



5TH CATEGORY - HISTORIC RACING  
**GROUP S**  
 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.

<b>Make of Car:</b>	TVR	<b>Model:</b>	5000M
<b>Period of Original Manufacture:</b>	1975 – 1977		
<b>Motorsport Australia Historic Group:</b>	Sc		
<b>Date of Issue of this Document:</b>	30/6/2022		



***Update Log***

30/6/2022	Document layout

**SECTION 1 - CHASSIS**

**1.1. CHASSIS**

<b>Description:</b>	Tubular Steel Space Frame		
<b>Period of Manufacture:</b>	1975 – 1977		
<b>Manufacturer:</b>	TVR		
<b>Chassis Number From:</b>	2410FM to 4940M		
<b>Chassis Number location:</b>			
<b>Material:</b>	Steel		
<b>Comments</b>	None		

**1.2. FRONT SUSPENSION**

<b>Description:</b>	Independent – Upper & Lower Unequal Length Wishbone		
<b>Spring Medium:</b>	Coil		
<b>Damper Type:</b>	Telescopic	<b>Adjustable:</b>	Optional
<b>Anti-sway bar:</b>	Fitted	<b>Adjustable:</b>	No
<b>Suspension adjustable:</b>	Yes	<b>Method:</b>	Camber, caster & toe
<b>Comments:</b>	None		

**1.3. REAR SUSPENSION**

<b>Description:</b>	Independent – Upper & Lower Unequal Length Wishbone		
<b>Spring Medium:</b>	Coil		
<b>Damper Type:</b>	Telescopic	<b>Adjustable:</b>	Optional
<b>Anti-sway bar:</b>	Fitted	<b>Adjustable:</b>	No
<b>Suspension adjustable:</b>	Yes	<b>Method:</b>	Camber, caster & toe
<b>Comments:</b>	None		

**1.4. STEERING**

<b>Type:</b>	Rack and pinion	<b>Make:</b>	Alford and Alder
<b>Comments</b>	None		

**1.5. BRAKES**

	<b>Front</b>	<b>Rear</b>
<b>Type:</b>	Disc	Drum
<b>Dimensions:</b>	273 mm	225 mm
<b>Material of drum/disc:</b>	Cast iron	Cast iron
<b>No. cylinders/pots per wheel:</b>	Four	One
<b>Actuation:</b>	Hydraulic	Hydraulic
<b>Caliper make:</b>	Girling	
<b>Caliper type:</b>		
<b>Material:</b>	Cast iron	
<b>Master cylinder make:</b>	Girling	
<b>Type:</b>	Tandem	
<b>Adjustable bias:</b>	No	
<b>Servo Fitted:</b>	Yes	
<b>Comments:</b>	None	

## SECTION 2 - ENGINE

### 2.1. ENGINE

<b>Make:</b>	Ford Windsor		
<b>Model:</b>	289		
<b>No. cylinders:</b>	Eight	Eight	Eight
<b>Cylinder Block-material:</b>	Cast iron	Cast iron	Cast iron
<b>Bore - Original:</b>	101.6 mm	101.6 mm	101.6 mm
<b>Stroke - original:</b>	72.898 mm	72.898 mm	72.898 mm
<b>Capacity - original:</b>	4728 cc	4728 cc	4869 cc
<b>Identifying marks:</b>	N/A		
<b>Cooling method:</b>	Liquid		
<b>Comments:</b>	Ford replacement block for the Windsor engine, part number M-6010-BOSS302 is approved for use. See Appendix A.		

### 2.2. CYLINDER HEAD

<b>Make:</b>	Ford		
<b>No. of valves/cylinder:</b>	Two	<b>Inlet:</b> One	<b>Exhaust:</b> One
<b>No. of ports total:</b>	Eight	<b>Inlet:</b> Four	<b>Exhaust:</b> Four
<b>No. of camshafts:</b>	One	<b>Location:</b> Block	<b>Drive:</b> Chain
<b>Valve actuation:</b>	Pushrod and rocker		
<b>Spark plugs/cylinder:</b>	One		
<b>Identifying marks:</b>	289 or 302 cast into heads adjacent to rocker stud boss		
<b>Comments:</b>	Note that inlet valves and exhaust valves are in the same plain in the Windsor engine. For Replacement Windsor head see Appendix A.		

### 2.3. LUBRICATION

<b>Method:</b>	Wet sump	<b>Oil tank location:</b>	N/A
<b>Dry sump pump type:</b>	N/A	<b>Location:</b>	N/A
<b>Oil cooler standard:</b>	No	<b>Location:</b>	N/A
<b>Comments:</b>	None		

### 2.4. IGNITION SYSTEM

<b>Type:</b>	Electronic
<b>Make:</b>	Motorcraft
<b>Comments:</b>	None

### 2.5. FUEL SYSTEM

<b>Carburettor Make:</b>	Holley	<b>Model:</b>	4V
<b>Carburettor Number:</b>	One		
<b>Size:</b>	N/A		
<b>Fuel injection Make:</b>	N/A	<b>Type:</b>	N/A
<b>Supercharged:</b>	No	<b>Type:</b>	N/A
<b>Comments:</b>	None		

**SECTION 3 - TRANSMISSION**

**3.1. CLUTCH**

<b>Make:</b>	Various
<b>Type:</b>	Diaphragm
<b>Diameter:</b>	Various
<b>No. of Plates:</b>	One
<b>Actuation:</b>	Free
<b>Comments:</b>	None

**3.2. TRANSMISSION**

<b>Type:</b>	Syncromesh
<b>Make:</b>	Borg Warner T10
<b>Gearbox location:</b>	Behind engine
<b>No. forward speeds:</b>	Four
<b>Gearchange type and location:</b>	Remote on floor
<b>Case material:</b>	Cat iron or Aluminium alloy
<b>Identifying marks:</b>	N/A
<b>Comments:</b>	None

**3.3. FINAL DRIVE**

<b>Make:</b>	Chevrolet	<b>Model:</b>	Corvette
<b>Type</b>	Sprung		
<b>Wheel drive method:</b>	Half shaft		
<b>Ratios:</b>	Various		
<b>Differential type:</b>	S[pin resistant		
<b>Comments:</b>	None		

**3.4. TRANSMISSION SHAFTS (EXPOSED)**

<b>Number:</b>	Three
<b>Location:</b>	Open tail shaft to differential, halfshafts to wheels
<b>Description:</b>	Drive shaft with two universal joints, Half shaft with two universal joints x 2
<b>Comments:</b>	None

**3.5. WHEELS & TYRES**

<b>Wheel type - Original:</b>	Cast	<b>Material - Original:</b>	Alloy
<b>Wheel type - Allowed:</b>	Cast Pressed	<b>Material - Allowed:</b>	Alloy Steel
<b>Fixture method:</b>	Studs	<b>No. studs:</b>	Four
<b>Wheel dia. &amp; rim width</b>	<b>FRONT</b>		<b>REAR</b>
<b>Original:</b>	6" x 14"		6" x 14"
<b>Allowed</b>	6" x 14"		6" x 14"
<b>Tyre Section:</b>			
<b>Original:</b>	185 x 14"		185 x 14"
<b>Allowed:</b>			
<b>Aspect ratio - minimum:</b>	60% minimum aspect ratio.		
<b>Comments:</b>	Refer approved tyre list.		

## SECTION 4 GENERAL

### 4.1. FUEL SYSTEM

<b>Tank Location:</b>	Rear	<b>Capacity:</b>	N/A
<b>Fuel pump, type:</b>	Mechanical / engine	<b>Make:</b>	AC
<b>Comments:</b>	None		

### 4.2. ELECTRICAL SYSTEM

<b>Voltage:</b>	Twelve	<b>Alternator fitted:</b>	Alternator
<b>Battery Location:</b>	N/A		
<b>Comments:</b>	None		

### 4.3. BODYWORK

<b>Type:</b>	Fixed head coupe	<b>Material:</b>	Fibreglass
<b>No. of seats:</b>	Two	<b>No. doors:</b>	Two
<b>Comments:</b>	None		

### 4.4. DIMENSIONS

<b>Track - Front:</b>	1370 mm	<b>Rear:</b>	1370 mm
<b>Wheelbase:</b>	2287 mm	<b>Overall length:</b>	4165 mm
<b>Dry weight:</b>	1080 kg		
<b>Comments:</b>	None		

### 4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations
------------------------------------

## **Appendix Block**

Ford replacement block for the Windsor 289 engine, part number M-6010BOSS302 is approved for use. Logbook endorsed and the engine sealed required.

## **Cylinder Heads**

Approved cast iron cylinder heads are:

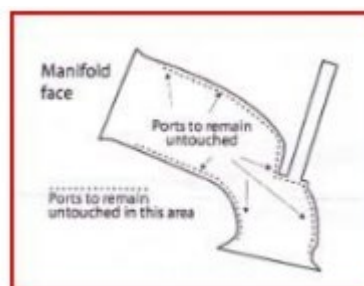
- Dart Iron Eagle No. 1330008 \*
- RHS Pro Action Small Block Ford No. 35305
- World Products Windsor Junior.

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 will be located in an easily accessible position within the engine bay.

## **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 assembled 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.