



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:	27 September 2021		
Comments	Specification changes introduced after 1 January 1965 are not eligible under Group Nb regulations		



Refer to The *Manual*, Historic Appendix, Vehicle Eligibility, General Requirements & Historic Touring Cars Group N Regulations for permitted modifications.

Update Log

23/6/2023	Tyre protrusion clarification
1/1/2024	Inclusion of kerb and minimum racing weights

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:	<p>Blocks from a Mk 2 prefix 9FXEY & 1100 prefix 12 (usually) allowed. Belt drive of camshaft permitted when retained within original chain cover.</p> <p style="padding-left: 40px;">* Original stroke only. With reduced stroke, the bore is free and the max capacity is 1300 cc</p>		

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. Note tooth belt camshaft drive is permitted subject to enclosure within the original timing chain case.</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.

