

5TH CATEGORY - HISTORIC RACING

**GROUP Nc**

APPROVED VEHICLE SPECIFICATION

This form details the approved specifications of individual vehicle models in the 5th Category Historic car group. To be issued with a 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 CAMS Manual of Motor Sport.

**Make of Car:** Ford      **Model:** Mustang Boss 302  
**Period of Original Manufacture:** Nov. 1968 to Nov. 1969  
**CAMS Historic Group:** Nc  
**Date of issue of this document:** Nov 2017



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

# **SECTION 1 - CHASSIS**

## **1.1 CHASSIS FRAME**

**Description:** Un-body two door coupe  
**Period of Manufacture:** 1968 – 69  
**Manufacturer:** Ford Motor Co.  
**Chassis no. from:** 9(F,R or T) 02 - 100001  
**Chassis no. location:** Left side of firewall  
**Material:** Steel

## **1.2 FRONT SUSPENSION**

**Description:** Independent, upper wishbone, lower arm with track rod.  
**Spring Medium:** Coil  
**Damper Type:** Telescopic **Adjustable:** Yes  
**Anti-sway bar:** Fitted **Adjustable:** No  
**Suspension adjustable:** Yes **Method:** Caster, camber and toe, spring height

## **1.3 REAR SUSPENSION**

**Description:** Live axle  
**Spring medium:** Leaf  
**Damper type:** Telescopic **Adjustable:** Yes  
**Anti-sway bar:** None  
**Suspension adjustable:** Yes **Method:** Spring height

## **1.4 STEERING**

**Type:** Recirculating ball **Make:** Ford  
**Comments:** For fitment of a collapsible steering column refer to the Appendix

## **1.5 BRAKES**

	<b>Front</b>	<b>Rear</b>
<b>Type:</b>	Disc	Drum
<b>Dimensions:</b>	287 x 23.8 mm	254 x 44.4 mm
<b>Material:</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>Caliper Material:</b>		
<b>Master cylinder make:</b>	Ford	<b>Type:</b> Tandem
<b>Adjustable bias:</b>	No	
<b>Servo Fitted:</b>	Yes	

## **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:</b>	76.2 mm		
<b>Capacity - original:</b>	4942 cc	<b>Max. allowed:</b>	5089 cc
<b>Cooling method:</b>	liquid		
<b>Identifying marks:</b>	C9ZE - 6015B		

#### **Comments:**

Boss 302 is a unique four bolt main bearing block. The Ford Motorsport block Part No. M-6010-A4 manufactured up to *circa* 1993 is approved for use. The later ford motorsport block carrying the same part no. is not eligible. Refer attached photograph identifying the eligible cylinder block. The Ford M-6010-BOSS 302 block as a replacement for the original 302 Boss block is approved for use.

### **2.2 CYLINDER HEAD**

<b>Make:</b>	Ford		
<b>No. of valves/cylinder:</b>		<b>Inlet:</b> One	<b>Exhaust:</b> One
<b>No. of ports total:</b>		<b>Inlet:</b> Four	<b>Exhaust:</b> Four
<b>No. of camshafts:</b>	One	<b>Location:</b> Block	<b>Drive:</b> Chain
<b>Valve actuation:</b>	Pushrod & rocker		
<b>Spark plugs/cylinder:</b>	One		
<b>Identifying marks:</b>	C8FE or C9ZE are the only acceptable prefixes.		

#### **Comments:**

After market Cylinder head use is allowed upon individual application.

- World Products Windsor Junior
- The heads to be in the manufactured state, save for refacing the cylinder gasket face and matching the inlet ports by not more than 12mm from the port face
- Sealing procedure for engines using the substitute cylinder head is at end of specification sheet.

Once approval, endorsement and the engine seal numbers will be recorded in the log book.

### **2.3 LUBRICATION**

<b>Method:</b>	Wet sump
<b>Oil cooler standard:</b>	No

### **2.4 IGNITION SYSTEM**

<b>Type:</b>	Points, coil & distributor
<b>Make:</b>	Autolite

### **2.5 FUEL SYSTEM**

<b>Carburettor Make:</b>	Holly	<b>Model:</b>	9510
<b>Carburettor number:</b>	One		

## **SECTION 3 - TRANSMISSION**

### **3.1 CLUTCH**

**Make:** Ford  
**Type:** Diaphragm  
**Diameter:** 267 mm  
**Actuation:** Hydraulic  
**No. of Plates:** One

### **3.2 TRANSMISSION**

**Type:** Synchromesh  
**Make:** Ford, top loader  
**No. forward speeds:** Four  
**Gearbox location:** Behind engine  
**Gear change type and location:** Remote floor shift  
**Case material:** Cast iron  
**Identifying marks:** N/A

### **3.3 FINAL DRIVE**

**Make:** Ford  
**Model:** 9 inch  
**Type:** Live axle  
**Wheel drive method:** Rear  
**Ratios:** Various  
**Differential type:** LSD "Traction-lok" or "Detroit Locker"

### **3.4 TRANSMISSION SHAFTS (EXPOSED)**

**Number:** One  
**Description:** Open tail shaft

### **3.5 WHEELS & TYRES**

<b>Wheel type - Original:</b>	Disc	<b>Material - Original:</b>	Steel
<b>Allowed:</b>	Cast	<b>Allowed:</b>	Aluminium 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>	7 x 15 inch	7 x 15 inch	
<b>Allowed:</b>	8 x 15 inch	8 x 15 inch	
<b>Tyres:</b>	60% minimum aspect ratio, refer approved tyre list.		

## **SECTION 4 - GENERAL**

### **4.1 FUEL SYSTEM**

**Tank Location:** Boot floor  
**Fuel pump type and location:** Mechanical & Electrical  
**Capacity:** 75 litre  
**Make:** Ford

### **4.2 ELECTRICAL SYSTEM**

**Voltage:** 12  
**Battery Location:** Engine compartment  
**Alternator:** Fitted

### **4.3 BODYWORK**

**Type:** Closed touring  
**No. of seats:** Four  
**Material:** Steel  
**No. doors:** Two



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" and be 4.75" in height with 36" centre to centre between the mountings.



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 58-1/2" in length. The total width in the centre including the bottom lip 5". The total length at the centre before it turns corners (front part before turn) 50".

### **4.4 DIMENSIONS**

**Track - Front:** 1506 mm  
**Wheelbase:** 2743 mm  
**Dry weight:** 1238 kg  
**Rear:** 1486 mm  
**Overall length:** 4770 mm

### **4.5 SAFETY EQUIPMENT**

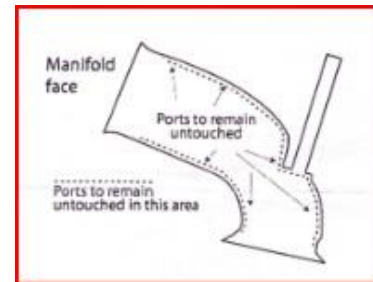
**Refer applicable Group Regulations**

## **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 of the correct diameter for the inlet, and 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.  
ie. 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.





## Replacement of solid steering column with collapsible type.

The original steering column main outer tube and steering shaft is replaced with a collapsible steering column main outer tube and steering shaft from an Australian XA to XC Ford Falcon.

The Ford Falcon main tube is modified by removing the spot welded Ford Australia mount and drilling a hole in the column for the Ford USA mount that bolts into the dashboard.



The Ford Falcon main outer tube will locate in the original lower firewall mount. An original Ford Australia coupler can then be used to join the collapsible inner shaft to the original steering box.



The original Ford USA steering column top and switches can then be mounted on the top of the Collapsible column to retain the original look and functions.

