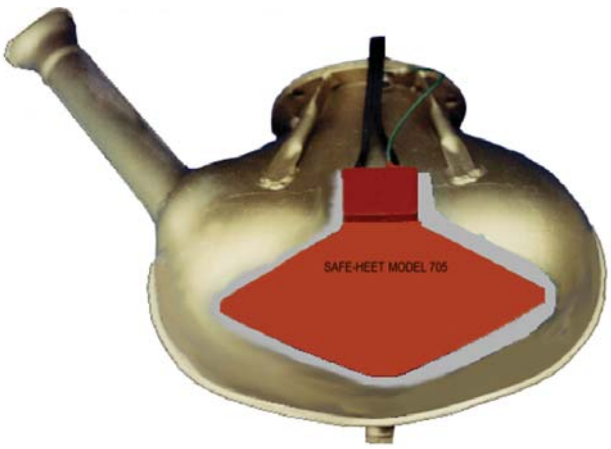
SAFE-HEET Silicone Pad Aircraft Engine Heaters

Easy to Use

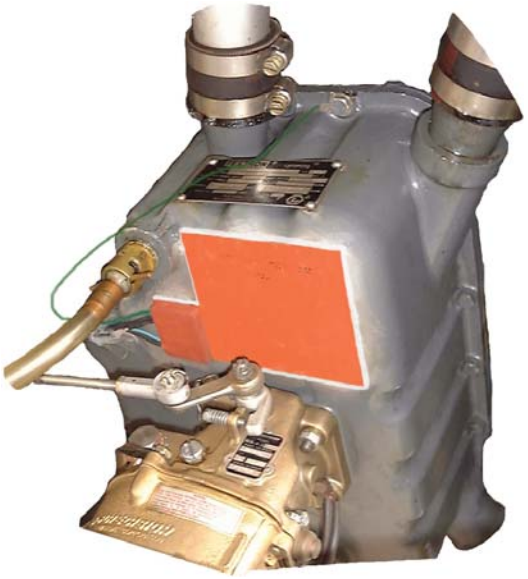
- Permanent installation, thin flexible pad bonds to engine oil sump.
- STC or 337 form not required (log book entry only).
- No engine or airframe modifications required.
- Kit contains instructions and materials.
- Uses standard 110V AC.
- Can be used with a timer.

Installation Tip:
SAFE-HEET engine heaters are installed with a two-part adhesive. The engine heater can be installed quickly and easily by using the 707 temperature controller at half power. At temperatures below 70° F the temperature controller must be used to ensure proper adhesive cure. Proper adhesive cure is essential to full service life of the heater.



Now with surge protection!

Ground fault protected for improved safety!



Economical and Efficient

- Puts the heat where it is needed with little loss to the surrounding atmosphere.
- Heats the air inside the engine.
- Uses about 300 Watts. Costs about 3 cents per hour to operate.
- Less than 1 hour will generally warm the engine oil from subzero to a safe easy starting temperature.
- Entire engine will be warm in 2 to 3 hours.
- Thermo-conductive adhesive for efficient heat transfer and lower surface temperatures.
- Metal foil heatsink is vulcanized to pad contact face for even heat transfer.
- Reduces costly starter and engine abuse during cold weather starts.

Safe

- UL recognized components. 100% thermo-fused element.
- External ground wire allows the engine and airframe to be grounded to the electrical outlet, reducing the risk of electrical shock in damp outdoor locations.
- Thermostatically controlled to maintain oil sump temperature less than 160° F.
- No flame or hot air to burn cowling or plastic parts.
- Reduces the risk of fires associated with cold starts.
- Ground Fault Circuit Interrupter (GFCI) included to reduce the risk of electrical shock and power surge damage.

Complete installation instructions can be found on our website: www.mcfarlaneaviation.com/safe-heet

McFarlane
FAA-PMA Approved

SAFE-HEET™
Engine Heaters and Accessories

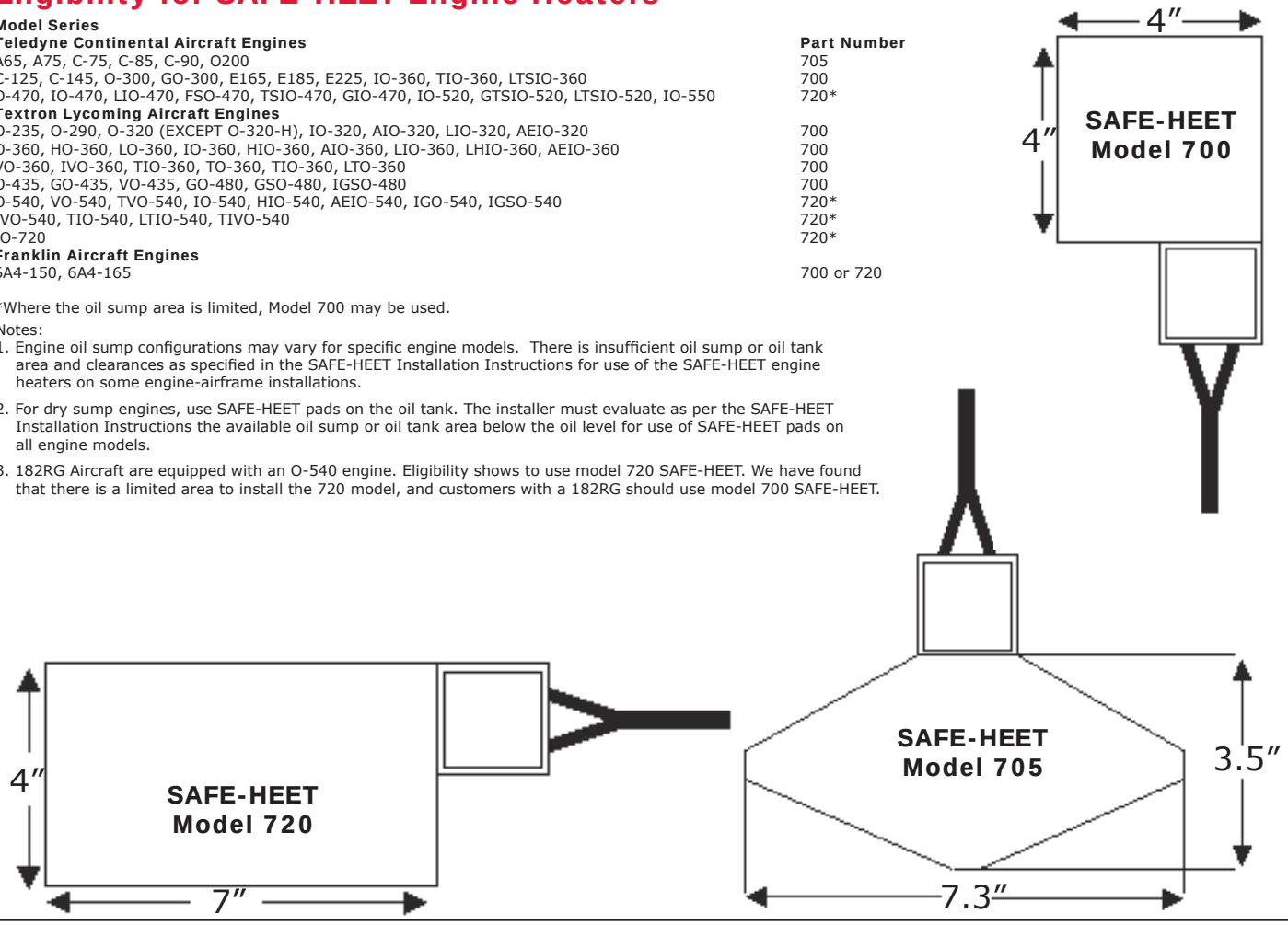
Eligibility for SAFE-HEET Engine Heaters

Model Series	Part Number
Teledyne Continental Aircraft Engines	
A65, A75, C-75, C-85, C-90, O200	705
C-125, C-145, O-300, GO-300, E165, E185, E225, IO-360, TIO-360, LTSIO-360	700
O-470, IO-470, LIO-470, FSO-470, TSIO-470, GIO-470, IO-520, GTSIO-520, LTSIO-520, IO-550	720*
Textron Lycoming Aircraft Engines	
O-235, O-290, O-320 (EXCEPT O-320-H), IO-320, AIO-320, LIO-320, AEIO-320	700
O-360, HO-360, LO-360, IO-360, HIO-360, AIO-360, LIO-360, LHIO-360, AEIO-360	700
VO-360, IVO-360, TIO-360, TO-360, TIO-360, LTO-360	700
O-435, GO-435, VO-435, GO-480, GSO-480, IGSO-480	700
O-540, VO-540, TVO-540, IO-540, HIO-540, AEIO-540, IGO-540, IGSO-540	720*
IVO-540, TIO-540, LTIO-540, TIVO-540	720*
IO-720	720*
Franklin Aircraft Engines	
6A4-150, 6A4-165	700 or 720

*Where the oil sump area is limited, Model 700 may be used.

Notes:

1. Engine oil sump configurations may vary for specific engine models. There is insufficient oil sump or oil tank area and clearances as specified in the SAFE-HEET Installation Instructions for use of the SAFE-HEET engine heaters on some engine-airframe installations.
2. For dry sump engines, use SAFE-HEET pads on the oil tank. The installer must evaluate as per the SAFE-HEET Installation Instructions the available oil sump or oil tank area below the oil level for use of SAFE-HEET pads on all engine models.
3. 182RG Aircraft are equipped with an O-540 engine. Eligibility shows to use model 720 SAFE-HEET. We have found that there is a limited area to install the 720 model, and customers with a 182RG should use model 700 SAFE-HEET.



Convenient SAFE-HEET Kits with Temperature Controller

Part Numbers 700KT, 705KT, 720KT

Kits include a SAFE-HEET engine heater and a temperature controller. Use the temperature controller to make installation fast and easy!

Ground Fault Circuit Interrupter (GFCI)

Part Number 709SK

Included with every SAFE-HEET is a Ground Fault Circuit Interrupter. 709SK is used to protect the SAFE-HEET and engine from any ground fault (insulation failure) situation. The 600 Watt Ground Fault Circuit Interrupter will open the circuit if more than 5 mA is detected not returning through the GFCI. This prevents lethal electrical shocks to the operator and electrical arcing between the engine and the heat pad. Insulation failure of the heat pad could be caused by lightning, electrical surge or mechanical damage. In some situations arcing between the heat pad and the engine pan could cause oil leakage and subsequent engine failure. Each GFCI is individually tested.

Variable Temperature Controller

Part Number 707

Makes installation fast and easy!

SAFE-HEET engine heaters can be plugged into the controller to speed and improve engine heater installation. The controller allows the SAFE-HEET engine heater pad to cure the special thermo conductive adhesive using its own heat energy at a reduced rate. SAFE-HEET engine heaters can be installed during much colder temperatures using the 707 Temperature Controller.

The variable temperature controller can also be used for continuous engine heating. Lower temperature settings help prevent the internal engine corrosion normally associated with leaving heaters on at full power. The variable temperature controller allows the user to adjust the heat to best fit each unique situation.

McFarlane's GFCI and Variable Temperature Controller may be used with other brand engine heaters.