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:	Chevrolet	**Model:**	Corvette
Period of Original Manufacture:	1971		
Motorsport Australia Historic Group:	Sc		
Date of Issue of this Document:	31/12/2024		

Update Log

May 2020	GM Motorsport block Part #88962516 added
30/6/2022	Document layout
31/12/2024	Inclusion of kerb and minimum racing weights

SECTION 1 - CHASSIS

1.1. CHASSIS

Description:	Box section ladder frame	
Period of Manufacture:	1971	
Manufacturer:	GM/Chevrolet	
Chassis Number:	Convertible	194671S-00001 to – 121801
	Coupe	194371S-000001 to – 121801
Chassis Number location:	LH Windscreen pillar	
Comments	None	

1.2. FRONT SUSPENSION

Description:	Independent with short & long arm wishbones			
Spring Medium:	Coil			
Damper Type:	Telescopic		**Adjustable:**	No
Anti-sway bar:	Fitted		**Adjustable:**	No
Suspension adjustable:	Yes	**Method:**	Caster & camber by shims, toe by tie rods	
Comments:	None			

1.3. REAR SUSPENSION

Description:	Independent with trailing arms			
Spring Medium:	Leaf			
Damper Type:	Telescopic		**Adjustable**	No
Anti-sway bar:	Fitted		**Adjustable:**	No
Suspension adjustable:	Yes	**Method:**	Threaded links	
Comments:	None			

1.4. STEERING

Type:	Recirculating ball	**Make:**	GM
Comments	None		

1.5. BRAKES

	Front	**Rear**
Type:	Disc, vented	Disc, vented
Dimensions:	299 mm x 31.75 mm	299 mm x 31.75 mm
Material of drum/disc:	Cast iron	Cast iron
No. cylinders/pots per wheel:	Four	Four
Actuation:	Hydraulic	Hydraulic
Caliper make:	Delco Moraine	Delco Moraine
Caliper type:	Fixed	Fixed
Material:	Cast iron	Cast iron
Master cylinder make:	Delco Moraine	
Type:	Tandem	
Adjustable bias:	No	
Servo Fitted:	Yes	
Comments:	Dual or tandem master cylinders permitted. Refer Group S regulations for permitted modifications	

SECTION 2 - ENGINE

2.1. ENGINE

Make:	Chevrolet		
Model:	350³" LT1		
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:	88.392 mm	**Max allowed:**	88.392 mm
Capacity - original:	5733 cc	**Max allowed:**	5904 cc
Identifying marks:	Casting number, refer Appendix A, New block added		
Cooling method:	Liquid		
Comments:	Refer Appendix A for component substitution • GM Performance Small Block: 10066034 • GM Performance Small Block: 88962516 Aluminium blocks are not permitted for this group.		

2.2. CYLINDER HEAD

Make:	Chevrolet				
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:	Casting number				
Comments:	Conditional upon individual application Refer Appendix A for component substitution • Dart Iron Eagle 180 SBC 23 Degree cast iron part no 10120010 • RHS "Pro Action" 23 degree Cast Iron SBC head – (180cc Intake Runner/64cc chamber). Part No. 12317 straight plug Part No. 12318 angled plug				

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:	Delco Remy
Comments	None

2.5. FUEL SYSTEM

Carburettor Make:	GM Holley	**Model:**	Four barrel
Carburettor Number:	Single four barrel		
Size:	Various		
Fuel injection Make:	N/A	**Type:**	N/A
Supercharged:	No	**Type:**	N/A
Comments:	None		

SECTION 3 - TRANSMISSION

3.1. CLUTCH

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

3.2. TRANSMISSION

Type:	Synchromesh
Make:	GM, Muncie
Model	M20 or M21
Gearbox location:	Behind engine
No. forward speeds:	Four
Gearchange type and location:	Floor -remote
Case material:	Cast iron or Aluminium alloy
Identifying marks:	N/A
Comments:	None

3.3. FINAL DRIVE

Make:	GM	**Model:**	N/A
Type:	Sprung unit		
Ratios:	Various		
Differential type:	LSD, GM Posi traction		
Comments:	None		

3.4. TRANSMISSION SHAFTS (EXPOSED)

Number:	Three
Description:	Open tail shaft, transmission to Sprung unit. Half shaft, sprung unit to wheels
Comments:	None

3.5. WHEELS & TYRES

Wheel type - Original:	Disc	**Material - Original:**	Steel
Wheel type - Allowed:	Cast	**Material - Allowed:**	Aluminium Alloy
Fixture method:	Studs	**No. studs:**	Five
Wheel dia. & rim width	**FRONT**		**REAR**
Original:	8” x 15”		8” x 15”
Allowed – small block	8” x 15”		8” x 15”
Allowed – big block	8” x 15”		8” x 15”
Tyre Section:	Refer approved tyre list.		
Aspect ratio - minimum:	60% minimum aspect ratio.		
Comments:	None		

-

SECTION 4 GENERAL

4.1. FUEL SYSTEM

Tank Location:	Under rear floor	**Capacity:**	75 litres
Fuel pump, type:	Mechanical, on engine	**Make:**	AC Delco
Comments:	None		

4.2. ELECTRICAL SYSTEM

Voltage:	Twelve	**Alternator fitted:**	Alternator
Battery Location:	Behind seat		
Comments:	None		

4.3. BODYWORK

Type:	Sports. Coupe	**Material:**	Fiberglass
No. of seats:	Two	**No. doors:**	Two
Comments:	None		

4.4. DIMENSIONS

Track - Front:	1491 mm	**Rear:**	1509 mm
Wheelbase:	2489 mm	**Overall length:**	4636 mm
Approved Manufacturer's kerb weight:	1493 kg		
Approved minimum racing weight:	1380 kg		
Comments:	None		

4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations

Appendix A
Engine Block

Spare part 88962516 GM performance parts replacement small block 305, 327 & 350, four bolt design with one-piece rear seal, a kit to retain split rear seals is available and will be permitted.
Logbook endorsed and the engine sealed required.

88962516 Engine Block Casting Numbers
N/A

10066034 Engine Block Casting Numbers

3782870	3789817	3790721	3791362	3794460	3852174	3858174
3858180	3858190	3868657	3876132	3892657	3903352	3914660
3914678	3932368	3955618	3959512	3970010	3970014	3970016
Or others by specific approval						

Cylinder Heads

GM Cylinder Head Casting Numbers

3782461	3890462	3917291	3917292	3917293	3927185	3927186
3927187	3927188	3932441	3947041	3973414	3973487	3986316
3986339	3991492	3998916	3998993			
Or others by specific approval						

Approved substitute heads are:

- Dart Iron Eagle 180 SBC 23 Degree cast iron part no 10120010 *
- RHS “Pro Action” 23 degree Cast Iron SBC head – (180cc Intake Runner/64cc chamber).
  Part No. 12317 straight plug
  Part No. 12318 angled plug

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.

Chevrolet small block 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. <u>Inlet and exhaust ports must be left completely untouched from under the valve seats to within allowed depth from the manifold face.</u>
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. 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.
6. 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.