THERMAL
ENGINEERING COMPANY

OPERATING INSTRUCTIONS
Model 1702, 1703
CHARGE-OIL PUMP

The Thermal Charge-Oil Pump is a piston type high pressure pump designed to operate at pressures to 250 PSI. Model 1702 is designed to be mounted on 1 gallon cans of refrigeration oil and to pump oil directly into refrigeration compressors without pumping them down. Model 1703 mounts on 5 gallon cans.

To install pump in can: The CHARGE-OIL Pump attaches to the opening of the can be means of detachable threads which fasten to the cap on the pump by 2 screws.

To change thread ring sizes, remove one screw, loosen the other and remove the unwanted thread. Put the desired thread in place and tighten the screws.

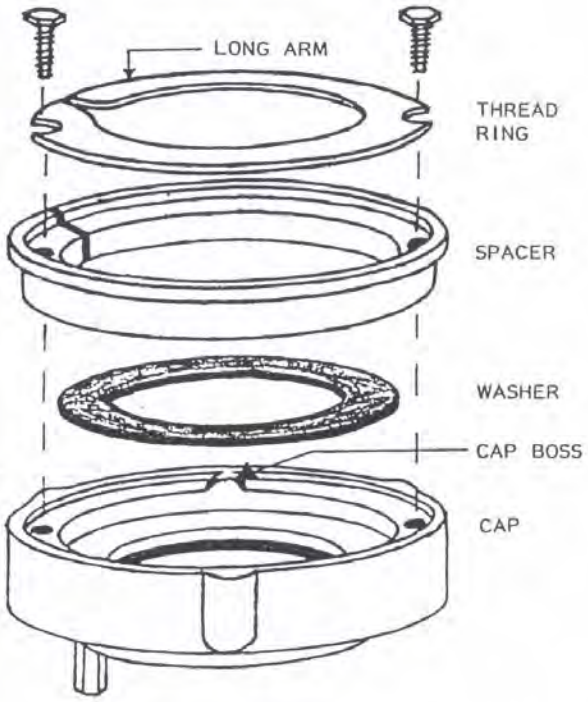
NOTE: When installing the thread ring, the longer arm of the thread ring must be over the boss in the cap. When the screws are tightened, the longer arm should be about ⅛ in. above the short arm to act as the lead thread.

A special aluminum spacer is provided in the kit for use with Suniso and Calgon bottles with plastic threads. The spacer is used between the cap and the thread ring. Longer screws are provided for use when the spacer is necessary.

Insert barrel of the pump in the can opening and tighten the cap on the can neck until snug. The material from which the can and neck is made is light and excessive tightening can deform the neck so the cap will not hold. Make sure the cap does not go on cross-threaded. Push the barrel into the can until it touches the bottom. The pump is now ready for operation.

To pump oil into compressor: Attach pump to compressor with charging hose or copper tube (charging hose preferred). Leave connection to compressor loose. Pump oil into charging hose until it is filled. This is necessary to eliminate air and to insure oil seal for the check valve. This valve will not hold against gas pressure without the oil seal. Tighten the compressor connection and open the compressor valve. Pump the oil into the compressor with even strokes. The viscosity of the oil prevents it from filling the pump immediately so time must be allowed on the up-stroke for the cylinder to fill. Higher viscosities and cold oil will both slow down the filling rate. Push straight down on the pressure stroke so the pump will not slip on the can bottom. It may be necessary to hold the pump barrel with one hand while pumping since the cap does not rigidly hold the barrel and it can move up and down. If pump barrel fills complete on each up-stroke and the piston is pushed all the way down 10 strokes will pump 1 pint of oil.

After the desired amount of oil has been pumped the charging hose can be disconnected from the compressor and the pump unless the charging hose is to be used permanently with the pump. The pump can be left attached to the same can until it is empty or alternated between cans of different oils. No further preparation is needed to leave it attached. The air to replace the oil pumped out is passed into the can thru a bleed valve on the cap assembly which allows air to enter but will not let oil leak out.



ACCESSORIES:

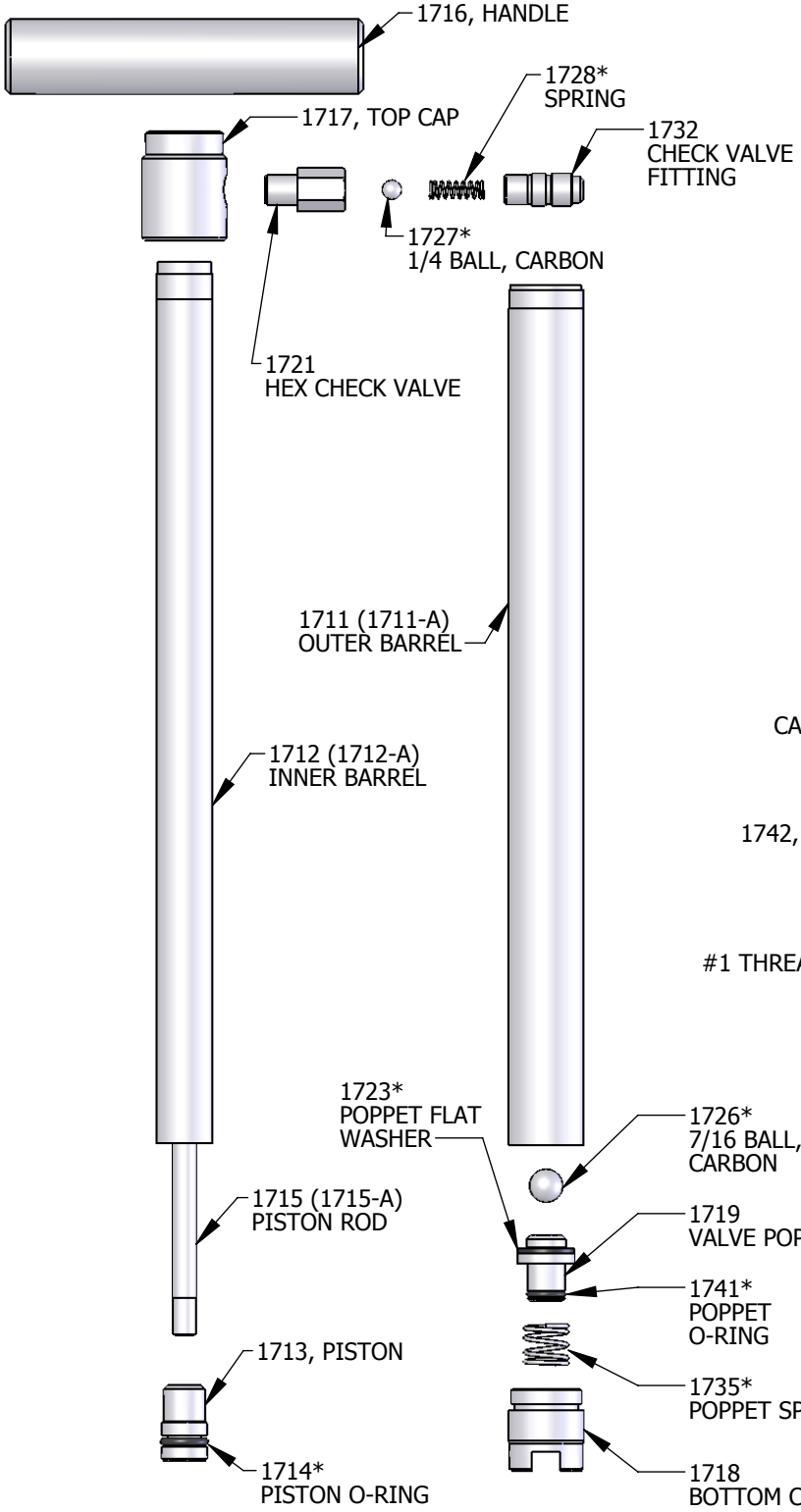
1705 Repair Kit	Complete set of balls, springs, o-rings and gaskets for 1702 and 1703.
1706 Air Bleed Valve Assembly	
1768 Adapter Kit	Adapter Kit for all popular cans and bottles of refrigerant oil. Kit contains 5 rings and one spacer to accommodate most of containers.
1770 Suction Adapter	Suction Adapter for new style aluminum Charge-Oil Pump. Converts Charge-Oil Pump into a suction pump for refrigeration, marine and other similar applications where it is impossible to draw oil in the normal manner.

THERMAL ENGINEERING COMPANY
A Division of Airserco Manufacturing Company LLC

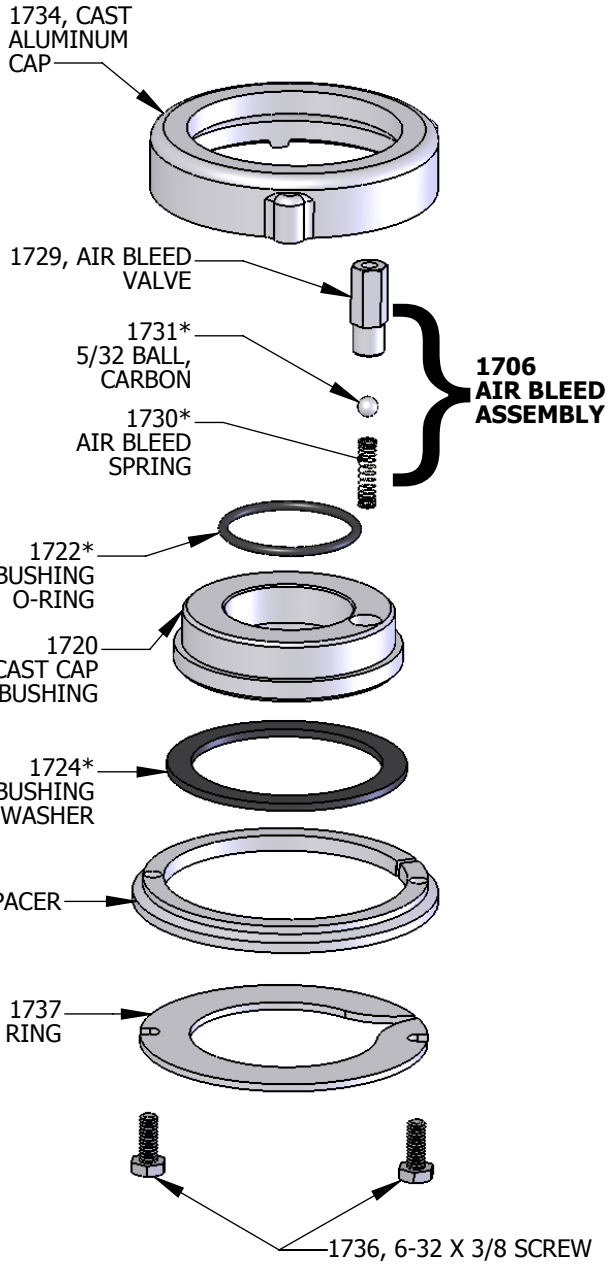
7555 Tyler Boulevard; Mentor, OH 44060 800-473-1754 Fax: 440 946-8188
www.thermalengineeringcompany.com

CHARGE-OIL PUMP
MODEL 1702 & 1703

VIEW 1, SCALE 1:2.5



VIEW 2, SCALE 1:1.5

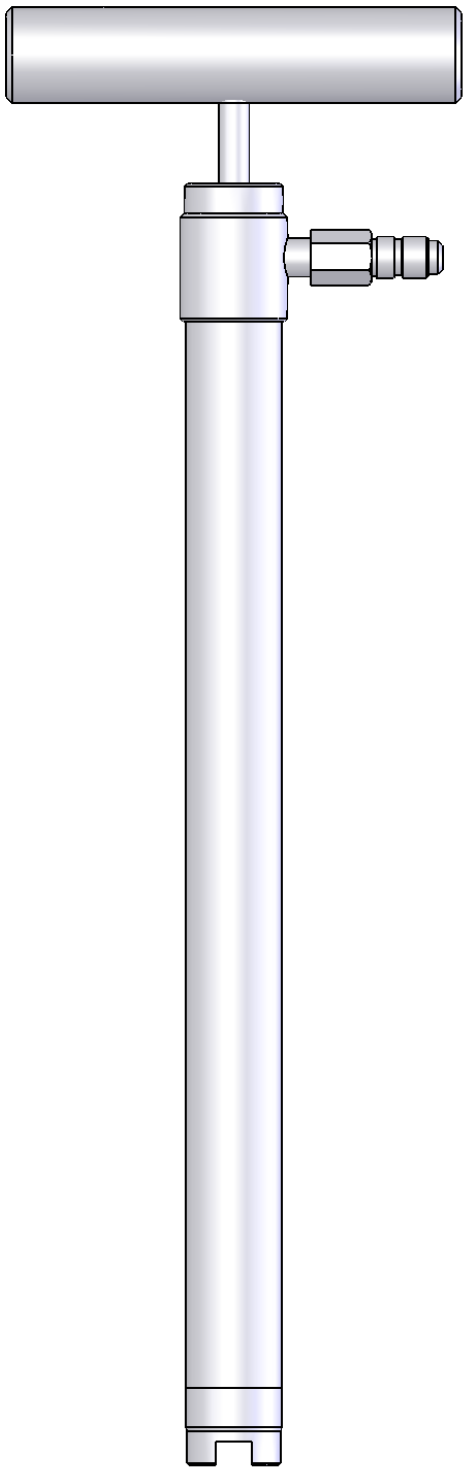


NOTE: PARTS IN PARENTHESES ARE FOR THE 1703, 5 GALLON, CHARGE-OIL PUMP

* CONTAINED IN 1705 REPAIR KIT

CHARGE-OIL PUMP
MODEL 1702 & 1703

VIEW 1, SCALE 1:2.5



VIEW 2, SCALE 1:1.5