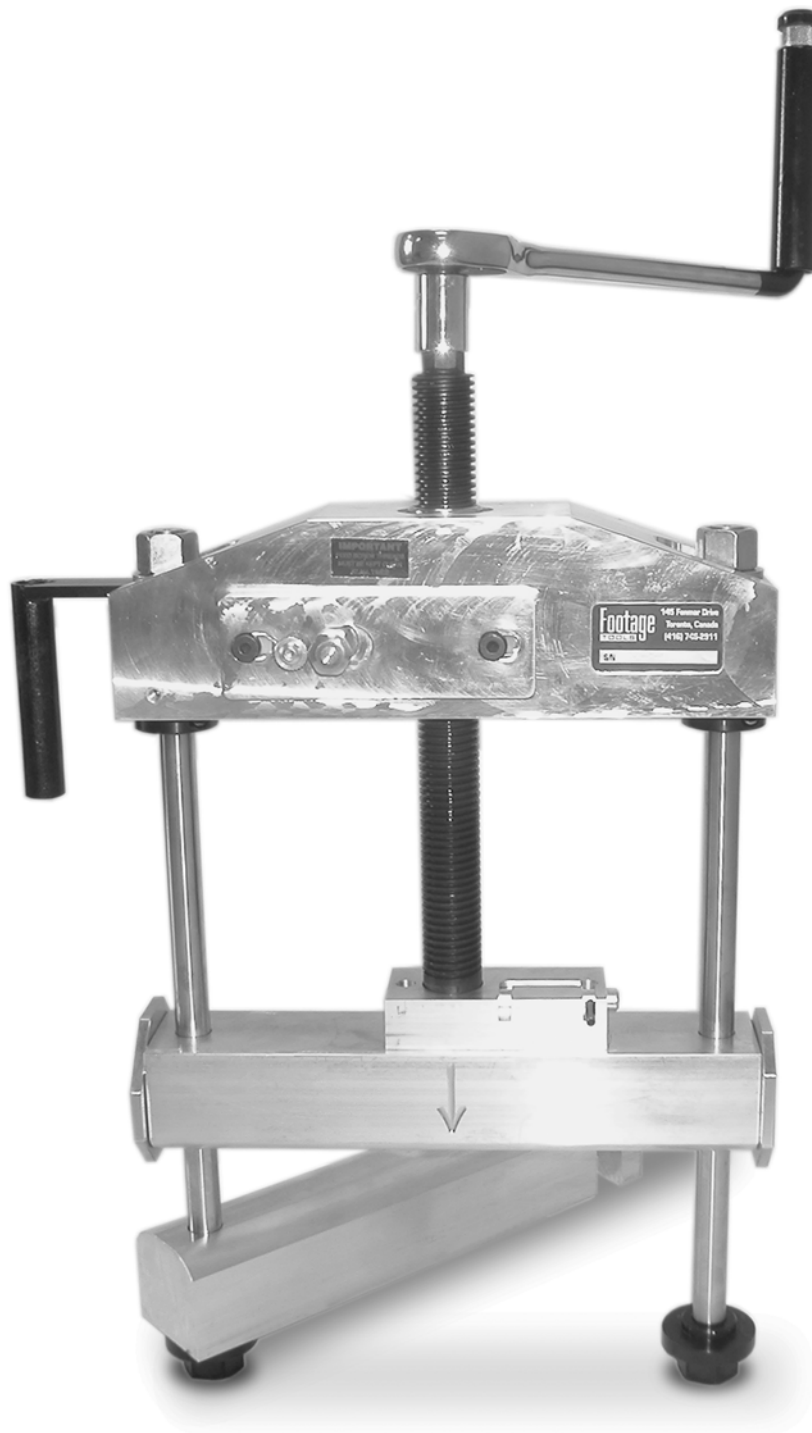


Owner's Manual

Footage
TOOLS INC.



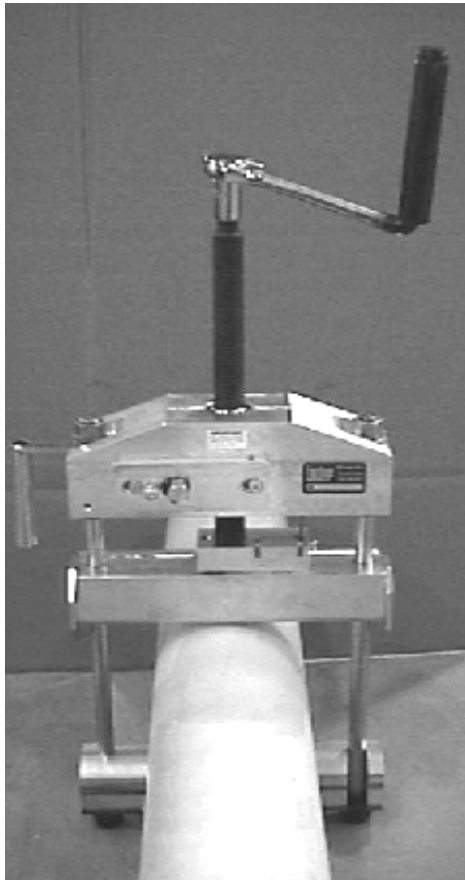
C400 Gear Operated Squeeze Off Tool

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

Preliminary Assembly

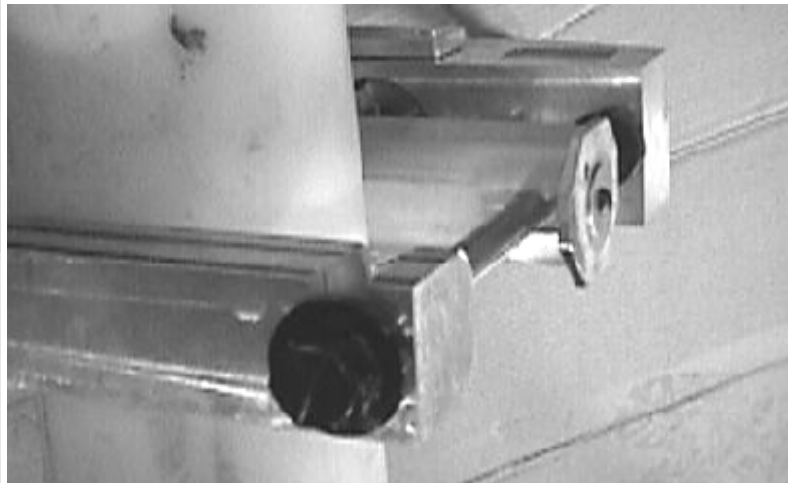
To connect the C615-A105 static grounding kit, mount the grounding tool lead to the upper bar, left hand corner with the 1/4" hardware supplied (see attached). Clean all connections prior to assembly. If you are using the optional grounding spike C615-A105 fully install the grounding spike into **firm** ground near the tool. Moist soil is required. Soak the area that the grounding spike will be inserted into if necessary. This is critical as this grounding system will direct any static electric charge that is created when the flow of gas is cut off during the squeeze operation.

Mounting Tool to Pipe (Refer to Figure 1 – tool drawing on page 3)

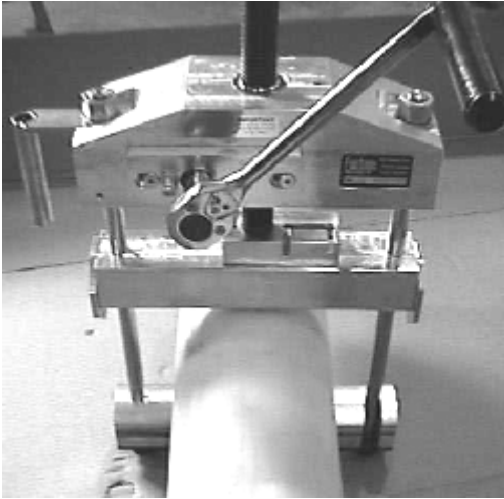


Picture 1

With Locking Pin (7) disengaged and Sliding Gate (5) engaged with the Front Drive Hex (6), rotate the Top Drive Hex (4), counterclockwise until the opening between the Sliding Bar (10) and the Stationary Bar (1) allows the pipe to be inserted. Ensure the roll pin on the Locking Pin (7) is facing down while opening the tool. Swing open the Stationary Bar (1) and lower the unit over the pipe. Swing the Stationary Bar closed and lock it into position by slightly lifting the bar over the Rod Nut (2). **Ensure the recessed pocket in the Bottom Bar has fully engaged and seated with the End Washer/Nut or tool damage could result.** (See Pictures 1 and 2)



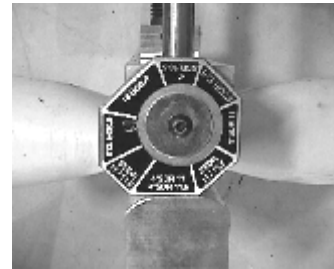
Picture 2



Picture 7

Once the Power Screw (8) is locked with the Locking Pin (7), rotation of the Front Drive (6) (See *Picture 7*) will advance the squeeze bars through the internal worm gear reduction. Begin advancing the squeeze bars again by rotating the Front Drive in a clockwise direction. Slow squeeze rates are necessary to allow time for the pipe to change shape or “flow”. The less time that is given for a pipe to flow, the more force will be required to make the pipe change shape. Also, the more force that is put into changing the pipe shape, the more stress there will be in the pipe. In colder conditions, the pipe will flow more slowly and thus more time must be given in squeeze rates to allow this flow to occur. The squeezing should

stop just as the Gauge Plates (3) touch the Stationary Bar (1). (See



Picture 8

Picture 8) Do not over squeeze beyond this limit as tool damage may occur. Do not use extensions on the wrench handle to get more squeeze as tool damage may result.

Squeezing Large Diameter Pipe

With Pipe diameters larger than 3” (75mm), the squeezing process should be paused at intervals to allow the pipe material time to “cold flow” from the squeeze zone. Consult your local utility regarding their specific recommendations regarding this procedure. These waiting periods should be extended in cold weather conditions.

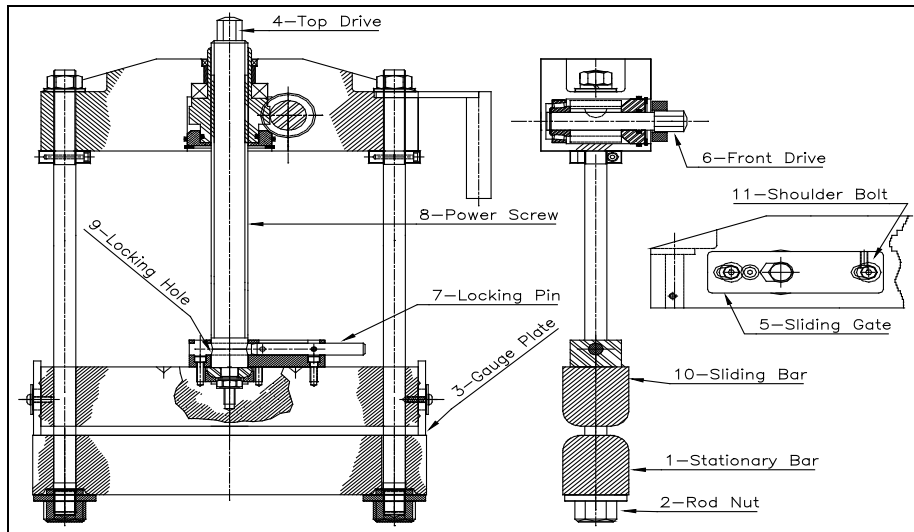


Figure 1 – Tool Drawing

Releasing Pipe

When the pipe is ready to be released from the squeeze, rotate the Front Drive (6) in the opposite direction. **In releasing a pipe from a squeeze, there should be a release rate of no more than 0.5 inches (12.5mm) per minute (this maximum rate is specified by the Gas Research Institute).** Consult your local utility regarding their specific recommendations regarding this procedure.

At some point in the releasing process when loading appears minimal, the operator may wish to switch to using the Top Drive to release the pipe. To operate the Top Drive (4), rotate the Front Drive (6) until the Slide Gate (5) can be engaged with the hex. Disengage the Locking Pin (7) from the Power Screw (8). Then the Top Drive can be rotated in the counterclockwise direction to release the pipe. Again, do not exceed the .5 inches (12.5mm) per minute release rate. In the squeezing of a pipe, a slow release rate is required to allow the plastic to flow and thereby avoid pipe damage. When releasing the pipe in cold weather conditions, below 0 °C (32 °F), the release rate should be reduced further.

WARNING



Do not exceed the recommended squeeze and release rates. Temperatures below 32°F (0°C) will require slower squeeze and release rates. Release is more critical than squeeze, thus slower rates are required.



When performing a squeeze, stay a minimum of 12" or 3 times the pipe diameter, whichever ever is greater away from fittings, fusion or previously squeezed areas.



To ensure the removal of any static electric charge buildup, ensure the grounding system is properly planted in the soil. Your tool can easily be fitted with a grounding stake if not so equipped. Contact your FOOTAGE TOOLS dealer for installation instructions and parts.

Tool Maintenance

- IMPORTANT: Keep the Power Screw (8) thread clean and dry whenever squeezing or opening the tool.** Use a stiff nylon (not wire) brush to clean the threads. This is essential as any debris caught in the threads will track into the female thread and cause binding which will result in excessive forces being required to operate the tool. Do not lubricate this thread with grease or oil. Use only a "Dry" Spray Lubricant.
- IMPORTANT: The two cavities where the Rod Nuts (2) engage the Stationary Bar (1) must be kept clean and free of debris.** Inspect before each use and clean as required.
- Keep the side shafts clean.
- Lubrication:

Thrust Bearing on Sliding Bar (10) - Clean the area around the Locking Pin (7) Retaining Plate. Remove the two Cap screws that hold this plate on. Retract the Power Screw (8). While keeping the area clean, coat all bearing surfaces and pack cavity with "Molyslip" #3352 Anti-scuff Paste. Reassemble.

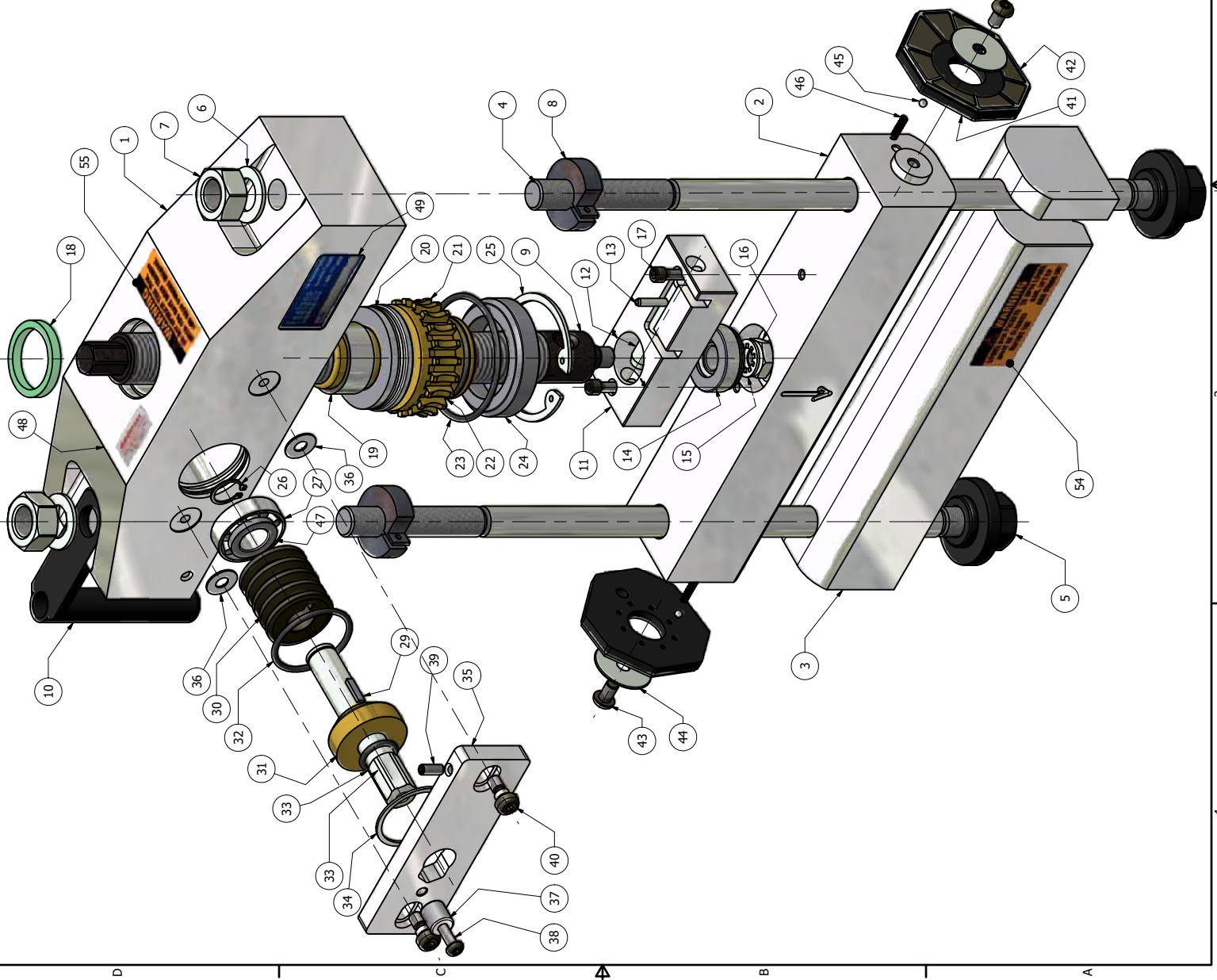
Front Drive (6) Gearbox - With tool flipped upside down (Top Drive (4) down), on a level surface, remove Shoulder Bolt (11) (i.e.: the bolt nearest the Power Screw (8)). The fluid must be up to this level. If low, top up with a mixture of:

- 10 parts - 75W90 Gear oil
- 1 part - "Molyslip G" #53422 Molybdenum Disulfide Oil

2 1 3 4

Parts List

QTY	PART NUMBER	DESCRIPTION	ITEM
1	LABEL-008	LABEL - OWNERS MANUAL	55
2	LABEL-007	LABEL - LOWER BAR	54
1	-	OWNERS MANUAL	53
1	C400-BOX	SHIPPING / TRANSPORT CONTAINER	52
1	T342-41	WRENCH, 1/2" DRIVE X 90 DEG	51
1	C350-58	DIRVE SOCKET, 3/4"	50
1	LABEL-003	FOOTAGE TOOLS INC. DECAL	49
1	LABEL-00	STICKER, POWER SCREW	48
1	C400-56	BEARING #LM11910	47
2	C100-21	SPRING	46
2	99-157-00-0006	CHROME BALL	45
2	99-145-00-0005	WASHER, FENDER, 5/16 ID	44
2	99-104-00-0508	BHCS, 5/16-18 X 1/2"	43
2	C413-11	GAUGE PLATE LABEL	42
2	C412-11	GAUGE PLATE	41
2	99-114-06-0503	SHOULDER SCREW 3/8 DIA	40
1	C350-2	SPRING PLUNGER 1/4-20	39
1	99-104-06-0416	BHCS, 1/4-20 X 1"	38
1	C356-11	KNURLED KNOB	37
2	99-146-00-0406	NYLON WASHER	36
1	C364-11	GATE, SLIDING	35
1	99-195-00-0287	RETAINING RING, INTERNAL	34
1	99-490-00-0210	ORING #0210	33
1	99-490-00-0225	ORING #0225	32
1	C404-11	BUSHING	31
1	C400-53	WORM (No. W8A-G X .75	30
1	99-171-00-0606	KEY, WOODRUFF #606	29
1	C405-11	SHAFT	28
1	C400-55	TAPER ROLLER BEARING #LM11949	27
1	99-196-00-0075	RETAINING RING, EXTERNAL	26
1	99-195-00-0287	RETAINING RING INTERNAL	25
1	C403-11	BUSHING FOR GEAR	24
1	99-490-00-0233	O-Ring # 233	23
1	99-490-00-0224	O-Ring # 224	22
1	C402-11	WORM GEAR	21
1	C400-51	BEARING, THRUST, ROLLER	20
1	C400-520	INNER RING - MODIFIED	19
1	C400-50	OIL SEAL	18
2	99-106-00-0412	SHCS, 1/4-20 X 3/4"	17
1	99-132-00-0008	NUT, JAM, 1/2-20UNF	16
1	99-147-00-0008	WASHER, LOCK, 1/2"	15
1	C156-13	BEARING, THRUST	14
1	99-163-01-1224	ROLL PIN, STAINLESS	13
1	C355-11	PIN LOCK	12
1	C366-11	RETAINER BLOCK	11
1	C176-2	HANDLE	10
1	C409-12	POWER SCREW	9
2	C416-11	LOCKING THREADED COLLAR	8
2	99-121-09-0012	HEX NUT 3/4-16UNF	7
2	99-141-08-0012	WASHER, FLAT, 3/4"	6
2	C406-11	ROD NUT	5
2	C411-13	SIDE SHAFT	4
1	C407-11	STATIONARY BAR	3
1	C408-11	SLIDING BAR	2
1	C401-12	TOP BAR	1



FOOTAGE TOOLS INC.

C400-A001 ASSEMBLY DWG

6" GEAR - SQUEEZE OFF TOOL

7/9/2009

DRAWN (nguyen)

CHECKED

QA

MFG

APPROVED (nguyen)

REMOVE ALL SHARP CORNERS UNLESS SPECIFIED OTHERWISE

SCALE NTS

DWG NO C400-A001

REV H

SHEET 1 OF 1

ECN 1813	C400 (6 in.) GEAR OPERATED SQUEEZE-OFF TOOL FOR PE PIPE	Page 7 of 7
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Footage Tools Limited 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 one full year 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 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 labour 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.



IMPORTANT NOTICE

*Warranty registration
now available online.*

Please visit
www.footagetools.com
and click on
'warranty registration'.

54 Audia Crt. Unit #1
Vaughan, Ontario
Toll Free: 1-888-737-3668
www.footagetools.com



Model: _____

S/N: _____