



Appendix 3 LHMC BMW MINI Technical Regulations

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 make a modification you should work on the principle that you cannot.

The Class is open to new Mini R50 & R53 Mini One, Mini Cooper Saloon & Mini Cooper S Saloon (2000-2006 models only). All parts from the R50 & R53 may be interchanged, with the exception of 3.13

All cars must comply fully with the current MSA Yearbook regulations J and Technical regulations N6.1. to 6.14.3. and these supplementary regulations.

1.SAFETY

1.1 Roll over structure to N 6.12.1 as a minimum is mandatory.K1.6.1 Appendix 2 drawing 12 (g) or (h).

1.2 A fire extinguisher with a minimum capacity of 1.75 litres AFFF is the mandatory minimum. Refer to K 3.1.1 (Table 3, page 168), plus K 3.4. complete.

1.3 Front windscreen to be laminated glass or a minimum of 4 mm polycarbonate. An operative windscreen wiper/washer system is required. A rear screen and side windows are mandatory. Consideration **MUST** be given to driver's compartment ventilation for this purpose only, it is permitted to cut a maximum of 4 x 50 mm diameter holes in each rear side and or tailgate windows. A vented hole may also be added to the driver's window large enough to accept the driver's arm.

1.4 Seat Belts. Refer to K 2.1.complete (except K 2.1.1, 3 point not allowed) 4 point is mandatory minimum. Anchor points must not rely solely on the large washers supplied with many seat belts but **MUST** be reinforced over a suitable area to give the sufficient strength. The rear fixing of the seat belts must be fixed to the harness bar fitted to the roll cage.

1.5 A competition seat with a built-in headrest and mountings are mandatory. Refer K 2.2 complete. The seat must be currently or previously homologated, but may be out of date.

1.6 An ignition cut-off switch having positive on/off positions clearly marked, must be fitted in a position to be operable by the driver when normally seated. It must also isolate the fuel pump(s). A spark proof master cut-off switch must be fitted externally below the windscreen and be readily

accessible what ever the attitude of the vehicle following an accident. The switch must be clearly marked with a red spark on a white edged blue triangle and On/Off positions clearly marked.

1.7 The front bulkhead **MUST** be effectively fire proofed, so as to seal off the drivers compartment from fire within the engine compartment. Tape is not considered acceptable. Refer J 5.2.2 .

1.8 Window nets must be fitted on the drivers side of the vehicle.

1.9 In addition to the minimum apparel standards set out in MSA General Regulations N9 following are mandatory:

- a) Flame resistant gloves and shoes.

The following are highly recommended:

- c) FHR devices
- d) Fireproof underwear
- e) Fireproof balaclava

2.Body Work and General

2.1 The outward appearance of the car must remain unaltered.Body shell / chassis to be standard Mini R50 & R53 Mini One, Mini Cooper Saloon & Mini Cooper S Saloon (2000-2006 models only). All brackets and fixings may be removed .The internal door steel may be removed.

2.1. Weight limits The minimum weight for car and driver, full racing apparel:

Normally aspirated(R50 non supercharged)1000 Kg .

Forced induction (R53 supercharged)1100 Kg .

2.2 Fibreglass bonnet, front and rear bumpers may be used provided they are securely fixed and must be the same shape and size as standard fitments.

2.3 Plastic inner wings may be removed.

2.4 The exterior body panels of the car may be substituted for composite ones (fibreglass) the dimensions and visual appearance of these parts must be identical to the standard panels. (moulded off standard parts. As per blue book rule N.6.2.7

2.5 The reinforcing of the standard suspension mounting points may **NOT** extend to more than a radius of 100mm from the centre of the suspension point, except for front strut braces (Ref 4.8). The crumple area of the left and right front chassis legs may be reinforced.

2.6 Glass sunroofs are not permitted. The sunroof aperture must be closed by a metal panel permanently fitted in place.

2.7 All lights must be removed and the apertures blanked off.
Mesh may be used.

2.8 All interior trim must be removed, including floor covering, head linings, front & rear passenger seats, audio equipment, spare wheel, standard seat belts. Door / trim panels must also be removed and replaced with aluminium or fibreglass panels. Driver and passenger air bags maybe removed, however it is mandatory that the system be made inoperable. Heater system is optional.

2.9 All cars must be fitted with one internal rear view mirror of at least 50sq. cm securely mounted and positioned to give a clear view to the rear. The edges of the mirror must be protected by a suitable cover to reduce the possibility of injury in the event of an accident. External mirrors must be kept as standard.

2.10 All cars must be fitted with towing eyes front and rear which must not protrude beyond the limits of the body. Their position should be marked clearly in a contrasting colour other than black or white. (refer:- N.6.14.3)

2.11 The standard petrol tank must be retained and in its original position. It is mandatory for the fuel tank to have a protective guard.

2.12 Door handles must be retained. Bonnet and rear tail gate must be fitted with additional catches /straps. The tail gate electric catch must be removed.

2.13 The exhaust is free but must exit at the rear of the vehicle and incorporate a catalytic converter. An effective silencer must be fitted to the vehicle at all times in accordance with Section J, page148, appendix 1, chart 5.18, section F.

2.14 Choice of steering wheel is free.

2.15 The standard steering column must be retained and the steering locks must be rendered inoperative. It is permissible to remove the PAS unit.

2.16 The instruments are open to free choice. Dashboard may be removed to allow the fitment of the roll cage.

2.17 It is permitted to fit protective guards to the sump. Any guards may protect but **NOT** strengthen. These protections must be made from either aluminium alloy, steel or composite material and have minimum thickness of 4mm and 2mm for steel. The total weight of protections must be 20kg maximum (FIA279 appendix J page 7 3.2.5).

2.18 It is **NOT** permitted to reinforce the bumpers or their mountings.

2.19 Radiators must remain within the engine compartment, Electric fans and water pumps are permissible. All pipe work is free. It is permitted to modify or remove the radiator shield / cowl Radiators must be retained by metal brackets Only Mini/JCW/GP intercooler radiators may be used from a R53 model.

2.20 Mud flaps are to be fitted behind all four wheels, extending to a minimum of 38mm either side of the tyre tread and to a maximum of 76mm above the ground.

2.21 Side skirts maybe replaced or modified, but the width must not exceed beyond the front and rear wing extensions when viewed from above and must not contain metal.

2.22 The rear wing assembly is optional but if fitted must be identical to the original Mini / JCW part.

3 ENGINE AND GEARBOX

The cylinder head, engine block and sump must remain STANDARD as supplied by Mini unless specifically permitted by these regulations **NOTE:** Throughout this section, the words 'standard' and 'production' refer specifically to items manufactured by the Mini Group and OEM suppliers and no other manufacturer.

3.1 The engine and gearbox must be of the type originally fitted and be in the original position.

3.2 Head gasket is free. The original terrain must be visible in the inlet and exhaust ports and in combustion chambers.

3.3 A production crankshaft and standard con rods are mandatory, although balancing is permitted. Machining the crankshaft in any other way to reduce weight or any other benefit is not permitted. Polishing is not permitted. In all cases one con rod must be completely standard.

3.4 Pistons must be unmodified standard 2016 BMW Mini Technical Regulations. V1

production or approved replacement pistons

3.5 The cam MUST remain STANDARD

Timing of the cam is to remain as standard.

3.6 The Flywheel must be a standard Mini/JCW unit or a standard single mass replacement unit.. The standard unit may not be lightened by machining and or drilling.

3.7 Steel or Alloy competition flywheels are not permitted

3.8 It is permitted to baffle the standard sump and modify the oil pick up pipe. Dry sumping is **NOT** allowed.

3.9 It is permitted to fit an oil cooler within the engine compartment

3.10 Inlet manifolds are to be STANDARD.

It is permitted to remove/replace the original air filter with a performance or induction kit. All engine breather pipes that do not re - circulate must go to a breather catch tank. It is not permitted to modify the throttle mechanism throttle body or throttle plate and must remain STANDARD.

3.12 Spark plugs are open to free choice but leads and coil pack must remain STANDARD.

3.13 Standard Mini/JCW Superchargers are permitted All drive pulleys and the drive belts are free.

3.14 Fuel system to be standard Mini/JCW.

3.15 Turbo-chargers, injection of nitrous oxide or water are **NOT** permitted.

3.16 Fuel: Petrol as defined as 'Pump fuel' J 5.13.4. (Table on page 64).

3.17 Standard gearbox casing and all internals MUST be retained. 5 or 6 speed gearboxes are permitted. Gearbox ratios and final drive must be the same as originally supplied for the car. Gearboxes may be rebuilt with stronger bearings.

3.18 Limited slip differentials are permitted

3.19 The clutch is free as long as the same number of driven plates as used in the production item are retained. Friction material is free providing it is to the original configuration.

3.20 Water pumps are free but must remain within the engine compartment.

3.21 Standard drive shafts must be retained.

3.22 Short shift gear linkage is permitted.

4 SUSPENSION AND BRAKES

4.1 Standard brake system must be retained apart
Page 3 of 5

from modifications outlined in section 4.2 & 4.3.

Brakes must be operative on all four wheels.

Handbrakes must be operable and be of sufficient efficiency to hold the car on a slight gradient.

4.2 Standard Mini pattern after market ferrous discs may be used. Friction material is free. Brake hoses are free.

4.3 ABS braking is not permitted; therefore ABS braking is to be disabled or removed. It is permitted to fit pressure limiting/apportioning valves to the rear brakes.

4.4 The ride height may be altered.

4.5 Shock absorbers and springs are free. Remote canister dampers are not permitted. Rose type joints may be used in the shock absorbers top and bottom mounts. Front, top mounting point may be modified/re-drilled.

4.6 Camber angle on front and rear wheels must not exceed 3 degrees negative.

4.7 Competition bushes are permitted. Rose joints are not permitted with the exception of as permitted at para 4.5.

4.8 Pressed steel suspension arms may be strengthened

4.9 Anti roll bars may be fitted, providing they are standard Mini parts.

4.10 The wheel Design and Manufacture / supplier is Free but the diameter, width and offset must remain the same as standard Mini/JCW.

Wheel nuts must match the wheel used. Spacers as per J5.8.2
Yokohama 195/55/15 AO48R (compound M or S) tyres are mandatory.

4.11 Front upper and lower strut braces are permitted and their design and material is free. Front control arm, rear carrier mounting bolts and the front sub frame bolts, may be replaced with nuts and bolts.

5. ELECTRICAL EQUIPMENT.

5.1 Car ECU must be standard Mini, but the Engine map is free.

5.2 All sensors, actuators and wiring originally fitted to the engine ECU must be operational and standard in all respects. The only exceptions to this are fitting:- battery masters switch: rev counter: cooling fan switch: electric water pump switch: shift light.

5.3 Body control unit may be bypassed or removed along with all related wiring.

5.4 Each car must be fitted with two RED brake
2016 BMW Mini Technical Regulations. V1

lights, of the anti crash type as used in fog, with a minimum of 21Watt bulbs fitted (or LED equivalent). The lights should be clearly visible from behind when the foot brake is applied.

5.5 A 'poor visibility' light should be fitted. Refer K5 complete.

5.6 Both charging and starting circuits must be as standard and function efficiently.

5.7 A battery and self starter must be fitted and in working order and not of a temporary nature. The battery may be located either next to the engine or in passenger compartment. The battery earth lead must be coloured yellow. Battery terminals **MUST** be covered with insulating material. **Battery must be securely mounted to the vehicle.** If mounted within the passenger compartment, battery must be fitted in a sealed non conductive battery box

5.8 External circuit breaker must be fitted. Refer: - K 8.1, K 8.2, K 8.5.

5.9 The key micro chip antenna must remain.

5.10 The EWS security module must be made easily accessible (security plate and fastenings removed).

5.11 Both standard fuse boxes must be used and in original location although redundant fuses may be removed.

5.12 Wheel sensors must be unplugged or removed.

6 ELIGIBILITY CHECKS.

All cars **MUST** have following studs, nuts and bolts drilled to enable seals to be affixed. Drillings must be of at least 3mm diameter. Failure to have the following drilled is deemed to be a breach of vehicle eligibility.

Appendix for drawings and photographs indicating the bolts to be drilled

