



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
Period of Original Manufacture: 1963 to 64
CAMS Historic Group: Nb
Date of issue of this document: April 2013

Model: Mercury Comet Caliente



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 64
Manufacturer: Ford Motor Co Ltd
Chassis no. from: 4H23K - 500001
Chassis no. location: Left inner front fender
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: Fitted **Adjustable:** No
Suspension adjustable: No

1.3 REAR SUSPENSION

Description: Live axle
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:	292 x 31.75 mm	279.4 x 63.5 mm
Material:	Cast iron	Cast iron
No. cylinders/pots per wheel:	Four	One
Actuation:	Hydraulic	Hydraulic
Caliper Make:	Ford	
Caliper Type:	Fixed	
Caliper Material:	Cast iron	
Master cylinder make:	Ford	Type: Duel
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		
Identifying marks:	N/A		

Comments:

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

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:

Conditional upon individual application.

The RHS™ Pro Action™ Small Block Ford Cylinder Head, part no: 35304 or World Products Windsor Junior cylinder heads with 180cc volume per inlet runner are allowed:

Subject to the heads being in manufactures states. Save for the cylinder head gasket face & matching of the inlet ports by not more than 12mm from the port face.

Log book endorsed and the engine sealed required.

Refer attached Allowances and Sealing Procedure Documents

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:	Ford, four barrel	Model:	C40F – 9510
Carburettor number:	One	Size:	N/A

SECTION 3 - TRANSMISSION

3.1 CLUTCH

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

3.2 TRANSMISSION

Type: Synchro – mesh
Make: T & C
No. forward speeds: Four
Gear change type and location: Remote, floor shift
Case material: Cast iron
Gearbox location: Behind Engine
Identifying marks: N/A

3.3 FINAL DRIVE

Make: Ford
Type: Live axle, semi – floating
Wheel drive method: Rear
Ratios: 3.25, 3.50, 3.89, 4.11, 4.29 & 4.57
Differential type: Limited slip
Model: 8.5 & 9 inch allowed

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:	15 x 6.5 inch		15 x 6.5 inch
Allowed:	15 x 6.0 inch		15 x 6.0 inch
Tyres original:	7.10/6.70 – 15		7.10/6.70 – 15
Tyres allowed:	60% minimum aspect ratio, refer approved tyre list.		

SECTION 4 - GENERAL

4.1 FUEL SYSTEM

Tank Location:	Boot x 2	Capacity:	Main tank 75.8 litre Aux tank 64.0 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:	Alloy front and rear bumpers & grille permitted. Spring tower supports where optional.		

4.4 DIMENSIONS

Track - Front:	1411 mm	Rear:	1422 mm
Wheelbase:	2900 mm	Overall length:	4960 mm
Dry weight:	1200kg		

4.5 SAFETY EQUIPMENT

Refer applicable Group 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.

