

Edition 2 - Section 2

PRODUCT & PARTS CATALOGUE

Protection Systems by RCT



FEATURED
PRODUCT

PREVENT REFUELLING INCIDENTS

DUAL FUEL CAP ISOLATION SYSTEM

The Muirhead™ Dual Fuel Cap Isolation system is the latest in the range of Smart Protection Systems available.

The Dual Fuel Cap Isolation System ensures operator and machine safety on site. The system is designed to prevent accidents associated with refuelling.

This includes preventing the operator from driving off with the CBC still connected preventing any potential damage to fuel bay infrastructure and environmental damage associated with a major fuel spill.

The Muirhead™ Dual Fuel Cap Isolation system features ensure the ignition won't start unless the fuel cap and park brake are on, substantially minimising the risks associated with refuelling.

In addition, the system will also trigger an alarm to alert the driver if the fuel cap is removed while the engine is running. In this instance the engine isn't disabled, however it is if the operator applies the park brake while running the engine when the fuel cap is removed it will disable the engine immediately.

In instances where a machine has two or "dual" fuel caps, the system will ensure the engine won't start until both fuel caps are securely on.

The Muirhead™ Dual Fuel Cap Isolation System is the foolproof option for safely refuelling on site, every time, without fail.



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AIR CLEANER RESTRICTION WARNING SYSTEM



Damage to engines due to extremely dusty conditions or poor air filter maintenance can cause premature engine failure and reduce machine availability.

The Muirhead™ Air Cleaner Restriction Warning system can help prevent this by monitoring the air filter restriction caused by blocked filters.

The Muirhead™ Air Cleaner Restriction Warning system has a red LED pilot lamp and alert sonar. This alerts the operator that the air cleaner needs cleaning or replacing.



Part No: 2756
AIR FILTER RESTRICTION WARNING KIT



Part No: 3555
AIR FILTER RESTRICTION PANEL ONLY



Part No: 2388
VACUUM SWITCH (SET TO 25" OF WATER) 6.2KPA 1/8 NPT FEMALE THREAD



Part No: 1244
ADAPTOR NIPPLE 1/8 NPT MALE TO MALE THREAD

AUTO THROTTLE CONTROLLERS



AUTO THROTTLE CONTROLLER WITH PTO (PART NO. 3813)

The automatic throttle control system with PTO is a unique product that incorporates the following features:

THROTTLE CONTROL FUNCTION

This system, when activated, will raise the RPM to a pre-set point and isolate the foot throttle pedal.

OPERATOR CONTROL

This system incorporates a toggle switch to activate the system and provides a visual warning when the system is operational.

PTO CONTROL FUNCTION

This system, when activated, engages the PTO at either idle or pre-set RPM levels.

FULLY PROGRAMMABLE

This system is fully programmable via PowerMaster software and a notebook computer. This system also has a potentiometer located inside the control unit that will set the desired RPM when the system is activated.

SAFETY CONTROL

Neutral and park brake interlocks are incorporated in this system so that the automatic throttle and PTO will only operate when neutral is selected and the park brake is applied.

When the system is activated the throttle pedal is isolated and cannot override the automatic setting.

If the system is de-activated by the safety interlocks (neutral or park brake) the system will not activate again until it is reset.

Reset requires the park brake to be applied, neutral gear to be selected and the system switch to be turned off.



Part No: 3813

AUTO THROTTLE CONTROLLER WITH
PTO

DAYTIME RUNNING LIGHTS SYSTEM



The Muirhead™ Daylight Running Lights system operates off the ignition circuit of a vehicle. Option One automatically switches the vehicle's headlights on when the ignition is switched on. With Option Two, the vehicle's headlights can only be operated when the ignition is on. This increases safety, on or off road.



Part No: 3438
DAYTIME RUNNING HEADLIGHT
CONTROL SYSTEM 12V



Part No: 10549
DAYTIME RUNNING HEADLIGHT
CONTROL SYSTEM 24V

AUXILIARY WARNING AND CONTROLS

ELECTRONIC BRAKE APPLICATION DEVICE

The Electronic Brake Application Device is designed to interface into machine OEM's brake circuits and apply the brakes proportionally. The device can be activated by RCT controller monitoring, vehicle or engine speed, engine fault, etc.



Part No: 11322
ELECTRONIC BRAKE APPLICATION
DEVICE KIT INCLUDES 11918



Part No: 11614
BRAKE APPLICATION DEVICE T/S
DOZERS

PRODUCT IMAGE
UNAVAILABLE

Part No: 11918
KIT LOOM SET T/S 11322 PART A AND
PART B

AUXILIARY WARNING AND CONTROLS

ELECTRONIC HOIST CONTROLLER



This product has been designed to suit Caterpillar trucks that are converted into service trucks or water carts and have an electric over hydraulic hoist control. The product is installed to replace the OEM hoist control lever and provides limited control of the hoist pump.

The electric hoist control is designed to operate in conjunction with Muirhead™ Automatic Throttle Control systems. When activated, it will operate the vehicles OEM hoist hydraulic system.



Part No: 0364
ELECTRIC HOIST CONTROL KIT TO
SUIT CATERPILLAR TRUCKS

ELECTRONIC LATCH CONTROLLER



The Muirhead™ Electronic Latch Controller has been designed to interface into RCT control devices and latch when triggered. The control unit senses input from a control device and will trigger an output to latch. Reset of the unit is through the reset key.



Part No: 4308
UNIVERSAL LATCH CONTROLLER

ENGINE HOURMETERS AND CONTROLLERS



HOURLMETER & HOURLMETER CONTROLLER (PART NO. 4398 & 3150)

The Muirhead™ Hourmeter & Hourmeter Controller have been specifically designed to record genuine working hours. They do this by monitoring engine revs as opposed to measuring time. During periods when the machine is idling, for example at lunch time or in periods of changing work shifts, the engine hourmeter will not operate, therefore recording only genuine machine working hours.

To enable universal application, an input frequency signal from the machine's alternator to the hourmeter controller has been used. Electrical wiring is used for signal transmission between the control unit and alternator. An adjustable potentiometer is incorporated in the control unit which allows the operator to adjust the RPM setting to suit specific machines.

HOURLMETER SHUTDOWN CONTROLLER (PART NO. 8566)

The Muirhead™ Hourmeter Shutdown Controller is a unique product which includes multiple functions. The system serves as an hourmeter controller, auxiliary output shutdown controller, idle down timer and extended idle shutdown controller all in the one system.



Part No: 8566
ENGINE HOURLMETER CONTROLLER
24V SHUTDOWN



Part No: 4398
HOURLMETER TIMED 24V (M-E EHMC-
4-24V)



Part No: 3150
CONTROL HOURLMETER TIMED 24V

FIRE CONTROLLERS



FIRE STATUS PANEL (PART NO. 5884) AUSTRALIAN STANDARD 5062

The Muirhead™ Fire Status Panel is designed and built to the latest Australian Standards AS5062. The panel will monitor the status of the fire bottle from two pressure switch inputs. The low pressure input warns the operator when the bottle pressure is below the desired kPa level. The shutdown pressure switch will trigger when the bottle has been discharged. It also has a key switch for override and pushbutton for extended shutdown when activated.

IDLE TIMER/FIRE CONTROLLER (PART NO. 3329)

The Muirhead™ Idle Timer/Fire Controller is a dual purpose product that incorporates both idle down and fire detection shutdown used to protect diesel engines and turbo chargers against immediate shut off, which traps high temperatures in the engine, resulting in component failure. A delay to shutdown ensures the operator has time to safely park the machine prior to the automatic shutdown. The system also activates if it senses a pressure loss in the fire suppression system and prevents normal operation if unsafe levels are detected.



Part No: 5884
FIRE SHUTDOWN CONTROLLER
MULTI-VOLTAGE AS5062
SPECIFICATION



Part No: 3329
FIRE SHUTDOWN / IDLE TIMER 24V
ENERGISED TO RUN SURFACE
MOUNT (NON AS5062)



Part No: 4800
PRESSURE SWITCH 200KPA FALLING
1/8 NPT



Part No: 6778
PRESSURE SWITCH 200KPA RISING
1/8 NPT



Part No: 2348
PRESSURE SWITCH 900KPA FALLING
1/8 NPT



Part No: 5236
PRESSURE SWITCH 1050KPA
FALLING 1/8 NPT



Part No: 0475
PRESSURE SWITCH 1200KPA
FALLING 1/8 NPT

GPS ZONING AND LOCATION SYSTEM



The Muirhead™ GPS Zoning system is a powerful and low cost zoning system. This unique product design is a powerful, low cost zoning system. The system calculates the vehicle's global position and uses this information to determine which predefined zone the vehicle is currently operating within.

The controller (11020) monitors the vehicle's position using global positioning system (GPS) which tracks the unit using satellites while the unit has a clear view of the sky.

The controller compares the vehicles position with its set zoning area to determine which zone the vehicle is in. Zones are downloaded from a remote user's website, by means of the unit, through the GSM or WiFi network. When an area is created or modified, it is saved on a secure server ready for the controller to download. The unit periodically establishes a connection with the server to upload data and download any new or modified areas. Upon downloading new zones, the unit continues uninterrupted zoning using the new zoning areas.

The graphical method is a powerful tool for both beginners and experts is as simple as clicking on a graphical map, and selecting the corners of a zone to generate a zoning area. The gap boundaries are automatically generated.

The manual method is advised for use by trained operators only. This method allows for a greater level of accuracy to be achieved with the coordinates of the zoning areas. This method consists of typing in the exact coordinates of each corner of the zone (these coordinates must be measured on the site).

Speed limiting is also a feature of the zoning system. The user can setup zones around hazardous areas, high traffic areas, access ways, etc. Speed control is achieved by coupling the GPS zoning system with the Fly-by-wire FBW speed limiter (Please contact RCT for the correct speed limiter for your machine). The speed limiter then uses the vehicles zoning information to determine the permitted top speed for the vehicle, for the current location.



Part No: 10926
GPS ZONING AND LOCATION SYSTEM



Part No: 11020
GPS ZONING AND LOCATION
CONTROLLER

LADDER CONTROLLERS



LADDER LIGHTING CONTROLLER (PART NO. 2976 & 0834)

The Muirhead™ Ladder Lighting Controller is designed to limit injuries when ascending and descending machine ladders. The lighting allows the operator to clearly see the ladder rungs as they board and exit their machine. The system allows the operator to turn on the ladder lights from either the cabin or ground position prior to exiting or boarding the machine.

Once the ladder lights have been illuminated, they will turn off after a pre-set time to minimise power consumption. The time delay for turning off the ladder lights can be adjusted between 1, 2, 4 and 8 minutes.

DOCKING LADDER CONTROLLER (PART NO. 9037)

The Muirhead™ Docking Ladder Control (Part No. 9037) has been designed to provide electrical operation of a machine's docking type boarding ladder (often found on dozers). The unit will allow the ladder to be lowered when the machine is stationary with the park brake applied. It features automatic operation of the ladder raise control if the ladder is down and the operator releases the park brake.

The docking ladder control has maximum time cycles for both raise and lower functions that will stop excessive run times damaging components or draining batteries. The ladder time cycle will start by the operation of the spring return toggle switch that allows the operator to control a raise or lower function as required.

The docking ladder control also incorporates an internal sonar unit which alerts the operator when a raise or lower time cycle is complete or if a condition is not met and a fault has occurred. An output is provided for an external ladder access lamp which will become active for 45 seconds whenever the ladder raise/lower switch on the controller is activated.

DOUBLE ACTING LADDER CONTROLLER (PART NO. 9111)

The Muirhead™ Double Acting Ladder Control unit has been designed to provide electrical control of a machine's boarding ladder.

The ladder control unit will allow the ladder to be lowered when the machine is stationary with the park brake applied. It features automatic operation of 'the ladder raise control' if the ladder is down and the operator releases the park brake.

The ladder controller has maximum time cycles for both raise and lower functions that will stop excessive run times damaging components or draining batteries. The ladder time cycle will start by means of the operation of the spring return toggle switch that allows the operator to control a raise or lower function as required. The ladder controller also incorporates an internal sonar unit which alerts the operator when a raise or lower time cycle is active or if a condition is not met and a fault has occurred.

A ladder access lamp will illuminate for 45 seconds whenever the ladder raise/lower switch is toggled in either direction.



Part No: 2976
AUTOMATIC LADDER CONTROLLER



Part No: 0834
LADDER LIGHT TIMER CONTROLLER



Part No: 9037
DOCKING LADDER CONTROLLER



Part No: 9111
LADDER CONTROLLER DOUBLE
ACTING

AUXILIARY WARNING AND CONTROLS

MULTIPURPOSE CONTROL DEVICE



The Multipurpose Control Device (PMX) is a programmable input and output controller. It accepts digital, analogue and PWM inputs and outputs. The system, used in conjunction with the PowerMaster™ software provides a very flexible product base. This configuration software doubles as a diagnostics tool as it displays the inputs and outputs live when connected to a PC.

The PMX can be used in any application where programmable control is required to operate valves, alarms, braking, speed, throttle and other applications on mobile equipment.

For further information or specific requirements, please refer to your nearest RCT branch.



Part No: 11094
MULTIPURPOSE SPEED
CONTROLLER 2 x 0 - 5V



Part No: 11966
CONTROLLER OVERCRANK MODULE
MULTI-VOLTAGE

PARK BRAKE WARNING / LOCKOUT SYSTEMS



The Park Brake Warning system is a unique product that incorporates the following features:

DOOR SENSING

The control unit senses when the door is opened or closed via proximity switches.

PARK BRAKE SENSING

The control unit senses the state of the park brake via a park brake switch.

OPERATOR WARNING

Operates a visual alarm and incorporates an output for the OEM horn circuit (manufacturer recommends this output be connected to the OEM horn circuit via a relay).

KEY OVERRIDE FUNCTION

The system incorporates a key override in the external circuit so that the system becomes inactive and maintenance can be carried out.

SELF TEST FUNCTION

When the control unit is first powered up, the alarms will self test for approx. 1-2 seconds.



Part No: 11386
PARK BRAKE WARNING KIT MULTI-VOLTAGE



Part No: 11387
PARK BRAKE WARNING KIT MULTI-VOLTAGE 1 DOOR ACCESS



Part No: 0869
LOOM TO SUIT 0230 / 10886



Part No: 8722
PARK BRAKE WARNING MODULE (LIGHT DUTY)



Part No: 8286
PARK BRAKE LOCKOUT KIT TO SUIT CATERPILLAR D10T



Part No: 11377
PANEL DOOR OPEN PARK BRAKE

POWER MODE BYPASS



The Power Mode Bypass has been designed to prevent excess fuel usage by controlling the power mode on Komatsu 785-5 & 7 haul trucks. Part No. 11337



Part No: 11337
POWER MODE BYPASS

PRE-START WARNING TIMERS



The Muirhead™ Pre-start Warning Timers are designed to warn personnel within the vicinity of a machine that the engine is about to start. The system interfaces directly into the machine's starter circuit, automatically triggering when the ignition switch is activated. The system can be set to sound for a pre-set time period before allowing the machine to start or linked to trigger the machine's horn, lights or any electronic warning device.



Part No: 6337
PRE-START WARNING ELECTRONIC
TIMER WITH ALARM AND PLUG



Part No: 2625
PRE-START WARNING ELECTRONIC
TIMER WITH EXTERNAL ALARM AND
LEAD

AUXILIARY WARNING AND CONTROLS

PWM SENSE SWITCH CONTROLLER

The Muirhead™ Pulse Width Modulation (PWM) Sense Switch Control can be programmed in the field to switch at any given PWM duty cycle set point.

This exceptionally useful device can monitor the duty cycle percentage and provides a set of changeover outputs (both positive), one below the pre-set programmed value and one above.

An example application would see it monitoring the duty cycle on a proportional retarder control valve using PWM control. The 5534 could be set to bring on an external light to indicate when the retarder is being heavily applied.



Part No: 5534
PWM SENSE SWITCH CONTROLLER

AUXILIARY WARNING AND CONTROLS

RELAY RATCHET CONTROLLER

The Muirhead™ Relay Ratchet Controller can be utilised in a multitude of applications where an alternating state between on and off is desired utilising only one input (negative ground).

The unit contains a set of voltage free changeover contacts and inbuilt memory, enabling the unit to remember what state it is in when last de-powered so when re-powered it will return to that state. A green LED also indicates what state it is in.



Part No: 4122
CONTROL RATCHET RELAY & LOOM

SERVICE MONITOR



The Muirhead™ Service Monitor is a count down timer used to indicate when a vehicle is due for a service. It has two stages of warning; the first stage, an amber LED indicates that the service is due, the second stage, a red flashing LED indicates that the service is 10% overdue. Both stages also activate an output that can operate a visual and audible alarm. A green LED illuminates when the vehicle is operating efficiently.

For example, if a vehicle requires a service every 250 hours, the unit is programmed to 250 hours. After 250 hours of operation, the amber LED activates, indicating that the service is due. 25 hours later, the red flashing LED will illuminate. This mode will continue until the unit is reset using the reset key switch.



Part No: 3342
SERVICE MONITOR (HOURS)



Part No: 5947
KEY SWITCH 2 POSITION (USED FOR
RESET OF 3342)



Part No: 6591
SERVICE MONITOR PROGRAMMER



Part No: 8847
SERVICE MONITOR RESETTER

AUXILIARY WARNING AND CONTROLS

THIRD GEAR TRAVEL ALARM SYSTEM



The Muirhead™ Third Gear Travel Alarm System for Caterpillar dozers has been designed to alert the operator when third gear has been selected in either forward or reverse.

Generally, in most dozer operations first and second gears only are used. Third gear and higher are not normally used when the machine is moving material. The system interfaces into the Caterpillar dozer transmission system and senses when third gear is selected. The system then activates an audible and visual alarm alerting the operator to change down gears.

Compatible with CAT D10R / D11R and T series dozers.



Part No: 4913
3RD GEAR TRAVEL ALARM SYSTEM

AUXILIARY WARNING AND CONTROLS

THROTTLE CONTROL MODULE (TCM)



This module is designed to be incorporated into Original Equipment Manufacturer (OEM) electronic throttle system when the electronic throttle is required to be disabled (e.g. return to idle).

Once installed this module prevents any logging of ECM fault codes.

This product is commonly used in conjunction with Muirhead™ Engine Protection and ControlMaster® Systems.



Part No: 7767
THROTTLE CONTROL MODULE DE-
ENERGISED TO LIMIT

TRAY ANGLE KICK OUT SYSTEM



The Muirhead™ Tray Angle Kick Out system is designed to prevent damage to trays by limiting the raised tray angle. With the ability to install larger capacity trays to haul trucks the chances of damage to trays or other equipment is increased.

The Tray Angle Kick Out system is designed to allow aftermarket trays to elevate to a specific point to dump the payload material.



Part No: 6274
TRAY ANGLE KICK OUT CONTROLLER



Part No: 6119
CONTROL TILT DUAL AXIS ADJ RANGE
1 TO 45 DEGREES



Part No: 7994
MOUNT T/S 6119

WATER SPRAY CONTROLLERS



WATER SPRAY TIMER (PART NO. 2774 & 4530)

The Muirhead™ Water Spray Timer/Automatic Water Spray Controller (Part No. 4530/2774) allows the operator to manually or automatically adjust the water release rate by simply turning the potentiometer on the water spray timer to the desired discharge rate.

The water spray timer utilises a solenoid valve to turn the water output level on and off and has a 2-15 second standard timer, allowing the operator to optimise the rate of water discharged to suit their application.

The water spray timer incorporates two types of water disperse modes, continuous and pulse.

AUTO SPRAY CONTROLLER (PART NO. 6232)

The Muirhead™ Auto Spray Controller (ASC) has been designed to provide semi-automated spraying dependent on the conditions. The controller has three outputs, two of which control the spray heads and one which controls the water delivery by way of a variable PWM output.

The ASC also incorporates a speed input which senses frequency and two digital inputs for adjusting the water spray by adjusting the variable PWM output. The system is configured to have the spray heads activate automatically in relation to the ground speed of the vehicle.

The ASC has various set points which are adjustable via a custom software package. While the machine is travelling below a pre-set speed, it cuts off the spray heads and the water spray. At various levels of ground speed it will vary the output controls. It also has two inputs which adjust the flow output. The low input is designed to operate the PWM output at a reduced duty cycle and the high input is designed to activate the PWM output duty cycle at the maximum level when calibrated.

The ASC will connect to a custom water spray system installed onto a water truck to control the spray heads and the water pump. It will sense the speed at which the truck is travelling via a wire that is connected to the truck's electric speedometer. The spray outputs will be factory set but will be field adjustable via a computer, PowerMaster software version 2.44 up and a programming lead 3314.

Note that the speed settings will have to be calibrated for each different machine.

7 FUNCTION VARIABLE SPRAY CONTROLLER (PART NO. 8995)

The Muirhead™ Variable Spray Controller (VSC) incorporates seven (7) function switches with LED indication to signal the active state and a number of inbuilt features for the spray control.

Functions include automatic spray control that pulses the water spray on and off at a variable rate dependant on the speed of the truck. The spray will automatically turn off when the truck slows down or stops and will automatically turn on when the truck is moving.

The VSC will connect to the existing truck solenoid valves that control the water pump and three (3) water spray heads. It will sense the speed of the truck via a wire that is connected to the truck's electronic speedometer. The spray outputs will be factory set and are field adjustable using a computer fitted with PowerMaster software version 2.10 and a programming lead.

Note that the speed will have to be calibrated for each machine.

6 FUNCTION VARIABLE SPRAY CONTROLLER (PART NO. 10910)

The Muirhead™ Variable Spray Controller (VSC) is the latest addition to the Muirhead™ range of water spray controllers.

The system has six (6) spray head outputs for individual control, auto/manual function switch, three adjustable speed settings, one shot pulse and an adjustable constant pulse setting. The controller has been designed to interface into an OEM mobile water truck control panel.

There are added features for cannon and pump control with inputs from vehicle speed sensor and tank low level sensor.



Part No: 6232
AUTOMATIC WATER SPRAY
CONTROLLER



Part No: 4530
WATER SPRAY TIMER PULSE TO SUIT
WATER TRUCK



Part No: 2774
WATER SPRAY TIMER VARIABLE



Part No: 8995
WATER SPRAY TIMER VARIABLE WITH
AUTOMATIC / MANUAL SWITCHING



Part No: 10910
VARIABLE SPRAY CONTROLLER
AUTO / MANUAL CUSTOM PROGRAM

ADDITIONAL FUNCTION DECALS (LABELS)



The following products are a selection of additional labels suited to the Muirhead™ Engine Protection Systems (EPS).



Part No: 4349
ALTERNATOR WARNING



Part No: 5629
BELT BREAK



Part No: 5636
BLANK NO RED DOT



Part No: 0427
BLANK WITH RED DOT



Part No: 1417
BRAKE OIL TEMPERATURE



Part No: 6143
COMPRESSOR DISCHARGE
TEMPERATURE



Part No: 0442
COMPRESSOR OIL LEVEL



Part No: 0453
COMPRESSOR OIL PRESSURE



Part No: 0428
CONVERTOR OIL TEMPERATURE



Part No: 5630
COOLANT FLOW



Part No: 5635
COOLANT LEVEL



Part No: 1372
COOLANT LEVEL / FLOW



Part No: 3144
COOLANT LEVEL / TEMPERATURE



Part No: 5779
COOLANT LEVEL 1



Part No: 5781
COOLANT LEVEL 2



Part No: 5784
COOLANT LEVEL AUX



Part No: 5785
COOLANT LEVEL FRONT



Part No: 5783
COOLANT LEVEL LEFT



Part No: 5782
COOLANT LEVEL MAIN



Part No: 5780
COOLANT LEVEL REAR



Part No: 5778
COOLANT LEVEL RIGHT



Part No: 4352
CYLINDER HEAD TEMPERATURE



Part No: 0426
DRILL WATER LEVEL



Part No: 1415
ENGINE OIL TEMPERATURE



Part No: 5638
ENGINE TEMPERATURE



Part No: 5628
FILTER RESTRICTION



Part No: 0486
FUEL LEVEL



Part No: 5633
HYDRAULIC OIL LEVEL



Part No: 4350
HYDRAULIC OIL PRESSURE



Part No: 5631
HYDRAULIC OIL TEMPERATURE



Part No: 5634
OIL LEVEL



Part No: 5637
OIL PRESSURE



Part No: 1368
OIL PRESSURE / LEVEL



Part No: 8424
PUMP FLOW



Part No: 5632
TRANSMISSION OIL LEVEL



Part No: 4348
TRANSMISSION OIL PRESSURE



Part No: 1411
TRANSMISSION OIL TEMPERATURE

ENGINE PROTECTION SYSTEMS (EPS)

ALARMS AND BUZZERS



The following products are a selection of alarms and buzzers suited to the Muirhead™ Engine Protection Systems. For additional products, please refer to the AusProTec™ section of our catalogue.



Part No: 1723
WARNING ALARM CONSTANT OR
INTERMITTENT SIREN 12/24V



Part No: 6162
WARNING ALARM 102dB 12/24V
(HEAVY DUTY)

ENGINE PROTECTION SYSTEMS (EPS)

BELT BREAK SENSORS



The following products are a selection of belt break switches suited to the Muirhead™ Engine Protection Systems. For additional products, please refer to the AusProTec™ section of our catalogue.



Part No: 1593
PROXIMITY SWITCH 30 MM SENSING
NORMALLY OPEN 2 WIRE SYSTEM



Part No: 4072
PROXIMITY SWITCH 30MM SENSING
NORMALLY OPEN 3 WIRE SWITCHED
TO GROUND

COOLANT LEVEL PROBES



The following products are a selection of coolant level probes suited to the Muirhead™ Engine Protection Systems. For additional products, please refer to the AusProTec™ section of our catalogue.



Part No: 2006
LIGHT DUTY COOLANT PROBE 1/8
NPT



Part No: 2887
MEDIUM DUTY COOLANT PROBE 1/4
NPT



Part No: 2205
HEAVY DUTY COOLANT PROBE 1/4
NPT



Part No: 6510
HEAVY DUTY COOLANT SWITCH
(CAPACITIVE) 1/4 NPT

ENGINE PROTECTION SYSTEMS (EPS)

ENGINE PROTECTION SYSTEM HEAVY DUTY (EPS)



The Muirhead™ Engine Protection System (EPS) is designed to monitor practically any alarm condition on virtually any machine. The electronic EPS is smaller in design and integrates more features than all of its previous models. With no mechanical parts, the EPS control module is extremely reliable, easy to install and simple to use. The system follows in the footsteps of its predecessors delivering purpose built engine protection.

Every EPS control module can be customised to monitor known problems and functions commonly associated with equipment failure. This is one of the many reasons Muirhead™ products are the preferred equipment protection systems for Australian and international mines, contractors and Original Equipment Manufacturers.



Part No: 9200
ENGINE PROTECTION SYSTEM 4
FUNCTION TO SUIT WATER COOLED
ENGINES



Part No: 9301
ENGINE PROTECTION SYSTEM 4
FUNCTION TO SUIT AIR COOLED
ENGINES



Part No: 8797
LOOM 5M TO SUIT 9200 AND 9301



Part No: 8805
LOOM 10M TO SUIT 9200 AND 9301



Part No: 3565
ENGINE PROTECTION SYSTEM 6
FUNCTION TO SUIT WATER COOLED
ENGINES



Part No: 3747
ENGINE PROTECTION SYSTEM 6
FUNCTION TO SUIT AIR COOLED
ENGINES



Part No: 5994
LOOM 10M TO SUIT 3565 AND 3747

ENGINE PROTECTION SYSTEMS (EPS)

ENGINE PROTECTION SYSTEMS LIGHT DUTY (EPS)



The Muirhead™ Light Vehicle Engine Protection systems offer protection for your light commercial, off road mobile equipment by monitoring engine oil pressure, coolant temperature and coolant levels. The system, by alerting the operator, prevents premature engine failure, damage and costly repairs.

The systems provide audible and visual warnings and incorporate additional outputs for return to idle or shutdown modes. Compact in design and easy to install.



Part No: 3206
ENGINE PROTECTION SYSTEM
12/24V ENERGISED TO RUN TO SUIT
LIGHT VEHICLES



Part No: 1245
ENGINE PROTECTION SYSTEM
12/24V ENERGISED TO RUN TO SUIT
TOYOTA HZJ SERIES



Part No: 3369
REPLACEMENT CONTROL PANEL TO
SUIT 3206 AND 1245 (PANEL ONLY)

ENGINE PROTECTION SYSTEMS (EPS)

FLOW SWITCH



The following products are a selection of flow switches suited to the Muirhead™ Engine Protection Systems. For additional products, please refer to the AusProTec™ section of our catalogue.



Part No: 6041
FLOW SWITCH NORMALLY OPEN
56MM PADDLE (CATERPILLAR
ENGINES ONLY)



Part No: 2987
GASKET TO SUIT 6041

ENGINE PROTECTION SYSTEMS (EPS)

OIL LEVEL SWITCH



The following products are a selection of oil level switches suited to the Muirhead™ Engine Protection Systems. For additional products, please refer to the AusProTec™ section of our catalogue.



Part No: 3072
OIL LEVEL SWITCH CAPACITIVE USED
FOR TEMPERATURES BELOW 100°C
1/4 NPT

ENGINE PROTECTION SYSTEMS (EPS)

PRESSURE SWITCHES



The following products are a selection of pressure switches suited to the Muirhead™ Engine Protection Systems. For additional products, please refer to the AusProTec™ section of our catalogue.



Part No: 3074
PRESSURE SWITCH 8 PSI 2
TERMINAL NORMALLY OPEN 1/8 NPT
(LIGHT DUTY)



Part No: 8725
PRESSURE SWITCH 8 PSI 2
TERMINAL NORMALLY OPEN 1/8 NPT
(HEAVY DUTY)



Part No: 9976
PRESSURE SWITCH 12 PSI SURE-
SEAL CONNECTION 9/16 UNO
(PERKIN'S ENGINE THREAD)



Part No: 7968
O'RING SEAL TO SUIT 9976
(RECOMMENDED)



Part No: 3430
PRESSURE SWITCH 9 PSI FALLING
NORMALLY OPEN 1/8 NPT



Part No: 3429
PRESSURE SWITCH 16 PSI FALLING
NORMALLY OPEN 1/8 NPT

RETURN TO IDLE CONTROLLERS



The Muirhead™ Return to Idle Controllers and Kits are available for pneumatic and hydraulic throttle systems. These kits are designed to integrate with Muirhead™ equipment to restrict or control the throttle actuation of a machine.

For professional advice on choosing the right engine control or idle down kit for your machine, please contact your nearest RCT branch.



Part No: 7767
RETURN TO IDLE CONTROLLER TO
SUIT MACHINES WITH ELECTRONIC
THROTTLE SYSTEMS



Part No: 4570
RETURN TO IDLE HYDRAULIC VALVE
TO SUIT MACHINES WITH HYDRAULIC
THROTTLE SYSTEMS

SUNDRY PARTS



The following products are a selection of sundry parts and install kits suited to the Muirhead™ Engine Protection Systems. For additional products, please refer to the AusProTec™ section of our catalogue.



Part No: 4420
INSTALL CRIMP KIT TO SUIT Muirhead™ EPS



Part No: 3506
INSTALL SUNDRY KIT TO SUIT Muirhead™ EPS



Part No: 0899
THREAD SEALANT LOCTITE 567 50ML



Part No: 3379
ADAPTOR BUSH 3/8 NPT FEMALE TO 1/2 NPT MALE TO SUIT 3/8 NPT TEMPERATURE SWITCHES



Part No: 0789
CABLE TIE 100MM * 2.5MM (SMALL)

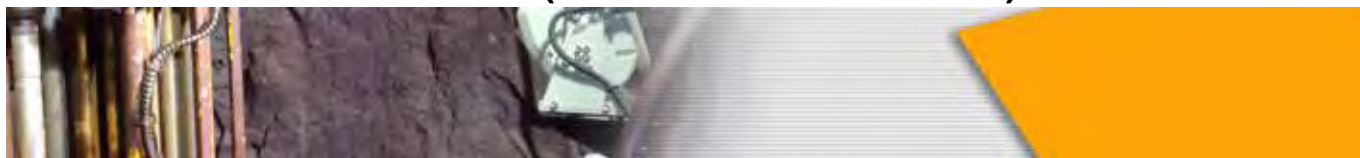


Part No: 0211
CABLE TIE 270MM * 4.8MM (MEDIUM)



Part No: 0788
CABLE TIE 270MM * 8.6MM (LARGE)

TEMPERATURE SWITCHES (TO SUIT EPS SYSTEMS)



The following products are a selection of temperature switches suited to the Muirhead™ Engine Protection Systems. For additional products, please refer to the AusProTec™ section of our catalogue.



Part No: 1232
TEMPERATURE SWITCH 185°C TO
SUIT DEUTZ



Part No: 9454
TEMPERATURE SWITCH 100°C
NORMALLY CLOSED 1/8 NPT



Part No: 1763
TEMPERATURE SWITCH 205°F
NORMALLY CLOSED 2 TERMINAL 3/8
NPT (KIDDE FENWAL)



Part No: 1764
TEMPERATURE SWITCH 212°F
NORMALLY CLOSED 2 TERMINAL 3/8
NPT (KIDDE FENWAL)



Part No: 1765
TEMPERATURE SWITCH 220°F
NORMALLY CLOSED 2 TERMINAL 3/8
NPT (KIDDE FENWAL)



Part No: 1767
TEMPERATURE SWITCH 250°F
NORMALLY CLOSED 2 TERMINAL 3/8
NPT (KIDDE FENWAL)



Part No: 1768
TEMPERATURE SWITCH 275°F
NORMALLY CLOSED 2 TERMINAL 3/8
NPT (KIDDE FENWAL)



Part No: 8491
TEMPERATURE SWITCH 225°F
NORMALLY CLOSED 2 TERMINAL
O-RING 3/4 UNO



Part No: 3379
ADAPTOR BUSH 3/8 NPT FEMALE
TO 1/2 NPT MALE TO SUIT 3/8 NPT
TEMPERATURE SWITCHES

UNIVERSAL WARNING SYSTEMS



The Muirhead™ Universal Warning systems offer protection for your light commercial, off-road mobile equipment by monitoring engine oil pressure, coolant temperature and coolant levels. The systems, by alerting the operator, prevent premature engine failure, damage and costly repairs.

The systems provide audible and visual warnings and incorporate additional outputs for return to idle or shutdown modes. Compact in design and easy to install.



Part No: 0225
UNIVERSAL WARNING KIT



Part No: 4461
PANEL TO SUIT 0225 (SINGLE LED AND ALARM)



Part No: 0221
LOOM TO SUIT 0225

FLUID MONITORING / WARNING SYSTEMS

COOLANT LEVEL KITS AND PROBES



The Muirhead™ Coolant Level Kits are designed to monitor engine coolant levels on motor powered equipment to prevent premature engine failure.

In the event of a blown hose or cracked seal, most engine temperature gauges and protection systems will not detect loss of coolant fluid. This is due to the fact that gauges and temperature switches rely on sensing the coolant temperature and when there is no coolant, the gauges cannot sense the temperature.

The Muirhead™ Coolant Level Kits eliminate these concerns by warning the operator that the coolant has reached a dangerously low level. This warning provides the operator enough time to take preventative action before major engine damage occurs.



Part No: 11873
COOLANT LEVEL KIT MULTI-VOLTAGE WITH LIGHT DUTY PROBE (2 x 2006)



Part No: 11871
COOLANT LEVEL KIT MULTI-VOLTAGE WITH HEAVY DUTY PROBE (1 x 2205)



Part No: 11872
COOLANT LEVEL KIT MULTI-VOLTAGE WITH HEAVY DUTY PROBE (2 x 2205)



Part No: 1301
COOLANT LEVEL KIT 24V WITH HEAVY
DUTY PROBE (2 x 2205)



Part No: 1739
COOLANT LEVEL MODULE MULTI-
VOLTAGE (MODULE ONLY)



Part No: 2006
COOLANT LEVEL PROBE LIGHT DUTY
1/8 NPT (PLASTIC BODY)



Part No: 3552
COOLANT LEVEL PROBE LIGHT DUTY
EXPANSION



Part No: 2887
COOLANT LEVEL PROBE LIGHT DUTY
1/4 NPT (COMPLETE WITH BRASS
BUSH)



Part No: 2205
COOLANT LEVEL PROBE HEAVY
DUTY 1/4 NPT (BRASS BODY)



Part No: 6510
COOLANT LEVEL PROBE HEAVY
DUTY 1/4 NPT (3 WIRE CAPACITIVE)

LOW OIL / FUEL WARNING KITS AND SWITCHES



The Muirhead™ Low Oil/Fuel Warning Kits are used to detect low diesel fuel levels. When low fuel level is detected, the LED will illuminate and the audible alarm will sound.

The probe's electronic circuitry is enclosed within a single sealed unit. The level sensor will suit any diesel fuel application for either mobile or stationary equipment.

A distinct advantage of this switch, over a float switch, is its compact design and high resistance to vibration. It contains no moving parts. The switch, being isolated, allows it to be used in an above ground application.



Part No: 8612
LOW OIL LEVEL KIT (WITH 3072 SWITCH)



Part No: 3072
OIL LEVEL SWITCH 1/4 NPT (CAPACITIVE)

LUBRICATION CONTROLLER (STANDARD)



The Muirhead™ Lubrication Controllers are purpose built to all mobile equipment . The system has been designed to be user friendly with inbuilt diagnostics. It incorporates infrared programming capabilities, overload protection, lubrication counter and full diagnostics.

The lubrication controller is designed to inject grease at pre-set/programmable intervals. If the grease confirmation is not received within two minutes, the controller will display "FAIL" and the grease fault alarm will signal the VIMS system to record and display a lube fail warning.

The grease time interval can be pre-programmed to suit the client's specifications or adjusted on site with an optional lube control programmer.

The Muirhead™ Programmable Lubrication Controller has been designed with flexibility in mind. The system is capable of operating in many different modes, which will suit multiple lubrication systems available in the market.



Part No: 3560
LUBRICATION CONTROLLER



Part No: 5096
LUBRICATION CONTROLLER TO SUIT
VIMS MACHINES



Part No: 1151
PROGRAMMER TO SUIT LUBE
CONTROLLER



Part No: 6150
PRESSURE SWITCH 900 - 3000 PSI
ADJUSTABLE (PRE-SET TO 1950 PSI
RISING)



Part No: 9252
CONTROL LUBE PROGRAMMABLE

FORKLIFT AND LOGISTICS SAFETY SYSTEMS

DIRECTIONAL CHANGE CONTROLLER



The Muirhead™ Directional Change Controller is designed to prevent accidents and damage to forklifts from continued directional change whilst the forklifts are moving.

The control unit will inhibit a change of machine direction unless the machine is stationary. The system does this by sensing that the forward or reverse gears have been selected whilst detecting the forklift's ground speed to check that the machine is stationary.

The system is compatible with most types of forklifts that are installed with electric shifts.

The super sense controller senses both ground speed and gear position. The unit will not allow a change in direction unless the machine is travelling below the pre-set speed. When forward is selected and the machine is moving, the operator will not be able to select reverse until the machine is below the pre-set speed programmed in the control.

Customised versions are available on request.



Part No: 6388
DIRECTIONAL CHANGE CONTROL KIT
(ADJUSTABLE SPEED)



Part No: 11058
CONTROL DIRECTION CHANGE
ADJUSTABLE SPEED SETPOINT
COMPLETE UNIT



Part No: 10216
KIT DCC T/S 8 SERIES TOYOTA
FORKLIFT

FORKLIFT ENGINE PROTECTION

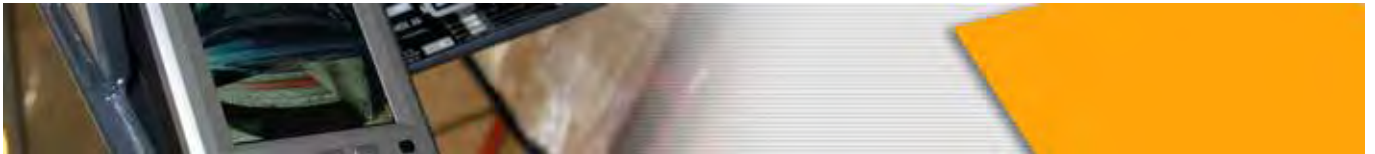


The forklift engine protection kit is designed to suit all makes and models of forklifts; from small 2 ton to the larger 20 ton the kit can suit. From the smallest to the largest machines the forklift engine protection kit delivers peace of mind to prevent major engine damage.



Part No: 9303
KIT EPS T/S FORKLIFT 12/24V

FORKLIFT MAST CAMERA KITS



The Maxi Vision™ Mast Forklift Camera systems offer forklift operators a new perspective on driving and operating equipment. The camera systems are designed to enhance safety by improving the operator's vision when performing such tasks as lifting, transporting loads or reversing the forklift. The systems are suitable for use on small or large forklift trucks, battery or I/C models.

The Maxi Vision™ range of colour LCD monitor and camera options are robust in design and are ideally suited to industrial equipment. Heavy duty casing and mounting options are also available to suit custom applications.

The camera system has been designed to suit forklifts and includes pulleys, heavy duty cabling, special mounting and fittings to enable reliable installation to most electrical and IC forklifts.



Part No: 6660
FORKLIFT MAST CAMERA SYSTEM
(SUITS 2 AND 3 STAGE MASTS) OPEN
CAB IP67



Part No: 12576
FORKLIFT MAST CAMERA SYSTEM
(SUITS 2 AND 3 STAGE MASTS)
CLOSED CAB



Part No: 5790
VOLTAGE REDUCER FOR
ELECTRONIC FORKLIFTS



Part No: 10234
CONVERTER DC TO DC 30/60V WITH
FLY LEADS

FORKLIFT AND LOGISTICS SAFETY SYSTEMS

FORKLIFT SPEED LIMITERS



The Muirhead™ Speed Limiter will revolutionise the forklift industry. Its robust construction and universal application makes the system a safe, reliable solution to manage forklift speed.

The system combines a heavy duty actuator and the latest technology controller to give smooth speed control, without compromising productivity or safety. As a key safety feature, the system defaults to a pre-set speed limit if the speed signal is lost. Along with the added compatibility of speed zone control, the kit suits all types of forklift applications.

With speed being one of the major contributors to forklift accidents, the Muirhead™ Speed Limiter provides a safe reliable solution.



Part No: 6000
FORKLIFT SPEED LIMITER KIT 12V
(FS-6)



Part No: 7000
FORKLIFT SPEED LIMITER KIT 24V
(FS-6)



Part No: 10452
FORKLIFT SPEED LIMITER
CONTROLLER (CABLE THROTTLE)



Part No: 10444
FORKLIFT CAN SPEED LIMITER
(TOYOTA 8 SERIES DELUXE)



Part No: 0434
MACHINE ZONE DOORWAY ACCESS
KIT

FORKLIFT AND LOGISTICS SAFETY SYSTEMS

SEAT BELT INTERLOCK SYSTEMS



The Muirhead™ Safety interlocks are designed to interface into a vehicle's system and assist with operator safety and machine productivity. The simple design and robust construction ensures a user friendly outcome. The interlocks are multi-voltage and come complete as a kit for easy installation into machine seat switches, seat belt assemblies or transmissions.

Systems include:

SEAT BELT INTERLOCK

Ensures seat belt is applied before starting the machine

SEQUENTIAL SEAT BELT CONTROLLER

Assists the operator to follow safety procedures by ensuring the machine is started following the correct start up sequence



Part No: 6389
SEQUENTIAL SEAT BELT CONTROLLER
KIT (WITH IGNITION MOD)



Part No: 6379
CONTROLLER TO SUIT 6389
(CONTROLLER ONLY)



Part No: 6385
LOOM TO SUIT 6389 AND 6394



Part No: 5975
BYPASS CONTROLLER TO
SUIT SEQUENTIAL SEAT BELT
CONTROLLER



Part No: 10000
SEQUENTIAL SEAT BELT KIT (TOYOTA
8 SERIES)



Part No: 6522
SEQUENTIAL SEAT BELT KIT (HIGH
VOLTAGE)



Part No: 6394
SEQUENTIAL SEAT BELT
CONTROLLER (HIGH VOLTAGE)



Part No: 12331
KIT SSBC UNICARRIER

SEAT BELTS AND SEAT PRESSURE SWITCHES



The following products are a selection of seat belts and seat activated switches suited to the Muirhead™ Seat Belt Warning systems.



Part No: 5002
SEAT BELT RETRACTOR AND BUCKLE
RIGHT HAND MOUNT 45° 90MM STALK
(BLACK)



Part No: 5495
SEAT ACTIVATED SWITCH LEVER
TYPE (NORMALLY OPEN CIRCUIT)



Part No: 0235
SEAT ACTIVATED PRESSURE SWITCH
(NORMALLY OPEN CIRCUIT)



Part No: 5203
HEAVY DUTY SEAT BELT 3 INCH WIDE
(NO SWITCH)



Part No: 10089
RETRACTOR & BUCKLE SWITCH
(TOYOTA)



Part No: 10090
RETRACTOR & BUCKLE SWITCH
(TCM)



Part No: 10091
RETRACTOR & BUCKLE SWITCH
(KOMATSU / CLARK)



Part No: 10113
RETRACTOR & BUCKLE SWITCH
220MM (FLEXIBLE STALK)

SPEED SENSORS



The following products are a selection of speed sensors suited to the Muirhead™ Forklift Speed Limiter range. For further information or specific requirements, please refer to your nearest RCT branch.



Part No: 11621
ISOLATED SIGNAL AMPLIFIER



Part No: 0465
SPEED SENSOR (PROXIMITY SWITCH TYPE)



Part No: 5305
SPEED SENSOR 78MM (MAGNETIC PICKUP STYLE)



Part No: 12505
CAN GROUND SPEED SENSOR



Part No: 7961
GROUND SPEED RADAR SENSOR



Part No: 8176
MOUNT TO SUIT 7961/917

IDLE AND SHUTDOWN CONTROLLERS



The Muirhead™ Engine Shutdown Controller (excess idle shutdown system) is designed to detect if the machine has idled for long periods before shutting off the machine.

It also protects diesel engines and turbo chargers against immediate shutdown damage. The system can turn off lights, air conditioning and other electrical components one minute before engine shut off occurs, avoiding flattening the vehicle's battery.

The unit is capable of controlling the engine shutdown circuit and up to six auxiliary circuits before shutdown occurs.



Part No: 4683
ENGINE SHUTDOWN KIT 24V
(STANDARD)



Part No: 7602
ENGINE SHUTDOWN KIT 24V
DELAYED SHUTDOWN WITH
EXTENDED IDLE PERIOD SHUTDOWN
IDENTIFICATION



Part No: 12362
CONTROLLER EXCESS IDLE
SHUTDOWN



Part No: 12476
CONTROLLER EXCESS IDLE
WARNING WITH GROUND SPEED
DETECTION

IDLE TIMERS



The Muirhead™ Idle Timers are designed to moderate extreme operating temperatures before final shutdown occurs on mobile equipment. The idle timers regulate temperature in the engine and turbo components by idling the engine for a set time period before final shutdown occurs.

The idle timers are a cost effective means of protecting diesel engines and turbo components from excessive wear due to immediate shutdown without an idle period.

Customised idle timers are available with additional functions such as lights & auxiliary shutoff on request.



Part No: 11450
ENERGISED TO RUN IDLE TIMER
MULTI-VOLTAGE INTEGRATED



Part No: 6189
ENERGISED TO RUN IDLE TIMER
24V INTEGRATED (TO SUIT HITACHI
EXCAVATORS)



Part No: 3329
ENERGISED TO RUN IDLE / FIRE
TIMER 24V SURFACE MOUNT



Part No: 11452
KIT IDLE TIMER MULTI-VOLTAGE



Part No: 11951
KIT IDLE TIMER (PANEL & PLUG)



Part No: 12285
KIT IDLE TIMER T/S F-SERIES VOLVO
LOADER



Part No: 12286
KIT IDLE TIMER T/S KOMATSU
MACHINES

FUEL CAP ISOLATION SYSTEMS



The Muirhead™ Fuel Cap Isolation system has been designed to prevent the machine operator from starting the machine and driving away with the fuel filler still attached. This will eliminate damage to machines, refuelling stations and hoses, and prevent hazardous fuel spills.

The system inhibits the operator from starting the machine, without firstly ensuring the fuel cap has been placed securely back onto the quick fill adaptor on the fuel tank.

The Muirhead™ Fuel Cap Isolation system has an intrinsically safe circuit design with supporting certification conformity for use in zone 0 applications.



Part No: 7811
FUEL CAP ISOLATION SYSTEM



Part No: 10136
KIT DUAL FUEL CAP ISOLATION SYSTEM



Part No: 7808
FUEL CAP ISOLATION CONTROLLER TO SUIT 7811 (PANEL ONLY)



Part No: 7809
REPLACEMENT FUEL CAP TO SUIT 7811

ISOLATION SYSTEMS

LIVE FUEL LOCKOUT SYSTEM



The Muirhead™ Live Fuel Lockout system is designed to engage the machine's park brake and activate a flashing beacon. The beacon alerts personnel near the machine that the vehicle is in the process of being refuelled. The system locks on the park brake to prevent the machine from moving, while the flashing beacon provides a visual warning to surrounding personnel that the machine is currently being refuelled.

For part numbers for the electrical live fuel lockout system, please refer to your nearest RCT branch.



Part No: 5338
MECHANICAL LIVE FUEL LOCKOUT
KIT

ISOLATION SYSTEMS

LIVE FUEL SERVICE LOCKOUT CONTROLLER



The Muirhead™ Live Fuel Service Lockout Controller (Part No. 8972) has been specifically designed to be the main lockout mechanism to ensure that the park brake remains applied and alarms remain activated while service personnel refuel or perform maintenance tasks on the machine.

The isolation mechanism activates the alarm and beacon to alert personnel near the machine that the vehicle is in the process of being serviced or refuelled. The system reduces the danger of drive off accidents and improves the overall servicing safety whilst the machine is still running.



Part No: 8972
LIVE FUEL SERVICE LOCKOUT
CONTROLLER

ADVANCED MANAGEMENT SYSTEMS (AMS-100)



The Muirhead™ AMS-100 series 2 is an advanced management system designed to monitor critical operating functions and control various components on mobile and stationary machines. The system is capable of monitoring eight (8) inputs and has both LED and LCD displays. These displays can be programmed to alert the operator of any alarm conditions and can display a particular function status.

The AMS-100 series 2 comprises a central display data linked to a Programmable Output Device (POD) enabling the system to monitor both Original Equipment Manufactured (OEM) and non-OEM components. The central display keeps the operator informed of the status of their machine and helps to prevent premature engine wear, unexpected breakdowns and costly repairs.

The system can be programmed to monitor and/or display various safety functions, such as, vehicle and engine overspeed, park brake warning, raised tray and opened doors. All monitored functions can be assigned a pre-determined level of warning response, allowing for uniform safety and operational control. As a means to protect equipment components from damage, the AMS-100 series 2 can be set to idle and/or shutdown the machine if an abnormal operating condition is detected.



Part No: 1111
AMS-100 ELECTRONIC INPUT /
OUTPUT MODULE (POD)



Part No: 9887
AMS-100 VERSION 2 ELECTRONIC
DISPLAY

FATIGUE WARNING SYSTEMS



The Muirhead™ Fatigue Warning system has been developed with operator safety in mind. This system, once activated, randomly checks the operator's awareness using a visual warning. If this warning is not acknowledged by means of a reset switch, an audible alarm will sound until the operator resets the system.

The Muirhead™ Fatigue Warning System is most effective in managing driver fatigue for fast moving earthmoving vehicles such as ON/OFF highway trucks and other fast moving heavy equipment.

As an added feature, the fatigue warning system is versatile enough to be used on all other types of operating vehicles.

The Muirhead™ Driver Alert Fatigue Warning system is designed to maintain operator's alertness to help eliminate fatigue induced accidents. The system checks the operator's awareness by randomly activating fatigue warning alerts. The system incorporates a real time clock which can be programmed to operate during a specific time period when operator fatigue is most prevalent (i.e. early hours of the morning or late in an operator's shift).

The system also features an optional speed set point function whereby the system can be programmed to operate only after a pre-set speed is reached. The system can also be programmed to actively detect if the driver is reversing the machine, or if the machine's park brake is applied. This function pauses the system to prevent any alarm activation whilst the driver is performing tasks which require their full concentration and/or when the machine is in idle.



Part No: 8614
FATIGUE WARNING SYSTEM
(RANDOM)



Part No: 9055
FATIGUE WARNING KIT (MCU STYLE)

MACHINE SEAT BELT INTERLOCKS

The Muirhead™ Seat Belt Interlock is a simple device that ensures the operator seat belt is fastened correctly. The SBC (Seat Belt Controller) is suitable for all machine types and is simple to install and maintain. Kits are available that include a controller, loom, warning light and alarm and label.



Part No: 9369
SEAT BELT PARK BRAKE KIT WITH
IGNITION MOD



Part No: 9561
CONTROL SBC WITH IGNITION MOD



Part No: 6385
LOOM SEAT BELT CONTROLLER IGN
MOD



Part No: 9962
LABEL T/S 9561 SEAT BELT
CONTROLLER

LIGHTING TOWER SHUTDOWN SYSTEMS



The Muirhead™ Lighting Tower Shut down system is specifically designed to allow lighting towers to be controlled semi automatically. The system has two modes of operation, manual mode and automatic mode. In manual mode, the system operates as per normal. In automatic mode, the operator must initially start the engine manually via the key switch, allow the engine to run up to operational RPM then arm the system. The engine is latched on in the running mode until light is sensed the next day. When daylight is confirmed the lighting tower is shutdown automatically and the ignition is isolated.

The Muirhead™ Lighting Tower Auto Start/Stop Control has been designed to eliminate the need for site staff to manually start every light tower each evening.

On larger worksites, this can prove costly in terms of man hours, fuel and wear and tear on both staff vehicles and light towers. Some of these towers may run four hours or more than is required every day. The light tower auto start/stop will save both time and money.



Part No: 7768
LIGHTING TOWER SHUTDOWN
CONTROLLER 12/24V



Part No: 9046
LIGHT SENSOR TO SUIT 7768

PROGRAMMING TOOLS AND SOFTWARE

The following products are a selection of programming tools and software suited to the Muirhead™ product range. For further information or specific requirements, please refer to your nearest RCT branch.



Part No: 2694
USB TO SERIAL ADAPTOR LEAD



Part No: 3314
PROGRAMMING LEAD TO SUIT
POWERMASTER SOFTWARE



Part No: 10795
PROGRAMMING LEAD TO SUIT 11094 /
11186 / 10452 SPEED LIMITER



Part No: 9990
POWERMASTER SOFTWARE



Part No: 11199
KIT LUBE CONTROL PROGRAMMING
MUIRHEAD



Part No: 12076
KIT ADAPATOR USB TO SERIAL RS232
CONVERTER INC DRIVERS FOR 64
BIT WINDOWS



Part No: 12531
BLUETOOTH WIRELESS USB-SERIAL
LINK

TRAY WARNING SYSTEMS

RAISED TRAY WARNING SYSTEMS



Drivers of large trucks inherently face hazardous conditions when operating near power lines, overpasses and underground portals. A truck with a raised tray in these surroundings can cause an enormous amount of damage to core operating facilities and endanger the lives of both the driver and personnel within the vicinity. It is therefore, extremely important that the truck operator is aware of which position their tray is in while they are driving.

The Muirhead™ Raised Tray Warning system can minimise these risks by alerting the operator and personnel within the area that the vehicle's tray is in a raised position. A system is also available which can limit the machine's transmission to first gear when the tray is raised, thereby avoiding high speed accidents.

The Muirhead™ Tray Collision Warning system (4270) has been designed to alert the operator of an impending tray collision when operating in a height restricted working area.

This system utilises a programmable ultra sonic sensor with two interval switching outputs that provide the operator with a two stage visual and audio alarm alert.



Part No: 2214
RAISED TRAY WARNING KIT (WITH
TRANSMISSION INHIBITOR)



Part No: 4270
TRAY COLLISION WARNING KIT

UNIVERSAL INCLINE CONTROLLERS

INCLINE SHUTDOWN SYSTEMS



The Muirhead™ Incline Shutdown systems have been designed to warn machine operators that the machine they are operating is on a dangerous incline (at angles over 35° or 60°). The operator will be alerted via an audible and visual warning for a pre-set time after which the engine will be shutdown. The time delay prior to shutdown is switch selectable between 5, 6, 15 and 25 seconds. The system has an override switch incorporated to enable the operator to override the system before it has shutdown in an over inclined state.

The incline shutdown systems provide the operator with enough early warning to prevent machine rollovers, serious injuries and machine damage.



Part No: 1800
INCLINE SHUTDOWN 35° DETECTION



Part No: 4089
INCLINE SHUTDOWN 60° DETECTION



Part No: 6119
CONTROL TILT DUAL AXIS ADJ RANGE
1 TO 45 DEGREES

VEHICLE ROLLOVER SHUTDOWN SYSTEM



Vehicle rollovers are commonly attributed to unstable road conditions, overloading, blown tyres and excessive speeding around sharp corners. In a vehicle rollover, it is vital that the operator be protected by an automatic shutdown system which allows them enough time to exit the vehicle, in the event of a fire.

The Muirhead™ Vehicle Rollover Shutdown system is designed to shutdown the vehicle's engine in the event of a rollover, reducing the risk of major engine damage. Used in conjunction with a battery isolator, the system can disconnect the vehicle's ignition and electrical system to reduce the risk of fire.



Part No: 5027
VEHICLE ROLLOVER SHUTDOWN
CONTROLLER 24V

VEHICLE SPEED / ENGINE SPEED SYSTEMS

SPEED ALERT SYSTEMS



The Muirhead™ Speed Alert system has been designed to prevent speed related accidents by warning the operator and surrounding personnel that the vehicle is travelling beyond its pre-set speed limit. The system detects the vehicle's speed via a proximity pickup sensor mounted in the drive train.

If the driver does not slow down to allow the vehicles speed to fall below the second pre-set speed limit the pre-alarm will continue to sound and activate additional warning devices, such as a strobe light or flashing indicators.

Once the driver reduces their speed below the set speed limit, the warning alarms will reset and return to normal status.



Part No: 3508
SPEED ALERT KIT 12V



Part No: 3515
CONTROLLER TO SUIT 3508



Part No: 3510
LOOM TO SUIT 3508 (STANDARD)



Part No: 7298
LOOM TO SUIT 3508
(TOYOTA AND NISSAN)

VEHICLE SPEED / ENGINE SPEED SYSTEMS

SPEED LIMITERS



The Muirhead™ Electronic Speed Limiter is designed to maintain control of a vehicle's maximum speed by electronically interfacing into the throttle system. With speed being a major factor in many automotive accidents, the Muirhead™ Electronic Speed Limiter will control the vehicle's maximum speed to enable safe and productive operation at all times.

This software enables the user to set a machine's maximum speed to suit the application and the operating conditions. The system eliminates the need to lockout gears to try and reduce the overall speed of the vehicle.



Part No: 11186
ELECTRONIC SPEED LIMITER
(ISOLATION RELAY)



Part No: 11506
KIT SPEED LIMITER T/S V8
LANDCRUISERS



Part No: 11068
LOOM TO SUIT 0-5V SPEED LIMITER



Part No: 7290
KIT SPEED LIMITER GENERIC FBW
DUAL TPS

VEHICLE OVERSPEED AND ENGINE OVER RPM SYSTEMS



The Muirhead™ Vehicle Overspeed (VOS) and Engine Over RPM systems are designed to warn and prevent operators from over speeding and over revving their machines.

These systems are primarily used to prevent machine damage from operator abuse.

For professional advice on choosing the right overspeed / vehicle over RPM system, please contact your nearest RCT branch.



Part No: 9914
VEHICLE ENGINE OVER RPM
SYSTEM TO SUIT ELECTRONIC
BRAKE KOMATSU AND CATERPILLAR
DOZERS



Part No: 2806
VEHICLE OVERSPEED AND ENGINE
OVERSPEED KIT 24V



Part No: 3327
VEHICLE OVERSPEED CONTROLLER
12V (INTEGRATED)



Part No: 4362
VEHICLE OVERSPEED KIT SET TO 25 /
28 KM/H 12V



Part No: 2755
ENGINE OVER RPM SYSTEM
LATCHING 24V



Part No: 11094
DUAL POT FBW SPEED LIMITER



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“SOLUTIONS TO SUPPORT CLIENTS AROUND THE WORLD, IN MINING,
INDUSTRIAL, AGRICULTURAL AND CIVIL SECTORS.”