

Product: Bobcat Angle Broom Service Repair Workshop Manual

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Bobcat®

Service Manual Angle Broom

S/N 068700101 & Above

S/N 797301001 & Above

S/N 690100101 & Above

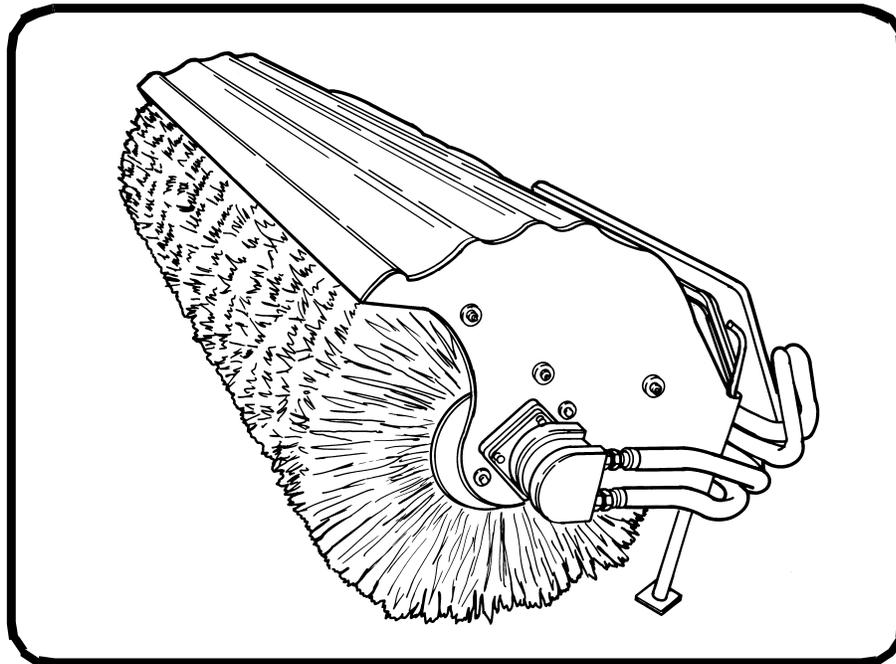
S/N 055000101 & Above

S/N 231000101 & Above

S/N 231311101 & Above

S/N 231411101 & Above

S/N 700000101 & Above



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MAINTENANCE SAFETY



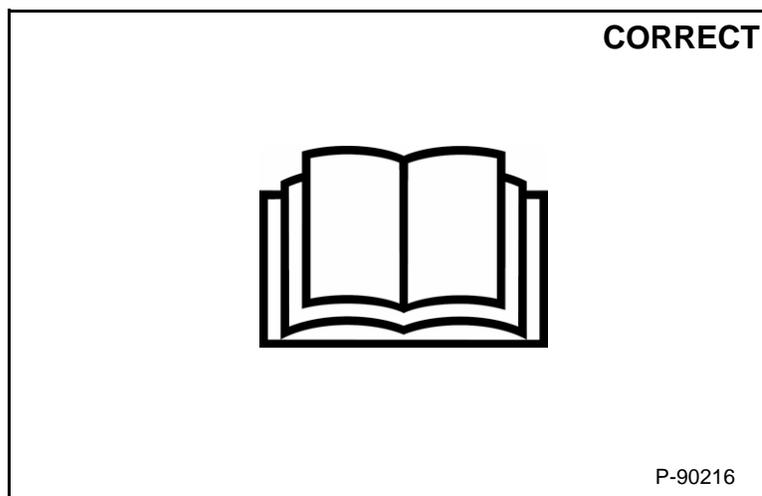
WARNING

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-2003-0807



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 / implements without instructions. See Operation & Maintenance Manual and Attachment / Implement Service Manual.
-  Cleaning and maintenance are required daily.
-  Never service or adjust attachment / implement with the engine running unless instructed to do so in manual.
-  Always lower the attachment / implement 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.

MSW30-0409



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SERIAL NUMBER LOCATION

Figure 1

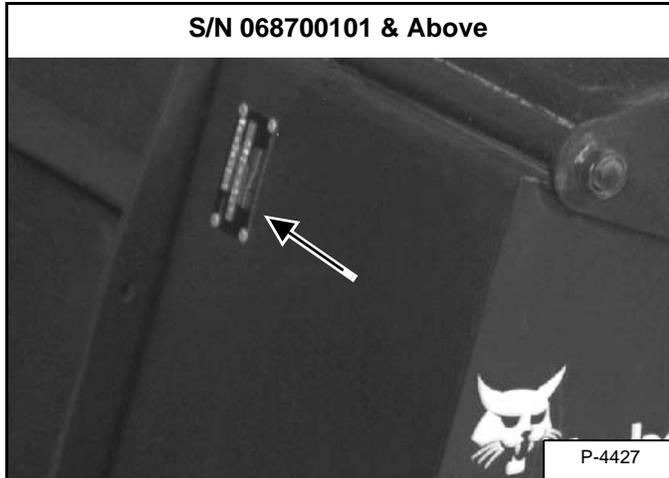


Figure 2

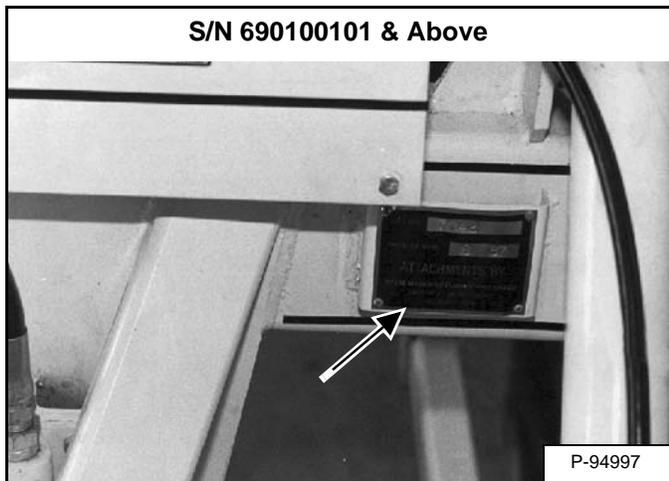
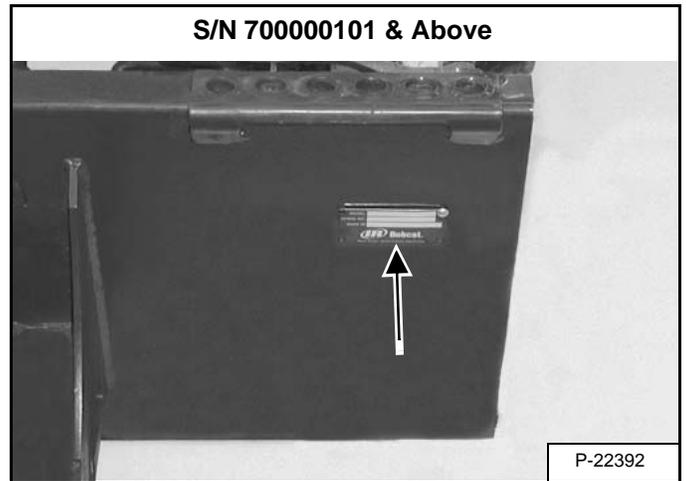


Figure 3



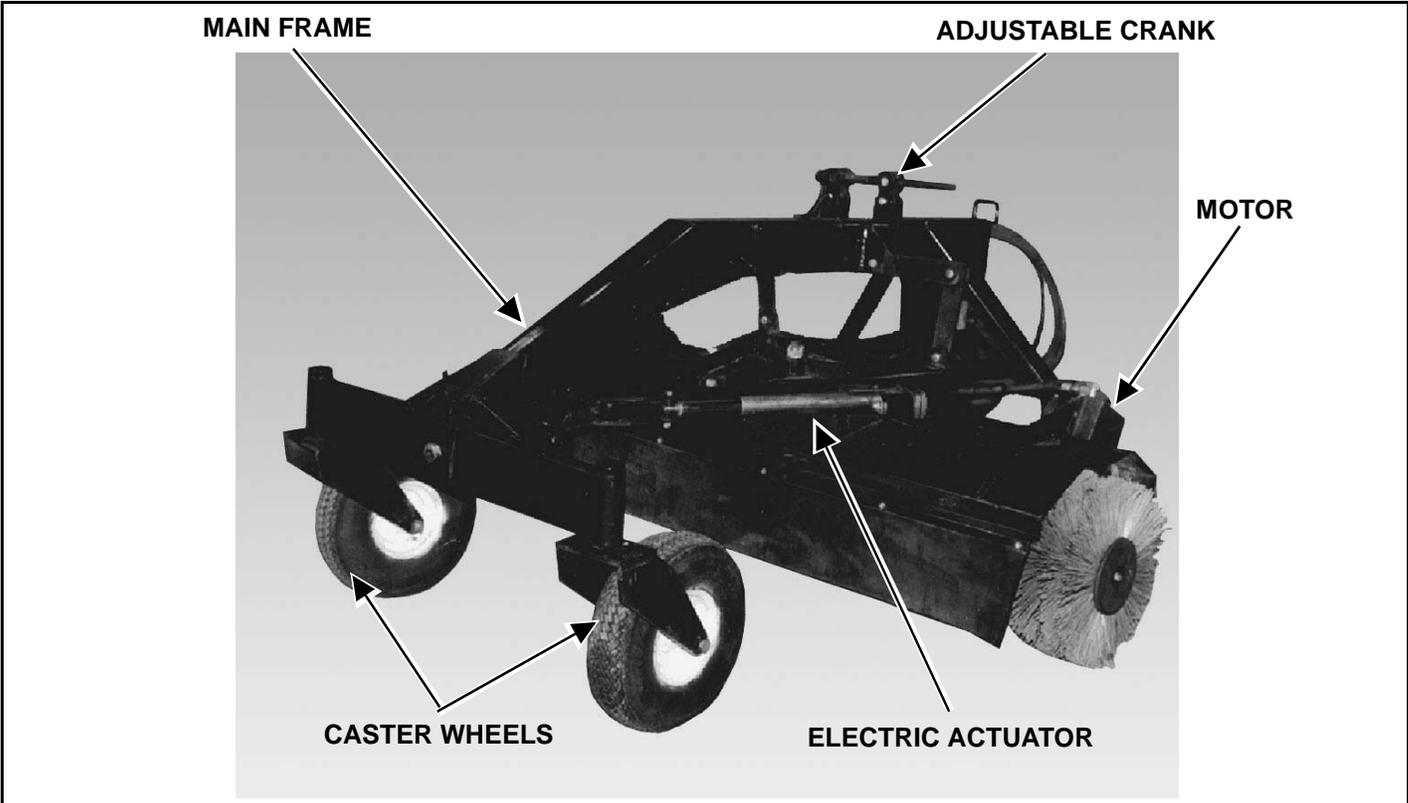
Figure 4



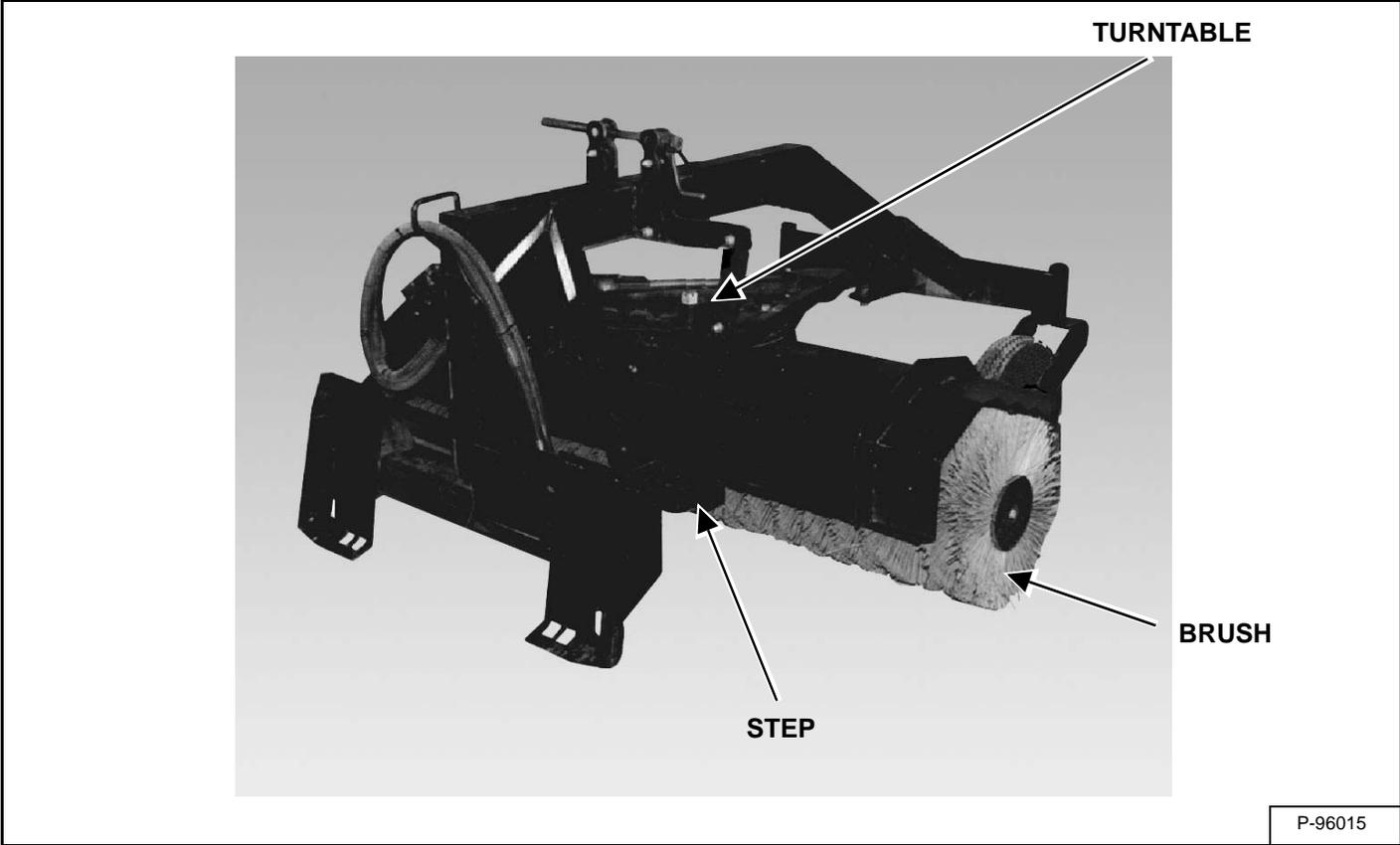
Always use the serial number of the machine when requesting service information or when ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing a specific service operation [Figure 1], [Figure 2], [Figure 3] and [Figure 4].

ATTACHMENT IDENTIFICATION

(S/N 068700101 & Above)



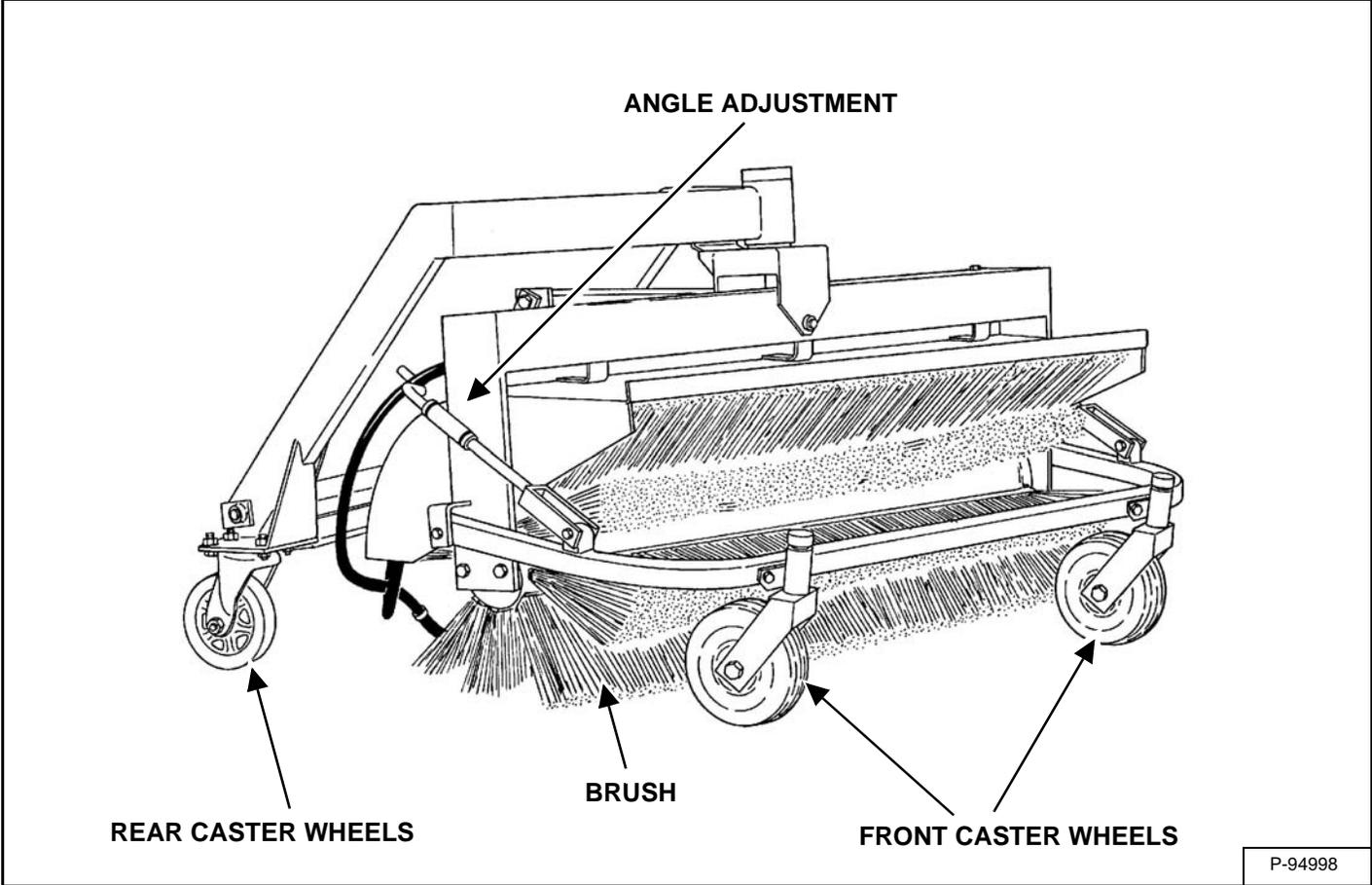
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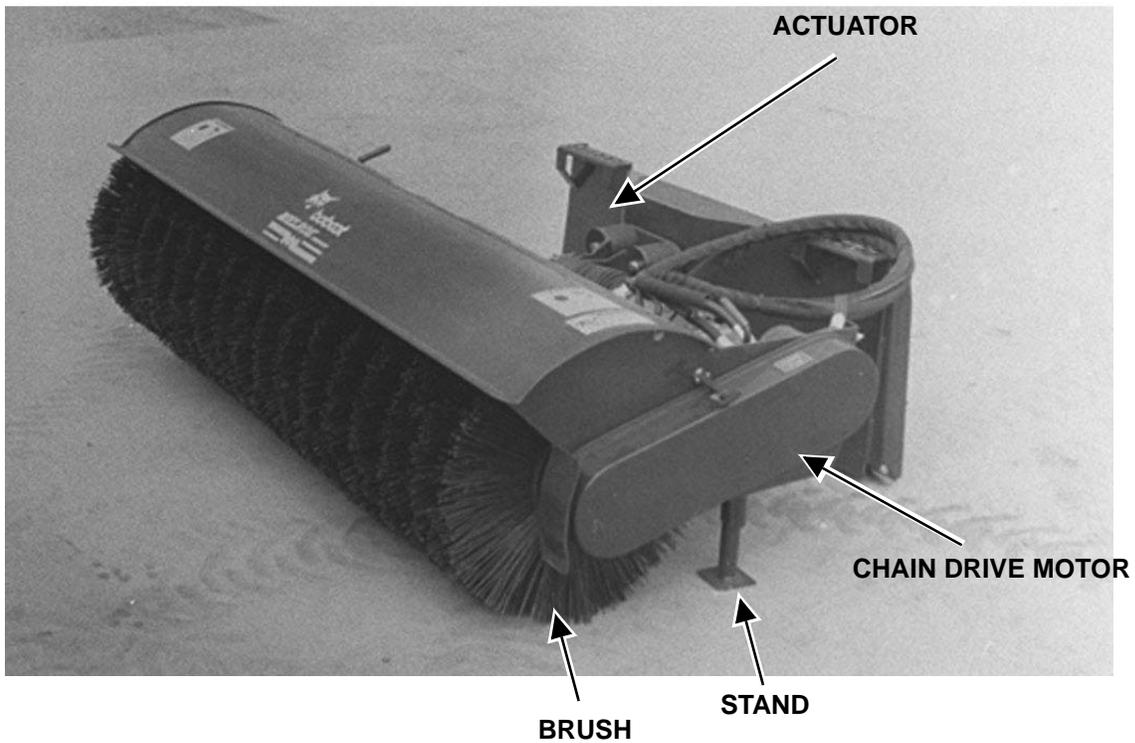
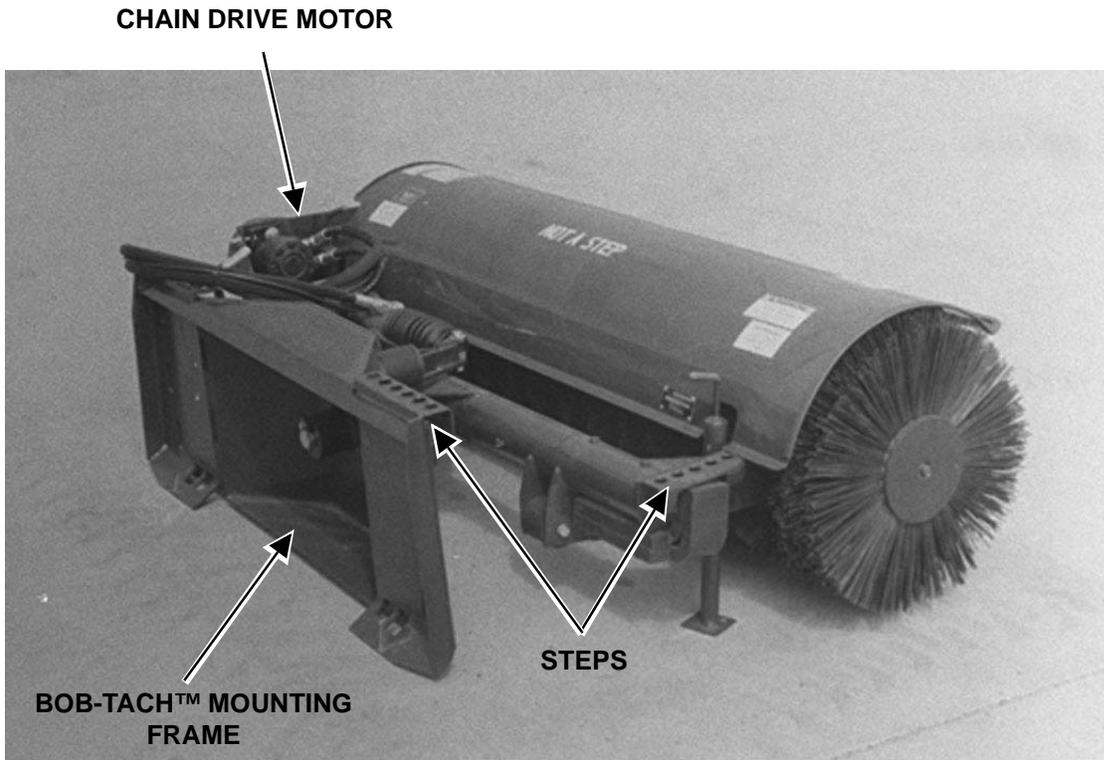
ATTACHMENT IDENTIFICATION (CONT'D)

(S/N 797301001 & Above)



ATTACHMENT IDENTIFICATION (CONT'D)

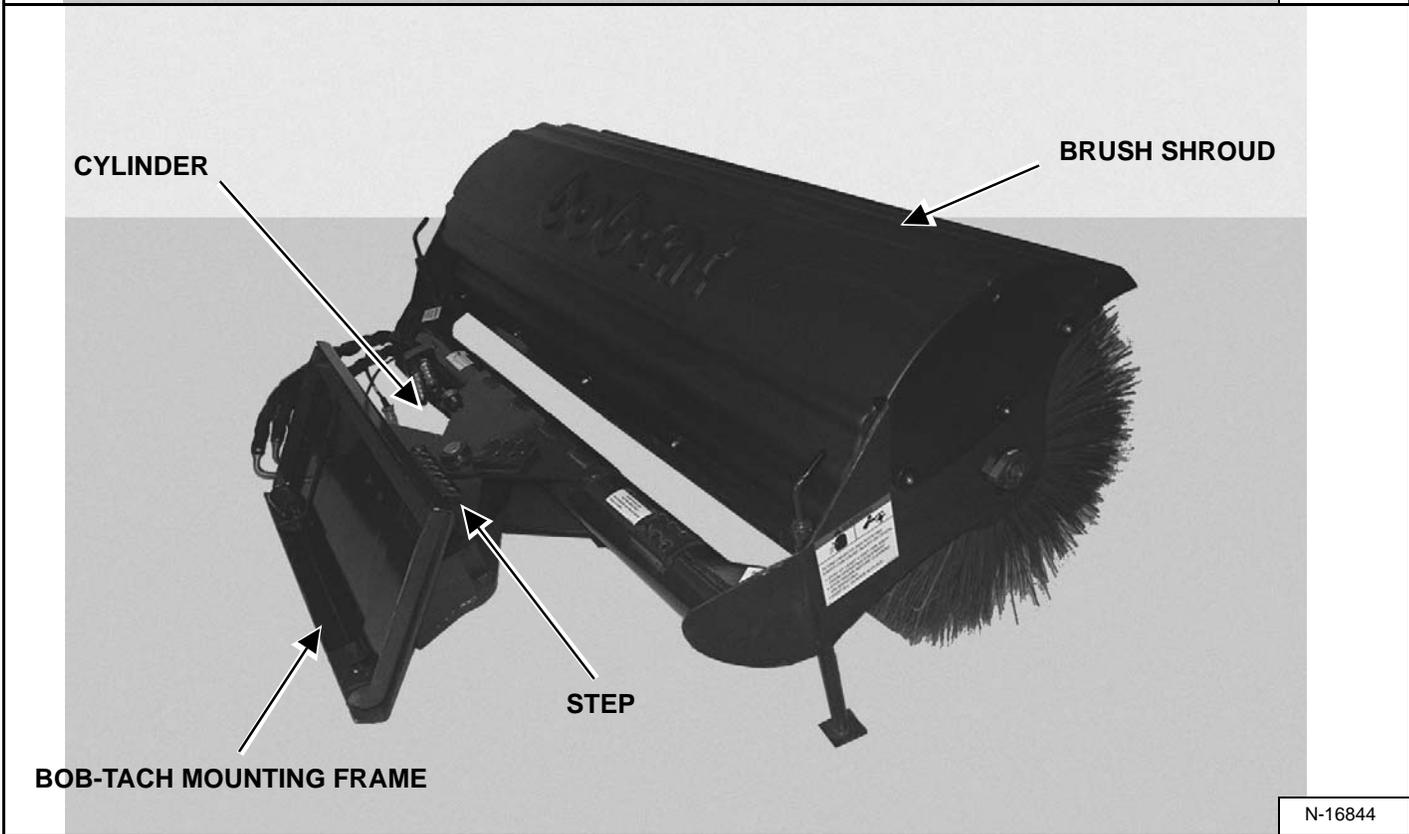
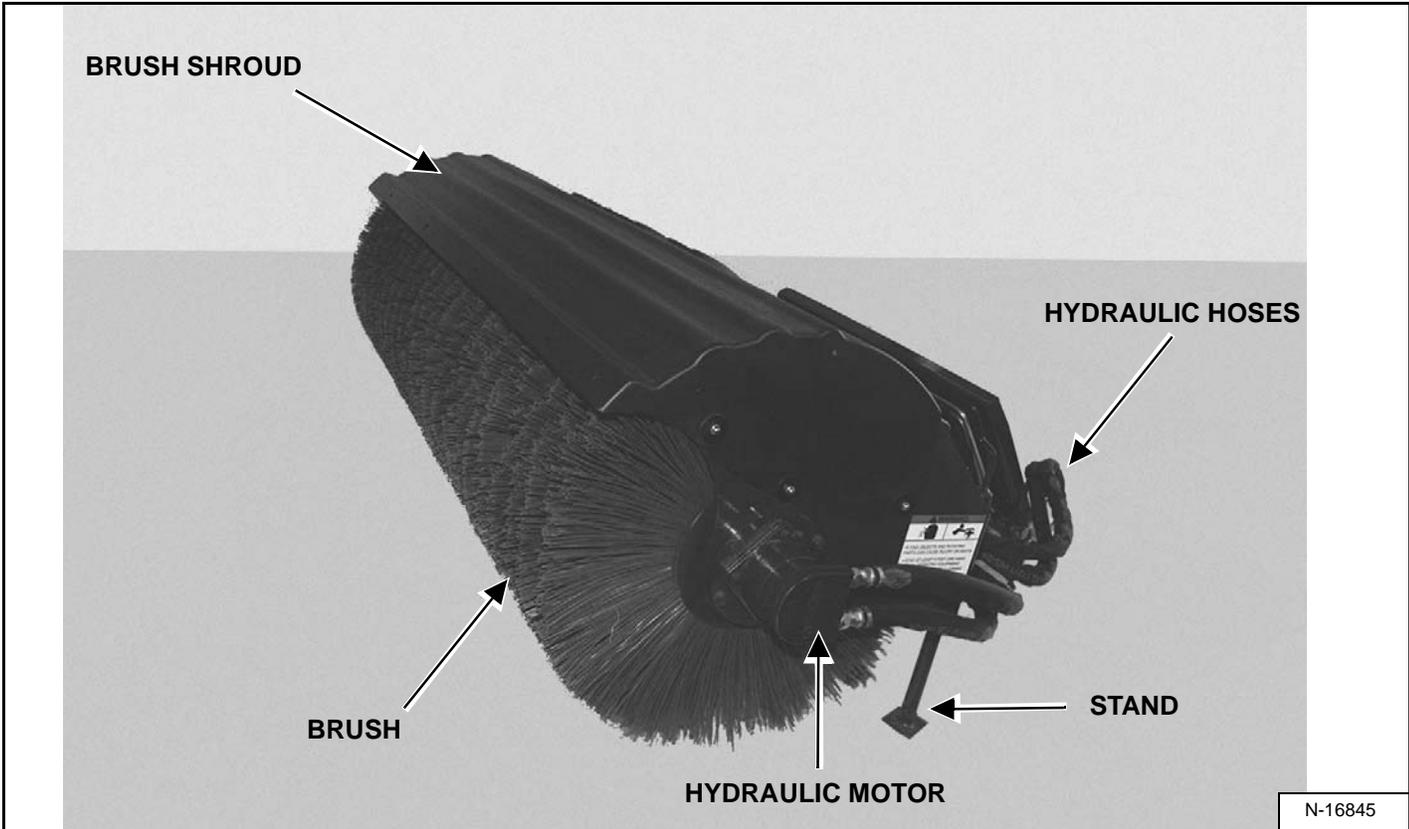
(S/N 690100101 & Above)



P-94999

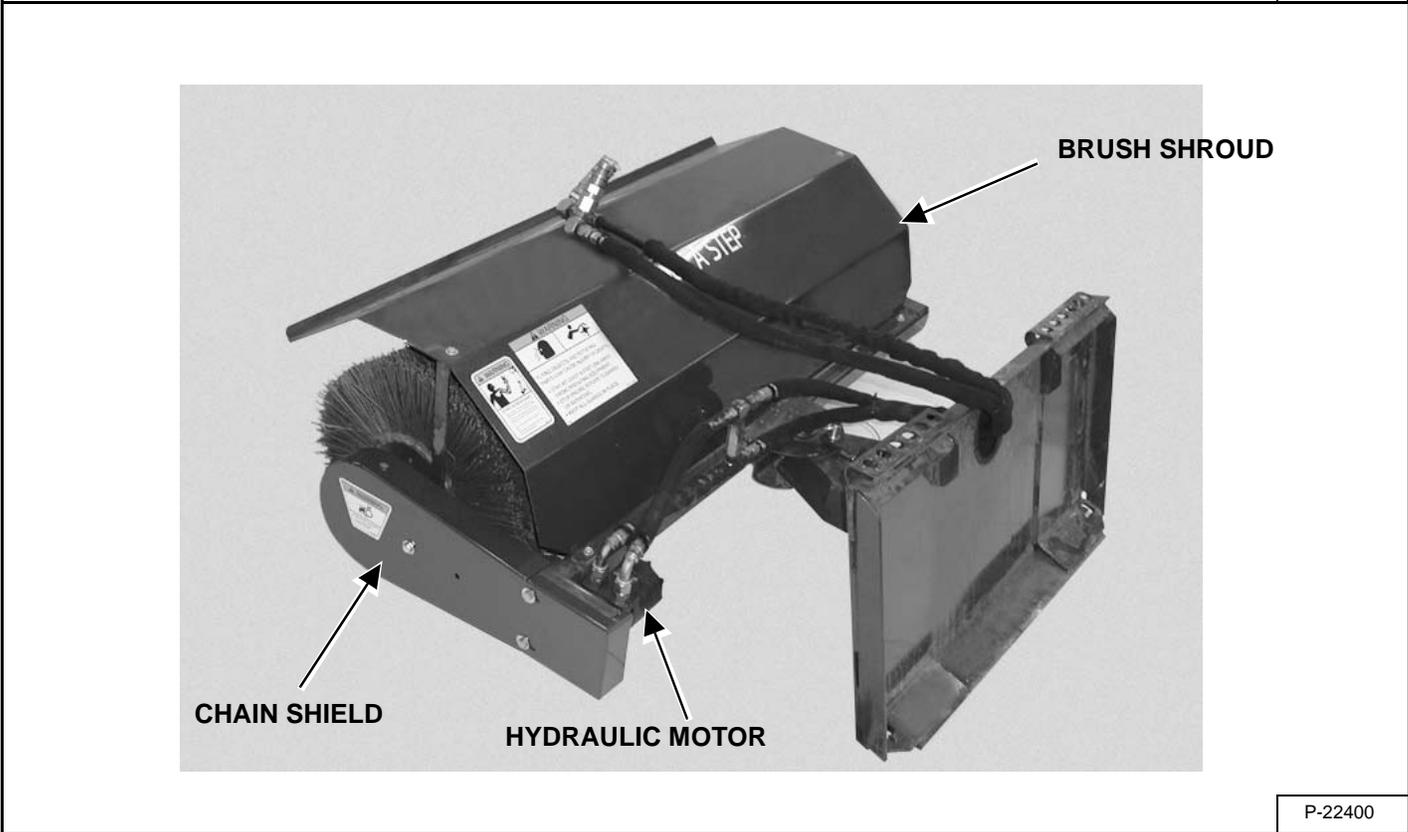
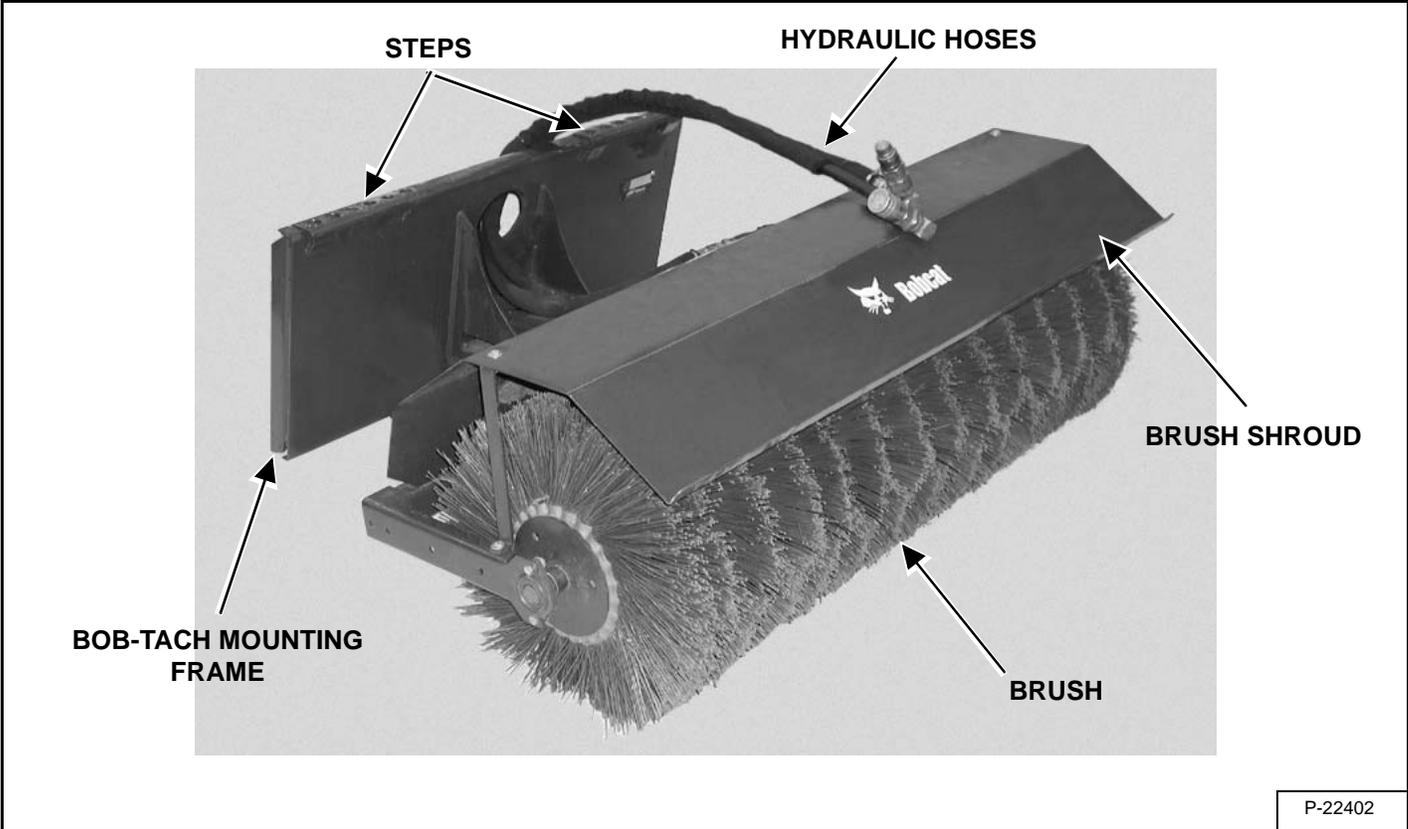
ATTACHMENT IDENTIFICATION (CONT'D)

(S/N 055000101 & Above), (S/N 231000101 & Above), (S/N 231311101 & Above) And (S/N 231411101 & Above)



ATTACHMENT IDENTIFICATION (CONT'D)

(S/N 700000101 & Above)



SAFETY & MAINTENANCE

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LUBRICATION

Always use a good quality lithium base multipurpose grease when lubricating the angle broom. Apply the lubricant until extra grease shows.

IMPORTANT

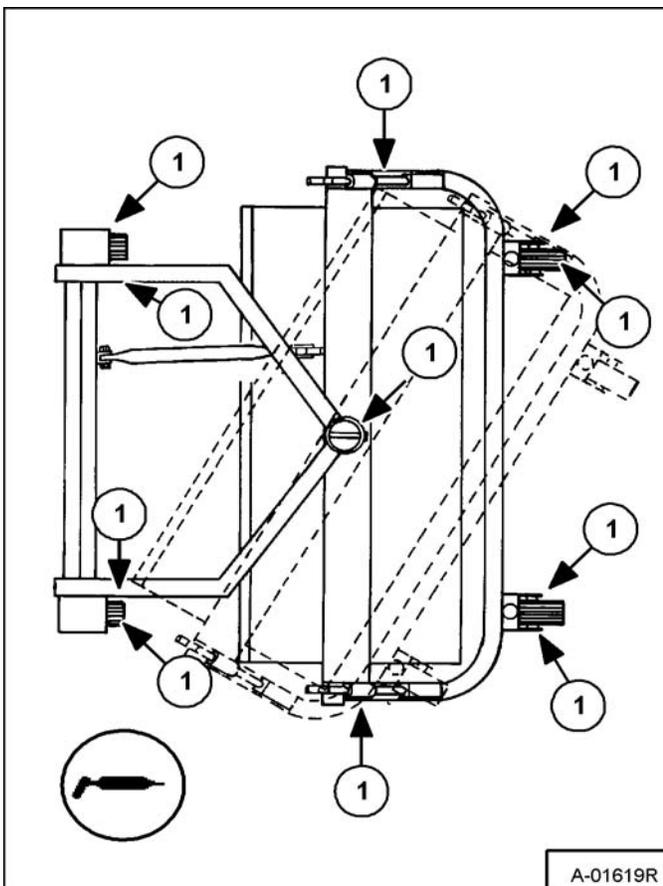
Fluid such as engine oil, hydraulic fluid, coolants, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.

I-2067-0499

Lubrication Points (S/N 797301001 & Above)

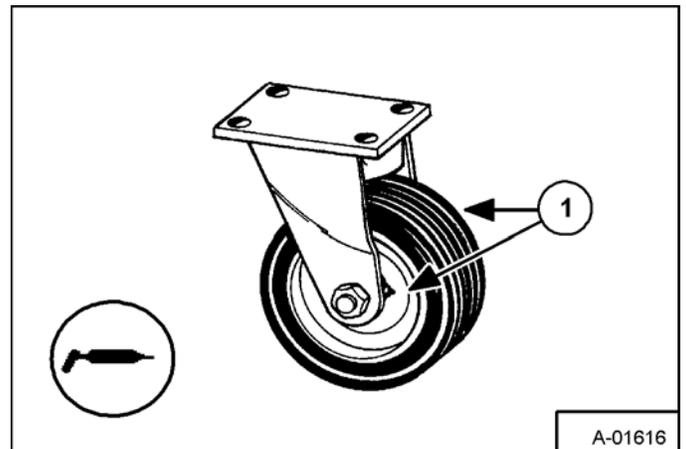
Lubricate the following grease fittings **EVERY 7 - 10 HOURS**:

Figure 10-10-1



There are eleven grease fittings (Item 1) [Figure 10-10-1].

Figure 10-10-2



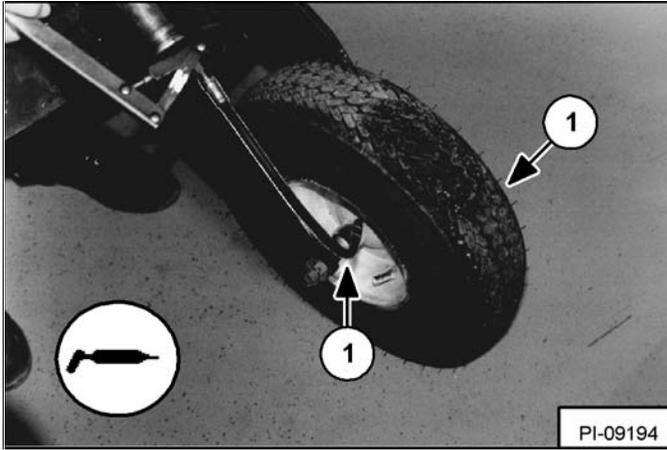
The rear caster wheels each have two fittings (Item 1) [Figure 10-10-2]. The height adjustment cranks need only occasional lubrication.

LUBRICATION (CONT'D)

Lubrication Points (S/N 068700101 & Above)

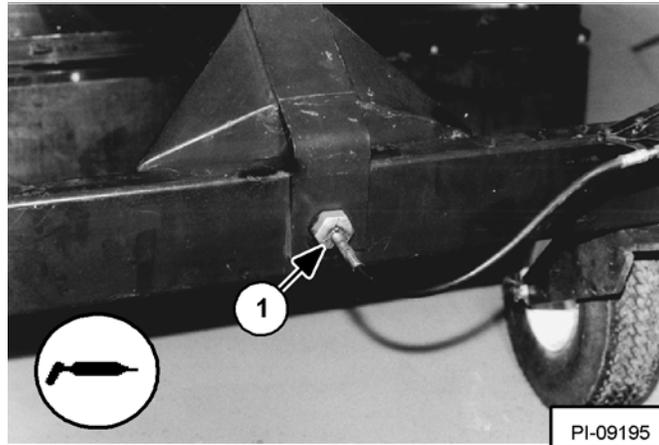
Lubricate the following grease fittings **EVERY 8 - 10 HOURS**:

Figure 10-10-3



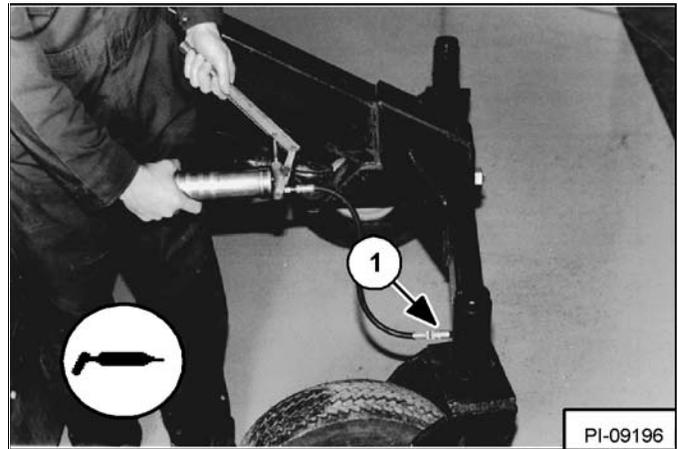
The front wheel bushings (2 fittings) (Item 1) [Figure 10-10-3].

Figure 10-10-4



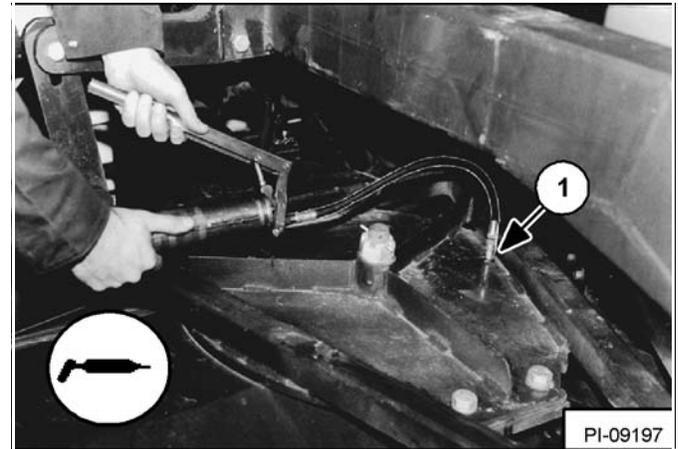
The bolster (1 fitting) (Item 1) [Figure 10-10-4].

Figure 10-10-5



The caster pivots (2 fittings) (Item 1) [Figure 10-10-5].

Figure 10-10-6

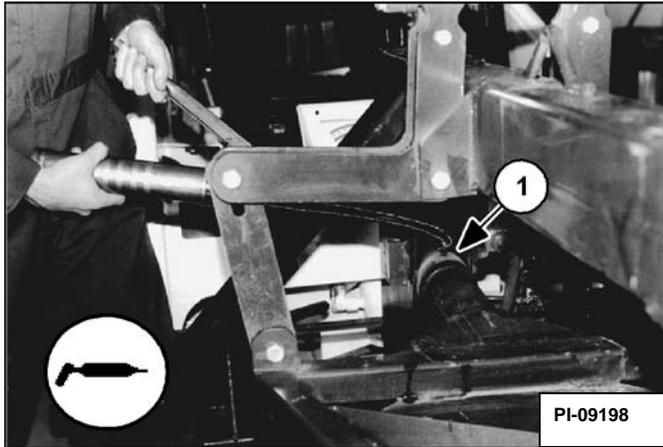


The angle pivot (2 fittings) (Item 1) [Figure 10-10-6].

LUBRICATION (CONT'D)

Lubrication Points (S/N 068700101 & Above) (Cont'd)

Figure 10-10-7

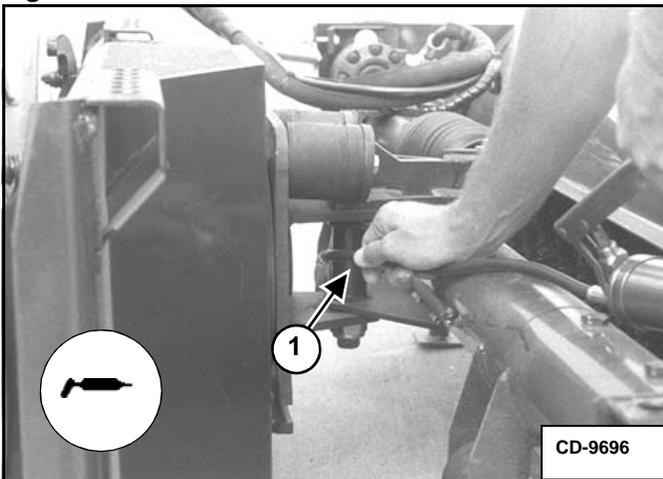


The rear broom pivot (1 fitting) (Item 1) [Figure 10-10-7].

Lubrication Points (S/N 690100101 & Above)

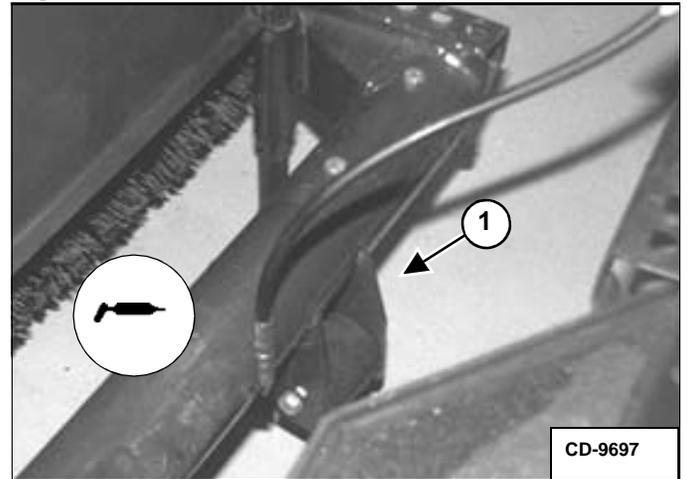
Lubricate the following grease fittings **EVERY 20 HOURS:**

Figure 10-10-8



The broom pivot (1 fitting) (Item 1) [Figure 10-10-8].

Figure 10-10-9



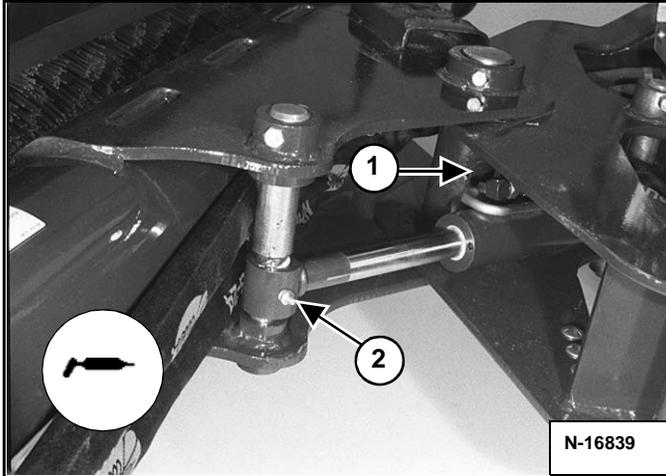
The oscillating pivots (2 fittings) (Item 1) [Figure 10-10-9].

LUBRICATION (CONT'D)

Lubrication Points (S/N 055000101 & Above, S/N 231000101 & Above, S/N 231311101 & Above And S/N 231411101 & Above)

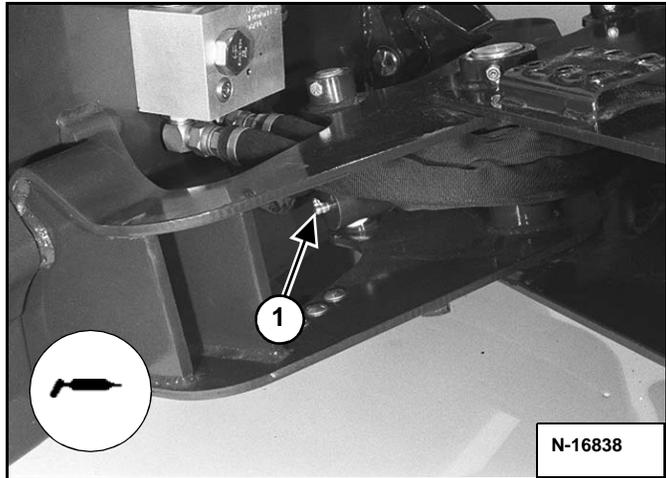
Lubricate the following grease fittings **EVERY 20 HOURS:**

Figure 10-10-10



1. Broom Pivot (Item 1) [Figure 10-10-10].
2. Cylinder Rod End (Item 2) [Figure 10-10-10].

Figure 10-10-11

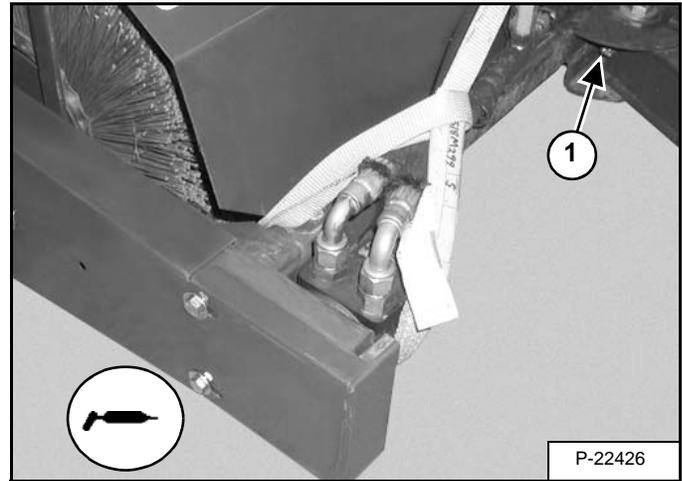


3. Cylinder Base End (Item 1) [Figure 10-10-11].

Lubrication Points (S/N 700000101 & Above)

Lubricate the following grease fitting **EVERY 200 HOURS:**

Figure 10-10-12



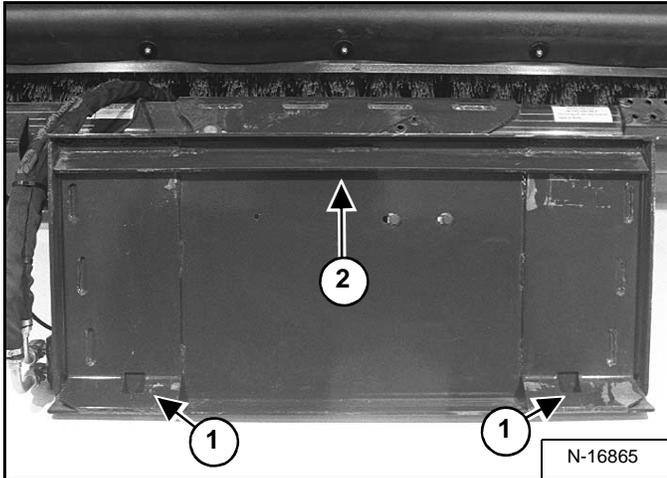
1. Broom Pivot Bushing (Item 1) [Figure 10-10-12].

DAILY INSPECTION

Attachment Mounting Frame

Broom Mount Inspection

Figure 10-20-1



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

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

Bob-Tach

Hand Lever Bob-Tach

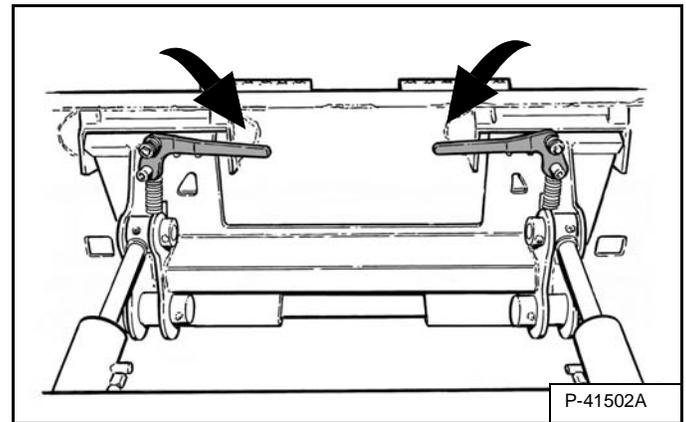
WARNING

AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

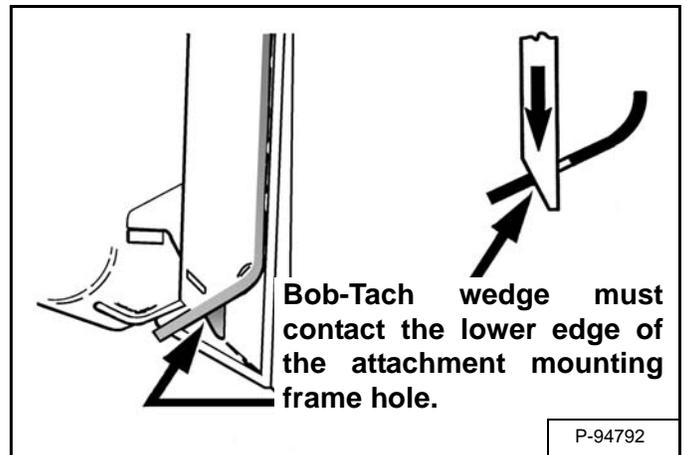
Figure 10-20-2



Push down on the Bob-Tach levers until they are fully engaged in the locked position [Figure 10-20-2] (wedges fully extended through the attachment mounting frame holes).

The levers and wedges must move freely [Figure 10-20-2].

Figure 10-20-3



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 10-20-3].

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

Inspect the mounting frame on the attachment. (See the machine's Operation and Maintenance Manual for inspecting the Bob-Tach). 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 machine's Operation & Maintenance Manual for the correct procedure.)

DAILY INSPECTION (CONT'D)

Bob-Tach (Cont'd)

Power Bob-Tach

! WARNING

AVOID INJURY OR DEATH

The Bob-Tach wedges must extend through the holes in the attachment mounting frame. Levers must be fully down and locked. Failure to secure wedges can allow attachment to come off.

W-2715-0208

Figure 10-20-4

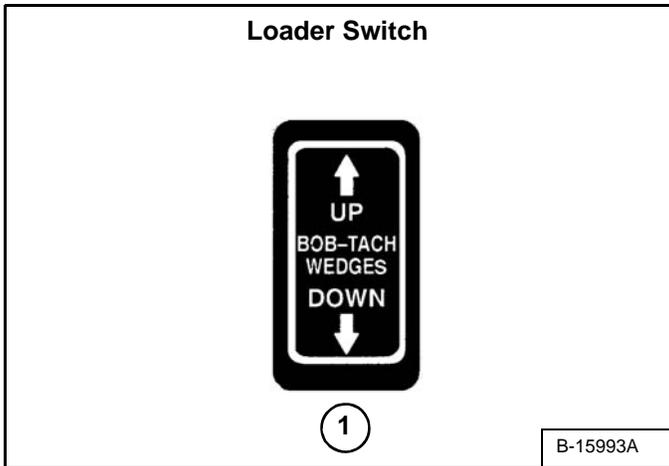


Figure 10-20-5

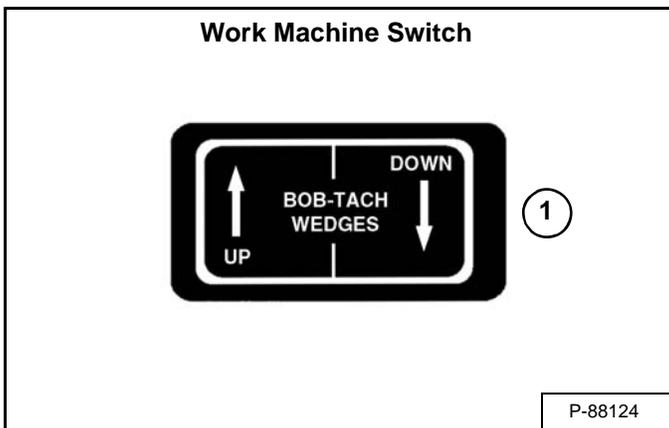
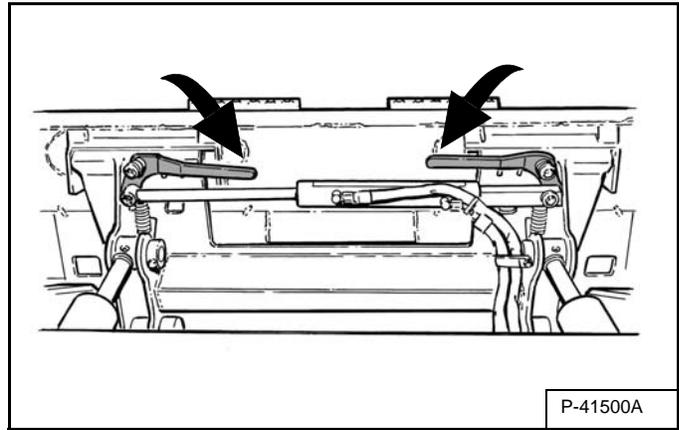
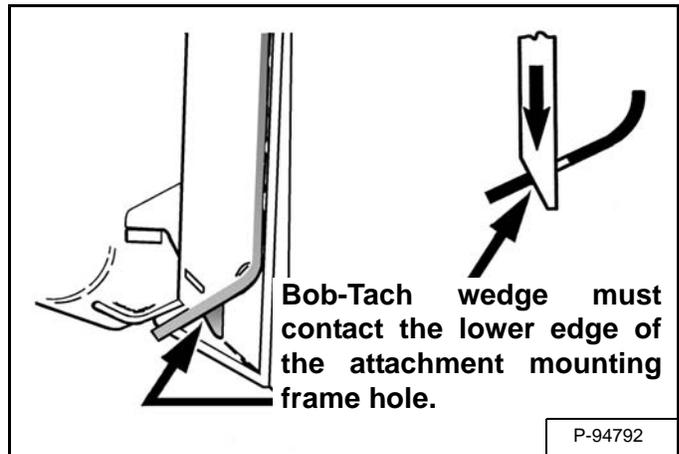


Figure 10-20-6



Push and hold the BOB-TACH “WEDGES DOWN” switch (Item 1) [Figure 10-20-4] or [Figure 10-20-5] until the levers are fully engaged in the locked position [Figure 10-20-6] (wedges fully extended through the attachment mounting frame holes).

Figure 10-20-7



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 10-20-7].

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

Inspect the mounting frame on the attachment. (See the machine's Operation and Maintenance Manual for inspecting the Bob-Tach). 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 machine's Operation & Maintenance Manual for the correct procedure.)

TROUBLESHOOTING

Chart

 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

If the attachment is not working correctly, check the hydraulic system of the machine thoroughly before making any repairs on the attachment. Attachment problems can be affected by a hydraulic system that is not operating to specifications. Connect a flow meter to the machine to check the hydraulic pump output, relief valve setting and tube lines to check flow and pressure. (See the machine's 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 attachment.

TROUBLESHOOTING THE ANGLE BROOM		
PROBLEM	CAUSE	CORRECTION
Broom will not rotate.	Auxiliary hydraulic lever not engaged.	Engage auxiliary hydraulic lever.
	Broken drive chain.	Repair/replace chain.
Broom bristles wear quickly.	Too much down pressure being applied to the broom.	Use the correct amount of down pressure needed for the conditions present.
Broom operation not effective.	Broom bristles worn to minimum length.	Replace broom bristle sections.



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HYDRAULIC SYSTEM

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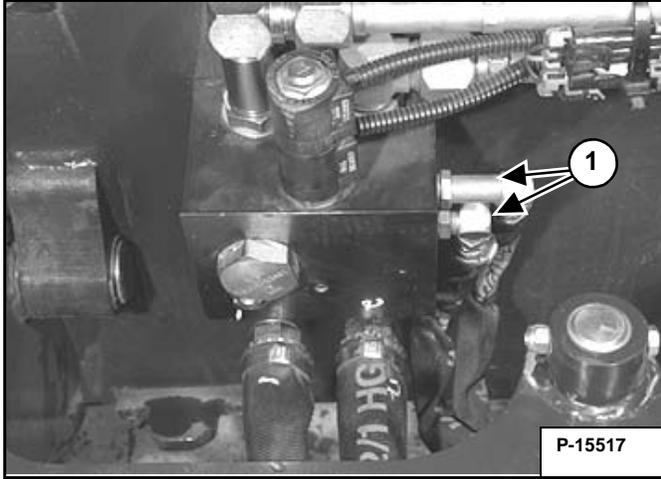
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Parts Identification	20-36-2
Disassembly	20-36-3
Assembly	20-36-9

**HYDRAULIC CYLINDER (S/N 055000101 & ABOVE),
(S/N 231000101 & ABOVE), (S/N 231311101 & ABOVE)
AND (S/N 231411101 & ABOVE)**

Removal And Installation

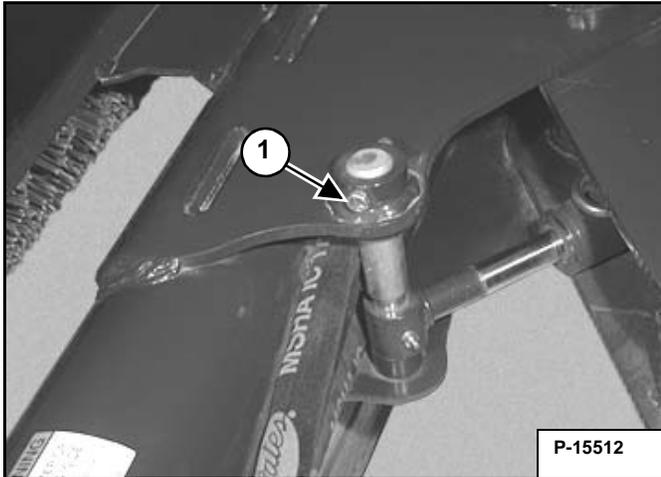
Remove the mounting frame pivot springs.

Figure 20-10-1



Mark and remove the hoses (Item 1) [Figure 20-10-1] at the control valve.

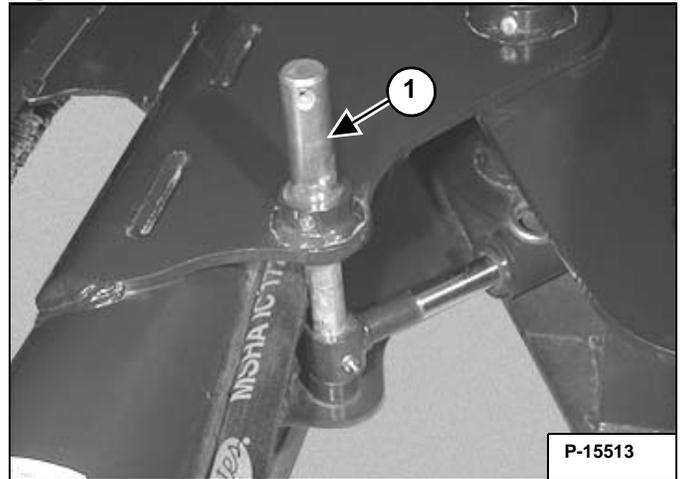
Figure 20-10-2



Remove the retaining bolt and nut (Item 1) [Figure 20-10-2].

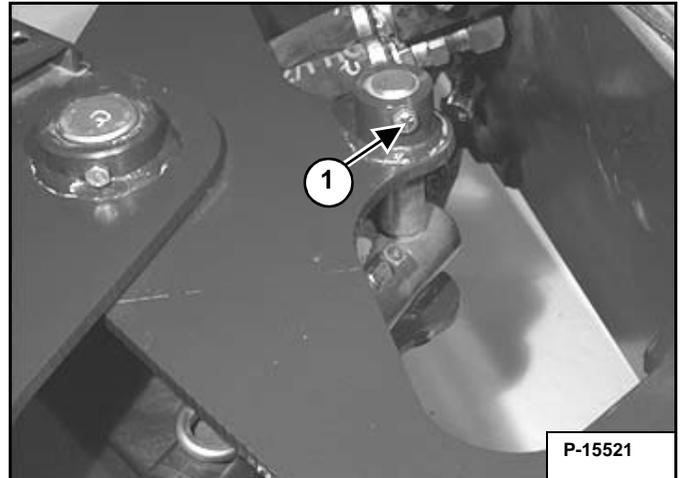
Installation: Tighten the bolt to 34 - 38 N•m (25 - 28 ft-lb) torque.

Figure 20-10-3



Remove the pin (Item 1) [Figure 20-10-3] from the rod end of the cylinder.

Figure 20-10-4



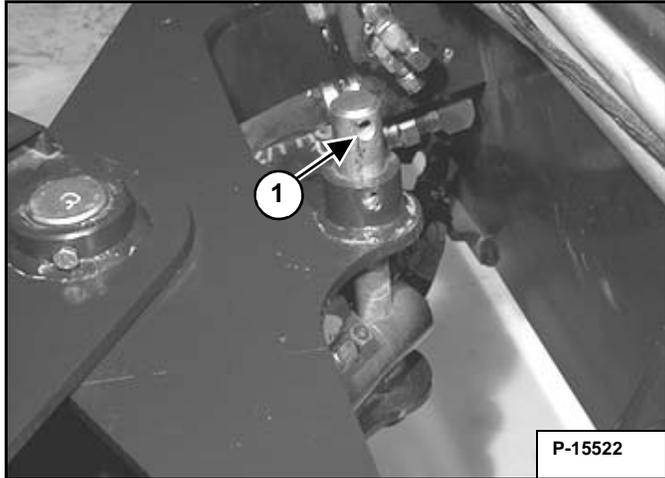
Remove the retaining bolt and nut (Item 1) [Figure 20-10-4].

Installation: Tighten the bolt to 34 - 38 N•m (25 - 28 ft-lb) torque.

**HYDRAULIC CYLINDER (S/N 055000101 & ABOVE),
(S/N 231000101 & ABOVE), (S/N 231311101 & ABOVE)
AND (S/N 231411101 & ABOVE) (CONT'D)**

Removal And Installation (Cont'd)

Figure 20-10-5



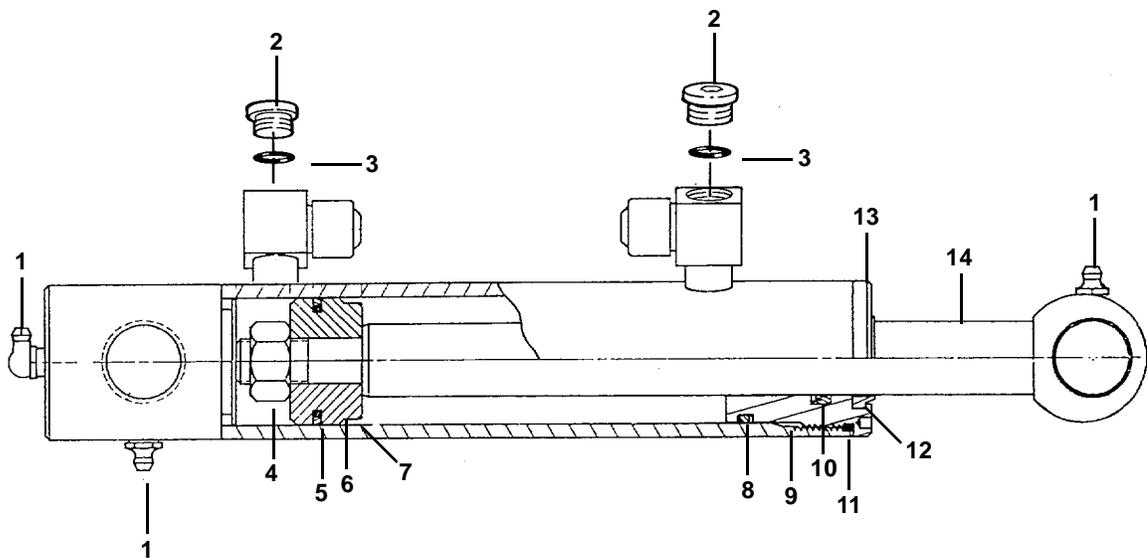
Remove the pin (Item 1) [Figure 20-10-5] from the base end of the cylinder.

Remove the cylinder.

HYDRAULIC CYLINDER (S/N 055000101 & ABOVE), (S/N 231000101 & ABOVE), (S/N 231311101 & ABOVE) AND (S/N 231411101 & ABOVE) (CONT'D)

Parts Identification

1. Grease Fitting
2. Plug
3. O-ring
4. Nut
5. O-ring
6. Ring
7. Piston
8. O-ring
9. Back-Up Ring
10. Rod Seal
11. O-ring
12. Rod Seal
13. Head
14. Rod



B-05435

Disassembly

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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IMPORTANT

Contain and dispose of any oil leakage in an environmentally safe manner.

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⚠ WARNING

AVOID INJURY OR DEATH

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.

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Use the following tools to disassemble the hydraulic cylinder:

MEL1074 O-ring Seal Hook
MEL1075 Adjustable Gland Nut Wrench
OEM 6194 Cylinder Wrench

NOTE: The drawings may not show the cylinder exactly as it appears, but the procedure is correct for all the cylinders.

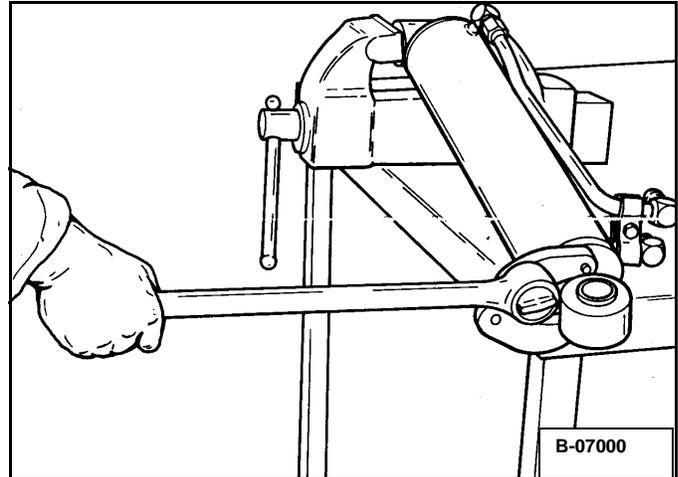
Put the base end of the hydraulic cylinder in a drain pan. Move the rod in and out to remove the fluid from the cylinder. Move the rod slowly so the fluid will go directly into the drain pan.

Sample of manual. Download All 228 pages at:

<https://www.arepairmanual.com/downloads/bobcat-angle-broom-service-repair-workshop-manual/>

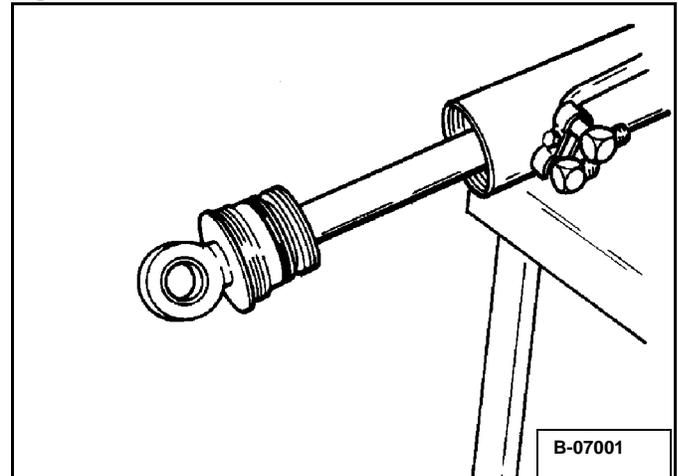
Put the base end of the cylinder in a vise.

Figure 20-10-6



Use the adjustable gland nut wrench (OEM 6194) to loosen the head [Figure 20-10-6].

Figure 20-10-7



Remove the rod assembly from the cylinder case [Figure 20-10-7].

Remove the cylinder case from the vise

Put the rod end in the vise