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:**	Falcon Rallye Sprint
Period of Original Manufacture:	1963 to 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 pillar less coupe, welded pressed steel
Period of Manufacture:	1963 to 1964
Manufacturer:	Ford Motor Co Ltd
Chassis Number From:	4H13F-100001
Chassis Number location:	Stamped onto left hand side inner guard top edge
Material:	Steel
Comments	Originally LHD only

1.2. FRONT SUSPENSION

Description:	Independent by upper wishbone and lower TCA with forward link			
Spring Medium:	Coil			
Damper Type:	Telescopic		**Adjustable:**	No
Anti-sway bar:	No		**Adjustable:**	N/A
Suspension adjustable:	Yes	**Method:**	Caster, camber and toe	
Comments:	Refer to Appendix A			

1.3. REAR SUSPENSION

Description:	Live axle with detachable carrier			
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
Comments	No power steering		

1.5. BRAKES

	Front	**Rear**
Type:	Disc, vented	Drum, single leading shoe
Dimensions:	286 mm x 21 mm 292 mm x 21 mm	254 mm x 57.15 mm 279.4 mm x 76.2 mm
Material of drum/disc:	Cast iron	Cast iron
No. cylinders/pots per wheel:	Girling – three Kelsey Hayes – Four	One
Actuation:	Hydraulic	Hydraulic
Caliper make:	Girling Kelsey Hayes	
Caliper type:	Fixed	
Material:	Cast iron	
Master cylinder make:	Kelsey Hayes Girling	
Type:	Kelsey Hayes – dual Girling - single	
Adjustable bias:	No	
Servo Fitted:	Yes	
Comments:	None	

SECTION 2 - ENGINE

2.1. ENGINE

Make:	Ford		
Model:	W289HP or W302		
No. cylinders:	Eight	**Configuration:**	Vee
Cylinder Block-material:	Cast iron	**Two/Four Stroke:**	Four
Bore - Original:	101.76mm	**Max allowed:**	103.26 mm
Stroke - original:	72.898mm	**Max allowed:**	72.898 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 A.		

2.1. CYLINDER HEAD

Make:	Ford W289HP or W302				
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 and rocker				
Spark plugs/cylinder:	One				
Identifying marks:	N/A				
Comments:	Aftermarket 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. 35304 • World Products Windsor Junior. See Appendix A.				

2.1. LUBRICATION

Method:	Wet sump	**Oil tank location:**	N/A
Dry sump pump type:	N/A	**Location:**	N/A
Oil cooler standard:	Yes	**Location:**	LHS radiator support panel
Comments:	An aperture in LHS radiator support panel is permitted for oil cooler (see Appendix B)		

2.2. IGNITION SYSTEM

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

2.3. FUEL SYSTEM

Carburettor Make:	Carter	**Model:**	AFB
Carburettor Number:	Two		
Size:	N/A		
Fuel injection Make:	N/A	**Type:**	N/A
Supercharged:	No	**Type:**	N/A
Comments:	Moderate duty engine has single carburettor on a Holley manifold.		

SECTION 3 - TRANSMISSION

3.1. CLUTCH

Make:	Ford
Type:	Diaphragm
Diameter:	267 mm
No. of Plates:	One
Actuation:	Mechanical
Comments:	None

3.2. TRANSMISSION

Type:	Synchromesh
Make:	Borg Warner T-10 in either early or later configuration.
Gearbox location:	Behind engine
No. forward speeds:	Four
Gearchange type and location:	Remote - central floor mounting
Case material:	Original Ford bell housing, Aluminium or cast iron
Identifying marks:	N/A
Comments:	None

3.3. FINAL DRIVE

Make:	Ford	**Model:**	8” and 9” allowed.
Type:	Rear axle original Ford - either 8" or 9" detachable carrier type		
Ratios:	3.50, 3.89, 4.11, 4.29, 4.57, 5.14		
Differential type:	Limited slip		
Comments:	None		

3.4. TRANSMISSION SHAFTS (EXPOSED)

Number:	One
Location:	Gearbox to final drive
Description:	Open tailshaft
Comments:	Steel

3.5. WHEELS & TYRES

Wheel type - Original:	Pressed disc	**Material - Original:**	Steel
Wheel type - Allowed:	Period cast	**Material - Allowed:**	Alloy
Fixture method:	Stud and nut	**No. studs:**	Five
Wheel dia. & rim width	**FRONT**	**REAR**	
Original:	5.5” x 13” 5.5” x 14” 5.5” x 15”	5.5” x 13” 5.5” x 14” 5.5” 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		

-

SECTION 4 GENERAL

4.1. FUEL SYSTEM

Tank Location:	Boot	**Capacity:**	102 litres
Fuel pump, type:	Mechanical on block	**Make:**	Various
Comments:	None		

4.2. ELECTRICAL SYSTEM

Voltage:	12	**Alternator fitted:**	Alternator
Battery Location:	Engine bay RHF		
Comments:	None		

4.3. BODYWORK

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

4.4. DIMENSIONS

Track - Front:	1397 mm	**Rear:**	1428 mm
Wheelbase:	2781 mm	**Overall length:**	4612 mm
Approved Manufacturer's kerb weight:	1100 kgs		
Approved minimum racing weight:	1100 kgs		
Comments:	None		

4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations.
All original Falcon Rallye Sprint vehicles originally built in Australia **before 22 December 1992**, including the extent to which those cages extend beyond the passenger compartment, are deemed to be eligible. All other Falcon Rallye Sprint vehicles must be fitted with roll cages of no greater specification, other than with express approval.

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. 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:

- Dart Iron Eagle No. 1330008 *
- 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.

* 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 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.

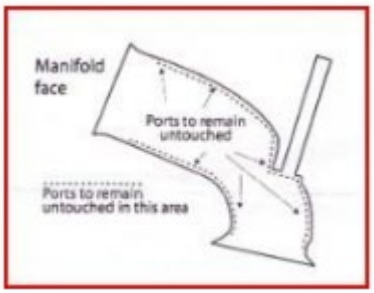
Sealing procedure for engines using the substitute cylinder head

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 (or pressed steel sheet);
    - Front fenders (or pressed steel sheet);
    - Doors (inner and outer skins);
    - Bonnet and boot – (inner and outer skins) with the use of inner mouldings for rigidly and the use of all the original fixtures (hinges and catches, counter-balancing springs are free);
    - Rear fenders (or Pressed Steel Sheet) **for vehicles approved prior to 21 December 1992**, and in any other case, Pressed Steel Sheet.
    - Bumper bars
        - Bumper bars may alternately be made of Pressed aluminium alloy sheet or Pressed Steel Sheet.
- The glass is to be of thickness not less than originally used in production), not lexan/Perspex.
- The interior of the vehicle is to be to the original specification of production Ford Falcon Rally Sprints with the allowances under the Group N regulations.

Oil Cooler aperture