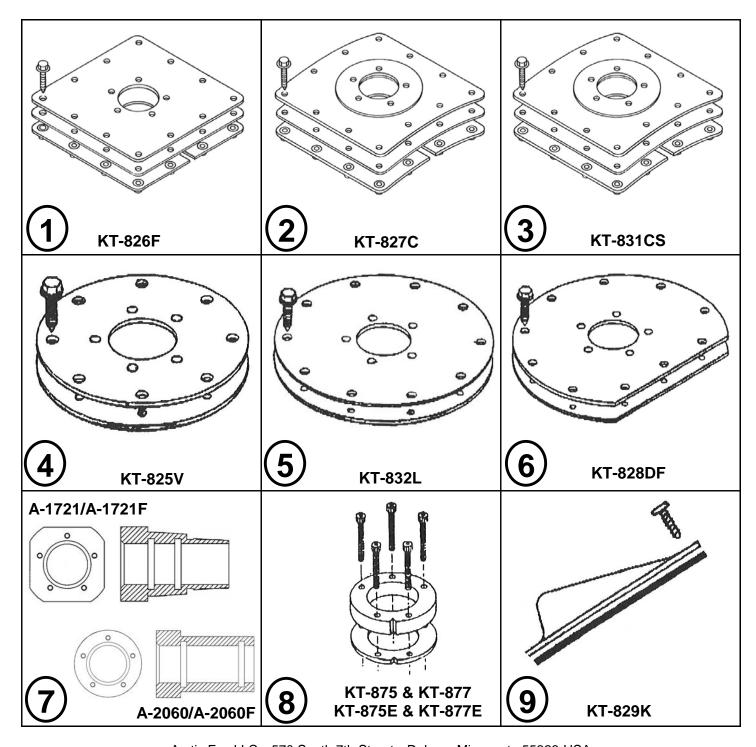


# INSTALLATION INSTRUCTIONS ADAPTER KITS for HOT FOXTM

In-Line/In-Tank Warmer

B-463-5/08

# READ INSTRUCTIONS COMPLETELY BEFORE BEGINNING INSTALLATION



#### ADAPTER KITS COVERED BY THESE INSTRUCTIONS

#### 1) KT-826F ADAPTER KIT (6" SQUARE)

**Usage:** Fits standard Arctic Fox mount for flattop tanks and Arctic Fox weld-on

flanges A-625, A-626, A-817.

Kit includes: A-826 Adapter Plate

A-611 Gasket A-708 Template

A-2025 Backing Plates (Qty. 2)

A-649 Clips (Qty. 4)

A-610 Mounting Bolts (Qty. 12)

# 2) KT-827C ADAPTER KIT (6" SQUARE FOR 22-29"[560-737mm] DIA. ROUND TANKS)

**Usage:** Fits standard Arctic Fox mount for round tanks.

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Kit includes: A-827 Adapter Plate

A-611 Gasket A-708 Template

A-1795 Backing Plates (Qty. 2)

A-649 Clips (Qty. 4)

A-610 Mounting Bolts (Qty. 12)

### 3) KT-831CS ADAPTER KIT (6" SQUARE FOR 14-18" [356-457mm] DIA. ROUND TANKS)

**Usage:** Fits standard Arctic Fox mount for

round tanks.

Kit includes: A-831 Adapter Plate

A-611 Gasket A-708 Template

A-1795 Backing Plates (Qty. 2)

A-649 Clips (Qty. 4)

A-610 Mounting Bolts (Qty. 12)

# 4) KT-825V ADAPTER KIT (5" ROUND 8-HOLE)

Usage: Fits Volvo & GM OEM 4-3/8" B.C. flange and miscellaneous others. Also fits Arctic Fox weld-on flanges A-818 & A-800.

Kit Includes: A-825 Adapter Plate

A-801 Gasket

A-610 Mounting Bolts (Qty. 8)

# 5) KT-832L ADAPTER KIT (6-1/2" ROUND 10-HOLE)

Usage: Fits miscellaneous automotive & industrial OEM 5-3/4" B.C. flanges & Arctic Fox weld-on flanges A-820 & A-823.

Kit Includes: A-832 Adapter Plate

A-821 Gasket

A-610 Mounting Bolts (Qty. 10)

# 6) KT-828DF ADAPTER KIT (D SHAPED 10-HOLE FOR FLAT TANKS)

**Usage:** Fits Tokheim 10-hole flange and Polar

Baron mount opening for flat tanks.

Kit Includes: A-828 Adapter Plate

A-645 Gasket

A-610 Mounting Bolts (Qty. 10)

#### 7) A-1721 THREADED ADAPTER

Usage: For installation into 2" female pipe

thread (To –40° F/C)

Kit Includes: A-1726 O-ring (Qty. 2)

A-1792 Gasket

#### **A-1721F THREADED ADAPTER**

**Usage:** For installation into 2" female pipe thread. (To –90° F/-67° C)

Kit Includes: A-2758 O-ring (Qty. 2)

A-1792 Gasket

#### **A-2060 WELD-IN ADAPTER**

**Usage:** To weld in hydraulic of fuel tank.

(To -40° F/C)

Kit Includes: A-1726 O-ring (Qty. 2)

A-1792 Gasket

#### A-2060F WELD-IN ADAPTER

Usage: To weld in hydraulic or fuel tank.

(To -90° F / - 67° C)

Kit Includes: A-2758 O-ring (Qty. 2)

A-1792 Gasket

#### 8) KT-875 SPACER KIT

**Usage:** To raise HOT FOX<sup>™</sup> flange 1/2" (13mm) above tank.

Kit Includes: A-863 Socket-Head Bolt (Qty. 5)

A-841 Gasket A-1792 Gasket

A-875 Spacer, 1/2" (13mm)

#### **KT-877 SPACER KIT**

**Usage:** To raise HOT FOX<sup>™</sup> flange

1" (25mm) above tank. (For Kenworth

recessed gauge opening and

miscellaneous others)

Kit Includes: A-869 Socket-Head Bolt (Qty. 5)

A-841 Gasket A-1792 Gasket A-877 Spacer, 1"

## **KT-875E METRIC SPACER KIT**

Usage: To raise HOT FOX™ flange 13mm (1/2") above tank.

Kit Includes: A-863E Socket-Head Bolt (Qty. 5)

A-841 Gasket A-1792 Gasket

A-875 Spacer, 13mm (1/2")

#### **KT-877E SPACER KIT**

**Usage:** To raise HOT FOX<sup>™</sup> flange

25mm (1") above tank.

Kit Includes: A-869E Socket-Head Bolt (Qty. 5)

A-841 Gasket A-1792 Gasket

A-877 Spacer, 25mm (1")

# 9) KT-829K ADAPTER KIT (120MM ROUND 10-HOLE FLANGE)

**Usage:** Fits Kenworth OEM 104.5mm B.C.

flange.

Kit Includes: A-829 Adapter Plate

A-811 Gasket

A-856 Self-Tapping Screws, Torx

Drive (Qty. 5)

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## **INSTALLATION OF KITS 1, 2, & 3**

Kits 1, 2, and 3 require drilling holes into the tank skin. They are used:

- To reinforce thinner walled tanks where direct mounting the HOT FOX™ is not recommended.
- With aluminum tanks with 0.100" (2.5mm) or less wall thickness, and steel tanks with 0.075" (2mm) (14 gauge) or less wall thickness, when a reinforced gauge opening is not available.
- To retrofit the HOT FOX<sup>™</sup> into the opening on a tank previously equipped with an Arctic Fox Tank Warmer.

#### IMPORTANT PRECAUTIONS

- Read these instructions completely before you begin. Mistakes can be expensive.
- Know where all baffles are located before you cut a hole in the fuel tank.
- Determine which way the plumbing will run before cutting the mounting hole.

#### PREPARE THE TANK

- The kit includes a template which will be placed on the fuel tank to help you punch and drill the mounting hole accurately.
  - IMPORTANT: Remove all grease from the area where the heater will be installed. Also determine which direction you are going to run the hoses to plumb the Warmer to the engine.
  - After the mounting area has been cleaned, remove the paper backing from the template and affix it to the tank in the appropriate position. Note the arrow on the template which points to the engine.
- Center-punch the 12 outside holes and the center hole.

#### **CUT THE MOUNTING HOLES**

- 3. Exact hole location is very important, so we recommend that you carefully pre-drill each hole location with a 1/8" drill bit.
- 4. Drill the 12 outside holes with a 5/16" drill bit.
  - NOTE: in the following steps, you can keep most of the saw cuttings out of the tank if you apply a layer of grease on the inside edge of the hole saw blade.
- 5. Use a 3-3/4" or 4" hole saw to cut the large "A" hole for the warmer. For adapter kit installation, you don't have to cut template holes "B" and "C".
  - CAUTION: If the fuel system doesn't have a filter between the tank and transfer pump, all chips MUST BE REMOVED from inside the fuel tank to avoid damaging the fuel pump.
- 6. Deburr each hole on the inside of the tank.
- 7. Remove the template from the tank.

#### **INSTALL THE BACKING PLATES**

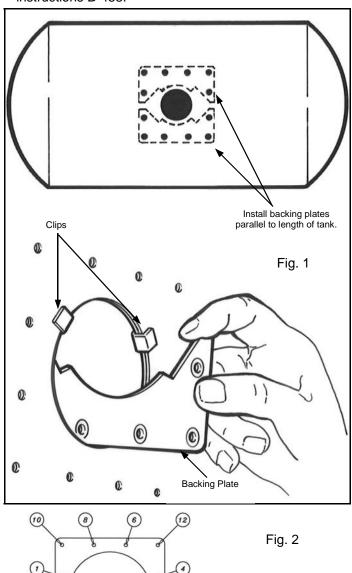
8. Install the backing plates as shown in Fig. 1: the cutout edge faces the inside of the tank, and the straight edge faces out. If mounting the plates in a round tank, install them so they run parallel with the length of the tank.

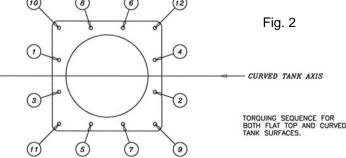
# PREPARE THE TANK

- 9. Position the gasket over the 12 perimeter holes. Insert the adapter plate over the gasket and secure with new 1/4-20 bolts.
  - Tighten all the bolts to 40-60 in. lbs. (4.5-6.2nm) of torque (or until the bolts are snug to the top of the plate surface). Then tighten all the bolts to 78-95 in. lbs. (8.8-10.2nm). Then recheck the bolts in the sequence indicated in Fig. 2 for 78-95 in. lbs. (8.8-10.2nm).

IMPORTANT: To insure proper sealing of the gasket, the above procedure *must* be followed.

10. Mount the HOT FOX<sup>™</sup> into adapter plate sending gauge opening. Refer to the HOT FOX<sup>™</sup> installation instructions B-458.





## **INSTALLATION OF KITS 4, 5, & 6**

- Position the gasket over the existing hole opening on the tank.
- 2. Install the adapter plate over the gasket and secure with new 1/4"/20 Bolts. Tighten all the bolts to 78-95 in. lbs. (8.8-10.2nm) According to the procedure for kits 1, 2, & 3 on page 3.
- Mount the HOT FOX<sup>™</sup> into the adapter plate sending gauge opening. Refer to the HOT FOX<sup>™</sup> installation instructions B-458.

#### **INSTALLATION OF KIT 7**

#### A-1721 and A-1721F

These steel adapters thread into a 1-1/2 or 2 inch NPT female pipe thread. The adapters are the same except the A-1721 has O-rings rated for -40° F/C and the A-1721F has O-rings rated for -90° F / -67° C.

#### A-2060 and A-2060F

These 2 steel weld-in flange adapters are the same

except the A-1721 has O-rings rated for -40° F/C and the A-1721F has O-rings rated for -90° F / -67° C. Requires a 2-1/4" (58mm) diameter hole in a steel reservoir. Weld adapter to reservoir using approved welding practices. Minimum reservoir wall thickness should be 11 gauge (0.120" / 3mm). Be sure O-rings are removed for welding and cool down process. Insert O-rings after cool down.

#### **INSTALLATION OF KIT 8**

- 1. Position the gasket over the fuel sending gauge opening aligning all bolt hole openings. Then align the spacer bolt holes over the gasket.
- 2. Mount the HOT FOX™ into the adapter plate sending gauge opening. Refer to the HOT FOX™ installation instructions B-458.
- 3. CAUTION: KT-875E and KT-877E are to be used

only with HOT FOX™ fuel warmers which have metric fasteners. The part number for these warmers will always end with an "E". For example: TWHF 20-22-2MME.

Do not attempt to use KT-875E or KT-877E with other HOT FOX<sup>™</sup> products, or with A-1721 or A-2060 flanges. NOTE: You must use the bolts provided with the kit.

#### **INSTALLATION OF KIT 9**

- 1. Lay the gasket over the flange opening in the tank.
- 2. Position the adapter plate over the gasket so that when the heater is installed fuel draw will come from the center of the tank. Install the mount screws and
- tighten them securely.
- 3. Mount the HOT FOX™ into the adapter plate sending gauge opening. Refer to the HOT FOX™ installation instructions B-458.