



# AIR CONDITIONING SYSTEM MANIFOLD WITH SIGHT GLASS

MODEL NO: **VSAC002.V2**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Wear eye protection



Wear protective gloves



Wear safety footwear



Wear protective clothing

## 1. SAFETY

- WARNING!** Ensure that Health and Safety, local authority and general workshop practice regulations are adhered to when using tools.
- WARNING!** Any work carried out on the A/C system should only be performed by an Air Conditioning service technician following the vehicle manufacturer's service instructions or a proprietary manual to establish the current procedure and data.
- × **DO NOT** use manifold if damaged.
- ✓ Dispose of refrigerants according to local authority guidelines.
- × **DO NOT** Allow refrigerant to vent to atmosphere.
- ✓ Maintain the manifold in a good condition for prolonged life and safe use.
- ✓ Wear suitable eye protection. A full range of personal safety equipment is available from your Sealey stockist.
- ✓ Wear suitable protective clothing and gloves when working with refrigerant.
- ✓ Wear suitable clothing to avoid snagging. **DO NOT** wear jewellery and tie back long hair.
- ✓ Account for all tools and parts being used and **DO NOT** leave them on or near the engine.
- ✓ On completion of work, put the equipment back and store in a cool, dry, childproof location.
- WARNING:** The warnings, cautions and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution are factors which cannot be built into this product, but must be applied by the operator.  
**IMPORTANT:** These instructions are provided as a guide only. Always refer to the vehicle manufacturer's service instructions, or a proprietary manual, to establish the current procedure and data.

## 2. INTRODUCTION

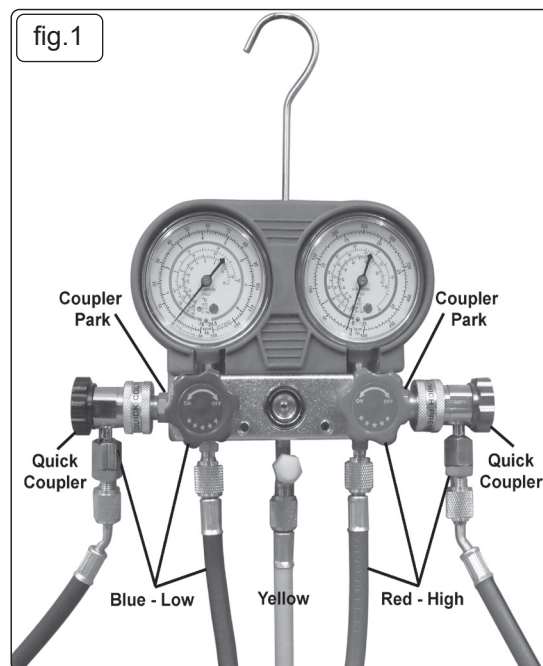
Designed for refrigerant testing, charging and evacuation. Can be used on automotive, commercial and domestic A/C and domestic refrigeration systems. Gauges marked for R134a and R12 pressure reading. Colour-coding on gauges, valves and hoses for easy operation. Features 2-way manifold and sight glass for monitoring refrigerant flow. Quick couplings included and hanging hook.

## 3. SPECIFICATION

Model No:..... **VSAC002.V2**  
 Application(s):..... R134a, R12  
 Hose Length:..... 1550mm

## 4. OPERATION

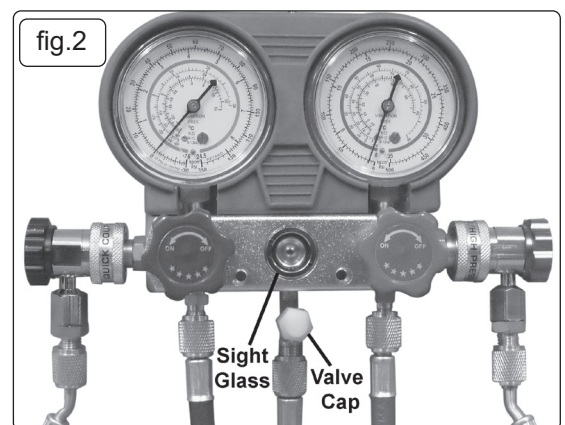
- WARNING!** Disconnect hoses with extreme caution! Pressurised refrigerant may be present in hoses. Never direct hoses toward yourself or any other persons.
- 4.1. CONNECTING QUICK COUPLERS**
- 4.2. Quick couplers are provided to access the vehicle's service ports. The quick coupler should be in the closed position before connecting to the male fitting on the vehicle.
- 4.2.1. To close, turn the handle fully anti-clockwise. Connect the blue and red hoses to the corresponding couplers and then to the corresponding side of the manifold.
- 4.2.2. Place the quick couplers on the male fittings on the vehicle.
- 4.2.3. Push in on the handle of the quick coupler with your thumb, while pulling up on the sleeve until it bottoms on the male fitting and then release. Check to see if it is correctly seated by pulling up on the quick coupler.
- 4.2.4. Make sure the hand-wheels on the manifold are closed (fully clock-wise) and turn the quick coupling knob fully anti-clockwise, to open the valve.
- 4.3. DIAGNOSING SYSTEM OPERATION**
- 4.3.1. Ensure both hand-wheels are closed (turn fully clockwise) and connect the blue low side hose to the A/C system's low pressure side service port.



- Connect the red high side hose to the A/C system's high pressure side service port. (Already done in section 4.1).
- 4.3.2. With the manifold hand-wheels closed (fully clockwise), read the pressures on each gauge.
- 4.3.3. Compare these pressures and temperatures to the A/C system manufacturer's specifications for proper operation.
- 4.3.4. If the system is within the correct operating guidelines, disconnect the manifold hoses from the system (close both hand wheels and couplers before removing). If repairs are necessary, follow the steps for recovering, evacuating and recharging the system.
- 4.4. RECOVERING REFRIGERANT**
- Note:** Refrigerant should not be exhausted to the atmosphere.
- 4.4.1. Ensure the blue low side hose is connected to the A/C system's low side service port, the red high side hose is connected to the A/C system's high side service port and the yellow centre hose connects to the inlet of the recovery unit. Set up as in fig. 1.
- 4.4.2. Follow the instructions provided with the recovery unit for proper recovery of refrigerant from the A/C system.
- 4.5. EVACUATING AND CHARGING A REFRIGERANT SYSTEM**
- 4.5.1. See section 4.1 (Connecting quick couplers) before proceeding. Connect the blue low side hose to the A/C system's low side service port. Connect the red high side hose to the A/C system's high side service port.
- 4.5.2. Check the manifold gauge pressure reading to be sure the A/C system has been recovered properly. If not, follow steps under Section 4.3 (Recovering Refrigerant). If it has, connect the centre yellow charging hose to a vacuum pump. Set up as in fig. 1.
- 4.5.3. Open the high and low side hand-wheels (fully anti-clockwise) and start the vacuum pump.
- 4.5.4. After evacuating the system according to the manufacturer's specifications, close both the high and low side hand-wheels and turn off the vacuum pump.
- 4.5.5. Disconnect the yellow hose from the vacuum pump and connect it to the refrigerant supply.
- 4.5.6. Slightly open the refrigerant supply valve. Remove the valve cap (fig.2) and purge air from the yellow charging hose at the manifold according to manufacturer's recommendations, then close the supply valve.
- 4.5.7. You can now charge the A/C system according to the manufacturer's specifications.
- If the system specifications call for **CHARGING ON THE HIGH SIDE**, close the manifold's blue low side hand-wheel, open the refrigerant supply valve and open the manifold's red high side hand-wheel. To find out when to cease adding refrigerant keep an eye on the sight glass (fig.2), when bubbles stop appearing, close the manifold's red high side hand-wheel and close the refrigerant supply valve.
  - If the system specifications call for **CHARGING ON THE LOW SIDE**, close the manifold's red high side hand-wheel, open the refrigerant supply valve and open the manifold's blue low side hand-wheel. To find out when to cease adding refrigerant keep an eye on the sight glass (fig.2), when bubbles stop appearing, close the manifold's blue low side hand-wheel and close the refrigerant supply valve.
- 4.5.8. When you have charged the system, close both manifold hand-wheels. Let the compressor run and check the manifold's gauge pressure readings to be sure the system is operating properly. If it is not, adjust the system as necessary. To disconnect the manifold when the system is operating correctly, first close the high side coupler valve, then disconnect the red high quick coupler from the A/C system.
- 4.5.9. Restart the A/C system, then open both manifold hand-wheels. Refrigerant from both hoses will be drawn quickly into the A/C system through the blue low side hose.
- 4.5.10. When both gauges show the lowest operating pressure recommended by the manufacturer, close the low side valve and turn off the A/C system.
- 4.5.11. Close the low side coupler valve and disconnect the low side hose from the A/C system.

## 5. MAINTENANCE

- 5.1. Keep the manifold in good working order.
- 5.2. Periodically replace O-rings and valve seats.
- 5.3. Be sure to lubricate O-rings with high vacuum grease.
- 5.4. Generally keep the manifold clean from dirt and grime to improve product life.



### ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



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**Note:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

**Important:** No Liability is accepted for incorrect use of this product.

**Warranty:** Guarantee is 12 months from purchase date, proof of which is required for any claim.

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