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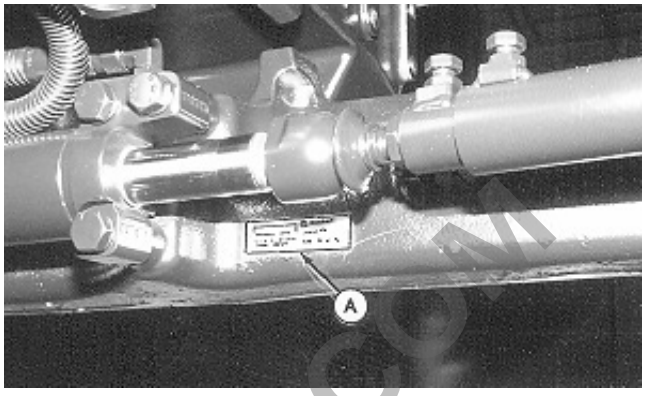
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Front Axle (2WD) Serial Number Location

The 2WD front axle serial number plate (A) is located on the rear right-hand side of the axle.

A—Front Axle Serial Number Plate

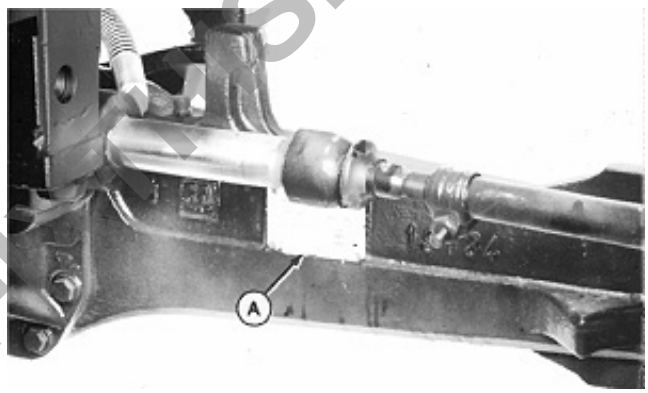


AG,OUO1085,22 –19–31JUL00–1/1

Mechanical Front Wheel Drive (MFWD) Serial Number Location

The MFWD serial number plate (A) is located on the rear side of the right-hand axle housing.

A—MFWD Serial Number Plate

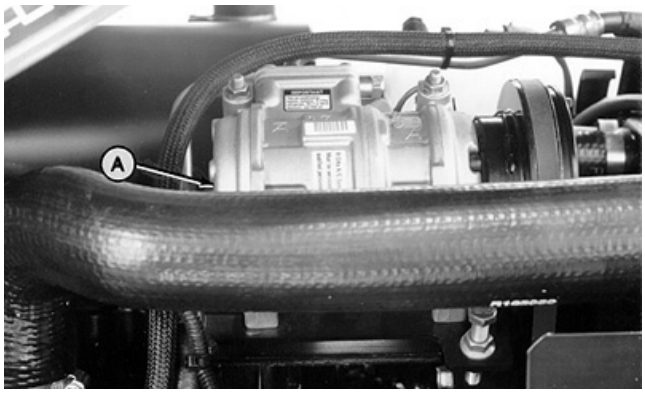


AG,OUO1085,23 –19–31JUL00–1/1

Air Conditioning Compressor Serial Number Location

The air conditioning compressor serial number plate (A) is located on the rear of the housing.

A—Air Conditioning Compressor Serial Number Plate



AG,OUO1085,24 –19–31JUL00–1/1

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Remove, Inspect and Install Fuel Tank—With Cab

NOTE: Fuel tank capacity is approximately 83 L (22 U.S. gal).

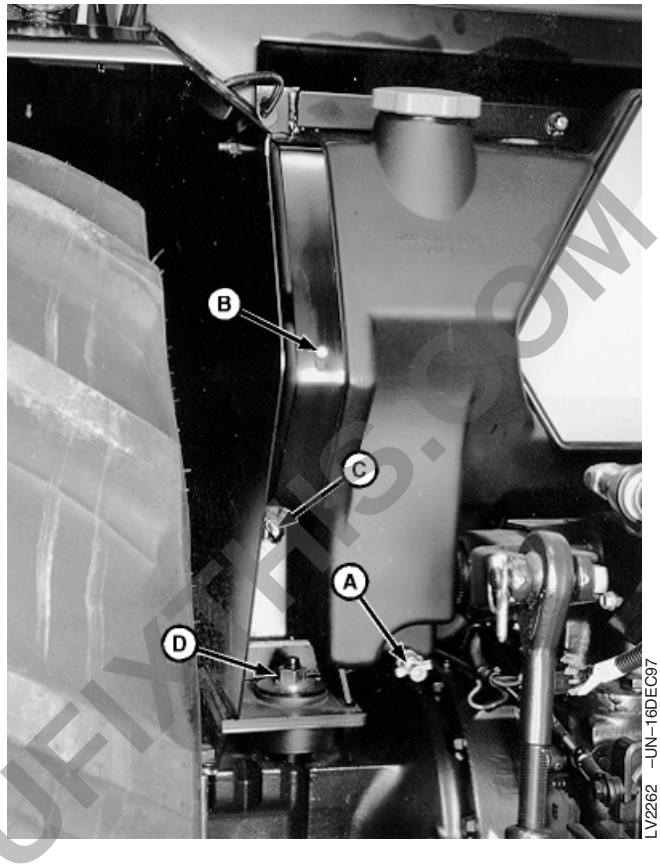
1. Open drain valve (A) and drain fuel tank into proper container. (See Do Not Use Galvanized Containers in Section 10, Group 20.)

2. Remove screw (B) and nut (C) on both sides of fuel tank.

NOTE: Rear of cab must be lifted upward approximately 25.4 mm (1.000 in.) for clearance of fuel tank during removal.

3. Remove rear cab mounting nuts (D) on both sides of cab.

A—Fuel Tank Drain
B—Screw (2 used)
C—Nut (2 used)
D—Nut (2 used)



LV2262 –UN–16DEC97

Continued on next page

AG,OUO1085,45 –19–07AUG00–1/3

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Special or Essential Tools

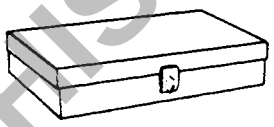
NOTE: Order tools according to information given in the U.S. SERVICEGARD™ Catalog or in the European Microfiche Tool Catalog (MTC).

SERVICEGARD is a trademark of Deere & Company.

DX,JDG155 –19–05JUN90–1/2

TS446 –UN–22JUN89

Electrical Repair Tool Kit. JDG155



For repair and installation of wires into electrical connectors.

DX,JDG155 –19–05JUN90–2/2

Service Equipment and Tools

NOTE: Order tools according to information given in the U.S. SERVICEGARD™ Catalog or from the European Microfiche Tool Catalog (MTC). Some tools may be available from a local supplier.

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AG,OUO1085,263 –19–28AUG00–1/3

Extraction Tool JDG364

Pulls wire from connector body.

AG,OUO1085,263 –19–28AUG00–2/3

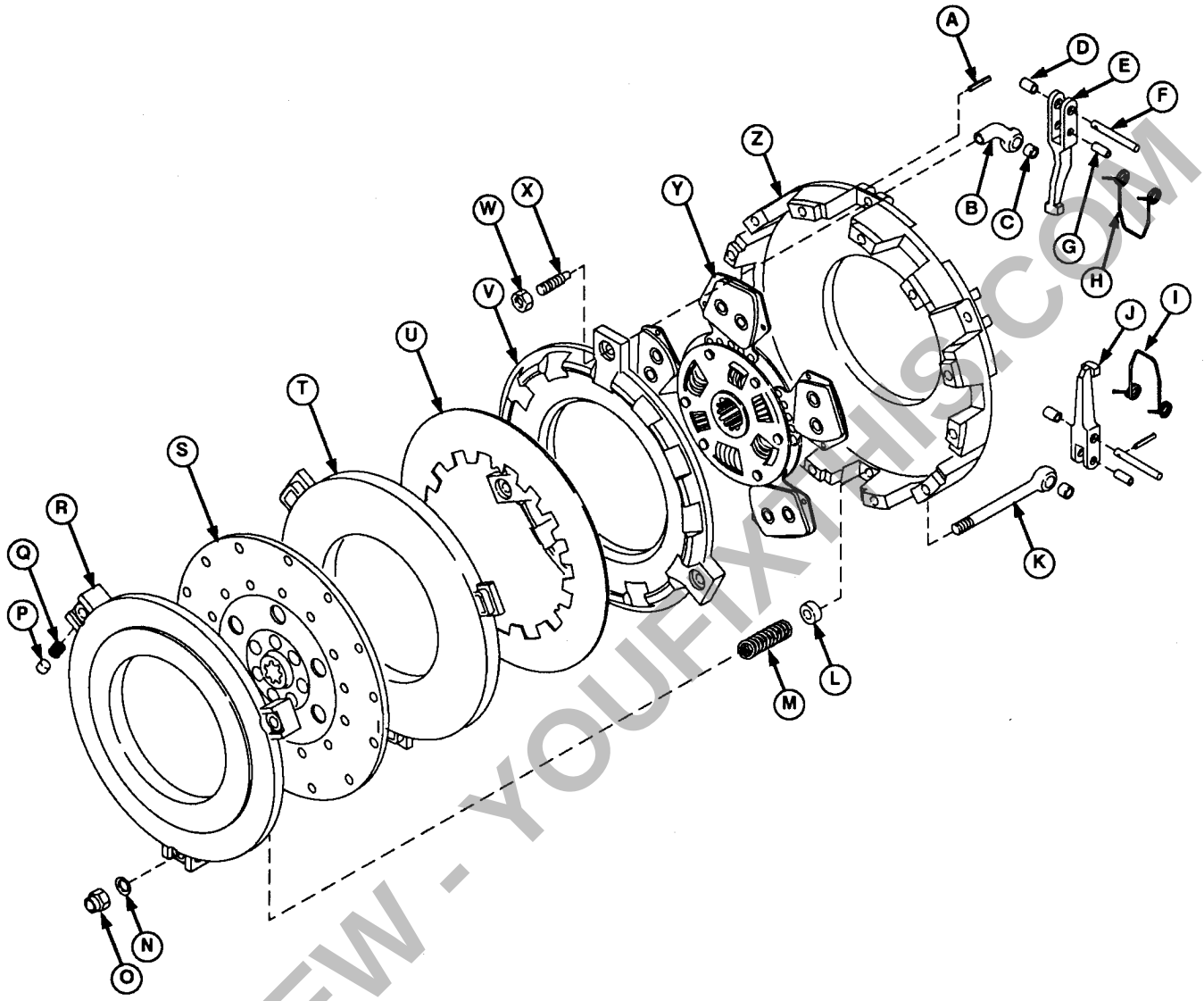
Terminal Applicator JDG783

Applies contact to terminal wire.

AG,OUO1085,263 –19–28AUG00–3/3

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LV030AE –UN–03MAR92

Clutch Assembly

A—Spring Pin (6 used)
B—Adjuster Cap (3 used)
C—Bushing (6 used)
D—Bushing (6 used)
E—Traction Clutch Finger (3 used)
F—Pin (6 used)
G—Pin (6 used)
H—Spring (3 used)
I—Spring (3 used)
J—PTO Clutch Finger (3 used)
K—Adjuster (3 used)
L—Spacer (3 used)
M—Spring (3 used)
N—Conical Washer (3 used)
O—Lock Nut (3 used)
P —Pad (3 used)
Q—Spring (3 used)
R—PTO Clutch Front Pressure Plate
S—PTO Clutch Disk
T—PTO Clutch Rear Pressure Plate
U—Spring Washer
V—Traction Clutch Front Pressure Plate
W—Nut
X—Adjuster Stud
Y—Traction Clutch Disk
Z—Traction Clutch Rear Pressure Plate

NOTE: Spring pins (A) must be pulled from bore to remove.

PTO clutch and traction clutch finger assemblies are serviced as separate kits. Kits are available through the parts catalog.

2. Disassemble parts (A—Z).
3. Inspect all parts for wear or damage. Replace as necessary.
4. Replace lock nuts (O).

Continued on next page

AG,OUO1085,127 –19–28JUN02–2/5

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Service Equipment and Tools

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OUO1043,0000EA4 –19–28JUN02–1/2

Flywheel Turning Tool JDE83

Rotates flywheel.

OUO1043,0000EA4 –19–28JUN02–2/2

Other Material

Number	Name	Use
TY15130 (U.S.)	John Deere Sealer	Seals shift lever housings.
TY6305 (U.S.) TY9485 (Canadian) 7649 (LOCTITE®)	Clean and Cure Primer	Cleans mating surfaces and reduces sealant curing time.
TY9370 (U.S.) TY9477 (Canadian) 242 (LOCTITE®)	Thread Lock and Sealer (Medium Strength)	Apply to PTO and traction clutch yoke-to-armshaft cap screw threads. Apply to shift fork-to-shaft cap screw threads.

LOCTITE is a registered trademark of Loctite Corp.

OUO1043,0000EA5 –19–28JUN02–1/1

50
15
1

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26. Remove MFWD drive shaft, if equipped. (See Remove, Inspect and Install MFWD Drive Shaft in Group 35.)

27. Install wood blocks between the front axle pivot stops and tractor frame. Chock front and back of rear wheels.

28. Position a floor jack under the transmission and a support stand under end of drawbar.

29. Attach a hoist and lifting chains or strap around clutch housing.

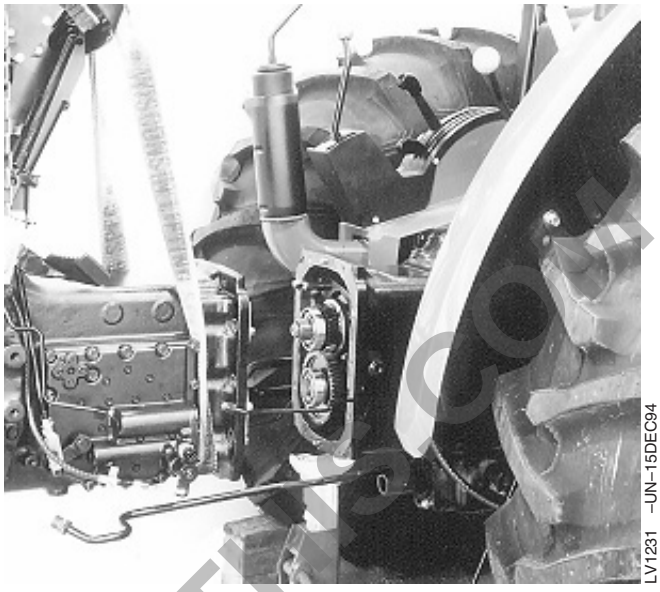
30. Place range shift lever in neutral and move gear shift lever fully left to neutral position between 1st and 2nd gears. Use wire or rope to hold gear shift lever in this position.

NOTE: When separating, the main outer shaft, gear fork shaft, and driven shaft assemblies must remain in transmission case.

50
16
6

31. Remove ten cap screws. Roll front section of tractor (clutch housing) away from rear section (transmission).

32. Install a support stand under clutch housing.



LV1231 –UN–15DEC94

AG,OUO1085,166 –19–18AUG00–5/5

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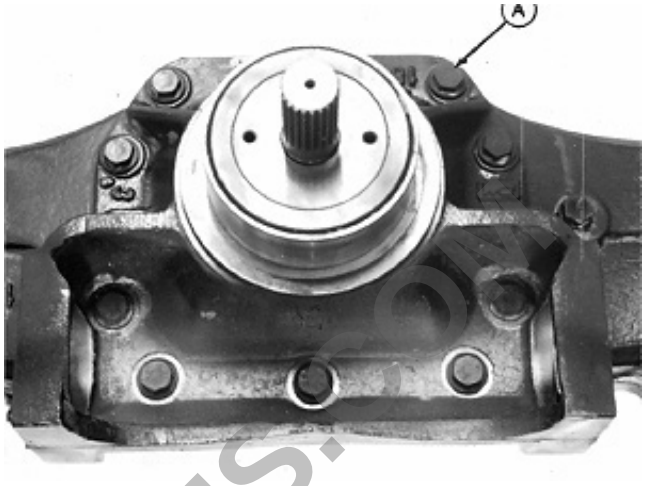
11. Assemble all parts.

AG,OUO1085,183 –19–14NOV02–3/3

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Remove and Install MFWD Differential Carrier Assembly



A—Cap Screw (10 used)

1. Remove steering cylinder. (See Remove and Install Steering Cylinder—MFWD Axle in Section 60, Group 05.)
2. Remove axle supports. (See Remove, Inspect and Install MFWD Axle Supports in this group.)
3. Remove MFWD axle shafts. (See Remove, Inspect, and Install MFWD Axle Shaft in this group.)

NOTE: Approximate capacity of axle housing is 5 L (5.3 U.S. qt).

4. Drain axle housing.
5. Remove ten cap screws (A) to remove carrier housing.
6. Make repairs as necessary. (See Disassemble and Inspect MFWD Differential Carrier Assembly in this group.)
7. Clean mating surfaces of housing using Clean and Cure Primer. Apply John Deere Flexible Sealant to mating surfaces of housings.
8. Install differential carrier housing.
9. Install cap screws and tighten to specifications.

Specification	
Differential Carrier-to-Axle Housing Cap Screws—Torque	169 N•m (125 lb-ft)

10. Install steering cylinder. (See Remove and Install Steering Cylinder—MFWD Axle in Section 60, Group 05.)
11. Install MFWD axle shafts. (See Remove, Inspect, and Install MFWD Axle Shaft in this group.)
12. Install MFWD axle and supports. (See Remove, Inspect and Install MFWD Axle Supports and Remove and Install MFWD Axle Housing Assembly in this group.)

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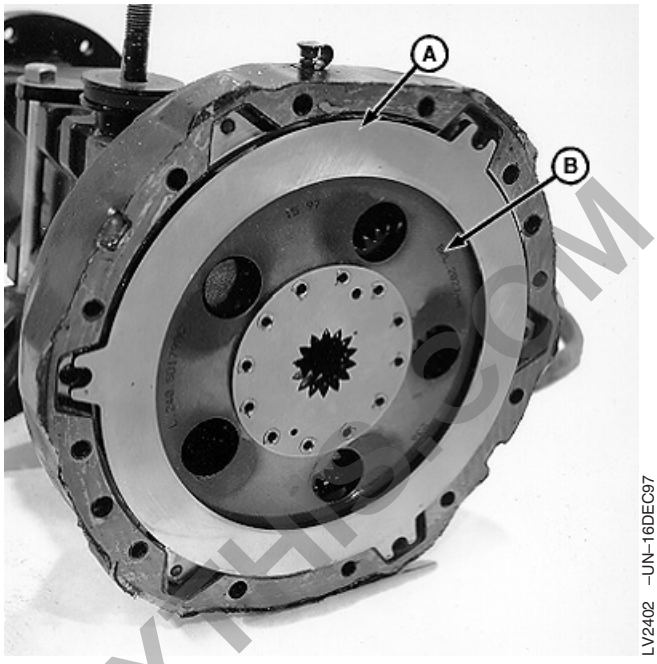
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IMPORTANT: Back plate (A) is machined on one side only. Plates must be installed so that machined side of plate (A) is facing friction disc (B).

8. Install friction disc (B) and back plate (A) with machined side facing friction disc.

9. Install final drive assembly. (See Remove and Install Final Drive Assembly in Section 50, Group 30.)

A—Back Plate
B—Friction Disc



LV2402 –UN–16DEC97

AG,OUO1085,326 –19–30AUG00–3/3

60
10
14

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6. Inspect all parts for wear or damage. Replace as necessary.

NOTE: Notched spool detent (H) is used on 5-groove spool (D) only.

7. Install parts (C) and (N—Q).

8. Install main relief valve (B). Tighten to specifications.

9. Apply thread lock and sealer (high-strength) to threads of spool detents (H and I).

10. Install parts (E—H) or (I—L) to spool ends.

11. Install new O-rings (A) in housing.

12. Coat spools and bores with clean transmission/hydraulic oil.

13. Install spools.

14. Apply multipurpose grease to springs (F and K).

Specification

Main Relief Valve—Torque	51 N•m (38 lb-ft)
Spool Detents—Torque	4 N•m (35 lb-in.)

OUO1085,0000174 –19–23JUL02–3/4

15. Install caps (E).

16. Apply multipurpose grease to balls (C).

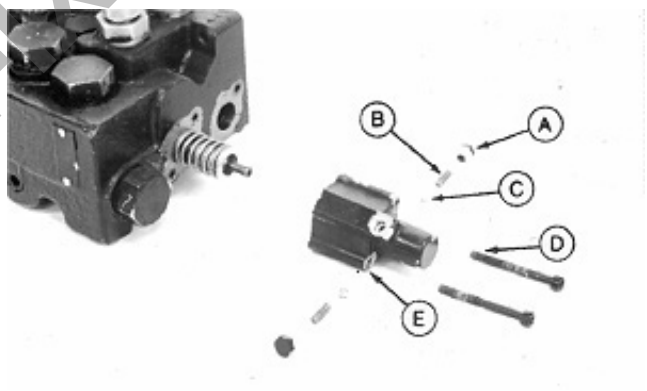
17. Install parts (A—C).

18. Apply thread lock and sealer (low strength) to threads of socket head cap screws (D).

19. Install socket head cap screws and tighten to specification.

Specification

Dual SCV End Cap Socket Head Cap Screws—Torque	7 N•m (62 lb-in.)



LV341 –UN–28FEB92

A—Plug (4 used)
B—Spring (4 used)
C—Ball (4 used)
D—Socket Head Cap Screw (4 used)
E—Cap (2 used)

OUO1085,0000174 –19–23JUL02–4/4

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17. Install the pulley-clutch hub and check clearance. (See Disassemble and Assemble Compressor Clutch in this group.)

AG,OUO1085,242 –19–17JUL02–4/4

Check Compressor Clutch Hub Clearance

NOTE: The clutch coil is NOT polarity sensitive.

1. Check pulley-to-clutch hub clearance using a dial indicator. Mount the gauge to the pulley as illustrated and connect a set of jumper wires from the compressor to a 12V battery.

2. Rotate the pulley and check clearance in three equally spaced locations around the clutch hub. Add or remove shims as required to meet specification.

Specification	
Compressor Pulley-to-Clutch Hub—Clearance	0.35—0.65 mm (0.014—0.026 in)

3. Tighten clutch shaft bolt to specification after correct clearance is obtained.

Specification	
Compressor Shaft Bolt—Torque	14 N•m (10 lb-ft)



LV1467 –UN–05DEC95

AG,OUO1085,243 –19–17JUL02–1/1

Inspect Compressor Manifold

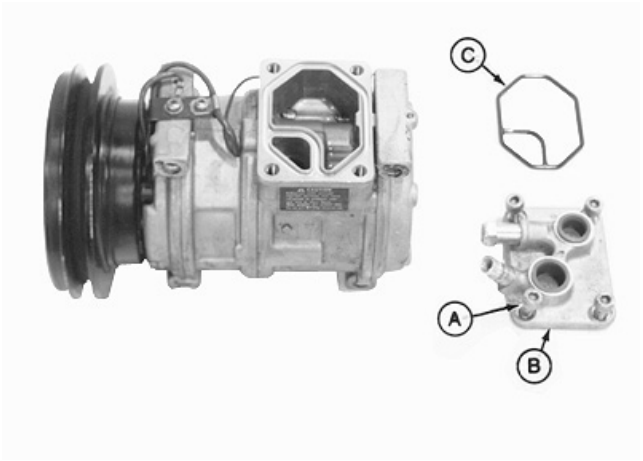
1. Remove cap screws (A) and the manifold (B).

2. Remove and discard seal (C). Inspect porting surfaces.

3. Lubricate and install a new seal (C).

4. Install manifold (B) and tighten cap screws (A) to specification.

Specification	
Compressor Through Bolts—Torque	26 N•m (19 lb-ft)



LV1468 –UN–05DEC95

A—Manifold Cap Screw
B—Manifold
C—Manifold Seal

AG,OUO1085,244 –19–17JUL02–1/1

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Range Lever Shift Check

CONDITIONS:

- Operator on seat.
- Engine running at specific rpm.

PROCEDURE:

- Depress clutch pedal.
- Put transmission shift lever (A) in gear.
- Put range shift lever (B) in speed range A. Put PowrReverser™ selector lever, if equipped, in forward position.
- Release clutch pedal and move machine in gear.
- Depress clutch pedal and stop machine.
- Repeat above procedure with remaining speed ranges.

NORMAL:

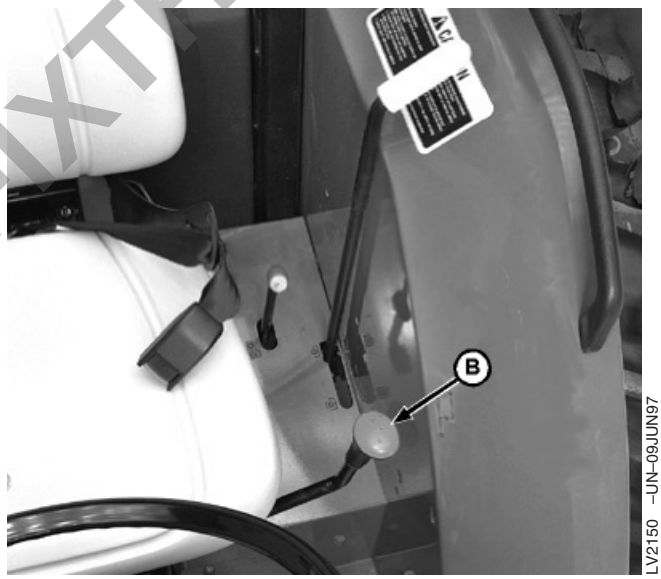
- Machine moves smoothly. Ground speed increases as higher gears and speed range are selected.
- Range shift stays in range selected.
- No excessive gear noise.

IF NOT NORMAL:

- Go to Diagnosis, Tests, and Adjustments—CS/SS Transmissions or Diagnosis, Tests, and Adjustments—PowrReverser™ Section 250, Groups 15 or 16 for diagnosis, tests, and adjustments.



LV2149 –UN–09JUN97



LV2150 –UN–09JUN97

A—Transmission Shift Lever
B—Range Shift Lever

AG,OUO1085,315 –19–25JUL02–1/1

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Bleed Fuel System

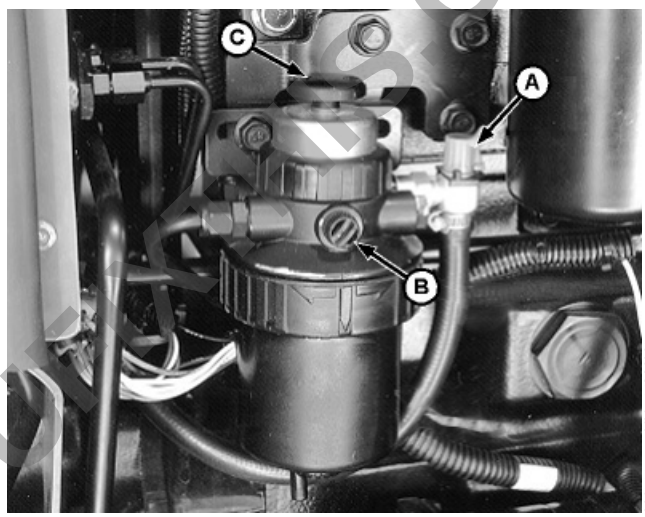
220
15
32

CAUTION: 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.



X9811 –UN–23AUG88



LV2167 –UN–14MAY97

A—Fuel Shut-Off Valve
B—Filter Bleed Plug
C—Fuel Pump Primer

REASON:

If the fuel system has been serviced (lines disconnected or filter removed), it will be necessary to bleed air from the system.

IMPORTANT: Do not attempt to start engine while bleeding fuel system. Injection pump can be damaged.

PROCEDURE:

1. Check that fuel level in tank is adequate.
2. Open fuel shut-off valve (A) at fuel filter.
3. Open filter bleed plug (B).
4. Operate supply pump primer (C) until air-free fuel flows from plug. Tighten plug (B) securely.
5. Start engine and check for leakage. If engine will not start, it may be necessary to bleed air from fuel system at fuel injection pump or injection nozzles as explained next.

Continued on next page

AG,OUO1032,3323 –19–31MAY00–1/2

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A—Battery
B—Fuse Link
C—30-Amp Fuse
D—Light Switch
E—Diode Pack
F—Instrument Lights
G—Fuel Gauge
H—Temperature Gauge
I—High Beam Indicator
J—20-Amp Fuse
K—20-Amp Fuse
L—Right Headlight
M—Left Headlight
N—Ground
O—Power Circuit
P—Low Beam Current
Q—Instrument Light Current
R—Ground Circuit
S—High Beam Current

FUNCTION:

Provide low and high beam illumination for visibility at night. Also provide illumination for gauges in instrument panel.

MAJOR COMPONENTS:

- 30-Amp Fuse
- 20-Amp Fuses
- Light Switch
- Diode Pack
- Right Headlight
- Left Headlight
- Instrument Lights

THEORY OF OPERATION:

When light switch is moved to fourth position from off, current flows on circuit 002 from battery, through 30-amp fuse (C), then through switch contacts and out circuit 134. Flow continues through 20-amp fuse (K) to circuit 114 and the low beam filament of the headlight bulbs. Current also flows through one diode of diode pack (E) to instrument lights (F). Remaining diode blocks current from passing into high beam circuit.

When light switch is moved to third position from off, current passes from switch on circuit 113 and passes through 20-amp fuse (J). Current moves on circuit 119 to high beam filament of both headlight bulbs and high beam indicator (I) light.

Light switch operates instrument lights (F) in either headlight position. Depending on switch position, current will flow out of switch on circuit 134 or 113 and through its respective fuse. Flow continues through diode pack to circuit 138 and on to instrument lights. Diode pack also blocks current flow from feeding back across one headlight circuit to the other.

AG,OUO1085,381 –19–18SEP00–2/2

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NOTE: Illustration shows the rear work light connectors disconnected for identification purposes only. Disconnect connector(s) only if test requires it.

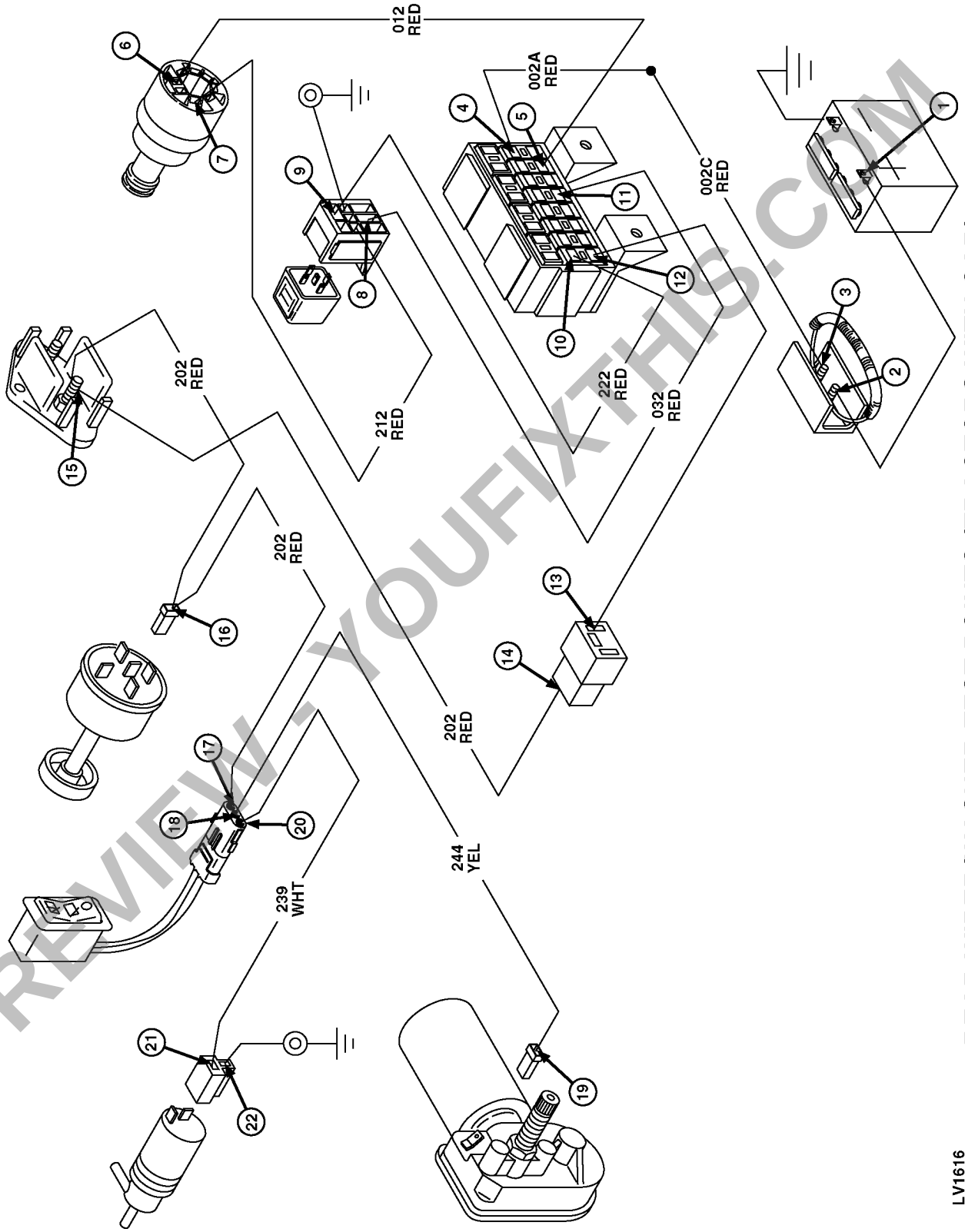
Test Location	Normal	If Not Normal
11. Female end of purple wire bullet connector located below left support of ROPS. (Disconnect bullet connector.)	Battery voltage.	Check for corroded connections or break in wire between bullet connector and fuse block.
12. Terminal A of female socket side of rear work light connector.	Battery voltage.	Check for corroded connections or break in wire between fuse block and work light connector.
13. Terminal B of female socket side of rear work light connector.	Less than 0.2 volt.	Check or replace bulb. Check continuity of black wires Nos. 010R-010A through bullet connector to cap screw (ground) on rockshaft cover.

AG,OUO1085,401 –19–20SEP00–3/3

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Rear Wiper/Washer Test Points (Tractors With Cab)



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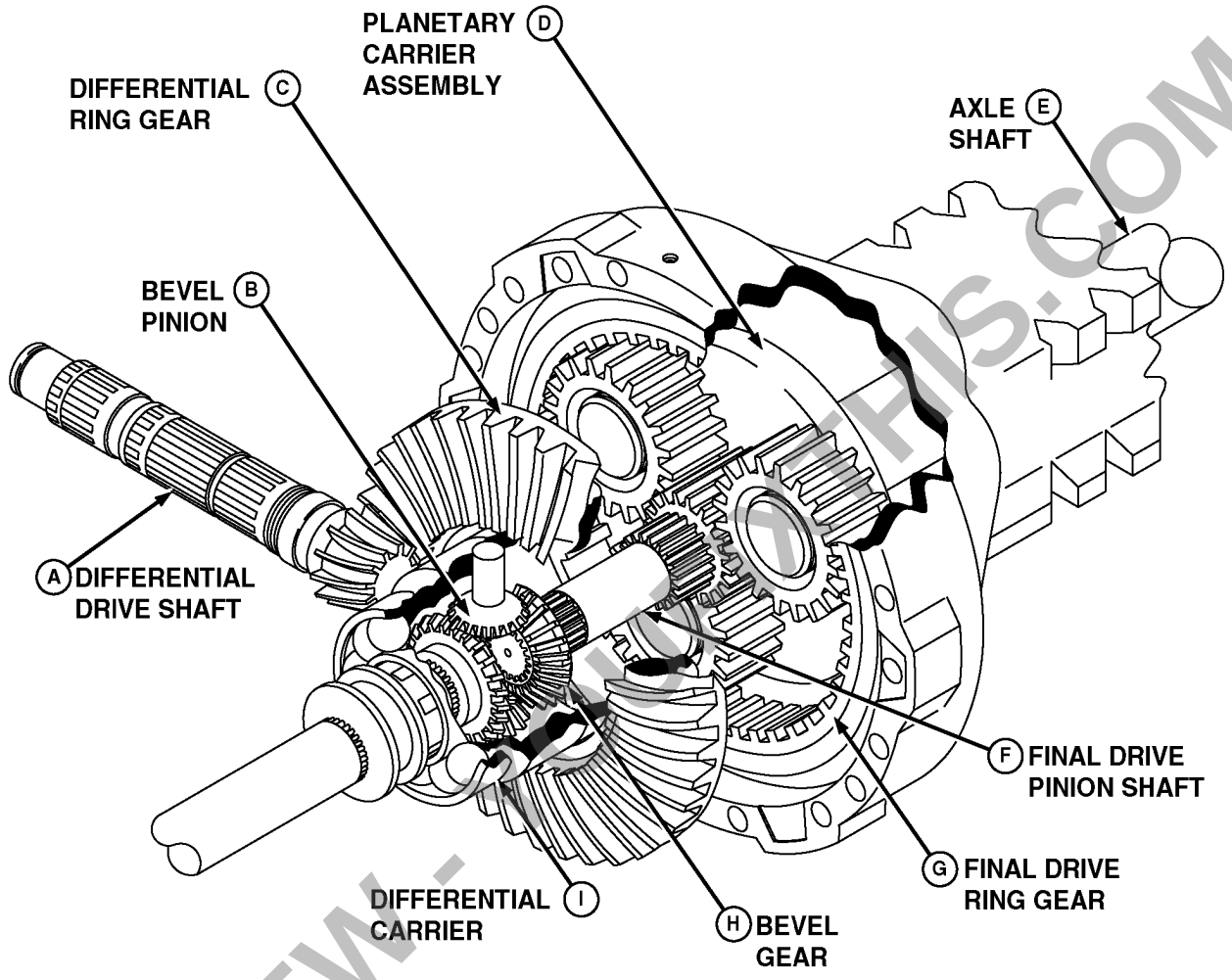
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Differential Power Flow



LV269AE

DIFFERENTIAL POWER FLOW

LV269AE –19–27FEB96

A—Differential Drive Shaft
B—Bevel Pinion
C—Differential Ring Gear
D—Planetary Carrier Assembly
E—Axle Shaft
F—Final Drive Pinion Shaft
G—Final Drive Ring Gear
H—Bevel Gear
I—Differential Carrier

FUNCTION:

The differential transmits power from the differential drive shaft to the final drive pinion shafts. It allows each wheel to rotate at varying speeds and still pull its own load.

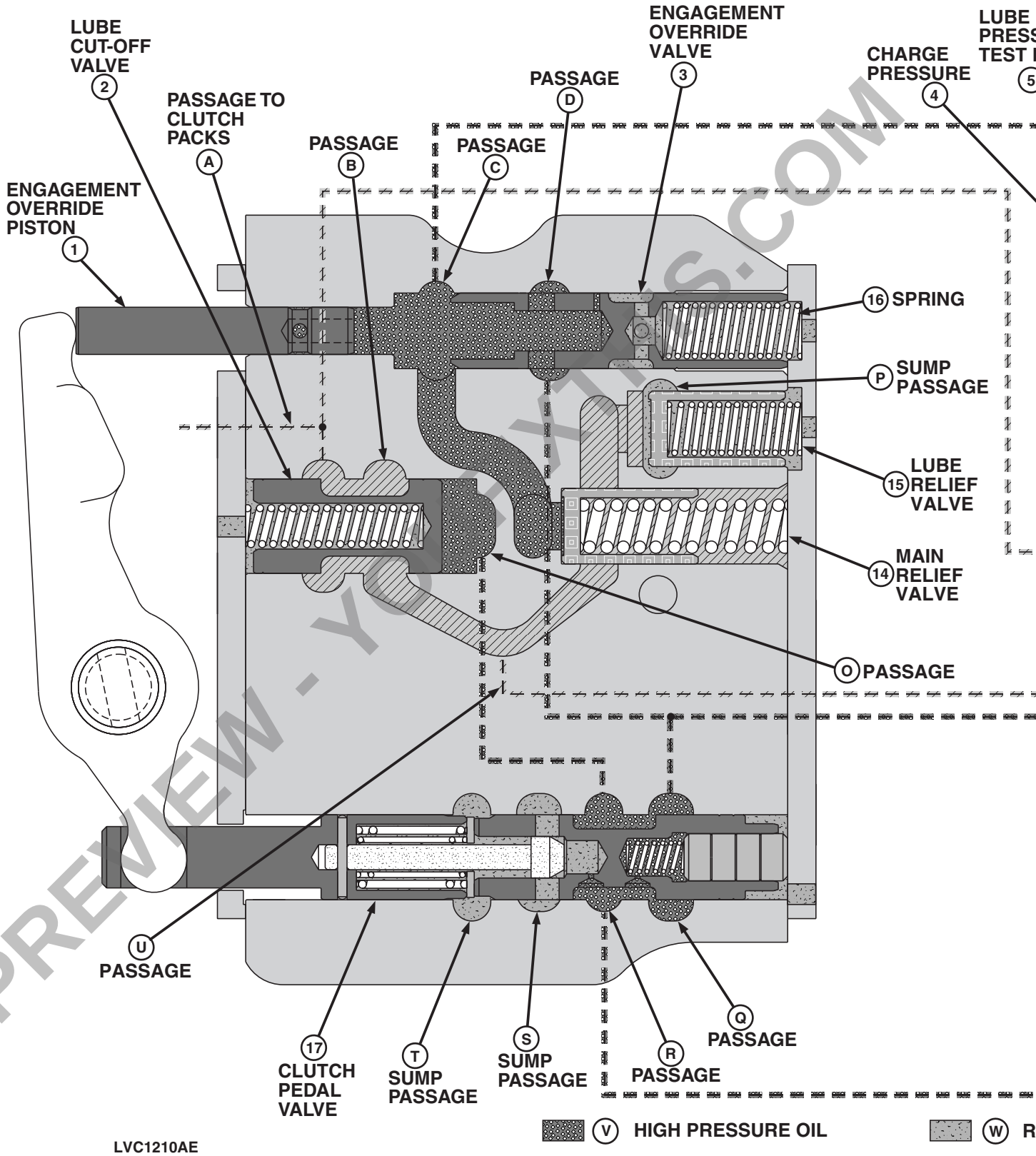
MAJOR COMPONENTS:

- Differential Drive Shaft
- Differential Ring Gear
- Differential Carrier Assembly
- Final Drive Pinion Shafts

Continued on next page

OUO1085,00001CF –19–02OCT00–1/2

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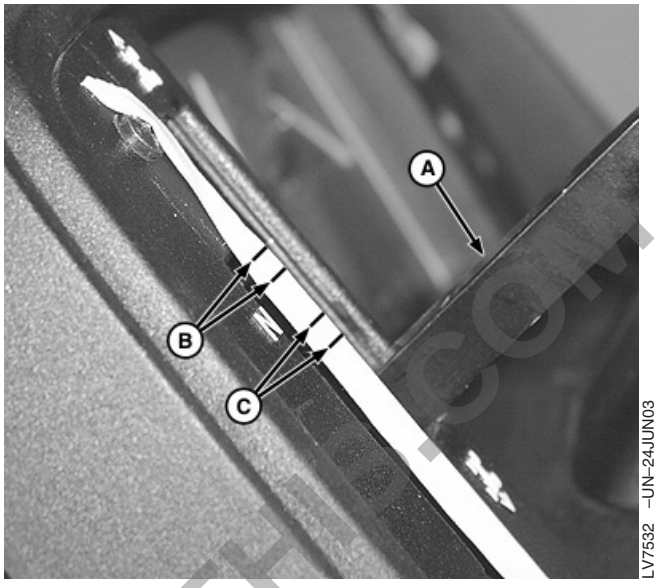
15. Position the control lever (A) in reverse.

16. Measure the distance between the top two marks (B) and the bottom two marks (C) on the masking tape.

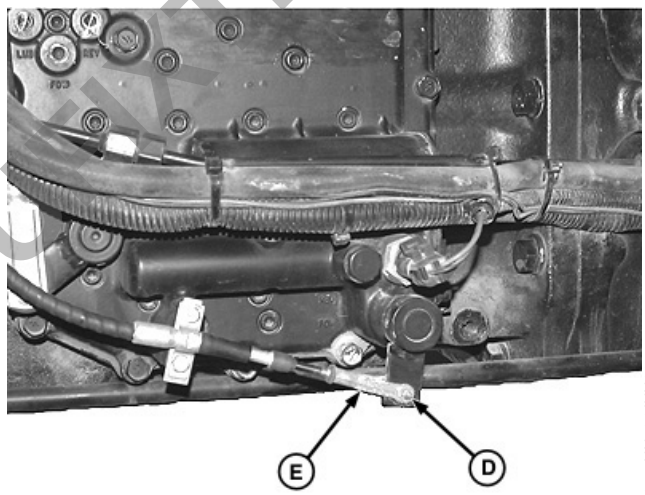
17. Record and compare the two measurements. If measurements are not equal remove the retaining pin (D) and turn yoke (E) in or out until the two measurements (B and C) at control lever are equal.

18. Repeat steps 11 through 20 of Adjust Forward-Neutral-Reverse Cable using a new piece of masking tape if measurements are not equal.

A—Control Lever
B—Top Two Marks
C—Bottom Two Marks
D—Retaining Pin



LV7532 –UN–24JUN03



LV7533 –UN–24JUN03

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OUO1023,0000412 –19–12APR04–6/7

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A—Rockshaft Valve
B—Inlet Housing
C—Left Brake Pressure Line
D—Rockshaft Draft-Sensing Lever
E—Transmission Lubrication Line
F—Steering Valve
G—Brake Valve
H—Hydraulic Oil Cooler
I—Cooler Inlet Line
J—Cooler Outlet Line
K—Right Turn Pressure Line
L—Hydraulic Pump
M—Steering Cylinder
N—Steering Pump
O—Left Turn Pressure Line
P—Supply Line to Steering Valve
Q—Suction Line
R—Right Brake Pressure Line
S—Return Line to Transmission Case
T—Supply Line to Inlet Housing
U—Rockshaft Position-Sensing Lever
V—Hydraulic Oil Filter
W—Main Relief Valve
X—Mesh Filter

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Section 290
Operator Station

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