Owner's Manual

C156-A004 Manual 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/STATIONARY BAR AND WHERE THE SIDE SHAFTS/CYLINDER RODS WILL CONTACT THE LOWER/STATIONARY 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 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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PRELIMINARY ASSEMBLY:

To connect the C615-B105 static grounding kit, mount the grounding tool lead to the head with the ¼" hardware supplied (see drawing). Clean all connections before assembly. If not using a ratchet to power the drive screw by the top hex, insert the "T" handle into the cross hole in the top of the power screw and thread the bolt into the end to secure it. Do not use extension on the "T" handle. The tool as supplied by the manufacturer has sufficient leverage to perform the task it was designed for.



A.1 Location of ground spike

OPERATING INSTRUCTIONS:

A. Installation on Pipe

1. Inspect the tool to ensure that the tool is clean and free from any dirt that may hinder proper operation. The power screw must be clean, free of dirt and debris and lubricated to function properly. Pay particular attention to the lower bar pockets (A.2) where the end washers on the side shafts engage. It is critical that these pockets are clean and free of debris. Clean if necessary.

2. Open the tool sufficiently by unscrewing the power screw. Once the sliding bar touches the top bar, stop unscrewing the power screw. Excessive torque on the power screw with the sliding bar touching the top bar may cause damage to the bearing retaining hardware.

3. Lift and swing out the lower bar and place the squeeze off tool over the pipe. Swing back the lower bar and lock into position over the end washers of the side shafts. Full engagement of these nuts into the lower bar pockets is critical or tool damage may result.



A.2 Lower Bar Pocket



A.3 End washer inside lower bar pocket

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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 facing down, such that they face the stationary bar.

2. Fully install the grounding stake into firm ground near the tool. Moist soil is preferred if available. This is critical as this grounding system will remove any static electric charge that is created when the flow of gas is cut off during the squeeze operation, thereby reducing the chances of sparks being created.

3. Tighten the power screw until the bars start to touch the pipe. Position the tool centrally on the pipe. There should be an equal space on both sides between the pipe wall and side shafts. Adjust as needed. If the tool is not centered on the pipe, tool and pipe damage may result.

4. The rate of squeeze is very important in obtaining good plastic flow in the pipe material. A slow squeeze rate minimizes the damage to the pipe walls. Advance the squeeze bars until 50% of the original diameter of the pipe 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 (0°C).



B.1 Gauge Plate



B.2 Place tool centrally on the Pipe & at 90°

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OPERATING INSTRUCTIONS:

B. Squeezing on Pipe

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

6. Continue slowly squeezing until the gauge plate stops just come in contact with the lower bar. The squeeze rate for this last portion should be approximately 1/2 inch per minute, no faster. Slower rates should be used below 32°F (0°C).

DO NOT CONTINUE TO SQUEEZE ONCE THE GAUGE STOPS HAVE BEEN REACHED OR TOOL DAMAGE MAY RESULT. Keep in mind, it may not be necessary to squeeze the pipe all the way to the gauge stops to obtain satisfactory flow control.

NOTE: TOOL MAY NOT GIVE ADEQUATE FLOW CONTROL ON HIGH DENSITY PIPE.

C. Releasing the Pipe

1. To avoid any damage to the plastic pipe, it is critical that a slow release rate be achieved. A release rate of 1/2 inches per minute is acceptable. This time allows for the plastic to "flow" decreasing the chances of material failure. Below 32°F (0°C), the release rate should be slower.

2. Unscrew the power screw slowly, not exceeding the release rate. Continue to open the tool at this rate until it can be removed from the pipe.

D. Re-rounding the Pipe if Required

Once the tool is fully open, reposition the tool 90 degrees from the original squeeze, on top of the peaks of the squeeze. Squeeze the pipe back to its original shape. It should also be noted that PE pipe rebounds on it's own to its near original shape very well. Squeeze points on the pipe are typically marked in some fashion for future reference. Consult your local utility as to their specific procedure for this operation.

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MAINTENANCE

This section contains maintenance instructions for the tool. Do not attempt any maintenance that 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.

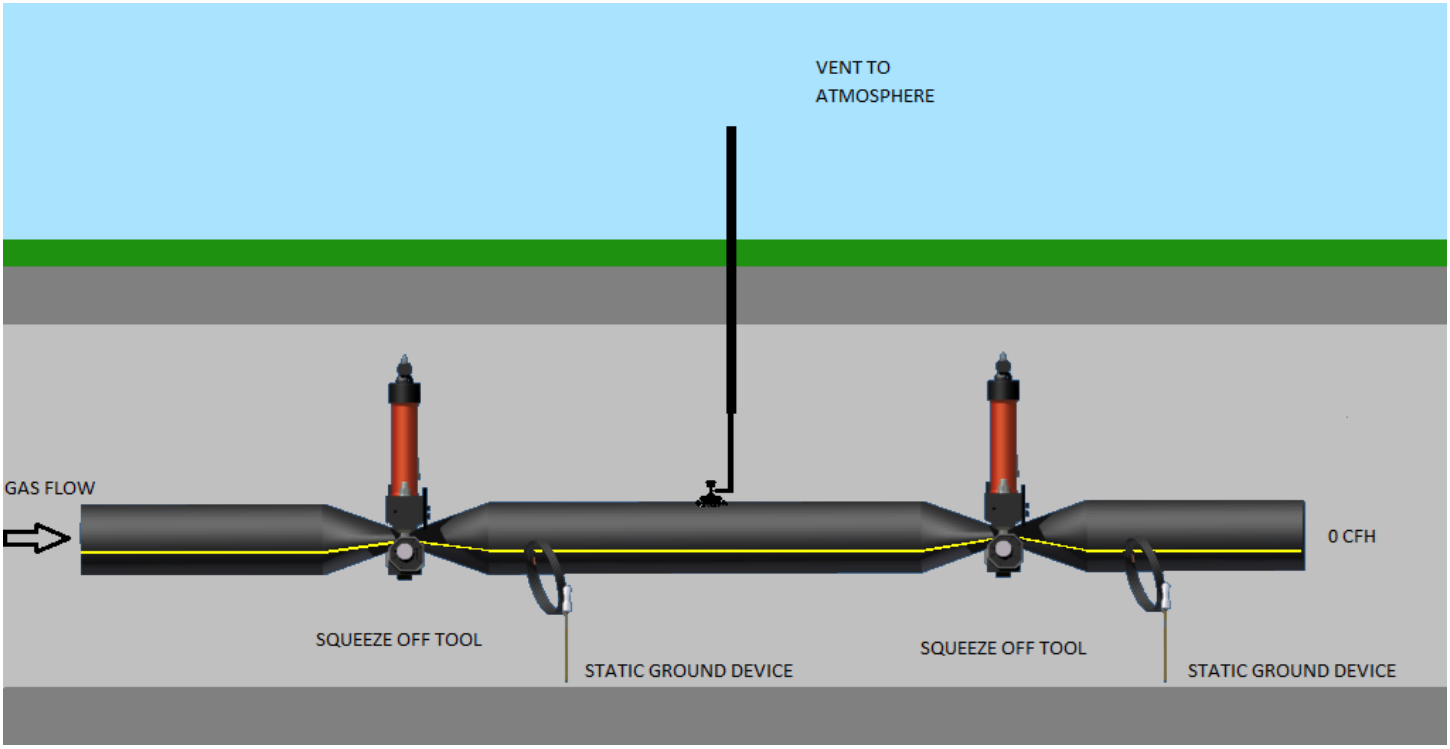
Ensure the tool is in good operating order by routinely:

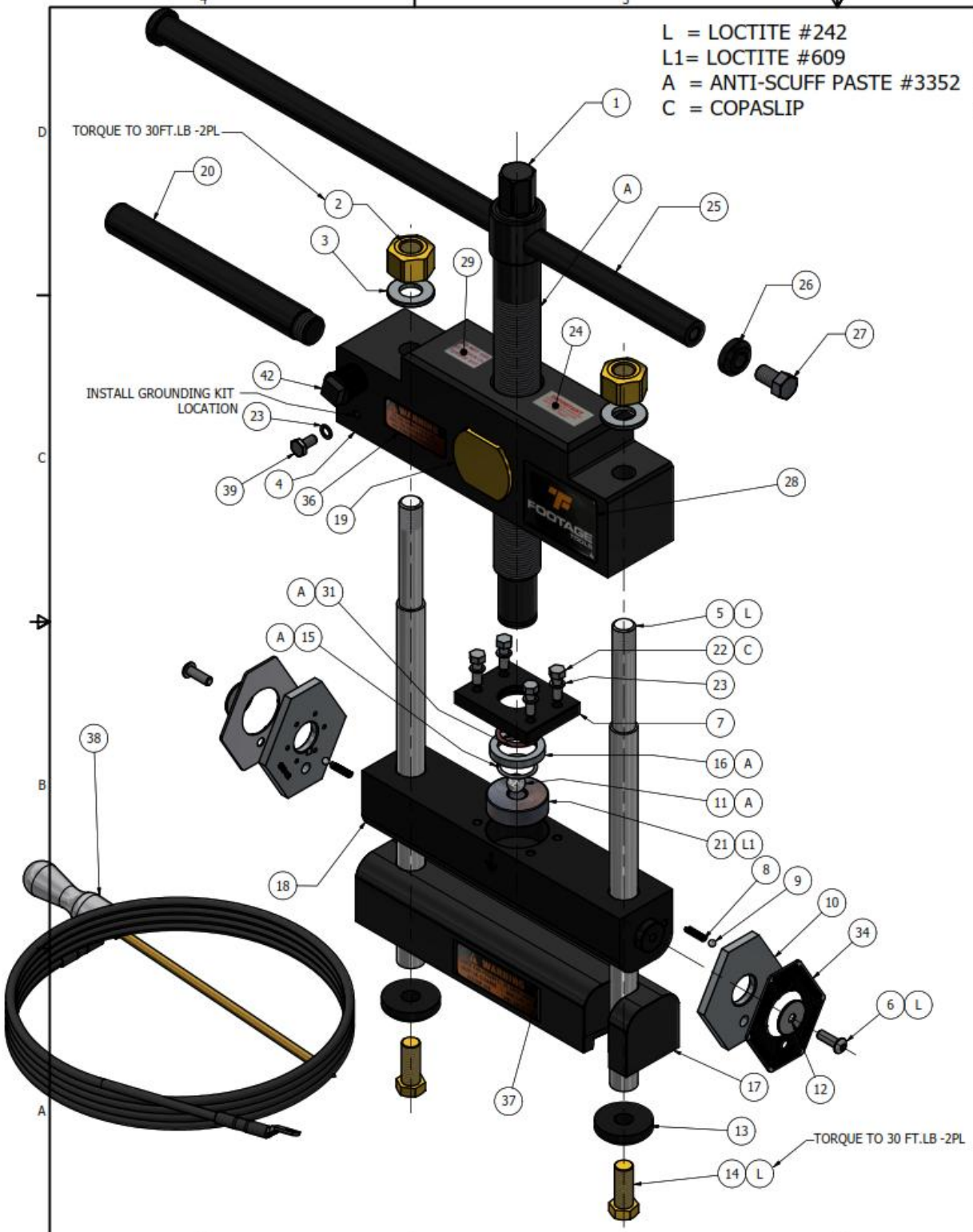
Inspect the power screw for dirt.	*Clean and lubricate*
Inspect the power screw thread for damage.	*Repair or replace as needed*
Inspect the end washer and screw for dirt and/or damage	*Clean, repair or replace as needed*
Inspect the squeeze bars for surface damage	Replace if needed
Inspect the stationary bar pockets (2) for debris	Clean as needed

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IMPORTANT NOTICE

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 / DCR	DATE	APPROVED
H	ADDED 99-259-P1-0008, PLASTIC 1/2 NPT PLUG	2068	30SE22	JLN
I	REMOVED IT# 15 & 20, NEW STYLE POWER SCREW	2087	08MR23	NN
J	ITEM #34 C098-132 WAS C098-131 & C098-142 WAS C098-131	2134	05MR25	RR

QTY	UNIT	PART NUMBER	DESCRIPTION	MASS (lb)	ITEM
1	EA	99-259-P1-0008	PLASTIC 1/2 NPT PLUG, FLANGED	.012	42
1	EA	-	TIE WRAP	.000	41
1	EA	99-100-00-0404	HHCS, 1/4-20 X 1/2	.014	39
1	EA	C615-B105	GROUNDING TOOL KIT	1.000	38
1	EA	LABEL-007	LOWER BAR LABEL	.006	37
1	EA	LABEL-009	WARNING LABEL	.004	36
J 2	EA	C098-132	GAUGE PLATE LABEL	.023	34
1	EA	99-490-00-0120	O-RING BUNA, #120	.002	31
1	EA	BOX-C156	SHIPPING CONTAINER- 4" MAN S.O.T	.000	30
1	EA	LABEL-001	LABEL, DO NOT USE EXTENSION	.000	29
1	EA	LABEL-011-NEW	LABEL, FOOTAGE NAME PLATE	.016	28
1	EA	99-100-00-0706	HEX HD CAP SCREW 7/16 X 3/4 LG	.062	27
1	EA	C110-17	WASHER END	.053	26
1	EA	C160-6	TORQUE BAR ASM	.369	25
1	EA	LABEL-00	FEED SCREW STICKER	.000	24
5	EA	99-140-00-0004	LOCK WASHER 1/4	.001	23
4	EA	99-100-00-0406	HEX HD CAP SCREW 1/4-20 X 3/4 LG	.017	22
1	EA	C156-14	POWER SCREW BUTT	.312	21
1	EA	C109-13	FIXED HANDLE	.435	20
1	EA	C163-14	BARREL NUT	.212	19
1	EA	C040-13	SLIDING BAR	3.176	18
1	EA	C159-13	STATIONARY BAR	3.311	17
1	EA	C156-15	RETAINER RING	.047	16
1	EA	C156-16	WIRE RING	.005	15
2	EA	99-101-08-0810	HHCS 1/2-20 X 1.25" LG. GR8	.104	14
2	EA	C219-12	END WASHER	.169	13
2	EA	99-145-00-0004	WASHER, FENDER	.013	12
1	EA	99-157-00-0016	STEEL BALL 1/2" DIA	.018	11
J 2	EA	C098-142	GAUGE PL. 6 SIDED	.424	10
2	EA	99-157-00-0006	STEEL BALL 3/16" DIA	.001	9
2	EA	C100-21	SPRING	.001	8
1	EA	C102-16	RETAINER PLATE	.422	7
2	EA	99-104-00-0408	BHCS 1/4-20 X 1/2"LG	.014	6
2	EA	C161-13	SIDE SHAFT	1.660	5
1	EA	C157-13	TOP BAR	6.277	4
2	EA	99-140-00-0010	LOCK WASHER 5/8	.032	3
2	EA	99-121-08-0010	NUT 5/8-18 UNF HD GRADE 8	.181	2
1	EA	C160-8	DRIVE SCREW	4.591	1

FOOTAGE PART LIST

DRAWN	JLN	2025-05-06	FOOTAGE TOOLS
MANUFACTURING APPROVAL			TITLE: C156-A004 ASSEMBLY DWG 4" SQUEEZE OFF TOOL
TOLERANCES: TIR 0.004, RMS 63 MAX, .X ±.02, .XX ±.01, .XXX ±0.005		MASS 25.7 lbmass	DWG NO C156-A004 REV J
		SCALE .49, SIZE C	

REMOVE ALL SHARP CORNERS UNLESS SPECIFIED OTHERWISE

SHEET 1 OF 1

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FOOTAGE TOOLS INC. LIMITED LIFETIME 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.