

# OWNER'S MANUAL

**Footage**

**IMPORTANT**

DO NOT OPERATE THIS TOOL UNLESS THESE INSTRUCTIONS HAVE BEEN CAREFULLY READ AND UNDERSTOOD.

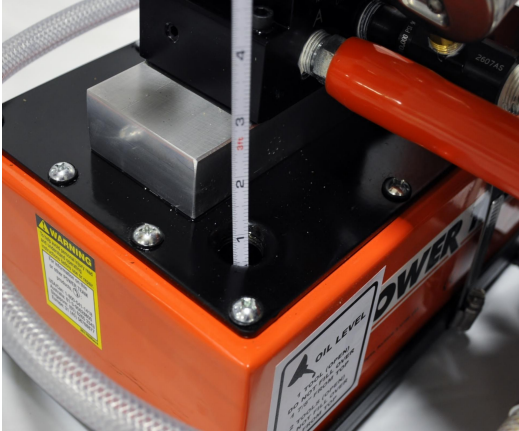


## **C36S** 3" - 6" Hydraulic Steel Squeeze Off Tool



This Footage Tools' C36S Steel Squeeze Off Tool is sold with one pump configuration only; fine controlled release. This fine controlled unit has a needle valve with a built-in orifice in the high-pressure pump line.

The C36S tool is powered by an air operated, hydraulic pump which is a single speed pump that gives the high pressures needed to steel pipe. Requiring 40 to 120 psi air supply pressure to operate, this pump is safer than an electrically operated pump in the



potentially explosive atmosphere near a gas main. The pump is equipped with an air filter/regulator/lubricator to ensure it will operate properly.

**Ensure the filter/regulator/lubricator is in good operating condition and filled with air tool oil.**

The pump contains a 3-position control valve.

Shifting the control valve lever to "SQUEEZE" will allow oil to be pumped through the needle valve and effect the squeezing operation of the tool. Similarly, shifting the control valve lever to

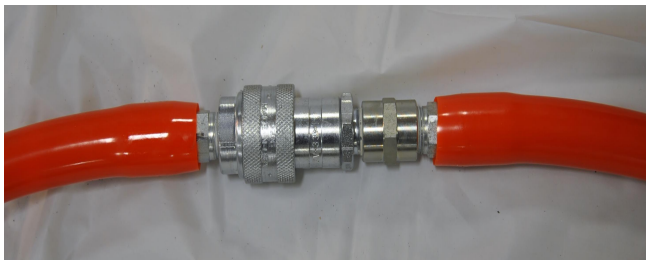
"RELEASE" will allow oil to be pumped to release

(open) the tool. The "NEUTRAL" position will release any pressure that is in the hoses.

An internal bypass valve, set at 10,000 PSI, is built into the pump to prevent over-pressurization of the pump.

### **Preliminary Assembly:**

1) Ensure the pump is filled with good quality, ISO 32 weight, hydraulic oil. To check or refill, connect the pump to the tool and close the tool till bars almost touch, 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 up to 1 1/2" from top, with the pump level and resting horizontally on the base and recap. **Cleanliness is critical while checking and refilling. Use a funnel with a filter. Do not allow any dirt to enter the reservoir.**



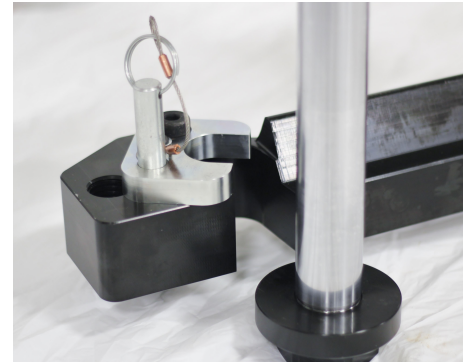
2) If motion of the tool seems jerky, bleeding air from the system may be necessary. To accomplish this, join the two hoses together, eliminating the tool as shown in the photo. Ensure the reservoir oil is topped up. Fully open needle valve by turning knob counter clockwise. Place the pump control valve to "SQUEEZE" and pump for 2 minutes. Place the pump control valve

to "RELEASE" and pump for 2 minutes. Return the valve to the "NEUTRAL" position. Disconnect the hoses and assemble them to the tool. Ensure tool is lower than pump then cycle the tool fully open, to fully closed, a few times. Repeat if necessary. Ensure the reservoir is topped up again, having the tool in the closed position.

## Operating Instructions:

### INSTALLATION ON PIPE

1) Inspect the tool to ensure that it is clean and free from any dirt that may hinder proper operation. Pay particular attention to the bottom bar locking mechanism and hydraulic connections (See *Picture 1*). Clean if necessary.



*Picture 1*

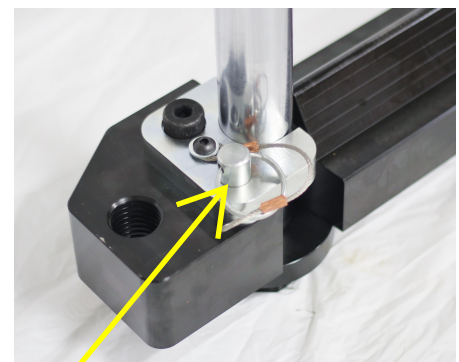
2) Carefully inspect the hydraulic hoses on the pump kit, to ensure there are no cuts or leaks. Make certain the hydraulic couplings are clean and then connect the hydraulic hoses from the pump to the squeeze off tool (See *Picture 2*). To eliminate any possibility of accidental disconnection with our standard coupling, rotate the female connector collar to lock the coupling. **Ensure the threaded collar is fully threaded on**, to enable pressure to reach the tool.



*Picture 2*

3) Open the tool by opening the needle valve all the way (counter-clockwise) and placing the pump control valve into the “RELEASE” position and operate the tool.

4) Pull and remove the pin to release locking mechanism then open bottom bar. Swing it to open position and place the tool over the pipe. Now swing bottom bar back into place and make certain bottom bar is fully engaged on the side shaft – install the pin through the locking plate into the bar.

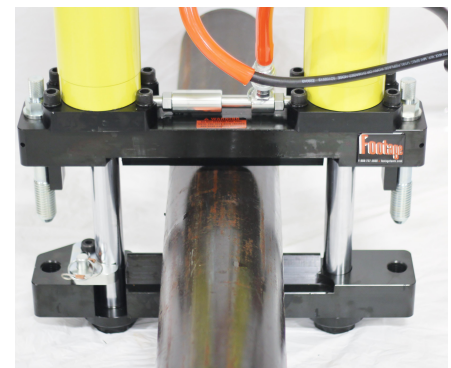


*Picture 3*

(See *picture 3*).

### SQUEEZING THE PIPE

1) Whenever steel pipe is squeezed-off and the pipe seam location can be determined, the seam shall be centered on the jaws of the squeeze-off tool. This reduces the stress that may cause the pipe to split.



*Picture 4*

- 2) If the seam cannot be determined, squeeze the pipe and in the event of a split seam, rotate the tool 90 degrees and perform the squeeze again.
- 3) Depending on the age of the pipe, internal or external corrosion and metal content, steel pipe will typically squeeze to 98% closed.

4) General recommendations:

- **Ensure that area of pipe chosen to squeeze off is free from excessive corrosion, welds, seams branch tees, etc.**
- **Remove coatings and or pipe wraps if required or possible**
- **Do not exceed the minimum pressure required to effectively stop or reduce the flow of gas to a safe workable environment**
- **Due to the nature of steel pipe and its fondness to corrode both internally and externally, steel pipe can either shear or split with no warning**
- **Bubble tight results can in no way be guaranteed due to the age of the pipe, condition of the pipe both inside and out along with the pipes metal integrity which can vary on any given portion of the pipe being squeezed**
- **With blocks or sling, fully support the full weight of the tool to prevent any damage to pipe and or tool as pipe is being squeezed**

5) Make sure the pipe is centrally located between the bars and 90 degrees to tool. Use a tape measure to help center the pipe (See *Picture 4*). This will ensure a proper squeeze and will prevent damage of the tool.

6) Close the needle valve by rotating valve fully clockwise to a finger tight tension only. Move the control lever on the pump to the "SQUEEZE" position.

7) Start operating the pump to advance the squeeze bars toward the pipe. Ensure the tool remains positioned centrally and in a perpendicular position on the pipe. **If this is not done, tool and pipe damage may result.** (See *Picture 5 & 6*)

8) As hydraulic pressure increases and the safety lock down bolts start to rise up, start threading safety lock down bolts into lower bar. Doing so will ensure that squeeze bars will remain safely fixed in the unlikely event of a hydraulic failure. (See *Picture 7*)



**Picture 5**

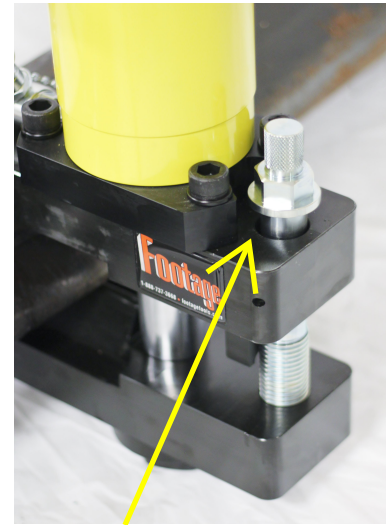


**Picture 6**

9) Continue squeezing the pipe until the flow is shut down, a workable environment has been achieved or until the bars come in contact with the safety stops. **Note: once bars have reached the stops, DO NOT CONTINUE TO PUMP,** as damage to the tool may result.

10) With fingers only, continue to thread the lock down bolts until they are snug with the surface of the top bar. (See Picture 8)

11) The tool is now safely secured to the pipe and if required, the hydraulic pressure can be released and the pump can be disconnected from the tool and removed from work area.



Picture 7

**WARNING: DO NOT DISCONNECT THE PUMP FROM THE TOOL UNTIL THE HYDRAULIC PRESSURE HAS BEEN RELEASED**

12) Perform desired work on the pipe.

## **RELEASING THE PIPE**

1) If the hydraulic pump has been disconnected, reconnect, as per procedure in section 2 from operating instruction. Once the hydraulic pump is securely attached, ensure that the needle valve is closed (clockwise and finger tight). Note: It is necessary to apply hydraulic pressure on the tool, in order to free the lock down bolts. Once the bolts are fully disengaged and they can be lifted up by hand, the releasing process can start. (See picture 7).



Picture 8

2) **Ensure the needle valve is fully closed.** Move the pump control valve handle from "SQUEEZE" to "NEUTRAL" to "RELEASE". As this is done, the tool will start to open immediately. Should the operator want to stop the release, return the pump control valve handle to the "SQUEEZE" position. The orifice in the needle valve controls the release rate. As the pipe opens slightly, the pressure in the tool will decrease. Once the pipe has stopped opening at its now crimped state, the tool will not open any further. The operator can then toggle control lever 2 or 3 times between the "SQUEEZE" and "RELEASE" positions to equalize any remaining pressure within the pump, lines and tool. Then the operator can **fully** open (counterclockwise) the needle valve, place control lever in the "RELEASE" position then operate pump to open tool for removal from pipe. **Once the tool is fully open, do not continue to pump. Continuing to pump will cause hydraulic oil to be vented from the relief valve to prevent tool damage.**

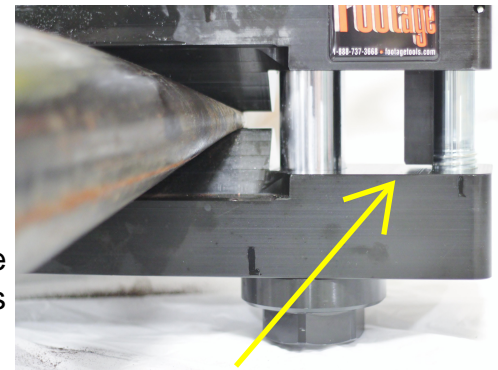
- 3) To remove the tool from the pipe let the upper bar rest against the pipe. Pull and remove the pin in the locking mechanism, then rotate the bottom bar clear of the pipe. The tool may now be lifted clear of the pipe. Close and secure bottom bar.

**Be aware that the balance of the tool will shift because of the change in position of the lower bar.**

## **SAFETY PRECAUTIONS**

### **WARNING:**

When squeezing the pipe, **DO NOT** continue to squeeze after the bars come in contact with the safety stops. This may cause damage to the tool (See *Picture 9*).

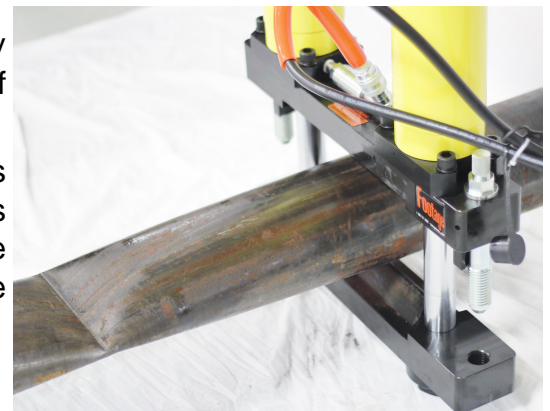


**Picture 9**

### **WARNING:**

When performing a squeeze, position the tool properly centered over the pipe, so the pipe will be in the middle of the jaws.

If it is necessary to perform a squeeze on a pipe that was previously squeezed, position the tool at least 3 diameters (or minimum 12") from the previous squeeze, to ensure the tool will remain perpendicular to the pipe during the squeezing process (See *Picture 10*).



**Picture 10**

### **WARNING:**

All operators and personnel must wear their PPE (personal protective equipment) while operating or around hydraulic tool, pump and hoses.

Always keep in mind that high pressure hydraulic equipment can cause serious injury if not properly maintained.

Repair any leaks or damage to system prior to use of these tools.

## **IMPORTANT NOTE:**

**For squeezing all types and sizes of steel pipe, the customer SHOULD consider regular training and testing on sample pipes used in their gas network.**

**This will allow for familiarity of required hydraulic pressures for given pipe sizes as well as any sounds the pipe may or may not make while being squeezed or released.**

## **MAINTENANCE**

This section contains maintenance instructions for the tool. Do not attempt any maintenance which you do not fully understand or 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.

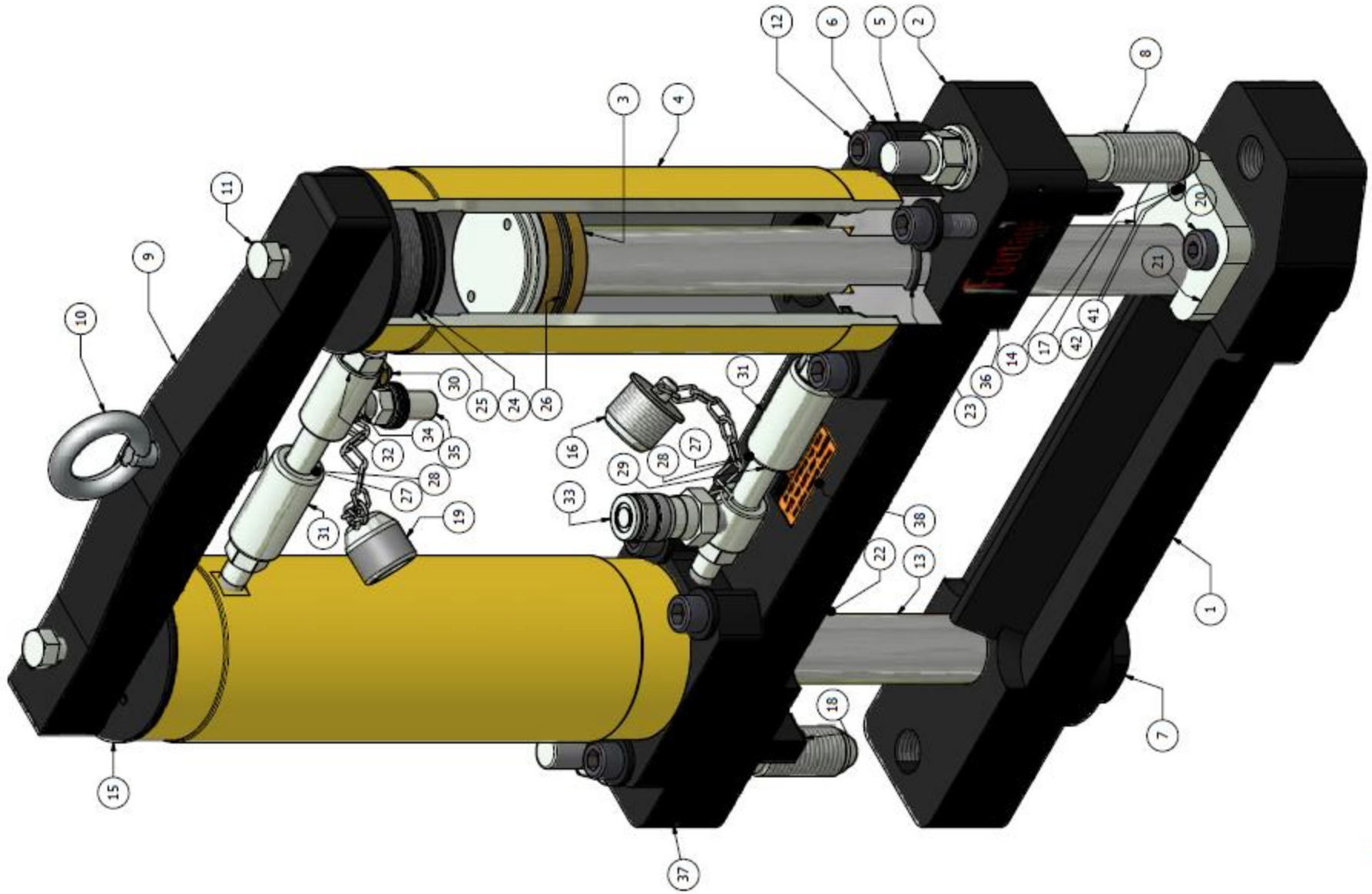
Ensure the tool is in good operating order by routinely:

Cycle pump monthly	See section # 2 in Preliminary Inspection section
Inspecting pump fluid level (See Preliminary Assembly)	Top up as needed
Bleeding air from hydraulic system.	Position tool lower than the pump. Without squeezing a pipe, open and close the tool several times to release any air into the reservoir. Top up the pump fluid level.
.	
Inspecting tool, pump, valves, gauge and hoses for oil leakage.	Tighten, repair or replace as required
Inspecting squeeze bars for damage.	Replace if needed
Inspecting the lock-down bolts for damage.	Replace if needed
Inspecting lock pin & locking gate for damage.	Replace if needed
Inspect cylinder rods for dirt	Clean as needed.
Ensure that no dirt has accumulated between bottom bar and rod nuts	Clean as needed.

## **SPECIFICATIONS**

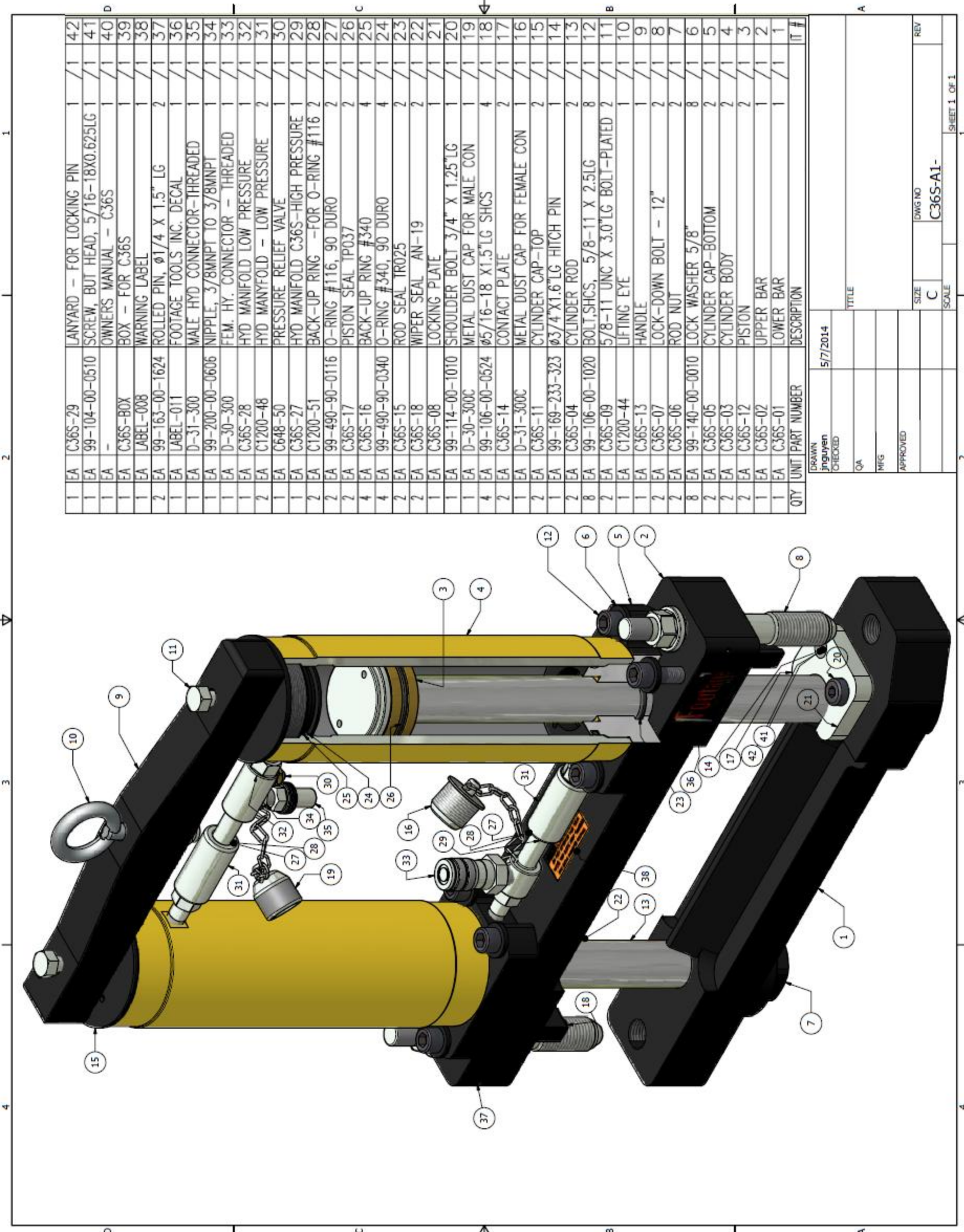
<b>GENERAL</b>	<b>C36S</b>
Max Steel SCH40 & 80 Pipe Diameter:	6"
Weight of tool:	270 lbs.
Operating Pressure (max):	10,000 PSI
Max. air pressure for air / hydraulic pump:	120 PSI
Accessory Kit (pump, 20' hoses, needle valve w 0.009" orifice, 10,000 psi gauge, air filter/regulator/lubricator & box):	C1200-25





QTY	UNIT	PART NUMBER	DESCRIPTION	IT #
1	EA	C36S-29	LANYARD -- FOR LOCKING PIN	1
1	EA	99-104-00-0510	SCREW, BUT HEAD, 5/16-18X0.625LG	41
1	EA	-	OWNERS MANUAL -- C36S	40
1	EA	C36S-BOX	BOX -- FOR C36S	39
1	EA	LABEL-008	WARNING LABEL	38
2	EA	99-163-00-1624	ROLLED PIN, Ø1/4 X 1.5" LG	37
1	EA	LABEL-011	FOOTAGE TOOLS INC. DECAL	36
1	EA	D-31-300	MALE HYD CONNECTOR--THREADED	35
1	EA	99-200-00-0606	NIPPLE, 3/8MNPT TO 3/8MNPT	34
1	EA	D-30-300	FEM. HY. CONNECTOR -- THREADED	33
1	EA	C36S-28	HYD MANIFOLD LOW PRESSURE	32
2	EA	C1200-48	HYD MANYFOLD -- LOW PRESSURE	31
1	EA	C648-50	PRESSURE RELIEF VALVE	30
1	EA	C36S-27	HYD MANIFOLD C36S-HIGH PRESSURE	29
2	EA	C1200-51	BACK-UP RING --FOR O-RING #116 2	28
2	EA	99-490-90-0116	O-RING #116, 90 DURO	27
2	EA	C36S-17	PISTON SEAL TP037	26
4	EA	C36S-16	BACK-UP RING #340	25
4	EA	99-490-90-0340	O-RING #340, 90 DURO	24
2	EA	C36S-15	ROD SEAL TR025	23
2	EA	C36S-18	WIPER SEAL AN-19	22
1	EA	C36S-08	LOCKING PLATE	21
1	EA	99-114-00-1010	SHOULDER BOLT 3/4" X 1.25"LG	20
1	EA	D-30-300C	METAL DUST CAP FOR MALE CON	19
4	EA	99-106-00-0524	Ø5/16-18 X1.5"LG SHCS	18
2	EA	C36S-14	CONTACT PLATE	17
1	EA	D-31-300C	METAL DUST CAP FOR FEMALE CON	16
2	EA	C36S-11	CYLINDER CAP--TOP	15
1	EA	99-169-233-323	Ø3/4"X1.6"LG HITCH PIN	14
2	EA	C36S-04	CYLINDER ROD	13
8	EA	99-106-00-1020	BOLT,SHCS, 5/8-11 X 2.5LG	12
2	EA	C36S-09	5/8-11 UNC X 3.0"LG BOLT--PLATED	11
1	EA	C1200-44	LIFTING EYE	10
1	EA	C36S-13	HANDLE	9
2	EA	C36S-07	LOCK-DOWN BOLT -- 12"	8
2	EA	C36S-06	ROD NUT	7
8	EA	99-140-00-0010	LOCK WASHER 5/8"	6
2	EA	C36S-05	CYLINDER CAP--BOTTOM	5
2	EA	C36S-03	CYLINDER BODY	4
2	EA	C36S-12	PISTON	3
1	EA	C36S-02	UPPER BAR	2
1	EA	C36S-01	LOWER BAR	1
			DESCRIPTION	

DRAWN Jnguyen	5/7/2014	TITLE
CHECKED		
QA		
MFG		
APPROVED		
SIZE C	DWG NO C36S-A1-	REV
SCALE		



**FOOTAGE TOOLS WARRANTY**

FOOTAGE TOOLS INC, hereinafter sometimes referred to as "Manufacturer" warrants each new PE Pipe Squeeze Off Tool of its own manufacture to be free from defects in material and workmanship, under normal use and service for the life of the tool after delivery to the end user. **Warranty is void unless warranty registration card is completed in full and returned to FOOTAGE TOOLS INC within thirty days from the date of purchase.** This warranty and any possible liability of FOOTAGE TOOLS INC hereunder is 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, 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.

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.





## IMPORTANT NOTICE

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*Warranty registration  
now available online.*

Please visit  
**[www.footagetools.com](http://www.footagetools.com)**  
and click on  
*'warranty registration'*.

54 Audia Crt. Unit #1  
Vaughan, Ontario  
Toll Free: 1-888-737-3668  
[www.footagetools.com](http://www.footagetools.com)



Model: \_\_\_\_\_

S/N: \_\_\_\_\_