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 Logbook, 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:**	Mustang
Period of Original Manufacture:	1967		
Motorsport Australia Historic Group:	Nc		
Date of issue of this document:	Nov 2017		

Update Log	

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

SECTION 1 - CHASSIS

1.1 CHASSIS FRAME	
Description:	Uni – body
Period of Manufacture:	1967
Manufacturer:	Ford Motor Co
Chassis no. from:	7(F,R or T)01(A,C,D,F or K)000001 Eg 6F01D00001
Chassis no. location:	LHF inner front fender
Material:	Steel
Comment:	None

1.2 FRONT SUSPENSION			
Description:	Independent with upper wishbone, lower control arm & tension rod		
Spring Medium:	Coil		
Damper Type:	Telescopic	**Adjustable:**	No
Anti-sway bar:	Fitted	**Adjustable:**	No
Suspension adjustable:	No		
Comment:	None		

1.3 REAR SUSPENSION			
Description:	Live axle		
Spring medium:	Semi – elliptical leaf		
Damper type:	Telescopic	**Adjustable:**	No
Anti-sway bar:	No		
Suspension adjustable:	No		
Comment:	None		

1.4 STEERING			
Type:	Recirculating ball & nut	**Make:**	Ford
Comment:	For fitment of a collapsible steering column refer to Appendix A		

1.5 BRAKES				
	Front			**Rear**
Type:	Disc, vented			Drum, twin leading shoe
Dimensions:	287 x 21 mm			254 x up to 63.5 mm
Material:	Cast iron			Cast iron
No. cylinders/pots per wheel:	Four			Two
Actuation:	Hydraulic			Hydraulic
Caliper Make:	Kelsey Hays			
Caliper Type:	Fixed			
Caliper Material:	Cast iron			
Master cylinder make:	Kelsey Hays	Girling	**Type:**	Tandem
Adjustable bias:	No			
Servo Fitted:	No			
Comment:	None			

SECTION 2 - ENGINE

2.1 ENGINE			
Make:	Ford		
Model:	289		
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 - original:	72.898 mm	**Max. allowed:**	72.898 mm
Capacity - original:	4728 cc	**Max. allowed:**	4869 cc
Cooling method:	Liquid		
Identifying marks:	N/A		
Comment:	See Appendix A for block substitution		

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:	289 or 302 cast into heads adjacent to rocker stud boss				
Comment:	2V or 4V 302 heads permitted see appendix A for substitution				

2.3 LUBRICATION			
Method:	Wet sump		
Oil cooler standard:	No		
Comment:	none		

2.4 IGNITION SYSTEM	
Type:	Coil & distributor
Make:	Autolite
Comment:	none

2.5 FUEL SYSTEM			
Carburettor Make:	Holly	**Model:**	4V
Carburettor number:	One	**Size:**	N/A
Comment:	none		

SECTION 3 - TRANSMISSION

3.1 CLUTCH			
Make:	Ford		
Type:	Diaphragm		
Diameter:	267 mm	**No. of Plates:**	One
Actuation:	Hydraulic		
Comment:	none		

3.2 TRANSMISSION			
Type:	Borg Warner or Ford		
Make:	T10 or top loader		
No. forward speeds:	Four	**Gearbox location:**	Behind engine
Gear change type and location:	Centre / floor		
Case material:	Cast iron or alloy	**Identifying marks:**	N/A
Comment:	none		

3.3 FINAL DRIVE			
Make:	Ford	**Model:**	9 inch
Type:	Live rear axle		
Wheel drive method:	Rear		
Ratios:	Various		
Differential type:	LSD		
Comment:	none		

3.4 TRANSMISSION SHAFTS (EXPOSED)	
Number:	One
Description:	Tubular steel open tailshaft
Comment:	none

3.5 WHEELS & TYRES			
Wheel type - Original:	Disc	**Material - Original:**	Steel
Allowed:	Period style	**Allowed:**	Alloy
Fixture method:	Studs	**No. studs:**	Five
Wheel dia. & rim width	**FRONT**	**REAR**	
Original:	14 x 7 or 8 inch	14 x 7 or 8 inch	
Allowed:	15 x 8 inch	15 x 8 inch	
Tyres original:	N/A	N/A	
Tyres allowed:	60% minimum aspect ratio, refer approved tyre list.		
Comment:	none		

SECTION 4 - GENERAL

4.1 FUEL SYSTEM			
Tank Location:	Boot floor	**Capacity:**	75 litre
Fuel pump type and location:	Mechanical / engine	**Make:**	AC
Comment:	none		

4.2 ELECTRICAL SYSTEM			
Voltage:	12	**Generator or Alternator:**	Alternator
Battery Location:	Engine bay		
Comment:	none		

4.3 BODYWORK			
Type:	Closed touring	**Material:**	Steel
No. of seats:	Four	**No. doors:**	Two
Comment:	1968 body permitted when modified (indicator recesses are removed) to match 1967 configuration and external cosmetics.		

4.4 DIMENSIONS			
Track - Front:	1526 mm	**Rear:**	1519 mm
Wheelbase:	2743 mm	**Overall length:**	4663 mm
Dry weight:	1188 Kg		
Comment:	none		

4.5 SAFETY EQUIPMENT
Refer applicable Group Regulations

Appendix A

Block Substitution

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.
Once approved, endorsement and the engine seal numbers will be recorded in the logbook

Cylinder Head Substitution

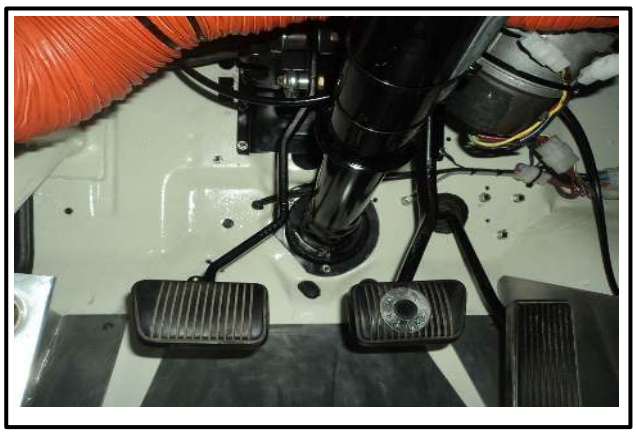
Approved cast iron cylinder heads:

- Dart Iron Eagle No. 1330008
- RHS Pro Action Small Block Ford No. 35305
- World Products Windsor Junior

Note: 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

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.

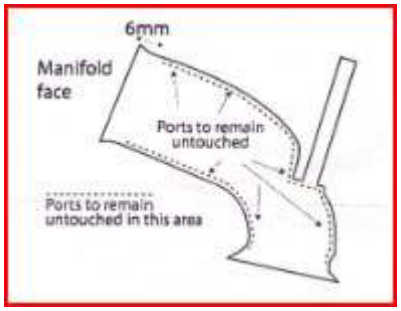
The original Ford USA steering column top and switches can then be mounted on the top of the Collapsible column to retain the original look and functions.

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.