Owner's Manual

C812S-A1 Hydraulic Steel Squeeze Off Tool



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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 PIPE.
- ENSURE THE GROUNDING SYSTEM IS PROPERLY PLANTED IN THE SOIL TO REDUCE THE CHANCES OF STATIC DISCHARGE.
- DO NOT MODIFY OR ALTER THE TOOL IN ANY WAY. ONLY USE FOOTAGE TOOLS REPLACEMENT PARTS PROVIDED BY THE MANUFACTURER OR AUTHORIZED DISTRIBUTOR.
- 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 AND WHERE THE SIDE SHAFTS/CYLINDER RODS WILL CONTACT THE LOWER BAR. REINSPECT AFTER TOOL IS LOWERED INTO POSITION ON PIPE JUST PRIOR TO SQUEEZE.

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SAFETY WARNING:

WARNING:

- 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 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 STEEL PIPE, DUE TO THE NATURE OF THE MATERIAL AND POTENTIAL CORROSION, THE PIPE CAN EITHER SHEAR OR SPLIT WITH NO WARNING. ALSO, BUBBLE-TIGHT RESULTS CANNOT BE GUARANTEED.
- 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.

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1. This Footage Tools' C812S Steel Squeeze Off Tool is sold in one configuration; fine-controlled release. This fine-controlled unit has a needle valve with a built-in orifice in the high-pressure pump line. The tool is powered by an air-operated, hydraulic pump which is a single speed pump that gives the high pressures needed to squeeze large diameter pipe. Requiring 60 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. Pushing the control valve lever clockwise will allow oil to be pumped through the needle valve and to control the squeezing operation of the tool. Similarly, pulling the control valve lever fully counter-clockwise will allow oil to be pumped to release (open) the tool. The neutral position (center) will cause the pump to stop building pressure, while holding existing pressure in the hose. A bypass valve, set at 10,000 PSI, is built into the pump to prevent over-pressurization.

PRELIMINARY ASSEMBLY:

1. Ensure the pump is filled with good-quality, ISO 32 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.) With the pump levelled, and resting horizontally on the base, remove the cap and fill up to 7.58 litres or measuring 1-1/2" from the top and recap. (When using one pump with two tools, please contact Footage for more information).



Cleanliness is critical while checking and refilling oil. Use a funnel with a filter. Do not allow any dirt to enter the reservoir.

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PRELIMINARY ASSEMBLY:

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.



BLEENDING OF THE HYDRAULIC SYSTEM

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OPERATING INSTRUCTIONS:

NOTE: The lifting bar has a vertical play of 0.030" - Designed by the Manufacturer

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 lower bar locking mechanism (Figure 1) and hydraulic connections. Clean if necessary.

1. Using a lifting device or crane, attach the device to the lifting eye and carefully lift the tool in a vertical position. The tool is equipped with a second connection point, which if necessary can be used to position the tool in an angle over the pipe. The lifting eye installed on the side of the tool is not permanently locked in position as this is an optional location and can be used as needed.

2. Carefully inspect the hydraulic hoses on the pump kit, to ensure there are no cuts or leaks. Ensure the hydraulic couplings are clean, and then connect the hydraulic hoses from the pump to the squeeze off tool *(Figure 2).* Ensure the threaded collar is fully threaded on so that no red paint is visible, to enable pressure to reach the tool.

3. Open the tool by turning the needle valve (located on the tool) all the way (counter-clockwise) and placing the pump control valve into the “RELEASE” position. Caution: Ensure the needle valve is fully open

4. Pull and remove the hitch pin to release the locking plate then open the lower bar. Be aware that the balance of the tool will shift because of the change in position of the lower bar. Swing it to its open position and place the tool over the pipe. Swing the lower bar back into place and ensure the lower bar is fully engaged on the cylinder rod and rod nut – install the pin through the locking plate into the bar. *(Figure 3).*

NOTE: Ensure the cable ring that is attached to the hitch pin is positioned away from the contact plate to prevent from being damaged during the squeeze.



Figure 1



Figure 2



Figure 3

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OPERATING INSTRUCTIONS:

B. 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.

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 the 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 maximum pressure required to effectively stop or reduce the flow of gas to a safe workable environment.
   - Due to the tendency of steel pipe to corrode both internally and externally, steel pipe can either shear or split without warning.
   - Bubble tight results can in no way be guaranteed due to the age of the pipe or the condition of the pipe both inside and out along with the pipe's metal integrity which can vary on any given portion of the pipe being squeezed.
   - With blocks or a sling, fully support the weight of the tool to prevent any damage to the pipe and/or tool as the 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 *(Figure 4).* This will ensure a proper squeeze and will prevent damage to 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.



Figure 4

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OPERATING INSTRUCTIONS:

B. Squeezing the Pipe

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. (Figure 5 & 6)

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

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 contact plate. Note: once the bars have reached the stops, DO NOT CONTINUE TO PUMP, as damage to the tool may result.

10. Continue to thread the lock-down bolts until they are snug with the surface of the upper bar. (Figure 8) The bolts need only be tightened by hand, not with a wrench.

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.

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

12. Perform desired work on the pipe.



Figure 5



Figure 6



Figure 7

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OPERATING INSTRUCTIONS:

C. RELEASING THE PIPE

1. Connect the lifting device to the tool. If the hydraulic pump has been disconnected, re-connect it according to section A from the operating instructions. 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. *(Figure 8)*



Figure 8

2. Ensure the needle valve is fully closed. Move the pump control valve handle from "SQUEEZE" to "NEUTRAL" to “RELEASE”. Slowly open the needle valve and the tool will start to open immediately. Should the operator want to stop the release, close the needle valve or return the pump control valve handle to the “SQUEEZE” position. 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 (counter clockwise) the needle valve, place control lever in the “RELEASE” position then operate the pump to open the tool for removal from the pipe. Continue to open the tool until it can be removed from the 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.

2. To remove the tool from the pipe let the upper bar rest against the pipe. Pull and remove the pin from the locking plate then rotate the lower bar clear of the pipe. The tool may now be lifted clear of the pipe. Close and secure lower bar.

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

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SAFETY PRECAUTIONS:

WARNING:

⚠ When squeezing the pipe, DO NOT continue to squeeze after the bars come in contact with the contact plate. This may cause damage to the tool *(Figure 9).*

⚠ 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 *(Figure 10).*

⚠ 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.

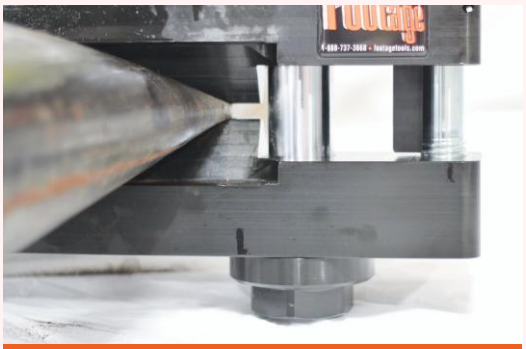


Figure 9



Figure 10

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 with required hydraulic pressures for given pipe sizes, as well as any sounds the pipe may or may not make while being squeezed or released.

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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.

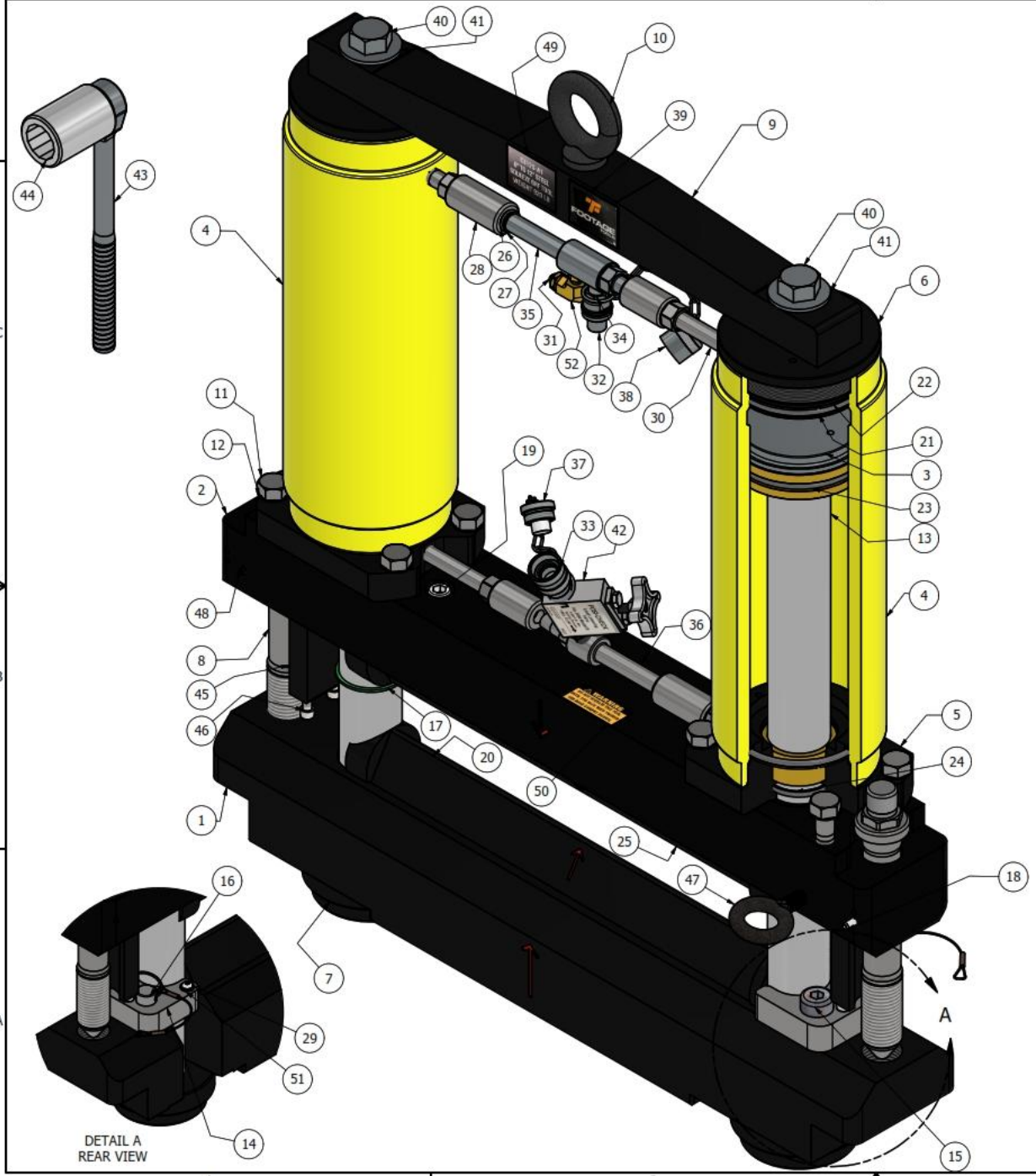
Ensure the tool is in good operating order by routinely:

Cycle pump monthly.	*See Preliminary Assembly, Pg. 5.*
Inspecting pump fluid level (See Preliminary Assembly, Pg. 5)	*Top up as needed*
Inspect contact plates for dirt and damage	*Clean or replace as needed*
Inspect the tool, pump, valves, gauge, and hoses for oil leakage.	*Tighten, repair or replace as required.*
Inspect squeeze bars for damage.	*Replace if needed.*
Inspect the lockdown bolts for damage.	*Replace if needed.*
Inspect hitch pin & locking plate for damage.	*Replace if needed.*
Inspect cylinder rods for dirt.	*Clean as needed.*
Inspect the rod nuts for dirt and damage.	*Clean, repair or replace as needed.*
Ensure that no dirt has accumulated between lower bar and rod nuts.	*Clean as needed.*
Inspect contact plates & rod nuts	*Clean as needed.*

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SPECIFICATIONS

GENERAL	*C812S*
Max Steel SCH40 & 80 Pipe Diameter:	*12”*
Weight of tool:	*920 lbs.*
Operating Pressure (max):	*10,000 psig*
Max. air pressure for air / hydraulic pump:	*120PSI*
OPTIONAL ACCESSORIES	
Accessory Kit (pump, 20’ hoses, needle valve w 0.009” orifice, 10,000 psi gauge, air filter/regulator/lubricator & box)	*C812S-AK1*



REVISION HISTORY					
REV	DESCRIPTION	ECN	DATE	BY	REVIEWED BY
B	ADDED SHCS 1/2-13 X 1/2"LG (ITEM #48)	2002	05AP19	NN	
C	ITEM #20 & 25 WERE C812S-20, C812S-21	2004	27MY19	NN	
D	IT #12: 99-141-04-0012 (TYPE B NARROW) WAS 99-141-00-0012	E2075	28OC22	JLN	

QTY	PART NUMBER	DESCRIPTION	MASS (lb)	ITEM
1	C812S-42	1/4 NPT ELBOW SHORT - BRASS	.194	52
1	99-141-00-0005	WASHER, FLAT, 5/16"	.006	51
1	LABEL-008	WARNING LABEL	.004	50
1	LABEL-017	LABEL-FOR C812S-A1	.004	49
1	99-150-00-0808	SHSS, 1/2-13 X 1/2" LG	.020	48
1	C812S-32	LIFTING EYE - FOR SIDE	.624	47
4	99-106-00-0624	3/8-16 X 1.5" LG SHCS	.068	46
2	C812S-14	CONTACT PLATE	1.540	45
1	C1200-46	1.5" DEEP SOCKET (1/2" DRIVE)	2.145	44
1	C1200-45	RATCHET	2.315	43
1	C148-41	NEEDLE VALVE 10000 PSI	2.033	42
2	99-141-11-0016	WASHER, FLAT, 1" I.D	.183	41
2	99-100-00-1624	HHCS, 1"8 UNC X 3.0 LG	1.057	40
1	LABEL-011	FOOTAGE NAME PLATE-NEW	.016	39
1	D-31-300C	METAL DUST CAP FOR MALE CON	.217	38
1	D-30-300C	METAL DUST CUP FOR FEM CON	.306	37
1	C1200-49	HYD MANIFOLD - HIGH PRESSURE	1.231	36
1	C1200-52	HYD MANIFOLD -LOW PRESSURE	1.461	35
1	99-200-00-0606	NIPPLE, 3/8 X 3/8 MNPT	.084	34
1	D-30-300	FEM. HYD CONNECTOR - THREADED	.537	33
1	D-31-300	MALE HYDRAULIC CONNECTOR - THREADED	.247	32
1	C648-50	PRESSURE RELIEF VALVE	.087	31
2	C1200-47	HYD MANIFOLD	1.249	30
1	99-104-00-0510	BHCS, 5/16-18 X 5/8 LG	.021	29
2	C1200-48	HYD MANIFOLD	1.102	28
2	C1200-51	BACK UP RING 116	.000	27
2	99-490-90-0116	O-Ring #116, 90 DURO	.001	26
1	C812S-51	INSERT FOOTAGE - UPPER	18.811	25
2	C812S-15	ROD SEAL, TRO31-FOR 2.5" DIA ROD	.010	24
2	C812S-17	PISTON SEAL TP051-FOR 5.5ID CYL	.034	23
4	C812S-16	BACK-UP RING FOR O-RING #429	.013	22
4	99-490-90-0429	O-RING #429	.034	21
1	C812S-50	INSERT FOOTAGE - LOWER	18.466	20
4	99-106-00-1048	5/8-11 X 3.0LG SHCS	.359	19
2	99-163-00-2032	ROLL PIN 5/16 X 2.0" LG	.026	18
2	C812S-18	WIPER SEAL -AN-25	.005	17
1	C812S-07	1" HITCH PIN -MOD	.991	16
1	99-114-00-1218	1" X 2.25LG SHOULDER BOLT	.823	15
1	C812S-08	LOCKING PLATE	3.822	14
2	C812S-04	CYLINDER ROD	47.712	13
8	99-141-04-0012	3/4 WASHER, TYPE B NARROW	.001	12
8	99-100-05-1224	3/4-10 UNC X 3.0"LG BOLT	.544	11
1	C812S-11	LIFTING EYE	2.357	10
1	C812S-19	LIFTING BAR	40.295	9
2	C1200-07	LOCK DOWN BOLT-C1200	6.713	8
2	C812S-09	CYLINDER ROD NUT	8.928	7
2	C812S-06	UPPER CAP CYLINDER	16.770	6
2	C812S-05	LOWER CAP CYLINDER	8.945	5
2	C812S-03	CYLINDER BODY	72.624	4
2	C812S-12	PISTON	10.537	3
1	C812S-02	UPPER BAR	193.207	2
1	C812S-01	LOWER BAR	224.427	1

FOOTAGE PART LIST

DRAWN TA 2025-09-08

MANUFACTURING APPROVAL

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

MASS 875.9 lbmass

SCALE 1 / 10

SIZE C

FOOTAGE TOOLS

TITLE
C812S-A1 ASM DWG
12" STEEL S.O.T
(188.4 Ton Force)

DWG NO C812S-A1

REV D

REMOVE ALL SHARP CORNERS UNLESS SPECIFIED OTHERWISE

SHEET 1 OF 1

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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.