Contents

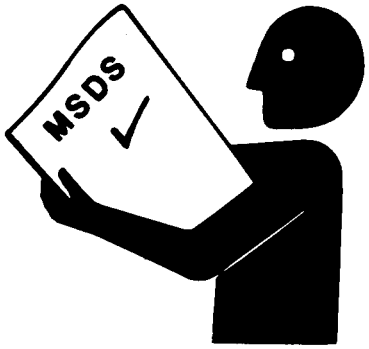
Handle Chemical Products Safely

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 –19–03MAR93–1/1

Handle Fluids 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.

TS202 –UN–23AUG88

TX,05,FF1622 –19–14JUN90–1/2

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.

TS227 –UN–23AUG88

TX,05,FF1622 –19–14JUN90–2/2

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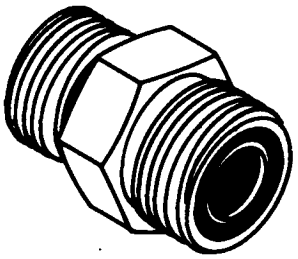
0003
6

Service Recommendations for Flat Face O-Ring Seal Fittings



T6243AD –UN–18OCT88

1. Inspect the fitting sealing surfaces. They must be free of dirt or defects.
2. Inspect the O-ring. It must be free of damage or defects.
3. Lubricate O-rings and install into groove using petroleum jelly to hold in place.
4. Push O-ring into the groove with plenty of petroleum jelly so O-ring is not displaced during assembly.
5. Index angle fittings and tighten by hand pressing joint together to insure O-ring remains in place.
6. Tighten fitting or nut to torque value shown on the chart per dash size stamped on the fitting. Do not allow hoses to twist when tightening fittings.

FLAT FACE O-RING SEAL FITTING TORQUE

Nominal Tube O.D.		Dash Size	Thread Size in.	Swivel Nut		Bulkhead Nut	
mm	in.	N•m	lb-ft	N•m	lb-ft		
6.35	0.250	-4	9/16-18	16	12	5.0	3.5
9.52	0.375	-6	11/16-16	24	18	9.0	6.5
12.70	0.500	-8	13/16-16	50	37	17.0	12.5
15.88	0.625	-10	1-14	69	51	17.0	12.5
19.05	0.750	-12	1 3/16-12	102	75	17.0	12.5
22.22	0.875	-14	1 3/16-12	102	75	17.0	12.5
25.40	1.000	-16	1 7/16-12	142	105	17.0	12.5
31.75	1.250	-20	1 11/16-12	190	140	17.0	12.5
38.10	1.500	-24	2-12	217	160	17.0	12.5

NOTE: Torque tolerance is +15 -20%.

04T,90,K67 –19–01AUG94–1/1

26. Install the third planet gears (A) using DFT1095 Planet Gear Assembly Tool and DFT1094 Bearing Pilot Tool. (See Section 99 for instruction to make tools.)

T7401AH –UN–27JAN92

TX,0250,DX266 –19–11NOV94–8/14

27. Install third planetary carrier (A) on gear shafts (B).

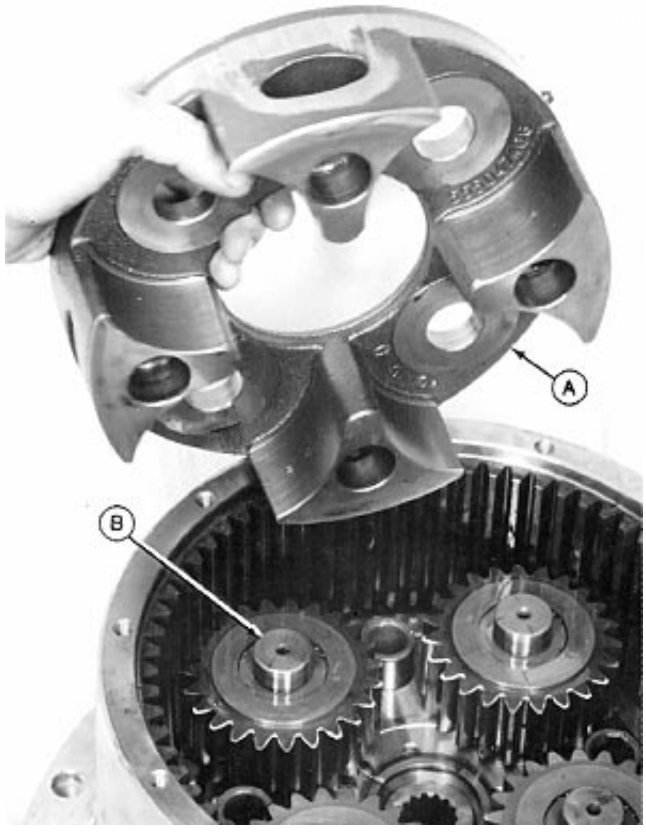
28. Pull carrier down on shafts and bushing using cap screws and washers.

29. Clean cap screw threads using clean and cure primer. Apply thread lock and sealer (medium strength) to threads.

30. Tighten cap screws to 540 N•m (400 lb-ft).

Specification

Cap Screws—Torque ..... 540 N•m (400 lb-ft)



T7626BZ –UN–06DEC91

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TX,0250,DX266 –19–11NOV94–9/14

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

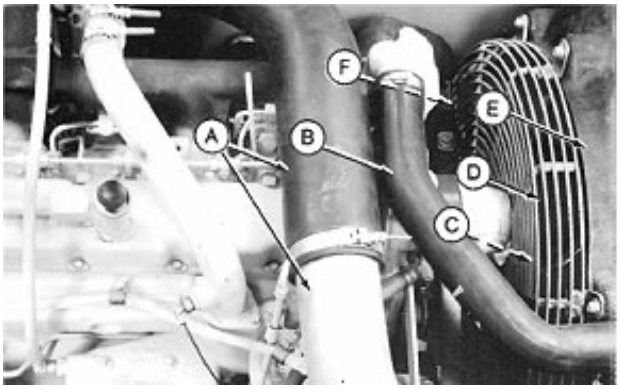
Shut off engine. Only remove filler cap when cool enough to touch with bare hands. Slowly loosen cap to first stop to relieve pressure before removing completely.

TS281 –UN–23AUG88

2. Drain coolant. Approximate radiator capacity is 34 L (9 gal).

TX,04,DY2884 –19–20AUG97–2/12

3. Remove air intake hose (A).
4. Remove upper radiator hose (B) and lower radiator hose (F).
5. Remove eight cap screws to remove upper and lower fan guards (D).
6. Remove six cap screws to remove fan (C).
7. Remove eight cap screws to remove shroud (E).



T7626CV –UN–18DEC91

A—Air Intake Hose
B—Upper Radiator Hose
C—Fan
D—Fan Guard
E—Fan Shroud
F—Lower Radiator Hose

Continued on next page

TX,04,DY2884 –19–20AUG97–3/12

Remove And Install Turbocharger (Serial No. —559602)

CAUTION: Allow exhaust system to cool before removal.

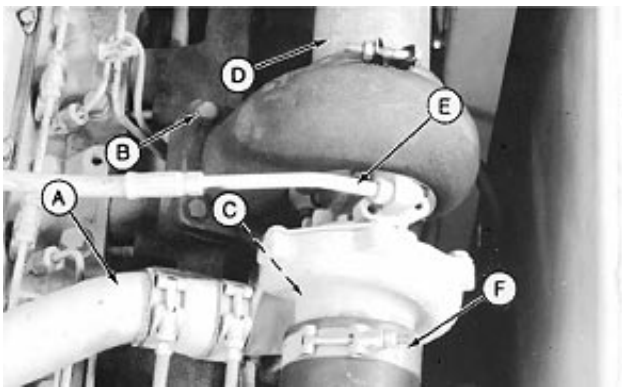
Thoroughly clean exterior of turbocharger and surrounding area to prevent entry of dirt into the air intake system during removal.

1. Remove air intake hose (F) and exhaust adapter (D).
2. Loosen clamps to remove air inlet hose (A).
3. Disconnect lines (C and E).
4. Remove cap screws and nuts (B) and remove turbocharger and gasket.
5. Cap and plug all openings.
6. Inspect parts. Repair or replace as necessary.
7. Install gasket, turbocharger and cap screws. Do not tighten cap screws.
8. Put a small amount of engine oil in oil inlet line. Connect lines.
9. Rotate compressor housing to align with air inlet hose (A). Tighten hose clamps until hose deforms around clamp band.
10. Tighten cap screws (B) to 47 N•m (35 lb-ft).

Specification

Turbocharger (—559602)Turbocharger-to-Manifold Cap Screw—Torque ..... 47 N•m (35 lb-ft)

11. Connect hose (F). Tighten clamp until hose deforms around clamp band.
12. Tighten U-bolts until muffler just starts to crush against support.



T7681FX –UN–23FEB92

A—Air Inlet Hose
B—Turbocharger-to-Exhaust Manifold Cap Screw (4 used)
C—Oil Return Line
D—Exhaust Adapter
E—Oil Inlet Line
F—Air Cleaner-to-Turbocharger Hose

04 0400 61

Continued on next page

TX,04,DY2894 –19–20AUG97–1/2

11. Install cover.

TX,1671,AB42 –19–12APR95–2/2

Adding 12-Volt Battery Accessories

IMPORTANT: This unit has a 24-volt electrical system. Installing 12-volt accessories without addition of 24-volt-to-12-volt converter may cause battery failure. See your John Deere dealer.

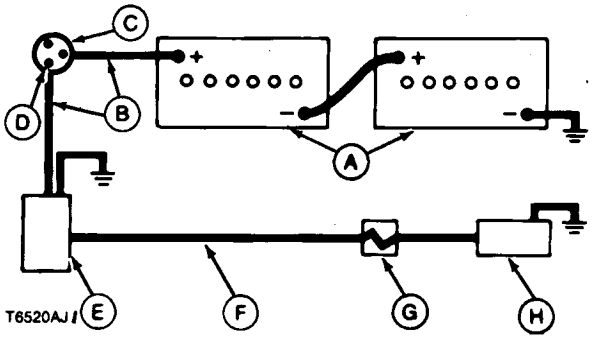
When possible, use 24-volt accessories.

Specification	
System—Voltage	24 volts

If 12-volt accessories are added, use a 24-volt-to-12-volt converter. Converters are available from your John Deere dealer (see the Industrial Equipment Attachment Guide) or electronic retail stores. This converter may be wired into the ACC terminal of the ignition switch (see drawing).

Converter capacity requirements depend on the load of the accessories installed. Follow electronic dealer and manufacturer's recommendations to determine the capacity of the converter required and its installation requirements.

DO NOT connect an accessory to one battery. Connecting a 12-volt accessory to one battery will cause one battery to overcharge, and the other battery to undercharge, causing battery failure.



T6520AJ1 –UN–18OCT88

A—Battery
B—24 Volts
C—Ignition Switch
D—ACC Terminal
E—Converter
F—12 Volts
G—In-Line Fuse
H—12-Volt Accessory

TX,1671,AB301 –19–13JAN92–1/1

16
1671
12

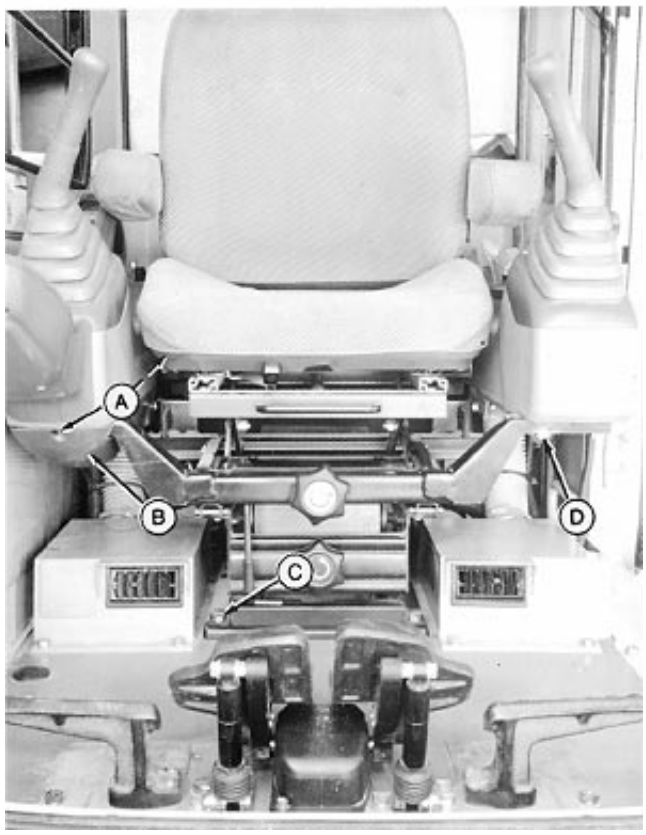
Remove And Install Seat (Serial No. — 538404)

1. Remove cap screws (A) to remove cover (B).
2. Remove the front two cap screws (D).

   Tip console up for access to the rear two cap screws. Lay console on cover behind seat.
3. Remove cap screws (C) from seat base.

CAUTION: Approximate weight of seat is 34 kg (75 lb).

4. Remove seat.
5. Inspect parts for wear.
6. Install seat.
7. Install cap screws (C).
8. Install consoles and cap screws (D).
9. Install cover (B) and cap screws (A).



T7681AL –UN–09JAN92

A—Cap Screw (3 used)
B—Cover
C—Cap Screw (4 used)
D—Cap Screw (4 used)

TX,18,DW5013 –19–18JUL97–1/1

18
1821
1

Specifications

Item	Measurement	Specification
Tooth Shank	Preheat Temperature	204—316°C (400—600°F)
	Fillet Weld	12.7 mm (0.5 in.)
	Distance From Edge	25 ± 6 mm (0.98 ± 0.24 in.)
Arm-to-Arm Link	Clearance	1.5 mm (0.06 in.)
Bucket Linkage	Clearance	0.5 mm (0.020 in.)

Item	Measurement	Specification
Bucket Linkage		
Nut	Torque	205 N•m (150 lb-ft)

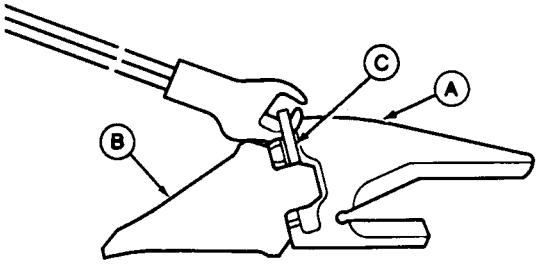
TX,3302,DX374 –19–14APR95–1/1

Replacing Bucket Tooth Tip—Heavy-Duty Bucket

1. Clean tooth (A) and tooth tip (B).
2. Insert lock removal tool under U-shaped pin (C).

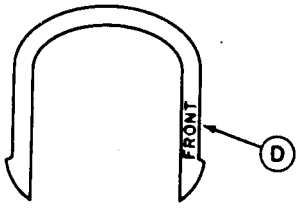
CAUTION: Avoid possible injury. Pin may fly after it is released from tooth tip. Keep a firm grip on pin to prevent injury.

3. Remove pin.
4. Turn tooth tip counterclockwise and pull it towards you to remove.
5. Clean tooth shank.
6. Replace U-shaped pin at same time you replace tooth tip.
7. Insert tooth tip on shank turning tip clockwise.
8. Install U-shaped pin. Side of pin marked “FRONT” (D) must face tooth tip. Make sure pin is firmly engaged over tooth tip.



T6879EE

T6879EE –UN–06DEC88



T7527DO –UN–27JUN91

A—Tooth
B—Tooth Tip
C—Pin
D—“Front” Mark

04T,90,K273 –19–28JAN92–1/1

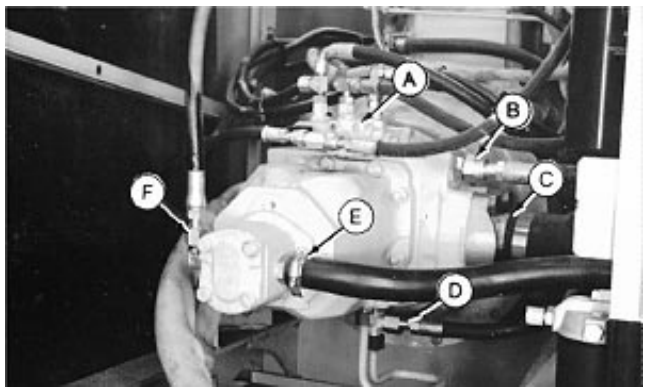
Remove And Install Hydraulic Pump (Serial No. —559602)

1. Loosen reservoir fill cap to release air pressure from reservoir.
2. Drain reservoir. Approximate capacity is 148 L (39 gal).
3. Remove pump regulator housing (A).
4. Disconnect lines (B—H).

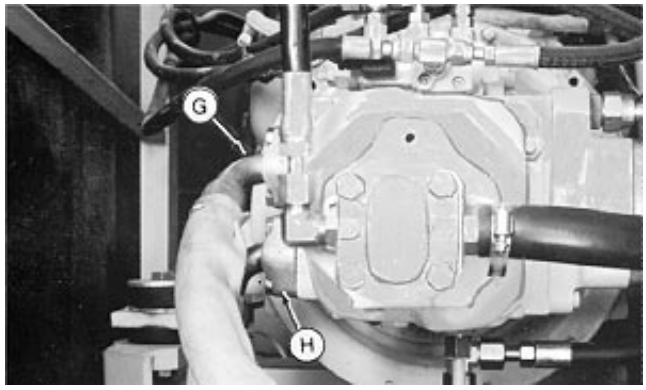
CAUTION: The approximate weight of hydraulic pump is 125 kg (276 lb).

5. Remove pump.
6. Repair or replace pump as necessary.

A—Pump Regulator Housing
B—Drain Port-to-Reservoir
C—Inlet Port-to-Reservoir
D—Drain Port-to-Reservoir
E—Inlet Port-to-Reservoir
F—Outlet Port-to-Pilot Filter
G—Outlet Port-to-Control Valve Upper Port
H—Outlet Port-to-Control Valve Lower Port



T7626CG –UN–18DEC91



T7626CH –UN–18DEC91

Hydraulic Pump And Pilot Pump Line

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TX,33,DY2944 –19–26AUG97–1/3

Hydraulic Oil Filter Inspection Procedure

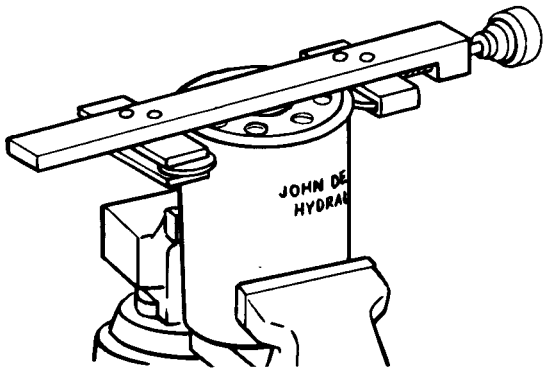
Pour oil out of filter to inspect for water contamination.

Use an oil filter cutting tool to cut top off filter.

Remove element and inspect for metal particles and debris in bottom of filter can.

Excessive amounts of brass and steel particles can indicate a failed hydraulic pump or a pump failure in process.

A rubber type of material can indicate cylinder packing failure.



IT4633 –UN–19JAN90

902525,F4A –19–18JUL94–1/1

13. Remove valve sections and pressure control manifold (B—H) from control valve manifold (A).

14. Repair or replace valve sections and manifold as necessary.

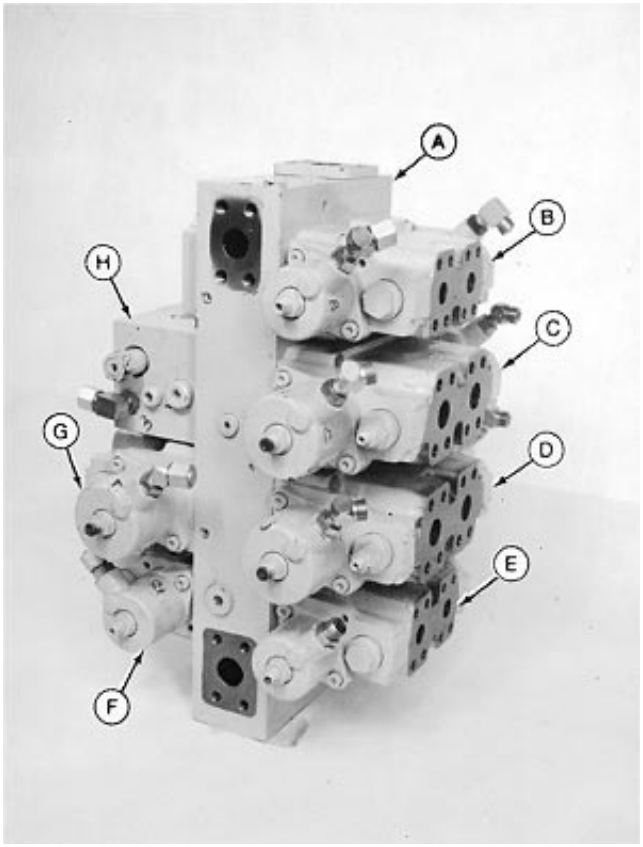
15. Install valve sections.

Specification

Swing Valve-to-Manifold—Torque	49 N•m (36 lb-ft)
Boom Valve-to-Manifold—Torque	86 N•m (63 lb-ft)
Bucket Valve-to-Manifold—Torque	86 N•m (63 lb-ft)
Left Propel Valve-to-Manifold—Torque	49 N•m (36 lb-ft)
Arm Valve-to-Manifold—Torque	86 N•m (63 lb-ft)
Right Propel Valve-to-Manifold—Torque	49 N•m (36 lb-ft)

16. Install valve.

A—Manifold
B—Swing Valve
C—Boom Valve
D—Bucket Valve
E—Left Propel Valve
F—Right Propel Valve
G—Arm Valve
H—Pressure Control Manifold



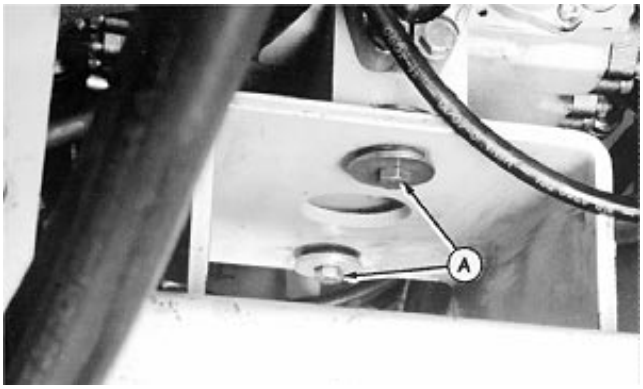
T7681DK –UN–22JAN92

TX,33,DY2960 –19–26AUG97–8/14

17. Install cap screws (A) and tighten to 75 N•m (55 lb-ft).

Specification

Mounting Cap Screws—Torque	75 N•m (55 lb-ft)



T7681DJ –UN–22JAN92

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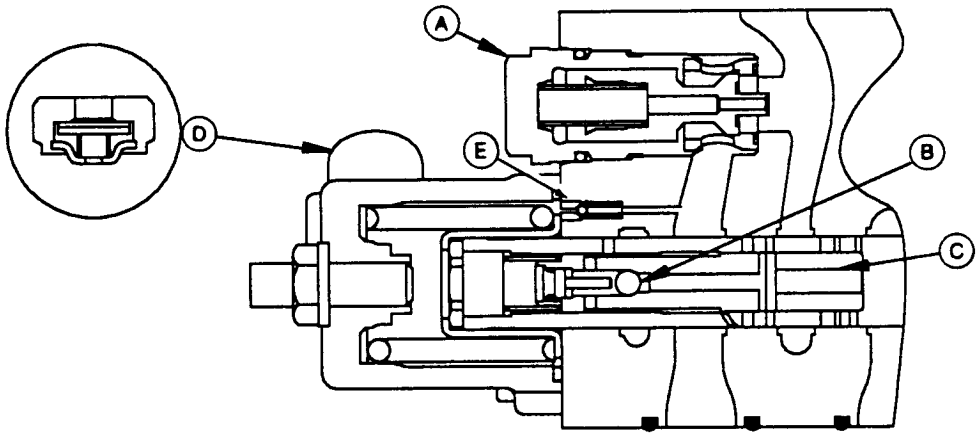
TX,33,DY2960 –19–26AUG97–9/14

Disassemble And Assemble Swing Valve Section



T7681EC –UN–27JAN92

A—Make-Up Valve
B—Ball
C—Balance Valve
D—Pilot Check Valve
E—Pilot Cap Relief Valve (Air Bleed Valve)

Tighten pilot check valve (D) to 9 N•m (80 lb-in.).

Specification

Pilot Check Valve—Torque ..... 9 N•m (80 lb-in.)

Tighten pilot cap relief valve (E) to 6 N•m (55 lb-in.).

Specification

Pilot Cap Relief Valve—Torque..... 6 N•m (55 lb-in.)

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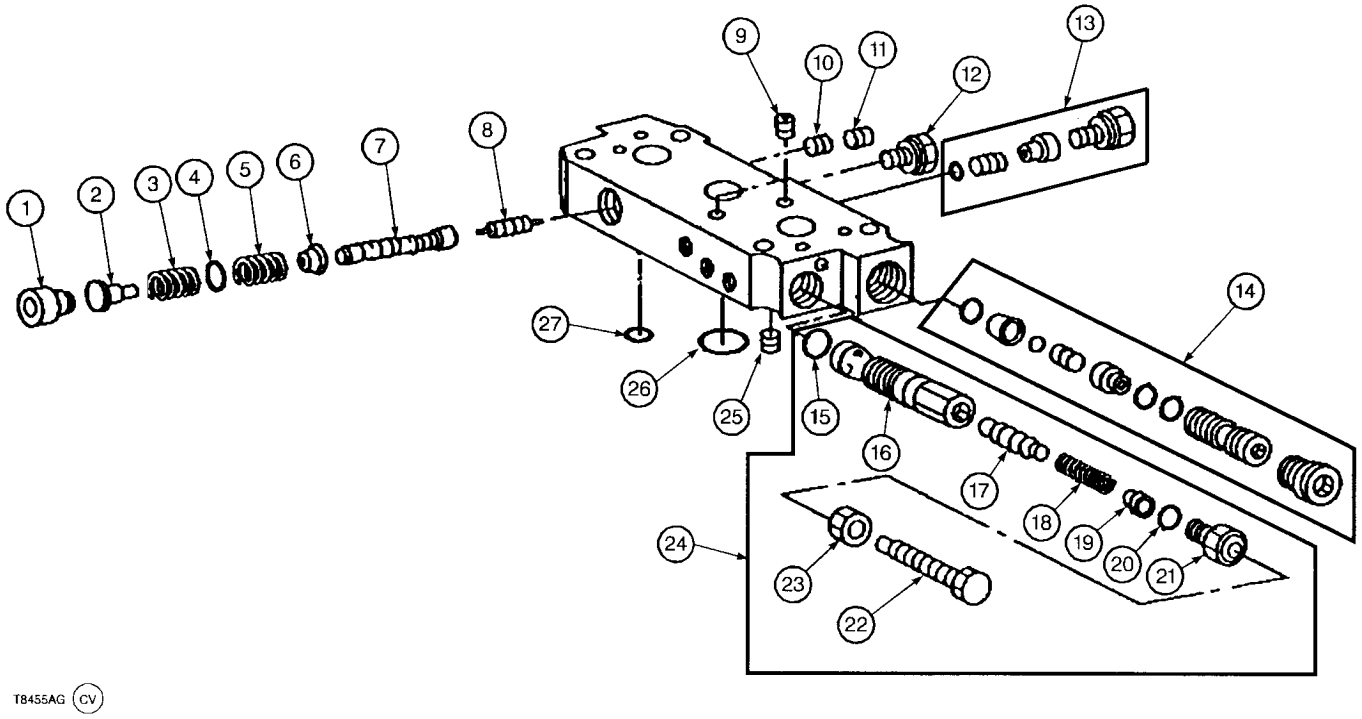
TX,3360,AB397 –19–20APR95–1/6

Disassemble And Assemble Swing Torque Control Valve (Serial No. —546276)



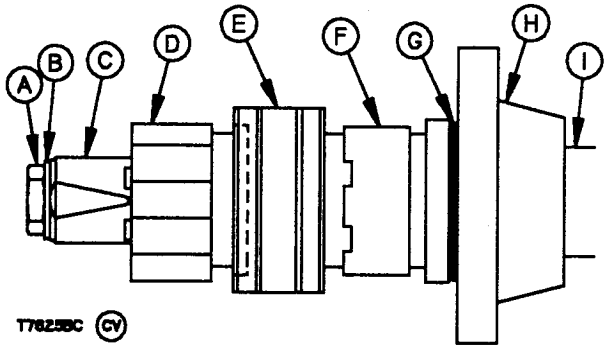
1—Plug
2—Spring Seat
3—Spring
4—Shim
5—Spring
6—Spring Seat
7—Spool
8—Shuttle Spool
9—Plug
10—Orifice
11—Plug
12—Plug
13—Check Valve
14—Shuttle Valve
15—O-Ring
16—Sleeve
17—Piston
18—Spring
19—Retainer
20—O-Ring
21—Plug
22—Screw
23—Nut
24—Relief Valve
25—Plug
26—O-Ring (3 used)
27—O-Ring (2 used)

TX,3360,DW602 –19–27AUG97–1/1

9. Remove parts (A—F) from rod (I).

10. Remove O-ring (G).

A—Cap Screw (Arm cylinder only)
B—Washer (Arm cylinder only)
C—Cushion (Arm cylinder only)
D—Nut
E—Piston
F—Cushion
G—O-Ring
H—Rod Guide
I—Cylinder Rod



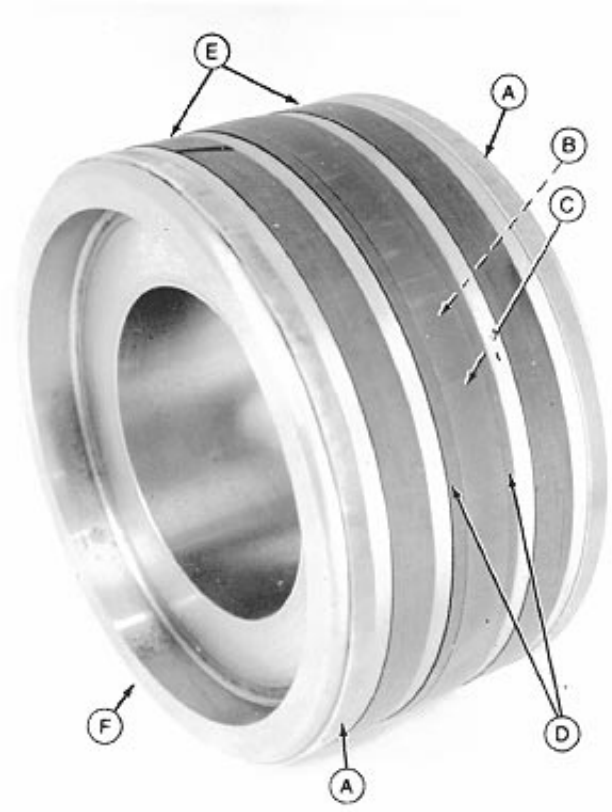
T7625BC –UN–22OCT91

TX,3360,VV389 –19–25NOV91–6/10

11. Remove parts (A—E) from the piston (F).

12. Remove rod guide from rod.

A—Wiper Ring (2 used)
B—Seal Expander
C—Cap Seal
D—Backup Ring (2 used)
E—Wear Ring (2 used)
F—Piston



T7625BE –UN–22OCT91

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