



**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 Logbook, 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 XR GT
<b>Period of Original Manufacture:</b>	1967 to 1968		
<b>Motorsport Australia Historic Group:</b>	Nc		
<b>Date of issue of this document:</b>	April 2020		



<i>Update Log</i>	

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

## SECTION 1 - CHASSIS

<b>1.1 CHASSIS FRAME</b>			
<b>Description:</b>	Uni-body four door sedan	<b>Period of Manufacture:</b>	1966 - 1968
<b>Manufacturer:</b>	Ford Motor Company		
<b>Chassis no. from:</b>	JG33XXXXXX		
<b>Chassis no. location:</b>	Radiator support panel, front upper left & id plate on the radiator Support panel. Original engine number stamped into left suspension Tower.		
<b>Material:</b>	Steel		
<b>Comment:</b>	None		

<b>1.2 FRONT SUSPENSION</b>			
<b>Description:</b>	Independent, upper wishbone, lower arm with track rod.		
<b>Spring Medium:</b>	Coil		
<b>Damper Type:</b>	Telescopic	<b>Adjustable:</b>	No
<b>Anti-sway bar:</b>	Fitted	<b>Adjustable:</b>	Yes
<b>Suspension adjustable:</b>	Yes	<b>Method:</b>	Caster, camber and toe, spring height.
<b>Comment:</b>	None		

<b>1.3 REAR SUSPENSION</b>			
<b>Description:</b>	Live axle		
<b>Spring medium:</b>	Leaf		
<b>Damper type:</b>	Telescopic	<b>Adjustable:</b>	No
<b>Anti-sway bar:</b>	yes	<b>Adjustable:</b>	Yes
<b>Suspension adjustable:</b>	yes	<b>Method:</b>	by spring height
<b>Comment:</b>	None		

<b>1.4 STEERING</b>			
<b>Type:</b>	Recirculating ball 16:1 box	<b>Make:</b>	Ford
<b>Comment:</b>	Original non collapsible column may be replaced with collapsible column from the later XY falcon which retains original appearance and indicator switch location.		

<b>1.5 BRAKES</b>			
	<b>Front</b>	<b>Rear</b>	
<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, Material, Type:</b>	Kelsey hayes/ford single piston floating / cast		
<b>Master cylinder make:</b>	PBR	<b>Type:</b>	Tandem
<b>Adjustable bias:</b>	No		
<b>Servo Fitted:</b>	Yes		
<b>Comment:</b>			

## SECTION 2 - ENGINE

<b>2.1 ENGINE</b>			
<b>Make:</b>	Ford		
<b>Model:</b>	289		
<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>	101.6mm	<b>Max allowed</b>	103.1mm
<b>Stroke - original:</b>	72.898mm	<b>Max. allowed:</b>	72.898mm
<b>Capacity - original:</b>	4728cc	<b>Max. allowed:</b>	4869cc
<b>Cooling method:</b>	liquid		
<b>Identifying marks:</b>	tag attached to engine		
<b>Comment:</b>	See Appendix A		

<b>2.2 CYLINDER HEAD</b>					
<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>	289 cast into heads adjacent to rocker stud boss				
<b>Comment:</b>	Aftermarket cylinder head use is allowed upon individual application. See Appendix A				

<b>2.3 LUBRICATION</b>	
<b>Method:</b>	wet sump
<b>Oil Cooler</b>	no
<b>Comment:</b>	None

<b>2.4 IGNITION SYSTEM</b>	
<b>Type:</b>	Coil, points, and distributor
<b>Make:</b>	Autolite
<b>Comment:</b>	None

<b>2.5 FUEL SYSTEM</b>			
<b>Carburettor Make:</b>	Autolite	<b>Model:</b>	4300-4v
<b>Comment:</b>	None		

### SECTION 3 - TRANSMISSION

<b>3.1 CLUTCH</b>			
<b>Make:</b>	Ford	<b>Type:</b>	diaphragm
<b>Diameter:</b>	241.5		
<b>No. of Plates:</b>	one		
<b>Actuation:</b>	hydraulic		
<b>Comment:</b>	None		

<b>3.2 TRANSMISSION</b>			
<b>Type:</b>	synchromesh		
<b>Make:</b>	Ford, top-loader		
<b>No. forward speeds:</b>	four	<b>Gearbox location:</b>	behind engine
<b>Gear change type and location:</b>	Floor remote		
<b>Case material:</b>	Cast iron		
<b>Comment:</b>	None		

<b>3.3 FINAL DRIVE</b>			
<b>Make:</b>	Borg warner	<b>Model:</b>	8 inch
<b>Wheel drive method:</b>	rear		
<b>Ratios:</b>	3.00:1		
<b>Differential:</b>	Limited-slip	<b>Type:</b>	Live axle
<b>Comments:</b>	4 pinion carrier std		

<b>3.4 TRANSMISSION SHAFTS (EXPOSED)</b>	
<b>Number:</b>	one
<b>Description:</b>	open tail shaft
<b>Comments:</b>	steel

<b>3.5 WHEELS &amp; TYRES</b>			
<b>Wheel type - Original:</b>	Pressed disc	<b>Material - Original:</b>	steel
<b>Allowed:</b>	cast	<b>Allowed:</b>	alloy
<b>Fixture method:</b>	studs	<b>No. studs:</b>	five
	<b>FRONT</b>		<b>REAR</b>
<b>Wheel dia. &amp; rim width -</b>			
<b>Original:</b>	5.50j x 14inch		5.50j x 14inch
<b>Allowed:</b>	8 x 15 inch		8 x 15 inch
<b>Tyres allowed:</b>	60% minimum aspect ratio, refer approved tyre list		
<b>Comment:</b>	None		

## SECTION 4 - GENERAL

### 4.1 FUEL SYSTEM

<b>Tank Location:</b>	Boot floor	<b>Capacity:</b>	62 litres
<b>Fuel pump type and location:</b>	Mechanical on block	<b>Make:</b>	Ford
<b>Comment:</b>	None		

### 4.2 ELECTRICAL SYSTEM

<b>Voltage:</b>	12 volt	<b>Alternator</b>	yes
<b>Battery Location:</b>	Engine bay RHF		
<b>Comment:</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>Comment:</b>	None		

### 4.4 DIMENSIONS

<b>Track - Front:</b>	1473mm	<b>Rear:</b>	1473mm
<b>Wheelbase:</b>	2827mm	<b>Overall length:</b>	4689mm
<b>Dry weight:</b>	1333kg		
<b>Comments:</b>	None		

### 4.5 SAFETY EQUIPMENT

*Refer applicable Group Regulations*

## **Appendix A**

### **Block**

Ford M-6010-BOSS 302 block with a rev limit of 7500rpm as a replacement for the Windsor 289 block is approved for use. Logbook endorsed and the engine sealed required.

### **Cylinder Head**

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.

Sealing procedures for engines using the substitute cylinder head is at the end of the specification sheet.

Dart Iron eagle require the use of a MSD Soft Touch rev limiter Part No 8728 with a 7500 RPM limit. The limiter will be subject to testing at race meetings. The limiter will be located in an easily accessible position within the engine bay.

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



### 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.

