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 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 CAMS Manual of Motor Sport.

Make of Car:	Chevrolet	**Model:**	1966 Nova II Super Sports Coupe
Period of Original Manufacture:	1965 – 1966		
CAMS Historic Group:	Nc		
Date of issue of this document:	**May 2018**		

Refer to CAMS Manual of Motor Sport, Vehicle Eligibility, Historic Touring Cars, General Requirements & Nc Regulations for permitted modifications.

SECTION 1 - CHASSIS

1.1 CHASSIS FRAME

Description:	Uni Body with sub frames
Period of Manufacture:	Gen 2 1965 to 1966
Manufacturer:	GM Chevrolet
Chassis no. from:	1#176$ 10001
	# = 15, 16, 17 or 18 $ = Assembly plant letter
Chassis no. location:	On plate on left side door hinge pillar
Material:	Steel

1.2 FRONT SUSPENSION

Description:	Independent with upper & lower wishbones		
Spring Medium:	Coil		
Damper Type:	Telescopic	**Adjustable:**	No
Anti-sway bar:	Fitted	**Adjustable:**	No
Suspension adjustable:	Yes **Method:**	Caster & camber by shims	

1.3 REAR SUSPENSION

Description:	Live rear axle		
Spring medium:	Mono plate leaf		
Damper type:	Telescopic	**Adjustable:**	No
Anti-sway bar:	Fitted	**Adjustable:**	No
Suspension adjustable:	Yes **Method:**	Height	

1.4 STEERING

Type:	Recirculation ball	**Make:**	Chevrolet

1.5 BRAKES

	Front	**Rear**
Type:	Drum	Drum
Dimensions:	9.5 x 2.9 inch	9.5 x 2 inch
Material:	Cast iron	Cast iron
No. cylinders/pots per wheel:	Two	One
Brake shoe configuration:	Twin leading shoe	Single leading shoe
Actuation:	Hydraulic	Hydraulic

Master cylinder make:	GM	**Type:**	Duel
Adjustable bias:	No		
Servo Fitted:	Option		

SECTION 2 - ENGINE

2.1 ENGINE

Make:	Chevrolet		
Model:	Small Block		
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:	82.55 mm	**Max. allowed:**	82.55 mm
Capacity - original:	5354 cc	**Max. allowed:**	5513 cc
Cooling method:	Water		
Identifying marks:	Refer Appendix for approved casting numbers, **<u>New block added</u>**		

2.2 CYLINDER HEAD

Make:	Chevrolet			**Type:**	OHV
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:	N/A				

Comments:

Conditional upon individual application.

- Approved cast iron cylinder heads are: **Dart Iron Eagle 180 SBC 23 Degree cast iron part no 10120010**, or the RHS "Pro Action" 23 degree Cast Iron SBC head – (180cc Intake Runner/64cc chamber). Part No. 12317 straight plug or part No. 12318 angled plug
- The heads 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.**
- **Engine to be sealed as per procedure in the appendix**

Once approval, endorsement and the engine seal numbers will be recorded in the log book.

2.3 LUBRICATION

Method: Wet sump
Oil cooler standard: None

2.4 IGNITION SYSTEM

Type: Coil, points & distributor
Make: Delco

2.5 FUEL SYSTEM

Carburettor Make: Rochester **Model:** Quadrajet
Carburettor number: One **Size:** 750
Type: Four barrel

SECTION 3 - TRANSMISSION

3.1 CLUTCH

Make: Various
Type: Diaphragm
Diameter: 10.4 inch **No. of Plates:** One
Actuation: Hydraulic

3.2 TRANSMISSION

Type: Synchromesh
Make: GM, Muncie M20 (wide ratio) & M21 (close ratio)
No. forward speeds: Four **Gearbox location:** Behind engine
Gear change type and location: H pattern, remote floor shift
Case material: Cast iron or alloy **Identifying marks:**

3.3 FINAL DRIVE

Make: Chevrolet **Model:** Salisbury, 10 or 12 bolt
Type: Live rear axle
Wheel drive method: Shaft
Ratios: Various
Differential type: Limited slip

3.4 TRANSMISSION SHAFTS (EXPOSED)

Number: One
Description: Open tail shaft

3.5 WHEELS & TYRES

Wheel type - Original:	Disc	**Material - Original:**	Steel
Allowed:	Cast	**Allowed:**	Alloy
Fixture method:	Studs	**No. studs:**	Five
Wheel dia. & rim width:	**FRONT**		**REAR**
Original:	14 x 5 inch		14 x 5 inch
Allowed:	15 x 8 inch		15 x 8 inch
Tyres original:	14 x 6.95 inch		14 x 6.95 inch
Tyres allowed:	60% minimum aspect ratio, refer approved tyre list.		

SECTION 4 - GENERAL

4.1 FUEL SYSTEM

Tank Location:	Boot	**Capacity:**	61 litre
Fuel pump type and location:	Mechanical, engine block	**Make:**	AC

4.2 ELECTRICAL SYSTEM

Voltage:	Twelve	**Alternator:**	Fitted
Battery Location:	Engine compartment		

4.3 BODYWORK

Type:	Closed	**Material:**	Steel
No. of seats:	Five	**No. doors:**	Two

4.4 DIMENSIONS

Track - Front:	1443 mm	**Rear:**	1430 mm
Wheelbase:	2794 mm	**Overall length:**	4648 mm
Dry weight:	1265 kg		

4.5 SAFETY EQUIPMENT

Refer applicable Group Regulations

Appendix

Spare part 10066034 GM performance parts replacement small block 305, 327 & 350, four bolt design with split rear seal.

BLOCK CASTING IDENTIFICATION

3959512	3852174	3903352	3791362	3955618	3782870	3858180
3789817	3970010	3858190	3789817	3892657	3858174	3914678
3866657	3794460	3782870	3892657	3932386	3876132	

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 2.02" in diameter for the inlet, and 1.60" 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 matching in the cross hatched area for the inlet and exhaust ports to manifold to a maximum of the 12 mm 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. Valve seat cutting/grinding is allowed, but the original valve sizes of 2.02" inlet and 1.60" 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.

   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.