

# Appendix 6 - Schedule T&C, Modified Saloon, Group 2

# APPROVED VEHICLE SPECIFICATION

This form details the approved specifications for an individual vehicle models for Historic competition, Section 5 Schedule T&C, Group 2 Historic Saloon car. To be issued with a COD, the vehicle needs to comply with these specifications, the physical appearance (shown in the illustrations) and the general historic rules, as detailed in the current MSNZ Manual of Motorsport.

Make and Model of Car: Morris/Austin Mini, Mini K, Cooper, Cooper S,

Riley Elf, Clubman GT

Period of Original Manufacture: Mini, Mk1 1959-1967 Mk2 1967-1970, Mk3

1970-1976. Clubman GT, 1969-1977, Riley Elf

1961-1969.

MSNZ Historic Group: Saloon Group 2

Date of Issue of this document: July 2018









Refer to MSNZ Manual of Motorsport, Vehicle Eligibility, Historic Saloon Cars, General Regulations and Appendix 6 Regulations for permitted modifications.

# **SECTION 1 – CHASSIS**

#### 1.1 CHASSIS FRAME

**Description:** Uni-Body

**Period of Manufacture:** 1959 to 1976

Manufacture: British Motor Corporation

**Countries of Manufacture:** England, Australia

**Chassis Number Location:** Various

Material: Steel

#### 1.2 FRONT SUSPENSION

**Description:** Independent upper and lower arms with lower castor

bar

**Spring Medium:** Rubber Cone or Hydralastic

**Damper Type:** Telescopic

**Anti-Sway bar:** Yes

**Suspension Adjustment:** Yes

#### **COMMENTS:**

**Hi-Lo adjustable cones are allowed. Adjustable tie rods allowed. Hydralastic Suspension may be replaced with dry rubber Cone suspension. Shock** absorbers must be of appropriate period type and the use of original mounts. They may not utilise external gas/fluid reservoirs and/or canisters. Bushing material can be replaced, Outer Ball Joints must remain. Aftermarket conventional type sway bar with adjustable end links maybe fitted, IE, made of solid steel bar bent to shape. Diameter of sway bar is free. Hollow Sway Bars are not permitted.

#### 1.3 REAR SUSPENSION

**Description:** Independent with trailing arms

**Spring Medium:** Rubber Cone or Hydralastic

**Damper Type:** Telescopic

**Damper Adjustable:** Yes

**Anti-Sway bar:** Fitted to Cooper S and GT

**Anti-Sway bar adustable:** Yes

**Suspension Adjustable:** Yes

Method: See note

#### **COMMENTS:**

**Hi-Lo adjustable cones are allowed. Adjustable Camber approved. Hydralastic Suspension may be replaced with dry rubber Cone Suspension**. Shock absorbers must be of appropriate period type and use the original mounts. They may not utilize external gas/fluid reservoirs and/or canisters. Aftermarket conventional type sway bar with adjustable end links maybe fitted, IE, made of solid steel bar bent to shape.

#### 1.4 STEERING

Type: Rack and Pinion

Make: BMC

#### **COMMENTS:**

Fast rate steering arms approved

#### 1.5 BRAKES, FRONT

Make: BMC

**Type:** Drum or Solid Disc (Disc on Cooper, S and GT)

**Dimensions:** 190.5 x 9.4 Disc (Cooper S and GT)

**Disc Material:** Cast iron/steel

Caliper Make: Lockheed

**Caliper Type:** Two pot.

Caliper Material: Cast iron

Caliper Pistons per wheel: Two

**Actuation:** Hydraulic

Master Cylinder Make: Various

Adjustable Bias: Yes Allowed

**Brake Booster Servo:** Yes

#### **COMMENTS:**

Vented directional rotors with mounting hats are not approved. Non-standard pedal boxes are not permitted. Master cylinders with reservoir must remain firewall mounted.

# 1.6 BRAKES, REAR

**Type:** Drum

**Dimensions:** 178 x 32mm

**Disc or Drum Material:** Cast Iron or optional Aluminium Mini Fin on Cooper S or GT

No. Cylinders/pots per One

wheel:

**Actuation:** Hydraulic

Caliper Material/Type: N/A

Caliper Pistons: N/A

#### **COMMENTS:**

Replacement of drum brakes with Discs not approved.

# **SECTION 2 – ENGINE**

#### 2.1 ENGINE

Make: BMC

Model: A & A+ Series

No. cylinders: Four

**Configuration:** Straight 4,

**Cylinder Block Material:** Cast iron

Two/Four Stroke: Four

848, Mini & Elf - **Original**: 62.9 x 68.26 mm

997, Cooper - **Original**: 62.43 x 81.28 mm

998, Mini, Elf & Cooper- **Original:** 64.58 x 76.2 mm

**1098, Mini K – Original:** 64.58 x 83.72 mm

970S - **Original**: 70.6 x 61.91 mm

1071S - **Original**: 70.6 x 68.26 mm

**1275S & GT - Original:** 70.6 x 81.28 mm

Cooling Method: Fluid

**Identifying marks:** Casting numbers, refer to manufacturer specs

## **COMMENTS:**

Any Replacement Engine block is approved from the A & A+ Series but must be of the same dimensions and material, as the original. The crankshaft to block deck height, camshaft placement position must be the same. No Stroker Crankshafts allowed. Maximum overbore of 060 thou is permitted.

# 2.2 CYLINDER HEAD/CAMSHAFT

Make: BMC

No. of valves/cylinder - inlet: One

No. of valves/cylinder – One

exhaust:

Total no. of ports – inlet 2

Total no. of ports – outlet 3

No. of Camshafts: One

**Camshaft Location:** Block

Camshaft Drive: Chain

Valve actuation: Pushrod and rockers

Spark Plugs/Cylinder: One

**Identifying marks:** Refer to manufacture specifications

**COMMENTS:** 

2.3 LUBRICATION

Method: Wet sump

Oil Cooler Standard: On Cooper S and GT

**COMMENTS:** 

Oil Cooler allowed on all models.

2.4 IGNITION SYSTEM

**Type:** Coil and Distributor

Make: Lucas

**COMMENTS:** Arden 8 port heads are approved to be used on Cooper S or 1275. Not approved to be used on the GT. Alloy 7 & 5 port heads not approved.

Aftermarket Electric insert allowed in lieu of points.

2.5 FUEL SYSTEM

Carburettor Make and 1.25 inch SU HS2

Model:

**Carburettor number:** 1 or 2 SU's on factory manifold

Pump: Mechanical

# **COMMENTS:**

Replacement aftermarket carburettors allowed including Split Webers on approved manifold. Mechanical Fuel Injection approved.

# **SECTION 3 - TRANSMISSION**

# 3.1 CLUTCH

Make: Borg and Beck

**Type:** Diaphragm

**Diameter** 185mm

No of Plates: One

**Actuation:** Hydraulic

#### **COMMENTS:**

Hydraulically operated multi plate race clutch is approved.

## 3.2 TRANSMISSION

**Type:** Synchro-mesh, not on first

Make: BMC

**Gearbox Location:** Under Engine

No. forward speeds: Four

Gear change type and Remote floor mounted

location:

Case Material: Alloy

#### **COMMENTS:**

Replacement straight cut, close ratio style gear sets are approved. 4 Speed synchro box approved. Rod change approved. Jack Knight 5 Speed Gearbox not approved.

## 3.3 FINAL DRIVE

Make: BMC

**Model:** Cooper S or Clubman GT

Wheel Drive Method: Front

**Ratios:** Various

**Differential:** Open or LSD

**Type:** Combined as transaxle

## **COMMENTS:**

# 3.4 TRANSMISSION SHAFTS (EXPOSED)

**Number** Two

**Description:** Halfshaft with Hardy Spicer or Dunlop universal joints, and CV

joints

#### **COMMENTS:**

#### 3.5 WHEELS AND TYRES

Wheel type – Original: Pressed Disc

Material – Original: Steel

Fixture Method: Studs

No. of stubs: Four

Original Wheel Diameter: 10 inch

Original Rim Width: 4.5 inch

**Tyres allowed:** 50% Minimum aspect ratio, Refer to Appendix 6 tyre rules

#### **COMMENTS:**

Period Alloys approved, maximum 10x6 inch. 12 inch wheels not approved. The 1 inch wheel size creep is not approved.

#### 4.1 FUEL SYSTEM

Make: SU

**Tank Location:** Inside boot behind rear seat

**Capacity:** 25 litres x 2 tanks as option

Fuel Pump type and Electric

location:

## **COMMENTS**

Boot mounted fuel cell fitment is approved.

#### 4.2 ELECTRICAL SYSTEM

Voltage: 12

**Alternator:** Fitted on engine

**Battery Location:** Boot

## **COMMENTS**

Battery cannot be mounted inside cockpit. Boot mounted battery approved.

# 4.3 BODYWORK/INTERIOR

Type: Closed Saloon

Material: Steel

**No of Seats:** Four

No of Doors: Two

Spoilers Front: N/A

Spoilers Rear: N/A

Hood Scoop: None

#### **COMMENTS**

The Cooper S and Clubman GT came with factory flares. The Group 2 or Group 4 flares are allowed as they were a period modification in Mini 7 Racing in NZ during the era. Later model wider flares are not approved.

# Speedo Aperture opening modification.

The use of a carburettor box is permitted only if fitted to the car in period. This modification is not allowed in an original standard body car if not historically done.

Dimensions of the aperture must not exceed 175mm high by 215mm wide. The box must be adequately sealed. The box is not to protrude past a line between the front face of the parcel shelf and the window surround base.

The instrument binnacle if using the carburettor box maybe removed but you must use a works type dash or similar as a replacement.



All door and side panels must be used and Mk1 & 2 door side bins installed. Mk3 windup windows can be replaced with a sliding window kit. Rear window can be replaced with a Perspex replacement but no air holes approved. Must be fixed as per MSNZ Rules.

All badges, bumpers and brightwork must be installed and be period correct for the model the car represents. Cooper S badges may be used on all round front Minis.

# **4.4 DIMENSIONS**

Track – Front: 1233mm

Track – Rear: 1120mm

Wheelbase: 2036mm

Overall Length: 3054mm

Curb Weight: 600kg

# **4.5 SAFETY EQUIPMENT**

See MSNZ Appendix Six - Schedule AA and Appendix Two - Schedule A.

**NOTES:** When constructing the roll cage side intrusion bars it is important to allow clearance for fitment of inside door arm rests, window winders and door opening handles.

# **ADDITIONAL COMMENTS:**

If you are unsure of eligibility or the approved replacement components and/or other technical issues for the above vehicle please contact the MSNZ Historic Commission. Their details can be found on <a href="https://www.motorsport.org.nz">www.motorsport.org.nz</a>