

750B and 850B Crawler Bulldozer Repair



TECHNICAL MANUAL

For complete service information also see:

750B and 850B Crawler Bulldozers

Operation and Test	TM1332
6076 Engine ..	CTM6
6068 Engine ..	CTM8
6414 Engine ..	CTM4
6166 Engine ..	CTM1
Engine Accessories	CTM11
Undercarriage Appraisal Manual	SP326

John Deere Dubuque Works
TM1476 (11MAY94)

LITHO IN U.S.A.
ENGLISH

Contents

SECTION 00—GENERAL INFORMATION

- Group 0001—Safety Information
- Group 0002—General Specifications
- Group 0003—Torque Values
- Group 0004—Fuels and Lubricants
- Group 0005—Inspection Procedure

SECTION 01—TRACKS

- Group 0130—Track System

SECTION 02—AXLES AND SUSPENSION SYSTEMS

- Group 0201—Drive Axle Housing and Support
- Group 0250—Axle Shaft, Bearings and Reduction Gears

SECTION 03—TRANSMISSION

- Group 0300—Remove and Install
- Group 0315—Control Linkage
- Group 0325—Drive Shaft and U-Joints
- Group 0360—Hydraulic System (Hydrostatic Transmission)

SECTION 04—ENGINE

- Group 0400—Removal and Installation

SECTION 05—ENGINE AUXILIARY SYSTEMS

- Group 0505—Cold Weather Starting Aid
- Group 0510—Cooling System
- Group 0515—Speed Controls and Fuels Shut-Off Linkage
- Group 0520—Intake System
- Group 0530—External Exhaust Systems
- Group 0560—External Fuel Supply System

SECTION 07—CLUTCH (COLD WEATHER DISCONNECT)

- Group 0715—Control Linkage
- Group 0752—Elements

SECTION 08—SPLITTER DRIVE

- Group 0851—Gears, Shafts and Bearings

SECTION 11—PARK BRAKE

- Group 1100—Park Brake
- Group 1115—Control Linkage
- Group 1160—Hydraulic System

SECTION 15—EQUIPMENT ATTACHING

- Group 1511—Drawbar
- Group 1512—Towbar

SECTION 16—ELECTRICAL SYSTEM

- Group 1671—Batteries, Support and Cables
- Group 1672—Alternator, Regulator, and Charging System Wiring
- Group 1673—Lighting System
- Group 1674—Wiring Harness and Switches
- Group 1676—Instruments and Indicators
- Group 1677—Motors and Actuators

SECTION 17—FRAMES, CHASSIS, OR SUPPORTING STRUCTURE

- Group 1740—Frame Installation
- Group 1746—Frame Bottom Guards

SECTION 18—OPERATOR'S STATION

- Group 1800—Removal and Installation
- Group 1810—Operator Enclosure
- Group 1821—Seat and Seat Belt
- Group 1830—Heating and Air Conditioning

SECTION 19—SHEET METAL

- Group 1910—Hood or Engine Enclosures
- Group 1921—Grille and Grille Housing

SECTION 20—SAFETY, CONVENIENCE AND MISCELLANEOUS

- Group 2003—Fire Extinguisher
- Group 2004—Horn and Warning Devices
- Group 2006—Cigar Lighter

SECTION 32—BULLDOZER

- Group 3200—Removal and Installation
- Group 3201—Blade

Continued on next page

Group 3215—Controls Linkage
Group 3240—Frames
Group 3260—Hydraulic System

SECTION 99—DEALER FABRICATED TOOLS

Group 9900—Dealer Fabricated Tools

Index

Section 00
GENERAL INFORMATION

Contents

Page

Group 0001—Safety Information
Safety Messages 0001-1

Group 0002—General Specifications
750B Crawler Dozer
750B Long Track 0002-8
850B 0002-13

Group 0003—Torque Values
Track Shoe Bolt 0003-1
Master Link Track Shoe Bolt 0003-3
O-Ring Boss Fittings 0003-10
Flat Face O-Ring Seal Fittings 0003-11
Four Bolt Flange Fittings 0003-12

Group 0004—Fuels and Lubricants
Fuel 0004-1
Engine Oil 0004-3
Hydraulic Oil 0004-4
Splitter Gearbox Oil 0004-4
Transmission Oil 0004-5
Inner and Outer Final Drives Oil 0004-6
Track Rollers 0004-6
Grease 0004-7

Group 0005—Inspection Procedure
Inspection Programs 0005-1
Using the Checklists 0005-2
Delivery Service 0005-2
PIP I Checklist 0005-3
PIP II Checklist 0005-7

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 -19-04JUN90

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).



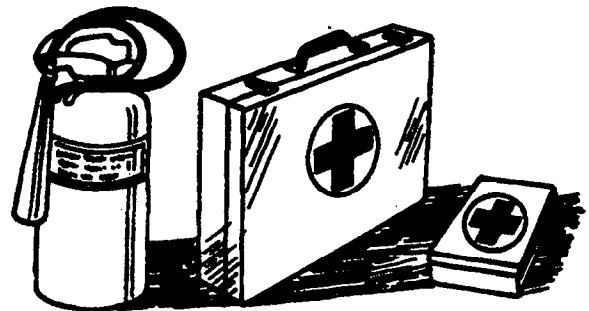
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PREPARE FOR EMERGENCIES

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

DISPOSE OF WASTE PROPERLY

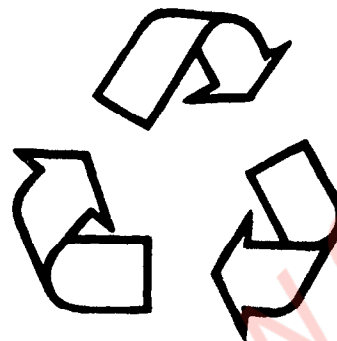
Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste used with John Deere equipment include such items as oil, fuel, coolant, brake fluid, filters, and batteries.

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

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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

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750B GENERAL SPECIFICATIONS

Engine: John Deere 6068T

Type	4-stroke cycle, turbocharged diesel
Bore and stroke	4.19 X 5 in. (106.4 x 127 mm)
Number of cylinders	6
Displacement	414 cu in. (6.785 L)
Lubrication	Pressure system with full flow filters
Cooling	Pressurized with thermostat and controlled bypass
Fan	Blower
Air Cleaner	Dry
Electrical system	24 volt with a 40 amp alternator
Batteries (2) 12 volt	Reserve capacity: 160 minutes
Power at 2100 engine rpm:	
Net	SAE 89 kW (120 hp)
Gross	SAE 95 kW (128 hp)

Transmission:

Splitter drive: Pressure-lubricated helical gears drive both transmissions, main hydraulic pump, winch drive shaft and auxiliary pump drive.

Speeds:

Infinite from 0-10.5 km/h (0-6.5 mph) forward and reverse

Steering:

Hydrostatic steering eliminates the need for steering clutches and steering brakes.

Parking Brakes:

Wet-disk brakes are automatically applied when engine is stopped, or manually applied with center foot pedal during normal operation.

Hydraulic System (Open Center):

Pressure	13 790 kPa (137.9 bar) (2000 psi)
Filter	10 micron filter in return line with bypass

Tracks:

Track shoes each side	40
Ground contact area	20 903 cm ² (3240 sq in.)
Wide track	39 484 cm ² (6120 sq in.)
Ground pressure:	
6505	66.6 kPa (0.7 bar) (9.66 psi)
6520	62.4 kPa (0.6 bar) (9.05 psi)
6525	61.7 kPa (0.6 bar) (8.95 psi)
Narrow gauge	62.2 kPa (0.6 bar) (9.02 psi)
Wide track	35.2 kPa (0.4 bar) (5.10 psi)
General purpose	(53.2 kPa (0.5 bar) (7.71 psi)
Track gauge	1.88 m (74 in.)
Narrow gauge	1.63 m (64 in.)
Minimum ground clearance	356 mm (14 in.)

NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, these specifications are based on a unit equipped with 457 mm (18 in.) grousers [864 mm (34 in.) for wide track and low ground pressure], roll-over protective canopy, full fuel tank, 79 kg (175 lb) operator, and standard equipment.

TX,SECI,FF,319 -19-05AUG93

750B DRAIN AND REFILL CAPACITIES

	English	Metric
Cooling system	7 gal	26.5 L
Fuel tank	73 gal	276 L
Engine crankcase, including filter	20 qt	19 L
Splitter drive	1.5 gal	5.7 L
Inner final drive (each side)	8.5 gal	32.2 L
Inner final drive (narrow gauge) (each side)	5.4 gal	20.3 L
Outer final drive (each side)	3.5 gal	13.2 L
Hydraulic reservoir	27.5 gal	104 L
Transmission reservoir	23 gal	87 L

TX,SECI,FF,301 -19-05AUG93

850B GENERAL SPECIFICATIONS

Engine: John Deere 6466A

Type	Turbocharged and aftercooled diesel
Bore and stroke	4.56 X 4.75 in. (116 x 121 mm)
Displacement	466 cu in. (7.636 L)
Lubrication	Pressure system with full flow filters
Cooling	Pressurized with thermostat and controlled bypass
Fan	Blower
Air Cleaner	Dry
Electrical system	24 volt with a 40 amp alternator
Batteries (2) 12 volt	Reserve capacity: 180 minutes
Power at 1800 engine rpm:	
Net	SAE 123 kW (165 hp)
Gross	SAE 131 kW (175 hp)

Transmission:

Splitter drive: Pressure-lubricated helical gears drive both transmissions, main hydraulic pump, winch drive shaft and auxiliary pump drive. Speeds: Infinite from 0-6.5 mph (0-10.5 km/h) forward and reverse.

Steering:

Hydrostatic steering eliminates the need for steering clutches and steering brakes.

Parking Brakes:

Wet-disk brakes are automatically applied when engine is stopped, or manually applied with center foot pedal during normal operation.

Hydraulic System (Open Center):

Pressure	2250 psi (15 514 kPa) (155 bar)
Filter	10 micron filter in return line with bypass
Pump flow at 2100 rpm	144 L/min (38 gpm)

Tracks:

Track shoes each side	37
Low ground pressure	43
Long track	40
Ground contact area	29 419 cm ² (4560 sq in.)
Low ground pressure	58 352 cm ² (9044 sq in.)
Long track	33 135 cm ² (5 136 sq in.)
Ground pressure:	
6540	57.3 kPa (0.6 bar) (8.3 psi)
6545	56.7 kPa (0.6 bar) (8.2 psi)
Low ground pressure	3.38 kPa (0.3 bar) (4.9 psi)
General purpose	59.1 kPa (0.6 bar) (8.58 psi)
Long track (6540)	53.3 kPa (0.5 bar) (7.7 psi)
Long track (6545)	52.8 kPa (0.5 bar) (7.65 psi)
Track gauge	1.88 m (74 in.)
Low ground pressure	2.24 m (88 in.)
Minimum ground clearance	417 mm (16.4 in.)
Low ground pressure with swamp shoe	490 mm (19.3 in.)

Operating Weight w/ROPS:

850B Standard	17 198 kg (37915 lb)
850B LGP	20 124 kg (44 365 lb)

Drawbar pull at 0.4 km/h (0.25 mph) 29 484 kg (289 kN) (65 000 lb)

NOTE: Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with ICED and SAE standards. Except where otherwise noted, these specifications are based on a unit equipped with 20 in. (508 mm) grousers [965 mm (38 in.) low ground pressure], roll-over protective canopy, full fuel tank, 79 kg (175 lb) operator, and standard equipment.

TX,SECI,FF,321 -19-01APR94

850B DRAIN AND REFILL CAPACITIES

	English	Metric
Cooling system	9 gal	34 L
Fuel tank	82 gal	310 L
Engine crankcase, including filter	25 qt	24 L
Splitter drive	1.5 gal	5.7 L
Inner final drive (each side)	5.5 gal	20 L
Inner final drive (LGP) (each side)	10 gal	38 L
Outer final drive (each side)	3.5 gal	13.25 L
Track frame pivot (each side)	1 pt	0.47 L
Hydraulic reservoir	27.5 gal	104 L
Transmission reservoir	29 gal	110 L

TX,SECI,FF,302 -19-05AUG93

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4**CHECKING TRACK SHOE CAP SCREW TORQUE**

Track shoe cap screw torque should be periodically checked. If the cap screws do not meet the minimum torque specifications, remove the shoes and clean the mating surfaces of the shoes and links before tightening the cap screws.

If machine is operated with loose track shoes, the cap screw holes in the shoes and links will wear and it may be difficult to keep the track shoes tight. Loose shoes can also cause hardware failure and loss of track shoes.

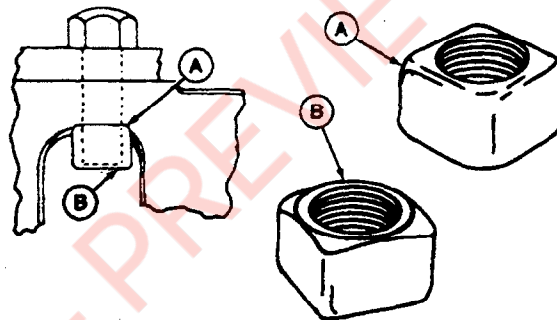
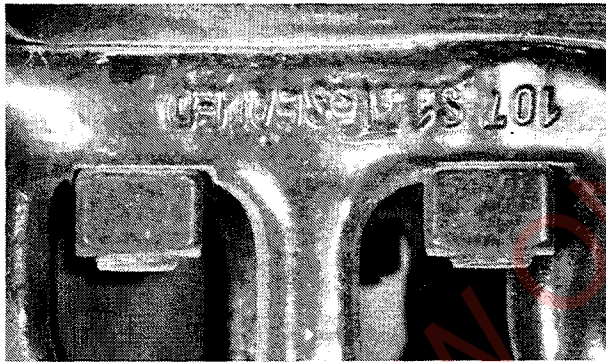
Install all track shoe nuts with rounded edges (A) against the link and chamfered edges (B) away from the link. Be sure nut is properly positioned in the link so there is full contact area between the nut and the link.

TORQUE SPECIFICATION

Cap Screw Torque 149 N·m (110 lb-ft)

NOTE: Replacement hardware should be lubricated and tightened to above specification.

A—Rounded Edge
B—Chamfered Edge



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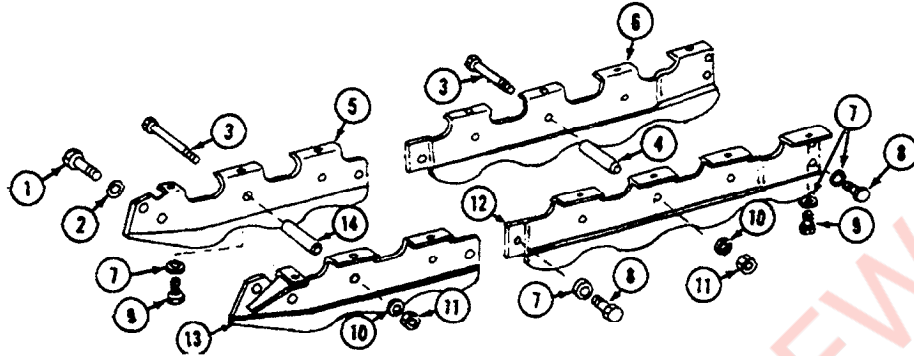
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REMOVE AND INSTALL ROCK GUARDS AND TRACK GUIDES



1—Cap Screw (4 used)
2—Washer (2 used)
3—Cap Screw (6 used)
4—Spacer (3 used)

5—Track Guide
6—Rock Guard
7—Washer (20 used)
8—Cap Screw (6 used)

9—Cap Screw (12 used)
10—Lock Washer (6 used)
11—Nut (6 used)

12—Rock Guard
13—Track Guide
14—Spacer (3 used)

NOTE: Removal and installation of rock guards and track guides are similar for both 750B and 850B. Majority of cap screws are F grade.

1. Remove parts (1—14).

2. Inspect rock guards (6 and 12) track guides (5 and 13) for wear and damage. Repair or replace parts as necessary.

IMPORTANT: Good welds are important. Have only a qualified welder repair the components. Use E7018 electrodes. Before welding, clean all dirt and paint from the weld areas and turn the battery disconnect switch to "OFF". Connect the welder ground clamp close to each weld area so electrical current does not pass through any bearings.

3. Apply high strength thread lock and sealer to cap screws (1, 3, 8 and 9).

4. Install inner rock guard, guide, washers and cap screws.

5. Put cap screws through inner guide or inner guard spacer, outer guide or outer guard, washer (10) and nut. Tighten the nuts.

6. Install outer guard and guide cap screws.

7. Install bottom two sprocket shields-to-track guide cap screws and tighten to 325 N·m (240 lb-ft).

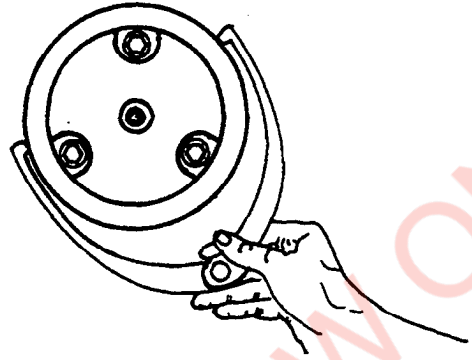
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MEASURE CARRIER ROLLER WEAR

1. Position an outside calipers over the most worn area of roller running surface, and close until caliper tips just touch tread surface.

2. Measure caliper tip spread using the scale to the nearest 0.5 mm (0.002 in.)

3. Check for flat spots on carrier roller thread, which indicate roller is not free to turn.

**CARRIER ROLLER WEAR SPECIFICATION**

	750B	850B
O.D. of new carrier roller	165 mm (6.5 in.)	165 mm (6.5 in.)
Minimum Recommended O.D.		
100% Worn	148.4 mm (5.84 in.)	145.3 mm (5.72 in.)

NOTE: See Undercarriage Appraisal Manual SP-326 for additional information.

TX,0130,DU1296 -19-11AUG93

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REMOVE AND INSTALL CARRIER ROLLER

⚠ CAUTION: Grease in track adjustment cylinder is under high pressure. Slowly loosen check valve fitting to release grease from track tension adjuster.

1. Slowly turn check valve fitting counterclockwise one turn to release track tension. (See Adjust Track Sag in this group.)

2. Raise and support track chain using a chain and hoist.

⚠ CAUTION: The approximate weight of carrier roller is 40 kg (90 lb).

3. Remove cap screws (B) to remove front (A) or rear (D) carrier rollers.

4. Install carrier roller, washers, and tighten cap screws (B) to 325 N·m (240 lb-ft).

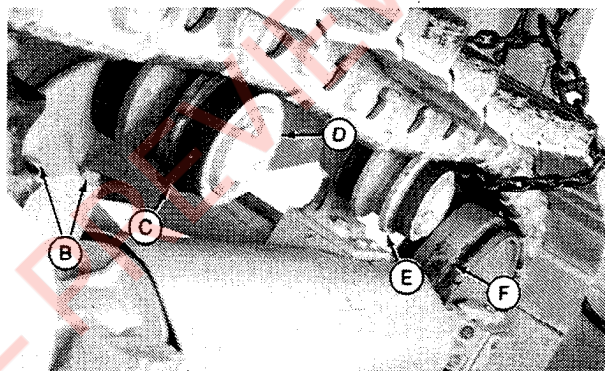
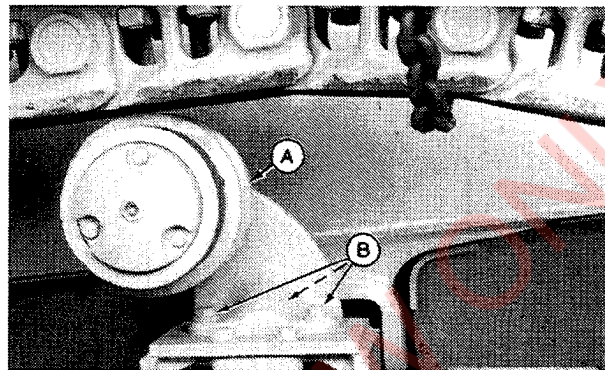
5. If front carrier roller was removed, stretch a string from rear carrier roller flange outside edge (C) to idler flange outside edge (F).

6. Loosen front carrier roller to support cap screws (B) and slide roller in or out until front carrier roller flange outer edge (E) is aligned with string.

7. Make sure center line of roller is perpendicular to track chain and tighten cap screws to 325 N·m (240 lb-ft).

8. Lower track and remove chain.

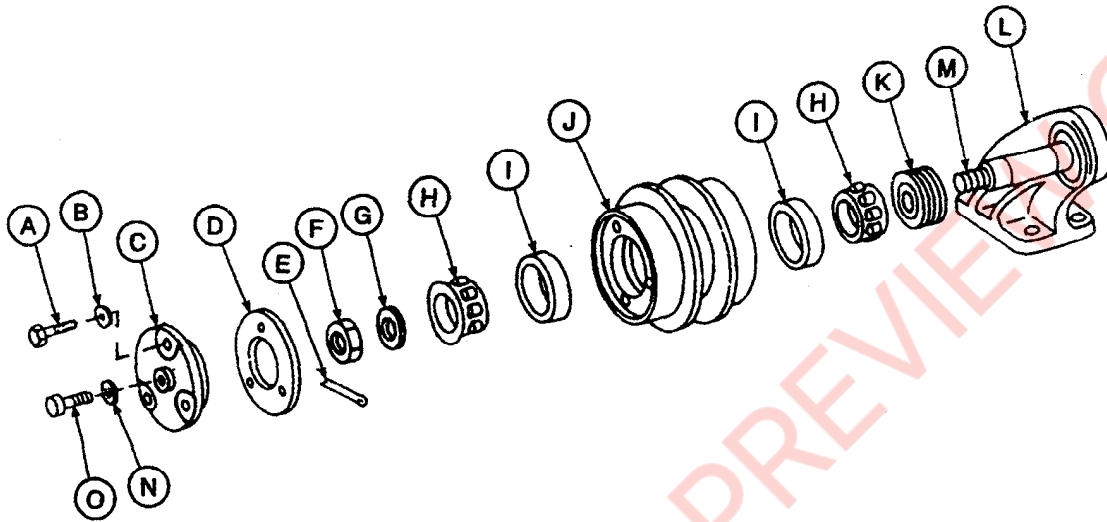
9. Adjust track tension. (See Adjust Track Sag procedure in this group.)



A—Front Carrier Roller
B—Cap Screw (8 used)
C—Rear Carrier Flange Outer Edge
D—Rear Carrier Roller
E—Rear Carrier Roller Flange Outer Edge
F—Idler Flange Outer Edge

TX,0130,DU1306 -19-30SEP93

DISASSEMBLE AND ASSEMBLE CARRIER ROLLER



T8040AH (CV)

A—Cap Screw (3 used)
 B—Lock Washer (3 used)
 C—Cover
 D—Gasket

E—Cotter Pin
 F—Nut
 G—Washer
 H—Bearing Cone (2 used)

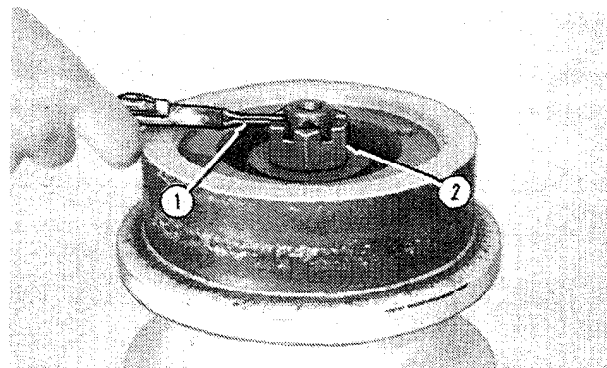
I—Bearing Cup (2 used)
 J—Roller
 K—Seal Kit
 L—Roller Support

M—Shaft
 N—O-Ring
 O—Fitting

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1. Remove three cap screws to remove cover, and gasket.

2. Remove cotter pin (1) to loosen nut (2). Do not remove nut at this time.



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