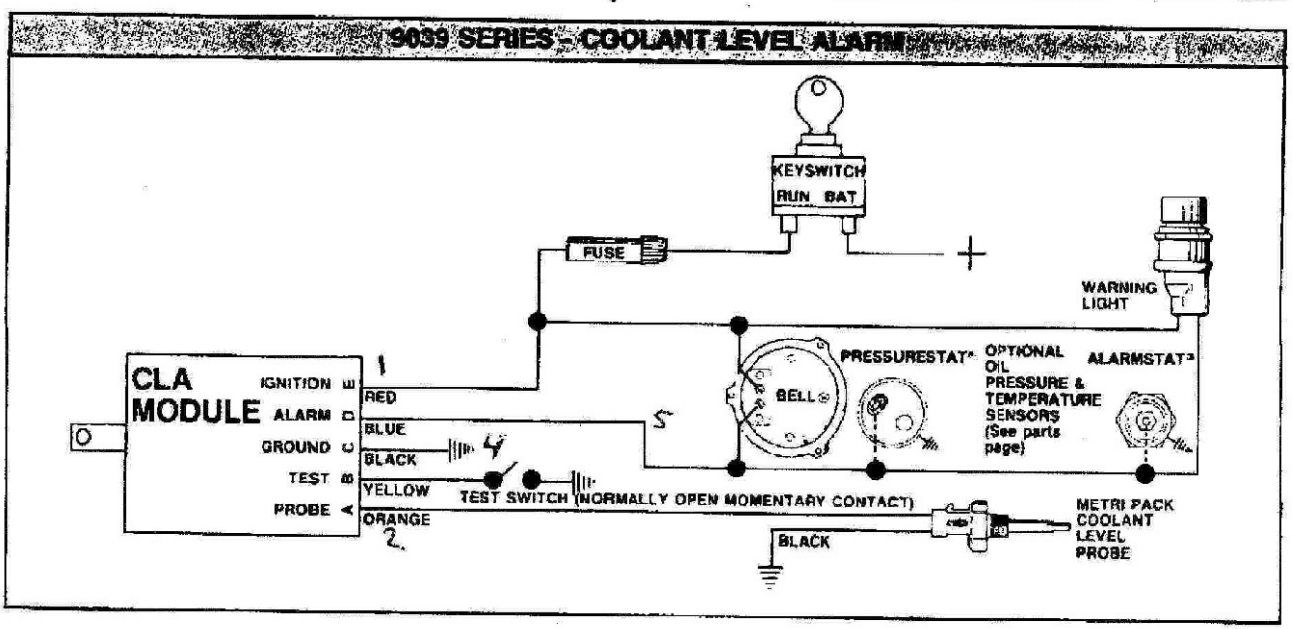
INSTALLATION AND SERVICE GUIDE
Coolant Level Alarm
(With Optional Coolant Temperature and Oil Pressure Monitoring)

On behalf of the entire KYSOR organization, we wish to thank you for purchasing a KYSOR Engine Monitoring System. Along with Monitoring Systems, KYSOR produces a wide range of engine temperature control products such as Fan Blades, Fan Clutches, Cooling System Controls, and Radiator Shutters. All KYSOR products are designed and manufactured to the highest quality standards for YOU, our customer.

This Installation and Service Guide contains the information that you will need to properly install and maintain your system for maximum life and dependable service. We urge you to thoroughly familiarize yourself with the contents of this guide and preserve it for future reference.

Installation Instructions

WARNING: Due care and caution must be exercised when ordering and installing a KYSOR Engine Monitoring System. Failure to follow these instructions may result in product or vehicle damage and possible serious personal injury.



1. MODULE

Install the Control Module in a cool, easily accessible location behind the instrument panel. DO NOT MOUNT MODULE IN THE ENGINE COMPARTMENT.

2. WARNING BELL & LIGHT

Install the bell in a convenient location in the cab and the light in the instrument panel. Attach the "Warning Plate" to the instrument panel.

3. COOLANT LEVEL PROBE

A) Determine a satisfactory location in the top radiator tank, above internal baffling and as near to the radiator center as possible. The Probe must be located at the correct depth to measure low coolant (usually at the cold fill level mark on the radiator).

B) For sheet metal tanks, install the Probe Adaptor in the radiator and insert the Probe in the adaptor (probe adaptor is not included in 9039 kit. See Service Parts for ordering information).

C) For cast tanks: install the Probe directly in a 1/4" pipe thread hole.

D) Attach the "Caution" label to the radiator top, near the cap.

Installation Instructions, Cont.

4. ALARMSTAT®

Install the ALARMSTAT® in a 3/8" pipe thread hole in the hottest spot in the water manifold system. NOTE: THE ALARMSTAT® MUST BE INSTALLED BETWEEN THE THERMOSTAT AND CYLINDER HEAD.

5. PRESSURESTAT®

Install the PRESSURESTAT® in the oil pressure gauge line, preferably in the cab for protection against vibration and corrosion to the terminals. **DO NOT MOUNT THE PRESSURESTAT® ON THE ENGINE.**

6. WIRING INSTRUCTIONS

A) Disconnect the batteries to prevent shorting.

B) Wire the components by following the wiring diagram.

C) Use color coded #16 gauge 105°C wire.

D) Place all wiring in loom for protection. Use grommets at firewalls and use wire ties to secure harness.

E) A test switch (normally open, momentary contact) may be added as shown in the diagram but is not essential as the module has a built in test feature.

System Check

1) Radiator coolant level must be normal before proceeding.

2) Turn keyswitch "ON." Bell and light should go on for a brief time, and then turn off. OPTIONAL: press and release test button after self check is concluded. Module should self check again.

3) With keyswitch "ON," remove wire from #2 terminal on the module, or the wire from the probe. The light and bell should come on. Alternate check is to drain the radiator. When coolant level falls below the probe the light and bell should come on.

4) Reconnect the wire removed in step 3. Your probe circuit is functioning properly.

ALARMSTAT® & PRESSURESTAT®

5) With the key switch turned to the "ON" position and the engine off, the alarms should go on. If the alarms do not go on there is usually a broken wire or loose connection in the warning circuit. Make sure that the system is wired according to the wiring diagram on page 1.

6) Start Engine: The alarm should stop as oil pressure reaches normal. Jumper the ALARMSTAT® to ground while the engine remains running. The alarm should again go on. Remove the jumper wire. Your ALARMSTAT®/PRESSURESTAT® Circuit is functioning properly.

System Troubleshooting

1. Unplug connector from module. Turn key on. Bell and light should NOT activate, if they do, wire D is shorted to ground.
2. Connect test light between wires E & C at connector. Turn key on. Test light should light. If not, there is either no voltage at E or no ground at C.
3. Jump wires C and D together at the connector. Turn key on. Bell and light should activate. If they don't, either:
   1) wire C is broken
   2) there is no voltage to the light and/or bell;
   3) the light and/or bell are defective
4. Plug in connector and turn key on. Bell and light should go on momentarily and then turn off. If they don't come on, replace module. If they stay on, check for either low coolant or broken A wire.
5. If system passed all checks, 1-4, but will not activate light and bell when coolant is drained out with key on, then clean the stainless steel tip of the coolant level probe.

Service Parts

COMPONENTS		
DESCRIPTION	**12 VOLT**	**24 VOLT**
Control Module	1039-07457-01	1039-07457-02
Coolant Level Probe (METRI-PACK) 1/4"NPT	5022-02200-01	5022-02200-01
Coolant Level Probe (METRI-PACK) 3/8"NPT	5022-02200-03	5022-02200-03
Warning Bell	1003-33040-01	1003-33040-02
Warning Light	1035-33930-12	1035-33930-24
Wiring Harness Adaptor (Module)	5507-10226-01	5507-10226-01
Wiring Harness Adaptor (Probe)	5507-10240-01	5507-10240-01
Mounting Clip	3015-01440-02	3015-01440-02
Adaptor Bushing - Probe (Mechanical Seal)	4038-16984-01	4038-16984-01
Adaptor Bushing - Probe (Soldered Seal)	4038-37465-01	4038-37465-01
Test Switch	1040-33140-01	1040-33140-01
Label Caution	4031-06987-01	4031-06987-01
Label Warning	4031-35200-01	4031-35200-01
Complete kits can be assembled by and ordered through your Kysor dealer		

ALARMSTATS®		
ENGINE	TEMPERATURE SETTING°F	KYSOR PART NUMBER
	Alarm	
CUMMINS V & VT 903, V & VT 555, KT & KTA 1150, 855 previous to Big CAM II; HINO EH-100 & EH-200; NAV DV-140, DV-190, 6.9L & 9.0L, NAV 537 & MV (gasoline); MACK All Engines prior to 1988; MERCEDES 352 & 352-A; VOLVO F6, F7, and N10	210	1002-05811-34
FORD 6.6L, 7.8L; DDC 53, 71 and 92 Series, GM 6.2L, 8.2L	215	1002-05811-35
CAT 3116, 3176, 3306, 3406, 3408, CAT 3304B, 3306B, 3406B, CAT 3208TA, 3208NA; CUMMINS Big Cam II, III or IV, CUMMINS L-10, N14, CUMMINS B & C Series; NAV DTA 360, NAV DT-466; and any other diesel engine not listed	220	1002-05811-36
CUMMINS NTC-444, N14-460; MACK E6 & E7, 1988 to present; NAV 7.3L	225	1002-05811-37

NOTE:
(1) The series 1002-05511-XX ALARMSTAT® can also be used (these two ALARMSTATS® differ only in mounting thread size; the series 05811 having a 3/8-18NPTF and the series 05511, a 1/2-14NPTF). Use the same suffix number as the series 05811 in the chart above.
(2) If ALARMSTATS® require a bushing for proper installation; use KYSOR Part Number 3022-01372-01 (1/2 NPT to 3/8 NPT) 3022-01372-02 (3/4 NPT to 3/8 NPT). DO NOT USE STANDARD PIPE BUSHINGS.
(3) Any vehicle rated at 8,500 lbs. GVW or above is considered heavy duty.

PRESSURESTATS®		
ENGINE	PRESSURE SETTING-PSI	KYSOR PART NUMBER
	Alarm	
DDC 53, 71 and 92 series; HINO EH-100 & EH-200; MACK E7, 1988 to present; MERCEDES 352 & 352-A; NAV DTA 360, NAV 7.3L; VOLVO F6, F7 & N10	3	1042-33130-03
CUMMINS Big Cam II, III or IV, CUMMINS L-10, N14, CUMMINS B & C Series, CUMMINS NTC-444, N14-460: CAT 3304B, 3306B, 3116, 3176; NAV DT-466, 6.9L & 9.0L; FORD 6.6L, 7.8L	5	1042-33130-05
CAT 3306, 3406 & 3408; CUMMINS V & VT 903, V & VT 555, KT & KTA 1150; 855 previous to Big Cam II; NAV DV-140, DV-190, NAV 537 & MV (gasoline); MACK All Engines prior to 1988	6	1042-33130-06
CAT 3208TA, 3406B; GM 6.2L, 8.2L; MACK E6 1988-present	10	1042-33130-10
CAT 3208NA	15	1042-33130-15

NOTE: For remote mounting of PRESSURESTATS®, specify Adaptor - PN 3022-01295-01.

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FORM EM 9-2
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