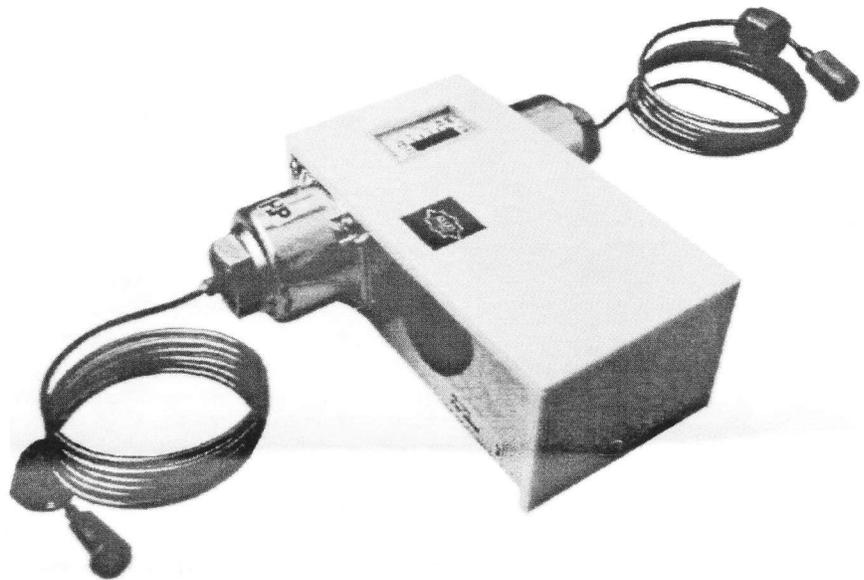




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# Replacing Oil Pressure Switch CNT00553

Using CNT05044



Models: CRHR, CRHM, CNT00553 and CNT06044

PART-SVN105A-EN



# General Information

## Literature change history

PART-SVN105A-EN (July 2007) manual first release.

## Warnings and Cautions

**NOTICE:** Warnings and Cautions appear at appropriate sections throughout this literature. Read these carefully.

**^ WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**^ CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**CAUTION:** Indicates a situation that may result in equipment or property-damage only accidents.

## Important Environmental Concerns!

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same **potential impact to the environment. Trane advocates the responsible handling of all refrigerants—including industry replacements for CFCs such as HCFCs and HFCs.**

## Responsible Refrigerant Practices!

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

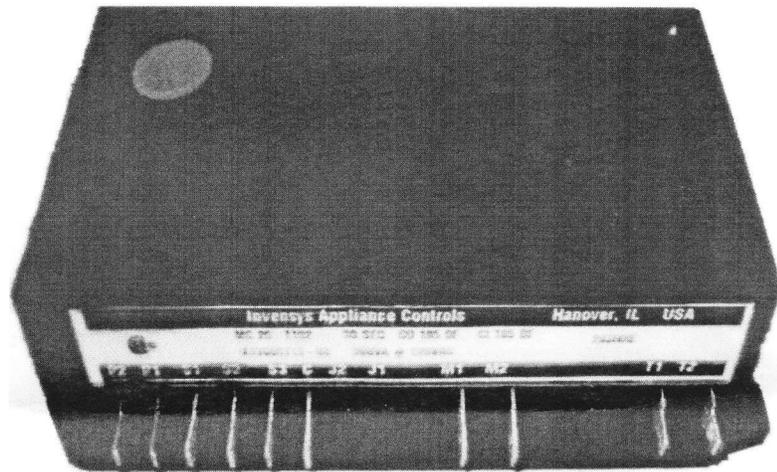
## General

This information documents the process of replacing the oil-control safety switch part number CNT00553. This change was required after the part became no longer available from the vendor. Included in the box are instructions and guidelines for completing the retrofit installation.

In order to replace a CNT00553 the customer should order one CNT05044. The installer should be prepared to supply electrical supplies (i.e. wire, wire-nuts, and connectors) that meet the same electrical requirements of the existing switch.

The CNT05044 connects electrically to the CNT01312 motor protector as shown in Figure 1. The motor protector is a black plastic box that is usually located in a unit control box. It measures approximately 3.5 x 6 inches and can be easily identified by the red oil pressure reset button on the front corner. The CNT01312 can be re-used with the new switch.

Figure 1. Motor protector, CNT01312 example





# Installation

## Mechanical and electrical installation

Use these instructions along with any local and state electrical codes to complete the change.

### A WARNING Hazardous Voltage!

**Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. Failure to disconnect power before servicing could result in death or serious injury.**

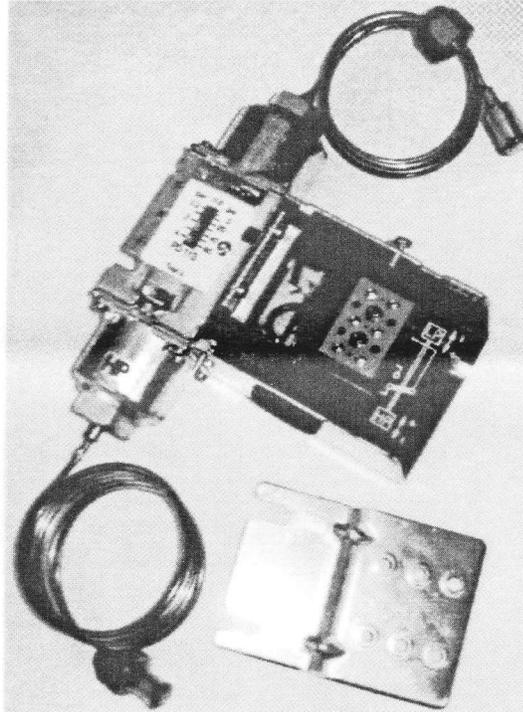
- 1 Disconnect all electrical power supplies to the unit.
- 2 Where compressor isolation valves are present use these valves to isolate the compressor from the rest of the unit refrigerant circuits. Remove refrigerant from the compressor using approved refrigerant handling procedures. Where isolation valves are not present it will be necessary to recover the entire unit refrigerant charge.
- 3 Disconnect the existing CNT00553 by first removing the electrical connections. Then remove the oil capillary tubes by disconnecting them from the compressor. The tubes should then be pinched shut and cut away from the switch. The broken and disconnected switch should remain in place to block the hole in the compressor control box.
- 4 The shape and mounting of the new switch is very different than the original switch. Secure the new switch (CNT05044) to the unit. The location of the new switch should be determined by application.

The mounting location must:

- a **Be close enough to the compressor so that the capillary tubes** easily reach from the switch to the connection points on the compressor.
  - b Allow for wiring to the CNT01312 motor controller located in the Unit Control Panel.
  - c Be free from excessive vibration and thermal exposure.
  - d Use the two mounting screws and washers provided to secure the mounting bracket to the back of the switch. Screws are less than 5 mm in length to prevent damage to the switch internal components.
- 5 Connect both capillary tubes from the new pressure switch to the compressor. The tube labeled HP should be connected to the pump discharge and other connection to the compressor suction. See Figure 2 for switch details. The original switch lube capillary went to pump discharge just like the new HP tube.

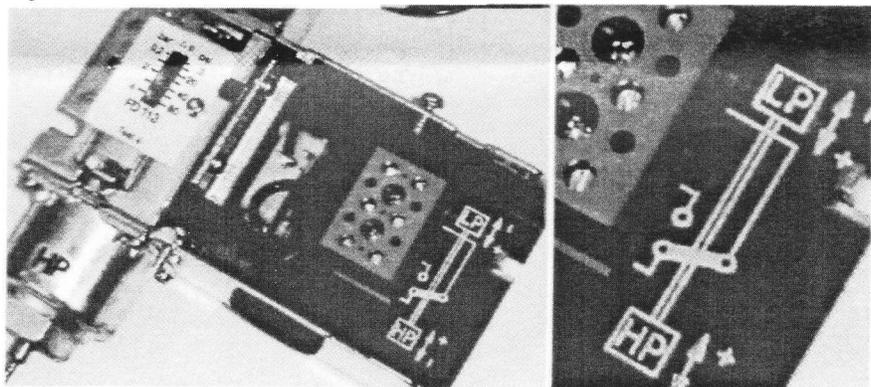


Figure 2. Internal view of new pressure switch and mounting bracket



Connect the P1 electrical terminal on the motor protector to the top or common terminal on the CNT05044. Connect the P2 electrical connection on the motor protector to the normally open terminal located in the center of the terminal block as shown in Figure 3. Secure wires appropriately. Make sure old wires are removed or terminated.

Figure 3 Internal view detail of electrical connections



7 The pressure differential setting is factory set so no adjustments are required. Making changes to this set point may result in serious damage to the equipment.

Factory settings: Open on a fall in differential pressure below 15 psid, close on a rise above 19 psid (4 psi differential).

8 Run several test cycles to ensure proper operation.