



**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>	Falcon XT GT
<b>Period of Original Manufacture:</b>	1967-1968		
<b>Motorsport Australia Historic Group:</b>	Group 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>	Unitary Construction
<b>Period of Manufacture:</b>	1967-1968
<b>Manufacturer:</b>	Ford Motor Company
<b>Chassis Number From:</b>	JG33XXXXXX
<b>Chassis Number location:</b>	Left side of radiator support panel. VIN is stamped on the front edge of the passenger side spring tower.
<b>Comments</b>	Steel

### 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, spring height.
<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 16:1 box.	<b>Make:</b>	Ford
<b>Comments</b>	Recirculating ball 20:1 ratio Power steering - RAM assist – 16:1 ratio. Original non collapsible column may be replaced with collapsible column from the later XY Falcon which retains original appearance and indicator switch location.		

### 1.5. BRAKES

	Front	Rear
<b>Type:</b>	Disc, Solid	Drum
<b>Dimensions:</b>	279.4mm	254mm x 45mm
<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>	PBR Ford two piston	
<b>Caliper type:</b>	Floating	
<b>Material:</b>	Cast iron	
<b>Master cylinder make:</b>	PBR	
<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>	302 Windsor		
<b>No. cylinders:</b>	Eight	<b>Configuration:</b>	Veel
<b>Cylinder Block-material:</b>	Cast iron	<b>Two/Four Stroke:</b>	Four
<b>Bore - Original:</b>	101.6mm	<b>Max allowed:</b>	103.1mm
<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>	The engine number is stamped on the front of the block behind the alternator. In later models this was stamped at the back of the block behind the intake 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 A.		

### 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> Chain
<b>Valve actuation:</b>	Pushrod and rocker		
<b>Spark plugs/cylinder:</b>	One		
<b>Identifying marks:</b>	N/A		
<b>Comments:</b>	Aftermarket cylinder head use is allowed upon individual application. Approved cast iron cylinder heads are: <ul style="list-style-type: none"> <li>• Dart Iron Eagle No. 1330008,</li> <li>• RHS Pro Action Small Block Ford No. 35305</li> <li>• World Products Windsor Junior.</li> </ul> See Appendix A.		

### 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>	N/A		
<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>	241.5 mm
<b>No. of Plates:</b>	Two
<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

**3.3. FINAL DRIVE**

<b>Make:</b>	Borg Warner	<b>Model:</b>	8 inch
<b>Type:</b>	Live axle		
<b>Ratios:</b>	2.93:1		
<b>Differential type:</b>	Limited slip		
<b>Comments:</b>	4 pinion carrier std		

**3.4. TRANSMISSION SHAFTS (EXPOSED)**

<b>Number:</b>	One
<b>Location:</b>	Gearbox to Final Drive
<b>Description:</b>	Open tailshaft
<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>	Cast	<b>Material - Allowed:</b>	Alloy
<b>Fixture method:</b>	Stud and nut	<b>No. studs:</b>	Five
<b>Wheel dia. &amp; rim width</b>	<b>FRONT</b>		<b>REAR</b>
<b>Original:</b>	5.5" x 14"		5.5" x 14"
<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		

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## SECTION 4 GENERAL



### 4.1. FUEL SYSTEM

<b>Tank Location:</b>	Boot floor	<b>Capacity:</b>	75 litres
<b>Fuel pump, type:</b>	Mechanical on 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 bay RHF		
<b>Comments:</b>	None		

### 4.3. BODYWORK

<b>Type:</b>	Sedan	<b>Material:</b>	Steel
<b>No. of seats:</b>	Five	<b>No. doors:</b>	Four
<b>Comments:</b>	<p>Divided grille, and inset driving lights for the GT.</p>  <p>The GT also replaced the thick lower body stripes of the XR with narrow stripes along the waistline from grille to tail light. The tail lights were still round, but instead of the small round indicator of the XR, the XT model had a long indicator across the light.</p>  <p>Bumpers were the same as the XR. XR and XT panels are not interchangeable:</p> <ul style="list-style-type: none"> <li>• XT bonnets have different under reinforcing patterns to XR bonnets;</li> <li>• XR and XT doors are not interchangeable as the door latch and handle mechanisms of both cars are very different and in different locations</li> <li>• front guards are not interchangeable between XR and XT due to the headlight retaining panels welded to the guards being very different – XR has heavy die cast covers whereas XT has pressed alloy ones.</li> <li>• Boot lids are also different from XR to XT due to holes for badges</li> </ul>		

### 4.4. DIMENSIONS

<b>Track - Front:</b>	1473 mm	<b>Rear:</b>	1473 mm
<b>Wheelbase:</b>	2827 mm	<b>Overall length:</b>	4689 mm
<b>Approved minimum racing weight:</b>	1444 kgs		
<b>Comments:</b>	1415 kgs		
<b>Comments:</b>	None		

### 4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations
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## **Appendix A**

### **Suspension**

#### **Front**

Ride height and spring rate may be changed by variation of coil springs; Change of sway bar diameter permitted; dampers free subject to original mountings being used and period technology limitation. Spring height adjustment permitted.

#### **Rear**

Spring height adjustment permitted.

### **Engine**

#### **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.

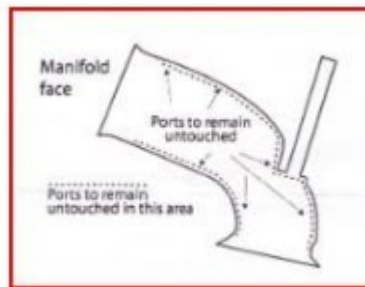
### **Sealing procedure for engines using the substitute cylinder head**

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 B***

### **Additional information**

The dash has a full-size tachometer calibrated to 7000rpm.

Speedo calibrated to 140 MPH.

Other gauges present are fuel, water temperature and oil pressure