



5TH CATEGORY - HISTORIC RACING
GROUP N
 APPROVED VEHICLE SPECIFICATION

This form details the approved specifications of individual vehicle models in the 5th Category Historic car group. To be issued with an Historic Log Book, cars need to comply with these specifications, the physical appearance shown in the illustrations and the general historic rules as detailed in the current Motorsport Australia Manual.

| | | | |
|---|---|---------------|-----------------------|
| Make of Car: | Morris/Austin | Model: | Mini Cooper "S" Mark1 |
| Period of Original Manufacture: | 1963-1967 | | |
| Motorsport Australia Historic Group: | Nb | | |
| Date of Issue of this Document: | 17 July 2024 | | |
| Comments | Specification changes introduced after 1 January 1965 are not eligible under Group Nb regulations | | |



Refer to Motorsport Australia Manual of Motor Sport, Vehicle Eligibility, Historic Touring Cars, General Requirements & Nc Regulations for permitted modifications.

Update Log

| | |
|------------|-------------------------------|
| 23/6/2023 | Tyre protrusion clarification |
| 19/07/2024 | Timing cover clarification |
| | |

SECTION 1 - CHASSIS

1.1. CHASSIS

| | |
|---------------------------------|---------------------------------------|
| Description: | Uni – body |
| Period of Manufacture: | 1963 – 1967 |
| Manufacturer: | British Motor Corporation |
| Chassis Number From: | K/A2S4**** or C/A2S7**** or YK2S2**** |
| Chassis Number location: | Various |
| Material: | Steel |
| Comments | None |

1.2. FRONT SUSPENSION

| | | | |
|-------------------------------|---|--------------------|----|
| Description: | Independent - upper & lower arms with lower castor bar. | | |
| Spring Medium: | Rubber cone | | |
| Damper Type: | Telescopic | Adjustable: | No |
| Anti-sway bar: | None | Adjustable: | No |
| Suspension adjustable: | Yes | Method: | No |
| Comments: | Front suspension lower control arms and castor bars may be made adjustable. | | |

1.3. REAR SUSPENSION

| | | | |
|-------------------------------|---|--------------------|-----|
| Description: | Independent - trailing arms | | |
| Spring Medium: | Rubber cone | | |
| Damper Type: | Telescopic | Adjustable: | No |
| Anti-sway bar: | None | Adjustable: | N/A |
| Suspension adjustable: | No | Method: | No |
| Comments: | Adjustable camber brackets and slotted pivot holes permitted. | | |

1.4. STEERING

| | | | |
|-----------------|-----------------|--------------|-----|
| Type: | Rack and pinion | Make: | BMC |
| Comments | None | | |

1.5. BRAKES

| | Front | Rear |
|--------------------------------------|-----------------|---------------------------|
| Type: | Disc, solid | Drum, single leading shoe |
| Dimensions: | 190 mm x 9.5 mm | 178 mm x 31.75 mm |
| Material of drum/disc: | Cast iron | Cast iron |
| No. cylinders/pots per wheel: | Two | One |
| Actuation: | Hydraulic | Hydraulic |
| Caliper make: | Lockheed | |
| Caliper type: | Fixed | |
| Material: | Cast iron | |
| Master cylinder make: | Lockheed | |
| Type: | Single | |
| Adjustable bias: | No | |
| Servo Fitted: | Yes | |
| Comments: | None | |

SECTION 2 - ENGINE

2.1. ENGINE

| | | | |
|---------------------------------|---|-------------------------|----------------------|
| Make: | BMC | | |
| Model: | "A" Series 9FSAY engine number prefix | | |
| No. cylinders: | Four | Configuration: | In-line (transverse) |
| Cylinder Block-material: | Cast iron | Two/Four Stroke: | Four |
| Bore - Original: | 70.61 mm | Max allowed: | 72.11 mm |
| Stroke - original: | 81.28 mm | Max allowed: | * |
| Capacity - original: | 1273 cc | Max allowed: | 1328 cc* |
| Identifying marks: | N/A | | |
| Cooling method: | Liquid | | |
| Comments: | <ul style="list-style-type: none"> * Note 1: - Blocks from a Mk 2 prefix 9FXEY & 1100 prefix 12 (usually) allowed. * Note 2: - if the original type of camshaft drive is changed, a timing cover is mandatory. * Note 3: - Original stroke only. With reduced stroke, the bore is free and the max capacity is 1300 cc | | |

2.2. CYLINDER HEAD

| | | | |
|--------------------------------|--|------------------------|-----------------------|
| Make: | BMC | | |
| No. of valves/cylinder: | Two | Inlet: One | Exhaust: One |
| No. of ports total: | Five | Inlet: Two | Exhaust: Three |
| No. of camshafts: | One | Location: block | Drive: Chain |
| Valve actuation: | Pushrod and rockers | | |
| Spark plugs/cylinder: | One | | |
| Identifying marks: | AEG163 or 12G940, Eleven studs | | |
| Comments: | <p>Compared with the other "A" series heads, the Cooper head has two additional studs (11 as against 9), the additional being a 5/16" stud adjacent to the thermostat housing and a 3/8" at the rear of the head.</p> <p>Note: - if the original type of camshaft drive is changed, a timing cover is mandatory.</p> | | |

2.3. LUBRICATION

| | | | |
|-----------------------------|----------|---------------------------|---------------|
| Method: | Wet sump | Oil tank location: | N/A |
| Dry sump pump type: | N/A | Location: | N/A |
| Oil cooler standard: | Fitted | Location: | Behind grille |
| Comments: | None | | |

2.4. IGNITION SYSTEM

| | |
|-----------------|---|
| Type: | Points, coil & distributor |
| Make: | Lucas |
| Comments | Breakerless electronic ignition permitted |

2.5. FUEL SYSTEM

| | | | |
|-----------------------------|------|---------------|-----|
| Carburettor Make: | SU | Model: | HS2 |
| Carburettor Number: | Two | | |
| Size: | 1 ¼" | | |
| Fuel injection Make: | N/A | Type: | N/A |
| Supercharged: | No | Type: | N/A |
| Comments: | None | | |

SECTION 3 - TRANSMISSION

3.1. CLUTCH

| | |
|-----------------------|-------------|
| Make: | Borg & Beck |
| Type: | Diaphragm |
| Diameter: | 185 mm |
| No. of Plates: | One |
| Actuation: | Hydraulic |
| Comments: | None |

3.2. TRANSMISSION

| | |
|--------------------------------------|---|
| Type: | Synchromesh, not on first* |
| Make: | BMC |
| Gearbox location: | Below engine |
| No. forward speeds: | Four |
| Gearchange type and location: | H pattern floor mounted |
| Case material: | Alloy |
| Identifying marks: | N/A |
| Comments: | Gearbox part numbers must be: 22G333, 22A1288 or 22G1128. Non synchromesh internals (dog box) allowed. * 22G1128 gearbox has synchro on first |

3.3. FINAL DRIVE

| | | | |
|----------------------------|--|---------------|-----|
| Make: | BMC | Model: | N/A |
| Type: | Combined as transaxle | | |
| Wheel drive method: | Front | | |
| Ratios: | 4.35:1, 4.267:1, 4.133:1, 3.938:1, 3.765:1, 3.647:1, 3.444:1 | | |
| Differential type: | Free/open | | |
| Comments: | None | | |

3.4. TRANSMISSION SHAFTS (EXPOSED)

| | |
|---------------------|---|
| Number: | Two |
| Location: | Transaxle to front uprights |
| Description: | Solid steel shaft with Hardy-Spicer or Dunlop rubber universal joints and CV joints |
| Comments: | None |

3.5. WHEELS & TYRES

| | | | |
|-----------------------------------|-------------------------------|-----------------------------|----------------|
| Wheel type - Original: | Pressed disc | Material - Original: | Steel |
| Wheel type - Allowed: | Steel Alloy (period style) | Material - Allowed: | Steel Alloy |
| Fixture method: | Studs | No. studs: | Four |
| Wheel dia. & rim width | FRONT | | REAR |
| Original: | 4.5" x 10" | | 4.5" x 10" |
| Allowed | 5.5" x 10" | | 5.5" x 10" |
| Tyre Section: | | | |
| Allowed: | Refer approved tyre list. | | |
| Aspect ratio - minimum: | 60% minimum aspect ratio. | | |
| Comments: | See Appendix A | | |

-

SECTION 4 GENERAL

4.1. FUEL SYSTEM

| | | | |
|-------------------------|---|------------------|------------|
| Tank Location: | Boot, LHR Quarter panel | Capacity: | 25 litres |
| Fuel pump, type: | Electric Rear sub-frame | Make: | SU AUF 201 |
| Comments: | Optional RHR Quarter panel fuel tank permitted. | | |

4.2. ELECTRICAL SYSTEM

| | | | |
|--------------------------|------|---------------------------|-----------|
| Voltage: | 12 | Alternator fitted: | Generator |
| Battery Location: | Boot | | |
| Comments: | None | | |

4.3. BODYWORK

| | | | |
|----------------------|--|-------------------|-------|
| Type: | Closed touring | Material: | Steel |
| No. of seats: | Four | No. doors: | Two |
| Comments: | <ul style="list-style-type: none"> • Mk1 body shell permitted if: <ul style="list-style-type: none"> ○ fitted with sliding window doors (steel); and ○ windscreen wipers 'park' to the RH bottom of the windscreen. • Full Cooper "S" badge work & trim required. • Cut – outs on front apron below bumper bar are from July 1963. • Standard seats, if used require frame & mounting reinforcements. • Speedo aperture opening modifications <ul style="list-style-type: none"> ○ The firewall may be modified to allow for the insertion of a carburettor box. The box to be adequately sealed. ○ The dimensions of the aperture shall not exceed 175 mm high and 215 mm wide. ○ The instrument binnacle may be moved to accommodate the carburettor box. Not to protrude beyond a line between the front face of the parcel shelf and window surround base. | | |

4.4. DIMENSIONS

| | | | |
|---|---------|------------------------|---------|
| Track - Front: | 1233 mm | Rear: | 1202 mm |
| Wheelbase: | 2036 mm | Overall length: | 3054 mm |
| Approved Manufacturer's kerb weight: | 617 kg | | |
| Approved minimum racing weight | 598 kg | | |
| Comments: | None | | |

4.5. SAFETY EQUIPMENT

| |
|------------------------------------|
| Refer applicable Group Regulations |
|------------------------------------|

Appendix A
Tyres

The photo below shows a Hoosier TDR tyre on a Group NB Mini Cooper rim.
The different tread lines have been highlighted by arrows.

The blue arrow is the tread line that is accepted as the only line to be visible outside the mudguard (chrome trim) when viewed from above at the centreline of the wheel on both the front and the rear.

