

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, AND CAUTIONS. USE THIS PRODUCT CORRECTLY, AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE, OR PERSONAL INJURY, AND WILL INVALIDATE THE WARRANTY.

(The use of symbols in this document is to attract your attention to possible danger, and reminders, the symbols and warnings themselves do not eliminate any danger, nor are they substitutes for proper accident prevention measures).

1. SAFETY INSTRUCTIONS

- DO familiarise yourself with this product's applications and limitations, as well as the specific potential hazards peculiar to this tool.
- DO keep this product in good working order and condition (*take immediate action to repair or replace damaged parts*).
- DO use recommended parts only (*non recommended parts may be dangerous and will invalidate the warranty*).
- DO wear approved eye protection. Contact your Sealey dealer for details.
- DO keep children and unauthorised persons away from the working area.
- DO keep working area clean and tidy, and free from unrelated materials.
- DO ensure the work area has adequate lighting.
- DO NOT remove the radiator cap whilst engine is hot.
- DO NOT use this product to perform a task for which it has not been designed.
- DO NOT use whilst under the influence of drugs, alcohol or other intoxicating medication.
- DO NOT remove the analyser with system temperature above 40°C.
- DO NOT remove temperature probe from the analyser when the system is pressurised, as coolant will be expelled.

2. ASSEMBLY

- 2.1. Connect 500mm hose between the hand pressure pump and the air supply port on the analyser (longer port).
- 2.2. Connect 1500mm hose to the drain port on the analyser (shorter port).
- 2.3. Fit the temperature probe and mounting nut to the analyser. Fully tighten.

3. OPERATION

3.1. CHECKS PRIOR TO TESTING:

DO NOT REMOVE TEMPERATURE PROBE FROM ANALYSER WHEN THE SYSTEM IS PRESSURISED AS COOLANT WILL BE EXPELLED, AND DO NOT REMOVE RADIATOR CAP WHEN HOT.

- 3.1.1. Remove radiator pressure cap (observing precautions inside front cover) and check condition. Adjust heater controls to 'heat' position.
- 3.1.2. Inspect radiator filler neck and remove any noticeable sharp areas that may damage the analyser bladder.
- 3.1.3. Check coolant level and top up if required.

3.2. ADJUSTING AND ATTACHING ANALYSER TO SYSTEM

- 3.2.1. To ensure secure fitting and positive sealing it is important that the analyser is adjusted so that two-thirds of the bladder is below the lower flange of the radiator or header tank neck before being inflated (see FIG. 1). To ensure this setting is correct use the following steps:
 - a) Measure the depth 'A' from the top to the bottom of the filler neck (see FIG. 2).
 - b) Deduct 10mm from this measurement, being 1/3 of the bladder height (see FIG. 3).
 - c) Select suitable diameter step of safety shield for top of filler neck. Adjust support plate and safety shield so that the selected step is set at the measurement calculated in FIG. 2, above the top of the bladder (FIG. 3 'B').
- 3.2.2. Whilst holding the retaining clips open, insert the analyser into the filler neck and check that the retaining clips securely engage under the lip of the radiator filler neck, or into the threaded section of the header tank. Adjust safety shield as required to centralise analyser and seal on top of radiator or header tank neck.
- 3.2.3. Place drain hose into coolant reservoir or suitable clean container.

WARNING

IF RETAINING CLIPS CANNOT BE LOCATED SECURELY, OR A TIGHT SEAL CANNOT BE CREATED WITH THE SAFETY SHIELD, DO NOT PROCEED WITH THE TEST.

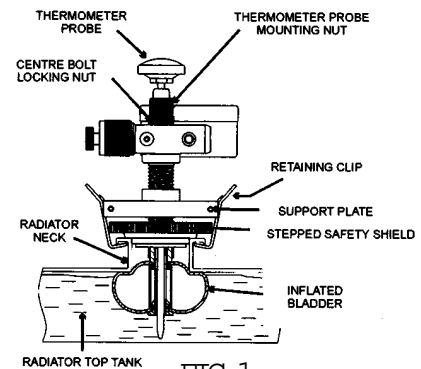


FIG 1.

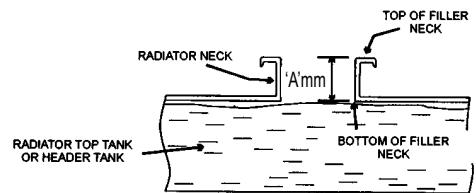


FIG 2.

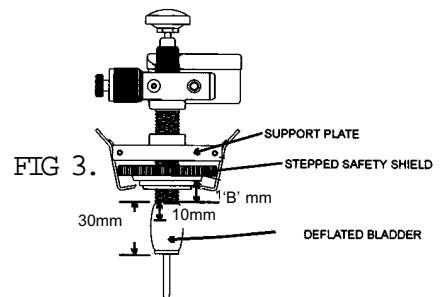


FIG 3.

3. OPERATION (continued)

3.3 PRESSURE TESTING

- 3.3.1. Turn relief valve adjusting screw clockwise until firm, then push slide valve across to the bladder circuit (see FIG. 4).
- 3.3.2. Operate the hand pump until a reading of 20PSI is reached in the bladder circuit. NOTE: DO NOT EXCEED 25PSI IN BLADDER CIRCUIT. Re-check that the retaining clips are holding the analyser securely.
- 3.3.3. Push the slide valve across to the system circuit (see FIG. 5) and operate the hand pump until the correct system pressure is obtained as per manufacturer's specifications.
NOTE: DO NOT EXCEED MANUFACTURER'S SPECIFICATION AS DAMAGE TO THE COOLING SYSTEM MAY OCCUR.
IF PROBLEMS ARE ENCOUNTERED PRESSURISING THE SYSTEM, CHECK FOR CORRECT BLADDER POSITION AND ALIGNMENT.
- 3.3.4. If system pressure is maintained for a minimum of two (2) minutes, then no serious leaks are present. Examination of hoses, etc., for seepage or slight leaks should still be carried out.
- 3.3.5. If system pressure drops slowly, this indicates small leaks or seepage. Check radiator core, fittings, hoses and gaskets. Retest once faulty component is isolated and renewed or repaired.
- 3.3.6. If system pressure drops rapidly, a major leak is present and should be rectified immediately before any further testing.
- 3.3.7. If no visible leaks can be identified, and the system pressure is still dropping, internal leakage is the probable cause.

3.4. INTERNAL LEAKAGE AND TEMPERATURE TESTING

Firstly: Check the oil level dipstick for signs of water penetration into the crankcase - water globules or a light creamy foam indicate a leaking cylinder head gasket. If further testing is necessary, follow steps below:

- 3.4.1. Adjust the system pressure to manufacturer's specifications. Place the slide valve in the system circuit position (see FIG. 5) then slowly turn the relief valve adjusting screw anti-clockwise until the desired pressure is set and held. Any excessive system pressure will now be expelled through the relief valve drain hose.
- 3.4.2. Start the engine and let it idle and warm up to normal operating temperature. Now monitor thermostat opening and fan cut in temperatures.

WARNING

DO NOT LEAVE VEHICLE UNATTENDED WHILE ENGINE IS RUNNING.

- 3.5. COMBUSTION LEAKAGE - excessive leakage from relief valve drain hose generally indicates combustion pressure leaking into the cooling system. To confirm, proceed as follows:
 - 3.5.1. Bleed off coolant through the fluid drain tube into the coolant reservoir, or a suitable container, and watch for tell tale air bubbles.
Stop engine at end of test.
 - 3.5.2. Further evidence of combustion leaks can be obtained with the use of combustion leak detection fluid. Relieve system pressure to "0 PSI" (see 3.6.1) and leave relief valve adjusting screw in the open position. Place drain hose into small container of leak detection fluid. Start engine. All gases from the cooling system will pass via drain hose through detection fluid, which will change colour if combustion gases are present. This indicates a leak at head gasket, a cracked head, etc.
NOTE: ENSURE COOLANT DOES NOT PASS INTO DETECTION FLUID AS THIS WILL AFFECT TEST RESULTS.
Stop engine at end of test.

3.6. REMOVAL FROM SYSTEM

WARNING: DO NOT ATTEMPT TO REMOVE ANALYSER WITH SYSTEM TEMPERATURE ABOVE 40°C.

- 3.6.1. With slide valve in the system position (see FIG. 5), gradually turn the relief valve screw anti-clockwise until system pressure is totally dispersed through the relief valve drain hose and "0 PSI" is shown on the gauge.
- 3.6.2. With the system pressure at "0 PSI", the slide valve can then be pushed across to the bladder circuit (see FIG. 4), deflating the bladder and allowing the retaining clips to be disengaged and the analyser removed.

4. CARE & MAINTENANCE

This analyser is a testing instrument and should be treated accordingly. Keep unit clean by rinsing in water after each use to prevent internal components sticking.

NOTE: DO NOT USE HARSH CHEMICALS OR SOLVENTS.

The rubber bladder and safety seal will wear with normal use. Replace bladder or safety seal if any deterioration is noted.

FIG 4. BLADDER CIR-

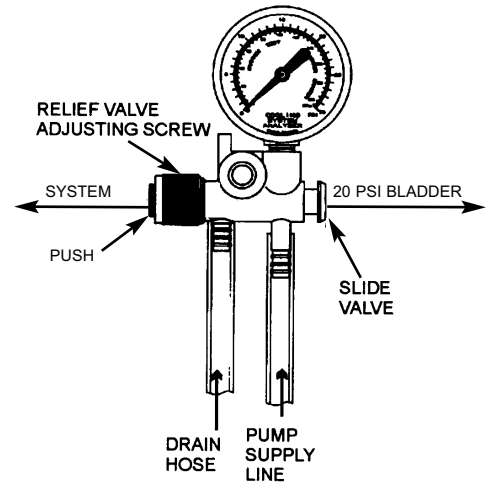
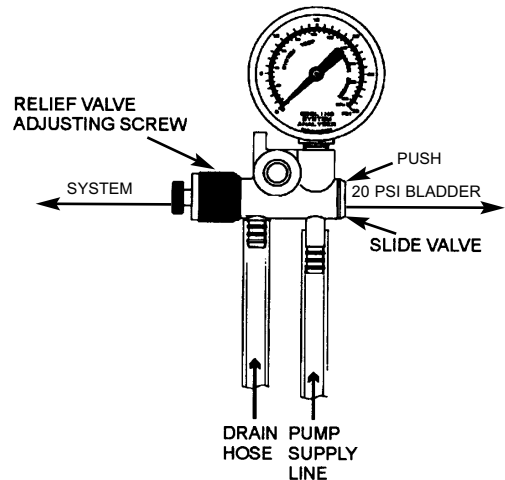


FIG 5. SYSTEM CIR-



5. BLADDER REPLACEMENT

- 5.1. Remove temperature probe with mounting nut and locking nut.
- 5.2. Remove bladder and centre stem assembly from main body.
- 5.3. Remove centre bolt O-ring and collet.
- 5.4. Slide bladder off bolt.
- 5.5. Remove bladder from mounting sleeve.
- 5.6. Slide new bladder onto mounting sleeve (use water as lubricant if required).
- 5.7. Reassemble bladder and stem assembly in reverse order (ensure O-ring collet is fitted with castled end facing stem) and refit to body.
- 5.8. Hand tighten locking nut. NOTE: DO NOT OVER TENSION AS TOOL DISTORTION MAY OCCUR.
- 5.9. Refit temperature probe with mounting nut.
- 5.10. Inflate bladder to specified pressure and immerse in water to test for leaks.

6. TROUBLESHOOTING

Overheating	<ul style="list-style-type: none">• Defective pressure cap• Low coolant level or concentration• Defective thermostat• Faulty water pump• Slipping, loose fan belt• Restricted coolant or air flow at radiator• Faulty radiator fan or fan clutch• Leaking head gasket/cracked head or block• Incorrect ignition timing• Lean air/fuel mixture
Low Engine Temperature	<ul style="list-style-type: none">• Thermostat seized in open position• Incorrect or no thermostat fitted
Coolant Leaks - Visible	<ul style="list-style-type: none">• Radiator/heater hoses• Water pump• Radiator core/fittings• Heater core• Faulty gaskets
Coolant Loss - Not Visible	<ul style="list-style-type: none">• Internal leaks• Head gasket• Cracked head• Cracked block/cylinder

IMPORTANT

NO RESPONSIBILITY IS ACCEPTED FOR INCORRECT USE OF THIS EQUIPMENT.

WARRANTY

GUARANTEE IS 12 MONTHS FROM PURCHASE DATE. PROOF OF PURCHASE WILL BE REQUIRED FOR ANY CLAIM.

INFORMATION

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