

DELPHI BRITISH TRUCK RACING ASSOC'N CHAMPIONSHIP

1. SPORTING REGULATIONS - GENERAL

1.1. Title & Jurisdiction:

The 2010 DELPHI BRITISH TRUCK RACING ASSOCIATION CHAMPIONSHIP is organised and administered by the British Automobile Racing Club Ltd (BARC) in accordance with the General Regulations of the Royal Automobile Club Motor Sports Association (incorporating the provisions of the International Sporting Code of the FIA) and these Championship Regulations. The organisers reserve the right to issue additional statements clarifying items in the rules and regulations and all such statements will be issued to all registered drivers by posting to the address details on the registration form

MSA Championship Permit No. **CHR2010 / 033**

Race Status: **National A Truck**

MSA Championship Grade: **C**

1.2. Officials:

1.2.1. Co-ordinator:	Jonathan Reeves	BTRA
1.2.2. Licensed Eligibility Scrutineer:	Terry Cox	
1.2.3. Championship Stewards:	Dennis Carter	BARC
	Dale Wells	BARC
	Roy Clarke	BTRA

1.3. Competitor Eligibility:

- 1.3.1. Drivers and Entrant Drivers must be fully paid up valid membership card holding members of the BTRA and be in possession of valid MSA Competition (Racing) National A status Truck Licence (Minimum).
- 1.3.2. The European Rounds will be inscribed on the NEAFP Calendar
- 1.3.3. All necessary documentation must be presented for checking at all rounds when signing on.

1.4. Registration:

- 1.4.1. All fully paid up members of the BTRA will automatically be registered for this championship.
- 1.4.2. There is no registration fee payable.

Note:- For the **first season only** a completely new race team competing in the BTRA championship will be required to pay only half BTRA championship membership fees.

BTRA race by race registration fee will be collected prior to the start of the race meeting and the fees are applicable to ALL rounds of the championship and any team missing a round will be required to pay for that round prior to the next event or at the end of the season if round missed was the last championship round.

- 1.4.3. Registrations will be accepted from 1st January 2010 until the closing date for the final round of the championship.
- 1.4.4. Registration numbers will be the permanent Competition numbers for the Championship.

1.5. Championship Rounds:

The 2010 British Truck Racing Association Championship will be contested over **16** rounds (8 meetings) as follows: Rounds 13 / 14 (marked *) are subject to removal / change.

Round:	Date	Venue	Organising Club
1 / 2	27-28 March 2010	Pembrey	BARC
3 / 4	17-18 April 2010	Brands hatch	BARC
5 / 6	15-16 May 2010	Pembrey	BARC
7 / 8	24-25 July 2010	Nurburgring (D)	ONS
9 / 10	07-08 August 2010	Thruxton	BARC
11 / 12	14-15 August 2010	Pembrey	BARC
13 / 14 *	04-05 September 2010 *	Donington *	BARC
15 / 16	30-31 October 2010	Brands Hatch	BARC

- 1.5.1 In accordance with MSA Regulation D11.1. the organisers reserve the right to amend the published list of dates and rounds, in which case, all registered competitors will be informed of the amendments by Official Bulletins posted to the address specified on the Official Registration Form.

1.6. Scoring:

- 1.6.1. Points will be awarded to Competitors listed as classified finishers in Final results as follows:-
In each Division: 1st – 10, 2nd - 9, 3rd - 8, 4th - 7, 5th - 6, 6th - 5, 7th - 4, 8th - 3, 9th - 2, 10th - 1
and 1 point for the driver setting the fastest lap.

If two or more competitors record identical fastest laps, each will receive the extra point.

- 1.6.2. The totals from all qualifying rounds run will determine final championship points and positions.

- 1.6.3 Ties shall be resolved using the formula in Regulation Q3.4. of the 2010 MSA Yearbook.

1.7. Awards:

- 1.7.1. All Awards are to be provided by the BTRA and individual meeting organisers.

- 1.7.2. Per Round: At the discretion of the individual meeting organisers.

- 1.7.3. Championship: Winner of each Division - A perpetual trophy
2nd placed in each Division - A perpetual trophy
3rd place in each Division - A perpetual trophy

The overall British Truck Racing Champion will be the winner of Division 1

- 1.7.4. Bonuses:

Per Event: Best Presented Paddock Area £100-00. This award may not be won more than twice in any season by any one team.

Championship: As may be arranged and announced.

- 1.7.5. Presentations:

Garlands and trophies are to be provided at the discretion of individual meeting organisers at the end of each race or at an end of the meeting presentation ceremony. Prize money and Bonuses shall be posted to the Entrants within the period specified by the organising clubs of the results being declared final after each race.

- 1.7.6. Entertainment Tax Liability:

In accordance with current government legislation the BTRA is legally obliged to withhold tax at the basic rate on all payments to non-UK resident sportsmen/women. That is, those persons who do not have a normal permanent residence in the UK. The UK does not include the Isle of Man, Channel Islands or Eire.

This means that, as the organiser, the BTRA is required to deduct tax at the relevant rate - currently 23% - from any such payments they may make to non-UK residents.

Under certain circumstances, it may be possible for competitors to enter into an agreement with the Inland Revenue to limit the tax withheld. Any application for such an arrangement must be made in writing and not later than 30 days before the payment is due.

For further information contact:- The Inland Revenue, Foreign Entertainers Unit, 2nd Floor Unit 1, Princes Gate, Homer Road, Solihull, West Midlands. Tel: 0121 712 8601 Fax: 0121 712 8662

- 1.7.7. Title to all Trophies:

In the event of any Provisional Results or Championship Tables being revised after any provisional presentations and such revisions affect the distribution of any awards the Competitors concerned must return such awards to the BTRA in good condition within 7 days.

2. SPORTING REGULATIONS - JUDICIAL PROCEDURES:

- 2.1. Rounds:** In accordance with section C of the 2010 MSA year book.
- 2.2. Championship:** In accordance with section C of the 2010 MSA yearbook.

3. SPORTING REGULATIONS - CHAMPIONSHIP RACE MEETINGS & RACE PROCEDURES

3.1. Entries:

- 3.1.1. Competitors are responsible for sending in correct and complete entries with the correct entry fees prior to the entry selection dates which shall be at least 3 days before each round.
- 3.1.2. Incorrect or incomplete entries (including Driver to be Nominated Entries) are to be held in abeyance until they are complete and correct and the date of receipt for acceptance of entry purposes shall be the date on which the Secretary of the meeting receives the missing or corrected information or fee.
- 3.1.3. Any withdrawal of Entry or Driver/Truck changes made after acceptance of any entry must be notified to the Secretary of the Meeting in writing. If Driver / Vehicle changes are made after publication of Entry lists with Final Instructions the Competitor concerned will be accepted in accordance with D25.1.12.
- 3.1.4. The maximum BTRA Race by Race Fee for each round shall be as advised by BTRA bulletin.
- 3.1.5. In the event of any rounds being oversubscribed the Organising Clubs, in liaison with the BTRA may at their discretion run Qualification Races (CR 3.15.) or split the entry into smaller groups using the Division system (CR 3.16.)
- 3.1.6. Should the provisions of 3.1.5. be impossible, reserves are to be nominated on the Final List of Entries published with Final Instructions or Amendment Sheet Bulletins. All Reserves will practice and replace withdrawn or retired entries Reserve Number order within each class. If Reserves are given Grid Places prior to issue of the first Grid Sheets for any round the times set in Practice shall determine their grid positions. If Reserves are given places after publication of the grid sheet and prior to trucks being collected in the Official "Assembly Areas" they will be placed at the rear of the Grid and be started without any time delay. Otherwise, they will be held in the Pitlane and be released to start the race after the last vehicle to start the GREEN FLAG LAP or last truck to take the start has passed the startline or pitlane exit. whichever is the latter. Such approval to start MUST be obtained from the Clerk of the Course.
- 3.1.11. Reserves who practice in the correct session and set a time will take precedence, in reserve number order, over any accepted entry whose practice times are disallowed, or who does not set a time during the official practice for the championship race.

3.2. Briefings:

Organisers should notify Competitors of the times and locations for all briefings in the Final Instructions for the meetings. Competitors must attend all briefings.

3.3. Qualifying:

The minimum period of qualifying to be provided is to be as specified in the MSA Regulations in respect of circuit lengths.

Should any practice session be disrupted the Clerk of the Course shall not be obliged to resume or re-run the session to achieve the championship criteria and the decision of the Clerk of the Course shall be final.

3.4. Qualification Criteria:

Each driver should complete a minimum of 3 laps qualifying in the vehicle to be raced and in the correct session in order to qualify for selection and order of precedence as set out in the MSA Regulation Q4.5. The Clerk of the Course and / or Stewards of the Meeting shall have the right to exclude any driver whose qualifying times or driving are considered to be unsatisfactory - as per MSA Regulation Q4.5.

3.5. Races:

The standard minimum scheduled distance shall be 12 miles whenever practicable but should any race distance be reduced at the discretion of the clerk of the Course or Stewards of the Meeting it shall still count as a full points scoring round.

3.6. Starts:

3.6.1. All race start countdowns are to have a minimum elapsed period of 5 minutes from the time all vehicles are released to form up on the grid to the start of the Green Flag Lap(s) in the formation as specified on the Track Licence for each circuit.

3.6.2. The countdown procedures/audible warnings sequence shall be:-
Rolling Starts:-

2 minutes to start of Green Flag/Pace Lap - Clear Grid warning/Grid closed
1 minute to start of Green Flag/Pace Lap - Start engines/clear Grid
30 seconds - Visible and audible warning for start of Green Flag/Pace Lap

3.6.3. The use of tyre heating/heat retention devices, tyre treatments and compounds is prohibited.

Any vehicles removed from the grid after the 2 minute stage or driven into pits on Green Flag lap shall be held in the pitlane and may start the race after the last vehicle to take the start from the grid has passed the startline or pitlane exit, whichever is the later.

3.6.5. Any drivers unable to start the Green Flag/Pace lap or start are required to indicate their situation as per MSA Regulation Q12.13.2. and any drivers unable to maintain grid positions on the Green Flag Lap to the extent that ALL other vehicles are ahead of them, may complete the Green Flag lap but MUST remain at the rear of the last row of the grid but ahead of any vehicles to be started with a time delay.

3.6.6. Excessive weaving to warm up tyres - using more than 50% of the track width, and falling back in order to accelerate and practice start, is prohibited.

3.6.7. In the event of any starting lights failure the Starter will revert to use of the National Flag.

3.7 Practice / Race Stops:

3.7.1 Should the need arise to stop any **practice or qualifying session**, RED LIGHTS will be switched on at the Startline and RED FLAGS will be displayed at the Startline and at all Marshals Signalling Points around the Circuit. This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and to return to the **pitlane**.

3.7.2 Should the need arise to stop any **race**, RED LIGHTS will be switched on at the Startline and RED FLAGS will be displayed at the Startline and at all Marshals Signalling Points around the Circuit. This is the signal for all drivers to cease circulating at racing speeds, to slow to a safe and reasonable pace and to return to the **starting grid** which will automatically become a Parc Ferme area.

Vehicles **should** not enter the Pits unless directed to do so **or unless repairs are necessary**. Work on vehicles already in the Pits must cease when a race is stopped **and may only continue under the control of Scrutineers**. **Vehicles which are in the pitlane or who enter the pitlane may ONLY re-start from the pitlane (not the grid) after all other vehicles have re-started. Non runners at the time of the stoppage (which have been recovered) can re-start from the pitlane behind those referred to above.**

3.7.3 Case A - Less than two laps completed by Race Leader

The race will be null and void. The race will re-start from the original grid positions. Competitors unable to take the re-start may be replaced by **nominated** reserves who will start from the **pitlane** in reserve **number** order **and in front of any other pitlane starter**. Gaps on the grid should not be closed up. The length of the re-started race will be determined by the Clerk of the Course.

3.7.4 Case B - More than two laps completed by Race Leader but less than 75% of Race Distance:

The race will restart from a grid set out by the finishing order of part one (as per Q5.4.3). The **final** result of the race will be the finishing order of part two. The length of the re-started race will be determined by the Clerk of the Course.

3.7.5 If the leader has completed more than **75%** of the race distance or duration it shall not **usually** be re-started (as per Q5.4.3). **If not re-started the results will be based on the order of crossing the finish line at one lap less than at the time of first showing the Red Flag. Only vehicles which are under their own power at the showing of the Red Flag will be classified.**

3.8. Scrutineering:

Trucks must be presented for scrutineering in a clean and tidy condition and any repairs should be to the highest possible professional standards, any trucks presented for scrutineering that do not conform will be rejected.

3.9. Re-Scrutiny:

Any vehicles reported involved in contact incidents during races or practice must be re-presented to the Scrutineers before continuing in the races or practice.

3.10. Pits and Pitlane Safety:

3.10.1. Pits: Entrants must ensure that the MSA, Circuit Management and Organising Club Safety Regulations are complied with at all times.

3.10.2. Pitlane: The outer lane or lanes are to be kept unobstructed to allow safe passage of vehicles at all times. The onus shall be on all Drivers to take all due care and drive at minimum speeds in pitlanes.

3.10.3 Refuelling: May only be carried out in accordance with the MSA Regulations Q13., Circuit Management Regulations and the SRs or Final Instructions issued for each Circuit / Meeting.

3.11. Race Finishes:

After taking the Chequered Flag drivers are required to: progressively and safely slow down, remain behind any competitors ahead of them, return to the Pit Lane Entrance/Paddock Entrance as instructed, comply with any directions given by Marshals or Officials and to keep the helmets on and harnesses done up while on the circuit or in the pit lane.

3.12. Results:

All practice time sheets, grids, race results are to be deemed PROVISIONAL until all vehicles are released by Scrutineers after Post Practice/Race Scrutineering and/or after completion of any Judicial or Technical Procedure.

3.13 Timing Modules:

3.13.1 All competitors will be required to fit an Electronic Self Identification Module (Transponder) to their vehicle (Q12.2.1) for the purposes of accurate timing. Holders for these and detailed fitting instructions will be issued with the transponders and it will be the responsibility of the competitor to fit these in the car in the position and manner specified. The Modules must be in place and functioning correctly for all Championship qualifying practice sessions and races. The setting and servicing of these items must only be carried out by properly authorised MSA licensed Timekeepers. Competitors will be charged by the timing company for replacement of the Modules due to misuse or loss at any time during the season.

3.13.2 Competitors may not place electronic timing equipment within five metres of the official Start, Finish or any other official timing lines at any event or test session/day. Any such equipment placed within these zones will be removed.

3.14 Driving Standards:

3.14.1 Any competitor who is reported to be involved in cases of contact / excessive corner cutting / excessive kerbing or other driving standards issue, may be subject to the following immediate penalties:

3.14.2 During practice and / or qualifying: The competitor concerned may be Black Flagged and may be subsequently prevented from taking any further part in that session

3.14.3 During race: The competitor concerned may be penalised by way of a drive through penalty in accordance with MSA Regulation Q12.6.

- 3.14.4 A drive through penalty being imposed will be notified by the use of a Black Flag or Black Flag and Penalty Board and must be taken within 3 laps of the notification being given. It will involve the competitor entering the pitlane, observing the pitlane speed limit between the 'in' and 'out' control lines, and exiting the pitlane to rejoin the race, without stopping at his / her pit.
- 3.14.5 Failure to comply with the imposition of a drive through penalty, may result in exclusion from the race in question
- 3.14.6 In the event that a penalty described above cannot be imposed for operational reasons during a race (i.e. within 3 laps of the end of a race), the competitor concerned may be given a 25 second elapsed time penalty as an alternative.

3.15 Qualification Races:

The means by which qualification races are organised, if deemed necessary, will be set out in individual race meeting SR's, or Final Instructions.

4. CHAMPIONSHIP RACE PENALTIES:

4.1. Infringements of Technical Regulations:

- 4.1.1. Arising from post practice Scrutineering or Judicial Action:
Minimum Penalty: The provisions of MSA Regulations: C3.3.
- 4.1.2. Arising from post race Scrutineering or Judicial Action:
Minimum Penalty: The provisions of MSA Regulations: C3.5.1. (a) and (b).
For infringements deemed to be of a more serious nature the Clerk of the Course and/or Stewards of the meeting are to invoke the provisions of Regulation C3.5.1. (c).
- 4.1.3. Additional specific championship penalties:
On application from the Championship Co ordinator / Organisers, the Championship Stewards have the right to exclude from the Championship any competitor found guilty of a serious driving or technical infringement.

4.2 Specific Championship Penalties for Infringement of Technical Regulations

4.2.1 Maximum Road Speed - Speeding (See 5.18):

During Practice and Race, contravention of Regulation 5.18 will invoke the following:

- a) During Practice Loss of practice times and race start from back of grid.
- b) During Race
- | | | |
|--------------------------|--|---------------------------|
| i) First contravention | Speeding for a period of 3 - 4 seconds | 10 second penalty. |
| | Speeding for a period of 5 - 6 seconds | 20 second penalty. |
| | Speeding for a period up to 7 seconds | 30 second penalty. |
| | Speeding for a period of 8+ seconds | Exclusion. |
| ii) Second Contravention | Similar time penalties, added to those above | |
| iii) Third Contravention | | Exclusion. |

- 4.2.1.1 Any vehicle which exceeds 170 kph will be excluded from the race, on the first contravention, irrespective of the duration of the contravention.

4.2.2 Exhaust Smoke Emissions (See 5.19):

The Organisers may appoint one or more observers to check for excess exhaust smoke during all practices and races. Any truck adjudged by a nominated Judge of Fact or duly appointed Scrutineer, to be emitting any visible smoke at any time during an event, will immediately be shown the **Black and Orange** Flag, by decision of the Clerk of the Course alone.

If a driver is stopped for smoke he shall be subject to penalties, applicable to the 2010 FIA EUROPEAN TRUCK RACING CHAMPIONSHIP and set down as follows:

- a) During Practice Loss of practice times and race start from back of grid.
- b) During Race
- | | |
|--------------------------|---|
| i) First contravention | Allowed to re-start after adjustments, only once |
| ii) Second Contravention | Not be allowed to re-start |

These decisions (4.2.2. & 4.2.2. a & b) will be without appeal. This regulation cannot be invoked as a reason for protest by competitors.

4.3 Infringements of Non-technical Regulations:

infringements of non-technical MSA Regulations and the Sporting Regulations issued for the Championship. As per 2010 MSA Judicial Procedure Regulations.

DELPHI BRITISH TRUCK RACING ASSOCIATION CHAMPIONSHIP

5. TECHNICAL REGULATIONS:

5.1. Introduction:

The following Technical Regulations are set out in accordance with the MSA specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it you should work on the principle that you cannot.

5.2. General Description:

The 2010 DELPHI BRITISH TRUCK RACING ASSOCIATION CHAMPIONSHIP is for Competitors participating in Racing trucks in compliance with the regulations issued and applying to the 2010 F.I.A. European Truck Racing Championship, Race Trucks (with the exceptions of the items detailed in this document) or the following regulations.

The 2010 DELPHI BRITISH TRUCK RACING ASSOC'N CHAMPIONSHIP is run in two Race Truck classes

1) Class A Race Trucks

Trucks fitted with any two of the following items of equipment,

- i) Disc brakes.
- ii) Shock absorbers, which are capable of being adjusted while, attached to the vehicle.
- iii) **Electrical** assisted gear changing mechanism.
- iv) Engines with a total cubic capacity greater than 14 litres.
- v) ~~Limited Slip Differential~~

2) Class B Race Trucks

Any Race truck conforming to the BTRA race truck class that does not comply with the requirements of Class A

To be eligible for Class B the Truck Chassis / Cab must be at least 3 years old.

Definition

Two-axle road tractors with a minimum production of 50 units during any 12 month period duly certified by an official documentation from manufacture.

The general shape of the tractor must correspond to the shape of a road-going tractor homologated for the transportation of merchandise.

The engine must be derived from a unit fitted to a road-going tractor. The engine must come from the commercial range of the truck manufacturer in the year of the truck production, and not necessarily from the model of truck, and must have been produced in a minimum quantity of 100 units.

All trucks must comply with Mainland British Type Approval for the main vehicle specifications and not have a maximum engine cubic capacity of more than 15 litres.

5.3. Safety Requirements:

All MSA Section K Safety Criteria Regulations apply as relevant.

For Super Race & Race Trucks competing in the European Cup, regulations applicable to the 2010 FIA European Truck Racing Cup apply.

For British Race Trucks not competing in the above the following regulations apply.

5.3.1 **Roll Cage** An internal cab roll cage must be fitted. A basic roll cage is as shown in diagram 8. It must be in one piece (i.e. all parts welded to each other) and follow the interior shape of the cab as closely as possible and be free from unevenness or cracks. The following members are mandatory, two rear diagonals, two roof diagonal members and one member joining the centre section of the front top cross member to the lower rear cross member or lower part of the rear vertical leg of the main roll cage.

If the driver's brake, clutch and accelerator pedals are positioned in front of the front wheel centre line an additional cross member must join the front outer foot of the internal roll cage to the chassis. The cabin pivot point and or the original cabin stiffening rail may be incorporated into this member. The material specification must comply with the details below for the roll cage with a minimum diameter or side length, of 25mm,

It is permissible and recommended to fit additional struts to the roll cage, examples are shown in Diagram 2. Such additional struts may be welded, bolted or clamped, and all hoops and struts must be one piece and not have joints within their length.

The minimum fixation of the cage to the cab consists of four mounting plates, one for each vertical pillar of the cage. Each mounting foot must have an area of at least 200 sq. cm and a thickness of 3mm. Reinforcing plates with an area of at least 200 sq. cm and a minimum thickness of 3mm must be fitted such that the cab floor is sandwiched between the mounting feet and the reinforcing plates. At least three bolts must clamp each mounting foot to its reinforcing plate, such bolts to have a minimum specification of 8.8 (S grade) and diameter of 12mm. This mounting represents a minimum.

- 5.3.2 The safety cage described in 5.3.1. must be directly connected, with steel sections to the chassis in a minimum of 4 separate locations. The additional supports are required from the four main roll vertical pillars via the reinforcing plates under the cab, at least 3 of these supports must be connected directly with steel section to the specification as the roll cage detailed below. The fourth connection must comply with the same material specification as below for the roll cage and will have a minimum diameter or side section of 25mm. NOTE! Two connections must be in front of the driver's feet and the two rearward of the rearmost position of the driver.

It is permitted to increase the number of bolts and to attach the roll cage to the cab shell (e.g. to screen and door pillars).

Minimum material specification for all mandatory tubes in cold drawn seamless steel tube with a minimum tensile strength of 340 N/mm². The minimum permitted tube sizes are either:
57.0 mm outside diameter and 4.9mm minimum wall thickness or
63.5 mm outside diameter and 3.2mm minimum wall thickness or
70.0 mm outside diameter and 2.4mm minimum wall thickness.

It is permitted to use a combination of these permitted tube sizes. All mandatory tubes must have an inspection hole of 5 mm diameter, drilled in an easily visible position.

All welding should be of the highest quality possible, with full penetration (preferably ~~arc~~ arc welding and in particular Heliarc). These requirements are a minimum.

Alternatively the roll cage must comply with the 2010 FIA EUROPEAN TRUCK RACING CUP Regulations.

5.3.3. Side guards

Metal side guards must be fitted between the mudguards of front and driven axles to prevent wheels interlocking. The sideguards may be made with either:

- One steel channel 100mm high x 50mm x 5mm or
- One steel box section 100mm x 50mm x 3mm or
- One steel tube 65mm diameter x 3mm wall thickness or
- Two steel tubes 50mm diameter x 3mm wall thickness.

Aluminium may be used in place of steel, but in that case the material thickness must be twice that specified for steel. Outriggers from the chassis to the sideguards must be made from material at least equal in strength to the sideguard material. All tubes and box sections must have a 5mm hole drilled in a visible position for inspection purposes.

Maximum spacing between any two outriggers is 1.5 metres

Maximum unsupported sideguard overhang is 500mm

Maximum permitted gap (in side view) between front or rear mudguard and the sideguard is 100mm.

5.3.4. Outriggers

Outriggers must be mounted to the chassis using spreader plates of at least 100 sq. cm. area and 5mm thickness. These plates must be welded to the outriggers and bolted to the chassis. At least 4 x 8mm diameter bolts must be used for each outrigger, these bolts must be at least grade 8.8(S grade). It is only permitted to drill the chassis for the attachment of sideguards. The bottom of the sideguards must be at least 500mm from the ground. The top must be no more than 1 metre from the ground. A sideguards must extend outwards so that they are within 300mm of the extremities of the vehicle in plan view, but they may not project beyond the extremities of the vehicle in plan view. All welding must be of the highest quality with full penetration. It must be possible to inspect all welds. Sideguards must not present any sharp angles or corners in plan view. It is permitted to cover the sideguards with fairings as described in section 5(6) but all such fairings must be readily detachable to allow for inspection of sideguards by scrutineers.

5.3.5. Front And Rear Guards

Guards must be fitted to front and rear of the vehicle to prevent it from driving over the top of "armco" safety barriers, and to assist with "suspended tow" vehicle recovery. These guards must meet the following requirements:

FRONT GUARD - The front face of the guard must be vertical and in line with the front face of the standard bumper. The top face of the guard must be in line with the top face of the standard bumper. The front guard must be attached directly to the chassis main members, as described in 5.5.1.2. and all the attachments must be forward of the front wheels.

REAR GUARD - The rear face of the guard must be vertical. No part of the rear guard may extend more than 200mm behind the end of the chassis main members. The top face of the guard must not be above the top flange of the chassis main members, measured at the extreme rear of the vehicle. Overall width of the guard must not exceed 2.300mm. The rear guard must be attached directly to the chassis main members, as described in 5.5.1.2. and all the attachments must be behind the rear wheels.

FRONT AND REAR GUARDS - The bottom face of each guard must be between 300mm and 400mm above the ground and must be between 1800mm and 2300mm wide. All exposed parts of the guards which are not part of the standard bumper(s) must be made of tube. Tube material is free, but it is recommended that roll cage or sideguard tube is used. The ends of any tubes must not be left exposed. Bottom tubes must be joined to top tubes/bumper(s) and there must be no sharp edges, corners or angles exposed. It is permitted to cover all or part of the guards with securely attached metal panels. Each guard must be able to withstand a load equal to the vehicle weight on the rear axle, applied horizontally to the bottom tube, along the axis of the vehicle. It must also be capable of supporting the weight of its own end of the vehicle. These loads must not cause distortion of the guard. Note: The load requirements can be checked by positioning the vehicle with the guard against a wall engaging a gear and applying load until the driven wheels spin on a dry road; and jacking up the appropriate end of the vehicle on the guard. with the load spread over the centre metre of the bottom tube.

5.3.6. Seat Belts

All seat belts must be a set of unmodified proprietary manufacture to current FIA standard and must be securely attached to the vehicle's cab structure or roll cage (MSA Regulation Q19.14.2 applies). Anchorage points on the cab structure must be reinforced to ensure adequate strength. Belts must have 2 parallel shoulder straps and one abdominal strap. Fixation points to be 2 for the abdominal strap and 2 behind the drivers seat for shoulder straps.

The shoulder straps must be fixed on a rear transversal tube welded to the roll bar or attached to the upper anchorage points of the front belts.

The transversal reinforcement shall be a tube measuring at least 38 mm x 2.5 mm or 40 mm x 2 mm, made from cold drawn seamless carbon steel, with a minimum yield strength of 350 N/mm².

The straps may be attached by looping or by screws, but in the latter case an insert must be welded for each mounting point (see Drawings 253-17C and 253-53 for the dimensions).

These inserts will be positioned in the reinforcement tube and the straps will be attached to them using bolts of M12 8.8 or 7/16UNF specification.

The angle of the shoulder straps at the rear of the seat must be at a maximum of 20 degrees to the horizontal.

5.3.7. Fire Extinguishers in compliance with FIA Appendix J and 2010 F.I.A. European Truck Racing Cup regulations, must be fitted .

5.3.8. Circuit Breaker - Engine shutdown

A circuit breaker or isolator switch which shuts down the engine and disconnects the batteries from all electrical circuitry (except any automatic fire extinguisher system) must be fitted behind the fifth wheel and between the chassis rails. This switch must be painted yellow and identified by a red spark on a white edged, blue triangle. The main earth between batteries and the chassis, or the negative lead in the case of insulated return wired vehicles must be coloured yellow or covered with yellow material. In the case of vehicles which use a mechanical shutdown system, a shutdown device must be fitted which is separate from the electric circuit breaker. The device must be fitted close to the circuit breaker, be clearly marked and have clear operating instructions (e.g. "pull knob to stop engine"). An engine shutdown switch and or mechanical device must be fitted in the cab, with positive on-off positions clearly marked. They must be operable by the driver, normally seated and wearing a seat belt. The switch must also isolate any electric fuel pumps.

It is recommended that either an air intake shutdown valve, exhaust shutdown valve or a shut off valve in the oil feed line to the turbocharger be fitted to restrict engine revs in the event of engine runaway. These devices must be operable from both inside and outside the cab.

5.3.9. Driver's and Passengers Windows

For safety reasons, whatever the external weather conditions, both side windows must be fully open.

A protective net in a readily visible contrasting colour must be fitted to the inside of both the driver's and passengers door covering the area of the window. It must not impede vision, but must be able to prevent the driver's hand or arm from falling out of the window in the event of a vehicle roll over.

This net must be approved by the Eligibility Scrutineer for the championship

5.3.10. Prop shaft

A minimum of 2 strong, steel, safety loops or straps must be fitted to each propeller shaft, shaft, to prevent it hitting the ground in case of breakage. They must be fitted so that one is less than half way along the propeller shaft while another is more than halfway along the shaft. The prop shaft must not pass through any fuel or air tanks.

Should any tank be close to the propeller shaft, it must have extra protection in the walls close to the shaft.

5.3.11 Wheel Nut Covers

Wheel nut covers of the linked plastic type are highly recommended for fitment to all wheels on the steering axle.

Metal wheel nut covers may only be used with the express permission of the Eligibility Scrutineer.

5.3.12. Fireproof Bulkhead

All vehicles must have a protective bulkhead of non-inflammable material between the engine/transmission and the driver's compartment capable of preventing the passage of fluid or flame in the case of fire. Gaps must be sealed with GRP or an RTV sealant. Use of magnesium is prohibited.

5.3.13. Fuel/Oil Lines

It is prohibited to run any fuel, oil or water lines within the cab. The only oil lines which may run within the cab are those leading solely to temperature or pressure gauges. Such lines must be metallic or aircraft quality.

5.3.14. Steering Lock and Quick Release Mechanism

Any steering lock system fitted to the vehicle must be removed.

If the steering column passes in between the driver's legs, it must be covered with protective detachable foam in order to prevent injuries to the driver's knees. As from 01/01/2010, the steering wheel must be fitted with a quick release mechanism. It must consist of a flange concentric to the steering wheel axis, coloured yellow through anodisation or any other durable yellow coating and installed on the steering column behind the steering wheel. The release must be operated by pulling the flange along the steering wheel axis.

5.3.15. Park Brake

The location of the park brake control must be clearly indicated by a notice inside the cab at least 20cm wide. The park brake control must be operable by the driver normally seated with seat belts fastened.

5.3.16. Engine Oil Catch Tank

All engine breathers venting to the atmosphere must be lead into a catch tank arranged in such a way as to prevent oil from spilling onto the track. If a single catch tank is used, it must have a volume of at least 4 litres. It is permitted to use multiple tanks, each tank must be at least 2 litres. Tanks may be of any material, but it must be possible to view the contents of the tank (e.g. a sight glass is required in a metal tank, plastic tanks must be translucent). All tanks must be capable of being readily emptied.

5.3.17 Lower Cab Access Strips

Must be modified, if necessary, so as to minimise the possibility of such components puncturing tyres in an incident.

5.3.18 Seats

The driver's seat must be homologated to a current FIA standard with an extension with energy absorbing and non-inflammable material around the driver's head and must not be modified.

(NOTE: This is the winged type seat)

All seats must be firmly attached and must not slide, tilt, hinge or fold. The driver's seat must support the driver and hold him in position inside the cab.

All seats must face forward. Passenger seats may be removed. All joints between any seat and the cab (i.e. seat to subframe [if fitted] and subframe to floor) must have at least 4 x 8 mm diameter or 6 x 6 mm diameter bolts, minimum grade 8.8 ("S" grade). Sliding seat runners must be locked and bolted into position by a system requiring the use of tools.

5.3.19 Water Tanks

No water tank may be situated within the chassis rails between the wheel base.

5.4. General Technical Requirements:

5.4.1. Vehicle competing in all classes must comply in all respects with the exception of the air inlet restrictor requirement, to the technical regulations issued as being applicable to the 2010 FIA European Truck Racing Championship, including all and any bulletins which may be issued during the course of the year, modifying or supplementing these regulations.

5.4.2. Vehicles competing in British Race Truck Division must comply with the following regulations 5 (4).3 to 5(6) inclusive and 5(5) to 5(18) inclusive.

5.4.3. Definitions

Race truck must be derived from a two-axle road tractors with a minimum production of 50 units of this type (Cabin & Chassis) during any 12 month period duly certified by an official documentation from manufacture.

The general shape of the tractor must correspond to the shape of a road-going tractor homologated for the transportation of merchandise, with a minimum Gross Vehicle Weight of 18 tonnes

The engine must be derived from a unit fitted to a road-going tractor.

The following mechanical components must be from a road-going tractor unit homologated for the transportation of merchandise:-

Gearbox - Front and rear axles - Steering box - Components of the braking system

The definitions given in art. 251 Appendix J of the 2010 FIA Annuaire shall apply to these regulations, which shall take precedence over the Terminology section of the MSA Regulations, as published in the MSA 2010 year book. Nevertheless the Section B of the MSA Regulations shall apply in all instances where it covers a topic not covered by art. 251 of the FIA Annuaire Appendix J.

5.4.4. Pattern Parts

Unless specifically prohibited by these regulations it is permitted to use "pattern parts" as direct replacement of manufacturer's parts, provided such parts are commercially available as direct replacements and of the same design as the vehicle manufacturer's parts.

5.4.5. Repairs

Repair of components may be affected using accepted repair methods such as welding. Competitors attention is drawn to the limitations of such action, the addition of gussets, additional welding or material, the change of shape, design, material, surface finish or removal of material constitute a "modification".

5.4.6. Standard Specification

Any reference to standard specification and/or parts and/or materials in these regulations shall be interpreted as a reference to the manufacturer's listed standard item(s) only as set down in the appropriate type approval. It shall not include manufacturer's options.

5.4.7. Aerodynamic Effect

No mechanical part must be designed to generate an aerodynamic effect.

5.4.8. Close Loop Control Systems

Apart from the engine management systems, close loop control systems are prohibited.

5.5. Chassis:

5.5.1. Chassis Modifications Permitted

5.5.1.1. It is permitted to locally modify the chassis frame in order to comply with the safety requirements specified within these regulations, in order to fit authorised reinforcements described in section 5.5.1.2. With the exception of the front and rear guards, (section 5.3.5.) all modifications must remain between the chassis rails and between the front of the complete front wheels and the rear of the complete rear wheels. Engine and transmission supports must be fixed directly to the chassis rails or to a transversal reinforcement that must be fixed within the chassis rails and retain the original principle. The chassis frame must be made of a ferrous material and must consist of two chassis rails in which have a "U" shape section.

It is not permitted to weld anything whatsoever to these members, and they may only be pierced so that various parts, as well as reinforcements and supports described in 5.5.1.2. may be affixed.

5.5.1.2 Authorised Reinforcements

Local reinforcements of the main members:

The two chassis rails may be reinforced locally with reinforcements of the same type (material & section shape) positioned inside the "U" shape. The total combined length of these must not be more than 1,000mm per main member. These reinforcements may be joined together by transversal members with a constant section that must always be less than those of the main members measured at the location of the reinforcement.

Transversal reinforcement

Any transversal link crossing a plane parallel to the vehicle's centre line linking both main chassis rails by means of welding, screwing, riveting and/or bonding.

Transversal members

Chassis rails may be joined together by transversal members with a constant section the dimensions of which must not exceed the height of the main members measured at the location of the reinforcement.

The fixing plate to which the additional reinforcement is attached must be square in shape and must not exceed the height of the chassis rail at the fixing point. The fixing nuts must be bolted directly to the cross member.

A maximum of 16 transverse members may be used, excluding for radiator, engine and gearbox mountings. These transversal members will be counted from the front end to the rear end of the chassis.

The fuel tank fixing will be counted as a minimum of 2 transversal members depending on the fixing arrangement

Engine, transmission and fifth wheel supports will also be counted as a minimum of 1 transversal member each.

No transversal member situated within the wheelbase may protrude beyond the upper surface of the main members of the chassis frame.

Additional reinforcements

A maximum of 5 plates per chassis rails may be used to connect the transversal members that join with the longitudinal members.

The length and width of each of the fixing plates of the underframe must not exceed the maximum height of the main chassis rails at any point. Each fixing plate may use a maximum of 6 bolts of a diameter no greater than 14 mm.

The fixations points must be situated within the wheelbase, between the front of the front wheel and the rear of the rear wheel.

The longitudinal reinforcements joining the transversal members must be connected to the 5 fixing plates mentioned above.

The number of longitudinal reinforcements when the truck is viewed from the side must not exceed 18.

All these reinforcements must be situated below the chassis rails and must have a maximum circumference of 280 mm.

A "U" or "L" section will be assumed equivalent to a complete rectangle for this measurement.

Each of these plates may not exceed 66,000mm² in size and may use a maximum of 6 bolts of a diameter no greater than 14mm. The two main members may be joined together with steel plates of 8mm maximum thickness fitted on their upper surface. A maximum of 8 bolts are authorised for affixing these plates to the main members. The holes through which these bolts pass through must have a diameter of no more than 6mm and must be situated at least 150mm from one another.

5.5.1.3 Additional Support for Equipment

Additional support for equipment are authorised. They must be bolted to the chassis rails through no more than 2 plates with a maximum length of 250mm each. The distance between these plates must be greater than 300mm. .

5.5.1.4 Ballast Attachment Plate

A flat plate measuring no more than a total length of 550mm along the length of the chassis rails and no more than 6mm thick may be attached to the authorised reinforcements (see 5.5.1.3.). Detachable ballast may be secured onto this plate on condition that it does not touch the authorised reinforcement members.

5.5.1.5 Towing

All vehicles to be fitted with front and rear towing attachments of strength and size adequate for towing the vehicle on tarmac. The rear towing attachment must be a proprietary type designed for towing an H.G.V. and be attached to the rear chassis cross rail by means of 4 correctly sized and graded bolts. The towing attachments must be painted in a contrasting colour (red, yellow or orange) for easy identification and be available for immediate use when required. They must not project out beyond the front face of the bumpers. The standard bumper may be modified to enable fitment of towing eyes in such a manner as to not cause a hazard, but for no other purpose.

5.5.1.6 Semi- Coupling (Fifth Wheel see drawing 6.4.7)

Regardless of manufacturer's specification, the semi-trailer pin coupling (fifth wheel) must be situated forward of the drive axle centreline.

The fifth wheel must comply with the dimensions of drawing 6.5.7. and have a thickness of 30mm.

The material is free but the fifth wheel must have a minimum weight of 5 kg.

The fifth wheel must be situated between 1000mm and 1300mm from the ground at all times and this measurement will be taken with the fifth wheel in the horizontal position. No other part, within a circle of 2040mm radius, the centre being the kingpin axis of the fifth wheel, may be situated above the upper surface of the fifth wheel.

5.5.2. Chassis Modifications Prohibited

The chassis frame must be exactly to manufacturer's standard specification, excluding semi-trailer coupling (fifth wheel) but the fifth wheel must be mounting in accordance with a standard commercial fifth wheel.

Excepting for any obstructions arising from the presence of either the fuel tank and/or any safety cage external bracing members or reinforcements detailed in these regulations.

The chassis frame must consist of two members forming a "U" section of the dimensions shown in 6.4.5.

5.5.3 Wheel Track

The combination of axles, wheels and tyres fitted must not increase the front or rear track by more than 150mm beyond the vehicle manufacturer's standard specification.

5.6. Body Work:

5.6.1. Modifications Permitted

5.6.1.1. General

It is permitted to make modifications under the general restriction that the appearance of the vehicle bears a close resemblance to the standard vehicle, including radiator grill and other trim. The cab must retain its original strength and integrity and the material of the external surfaces including the floor and the doors must be of original cab material. The width of the cab must not be less than 1800 mm. The lowest point of the floor of the cab must be at least 1000 mm above the ground. The distance between the rear of the door and the centre of the front axle must be the standard distance.

Any corrosion or lightening of the cab structure or mountings will cause the vehicle to be rejected at scrutineering. Vehicles with tilt cabs must have an additional device which bridges the normal tilt lock mechanism and will prevent cab tilt in the event of that mechanism disengaging. The weakest part of that device will be either one steel bolt or pin of at least 16mm diameter or two steel bolts or pins of at least 12mm diameter.

5.6.1.2. Interior

Truck carpet and floor coverings may be removed. Any loose floor coverings must be removed.

Dashboards may be deleted or modified as long as this does not cause any modification to the structure of the cab. It is strongly recommended a non-standard wheel of proprietary manufacture be fitted. It is recommended that a soft rim type is used.

All controls must be those provided by the manufacturer and they must retain their original function but they can be worked on to make them more accessible or more easily usable.

The driver's seat, and the fitting of a passenger seat are free but must be forward facing and passenger seats may be removed. The driver's seat must support the driver and hold him in position inside the cab. All seats fitted must be rigidly located and must not slide, tilt, hinge or fold. All joints between any seat and the cab must have at least 4 x 8mm diameter or 6 x 6mm diameter bolts, minimum grade 8.8. It is not permitted to have sliding seat runners operational on any seat. A head restraint must be fitted, capable of restraining a 17kg mass under a rearward acceleration of 5g. Its dimensions must be such that the driver's head is restrained and cannot move past it under rearward acceleration, or be trapped between the head restraint and the roll cage.

5.6.1.3. Exterior For Exterior Dimensions See Drawing No. 6.4.3

Side and top fairings may be fitted, but they must be firmly affixed and made of a rigid material. No fairing may impede access to safety items e.g. fuel and electrical cut off switches. Top fairings must be available to support the weight of a person walking on them. No fairing may extend forward of the front axle mudguard, or rearward of the end of the chassis rails. No wheel/tyre may be obscured by a side fairing. The maximum height of any fairing must not be more than 100mm above the highest face of the chassis rails behind the cab and must not impede connection of a semi-trailer. Fairings may not extend beyond the unfaired vehicle outline in plan view. Rear axle mudguards may be integral with fairings.

Mudguards must be fitted to all wheels and present no sharp edges and cover the full width of the tyre around a continuous arc of 120 degrees. This minimum coverage must be achieved with a continuous surface of a rigid material uninterrupted by any gaps, holes, slots or vents. The mudguards must extend forward of the relevant axle centreline. The trailing edge of the mudguard must be no more than 75mm above the relevant axle centreline.

Standard or optional aerodynamic devices listed by the manufacturer may be removed. They may be fitted only if they do not contravene the requirements of these regulations.

Windscreen and Windows

A windscreen of laminated glass must be fitted, bearing a mark to verify the fact. A transparent and unobstructed area of minimum 350mm in height covering the entire width of the windscreen must be located directly opposite the drivers eyes. For safety reasons it is mandatory for the windscreen to be backed by one or more bars to prevent the screen from collapsing into the cabin in the event of an accident. Each bar must be vertical and must be made of metal with a minimum section of 45mm².

All other windows may be of any type of safety glass, or transparent plastic of at least 4.8mm (3/16 ins) thickness. All window operating mechanism must function as designed by the manufacturer (e.g. manufacturer's wind down windows must remain as wind down windows). If side and/or rear windows are made of safety glass, it is recommended that they are covered with self-adhesive clear plastic film to prevent possible injury from broken glass.

Note tinted/silvered glass or film is not permitted on side windows, tinted glass or film is permitted on the rear window, provided that it is possible for a person situated 5 metres from the truck to see the driver as well as the contents of the cab.

If the truck was not originally fitted with a rear window, it is permitted to fit one with a maximum area of 150,000 mm.

Windscreen wipers and washers must be fitted and maintained in working condition at all times.

Two external rear view mirrors with a minimum reflective surface of 100mm x 150mm must be fitted, on each side of the truck in order to give an efficient view, to the driver, to the rear. Trailer susie pipes and electrics must be removed.

5.6.1.4. Silhouette

The only modifications permitted are those which do not infringe the above regulations 5 (6) 1.3.

5.6.1.5. Ground Clearance

The minimum ground clearance is 200mm except for the front and side bodywork fairings which have a minimum ground clearance of 100 mm. The side, rear guards and front bumper must respect the 200 mm. minimum ground clearance, except for the housing of the rear axle where the minimum ground clearance must be 170 mm. See page 9 drawing 6.4.3

5.6.2. Modifications Prohibited

The only modifications permitted are those detailed in 5 (6).1.

5.7. Engine:

5.7.1. Modifications Permitted

5.7.1.1. The engine and its ancillaries may only be modified within the limitations of the following regulations. It is permitted, unless specifically disallowed by these regulations for internal engine components to be substituted by alternative components sourced from the same engine manufacturer.

5.7.1.2. Camshaft timing and profile may be modified but valve lift must remain as standard.

5.7.2. Modifications Prohibited:

5.7.2.1. Unless specifically permitted by these regulations the engine and all, ancillaries must be exactly to manufacturer's standard specification.

5.7.2.2. It is not permitted to substitute the engine block and cylinder head castings from those which are the manufacturer's standard for the specified engine.

5.7.3. Engine Location is free

5.7.4. Oil/Water Cooling It is prohibited to run either oil or coolant pipes inside the cab.

5.7.4.1. Lubrication oil sumps may be baffled internally, but the standard sump casing must be retained. Fuel and oil coolers may be fitted within the periphery of the bodywork.

5.7.4.2. Water radiators may be enlarged, replaced by alternative specification items, or supplemented by additional radiators provided all radiators are fitted within the periphery of the bodywork.

5.7.5. Induction Systems:

5.7.5.1. Air induction system components up to the turbocharger or supercharger, may be modified or replaced. No part of the air induction system may project more than 200mm beyond the side or top extremities of the cab.

5.7.5.2. It is permitted to change the type of turbocharger(s) provided that the induction system components (i.e. the pipework and fittings between the turbocharger(s) and engine(s) are standard components manufactured by the relevant engine manufacturer. It is permitted to fit an air to air inter cooler provided all relevant components are standard production parts.

5.7.5.3 In the case of an 'in-line' engine, only one turbocharger is permitted. For a 'vee' engine, only one turbocharger per cylinder bank is permitted. In all cases the turbocharger may only be a single stage type. Variable geometry systems are prohibited. If a waste gate system is used, this may only be fitted on the exhaust side of the turbocharger.

It is strongly advised that a chalywn diesel shutdown valve be fitted to the air inlet system or that the oil feed line to the turbocharger has a shut off valve fitted actuated from both inside and outside the cab to reduce the possibility of engine runaway.

5.7.6. Exhaust Systems:

The exhaust components after the turbocharger or exhaust manifolds in the case of supercharged engines are free. The exhaust must terminate within the extremities of the vehicle plan view and between the wheels and within 500mm of the ground in side view.

A protection device must be fitted to the extreme end of all exhaust pipes. This device must be made so that any part with a diameter of more than 40mm will not pass directly out of the exhaust pipe. An example of a suitable protection device is strips of steel sheet. 1.6mm thick by 25mm wide, placed edge on to the exhaust gas flow and welded into the end of the exhaust pipe(s) at less than 40mm spacing. Vehicles using a smoke filter at the end of the exhaust pipe do not need the protection described above It is permitted to fit a 'waste gate' or 'pop off valve' provided such a component is of proprietary manufacture.

The exhaust system must be designed such that excessive smoke is not discharged into the atmosphere.

Smoke levels will be measured to EEC standards or equivalent and a Judge of Fact will determine unacceptable levels of smoke.

5.7.7. Fuel Delivery Systems

Fuel injection system parts regulating the quantity of fuel to the engine may be changed, providing that the new parts fit the original location without any modification. The original fuel system design must be retained in its entirety as the manufacturer envisaged e.g. Cummins PT. The maximum engine free run out speed may be changed.

5.8. Suspensions:

5.8.1. Permitted Modifications

5.8.1.1. Ride Height may be adjusted by the re-setting of manufacturer's specification road springs or air springs to lower the ride height to the minimum manufacturer's specification for the vehicle laden to design weight. In the case of multi-leaf steel springs this may be achieved by the removal of one or more leaf from the unit.

- 5.8.1.2. Shock Absorber units may be of any proprietary make and type, provided that their number, their type and their working principle remain unchanged . The attachment points are free. Shock absorbers which can be adjusted when the truck is on the move are forbidden .
- 5.8.1.3. Anti Roll Bars may be added to the vehicle or standard items modified, as long as they perform no function except for the control of relative lateral roll between axles and chassis They must not affect axle location, geometry in any way or be capable of being adjusted whilst the vehicle is in motion.
- 5.8.1.4. Castor Angle adjusting wedges may be fitted to any axle but must be securely located by either being welded to the axle spring pad or for it to be impossible for such wedges to be removed without first removing at least two axle/spring clamping bolts.
- 5.8.1.5 Axles (both driven and steering) may be replaced by any suitable alternative but must be rated by the relevant axle manufacturer as having an on-road weight rating equal to, or greater than, the vehicle's original axles. They must be fixed to the recipient vehicle's attachment points only. The front axle assembly cannot be driven. The axles must be from road-going tractors homologated for the transportation of merchandise with a minimum axle load of 6.7 tonnes for the front and 11.5 tonnes for the rear. These axles must come from an axle manufacturer with a minimum production of 300 units per year.
- 5.8.1.5. In addition to the leaf springs, the rear axle may have only one torque reaction arm locating on a single position on the chassis, Air suspensions is will only be allowed after written clearance has been obtained from the eligibility scrutineer.
- 5.8.2. Prohibited Modifications:
- 5.8.2.1. Camber Angle on the steering axle may not be negative regardless of either the vehicle or the axle manufacturer's specification. Zero camber is allowed, but there is no tolerance allowance.
- 5.8.2.2. Non-Ferrous Components may be used for bearing bushes but it is forbidden for suspension components which have any axle locating function to be made of non-ferrous material even if these are manufacturer's standard specification.
- 5.8.2.3. With the exception of the permitted modifications listed, it is forbidden to add any components to the suspension or to relocate/realign standard components such as spring shackles. This prohibition includes auxiliary spring devices, auxiliary axle location devices and any device which allows alteration of chassis ride height while the vehicle is moving. Subject to 5.8.1.6
- 5.8.3. Wheelbase / Track:
Wheelbase must be within the manufacturer's specification for the vehicle in question. Wheel track must not be increased by more than 150mm over and above that specified by the vehicle manufacturer.
- 5.8.4 The front axle assembly cannot be driven.

5.9. Transmissions:

- 5.9.1. Permitted Modifications:
The gearbox is free but must be of a direct manual level actuated type normally fitted to a heavy commercial vehicle and must have a working reverse gear. It must be possible to activate the 3 or 4 main gears by means of a mechanical lever, without exerting any power other than that of the driver. The clutch is free, but must be of the friction type. Activation must be initiated by the driver pushing the clutch pedal for each gear change.
- 5.9.1.1. Differentials must be either 100% locked and the locking of the differential can only be carried out by the use of tools acting directly on the differential when the vehicle is stationary. Any mechanism that remotely activates or de-activates the locking of the differential is prohibited. The use of any type of limited differential is prohibited.
- 5.9.1.2. Transmission & Drive Ratios may be changed
- 5.9.2. Prohibited Modifications:
The fitment of automatic gearboxes of any type is not allowed. The distance from the rear of the engine to the front of the gearbox must not be altered from that specified with the original gearbox. Fluid couplings between engine and gearbox are not allowed regardless of the manufacturer's specification. Electronic traction control is prohibited.

5.10. Electrics:

5.10.1. LIGHTING:

All lamps required for legal road use, specifically headlights, sidelights, indicators and brake lights, must be functional at all times and must not be obscured, The braking lights must be visible from a position 3 metres to the rear of the truck and 2 metres vertically. No lights other than normal legal lighting may be lit when the vehicle is on circuit, excepting obligatory requirements detailed in section 5(10).5. All forward facing lamps of more than 32 sq.cm surface area must be adequately protected and secured in case of glass breakage.

5.10.2. BATTERIES:

Batteries must be capable of starting the engine without any exterior assistance such as 'boost' batteries. Batteries must not be positioned within the cab. They must be securely fastened, each battery to be held down by at least two steel bolts of 10mm minimum diameter. Batteries must not be visible from outside the vehicle and must be covered.

5.10.3. GENERATORS / ALTERNATORS must be fitted and remain in circuit at all times.

5.10.4. A REARWARD FACING RED WARNING LIGHT of at least 20 watts (maximum 30 watts) must be mounted on the rear panel of the vehicle cab as high as possible and on the vehicle centreline. It must be switched on for the duration of all practice sessions and races. The lighted area of this lamp must not exceed 100 sq.cm. A L.E.D. unit may be used providing it is from a commercial vehicle, with the number of L.E.D.'s between 25 and 100 with a minimum diameter of 8 mm. per L.E.D. In addition to the standard system, it is compulsory to install 2 brake lights (in working order during the race) on the back of the cab, at the height of the red warning light mentioned above.

5.10.5 AUDIBLE REVERSE WARNING. Vehicles must be fitted with an audible warning that sounds when reverse gear is selected

5.11. Brakes:

5.11.1. Braking Safety System

Double circuit operated by the same pedal: The pedal must normally control all the wheels. In case of leakage anywhere in the brake system piping or any kind of failure of the brake transmission system, the pedal must still control at least two wheels.

All trucks must have a "four circuit" protection valve that isolates the two braking circuits from one another and from other pneumatic circuits.

The competitor must be able to demonstrate the two separate brake circuits are functioning.

As of 2010 the only type of braking system allowed will be that using only conventional pneumatic and/or spring actuation only without any other assistance of any other form.

5.11.2. Permitted Modifications:

There are no restrictions other than as set out in 5(11).3 Brake cooling is permitted using ducted air or water. Cooling ducts must comply with the bodywork regulations 5(6). Brake air reservoirs may be repositioned to allow the fitment of safety devices and/or fuel tank. An effective parking brake system must be fitted which is held on by mechanical energy. The parking brake must be operable by the driver sitting normally with safety belts fastened. The use of disc brakes is allowed provided that the said axle was fitted with disc brakes as original equipment.

5.11.3. Prohibited Modifications:

The use of any brake system components which are not of proprietary manufacture is prohibited. It is forbidden for the vehicle's air system pressure to exceed 12.0 bar. The primary braking of the vehicle must solely be driven by the foot of the driver, electronic assistance is forbidden. Anti lock braking systems (e.g. ABS) are forbidden.

5.12. Wheels/Steering:

5.12.1. Permitted Options:

Steering wheels are free within the limitations imposed by the following regulations. Driver's steering wheel may be of any proprietary manufacture, a soft rim type is strongly recommended the fitment of a removable type steering wheel is mandatory.

5.12.2. Prohibited Options

Road wheels - no part of any wheel rim or tyre fitted to a steering axle may project outward past the plane of the wheel nut/wheel rim interface. Thus it must be possible to fit two front rims to a rear hub in a twin wheel configuration. The use of non-proprietary manufacture wheels is prohibited as is the modification of proprietary manufacture wheels. No part of the wheel rim or tyre must foul any part of the vehicle under extremes of steering or suspension movement. Wheel nuts and studs must match the wheel rims being used, to ensure adequate fixing strength. The use of any spacers or adapters between the road wheels and the hub/drum is prohibited.

5.12.3. Construction and Materials

All the complete wheels of a truck must be standard production parts, unmodified and interchangeable, (i.e. a rear wheel may be mounted on a front hub with no special tools or accessories). Thus, it must be possible to fit two front wheels to a rear hub in twin wheel configuration. The use of split rim road wheels is prohibited. Outer wheels on twin wheel installations must be of metallic steel construction. There is no restriction in respect of wheel material for the remaining road wheels.

5.12.4. Dimensions: Wheel diameter is unrestricted, wheel rim width is limited to a maximum of 230mm.

5.12.5. On rear twin wheels, the measurement 'a' must be respected in drawing 6.5.6.

5.13. Tyres:

5.13.1. The maximum permitted nominal section width and actual width of the tyre when fitted to the rim is 315mm.

5.13.2. Tyres must be to E.E.C. type approval standard (E.E.C. regulation 54) or equivalent, and must be of tubeless radial steel construction with a speed rating of "L" or higher. Continental racing tyres are strictly prohibited. All tyres fitted must be available through normal retail outlets for all weather road use. Any externally applied chemical compounds which may affect tyre grip are forbidden.

5.13.3. Tyres for the front axle or the truck will be obtained from a single manufacture and of the same tread pattern and rubber compound and will only be obtained via BTRA from a single source. The BTRA will issue the tyre type and details of where to obtain tyres from by Championship Bulletin by the end of Jan 2010. If a suitable single source tyre can not be found then tyres listed on the FIA 2010 Truck Racing Championship can be used. The BTRA reserves the right to change tyre manufacture or tyre type after giving the race teams two months notice.

5.13.4. Retreaded tyres can only be fitted to the rear axle but they will not be allowed after 1st Jan 2011. The use of retreaded tyres will be constantly monitored and the organisers reserve the right to withdraw the use of retreaded tyres at any time during 2010 on the grounds of safety.

5.13.5. All tyres must have a tread depth of at least 1.4 mm for the duration of the event.

5.13.6. Re-cut tyres are not permitted except for the modifications detailed in drawing_No. 1 & 2, page 20

5.13.7. Cross cutting of treads is allowed as long as the depth of the cuts does not go below the tread wear indicators in the original tread. It is the competitor's responsibility to ensure that his/her tyres have standard tread compounds. No re-cut or cross cut tyres are allowed on the **front axle** of the truck.

5.14. Weights:

5.14.1. The weight of the truck is with the driver, wearing his complete racing apparel, at all times during the event. The minimum allowed weight for Race Trucks is defined as follows:
5500 kg of which **3300** kg measured at the front wheels

5.14.2. If weight has to be added to comply with the minimum weight, then it must be bolted to the chassis in such a way that it can be sealed by the scrutineers and does not present a safety hazard.

5.15. Fuel Tank / Fuel:

5.15.1. Fuel tanks are free in respect of capacity, design and material. They must be of unmodified proprietary manufacture and must be fully proofed against accidental fuel spillage or leakage from fillers and vents. Filler caps must have a positive closure action. It is recommended to fit FIA/FT3 safety fuel tanks as described in article 14 of Appendix J to the International Sporting Code.

- 5.15.2. Fuel tanks must be fitted inside the vertical lines produced by the outside of the main chassis frame, behind the cab and in front of the semi-trailer coupling but behind the cab. The fuel tank can have no other function than that of containing fuel.
- 5.15.3. The term "FUEL" shall include all substances fed into the combustion chambers of the engine, excepting only atmospheric air and water vapour contained naturally therein. The use of commercially available diesel fuel is obligatory, that is to say motor fuel produced by an oil company for use in diesel engines. Bio-diesel fuel will be allowed provided that the maximum density value does not exceed the value listed below. Fuel (according to EN 14214 – 2003 regulations) fuel or a mix of both corresponding to the following specification:- hydrocarbon content, % w/w 90.0 min
- | | | |
|---------------------------|----------------|--|
| - density, @15°C kg/litre | 0.900 max | |
| - cetane no (ASTM D613) | 60 max | |
| - calculated cetane index | 60 max | (ASTM D976/80) |
| - Sulphur content | 50 mg / kg max | (pr-EN-ISO/DIN 14596)
according to directive 98/70/CE |

5.15.4. Only air may be mixed with the fuel as an oxidant.

5.15.5. Any chemical additive, which increases the power, is forbidden.

5.16. Silencing:

Organisers may at their discretion, carry out noise tests in compliance with the procedures detailed in MSA Regulation J5.17. of the MSA Standing Supplementary Regulations. Any competitor whose vehicle is adjudged to produce excessive noise will be required to execute such measures as may be required to reduce noise pollution to an acceptable level, as defined by the meeting organisers.

5.17. Numbers And Championship Decals:

Championship decals must be displayed in accordance with MSA Regulations. Championship decals may be supplied by the championship organisers.

5.18. Maximum Road Speed:

- 5.18.1 All vehicles, regardless of class, must be equipped with a BTRA approved speed measuring/recording/limiting device. It is the competitor's responsibility to ensure that the speed-measuring device is fully operational through out the event and correctly calibrated.
In either case the device must be installed and operated in accordance with the device manufacturer's instructions. The maximum permitted road speed is 160 kph.
- 5.18.2 Competitors whose vehicles have been shown by any of the above detailed devices to have exceeded this maximum shall be subject to penalties, applicable to the 2010 FIA EUROPEAN TRUCK RACING Championship and set down herewith in Regulation 4.2
- 5.18.3. The Championship and Race Organisers, at their discretion may supplement or substitute equipment or carry out any other measures as they deem to be suitable to carry out checks to confirm that competing vehicles are not exceeding the stated maximum speed.

5.19 Smoke

Any truck adjudged to be emitting any visible smoke at any time during an event will immediately be shown the black & orange flag, by decision of the Clerk of the Course alone. If a driver is stopped for smoke he shall be subject to penalties, applicable to the 2010 FIA EUROPEAN TRUCK RACING Championship and set down herewith in Regulation 4.2

6. APPENDICES:

6.1. Race Organising Clubs & Circuits:

British Automobile Racing Club
Thruxton Circuit
Thruxton
NR. Andover
Hampshire SP11 8PN
Telephone: 01264 882200 Facsimile: 01264 882233
Contacts: Dennis Carter (Chief Executive)
 Dale Wells (Competitions Manager)

Pembrey Circuit
Pembrey
Nr Llanelli
Carmarthenshire SA16 0HZ
Telephone: 01554 891042 Facsimile: 01554 891387
Contact: Phil Davies (Circuit Manager)

6.2. Championship Contacts:

British Truck Racing Association

Championship Co-ordinator:
Jonathan Reeves
4 Cedar Mount
Mottingham Lane
London SE9 4RU
Telephone & Facsimile: 0208 857 7365

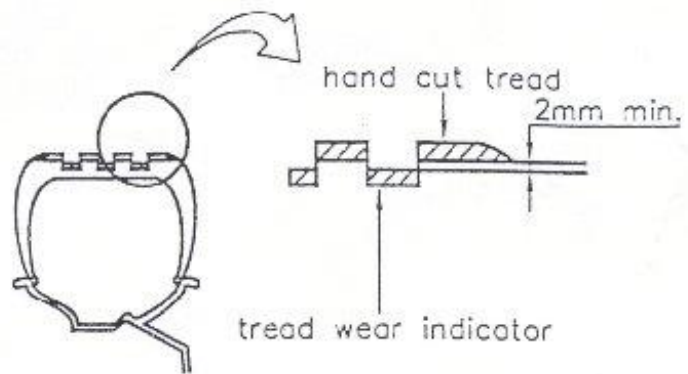
Championship Eligibility Scrutineer:
Terry Cox
Roughwood, Thibet Road
Sandhurst
Camberley
Surrey GU47 9AR
Telephone: 01344 762774 (H)

6.3. Commercial Undertakings:

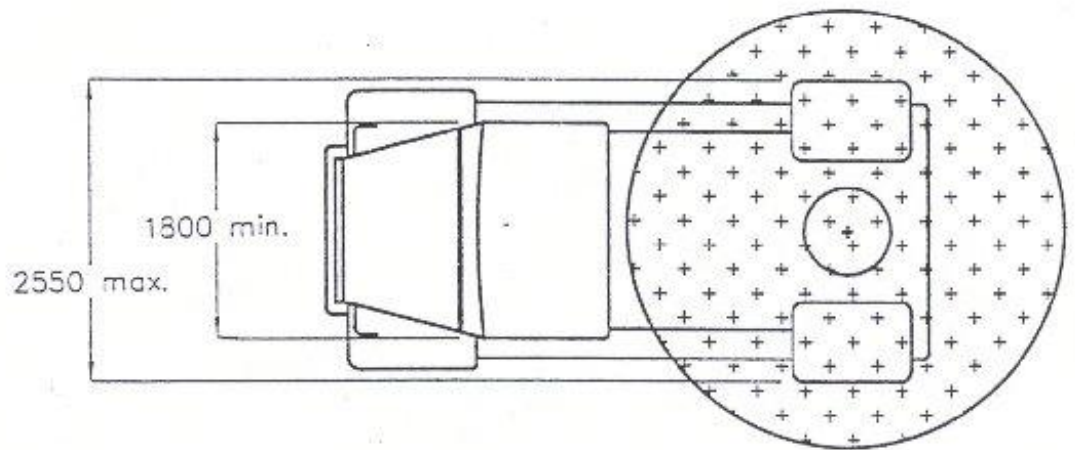
6.4. Drawings Applicable To This Championship:



Drawing No 1

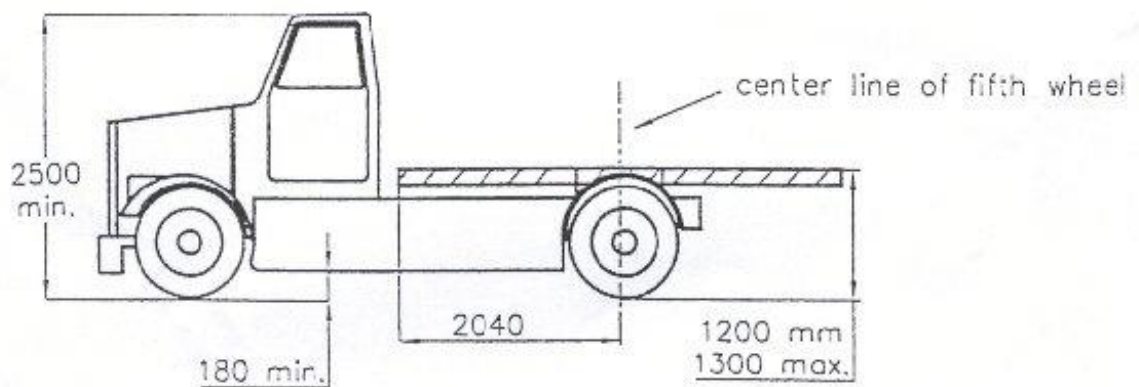


Drawing No 2

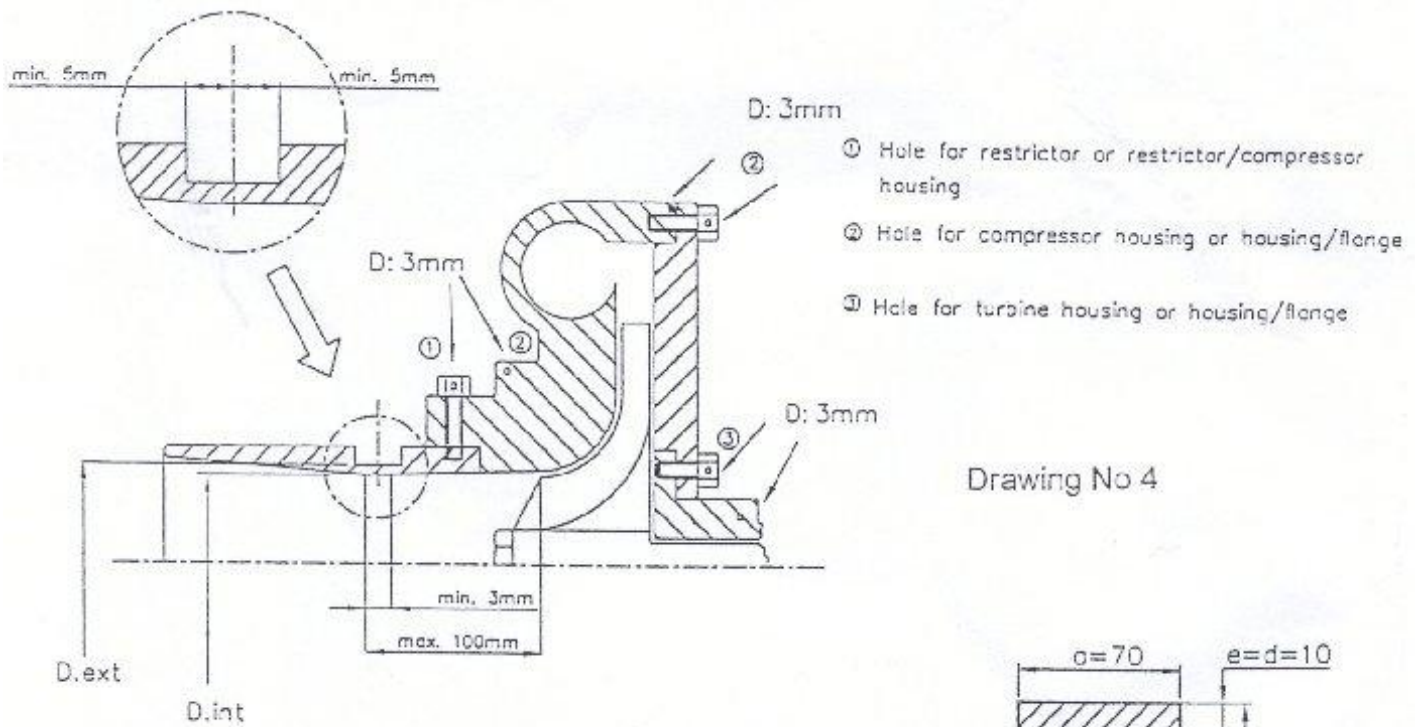


ALL DIMENSIONS IN MM

Drawing No 3

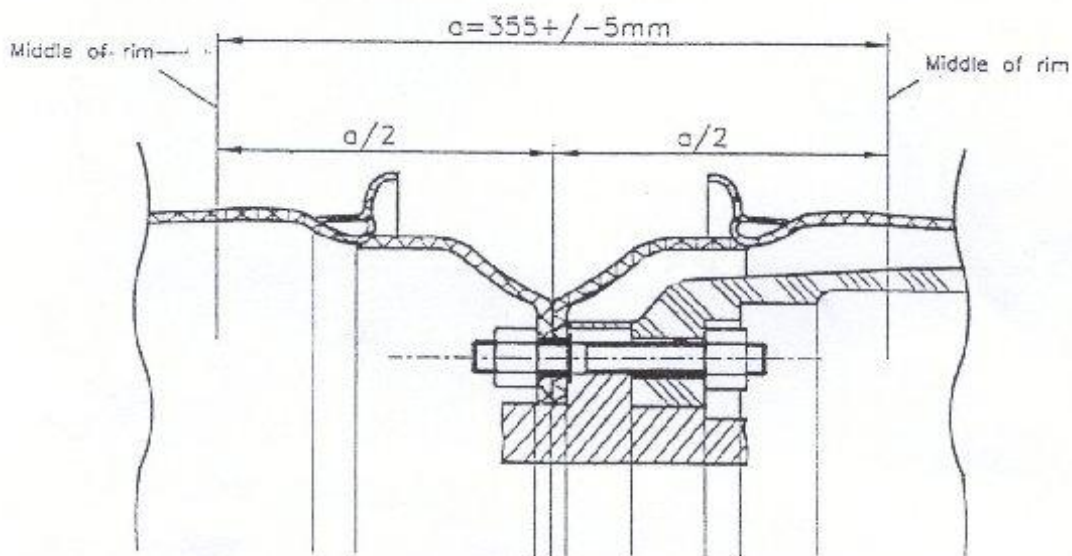
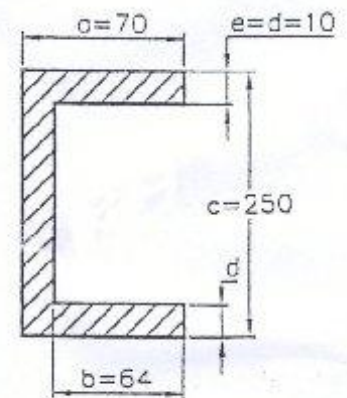


6.4. Drawings Applicable To This Championship – Continued



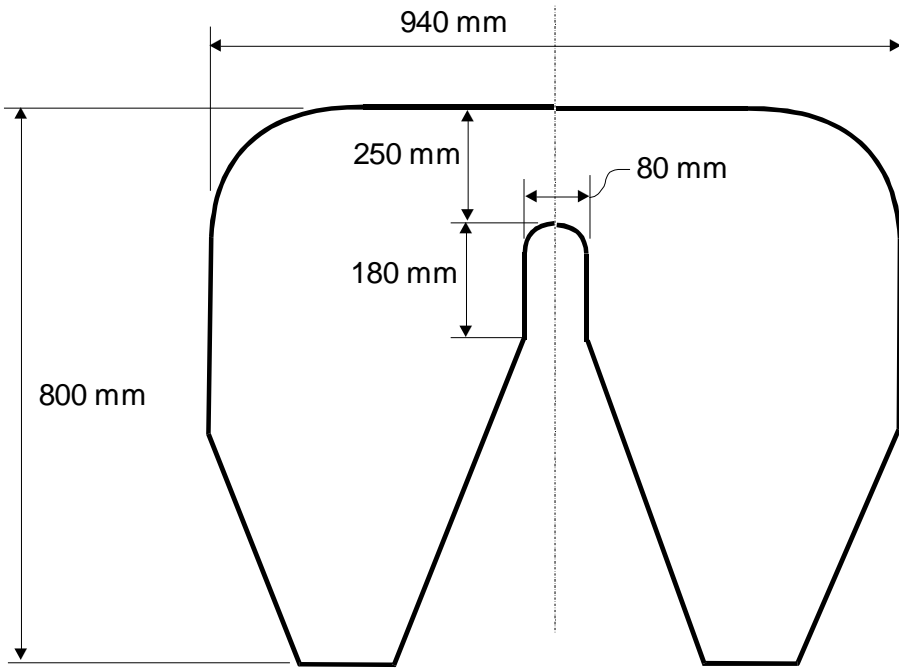
Drawing No 4

Drawing No 5



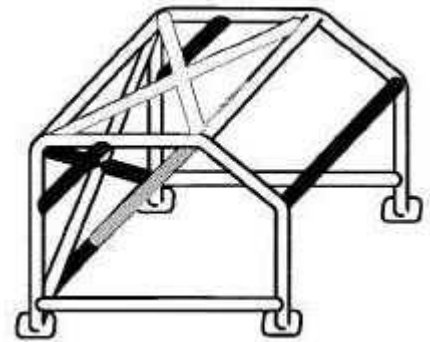
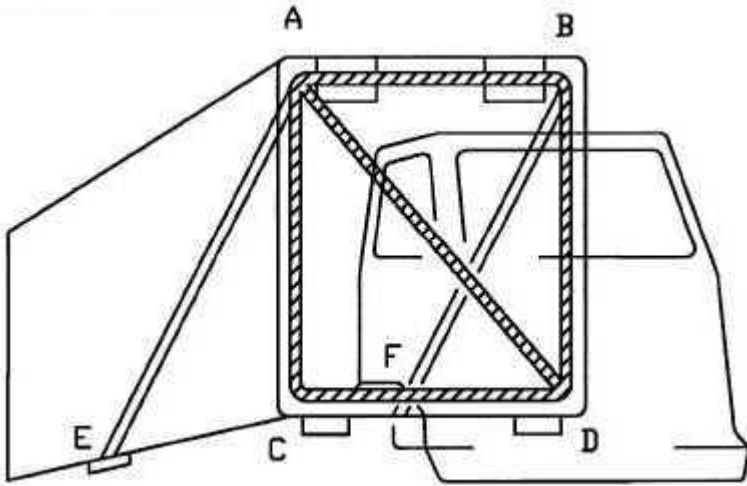
Drawing No 6

6.4. Drawings Applicable To This Championship – Continued



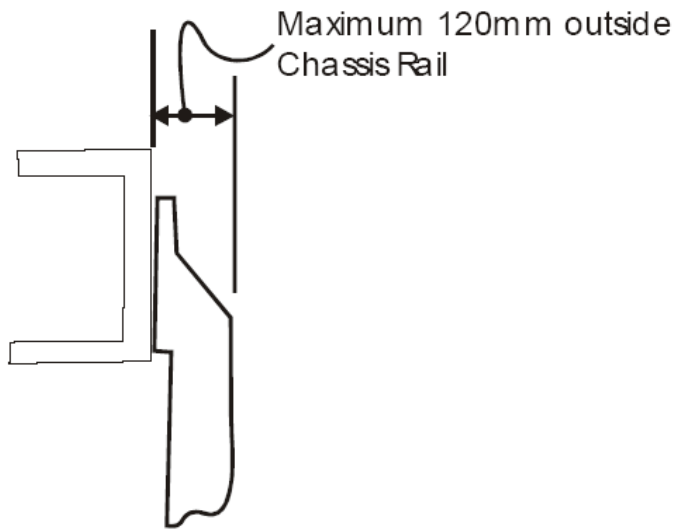
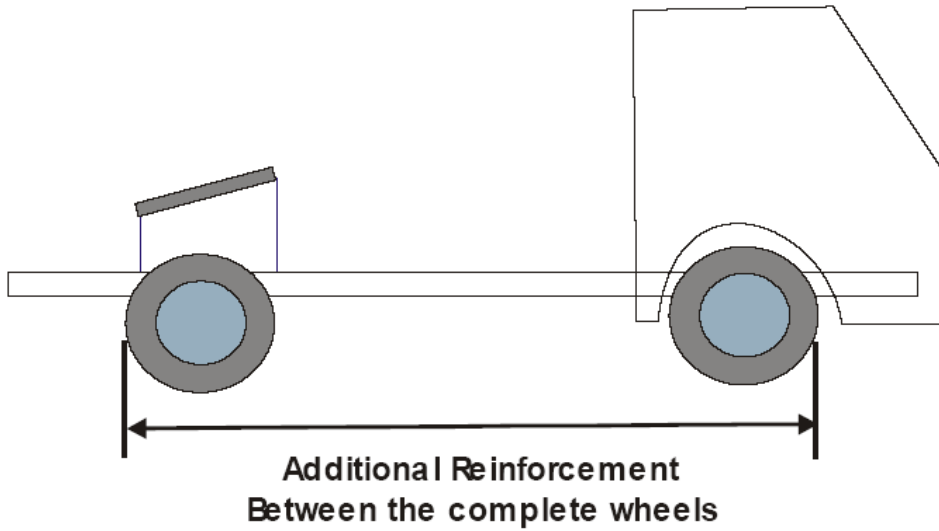
Drawing No. 7

Drawing No. 8
Roll Cage



**Authorized Reinforcements of
Chassis Frame Main Members**

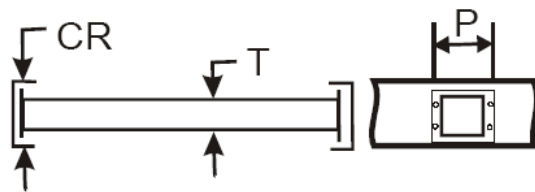
Figure A Chassis Additional Reinforcement Placement
Article 290 3.4.1) General



**Authorized Reinforcements of
Chassis Frame Main Members**

Figure B

Chassis Frame Main Members
Article 290 3.4.2) Authorized Reinforcements



Chassis Rail (CR) > Transversal Member(T)
Chassis Rail (CR) > Fixing Plate (P)

Figure C

Chassis Additional Reinforcements
Article 290 3.4.2) Authorized

