



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:	Ford	Model:	Mustang Boss 302
Period of Original Manufacture:	November 1968 to November 1969		
Motorsport Australia Historic Group:	Nc		
Date of Issue of this Document:	22 September 2021		



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

Update Log

SECTION 1 - CHASSIS

1.1. CHASSIS

Description:	Uni-body two door coupe
Period of Manufacture:	1967
Manufacturer:	Ford Motor Co.
Chassis Number From:	8(F, R or T)07(A, C, D, F or K)000001 E.g., 8F07D00001
Chassis Number location:	Left hand front inner front fender
Material:	Steel
Comments	None

1.2. FRONT SUSPENSION

Description:	Independent - upper wishbone, lower control arm & castor rod		
Spring Medium:	Coil		
Damper Type:	Telescopic	Adjustable:	No
Anti-sway bar:	Fitted	Adjustable:	No
Suspension adjustable:	Yes	Method:	Caster, camber and toe
Comments:	Refer to Appendix A		

1.3. REAR SUSPENSION

Description:	Live rear axle		
Spring Medium:	Semi elliptical leaf		
Damper Type:	Telescopic	Adjustable:	No
Anti-sway bar:	No	Adjustable:	N/A
Suspension adjustable:	No	Method:	N/A
Comments:	Refer to Appendix A		

1.4. STEERING

Type:	Recirculating ball	Make:	Ford
Power steering	RAM type system		
Comments	Power steering - See Appendix A. Collapsible steering column standard.		

1.5. BRAKES

	Front	Rear
Type:	Disc	Drum
Dimensions:	287 mm x 23.8 mm	254 mm x 44.4 mm
Material of drum/disc:	Cast iron	Cast iron
No. cylinders/pots per wheel:	One	One
Actuation:	Hydraulic	Hydraulic
Caliper make:	Kelsey Hayes Ford	
Caliper type:	Floating	
Material:	Cast iron	
Master cylinder make:	Ford	
Type:	Tandem	
Adjustable bias:	No	
Servo Fitted:	Yes	
Comments:	None	

SECTION 2 - ENGINE

2.1. ENGINE

Make:	Ford		
Model:	Boss 302		
No. cylinders:	Eight	Configuration:	Vee
Cylinder Block-material:	Cast iron	Two/Four Stroke:	Four
Bore - Original:	101.6 mm	Max allowed:	103.1 mm
Stroke - original:	76.2 mm	Max allowed:	76.2 mm
Capacity - original:	4942 cc	Max allowed:	5089 cc
Identifying marks:	C9ZE - 6015B Engine block number is stamped on a flat horizontal surface behind the inlet manifold.		
Cooling method:	Liquid		
Comments:	The Ford M-6010-BOSS 302 block as a replacement for the original 302 Boss block is approved for use. See Appendix B.		

2.2. CYLINDER HEAD

Make:	Ford		
No. of valves/cylinder:	Two	Inlet: One	Exhaust: One
No. of ports total:	Eight	Inlet: Four	Exhaust: Four
No. of camshafts:	One	Location: Block	Drive: Roller Chain
Valve actuation:	Pushrod and rocker		
Spark plugs/cylinder:	One		
Identifying marks:	C9ZE-6090-A or C		
Comments:	Original Boss 302 head or any 4v Ford Cleveland head may be used. See Appendix B.		

2.1. LUBRICATION

Method:	Wet sump	Oil tank location:	N/A
Dry sump pump type:	N/A	Location:	N/A
Oil cooler standard:	No	Location:	N/A
Comments:	Oil cooler permitted.		

2.2. IGNITION SYSTEM

Type:	Points, coil & distributor		
Make:	Autolite		
Comments	Breakerless electronic ignition permitted		

2.3. FUEL SYSTEM

Carburettor Make			
Series 1	Autolite	Model:	Autolite 4300-4V
Series 2	Holley	Model:	Holley 4150C-4V
Carburettor Number:	One		
Size:	Various		
Fuel injection Make:	N/A	Type:	N/A
Supercharged:	No	Type:	N/A
Comments:	None		

SECTION 3 - TRANSMISSION

3.1. CLUTCH

Make:	Ford
Type:	Diaphragm
Diameter:	267 mm
No. of Plates:	One
Actuation:	Hydraulic
Comments:	None

3.2. TRANSMISSION

Type:	Synchromesh
Make:	Ford Top Loader
Gearbox location:	Behind engine
No. forward speeds:	Four
Gearchange type and location:	Remote lever floor
Case material:	Cast iron
Identifying marks:	N/A
Comments:	None

3.1. FINAL DRIVE

Make:	Ford	Model:	9 inch
Type:	Live axle		
Ratios:	3.25 or 3.5 to 1		
Differential type:	Traction-lok or Detroit locker		
Comments:	None		

3.2. TRANSMISSION SHAFTS (EXPOSED)

Number:	One
Location:	Gearbox to final drive
Description:	Open tailshaft with twin uni joints
Comments:	Steel

3.1. WHEELS & TYRES

Wheel type - Original:	Pressed disc	Material - Original:	Steel
Wheel type - Allowed:	Period cast	Material - Allowed:	Alloy
Fixture method:	Studs	No. studs:	Five
Wheel dia. & rim width	FRONT		REAR
Original:	6" x 15"		6" x 15"
Allowed	8" x 15"		8" x 15"
Tyre Section:			
Allowed:	Refer approved tyre list.		
Aspect ratio - minimum:	60% minimum aspect ratio.		
Comments:	None		

SECTION 4 GENERAL

4.1. FUEL SYSTEM

Tank Location:	Boot floor	Capacity:	75 litres
Fuel pump, type:	Mechanical, left side of engine block.	Make:	Ford
Comments:	None		

4.2. ELECTRICAL SYSTEM

Voltage:	12	Alternator fitted:	Alternator
Battery Location:	Engine compartment		
Comments:	None		

4.3. BODYWORK

Type:	Closed touring	Material:	Steel
No. of seats:	Four	No. doors:	Two
Comments:	See Appendix C.		

4.4. DIMENSIONS

Track - Front:	1506 mm	Rear:	1486 mm
Wheelbase:	2743 mm	Overall length:	4770 mm
Dry weight:	1238 kg		
Comments:	None		

4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations

Appendix A

Suspension

Front

Spring height adjustment permitted.

Rear

Spring height adjustment permitted.

Power steering – LHD

RAM type system, which was a factory produced solution from Ford for 1964 to 1969 (inclusive) for left-hand drive Ford Mustangs.

Power steering – RHD

Approved is a RAM type system, which was a factory produced solution from Ford for 1964 to 1969 (inclusive) for left-hand drive Ford Mustangs.

The fitting of this approved solution to a right-hand drive vehicle involves the placement of the RAM system upside-down. This results in the hoses for the RAM system being at the bottom of the RAM, rather than the top, as is the case with fitment on a left-hand drive vehicle.

Appendix B

Block

Ford replacement block for the Windsor 302 engine, part number M-6010BOSS302 is approved for use. Logbook endorsed and the engine sealed required.

Cylinder Heads

Original Boss 302 head or any 4v Ford Cleveland head may be used.

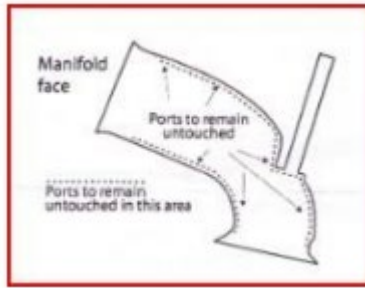
Sealing procedure for engines using the substitute cylinder head

1. Engine to be assemble to short motor without sump.
2. Heads to be assembled ready to be fitted to engine.
3. 2 sump bolts/studs to be drilled. 2 top timing case bolts/studs to be drilled.
4. The sealer will pick two valves from one cylinder of either head to be removed to check that under the valve head and the ports are unmodified and that the valve heads are 1.94" in diameter for the inlet, and 1.6" for the exhaust.
5. Check the inlet and exhaust ports are unmodified except for the allowance allowed, from the manifold faces, into the port for manifold alignment.
6. Combustion chambers are to be as per above.
7. Measure bore and stroke.
8. Note whether 2 bolt or 4 bolt block.
9. Fit sump and fit seal. Seal timing case.
10. Fit heads and drill holes in appropriate positions in the corners of the block and heads to enable wire and seals to be fitted.
11. Seal heads to block. Note seal numbers. Competitor gets a signed sealers document.

Note: If the heads are removed, they must be re-sealed following the above points 4, 5, 10 and 11.

Allowances

1. Surfacing of the head face is allowed to achieve required combustion chamber volume or restore the cylinder head from engine failure damage and/or overheating.
2. K Line .030" bronze valve guide inserts are allowed if required and to recondition to standard size from excessive wear.
3. Port match inlet and exhaust ports to manifold to a maximum of the allowed depth from the manifold face. Inlet and exhaust ports must be left completely untouched from under the valve seats to within allowed depth from the manifold face. Machining is allowed of the valve spring pad and valve guide outside diameter and length as well as pushrod holes. This will enable spring locators, valve springs, stem seals, valve spring installation height and pushrod clearance to be correctly set up and fitted.
4. Valve seat cutting/grinding is allowed, but the original valve sizes of inlet and exhaust must be retained. No machining is permitted under the valve seat.
5. No machining is permitted in the combustion chamber. Combustion chambers must be left completely untouched except for original machining by the manufacturer. i.e. No machining, no hard or soft wire brushing, no coarse or fine grinding either by hand, machine or high-speed grinder etc, no shot peening, no sand blasting, no glass bead blasting, no water blasting, no hand scraping, no filing, no emery wheels or stones, no acid etching, no chiselling, no hammering or pneumatic peening, no flexi honing, no spark eroding, no removal of any metal by milling machine.



Appendix C

Bodywork

Spoiler – Front

The front spoiler is to meet the specifications and dimensions of the original Ford part number C9ZZ-63001A74-A.

The spoiler will be of high impact flexible plastic with the outside of the longest part on the corners 58 ½ inches in length. The total width in the centre including the bottom lip 5 inches. The total length at the centre before it turns corners (front part before turn) 50 inches.



Spoiler – Rear

The rear spoiler is to meet the specifications and dimensions of the original Ford part number C9ZZ-6344210-K.

The spoiler will have an overall length of 57.5 inches and be 4.75 inches in height with 36 inches centre to centre between the mountings.



Scoop – Hood

1969 Mustang Mach 1 hood scoop permitted.

The hood scoop is to meet the specifications of the original Ford part No C9ZZ-16C630-A.

The scoop will have an overall length of 27.5 inches, 15.5 inches wide, 2.25 inches high.



Scoop - Rear quarter panel

Rear quarter panel fake scoops should not be used.



Repeater lights - front

Repeater lights on lower front guards must be installed.



Repeater lights – rear

Repeater lights on rear quarter panels must be installed.



Interior

The Boss 302's interior often varied significantly from one car to the next. The 302 came standard with Ford's base model Mustang interior, including bucket seats. However, multiple options were available to consumers, and many motorists chose to upgrade to the use of high-back bucket seats or differing dash gauge configurations.

The Boss 302's interior could be optioned to include wood grain dash, door trim, and shifter knob accents. Additional options included the choice of a centre console, tilt steering wheel, and varying radio selections.



Base interiors featured the Mustang's standard gauge arrangement, which included alternator, fuel, temperature, and oil pressure gauges. Alternatively, when the option of a tachometer was selected, the Boss 302's alternator and oil pressure gauges were replaced with warning lights.