10

SECTION 80—Miscellaneous
Group 05—Hood
Group 10—Front Axle (Two-Wheel Drive)
Group 15—Wagon And Pick-Up Hitch
Group 20—Rear Wheels

20

SECTION 90—Operator Station
Group 00—Component Removal and Installation
Group 05—Heating, Ventilating, and Air Conditioning (HVAC)

30

Group 10—Air Conditioning System
Group 15—Air Suspension Seat
Group 20—ACTIVE SEAT™
Group 25—Armrest
Group 30—Cab Door and Windshield

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SECTION 99—Dealer Tools
Group 05—Dealer Fabricated Tools
Group 10—Essential or Recommended Tools

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Repair CPC™, Large MATE-N-LOC™ and METRIMATE™ Pin Type Connectors

NOTE: JDG140 Extraction Tool is included in JDG155 Electrical Repair Tool Kit and JT07195B Technician's Electrical Repair Kit.

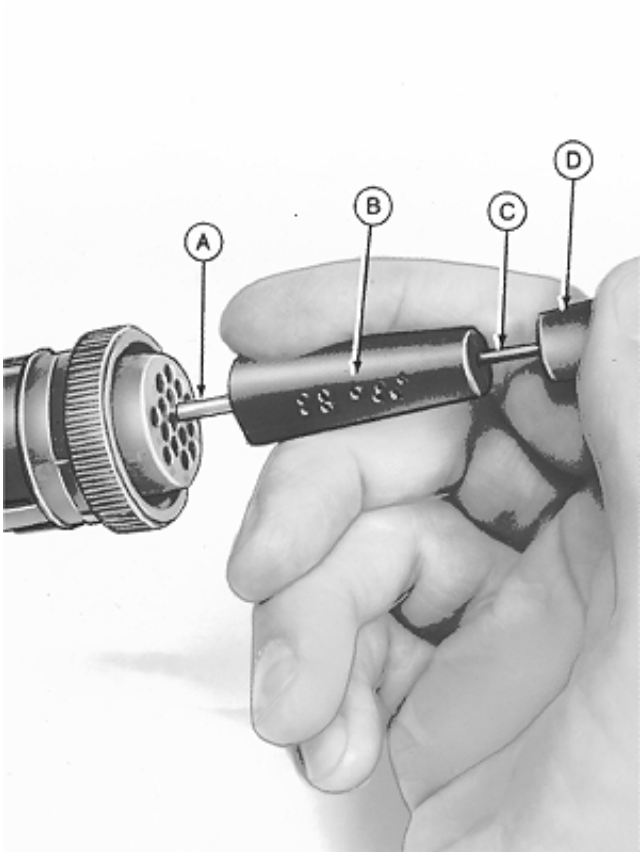
NOTE: JDG143 Extraction Tool and JDG144 Crimping Pliers are included in JDG155 Electrical Repair Tool Kit.

1. Select correct size JDG140 Extraction Tool or JDG143 Extraction Tool to remove contact.

NOTE: Allow tool push rod (C) to back out during insertion.

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05
18

2. Insert tool sleeve (A) over contact until tool bottoms.
3. Rotate tool handle (B) to ensure release of contact locking lances.
4. Hold tool sleeve firmly seated in connector and press push rod button (D). Remove contact from connector.
5. Remove old contact and strip 6 mm (1/4 in.) of insulation from wire using JDG145 Universal Electrical Pliers.
6. Crimp new contact on wire using JDG144 Crimping Pliers.
7. Spread contact locking lances and insert wire in correct terminal of new connector.
8. Transfer remaining wires to correct terminal of new connector.



A—Tool Sleeve
B—Tool Handle
C—Tool Push Rod
D—Push Rod Button

CPC is a trademark of AMP Incorporated
MATE-N-LOC is a trademark of AMP Incorporated
METRIMATE is a trademark of AMP Incorporated

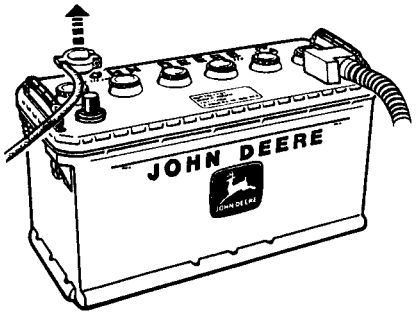
OUOD008,000001D –19–04OCT05–1/1

1—Single Point Ground **2—Negative Battery Post** **3—Negative Battery Post**

OURX984,000011F –19–29NOV05–2/2

Disconnect Electrical Circuit

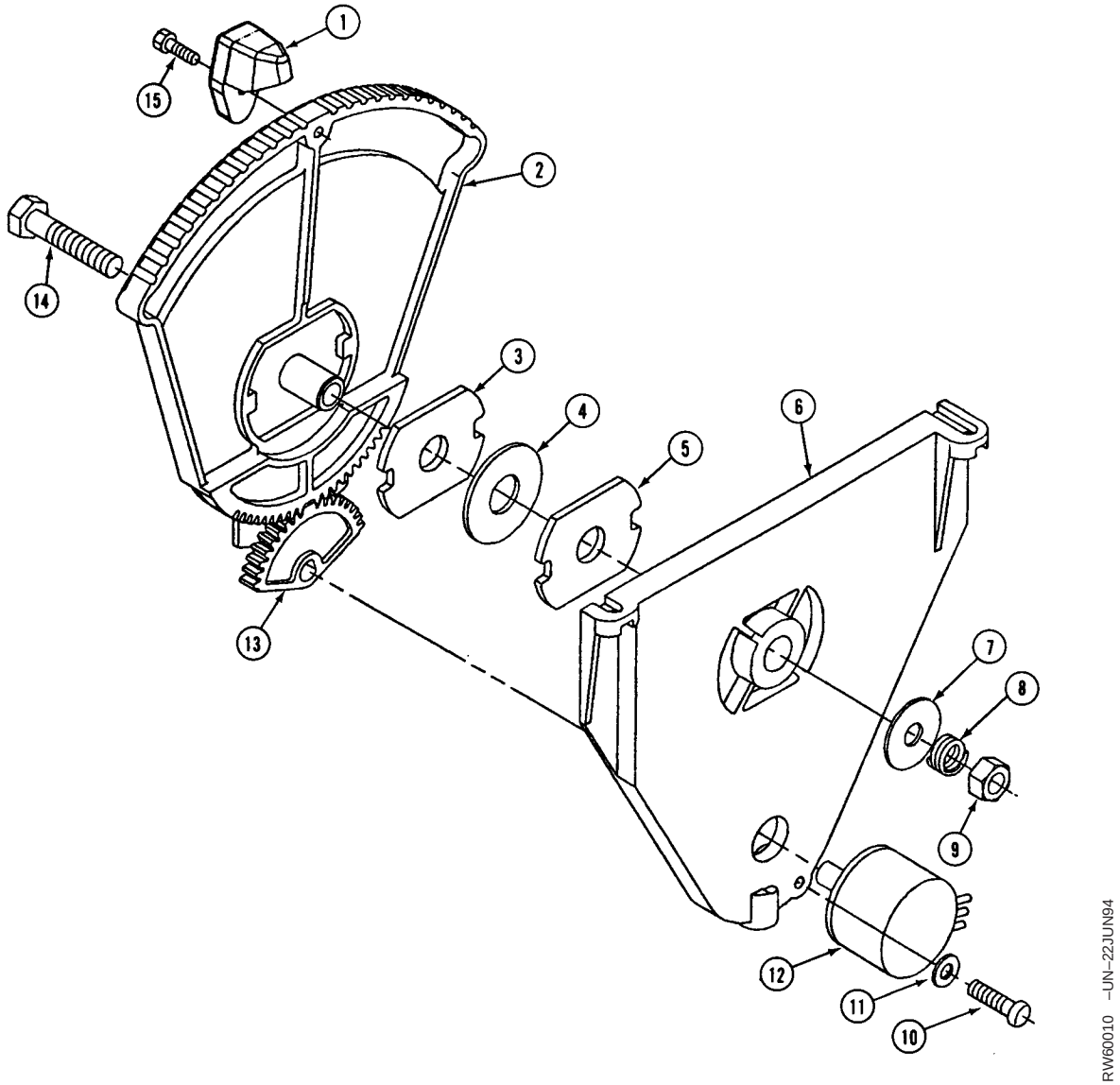
Disconnect battery ground (-) cable before carrying out any electrical repairs.



RW60020 –UN–09MAY94

AG,OUOD008,658 –19–15NOV99–1/1

Replace Engine Speed Control



1—Knob
2—Control Lever
3—Special Washer
4—Friction Washer
5—Special Washer
6—Bracket
7—Washer
8—Spring
9—Nut
10—Cap Screw
11—Washer
12—Sensor
13—Gear
14—Cap Screw
15—Cap Screw

1. Remove armrest control assembly (See Replace Armrest Control Assembly in this group).
2. Disconnect control harness from armrest control unit.
3. Remove mounting cap screws from engine speed control.
4. Replace control as necessary.
5. Tighten nut (9) until friction spring (8) height is 5.0—5.5 mm.
6. Install in reverse order.

Continued on next page

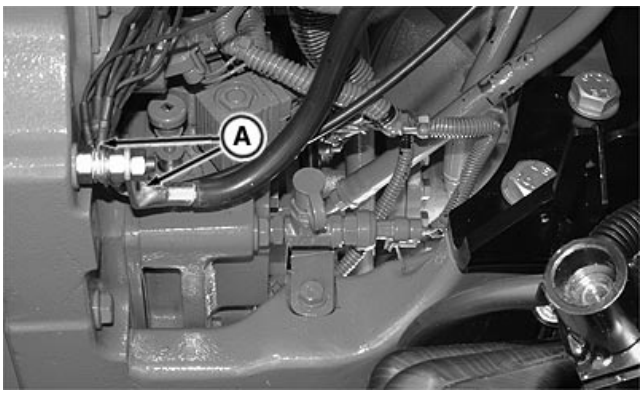
Replace Auxiliary Drive Pulley

1. Open hood and remove left side panel.
2. Disengage auxiliary drive belt from drive pulley.
3. Remove battery box cover and disconnect all battery ground cables (A) from transmission.
4. Remove pulley-to-shaft cap screw (B) and washer from drive pulley. Use a second person to hold flywheel using JDG820 Flywheel Rotation Tool.
5. Remove drive pulley (C) from input shaft.
6. Install pulley, washer, and cap screw. Tighten pulley-to-shaft cap screw.

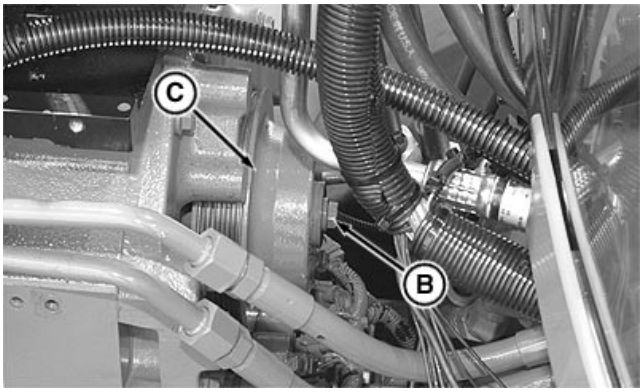
Specification

Auxiliary Drive Pulley Cap Screw—Torque	125 N•m (92 lb-ft)

7. Assemble and install rest of components in reverse order of disassembly.



RXA0056486 –UN–15AUG01



RXA0056483 –UN–15AUG01

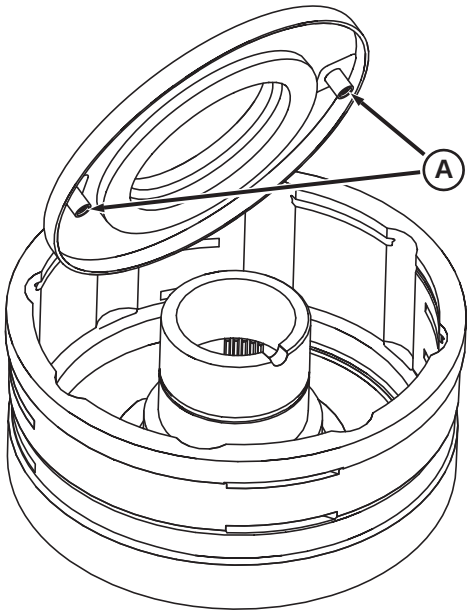
A—Battery Ground Cables
B—Pulley-to-Shaft Cap Screw
C—Auxiliary Drive Pulley

AG,OURX078,246 –19–11NOV04–1/1

50 05 12

19. Ensure relief check balls (A) are not stuck.

A—Relief Check Balls



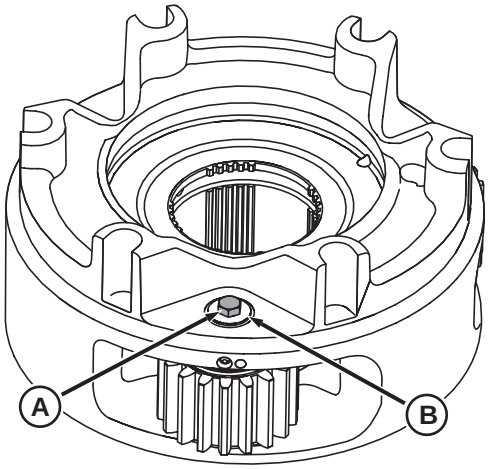
RXA0078258 –UN–04JAN05

AG,OURX078,272 –19–04MAY06–6/6

Disassemble, Inspect, and Assemble Planetary Carrier

1. Remove three pinion shaft pin retaining screws (A) and washers (B).

A—Shaft Pin Retaining Screws
B—Washers



RXA0078260 –UN–04JAN05

Continued on next page

AG,OURX078,273 –19–16NOV06–1/6

Sealing Instructions:

IMPORTANT: DO NOT use Cure Primer to clean the surfaces. The primer action will cause the new sealer material to set up TOO fast to allow adequate assembly time.

- Scrape surfaces to remove old sealer material. Gel-type paint removers containing ethylene chloride, rubbing alcohol, or hot soapy water can be used.
- Clean surfaces to remove oil and grease residue.
- Test for clean surface by applying a few drops of cool water to the surfaces. If water puddles or forms beads, repeat the cleaning procedure.
- Keep surfaces clean after they have been cleaned.

IMPORTANT: DO NOT use an excessive amount of sealant.

- Apply a **THIN** even layer of PM38657 High Flex-in-Place Gasket to one surface of the joint. Narrow overlap areas must be covered with sealant. Prevent sealant from entering any of the oil passages. Be sure the sealant loops around the oil passages.
- Work fast to prevent the sealant from drying before assembly is completed.
- Make sure the sealed surfaces stay dry, clean, and oil free.
- Allow 30 minutes minimum cure time at room temperature before filling with oil.

OURX985,00000AC –19–16SEP05–2/4

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Clutch Disks

IMPORTANT: DO NOT use solvent to clean the disks; use a lint-free cloth. New disks should be soaked in hydraulic oil for 15 minutes before assembly.

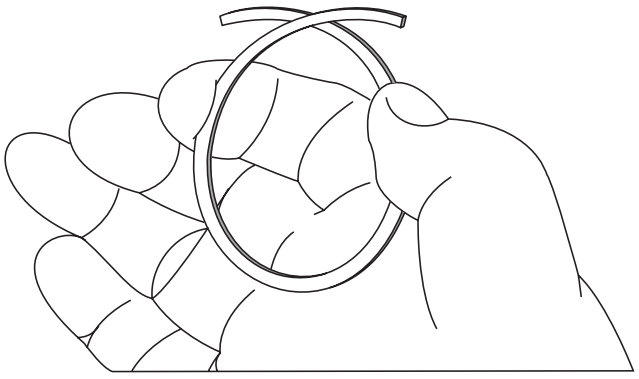


RXA0054013 –UN–08JUN01

OURX985,00000AC –19–16SEP05–3/4

Shaft Sealing Rings

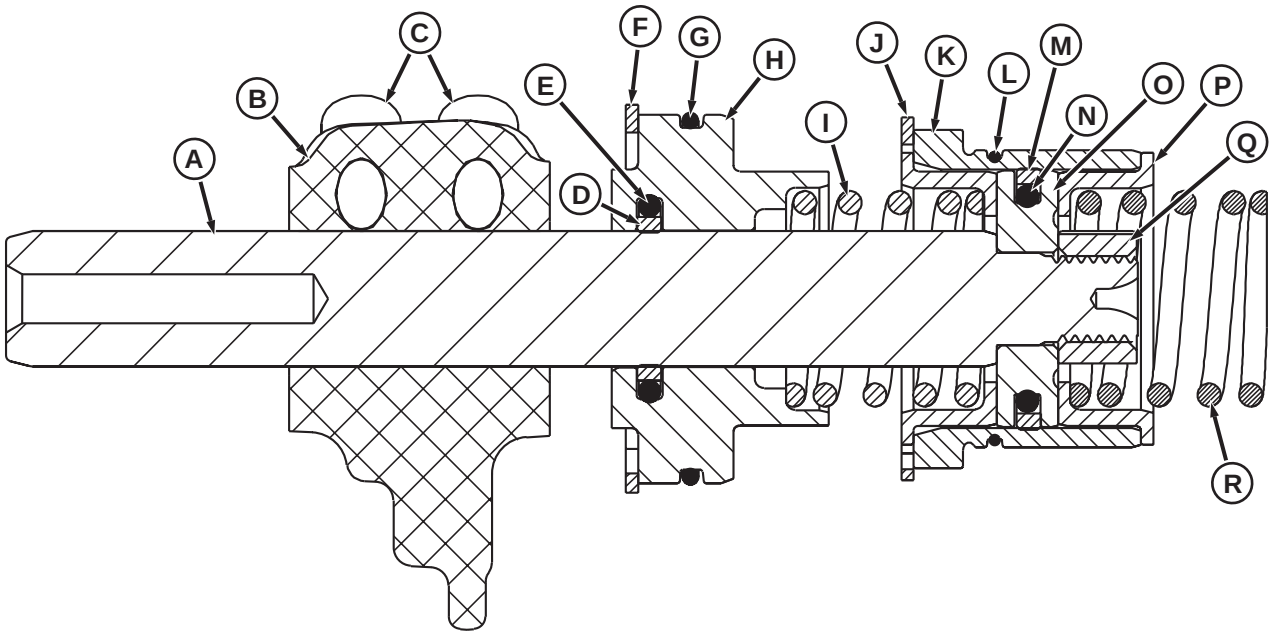
Compress sealing rings past meeting points before installing on shafts.



RXA0078234 –UN–20DEC04

OURX985,00000AC –19–16SEP05–4/4

Cross Sectional View—*C1/C2 Assembly*



RXA0080533 –UN–13MAY05

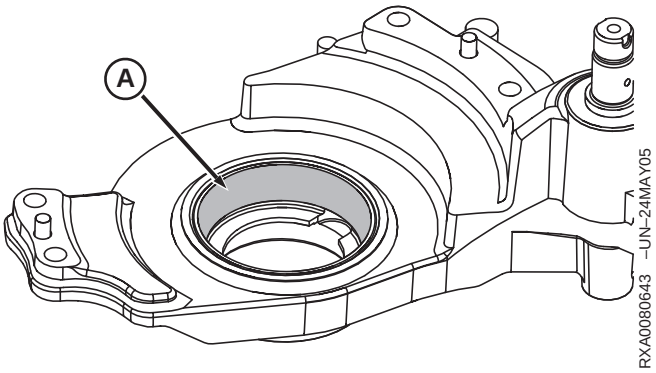
A—Shaft
B—Shift Fork
C—Socket Head Screws (2 used)
D—Seal
E—O-Ring
F—Retaining Ring
G—O-Ring
H—Cap
I—Spring
J—Retaining Ring
K—Sleeve
L—O-Ring
M—Seal
N—O-Ring
O—Piston
P—Spring Seat
Q—Nut
R—Spring

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20
33

OURX985,00000B5 –19–19JUL05–1/1

2. Install bearing cup (A) in bearing frame without shims.

A—Bearing Cup



OURX985,0000FC7 –19–24APR06–2/7

3. Install bearing frame (A) and tighten cap screws (B).

Specification

Planetary Input Gear Assembly
Bearing Frame—Torque ..... 125 N•m (92 lb-ft)

4. Roll gears several turns to seat bearing rollers.

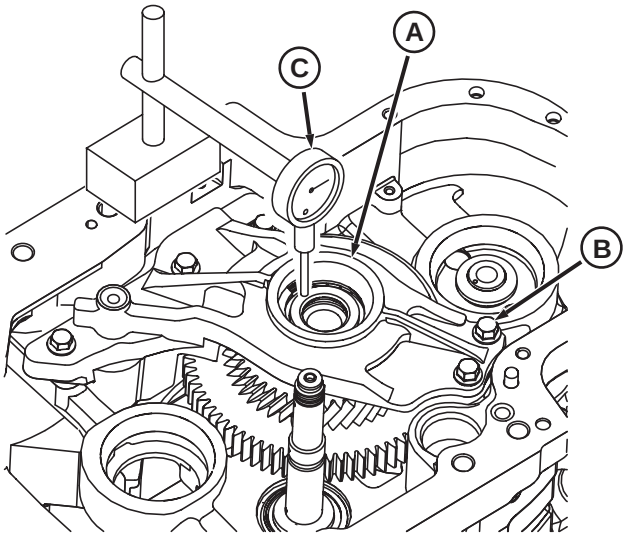
5. Use a dial indicator (C) to check end play.

Specification

Planetary Input Gear Assembly—
End Play ..... 0.00—0.15 mm (0.000—0.006 in.)

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8

A—Bearing Frame
B—Cap Screws (5 used)
C—Dial Indicator



Continued on next page

OURX985,0000FC7 –19–24APR06–3/7

CAUTION: Pump drive housing is extremely heavy. Failure to handle properly could result in personal injury or death.

19. Remove top pump housing cap screws (A) from differential.

20. Loosen housing cap screws (B), (both sides of housing) until there is 1/2 in. gap between housing and washer.

21. Install forcing screw (C), but **do not** tighten.

22. Remove two cap screws from each side of pump housing and install guide pins (D) in their place.

23. Tighten forcing screw (C) until housing comes loose and there is a gap between pump housing and differential.

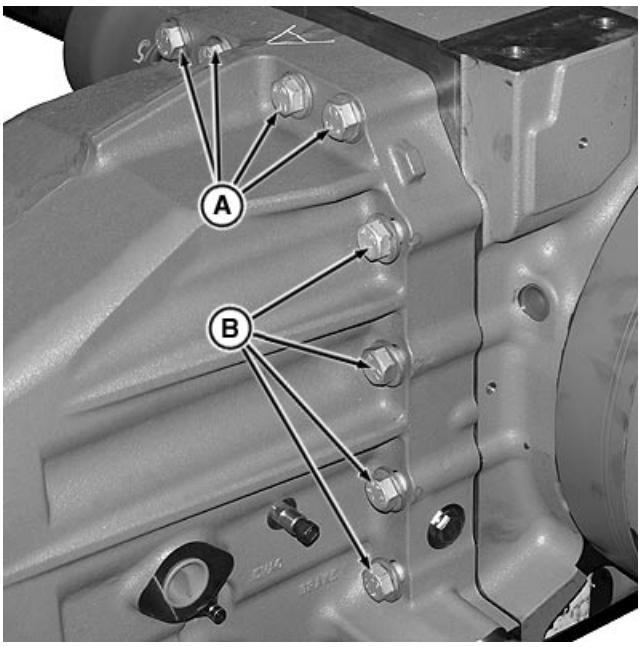
24. Remove forcing screw.

25. Install JDG19 Lifting Eyes (E) and JDG909 Lifting Eyes (F) as shown.

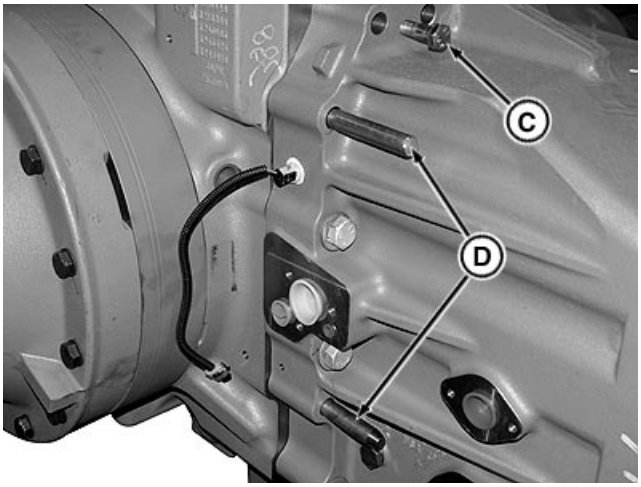
NOTE: PTO drive shaft is splined directly into pump drive housing and can bind up while removing housing.

26. Attach a suitable hoist to lift eyes. Remove the rest of the pump housing cap screws and pry on housing until free from differential.

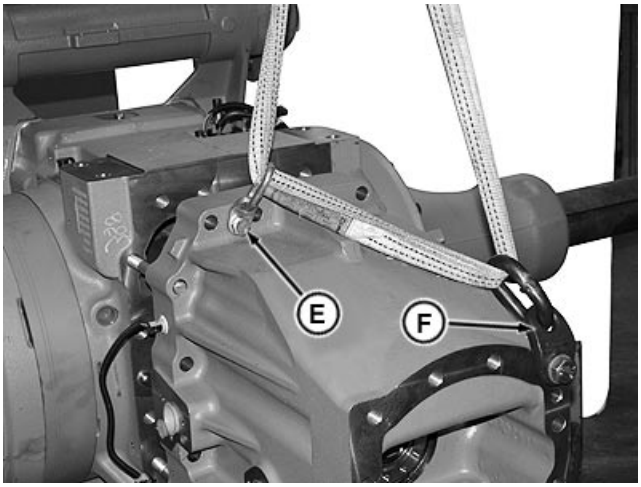
A—Top Pump Housing Cap Screws
B—Side Pump Housing Cap Screws
C—Forcing Screw
D—Guide Pins
E—JDG19 Lifting Eye
F—JDG909 Lifting Eye



RXA0083311 –UN–23AUG05



RXA0083315 –UN–23AUG05



RXA0083317 –UN–25AUG05

OURX984,000002A –19–20OCT05–8/8

7. Install the JDG890A Planetary Carrier Lifting Tool (A) and remove the carrier assembly.

A—Lifting Tool



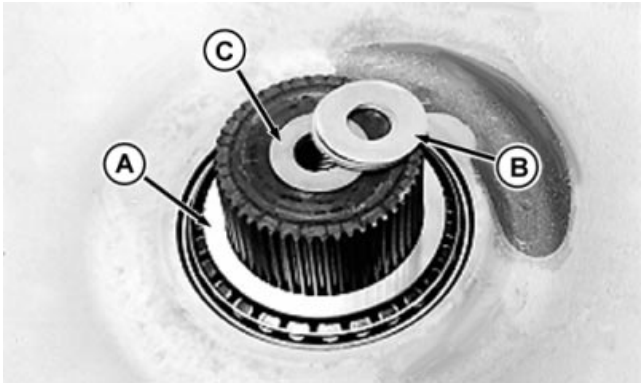
RW35307A –UN–30NOV98

OURX984,0000042 –19–22SEP05–3/5

8. Remove the carrier-to-bearing thrust washer (A).

9. Remove the end play shims (B) and the thick washer (C) from the end of the axle shaft.

A—Thrust Washer
B—Shims
C—Thick Washer



RW35308A –UN–30NOV98

OURX984,0000042 –19–22SEP05–4/5

10. Inspect the condition of the lock plate.

11. Replace the plate, if plate is bowed.



RW35309A –UN–30NOV98

OURX984,0000042 –19–22SEP05–5/5

List of References

Below is a list of all items within this group.

Essential, Recommended and Fabricated Tools

Specifications

General Repair Procedures—MFWD Clutch Assembly

Cross-Sectional View—MFWD Clutch Assembly (Without INDEPENDENT LINK SUSPENSION™)

Cross-Sectional View—MFWD Clutch Assembly (With INDEPENDENT LINK SUSPENSION™)

Disassemble Clutch

Assemble Clutch

RX33672,00004C5 –19–02FEB06–1/1

Essential, Recommended and Fabricated Tools

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

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Below are tools listed in this group.

DFRW95—MFWD Clutch Plate Compressor

JDG849 Clutch Disk Guide

JDG851 Seal Installer

JDG888 MFWD Clutch Plate Compressor

SERVICEGARD is a trademark of Deere & Company

OURX985,0000EB4 –19–01FEB06–1/1

Specifications

Item	Measurement	Specification
Valve Housing-to-Differential Case Cap Screws	Torque	73 N•m (54 lb-ft)
3-Way Solenoid-to-Valve Block	Torque	50 N•m (37 lb-ft)
Solenoid Nut-to-Valve	Torque	7 N•m (62 lb-in.)
2-Way Solenoid-to-Valve Block	Torque	50 N•m (37 lb-ft)
Check Valve-to-Valve Block	Torque	50 N•m (37 lb-ft)
Rod Pressure Control Valve-to-Valve Block	Torque	50 N•m (37 lb-ft)
Manual Drain Valve-to-Valve Block	Torque	40 N•m (30 lb-ft)
Suspension Damping Spool-to-Valve Block	Torque	100 N•m (74 lb-ft)
Suspension Damping Spool Nut-to-Valve Block	Torque	135 N•m (100 lb-ft)
Pressure Compensated Flow Control Valve-to-Valve Block	Torque	50 N•m (37 lb-ft)
Shuttle Check Valves-to-Valve Block	Torque	50 N•m (37 lb-ft)
Shuttle Check Valve (Front Hitch Only)	Torque	8 N•m (71 lb-in.)
Pressure Reducing Valve-to-Valve Block	Torque	40 N•m (30 lb-ft)
Pressure Relief Valve-to-Valve Block	Torque	50 N•m (37 lb-ft)

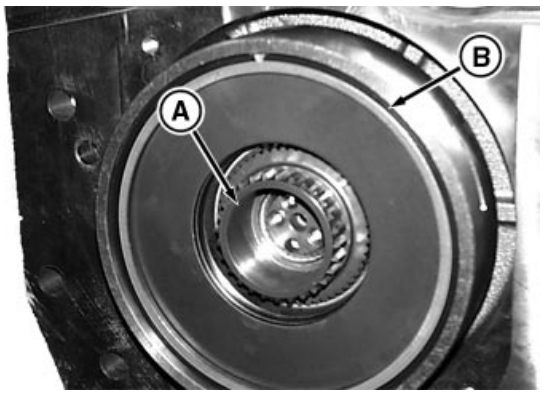
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Repair or Replace Independent Link Suspension Clutch Drive Gear

1. **Repair or Replace Independent Link Suspension Clutch Drive Gear:** Separate differential case from transmission. (See Remove MFWD Clutch in Section 56, Group 00.)

2. Remove splined coupling (A) from MFWD clutch (B) on transmission.

A—Splined Coupling
B—MFWD Clutch



RXA0055619 –UN–25JUL01

OURX956,0000390 –19–15SEP05–1/2

3. Inspect coupling and bushing (A).

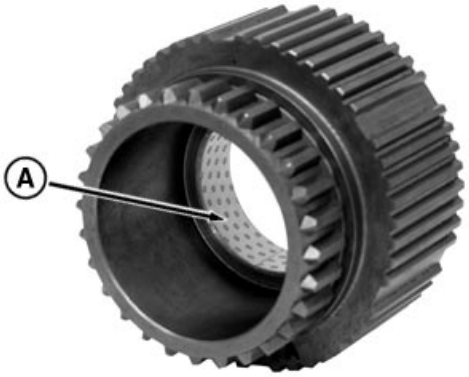
4. Replace parts as necessary.

NOTE: Driver disks and handle are part of D01044AA Bushing, Bearing and Seal Driver Set.

5. Install **new** bushing flush with gear face using a 70 mm or 2-3/4 in. driver disk, 55 mm or 2-3/16 in. pilot disk, and handle.

6. Install gear in reverse order and reassemble tractor. (See Install MFWD Clutch in Section 56, Group 00.)

A—Splined Coupling and Bushing



RXA0055930 –UN–27JUL01

OURX956,0000390 –19–15SEP05–2/2

Repair or Replace Independent Link Suspension Input Pinion Gear

1. **Repair or Replace Input Pinion Gear:** Separate differential case from transmission. (See Remove MFWD Clutch in Section 56, Group 00.)

Continued on next page

OURX956,0000391 –19–18AUG05–1/9

IMPORTANT: Using JDG1553-2 Installers will avoid possible damage to bushings.

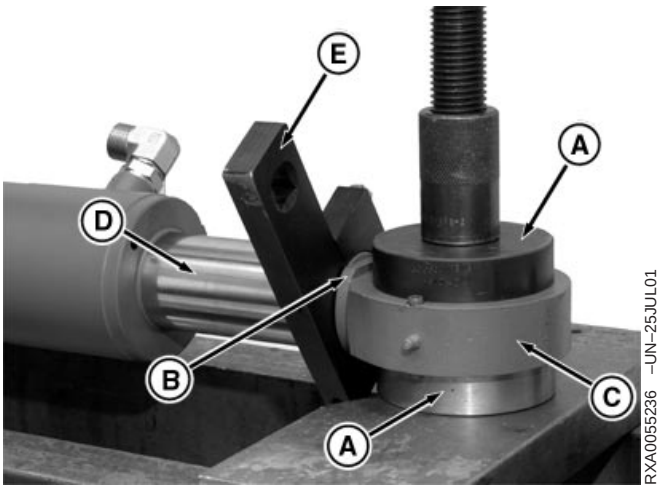
1. **Replace Bearing Eye:** Place cylinder assembly in a press using two JDG1553-2 Installers (A) on rod eye. DO NOT apply clamping force to bushing.
2. Pull piston rod out of cylinder assembly.

CAUTION: Use extreme care when applying heat to ensure adequate ventilation. DO NOT exceed 150° C (300° F).

3. Inactivate retaining compound by heating thread area (B) of bearing eye-to-piston rod. (About 25 mm or 1 in. from piston rod end.)
4. Remove bearing eye (C) from piston rod (D) using JDG1554 Piston Rod Wrench (E).
5. Clean threaded area of bearing eye and piston rod.
6. Apply PM37421 Thread Locker (High Strength) to bearing eye threads.
7. Install bearing eye to piston rod. Tighten to specification.

Specification

Suspension Cylinder Bearing Eye-to-Piston Rod—Torque	400 N•m (295 lb-ft)



RXA0055236 –UN–25JUL01

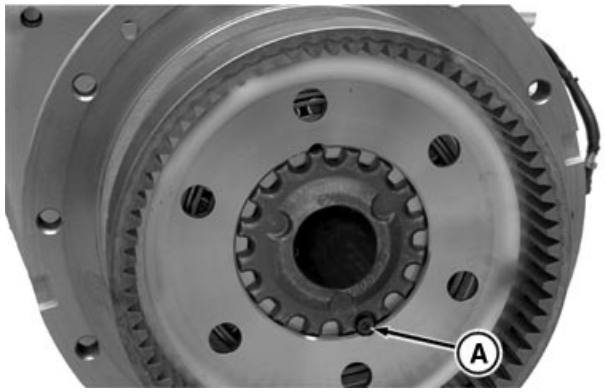
A—JDG1553-2[1] Installer (2 used)
B—Rod Eye-to-Rod Thread Area
C—Bearing Eye
D—Piston Rod
E—JDG1554 Piston Rod Wrench

[1]Part of JDG1553 Bushing Tool Set

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15. Remove ring gear hub retainer lock screw (A).

A—Lock Screw

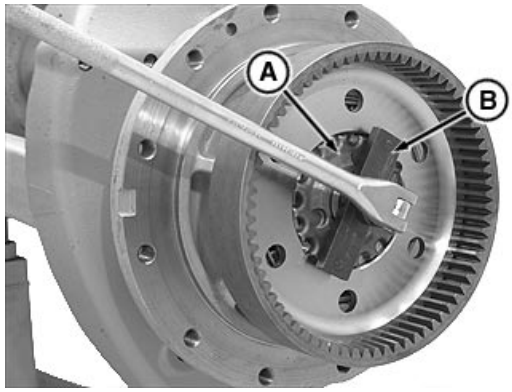


RXA0054981 –UN–19OCT01

OURX984,00002B6 –19–02NOV06–6/11

16. Remove retainer (A) using JDG1498 Spanner Wrench (B).

A—Ring Gear Hub Retainer
B—JDG1498 Spanner Wrench



RXA0057751 –UN–16OCT01

OURX984,00002B6 –19–02NOV06–7/11

17. Make alignment identification marks (A) on ring gear and knuckle spindle spline.

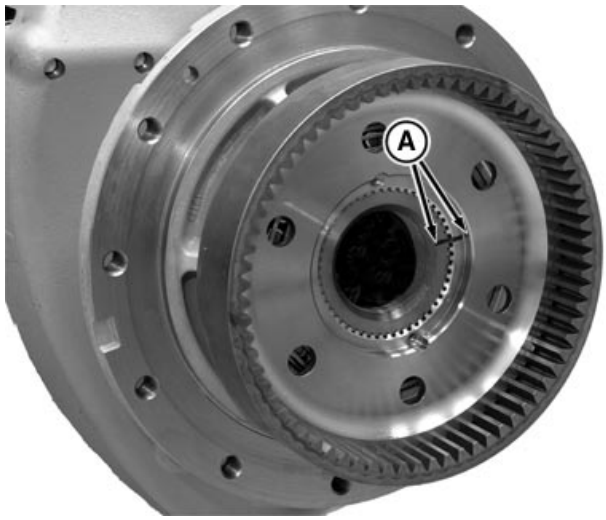
IMPORTANT: Be careful that ring gear hub outer bearing does not fall to the floor when ring gear and hub assembly is removed.

18. Remove ring gear hub assembly.

19. Inspect planetary ring gear, ring gear hub, and outer bearing.

20. Disassemble and replace parts as necessary.

A—Alignment Marks



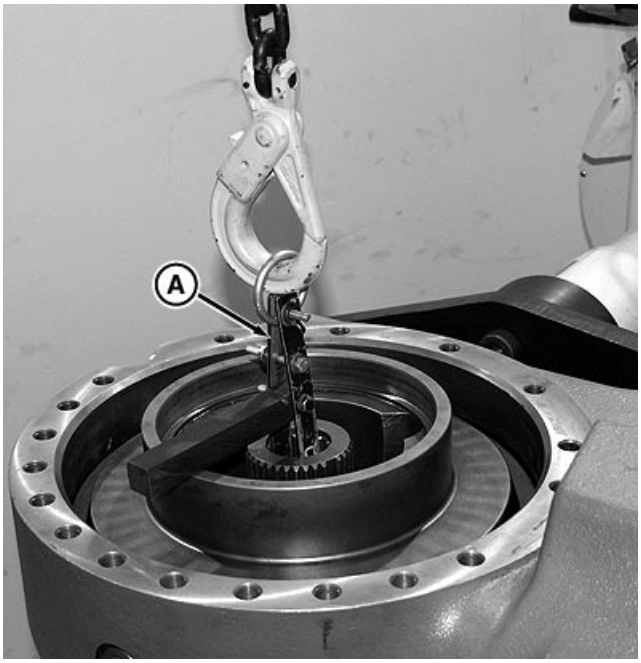
RXA0054983 –UN–22OCT01

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OURX984,00002B6 –19–02NOV06–8/11

17. Install differential using DFRW132 Differential Side Bevel Gear End Play Tool (A).

A—End Play Tool

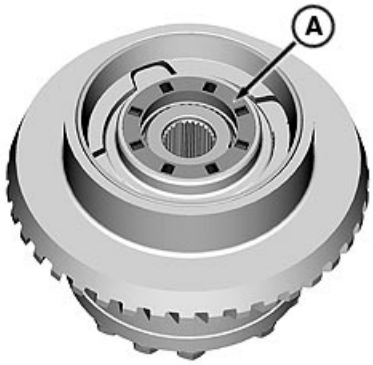


RXA0091627 –UN–12DEC06

OURX984,00002FF –19–20DEC06–4/5

18. Install thrust bearing (A).
19. Install right-hand axle housing. (See Install Right-Hand Axle Housing in Group 10.)
20. Install final drive assemblies. (See Remove and Install Final Drive in Group 00.)

A—Thrust Bearing



RXA0091916 –UN–19DEC06

OURX984,00002FF –19–20DEC06–5/5

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6. Inspect housing machined sealing surfaces for rust or contamination. Use a 280 grit honing stone or crocus cloth to remove only the high spots of rust.

7. Install **NEW** O-rings (B) when assembling the valve stack.

IMPORTANT: DO NOT intermix check valves (A) with other series valves. A wrong size shuttle can cause a malfunction.

IMPORTANT: Prevent valve malfunction and leaks, ensure all O-rings are completely seated in grooves and no paint chips or other contaminates are on adjoining surfaces.

8. Check to make sure check valve (A) is correctly positioned.

9. Install top cover and tighten tie bolt nuts.

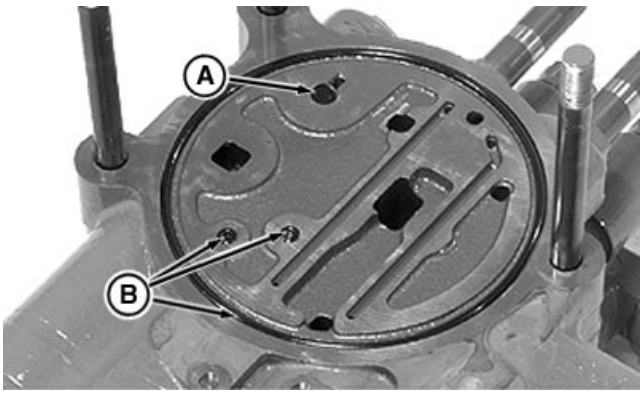
Specification	
Valve Stack Tie-Bolt Nuts—Torque	136 N•m (100 lb-ft)

For Tractors WITH 3-POINT HITCH, perform the following:

1. Install hydraulic connector to the hitch valve.

2. Install hitch manifold to the hitch-SCV valve stack and tighten the two hitch manifold-to-valve stack cap screws.

Specification	
Hitch Manifold-to-Valve Stack Cap Screws—Torque	90 N•m (66 lb-ft)



RXA0057278 –UN–25SEP01

A—Check Valve
B—O-Rings

OURX985,0000E55 –19–21APR06–2/2

List of References

Below is a list of all items within this group.

Specifications

Repair Wagon Hitch

Adjust Wagon Hitch Release

Repair Pick-Up Hitch

Adjust Pick-Up Hitch

RX33672,00004F9 –19–10JUL05–1/1

Specifications

Item	Measurement	Specification
Pick-Up Upper Hitch Frame Cap Screws	Final Torque	430 N•m (170 lb-ft)

OURX956,0000381 –19–07SEP04–1/1

Test Shaft Seal Leakage

1. Remove front plate from compressor pulley.

   Remove clutch hub and screw being careful not to lose inner clutch hub shims.

NOTE: JT02099, JT02100 and JT03194 are part of JT02098 Air Conditioning Fitting Kit.

2. Install JT02099[1] adapter in suction port and JT02100[1] in discharge port. Cap suction and discharge port adapters using JT03194[1] (A).

3. Connect low-pressure hose (B), from JT02051 Manifold with Gauges or JT02045 Recovery/Recycling, and Charging Station (D), to suction test port of compressor.

4. If using gauge set, connect center fill hose (C) to a container of R134a and open to pressurize compressor.

5. If using JT02045 Station to pressurize compressor, add 0.5 kg (1 lb) of refrigerant using normal fill procedures.

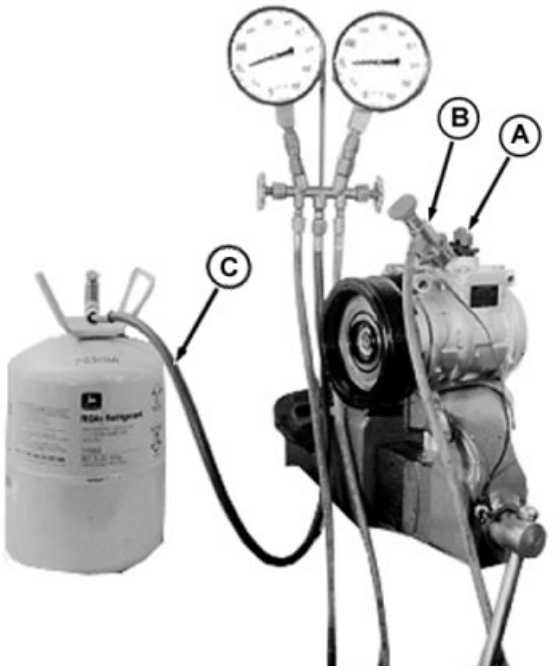
IMPORTANT: Do not exceed range of low-pressure gauge.

6. Check the following for leaks using JT02081 Electronic Leak Detector or 50-50 mixture of soap and water:

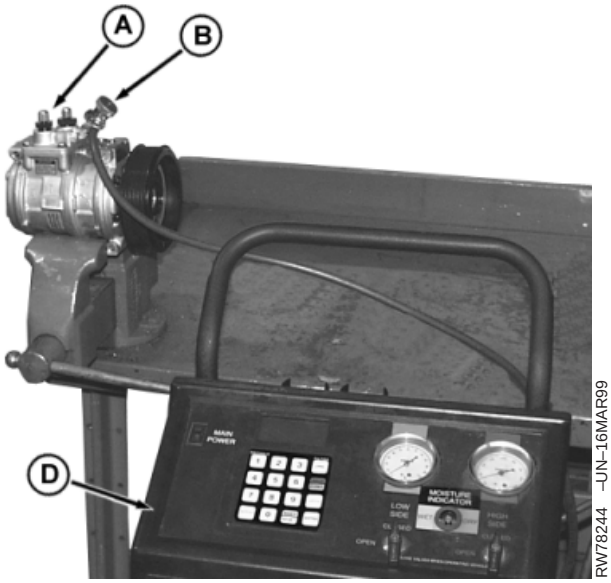
   - Shaft seal
   - Manifold seal
   - Housing seals at front, rear, and midsection of compressor body
   - Relief valve
   - Suction coupler Schrader valve

   Discharge and evacuate compressor after test is complete.

   Leakage should not exist. Repair compressor if required, and repeat test.



RW78243 –UN–16MAR99



RW78244 –UN–16MAR99

A—Test Fittings
B—Low-Pressure Hose Connector
C—Center Fill Hose
D—JT02045 R134a Refrigerant Recovery, Recycling, and Charging Station

[1]*Included in JT02098 Fitting Kit*

Continued on next page

JDG850 Clutch Disk Guide Tool

JDG851 Seal Installer

JDG853 Spanner Wrench

JDG853A Spanner Wrench

JDG854 Spanner Wrench

JDG855 Clutch Assembly Tool

JDG857 Guide Pins

JDG861 Torque Wrench Adapter

JDG864 Park Brake Spring Compression Tool

JDG867 Axle Seal Installer

JDG868 Axle Seal Installer

JDG872 Pump Drive Quill Adjustment Tool

JDG875 Differential Retaining Nut Adjusting Tool

JDG876 End Play Adjustment Tool

JDG877 Sealing Ring Loading Tool Set

JDG878 Sealing Ring Resizing Tool

JDG879 Differential and Pinion Lifting Fixture

JDG880 Differential Bearing Quill Adjustment Tool

JDG881 Driver

JDG882 Mounting Guide Pins

JDG883 Pump Drive Housing Seal Installer

JDG884 MFWD Drive Shaft Holding Tool

JDG885 Seal Installer

JDG888 MFWD Clutch Plate Compressor

JDG890A Planetary Carrier Lifting Tool

JDG909 Lifting Eyes

JDG913 Pressure Switch Socket

JDG915 Clutch Piston Installer

JDG929 Seal Remover and Installer Set

JDG930 Driver Disk (152 mm or 6 in.)

JDG931 178 mm (7 in.)

JDG932 162 mm (6-3/8 in.)

JDG933 Driver Disk 137 mm (5-3/8 in.)

JDG983 Snap Ring Expander Tool

JDG1072 Journal Bearing Sizing Tool

JDG1123 Driver Disk

JDG1182 Puller Adapter

JDG1198 Bearing Installer

JDG1211 Bushing Installer Pilot

JDG1212 Bushing Remover

JDG1216 Ring Gear Holding Tool

JDG1218A Seal Installer

JDG1220 Spacer Installer

JDG1222 Puller Jaws

JDG1251 Axle Support Bracket

JDG1252 Differential Housing Tool Set

JDG1253 Spanner Socket

JDG1254 Seal Installer

JDG1255 Slinger-Seal Installer

JDG1272 Bushing-Seal Installer

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