

450 Crawler

S/N 3038436 and After

Operators Manual

9-1610



Reprinted

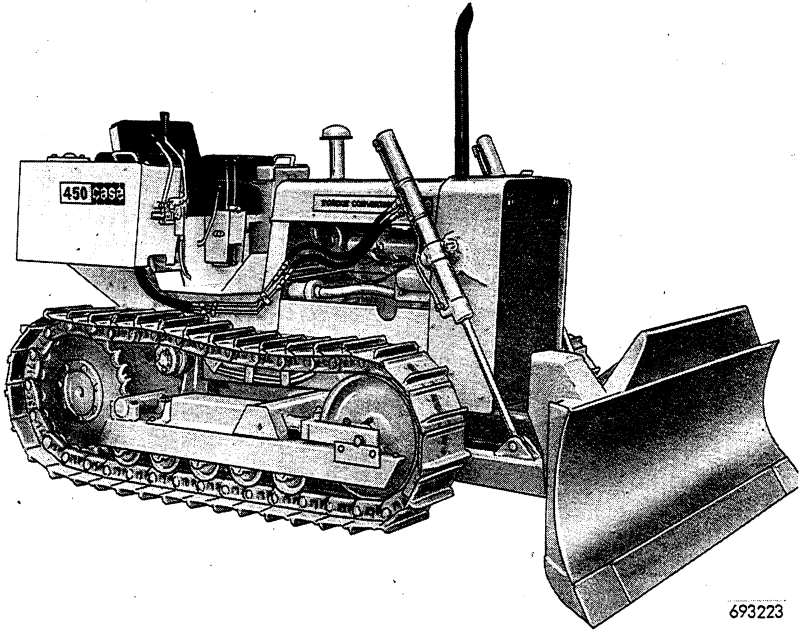
CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



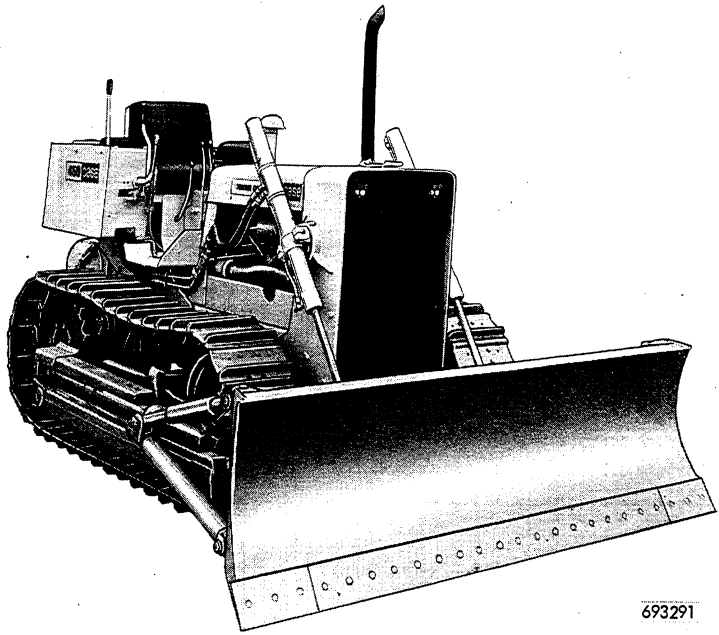
- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL



693223

Figure 3 - Power Angle-Tilt Dozer



693291

Figure 4 - Power Angling Dozer

1. Stop the crawler. Place the shuttle lever and track speed levers in neutral. Reduce engine speed to the lowest idle.
2. In one continuous motion, shift the dual range lever to the desired speed range.
3. If step 2. is not performed smoothly, the dual range lever will move only partially to the desired position. The engine must then be stopped, and the dual range lever shifted to the desired position.

16. **SHUTTLE LEVER:** Controls direction of crawler travel. The lever has three positions: forward, neutral and reverse.

The center position is neutral. When the lever is pushed forward, both tracks will travel forward. When the lever is pulled back, both tracks will travel in reverse.

CAUTION: Always reduce engine speed before shifting the shuttle lever to prevent shock loads that may damage the drive-shaft, transmission or final drives.

17. **BRAKE PEDALS:** These two pedals are used to stop or steer the crawler, and can be used together or independently.

When the left pedal is depressed, it disconnects the clutch on the left side of the transmission so that no power is delivered to the left track, and the left track is braked at the same time. The right pedal has the same function for the right track.

Depress both pedals simultaneously to stop the crawler. A latch is provided on the pedals so they can be used together.

Whenever the clutch is disconnected, depress the brake pedals enough to prevent freewheeling down a steep grade.

NOTE: On crawlers equipped with a clutch cutout, power to the tracks can be either continuous or interrupted when the brake pedals are used.

18. **CLUTCH CUTOUT LEVER:** The lever has two positions and affects brake pedal operation as follows:

- (1) Push lever in: Depressing a brake pedal applies the brake to a particular track and also disconnects the clutch so that no power is delivered to that track. This allows interrupted track power for stopping, pivot turning, and maximum hydraulic power as in loader operations.

Stall Speed

While loading or bulldozing, do not operate the crawler at or near stall speed too long or too frequently. Excessive stall speed can overheat oil in the transmission-torque converter system and cause serious damage to the system. See page 17.

Hillside Operation



WARNING: When operating on steep grades, precautions must be taken against engine stall and freewheeling of tracks:

1. Keep the dual range lever in low range.
2. Use the track speed levers for steering.
3. Use the engine for braking.
4. Use the brake pedals for stopping.



WARNING: Always operate the crawler in the same direction as indicated by the shuttle lever. Never allow the crawler to coast backward down a steep grade with the shuttle lever in the forward position. The engine may stall and allow the crawler to freewheel down the grade.

Cold Weather Operation

The crawler is designed for all weather operation. But certain precautions must be taken during cold weather to prevent damage and assure easy starting and efficient operation:

1. **BATTERY:** Keep the storage battery fully charged.
2. **LUBRICANTS:** Use oil and grease of correct viscosity in crankcase, transmission, final drives and pressure fittings.
3. **COOLING SYSTEM:** Use a reputable brand of high boiling point, permanent type, ethylene glycol antifreeze.
4. **OVERNIGHT STORAGE:** Keep tractor in a closed shelter or cover it with a tarpulin. If necessary to park tractor in the open overnight or longer, drive it onto planks or timbers to prevent tracks freezing to the ground. Clean wet mud and slush

ENGINE LUBRICATION SYSTEM

Oil Level

Before starting daily operations and before starting the engine, check the engine crankcase oil level by means of the filler tube dipstick located on the left side of the engine. See Figure 20. Add oil if level is at or below the "Add" mark. Do not overfill.

When adding oil, allow sufficient time for the oil to run down into the crankcase before rechecking the oil level. Never check the oil level while the engine is running.

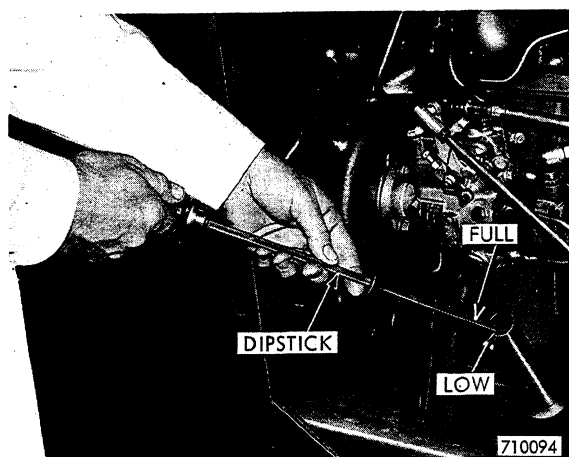


Figure 20

Oil Change

Change Interval

The engine crankcase oil should be changed after the first 20 hours of operation, and every 120 hours thereafter.

If engine service is severe, with frequent stopping and starting and high or low engine temperatures, the engine oil should be changed oftener to prevent sludge formation and harmful deposits.

NOTE: The oil should be drained, while still hot from engine operation, for the most thorough removal of contaminants.



WARNING: Always remove the pressure cap slowly. Quick removal of the cap can reduce system pressure enough to make the coolant boil out of the radiator opening and result in painful burns to the operator.

Coolant

Coolant Level

Check the coolant level before each daily operation while the engine is still cold. The coolant, while still cold, should be approximately 2 inches below the level of the radiator cap opening. Add coolant if necessary, but do not overfill.

CAUTION: Never pour coolant into a hot engine. The engine block or cylinder heads could crack because of sudden contraction caused by temperature differences between the metal and the coolant.

Never remove the radiator cap when the engine temperature gauge shows the engine is overheated. Coolant may boil away allowing engine parts to cool too fast and causing the block or heads to crack.

Antifreeze

Use only a reputable brand of permanent type, high boiling point, ethylene glycol antifreeze.

The crawler is shipped from the factory with permanent type antifreeze in the cooling system for protection down to -20°F . (-29°C). The antifreeze should never be used more than one winter due to natural breakdown of rust inhibitors.

Do not mix different types or brands of antifreeze in the cooling system. They may not be chemically compatible, and the mixtures will not give correct test readings.

NOTE: The use of low boiling point, alcohol type antifreeze is not recommended. Evaporation loss would be excessive because the alcohol boiling point is frequently below the crawler minimum operating temperature.

To replace filters:

1. Clean the filter side of the machine thoroughly. Be sure no dirt is left on the filter bodies.
2. Close the shutoff valve on the fuel tank. Open the drain valve on the primary filter.
3. Remove both filters with a strap wrench. Discard filters.
4. Apply a thin film of grease to the gaskets on the new filters. Install both by turning on clockwise until gasket contact is made. Hand tighten 1/2 to 3/4 turn. Bleed system, page 56.

NOTE: The filters have different size threads so getting them mixed up is impossible.

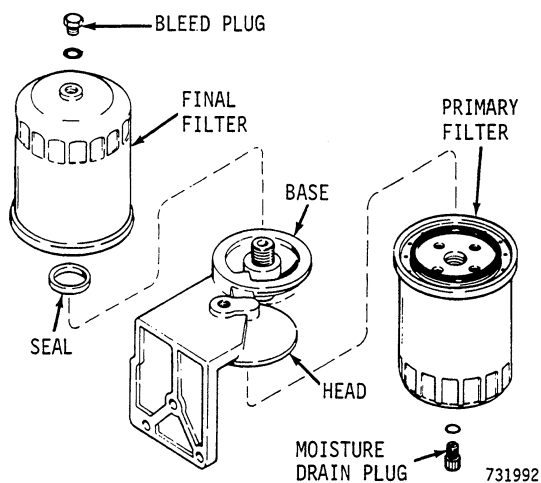


Figure 35a - Fuel Filters Late Models

Throttle Linkage Pivot Shaft

Every 120 hours of operation, lubricate the throttle linkage pivot shaft with lithium-soap base grease. The grease pressure fitting is located in the center of the shaft.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

Pull out the clutch cutout lever and keep it pulled out during the bleeding operation. See page 19.

SLAVE CYLINDER

To bleed the slave cylinder, perform steps 1 through 4 as described on page 68. Then proceed as follows:

TRANSMISSION CONTROL VALVE

Remove operator's seat cushion for access to the transmission control valve bleed screw. See Figure 42. Bleed valve as follows:

1. Have an assistant pump up the brake with the foot pedal.
2. Loosen the bleed screw on the transmission control valve.
3. Have assistant depress the brake pedal and hold it down. Tighten bleed screw, and release the brake pedal.
4. Repeat the preceding steps until a steady stream of brake fluid flows from the bleed screw hole as the pedal is depressed.

After both brake systems have been bled, refill the brake master cylinders to within 1/2" of the top of the reservoir. Use a brake fluid meeting SAE J1703 specifications.

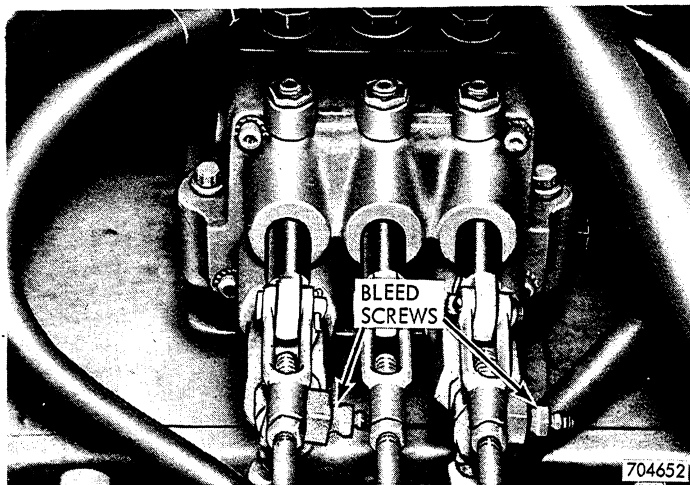


Figure 42

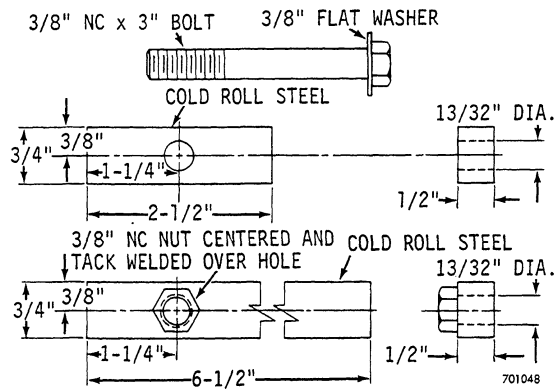


Figure 53a - Track Seal Holding Tools

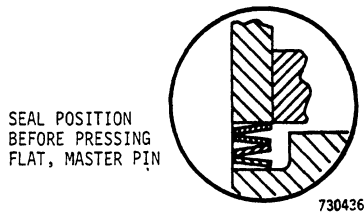


Figure 53b

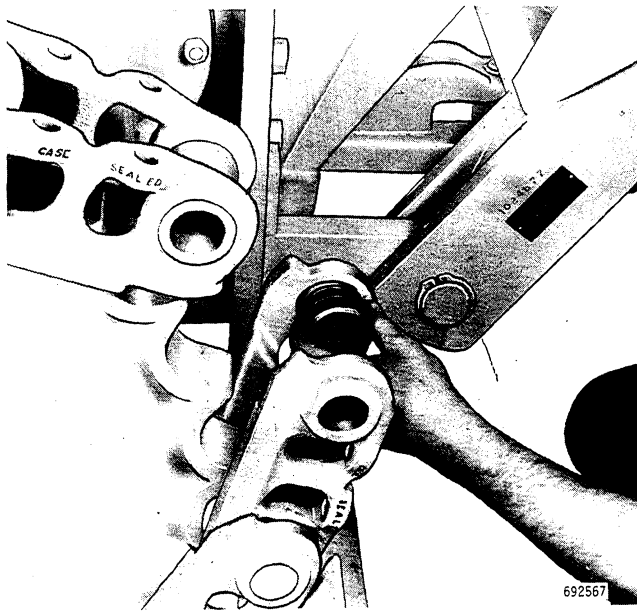


Figure 53c - Installing Seals

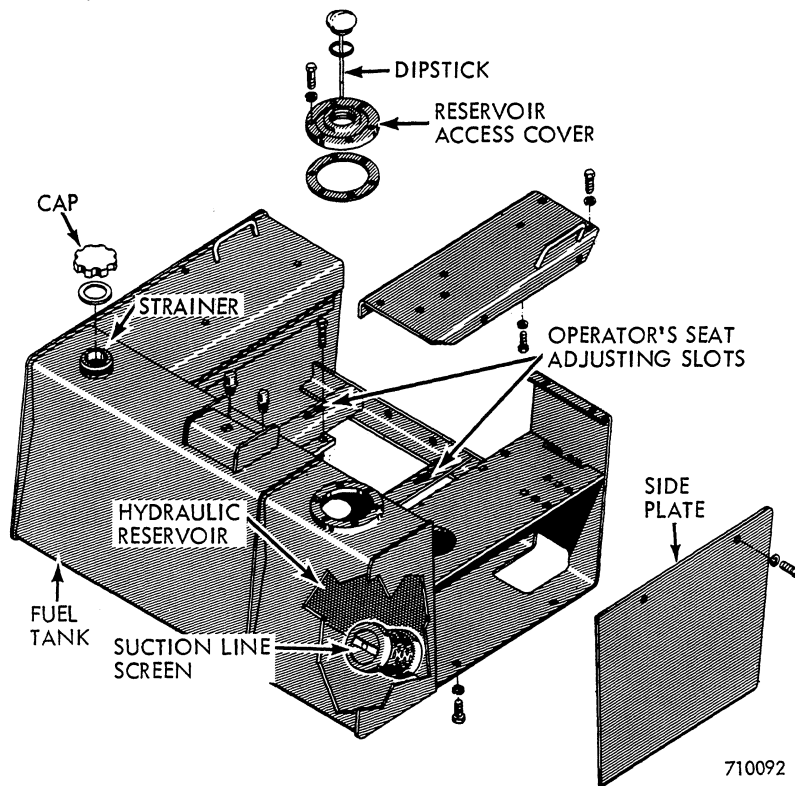


Figure 62

Oil Change

After every 1200 hours of operation the equipment hydraulic reservoir should be drained and refilled. Recommended for a refill is Case TCH oil which is stable under a wide temperature range.

To refill the system, remove the drain plug beneath the tank and allow the oil to drain completely. See Figure 62. Replace drain plug and put in Case TCH oil. The capacity of the reservoir is approximately 7-1/2 U.S. gallons of oil.

CAUTION: Never run the crawler engine with oil removed from the reservoir tank. The hydraulic pump could be damaged within seconds.

Suction Line Screen

The equipment hydraulic system suction line screen must be cleaned after every 240 hours of operation.

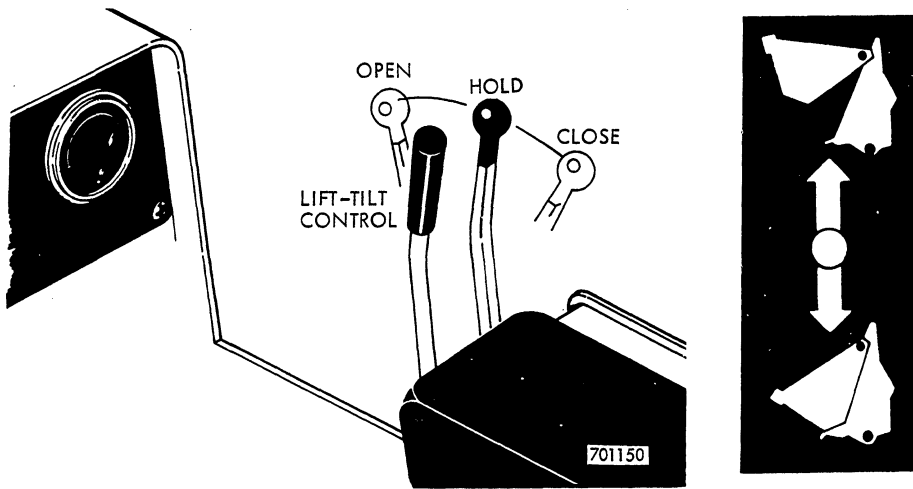


Figure 68

On loaders equipped with additional components, a third lever will be located to the right of the clam lever. Push the clam lever forward to open clam, and pull the lever back to close the clam. The lever will automatically return to the Hold position when released.

Gauges

Bucket Level Indicator

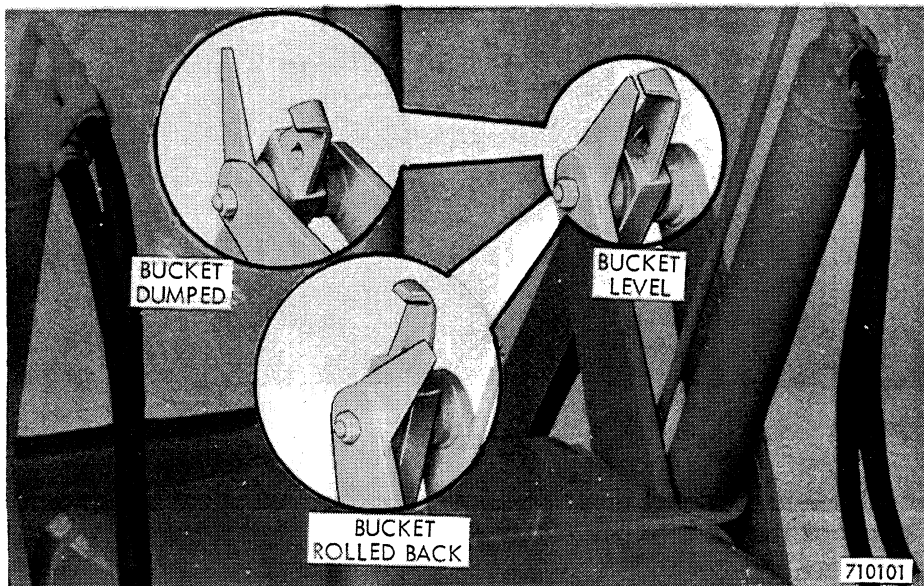


Figure 69

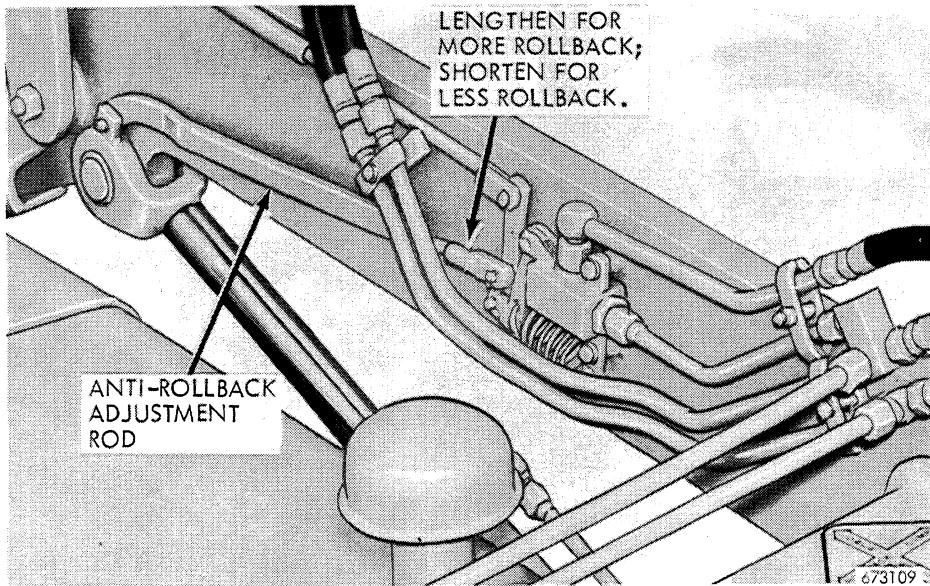


Figure 78 - Anti-Rollback Adjustment

Return-To-Dig Adjustment

Crawlers Before SN 3048572

Adjust the limit switch at the control valve so that when the tilt spool moves into the rollback position, the limit switch can be heard closing.

1. Raise loader to full height and dump the bucket. Increase engine speed to about 1/2 throttle and move lift-tilt lever to left and forward detent positions. When bucket reaches ground, stop engine.
2. Refer to Figure 79. One of two conditions will exist: (1) The bucket did not roll back enough. Loosen adjusting clamp and move limit switch housing up. Tighten clamp. (2) The bucket rolled back too far. Loosen adjusting clamp and move limit switch housing down. Tighten clamp.
3. After adjusting the housing, repeat step one and check the adjustment.

Crawlers With SN 3048572 and After

1. Raise the loader to full height and dump the bucket.

return for more soil in order to complete pass and eliminate end ridges. It is advantageous to vary the path when spreading so that large windrows do not hide the line of grade. A more efficient job of finish grading can therefore be done.

Transporting

When transporting dirt from one part of an excavation to another with the dozer, there is a certain amount of spillage around the ends of the blade that must be replenished. One method of checking this loss is to travel the same path each time so that ridges built up in earlier passes prevent dirt from leaving the blade. Another method is to dig very slightly through the entire length of the pass just enough to replenish the loss.

Pioneering

Pioneering is the process of clearing and draining virgin land and preparing it for development.

The first step is removing shrubs, brush, and small trees. To do this, it is necessary to lower the blade until it merely skims the ground. This will permit the removal of undesirable brush without disturbing valuable top soil. After small trees have been removed, it may be necessary to remove some large trees. An exceptional amount of caution should be exercised for this operation.

1. The operator should first determine which direction the tree must be felled. Take advantage of heavy or leaning branches to the falling side.
2. Cut a trench in the ground, opposite the side toward which you want the tree to fall.
3. If the tree has deep roots, it may be necessary to cut roots on the side with the trench.
4. Raise the blade as high as possible on the tree trunk.
5. Rock the tree to start it swaying; then, use the tree's own motion to help the machine.



WARNING: Watch for falling branches and upturning roots. This operation should be tried only by experienced operators.

REEL-IN: Pull the lever to the rear to reel-in the cable. This position applies the winch clutch and disengages the winch brake. The greater the manual pull on the lever, the greater will be the clutching and reel-in effort. When released, the lever automatically returns to the Hold position.

CAUTION: When reeling in a cable, do not allow the winch clutch to slip. More manual pull is required on the winch lever as the load on the drum increases.

HOLD: Place lever in vertical position to stop reel-in or free-spool action. In this position the winch brake is spring applied, the clutch is disengaged, and the cable drum is locked for towing operations.

FREE SPOOL: Push the lever forward all the way for free-spooling. This position releases both the brake and the clutch. The lever remains in Free-Spool position until it is manually returned to the Hold position.

Brake Run-In

If the winch is new and the winch brake will not hold a load, the brake may need a run-in.

To run-in the winch brake, attach the winch cable to a stump and drive the crawler away from the stump with the transmission in low gear. Allow the winch brake to slip just enough to let the crawler move forward until all the cable has been run out from the drum. Repeat this operation until the crawler has traveled a distance of 300 feet. Allow the winch to cool and check the holding power of the winch brake. Repeat operation if necessary.

Brake Drag Adjustment

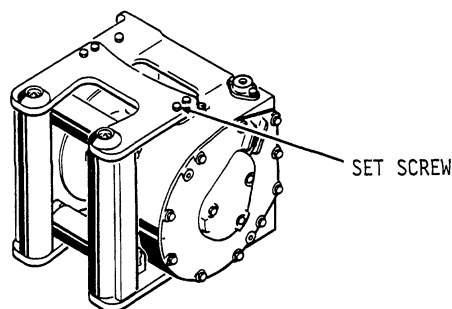


Figure 102

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL

- Thank you very much for reading the preview of the manual.
- You can download the complete manual from: www.heydownloads.com by clicking the link below



- Please note: If there is no response to CLICKING the link, please download this PDF first and then click on it.

CLICK HERE TO **DOWNLOAD** THE COMPLETE MANUAL