750J
Crawler Dozer

(PIN: 1T0750JX_ _D141344—310257)

JOHN DEERE

OPERATOR'S MANUAL

750J Crawler Dozer
(PIN: 1T0750JX_ _D141344—310257)

OMT227146 ISSUE C3 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

Worldwide Construction And Forestry Division
PRINTED IN U.S.A.

Introduction

Foreword

READ THIS MANUAL carefully to learn how to operate and service machine correctly. Personal injury or equipment damage can result if manual is not read. This manual and safety signs on the machine may also be available in other languages; see an authorized John Deere dealer to order.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of the machine and should remain with machine when machine is sold.

MEASUREMENTS in this manual are given in both metric and customary U.S. unit equivalents. Use only correct replacement parts and fasteners. Metric and inch fasteners may require a specific metric or inch wrench.

RIGHT-HAND AND LEFT-HAND sides are determined by facing in the direction of forward travel.

WRITE PRODUCT IDENTIFICATION NUMBERS (P.I.N.) in the Machine Numbers section. Accurately record all the numbers to help in tracing the machine if machine is ever stolen. A dealer also needs these numbers when parts are ordered. File the identification numbers in a secure place off machine.

WARRANTY is provided as part of John Deere's support program for customers who operate and maintain their equipment as described in this manual. The warranty is explained on the warranty certificate or statement which should have been received from the dealer.

This warranty provides the assurance that John Deere backs the products where defects appear within the warranty period. In some circumstances, John Deere also provides field improvements, often without charge to the customer, even if the product is out of warranty. Should the equipment be abused, or modified to change its performance beyond the original factory specifications, the warranty will become void and field improvements may be denied. Setting fuel delivery above specifications or otherwise overpowering machines results in such action.

If current owner is not the original owner of this machine, contact an authorized John Deere dealer to inform them of this unit's serial number. This will help John Deere notify current owner of any issues or product improvements.

TX,FOREWORD -19-01MAR23-1/1

IMPORTANT

Warranty will not apply to engine and drivetrain failures resulting from unauthorized adjustments to this engine.

Unauthorized adjustments are in violation of the emissions regulations applicable to this engine and may result in substantial fines and penalties.

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License Agreement for John Deere Software

LICENSE AGREEMENT FOR JOHN DEERE SOFTWARE

IMPORTANT -- READ CAREFULLY: THIS LICENSE AGREEMENT IS A LEGAL CONTRACT BETWEEN YOU AND JOHN DEERE SHARED SERVICES, INC., A CORPORATION HAVING A PRINCIPAL ADDRESS OF ONE JOHN DEERE PLACE, MOLINE, IL 61265 (THE "LICENSOR"). THIS LICENSE AGREEMENT GOVERNS YOUR USE OF ANY SOFTWARE ("SOFTWARE") AND OTHER MATERIALS (INDIVIDUALLY OR COLLECTIVELY "LICENSED MATERIALS" OR "LM") ASSOCIATED WITH ANY DISPLAY, ENGINE CONTROL UNIT, INVERTER, CONTROLLER, ELECTRONICS MODULE, SENSOR, ACTUATOR, OR COMPUTING UNIT (INDIVIDUALLY OR COLLECTIVELY "LICENSED PRODUCTS" OR "LP") OF THE JOHN DEERE EQUIPMENT THAT IS NOT OTHERWISE LICENSED BY A SEPARATE WRITTEN AGREEMENT BETWEEN YOU AND LICENSOR, OR ITS AFFILIATES.

BY ACTIVATING OR OTHERWISE USING THE LP, YOU ARE ACCEPTING AND AGREEING TO THE TERMS OF THIS LICENSE AGREEMENT WITH RESPECT TO THE LM THAT HAVE BEEN PRE-INSTALLED ON YOUR LP. YOU AGREE THAT THIS LICENSE AGREEMENT, INCLUDING THE WARRANTY DISCLAIMERS, LIMITATIONS OF LIABILITY, TERMINATION, AND ARBITRATION PROVISIONS BELOW, IS BINDING UPON YOU, AND UPON ANY COMPANY ON WHOSE BEHALF YOU USE THE LM AND LP AS WELL AS THE EMPLOYEES OF ANY SUCH COMPANY (COLLECTIVELY REFERRED TO AS "YOU" IN THIS LICENSE AGREEMENT). IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE AGREEMENT, OR IF YOU ARE NOT AUTHORIZED TO ACCEPT THESE TERMS ON BEHALF OF YOUR COMPANY OR ITS EMPLOYEES, DECLINE THESE TERMS AND CONDITIONS AND DO NOT USE THE LP OR THE JOHN DEERE EQUIPMENT. THIS LICENSE AGREEMENT REPRESENTS THE ENTIRE AGREEMENT CONCERNING THE LM BETWEEN YOU AND THE LICENSOR AND IT REPLACES ANY PRIOR PROPOSAL, REPRESENTATION, OR UNDERSTANDING BETWEEN YOU AND THE LICENSOR.

1. **Description of Software.** Your Licensed Product ("LP") comes with all Software pre-installed for operation of your John Deere Equipment. Licensed Materials ("LM") shall mean any Software, data files, documentation, engine calibration tables, proprietary data messages, and controller area network (CAN) data messages that are in or communicated to or from any LP (e.g., to monitor, diagnose, or operate the John Deere Equipment). Data files shall include but not be limited to any data structure that adjusts engine control parameters, such as fuel metering, fuel injection rate, fuel injection timing, fuel pressure, engine speed versus torque relationship, intake boost pressure, fuel-to-air ratio or engine timing.

2. **License.** Licensor hereby grants to you, and you accept, a nonexclusive license to use the LM in machine-readable, object code form, only as authorized in this License Agreement and the applicable provisions of the Operators' Manuals, which you agree to review carefully prior to using the LM. The LM may be used only on the LP in which it was initially installed and solely in conjunction with the John Deere Equipment in which it was initially installed; or, in the event of the inoperability of that LP, on a replacement LP provided to you by an authorized dealer pursuant to the Limited Warranty of Section 5. You agree that you will not assign, sublicense, transfer, pledge, lease, rent, or share your rights under this License Agreement, except that you may permanently transfer all of your rights under this License Agreement in connection with the sale of the LP or John Deere Equipment on which the LM covered by this Agreement are installed. If you sell or otherwise transfer the ownership of the LP or John Deere Equipment, you agree that you will require such transferee to accept terms no less restrictive than those in this License Agreement. This License Agreement also covers any and all hardware and additional software that may interact with the LM and/or the LP.

3. **Licensor's Rights.** You acknowledge and agree that the LM are proprietary to Licensor, or its affiliates or licensors, and is protected under copyright law, trade secret law, and laws governing confidential information. You shall maintain the confidentiality of the LM, any nonpublic information in the LM and the source code of the Software, regardless of whether the LM is labeled or marked with any proprietary legend or notice that indicates its confidential nature. You further acknowledge and agree that all right, title, and interest in and to the Software and the LM, including associated intellectual property rights, are and shall remain with Licensor, its affiliates, and their licensors. This License Agreement does not convey to you any title or interest in or to the LM, but only a limited right of use revocable in accordance with the terms of this License Agreement.

4. **License Restrictions, Reverse Engineering.** You may not reproduce, prepare derivative works based on, disclose, publish, distribute, rent, lease, modify, loan, display, or perform the LM or any part thereof. You may not reverse engineer, decompile, translate, adapt, or disassemble the LM, nor shall you attempt to create the source code from the object code for the Software. You may not transmit the LM over any network or via a hacking device, although you may use the LM to make transmissions of diagnostic data messages that are authorized by Licensor and you may receive Software updates authorized by Licensor over any Licensor-authorized communications channel. You also agree not to permit any third party acting under your control to do any of the foregoing activities related to reverse engineering of the Licensed Materials. You agree not to remove or obliterate any copyright, trademark or other proprietary rights notices from the LM, except as expressly permitted in writing by Licensor or its licensors or expressly permitted under applicable law notwithstanding these restrictions.

5. **License Restrictions, Circumvention.**

Security measures ("SM") means any of the following: technological measures under the Digital Millennium Copyright Act, copyright protection measures, application enabling mechanisms, passwords, key codes, encryption or other security devices. You agree that you will not: (a) attempt to defeat a SM or defeat a SM that protects the LM and that would constitute a violation under applicable U.S., U.K. or German law related circumvention of technological measures that protect software, copyrighted works, or other intellectual property rights, (b) purchase, manufacture, design, import, sell or distribute any circumvention or hacking device that is designed to circumvent or hack the LM or LP and that are unlawful to distribute under applicable U.S., U.K. or German law, (c) circumvent a SM that protects the LM if the circumvention can be used to access trade secrets or confidential information that is protected under applicable law; (d) apply circumvention devices or hacking devices to the LM, LP or John Deere Equipment (e.g., to bypass, temporarily or otherwise, one or more LPs) in a manner that violates any environmental

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regulations, laws, safety laws, or voluntary safety standards (e.g., ISO standards) that are supported by LPs, LMs, or (e) apply any circumvention devices or hacking devices from any third parties in an attempt to reverse engineer the LM or that could be used to access trade secrets or other confidential information in the LM that is protected under applicable law. You also agree not to permit any third party acting under your control to do any of the foregoing activities related to circumvention of SM.

6. **Consideration, License Fees**. The license fees or other good and valuable consideration paid by you are paid in consideration of the licenses granted under this License Agreement.

7. **Limited Warranty**. Licensor warrants, for your benefit alone and not for the benefit of any other party, that during the "**Warranty Period**" defined below, the Software will operate substantially in accordance with the applicable functional specifications ("**Specifications**") set forth in the Operators' Manuals. If, prior to expiration of the Warranty Period, the Software fails to perform substantially in accordance with the Specifications, you may return the LP to the place of purchase for repair or replacement of the non-performing Software. As used in this License Agreement. The "Warranty Period" is one (1) year from the date you take delivery of the LP.

8. **DISCLAIMER OF WARRANTIES**. YOU HEREBY AGREE THAT THE LIMITED WARRANTY PROVIDED ABOVE (THE "**LIMITED WARRANTY**") CONSTITUTES YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY PROBLEM WHATSOEVER WITH THE LM. EXCEPT AS PROVIDED IN THE LIMITED WARRANTY, THE LM IS LICENSED "AS IS," AND LICENSOR, ITS AFFILIATES AND THIRD PARTY SUPPLIERS EXPRESSLY DISCLAIM AND YOU EXPRESSLY WAIVE, RELEASE AND RENOUNCE ALL WARRANTIES ARISING BY LAW OR OTHERWISE WITH RESPECT TO THE LM, INCLUDING, BUT NOT LIMITED TO: ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE; ANY IMPLIED WARRANTY ARISING FROM COURSE OF PERFORMANCE, COURSE OF DEALING OR TRADE USAGE; ANY WARRANTY OF TITLE OR NON-INFRINGEMENT; AND, ANY OTHER WARRANTY ARISING UNDER ANY THEORY OF LAW, INCLUDING TORT, NEGLIGENCE, STRICT LIABILITY, CONTRACT OR OTHER LEGAL OR EQUITABLE THEORY. NO REPRESENTATION OR OTHER AFFIRMATION OF FACT INCLUDING, BUT NOT LIMITED TO, STATEMENTS REGARDING SUITABILITY FOR USE, SHALL BE DEEMED TO BE A WARRANTY BY LICENSOR OR ANY OF ITS AFFILIATES OR THIRD PARTY SUPPLIERS. LICENSOR DOES NOT WARRANT THAT THE LM AND/OR LP IS ERROR-FREE OR WILL OPERATE WITHOUT INTERRUPTION.

9. **LIMITATION OF LIABILITY**. EXCEPT AS SET FORTH IN THE LIMITED WARRANTY, UNDER NO CIRCUMSTANCES SHALL LICENSOR, ITS AFFILIATES OR ITS THIRD PARTY SUPPLIERS BE LIABLE TO YOU OR TO ANY THIRD PARTIES FOR DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING ANY LOSS OR DAMAGE CAUSED BY THE LM; ANY PARTIAL OR TOTAL FAILURE OF THE LM; PERFORMANCE, NONPERFORMANCE OR DELAYS IN CONNECTION WITH ANY INSTALLATION, MAINTENANCE, WARRANTY OR REPAIRS OF THE LM, DAMAGES FOR CROP LOSS, DAMAGE TO LAND, DAMAGE TO MACHINES, LOST PROFITS, LOSS OF BUSINESS OR LOSS OF GOODWILL, LOSS OF USE OF EQUIPMENT OR SERVICES OR DAMAGES TO BUSINESS OR REPUTATION ARISING FROM THE PERFORMANCE OR NON-PERFORMANCE OF ANY ASPECT OF THE SOFTWARE, LM OR LP, WHETHER IN CONTRACT, TORT OR OTHERWISE, AND WHETHER OR NOT LICENSOR, ITS AFFILIATES OR ITS THIRD PARTY SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL LICENSOR'S CUMULATIVE LIABILITY TO YOU OR TO ANY OTHER PARTY FOR ANY LOSSES OR DAMAGES RESULTING FROM ANY CLAIMS, LAWSUITS, DEMANDS, OR ACTIONS ARISING FROM OR RELATING TO USE OF THE LM EXCEED YOUR TOTAL PAYMENT FOR THE LP AND FOR THE LICENSE OF THE LM.

10. **Software Maintenance**. Licensor may, at its sole option, offer you maintenance of the Software, even though the Warranty Period has expired. Such maintenance may include providing modifications, corrections or enhancements ("**Upgrades**") to the Software and/or the applicable Operators' Manuals. Licensor reserves the right, in its sole discretion, to charge you for maintenance (except in cases where corrections are provided under the Limited Warranty). Your acceptance of this License Agreement constitutes your agreement that any Upgrades will be deemed included in the Software as defined in this License Agreement and that they shall be governed by the terms and conditions applicable to the LM under this License Agreement.

11. **Termination of License**. Licensor may terminate the license granted under this License Agreement upon written notice of termination provided to you if you violate any material term of this License Agreement pertaining to your use of the LM or Licensor's rights, including, without limitation, the provisions of Sections 2 and 3 above.

12. **Compliance with Law**. You agree that you will use the LM in accordance with United States law and the laws of the country in which you are located, as applicable, including foreign trade control laws and regulations. The LM may be subject to export and other foreign trade controls restricting re-sales and/or transfers to other countries and parties. By accepting the terms of this License Agreement, you acknowledge that you understand that the LM may be so controlled, including, but not limited to, by the Export Administration Regulations and/or the foreign trade control regulations of the Treasury Department of the United States. The LM remains subject to applicable U.S. laws.

11. **Indemnification**. You agree to defend, indemnify and hold Licensor, its affiliates and third party supplier, and their, officers, directors, employees, agents and representatives (each an "**Indemnified Party**"), harmless from and against all claims, demands proceedings, injuries, liabilities, losses, or costs and expenses (including reasonable legal fees) brought by any third party against any such persons arising from or in connection with your use of the LM, regardless of whether such losses are caused, wholly or partially, by any negligence, breach of contract or other fault of an Indemnified Party.

12. **Trademark.** Licensor does not grant you any right, license, or interest to any Licensor trademarks, symbols, marks or names (collectively "Marks') or any trademarks that confusingly similar to the Marks and you agree that no such right, license, or interest shall be asserted by you with respect to such Marks.

13. **Costs of Litigation**. If any claim or action is brought by either party to this License Agreement against the other party regarding the subject matter hereof, the prevailing party shall be entitled to recover, in

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addition to any other relief granted, reasonable attorney, arbitrators, and dispute resolution center administrative fees and expenses of litigation.

14. **Severability and Waiver**. Should any term or provision of this License Agreement be declared void or unenforceable by any court of competent jurisdiction, such declaration shall have no effect on the remaining terms and remaining provisions hereof. The failure of either party to enforce any rights granted hereunder or to take action against the other party in the event of any breach hereunder shall not be deemed a waiver by that party as to subsequent enforcement of rights of subsequent actions in the event of future breaches.

15. **Language Clause**. Unless the laws of the location in which you reside require otherwise, the parties hereby acknowledge that they have required this License Agreement, and all other documents relating hereto, be drawn up in the English language only. There may be a translated version of this License Agreement. If there is an inconsistency or contradiction between the translated version and the English version of this License Agreement, the English version of this License Agreement shall control unless the laws of the location in which you reside require that a different version control. The parties acknowledge and agree that they have required that this agreement be prepared in the English language. Les parties reconnaissent avoir exigé que les présentes soient rédigées en langue anglaise.

16. **Assignment by Licensor**. Licensor may assign this License Agreement without your prior consent to any company or entity affiliated with Licensor, or by an assignment associated with a corporate restructuring, merger or acquisition.

17. **Governing Law and Forum**. This License Agreement will be governed by and construed in accordance with the substantive laws in force in the State of Illinois, U.S.A. The respective courts of Rock Island County, Illinois have exclusive jurisdiction over all disputes relating to this License Agreement. This License Agreement will not be governed by the conflict of law rules of any jurisdiction or the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded.

18. **Arbitration**. IF YOU RESIDE IN A JURISDICTION WHEREIN THE ENFORCEABILITY OF THE TERMS OF SECTION 17 IS DEPENDENT UPON THE PARTIES AGREEING TO SUBMIT TO ARBITRATION, THEN ANY CONTROVERSY OR CLAIM ARISING OUT OF OR RELATING TO THIS LICENSE AGREEMENT SHALL BE DETERMINED BY ARBITRATION IN ACCORDANCE WITH THE INTERNATIONAL ARBITRATION RULES OF THE INTERNATIONAL CENTRE FOR DISPUTE RESOLUTION ("**ICDR**") IN EFFECT AT THE TIME OF ITS INITIATION. THE ARBITRATION SHALL BE HELD BEFORE ONLY ONE ARBITRATOR APPOINTED BY THE ICDR. THE PLACE OF ARBITRATION SHALL BE CHICAGO, ILLINOIS, USA AND THE LANGUAGE OF THE ARBITRATION SHALL BE ENGLISH.

19. **Representations of Licensee**. BY ACCEPTING THIS AGREEMENT, YOU: (A) ACKNOWLEDGE THAT YOU HAVE READ AND UNDERSTAND THIS AGREEMENT; (B) REPRESENT THAT YOU HAVE THE AUTHORITY TO ENTER INTO THIS AGREEMENT; (C) AGREE THAT THIS AGREEMENT IS ENFORCEABLE AGAINST YOU AND ANY LEGAL ENTITY THAT OBTAINED THE LM AND ON WHOSE BEHALF IT IS USED; AND, (D) AGREE TO PERFORM THE OBLIGATIONS OF THIS AGREEMENT.

20. **Notices**. All notices to Licensor shall be sent by certified or registered mail to John Deere Shared Services, Inc., One John Deere Place, Moline, IL 61265 U.S.A. All notices to Licensor shall be effective upon receipt. All notices required to be given to you shall, in Licensor's sole discretion, either be sent via certified or registered mail to the address given to Licensor, a John Deere dealer, or another distribution partner of Licensor in connection with your purchase of the LP and/or John Deere Equipment. Either method of notification used by Licensor shall be effective upon dispatch. You agree to notify Licensor of any change in your address in the manner set forth above.

21. **Third Party Software Notifications and Licenses.** The copyrights for certain portions of the Software may be owned or licensed by other third parties ("Third Party Software") and used and distributed under license. The Third Party Notices includes the acknowledgements, notices and licenses for the Third Party Software. The Third Party Notices are included with the distribution of this License Agreement on the display. If you are unable to locate these Third Party Notices, please write to us at the address below. The Third Party Software is licensed according to the applicable Third Party Software license notwithstanding anything to the contrary in this Agreement. If the Third Party Software contains copyrighted software that is licensed under the GPL/LGPL or other copyleft licenses, copies of those licenses are included in the Third Party Notices. You may obtain the complete corresponding source code for such Third Party Software from us for a period of three years after our last shipment of the Software by sending a request letter to:

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Moline, IL 61266-1202
USA

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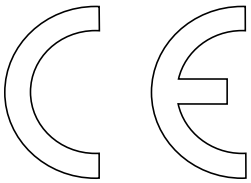
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Conformity Marking for European Union (EU) and Eurasian Economic Union (EAEU)

NOTE: Some or all machine models listed on the front cover of this manual are available in optional factory configurations that meet or exceed European Union (EU) or Eurasian Economic Union (EAEU) conformity requirements.

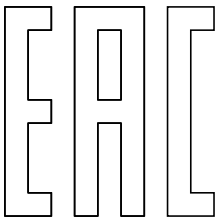
To validate conformance of a particular machine for sale into the EU or EAEU markets, check for the applicable marking on the machine, or see an authorized John Deere dealer.

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European Union (EU)

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Eurasian Economic Union (EAEU)

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EPA Non-road Emissions Control Warranty Statement—Compression Ignition

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JOHN DEERE

U.S. AND CANADA EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emissions Control Information" label located on the engine. If the engine is operated in the United States or Canada and the Emissions Control information label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine conforms to US EPA nonroad compression-ignition regulations", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines", or "This engine conforms to US EPA and California nonroad compression-ignition emission regulations", also refer to the "California Emission Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

JOHN DEERE'S WARRANTY RESPONSIBILITY

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emission-control system was designed, built and equipped so as to conform at the time of the sale with Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable US EPA regulations for a period of five years from the date the engine is placed into service or 3,000 hours of operation, whichever first occurs.

Where a warrantable condition exists, John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to you, including expenses related to diagnosing and repairing or replacing emission-related parts. Warranty coverage is subject to the limitations and exclusions set forth herein. Emission- related components include engine parts developed to control emissions related to the following:

Air-Induction System
Fuel System
Ignition System
Exhaust Gas Recirculation Systems
Aftertreatment Devices
Crankcase Ventilation Valves
Sensors
Engine Electronic Control Units

EMISSION WARRANTY EXCLUSIONS

John Deere may deny warranty claims for malfunctions or failures caused by:

- Non-performance of maintenance requirements listed in the Operator's Manual
- The use of the engine/equipment in a manner for which it was not designed
- Abuse, neglect, improper maintenance or unapproved modifications or alterations
- Accidents for which it does not have responsibility or by acts of God

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel can harm the emissions control system of the engine/equipment and is not approved for use.

To the extent permitted by law John Deere is not liable for damage to other engine components caused by a failure of an emission-related part, unless otherwise covered by standard warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. WHERE PERMITTED BY LAW, NEITHER JOHN DEERE NOR ANY AUTHORIZED JOHN DEERE ENGINE DISTRIBUTOR, DEALER, OR REPAIR FACILITY OR ANY COMPANY AFFILIATED WITH JOHN DEERE WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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JOHN DEERE

U.S. AND CANADA EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the "Emissions Control Information" label located on the engine. If the engine is operated in the United States or Canada and the Emissions Control information label states: "This engine complies with US EPA regulations for nonroad and stationary diesel engines", or "This engine conforms to US EPA nonroad compression-ignition regulations", refer to the "U.S. and Canada Emission Control Warranty Statement." If the engine is operated in California, and the label states: "This engine complies with US EPA and CARB regulations for nonroad diesel engines", or "This engine conforms to US EPA and California nonroad compression-ignition emission regulations", also refer to the "California Emission Control Warranty Statement."

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emissions-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

JOHN DEERE'S WARRANTY RESPONSIBILITY

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine including all parts of its emission-control system was designed, built and equipped so as to conform at the time of the sale with Section 213 of the Clean Air Act and is free from defects in materials and workmanship which would cause the engine to fail to conform with applicable US EPA regulations for a period of five years from the date the engine is placed into service or 3,000 hours of operation, whichever first occurs.

Where a warrantable condition exists, John Deere will repair or replace, as it elects, any part or component with a defect in materials or workmanship that would increase the engine's emissions of any regulated pollutant within the stated warranty period at no cost to you, including expenses related to diagnosing and repairing or replacing emission-related parts. Warranty coverage is subject to the limitations and exclusions set forth herein. Emission- related components include engine parts developed to control emissions related to the following:

Air-Induction System
Fuel System
Ignition System
Exhaust Gas Recirculation Systems
Aftertreatment Devices
Crankcase Ventilation Valves
Sensors
Engine Electronic Control Units

EMISSION WARRANTY EXCLUSIONS

John Deere may deny warranty claims for malfunctions or failures caused by:

- Non-performance of maintenance requirements listed in the Operator's Manual
- The use of the engine/equipment in a manner for which it was not designed
- Abuse, neglect, improper maintenance or unapproved modifications or alterations
- Accidents for which it does not have responsibility or by acts of God

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel can harm the emissions control system of the engine/equipment and is not approved for use.

To the extent permitted by law John Deere is not liable for damage to other engine components caused by a failure of an emission-related part, unless otherwise covered by standard warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. REMEDIES UNDER THIS WARRANTY ARE LIMITED TO THE PROVISIONS OF MATERIAL AND SERVICES AS SPECIFIED HEREIN. WHERE PERMITTED BY LAW, NEITHER JOHN DEERE NOR ANY AUTHORIZED JOHN DEERE ENGINE DISTRIBUTOR, DEALER, OR REPAIR FACILITY OR ANY COMPANY AFFILIATED WITH JOHN DEERE WILL BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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CARB Non-road Emissions Control Warranty Statement—Compression Ignition

Emissions Control Warranty Statement 2019 through 2021

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JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the “Emission Control Information” label located on the engine. If the engine is operated in the United States or Canada and the engine label states: “This engine complies with US EPA regulations for nonroad and stationary diesel engines”, or “This engine complies with US EPA regulations for stationary emergency diesel engines”, refer to the “U.S. and Canada Emission Control Warranty Statement.” If the engine is operated in California, and the engine label states: “This engine complies with US EPA and CARB regulations for nonroad diesel engines” also refer to the “California Emissions Control Warranty Statement.”

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2019 through 2021 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State’s stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

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JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

Fuel Metering system

- Fuel injection system

Exhaust Gas Recirculation

- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

Emission control labels

Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

SCR systems and urea containers/dispensing systems

Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator’s Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner’s failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

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Emissions Control Warranty Statement 2019 through 2021

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JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the “Emission Control Information” label located on the engine. If the engine is operated in the United States or Canada and the engine label states: “This engine complies with US EPA regulations for nonroad and stationary diesel engines”, or “This engine complies with US EPA regulations for stationary emergency diesel engines”, refer to the “U.S. and Canada Emission Control Warranty Statement.” If the engine is operated in California, and the engine label states: “This engine complies with US EPA and CARB regulations for nonroad diesel engines” also refer to the “California Emissions Control Warranty Statement.”

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2019 through 2021 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State’s stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the fuel injection system and the air induction system. Also included may be hoses, belts, connectors and other emission-related assemblies.

John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB and is free from defects in materials and workmanship which would cause the failure of a warranted part to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first for all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

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JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

Air Induction System

- Intake manifold
- Turbocharger
- Charge air cooler

Fuel Metering system

- Fuel injection system

Exhaust Gas Recirculation

- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
- Exhaust manifold

Emission control labels

Particulate Controls

- Any device used to capture particulate emissions
- Any device used in the regeneration of the capturing system
- Enclosures and manifolding
- Smoke Puff Limiters

Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

Advanced Oxides of Nitrogen (NOx) Controls

- NOx absorbers and catalysts

SCR systems and urea containers/dispensing systems

Miscellaneous Items used in Above Systems

- Electronic control units, sensors, actuators, wiring harnesses, hoses, connectors, clamps, fittings, gasket, mounting hardware

Any warranted emissions-related part scheduled for replacement as required maintenance is warranted by John Deere for the period of time prior to the first scheduled replacement point for the part. Any warranted emissions-related part not scheduled for replacement as required maintenance or scheduled only for regular inspection is warranted by John Deere for the stated warranty period.

OWNER'S WARRANTY RESPONSIBILITIES:

As the off-road diesel engine owner you are responsible for the performance of the required maintenance listed in your Operator's Manual. John Deere recommends that the owner retain all receipts covering maintenance on the off-road diesel engine, but John Deere cannot deny warranty solely for the lack of receipts or for the owner's failure to ensure the performance of all scheduled maintenance. However, as the off-road diesel engine owner, you should be aware that John Deere may deny you warranty coverage if your off-road diesel engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

The off-road diesel engine is designed to operate on diesel fuel as specified in the Fuels, Lubricants and Coolants section in the Operators Manual. Use of any other fuel may result in the engine no longer operating in compliance with applicable emissions requirements.

The owner is responsible for initiating the warranty process, and should present the machine to the nearest authorized John Deere dealer as soon as a problem is suspected. The warranty repairs should be completed by the authorized John Deere dealer as quickly as possible.

Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

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Emissions Control Warranty Statement 2022 through 2024

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JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

To determine if the John Deere engine qualifies for the additional warranties set forth below, look for the “Emission Control Information” label located on the engine. If the engine is operated in the United States or Canada and the engine label states: “This engine complies with US EPA regulations for nonroad and stationary diesel engines”, or “This engine complies with US EPA regulations for stationary emergency diesel engines”, refer to the “U.S. and Canada Emission Control Warranty Statement.” If the engine is operated in California, and the engine label states: “This engine complies with US EPA and California regulations for nonroad/off-road diesel engines” also refer to the “California Emissions Control Warranty Statement.”

Warranties stated on this certificate refer only to emissions-related parts and components of your engine. The complete engine warranty, less emission-related parts and components, is provided separately. If you have any questions about your warranty rights and responsibilities, you should contact John Deere at 1-319-292-5400.

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT:

The California Air Resources Board (CARB) is pleased to explain the emission-control system warranty on 2022 through 2024 off-road diesel engines. In California, new off-road engines must be designed, built and equipped to meet the State’s stringent anti-smog standards. John Deere must warrant the emission control system on your engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your engine.

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John Deere warrants to the ultimate purchaser and each subsequent purchaser that this off-road diesel engine was designed, built, and equipped so as to conform at the time of sale with all applicable regulations adopted by CARB. John Deere warrants that this engine is free from defects in materials and workmanship which would cause the failure of emissions warrantied parts to be identical in all material respects to the part as described in John Deere's application for certification for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. This applies to all engines rated at 19 kW and greater. In the absence of a device to measure hours of use, the engine shall be warranted for a period of five years.

EMISSIONS WARRANTY EXCLUSIONS:

John Deere may deny warranty claims for failures caused by the use of an add-on or modified part which has not been exempted by the CARB. A modified part is an aftermarket part intended to replace an original emission-related part which is not functionally identical in all respects and which in any way affects emissions. An add-on part is any aftermarket part which is not a modified part or a replacement part.

In no event will John Deere, any authorized engine distributor, dealer, or repair facility, or any company affiliated with John Deere be liable for incidental or consequential damage.

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JOHN DEERE'S WARRANTY RESPONSIBILITY:

Where a warrantable condition exists, John Deere will repair or replace, as it elects, your off-road diesel engine at no cost to you, including diagnosis, parts or labor. Warranty coverage is subject to the limitations and exclusions set forth herein. The off-road diesel engine is warranted for a period of five years from the date the engine is delivered to an ultimate purchaser or 3,000 hours of operation, whichever occurs first. The following are emissions-related parts:

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- EGR valve

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- Catalytic converter
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- PCV valve
- Oil filler cap

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Emissions Control Warranty Statement 2022 through 2024

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JOHN DEERE

CALIFORNIA EMISSIONS CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

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JOHN DEERE'S WARRANTY RESPONSIBILITY:

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- EGR valve

Catalyst or Thermal Reactor Systems

- Catalytic converter
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Emission control labels

Particulate Controls

- Any device used to capture particulate emissions
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Positive Crankcase Ventilation (PCV) System

- PCV valve
- Oil filler cap

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- NOx absorbers and catalysts

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Emissions regulations require the customer to bring the unit to an authorized servicing dealer when warranty service is required. As a result, John Deere is NOT liable for travel or mileage on emissions warranty service calls.

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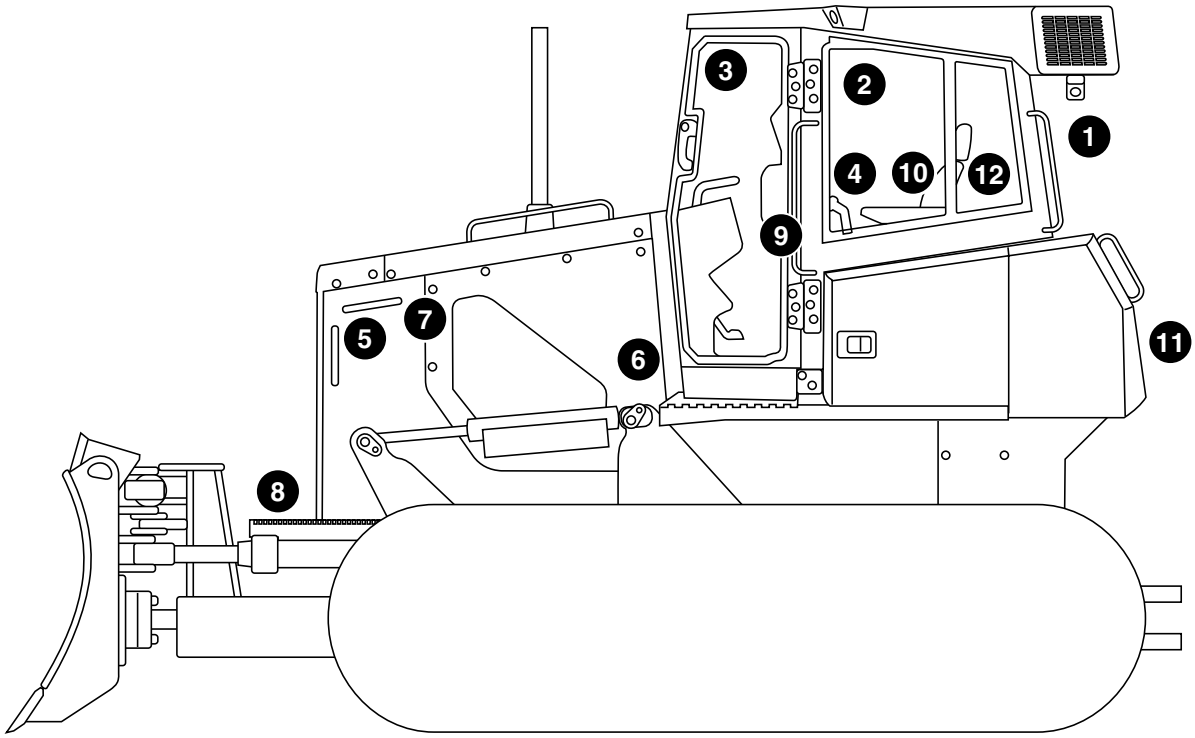
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Safety and Operator Convenience Features



TX1037086 —UN—03MAR08

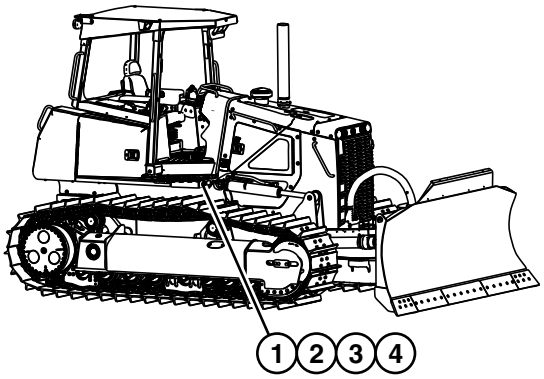
TX1037086

Please remember, the operator is the key to preventing accidents.

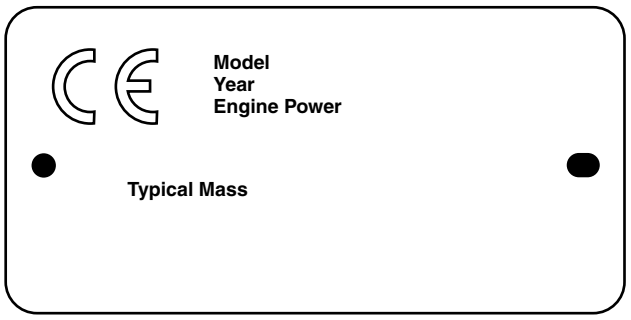
1. **ROPS, FOPS, and OPS.** Structures designed to help protect the operator are certified to ISO and OSHA. Enclosures also deflect sun and rain.
2. **Pressurized Cab.** Positive pressure ventilation system circulates both outside and inside air through filters for a clean working environment. Built-in defroster vents direct air flow for effective window defogging/deicing.
3. **Interior Rear View Mirror.** Offers the operator a view of activity behind him.
4. **Transmission Start.** After the park lock lever has been moved to the down UNLOCKED position, the transmission control lever must have been in the neutral, N position, before the transmission is able to be engaged.
5. **Handholds.** Large conveniently placed handholds make it easy to enter or exit the operator's station.
6. **Bypass Start Protection.** Shielding over the starter solenoid helps prevent dangerous bypass starting.
7. **Engine Fan Guard.** A secondary fan guard inside engine compartment helps prevent contact with engine fan blades.
8. **Steps.** Wide skid-resistant steps help prevent slipping while getting in or out of the operator's station.
9. **Park Lock Start and Park Lock Lever.** Park lock start feature prevents the engine from being started unless the park lock lever is in the up LOCKED position. When park lock lever is placed in up LOCKED position, the transmission shifts to neutral, the hydrostatic system is deactivated, and the park brake is engaged.
10. **Automatic Seat Belt Retractors.** Seat belt retractors help keep belts clean and convenient to use.
11. **Backup Alarm.** Alerts bystanders when reverse travel direction is selected by operator.
12. **Operator Manual Holder.** A sealed manual holder keeps manual on machine clean and dry.

HG31779,0000090 -19-04MAY11-1/1

Information for European Union Directives and Eurasian Economic Union Technical Regulations Compliance



Crawler Dozer



TX1232147 —UN—12JAN17

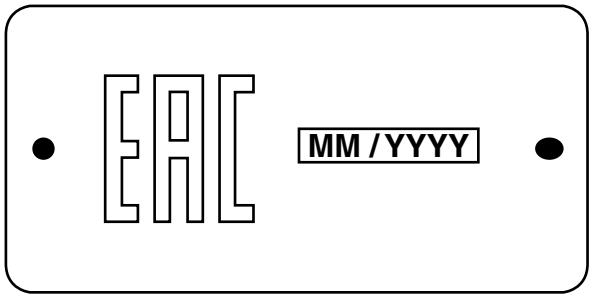
TX1066144 —UN—19OCT09

CE Mark



TX1066156 —UN—15OCT09

PIN Plate



TX1175987 —UN—03NOV14

EAC Marking

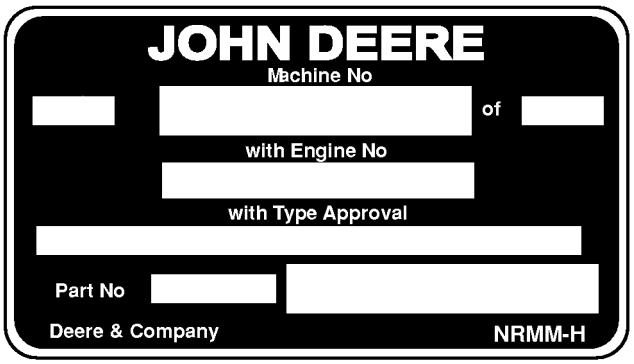
To the Customer

Effective June, 2006, all machines sold in the European Union must comply with the machinery directive 2006/42/EC and any amendments. Each machine meeting these requirements must bear the conformity mark CE. In addition, each machine must be accompanied with a Declaration of Conformity by the machine manufacturer. This declaration must be kept with the machine at all times and does not declare conformity to national road regulations.

Effective February 15, 2013, all machines sold in the Eurasian Economic Union must comply with the Technical Regulations of the Eurasian Economic Union TR TS 010/2011 “On Safety of machinery and Equipment.” Each machine meeting these requirements must bear the EAC Marking.

NOTE: This machine may need country approval for travel on public roads in Europe as some European countries require special equipment and approvals.

Product Identification Number (PIN), CE Mark, EAC Marking, and EU Flex Label Locations



TX1066630 —UN—21OCT09

EU Flex Label

1— PIN Plate
2— CE Mark (if required)
3— EAC Marking (if required)
4— EU Flex Label (if required)

The machine is identified by the PIN that is stamped on a serial number plate. The PIN plate (1), CE Mark or EAC Marking, and if required, EU flex label are located on the machine as indicated in the machine image.

Continued on next page

MB60223,000504F -19-12JAN17-1/2

NOTE: If this machine was certified (homologated) to the requirements of the European Union, there will be a CE mark affixed in indicated area (2). If required this machine will also be affixed with an EU Flex label (4) beside the CE mark in the indicated area.

If this machine was certified (homologated) to the requirements of the Eurasian Economic Union, there will be a EAC marking (3) affixed in the indicated area.

Sound and Vibration Specifications

Model	**750J-II**
Operator sound pressure and exterior sound power levels are:	
Cab	79 dB(A) and 107 dB(A) or less *
NOTE: Factors affecting listed values include operator performance, machine age, seat condition, the use of accessories, environment, and any machine movement. *(*) Data acquisition system precision values with a 2% technical uncertainty.* Sound levels were obtained using the test method specified per ISO 6396:2008 and ISO 6395:2008, respectively.	
Eurasian Economic Union Operator vibration levels are for properly maintained machines operating on a flat dirt area free of large objects such as trees and rocks. Whole body vibration levels were obtained using the test method specified per GOST 31191.1:2004.	
Whole Body	0.5 m/s^2 or less
Hand Arm	2.5 m/s^2 or less
NOTE: Factors affecting listed values include operator performance, machine age, the condition of window and door seals, the use of accessories, environment, and any machine movement.	
European Union Operator vibration levels are for properly maintained machines operating on a flat dirt area free of large objects such as trees and rocks. Vibration levels were obtained using the test method specified per ISO 2631-1:1997 or ISO TR 25398 where applicable.	
Whole Body	0.81 m/s^2 or less
Hand Arm	2.5 m/s^2 or less
NOTE: Factors affecting listed values include operator performance, machine age, the condition of window and door seals, the use of accessories, environment, and any machine movement.	

MB60223,000504F -19-12JAN17-2/2

Recognize Safety Information

This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert for the potential of personal injury.

Follow the precautions and safe operating practices highlighted by this symbol.

A signal word — DANGER, WARNING, or CAUTION — is used with the safety alert symbol. DANGER identifies the most serious hazards.

On your machine, DANGER signs are red in color, WARNING signs are orange, and CAUTION signs are yellow. DANGER and WARNING signs are located near specific hazards. General precautions are on CAUTION labels.



T133555 —UN—15APR13

T133588 —19—28AUG00

TX,RECOGNIZE -19-28JUN10-1/1

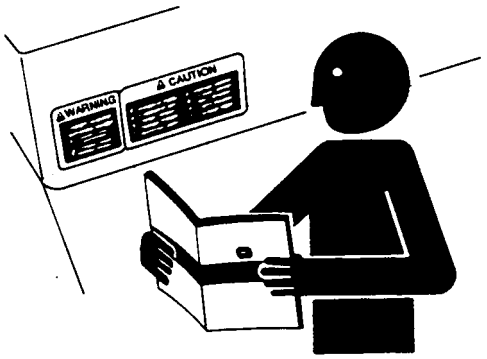
Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Use this operator's manual for correct safety sign placement. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.



TS201 —UN—15APR13

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

VD76477,0000510 -19-01JUN12-1/1

Operate Only If Qualified

Do not operate this machine unless the operator's manual has been read carefully, and you have been qualified by supervised training and instruction.

Operator should be familiar with the job site and surroundings before operating. Try all controls and machine functions with the machine in an open area before starting to work.

Know and observe all safety rules that may apply to every work situation and work site.

TX03679,00016FA -19-03JAN07-1/1

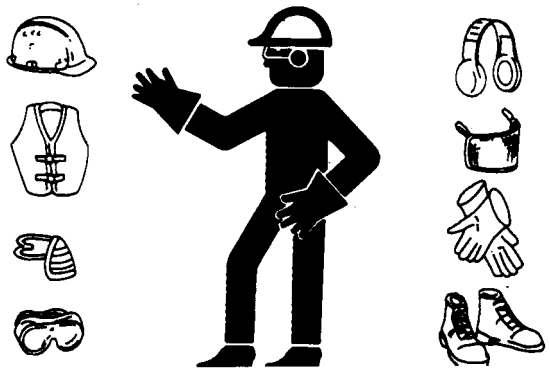
Wear Protective Equipment

Guard against injury from flying pieces of metal or debris; wear goggles or safety glasses.

Wear close fitting clothing and safety equipment appropriate to the job.

Operating equipment safely requires the full attention of the operator. Do not wear radio or music headphones while operating machine.

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protection such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises. Radio or music headphones are not suitable to use for hearing protection.



TS206 —UN—15APR13

TX,WEAR,PE -19-16JUN21-1/1

Avoid Unauthorized Machine Modifications

John Deere recommends using only genuine John Deere replacement parts to ensure machine performance. Never substitute genuine John Deere parts with alternate parts not intended for the application as these can create hazardous situations or hazardous performance. Non-John Deere Parts, or any damage or failures resulting from their use, are not covered by any John Deere warranty.

Modifications of this machine, or addition of unapproved products or attachments, may affect machine stability or reliability, and may create a hazard for the operator or others near the machine. The installer of any modification which may affect the electronic controls of this machine is responsible for establishing that the modification does not adversely affect the machine or its performance.

Always contact an authorized John Deere dealer before making machine modifications that change the intended use, weight, or balance of the machine, or that alter machine controls, performance, or reliability.

AM40430,00000A9 -19-02JUN15-1/1

Inspect Machine

Inspect machine carefully each day by walking around it before starting.

Keep all guards and shields in good condition and properly installed. Fix damage and replace worn or broken parts immediately. Pay special attention to hydraulic hoses and electrical wiring.



T6607AQ —UN—15APR13

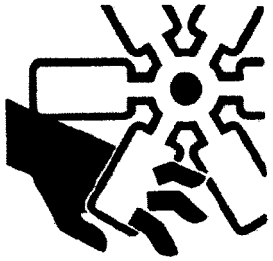
TX,INSPECT -19-08SEP10-1/1

Stay Clear of Moving Parts

Entanglements in moving parts can cause serious injury.

Stop engine before examining, adjusting or maintaining any part of machine with moving parts.

Keep guards and shields in place. Replace any guard or shield that has been removed for access as soon as service or repair is complete.



T133592 —UN—15APR13

TX03679,00016D2 -19-08JAN08-1/1

Avoid High-Pressure Fluids

Inspect hydraulic hoses periodically – at least once per year – for leakage, kinking, cuts, cracks, abrasion, blisters, corrosion, exposed wire braid or any other signs of wear or damage.

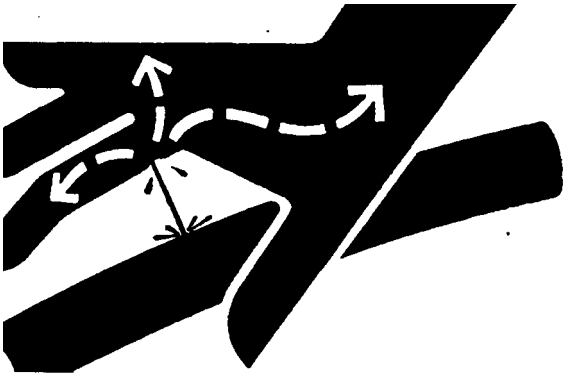
Replace worn or damaged hose assemblies immediately with John Deere approved replacement parts.

Escaping fluid under pressure can penetrate the skin causing serious injury.

Avoid the hazard by relieving pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure.

Search for leaks with a piece of cardboard. Protect hands and body from high-pressure fluids.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.



X9811 —UN—23AUG88

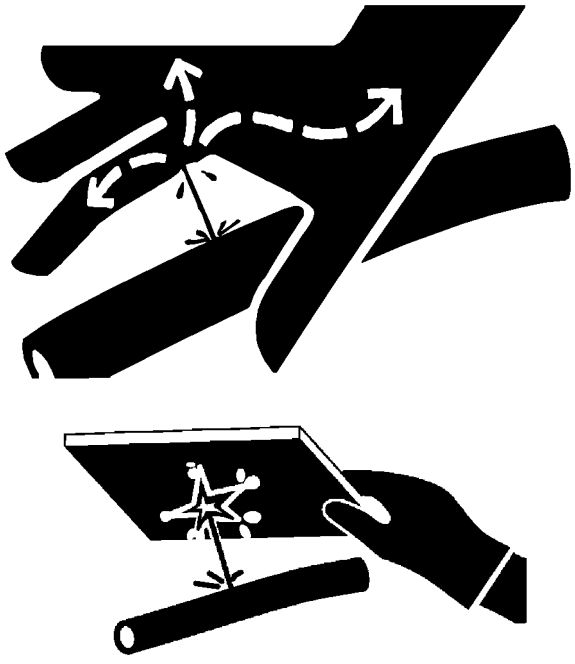
DX,FLUID -19-12OCT11-1/1

Avoid High-Pressure Oils

This machine uses a high-pressure hydraulic system. Escaping oil under pressure can penetrate the skin causing serious injury.

Never search for leaks with your hands. Protect hands. Use a piece of cardboard to find location of escaping oil. Stop engine and relieve pressure before disconnecting lines or working on hydraulic system.

If hydraulic oil penetrates your skin, see a doctor immediately. Injected oil must be removed surgically within hours or gangrene may result. Contact a knowledgeable medical source or the Deere & Company Medical Department in Moline, Illinois, U.S.A.



T133509 —UN—15APR13

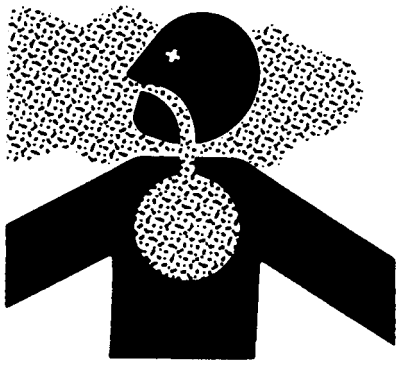
T133840 —UN—20SEP00

TX03679,00016D3 -19-03NOV08-1/1

Work In Ventilated Area

Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.

If you do not have an exhaust pipe extension, open the doors and get outside air into the area.



TS220 —UN—15APR13

DX,AIR -19-17FEB99-1/1

Prevent Fires

Handle Fuel Safely: Store flammable fluids away from fire hazards. Never refuel machine while smoking or when near sparks or flame.

Clean Machine Regularly: Keep trash, debris, grease and oil from accumulating in engine compartment, around fuel lines, hydraulic lines, exhaust components and electrical wiring. Never store oily rags or flammable materials inside a machine compartment.

Maintain Hoses and Wiring: Replace hydraulic hoses immediately if they begin to leak, and clean up any oil spills. Examine electrical wiring and connectors frequently for damage.

Keep A Fire Extinguisher Available: Always keep a multi-purpose fire extinguisher on or near the machine. Know how to use extinguisher properly.



T133553 —UN—07SEP00



T133554 —UN—07SEP00



T133552 —UN—15APR13

TX03679,00016F5 -19-26JUN09-1/1

Prevent Battery Explosions

Keep sparks, lighted matches, and open flame away from the top of battery. Battery gas can explode.

Never check battery charge by placing a metal object across the posts. Use a volt-meter or hydrometer.

Do not charge a frozen battery; it may explode. Warm battery to 16°C (60°F).



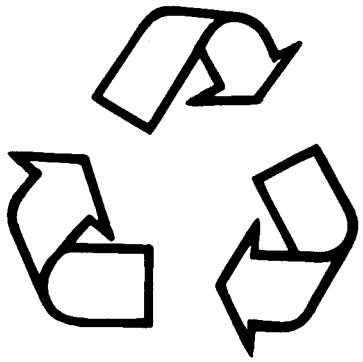
TS204 —UN—15APR13

DX,SPARKS -19-03MAR93-1/1

Decommissioning — Proper Recycling and Disposal of Fluids and Components

Safety and environmental stewardship measures must be taken into account when decommissioning a machine and/or component. These measures include the following:

- Use appropriate tools and personal protective equipment such as clothing, gloves, face shields or glasses, during the removal or handling of objects and materials.
- Follow instructions for specialized components.
- Release stored energy by lowering suspended machine elements, relaxing springs, disconnecting the battery or other electrical power, and releasing pressure in hydraulic components, accumulators, and other similar systems.
- Minimize exposure to components which may have residue from agricultural chemicals, such as fertilizers and pesticides. Handle and dispose of these components appropriately.
- Carefully drain engines, fuel tanks, radiators, hydraulic cylinders, reservoirs, and lines before recycling components. Use leak-proof containers when draining fluids. Do not use food or beverage containers.
- Do not pour waste fluids onto the ground, down a drain, or into any water source.
- Observe all national, state, and local laws, regulations, or ordinances governing the handling or disposal of waste fluids (example: oil, fuel, coolant, brake fluid); filters; batteries; and, other substances or parts. Burning of flammable fluids or components in other than specially designed incinerators may be prohibited by law and could result in exposure to harmful fumes or ashes.
- Service and dispose of air conditioning systems appropriately. Government regulations may require a certified service center to recover and recycle air conditioning refrigerants which could damage the atmosphere if allowed to escape.
- Evaluate recycling options for tires, metal, plastic, glass, rubber, and electronic components which may be recyclable, in part or completely.
- Contact your local environmental or recycling center, or your John Deere dealer for information on the proper way to recycle or dispose of waste.



TS1133 —UN—15APR13

DX,DRAIN -19-01JUN15-1/1

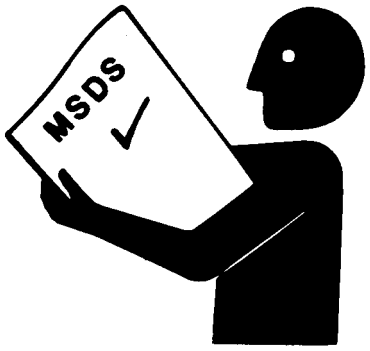
Handle Chemical Products Safely

Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with John Deere equipment include such items as lubricants, coolants, paints, and adhesives.

A Material Safety Data Sheet (MSDS) provides specific details on chemical products: physical and health hazards, safety procedures, and emergency response techniques.

Check the MSDS before you start any job using a hazardous chemical. That way you will know exactly what the risks are and how to do the job safely. Then follow procedures and recommended equipment.

(See your John Deere dealer for MSDS's on chemical products used with John Deere equipment.)



TS1132 —UN—15APR13

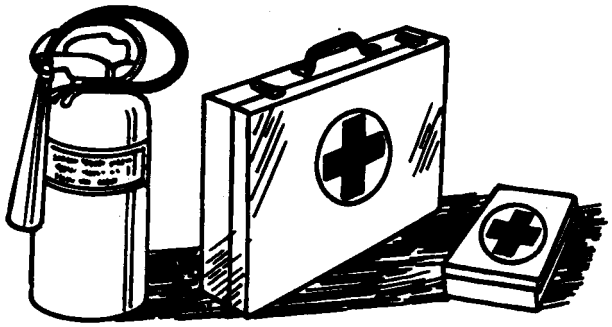
DX,MSDS,NA -19-03MAR93-1/1

Prepare for Emergencies

Be prepared if a fire starts.

Keep a first aid kit and fire extinguisher handy.

Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



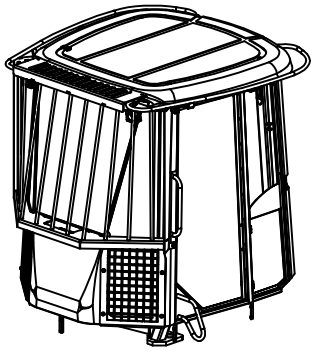
TS291 —UN—15APR13

DX,FIRE2 -19-03MAR93-1/1

Add Cab Guarding For Special Uses

Special work situations or machine attachments may create an environment with falling or flying objects. Working near an overhead bank, demolition work, using a hydraulic hammer or winch, working in a forestry application/wooded area, or working in a waste management application, for example, may require added guarding to protect the operator.

Additional level II FOPS (falling object protective structures), forestry protection packages, and/or special screens or guarding should be installed when falling or flying objects may enter or damage the machine. A rear screen should always be used with a winch to protect against a snapping cable. Before operating in any special work environments, follow the operator protection recommendations of the manufacturer of any specialized attachment or equipment. Contact your authorized John Deere dealer for information on protective guarding.



Cab Guarding

T141893 —UN—09JUN11

VD76477,0000504 -19-26JAN10-1/1

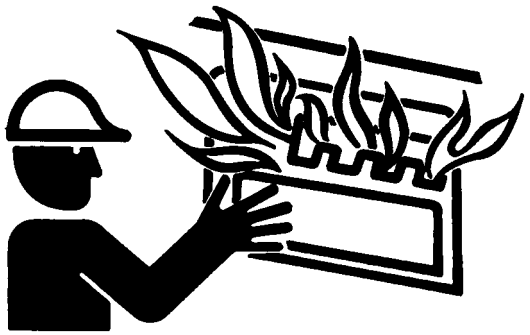
Clean Debris from Machine

Keep engine compartment, radiator, batteries, hydraulic lines, exhaust components, fuel tank, and operator's station clean and free of debris.

Clean any oil spills or fuel spills on machine surfaces.

Temperature in engine compartment may go up immediately after engine is stopped. BE ON GUARD FOR FIRES DURING THIS PERIOD.

Open access door(s) to cool the engine faster, and clean engine compartment.



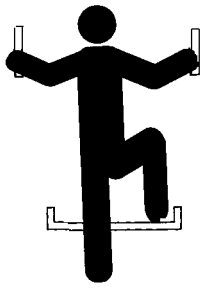
T6669AG —UN—15APR13

OUT4001,00000E3 -19-20AUG09-1/1

Use Steps and Handholds Correctly

Prevent falls by facing the machine when you get on and off. Maintain 3-point contact with steps and handrails. Never use machine controls as handholds.

Use extra care when mud, snow, or moisture present slippery conditions. Keep steps clean and free of grease or oil. Never jump when exiting machine. Never mount or dismount a moving machine.



T133468 —UN—15APR13

TX03679,00016F2 -19-12FEB07-1/1

Start Only From Operator's Seat

Avoid unexpected machine movement. Start engine only while sitting in operator's seat. Ensure all controls and working tools are in proper position for a parked machine.

Never attempt to start engine from the ground. Do not attempt to start engine by shorting across the starter solenoid terminals.



T133715 —UN—15APR13

TX03679,0001799 -19-22APR10-1/1

Use and Maintain Seat Belt

Use seat belt when operating machine. Remember to fasten seat belt when loading and unloading from trucks and during other uses.

Examine seat belt frequently. Be sure webbing is not cut or torn. Replace seat belt immediately if any part is damaged or does not function properly.

The complete seat belt assembly should be replaced every three years, regardless of appearance.



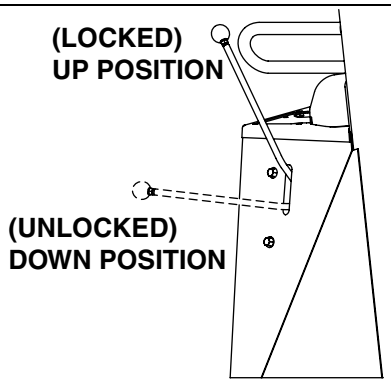
T133716 —19—17APR13

TX03679,00016DD -19-19MAR07-1/1

Prevent Unintended Machine Movement

Always move the park lock lever to the up LOCKED position before leaving the operator's seat for any reason.

Be careful not to accidentally actuate controls when coworkers are present. Engage park lock and lower work equipment to the ground during work interruptions. Stop the engine before allowing anyone to approach the machine. Follow these same precautions before standing up, leaving the operator's seat, or exiting the machine.



T207688 —19—31JAN05

LB82152,0000783 -19-04MAY11-1/1

Avoid Work Site Hazards

Avoid contact with gas lines, buried cables and water lines. Call utility line location services to identify all underground utilities before starting work.

Prepare work site properly. Avoid operating near structures or objects that could fall onto the machine. Clear away debris that could move unexpectedly if run over.

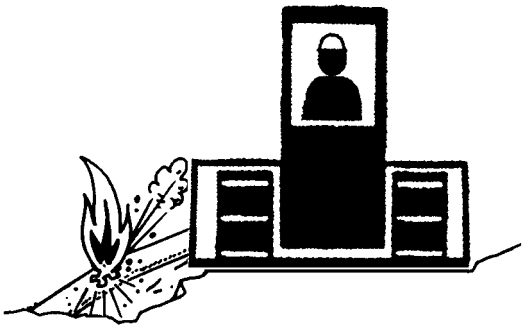
Avoid boom or attachment contact with overhead obstacles or overhead electrical lines. Never move machine closer than 3 m (10 ft) plus twice the line insulator length to overhead wires.

Keep bystanders clear at all times. Keep bystanders away from raised booms, attachments, and unsupported loads. Avoid swinging or raising booms, attachments, or loads over or near personnel. Use barricades or a signal person to keep vehicles and pedestrians away. Use a signal person if moving machine in congested areas or where visibility is restricted. Always keep signal person in view. Coordinate hand signals before starting machine.

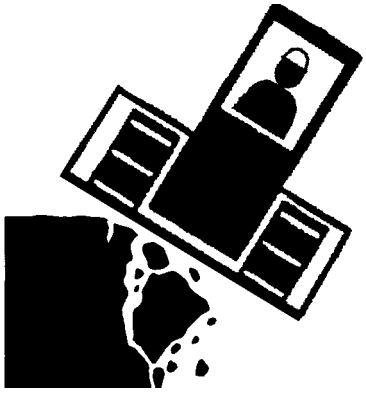
Operate only on solid footing with strength sufficient to support machine. Be especially alert working near embankments or excavations.

Avoid working under overhanging embankments or stockpiles that could collapse under or on machine.

Reduce machine speed when operating with tool on or near ground when obstacles may be hidden (e.g., during snow removal or clearing mud, dirt, etc.). At high speeds, hitting obstacles (rocks, uneven concrete or manholes) can cause a sudden stop. Always wear your seat belt.



T139002 —UN—05MAR01



T139003 —UN—05MAR01

VD76477,000120D -19-25APR08-1/1

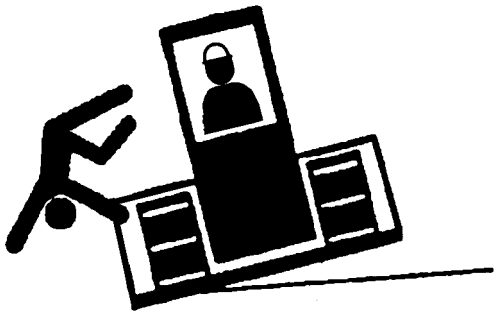
Keep Riders Off Machine

Always use seat belt.

Only allow operator on machine.

The instructional seat, if equipped, is used to accommodate trainers, persons that need to observe machine operation, and for coworkers to provide further operational instructions.

Riders are subject to injury due to fall from machine, being caught between machine parts, or being struck by foreign objects. Riders may obstruct the operator's view or impair the operator's ability to operate machine safely.



T137580 —UN—22FEB01

Keep Riders Off Machine

TX,NO,RIDERS,CRW -19-23APR20-1/1

Avoid Backover Accidents

Before moving machine, be sure that all persons are clear of machine path. Turn around and look directly for best visibility. Use mirrors to assist in checking all around machine. Keep windows and mirrors clean, adjusted, and in good repair.

Be certain reverse warning alarm is working properly.

Use a signal person when backing if view is obstructed or when in close quarters. Keep signal person in view at all times. Use prearranged hand signals to communicate.

Do not rely on the rear camera and radar object detection systems, if equipped, to determine if personnel are behind the machine. The system has limitations due to maintenance practices, environmental conditions, and operating range.



PC10857XW —UN—15APR13

TX,AVOID,BACKOVER -19-04MAR16-1/1

Avoid Machine Tip Over and Machine Damage

Use seat belt at all times.

Do not jump if the machine tips. You will be unlikely to jump clear and the machine may crush you.

Load and unload from trucks or trailers carefully. Be sure truck is wide enough and secured on a firm level surface. Use loading ramps and attach them properly to truck bed. Avoid trucks with steel beds because tracks slip more easily on steel.

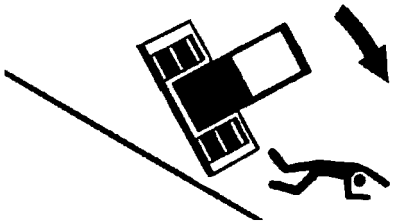
Be careful on slopes. Use extra care on soft, rocky, or frozen ground because machine may slip sideways in these conditions. When traveling up or down steep slopes, keep the bucket or blade on uphill side and just above ground level.

Ensure solid footing. Use extra care when operating on stockpile materials, or near banks or excavations that may cave-in and cause machine to tip or fall.

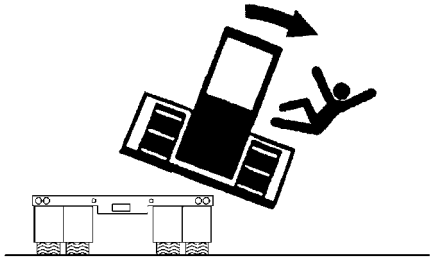
Avoid machine damage on slopes. Use extra care to operate machine.



T133716 —19—17APR13



T138416 —UN—22FEB01



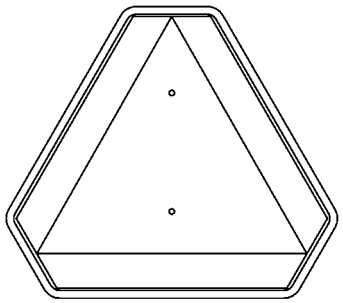
T138415 —UN—22FEB01

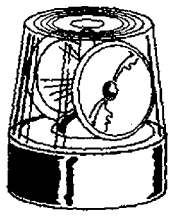
AM40430,00000B7 -19-12FEB07-1/1

Operating or Traveling On Public Roads

Machines that work near vehicle traffic or travel slower than normal highway speeds must have proper lighting and markings to assure they are visible to other drivers.

Install additional lights, beacons, slow moving vehicle (SMV) emblems, or other devices and use as required to make the machine visible and identify it as a work machine. Check state and local regulations to assure compliance. Keep these devices clean and in working condition.





T141891 —UN—15APR13

TX03679,00017C8 -19-02MAR07-1/1

Inspect and Maintain ROPS

A damaged roll-over protective structure (ROPS) should be replaced, not reused.

The protection offered by ROPS will be impaired if ROPS is subjected to structural damage, is involved in an overturn incident, or is in any way altered by welding, bending, drilling, or cutting.

If ROPS was loosened or removed for any reason, inspect it carefully before operating the machine again.

To maintain the ROPS:

- Replace missing hardware using correct grade hardware.
- Check hardware torque.
- Check isolation mounts for damage, looseness or wear; replace them if necessary.
- Check ROPS for cracks or physical damage.

TX03679,000179F -19-07SEP06-1/1

Add and Operate Attachments Safely

Always verify compatibility of attachments by contacting your authorized dealer. Adding unapproved attachments may affect machine stability or reliability and may create a hazard for others near the machine.

Ensure that a qualified person is involved in attachment installation. Add guards to machine if operator protection is required or recommended. Verify that all connections are secure and attachment responds properly to controls.

Carefully read attachment manual and follow all instructions and warnings. In an area free of bystanders and obstructions, carefully operate attachment to learn its characteristics and range of motion.

TX03679,00016F0 -19-12FEB07-1/1

Park and Prepare for Service Safely

Warn others of service work. Always park and prepare your machine for service or repair properly.

- Do not support machine with blade or attachments.
- Do not support machine with cinder blocks or wooden pieces that may crumble or crush.
- Do not support machine with a single jack or other devices that may slip out of place.
- Park machine on a level surface and lower blade and attachment to the ground.
- Engage park brake.
- Stop engine.
- Attach a “Do Not Operate” tag in an obvious place in the operator's station.

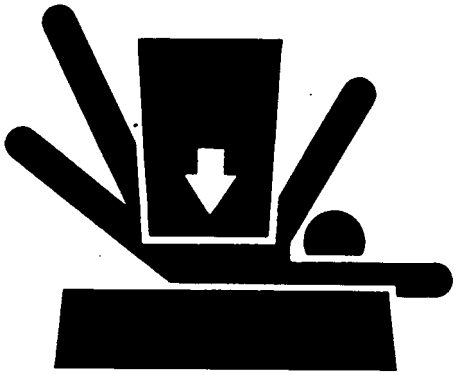
Securely support machine or attachment before working under it.

Understand service procedures before beginning repairs. Keep service area clean and dry. Use two people whenever the engine must be running for service work.

When performing above-ground maintenance, use appropriate support devices such as ladders, lifts, or platforms. If equipped, use the machine anchorage points and approved fall arrest harnesses and lanyards.



T133332 —19—17APR13



TS229 —UN—23AUG88

TX,PARK,CRW -19-21AUG20-1/1

Service Cooling System Safely

Explosive release of fluids from pressurized cooling system can cause serious burns.

Do not service radiator through the radiator cap. Only fill through the surge tank filler cap. Shut off engine. Only remove surge tank filler cap when cool enough to touch with bare hands. Slowly loosen cap to relieve pressure before removing completely.



TS281 —UN—15APR13

TX,SURGE -19-19JAN11-1/1

Remove Paint Before Welding or Heating

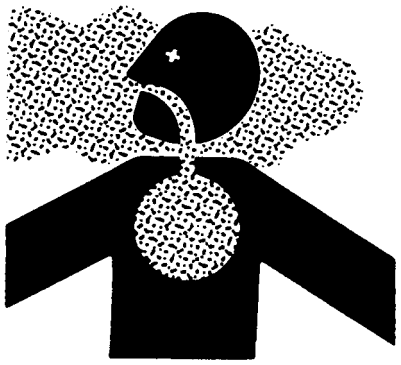
Avoid potentially toxic fumes and dust.

Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch.

Remove paint before heating:

- Remove paint a minimum of 100 mm (4 in.) from area to be affected by heating. If paint cannot be removed, wear an approved respirator before heating or welding.
- If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
- If you use solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

Do not use a chlorinated solvent in areas where welding will take place.



TS220 —UN—15APR13

Do all work in an area that is well ventilated to carry toxic fumes and dust away.

Dispose of paint and solvent properly.

DX,PAINT -19-24JUL02-1/1

Make Welding Repairs Safely

IMPORTANT: Disable electrical power before welding. Turn off main battery switch and disconnect positive (+) and negative (-) battery cables.

Do not weld or apply heat on any part of a reservoir or tank that has contained oil or fuel. Heat from welding and cutting can cause oil, fuel, or cleaning solution to create gases which are explosive, flammable, or toxic.

Avoid welding or heating near pressurized fluid lines. Flammable spray may result and cause severe burns if pressurized lines malfunction as a result of heating. Do not let heat go beyond work area to nearby pressurized lines.

Remove paint properly. Do not inhale paint dust or fumes. Use a qualified welding technician for structural repairs.



T133547 —UN—15APR13

Heating Near Pressurized Fluid Lines

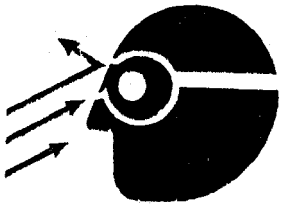
Make sure there is good ventilation. Wear eye protection and protective equipment when welding.

MB60223,0000212 -19-02JUL15-1/1

Drive Metal Pins Safely

Always wear protective goggles or safety glasses and other protective equipment before striking hardened parts. Hammering hardened metal parts such as pins and bucket teeth could dislodge chips at high velocity.

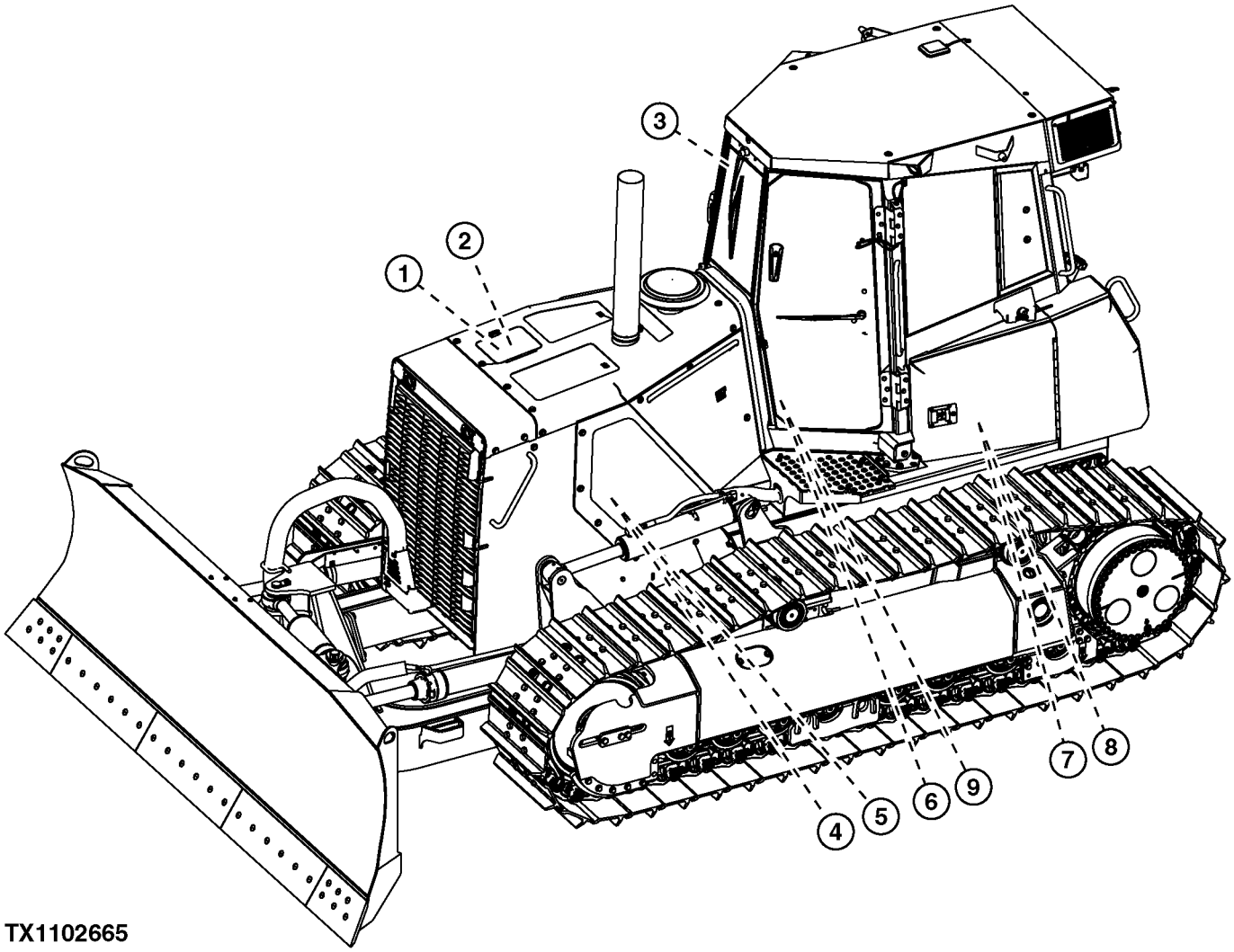
Use a soft hammer or a brass bar between hammer and object to prevent chipping.



T133738 —UN—15APR13

TX,PINS -19-20JAN11-1/1

Safety Signs



1— WARNING, Pressurized System
2— WARNING, Avoid Injury From Escaping Fluid.
3— WARNING, Seat Belt Should Be Worn At All Times
4— WARNING, Hot Surface
5— DANGER, Start Only From Seat
6— CAUTION, Engine Start and Stop Procedure
7— ATTENTION, Operator Station Tipping Procedure
8— WARNING, Always Install Cab Lock
9— WARNING, Keep Riders Off the Machine

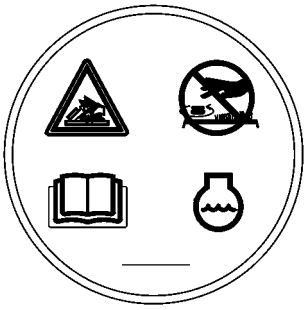
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MB60223,000024C -19-09DEC11-1/10

1. **WARNING, Pressurized System**

   Hot coolant can cause serious burns, injury or death. To open the cooling system filler cap, stop the engine and wait until the cooling system components are cool. Loosen the cooling system pressure cap slowly in order to relieve the pressure.

   This safety message is positioned on the surge tank cap.



TX1099924 —UN—24OCT11

MB60223,000024C -19-09DEC11-2/10

2. **WARNING, Avoid Injury From Escaping Fluid.**

   Avoid injury from escaping fluid. Contents of this accumulator are under pressure. Refer to proper Machine Model Technical Manual for disassembly or charging instructions and equipment required.

   Charge with Dry NITROGEN only.

   This safety message is positioned on or near all accumulators.





TX1099985 —19—02DEC11

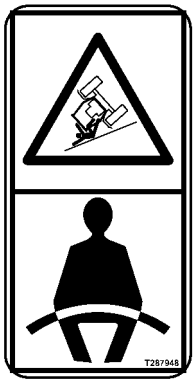
MB60223,000024C -19-09DEC11-3/10

3. **WARNING, Seat Belt Should Be Worn At All Times**

   A seat belt should be worn at all times during machine operation to prevent serious injury or death in the event of an accident or machine overturn. Failure to wear a seat belt during machine operation may result in serious injury or death.

   Avoid crushing DO NOT JUMP if machine tips. Use seat belt.

   This safety message is positioned on the ROPS post inside the cab.





TX1099887 —19—05DEC11

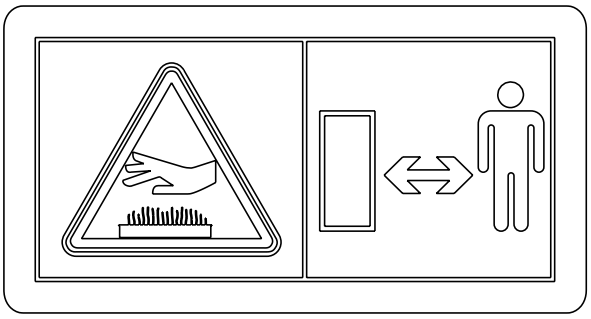
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MB60223,000024C -19-09DEC11-4/10

4. **WARNING, Hot Surface**

   Avoid personal injury. Do not touch a hot surface. Allow the engine to cool before any maintenance is performed on the engine.

   This safety message is positioned inside the engine compartment on the right side of machine.



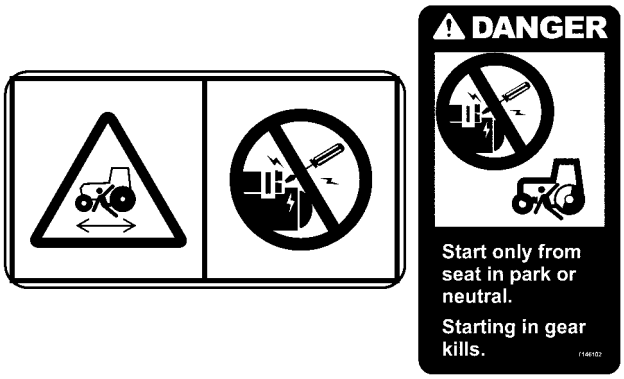
TX1102712 —UN—05DEC11

MB60223,000024C -19-09DEC11-5/10

5. **DANGER, Start Only From Seat**

   Start only from seat in park or neutral. Starting in gear kills.

   This safety message is positioned on the starter inside the engine compartment.



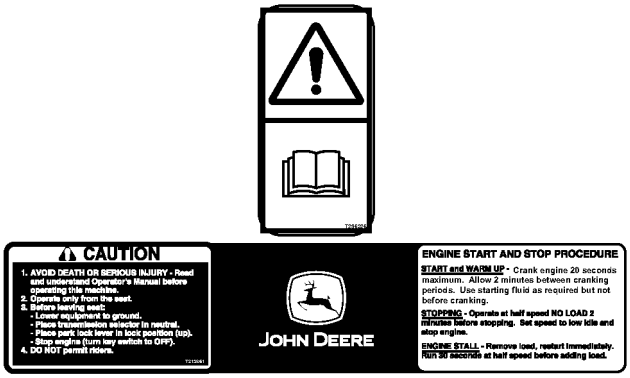
TX1099889 —19—05DEC11

MB60223,000024C -19-09DEC11-6/10

6. **CAUTION, Engine Start and Stop Procedure**

   Engine start and stop procedure.

   This safety message is positioned under the monitor on the front console.



TX1099988 —19—06DEC11

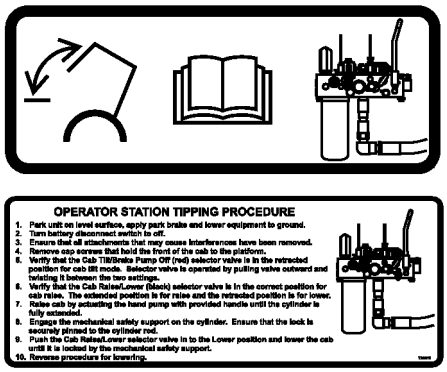
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MB60223,000024C -19-09DEC11-7/10

7. **ATTENTION, Operator Station Tipping Procedure**

   Procedure for safely tipping the operator station

   This safety message is positioned inside the right side utility compartment.



TX1099990 —19—02DEC11

MB60223,000024C -19-09DEC11-8/10

8. **WARNING, Always Install Cab Lock**

   Always install cab lock before working on or around this machine with the cab raised.

   This safety message is positioned inside the right side utility compartment.



TX1099991 —19—02DEC11

MB60223,000024C -19-09DEC11-9/10

9. **WARNING, Keep Riders Off Machine**

   Only allow the operator on the machine. Keep riders off.

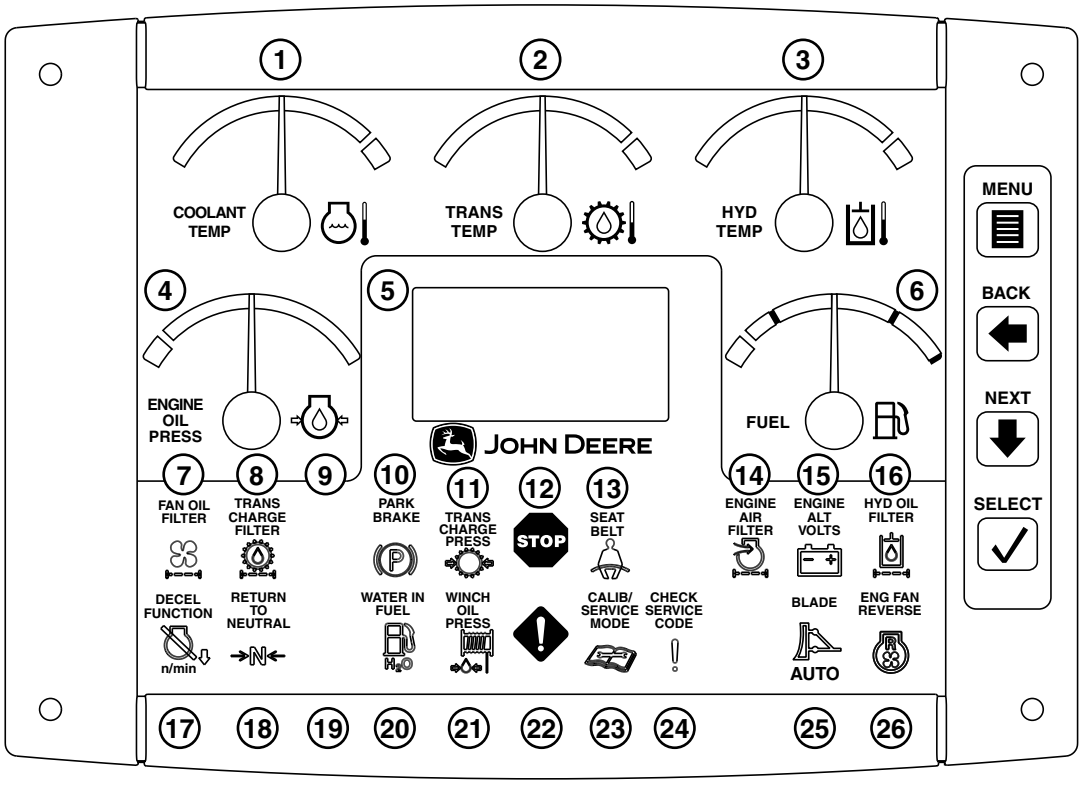
   This safety message is positioned under the monitor on the front console.



TX1102811 —UN—06DEC11

MB60223,000024C -19-09DEC11-10/10

Display Monitor (S.N. 141344—219962)



TX1009984 —19—13JUL06

TX1009984

Display Monitor (S.N. 141344—219962)

1— Engine Coolant Temperature Gauge
2— Transmission Oil Temperature Gauge
3— Hydraulic Oil Temperature Gauge
4— Engine Oil Pressure Gauge
5— Display Window
6— Fuel Level Gauge
7— Fan Oil Filter Restriction Indicator
8— Transmission Oil Charge Filter Restriction Indicator
9— Not Used
10— Park Brake Indicator
11— Transmission Oil Charge Pressure Indicator
12— STOP Indicator
13— Fasten Seat Belt Indicator
14— Engine Air Filter Restriction Indicator
15— Engine Alternator Voltage Indicator
16— Hydraulic Oil Filter Restriction Indicator
17— No Engine Decel Indicator
18— Return to Neutral Indicator
19— Not Used
20— Water-In-Fuel Indicator
21— Winch Oil Pressure Indicator
22— Caution Indicator
23— Calibration/Service Mode Indicator
24— Check Service Code Indicator
25— Auto Blade Indicator
26— Reversing Fan Drive Indicator

NOTE: Battery disconnect switch must be in ON position for monitor to operate.

The display monitor has three modes of operation, they are:

Key Off Mode—With battery disconnect switch ON and key switch OFF, each time the SELECT button is pressed the following information is displayed: MODEL NUMBER, HOUR METER symbol, and VOLTMETER symbol. While SELECT button is pressed, backlighting is supplied to engine coolant temperature gauge, fuel tank level gauge, and engine oil pressure gauge. With SELECT button released, unswitched power is removed and information is no longer displayed.

Bulb Check Mode—With battery disconnect switch ON, key switch ON, and the engine not running, display monitor will go into bulb check mode. All indicator lights, including red STOP light and caution indicator, will illuminate. All gauges will sweep from “low” to “high” and gauge warning lights will illuminate. Monitor will display model number. Monitor alarm will begin to sound. Alarm sounds two times to allow operator time to see that all display elements are functional.

Engine Running Mode—Monitor determines engine is running when it detects engine oil pressure or engine rpm. Monitor will display status of machine functions through its indicators and gauges.

- MENU provides initial entry into machine settings, diagnostics, and monitor settings. Once a main menu has been selected, pressing MENU again will return to the normal display mode Menu.
- BACK will back out of a menu, one item each time the key is pressed. The BACK key will eventually return to the normal display.
- NEXT will move to the next selection within a menu or mode. Press NEXT to cycle through all the possible selections in a menu.

Continued on next page

ER93822,00000ED -19-17FEB12-1/2

- SELECT toggles between the hour meter, charge pressure, and voltmeter displays during normal operation. During menu modes, SELECT will activate the currently chosen menu, provide additional information on codes, make selection, reset timers, or turn job timer on/off.

ER93822,00000ED -19-17FEB12-2/2

Display Monitor Functions (S.N. 141344—219962)

1. **Engine Coolant Temperature Gauge—**Indicator will light, STOP indicator will flash, and audible alarm will sound when pointer is in red zone. Immediately take load off the machine and run engine at fast idle. If indicators continue to stay on after several minutes of operation, stop engine and check for problem.

2. **Transmission Oil Temperature Gauge—**If pointer is in red zone, indicator will light, STOP indicator will flash, and audible alarm will sound indicating that the temperature is too high. Stop machine and allow transmission to cool. Shut off engine and take corrective action.

3. **Hydraulic Oil Temperature Gauge—**If pointer is in red zone, indicator will light, STOP indicator will flash, and audible alarm will sound indicating that the temperature is too high.

4. **Engine Oil Pressure Gauge—**When engine is running and engine oil pressure drops below recommended pressure, a segment will light and flash, the STOP indicator will light, and an audible alarm will sound. Immediately park machine in a safe area and stop the engine.

When engine is not running and key switch is on, the gauge light will be on, STOP light will not be on, and audible alarm will not sound.

5. **Display Window—**The display window will display the following functions.

- P or FNR
- Transmission Speed
- Tachometer
- Hour Meter
- Battery Voltage
- Transmission Charge Pressure

6. **Fuel Level Gauge—**Gauge will reflect fuel level in tank.

7. **Fan Oil Filter Restriction Indicator—**Indicator will light and caution indicator will illuminate when engine is running and fan oil filter becomes restricted. Replace fan oil filter as necessary.

8. **Transmission Oil Charge Filter Restriction Indicator—**Indicator will light and caution indicator will illuminate when engine is running and transmission oil charge filter becomes restricted. Replace transmission oil charge filter as necessary.

9. **Not Used.**

10. **Park Brake Indicator—**Indicator will light when machine is in PARK.

11. **Transmission Oil Charge Pressure Indicator—**Indicator will light, STOP indicator will light, and audible alarm will sound when charge pressure is too high or too low. Stop engine immediately.

12. **STOP Indicator—**STOP indicator flashes and alarm sounds when:

- Transmission charge pressure is too high or too low
- Water is in fuel system
- Hydraulic oil temperature is high
- Transmission oil temperature is high
- Engine coolant temperature is high
- Engine oil pressure is low

If indicators do not function correctly, see Troubleshooting. (Section 4-3.)

IMPORTANT: If STOP indicator flashes and alarm sounds for more than 10 seconds, stop machine immediately and investigate cause of problem.

13. **Fasten Seat Belt Indicator—**Indicator will light and stay on for 5 seconds when the machine is started.

14. **Engine Air Filter Restriction Indicator—**Indicator will light and caution indicator will illuminate when engine is running with air filter restricted.

Park machine in a safe area and shut engine off immediately.

Check air filters for restrictions.

15. **Engine Alternator Voltage Indicator—**Indicator will light when alternator voltage drops below 25 volts and when key switch is on and engine is not running.

16. **Hydraulic Oil Filter Restriction Indicator—**Indicator will light and caution indicator will illuminate when engine is running and hydraulic oil filter becomes restricted. Replace hydraulic oil filter as necessary.

NOTE: Restriction indicator may stay on for several minutes until hydraulic oil is warm.

17. **No Engine Decel Indicator—**Indicator will light when no engine deceleration feature is activated.

18. **Return to Neutral Indicator—**With park lock levers in up LOCKED position and transmission control lever out of neutral position, turning key switch ON will cause return to neutral indicator to light. Transmission control lever must be moved back to neutral position for machine to start.

19. **Not Used.**

20. **Water-In-Fuel Indicator—**Indicator will light, STOP indicator will light, and audible alarm will sound when water is detected in the fuel system. Stop engine immediately.

21. **Winch Oil Pressure Indicator—**Indicator is used if machine is equipped with a winch and a pressure switch circuit is setup on the machine. The indicator will illuminate if winch circuit oil pressure becomes too low.

When engine is not running and key switch is on, the gauge light will be on, STOP light will not be on, and audible alarm will not sound.

Continued on next page

22. **Caution Indicator—**If caution indicator lights, a problem is developing. It is not necessary to stop engine immediately, but the cause should be investigated as soon as possible.

23. **Calibration/Service Mode Indicator—**Indicator will light when machine is in a service mode or calibration.

24. **Check Service Code Indicator—**Indicator will light when a problem is detected in the monitor, transmission, or engine controller electrical systems.

25. **Auto Blade Indicator—**Indicator will light when auto blade function is enabled (Integrated Ground Control (IGC) machines only).

NOTE: The auto blade indicator is functional only when third party global positioning system (GPS) and/or laser guidance equipment is installed on IGC equipped machines.

26. **Reversing Fan Drive Indicator—**Indicator will light when reversing fan function is enabled.

ER93822,00000EE -19-17FEB12-2/2

Front Console Switch Functions (S.N. 141344—219962)

1—Under Seat Heater—If Equipped: Push switch to turn on under seat heater.

2—Fan Reversing Switch—If Equipped: Push switch to manually reverse fan for 30 seconds.

3—Decelerator Mode Switch: Push upper half of switch to enable engine mode. When the decelerator/brake pedal is pushed with the switch in engine enable mode, the engine speed will be decreased and effectively decrease ground speed. Push lower half of switch to enable transmission mode. When the decelerator/brake pedal is pushed with the switch in transmission mode, the transmission speed will decrease, but the engine speed will remain constant.

4—Standard Light Switch: Push upper half of switch to turn standard lights on. Push lower half of switch to turn standard lights off.

5—Optional Light Switch: Push upper half of switch to turn optional lights on. Push lower half of switch to turn optional lights off.



T198361A —UN—15MAR04

Switches

1— Under Seat Heater—If Equipped
2— Fan Reversing Switch—If Equipped
3— Decelerator Mode Switch
4— Standard Light Switch
5— Optional Light Switch

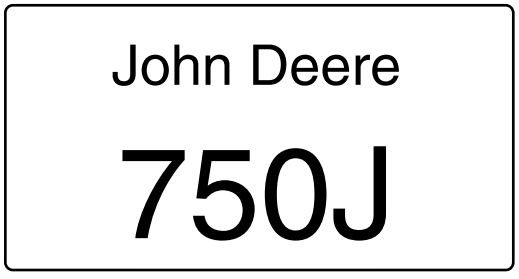
ER93822,00000EF -19-17FEB12-1/1

Monitor Display Unit—Normal Display (S.N. 141344—219962)

When key switch is turned on, all lights on display monitor will come on, all gauges will position gauge needle to the 12 o'clock position, and alarm will sound.

The basic display window will show the bulb check mode. After bulb check mode, the stop indicator and engine oil pressure indicator will flash.

The machine model number will show in the basic display window.



T202424 —19—09SEP04

750J Shown

Continued on next page

ER93822,00000F0 -19-17FEB12-1/2

Approximately 5 seconds later, the normal display will be shown.

The transmission mode display (1) shows the forward (F), neutral (N), reverse (R), park (P) status. When the park brake lever is in the up LOCKED position, a P will be displayed. When a transmission controller unit malfunction occurs, the display will show neutral.

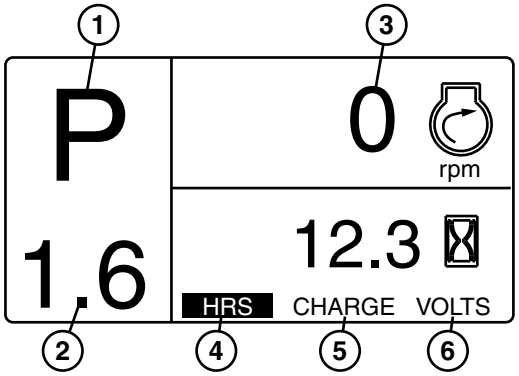
The transmission speed display (2) shows the transmission speed from 1.0 to 3.0 to the nearest tenth.

The tachometer display (3) shows the engine revolutions per minute to the nearest 5 rpm. When a transmission controller unit malfunction occurs, a "---" is displayed.

NOTE: Press SELECT or NEXT to toggle between hours, charge pressure, and system voltage.

The hour meter display (4) shows the machine hours to the nearest 1 decimal place. The hour meter accumulates hours only when the engine is on; and the icon flashes once per second. The hour meter displays up to 99,999.9 hours.

The transmission charge pressure display (5) will show transmission charge pressure in kPa or psi units.



T208648 —19—15FEB05

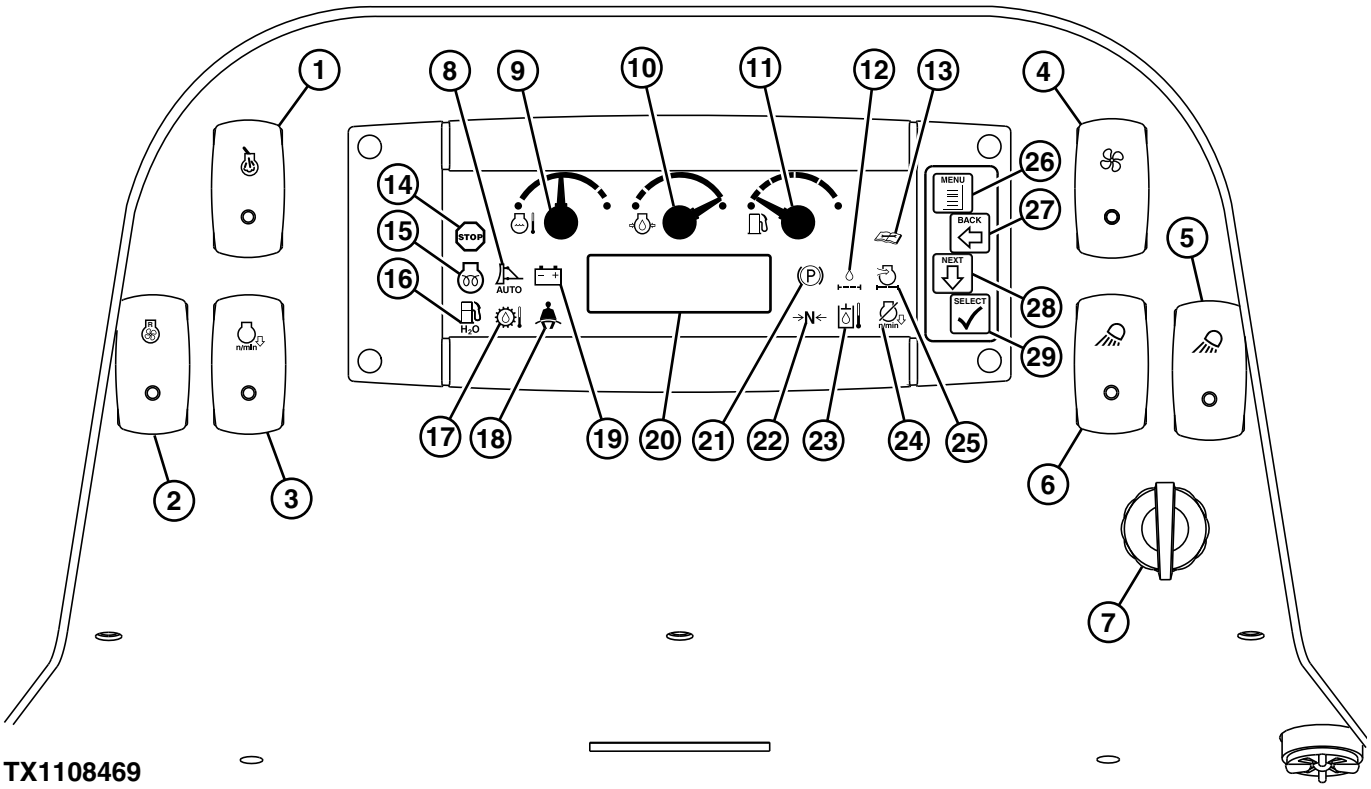
Normal Display Window

1— Transmission Mode Display
2— Transmission Speed Display
3— Tachometer Display
4— Hour Meter Display
5— Charge Pressure Display
6— System Voltage Display

The system voltage display (6) will show the vehicle's system voltage.

ER93822,00000F0 -19-17FEB12-2/2

Instrument Panel (S.N. 219963—)



TX1108469

Instrument Panel (S.N. 219963—)

1— Start Aid Switch
2— Reverse Fan Switch
3— Decel Mode Switch
4— Under-Seat Heater Switch
5— Optional Lights Switch—If Equipped
6— Front and Rear Work Lights Switch
7— Key Switch
8— Auto Blade Indicator
9— Engine Coolant Temperature Gauge
10— Engine Oil Pressure Gauge
11— Fuel Level Gauge
12— Oil Filter Restriction Indicator (Yellow)
13— Calibration/Service Code Indicator (Yellow)
14— Stop Indicator (Red)
15— Glow Plug Indicator (Green)
16— Water in Fuel Indicator (Red)
17— Transmission Oil Temperature Indicator (Yellow)
18— Seat Belt Indicator (Red)
19— Engine Alternator Voltage Indicator (Red)
20— Display Window
21— Park Brake Indicator (Red)
22— Return to Neutral Indicator
23— Hydraulic Oil Temperature Indicator (Yellow)
24— Decel Mode Indicator (Green)
25— Engine Air Filter Restriction Indicator (Yellow)
26— MENU Button
27— BACK Button
28— NEXT Button
29— SELECT Button

IMPORTANT: When the STOP indicator is activated, stop engine immediately and investigate cause of problem. DO NOT start engine until problem has been corrected.

Each display indicator light is color-coded to indicate the severity of the situation. Red is a high-level warning, yellow is a low-level warning and green indicates a condition.

When a red indicator lights, an audible alarm will sound. Stop the engine immediately and investigate the cause of the problem.

ER93822,00000F1 -19-17FEB12-1/1

Instrument Panel Functions (S.N. 219963—)

1—Start Aid Switch: Push switch to inject start aid fluid into engine. For additional information, see Starting Fluid—Cold Weather Start Aid. (Section 2-2.)

2—Reverse Fan Switch: Push switch to manually reverse fan for 15 seconds.

3—Decel Mode Switch: Push upper half of switch for “transmission” decel mode. When the brake/decel pedal is pushed with the switch in transmission mode, the transmission speed and engine speed will decrease. Push lower half of switch for “engine” decel mode. When the decel/brake pedal is pushed with the switch in engine mode, the engine speed will be decreased and effectively decrease ground speed.

4—Under-Seat Heater Switch: The under-seat heater switch has 3 positions. Move switch to the middle position to turn heater on low. Push top of switch to turn heater on high. Push bottom of switch to turn heater off.

5—Optional Lights Switch—If Equipped: Push upper half of switch to turn optional lights on. Push lower half to turn lights off.

6—Front and Rear Work Lights Switch: Push upper half of switch to turn front and rear work lights on. Push lower half to turn lights off.

7—Key Switch: The key switch has 4 positions: Accessory (A), OFF (B), ON (C) and Start (D).

8—Auto Blade Indicator: Indicator will light when auto blade function is enabled.

9—Engine Coolant Temperature Gauge: Indicator will light, STOP indicator will flash and audible alarm will sound when pointer is in red zone. Immediately take load off the machine and run engine at fast idle. If indicators continue to stay on after several minutes of operation, stop engine and check for problem.

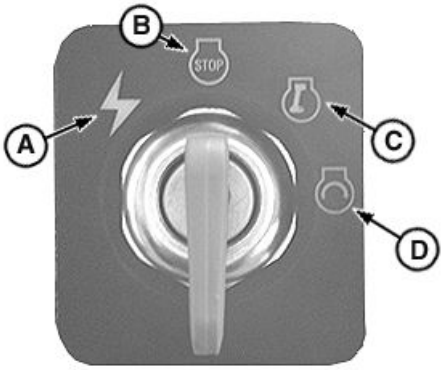
10—Engine Oil Pressure Gauge: When engine is running and engine oil pressure drops below recommended pressure, a segment will light and flash, the STOP indicator will light, and an audible alarm will sound. Immediately park machine in a safe area and stop the engine.

When engine is not running and key switch is ON, the gauge light will be on, STOP light will not be on, and audible alarm will not sound.

11—Fuel Level Gauge: Gauge will reflect fuel level in tank. Fuel level gauge needle will enter red zone when fuel level in tank is low.

12—Oil Filter Restriction Indicator: Indicator will light when engine is running and hydraulic and/or hydrostatic oil filter becomes restricted. Runtime screen will indicate which filter(s) are restricted. Replace oil filter as necessary.

It is normal for this light to remain lit for several minutes after start-up in cold weather. In extremely cold weather, it is a good practice to operate at reduced engine speed until the oil is warmed up so the light stays off.



TX1013002A —UN—05OCT06

Key Switch Positions

A—Accessory
B—OFF
C—ON
D—Start

13—Calibration/Service Mode Indicator: Indicator will light when machine is in a service mode or calibration.

14—STOP Indicator:

IMPORTANT: If STOP indicator flashes and alarm sounds, in most cases stop engine immediately and investigate cause of problem. Do not start engine until problem has been corrected.

The STOP indicator flashes and alarm sounds when:

- Engine oil pressure is too low
- Transmission oil temperature is excessively high
- Engine coolant temperature is excessively high
- Hydraulic temperature is excessively high

If engine coolant temperature indicator lights indicating that the temperature is excessively high, DO NOT stop engine. Reduce load and run engine at fast idle for several minutes. Stop engine and service machine.

The STOP indicator will light and audible alarm will sound when hydraulic oil temperature reaches 112°C (235°F) until it drops below 110°C (230°F). Immediately park the machine in a safe environment, stop engine and investigate the problem.

15—Glow Plug Indicator: Indicator will light when glow plugs are activated.

16—Water in Fuel Indicator: Indicator will light, STOP indicator will light, and audible alarm will sound when water is detected in the fuel system. Stop engine immediately.

17—Transmission Oil Temperature Indicator: Indicator will light when transmission oil temperature reaches 93°C (200°F) and stay lit until temperature drops below 90°C (195°F). The display window will automatically default to current temperature. Reduce load and monitor temperature.

Continued on next page

The STOP indicator will light and audible alarm will sound when transmission oil temperature reaches 95°C (205°F). Immediately take load off the machine and run engine at fast idle for several minutes. If indicator continues to stay on after several minutes of idling, stop engine and investigate the problem.

18—Seat Belt Indicator: Indicator will light and stay on for five seconds when the machine is started.

19—Engine Alternator Voltage Indicator: Indicator will light when battery/alternator is below 25-volts and when key switch is ON and engine is not running.

20—Display Window: The display window has four displays. Press the select button to cycle between displays on the display window when the monitor panel is active:

- Hour Meter (HRS)
- Transmission Charge Pressure (CHR)
- Voltmeter (VOL)
- Tachometer (RPM)

21—Park Brake Indicator: Indicator will light when key switch is ON and park lock lever is in the up (LOCKED) position.

22—Return to Neutral Indicator: With park lock lever in up position (LOCKED) and transmission control lever out of neutral position, turning key switch ON will cause the return to neutral indicator to light.

23—Hydraulic Oil Temperature Indicator: When hydraulic oil temperature reaches 112°C (235°F), hydraulic oil temperature indicator will flash, the STOP indicator will light and the alarm sounds until the hydraulic oil temperature falls below 110°C (230°F). It is not necessary to stop operation, but the temperature must be monitored.

24— Decelerator Mode Switch: Push upper half of switch for “transmission” decel mode. When the brake/decel pedal is pushed with the switch in transmission mode, the transmission speed and engine speed will decrease. Push lower half of switch for “engine” decel mode. When the decel/brake pedal is pushed with the switch in engine mode, the engine speed will be decreased and effectively decrease ground speed.

NOTE: The auto blade indicator is functional only when third party global positioning system (GPS) and/or laser guidance equipment is installed on IGC-equipped machines.

25—Engine Air Filter Restriction Indicator: Indicator will light when engine is running with air filter restricted. Park machine in a safe area and shut engine off immediately. Check air filters for restrictions.

26—Menu Button: With key switch ON, press the menu button to display the Main Menu.

27—Back Button: Use the back button to return to the previous menu.

28—Next Button: Use the next button to navigate to menu items.

29—Select Button: With key switch ON, press the select button to cycle between displays on the display window and to select menu options.

ER93822,00000F2 -19-16FEB12-2/2

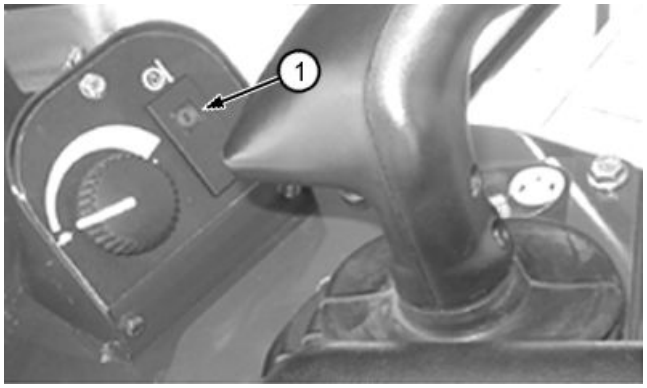
Warmup Indicator

The warmup indicator (1) will light when the transmission oil temperature is too low for normal machine operation. While the indicator is lit the following will occur:

- Engine speed is limited to 1200 to 1400 rpm

The indicator will remain lit, and engine speed will be limited until the transmission oil reaches a specified temperature, or the engine has run for 10 minutes. Indicator will turn off automatically when system has reached operating temperature.

For the final stage of the warmup cycle, the transmission speed will be limited to a maximum of 1.8 until the machine travels a combined distance of 91 m (300 ft). If speed is commanded faster than 1.8 prior to traveling 91 m (300 ft), the indicator will light and the speed will remain at 1.8.



T202721A —UN—18JAN05

Warmup Indicator

1— Warmup Indicator

HG31779,0000035 -19-21APR11-1/1

Air Conditioner and Heat—If Equipped

IMPORTANT: Do not operate air conditioner when air temperature is below -1°C (30°F).

When warm weather begins, check refrigerant for proper charge before using air conditioner.

Push switch (1) to turn air conditioner on or off.

NOTE: To increase temperature, make sure heater hose shutoff valve (4) on engine water pump housing is open.

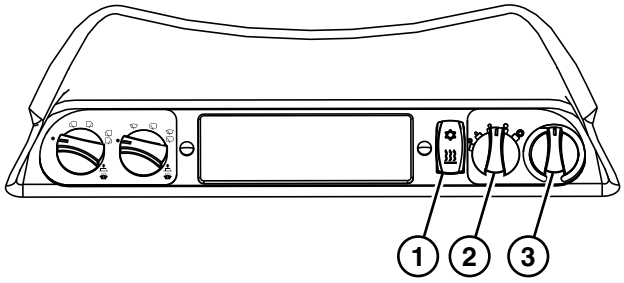
Turn temperature control dial (3) clockwise to increase temperature.

Turn blower control dial (2) clockwise to increase blower speed.

If temperature in cab becomes too cold, the temperature dial can be turned to add heat even though air conditioner is on.

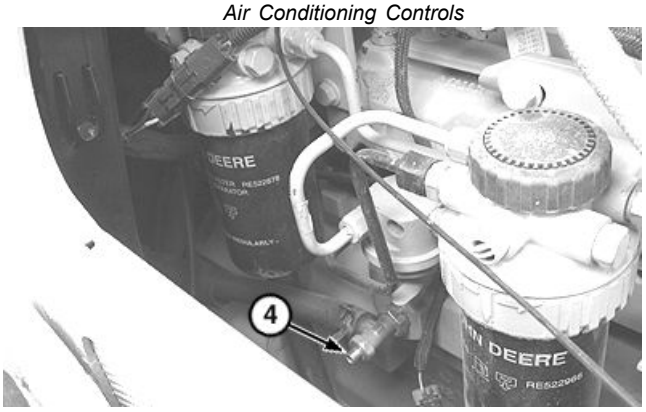
Move louvers left or right to direct or restrict air flow.

1— Air Conditioner Switch
2— Blower Control Dial
3— Temperature Control Dial
4— Heater Shutoff Valve



TX1108476 —UN—16FEB12

Air Conditioning Controls



TX1108474A —UN—16FEB12

750J Heater Shutoff Valve

ER93822,00000F3 -19-16FEB12-1/1

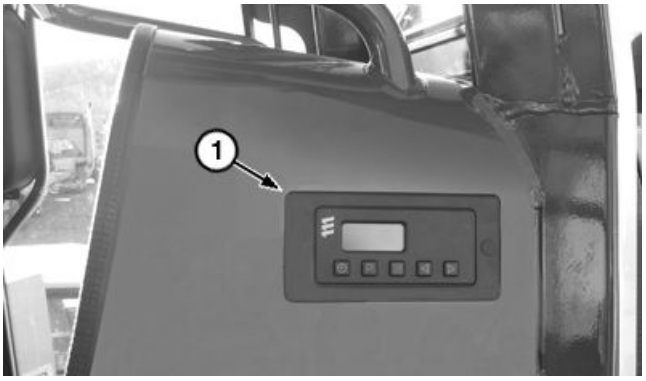
Fuel Fired Coolant Heater Timer—If Equipped

IMPORTANT: Engine damage may result if the fuel fired coolant heater is turned on during higher ambient temperatures. Operate the heater only in low ambient temperatures.

The fuel fired coolant heater timer (1) operates the fuel fired coolant heater and is located on the right side of the front console.

For more information on operating the fuel fired coolant heater timer see Operation—Operating the Machine. (Section 2-2.)

1— Fuel Fired Coolant Heater Timer—If Equipped



TX1088754A —UN—24FEB11

Front Console (right side)

LB82152,0000768 -19-11AUG15-1/1

Windshield Wiper and Washer Controls

Windshield Wiper and Washer Switches (S.N. —210213)

Push front and rear windshield wiper switch (1) to operate front and rear (if equipped) windshield wiper. Push door wiper switch (2) to operate door wipers. Continue to push switch(es) to operate washer fluid.

1— Windshield Wiper Switch **2— Door Wiper Switch**



T200589B —UN—02JUN04

Windshield Wiper Switch

JK47244,0000378 -19-21JAN14-1/2

Windshield Wiper and Washer Controls (S.N. 210214—)

Window Wiper Operation

Windshield wiper knob (1) has three positions:

- Turn windshield wiper knob to first position to operate front window wiper.
- Turn windshield wiper knob to second position to operate rear window wiper.
- Turn windshield wiper knob to third position to operate front and rear door wipers.

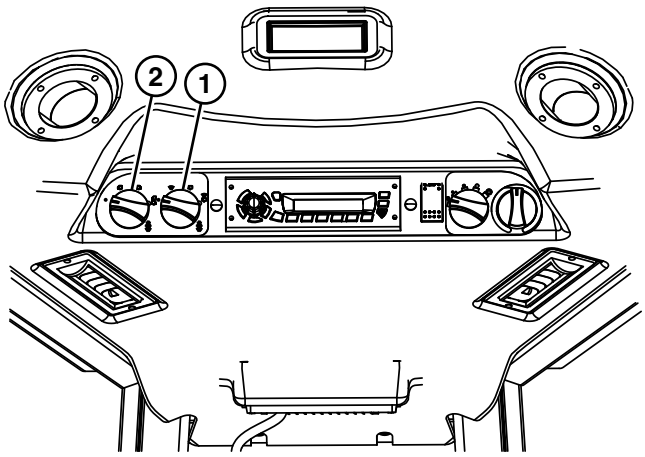
Push knob to operate windshield washers.

Door Wiper Operation

Door wiper knob (2) has three positions:

- Turn door wiper knob to first position to operate left door wiper.
- Turn door wiper knob to second position to operate right door wiper.
- Turn door wiper knob to third position to operate both left and right door wipers.

Push knob to operate door window washers.



TX1151234 —UN—16JAN14

Windshield Wiper Controls

1— Windshield Wiper Knob **2— Door Wiper Knob**

JK47244,0000378 -19-21JAN14-2/2

Battery Disconnect Switch

Battery disconnect switch (1) is located next to machine batteries. Turn switch to OFF position to disconnect electrical power to machine.

1— Battery Disconnect Switch



T198348A —UN—15MAR04

Battery Disconnect

HG31779,000034F -19-21APR11-1/1

Door Latch

From inside of cab, push door latch lever (1) to open door.

From outside of cab, pull door latch lever (1) to open door.

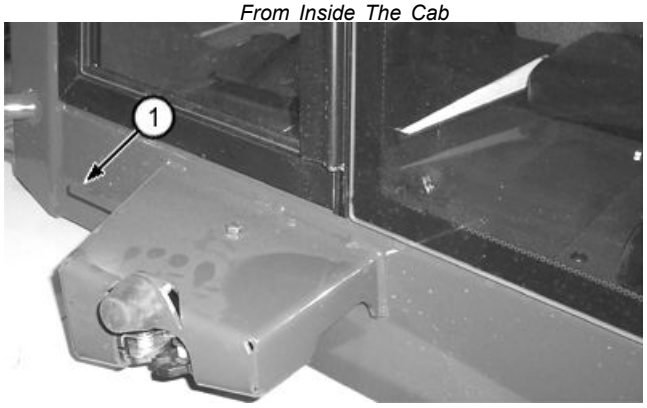
Doors can be latched in the open position when pushed back against the cab side.

1— Door Latch Lever



T206809A —UN—24JAN05

From Inside The Cab



T206808A —UN—24JAN05

From Outside The Cab

HG31779,0000061 -19-17DEC08-1/1

Secondary Exits—Cab Units Only

Exit cab through left-side door (1). Right-side door can be used as secondary exit.



T206581A —UN—31JAN05

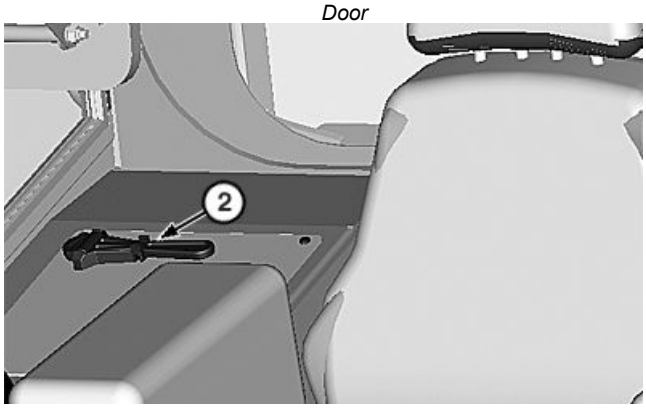
Door

Exit tool (2) is located to the right rear of the operator's seat.

If necessary, use exit tool to break glass or cut seat belt.

1— Door

2— Exit Tool—If Equipped



TX1091384A —UN—25APR11

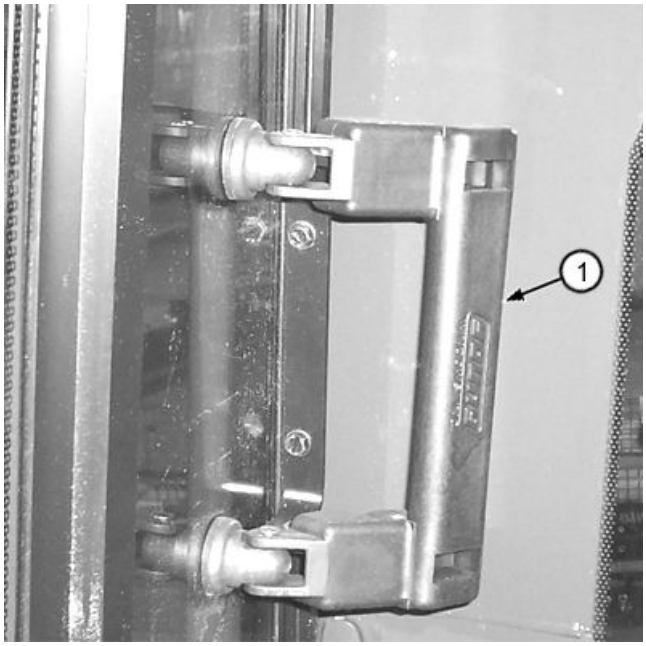
Exit Tool—If Equipped

LB82152,0000761 -19-25APR11-1/1

Cab Windows

Pull handle (1) forward and push out to open window.

1— Handle



T206810A —UN—24JAN05

Cab Window Handle

HG31779,0000062 -19-22NOV10-1/1

Adjust Deluxe Mechanical Suspension Seat—If Equipped

Use flip-out lever to turn weight/height adjustment knob (E). Turn knob clockwise for firm ride and counterclockwise for soft ride.

Lift lever (D) to adjust cushion position.

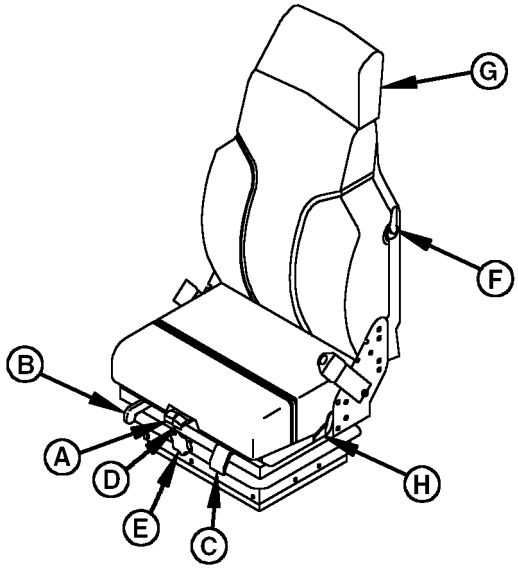
Lift seat fore-aft lever (A) to move seat forward and rearward. Release lever at one of several positions.

Remove your weight from seat. Lift up lever (C) and move seat to one of three positions for height adjustment.

Move seat to mid-to-aft position. While sitting in seat, turn weight adjustment knob (E) to support weight. Check weight indicator (B) for appropriate weight setting and continue to turn until yellow pointer inside tube is flush with tube opening.

While sitting in seat, lift lever (H) and allow cushion to angle forward or lean backward into desired position and release handle.

While sitting in seat, rotate lumbar support knob (F) to increase or decrease support to lower back.



T118252

T118252 —UN—16DEC98

A—Fore-Aft Lever
B—Weight Indicator
C—Seat Height Adjustment Lever
D—Seat Cushion Adjustment Lever
E—Weight/Height Adjustment Knob
F—Lumbar Support Adjustment Lever
G—Head Rest
H—Back Cushion Angle Adjustment Lever

OUO1043,00001E6 -19-22NOV00-1/1

Adjust Air Suspension Seat—If Equipped

Seat height adjusts automatically to weight of operator.

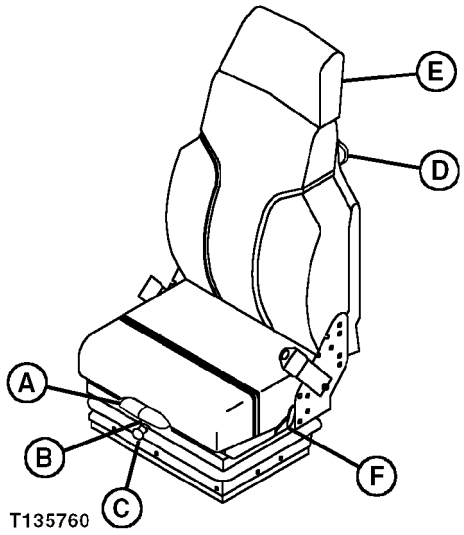
Lift seat fore-aft lever (A) to move seat forward or rearward. Release lever to lock seat in position.

Lift seat cushion adjustment lever (B) to adjust cushion position. Release lever to lock seat in position.

Pull ride adjustment knob (C) out to raise seat. Push ride adjustment knob in to lower seat. Release knob to lock seat into position.

While sitting in seat, turn lumbar support lever (D) to increase or decrease support to lower back.

While sitting in seat, lift seat back tilt lever (F) to tilt seat back forward or backward. Release lever to lock seat in position.



T135760 —UN—22NOV00

A—Fore-Aft Lever
B—Seat Cushion Adjustment Lever
C—Ride Adjustment Knob
D—Lumbar Support Adjustment Lever
E—Head Rest
F—Seat Back Tilt Lever

OUO1043,00001E4 -19-01DEC16-1/1

Fire Extinguisher Mounting Location

MOUNTING LOCATION:

The designated fire extinguisher mounting location (1) is inside the cab on the left rear side.

USE:

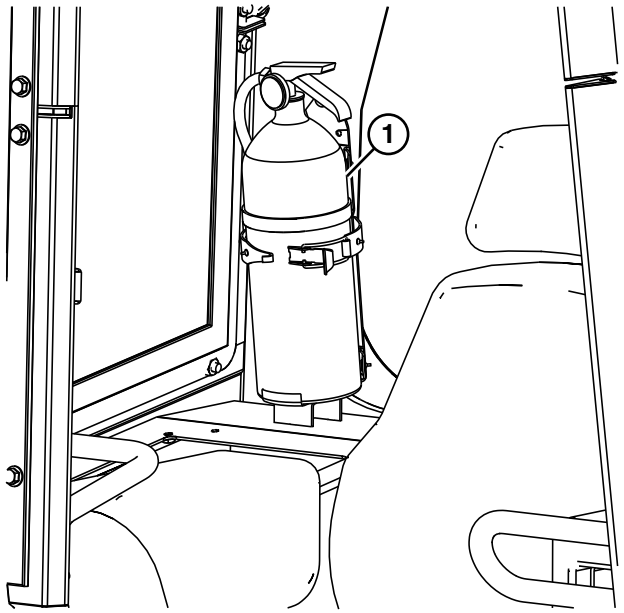
NOTE: All fire extinguishers do not operate the same. Read operating instructions on canister.

The portable fire extinguisher is used to aid in the extinguishing of small fires. Refer to individual manufacturers' instructions and proper fire fighting procedures before the need to use the fire extinguisher arises. See Prevent Fires. (Section 1-2.)

MAINTENANCE:

IMPORTANT: Avoid possible machine damage. Check gauge—if equipped, on fire extinguisher. If fire extinguisher is not fully charged, recharge or replace it according to the manufacturer's instructions.

Inspect and maintain the fire extinguisher following the manufacturer's recommendations and all local, regional and national regulations.



TX1053422 —UN—18DEC08

Fire Extinguisher Mounting Location

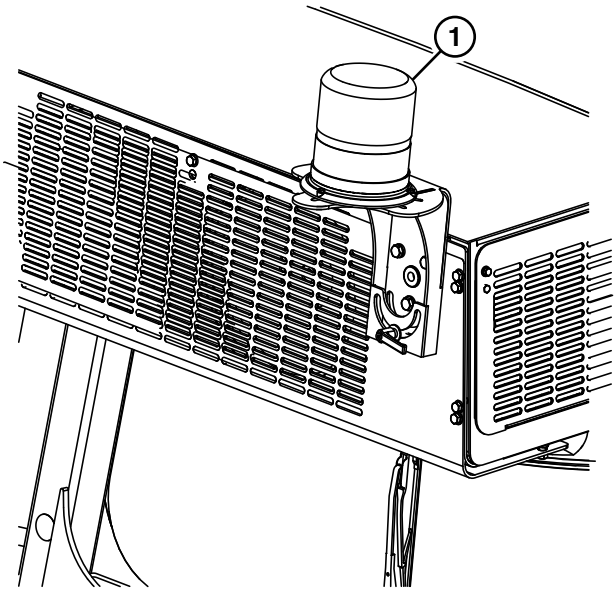
1— Fire Extinguisher Mounting Location

LB82152,0000776 -19-25APR11-1/1

Beacon—If Equipped

Beacon (1) light is located on right rear of crawler. Beacon will be powered by ignition power and will be on whenever key switch is on.

1— Beacon (right rear of cab)



Beacon

LB82152,0000760 -19-21APR11-1/1

Inspect Machine Daily Before Starting

Do daily maintenance checks. See Maintenance—Every 10 Hours or Daily. (Section 3-4.)

- Inspect grille and radiator screens (1) for obstructions.
- Clean engine shields (2).
- Inspect precleaner (3), and clean as necessary.
- Clean operator station (4), check pedals for freedom of movement, and check fire extinguisher charge, if equipped.
- Check fuel level. Remove fuel tank cap (5), and fill with proper fuel, if necessary.

Inspect the following before starting:

ELECTRICAL SYSTEM: Check for worn or frayed wires and loose or corroded connections.

HYDRAULIC SYSTEM: Check for leaks, missing or loose clamps, kinked hoses, and lines or hoses that are making contact with each other or other machine parts.

FUEL SYSTEM: Drain fuel filter. See Drain Fuel Filter Sediment. (Section 4-1.)

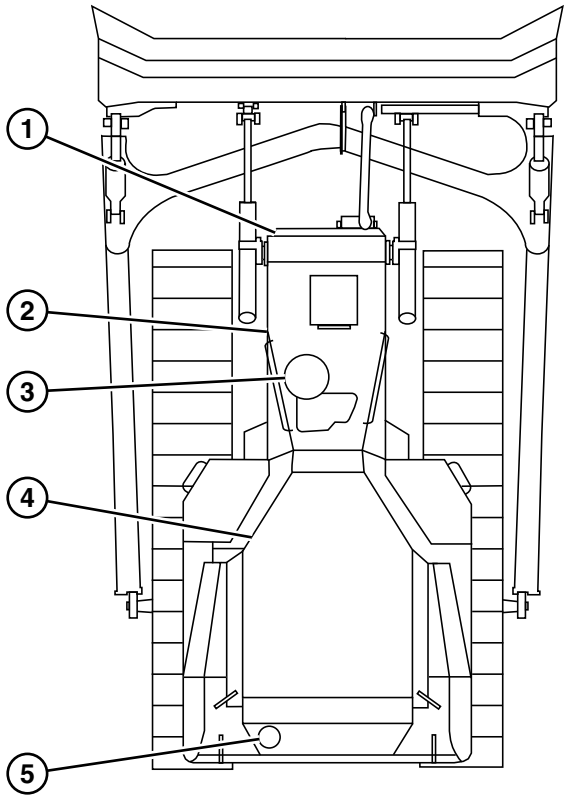
HARDWARE: Check for loose or missing parts.

LUBRICATION: Check lubrication points on Periodic Maintenance Chart. See Periodic Maintenance. (Section 3-2.)

SHEET METAL AND TRACKS: Check for bent, broken, loose, or missing parts.

PROTECTIVE DEVICES: Inspect guards, shields, ROPS, and seat belt.

SAFETY: Walk around machine to be sure all persons are away from machine area.



TX1010852 —UN—03AUG06

Inspect Machine Daily Before Starting

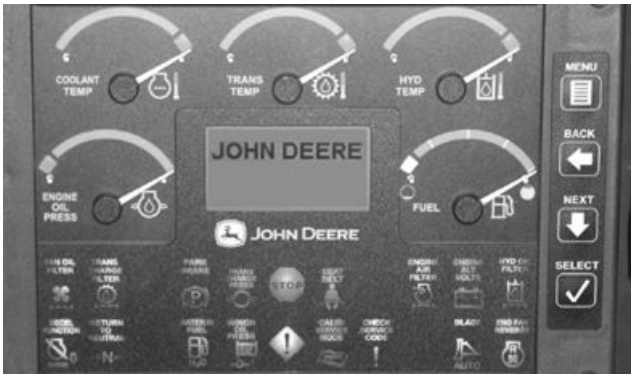
1— Grille and Radiator Screens
2— Engine Shields
3— Precleaner
4— Operator Station
5— Fuel Tank Cap

MH66O88,00001E4 -19-03MAY11-1/1

Check Instruments Before Starting

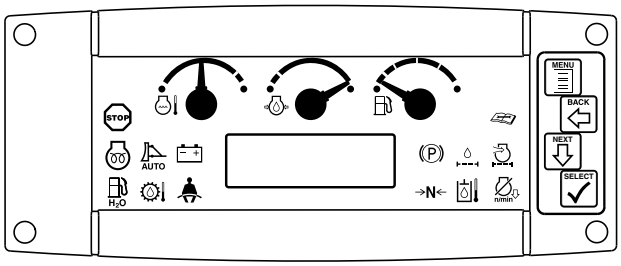
With battery disconnect switch ON, key switch ON and engine not running, display monitor will go into bulb check mode. All warning indicators, red STOP light, and yellow caution indicator are illuminated.

All indicators and displays on monitor will light and monitor alarm will beep twice in one-second intervals.



TX1016216A —UN—06DEC06

Check Instruments Before Starting (S.N. 141344—219962)



TX1108450 —UN—15FEB12

Check Instruments Before Starting (S.N. 219963—)

ER93822,00000F5 -19-17FEB12-1/1

Engine Break-In Period

IMPORTANT: To avoid engine damage, it is critical to observe the engine break-in period. Extra care during the first 100 hours of operation will result in more satisfactory long-term engine performance and life. DO NOT exceed 100 hours of operation with John Deere Break-In Plus™ engine oil.

This machine is factory filled with John Deere Break-In Plus engine oil.

1. Operate the machine at heavy or normal loads with minimal idling during the break-in period. During the first 20 hours, avoid prolonged periods of engine idling or sustained maximum load operation. If engine will idle longer than 5 minutes, stop engine.

IMPORTANT: DO NOT add make-up oil until the oil level is BELOW the ADD mark on the dipstick. John Deere Break-In Plus oil should be used to make up any oil consumed during the break-in period.

If John Deere Break-In Plus Engine Oil is not available, use a 10W-30 diesel engine oil meeting one of the following during the initial 50 hours of operation:

- **API Service Category CK-4**
- **API Service Category CJ-4**
- **ACEA Oil Sequence E9**
- **ACEA Oil Sequence E6**

2. Check engine oil level more frequently during the engine break-in period.
3. Change oil and oil filter after first 100 hours of operation (maximum). Fill crankcase with the normal seasonal viscosity grade oil. See Diesel Engine Oil. (Section 3-1.)
4. Watch coolant temperature gauge closely. If coolant temperature rises above specified limits on the gauge, reduce load on engine. Unless temperature drops quickly, stop the engine and determine the cause before resuming operation. See Miscellaneous—Troubleshooting.
5. Watch oil pressure gauge for pressure within specification.
6. Check belt for proper alignment and seating in pulley grooves.

Break-In Plus is a trademark of Deere & Company

TX,BREAKIN,JD100HR -19-17SEP20-1/1

Starting the Engine

CAUTION: Prevent asphyxiation. Engine exhaust fumes can cause sickness or death.

If you must operate engine in a building, be positive there is adequate ventilation. Either use an exhaust pipe extension to remove the exhaust fumes or open doors and/or windows to bring enough outside air into the area.

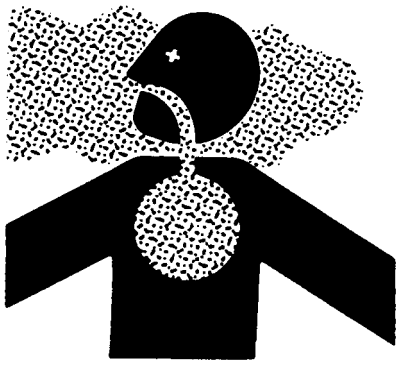
CAUTION: Avoid possible injury or death from a runaway machine. Do not start engine by shorting across starter terminals. Machine will start in gear if normal starting circuitry is bypassed.

NEVER start engine while standing on ground. Start engine only from operator's seat with transmission in neutral and park lock lever up.

If machine is equipped with fuel fired coolant heater, follow these steps before attempting to start machine:

1. Turn the fuel fired coolant heater on.
2. After preheating for approximately 30 minutes to maximum 60 minutes, the engine is ready to be started.

For more information, see Operating Fuel Fired Coolant Heater—If Equipped in this section.



TS220 —UN—15APR13

Asphyxiation



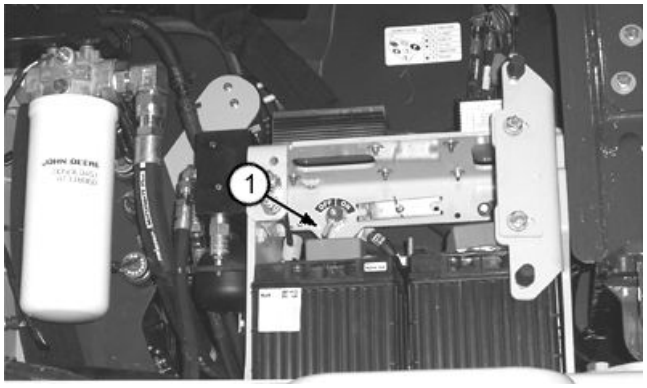
T6607AO —UN—18OCT88

Runaway Machine

LB82152,000076A -19-25APR11-1/4

1. Turn battery disconnect switch (1) clockwise to ON position.

1— Battery Disconnect Switch



T206570A —UN—18JAN05

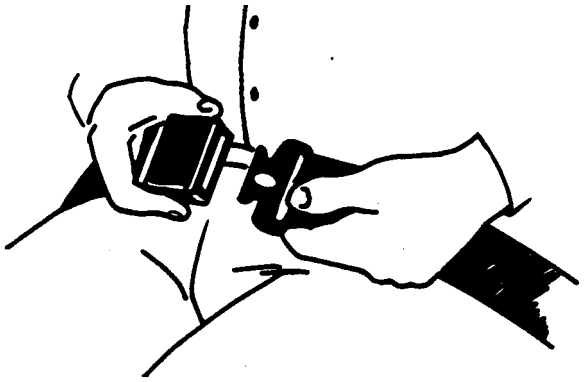
Battery Disconnect Switch

Continued on next page

LB82152,000076A -19-25APR11-2/4

CAUTION: Use seat belt to avoid being injured or killed in case of accident such as an overturn.

2. Sit in seat and fasten seat belt.



TS175 —UN—23AUG88

Seat Belt

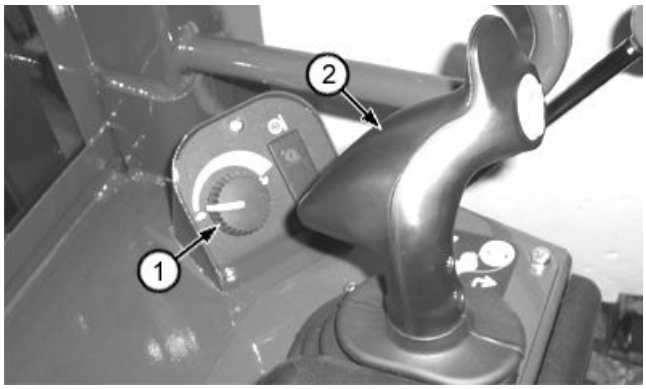
LB82152,000076A -19-25APR11-3/4

3. Place transmission control lever (TCL) (2) in neutral position.
4. Park lock lever (3) must be in the up LOCKED position.
5. Turn engine speed control dial (1) to slow idle.
6. Push horn button to sound horn.

IMPORTANT: Do not operate starter for more than 20 seconds at a time or starter may be damaged. If engine does not start, wait at least 2 minutes before trying again. If engine does not start in four attempts, refer to Troubleshooting section. (Section 4-3.)

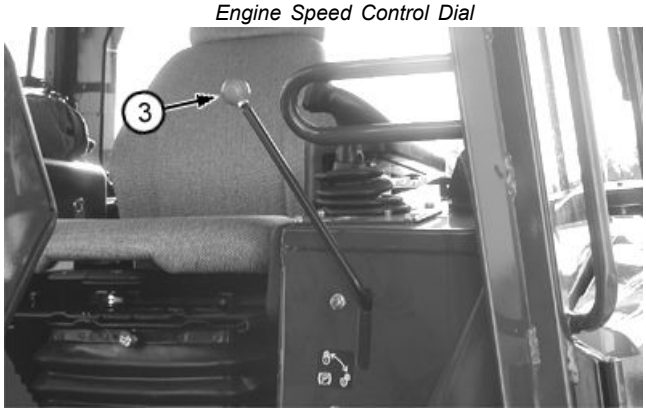
7. Turn key switch clockwise to turn engine until it starts. With engine running, adjust engine rpm to 1600 (half speed). See Engine Warmup in this section for proper warmup procedure.

1— Engine Speed Control Dial
2— Transmission Control Lever (TCL)
3— Park Lock Lever



T206612A —UN—24JAN05

Engine Speed Control Dial



T198352B —UN—15MAR04

Park Lock Lever

LB82152,000076A -19-25APR11-4/4

Starting Fluid—Cold Weather Start Aid

CAUTION: Prevent possible injury from exploding container. Starting fluid is highly flammable. Keep container away from heat, sparks, and open flame. Contents are pressurized. Do not puncture or incinerate container. Remove container from machine if engine does not need starting fluid.

IMPORTANT: Prevent damage to engine. Use start aid when temperatures are below 4.4° C (40° F) and only when engine is COLD.

Using Starting Fluid

IMPORTANT: To avoid engine damage, push start aid button only when engine is cold and cranking. Start aid fluid is being injected into engine as long as you push switch.

NOTE: Crank engine for 20 seconds maximum, allowing 2 minutes between cranking periods.

While cranking engine, push start aid switch (1).

Replacing Start Aid Can

1. Remove clamp (2) from container.
2. Turn container (3) counterclockwise to remove.
3. Install new container by turning clockwise into starting valve.

IMPORTANT: Protect start aid components from possible damage. Use dust cap on starting valve.

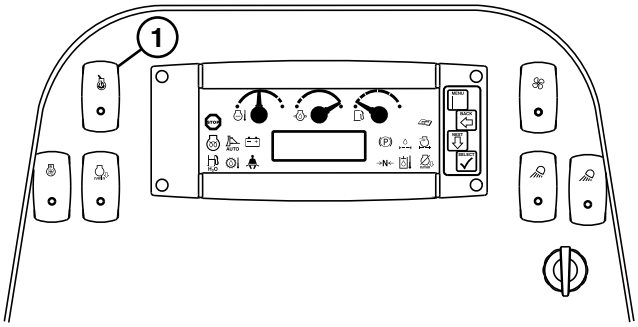
4. If no starting fluid is needed, remove container and install dust cap (4).

1— Start Aid Switch
2— Clamp
3— Container
4— Dust Cap



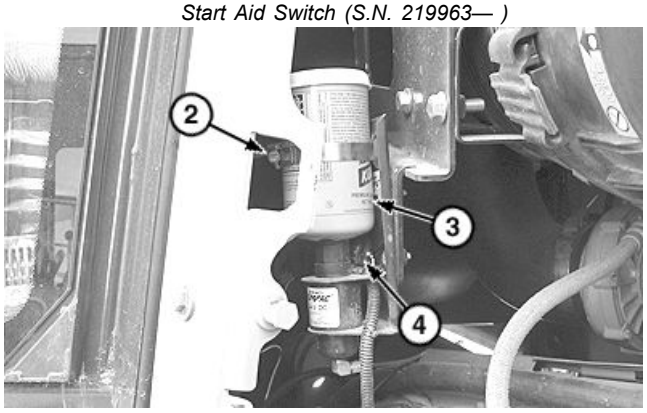
T206615A —UN—24JAN05

Start Aid Switch (S.N. 141344—219962)



TX1108463 —UN—16FEB12

Start Aid Switch (S.N. 219963—)



TX1018224A —UN—06FEB07

Start Aid Container

ER93822,00000F6 -19-17FEB12-1/1

Engine Warmup

1. After engine starts, run at 1600 rpm for 2 minutes. Do not run at fast or slow idle.
2. Operate machine at less-than-normal loads and speeds until engine is at normal operating temperature.

HG31779,0000020 -19-20JUL10-1/1

Cold Weather Warmup

IMPORTANT: If hydraulic oil is cold, hydraulic functions move slowly. Do not attempt machine operations until hydraulic functions move at close-to-normal cycle times.

In extremely cold conditions, an extended warmup period will be necessary. The transmission speed and engine speed will be limited.

The warmup light indicates the crawler engine and ground speed are being limited due to extreme cold conditions. Engine speed will be limited to between 1200 and 1400 rpm for up to 10 minutes. Additionally, transmission speed setting will be limited to 1.8 until crawler has moved 300 feet after completing the 10 minute engine warmup period.

Avoid sudden operation of hydraulic functions until engine is thoroughly warmed up. Remove ice, snow, and mud before operation.

NOTE: Use lower viscosity oil in the hydraulic and transmission system to help start the engine when ambient temperature is below -18°C (0°F). See Transmission, Hydraulic, and Hand Pump Reservoir Oil. (Section 3-1.)

Cycle all hydraulic functions to distribute warmed oil until all functions operate freely.

LB82152,000077B -19-25APR11-1/1

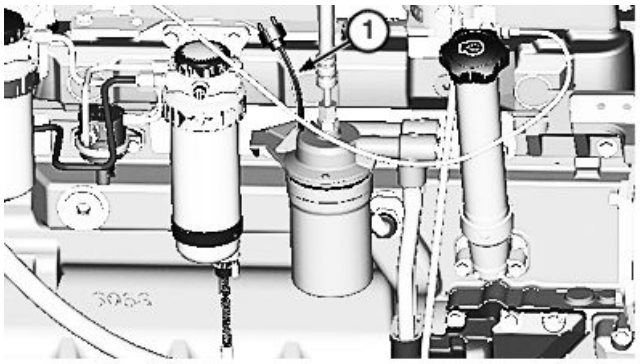
Engine Block Heater—If Equipped

CAUTION: Prevent possible injury from electrical shock. Use grounded cord and inspect for damage before connecting to power source.

IMPORTANT: Prevent property damage as a result of possible fire from an overheated electrical cord. Use a heavy-duty, grounded cord to connect heater to electrical power.

Supply voltage for engine block heater (1) can be 220 V or 110 V. Ensure correct supply voltage is used for engine block heater.

1. Open right front service door to access engine block heater (1).
2. Connect engine block heater to electrical power 10 hours before starting engine.



TX1091186 —UN—19APR11

Engine Block Heater

1— Engine Block Heater

3. Close service door.

LB82152,0000765 -19-17OCT17-1/1

Operating Fuel Fired Coolant Heater—If Equipped

CAUTION: Prevent asphyxiation. Engine exhaust fumes can cause sickness or death to you or someone else.

If you must operate engine in a building, be positive there is adequate ventilation. Either use an exhaust pipe extension to remove the exhaust fumes or open doors and/or windows to bring enough outside air into the area.

CAUTION: Handle fuel carefully to reduce risk of fire. Do not fill the fuel tank with heater turned on.

Do not operate heater in enclosed areas where combustible fumes may be present. Operate heater only in open areas to keep combustible fumes away from machine.

Keep any flammable material a minimum distance of 50 mm (2.0 in.) from exhaust tube.

The diesel fuel burning heater draws fuel from machine fuel tank at a rate of approximately 0.1 gal/hr.

Ensure the fuel system is intact and there are no leaks.

Use proper coolant. Failure to do so may cause damage of engine and/or personal injury.

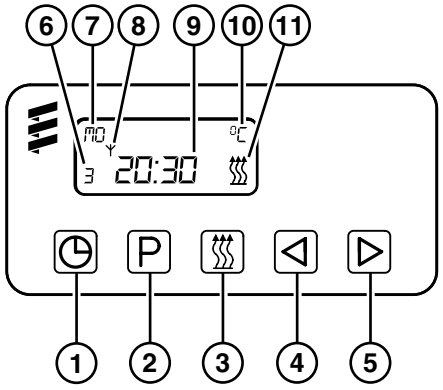
IMPORTANT: The coolant heater requires that the coolant in the system to be heated, contain the proper mixture of water and coolant to prevent coolant from freezing or slushing. If the coolant becomes slushy or frozen, the heater's coolant pump cannot move the coolant causing a blockage of the circulating system.

Setting Time and Weekday

1. Briefly press time button (1). Time display (9) 12:00 flashes.
2. Set the current time using backward button (4) or forward button (5). When the time display stops flashing, the time has been stored.
3. The weekday display (7) then begins to flash. Set the current weekday using backward button or forward button. When the weekday display stops flashing, the weekday has been stored.
4. If the time is ON, the display continues to be displayed. If the time is OFF, the display disappears after 10 seconds.

Adjusting Time and Weekday

1. Press and hold down time button until the time flashes.



TX1089196 —UN—10MAR11

TX1089196

Fuel Fired Coolant Heater Timer Display

1— Time Button
2— Program Button
3— Heat On Button
4— Backward Button
5— Forward Button
6— Memory Display
7— Weekday Display
8— Radio Remote Control Symbol
9— Time Display
10— Temperature Display
11— Heat Status Display

2. Follow steps 2—4 under Setting Time and Weekday. If only the time is to be adjusted, the flashing weekday display can be skipped by pressing the time button twice.
3. When the weekday has been adjusted, pressing the time button causes the display to stop flashing and the weekday to be stored.

Heating Without Programming (Time OFF)

Switch On Heating:

Briefly press the heat on button (3). Display window will display heat status (11), and current time or preset time. The default heating time is set to 120 minutes. It can be changed permanently or temporarily.

Temporarily Setting New Heating Time:

1. Briefly press the heat on button.
2. To decrease heating time (1 minute increments), press backward button. To increase heating time (120 minutes maximum), press forward button.

Switch Off Heating:

Briefly press heat on button. The heat status display disappears. Automatic after-run for cool-down purposes will begin.

Continued on next page

LB82152,0000769 -19-11AUG15-1/3

Heating Without Programming (Time ON)

Switch On Heating:

1. Briefly press heat on button.
2. Display window will display heat status, time and weekday.
3. Heating remains operational until the time is switched off. If the time is switched off, the heating remains switched on for 15 minutes. This time can be increased (maximum of 120 minutes), by pressing forward button or decreased in 1 minute increments by pressing backward button.

Switch Off Heating:

Briefly press heat on button. The heat status display disappears. Automatic after-run for cool-down purposes will begin.

Programming Start of Heating

Selecting and Activating Memory:

Three switch-on times within the following 24-hour period or one switch-on time in seven days can be stored in memory. Only one switch-on time can be activated at a time.

1. To activate first memory: Press program button (2) once. Memory display (6): 1 (default setting 12:00).
2. To activate second memory: Press program button twice. Memory display: 2 (default setting 12:00).
3. To activate third memory: Press program button once more. Memory display: 3 (default setting 12:00).
4. Press program button repeatedly until the memory display disappears.

NOTE: Neutral status—no memory activated.

Program Switch On Heating Within 24 Hours

The correct program day is automatically displayed. No adjustment is necessary.

Set the Program Time:

1. Press program button repeatedly until the desired memory display flashes 1, 2 or 3. Briefly press and release backward button or forward button. The program time will flash.
2. Set the program time for heating using backward button or forward button. Setting is only possible if the program time is flashing. To select another memory, press program button.

Program Switch On Heating After 24 Hours (Maximum 7 Days)

Set the Program Time:

1. Press program button repeatedly until the desired memory display flashes 1, 2 or 3. Briefly press and release backward button or forward button. The program time will flash.
2. Set the program time for heating using backward button or forward button. Setting is only possible if the program time is flashing. To select another memory, press program button.

Set the Program Day:

The program day begins to flash approximately 5 seconds after the program time has been set.

1. Set the program day for heating using the backward button or forward button.
2. The program time and program day are stored when the time display disappears or when the current time appears. The memory display indicates the activated memory. The flashing heat status symbol also indicates that a memory has been activated.

Checking Activated Memory

The program time of the displayed memory is displayed for approximately five seconds. The display then disappears or the current time is displayed (if the time is ON).

The program time display and the program weekday can then be called up by pressing program button once for 5 seconds.

Temperature Display

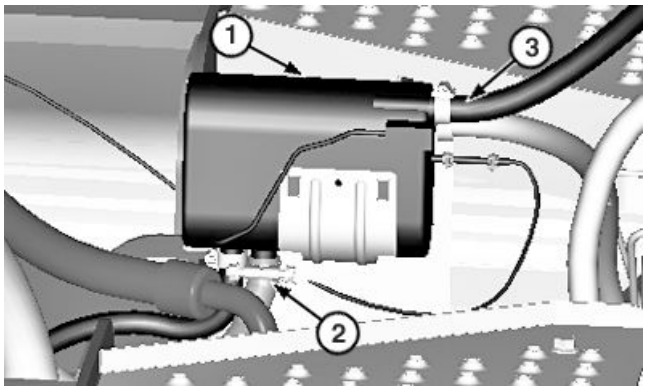
If an ambient temperature sensor is connected and the time is activated, the temperature can be permanently displayed by pressing time button once. If the time is OFF, the time temperature is displayed for 15 seconds by pressing time button twice.

Continued on next page

Diagnostic Trouble Codes

If a diagnostic trouble code appears in display window:

1. Press program button to turn heater off and on (twice maximum).
2. To access fuel fired coolant heater (1) raise cab or ROPS. See Operator Station Tilting Procedure. (Section 4-1.)
3. Check exhaust tube (2) of fuel fired coolant heater for blockage.
4. Check intake tube (3) of fuel fired coolant heater for blockage, chafing or cracks.
5. See your authorized dealer.



TX1091540A —UN—26APR11

Fuel Fired Coolant Heater

1— Fuel Fired Coolant Heater
2— Exhaust Tube
3— Intake Tube

LB82152,0000769 -19-11AUG15-3/3

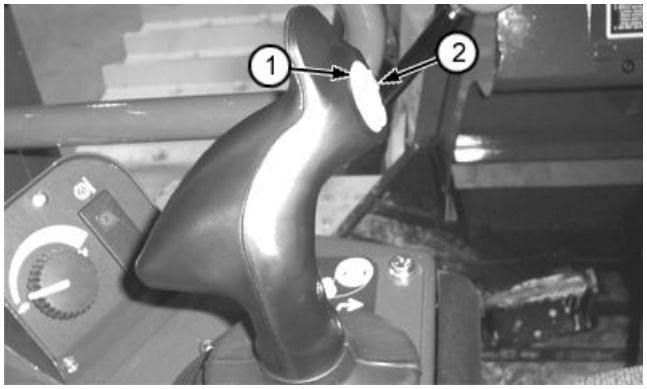
Transmission Control Lever

Push the top of the transmission speed-in-grip (SIG) button (1) to increase transmission speed. Push the bottom of the switch to lower the machine transmission speed.

Push the horn button (2) to sound the machine horn when needed.

The transmission control lever controls the direction (forward and reverse), steering (left turn, right turn), pivot turn, and counter rotation.

- Push lever forward to go forward.
- Pull lever back to go backward.
- Push lever to the right to go right.
- Push lever to the left to go left.



T206857A —UN—24JAN05

Transmission Control Lever

1— Transmission Speed-In-Grip (SIG) Button
2— Horn Button

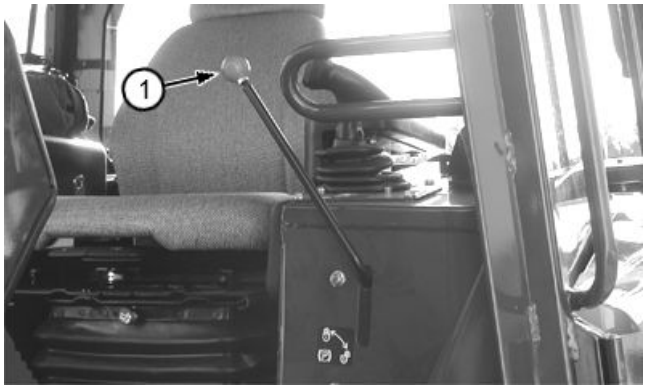
AM40430,0000013 -19-20APR11-1/1

Driving the Machine

1. Fasten seat belt.
2. Park lock lever (1) must be in the up LOCKED position.
3. Place transmission control lever (2) in neutral position.
4. Start engine.
5. Depress decelerator/brake pedal.
6. Move park lock lever to down UNLOCKED position. Speed gauge will display default transmission setting 1.6.

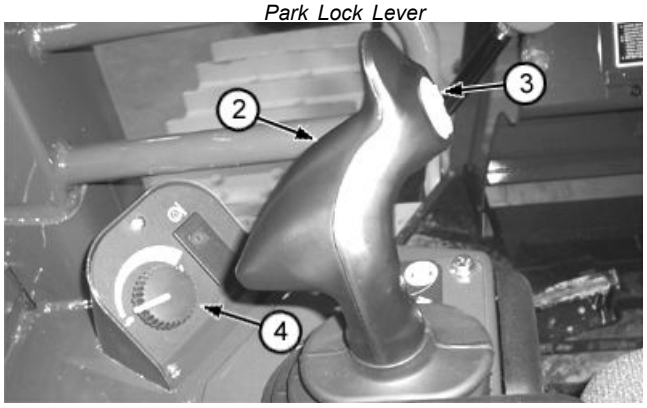
NOTE: Transmission speed-in-grip button adjusts travel speed and may be adjusted at any time.

7. Place in desired position.
8. Press transmission SIG button (3) to desired setting (1.0—3.0) as seen in display window. The transmission speed range is preset for a startup speed range of 1.6. The transmission speed range can vary depending on operator's preference from 1.0 to 3.0 (machine speed can vary from 0 to 6.0 mph).
9. Slowly release decelerator/brake pedal to move machine.
10. Turn engine speed control dial (4) to the desired engine speed setting.
11. Move in desired turning direction to steer.



T198352A —UN—18JAN05

Park Lock Lever



T206811A —UN—24JAN05

Transmission Control Lever

1— Park Lock Lever
2— Transmission Control Lever
3— Transmission Speed-In-Grip (SIG) Button
4— Engine Speed Control Dial

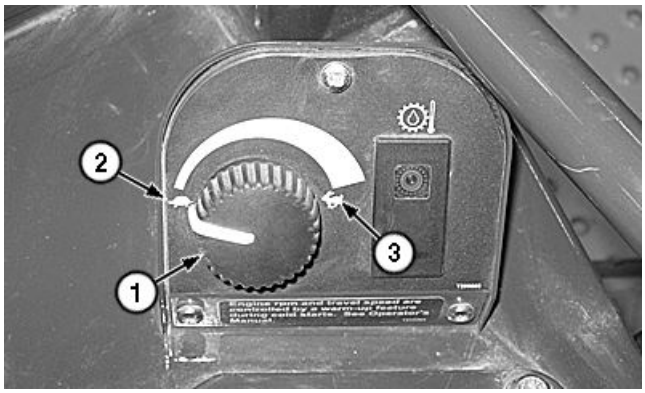
HG31779,0000065 -19-25APR11-1/1

Using Engine Speed Control Dial

To increase engine speed, turn engine speed control dial (1) clockwise to position (2) rabbit (fast idle). To decrease engine speed, turn dial counterclockwise to position (3) turtle (slow idle).

NOTE: After starting engine, engine speed control dial must be set to slow idle before dial can be used to increase engine speed.

NOTE: When transmission control lever is in forward or reverse position, turning engine speed control dial clockwise may cause machine to move, or will increase machine travel speed.



TX1101312A —UN—15NOV11

1— Engine Speed Control Dial
2— Slow Idle Position
3— Fast Idle Position

MB60223,0000270 -19-15NOV11-1/1

Travel Speed Using Transmission Control Lever

Hydrostatic dual path transmission provides variable travel speed (1.0—3.0) ranging from 0—11 km/h (0—6.0 mph) in forward or reverse. Reverse speed ratios of 80%, 100%, 115%, and 130% until maximum mph is reached, from 0—11 km/h (0—6.0 mph) in reverse. Transmission speed default speed of 1.6 will be displayed by moving park lock lever, pushing transmission speed button, or pushing SELECT button on monitor.

HG31779,000035F -19-15MAY08-1/1

Decelerator/Brake Pedal and Decelerator Mode Switch

CAUTION: Prevent possible injury from unexpected machine movement. Pushing decel/brake pedal beyond a point of increased resistance will apply brakes and stop machine abruptly.

Do not apply brakes to stop machine during normal operating conditions. Pushing decelerator/brake pedal (1) beyond a point of increased resistance will apply brakes and stop machine abruptly.

The decelerator mode switch (2) is used to set operational mode of foot pedal. Two modes are available.

Engine Mode

Actuating the decelerator mode switch to the up position will set the foot pedal in Engine Mode. In Engine Mode, pressing on the decelerator/brake pedal will slow engine speed and reduce machine ground speed. Pushing pedal beyond a point of increase resistance will apply brakes and machine will stop abruptly.

Travel will resume as pedal is released.

NOTE: Decelerator mode switch position can be changed at any time. With transmission control lever (TCL) in neutral, mode change will take effect immediately. If TCL is not in neutral, return to neutral (RTN) light will light indicating TCL must be moved to neutral for Decelerator Mode change to take effect.

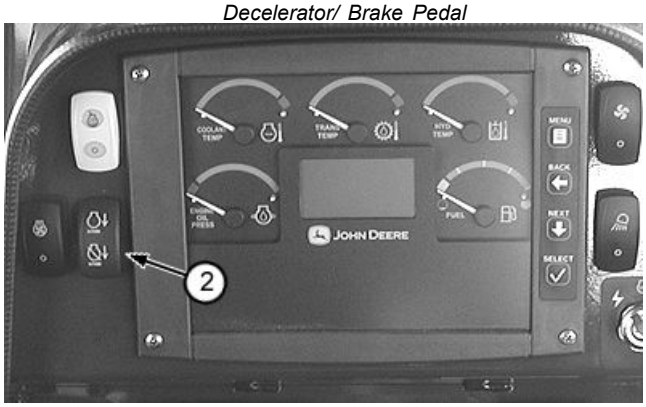
Transmission Mode

Actuating the decelerator mode switch to the down position will set the foot pedal in Transmission Mode. In Transmission Mode, pressing on the decelerator/brake pedal will reduce machine ground speed but does not slow engine speed. Pushing pedal beyond a point of increased resistance will apply brakes and machine will stop abruptly. **Travel will resume as pedal is released.**



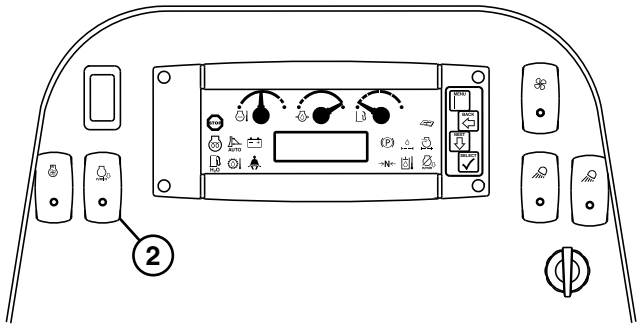
T198357A —UN—15MAR04

Decelerator/ Brake Pedal



T207691A —UN—04FEB05

Decelerator Mode Switch (S.N. 141344—219962)



TX1108449 —UN—15FEB12

Decelerator Mode Switch (S.N. 219963—)

1— Decelerator/Brake Pedal **2— Decelerator Mode Switch**

ER93822,00000F7 -19-17FEB12-1/1

Using Park Lock Lever

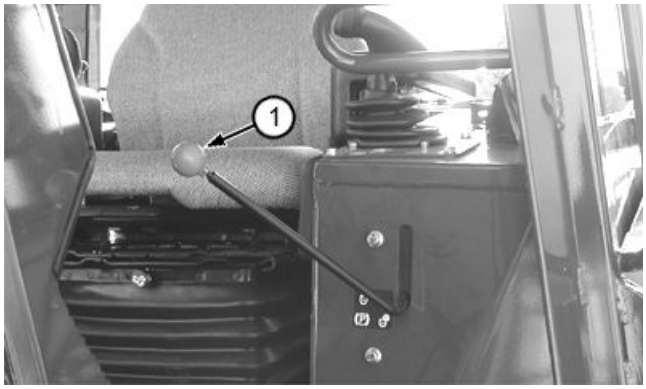
CAUTION: Prevent possible injury from unexpected machine movement. Always move park lock lever to up LOCKED position before starting or dismounting.

When park lock lever (1) is in up LOCKED position, transmission control lever (TCL) can move but will not operate the machine.

When park lock lever is in down UNLOCKED position, TCL can move machine.

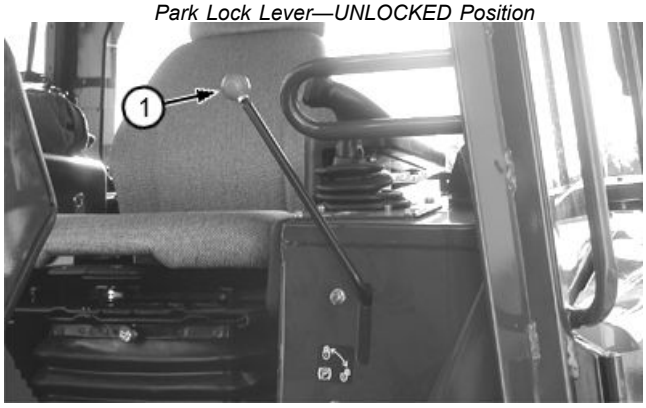
If park lock lever is pulled down while the TCL is in forward or reverse, the machine will not move. Put TCL in neutral, then raise and lower the park lever. Machine is now operable.

1— Park Lock Lever



T198353A —UN—18JAN05

Park Lock Lever—UNLOCKED Position



T198352A —UN—18JAN05

Park Lock Lever—LOCKED Position

AM40430,0000036 -19-19APR11-1/1

Hydraulic Enable Switch/Hydraulic Accumulator Discharge

CAUTION: Prevent possible injury from high pressure fluid. Discharge accumulator before servicing any hydraulic components. Hydraulic oil in accumulator can be stored at pressures equal to or above system relief pressures.

Hydraulic enable switch (1) is used to lock out blade hydraulic control lever.

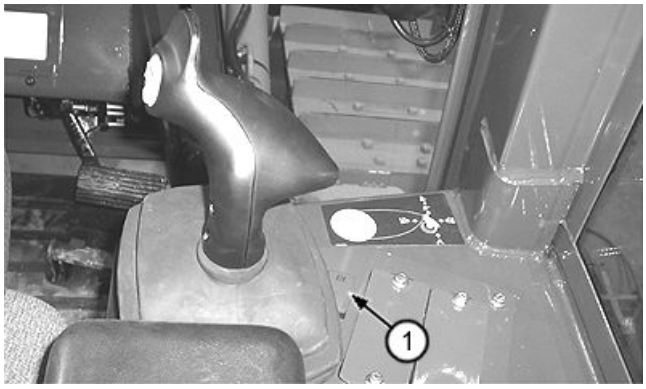
NOTE: Hydraulic enable switch (1) must be pressed and held down while moving control lever forward to lower blade with engine stopped.

Switching the position with forward half pressed down, enables all blade hydraulic control lever functions, if key is on and engine is running.

Switching position with rear half pressed down, locks out all blade hydraulic control lever functions in all conditions.

To remove stored energy from blade hydraulics and hydraulic control lever accumulator system:

1. Lower blade to ground and stop engine.
2. Turn key switch to ON but do not start engine.



T208165A —UN—08FEB05

Hydraulic Enable Switch

1— Hydraulic Enable Switch

3. Set hydraulic enable switch to enable position (front half of switch pressed down).
4. Cycle each function (lift up/down, tilt left/right and blade angle left/right) several times until accumulator pressure has been discharged.
5. Turn key switch to OFF.
6. Turn battery disconnect switch to OFF position.

AM40430,0000049 -19-19APR11-1/1

Stopping the Engine—Normal Shutdown

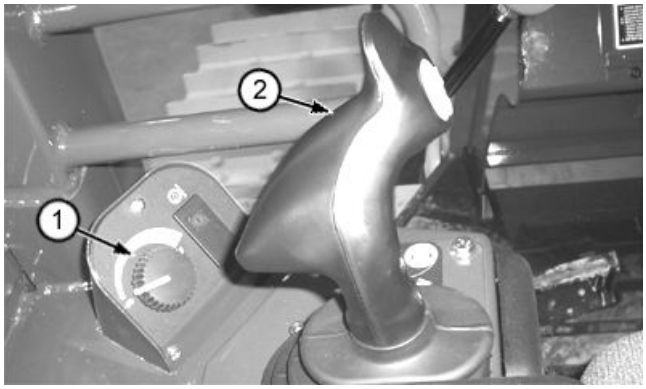
IMPORTANT: Before stopping engine that has been operating at working load, idle engine at 1/2 speed for 2 minutes to cool hot engine parts. If engine stalls while operating under load, restart it immediately and idle at 1/2 speed for 2 minutes before stopping to allow coolant to continue circulating through engine.

IMPORTANT: Turbocharger may be damaged if engine is not properly shut down.

1. Park machine on a level surface.
2. Lower all equipment to ground.
3. Place transmission control lever (TCL) (2) in neutral position.

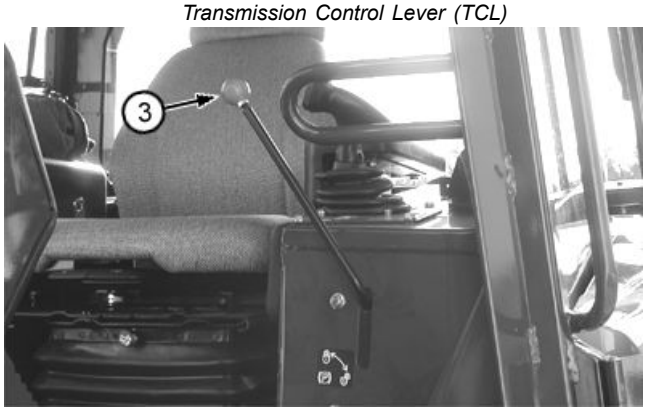
CAUTION: Prevent possible injury from unexpected machine movement. Never rely on TCL alone to keep machine from moving. Machine can unexpectedly roll or move under power, resulting in death or serious injury. Always engage park lock lever to hold machine.

4. Move park lock lever (3) to up LOCKED position.
5. Run engine at 1/2 speed without load for 2 minutes.
6. Turn engine speed control dial (1) to slow idle position.
7. Turn key off to stop engine. Remove key.
8. Release hydraulic pressure by moving control levers until equipment does not move.



Transmission Control Lever (TCL)

T206811C —UN—24JAN05



Park Lock Lever

T198352C —UN—15MAR04

1— Engine Speed Control Dial
2— Transmission Control Lever
3— Park Lock Lever

HG31779,000035D -19-20APR11-1/1

Stopping the Machine

NOTE: Brake automatically engages under the following conditions:

1. *When the engine is not running.*
2. *If transmission control lever (TCL) is in neutral (N) position and machine senses hydrostatic motor movement for more than 2 seconds.*
3. *If TCL is in forward (F) or reverse (R) position and decelerator/brake pedal is pushed all the way to the first stop position (not into brake range) and machine senses hydrostatic motor movement for more than 2 seconds.*

Stop crawler by doing one of the following:

CAUTION: Prevent possible injury from unexpected machine movement. Pushing on decelerator/brake pedal will stop machine abruptly. Brake will release as pedal is released. Pushing the park lock lever to up LOCKED position will stop machine abruptly.

- Place transmission control lever (TCL) in neutral.
- Push decelerator/brake pedal to second stop position (fully depress pedal).
- Push park lock lever to up LOCKED position.

CAUTION: Prevent possible injury from overturning the machine. If blade is dropped when moving rapidly down a steep hill, machine may overturn.

- As a last resort, drop blade to stop machine.

AM40430,0000023 -19-25APR11-1/1

Parking the Machine

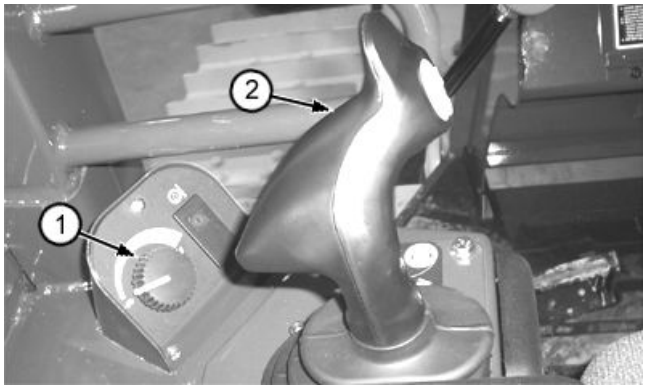
1. Park machine on a level surface.
2. Lower blade to ground.
3. Place transmission control lever (2) in NEUTRAL.

CAUTION: Prevent possible injury from unexpected machine movement. Never rely on transmission control lever alone to keep machine from moving. Machine can unexpectedly roll or move under power, resulting in death or serious injury. Always engage park lock lever to hold machine.

4. Move park lock lever (3) to up LOCKED position.

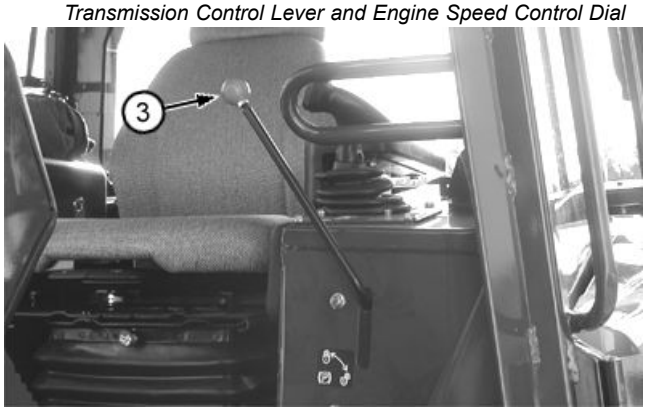
IMPORTANT: To avoid damage to turbocharger, run engine at 1/2 speed with no load for 2 minutes.

5. Run engine at 1/2 speed with no load for 2 minutes.
6. Turn engine speed control dial (1) to slow idle position.
7. Turn key OFF to stop engine.
8. Turn key switch to ON position.
9. Push hydraulic enable switch to unlock position.
10. Release hydraulic pressure by moving control lever(s) until equipment does not move.
11. Turn key OFF.
12. Turn battery disconnect switch to OFF position.



T206811D —UN—12JAN05

Transmission Control Lever and Engine Speed Control Dial



T198352D —UN—12JAN05

Park Lock Lever

1— Engine Speed Control Dial
2— Transmission Control Lever
3— Park Lock Lever

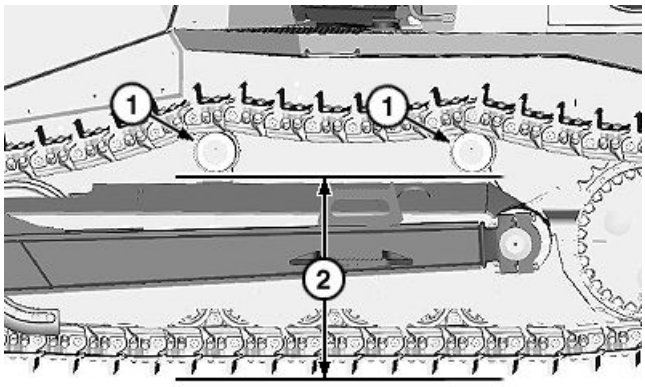
LB82152,0000772 -19-20APR11-1/1

Operating in Water and Mud

IMPORTANT: Damage to the hydrostatic motors, hydrostatic pumps, cooling fan, and other components could occur if fording depth is exceeded. Never exceed maximum fording depth (2) higher than the lower edge of carrier rollers (1).

When it is necessary to operate or drive the machine in water or mud, water or mud must not go higher than the lower edge of carrier rollers (1).

After working in water or mud, lubricate all grease and lubrication points.



XJ1276622 —UN—16APR19

Maximum Fording Depth

1— Carrier Roller (4 used)
2— Maximum Fording Depth

SK32938,000000B -19-17APR19-1/1

Ripper Control Lever—If Equipped

IMPORTANT: When using the ripper, operate the machine in LOW travel speed.

Avoid machine damage. Do not turn machine with ripper engaged in material.

With multi-teeth rippers it is usually more beneficial to install multiple teeth than to select a higher travel speed.

Use only one ripper tooth to rip out difficult or large sized material.

Easy to rip material, which breaks into smaller pieces, can be removed with a multi-tooth ripper with two or three teeth.

During the ripper application, always make sure that both tracks are fully on the ground at all times. If necessary, prepare the site accordingly.

The ground should be ripped as deep as possible. If the ground is layered, proceed to rip one layer at a time. To reach the desired depth, it may be necessary to run over the same track several times.

In some cases, it may be necessary to cut crosswise.

On slopes, always rip going downhill.



TX1026010A —UN—05JUL07

Ripper Control Lever

1— Lower Direction (Forward Position)

2— Raise Direction (Rearward Position)

Operation Of The Ripper

- To lower ripper, push the ripper control lever forward (1).
- To raise ripper, pull the ripper control lever rearward (2).

OUT4001,00002FD -19-19APR11-1/1

Blade Control Lever—Operation

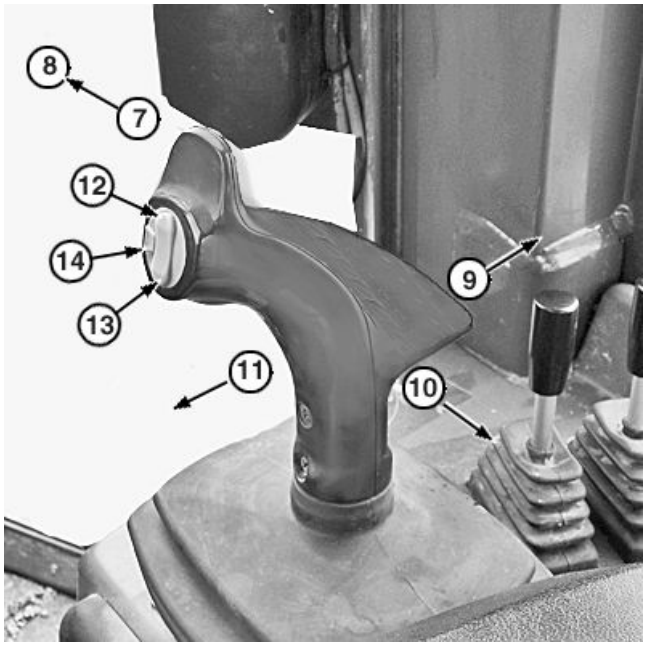
NON-IGC Blade Control Lever Operation

Blade float detent position (7) is used for backblading. When blade control lever is put into float position, it must be moved manually back to neutral position.

Blade control lever is used for all hydraulic functions on all non-Integrated Ground Control (IGC) units.

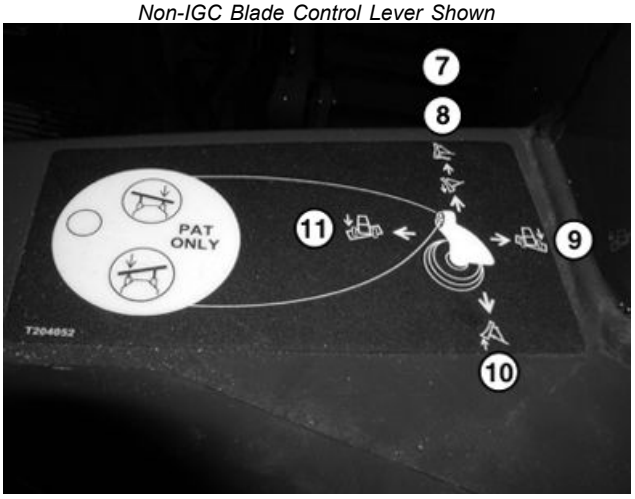
- Push lever forward to float detent position for blade float.
- Push lever forward one position for blade lower (8).
- Pull lever rearward for blade lift (10).
- Push lever to the left for blade tilt left (11).
- Push lever to the right for blade tilt right (9).
- Push top of button down to angle blade clockwise (12).
- Push bottom of button down to angle blade counterclockwise (13).

7— Blade Float Detent Position
8— Blade Lower Postion
9— Blade Tilt Right Position
10— Blade Lift Postion
11— Blade Tilt Left Position
12— Blade Angle Clockwise
13— Blade Angle Counter-clockwise
14— Not Used



TX1091134A —UN—19APR11

Non-IGC Blade Control Lever Shown



TX1010863A —UN—07AUG06

Power Angle Tilt

Continued on next page

LB82152,0000771 -19-25APR11-1/2

IGC Blade Control Lever Operation

Electronic blade control lever is used for all hydraulic functions on IGC units—if equipped.

Blade float detent position (7) is used for back blading.

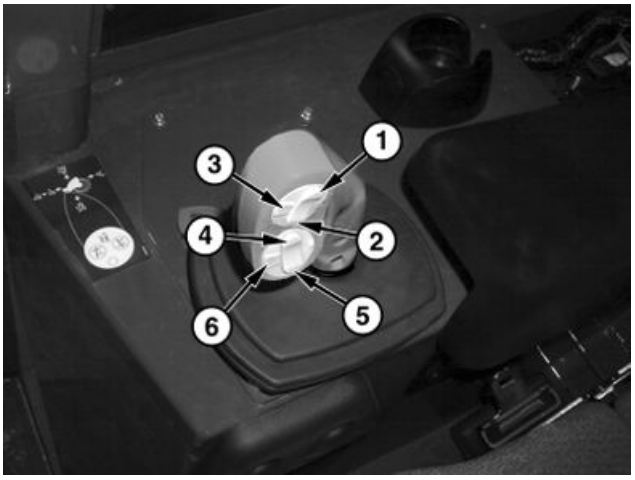
When blade control lever is put into float position, it will return to neutral on its own.

To disable blade float, push the lever forward or rearward after the joystick has returned to neutral. Moving the lever to the left or right will not disable blade float.

- Push lever forward to float detent position for blade float.
- Push lever forward one position for blade lower (8).
- Pull lever rearward for blade lift (10).
- Push lever to the left for blade tilt left (11).
- Push lever to the right for blade tilt right (9).

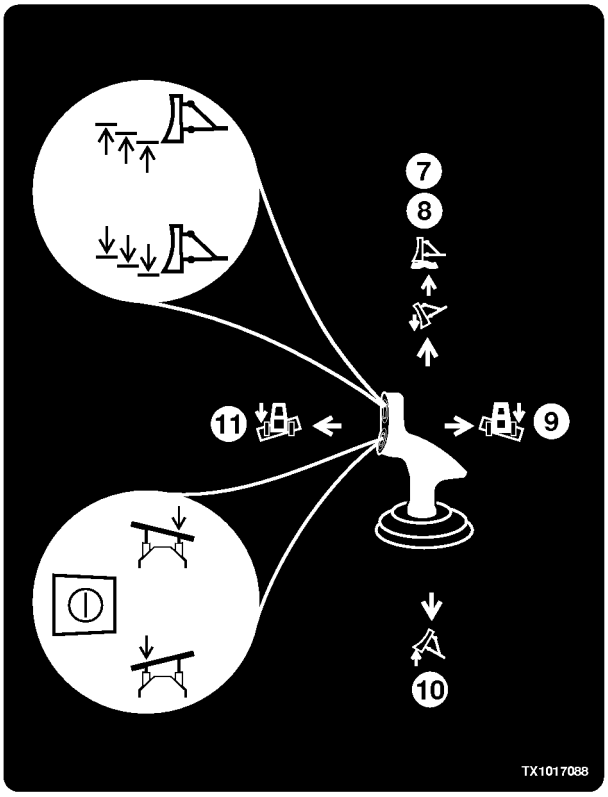
IMPORTANT: To avoid overheating hydraulic oil, allow control lever to return to neutral position when cylinders reach end of stroke.

1— Increment (up)—IGC Only
2— Decrement (down)—IGC Only
3— Not Used
4— Blade Angle Clockwise
5— Blade Angle Counterclockwise
6— IGC On/Off—IGC Only
7— Blade Float Detent Position
8— Blade Lower Postion
9— Blade Tilt Right Position
10— Blade Lift Postion
11— Blade Tilt Left Position



TX1010864A —UN—03AUG06

IGC Blade Control Lever



TX1017088 —UN—27DEC06

IGC Machine

LB82152,0000771 -19-25APR11-2/2

Changing Blade Pitch

It may be necessary to change the pitch of the blade depending on the type of work being done and soil conditions being dozed, or to change the feel of the dozer to operator's preference.

Blade Pitch Forward Advantages:

With the blade pitched forward, the blade will not carry as much soil. The weight of the soil carried by the blade adds to the weight of the dozer and moves the balance of weight on the tracks forward. This can cause the front idlers of the crawler to sink in loose or soft soils. When the idlers sink, the blade cuts unevenly into the soil. With the blade pitched forward, the dozer balance does not change as much with a full blade; therefore, the tendency for idlers to sink is reduced.

With blade pitched forward, there is less of a tendency for dirt to come over the back of the blade when dozing uphill. It is also easier to drop dirt at the end of a push when dozing uphill or when dozing very sticky materials.

Blade Pitch Back Advantages:

With the blade pitched back, the cutting edge lies more horizontally resulting in a heavier cut into soils. Having the cutting edge more horizontal also provides a smoother cut in heavy soils. More soil is carried by the blade when it is pitched back. Carrying more soil on the blade adds to the weight of the dozer. This added weight can increase push force in heavy soils. The soil carried by the blade also moves the balance of weight forward on the machine. In heavy soils, this can be an advantage because the increased weight can help keep the front of the machine down and keep the cutting edge penetrating during heavy cutting.

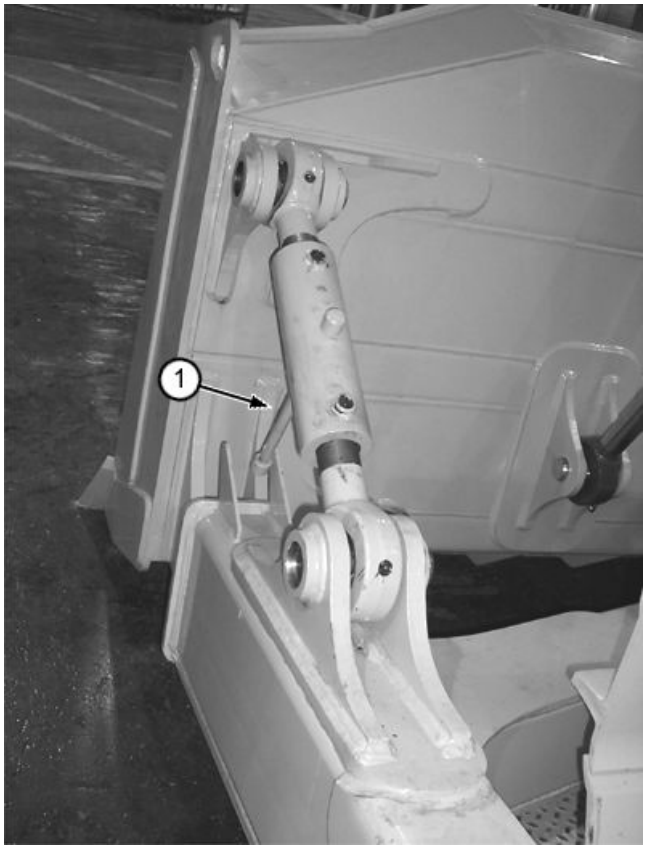
AM40430,0000015 -19-15MAY08-1/1

Changing Blade Pitch—Outside Dozer Linkage

CAUTION: Prevent possible injury from falling blade or frame. NEVER work under a raised blade unless the blade or frame is supported.

To change blade pitch, insert adjusting bar (1) and turn adjusting jack to extend or retract jack. Then extend or retract tilt cylinder the same amount to obtain desired pitch.

1— Adjusting Bar



T207104A —UN—14JAN05

Blade Pitch

AM40430,0000017 -19-26APR11-1/1

Changing Blade Pitch—C-Frame Dozer Linkage

CAUTION: Prevent possible injury from falling blade or frame. NEVER work under a raised blade unless the blade or frame is supported.

1. Raise blade approximately 152 mm (6 in.) off ground and support with blocks. Support C-frame with floor stands.

NOTE: It may be necessary to use a floor jack for relieving blade tension.

2. Loosen cap screws (1) to adjust shims.
3. Move shims to one of four desired positions: forward, mid-forward, mid-back, or back.

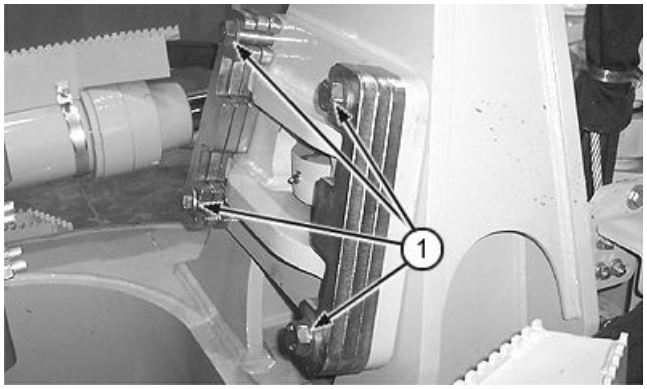
CAUTION: Wear gloves to prevent possible injury from pinching/crushing fingers in between shims.

4. Apply Loctite® to threads of cap screws.
5. Make sure shims are in the same position on each side. Tighten cap screws to specification.

Specification

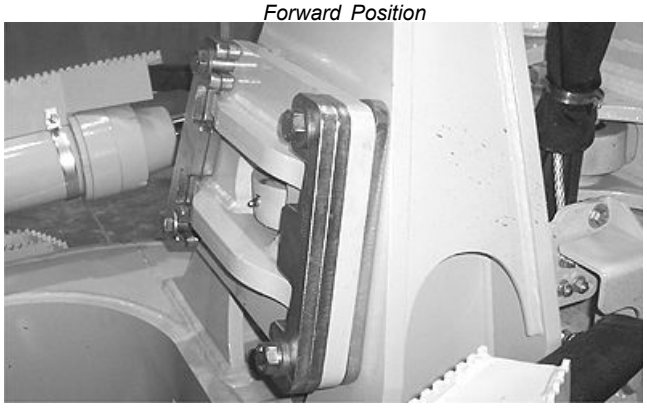
Cap Screw—Torque.....624 N·m
460 lb.-ft.

1— Cap Screw (4 used)



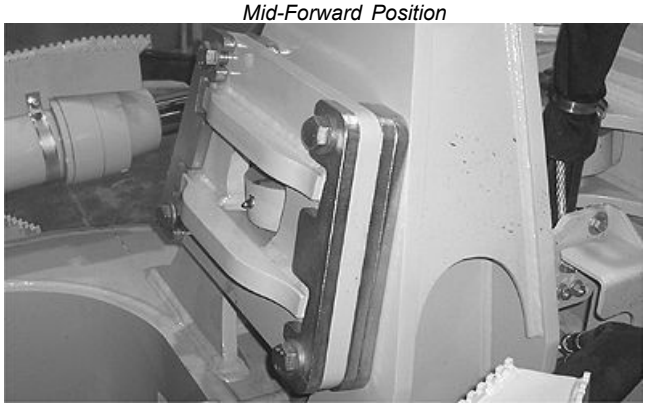
T207337A —UN—20JAN05

Forward Position



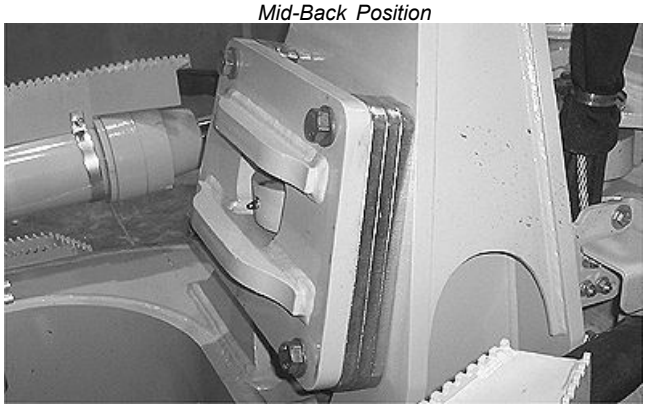
T207338A —UN—20JAN05

Mid-Forward Position



T207339A —UN—20JAN05

Mid-Back Position



T207340A —UN—20JAN05

Back Position

Loctite is a trademark of Henkel Corporation

AM40430,0000018 -19-16FEB17-1/1

Changing Blade Pitch—Three-Position Pitch Adjustment

Three-Position Blade Pitch Adjustment

NOTE: Both sides need to be adjusted.

The blade pitch can be adjusted to suit ground conditions by changing the hydraulic cylinder (1) and the mechanical cylinder position. There are three blade pitch positions—center, top and bottom.

- **Center Position:** For normal ground conditions.
- **Top Position:** For soft ground conditions; reduces cutting angle.
- **Bottom Position:** For hard ground conditions; establishes a steep cutting edge.

1. Raise blade approximately 152 mm (6 in.) off ground and support with blocks.

CAUTION: Prevent possible injury from falling blade or frame. NEVER work under a raised blade unless the blade or frame is supported.

2. Support cylinder with strap (2).
3. Remove the cap screw (3) and pin retention plate (4) and then remove the pin.

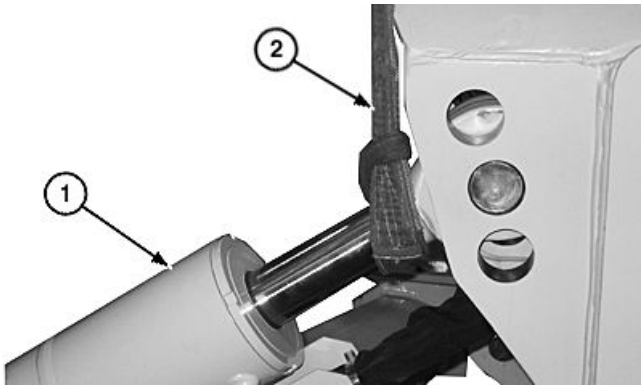
CAUTION: Avoid possible injury from crushing or pinching. Never align the bores with your fingers during the adjustment procedure.

CAUTION: Wear gloves to prevent possible injury from pinching or crushing fingers in between shims.

4. Start the machine and move the blade control lever to tilt cylinder in the desired direction until the pin can be installed.

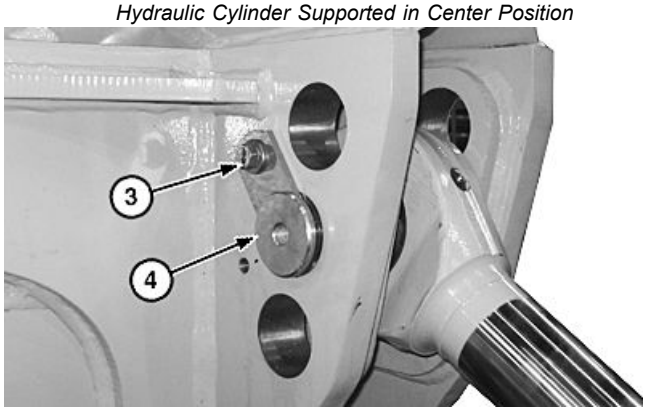
NOTE: If pitch jack is seized, see your authorized John Deere dealer.

5. Using a combination of an alignment tool (5) and the machine hydraulics, activate the tilt cylinder to align the clevis for the pitch jack (6). Adjust the length of the pitch jack to assist in aligning the clevis. Align the clevis so the pin can be installed. Install the pin from the inside to the outside and install ring and retaining screw.



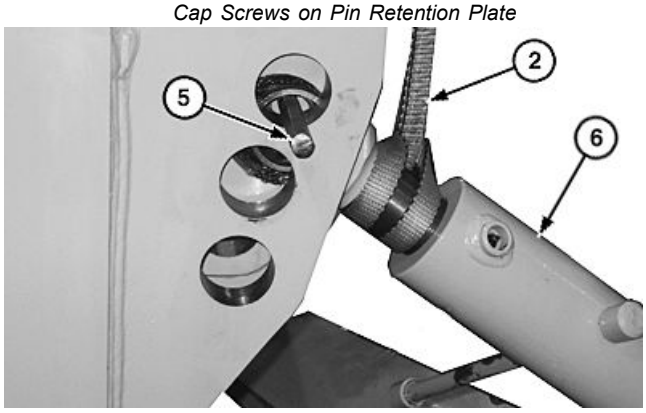
TX1070329A —UN—28JAN10

Hydraulic Cylinder Supported in Center Position



TX1070333A —UN—01FEB10

Cap Screws on Pin Retention Plate



TX1070330A —UN—28JAN10

Alignment Tool on Supported Pitch Jack

1— Hydraulic Cylinder
2— Strap
3— Cap Screw (2 used)
4— Pin Retention Plate
5— Alignment Tool
6— Pitch Jack

ER79617,00009B1 -19-06MAY10-1/1

Avoid Track Damage

IMPORTANT: Avoid machine damage. If machine is equipped with a sealed and lubricated track, avoid water being forced between the plastic pins and rubber plugs while washing machine with pressure washer.

JH91824,00002EA -19-22JUL10-1/1

Extend Undercarriage Life

Proper maintenance and adjustment of your machine's undercarriage will provide maximum wear life in many operating and soil conditions. You can and will make a difference in getting maximum wear life from the components. Here are some operating tips that will make a difference:

PROPER TRACK SAG ADJUSTMENT—Maintaining proper amount of track sag 51 mm (2.0 in.) is the most important adjustment to maintain. Tight tracks can reduce wear life by more than 50 percent and cause loading on undercarriage components, increasing the wear rate. Track sag should be adjusted as soil conditions change. Observe the amount of sag every day and adjust as needed. Refer to the periodic service interval in this manual or decal on machine for proper adjustment procedure.

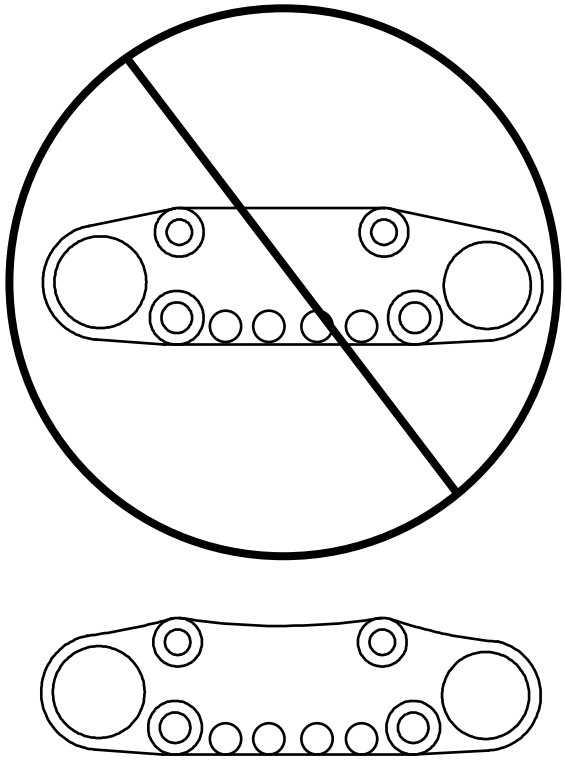
REDUCE OPERATING TIME IN REVERSE—On all track machines, bushing and sprocket wear rate increases significantly when operating in reverse rather than forward.

To get the most life out of undercarriage, minimize the amount of time operating in reverse.

REDUCE OPERATING AND TRAVEL SPEED WHEN POSSIBLE—As machine speed increases, wear rates increase. Operate at minimum ground speed required to match type of work. Excessive track slipping will also increase wear, particularly on grouser tips.

REDUCE UNNECESSARY ADDED WEIGHT—Additional machine weight due to attachments of counterweighting will cause faster wear rate.

USE PROPER CHAIN GUIDES OR GUARDS—Properly installed and maintained track guides or guards will keep chain aligned with roller and idler, extending wear life.



T207501 —UN—15FEB05

SELECT PROPER TRACK PAD WIDTH—Wider track pads increase loading and wear on undercarriage components. Use narrowest pad possible for operating conditions.

TX,30,RR,A3 -19-15MAY08-1/1

Loading Machine on a Trailer

1. Keep the trailer bed clean.
2. Install wheel chocks (1) against truck wheels.
3. Use a ramp or loading dock. Ramps must be strong enough, have a low angle, and be of correct height.
4. Fasten seat belt before starting engine.
5. Load and unload the machine on a level surface.

CAUTION: Prevent possible injury from unexpected machine movement. Whenever possible, back the machine onto the trailer to prevent possible tipping.

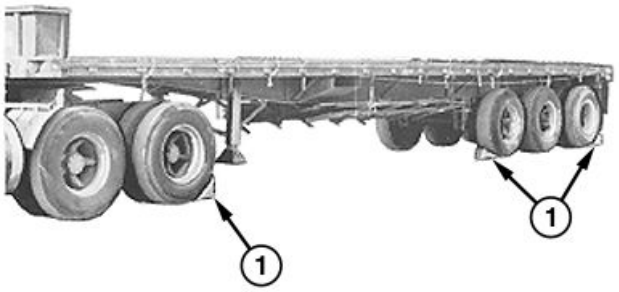
6. Drive the machine onto the ramps squarely.
7. The center line of the machine should be over the center line of the trailer.
8. Lower all equipment onto blocks.
9. Move transmission control lever (TCL) to neutral.

CAUTION: Prevent possible injury from unexpected machine movement. Never rely on transmission control lever alone to keep machine from moving. Machine can unexpectedly roll or move under power, resulting in death or serious injury. Always engage park lock lever to hold machine.

10. Move park lock lever to up LOCKED position.

IMPORTANT: To avoid damage to turbocharger—if equipped, run engine at 1600 rpm no load for 2 minutes.

11. Run engine at 1600 rpm no load for 2 minutes.



TX1010855A —UN—03AUG06

Loading Machine on a Trailer

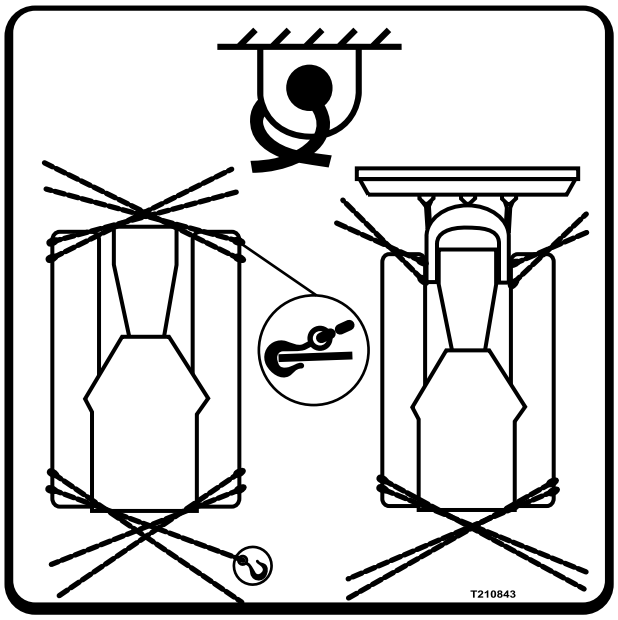
1— Wheel Chocks

12. Turn engine speed control dial counterclockwise to slow idle position.
13. Turn key switch to OFF. Stop engine.
14. Turn key switch to ON position.
15. Push hydraulic enable switch to unlock position.
16. Release hydraulic pressure by moving control lever(s) until equipment does not move.
17. Turn key switch to OFF.
18. Turn battery disconnect switch to OFF position.
19. Cover exhaust opening to prevent entry of wind and water.

Continued on next page

IMPORTANT: Fasten chains or cables to machine frame or track chain links. Do not place chains or cables over or against hydraulic lines or hoses.

20. Fasten each corner of the machine to the trailer with chains or cables.
    - Front: Use either the outside or inside of the track shoe as shown. In addition, it is permissible to use the tow hook eye on the bottom of the machine frame front end.
    - Side: Use inside edge of track shoe.
    - Rear: Use outer edge of track shoe. In addition, it is permissible to use the drawbar, if equipped.



TX1090933 —UN—14APR11

Tie Downs

LB82152,000076E -19-20APR11-2/2

Lifting the Machine

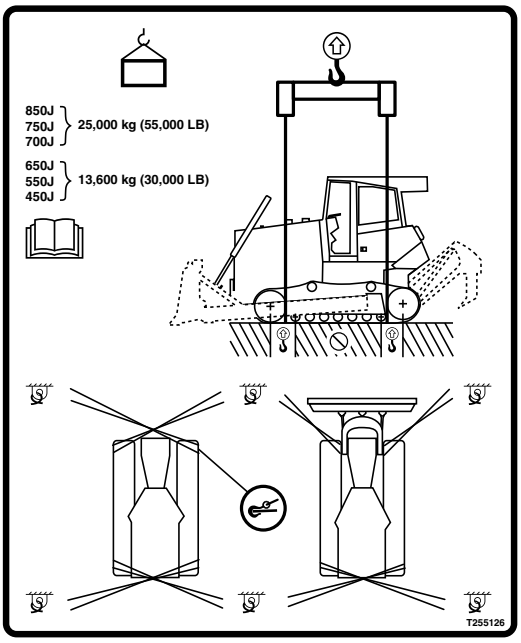
⚠ CAUTION: Avoid injury or machine damage from unexpected machine movement. Properly lift machine and use proper tie-downs.

NOTE: Do not use handles or steps in order to lift or tie down the machine.

For specific weight information, see Crawler Dozer Weights. (Section 4-6.)

1. Engage the parking brake.
2. Use proper rated cables and slings for lifting. The crane should be positioned so that the machine is lifted parallel to the ground.

   Position the slings beneath the front of the track and beneath the rear of the track in designated lifting zones.
3. On sharp corners, use corner protectors.
4. To prevent contact with the machine, lifting cables should have sufficient length.
5. The width and strength of the spreader bar should be sufficient to prevent contact with the machine.



TX1090909 —UN—15APR11

Lifting the Machine

LB82152,0000764 -19-15APR11-1/1

Releasing Park Brake to Tow the Machine

This procedure is used to release park brake for towing the machine.

CAUTION: Prevent possible injury from unexpected machine movement during towing preparation. Place blocks at front and rear of tracks and secure machine to prevent it from rolling.

Do not allow an operator on the machine being towed unless the operator can control the steering and brakes.

IMPORTANT: Do not tow machine faster than 2.4 km/h (1.5 mph) or extensive machine damage may result.

Towing Machine With Engine OFF

1. Tilt cab up. See Cab Tilting Procedure. (Section 4-1.)

NOTE: Multi-function valves can be turned out using a 1 1/4 in. socket and a flexible head ratchet. Engine does not have to be running to tow machine.

The top multi-function valves (1) are in the forward side of the closed loop circuit and the bottom multi-function valves (2) are in the reverse side of the closed loop circuit. The front hydrostatic pump controls the right track and the rear hydrostatic pump controls the left track.

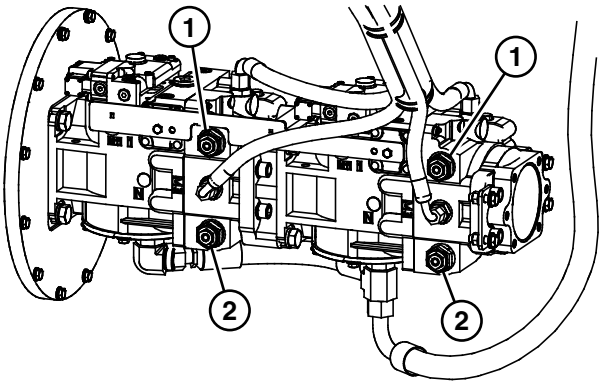
2. **TO TOW MACHINE IN REVERSE** both front and rear pump top multi-function valves (1) MUST be turned out (counterclockwise) 1/2 to 1 turn.

   TO TOW MACHINE FORWARD both front and rear pump bottom multi-function relief valves (2) MUST be turned out (counterclockwise) 1/2 to 1 turn and blade must be raised off the ground. (If engine will crank but will not start, blade can be raised by cranking engine while holding blade raise function on control valve.)

3. Tilt cab down.
4. Turn key switch ON.
5. Put park lock lever in down UNLOCKED position and transmission control lever (TCL) in neutral (N) position.

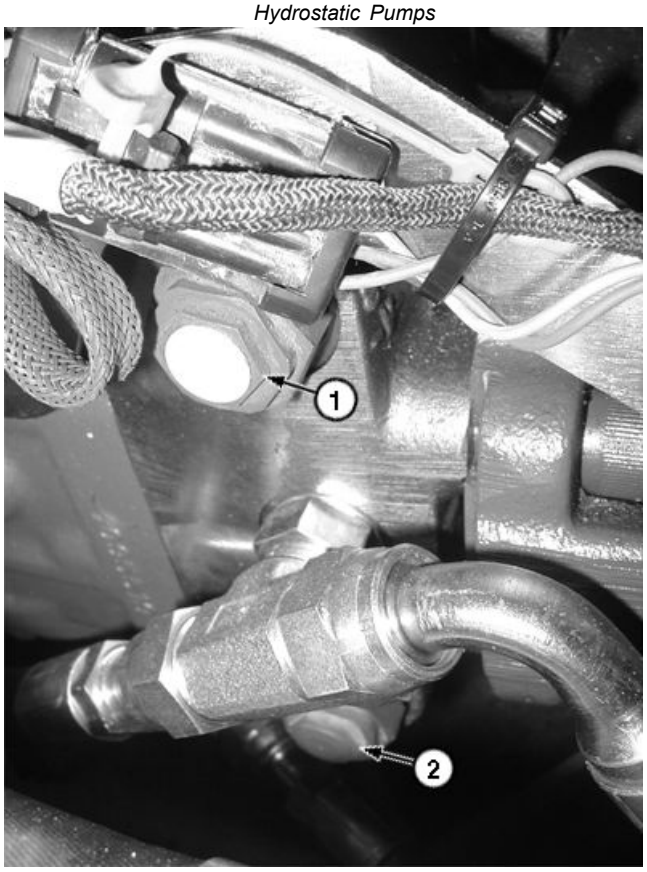
NOTE: TOW will allow the machine to be towed without automatically applying the brakes (hill hold feature disabled).

6. Set brake control setting to TOW.
   a. Press MENU on monitor.
   b. Select MACHINE SETTINGS.
   c. Select BRAKE CTRL.
   d. Select TOW.
7. Leave key switch in ON position.



TX1049538 —UN—01OCT08

Hydrostatic Pumps



TX1049533A —UN—01OCT08

Multi-Function Valves

1— Top Multi-Function Valve

2— Bottom Multi-Function Valve

Continued on next page

8. Pull and turn the hand pump selector valve 2 (4) to the extended out (tow) position on hydraulic integrated circuit (HIC) valve.

NOTE: There is a relief valve for the park brake in the HIC valve. Oil can be heard flowing through relief, and an increased pressure can be felt on handle when brakes are totally released.

9. Use pump handle and apply pressure to release brakes.

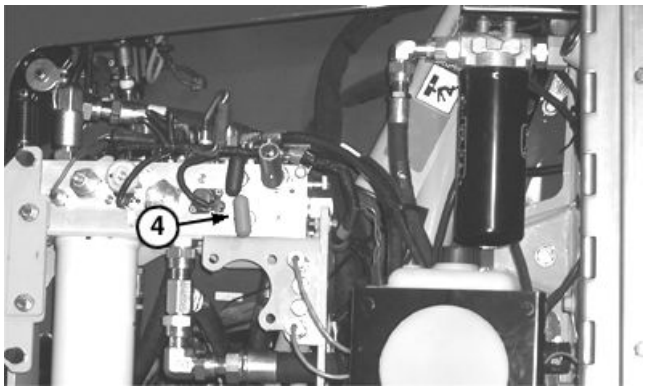
NOTE: Brakes can be applied in TOW mode by moving park lever up, depressing decelerator pedal fully to floor, or turning key switch OFF.

NOTE: If brakes are applied while towing, brake release procedure must be repeated before resuming towing.

10. Tow machine using either front or rear tie-downs (3).

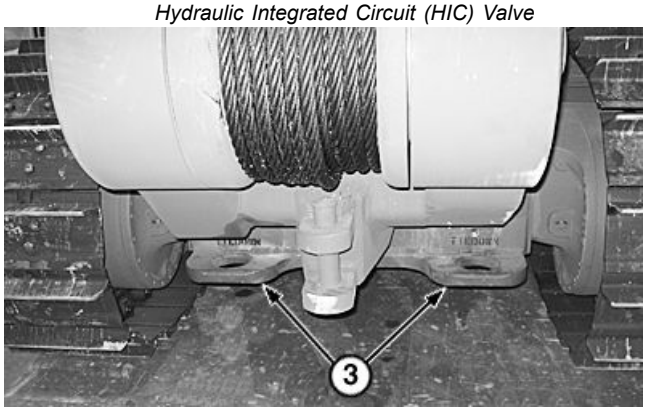
3— Tie-Down (4 used)

4— Hand Pump Selector Valve 2



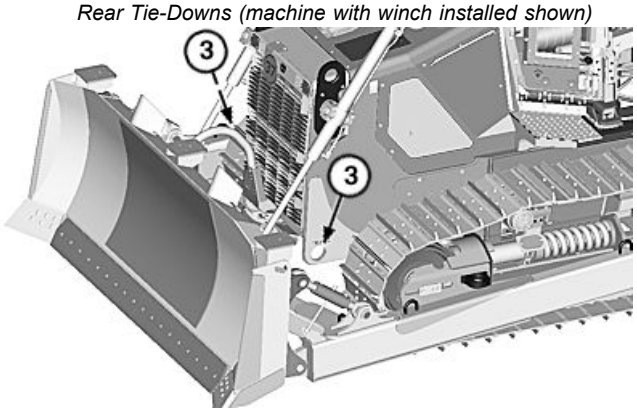
TX1081797A —UN—13SEP10

Hydraulic Integrated Circuit (HIC) Valve



TX1081646A —UN—07SEP10

Rear Tie-Downs (machine with winch installed shown)



TX1081726A —UN—17OCT17

Front Tie-Down—2 Used

MB60223,0000068 -19-20APR11-2/2

Operating on Steep Hills

IMPORTANT: Use caution when operating on steep hills. It is important to operate machine at slow transmission speeds to protect the engine and/or transmission from damage.

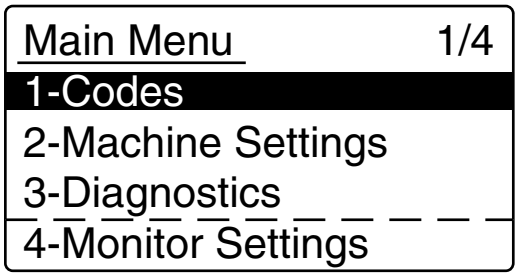
VD76477,000045E -19-15DEC10-1/1

CAN Monitor Unit (CMU) Main Menu

NOTE: The navigation keys MENU, BACK, NEXT, and SELECT are located at the right side of the CMU display.

The Main Menu provides the capability to select the next submenus. The Main Menu is accessed by pressing the MENU key. The submenus under Main Menu include:

1. Codes menu allows service personnel or operator to view active or stored diagnostic trouble codes.
2. Machine Settings menu allows the operator to make changes to various operating characteristics of the machine.
3. Diagnostics menu provides a limited set of tools, and is intended to be used by service personnel and machine operator for diagnostic and troubleshooting functions.
4. Monitor Settings menu allows the operator to make changes to various operating characteristics of the monitor.



T194565 —19—30SEP03

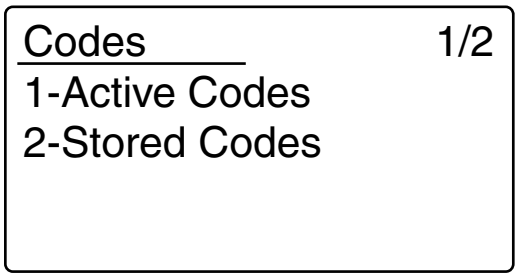
Main Menu

MH66O88,00001EA -19-22JUL10-1/1

CAN Monitor Unit (CMU) Main Menu—Codes

Codes menu consists of the following submenus:

1. Active Codes
2. Stored Codes



T193353 —19—22SEP03

Codes

MH66O88,00001EB -19-22JUL10-1/1

CAN Monitor Unit (CMU) Main Menu—Codes—Active Codes

This submenu displays the diagnostic trouble codes (DTCs) that are currently active on the machine. As the DTCs are resolved or fixed, the code will be removed from the active code list.

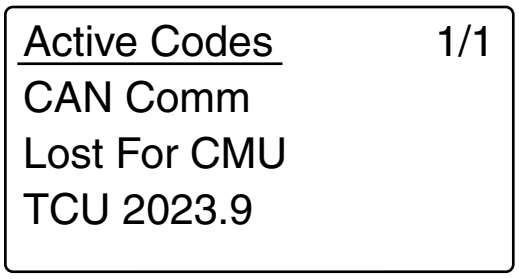
The following will be displayed:

- Text description of the DTC
- Source controller of fault (ECU, CMU, or TCU)
- SPN (Suspect Parameter Number)
- FMI (Failure Mode Indicator)

Press SELECT. An active diagnostic trouble code will be displayed.

Press SELECT to view occurrences.

Press SELECT to view circuit information to help diagnose the problem.



T202428 —19—09SEP04

Active Codes

Press NEXT to display next active code.

MH66O88,00001EC -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Codes—Stored Codes

The Stored Codes submenu will display up to 20 of the latest diagnostic trouble codes (DTCs) that have occurred on the machine. Each diagnostic trouble code will be saved in the order it occurred. If 20 codes exist and another DTC is present, the listing will be adjusted first in/first out.

The following will be displayed:

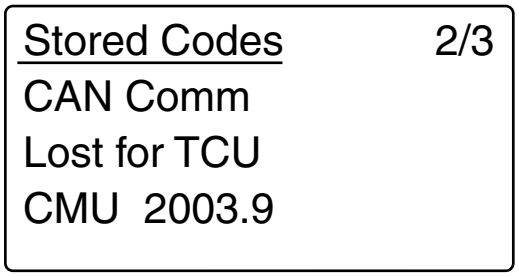
- Text description of the DTC with associated icon
- Source controller of fault (ECU, CMU, or TCU)
- SPN (Suspect Parameter Number)
- FMI (Failure Mode Indicator)
- Value of sensor at time of fault (if applicable)
- Current value of sensor (if applicable)
- Hour meter reading at first and last occurrence
- Total number of occurrences

Press SELECT. A stored diagnostic trouble code will be displayed.

Press SELECT again to view occurrences.

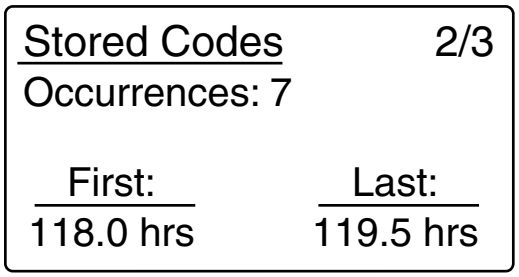
Press SELECT again to view circuit information to help diagnose problem.

Press NEXT to display next active code.



T193356 —19—08OCT03

Stored Codes



T195058 —19—23SEP03

Stored Codes

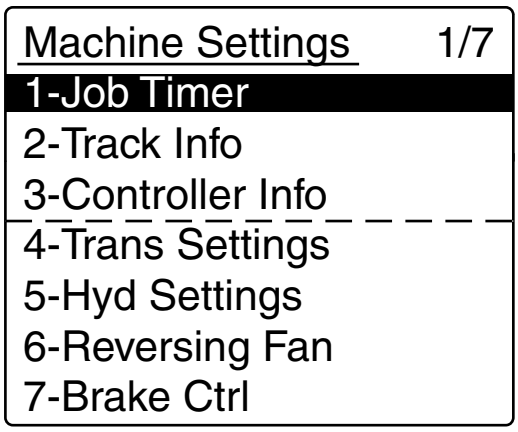
MH66O88,00001ED -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Machine Settings

The Machine Settings menu allows the operator to make changes to various operating conditions of the machine. The last selection of the machine settings will be stored and, upon turning the ignition switch on, the last value will be retrieved.

Press NEXT at Main Menu to highlight Machine Settings.

Press SELECT to display submenu.



TX1009761 —19—07JUL06

Machine Settings

MH66O88,00001EE -19-22JUL10-1/1

CAN Monitor Unit (CMU) Main Menu—Machine Settings—Job Timer

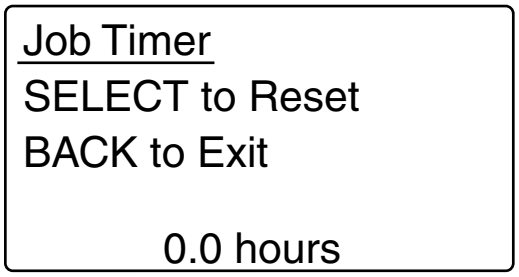
The job timer is a resettable hour meter that can be used to time tasks to the nearest tenth of an hour. The maximum capacity displayed is 999.9 hours. The job timer will stop and the value will be set to zero when it exceeds 999.9 hours. The job timer will run even when the Job Timer submenu is not active. The job timer value will be stored when the ignition switch is turned off.

At Main Menu Machine Settings, press NEXT to highlight Job Timer.

Press SELECT.

Press SELECT to reset the timer to zero.

Press BACK to exit.



T193360 —19—05AUG03

Job Timer

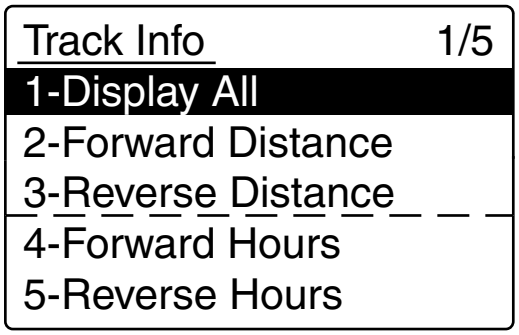
MH66O88,00001EF -19-15FEB12-1/1

CAN Monitor Unit (CAN) Main Menu—Machine Settings—Track Info

This menu displays track information calculated by the TCU.

Press SELECT to display all track information. The following information will be displayed:

- Forward Distance—The distance the machine has traveled in forward direction is displayed in miles.
- Reverse Distance—The distance the machine has traveled in reverse direction is displayed in miles.
- Forward Hours—The hours the machine has spent traveling in forward direction is displayed.
- Reverse Hours—The hours the machine has spent traveling in reverse direction is displayed.
- Press EXIT to return to submenu.



T202433 —19—09SEP04

Track Info

MH66O88,00001F0 -19-15FEB12-1/1

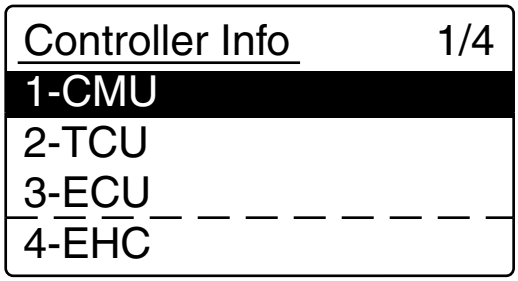
CAN Monitor Unit (CMU) Main Menu—Machine Settings—Controller Info

This menu displays the machine ID, hardware part numbers, and software version numbers for various devices on the machine.

Press SELECT to display all controller information. The following information will be displayed:

- CMU—Software number, machine ID number, and CMU hardware part number will be displayed.
- TCU—Software number and TCU hardware part number will be displayed.
- ECU—Software number and ECU hardware part number will be displayed.

NOTE: The electrohydraulic controller (EHC) is available only on machines equipped with integrated grade control (IGC) systems.



TX1009762 —19—07JUL06

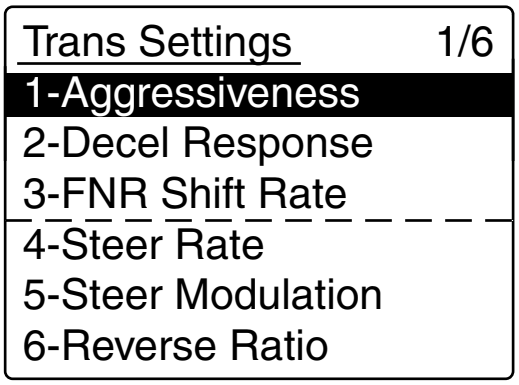
Controller Info

- EHC—Software number and EHC hardware part number will be displayed. (Controller is available on IGC only.)

MH66O88,00001F1 -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Machine Settings—Trans Settings

This menu contains settings that affect transmission function and performance. You can fine-tune the feel of the dozer by adjusting the rates on the transmission controller unit. Listed below are the adjustable rates.



TX1009763 —19—07JUL06

Trans Settings

Rate	Description	Factory Setting	Operator Comment	Solution
Aggressiveness (Aggr)	Affects operator perception of machine power. Affects engine pull-down and opposite track movement when the track drive goes over relief.	LOW	“The engine doesn't sound like it's working.” “The tracks stop too soon.”	MED increases engine pull-down 100 rpm more than LOW. HIGH increases engine pull-down 100 rpm more than LOW, and opposite track moves when one track stalls over relief.
Decelerator Response	Affects decelerator responsiveness to pedal movement.	LOW	“The dozer is too jerky when I use the decelerator.” “The decelerator is too slow.”	Change to LOW. Change to HIGH.
FNR Shift Rate	Affects how quickly the dozer shifts between forward and reverse.	MED	“The direction shift is too jerky.” “The direction shift is too slow.”	Change to LOW. Change to HIGH.
Steer Rate	Affects steering response to steering lever movement.	MED	“The steering is too jerky.” “The steering is too slow.”	Change to LOW. Change to HIGH.
Steer Modulation	Affects amount of steering that occurs per amount of lever movement.	MED	“The steering is too long on this joystick.” “The steering throw is too short on this joystick and the steering is too jerky.”	Change to HIGH. Change to LOW.
Reverse Ratio	Affects the control of the decelerator/brake pedal. Eng = Engine and Transmission Decelerate. Tran = Transmission only Decelerates.	ENG	“I like the way the decelerator/brake pedal slows the speed of the machine, but I need to have faster hydraulic speeds.”	Change to Tran. The engine speed will stay set constant while the ground speed is decreased. This will maintain high hydraulic flow and function speed.

MH66O88,00001F2 -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Machine Settings—Hydraulic Settings (IGC Option)

The feel of the dozer can be fine-tuned by adjusting the rates on the hydraulic controller unit. Listed below are the adjustable rates.

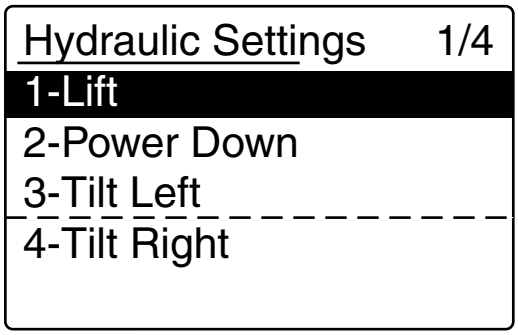
- Lift
- Power Down
- Tilt Left
- Tilt Right

Press SELECT to display submenu.

- Low
- Medium
- High

Hydraulic settings (IGC only): The hydraulic settings for the optional IGC system can be adjusted using this menu.

- Lift—Lift speed can be set to low, medium, or high.
- Power Down—Power down speed can be set to low, medium, or high.
- Tilt Left—Tilt left speed can be set to low, medium, or high.
- Tilt Right—Tilt right speed can be set to low, medium, or high.



TX1010947 —19—04AUG06

Hydraulic Settings

MH66O88,00001F3 -19-15FEB12-1/1

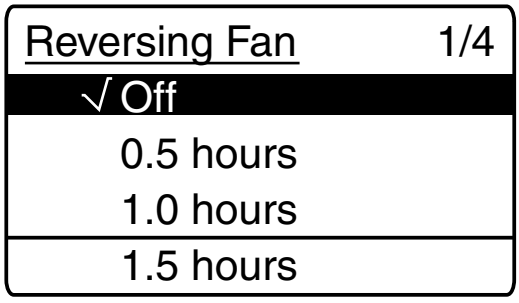
CAN Monitor Unit (CMU) Main Menu—Machine Settings—Reversing Fan

The interval between reverse cycles for the hydraulic fan can be set in this menu.

At the machine settings menu, press NEXT to highlight Reversing Fan.

Press SELECT to display submenu.

- Off—Turns the reversing function off.
- 0.5 hours—Fan will reverse every half hour when machine is in neutral or reverse.
- 1.0 hours—Fan will reverse every hour when machine is in neutral or reverse.
- 1.5 hours—Fan will reverse every hour and a half when machine is in neutral or reverse.



T205942 —19—16DEC04

Reversing Fan

MH66O88,00001F4 -19-15FEB12-1/1

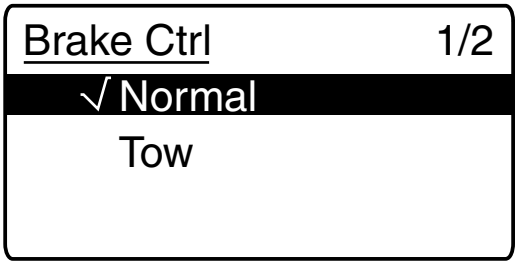
CAN Monitor Unit (CMU) Main Menu—Machine Settings—Brake Ctrl

This function will allow the machine to be towed without automatically applying the brakes (hill hold feature disabled).

Press NEXT at Machine Settings to highlight Brake Ctrl.

Select Brake Ctrl.

- Select Normal for normal machine operation.
- Select Tow to tow the machine.



TX1010948 —19—04AUG06

Brake Control

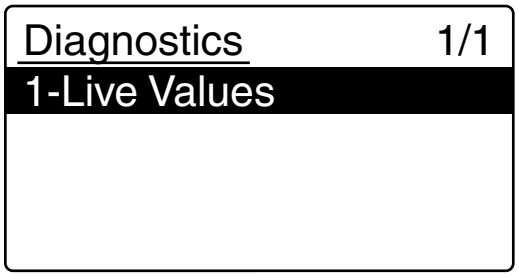
MH66O88,00001F5 -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Diagnostics

The Diagnostics menu provides a limited set of tools and is intended for use by service personnel and machine operators for diagnostic and troubleshooting functions.

Press NEXT at Main Menu to highlight Diagnostics.

Press SELECT to display submenu.



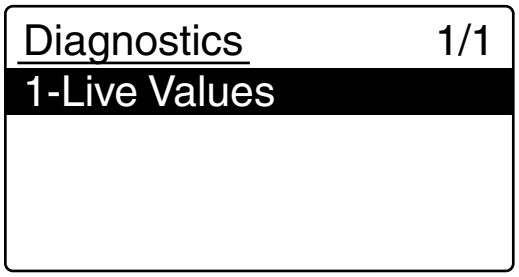
TX1009764 —19—07JUL06

Live Values

MH66O88,00001F6 -19-22JUL10-1/1

CAN Monitor Unit (CMU) Main Menu—Diagnostics—Live Values

Press SELECT to display Live Values.



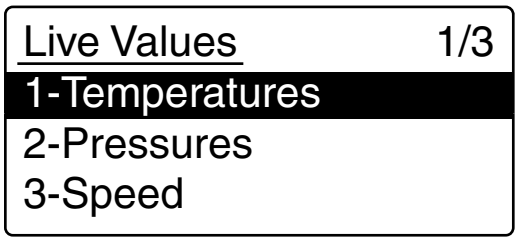
TX1009764 —19—07JUL06

Diagnostics

MH66O88,00001F7 -19-15FEB12-1/2

This menu displays the live values that the controllers see.

- Temperatures—Displays values for engine, transmission, and hydraulic temperatures.
- Pressures—Displays values for transmission and engine pressures.
- Speed—Displays values for engine, left motor, right motor, crankshaft, and camshaft speed.



TX1008962 —19—08JUN06

Live Values

MH66O88,00001F7 -19-15FEB12-2/2

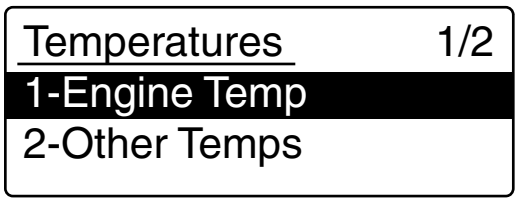
CAN Monitor Unit (CMU) Main Menu—Diagnostics Live Values—Temperatures

This menu displays the live values that the controllers see.

Press SELECT when Temperatures is highlighted.

Press SELECT to display Engine Temp. The following values will be displayed:

- Coolant—Coolant temperature will be displayed in °C or °F.
- Fuel—Fuel temperature will be displayed in °C or °F.
- Manifold Air—Manifold air temperature will be displayed in °C or °F.
- Comp Inlet—Compressor inlet air temperature will be displayed in °C or °F.
- EGR—EGR temperature will be displayed in °C or °F.
- Charge Air—Charge air temperature will be displayed in °C or °F.



TX1008619 —19—30MAY06

Temperatures

Press SELECT to display Other Temps. The following values will be displayed.

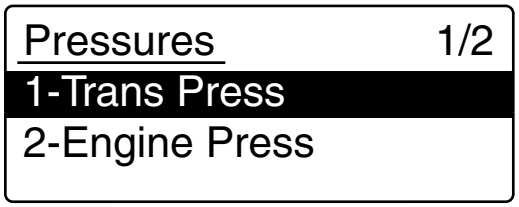
- Transmission—Transmission oil temperature will be displayed in °C or °F.
- Hydraulic—Hydraulic oil temperature will be displayed in °C or °F.

MH66O88,00001F8 -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Diagnostics Live Values—Pressures

Press NEXT to highlight Pressures.

This menu displays values for transmission and engine pressures.



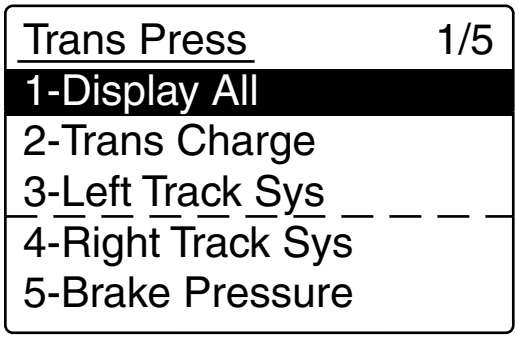
TX1008620 —19—30MAY06

Pressures

MH66O88,00001F9 -19-15FEB12-1/3

Press SELECT to display all trans pressures. The following values will be displayed:

- Trans Charge—Transmission charge pressure will be displayed in kPa or psi.
- Left Track Sys—Left track system pressure will be displayed in kPa or psi.
- Right Track Sys—Right track system pressure will be displayed in kPa or psi.
- Brake Pressure—Brake pressure will be displayed in kPa or psi.



TX1011133 —19—15AUG06

Trans Press

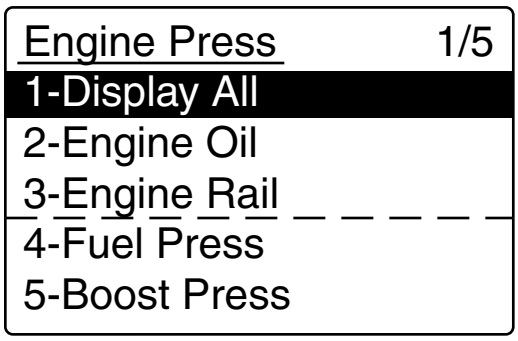
Continued on next page

MH66O88,00001F9 -19-15FEB12-2/3

Press SELECT to display all engine pressures. The following values will be displayed:

- Engine Oil—Engine oil pressure will be displayed in kPa or psi.
- Engine Rail—Engine fuel rail pressure will be displayed in kPa or psi.
- Fuel Press—Fuel pressure at transfer pump will be displayed in kPa or psi.
- Boost Press—Boost pressure will be displayed in kPa or psi.

Press BACK to return to submenu.



TX1011134 —19—15AUG06

Engine Press

MH66O88,00001F9 -19-15FEB12-3/3

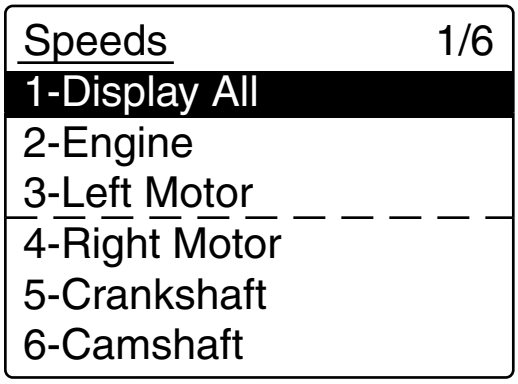
CAN Monitor Unit (CMU) Main Menu—Diagnostics Live Values—Speeds

Press NEXT to highlight Speeds.

Press SELECT to display all speeds. The following values will be displayed:

- Engine—Engine speed will be displayed in rpm.
- Left Motor—Left motor speed will be displayed in rpm.
- Right Motor—Right motor speed will be displayed in rpm.
- Crankshaft—Crankshaft speed will be displayed in rpm.
- Camshaft—Camshaft speed will be displayed in rpm.

Press BACK to return to submenu.



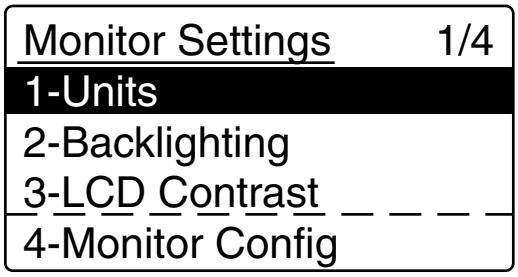
T202464 —19—15AUG06

Speeds

MH66O88,00001FA -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Monitor Settings

The Monitor Settings menu provides the capability to select submenus.



TX1009768 —19—07JUL06

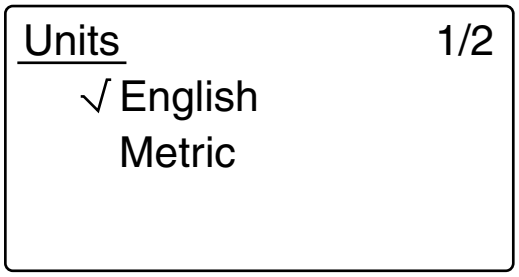
Monitor Settings

MH66O88,00001FB -19-22JUL10-1/1

CAN Monitor Unit (CMU) Main Menu—Monitor Settings—Units

Units: This menu sets the units for all functions of the CMU. Push SELECT to select the desired mode.

- English—All units will be English standard units.
- Metric—All units will be metric units.



T193395 —19—05AUG03

Units

MH66O88,00001FC -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Monitor Settings—Backlighting

Backlighting: This mode allows the operator to adjust the backlighting of the monitor. The backlight value is displayed in percentage and is incremented by 1. The range of adjustment is from 1 (no light) to 10 (brightest setting). The default backlight value is 10%.

Press NEXT to highlight Backlighting.

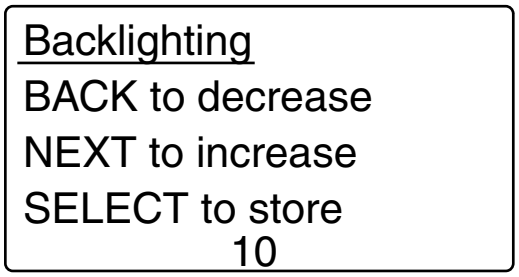
Press SELECT.

Press NEXT to increase backlighting by 1.

Press BACK to decrease backlighting by 1.

Press SELECT to store currently displayed value. The stored value will be used as the default backlight value until changed.

NOTE: Changing the backlight value without storing the setting with the SELECT key will affect the backlighting only until the key switch is turned off. The previously stored value will be used when the key switch is turned on again.



T193397 —19—15OCT03

Backlighting

Press MENU to exit.

MH66O88,00001FD -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Monitor Settings—LCD Contrast

LCD Contrast—This mode allows the operator to adjust the contrast setting of the monitor display. The range of adjustment is from 1 (lightest, or least contrast) to 10 (darkest, or most contrast). The default contrast value is 5.

Press NEXT at Monitor Settings menu to highlight LCD Contrast.

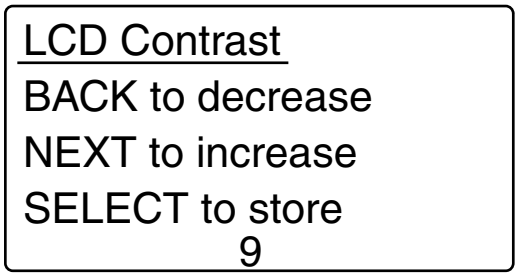
Press SELECT.

Press NEXT to increase contrast by 1.

Press BACK to decrease contrast by 1.

Press SELECT to store currently displayed value. The stored value will be used as the default contrast value until it is changed.

NOTE: Changing the contrast without storing the setting with the SELECT key will affect the contrast only until the key switch is turned off. The previously stored value will be used when the key switch is turned on again.



T193398 —19—22SEP03

LCD Contrast

Press MENU to exit.

MH66O88,00001FE -19-15FEB12-1/1

CAN Monitor Unit (CMU) Main Menu—Monitor Settings—Monitor Config

Monitor Config: This menu displays the type and performance level of the machine. These items are populated by the engine control unit (ECU).

Press MENU to exit.

MH66O88,00001FF -19-15FEB12-1/1

Standard Display Monitor (SDM)—Main Menu

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

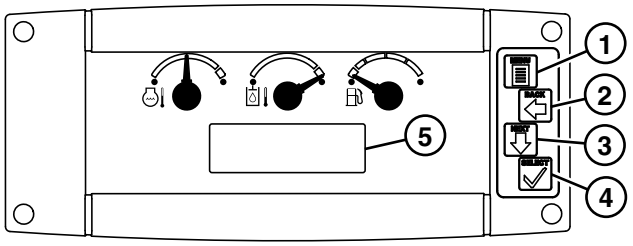
BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

MAIN MENU screen is the initial SDM screen activated when operator begins to view or modify machine and monitor settings.

The MAIN MENU is accessed by pressing the SELECT button once while the runtime screen is displayed.

MAIN MENU screen displays four options from which the operator may view or modify machine information:

1. **CODES—**displays active or stored diagnostic trouble codes.
2. **MACHINE SETTINGS—**allows operator to view or modify operating characteristics of the machine.
3. **DIAGNOSTICS—**provides a limited set of tools, and is intended for diagnostic and troubleshooting functions.
4. **MONITOR—**allows operator to view or modify operating characteristics of the monitor.

ER93822,00000C0 -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Codes

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

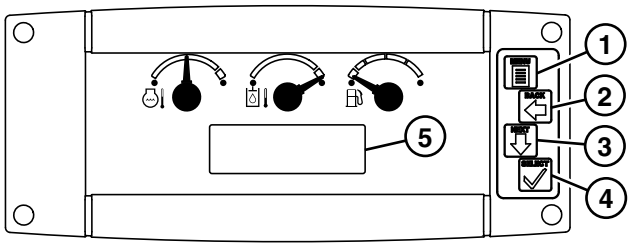
- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

The CODES menu screen displays diagnostic trouble codes (DTCs) that are currently active or stored on the machine. Each DTC is saved in order of occurrence.

To access CODES menu screen from the runtime screen,

1. Press SELECT button to activate MAIN MENU screen.
2. Press NEXT button until CODES menu option is highlighted.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

3. Press SELECT button.

CODES menu options include:

1. ACTIVE CODES - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Codes—Active Codes in this section.
2. STORED CODES - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Codes—Stored Codes in this section.

ER93822,00000C1 -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Codes—Active Codes

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

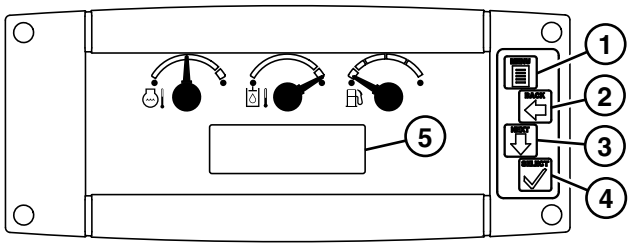
NOTE: Translations shown on display may be abbreviated.

The ACTIVE CODES menu displays a maximum of 20 of the most recent diagnostic trouble codes (DTCs) that are currently active on the machine. As the DTCs are resolved or fixed, the code will be removed from the Active Codes display.

To access ACTIVE CODES screen from the runtime screen,

1. Press SELECT button to initiate MAIN MENU screen.
2. Press NEXT button until CODES menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until ACTIVE CODES menu option is highlighted.
5. Press SELECT button.

If NO ACTIVE CODES is displayed, the SDM has not received any DTCs to relay to the operator.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

If one or more DTCs are displayed, the operator may view more information on a specific code by pressing the NEXT button until the appropriate DTC is highlighted and then pressing the SELECT button.

The following is displayed for each active code:

NOTE: Circuit information varies based upon diagnostic trouble code.

- Text description of the DTC
- Source controller of fault (ECU, SDM, or TCU)
- Suspect Parameter Number (SPN)
- Failure Mode Indicator (FMI)

In the example 000744.04, 000744 is the SPN and 04 is the FMI number.

After viewing the DTC information, press the BACK button once to return to the list of active DTCs.

ER93822,00000C2 -19-25JAN12-1/1

Standard Display Monitor (SDM)—Main Menu—Codes—Stored Codes

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

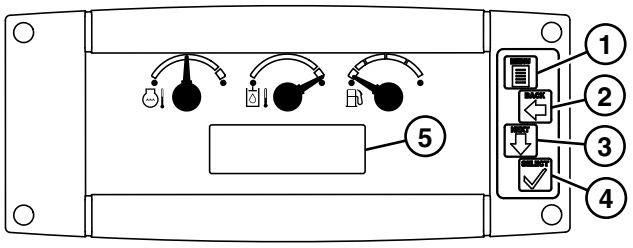
- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

The STORED CODES menu provides the capability to display in sequence up to 20 of the latest diagnostic trouble codes (DTCs) that have occurred on the machine. Each DTC is saved in the order it occurred. If 20 codes exist and another DTC occurs, the oldest DTC is removed from the list.

To access STORED CODES screen from the runtime screen,

1. Press SELECT button to initiate MAIN MENU screen.
2. Press NEXT button until CODES menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until STORED CODES menu option is highlighted.
5. Press SELECT button.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

If NO STORED CODES is displayed, the SDM has not stored any DTCs to relay to the operator.

If one or more DTCs are displayed, the operator may view more information on a specific code by pressing the NEXT button until the appropriate DTC is highlighted and then pressing the SELECT button.

The following is displayed for each stored code:

NOTE: Circuit information varies based upon diagnostic trouble code.

- Text description of the DTC
- Source controller of fault (ECU, SDM, or TCU)
- Suspect Parameter Number (SPN)
- Failure Mode Indicator (FMI)

In the example 000744.04, 000744 is the SPN and 04 is the FMI number.

ER93822,00000C3 -19-25JAN12-1/1

Standard Display Monitor (SDM)—Main Menu—Machine Settings

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

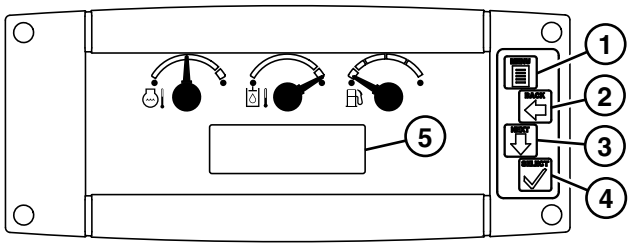
The MACHINE SETTINGS menu allows the operator to make changes to various operating conditions of the machine. Normally, the last setting is stored when the engine is shut off and is retrieved when the engine is restarted.

To access MACHINE SETTINGS menu screen from the runtime screen,

1. Press SELECT button to activate MAIN MENU screen.
2. Press NEXT button until MACHINE SETTINGS menu option is highlighted.
3. Press SELECT button.

MACHINE SETTINGS menu options include:

1. TRANSMISSION - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Machine Settings—Transmission in this section.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

2. REVERSING FAN - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Machine Settings—Reversing Fan in this section.
3. BRAKE MODE - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Machine Settings—Brake Mode in this section.
4. CONTROLLER INFO - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Machine Settings—Controller Info in this section.
5. JOB TIMER - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Machine Settings—Job Timer in this section.
6. TRACK INFO - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Machine Settings—Track Info in this section.

ER93822,00000C4 -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Machine Settings—Transmission

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

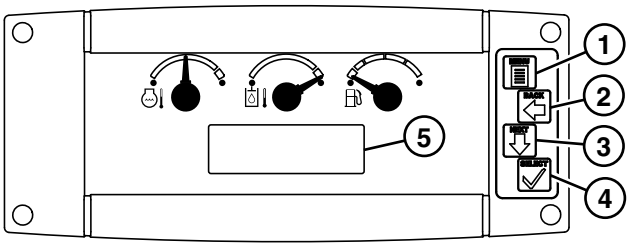
BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

The TRANSMISSION menu contains settings that affect transmission function and performance.

To access TRANSMISSION screen from the runtime screen,

1. Press SELECT button to initiate MAIN MENU screen.
2. Press NEXT button until MACHINE SETTINGS menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until TRANSMISSION menu option is highlighted.
5. Press SELECT button.

TRANSMISSION items on display include:

1. REVERSE RATIO
2. AGGRESSIVENESS
3. DECEL RESPONSE
4. FNR SHIFT RATE
5. STEER RATE
6. STEER MODULATION

The machine may be modified to the preferences of the operator by adjusting the rates on the transmission controller unit. Following are the adjustable rates:

Rate	Description	Factory Setting	Operator Comment	Solution
REVERSE RATIO	Enables operator to preset reverse speeds based on forward speed.	100%		115% 130%
AGGRESSIVENESS	Affects operator perception of machine power. Affects engine pull-down and opposite track movement when the track drive goes over relief.	NORMAL	“The engine speed pulls down too far.” “The tracks stop too soon.”	LOW decreases engine pull-down.
DECEL RESPONSE	Affects machine responsiveness to pedal movement.	NORMAL	“The machine is too jerky when I use the decelerator/brake pedal.” “The decelerator/brake pedal is too slow.”	Change to LOW. Change to HIGH.
FNR SHIFT RATE	Affects how quickly the machine shifts between forward and reverse.	NORMAL	“The direction shift is too jerky.” “The direction shift is too slow.”	Change to LOW. Change to HIGH.

Continued on next page

STEER RATE	Affects steering response to steering lever movement.	NORMAL	"The steering is too jerky." "The steering is too slow."	Change to LOW. Change to HIGH.
STEER MODULATION	Affects amount of steering that occurs per amount of lever movement.	NORMAL	"The lever travel for steering is too long on this joystick." "The steering throw is too short on this joystick and the steering is too jerky."	Change to HIGH. Change to LOW.

To modify the adjustable rate,

1. Access the TRANSMISSION menu.
2. Press the NEXT button until the adjustable rate to be modified is highlighted.
3. Press SELECT button.
4. Press the NEXT button until the desired setting is highlighted.
5. Press SELECT to activate new setting.
6. An audible signal activates as the screen displays SAVING SETTING.

If the modification was successful, the screen will display SETTINGS SAVED. If the modification was not successful, the screen will display SAVE FAILED.

ER93822,00000C5 -19-07NOV11-2/2

Standard Display Monitor (SDM)—Main Menu—Machine Settings—Reversing Fan

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

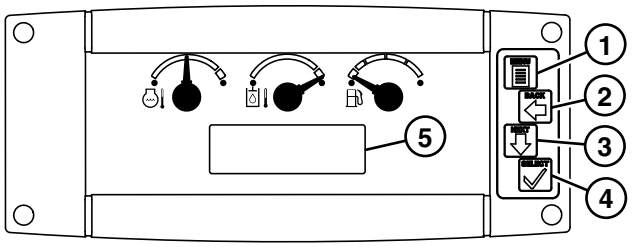
The REVERSING FAN menu is used to set the interval between reverse cycles for the hydraulic fan.

To access REVERSING FAN screen from the runtime screen,

1. Press SELECT button to initiate MAIN MENU screen.
2. Press NEXT button until MACHINE SETTINGS menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until REVERSING FAN menu option is highlighted.
5. Press SELECT button.

REVERSING FAN menu options include:

- OFF—Turns the reversing function off.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

- 30 MINUTES—Fan will reverse every half hour when machine is in neutral or reverse.
- 45 MINUTES—Fan will reverse every 45 minutes when machine is in neutral or reverse.
- 60 MINUTES—Fan will reverse every hour when machine is in neutral or reverse.
- 90 MINUTES—Fan will reverse every 90 minutes when machine is in neutral or reverse.

To modify the reversing fan setting,

1. Access the REVERSING FAN menu.
2. Press the NEXT button until desired new setting is highlighted.
3. Press SELECT button to activate new setting.
4. An audible will signal will sound as the screen displays SAVING SETTING.

If the modification was successful, the SDM screen displays SETTINGS SAVED. If the modification was not successful, the SDM screen displays SAVE FAILED.

ER93822,00000C6 -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Machine Settings—Brake Mode

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

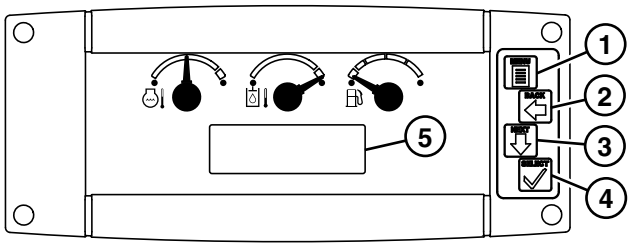
- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

The BRAKE MODE menu will allow the machine to be towed without automatically applying the brakes.

To access REVERSING FAN screen from the runtime screen,

1. Press SELECT button to initiate MAIN MENU screen.
2. Press NEXT button until MACHINE SETTINGS menu option is highlighted.
3. Press SELECT button.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

4. Press NEXT button until BRAKE MODE menu option is highlighted.
5. Press SELECT button.

BRAKE MODE menu options include:

1. NORMAL—press SELECT for normal machine operation.
2. TEST—press SELECT
3. TOW—press SELECT to tow the machine.

ER93822,00000C7 -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Machine Settings—Controller Info

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

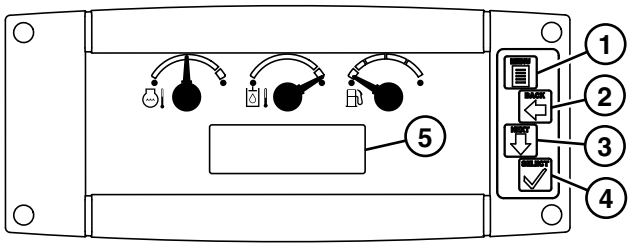
NOTE: Translations shown on display may be abbreviated.

The CONTROLLER INFO menu displays current versions of software installed for diagnostics.

To access CONTROLLER INFO screen from the runtime screen,

1. Press SELECT button to initiate MAIN MENU screen.
2. Press NEXT button until MACHINE SETTINGS menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until CONTROLLER INFO menu option is highlighted.
5. Press SELECT button.

CONTROLLER INFO menu options include:



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

1. SDM—Press SELECT button to display software version number of SDM. Press SELECT button again to display software part number of SDM. Press SELECT button once more to display hardware part number of SDM. Press MENU button to return to runtime screen.
2. TCU—Press SELECT button to display software version number of Transmission Control Unit (TCU). Press SELECT button again to display software part number of TCU. Press MENU button to return to runtime screen.
3. ECU—Press SELECT button to display software version number of Engine Control Unit (ECU). Press SELECT button again to display software part number of ECU. Press MENU button to return to runtime screen.

ER93822,00000C8 -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Machine Settings—Job Timer

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

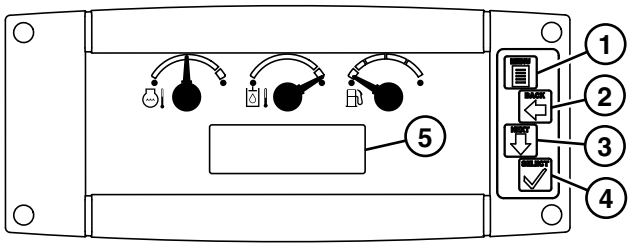
BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

The JOB TIMER menu contains an hour meter that can be reset. The hour meter will measure to the nearest tenth of an hour.

To access JOB TIMER screen from the runtime screen,

1. Press SELECT button to initiate MAIN MENU screen.
2. Press NEXT button until MACHINE SETTINGS menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until JOB TIMER menu option is highlighted.
5. Press SELECT button.

JOB TIMER menu options include:

1. SHOW TIMER—displays the current hours since last reset.
2. RESET TIMER—resets the timer.

ER93822,00000C9 -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Machine Settings—Track Info

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

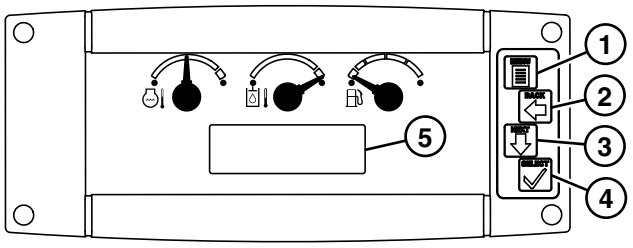
- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

The TRACK INFO menu displays track information calculated by the transmission control unit (TCU).

To access TRACK INFO menu screen from the runtime screen,

1. Press SELECT button to activate MAIN MENU screen.
2. Press NEXT button until MACHINE SETTINGS menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until TRACK INFO menu option is highlighted.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

5. Press SELECT button.

The TRACK INFO screens display:

- FORWARD DISTANCE—The distance the machine has traveled in forward direction is displayed in miles.
- REVERSE DISTANCE—The distance the machine has traveled in reverse direction is displayed in miles.
- FORWARD HOURS—The hours the machine has spent traveling in forward direction is displayed.
- REVERSE HOURS—The hours the machine has spent traveling in reverse direction is displayed.

Press NEXT button to view each of the displays. Press MENU button to return to MAIN MENU screen.

ER93822,00000CA -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Diagnostics

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

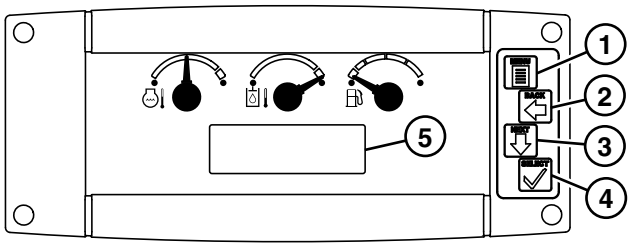
- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

The DIAGNOSTICS menu provides a limited set of tools and is intended for diagnostics and troubleshooting functions.

To access DIAGNOSTICS menu screen from the runtime screen,

1. Press SELECT button to activate MAIN MENU screen.
2. Press NEXT button until DIAGNOSTICS menu option is highlighted.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

3. Press SELECT button.

DIAGNOSTICS menu items include:

- LIVE VALUES—For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Diagnostics—Live Values in this section.

ER93822,00000CB -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Diagnostics—Live Values

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

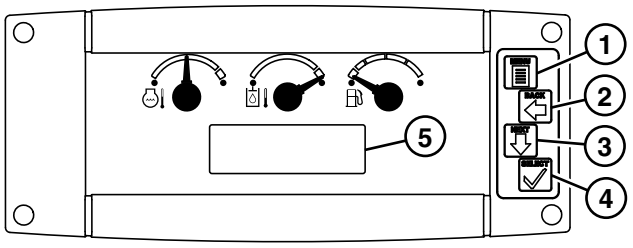
The LIVE VALUES menu displays current machine temperatures, pressures, and speed values.

To access LIVE VALUES menu screen from the runtime screen,

1. Press SELECT button to activate MAIN MENU screen.
2. Press NEXT button until DIAGNOSTICS menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until LIVE VALUES menu option is highlighted.
5. Press SELECT button.

The submenus under LIVE MENU that appear on display include:

1. TEMPERATURES - Press SELECT button to activate TEMPERATURES screen. Press NEXT button to navigate to the next display in TEMPERATURES screen. Press MENU button to return to MAIN MENU screen. TEMPERATURES screen displays include:
   - Coolant
   - Fuel
   - Manifold Air
   - Transmission Oil
   - Hydraulic Oil
   - CAC Outlet
   - Ambient Air
2. PRESSURES - Press SELECT button to activate PRESSURES screen. Press NEXT button to navigate to the next display in PRESSURES screen. Press MENU button to return to MAIN MENU screen. PRESSURES screen displays include:
   - Transmission Charge Oil
   - Brake
   - Left System
   - Right System
   - Engine Oil
   - Fuel
   - Manifold Air
3. SPEEDS - Press SELECT button to activate SPEEDS screen. Press NEXT button to navigate to the next display in SPEEDS screen. Press MENU button to return to MAIN MENU screen. SPEEDS screen displays include:
   - Engine Speed
   - Left Motor
   - Right Motor
   - Crankshaft
   - Camshaft



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

ER93822,00000CC -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Monitor

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

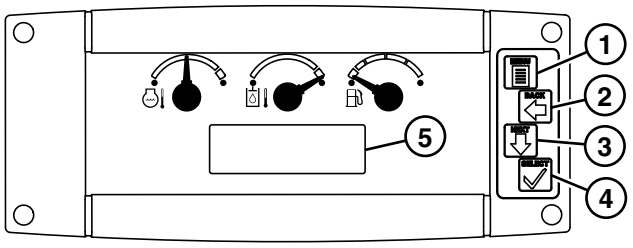
- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

The MONITOR menu allows for changes to display settings of the monitor.

To access MONITOR menu screen from the runtime screen,

1. Press SELECT button to activate MAIN MENU screen.
2. Press NEXT button until MONITOR menu option is highlighted.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

3. Press SELECT button.

MONITOR menu options include:

- UNITS - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Monitor—Units in this section.
- CONTRAST - For more information concerning this menu option, see Standard Display Monitor (SDM)—Main Menu—Monitor—Contrast in this section.

ER93822,00000CD -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Monitor—Units

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

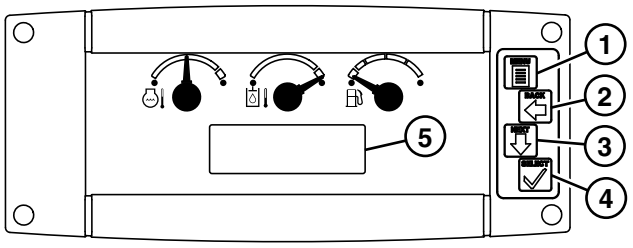
- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

The UNITS menu allows the operator to modify the units of measurement for all functions and displays of the SDM.

To access UNITS menu screen from the runtime screen,

1. Press SELECT button to activate MAIN MENU screen.
2. Press NEXT button until MONITOR menu option is highlighted.
3. Press SELECT button.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

UNITS menu options include:

1. ENGLISH—Press SELECT button when ENGLISH is highlighted to display readings in English standard units. An audible signal will activate and “ENGLISH SELECTED” displays on the SDM screen.
2. METRIC—Press SELECT button when METRIC is highlighted to display readings in metric units. An audible signal will activate and “METRIC SELECTED” displays on the SDM screen.

ER93822,00000CE -19-07NOV11-1/1

Standard Display Monitor (SDM)—Main Menu—Monitor—Contrast

MENU button (1) - Press MENU button to exit the current menu screen (5) and return to runtime screen.

BACK button (2) - Press BACK button to return to previous menu screen.

NEXT button (3) - Press NEXT button to highlight the available menu option in the current screen.

SELECT button (4) - Press SELECT button to initiate and access the MAIN MENU screen. After the MAIN MENU has been activated, press SELECT button to:

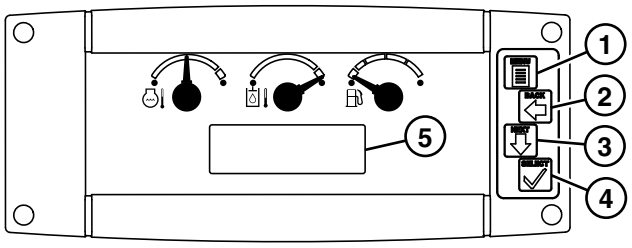
- proceed to the next menu level
- or modify the machine or SDM as indicated by highlighted menu item
- or perform the action indicated by the highlighted menu item.

NOTE: Translations shown on display may be abbreviated.

The CONTRAST menu allows the operator to adjust the contrast setting of the monitor display. The range of adjustment is from 1 (lightest, or least contrast) to 10 (darkest, or most contrast). The default contrast value is 5.

To access CODES menu screen from the runtime screen,

1. Press SELECT button to activate MAIN MENU screen.
2. Press NEXT button until MONITOR menu option is highlighted.
3. Press SELECT button.
4. Press NEXT button until CONTRAST menu option is highlighted.



TX1100522 —UN—07NOV11

1— MENU Button
2— BACK Button
3— NEXT Button
4— SELECT Button
5— Screen

5. Press SELECT button.

NOTE: Changing the contrast without storing the setting with the SELECT button will affect the contrast only until the engine stop switch is pressed. The previously stored value will be used when the engine start switch is activated.

To modify contrast setting of the monitor display,

1. Access CODES menu screen.
2. Press NEXT or BACK button until desired contrast setting is displayed. Pressing NEXT button increases contrast by 1. Pressing BACK button decreases contrast by 1.
3. Press SELECT button to store the displayed contrast setting and return to MAIN MENU screen.

ER93822,00000CF -19-07NOV11-1/1

Required Emission-Related Information

Service Provider

A qualified repair shop or person of the owner's choosing may maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. However, warranty, recall, and all other services paid for by John Deere must be performed at an authorized John Deere service center.

DX,EMISSIONS,REQINFO -19-12JUN15-1/1

Engines With Tier 3-Stage IIIA/MAR-I Emission Control

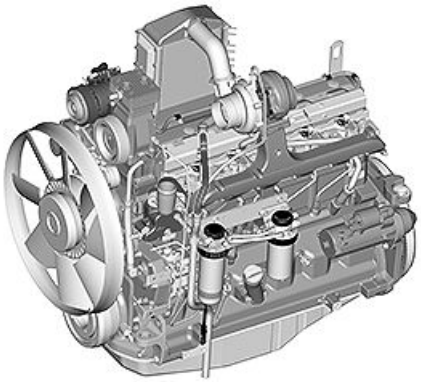
Emission control programs set emission limits for engines and reduce vehicle and machinery impact on air quality.

Tier 3-Stage IIIA certified engines meet US EPA Tier 3, EU Stage IIIA, and PROCONVE MAR-I emission requirements for construction and forestry machinery.

The programs consider both machinery and fuel as an integrated system. Correct use and maintenance of the machine is required.

Fuel quality and sulfur content must comply with the specifications in this manual.

IMPORTANT: If the engine or the engine auxiliaries fail during the lifespan, contact an authorized John Deere dealer for proper maintenance to ensure the correct emission control.



BM010705 —UN—22JAN16

Tier 3-Stage IIIA Engine

KR46761,000147B -19-05AUG20-1/1

Alternative and Synthetic Lubricants

Conditions in certain geographical areas may require lubricant recommendations different from those printed in this manual.

Some John Deere brand coolants and lubricants may not be available in your location.

Consult your authorized John Deere dealer to obtain information and recommendations.

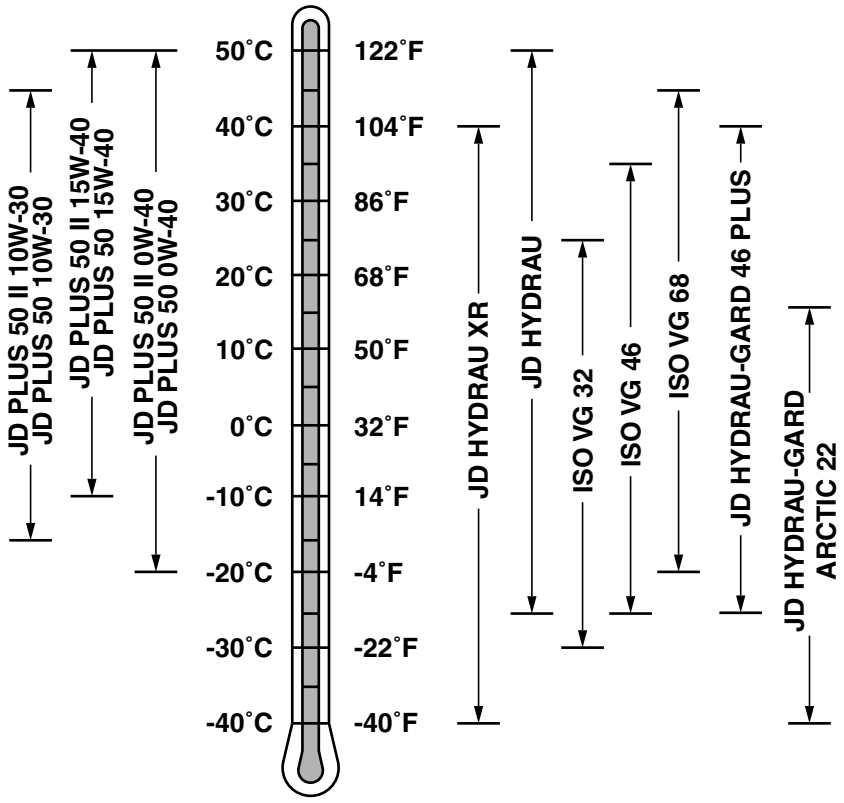
Synthetic lubricants may be used if they meet the performance requirements as shown in this manual.

The temperature limits and service intervals shown in this manual apply to both conventional and synthetic lubricants.

Re-refined base stock products may be used if the finished lubricant meets the performance requirements.

VD76477,000051E -19-29MAR11-1/1

Hydraulic and Hydrostatic Oil



TX1180348

TX1180348 —UN—18DEC14

Oil Viscosities for Ambient Temperature Ranges

Use oil viscosity based on the expected air temperature range during the period between oil changes.

IMPORTANT: Avoid machine damage. Do not mix fluids of different type or brand. Do not mix zinc-free and zinc-based. Mixing fluids can result in additive fall-out and lubricant degradation. Zinc-free oils are not approved for use.

2000-Hour Change Interval

The following oils are preferred:

- John Deere Hydrau™
- John Deere Hydrau™XR
- John Deere Plus-50™ II
- John Deere Plus-50™
- John Deere Hydrau-Gard™ 46 Plus[1]

1000-Hour Change Interval

Other oils may be used if they meet one or more of the following:

- Minimum API classification CI-4
- Anti-Wear Hydraulic Oils (AWHO):
  - ISO 11158 Category HV
  - DIN 51524-3

Cold weather operation only:

- John Deere Hydrau-Gard™ 22 Arctic[1]

[1]*Fluid is not available in the United States or Canada.*

Hydrau is a trademark of Deere & Company
Plus-50 is a trademark of Deere & Company
Hydrau-Gard is a trademark of Deere & Company

CN93077,0000332 -19-06MAR17-1/1

Inner and Outer Final Drive Oil

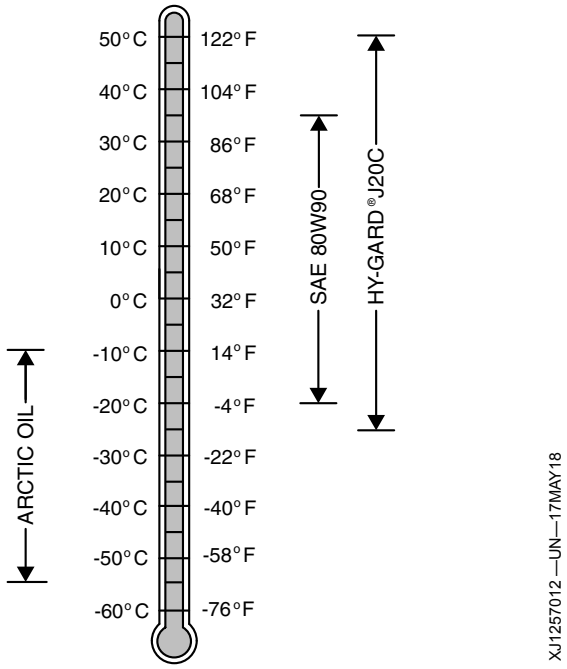
Depending on the expected air temperature range between oil changes, use oil viscosity shown on the chart.

John Deere Hy-Gard™ is preferred.

Other oils may be used if they meet the following:

- John Deere Gear Lubricant API GL-5 (SAE 80W90)

Arctic oils (such as Military Specifications MIL-L-46167B) may be used at temperatures below -30°C (-22°F).



Inner and Outer Final Drive Oil Temperature Specifications

Hy-Gard is a trademark of Deere & Company

TX,45,RR5121 -19-17MAY18-1/1

Track Rollers, Front Idler, Carrier Roller and Track Frame Pivot Oil

Use oil viscosity based on the expected air temperature range during the period between oil changes.

The following oils are preferred:

- John Deere GEAR LUBRICANT HY-GARD API GL-5 (SAE 80W90)
- John Deere EXTREME-GARD

The following oils are recommended:

- API Service Classification API GL-5 gear oil (SAE 80W90)
- Arctic oils such as (MIL-L-10324A) may be used at temperatures below —30°C (—11°F).

ER93822,000010D -19-14APR08-1/1

Multipurpose Extreme Pressure (EP) Grease

IMPORTANT: For automated lubrication systems different ambient air temperatures need to be considered.

Use grease based on NLGI consistency numbers and the expected air temperature range during the service interval.

John Deere SD Polyurea Grease is preferred.

The following greases are also recommended:

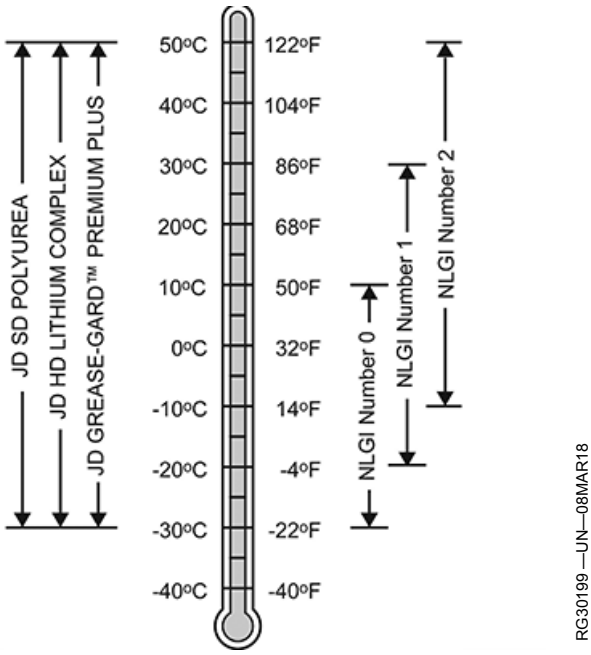
- John Deere HD Lithium Complex Grease
- John Deere Grease-Gard™ Premium Plus

Other greases may be used if they meet the following:

- NLGI Performance Classification GC-LB
- ISO-L-X-BDHB 2 or DIN KP 2 N-10 Lithium Complex, Non-Synthetic Base Oil (100 to 220 mm2/s @ 40°C)

IMPORTANT: Some types of thickeners, base oils, and additives used in greases are not compatible with others. Mixing greases should be avoided. Consult your grease supplier before mixing different types of grease.

Grease-Gard is a trademark of Deere & Company



Greases for Air Temperature Ranges

DX,GREA1 -19-13JAN18-1/1

Lubricant Storage

Your equipment can operate at top efficiency only when clean lubricants are used.

Use clean containers to handle all lubricants.

Store lubricants and containers in an area protected from dust, moisture, and other contamination. Store containers on their side to avoid water and dirt accumulation.

Make certain that all containers are properly marked to identify their contents.

Properly dispose of all old containers and any residual lubricant they may contain.

DX,LUBST -19-11APR11-1/1

Mixing of Lubricants

In general, avoid mixing different brands or types of oil. Oil manufacturers blend additives in their oils to meet certain specifications and performance requirements.

Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.

Consult your John Deere dealer to obtain specific information and recommendations.

DX,LUBMIX -19-18MAR96-1/1

Diesel Fuel

Consult your local fuel distributor for properties of the diesel fuel available in your area.

In general, diesel fuels are blended to satisfy the low temperature requirements of the geographical area in which they are marketed.

Diesel fuels specified to EN 590 or ASTM D975 are recommended. Renewable diesel fuel produced by hydrotreating animal fats and vegetable oils is basically identical to petroleum diesel fuel. Renewable diesel that meets EN 590 or ASTM D975 is acceptable for use at all percentage mixture levels.

Required Fuel Properties

In all cases, the fuel shall meet the following properties:

Cetane number of 43 minimum. Cetane number greater than 47 is preferred, especially for temperatures below –20°C (–4°F) or elevations above 1500 m (5000 ft).

Cold Filter Plugging Point (CFPP) should be at least 5°C (9°F) below the expected lowest temperature or **Cloud Point** below the expected lowest ambient temperature.

Fuel lubricity should pass a maximum scar diameter of 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

Diesel fuel quality and **sulfur content** must comply with all existing emissions regulations for the area in which the engine operates. DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

Sulfur Content for Interim Tier 4 and EU Stage III B Engines

- Use ONLY ultra low sulfur diesel (ULSD) fuel with a maximum of 15 mg/kg (15 ppm) sulfur content.

Sulfur Content for Tier 3 and Stage III A Engines

- Use of diesel fuel with sulfur content less than 1000 mg/kg (1000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 1000-5000 mg/kg (1000-5000 ppm) REDUCES oil and filter change intervals.
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur Content for Tier 2 and Stage II Engines

- Use of diesel fuel with sulfur content less than 500 mg/kg (500 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content 500-5000 mg/kg (500-5000 ppm) REDUCES oil and filter change intervals.
- BEFORE using diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm), contact your John Deere dealer.

Sulfur Content for Other Engines

- Use of diesel fuel with sulfur content less than 5000 mg/kg (5000 ppm) is RECOMMENDED.
- Use of diesel fuel with sulfur content greater than 5000 mg/kg (5000 ppm) REDUCES the oil and filter change interval.

IMPORTANT: Do not mix used diesel engine oil or any other type of lubricating oil with diesel fuel.

Improper fuel additive usage may cause damage on fuel injection equipment of diesel engines.

VD76477,000051F -19-07APR11-1/1

Lubricity of Diesel Fuel

Most diesel fuels manufactured in the United States, Canada, and the European Union have adequate lubricity to ensure proper operation and durability of fuel injection system components. However, diesel fuels manufactured in some areas of the world may lack the necessary lubricity.

IMPORTANT: Make sure the diesel fuel used in your machine demonstrates good lubricity characteristics.

Fuel lubricity should pass a maximum scar diameter of 0.45 mm as measured by ASTM D6079 or ISO 12156-1.

If fuel of low or unknown lubricity is used, add John Deere Fuel-Protect Diesel Fuel Conditioner (or equivalent) at the specified concentration.

Lubricity of Biodiesel Fuel

Fuel lubricity can improve significantly with biodiesel blends up to B20 (20% biodiesel). Further increase in lubricity is limited for biodiesel blends greater than B20.

VD76477,0000520 -19-29MAR11-1/1

Handling and Storing Diesel Fuel

CAUTION: Reduce the risk of fire. Handle fuel carefully. DO NOT fill the fuel tank when engine is running. DO NOT smoke while you fill the fuel tank or service the fuel system.

Fill the fuel tank at the end of each day's operation to prevent water condensation and freezing during cold weather.

Keep all storage tanks as full as practicable to minimize condensation.

Ensure that all fuel tank caps and covers are installed properly to prevent moisture from entering. Monitor water content of the fuel regularly.

When using biodiesel fuel, the fuel filter may require more frequent replacement due to premature plugging.

Check engine oil level daily prior to starting engine. A rising oil level may indicate fuel dilution of the engine oil.

IMPORTANT: The fuel tank is vented through the filler cap. If a new filler cap is required, always replace it with an original vented cap.

When fuel is stored for an extended period or if there is a slow turnover of fuel, add a fuel conditioner to stabilize the fuel and prevent water condensation. Contact your fuel supplier for recommendations.

VD76477,0000521 -19-30MAR11-1/1

Biodiesel Fuel

Biodiesel is a fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats. Biodiesel blends are biodiesel mixed with petroleum diesel fuel on a volume basis.

Biodiesel users in the U.S. are strongly encouraged to purchase biodiesel blends from a BQ-9000 Certified Marketer and sourced from a BQ-9000 Accredited Producer (as certified by the National Biodiesel Board). Certified Marketers and Accredited Producers can be found at the following website: http://www.bq-9000.org.

While 5% blends are preferred (B5), biodiesel concentrations up to a 20% blend (B20) in petroleum diesel fuel can be used in all John Deere engines. Biodiesel blends up to B20 can be used ONLY if the biodiesel (100% biodiesel or B100) meets ASTM D6751 (US), EN 14214 (EU), or equivalent specification. Expect a 2% reduction in power and a 3% reduction in fuel economy when using B20.

John Deere approved fuel conditioners containing detergent/dispersant additives are recommended when using lower biodiesel blends, but are required when using blends of B20 or greater.

John Deere engines can also operate on biodiesel blends above B20 (up to 100% biodiesel) ONLY if the biodiesel meets the EN 14214 specification (primarily available in Europe). Engines operating on biodiesel blends above B20 may not fully comply with all applicable emissions regulations. Expect up to a 12% reduction in power and an 18% reduction in fuel economy when using 100% biodiesel. John Deere approved fuel conditioners containing detergent/dispersant additives are required.

The petroleum diesel portion of biodiesel blends must meet the requirements of ASTM D975 (US) or EN 590 (EU) commercial standards.

Biodiesel blends up to B20 must be used within 90 days of biodiesel manufacture. Biodiesel blends from B21 to B100 must be used within 45 days of biodiesel manufacture.

Request a certificate of analysis from your fuel distributor to ensure that the fuel is compliant with the above specifications.

When using biodiesel fuel, the engine oil level must be checked daily. If oil becomes diluted with fuel, shorten oil change intervals. Refer to Diesel Engine Oil and Filter Service Intervals for more details regarding biodiesel and engine oil change intervals.

The following must be considered when using biodiesel blends up to B20:

- Cold weather flow degradation
- Stability and storage issues (moisture absorption, oxidation, microbial growth)
- Possible filter restriction and plugging (usually a problem when first switching to biodiesel on used engines.)
- Possible fuel leakage through seals and hoses
- Possible reduction of service life of engine components

The following must also be considered when using biodiesel blends above B20.

- Possible coking and/or blocked injector nozzles, resulting in power loss and engine misfire if John Deere approved fuel conditioners containing detergent/dispersant additives are not used
- Possible crankcase oil dilution, requiring more frequent oil changes
- Possible corrosion of fuel injection equipment
- Possible lacquering and/or seizure of internal components
- Possible formation of sludge and sediments
- Possible thermal oxidation of fuel at elevated temperatures
- Possible elastomer seal and gasket material degradation (primarily an issue with older engines)
- Possible compatibility issues with other materials (including copper, lead, zinc, brass, and bronze) used in fuel systems and fuel handling equipment
- Possible reduction in water separator efficiency
- Potential high acid levels within fuel system
- Possible damage to paint if exposed to biodiesel

IMPORTANT: Raw pressed vegetable oils are NOT acceptable for use as fuel in any concentration in John Deere engines. Their use could cause engine failure.

VD76477,0000522 -19-30MAR11-1/1

Testing Diesel Fuel

A fluid analysis program can help to monitor the quality of diesel fuel. The fuel analysis can provide critical data such as cetane number, fuel type, sulfur content, water content, appearance, suitability for cold weather operations, bacteria, cloud point, acid number, particulate contamination, and whether the fuel meets specification.

Contact your John Deere dealer for more information on diesel fuel analysis.

VD76477,0000523 -19-30MAR11-1/1

Minimizing the Effect of Cold Weather on Diesel Engines

John Deere diesel engines are designed to operate effectively in cold weather.

However, for effective starting and cold weather operation, a little extra care is necessary. The following information below outlines steps that can minimize the effect that cold weather may have on starting and operation of your engine. See your John Deere dealer for additional information and local availability of cold weather aids.

Use Winter Grade Fuel

When temperatures fall below 0°C (32°F), winter grade fuel (No. 1-D in North America) is best suited for cold weather operation. Winter grade fuel has a lower cloud point and a lower pour point.

Cloud point is the temperature at which wax will begin to form in the fuel and this wax causes fuel filters to plug. **Pour point** is the lowest temperature at which movement of the fuel is observed.

NOTE: On an average, winter grade diesel fuel has a lower BTU (heat content) rating. Using winter grade fuel may reduce power and fuel efficiency, but should not cause any other engine performance effects. Check the grade of fuel being used before troubleshooting for low power complaints in cold weather operation.

Air Intake Heater

An air intake heater is an available option for some engines to aid cold weather starting.

Ether

An ether port on the intake is available to aid cold weather starting.

CAUTION: Ether is highly flammable. Do not use ether when starting an engine equipped with glow plugs or an air intake heater.

Coolant Heater

An engine block heater (coolant heater) is an available option to aid cold weather starting.

Seasonal Viscosity Oil and Proper Coolant Concentration

Use seasonal grade viscosity engine oil based on the expected air temperature range between oil changes and a proper concentration of low silicate antifreeze as recommended. (See DIESEL ENGINE OIL and ENGINE COOLANT requirements in this section.)

Diesel Fuel Flow Additive

Use John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula), which contains anti-gel chemistry, or equivalent fuel conditioner to treat non-winter grade fuel (No. 2-D in North America) during the cold weather season. This generally extends operability to about 10°C (18°F) below the fuel cloud point. For operability at even lower temperatures, use winter grade fuel.

IMPORTANT: Treat fuel when outside temperature drops below 0°C (32°F). For best results, use with untreated fuel. Follow all recommended instructions on label.

Biodiesel

When operating with biodiesel blends, wax formation can occur at warmer temperatures. Begin using John Deere Fuel-Protect Diesel Fuel Conditioner (winter formula) at 5°C (41°F) to treat biodiesel fuels during the cold weather season. Use B5 or lower blends at temperatures below 0°C (32°F). Use only winter grade petroleum diesel fuel at temperatures below -10°C (14°F).

Winterfronts

Use of fabric, cardboard, or solid winterfronts is not recommended with any John Deere engine. Their use can result in excessive engine coolant, oil, and charge air temperatures. This can lead to reduced engine life, loss of power and poor fuel economy. Winterfronts may also put abnormal stress on fan and fan drive components potentially causing premature failures.

If winterfronts are used, they should never totally close off the grill frontal area. Approximately 25% area in the center of the grill should remain open at all times. At no time should the air blockage device be applied directly to the radiator core.

Radiator Shutters

If equipped with a thermostatically controlled radiator shutter system, this system should be regulated in such a way that the shutters are completely open by the time the coolant reaches 93°C (200°F) to prevent excessive intake manifold temperatures. Manually controlled systems are not recommended.

If air-to-air aftercooling is used, the shutters must be completely open by the time the intake manifold air temperature reaches the maximum allowable temperature out of the charge air cooler.

For more information, see your John Deere dealer.

VD76477,0000524 -19-06MAY11-1/1

Diesel Engine Break-In™ Oil

New engines are filled at the factory with either John Deere Break-In™ or Break-In Plus™ Engine Oil. During the break-in period, add John Deere Break-In or Break-In Plus Engine Oil, respectively, as needed to maintain the specified oil level.

Operate the engine under various conditions, particularly heavy loads with minimal idling, to help seat engine components properly.

Change the oil and filter at 250 hours maximum for Break-In Oil or 500 hours maximum for Break-In Plus Oil during the initial operation of a new or rebuilt engine.

After engine overhaul, fill the engine with either John Deere Break-In or Break-In Plus Engine Oil.

If John Deere Break-In or Break-In Plus Engine Oil is not available, use a 10W-30 diesel engine oil meeting one of the following during the first 250 hours of operation:

- API Service Classification CE
- API Service Classification CD
- API Service Classification CC
- ACEA Oil Sequence E2
- ACEA Oil Sequence E1

IMPORTANT: Do not use Plus-50™ II, Plus-50, or engine oils meeting any of the following for the initial break-in of a new or rebuilt engine:

API CK-4	**ACEA E9**
API CJ-4	**ACEA E7**
API CI-4 PLUS	**ACEA E6**
API CI-4	**ACEA E5**
API CH-4	**ACEA E4**
API CG-4	**ACEA E3**
API CF-4	
API CF-2	
API CF	

These oils will not allow the engine to break in properly.

John Deere Break-In Plus Engine Oil can be used for all John Deere diesel engines at all emission certification levels.

After the break-in period, use John Deere Plus-50 II, John Deere Plus-50, or other diesel engine oil as recommended in this manual.

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Break-In Plus is a trademark of Deere & Company
Plus-50 is a trademark of Deere & Company

TX,ENOIL4 -19-13FEB23-1/1

Diesel Engine Oil—Tier 3 and Stage III A Engines

Use oil viscosity based on the expected air temperature range during the period between oil changes.

John Deere Plus-50™ II oil is preferred.

John Deere Plus-50 is also recommended.

Other oils may be used if they meet one or more of the following:

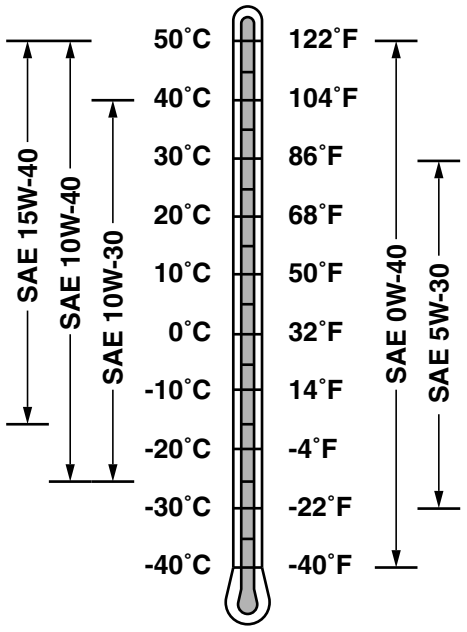
- John Deere Torq-Gard™
- API Service Category CJ-4
- API Service Category CI-4 PLUS
- API Service Category CI-4
- ACEA Oil Sequence E9
- ACEA Oil Sequence E7
- ACEA Oil Sequence E6
- ACEA Oil Sequence E5
- ACEA Oil Sequence E4

Multi-viscosity diesel engine oils are preferred.

Diesel fuel quality and fuel sulfur content must comply with all existing emissions regulations for the area in which the engine operates.

DO NOT use diesel fuel with sulfur content greater than 10 000 mg/kg (10 000 ppm).

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Torq-Gard is a trademark of Deere & Company



Oil Viscosities for Air Temperature Ranges

TX1114353 —UN—22MAY12

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Engine Oil and Filter Service Intervals — Tier 3 and Stage III A — PowerTech™ Plus Engines

Recommended oil and filter service intervals are based on a combination of oil pan capacity, type of engine oil and filter used, and sulfur content of diesel fuel. Actual service intervals also depend on operation and maintenance practices.

Approved Oil Types:

- "Plus-50 Oils" include John Deere Plus-50™ II and John Deere Plus-50™.
- "Other Oils" include John Deere Torq-Gard™, API CK-4, API CJ-4, API CI-4 PLUS, API CI-4, ACEA E9, ACEA E7, ACEA E6, ACEA E5, and ACEA E4.

Use oil analysis to evaluate the condition of the oil and to aid in selection of the proper oil and filter service interval. Contact your John Deere dealer or other qualified service provider for more information on engine oil analysis.

Change the oil and oil filter at least once every 12 months even if the hours of operation are fewer than the otherwise recommended service interval.

Diesel fuel sulfur content affects engine oil and filter service intervals.

- Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm) is RECOMMENDED
- BEFORE using diesel fuel with sulfur content greater than 2000 mg/kg (2000 ppm), contact your John Deere dealer or qualified service provider
- DO NOT use diesel fuel with sulfur content greater than 10000 mg/kg (10000 ppm)

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Torq-Gard is a trademark of Deere & Company

NOTE: The 500 hour extended oil and filter change interval is only allowed if all of the following conditions are met:

- *Use of diesel fuel with sulfur content less than 2000 mg/kg (2000 ppm)*
- *Use of John Deere Plus-50™ II or Plus-50 Oil*
- *Use of an approved John Deere oil filter*

Engine Oil and Filter Service Intervals	
Fuel Sulfur	Less than 2000 mg/kg (2000 ppm)
Plus-50 Oils	500 hours
Other Oils	250 hours
Fuel Sulfur	2000—10000 mg/kg (2000—10000 ppm)
Plus-50 Oils	Contact John Deere dealer
Other Oils	Contact John Deere dealer
Oil analysis may extend the service interval of "Other Oils", to a maximum not to exceed the interval of Plus-50 Oils. Oil analysis means taking a series of oil samples at 50-hour increments beyond the normal service interval until either the data indicates the end of useful oil life or the maximum service interval of John Deere Plus-50 oils is reached.	

IMPORTANT: To avoid engine damage:

- **Reduce oil and filter service intervals by 50% when using BioDiesel blends greater than B20. Oil analysis may allow longer service intervals**
- **Use only approved oil types**

DX,ENOIL13,T3,PTP,220toMAX -19-13JAN18-1/1

Heavy Duty Diesel Engine Coolant

The engine cooling system is filled to provide year-round protection against corrosion and cylinder liner pitting, and winter freeze protection to -37°C (-34°F). If protection at lower temperatures is required, consult your John Deere dealer for recommendations.

The following engine coolants are preferred:

John Deere COOL-GARD™ II Premix

John Deere COOL-GARD II PG Premix

Use John Deere COOL-GARD™ II PG Premix when a non-toxic coolant formulation is required.

Additional Recommended Coolants

The following engine coolants are also recommended:

- John Deere COOL-GARD II Concentrate in a 40—60% mixture of concentrate with quality water.

John Deere COOL-GARD II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate coolants do not require use of supplemental coolant additives.

Other Coolants

John Deere COOL-GARD II, and COOL-GARD II PG coolants might not be available in the geographical area where service is performed.

If these coolants are unavailable, use a coolant concentrate or prediluted coolant intended for use with heavy duty diesel engines and with a minimum of the following chemical and physical properties:

- Is formulated with a quality nitrite-free additive package.
- Provides cylinder liner cavitation protection according to either the John Deere Cavitation Test Method or a fleet study run at or above 60% load capacity.
- Protects the cooling system metals (cast iron, aluminum alloys, and copper alloys such as brass) from corrosion.

The additive package must be part of one of the following coolant mixtures:

- ethylene glycol or propylene glycol base prediluted (40—60%) heavy duty coolant
- ethylene glycol or propylene glycol base heavy duty coolant concentrate in a 40—60% mixture of concentrate with quality water

Water Quality

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate.

IMPORTANT: Do not use cooling system sealing additives or antifreeze that contains sealing additives.

Do not mix ethylene glycol and propylene glycol base coolants.

Do not use coolants that contain nitrites.

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Drain Intervals for Diesel Engine Coolant

Drain and flush the cooling system and refill with fresh coolant at the indicated interval, which varies with the coolant used.

John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate are maintenance free coolants for up to 6 years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix or COOL-GARD II PG Premix.

Test the coolant condition annually with Coolant Test Strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II Coolant Extender as directed.

If John Deere COOL-GARD II Premix, COOL-GARD II PG Premix, or COOL-GARD II Concentrate is used, but the coolant is not tested OR additives are not replenished by adding John Deere COOL-GARD II Coolant Extender, the drain interval is 4 years or 4000 hours of operation. This drain interval only applies to COOL-GARD II coolants that have been maintained within a 40% to 60% mixture of concentrate with quality water.

If a coolant other than COOL-GARD II, or COOL-GARD II PG is used, reduce the drain interval to 2 years or 2000 hours of operation.

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John Deere COOL-GARD™ II Coolant Extender

Some coolant additives will gradually deplete during engine operation. For John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate, replenish coolant additives between drain intervals by adding John Deere COOL-GARD II Coolant Extender.

John Deere COOL-GARD II Coolant Extender should not be added unless indicated by coolant testing.

John Deere COOL-GARD II Coolant Extender is a chemically matched additive system for use with all John Deere COOL-GARD II coolants. John Deere COOL-GARD II Coolant Extender is not intended for use with nitrite-containing coolants.

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IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:

- **John Deere COOL-GARD II**
- **John Deere COOL-GARD II PG**

The use of non-recommended supplemental coolant additives may result in additive drop-out, gelation of the coolant, or corrosion of cooling system components.

Add the recommended concentration of John Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

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Supplemental Coolant Additives

Some coolant additives will gradually deplete during engine operation. For nitrite-containing coolants, replenish coolant additives between drain intervals by adding a supplemental coolant additive as determined necessary by coolant testing.

John Deere Liquid Coolant Conditioner is recommended as a supplemental coolant additive for nitrite-containing coolants.

John Deere Liquid Coolant Conditioner is not designed for use with COOL-GARD™ II Premix, COOL-GARD II PG Premix, or COOL-GARD II Concentrate.

IMPORTANT: Do not add a supplemental coolant additive when the cooling system is drained and refilled with any of the following:

- **John Deere COOL-GARD II**
- **John Deere COOL-GARD II PG**

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If other coolants are used, consult the coolant supplier and follow the manufacturer's recommendation for use of supplemental coolant additives.

The use of non-recommended supplemental coolant additives may result in additive drop-out and gelation of the coolant.

Add the manufacturer's recommended concentration of supplemental coolant additive. DO NOT add more than the recommended amount.

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Operating in Warm Temperature Climates

John Deere engines are designed to operate using recommended engine coolants.

Always use a recommended engine coolant, even when operating in geographical areas where freeze protection is not required.

IMPORTANT: Water may be used as coolant *in emergency situations only.*

Foaming, hot surface aluminum and iron corrosion, scaling, and cavitation occur when water is used as the coolant, even when coolant conditioners are added.

Drain cooling system and refill with recommended engine coolant as soon as possible.

DX,COOL6 -19-17FEB20-1/1

Additional Information About Diesel Engine Coolants and John Deere COOL-GARD™ II Coolant Extender

Engine coolants are a combination of three chemical components: ethylene glycol (EG) or propylene glycol (PG) antifreeze, inhibiting coolant additives, and quality water.

Coolant Specifications

John Deere COOL-GARD™ II Premix, either EG or PG, are fully formulated coolant that contains all three components in their correct concentrations. DO NOT add an initial charge of John Deere COOL-GARD II Coolant Extender to COOL-GARD II Premix. DO NOT add any other supplemental coolant additive or water to COOL-GARD II Premix.

John Deere COOL-GARD II Concentrate contains both ethylene glycol and inhibiting coolant additives. Mix this product with quality water, but DO NOT add an initial charge of John Deere COOL-GARD II Coolant Extender or any other supplemental coolant additive.

Replenish Coolant Additives

Some coolant additives will gradually deplete during engine operation. Periodic replenishment of inhibitors is required, even when John Deere COOL-GARD II Premix or COOL-GARD II Concentrate is used. Follow the recommendations in this manual for the use of John Deere COOL-GARD II Coolant Extender.

Why use John Deere COOL-GARD II Coolant Extender?

Operating without proper coolant additives will result in increased corrosion, cylinder liner erosion and pitting, and other damage to the engine and cooling system. A simple mixture of ethylene glycol or propylene glycol and water will not give adequate protection.

John Deere COOL-GARD II Coolant Extender is a chemically matched additive system designed to fortify the proprietary additives used in John Deere COOL-GARD II Premix and COOL-GARD II Concentrate and to provide optimum protection for up to 6 years or 6000 hours of operation.

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Avoid Automotive-type Coolants

Never use automotive-type coolants (such as those meeting ASTM D3306). These coolants do not contain the correct additives to protect heavy-duty diesel engines. Do not treat an automotive engine coolant with supplemental coolant additives because the high concentration of additives can result in additive fallout.

Water Quality

Water quality is important to the performance of the cooling system. Distilled, deionized, or demineralized water is recommended for mixing with ethylene glycol and propylene glycol base engine coolant concentrate. All water used in the cooling system should meet the following minimum specifications for quality:

Chlorides	<40 mg/L
Sulfates	<100 mg/L
Total solids	<340 mg/L
Total dissolved I hardness	<170 mg/L
pH	5.5—9.0

Freeze Protection

The relative concentrations of glycol and water in the engine coolant determine its freeze protection limit.

Ethylene Glycol	Freeze Protection Limit
40%	-24°C (-12°F)
50%	-37°C (-34°F)
60%	-52°C (-62°F)
Propylene Glycol	**Freeze Protection Limit**
40%	-21°C (-6°F)
50%	-33°C (-27°F)
60%	-49°C (-56°F)

DO NOT use a coolant-water mixture greater than 60% ethylene glycol or 60% propylene glycol.

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Testing Diesel Engine Coolant

Maintaining adequate concentrations of glycol and inhibiting additives in the coolant is critical to protect the engine and cooling system against freezing, corrosion, and cylinder liner erosion and pitting.

Test the coolant solution at intervals of 12 months or less and whenever excessive coolant is lost through leaks or overheating.

Coolant Test Strips

Coolant test strips are available from your John Deere dealer. These test strips provide a simple, effective method to check the freeze point and additive levels of your engine coolant.

When Using John Deere COOL-GARD™ II

John Deere COOL-GARD™ II Premix, COOL-GARD II PG Premix, and COOL-GARD II Concentrate are maintenance free coolants for up to 6 years or 6000 hours of operation, provided that the cooling system is topped off using only John Deere COOL-GARD II Premix or COOL-GARD II PG Premix. Test the coolant condition annually with coolant test strips designed for use with John Deere COOL-GARD II coolants. If the test strip chart indicates that additive is required, add John Deere COOL-GARD II Coolant Extender as directed.

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Add only the recommended concentration of John Deere COOL-GARD II Coolant Extender. DO NOT add more than the recommended amount.

When Using Nitrite-Containing Coolants

Compare the test strip results to the supplemental coolant additive (SCA) chart to determine the amount of inhibiting additives in your coolant and whether more John Deere Liquid Coolant Conditioner should be added.

Add only the recommended concentration of John Deere Liquid Coolant Conditioner. DO NOT add more than the recommended amount.

Coolant Analysis

For a more thorough evaluation of your coolant, perform a coolant analysis. The coolant analysis can provide critical data such as freezing point, antifreeze level, pH, alkalinity, nitrite content (cavitation control additive), molybdate content (rust inhibitor additive), silicate content, corrosion metals, and visual assessment.

Contact your John Deere dealer for more information on coolant analysis.

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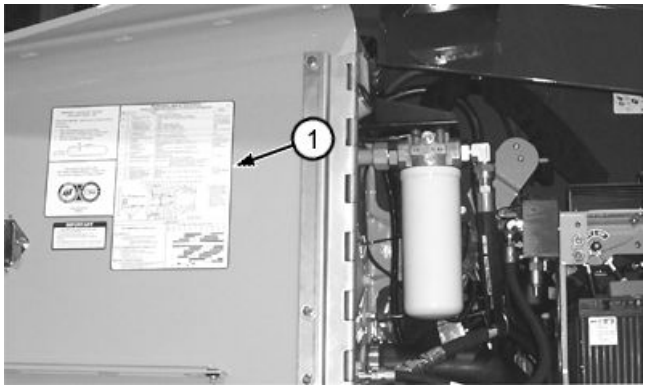
Service Machine at Specified Intervals

Lubricate and make service checks and adjustments at intervals shown on the periodic maintenance chart (1) and on the following pages.

The periodic maintenance chart is located on the inside of the right rear service door.

Perform service on items at multiples of the original requirement. For example, at 500 hours also service those items (if applicable) listed under 250 hours, 100 hours, 50 hours, and 10 hours or daily.

1— Periodic Maintenance Chart



T206845A —UN—24JAN05

Periodic Maintenance Chart

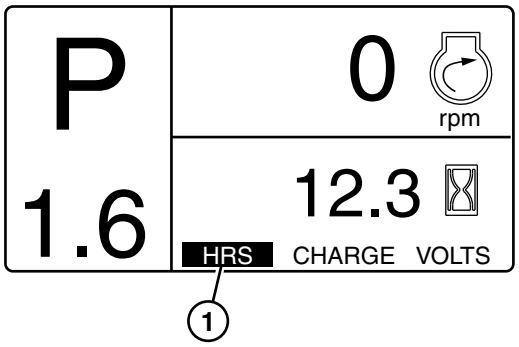
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Check Hour Meter Regularly

Use the hour meter (1) to determine when your machine needs periodic maintenance. With key switch OFF, push SELECT button to display hour usage.

Intervals on the periodic maintenance chart are for operating in normal conditions. If operating machine in severe conditions, machine should be serviced at shorter intervals.

1— Hour Meter



T206891 —19—11JAN05

Check Hour Meter

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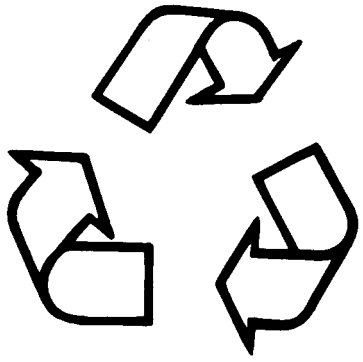
Prepare Machine for Maintenance

Before performing maintenance procedures in the following chapters and before leaving operator's seat, park machine as described below unless another position is specified in the procedure.

IMPORTANT: Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment includes such items as oil, fuel, coolant, brake fluid, filters, and batteries. Do not pour waste onto the ground, down a drain, or into any water source.

NOTE: If maintenance must be performed with engine running, do not leave machine unattended.

1. Park machine on a level surface.



TS1133 —UN—15APR13

Prepare Machine for Maintenance

2. Lower all equipment to ground.

Continued on next page

LB82152,0000778 -19-29APR11-1/2

3. Move transmission control lever (TCL) (1) to NEUTRAL position.

CAUTION: Prevent possible injury from unexpected machine movement. Never rely on transmission control lever alone to keep machine from moving. Machine can unexpectedly roll or move under power, resulting in death or serious injury. Always engage park lock lever to hold machine.

4. Move park lock lever (3) to up LOCKED position.

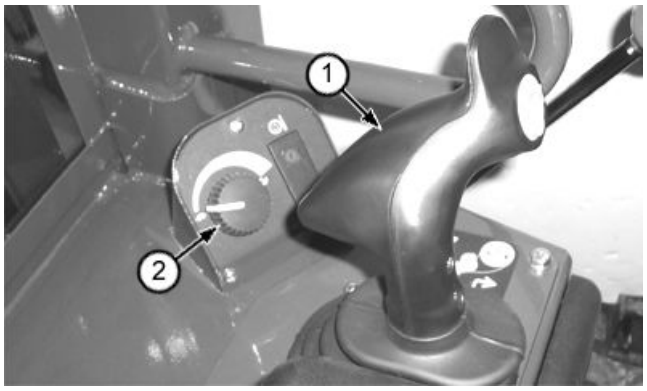
IMPORTANT: Turbocharger may be damaged if engine is not properly shut down.

5. Run engine at 1/2 speed without load for 2 minutes.
6. Turn engine speed control dial (2) to slow idle position.
7. Stop engine.
8. With key in ON position, turn hydraulic enable switch on.
9. Release hydraulic pressure by moving control lever(s) until equipment does not move.
10. Remove key from switch.

IMPORTANT: Before welding, avoid electronic component damage; turn battery disconnect switch OFF.

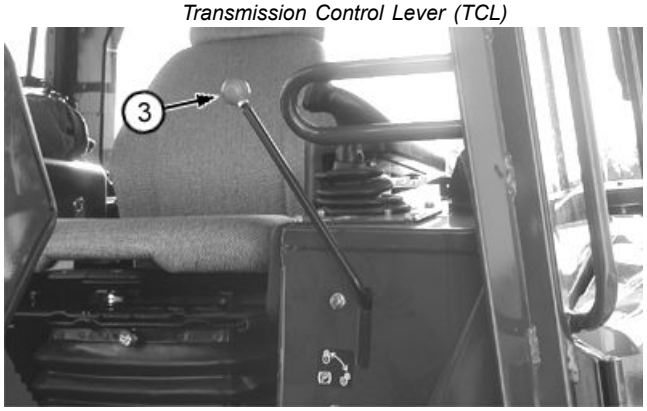
11. Turn battery disconnect switch (4) OFF (counterclockwise) if making adjustments to electrical systems or welding on machine.

1— Transmission Control Lever (TCL)
2— Engine Speed Control Dial
3— Park Lock Lever
4— Battery Disconnect Switch



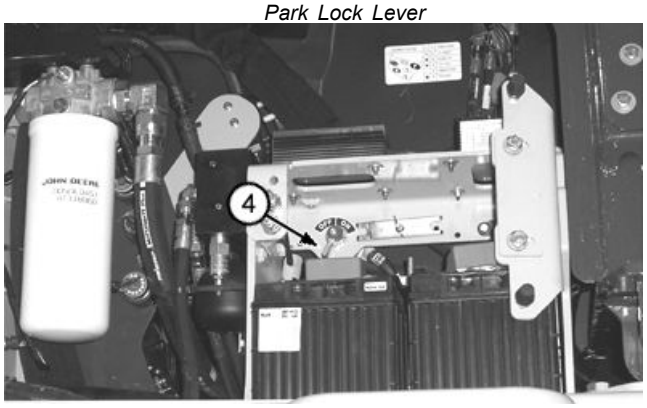
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Transmission Control Lever (TCL)



T198352E —UN—18JAN05

Park Lock Lever



T206570B —UN—18JAN05

Battery Disconnect Switch

LB82152,0000778 -19-29APR11-2/2

Fluid Analysis Program Test Kits and 3-Way Coolant Test Kit

Fluid Analysis Program Test Kits and the 3-Way Coolant Test Kit are John Deere fluid sampling products to help you monitor machine maintenance and system condition. The objective of a fluid sampling program is to ensure machine availability when you need it and to reduce repair costs by identifying potential problems before they become critical.

Engine, hydraulic, power train, and coolant samples should be taken from each system on a periodic basis, before a filter or fluid change interval. Certain systems require more frequent sampling. Consult your authorized John Deere dealer on a maintenance program for your specific application. Your authorized John Deere dealer has the sampling products and expertise to assist you in lowering your overall operating costs through fluid sampling.



TX1003513A —UN—20FEB06

TX,ANALYSIS -19-20JAN11-1/1

Service Intervals

Model: 750J (S.N. 141344—)	**PIN/Serial Number:**
Hour Meter Reading:	
SERVICE INTERVALS	
Service machine at intervals shown on this chart. Also, perform service on items at multiples of the original requirement. For example: at 2000 hours, also service those items (if applicable) listed under 1000 hours, 500 hours, 250 hours, 50 hours, and 10 hours or daily.	
FLUID SAMPLING	
Fluid samples should be taken from each system at its recommended change interval prior to actually draining the fluid. Regular oil sampling will extend the operational life of the machine.	
As Required	
□ Inspect belts	□ Check engine air cleaner restriction indicator
□ Check and adjust trunnion bearing clearance (if equipped)	□ Check and adjust track sag
□ Clean or replace engine air cleaner elements	□ Add coolant extender as indicated by Cool-Gard™ II test strips
Every 10 Hours or Daily	
□ Check engine oil level	□ Lubricate C-frame dozer linkage (if equipped)
□ Check coolant level at surge tank	□ Lubricate pushbeam dozer linkage (if equipped)
□ Check transmission oil level	□ Check hydraulic system oil level
□ Check and drain auxiliary fuel filter and water separator (if equipped)	□ Check and drain primary fuel filter
Every 50 Hours	
□ Lubricate lift cylinder pivots	□ Lubricate rear ripper (if equipped)
□ Lubricate left and right end crossbar pivot	
Initial Service—250 Hours[1]	
□ Drain and refill break-in engine oil and replace filter	
Every 250 Hours	
□ Take engine oil sample	□ Check inner and outer final drive oil level
Every 500 Hours	
□ Check air intake hoses	□ Take hydraulic oil sample
□ Replace primary and final fuel filters	□ Take diesel fuel sample
□ Drain and refill engine oil and replace filter	□ Take engine coolant sample
□ Check fuel fired coolant heater (if equipped)	□ Take transmission oil sample
□ Check battery water level; clean and tighten terminals	□ Take inner and outer final drive oil sample
□ Replace auxiliary fuel filter and water separator (if equipped)	
Every 1000 Hours	
□ Check coolant	□ Clean engine crankcase vent tube
□ Drain and refill inner and outer final drive oil	□ Check track frame pivot shaft bushing oil

Continued on next page

Every 2000 Hours	
□ Check and adjust engine valve lash	□ Replace hydrostatic charge filter
□ Replace hydraulic fan oil return filter	□ Drain and refill hydrostatic transmission oil
□ Drain and refill hydraulic system oil and replace filter	
Every 6000 Hours	
□ Drain, flush, and refill engine cooling system	
[1]*Perform initial service once after the first 250 hours of operation.*	

Cool-Gard is a trademark of Deere & Company

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Required Parts

REQUIRED PARTS							
Ensure machine performance and availability; use only genuine John Deere parts. Verify part numbers are current and that any associated parts are also on hand, i.e., filter O-rings.							
Description	**Initial Service—250 Hours[1]**	**Every 250 Hours**	**Every 500 Hours**	**Every 1000 Hours**	**Every 2000 Hours**	**Every 4000 Hours**	**Every 6000 Hours**
Engine Oil Filter	1		1	1	1	1	1
Primary Fuel Filter			1	1	1	1	1
Final Fuel Filter			1	1	1	1	1
Auxiliary Fuel Filter and Water Separator (if equipped)			1	1	1	1	.1
Hydraulic Fan Oil Return Filter					1	1	1
Hydraulic Oil Filter					1	1	1
Hydrostatic Charge Oil Filter					1	1	1
Engine Rocker Arm Cover Gasket					1	1	1
Primary Engine Air Filter Element	As Required						
Secondary Engine Air Filter Element	As Required						
Engine Air Cleaner Dust Unloader Valve	As Required						
Cab Fresh Air Filter	As Required						
Cab Recirculating Air Filter	As Required						
John Deere Plus-50™ II Engine Oil[2]	26.0 L (7.0 gal)		26.0 L (7.0 gal)	26.0 L (7.0 gal)	26.0 L (7.0 gal)	26.0 L (7.0 gal)	26.0 L (7.0 gal)
John Deere Hydrau™ Hydraulic Oil[2]					106.0 L (28.0 gal)	106.0 L (28.0 gal)	106.0 L (28.0 gal)
John Deere Hydrau™ Hydrostatic Oil[2]					106.0 L (28.0 gal)	106.0 L (28.0 gal)	106.0 L (28.0 gal)
John Deere Cool-Gard™ II Pre-Mix							21.6 L (5.7 gal)
Inner Final Drive Oil (each side)							
750J (OSD)				9.5 L (2.5 gal)	9.5 L (2.5 gal)	9.5 L (2.5 gal)	9.5 L (2.5 gal)
750J LT				9.5 L (2.5 gal)	9.5 L (2.5 gal)	9.5 L (2.5 gal)	9.5 L (2.5 gal)
750J WT and 750J LGP				15.9 L (4.2 gal)	15.9 L (4.2 gal)	15.9 L (4.2 gal)	15.9 L (4.2 gal)
Outer Final Drive Oil (each side)				15.1 L (4.0 gal)	15.1 L (4.0 gal)	15.1 L (4.0 gal)	15.1 L (4.0 gal)
Track Frame Pivot Shaft Oil (each side)				1.7 L (1.75 qt)	1.7 L (1.75 qt)	1.7 L (1.75 qt)	1.7 L (1.75 qt)
Fluid Analysis Kits[3]							
Diesel Engine Oil		1	1	1	1	1	1
Transmission Oil			2	2	2	2	2
Hydraulic Oil			1	1	1	1	1
Final Drive Oil			4	4	4	4	4
Diesel Fuel			1	1	1	1	1

Continued on next page

LB82152,0000767 -19-08MAR19-1/2

Engine Coolant			1	1	1	1	1

[1]*Perform initial service once after the first 250 hours of operation.*
[2]*For recommended oil type and oil viscosities based on operating temperatures, see Maintenance—Machine. (Section 3-1.)*
[3]*Based on fluid analysis results, intervals may need to be adjusted for operating conditions. Consult an authorized John Deere dealer.*

Plus-50 is a trademark of Deere & Company
Hydrau is a trademark of Deere & Company
Cool-Gard is a trademark of Deere & Company

LB82152,0000767 -19-08MAR19-2/2

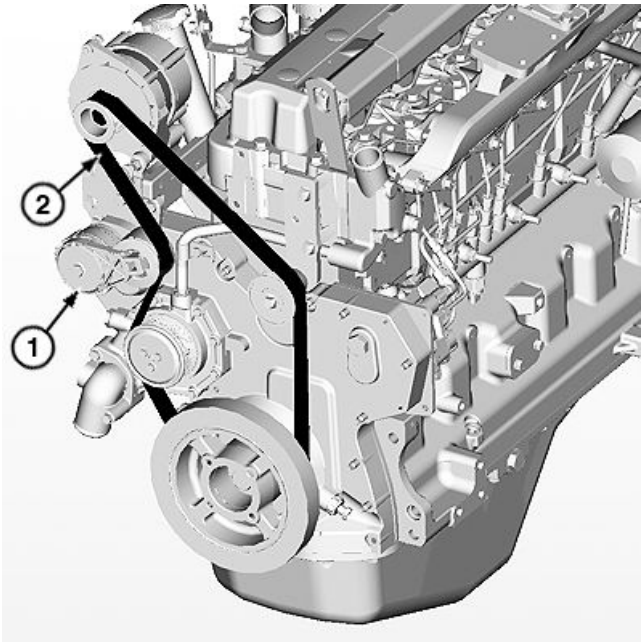
Check Alternator Belt Tension

Belt drive systems equipped with automatic belt tensioner (1) cannot be adjusted or repaired. The automatic belt tensioner is designed to maintain proper belt tension over the life of the belt.

A belt tension gauge will not give an accurate measure of the belt tension when automatic spring tensioner is used.

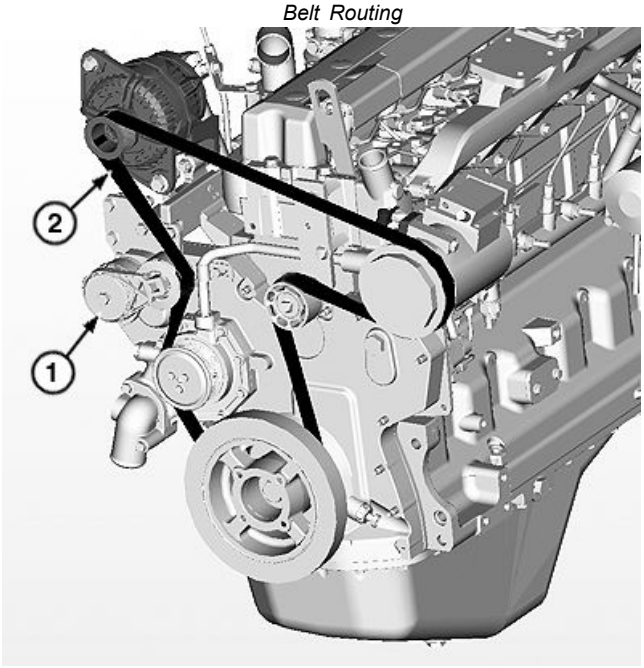
1. Start engine and run at fast idle.
2. Belt (2) must not emit a loud squealing sound at slow idle, fast idle, or rapid acceleration. If belt produces a squealing sound under any of these conditions, see your authorized dealer. If belt does not produce a squealing sound, proceed to next step.
3. Turn on air conditioning (if equipped) and lights. If belt produces a squealing sound under any of these conditions, see your authorized dealer. If belt does not produce a squealing sound, proceed to next step.
4. Visually inspect belt for wear, cracks, or fraying. If belt shows signs of excessive wear, see your authorized dealer.

1— Automatic Belt Tensioner **2— Belt**



TX1137012 —UN—24MAY13

Belt Routing



TX1137013 —UN—24MAY13

Belt Routing with Air Conditioning

KR46761,000092B -19-24MAY13-1/1

Check Track Sag

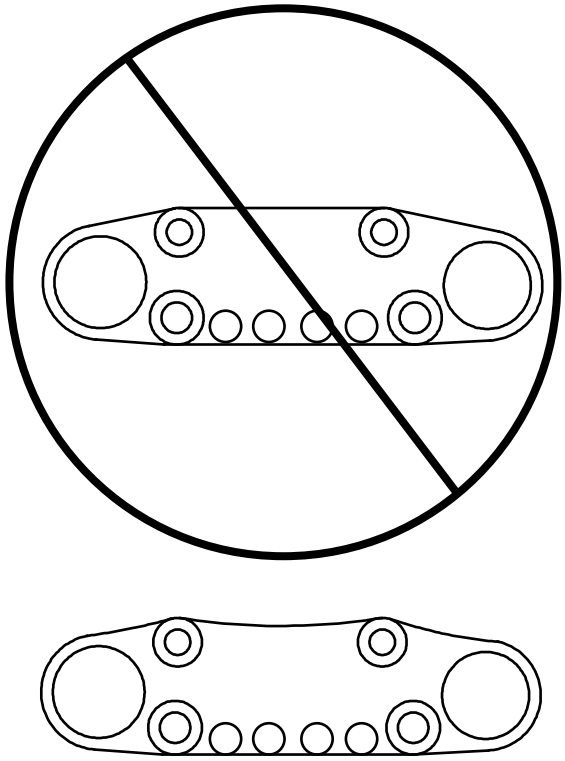
Maintaining proper track sag (3) to specification is the single most important adjustment. Tight tracks can reduce wear life by more than 50% over tracks which are properly maintained at 51 mm (2.0 in.) of sag. Tight tracks increase loading on undercarriage components and accelerate wear rate. Track sag should be adjusted as soil conditions change. See Track Sag General Information. (Section 4-1.)

1. Allow machine to slowly roll forward so track pin (1) is centered over rear carrier roller (2).
2. Measure track sag between two carrier rollers. Measure track sag from top of track grouser to a straightedge (4). If track sag is not within specification, see Adjust Track Sag in this section.

Specification

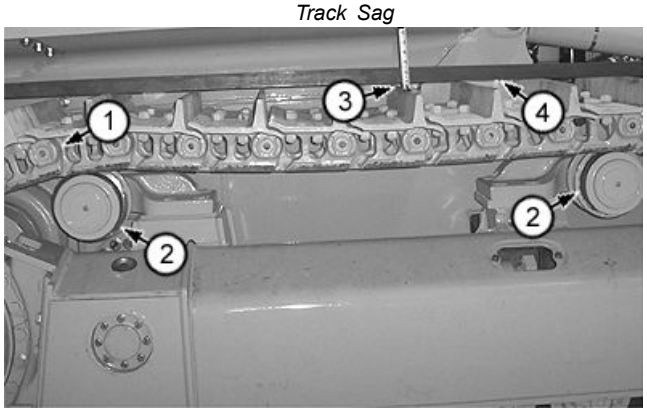
Track Sag—Distance.....45—57 mm
1.75—2.25 in.

1— Track Pin
2— Carrier Roller (2 used)
3— Track Sag
4— Straightedge



T207501 —UN—15FEB05

Track Sag

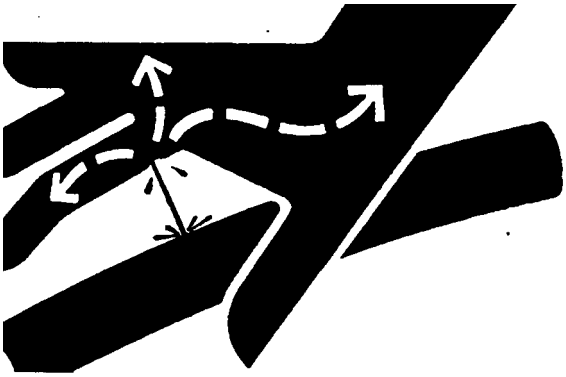


T207100A —UN—01FEB05

Check Track Sag

HG31779,0000067 -19-18NOV10-1/1

Adjust Track Sag

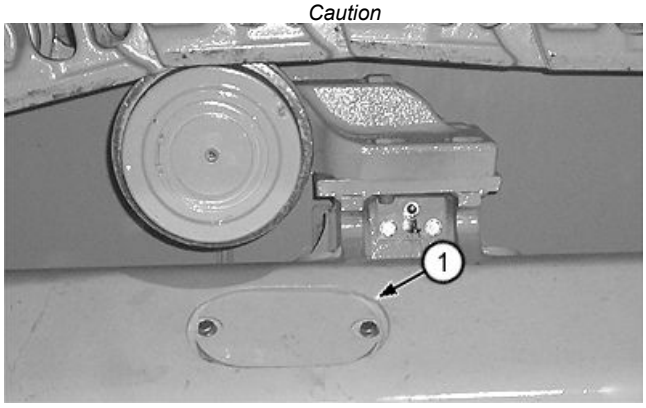


X9811 —UN—23AUG88

Caution

CAUTION: Prevent possible injury from high pressure grease. Grease for track adjuster cylinder is under high pressure. Never remove special grease fitting or check valve to release grease. If grease does not escape immediately from vent hole with check valve loosened, slowly drive forward and reverse until grease escapes. DO NOT disassemble parts unless you know the correct procedure and have correct tools. See your authorized dealer for service.

If an accident occurs, see a doctor immediately. Any fluid injected into skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury may call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.



T206820A —UN—07JAN05

Track Adjust

1— Access Cover

IMPORTANT: Prevent possible damage to track components. DO NOT clean track before adjusting chain if ground conditions cause packing around sprocket and idlers.

Grease fitting on check valve is used for track sag adjustment only.

Relief valve should not be tampered with. It is fitted with a cover.

To move piston, an air assisted grease gun can be used. If piston does not move, check for seized track adjuster parts.

To decrease or increase track sag, loosen two cap screws and remove access cover (1).

Continued on next page

AM40430,0000016 -19-20MAR15-1/2

Decrease Track Sag:

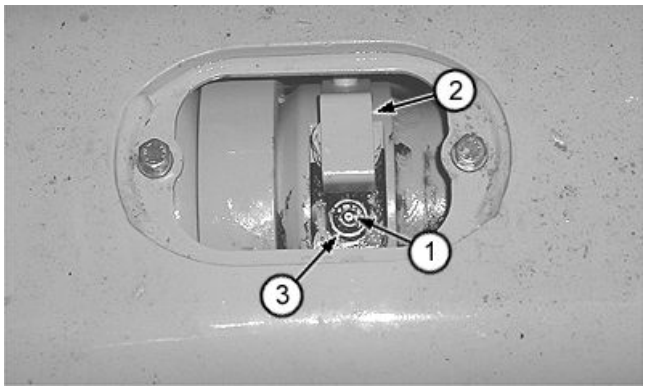
NOTE: Grease gun with 55 200 kPa (552 bar) (8000 psi) minimum capacity is required.

1. To decrease sag, apply grease to fitting (1) using grease gun.
2. After adding grease, operate unit to allow track adjuster cylinder to fully adjust and then check sag again.

Increase Track Sag:

CAUTION: Prevent possible serious injury from high-pressure grease penetrating your skin. Never remove grease fitting or check valve to release the grease. If grease does not escape immediately from vent hole when check valve nut is loosened, slowly drive machine in forward and reverse directions until grease escapes. DO NOT disassemble parts unless you know the correct procedure and have correct tools. See your authorized John Deere dealer.

If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result. Doctors unfamiliar with this type of injury may call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.



T206819C —UN—28JAN05

1— Grease Fitting
2— Relief Valve
3— Check Valve

1. To increase sag, turn check valve (3) two turns counterclockwise to release grease through vent hole.
2. Turn check valve clockwise to close it.
3. After releasing grease, operate unit to allow track adjuster cylinder to fully adjust and then check sag again.

Install access cover.

AM40430,0000016 -19-20MAR15-2/2

Check and Adjust Trunnion Bearing Clearance—If Equipped

NOTE: Maintaining trunnion bearing clearance within specification extends the functional life of trunnion bearing (5) and prevents unwanted binding of trunnion bearing.

The trunnion bearing is located on the left and right pushbeams between the trunnion (4) and the pushbeam (6). Shims are located between the cap (3) and pushbeam. Shims may be accessed by removing cap screws (2) from pushbeam.

To measure trunnion bearing clearance:

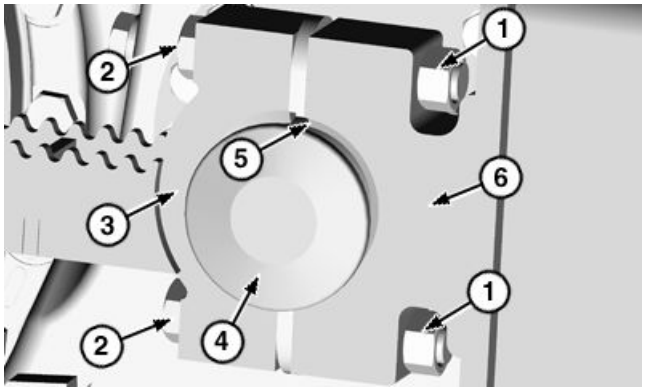
1. With blade on ground, backdrag machine 4.0 m (13.1 ft.).
2. Turn off engine.
3. Measure distance between trunnion and trunnion bearing.
4. If distance is greater than specification, remove shims.

Specification

Trunnion Bearing
Clearance—Distance.....1.0—2.0 mm
0.04—0.08 in.

To remove shims:

1. Loosen and remove nuts (1).
2. Remove cap.
3. Remove equal number of shims from top and bottom cap screws until clearance meets specification.



TX1118913A —UN—24JUL12

Trunnion (right pushbeam shown)

1— Nut (2 used)
2— Cap Screw (2 used)
3— Cap
4— Trunnion
5— Trunnion Bearing
6— Pushbeam

Specification

Trunnion Bearing
Clearance—Distance.....1.0—2.0 mm
0.04—0.08 in.

4. Install cap.
5. Tighten nut to specification. See bolt and screw torque values in Miscellaneous—Machine. (Section 4-1.)

If trunnion bearing clearance is greater than specification and all shims have been removed, see your authorized dealer.

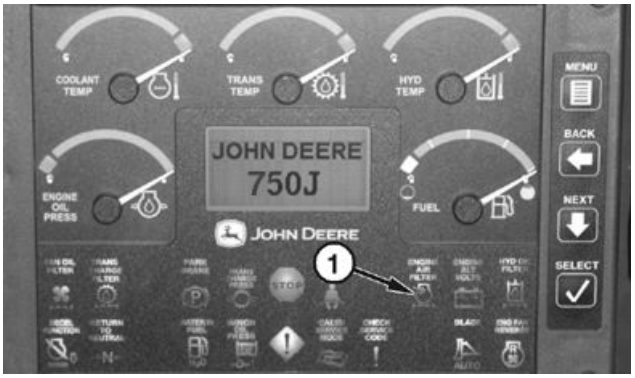
ER93822,0000160 -19-11OCT12-1/1

Check Air Restriction Indicator

Check air restriction indicator (1).

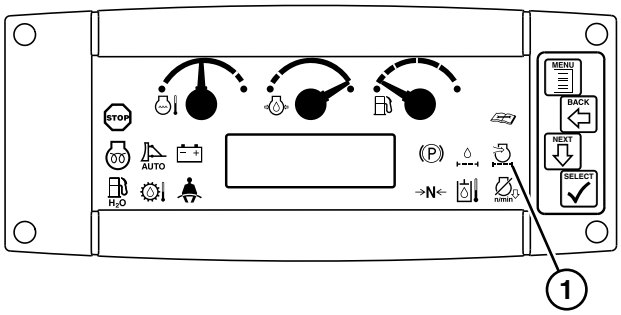
If indicator is on, replace air filter elements. See Replace Air Filter Elements. (Section 4-1.)

1— Air Restriction Indicator



TX1017514A —UN—16JAN07

Air Restriction Indicator (S.N. 141344—219962)



TX1108448 —UN—15FEB12

Air Restriction Indicator (S.N. 219963—)

ER93822,00000F8 -19-17FEB12-1/1

Check Coolant

CAUTION: Prevent possible injury from hot spraying fluids. Shut off engine. Remove filler cap only when cool enough to touch with bare hands. Slowly loosen cap to relieve pressure before removing completely.



TS281 —UN—15APR13

IMPORTANT: John Deere COOL-GARD™ II Coolant Extender does not protect against freezing. Coolant conditioner prevents rust, scale, and liner cavitation.

NOTE: Check coolant every 1000 hours or 1 year, or when replacing 1/3 or more of coolant. Add coolant conditioner as indicated by John Deere COOL-GARD™ II test strips.

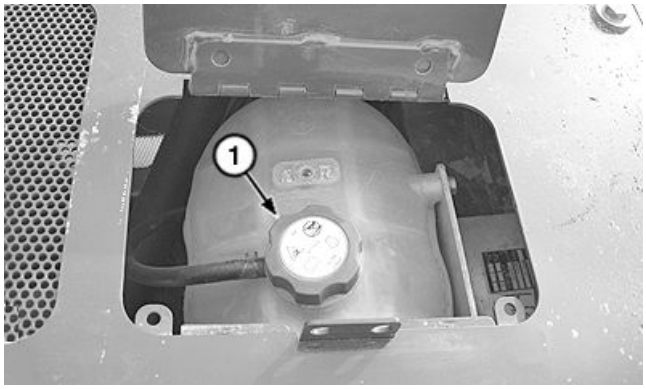
1. Remove surge tank cap (1) and test coolant solution. Use the following kit to check coolant.

   - **COOL-GARD II Test Strips**
     Coolant test strips provide an effective method to check freeze point and additive levels of engine coolant. See your authorized dealer for COOL-GARD II test strips and follow instructions on kit.

2. Add John Deere COOL-GARD II Coolant Extender as necessary. Follow instructions on container for amount.

Specification	
Cooling System—Capacity	21.6 L 5.7 gal

COOL-GARD is a trademark of Deere & Company



TX1018323A —UN—31JAN07

1— Surge Tank Cap

3. Install surge tank cap.

CC28724,000007E -19-13MAR13-1/1

Check Engine Oil Level

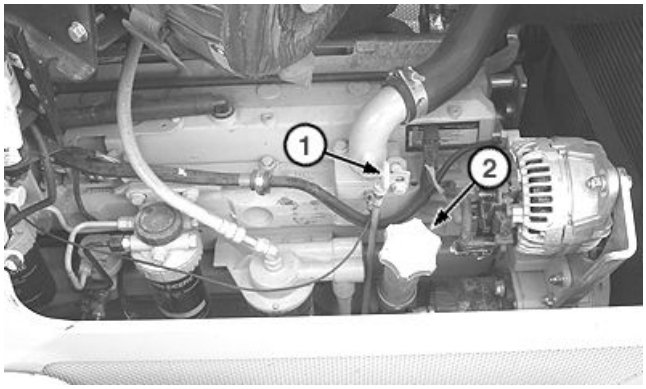
IMPORTANT: Do not run engine when oil level is below the ADD mark.

The most accurate oil level reading is obtained when the engine is cold before starting the engine for the day's operation.

1. Park machine on a level surface.
2. Engage the park lock lever in the up LOCKED position.
3. Make sure dipstick (1) is fully seated.
4. Remove dipstick to check oil level.

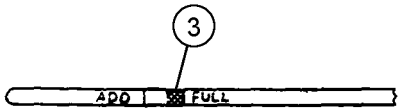
   BEFORE THE ENGINE IS STARTED: The engine is full when oil level is in the cross-hatch area (3). It is acceptable to run the engine when the oil level is above the ADD mark.

   AFTER THE ENGINE HAS BEEN RUN: Allow the oil to drain into the oil pan for 10 minutes before checking the oil level. Ten minutes after shutdown the engine oil level must be above the ADD mark.
5. If necessary, remove the fill tube cap (2) to add oil. See Diesel Engine Oil. (Section 3-1.)
6. Check oil on dipstick again.



Engine Fill Tube Cap and Dipstick

TX1017550A —UN—16JAN07



Dipstick Cross-Hatch Area

T206736 —UN—10JAN05

1— Dipstick
2— Fill Tube Cap
3— Dipstick Cross-Hatch Area

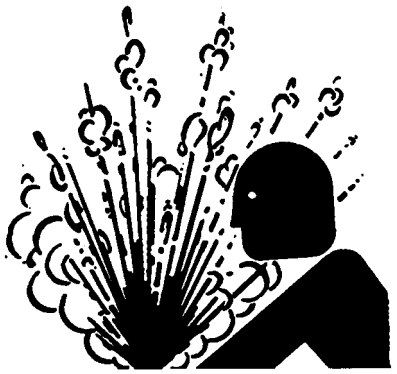
VD76477,00013A0 -19-27APR11-1/1

Check Coolant Level

CAUTION: Prevent possible injury from hot spraying fluids. Shut off engine. Remove filler cap only when cool enough to touch with bare hands. Slowly loosen cap to relieve pressure before removing completely.

1. With the engine cold, coolant level must be between MIN COLD and MAX COLD marks on surge tank (1).
2. If coolant is below the MIN COLD mark, add coolant to the surge tank.
3. If there is no coolant in the recovery tank, add coolant to the surge tank.

1— Surge Tank



T6464AV —UN—18OCT88

Avoid Hot Spraying Coolant



TX1017581A —UN—16JAN07

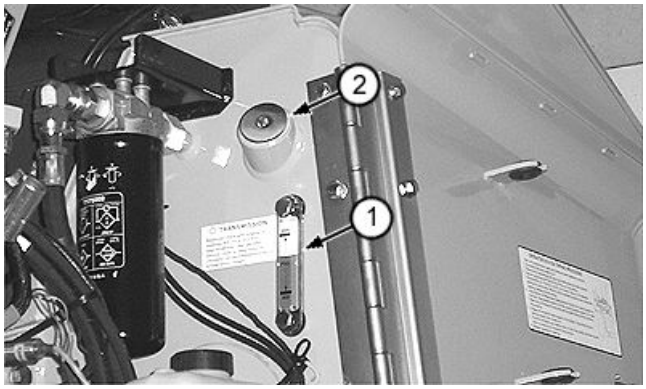
Surge Tank

VD76477,00013A9 -19-13MAR13-1/1

Check Transmission Oil Level

IMPORTANT: DO NOT operate engine without oil in reservoir. Engine damage may result.

1. Park machine on level ground.
2. Turn key switch to OFF.
3. The transmission oil reservoir, fill port, and sight glass are located on the left side of the machine. Oil must be within the ADD mark and FULL mark on sight glass tube (1).
4. If necessary, add oil to fill port (2). See Transmission and Hydraulic Reservoir Oil. (Section 3-1.)
5. Check O-ring on cap before installing.



T206638A —UN—05JAN05

Sight Glass

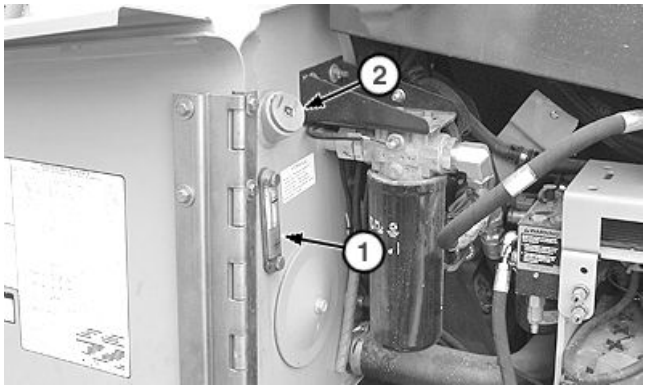
1— Sight Glass Tube **2— Fill Port**

VD76477,00013AB -19-27APR11-1/1

Check Hydraulic Oil Level

IMPORTANT: DO NOT operate engine without oil in reservoir. Engine damage may result.

1. Park machine on level surface and lower all equipment to ground.
2. Turn key switch to OFF.
3. The hydraulic oil reservoir, fill port and sight glass are located on the right side of machine. Oil must be between ADD and FULL marks in sight glass tube (1).
4. If necessary, remove cap and add oil to fill port (2). See Transmission and Hydraulic Reservoir Oil. (Section 3-1.)
5. Check O-ring on cap before installing.



TX1017582A —UN—16JAN07

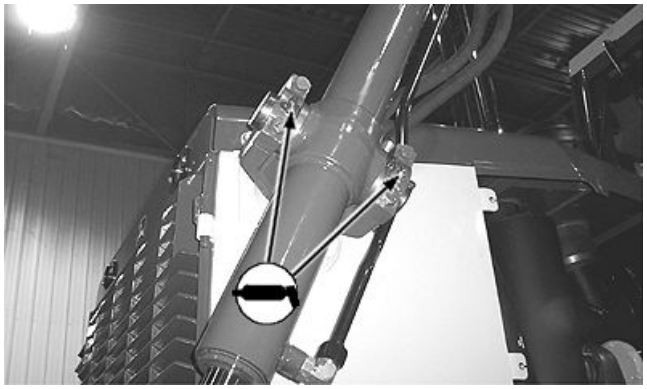
Hydraulic Oil Level

1— Sight Glass Tube **2— Fill Port**

VD76477,00013AC -19-27APR11-1/1

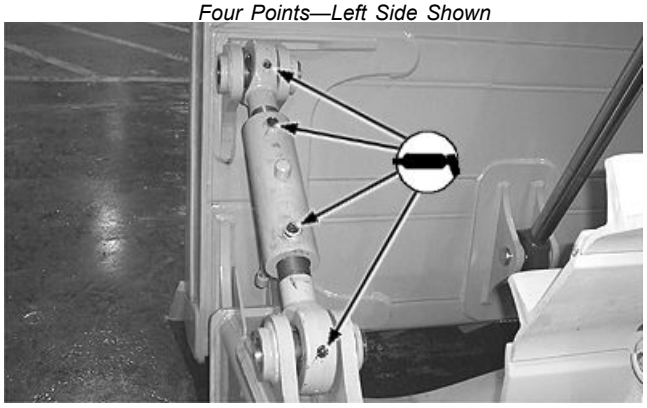
Grease Outside Dozer (OSD) Linkage

Apply grease to lubrication fittings until it escapes at joints. See Grease. (Section 3-1.)



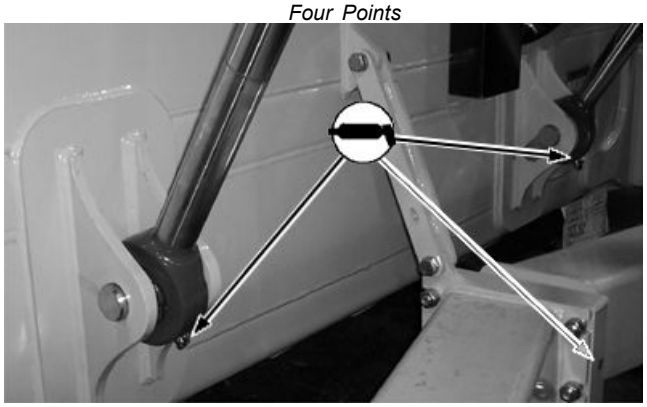
T206699A —UN—19JAN05

Four Points—Left Side Shown



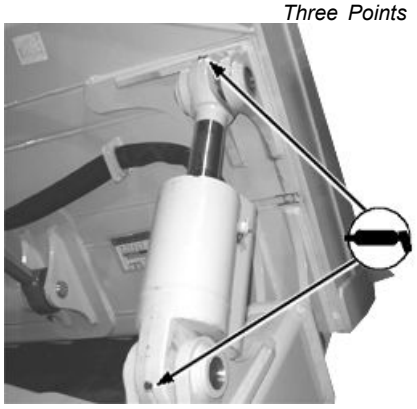
T206698A —UN—10JAN05

Four Points



T206697A —UN—10JAN05

Three Points



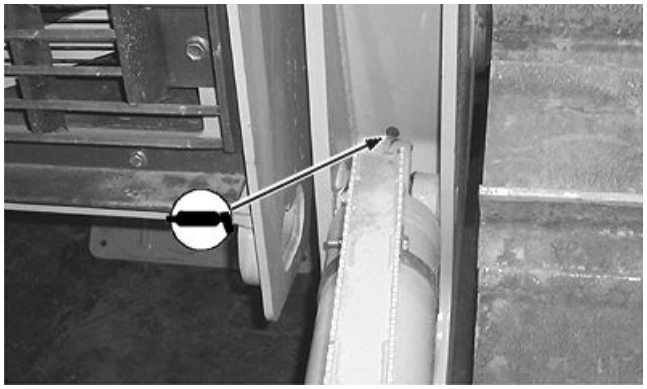
T206696A —UN—19JAN05

Two Points

AM40430,000000B -19-29APR11-1/1

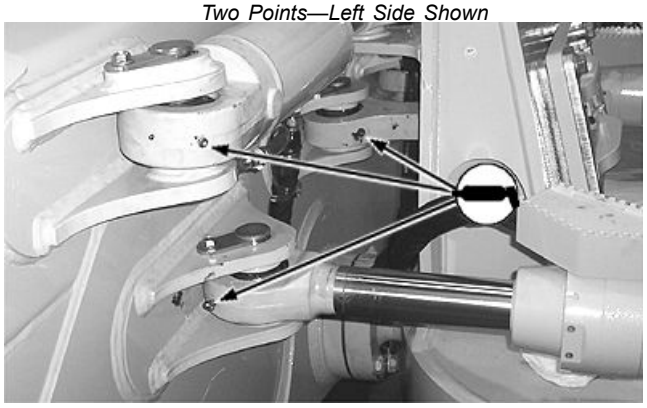
Lubricate C-Frame Dozer Linkage—If Equipped

Apply grease to lubrication fittings until it escapes joints. See Grease. (Section 3-1.)



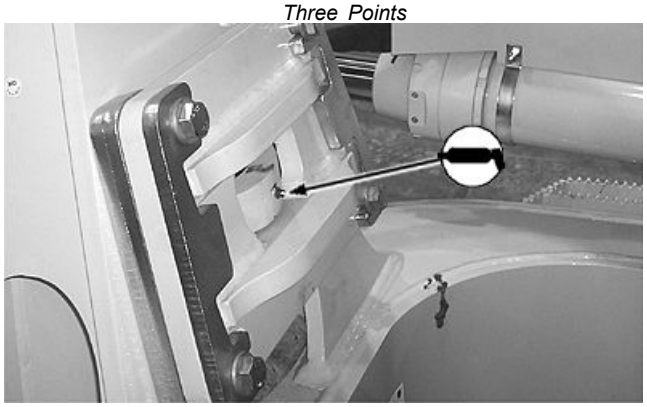
T206936A —UN—11JAN05

Two Points—Left Side Shown



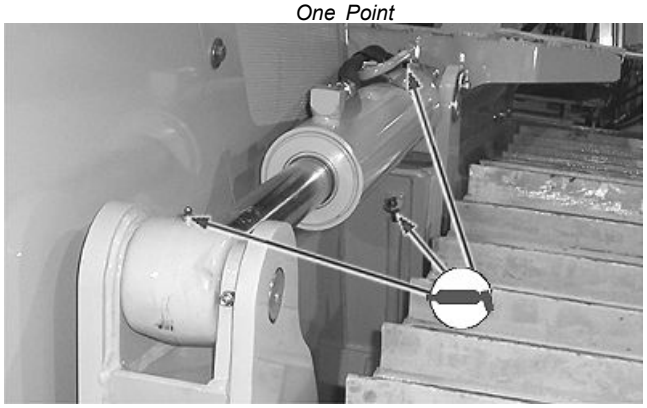
T2066651A —UN—05JAN05

Three Points



T206666A —UN—05JAN05

One Point



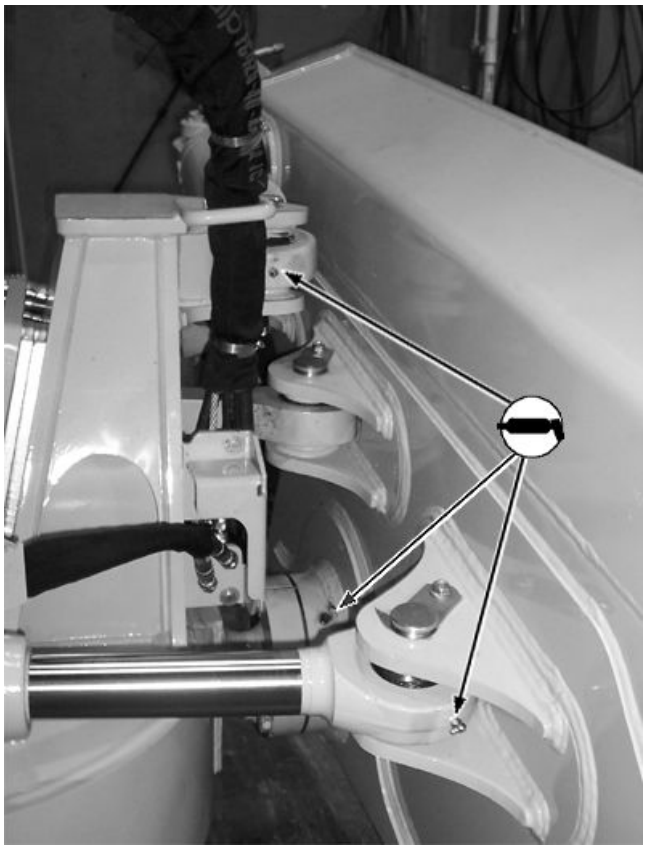
T206720A —UN—06JAN05

Six Points—Left Side Shown

Continued on next page

AM40430,000000C -19-16DEC11-1/2

Apply grease to lubrication fittings until it escapes joints. See Grease. (Section 3-1.)



T206643A —UN—05JAN05

Three Points

AM40430,000000C -19-16DEC11-2/2

Check and Drain Auxiliary Water Separator Fuel Filter—If Equipped

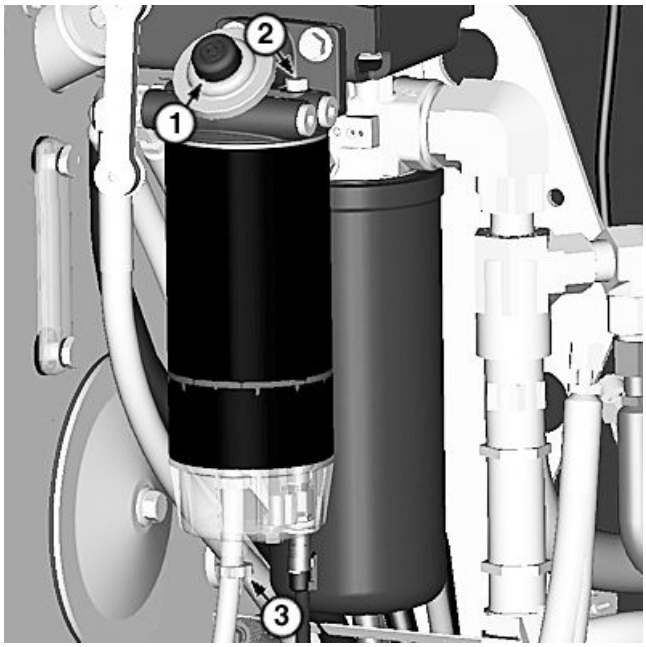
NOTE: The auxiliary water separator fuel filter is located in the back of the machine.

1. Place container under drain valve (3).
2. Loosen air vent (2) and drain valve. Drain water and sediment into container.
3. Tighten drain valve.

IMPORTANT: Do not prefill fuel filters. Debris in unfiltered fuel will damage fuel system components.

4. Bleed fuel system with fuel priming pump button (1), until air is vented.
5. Tighten air vent.
6. Operate engine and check for leaks.

1— Fuel Priming Pump Button (hand operated)
2— Air Vent
3— Drain Valve



TX1080035 —UN—19JUL10

Auxiliary Fuel Filter Water Separator

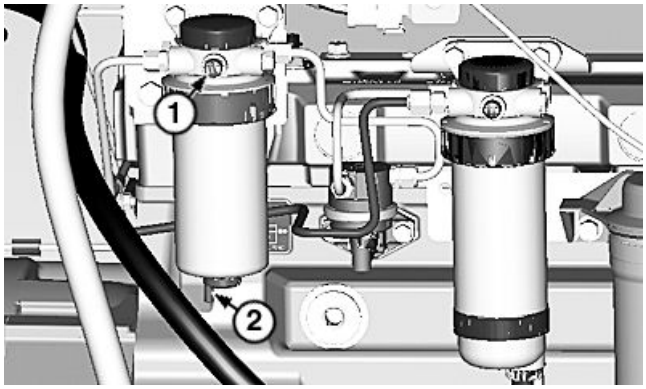
ER79617,0000C06 -19-19JUL10-1/1

Check and Drain Primary Fuel Filter

1. Turn the bleed screw (1) counterclockwise two full turns.
2. Open the drain plug (2). Drain liquid into a container for several seconds, until clean fuel emerges. Dispose of waste properly.
3. Close drain plug and tighten bleed screw.

IMPORTANT: Do not prefill fuel filters. Debris in unfiltered fuel will damage fuel system components.

4. Bleed the fuel system. See Bleed Fuel System. (Section 4-1.)



TX1079964 —UN—16JUL10

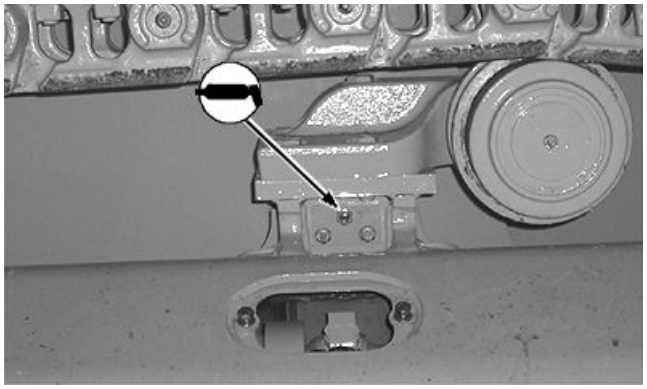
Primary Fuel Filter

1— Bleed Screw **2— Drain Plug**

ER79617,0000C07 -19-27APR11-1/1

Grease Right and Left End Crossbar Pivots with Grease Lines—If Equipped

Apply grease to lubrication fittings until it escapes at joints. See Grease. (Section 3-1.)



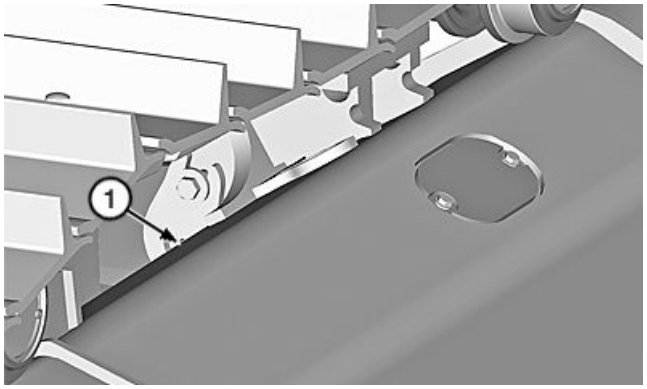
T206689A —UN—05JAN05

Two Points—Right Side Shown

LB82152,0000781 -19-03MAY11-1/1

Grease Right and Left End Crossbar Pivot

Apply grease to lubrication fittings (1) until it escapes at joints. See Grease. (Section 3-1.)



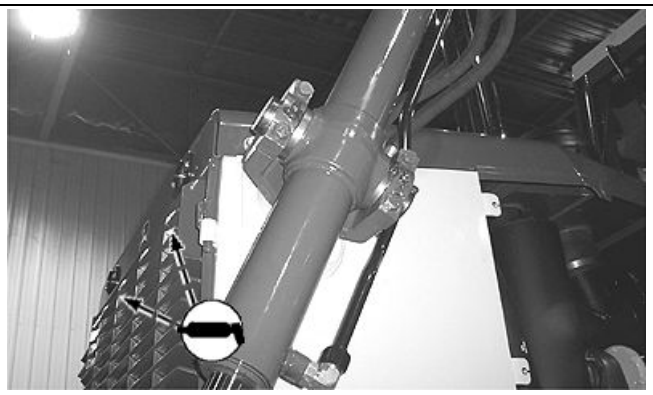
TX1091790A —UN—03MAY11

Grease Right and Left Crossbar Pivot (right side shown)

LB82152,0000782 -19-03MAY11-1/1

Grease Push Beam Lift Cylinder Pivots

Apply grease to lubrication fittings until it escapes at joints. See Grease. (Section 3-1.)



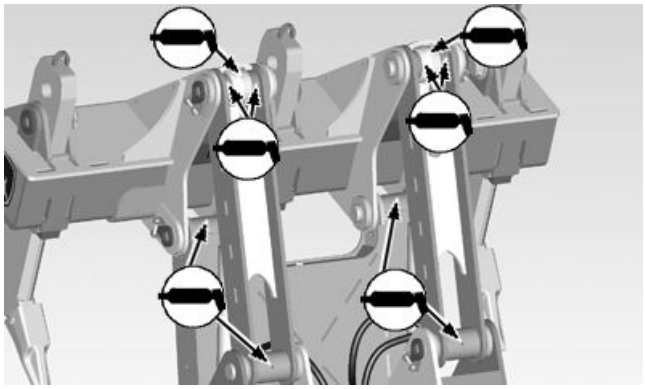
T206699B —UN—19JAN05

Two Points

AM40430,0000021 -19-27OCT10-1/1

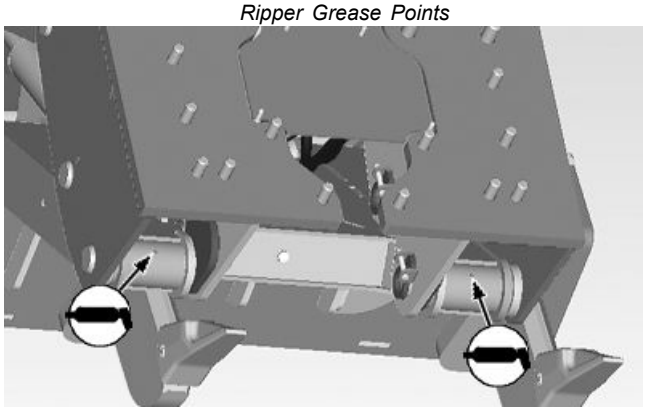
Grease Ripper—If Equipped

Using a grease gun, lubricate 12 grease fittings until grease escapes at joints. See Grease. (Section 3-1.)



TX1040533A —UN—22APR08

Ripper Grease Points



TX1040534A —UN—22APR08

12 Points Total

KH31969,000008B -19-27APR11-1/1

Change Engine Break-In Oil and Filter

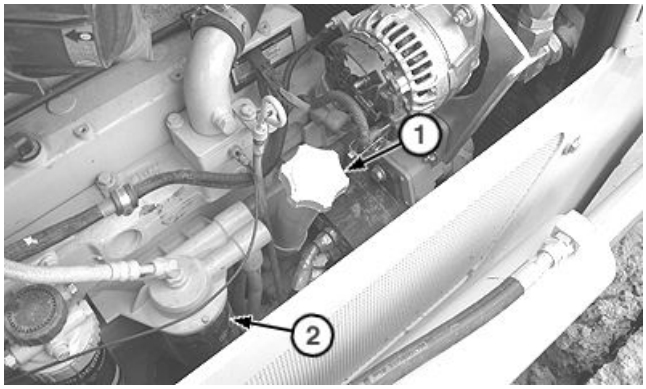
1. Run engine to warm oil. Stop engine.
2. Remove cap screws and remove oil pan access cover (located below engine).
3. Remove drain plug or open drain valve, if equipped, and allow oil to drain into a container. Dispose of waste oil properly.
4. Install drain plug or close drain valve, if equipped.
5. Turn engine oil filter (2) counterclockwise to remove.
6. Apply thin film of oil to gasket of new filter.
7. Install new filter. Turn filter clockwise by hand until gasket touches mounting surface.
8. Tighten 1/2 turn more.
9. Remove fill tube cap (1). Fill engine with oil at fill tube. See Diesel Engine Oil. (Section 3-1.)

Specification

Engine Oil—Capacity..... 26.5 L
7.0 gal

10. Install fill tube cap and start engine.

    Engine oil pressure indicator on monitor must go out within 15-20 seconds. If not, stop engine immediately and find the cause.



TX1017584A —UN—16JAN07

Engine Filter and Fill Tube

1— Fill Tube Cap **2— Engine Oil Filter**

11. After running engine for 2 minutes, stop engine. Check oil level.
12. Check for leaks around filter and drain plug. Tighten only enough to stop leaks.
13. Install oil pan access cover.

VD76477,00013AD -19-27APR11-1/1

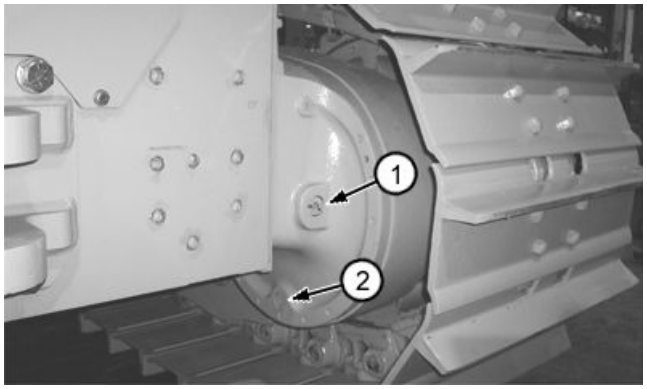
Check Inner and Outer Final Drive Housings Oil Level

1. Park machine on a level surface so that sprocket oil level line (3) is parallel with ground and drain plugs (2) are at bottom of sprocket.
2. Remove filler plugs (1).
3. Oil level must be within 13 mm (1/2 in.) of bottom of hole.

IMPORTANT: Avoid overheating and damage to components. Do not overfill final drives. If specified fill volumes are not met, malfunction of final drive can occur.

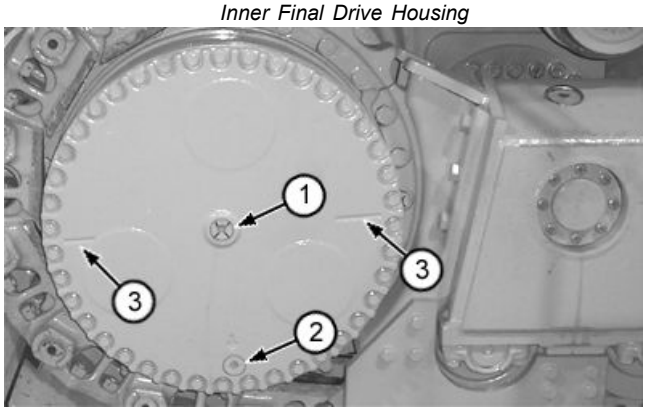
4. Add oil as necessary. See Inner and Outer Final Drive Oil. (Section 3-1.)
5. Install and tighten plugs.

1— Filler Plug
2— Drain Plug
3— Oil Level Line



T206849A —UN—24JAN05

Inner Final Drive Housing



T206850A —UN—24JAN05

Outer Final Drive Housing

HG31779,000006D -19-11MAY16-1/1

Take Engine Oil Sample

See your authorized dealer.

OUT4001,000039B -19-14MAR12-1/1

Change Engine Oil and Filter

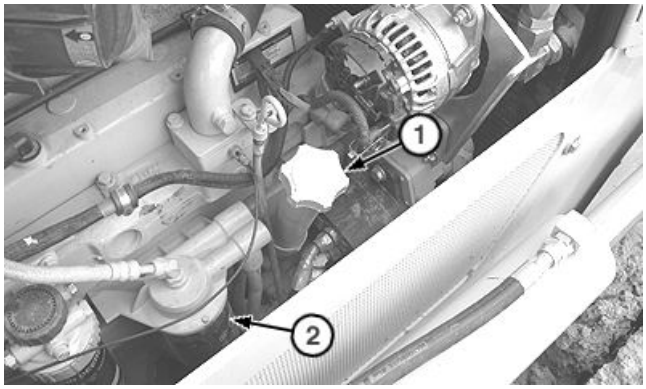
1. Run engine to warm oil. Stop engine.
2. Remove cap screws and remove oil pan access cover (located below engine).
3. Remove drain plug or open drain valve, if equipped, and allow oil to drain into a container. Dispose of waste oil properly.
4. Install drain plug or close drain valve, if equipped.
5. Turn engine oil filter (2) counterclockwise to remove.
6. Apply thin film of oil to gasket of new filter.
7. Install new filter. Turn filter clockwise by hand until gasket touches mounting surface.
8. Tighten 1/2 turn more.
9. Remove fill tube cap (1). Fill engine with oil at fill tube. See Diesel Engine Oil. (Section 3-1.)

Specification

Engine Oil—Capacity..... 28.0 L
7.4 gal

10. Install fill tube cap and start engine.

    Engine oil pressure indicator on monitor must go out within 15-20 seconds. If not, stop engine immediately and find the cause.



TX1017584A —UN—16JAN07

Engine Filter and Fill Tube

1— Fill Tube Cap **2— Engine Oil Filter**

11. After running engine for 2 minutes, stop engine. Check oil level.
12. Check for leaks around filter and drain plug. Tighten only enough to stop leaks.
13. Install oil pan access cover.

LB82152,0000784 -19-22JUL22-1/1

Replace Primary and Final Fuel Filters

NOTE: Primary and final fuel filters are located in the front right side engine compartment.

1. Disconnect sensor (1) from wiring harness.

NOTE: Dispose of waste properly.

2. Thoroughly clean primary and final fuel filters, water separator assembly and surrounding area.
3. Turn retaining ring (2) counterclockwise and remove the primary fuel filter element (3).
4. Turn retaining ring on final fuel filter element (4) counterclockwise and remove filter element.
5. Remove water separator bowl (5) from primary fuel filter. Drain and clean separator bowl.

IMPORTANT: Do not prefill fuel filters. Debris in unfiltered fuel will damage fuel system components.

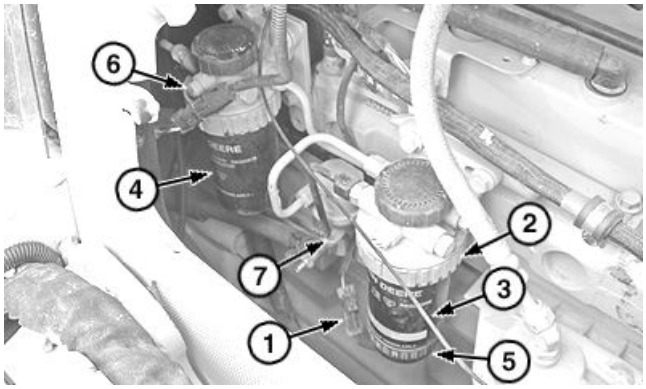
6. Install water separator bowl onto new primary fuel filter element. Tighten securely.
7. Fill element with fuel.

NOTE: Fuel filter must be indexed properly and the key on canister must be oriented in slot of mounting base for correct installation.

8. Clean filter base and thoroughly inspect filter base seal ring. Replace as needed.

NOTE: Do not attempt to turn the filter element into base.

9. Install new primary and final fuel filter elements by aligning vertical locators into slots on filter base. Push filter elements up firmly until filter snaps against base.



TX1018241A —UN—30JAN07

1— Sensor
2— Retaining Ring
3— Primary Fuel Filter Element
4— Final Fuel Filter Element
5— Water Separator Bowl
6— Bleed Screw
7— Primer Pump

10. Turn retaining ring clockwise onto filter base until retaining ring clicks tightly into place.
11. Connect sensor to wiring harness.
12. Place pan under filter.
13. Loosen bleed screw (6) on final fuel filter by turning knob counterclockwise.
14. Operate primer pump (7) until fuel flow from bleed screw is free of air bubbles.
15. Tighten bleed screw as hand primer is held in downward position.

LB82152,000077D -19-27APR11-1/1

Replace Auxiliary Fuel Filter and Water Separator—If Equipped

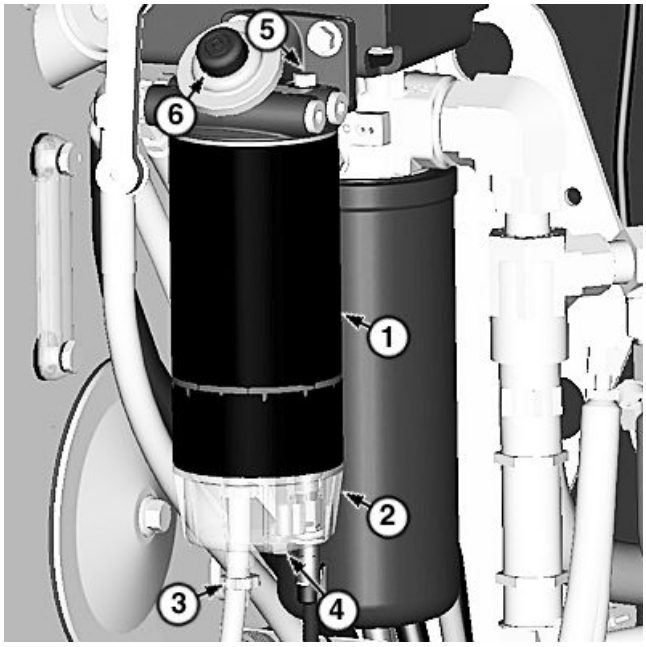
NOTE: The auxiliary fuel filter and water separator is located in the rear right side of the machine.

NOTE: Dispose of waste properly.

1. Open air vent (5) and drain (3) to remove fuel.
2. Remove glass bowl (2).

IMPORTANT: Do not prefill fuel filters. Debris in unfiltered fuel will damage fuel system components.

3. Remove and replace filter element (1).
4. Install glass bowl.
5. Remove trapped air from fuel filter by using air vent and priming hand pump (6).
6. Start engine and let it run for 1 minute. Check for leaks.
7. If needed, tighten filter element and glass bowl only enough to stop leaks.



TX1080034 —UN—19JUL10

Auxiliary Fuel Filter and Water Separator

1— Filter Element
2— Glass Bowl
3— Drain
4— Plug
5— Air Vent
6— Priming Hand Pump

LB82152,0000773 -19-28APR11-1/1

Check Fuel Fired Coolant Heater—If Equipped

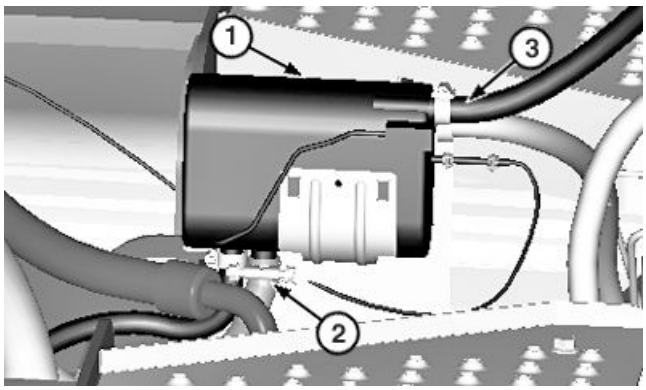
CAUTION: Prevent possible injury from fire. Exhaust tube is hot when fuel fired coolant heater is operating. Keep any flammable material a minimum distance of 50 mm (2.0 in.) from exhaust tube.

Handle fuel carefully. Do not fill the fuel tank with heater turned on.

Do not operate heater in enclosed areas where combustible fumes may be present. Operate heater only in open areas to keep combustible fumes away from machine.

Ensure the fuel system is intact and there are no leaks.

1. To access fuel fired coolant heater (1), raise cab or ROPS. See Operator Station Tilting Procedure. (Section 4-1.)
2. Clean area around fuel fired coolant heater and exhaust tube (2).
3. Make sure that any flammable material is a minimum distance of 50 mm (2.0 in.) from exhaust tube.
4. Check the exhaust tube for leaks and cracks.



TX1091540A —UN—26APR11

Fuel Fired Coolant Heater

1— Fuel Fired Coolant Heater
2— Fuel Fired Coolant Heater Exhaust Tube
3— Fuel Fired Coolant Heater Intake Hose

IMPORTANT: Blockage of intake or exhaust hoses may cause the fuel fired coolant heater to shut down. Damage to the machine may occur.

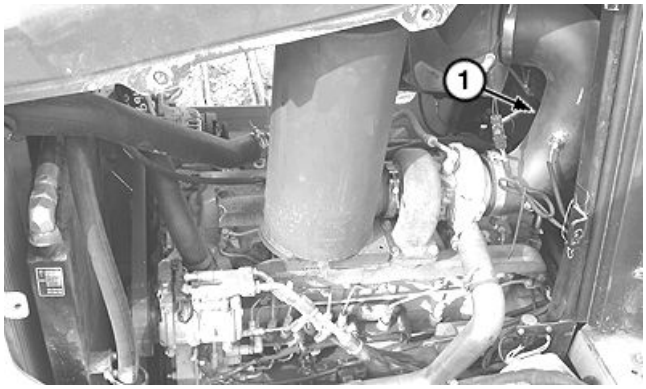
5. Check the intake hose (3) for any leaks, chafing or blockage.
6. Ensure the fuel system to fuel fired coolant heater is intact and there are no leaks.

LB82152,00006EB -19-11AUG15-1/1

Check Air Intake Hose

1. Check air intake hose (1) for cracks and replace as necessary.
2. Check for loose connections and tighten clamps as necessary.

1— Air Intake Hose



TX1018313A —UN—30JAN07

Air Intake Hose

VD76477,00013E8 -19-27APR11-1/1

Check Battery Electrolyte Level; Clean and Tighten Terminals

CAUTION: Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

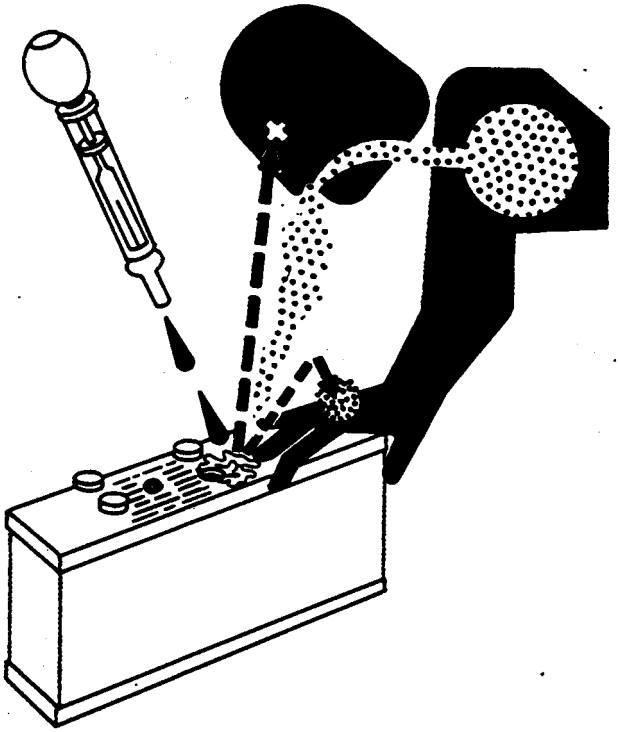
1. **Filling batteries in a well-ventilated area.**
2. **Wearing eye protection and rubber gloves.**
3. **Avoiding breathing fumes when electrolyte is added.**
4. **Avoiding spilling or dripping electrolyte.**
5. **Using proper jump start procedure.**

If you spill acid on yourself:

1. **Flush your skin with water.**
2. **Apply baking soda or lime to help neutralize the acid.**
3. **Flush your eyes with water for 10—15 minutes. Get medical attention immediately.**

If acid is swallowed:

1. **Drink large amounts of water or milk.**
2. **Then drink milk of magnesia, beaten eggs, or vegetable oil.**
3. **Get medical attention immediately.**



TS203 —UN—23AUG88

CAUTION: Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (—) battery clamp first and replace it last.



TS204 —UN—15APR13

1. Remove hold-down clamps.

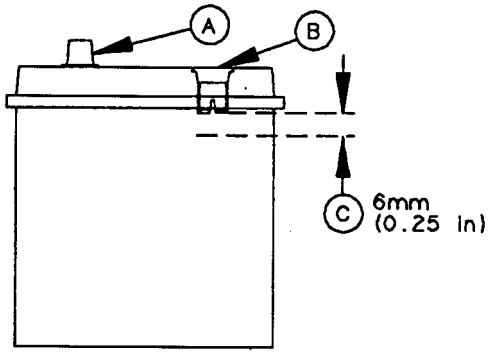
Continued on next page

TX,70,RR,A7 -19-09DEC10-1/3

IMPORTANT: Add water to batteries in freezing weather before you begin operating your machine for the day, or else charge the batteries.

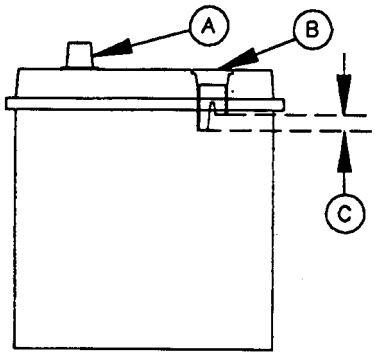
2. Fill each cell to within specified range (C) with distilled water. DO NOT overfill.

A—Battery Post
B—Fill Tube
C—Electrolyte Level Range



T6996DB —UN—10FEB89

Single Level Fill Tube Application



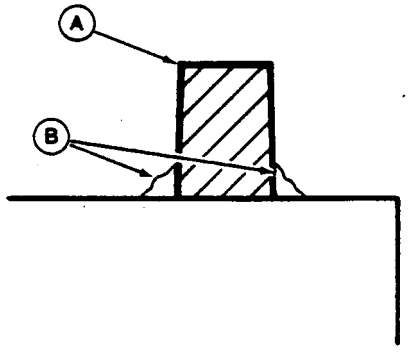
T6996DA —UN—10FEB89

Dual Level Fill Tube Application

TX,70,RR,A7 -19-09DEC10-2/3

3. Disconnect battery clamps, grounded clamp first.
4. Clean battery terminals (A) and clamps with a stiff brush.
5. Apply lubricating grease (B) around battery terminal base only.
6. Install and tighten clamps, grounded clamp last.
7. Install hold-down clamps.

A—Battery Terminals
B—Lubricating Grease



T6758AA —UN—21OCT88

TX,70,RR,A7 -19-09DEC10-3/3

Take Fluid Samples

See an authorized John Deere dealer for taking the following fluid samples:

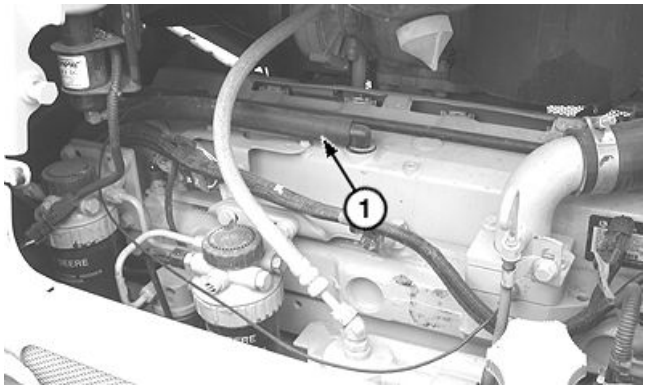
- Hydrostatic Transmission Oil
- Hydraulic Oil
- Inner and Outer Final Drive Oil
- Diesel Fuel
- Coolant

JB38880,00015CB -19-22MAR19-1/1

Clean Engine Crankcase Vent Tube

1. Remove vent tube (1) and clean interior using diesel fuel.
2. Check condition of O-ring in rocker arm cover and replace as necessary.

1— Vent Tube



TX1017588A —UN—16JAN07

Engine Crankcase Vent Tube

VD76477,00013B0 -19-27APR11-1/1

Change Final Drive Oil

1. Park machine on a level surface so sprocket oil level line (3) is parallel to ground with outer drive drain plug (2) to bottom.

NOTE: Dispose of oil properly.

2. Remove drain plugs (2) and filler plugs (1) to drain oil.
3. Install and tighten drain plugs.

IMPORTANT: Avoid overheating and damage to components. Do not overfill final drives. If specified fill volumes are not met, malfunction of final drive can occur.

4. Fill final drives with oil according to specifications. See Inner and Outer Final Drive Oil. (Section 3-1.)

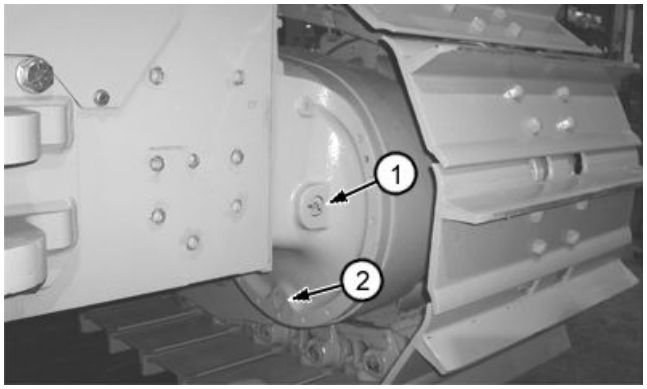
Inner Final Drive Oil (each side)—Specification

Inner Final Drive Oil (LT)—Capacity	9.5 L 2.5 gal
Inner Final Drive Oil (WT and LGP)—Capacity	15.9 L 4.2 gal

Outer Final Drive Oil (each side)—Specification

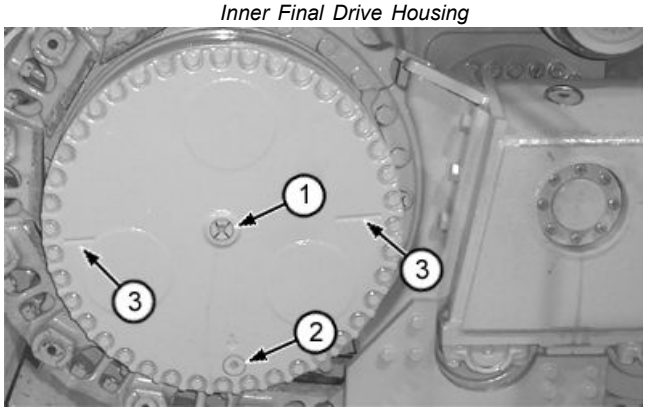
Outer Final Drive Oil—Capacity	15.1 L 4.0 gal

5. Install and tighten filler plugs.



T206849A —UN—24JAN05

Inner Final Drive Housing



T206850A —UN—24JAN05

Outer Final Drive Housing

1— Filler Plug
2— Drain Plug
3— Oil Level Line

LB82152,0000785 -19-18OCT17-1/1

Check Track Frame Pivot Shaft Bushing Oil

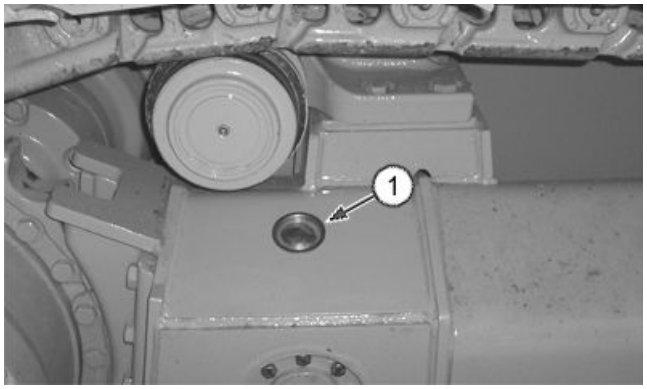
1. Remove cap (1).
2. Remove plug (2).
3. Check oil level and fill completely. See Final Drive and Track Frame Pivot Oil. (Section 3-1.)

Specification

Track Frame Pivot Shaft Bushing Oil (per side)—Capacity..... 1.7 L
1.75 qt.

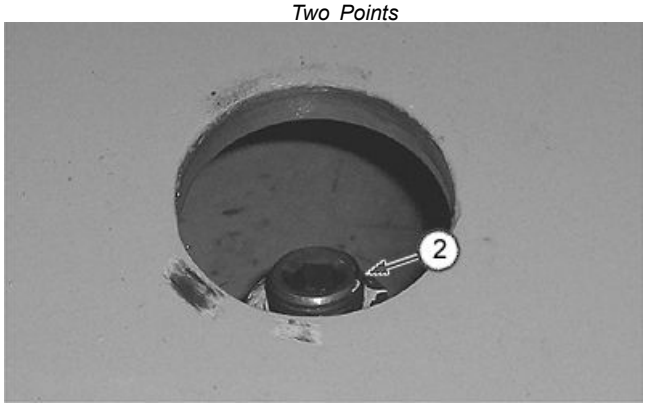
4. Install plug.
5. Install cap.

1— Cap **2— Plug**



T206712A —UN—07JAN05

Two Points



T206713A —UN—06JAN05

Plug

AM40430,0000020 -19-31JUL17-1/1

Check Coolant

See Check Coolant. (Section 3-3.)

OUT4001,0000365 -19-28JUL14-1/1

Change Hydraulic System Oil and Replace Filter

IMPORTANT: Replace filter before recommended service interval if hydraulic oil filter indicator stays on after oil is warm.

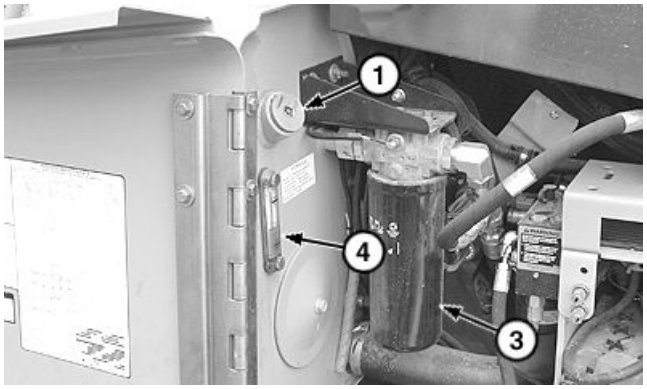
1. Open right rear access door.
2. Loosen filler plug (1) to relieve pressure.
3. Remove rear access panel (2) below fuel tank.

NOTE: Dispose of waste oil properly.

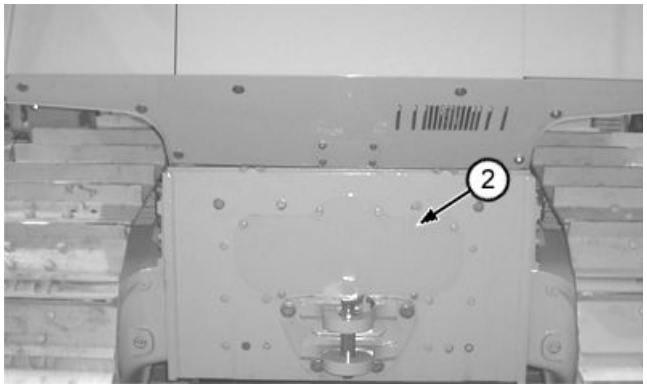
4. Drain oil into container through environmental drain hose.
5. Clean area around housing and remove filter (3) by turning counterclockwise.
6. Apply a film of oil to sealing ring on new filter. Install so gasket touches mounting surface and tighten an additional 3/4 to one turn with a suitable wrench.
7. Fill reservoir with oil to specification and install plug.

Specification	
Hydraulic System Oil—Capacity	106 L 28 gal

8. Move transmission control lever to neutral. Start engine and run at slow idle for 5 minutes before operating machine. This will allow filter element to refill and air to be purged from charge circuit.
9. Check for any leakage around element and tighten as necessary to stop leakage.



TX1017589A —UN—16JAN07



T207253A —UN—28JAN05

1— Filler Plug
2— Rear Access Panel
3— Filter
4— Sight Glass

10. Check oil level in sight glass (4). Oil should be to midpoint.

VD76477,00013B2 -19-12FEB07-1/1

Change Hydrostatic Transmission Oil and Replace Hydrostatic Charge and Fan Oil Filters

IMPORTANT: Replace filter before recommended service interval if hydraulic oil filter indicator stays on after oil is warm.

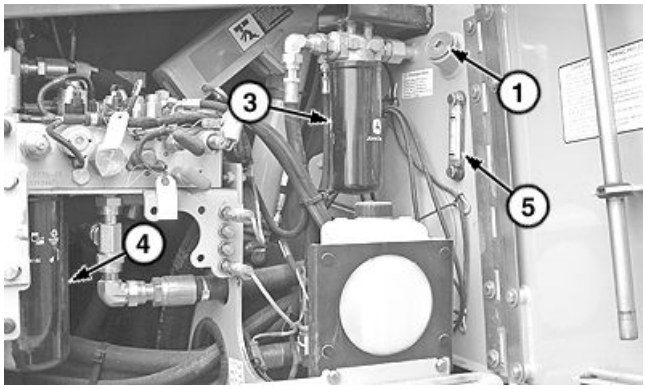
1. Open left rear access door.
2. Loosen filler plug (1) to relieve pressure.
3. Remove rear access panel (2) below fuel tank.

NOTE: Dispose of waste oil properly.

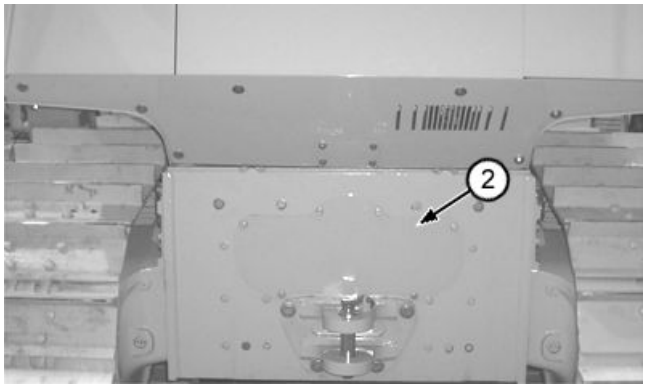
4. Drain oil into container through environmental drain hose.
5. Clean area around housing and remove fan oil filter (3) by turning counterclockwise.
6. Apply a film of oil to sealing ring on new filter. Install so gasket touches mounting surface and tighten an additional 3/4 to one turn with a suitable wrench.
7. Clean area around housing and remove charge filter (4) by turning counterclockwise.
8. Apply a film of oil to sealing ring on new filter. Install so gasket touches mounting surface and tighten an additional 3/4 to one turn with a suitable wrench.
9. Fill reservoir with oil to specification and install plug.

Specification	
Hydrostatic System Oil—Capacity	106 L 28 gal

10. Move transmission control lever to neutral. Start engine and run at slow idle for 5 minutes before operating machine. This will allow filter element to refill and air to be purged from charge circuit.



TX1017590A —UN—16JAN07



T207253A —UN—28JAN05

1— Filler Plug
2— Rear Access Panel
3— Fan Oil Filter
4— Charge Filter
5— Sight Glass

11. Check for any leakage around element and tighten as necessary to stop leakage.
12. Check oil level in sight glass (5). Oil should be to midpoint.

VD76477,00013B3 -19-12FEB07-1/1

Adjust Engine Valve Lash

See your authorized dealer.

VD76477,00004DC -19-16JUN06-1/1

Draining the Cooling System

CAUTION: Prevent possible injury from hot spraying fluids. Shut off engine. Remove filler cap only when cool enough to touch with bare hands. Slowly loosen cap to relieve pressure before removing completely.



TS281 —UN—15APR13

Every 6000 hours replace thermostats, drain and flush cooling system using clean water and refill with new coolant.

IMPORTANT: John Deere COOL-GARD™ II Pre-Mix coolant is recommended when adding new coolant to cooling system. Follow directions on container for correct mixture ratio.

COOL-GARD is a trademark of Deere & Company

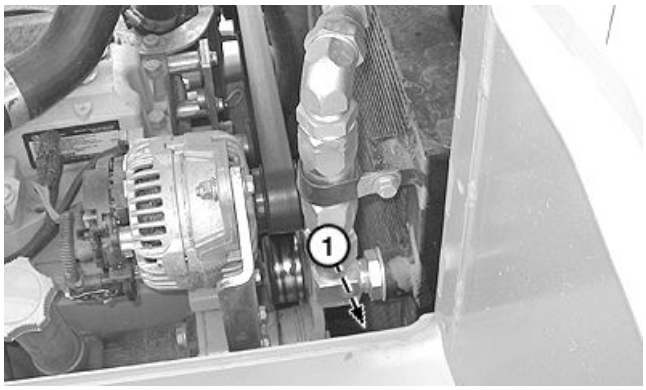
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CC28724,0000088 -19-13MAR13-1/2

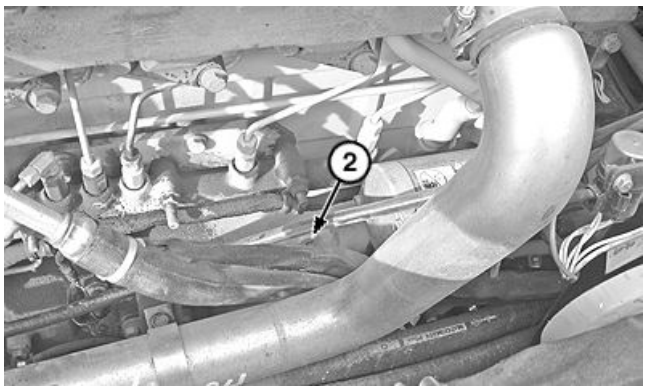
Specification	
Coolant—Capacity	21.6 L 5.7 gal

1. Remove left engine side shield.
2. Open radiator valve (1) to drain radiator.
3. Open drain plug (2) to drain engine block.
4. Open heater valve (3) to drain heater core.
5. After coolant has drained, install plugs and close valve.

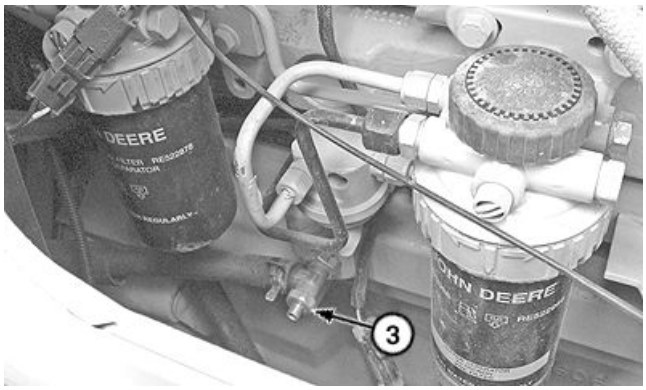
1— Radiator Valve
2— Drain Plug
3— Heater Valve



TX1018376A —UN—01FEB07



TX1018439A —UN—06FEB07



TX1018379A —UN—01FEB07

CC28724,0000088 -19-13MAR13-2/2

Filling the Cooling System

CAUTION: Prevent possible injury from hot spraying fluids. Shut off engine. Remove filler cap only when cool enough to touch with bare hands. Slowly loosen cap to relieve pressure before removing completely.

Specification	
Coolant—Capacity	21.6 L 5.7 gal

Fill system so coolant level is to bottom of filler neck.

NOTE: John Deere COOL-GARD™ II Pre-Mix is recommended when adding new coolant to cooling systems.

Follow directions on container for correct mixture ratio.

FREEZING TEMPERATURES: Fill with permanent-type low silicate, ethylene glycol antifreeze (without stop-leak additive) and clean, soft water. Add John Deere COOL-GARD™ II Coolant Extender as required.

COOL-GARD is a trademark of Deere & Company



TS281 —UN—15APR13

After filling surge tank, operate engine 15—30 minutes to purge air from engine block. Shut off engine and add coolant to surge tank as necessary. Warm engine to normal operating temperature, stop engine, and verify that radiator is completely full. Check that the surge tank is at normal level. Add coolant to surge tank as necessary.

LB82152,0000786 -19-13MAR13-1/1

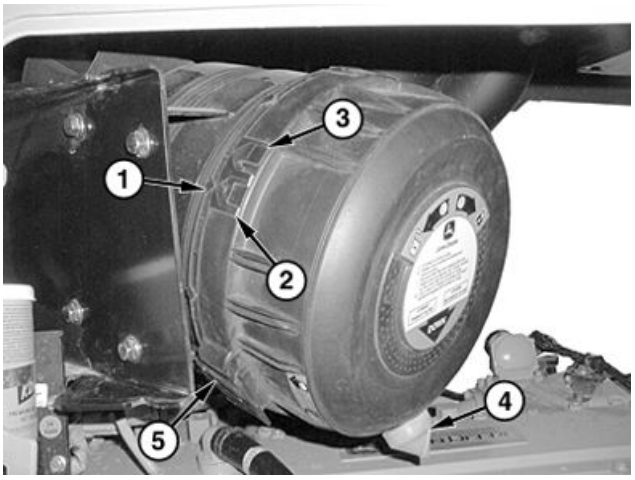
Replace Air Filter Elements

1. Pull out and hold lock lever (5). Rotate air filter cover counterclockwise until unlock icon (3) lines up with arrow (1).
2. Remove cover.
3. Remove primary element (6).
4. Remove secondary element (7).
5. Clean air cleaner canister.
6. Install new filter elements into housing, one at a time, making sure secondary element is centered in canister.

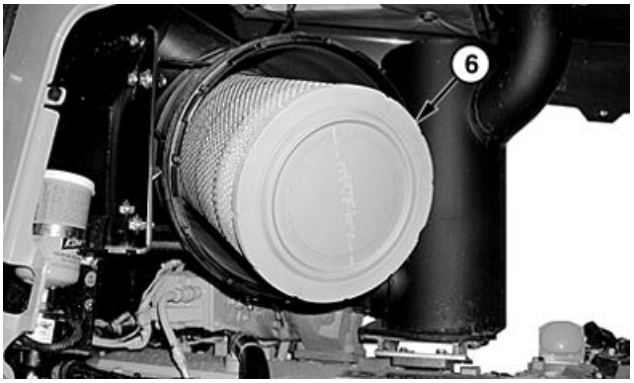
NOTE: When installing air cleaner cover, make sure the dust unloader valve is pointing down.

7. Attach cover by aligning unlock icon (3) with arrow (1). Rotate cover clockwise until lock icon (2) aligns with alignment arrow (1).

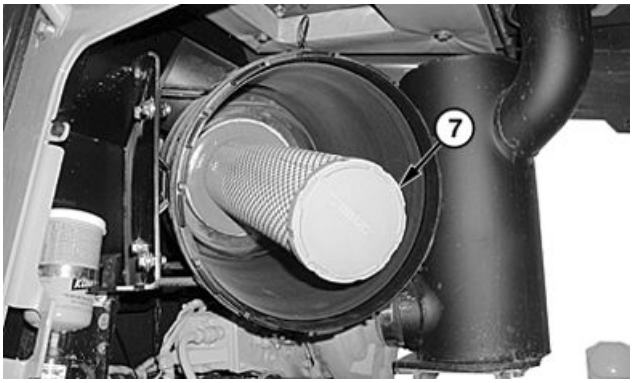
1— Alignment Arrow
2— Lock Icon
3— Unlock Icon
4— Dust Unloader Valve
5— Lock Lever
6— Primary Element
7— Secondary Element



TX1006494A —UN—18APR06



TX1006495A —UN—18APR06



TX1006496A —UN—18APR06

VD76477,00013B4 -19-12JAN07-1/1

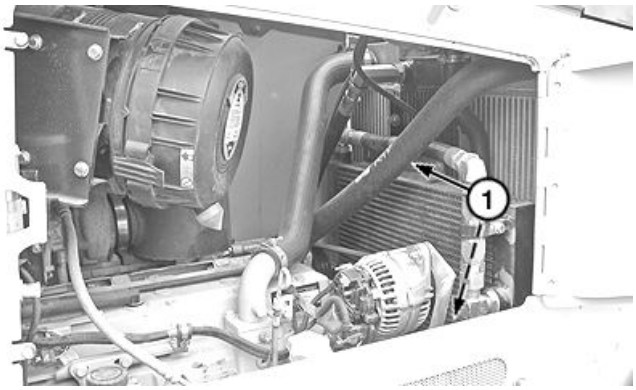
Checking Coolant Hoses

Check hoses (1) for cracks and leaks.

Tighten clamps.

Check radiator for dirt, damage, leaks, and loose or broken mountings. Clean radiator fins.

1— Hoses



TX1018336A —UN—31JAN07

VD76477,00013E9 -19-31JAN07-1/1

Clean Dust Unloader Valve

IMPORTANT: A missing, damaged, or hardened dust unloader valve will make dust cup precleaner ineffective, causing very short element life. Valve should suck closed above 1/3 engine speed.

Squeeze dust unloader valve (1) to remove dust from air cleaner.

If operating in high dust conditions, squeeze dust unloader valve every couple of hours of operation to release dust.

1— Dust Unloader Valve



TX105816A —UN—09APR09

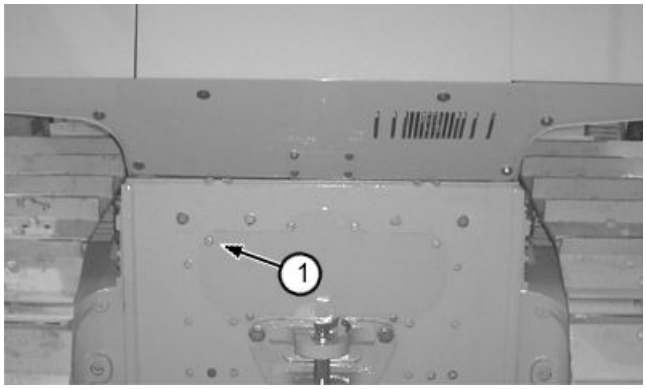
Dust Unloader Valve

JH91824,000059F -19-09APR09-1/1

Fuel Drain and Shutoff Valve

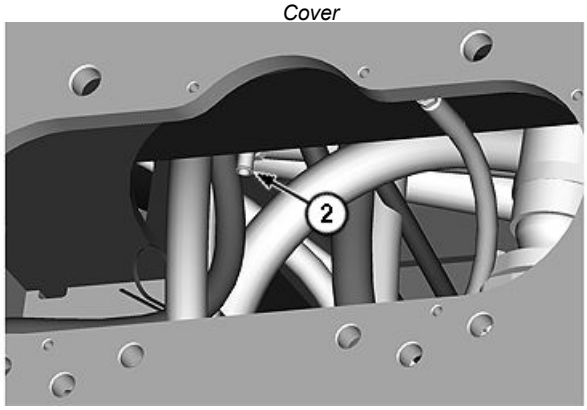
1. Remove six cap screws (1) to remove cover at rear of machine.
2. Attach hose to environmental drain valve (2).
3. Open drain valve. Drain fuel into appropriate container. Dispose of waste properly. See Safety-General Precautions. (Section 1-2.)
4. Close drain valve.
5. Disconnect hose from drain valve.
6. Replace cover.

1— Cap Screw (6 used) **2— Environmental Drain Valve**



T207206A —UN—24JAN05

Cover



TX1051602A —UN—14NOV08

Environmental Drain Valve

MD04263,000001D -19-29APR11-1/1

Discharge Pilot Control System Hydraulic Pressure

CAUTION: Prevent injury from unexpected machine movement. Turn engine off. Keep bystanders clear of machine.

Before servicing or performing maintenance on the machine, discharge hydraulic oil pressure from the pilot control system as follows:

1. Ensure that area around blade is clear.
2. Turn off engine.
3. Turn key switch to ON position.
4. Without starting engine and hydraulic enable switch in unlocked position, cycle hydraulic control lever in all directions.

HG31779,00001BD -19-22JUL10-1/1

Precautions for Alternator and Regulator

When batteries are connected, follow these rules:

1. Disconnect negative (-) battery cable when working on or near alternator or regulator.
2. DO NOT TRY TO POLARIZE ALTERNATOR OR REGULATOR.
3. Be sure that alternator wires are correctly connected BEFORE connecting batteries.
4. Do not ground alternator output terminal.
5. Do not disconnect or connect any alternator or regulator wires while batteries are connected or while the alternator is operating.
6. Connect batteries or a booster battery in the correct polarity (positive [+] to positive [+] and negative [-] to negative [-]).
7. Do not disconnect the batteries when engine is running and alternator is charging.
8. Disconnect battery cables before connecting battery charger to the batteries. If machine has more than one battery, each battery must be charged separately.
9. Before washing machine, place a water repellent cover over the alternator.
10. To prevent component damage, the water jets need to be set at a 45-degree angle with reduced water pressure. Avoid direct contact with electrical and electronic connectors.

CED,OUO1021,185 -19-04MAR20-1/1

Handling, Checking and Servicing Batteries Carefully

CAUTION: Battery gas can explode. Keep sparks and flames away from batteries. Use a flashlight to check battery electrolyte level.

Never check battery charge by placing a metal object across the posts. Use a voltmeter or hydrometer.

Always remove grounded (-) battery clamp first and replace it last.

Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing, and cause blindness if splashed into eyes.

Avoid the hazard by:

1. **Filling batteries in a well-ventilated area.**
2. **Wearing eye protection and rubber gloves.**
3. **Avoiding breathing fumes when electrolyte is added.**
4. **Avoiding spilling or dripping electrolyte.**
5. **Use proper jump start procedure.**

If you spill acid on yourself:

1. **Flush your skin with water.**
2. **Apply baking soda or lime to help neutralize the acid.**
3. **Flush your eyes with water for 15—30 minutes. Get medical attention immediately.**

If acid is swallowed:

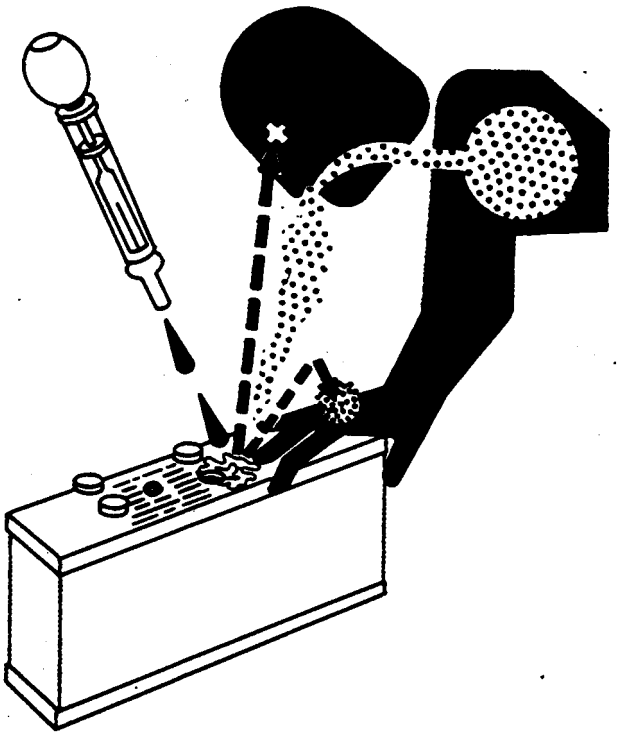
1. **Do not induce vomiting.**
2. **Drink large amounts of water or milk, but do not exceed 1.9 L (2 qt).**
3. **Get medical attention immediately.**

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. **Wash hands after handling.**

If electrolyte spills on the floor, use one of the following mixtures to neutralize the acid: 0.5 kg (1 lb) baking soda in 4 L (1 gal) water, or 0.47 L (1 pt) household ammonia in 4 L (1 gal) water.



TS204 —UN—15APR13



TS203 —UN—23AUG88

IMPORTANT: Do not overfill the battery cells.

Check the specific gravity of electrolyte in each battery cell.

Continued on next page

TX03679,0001788 -19-29APR11-1/2

See your authorized dealer for JT05460 SERVICEGARD™ battery and coolant tester. Follow directions included with the tester.

A fully charged battery will have a corrected specific gravity reading of 1.260. If the reading is below 1.200, charge the battery.



T85402 —UN—10NOV88

Battery And Coolant Tester

SERVICEGARD is a trademark of Deere & Company

TX03679,0001788 -19-29APR11-2/2

Using Booster Batteries—12-Volt System

Before boost starting, machine must be properly shut down to prevent unexpected machine movement when engine starts.

CAUTION: Prevent possible injury from exploding battery. An explosive gas is produced while batteries are in use or being charged. Keep flames or sparks away from the battery area. Make sure the batteries are charged in a well-ventilated area.

IMPORTANT: The machine electrical system is a 12-volt negative (-) ground. Use only 12-volt booster batteries.



TS204 —UN—15APR13

Using Booster Batteries

1. Connect one end of the positive cable to the positive terminal of the machine batteries and the other end to the positive terminal of the booster batteries.
2. Connect one end of the negative cable to the negative terminal of the booster batteries. Connect other end of the negative cable to the machine as far away from the machine batteries as possible.
3. Start engine.
4. Immediately after starting engine disconnect end of the negative cable from the machine. Then disconnect the other end of the negative cable from the negative terminal of the booster batteries.
5. Disconnect positive cable from booster batteries and machine batteries.

OUT4001,00000E1 -19-21JUL17-1/1

Using Battery Charger

12-Volt System

CAUTION: Prevent possible injury from exploding battery. Do not charge a battery if ambient temperature is below 0°C (32°F). Warm battery to 16°C (60°F) before charging.

Turn off charger before connecting or disconnecting it.

IMPORTANT: Do not use battery charger as a booster if a battery has a 1.150 specific gravity reading or lower.

Disconnect battery ground (-) clamp before charging batteries in the machine to prevent damage to electrical components.

NOTE: Some battery chargers may also be used as a booster to start the engine. Follow battery charger manufacturer's operating instruction before boosting.

1. Turn the battery disconnect switch (if equipped) to the OFF position.
2. Ventilate the area where battery is being charged.
3. Connect positive (+) cable to the positive (+) terminal of machine battery.
4. Connect negative (-) cable to the negative (-) terminal of machine battery.

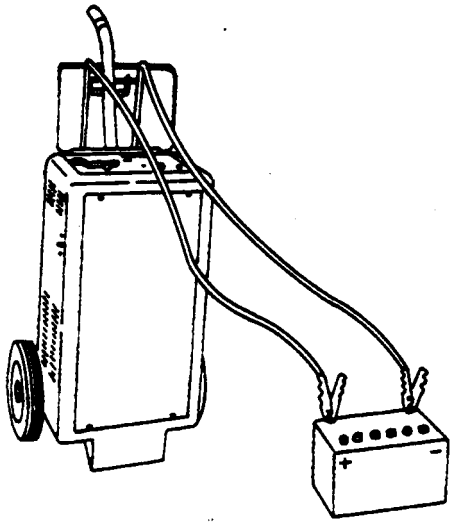
CAUTION: Prevent possible injury from exploding battery. Follow battery charger manufacturer's operating instructions before charging.

IMPORTANT: Prevent battery or machine damage from improper use of charger. Follow battery charger manufacturer's operation instruction before charging.



TS204 —UN—15APR13

Prevent Battery Explosions



N36890 —UN—07OCT88

Charger

5. Stop or cut back charging rate if battery case becomes hot or is venting electrolyte. Battery temperature must not exceed 52°C (125°F).
6. Remove charger cables in reverse order of connection.

Continued on next page

OUT4001,0000239 -19-15SEP21-1/2

24-Volt System

CAUTION: Prevent possible injury from exploding battery. Do not charge a battery if ambient temperature is below 0°C (32°F). Warm each battery to 16°C (60°F) before charging.

Turn off charger before connecting or disconnecting it.

IMPORTANT: Do not use battery charger as a booster if a battery has a 1.150 specific gravity reading or lower.

Disconnect battery ground (-) clamp before charging batteries in the machine to prevent damage to electrical components.

NOTE: Some battery chargers may also be used as a booster to start the engine. Follow battery charger manufacturer's operating instruction before boosting.

1. Turn the battery disconnect switch (if equipped) to the OFF position.
2. Ventilate the area where batteries are being charged.
3. Connect positive (+) cable to the positive (+) terminal of one machine battery.
4. Connect negative (-) cable to the negative (-) terminal of second machine battery.

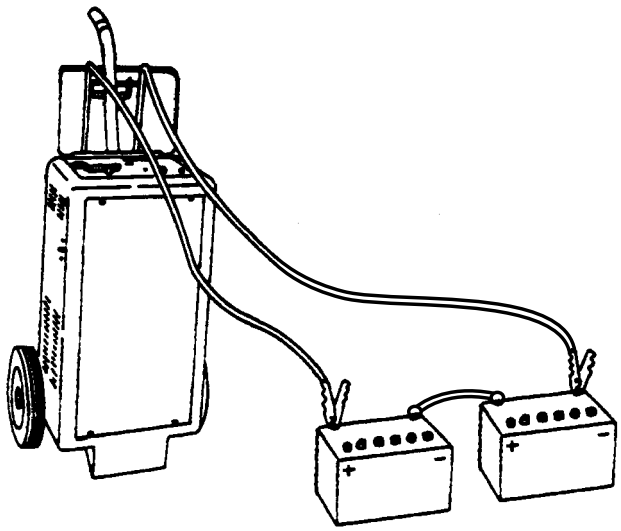
CAUTION: Prevent possible injury from exploding battery. Follow battery charger manufacturer's operating instructions before charging.

IMPORTANT: Prevent battery or machine damage from improper use of charger. Follow battery charger manufacturer's operation instruction before charging.



TS204 —UN—15APR13

Prevent Battery Explosions



TX1314241 —UN—22JUN21

Charger

5. Stop or cut back charging rate if battery case becomes hot or is venting electrolyte. Battery temperature must not exceed 52°C (125°F).
6. Remove charger cables in reverse order of connection.

OUT4001,0000239 -19-15SEP21-2/2

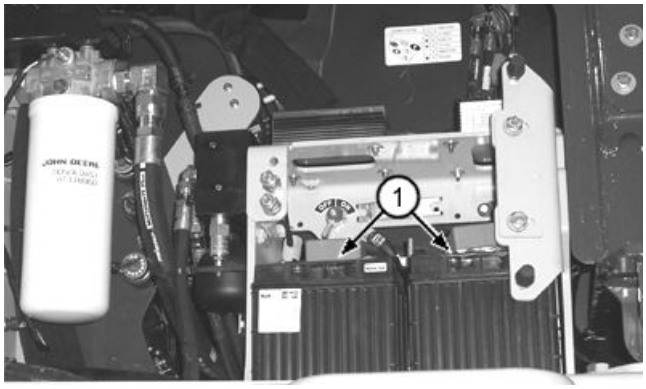
Replacing Batteries

CAUTION: Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, eat holes in clothing and cause blindness if splashed into eyes. Wear personal protective equipment including eye protection, face shield, gloves and apron when working around sulfuric acid.

Your machine has two 12-volt batteries (1) with negative (—) ground connected in series to provide 24-volts.

Use only batteries which meet the following specifications.

BATTERY SPECIFICATIONS		
BCI Group	**Cold Cranking Amps 0°F (—18°C)**	**Reserve Capacity (Minute of 25 Amp)**
31	950	190



T206570C —UN—18JAN05

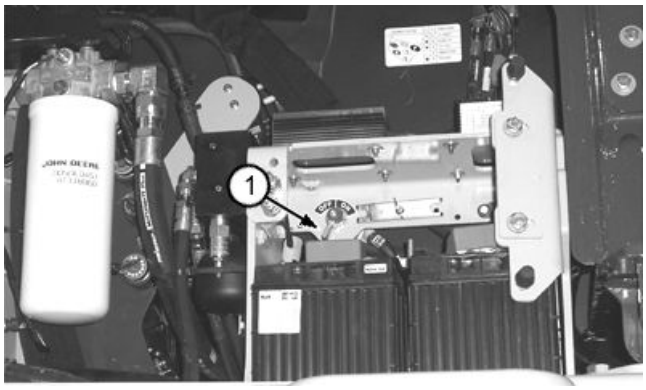
1— Battery (2 used)

VD76477,0001454 -19-03MAY11-1/1

Removing Batteries

CAUTION: Prevent possible injury from exploding battery. Always remove grounded (—) battery clamp first and replace it last.

1. Turn battery disconnect switch (1) to OFF.
2. Disconnect negative (—) battery cables first, then positive (+) cables.
3. Remove nuts and hold-down frames. Lift batteries from machine.
4. Check cables and clamps for damage and wear. Make certain the batteries are fully charged.
5. Install batteries making sure they are level.
6. Install hold-down frames. Connect cables, positive then negative.



T206570A —UN—18JAN05

1— Battery Disconnect Switch

7. Turn battery disconnect switch to ON.

HG31779,0000070 -19-04DEC06-1/1

JDLink™ Machine Monitoring System (MMS)—If Equipped

JDLink™ is an equipment monitoring and information delivery system. JDLink™ automatically collects and manages information about where and how construction and forestry equipment is being used, as well as critical machine health data and service status.

For more information, see an authorized John Deere dealer or visit www.deere.com (browse to Construction, Services and Support, JDLink™).

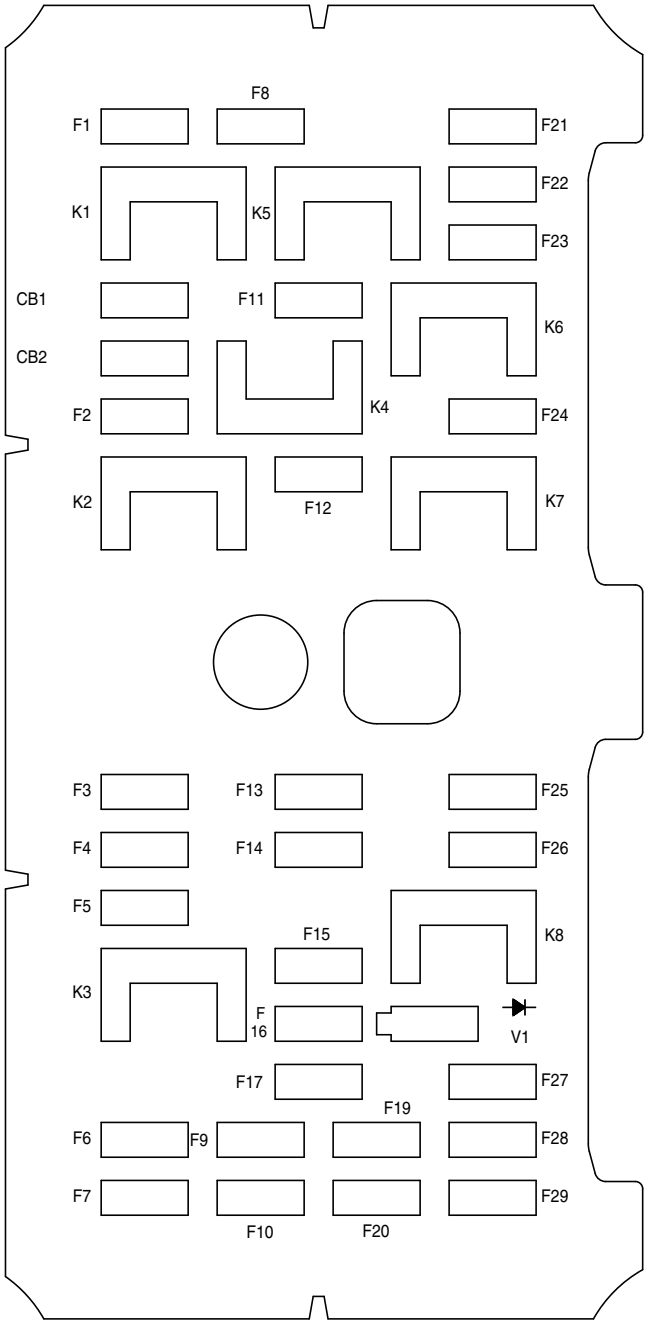
JDLink is a trademark of Deere & Company

VD76477,0001541 -19-26MAR15-1/1

Replacing Fuses (S.N. 141344—219962)

IMPORTANT: Install fuse with correct amperage rating to prevent electrical system damage from overload.

The vehicle electrical center (VEC) is located in the operator's station.



TX1091289

TX1091289 —UN—27APR11

Vehicle Electrical Center (VEC) (S.N. 141344—219962)

Continued on next page

ER93822,00000FB -19-08JUN18-1/4

F1— Condenser Fan Motor 2 15-Amp Fuse
F2— Condenser Fan Motor 1 15-Amp Fuse
F3— Service ADVISOR Power 5-Amp Fuse
F4— CMU Power 5-Amp Fuse
F5— Alternator Excitation 5-Amp Fuse
F6— TCU Power 10-Amp Fuse
F7— Spare Fuse
F8— Dome Light 5-Amp Fuse
F9— Pilot Enable Ignition Power 5-Amp Fuse
F10— Under-Seat Heater 15-Amp Fuse
F11— Winch Switch/Solenoids 5-Amp Fuse
F12— Heater Blower 15-Amp Fuse
F13— Start Aid 15-Amp Fuse
F14— Air Seat 10-Amp Fuse
F15— Switch LED (backlight) Circuit 5-Amp Fuse
F16— Optional Powerport 10-Amp Fuse
F17— Spare 15-Amp Fuse
F19— Horn 5-Amp Fuse
F20— Radio Memory 5-Amp Fuse
F21— Front/Rear Wiper Motor 10-Amp Fuse
F22— Right/Left Wiper Motor 10-Amp Fuse
F23— Standard Powerport 10-Amp Fuse
F24— Air Conditioning Compressor Clutch 5-Amp Fuse
F25— Start Relay 10-Amp Fuse
F26— ECU Ignition Power 5-Amp Fuse
F27— Spare 10-Amp Fuse
F28— CMU Battery Power 10-Amp Fuse
F29— ECU Battery Power 15-Amp Fuse
F30— Auxiliary Work Light 20-Amp Circuit Breaker (marked CB1)
F31— Standard Work Light 15-Amp Circuit Breaker (marked CB2)
K1—Condenser Fan 2 Relay
K2—Condenser Fan 1 Relay
K3—10-Amp Optional Convertor Relay
K4—Auxiliary Work Light Relay
K5—Wiper Relay
K6—Standard Work Light Relay
K7—Air Conditioning Compressor Clutch Relay
K8—Horn Relay
V1—Alternator Excitation 3-Amp Diode

NOTE: The following items are located outside of the VEC:

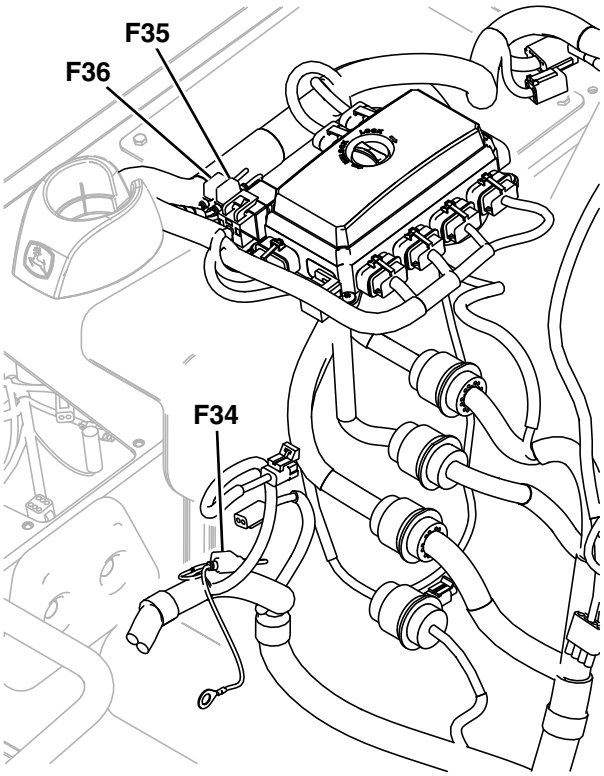
- *IGC Fuse and Relay Box (IGC machines only)*
- *F33—Main 125-Amp Fuse (later machines)*

The main 125-amp fuse (F33) and IGC fuse and relay box (if equipped with integrated grade control) are located in the battery compartment.

ER93822,00000FB -19-08JUN18-2/4

JDLink™ Fuses

F34— JDLink™ Ground 5-Amp Fuse—If Equipped
F35— JDLink™ Switched Power 5-Amp Fuse—If Equipped
F36— JDLink™ Unswitched Power 5-Amp Fuse—If Equipped



JDLink™ In-Line Fuses Specifications—If Equipped (S.N. 141344—219962)

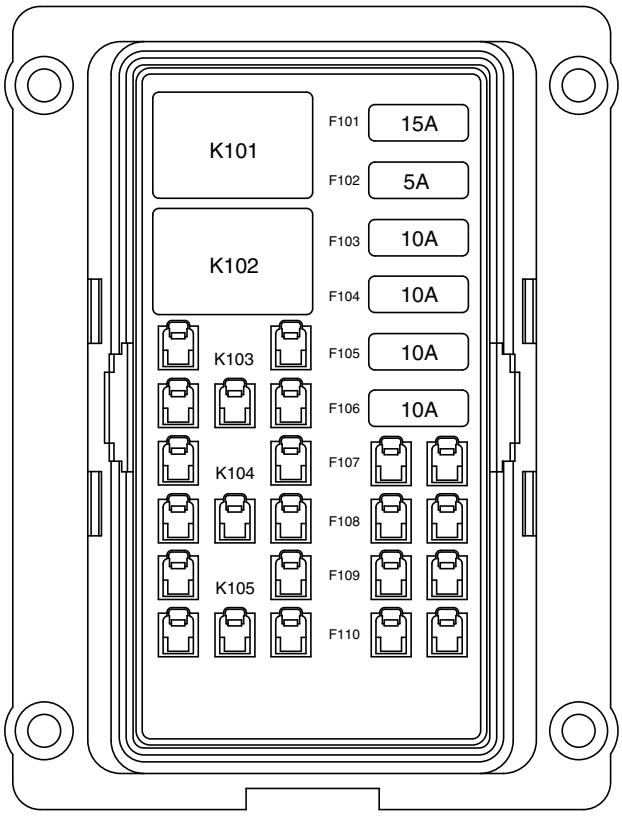
JDLink is a trademark of Deere & Company

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ER93822,00000FB -19-08JUN18-3/4

IGC Fuses and Relays

F101— IGC Switched Power 15-Amp Fuse (IGC option)
F102— BCJ Switched Power 5-Amp Fuse (IGC option)
F103— EHC Switched Power 10-Amp Fuse (IGC option)
F104— IGC Unswitched Power_1 10-Amp Fuse (IGC option)
F105— IGC Unswitched Power_2 10-Amp Fuse (IGC option)
F106— IGC Unswitched Power_3 10-Amp Fuse (IGC option)
K101— IGC Switched Power Relay (IGC option)
K102— BCJ and EHC Switched Power Relay (IGC option)



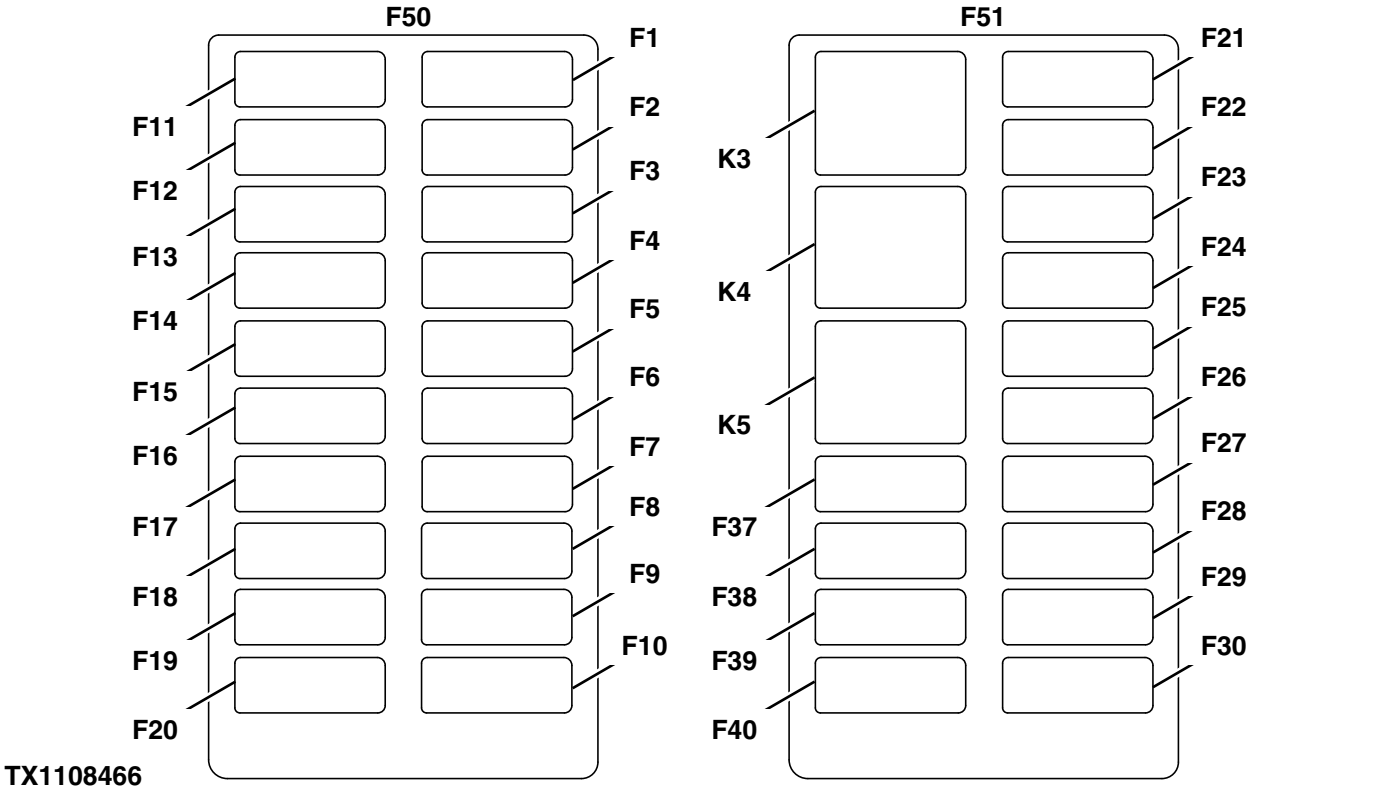
IGC Fuse and Relay Box—If Equipped (S.N. 141344—219962)

ER93822,00000FB -19-08JUN18-4/4

Replacing Fuses (S.N. 219963—)

IMPORTANT: Install fuse with correct amperage rating to prevent electrical system damage from overload.

The vehicle electrical center (VEC) is located in the operator's station.



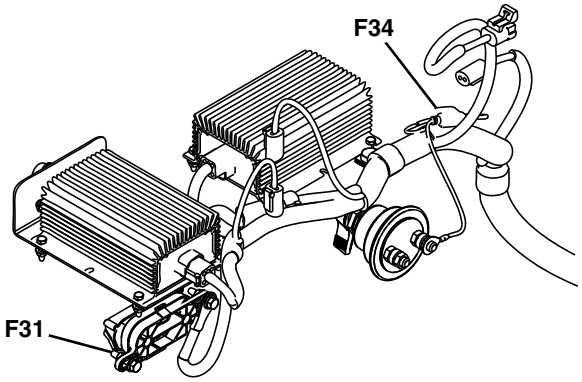
Vehicle Electrical Center (VEC) (S.N. 219963—)

F1— Standard Display Monitor (SDM) Unswitched Power 5 A Fuse
F2— Engine Control Unit (ECU) Unswitched Power 15 A Fuse
F3— Transmission Control Unit (TCU) Unswitched Power 10 A Fuse
F4— 12 V Converter Unswitched Power 10 A Fuse
F5— Service ADVISOR™ Unswitched Power 5 A Fuse
F6— JDLink™ Unswitched Power 5 A Fuse
F7— Horn 5 A Fuse
F8— Work Lights 20 A Fuse
F9— Drive Lights 15 A Fuse
F10— Not Used
F11— Standard Display Monitor (SDM) Switched Power 5 A Fuse
F12— JDLink™ Switched Power 5 A Fuse
F13— Engine Control Unit (ECU) Switched Power 5 A Fuse
F14— 12 V Converter Switched Power 10 A Fuse
F15— Under Seat Heater 15 A Fuse
F16— Heater Blower 15 A Fuse
F17— Air Ride Seat 15 A Fuse
F18— Front and Rear Window Wipers 10 A Fuse
F19— Door Window Wipers 10 A Fuse
F20— Optional Converter Switch 10 A Fuse
F21— Spare 10 A Fuse
F22— Fuel Filter Heater 10 A Fuse
F23— Spare 10 A Fuse
F24— Alternator Excitation 5 A Fuse
F25— Pilot Control Enable 5 A Fuse
F26— Ether Start Aid 15 A Fuse
F27— Dome Light/Backlight 5 A Fuse
F28— Transmission Switches 5 A Fuse
F29— Light Switches 5 A Fuse
F30— Quick-Drop Switch 5 A Fuse
F37— Start Relay 10 A Fuse
F38— Air Conditioner Compressor Clutch 5 A Fuse
F39— Condenser Fan Motor 1 15 A Fuse
F40— Condenser Fan Motor 2 15 A Fuse
F50— Fuse Box 1
F51— Fuse Box 2
K3—Auxiliary Worklight Relay
K4—Standard Worklight Relay
K5—Horn Relay

Continued on next page

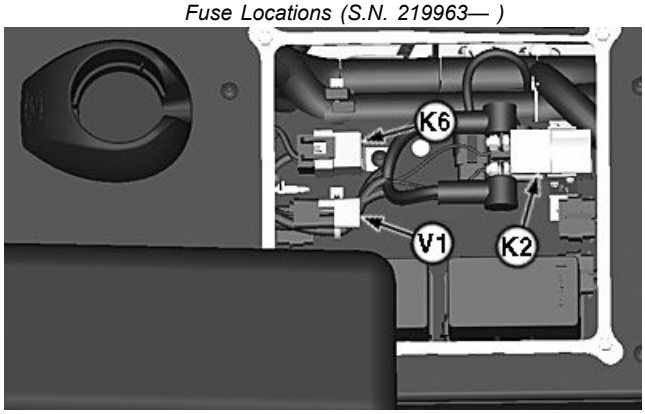
NOTE: The following items are located outside of the VEC:

F31— Main 120 A Circuit Breaker
F34— JDLink™ Ground 5 A Fuse—If Equipped
K2—Main Ignition Relay
K6—Air Conditioning Compressor Clutch Relay
V1—Alternator Excitation 3-Amp Diode



TX1102853 —UN—06DEC11

Fuse Locations (S.N. 219963—)



TX1108467A —UN—15FEB12

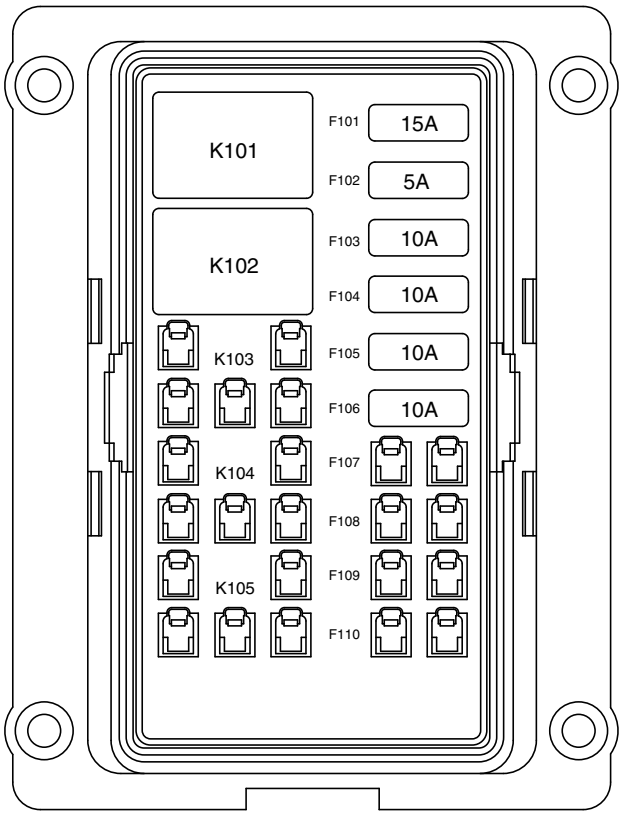
Fuse Locations (S.N. 219963—)

Continued on next page

ER93822,00000F9 -19-17FEB12-2/3

IGC Fuses and Relays

F101— IGC Switched Power 15-Amp Fuse
F102— BCJ Switched Power 5-Amp Fuse
F103— EHC Switched Power 10-Amp Fuse
F104— IGC Unswitched Power_1 10-Amp Fuse
F105— IGC Unswitched Power_2 10-Amp Fuse
F106— IGC Unswitched Power_3 10-Amp Fuse
K101— IGC Switched Power Relay
K102— BCJ and EHC Switched Power Relay



IGC Fuse and Relay Box (S.N. 219963—) (If Equipped)

ER93822,00000F9 -19-17FEB12-3/3

Fuse (Blade-Type) Color Codes

Amperage Rating	Color
1	Black
3	Violet
4	Pink
5	Tan
7-1/2	Brown
10	Red
15	Light Blue
20	Yellow
25	Natural (White)
30	Light Green

DZ80269,0000209 -19-07AUG06-1/1

Drain Fuel Filter Sediment

NOTE: Dispose of waste properly.

Drain water and sediment as necessary.

1. Loosen drain screw (1). Drain liquid for several seconds.
2. Tighten drain screw.

IMPORTANT: Do not prefill fuel filters. Debris in unfiltered fuel will damage fuel system components.

3. Bleed fuel system. See Bleeding Fuel System in this section.

1— Drain Screw



TX1018353A —UN—31JAN07

VD76477,00013EA -19-29APR11-1/1

Bleed the Fuel System

CAUTION: Escaping fluid under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting fuel or other lines. Tighten all connections before applying pressure. Keep hands and body away from pinholes and nozzles that eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

If ANY fluid is injected into the skin, a doctor familiar with this type of injury must surgically remove it within a few hours or gangrene may result. Doctors unfamiliar with this type of injury may call the Deere & Company Medical Department in Moline, Illinois, or other knowledgeable medical source.

High-pressure fluid remaining in fuel lines can cause serious injury. Before disconnecting fuel lines, sensors, or any other components between the high-pressure fuel pump and nozzles on engines with high pressure common rail (HPCR) fuel system, wait a minimum of 15 minutes after engine is stopped.

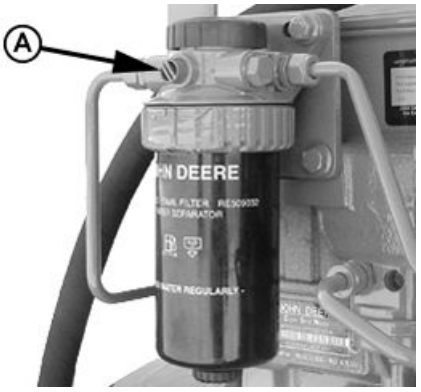
Only technicians familiar with this type of system can perform repairs. (See your John Deere dealer.)

IMPORTANT: If the engine has been run out of fuel, or after you have serviced the fuel filters, DO NOT PRESSURIZE THE FUEL TANK to prime the fuel system! Doing this causes the seal on the front of the high pressure pump to rupture. When such a rupture occurs, fuel passes around the seal, and fills the engine crankcase. This condition causes severe damage to the engine and requires replacement of the high pressure pump.

IMPORTANT: Do not prefill fuel filters. Debris in unfiltered fuel will damage fuel system components.

NOTE: A fuel system always must be bled, after the engine has been run out of fuel, fuel filters have been serviced, or the fuel system has been opened.

Any time the fuel system has been opened for service (lines disconnected or filters removed), it will be necessary to bleed air from the system.



RG15147 —UN—08NOV06

Final Fuel Filter

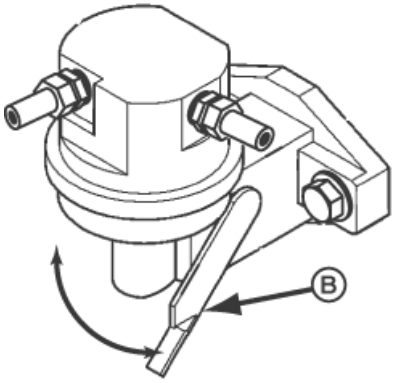
A—Bleed Vent Screw

Continued on next page

VD76477,000142A -19-03MAY11-1/2

CAUTION: Do not crack any fuel lines to bleed the fuel system. This fuel system is sensitive to fuel contamination.

1. On the final fuel filter base, by hand, turn the air bleed vent screw (A) counterclockwise, two full turns.
2. Operate fuel transfer pump primer lever (B), or primer button on fuel filter base—if equipped, until fuel flows out of bleed vent screw.
3. Turn bleed vent screw clockwise. Hand-tighten securely.
4. Continue operating primer until pumping action is not felt.
5. Start engine and check for leaks.



RG15155 —UN—13NOV06

Fuel Transfer Pump

B—Primer Lever

VD76477,000142A -19-03MAY11-2/2

Check Engine Speeds

1. Warm engine to normal operating temperature.
2. Check engine speeds using display monitor.

Specification	
Slow Idle (with decelerator pedal pressed)—Speed	880—910 rpm
Fast Idle—Speed	2255—2285 rpm

If adjustment is necessary, see your authorized dealer.

HG31779,0000072 -19-03MAY11-1/1

Do Not Service Control Valves, Cylinders, Pumps, or Motors

Special tools and information are needed to service control valves, cylinders, pumps, or motors.

If these parts need service, see an authorized John Deere dealer.

TX,90,DH2537 -19-13AUG20-1/1

Track Sag General Information

Properly adjusted tracks prolong chain life. To get the maximum life out of track bushings, keep the track sag properly adjusted. Improperly adjusted track wears at a more rapid rate.

A tight track causes higher loading which will increase wear on the pins, bushings, links, sprocket and front idler. The graph (A) shows how the loading on the track chain increases significantly when tracks are too tight. Also, a tight track requires more horsepower, increasing fuel consumption and decreasing productivity.

Periodically check track sag. In some applications, tracks may require adjustment several times during a working day. This is especially true when working in different conditions on the same job site, as moisture content of the soil changes.

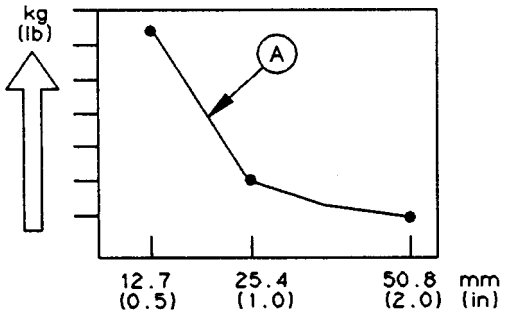
Tracks should always be adjusted in the actual operating conditions. If material packs in the undercarriage, the tracks should be adjusted with the material packed in the components.

When packing occurs, track sag is taken up and must be loosened to extend wear life. The track spring will recoil and the machine will continue to operate with tight track. However, continued operation without loosening the tracks will result in excessive pin and bushing wear, sprocket popping, tooth tip wear, and excessive loads on the entire undercarriage and final drive system.

With sealed chain, internal pin and bushing wear creates sag which reduces the effects of packing. However, if a sealed chain is too tight, accelerated bushing wear occurs.

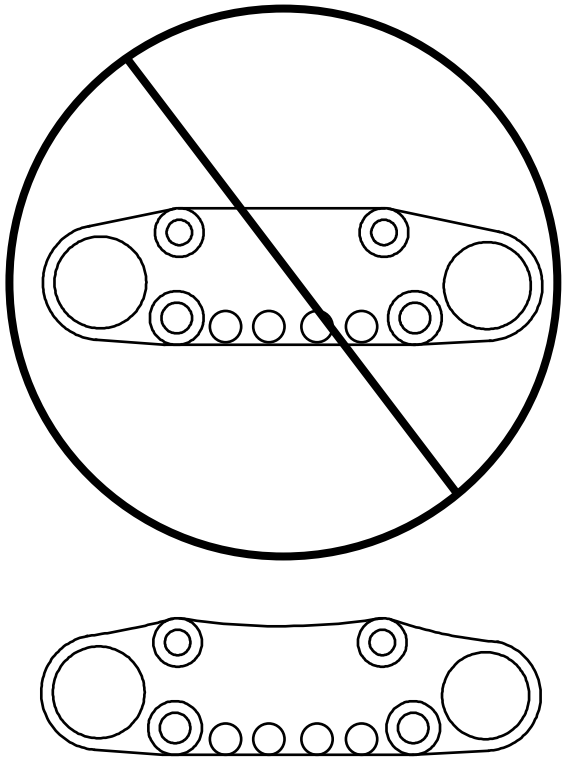
Lubricated chain is different due to the absence of internal pin and bushing wear. It is absolutely essential to keep sag adjusted to prevent accelerated bushing outside diameter wear.

Maintaining track sag is very important regardless of the type of track being used.



T7800AJ —UN—31JUL92

Track Tension kg (lb) vs. Track Sag mm (in.)



T207501 —UN—15FEB05

TX,90,RR2516 -19-19SEP08-1/1

Checking Idlers and Rollers for Oil Leakage

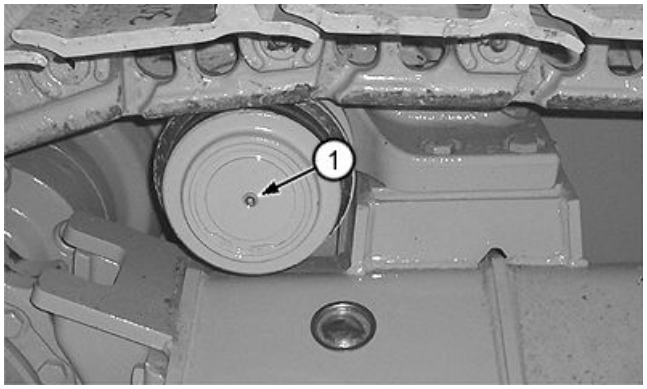
Check carrier rollers, front idlers, and track rollers for leaks. If any leaks are found, see an authorized John Deere dealer.

AM40430,0000019 -19-07NOV16-1/1

Checking Carrier Roller Oil Level

1. Remove plug (1) from carrier roller. Oil must flow from hole.
2. Add oil as necessary. See Track Rollers, Front Idler, and Carrier Roller Oil. (Section 3-1.)
3. Install plug.

1— Plug



T207177A —UN—18JAN05

Carrier Roller

AM40430,000001A -19-31JUL17-1/1

Cab or ROPS Tilting Procedure

1. Park machine on level surface.
2. Move park lock lever to up LOCKED position.
3. Lower equipment to ground.
4. Remove all 10 cap screws (1) that hold front of the cab to the platform.

NOTE: Selector valve is operated by pulling valve outward and twisting it between the two settings.

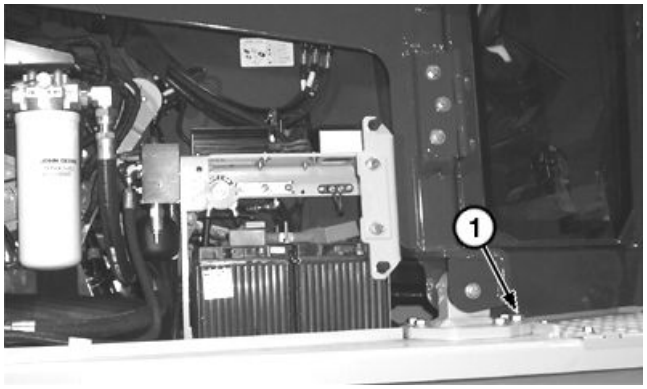
5. Verify that the cab/tilt brake pump off (red) selector valve (2) is the retracted position for cab tilt mode.

CAUTION: Failure to use mechanical safety support could result in injury or death.

6. Pull cab raise/lower (black) selector valve (3) outward and rotate counterclockwise 1/4 turn to the extended position to raise the cab. The extended position is for raise and the retracted position is for lower.

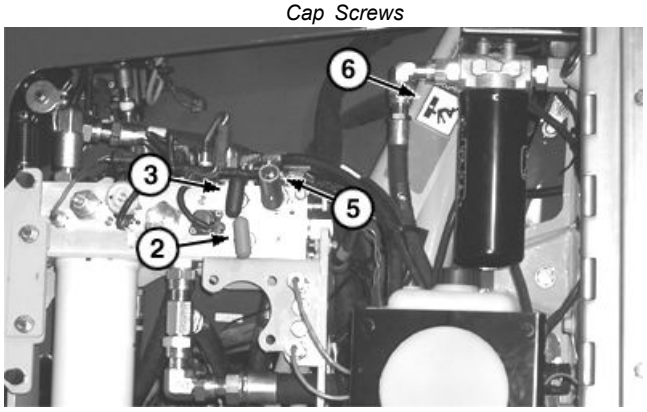
NOTE: Make sure the mounts are flat as the cab is being lowered.

7. Insert handle (4) into hand pump (5).
8. Actuate hand pump until the cylinder is fully extended.
9. Engage the mechanical safety support (6) on the cylinder. Ensure that the lock is securely pinned to the cylinder rod.
10. Pull cab raise/lower selector valve outward and rotate clockwise 1/4 turn to the retracted position to lower the cab until it is locked by the mechanical safety support.
11. Reverse procedure for lowering.
12. Tighten cap screws to specification.



T206852A —UN—01JUN10

Cap Screws



T206851A —UN—01JUN10

Cab Tilt

1— Cap Screw (10 used)
2— Cab Tilt/Brake Pump Off (red) Selector Valve
3— Cab Raise/Lower (black) Selector Valve
4— Handle
5— Hand Pump
6— Mechanical Safety Support

Specification

Cap Screw—Torque	350 N·m
	255 lb-ft

AM40430,0000032 -19-30NOV22-1/1

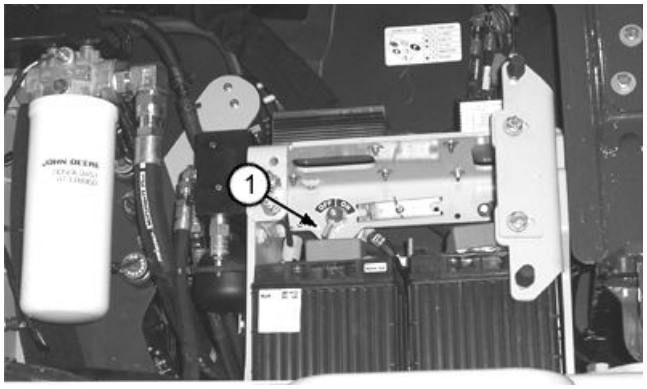
Welding Procedure

IMPORTANT: To avoid electronic component damage, turn battery disconnect switch to OFF position before welding on machine.

1. Turn battery disconnect switch (1) to OFF position.
2. Clamp welding ground clamp as close to point of welding as possible.

IMPORTANT: Before welding on machines with an engine control unit (ECU), protect the ECU from high-current damage as follows:

1. Disconnect ECU-to-vehicle frame ground connection.
2. Disconnect all other connectors from ECU. Also disconnect module connector at injector pump.
3. Connect welder ground close to welding point and make sure ECU and other electrical components are not in the ground path.



T206570A —UN—18JAN05

Battery Disconnect Switch

1— Battery Disconnect Switch

HG31779,0000071 -19-03MAY11-1/1

Welding On Machine

CAUTION: Avoid potentially toxic fumes and dust. Hazardous fumes can be generated when paint is heated by welding, soldering, or using a torch. Do all work outside or in a well-ventilated area. Dispose of paint and solvent properly.

When sanding or grinding painted surfaces, avoid breathing the dust. Wear an approved respirator. When using solvent or paint stripper, remove stripper with soap and water before welding. Remove solvent or paint stripper containers and other flammable material from area. Allow fumes to disperse at least 15 minutes before welding or heating.

IMPORTANT: Have only a qualified welder perform this job. Connect welder ground clamp close to each weld area so electrical current does not pass through any bearings, articulation joints, or pivot points. Remove or protect all parts that can be damaged by heat or weld splatter.

1. Remove paint before welding or heating.
   - When sanding or grinding paint, avoid breathing the dust.
   - Wear an approved respirator. When using solvent or paint stripper, remove stripper with soap and water before welding.
   - Remove solvent or paint stripper containers and other flammable material from area.
   - Allow fumes to disperse at least 15 minutes before welding or heating.

IMPORTANT: Electrical current traveling from the welder through the machine electrical system may damage the machine electrical system, including battery and control units. Disconnect battery positive and negative cables before welding on machine.

2. Disconnect the negative (-) battery cables.
3. Disconnect the positive (+) battery cables.
4. Cover, protect, or move any wiring harness sections away from welding area.

For any repairs, see an authorized John Deere dealer.

TX,WOM -19-06JUL20-1/1

Welding Near Electronic Control Units

IMPORTANT: Do not jump-start engines with arc welding equipment. Currents and voltages are too high and may cause permanent damage.

1. Disconnect the negative (-) battery cable(s).
2. Disconnect the positive (+) battery cable(s).
3. Connect the positive and negative cables together. Do not attach to vehicle frame.
4. Clear or move any wiring harness sections away from welding area.
5. Connect welder ground close to welding point and away from control units.



TS953 —UN—15MAY90

6. After welding, reverse Steps 1—5.

DX,WW,ECU02 -19-14AUG09-1/1

Keep Electronic Control Unit Connectors Clean

IMPORTANT: Do not open control unit and do not clean with a high-pressure spray. Moisture, dirt, and other contaminants may cause permanent damage.

1. Keep terminals clean and free of foreign debris. Moisture, dirt, and other contaminants may cause the terminals to erode over time and not make a good electrical connection.
2. If a connector is not in use, put on the proper dust cap or an appropriate seal to protect it from foreign debris and moisture.
3. Control units are not repairable.
4. Since control units are the components LEAST likely to fail, isolate failure before replacing by completing a diagnostic procedure. (See your John Deere dealer.)
5. The wiring harness terminals and connectors for electronic control units are repairable.

DX,WW,ECU04 -19-11JUN09-1/1

Checking Fire Extinguisher—If Equipped

IMPORTANT: Charge fire extinguisher after each use.

Check gauge regularly for correct charge. Pointer must be in green zone. If not, see your authorized dealer to get extinguisher charged.

TX,85,RR,A43 -19-04DEC06-1/1

Checking Air Conditioner Refrigerant Level—If Equipped

IMPORTANT: Prevent possible compressor damage. If receiver/dryer moisture eye color indicates "wet" (pink), dryer is saturated and should be changed within the next 100 machine hours to prevent further buildup of moisture in refrigerant.

1. Check color of sight glass (1), to see if receiver/dryer is wet (pink) or dry (blue).
2. If wet (pink), see your authorized dealer within the next 100 machine hours to service receiver/dryer.

1— Sight Glass



Air Conditioner Sight Glass

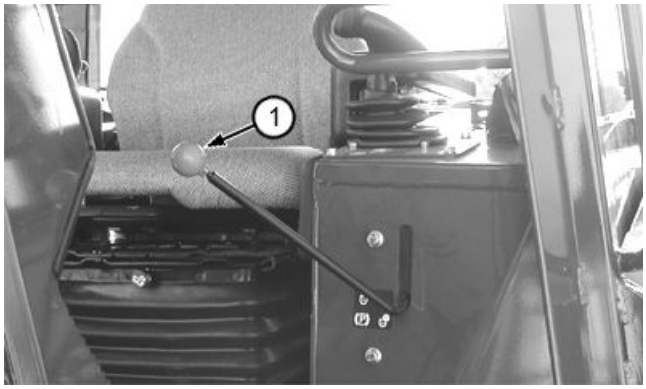
T207429A —UN—25JAN05

AM40430,0000027 -19-29APR11-1/1

Checking Park Lock Start System

CAUTION: Avoid possible injury or death. Be sure all people are away from machine when park lock start checks are performed.

1. Place transmission control lever (TCL) in NEUTRAL.
2. Move park lock lever (1) to down UNLOCKED position.
3. Turn key switch to START position. Starter must not engage. If engine starts, return park lock lever to up LOCKED position and see your authorized dealer.
4. Move park lock lever to up LOCKED position.
5. Turn key switch to START position. Starter should engage, turning engine over. If engine does not turn over, see your authorized dealer.



T198353A —UN—18JAN05

Park Lock Lever

1— Park Lock Lever (unlocked position)

VD76477,00013BA -19-03MAY11-1/1

Checking Transmission Start System

CAUTION: Avoid possible injury or death. Be sure all people are away from machine when park lock start checks are performed.

1. With engine running on a level surface, place park lock lever in up LOCKED position.
2. Move transmission control lever (TCL) to forward F or reverse R position.
3. Set engine speed to 1500 rpm.
4. Move park lock lever to down UNLOCKED position.
5. Monitor should display “Return to N” and machine should not move.
6. Move TCL to neutral N position and “Return to N” light should turn off on monitor.

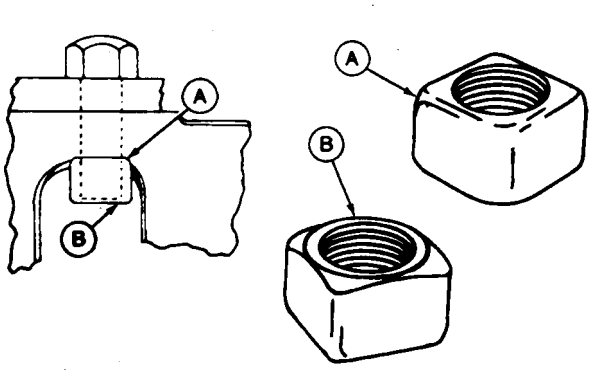
AM40430,0000033 -19-29APR11-1/1

Checking Track Shoe Cap Screw Torque

NOTE: Track shoe bolt torque specifications do not apply to split master link.

Cap screw threads and bearing surface under head must be lubricated with SAE 30 oil.

Specification	
750J Track Shoe 3/4 in.	
Cap Screw—Torque	270 ± 30 N·m
	200 ± 20 lb-ft
Torque Turn	1/3 turn (120°)



T6794AM —UN—23FEB89

A—Rounded Edge **B—Chamfered Edge**

Track shoe cap screw torque should be periodically checked. If cap screws do not meet minimum torque specifications, remove shoes and clean mating surfaces of shoes and links before tightening.

If machine is operated with loose track shoes, cap screw holes in the shoes and links will wear, making it difficult to keep the shoes tight. Loose shoes can also cause hardware failure and loss of shoes.

Install all nuts with rounded edges (A) against the link and chamfered edges (B) away. Be sure nut is properly positioned in link so there is full contact between nut and link.

If cap screws check less than above specification, remove shoes and clean paint or other foreign material from chain and shoe mating surfaces.

Lubricate cap screws and assemble shoes.

VD76477,0001210 -19-29APR11-1/1

Checking Track Shoe Cap Screw Torque—Master Link

If cap screws check less than specification, remove shoe and clean paint or other foreign material from chain and shoe mating surfaces.

Lubricate cap screw threads and bearing surface of cap screw head using PT569 John Deere NEVER-SEEZ® Lubricant or equivalent.

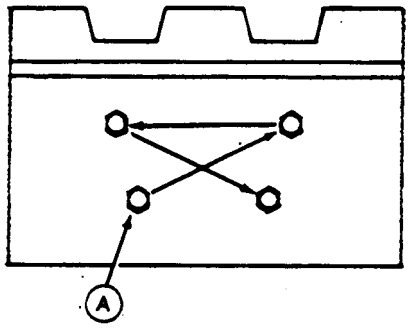
IMPORTANT: DO NOT use impact wrench to start master shoe cap screws to avoid cross-threading.

Use only the torque turn method described below when assembling master track shoe. This method provides the optimum tightness level for this critical area.

Install master shoe on master links and start cap screws by hand to avoid cross-threading.

Tighten master cap screws in a crisscross sequence (A). Repeat sequence a second time. Use same tightening sequence for additional turns.

NEVER-SEEZ is a registered trademark of Emhart Chemical Group



T96302 —UN—01NOV88

A—Master Link Tightening Sequence

Specification

750J Master Link 3/4 in.	
Cap Screw—Torque	270 ± 30 N·m
	200 ± 20 lb-ft
Torque Turn	1/2 turn (180°)

VD76477,0001211 -19-02NOV06-1/1

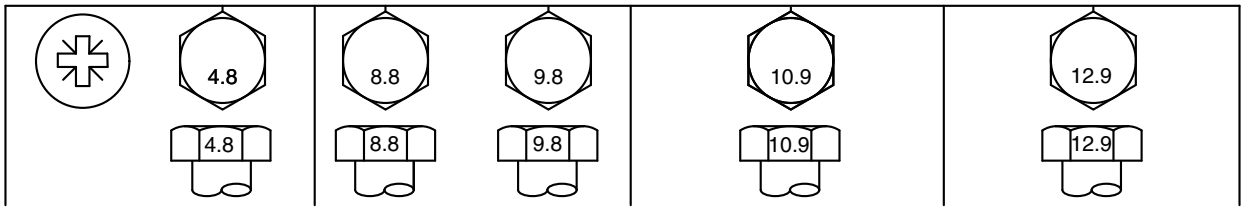
Hardware Torque Specifications

Check cap screws and nuts to be sure they are tight. If hardware is loose, tighten to torque shown on the following charts unless a special torque is specified.

TX,90,FF1225 -19-15MAR93-1/1

Metric Bolt and Screw Torque Values

TS1742 —UN—31MAY18



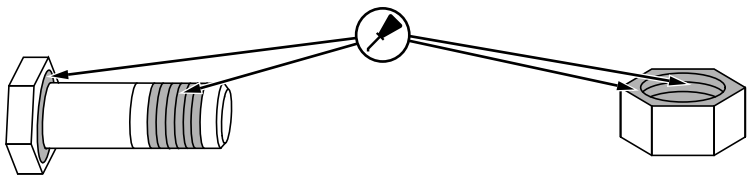
Bolt or Screw Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]		Hex Head[a]		Flange Head[b]	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
M6	3.6	31.9	3.9	34.5	6.7	59.3	7.3	64.6	9.8	86.7	10.8	95.6	11.5	102	12.6	112
									N·m	lb·ft	N·m	lb·ft	N·m	lb·ft	N·m	lb·ft
M8	8.6	76.1	9.4	83.2	16.2	143	17.6	156	23.8	17.6	25.9	19.1	27.8	20.5	30.3	22.3
			N·m	lb·ft	N·m	lb·ft	N·m	lb·ft								
M10	16.9	150	18.4	13.6	31.9	23.5	34.7	25.6	46.8	34.5	51	37.6	55	40.6	60	44.3
	N·m	lb·ft														
M12	—	—	—	—	55	40.6	61	45	81	59.7	89	65.6	95	70.1	105	77.4
M14	—	—	—	—	87	64.2	96	70.8	128	94.4	141	104	150	111	165	122
M16	—	—	—	—	135	99.6	149	110	198	146	219	162	232	171	257	190
M18	—	—	—	—	193	142	214	158	275	203	304	224	322	245	356	263
M20	—	—	—	—	272	201	301	222	387	285	428	316	453	334	501	370
M22	—	—	—	—	365	263	405	299	520	384	576	425	608	448	674	497
M24	—	—	—	—	468	345	518	382	666	491	738	544	780	575	864	637
M27	—	—	—	—	683	504	758	559	973	718	1080	797	1139	840	1263	932
M30	—	—	—	—	932	687	1029	759	1327	979	1466	1081	1553	1145	1715	1265
M33	—	—	—	—	1258	928	1398	1031	1788	1319	1986	1465	2092	1543	2324	1714
M36	—	—	—	—	1617	1193	1789	1319	2303	1699	2548	1879	2695	1988	2982	2199

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench.
DO NOT use these values if a different torque value or tightening procedure is given for a specific application.
For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

TS1741 —UN—22MAY18

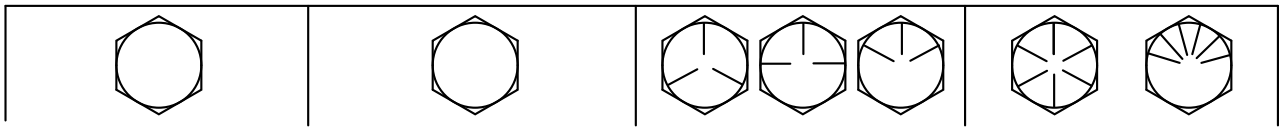


[a]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[b]Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ2 -19-09MAY22-1/1

Unified Inch Bolt and Screw Torque Values

TS1671 —UN—01MAY03



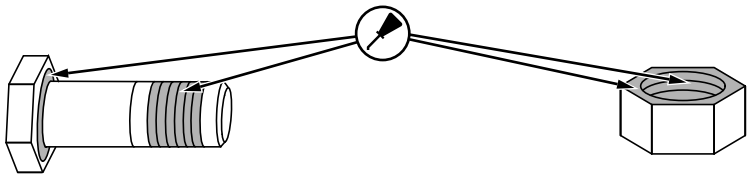
Bolt or Screw Size	SAE Grade 1[a]				SAE Grade 2[b]				SAE Grade 5, 5.1 or 5.2				SAE Grade 8 or 8.2			
	Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]		Hex Head[c]		Flange Head[d]	
	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in	N·m	lb·in
1/4	3.1	27.3	3.2	28.4	5.1	45.5	5.3	47.3	7.9	70.2	8.3	73.1	11.2	99.2	11.6	103
													N·m	lb·ft	N·m	lb·ft
5/16	6.1	54.1	6.5	57.7	10.2	90.2	10.9	96.2	15.7	139	16.8	149	22.2	16.4	23.7	17.5
									N·m	lb·ft	N·m	lb·ft				
3/8	10.5	93.6	11.5	102	17.6	156	19.2	170	27.3	20.1	29.7	21.9	38.5	28.4	41.9	30.9
					N·m	lb·ft	N·m	lb·ft								
7/16	16.7	148	18.4	163	27.8	20.5	30.6	22.6	43	31.7	47.3	34.9	60.6	44.7	66.8	49.3
	N·m	lb·ft	N·m	lb·ft												
1/2	25.9	19.1	28.2	20.8	43.1	31.8	47	34.7	66.6	49.1	72.8	53.7	94	69.3	103	75.8
9/16	36.7	27.1	40.5	29.9	61.1	45.1	67.5	49.8	94.6	69.8	104	77	134	98.5	148	109
5/8	51	37.6	55.9	41.2	85	62.7	93.1	68.7	131	96.9	144	106	186	137	203	150
3/4	89.5	66	98	72.3	149	110	164	121	230	170	252	186	325	240	357	263
7/8	144	106	157	116	144	106	157	116	370	273	405	299	522	385	572	422
1	216	159	236	174	216	159	236	174	556	410	609	449	785	579	860	634
1-1/8	305	225	335	247	305	225	335	247	685	505	751	554	1110	819	1218	898
1-1/4	427	315	469	346	427	315	469	346	957	706	1051	775	1552	1145	1703	1256
1-3/8	564	416	618	456	564	416	618	456	1264	932	1386	1022	2050	1512	2248	1658
1-1/2	743	548	815	601	743	548	815	601	1665	1228	1826	1347	2699	1991	2962	2185

The nominal torque values listed are for general use only with the assumed wrenching accuracy of 20%, such as a manual torque wrench.
DO NOT use these values if a different torque value or tightening procedure is given for a specific application.
For lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application.

Replace fasteners with the same or higher property class. If higher property class fasteners are used, tighten these to the strength of the original.

- Make sure that fastener threads are clean.
- Apply a thin coat of Hy-Gard™ or equivalent oil under the head and on the threads of the fastener, as shown in the following image.
- Be conservative with the amount of oil to reduce the potential for hydraulic lockup in blind holes due to excessive oil.
- Properly start thread engagement.

TS1741 —UN—22MAY18



[a]Grade 1 applies for hex cap screws over 6 in (152 mm) long, and for all other types of bolts and screws of any length.
[b]Grade 2 applies for hex cap screws (not hex bolts) up to 6 in (152 mm) long.
[c]Hex head column values are valid for ISO 4014 and ISO 4017 hex head, ISO 4162 hex socket head, and ISO 4032 hex nuts.
[d]Hex flange column values are valid for ASME B18.2.3.9M, ISO 4161, or EN 1665 hex flange products.

DX,TORQ1 -19-09MAY22-1/1

Operational Checkout

Use this procedure to make a quick check of machine operation by doing a walk around inspection and performing specific checks from operator's seat.

Complete visual checks (oil levels, oil condition, external leaks, loose hardware, linkage, wiring, etc.) before performing checkout.

Most checks will require machine systems to be at normal operating temperatures and a level area with adequate space to operate machine. Some checks may require varied surfaces.

No special tools are necessary to perform the checkout.

If no problem is found, go to next check. If problem is indicated, an additional check or repair procedure will be suggested.

LB82152,0000763 -19-17FEB12-1/33

❶ Diagnostic Trouble Code (DTC) Check

LB82152,0000763 -19-17FEB12-2/33

Display and Clear Trouble Codes	**Always check for diagnostic trouble codes and have them corrected before performing the operational checkout.** Check for active and stored diagnostic trouble codes (DTCs). For machines (S.N. 141344—219962), DTCs can be displayed by using the CAN monitor unit (CMU), see CAN Monitor Unit (CMU) Main Menu—Codes. (Section 2-3.) For machines (S.N. 219963—), DTCs can be displayed by using the standard display monitor (SDM), see Standard Display Monitor (SDM)—Main Menu—Codes. (Section 2-4.) *LOOK: Are diagnostic trouble codes present that cannot be cleared?*	**YES:** See your authorized dealer. **NO:** Continue with operational checkout.

LB82152,0000763 -19-17FEB12-3/33

❷ Operational Checks—Key Switch OFF, Engine OFF

LB82152,0000763 -19-17FEB12-4/33

Battery Check	Push and hold SELECT button until battery volts are displayed. *LOOK: Do battery volts read a minimum of 24 volts?*	**YES:** Check complete. **NO:** Check and recharge batteries. See Check Battery Electrolyte Level and Terminals. (Section 3-8.) Check voltage on each battery before recharging. *NOTE: If one battery will not hold a charge, replace both batteries.*

Continued on next page

LB82152,0000763 -19-17FEB12-5/33

Horn Check	Push horn button. *LISTEN: Does horn activate?*	**YES:** Check complete. **NO:** Check horn 5 A fuse (F19). See Replacing Fuses. (Section 4-1.) If fuse is okay, check horn circuit. See your authorized dealer.

LB82152,0000763 -19-17FEB12-6/33

Seat Control Checks	*NOTE: For seat adjustment procedures, see Adjust Air Suspension Seat—If Equipped. (Section 2-1.)* *If machine is equipped with air seat, key switch must be ON to raise seat.* Does seat raise and lower easily? Does seat angle change easily? Does lever move easily to unlock seat support? Does seat move forward and rearward easily? Does lever lock seat support in position when released? Does seat back tilt forward and rearward easily? Does lever unlock and lock easily to hold seat back in position?	**YES:** Check complete. **NO:** See your authorized dealer.

LB82152,0000763 -19-17FEB12-7/33

❸ Operational Checks—Key Switch ON, Engine OFF

LB82152,0000763 -19-17FEB12-8/33

Battery Disconnect Switch Check	 T118722B —UN—01DEC98 *NOTE: Battery disconnect switch is located inside of the right rear service door.* Turn battery disconnect switch OFF. Turn key switch ON. *LOOK: Do monitor indicator lights come on?*	**YES:** Switch is malfunctioning. Check battery disconnect switch. **NO:** Continue check.
	Turn battery disconnect switch ON. Turn key switch ON. Do not start engine. *LOOK: Do monitor indicator lights come on?*	**YES:** Check complete. **NO:** Check battery disconnect switch. See your authorized dealer.

Continued on next page

LB82152,0000763 -19-17FEB12-9/33

Monitor Check	Turn key switch ON. Observe monitor and note changes for first 3 seconds (bulbs, indicators and gauges). *LOOK/LISTEN: Do all lights come on and is the audible alarm activated? Does the LCD display show "John Deere" and the model number? Do all the gauge indicators point to approximately 12 o'clock position? Does the backlighting for the gauges come on?* After 4 seconds observe changes in monitor. *LOOK: Do gauge indicators change from 12 o'clock to normal readings?*	**YES:** Check complete. **NO:** Check monitor ignition power 5 A fuse (F4). See Replacing Fuses. (Section 4-1.) If fuse okay, check monitor circuit. See your authorized dealer.

LB82152,0000763 -19-17FEB12-10/33

Backup Alarm Check	Key switch ON. Move park lock lever down UNLOCKED position. Move transmission control lever to reverse position. *LISTEN: Does backup alarm activate?*	**YES:** Check complete. **NO:** See your authorized dealer.

LB82152,0000763 -19-17FEB12-11/33

Beacon Light Check—If Equipped	Key switch on, engine off. *LOOK: Does beacon light operate with key switch ON?*	**YES:** Check complete. **NO:** Check beacon light circuit. See your authorized dealer?

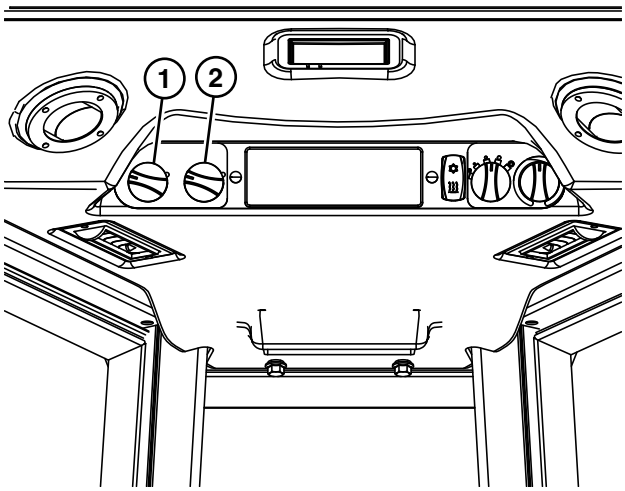
LB82152,0000763 -19-17FEB12-12/33

License Plate Lamp—If Equipped	Key switch ON, engine off. Standard drive lights switch located on front console is switched ON. *LOOK: Does license plate lamp operate with key switch ON?*	**YES:** Check complete. **NO:** Check standard drive lights circuit. See your authorized dealer.

Continued on next page

LB82152,0000763 -19-17FEB12-13/33

Front/Rear Wiper and Washer Motor Check—If Equipped



TX1102313 —UN—30NOV11

Wiper Switch

1— Left/Right Door Wiper Rocker Switch
2— Front/Rear Wiper Rocker Switch

Key switch ON.

Turn front/rear wiper switch (2) to the number three (end) position.

LOOK: Do front and rear wipers operate?

Push wiper switch in to momentary position and hold.

LOOK: Does the front/rear washer pump operate?

LOOK: Do front and rear wipers continue to operate?

YES: Check complete.

NO: Washer fluid reservoir may be empty. Check washer fluid.

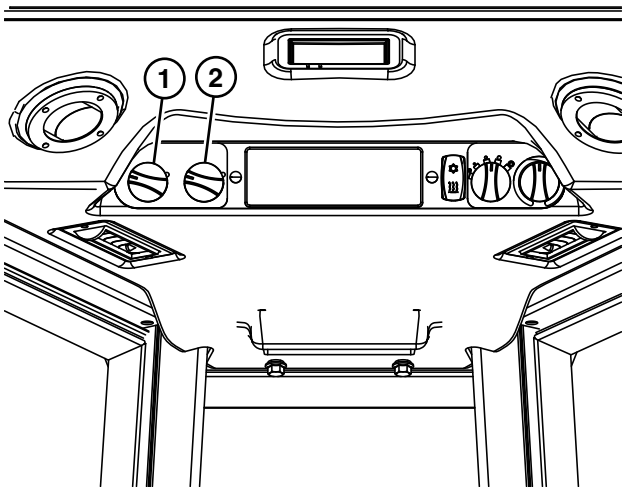
Check front/rear wiper motor 10 A fuse (F21). See Replacing Fuses. (Section 4-1.)

If fuse okay, check wiper circuit. See your authorized dealer.

Continued on next page

LB82152,0000763 -19-17FEB12-14/33

Left/Right Door Wiper and Washer Motor Check—If Equipped



TX1102313 —UN—30NOV11

Wiper Switch

1— Left/Right Door Wiper Rocker Switch
2— Front/Rear Wiper Rocker Switch

Key switch ON.

Turn left/right door wiper switch (1) to the number three (end) position.

LOOK: Do left and right wipers operate?

Push switch fully to momentary position and hold.

LOOK: Does left/right washer pump operate?

LOOK: Do left and right wipers continue to operate?

YES: Check complete.

NO: Washer fluid reservoir may be empty. Check washer fluid.

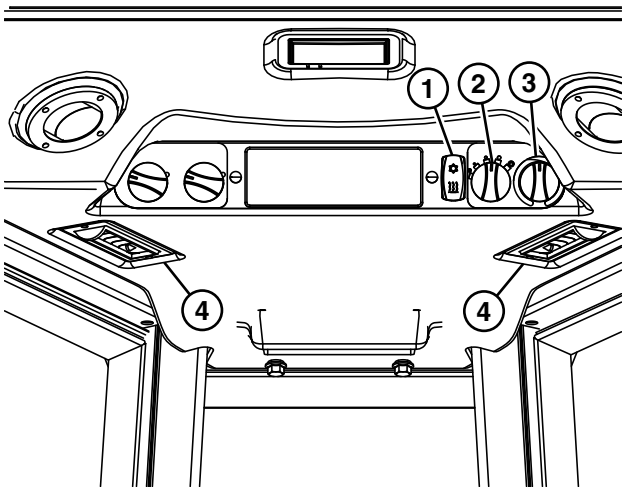
Check left/right wiper motor 10 A fuse (F22). See Replacing Fuses. (Section 4-1.)

If fuse okay, check wiper circuit. See your authorized dealer.

Continued on next page

LB82152,0000763 -19-17FEB12-15/33

Heater Blower Motor Check—If Equipped



TX1102312 —UN—30NOV11

Temperature Controls

1— Air Conditioner Switch
2— Blower Switch
3— Temperature Control
4— Air Duct (8 used)

Key switch ON.

Turn blower switch (2) to 1st, 2nd, 3rd, and 4th positions.

FEEL: Does air exit all ducts from roof?

YES: Check complete.

NO: Check heater blower 10 A fuse (F12). See Replacing Fuses. (Section 4-1.)

If fuse okay, check heater blower circuit. See your authorized dealer.

LB82152,0000763 -19-17FEB12-16/33

❹ Operational Checks—Key Switch ON, Engine ON

Continued on next page

LB82152,0000763 -19-17FEB12-17/33

Alternator Check	Start engine and operate at slow idle. Start engine. *LOOK: Is ENGINE ALT VOLTS indicator light on?*	**YES:** Check and recharge batteries. Check Battery Electrolyte Level, Clean and Tighten Terminals. (Section 3-7.) Check voltage on each battery before recharging. *NOTE: If one battery will not hold a charge, replace both batteries.* Test alternator. See your authorized dealer. **NO:** Check complete.

LB82152,0000763 -19-17FEB12-18/33

Air Filter Restriction Indicator Check	 T206395 —UN—21DEC04 *Air Filter Restriction Indicator* Operated engine at slow idle and fast idle. nbsp;nbsp;nbsp;nbsp;nbsp;nbsp; *LOOK: Does air filter restriction indicator light come on?*	**YES:** Clean or replace air cleaner elements. See Replace Air Filter Elements. (Section 4-1.) If air cleaner elements are okay, see your authorized dealer. **NO:** Check complete.

LB82152,0000763 -19-17FEB12-19/33

Slow and Fast Idle Check	Run engine at slow and fast idle while noting rpm readings on monitor. *LOOK: Are slow and fast idle displayed on monitor?* **Specification** Engine Slow Idle—Speed..... 880—910 rpm Engine Fast Idle—Speed..... 2255—2285 rpm	**YES:** Check complete. **NO:** See your authorized dealer.

Continued on next page

LB82152,0000763 -19-17FEB12-20/33

Park Brake Valve Leakage Check	Hydrostatic oil must be at operating temperature 66° C (150° F). Oil temperature can be viewed on monitor. Adjust engine speed control to slow idle with park lock lever in the up LOCKED position. Observe charge pressure reading on monitor display. For machines (S.N. 141344—219962), the charge pressure can be accessed as a live value in the CMU menu structure. See CAN Monitor Unit (CMU)—Main Menu—Diagnostics—Live Values. (Section 2-3). For machines (S.N. 219963—), the charge pressure can be accessed as a live value in the SDM menu structure. See Standard Display Monitor (SDM)—Main Menu—Diagnostics—Live Values. (Section 2-4.) *LOOK: Does pressure drop as park lock lever is moved down, then return to original value?* Fully depress decel/brake pedal, then release. *LOOK: Does pressure drop as decelerator/brake pedal is released, then return to original value?* *LOOK: Do tracks creep or move?*	**YES:** See your authorized dealer. **NO:** Check complete.

LB82152,0000763 -19-17FEB12-21/33

Decelerator/Brake Pedal and Park Brake Check	Operate engine at slow idle. **CAUTION: Pushing on decelerator/brake pedal will stop machine abruptly.** *NOTE: Decelerator/brake response time can be set to operator preference. See your authorized dealer.* Move park lock lever to the down UNLOCKED position. Operate machine slowly in forward. Fully depress decelerator/brake pedal and then release. *LOOK: Machine must stop when pedal is depressed and must move when pedal is released.* Depress decelerator/brake pedal until spring resistance is felt. Adjust engine speed to fast idle and transmission speed to 3.0. Move transmission control lever to forward position. Release decelerator/brake pedal. *LOOK: Does machine accelerate smoothly to maximum speed?* *NOTE: For machines (S.N. 219963—), decelerator/brake response time can be set to operator preference. See Standard Display Monitor (SDM)—Main Menu—Machine Settings—Transmission. (Section 2-4.)*	**YES:** Check complete. **NO:** See your authorized dealer.

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LB82152,0000763 -19-17FEB12-22/33

Transmission Control Lever (TCL) Check

CAUTION: Prevent possible injury from machine movement. Make sure there is adequate room and be aware of bystanders.

NOTE: Transmission control lever shift rate can be set to operator preference. Low has a slower reaction time and high has a quicker reaction time. See your authorized dealer.

Operate engine at 1500 rpm.

Put transmission speed to 2.0.

Make several shifts from neutral to forward, neutral to reverse, and then forward to reverse.

Specification

Engine—Speed.....1500 rpm

LOOK: Does machine shift smoothly?

LOOK: Does machine operate in forward and reverse?

YES: Check complete.

NOTE: For machines (S.N. 219963—), transmission control lever shift rate can be set to operator preference. Low has a slower reaction time and high has a quicker reaction time. See Standard Display Monitor (SDM)—Main Menu—Machine Settings—Transmission. (Section 2-4.)

NO: See your authorized dealer.

LB82152,0000763 -19-17FEB12-23/33

Transmission Speed Check

Operate engine at slow idle.

Check transmission speed. Transmission speed should be defaulted to 1.6.

LOOK: Does transmission speed default to 1.6?

Increase transmission speed to 3.0.

YES: Check complete.

LOOK: Does transmission speed increase to 3.0?

NO: See your authorized dealer.

LB82152,0000763 -19-17FEB12-24/33

Tracking and Maximum Speed Check

IMPORTANT: To avoid machine damage, track sag must be at specification and machine must be operated on a level surface for all tracking checks.

Push decelerator mode switch to ENGINE MODE position.

Operate engine at fast idle.

Put transmission speed to 3.0.

Move park lock lever down UNLOCKED position.

Push decelerator pedal fully to stop.

Move Transmission control lever to FORWARD position.

Slowly increase engine speed from slow to fast idle by slowly raising the decelerator pedal.

LOOK: Does machine speed increase as engine speed increases? Is tracking straight at all speeds?

YES: Check complete.

Repeat check for reverse travel.

NO: See your authorized dealer.

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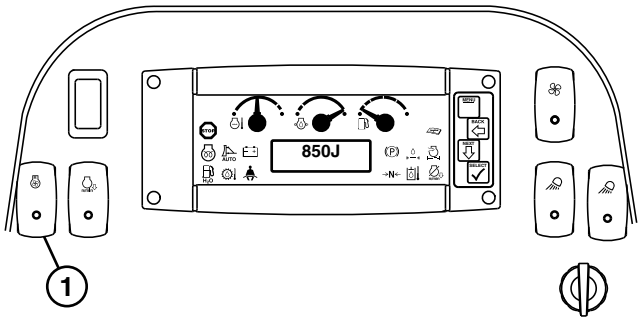
LB82152,0000763 -19-17FEB12-25/33

Reverse Fan Check—If Equipped



T194319 —UN—11SEP03

Reverse Fan Switch (S.N. 141344—219962)



TX1106594 —UN—25JAN12

Reverse Fan Switch (S.N. 219963—)

For machines (S.N. 141344—219962), push the fan switch to enable manual mode (reverse fan indicator light on.)

For machines (S.N. 219963—), push the fan switch (1) to enable manual mode.

NOTE: Reverse fan function cannot be operated twice within one minute. Wait one minute before attempting to reverse fan direction again.

NOTE: For machines (S.N. 141344—178818), fan won't reverse until transmission control lever is moved out of FORWARD.

LISTEN/LOOK: Does fan reverse direction and operate at full speed for 15 seconds?

Fan will change directions and operate at normal speed.

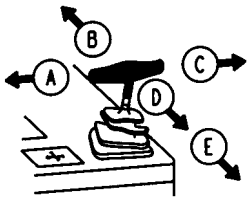
YES: Check complete.

NO: See your authorized dealer.

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LB82152,0000763 -19-17FEB12-26/33

Blade Control Lever Check



T8404AC —UN—14FEB95

A—Blade Tilt Right
B—Blade Lift
C—Blade Tilt Left
D—Blade Down
E—Blade Float

Push hydraulic enable switch to the LOCKED position to disable the pilot controls.

Move control lever to positions (A—D) and release.

LOOK/FEEL: Does blade control lever move to all positions easily and return to neutral when released?

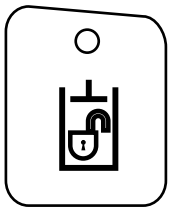
YES: Check complete.

NOTE: Blade control lever will not return to neutral when moved to blade float position (E). Lever must be manually pulled from float position.

NO: If functions hesitate or do not operate smoothly, see your authorized dealer.

LB82152,0000763 -19-17FEB12-27/33

Hydraulic Enable Circuit Check



T194312 —UN—11SEP03

Operate engine at slow idle.

Hydraulic enable switch in the LOCKED position. Pilot controls disabled.

Move blade control lever to all positions.

YES: See your authorized dealer.

LOOK: Do any blade functions operate?

NO: Continue check.

Push hydraulic enable switch to the UNLOCKED position to enable the pilot controls.

Move blade control lever to all positions.

YES: Check complete.

LOOK: Do all blade functions operate?

NO: See your authorized dealer.

Continued on next page

LB82152,0000763 -19-17FEB12-28/33

Hydraulic Controls Check	Operate engine at slow idle. *NOTE: For machines equipped with IGC, put blade control in manual mode by pushing the IGC on/off button located on the joystick handle. The blade control is in manual mode when the auto blade light on the CMU is off.* Slowly move blade control lever to all positions except blade float detent. For machines equipped with PAT and IGC, push blade angle buttons on joystick handle to rotate blade in both directions. *LOOK/FEEL: Do all blade functions operate smoothly, without hesitation?*	**YES:** Check complete. **NO:** See your authorized dealer.

LB82152,0000763 -19-17FEB12-29/33

Quick-Drop Valve Check (Outside Dozers Only)	Operate engine at fast idle. Raise blade to maximum height. *NOTE: Quick-Drop is activated when control lever is in float position or when lever is at the end of power down position.* Move control lever to float position and record time it takes to lower blade to ground from maximum height. *LOOK: Does it take 1 second or less for blade to lower to ground with Quick-Drop activated?* Raise blade after blade has been lowered with quick drop valve. *LOOK: Does blade raise immediately?*	**YES:** Check complete. **NO:** See your authorized dealer.

LB82152,0000763 -19-17FEB12-30/33

Blade Float Check	Operate engine at slow idle. Raise front of machine off ground by fully lowering and tilting blade. Push hydraulic control lever into float detent position. *LOOK: Does front of crawler lower to ground?* *FEEL: Does hydraulic control lever stay in float detent position?*	**YES:** Check complete. **NO:** See your authorized dealer.

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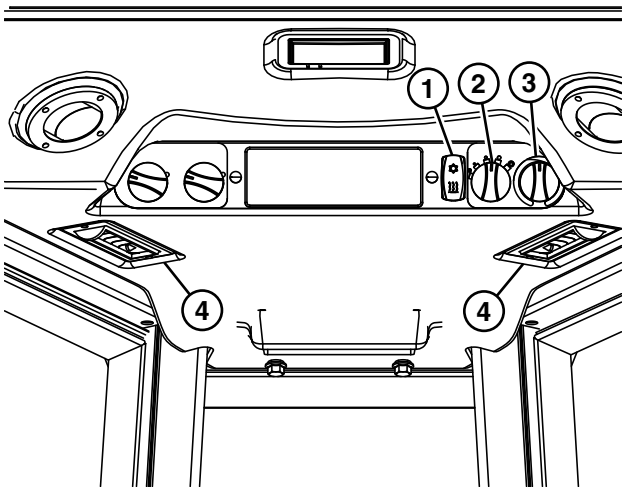
LB82152,0000763 -19-17FEB12-31/33

Cycle Time Check	For machines (S.N. 141344—219962), use the CAN monitor unit (CMU) or Service ADVISOR™ Diagnostic Application to read engine rpm and hydraulic oil temperature. For machines (S.N. 219963—) use Standard Display Monitor (SDM) or Service ADVISOR™ Diagnostic Application to read engine rpm and hydraulic oil temperature. **Specification** Hydraulic Oil—Temperature..... 57—66°C 135—150°F Engine—Speed..... Fast Idle **Outside Dozer (OSD)—Specification** Blade Raise—Cycle Time.....2.8 seconds Blade Power Down—Cycle Time.....2.2 seconds Blade Tilt Left—Cycle Time.....1.0 seconds Blade Tilt Right—Cycle Time.....1.0 seconds **750J PAT—Specification** Blade Power Down—Cycle Time.....1.8 seconds Blade Raise—Cycle Time.....2.9 seconds Blade Tilt Left—Cycle Time.....1.4 seconds Blade Tilt Right—Cycle Time.....1.4 seconds Blade Angle Left—Cycle Time.....4.0 seconds Blade Angle Right—Cycle Time.....4.1 seconds Do cycle times meet or exceed specification?	**YES:** Check complete. **NO:** See your authorized dealer.

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Air Conditioner Check—If Equipped



TX1102312 —UN—30NOV11

Temperature Controls

1— Air Conditioner Switch
2— Blower Switch
3— Heater Temperature Control
4— Air Duct (8 used)

Operate engine at fast idle.

Turn air conditioner switch (1) to on position. On position is up (snow flake). Position down is not used for this test.

Turn blower switch (2) to 4th position.

Wait for any warm air in duct system to dissipate.

FEEL: Is air from ducts cool?

YES: Check complete.

NO: See your authorized dealer.

LB82152,0000763 -19-17FEB12-33/33

Troubleshooting Procedure

NOTE: Troubleshooting charts are arranged from the simplest to verify, to least likely, more difficult to verify. When diagnosing a problem, use all possible means to isolate the problem to a single component or system. Use the following steps to diagnose problems:

Step 1. Operational Checkout Procedure

Step 2. Troubleshooting Charts

Step 3. Adjustments

Step 4. See your authorized John Deere dealer.

TX,TROUBLESHOOT -19-20JAN11-1/1

Engine

Symptom	Problem	Solution
Engine Will Not Start or Starts Hard	Fuel tank empty	Check fuel quantity.
	Fuel tank vent pipe plugged	Loosen cap and listen for air rushing into tank. Replace cap.
	Fuel tank shutoff not fully open	Open fuel tank shutoff.
	Water in fuel or water frozen in fuel line	Drain water from fuel tank. Inspect fuel filter(s) for water. Change filter(s).
	Fuel filter(s) plugged	Inspect and replace fuel filter(s).
	Incorrect grade of fuel	Drain fuel tank and add correct fuel.
	Air leak on suction side of fuel system	Check and tighten connection. Check fuel lines for damage. See your authorized dealer.
	Valve clearance	Check and adjust valve clearance.
	Valves sticking or burned	See your authorized dealer.
Engine Surges or Stalls Frequently	Fuel tank cap vent pipe plugged	Remove fuel cap and listen for air rushing into tank. Replace cap.
	Fuel tank shutoff not fully open	Open fuel tank shutoff.
	Incorrect grade of fuel	Drain fuel tank and add correct fuel.
	Water in fuel or water frozen in line	Drain water from fuel tank. Inspect fuel filter(s) for water. Change filter(s).
	Fuel filter(s) plugged	Replace filter(s).
	Air leak on suction side of fuel system	Check and tighten connections. Check fuel lines for damage.
	Fuel pump	Repair or replace fuel pump. See your authorized dealer.
	Fuel return line from injection pump to tank restricted	Disconnect fuel return line from injection pump. Connect a hose to pump and route fuel into a container. If engine now operates normally, return hose is restricted.

Continued on next page

Symptom	Problem	Solution
	Worn or broken compression rings; cylinder head gasket leaking	See your authorized dealer.
Engine Will Not Start	Engine overheating	Test cooling system. See your authorized dealer.
	Injection nozzles	See your authorized dealer.
	Injection pump	See your authorized dealer.
Engine Misses	Air in fuel	Disconnect return hose from leak-off lines. Crank engine and check for air in fuel at leak-off lines. Tighten connections. Check fuel lines for damage.
	Incorrect grade of fuel	Drain fuel tank and add correct fuel.
	Slow idle speed too low	Check slow idle speed. See your authorized dealer.
	Fuel pump	Repair or replace fuel pump. See your authorized dealer.
	Engine overheats	Test cooling system. See your authorized dealer.
	Incorrect valve clearance	Check and adjust valve clearance. See your authorized dealer.
	Bent push rods	Inspect and replace. See your authorized dealer.
	Valve sticking or burned	Disconnect fuel injection pump solenoid wire connector.
		Crank engine and listen for air leaking past valves or an uneven starter speed. See your authorized dealer.
	Cylinder head gasket leaking	See your authorized dealer.
	Worn or broken compression rings	See your authorized dealer.
	Injection nozzles	Test nozzles. See your authorized dealer.
	Injection pump	Remove and test injection pump. See your authorized dealer.

Continued on next page

Symptom	Problem	Solution
Engine Does Not Develop Full Power	Fuel tank cap vent pipe plugged	Remove fuel cap and listen for air rushing into tank. Replace fuel cap.
	Fuel tank shutoff not fully open	Open fuel tank shutoff.
	Air intake system restricted	Check air filter elements and air filter restriction indicator. See Maintenance—As Required.
	Incorrect grade of fuel	Drain fuel tank and add correct fuel. See Maintenance—Machine.
	Tracks too tight	Check and adjust track tension.
	Excess drag in brakes	Check service and brake drag. See your authorized dealer.
	Fast idle speed set too low	Check and adjust fast idle. See your authorized dealer.
	Fuel filter plugged	Change filter.
	Fuel line restricted	Check for pinched or kinked lines or debris in lines. Route return line into separate container. If engine operation returns to normal, repair fuel return system lines.
	Air leak in intake manifold	Test air intake system for leaks. See your authorized dealer.
	Incorrect valve clearance	Check and adjust valve clearance. See your authorized dealer.
	Fuel transfer pump	See your authorized dealer.
	Excessive restriction in hydraulic system or control valve unloading valve malfunction	See your authorized dealer.
	Turbocharger	Remove air intake hose and exhaust elbow. Leading edge of compressor vanes must be sharp and straight. Spin compressor wheel and listen for noisy bearings. Turbine and compressor wheels must not rub in housing.
	Muffler restricted	Run engine without muffler. If engine operation is now normal, install a new muffler.

Continued on next page

Symptom	Problem	Solution
	Low compression	Disconnect fuel injection pump solenoid wire connector. Crank engine and listen for air leaking past valves or an uneven starter speed. Start engine and observe blow-by from vent tube. See your authorized dealer.
	Injection nozzles	Remove and test nozzles. See your authorized dealer.
	Incorrect camshaft timing	Check timing. See your authorized dealer.
	Injection pump	Remove and test pump. See your authorized dealer.
Engine Emits Excessive Black or Gray Exhaust Smoke	Restricted air filter	Check air filter restriction indicator and air filters. See Maintenance—As Required. Replace.
	Incorrect grade of fuel	Drain fuel tank and add correct fuel. See Maintenance—Machine.
	Air leak between turbocharger and manifold	Test air intake system for leaks. See your authorized dealer.
	Excessive fuel delivery	Remove and test fuel injection pump. See your authorized dealer.
	Injection nozzles	Remove and test nozzles. See your authorized dealer.
	Turbocharger	Remove air intake hose and exhaust elbow. Leading edge of compressor vanes must be sharp and straight. Spin compressor wheel and listen for noisy bearings. Turbine and compressor wheels must not rub in housing.
Engine Emits Excessive Blue or White Smoke	Cranking speed too slow	Check batteries and connections.
	Incorrect grade of fuel	Drain fuel tank and add correct fuel. See Fuel and Lubricants chapter.
	Engine running too cold	Check thermostats. See your authorized dealer.

Continued on next page

Symptom	Problem	Solution
	Injection nozzles	Remove and test nozzles. See your authorized dealer.
	Low compression	Disconnect fuel injection pump solenoid wire connector. Crank engine and listen for air leaking past valves. Start engine and observe blow-by from vent tube. See your authorized dealer.
	Excessive wear in liners and/or piston rings stuck	Inspect and repair. See your authorized dealer.
	Worn valve guides	Inspect and repair. See your authorized dealer.
Slow Acceleration	Incorrect grade of fuel	Drain fuel tank and add correct fuel. See Fuels and Lubricants chapter.
	Fuel injection pump	Remove and test fuel injection pump. See your authorized dealer.
	Injection nozzles	Remove and test nozzles. See your authorized dealer.
Detonation	Starting aid solenoid stuck open	Inspect and repair. See your authorized dealer.
	Incorrect injection pump advance	Repair advance. See your authorized dealer.
Abnormal Engine Noise	Low or incorrect engine oil	Add correct oil.
	Start aid solenoid stuck	Remove start aid can from bracket and restart engine.
	Engine oil diluted with fuel	Inspect engine oil. Inspect fuel pump spindle, seal, and housing.
	Turbocharger	Remove air intake hose and check compressor wheel clearance between housing and wheel. Spin compressor wheel; check for worn bearings. Repair turbocharger.
	Excessive valve clearance	Adjust valve clearance. See your authorized dealer.
	Bent push rods	Replace. See your authorized dealer.

Continued on next page

Symptom	Problem	Solution
	Worn rocker arm shafts	Replace. See your authorized dealer.
	Loose connecting rod caps	Inspect and tighten connecting rod cap screws. See your authorized dealer.
	Loose main bearing caps	Inspect and tighten main bearing cap screws. See your authorized dealer.
	Worn main bearing	Replace bearings. See your authorized dealer.
	Worn connecting rod bearings	Replace bearings. See your authorized dealer.
	Incorrect camshaft timing	Check camshaft timing. See your authorized dealer.
	Scored piston	Replace. See your authorized dealer.
	Worn piston pin bushings and pins	Replace pins and bushings. See your authorized dealer.
Low Oil Pressure	Low oil level	Add oil.
	Wrong viscosity oil or oil diluted with diesel fuel	Change oil.
	Oil pressure gauge or sensor	Test gauge and sensor. See your authorized dealer.
	Oil pressure regulating valve	Replace or adjust regulating valve. See your authorized dealer.
	Turbocharger shaft seal leaking	Inspect and repair. See your authorized dealer.
	Plugged oil pump intake screen	Inspect and clean. See your authorized dealer.
	Loose oil pump drive gear	Inspect and repair. See your authorized dealer.
	Worn oil pump gear or housing	Remove, inspect and repair. See your authorized dealer.
	Excessive main bearing clearance	Replace main bearings. See your authorized dealer.

Continued on next page

Symptom	Problem	Solution
	Excessive connecting rod bearing clearance	Replace connecting rod bearings. See your authorized dealer.
	Piston cooling orifice missing	Inspect piston cooling orifices. See your authorized dealer.
	Leakage at internal oil passage	Check all possible internal leakage paths. Repair. See your authorized dealer.
	Cracked cylinder block	Replace cylinder block. See your authorized dealer.
High Oil Pressure	Wrong viscosity oil (too thin)	Check for antifreeze in oil. Change oil.
	Oil pressure gauge or sender	Test gauge and sender. See your authorized dealer.
	Oil pressure regulating valve	Repair or adjust regulating valve. See your authorized dealer.
	Stuck oil filter bypass valve	Repair. See your authorized dealer.
	Stuck oil cooler bypass valve	Repair. See your authorized dealer.
Engine Overheats	Low coolant level	Fill cooling system and check for leaks.
	Low engine oil level	Add oil.
	Fan on backwards, damaged, or wrong fan installed	Check for correct fan installation.
	Radiator or oil cooler dirty, plugged, or fins damaged	Check air flow. Clean radiator. Straighten fins.
	Radiator shroud missing, damaged, or baffles missing	Inspect. Repair or replace.
	Engine overloaded	Reduce load.
	Incorrect grade of fuel	Drain fuel tank and add correct fuel.
	Coolant filler cap	Replace cap.
	Fuel gauge or sender	Test, repair, or replace. See your authorized dealer.

Continued on next page

Symptom	Problem	Solution
	Thermostats (stuck)	Inspect thermostats. See your authorized dealer.
	Thermostats missing	Install thermostats. See your authorized dealer.
	Cooling system coated with lime deposits	Flush cooling system.
	Excessive brake drag	Check brake drag. See your authorized dealer.
	Water pump	Repair. See your authorized dealer.
	Excessive fuel delivery	Remove injection pump. Check for proper fuel delivery. Adjust. See your authorized dealer.
	Scored piston	Replace piston. See your authorized dealer.
	Combustion leak into cooling system.	Remove radiator cap. Start engine and check for bubbles in radiator.
Engine Runs Cold	Temperature gauge or sender	Test gauge and sender. See your authorized dealer.
	Thermostat stuck open	Replace thermostat. See your authorized dealer.
Oil in Coolant or Coolant in Oil	Leaking heat exchanger	Air test and repair or replace.
	Leaking cylinder head gasket	Replace gasket. See your authorized dealer.
	Leaking cylinder liner packings	Replace packings. See your authorized dealer.
	Cracked cylinder liner	Replace liner. See your authorized dealer.
	Cracked cylinder block	Replace cylinder block. See your authorized dealer.
Excessive Fuel Consumption	Air system restricted	Check filter restriction indicator and air filters. Replace.
	Leakage in fuel system	Inspect and repair.

Continued on next page

Symptom	Problem	Solution
	Incorrect grade of fuel	Drain and refill with correct fuel.
	Turbocharger	Remove air intake hose and exhaust elbow. Leading edge of compressor vanes must be sharp and straight. Spin compressor wheel to check for rough bearings. Turbine and compressor wheels must not rub in housing.
	Worn injection nozzles	Test nozzles. Repair. See your authorized dealer.
Turbocharger Excessively Noisy or Vibrates	Bearings not lubricated	Insufficient oil pressure. Check for restricted turbocharger oil line.
	Air leak in engine, intake or exhaust manifold	Inspect and repair. See your authorized dealer.
	Incorrect clearance between turbine wheel and turbine housing	Remove exhaust elbow and air inlet hose. Inspect and repair.
	Broken blades on turbine	Remove exhaust elbow and air inlet hose. Inspect and repair.
Oil Dripping from Turbocharger Adapter	Damaged or worn bearings and/or worn seals	Inspect compressor and turbine wheel for damaged blades. Check for proper engine service intervals or dirt entering engine.
	Excessive crankcase pressure	Check for plugged vent tube. Clean.
	Carbon build-up in turbocharger oil return line where line passes exhaust manifold	Remove line. Inspect and clean.
Excessive Drag in Turbocharger Rotating Members	Carbon build-up behind turbine wheel caused by combustion deposits	Inspect and clean. See your authorized dealer.
	Dirt build-up behind compressor wheel caused by air intake leaks	Inspect and repair. See your authorized dealer.
	Bearing seizure of dirty or worn bearings caused by excessive temperature, unbalanced wheel, dirty oil, oil starvation, or insufficient lubrication	See your authorized dealer.

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Electrical System

Symptom	Problem	Solution
Nothing Works	Power circuit components	See your authorized dealer.
	Battery undercharged or dead	See your authorized dealer.
	Disconnect switch	Check switch knob position.
	Start fuse failure	Replace fuse.
	Battery cables making poor connections	Clean cable connections at battery and starter solenoid.
Starter Will Not Crank Engine	Battery undercharged or dead	See your authorized dealer.
	Battery cables making poor connection	Clean connections at battery, starter, and ground to frame.
	Starter relay problem	See your authorized dealer.
	Starter solenoid problem	See your authorized dealer.
	Starter motor problem	See your authorized dealer.
	Starter motor pinion stuck in flywheel gear	Repair starter motor. See your authorized dealer.
	Key switch	See your authorized dealer.
	Major engine problem	See your authorized dealer.
Engine Cranks Slowly	Batteries undercharged	See your authorized dealer.
	Starter armature bearings worn causing starter "drag"	Repair or replace starter. See your authorized dealer.
	Battery cable connections loose or corroded	Clean and/or tighten connections.
Starting Motor Turns, but Engine Will Not Crank	Starter pinion not engaging flywheel ring gear	See your authorized dealer.
	Starter pinion or flywheel gear teeth broken	See your authorized dealer.
Starting Motor Continues to Run after Engine Starts	Starter solenoid stuck	See your authorized dealer.
	Starter not disengaging	See your authorized dealer
	Starter relay stuck	See your authorized dealer.

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Symptom	Problem	Solution
	Key switch problem	See your authorized dealer.
	Wiring harness shorted	See your authorized dealer.
Battery Using Too Much Water	Battery being overcharged	See your authorized dealer.
	High ambient temperature	Refill with distilled water.
	Cracked battery case	Replace battery. Install hold-down correctly.
Low Battery Output	Low water level	See Battery Using Too Much Water in this group.
	Dirty or wet battery top, causing discharge	Clean battery and wipe dry.
	Corroded or loose battery cable ends	Clean and tighten cable end clamps. Recharge battery. If machine has two batteries, recharge separately.
	Broken or loose battery posts	Wiggle posts by hand. If posts are loose or will turn, replace battery. If machine has two batteries, replace both batteries.
	Loose fan/alternator belt or worn pulleys	Inspect belt or pulley. Adjust or replace as necessary.
Starter Solenoid Chatters	Poor connections at batteries or starter	Clean connections.
	Low battery charge	Recharge or replace batteries.
	Starter solenoid "hold-in" windings open	See your authorized dealer.
Engine Cranks but Does Not Start	Key switch problem	See your authorized dealer.
	Engine circuit electrical problem	Check Diagnostic Trouble Codes
	Wiring harness problem	See your authorized dealer.
Start Aid Does Not Work	Empty or misaligned start aid can	A click, not a hiss, is heard when start aid button is pushed. Replace or adjust can.
	Start aid switch	See your authorized dealer.
	Start aid solenoid	See your authorized dealer.

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Symptom	Problem	Solution
Noisy Alternator	Start aid solenoid	See your authorized dealer.
	Worn drive belt	Inspect and replace.
	Pulley misaligned	Adjust alternator mount.
	Alternator bearing worn	Loosen alternator belts. Turn pulley by hand. If any roughness is felt, repair alternator.
	Internal alternator failure	See your authorized dealer.
Voltage Indicator Light Remains On	Loose or glazed alternator belt	Check belt. Replace if glazed; tighten if loose.
	Engine rpm low	Raise engine rpm. If light remains on, see your authorized dealer.
	Excessive electrical load from added accessories	Remove accessories or install higher output alternator.
	Loose or corroded electrical connections on battery, ground strap, starter or alternator	Inspect, clean, or tighten electrical connections.
	Alternator Excition Diode	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.
	Alternator problem	See your authorized dealer.
	Display monitor problem	See your authorized dealer.
Fuel Gauge Does Not Work	Fuse	Replace fuse.
	Fuel gauge problem	See your authorized dealer.
	Fuel gauge sender problem	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.
Hydraulic Oil Filter Restriction Light Does Not Work, Key On, Engine Off	Wiring harness or bulkhead connector	See your authorized dealer.
	Hydraulic oil filter restriction switch	See your authorized dealer.
	Bulb or bulb socket	See your authorized dealer.

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Symptom	Problem	Solution
Transmission Oil Filter Restriction Indicator Light Does Not Work, Key On, Engine Off	Bulb	Replace bulb.
	Wiring harness or bulkhead connector	See your authorized dealer.
	Transmission oil filter restriction switch	See your authorized dealer.
Hydraulic Fan Oil Filter Restriction Indicator Light Does Not Work, Key On, Engine Off	Bulb	Replace bulb.
	Wiring harness or bulkhead connector	See your authorized dealer.
	Transmission return filter restriction switch	See your authorized dealer.
Transmission Oil Filter Restriction Indicator Light Stays On All the Time	Wiring harness or connection at bulk head connector	See your authorized dealer.
	Filter	Remove, inspect and replace.
	Pin in filter housing	Make sure pin is not stuck against switch.
Hydraulic Oil Filter Restriction Indicator Light Stays On All the Time	Restricted hydraulic oil filter	Replace filter.
	Hydraulic oil filter restriction switch	See your authorized dealer.
Hydraulic Fan Oil Filter Restriction Indicator Light Stays On All the Time	Wiring harness or connection at bulk head connector	See your authorized dealer.
	Filter	Remove, inspect and replace.
	Pin in filter housing	Make sure pin is not stuck against switch.
Monitor Does Not Work	Monitor fuse	Replace fuse.
	Wiring harness	See your authorized dealer.
Voltage Indicator Indicates Low Charge	Regulator	See your authorized dealer.
	Wiring harness or connectors	See your authorized dealer.
Transmission Oil Temperature Gauge Always Indicates HOT	Gauge	See your authorized dealer.
	Sender	See your authorized dealer.

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Symptom	Problem	Solution
	Wiring harness	See your authorized dealer.
Engine Oil Pressure Gauge Always Indicates HIGH	Wire harness or bad connection at bulkhead connector	See your authorized dealer.
	Indicator	See your authorized dealer.
	Sender	See your authorized dealer.
	Wiring harness	See your authorized dealer.
	High oil viscosity	Drain and add correct oil.
Engine Oil Pressure Indicator Indicates Low	Wiring harness	See your authorized dealer.
	Sender	See your authorized dealer.
	Low oil level	Stop engine. Check level.
	Low oil viscosity	Drain and add correct oil.
Transmission Oil Pressure Indicator Reads HOT	Gauge	See your authorized dealer.
	Sender	See your authorized dealer.
Horn Does Not Sound	Wiring harness	See your authorized dealer.
	Horn	See your authorized dealer.
	Horn fuse	See your authorized dealer.
	Horn relay	See your authorized dealer.
	Horn switch	See your authorized dealer.
Reverse Alarm Does Not Sound	Wiring harness	See your authorized dealer.
	Reverse alarm	See your authorized dealer.
Front or Rear Wiper Does Not Work	Wiper fuse	Replace fuse.
	Wiper switch problem	See your authorized dealer.
	Wiper motor problem	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.

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Symptom	Problem	Solution
Defrost Fan Motor Does Not Work	Fuse	Replace fan fuse.
	Fan switch problem	See your authorized dealer.
	Fan motor resistor problem	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.
Blower Motor Does Not Work	Fan motor switch problem	See your authorized dealer.
	Fan motor resistor problem	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.
Cab Work Lights Do Not Operate	Fuse or Circuit breaker	Replace fuse or reset breaker.
	Light switch problem	See your authorized dealer.
	Cab work light relay problem	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.
Driving Lights Do Not Work	Fuse or Circuit breaker	Replace fuse or reset breaker.
	Driving light switch problem	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.
Dome Light Does Not Work	Bulb	Replace bulb.
	Fuse	Replace fuse.
	Dome light switch problem	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.

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Hydraulic System

Symptom	Problem	Solution
Blade Lifts and/or Blade Tilts Too Slowly	Cold oil	Allow oil to warm up.
	Oil viscosity	Use correct oil.
	Wrong engine speed (too slow)	Check speed control. Check engine speeds. (See Miscellaneous—Machine.)
	System relief valve stuck open	See your authorized dealer.
	Excessive internal leakage in cylinders or control valve circuits	Check components for excessive leakage.
	Air leak in pump suction line	Inspect. Repair.
	Suction line to hydraulic pump restricted	Inspect. Repair.
	Worn hydraulic pump	Check blade raise cycle time.
Blade Fails to Lift and Blade Fails to Tilt	Low hydraulic oil level	Check. Add hydraulic oil.
	System relief valve poppet stuck open or not closing after start-up	See your authorized dealer.
	Failed hydraulic pump drive shaft or internal pump failure	See your authorized dealer.
	Quick-drop spool stuck in open position	See your authorized dealer.
Blade Drifts Down or Tilt Cylinder Extends under Load	Leaking hydraulic oil lines	Inspect. Repair.
	Failed cylinder packings or O-ring	See your authorized dealer.
	Control valve rod end relief cartridge (blade) leaking or relief plug seals leaking (tilt) or control valve spool worn	See your authorized dealer.
	Quick-drop valve spool stuck or leaking	See your authorized dealer.
Blade Will Not Penetrate (Lift Cylinders Lift Up under Load)	Leaking hydraulic oil lines	Inspect. Repair.
	Blade control valve head-end relief cartridge or O-rings leaking	See your authorized dealer.
	Leaking cylinder packings or O-rings leaking	See your authorized dealer.
	Control valve spool worn	See your authorized dealer.

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Symptom	Problem	Solution
	Quick drop spool stuck in open position	See your authorized dealer.
Blade Hard to Control	Front idler loose on side frames	Adjust front idler to side frame clearance. See Miscellaneous—Machine.
Blade Drops as Control Lever Is Slowly Moved from Hold to Raise Position with Engine at Low Speed	Control valve lift check poppet damaged or leaking	See your authorized dealer.
Control Lever Will Not Remain in Float Position	Pilot controller	See your authorized dealer.
Pump Excessively Noisy	Cold oil	Allow unit to warm up.
	Low oil level	Check, add oil.
	Oil viscosity	Change oil to correct viscosity oil.
	System relief valve set too low	See your authorized dealer.
	Intake hose to hydraulic pump restricted	See your authorized dealer.
	Hydraulic pump failed	See your authorized dealer.
	Low oil level	Check, correct.
Hydraulic Oil Overheats	Operator holds control valve open too long, causing system relief valve to open	Instruct operator on correct operation of dozer.
	Oil viscosity too high (oil too thick)	Change oil to correct viscosity.
	System relief set too low	See your authorized dealer.
	Oil lines damaged, causing excessive internal restriction	Inspect, repair.
Hydraulic Oil Foams	Water in oil	Inspect oil. Change.
	Using wrong oil	Inspect. Change oil.
	Damaged hydraulic oil lines	Inspect. Change.
	Air leak in suction line to hydraulic pump or pump shaft seal leaking	Inspect. Repair.
Blade Drops Slowly, when Solenoid Is Actuated, on Quick-Drop Valve Equipped Machine (Quick-Drop Valve Is Not Used on All Hydraulic Dozer Machines)	No electrical power to solenoid	See your authorized dealer.

Continued on next page

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Symptom	Problem	Solution
	Quick-drop valve spool stuck in closed position	See your authorized dealer.
	Solenoid does not work	See your authorized dealer.

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Hydrostatic Transmission

Symptom	Problem	Solution
Transmission Oil Filter Restriction Indicator Light Remains On with the Unit at Operating Temperature	Plugged filter	Change filter.
	Sender wire grounded	Remove wires from sender. If light remains on, circuit is grounded. See your authorized dealer.
Hydraulic Fan Oil Filter Restriction Indicator Light Remains On with the Unit at Operating Temperature	Plugged filter	Change filter.
	Sender wire grounded	Remove wires from sender. If light remains on, circuit is grounded. See your authorized dealer.
Transmission Oil Overheats	Low oil level	Check and add transmission oil.
	Oil cooler core restricted with debris or fins damaged	Clean core.
	Damaged oil cooler fins	See your authorized dealer.
	Failed sensor or wiring	See your authorized dealer.
	Fan installed backwards	See your authorized dealer.
Low Transmission Oil Pressure (Filter Restriction Indicator Light May or May Not Be On)	Low oil level	Check. Add oil.
	Failed coupler between hydrostatic pumps	See your authorized dealer.
	Failed engine coupler	See your authorized dealer.
	Failed park brake solenoid	See your authorized dealer.
Crawler Will Not Move	Park lock switch	See your authorized dealer.
	Transmission problem	See your authorized dealer.
	Park brake problem	See your authorized dealer.
Crawler Mistracks	Left and right track sag not adjusted the same	Adjust track sag to specifications.
	Machine out of calibration	See your authorized dealer.

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Symptom	Problem	Solution
	Low charge pressure	See your authorized dealer.
	Failed motor sensor	See your authorized dealer.

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Air Conditioning

Symptom	Problem	Solution
Air Conditioning System Does Not Operate	Accessory relay	See your authorized dealer.
	Fuse	Replace fuse.
	Fan motor switch problem	See your authorized dealer.
	Fan motor resistor problem	See your authorized dealer.
	Fan motor problem	See your authorized dealer.
	A/C Freeze control switch problem	See your authorized dealer.
	Wiring harness problem	See your authorized dealer.
	Temperature control switch problem	See your authorized dealer.
	Low pressure switch	See your authorized dealer.
	High pressure switch	See your authorized dealer.
	Compressor clutch coil	See your authorized dealer.
	Relay	See your authorized dealer.
	Circuit breaker	See your authorized dealer.
	Condenser fan motor	See your authorized dealer.
	Wiring harness failure	See your authorized dealer.

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Integrated Grade Control (IGC) System— If Equipped

NOTE: For diagnosing general hydraulic symptoms, see Hydraulic System in this section.

Symptom	Problem	Solution
All Blade Functions Do Not Operate in Manual or Auto Modes	Blown Fuse	Check optional powerport 10-amp fuse F16 and EHC switched power 10-amp fuse F103. Replace if necessary.
	Pilot Control Enable Switch Malfunction	See your authorized dealer.
	Relay K102 Malfunction	See your authorized dealer.
	Wiring Is Disconnected or Shorted	See your authorized dealer.
	Hydraulic Malfunction	See Hydraulic System diagnostics in this section.
	Electro-Hydraulic Controller (EHC) Malfunction	See your authorized dealer.
All Blade Functions Operate Normally in Manual Mode, But Not in Auto Mode	Poor Reception From Satellite or From Other Guidance Equipment	Consult documentation of supplier's grade control equipment. If problem cannot be resolved, see your authorized dealer.
	Blown Fuse	Check fuses F101, F104, F105, and F106. Replace if necessary.
	Wiring Disconnected or Shorted	See your authorized dealer.
	Relay (K101) Malfunction	See your authorized dealer.
	IGC On/Off Switch Malfunction	See your authorized dealer.
	CAN Termination Resistor Missing or Malfunctioning	See your authorized dealer.
	Grade Control Supplier's Equipment Malfunctioning	See your authorized dealer.
	Electro-Hydraulic Controller (EHC) Malfunction	See your authorized dealer.
All Blade Functions Operate Normally in Auto Mode, But Not in Manual Mode	IGC On/Off Switch Malfunction	See your authorized dealer.
	Electro-Hydraulic Controller (EHC) Malfunction	See your authorized dealer.
Blade Lift and Tilt Operate Normally in Auto Mode, But Not in Manual Mode	CAN Joystick Module Malfunction	See your authorized dealer.

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Symptom	Problem	Solution
	Electro-Hydraulic Controller (EHC) Malfunction	See your authorized dealer.
Blade Lift and Tilt Operate Normally, But Blade Angle Does Not	Wiring Disconnected or Shorted	See your authorized dealer.
	Blade Angle Switch Malfunction	See your authorized dealer.
	Hydraulic Malfunction	See Hydraulic System diagnostics in this section.
	Blade Angle Actuator Malfunction	See your authorized dealer.
	Electro-Hydraulic Controller (EHC) Malfunction	See your authorized dealer.
Blade Response Is Not Smooth	Valve Calibration or Valve Offset and Gain Not Set Correctly (Auto Mode Only)	Perform valve calibration procedure or adjust valve offset and gain procedures per grade control supplier's instructions. If problem cannot be resolved, see your authorized dealer.
	Low Hydraulic Oil Level	Check hydraulic oil level and add oil if necessary. See Transmission and Hydraulic Reservoir Oil in Section 3-1.
	CAN Termination Resistor Missing or Malfunctioning (Manual Mode Only)	See your authorized dealer.
	Wiring to Affected Electro-Hydraulic Actuator Has Intermittent Connection	See your authorized dealer.
	Actuator Spool Sticking or Actuator Solenoid Malfunctioning	See your authorized dealer.
	Pump Load Sense Not Set Correctly or Load Sense Spool Sticking	See your authorized dealer.
	Control Valve Load Sense Relief Valve Sticking	See your authorized dealer.
All Blade Functions Are Slow or Sluggish	Valve Calibration or Valve Offset and Gain Not Set Correctly (Auto Mode Only)	Perform valve calibration procedure or adjust valve offset and gain procedures per grade control supplier's instructions. If problem cannot be resolved, see your authorized dealer.
	Pump Load Sense Not Set Correctly or Load Sense Spool Sticking	See your authorized dealer.
	Control Valve Load Sense Relief Valve Sticking	See your authorized dealer.
	Hydraulic Malfunction	See Hydraulic System diagnostics in this section.

Continued on next page

Symptom	Problem	Solution
Blade Response Is Too Fast	Valve Calibration or Valve Offset and Gain Not Set Correctly (Auto Mode Only)	Perform valve calibration procedure or adjust valve offset and gain procedures per grade control supplier's instructions. If problem cannot be resolved, see your authorized dealer.
	Pump Load Sense Not Set Correctly or Load Sense Spool Sticking	See your authorized dealer.
	Control Valve Load Sense Relief Valve Sticking	See your authorized dealer.
Blade Moves Quickly (Jumps) to One Side, Then Slowly Comes Back on Grade	Valve Calibration or Valve Offset and Gain Not Set Correctly (Auto Mode Only)	Perform valve calibration procedure or adjust valve offset and gain procedures per grade control supplier's instructions. If problem cannot be resolved, see your authorized dealer.
	Wiring to Affected Electro-Hydraulic Actuator Has Intermittent Connection	See your authorized dealer.
	Actuator Spool Sticking or Actuator Solenoid Malfunctioning	See your authorized dealer.
Waves in Graded Surface	Poor Reception From Satellite or From Other Guidance Equipment (Auto Mode Only)	Consult documentation provided by the grade control supplier. If problem cannot be resolved, see your authorized dealer.
	Valve Calibration or Valve Offset and Gain Not Set Correctly (Auto Mode Only)	Perform valve calibration procedure or adjust valve offset and gain procedures per grade control supplier's instructions. If problem cannot be resolved, see your authorized dealer.
	Grade Control Supplier's Equipment Malfunctioning (Auto Mode Only)	Consult documentation provided by the grade control supplier. If problem cannot be resolved, see your authorized dealer.
	Wiring to Affected Electro-Hydraulic Actuator Has Intermittent Connection	See your authorized dealer.
	Actuator Spool Sticking or Actuator Solenoid Malfunctioning	See your authorized dealer.

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Prepare Machine for Storage

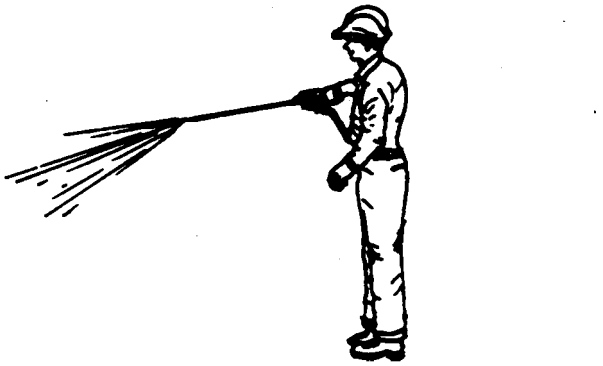
IMPORTANT: Avoid machine damage, do not use biodiesel during machine storage. When using biodiesel blends, switch to petroleum diesel for long term storage.

1. Before storage, operate engine on at least one complete tank of petroleum diesel fuel to purge the fuel system. Ensure that the fuel tank is full during storage to prevent water build up due to condensation.

NOTE: For up to and including B20, it is recommended that biodiesel be used within three months of its manufacture. For blends greater than B20, it is recommended that the biodiesel be used within 45 days. The poor oxidation stability characteristic of biodiesel can result in long-term storage problems. John Deere does not recommend using biodiesel in engines powering standby applications or vehicles operating on a seasonal basis. Consult your John Deere dealer or fuel supplier for additives to improve fuel storage and performance of biodiesel fuels. These additives must be added to the biodiesel close to its time of production for them to be effective.



T47764 —UN—09NOV88



T5813AM —UN—09FEB89

2. Repair worn or damaged parts. Install new parts, if necessary, to avoid needless delays later.
3. Clean primary air cleaner.

IMPORTANT: High pressure washing greater than 1379 kPa (13.8 bar) (200 psi) can damage freshly painted finishes. Paint should be allowed to air dry for 30 days minimum after receipt of machine before cleaning parts or machines with high pressure. Use low pressure wash operations until 30 days have elapsed.

4. Wash the machine. Use low pressure wash operations (less than 1379 kPa (13.8 bar) (200 psi) until 30 days after receipt of machine have elapsed. Paint areas to prevent rust. Replace decals, where needed.
5. Fill fuel tank to prevent condensation.
6. Check tire pressure to ensure tires are properly inflated
7. Apply waste oil to track chains. Run machine back and forth several times. Park machine on a hard surface to prevent tracks from freezing to ground.
8. Store machine in a dry, protected place. If stored outside, cover with a waterproof material.

IMPORTANT: LPS 3 Rust Inhibitor can destroy painted finish. DO NOT spray LPS 3 Rust Inhibitor on painted areas.

9. Retract all hydraulic cylinders, if possible. If not, coat exposed cylinder rods with LPS ® 3 Rust Inhibitor.
10. Place a "DO NOT OPERATE" tag on the right control lever.
11. Lubricate all grease points.
12. Remove batteries.
13. Remove seat cushion and other perishable items.
14. Remove keys and lock all covers and doors.

LPS is a trademark of the Holt Lloyd Corporation.

ER93822,000011E -19-25APR08-1/1

Avoid Track Damage

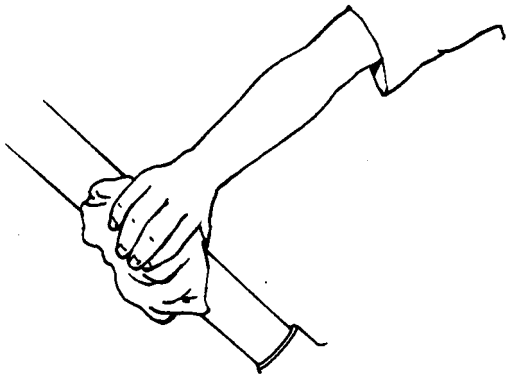
IMPORTANT: Avoid machine damage. If machine is equipped with a sealed and lubricated track, avoid water being forced between the plastic pins and rubber plugs while washing machine with pressure washer.

JH91824,00002EA -19-22JUL10-1/1

Monthly Storage Procedure

CAUTION: Prevent possible injury or death from asphyxiation. Engine exhaust fumes can cause sickness or death. Start engine ONLY in a well-ventilated area.

1. Drain water and sediment from fuel tank when air temperature is above freezing.
2. Remove LPS 3® Rust Inhibitor from cylinder rods with a cleaning solvent.



T6191AA —UN—18OCT88

LPS 3 Rust Inhibitor is manufactured by Holt Lloyd Corporation.

TX,STORAGE,KEY -19-20JAN11-1/2

IMPORTANT: Prevent possible engine damage. During cold temperatures, check fluidity of engine oil on dipstick. If the oil appears waxy or jelly-like rather than liquid, DO NOT attempt to start engine. Use external heat source to warm the crankcase until oil appears fluid.

3. Check all fluid levels. If low, check for leaks and add oil as required.
4. Check belts.
5. Check condition of all hoses and connections.
6. Check battery electrolyte level. Charge and install battery.
7. For machines with **tires**, check condition of tires and tire pressure.

   For machines with **tracks**, check condition of tracks and track sag.

   On crawler machines with non-sealed and non-lubricated track chains, apply oil to the pin-to-bushing joints. Run machine back and forth several times.
8. Park machine on a hard surface to prevent tracks from freezing to ground.
9. Fill fuel tank.
10. Pre-lubricate turbocharger bearings, if equipped:

    a. Disconnect fuel shutoff fuse.

    b. Crank engine for 10 seconds.

    c. Connect fuel shutoff fuse.
11. Inspect engine compartment, and remove any foreign material that could have accumulated. Start engine and run until it reaches operating temperature. Run at 1/2 speed for 5 minutes. Do not run at fast or slow idle.

    - If engine fails to start or runs poorly after starting, change fuel filter(s). Bleed fuel system.



T6181AU —UN—18OCT88

12. Operate all controls, levers, seat adjustments, and others.

CAUTION: Prevent possible injury from unexpected machine movement. Clear the area of all persons before running machine through the operation procedure.

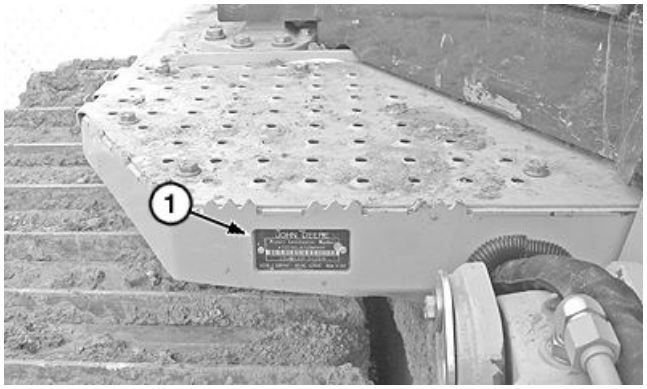
13. Make sure that the area is clear to allow for movement. Cycle all hydraulic functions several times. Check condition of all hoses and connections.
14. Park the machine with cylinder rods retracted, if possible. Turn key switch to OFF.
15. Apply LPS 3 Rust Inhibitor to exposed cylinder rod areas.

TX,STORAGE,KEY -19-20JAN11-2/2

Record Product Identification Number (PIN)

Product Identification Number (1)

1— Product Identification Number



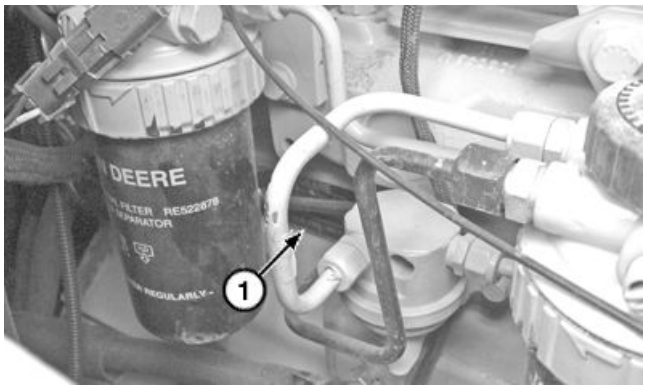
TX1018367A —UN—06FEB07

VD76477,00013EB -19-31JAN07-1/1

Record Engine Serial Number

Engine Serial Number (1)

1— Engine Serial Number Plate



TX1017597A —UN—16JAN07

VD76477,00013BB -19-12JAN07-1/1

Keep Proof of Ownership

1. Maintain in a secure location an up-to-date inventory of all product and component serial numbers.
2. Regularly verify that identification plates have not been removed. Report any evidence of tampering to law enforcement agencies and order duplicate plates.
3. Other steps you can take:
   - Mark your machine with your own numbering system
   - Take color photographs from several angles of each machine

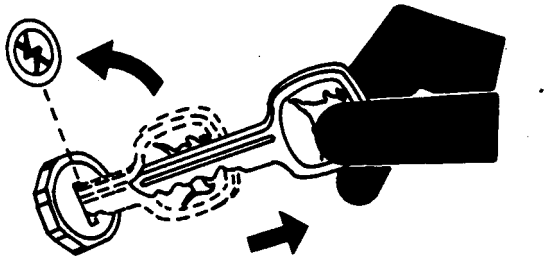


TS1680 —UN—09DEC03

DX,SECURE1 -19-18NOV03-1/1

Keep Machines Secure

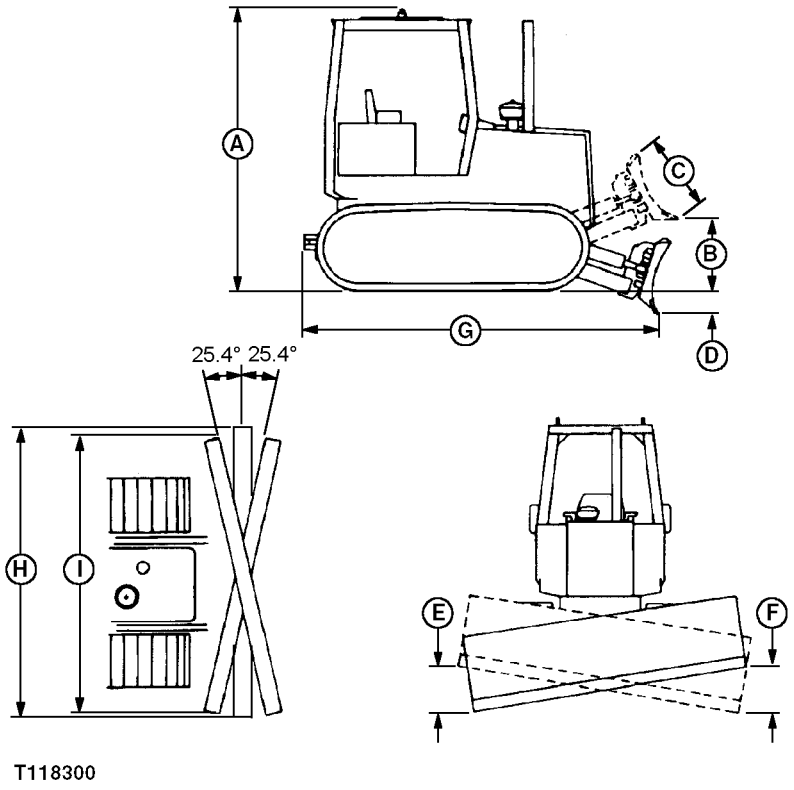
1. Install vandal-proof devices.
2. When machine is in storage:
   - Lower equipment to the ground
   - Set wheels to widest position to make loading more difficult
   - Remove any keys and batteries
3. When parking indoors, put large equipment in front of exits and lock your storage buildings.
4. When parking outdoors, store in a well-lighted and fenced area.
5. Make note of suspicious activity and report any thefts immediately to law enforcement agencies.
6. Notify your John Deere dealer of any losses.



TS230 —UN—24MAY89

DX,SECURE2 -19-18NOV03-1/1

750J Crawler Dozer Dimensions



T118300

T118300 —UN—11NOV98

NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ISO and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Item	Measurement	Specification
A—Overall Height—ROPS or Cab	Height	3099 mm 122 in.
B—Blade	Height	1194 mm 47 in.
C—Blade Lift	Height	978 mm 39 in.
D—Digging	Depth	620 mm 24 in.
E—Blade Tilt	Distance	721 mm 28 in
F—Blade Tilt	Distance	721 mm 28 in
G—Overall Length With Blade	Length	5207 mm 205 in.
G—Overall Length With Blade (With Extended Drawbar)	Length	5269.5 mm 207.5 in.
H—Blade Width	Width	3296 mm 130 in.
I—Blade Angle	Angle	23.5°

Continued on next page

AM40430,000004C -19-29APR11-1/2

Item	Measurement	Specification
129.75 inch PAT Blade	Capacity	3.23 m^3

AM40430,000004C -19-29APR11-2/2

750J Crawler Dozer Specifications

Item	Measurement	Specification
John Deere PowerTech E™ 6068H 6-Cylinder Diesel Engine		
	Non-Road Emission Standards	Meets PROCONVE MAR-I and Tier 3/Stage IIIA Emissions
Engine	Type	Turbocharged
Fuel Consumption, Typical	Consumption	15.1—21.6 L/h 4.0—5.7 gph
Rated Power at 2100 rpm	Power	108 kW SAE net horsepower 145 hp
Piston	Displacement	6.8 L 414 $in.^3$
Maximum Net Torque at 1400 rpm	Torque Rise	680 N·m 500 lb-ft
Oil Pan Size	Capacity	0.23 L/kW
Batteries	Voltage	12-volt
Alternator—ROPS	Amperage	55 amp
Alternator—Cab with Air Conditioning	Amperage	80 amp
Transmission	Speed	0—10.1 km/h 0—6.3 mph
Hydraulic System	Pressure	24 993 kPa 3625 psi
	Flow Rate	140 L/min @ unloaded high idle 37 gpm
Undercarriage		
Track Shoes (Each Side)	Quantity	40
Ground Contact Area (with 22 in. Shoes)	Area	28 955 cm^2
Track	Pitch	191 mm 7.5 in.
	Gauge	1880 mm 74 in.
Ground Pressure	Pressure	49.9 kPa 7.24 psi 0.49 bar

PowerTech E is a trademark of Deere & Company

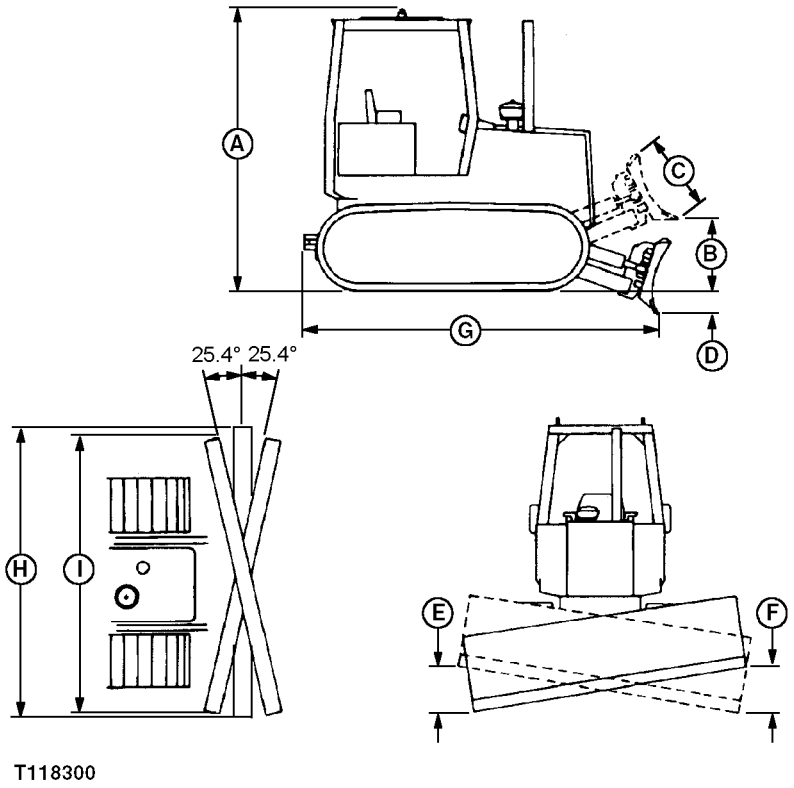
JH91824,00002BC -19-11JAN17-1/1

750J Crawler Dozer Weights

Item	Measurement	Specification
SAE Operating Weight	Weight	14 780 kg 32 585 lb
Optional Equipment		
Rock Guards (4)	Weight	174 kg 384 lb
Cab with Pressurizer and Heater/Air Conditioning	Weight	337 kg 743 lb
Heater (ROPS Canopy)	Weight	39 kg 85 lb
Extended Rigid Draw Bar	Weight	130 kg 286 lb

AM40430,000004E -19-29APR11-1/1

750J-LT Crawler Dozer Dimensions



T118300

T118300 —UN—11NOV98

NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ISO and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Item	Measurement	Specification
A—Overall Height—ROPS or Cab	Height	3099 mm 122 in.
B—Blade	Height	1194 mm 47 in.
C—Blade Lift	Height	1024 mm 40.3 in.
D—Digging	Depth	650 mm 25.6 in.
E—Blade Tilt	Distance	437 mm 17.2 in
F—Blade Tilt	Distance	437 mm 17.2 in
G—Overall Length With Blade	Length	5296 mm 208.5 in.
G—Overall Length With Blade (With Extended Drawbar)	Length	5579.5 mm 219.5 in.
H—Blade Width	Width	3296 mm 129.75 in.
I—Blade Angle	Angle	23.5°

Continued on next page

LB82152,000076D -19-28APR11-1/2

Item	Measurement	Specification
129.75 inch PAT Blade	Capacity	3.23 m^3

LB82152,000076D -19-28APR11-2/2

750J-LT Crawler Dozer Specifications

Item	Measurement	Specification
John Deere PowerTech E™ 6068H 6-Cylinder Diesel Engine		
	Non-Road Emission Standards	Meets PROCONVE MAR-I and Tier 3/Stage IIIA Emissions
Engine	Type	Turbocharged
Fuel Consumption, Typical	Consumption	15.1—21.6 L/h 4.0—5.7 gph
Rated Power at 2100 rpm	Power	108 kW SAE net horsepower 145 hp
Piston	Displacement	6.8 L 414 $in.^3$
Maximum Net Torque at 1400 rpm	Torque Rise	680 N·m 500 lb-ft
Batteries	Voltage	12-volt
Alternator—ROPS	Amperage	55 amp
Alternator—Cab with Air Conditioning	Amperage	80 amp
Transmission	Speed	0—10 km/h 0—6.3 mph
Hydraulic System	Pressure	24 993 kPa 3625 psi
	Flow Rate	140 L/min @ unloaded high idle 37 gpm
Undercarriage		
Track Shoes (Each Side)	Quantity	45
Ground Contact Area (with 22 in. Shoes)	Area	34 348 cm^2
Track	Pitch	191 mm 7.5 in.
	Gauge	1880 mm 74 in.
Ground Pressure	Pressure	44.5 kPa 6.45 psi 0.45 bar

PowerTech E is a trademark of Deere & Company

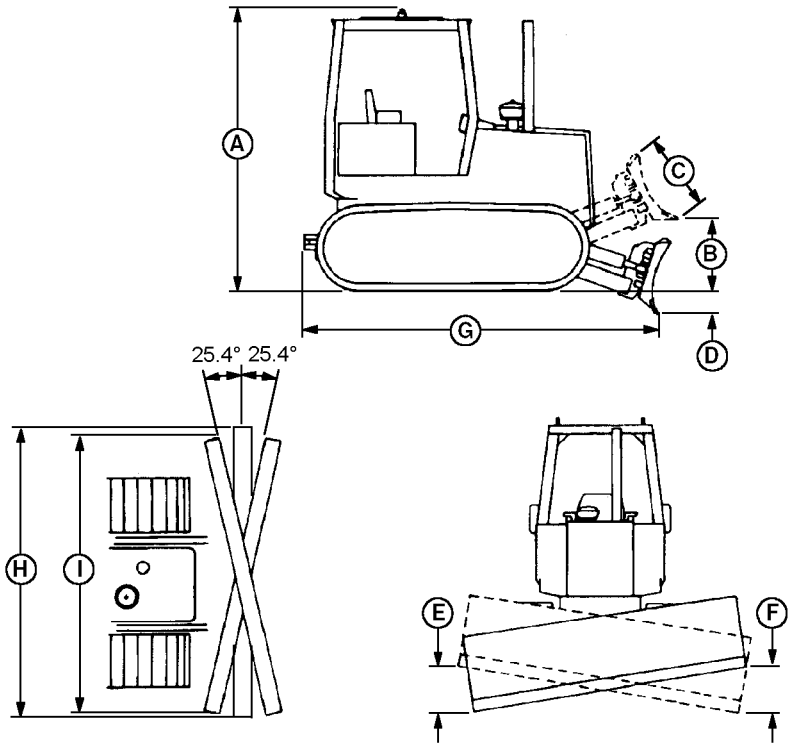
LB82152,000077F -19-11JAN17-1/1

750J-LT Crawler Dozer Weights

Item	Measurement	Specification
SAE Operating Weight	Weight	15 601 kg 34 395 lb
Optional Equipment		
Rock Guards (4)	Weight	154 kg 340 lb
Cab with Pressurizer and Heater/Air Conditioning	Weight	337 kg 743 lb
Heater (ROPS Canopy)	Weight	39 kg 85 lb
Extended Rigid Draw Bar	Weight	130 kg 286 lb

AM40430,0000051 -19-05MAY11-1/1

750J-LGP Crawler Dozer Dimensions



T118300

T118300 —UN—11NOV98

NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ISO and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Item	Measurement	Specification
A—Overall Height—ROPS or Cab	Height	3099 mm 122 in.
B—Blade	Height	1171 mm 46 in.
C—Blade Lift	Height	1024 mm 40 in.
D—Digging	Depth	650 mm 25.6 in.
E—Blade Tilt	Distance	523 mm 20.6 in
F—Blade Tilt	Distance	524 mm 20.6 in
G—Overall Length With Blade	Length	5296 mm 209 in.
G—Overall Length With Blade (With Extended Drawbar)	Length	5579.5 mm 219.5 in.
H—Blade Width	Width	3962 mm 156 in.
I—Blade Angle	Angle	23.5°

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AM40430,0000052 -19-28APR11-1/2

Item	Measurement	Specification
156 inch PAT Blade	Capacity	3.81 m^3

AM40430,0000052 -19-28APR11-2/2

750J-LGP Crawler Dozer Specifications

Item	Measurement	Specification
John Deere PowerTech E™ 6068H 6-Cylinder Diesel Engine		
	Non-Road Emission Standards	Meets PROCONVE MAR-I and Tier 3/Stage IIIA Emissions
Engine	Type	Turbocharged
Fuel Consumption, Typical	Consumption	15.1—21.6 L/h 4.0—5.7 gph
Rated Power at 2100 rpm	Power	108 kW SAE net horsepower 145 hp
Piston	Displacement	6.8 L 414 $in.^3$
Maximum Net Torque at 1400 rpm	Torque Rise	738 N·m 540 lb-ft
Oil Pan Size	Capacity	0.22 L/kW
Batteries	Voltage	12-volt
Alternator—ROPS	Amperage	55 amp
Alternator—Cab with Air Conditioning	Amperage	80 amp
Transmission	Speed	0—10.1 km/h 0—6.3 mph
Hydraulic System	Pressure	24 993kPa 3625 psi
	Flow Rate	140 L/min @ unloaded high idle 37 gpm
Undercarriage		
Track Shoes (Each Side)	Quantity	45
Ground Contact Area (with 34 in. Shoes)	Area	53 084 cm^2
Track	Pitch	190.5 mm 7.5 in.
	Gauge	2134 mm 84 in.
Ground Pressure	Pressure	30.7 kPa 4.45 psi 0.30 bar

PowerTech E is a trademark of Deere & Company

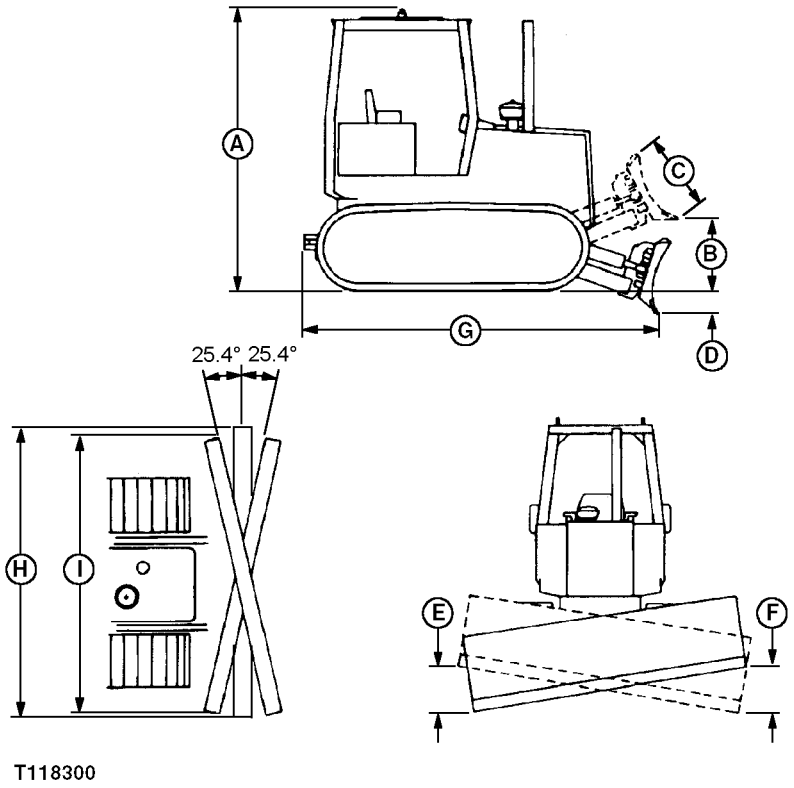
JH91824,00002BD -19-11JAN17-1/1

750J-LGP Crawler Dozer Weights

Item	Measurement	Specification
SAE Operating Weight	Weight	16 658 kg 36 725 lb
Optional Equipment		
Rock Guards (4)	Weight	154 kg 340 lb
Cab with Pressurizer and Heater/Air Conditioning	Weight	337 kg 743 lb
Heater (ROPS Canopy)	Weight	39 kg 85 lb
Extended Rigid Draw Bar	Weight	130 kg 286 lb

AM40430,0000054 -19-05MAY11-1/1

750J Pushbeam Crawler Dozer Dimensions



T118300

T118300 —UN—11NOV98

NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ISO and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Item	Measurement	Specification
A—Overall Height—ROPS or Cab	Height	3099 mm 122 in.
B—Blade	Height	1194mm 47 in.
C—Blade Lift	Height	978 mm 39 in.
D—Digging	Depth	574 mm 23 in.
E—Blade Tilt	Distance	721 mm 28 in
F—Blade Tilt	Distance	721 mm 28 in
G—Overall Length With Blade	Length	5207 mm 205 in.
G—Overall Length With Blade (With Extended Drawbar)	Length	5484.5 mm 216 in.
H—Blade Width	Width	3251 mm 128 in.

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AM40430,0000055 -19-28APR11-1/2

Item	Measurement	Specification
128 inch Semi-U Blade	Capacity	4.27 m^3

AM40430,0000055 -19-28APR11-2/2

750J Pushbeam Crawler Dozer Specifications

Item	Measurement	Specification
John Deere PowerTech E™ 6068H 6-Cylinder Diesel Engine		
	Non-Road Emission Standards	Meets PROCONVE MAR-I and Tier 3/Stage IIIA Emissions
Engine	Type	Turbocharged
Fuel Consumption, Typical	Consumption	15.1—21.6 L/h 4.0—5.7 gph
Rated Power at 2100 rpm	Power	108 kW SAE net horsepower 145 hp
Piston	Displacement	6.8 L 414 $in.^3$
Maximum Net Torque at 1400 rpm	Torque Rise	700 N·m 420 lb-ft
Batteries	Voltage	12-volt
Alternator—ROPS	Amperage	55 amp
Alternator—Cab with Air Conditioning	Amperage	80 amp
Transmission	Speed	0—10 km/h 0—6.3 mph
Hydraulic System	Pressure	25 000 kPa 3625 psi
	Flow Rate	132.4 L/min @ unloaded high idle 35 gpm
Undercarriage		
Track Shoes (Each Side)	Quantity	40
Ground Contact Area (with 22 in. Shoes)	Area	28 955 cm^2
Track	Pitch	190.5 mm 7.5 in.
	Gauge	1880 mm 74 in.
Ground Pressure	Pressure	54.3 kPa 7.87 psi 0.54 bar

PowerTech E is a trademark of Deere & Company

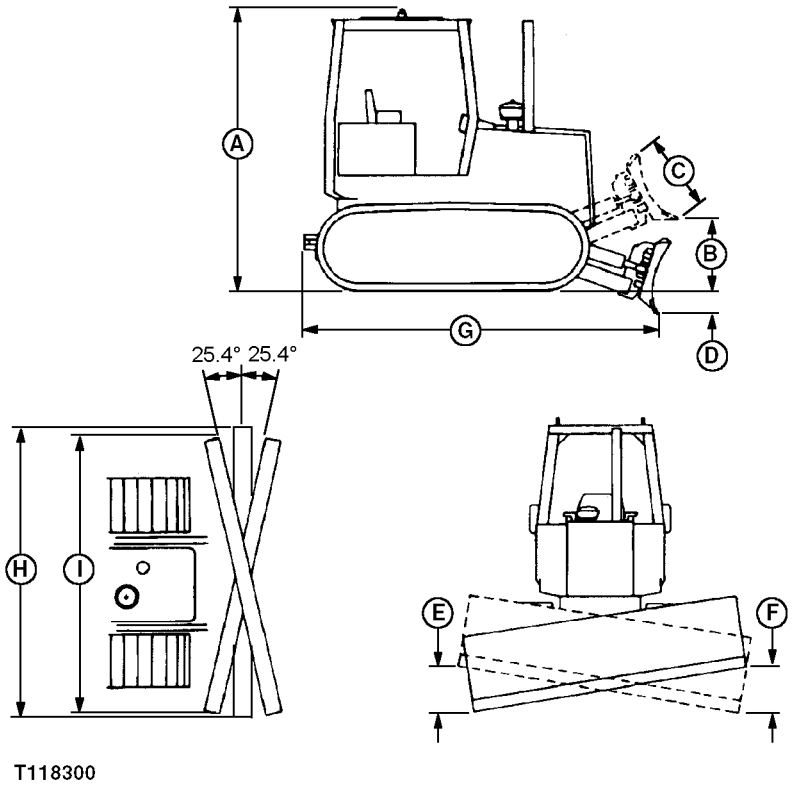
VD76477,00013CD -19-11JAN17-1/1

750J Pushbeam Crawler Dozer Weights

Item	Measurement	Specification
SAE Operating Weight	Weight	16 031 kg 35 344 lb
Optional Equipment		
Rock Guards (4)	Weight	174 kg 384 lb
Cab with Pressurizer and Heater/Air Conditioning	Weight	337 kg 743 lb
Heater (ROPS Canopy)	Weight	39 kg 85 lb
Extended Rigid Draw Bar	Weight	130 kg 286 lb

AM40430,0000057 -19-05MAY11-1/1

750J-WT Pushbeam Crawler Dozer Dimensions



T118300

T118300 —UN—11NOV98

NOTE: Specifications and design subject to change without notice. Whenever applicable, specifications are in accordance with ISO and SAE standards. Except where otherwise noted, these specifications are based on a unit with roll-over protective structure, full fuel tank, 80 kg (175 lb) operator, and standard equipment.

Item	Measurement	Specification
A—Overall Height—ROPS or Cab	Height	3095 mm 122 in.
B—Blade	Height	1170 mm 46.1 in.
C—Blade Lift	Height	1050 mm 41.3 in.
D—Digging	Depth	575 mm 22.6 in.
E—Blade Tilt	Distance	653 mm 25.7 in
F—Blade Tilt	Distance	653 mm 25.7 in
G—Overall Length With Blade	Length	5205 mm 205 in.
G—Overall Length With Blade (With Extended Drawbar)	Length	5484.5 mm 216 in.
H—Blade Width	Width	3759 mm 148 in.
148 inch Semi-U Blade	Capacity	4.51 m^3

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AM40430,0000058 -19-29OCT07-1/2

Item	Measurement	Specification
150 inch Straight Blade	Capacity	4.01 m^3

AM40430,0000058 -19-29OCT07-2/2

750J-WT Pushbeam Crawler Dozer Specifications

Item	Measurement	Specification
John Deere PowerTech E™ 6068H 6-Cylinder Diesel Engine		
	Non-Road Emission Standards	Meets PROCONVE MAR-I and Tier 3/Stage IIIA Emissions
Engine	Type	Turbocharged
Fuel Consumption, Typical	Consumption	15.1—21.6 L/h 4.0—5.7 gph
Rated Power at 2100 rpm	Power	108 kW SAE net horsepower 145 hp
Piston	Displacement	6.8 L 414 $in.^3$
Maximum Net Torque at 1400 rpm	Torque Rise	700 N·m 420 lb-ft
Batteries	Voltage	12-volt
Alternator—ROPS	Amperage	55 amp
Alternator—Cab with Air Conditioning	Amperage	80 amp
Transmission	Speed	0—10 km/h 0—6.3 mph
Hydraulic System	Pressure	25 000 kPa 3625 psi
	Flow Rate	132.4 L/min @ unloaded high idle 35 gpm
Undercarriage		
Track Shoes (Each Side)	Quantity	40
Ground Contact Area (with 34 in. Shoes)	Area	44 748 cm^2
Track	Pitch	190.5 mm 7.5 in.
	Gauge	2134 mm 84 in.
Ground Pressure	Pressure	36.1 kPa 5.24 psi 0.36 bar

PowerTech E is a trademark of Deere & Company

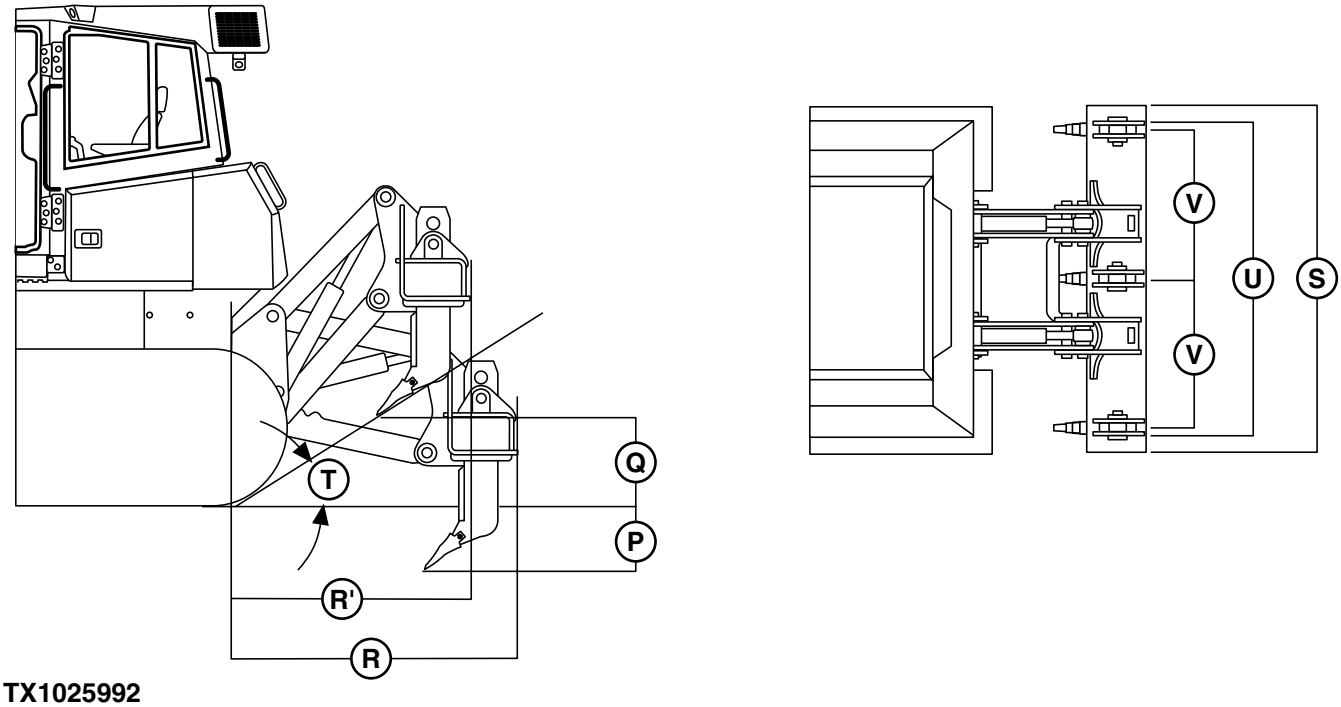
VD76477,00013CE -19-11JAN17-1/1

750J-WT Pushbeam Crawler Dozer Weights

Item	Measurement	Specification
SAE Operating Weight	Weight	16 658 kg 36 725 lb
Optional Equipment		
Rock Guards (4)	Weight	174 kg 384 lb
Cab with Pressurizer and Heater/Air Conditioning	Weight	337 kg 743 lb
Heater (ROPS Canopy)	Weight	39 kg 85 lb
Extended Rigid Draw Bar	Weight	130 kg 286 lb

AM40430,000005A -19-05MAY11-1/1

750J Parallelogram Ripper with Hydraulic Pitch Adjustment (All Models)



TX1025992 —UN—06JUL07

TX1025992

Item	Measurement	Specification
P—Ripping Depth	Maximum Depth	686 mm 2 ft. 3 in.
Q—Clearance	Maximum Clearance Under Tip	686 mm 2 ft. 3 in
R—Overall Length, Attachment Lowered	Length	1689 mm 5 ft. 7 in.
R'—Overall Length, Attachment Raised	Length	1448 mm 4 ft. 9 in.
S—Overall Beam Width	Width	2134 mm 7 ft.
T—Slope Angle (full raise)	Degrees	22°
U—Ripping Width	Width	1880 mm 6 ft. 2 in.
V—Distance between Shanks	Distance	902 mm 3 ft.
Ripper Weight	Weight	1690 kg 3,725 lbs

OUT4001,00002FF -19-05JUL07-1/1

750J and 750J-LT Crawler Dozer Drain and Refill Capacities

Item	Measurement	Specification
Drain and Refill Capacities		
Cooling System With Recovery Tank	Capacity	21.6 L 5.7 gal
Fuel Tank	Capacity	371.0 L 98.0 gal
Engine Oil (Including Filter)	Capacity	26.5 L 7.0 gal
Inner Final Drive (Each Side)	Capacity	9.5 L 2.5 gal
Outer Final Drive (Each Side)	Capacity	15.1 L 4.0 gal
Hydraulic Reservoir	Capacity	105.6 L 27.9 gal
Hydrostatic Reservoir	Capacity	105.6 L 27.9 gal

VD76477,00004D9 -19-19OCT17-1/1

750J-WT and 750J-LGP Crawler Dozer Drain and Refill Capacities

Item	Measurement	Specification
Drain and Refill Capacities		
Cooling System With Recovery Tank	Capacity	21.6 L 5.7 gal
Fuel Tank	Capacity	371.0 L 98.0 gal
Engine Oil (Including Filter)	Capacity	26.0 L 7.0 gal
Inner Final Drive (Each Side)	Capacity	15.9 L 4.2 gal
Outer Final Drive (Each Side)	Capacity	15.1 L 4.0 gal
Hydraulic Reservoir	Capacity	105.6 L 27.9 gal
Hydrostatic Reservoir	Capacity	105.6 L 27.9 gal

VD76477,00004DA -19-19OCT17-1/1

Eurasian Economic Union

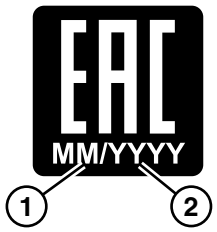
This information applies only to products which bear the EAC conformity mark of the Eurasian Economic Union member states.

Manufacturer:
Deere & Company, Moline, Illinois U.S.A.

Name of the authorized representative in the Eurasian Economic Union:
Limited Liability Company
“John Deere Rus”

Address of the authorized representative:
142050, Russia, Moscow region, Domodedovo district, Domodedovo, Beliye Stolbi micro district, vladenye “Warehouse 104”, Building 2

For technical support, contact an authorized John Deere dealer.



EAC Marking

1— Month of Manufacture **2— Year of Manufacture**

Date of manufacture is denoted by the product marking on or near the serial number plate.

TX1333032 —UN—10NOV22

MB60223,0005008 -19-10NOV22-1/1

Machine Design Life

This machine is designed and manufactured to provide a long life of productive operation, however actual attainable life depends on a number of factors including the severity of working conditions and completion of recommended maintenance. (See the Service section of this manual.)

Periodically inspect and review the machine in conjunction with your John Deere dealer. The review may result in recommendations for service, component repair, remanufacture or replacement, or, if at the end of life, that the machine be removed from operation. (See separate decommissioning section of this manual for information on disposal and recycling of machine components.)

No machine should be operated if safety-related components are missing or in need of service. All missing or damaged safety-related components, including safety signs, should be repaired or replaced before operating.

DX,MACH,DESIGN,LIFE -19-14SEP15-1/1

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