WARNING!

Do not operate the Trojan Sewer/Drain Cleaning Machine until you have thoroughly read and understand all instructions in this manual. Failure to comply may result in personal injury, accidents or electrical shock.

SAFETY INSTRUCTIONS

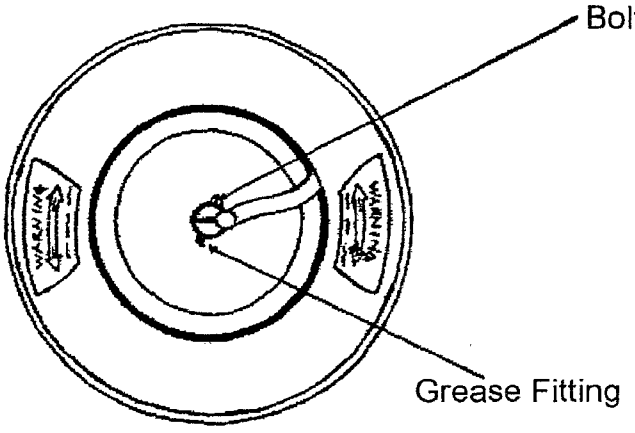
- Read the manual thoroughly.
- Guard against electrical shock by being sure you uses a properly grounded three-hole electrical outlet. All Trojan Sewer/Drain Cleaning Machines are equipped with a three-prong plug. It should be plugged into a three-hole electrical receptacle. If you must use a three-prong adapter to accommodate a two-hole receptacle, connect the green pigtail or grounding lug to a known ground such as a cold water pipe, ground rod, etc.
- If you must use an extension cord, use a minimum 12 gauge wire size, three (3) wire type extension cord in good condition. ***NEVER*** cut off the grounding prong for use in a two (2) hole receptacle - doing this cuts off your protection from electrical shock. When using your Trojan Sewer/Drain Cleaning Machine outdoors, be sure to use an approved outdoor extension cord.
- Never yank the cord or extension cord to disconnect the Trojan Sewer/Drain Cleaning Machine. Never lift the Trojan Sewer/Drain Cleaning Machine by the cord. Inspect your cord regularly, if it is damaged replace it immediately.
- To avoid accidental starting, be sure the switch is turned to the "Off" position before plugging into the electrical source.
- Wear proper clothing and apparel. Do not wear loose fitting clothing that could be caught in moving parts. Tie back or wear a protective cover over head for long hair.
- For added protection wear rubber boots and wear rubber gloves inside your Jack Kline Co, Inc. riveted gloves.
- Avoid dangerous environments. Do not use the Trojan Sewer/Drain Cleaning Machine in rain or in damp or wet locations. Do not operate in the presence of flammable liquids or gases.
- Keep your work area clean and uncluttered.
- Stay alert. Do not operate the Trojan Sewer/Drain Cleaning Machine while under the influence of alcohol, drugs or medication. Do not operate when tired. Use common sense!
- Always disconnect the Trojan Sewer/Drain Cleaning Machine when not in use, before servicing and when changing accessories such as cable, blades & cutters.
- Do not operate the Trojan Sewer/Drain Cleaning Machine in reverse for a prolonged period. Reverse is only to e used to back tool away from an obstruction. Operating the Trojan Sewer/Drain Cleaning Machine in reverse can cause cable damage & possible personal injury.

- Keep unauthorized persons away from work area and Trojan Sewer/Drain Cleaning Machine. All spectators, especially children, should be kept at a safe distance.
- Do not over torque cables. Kinking or breakage of cable can result from over torque. When an obstruction is encountered, back your cable off, then forward again until obstruction is cleared.
- Replace worn cables. Worn cables are very limber, kinked or have flattened coils on the outside of the cable.
- Maintain the Trojan Sewer/Drain Cleaning Machine with proper care. Keep your equipment clean for the best and safest performance.

Be aware that drains/sewers carry bacteria and possibly infectious diseases. Always wear safety goggles. Avoid contact with eyes, ears and mouth. Do not expose cuts or open sores to drains or sewer cleaning equipment

SAFETY FIRST!

IMPORTANT



Trojan Stallion Inner/Outer Drum

BE SURE ***NOT*** TO TIGHTEN BOLT DOWN ON THE INNER DRUM OF THE STALLION. THE INNER DRUM MUST MOVE FREELY FROM THE OUTER DRUM FOR THE MACHINE TO OPERATE PROPERLY. FAILURE TO LEAVE BOLT LOOSE MAY RESULT IN DAMAGE TO YOUR MACHINE AND/OR DAMAGE TO YOUR CABLES.

GENERAL OPERATING PROCEDURES FOR THE TROJAN SEWER/DRAIN CLEANING MACHINE

READ ALL SAFETY PRECAUTIONS BEFORE OPERATING THE TROJAN SEWER/DRAIN CLEANING MACHINE

- Attach your choice of tool onto the working end of the cable.
- Place the Trojan Sewer/Drain Cleaning Machine as close as possible to the clean-out or pipe opening. Do not allow more than three (3) feet of cable between the pipe opening and the machine.
- Place the air bubble in an accessible position. Hand feed the cable into the line opening about 6".
- Be sure the toggle switch is in the forward position. Check the drum rotation by momentarily pressing the air bubble and making sure the drum rotates counter clockwise as you face the drum. If the drum turns clockwise - stop immediately. When the machine has come to a complete stop switch the toggle switch to the forward position then proceed as before.
  If you are using a power cable feed, refer to the"Operating Your Power Cable Feed" section before proceeding.
- Place your riveted Jack Kline Co., Inc. gloved hand on the cable. Apply downward pressure on the cable to keep it in line while stepping on the air bubble. The cable will start rotating. Feed into the line slowly. It is very important to keep the cable rotating at all times. Place both hands equal distance between machine and clean-out. Use your hands as a guide for the cable to prevent kinking, buckling or swinging.
- When your cutting tool meets blockage, it will slow or stop. Quickly pull cable back in order to prevent cutting tool from hanging up. This will release the tension on the cable and prevent breakage or kinking of cable.
- If your cable gets hung up and you cannot pull it back, release the air bubble. When machine comes to a complete stop if cable is still hung up switch machine to the reverse position and run momentarily to allow cable to be removed. Release air bubble. When machine comes to a complete stop place the switch in the forward position and continue.
- Avoid operating the Trojan Sewer/Drain Cleaning Machine in reverse except to remove a blade that is hung up.
- As soon as motor is at full RPM again, press your cable against blockage. Push and pull cable against blockage until you break through.
- When you are through with the job or need a new tool, feed the cable back into the drum. Make sure the toggle switch is in the forward position so the arm can distribute the cable into the drum evenly. Do not push cable back into drum while drum is not rotating.
- When cutting tool is close to opening, release air bubble and allow machine to come to a complete stop.
- Move the toggle switch to the "neutral" position and unplug the Trojan Sewer/Drain Cleaning Machine. Hand feed the remaining cable into the drum.

HOW TO INSTALL CABLE

Trojan Colt

- Uncoil cable to be installed in the Trojan Colt Machine and lay out straight.
- Loosen the cable clamp. Do not loosen screws too much so cable clamp does not come unfastened.
- Place left hand on top of the drum while pressing the heads of the cable clamp screws forward. Rotate the inner drum with the right hand so the distributor arm is slightly to the right of the cable clamp.
- Feed the cable into drum through the distributor arm. Allow the inner drum to rotate in a clockwise direction as the cable feeds into the outer drum.
- Hold the clamp bolts firmly with left hand as you grasp the inner drum and rotate it quickly counter-clockwise. This motion will feed the cable under the cable clamp. Tighten the cable clamp bolts securely.

Stallion

Note: Install a new 10' anchor piece each time you install a new cable.

- Removing the 10' anchor piece
  1. Loosen nut on the cable clamp.
  2. Remove cable clamp piece.
  3. Pull 10' anchor piece from the Stallion.
- Replacing the 10' anchor piece.
  1. Position the distributor arm to the left of the cable clamp hole in the outer drum.
  2. Push about 3 feet of the cable through the distributor arm into the drum The distributor arm will move to the right of the cable clamp hole.
  3. Secure the cable clamp being sure there is 6"-8" of the anchor piece beyond the cable clamp. Push the remainder of the anchor piece inside the drum

The Stallion comes with cable installed. When it is necessary to replace cables, follow the following instruction. Cables and leaders are joined together by male and female couplings and held together by expansion pins.

1. Position the coupling stand that is included in the toolbox 2'-3' from the Trojan Stallion.
2. To remove old cable, place the joined couplings with the expansion pin up in the groove of the coupling stand. Using the punch provided in the toolbox, place the tip in the expansion pin. Using a hammer, drive the pin down. The shoulder of the punch will prevent the pin from going all the way through the female coupling so you can re-use it while allowing the cables to be separated.
3. To couple a new cable place the male coupling of the new cable into the female coupling of the cable you are joining it to in the groove of the coupling stand. Insert the expansion pin in slot and with a hammer, drive the expansion pin flush with the female coupling.

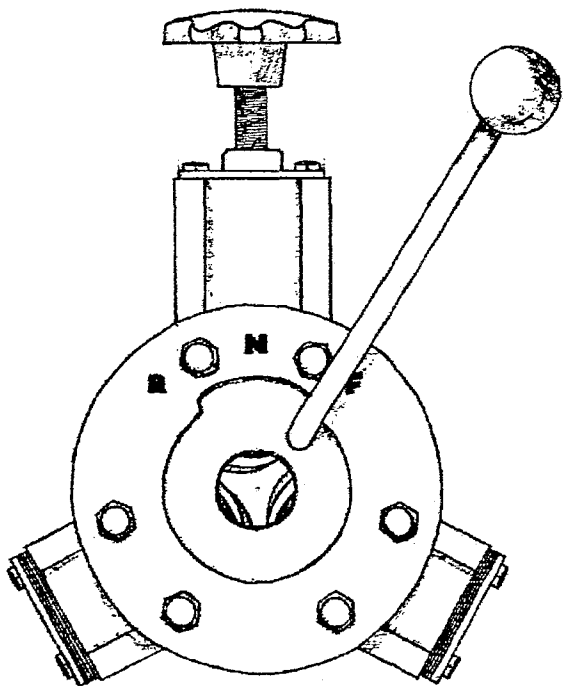
OPERATING THE POWER CABLE FEED

Before turning the power cable feed on be sure the lever is in the upright "neutral" position. This prevents accidentally feeding cable fitting through the power cable feed.

Always wear Jack Kline Co., Inc. riveted gloves to protect your hands.

Maintain the power cable feed by following instructions for lubrication, replacing bearings and maintenance.

The power cable feed works like a transmission - the faster you are putting the cable out, the less power you have - so you don't hurt yourself or damage the cable.



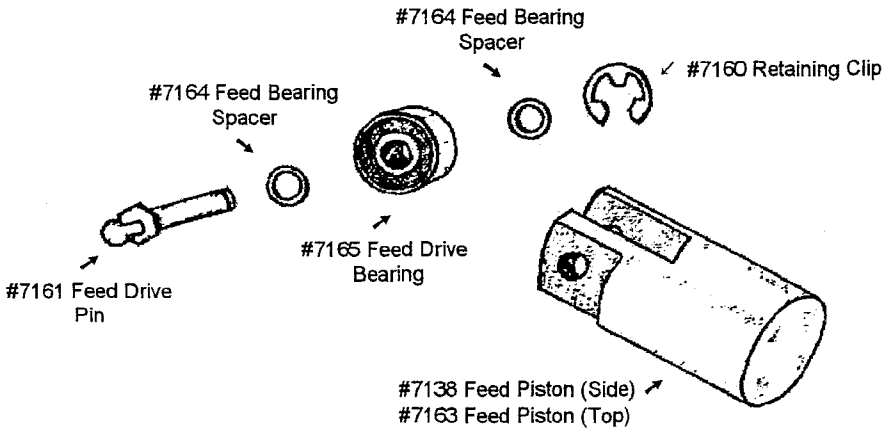
1. Be sure the handle of the power cable feed is in the upright, "neutral", position.
2. Release tension from the hand knob assembly.
3. Start the Trojan Sewer/Drain Cleaning machine (refer to the General Operating Procedures).
4. Move the handle to the "forward" (completely to the right) position and tighten the hand knob. Once the cable is moving steadily forward, stop turning the hand knob.
5. The closer you are to the "neutral" position, the more power you have and the slower the cable is moving. The same applies in reverse.
6. To bring the cable back out of the line, move the handle to the "reverse" (completely to the left) position.
7. If the cable does not feed or begins to slip, tighten the hand knob carefully until the cable is moving again. Be very careful not to over tighten the hand knob assembly. This may damage the power cable feed bearings.
8. When the handle is straight up in the "neutral" position, there is no movement of the cable forwards or backwards allowing the blade to be positioned against stoppage to break through it.
9. Once you have cut through the blockage move the handle to the "reverse" position and bring the cable back into the drum.

Lubrication

1. The drive bearings have been packed at the factory and require no lubrication
2. Grease all housings equipped with zerk fittings. Using a grease gun, insert into zerk and grease until you see grease coming out of the zerk fitting.
3. Remove front disc periodically to apply grease to both sides of the assembly.
4. If the power cable feed is not being used for an extended period of time it is best to lubricate the power cable feed with WD40 or an equivalent lubricant to prevent oxidation on the parts.

Replacing New Feed Drive Bearings

When you replace drive bearings, replace all three (3) at the same time*



1. Remove one section at a time - two acorn nuts, bolts, washers and block assembly.
2. Pull piston unit out of block. Remove retaining clip from the drive pin. ***Be sure to remove spacers on each side of the bearing.***
3. Soak and clean all parts in a de-greaser or WD40. Wipe dry.
4. Replace new bearing with one spacer on each side of it. Replace the retaining clip and grease with petroleum jelly.
5. Slide the unit back together making sure the drive pin ball slides into the slot on the actuator arm. Replace bolts, washers and acorn nuts, then tighten.
6. Repeat with remaining two (2) sections.

Assembling Blades to Cables

The Trojan Stallion comes equipped with various blades. The blades can be attached to a 2' leader or to a double male coupling. Attach assemblies as shown in figure 1 & figure 2. Tighten with the T-Wrench provided in the toolbox.

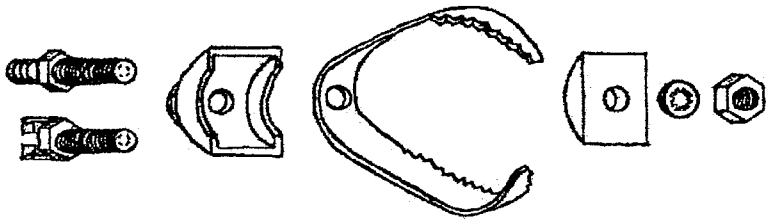


Figure 1

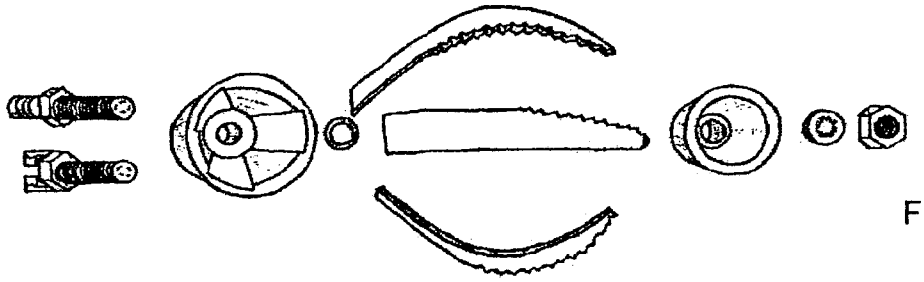


Figure 2

The Trojan Colt comes equipped with a bag of parts complete with accessories that fit the cable (13/32", ½" or 5/16"). Attach as shown in figures 3, 4 and 5.

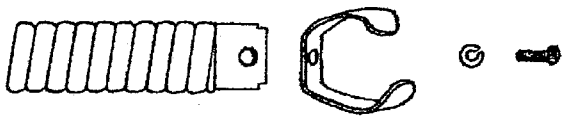


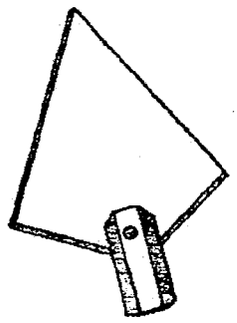
Figure 3 - Blade Assembly for 13/32", ½" and 5/16" Cable

Figure 4 - Drophead Assembly for 13/32" and 5/16" Cable

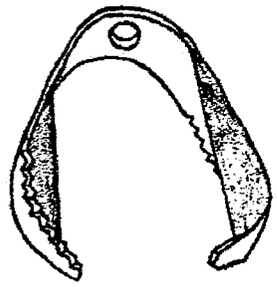
Figure 5 - Hook Assembly for 13/32" and ½" Cable

Optional Cutting Tools for the Trojan Stallion

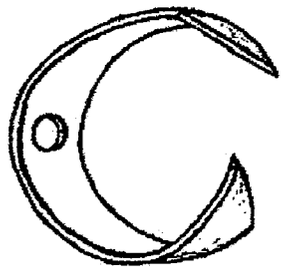
Boring Tool **Part# 9404**
Used in 3", 4" and 6" lines
to penetrate major blockages
such as cement, grout, tile, etc.



2" Grease Blade **Part# 9132**
3" Grease Blade **Part# 9130**
4" Grease Blade **Part# 9131**
Used to clean grease in lines.
The paddles scoop muck and
cause a churning action to
produce quick, efficient cleaning
within the line being cleaned.



2 ½" Round Cutter Blade **Part# 9122**
Used to cut through roots
and clean blockages in
3", 4" & 6" lines.

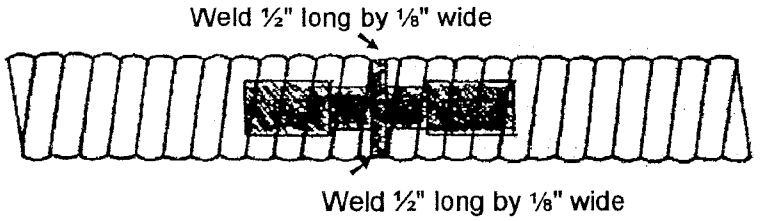


Splicing or Repairing 3/4" Cable for the Trojan Stallion

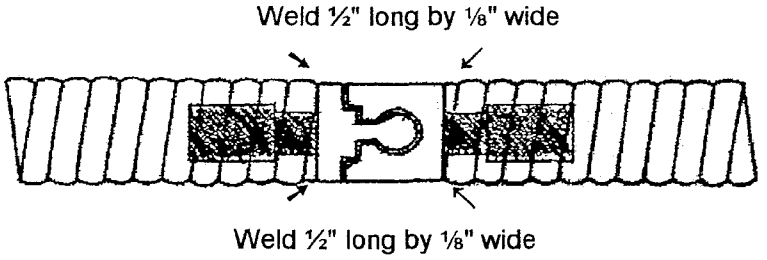
1. Square each end of the cable to be spliced on a disc sander or grinder. Grind down so the shoulder of the splicer will butt squarely against the cable ends. **If splicing/repairing inter steel cables, pull the inter steel out of the cable far enough to allow insertion of the splicer/coupling, then cut inter steel off and push back into cable.**
2. Place cable in a vice allowing cable end to extend 1" from vice jaws. Open ends slightly with a drive punch so the opening is large enough to allow the splicer/coupling to be inserted.
3. Be sure splicer/coupling and cable are free of rust and/or grease.
4. Connect cable ends to splicer/coupling and draw up tightly.
5. By means of arc welding, tack cable to shoulder of splicer/coupling at each end of cable where cable butts up against the shoulder of the splicer/coupling.

Do not attempt a full weld with an acetylene torch. The extreme heat will soften the coils on the cable and splicer/coupling and render it useless.

Do not repair broken cables by means of welding only, always use a coupling or splicer at the weld!



#8102 3/4" Splicer



#8100 3/4" Female Coupling
#8101 3/4" Male Coupling

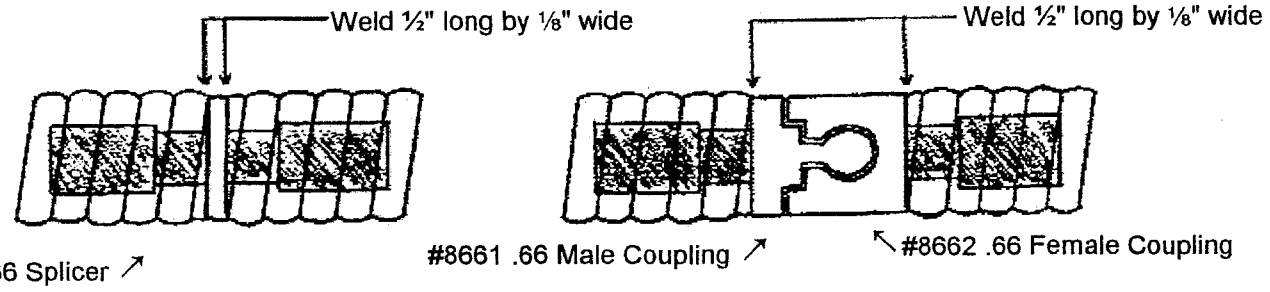
#8103 3/4" Long Male End

Splicing or Repairing .66 Steel Blue Max Cables

Square each end of the cable to be spliced or repaired on a disc sander or grinder. Be sure the inter-steel core of the cable is flush with the outer cable. Grind so to produce a flat surface between the cable and the splicer/coupling.

1. . Secure the cable in a vise. Be sure the inter-steel of the cable remains flush with the outer cable.
2. Be sure the splicer/coupling and cable are free of rust and/or grease/dirt.
3. Insert the splicer/coupling into the inter-steel just like tightening a screw. Tighten so contact is made between the outer cable and the splicer/coupling face.
4. Repeat for the other end of the cable.
5. Follow the following specified welding process:
   - A. Before welding, preheat area where weld will be with a propane torch. Hold the torch 4-5" from the metal surface and heat for two (2) minutes.
   - B. Immediately weld with an arc welder using 3/32" diameter Unitrode #70 or equivalent chromium-stainless steel rod. Use heat range of 90-100 amps.
   - C. Weld bead should be 1/8" wide and ½" long where each wire end contacts the splicer.
   - D. You ***must*** stress relieve the welded area. Using a propane torch 4-5" from the metal surface, heat for approximately five (5) minutes. Allow to cool. The cable is ready to use.

WARNING **Do not heat the cable to a cherry red color. This is too high of temperature and will weaken the cable.**



#8675 .66 Long Male End