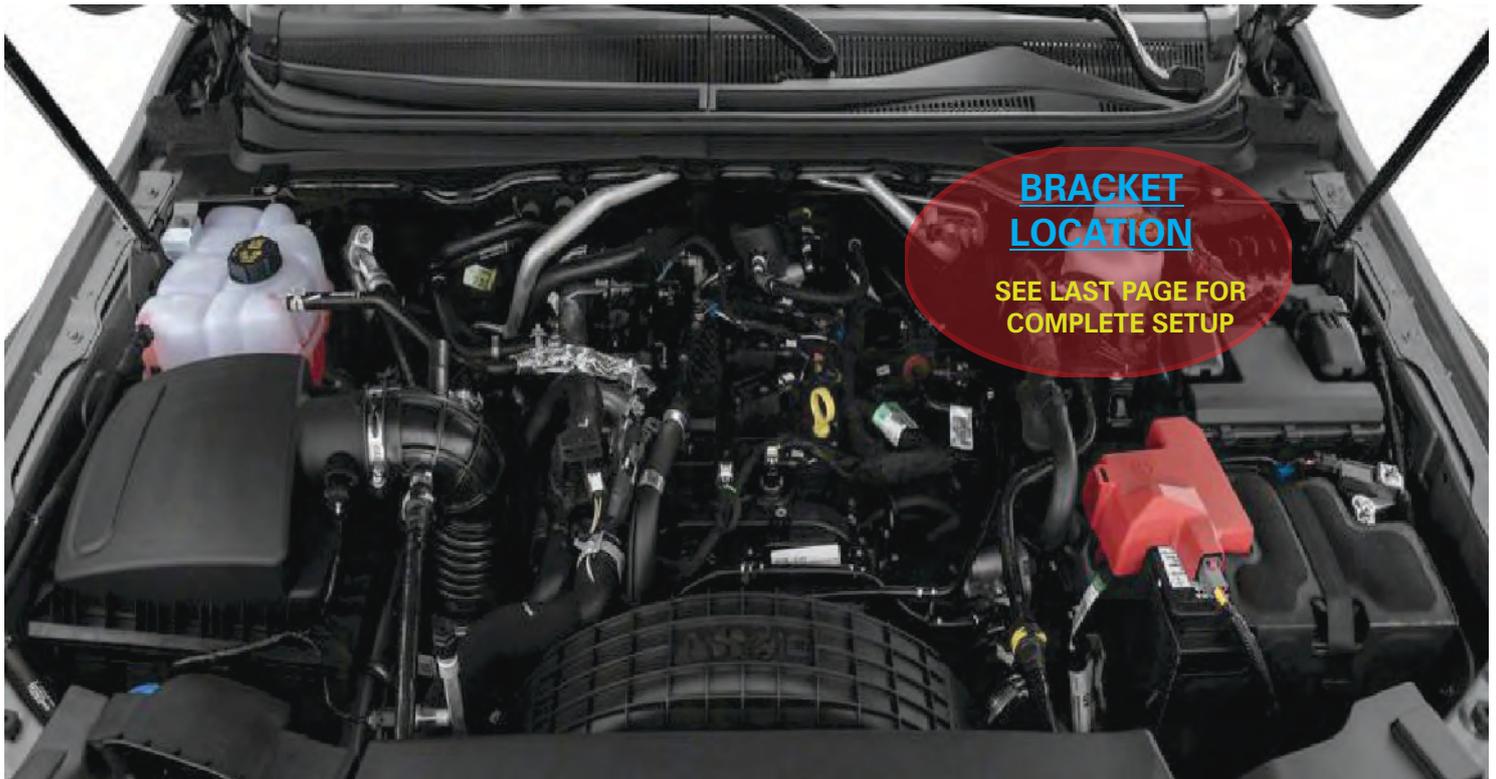


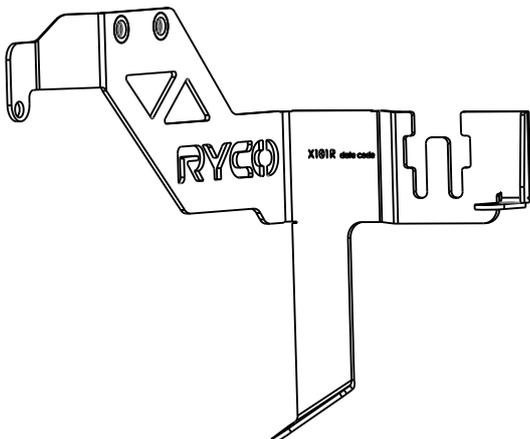
X101R FUEL WATER SEPARATOR / CATCHCAN FITMENT INSTRUCTIONS

FORD RANGER - See RYCO catalogue for specific application details.

The Ryco X101R 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 RCC351 series catchcan. It is recommended that the installation is conducted by a qualified mechanic following the procedures in this instruction sheet.



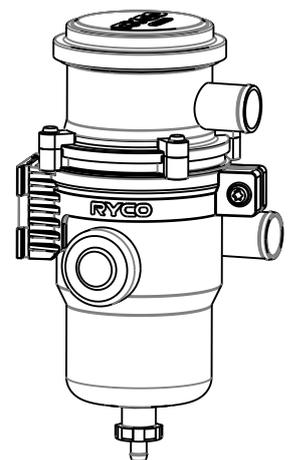
SECTION 1
METAL BRACKET



SECTION 2
FUEL WATER SEPARATOR

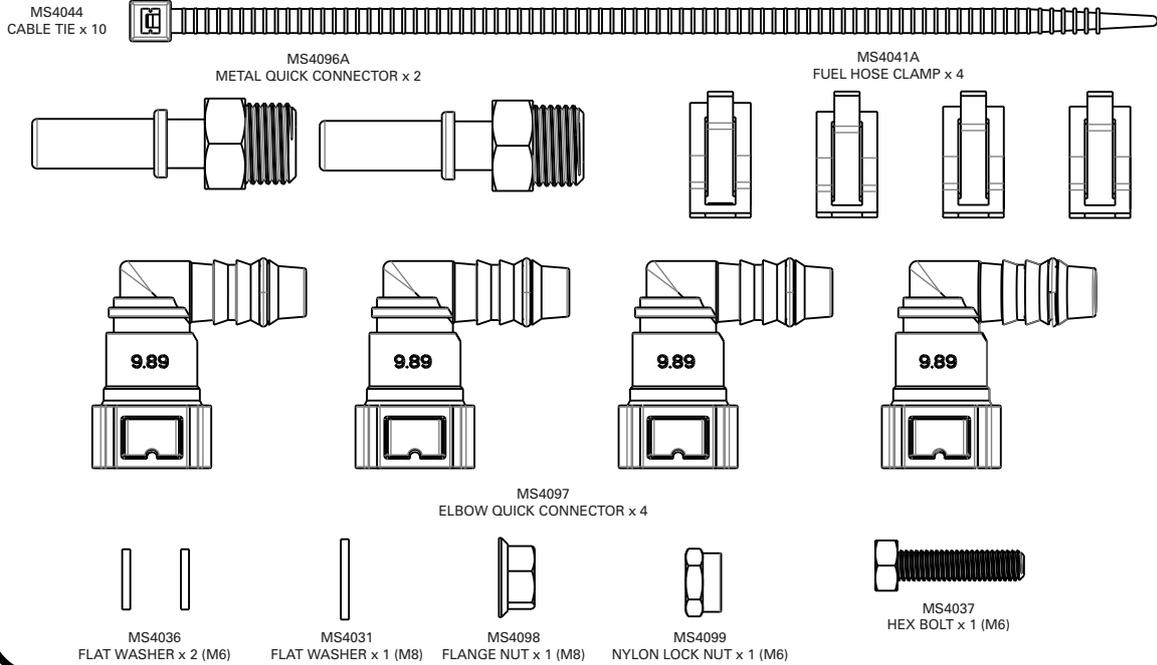


SECTION 3
CATCHCAN

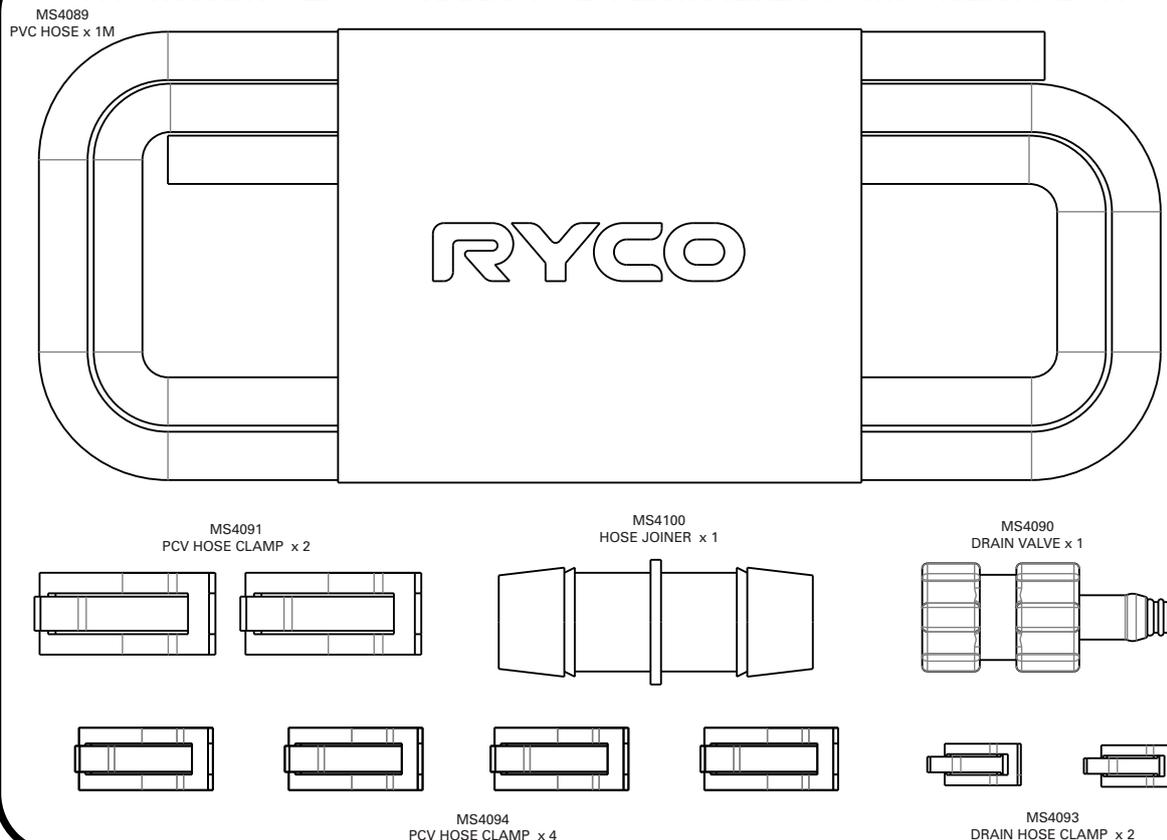


COMPONENTS INCLUDED IN X101R KIT

X101R PARTS LIST - BRACKET / FUEL FILTER COMPONENTS BOX



X101R PARTS LIST - CRANKCASE VENT. FILTER COMPONENTS BOX



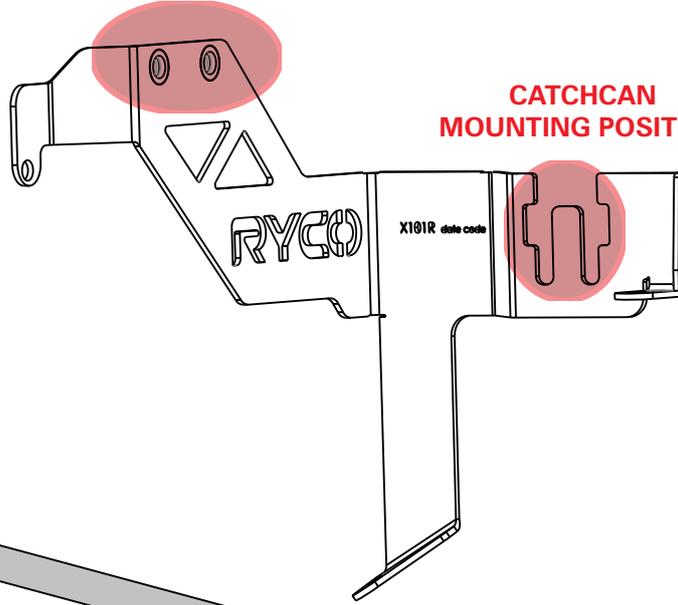
COMPONNETS INCLUDED IN X101R KIT

PARTS LIST - BRACKET, FUEL FILTER & CATCHCAN COMPONENTS

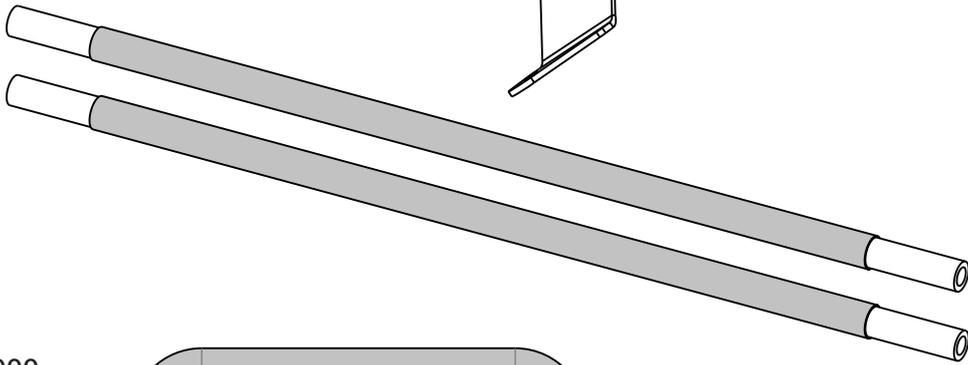
**FUEL WATER SEPARATOR
MOUNTING POSITION**

**CATCHCAN
MOUNTING POSITION**

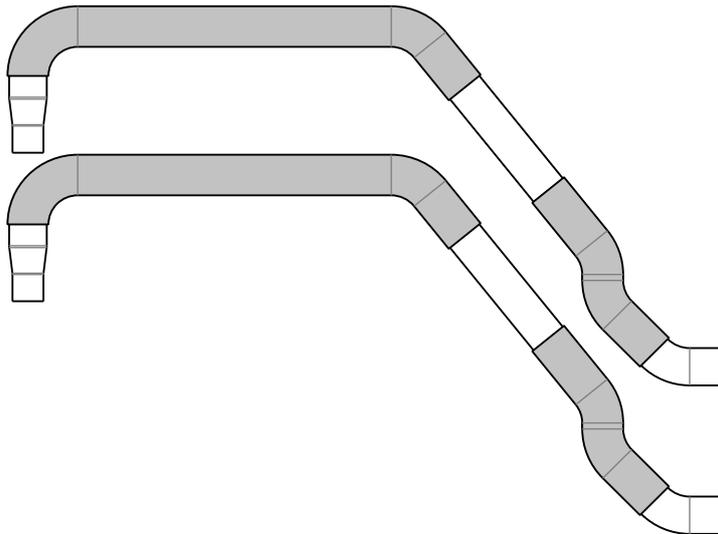
FB9803C
MOUNTING BRACKET x 1



HF9803
FUEL HOSE x 2
(660mm)

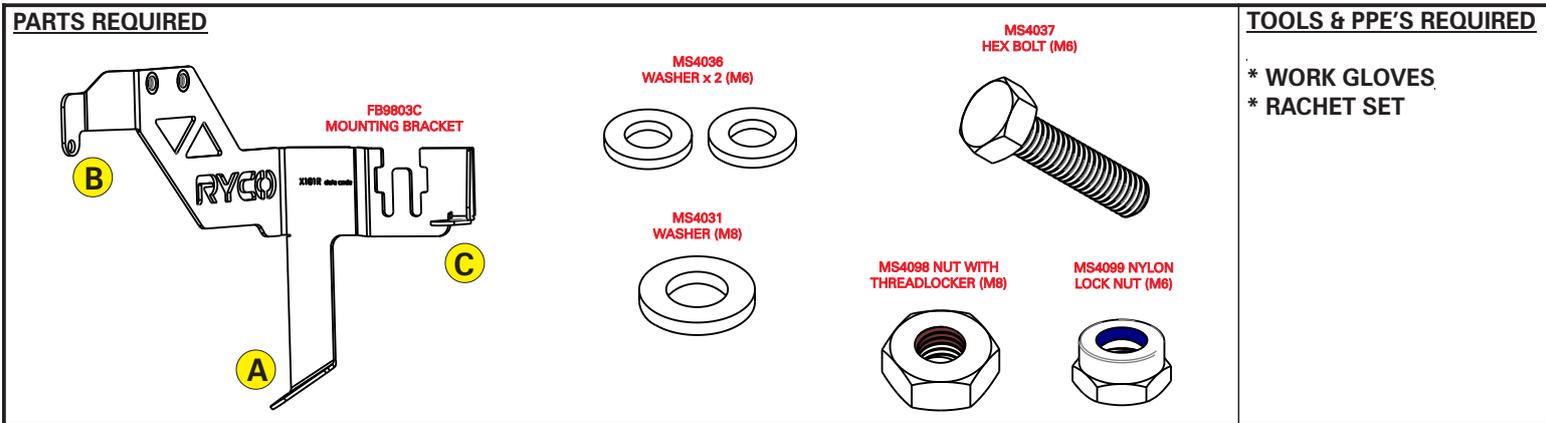


MH1000
PCV HOSE x 2



X101R FUEL WATER SEPARATOR / CATCHCAN FITMENT INSTRUCTIONS

SECTION 1 METAL BRACKET FITMENT



WORK PROCEDURE

1. Remove the factory M6 nut on the fuse box from Point **C**.
2. Locate the stud on the thermal expansion (TX) valve Point **B**. Position the bracket in the engine bay as per Fig. 1, placing point **B** at the TX valve stud and Point **C** at the fuse box stud.
3. Loosely refit the factory M6 nut at Point **C** onto the fuse box stud, and the supplied M8 nut at Point **B** onto the TX valve stud. (Caution: Do not remove the factory nut holding the TX valve).
4. Note the position of the hole at Point **A** (Note: Some PX1 vehicles may not have this hole. If this is the case, drill a 7mm hole using the bracket slot as a template). From the front-left wheel house of the vehicle, install the supplied M6 bolt with washer upwards through the hole at Point **A**, and secure the bracket with the supplied M6 nylon lock nut and another M6 washer. (Caution: Note the bolt direction. Do not install the bolt so it protrudes into the wheel house).
5. Tighten all three (3) fasteners as per Fig. 2.

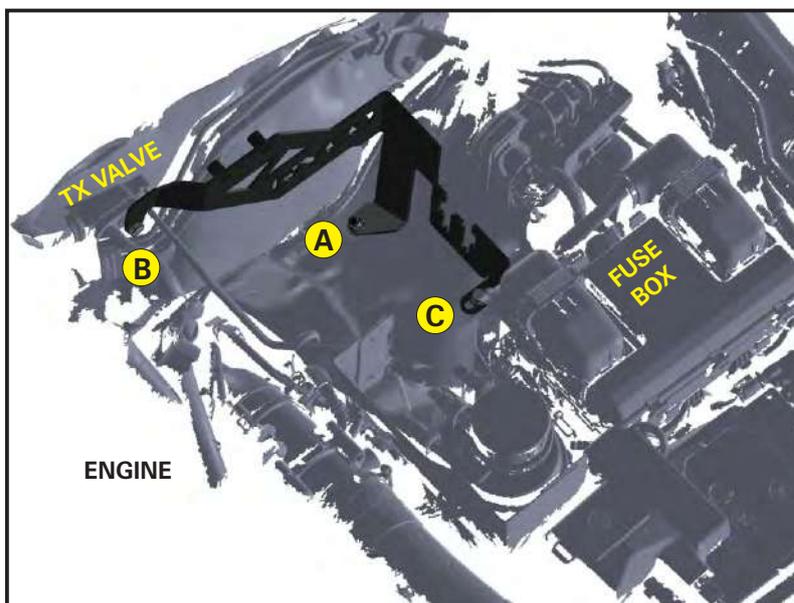


FIG. 1 BRACKET IN ENGINE BAY

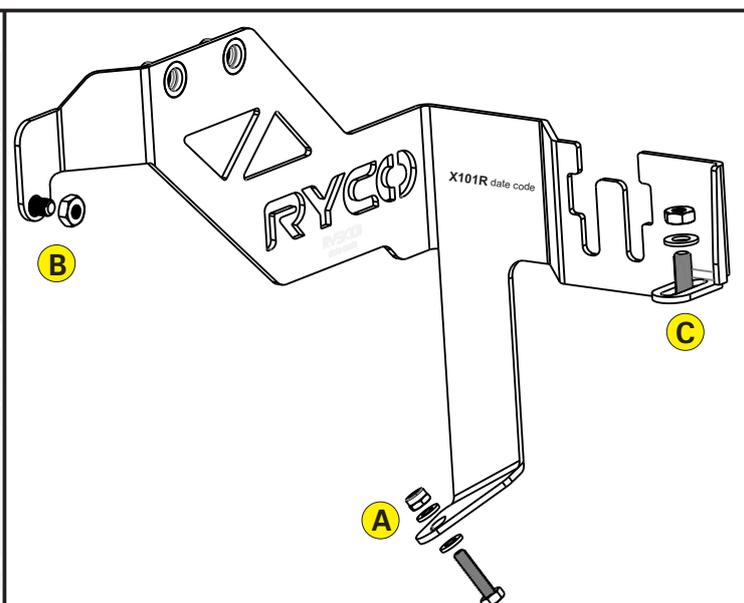
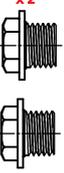
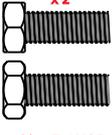
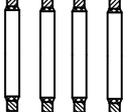
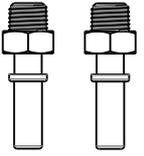
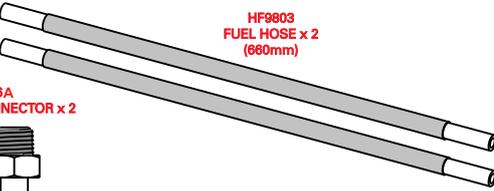
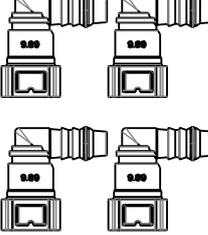


FIG. 2 BRACKET INSTALLATION

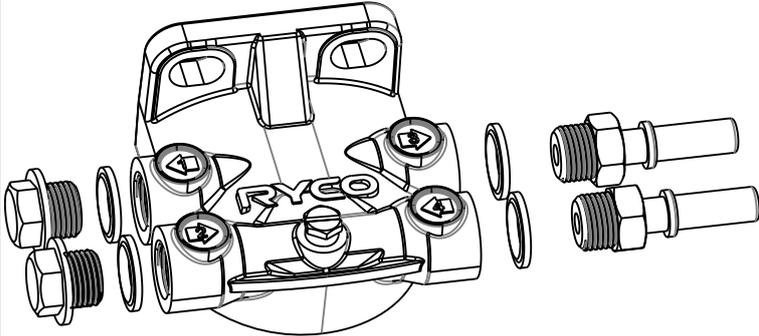
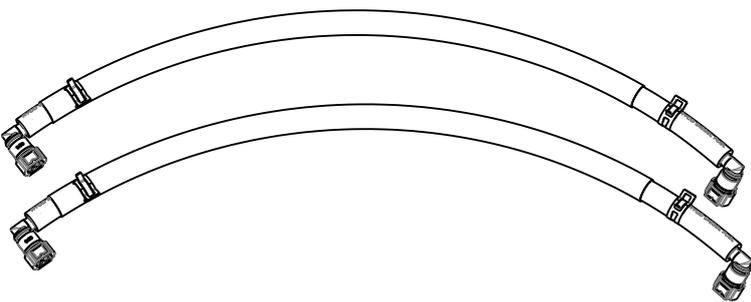
X101R FUEL WATER SEPARATOR / CATCHCAN FITMENT INSTRUCTIONS

SECTION 2 FUEL WATER SEPARATOR INSTALLATION

PARTS REQUIRED		TOOLS & PPE'S REQUIRED	
<p>M16 PLUG x 2</p>  <p>M10 BOLT x 2</p>  <p>M10 FLANGE NUT x 2</p>  <p>RUBBER BONDED WASHER x 4</p>  <p>M10 WASHER x 2</p>  <p>RYCO Z980K16 FUEL WATER SEPARATOR</p> 	<p>MS4096A METAL QUICK CONNECTOR x 2</p>  <p>MS4041A FUEL HOSE CLAMP x 4</p> 	<p>HF9803 FUEL HOSE x 2 (660mm)</p>  <p>MS4097 ELBOW QUICK CONNECTOR x 4</p> 	<ul style="list-style-type: none"> * WORK GLOVES * RACHET SET * 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 Fig 3. Tighten blanking plugs(on Port 1 & 2) and quick connectors (on Port 3 & 4).
2. Install all four (4) supplied elbow connectors onto both supplied fuel hoses with supplied fuel hose clamps, as per Fig. 4. Do not tighten fuel hose clamps yet.

 <p>FIG. 3 FUEL WATER SEPARATOR HEAD PREPARATION</p>	 <p>FIG. 4 FUEL HOSE PREPARATION</p>
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X101R FUEL WATER SEPARATOR / CATCHCAN FITMENT INSTRUCTIONS

SECTION 2 FUEL WATER SEPARATOR INSTALLATION (CONTINUED)

WORK PROCEDURE (CONTINUED)

1. Locate the factory fuel supply line by starting at the factory fuel filter. Locate the larger lower red elbow connector (see Fig. 5), squeeze the coloured tabs to remove. Have a rag ready to capture any diesel that may spill out of the fuel line and the fuel filter.
2. Trace the other end of the fuel supply line to the second factory quick connect fitting and remove it from the factory fuel supply pipe. Remove the factory fuel supply line from the vehicle and store for safe keeping.
3. Mount Z980K16 assembly onto metal bracket using the two (2) black M10 bolts supplied with the Z980K16.
4. Connect one of the supplied fuel hoses to the factory fuel supply pipe by pushing the elbow connector onto the fuel pipe until you hear a "click", and route as per Fig. 6 connecting to the inlet port of the Z980K16 (coloured brown in Fig. 6).
5. Connect the second hose to the outlet port of the Z980K16 (coloured green in Fig. 6) by pushing the elbow connector onto the metal quick connector until you hear a "click", and route the other end up through the factory fuel filter bracket. Do not connect to the factory fuel filter yet.
6. Tighten all hose clamps.
7. Find an assistant to help prime the fuel system. Place a container under the unconnected elbow connector. Prime the fuel system by turning the ignition key to "On / Run" position (do not start the Engine) until fuel comes out from the elbow connector. Turn off the ignition and connect the elbow connector to the factory fuel filter. Start the engine and check for leaks in fuel lines and connectors.

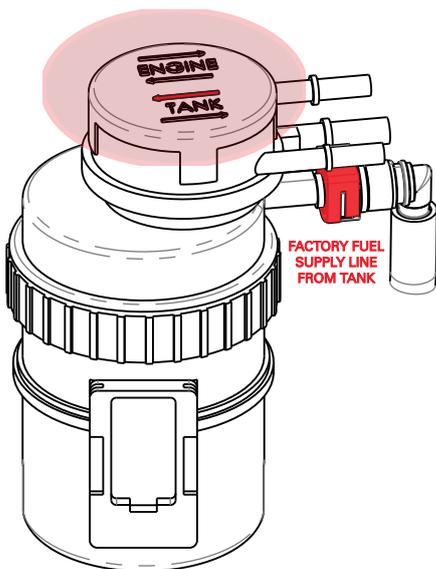


FIG. 5 FACTORY HOSE IDENTIFICATION

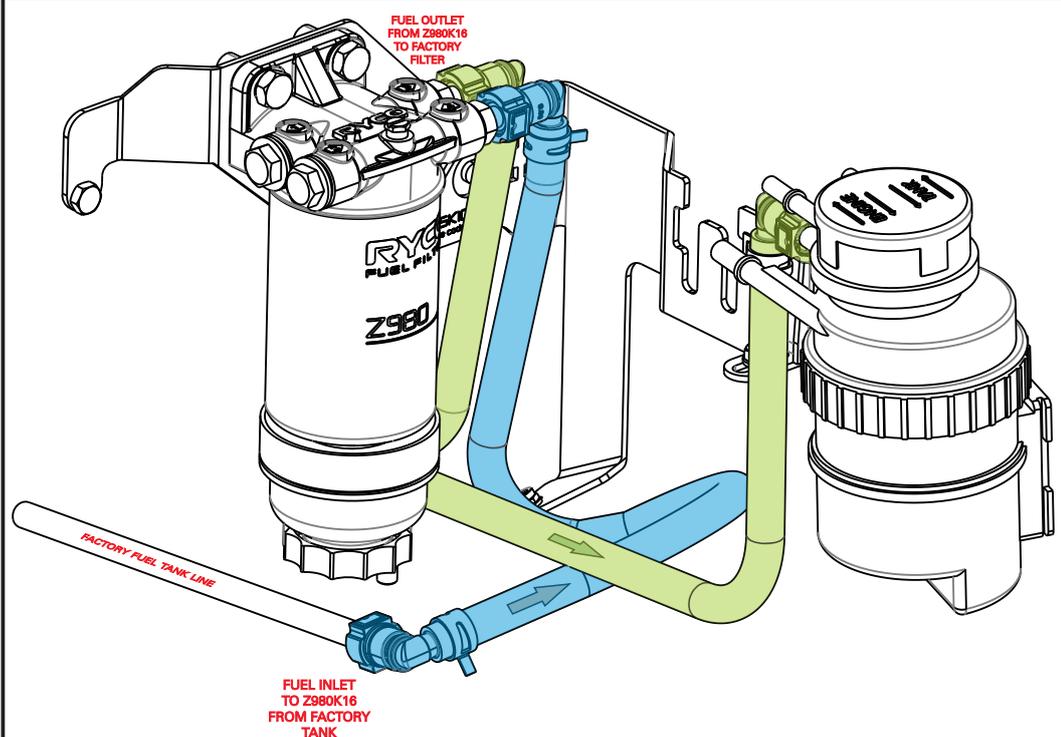
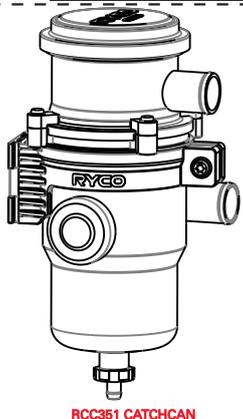
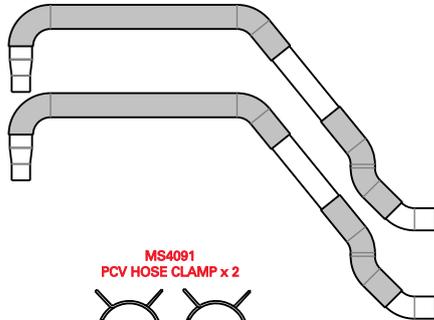
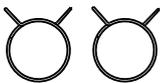
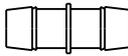


FIG. 6 FUEL WATER SEPARATOR & FUEL HOSE INSTALLATION

X101R FUEL WATER SEPARATOR / CATCHCAN FITMENT INSTRUCTIONS

SECTION 3 CATCHCAN INSTALLATION

PARTS REQUIRED		TOOLS & PPE'S REQUIRED
 <p>RCC351 CATCHCAN</p>	<p>MH1000 PCV HOSE x 2</p>  <p>MS4091 PCV HOSE CLAMP x 2</p>  <p>MS4094 PCV HOSE CLAMP x 4</p>  <p>MS4100 PCV HOSE JOINER</p> 	<ul style="list-style-type: none"> * WORK GLOVES * RACHET SET * HOSE CLAMP PLIERS

WORK PROCEDURE

1. Remove the engine cover where applicable.
2. Mount the catchcan onto the bracket by sliding the RCC351 nylon bracket onto the catchcan mounting position on FB9803, rotate it so it is facing directly toward the engine and tighten the plastic bracket retaining screw.
3. Locate the PCV valve on the driver side of the engine, as per Fig. 7 below.

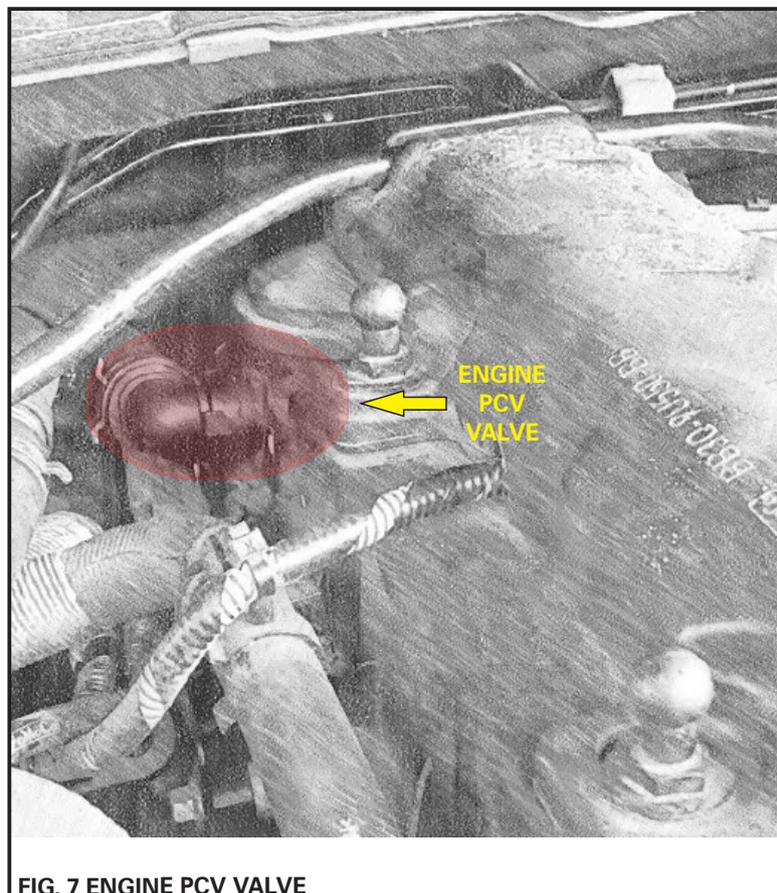


FIG. 7 ENGINE PCV VALVE

X101R FUEL WATER SEPARATOR / CATCHCAN FITMENT INSTRUCTIONS

SECTION 3 CATCHCAN INSTALLATION (CONTINUED)

WORK PROCEDURE (CONTINUED)

3. Disconnect the quick connector on the factory PCV ventilation hose to the engine PCV valve by squeezing the outer ring. Remove the PCV quick connector from the factory hose and connect it to the smaller end (19mm) of a Ryco moulded hose using one of the smaller PCV hose clamps.

4. Feed the hose behind the engine, the PCV hoses run behind the engine and under the factory brake pipes. Push the hoses down past the factory pipes so they sit in the space between the cylinder head and firewall. (Fig.8)

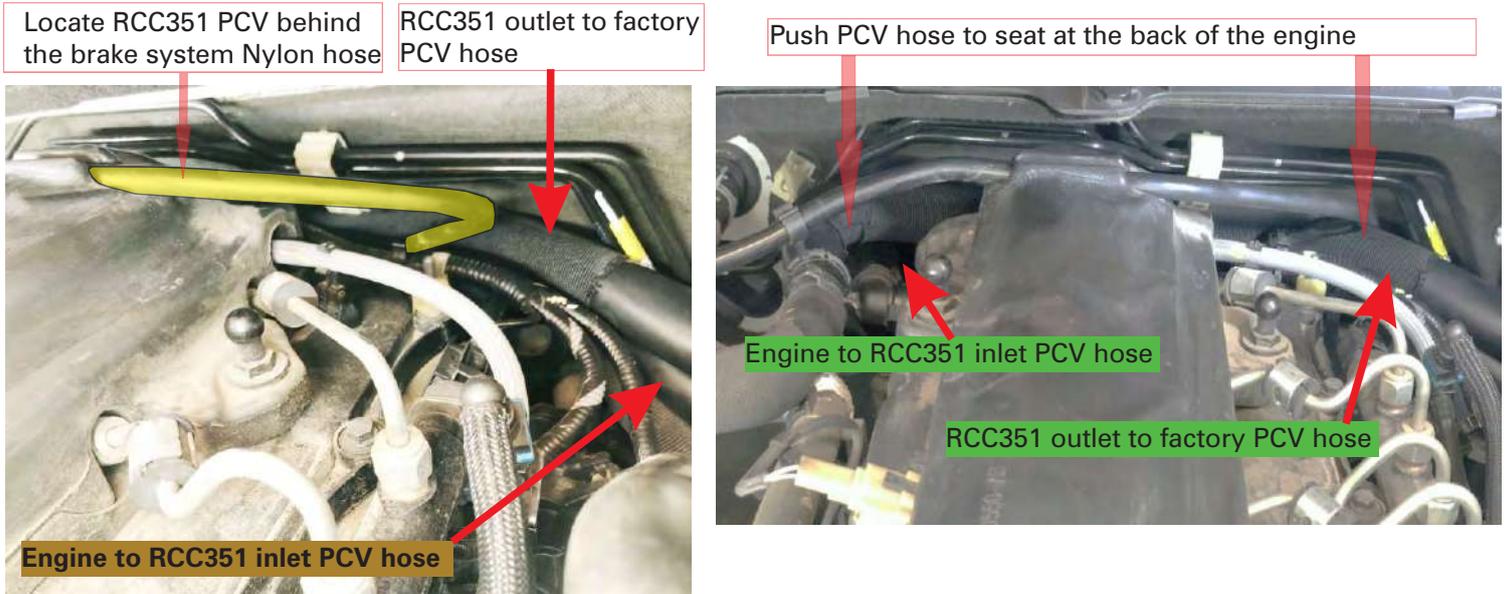


Fig 8. CATCHCAN INSTALLATION PCV HOSES LOCATIONS

Make sure the Ryco PCV hoses are routed behind the AC pipe. Ensure that the hoses are not squashed and there are no kinks. Connect the larger end (25mm) of the Ryco moulded hose to the lower port of the RCC351 with one of the large PCV hose clamps.

5. With the 2nd Ryco moulded hose, connect a straight hose joiner to the smaller end and secure with a small PCV hose clamp. Feed it along the top of the first hose ensuring it also runs under the factory pipes including the AC pipe. Connect the larger end (25mm) to the upper port of the RCC351, securing with a large PCV hose clamp. Connect the factory PCV hose to the straight hose joiner at the small end and secure with a small PCV hose clamp (Fig. 9).

6. Check both PCV hoses are not jammed or kinked by the surrounding engine parts.

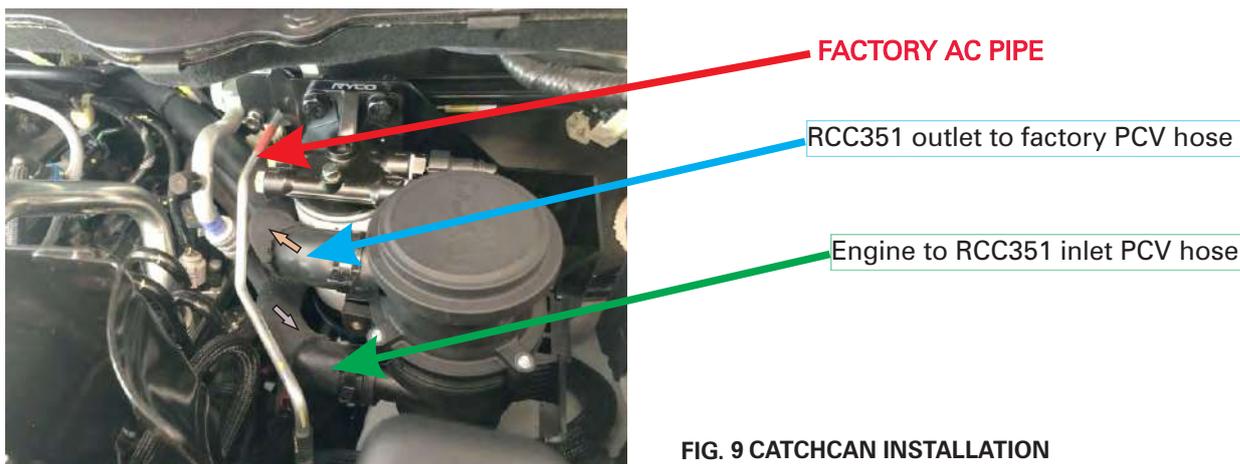
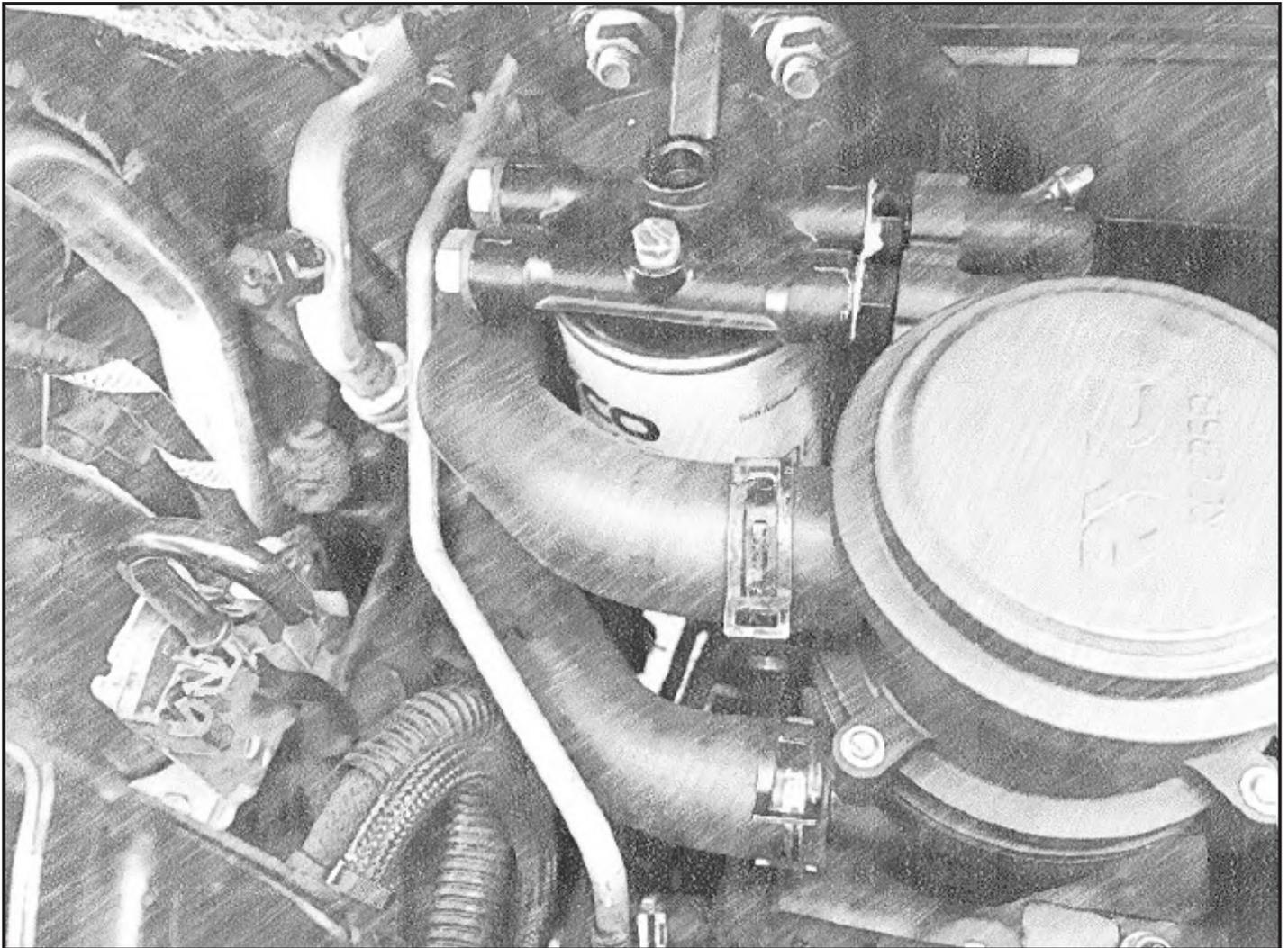


FIG. 9 CATCHCAN INSTALLATION

X101R FUEL WATER SEPARATOR / CATCHCAN FITMENT INSTRUCTIONS

DRAIN HOSE INSTALLATION PROCEDURE (OPTIONAL)

1. To install the drain hose, remove the drain plug from the bottom of RCC351, take out the rubber seal from the plug and refit. Insert the drain hose and secure it with the supplied spring clamp. Insert the hose drain tap to the other end and use the zip ties to secure the hose. To drain, pull back the red section until all oil has drained out.
2. If it has been fitted without using the drain hose supplied, simply slide out the unit from its bracket and loosen the drain plug on the unit and let the oil drain onto a pan or bottle.



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