

# Impeller Mower-Conditioners 1326 and 1327



JOHN DEERE

## TECHNICAL MANUAL Impeller Mower-Conditioners 1326 and 1327

TM3260 (01Jun86) English

**John Deere Arc-lès-Gray**  
**TM3260 (01Jun86)**

LITHO IN U.S.A.  
ENGLISH



**1326 – 1327 MOWER CONDITIONERS  
TECHNICAL MANUAL  
TM 3260 (JUNE-86)**

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TABLEMAT-CCL101AE-200885

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## SERVICE LITERATURE

This technical manual is part of a twin concept of service.

### FOS Manuals – for reference

### Technical Manuals – for actual service

The two kinds of manuals work as a team to give you both the general background and technical details of shop service.

Fundamentals of Service (FOS) Manuals cover basic theory of operation, fundamentals of trouble shooting, general maintenance, and basic types of failures and their causes. FOS manuals are for training new people and for reference to experienced technicians.

Some features of this technical manual:

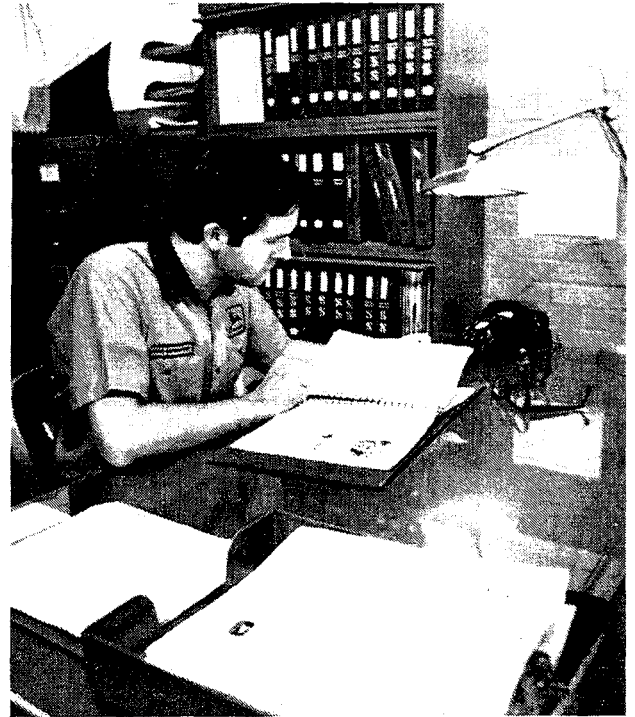
Table of contents at front of manual

Exploded views showing parts relationship

Photos showing service techniques

This technical manual was planned and written for you – an experienced technician. Keep it in a permanent binder in the shop where it is handy. Refer to it whenever in doubt about correct service procedures or specifications.

Using the technical manual as a guide will reduce error and costly delay. It will also assure you the best in finished service work.



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## **SAFETY**

Operator's Manuals of the relevant machines contain SAFETY rules for operation and service. Practice them to avoid ACCIDENTS.

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## **GENERAL RECOMMENDATIONS FOR DISASSEMBLY AND INSPECTION**

A good working organization as well as clean tools and work bench are a must for proper repair and service.

Use adequate tools, check all parts for serviceability and replace them if necessary.

Refer to relevant FOS Manuals for diagnosing component problems.

Follow given specifications and refer to Operator's Manual for safety procedures.

Use exploded views to identify parts.

Before commencing reassembly, make sure all parts (including replacements) are available on your work bench.

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**GENERAL SPECIFICATIONS**

Refer to the operator's manual of the relevant machine.

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**GENERAL TORQUES**

**METRIC MEASUREMENT**

Bolt Diameter (A)	Bolt Torque in Nm (ft-lb)	
	8.8	10.9
5 mm	7 ( 5 )	9 ( 6.5 )
6 mm	10 ( 8.5 )	15 ( 10 )
8 mm	30 ( 20 )	40 ( 30 )
10 mm	50 ( 35 )	80 ( 60 )
12 mm	100 ( 75 )	140 ( 100 )
14 mm	160 ( 120 )	210 ( 155 )
16 mm	240 ( 175 )	350 ( 260 )
20 mm	480 ( 355 )	650 ( 480 )
24 mm	820 ( 605 )	1150 ( 850 )
30 mm	1640 (1210 )	2250 (1660 )

*NOTE: Bolts having lock nuts should be torqued to approximately 65% of amounts shown in above chart.*

This chart gives the recommended torques for hardware. Refer to this chart when no specified torque is mentioned in assembly procedures.

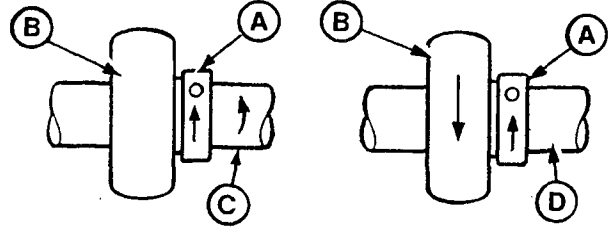
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## LOCKING COLLARS FOR SHAFT BEARINGS

Locking collars (A) on bearings (B) must be kept tight at all times.

On rotating shafts (C), locking collars (A) will have to be secured in the direction of shaft rotation.

On stationary shafts (D), locking collars (A) will have to be secured in the opposite direction of bearing (B) rotation.



CC 2636

A—Locking collar

C—Rotating shaft

B—Bearing

D—Stationary shaft

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## LUBRICATION

Quality of lubricant to be used and lubrication periods depend upon operating conditions.

**IMPORTANT: Refer to lubrication section of the Operator's Manual for procedure, proper oil specifications and recommended grease.**

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# Section 50 POWER TRAIN – REPAIR

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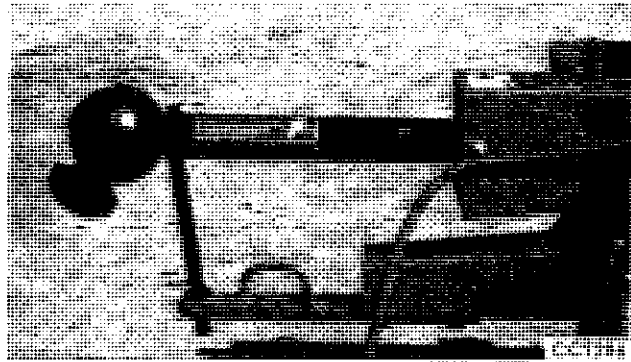
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### POWR-GARD PTO DISASSEMBLY

The 1326-1327 mower conditioners are equipped with a front and a rear power line. Disassembly and re-assembly processes are identical for both parts.

 **CAUTION:** Never connect a 540 rpm mower-conditioner to a 1000 rpm tractor.



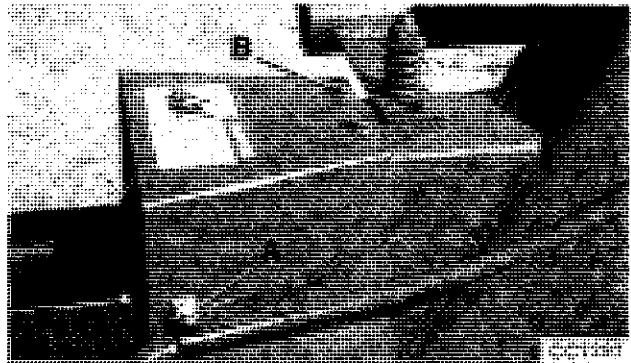
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### Remove PTO Shield

Remove hose clamp (A).

Remove the four cap screws (B).

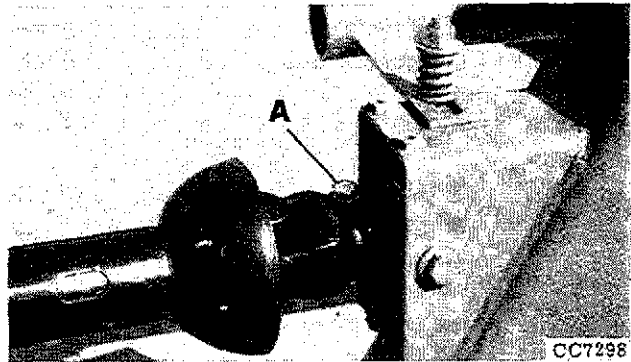
Remove PTO shield (C).



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### Remove PTO Hookup

Remove cap screw (A) and PTO hookup.

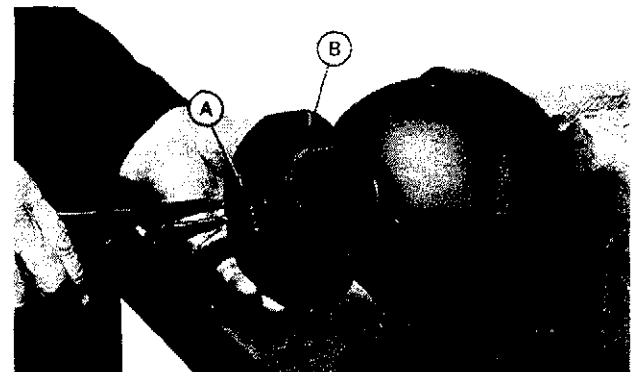


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### Disassemble POWR-GARD PTO

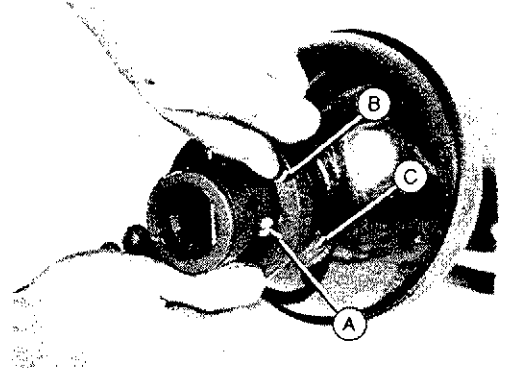
Support push collar assembly (B) and remove snap ring (A).

Remove push collar and pushbutton latch.



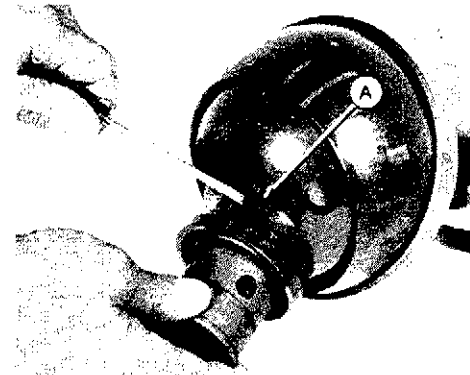
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Push back on retainer collar, remove three steel balls (A) from yoke, remove retainer collar (B) and spring (C).



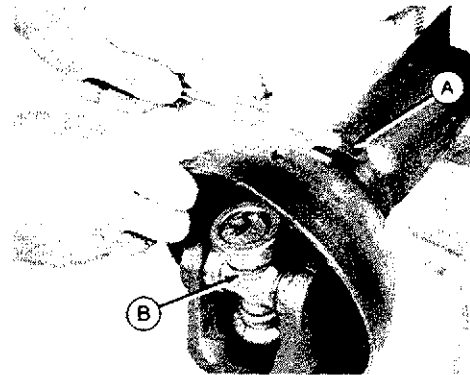
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Lift locking bearings (A) up and out of assembly. Remove closure shield from yoke.



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Hold in vise, positioned so shaft can't slip out.  
Remove locking bearings (A) from shield.  
Remove yoke and shaft assembly (B) from shield.

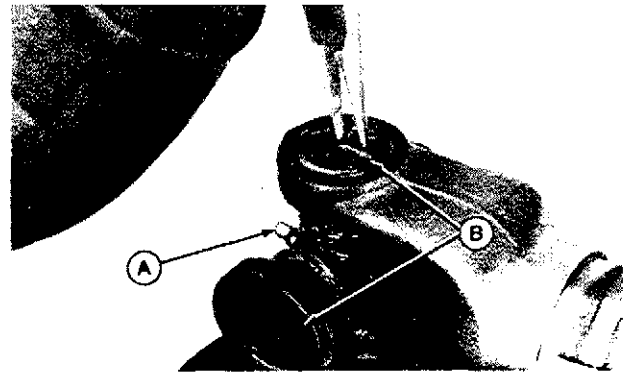


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Note position of grease fitting (A) prior to disassembly so it can be properly positioned during reassembly.

Remove snap rings (B) from outside.

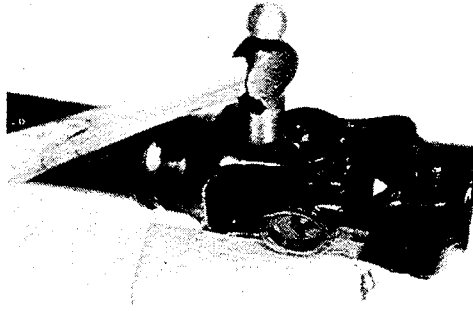
If snap rings stick, loosen by tapping lightly on ends of bearings with a soft brass hammer or soft brass rod.



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Position joint in an open vise with each ear of one yoke supported by a vise jaw.

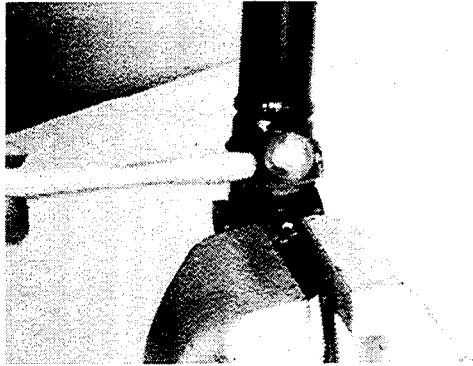
With a soft hammer or mallet, strike the top ear of the unsupported yoke. This will drive the top bushing outward approximately 9.5 mm (3/8 in.).



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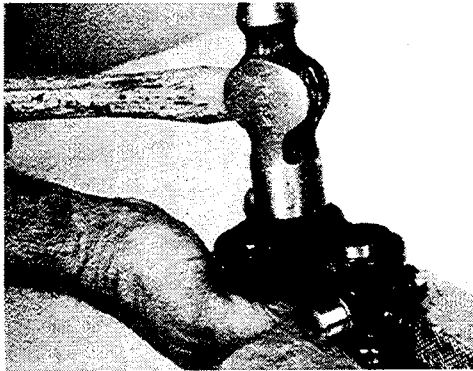
Clamp loosened bearing in vise and drive yoke off.

Repeat this procedure for removing bearing directly opposite the one just removed, after which the yoke itself may be removed.



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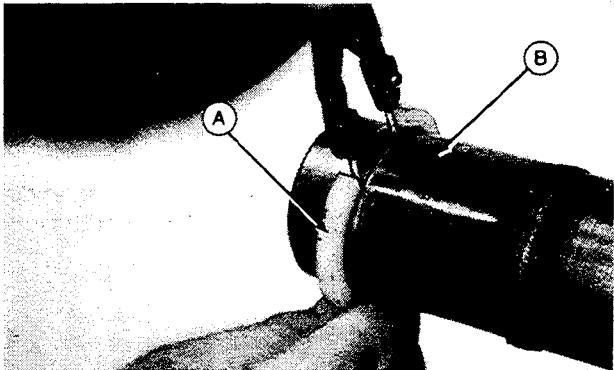
To remove remaining two bushings, support cross as shown making certain that vise jaws are covered with brass protectors. By striking yoke ear, the remaining bushings can be removed as described above.



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Disassemble rear section of powershaft in same manner as front section.

Remove nylon bearing (A) from yoke and tube (B).



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## POWR-GARD PTO INSPECTION

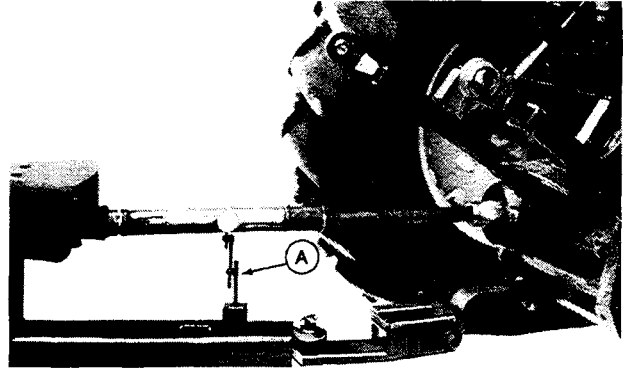
1. Clean rust, dirt and paint from cap holders.
2. Replace spider and bearing assembly, if worn.



**CAUTION: Do not start tractor while inspecting shaft for straightness.**

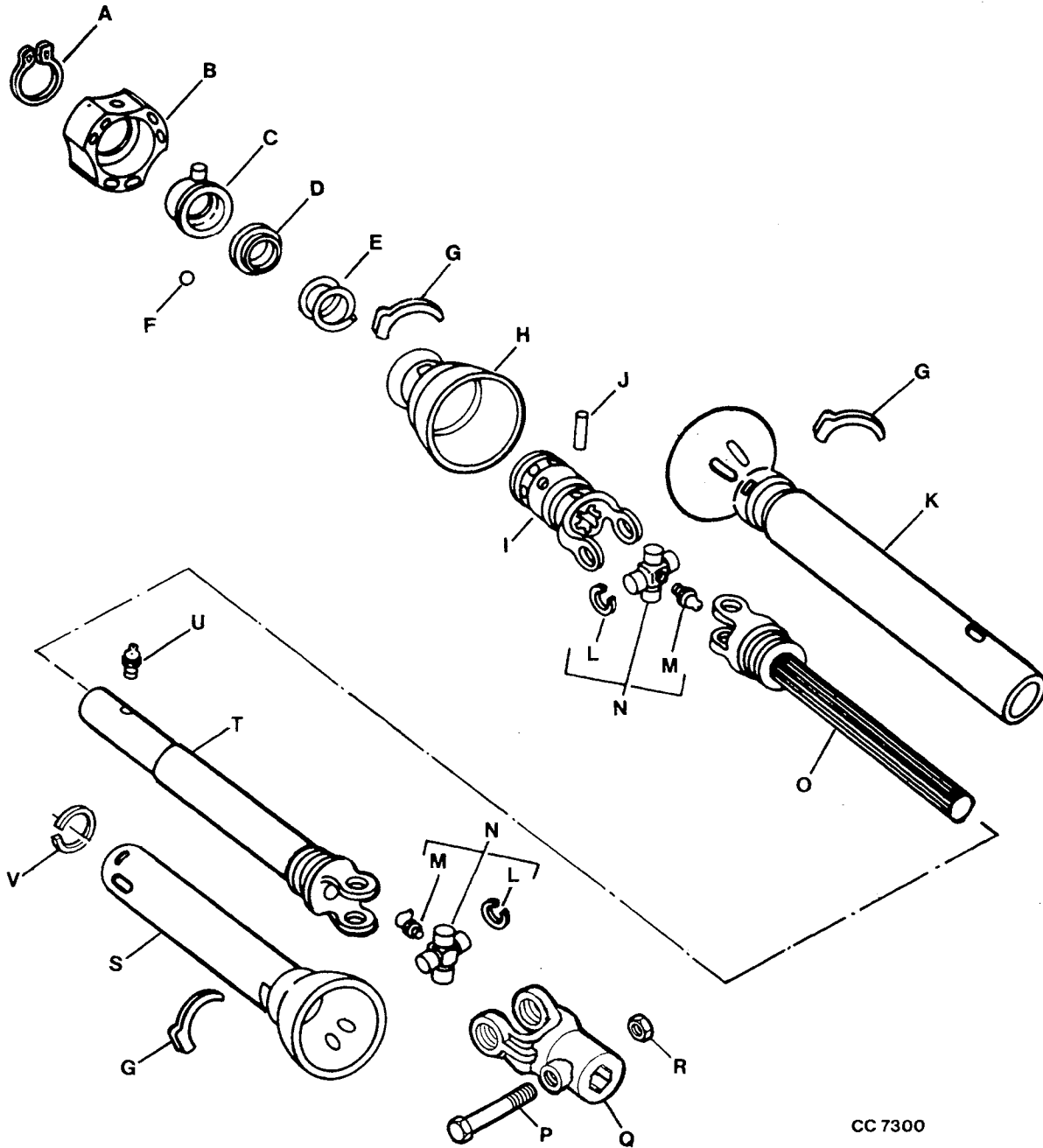
3. Check yoke and tube, yoke and shaft for straightness using dial indicator (A). Max. run-out should be 0.90 mm (0.35 in.) in middle of hookup. If hookup is out of tolerance, straighten or replace.

4. Check shaft for roughness, nicks or pitting of surface.
5. Replace compression springs if cracked or rusted.
6. Replace nylon locking bearings if worn.



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**POWR-GARD PTO – EXPLODED VIEW**



CC 7300

A-Snap ring  
 B-PTO shield  
 C-Latch  
 D-Retainer  
 E-Spring  
 F-Ball

G-Universal joint bearing  
 H-PTO shield  
 I-Universal joint yoke  
 J-Spring pin  
 K-Powershaft shield  
 L-Snap ring

M-Lubrication fitting  
 N-Cross and bearing assembly  
 O-Yoke with shaft  
 P-Cap screw  
 Q-Universal joint yoke  
 R-Nut

S-Powershaft shield  
 T-Yoke with shaft  
 U-Lubrication fitting  
 V-Guide

CC7300-CCL15005AE-20085

### POWR-GARD PTO REASSEMBLY

Reassemble joints. Start one bearing in yoke.  
Position center spider (A) through yoke.

Press bearing into yoke until flush with surface.

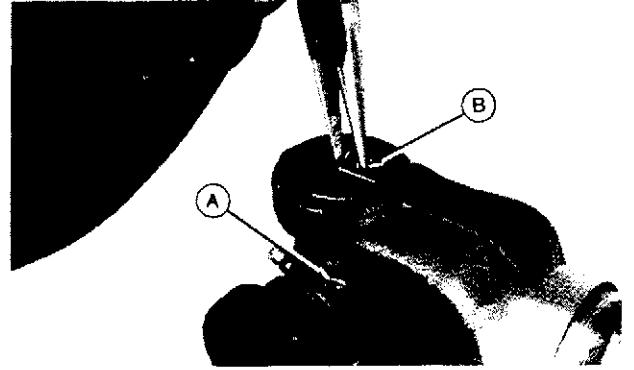
Clamp yoke in vise. Use a punch or socket with slightly smaller diameter than that of bearing and press bearing past snap ring groove.

Install snap ring (B).

Position cross and install bearing on opposite side.

Properly position grease fitting to allow greasing before installing third and fourth bearing.

Assemble remaining bearings and lubricate.



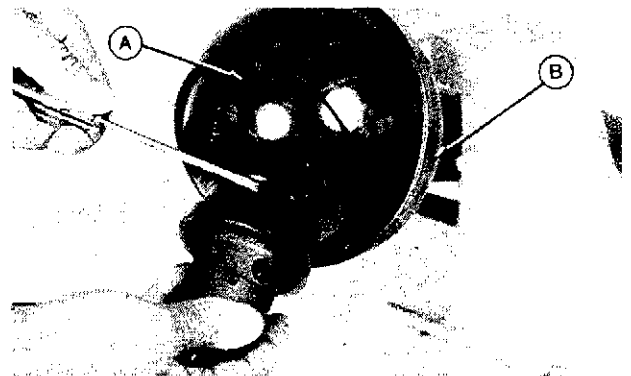
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If joint is stiff and does not flex freely after assembling, strike each ear of yoke on radius (A) to relieve pressure.



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Install closure shield assembly (A), shield (B) and shield bearings.

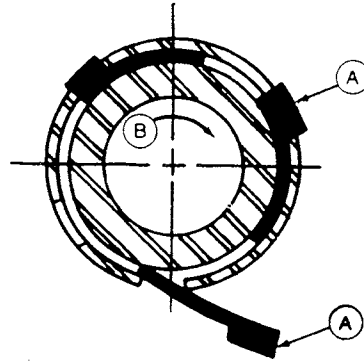


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*NOTE: Apply grease to bearing grooves.*

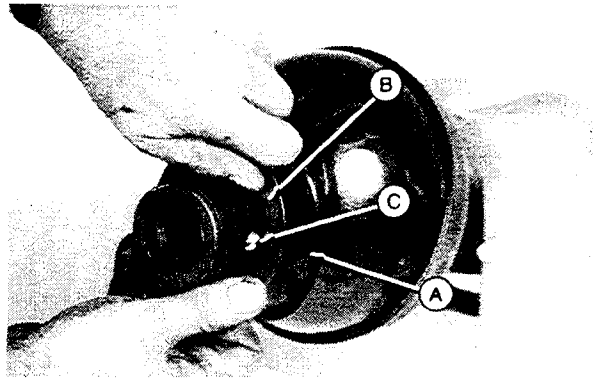
Install bearings (A) to retain shield as shown.

**A**—Locking bearings  
**B**—Direction of shaft rotation



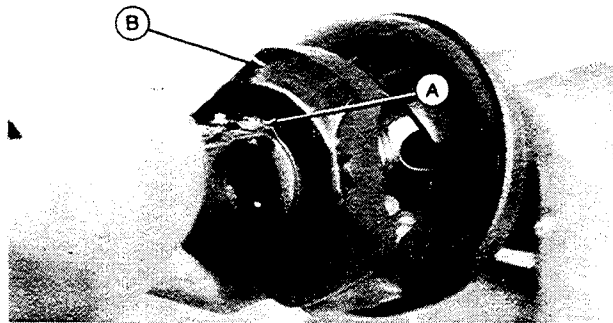
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Install spring (A), retainer collar (B), and steel balls on yoke.



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Slide push button collar assembly (B) on yoke and secure with snap ring (A).



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## **POWR-GARD PTO REINSTALLATION**

Reverse POWR-GARD PTO removal and disassembly steps for reinstallation.

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## BONDIOLI PTO DISASSEMBLY

1326 and 1327 mower-conditioners are equipped with a front and a rear power line. Disassembly and re-assembly processes are identical for both parts.



**CAUTION:** Never connect a 540 rpm mower-conditioner to a 1000 rpm tractor.

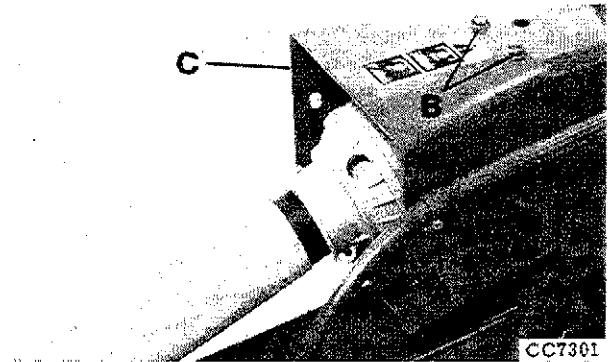
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### Remove PTO Shield

Remove hose clamp (A).

Remove the two upper and lower cap screws (B).

Remove drive shield (C).

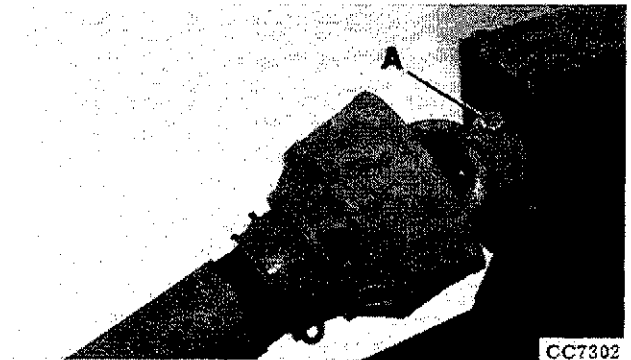


CC7301

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### Remove PTO Hookup

Remove cap screw (A) and PTO hookup.



CC7302

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## PTO SHIELD DISASSEMBLY

Keep cone pressed downward and release catches by pushing with a screwdriver.



CC7303

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### Remove Half Tube

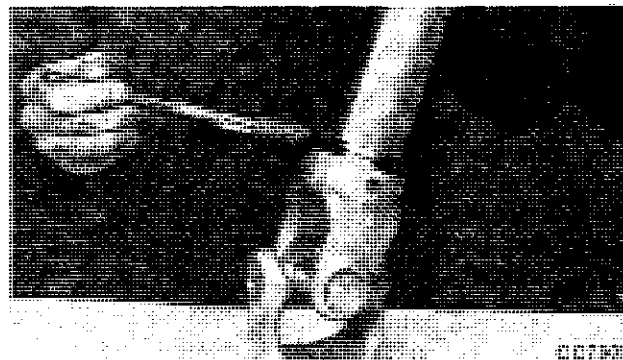
Open bearing ring to remove half tube.



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### PTO SHIELD REASSEMBLY

Grease bearing ring groove.



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### Reinstall Shield Tube

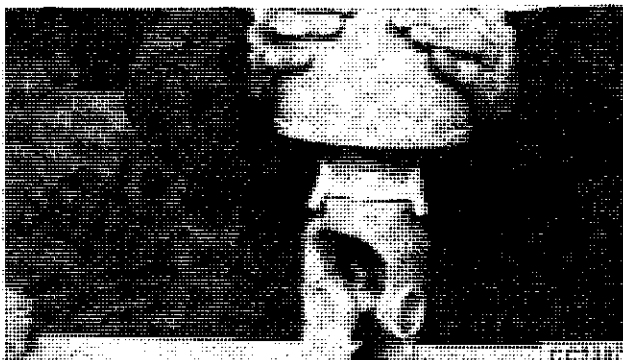
Fit shield tube onto bearing ring by centering the holes over the catches.



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### Reinstall Cone Shield

Fit cone centering grease fitting to grease filling hole on bearing ring. Press to connect.



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**NOTE:**

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**Check Assembly**

Make sure that catches are properly engaged by tapping on cone.



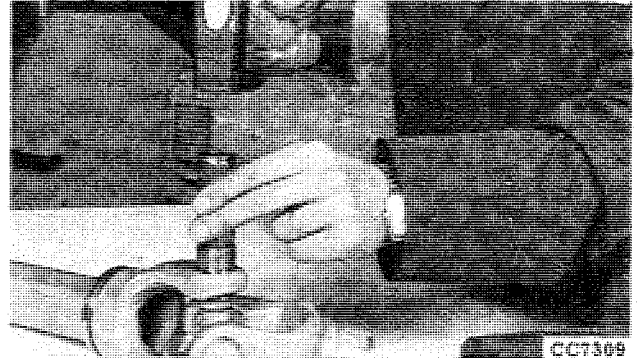
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**PTO HOOKUP DISASSEMBLY**

Remove PTO shield.

Press on snap ring.

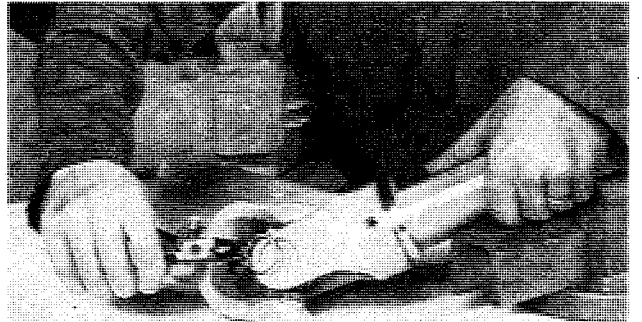


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**Remove Snap Ring**

Remove snap ring with snap ring pliers.



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**Remove Bearing**

Remove the first bearing from the ear.



CC7311

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### Remove First Bearing

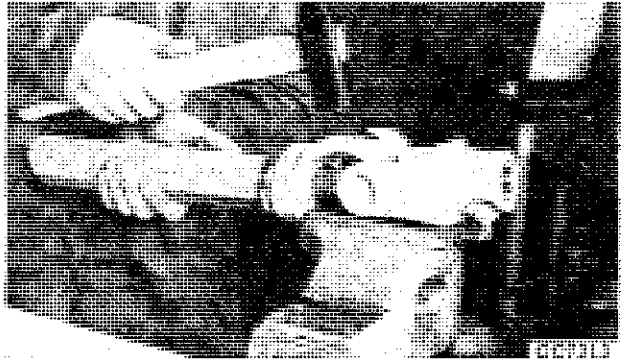
Complete removal of first bearing.



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### Remove Snap Ring

After removing snap ring, remove the second bearing.



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### Remove Second Bearing

Remove bearings of outer yoke.



CC7314-CCL15005AE-200885

### PTO HOOKUP REASSEMBLY

Grease the inside of the bearings to hold the needles in place.

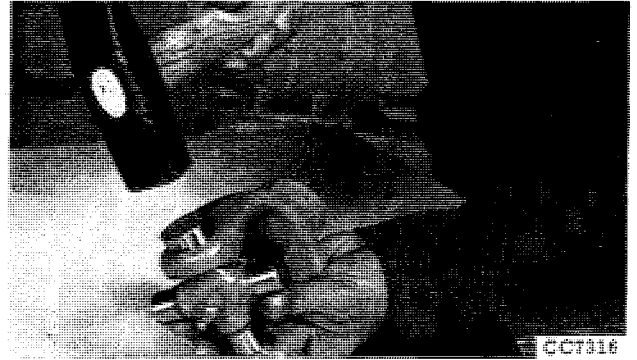


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### Install First Bearing

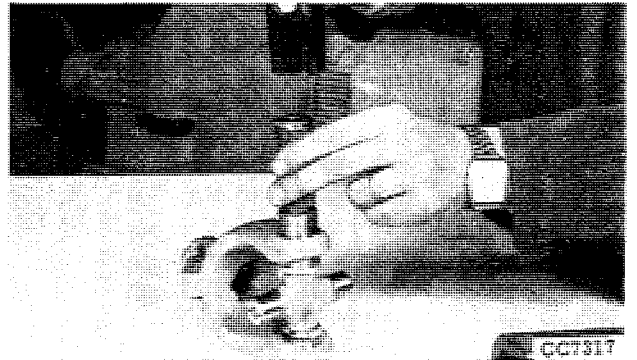
Push first bearing in the ear. Hold the needles in place using the journal arm.



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### Install Second Bearing

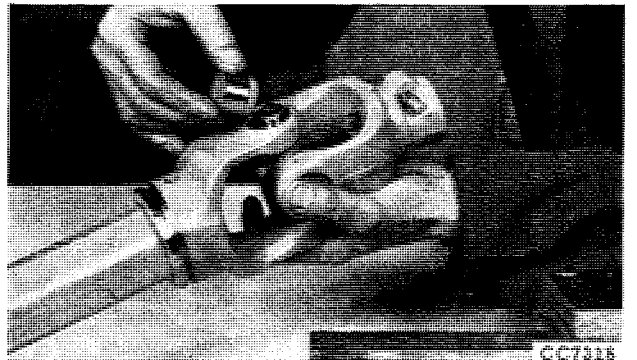
Repeat the whole process for the second bearing. Adjust bearing position and insert both snap rings.



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### Install Inner Yoke Bearing

Install inner yoke bearings. Make sure that the grease fitting faces the inner yoke.



CC7318-CCL15005AE-200885

### Adjust Bearing Position

Adjust the position of the bearings and insert both snap rings. Tap the ear base lightly to fully seat the snap rings and loosen the joint.



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