

Component Testing Guide

740972 12 volt Relay 740241 24 volt Relay

Where Used:

170, 200, 260 and 320 Automatic Scrubber Series

Purpose:

To allow a small current to control a larger current.

How a Relay Operates:

In general, a relay operates and functions very much like its bigger brother the contactor. A relay is typically used to carry lighter current loads than a contactor. When system voltage is applied to the smaller control terminals 1 & 2, an electromagnetic field is created. When the electromagnetic field is created, a set of contact points are pulled together to make contact or close the circuit between Terminals A & B. This allows current to flow to operate an electrical device, i.e. a brush or vacuum motor. When the power or system voltage is removed from the small terminals 1 & 2, the electromagnetic field collapses and the contact points inside the relay pull-apart or "open" the circuit. Current will then cease to flow to the electrical component the relay is controlling.

How to Test:

To test a relay you will need the following tools: 1). Jumper wires, 2). Volt Meter, 3). OHM Meter or Continuity Tester.

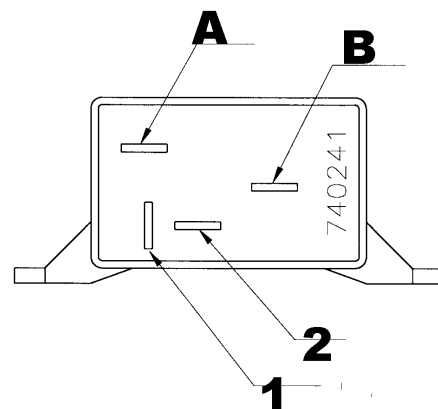
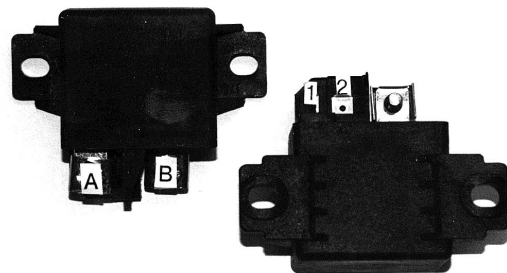
1). Remove all the wires from the relay noting their location. Connect your OHM meter or continuity tester across terminals A & B. No continuity should be shown at this time without power to terminals 1 & 2. If continuity is shown the relay is defective and must be replaced. This situation would cause the electrical component the relay was controlling to remain on even when the switch is in the "off" position.

2). With the OHM meter or continuity tester connected across terminals A & B, apply voltage via your jumper leads to the small terminals 1 & 2. You should now read continuity between terminals A & B. If continuity is not present at this time the relay is defective and must be replaced. This symptom would cause a motor to not function when the switch is activated.

Diagnosis Summary:

1). If system voltage is present at terminals 1 & 2, continuity should be shown between A & B.

2). Without system voltage present at terminals 1 & 2, continuity should not be shown between A & B.



CAUTION: These tests should only be performed by a qualified technician. Working with electricity can be dangerous. When using jumper wires to help diagnosis an electrical component, care must be exercised to prevent a short circuit from occurring. Do not allow the two test leads (jumpers) to touch or personal injury or damage to the equipment will result.