

ENGINE PROTECTION SYSTEM - LIGHT VEHICLE



ENGINE PROTECTION SYSTEM KIT, TO SUIT LIGHT VEHICLE & FORKLIFT

3206



ENGINE PROTECTION SYSTEM TO SUIT HZJ AND VDJ SERIES LANDCRUISERS

1245



ENGINE PROTECTION SYSTEM KIT, TO SUIT FORKLIFT

9303

The Muirhead® Light Vehicle Engine Protection system is ideal for light commercial and off-road mobile equipment.

The system monitors three critical areas of potential engine failure and alerts the operator if there are issues regarding the engine coolant level, temperature and oil pressure fault. These warnings greatly reduces premature engine failure, damage and costly repairs.

The compact and easy-to-install system provides audible and visual warnings, and incorporates additional outputs for return to idle or shutdown modes.

Equipment Type

All internal combustion forklifts and light vehicles that require an engine monitoring system.

Target Customer

All owners and operators of mobile equipment concerned with unintentional engine damage caused by failure within equipment such as forklifts, light vehicles, skid steers and pumps.

Functionality

When the ignition is switched on, the oil pressure indicator will illuminate along with the engine fault indicator and the audible alarm will sound until the engine gains sufficient oil pressure. The unit is now monitoring the engine. Once a fault has been detected, the engine fault indicator will flash for ten seconds, along with the indicator of the particular circuit that has caused the fault and the audible alarm will sound.

The Muirhead® Light Vehicle Engine Protection system, incorporates three inputs (one designated as a special alternating current (ac) circuit for detecting coolant) and three outputs. The configuration of these inputs and outputs are;

- ▶ **Engine Coolant Level** – This circuit detects low engine coolant. It is configured to have a five-second delay prior to activating its corresponding warning indicator and the external audible alarm and optional shutdown process. This circuit activates when the circuit becomes open.
- ▶ **Engine Temperature** – This circuit detects high engine temperature. It is configured to have a one-second delay prior to activating its corresponding warning indicator and the external audible alarm and optional shutdown process. This circuit activates when the circuit becomes open.
- ▶ **Engine Oil Pressure Low** - This circuit detects low engine oil pressure. It is configured to have a one-second delay prior to activating its corresponding warning indicator and the external audible alarm and optional shutdown process. This circuit activates when the circuit becomes open.
- ▶ **Audible Alarm Output** – The audible alarm output circuit switches on as soon as an individual warning indicator has been activated. The alarm will remain on in a constant state until the operator has rectified the individual engine fault that was registered on the control unit.
- ▶ **Idle Output (Optional)** – This circuit operates as a direct opposite to the audible alarm circuit. It switches off when the audible alarm switches on. This circuit is only used in conjunction with additional control systems that can return the engine to idle on detection of a fault.
- ▶ **Shutdown ETR (Optional)** – This circuit operates similar to the idle output. However, this time delay is factory set to 10 seconds and therefore allows the vehicle to run for 10 seconds after the detection of a fault and the warning system has become active. The circuit is powered to run. The circuit switches off once a fault has been active for 10 seconds. This circuit also incorporates an override circuit to allow the vehicle to start when no oil pressure is present.

| APT | HEAVY DUTY | OUTPUTS | INPUTS | IP66 CONTROLLER | KIT AVAILABLE | LED RED WARNING LIGHT & LABEL |
|------|------------|---------|--------|-----------------|---------------|-------------------------------|
| 3206 | Y | 3 | 3 | N | N | Y |
| 1245 | Y | Y | Y | Y | Y | Y |

ADDITIONAL DOCUMENTS

PRODUCT ONLINE



CUSTOMER DATASHEET



MANUAL





PRODUCT OUTLINE SHEET

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Variations

The system can be configured for the below additional features.

- ▶ Idle Output (Optional) – additional controller system can return the engine to idle on detection of a fault.
- ▶ Shutdown ETR (Optional) – additional controller system can allow the vehicle to run for 10 seconds after the detection of a fault and shut down the engine.

Key Features

- ▶ Reduces costly engine repairs
- ▶ Easy diagnosis of engine problems
- ▶ Guards against engine failure
- ▶ Audible and visual warnings on reader
- ▶ Multi-voltage 12 – 24 volts DC
- ▶ Universal applications
- ▶ Optional idle or shutdown function in the event of engine fault
- ▶ Tamper proof
- ▶ Environmentally sealed – IP32
- ▶ Reduces operator responsibility
- ▶ Ruggedized components for long life
- ▶ Enforces safe operating practices
- ▶ Customisable circuitry
- ▶ Light Vehicle protection kits come complete with sensors, harness and fittings.
- ▶ Simple and automatic operation

Parts List

PARTS LIST – QUANTITY SUPPLIED

| PART # | DESCRIPTION | 3206 | 9303 |
|--------|--------------------------------|------|------|
| 3369 | PANEL | 1 | 1 |
| 3074 | SWITCH PRESS 8PSI 1/8PTF NO F | 1 | 1 |
| 1723 | BUZZER WARNING CONS/INT 80DB | 1 | 1 |
| 1764 | SWITCH TEMP 212F N/C 2T 3/8NPT | 1 | - |
| 1766 | SWITCH TEMP 230F N/C 2T 3/8NPT | - | 1 |
| 2006 | PROBE COOLANT PLASTIC 1/8NPT | 1 | 1 |
| 7621 | TERMINAL COOLANT LEVEL PROBE | 1 | 1 |
| 8145 | INSULATOR TO SUIT 605001BL2 | 1 | 1 |
| 0578 | ADAPTOR NIPPLE 1/8-1/8BSPTM | - | 1 |
| 0029 | BUSH T/S 1/8NPT PROBE | - | 1 |
| 1247 | ADAPTOR T-PIECE 1/8 NPT FIXED | - | 1 |
| 5641 | EWS UNIVERSAL LOOM | 1 | 1 |

Quoting & Pricing

Pricing in Price List will include all of the components listed above in the Parts List. Spare or replacement parts can be ordered via the APT part numbers in the Parts List

Additional Document

| ITEM | DESCRIPTION | DOCUMENT NUMBER/TITLE |
|------|-----------------|--|
| 1 | Datasheets | SBMH0710076-Forklift-Engine-Protection-System SBMH1204015-Light-Vehicle-Engine-Warning-Kits SBMH0615124-Light-Vehicle-Engine-Warning-Systems |
| 2 | Product Manuals | M0140 M0073 |



PRODUCT OUTLINE SHEET

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Related Images



Discover more: rct-global.com

sales@rct-global.com

AUSTRALIA: +61 8 9353 6577
AFRICA: +27 83 292 4246
CANADA: +1 705 590 4001
RUSSIA / CIS: +7 910 411 1174
SOUTH AMERICA: +56 3 5229 9409
USA: +1 801 938 9214