

Rapid Pressure Rise Relay Test Kit Manual

Testing set-up, test limits, testing procedure, disassembly and spare parts

Prepared from the supplied instruction photos

Before use: Only trained personnel should perform this procedure. De-energize the relay control circuit before connecting or removing the cable plug. Verify this clean copy against the official OEM instructions before field use.

1. Test kit purpose

This manual describes how to set up and use the rapid pressure rise relay test kit, including the operate test, non-operate test, reset check, disassembly, connector references and spare parts.

2. Test limits

Do not exceed 3.75 PSIG during testing.

900 Series	910 Series	Expected result
3.25 - 3.50 PSIG	2.50 - 2.75 PSIG	Unit should operate
1.25 - 1.50 PSIG	0.75 - 1.00 PSIG	Unit should not operate

3. Kit overview

Main items shown on the kit layout:

- Light test button
- Timer button
- Test lights
- Batteries
- Cable storage
- Pressure hose storage
- Relief valve
- Pressure gauge
- Pressure bulb
- Instructions compartment

3.1 Reference diagram

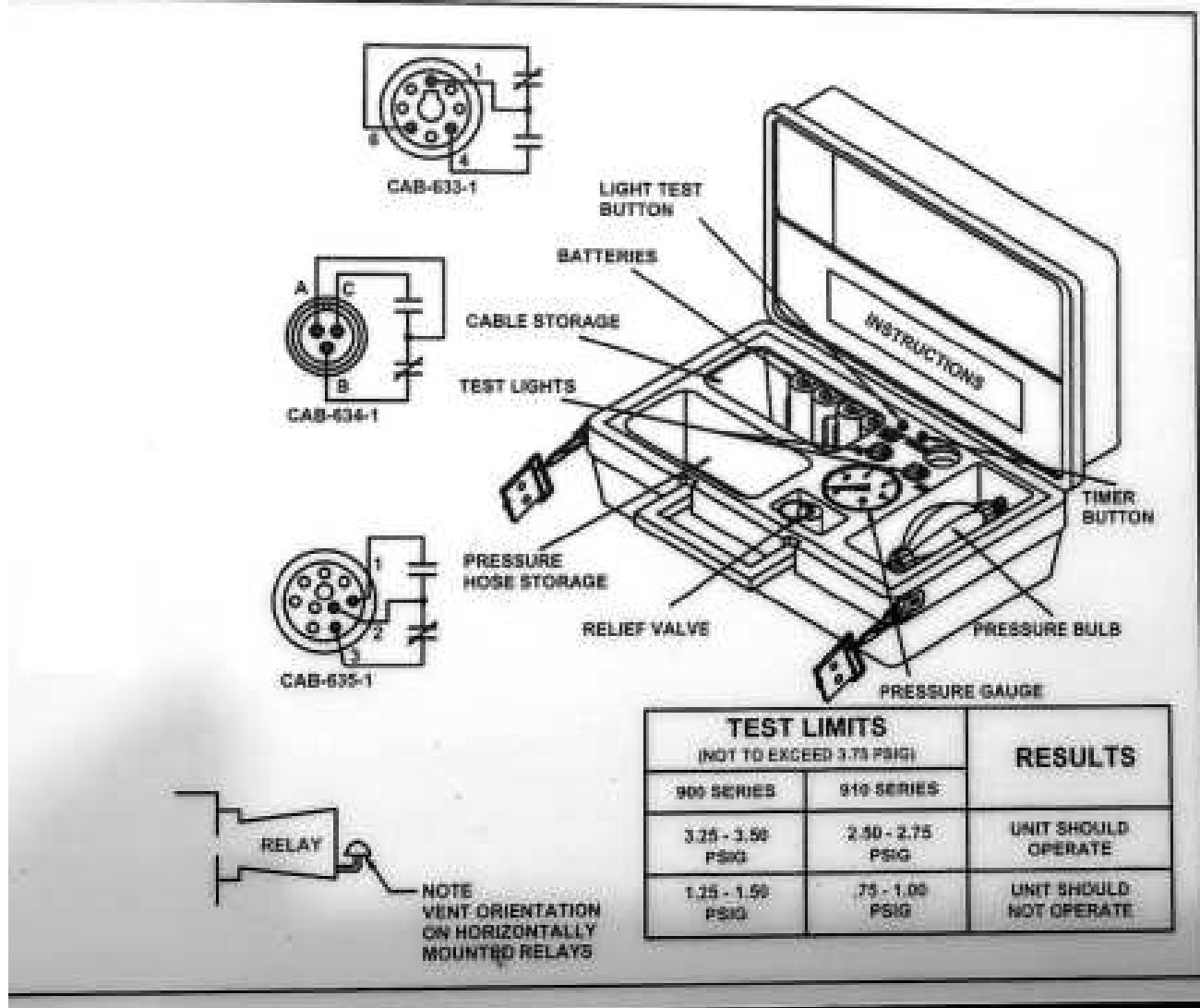


Figure 1. Test kit layout, connector diagrams, relay vent orientation and test limit reference.

4. Testing set-up

1. De-energize the rapid pressure rise relay control circuit and remove the cable plug from the unit.
2. Press the light test button to activate the test kit. Both bulbs should glow when the button is depressed. The test kit will automatically shut off after five (5) minutes.
3. Connect the test cable to the electrical connector. The red light should glow. If it does not, press the test button to verify that both bulbs operate and the battery voltage is sufficient to perform the test. If the test kit is functioning correctly and the red test light still does not light, the relay is not functioning properly and should be returned to the factory for examination.
4. Remove the pipe plug or vent from the cover of the relay.
5. Install the coupler to the cover so the gasket is sufficiently compressed to seal the unit.
6. Connect the pressure hose to the coupler.

5. Testing procedure

5.1 Operate test

1. Press or squeeze the pressure bulb to attain the desired test pressure on the pressure gauge: 3.25 - 3.50 PSIG for 900 Series or 2.50 - 2.75 PSIG for 910 Series.
2. Press the timer button to activate the timer. Maintain this pressure for a minimum of 45 seconds by pressing or squeezing the pressure bulb as required. The red light will dim during timing. Timing is complete when the red light glows.
3. After timing is complete, rapidly pull the ring on the relief valve. The yellow test light should glow and the red test light should dim.
4. If the yellow test light does not glow, retest to verify the procedure. After a few seconds, the relay should reset: the red test light should glow and the yellow test light should go dim.
5. Caution: always wait one minute between tests. If the bulb still fails to glow, the relay is not within specification.

5.2 Stabilization wait

Wait one minute for the relay mechanism to stabilize before starting the non-operate test.

5.3 Non-operate test

1. Press or squeeze the pressure bulb to attain the desired non-operate test pressure on the pressure gauge: 1.25 - 1.50 PSIG for 900 Series or 0.75 - 1.00 PSIG for 910 Series.
2. Press the timer button as described in the operate test. Maintain this pressure for a minimum of 45 seconds by pressing or squeezing the pressure bulb as required.
3. After 45 seconds, rapidly pull the ring on the relief valve. The red test light should continue to glow and the yellow test light should not glow.
4. If the yellow light does glow, retest to verify this procedure.
5. Caution: always wait a minimum of one minute between tests. If the yellow light still glows, the relay is not within specification.

6. Disassembly

1. Reverse the set-up procedure described in steps 1 through 5. Make sure thread sealant is applied to the pipe plug or vent threads.
2. Horizontally mounted relays must have the vent oriented as shown in the reference diagram.
3. If any rapid pressure rise relay fails to perform as specified, return it to the factory for examination.

7. Spare parts and accessories

Item	Part number / specification
Qualitrol connector (STD.)	Qual. P/N CAB-633-1
Qualitrol connector (ANSI)	Qual. P/N CAB-635-1
"MS" style connector	Qual. P/N CAB-634-1
Bulbs	T-3 1/4 mini bayonet, 6.3 V, 0.15 A; Sylvania P/N 1847; Qual. P/N LMP-016-1
Batteries	Size C - alkaline
Pipe plug wrench	3/16 hex
Vent wrench	7/16 x 3/8 open end

8. Connector reference

Connector / diagram	Reference
CAB-633-1	Qualitrol connector (STD.)
CAB-634-1	"MS" style connector
CAB-635-1	Qualitrol connector (ANSI)
Vent orientation: Horizontally mounted relays must have the vent oriented as shown in the reference diagram.	