

**SPECIFIC TECHNICAL REGULATIONS
FOR NON-OEM FUEL TANKS
FOR CARS**

2023

VERSION RELEASED ON 01.12.2022



CARS

SPECIFIC REGULATIONS FOR NON-OEM TANKS FOR CARS

1. Specifications and Installation of tanks

Fuel tanks conforming to FT3-1999, FT3.5-1999 or FT5-1999 standards are strongly recommended.

Collecting tanks with a capacity of less than 1 litre are of free construction, but their number is limited by that of the main tanks equipping the vehicle.

Holes must be provided for in the floor of the boot in order to allow the outflow of the fuel in the event of a leak. For vehicles in respect of which the manufacturer has not provided for a specific luggage compartment, as an integral part of the bodywork, the additional tank may be situated inside the cockpit to the rear of the rearmost seat.

In all cases, the tank including the filling pipes, must be totally insulated by means of flameproof and liquid-tight bulkheads or casing, preventing the infiltration of fuel into the cockpit or contact with the exhaust pipes.

The cockpit must be separated from the tank by a fire-resistant, flameproof and liquid-tight bulkhead or casing.

Tanks must be efficiently protected and very firmly attached to the bodysell or the chassis of the vehicle.

The location and dimension of the filler hole and cap may be changed on condition that the new installation does not protrude beyond the bodywork and gives every guarantee against a possible leakage of fuel into one of the inner compartments of the vehicle.

These holes may be situated in the location of the rear or side windows.

The filler hole and the air vent must be situated outside the cockpit.

If there is a filler hole inside the bodywork, it must be surrounded by a receptacle with outflow to the outside.

If the metallic support of the filler hole(s) is not on the fuel tank itself, each filling pipe linking each orifice of the tank itself must have a minimum inner diameter of 22 mm.

The use of refuelling quick couplings is authorised. Each connector must then be protected with a cap.

2. Fuel cooling

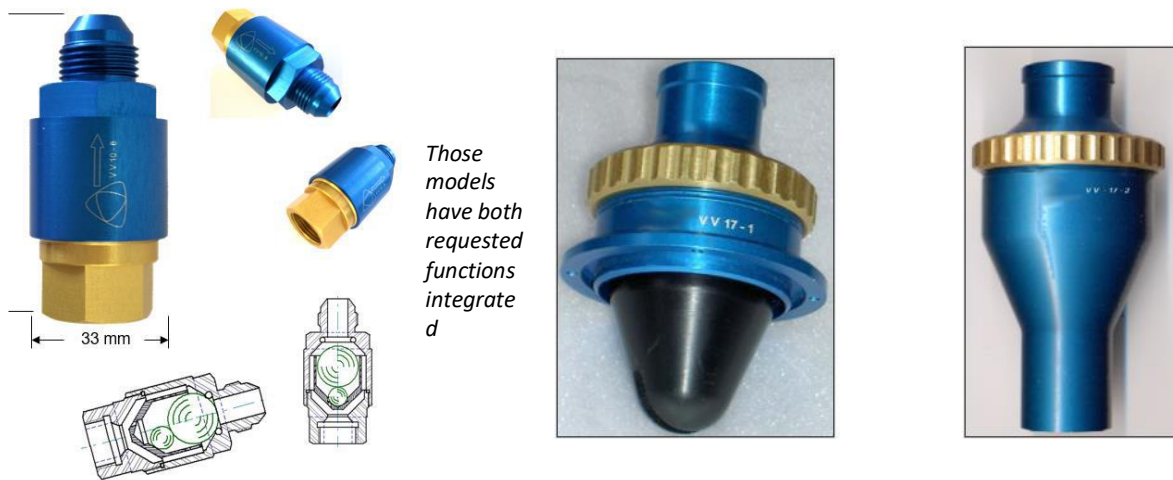
The fitting of fuel coolers is authorised on the return circuit to the tank.

3. Roll over and vent valve

One or two breathers per fuel tank are mandatory.

A ventilation line of the fuel cell as far as the valves described below must have the same specifications as those of the fuel lines and must be fitted with a system complying with the following conditions (it is as well possible having these valves fitted on the tank itself then breathing hose line as defined):

- Gravity activated roll-over valve
- Float chamber ventilation valve



Note: We recommend you using big internal ball diameter valve according to big size tank!

4. Over pressure valve

Must be on a separate line then previous valves, fixed directly on the fuel cell, then connected to breathing hose line.

- Blow off valve with a maximum over pressure of 200 mbar, working when the float chamber ventilation valve is closed.



5. Tank breathing

The air vent must either come out on the roof of the vehicle or make a loop as high as possible inside the vehicle and come out under the vehicle on the opposite side to its connection to the tank.

Fuel lines must have a minimum burst pressure of 70 bars (1000 psi) at the minimum operating temperature of 135 C (250 F). When flexible, these lines must have threaded connectors and an outer braid resistant to abrasion and flame (do not sustain combustion).

One model on the market combine all requested functions with a correct diameter, supplier is ATL:

200MB -10 FIA In-Line Vent Valve

Part Number: TF-AF-014

Description: 200MB -10 FIA In-Line Vent Valve

In line roll-over vent valve to comply with FIA Article 253-3.4.

The valve has roll-over protection and allows a fuel cell to breathe as fuel is used, expands or contracts.

Various fitment sizes available.

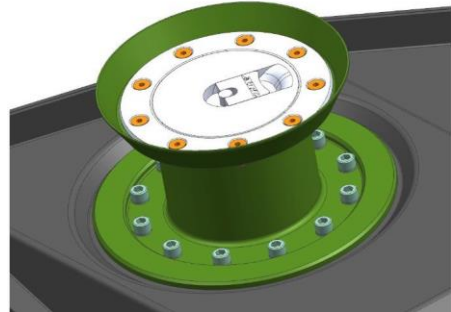
Specification:

- 200mb -10 FIA in-line vent valve
- 200mb blow-off pressure
- Roll-over protection



6. Tank Filling

If there is a filler hole inside the bodywork, it must be surrounded by a receptacle with outflow to the outside



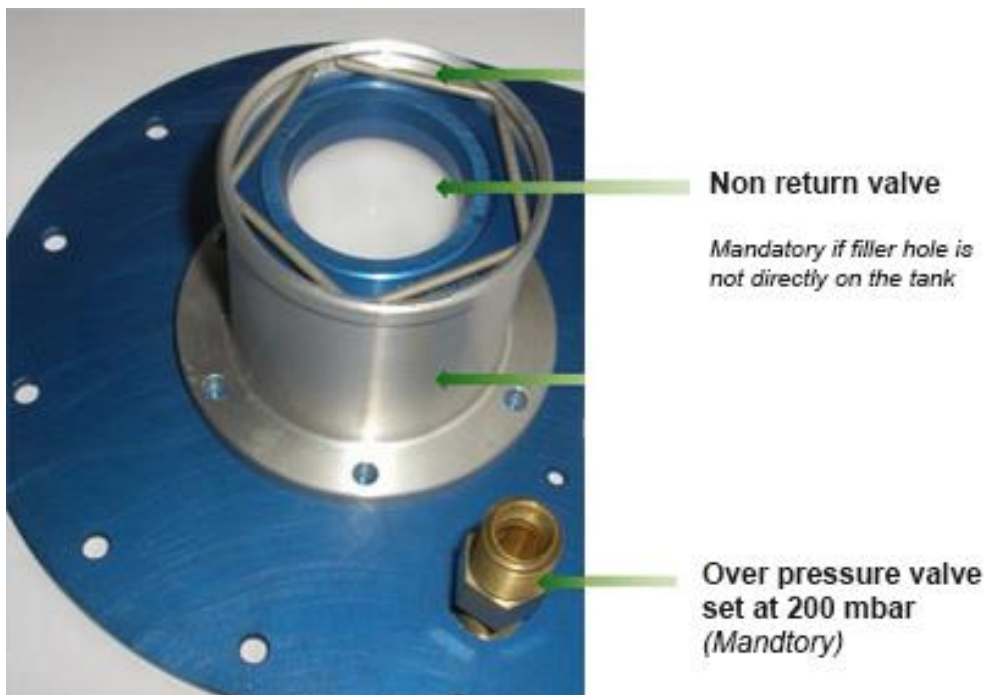
7. Fuel tanks with filler necks

All vehicles fitted with a fuel tank with a filler neck passing through the cockpit must be equipped with a non-return valve.

This valve, of the type "with one or two flaps", must be installed in the filler neck on the tank side."

The filler neck is defined as being the means used to connect the fuel filler hole of the vehicle to the fuel tank itself.





List of manufacturers of non-return valves and models homologated by FIA

<p>IN-FLEX Avenue de Mont F - 77111 SOIGNOLLES EN BRIE FRANCE Tel. : (33) 1 64 42 57 99 - Fax : (33) 1 64 06 79 83</p> <p>Clapet / Valve 3 111 9101-032D</p>	 <p>REFERENCE (FA3W9) 31119101-032D N° DE SERIE ### ← (Attribué par IN-flex) DATE DE FABRICATION ← (Attribué par IN-flex)</p> <p>Le clapet doit être livré dans son emballage d'origine portant cette étiquette The valve must be delivered in its original packaging bearing this label</p>
<p>ORION Performance 2, rue Emile Zola 77450 MONTRY FRANCE Tel. : (33) 1 60 04 61 76 - Fax : (33) 1 60 04 75 36</p> <p>Clapet / Valve NRV0050 Clapet / Valve NRV0850 Clapet / Valve NRV0850-D Clapet / Valve DFV1350 Clapet / Valve NRV1550-D</p>	