



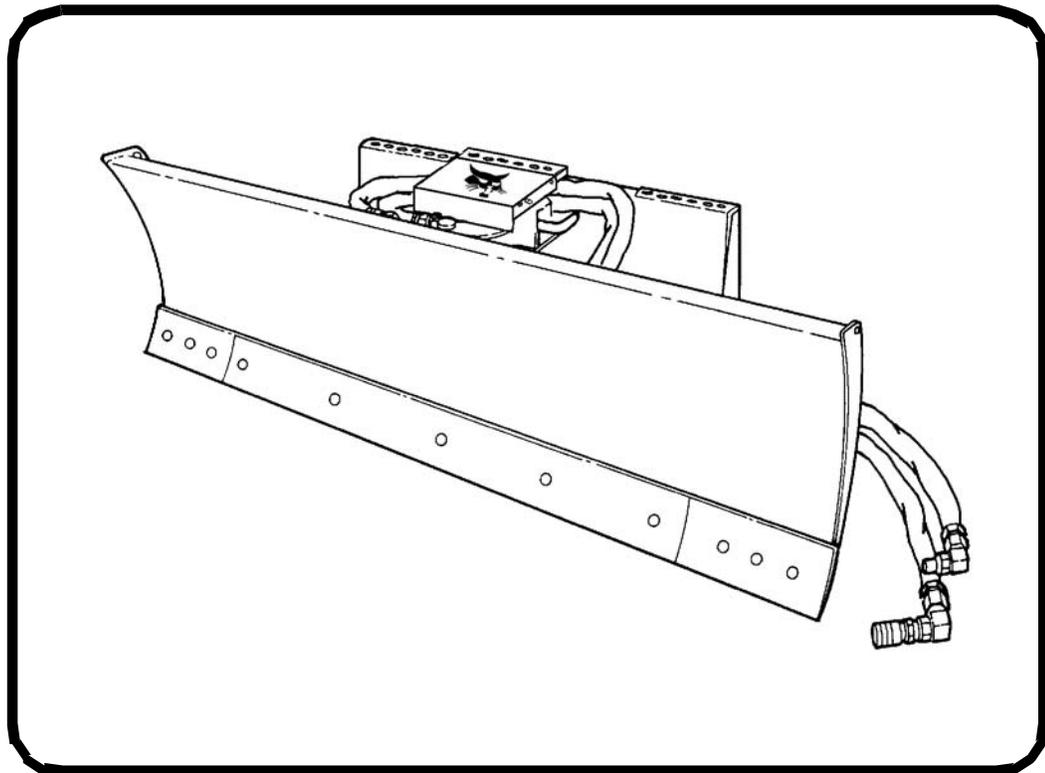
Bobcat®

Service Manual

Dozer Blade

(68 In.) S/N 224300152 & Below
(68 In.) S/N 224300153 & Above
(80 In.) S/N 699100101 & Above
(80 In.) S/N 232112994 & Below

(80 In.) S/N 232112995 & Above
(90 In.) S/N 223200101 & Above
(90 In.) S/N 231912339 & Below
(90 In.) S/N 231912340 & Above



Product: Bobcat Dozer Blade Service Repair Workshop Manual

Full Download: <https://www.arepairmanual.com/downloads/bobcat-dozer-blade-service-repair-workshop-manual/>

Sample of manual. Download All 102 pages at:

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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.

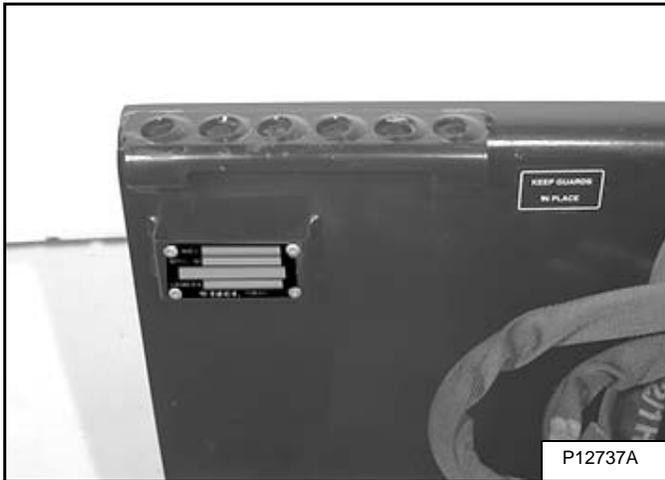


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SERIAL NUMBER LOCATION

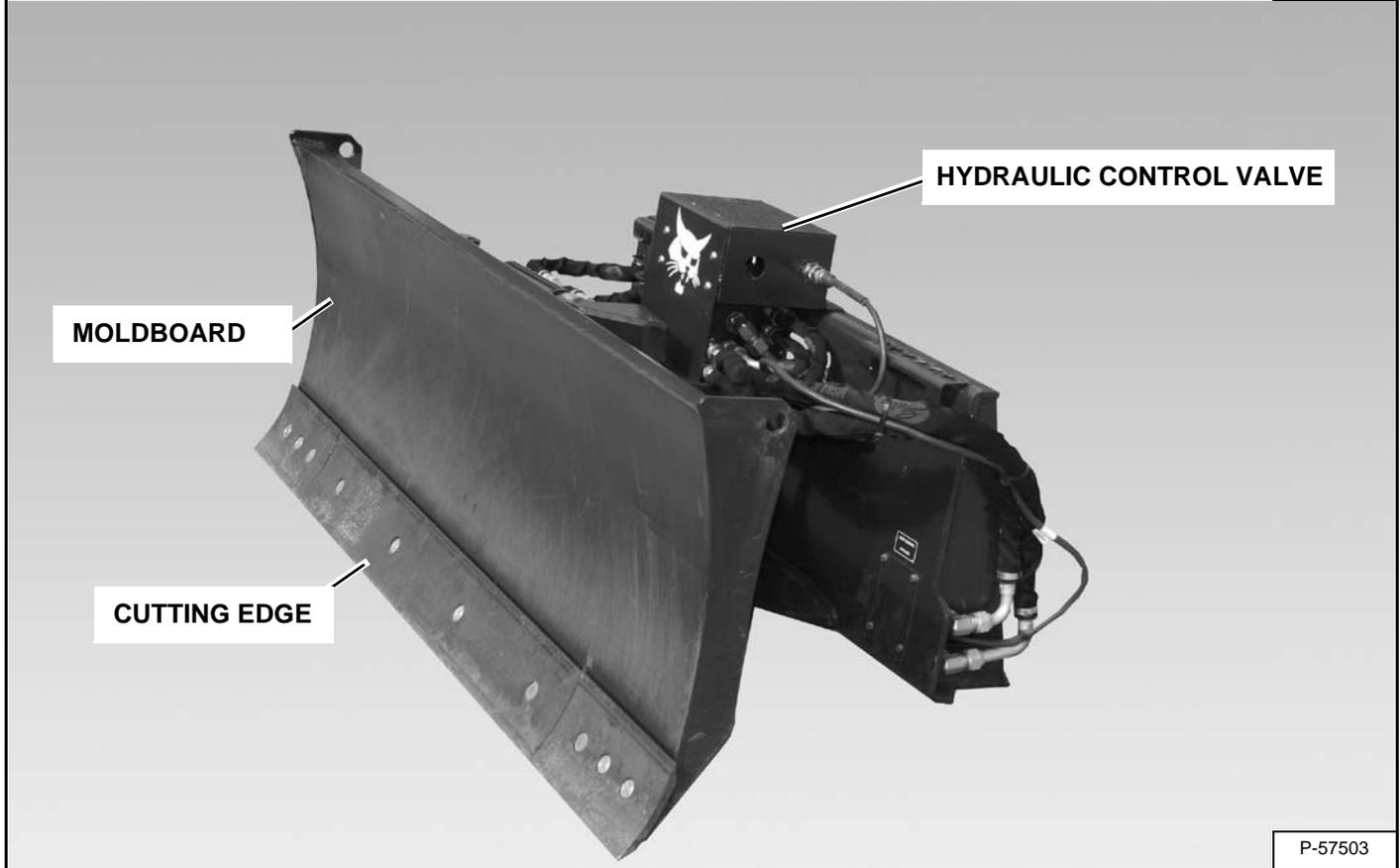
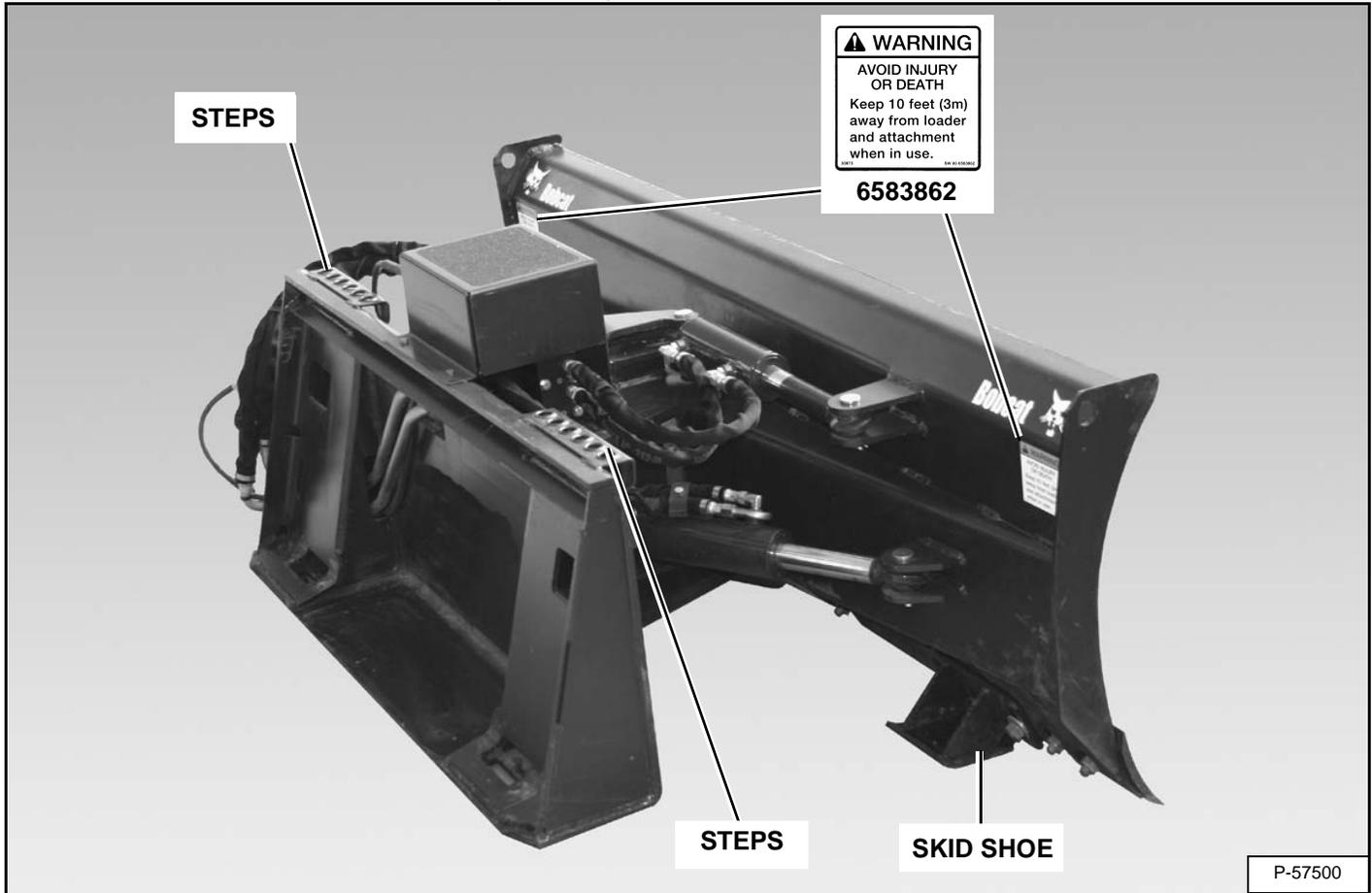
Attachment Serial Number

Figure 1



Always use the serial number of the dozer 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 **[Figure 1]**.

IDENTIFICATION AND MACHINE SIGNS (DECALS)



PREVENTIVE MAINTENANCE

PREVENTIVE MAINTENANCE

INSPECTION	10-20-1
Cutting Edge Inspection.....	10-20-3
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AVOID INJURY OR DEATH

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-2003-0807

PROBLEM	CAUSE	CORRECTION
Dozer Blade does not mount properly on the Bob-Tach.	Bob-Tach wedges are not fully retracted before installation.	Retract Bob-Tach wedges before installation.
	Mud, dirt or stones are lodged between the Bob-Tach and the Dozer Blade mount.	Remove debris from between Bob-Tach and Dozer Blade mount.
Dozer Blade does not rotate or oscillate.	No hydraulic flow.	Activate loader front auxiliary hydraulics. Check quick couplers connection. Check for damaged hose ends and fittings.
	Electrical harness not installed.	Install electrical harness from the Dozer Blade to the loader.
	No electrical current flow through harness.	Check Dozer Blade electrical harness for damage to connector or harness.
	G - Series loaders only: ACD harness disconnected or damaged ACD Control Module.	Check harness and ACD Control Module, repair or replace as needed.
	G - Series loaders only: 7/14 pin connector switch at loader not in correct position for the harness supplied with attachment.	Move the switch to the correct position for the harness used on the attachment.
Dozer Blade is hard to control.	Skid shoes worn.	Replace worn skid shoes.
	Worn bushings.	Replace bushings.
	Worn pins.	Replace pins.



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INSPECTION

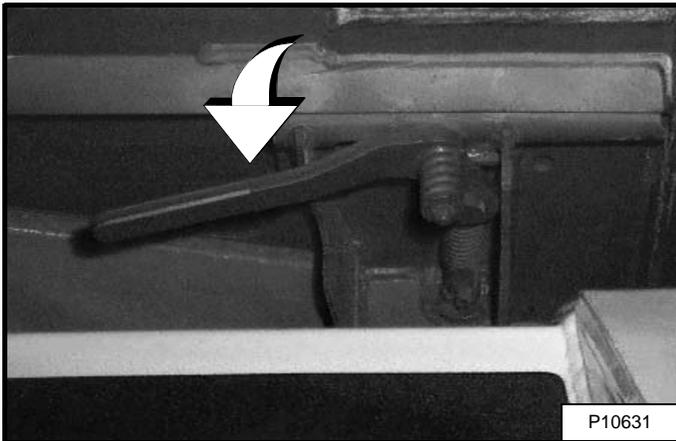
Hand Lever Bob-Tach Inspection

! 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.

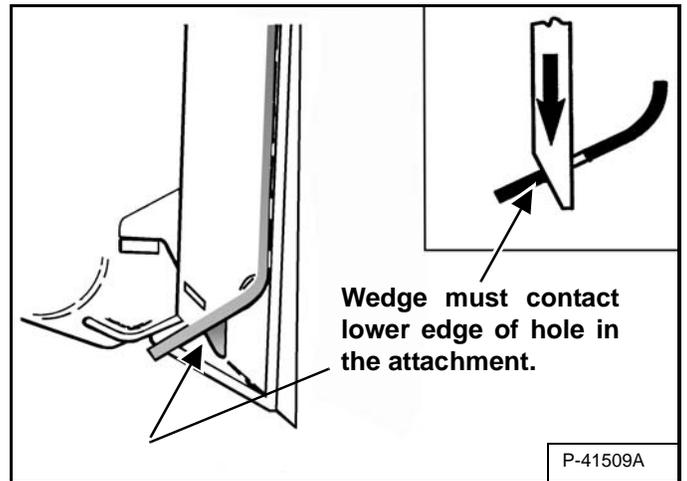
W-2102-0497

Figure 10-20-1



Move the Bob-Tach levers down to engage the wedges [Figure 10-20-1]. The levers and wedges must move freely.

Figure 10-20-2

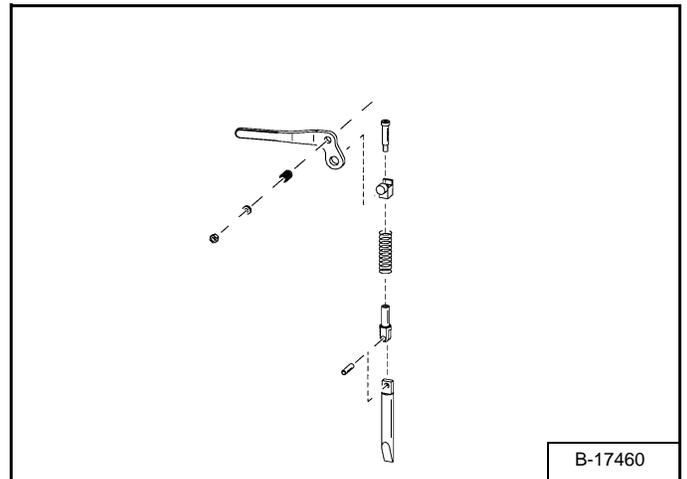


The wedges must extend through the holes in the attachment mounting frame (Item 2) [Figure 10-20-2].

The spring loaded wedge (Item 1) must contact the lower edge of the hole in the attachment (Item 2) [Figure 10-20-2].

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

Figure 10-20-3



Inspect the mounting frame on the attachment and the Bob-Tach, linkages and wedges for excessive wear or damage. Replace any parts that are damaged, bent, or missing [Figure 10-20-3]. 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 MACHINE*.)

INSPECTION (CONT'D)

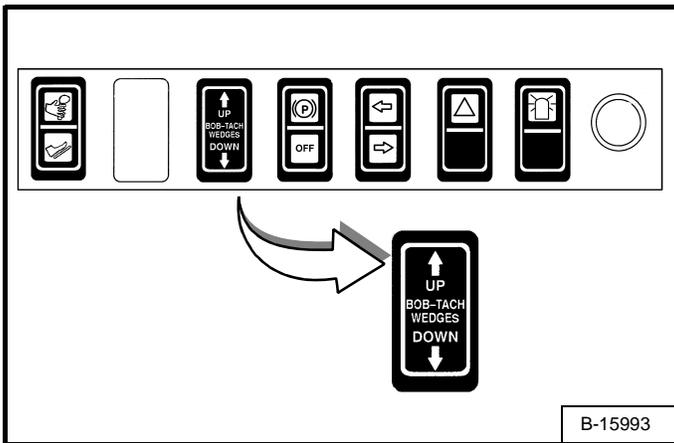
Power Bob-Tach Inspection

! 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

Figure 10-20-4

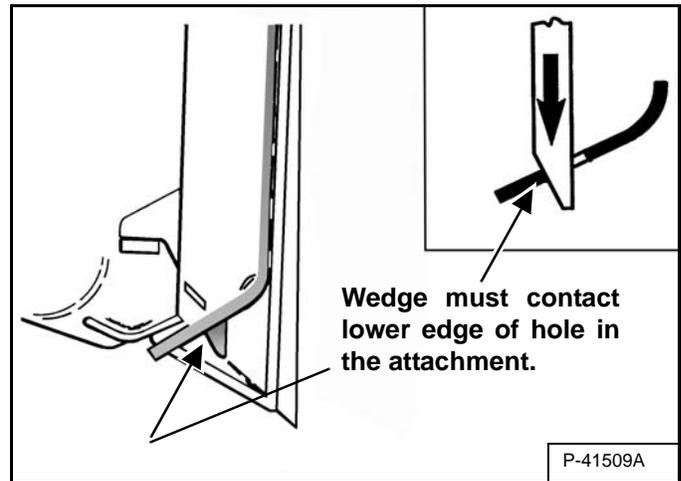


NOTE: The Power Bob-Tach system has continuous pressurized hydraulic oil to keep the wedges in the engaged position and prevent attachment disengagement. Because the wedges can slowly lower, the operator may need to reactivate the switch (BOB-TACH WEDGES UP) to be sure both wedges are fully raised before installing the attachment.

Push and hold the BOB-TACH WEDGES UP switch until wedges are fully raised. Push and hold the BOB-TACH WEDGES DOWN switch until [Figure 10-20-4] the wedges are fully down.

The wedges must move freely.

Figure 10-20-5

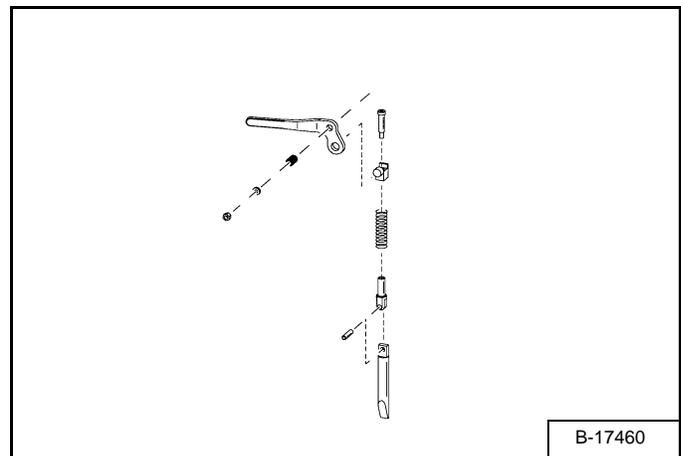


The wedges must extend through the holes in the attachment mounting frame (Item 2) [Figure 10-20-5].

The spring loaded wedge (Item 1) must contact the lower edge of the hole in the attachment (Item 2) [Figure 10-20-5].

If the wedge does not contact the lower edge of the hole [Figure 10-20-5] the attachment will be loose and can come off the Bob-Tach.

Figure 10-20-6



Inspect the mounting frame on the attachment and the Bob-Tach, linkages and wedges for excessive wear or damage [Figure 10-20-6].

Replace any parts that are damaged, bent, or missing. Keep all fasteners tight. Inspect the hoses and fittings for leaks.

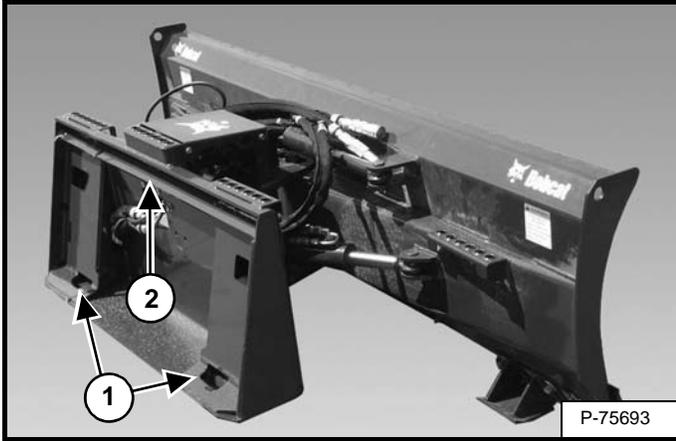
Look for cracked welds. Contact your Bobcat dealer for repair or replacement parts.

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

INSPECTION (CONT'D)

Dozer Blade Mount Inspection

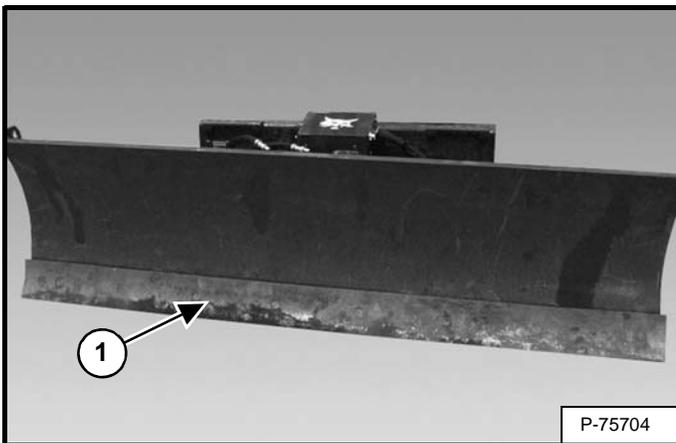
Figure 10-20-7



Inspect the Bob-Tach wedge mounts (Item 1) mounting flange (Item 2) and all welds on the Dozer Blade mount for wear and damage each time the Dozer Blade is removed from the loader [Figure 10-20-7].

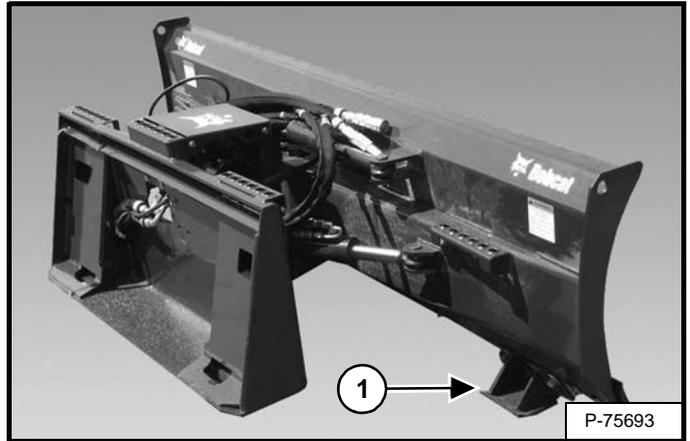
Cutting Edge Inspection

Figure 10-20-8



The cutting edge (Item 1) [Figure 10-20-8] is reversible. When the cutting edge becomes worn or damaged, remove the cutting edge, rotate it 180 degrees and reinstall. (See Removal And Installation on Page 30-20-1.)

Figure 10-20-9



Inspect the skid shoes (Item 1) [Figure 10-20-9] for wear and damage.

Replace the skid shoes as needed.



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HYDRAULIC SYSTEM

HYDRAULIC SYSTEM

HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW)	20-10-1
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Disassembly	20-10-4
Parts Identification	20-10-3
Removal And Installation	20-10-1
HYDRAULIC CONTROL VALVE (S/N 224300153 & ABOVE, S/N 232112995 & ABOVE, S/N 231912340 & ABOVE)	20-11-1
Assembly	20-11-8
Disassembly	20-11-4
Parts Identification	20-11-3
Removal And Installation	20-11-1
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Assembly	20-20-9
Disassembly	20-20-6
Oscillation Cylinder Removal And Installation	20-20-1
Parts Identification	20-20-5
Rotation Cylinder Removal And Installation	20-20-3



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HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW)

Removal And Installation

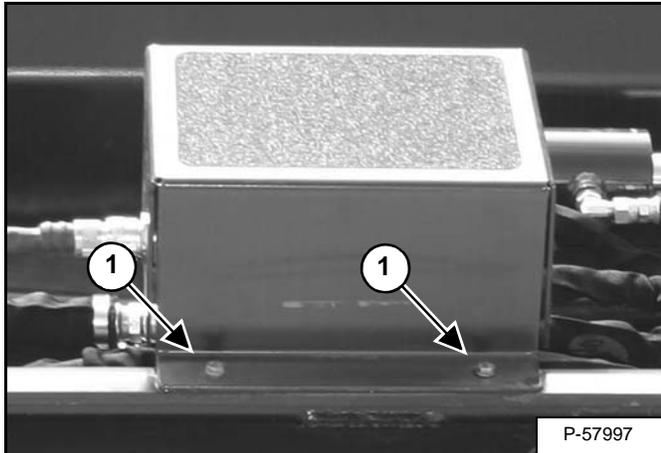
WARNING

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Engine is running.
- Tools are being used.

W-2019-1285

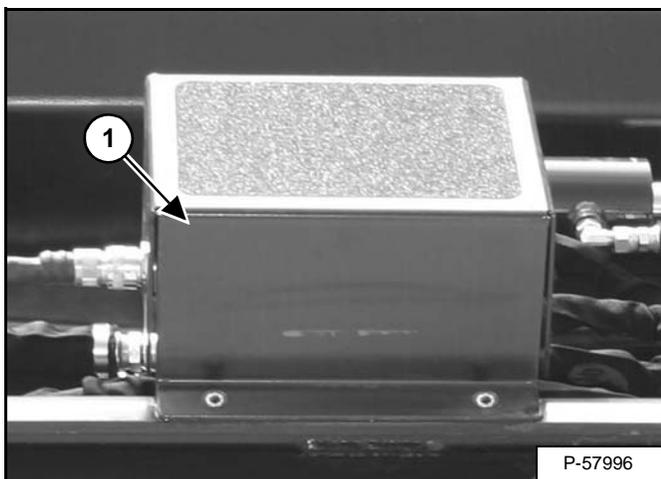
Figure 20-10-1



Remove the two bolts (Item 1) [Figure 20-10-1].

Installation: Tighten the bolts to 80-90 in.-lb. (9-10 N•m) torque.

Figure 20-10-2



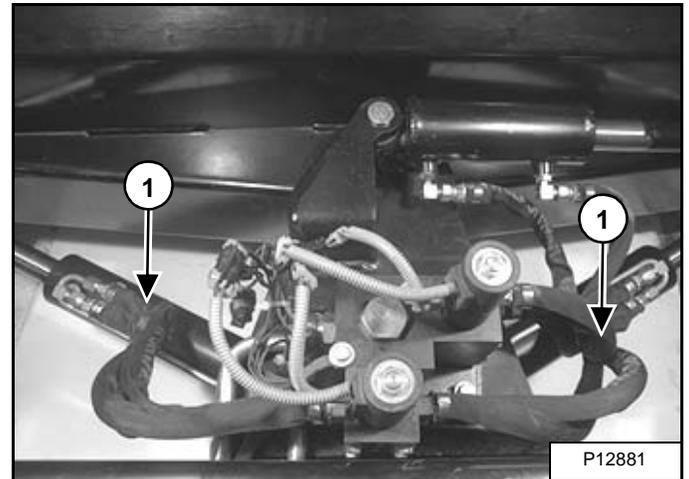
Remove the cover (Item 1) [Figure 20-10-2].

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.

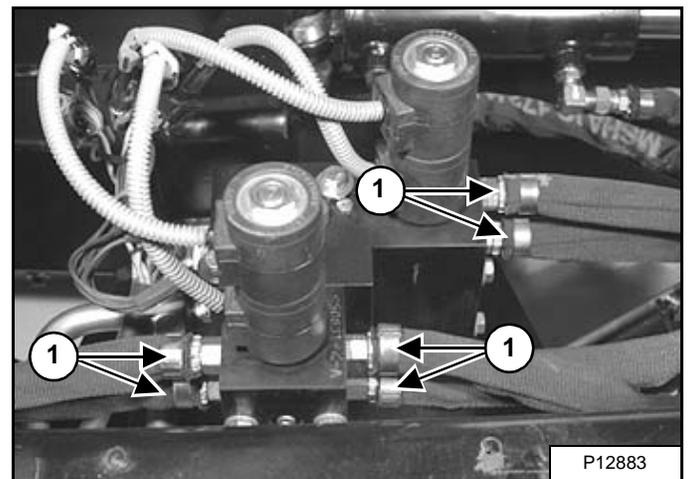
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Figure 20-10-3



Remove the hose clamps (Item 1) [Figure 20-10-3].

Figure 20-10-4

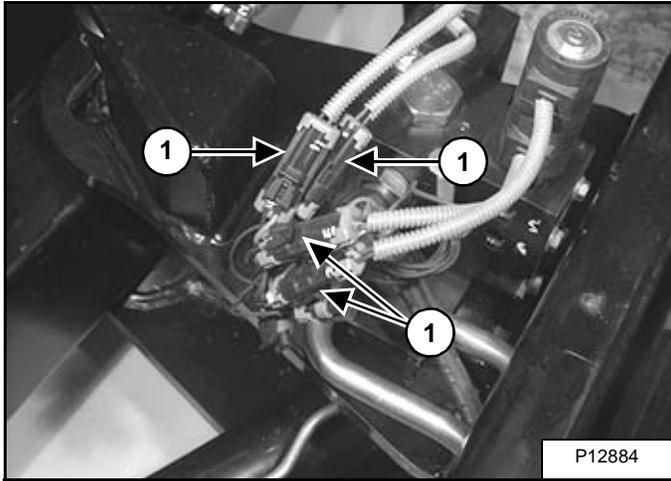


Mark the hydraulic hoses for ease of assembly. Remove the six hoses (Item 1) [Figure 20-10-4] from the hydraulic cylinders and the hydraulic control valve.

HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW) (CONT'D)

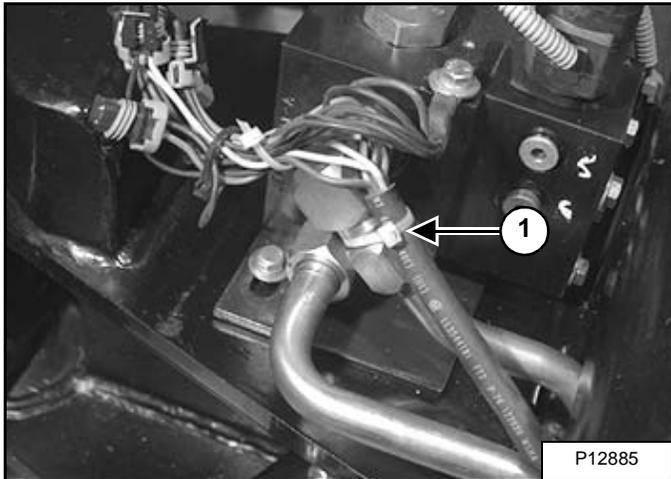
Removal And Installation (Cont'd)

Figure 20-10-5



Disconnect the wire harness (Item 1) [Figure 20-10-5] from the solenoids.

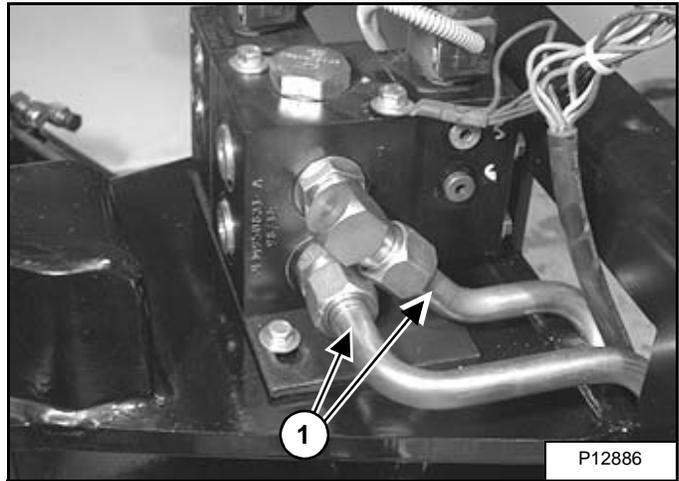
Figure 20-10-6



Cut and remove the tie strap (Item 1) [Figure 20-10-6].

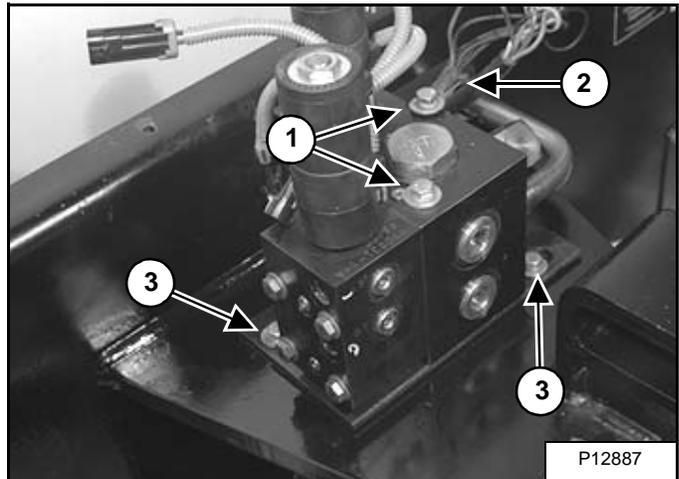
Reposition the wire harness to provide clearance to the hydraulic tubelines.

Figure 20-10-7



Remove the hydraulic tubelines (Item 1) [Figure 20-10-7].

Figure 20-10-8



Remove the two mount bolts (Item 1) [Figure 20-10-8].

Remove the ground wires (Item 2) [Figure 20-10-8] from the mount bolt.

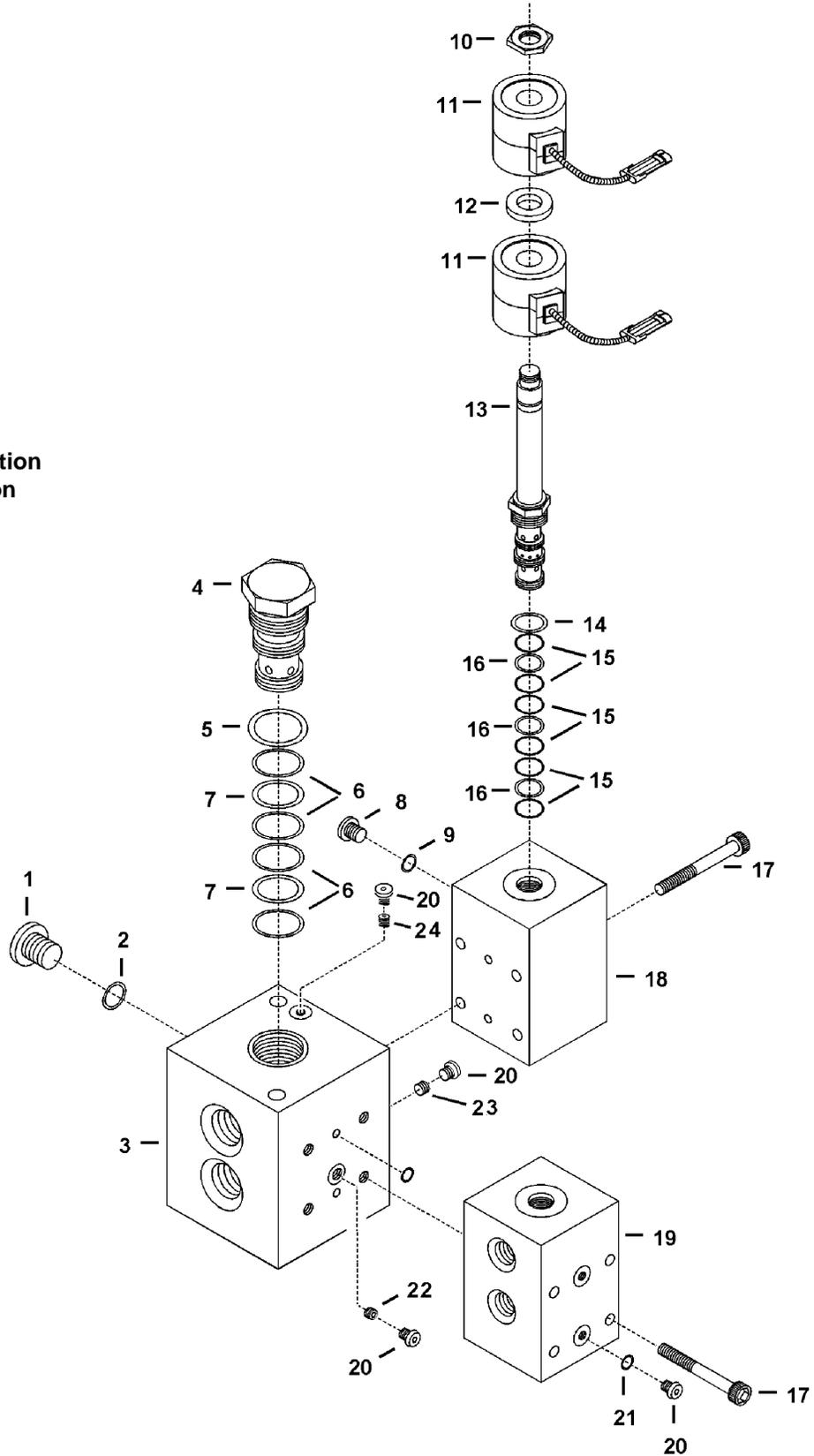
Installation: Tighten the bolts (Item 1) [Figure 20-10-8] to 180-200 in.-lb. (21-23 N•m) torque.

Loosen the mount plate bolts (Item 3) and adjust the valve for proper tubeline to valve installation [Figure 20-10-8].

Installation: Tighten the bolts (Item 3) [Figure 20-10-8] to 180-200 in.-lb. (21-23 N•m) torque.

Parts Identification

- 1. Plug
- 2. O-ring
- 3. Valve Block
- 4. Relief Valve
- 5. O-ring
- 6. Back-up Ring
- 7. O-ring
- 8. Plug
- 9. O-ring
- 10. Nut
- 11. Coil
- 12. Spacer
- 13. Spool
- 14. O-ring
- 15. Back-up Ring
- 16. O-ring
- 17. Bolt
- 18. Oscillation Valve Section
- 19. Rotation Valve Section
- 20. Plug
- 21. O-ring
- 22. Orifice (.089)
- 23. Orifice (.050)
- 24. Orifice (.015)

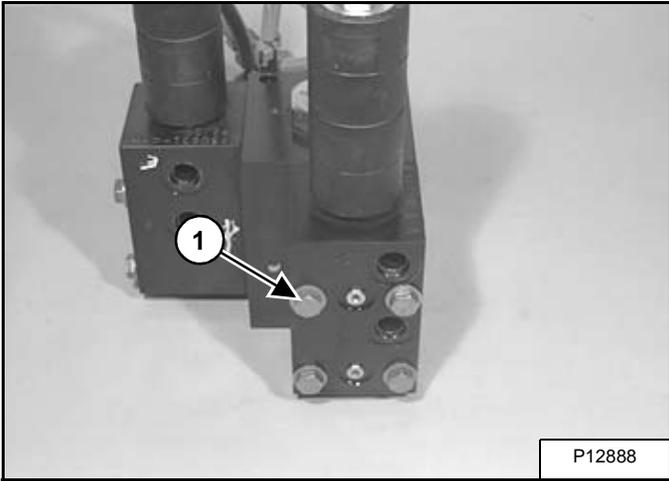


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HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW) (CONT'D)

Disassembly

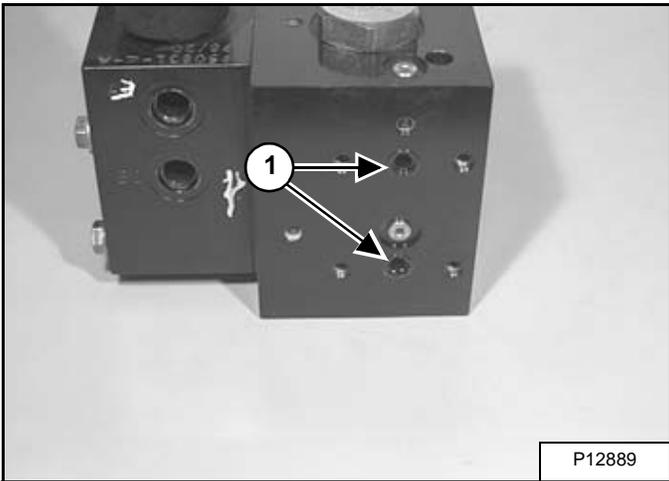
Figure 20-10-9



Remove the four bolts (Item 1) [Figure 20-10-9].

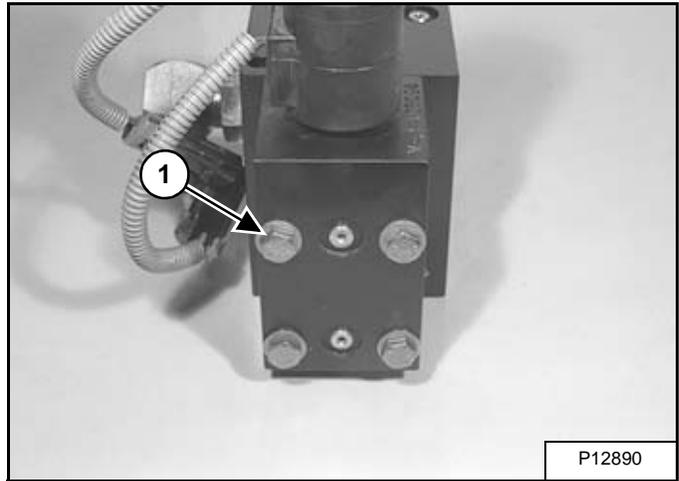
Remove the oscillation valve section.

Figure 20-10-10



Remove the O-rings (Item 1) [Figure 20-10-10].

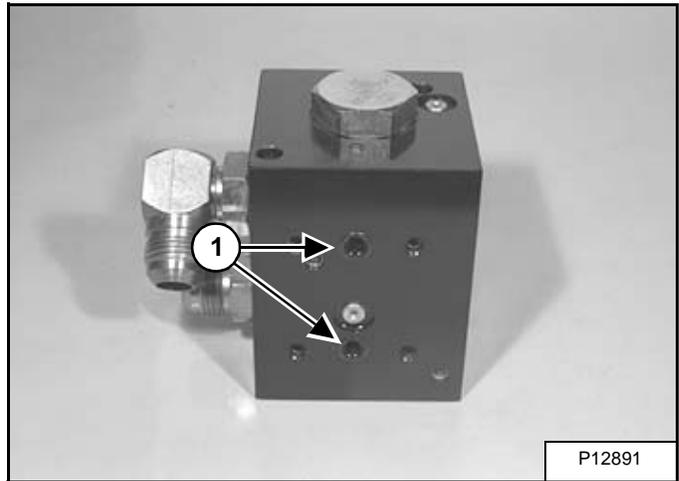
Figure 20-10-11



Remove the four bolts (Item 1) [Figure 20-10-11].

Remove the rotation valve section.

Figure 20-10-12

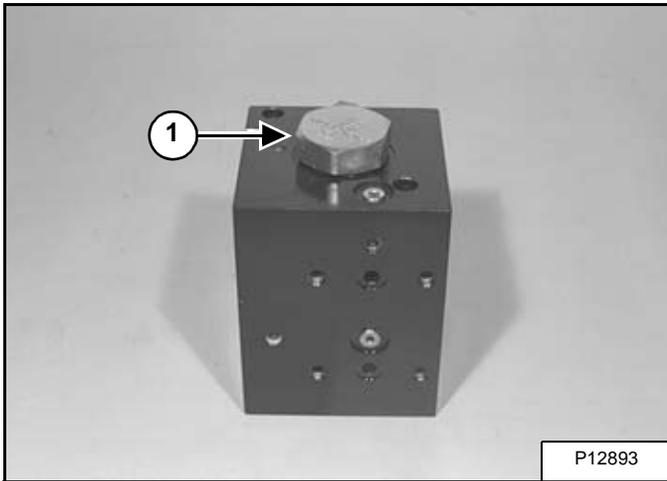


Remove the O-rings (Item 1) [Figure 20-10-12].

HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW) (CONT'D)

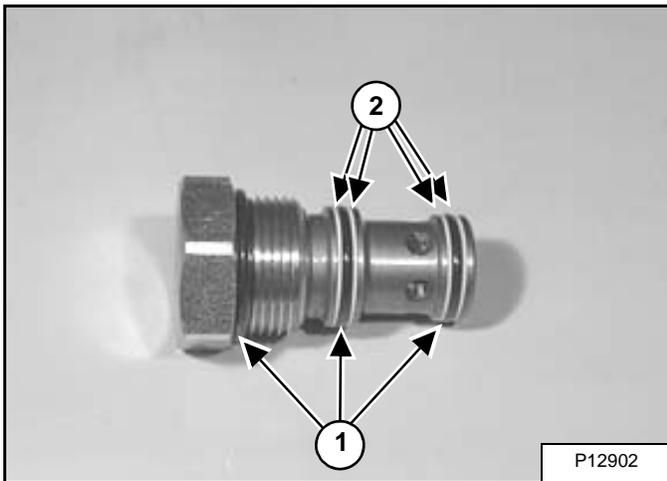
Disassembly (Cont'd)

Figure 20-10-13



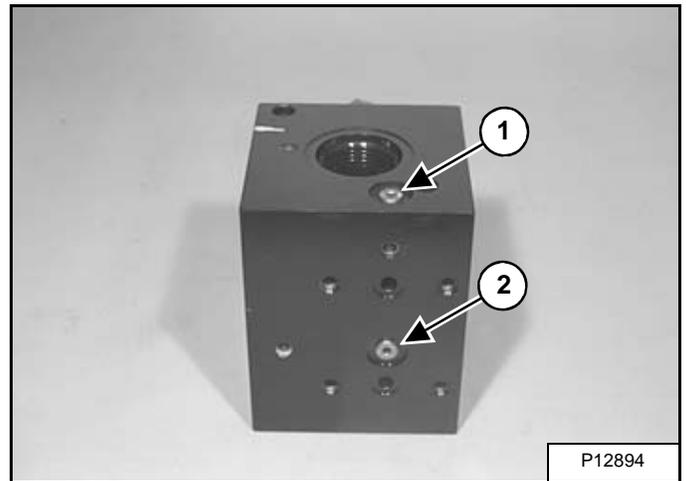
Remove the relief valve (Item 1) [Figure 20-10-13].

Figure 20-10-14



Remove the O-rings (Item 1) and back-up rings (Item 2) [Figure 20-10-14].

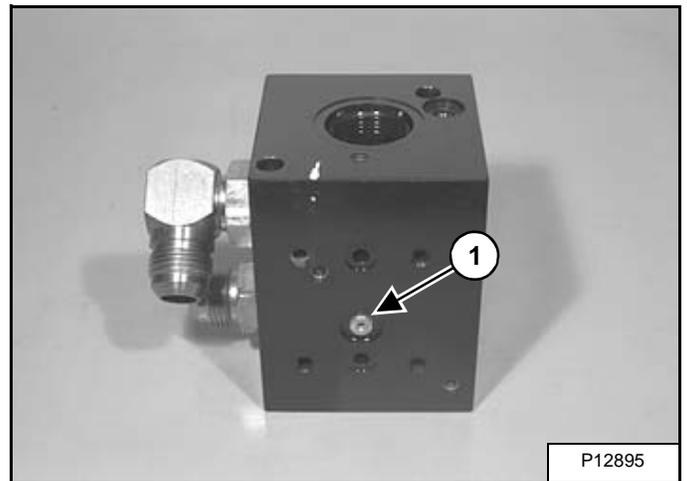
Figure 20-10-15



Remove plug (Item 1) [Figure 20-10-15] and orifice.

Remove plug (Item 2) [Figure 20-10-15] and orifice.

Figure 20-10-16

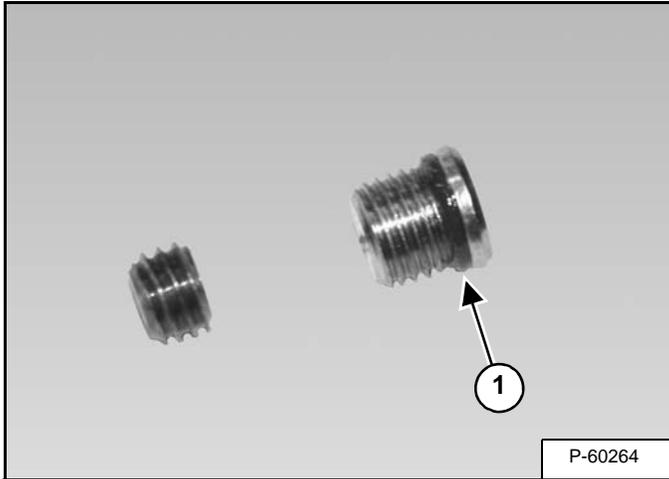


Remove the plug (Item 1) [Figure 20-10-16] and orifice.

HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW) (CONT'D)

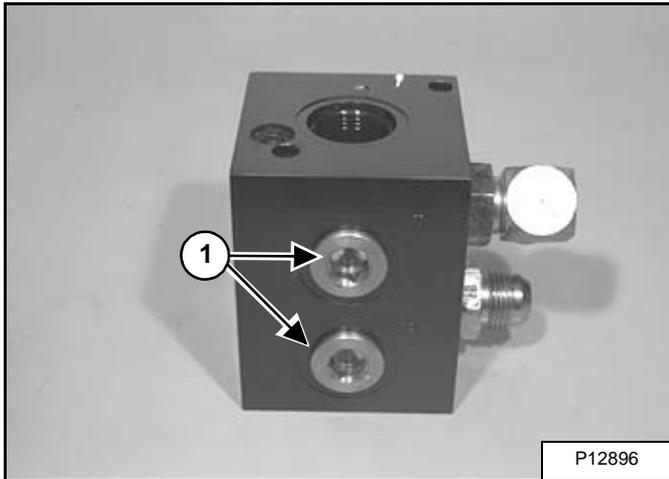
Disassembly (Cont'd)

Figure 20-10-17



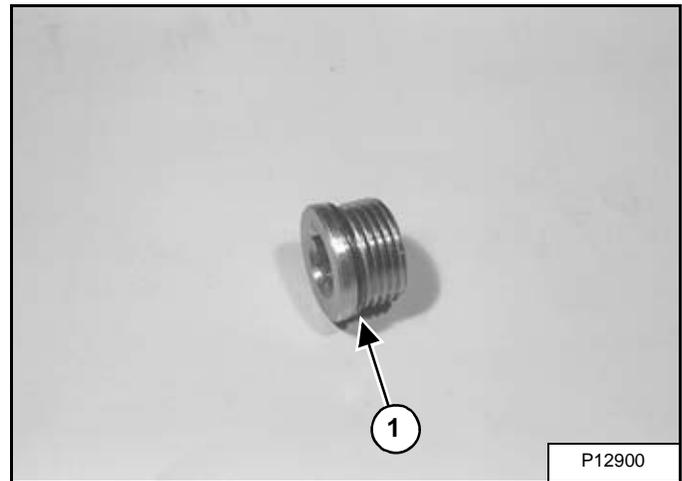
Remove the O-rings (Item 1) [Figure 20-10-17] from the three plugs.

Figure 20-10-18



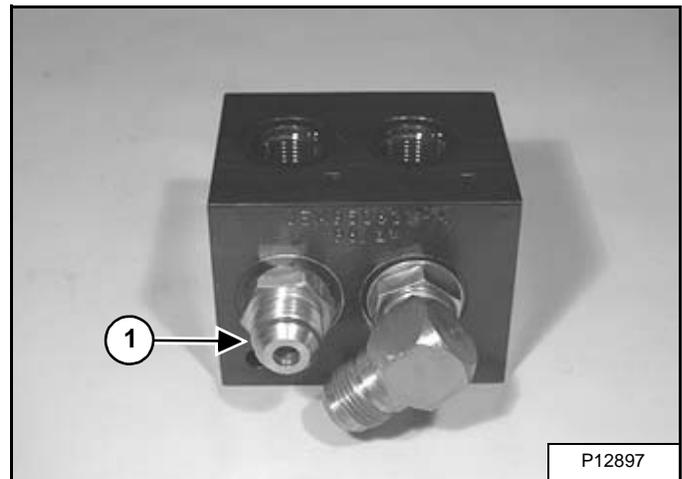
Remove the two plugs (Item 1) [Figure 20-10-18].

Figure 20-10-19



Remove the O-rings (Item 1) [Figure 20-10-19] from the two plugs.

Figure 20-10-20

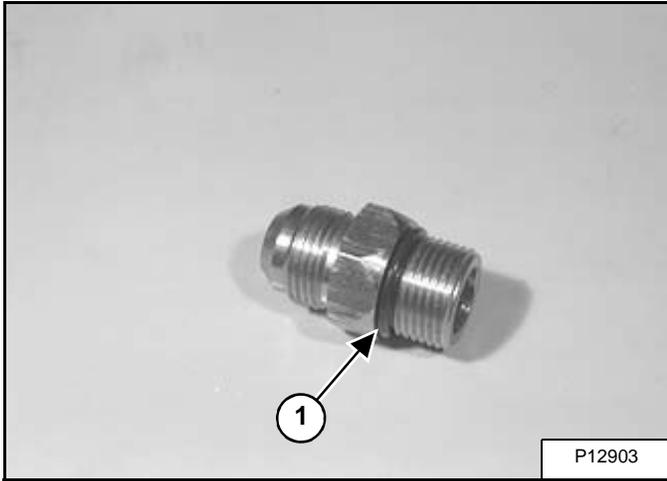


Remove the straight fitting (Item 1) [Figure 20-10-20] from the P port.

HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW) (CONT'D)

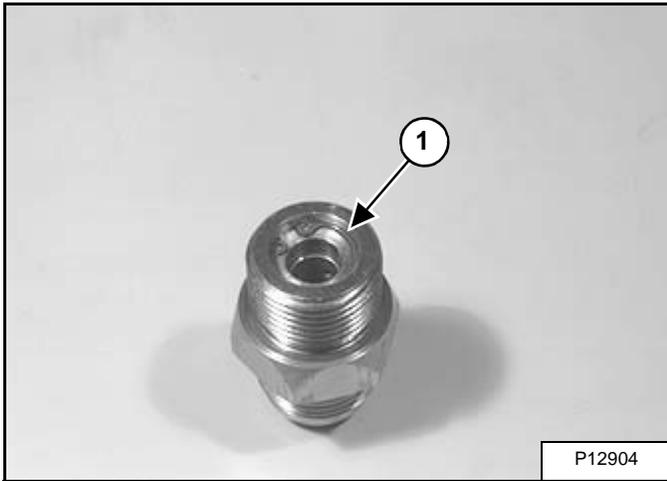
Disassembly (Cont'd)

Figure 20-10-21



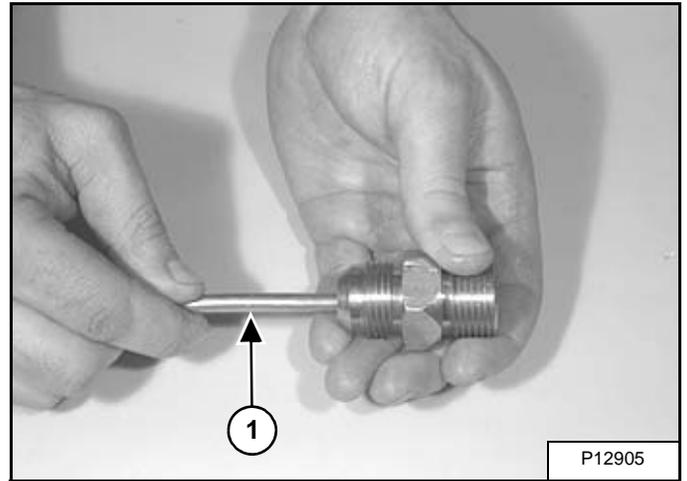
Remove the O-ring (Item 1) [Figure 20-10-21].

Figure 20-10-22



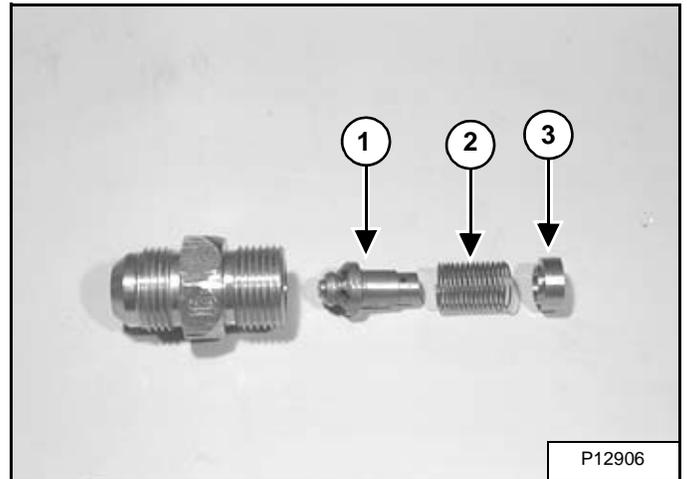
Remove the snap ring (Item 1) [Figure 20-10-22].

Figure 20-10-23



Using a brass drift (Item 1) [Figure 20-10-23] separate the fitting.

Figure 20-10-24

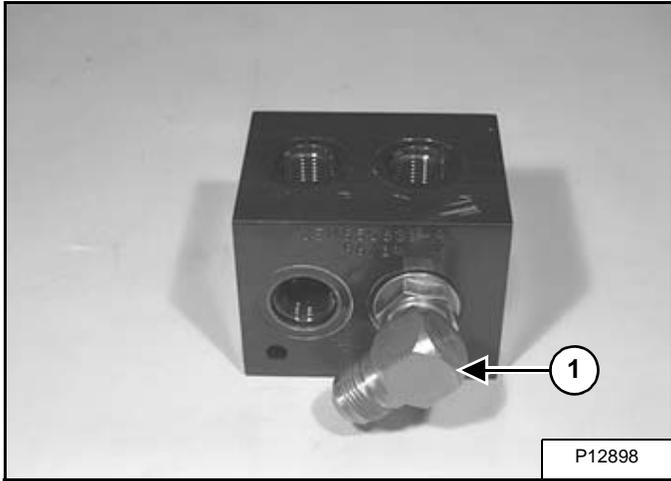


Remove the spring seat (Item 1), spring (Item 2) and poppet (Item 3) from the fitting [Figure 20-10-24].

HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW) (CONT'D)

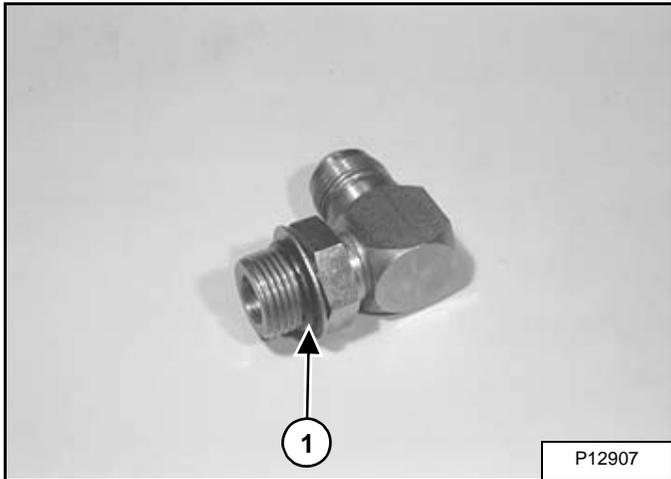
Disassembly (Cont'd)

Figure 20-10-25



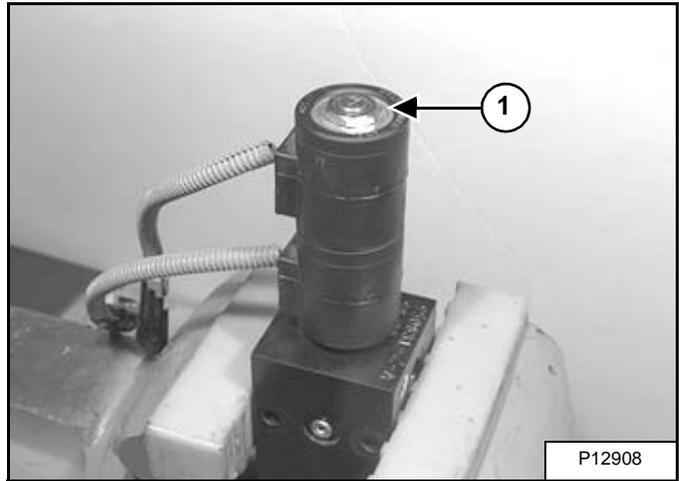
Remove the angle fitting (Item 1) [Figure 20-10-25] from the T port.

Figure 20-10-26



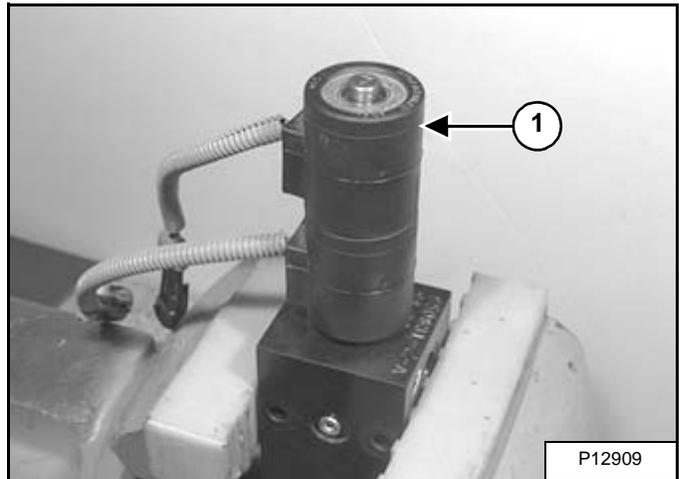
Remove the O-ring (Item 1) [Figure 20-10-26] from the fitting.

Figure 20-10-27



Remove the coil nut (Item 1) [Figure 20-10-27] from the rotation valve.

Figure 20-10-28

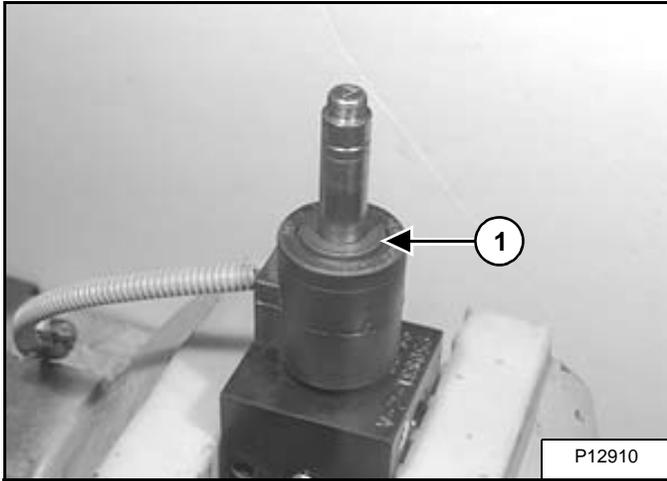


Remove the coil (Item 1) [Figure 20-10-28].

HYDRAULIC CONTROL VALVE (S/N 224300152 & BELOW, S/N 699100101 & ABOVE, S/N 232112994 & BELOW, S/N 223100101 & ABOVE, S/N 231912339 & BELOW) (CONT'D)

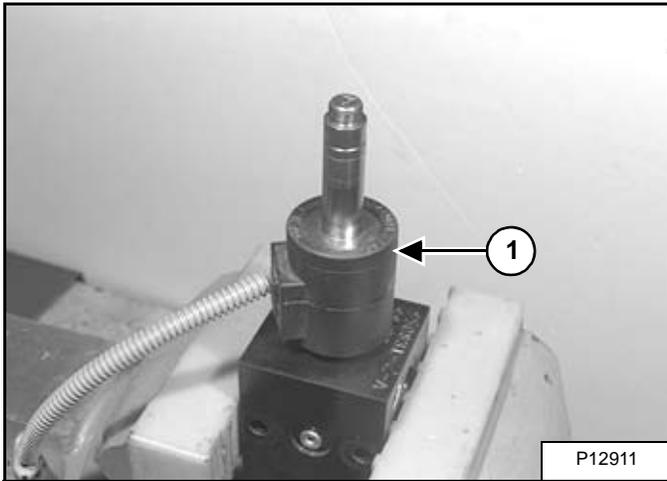
Disassembly (Cont'd)

Figure 20-10-29



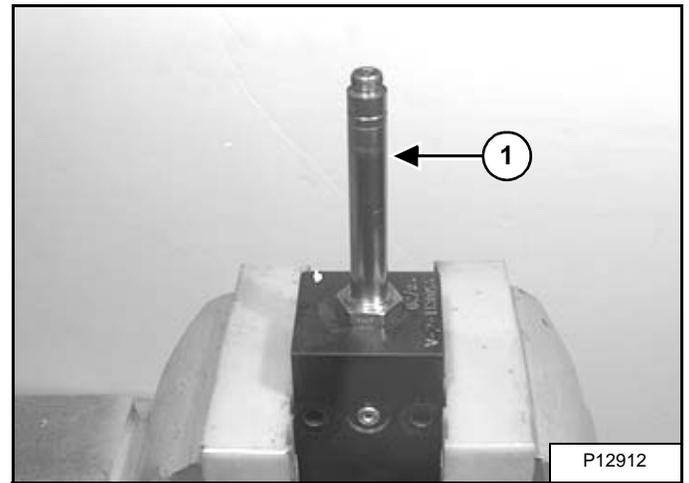
Remove the spacer (Item 1) [Figure 20-10-29].

Figure 20-10-30



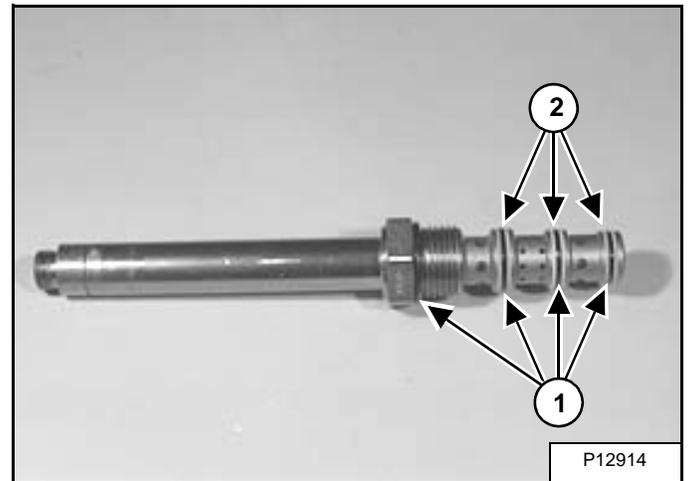
Remove the coil (Item 1) [Figure 20-10-30].

Figure 20-10-31



Remove the spool (Item 1) [Figure 20-10-31].

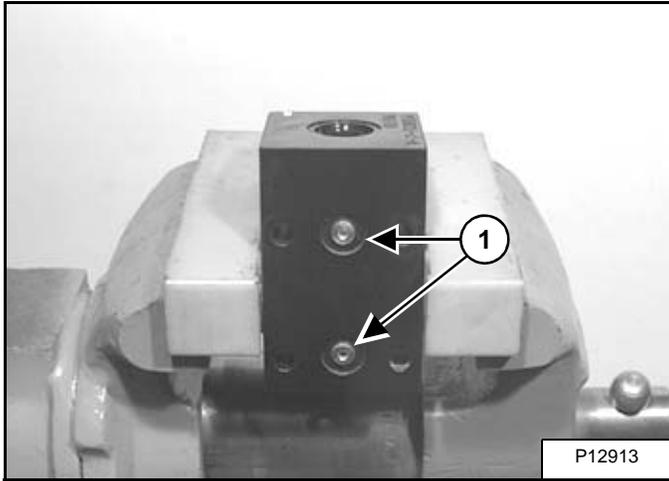
Figure 20-10-32



Remove the O-rings (Item 1) and back-up rings (Item 2) from the spool [Figure 20-10-32].

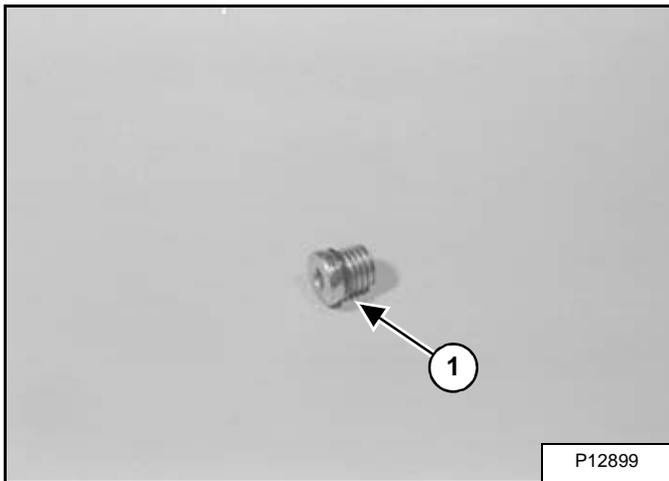
Disassembly (Cont'd)

Figure 20-10-33



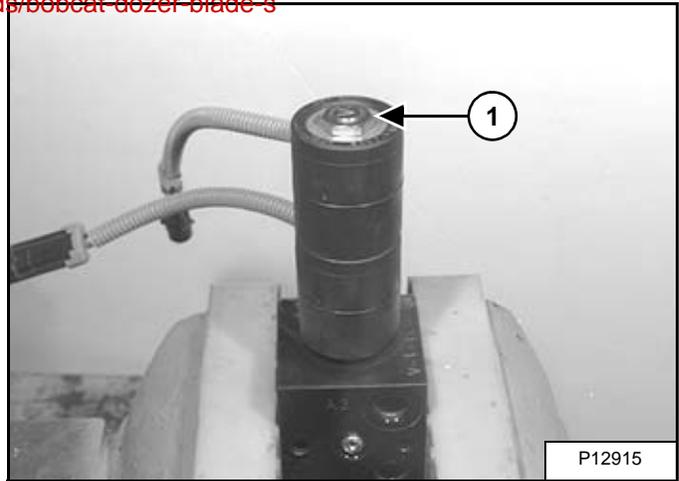
Remove the two plugs (Item 1) [Figure 20-10-33].

Figure 20-10-34



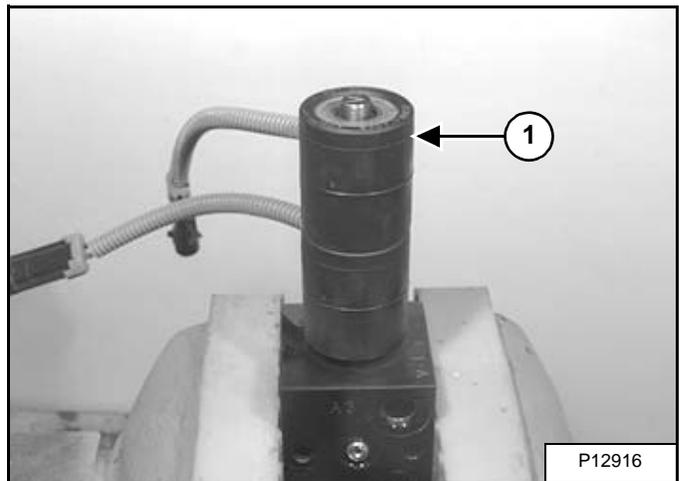
Remove the O-rings (Item 1) [Figure 20-10-34] from the two plugs.

Figure 20-10-35



Remove the coil nut (Item 1) [Figure 20-10-35] from the oscillation valve.

Figure 20-10-36



Remove the coil (Item 1) [Figure 20-10-36].