

Starting and Stopping the Engine

Starting the Engine

1. Move the throttle lever midway between Slow and Fast positions (Figure 20).

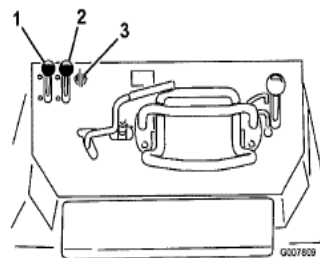


Figure 20

2. Move the choke lever to the On position (Figure 20).

Note: A warm or hot engine may not require choking.

3. Start the engine as follows for your model:
 - For model 22972, turn the key to the On position then pull the recoil handle on top of the engine.
 - For an electric start model, turn the key to the On position (Figure 20). When the engine starts, release the key.

Important: Do not engage the starter for more than 10 seconds at a time. If the engine fails to start, allow a 30 second cool-down period between attempts. Failure to follow these instructions can burn out the starter motor.

4. Gradually move the choke lever to the Off position (Figure 20). If the engine stalls or hesitates, engage the choke again until the engine warms up.
5. Move the throttle lever to the desired setting (Figure 20).

Important: If the engine is run at high speeds when the hydraulic system is cold (i.e., when the ambient air temperature is near freezing or lower), hydraulic system damage could occur. When starting the engine in cold conditions, allow the engine to run in the middle throttle

position for 2 to 5 minutes before moving the throttle to fast (rabbit).

Note: If the outdoor temperature is below freezing, store the machine in a garage to keep it warmer and aid in starting.

Stopping the Engine

1. Move the throttle lever to the Slow position (Figure 20).
2. Lower the boom (Figure 21).

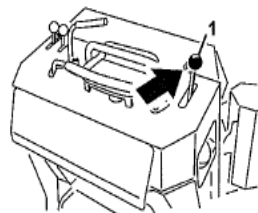


Figure 21

3. Turn the key off (Figure 20).

Note: If the engine has been working hard or is hot, let it idle for a minute before turning the ignition key off. This helps cool the engine before it is stopped. In an emergency, the engine may be stopped immediately.

4. Remove the key.

Stopping the Machine

To stop the machine, release the traction control, move the throttle lever to slow (turtle), lower the boom to the ground, and stop the engine. Set the parking brake and remove the key.

CAUTION

A child or untrained bystander could attempt to operate the machine and be injured.

Remove the key from the switch when leaving the machine, even if just for a few seconds.

Moving a Non-functioning Machine

Important: Do not tow or pull the machine without first opening the tow valves, or the hydraulic system will be damaged.

1. Stop the engine.
2. Remove the bottom shield.
3. Using a wrench, turn the tow valves on the hydraulic pumps twice counter-clockwise (Figure 22).

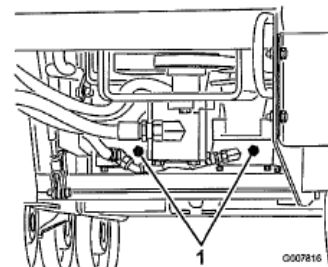


Figure 22

1. Tow valves
4. Install the bottom shield and tow the machine as required.
5. When the machine has been repaired, close the tow valves before operating it.

Digging a Trench

1. Start the engine, raise the boom, set the throttle lever to the Fast position, and move the machine over the area to be trenched.
2. Pull the trencher control lever to the reference bar to engage the trencher.
3. Slowly lower the boom and chain into the ground.

Note: To achieve the maximum depth, you may need to lower the boom as far into the ground as it will go with the chain running. Then, stop the chain and lower it fully. Start the chain again and resume operation.

4. Once the trencher boom is in the ground at a 45 to 60 degree angle, slowly move the traction unit rearward to extend the trench.

Note: If you move too fast, the trencher will stall. If it stalls, raise it slightly, slowly drive forward, or reverse the chain direction momentarily.

5. When finished, raise the boom out of the trench, then stop the trencher.

Securing the Machine for Transport

When transporting the machine on a trailer, always use the following procedure:

Important: Do not operate or drive the machine on roadways.

1. Stop the engine.
2. Lower the boom.
3. Secure the machine to the trailer with chains or straps using the tie-down/lift loops at the front and rear of the machine (Figure 23 and Figure 24). Refer to your local ordinances for trailer and tie-down requirements.

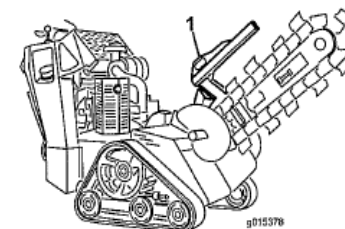


Figure 23

1. Front tie-down loop

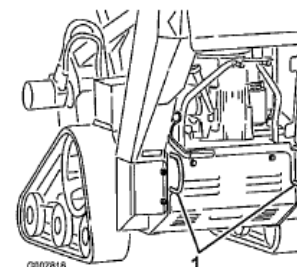


Figure 24

1. Rear tie-down loops

Lifting the Machine

You can lift the machine using the tie-down/lift loops as lift points (Figure 23 and Figure 24).

Operating Tips

- Clean the area of trash, branches and rocks before trenching to prevent equipment damage.
- Always begin trenching with the slowest ground speed possible. Increase speed if conditions permit. If the chain speed slows down, reduce ground speed to keep the chain moving at its fastest rate. Do not spin the tracks while trenching.
- Always use full throttle (maximum engine speed) when trenching.
- Always trench backwards (i.e., in reverse).
- Trench at a 45 to 60 degree angle for best results.
- You will be able to dig a trench faster by controlling the depth with periodic adjustments of the boom.
- If the trencher binds in the soil, reverse the chain direction. Once the chain is loose, change chain directions and continue trenching.
- If you need the finished trench to be cleaner than what is possible with the trencher, you can purchase a crumber from your dealer. The crumber mounts onto the trencher head and scrapes the trench clean as you dig.
- To improve the quality of trenches less than 24 inch (60.9 cm) deep, use a 24 inch (60.9 cm) boom.
- Use the correct chain for the ground conditions, as listed in the following table:

Soil Type	Recommended Chain Type
Sandy	Soil chain (re-configure with extra teeth for added digging speed; refer to your Authorized Service Dealer)
Sandy Loam/Loam/Loamy Clay	Soil chain
Wet, sticky clay	Soil chain
Hard soils: dry clay and compacted soils	Combination chain
Rocky soil/gravel	Rock chain

