FIRE SUPPRESSION

Fire suppression for all levels
of racing and motorsport

Photograph for illustration purposes

Installation Manual

Model Number: **CF-TEC2700MK** Part Number: **100.000.220**

2.7kg Coldfire plumbed-in fire suppression system with mechanical activation

FIA APPROVED

MANUFACTURER: FEV
MODEL: CF-TEC2700MK
HOM. NO: EX.035.24
FIA STANDARD: 8865-2015

Updated October 2024

Important Information

The CF-TEC2700MK, homologated to FIA 8865-2015 and forming part of the all new “CF-TEC” range of fire suppression systems from FEV. The CF-TEC range features Coldfire, an eco-friendly extinguishing agent that excels in the removal of heat from any object, offering unmatched safety and performance for both occupants and vehicles.

Coldfire is compatible with various racing fuels and is FIA approved for use with petrol + up to 85% Ethanol content. In addition, Coldfire will limit re-ignition and will encapsulate and remove hydrocarbons, thereby reducing hydrocarbon smoke and increasing occupant visibility during the event of a fire.

Please read the following before commencing any installation.

1. This manual should be read and understood before starting installation.
2. The components supplied should be used in accordance with the installation and any advice FEV provide. If you do not comply with the instructions or any such advice, without limitation, any warranty may be invalidated.
3. This product should be returned every 2 years from date of last service to FEV or an approved service agent, for a complete check and service – and re-certification for a further 2 years.

Please Note

FEV FIA approved Coldfire based systems are tested and rated for a temperature operation range of –15 to +80 degrees C in accordance with FIA regulations. Users should ensure that where high temperatures are anticipated adequate provision is made to locate the system away from high temperature sources (exhaust, catalyst, etc) and if necessary fit reflective insulation around the cylinder.

THIS IS A SAFETY ITEM! CHECK YOUR INSTALLATION CAREFULLY! IF IN DOUBT ASK!

BEFORE EVERY EVENT CHECK SYSTEM CONTENTS, NOZZLES ARE CLEAN AND ALL CONNECTIONS ARE SECURE.

FIA

It must be emphasised that any plumbed in fire extinguisher system is mainly designed to delay the development of the fire and consequently give the driver and co-driver time to exit the car; the system is not designed to put out the fire and prevent the car from burning.

Please do not tamper with, make changes to, or use non FEV parts on your new fire extinguisher system as this will invalidate the homologation and affect the performance of the product. If any new parts are needed, please call FEV on 0044 (0) 1243 55 55 66

If any changes have been made to this product from the original specification, it could in effect stop you racing.

Kit Contents

Qty	Description	Part Number
1	CF-TEC2700MK Complete Cylinder - Filled	100.000.221
1	CF-TEC2700MK & EK 2 - Part End Brackets	100.300.041
2	CF-TEC2700MK & EK Standard Nut & Bolt Straps (526mm)	100.500.037
5.5mtr	10mm Aluminium Pipework	100.800.014
2mtr	6mm Aluminium Pipework	100.800.013A
1	6ft T Handle Pull Cable	100.800.001
1 or 2	12ft T Handle Pull Cable	100.800.002
2	Pull Cable Nipple	100.800.003
1	CF-TEC Cockpit Roll Cage Nozzle Assembly with 10mm Straight Connector	100.800.080
1	CF-TEC2700 Footwell Nozzle Assembly with 10mm Swivel Elbow Connector	100.800.081
2	CF-TEC2700 LH/RH Engine Nozzle with 6mm Swivel Elbow Connector	100.800.082
1	CF-TEC2700 Centre Engine Nozzle with 6mm Swivel T Connector	100.800.083
1	6mm T Connector	100.900.056
1	10mm Y Connector	100.900.035
1	10mm Y Connector (with 6mm Reducer Installed)	100.900.035 (100.900.051)
10	10mm Aluminium Pipe Clips	100.800.011B
5	6mm Aluminium Pipe Clips	100.800.011C
2	Large ‘E’ Label	200.300.005
1	Small ‘E’ Label	200.300.005B

Installation Instructions

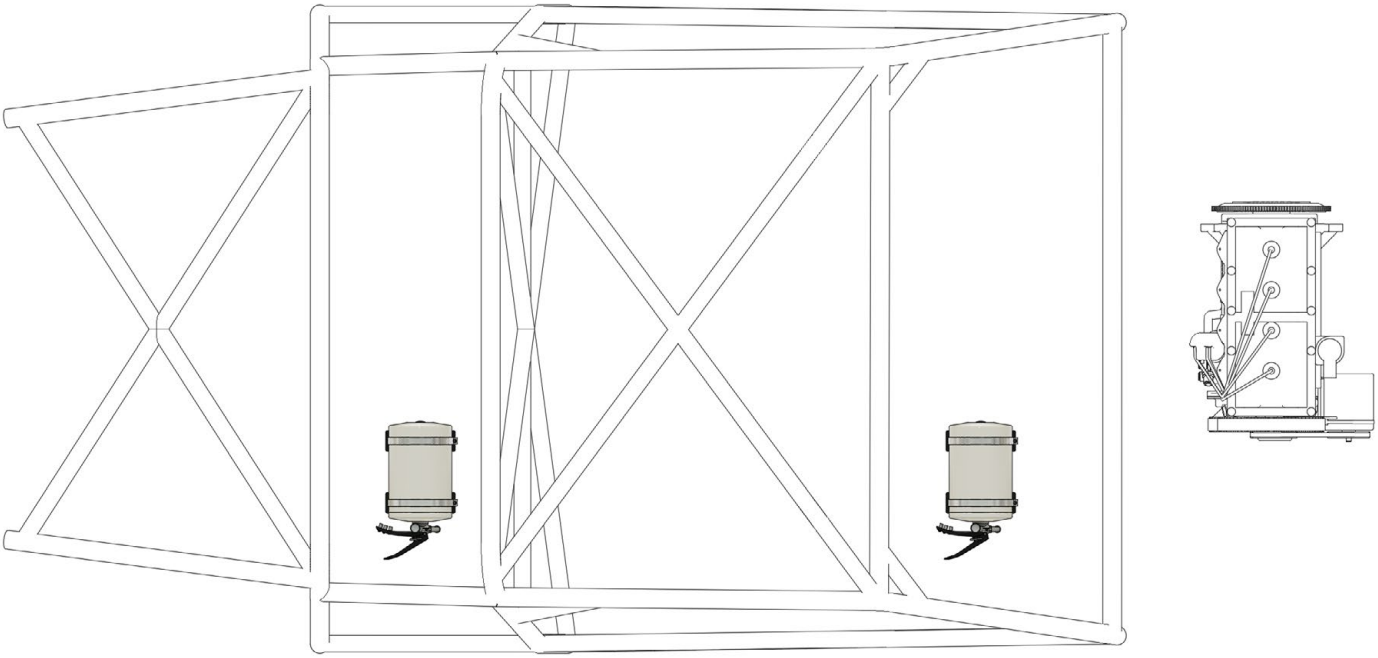
Cylinder, Cradle & Straps

Cylinder Location

Install cylinder in accordance with the following instructions and as per figure 1.

It is mandatory to affix the cylinder and cradle within the safety cell (as per figure 1) and with the FIA homologation and maintenance labels made visible for scrutineering. Either a transverse or longitude position can be selected. It is recommended to position the cylinder and cradle in either footwell, or in the rear of the cockpit behind the seats. Ensure adequate provisions are made to position the cylinder away from high temperature sources.

Figure 1



Cradle & Straps Installation

Install cradle and straps in accordance with the following instructions and as per figure 2 & 3.

Mount the cylinder cradle to the vehicle using M6 bolts, washers and Nyloc nuts. Do not use rivets or self-tapping screws. For vehicles experiencing high vibration levels, use suitable anti-vibration mounts.

1. Mark four fixing holes as per figure 2.
2. Drill the four marked fixing holes with a drill size appropriate for the bolt size being used.
3. Fix the cradle to the vehicle using M6 bolts, washers and Nyloc nuts as per figure 3.
4. Secure the cylinder in the cradle with the pre-installed straps, always ensure a lock nut is used for the strap bolt as per figure 3.

It is accepted to use a cradle and strap of your own specification, provided it conforms to FIA Appendix J, Art. 253 7.2.2

Figure 2

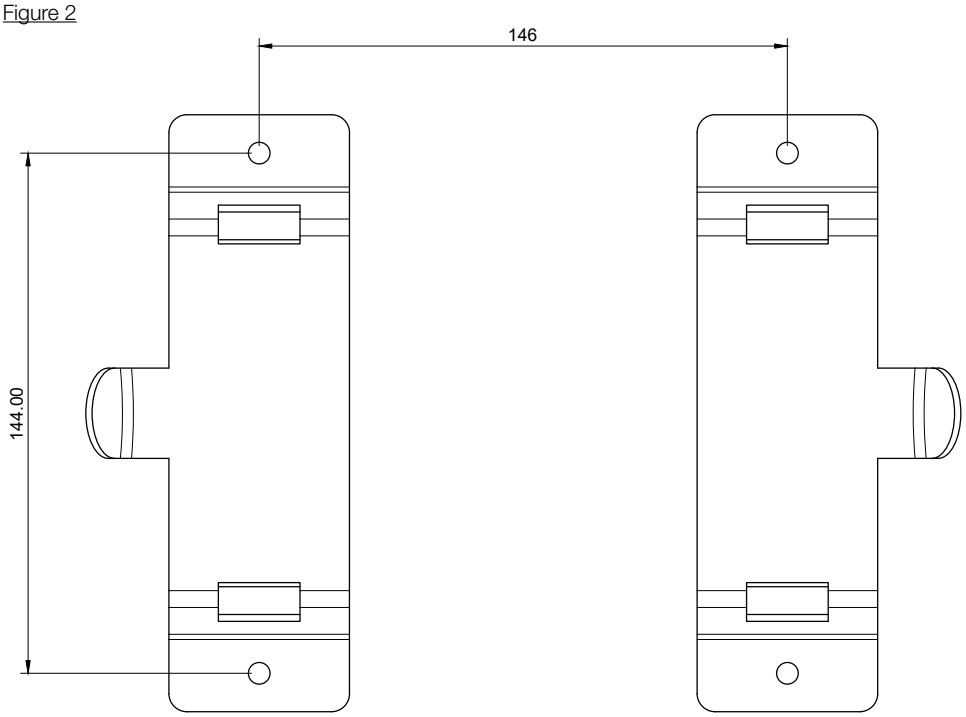
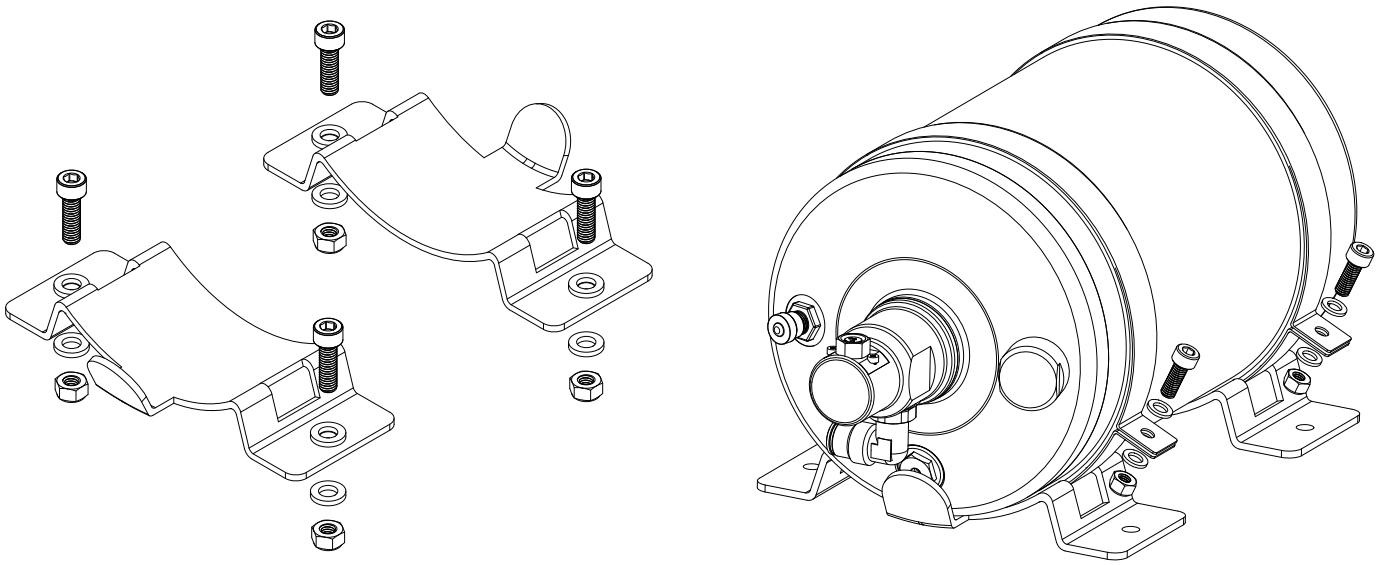


Figure 3



Pipework, Connectors & Nozzles

Pipework & Connectors Installation

Install pipework and connectors in accordance with the following instructions and as per figure 4a & 4b.

1. Correct pipe cutting and bending tooling is used. We recommend a pipe cutter, pipe bender and a pipe straightener.
2. A minimum bend radius of 25mm for 10mm Aluminium pipework and a 15mm radius for 6mm Aluminium pipework.
3. Use O-ring lubricant on the end of each pipe before inserting into the connectors.
4. 10mm Aluminium pipe press fits into the 10mm connectors 20mm. 6mm Aluminium pipe press fits into the 6mm connectors 16mm. It is recommended to make a guide mark from the end of the pipe for ensuring a proper connection is made..
5. 10mm and 6mm Aluminium pipe is disconnected and removed from the connectors by pressing the collet in and pulling on the pipe.

Figure 4a

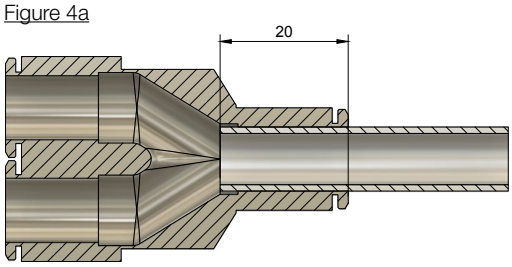
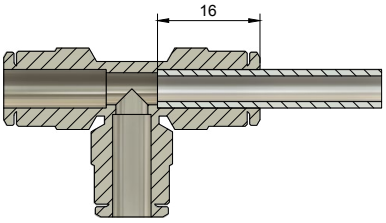


Figure 4b



Nozzle Installation

Install nozzles in accordance with the following instructions and as per figure 5a, 5b & 5c.

1. Nozzles should be installed in a way that does not obstruct the flow of the nozzles and not pointing at the head of the driver.
2. Cockpit roll cage nozzle should be mounted to a preformed bracket using x2 M4 bolts and secured centrally to the main roll bar of the roll cage using a worm drive clamp as per figure 5a. Where roll cage padding is used, please use a pre-formed bracket to ensure the nozzle sits lower than the padding and that the nozzle is not obstructed by the padding.
3. Cockpit footwell nozzle should be mounted to a preformed bracket using x2 M4 bolts and secured centrally to the transmission tunnel as per figure 5b.
4. Engine nozzle should be mounted to a preformed bracket with a 17mm through-hole and secure using the supplied nut as per figure 5c. Secure nut using Loctite 243 and mark with torque seal.
5. Install all push fit connectors into nozzles using Loctite 243 and mark with torque seal.

Figure 5a

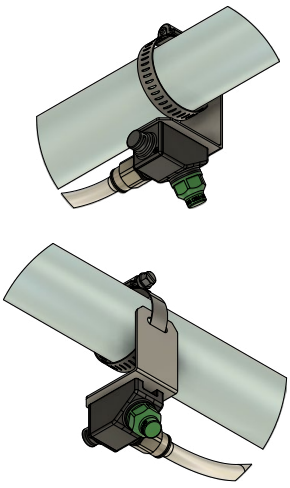


Figure 5b

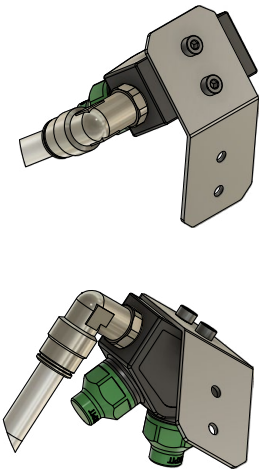
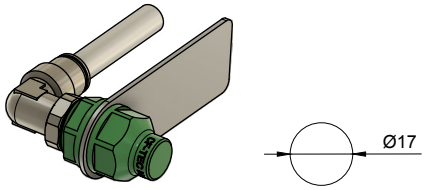


Figure 5c



Cockpit Nozzle Location

Install cockpit nozzle in accordance with the following instructions and as per figure 6a & 6b.

1. The roll cage cockpit nozzle should be mounted parallel to the ground and secured to the main roll bar of the roll cage with the green nozzle spraying down and towards the front of the car and the flat fan nozzle spraying down and behind the vehicles seats. Where roll cage padding is used, please use a pre-formed bracket to ensure the nozzle sits lower than the padding and that the nozzle is not obstructed by the padding.
2. The footwell cockpit nozzle should be mounted central to the vehicle and towards the front of the transmission tunnel area with the nozzles spraying down and towards the rear of the vehicle into each footwell.
3. Ensure nozzle is not obstructed and is NOT aiming towards the head of the driver/co-driver.

Figure 6a

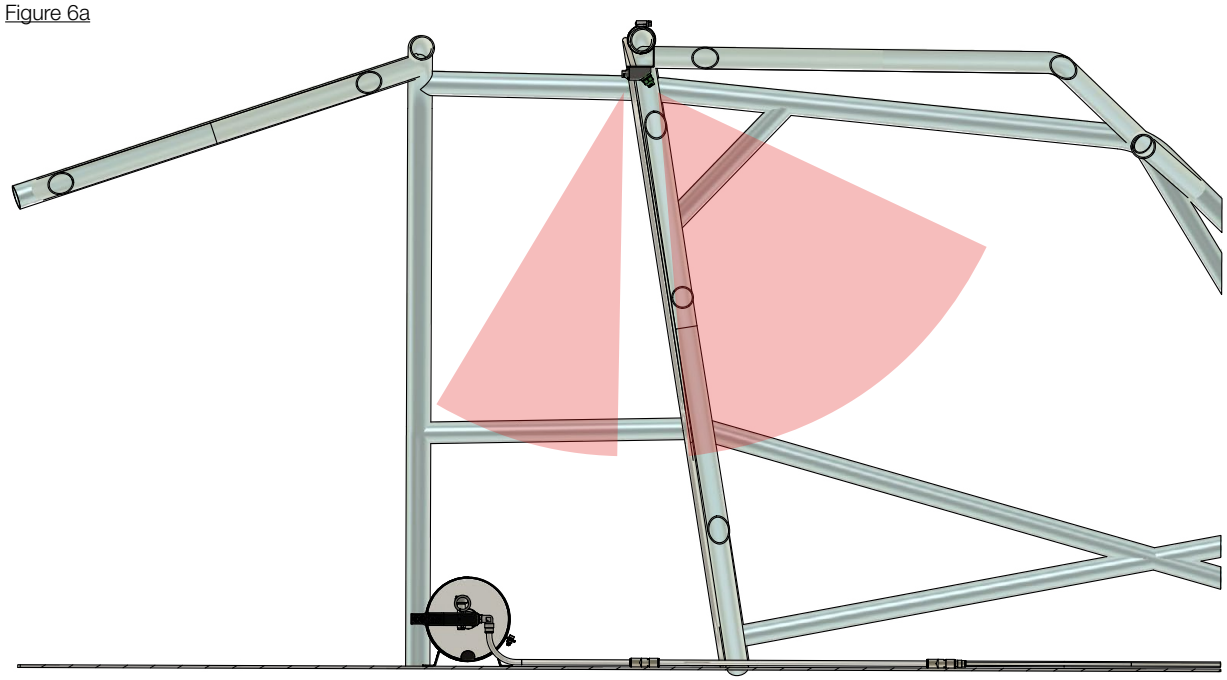
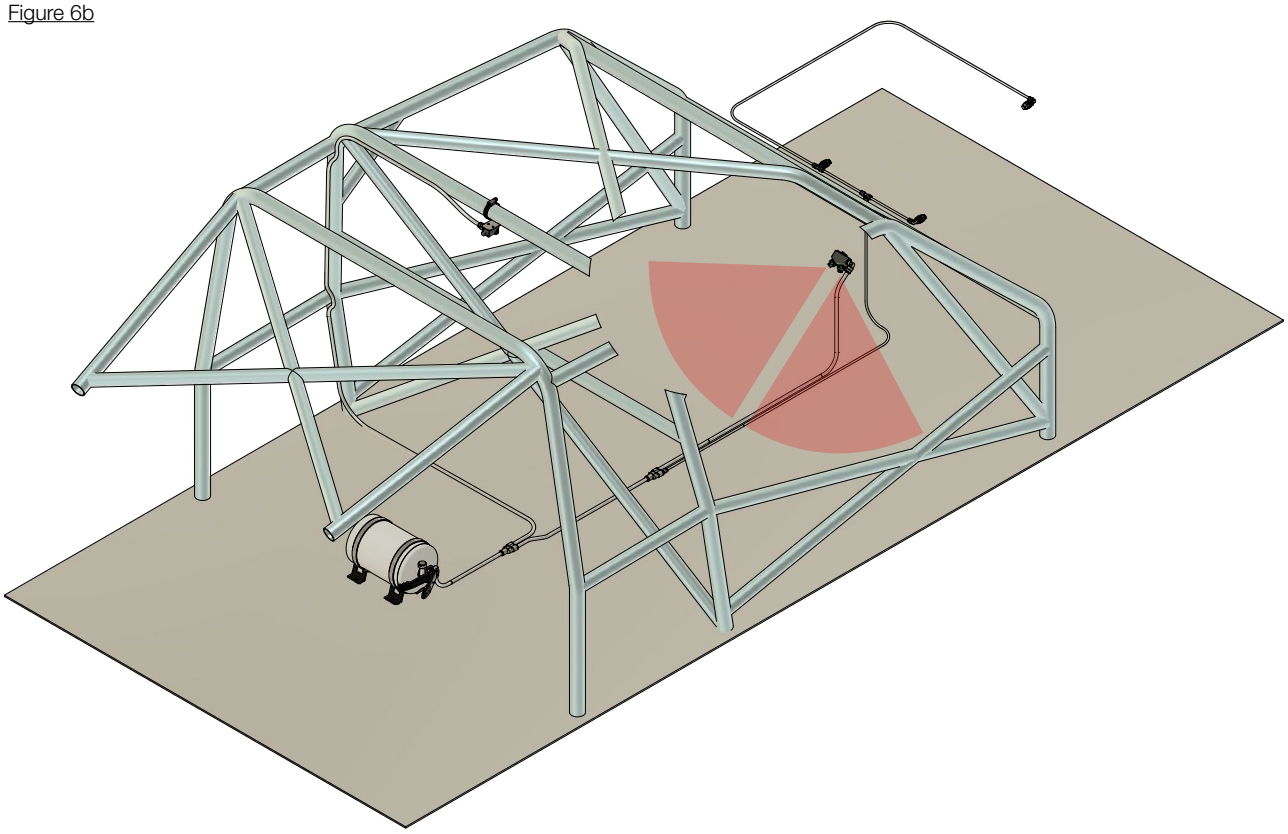


Figure 6b

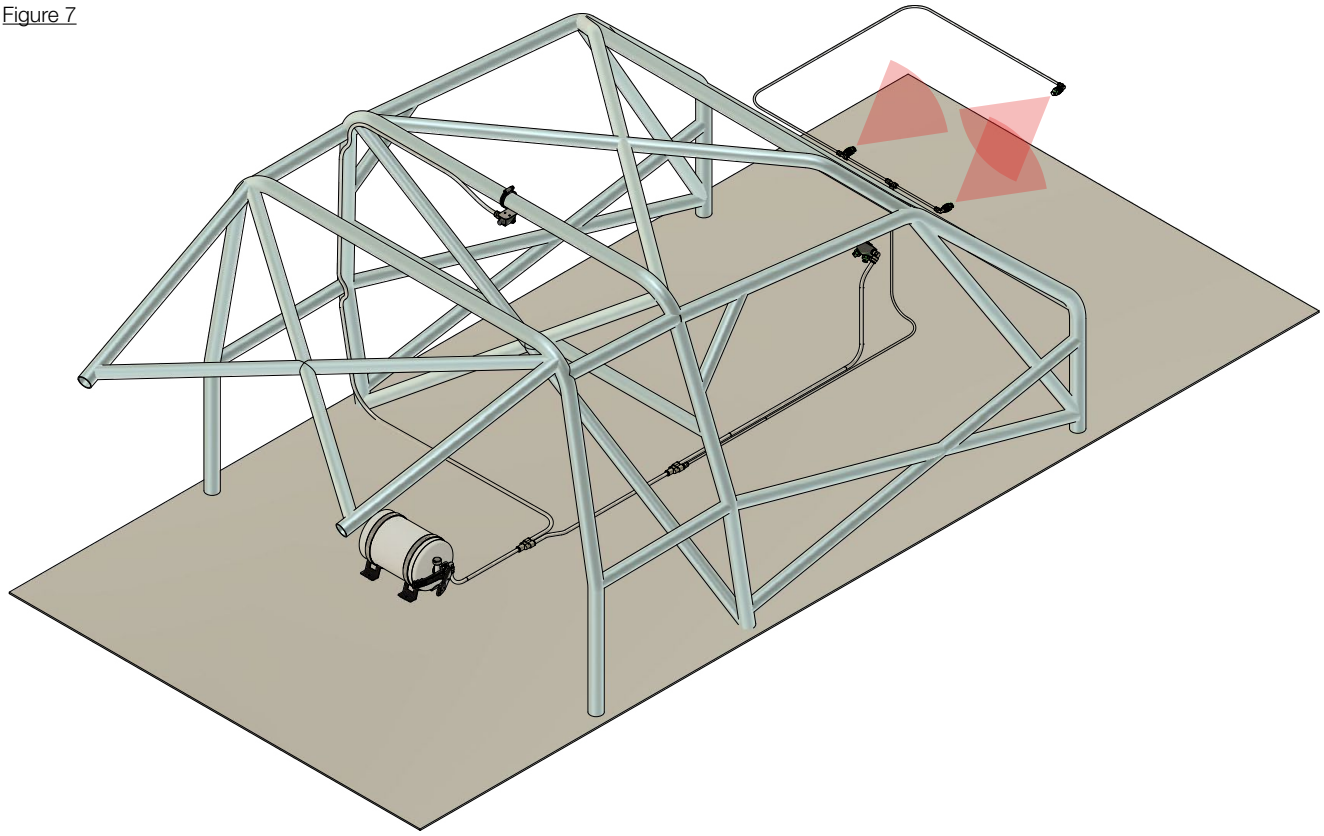


Engine Nozzles Location

Install engine nozzle in accordance with the following instructions and as per figure 7.

1. There are 3 engine nozzles, 2 of the engine nozzles should be mounted on the engine bulkhead spraying towards the front of the vehicles and aimed at likely ignition sources, the last nozzle should be mounted so that it is spraying towards the rear of the vehicle and aimed at likely ignition sources.

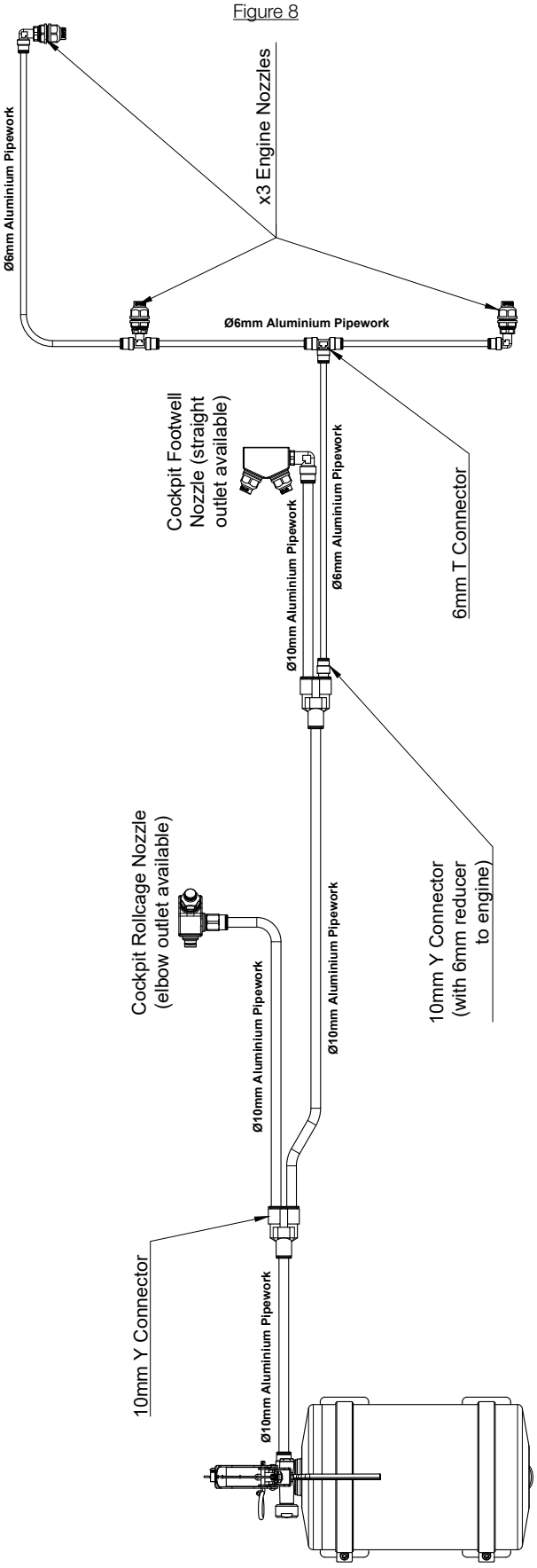
Figure 7



Pipework, Connectors & Nozzles Layout

Install the CF-TEC2700MK cylinder to the pipework, connectors and nozzles in accordance with figure 8. Take care to ensure pipework lengths, connector configuration and nozzle location are correct, incorrect installation can result in a void homologation. Use pipe clips as supplied for securing pipework to the vehicle.

Figure 8



Cockpit Pipework: 10mm OD
Engine Pipework: 6mm OD

T Handle Pull Cable Installation

Install the T handle pull cables in accordance with the following instructions and as per figure 9a & 9b.

For vehicles requiring only 1 internal and 1 external activation point, a 6ft and 12ft pull cable will be supplied. For vehicles requiring 1 internal and 2 external activation points, a 6ft and 2 x 12ft pull cables will be supplied.

1. Mount the 6ft pull cable through a 9.5mm hole to enable operation in accordance with current regulations, inside the vehicle within easy reach of the driver and co-driver where applicable. Apply the small E label adjacent to the internal pull cable.

2. Mount the 12ft pull cable on one side of the vehicle on an outside panel through a 9.5mm hole and adjacent to the electrical cut out switch. Apply the large E label adjacent to the external pull cable. Repeat process on opposite side of the vehicle for 2nd external activation point.

The following section should be completed with the handle safety pin installed!

3a. Take the end of the pull cable with the braided wire and push it through designated hole positioned on the underside of the cable adjuster.

3b. Pull the braided wire up through the cable adjuster and through the designated hole found on the top lever of the mechanical handle.

3c. Take a cable nipple, un-screw the bolt enough to allow the braided wire to pass through the hole, slide the cable nipple over the braided wire and push it down to the top of the lever. Whilst still keeping the tension, tighten the nipple bolt so that it is clamping down on the braided wire.

Figure 9a

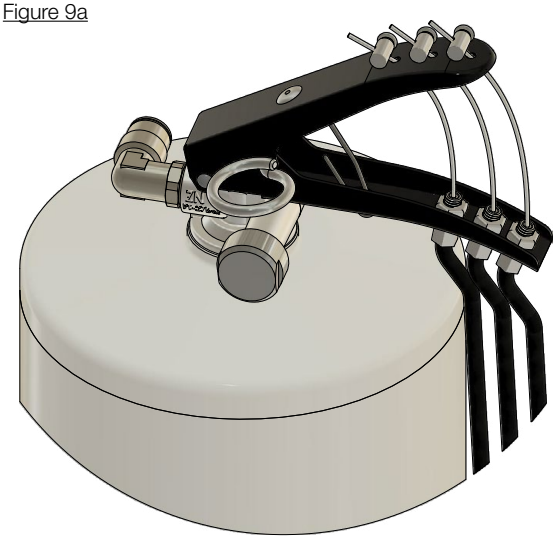
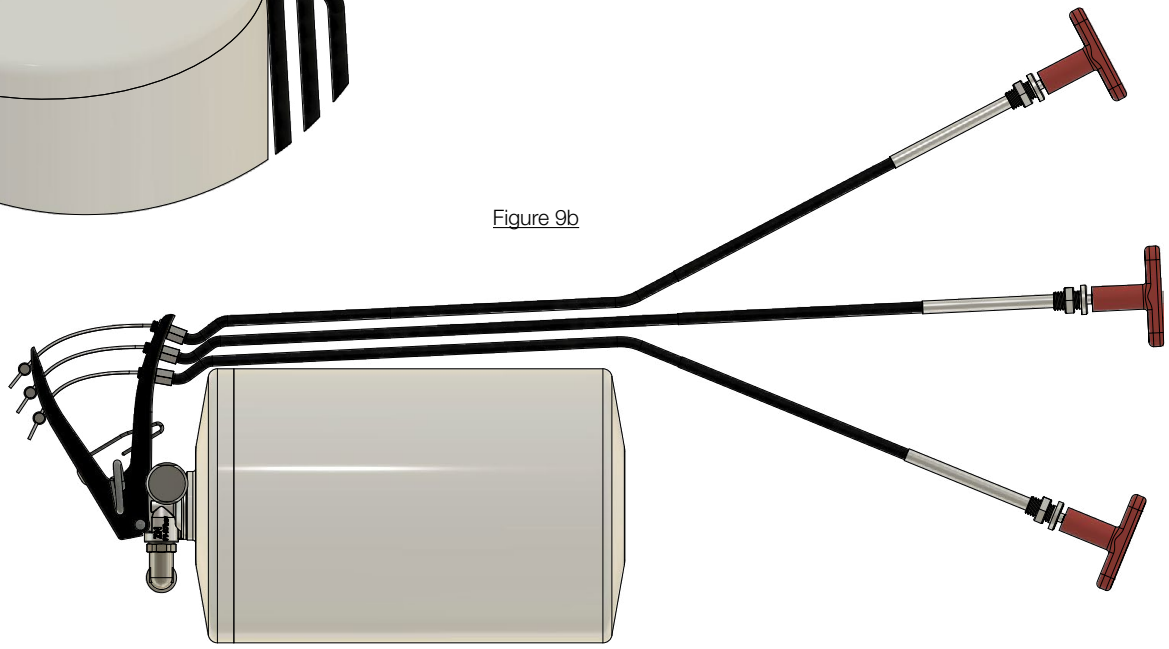


Figure 9b



Extinguisher Checks & Maintenance

Extinguisher Pressure Gauge Check

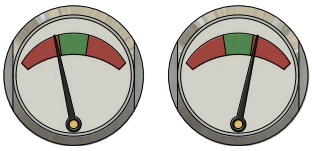
Make a check to the pressure gauge as per the following instructions and in accordance with figure 10.

1. Check the pressure gauge prior to every event.
2. Ensure the pressure gauge needle is in the green zone of the scale. The green zone is designed for the minimum and maximum operating temperatures, some variation will be experienced in high and low temperatures, this is expected.
3. If the pressure gauge needle is in either of the red zones, remove extinguisher from service and contact FEV directly or one of FEV's approved service agents.

Figure 10

The above pressure gauge needle positions shall be deemed acceptable

The below pressure gauge needle positions shall be deemed **NOT** acceptable

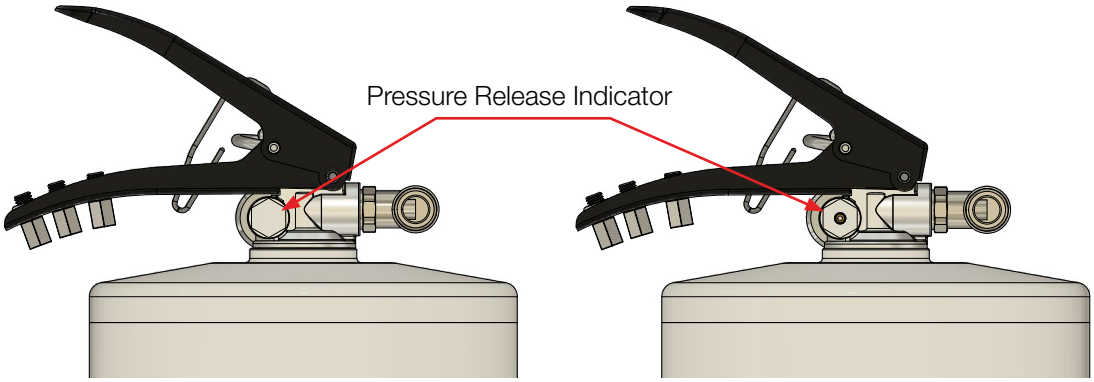


Pressure Release System Check

Make a check to the pressure release system as per the following instructions and in accordance with figure 15.

1. Check the pressure release prior to every event.
2. Ensure the pressure release indicator is not damaged or removed.
3. If the pressure release indicator is damaged or has been removed, remove the extinguisher from service and contact FEV directly or one of FEV's approved service agents.

Figure 11



The above pressure release indication condition will be deemed acceptable

The above pressure release indication condition will be deemed **NOT** acceptable

Extinguisher Maintenance

The following maintenance should be carried out on every extinguisher:

1. Prior to each event, check that the FIA homologation, maintenance and (AQ) hologram labels are valid and can clearly be read during scrutineering checks.
2. Prior to each event, check system pipework, connectors and nozzles to ensure no damage or blockage.
3. Make routine checks to the bottle weight, pressure gauge and pressure release system.
4. The system should be serviced every 2 years to comply with FIA regulations. This can only be carried out by either FEV or an approved FEV service agent.
5. Never attempt to modify or service an extinguisher system yourself or by a unapproved FEV service agent, doing so can impact the FIA homologation and therefore could stop the vehicle from being approved to race.

Citation ISO Certification
Quality management
ISO 9001: 2015
REGISTERED
Certificate No: 411742022

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