

waterwatch

Water in fuel alarm system

Information Booklet

WW20072



Included in the box

- 1 x Information Booklet
- 1 x Electrical Kit
- 1 x Water Watch Unit
- 1 x Water Watch Equipped Sticker
- 1 x Warning Sticker

Bracket kits & instructions supplied separately



Please ensure that you have read and understand this information booklet completely. Incorrect installation or servicing may void warranty.



For after sales support or if you have further questions,
please contact the Water Watch team at:



Responsive Engineering Australia Pty Ltd
Tel 02 6280 4334 Fax 02 6280 0179
Email responsiveengineering@bigpond.com
www.responsiveengineering.com.au

Contents

Congratulations, you have purchased an Australian designed and built Water Watch, made from quality components, built and tested in Australia before each purchase.

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Why is Water Watch essential for common rail diesel fuel systems?

Water Watch is proudly made in Australia and specifically designed for Common Diesel Rail Vehicles.

Approximately 85% of the fuel in a common rail fuel system is circulated throughout the entire fuel system and is returned to the tank every hour the engine is operated.

This high fuel flow rate, combined with the high temperature and pressure within a common rail fuel system makes it extremely vulnerable to damage if water is present in the fuel.

Just fitting an extra fuel filter or water trap will not adequately protect your common rail diesel engine fuel system from expensive damage due to water in the fuel.

Water Watch traps and retains free water from the fuel and provides a timely warning both visual and audible to the driver that water is present in the fuel system.

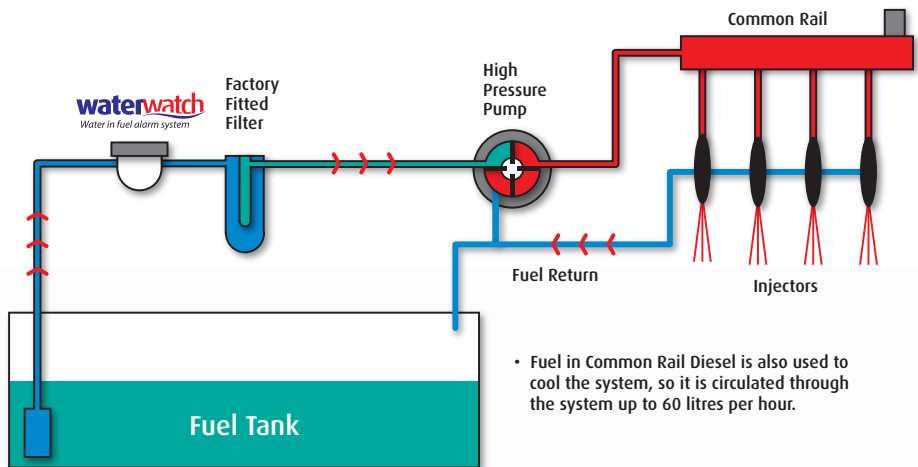
Water Watch alarm sounds when only 5mls of water is trapped in the bowl, giving the driver the opportunity to stop and remove the water before damage occurs.

Other water traps without an alarm, water can accumulate and be circulated throughout the fuel system without the drivers knowledge. These water traps may only be inspected for water at vehicle servicing times or at irregular intervals. This will be too late and damage to expensive fuel system components may have already occurred.



Location Diagram

Water Watch is located in the supply line from the fuel tank and before the original fuel filter.



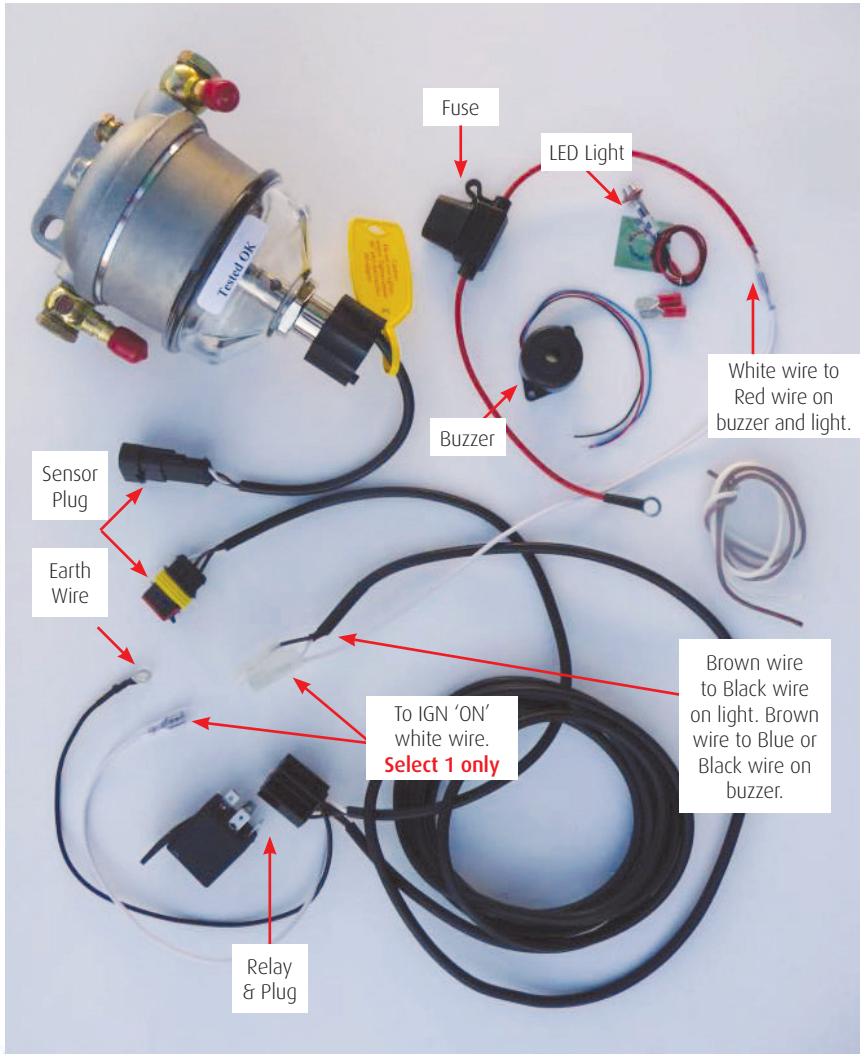
- Fuel in Common Rail Diesel is also used to cool the system, so it is circulated through the system up to 60 litres per hour.

Fitting Instructions

These instructions are for fitting to a 12/24 Volt system. we recommend consulting an auto electrician for wiring of your vehicle.

ENSURE THAT THE VEHICLES BATTERY IS DISCONNECTED PRIOR TO INSTALLATION. AND THE ENGINE BAY IS FREE OF DUST AND DIRT.

1. Mount the Water Watch assembly **after the fuel tank** and **before the original fuel filter** in your vehicle, be sure to mount as vertical as possible. Ensure fuel flow is according to the arrow on the top of the filter housing.
2. Bolt relay into suitable position near Water Watch unit using 6mm bolt, washer and nut.
3. Mount the supplied LED Lamp to a visible place on your dashboard. Remove nut and washer behind LED - slide sticker onto back of LED and mount on dash, securing with washer and nut.
4. Mount supplied buzzer behind/ under your vehicles dashboard - the alarm sound is louder when the buzzer faces into the cab. Adjust direction to suit your own requirements.
5. Locate wire which has battery voltage when ignition is **on** and connect to a **White** wire at either the relay end **or** alternatively the opposite end (under dash end) of the wiring harness. If this wire is not from a fused source, fit the fuse holder and 5 amp fuse as supplied (refer to the wiring diagram).
6. White wire at relay end of the harness should be secured to the rest of the harness and insulated or removed if not used.
7. Connect the **Black** wire with eye terminal at the relay end to vehicle earth.
8. Connect the **Red** wire from both the LED light and buzzer to the wire at the under dash end of the wiring harness.



Continued On Following Pages ►

Fitting Instructions (continued)

Buzzer Options

9A Option 1

Continuous Warning

Connect the **black** wire of the LED light and buzzer to the brown wire at the dash end of the wiring harness.

9B Option 2

Pulse Warning

Connect the **blue** wire of the buzzer and the **black** wire of the LED light to the brown wire under the dash end of the wiring harness.
Note: **red** wire to power (white wire)

Note: LED light and buzzer wiring connections should be soldered at joins.

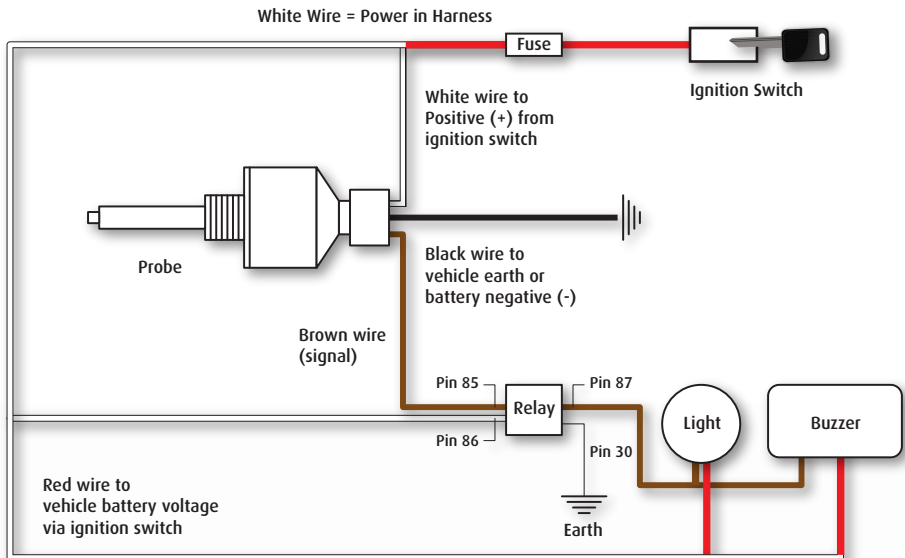
The Water Watch assembly incorporates a self check circuit. The LED light and buzzer will activate for approximately 3-4 seconds when the ignition switch is turned 'ON'.

If the LED light and buzzer does not function when the ignition is turned on there may be a malfunction in the circuit. Any malfunction of the warning system should be inspected and rectified immediately to achieve the maximum protection for your vehicles fuel system.

- **Apply warning sticker supplied on appropriate area on vehicles windscreen.**
- **Place this information booklet and other appropriate paperwork in glove box for future reference.**

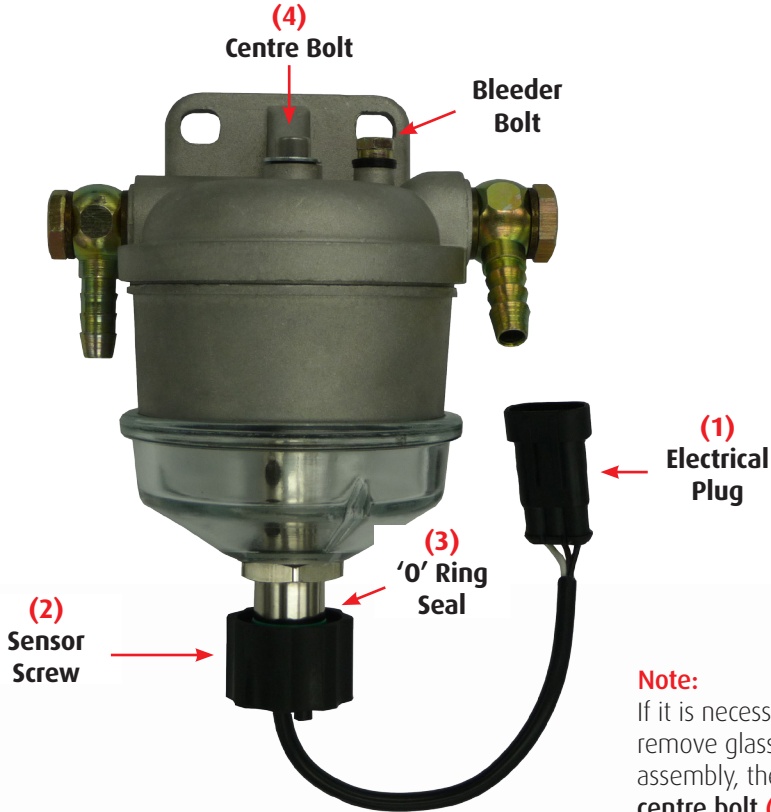
More information, photos and videos are available on our website www.responsiveengineering.com.au

Wiring Diagram



Service Instructions

Water Watch must sound the alarm for 3-4 seconds each time the ignition is switched on to check the circuit and to let you know that it is working.



Note:

If it is necessary to remove glass bowl assembly, then the **centre bolt (4)** must only be tightened to a tension of approx 25inch/pounds (2.8NM).

Service Instructions



If this alarm activates **after the initial pre-check alarm** or during normal operation **STOP THE ENGINE** as soon as it is safe to do so and follow these simple instructions.

Read the instructions fully before proceeding to drain.

Check visually for water in the glass bowl.

It may be difficult to see the water. We recommend as a precaution to proceed with draining the Water Watch bowl - the sensor is very accurate, the water may be dispersed within the fuel.

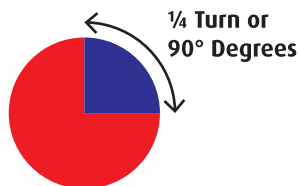
- 1. Unplug electrical plug (1) on sensor from the wiring harness.**
- 2. Unscrew sensor (2) and remove momentarily to allow water to flush from bowl. Fluids should drain from glass bowl very quickly. (Bleeder/Banjo bolt may be loosened if draining is slow)**
- 3. When liquid has drained, carefully retighten the sensor screw - 90 degrees after 'O' Ring (3) makes contact.**
Warning - Do Not Overtighten Sensor - see notes on page 19
- 4. Reattach the electrical plug (1) to wiring harness.**
- 5. Prime the engine's fuel system (refer to owner's manual).**
- 6. Check that no further water is entering the glass bowl and Water Watch warning ceases to sound alarm after pre-check.**
- 7. If no more water is evident and/or alarm warning sounds again, this will indicate more water in your fuel supply (tank).**
- 8. If you still have water in your fuel supply, do not operate engine as damage to fuel injection components will occur.**

Notes on Proper Use

Water Watch is fitted to assist in detecting and removing water in the fuel supply during normal operation of the vehicle.

Water Watch is installed in the fuel supply line **PRIOR** to the factory filter.

DO NOT OVER TIGHTEN SENSOR.
Screw the sensor into the adaptor until the seal washer just touches the adaptor, then tighten a further 90 degrees by hand pressure only.



Water Watch is designed to enhance the original filtration system by **removing water and debris** and warning the operator of contaminated fuel without causing restriction to fuel flow.

If the warning buzzer and lamp are activated after the initial start-up pre-test, then you must stop the engine as quickly as it is safe to do so, drain the contents of the bowl as detailed in the service instructions (pages 10 & 11) before proceeding to operate the engine again.

Should Water Watch alarms reactivate, indicating continued amounts of water entering your fuel supply, the contents of your fuel supply should be removed and the supply tanks cleaned.

Failure to do so may cause serious damage to the fuel system and engine components. Water Watch's ability to protect these systems is limited by the capacity of the collection bowl where water and debris are collected.

It is recommended that the Water Watch unit is checked regularly for fuel quality and the removal of debris from the bowl.

Lifetime Warranty Guarantee

Our commitment to quality includes our service. Should you, contrary to expectations, experience defects due to manufacturing faults, Responsive Engineering will provide you with a lifetime warranty against defects as follows:

The product is guaranteed to be free of manufacturing and workmanship defects when used under normal conditions and care and in accordance with our instructions on use.

Defects that do occur will be repaired, replaced at our discretion, solely at our option with no charge for parts. The benefits conferred by this warranty are in addition to all rights and remedies in respect of the product that the consumer has under the Competition and Consumer Act 2010 and similar state and territory laws.

Extent of Warranty

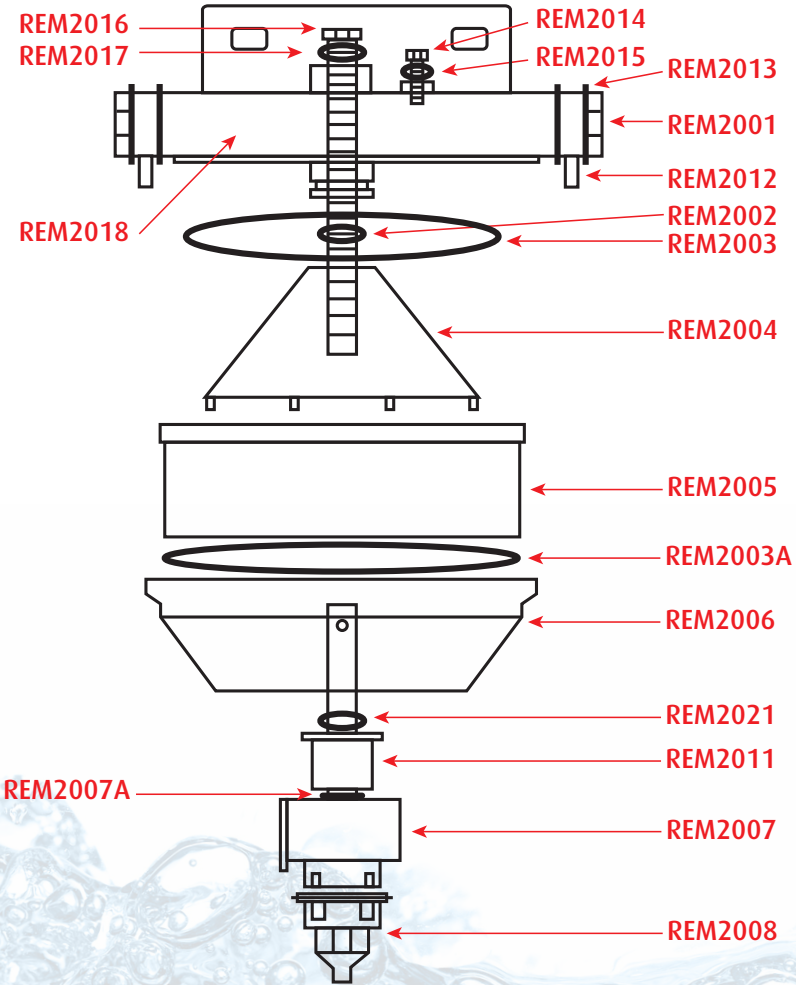
The warranty is limited to defects in workmanship or parts of the Water Watch unit. All defective products or parts will be replaced. This warranty does not extend to manuals and packaging, electrical lines or electrical components, fuel lines or other installation accessories to the Water watch unit.

Exclusions

This warranty does not cover:

- > Any defect caused by an accident, misuse, abuse, improper installation or operation or lack of reasonable care.
- > Any product that has not been installed, operated or maintained in accordance with the manufacturer's instructions provided with this product.
- > Any damage caused by improper power input, improper cable connection, failure to unplug the sensor from wiring prior to removal and installation, or over tightening the sensor into the Water Watch unit.

WW20072 Parts List



Should your Water Watch require replacement parts due to damage or reinstallation in another vehicle, please contact Responsive Engineering.



Qty	WW20072	Part
2	REM2001	Banjo Bolt
1	REM2002	O'Ring
1	REM2003	O'Ring
1	REM2003A	O'Ring
1	REM2004	Diffuser
1	REM2005	Skirt
1	REM2006	Bowl
1	REM2007	Sensor
1	REM2007A	Sensor Seal
1	REM2008	C'necter Loom
1	REM2011	Adapter
2	REM2012A	Banjo 8mm
2	REM2012B	Banjo 10mm
2	REM2012C	Banjo 12mm
2	REM2013	Washer
1	REM2014	Bleed Bolt
1	REM2015	Washer
1	REM2016	Centre Bolt
1	REM2017	O'Ring
1	REM2018	Seating
1	REM2021	O'Ring
1	REM2000	Seal Kit



A series of 24 horizontal blue lines spaced evenly down the page, intended for writing or notes.

More Products

Responsive Engineering is an Australian company dedicated to finding innovative solutions to protect your Diesel Fuel System

Water Watch **Mounting bracket kits** are supplied separately to Water Watch units and are designed to suit many diesel vehicles.

Full list available on our web site www.responsiveengineering.com.au

Contents include: quality powder coated steel bracket specifically designed to fit your vehicle, additional fuel hose, clamps or quick connect fittings, nuts, bolts, washers and fitting instructions specific to your vehicles requirements.



Also available from Responsive Engineering:

Diesel Key – prevents miss-fuelling with petrol. Diesel Key has a locking system which will only open when exactly the correct nozzle size is inserted into the receiver. Diesel Key prevents any access to the fuel tank either to put fuel in or out without the correct nozzle.

Responsive Fuel Additive – fuel conditioner specifically designed for Common Rail Diesel fuel systems



WARNING!
DO NOT DAMAGE
YOUR SENSOR!

- 1 UNCLIP SENSOR FROM WIRING HARNESS BEFORE TURNING SENSOR SCREW.** Twisting the wiring coming from the sensor will damage the circuit board inside the sensor unit.
- 2** After loosening/removing sensor unit from Water Watch to remove water/contamination. Reinstall sensor with care. Screw the sensor into the adapter until the seal washer just touches the adapter, then tighten a further 90 degrees by hand pressure only.
- 3** Take care not to put undue strain on the wire from the sensor unit when reconnecting to the wiring harness plug.

Rough handling or excessive force can damage the connection and allow water to enter the plug; this may give you a false warning or cause a malfunction with the Water Watch Alarm operation.

The sensor should not require adjustment on installation. It is only if the sensor is removed and replaced that the above instructions apply.



Please ensure that you have read and understand this information booklet completely. Incorrect installation or servicing may void warranty.



Should Water Watch alarm activate when driving - Pull up as soon as it is safe to do so and go to service instructions on pages 10-11.



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