INGERSOLL-RAND®

TECHNICAL MANUAL SUPPLEMENT

T30

Small Compressor Division
INGERSOLL-RAND COMPANY
Campbellsville, KY 47218

LOW OIL LEVEL SWITCH

PART NUMBER 32276313

⚠ WARNING

Compressed Air Has Great Force.

Can Cause Severe Injury or Death.

Always release air pressure from the compressor, air receiver and associated tubing and components before servicing this compressor.

⚠ WARNING

Hazardous Voltage.

Can Cause Severe Injury or Death.

Always disconnect power supply before performing any maintenance or repair work on this compressor.

1. PURPOSE.

The purpose of this publication is to provide maintenance and parts list information regarding the latest design improvements on your Ingersoll-Rand air compressor. The information contained herein has not yet been incorporated in the Instruction and Parts List Manuals provided with your compressor.

2. SCOPE.

This supplement is applicable to all Type 30 (T30) air compressors manufactured after April 1, 1994. Depending on the air compressor purchased, the Low Oil Level Switch is available as either standard or optional equipment.

3. PRECEDENCE.

The maintenance procedures contained in Paragraph 6 supersede the corresponding data in the Instruction Manual supplied with your air compressor. When ordering spare or replacement parts, the part numbers listed in Paragraph 8 should be used in place of those shown in the Parts List. This publication, along with the Instruction Manual and Parts List should be kept in a location which is accessible to operation and maintenance personnel.

4. DESCRIPTION.

A properly functioning Low Oil Level Switch is critical to the operation of your compressor. Operating the compressor with a defective switch can cause extensive damage should the frame oil level drop to an unsafe point undetected. The switch is a single-pole, double-throw device, and is NEMA 4 rated. Switch data is listed in Table 1.

The low oil level switch does not alleviate the need to check the frame oil level in your compressor on a regular basis (Refer to the SCHEDULED MAINTENANCE table in your Instruction Manual). Ingersoll-Rand Company cannot assume responsibility for any damage which might occur as the result of operating the compressor without adequate lubrication.

AMPS	VOLTAGE
0.4	575 VAC PILOT DUTY
1/4	250 VDC - NON-INDUCTIVE
1/2	125 VDC - NON-INDUCTIVE
3-1/2	24 VDC - NON-INDUCTIVE
10	125, 250, 480 VAC

TABLE 1. SWITCH DATA.

5. OPERATION.

If the oil level in the compressor frame reaches an unsafe level, the float will cause the switch contacts to open and shut down the unit. When the proper lubricant level has been restored, the float will reset to its original position, closing the switch contacts. The compressor can then be restarted.

6. MAINTENANCE.

Under normal operation, the low oil level switch requires no operator intervention or routine maintenance. If the switch fails, as evidenced by frequently shutting off the motor, or failing to shut off the motor if the oil level drops to an unsafe point, it should be removed and

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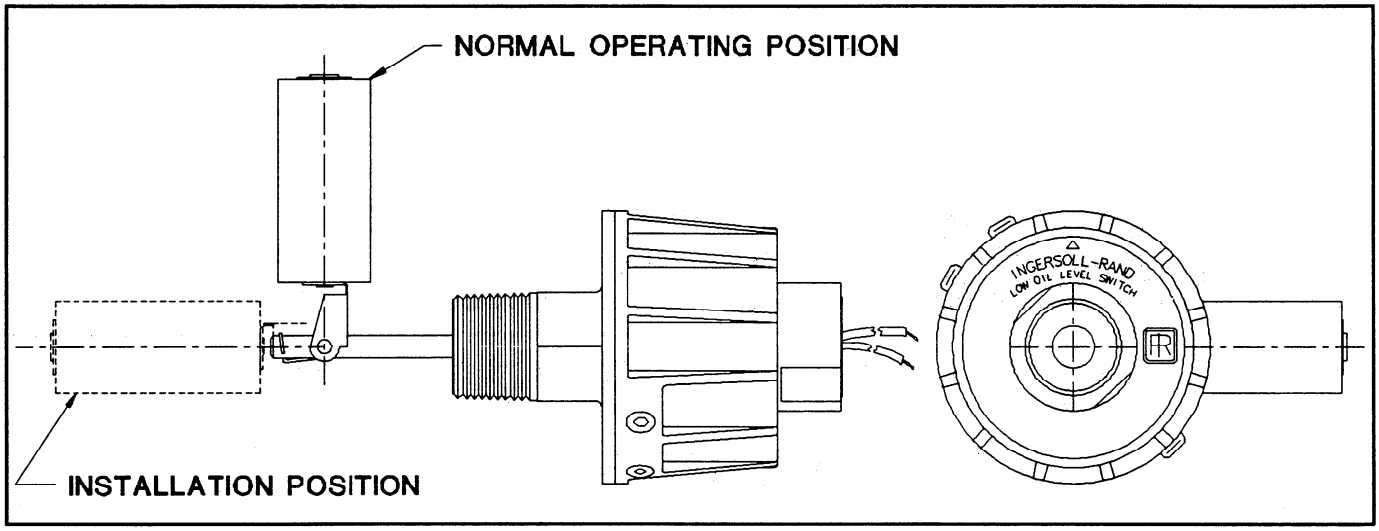

FIGURE 1. SWITCH ALIGNMENT.

checked immediately. A defective switch must be replaced.

A. REMOVAL. (**NOTE**: Frame end cover removal is not required to remove the low oil level switch).

1). Disconnect the main power supply and drain the oil from the frame (refer to your Instruction Manual for oil change procedures).
2). Disconnect the switch wires from the control circuit.
3). Loosen the three set screws and remove the switch cover.
4). Remove the switch body from the compressor frame. (**NOTE:** If the switch is to be removed from the compressor for an extended period of time, install a 3/4" NPT plug into the frame opening to keep dust and dirt out of the frame).

B. CLEANING. Thoroughly clean the float with a dry rag. If necessary, a non-flammable solvent can be used provided the float is wiped clean before the switch is reinstalled.

C. TESTING. The switch can be tested with a standard 12-volt automotive test light.

1). Align the cover on the switch body as shown in Figure 1.
2). Hold the float up so that the contact rod and cover do not make contact. The test light should be on.
3). Release the float. When the rod and cover make contact, the test light should go off.

D. INSTALLATION.

1). With the switch cover removed, apply pipe thread sealant to the switch threads.
2). With the float extended straight out, insert the switch body into the frame and tighten. When properly installed, the switch should be aligned as illustrated in Figures 1 and 2.
3). Hold the contact rod straight up at a 90° angle. Install the switch cover with the arrow pointing straight up at a 90° angle.
4). Carefully and evenly tighten the three set screws to secure the cover to the switch body, using caution not to over-tighten and damage the switch. The set screws should be torqued to 24-32 In. Oz.
5). Connect the switch wires to the control circuit. (Refer to your Instruction Manual).
6). Fill the compressor frame with lubricant. (Refer to your Instruction Manual).

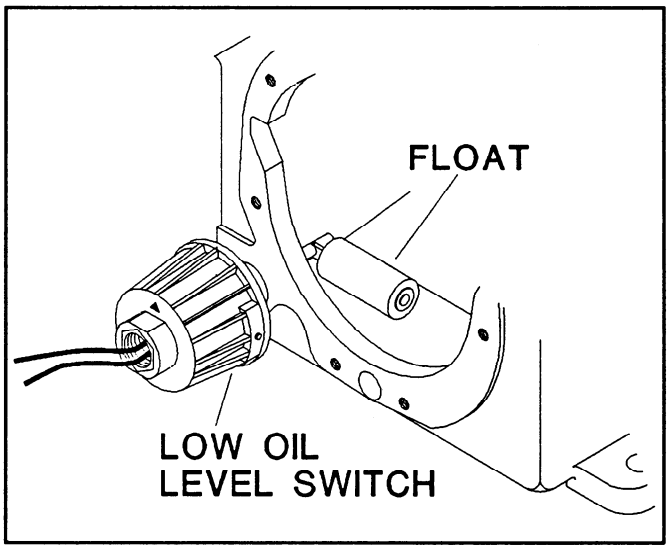

FIGURE 2. SWITCH INSTALLATION.

7. PARTS LIST DATA.

Should it ever be necessary to replace the switch, supply the information in Table 2. when ordering.

PART NBR.	DESCRIPTION
32276313	SWITCH, LOW OIL LEVEL

TABLE 2. PARTS LIST DATA.