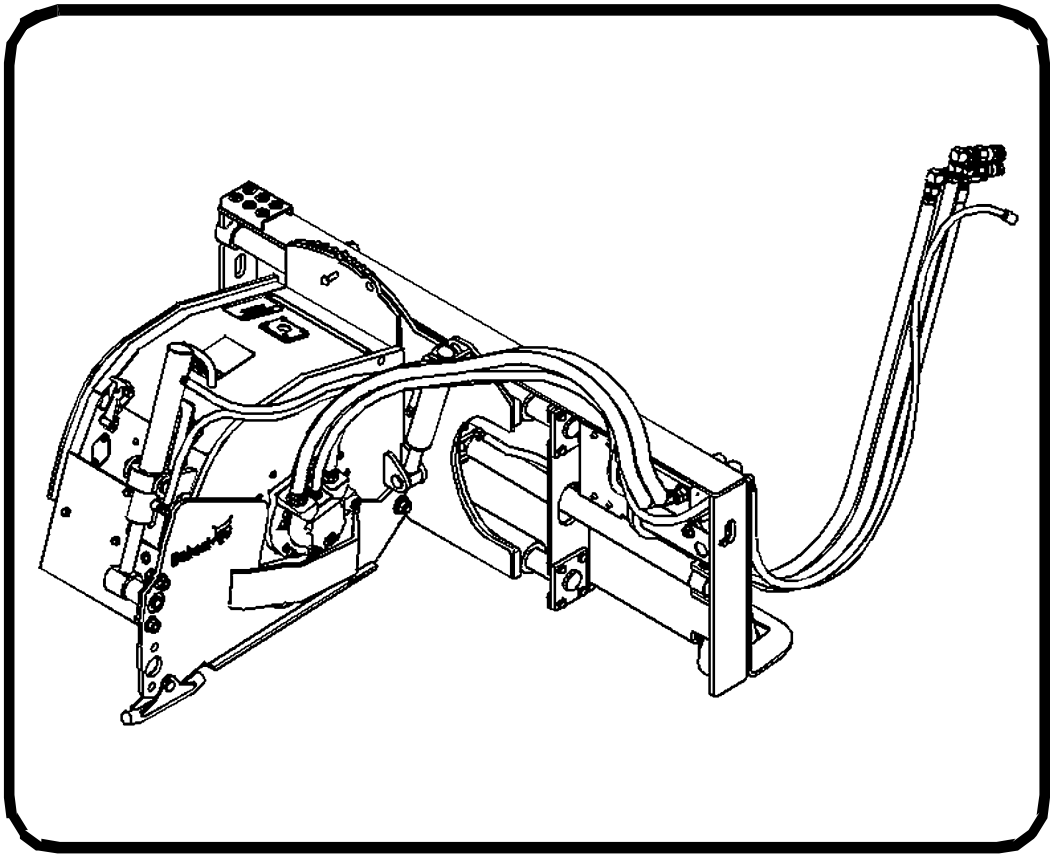
Bobcat®

Service Manual
Planer

(14 Planer) S/N 231200101 & Above
(18 Hyd Planer) S/N 231611101 & Above
(24 Hyd Planer) S/N 231711101 & Above

(Surface Planer) S/N 231100101 & Above
(40 Hyd Planer) S/N 991400101 & Above
(Curb Planer) S/N 234000101 & Above



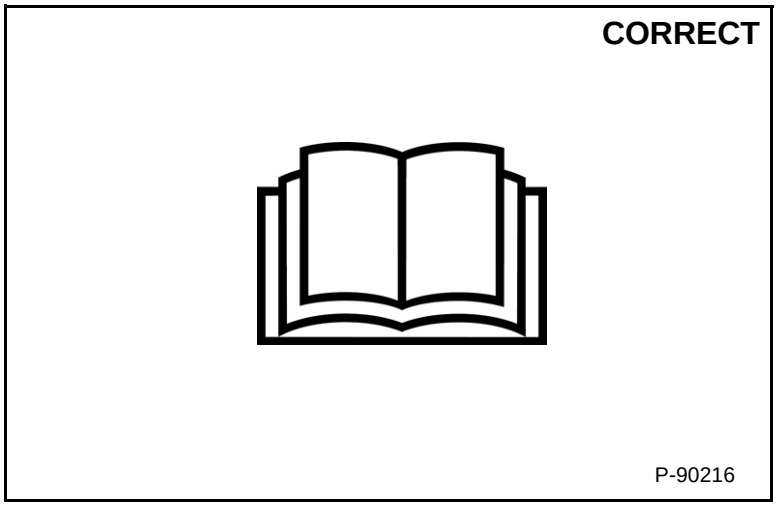
6901087 (3-10)
Printed in U.S.A.

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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CONTENTS


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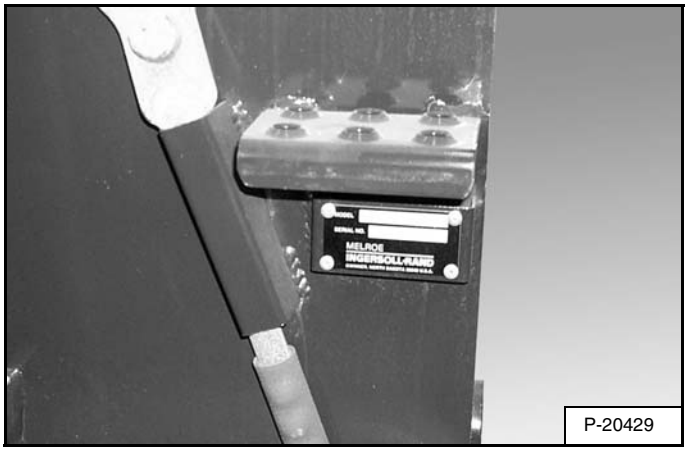
SERIAL NUMBER LOCATION

14 in. Standard Flow Planer (S/N 231200101 & Above)

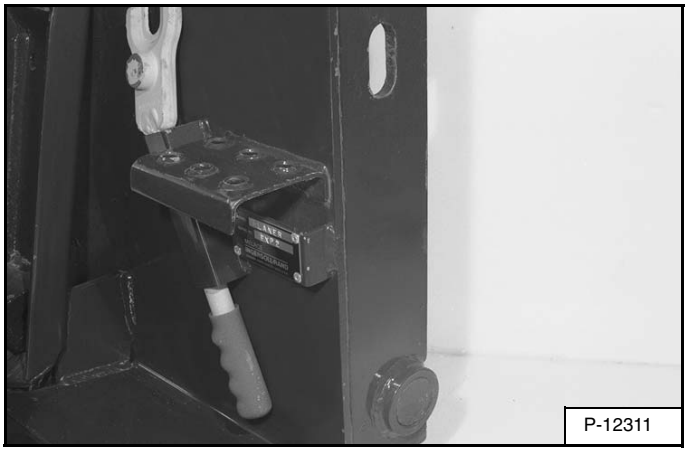
Figure 1



Always use the serial number of the planer 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]**.

18 & 24 in. High Flow Planer (S/N 231711101 & Above, S/N 231611101 & Above)

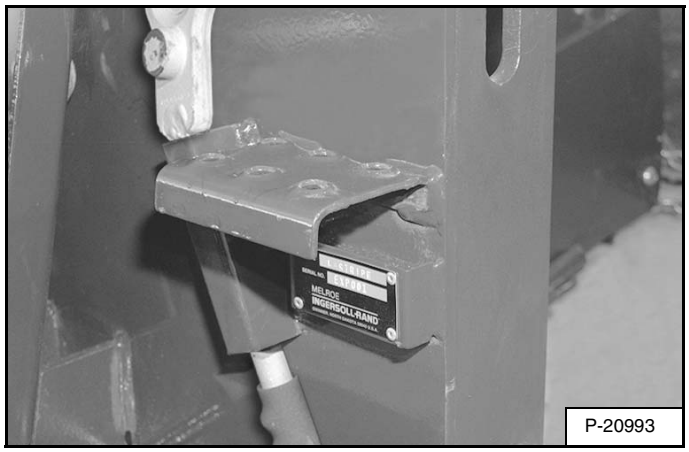
Figure 2



Always use the serial number of the planer 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 2]**.

16 in. Surface Planer (S/N 231100101 & Above)

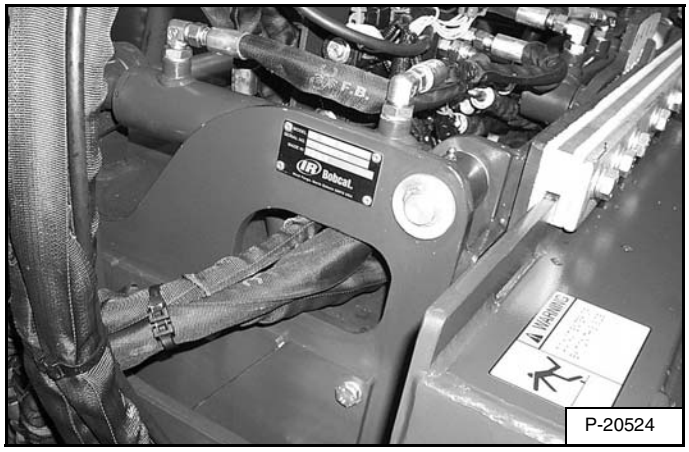
Figure 3



Always use the serial number of the planer 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 3]**.

40 in. High Flow Planer (S/N 991400101 & Above)

Figure 4

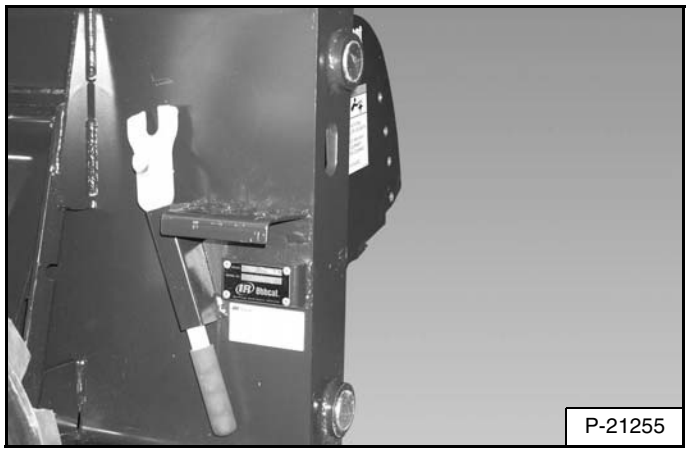


Always use the serial number of the planer when requesting service information or when ordering parts. Early or later models (identification made by serial number) may use different parts, or it may be necessary to use a different procedure in doing a specific service operation **[Figure 4]**.

SERIAL NUMBER LOCATION (CONT'D)

Curb Planer (S/N 234000101 & Above)

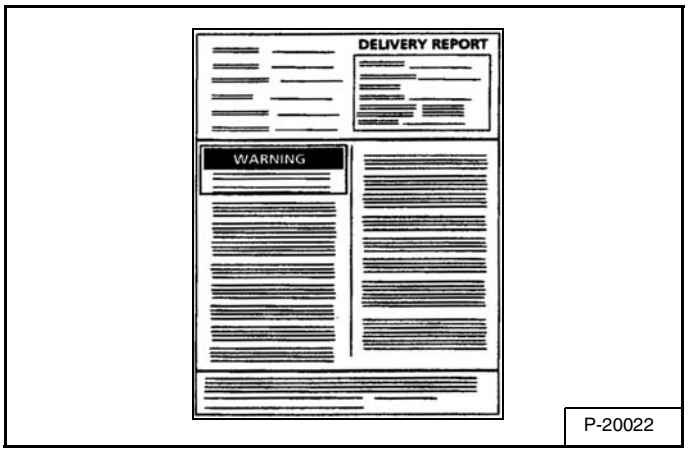
Figure 5



Always use the serial number of the curb planer 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 5]**.

DELIVERY REPORT

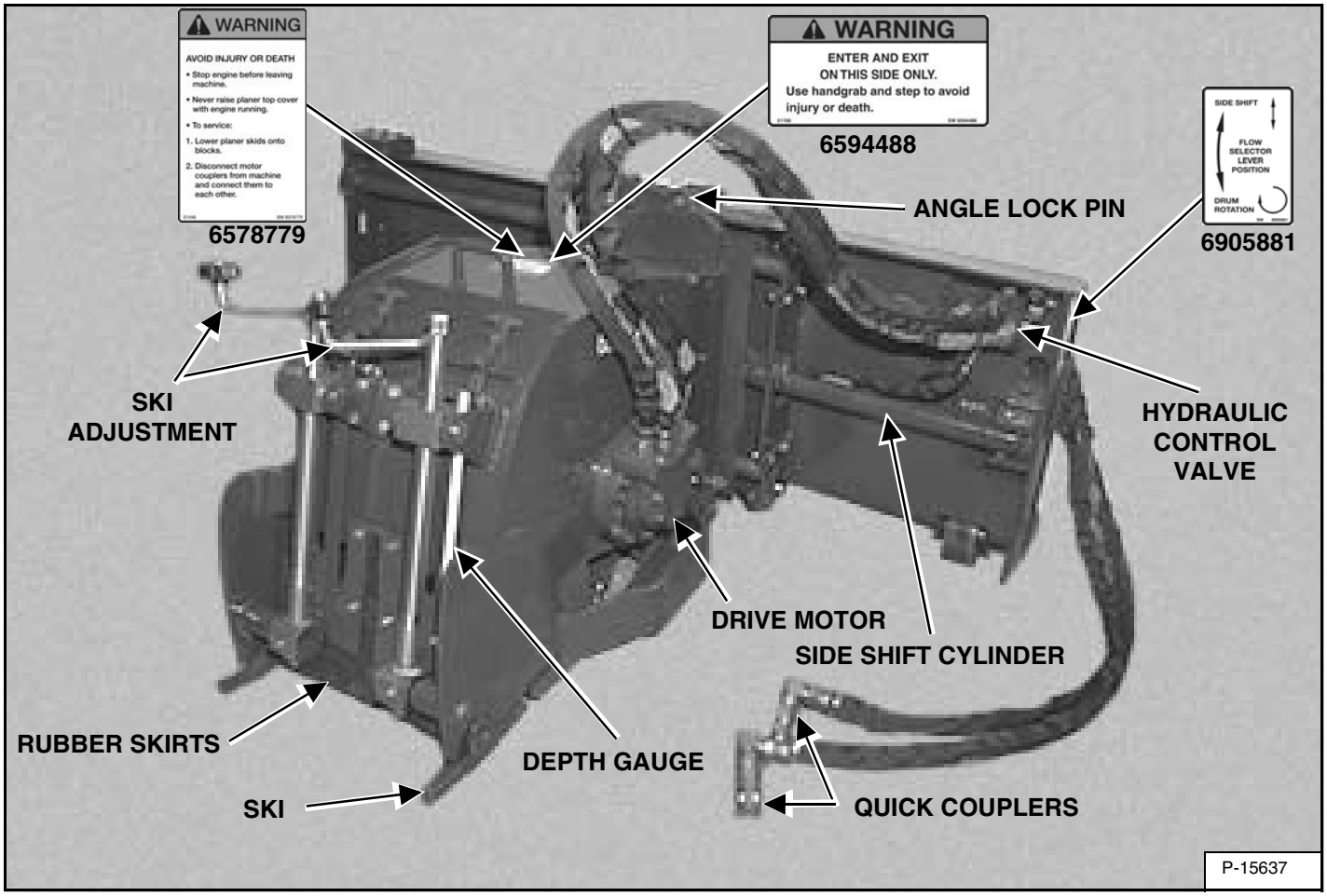
Figure 6



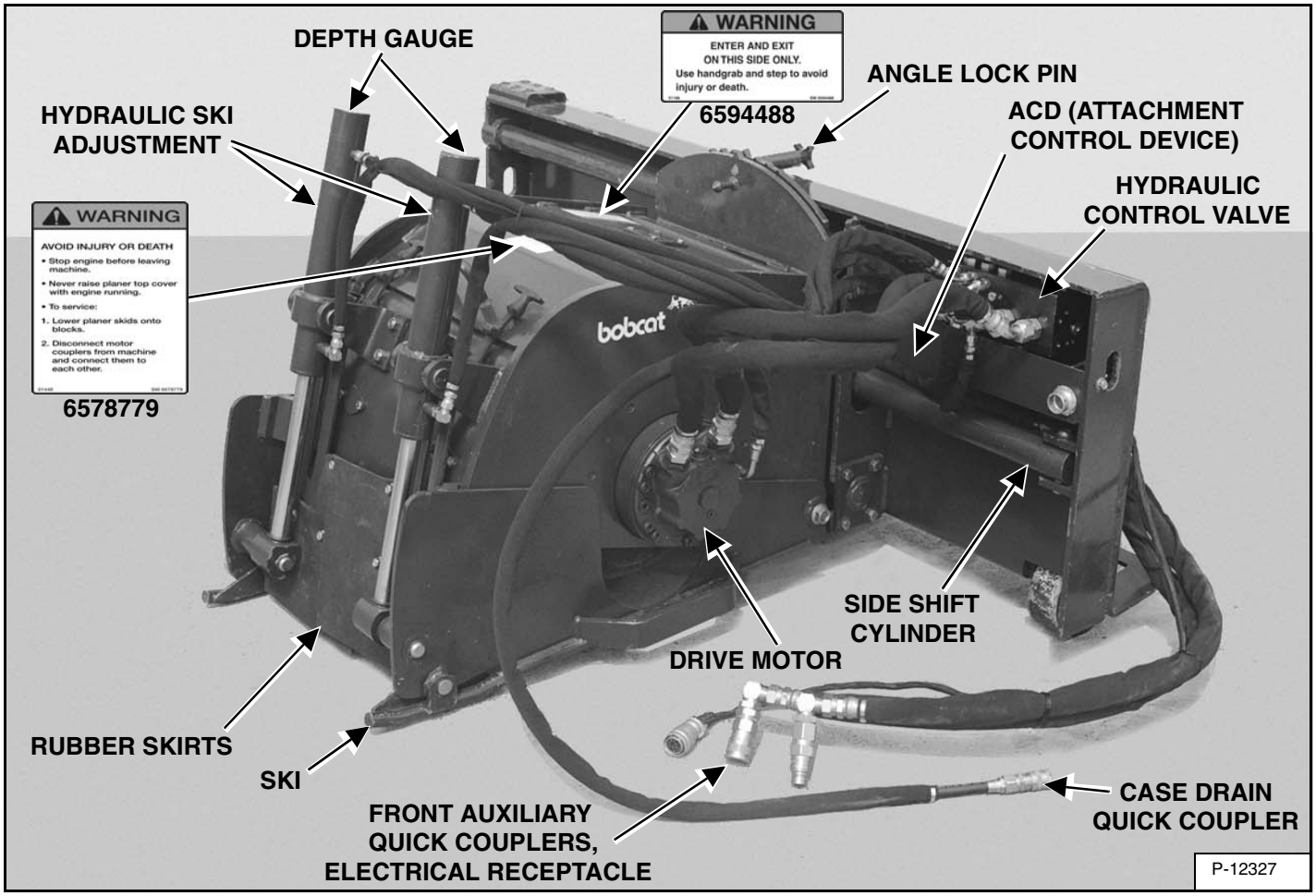
The delivery report **[Figure 6]** must completed by the dealer and signed by the owner or operator when the planer is delivered. An explanation of the form must be given to the owner. Make sure it is filled out completely.

IDENTIFICATION AND MACHINE SIGNS (DECALS)

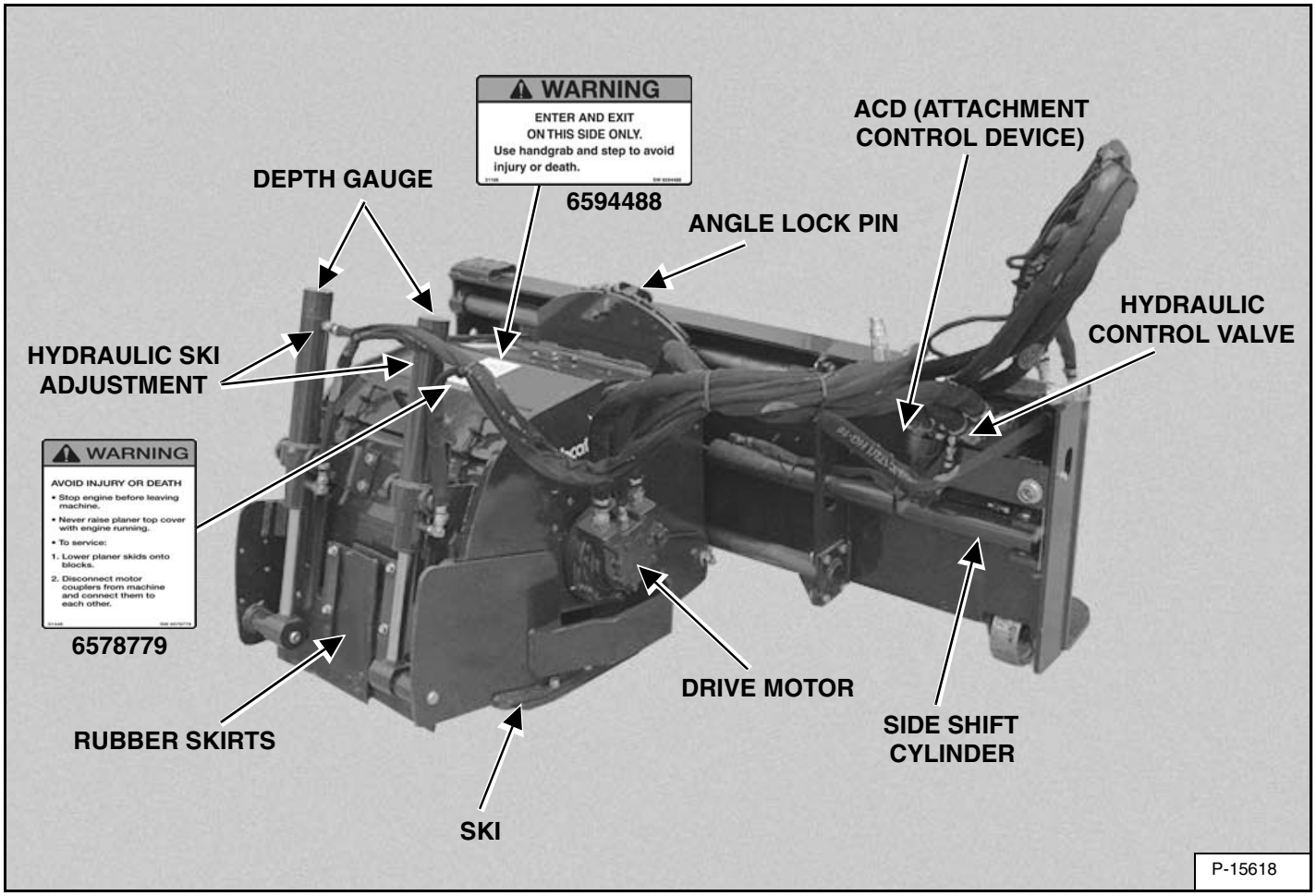
14 in. Standard Flow Planer (S/N 231200101 & Above)



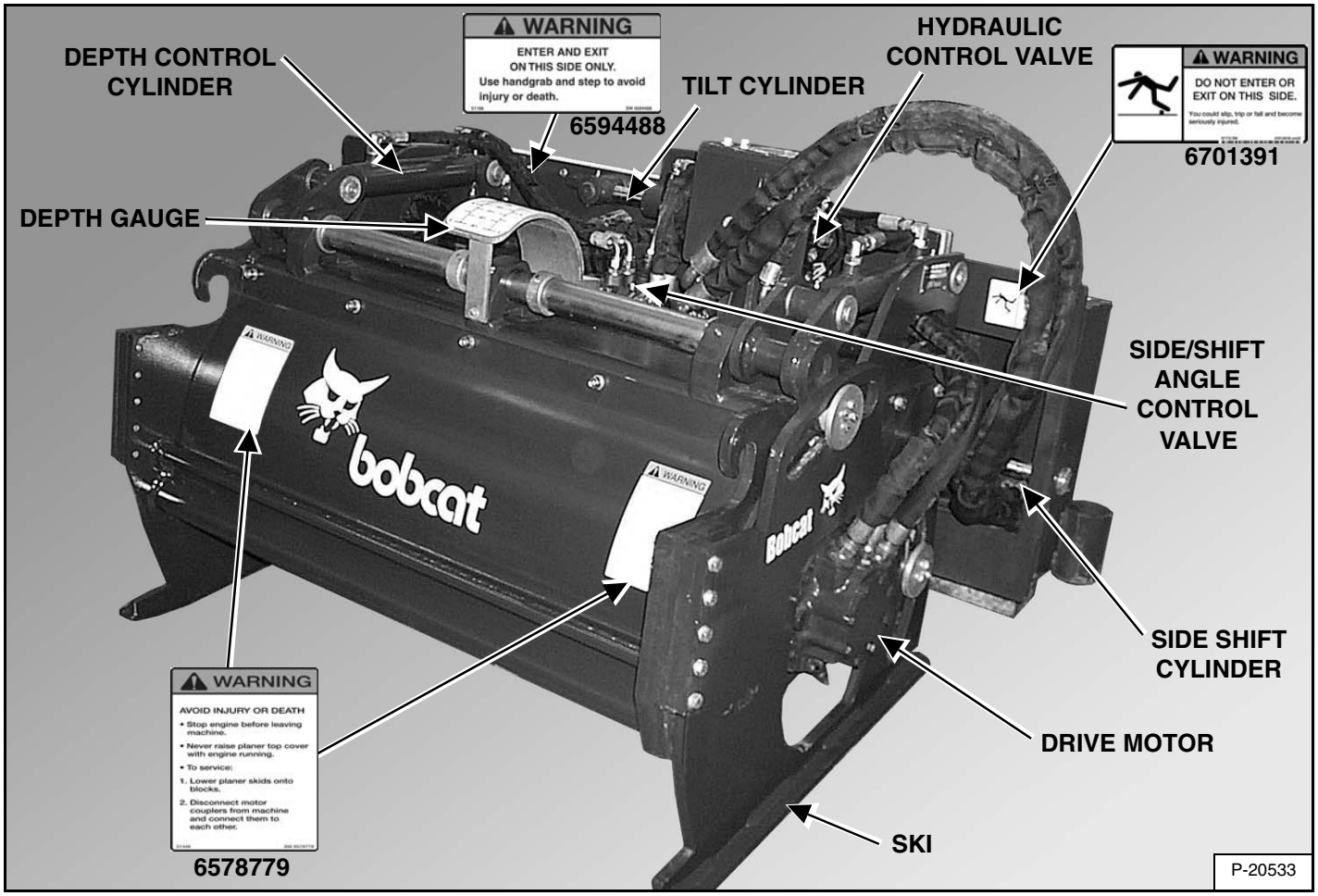
18 & 24 in. High Flow Planer (S/N 231711101 & Above, S/N 231611101 & Above)



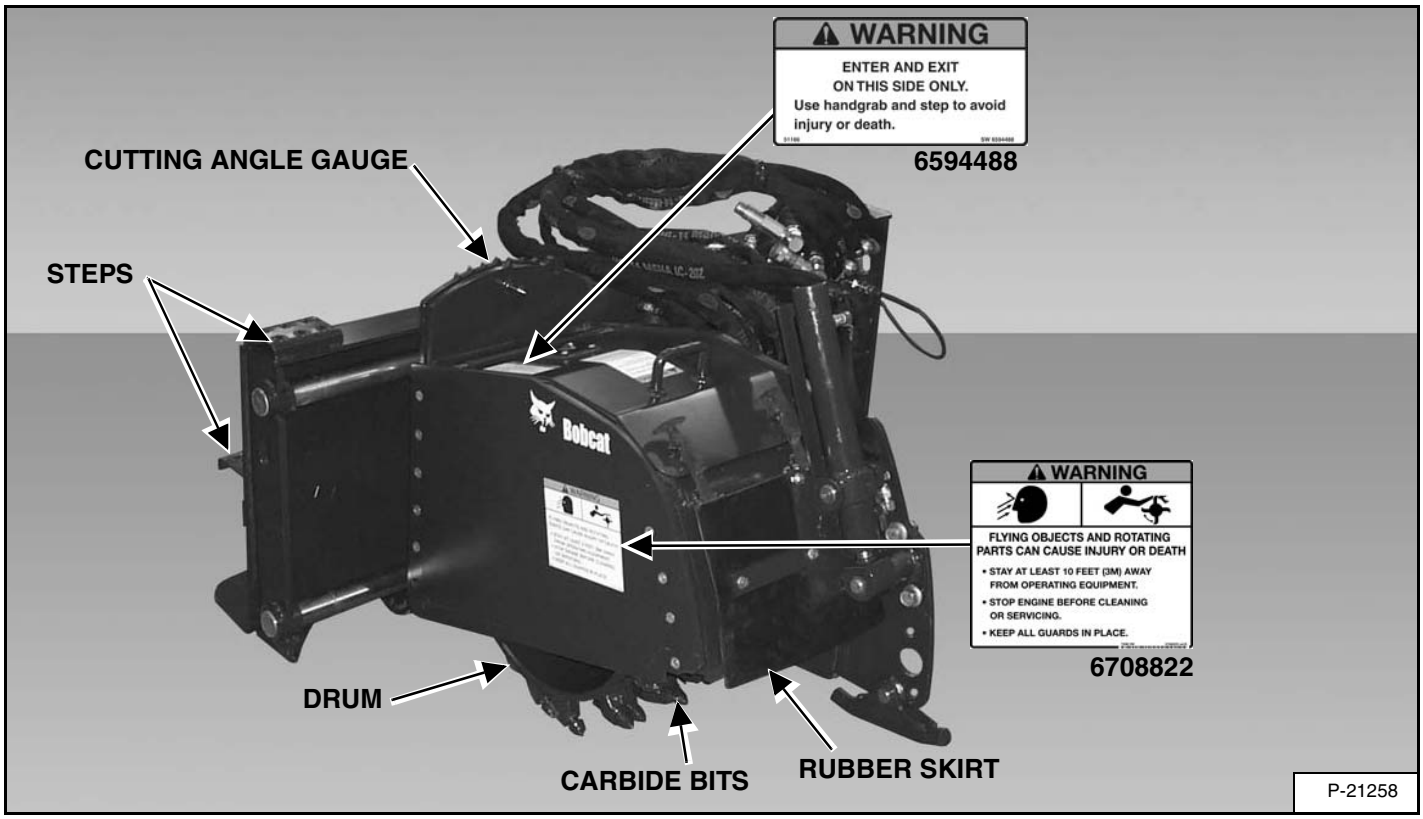
16 in. Surface Planer (S/N 231100101 & Above)

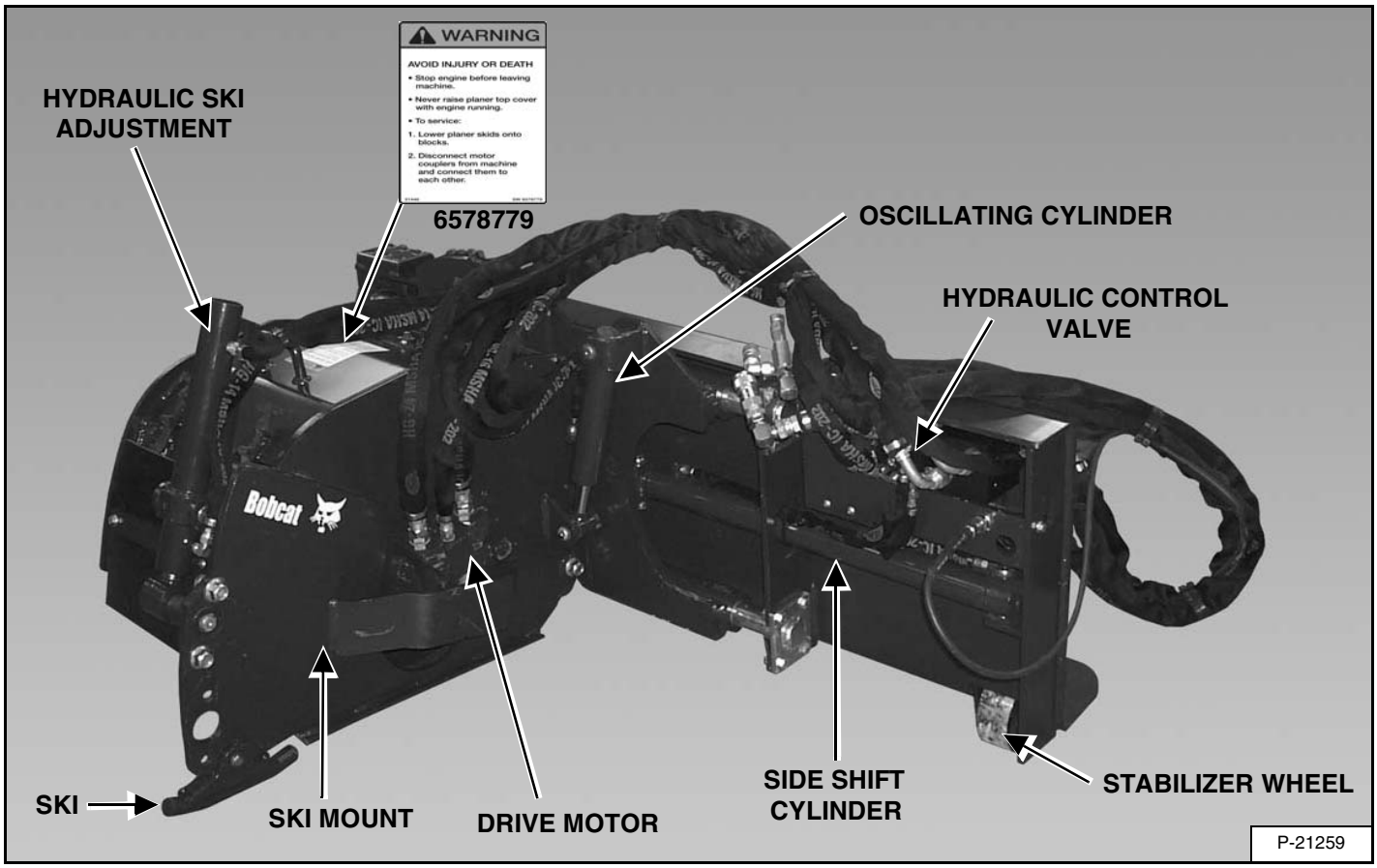


40 in. High Flow Planer (S/N 991400101 & Above)



Curb Planer (S/N 234000101 & Above)



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SAFETY & MAINTENANCE


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TROUBLESHOOTING

Chart (14 in. Standard Flow)

⚠ WARNING

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W-2003-0807

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.

PROBLEM	CAUSE	CORRECTION
Planer cut is inadequate.	Carbide bits worn or missing.	Replace the carbide bits.
Noisy motor (with load).	Vibration; loose bolts.	Check torque.
External oil leaks.	Motor case pressure too high.	Check the case drain line.
	Defective assembly.	Check case drain line for blockage.
	Damaged O-rings.	Replace O-rings as needed.
Planer will not side shift.	Valve lever not in the side shift position.	Move valve lever to side shift position.
	Not enough hydraulic pressure.	Test loader hydraulics for flow and pressure.
	Planer housing seized or rusted in place.	Remove rust or material interference.
Drum motor with load does not turn.	Hydraulic pressure is low.	Check relief valve setting.
	Internal hydraulic leaks.	Check motor.
Noisy motor (with no load).	Humming; worn bearings.	Replace bearings.
Loaded motor does not turn at normal speed.	Not enough hydraulic flow.	Check pump flow and rotation speed.
	Internal leaks.	Check cylinder block and valve block assembly.
		Check motor.
Drum motor does not rotate.	Front auxiliary hydraulics not engaged.	Engage the loader front auxiliary.
	Couplers are reversed.	Switch couplers.
	Excessive hydraulic leakage.	Check hoses and motor block.
	Hydraulic leaks.	Check cylinder block and valve block assembly.
	No hydraulic flow.	Check pump drive and pump inlet.
	No hydraulic pressure.	Valves damaged or corroded.
Planer does not mill to correct depth.	Carbide bits worn depth.	Replace the carbide bits.
	Decals misplaced or missing.	Replace with new decals.

Chart (18 & 24 in. High Flow)

⚠ WARNING

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W-2003-0807

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.

PROBLEM	CAUSE	CORRECTION
Planer cut is inadequate.	Carbide bits worn or missing.	Replace the carbide bits.
Noisy motor (with load).	Vibration; loose bolts.	Check torque.
External oil leaks.	Motor case pressure too high.	Check the case drain line.
	Defective assembly.	Check case drain line for blockage.
	Damaged O-rings.	Replace O-rings as needed.
	Defective end cover.	Check bolt torque.
Planer will not side shift.	Damage to wiring or electrical connectors.	See your Bobcat dealer.
	Not enough hydraulic pressure.	Test loader hydraulics for flow and pressure.
	Planer housing seized or rusted in place.	Remove rust or material interference.
Drum motor with load does not turn.	Hydraulic pressure is low.	Check relief valve setting.
	Internal hydraulic leaks.	Check motor.
Noisy motor (with no load).	Humming; worn bearings.	Replace bearings.
Loaded motor does not turn at normal speed.	Not enough hydraulic flow.	Check pump flow and rotation speed. Check Hi Flow diverter valve. Make sure Hi Flow is ON.
	Internal leaks.	Check cylinder block and valve block assembly.
		Check motor.
Drum motor does not rotate.	Front auxiliary hydraulics not engaged.	Engage the loader front auxiliary.
	Large couplers are reversed.	Switch couplers.
	Excessive hydraulic leakage.	Check hoses and motor block.
	Hydraulic leaks.	Check cylinder block and valve block assembly.
	No hydraulic flow.	Check pump drive and pump inlet.
	No hydraulic pressure.	Valves damaged or corroded.
Planer does not mill to correct depth.	Carbide bits worn depth.	Replace the carbide bits.
	Decals misplaced or missing.	Replace with new decals.
	Ski pivot bushings worn or missing.	Install new ski pivot bushings.
	Ski worn.	Replace ski.

Chart (16 in. Surface)

⚠ WARNING

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W-2003-0807

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.

PROBLEM	CAUSE	CORRECTION
Planer cut is inadequate.	Carbide bits worn or missing.	Replace the carbide bits.
Noisy motor (with load).	Vibration; loose bolts.	Check torque.
External oil leaks.	Motor case pressure too high.	Check the case drain line.
	Defective assembly.	Check case drain line for blockage.
	Damaged O-rings.	Replace O-rings as needed.
	Defective end cover.	Check bolt torque.
Planer will not side shift.	Damage to wiring or electrical connectors.	See your Bobcat dealer.
	Not enough hydraulic pressure.	Test loader hydraulics for flow and pressure.
	Planer housing seized or rusted in place.	Remove rust or material interference.
Drum motor with load does not turn.	Hydraulic pressure is low.	Check relief valve setting.
	Internal hydraulic leaks.	Check motor.
Noisy motor (with no load).	Humming; worn bearings.	Replace bearings.
Loaded motor does not turn at normal speed.	Not enough hydraulic flow.	Check pump flow and rotation speed. Check Hi Flow diverter valve. Make sure Hi Flow is ON.
	Internal leaks.	Check cylinder block and valve block assembly.
		Check motor.
Drum motor does not rotate.	Front auxiliary hydraulics not engaged.	Engage the loader front auxiliary.
	Large couplers are reversed.	Switch couplers.
	Excessive hydraulic leakage.	Check hoses and motor block.
	Hydraulic leaks.	Check cylinder block and valve block assembly.
	No hydraulic flow.	Check pump drive and pump inlet.
	No hydraulic pressure.	Valves damaged or corroded.
Planer does not mill to correct depth.	Carbide bits worn depth.	Replace the carbide bits.
	Decals misplaced or missing.	Replace with new decals.
	Ski pivot bushings worn or missing.	Install new ski pivot bushings.
	Ski worn.	Replace ski.

Chart (40 in. High Flow)

⚠ WARNING

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W-2003-0807

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.

PROBLEM	CAUSE	CORRECTION
Planer cut is inadequate.	Carbide bits worn or missing.	Replace the carbide bits.
Noisy motor (with load).	Vibration; loose bolts.	Check torque.
External oil leaks.	Motor case pressure too high.	Check the case drain line and quick couplers.
	Defective assembly.	Check case drain line for blockage.
	Damaged O-rings.	Replace O-rings as needed.
Planer will not side shift.	Valve lever not in the side shift position.	Move valve lever to side shift position.
	Not enough hydraulic pressure.	Test loader hydraulics for flow and pressure.
Planer will not angle.	Valve lever not in the plane angle position.	Move valve lever to planer angle position.
	Not enough hydraulic pressure.	Test loader hydraulics for flow and pressure.
Drum motor with load does not turn.	Hydraulic pressure is low.	Check relief valve setting.
	Internal hydraulic leaks.	Check motor.
Noisy motor (with no load).	Humming; worn bearings.	Replace bearings.
Loaded motor does not turn at normal speed.	Not enough hydraulic flow.	Check pump flow and rotation speed.
	Internal leaks.	Check cylinder block and valve block assembly.
		Check motor.
Drum motor does not rotate.	Front auxiliary hydraulics not engaged.	Engage the loader front auxiliary.
	Couplers are reversed.	Switch couplers.
	Excessive hydraulic leakage.	Check hoses and motor block.
	Hydraulic leaks.	Check cylinder block and valve block assembly.
	No hydraulic flow.	Check pump drive and pump inlet.
	No hydraulic pressure.	Valves damaged or corroded.
	Debris in orifice.	Clean orifice and / or valve body.
Planer does not mill to correct depth.	Carbide bits worn.	Replace the carbide bits.
	Depth decals misplaced or missing.	Replace with new depth decals.
	Skis worn.	Replace skis.

Chart (Curb)

⚠ WARNING

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W-2003-0807

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.

PROBLEM	CAUSE	CORRECTION
Planer cut is inadequate.	Carbide bits worn or missing.	Replace the carbide bits.
Noisy motor (with load).	Vibration; loose bolts.	Check torque.
External oil leaks.	Motor case pressure too high.	Check the case drain line.
	Defective assembly.	Check case drain line for blockage.
	Damaged O-rings.	Replace O-rings as needed.
Planer will not side shift.	Damage to wiring or electrical connectors.	See your Bobcat dealer.
	Not enough hydraulic pressure.	Test loader hydraulics for flow and pressure.
	Planer housing seized or rusted in place.	Remove rust or material interference.
Drum motor with load does not turn.	Hydraulic pressure is low.	Check relief valve setting.
	Internal hydraulic leaks.	Check motor.
Noisy motor (with no load).	Humming; worn bearings.	Replace bearings.
Loaded motor does not turn at normal speed.	Not enough hydraulic flow.	Check pump flow and rotation speed. Check Hi Flow diverter valve. Make sure Hi Flow is ON.
	Internal leaks.	Check cylinder block and valve block assembly.
		Check motor.
Drum motor does not rotate.	Front auxiliary hydraulics not engaged.	Engage loader front auxiliary.
	Large couplers are reversed.	Switch couplers.
	Excessive hydraulic leakage.	Check hoses and motor block.
	Hydraulic leaks.	Check cylinder block and valve block assembly.
	No hydraulic flow.	Check pump drive and pump inlet.
	No hydraulic pressure.	Valves damaged or corroded.
Planer will not oscillate.	Damage to wiring or electrical connectors.	See your Bobcat dealer.
	Not enough hydraulic pressure.	Test loader hydraulics for flow and pressure.


Bobcat®

INSPECTION

Bob-Tach

Hand Lever Bob-Tach

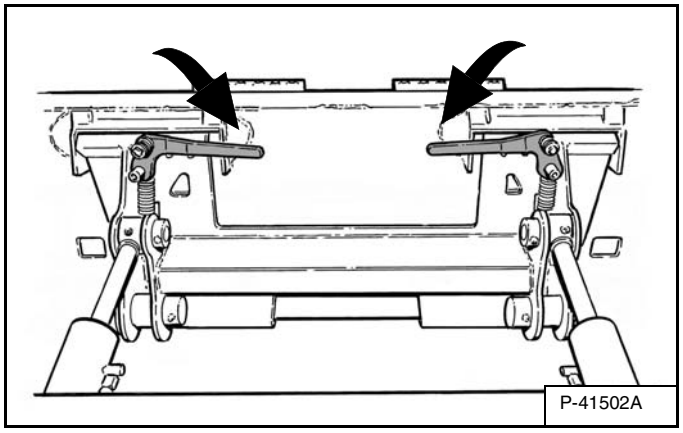
⚠ WARNING

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

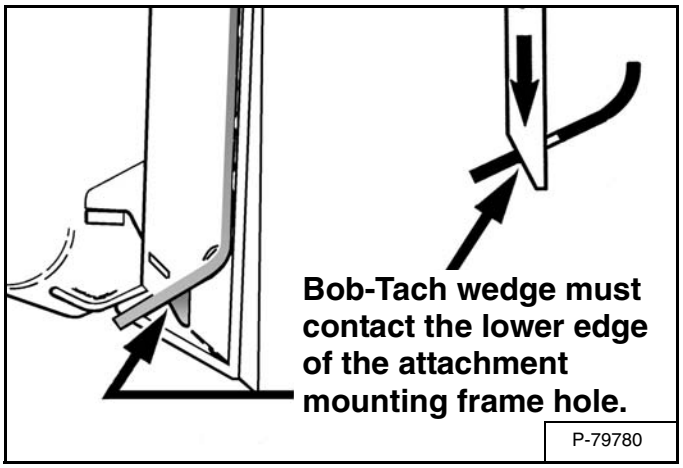
Figure 10-20-1



Push down on the Bob-Tach levers until they are fully engaged in the locked position **[Figure 10-20-1]** (wedges fully extended through the attachment mounting frame holes).

The levers and wedges must move freely **[Figure 10-20-1]**.

Figure 10-20-2



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach **[Figure 10-20-2]**.

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 & 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.)

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 10-20-3

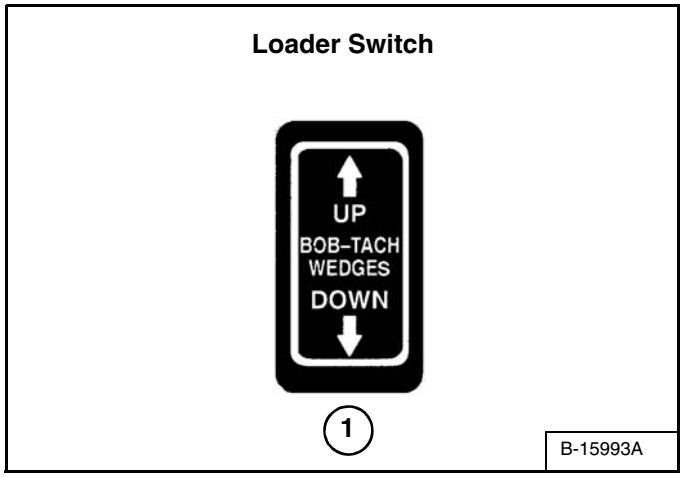
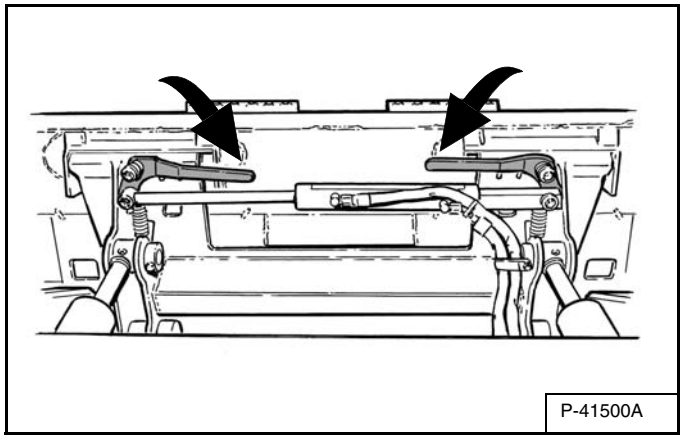
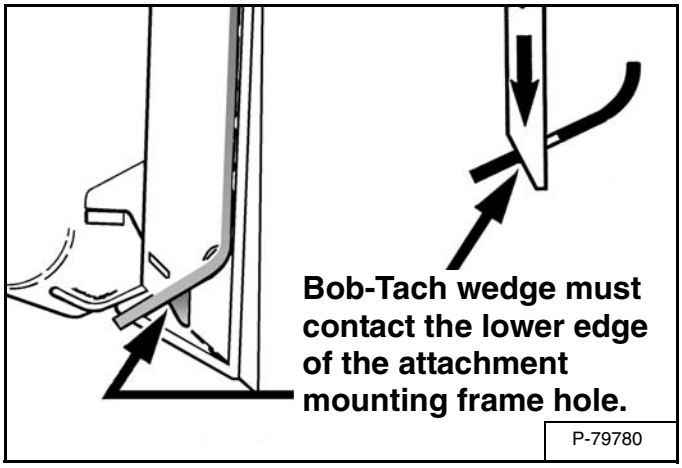


Figure 10-20-4



Push and hold the BOB-TACH "WEDGES DOWN" switch (Item 1) **[Figure 10-20-3]** until the levers are fully engaged in the locked position **[Figure 10-20-4]** (wedges fully extended through the attachment mounting frame holes).

Figure 10-20-5



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach **[Figure 10-20-5]**.

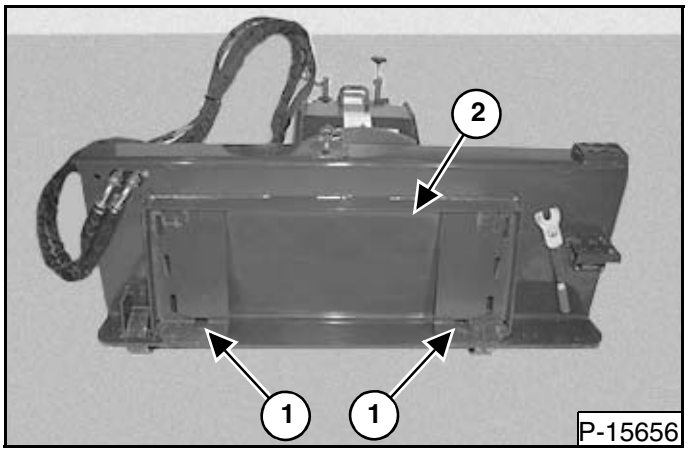
NOTE: If the wedge does not contact the lower edge of the hole, the attachment will be loose and can come off the Bob-Tach.

Inspect the mounting frame on the attachment. (See the machine's Operation & 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.)

Planer Mount Inspection (14 in. Standard Flow)

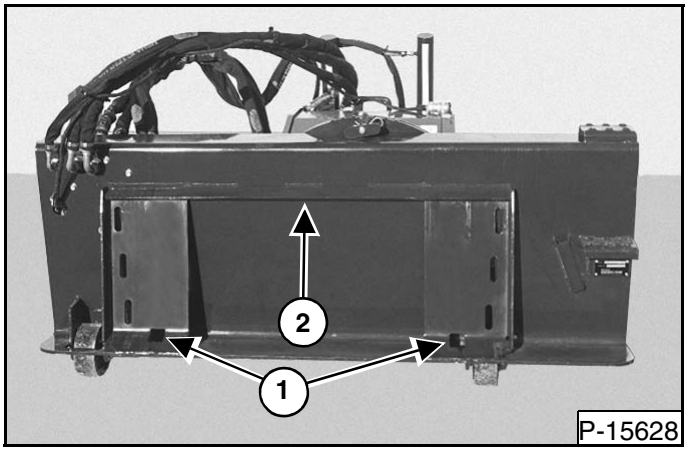
Figure 10-20-6



Inspect the Bob-Tach wedge mount (Item 1), mounting flange (Item 2) **[Figure 10-20-6]** and all welds on the planer mount for wear and damage each time the planer is removed from the loader.

Planer Mount Inspection (18 & 24 in. High Flow) (16 in. Surface)

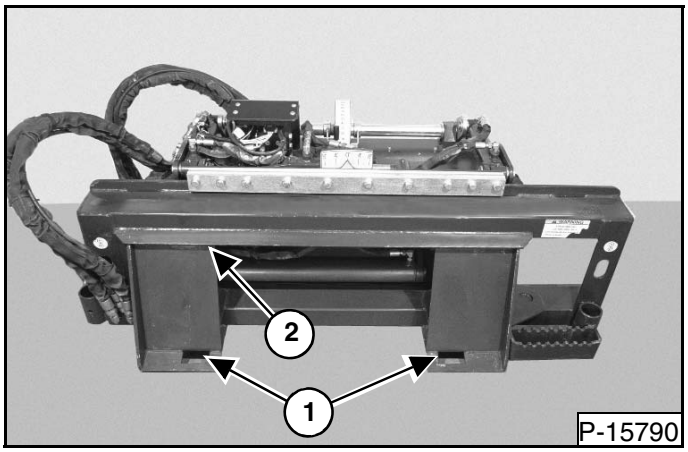
Figure 10-20-7



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

Planer Mount Inspection (40 in. High Flow)

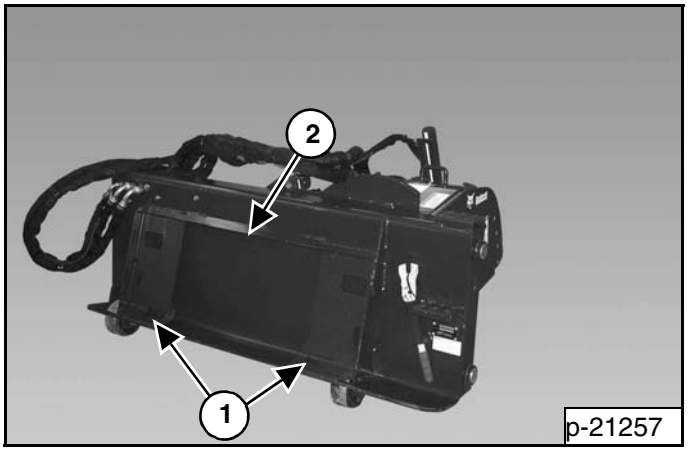
Figure 10-20-8



Inspect the Bob-Tach wedge mounts (Item 1), mounting flange (Item 2) **[Figure 10-20-8]** and all welds on the planer mount for wear and damage each time the planer is removed from the loader.

Planer Mount Inspection (Curb)

Figure 10-20-9

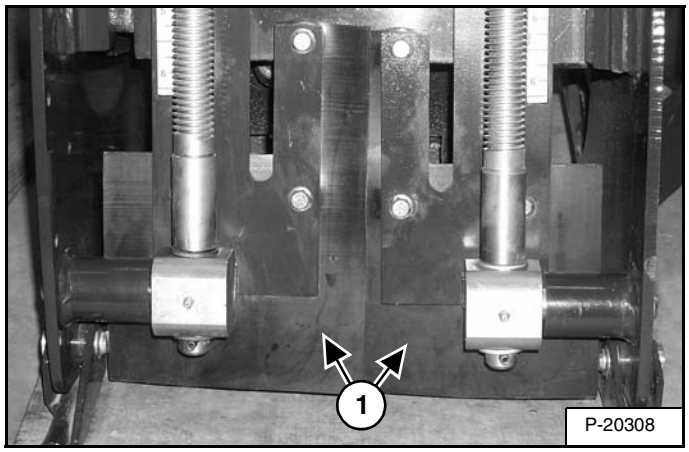


Inspect the Bob-Tach wedge mounts (Item 1), mounting flange (Item 2) **[Figure 10-20-9]** and all welds on the curb planer mount for wear and damage each time the curb planer is removed from the loader.

INSPECTION (CONT'D)

Rubber Skirt Inspection (14 in. Standard Flow)

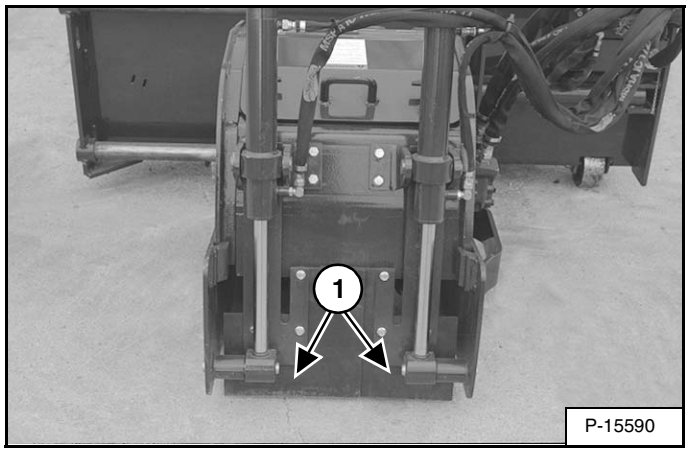
Figure 10-20-10



Make sure the rubber skirts (Item 1) **[Figure 10-20-10]** are in good condition to provide protection from flying debris.

Rubber Skirt Inspection (18 & 24 in. High Flow)

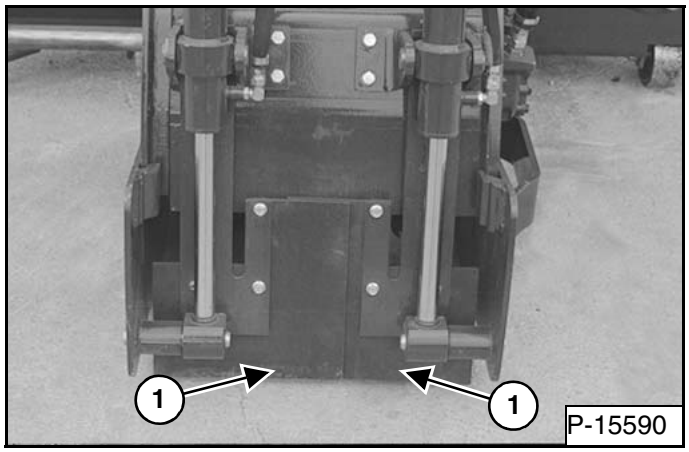
Figure 10-20-11



Make sure the rubber skirts (Item 1) **[Figure 10-20-11]** are in good condition to provide protection from flying debris.

Rubber Skirt Inspection (16 in. Surface)

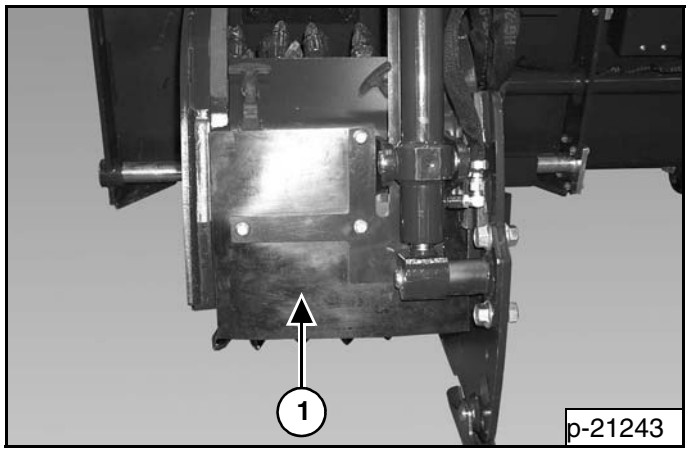
Figure 10-20-12



Make sure the rubber skirts (Item 1) **[Figure 10-20-12]** are in good condition to provide protection from flying debris.

Rubber Skirt Inspection (Curb)

Figure 10-20-13



Make sure the rubber skirts (Item 1) **[Figure 10-20-13]** are in good condition to provide protection from flying debris.

LUBRICATING THE ATTACHMENT

Lubrication Locations (14 in. Standard Flow)

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

Lubricate the following grease fittings every 8 - 10 hours.

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.

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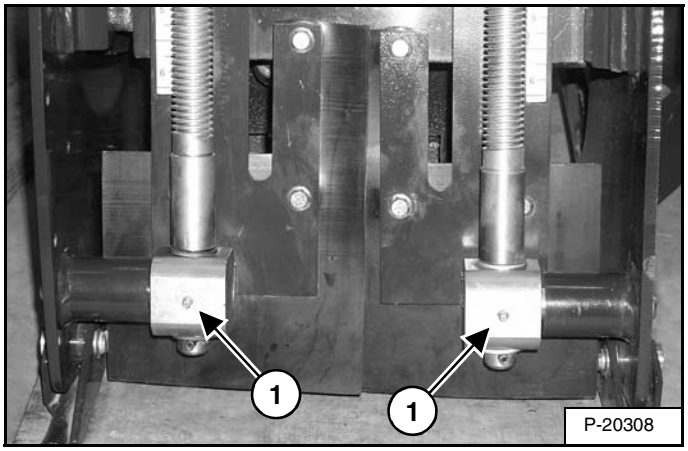
Figure 10-30-1



Lubricate the two adjusting rod fittings (Item 1) **[Figure 10-30-1]**.

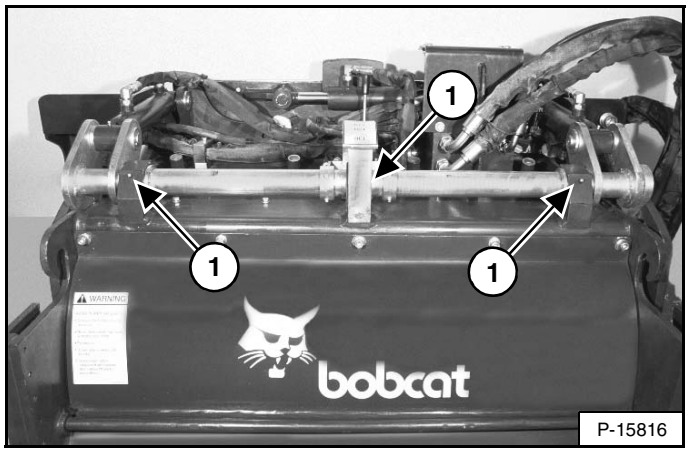
LUBRICATING THE ATTACHMENT (CONT'D)

Lubrication Locations (40 in. High Flow)

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

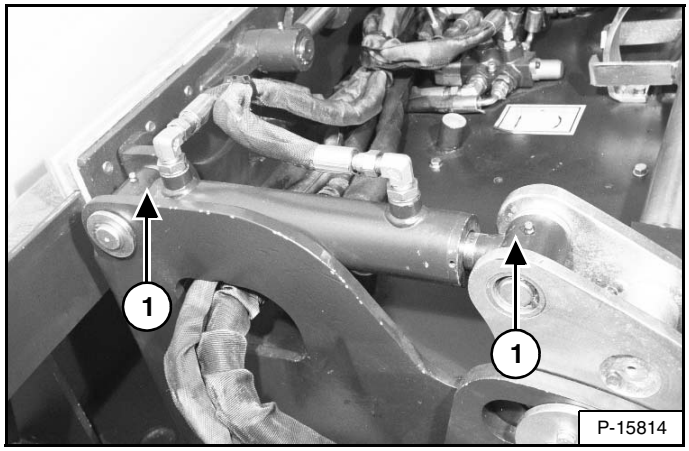
Lubricate the following grease fittings every 8 - 10 hours.

Figure 10-30-2



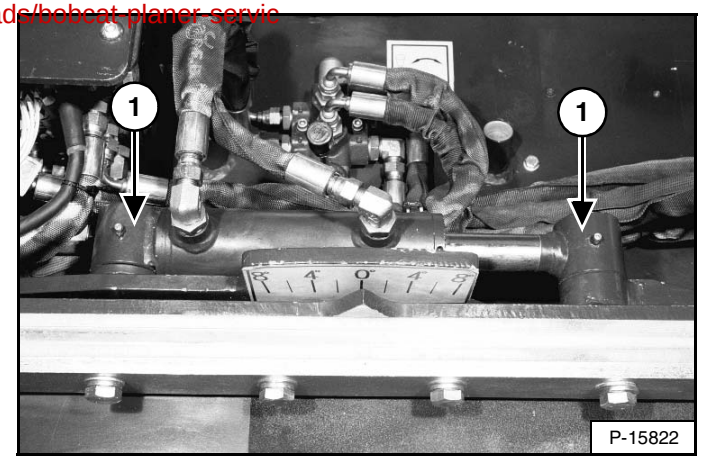
Three ski shaft pivots (Item 1) **[Figure 10-30-2]**.

Figure 10-30-3



Ski cylinder rod and base ends (both sides) (Item 1) **[Figure 10-30-3]**.

Figure 10-30-4



Housing angle cylinder rod and base end (Item 1) **[Figure 10-30-4]**.