

RYCO

X106R™

FUEL WATER SEPARATOR / CATCH CAN FITTING INSTRUCTIONS

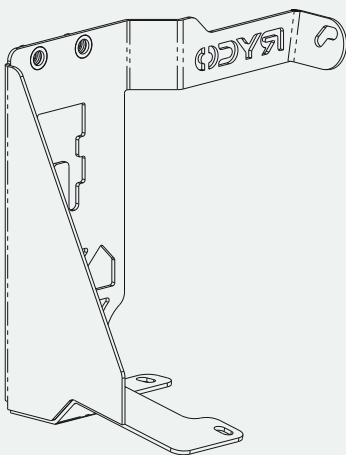


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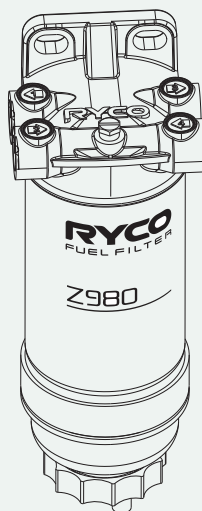
BE
RYCO
READY

TOYOTA LAND CRUISER 70 Series See Ryco catalogue for specific application details.

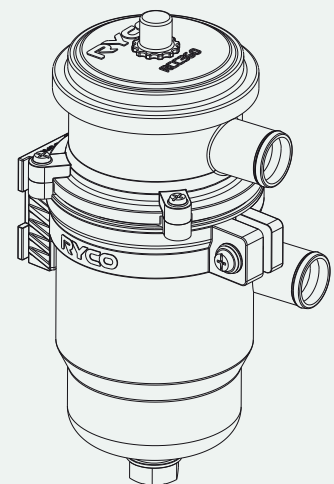
The Ryco X106R kit includes mounting bracket specifically designed for the vehicle, and all components required to complete the installation of Ryco Z980K16 series fuel water separator and RCC360 series catch can. It is recommended that the installation is conducted by a qualified mechanic following the procedures in this instruction sheet.



SECTION 1
METAL BRACKET

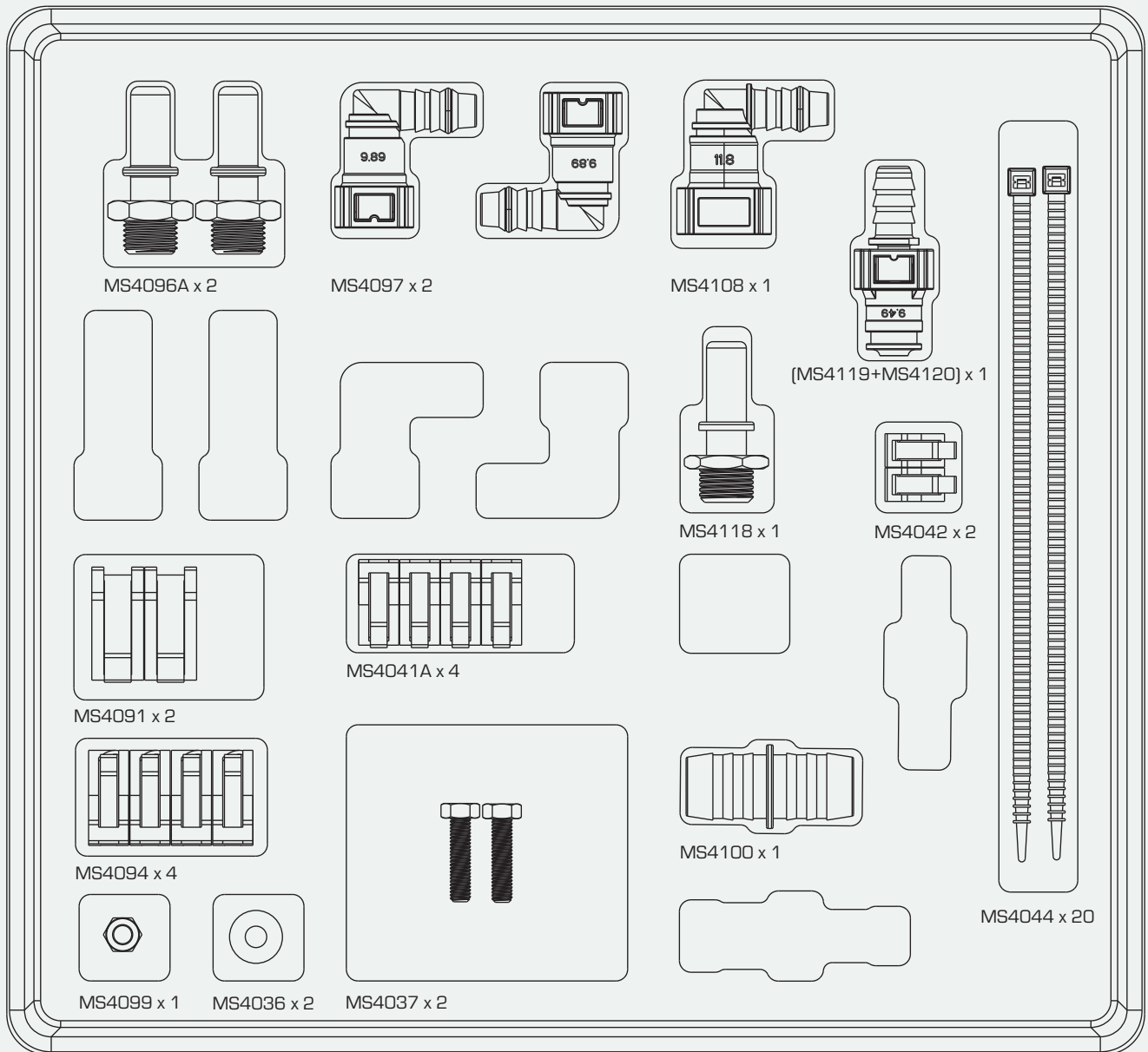


SECTION 2
FUEL WATER SEPARATOR



SECTION 3
CATCH CAN

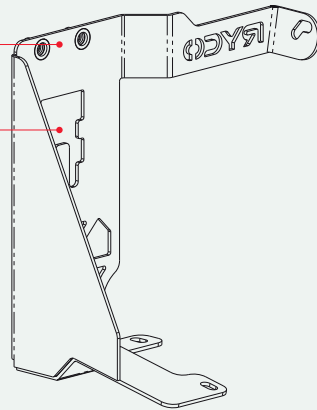
COMPONENTS INCLUDED IN X106R KIT



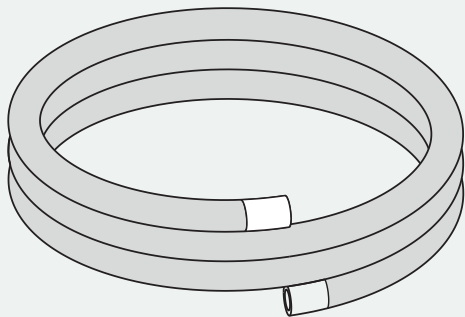
COMPONENTS INCLUDED IN X106R KIT

FUEL WATER SEPARATOR
MOUNTING POSITION

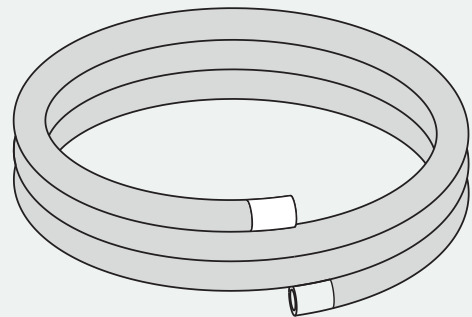
CATCH CAN
MOUNTING POSITION



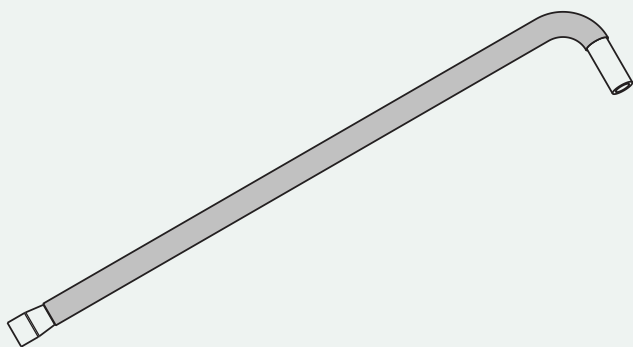
FB9811C
MOUNTING BRACKET x 1



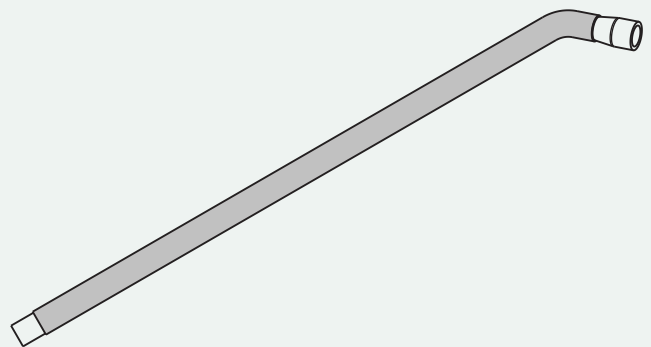
HF9811
FUEL HOSE x 2 (2000mm)



HF9811
FUEL HOSE x 2 (2000mm)



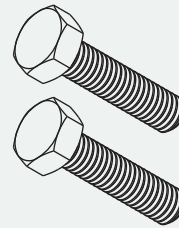
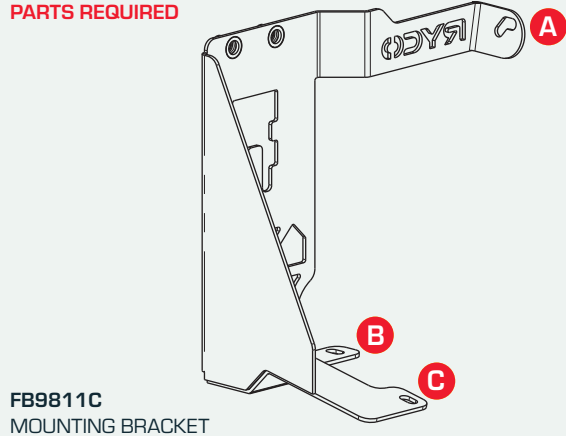
MH9811A
PCV HOSE x 1



MH9811B
PCV HOSE x 1

SECTION 1 METAL BRACKET FITMENT

PARTS REQUIRED



TOOLS & PPE REQUIRED

- Ratchet Set
- Work Gloves

WORK PROCEDURE

- 1 Locate the power steering reservoir behind the airbox. Remove the factory M6 bolt holding the power steering reservoir mount closest to the engine, see Figure 2. (Note: You do not need to remove the other factory bolt)
- 2 Position the bracket in the engine bay as per Figure 1, aligning the hole at Point "B" on the bracket under the power steering reservoir mount at point "B" and loosely refit the factory bolt.
- 3 Note the position of the threaded hole at Point "C" in the engine bay, and the threaded hole at Point "A" on the side of the engine bay. Secure the bracket onto the vehicle by loosely installing a supplied M6 bolt and washer at both points.

INSTALLATION TIP

To assist with clearance to fit the catchcan behind the airbox, position the bracket as far back as the bracket mounting holes allow. For added security, you may wish to secure the M6 bolt at Point "C" with the supplied M6 nylon lock nut by accessing the end of the bolt from the drivers side front wheel house.

- 4 Tighten all fasteners as per Figure 2.

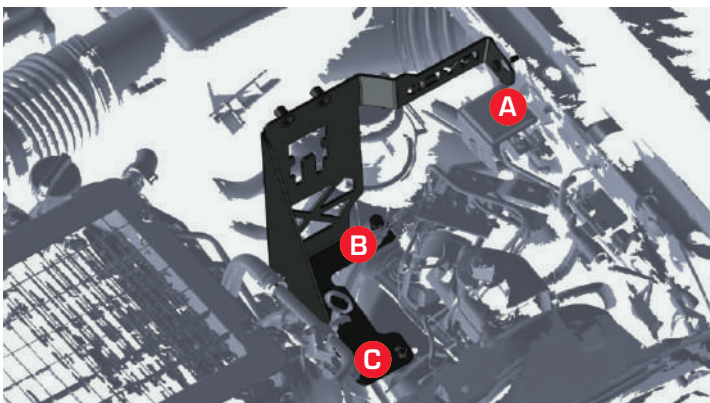


FIGURE 1
BRACKET IN ENGINE BAY

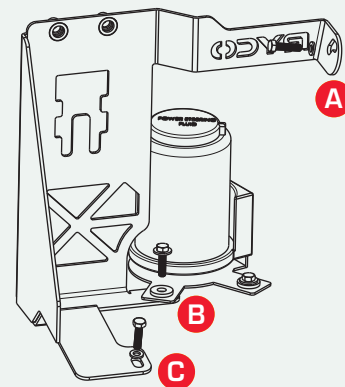
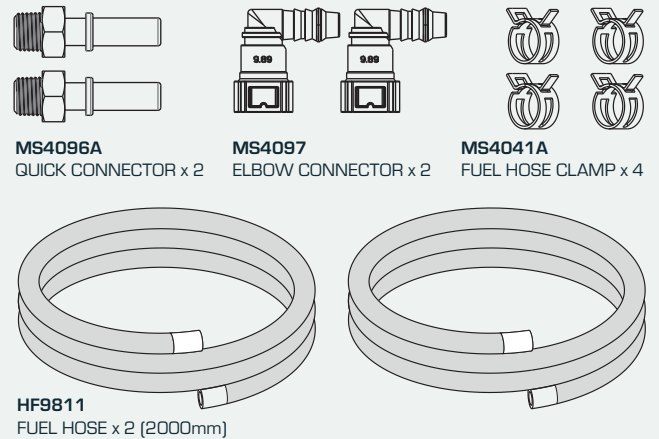
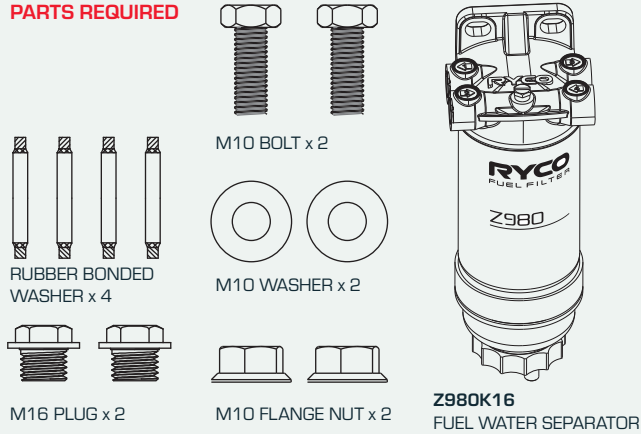


FIGURE 2
BRACKET INSTALLATION

SECTION 2 FUEL WATER SEPARATOR INSTALLATION

PARTS REQUIRED



TOOLS & PPE REQUIRED

- Ratchet Set
- Work Gloves
- Hose Clamp Pliers
- Rags

WORK PROCEDURE

- 1 Install the Ryco fuel water separator head with metal quick connectors, blanking plugs and rubber bonded washers, as per Figure 3. Tighten blanking plugs (on Port 1 & 2) and quick connectors (on Port 3 & 4).
- 2 Install two (2) of the supplied elbow connectors onto one end of both supplied fuel hoses and install four (4) supplied fuel hose clamps onto both ends of both fuel hoses, as per Figure 4. Do not tighten fuel hose clamps yet.

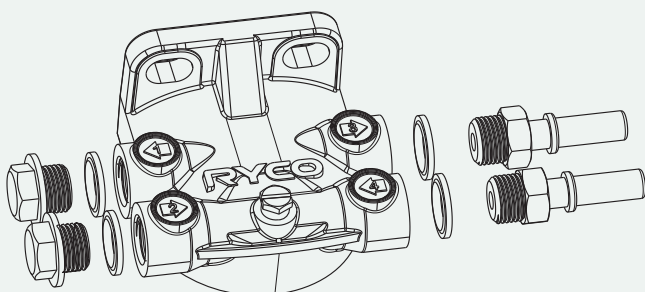


FIGURE 3
FUEL WATER SEPARATOR HEAD PREPARATION

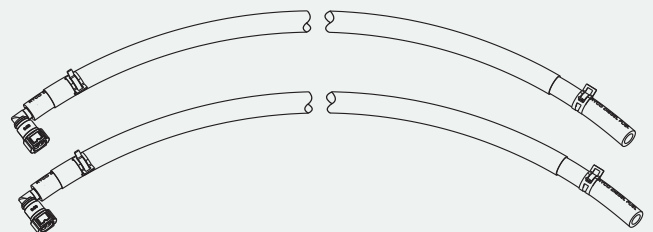


FIGURE 4
FUEL HOSE PREPARATION

SECTION 2 FUEL WATER SEPARATOR INSTALLATION CONTINUED

WORK PROCEDURE CONTINUED

- 3 Locate the factory fuel filter on the passenger side of the engine bay. Locate the factory fuel inlet hose at the factory fuel filter. Loosen the factory fuel hose clamp and disconnect the fuel supply line from the factory filter, as per Figure 5. Have a rag ready to capture any diesel that may spill out of the fuel line and the fuel filter.
- 4 Trace the other end of the fuel supply line and disconnect it from the metal factory fuel supply pipe, as per Figure 5. Remove the factory fuel supply line from the vehicle and store for safe keeping. Have a rag ready to capture any diesel that may spill out of the fuel lines.
- 5 Mount the Z980K16 fuel filter assembly onto the metal bracket facing the rear of the engine bay using the two (2) black M10 bolts and washers supplied with the Z980K16.
- 6 Connect one of the supplied fuel hoses to the inlet port of the Z980K16 (coloured brown in Figure 6) by pushing the elbow connector onto the metal quick connector until you hear a 'click', and route the other end over the ABS pipes toward the rear of the engine bay up to the back corner. From the corner, run the hose behind the brake booster and along firewall to the passenger side of the vehicle, running under the heater hose bracket. Complete the routing by running the hose to the factory fuel supply pipe and connecting with a hose clamp. See Figure 7 for hose routing.
- 7 Connect the second hose to the outlet port of the Z980K16 (coloured green in Figure 6) by pushing the elbow connector onto the metal quick connector until you hear a 'click', and route the other end under the ABS pipes and up to the back corner of the engine bay. Route the remaining fuel hose similar to the other fuel hose as per Figure 7. Connect the end of the fuel hose to the factory fuel filter inlet port and secure with a hose clamp.
- 8 Ensure all hose clamps are secure. For added security, use the supplied cable ties to secure the fuel hoses at regular intervals to the factory cable along the firewall and heater hose bracket.
- 9 Locate the priming button on top of the factory fuel filter. Prime the fuel system by pumping the button repeatedly until you feel it go hard and become difficult to press any further. The priming process could take approximately 5 - 10 minutes.

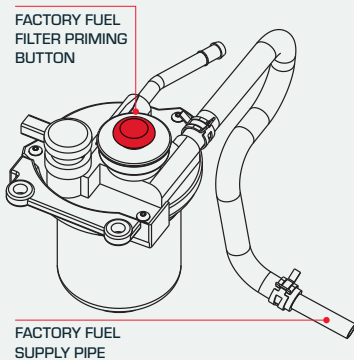


FIGURE 5
FACTORY HOSE IDENTIFICATION

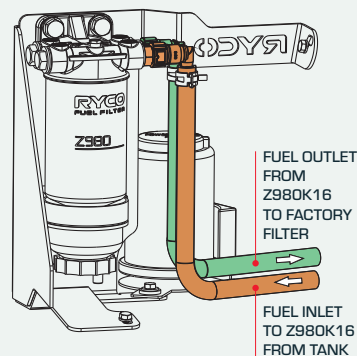


FIGURE 6
FUEL WATER SEPARATOR INSTALLATION

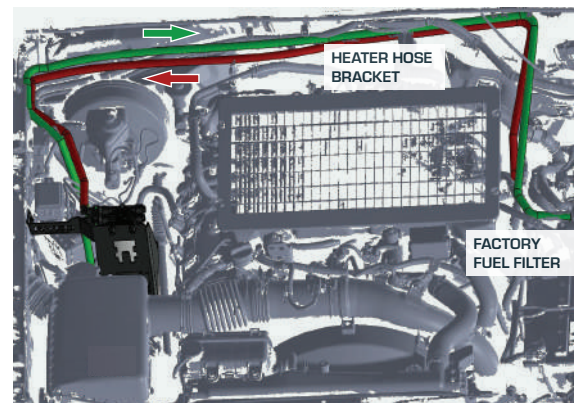
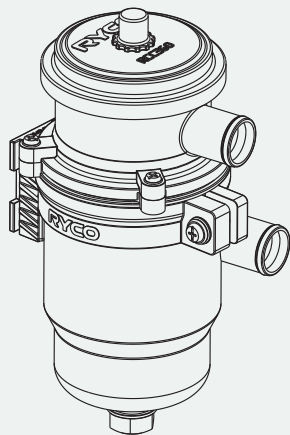


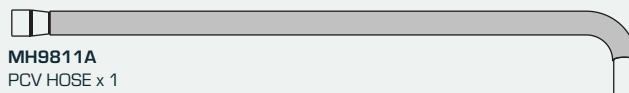
FIGURE 7
FUEL HOSE ROUTING

SECTION 3 CATCH CAN INSTALLATION

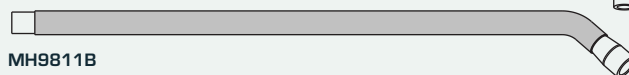
PARTS REQUIRED



RCC360
CATCH CAN



MH9811A
PCV HOSE x 1



MH9811B
PCV HOSE x 1



MS4100
PCV HOSE JOINER x 1



MS4091
PCV HOSE CLAMP x 2



MS4094
PCV HOSE CLAMP x 4

TOOLS & PPE REQUIRED

- Ratchet Set
- Work Gloves
- Hose Clamp Pliers

WORK PROCEDURE

- 1 Mount the catchcan onto the bracket by sliding the RCC360 nylon bracket onto the catchcan mounting position so it sits behind the factory airbox. Rotate the RCC360 counter clockwise so the ports are facing toward the engine PCV valve and tighten the plastic bracket retaining screw, as per Figure 8 below.

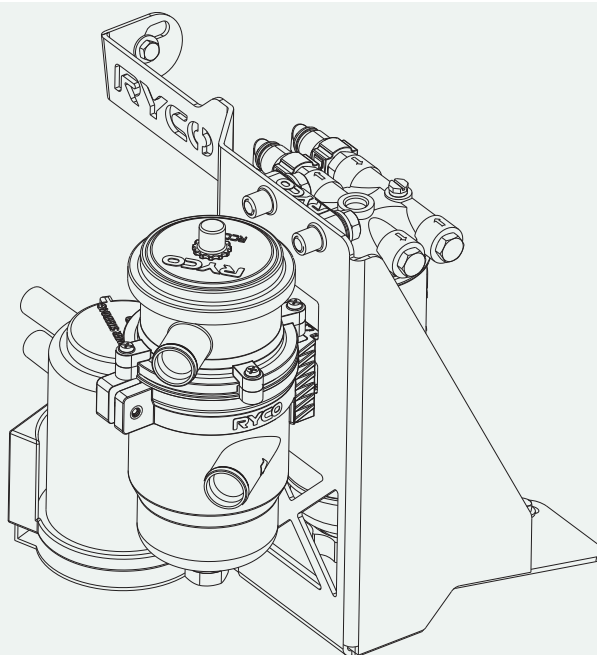


FIGURE 8
CATCH CAN INSTALLATION

SECTION 3 CATCH CAN INSTALLATION CONTINUED

WORK PROCEDURE CONTINUED

- 2 Locate the factory PCV valve at the front of the engine, as per Figure 9. Disconnect the factory PCV hose from the PCV valve but leave it attached to the air intake. Connect the small end of Ryco PCV hose MH9811A to the engine PCV valve outlet using a hose clamp. Route the Ryco PCV hose across the front of the engine, behind the factory air intake system as shown in Figure 10 and connect to the lower port of the RCC360. Secure with a supplied hose clamp.
- 3 Connect a supplied straight hose joiner to the small diameter end of the Ryco PCV hose MH9811B and secure with a supplied hose clamp. Connect MH9811B to the factory PCV hose via the hose joiner and secure with a supplied hose clamp. Route MH9811B along side MH9811A as per Figure 10 and connect the large diameter end to the upper port of the RCC351 and secure with a supplied hose clamp.
- 4 Locate the two (2) intercooler mounting brackets as per Figure 10. Secure the two (2) PCV hoses with the supplied cable ties onto the brackets. (Note: Do not tighten the cable ties excessively as the hoses should be allowed to slide)
- 5 Check both PCV hoses are not jammed or kinked by the surrounding engine parts.

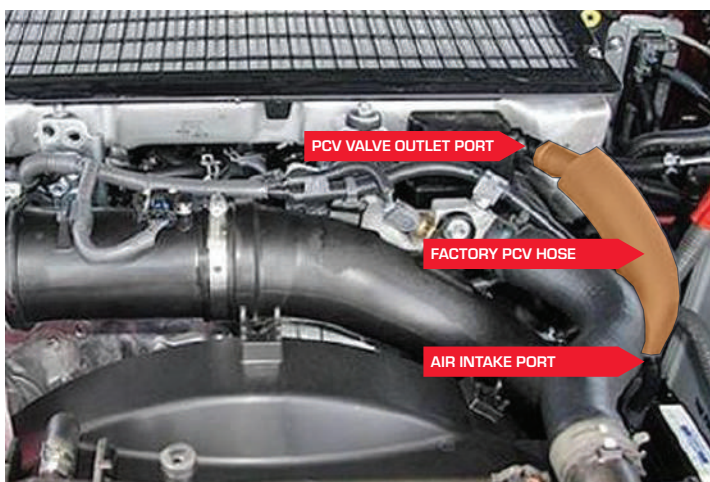


FIGURE 9
ENGINE PCV VALVE AND FACTORY HOSE

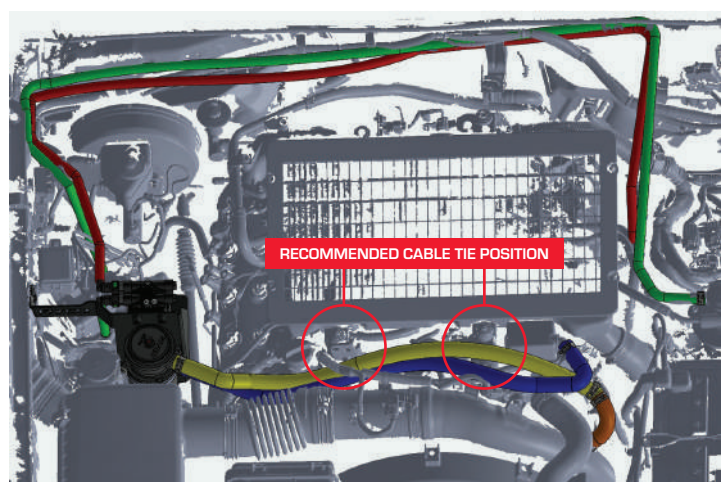
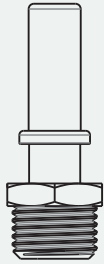
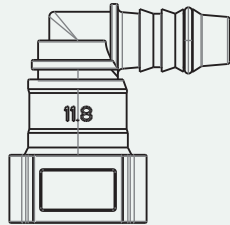


FIGURE 10
FUEL HOSE AND PCV HOSE ROUTING

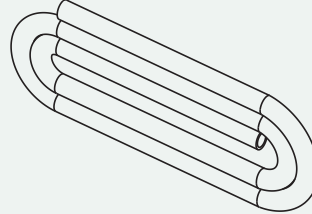
INCLUDED DRAIN HOSE COMPONENTS



MS4118
QUICK CONNECTOR x 1



MS4108
ELBOW QUICK CONNECTOR x 1



MS4117
PVC HOSE x 1M



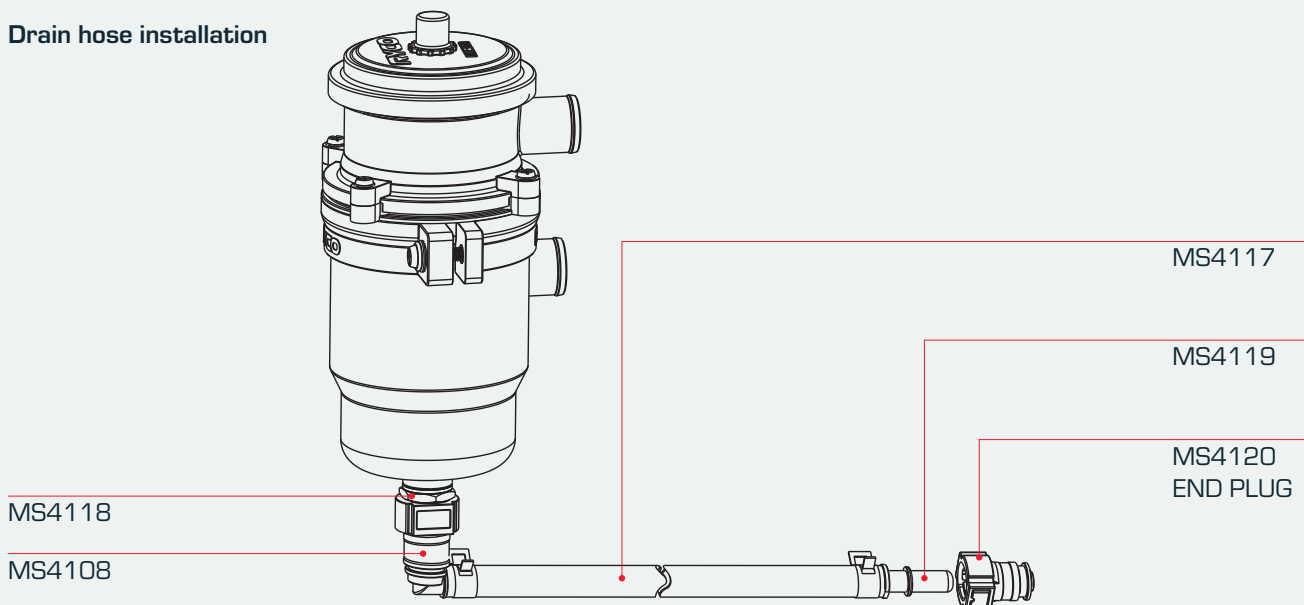
MS4119+MS4120
HOSE END PLUG x 1 SET

DRAIN HOSE INSTALLATION PROCEDURE

To install the drain hose

- 1 Remove the blanking plug from the base of the catch can.
- 2 Remove the rubber washer from the blanking plug.
- 3 Fit rubber washer to the MS4118 Male Quick Connector.
- 4 Install MS4118 with rubber washer to the base of catch can.
- 5 Connect the MS4108 elbow female quick connector to the MS4118 male quick connector on the base of the catch can by pushing on until you hear a “click”.
- 6 Insert the drain hose onto the barb end of MS4108 and secure with the supplied spring clamp.
- 7 Insert the MS4119 onto the other end of the hose and secure with the supplied spring clamp.
- 8 Use the zip ties to secure the hose.

Drain hose installation



HOW TO DRAIN THE CATCH CAN

Note: Check the catch can sump level every month or 5000km, whichever comes first and drain as required. Sump level checks are recommended daily when four-wheel driving or towing.

If the drain hose is fitted

- 1 Push both buttons on the MS4120 end plug and pull to separate from the MS4119.
- 2 Allow all oil to drain out.
- 3 Push MS4120 plug back on to MS4119 until you hear a "click".

If fitted without drain hose

- 1 Slide catch can out of the bracket. You may need to remove inlet and outlet hoses by loosening the hose clamps.
- 2 Remove the blanking plug from the base of the catch can.
- 3 Allow all oil to drain.
- 4 Refit the blanking plug to the base of the catch can ensure the rubber seal is in place.

WHEN SHOULD YOU SERVICE THE CATCH CAN

Check service indicator

If red service indicator is not raised, the catch can does not currently require a service. Check again in a month or 5000 km. Sump level checks are recommended daily when four-wheel driving or towing. If the red service indicator is raised, unscrew the clear service indicator housing and compress the red service indicator. Run the engine and if the red service indicator raises again, it is time to service your catch can.

NO SERVICE REQUIRED



SERVICE REQUIRED



HOW TO DRAIN THE CATCH CAN

How to service the catch can

- 1 Draining catch can before service is recommended
- 2 Undo the four bolts the on catch can head, take note of outlet position. Remove hoses and clamps, if required.
- 3 Separate the head from the rest of the catch can
- 4 Lift out old filter
- 5 Use a rag to clean inside catch can sump
- 6 Refit new filter (RCC160F), and replace the main housing o-ring
- 7 Reinstall the filter head noting the position of the outlet port from earlier
- 8 Tighten the four bolts and reinstall hoses and hose clamps if removed.

X106R™

FUEL WATER SEPARATOR / CATCH CAN
FITTING INSTRUCTIONS