

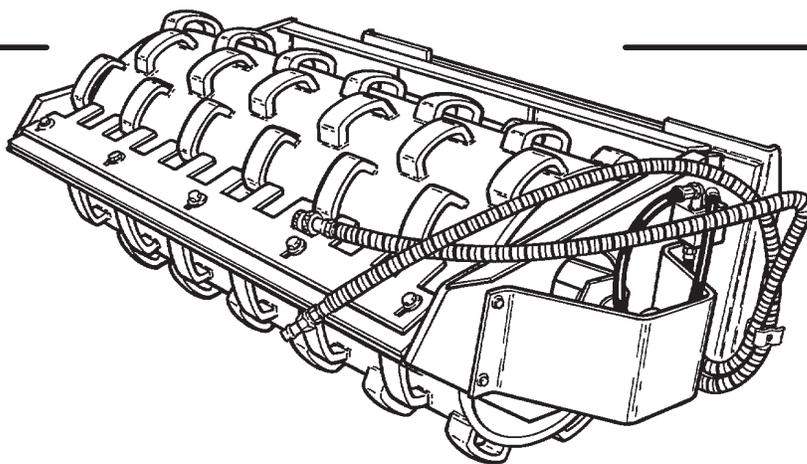


**Bobcat**®

# Vibratory Roller

# Service Manual

48 inch S/N 802900101 & Above  
48 inch S/N 803400101 & Above  
48 inch S/N 054800101 & Above  
48 inch S/N 063100101 & Above  
72 inch S/N 054900101 & Above  
72 inch S/N 063200101 & Above



Product: 2001 Bobcat Roller 48 ,Roller72 Vibratory Roller Service Repair Workshop Manual

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8-roller72-vibratory-roller-service-repair-workshop-manual/

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# MAINTENANCE SAFETY



## WARNING

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Operator's Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0903



**Safety Alert Symbol:** This symbol with a warning statement, means: "Warning, be alert! Your safety is involved!" Carefully read the message that follows.



B-10731a

-  Never service attachments without instructions. See Operation & Maintenance Manual and Attachment Service Manual.
-  Cleaning and maintenance are required daily.
-  Never service or adjust attachment with the engine running unless instructed to do so in manual.
-  Always lower the attachment to the ground before lubricating or servicing.
-  Avoid contact with leaking hydraulic fluid or diesel fuel under pressure. It can penetrate skin or eyes.
-  Stop, cool and clean engine of flammable materials before checking fluids.
-  Keep body, loose objects and clothing away from moving parts, electrical contacts, hot parts and exhaust.
-  Safety glasses are needed for eye protection from electrical arcs, battery acid, compressed springs, fluids under pressure and flying debris or when tools are used. Use eye protection approved for type of welding.



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**PREVENTIVE  
MAINTENANCE**

**HYDRAULIC  
SYSTEM**

**MAIN FRAME**

**SPECIFICATIONS  
AND  
SCHEMATICS**

**CALIFORNIA  
PROPOSITION 65 WARNING**

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.



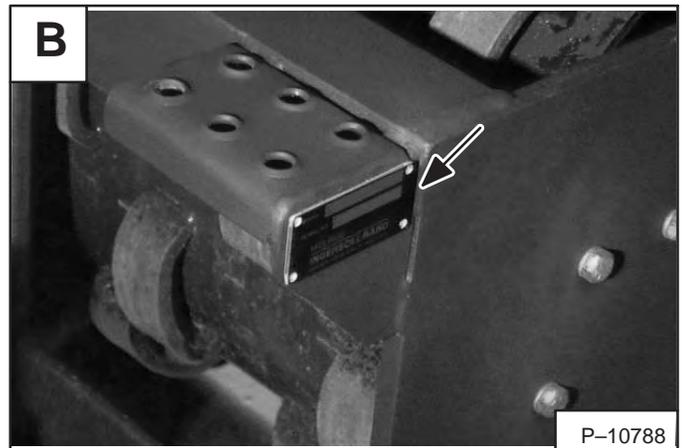
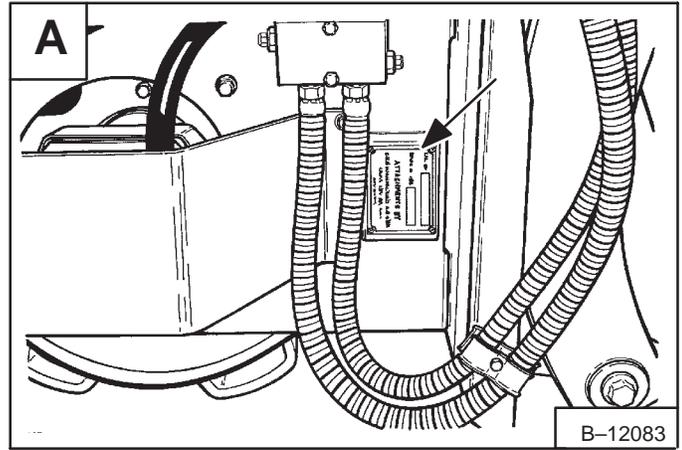
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## SERIAL NUMBER LOCATION

It is important to refer to the serial number of the Vibratory Roller when making repairs or ordering parts [A]. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing specific service work.

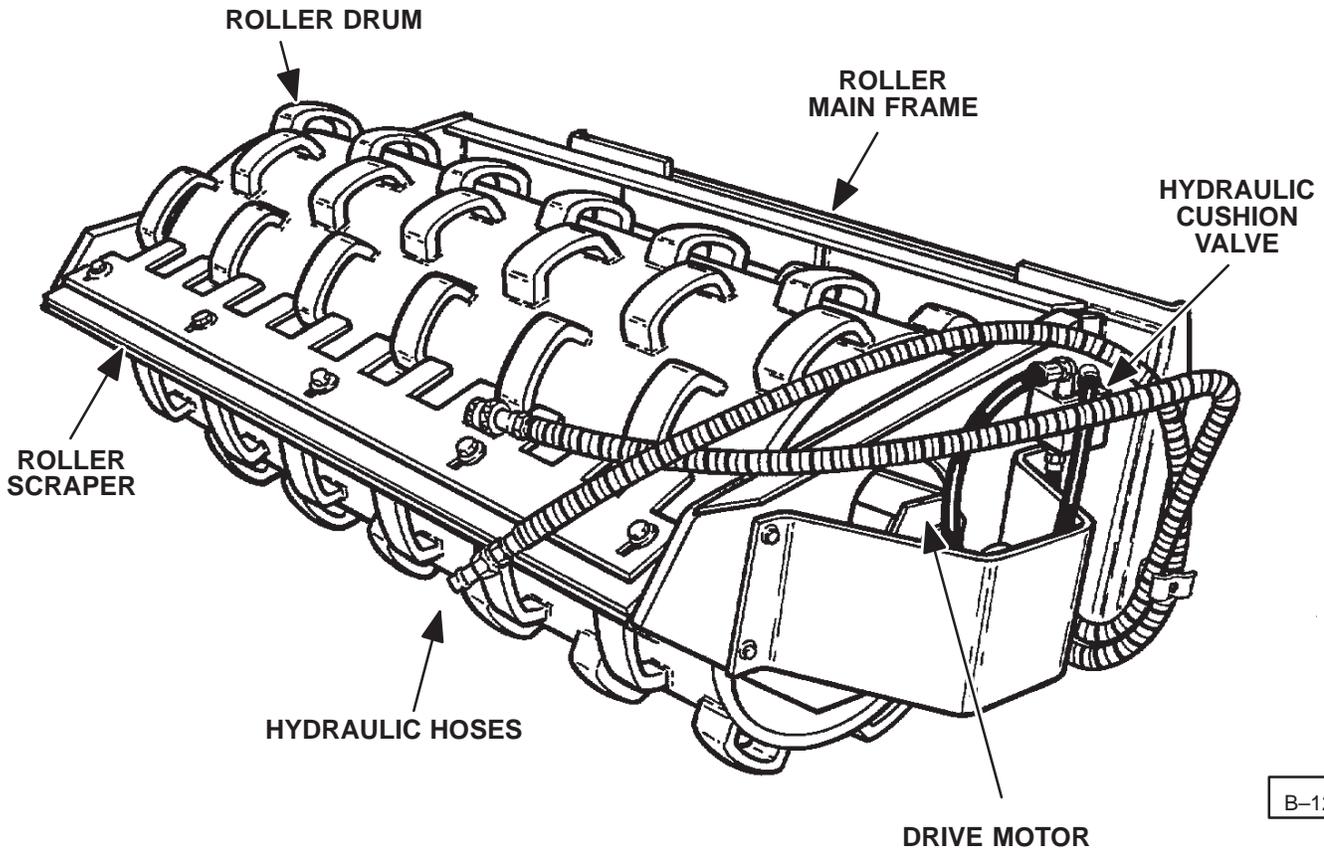
**48 Inch:** The Vibratory Roller serial number plate is located below the cushion valve toward the rear of the Vibratory Roller [A].

**72 Inch:** The Vibratory Roller serial number plate is located on the step on the right end of the frame [B].



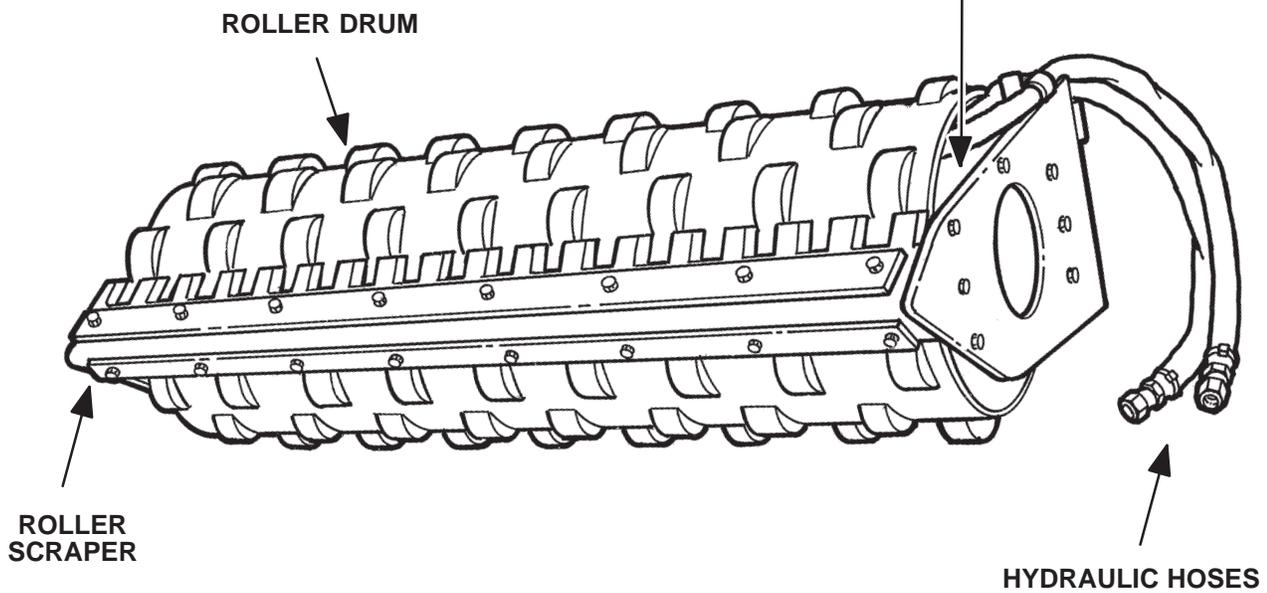
VIBRATORY ROLLER IDENTIFICATION

48 Inch



B-12089

72 Inch



B-15069

# PREVENTIVE MAINTENANCE



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## TROUBLESHOOTING

### **WARNING**

Instructions are necessary before operating or servicing machine. Read and understand the Operation & Maintenance Manual, Handbook and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments, repairs or service. Failure to follow instructions can cause injury or death.

W-2003-1298

If the Vibratory Roller is not working correctly, check the hydraulic system of the machine thoroughly before making any repairs on the roller. Vibratory Roller problems can be affected by a hydraulic system that is not operating to specifications. Connect a flow meter to the loader to check the hydraulic pump output, relief valve setting and tubelines to check flow and pressure. (See the loader Service Manual for the correct procedure to connect the flow meter.)

Use the following troubleshooting chart to locate and correct problems which most often occur with the Vibratory Roller.

PROBLEM	CAUSE	CORRECTION
Vibratory Roller Shaft will not rotate.	Loader fluid reservoir is low.	Add fluid to reservoir on loader.
	No fluid to the Vibratory Roller.	Check connections and flow to roller.
	Damaged quick couplers.	Replace quick couplers.
	Coupler flexible element is broken or torn.	Replace the flexible element.
	Coupler key has sheared.	Replace the key.
	Loader main relief valve set too low.	Adjust main relief to correct setting.
	Loader hydraulic pump not working.	Repair or replace as needed.
Vibratory Roller shaft rotates slowly.	Relief valve in hydraulic cushion is not functioning.	Adjust or replace relief valve.
	Not enough hydraulic flow.	Test loader hydraulics for flow and pressure.

## INSPECTION

### Bob-Tach Inspection

Move the Bob-Tach levers to engage the wedges [A]. The levers and wedges must move freely.

The wedges must extend through the holes in the attachment mounting frame (Item 1) [B] & [C].



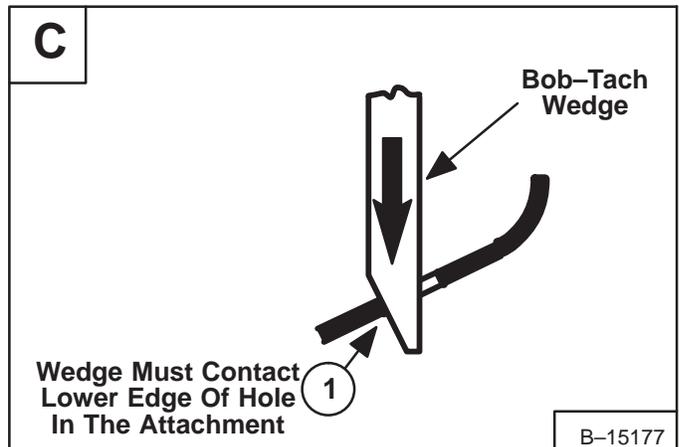
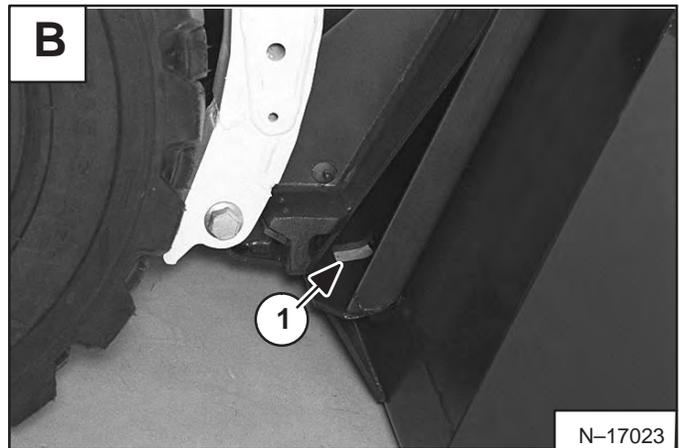
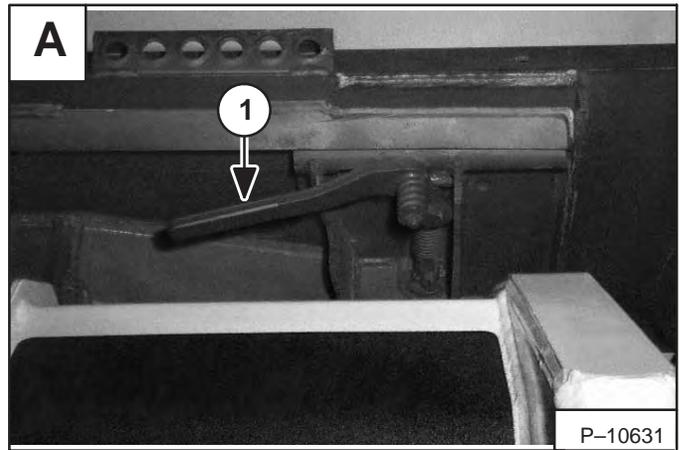
## WARNING

Bob-Tach wedges must extend through the holes in attachment. Lever(s) must be fully down and locked. Failure to secure wedges can allow attachment to come off and cause injury or death.

W-2102-0497

The spring loaded wedge (Item 1) [A] must contact the lower edge of the hole in the attachment (Item 1) [B] and [C].

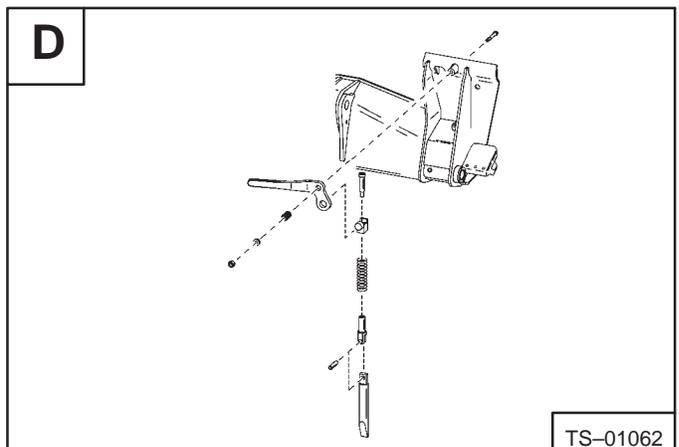
If the wedge does not contact the lower edge of the hole [B] and [C], the attachment will be loose and can come off the Bob-Tach.



Inspect the mounting frame on the attachment and the Bob-Tach, linkages and wedges for excessive wear or damage [D]. Replace any parts that are damaged, bent, or missing. Keep all fasteners tight.

Look for cracked welds. Contact your Bobcat dealer for repair or replacement parts.

Lubricate the wedges. (See the correct loader Operation And Maintenance Manual for *LUBRICATION OF THE BOBCAT LOADER*.)



## LUBRICATION

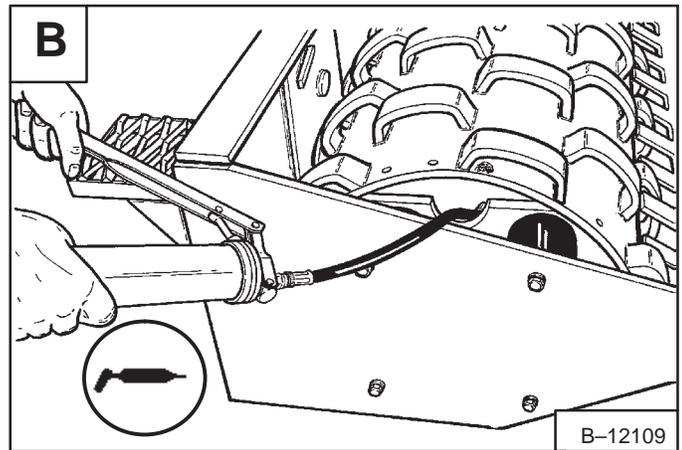
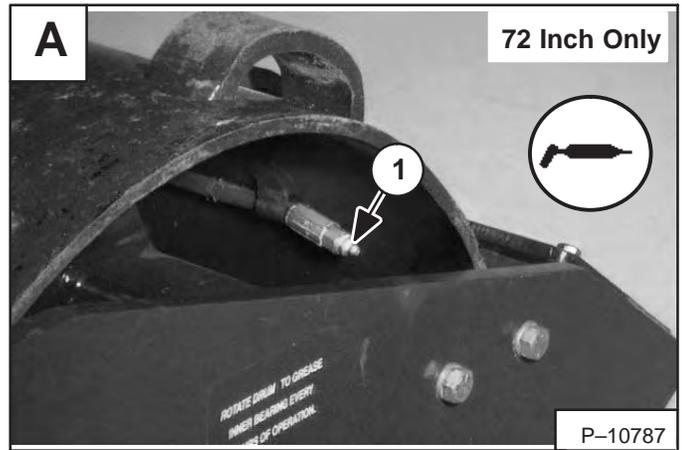
Always use a good quality lithium based multi-purpose grease when lubricating the Vibratory Roller.

# IMPORTANT

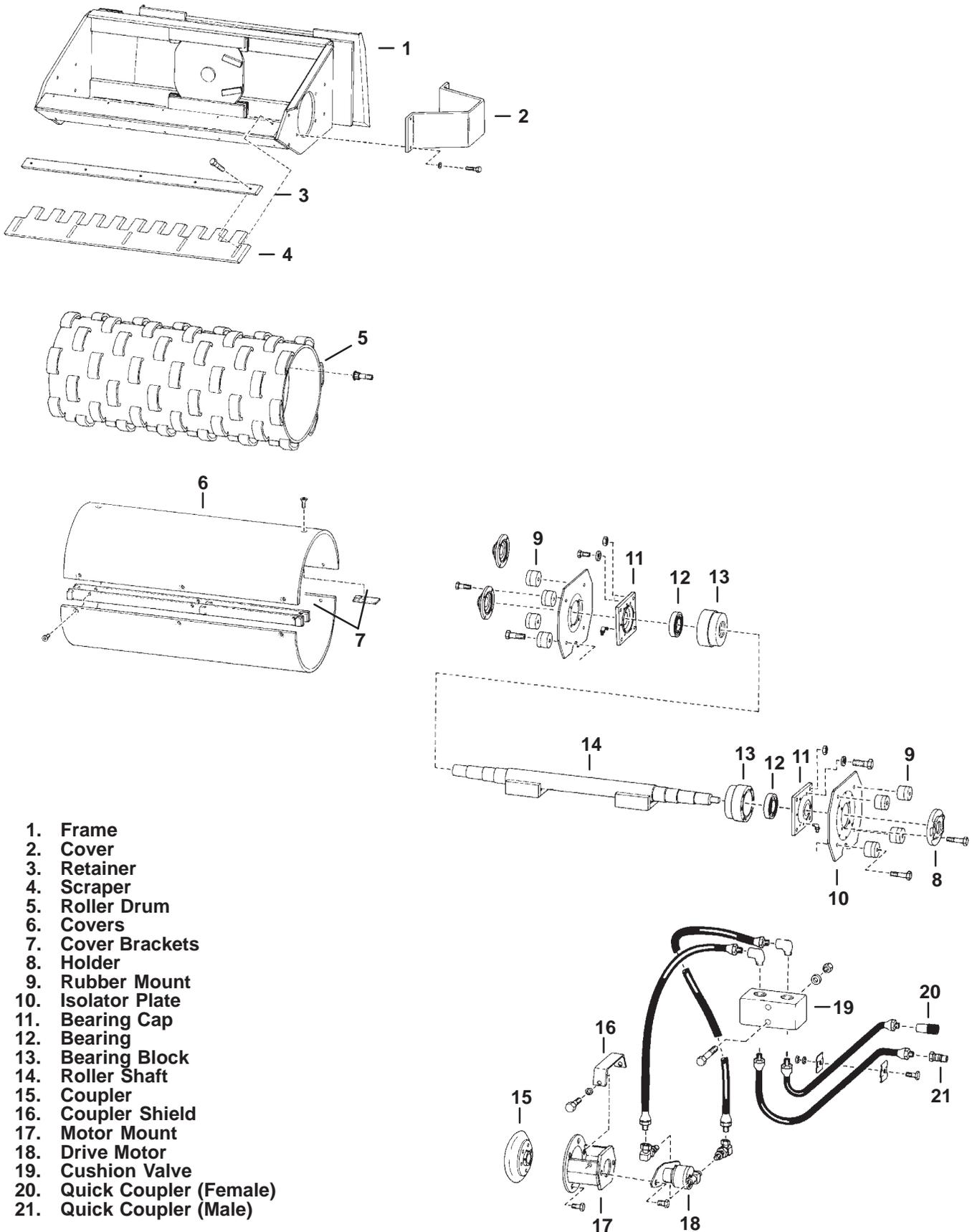
Fluid such as engine oil, hydraulic fluid, coolants, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.

I-2067-0499

Apply grease (4 or 5 pumps) to the shaft bearings (Item 1) [A] & [B] EVERY 8-10 HOURS.



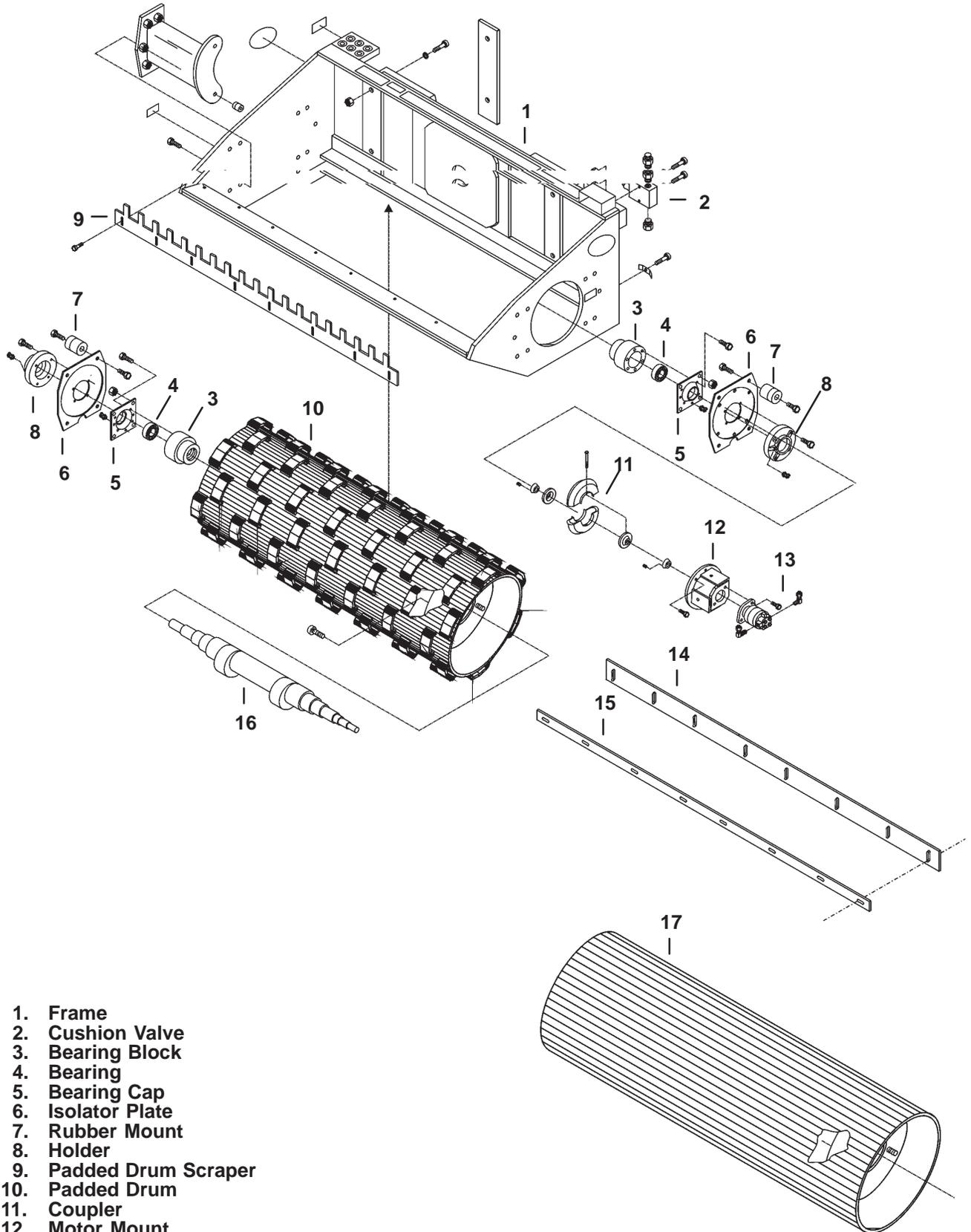
**PARTS IDENTIFICATION**  
48 Inch



1. Frame
2. Cover
3. Retainer
4. Scraper
5. Roller Drum
6. Covers
7. Cover Brackets
8. Holder
9. Rubber Mount
10. Isolator Plate
11. Bearing Cap
12. Bearing
13. Bearing Block
14. Roller Shaft
15. Coupler
16. Coupler Shield
17. Motor Mount
18. Drive Motor
19. Cushion Valve
20. Quick Coupler (Female)
21. Quick Coupler (Male)

E-01845  
E-01846

**PARTS IDENTIFICATION (Cont'd)**  
**72 Inch**



- 1. Frame
- 2. Cushion Valve
- 3. Bearing Block
- 4. Bearing
- 5. Bearing Cap
- 6. Isolator Plate
- 7. Rubber Mount
- 8. Holder
- 9. Padded Drum Scraper
- 10. Padded Drum
- 11. Coupler
- 12. Motor Mount
- 13. Drive Motor
- 14. Smooth Drum Scraper
- 15. Smooth Drum Scraper Holder
- 16. Roller Shaft
- 17. Smooth Drum

MC-02388



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## HYDRAULIC SYSTEM

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## HYDRAULIC SYSTEM



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## HYDRAULIC CUSHION VALVE

### Removal And Installation

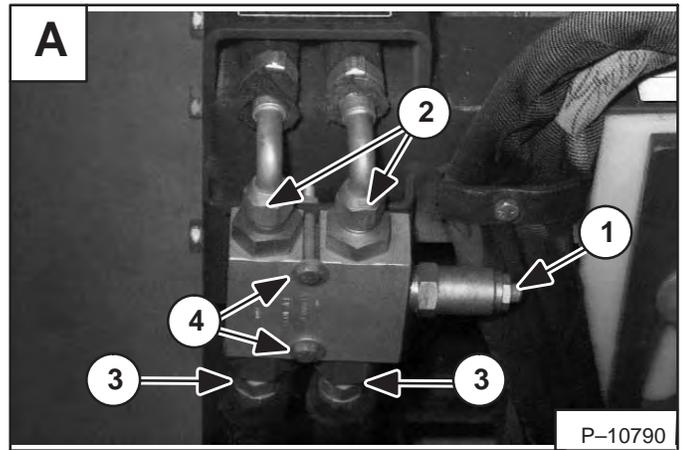
**NOTE:** The relief valve (Item 1) [A] is factory set to 1500 PSI (10343 kPa) and is non-adjustable.

Clean the area around the cushion valve before removal.

# IMPORTANT

When repairing hydrostatic and hydraulic systems, clean the work area before disassembly and keep all parts clean. Always use caps and plugs on hoses, tubelines and ports to keep dirt out. Dirt can quickly damage the system.

I-2003-0888

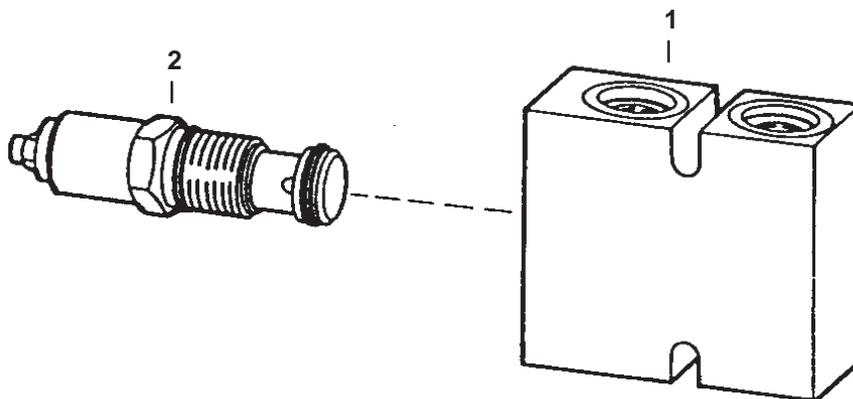


Remove the hoses (Item 2 & 3) [A] from the cushion valve.

Remove the two mounting bolts (Item 4) [A].

### Parts Identification

1. Valve Body
2. Relief Valve 1500 PSI (10343 kPa)



B-13400

## HYDRAULIC MOTOR

### Removal

# IMPORTANT

When repairing hydrostatic and hydraulic systems, clean the work area before disassembly and keep all parts clean. Always use caps and plugs on hoses, tubelines and ports to keep dirt out. Dirt can quickly damage the system.

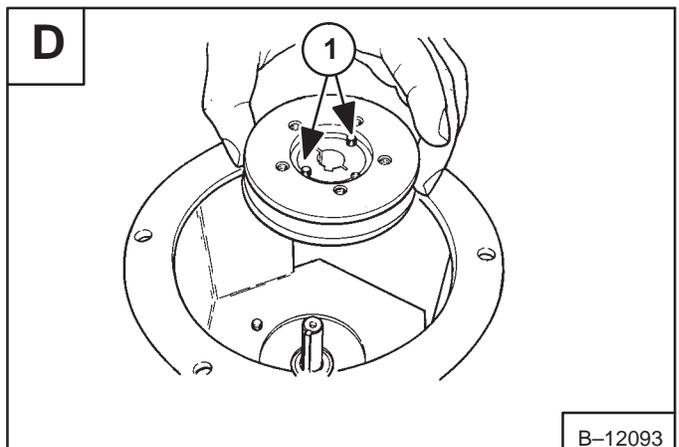
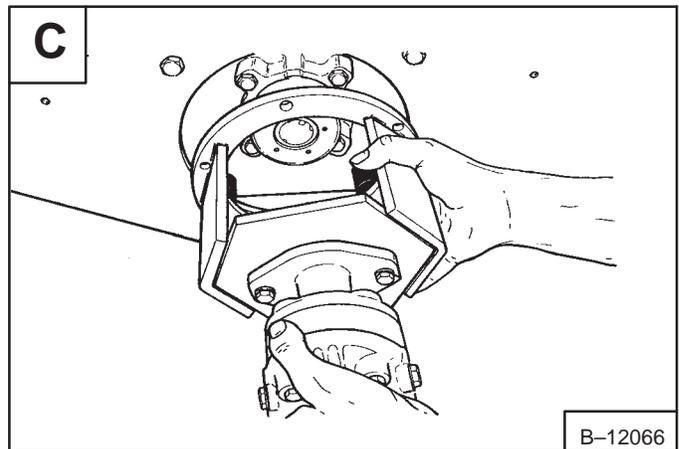
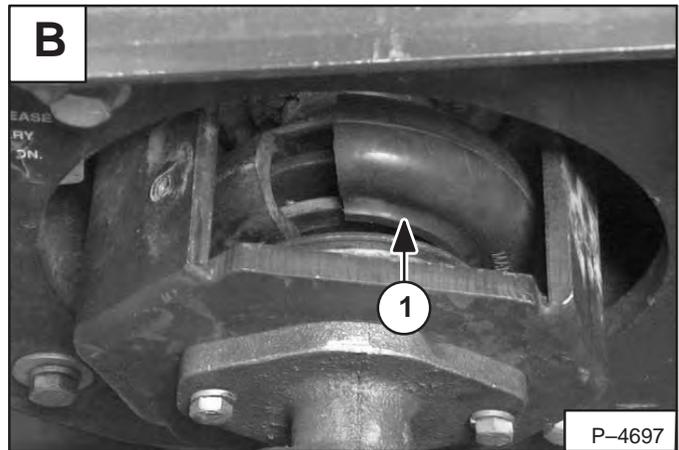
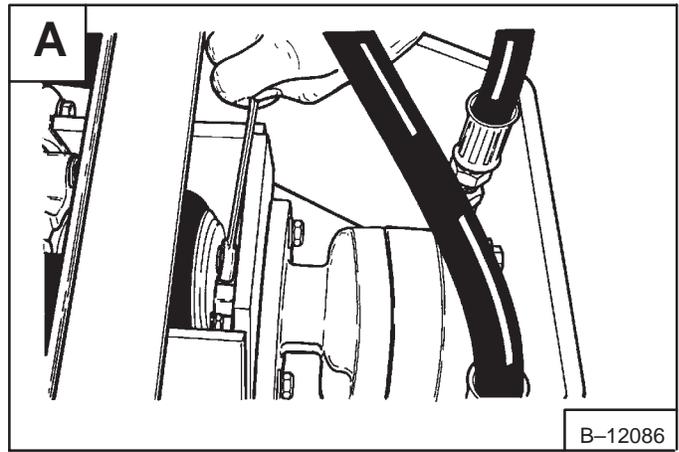
I-2003-0888

Remove the hoses from the hydraulic motor and loosen the bolts from the coupler lock (both sides) [A].

Remove the rubber coupler (Item 1) [B] from the clamping flange.

Remove the bolts from the motor mount and remove the motor mount [C].

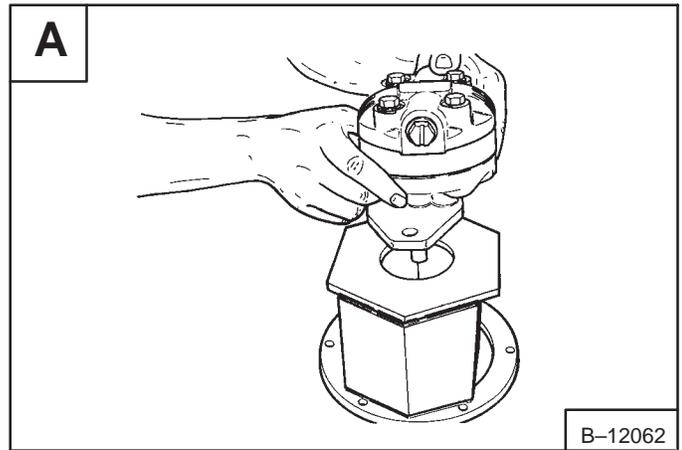
Loosen the set screws (Item 1) [D] and remove the Taper-Lock coupler from the motor shank.



## HYDRAULIC MOTOR (Cont'd)

### Removal (Cont'd)

Remove the drive motor mounting bolts and remove the motor from the mount [A].

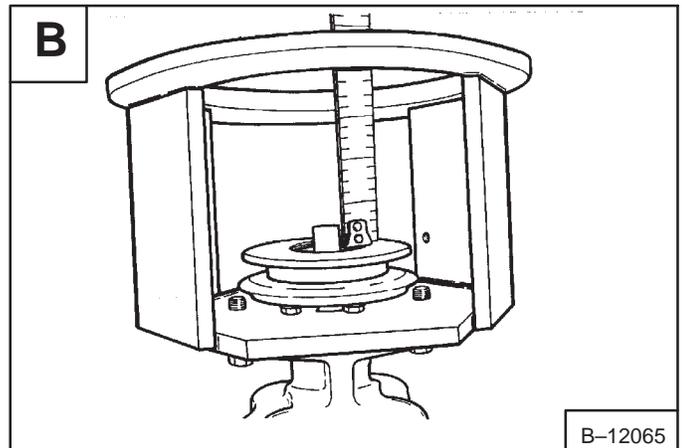


### Installation

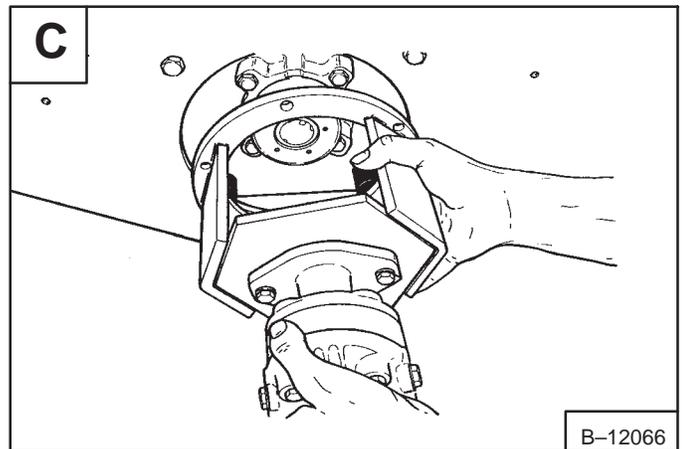
Install the motor on the mount. Install the bolts and tighten to 25–28 ft.-lbs. (34–38 Nm) torque.

Install the coupler 0.357 inch (9.5 mm) from the end of the motor shaft [B].

Tighten the set screws.



Install the motor mount and bolts. Tighten the bolts to 25–28 ft.-lbs. (34–38 Nm) torque [C].

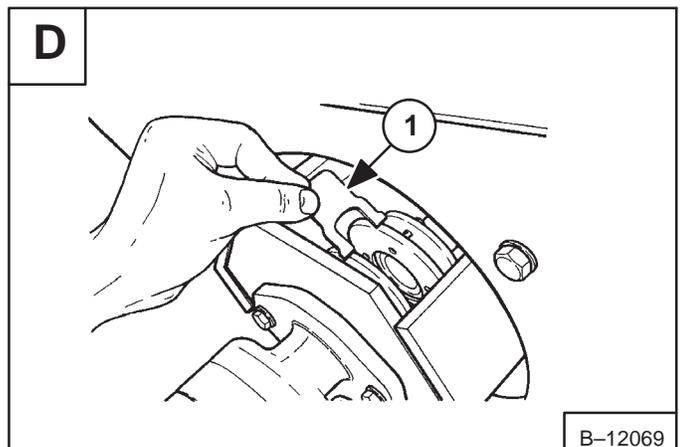


Use a coupler gauge (Item 1) [D] to align the couplers.

**NOTE: The coupler gauge is provided with a new flexible element. If no gauge is available, set the dimension to 0.9688 inch (24,6 mm).**

Measure the gap and alignment at four different places 90° apart around the coupler. Align to within 0.0312 inch (.79 mm).

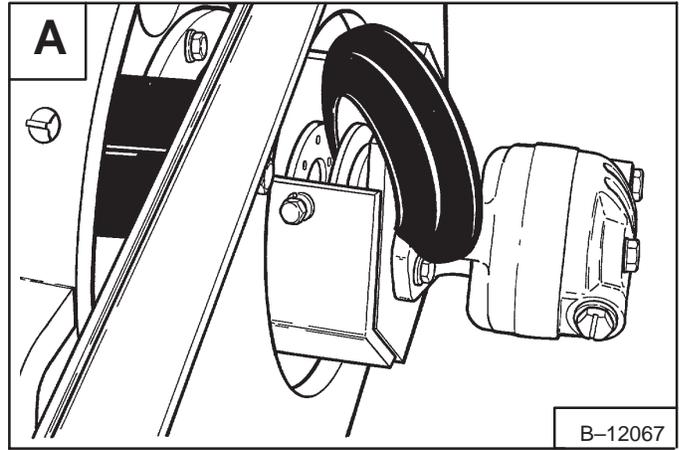
Loosen the set screws and adjust the coupler as needed.



## HYDRAULIC MOTOR (Cont'd)

### Installation (Cont'd)

Install the flexible element in the Taper-Lock coupler [A].



Be sure the element is worked down completely on the seat (Item 1) [B].

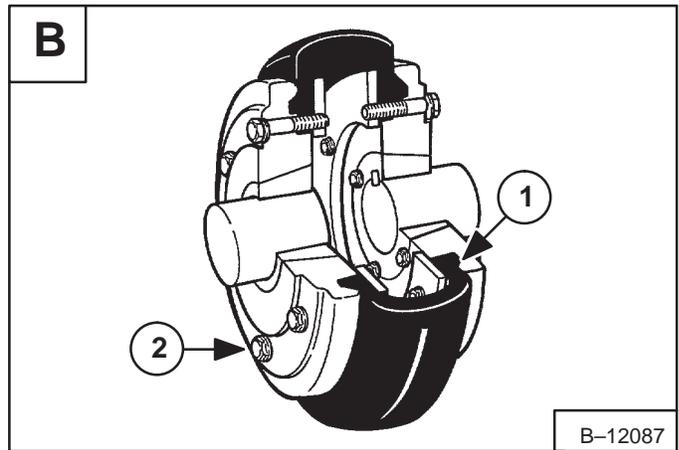
Tap on the outside diameter with a mallet until the split in the element is closed.

Hold the element closed while tightening one of the two bolts (Item 2) [B] directly opposite the split, finger tight only.

Using both hands, knead the element, pulling it toward the split.

Holding the element closed, tighten the next two bolts farthest from the split, finger tight only.

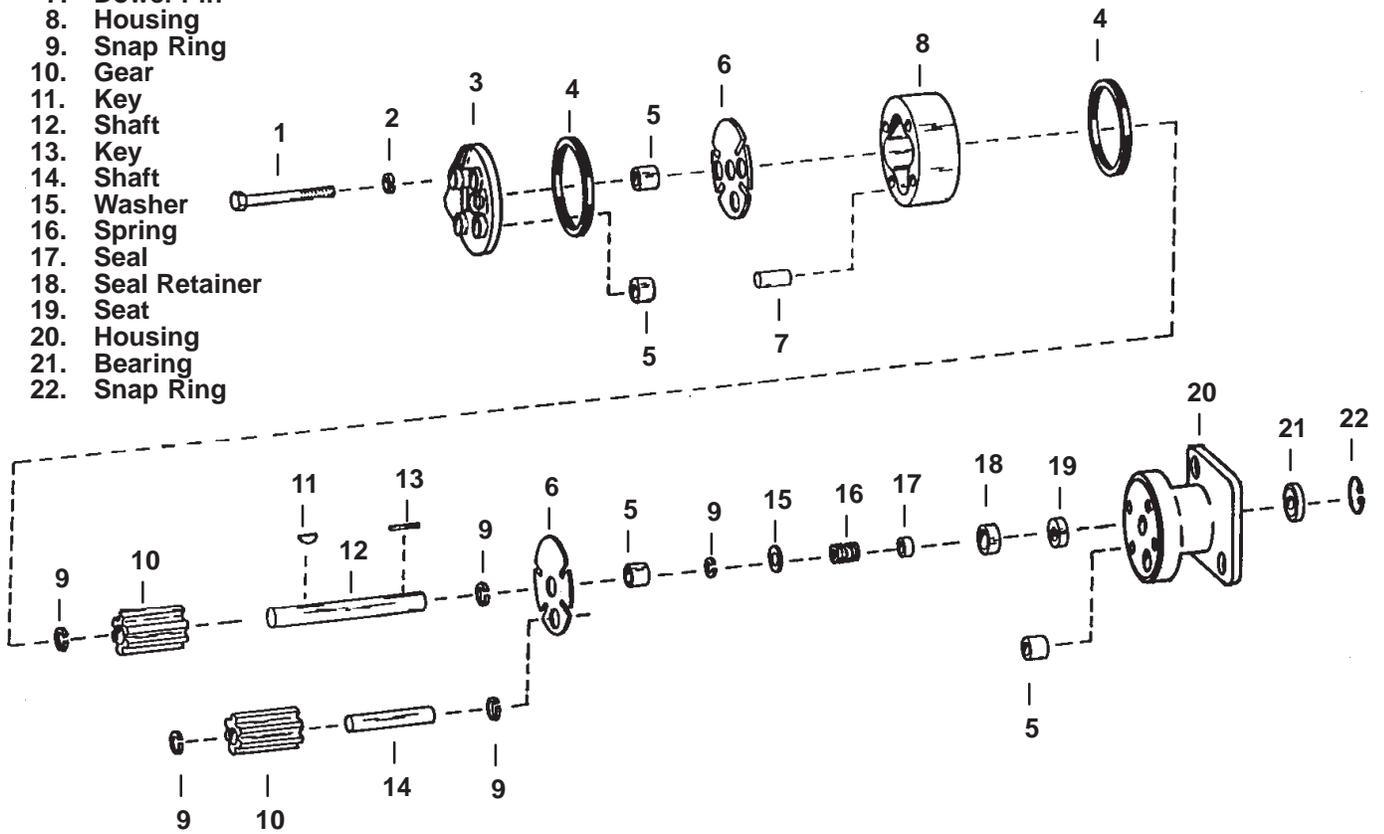
Repeat the procedure for all remaining bolts. Tighten the bolts.



HYDRAULIC MOTOR (Cont'd)

Parts Identification

1. Bolt
2. Washer
3. End Cover
4. O-Ring
5. Bearing
6. Wear Plate
7. Dowel Pin
8. Housing
9. Snap Ring
10. Gear
11. Key
12. Shaft
13. Key
14. Shaft
15. Washer
16. Spring
17. Seal
18. Seal Retainer
19. Seat
20. Housing
21. Bearing
22. Snap Ring



## HYDRAULIC MOTOR (Cont'd)

### Disassembly And Assembly

# IMPORTANT

When repairing hydrostatic and hydraulic systems, clean the work area before disassembly and keep all parts clean. Always use caps and plugs on hoses, tubelines and ports to keep dirt out. Dirt can quickly damage the system.

I-2003-0888

Remove the key from the motor shaft.

Put the motor in a vise [A].

Remove the bolts (Item 1) [A].

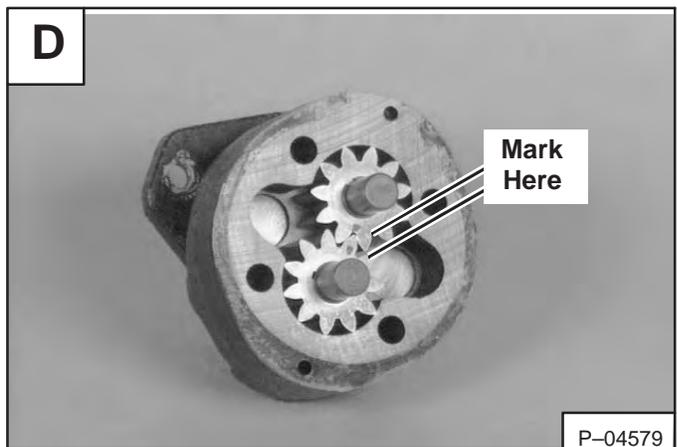
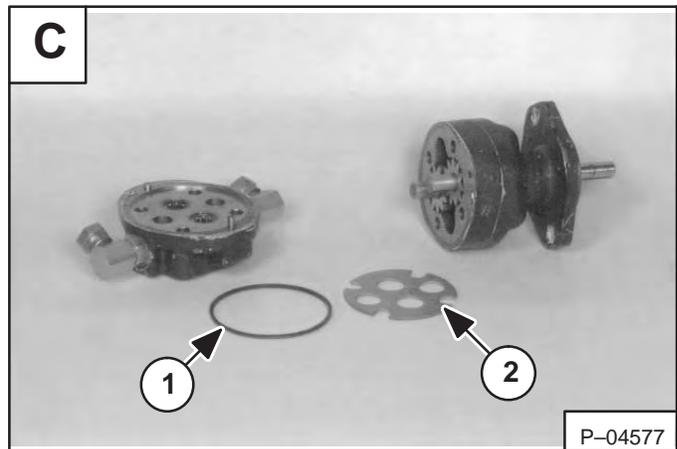
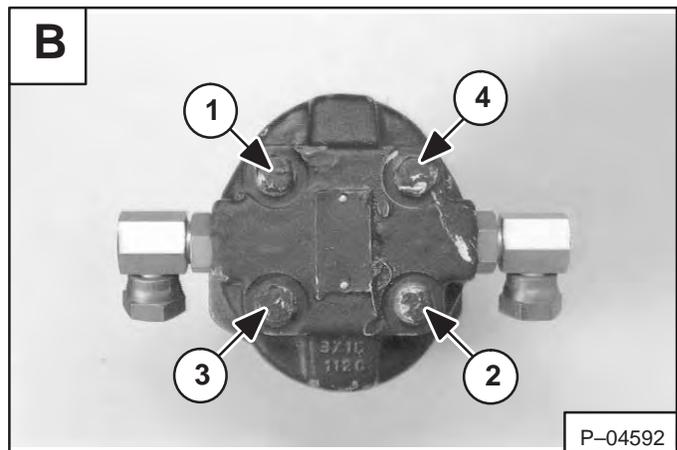
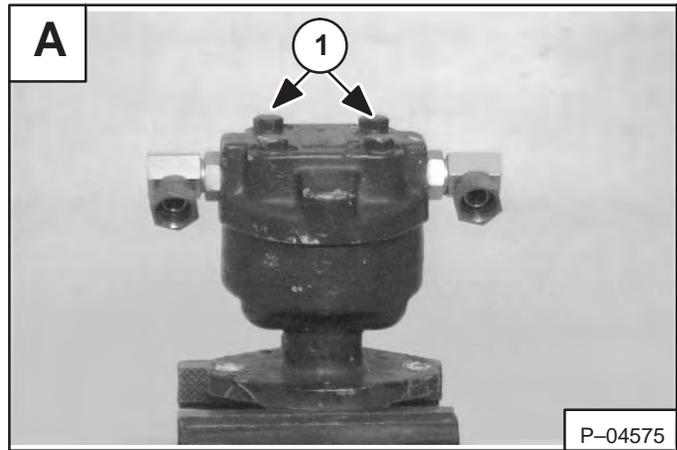
**Installation:** Install the bolts in the sequence shown and tighten to 70 ft.-lbs. (95 Nm) torque [B].

Tap on the drive shaft, from the base end, with a plastic hammer to remove the cap [C].

**NOTE: DO NOT use screwdrivers to pry the sections apart or damage could result.**

Remove the O-ring (Item 1) [C] and the wear plate (Item 2) [C].

**NOTE: Keep the gears meshed together until they have been marked to be sure of correct assembly [D].**



## HYDRAULIC MOTOR (Cont'd)

### Disassembly And Assembly (Cont'd)

Use a plastic hammer to tap on the shafts to remove the center housing (Item 1) [A] from the motor base. Remove the O-ring (Item 2) [A].

**NOTE: DO NOT use screwdrivers to pry the sections apart or damage could result.**

Remove the driven gear (Item 3) [A].

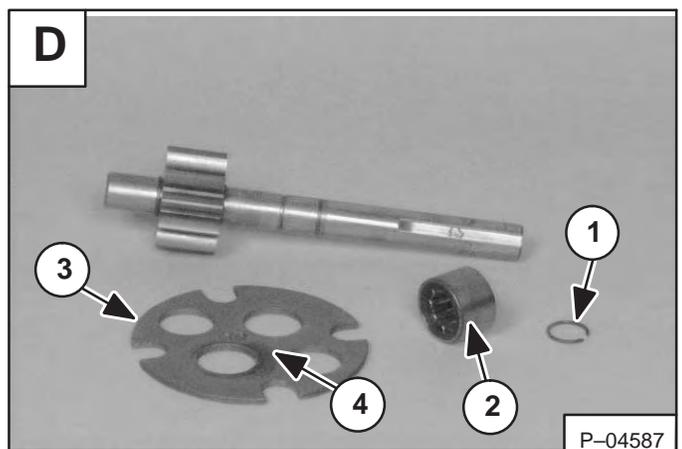
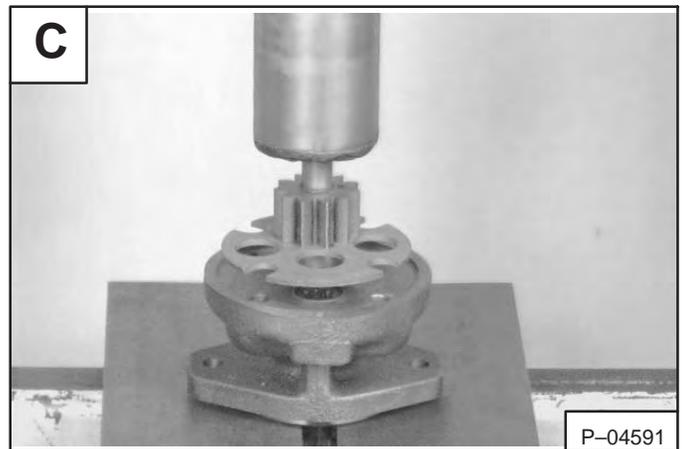
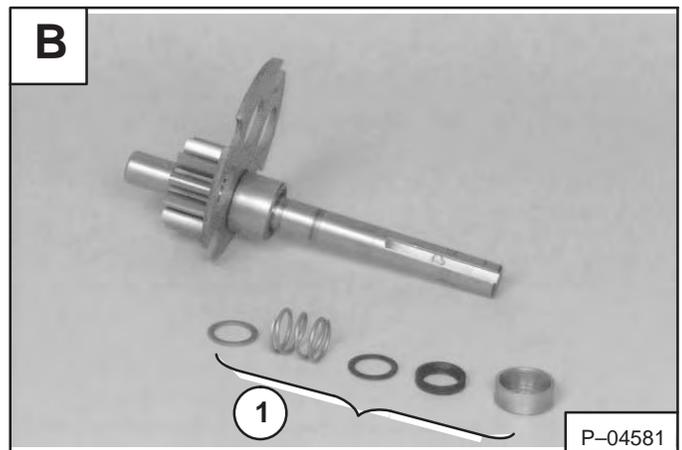
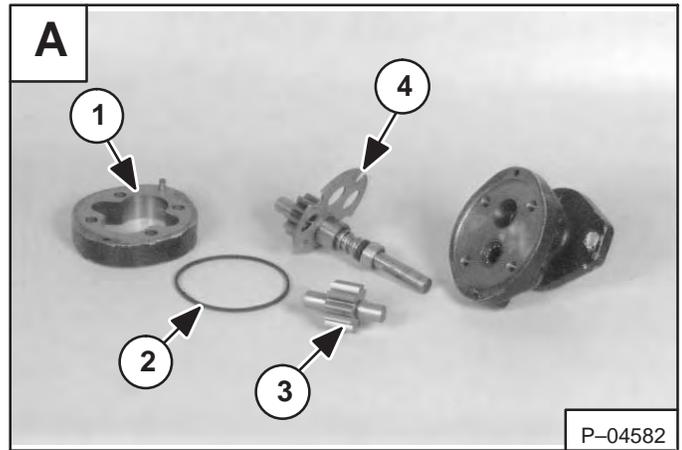
To remove the drive shaft and gear (Item 4) [A], use a soft hammer to drive the shaft from the motor base.

Remove the seal assembly (Item 1) [B] from the shaft.

**Installation:** Lubricate the seal and use a press to install the shaft, wear plate, bearing and seal assembly [C].

Remove the snap ring (Item 1) [D] to remove the shaft bearing (Item 2) [D] and the wear plate (Item 3) [D].

**Assembly:** The high pressure pockets (Item 4) [D] in the wear plate must face the gears and be located on the DISCHARGE side of the motor. The high pressure pockets must be directly opposite of each other when the motor is assembled.



## HYDRAULIC MOTOR (Cont'd)

### Disassembly and Assembly (Cont'd)

When gears are worn or broken, always replace both gears as a set.

Remove the snap rings (Item 1) [A] from both sides of the gears to replace the gears or shafts.

If bearings need replacing, use OTC number 27498 15/16–Spacer as follows:

Remove the snap ring from the roller bearing. Remove the rollers and cage.

With the tool installed in the bearing race and adapted to a slide hammer, install the snap ring in the top groove.

Use the slide hammer to remove the bearing race (Item 1 [B]).

**Installation:** Press all roller bearings flush with the housing surface [C].

Remove the snap ring to remove the outer bearing from the motor base.

**NOTE: The bearing must be removed first to access the seal seat.**

Using a punch, tap the outer bearing from the housing [D].

To avoid damage to the housing, tap evenly from side to side when removing the bearing.

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