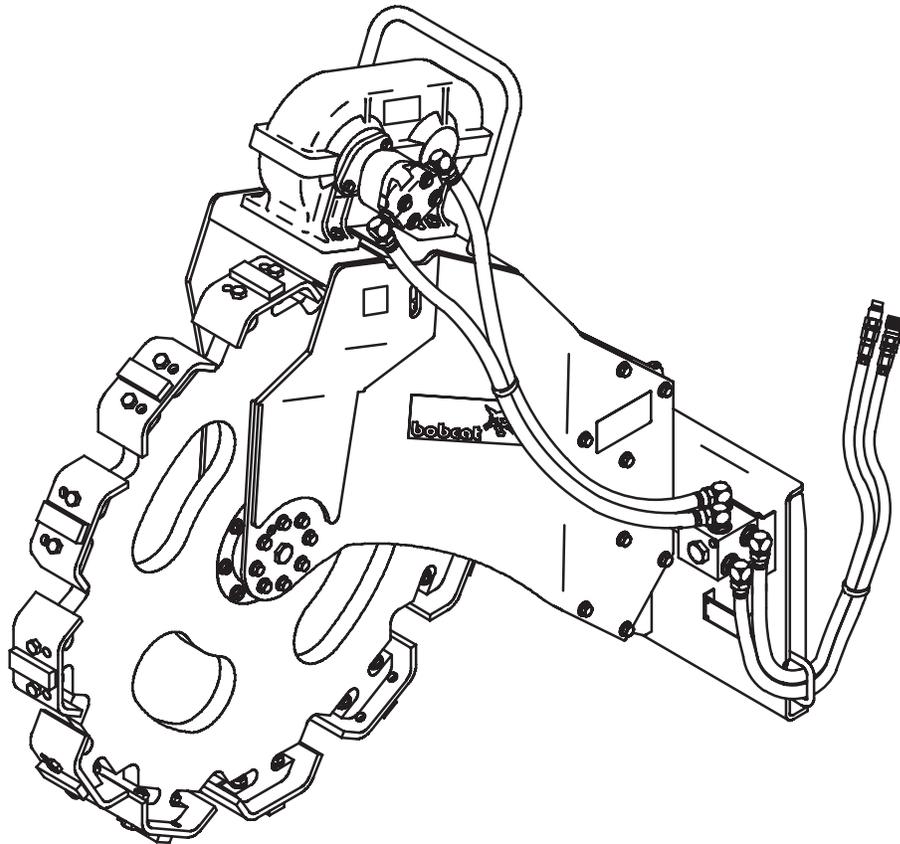




# TRENCH COMPACTOR

S/N 223300101 & Above

## Service Manual



Product: 1999 Bobcat Trencher Compactor Service Repair Workshop Manual  
Full Download: <https://www.arepairmanual.com/downloads/1999-bobcat-trencher-compactor-service-repair-workshop-manual/>

Sample of manual. Download All 60 pages at:  
<https://www.arepairmanual.com/downloads/1999-bobcat-trencher-compactor-service-repair-workshop-manual/>

# 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.



-  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.



**Bobcat®**

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SPECIFICATIONS AND SCHEMATICS .....	10-40-1

**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.

**PREVENTIVE  
MAINTENANCE**

**HYDRAULIC  
SYSTEM**

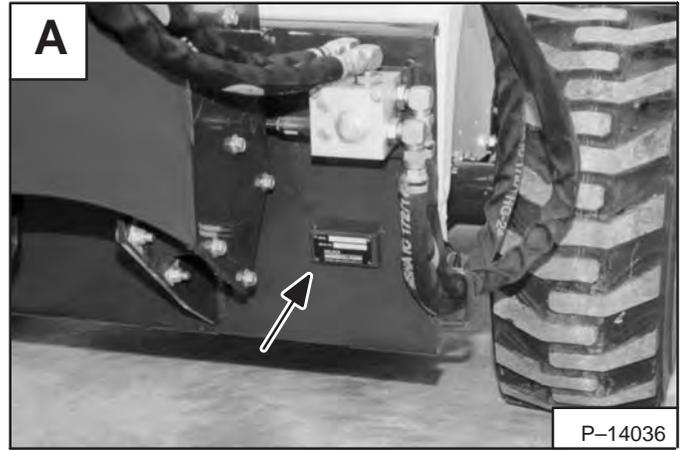
**MAIN FRAME**

**SPECIFICATIONS  
AND  
SCHEMATICS**

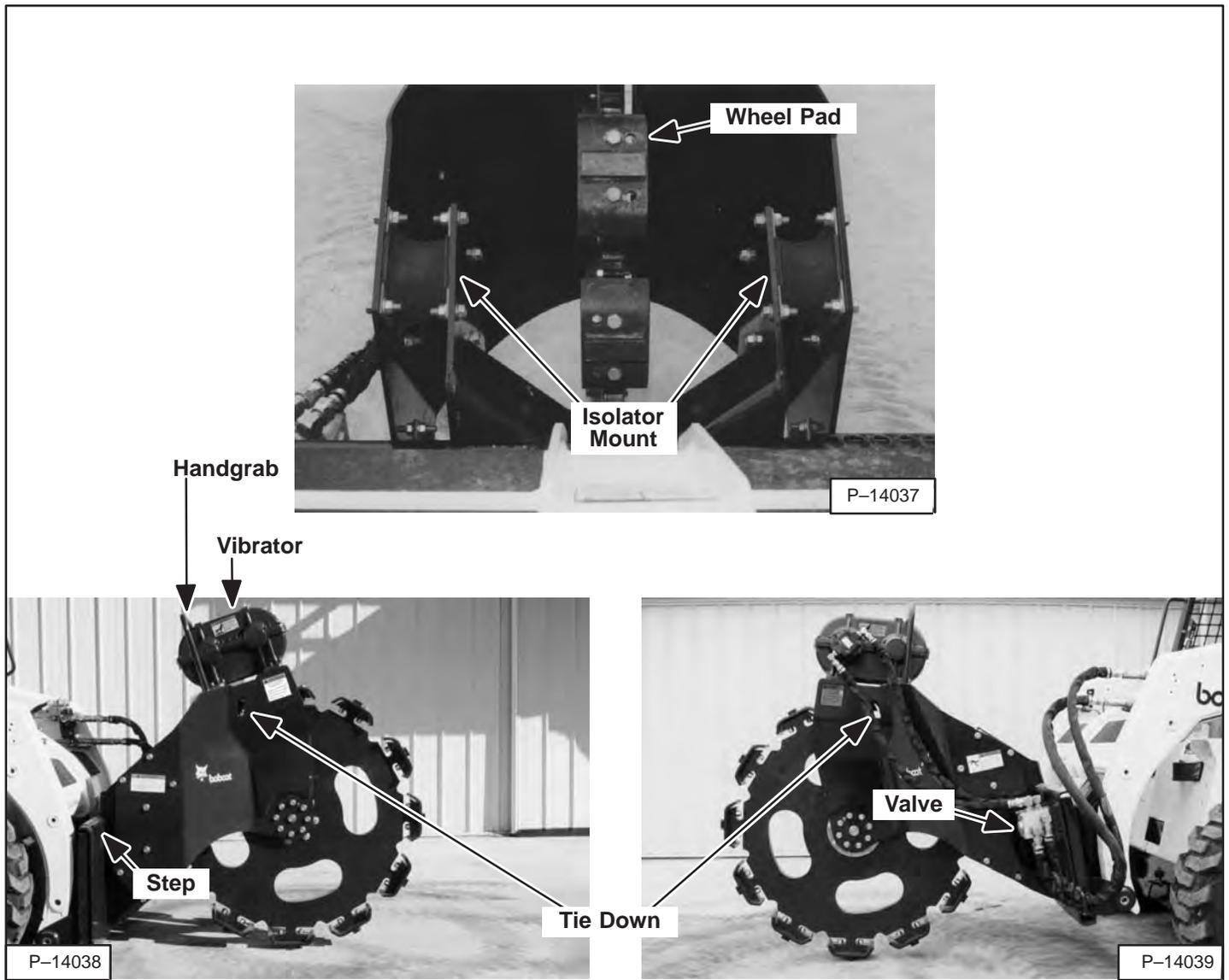


## SERIAL NUMBER LOCATION

Always use the serial number of the Trench Compactor when requesting service information or when ordering parts. 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 a specific service operation [A].



## IDENTIFICATION





# PREVENTIVE MAINTENANCE

	<b>Page Number</b>
INSPECTION	
Bob-Tach Inspection .....	10-10-4
Trench Compactor Mount Inspection .....	10-10-5
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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. Untrained operators and failure to follow instructions can cause injury or death.

W-2003-0199

PROBLEM	CAUSE	CORRECTION
Trench Compactor does not seat correctly on the Bob-Tach.	Bob-Tach wedges are not fully retracted.	Retract Bob-Tach wedges.
	Debris lodged between the Bob-Tach and the Trench Compactor.	Remove debris from between Bob-Tach and Trench Compactor.
Vibrator won't operate.	Front auxiliary hydraulics not engaged.	Engage loader front auxiliary hydraulics.
	No hydraulic flow.	Check quick coupler connections. Check for damaged hose ends and fittings.

## 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) [A].



## 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

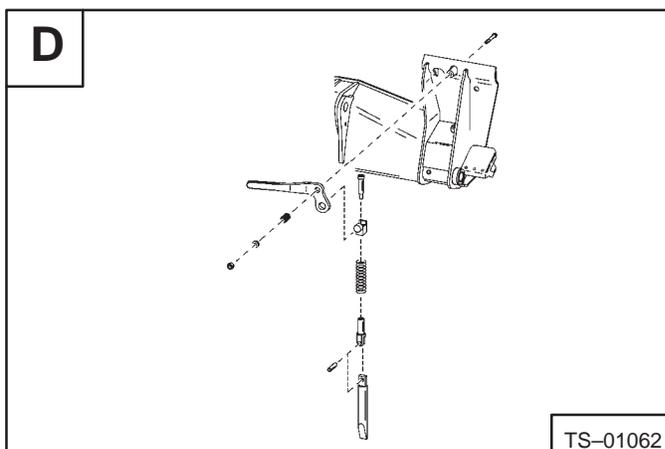
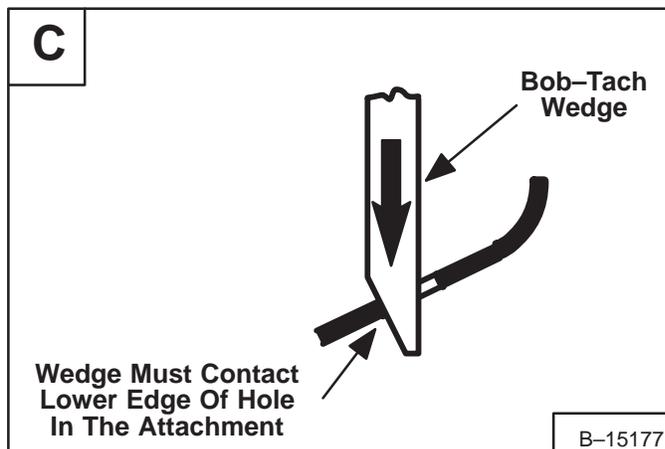
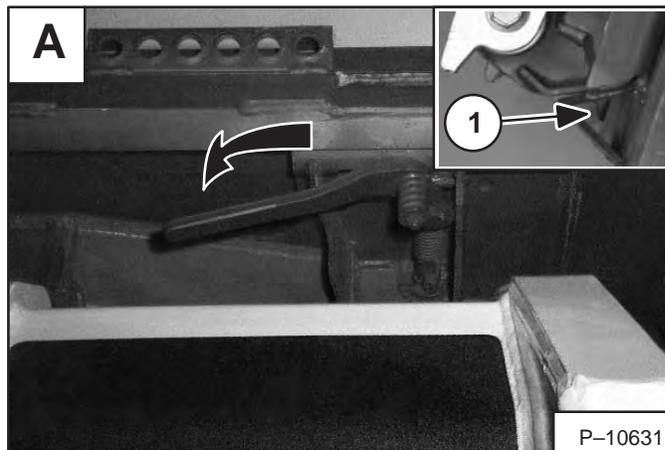
The spring loaded wedge (Item 1) [A] must contact the lower edge of the hole in the attachment (Item 1) [B] and [C].

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.

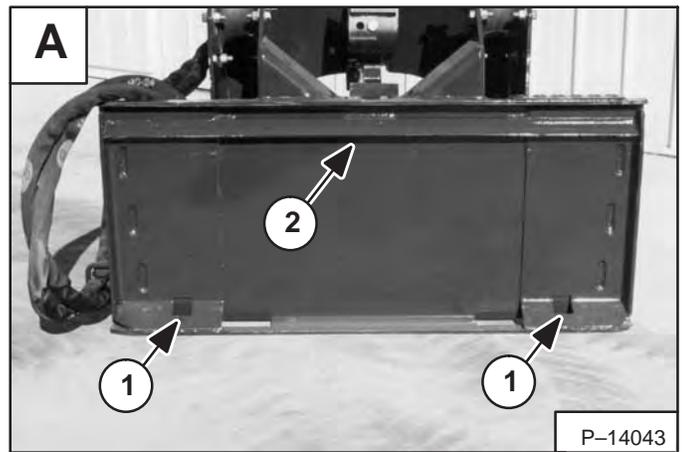
Lubricate the wedges. (See the correct loader Operation & Maintenance Manual for *LUBRICATION OF THE BOBCAT LOADER.*)



## INSPECTION (Cont'd)

### Trench Compactor Mount Inspection

Inspect the Bob-Tach wedge mounts (Item 1) **[A]** mounting flange (Item 2) **[A]** and all welds on the Trench Compactor mount for wear and damage each time the Trench Compactor is removed from the loader.





# HYDRAULIC SYSTEM

	<b>Page Number</b>
<b>HYDRAULIC CONTROL VALVE</b>	
Assembly .....	10-20-8
Disassembly .....	10-20-4
Parts Identification .....	10-20-3
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<b>HYDRAULIC MOTOR</b>	
Disassembly and Assembly .....	10-20-15
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<b>RELIEF CARTRIDGE</b>	
Adjustment .....	10-20-13
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## HYDRAULIC SYSTEM



## HYDRAULIC CONTROL VALVE

### Removal and Installation

Mark the hoses (Item 1) [A] for ease of assembly.

Remove the hoses from the fittings.

# 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.

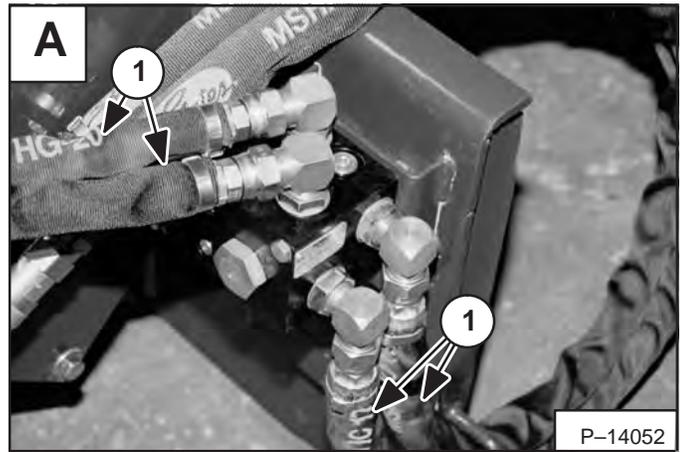
I-2003-0888

Remove the two bolts (Item 1) [B] attaching the control valve to the mounting frame.

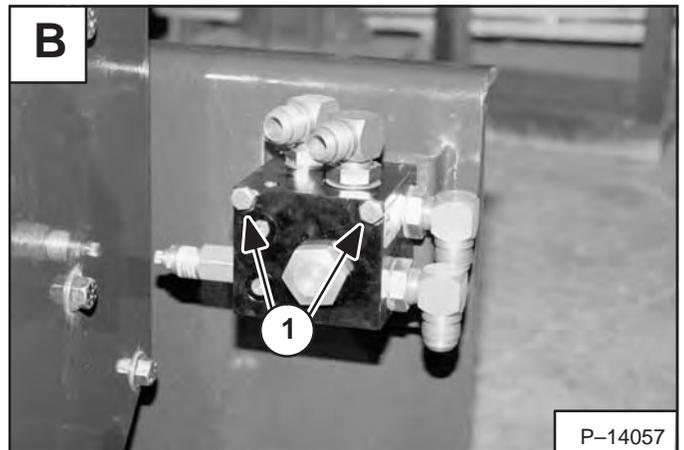
**Installation:** Tighten the two bolts to 35–40 ft.-lbs. (47–54 Nm) torque.

Remove the control valve.

### Parts Identification

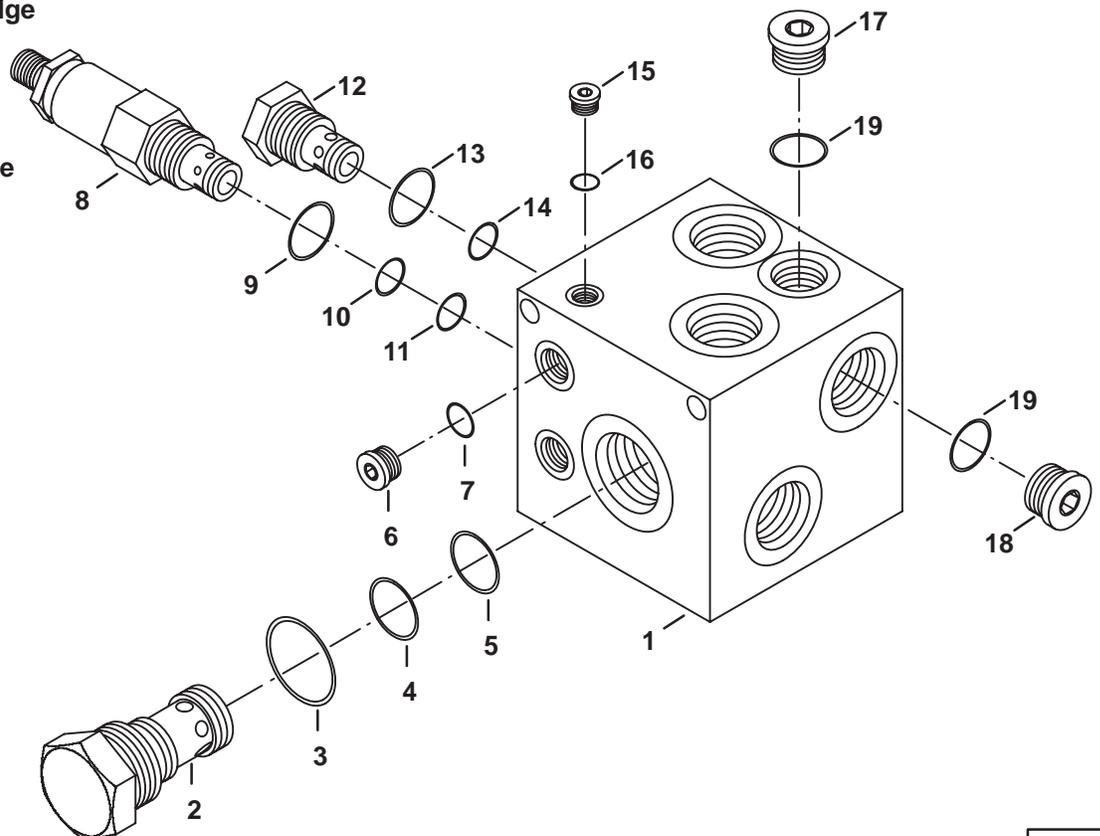


P-14052



P-14057

1. Body
2. Priority cartridge
3. O-ring
4. O-ring
5. O-ring
6. Plug
7. O-ring
8. Relief cartridge
9. O-ring
10. O-ring
11. Seal
12. Check valve
13. O-ring
14. O-ring
15. Plug
16. O-ring
17. Plug
18. Orifice
19. O-ring

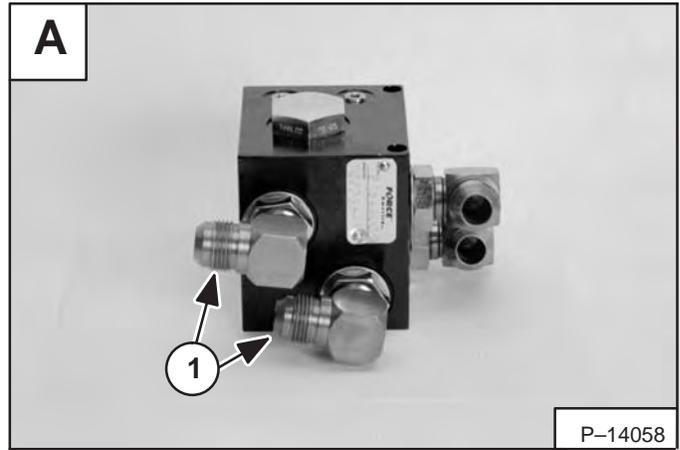


TS-01712

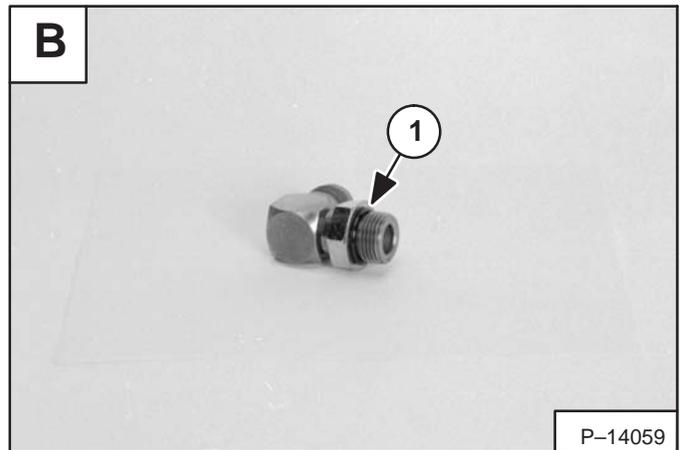
## HYDRAULIC CONTROL VALVE

### Disassembly

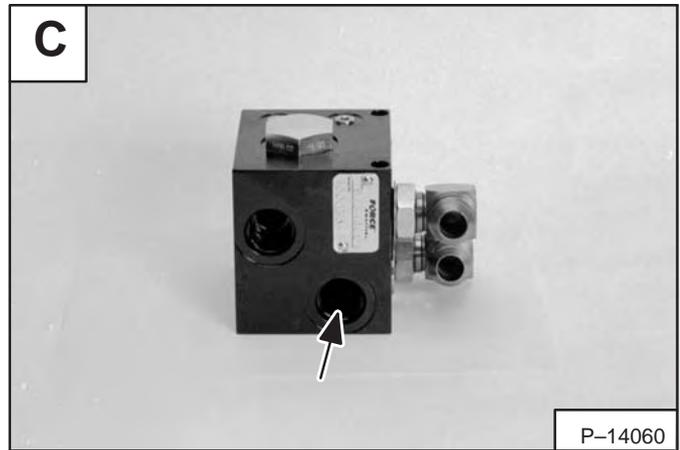
Remove the two fittings (Item 1) **[A]** from the IN and OUT ports.



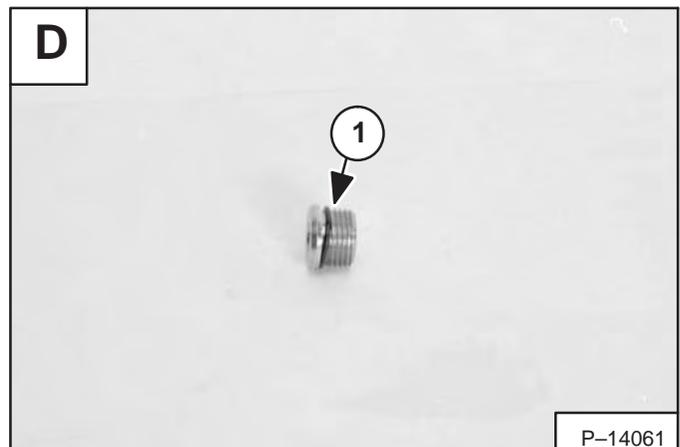
Remove the O-rings (Item 1) **[B]** from the two fittings.



Remove the orifice from inside the IN port **[C]**.



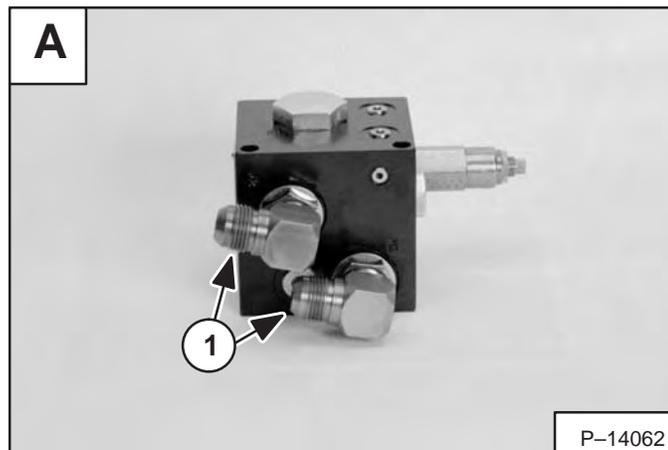
Remove the O-ring (Item 1) **[D]** from the orifice.



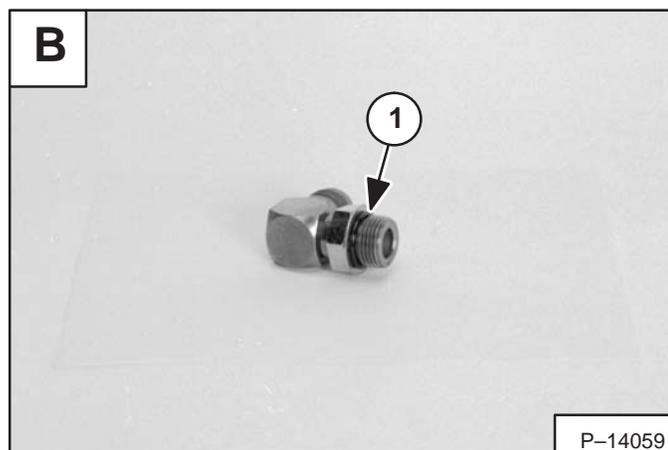
## HYDRAULIC CONTROL VALVE (Cont'd)

### Disassembly (Cont'd)

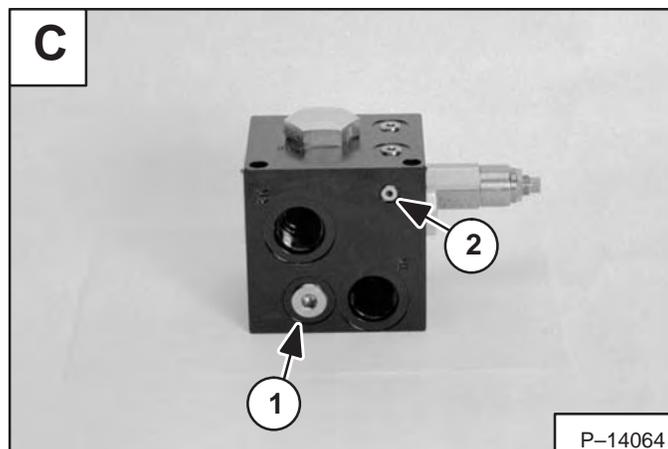
Remove the two fittings (Item 1) [A] from the M1 and M2 ports.



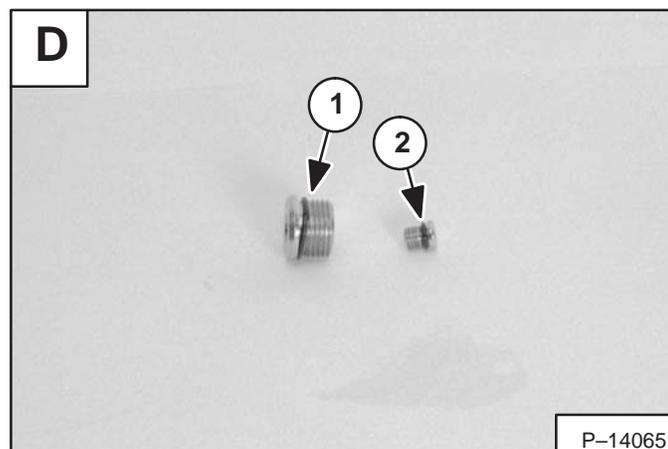
Remove the O-rings (Item 1) [B] from the two fittings.



Remove the plugs (Items 1 & 2) [C].



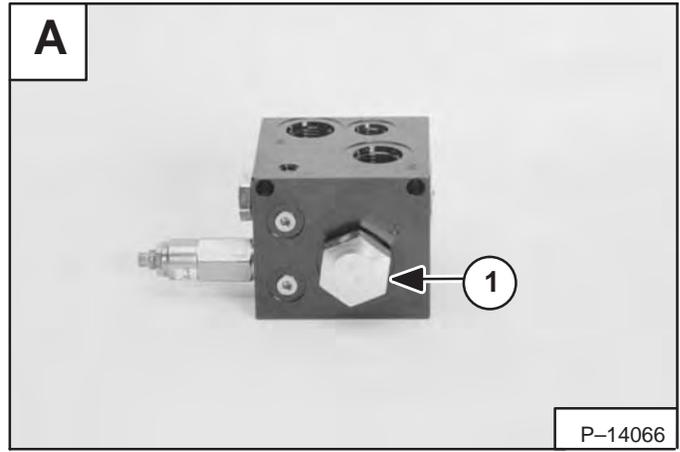
Remove the O-rings (Items 1 & 2) [D] from the two plugs.



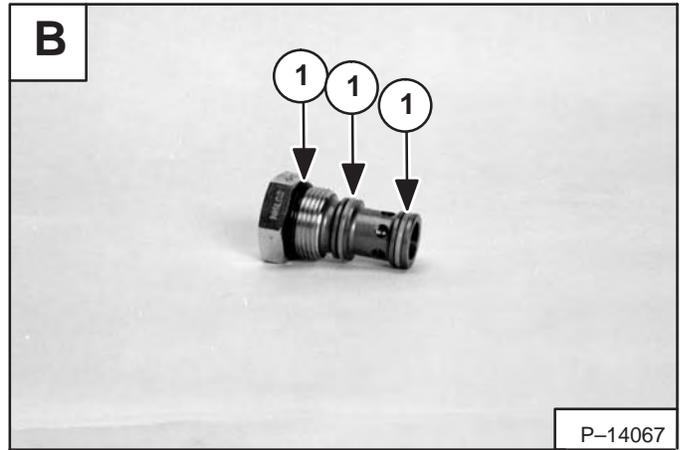
## HYDRAULIC CONTROL VALVE (Cont'd)

### Disassembly (Cont'd)

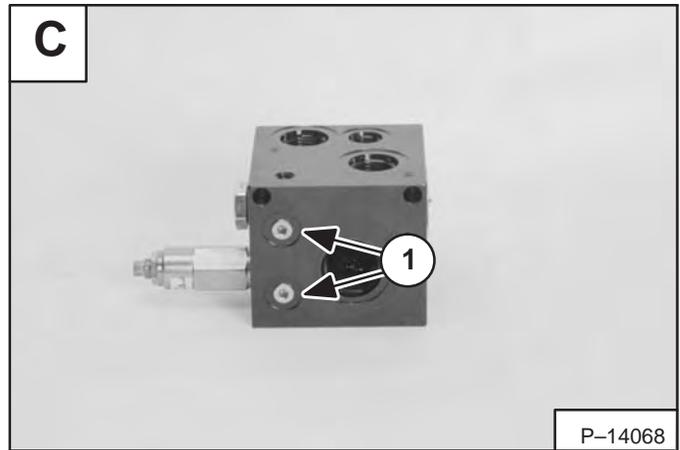
Remove the priority cartridge (Item 1) **[A]** from the LC port.



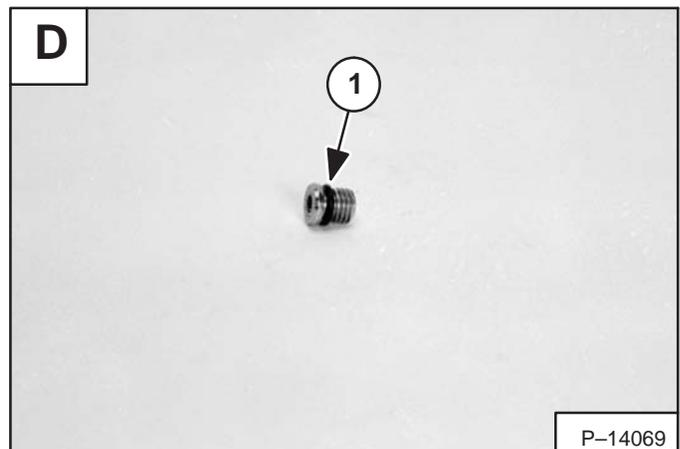
Remove the O-rings (Item 1) **[B]** from the priority cartridge.



Remove the two plugs (Item 1) **[C]**.



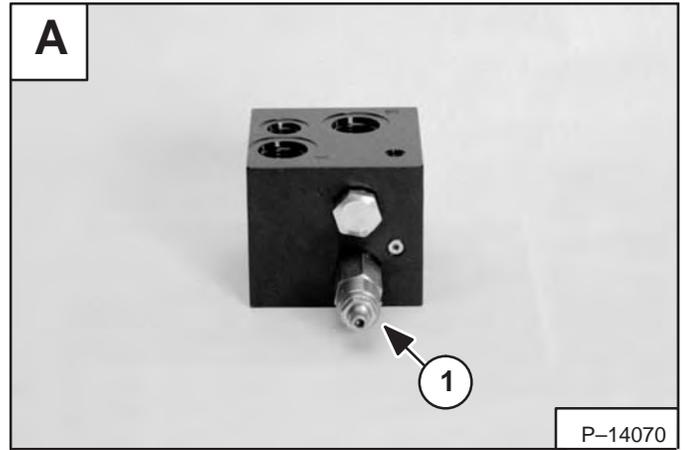
Remove the O-rings (Item 1) **[D]** from the two plugs.



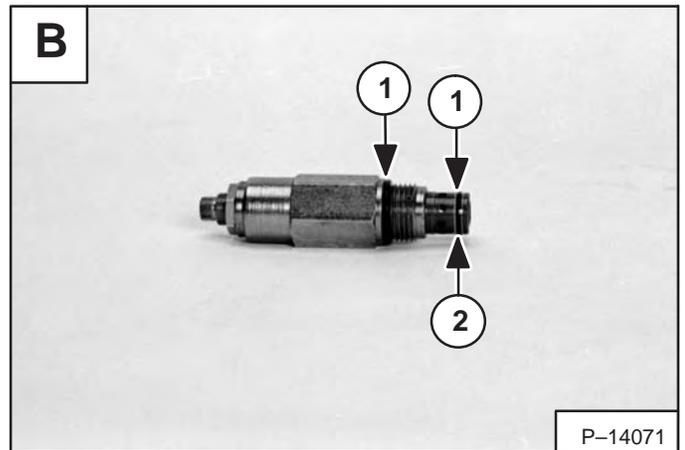
## HYDRAULIC CONTROL VALVE (Cont'd)

### Disassembly (Cont'd)

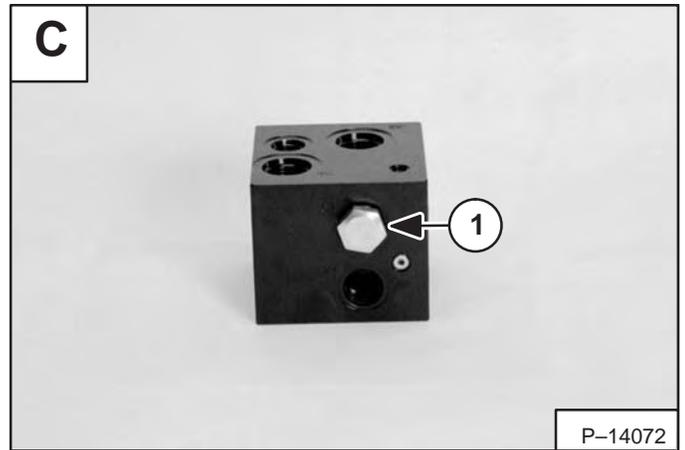
Remove the relief cartridge (Item 1) **[A]** from the RV port.



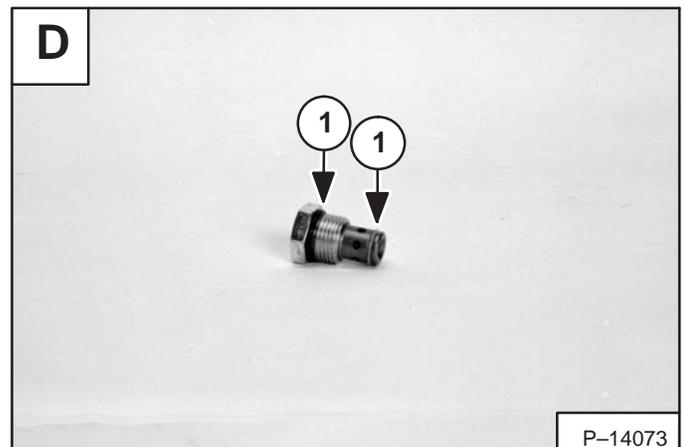
Remove the O-rings (Item 1) **[B]** and the seal (Item 2) **[B]** from the relief cartridge.



Remove the check valve (Item 1) **[C]** from the CV port.



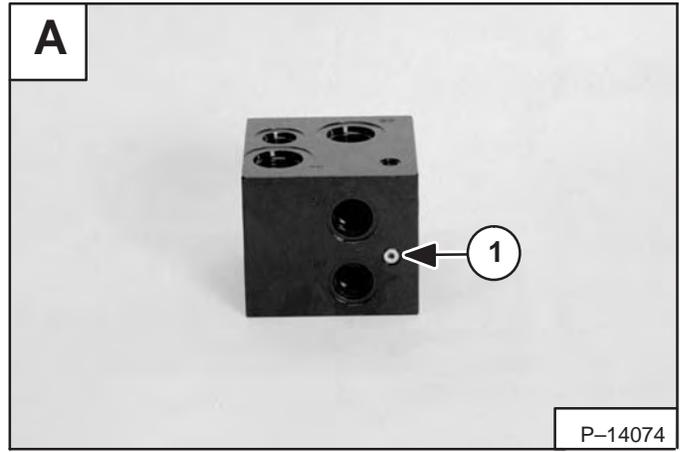
Remove the O-rings (Item 1) **[D]** from the check valve.



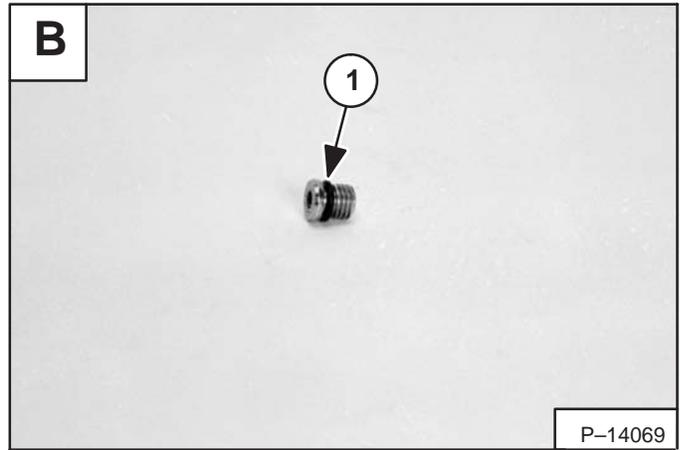
## HYDRAULIC CONTROL VALVE (Cont'd)

### Disassembly (Cont'd)

Remove the plug (Item 1) **[A]**.



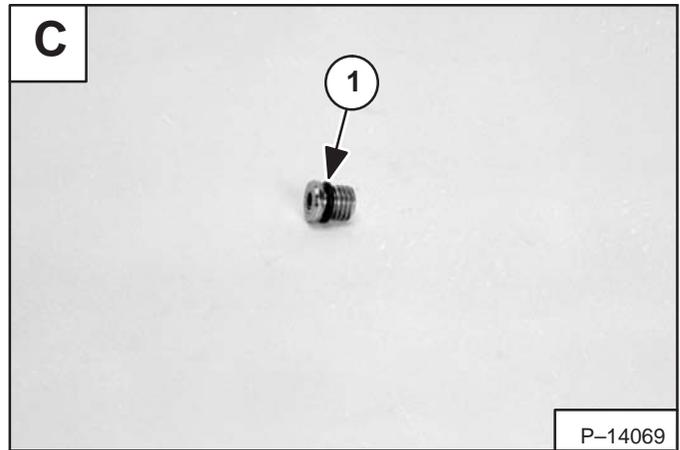
Remove the O-ring (Item 1) **[B]** from the plug.



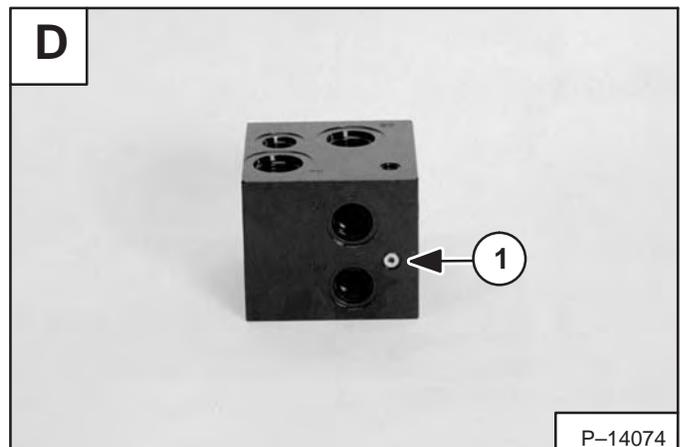
### Assembly

Clean all parts in solvent and dry with compressed air. Apply clean hydraulic fluid to all O-rings, back-up rings, and seals before installation.

Install the O-ring (Item 1) **[C]** on the plug.



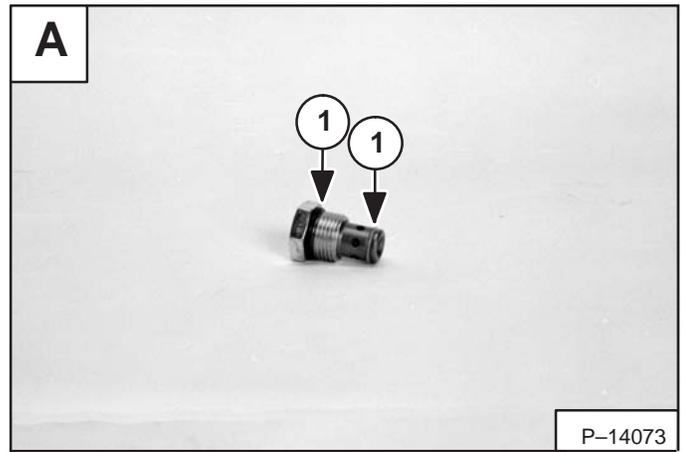
Install the plug (Item 1) **[D]** in the valve.



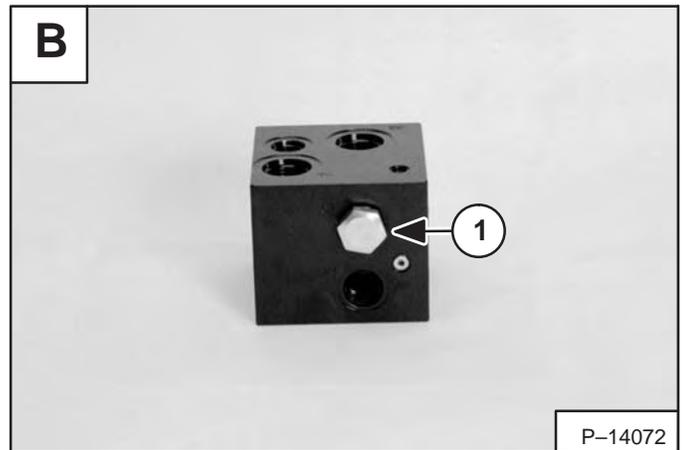
## HYDRAULIC CONTROL VALVE (Cont'd)

### Assembly (Cont'd)

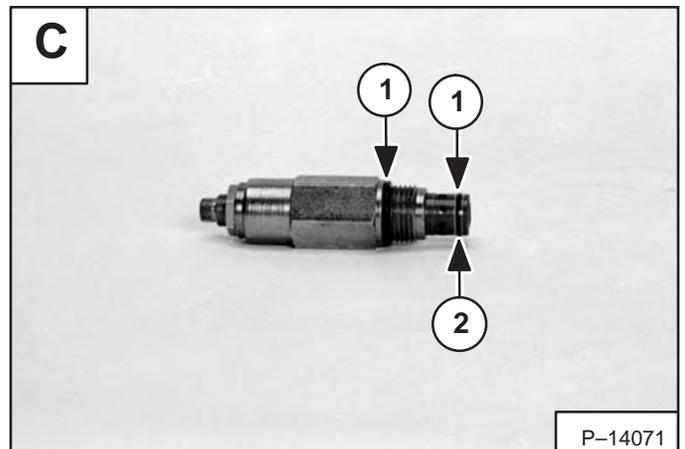
Install the O-rings (Item 1) **[A]** on the check valve.



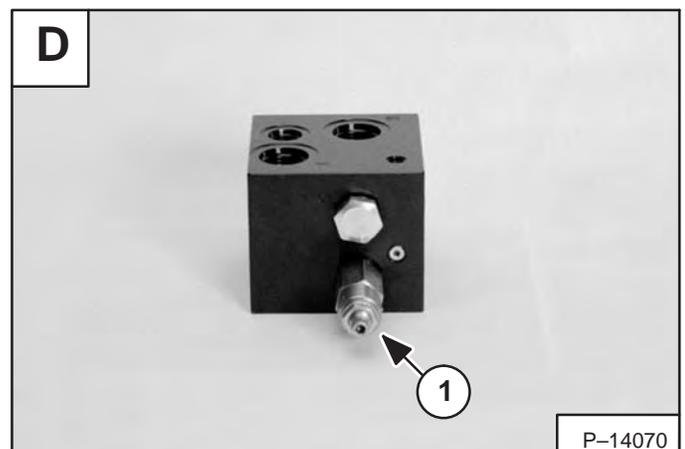
Install the check valve (Item 1) **[B]** in the CV port. Tighten the check valve to 30 ft.-lbs. (41 Nm) torque.



Install the O-rings (Item 1) **[C]** and the seal (Item 2) **[C]** on the relief cartridge.



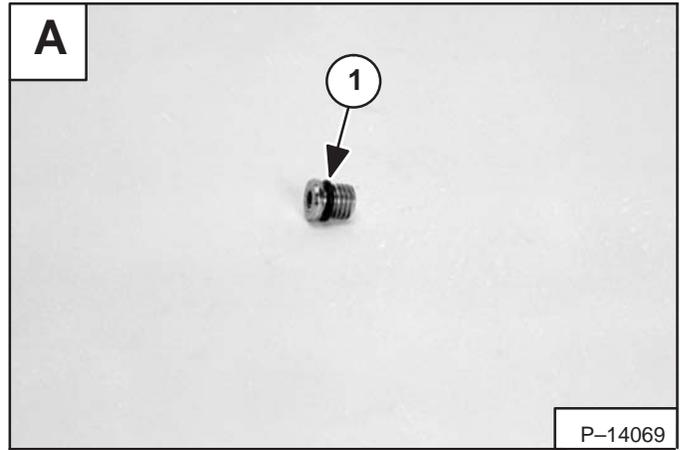
Install the relief cartridge (Item 1) **[D]** in the RV port. Tighten the relief cartridge to 30 ft.-lbs. (41 Nm) torque.



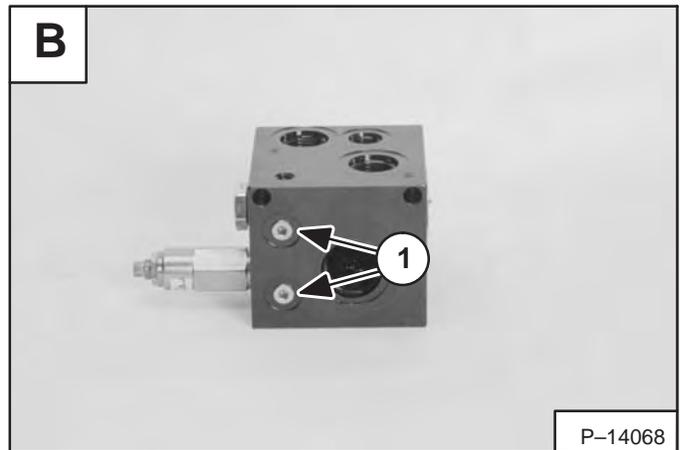
## HYDRAULIC CONTROL VALVE (Cont'd)

### Assembly (Cont'd)

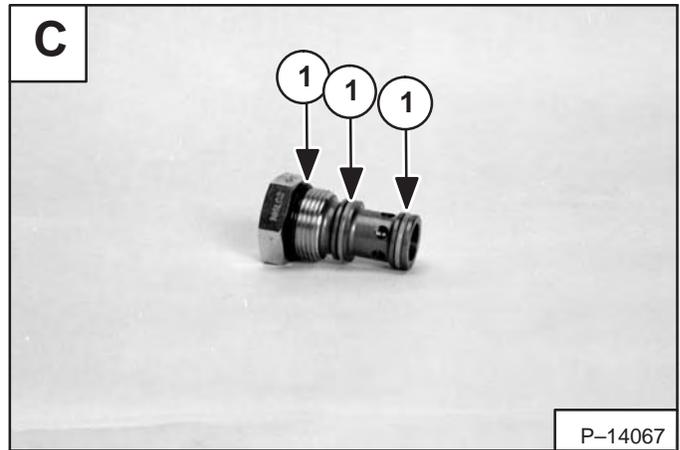
Install the O-rings (Item 1) **[A]** on the two plugs.



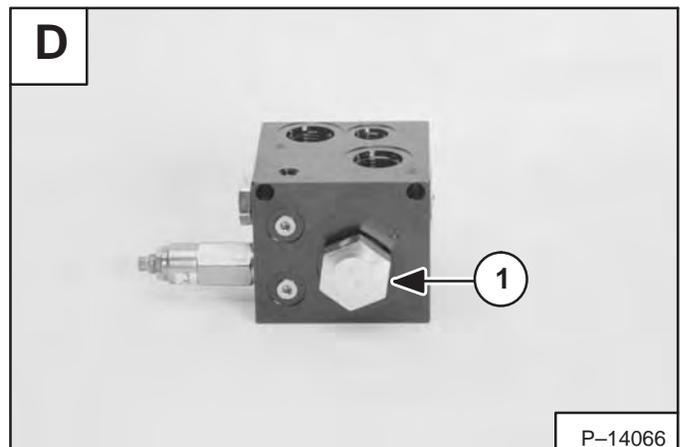
Install the two plugs (Item 1) **[B]** in the valve.



Install the O-rings (Item 1) **[C]** on the priority cartridge.



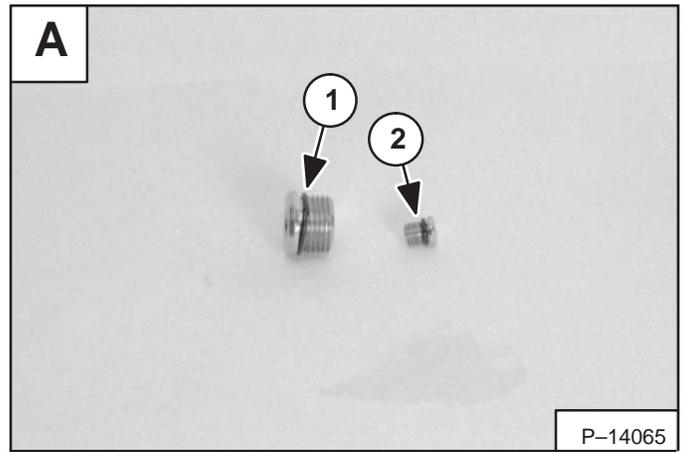
Install the priority cartridge (Item 1) **[D]** in the LC port. Tighten the priority cartridge to 45 ft.-lbs. (61 Nm) torque.



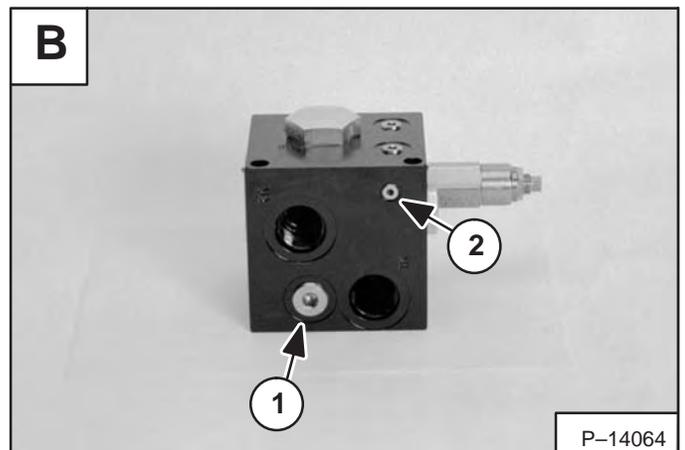
## HYDRAULIC CONTROL VALVE (Cont'd)

### Assembly (Cont'd)

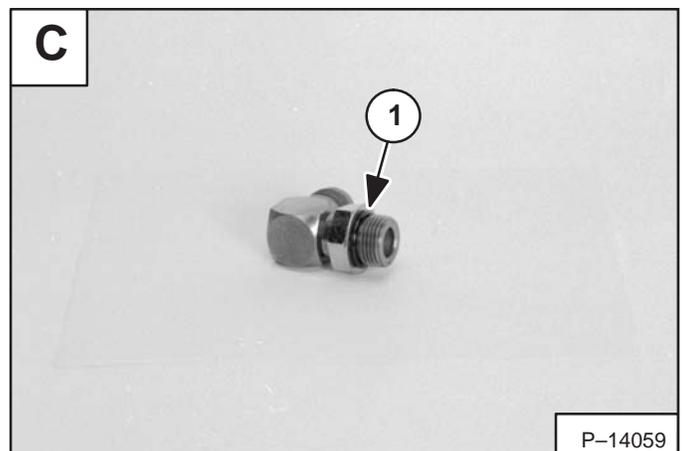
Install the O-rings on the two plugs (Items 1 & 2) **[A]**.



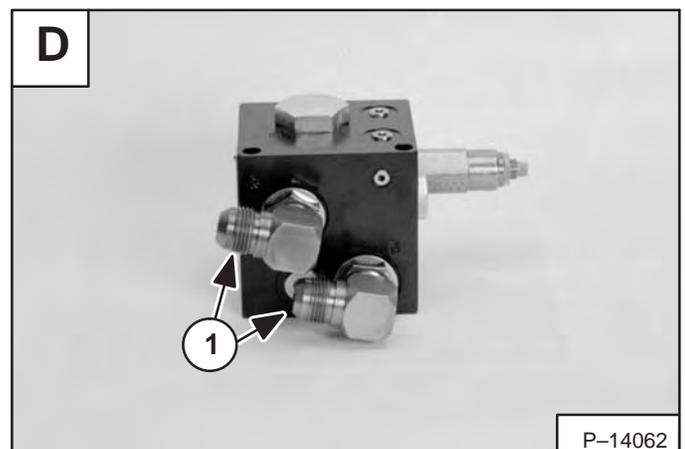
Install the two plugs (Items 1 & 2) **[B]**.



Install the O-rings (Item 1) **[C]** on two of the fittings.



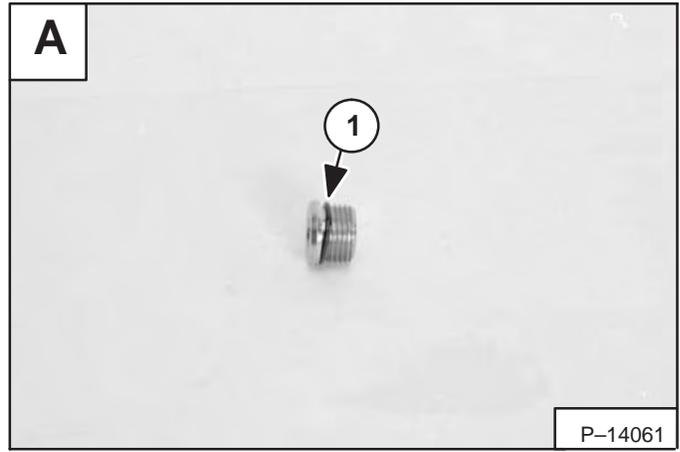
Install two of the fittings (Item 1) **[D]** in the M1 and M2 ports.



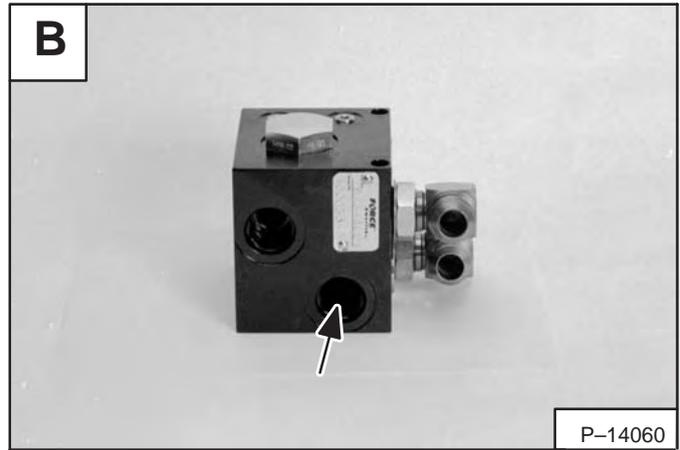
## HYDRAULIC CONTROL VALVE (Cont'd)

### Assembly (Cont'd)

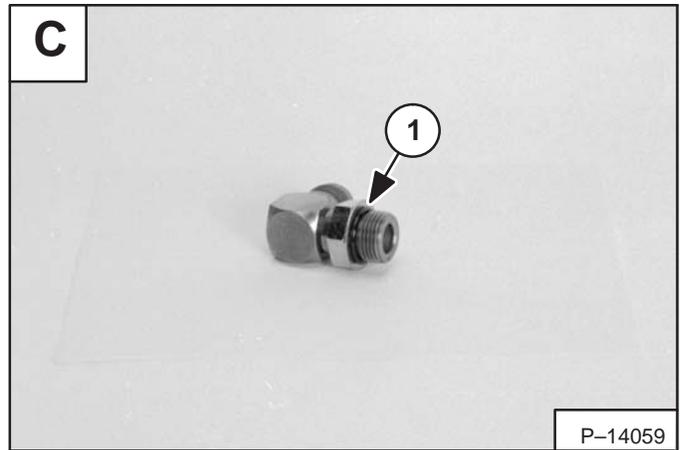
Install the O-ring (Item 1) [A] on the orifice.



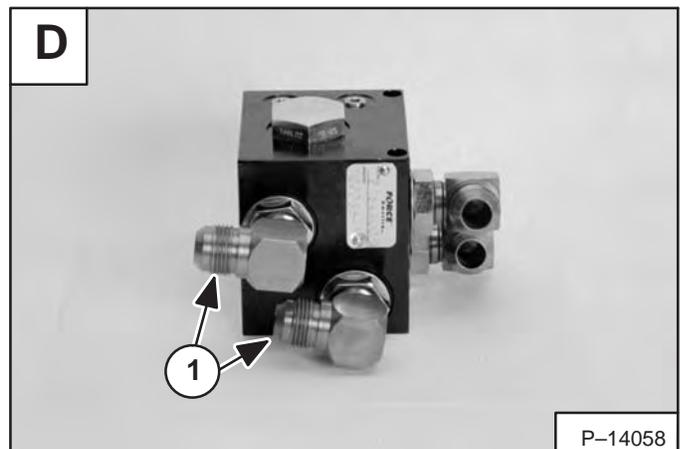
Install the orifice inside the IN port [B].



Install the O-rings (Item 1) [C] on the two remaining fittings.



Install the two remaining fittings (Item 1) [D] in the IN and OUT ports.



## RELIEF CARTRIDGE

### Description

The relief cartridge is factory set at approximately 1700 PSI (11721 kPa).

### Adjustment

Disconnect the hydraulic hose (Item 1) **[A]** from the fitting on the inlet port of the hydraulic motor.

Install a minimum 5000 PSI (34475 kPa) guage on the end of the hydraulic hose.

Disconnect the hydraulic hose (Item 2) **[A]** from the fitting on the outlet port of the hydraulic motor.

Plug the end of the hydraulic hose with a #10 tube plug fitting.

Start the loader.

Start the vibrator.

The pressure reading on the guage should read approximately 1700 PSI (11721 kPa).

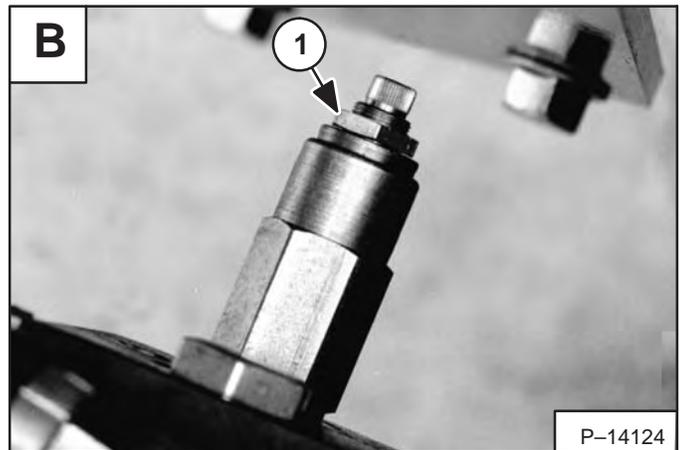
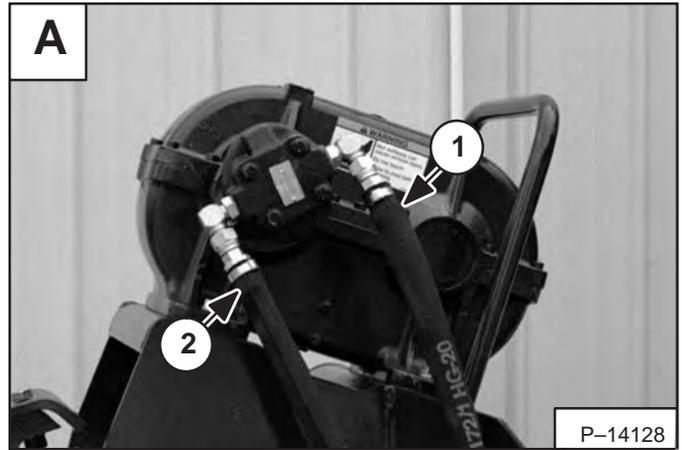
If adjustment is needed, stop the loader and loosen the nut (Item 1) **[B]** on the end of the relief cartridge.

Use an allen wrench to turn the plug clockwise to increase pressure or counterclockwise to reduce the pressure **[C]**.

Start the loader and recheck the pressure.

Repeat until pressure of 1700 PSI (11721 kPa) has been reached.

Retighten the nut (Item 1) **[B]** on the end of the relief cartridge.

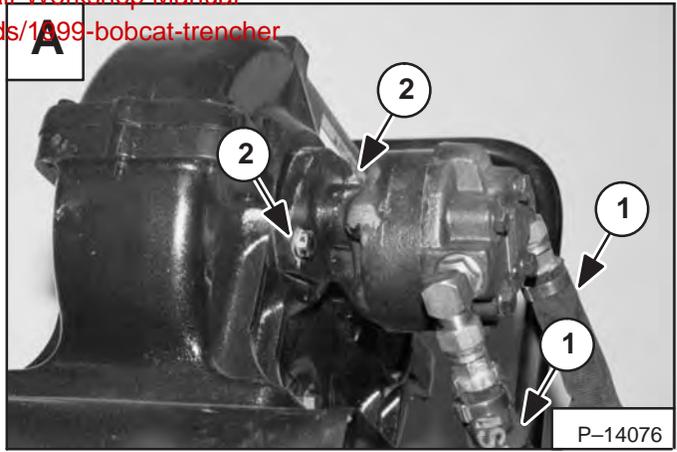


## HYDRAULIC MOTOR

### Removal and Installation

Mark the hoses for ease of assembly.

Remove the hoses (Item 1) [A] from the fittings.



P-14076

# 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 two bolts (Item 2) [A].

**Installation:** Tighten the bolts to 40–45 ft.-lbs. (54–61 Nm) torque.

Remove the hydraulic motor [B].

**Installation:** Check to be certain the motor drive shaft key way has been center punched before reinstalling the old motor or installing a new one. (See *HYDRAULIC MOTOR Inspection* Page 10–20–18.)

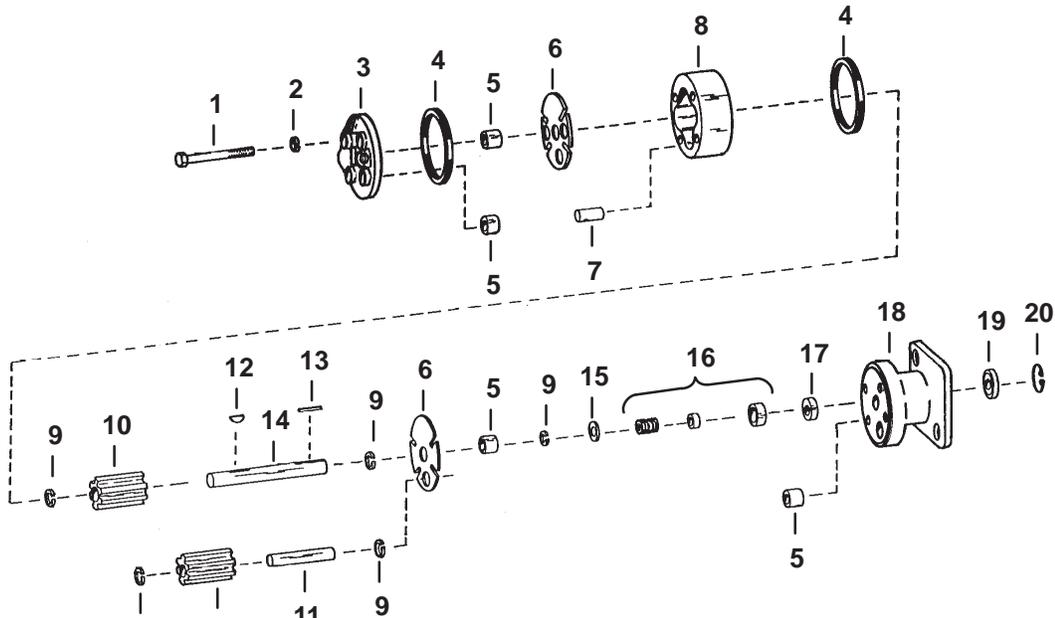
**Installation:** Apply a high-temp silicone sealant or gasket maker to the adapter flange before installation.



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### Parts Identification

1. Cap screw
2. Washer
3. Cover
4. O-ring
5. Bearing
6. Wear plate
7. Dowel pin
8. Housing
9. Snap ring
10. Gear
11. Shaft
12. Key
13. Key
14. Shaft
15. Washer
16. Seal assembly
17. Seat
18. Adapter
19. Bearing
20. Snap ring



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