

THE
BARRETO
MODEL 1318
HYDRAULIC TRENCHER

CONGRATULATIONS!

You are now the proud owner of the BARRETO Model 1318 trencher. Please take a moment of your time to look over the following information. Familiarize yourself with the trencher, its characteristics, and method of operation. Pay particular attention to the safety and operating instructions.

If you have any questions or need any replacement parts in the future, please contact us at your convenience. Our toll-free phone number, fax and email are listed below.

THANK YOU for your patronage and confidence in BARRETO equipment.

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1318 TRENCHER ASSEMBLY INSTRUCTIONS

1. Remove trencher from shipping crate.
2. Install boom onto boom pivot/mount with the 7/8" wide wear strip on bottom side of boom. Push boom on as far as it will go. Be sure adjuster screw is backed out.
3. Free wheel hubs: To engage either hub, pull the lever and rotate it slightly to lower the lever into the slot in the free wheeling plate, which allows the spring-loaded pin to engage. Repeat for the other wheel. Push the trencher a bit if necessary until each pin finds a hole to drop into. The hubs are now locked. Disengaging one hub makes it much easier to turn the trencher when transporting under power.

SERVICE INFORMATION

1. Check reservoir level using sight glass on the right side of the tank. If required, add to reservoir with tractor transmission hydraulic oil. (Shell DONAX TD FLUID or comparable.)
2. Recheck oil level after trencher has been run and oil has circulated through wheel and chain motors. Routinely check level thereafter.
3. Change hydraulic oil filter after the first 50 hours of use. Change it every 200 hours thereafter.
4. Add 1 quart of hydraulic oil to reservoir with each filter change.
5. Check all hydraulic fittings for leaks and tighten if necessary.
6. The grease zerks at each end of chain shaft should be greased after every 4 to 8 hours of use. The grease zerk in the front wheel should be greased after every 8 hours of use.
7. Grease zerks on each side of the boom cylinder should be greased once a week
8. Grease zerks on the wheel hubs should be greased and free wheeled once a week or so, depending upon free wheel use.

IMPORTANT: The engine on the Barreto trencher may or may not been serviced prior to shipping. Shipping regulations may prohibit this. Check levels and add oil and fuel as required before starting. Service according to the engine manual before starting.

WARNING: Running the trencher without hydraulic oil will cause serious damage to the hydraulic pump. **INSURE THAT THE RESERVOIR OIL LEVEL IS TO THE SIGHT GLASS BEFORE STARTING THE MACHINE.**

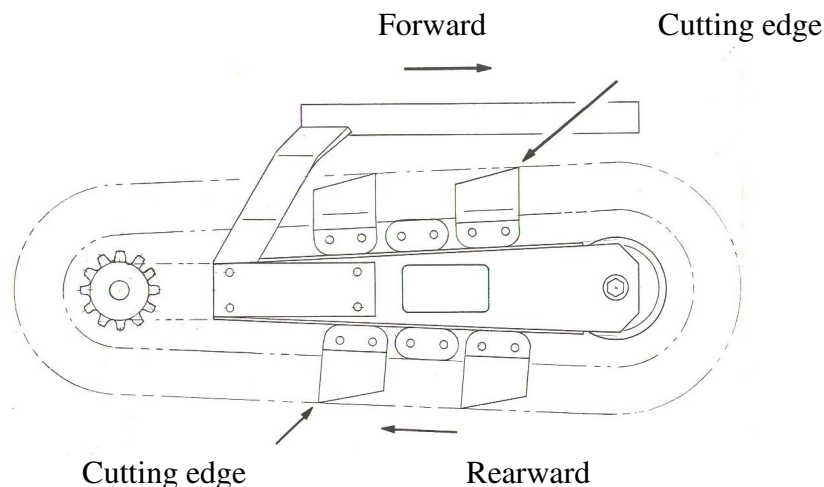
BREAK IN PROCEDURE

**KEEP ALL PERSONNEL CLEAR OF MACHINE
DURING BREAK IN TO PREVENT INJURY!!
ONLY RUN ENGINE OUTSIDE OR IN
A WELL-VENTILATED AREA.**

Before installing the chain, secure the clutch handle in closed position and let the machine run for 30 minutes at half throttle with dig chain sprocket in motion.

CHAIN INSTALLATION

1. After break in, stop engine. Slide chain under sprocket, with teeth in the correct cutting direction. Properly installed, the cutting edges of the chain will face forward on the top of the boom and rearward on the bottom of the boom (see diagram below).
2. Push digging boom control lever forward to lower boom onto the chain.
3. Wrap chain around boom and sprocket. Install chain master link or link pin.
4. Use boom adjuster screw to tighten chain. Chain should have enough slack to allow approximately 1" to 2" of space between middle of boom and chain when boom and chain are straight out in a horizontal position.
5. Tighten adjuster screw locknut and 4 boom mounting bolts.



1318 TRENCHER OPERATING INSTRUCTIONS

READ SAFETY INSTRUCTIONS BEFORE OPERATING!

Be sure that the engine oil, fuel and hydraulic oil are at proper levels before starting the engine.

STUDY AND UNDERSTAND CONTROLS BEFORE BEGINNING OPERATION.

1. **FREE WHEELING HUBS:** To engage either hub, pull the lever and rotate it slightly to lower the lever into the slot in the free wheeling plate, which allows the spring-loaded pin to engage. Repeat for the other wheel. Push the trencher a bit if necessary until each pin finds a hole to drop into. The hubs are now locked. Disengaging one hub makes it much easier to turn the trencher when transporting under power.
2. **ENGINE IGNITION:** Must be in ON position to start the engine. Move to OFF position to stop the engine.
3. **ENGINE THROTTLE:** Controls engine speed. Operate at full throttle.
4. **CLUTCH (ACTUATOR) LEVER:** Squeeze to activate the Wheel Drive, Dig Chain, and Boom Lift Controls. All motion stops when the lever is released. It is located near the left handlebar grip.
5. **GEAR SHIFT CONTROL:** Select either TRANSPORT for the higher ground speed range or TRENCHING for the lower ground speed range.
6. **WHEEL DRIVE DIRECTION CONTROL:** Select forward or reverse to control the **direction** (not speed).
7. **WHEEL SPEED CONTROL:** The wheel speed is variable when the Wheel Drive Direction Control is in either forward or reverse and at least one hub is engaged. The farther toward the rabbit the Speed Control is moved, the faster the trencher will travel. A fast speed is only for transport, not trenching. **For safety**, set at minimum (turtle) before squeezing the clutch (actuator) lever, then slowly increase the speed.
8. **DIG CHAIN CONTROL:** Select forward position for trenching, and reverse to help clear debris from the chain. It is best to move the control before the clutch (actuator) lever is squeezed.
9. **DIGGING BOOM CONTROL:** Pull to raise the digging boom and push to lower the boom. During normal operation you will hear a relief valve working.

GETTING STARTED:

1. Gear Shift Control in transport (high range)
2. Both the Wheel Drive Direction Control and Dig Chain Control in neutral
3. Wheel Speed Control at the minimum (turtle).
4. Left hand wheel hub engaged, right hand hub disengaged (free wheeling).
5. Start and warm up engine. Set engine throttle at full speed.
6. Change the Wheel Drive Direction Control from neutral to forward.
7. Squeeze the clutch (actuator) lever.
8. Slowly increase the wheel speed and navigate the trencher to the starting position. The trencher is designed to dig toward the operator (with the Wheel Drive Direction Control in reverse). With this in mind, position the machine to start the trench.

TRENCHING PROCEDURE:

1. Return the Wheel Speed Control to minimum (turtle).
2. Wheel Drive Direction Control in neutral
3. Gear Shift Control in trenching (low range)
4. Engage both free wheeling hubs.
5. Dig Chain Control in forward
6. Squeeze the clutch (actuator) lever.
7. Slowly lower the digging boom until the desired trench depth is achieved.
8. Wheel Drive Direction Control in reverse
9. Slowly increase the wheel speed until a workable speed is reached. Use a very slow speed for trenching and adjust for soil conditions as necessary. If objects such as rocks or roots jam in the chain, release the clutch lever, then reverse the chain to dislodge the debris. If necessary move the trencher forward a few inches and trench the area again.

BARRETO HYDRAULIC TRENCHER

SAFETY INSTRUCTIONS

- **READ SAFETY AND OPERATING INSTRUCTIONS BEFORE OPERATING!**
- **USE COMMON SENSE AND PLENTY OF IT!**
- Do not leave trencher unattended with the engine running.
- Always leave trencher parked on a level surface, and lock the free wheeling hubs.
- The **SAFETY CLUTCH (ACTUATOR) LEVER** on the left handle bar is for operator protection. **DO NOT TAPE DOWN LEVER** or otherwise by-pass this safety feature.
- Objects may become airborne while operating trencher. Wear safety goggles and a hard hat while operating or observing!
- Digging chain, auger and other moving parts can cut off arms, legs, or fingers. **STAY CLEAR!**
- Buried cables or gas lines can cause serious injury or death if struck with dig chain. Contact local agencies for location before digging.
- Fuel exhaust and fuel fumes can cause illness or death. Operate outdoors and avoid breathing exhaust and fumes.
- Fuel fumes can catch fire or explode. Do not smoke or operate near flames or sparks.
- Hydraulic oil is under extreme pressure and can get under skin and burn or poison. Check for leaks with cardboard.
- Muffler and engine get hot enough to cause serious burns. Do not touch until cool.

BARRETO MANUFACTURING, INC. EQUIPMENT WARRANTY

Barreto Manufacturing, Inc. warrants all BARRETO equipment to be free of defects in material and workmanship for a period of one (1) year, dating from delivery to the original user.

This Warranty is in lieu of all other warranties, whether written or implied, and is limited to:

1. Replacement of parts returned to the dealer and/or factory and determined defective upon inspection. (Replacement for parts to dealers shall be at dealer cost plus shipping charges.)
2. Time for pick-up and/or delivery, transportation or service calls by dealers is excluded. Manufacturer reserves the right to determine reasonable time required for repair.

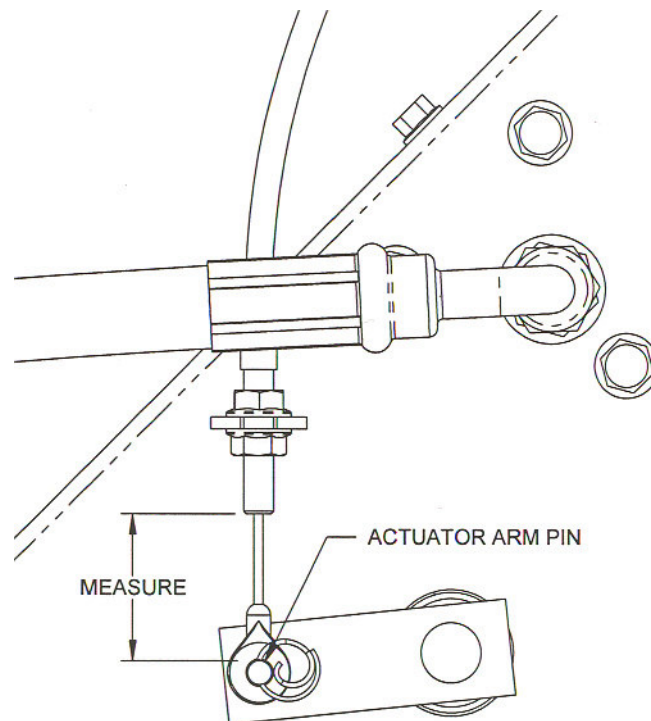
Warranty does not apply to damage caused by abuse or neglect. Time and materials required for normal maintenance and service are also excluded from warranty coverage.

Engines, engine accessories and tires are warranted by the original manufacturers and are not covered by the Barreto Equipment Warranty.

CLUTCH CABLE AND ACTUATOR ARM ADJUSTMENT

The clutch (actuator) cable and lever must have some free play. The cable will stretch and occasionally needs adjustment.

1. Rotate the actuator arm counter-clockwise, by hand, to take up any free play. Measure the distance from the pin of the actuator arm to the end of the cable housing.
2. Pull the clutch (actuator) lever all the way up until it touches the handle bar grip. With the lever pulled up, again measure the distance from the pin of the lever to the cable housing. Calculate the difference.
3. Adjust the cable for $7/16''$ to $1/2''$ movement of the actuator arm at the pin. Do not include any lever free play in the measurements.



1318 TRENCHER TROUBLE SHOOTING GUIDE

CAUTION!! Always use extreme care when trouble shooting or making adjustments on trencher. Stay clear of chain and auger when engine is running. Stop engine before disassembling any component.

A. Entire hydraulic system does not operate and the engine is not under load.

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| 1. Broken or improperly adjusted clutch (actuator) cable. | See clutch cable and actuator arm adjustment. Adjust or replace cable. |
| 2. Low hydraulic oil in tank | Add oil until it shows in sight gauge. |
| 3. Hydraulic pump-to-engine coupler has slipped. | Check for wear and replace both coupler halves and rubber spider, as needed. |

B. Engine lugs down or dies and wheels and chain do not turn.

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| 1. Rocks or other obstructions stopping chain. | Reverse chain momentarily to free it from obstruction. Raise boom and stop chain. See if obstruction can be removed from trench. |
| 2. Trenching depth or speed too great for soil conditions. | Decrease ground speed or trenching depth. |
| 3. Chain shaft support bearings binding. | Lubricate or replace bearings as needed. |
| 4. Engine improperly tuned or maintained. | See engine manual and correct as needed. |
| 5. Low oil alert causes engine to shut down. | This may occur when trenching on hills. Level trencher, check oil and allow oil alert to reset. |
| 6. Engine losing power due to wear. | See engine manual. |

C. Chain fails to rotate, but wheels turn under power.

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| 1. Sheared key on auger motor shaft. | Replace key and other parts as needed. |
| 2. Chain motor worn. | Rebuild motor or replace with exchange motor. |
| 3. 3000 pound relief valve (on the actuator valve) malfunctioning. | Replace relief valve. |

D. Wheels fail to turn, but chain rotates.

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| 1. Wheel axle key sheared. | Replace key and other parts as needed. |
| 2. Relief valve malfunctioning. | Replace relief valve located on boom lift valve. |

E. Oil leaks in hydraulic system.

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| 1. Fittings are loose. | Tighten fittings on hoses and adapters. |
| 2. Worn or broken hoses. | Inspect hoses for breaks and abrasions. |
| 3. Oil around chain motor or shaft. | Inspect motor for leaking shaft seal.
Rebuild motor or replace with exchange motor. |

F. Foaming hydraulic oil coming from breather hose.

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| 1. Improper oil used. | Verify that hydraulic oil used had antifoaming additives. Recommended oil is tractor hydraulic. (Shell Donax TD or comparable.) |
| 2. Air leaking into oil where under pressure. | Inspect and tighten fittings on pump and hoses. |

G. Boom does not lift, or does not lower into ground.

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| 1. Boom lift relief valve malfunctioning. | Replace relief valve. |
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