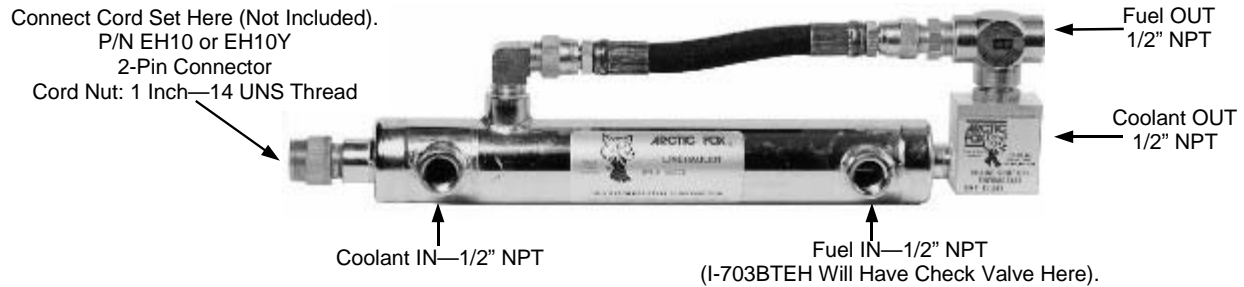


## INSTALLATION INSTRUCTIONS—B-608—10/07

### LECTRO LINER from Arctic Fox

#### I-703 BTEH—I-704 BTEH—I-714BTEH

#### In-Line Coolant Heated Fuel Warmer—With 120/240 Volt Preheat Option



**MOUNTING:** Using appropriate mounting hardware, the in-line fuel warmer can be frame or engine/transmission mounted in either the horizontal or vertical position. To provide maximum cold weather protection, the in-line warmer must be located as close as possible to the primary fuel filter. Some engine applications may not be equipped with a primary fuel filter between the tank and transfer pump. In this situation, locate warmer as close as possible to the transfer pump.

**COOLANT SUPPLY:** Obtain hot coolant from a pipe plug opening on the engine pressure side of cooling system. Route coolant to either "COOLANT CONNECTION" on warmer.

**COOLANT RETURN:** Route coolant from unused "COOLANT CONNECTION" on warmer back to engine pipe plug on suction side of the engine cooling system.

**SUGGESTION:** If uncertain as to which pipe plug ports on an engine are coolant supply and return, locate hose connections for cab heater and plumb into ports located in same cavities.

**FUEL:** Route fuel line from tank to either "FUEL CONNECTION" on fuel warmer. Install fuel line from other fuel connection on warmer to primary fuel filter inlet, or to transfer pump if engine is not equipped with a primary filter. If

more than 24 inches (610mm) of fuel line will be installed between the warmer and the primary filter, it is recommended that the line be insulated with ARCTIC FOX INSULTUBE part number A-706.

**CAUTION:** For the most efficient operation of fuel warmers, it is **recommended** that a separate coolant loop be provided. It is **not recommended** to use TEE's or WYE's in coolant supply and return lines thereby paralleling with another accessory. However, if all access ports on the engine are being used for other accessories (such as cab/sleeper heaters, temperature sensors, etc.), then a TEE may have to be considered as an option. In this circumstance, the TEE must be at least 1/2" NPT or larger and should be installed at the engine port, not along the coolant line itself. It should also be noted that plumbing a fuel warming device in series with a cab heater may drastically reduce the amount of heat transferred to the fuel.

Both the I-703BTEH and I-704BTEH models have an integral, automatic hot coolant supply shutoff valve that is thermostatically controlled based upon fuel temperature. Manual shut off valves such as ARCTIC FOX part numbers A-275, A-461, A-526, or A-527 and automatic shut off valve number S-400 are available from your dealer if additional coolant circuit isolation is desired.

**HELPFUL HINTS:** If an in-line fuel warmer is used with an optional in-tank warmer, both can be plumbed in a series coolant loop. However the hot coolant from the engine coolant supply should first pass through the in-line warmer, then on to the in-tank warmer. This will allow maximum anti-waxing protection to the primary fuel filter upon initial start up after an extended "cold soak" period. For additional cold weather protection, especially below 0° F (-18°C), ARCTIC FOX INSULTUBE can be added to all fuel and coolant lines to reduce external heat loss. Refer to the Arctic Fox product catalog for all installation accessories. Call (800) 654-5382 or (763) 972-2758 for additional information and technical support.

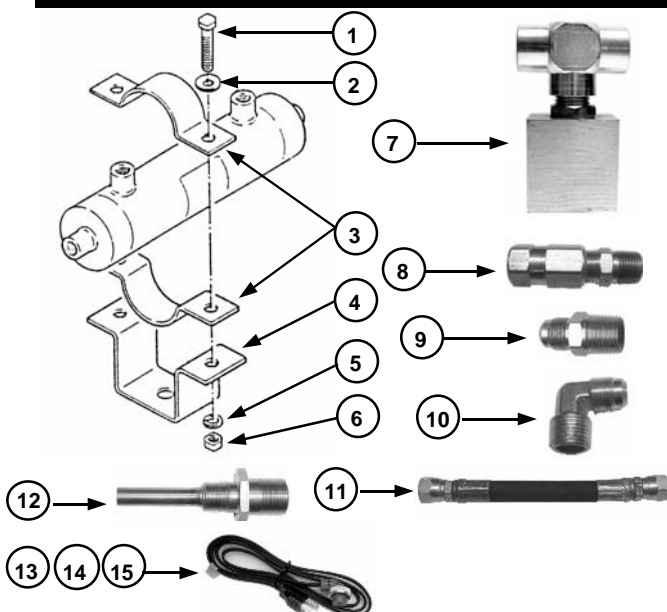
#### 5-Year—60,000 Mile (96,500km) Fuel and Fluid Warmer Warranty

All Arctic Fox® warmers (other than engine oil pan heat exchangers and alternative fuel heat exchangers) using coolant are warranted against defects in materials and workmanship for a period of 5-years or 60,000 miles from the date of purchase by the user. This warranty does not cover warmers which are altered or used for a purpose other than that for which it was intended or used in a manner inconsistent with any instructions regarding its use. The exclusive remedy for any unit found to be defective under this warranty is limited to the repair or replacement of the defective unit without charge, and Arctic Fox® shall **NOT** be liable for any consequential or incidental damages, including labor. In order to qualify for stated warranties, a Return Materials Authorization (RMA) number must be obtained from Arctic Fox® by calling (in USA) 1-800-654-5382 or 763-972-2758. The alleged defective unit must be returned to Arctic Fox® **intact**, postage or freight prepaid and Arctic Fox® will return the repaired or replaced unit postage or freight prepaid. Final determination of defects shall be made by Arctic Fox® in accordance with procedures established by Arctic Fox®. No agent, employee or representative of Arctic Fox® has any authority to bind any affirmation representation or warranty concerning Arctic Fox® products except as stated herein.

PART NUMBER	FUEL FLOW GPM/LPM	MOUNTING HARDWARE	CHECK VALVE See (1) Below	SHUT-OFF THERMOSTAT See (2) Below	DUEL FUEL INLET See (3) Below	ELECTRIC PREHEAT See (4) Below	FUEL PORT	COOLANT PORT
I-702	.1-.5 / .4-1.9	NO	NO	NO	NO	NO	3/8" NPT	3/8" NPT
I-702B	.1-.5 / .4-1.9	YES	NO	NO	NO	NO	3/8" NPT	3/8" NPT
I-703	.1-1.5 / .4-5.7	NO	NO	NO	NO	NO	3/8" NPT	1/2" NPT
I-703B	.1-1.5 / .4-5.7	YES	NO	NO	NO	NO	3/8" NPT	1/2" NPT
I-703BT	.1-1.5 / .4-5.7	YES	YES	78°-95°F 25°-35°C	NO	NO	1/2" NPT	1/2" NPT
I-703BTEH	.1-1.5 / .4-5.7	YES	YES	78°-95°F 25°-35°C	NO	120 VAC	1/2" NPT	1/2" NPT
I-704B	.1-1.5 / .4-5.7	YES	NO	NO	NO	NO	1/2" NPT	1/2" NPT
I-704BT	.1-1.5 / .4-5.7	YES	NO	78°-95°F 25°-35°C	NO	NO	1/2" NPT	1/2" NPT
I-704BTEH	.1-1.5 / .4-5.7	YES	NO	78°-95°F 25°-35°C	NO	120 VAC	1/2" NPT	1/2" NPT
I-705B	.1-1.5 / .4-5.7	YES	YES	NO	YES	NO	1/2" NPT	1/2" NPT
I-705BT	.1-1.5 / .4-5.7	YES	YES	78°-95°F 25°-35°C	YES	NO	1/2" NPT	1/2" NPT
I-706B	.1-1.5 / .4-5.7	YES	NO	NO	YES	NO	1/2" NPT	1/2" NPT
I-706BT	.1-1.5 / .4-5.7	YES	NO	78°-95°F 25°-35°C	YES	NO	1/2" NPT	1/2" NPT
I-714BT	.1-1.5 / .4-5.7	YES	NO	104°-125°F 40°-51°C	NO	NO	1/2" NPT	1/2" NPT
I-714BTEH-2	.1-1.5 / .4-5.7	YES	NO	104°-125°F 40°-51°C	NO	220/240 VAC	1/2" NPT	1/2" NPT
I-724BT	.1-1.5 / .4-5.7	YES	NO	104°-125°F 40°-51°C	NO	NO	1/2" NPT	1/2" NPT

1. Check valve required when mounting heater above top of fuel tank.
2. Allows automatic fuel temperature sensing and control, required for most electronic engines.
3. Allows for simplified dual draw plumbing when retrofitting single draw to dual draw systems.
4. Includes electric coolant pre-heat. 120 VAC cord set not included see page 11 to order, 220 VAC includes cord set.

### IN-LINE FUEL WARMER REPLACEMENT PARTS



ITEM	QTY.	DESCRIPTION	PART NO.
1	4	3/8" unc x 1.0" Long Bolt	A-321
2	4	3/8" SAE Flat Washer	A-311
3	4	Half Moon Bracket	A-307
4	2	U-Bracket	A-308
5	4	3/8" Split Lock Washer	A-310
6	4	3/8" UNC Hex Nut	A-309
7	1	Thermostat with Tee	S-400T
8	1	Check Valve 1/2" NPT	A-335
9	1	Male Connector #8 x 1/2" NPT	A-287
10	1	Elbow #8 x 1/2" NPT	A-281
11	1	#8 Single Wire Braided Hose	A-703H-8
12	1	63W 120V Heat Element 125W 240V Heat Element	A-120EK-1 OW212200-000
13	1	Power Cord 10' Threaded	EH10
14	1	Power Cord 10' "Y"	EH10Y
15	1	Power Cord 14' "Y"	EH14YK