



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.

Make of Car:	Sunbeam	Model:	Tiger Mark I Mark II
Period of Original Manufacture:	Mark I - 1964 – 1967 Mark II - 1967		
Motorsport Australia Historic Group:	Sb		
Date of Issue of this Document:	30/6/2022		



Update Log

30/6/2022	Document layout

SECTION 1 - CHASSIS

1.1. CHASSIS

Description:	Unibody
Period of Manufacture:	1964 - 1967
Manufacturer:	Sunbeam (Rootes)
Chassis Number From:	Mark I 1964 B9499997 up to B9499999 Mark I 4/64 - 8/65 B9470001 up to B 9473762 & B9473767 Mark I CKD (South African Tigers) 1965 B9480001 up to B9480073 Mark I 1966 B382000001 up to B382002706 Mark II 12/66 - 6/67 B382100100 up to B382100633
Chassis Number location:	Alloy plate on top of firewall
Material:	Steel
Comments	None

1.2. FRONT SUSPENSION

Description:	Independent with twin wishbones		
Spring Medium:	Coil		
Damper Type:	Telescopic	Adjustable:	No
Anti-sway bar:	Fitted	Adjustable:	No
Suspension adjustable:	Yes	Method:	Shims
Comments:	Spring rates and ride heights are free		

1.3. REAR SUSPENSION

Description:	Live rear axle with Panhard rod		
Spring Medium:	Semi elliptical leaf		
Damper Type:	Telescopic	Adjustable	No
Anti-sway bar:	No	Adjustable:	N/A
Suspension adjustable:	Yes	Method:	
Comments:	Spring rates and ride heights are free		

1.4. STEERING

Type:	Rack and pinion	Make:	Alford and Adler
Comments	None		

1.5. BRAKES

	Front	Rear
Type:	Disc	Drum
Dimensions:	250 mm	228.6 mm
Material of drum/disc:	Cast iron	Cast iron
No. cylinders/pots per wheel:	One	One
Actuation:	Hydraulic	Hydraulic
Caliper make:	Girling	
Caliper type:		
Material:	Cast iron	
Master cylinder make:	Girling	
Type:	Single	
Adjustable bias:	No	
Servo Fitted:	Yes	
Comments:	None	

SECTION 2 - ENGINE

2.1. ENGINE

Make:	Ford		
Model:	Mark I	4.2 (260)	
	Mark II	4.7 (289)	
No. cylinders:	Eight	Configuration:	Vee
Cylinder Block-material:	Cast iron	Two/Four Stroke:	Four
Bore – Original – Mark I:	96.52 mm	Max allowed:	98.02 mm
Stroke - original – Mark I:	72.898 mm	Max allowed:	72.898 mm
Capacity - original – Mark I:	4267 cc	Max allowed:	4869 cc
Bore – Original – Mark II:	101.6 mm	Max allowed:	103.1 mm
Stroke - original – Mark II:	72.898 mm	Max allowed:	72.898 mm
Capacity - original – Mark II:	4728 cc	Max allowed:	5089 cc
Identifying marks:	N/A		
Cooling method:	Liquid		
Comments:	Mark I vehicles allowed fitting of 289 engines.		

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 and rocker		
Spark plugs/cylinder:	One		
Identifying marks:	N/A		
Comments:	For Replacement Windsor head see Appendix A.		

2.3. 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:	None		

2.4. IGNITION SYSTEM

Type:	Points, Coil and Distributor
Make:	Ford
Comments:	None

2.5. FUEL SYSTEM

Carburettor Make:	Autolite	Model:	2 barrel
Carburettor Number:	One		
Size:	365 CFM		
Fuel injection Make:	N/A	Type:	N/A
Supercharged:	No	Type:	N/A
Comments:	Factory option of Holley four barrel 600 allowed.		

SECTION 3 - TRANSMISSION

3.1. CLUTCH

Make:	Borg and Beck
Type:	Diaphragm
Diameter:	254 mm
No. of Plates:	One
Actuation:	Hydraulic
Comments:	None

3.2. TRANSMISSION

Type:	Syncromesh
Make:	Ford
Gearbox location:	Behind engine
No. forward speeds:	Four
Gearchange type and location:	Remote floor
Case material:	Cast iron
Identifying marks:	MkI & IA – HC4-E Mk II - HC4-B
Comments:	None

3.3. FINAL DRIVE

Make:	Sunbeam	Model:	Salisbury 4HA
Wheel drive method:	Rear		
Ratios:	Various		
Differential type:	Live axle		
Comments:	Free/Open		

3.4. TRANSMISSION SHAFTS (EXPOSED)

Number:	One
Location:	Gearbox to final drive
Description:	Open tailshaft with twin uni joints
Comments:	None

3.5. WHEELS & TYRES

Wheel type - Original:	Disc	Material - Original:	Steel
Wheel type - Allowed:	Cast alloy	Material - Allowed:	Cast alloy
Fixture method:	Studs	No. studs:	Four
Wheel dia. & rim width	FRONT		REAR
Original:	4.5" x 13"		4.5" x 13"
Allowed	6" x 13"		6" x 13"
Tyre Section:			
Original:	590 x 13"		590 x 13"
Allowed:			
Aspect ratio - minimum:	60% minimum aspect ratio.		
Comments:	Refer approved tyre list.		

SECTION 4 GENERAL

4.1. FUEL SYSTEM

Tank Location:	Rear guards	Capacity:	42 litres
Fuel pump, type:	Electric	Make:	SU
Comments:	None		

4.2. ELECTRICAL SYSTEM

Voltage:	Twelve	Alternator fitted:	To 1967 - Generator 1967 - Alternator
Battery Location:	Boot		
Comments:	None		

4.3. BODYWORK

Type:	Open Sports	Material:	Steel
No. of seats:	Two	No. doors:	Two
Comments:	Hard top fitment allowed		

4.4. DIMENSIONS

Track - Front:	1314 mm	Rear:	1236 mm
Wheelbase:	2187 mm	Overall length:	3962 mm
Dry weight:	1163 kg		
Comments:	None		

4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations

Appendix

Cylinder Heads

Approved cast iron cylinder heads are:

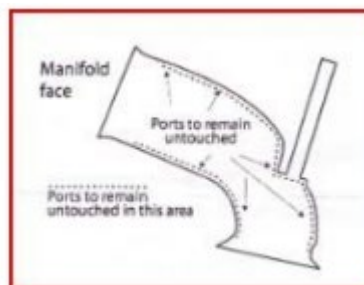
- Dart Iron Eagle No. 1330008 *
- RHS Pro Action Small Block Ford No. 35305
- World Products Windsor Junior.

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 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.