FIA STANDARD GUIDELINES SAFETY FUEL BLADDERS

Preliminary notices and terms

INTRODUCTION

1. The FIA Standard Guidelines Safety Fuel Bladders ("Guidelines") set out general informational guidance and illustrative graphics regarding Fuel Bladders approved in accordance with FIA Standards. This document is provided, at the FIA's discretion, to assist drivers and/or competitors taking part in competitions appearing on the FIA International Sporting Calendar and scrutineers ("Third Parties").

2. Provision of the Guidelines to any Third Party is strictly subject to the Third Party's acceptance of and agreement to comply with these Preliminary Notices and Terms.

DISCLAIMER

3. The contents of the Guidelines (including general informational guidance in relation to health and safety, sporting or technical matters) taken in isolation may not be suitable or appropriate for each and every regional and national "Motor Sport Event" (which incorporates all of the following activities i) motor sports competitions, practices, tests, reconnaissance's / "recce's" and demonstrations, ii) any associated entertainment, marketing or commercial activities and iii) any engineering, scrutineering, maintenance or other technical activities, and begins from the time the relevant locations where these activities are taking place are made accessible to any persons, and ends when the relevant locations are closed to access or the activities end, whichever occurs later). This is because the Guidelines relate to FIA Standards created for competitions appearing on the FIA International Sporting Calendar which operate within a regulatory and safety environment that does not apply to Motor Sport Events that do not appear on the FIA International Sporting Calendar.

4. It is the full responsibility of Third Parties to ensure that they understand and comply with any relevant obligations or duties relating to health and safety, product design, construction/manufacturing or consumer law which are placed on them under i) any applicable National Sporting Authority requirements, regulations and safety standards ("ASN Regulations"), ii) FIA requirements, regulations and safety standards ("FIA Regulations") and/or iii) any relevant transnational, national and/or local laws, regulations, directives and decrees passed by the government, a quasi-governmental entity or by any entity which has the same authority as the government in any applicable country or other territory, including all applicable local, state and federal laws, and any industry practices, codes of practice and/or codes of conduct incorporated into any of the foregoing, and all binding court orders, decrees, and any decisions and/or rulings of any competent authority that are relevant ("Applicable Laws"). The FIA assumes no responsibility in relation to such understanding or compliance.

5. The Guidelines do not contain any advice or guidance in relation to Applicable Laws, and the FIA makes no representation or warranty that the general informational guidance within the Guidelines complies with the Applicable Laws applying to a particular Motor Sport Event. Accordingly, it is the full responsibility of Third Parties to i) take appropriate advice and make their own enquiries as to Applicable Laws and any particular local safety requirements or other relevant considerations applying to a Motor Sport Event and ii) to adapt and implement the Guidelines in a suitable and safe manner depending on the circumstances of the particular Motor Sport Event. The FIA assumes no responsibility in this regard.

6. For the avoidance of any doubt, compliance with the Guidelines in isolation does not guarantee the safety of a particular Motor Sport Event.

7. If there is any conflict, or any doubt as to a conflict, between the contents of the Guidelines and Applicable Laws, Applicable Laws always take precedence. If it is possible to comply both with Applicable Laws and the Guidelines (subject to all appropriate adaptations as per paragraph 5), Third Parties should endeavour to do so.

8. The FIA does not make any representation or warranty, express or implied, and does not assume any responsibility as to the quality, suitability or fitness for purpose:

- **a.** of any equipment, products or designs that may be referred to within the Guidelines; nor
- **b.** as to the applicability or suitability of the Guidelines in relation to Motor Sport Events that do not appear on the FIA International Sporting Calendar.

9. All Third Parties are made aware that technology utilised in motor sport vehicles, equipment, structures, installations and products is subject to ongoing change and development, as well as good and best practice evolving over time. As a result, the Guidelines are subject to ongoing review and amendment over time.

10. All Third Parties are made aware of the risks that are inherent in the attendance of any person at or within the vicinity of a Motor Sport Event. Depending on the circumstances of the Motor Sport Event, these risks may include (non-exhaustive): the possibility of incidents (resulting from motor sports or otherwise) resulting in physical and/or mental injury or death; exposure to noise; exposure to / interaction with high voltage or other technical / mechanical equipment; or contracting/spreading communicable diseases.

LIMITATION & INDEMNITY

11. The FIA disclaims, excludes and limits (to the fullest extent permitted under Applicable Laws) any and all claims, liability, costs, expenses, damages, losses (including but not limited to any direct, indirect, incidental, special, consequential or exemplary damages or losses, property damage, breach of intellectual property rights, breach of contract, loss of profit, loss of reputation or goodwill, use, data or other intangible loss, loss of agreements or contracts, loss of sales of business and all interest, penalties and legal costs) and any personal or mental injury (including nervous shock, disease, disablement and death and any financial losses resulting), sustained by any organisation or person (including Third Parties and their subsidiaries, affiliates, licensors, licensees, agents, co-branders, partners, employees, directors, members, officers, advisors, consultants, representatives, successors and assigns (collectively the "Representatives")), howsoever arising from any use or implementation of, or reliance placed on the contents of, the Guidelines in relation to a particular Motor Sport Event by Third Parties or their Representatives, including in relation to:

- **a.** Statements (including false statements), acts or omissions by the FIA or its Representatives or Third Parties and their Representatives; or
- **b.** Any other negligence, lack of reasonable care, breach of any statutory or other duty or Applicable Laws, careless or wrongful act or wilful default by the FIA or its Representatives or Third Parties and their Representatives.

12. Any use or implementation of, or reliance placed on the contents of, the Guidelines in relation to a particular Motor Sport Event by any Third Party or its Representatives is (to the fullest extent permitted under Applicable Laws) strictly subject to acceptance by the Third Party and its Representatives of the following:

- **a.** The Third Party and its Representatives agree to waive any rights and/or claims, agree to release, hold harmless and not to sue the FIA or its Representatives in relation to any claims, liabilities, costs, expenses, damages and losses (including those referred to in paragraph 11); and
- **b.** The Third Party and its Representatives agree to indemnify the FIA and its Representatives in relation to any and all claims, liabilities, costs, expenses, damages and losses (including those referred to in paragraph 11), and this indemnity shall apply whether or not the FIA has been negligent or is at fault; in each case arising from the use or implementation of, or reliance placed on the contents of, the Guidelines in relation to a particular Motor Sport Event.

GOVERNING LAW & JURISDICTION

13. The Guidelines and any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with the Guidelines or their subject matter or formation, shall be governed by and construed in accordance with the laws of France.

14. The courts of France shall have exclusive jurisdiction to settle any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with the Guidelines or their subject matter or formation.

15. Any matters relating to investigation and enforcement of FIA Regulations are subject to the jurisdiction of the internal judicial and disciplinary bodies of the FIA.

SCOPE

The FIA safety regulations are made up of several different types of document. Some of the documents, such as FIA Standards, FIA Homologation Regulations for Safety Equipment and FIA labelling guidelines, are targeted to the safety equipment manufacturers. Some regulations aim to ensure that the safety equipment used in competitions appearing on the FIA International Sporting Calendar delivers a specified level of safety protection. There are other documents, such as Appendices to the International Sporting Code, Technical and Sporting Regulations, that aim to regulate the use of the safety equipment in competitions appearing on the FIA International Sporting Calendar.

The aim of these new Safety Equipment Guidelines ("Guidelines") is to complement the FIA safety regulations and to collect all the relevant regulatory information in one place, including the different Standards recognized by the FIA, the differences between them, the importance of safety equipment, the protection delivered, how to select, use and customize safety equipment, and how to avoid critical mistakes. It also gives tips on how to identify non-original products and what to do after an accident.

This document is intended to make the FIA regulations more easily understandable for competitors and scrutineers.

The text written here does not replace the official documents published on the FIA website and it has no regulatory value.

This is a living document that can be updated to reflect any new information, updates to regulatory or guidance documents or clarification that the FIA considers relevant to the competitors and officials. Please ensure that you take into consideration the latest available version.

TABLE OF CONTENTS

INTRODUCTION

Fuel tanks are crucial components in racing vehicles, as they store and distribute fuel during races. The FIA Standard aims to enhance safety and prevent accidents related to fuel systems in motor sports. This Standard covers various aspects, including bladder material, construction, capacity and safety features like baffles and foam fillers, which prevent fuel sloshing and minimize the risk of fire in the event of an impact.

The usage of FIA homologated material specified in the FIA Standard for fuel tanks is aimed at preventing the spread of fire and the risk of explosion.

No fuel bladders shall be used for more than five years after the date of manufacture, unless reinspected and recertified by the manufacturer at the end of this five-year period, for a supplementary period of up to two years after the date of recertification, i.e. not exceeding seven years after the date of manufacture.

When a bladder reaches the end of its serviceable life, through regulation or wear, many components are capable of being reused in its replacement. Please contact your supplier to discuss what can be recycled or reused as part of replacing your product. Frequently used bladder materials and safety foams cannot be recycled or repurposed and therefore must be disposed of in compliance with local environmental and legal regulations.

1/ REGULATION REFERENCES

Currently, there is one FIA Standard for Safety Fuel Bladders, articulated in three specifications: FT3-1999, FT3.5-1999 and FT5-1999. For more information, please check the *International Sporting Code (ISC) – Appendix J-Article 253, Art.14 Safety Fuel Tanks* and the Technical Regulations of each Championship.

QR Code 1 – Appendix J Art.253 to the International Sporting Code

It is important to remember that the usage in a competition appearing on the FIA International Sporting Calendar of any fuel tank is prohibited unless the device has been homologated according to the FIA Standards FT3-1999, FT3.5-1999 and FT5-1999. Homologated fuel bladders are listed in FIA Technical List No. 1.

QR Code 2 - Technical List No. 01 "List of fuel bladders homologated according to the FIA Standards FT3-1999, FT3.5-1999, FT5-1999"

USER GUIDE & INSTALLATION

1/ USE AND MAINTENANCE

WORKS ON FUEL CELLS INCUDING INSPECTION, MODIFICATIONS, REPAIRS

Fuel cells and equipment modifications, repairs and disassembly for periodic inspections and cleaning should exclusively be conducted by the manufacturer or trained technicians, wearing full protective clothing including fireproof, antistatic and waterproof equipment. Adequate repairs using the proper materials are mandatory, and proper handling is prescribed. Reassembly must adhere to the manufacturer's design, and a low-pressure leak test must be conducted on joints, fittings and surfaces. Fuel cell certification remains valid for five years from the manufacture date, extendable for an additional two years upon recertification, provided it meets safety standards. For any repairs, modifications, or recertification, coordination with the manufacturer regarding procedures, timing and shipping details is advised.

TEMPERATURE

The resilience of safety fuel cells against impacts and punctures stems from their flexibility and deformability. However, colder temperatures can compromise their flexibility and efficiency. Typically, these cells are engineered to function optimally within a temperature range of 0°C to 60°C. Extremely low temperatures below -15°C can weaken the crash resistance of the fuel cell, diminishing its overall performance. Conversely, temperatures exceeding 100°C can hasten the deterioration of the cell; the longer it remains exposed to high temperatures, the quicker it degrades. Regular checks for chafing on both internal and external surfaces of the fuel cell are necessary to maintain its integrity.

WATER & MOISTURE

Water vapor and direct exposure to sunlight can damage fuel cell bladders and safety foam. It is recommended to always install the fuel cell bladder inside a metal and composite enclosure, checking that its inner and outer parts are kept free of water and water vapor.

PERMEABILITY

Due to the polymeric nature of the safety fuel cell bladders, fuel permeation or diffusion may occur. Always install a fully functioning ventilation system, which can prevent fuel vapours from accumulating around the fuel cell and the vehicle.

WEATHERING EFFECTS

Competition equipment, particularly plastic and rubber parts, are susceptible to degradation due to weather conditions such as sunlight, wind, freeze-thaw cycles, temperature fluctuations and exposure to airborne pollutants. Ozone, ultraviolet rays, water and acids can deteriorate these components. To mitigate damage, it is essential to shield the fuel cell and refuelling system from weathering exposure.

ABRASION

Safety fuel cell bladders made from rubberised materials are vulnerable to chafing and abrasion, requiring careful handling and installation without exerting force or pressure. It is crucial to keep them free from stones, sand, or other corrosive substances. The container holding the fuel cell bladder must have a smooth interior to prevent damage. Avoid placing sharp or heavy items inside the bladder, as they could cause leaks by damaging the rubber-coated fabric. Heating bladders to a maximum of 60°C can enhance flexibility during installation, but direct heat must be avoided. Additionally, protecting the bladder with talcum powder and duct tape, and seeking advice from the manufacturer when in doubt, can help prevent abrasion and ensure the integrity of the bladder.

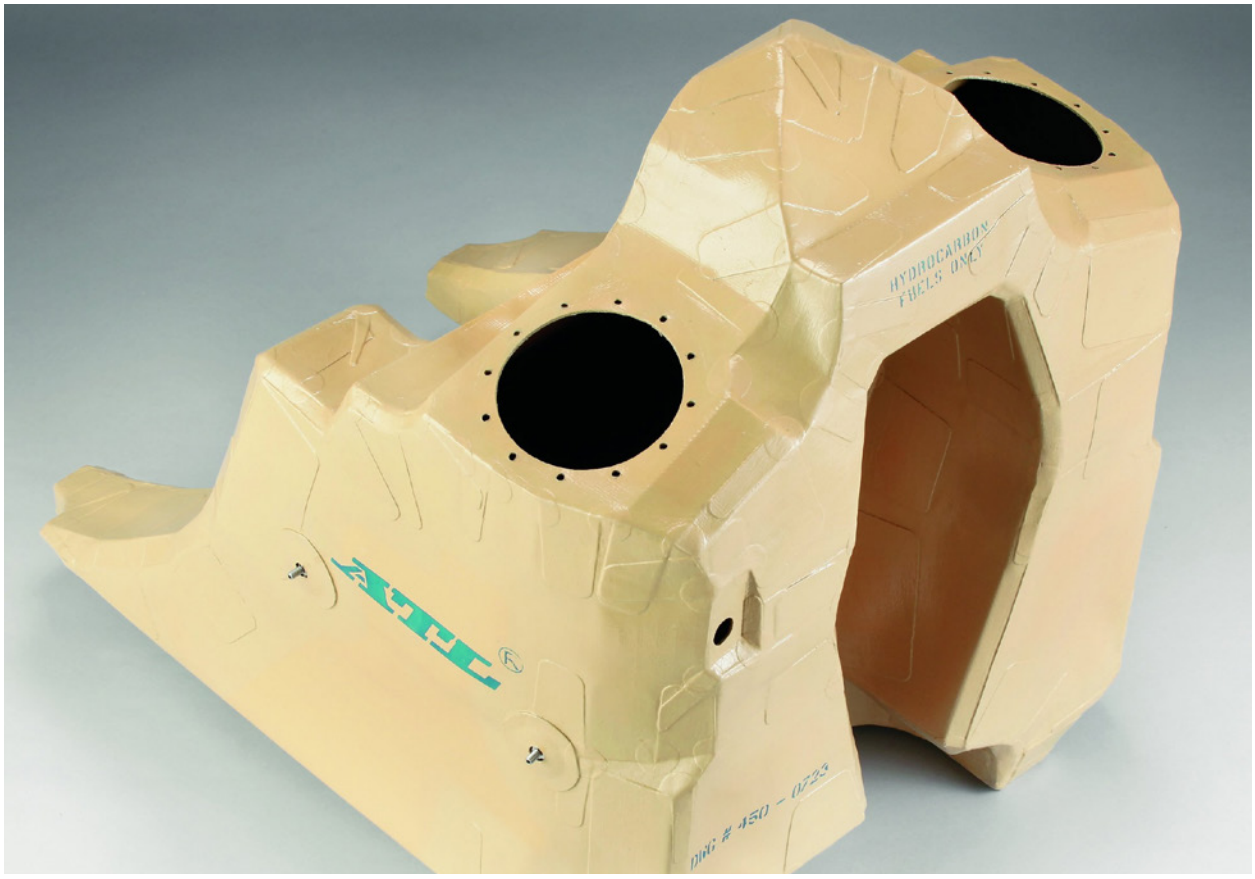
FUEL COMPATIBILITY

It is crucial to select fuel system components compatible

with the specific type of fuel intended for use, such as gasoline, diesel, or methanol, to prevent premature deterioration of fuel cells and related parts. Certain materials, including those used in fuel cell foam baffling and bladders, are susceptible to damage from alcohol and various chemical fuels like nitromethane, nitropropane, hydrazine, aniline, toluidine and aromatics. The use of these incompatible fuels can harm hoses, gaskets, valves and other components. Fuel cell materials do tolerate additives at the usual rate (<2%), while for higher rates, some degradation in the physical-chemical characteristics of inner layers is likely to occur. To avoid accelerated degradation, it is important to consult suppliers for guidance on choosing appropriate materials for the intended fuel or blend. Regularly switching between different fuels should be avoided whenever possible to maintain the longevity and effectiveness of the fuel system components.

SAFETY FOAM BAFFLING

The fuel cell foam is made of an open cell reticulate material. If this kind of foam is used inside a safety fuel cell bladder, it serves to avoid explosions, control fuel slosh and absorb the energy given off from impacts. The foam should never be handled if wet with fuel. The surface could catch fire. Moreover, the foam should only be used with gasoline, not with additives, water, alcohol or aromatics in percentages above 50%. If additives have been used previously, the foam can still be used provided that it is cleaned and dried immediately after its use. It is recommended to inspect fuel cell foam every 12 months and promptly replace any softened, flaking, or "gummy" foam.



FOAM REMOVAL

Internal safety foam baffling must be handled only when completely dry. Once the fuel cell is thoroughly dried, the foam baffling can be cleaned, reinstalled, or replaced with a new one. It is crucial never to handle wet foam baffling, as fuel droplets might be sprayed and ignited due to electrostatic charges. To ensure safety, always wear full protective clothing when working on fuel cells, fuel containers, or related accessories. Additionally, emptying fuel cells, filling them with water, and draining the water around the cell before removing and drying the safety foam is recommended to prevent fuel-related hazards.

INFLATION TEST

Fuel tanks and bladders should not be inflated or pressurized. However, it is permissible to conduct a leak-control test on these tanks at a maximum pressure of 0.1 bar. To perform this test, a precision gauge and an additional pressure-regulating instrument are required. Excessive pressure can lead to elongation of the fuel tank and cause damage to the joints, even without visible external signs. It is advisable to carry out this test during regular maintenance, ideally every two years if feasible.

VENTING SYSTEM

An appropriate venting system of the fuel cell is paramount for the operation of the fuel-feed system and improves fire safety. Make sure that the open vent pipe is tightly fastened to the fuel cell and oriented upwards and away from the cell, engine, exhaust pipe and driver's cab. Always use the highest quality fuel resistant hoses, ensure joints are airtight, and place the exit of the vent at the bottom, towards a catch tank or directly in the airflow, away from any potential source of ignition.

SPILLAGE

Accidents in pits or garages can occur due to inaccurate fuel filling methods leading to fuel leaks. To prevent spills, it is crucial to fill the fuel cell slowly, allowing vapours to discharge and avoiding back-surge or dripping. Quick-filling cells should be equipped with appropriate valves such as dry break, roll-over and vents. The use of discriminator valves or catch tanks can prevent liquid fuel discharge. Regular checks are necessary to ensure all fuel components, including lines, pumps, gauges and return lines, are airtight and leak-free. The effectiveness of the fuel cell relies on the integrity of its peripheral

equipment and accessories, highlighting the importance of thorough inspections before racing starts of the entire fuel-feed system to prevent fuel spills and leaks.

STORAGE AND COLLECTION

Proper storage procedures for fuel cells are essential to ensure their longevity and safety. It is crucial to avoid storing fuel cells near heat sources and to empty them completely when the vehicle is not in use. When storing, the bladder should be drained, washed with soap and water, thoroughly dried, and all ports sealed. The fuel cell should then be kept in a dark and dry environment with a temperature around 25°C and a relative humidity of less than 70%. These measures help maintain the integrity of the fuel cell, preventing potential damage and ensuring its readiness for future use.

CLOSURE PLATE ASSEMBLY

If fuel cell closure plates are disassembled for inspection purposes, it is recommended to take the following precautions:

- Closure plates are to be inspected before connection, to prevent the presence of external contamination and damage to screw threads. Check the length of screws before installing. Screws that are too long can damage screw thread or connection flanges.
- Suggested screw tightening: M6 screws 6-8 Nm, M5 screws 2.5-3 Nm; for other kinds of screws contact the manufacturer. The tightening torque is reduced shortly after the screw tightening, due to the flow properties of the rubber material that is used between the surfaces for the closure plates. Tighten the screws to the fixed couple once, and again five hours after their initial assembly. Avoid tightening the screws above the set value or tightening the screws repeatedly, because it might damage the rubberized flange.
- The closure plates on which leaks have been found after the tightening of the screws must be disassembled to check for any imperfections or the presence of foreign material on the coupling surfaces, screws or holes.

INTERNAL AND EXTERNAL CLEANING

Typically, bladder fuel tanks require minimal cleaning, especially if they are consistently filled with the same type of fuel. When cleaning becomes necessary, remove all external and internal accessories, and if possible, take out the foam. Use a non-aggressive cleaner suggested by the fuel tank manufacturer. Fill the tank with a solution consisting of 1% of its volume of hot water (around 60-70°C) and the cleaner. Seal all openings and shake the tank to ensure the solution covers its interior. Repeat this process until the drained liquid is free from residue or sludge. Rinse the tank thoroughly with hot water and dry it using an antistatic cloth. Allow the removed foam to dry completely, remove any remaining dirt, and place the foam back into its original position inside the tank. Use the same cleaner solution and a sponge to clean the exterior of the tank, rinse with hot water, and dry with an antistatic cloth.

DRAIN AFTER USE

It is recommended to drain all fuel systems during periods of non-use to prevent potential damage caused by phase separation in certain fuels, which can lead to high concentrations of substances harmful to bladder material or components. While not foolproof, draining the system helps minimize this risk.

STATIC GROUNDING

To prevent sparking and potential fuel ignition, it is crucial to address electrostatic charges generated by fuel agitation, high flow rates and external sources. Implementing electrostatic grounding measures for all fuel-handling equipment, including fuel cell bladders, overhead fuelling rigs, hoses, valves and other components, is essential. Proper grounding through bonding straps ensures unimpeded electrical dissipation. Additionally, wearing full protective clothing and ensuring clean, full-circle connections at terminals are vital safety practices when working with flammable fuels. It is important to note that decorative anodize coatings applied to fittings are not conductive and should be considered in grounding strategies.

PERSONNEL PROTECTION

When handling flammable substances, wear full protective clothing and fireproof, antistatic and waterproof equipment.

2/ INSTALLATION

During the installation of fuel tanks, dry-break valves, vent valves, fuel hoses or other components, it is crucial to meticulously adhere to the instructions provided by the manufacturer. Careful attention must be given to location, bracketing, venting, grounding and isolation from the driver compartment. Due to the diverse range of vehicles, specific installation guidelines for individual products cannot be provided in these Guidelines. It is imperative to avoid creating creases, folds or pressurized areas during installation, as these issues could lead to the collapse of the fuel cell bladder skin over time, resulting in potential leaks. If uncertainties arise, consulting the chassis manufacturer and/or bladder manufacturer is recommended. Although installation methods are unique to each vehicle, it is essential to comply with basic safety and functional practices, ensuring adherence to regulatory requirements set forth by the FIA and the device manufacturer.

Unless specifically waived by the FIA, all fuel bladders must be supplied with a suitable fuel resistant polyurethane foam baffling, conforming to Mil Spec MIL-B-83054, MIL-DTL-83054C, SAE-AIR-4170 or equivalent. This foam must fill a minimum of 80% of the volume of the fuel bladder. Where rapid refuelling is expected, an anti-static foam conforming to Mil-Spec MIL-F-87260 (USAF) must be employed.

INSTALLATION OF THE FUEL TANKS IN SINGLE SEATER

If the car is fitted with a fuel tank pressurisation system, the tank must be fitted with a pressure relief valve to prevent overpressure, and with a fuel tank pressure sensor. The FIA may request the car supplier to demonstrate that the specification of all relevant parts of the fuel tank, and the strength of the surrounding structure, are consistent with the pressure that the pressure relief valve is set to.

Fittings and piping

The total area of apertures in the fuel bladder must not exceed 35,000 mm^2.

Circular apertures that have a diameter smaller than 35 mm may be closed with a fitting, secured with a single threaded fastener on the full diameter of the opening, provided that this threaded fastener is provided with mechanical secondary locking. All other apertures in the fuel bladder must be closed by hatches or fittings which must:

- be secured to metallic bolt rings bonded to the inside of the bladder;
- have bolt hole edges no less than 5 mm from the edge of the bolt ring, hatch, or fitting;
- attach directly to the fuel bladder and have no part of the survival cell structure included in the closure;
- be secured with multiple fasteners in such a way that the absence of any single fastener does not compromise the security of the closure.

Where the fuel bladder is attached to the survival cell, fixings must be designed so that if it is pulled away from the survival cell, the attachment will fail without compromising the integrity of the fuel bladder.

All fuel lines between the fuel tank and the engine must have a self-sealing breakaway valve. This valve must separate at less than 50% of the load required to break the fuel line fitting or to pull it out of the fuel tank.

No lines containing fuel may pass through the cockpit.

All lines must be fitted in such a way that any leakage cannot result in the accumulation of fuel in the cockpit.

All components containing fuel at a pressure greater than 10 barG must be located outside the fuel tank.

Fuel tank fillers

Fuel tank fillers must not protrude beyond the bodywork. Any breather pipe connecting the fuel tank to the atmosphere must be designed to avoid liquid leakage when the car is running and its outlet must be no less than 250 mm from the cockpit opening. All fuel tank fillers and breathers must be designed to ensure an efficient locking action which reduces the risk of an accidental opening following a crash impact or incomplete locking after refuelling.

Refuelling

A cover must be always fitted over any refuelling connector when the car is running on the track. The cover and its attachments must be sufficiently strong to avoid accidentally opening in the event of an accident.

Any refuelling procedure must respect the provisions of related articles of the sporting regulations for each Championship.

FUEL LINES FOR CARS OF GROUPS N, A AND R-GT

Protection

Fuel lines must be protected externally against any risk of deterioration (stones, corrosion, mechanical breakage, etc.) and internally against all risks of fire and deterioration.

Specifications and installation

The fittings of fuel lines must be manufactured according to the specifications below:

- When flexible, these lines must have threaded, crimped or self-sealing connectors and an outer braid resistant to abrasion and flame (do not sustain combustion).
- The minimum burst pressure measured at a minimum operating temperature is of:
  - 70 bars (1000 psi) 135°C (250°F) for the fuel lines (except the connections to the injectors and the cooling radiator on the circuit returning to the tank);

- 70 bars (1000 psi) 232°C (450°F) for the lubricating oil lines;
- 280 bars (4000 psi) 232°C (450°F) for the lines containing hydraulic fluid under pressure.

- If the operating pressure of the hydraulic system is greater than 140 bars (2000 psi), the burst pressure must be at least double the operating pressure.

Lines containing fuel may pass through the cockpit, but without any connectors inside except on the front and rear bulkheads according to Figure 1.

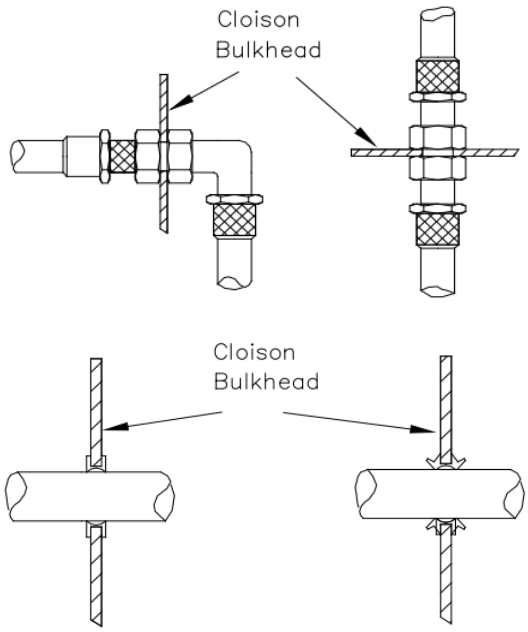


Fig. 1 – Bulkhead scheme

Automatic fuel cut-off

It is recommended that all fuel feed pipes going to the engine must be provided with automatic cut-off valves located directly on the fuel tank which automatically close all the fuel lines under pressure if one of these lines in the fuel system is fractured or leaks.

Compulsory:

All the fuel pumps must only operate when the engine is running, except during the starting process.

Fuel cell ventilation:

The ventilation line of the fuel cell in regard to 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:

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

If the internal diameter of the fuel tank breather venting tube is greater than 20 mm, a non-return valve homologated by the FIA must be fitted.

All cars fitted with a fuel tank with filler neck passing through the cockpit must be equipped with a non-return valve homologated by the FIA (Technical List n°18).

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.

SCRUTINEERING CORNER

1/ PRE-EVENT CONTROL

Please ensure that you have downloaded the latest version of Technical List No. 01. It contains very useful information to allow you to check that the safety equipment is in compliance with the FIA Safety Regulations.

QR Code 1 - Technical List No. 01 "List of fuel bladders homologated according to the FIA Standards FT3-1999, FT3.5-1999, FT5-1999".

The FIA-approved label is affixed on the products only if they comply with FIA safety requirements. The FIA hologram and label indicate that the product has undergone the stringent tests defined in the FIA Standard.

Use the above example of labels to check conformity with the technical list and prove the authenticity of the equipment. In case of doubt, contact your ASN or the event officials.

Alternatively, compare the label/hologram with another product which you are confident complies with the regulations.

CHECKLIST TO IDENTIFY FUEL BLADDER COMPLIANCE WITH FIA REGULATIONS

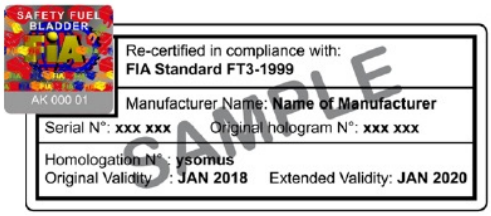
1. Compare FIA label and hologram affixed on the fuel tank with label template shown in the relevant technical list.

2. The way the information is displayed, the font and the use of bold type must be the same as on the template.

3. The standard, manufacturer's name, homologation number, model name and validity date must always be presented and printed according to font style and size of the label.

4. Compare information shown on the FIA label with the information shown in the relevant technical list.

5. Compare the date of manufacture with the homologation date. The validity of FIA Standard FT3-1999 is five years, afterwards it can be extended by the manufacturer for another two years, if the bladder is still compliant with the FIA Standard Specifications.



2/ POST-ACCIDENT ANALYSIS

After a severe impact affecting the structural chassis of the vehicle around the safety fuel tank, it is recommended that the device be emptied and sent to the manufacturer to check if there is any leakage or damage.

QR CODES - SUMMARY

Art.253 to the International Sporting Code

Technical List 01

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