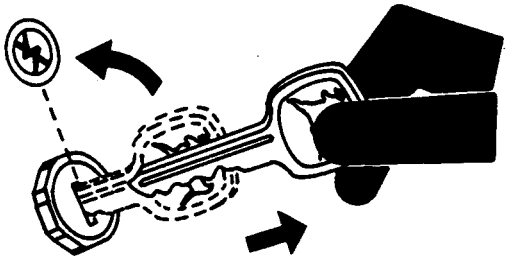
Contents

Park Machine Safely

Before working on the machine:

- Lower all equipment to the ground.
- Shift transmission to PARK.
- Engage park brake if equipped.
- Stop the engine and remove the key.
- Disconnect the battery ground strap.
- Hang a "DO NOT OPERATE" tag in operator station.



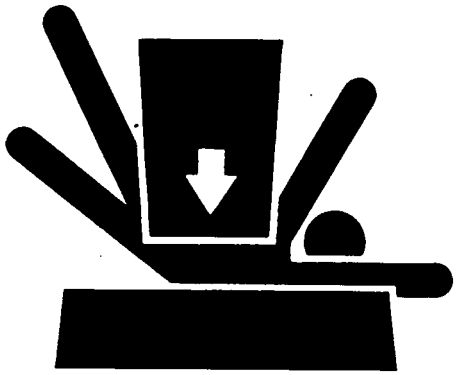
TS230 –UN–24MAY89

CED,OUO1085,7 –19–26JUL00–1/1

Support Machine Properly

Always lower the attachment or implement to the ground before you work on the machine. If you must work on a lifted machine or attachment, securely support the machine or attachment.

Do not support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load. Do not work under a machine that is supported solely by a jack. Follow recommended procedures in this manual.



TS229 –UN–23AUG88

CED,OUO1085,8 –19–26JUL00–1/1

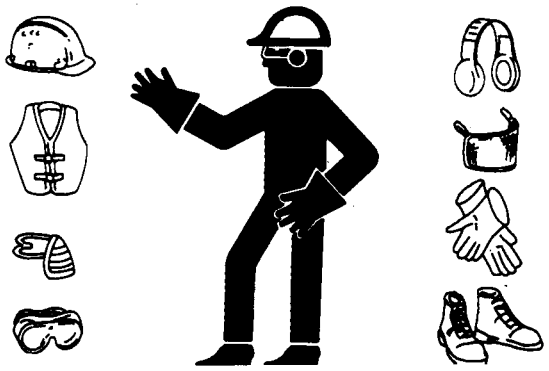
Wear Protective Clothing

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 –19–10SEP90–1/1

Serial Numbers

When working on machines or components that are covered by warranty, it is IMPORTANT that you include the machine's Product Identification Number and the component serial number on the warranty claim form.

The location of component serial number plates are shown below.

MX,1025FT,A4 –19–15JAN91–1/1

Product Identification Number Location

The machine's product identification number plate (A) is located on the right-hand side of the front support.

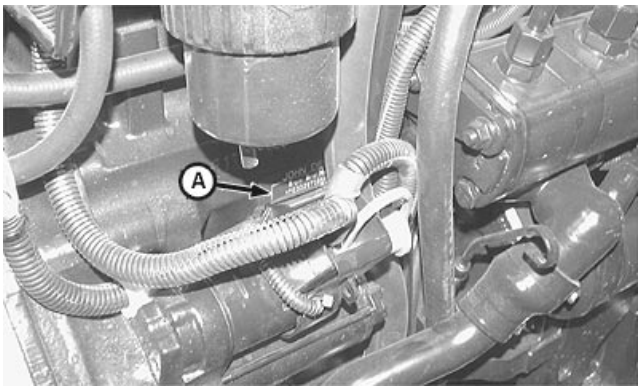
A—Product Identification Number Plate

AG,OUO1085,16 –19–31JUL00–1/1

Engine Serial Number Location

The engine serial number plate (A) is located on the right-hand side of the engine block, between the starter and the hydraulic pump.

A—Engine Serial Number Plate

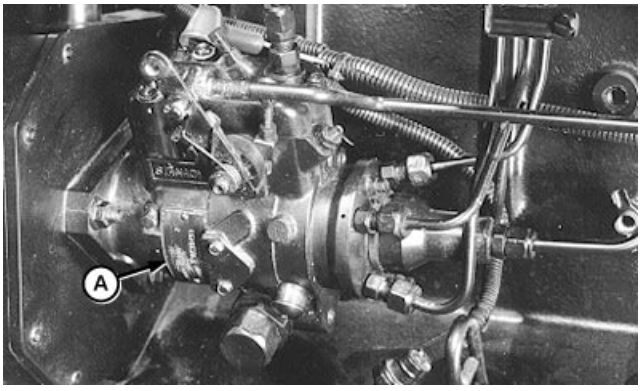


AG,OUO1085,17 –19–31JUL00–1/1

Fuel Injection Pump Serial Number Location

The fuel injection pump serial number plate (A) is located on the side of the pump.

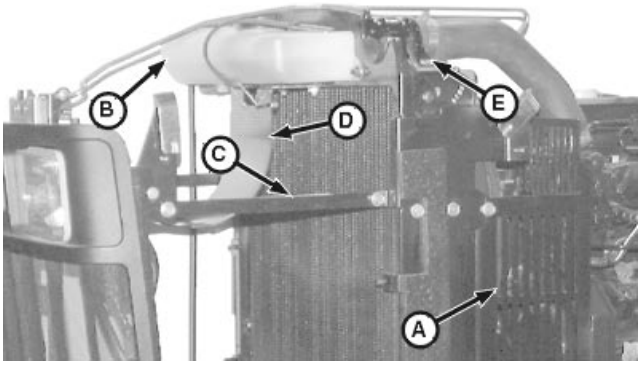
A—Fuel Injection Pump Serial Number Plate



AG,OUO1085,18 –19–31JUL00–1/1

6. Remove finger guard (A) and recovery tank (B).
7. Disconnect bracket (C) from both sides of radiator.
8. Remove air cleaner support bracket (D).
9. Disconnect upper radiator hose (E) from radiator.

A—Finger Guard
B—Recovery Tank
C—Bracket (2 used)
D—Air Cleaner Support Bracket
E—Upper Radiator Hose

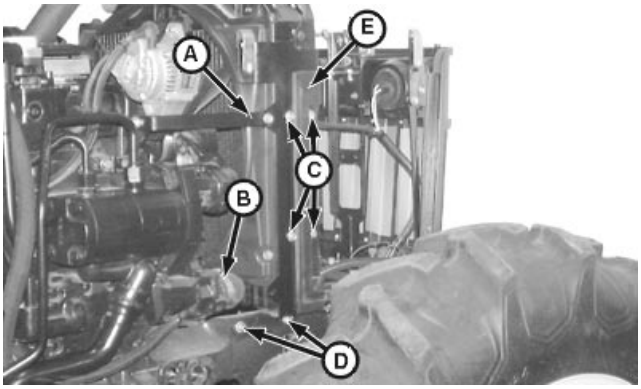


LV6644 –UN–17APR01

OUO1089,0000327 –19–24APR01–2/4

10. Remove bracket (A) from radiator support.
11. Disconnect lower radiator hose (B) from water pump. Close all openings using caps and plugs.
12. Remove four cap screws (C), two cap screws (D), and radiator support (E) from both sides.

A—Bracket
B—Lower Radiator Hose
C—Cap Screw (8 used)
D—Cap Screw (4 used)
E—Radiator Support



LV6645 –UN–17APR01

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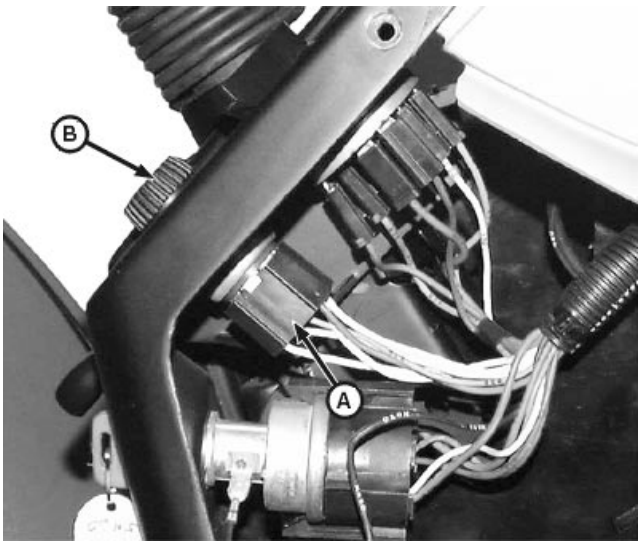
OUO1089,0000327 –19–24APR01–3/4

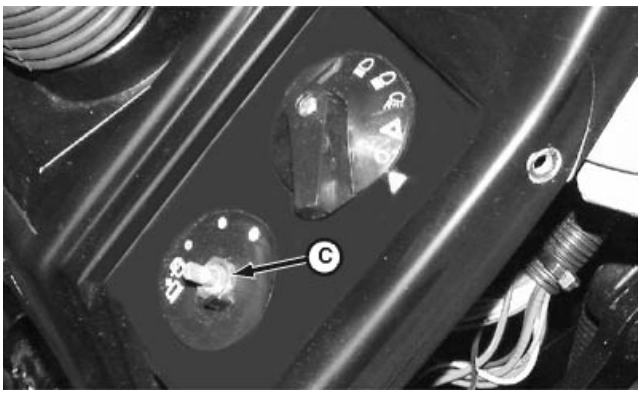
Replace Wiper Control Switch

1. Disconnect battery negative (—) cable.
2. Remove right-side dash panel.
3. Disconnect electrical connector (A).
4. Remove wiper switch knob (B) and nut (C).
5. Replace wiper control switch.
6. Install nut (C) and wiper switch knob (B).
7. Connect electrical connector (A).
8. Install right-side dash panel and connect battery negative (—) cable.

A—Electrical Connector
B—Wiper Switch Knob
C—Nut



LV6479 –UN–10MAR01

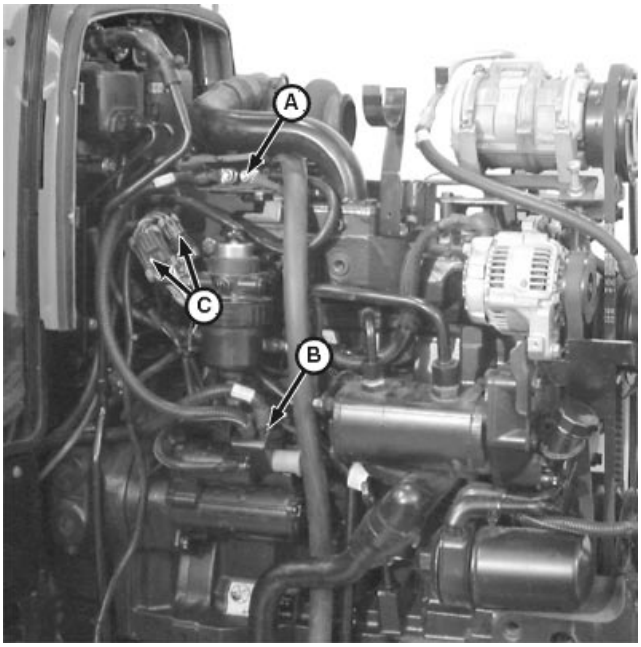


LV6480 –UN–10MAR01

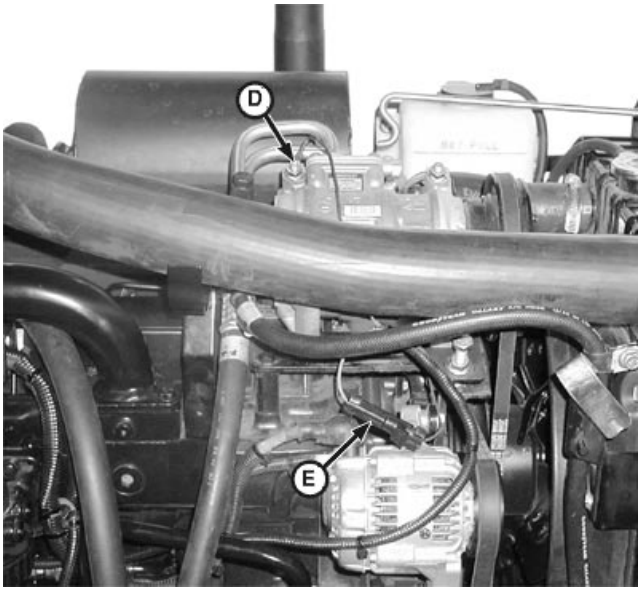
OUO1089,00002B2 –19–02MAR01–1/1

17. Install disconnected red wires on right post of fuse link junction block (A).
18. Connect two main harness wiring connectors (C).
19. Connect battery positive (+) cable to starter terminal (B).
20. Connect A/C compressor ground wire (D) and connector (E).

A—Right Post of Fuse Link Junction Block
B—Starter Terminal
C—Main Harness Wiring Connector (2 used)
D—Ground Wire
E—Connector



LV7010 –UN–24MAY01



LV7020 –UN–24MAY01

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05
22

Continued on next page

AG,OUO1085,120 –19–26FEB02–6/9

1—Plug
2—Seal
3—Filter Spring
4—Filter
5—Valve Body
6—Gasket (2 used)
7—Plate
8—Bearing
9—Valve Plate
10—Pin
11—Gasket
12—Guide Pin
13—Washer
14—Spring
15—Spring
16—Spring Pin
17—Piston
18—Plate
19—Socket Head Screw (3 used)
20—Spring
21—Spool
22—Spool
23—Valve Body
24—Socket Head Screw (3 used)
25—Spool
26—Seal
27—Spring
28—Socket Head Screw (3 used)
29—Plate
30—Spring
31—Spool
32—Spool
33—Spring
34—Pin
35—Clutch Arm
36—Washer
37—Seal
38—Pin
39—Shift Arm
40—Seal
41—Orifice
42—Pin
43—Ring
44—Valve Sleeve
45—Seal
46—Spring Pin
47—Spool
48—Spring
49—Spring
50—Spring
51—Spool
52—Ring
53—Seal
54—Socket Head Screw (4 used)
55—Cover
56—Seal
57—Spool
58—Spring
59—Gasket
60—Plug
61—Ball

NOTE: Clutch arm (35) is press fit in plate (9).

4. Remove parts (35, 36, and 37) using a bushing, bearing, and seal driver set.

5. Separate back valve plate (9) from front valve body (5).

6. Remove gaskets (6) and plate (7).

7. Remove plug (60), gasket (59), springs (58), and balls (61).

8. Remove screws (24) and valve body (23).

IMPORTANT: Replace all O-rings and seals. Used or damaged O-rings and seals will leak.

9. Remove parts (11—34) from valve body (23). Inspect for wear or damage. Replace as necessary.

10. Disassemble piston (17) containing parts (12—16). Place piston assembly (17) in a soft-jawed vise. Place a socket or pipe over the head of pin (12) and compress washer (13) and springs (14 and 15). Remove pin (16) using a small punch and hammer.

11. Remove parts (12—15) from piston (17). Inspect all parts for wear or damage. Replace as necessary.

NOTE: Bearing (8) is press fit in plate (9). Inspect for wear or damage. Replace only if necessary.

12. Replace bearing (8) using a bushing, bearing, and seal driver set. Install new bearing until centered in bore.

13. Remove shift arm (39) and seal (40) using a punch and soft-faced hammer.

14. Remove orifice (41). Inspect for debris or damage in orifice hole. Clean or replace if necessary.

15. Remove plug (1), seal (2), spring (3), and filter (4). Inspect parts for wear or damage. Replace as necessary.

16. Remove screws (54), cover (55), and seals (53 and 56).

17. Remove spool (57).

18. Remove sleeve (44) containing parts (43 and 45—53) from front valve body (5).

NOTE: Spring pin (46) is press fit in spool (47). Remove spring pin only if replacement of spool is necessary.

19. Disassemble sleeve (44) by compressing spool (51) and remove snap ring (52).

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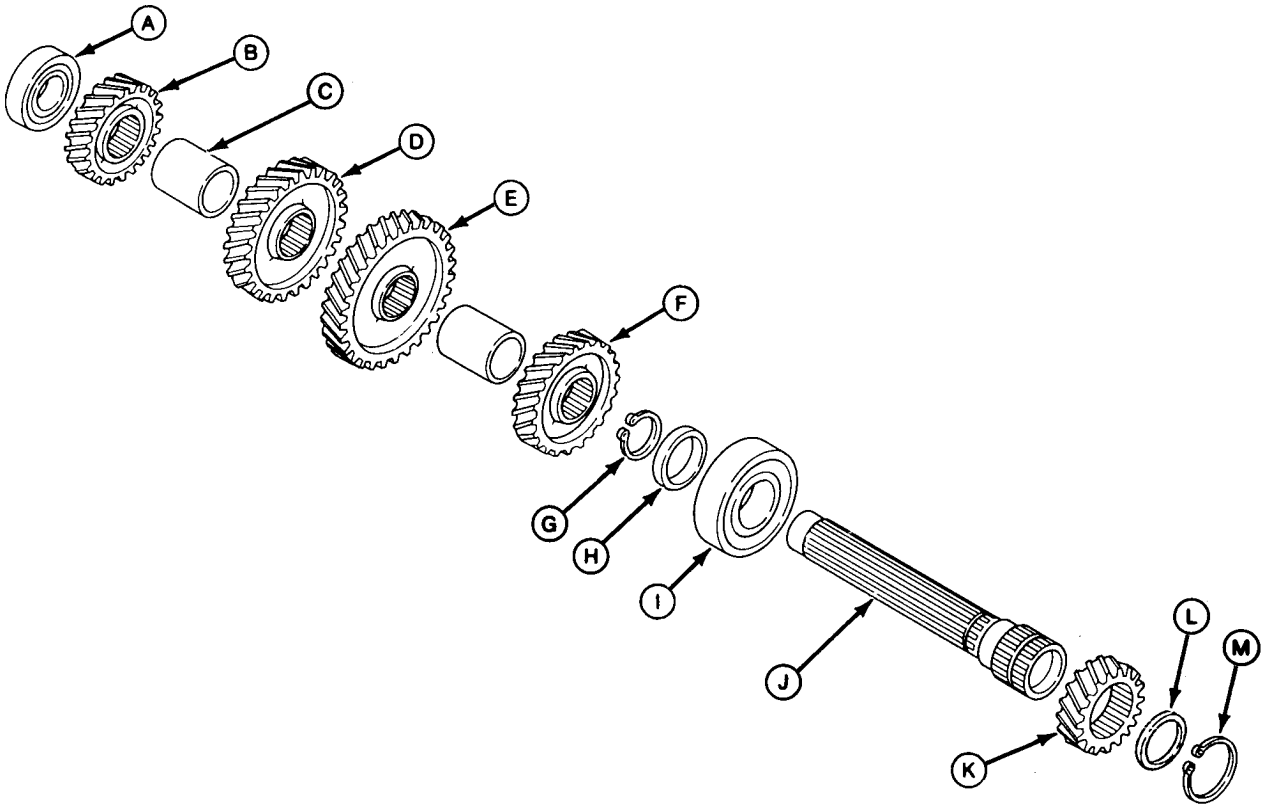
Disassemble, Inspect and Assemble Driven Shaft



LV482A –UN–18APR96

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15
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NOTE: Bearings (A and I) are press fit on shaft (J).

1. Remove bearing (A) using a knife-edged puller and a press.
2. Remove parts (B—H).
3. Remove parts (L, M, and K).

LV481 –UN–03MAR92

A—Bearing
B—Reverse Driven Gear
C—Collar (2 used)
D—2nd Speed Driven Gear
E—1st Speed Driven Gear
F—3rd Speed Driven Gear
G—Snap Ring
H—Spacer
I—Bearing
J—Driven Shaft
K—C Range Driven Gear
L—Washer
M—Snap Ring

Continued on next page

4. Remove reverse idler shaft (A).

NOTE: Bearings (B) and (F) are press fit in gear (D).

5. Remove bearings (B) and (F) using a bearing, bushing, and seal driver set and a press.

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

NOTE: Lubricate all parts with clean transmission/hydraulic oil during assembly.

7. Assembly parts (B—F). Install bearings using a bearing, bushing, and seal driver set and a press.

8. Apply Thread Lock and Sealer (Medium Strength) to threads of reverse idler shaft (A).

9. Install reverse idler shaft and tighten to specification.

Specification

Reverse Idler Shaft—Torque..... 132 N•m (97 lb-ft)

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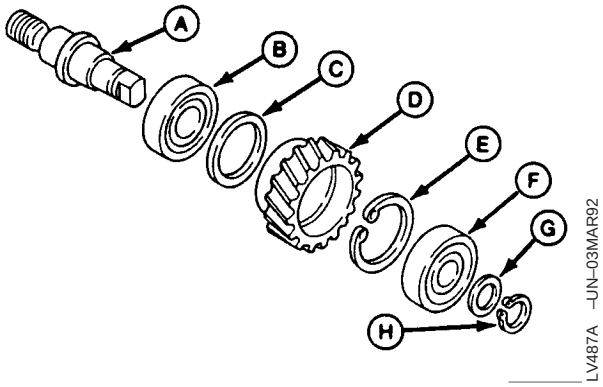
15
54

10. Install idler gear assembly, washer (G), and snap ring (H).

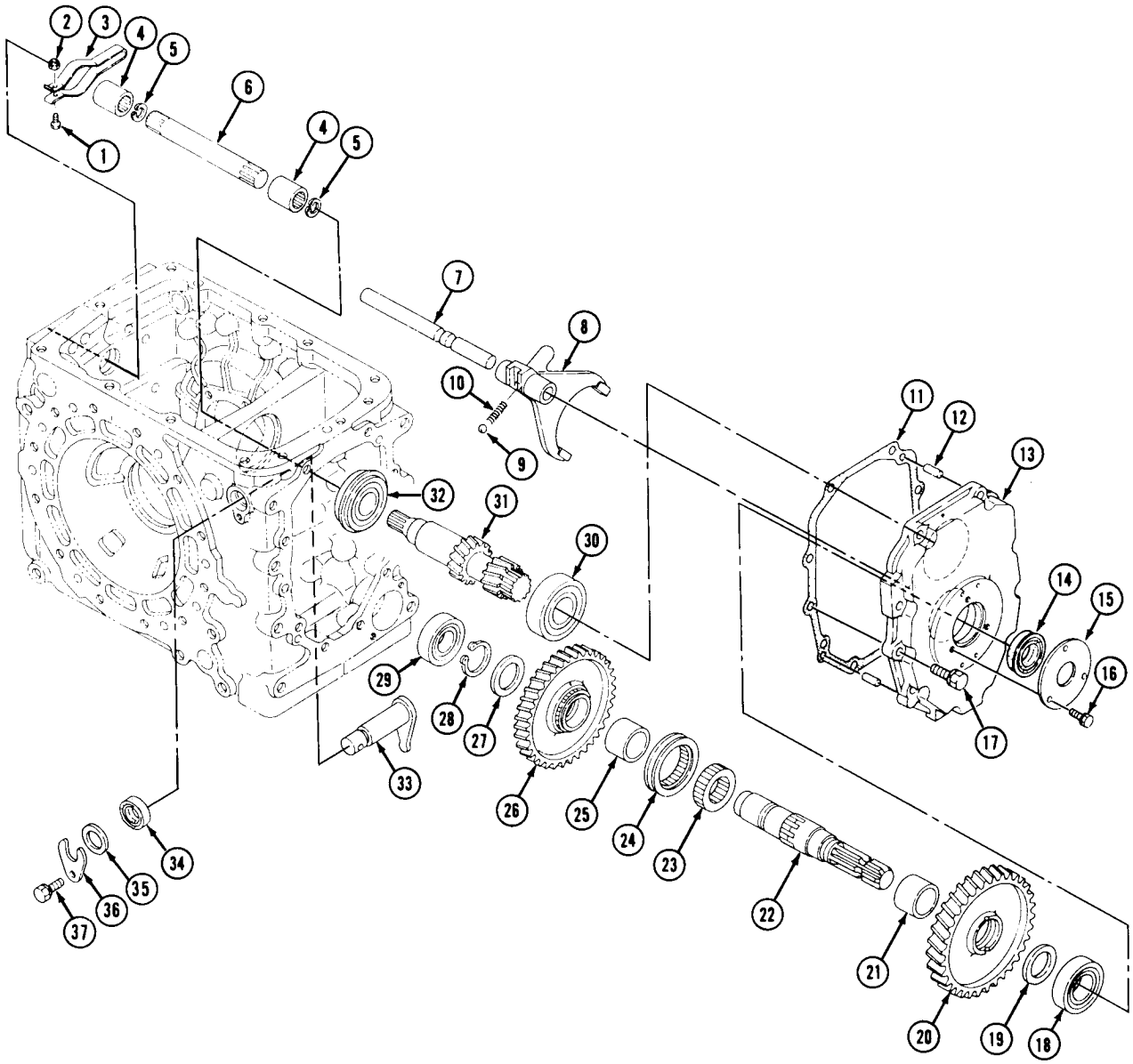
11. Install clutch housing to transmission. (See Install Clutch Housing to Transmission—Straddle Mount or Install Clutch Housing to Transmission—Isolated Open Operator Station and Cab Tractors in Group 16.)



LV487A –UN–03MAR92

A—Reverse Idler Shaft
B—Bearing
C—Spacer
D—Reverse Idler Gear
E—Snap Ring
F—Bearing
G—Washer
H—Snap Ring

AG,OUO1085,164 –19–26FEB02–2/2



1—Cap Screw
2—Nut
3—Snubber Brake
4—Coupler
5—Ring
6—Intermediate Shaft
7—Shaft
8—Fork
9—Ball
10—Spring
11—Gasket
12—Pin
13—Cover
14—Seal
15—Plate
16—Screw with Washer
17—Cap Screw
18—Ball Bearing
19—Washer
20—Gear
21—Bushing
22—Shaft
23—Shift Collar
24—Shifter
25—Bushing
26—Gear
27—Washer
28—Ring
29—Ball Bearing
30—Ball Bearing
31—Gear
32—Ball Bearing
33—Arm
34—Seal
35—Washer
36—Plate
37—Cap Screw

Continued on next page

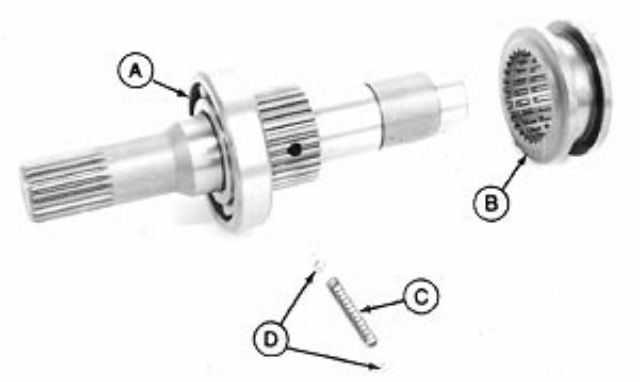
AG,OUO1085,185 –19–26FEB02–2/3

Assemble MFWD Drop Gearbox

IMPORTANT: Use new seals and O-rings during assembly. Damaged or used seals and O-rings will leak.

NOTE: Lubricate all internal parts with clean transmission/hydraulic oil during assembly.

1. Install bearing (A), if removed, using a piece of pipe and a press.
2. Apply multipurpose grease to balls (D) and spring (C).
3. Install balls and spring in hole in shaft.
4. Install collar (B) over balls with shoulder of collar facing bearing (A).



LV560 –UN–09MAR92

A—Bearing
B—Shift Collar
C—Spring
D—Ball (2 used)

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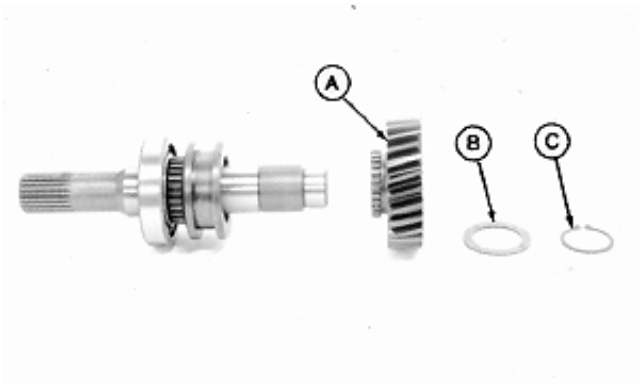
35
12

AG,OUO1085,206 –19–22AUG00–1/6

IMPORTANT: Small splines on gear (A) must face shift collar.

Grooves in washer (B) must face gear (A).

5. Install gear (A), washer (B), and snap ring (C).
6. Press bearing (D) tight against shoulder of shaft.



LV561 –UN–09MAR92

A—Idler Gear
B—Washer
C—Snap Ring
D—Bearing

LV562 –UN–09MAR92

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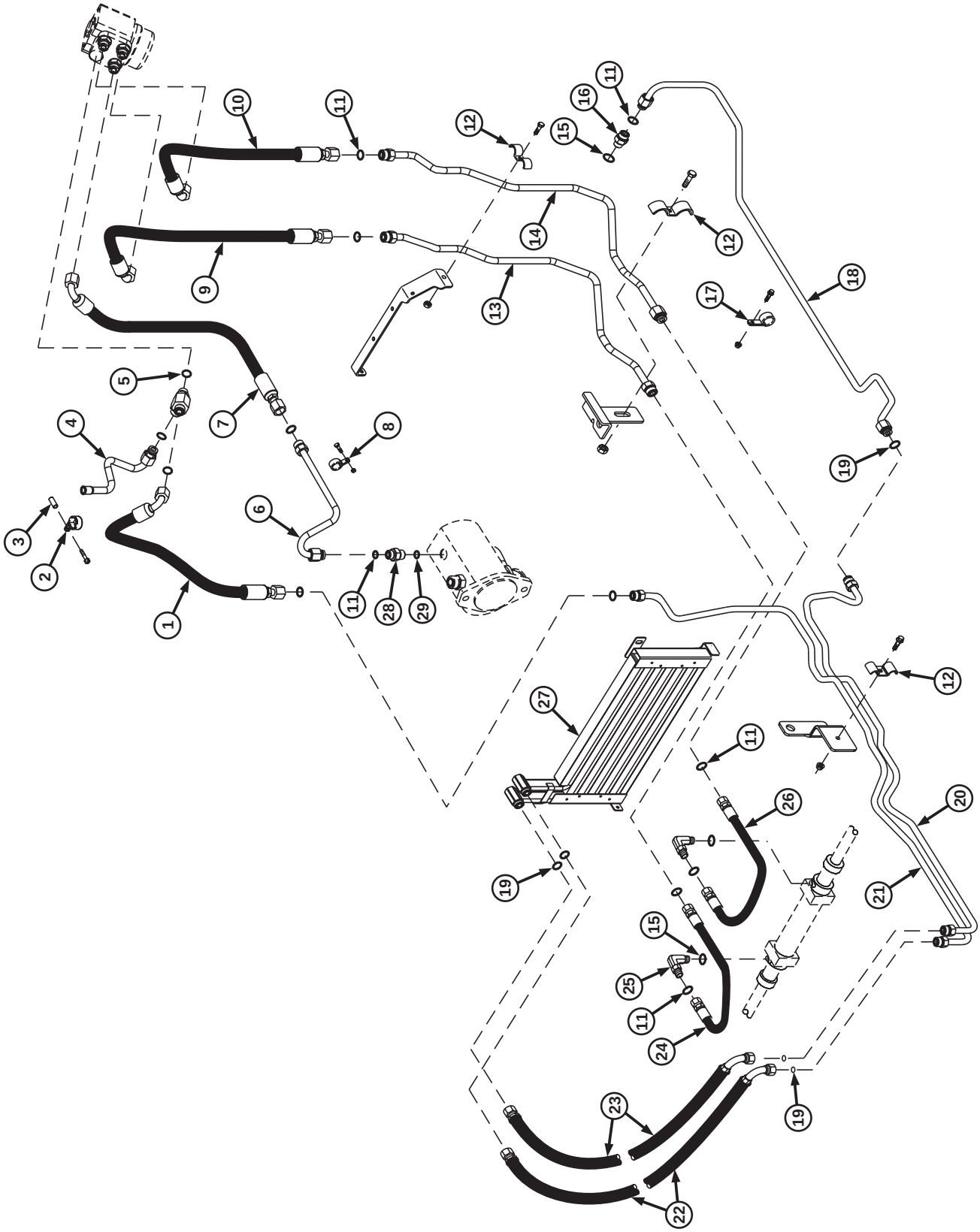
AG,OUO1085,206 –19–22AUG00–2/6

Inspect and Replace Steering Hydraulic Lines—Isolated Open Operator Station and Cab Tractors (With Oil Cooler)



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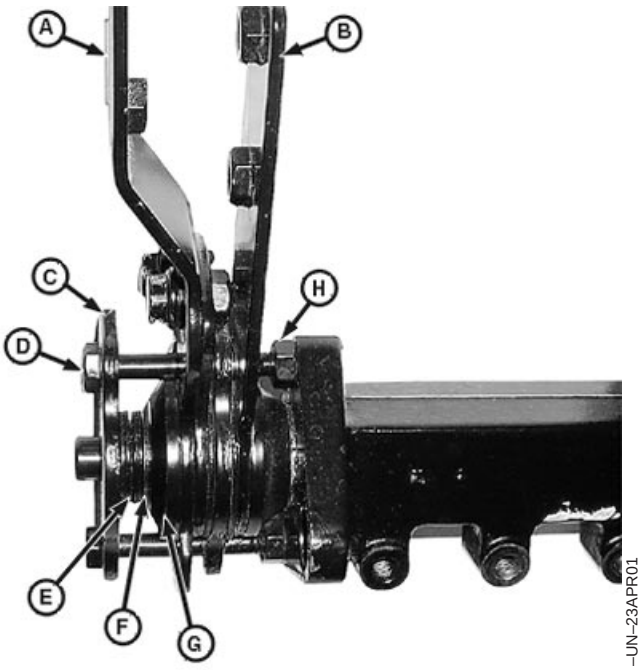
OUO1087,0000B06 –19–26FEB02–1/2

Inspect and Repair Rockshaft Control Assembly—Straddle Mount Tractors

1. Remove rockshaft case. (See Remove and Install Rockshaft Case—Straddle Mount Tractors in this group.)
2. Loosen nuts (H).
3. Remove parts (C—H).

A—Position Control Lever
B—Draft Sensing Lever
C—Alignment Plate
D—Cap Screw (2 used)
E—Spring Washer (4 used)
F—Washer
G—Spacer
H—Jam Nut (2 used)



LV6670 –UN–23APR01

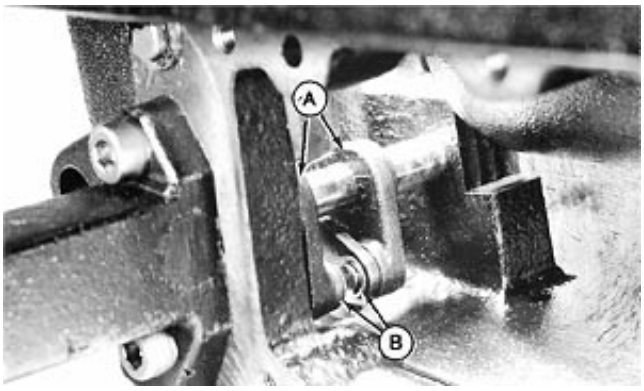
OUO1082,00001BF –19–28FEB02–1/5

4. Remove inlet housing. (See Replace Rockshaft Control Valve—Straddle Mount Tractors in this group.)

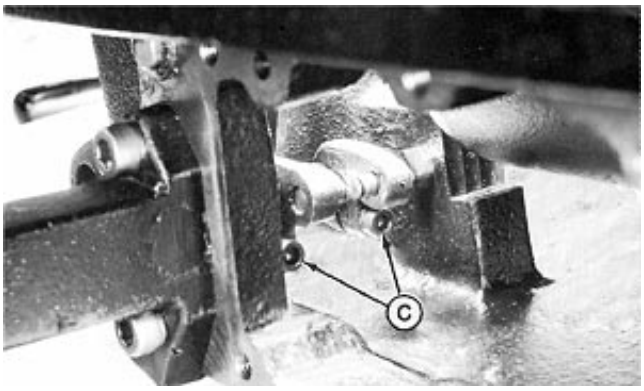
NOTE: To access links inside rockshaft case, rockshaft case must be placed upside down.

5. Turn rockshaft case upside down.
6. Remove E-clips (B). Disconnect links from levers (A).
7. Rotate levers and remove socket head cap screws (C).

A—Lever
B—E-Clip
C—Socket Head Cap Screw



LV209 –UN–28FEB92



LV210 –UN–28FEB92

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OUO1082,00001BF –19–28FEB02–2/5

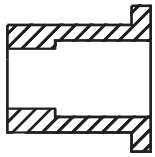
70
10
3

7. Place a screw driver through cable pin hole of spool.
8. Clamp screw driver in a soft-jawed vise.
9. Remove parts (H—M) and (P).
10. Inspect all parts for wear or damage. Replace as necessary.
11. Lightly coat detent spring (P), pilot ball (M) and detent balls (L) with multipurpose grease.
12. Install detent spring (P), pilot ball (M) and detent balls (L) into spool.

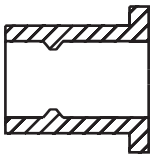
OUO1082,00001E0 –19–26FEB02–3/7

NOTE: Notched detent is used on 6-groove float spool. Stepped detent is used on 5-groove regenerative spool.

13. Place detent on spool.
14. Using a small allen wrench (A) gently push in pilot ball and detent spring.
15. Carefully slide detent (B) over detent balls (C).



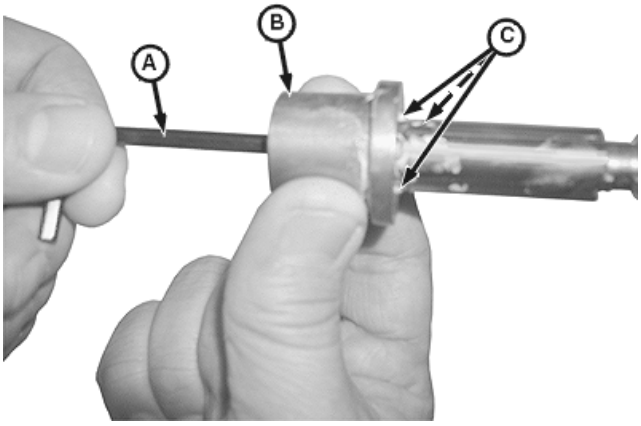
REGENERATIVE DETENT



FLOAT DETENT

LV7038

LV7038 –19–29MAY01



LV7039 –UN–29MAY01

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17

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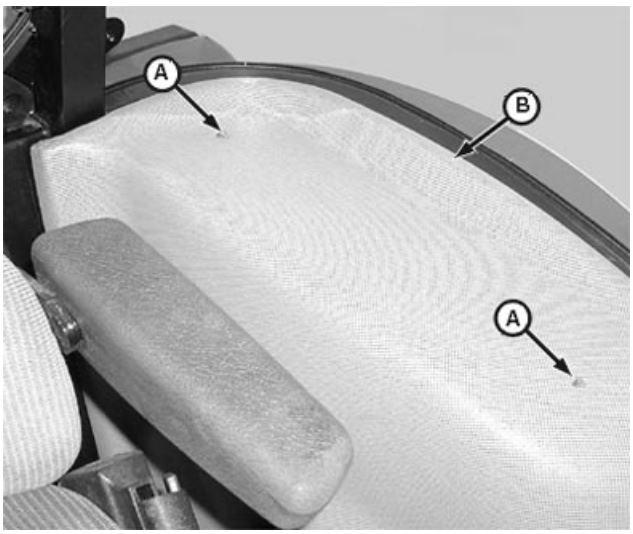
OUO1082,00001E0 –19–26FEB02–4/7

Remove and Install Left-Side Upholstery

1. Remove two cap screws (A) from left-side upholstery (B).
2. Pull away left side of floor mat.
3. Remove screw (C) and remove upholstery from tractor.
4. Install upholstery on tractor and install screw (C).
5. Place floor mat back into position on left side of floor.
6. Install cap screws (A).

A—Cap Screw (2 used)
B—Left-Side Upholstery
C—Screw



LV6860 –UN–10SEP01

LV6861 –UN–15MAY01

OUO1089,0000344 –19–30AUG01–1/1