



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.

<b>Make of Car:</b>	Ford	<b>Model:</b>	Mustang Boss 302
<b>Period of Original Manufacture:</b>	November 1968 to November 1969		
<b>Motorsport Australia Historic Group:</b>	Nc		
<b>Date of Issue of this Document:</b>	1 January 2024		



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

***Update Log***

1/1/2024	Inclusion of kerb and minimum racing weights

## SECTION 1 - CHASSIS

### 1.1. CHASSIS

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

### 1.2. FRONT SUSPENSION

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

### 1.3. REAR SUSPENSION

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

### 1.4. STEERING

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

### 1.5. BRAKES

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

## SECTION 2 - ENGINE

### 2.1. ENGINE

<b>Make:</b>	Ford		
<b>Model:</b>	Boss 302		
<b>No. cylinders:</b>	Eight	<b>Configuration:</b>	Vee
<b>Cylinder Block-material:</b>	Cast iron	<b>Two/Four Stroke:</b>	Four
<b>Bore - Original:</b>	101.6 mm	<b>Max allowed:</b>	103.1 mm
<b>Stroke - original:</b>	76.2 mm	<b>Max allowed:</b>	76.2 mm
<b>Capacity - original:</b>	4942 cc	<b>Max allowed:</b>	5089 cc
<b>Identifying marks:</b>	C9ZE - 6015B Engine block number is stamped on a flat horizontal surface behind the inlet manifold.		
<b>Cooling method:</b>	Liquid		
<b>Comments:</b>	Ford M-6010-BOSS 302 block with a rev limit of 7500rpm as a replacement for the original block is approved for use. Logbook endorsed and the engine sealed required. See Appendix B.		

### 2.2. CYLINDER HEAD

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

### 2.1. LUBRICATION

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

### 2.2. IGNITION SYSTEM

<b>Type:</b>	Points, coil & distributor
<b>Make:</b>	Autolite
<b>Comments</b>	Breakerless electronic ignition permitted

### 2.3. FUEL SYSTEM

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

**SECTION 3 - TRANSMISSION**

**3.1. CLUTCH**

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

**3.2. TRANSMISSION**

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

**3.1. FINAL DRIVE**

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

**3.2. TRANSMISSION SHAFTS (EXPOSED)**

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

**3.1. WHEELS & TYRES**

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

## SECTION 4 GENERAL

### 4.1. FUEL SYSTEM

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

### 4.2. ELECTRICAL SYSTEM

<b>Voltage:</b>	12	<b>Alternator fitted:</b>	Alternator
<b>Battery Location:</b>	Engine compartment		
<b>Comments:</b>	None		

### 4.3. BODYWORK

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

### 4.4. DIMENSIONS

<b>Track - Front:</b>	1506 mm	<b>Rear:</b>	1486 mm
<b>Wheelbase:</b>	2743 mm	<b>Overall length:</b>	4770 mm
<b>Approved Manufacturer's kerb weight:</b>	1475 kgs		
<b>Approved minimum racing weight:</b>	1446 kgs		
<b>Comments:</b>	None		

### 4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations
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## **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. The limiter must be located within the engine bay in an easily accessible position. The wiring must be visible along its length with the earth connected to the nearest practical earth point. The limiter will be subject to testing at race meetings.

### **Cylinder Heads**

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

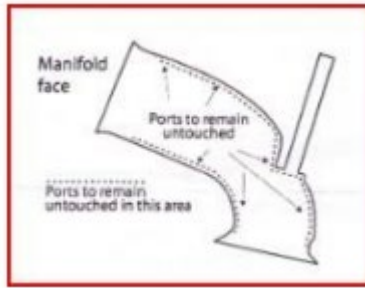
### **Sealing procedure for engines using the substitute cylinder head**

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.