



## SERVICE BULLETIN

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**Title:** 19XR Oil Pressure Sensor Fault  
**Models Affected:** 19XR

**Number:** C9706  
**Date:** 2/11/97  
**Supersedes:** New

**Purpose:**

To inform the field of the update in software due to problems at start-up with the Alarm Message 'SENSOR FAULT: OIL PRESSURE.'

**File:** Controls–Wiring

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## Background:

The 19XR compressor is equipped with two pressure transducers in the oil lubrication system used to calculate oil pressure differential. The pressure transducer installed in the oil sump is compared with the pressure transducer installed on the discharge line of the pump with the use of the POWER SUPPLY / COMPARATOR. This PC board (part # HK35AA007), installed in the control panel, supplies power to the transducers and also calculates pressure differential. This differential is inputted to the PSIO on plug J7 terminals 7 and 8 and displayed in the STATUS01 screen as Oil Pressure (psi)(KPa).

Since one input is used for two pressure transducers, sensor fault protection is provided when the differential exceeds the oil pressure sensor fault threshold of 35 psi (241.3 KPa). This fault protection is in addition to the standard fault condition for pressure transducers. The input voltage ratio of the transducer voltage to the reference voltage (5 VDC) must be between .060 and 0.98. To troubleshoot the individual pressure transducers place the negative (black) lead of your volt-ohm meter on terminal U4 of the power supply / comparator. With the positive (red) lead measure the voltage on terminal VH1 for the oil supply transducer and terminal VL1 for the oil sump transducer. The ratio is this measured voltage divided by the supply voltage measured between terminal U4 and U3 (5 VDC). If this threshold is exceeded during pump energization, the PIC control will alarm with 'SENSOR FAULT: OIL PRESSURE.'

**Problem:**

During start-up, when the oil pump starts, the oil pressure developed in the first few seconds of operation can spike to over 50 psi (344.7 KPa). This is due to the response time of the oil pressure regulator. Once the regulator unseats, the oil pressure quickly subsides to normal operation.

**Correction:**

Version 2 software has been released (1/13/97) to allow for the pressure fluctuation in the oil regulator. The oil pressure will be ignored for the first ten seconds of pump energization. The oil pressure sensor fault threshold has also been changed from 35 to 45 psi (241.3 to 310.3 KPa). Other changes incorporated in the software upgrade will be described in a later bulletin.