



5TH CATEGORY - HISTORIC RACING

GROUP Nb

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 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 CAMS Manual of Motor Sport.

Make of Car: Ford **Model:** Falcon Sprint
Period of Original Manufacture: 1963 to 64
CAMS Historic Group: Nb
Date of issue of this document: Aug 2018



Photos courtesy Bonhams and Ford

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

SECTION 1 - CHASSIS

1.1 CHASSIS FRAME

Description: Uni-body, two door pillar less coupe, welded pressed steel
Period of Manufacture: 1963 to 1964
Manufacturer: Ford Motor Co Ltd
Chassis no. from: 4H13F-100001
Chassis no. location: stamped onto left hand side inner guard top edge
Material: Steel
Comments: Originally LHD only

1.2 FRONT SUSPENSION

Description: Independent, with upper wishbone & lower arm with tension rod
Spring Medium: Coil
Damper Type: Telescopic **Adjustable:** No
Anti-sway bar: No
Suspension adjustable: No

1.3 REAR SUSPENSION

Description: Live axle with detachable carrier
Spring medium: Semi – elliptical leaf
Damper type: Telescopic **Adjustable:** No
Anti-sway bar: No
Suspension adjustable: No

1.4 STEERING

Type: Recirculating ball **Make:** Ford

1.5 BRAKES

	Front	Rear
Type:	Disc, vented	Drum, single leading shoe
Dimensions:	286 or 292 x 31.75 mm	254 x 57.15 mm or 279.4 x 76.2 mm
Material:	Cast iron	Cast iron
No. cylinders/pots per wheel:	Girling – three Kelsey Hays – Four	One
Actuation:	Hydraulic	Hydraulic
Caliper Make:	Girling or Kelsey Hayes	
Caliper Type:	Fixed	
Caliper Material:	Cast iron	
Master cylinder make:	Kelsey Hayes X 1 Girling X 2	Type: Kelsey Hays – dual Girling - single
Adjustable bias:	No	
Servo Fitted:	Yes	

SECTION 2 - ENGINE

2.1 ENGINE

Make: Ford
Model: W289HP or W302 blocks permitted.
No. cylinders: Eight **Configuration:** Vee
Cylinder block material: Cast iron **Two/Four Stroke:** Four
Bore - Original: 101.76 mm **Max. allowed:** 103.26 mm
Stroke - original: 72.9 mm **Max. allowed:** 72.9 mm
Capacity - original: 4728 cc **Max. allowed:** 4869 cc
Cooling method: Liquid **C/R:** 12.0:1
Identifying marks: N/A

Comments:

Cylinder blocks with either 5 bolt or 6 bolt bell housing fixture permitted. Original Ford bell housing can be Aluminium or cast iron.

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

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 & rocker
Spark plugs/cylinder: One
Identifying marks: N/A

Comments:

After market Cylinder head use is allowed upon individual application.

- 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 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 procedure for engines using the substitute cylinder head is at end of 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 log book.

2.3 LUBRICATION

Method: Wet sump
Oil cooler standard: No

2.4 IGNITION SYSTEM

Type: Coil & distributor
Make: Ford

2.5 FUEL SYSTEM

Carburettor Make: Carter, four barrel **Model:** AFB
Carburettor number: Two **Size:** N/A
Comments: Moderate duty eng. Has single Carbie on a Holly manifold.

SECTION 3 - TRANSMISSION

3.1 CLUTCH

Make: Ford
Type: Diaphragm
Diameter: 267 mm **No. of Plates:** One
Actuation: Mechanical

3.2 TRANSMISSION

Type: Synchro – mesh
Make: Borg Warner T10 or Super T10 or Top loader (early pattern)
No. forward speeds: Four **Gearbox location:** Behind Engine
Gear change type and location: Remote, floor shift
Case material: Cast iron **Identifying marks:** N/A

3.3 FINAL DRIVE

Make: Ford **Model:** 8 & 9 inch allowed
Type: Live axle with detachable carrier
Wheel drive method: Rear
Ratios: 3.50, 3.89, 4.11, 4.29, 4.57, 5.14
Differential type: Limited slip

3.4 TRANSMISSION SHAFTS (EXPOSED)

Number: One
Description: Tubular steel open tailshaft

3.5 WHEELS & TYRES

Wheel type - Original:	Disc	Material - Original:	Steel
Allowed:	Period cast	Allowed:	Alloy
Fixture method:	Studs	No. studs:	Five
Wheel dia. & rim width:	FRONT		REAR
Original:	13, 14 or 15 x 5.5 inch		13, 14 or 15 x 5.5 inch
Allowed:	15 x 6.0 inch		15 x 6.0 inch
Tyres allowed:	60% minimum aspect ratio, refer approved tyre list.		

SECTION 4 - GENERAL

4.1 FUEL SYSTEM

Tank Location:	Boot	Capacity:	102 litre
Fuel pump type and location:	Mechanical / engine, Electrical / N/A	Make:	Variable suppliers

4.2 ELECTRICAL SYSTEM

Voltage:	12	Generator or Alternator:	Alternator
Battery Location:	Engine compartment		

4.3 BODYWORK

Type:	Closed touring	Material:	Steel
No. of seats:	Five	No. doors:	Two
Comments:	Refer Appendix 1		

4.4 DIMENSIONS

Track - Front:	1397 mm	Rear:	1428 mm
Wheelbase:	2781 mm	Overall length:	4612 mm
Dry weight:	1100kg		

4.5 SAFETY EQUIPMENT

Refer applicable Group Regulations

Appendix 1

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

Bodywork

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 rigidly 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.

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.

Sealing procedure for engines using the substitute cylinder head (289 or 302)

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.
4. 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.
5. 289 and early 302 Windsor 2 bolt block engines require the drilling of steam water passage holes in the cylinder head face to match the engine block. This is outlined in the World Products assembly guide headed 'Machine Shop Specs'.
6. Valve seat cutting/grinding is allowed, but the original valve sizes of 1.94" inlet and 1.6" exhaust must be retained. No machining is permitted under the valve seat.
7. 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.
The only exception is the metal between the inlet valve head and the exhaust valve head which may be rounded in case it creates a hot spot.

