Owner's Manual

# C600 Hydraulic Squeeze Off Tool




Phone (905) 695-9900

Toll Free 1 (888) 737-3668

54 Audia Crt. Vaughan, ON, Canada L4K 3N4

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# SAFETY WARNING:

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DAMAGES, INCLUDING WITHOUT LIMITATION DEFECTS, DETERIORATION, WEAR, ERROR, FAILURE OF THE SQUEEZE OFF TOOL, OR INJURY, INCLUDING WITHOUT LIMITATION DEATH AND INCAPACITATION. FOOTAGE TOOLS INC. EXPRESSLY DISCLAIMS ANY AND ALL LIABILITY FOR DIRECT, INDIRECT, INCIDENTAL, SPECIAL, BODILY, EXEMPLARY OR DAMAGES OF ANY KIND, WHETHER FORESEEABLE OR UNFORESEEABLE, ARISING OUT OR IN CONNECTION WITH THE FAILURE TO COMPLY WITH THIS OWNER'S MANUAL.**

## WARNING:

- DO NOT EXCEED THE RECOMMENDED SQUEEZE AND RELEASE RATES. TEMPERATURES BELOW 32°F (0°C) REQUIRE SLOWER SQUEEZES AND RELEASES. RELEASES ARE MORE CRITICAL THAN SQUEEZES; THUS, SLOWER RATES ARE REQUIRED. CONSULT YOUR LOCAL UTILITY REGARDING THEIR SPECIFIC RECOMMENDATIONS FOR THIS PROCEDURE.
- WHEN PERFORMING A SQUEEZE, STAY A MINIMUM OF 3 TIMES THE PIPE DIAMETER FROM FITTINGS, FUSIONS, OR PREVIOUSLY SQUEEZED SECTIONS OF PIPE. NEVER SQUEEZE A PIPE IN THE SAME PLACE TWICE OR PIPE DAMAGE MAY RESULT.
- ENSURE THE GROUNDING SYSTEM IS PROPERLY PLANTED IN THE SOIL TO REDUCE THE CHANCES OF STATIC DISCHARGE.
- USE EXTREME CAUTION WHEN OPERATING THE TOOL NEAR LIVE ELECTRICAL WIRES, BURIED UTILITIES, OR OTHER HAZARDS.
- IN CASE OF MALFUNCTION, IMMEDIATELY STOP USING THE TOOL AND CONTACT A QUALIFIED TECHNICIAN FOR INSPECTION AND REPAIR.
- WHEN OPERATING THIS TOOL, SAFETY EQUIPMENT, INCLUDING SAFETY GLASSES ARE REQUIRED.
- BEFORE PERFORMING A SQUEEZE, CLEAN THE POCKETS ON THE UNDERSIDE OF THE LOWER BAR/STATIONARY BAR AND WHERE THE SIDE SHAFTS/CYLINDER RODS WILL CONTACT THE LOWER BAR/STATIONARY BAR. REINSPECT AFTER TOOL IS LOWERED INTO POSITION ON PIPE JUST PRIOR TO SQUEEZE.

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# SAFETY WARNING:

## WARNING:

- DO NOT MODIFY OR ALTER THE TOOL IN ANY WAY. ONLY USE FOOTAGE TOOLS REPLACEMENT PARTS PROVIDED BY THE MANUFACTURER OR AUTHORIZED DISTRIBUTOR.
- FOR HYDRAULIC SQUEEZE TOOLS: INSPECT HYDRAULIC HOSES FOR SIGNS OF DAMAGE OR CUTS AND REPLACE IF NECESSARY. ENSURE HYDRAULIC FITTINGS ARE FULLY ENGAGED.
- BEFORE PERFORMING A SQUEEZE, ENSURE THE PIPE IS CENTRED BETWEEN SIDE SHAFTS/CYLINDER RODS AND THE TOOL IS IN AN UPRIGHT POSITION.
- FOR HYDRAULIC SQUEEZE TOOLS: BEGIN TO ENGAGE THE SAFETY LOCK DOWN BOLTS WHEN THE UPPER BAR/SLIDING BAR IS APPROXIMATELY ONE INCH FROM TOUCHING THE GAUGE STOP.
- FOR HYDRAULIC SQUEEZE TOOLS: ENSURE YOU READ AND UNDERSTAND HOW TO OPERATE THE NEEDLE VALVE IF INSTALLED ON HYDRAULIC PUMP.
- WHEN SQUEEZING HDPE PIPE, DUE TO THE NATURE OF THE MATERIAL, IT MAY BE NECESSARY TO DOUBLE SQUEEZE AND VENT TO ATMOSPHERE BETWEEN THE SQUEEZED SECTIONS IN ORDER TO ACHIEVE FLOW CONTROL.
- KEEP AWAY FROM ANY HIGH-PRESSURE HYDRAULIC LEAKS. A HIGH-PRESSURE JET OIL CAN CAUSE SERIOUS INJURY. REPAIR IMMEDIATELY.

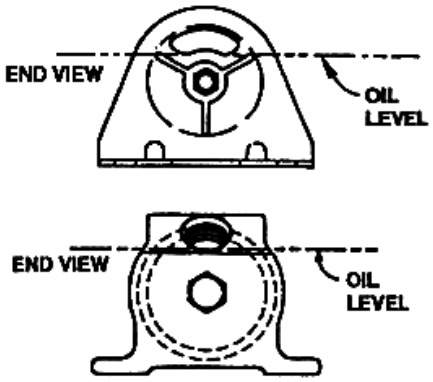
**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

This tool is sold in one basic configuration; fine controlled release. The fine controlled unit has a needle valve with a built-in orifice in the high-pressure pump line. The hand pump contains a three-position control valve. When the control valve is placed in the squeeze position, oil is pumped through the lower hose, passes through the needle valve, and to the squeeze operation of the tool. Similarly, moving the control valve lever to the release position allows oil to be pumped through the upper hose and to the release (open) operation of the tool. The neutral (centered) position will not hold any pressure in the tool.

The hand pump is a two-stage pump that provides high oil volume at low pressure for rapid cylinder advancement. At approximately 1400 PSI, the pump will automatically switch to low-volume flow for high-pressure applications. A bypass valve, set at 10,000 PSI, is built into the pump to prevent over-pressurization.

# PRELIMINARY ASSEMBLY:

1. Ensure the hand pump is filled with good quality, ISO 32 weight, hydraulic oil. To check or refill, connect the pump to the tool, retract the cylinder, and release system pressure. (Failure to follow this instruction may result in overfilling the reservoir – this could result in reservoir failure due to excessive pressure and possible injury.) Remove cap and fill to the indicated level with the pump level resting horizontally on the base. Then recap securely. Cleanliness is critical while checking and refilling. Use a funnel with a filter. Do not allow any dirt to enter the reservoir.




2. If the tool operates with jerky or uneven motion, bleeding air from the system may be necessary. To do this, connect the two hoses, eliminating the tool as shown in the photo. Ensure the reservoir is topped to the proper level. Set the pump control valve to the "squeeze“ position and pump for 2 minutes. Then, set the pump control valve to the "Release" position and pump for 1 minute. Return the valve to the "Neutral" position. Disconnect the hoses and assemble them to the tool. Pressurize the tool in the "squeeze" position for 5 minutes. Cycle the tool fully open to fully closed a few times. Ensure that the needle valve is fully open. Repeat the procedure if necessary.



BLEEDING OF THE HYDRAULIC SYSTEM

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# PRELIMINARY ASSEMBLY:

3. To connect the C615HD-B110 static grounding kits, mount the grounding tool lead to the squeeze-off tool in the ¼" X 20 tapped hole on the left side of the upper bar using the supplied ¼" hardware. This hole is in the upper bar, below and to the left of the "Footage Tools" name plate, as shown in the photo on the right.

4. The C600 is equipped with folding handles for improved transport of the tool. This feature will still allow the tool to be used in a trench as narrow as 20". To stow or extend the handles, pull the ring on each handle's plunger upwards while rotating the handle to the desired position. Ensure the plunger enters the provided detents, thereby locking the handles in the selected position.



LOCATION OF GROUND SPIKE HOLE



LOCATION OF HANDLE LOCK PIN

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# OPERATING INSTRUCTIONS:

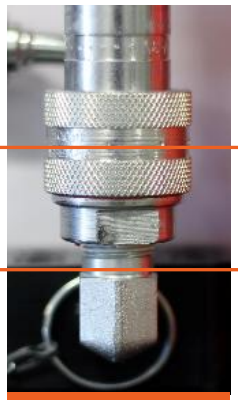
## A. Installation of Pipe

⚠ **WARNING:** Inspect the tool to ensure that it is clean and free from any dirt that may hinder proper operation. Pay particular attention to the two lower bar pockets where the rod nuts on the cylinder rods engage. These pockets must be clean and free of debris. Clean if necessary.

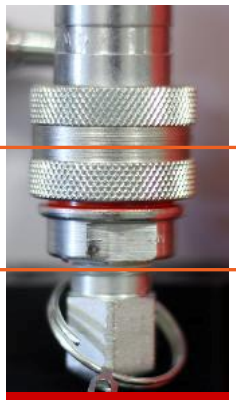


LOWER BAR POCKET

1. Fully install the grounding spike in firm soil near the tool and work area. Moist soil is required to ensure good contact with the ground. Soak the area where the spike will be inserted, if necessary. This step is critical as the grounding system should dissipate any static electric charge generated when the gas flow is cut off during the squeeze operation, thereby reducing the risk of sparks being created.



CORRECT



INCORRECT

2. Carefully inspect the hydraulic hoses to ensure there are no cuts or leaks. Ensure the hydraulic couplings are clean and connect the two hoses from the hand pump to the squeeze-off tool. Notice the hoses have a male and female half of the couplings attached to them that go to the mating parts on the squeeze-off tool, so the hoses cannot be hooked up backwards. To eliminate any possibility of accidental disconnection, the threaded collar must be fully threaded on, to enable pressure to reach the tool.

⚠ **WARNING:** To eliminate any possibility of accidental disconnection, the threaded collar must be fully threaded on. To enable pressure to reach the tool, tighten fittings until you can no longer see ORANGE paint on the inside collar.



ATTACHMENT OF HYDRAULIC COUPLING

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# OPERATING INSTRUCTIONS:

## A. Installation of Pipe

⚠ **WARNING:** Open the tool by placing the pump control valve into the release position. **CAUTION:** Ensure the needle valve is fully open counter-clockwise. Pump until the squeeze bars are sufficiently open to allow the pipe to be inserted. Once the tool is fully open, do not continue to pump, as the pressure relief valve in the handle will dump oil to protect the tool from damage.



PRESSURE RELIEF VALVE

3. Lift and swing the lower bar out and place the squeeze-off tool over the pipe. Swing back the lower bar and lock into position over the rod nuts of the cylinder rod. Full engagement is critical, or tool damage may result. The operator should visually check to see that the cutout in the lower bar has fully rested against the cylinder rod to ensure the bar has swung fully shut. It should look closed. The operator should then feel along the underside of the lower bar to confirm that the bottom of the rod nuts are flush with the bottom face of the lower bar and are fully seated in the pockets on the underside of the lower bar. This is important so the tool cannot open accidentally and also ensures there is equal load on both sides. Failure to comply with this step may result in tool damage.



ROD NUT INSIDE LOWER BAR POCKET

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# OPERATING INSTRUCTIONS:

## B. Squeezing the Pipe

1. Set the gauge plate stops on either side of the unit to the proper pipe size and SDR setting. Ensure both sides are identical, or tool damage may result. The required stop should be shown upward, such that they face the upper bar.

2. Close the needle valve clockwise and move the control lever on the hand pump to the squeeze position.

3. Close the tool with the pump until the bars start to touch the pipe. Position the tool centrally on the pipe, and perpendicular to the pipe when viewed from the top. The arrow on the upper bar indicates the central position. If this is not done, satisfactory flow control may not be achieved.

4. The rate of squeeze is very important in preventing pipe damage. Do not exceed 2” per minute squeeze rate. Advance the squeeze bars until 50% of the pipe’s original diameter has been squeezed. At this time, it is important to wait a few minutes so that the pipe material has a chance to relax (5 minutes is recommended). Increase this time in colder weather, below 32°F. Consult your local utility for their specific recommendations regarding the prescribed squeeze rate.

5. Continue squeezing the pipe slowly until a further 25% of the pipe’s diameter has been squeezed. Again, pause to let the pipe have time to relax. (5 minutes).

6. Continue slowly squeezing until the gauge plate stops comes into contact with the lower bar. Slower rates should be used below 32°F.

NOTE: KEEP IN MIND, IT MAY NOT BE NECESSARY TO SQUEEZE THE PIPE ALL THE WAY TO THE GAUGE STOPS TO OBTAIN SATISFACTORY FLOW CONTROL.




GAUGE PLATE





PLACE TOOL CENTRALLY ON PIPE & AT 90° TO PIPE

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# OPERATING INSTRUCTIONS:

## B. Squeezing the Pipe

**WARNING: SAFETY LOCKS**
These hydraulic squeeze-off tools are equipped with a steel lock-down bolt on each end of the upper bar, allowing the tool to be securely locked in the squeezed position when the hydraulics are detached or if hydraulic pressure is lost. To engage the lock-down bolts, begin threading them into the lower bar approximately 1" before the squeeze reaches the stops to assist with alignment into the steel barrel nuts. Continue threading the bolts as the tool completes the squeeze. Once the tool has reached the stops on both sides, the bolts should be fully threaded by hand only; do not use a wrench as they are not intended to assist in squeezing the pipe. The squeeze-off tool provides sufficient hydraulic force to operate independently. When fully engaged, the hex end of each bolt should sit flush with the upper bar.




ENGAGEMENT OF LOCK-DOWN BOLTS

**WARNING: PUMP DISCONNECTION WHILE TOOL IS IN SQUEEZED POSITION ON A PIPE**
After engaging the lock-down bolts, move the control lever on the hand pump to the "release" position and open the needle valve to relieve hydraulic pressure. Do not disconnect hoses while under residual pressure, as this may lead to connector seal failure. Once pressure is fully released, unscrew the locking collars on both hydraulic connectors to allow safe disconnection.

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# OPERATING INSTRUCTIONS:

## C. RELEASING THE PIPE

1. Unscrew the lockdown bolts located at each end of the squeeze bars. To relieve the upward tension caused by the pipe's tendency to rebound, it may be necessary to place the pump control valve in the “squeeze” position and apply additional pressure to the tool. If the lockdown bolts are difficult to loosen by hand, a wrench may be used to assist in removal.

⚠ **WARNING:** To prevent damage to the plastic pipe, it is critical to achieve a slow and controlled release rate. A release rate of ½” per minute is recommended, as this allows the plastic material to "flow" gradually, minimizing the risk of pipe damage. In temperatures below 32°F (0°C), an even slower release rate should be used. Always consult your local utility for their specific guidelines and prescribed release rate recommendations.

2. Determine the type of release mechanism supplied on the tool: Fine control release or manually controlled release. Note: The manual release mechanism (no needle valve) is no longer supplied with this tool.

### Fine controlled release (needle valve with orifice in line)

Ensure the needle valve is fully closed.
Move the pump control valve handle from the “squeeze” position to “neutral,” then slowly shift it to the “release” position. The tool will begin to open immediately. To stop the release at any time, simply return the valve handle to the neutral position. The needle valve orifice controls the release rate, and a rate of ½ inch per minute should be maintained to prevent pipe damage. In temperatures below 32°F (0°C), a slower release rate is recommended. As the pipe begins to recover, the internal pressure in the tool will decrease, naturally slowing the release rate. Once the pipe is sufficiently relaxed, the operator may fully open the needle valve to allow the bars to rise more quickly for a complete release. Continue opening the tool until it can be safely removed from the pipe.

### Manually controlled release (no needle valve in line)

Move the pump lever quickly from the "squeeze" position to the "neutral" position and allow approximately 5 seconds for the hydraulic pressure to relax. Then, gently shift the lever from "neutral" to the "release" position, carefully observing the movement of the squeeze bars. Once the bars begin to open at the desired release rate (½ inch per minute), immediately return the lever to the "neutral" position to stop movement. Repeat this procedure—alternating between "release" and "neutral“, until the pipe is sufficiently relaxed. When the bars no longer move with the lever in the release position, you may begin pumping the handle while keeping the lever in the release position. Continue to maintain the ½ inch per minute release rate until the squeeze bars are no longer compressing the pipe. Once the bars are completely clear of the pipe, you may pump the handle more rapidly, keeping the lever in the release position to fully retract the tool and prepare it for removal.

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# OPERATING INSTRUCTIONS:

## C. RELEASING THE PIPE

⚠ WARNING: Pumping too quickly will cause the oil to eject out of the relief port in the handle. This is a safety feature which prevents the operator from releasing the pipe too quickly.

3. To remove the tool from the pipe, let the tool rest by the upper bar on the pipe. Slide the lower bar upwards, (towards the pipe) about 1 inch, then rotate the lower bar clear of the pipe. The tool may now be lifted clear of the pipe.

4. If re-rounding of pipe is not to be performed, the grounding spike may now be removed, and the tool repacked in its shipping container.

## D. RE-ROUNDING THE PIPE IF REQUIRED

Once the tool is fully open, reposition the tool 90° from the original squeeze, on top of the peaks of the squeeze. Squeeze the pipe back to its original shape as outlined in “Installation on Pipe” and “Squeezing the Pipe” detailed above. Consult your local utility for their specific recommendations regarding this procedure. The grounding spike may now be removed, and the tool repacked in it’s shipping container.

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# MAINTENANCE

This section contains maintenance instructions for the tool. Do not attempt any maintenance which you do not fully understand, nor that you cannot do accurately and safely with the tools and equipment available to you. If you encounter a problem that you do not understand or cannot solve, contact your Footage Tools dealer.

**Ensure the tool is in good operating order by routinely:**

| | |
|---|---|
| Inspect pump fluid level (See Fig. on Pg. 4) | Top up as needed |
| Inspect cylinder rods for dirt and damage. | Replace and clean as needed |
| Inspect tool, pump, valves and hoses for oil leakage. | Tighten, repair or replace as required |
| Inspect squeeze bars for surface damage. | Replace if needed |
| Inspect lock down bolts for damage. | Replace if needed |
| Inspect the lower squeeze bar pockets (2) for debris. | Clean before each use. |
| Inspect the rod nut for dirt and/or damage | Clean, repair or replace as needed |

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

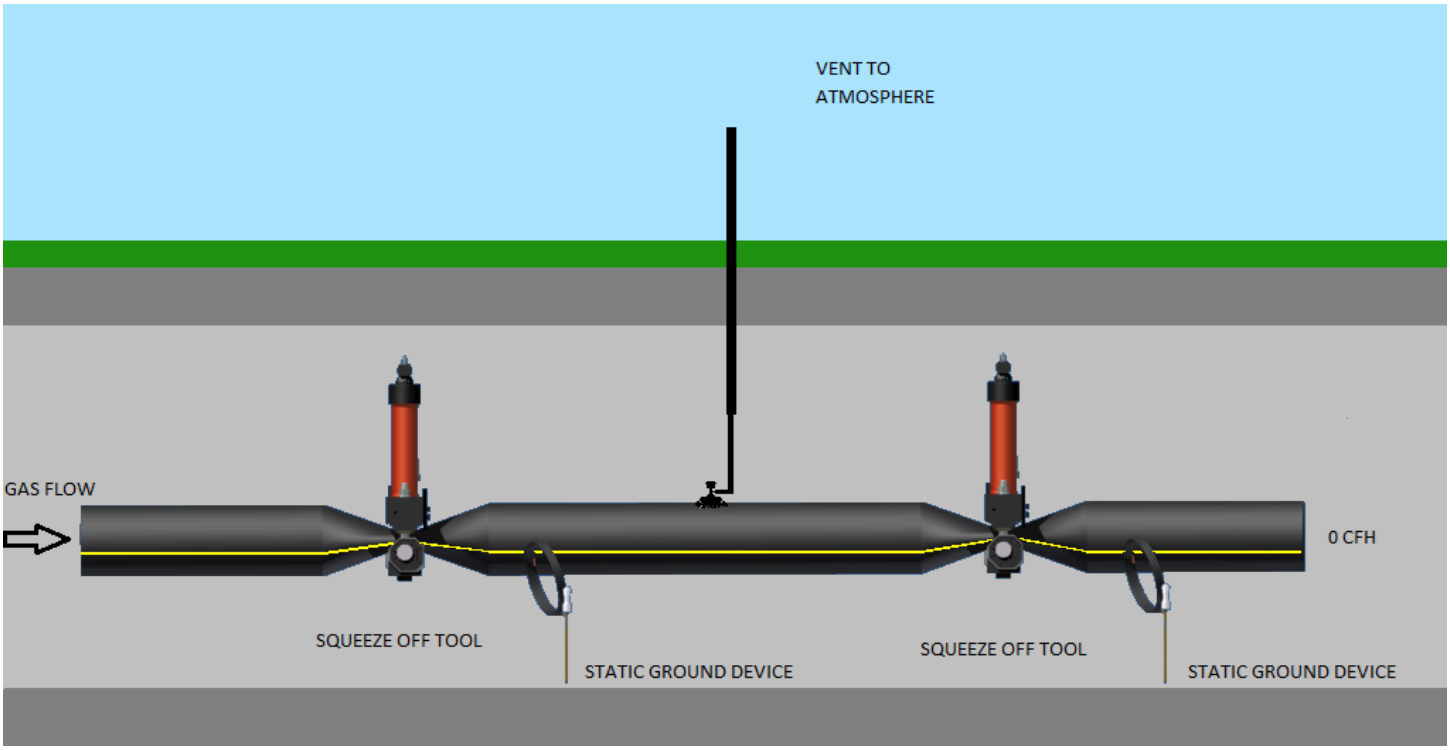
# SPECIFICATIONS

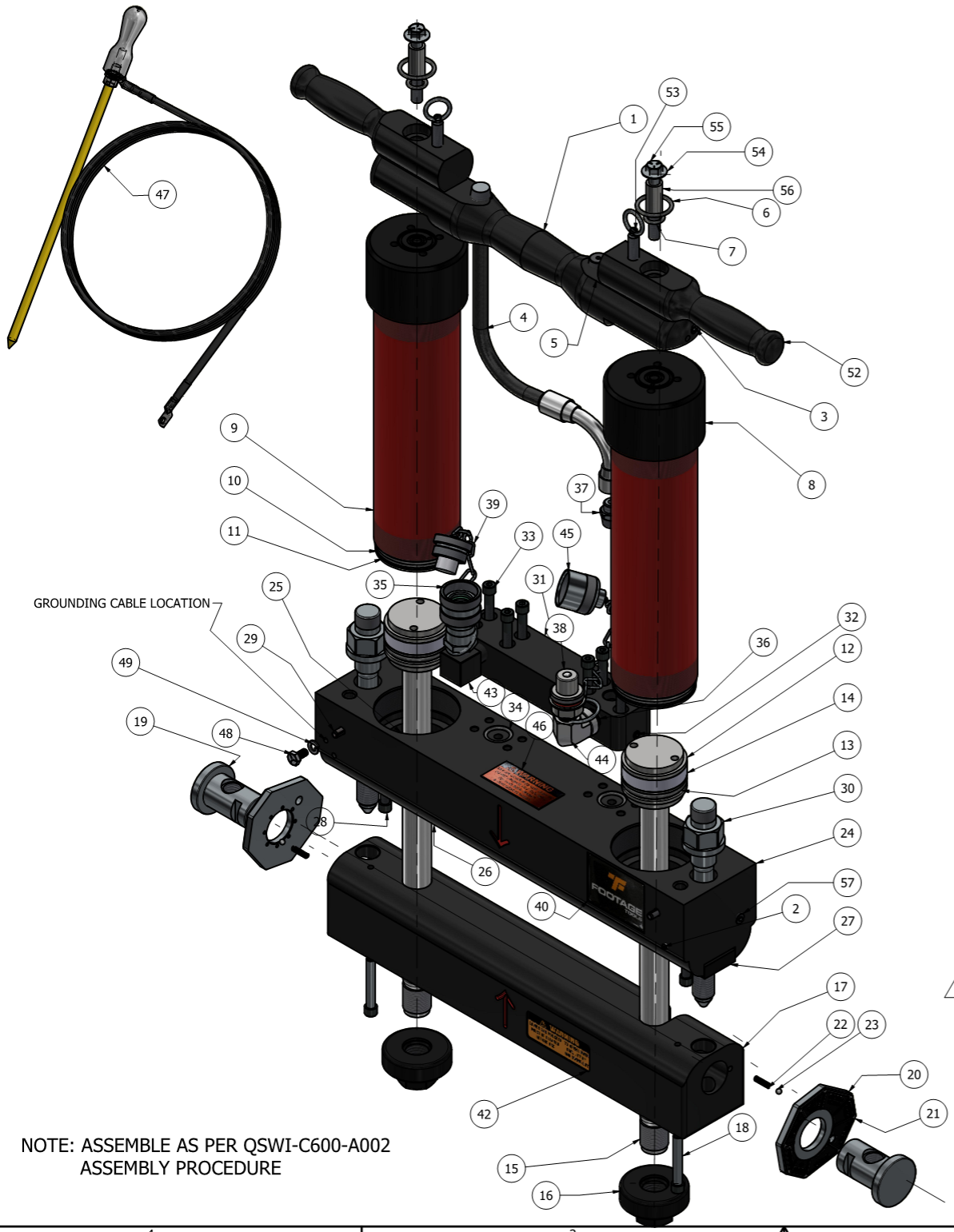
| ***GENERAL*** | ***C600*** |
|---|---|
| *Max Pipe Diameter:* | *6"* |
| *Weight:* | *79 lbs.* |
| *Operating Pressure (max):* | *10,000 psig* |
| | |
| ***OPTIONAL ACCESSORIES*** | |
| *Grounding Spike Kit (5 or 10 foot)* | *C615-A105/C615-A110* |
| *Pump, 8' Hose, with Needle Valve (c/w 0.009" orifice)* | *C148-352* |
| *Pump, 8' Hose, with Needle Valve & Gauge* | *C148-355* |

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# SAFETY WARNING:

If you experience difficulty obtaining flow control when squeezing HDPE pipe, we recommend you perform a double squeeze and vent to atmosphere. Please consult your local Utility for their specific operating procedure.






REVISION HISTORY

| REV | DESCRIPTION | ECN | DATE | APPROVED |
|---|---|---|---|---|
| K | UPDATED AS PER ECN E2101 | E2101 | 05DE2023 | JLN |

| QTY | UNIT | PART NUMBER | DESCRIPTION | MASS (lb) | ITEM |
|---|---|---|---|---|---|
| 2 | | 99-218-00-0002 | PIPE PLUG 1/8NPT | .007 | 57 |
| 2 | | C603-13 | BUSHING | .046 | 56 |
| 2 | | 99-100-00-0622 | HHCS, 3/8-16 X 2.75" LG | .104 | 55 |
| 2 | | 99-141-00-0006 | 3/8" FLAT WASHER | .004 | 54 |
| 2 | | C850-16 | PLUNGER | .057 | 53 |
| 2 | | C850-10 | HANDLE GRIP | .991 | 52 |
| 2 | | - | OWNERS MANUAL, C600 | .135 | 51 |
| 1 | | - | TIE WRAP | .016 | 50 |
| 1 | | 99-140-00-0004 | WASHER, HELICAL, SPRING LOCK 1/4" | .000 | 49 |
| 1 | | 99-100-00-0404 | SCREW, CAP, HEX, 1/4-20X0.5 LG | .002 | 48 |
| 1 | | C615HD-B110 | GROUNDING ROD AND CABLE ASSEMBLY | .724 | 47 |
| 1 | | LABEL-008 | WARNING LABEL | .010 | 46 |
| 1 | | D-31-300C | METAL DUST CAP FOR MALE CONNECTOR | .217 | 45 |
| 1 | | 99-214-01-0606 | 90DEG ELBOW 3/8MNPT X 3/8 FNPT | .261 | 44 |
| 1 | | 99-214-00-0606 | 90DEG ELBOW 3/8MNPT X 3/8 FNPT | .248 | 43 |
| 2 | | LABEL-007 | LOWER BAR INSTRUCTIONS LABEL | .000 | 42 |
| 1 | | C600-BOX | SHIPPING CONTAINER (NOT SHOWN) | | 41 |
| 1 | | LABEL-011 | FOOTAGE TOOLS DECAL NEW | .000 | 40 |
| 1 | | D-30-300C | METAL DUST CAP FOR FEMALE CONNECT | .306 | 39 |
| 1 | | D-31-300 | MALE HYD CONNECTOR, THREADED | .243 | 38 |
| 1 | | 99-280-00-0606 | NIPPLE 3/8 MNPT TO 6 JIC | .010 | 37 |
| 1 | | 99-210-00-0006 | NIPPLE, PIPE, 3/8 MNPT-3/8MNPT | .033 | 36 |
| 1 | | D-30-300 | FEMALE HYD CONNECTOR, THREADED | .535 | 35 |
| 2 | | 99-490-90-0210U | O'RING #0210 URETHANE | .001 | 34 |
| 8 | | 99-106-00-0528 | SHCS 5/16- 18 X 1.75" | .049 | 33 |
| 1 | | 99-218-00-0001 | PIPE PLUG 1/16" NPT | .000 | 32 |
| 1 | | C640-11 | MANIFOLD UPPER BAR | 1.646 | 31 |
| 2 | | C604-11 | LOCK DOWN BOLT | 1.324 | 30 |
| 2 | | 99-163-00-1632 | ROLL PIN 1/4X 2" LG | .002 | 29 |
| 2 | | 99-106-00-0510 | SHCS 5/16-18 X 5/8"LG | .003 | 28 |
| 2 | | C612-11 | CONTACT PLATE | .038 | 27 |
| 1 | | M100-17 | OIL SEAL CR#9815 | .000 | 26 |
| 2 | | C636-11 | ROD SEAL TRO-14 | .000 | 25 |
| 1 | | C601-13 | UPPER BAR | 16.240 | 24 |
| 2 | | 99-157-00-0006 | CHROME BALL 3/16 | .000 | 23 |
| 2 | | C100-21 | SPRING | .001 | 22 |
| 2 | | C413-11 | GAUGE PLATE LABEL | .009 | 21 |
| 2 | | C414-11 | GAUGE PLATE 8 SIDED | .533 | 20 |
| 2 | | C605-11 | BARREL NUT | .798 | 19 |
| 2 | | 99-114-00-0416 | SHOULDER BOLT 5/16 X 2" LG | .059 | 18 |
| 1 | | C602-11 | LOWER BAR | 11.999 | 17 |
| 2 | | C610-11 | ROD NUT | .982 | 16 |
| 2 | | C609-11 | CYLINDER ROD | 3.511 | 15 |
| 2 | | C634-11 | WEAR RING | .015 | 14 |
| 2 | | C635-11 | PISTON SEAL TPO-26 | .009 | 13 |
| 2 | | C607-11 | PISTON | 1.338 | 12 |
| 2 | | C638-11 | BACK UP RING #0231 | .002 | 11 |
| 4 | | 99-490-90-0231 | O'RING #0231 90 DURO | .005 | 10 |
| 2 | | C608-11 | CYLINDER BODY | 8.955 | 9 |
| 2 | | C606-11 | END CAP | 1.227 | 8 |
| 2 | | 99-490-90-0014 | O'RING #014, 90 DURO | .001 | 7 |
| 2 | | 99-490-90-0024 | O'RING # 024, 90 DURO | .001 | 6 |
| 1 | | C648-50 | PRESSURE RELIEF VALVE | .010 | 5 |
| 1 | | C637-15 | 12" HOSE ASM HOSE 3/8NPT TO 90DEG 9/16JIC | .376 | 4 |
| 2 | | 99-218-00-0002 | PIPE PLUG 1/8 | .007 | 3 |
| 1 | | 99-155-00-0409 | PLUNGER, 1/4-20 X 0.56"LG | .001 | 2 |
| 1 | | C603-12 | HANDLE MANIFOLD | 4.901 | 1 |

K

FOOTAGE PART LIST

DRAWN nguyenj 2009-06-25

MANUFACTURING APPROVAL

TOLERANCES:
TIR 0.004
RMS 63 MAX
.X ± .02
.XX ± .01
.XXX ± 0.005

MASS N/A

SCALE .38
SIZE C

FOOTAGE TOOLS

TITLE **C600-A002 ASSEMBLY DWG**
**6" HYD. SQUEEZE OFF TOOL**
**31890 LB FORCE**

DWG NO C600-A002

REV K

REMOVE ALL SHARP CORNERS UNLESS SPECIFIED OTHERWISE

SHEET 1 OF 1

**DO NOT OPERATE THESE TOOLS UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD**

# FOOTAGE TOOLS INC. WARRANTY

**FOOTAGE TOOLS INC.**, hereinafter sometimes referred to as “Manufacturer” warrants each new industrial product of its own manufacture to be free from defects in material and workmanship, under normal use and service for the life of the tool. **Warranty is void unless warranty registration form is completed either online or manually and returned to FOOTAGE TOOLS INC. within thirty (30) days from the date of purchase.** This warranty and any possible liability of **FOOTAGE TOOLS INC.** hereunder are in lieu of all other warranties, expressed, implied, or statutory, including, but not limited to, any warranties of merchantability or fitness for a particular purpose.

The parties agree that the Buyers **SOLE AND EXCLUSIVE REMEDY** against Manufacturer, whether in contract or arising out of warranties, representations, instructions, or defects shall be for the replacement or repair of defective parts as provided herein. In no event shall Manufacturers liability exceed the purchase price of the product. The Buyer agrees that no other remedy (including, but not limited to, in incidental or consequential loss) shall be available to him. If during the warranty period, any product becomes defective by reason of material or workmanship and Buyer immediately notifies Manufacturer of such defect, Manufacturer shall, at its option, supply a replacement part or request return of the product to its plant in Toronto, Canada. No parts shall be returned without prior written authorization and a return goods authorization number from Manufacturer, and this Warranty does not obligate the Manufacturer to bear any transportation charges in connection with the repair or replacement of defective parts. The Manufacturer will **not** accept any charges for labor and/or parts incidental to the removal or remounting of parts repaired or replaced under this Warranty.

This Warranty shall not apply to any part or product which shall have been installed or operated in a manner not recommended by **FOOTAGE TOOLS INC.**, nor to any part or product which shall have been neglected, or used in any way which, in the manufacturers opinion, adversely affects its performance; nor negligence of proper maintenance or other negligence, fire, or other accident: nor if the unit has been altered or repaired outside of a **FOOTAGE TOOLS INC.** authorized dealership in a manner of which, in the sole judgement of **FOOTAGE TOOLS INC.** affects its performance stability or reliability: nor to any product in which parts not manufactured or approved by **FOOTAGE TOOLS INC.** have been used, nor to normal maintenance services or replacement of normal service items. Equipment and accessories not of our manufacture are warranted only to the extent of the original Manufacturers Warranty and subject to their allowance to us, if found to be defective by them.

The original purchaser, user is responsible for “downtime” expenses and all business costs and losses resulting from a warrantable failure. **FOOTAGE TOOLS INC.** specifically disclaims any responsibility for any damages of any kind or description, whether to property or person, in any way connected with or arising out of the use of **FOOTAGE TOOLS INC.** products. The Buyer expressly acknowledges that this Limited Lifetime Warranty does not apply to any part or product not directly purchased from the Manufacturer

FOOTAGE TOOLS INC reserves the right to modify, alter, and improve any product or parts without incurring any obligation to replace any product or parts previously sold with such modified, altered, or improved product or part.

No person is authorized to give any other Warranty, or to assume any additional obligation on the Manufacturers behalf unless made in writing and signed by an officer of the Manufacturer.