



Bobcat®

Flail Cutter

FC155-FC175

(Europe Only)

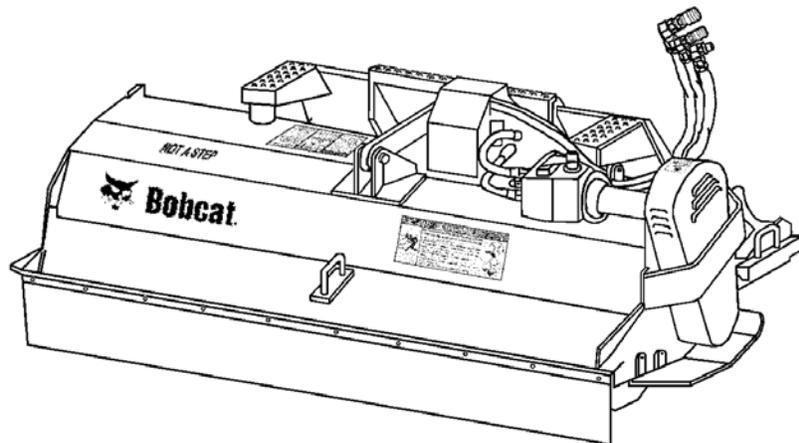
FC200

Service Manual

(FC155 Europe Only) S/N A01P00101 & Above

(FC175 Europe Only) S/N 467500101 & Above

(FC200) S/N 467300101 & Above



Product: Bobcat Flail Cutter FC155/FC175/FC200 Service Repair Workshop Manual

Full Download: [https://www.arepairmanual.com/downloads/bobcat-flail-cutter-](https://www.arepairmanual.com/downloads/bobcat-flail-cutter-fc155-fc175-fc200-service-repair-workshop-manual/)

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Sample of manual. Download All 110 pages at:

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**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.

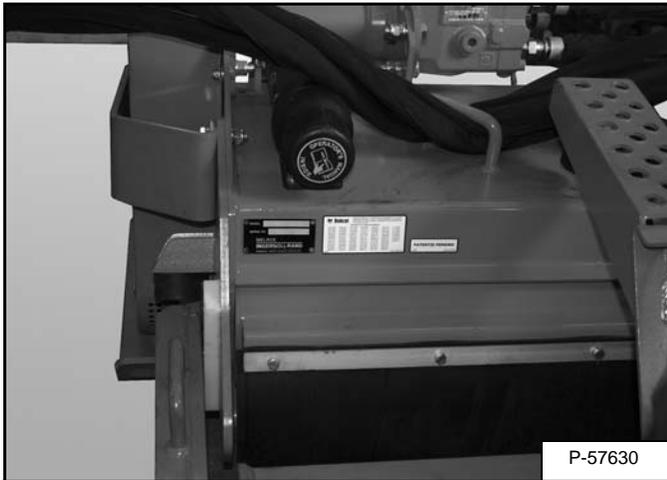


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SERIAL NUMBER LOCATION

Attachment Serial Number

Figure 1



Always use the serial number of the flail cutter 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].

MANUAL STORAGE LOCATION

Read and understand the Operation & Maintenance Manual before operating the flail cutter.

Figure 2

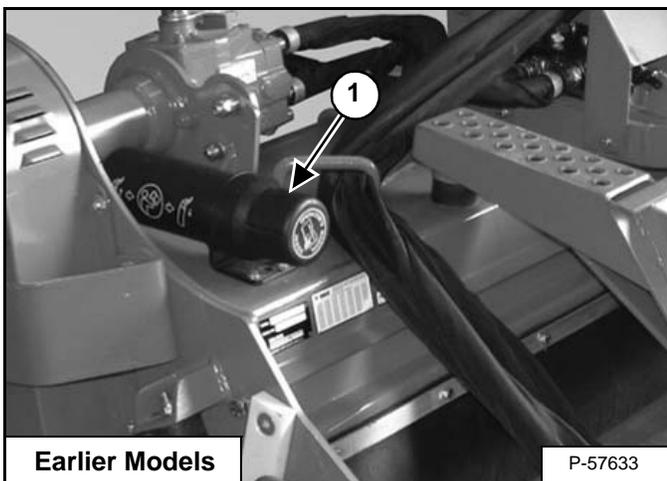
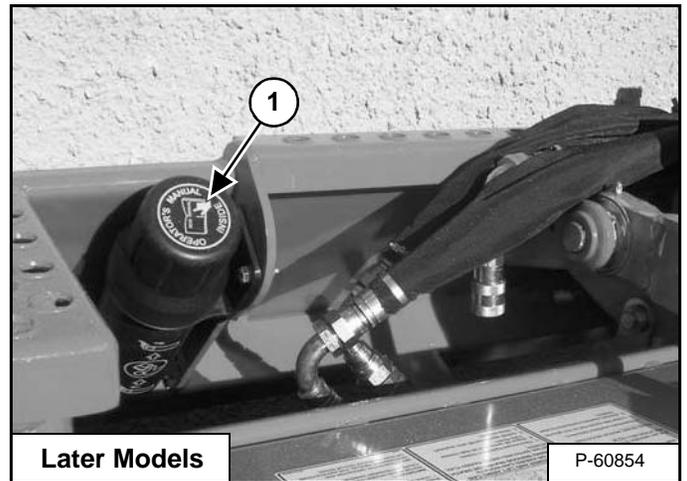


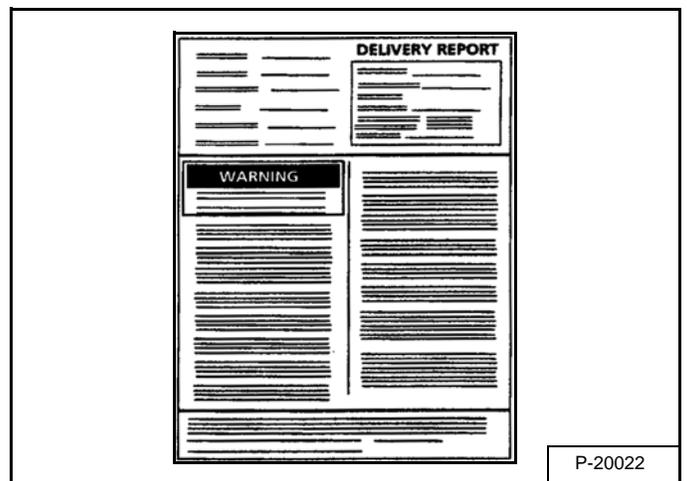
Figure 3



The Operation & Maintenance Manual and Safety Manual are stored in a container (Item 1) [Figure 2] & [Figure 3] located on the flail cutter.

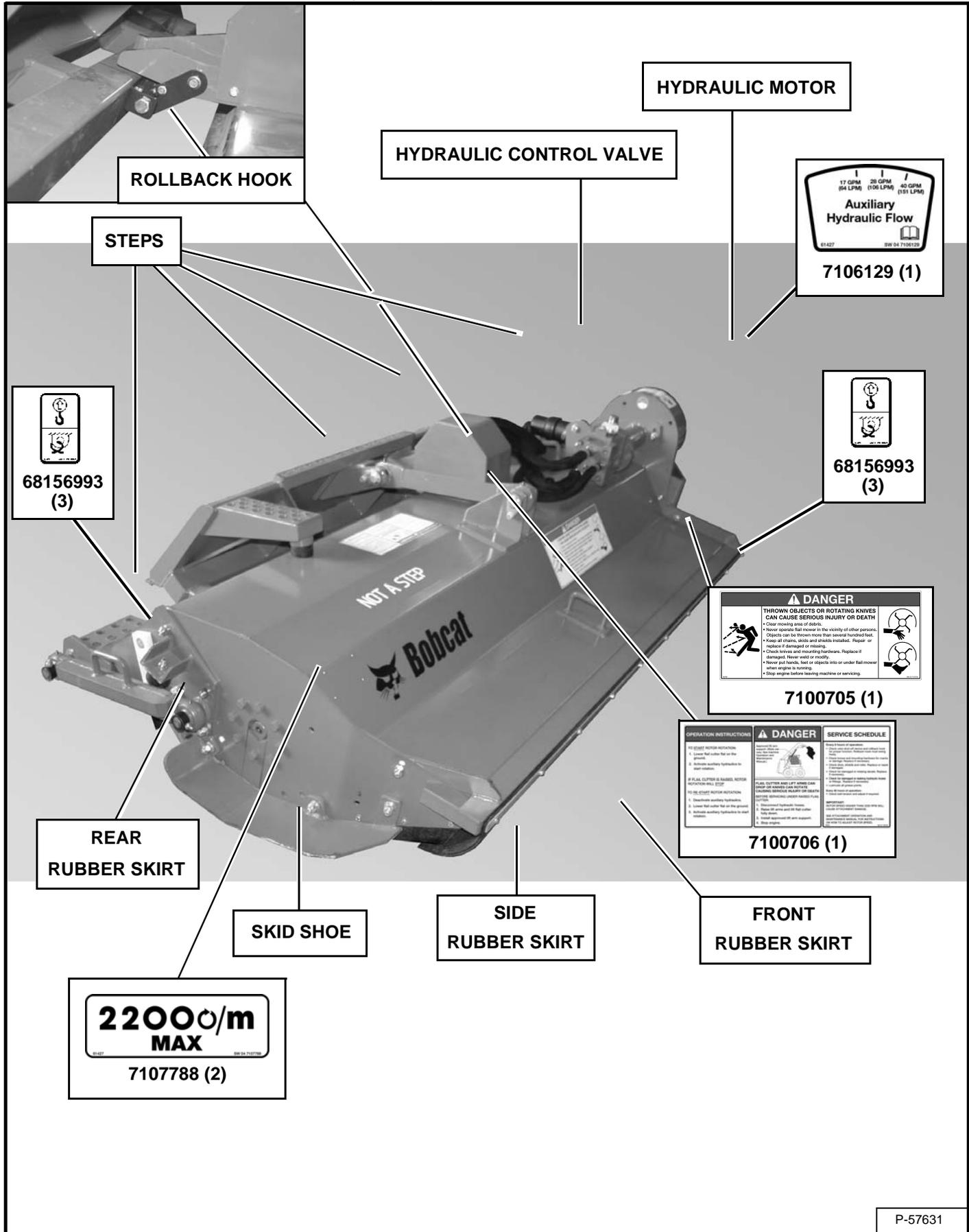
DELIVERY REPORT

Figure 4



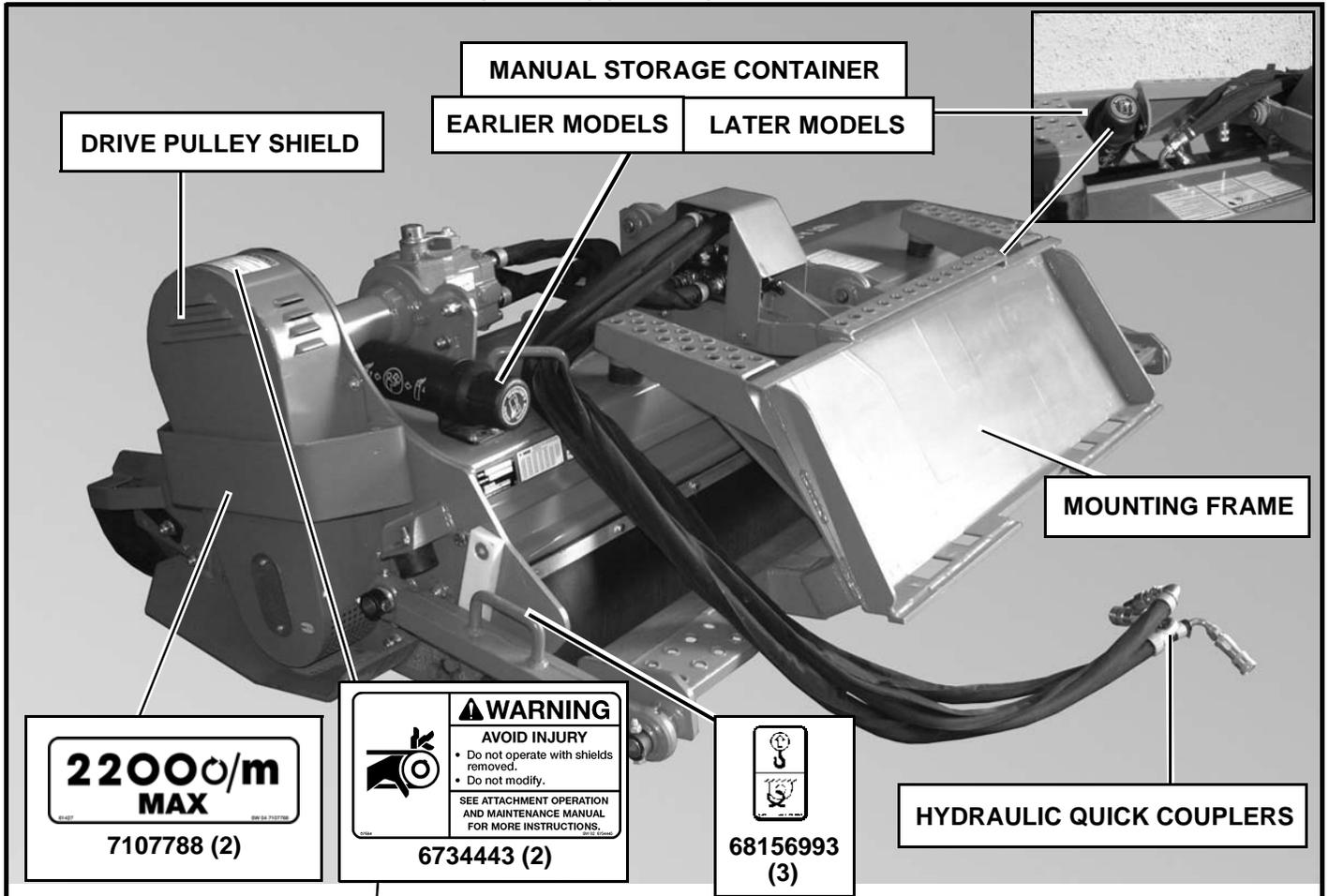
The delivery report must be filled out by the dealer and signed by the owner or operator when the flail cutter is delivered. An explanation of the form must be given to the owner. Make sure it is filled out completely [Figure 4].

IDENTIFICATION AND MACHINE SIGNS (DECALS)



P-57631

IDENTIFICATION AND MACHINE SIGNS (DECALS) (CONT'D)





SAFETY AND MAINTENANCE

SAFETY AND MAINTENANCE

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TROUBLESHOOTING

Chart



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

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 or such problems as a plugged fuel filter or hydraulic filter in the machine. Connect a flow meter to the machine to check the hydraulic pump output, relief valve setting and tubelines to check flow and pressure. (See the machine Service Manual for the correct procedure to connect the flow meter).

PROBLEM	CAUSE	CORRECTION
Abnormal machine vibrations.	The knife rotor is out of balance.	Rebalance the rotor.
	One or more of the knives are broken.	Replace broken knives.
	Loss of a counterweight.	Replace counterweight.
Poor Cutting.	The rotor does not reach the correct working speed.	Check belt tension.
	Machine adjustment does not comply with the instructions.	Check transmission rpm.
	Forward speed is too fast.	Adjust forward speed.
	Worn knives or parts.	Replace knives or sharpen uniformly. DO NOT change their weight and position on the rotor.
Machine absorbs too much power.	Hatch or roller out of adjustment.	Adjust the hatch and/or roller.
	Too much material and low machine power.	Adjust power and forward speed.
The roller does not turn.	Dry roller.	Lubricate roller.
	Material is fouling the guards.	Clean the guards.
	Roller is bent.	Replace roller.
	Sandy soil.	Fit roller with larger roller diameter.
Casing is punctured.	Worn sheet metal.	Replace the casing or scrap the attachment.
		Repair the casing if the rotor is still operational.
Bearings break frequently.	Casing is bent by excessive side loads.	Replace casing.
	No lubrication.	Lubricate bearings.
	Attachment overloaded.	Adjust power and forward speed.
	Rotor installed wrong.	Reinstall rotor.
	Rotor out of adjustment.	Adjust rotor.

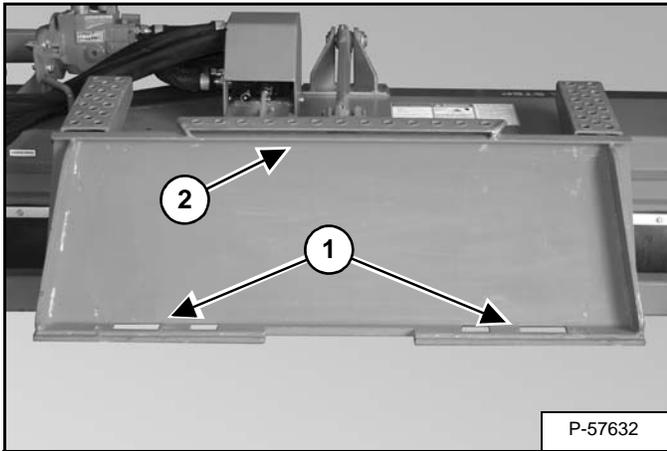


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DAILY INSPECTION

Attachment Mounting Frame

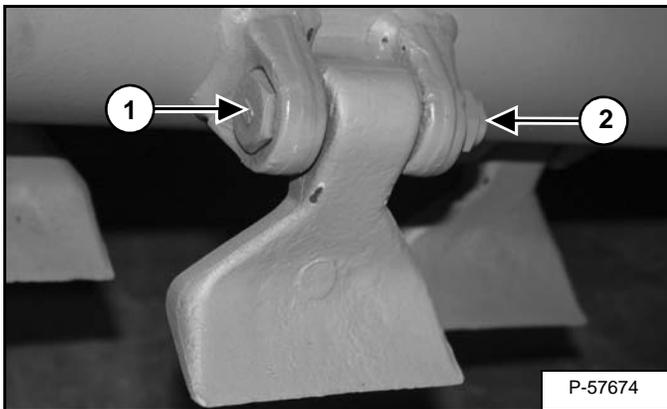
Figure 10-20-5



Inspect the Bob-Tach wedge mounts (Item 1), mounting flange (Item 2) **[Figure 10-20-5]** and all welds on the flail cutter for wear and damage each time the flail cutter is removed from the loader.

Frequently inspect the flail cutter to ensure that all components are secure and that all bolts and nuts are thoroughly tightened.

Figure 10-20-6



Periodically inspect the flail knife bolts (Item 1) and nuts (Item 2) **[Figure 10-20-6]** for tightness. They must be secured thoroughly as loosening could damage the rotor.

DAILY INSPECTION (CONT'D)

Bob-Tach

Hand Lever Bob-Tach

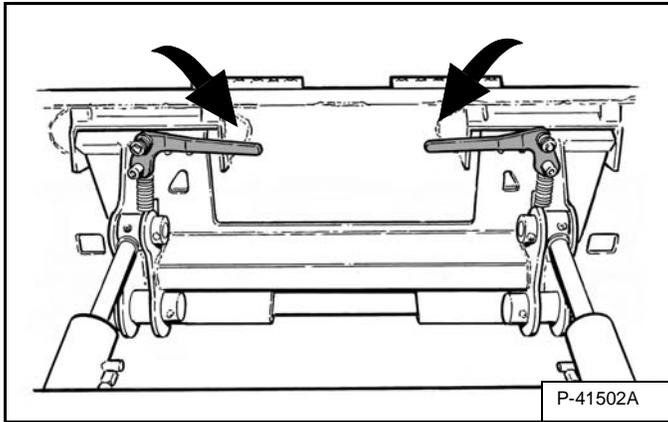
! WARNING

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.

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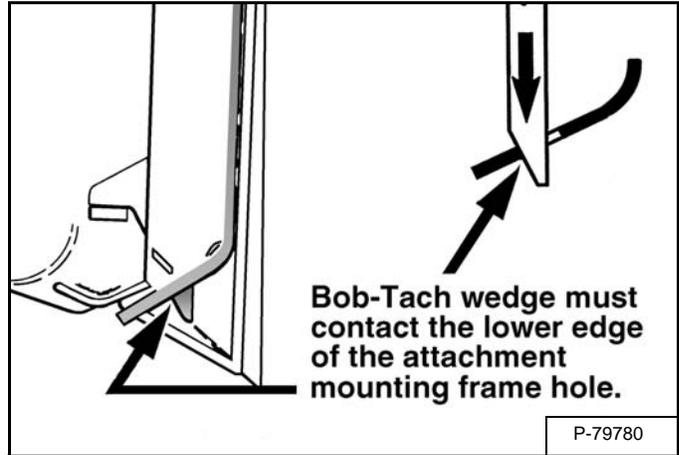
Figure 10-20-7



Push down on the Bob-Tach levers until they are fully engaged in the locked position [Figure 10-20-7] (wedges fully extended through the attachment mounting frame holes).

The levers and wedges must move freely [Figure 10-20-7].

Figure 10-20-8



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 10-20-8].

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



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 10-20-9

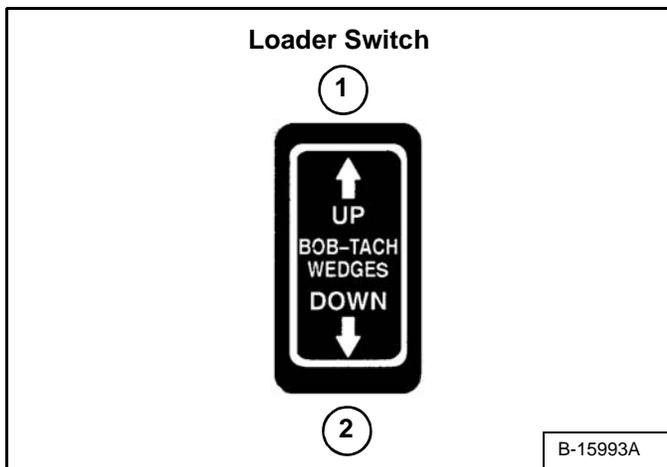


Figure 10-20-10

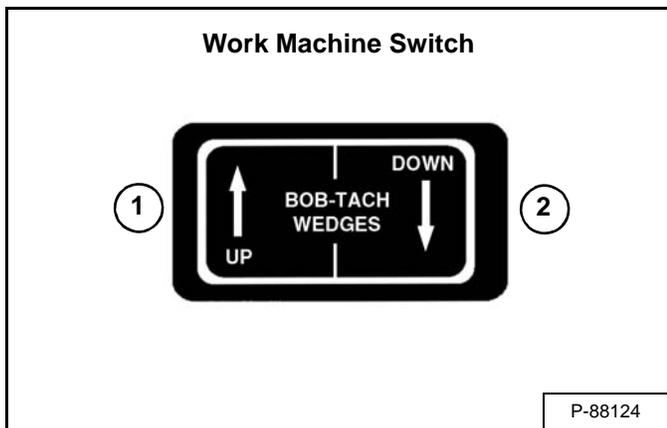
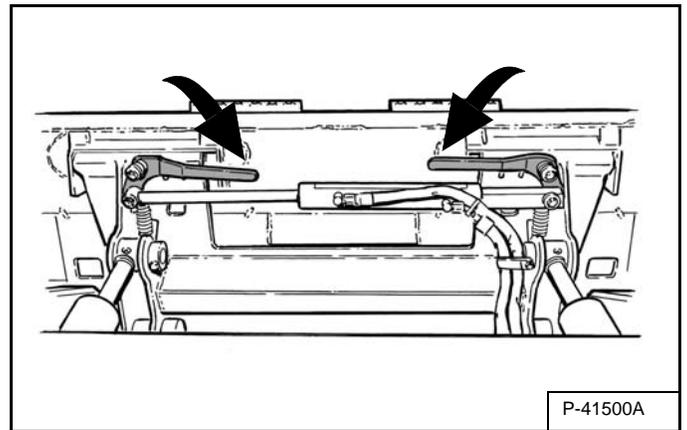
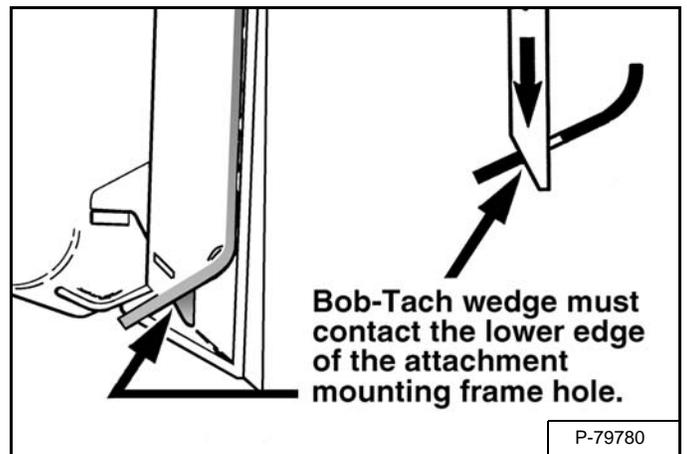


Figure 10-20-11



Push and hold the BOB-TACH “WEDGES DOWN” switch (Item 2) [Figure 10-20-9] and [Figure 10-20-10] until the levers are fully engaged in the locked position [Figure 10-20-11] (wedges fully extended through the attachment mounting frame holes).

Figure 10-20-12



The wedges must extend through the holes in the attachment mounting frame, securely fastening the attachment to the Bob-Tach [Figure 10-20-12].

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.)

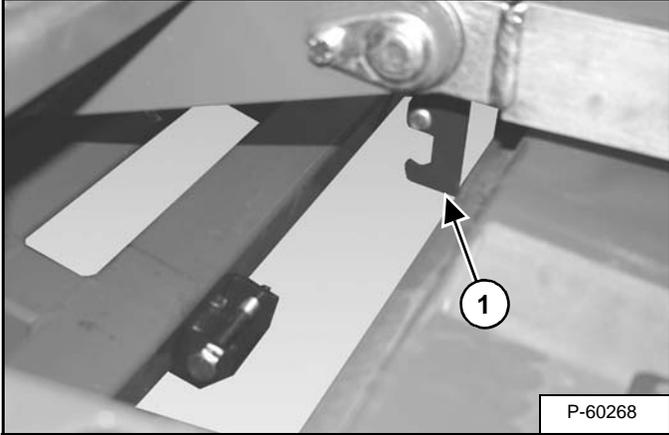
DAILY INSPECTION (CONT'D)

Rollback Hook Inspection

A rollback hook is provided to prevent the cutter deck from contacting the frame if the attachment is raised and fully rolled back on some machines.

NOTE: The rollback hook must swing freely.

Figure 10-20-13



Inspect the rollback hook (Item 1) [Figure 10-20-13]. The rollback hook must swing freely. Inspect for cracks, loose hardware or damage. Replace any parts that are damaged bent or missing.

Checking The Rotor Shut-Off Device

WARNING

- Never operate without rotor shut-off device.
- Never modify the rotor shut-off device and check that it is operating properly.

W-2628-0405

Use the following procedures to check the rotor shut-off device.

Procedure 1

Enter the machine. (See the Flail Cutter Operation & Maintenance Manual for the correct procedure.)

While in the operator seat, seat belt fastened and seat bar lowered, start the engine.

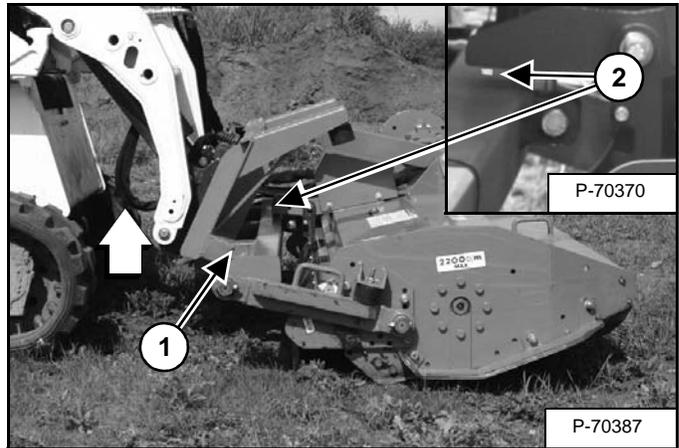
Figure 10-20-14



Place the flail cutter flat on the ground, fully lower the lift arm(s) [Figure 10-20-14].

Engage the auxiliary hydraulics. (See the Machine Operation & Maintenance Manual for the correct procedure.) The rotor should rotate.

Figure 10-20-15



Raise the lift arm(s), when the lower cross member of the attachment mounting frame (Item 1) comes in contact with the shut-off lever (Item 2) [Figure 10-20-15], the rotor must come to a complete stop within 7 seconds.

Lower the lift arm(s) fully to check that the rotor does not restart.

NOTE: If the rotor does not come to a complete stop within seven seconds or begins rotating again after the lift arms are fully lowered during any of the above procedures, see your Bobcat dealer for service.

DAILY INSPECTION (CONT'D)

Checking The Rotor Shut-Off Device (Cont'd)

Procedure 2

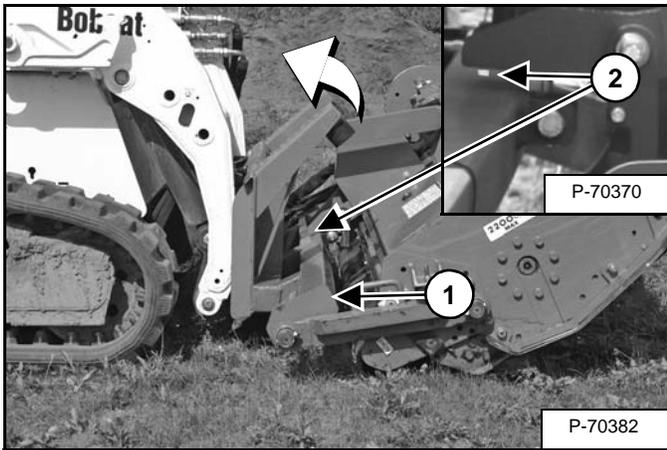
Figure 10-20-16



Place the flail cutter flat on the ground, fully lower the lift arm(s) [Figure 10-20-16].

Engage the auxiliary hydraulics. (See the Machine Operation & Maintenance Manual for the correct procedure.) The rotor should rotate.

Figure 10-20-17



Tilt the Bob-Tach back, when the mounting frame (Item 1) comes in contact with the shut-off lever (Item 2) [Figure 10-20-17], the rotor must come to a complete stop within 7 seconds.

Lower the lift arm(s) fully to check that the rotor does not restart.

NOTE: If the rotor does not come to a complete stop within seven seconds or begins rotating again after the lift arms are fully lowered during any of the above procedures, see your Bobcat dealer for service.

Procedure 3

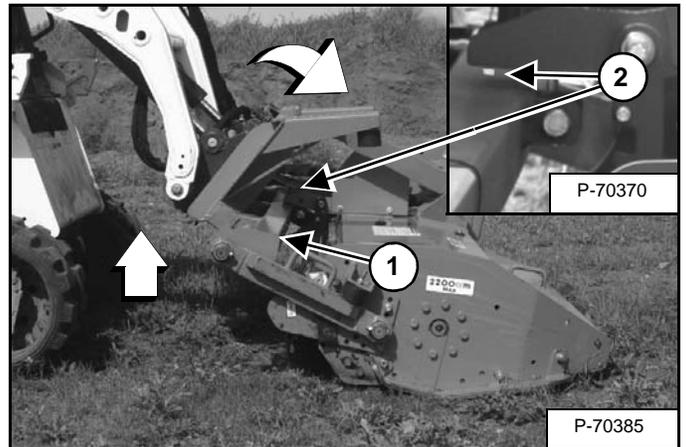
Figure 10-20-18



Place the flail cutter flat on the ground, fully lower the lift arm(s) [Figure 10-20-18].

Engage the auxiliary hydraulics. (See the Machine Operation & Maintenance Manual for the correct procedure.) The rotor should rotate.

Figure 10-20-19



Raise the lift arm(s) and tilt the Bob-Tach forward, when the mounting frame (Item 1) comes in contact with the shut-off lever (Item 2) [Figure 10-20-19], the rotor must come to a complete stop within 7 seconds.

Lower the lift arm(s) fully to check that the rotor does not restart.

NOTE: If the rotor does not come to a complete stop within seven seconds or begins rotating again after the lift arms are fully lowered during any of the above procedures, see your Bobcat dealer for service.

DAILY INSPECTION (CONT'D)

Checking The Rotor Shut-Off Device (Cont'd)

Restart Rotor Rotation

Disengage the auxiliary hydraulics by taking it out of detent, re-engage the auxiliary hydraulics into detent. The rotor should start rotating.

NOTE: Shut-off valve WILL NOT reset unless the auxiliary hydraulics are cycled off first.

DAILY INSPECTION (CONT'D)

Checking Mechanical Linkage For Rotor Shut-Off Device

! WARNING

- Never operate without rotor shut-off device.
- Never modify the rotor shut-off device and check that it is operating properly.

W-2628-0405

! WARNING

AVOID INJURY OR DEATH

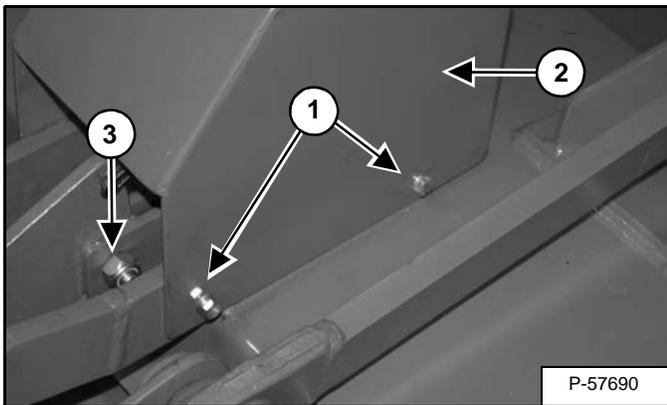
Wear safety glasses to prevent eye injury when any of the following conditions exist:

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

W-2019-0907

Stop the engine and exit the loader. (See the Flail Cutter Operation & Maintenance Manual for the correct procedure.)

Figure 10-20-20



Remove the four bolts (Item 1), then remove cover (Item 2) [Figure 10-20-20].

Check if the pivot bolt (Item 3) [Figure 10-20-20] in the shut-off lever is loose or missing.

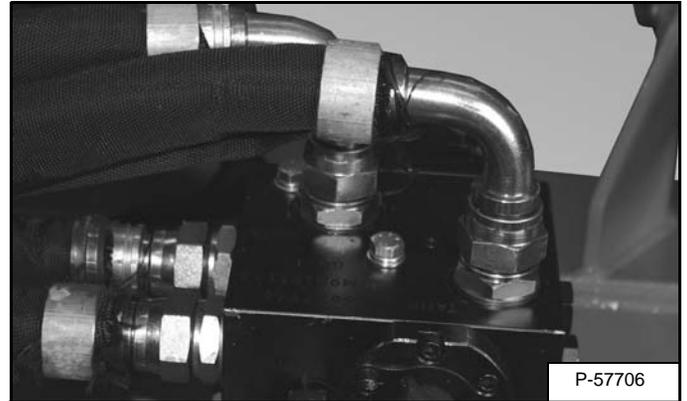
! WARNING

AVOID BURNS

Hydraulic fluid, tubes, fittings and quick couplers can get hot when running machine and attachments. Be careful when connecting and disconnecting quick couplers.

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Figure 10-20-21

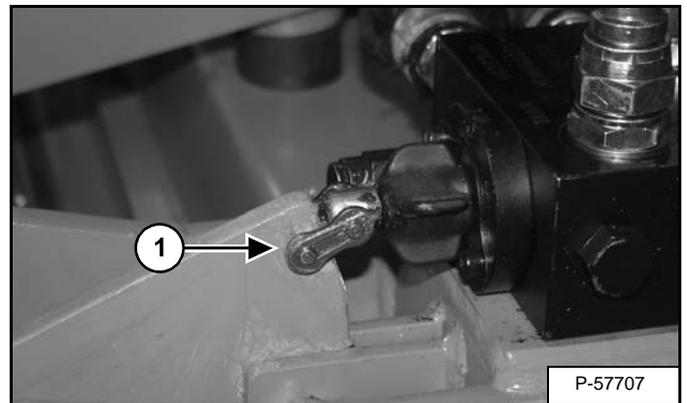


Check for loose or missing bolts mounting the control valve [Figure 10-20-21] to the frame.

Check hydraulic hoses for loose connections.

Repair or replace as needed.

Figure 10-20-22



Check the condition of the connector link (Item 1) [Figure 10-20-22].

DAILY INSPECTION (CONT'D)

Follow the flail cutter service schedule for routine maintenance. It is located on top of the attachment, just right of the hydraulic control valve.

Check the following items every **8 hours** of operation:

- Check rotor shut-off device and rollback hook for proper function. Rollback hook must swing freely.
- Check the knives and mounting hardware for cracks or damage. Replace if necessary.
- Check deck, shields and roller. Replace or repair if damaged.
- Check for damaged or missing decals. Replace if necessary.
- Check for damaged or leaking hydraulic hoses or fittings. Replace if necessary.
- Lubricate all grease points.

Check the following every **50 hours** of operation:

- Check belt tension and adjust if required.

WARNING

AVOID INJURY OR DEATH

Diesel fuel or hydraulic fluid under pressure can penetrate skin or eyes, causing serious injury or death. Fluid leaks under pressure may not be visible. Use a piece of cardboard or wood to find leaks. Do not use your bare hand. Wear safety goggles. If fluid enters skin or eyes, get immediate medical attention from a physician familiar with this injury.

W-2072-0807

WARNING

- Never operate without rotor shut-off device.
- Never modify the rotor shut-off device and check that it is operating properly.

W-2628-0405

Figure 10-20-23

SERVICE SCHEDULE

Every 8 hours of operation:

- Check rotor shut-off device and rollback hook for proper function. Rollback hook must swing freely.
- Check knives and mounting hardware for cracks or damage. Replace if necessary.
- Check deck, shields and roller. Replace or repair if damaged.
- Check for damaged or missing decals. Replace if necessary.
- Check for damaged or leaking hydraulic hoses or fittings. Replace if necessary.
- Lubricate all grease points.

Every 50 hours of operation:

- Check belt tension and adjust if required.

IMPORTANT:
ROTOR SPEED HIGHER THAN 2200 RPM WILL CAUSE ATTACHMENT DAMAGE.

SEE ATTACHMENT OPERATION AND MAINTENANCE MANUAL FOR INSTRUCTIONS ON HOW TO ADJUST ROTOR SPEED.

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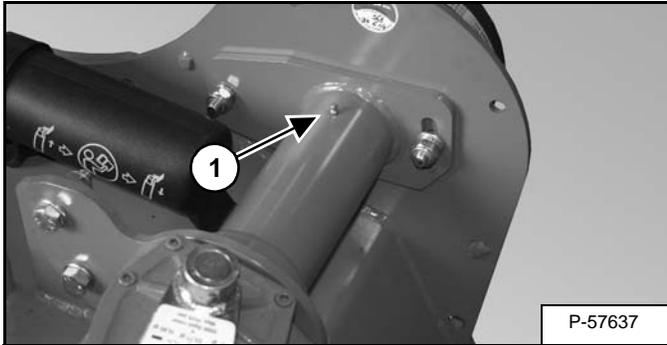
Service schedule decal [Figure 10-20-23].

LUBRICATION

Lubricate the following locations after every 8 hours of operation.

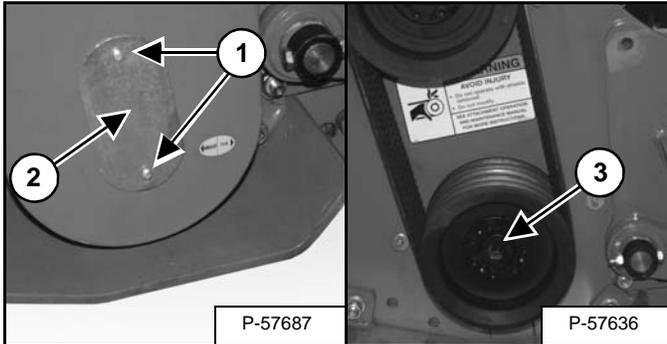
NOTE Always use a good quality lithium based grease when lubricating the attachment.

Figure 10-30-1



Lubricate fitting (Item 1) [Figure 10-30-1]

Figure 10-30-2

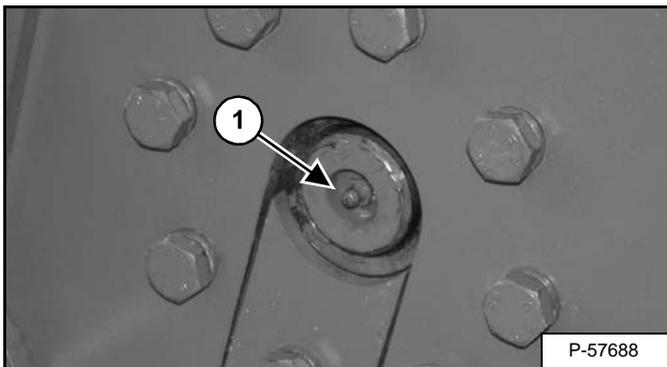


Remove bolts (Item 1), then remove cover plate (Item 2) [Figure 10-30-2].

NOTE: The drive pulley shield has been removed (right frame) [Figure 10-30-2] for picture clarity.

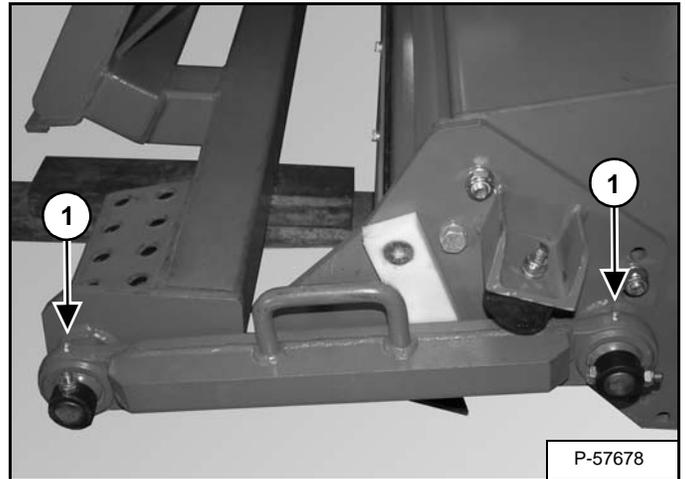
Lubricate fitting (Item 3) [Figure 10-30-2] on the left side of the mower. Replace cover plate and bolts.

Figure 10-30-3



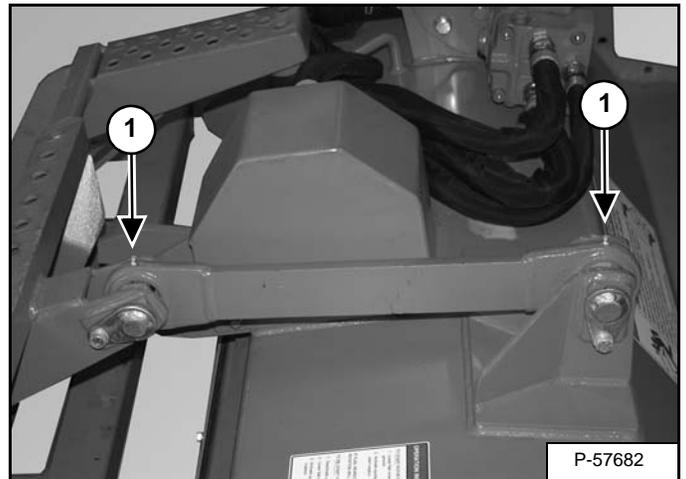
Lubricate fitting (Item 1) [Figure 10-30-3] on the left side of the drum.

Figure 10-30-4



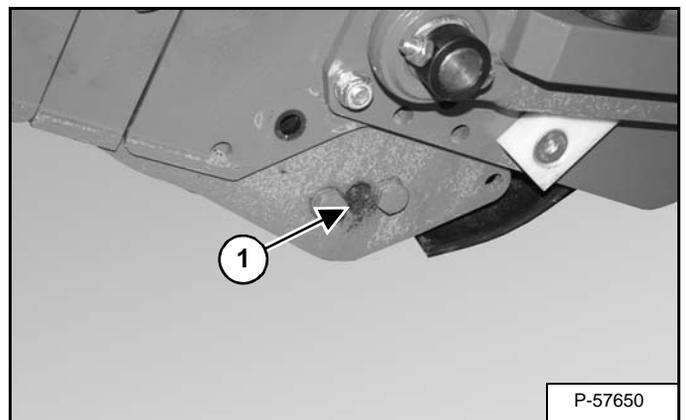
Lubricate fittings (Item 1) [Figure 10-30-4] on both side link arms of the Flail Cutter.

Figure 10-30-5



Lubricate fittings (Item 1) [Figure 10-30-5] on the center pivot arm.

Figure 10-30-6



Lubricate fitting (Item 1) [Figure 10-30-6] on both ends of the roller.



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REAR HATCH

Adjustment

NOTE: As the rear hatch is progressively opened to one of the seven available positions less hydraulic power is required. Power requirements are also affected by the roller height adjustment. The degree of mulching is also reduced as the rear hatch is opened further.

Stop the engine and exit the machine.

WARNING

Before you leave the operator's seat:

- Lower the lift arms, put the attachment flat on the ground.
- Stop the engine.
- Engage the parking brake.
- Raise seat bar.
- (Foot Pedal Controls) Move pedals until both lock.
- (Advanced Control System-ACS) Move the hydraulic controls to the **NEUTRAL POSITION** to make sure that both lift and tilt functions are deactivated.
The seat bar system must deactivate the lift and tilt control functions when the seat bar is up. Service the system if hand controls do not deactivate.
- (Selectable Joystick Controls-SJC) Move the joysticks to the **NEUTRAL POSITION** to make sure that travel and hydraulic functions are deactivated.
The seat bar system must deactivate these functions when the seat bar is up. Service the system if controls do not deactivate.

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WARNING

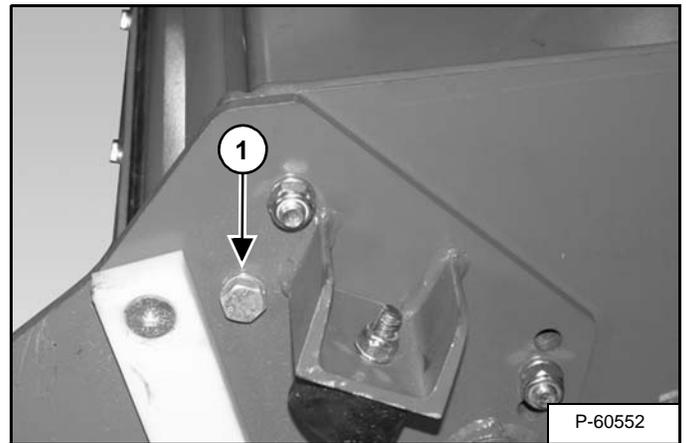
AVOID INJURY OR DEATH

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.

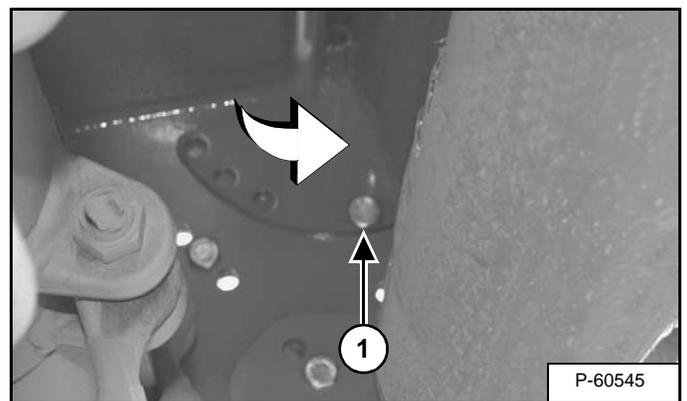
W-2019-0907

Figure 10-40-1



Loosen rear hatch pivot bolts (Item 1) [Figure 10-40-1] on both sides of the flail cutter.

Figure 10-40-2



Remove bolts (Item 1) [Figure 10-40-2] and nuts from both sides of the flail cutter, move the rear hatch to the desired position.

NOTE: When installing the bolts (Item 1) [Figure 10-40-2] that hold the rear hatch in position, install them from the inside towards the outside. Placing the nut on the outside of the flail cutter.

Re-install the bolts securing the rear hatch in position. Tighten bolts (Item 1) [Figure 10-40-2] on both sides of the flail cutter to 65-70 ft.-lb. (88-94 N•m) torque.

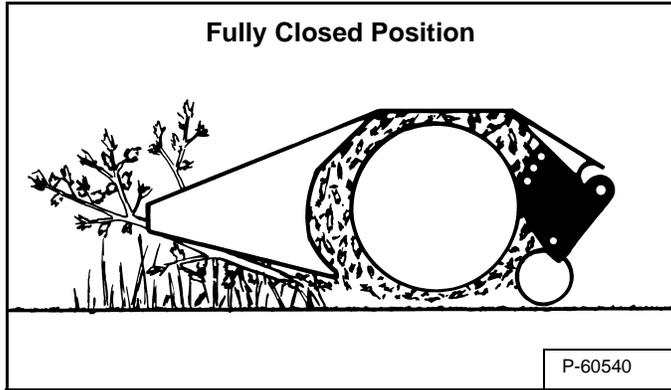
Tighten rear hatch pivot bolts (Item 1) [Figure 10-40-1] to 65-70 ft.-lb. (88-94 N•m) torque.

REAR HATCH (CONT'D)

Rear Hatch Positions

NOTE: When operating the flail cutter in any of the following positions it is important that the rotor speed of 2200 rpm is maintained during operation.

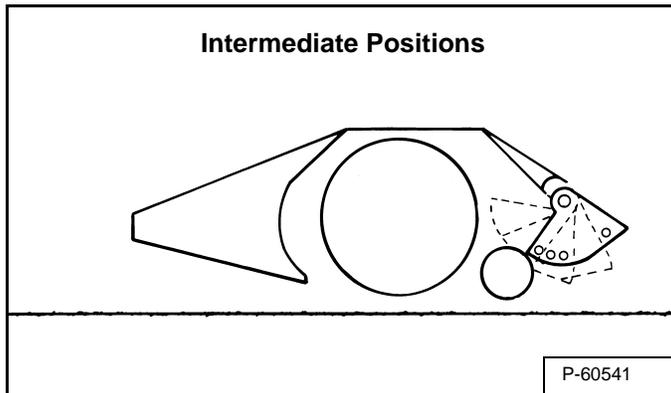
Figure 10-40-3



The fully closed position is generally used to mulch prunings and when a fine homogeneous mulch is desired.

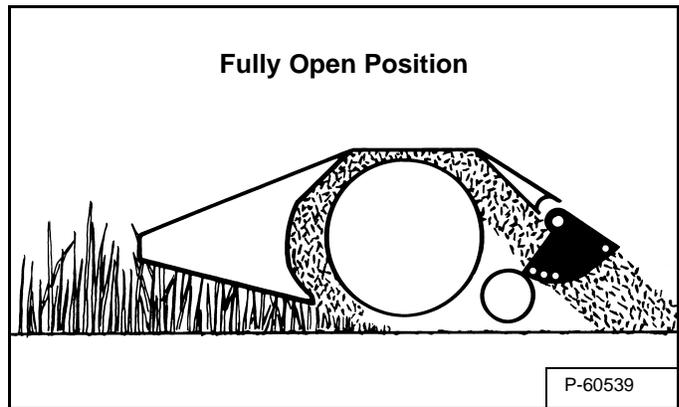
When the rear hatch is in the fully closed position, the material being mulched will circulate between the rotor and the roller [Figure 10-40-3].

Figure 10-40-4



The intermediate positions allow the operator to adjust the degree of mulching required and discharge the mulched material over the roller [Figure 10-40-4].

Figure 10-40-5



The fully open position enables a more efficient cut at high forward speeds, reduces fuel consumption and minimizes the hydraulic power required.

When the rear hatch is in the fully open position, the cut material exits the flail cutter over the roller [Figure 10-40-5].

NOTE: Cutting wet grass is difficult and absorbs a lot of hydraulic power. Adjust travel speed as needed.

DRIVE BELTS

Adjustment

NOTE: Check belt tension every 50 hours of use.

! WARNING

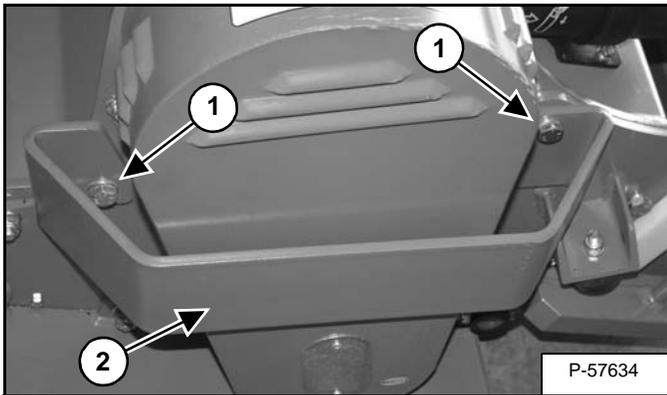
AVOID INJURY OR DEATH

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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Figure 10-50-1

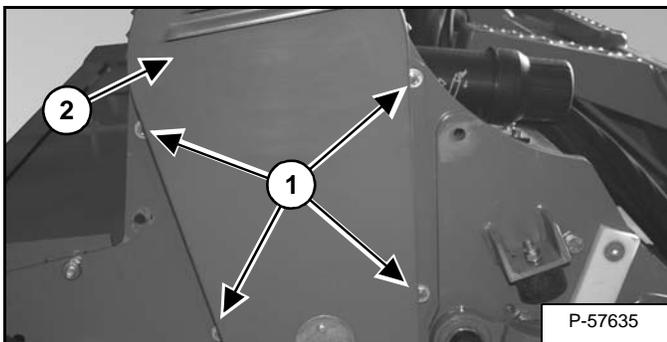


Remove bolts (Item 1) [Figure 10-50-1].

Remove brush guard (Item 2) [Figure 10-50-1].

Installation: Tighten bolts to 65-70 ft.-lb. (88-95 N•m) torque.

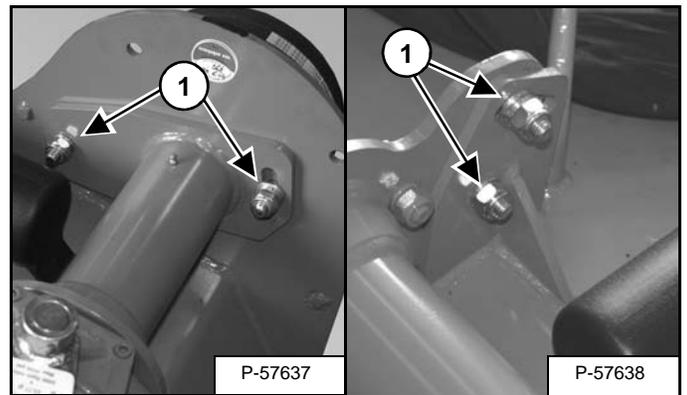
Figure 10-50-2



Remove bolts (Item 1) and drive pulley shield (Item 2) [Figure 10-50-2].

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

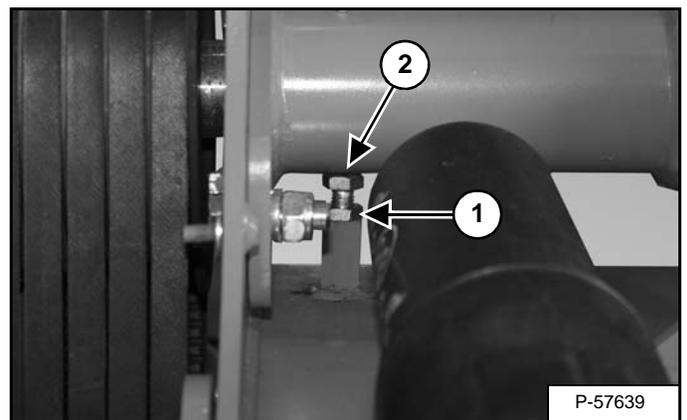
Figure 10-50-3



Loosen the four bolts (Item 1) [Figure 10-50-3] supporting the gear box and extension.

Installation: Tighten bolts to 65-70 ft.-lb. (88-95 N•m) torque.

Figure 10-50-4

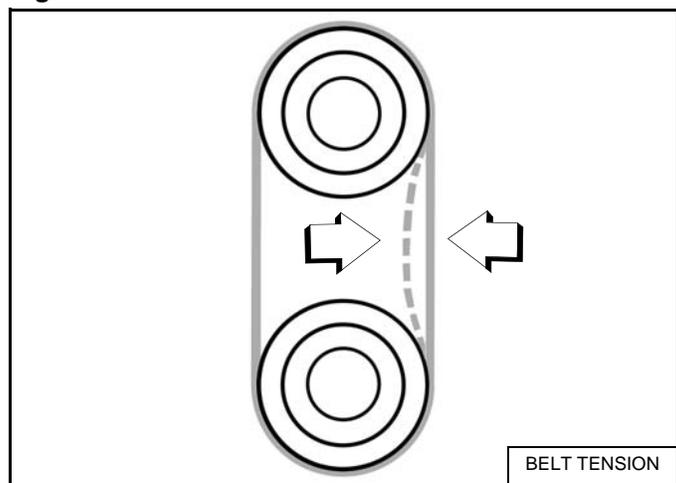


Loosen jam nut (Item 1), then turn the tension bolt (Item 2) [Figure 10-50-4] counterclockwise to increase belt tension. Turn the tension bolt clockwise to decrease belt tension.

DRIVE BELTS (CONT'D)

Adjustment (Cont'd)

Figure 10-50-5



Check belt tension by pressing forcefully on the belt.

Depending on model and the distance between pulleys, the belt should move between 0.2-0.4 in. (5-10 mm) **[Figure 10-50-5]**.

Once the desired belt tension is obtained, tighten jam nut (Item 1) **[Figure 10-50-4]**.

Install drive pulley shield and brush guard.

HYDRAULIC SYSTEM

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HYDRAULIC SYSTEM

Product: Bobcat Flail Cutter FC155/FC175/FC200 Service Repair Workshop Manual
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