

# R134a/R1234yf MANIFOLD GAUGE SET OPERATING INSTRUCTIONS



## WARNING

- WEAR GOGGLES!!
- AVOID CONTACT WITH REFRIGERANT
- DO NOT VENT REFRIGERANT INTO ATMOSPHERE

## PRE-SERVICE INSTRUCTIONS

1. Close both valves on the manifold gauge set by turning the high and low knobs clockwise.
2. The gauges are correctly calibrated at the factory before shipment. If calibration is required, insert a straight blade screwdriver into the adjusting screw on the gauge face.
3. Attach the high and low couplers to the male end of the red and blue hoses. If using manual couplers, open the plunger by turning the knob counter-clockwise prior to connection to the system. If quick couplers are used, pull the sleeves up to unlock position before attaching to an A/C system.

**NOTE:** Attach 12 mm-m x 14 mm-f R1234yf adapters (fig. II) to R1234yf couplers (fig. Q,R or CC, DD) before connecting to the red and blue hose.

4. Connect the red hose to the high side port and the blue hose to the low side port on the manifold gauge.

## TROUBLESHOOTING TIPS

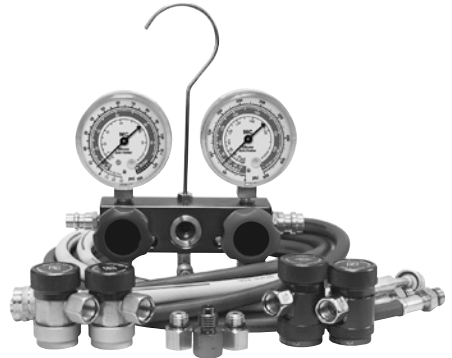
- Low side and high side pressure are low. Usually indicates a low charge.
- Low side pressure is low and high side pressure is high. Usually indicates a blockage in the system.(i.e. expansion of valve or orifice tube.)
- Low side pressure is high and high side pressure is low. When accompanied by a vibrating gauge needle, usually indicates faulty reed valves in compressor.
- Low side and high side pressures are high. Usually indicates an over charged system.

## TESTING AND CHARGING

To properly diagnose the problem in the A/C system, first check the system's overall performance. This includes testing the system's pressure and refrigerant flow. These conditions can be checked with the manifold gauge set.

**NOTE:** Be sure that the hand valves on the manifold gauge set are in the closed position. Always wear gloves and safety goggles when working with refrigerant.

1. Remove the protective caps from the system ports. Check for leaks at the ports.
2. Connect the low side service hose (blue) to the suction side of the compressor. Connect the high side



service hose (red) to the discharge side of the compressor. Make sure the couplers are securely snapped.

3. If using manual couplers, move the plunger down within the coupler by turning the knob clockwise in order to open the port valves and start refrigerant flow.

### IMPORTANT NOTES

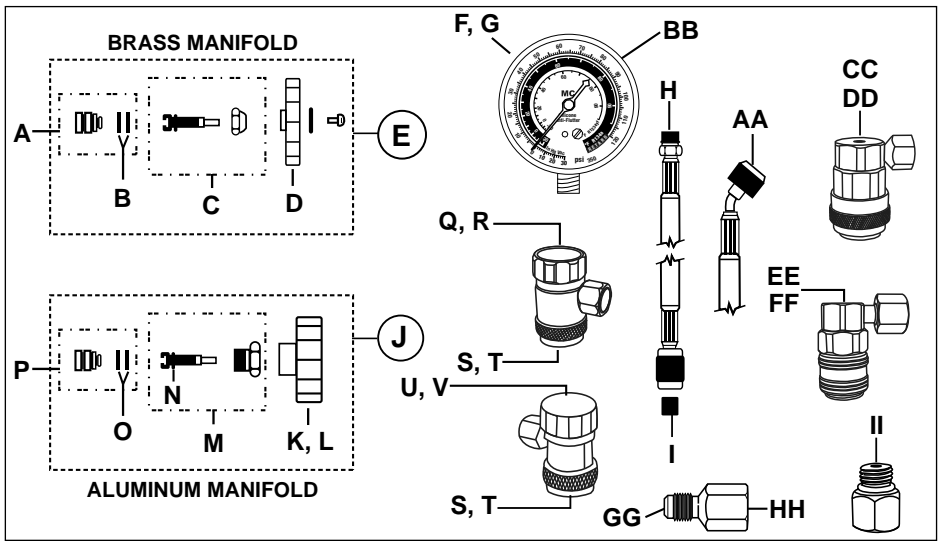
- A system that has been opened or one that is found to be excessively low on refrigerant pressure as a result of a leak, must be fully evacuated by means of recycling and deep vacuum.
- A system that has been evacuated must be repaired, leak tested and evacuated again to 29" Hg. before charging.
- If charging on the liquid or high side, use only the high side valve on the manifold gauge set. Make sure the low side valve is closed.
- After charging, test the system by turning on the engine and running the A/C with both valves closed on the manifold.
- After testing, disconnect the couplers from the system and make sure to use a recovery/recycling machine to evacuate any refrigerant remaining in the hoses.

### TEMPERATURE PRESSURE CHART

Ambient Temperature (°F)	Low Side Gauge (PSI)		High Side Gauge (PSI)	
	R134a	R1234yf	R134a	R1234yf
65°	25-35	22-32	135-155	128-142
70°	30-40	27-38	145-160	140-155
75°	35-45	33-43	150-170	148-166
80°	40-45	40-45	175-210	175-210
85°	45-55	46-56	225-250	227-253
90°	45-55	46-56	250-270	255-275
95°	50-55	53-57	275-300	280-310
100°	50-55	53-57	315-325	325-342
105°	50-55	53-57	340-345	350-360

\* This chart should be used as a reference only please contact the vehicle manufacturer for exact information

**⚠ WARNING:** This product can expose you to chemicals including Di (2-ethylhexyl) phthalate, lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm.



### BRASS & ALUMINUM GAUGE SET PARTS

Fig.	Description	Fig.	Description
A.	Piston Seal Assembly with O-Rings (2 pcs)	Q.	R1234yf High Side Manual Coupler Complete
B.	Piston Seal O-Ring (2 pcs)	R.	R1234yf Low Side Manual Coupler Complete
C.	Stem and Nut	S.	High Side O-Ring
D.	Hand-wheel	T.	Low Side O-Ring
E.	Complete Stem Assembly with Knob (2 pcs)	U.	R34a High Side Manual Coupler Complete
F.	R1234yf/R134a High Side Gauge (Red) Complete	V.	R134a Low Side Manual Coupler Complete
G.	R1234yf/R134a Low Side Gauge (Blue) Complete	AA.	Shut-Off Valve O-Ring
H.	O-ring for Male Hose Fitting	BB.	Lens
I.	Gasket for Hose Assembly	CC.	R1234yf High Side Quick Coupler Complete
J.	Complete Stem Assembly w/Knob (2 pcs)	DD.	R1234yf Low Side Quick Coupler Complete
K.	Knob Only, Low Side, (Blue)	EE.	R134a High Side Quick Coupler Complete
L.	Knob Only, High Side (Red)	FF.	R134a Low Side Quick Coupler Complete
M.	Stem, Nut and Stem O-Ring	GG.	1/2" ACME-M x 1/2" ACME-F LH Thread Vacuum Pump/Tank Adapter
N.	Stem O-Ring (2 pcs)	HH.	O-Ring for 1/2" ACME-M x 1/2" ACME-F LH Thread Adapter
O.	Piston Seal O-Rings (4 pcs)	II.	12 mm-m x 14 mm-f R1234yf Adapter
P.	Piston Seal Assembly with O-Rings (2 pcs)		