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.

Make of Car:	Ford	**Model:**	Falcon XR GT
Period of Original Manufacture:	1967 to 1968		
Motorsport Australia Historic Group:	Nc		
Date of Issue of this Document:	September 2021		

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

Update Log

SECTION 1 - CHASSIS

1.1. CHASSIS

Description:	Uni-body four door sedan
Period of Manufacture:	1969-1970
Manufacturer:	Ford Motor Company
Chassis Number From:	LD5XXXXC
Chassis Number location:	Original engine number stamped into left suspension tower.
Material:	Steel
Comments	None

1.2. FRONT SUSPENSION

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

1.3. REAR SUSPENSION

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

1.1. STEERING

Type:	Recirculating ball 16:1 box.	**Make:**	Ford
Comments	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.		

1.2. BRAKES

	Front	**Rear**
Type:	Disc, Solid	Drum
Dimensions:	279.4 mm x 23.9 mm	254 mm x 45 mm
Material of drum/disc:	Cast iron	Cast iron
No. cylinders/pots per wheel:	One	One
Actuation:	Hydraulic	Hydraulic
Caliper make:	PBR Ford two piston	
Caliper type:	Floating	
Material:	Cast iron	
Master cylinder make:	PBR	
Type:	Tandem	
Adjustable bias:	No	
Servo Fitted:	Yes	
Comments:	None	

SECTION 2 - ENGINE

2.1. ENGINE

Make:	Ford		
Model:	Windsor 289		
No. cylinders:	Eight	**Configuration:**	Vee
Cylinder Block-material:	Cast iron	**Two/Four Stroke:**	Four
Bore - Original:	101.6 mm	**Max allowed:**	103.1 mm
Stroke - original:	72.898 mm	**Max allowed:**	72.898 mm
Capacity - original:	4728 cc	**Max allowed:**	4869 cc
Identifying marks:	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.		
Cooling method:	Liquid		
Comments:	Ford replacement block for the Windsor engine, part number M-6010-BOSS302 is approved for use. See Appendix A.		

2.2. CYLINDER HEAD

Make:	Ford				
No. of valves/cylinder:	Two	**Inlet:**	One	**Exhaust:**	One
No. of ports total:	Eight	**Inlet:**	Four	**Exhaust:**	Four
No. of camshafts:	One	**Location:**	Block	**Drive:**	Chain
Valve actuation:	Pushrod and rocker				
Spark plugs/cylinder:	One				
Identifying marks:	289 cast into heads adjacent to rocker stud boss				
Comments:	For Replacement Windsor head see Appendix A				

2.3. LUBRICATION

Method:	Wet sump	**Oil tank location:**	N/A
Dry sump pump type:	N/A	**Location:**	N/A
Oil cooler standard:	No	**Location:**	N/A
Comments:	Oil cooler permitted		

2.4. IGNITION SYSTEM

Type:	Points, coil & distributor
Make:	Autolite
Comments	Breakerless electronic ignition permitted

2.5. FUEL SYSTEM

Carburettor Make:	Autolite	**Model:**	4300-4V
Carburettor Number:	One		
Size:	Various		
Fuel injection Make:	N/A	**Type:**	N/A
Supercharged:	No	**Type:**	N/A
Comments:	None		

SECTION 3 - TRANSMISSION

3.1. CLUTCH

Make:	Ford
Type:	Diaphragm
Diameter:	241.5 mm
No. of Plates:	One
Actuation:	Hydraulic
Comments:	None

3.2. TRANSMISSION

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

3.3. FINAL DRIVE

Make:	Borg Warner	**Model:**	8 inch
Type:	Live axle		
Ratios:	3.00:1		
Differential type:	Limited slip		
Comments:	None		

3.4. TRANSMISSION SHAFTS (EXPOSED)

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

3.5. WHEELS & TYRES

Wheel type - Original:	Pressed disc	**Material - Original:**	Steel
Wheel type - Allowed:	Cast	**Material - Allowed:**	Alloy
Fixture method:	Studs	**No. studs:**	Five
Wheel dia. & rim width	**FRONT**		**REAR**
Original:	5.50j x 14”		5.50j x 14”
Allowed	8” x 15”		8” x 15”
Tyre Section:			
Allowed:	Refer approved tyre list.		
Aspect ratio - minimum:	60% minimum aspect ratio		
Comments:	None		

-

SECTION 4 GENERAL

4.1. FUEL SYSTEM

Tank Location:	Boot floor	**Capacity:**	62 litres
Fuel pump, type:	Mechanical, left side of engine block.	**Make:**	Ford
Comments:	None		

4.2. ELECTRICAL SYSTEM

Voltage:	12	**Alternator fitted:**	Alternator
Battery Location:	Engine compartment RHF		
Comments:	None		

4.3. BODYWORK

Type:	Sedan	**Material:**	Steel
No. of seats:	Five	**No. doors:**	Four
Comments:	None		

4.4. DIMENSIONS

Track - Front:	1473 mm	**Rear:**	1473 mm
Wheelbase:	2827 mm	**Overall length:**	4689 mm
Dry weight:	1333 kg		
Comments:	None		

4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations

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 289 engine, part number M-6010BOSS302 is approved for use. Logbook endorsed and the engine sealed required.

Cylinder Head

Approved cast iron cylinder heads are:

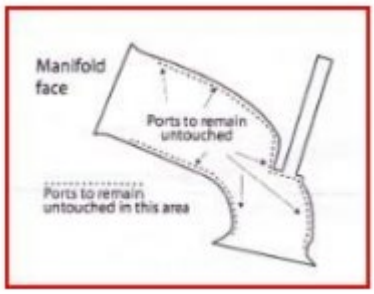
- Dart Iron Eagle No. 1330008 *
- RHS Pro Action Small Block Ford No. 35305
- World Products Windsor Junior.

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.

* 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.

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.