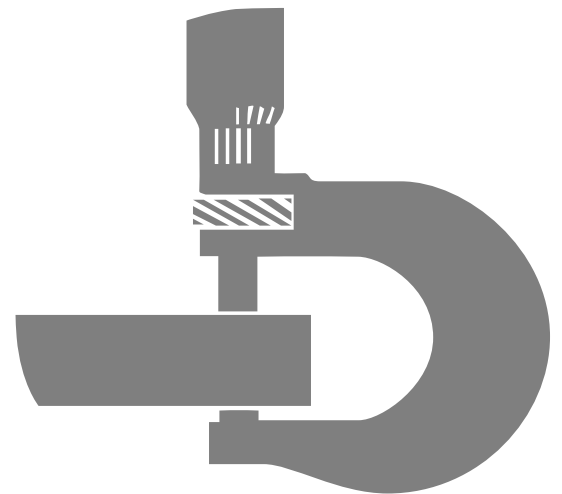


**3029
4039, 4045
6059, 6068
Engines (Saran)
(-499999CD)**

**COMPONENT
TECHNICAL
MANUAL**



**John Deere Usine de Saran
CTM3274 (01JUL99)**

**European Version
Printed in Germany
ANGLAIS**

**3029, 4039, 4045, 6059, 6068
Engines (Saran)
(-499999CD)**

CTM3274 (01JUL99)

Introduction

FOREWORD

This manual is written for an experienced technician. Essential tools required in performing certain service work are identified in this manual and are recommended for use.

Live with safety: Read the safety messages in the introduction of this manual and the cautions presented throughout the text of the manual.



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

Use this component technical manual in conjunction with the machine technical manual. An application listing in the introduction identifies product-model/component type-model relationship. See the machine technical manual for information on component removal and installation, and gaining access to the components.

This manual is divided in two parts: repair and operation and tests. Repair sections contain

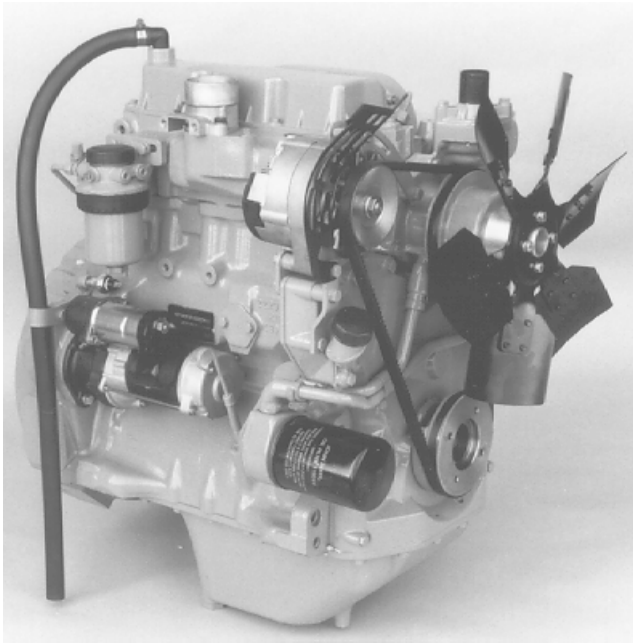
necessary instructions to repair the component. Operation and tests sections help you identify the majority of routine failures quickly.

Information is organized in groups for the various components requiring service instruction. At the beginning of each group are summary listings of all applicable essential tools, service equipment and tools, other materials needed to do the job, service parts kits, specifications, wear tolerances, and torque values.

Component Technical Manuals are concise service guides for specific components. Component technical manuals are written as stand-alone manuals covering multiple machine applications.

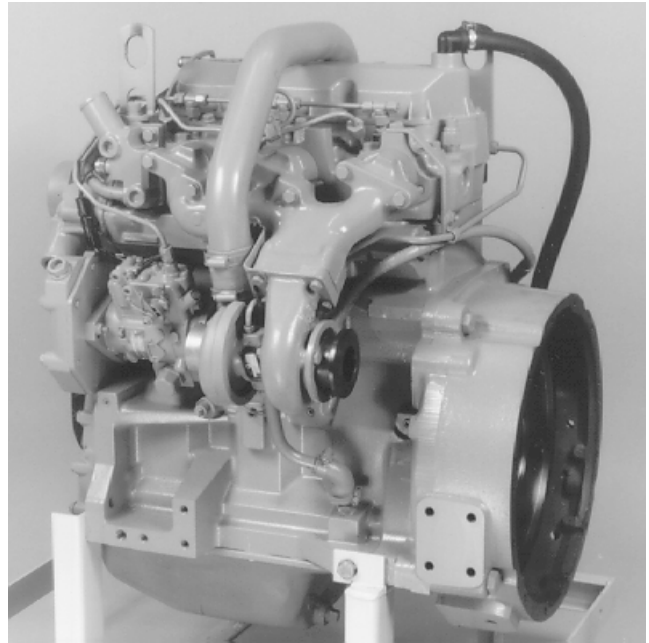
Fundamental service information is available from other sources covering basic theory of operation, fundamentals of troubleshooting, general maintenance, and basic type of failures and their causes.

ENGINE IDENTIFICATION VIEWS



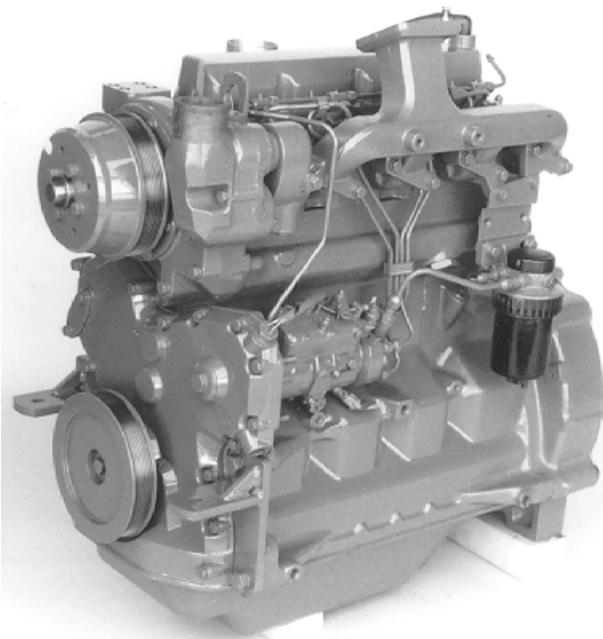
CD30699 -UN-23FEB99

3029D



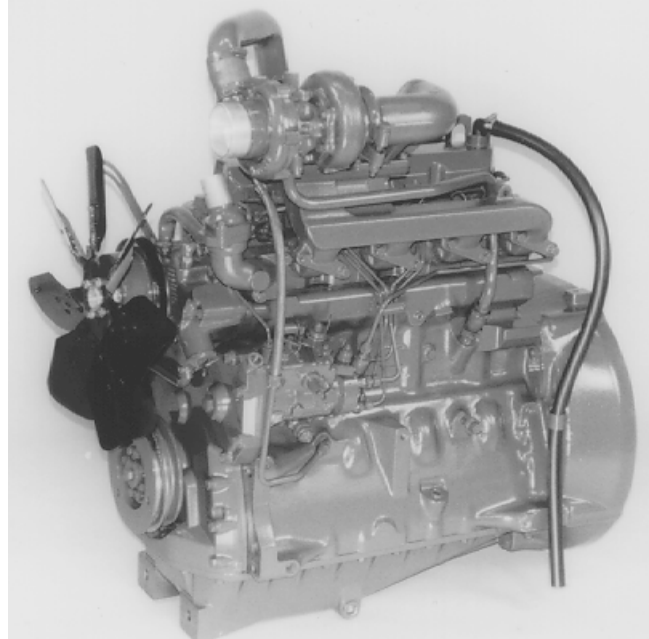
CD30518 -UN-19MAY98

3029T



CD30701 -UN-23FEB99

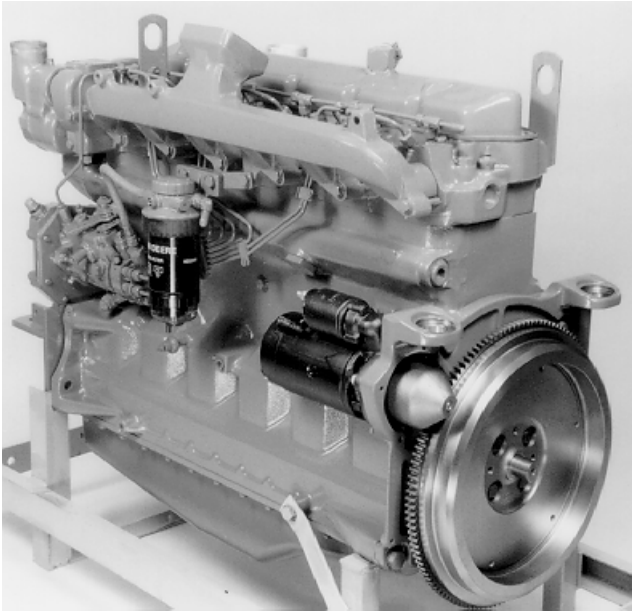
4039D



CD30702 -UN-23FEB99

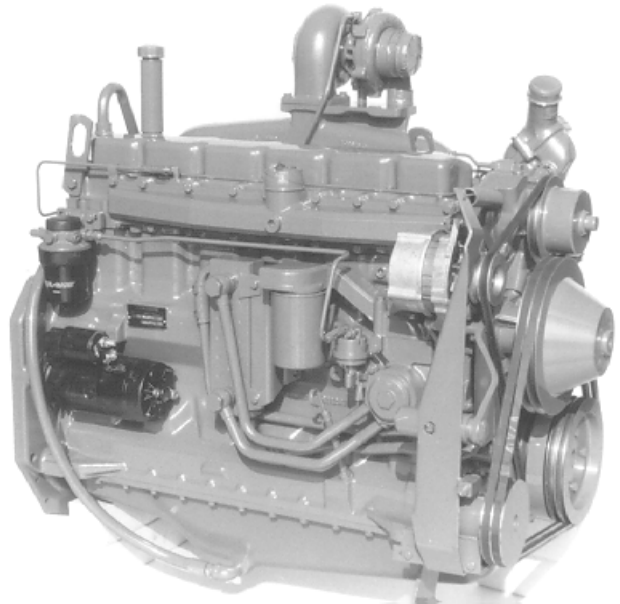
4039T

ENGINE IDENTIFICATION VIEWS (CONT'D)



6068D

CD30703 -UN-23FEB99



6068H

CD30704 -UN-23FEB99

Engine application chart

This Component Technical Manual contains service information on the 3029, 4039, 4045, 6059 and 6068 engines produced by JOHN DEERE Saran (FRANCE) for the applications listed in the application chart.

NOTE: Information on how to remove and reinstall the engine in the vehicle is contained in the relevant Technical Manual.

3000-SERIES TRACTORS	ENGINE MODEL	SERIAL NUMBER
3100	CD3029DRT65	(189846 -)
3110	CD3029DRT65	
3200/3200X	CD4039DRT35	(181345 -)
3210/3210X	CD4039DRT35	
3300/3300X	CD4045DRT35	(182145 -)
3310/3310X	CD4045DRT35	
3400/3400X	CD4039TRT35	(181775 -)
3410/3410X	CD4039TRT35	
4000-SERIES TELESCOPIC HANDLERS	ENGINE MODEL	SERIAL NUMBER
4400	CD4039TF005	(237697 -)
4500	CD4039TF005	
5000-SERIES TRACTORS (Agritalia-built)	ENGINE MODEL	SERIAL NUMBER
5300/5300N	CD3029DAT01	(315424 -)
5400/5400N	CD3029TAT02	(289398 -)
5500/5500N	CD4039TAT01	(346168 -)
5000-SERIES TRACTORS (Augusta-built)	ENGINE MODEL	SERIAL NUMBER
5400N	CD3029TLV01	
5500N	CD4039TLV01	(201353 -)
5000-SERIES TRACTORS (For India)	ENGINE MODEL	SERIAL NUMBER
5300	CD3029DPY01	(383283 -)

(Continued on next page)

CD,3274,G00,24 -19-04JAN99

ENGINE APPLICATION CHART (CONT')

6000-SERIES TRACTORS	ENGINE MODEL	SERIAL NUMBER
6100 (Direct fan drive)	CD4045DL001	(101582 -)
6100 (Viscous fan drive)	CD4045DL002	(101582 -)
6200 (Direct fan drive)	CD4039TL001	(101625 -)
6200 (Viscous fan drive)	CD4039TL004	(101625 -)
6300 (Direct fan drive)	CD4039TL003	(101649 -)
6300 (Viscous fan drive)	CD4039TL006	(101649 -)
6400 (Direct fan drive)	CD4045TL001	(101682 -)
6400 (Viscous fan drive)	CD4045TL003	(101682 -)
6506 (Viscous fan drive)	CD6068DL001	(214852 -)
6600 (Viscous fan drive)	CD6059TL001	(128886 -)
6800 (Viscous fan drive)	CD6068TL001	(124505 -)
6900 (Viscous fan drive)	CD6068TL002	(186326 -)

WATERLOO TRACTORS	ENGINE MODEL	SERIAL NUMBER
7600	T06068TRW01	

ZWEIBRÜCKEN COMBINES	ENGINE MODEL	SERIAL NUMBER
2054	6068HZ001	(116452 -)
2254	6068HZ001	

ENGINES FOR CHINESE COMBINES	SERIAL NUMBER
CD6059TYC01	(367019 -)
CD6059TYC02	(363170 -)

ENGINES FOR GOLDONI TRACTORS	SERIAL NUMBER
CD3029DFG21	(287123 -)
CD3029DFG22	(287325 -)
CD3029TFG21	(287526 -)

(Continued on next page)

CD.3274.G00.25 -19-04JAN99

Engine application chart

ENGINE APPLICATION CHART (CONT')

SARAN OEM ENGINES	SERIAL NUMBER	SARAN OEM ENGINES	SERIAL NUMBER
CD3029DF		CD3029TF	
CD3029DF001		CD3029TF001	
CD3029DF005	(162670 -)	CD3029TF002	(170797 -)
CD3029DF031		CD3029TF031	
CD3029DF032		CD3029TF032	(176015 -)
CD3029DF033	(177875 -)	CD3029TF033	(177880 -)
CD3029DF034		CD3029TF120	
CD3029DF120		CD3029TF121	
CD3029DF121		CD3029TF123	(354029 -)
CD3029DF122	(263024 -)	CD3029TF160	
CD3029DF123	(312932 -)	CD3029TF161	(288419 -)
CD3029DF124	(340207 -)	CD3029TF162	
CD3029DF128		CD3029TF163	(342829 -)
CD3029DF160			
CD3029DF161	(288417 -)		
CD3029DF162			
CD3029DF163			
CD3029DF164			
CD3029DF165			
CD4039DF		CD4039TF	
CD4039DF001		CD4039TF001	
CD4039DF002		CD4039TF002	
CD4039DF004	(152613 -)	CD4039TF003	(169516 -)
CD4039DF005	(165009 -)	CD4039TF004	(152616 -)
CD4039DF006	(340212 -)	CD4039TF005	
CD4039DF007	(378895 -)	CD4039TF006	(339780 -)
CD4039DF008		CD4039TF007	(379066 -)
CD4039DF031		CD4039TF008	
CD4039DF032		CD4039TF031	
		CD4039TF032	(166826 -)
CD4045DF001		CD4045TF001	
CD4045DF031		CD4045TF002	(170081 -)
		CD4045TF003	(342250 -)
		CD4045TF008	
		CD4045TF031	

(Continued on next page)

CD.3274.G00.29 -19-04JAN99

Engine application chart

ENGINE APPLICATION CHART (CONT')

SARAN OEM ENGINES	SERIAL NUMBER	SARAN OEM ENGINES	SERIAL NUMBER
CD6059DF		CD6059TF	
CD6059DF001		CD6059TF001	
CD6059DF002		CD6059TF002	(158390 -)
CD6059DF003		CD6059TF003	(158394 -)
		CD6059TF004	
		CD6059TF005	(166159 -)
		CD6059TF006	(166960 -)
		CD6059TF008	(341217 -)
CD6068DF001		CD6068TF001	
		CD6068TF002	(187378 -)
		CD6068TF003	
		CD6068TF004	(344260 -)
		CD6068TF008	
		CD6068TF009	

CD,3274,G00,30 -19-04JAN99

HANDLE FLUIDS SAFELY—AVOID FIRES

When you work around fuel, do not smoke or work near heaters or other fire hazards.

Store flammable fluids away from fire hazards. Do not incinerate or puncture pressurized containers.

Make sure machine is clean of trash, grease, and debris.

Do not store oily rags; they can ignite and burn spontaneously.



DX,FLAME -19-29SEP98

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1
-UN-23AUG88
TS227

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).



DX,SPARKS -19-03MAR93

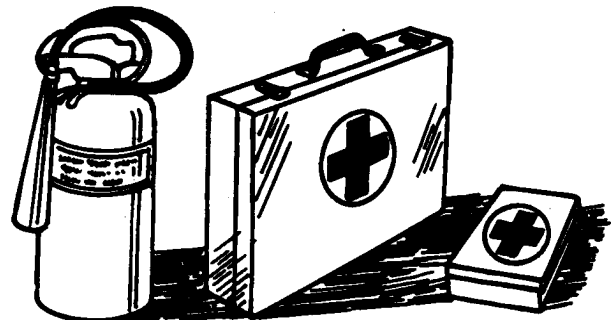
-UN-23AUG88
TS204

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.



DX,FIRE2 -19-03MAR93

-UN-23AUG88
TS291

PREVENT ACID BURNS

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:

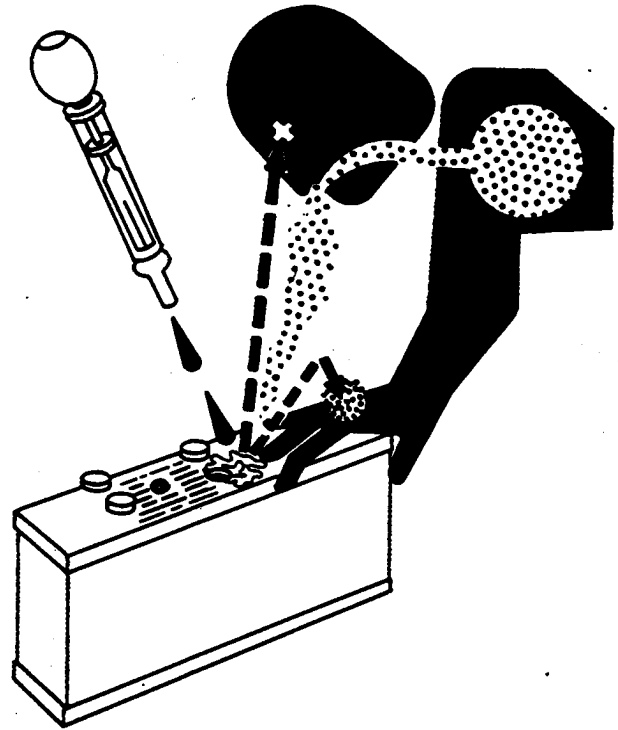
1. Filling batteries in a well-ventilated area.
2. Wearing eye protection and rubber gloves.
3. Avoiding breathing fumes when electrolyte is added.
4. Avoiding spilling or dripping electrolyte.
5. Use proper jump start procedure.

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 2 L (2 quarts).
3. Get medical attention immediately.



TSS203 -UN-23AUG88

DX,POISON -19-21APR93

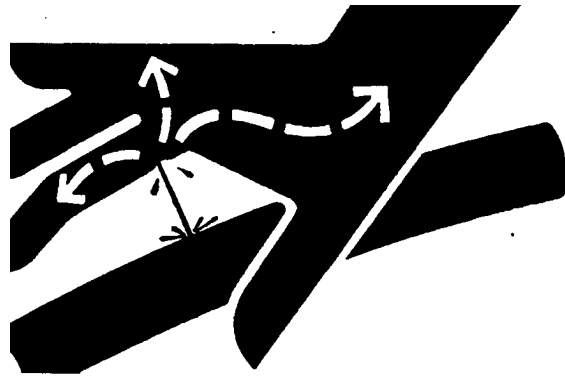
AVOID HIGH-PRESSURE FLUIDS

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 from Deere & Company Medical Department in Moline, Illinois, U.S.A.



DX,FLUID -19-03MAR93

X9811 -UN-23AUG88

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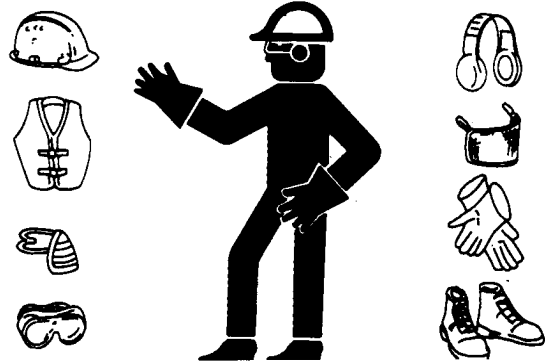
WEAR PROTECTIVE CLOTHING

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.



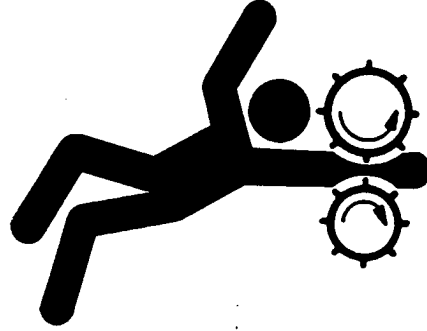
DX,WEAR -19-10SEP90

TS206 -UN-23AUG88

SERVICE MACHINES SAFELY

Tie long hair behind your head. Do not wear a necktie, scarf, loose clothing, or necklace when you work near machine tools or moving parts. If these items were to get caught, severe injury could result.

Remove rings and other jewelry to prevent electrical shorts and entanglement in moving parts.



DX, LOOSE -19-04JUN90

TS228 -UN-23AUG88

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.



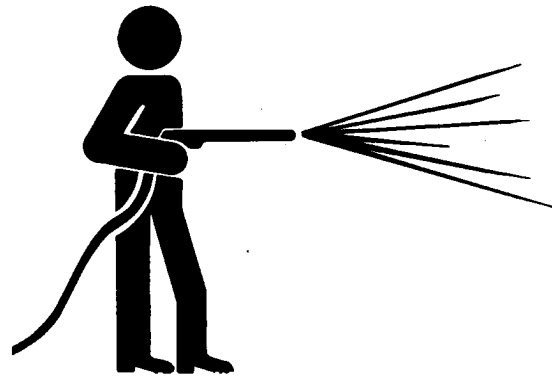
DX, AIR -19-04JUN90

TS220 -UN-23AUG88

WORK IN CLEAN AREA

Before starting a job:

- Clean work area and machine.
- Make sure you have all necessary tools to do your job.
- Have the right parts on hand.
- Read all instructions thoroughly; do not attempt shortcuts.



DX, CLEAN -19-04JUN90

T6642EJ -UN-18OCT88

REMOVE PAINT BEFORE WELDING OR HEATING

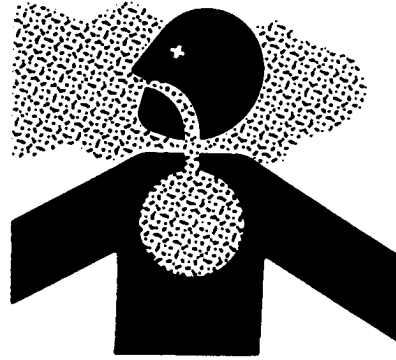
Avoid potentially toxic fumes and dust.

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

500
-UN-23AUG88
TS220

AVOID HEATING NEAR PRESSURIZED FLUID LINES

Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders. Do not heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can be accidentally cut when heat goes beyond the immediate flame area.

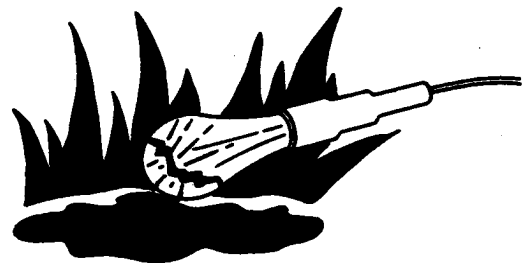


DX,TORCH -19-03MAR93

-UN-15MAY90
TS953

ILLUMINATE WORK AREA SAFELY

Illuminate your work area adequately but safely. Use a portable safety light for working inside or under the machine. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.



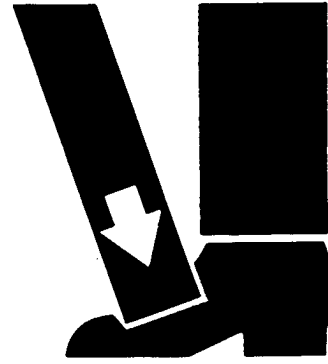
DX,LIGHT -19-04JUN90

-UN-23AUG88
TS223

USE PROPER LIFTING EQUIPMENT

Lifting heavy components incorrectly can cause severe injury or machine damage.

Follow recommended procedure for removal and installation of components in the manual.



DX,LIFT -19-04JUN90

TS226 -UN-23AUG88

PRACTICE SAFE MAINTENANCE

Understand service procedure before doing work. Keep area clean and dry.

Never lubricate, service, or adjust machine while it is moving. Keep hands, feet, and clothing from power-driven parts. Disengage all power and operate controls to relieve pressure. Lower equipment to the ground. Stop the engine. Remove the key. Allow machine to cool.

Securely support any machine elements that must be raised for service work.

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.

On self-propelled equipment, disconnect battery ground cable (-) before making adjustments on electrical systems or welding on machine.

On towed implements, disconnect wiring harnesses from tractor before servicing electrical system components or welding on machine.



DX,SERV -19-04FEB99

TS218 -UN-23AUG88

USE PROPER TOOLS

Use tools appropriate to the work. Makeshift tools and procedures can create safety hazards.

Use power tools only to loosen threaded parts and fasteners.

For loosening and tightening hardware, use the correct size tools. DO NOT use U.S. measurement tools on metric fasteners. Avoid bodily injury caused by slipping wrenches.

Use only service parts meeting John Deere specifications.



DX,REPAIR -19-04JUN90

TS779 -UN-08NOV89

DISPOSE OF WASTE PROPERLY

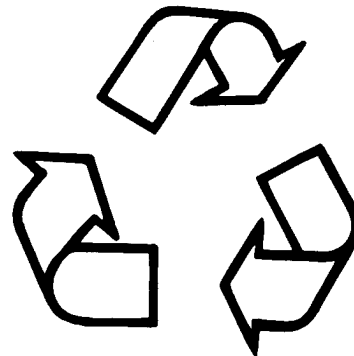
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

Use leakproof containers when draining fluids. Do not use food or beverage containers that may mislead someone into drinking from them.

Do not pour waste onto the ground, down a drain, or into any water source.

Air conditioning refrigerants escaping into the air can damage the Earth's atmosphere. Government regulations may require a certified air conditioning service center to recover and recycle used air conditioning refrigerants.

Inquire on the proper way to recycle or dispose of waste from your local environmental or recycling center, or from your John Deere dealer.



DX,DRAIN -19-03MAR93

TS1133 -UN-26NOV90

LIVE WITH SAFETY

Before returning machine to customer, make sure machine is functioning properly, especially the safety systems. Install all guards and shields.



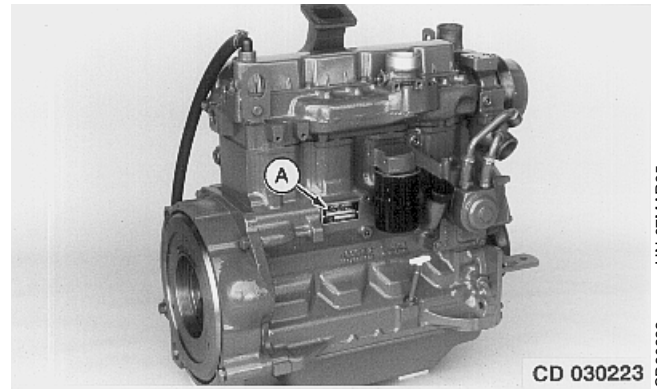
DX,LIVE -19-15APR98

TS231 -19-07OCT88

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8

ENGINE IDENTIFICATION

The engine can be identified from the serial plate (A) located on the right-hand side of the engine. Some applications also have an additional serial plate located on top of the flywheel housing. Refer to the engine type to identify repair information in the Component Technical Manual.



CD,3274,G01,1 -19-24FEB92

-UN-07MAR95
CD30223

ENGINE PLATE INFORMATION (EARLIER DESIGN)

Three types of plates are used on engines and give the following information:

First line (all plates)

- CD Manufacturing factory
(CD = Saran, T0 = Dubuque)
- 4045 Engine model designation
4 = Number of cylinders
045 = Total displacement
(045 = 4.5 liters)
- D Aspiration code
D = Naturally Aspirated
H = air-to-air aftercooled
T = Turbocharged
- 000000 Sequential serial number

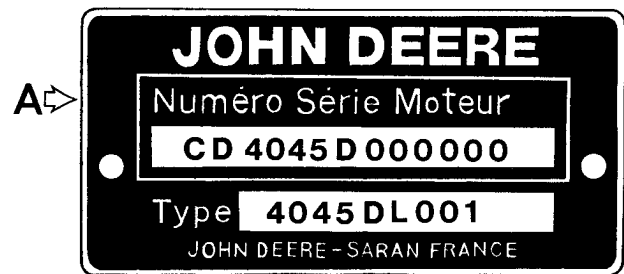
Second line (all plates)

- 4045D See above
- L User code
F = OEM application
L = Mannheim
RW = Waterloo Tractor
Z = Zweibrücken
- 001 Application number

Third line (OEM plates only)

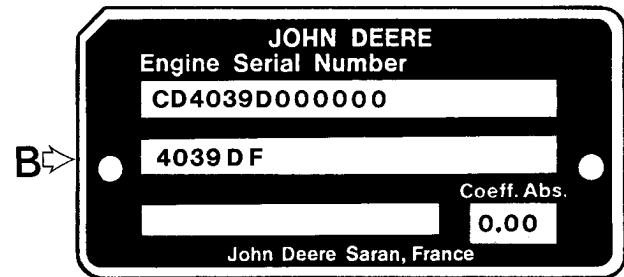
- First field Not used
- Second field Absorption coefficient of smoke emissions (shown on certain OEM engines)

- A—Plate used on John Deere equipment
- B—Plate used on OEM engines
- C—Generic plate used on certain OEM engines



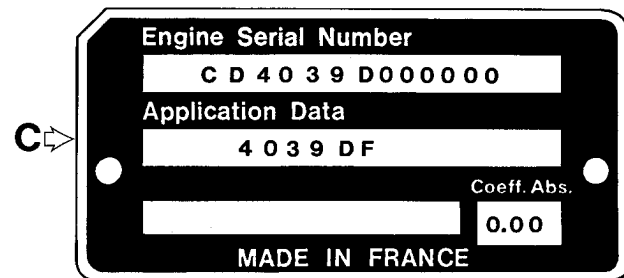
CD 030230

-UN-07MAR95
CD30230



CD 030224

-UN-07MAR95
CD30224



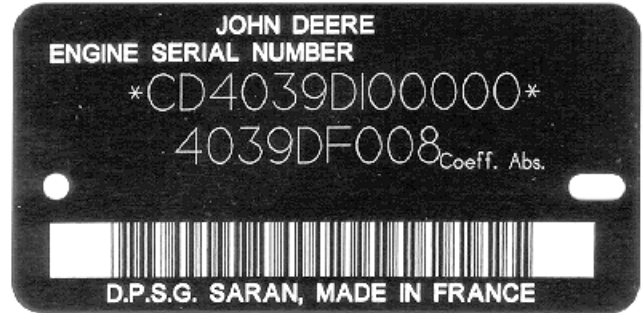
CD 030225

-UN-07MAR95
CD30225

ENGINE PLATE INFORMATION (LATER DESIGN)

A new engine plate design as shown, is now affixed to the engine.

Information on this new plate is the same as previously.



-UN-22FEB99
CD30705

CD,3274,G01,10 -19-04JAN99

REPOWER ENGINE PLATE

A specific plate is fixed on repower engines for proper identification. This plate gives the following information:

First line

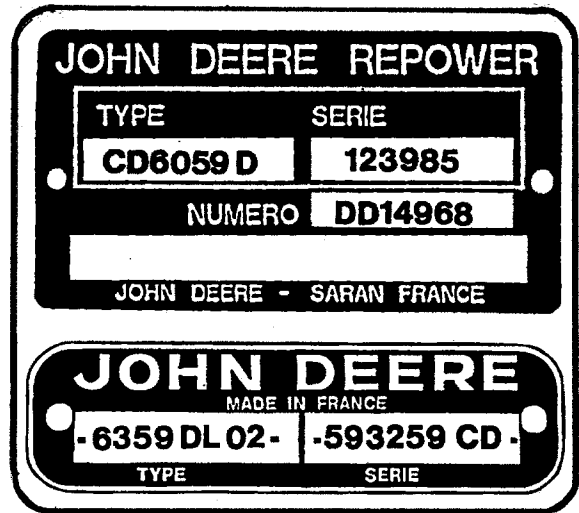
First field Engine type
 Second field Sequential serial number

Second line

DD----- Repower engine part number

The third line contains a bar code information for factory use.

NOTE: The serial number plate from original engine must be fixed on the repower plate as shown.



-UN-22FEB99
CD30706

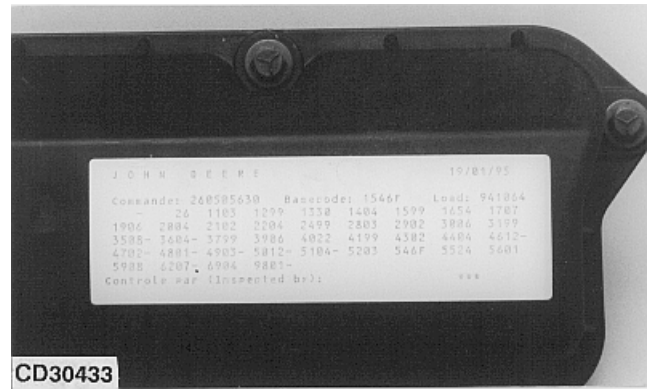
CD,3274,G01,6 -19-04JAN99

OEM ENGINE OPTION CODE LABEL

An option code label is secured to the top of the valve cover and identifies the factory installed options on each OEM engine to ensure correct parts acquisition.

Always provide option code information and engine base code when ordering repair parts. A listing of option codes is given in Parts Catalogs and Operator's Manual.

NOTE: Before "hot tank" cleaning, ensure that option codes are recorded elsewhere.



CD,3274,G01,3 -19-01FEB94

ENGINE REFERENCES

Direction of engine rotation:

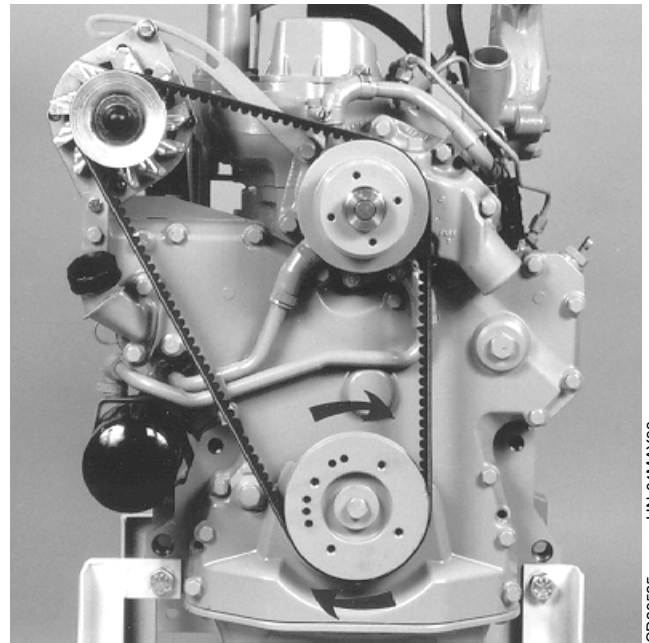
Clockwise rotation when viewed from water pump end.

Engine front reference:

The water pump end is the "front" of the engine. Cylinder number 1 is at the front of engine.

Engine side references:

"Right-hand" and "left-hand" sides are determined by facing the flywheel end (rear) of the engine. Right-hand side is the camshaft side while left-hand side is the fuel injection pump side.



CD,CTM125,005 -19-01DEC97

Click on the image link below for the full version of the service manual

