



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
<b>Period of Original Manufacture:</b>	1964-1965		
<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***

27/11/20	Brake size corrected
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>	1964 – 1965
<b>Manufacturer:</b>	Ford Motor Co.
<b>Chassis Number From:</b>	5(F, R or T)07(A, C, D, F or K)000001 E.g., 5F07D00001
<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 and nut	<b>Make:</b>	Ford
<b>Power steering</b>	RAM type system		
<b>Comments</b>	Power steering - See Appendix A. For fitment of a collapsible steering column see Appendix C.		

### 1.5. BRAKES

	Front	Rear
<b>Type:</b>	Disc, vented	Drum
<b>Dimensions:</b>	286 mm x 21 mm	254 mm x up to 63.5 mm
<b>Material of drum/disc:</b>	Cast Iron	Cast iron
<b>No. cylinders/pots per wheel:</b>	Three	Two
<b>Actuation:</b>	Hydraulic	Hydraulic
<b>Caliper make:</b>	Girling Kelsey Hayes	
<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>	Windsor 289		
<b>No. cylinders:</b>	Eight	<b>Configuration:</b>	Ve
<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>	72.898 mm	<b>Max allowed:</b>	72.898 mm
<b>Capacity - original:</b>	4728 cc	<b>Max allowed:</b>	4869 cc
<b>Identifying marks:</b>	LD5XXXXC, on lower right-hand side of block, observed from below. Located low on right side of block – most easily sighted from below car on stands.		
<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> One	<b>Exhaust:</b> One
<b>No. of camshafts:</b>	One	<b>Location:</b> Block	<b>Drive:</b> Chain
<b>Valve actuation:</b>	Pushrod and rocker		
<b>Spark plugs/cylinder:</b>	One		
<b>Identifying marks:</b>	289 cast into heads adjacent to rocker stud boss.		
<b>Comments:</b>	Note that inlet valves and exhaust valves are in the same plain in the Windsor engine. For Replacement Windsor head see Appendix B.		

### 2.3. 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.		

### 2.4. IGNITION SYSTEM

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

### 2.5. FUEL SYSTEM

<b>Carburettor Make:</b>	Autolite	<b>Model:</b>	4300-4V
<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 or Borg Warner T10
<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 (Ford Top Loader) Alloy (Borg Warner T10)
<b>Identifying marks:</b>	N/A
<b>Comments:</b>	None

**3.3. FINAL DRIVE**

<b>Make:</b>	Ford	<b>Model:</b>	8 or 9 inch
<b>Type:</b>	Live axle		
<b>Ratios:</b>	Various		
<b>Differential type:</b>	Open/Free		
<b>Comments:</b>	None		

**3.4. 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

**3.5. 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 14"		6" x 14"
	6" x 15"		6" x 15"
<b>Allowed</b>	8" x 14"		8" x 14"
	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>	60 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>	None		

### 4.4. DIMENSIONS

<b>Track - Front:</b>	1460 mm	<b>Rear:</b>	1460 mm
<b>Wheelbase:</b>	2743 mm	<b>Overall length:</b>	4612 mm
<b>Approved Manufacturer's kerb weight:</b>	1333 kgs		
<b>Approved minimum racing weight:</b>	1306 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, and then cutting, re-aligning and rewelding the drag-link component to fit the upside-down RAM. 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**

Approved cast iron cylinder heads are:

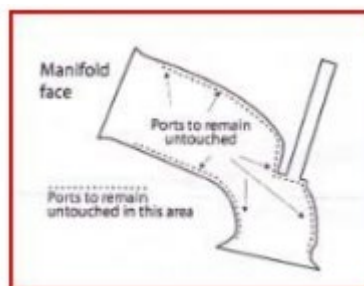
- Dart Iron Eagle No. 1330008 \*
- RHS Pro Action Small Block Ford No. 35305
- World Products Windsor Junior.

The heads are 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.

- \* Dart Iron Eagle require the use of a MSD Soft Touch rev limiter Part No 8728 with a 7500 RPM limit. 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.

### **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.



## Sealing procedure for engines with substitute heads

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.

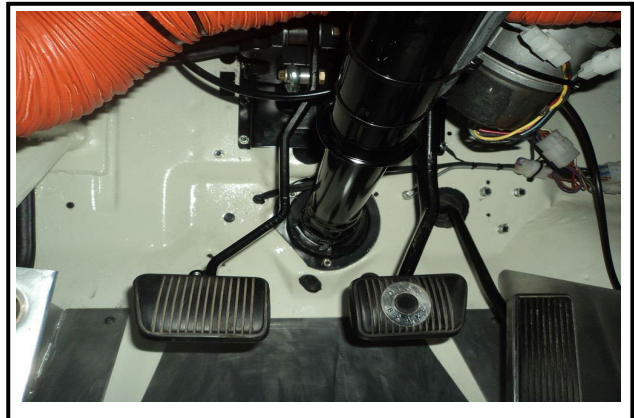
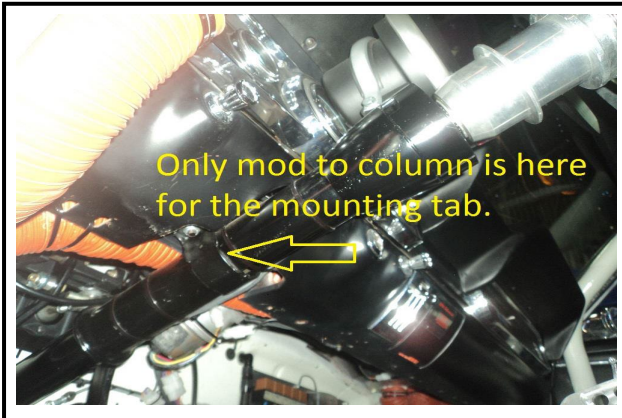


**Appendix C**

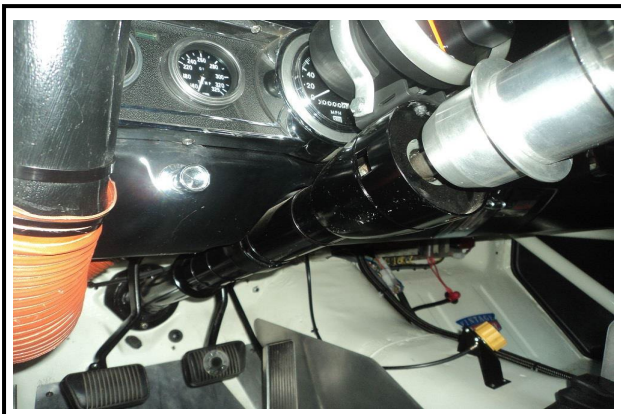
**Replacement of solid steering column with collapsible type.**

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.