



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 Sprint
<b>Period of Original Manufacture:</b>	1963 to 1964		
<b>Motorsport Australia Historic Group:</b>	Nb		
<b>Date of Issue of this Document:</b>	24 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

<b>Description:</b>	Uni-body, two door pillar less coupe, welded pressed steel
<b>Period of Manufacture:</b>	1963 to 1964
<b>Manufacturer:</b>	Ford Motor Co Ltd
<b>Chassis Number From:</b>	4H13F-100001
<b>Chassis Number location:</b>	Stamped onto left hand side inner guard top edge
<b>Material:</b>	Steel
<b>Comments</b>	Originally LHD only

### 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>	No	<b>Adjustable:</b>	N/A
<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 axle with detachable carrier		
<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	<b>Make:</b>	Ford
<b>Comments</b>	No power steering		

### 1.5. BRAKES

	Front	Rear
<b>Type:</b>	Disc, vented	Drum, single leading shoe
<b>Dimensions:</b>	286 mm x 31.75 mm 292 mm x 31.75 mm	254 mm x 57.15 mm 279.4 mm x 76.2 mm
<b>Material of drum/disc:</b>	Cast iron	Cast iron
<b>No. cylinders/pots per wheel:</b>	Girling – three Kelsey Hays – Four	One
<b>Actuation:</b>	Hydraulic	Hydraulic
<b>Caliper make:</b>	Girling Kelsey Hayes	
<b>Caliper type:</b>	Fixed	
<b>Material:</b>	Cast iron	
<b>Master cylinder make:</b>	Kelsey Hayes Girling	
<b>Type:</b>	Kelsey Hays – dual Girling - single	
<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>	101.76mm	<b>Max allowed:</b>	103.26 mm
<b>Stroke - original:</b>	72.898mm	<b>Max allowed:</b>	72.898 mm
<b>Capacity - original:</b>	4728 cc	<b>Max allowed:</b>	4869 cc
<b>Identifying marks:</b>	N/A		
<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.		

### 2.1. 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.		

### 2.1. 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		

### 2.2. IGNITION SYSTEM

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

### 2.3. FUEL SYSTEM

<b>Carburettor Make:</b>	Carter	<b>Model:</b>	AFB
<b>Carburettor Number:</b>	Two		
<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>	Moderate duty engine has single carburettor on a Holley manifold.		

**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>	Mechanical
<b>Comments:</b>	None

**3.2. TRANSMISSION**

<b>Type:</b>	Synchromesh
<b>Make:</b>	Borg Warner T10 or Super T10 or Top loader (early pattern)
<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>	Original Ford bell housing can be Aluminium or cast iron.

**3.3. FINAL DRIVE**

<b>Make:</b>	Ford	<b>Model:</b>	8" and 9" allowed.
<b>Type:</b>	Live axle with detachable carrier.		
<b>Ratios:</b>	3.50, 3.89, 4.11, 4.29, 4.57, 5.14		
<b>Differential type:</b>	Limited slip		
<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
<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>	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 13"		5.5" x 13"
	5.5" x 14"		5.5" x 14"
	5.5" x 15"		5.5" x 15"
<b>Allowed</b>	6" x 15"		6" 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	<b>Capacity:</b>	102 litres
<b>Fuel pump, type:</b>	Mechanical on block	<b>Make:</b>	Various
<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>	Closed touring	<b>Material:</b>	Steel
<b>No. of seats:</b>	Five	<b>No. doors:</b>	Two
<b>Comments:</b>	Refer Appendix B.		

### 4.4. DIMENSIONS

<b>Track - Front:</b>	1397 mm	<b>Rear:</b>	1428 mm
<b>Wheelbase:</b>	2781 mm	<b>Overall length:</b>	4612 mm
<b>Dry weight:</b>	1100 kg		
<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.

### **Engine**

#### **Block**

Cylinder blocks with either 5 bolt or 6 bolt bell housing fixture permitted.

Original Ford bell housing can be Aluminium or cast iron.

Ford replacement block for the Windsor 302 engine, part number M-6010BOSS302 is approved for use.

Logbook endorsed and the engine sealed required.

#### **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 will be subject to testing at race meetings. The limiter will be located in an easily accessible position within the engine bay.

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

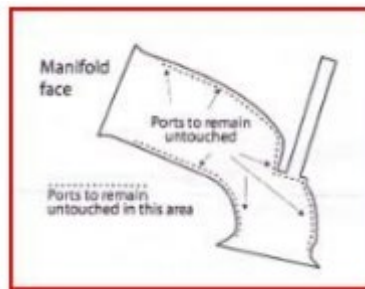
1. Engine to be assemble to short motor without sump.
2. Heads to be assembled ready to be fitted to engine.
3. 2 sump bolts/studs to be drilled. 2 top timing case bolts/studs to be drilled.
4. The sealer will pick two valves from one cylinder of either head to be removed to check that under the valve 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**

### **Bodywork**

The 1964 Ford Falcon Sprint Hardtop comes in two versions - steel-bodied and lightweight. The Basic Specification is supplemented by and/or superseded by the following:

- The following may be constructed of 3mm or thicker glass reinforced plastic (GRP):
  - Splash tray – between the bumper bar and the grille;
  - Front fender;
  - Door outer skin;
  - Bonnet and boot – with the use of inner mouldings for rigidity and the use of all the original fixtures (hinges and catches, counter-balancing springs are free).
- Bumper bars
  - Bumper bars may alternately be made of steel or aluminium or FRP (not less than 3mm thick).
- The glass and the interior of the vehicle are to be to the original specification of production Ford Falcon Sprints with the allowances under the Group N regulations.