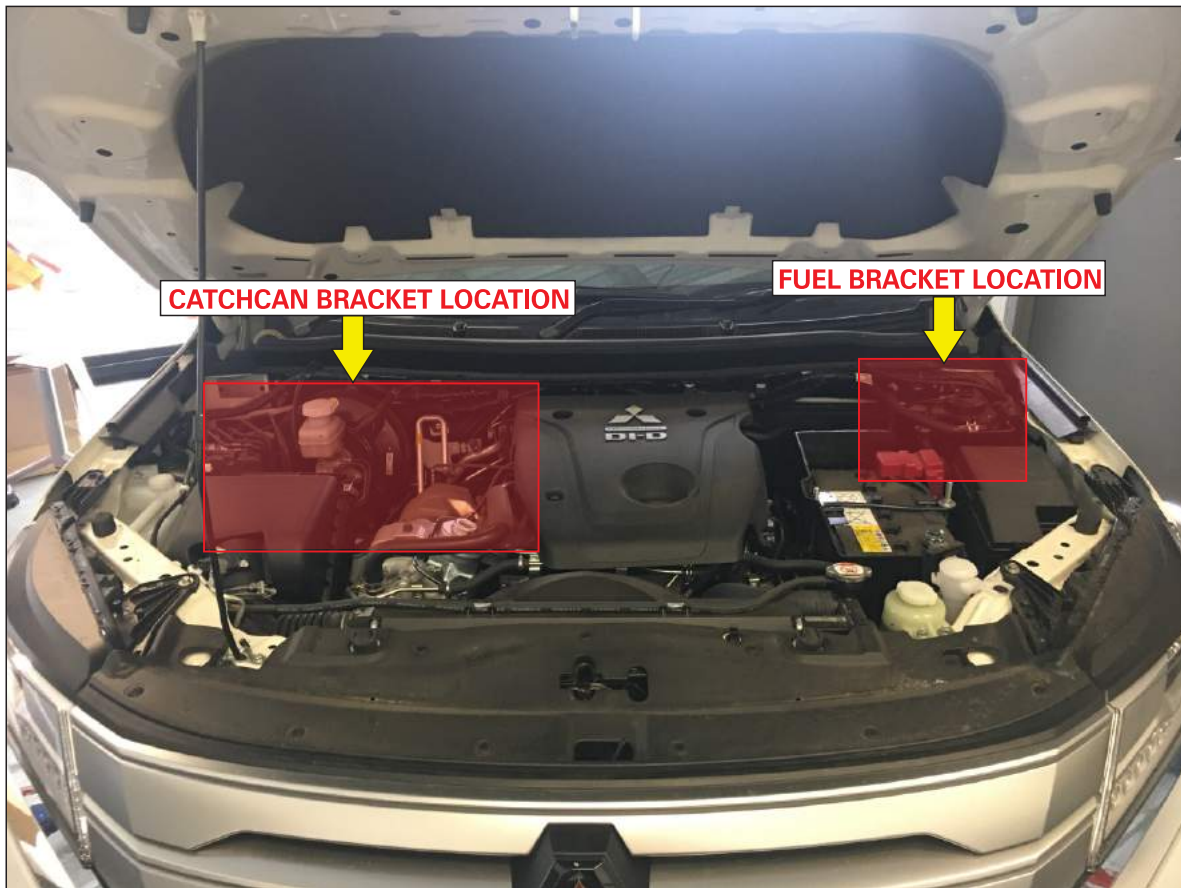


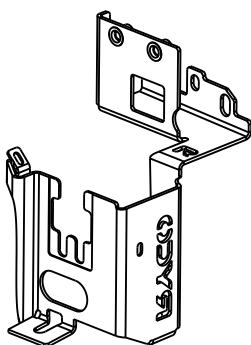
X117R FUEL WATER SEPARATOR / CATCHCAN FITMENT INSTRUCTIONS

MITSUBISHI TRITON MR / PAJERO SPORT - See RYCO catalogue for specific application details.

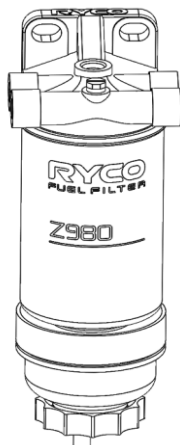
The Ryco X117R kit includes mounting brackets specifically designed for the vehicle, and all components required to complete the installation of Ryco Z980K16 series fuel water separator and RCC351 series catchcan. It is recommended that the installation is conducted by a qualified mechanic following the procedures in this instruction sheet.



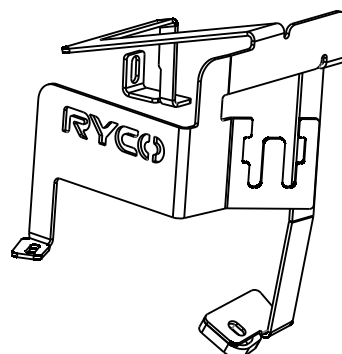
**SECTION 1
FUEL MOUNTING BRACKET**



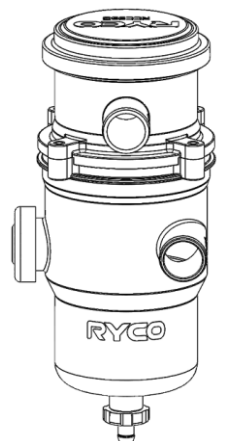
**SECTION 2
FUEL WATER SEPARATOR**



**SECTION 3
CATCHCAN MOUNTING BRACKET**

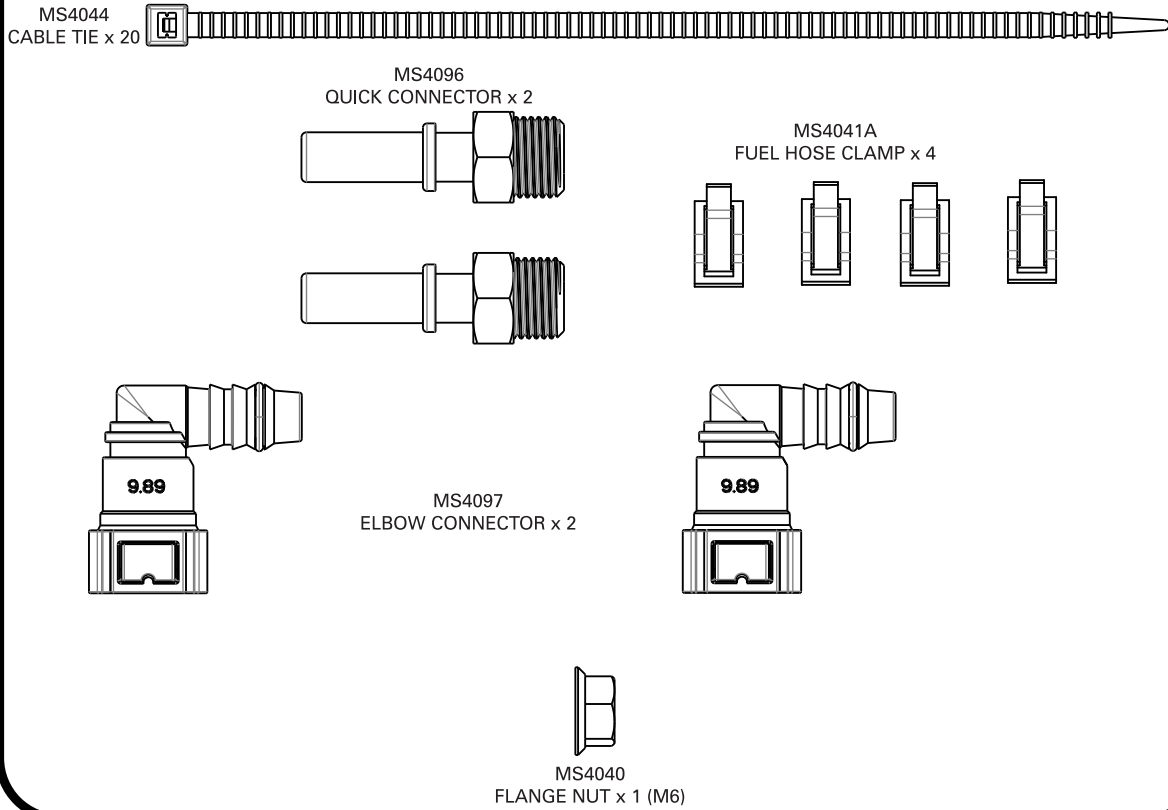


**SECTION 4
CATCHCAN**

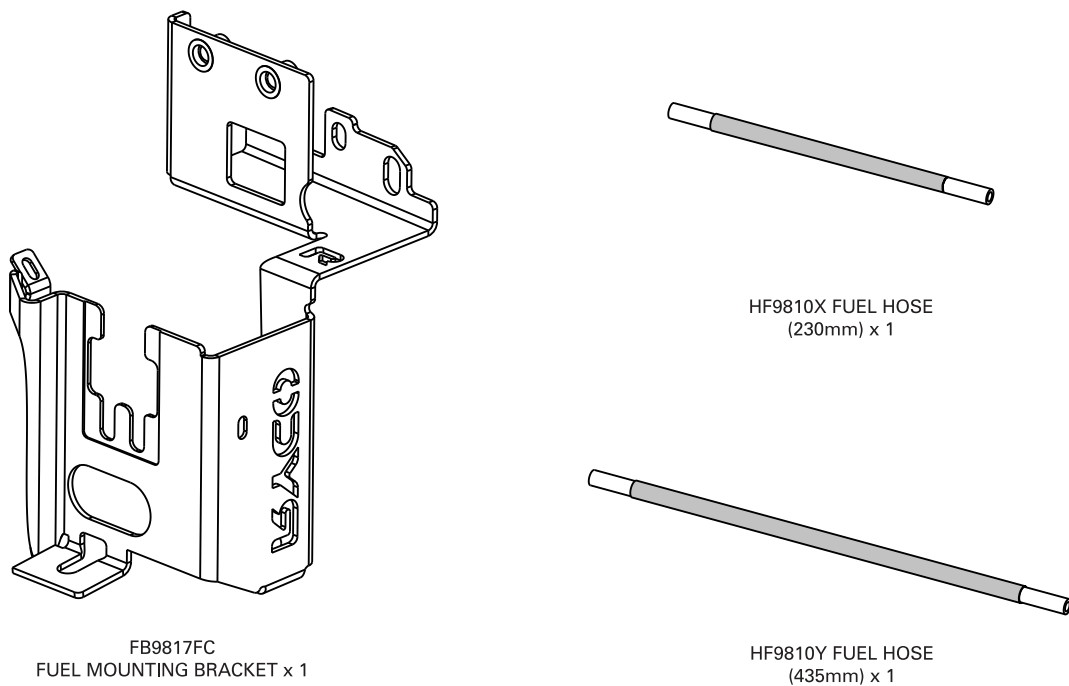


**COMPONENTS INCLUDED IN X117R KIT
(Components not sold SEPARATELY)**

PARTS LIST - FUEL FILTER BRACKET & COMPONENTS BOX



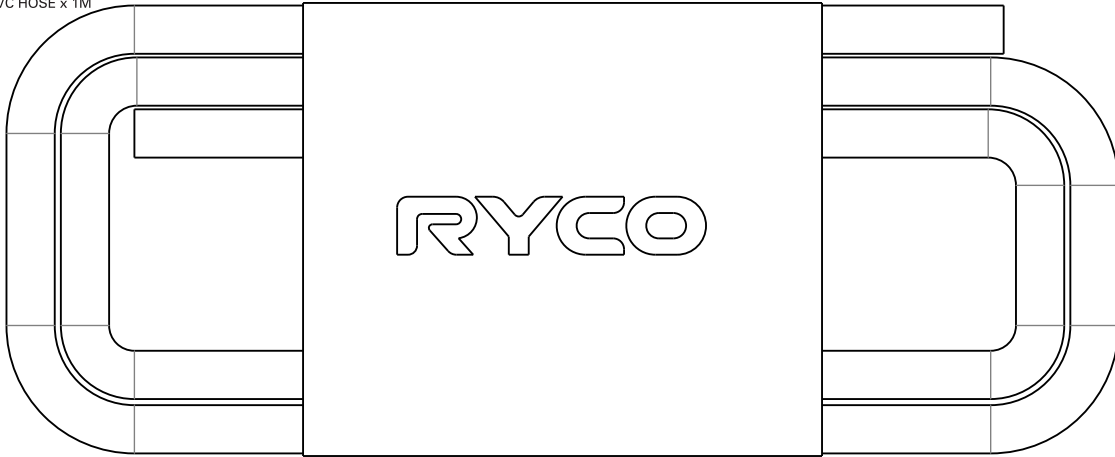
PARTS LIST - PACKAGED IN CARTON



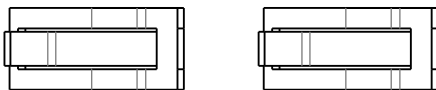
**COMPONENTS INCLUDED IN X117R KIT
(Components not sold SEPARATELY)**

PARTS LIST - CATCHCAN BRACKET & COMPONENTS BOX

MS4089
PVC HOSE x 1M



MS4091
PCV HOSE CLAMP x 2



MS4037A
HEX BOLT x 1 (M6 - 35MM)

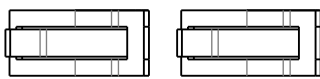


MS4106
FLAT WASHER x 1 (M6)



MS4040
FLANGE NUT x 1 (M6)

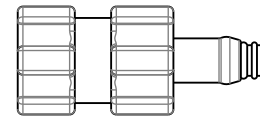
MS4094
PCV HOSE CLAMP x 2



MS4107
SPRING WASHER x 1 (M6)

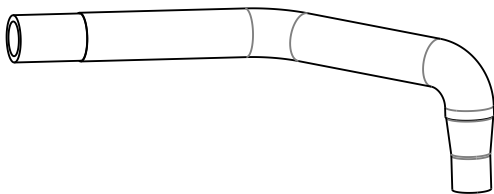


MS4093
DRAIN HOSE CLAMP x 2

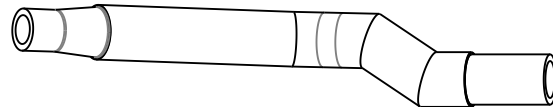


MS4090
DRAIN VALVE x 1

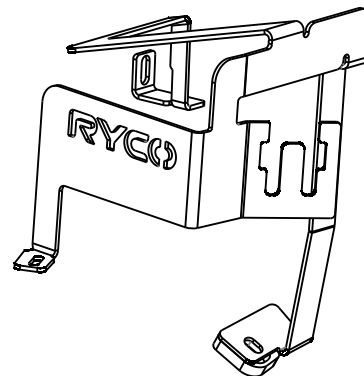
PARTS LIST - PACKAGED IN CARTON



MH9810X
PCV HOSE x 1



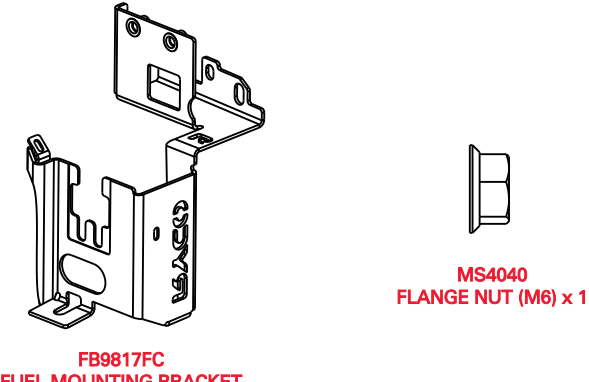
MH9810Y
PCV HOSE x 1



FB9810CX
CATCHCAN MOUNTING BRACKET x 1

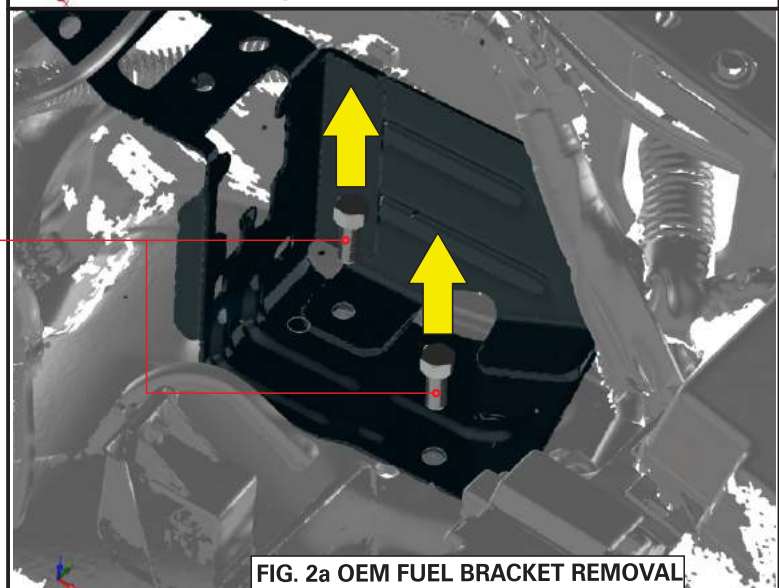
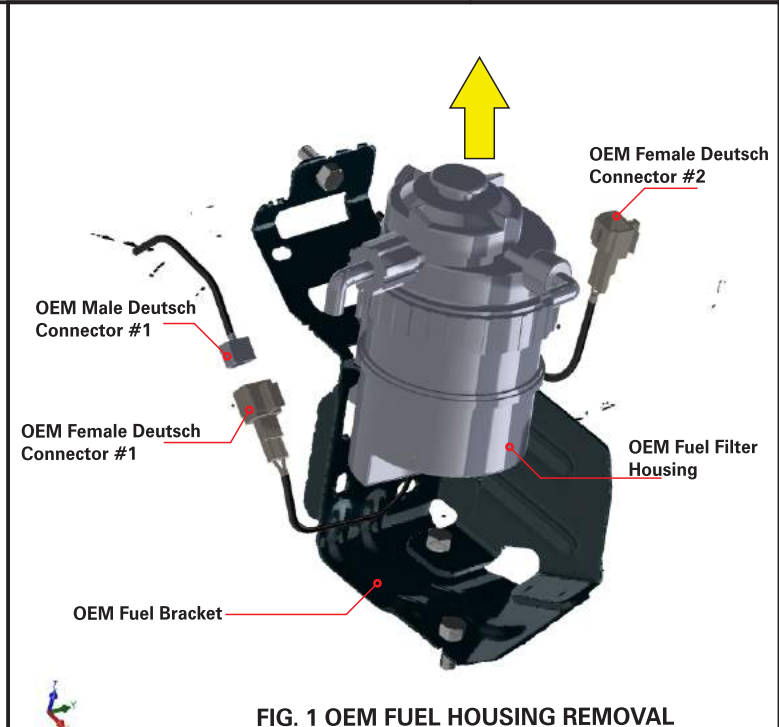
X117R FUEL WATER SEPARATOR FITMENT INSTRUCTIONS

SECTION 1 FUEL MOUNTING BRACKET FITMENT (1/4)

PARTS REQUIRED	TOOLS & PPE'S REQUIRED
 <p data-bbox="279 739 518 772">FB9817FC FUEL MOUNTING BRACKET</p> <p data-bbox="678 660 869 705">MS4040 FLANGE NUT (M6) x 1</p>	<p data-bbox="1268 425 1460 515">* WORK GLOVES * SOCKET SET * RATCHET SET</p>

WORK PROCEDURE

1. Unclip all OEM fuel filter Deutsch connectors from the OEM fuel filter bracket
2. Disconnect OEM male & female Deutsch connectors
3. Remove the OEM fuel filter housing from the OEM fuel filter bracket by lifting it up out of its slot, then place it to left hand side of the bracket.
4. Unscrew the 2 x OEM M8 bolts shown in Fig. 2a. Ensure you hold onto these M8 bolts, as you will be using these to fit the FB9817FC bracket later.



X117R FUEL WATER SEPARATOR FITMENT INSTRUCTIONS

SECTION 1 FUEL MOUNTING BRACKET FITMENT (2/4)

WORK PROCEDURE

5. Unscrew the OEM M8 bolt shown in Fig. 2b. Place this M8 bolt with the other 2 OEM M8 bolts as you will be using these to fit the Ryco FB9817FC bracket later.

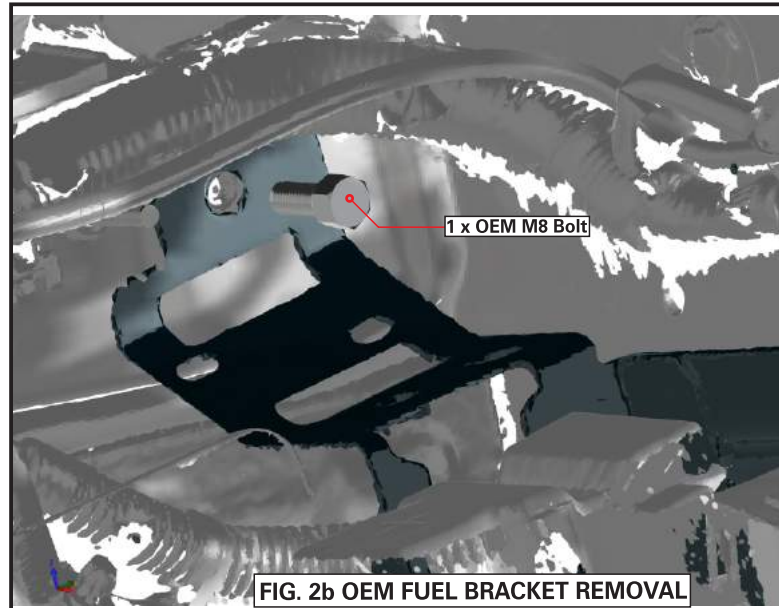


FIG. 2b OEM FUEL BRACKET REMOVAL

6. Remove the OEM fuel supply hose & hose clamps (highlighted green in Fig. 3). Have a rag ready as some fuel will spill from the hose and pipe.

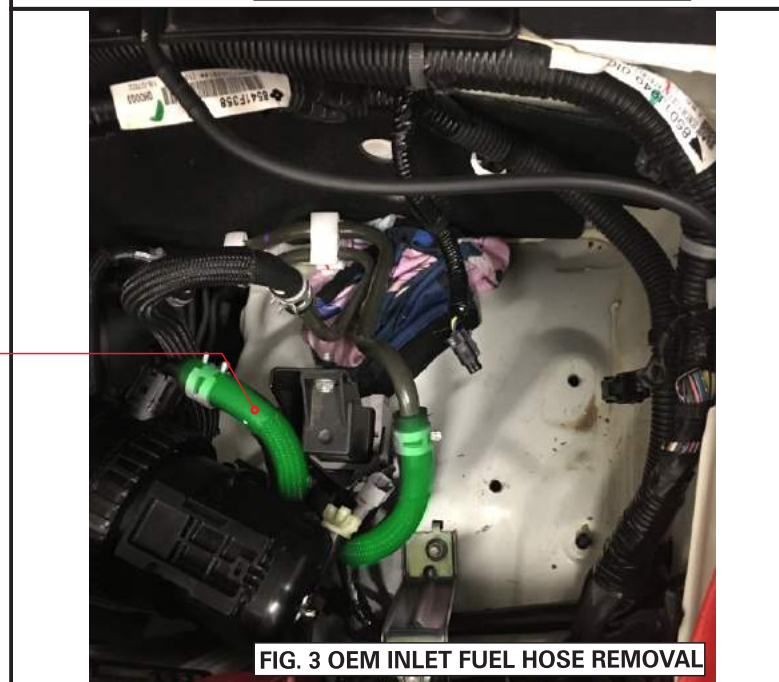


FIG. 3 OEM INLET FUEL HOSE REMOVAL

7. Mount the Ryco FB9817FC bracket using the same mounting points and bolts from the OE bracket you just removed: Half screw in 2 of the OEM M8 bolts in to the base mounting points as shown in Fig. 4a. (Screw in enough to allow Ryco FB9817FC bracket to slide in under the bolt heads).

RYCO FB9817FC Fuel Bracket

2 x OEM M8 Bolts

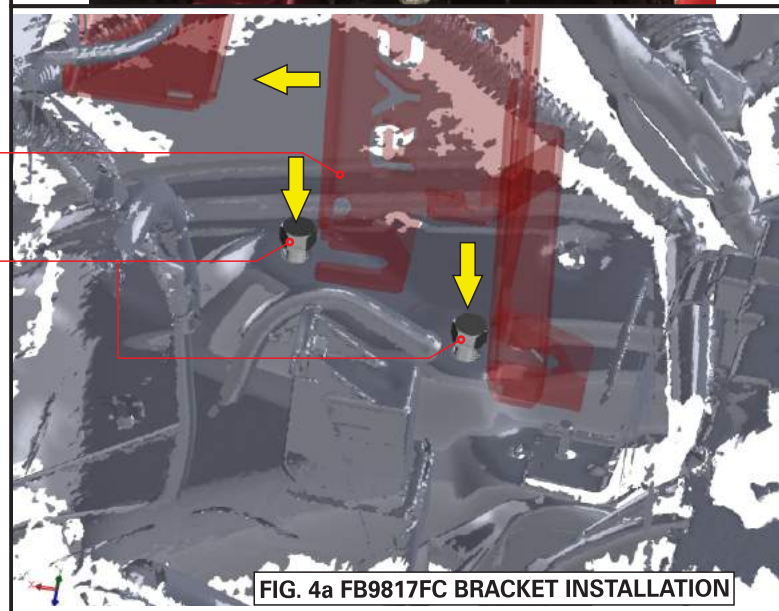


FIG. 4a FB9817FC BRACKET INSTALLATION

8. Slide the Ryco FB9817FC bracket so bottom two slots of the bracket engage under the OEM M8 Bolt heads.

X117R FUEL WATER SEPARATOR FITMENT INSTRUCTIONS

SECTION 1 FUEL MOUNTING BRACKET FITMENT (3/4)

WORK PROCEDURE

9. Screw in the remaining OEM M8 bolt saved from the previous steps into the firewall mounting point. Then install the supplied MS4040 M6 flange nut into the firewall stud as shown in Fig. 4b.

MS4040 M6
Flange Nut

OEM M8 Bolt

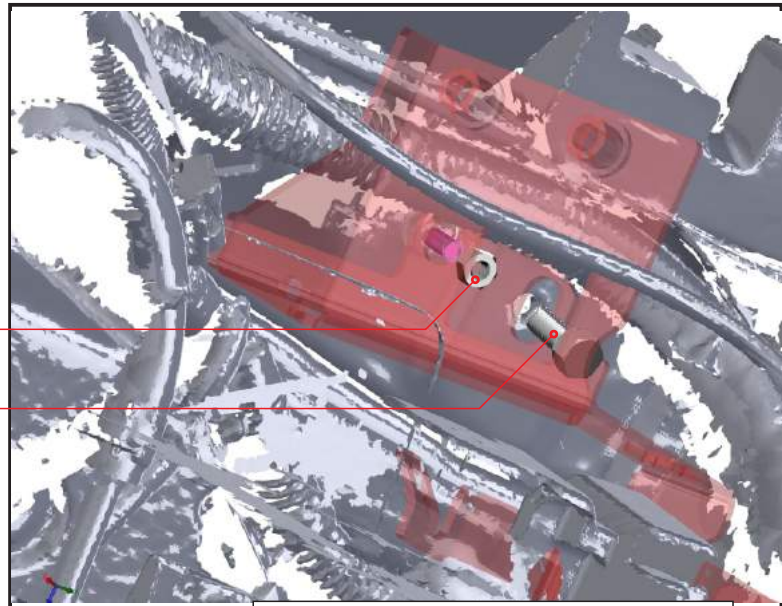


FIG. 4b FB9817FC BRACKET INSTALLATION

10. Proceed to fully tighten the OEM M8 Bolts shown in Fig. 4c.



FIG. 4c FB9817FC BRACKET INSTALLATION

11. Install the OEM Fuel Filter Housing by first passing the female OEM Deutsch connector#1 through the opening as shown in Fig.5a. Then mount the OEM fuel filter housing on to its mounting slot as shown in Fig.5a.

OEM Fuel Filter
Housing

OEM Female Deutsch
Connector#1

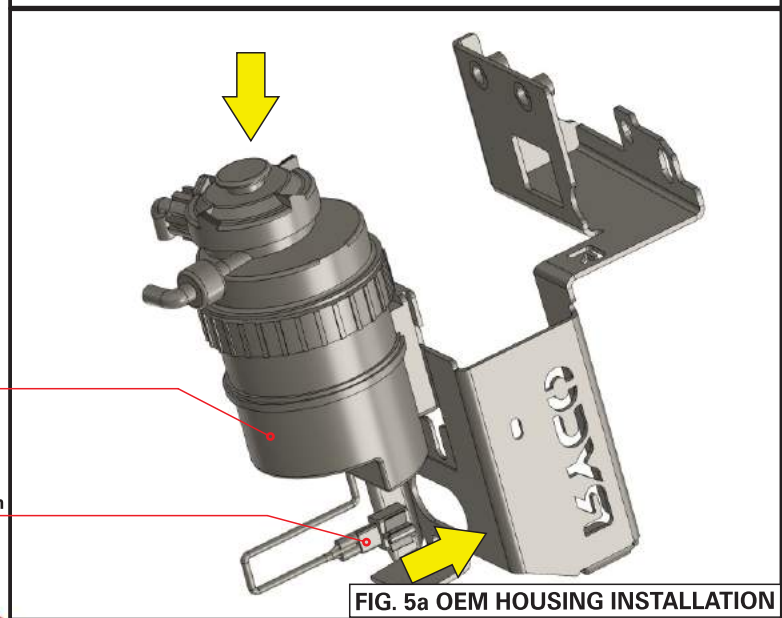


FIG. 5a OEM HOUSING INSTALLATION

X117R FUEL WATER SEPARATOR FITMENT INSTRUCTIONS

SECTION 1 FUEL MOUNTING BRACKET FITMENT (4/4)

WORK PROCEDURE

12. Clip the female OEM Deutsch connect#1 onto the slot as shown in Fig.5b.

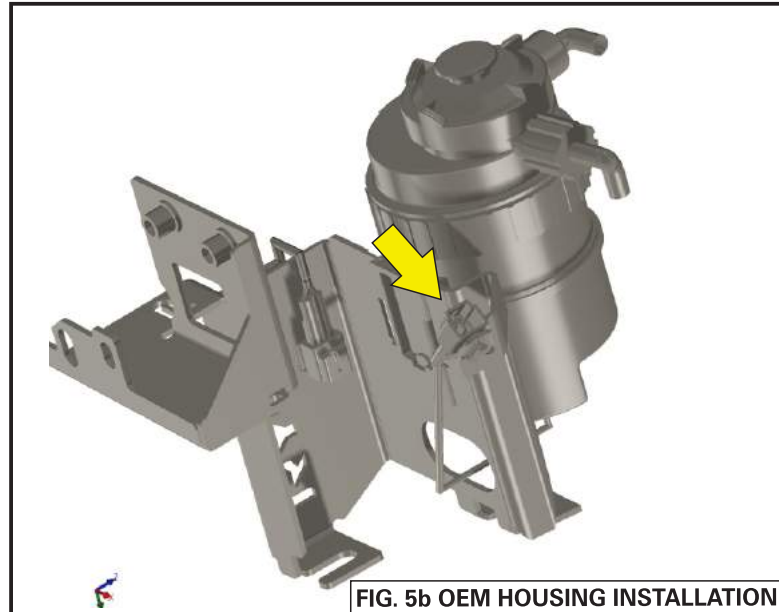


FIG. 5b OEM HOUSING INSTALLATION

13. Connect the male and female OEM Deutsch connector#1 then cable tie the OEM Deutsch connector#1 loom to the slot on the FB9817FC bracket as shown in FIG. 5c

- Male OEM Deutsch Connector#1 Loom
- Cable Tie
- Female OEM Deutch Connector #2
- Male OEM Deutsch Connector#1

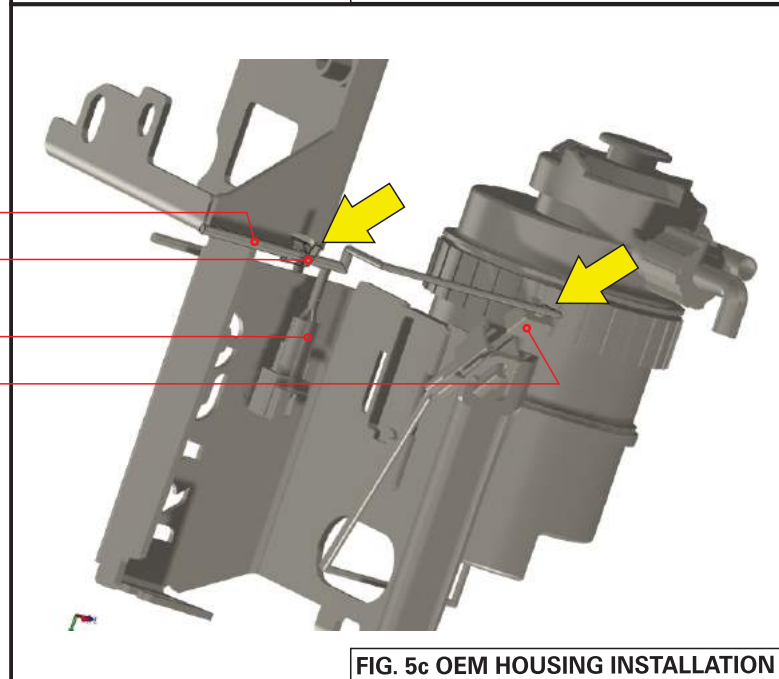
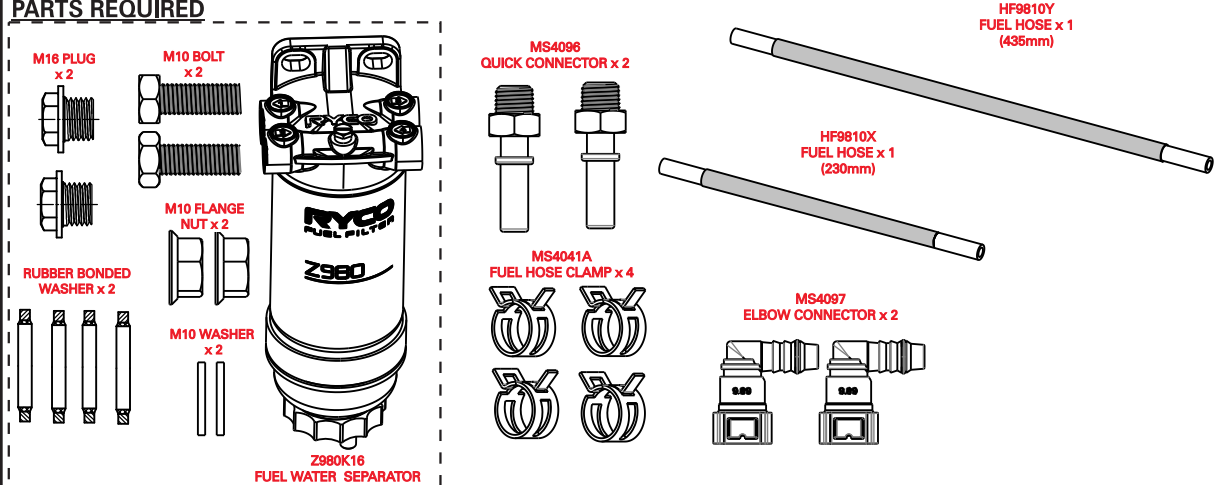


FIG. 5c OEM HOUSING INSTALLATION

14. Clip the female OEM Deutsch connector#2 to the slot on the FB9817FC bracket as shown in Fig. 5c.

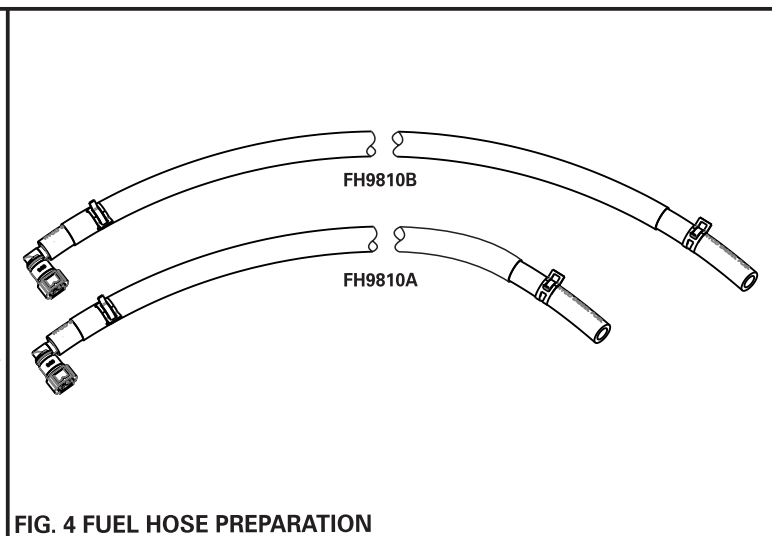
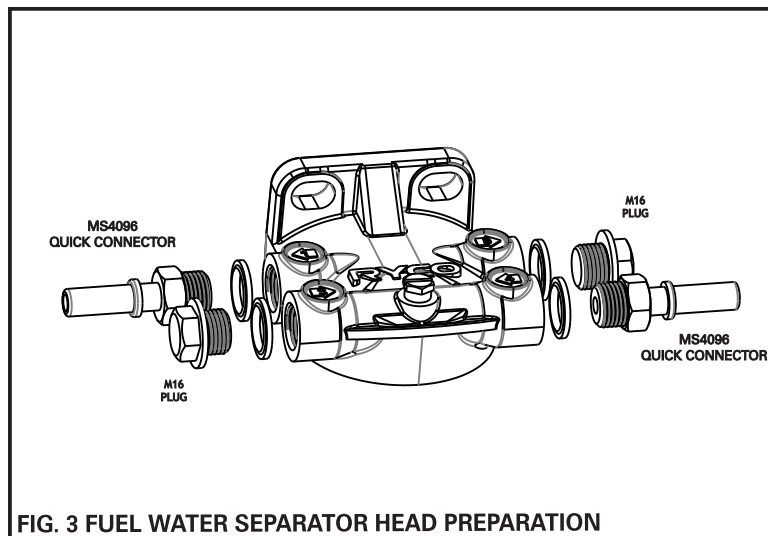
X117R FUEL WATER SEPARATOR FITMENT INSTRUCTIONS

SECTION 2 FUEL WATER SEPARATOR INSTALLATION

PARTS REQUIRED		TOOLS & PPE'S REQUIRED	
		<ul style="list-style-type: none"> * WORK GLOVES * RACHET SET * HOSE CLAMP PLIERS * RAGS 	

WORK PROCEDURE (1/3)

1. Select the supplied male quick connectors (MS4096) that fit your Ryco fuel water separator head.
2. Locate the blanking plugs supplied with your Ryco fuel water separator.
3. Install the Ryco fuel water separator head with metal quick connectors, blanking plugs and rubber bonded washers as shown in Fig.3. Tighten blanking plugs (on Port 2 & 3) and quick connectors (on Port 1 & 4).
4. Install two (2) supplied elbow connectors onto one end of both the supplied fuel hoses and install four (4) supplied fuel hose clamps onto each end of the fuel hoses, as per Fig. 4. Do not tighten the fuel hose clamps yet.

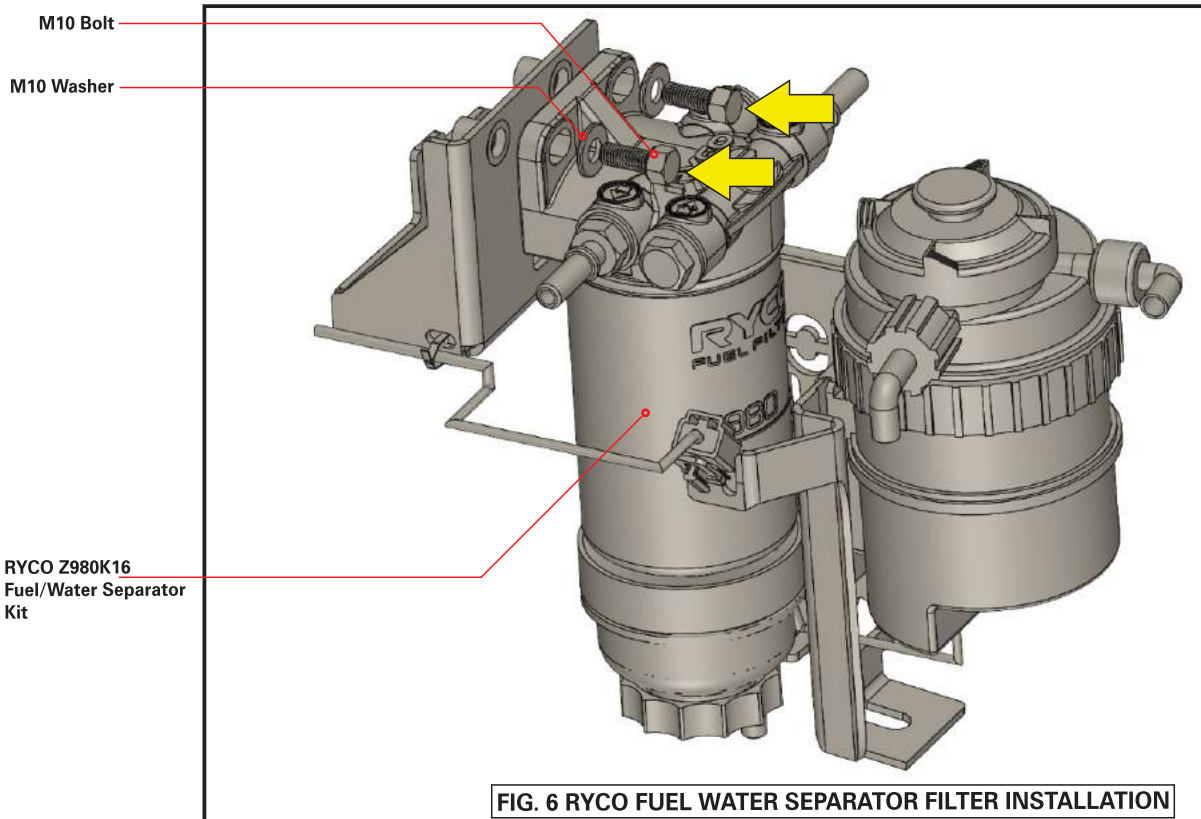


X117R FUEL WATER SEPARATOR FITMENT INSTRUCTIONS

SECTION 2 FUEL MOUNTING BRACKET FITMENT (2/3)

WORK PROCEDURE

5. Using the M10 Bolts and Washers supplied in the Ryco Z980K16 fuel water separator kit, attach the Z980K16 to the FB9817FC bracket as shown in FIG. 6.
6. Starting with the longer Ryco fuel hose FH9810B, install the open end of the hose on to the vehicles fuel tank supply pipe, and tighten with the MS4041A hose clamp as shown in Fig. 7 (overleaf).
7. Route the hose around the front of the OE fuel filter housing and along the other side of the fuel filter assembly, shown as green in Fig. 7 (overleaf).
Connect the MS4097 Elbow Connector to the Z980K16 Inlet Quick Connector.
Connection has been successfully made when you hear a 'click' noise.



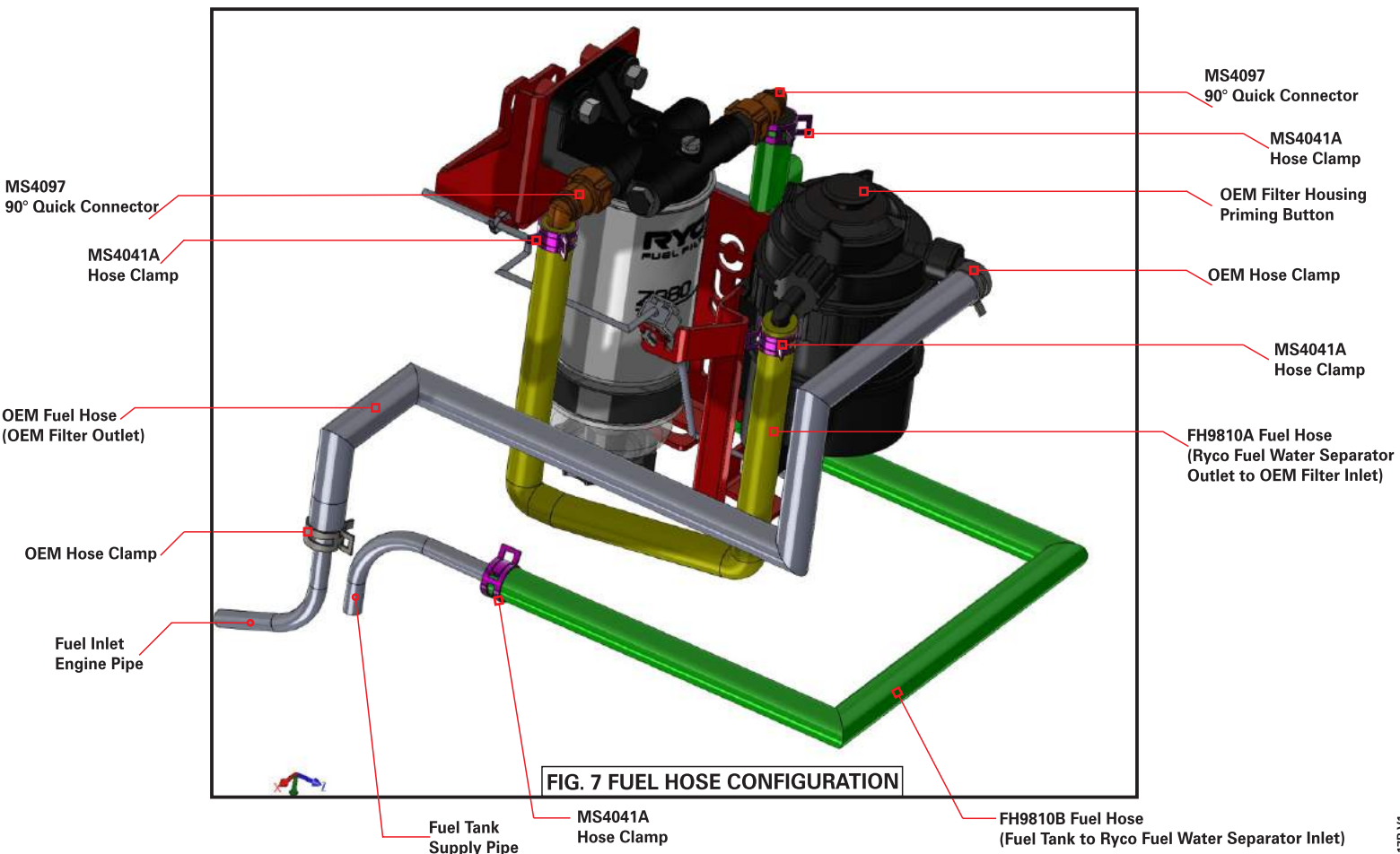
X117R FUEL WATER SEPARATOR FITMENT INSTRUCTIONS

SECTION 2 FUEL MOUNTING BRACKET FITMENT (3/3)

WORK PROCEDURE


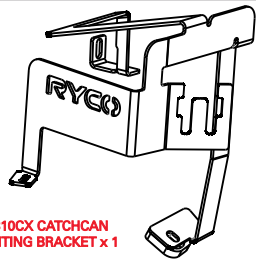
REFER TO FIG.7 DIAGRAM BELOW

8. With the shorter Ryco fuel hose FH9810A, install the open end of the hose onto the inlet port of OEM fuel filter housing and tighten with the MS4041A Hose Clamp. Route the hose, shown in yellow in Fig. 7. and connect the MS4097 Elbow Connector to the Z980K16 Outlet Quick Connector. Connection has to be successfully made when you hear a 'click' noise.
9. **WARNING: The fuel system MUST BE PRIMED** prior to starting the engine. **DO NOT OPEN THE BLEED SCREW ON THE RYCO Z980K16, keep closed.**
10. Locate the priming button on top of the factory fuel filter and prime the fuel system by pumping the button repeatedly. Continue pumping until it is hard to press. The priming process could take approximately 5 - 10 minutes.
11. Once you can no longer depress the priming button, turn on the engine. With the engine running, check for fuel leaks on all the installed equipment.



X117R CATCHCAN FITMENT INSTRUCTIONS

SECTION 3 CATCHCAN INSTALLATION

PARTS REQUIRED		TOOLS & PPE'S REQUIRED	
	MH9810X PCV HOSE x 1	* WORK GLOVES * RACHET SET * HOSE CLAMP PLIERS	
	MH9810Y PCV HOSE x 1		
	MS4091 PCV HOSE CLAMP x 2	MS4037A HEX BOLT x 1 (M6 - 35MM)	MS4106 FLAT WASHER x 1 (M6)
	MS4094 PCV HOSE CLAMP x 2	MS4107 SPRING WASHER x 1 (M6)	MS4040 FLANGE NUT x 1 (M6)
			FB9810CX CATCHCAN MOUNTING BRACKET x 1

WORK PROCEDURE

1. Remove the plastic engine cover.
2. Remove OEM PCV hose highlighted green in FIG. 8A
3. Remove the OEM Bolt from behind the ABS module as show in Fig. 8B, hold on to this bolt as you will screw it back into this thread in a later step.
4. Remove the rear airbox mounting OEM bolt & washer shown in FIG. 8C.

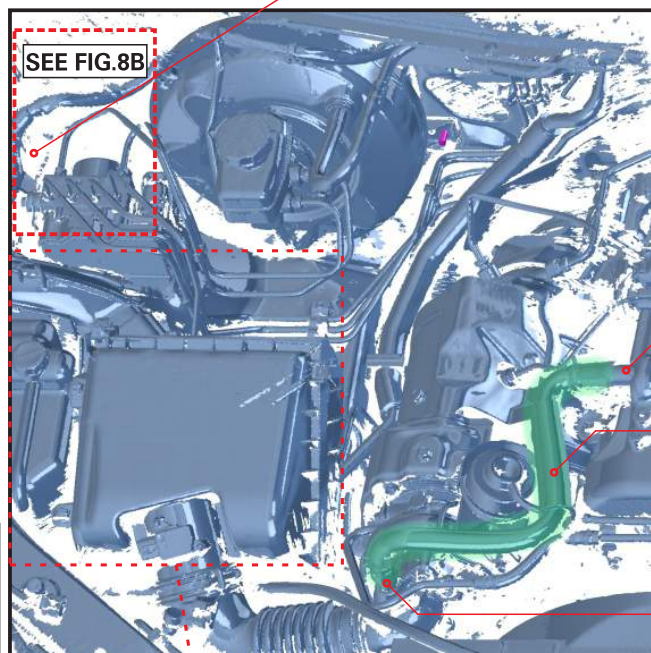


FIG. 8A OEM PCV HOSE REMOVAL

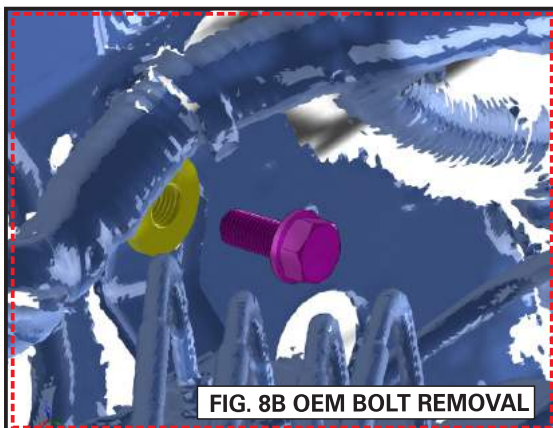


FIG. 8B OEM BOLT REMOVAL

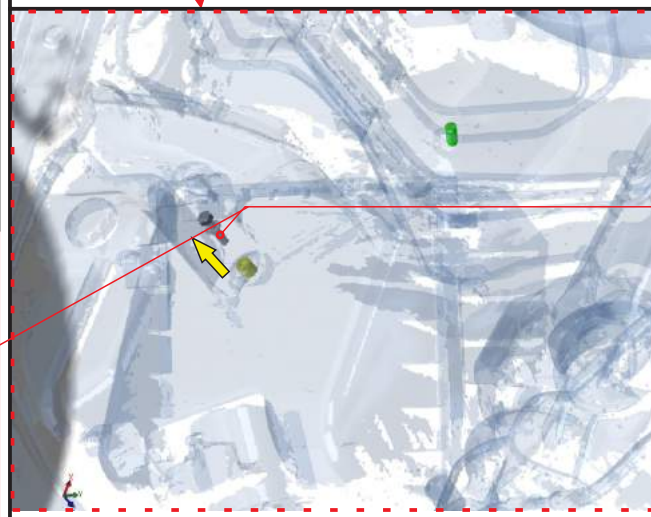


FIG. 8C OEM AIR BOX BOLT REMOVAL

X117R CATCHCAN FITMENT INSTRUCTIONS

SECTION 3 CATCHCAN INSTALLATION

WORK PROCEDURE

5. When fitting the FB9810CX Catchcan bracket as shown in FIG. 9A to 9C, you will be required to manouevre the bracket around engine components.

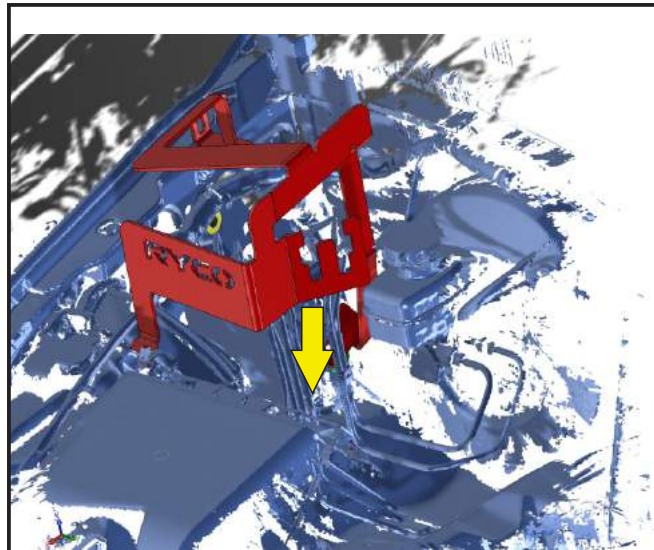


FIG. 9A FB9810CX BRACKET INSTALLATION

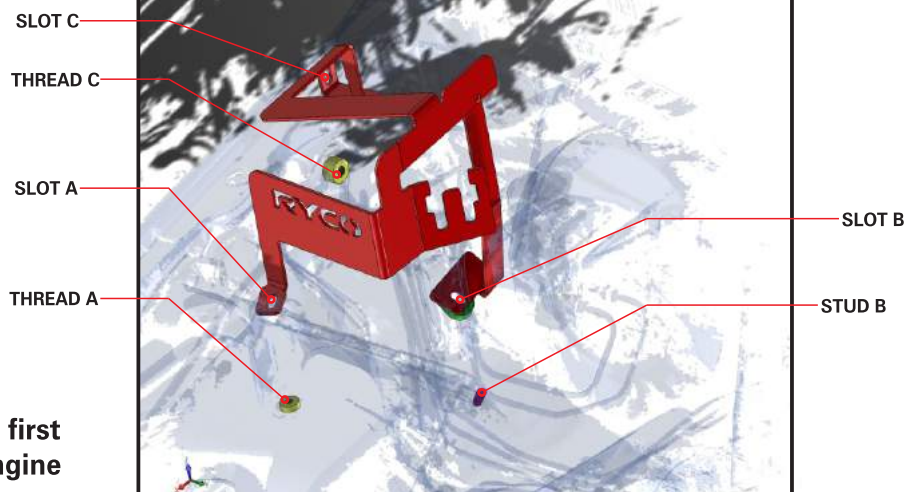


FIG. 9B FB9810CX SLOT/THREAD/STUD LOCATIONS

6. Referring to FIG. 9B, we recommend first engaging the bracket Slot B on to engine Stud B under the brake pipes. Then proceed to line up Slot A with Thread A behind the air box. Finally, line up Slot C to be concentric with Thread C behind the ABS Module.

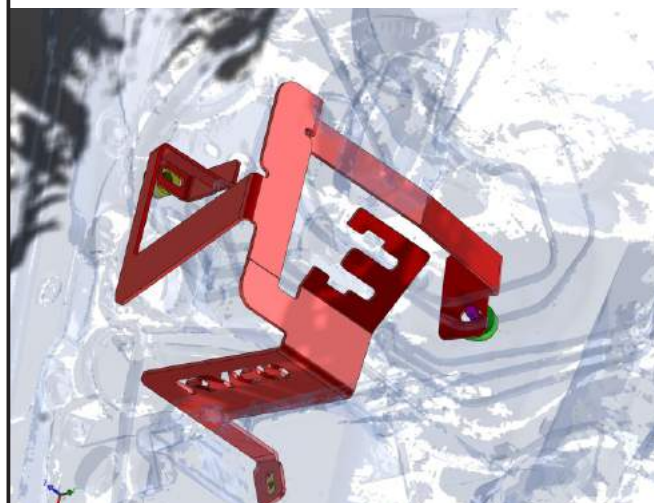


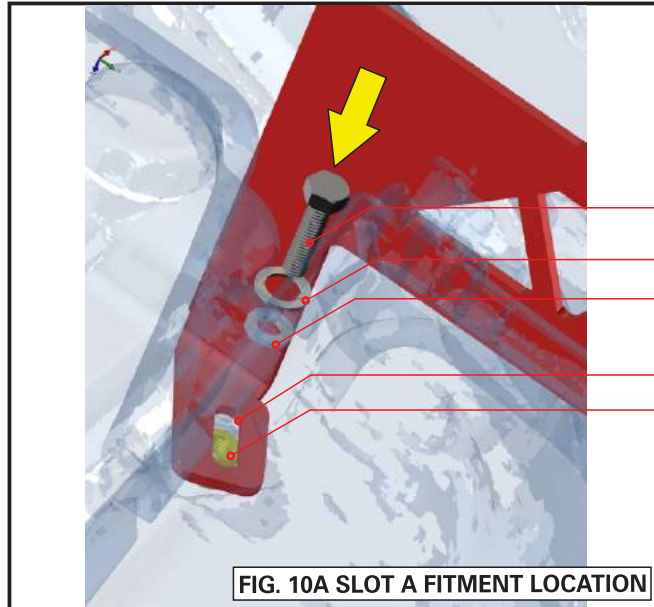
FIG. 9C FB9810CX BRACKET IN POSITION

X117R CATCHCAN FITMENT INSTRUCTIONS

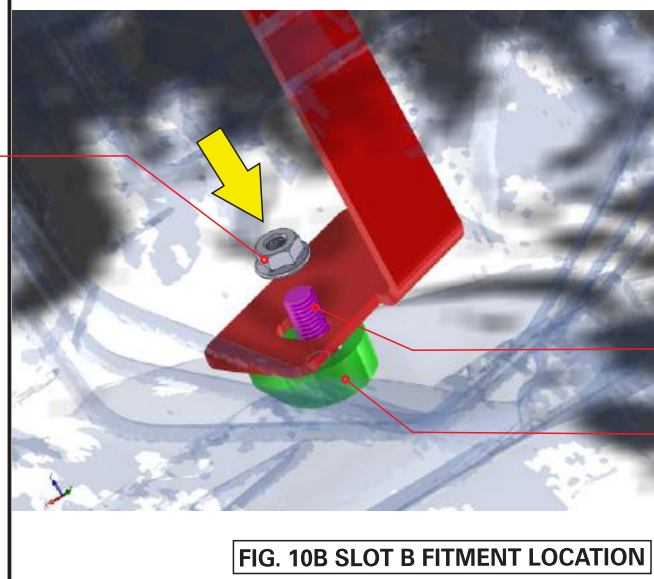
SECTION 3 CATCHCAN INSTALLATION

WORK PROCEDURE

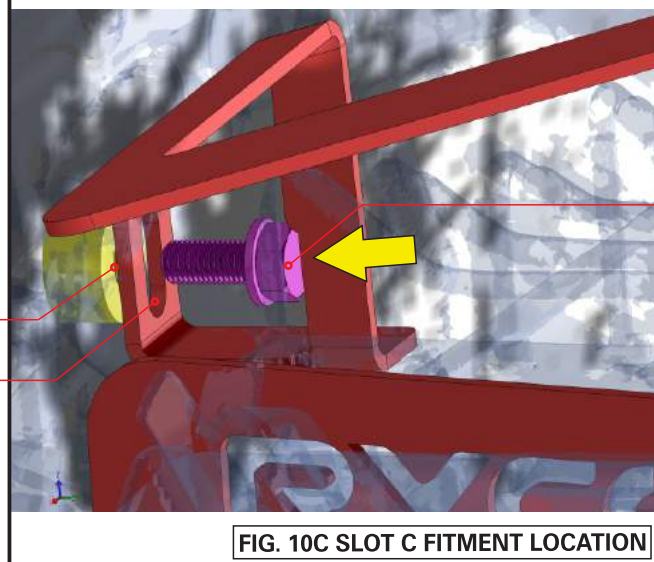
7. Engage supplied MS4037A M6 bolt into supplied MS4107 M6 spring washer, MS4106 M6 washer & Slot A, proceeding to then screw into Airbox mount Thread A.



8. Screw supplied MS4040 M6 flange nut onto Stud B.



9. Screw OEM bolt into Thread C.

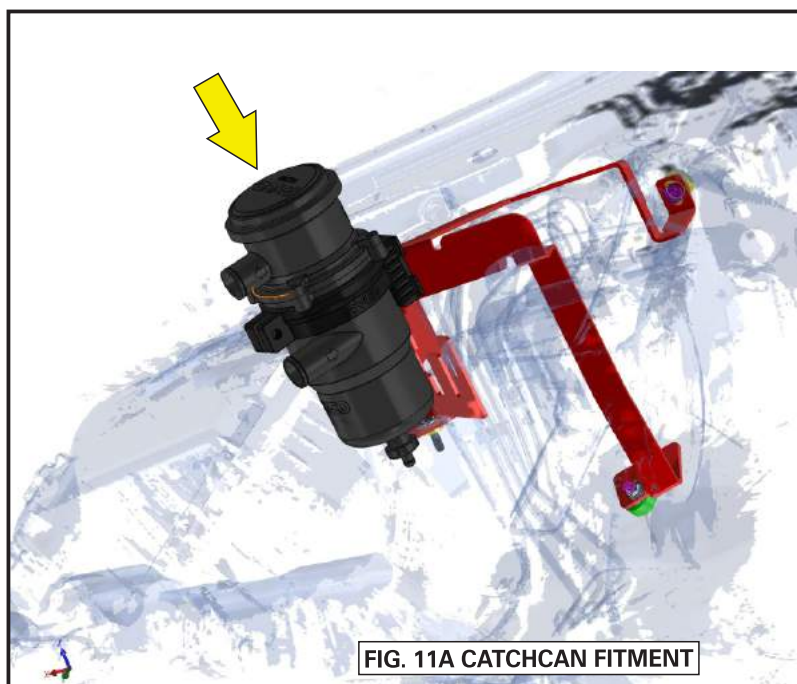


X117R CATCHCAN FITMENT INSTRUCTIONS

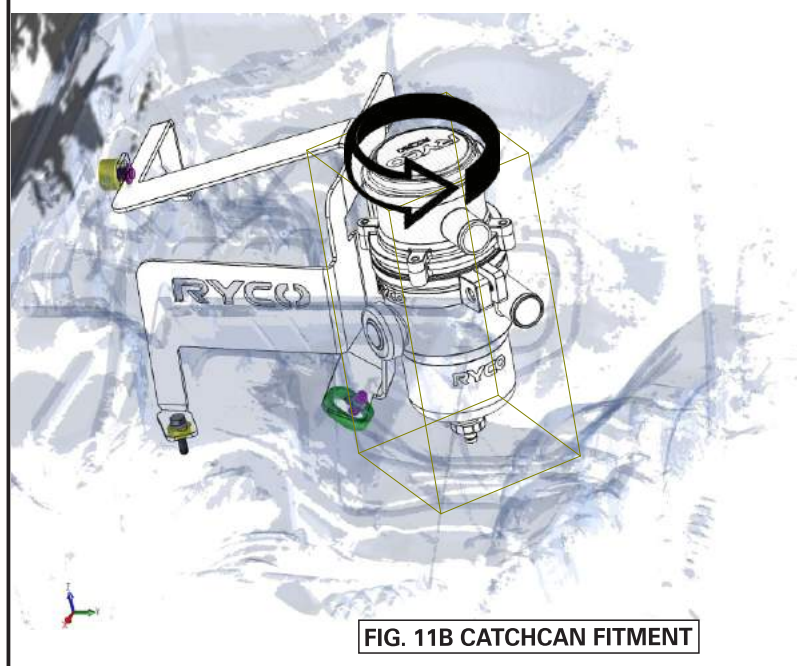
SECTION 4 CATCHCAN INSTALLATION

WORK PROCEDURE

10. Slot RCC351 Catchcan with nylon bracket onto the FB9810CX Catchcan bracket as shown in FIG. 11A



11. Proceed to rotate the RCC351 to match the alignment shown in FIG. 11B, ensuring clearance to the Engine Airbox.



X117R CATCHCAN FITMENT INSTRUCTIONS

SECTION 4 CATCHCAN INSTALLATION

WORK PROCEDURE

REFER TO FIG. 11A & 11B

12. Starting with the MH9810Y PCV hose, install the small end on to the Engine PCV Port & tighten with the MS4094 hose clamp as shown in Fig. 11A & 11B.
13. Install the other end of the MH9810Y PCV hose on to the lower, inlet port, of the RCC351 Catchcan and tighten with the MS4091 hose clamp as shown in Fig. 11A & 11B.
14. Install the larger end of the MH9810X PCV hose on to the upper, outlet port, of the RCC351 Catchcan and tighten with a MS4091 hose clamp. Install the other end of the MH9810X PCV hose on to the Air Intake PCV port and tighten with a MS4094 hose clamp as shown in Fig. 11A & 11B.

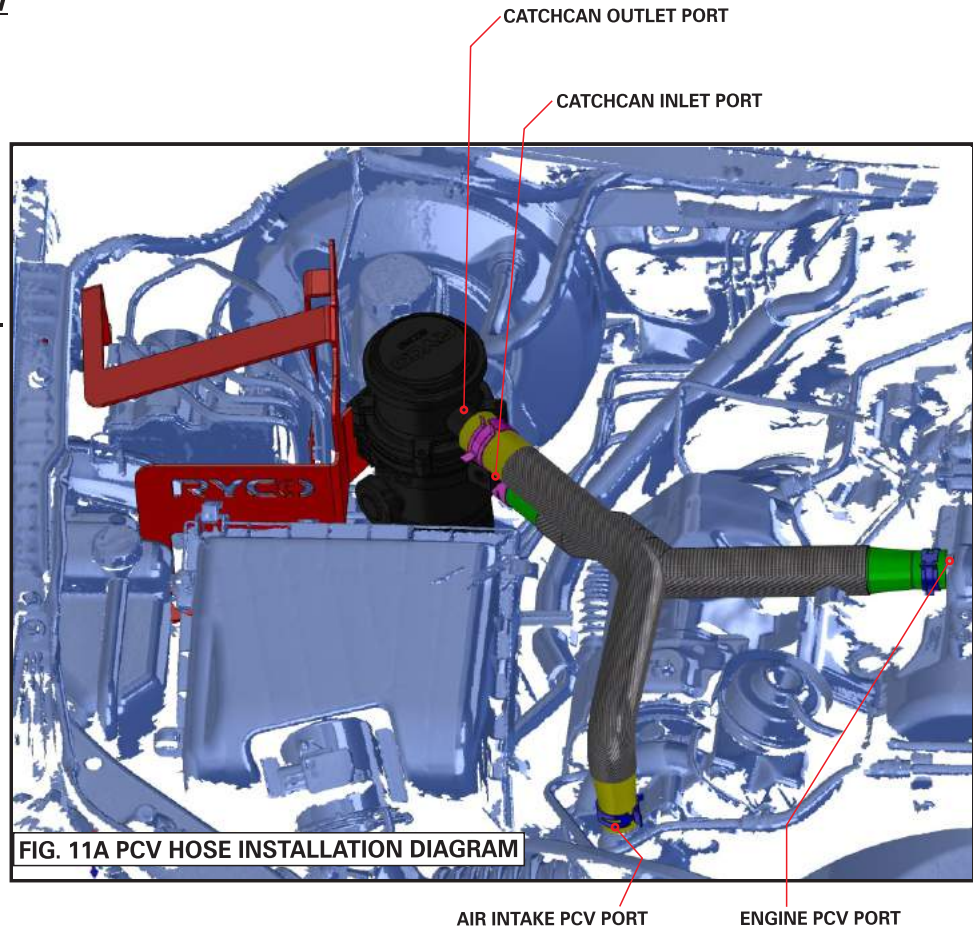


FIG. 11A PCV HOSE INSTALLATION DIAGRAM

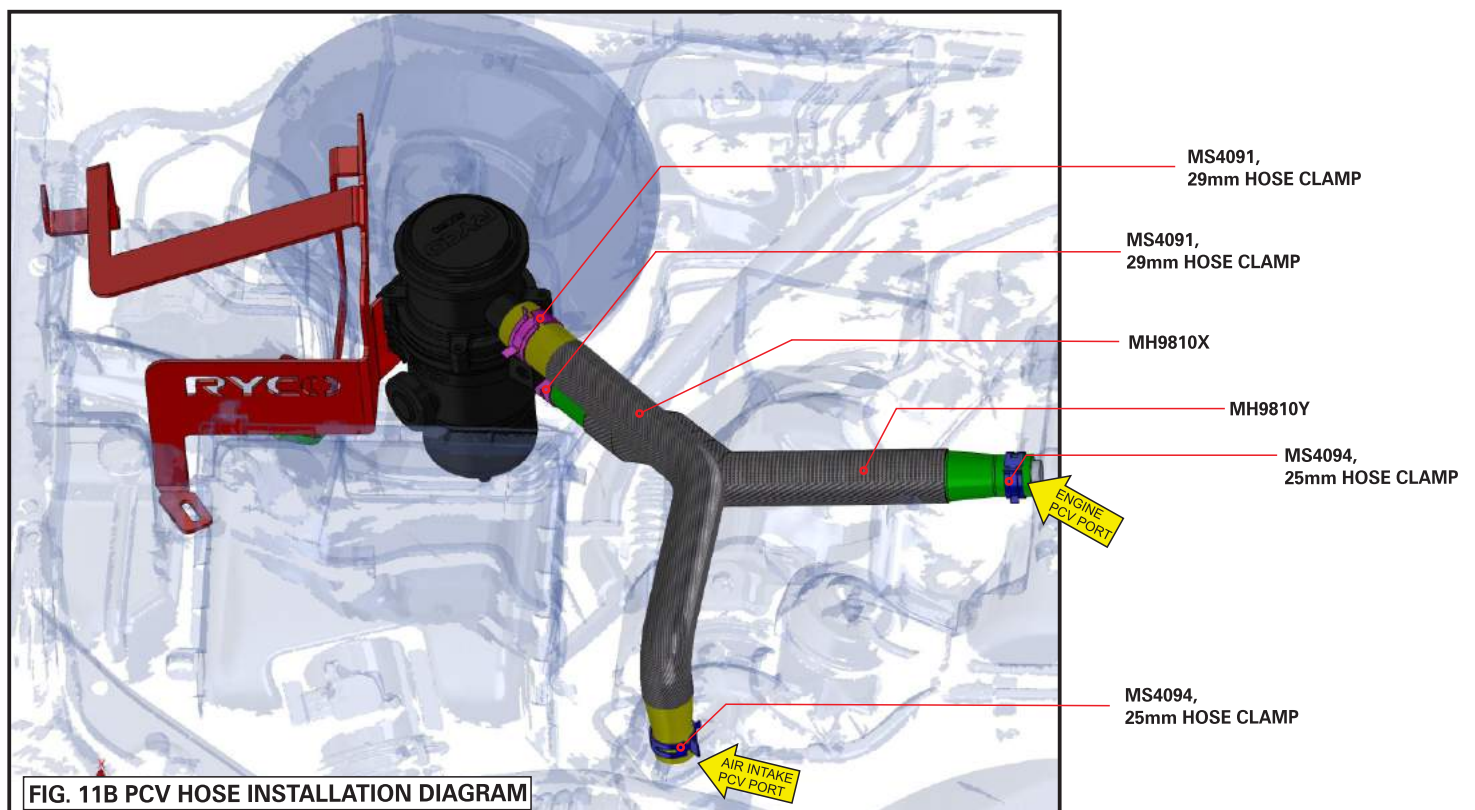


FIG. 11B PCV HOSE INSTALLATION DIAGRAM

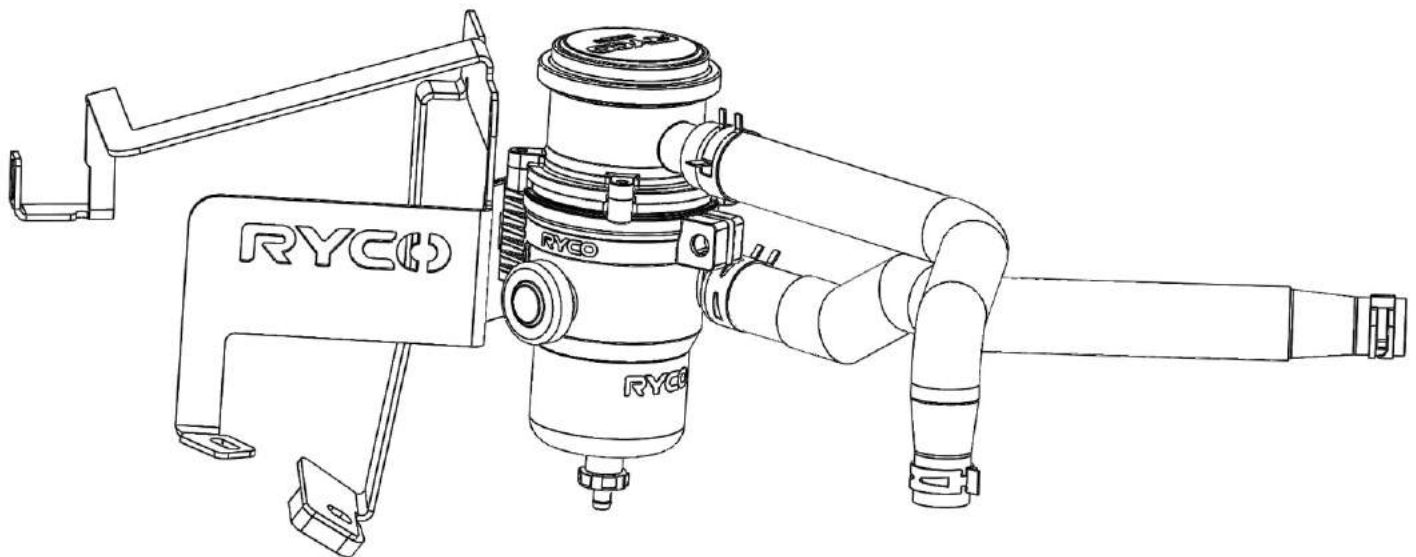
X117R CATCHCAN FITMENT INSTRUCTIONS

SECTION 4 CATCHCAN INSTALLATION (CONTINUED)

WORK PROCEDURE (CONTINUED)

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 remove the drain plug on the unit and let the oil drain onto a pan or bottle.



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