



**Imperial**<sup>®</sup>

**Operating Instructions and Parts List**

## **AUTOMOTIVE CHARGING AND TESTING MANIFOLD**

### **WARNING**

*This manifold should only be used by certified professional service technicians in the refrigeration & air-conditioning field who are familiar with the equipment they are servicing. Safety goggles should be worn at all times. Refrigerant and lubricant vapor or mist may cause injury, frostbite, irritate eyes, nose and throat. Avoid breathing or contact with skin. Always point hose away from you and anybody near or around you. Remove hoses with care as they may be under high refrigerant pressure. Improper procedures can cause refrigerant gas under pressure to explode violently.*

**T**his new manifold design allows the operator to use one manifold with two separate sets of hoses to work on Automotive R-12 or R-134a with the enclosed adapter. Hoses for use with R-134a are included. Prior to changing hoses, recover refrigerant remaining in the hoses to the vacuum specified in the appropriate EPA standard for recovery and/or recycling, to prevent system contamination. There are some direct replacement refrigerants on the market today. Be sure to follow EPA "use conditions".

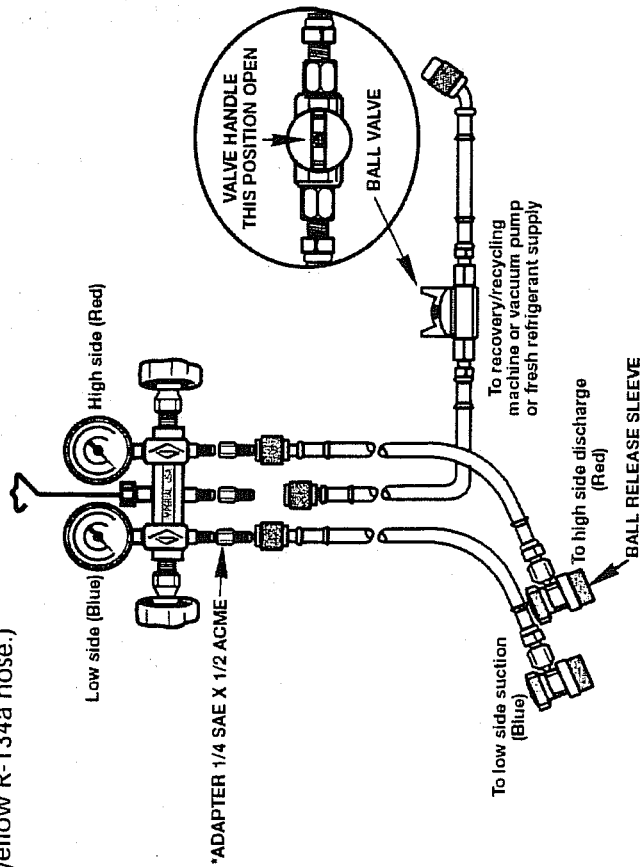
In June of 1997, the EPA approved the use of the same manifold set for both automotive refrigerants with the following provision: a different set of hoses with unique fittings at the systems connection must be used for each refrigerant; these unique fittings must be permanently attached to the end of the hose being connected to the system; and the refrigerant must be recovered to the vacuum specified by the appropriate EPA standards for recovery and recycling.

This new ruling will allow technicians and shops to legally convert R-12 manifolds to R-134a and they will not need to purchase multiple manifold gauges.

## MANIFOLD FUNCTION

The handle on the right side of the manifold (colored red) controls the flow to the high side (discharge) side of the compressor. The handle located on the left side of the manifold (colored blue) controls the flow to the low (suction) side of the compressor.

The color coded gauges will indicate pressure or vacuum whenever the manifold is connected to a system and any shut-off devices in the hoses are open. There is no valve controlling on/off between the system port and pressure gauge. (If Core Valve is involved, a core depressor in the service hose may require a minor adjustment with R-12 applications or yellow R-134a hose.)



\*For use with R-134a attach the (3) adapters furnished onto the manifold, to connect hoses supplied. A slight wrench tightening is all that is needed.

## CHARGING INSTRUCTIONS

- 1) Follow the manufacturer's recommended specification for the amount of refrigerant to charge in each system.
- 2) Close high side and low side valves by turning them clockwise.

- 3) Connect the blue hose to the connector under blue handle "low side". Connect the yellow hose to the center connection, attach non-core valve end to manifold and the red hose to connector under the red handle "high side".
- 4) Connect the other end of the blue hose to the automotive service coupler with the blue handle and the unconnected end of the red hose to the automotive service coupler with the red handle. (R-134a only)
- 5) The automotive service coupler must be in the **closed position** before connecting or disconnecting to or from the systems ports. An integral patented safety sleeve prevents accidental refrigerant venting under all operating conditions. To close the coupling, turn the knob counterclockwise until finger tight.
- 6) Connect the automotive service coupler to the proper high and low side of the compressor. Slide the ball release sleeve towards the knob, push the coupling onto the service port and release the sleeve. Pull on the coupling lightly to make sure that the balls have engaged the ball race.
- 7) Connect the yellow hose to the refrigerant supply tank or charging cylinder. Your yellow hose is supplied with a valve in line to meet EPA requirements.
- 8) Make sure that the valve on the yellow hose is in the open position. Open the supply tank and purge yellow hose. Take care to release air only.
  - 9a) Start the car engine and add refrigerant by slightly opening "low" side handle. Follow the manufacturer's recommended specifications for amount of refrigerant to charge into the system.
  - 9b) If charging on the liquid or high side, use only the high side valve on the manifold set. **Make sure low side valve on manifold is closed. Make sure car is not running if charging on the liquid side.**
- 10) When completed, close the valves and follow proper safety and EPA rules.

**WARNING: Remove all hoses with care.**

## EVACUATING INSTRUCTIONS

**NOTE:** It is unlawful to discharge or exhaust refrigerants into the atmosphere. Imperial strongly recommends using recovery or recycling equipment for proper disposal of refrigerants.

- 1) Remove all refrigerant from the system. Follow recovery or recycling procedures.
- 2) Evacuating connections are the same as charging connections (see charging instructions 5 & 6) with one exception: the yellow hose should be connected to a vacuum pump instead of a supply tank.
- 3) Fully open valves "Low" and "High" and ball valve on the yellow hose.
- 4) Start the vacuum pump.
- 5) Evacuate the system according to the manufacturer's specification; close all valves and turn off vacuum pump.
- 6) Follow procedure for charging.

### Imperial Service Parts

### Part No.

High Side Repair Kit	405 RH
Low Side Repair Kit	405 RL
R12/134 Low Side Gauge	441 CB
R12/134 High Side Gauge	441 CR
Service Coupler Low	21L
Service Coupler High	21H
Service Coupler Repair Kit	21O
Hook Assembly	S10000519
Gauge Lens Bayonet Mount	S10000548
Adapter 1/4 SAE to 1/2 ACME	S10000637
Red Hose (Automotive 134a)	805 AR
Blue Hose (Automotive 134a)	805 AB
Yellow Hose (Automotive 134a)	805 AY
Red R-12 Hose (1/4 Flare)	805 MRR
Blue R-12 Hose (1/4 Flare)	805 MRB
Yellow R-12 Hose (1/4 Flare)	805 MRY
Protective Gauge Boots	400 RB

**LIFETIME WARRANTY:** Any product manufactured by Imperial, that fails to render service due to defect in workmanship or materials will be replaced or repaired at no charge. Product failures due to misuse, abuse, normal wear and tear or alterations are not covered by the Lifetime Warranty. Wear items will need to be replaced over time, and are not included (such as cutter wheels, seals, gaskets, o-rings and gauges). Imperial makes no other warranty, expressed or implied. Tools should be returned to the Buyer's place of purchase.

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