

WARNING
BARRETO HYDRAULIC TRACK TRENCHER

Any piece of equipment can be dangerous if not operated properly. **YOU** are responsible for the safe operation of this equipment. The operator must carefully read and follow any warnings, safety signs and instructions provided with or located on the equipment. Do not remove, defeat, deface or render inoperable any of the safety devices or warnings on this equipment. If any safety devices or warnings have been removed, defeated, defaced or rendered inoperable, **DO NOT USE THIS EQUIPMENT!!!**

Smart digging means calling 811 before each job. Whether you are a homeowner or a professional excavator, one call to 811 gets your underground utility lines marked for FREE.

 **WARNING:** Operating, servicing and maintaining this equipment can expose you to chemicals including engine exhaust, carbon monoxide and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize your exposure, avoid breathing exhaust, do not idle the engine except as necessary, operate and service your equipment in a well-ventilated area and wear gloves or wash your hands frequently when servicing your equipment. For more information go to www.P65warnings.ca.gov

WARNING!

- Never operate power equipment of any kind if you are tired or if you are under the influence of alcohol, drugs, medication or any substance that could affect your ability or judgment. Be alert! If you get tired while operating this equipment, take a break. Tiredness may result in loss of control.
- Provide adequate ventilation when operating this equipment. Internal combustion engines consume oxygen and give off deadly carbon monoxide gas.
- **DANGER:** This equipment has multiple pinch points that can cause dismemberment or death. Keep hands, feet and all other body parts clear at all times.
- Use extreme caution whenever operating, moving, loading or unloading this equipment. During and after operation the Muffler and other components are Extremely Hot and will cause Serious Burns.

If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator. If there is any doubt as to the operation or safety of the equipment, **DO NOT USE!!! CALL A TOOL SHED IMMEDIATELY!!! FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH**

SAFETY MESSAGES

General safety messages are listed in this Safety Messages section. Specific safety messages appear as appropriate in this manual where a potential hazard may occur if procedures or instructions are not followed correctly and completely.

SAFETY SYMBOL



This is the international safety alert symbol. This symbol is used in combination with a signal word and written message to warn you of a potential for bodily injury or death.

A signal word "DANGER", "WARNING", or "CAUTION" is used with the safety alert symbol.



DANGER: Imminent hazards, that if not avoided, will result in serious personal injury or death.



WARNING: Potential hazards or unsafe practices, that if not avoided, could result in serious personal injury or death:



CAUTION: Potential hazards or unsafe practices, that if not avoided, could result in minor personal injury, product damage, or property damage.

Safety decals with a signal word "DANGER", "WARNING", or "CAUTION" are affixed to the trencher near specific hazards.

This machine is intended for the operator to stand on. If at any time it becomes unsafe, the operator must step off immediately.

Read this manual and study ALL decals on the trencher before operating the trencher.

SAFETY INSTRUCTIONS OVERVIEW

READ SAFETY AND OPERATING INSTRUCTIONS BEFORE OPERATING!

USE COMMON SENSE AND PLENTY OF IT!

Call before you dig. If you do not call, you may cause an accident; suffer injuries or death; cause interruption of services; damage the environment; and/or incur project delays. Expect to be held liable for any damages caused, if you fail to call.



DANGER: Buried electric cables or gas lines can cause serious injury or death if struck with dig chain. Always determine location of utilities before trenching.



WARNING: Fiber optic cables convey laser light that can injure your eyesight.

STAY CLEAR of moving parts on the trencher.



DANGER: Digging chain, auger and other moving parts can cut off arms, legs, or fingers. Contact with the digging chain or auger while in operation will cause serious injury or even death.

Wear safety goggles and a hard hat while operating or observing!



WARNING: The dig chain may throw stones and debris.

Wear adequate hearing protection while operating or observing.



WARNING: Exposure to loud noise is cumulative and may permanently damage your hearing.



SAFETY INSTRUCTIONS OVERVIEW (continued)

Wear safety boots and gloves. Wear close-fitting clothing. Contain long hair. Do not wear jewelry. Wear reflective clothing if working near traffic.

Only operate outdoors and avoid breathing engine exhaust and fumes.

 **WARNING:** Engine exhaust contains carbon monoxide gas that is toxic. Breathing it can cause unconsciousness and death.

Adequate lighting is required, daylight or artificial, for safe operation of the trencher.

Allow adequate side and overhead clearances between trencher and buildings, fences, and trees.

 **WARNING:** If the dig chain contacts an object the digging chain can climb upward quickly and tip the trencher toward the operator. Serious injury or death will result by operator contact with the moving chain. The digging chain can suddenly drag the machine forward if the trencher is forced too quickly into the ground or catches on a buried object.

Insure that the TRENCH LEVER is in NEUTRAL when not actually trenching.

 **WARNING:** Contact with the dig chain or auger while in operation will cause serious injury or even death. The teeth of the dig chain are sharp. Avoid contact even when the chain is not moving.

Avoid inclines if at all possible.

 **WARNING:** Navigating on any incline increases the danger of the trencher losing traction or rolling over, especially if the surface is wet. If you lose control, step off immediately to avoid personal injury. Navigation on inclines should be especially slow and turns very gradual. Refer to the incline diagram in the section, "GROUND TRANSPORT".

 **WARNING:** The weight of the trencher or walking near the edge of the trench could cause collapse of the trench wall. If a track goes over the edge of the trench the trencher could suddenly turn over.

Avoid operating adjacent to drop-offs or embankments.

Keep away from tracks to avoid getting crushed.

 **WARNING:** Getting run over by the trencher will cause injury.

Always leave trencher parked on a level surface.

 **WARNING:** Do not park on incline. Move the trencher to a level surface and set the parking brake located behind the left hand track motor. Move the handle down to engage the brake.

Do not leave trencher unattended with the engine running.

Do not operate trencher near any source of flammable dust or vapors.

 **WARNING:** Sparks from the engine exhaust can cause an explosion or fire in a flammable or explosive atmosphere. Fuel fumes can catch fire or explode.

Do not operate trencher near flames or sparks.

 **WARNING:** Fuel fumes can catch fire or explode.



SAFETY INSTRUCTIONS OVERVIEW (continued)

Shut off engine and allow it to cool before refueling.



WARNING: Fuel fumes can catch fire or explode. Do not smoke when refueling. Do not refuel near a source flames or sparks.

Do not touch the engine, muffler, or any of the hydraulic components until cool.



WARNING: Muffler and engine get hot enough to cause serious burns. For the safety of yourself and others, allow enough time for the engine, muffler, and the hydraulic fluid to cool completely before performing any cleaning or maintenance.

Avoid contact with hydraulic fluid.



WARNING: When machine is operating, hydraulic fluid is under extreme pressure and can get under skin and burn or poison.

Keep others away. If the job site is near a road or pedestrian path, warn and divert both motorized traffic and pedestrians. As appropriate, use traffic flag personnel, signs, cones, and lighting devices to insure safety.



WARNING: Someone could step into the trench by accident. Walking near the edge of the trench could cause collapse of the trench wall and possibly cause someone to fall onto the moving chain. Contact with the digging chain or auger while in operation will cause serious injury or even death.

Only the operator is allowed to stand on the trencher.

Never lift trencher over any person at any time.



WARNING: If trencher should fall it would crush anybody under it.

We recommend having a fire extinguisher suitable for petrol fires in the operating area.

Attachments can change the center of mass and machine operations. Use only Barreto attachments.

BATTERY & ELECTRIC STARTER SAFETY INSTRUCTIONS

Shield entire face, especially your eyes, and wear rubber gloves to avoid acid burns whenever doing anything with the battery. Battery caps must be tightly in place if the battery has removable caps.



WARNING: The battery contains sulfuric acid that can cause blindness and severe burns. Avoid contact with eyes, skin, and clothing. If acid contacts eyes, call 911 immediately and flush eyes with water for 15 minutes or until emergency medical help arrives. If acid contacts skin, flush area with plenty of water. If acid is ingested, drink large quantities of water or milk then follow with milk of magnesia, beaten egg, or vegetable oil, and get medical attention immediately.

Avoid contact with battery components. Wear rubber gloves and wash hands after handling any battery components.



WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to cause cancer and reproductive harm. Acid can cause blindness and severe burns if leaked from the battery.

Do not charge or jump-start the battery near flames or sparks, or while smoking.



WARNING: Battery fumes are flammable and explosive. Avoid explosion hazard that could blind and burn. Tools and jumper cable clamps can make sparks, so use them with care. Shield eyes and face, and wear rubber gloves.

TRENCHER OPERATING INSTRUCTIONS

READ SAFETY INSTRUCTIONS BEFORE OPERATING! Both the SAFETY INSTRUCTIONS and OPERATING INSTRUCTIONS are in this manual.

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

STUDY AND UNDERSTAND CONTROLS BEFORE BEGINNING OPERATION.

CONTROLS

KEYED IGNITION SWITCH: This remote switch is located with the other trencher controls for your convenience. Use it to start and stop the engine equipped with an electric starter. Refer to the ENGINE START UP PROCEDURE.

ENGINE: This is the throttle - controls engine speed. Operate at full throttle (all the way forward).

SPEED LEVERS: Controls speed and direction of the track drive.

- Pushing the left or right speed LEVER forward causes that track to go forward.
- Pulling the left or right speed LEVER back causes that track to go in reverse.
- Moving the speed LEVER further from neutral increases the speed in that direction.
- Steer the trencher by moving one speed LEVER farther forward or backwards than the other LEVER. This causes the track to rotate at a different speed than the other, allowing the trencher to turn.
- Very slow speed is required for trenching in most conditions.

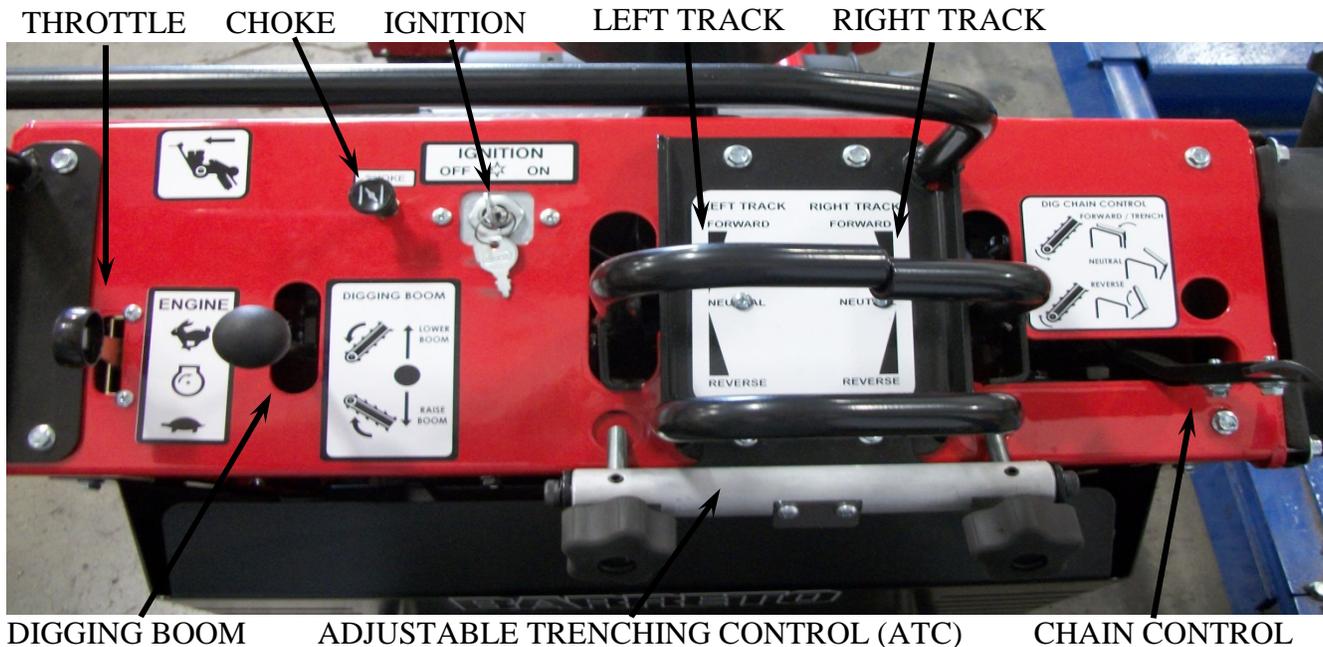
NOTE: Be sure operator understands that the machine moves BACK when trenching, not forward.

ADJUSTABLE TRENCHING CONTROL (ATC): Push the ATC into place and tighten the knob on each side to the desired lever position to control the speed of each individual track.

TRENCH LEVER: To trench, hold the TRENCH LEVER in the DOWN position with your hand on top of it. To stop the chain, lift your hand up and the TRENCH LEVER will spring back to the neutral position and stop the chain. To reverse the chain, move the TRENCH LEVER from the neutral position up to the right as you stand at the operator's position

DIGGING BOOM CONTROL: Pull down to raise the digging boom and push up to lower the boom. During normal operation you will hear the relief valve working.

PARKING BRAKE: It is located behind the left hand track motor. Move the handle down to engage the brake, and up to disengage it.



ENGINE START UP PROCEDURE

Only operate trencher outdoors and avoid breathing engine exhaust and fumes.



WARNING: Engine exhaust contains carbon monoxide gas that is toxic. Breathing it can cause unconsciousness and death. Avoid any areas or actions that expose you to carbon monoxide.

1. Open the FUEL SHUTOFF VALVE.
2. If the engine is cold, close the CHOKE. Turn choke off (open) after engine warms up enough. To restart a warm engine, leave the choke in the open position.
3. Move the ENGINE THROTTLE to about 1/3 of the way forward.
4. ELECTRIC STARTER: Turn the ignition key to the START position, and hold it there until the engine starts. If the engine fails to start within 10 seconds, release the key, and wait at least 10 seconds before operating the starter again.

NOTICE - *Using the electric starter for more than 10 seconds at a time will overheat the starter motor and can damage it.*

When the engine starts, release the key, allowing it to return to the ON position.

Open the CHOKE (turn choke off) after the engine warms up enough.

COLD WEATHER OPERATIONS: Before operating in cold weather, refer to the Engine Owner's Manual for recommended engine oil. Do not spray starting fluid into the air cleaner as engine damage could result. If the machine is operated at temperatures below +32°F then changing the hydraulic fluid to ISO 46 is recommended. If you do not want to change the hydraulic fluid but want to operate the machine at temperatures below +32°F, then do the following:

- Warm up engine at a low speed.
- Gradually increase engine speed, allowing **30 minutes for the hydraulic fluid to warm up.**

Reduce the engine speed if the hydraulic pump whines. Pump noise may indicate a lack of hydraulic fluid flow that could damage the pump.

For frequent starts below 18°F consult your Barreto Manufacturing, Inc. dealer.

TRENCHING PROCEDURE

Follow engine start up procedure.

Have engine at full throttle (LEVER forward).

Move trencher into position using the SPEED LEVERS.

Engage the TRENCH LEVER.

Slowly lower the digging boom until the desired trench depth is achieved. See TRENCHING TIPS for details.

Move the SPEED LEVERS in **reverse**. Start at slow speed. The machine moves **BACK** when trenching, not forward.

Adjust the travel speed until a workable speed is reached. Use a very slow speed for trenching and adjust for soil conditions as necessary. Adjust speed to avoid track spin or engine overloading. If objects such as rocks or roots jam in the chain, release the TRENCH LEVER, then reverse the chain to dislodge the debris. If necessary move the trencher forward a few inches and trench the area again.

Track speed and direction while trenching can be fine-tuned by using the Adjustable Trenching Control (ATC) system, which can be placed into position to modify the trenching speed of the tracks individually while on the go. Individual track controls can be adjusted separately during operation allowing the operator to keep their trench straight when working on uneven terrain.



TRENCHING TIPS

THE PLUNGE CUT:

If the boom bounces when lowering it, use a more gradual “boom down” action. A little ground travel toward the operator during the plunge cut may help reduce bounce. Adjust the boom lowering speed for soil conditions as necessary.

Do not overload engine. If the engine lugs down or the digging chain slows down, raise the boom until speed increases, then continue lowering the boom slowly.

Do not attempt to force boom down faster than digging chain can remove material.

SHUT DOWN PROCEDURE

1. Always leave trencher parked on a level surface.

 **WARNING:** Do not park on incline. Move the trencher to a level surface and set the parking brake located behind the left hand track motor, near decal shown. Move the handle down to engage the brake.

2. Unless loaded on a trailer, lower the boom to the ground.

3. Reduce the ENGINE THROTTLE to idle.

4. Move the IGNITION KEYED SWITCH to the OFF position to stop the engine, and remove the key.

5. **CLOSE THE FUEL SHUTOFF VALVE.** Failure to close this valve could cause fuel to leak down into the cylinder & crankcase. Damage resulting from this **WOULD NOT** be covered by your engine warranty!

Shut off engine and allow it to cool before refueling.

 **WARNING:** Fuel fumes can catch fire or explode. Do not smoke or allow flames or sparks in the area.

Do not touch the engine, muffler, or any of the hydraulic components until cool.

 **WARNING:** Muffler and engine get hot enough to cause serious burns. For the safety of yourself and others, allow enough time for the engine, muffler, and the hydraulic fluid to cool completely before performing any cleaning or maintenance.



GROUND TRANSPORT OF THE TRENCHER

Raise the digging chain boom.



WARNING: Contact with the dig chain or auger while in operation will cause serious injury or even death. The teeth of the dig chain are sharp. Avoid contact even when the chain is not moving.

Use the SPEED LEVERS to control travel direction and speed.

- Pushing the SPEED LEVERS forward from the neutral position causes the machine to move forward.
- Pulling the SPEED LEVERS back from neutral position causes the machine to move backward.
- Moving the SPEED LEVERS farther from the neutral position increases the speed.
- Steer the trencher by moving one speed LEVER farther forward or backwards than the other LEVER. This causes the track to rotate at a different speed than the other, allowing the trencher to turn.
- If you are not experienced operating this trencher, a slow ground speed is recommended for your safety.

Keep away from tracks to avoid getting crushed.



WARNING: Getting run over by the trencher will cause injury.

Only the operator is allowed to ride on the trencher at the operator station.

Never make sudden changes in speed or direction.

Use extra caution on soft or uneven ground.

Avoid operating adjacent to drop-offs or embankments.

Avoid inclines if at all possible. Never use on any incline exceeding the angles shown below.



WARNING: Navigating on any incline increases the danger of the trencher losing traction or rolling over, especially if the surface is wet. If you lose control get out of the way immediately to avoid personal injury. Navigation on inclines should be especially slow and turns very gradual.

A 20° maximum incline is allowed. Honda engines have an Oil Alert system that will automatically stop the engine if tipped more than 20°.

