



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 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 XW
(1) GT,
(2) GT HO Ph1
(3) GT HO Ph 2

Period of Original Manufacture: 1969 to 1970

CAMS Historic Group: Nc

Date of issue of this document: Dec 2013



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

SECTION 1 - CHASSIS

1.1 CHASSIS FRAME

Description: Uni-body four door sedan
Period of Manufacture: 1969 – 1970
Manufacturer: Ford Motor Co.
Chassis no. from: JG33XXXXXXX
Chassis no. location: Radiator support panel, front upper left & Id plate on the radiator support panel in 1969 and ADR type plate on the LHS of the firewall in 1970. Original engine number stamped into left suspension tower.
Material: Steel

1.2 FRONT SUSPENSION

Description: Independent, upper wishbone, lower arm with track rod.
Spring Medium: Coil
Damper Type: Telescopic **Adjustable:** No
Anti-sway bar: Fitted **Adjustable:** No
Suspension adjustable: Yes **Method:** Caster, camber and toe, spring height

1.3 REAR SUSPENSION

Description: Live axle
Spring medium: Leaf
Damper type: Telescopic **Adjustable:** No
Anti-sway bar: Only HO Series 1 & 2 **Adjustable:** No
Suspension adjustable: Yes **Method:** By spring height

1.4 STEERING

Type: Recirculating ball **Make:** Ford

1.5 BRAKES

	Front	Rear
Type:	Disc, vented	Drum
Dimensions:	286 x 23.9 mm	254 x 63.5 mm
Material:	Cast iron	Cast iron
No. cylinders/pots per wheel:	One	One
Actuation:	Hydraulic	Hydraulic
Caliper Make:	Kelsey Hayes / Ford	
Caliper Type:	Single piston, floating	
Caliper Material:	Cast	
Master cylinder make:	PBR	Type: Tandem
Adjustable bias:	No	
Servo Fitted:	Yes	

SECTION 2 - ENGINE

2.1 ENGINE

Make:	Ford		
Model:	Winsor (series 1 & 2), Cleveland (series 3)		
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:	89.0 mm		
Capacity - original:	5766 cc	Max. allowed:	5937 cc
Cooling method:	Liquid		
Identifying marks:	Winsor C90E - 6015B, Cleveland DOAE-6015-J or G on lower right hand side of block, observer from below.		

2.2 CYLINDER HEAD

Make:	Ford		
No. of valves/cylinder:		Inlet: One	Exhaust: One
No. of ports total:		Inlet: Four	Exhaust: Four
No. of camshafts:	One	Location: Block	Drive: Chain
Valve actuation:	Pushrod & rocker		
Spark plugs/cylinder:	One		
Identifying marks:	Identification marks are located on unmachined area adjacent to the head gasket surface (visible only with head removed). Winsor has "351" and "WF" on top surface of the head visible with rocker cover removed.		

Comments:

Note that inlet valves and exhaust valves are in the same plain in the Winsor engine; in the Cleveland engine they are in different plains, being 'canted' in US language.

Upon individual application with the log book endorsed and the engine sealed.

Cast iron heads

The World Products Winsor Senior cylinder head (200cc runner and 64cc chamber) may be used.

The Dart "Iron Eagle 180" Cylinder head part no 13310010 may be used.

Subject to the heads being in the manufactured state. Save for refacing of the cylinder gasket face and matching of the inlet ports by not more than 12mm from the port face.

2.3 LUBRICATION

Method:	Wet sump
Oil cooler standard:	No

2.4 IGNITION SYSTEM

Type:	Coil, points & distributor
Make:	Autolite

2.5 FUEL SYSTEM

Carburettor Make:	Autolite (Series 1)	Model:	4300 – 4V
	Holly (Series 2 & 3)		4150C – 4V
Carburettor number:	One		

SECTION 3 - TRANSMISSION

3.1 CLUTCH

Make: Ford
Type: Diaphragm
Diameter: 241.5 mm
Actuation: Hydraulic
No. of Plates: Two

3.2 TRANSMISSION

Type: Synchromesh
Make: Ford, Toploader
No. forward speeds: Four
Gearbox location: Behind engine
Gear change type and location: Floor, remote
Case material: Cast iron
Identifying marks:
Comments: Series 1 uses 28 spline output shaft, Series 2 & 3 use longer (105 mm) 31 spline output shaft.

3.3 FINAL DRIVE

Make: Ford
Model: 9 inch
Type: Live axle
Wheel drive method: Rear
Ratios: 3.0, 3.25 or 3.5 to 1
Differential type: LSD, Traction-lok, Series 2 & 3 also used Detroit locker

3.4 TRANSMISSION SHAFTS (EXPOSED)

Number: One
Description: Open tail shaft, Series 2 & 3 105 mm shorter than series 1
Comments: Axle to be 28 spline unless Detroit locker fitted then 31 spline axles required.

3.5 WHEELS & TYRES

Wheel type - Original:	Pressed disc	Material - Original:	Steel
Allowed:	Cast	Allowed:	Aluminium
Fixture method:	Studs	No. studs:	Five
Wheel dia. & rim width:	FRONT		REAR
Original:	6 x 14 inch		6 x 14 inch
Allowed:	8 x 15 inch		8 x 15 inch
Tyres allowed:	60% minimum aspect ratio, refer approved tyre list.		

SECTION 4 - GENERAL

4.1 FUEL SYSTEM

Tank Location:	Boot floor	Capacity:	Series 1 = 73 litre Series 2 & 3 = 164 litre
Fuel pump type and location:	Mechanical on block	Make:	Ford

4.2 ELECTRICAL SYSTEM

Voltage:	12	Alternator:	Fitted
Battery Location:	Engine bay, RHF		

4.3 BODYWORK

Type:	Touring car	Material:	Steel
No. of seats:	Five	No. doors:	Four

Comments:

It is essential that detail of external bodywork and interior trim corresponds with original production form of model concerned. Summarising:-

All Models must have driving lights, bonnet locking pins of 'hairpin' type with pins attached by bowden cable, small air intake on right side of bonnet, stainless capping on rear window weather seal and two horizontal decorative strips across boot. Internally 'full' instrumentation is required whilst trim must be 'Fairmont' level - material of door trims comes up to window glass level and there are two courtesy lights on 'c' pillar in addition to roof light.

Series 2 & 3 additionally must have front air dam and Model 3 only has an 8000-rpm tachometer.

A rear wing was not fitted to any XW model.

4.4 DIMENSIONS

Track - Front:	1510 mm	Rear:	1487 mm
Wheelbase:	2827 mm	Overall length:	4690 mm
Dry weight:	1444 kg		

4.5 SAFETY EQUIPMENT

Refer applicable Group Regulations



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.

