



WORLD OF MOTORSPORT ZA

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NATIONAL MOTOR SPORT FEDERATION

WITH INTERNATIONAL FEDERATION AFFILIATION

2020

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2020- 2021 WOMZA HEAVY METALS DIRT

INTRODUCTION:

Competitor age restriction:

- Minimum age 13 years old for club level entries only;
- Competitor's minimum age - 14 years old are permitted to enter into this class at regional and national level with the approval of their promoter and local TC Representative.
- Reference to length and widths in the regulations shall be defined as, length, measure in the direction of, from the front of the vehicle to the back and width being measured from left to right of the vehicle;

Anything not specifically mentioned or what is not written, is not permissible

From 2020 Heavy Metals will race clockwise.

SAFETY:

- Limited contact racing as described;
- Limited contact shall mean nothing more than the coming together of vehicles caused by close racing, minimal shunting and nudging shall be permitted due to close racing;
- Upon contact being made unintentionally or accidentally, the following vehicle shall leave enough space for the leading vehicle to regain its position on the track;
- In limited contact, the intention is to permit minimal contact, but the contact shall not be forceful enough to cause the lead vehicle to be placed in a different race line involuntarily;
- Ensure that all joints in construction are welded properly – minimum 75%;
- Sump, gearbox and differential plugs are to be wired securely;

- The installation of Fire extinguishers shall remain optional; however, it is highly recommended to have fire extinguishers fitted in the competitor compartment. All installations must be well secured thus prevent the extinguisher from dislodging upon an impact;

SAFETY / TECHNICAL & CONSTRUCTION REGULATIONS

HEAVY METAL - CLASS TECHNICAL REGULATIONS

DESCRIPTION	
GHTC1	<u>ELIGIBILITY OF VEHICLE AND BODIES:</u>
1.1	Any car- or LDV (bakkie) body will be permitted;
1.2	Any five, six- or eight cylinder car body, commercially sold, will be permitted;
1.3	Only original road going vehicles will be allowed. This means no space frame or semi-space frame vehicles;
1.4	Body and engine can be from different manufacturers;
1.5	Only front fenders, doors, bootlids and bonnets may be replaced with fiberglass panels;
1.6	Body panels may be cut away to lighten the car’;
1.7	The firewall may be cut to accommodate the engine back;
1.8	Engine crank pulley may not be further back than a 200mm from standard radiator cradle centerline. The radiator can be fitted in original position or at the rear as per TSH11.

GHTC2.	<u>FIRE WALLS/PROTECTOR WALLS</u>
2.1	Vehicles must have metal firewalls between the driver's compartment and engine, between driver's compartment and fuel cell or fuel tank;
2.2	All firewalls are to be constructed of metal only;
2.3	Plastic, fiberglass and rubber fire walls is not permitted
2.4	Fire walls will not have any holes, other than where pipes and lead protrude fire wall with precise fitment

GHTC3.	<u>VEHICLE CONSTRUCTION</u>
3.1	Front- or rear wheel drive cars are permitted;
3.2	Front wheel drive cars cannot be converted to rear wheel drive & vice versa;
3.3	Four-wheel drive vehicles is not permitted

GHTC4.	<u>DIMENSIONS AND WEIGHTS</u>
4.1	All four wheels of the vehicle to fit within the body of the vehicle.
4.2	The minimum weight shall be 950kg for six cylinder cars; excludes weight of fire extinguishers and fuel
4.3	No weight tolerances

GHTC5.	<u>BRAKES</u>
5.1	Brakes General:
5.1.1	Brakes are mandatory on all four wheels;
5.1.2	Brake lights are mandatory and operational always;
5.1.3	Brake lights must be red and be mounted in plain sight for competitors to observe without restriction;
5.1.4	Brake lights may not be fitted in the tailgate of the bodywork of the vehicle, additionally all glass or plastic indicators and lights shall be removed from the body of the vehicle;
5.1.5	Brake lights to work off brake pedal operated switch
5.1.6	No ON/OFF switches permitted on brake light system
5.2	<u>Brake light specifications: -</u>

5.2.1	Red LED - minimum 200mm length;
5.2.2	Minimum of 75% of the LED's must be operational;
5.2.3	Red light – round, minimum of 50mm in diameter and a maximum of 100mm
5.2.4	Rectangular or square brake lights shall be a minimum of 50mm square with a maximum of 100mm
5.2.5	Brake light appearance shall always remain bright, any dull brake light appearance may be rejected by the scrutineer;
5.3	<u>Brake Mechanism: -</u>
5.3.1	Only standard components as originally fitted to the car may be used;
5.3.2	Only original calipers to be used as per manufacturers' specification;
5.3.3	Brake pads or lining material is free, in other words friction material is free;
5.3.4	ABS or any other electronic driving aids is not permitted;
5.3.5	Brake balancing not permitted
5.3.6	All Handbrakes to be removed

GHTC6	<u>BUMPERS</u>
6.1.1	No external steel bumpers, refer to internal bumper regulation;
6.1.2	All piping utilized for the purpose of bumpers shall remain in a single tubular form, it follows, that under no circumstances may any of these pipes be filled in any manner or have additional smaller tubing inserted to the inside of the larger pipe; The single tubular pipe can have maximum of 4 mounting points.
6.2	<u>Internal bumpers</u>
6.2.1	Internal bumpers – piping material used shall have a maximum outside diameter of 38mm and a maximum wall thickness of 2mm with no more than 4 mounting points
6.2.2	The internal bumper shall be shaped in accordance with the vehicle's front silhouette;
6.2.3	Additional radiator protection may be installed internally with no more than 4 mounting points; may not form part of the bumper, must be the size of the radiator.
6.2.4	Vehicles that are manufactured with steel bumpers must be replaced with plastic or fibre glass bumpers, fitted with a single 38mm x 2mm pipe inside shaped according to the bumper with no more than 4 mounting points
6.2.5	Only plastic or fibre glass bumpers not exceeding 3mm thick may be fitted externally for cosmetic purposes only, no steel stiffeners;
6.2.6	No piping to protrude outside of bodywork;
GHTC7	<u>STEERING AND SUSPENSION</u>
7.1	Shocks can be interchanged as long as it is a shock that was originally fitted to a commercially sold vehicle. The original mounting points on shock, body and suspension to stay the same; control arms to remain standard.
7.2	Only vehicle specific suspension components may be used (e.g. BMW 535 suspension parts cannot be fitted to a BMW 740 or a Ford Sierra);
	The lowering of the car will be permitted. Ride-height adjustment is free;
7.3	Coils springs is free
7.5	Ride height adjustment free;
7.7	Clip-on steering wheel (no homemade clip-on device)

GHTC8	<u>EXHAUSTS:</u>
8.1.1	Exhausts and silencer boxes mandatory and must comply to prescribed noise levels; Maximum decibels 108, measured 1metre away at 5000rpm;
8.1.2	Branches is permitted
8.2	<u>Exhaust Fitment</u>
8.2.1	Exhaust outlet must face downwards underneath the vehicle;

8.2.2	All piping shall be secured with saddles, preventing exhaust pipes from coming free in the event of it breaking off;
8.2.3	Exhausts fitted below the floor pan shall have saddles fitted at +- 33% and 66% of the exhaust length to retain the exhaust in the event of exhaust breaking.
8.2.4	Saddles are to be bolt on type;
8.2.5	Exhaust systems installed above the floor pan with tailpipes passing out through the side of the vehicle, shall do so at a maximum height of 450mm measured from the ground to the top of the pipe with the vehicle parked on a level floor, with driver seated and tyres measured at racing pressures;
8.2.6	Exhaust systems installed above the floor pan may not protrude more than 50mm beyond the body silhouette;
8.2.7	A suitable metal plate mounted away from the exhaust in order that it acts, as an effective heat shield shall cover the pipe inside the driver's compartment.
GHTC9	<u>FLYWHEELS</u>
9.1	Flywheel to keep to standard specification, no lightening of flywheel

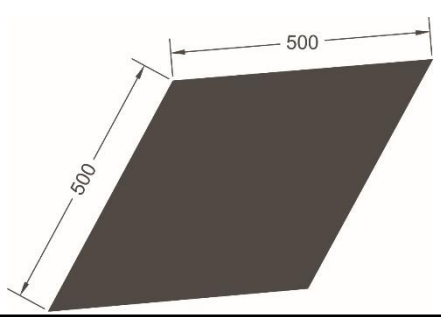
GHTC10	<u>FUEL</u>
10.1	Racing and pump fuel permitted
10.2	Performance enhancing additives;
10.3	Methanol and Ethanol is not permitted

GHTC11	<u>FUEL MANAGEMENT AND CARBURETION:</u>
11.1	Original carburation (i.e. factory fitted) is allowed
11.2	This carburation can only be replaced with <u>one</u> down-draft carburetor;
11.3	Fuel injection is allowed;
11.4	The original intake and throttle bodies must be retained;
11.5	Aftermarket Fuel and ignition management system is permitted.
11.6	Jets sizes Open
11.7	Side draughts not permitted
11.8	Head gas flowed on only the 12valve carburetor engine is permitted
11.9	Cams is open on the 12 valve carburetor and fuel injection engines
11.10	Only standard cams can be used on the multi valve unit
11.11	Electrical low pressure fuel pump permitted.
11.12	Two parallel springs on carburetor

GHTC12	<u>ENGINE</u>
12.1	General
12.2	Only five and six cylinder piston driven engines will be permitted;
12.3	Engine power restricted to 160 KW on wheels
12.4	No engines with forced induction will be permitted e.g. turbo- or supercharged;
12.5	Only standard, factory fitted rockers and lifters may be used;
12.6	Standard bore plus 60 thou oversize permitted
12.7	Engine compression may be increased - skimming of head and block allowed;
12.8	The stroke may not be changed;
12.9	Only pistons manufactured with the engine are allowed;
12.10	Air Cleaners and air boxes are open
12.11	Removal of alternators or charging system is permitted
12.12	Consumable items such as filter elements and spark plugs are open
12.13	Spot machining of the crankshaft and flywheel are permitted for balancing purposes only;
12.14	Weight of engine components must be kept to standard specifications; no lightening will be permitted;
12.15	No motorcycle engines permitted;

12.16	Any lubricant is permitted.
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GHTC13	<u>TRANSMISSION</u>
13.1	Only commercially sold transmissions will be permitted
13.2	Ratio of final drives is open
13.3	The differential may be locked by means of welding the gears together e.g. locked diffs;
13.4	No limited slip diffs will be permitted;
13.5	Standard clutches only;
13.6	Pressure plate must remain standard;
GHTC14	<u>WHEELS AND TYRES</u>
14.1	Double wheels not permitted
14.2	Normal, road legal tyres, new, second hand or re-tread are permitted;
14.3	Tyres will be a maximum of 16 inch (8J) with a maximum width of 205 as indicated on the tyre wall;
14.4	Only freely available road tyres from any general tyre dealer is allowed;
14.5	Rally tyres is permitted
14.6	Tyre walling bearing the following inscription is not permitted, "for racing purposes only/ not road legal / not for highway use";
14.7	All tyres have to be presented at scrutineering;

GHTC15	<u>WINGS:</u>
15.1	Wings are permitted;
15.2	Wings are not allowed to be wider than the width of the vehicle;
15.3	Rear wing may not exceed the rear of the vehicle.
15.4	<p>Wing end plates to be a maximum of 500mm x 500mm with a tolerance of 50mm.</p> 
15.5	Vertical plates permitted shall not exceed 4 x vertical plates;
15.6	Van size and choice shall be a maximum of two, the accumulative van length shall not exceed the length of 600mm measured together
15.7	The first horizontal vane cannot exceed 500mm in length;
15.8	The second vane may not exceed 100mm in length and may be adjustable;
15.9	Wing to be mounted from "B" pillar backwards;
15.10	Height of wing should be no higher than 300mm from the highest point of the roof to the highest part of the vane;

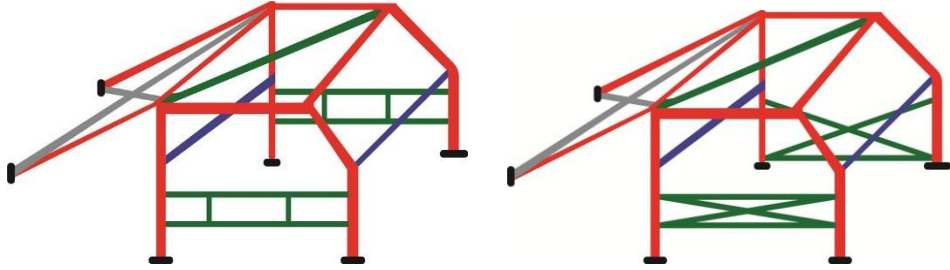
TECHNICAL CONSTRUCTION REGULATIONS

TCH1.	<u>PROTECTIVE CLOTHING</u>
1.1	Full fire-retardant race overalls are compulsory.
1.2	Minimum requirement is a Level 1, single layer race suit;
1.3	The composition of the suit even if small percentages are used may not be of a polyester, nylon or synthetic material;

1.4	Mechanic overalls will not be permitted;
1.5	Two-piece race suites not permissible;
1.6	No pushing up of sleeves permissible whilst racing;
1.7	Fire retardant gloves are compulsory;
1.8	Open fingertip gloves are not permitted;
1.9	Neck braces/donut type shall be mandatory for all competitors under the age of 18 ;
1.10	All helmets will be in a good condition; it will be highly recommended that full face helmets are used for Oval
1.11	Track Racing;
1.12	The only helmet that will be approved must bear the SABS or of a higher standard and a type that is suitable for highway usage;
1.13	The Scrutineer may condemn a helmet or confiscate a helmet until after a race meeting, if, the visor is cracked, the helmet has a visible crack and if the helmet straps are in any way sub-standard;
1.14	<u>Recommended washing instructions of race suites:</u>
1.14.1	No Bleaches, No fabric softeners, no machine washing, no tumble drying, no ironing – hand wash only and drip dried – this method preserves the agents within the fabric.
TCH2.	<u>SAFETY REGULATIONS</u>
2.1	All sump, gearbox and differential drain and filler plugs have to be drilled and wired;
2.2	Oil filters have to be clamped or strapped;
2.3	A radiator water catch tank of a minimum capacity of 1 liters shall be fitted to the cooling system;
2.4	A sealed radiator system will be exempted from the above regulation, for example Golf systems;
2.5	All joints and seams in the construction of the vehicle shall be properly mitered and be welded;
2.6	All flammable items such as plastic dashboards, plastics, carpets, upholstery and hood lining must be removed;
2.7	All bitumen cladding on the interior of the vehicle must be removed;
2.8	All lights and windows must be removed from the vehicle, only the rear side windows may be replaced with see through lexan;
2.9	Under no circumstances may a vehicle compete without a secured bonnet, the purpose of this is to prevent the bonnet dislodging and secondly preventing, burns of any nature towards a competitor;
2.10	Bonnets shall be constructed and fit in such a manner that no open gaps will display when closed;
2.11	All piping (brakes and fuel) and wiring must be installed above the floor board or chassis;
2.12	Vehicles shall be able to self start and self starters have to be in a working condition;
TCH3.	<u>BATTERIES</u>
3.1	It shall be mandatory for batteries to be bolted down;
3.2	Battery shall be bolted down by way of a cross bar or cross bracket;
3.3	Cross bar to be made of a flat bar with a minimum 5mm thickness; or
3.4	Square bar of 8mm x 8mm or round bar of a minimum 8mm in diameter;
3.5	The hold down bolts shall be a minimum of 8mm in diameter;
3.6	No side clamps or straps will be permitted to hold down the battery;
3.7	Batteries shall be covered by a nonconductive material to prevent short circuiting in the case of an accident;
3.8	Batteries fitted in the competitor's compartment shall be mounted in a leak proof compartment, e.g., boat battery box;
3.9	The use of battery box compartment shall still require the battery to be bolted down inside the box, in all instances the cover of the battery box must be secured, by way strapping;
3.10	Batteries may be kept in their original positions and be affixed correctly; In all instances batteries should be easily accessible for scrutineers to inspect;
TCH4.	<u>COMPETITION NUMBERS ON VEHICLES DISPLAYS</u>
4.1	Optional number placing on Wing Plates: -
4.2	Wing Plates – White Back, black number or Black back with mandatory white or Day Glo colour only -
4.3	Minimum size, 300mm height with a 50mm font stroke;
4.4	No other stickers or advertising permitted on wing plate;
4.5	The number shall be displayed on the wing or the "C" Pillar or on the front door.
4.6	Competition number to be displayed on the Roof of the vehicle, showing towards the outer side of track;
4.7	Competition numbers to be a minimum size of 300mm in height with a readable 50mm Font stroke;

4.8	Competition prefix to be a minimum size of 120mm in height.
4.9	Competition numbers to be contrast to the colour of the vehicle;
4.10	Competition number and competitor's name to be displayed on the visor – visor height is generally 120mm in height;
4.11	<u>General Graphics and/or Sign writing on vehicles: -</u>
4.11.1	Only vinyl lettering or professional sign writing applications will be permitted;
4.11.2	Club Prefixes are mandatory to be displayed together with the number;
4.11.3	Advertisements/sponsors must not scramble the number of the vehicle;
4.11.4	Advertisements and slogans may not be of discriminatory manner;
4.11.5	Numbers 1, 2 and 3 will be reserved for WOMZA Final Championships only;
4.11.6	No longer may clubs use 1,2 or 3 for Club Champions or zero numbers;
4.11.7	Only, rear side windows (which are to be replaced with see through lexan or polycarbonate) may be sign written. no more than 50% of the window may be covered with sign writing;
4.11.8	No lights (LED) are permitted on the outside on the frame including wings.
4.11.9	No lights (LED) are permitted inside cockpit.
4.11.10	Lights (LED) are permitted on wheels and underneath of car.
TCH5	<u>ENGINE POSITIONS:</u>
5.1	As per GHTC 1.8
TCH6	<u>FUEL TANKS AND FUEL PIPES:</u>
6.1	Vehicle may not retain the original position of their fuel tanks, shall be removed from the original position;
6.2	It is highly recommended that properly designed and manufactured racing fuel tanks are used or bag type fuel cells which reduces the risk of fuel spillage from accident damage;
6.3	The wall thickness of metal fuel tanks shall be no less than 1mm;
6.4	A fuel tank breather, which shall vent externally, must be fitted to all fuel tanks.
6.5	A non-return valve shall be fitted to the breather.;
6.6	The non-return valve may not be airtight;
6.7	The fuel tank cap shall be the non-vented type;
6.8	Fuel tanks must be mounted in a separate compartment behind the competitor;
6.9	Fuel tanks must be securely mounted to the chassis of the vehicle with bolts or metal straps;
6.10	No fuel tank to be fitted above the battery and the battery to be covered with rubber on the top
6.11	A fire wall must be constructed to separate the competitor from the fuel tank and fuel pumps as well as the filler and breather system;
6.12	The fuel lines must run above the floor;
6.13	The section of the fuel line running inside the vehicle past the competitor compartment must be of a steel material and may not have joints
TCH7.	<u>KILL SWITCH</u>
7.1	Vehicle shall have kill switches made of non-flammable material fitted;
7.2	Kill switches to be marked red;
7.3	The fitment of the kill switch fitted shall be within the competitors reach and his sight when strapped in;
7.4	External switch shall be situated outside of the vehicle for Officials to easily reach;
7.5	If the internal kill switch cannot be reach by an official easily, it shall be mandatory for an additional external kill switch to be fitted;
7.6	The effect of the Kill switches is to isolate the battery power from the rest of the vehicle and to shut the engine off with immediate effect, resulting in the break of the ignition and electric fuel pump circuits, simply said to cut all power and fuel supply simultaneously;
TCH8	<u>MIRRORS</u>
8.1	Only one mirror mounted inside of vehicle permitted;
8.2	Maximum size of mirrors 100mm x 200mm;
8.3	One Exterior mirror permitted;

8.4	Exterior to be fitted within the width of car on the competitor driving side;
8.5	Maximum size of exterior mirror 150mm in diameter, width and/or height;
TCH9	<u>MUDFLAPS</u>
9.1	Mandatory on vehicle;
9.2	Mud flaps to be fitted behind the rear wheels of rear wheel drive cars;
9.3	Mud flaps to be fitted behind the rear wheels and behind the front wheels of front wheel drive vehicles;
9.4	Mud flaps must be positioned directly behind the wheels and not more than 100mm from the back face of the wheels;
9.5	Distance of mud flap from ground level with driver seated, measured from the bottom of the mud flap to ground level is maximum 100mm and minimum 50mm, with the competitor seated and wheels inflated to racing pressures;
9.6	Mud flaps to cover the full width of the tyre and must be fitted as close to the tyre as possible;
9.7	Mud flaps not to drag on the ground;
9.8	Mud flaps must be made up of a firm but flexible material, metal material may not be used;
9.9	Mud flaps may under no circumstance be manufactured from rubber car mats
9.10	Mud flaps should be fitted in such a manner that it forms part of the body;
9.11	Mud flaps may not be part of or be fitted to bumpers;
TCH10.	<u>OIL SAFETY CONTROL</u>
10.1	Oil filters are either to be clamped or strapped;
10.2	Sump, gearbox, axle's drain and filler plugs are to be drilled and wired;
10.3	An oil catch tank, with a minimum capacity of 1 litres, capable of accepting surplus oil and fumes from the engine shall be fitted; (ENGINE BAY OR CAN IT BE FITTED INSIDE CAR)
10.4	The catch tank shall be connected to each breather outlet by means of a flexible pipe or similar conveyance, designed to feed the oil or fumes to the tank;
10.5	The catch tank is to be emptied between races;
TCH11.	<u>RADIATOR AND SAFETY CONTROL</u>
11.1	Any standard vehicle radiator is permitted
11.2	Any coolant is permitted.
11.3	Radiators applicable to all classes – a water catch tank with a minimum capacity of 1litres shall be fitted to the cooling system, exempted will be sealed water systems;
11.4	Under no circumstances may a water catch container be replaced with a pipe allowing steam or water (overheating) being directed outwards;
11.5	All joints that are not flared shall be double clamped, flared pipes may have one clamp only;
11.6	All piping to and from the radiator, other than the joints and the overflow pipes shall be of steel or aluminum or copper;
11.7	The pipes must be mounted securely between the firewall and the radiator and at a height not higher the sissy bar;
11.8	All joints are to be enclosed by a rubber sock and all hoses are to be double clamped;
11.9	Radiator shield protectors are mandatory with the following regulations applicable;
11.10	A fitment of a shield in lexan or Perspex shall be fitted to protect the competitor from a burst water pipe;
11.11	The shield could be made up in two designs namely:
11.12	A straight up shield covering and protecting the competitor in full whilst seated, this to be the full range of the radiator and competitor;
11.13	An upright shield with a hood covering the top of the radiator to form an airflow tunnel so not to restrict air intake, being the full width of the radiator, protecting the competitor whilst seated;
TCH12	<u>Prop shafts running below chassis:</u>
12.1	Vehicle shall have a collar/hoop that would prevent the front end of the running gear (prop shaft or torque tube) to lodge into the track should it break while the vehicle is in motion;
12.2	The hoop should be approximately 25% along the distance of the shaft as measured from the front of the prop shaft;
TCH13.	<u>SAFETY/ROLL CAGES</u>

<p>13.1 13.2 13.3</p>	<p>The safety cage know as a roll cage is a structural framework designed to prevent serious body shell deformation and bodily harm in the case of collision or a car turning over; It is compulsory for all vehicles to have a fully constructed roll cages; Great care must be taken that roll cages are constructed in the fashion, that in an event of an accident, no metal piping could break off causing bodily harm. The roll cage has to be designed so to protect the competitor;</p> 
<p>13.4 13.5 13.6 13.7</p>	<p>The example shall be a mandatory minimum requirement; The cross bar behind the driver seat (blue) shall be mounted flush directly behind the backrest of the seat in order to support the backrest. This cross bar shall be just below the shoulder of the driver when seated; Additional cross bars may be added to the cage; Where the roll cage has lost strength due to bends, triangulated bracing to reinforce the cage would be necessary;</p>
<p>13.8 13.9 13.10 13.11 13.12 13.13 13.14</p>	<p>All welding points to be welded 100% and the less accessible areas no less than 75%; Round tubing shall have a minimum outside diameter of 38mm and a minimum wall thickness of 2mm; A maximum of two 8mm inspection holes on the left hand and right hand side of the cage shall be made for easy inspection; The cage shall be fitted with a base plate, welded, or bolted on to the floor, sill, or wheel arch of the vehicle if the original body of a standard vehicle is utilized. The cage of a purpose built chassis shall for man integral part of the chassis itself and shall accordingly be welded directly onto the chassis legs. A minimum size of base plate 60x60x4mm thick. Where the driver's helmets could meet the safety cage, a non-flammable padding should be provided for protection; Sissy bars shall be fitted in such a manner that the competitor's hips and knees are completely protected when he/she is strapped into the seat. The sissy bars should be constructed in such a manner that in an event of a T-bone incident the other vehicle would collide with the sissy bar;</p>
<p>TCH14. 14.1 14.2 14.3 14.3 14.4 14.5 14.6 14.7 14.8 14.9 14.10 14.11 14.12 14.13</p>	<p><u>SEATS - Race Seats</u> Race seat minimum specifications for oval track racing: Race seat shall have holes where seat belts can be let through, one on each side of the seat for lap belts and two on the back rest at shoulder height for the belts to exit to its mounting points; It is highly recommended to fit a FIA approved seat; Only bucket race seats permitted, no adjustable back rest reclining road car or race styled seats will be permitted; No fibre glass seats may be used; Seat is to be mounted against support bar across just below shoulder level. Aluminum seat permitted; Aluminum seat wall thickness – minimum of 2.5mm; Steel seat permitted; Steel seat wall thickness, minimum of 2.00mm; Steel framed seats permitted; Carbon fibre seat is permitted Carbon fibre seat wall thickness, minimum of 3.00mm Carbon fibre seat are to be mounted with a support bar across the back with tear plates of 100 mm x 100mm, behind the backrest of the seat, just below shoulder height; Vehicle that have cracked/torn and broken seats shall automatically be excluded from the event, without any further negotiations;</p>

14.14	Race seat need to be bolted with four 8mm(minimum) bolts at bottom of race seat or with two 8mm(minimum) of the center of seat. The Seat backrest also need to be bolted to the support bar with two 8mm(minimum) bolts. 8mm U bolt may be used.
TCH15. 15.1 15.2 15.3 15.4 15.5	<u>SEAT BELTS</u> Quick release seat belt and shoulder harness are mandatory; Seat belts must have a minimum of four points; No hand stitching or homemade alterations permitted to belts; Only SABS or International standard belts permitted; Safety belts and driver seats must be secured to the roll cage or frame (not to the floor pan);
15.6 15.6.1 15.6.2 15.6.3 15.6.4 15.6.5	<u>Fitment of Seat Belts:</u> 15.6.1 The shoulder belt will exit through the backrest of the seat horizontally to the rear mounting point with a minimum of 20degree (measure from horizontal) downwards to the exit point; 15.6.2 The lap belts will exit through the side hole fitment of the seat, and form a vertical line to the mounting points with a maximum of 30degrees rearward; 15.6.3 The crotch belt application – it shall exit though the seat downward vertical viewed from the side with a maximum of 20degree rearward towards the mounting points; 15.6.4 If the fitment of the shoulder belt cannot fit as above, the fitment of the shoulder belt may be taken down to the chassis, but must be supported with a crossbar behind the back rest of the seat at the same height of the seat belt exit holes for the crossbar to function as a support for the belt going down for the bar to take the downward pressure of the shoulder belt and not the seat back rest; 15.6.5 Existing vehicles that have seat belts and seats mounted to the floor pan must be supported by 50mm x 50mm washers or 75mm x 2mm in diameter tear plate; See drawing for belt installation; <div data-bbox="272 1060 1534 1438" data-label="Diagram"> </div>
TCH16.	<u>SPACE FRAME / PURPOSE BUILT / SEMI-SPACE VEHICLES</u> n/a
TCH17 17.1 17.2 17.3	<u>TOW HOOKS</u> 17.1 Vehicle are to install tow hooks to the front and back of the vehicle; 17.2 These may not protrude beyond the bumpers of the vehicle; 17.3 It should be clearly marked in red, yellow or orange for tow-vehicle crew to tow the vehicle with the least delay;
TCH18. 18.1 18.2 18.3	<u>WEIGHTS</u> 18.1 Vehicle which require to increase vehicle weights shall do so by fitting ballasts: 18.2 Ballasts, is a non-functional material added to increase vehicle weight. 18.3 Any ballast must be permanently fixed to the structure of the vehicle by means of bolting, wiring and strapping

18.4	of ballasts is prohibited;
18.5	All ballast must be clearly marked by a contrasting colour to the interior of the vehicle;
18.6	Championship events – once vehicles have been weighed the Scrutineer shall have the right to wax seal ballasts;
18.7	Fitted fire-extinguishers shall be removed or its weight reading shall be taken into consideration and be excluded for weighing purpose;
18.8	No weight tolerances will be permitted;
	A vehicle may be weighed at any time during the event and remains the responsibility of the competitor to ensure the vehicle in which he is competing complies to the class weight regulation;
TCH19.	<u>WELDING</u>
19.1	All joints and seams in the construction of the vehicle are to be properly mitered and shall be welded.
19.2	All visible welding shall be 100%.
TCH20.	<u>FENDER FLAIRS</u>
20.1	The use of fender flairs is permitted
20.2	Fender flairs constructed from fiber glass max 3mm in thickness, may not have any additional steel reinforcements.
20.3	Fender flairs constructed from sheet metal may not exceed 1.2mm in thickness, may not have any sharp edges and must be shaped to fit according to the fenders shape.
TCH21.	<u>WINDSCREENS AND GLASS WINDOWS</u>
21.1	All windscreens and glass windows shall be removed if vehicle is being campaigned permanently on dirt;
21.2	Only the rear side windows may be replaced with see through lexan or polycarbonate;