



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: | Mercury Comet Caliente |
| Period of Original Manufacture: | 1963 – 1964 | | |
| Motorsport Australia Historic Group: | Nb | | |
| Date of Issue of this Document: | 1 January 2024 | | |



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

Update Log

| | |
|----------|--|
| 1/1/2024 | Inclusion of kerb and minimum racing weights |
| | |
| | |

SECTION 1 - CHASSIS

1.1. CHASSIS

| | |
|---------------------------------|---|
| Description: | Uni-body, two door pillarless coupe, welded pressed steel |
| Period of Manufacture: | 1963 to 64 |
| Manufacturer: | Ford Motor Co Ltd |
| Chassis Number From: | 4H23K - 500001 |
| Chassis Number location: | Left inner front fender |
| Material: | Steel |
| Comments | Originally LHD only |

1.2. FRONT SUSPENSION

| | | | |
|-------------------------------|--|--------------------|------------------------|
| Description: | Independent - upper wishbone & lower arm with tension 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. Spring tower supports were optional. | | |

1.3. REAR SUSPENSION

| | | | |
|-------------------------------|----------------------|--------------------|-----|
| Description: | Live 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 | | |

1.4. STEERING

| | | | |
|-----------------------|--|--------------|------|
| Type: | Recirculating ball | Make: | Ford |
| Power steering | RAM type system | | |
| Comments | Power steering - See Appendix A. For fitment of a collapsible steering column see Appendix C. | | |
| Comments | None | | |

1.5. BRAKES

| | Front | Rear |
|--------------------------------------|-------------------|---------------------------|
| Type: | Disc, vented | Drum, single leading shoe |
| Dimensions: | 292 mm x 31.75 mm | 279.4 x 63.5 mm |
| Material of drum/disc: | Cast iron | Cast iron |
| No. cylinders/pots per wheel: | Four | One |
| Actuation: | Hydraulic | Hydraulic |
| Caliper make: | Ford | |
| Caliper type: | Fixed | |
| Material: | Cast iron | |
| Master cylinder make: | Ford | |
| Type: | Dual | |
| Adjustable bias: | No | |
| Servo Fitted: | Yes | |
| Comments: | None | |

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 |
| Identifying marks: | N/A | | |
| Cooling method: | Liquid | | |
| 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 original block is approved for use. Logbook endorsed and the engine sealed required. See Appendix B. | | |

2.1. CYLINDER HEAD

| | | | | | |
|--------------------------------|--|------------------|-------|-----------------|-------|
| Make: | Ford | | | | |
| No. of valves/cylinder: | Two | Inlet: | One | Exhaust: | One |
| No. of ports total: | Eight | Inlet: | One | Exhaust: | One |
| No. of camshafts: | One | Location: | Block | Drive: | Chain |
| Valve actuation: | Pushrod and rocker | | | | |
| Spark plugs/cylinder: | One | | | | |
| Identifying marks: | N/A | | | | |
| Comments: | For Replacement Windsor head see Appendix B. | | | | |

2.2. 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. | | |

2.3. IGNITION SYSTEM

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

2.4. FUEL SYSTEM

| | | | |
|-----------------------------|---------|---------------|-------------|
| Carburettor Make: | Ford | Model: | C40F – 9510 |
| 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: | 267 mm |
| No. of Plates: | Ford |
| Actuation: | Hydraulic |
| Comments: | None |

3.2. TRANSMISSION

| | |
|--------------------------------------|--------------------|
| Type: | Synchromesh |
| Make: | T & C |
| Gearbox location: | Behind engine |
| Number of 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: | Ford | Model: | 8.5" and 9" |
| Type: | Live axle, semi floating | | |
| Ratios: | 3.25, 3.50, 3.89, 4.11, 4.29 & 4.57 | | |
| Differential type: | Limited slip | | |
| Comments: | None | | |

3.1. TRANSMISSION SHAFTS (EXPOSED)

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

3.2. WHEELS & TYRES

| | | | |
|-----------------------------------|---------------------------|-----------------------------|-------------|
| Wheel type - Original: | Pressed disc | Material - Original: | Steel |
| Wheel type - Allowed: | Period cast | Material - Allowed: | Alloy |
| Fixture method: | Studs | No. studs: | Five |
| Wheel dia. & rim width | FRONT | | REAR |
| Original: | 6.5" x 15" | | 6.5" x 15" |
| Allowed | 6" x 15" | | 6" x 15" |
| Tyre Section: | | | |
| Allowed: | Refer approved tyre list. | | |
| Aspect ratio - minimum: | 60% minimum aspect ratio. | | |
| Comments: | None | | |

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SECTION 4 GENERAL

4.1. FUEL SYSTEM

| | | | |
|-------------------------|----------------------------|------------------|---|
| Tank Location: | Boot x 2 | Capacity: | Main tank 75.8 litres Aux tank 64.0 litres |
| Fuel pump, type: | Mechanical on engine block | Make: | Various |
| Comments: | none | | |

4.2. ELECTRICAL SYSTEM

| | | | |
|--------------------------|--------------------|---------------------------|------------|
| Voltage: | 12 | Alternator fitted: | Alternator |
| Battery Location: | Engine compartment | | |
| Comments: | None | | |

4.3. BODYWORK

| | | | |
|----------------------|----------------|-------------------|-------|
| Type: | Closed touring | Material: | Steel |
| No. of seats: | Five | No. doors: | Two |
| Comments: | None | | |

4.4. DIMENSIONS

| | | | |
|---|----------|------------------------|---------|
| Track - Front: | 1411 mm | Rear: | 1422 mm |
| Wheelbase: | 2900 mm | Overall length: | 4960 mm |
| Approved Manufacturer's kerb weight: | 1370 kgs | | |
| Approved minimum racing weight: | 1343 kgs | | |
| Comments: | 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.

Power steering – LHD

RAM type system, which was a factory produced solution from Ford for 1964 to 1969 (inclusive).

Power steering – RHD

Approved is a RAM type system, which was a factory produced solution from Ford for 1964 to 1969 (inclusive).

The fitting of this approved solution to a right-hand drive vehicle involves the placement of the RAM system upside-down, and then cutting, re-aligning and rewelding the drag-link component to fit the upside-down RAM. This results in the hoses for the RAM system being at the bottom of the RAM, rather than the top, as is the case with fitment on a left-hand drive vehicle.

Appendix B

Block

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

Ford replacement block for the Windsor 302 engine, part number M-6010BOSS302 is approved for use. Logbook endorsed and the engine sealed required. The limiter must be located within the engine bay in an easily accessible position. The wiring must be visible along its length with the earth connected to the nearest practical earth point. The limiter will be subject to testing at race meetings.

Cylinder Heads

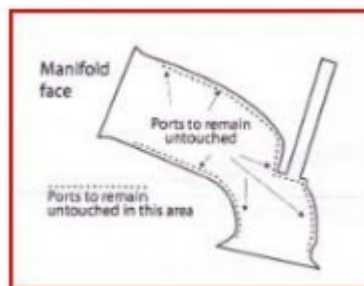
Approved cast iron cylinder heads are:

- RHS Pro Action Small Block Ford No. 35304
- 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.

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.

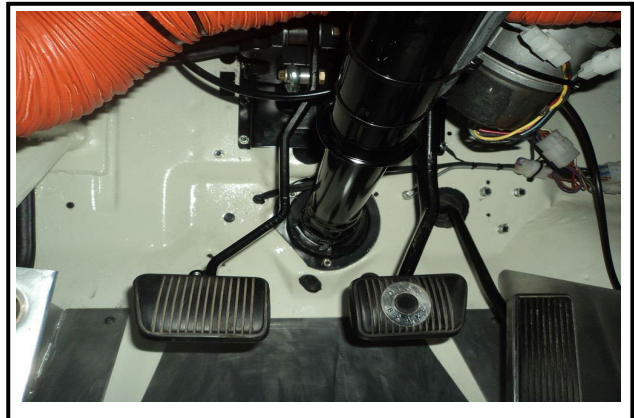
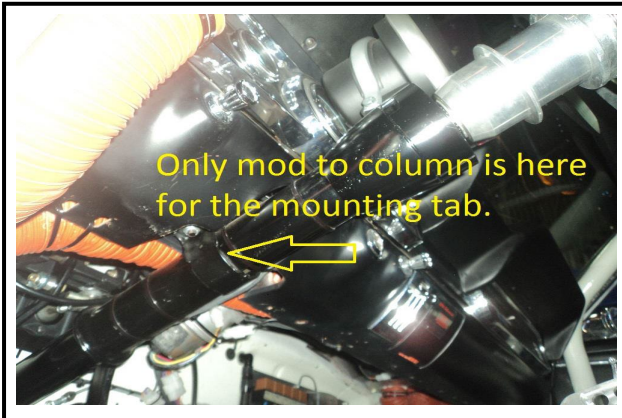
Note: If the heads are removed, they must be re-sealed following the above points 4, 5, 10 and 11.

Appendix C

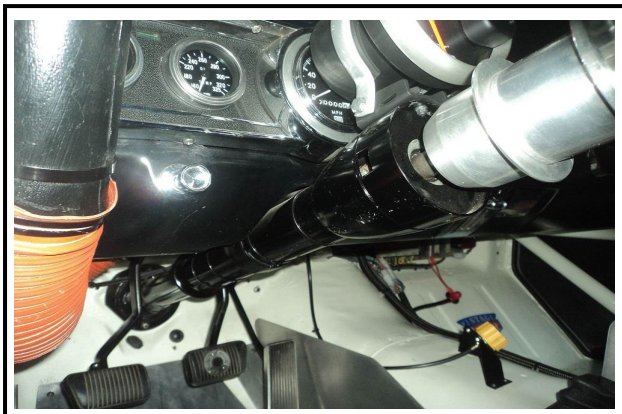
Replacement of solid steering column with collapsible type.

The original steering column main outer tube and steering shaft is replaced with a collapsible steering column main outer tube and steering shaft from an Australian XA to XC Ford Falcon.

The Ford Falcon main tube is modified by removing the spot-welded Ford Australia mount and drilling a hole in the column for the Ford USA mount that bolts into the dashboard.



The Ford Falcon main outer tube will locate in the original lower firewall mount. An original Ford Australia coupler can then be used to join the collapsible inner shaft to the original steering box.



The original Ford USA steering column top and switches can then be mounted on the top of the Collapsible column to retain the original look and functions.