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Due to a review of these regulations for 2024 most articles have been modified	01/01/2024	01/01/2024

A capitalised and italicised word in this document is defined in the FIA International Sporting Code *(Code)* or the National Competition Rules *(NCR),* including their Appendices.
Any HEADING is for reference only and has no regulatory effect.

PART 1 - *NATIONAL COMPETITION*

1. GENERAL

The refuelling of an *Automobile* during a *National Competition* and where the *Supplementary Regulations* permit may only be conducted in *Pit Lane* using an Overhead Rig.

Each *Automobile* must have its engine switched off and be stationary at all times during refuelling.

Unless specified otherwise in *Supplementary Regulations*, only those involved in the refuelling process may be in *Pit Lane* during refuelling.

Refuelling of an *Automobile* on the *Circuit* is prohibited.

Refuelling of an *Automobile* in the pit garage or paddock is prohibited during any session in which the *Automobile* is entered.

Any refuelling of an *Automobile* outside of a session must be conducted either with the *Automobile* totally within a pit garage or in the area of the paddock specifically designated for the purpose of refuelling, and must be conducted with the engine switched off.

2. SAFETY

2.1 Fuel Storage

The area of the pit garage in which a fuel reservoir is situated must be adequately ventilated and have unimpeded access from front and rear of the pit garage. In accordance with the Circuit Race Standing Regulations a minimum of 1 x 4.5 kg fire extinguisher must be available for use in each pit garage.

2.2 Pit Crew

Unless otherwise approved in the *Rules*, any refuelling will require a maximum of 4 crew members to attend the *Automobile* who will only be permitted to perform the following tasks:

1 fire attendant – stand near the *Automobile* and the refuelling equipment with the fire extinguisher ready to operate;

1 emergency cut-off valve attendant - hold the emergency cut-off valve open during the refuelling operation;

1 refueller – handle and operate the refuelling nozzle;

1 hose attendant (optional) – if necessary, hold the refuelling hose over the *Automobile*.

Each crew member must be attired in accordance with Technical Appendix - *Schedule* D for a refuelling operation as must any other person within 1 metre of the refuelling operation (e.g. Car Controller, Driver Assistant).

2.3 Emergency Cut-Off Valve

Each Overhead Rig must be equipped with a fuel cut-off valve attached directly to the fuel reservoir (refer Diagram 2) and operate on the “dead man” principle. When pressure on the handle of the cut-off valve is released, the valve must immediately close, stopping the flow of fuel from the reservoir. This closing principal must not rely on the action of gravity alone.

2.4 Approval of Installation and Equipment

Prior to any *Competition* during which refuelling is permitted in *Pit Lane,* all equipment and its installation must be approved by the Chief Scrutineer or their nominee.

2.5 Earthing

During any refuelling operation, each *Automobile* and its refuelling equipment (including tower, reservoir, hose, and coupling) must be grounded to earth. The *Automobile's* receiving unit for the delivery hose must be connected to a ground/earth point on the *Automobile*.

3. DRY-BREAK COUPLING

The refuelling of an *Automobile* in *Pit Lane* must be conducted using a dry-break coupling approved by *Motorsport Australia* (refer Diagram 1).

A dry-break coupling, which may be separate or combined, must connect the supply hose and the vent hose to the *Automobile*.

All refuelling equipment must be maintained in good working order. Each dry-break coupling must be regularly inspected and any part showing any sign of wear or damage, replaced.

4. OVERHEAD RIG

An Overhead Rig must:

store fuel in a single rigid reservoir not exceeding 2 metres in height above the *Pit Lane* (refer Diagram 2);

have an explosion safe shielded vent on top of the reservoir which may exceed the 2 metre height limit and vent to atmosphere outside of any pit garage;

have a maximum capacity of 220 litres of fuel plus 10% ullage (air space);

include a separate delivery and vent hose which may be connected to the *Automobile* individually or via a siamese coupling;

delivery hose specification

a single, fuel resistant, flexible, hose connected to the emergency cut-off valve located at the base of the reservoir. Such hose must be a minimum of 2.5 metres in length and of an *ID* no greater than 50 mm;

vent hose specification

a single, fuel resistant, flexible hose connected to the ullage space in the reservoir (see Diagram 2). Such hose must have an *ID* no greater than 50 mm.

be electrically continuous and efficiently grounded in its entirety;

have a fitting (maximum 50 mm diameter) on top of the reservoir to enable refilling;

not be artificially pressurised; and

be tethered from 2 opposing locations on top of the reservoir to a point above on a building or structure substantial enough to support a full reservoir.

Any device which changes the ambient temperature of the fuel is prohibited.

The Overhead Rig must be completely drained of fuel before moving.

A fire attendant with a minimum 4.5 kg fire extinguisher must be adjacent to the Overhead Rig during any refuelling/defueling of the reservoir.

When in use, the reservoir and associated hoses, must be in the *Pit Lane* at the location specified in the *Rules*.

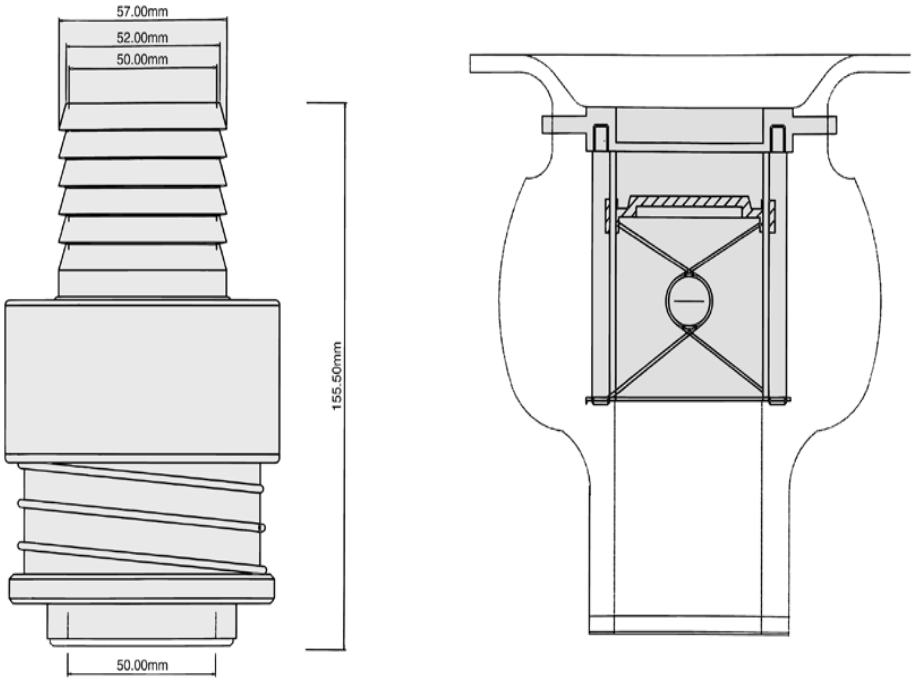

Diagram 1:
General design of dry-break coupling
(probe and receiver unit)

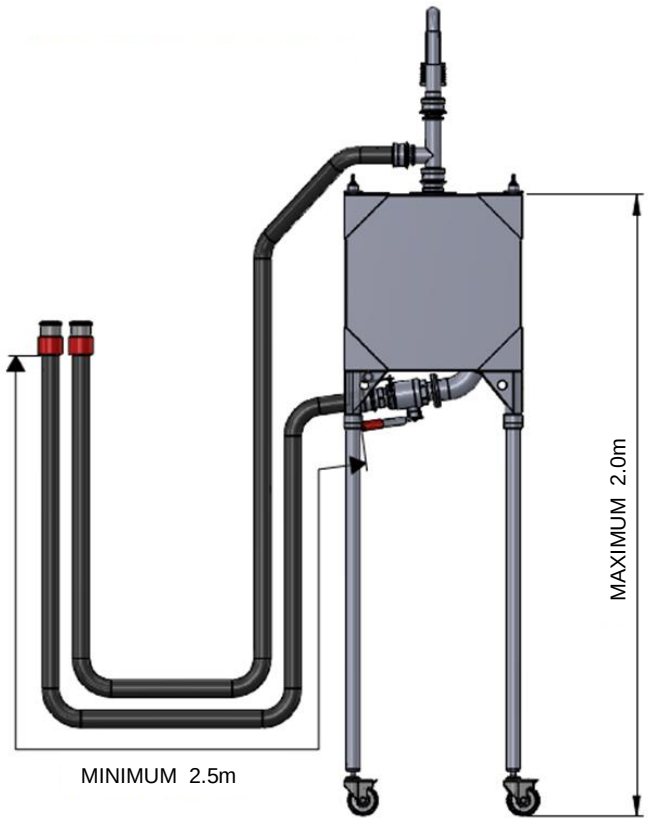

Diagram 2:
Example: Overhead Rig with fuel hose and vent return.

PART 2 - *STATE /CLUB COMPETITION*

1. GENERAL

The refuelling of an *Automobile* during a *State* or *Club Competition* and where the *Supplementary Regulations* permit may only be conducted in *Pit Lane* using an Overhead Rig (as described in Part 1) or a fuel drum/s as detailed below (Drum Rig).

Each *Automobile* must have its engine switched off and be stationary at all times during refuelling.

Unless specified otherwise in the *Supplementary Regulations*, only those involved in the refuelling process may be in *Pit Lane* during refuelling.

Refuelling of an *Automobile* on the *Circuit* is prohibited.

There must be at least 2 metres between any *Automobile* in the *Pit Lane* before refuelling is permitted to begin or continue.

No spark emitting device is permitted in the *Pit Lane* during any session where refuelling is permitted. (e.g. electric or battery-operated tools, battery jump packs).

Refuelling of an *Automobile* in the pit garage or paddock is prohibited during any session in which that *Automobile* is entered.

Any refuelling of an *Automobile* outside of a session must be conducted either with the *Automobile* totally within a pit garage or in the area of the paddock specifically designated for the purpose of refuelling, and must be conducted with the engine turned off.

2. SAFETY

2.1 Fuel Storage

The area of the pit garage in which any fuel drum is stored must be adequately ventilated and have unimpeded access from front and rear of the pit garage. In accordance with the Circuit Race Standing Regulations a minimum of 1 x 4.5 kg fire extinguisher must be available for use in each pit garage.

2.2 Pit Crew

Unless otherwise approved in the *Rules*, any refuelling procedure will require 3 crew members to attend the *Automobile* who will only be permitted to perform the following tasks:

1 fire attendant – stand near the *Automobile* and the refuelling equipment with the fire extinguisher ready to operate;

2 hose attendants – both must assist in the moving of the Drum Rig into and out of *Pit Lane*. During refuelling, 1 attendant must operate the pump, whilst the other must control the fuel connection or nozzle and the flow of fuel into the *Automobile.*

Each crew member must be attired in accordance with Technical Appendix - Schedule D for a refuelling operation.

Any other crew member whose tasks place them within 1 metre of the refuelling nozzle on an *Automobile* (e.g. Car Controller, Driver Assistant) must be attired as listed above for refuelling crew.

2.3 Approval of Installation and Equipment

Prior to any *Competition* during which refuelling is permitted in *Pit Lane*, all equipment and its installation must be approved by the Chief Scrutineer or their nominee.

2.4 Earthing

During any refuelling operation, each *Automobile* and its refuelling equipment must be grounded to earth.

2.5 Position of Crew and Equipment

Other than the Car Controller, each crew member and all equipment must remain in the pit garage until the *Automobile* has stopped in its pit bay.

When refuelling is to be conducted, the *Automobile's* engine must be switched off, the *Driver* must exit the *Automobile* to the pit garage before the refuelling process may commence, and the *Driver* to enter the *Automobile* may not exit the pit garage until the refuelling is complete.

2.6 Minimum Pit Lane Time

A minimum of 5 minutes from entering the *Pit Lane* until exiting the *Pit Lane* is mandatory for any *Automobile* conducting refuelling during a pit stop.

2.7 Refuelling more than 60 litres

If an *Automobile* requires more than 60 litres of fuel during a refuelling pit stop:

more than 1 Drum Rig must be used;

the refilling of an empty Drum Rig, or the swapping of a drum pump, from one Drum Rig to another is prohibited;

a subsequent Drum Rig may only be moved into *Pit Lane* when the preceding Drum Rig is disconnected from the *Automobile* and removed from *Pit Lane.*

2.8 Refuelling under Safety Car or Red Flag

It is prohibited for any *Automobile* to enter *Pit Lane* for the purpose of refuelling under Safety Car or Red Flag conditions.

2.9 Fuel Spill

If any fuel is spilt during the refuelling process:

refuelling of that *Automobile* must stop immediately;

all spilt fuel must be cleaned up prior to refuelling recommencing;

refuelling will not be considered to be completed until any spilt fuel is cleaned up.

2.10 Fuel Leak

If a Drum Rig or an *Automobile* is leaking fuel during the refuelling process:

refuelling of that *Automobile* must stop immediately;

the fuel leak must be repaired to the satisfaction of the Chief Scrutineer prior to refuelling recommencing;

any *Automobile* leaking fuel will be prohibited from exiting *Pit Lane*.

2.11 Refueller Briefing

Each crew member involved in the refuelling of an *Automobile* must attend a refuellers briefing which must include each item covered in these regulations.

2.12 Refuelling near Hot Components

If the *Automobile's* fuel filler orifice is within 1 metre of its wheel or exhaust outlet, such must be covered during the entire refuelling process by the use of either a fire blanket or a non-flammable towel that is fully saturated with water.

3. DRUM RIG

A Drum Rig may only be used to refuel an *Automobile* in *Pit Lane* during an approved refuelling session under the following conditions:

Any refuelling drum must be metal and no greater than 60 litres capacity (refer Attachment 1);

The Drum Rig must remain in the pit garage until the *Automobile* has come to a complete stop, the engine has been switched off, and the *Driver* has exited the *Automobile* and is in the pit garage;

A *Driver* may be 1 of the 3 refuelling pit crew;

The Drum Rig must be stationary in *Pit Lane* before refuelling may commence;

The Drum Rig may only be moved into *Pit Lane* using a moving trolley which has:

a rated capacity of at least 150 kg;

a track greater than the width of the refuelling drum being transported;

the Drum Rig securely attached to it in at least 2 locations with each attachment rated at 100 kg minimum; and

both hose attendants supporting the Drum Rig during any movement to and from the pit garage and *Pit Lane*.

The Drum Rig must be stationary whilst fuel is being transferred;

The transferring of fuel into the *Automobile* must use a manually operated rotary pump which includes a metal fuel pick up shaft and a metal drum pump clamp attached to the threaded drum opening (refer Attachment 1);

The fuel transfer hose must be:

approved for use with fuel;

correctly sized to fit the outlet of the drum pump; and

firmly attached to the drum pump using a metal hose clamp.

For an *Automobile* using the fuel filling system as provided by the original vehicle manufacturer of that *Automobile*:

The hose from the drum pump must be connected to an automatic cut-off fuel nozzle (refer Attachment 1) which must:

be approved for the transfer of fuel;

have an operating automatic cut-off that clicks to the off position and stops the flow of fuel when back pressure is applied to the nozzle tip; and

automatically stop the flow of fuel when the lever is released;

be of an appropriate size to fit completely within the refuelling orifice of the *Automobile* as designed by the manufacturer; and

be attached to the fuel filling hose with a metal hose clamp.

The refuelling drum breather hole must be open and incorporate a vent system with a gravity activated roll-over valve.

For an *Automobile* **not** using the fuel filling system as provided by the original vehicle manufacturer for that *Automobile*:

The hose from the drum pump must be connected to the *Automobile* fuel tank via a pair of quick disconnect dry-break fittings (refer Attachment 1);

Each quick disconnect dry-break fitting must be approved for use with fuel;

The breather hose from the *Automobile's* fuel tank must be a transparent hose approved for use with fuel;

During refuelling, the breather hose must be connected to the *Automobile* and the refuelling drum's standard vent opening via a pair of quick disconnect dry break fittings.

Attachment 1

Example of a 60 litre fuel drum

Example of a Rotary drum pump

Example of a Steel Drum Pump Clamp

Example of a plastic drum pump clamp – Prohibited.

Example of a suitable trolley

Example of dry break fittings.

Example of auto shut off refuelling nozzle