

Series 300 4039, 4045, and 6068 Marine Engines

**Deere Power Systems Group
OMRG20144 Issue B5
(This manual replaces OMRG20144 Issue D3)**

LITHO IN U.S.A.
ENGLISH

To The Operator

THIS OPERATING AND SERVICE MANUAL outlines the detailed service procedures and recommended service intervals for 4039, 4045, and 6068 Marine Engines to assure years of dependable and efficient performance. Each section is clearly identified so you can easily find the information you need—whether it is operation, lubrication, troubleshooting, or service.

SERVICE AND REPAIR/REPLACEMENT PROCEDURES outlined in this manual involve only the marine related components. For major internal engine repairs and externally accessible standard engine components (water pump, crankshaft oil seals, etc.), refer to CTM8—3029, 4039, 6059, 4045, and 6068 Engines Component Technical Manual. Have your authorized servicing dealer or marine engine distributor perform necessary repairs.

READ THIS MANUAL CAREFULLY to learn how to operate and service your engine correctly. Failure to do so could result in personal injury or equipment damage.

THIS MANUAL SHOULD BE CONSIDERED a permanent part of your boat and should remain with the boat when you sell it.

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

RIGHT-HAND AND LEFT-HAND sides are determined by facing the flywheel end (rear) of the engine and facing toward the front (water pump end) of engine.

WRITE PRODUCT IDENTIFICATION (SERIAL) NUMBERS and engine option codes in the spaces indicated in the Record Keeping Section of this manual. Accurately record all the numbers to help in tracing the boat should it be stolen. Your dealer also needs these numbers when parts are ordered for servicing. Since this manual is to remain on-board the boat at all times, also file the identification numbers in a secure place away from the boat.

SETTING FUEL DELIVERY beyond published factory specifications or otherwise overpowering will result in loss of warranty protection for this engine.

CERTAIN ENGINE ACCESSORIES such as air cleaner and instruments are optional equipment on John Deere Engines. These accessories may be provided by the equipment manufacturer instead of John Deere. This operator's manual applies only to the engine and those options provided through the John Deere parts distribution network.

• Engine Identification

MARINE ENGINES COVERED in this manual may be identified by the model number designation 4039D, 4045T, 6068D, or 6068T which are a portion of the serial number:

- The first digit shown indicates the number of cylinders.
- The second, third, and fourth digits indicate displacement in liters.
- The fifth digit (letter) indicates engine aspiration:
 - D—Naturally aspirated (non-turbocharged)
 - T—Turbocharged

For example: 4039D designates a 4-cylinder engine that has 3.9 L (239 cu. in.) displacement and the engine is naturally aspirated.

Engine Owner

JOHN DEERE ENGINE OWNER:

Don't wait until you need warranty or other service to meet your local John Deere Engine Distributor or Service Dealer.

Learn who he is and where he is. At your first convenience, go meet him. He'll want to get to know you and to learn what your needs might be.

UTILISATEURS DE MOTEURS JOHN DEERE:

N'attendez pas d'être obligé d'avoir recours à votre Concessionnaire ou Point de Service le plus proche pour vous adresser à lui.

Renseignez-vous dès que possible pour l'identifier et le localiser. À la première occasion, prenez contact avec lui et faites-vous connaître. Il sera lui aussi heureux de faire votre connaissance et de savoir que vous pourrez compter sur lui le moment venu.

AN DEN BESITZER DES JOHN DEERE MOTORS:

Warten Sie nicht auf einen evt. Reparaturfall um den nächstgelegenen John Deere Händler kennen zu lernen.

Machen Sie sich bei ihm bekannt und nutzen Sie sein "Service Angebot".

PROPRIETARIO DEL MOTORE JOHN DEERE:

Non aspetti fino a quando ha bisogno della garanzia o di un altro tipo di assistenza per incontrarsi con il Suo Concessionario che fornisce l'assistenza tecnica.

Impari a conoscere chi è e dove si trova. Alla Sua prima occasione cerchi d'incontrarlo. Egli desidera farsi conoscere e conoscere le Sue necessità.

PROPIETARIO DE EQUIPO JOHN DEERE:

No espere hasta necesitar servicio de garantía o de otro tipo para conocer a su Distribuidor de Motores John Deere o al Concesionario de Servicio.

Entérese de quién es, y dónde está situado. Cuando tenga un momento, vaya a visitarlo. A él le gustará conocerlo, y saber cuáles podrían ser sus necesidades.

JOHN DEERE MOTORÄGARE:

Vänta inte med att besöka Din John Deere återförsäljare till dess att Du behöver service eller garanti reparation.

Bekanta Dig med var han är och vem han är. Tag första tillfälle att besöka honom. Han vill också träffa Dig för att få veta vad Du behöver och hur han kan hjälpa Dig.

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Identification Views

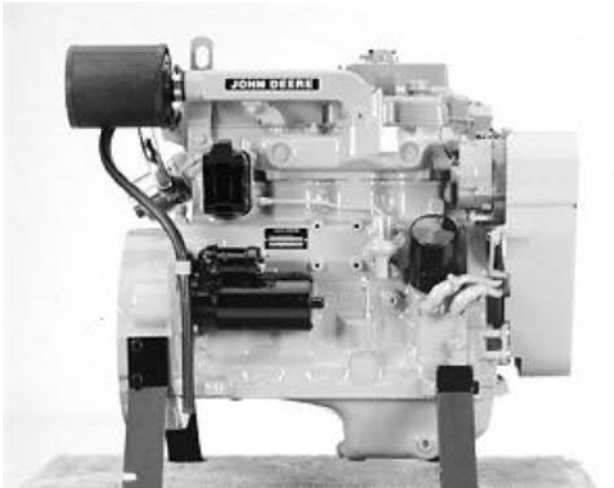
4039DFM01 ENGINE WITH GEAR DRIVEN SEA WATER PUMP



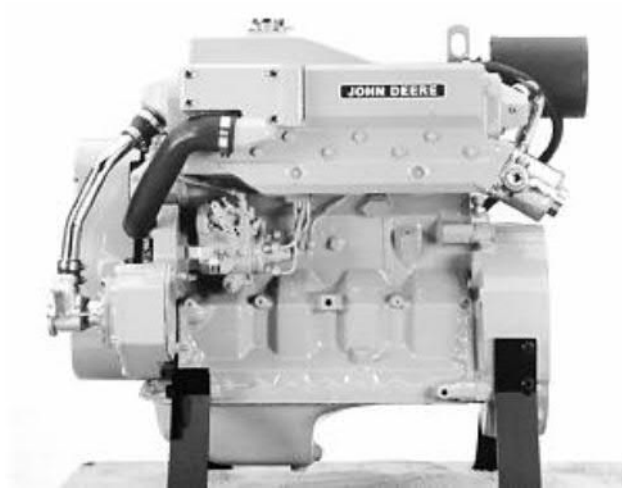
RG6689 -UN-26MAR93



RG6688 -UN-26MAR93



RG6690 -UN-26MAR93



RG6691 -UN-26MAR93



RG6692 -UN-26MAR93

Identification Views

4045TFM01 ENGINE WITH BELT DRIVEN SEA WATER PUMP



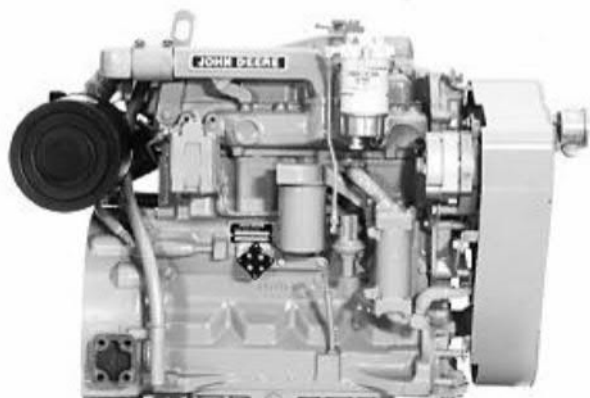
-UN-26MAR93

RG6676



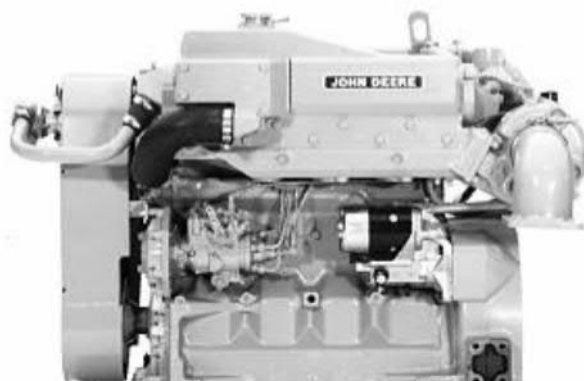
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RG6677



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RG6678



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RG6679



-UN-26MAR93

RG6680



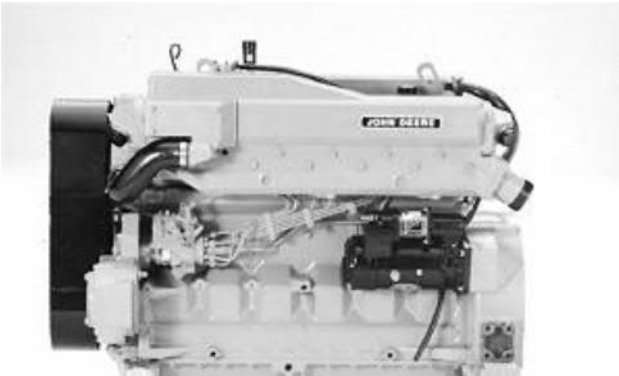
-UN-26MAR93

RG6681

RG20144,11 -19-30MAR93

Identification Views

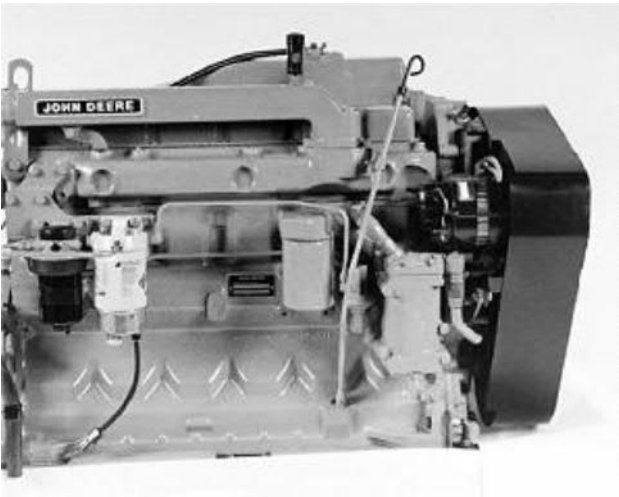
6068DFM01 ENGINE (NO SEA WATER PUMP)



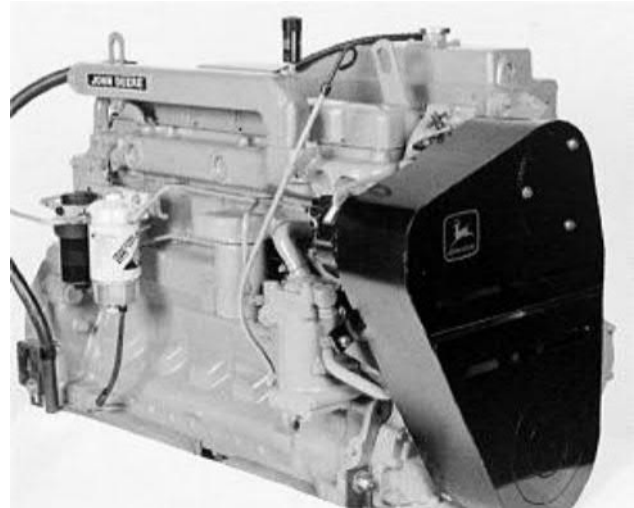
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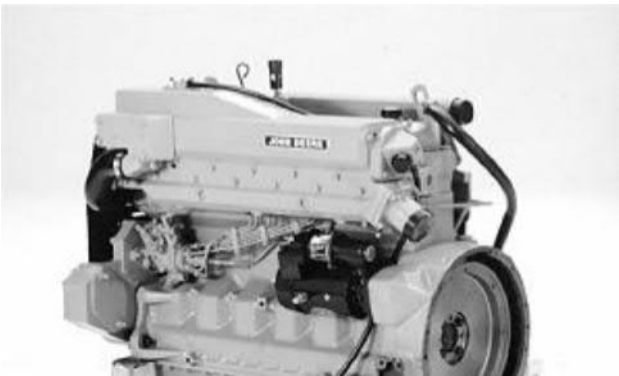
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RG6700 -UN-26MAR93



RG6701 -UN-26MAR93



RG6696 -UN-26MAR93



RG6694 -UN-26MAR93

RG20144,11A -19-30MAR93

6068TFM01 ENGINE WITH GEAR DRIVEN SEA WATER PUMP



-UN-26MAR93

RG6683



-UN-26MAR93

RG6682



-UN-26MAR93

RG6685



-UN-26MAR93

RG6684



-UN-26MAR93

RG6687



-UN-26MAR93

RG6686

RG20144,11B -19-30MAR93

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All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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A John Deere ILLUSTRATION™ Manual

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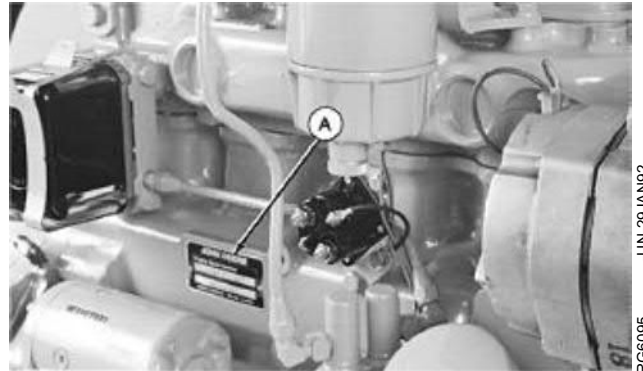
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Record Keeping

ENGINE SERIAL NUMBER PLATE

Each engine has a 13-digit John Deere engine serial number.

Your engine's serial number plate (A) is located on right-hand side of cylinder block (viewed from flywheel end) between the oil filter housing and fuel filter.



RG20144,16 -19-31JAN95

RG6095 -UN-29JAN92

RECORD ENGINE SERIAL NUMBER

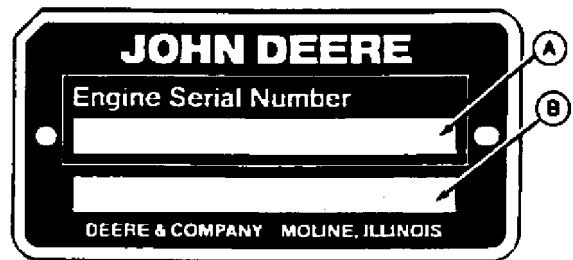
Your engine will have a serial number plate.

Record all of the numbers and letters found on your engine serial number plate in the spaces provided below.

This information is very important for repair parts or warranty information.

Engine Serial Number (A)

Application Data (B)



Embossed Serial Number Plate



Bar Coded Serial Number Plate

S55,OMSN,B1 -19-16FEB95

RG5609 -UN-08JAN90

RG7301 -UN-17FEB95

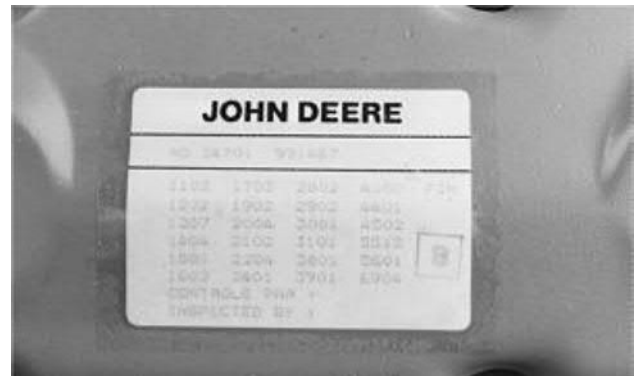
ENGINE OPTION CODES

In addition to the serial number plate, OEM engines have an engine option code label affixed to the rocker arm cover. These codes indicate which of the engine options were installed on your engine at the factory. When in need of parts or service, furnish your authorized servicing dealer or engine distributor with these numbers.

The first two digits of each code identify a specific group, such as alternators. The last two digits of each code identify one specific option provided on your engine, such as a 12-volt, 55-amp alternator.

If an engine is ordered without a particular component, the last two digits of that functional group option code will be nines (99). The following list shows only the first two digits of the code numbers. For future reference such as ordering repair parts, it is important to have these code numbers available. To ensure this availability, enter the third and fourth digits shown on your engine option code label in the spaces provided on the following pages.

NOTE: *Your engine option code label may not contain all option codes if an option has been added after the engine left the producing factory.*



RG4907 -UN-15DEC88

RG,20144,18A -19-16FEB95

ENGINE OPTION CODES—CONTINUED

Option Codes	Description	Option Codes	Description
11 ____	Rocker Arm Cover	37 ____	Fuel Transfer Pump
12 ____	Oil Filler	39 ____	Thermostat Housing
13 ____	Crankshaft Pulley	40 ____	Dipstick
14 ____	Flywheel Housing	41 ____	Belt Driven Front Auxiliary Drive
15 ____	Flywheel	43 ____	Air Inlet Heater
16 ____	Injection Pump	44 ____	Timing Gear Cover With Gears
17 ____	Air Inlet	45 ____	Balancers For 4-Cylinder Engines
19 ____	Oil Pan	46 ____	Cylinder Block With Liners and Camshaft
20 ____	Water Pump	52 ____	Auxiliary Gear Drive
21 ____	Thermostat Cover	55 ____	Shipping Stand
22 ____	Thermostat	56 ____	Paint Option
23 ____	Fan Drive	59 ____	Oil Cooler and Filter
24 ____	Fan Belt	62 ____	Alternator Mounting
27 ____	Heat Exchanger	64 ____	Exhaust Elbow
28 ____	Exhaust Manifold	65 ____	Turbocharger
29 ____	Ventilator System	67 ____	Starter Relay
30 ____	Starting Motor	69 ____	Engine Serial Number Plate
31 ____	Alternator	80 ____	Sea Water Pump
35 ____	Fuel Filter	97 ____	Air Cleaner

RG20144,18 -19-02MAR92

RECORD FUEL INJECTION PUMP MODEL NUMBER

Record the fuel injection pump model and serial information found on the serial number plate (A).

Model No. _____ RPM _____

Manufacturer's No. _____

Serial No. _____



RG6096
-UN-23JAN92

RG20144,17 -19-23JAN92

Safety

RECOGNIZE SAFETY INFORMATION

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

Follow recommended precautions and safe operating practices.



DX,ALERT -19-03MAR93

T81389 -UN-07DEC88

UNDERSTAND SIGNAL WORDS

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

DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.



DX,SIGNAL -19-03MAR93

TS187 -19-30SEP88

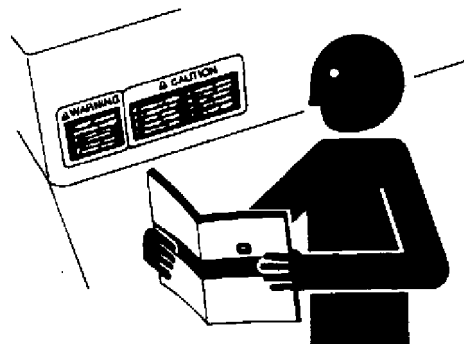
FOLLOW SAFETY INSTRUCTIONS

Carefully read all safety messages in this manual and on your vessel safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer or authorized engine distributor.

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

Keep your vessel in proper working condition. Unauthorized modifications to the engine may impair the function, safety, and engine life.

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



RG20144,2 -19-03FEB92

TS201 -UN-23AUG88



PREVENT STARTING IN GEAR

Avoid possible injury from starting in gear.

Do not start engine by shorting across starter terminal. Engine can start with marine gear engaged if normal circuitry is bypassed.

Start engine only from operator's control station, with PTO or marine gear disengaged (neutral).



RG20144,8 -19-29JAN92

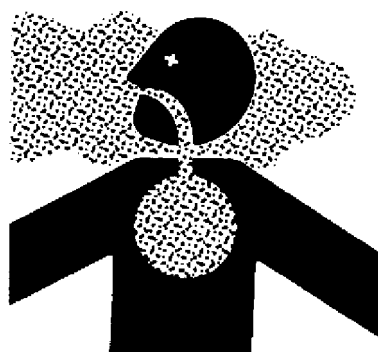
RG5419 -UN-28FEB89

WORK IN VENTILATED AREA

Engine exhaust fumes can cause sickness or death. When operating engine in an enclosed engine room, be sure ventilation system is operating properly.

If engine room ventilation system is not operating properly, open the access door or engine room hatches to get outside air into the enclosed area.

Keep all engine exhaust connections securely tightened. Repair any leaky joints in the exhaust system immediately.



RG20144,6 -19-29JAN92

TS220 -UN-23AUG88

HANDLE FUEL SAFELY—AVOID FIRES

Handle fuel with care: it is highly flammable. Do not refuel the machine while smoking or when near open flame or sparks.

Always stop engine before refueling machine. Fill fuel tank outdoors.

Prevent fires by keeping machine clean of accumulated trash, grease, and debris. Always clean up spilled fuel.



DX,FIRE1 -19-03MAR93

TS202 -UN-23AUG88

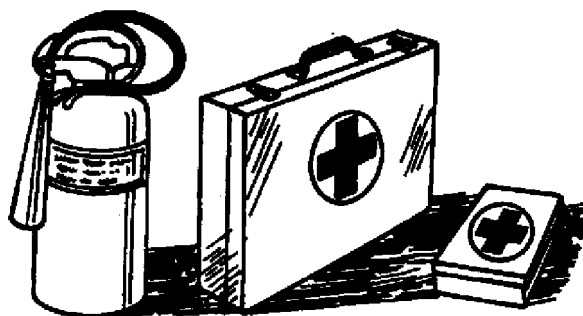


PREPARE FOR EMERGENCIES

Be prepared if a fire starts.

Always keep a first aid kit and fire extinguisher on hand and know how to use them. Inspect and service fire extinguisher as recommended by manufacturer.

Familiarize everyone aboard your vessel with emergency contact procedures. Keep a laminated copy of emergency contact information near your communication radio or telephone, if equipped.



TS291
-UN-23AUG88

RG20144,4 -19-12NOV91

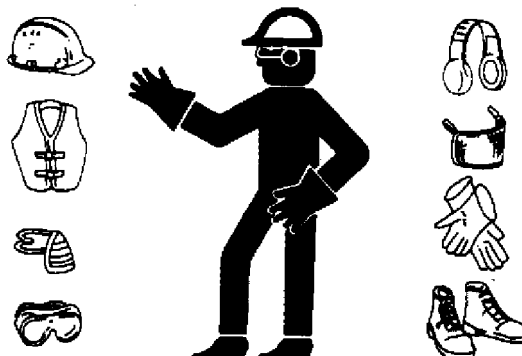
WEAR PROTECTIVE CLOTHING

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

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.

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



TS206
-UN-23AUG88

DX,WEAR -19-10SEP90

PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs or earplugs if working inside an enclosed engine room with engine running.



TS207
-UN-23AUG88

RG20144,5 -19-12NOV91



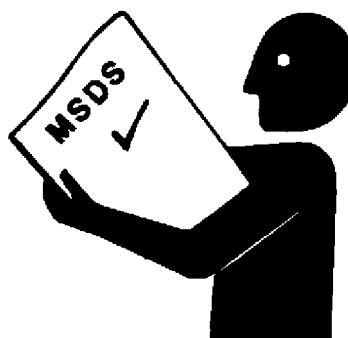
HANDLE CHEMICAL PRODUCTS SAFELY

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-26NOV90

DX.MSDS.NA -19-03MAR93

STAY CLEAR OF ROTATING DRIVELINES

Entanglement in rotating driveline can cause serious injury or death.

Be sure protective guards and shields are securely installed over engine-driven drivelines at all times during engine operation.

Wear close fitting clothing. Stop the engine and be sure the propeller shaft and PTO driveline are stopped before making adjustments or performing any type service on the engine or PTO-driven equipment.



TS198 -UN-23AUG88

RG20144,7 -19-29JAN92



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PRACTICE SAFE MAINTENANCE

Understand service procedures before doing work. Do not attempt repairs that you do not understand. Do not use tools or equipment you do not know how to use.

Keep all parts in good condition and properly installed. Fix damage immediately. Replace worn or broken parts. Remove any buildup of grease, oil, or debris. Keep area clean and dry.

Do not touch any part of an operating engine. Allow the engine to cool before any repairs or adjustments are performed.

Disconnect battery ground (-) cable before making adjustments on electrical system or welding in engine room.



RG20144,9 -19-12NOV91

TS218 -UN-23AUG88

REMOVE PAINT BEFORE WELDING OR HEATING

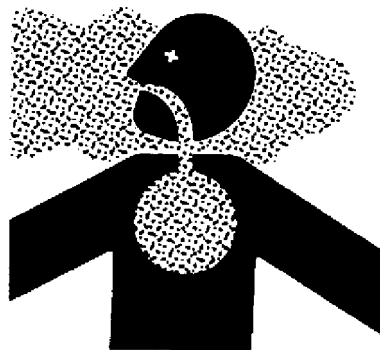
Avoid potentially toxic fumes and dust.

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

Do all work outside or in a well ventilated area. Dispose of paint and solvent properly.

Remove paint before welding or heating:

- 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.



DX,PAINT -19-03MAR93

TS220 -UN-23AUG88

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