



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:** Holden                      **Model:** HG Monaro GTS 350  
**Period of Original Manufacture:** July 1970 to 1971  
**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:** March. to Dec. 1969  
**Manufacturer:** Holden  
**Chassis no. from:** 81837G\$\$?????  
                                  \$\$ = assembly plant code, ?????? = sequence number  
**Chassis no. location:** Chassis rail  
**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:** Semi elliptical leaf  
**Damper type:** Telescopic **Adjustable:** No  
**Anti-sway bar:** None  
**Suspension adjustable:** Yes **Method:** Height

### **1.4 STEERING**

**Type:** Recirculation ball **Make:** Holden

### **1.5 BRAKES**

	<b>Front</b>	<b>Rear</b>
<b>Type:</b>	Disc	Drum
<b>Dimensions:</b>	10 ½ x 5/8 inch	10 x 2 inch
<b>Material:</b>	Cast iron	Cast iron
<b>No. cylinders/pots per wheel:</b>	Two	One
<b>Actuation:</b>	Hydraulic	Hydraulic
<b>Caliper Make:</b>	Chevrolet	
<b>Caliper Type:</b>	Fixed	
<b>Caliper Material:</b>	Cast iron	
<b>Master cylinder make:</b>	GM	<b>Type:</b> Duel
<b>Adjustable bias:</b>	No	
<b>Servo Fitted:</b>	Yes	

## **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:** 88.392 mm  
**Capacity - original:** 5733 cc **Max. allowed:** 5904 cc  
**Cooling method:** Water  
**Identifying marks:** Refer Appendix for allowed casting numbers, **New block allowed**

### **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  
**Carburettor number:** One  
**Type:** Four barrel  
**Model:** Quadrajets  
**Size:** 750

## SECTION 3 - TRANSMISSION

### 3.1 CLUTCH

**Make:** Various  
**Type:** Diaphragm  
**Diameter:** 11 inch  
**Actuation:** Hydraulic / Mechanical  
**No. of Plates:** One

### 3.2 TRANSMISSION

**Type:** Synchromesh  
**Make:** GM, Saginaw  
**No. forward speeds:** Four  
**Gearbox location:** Behind engine  
**Gear change type and location:** H pattern, remote floor shift  
**Case material:** Cast iron  
**Identifying marks:** N/A

### 3.3 FINAL DRIVE

**Make:** Chevrolet  
**Type:** Live rear axle  
**Model:** Salisbury, 10 bolt  
**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

<b>Wheel type - Original:</b>	Disc	<b>Material - Original:</b>	Steel
<b>Allowed:</b>	Cast	<b>Allowed:</b>	Alloy
<b>Fixture method:</b>	Studs	<b>No. studs:</b>	Five
<b>Wheel dia. &amp; rim width:</b>	<b>FRONT</b>	<b>REAR</b>	
<b>Original:</b>	14 x 6 inch	14 x 6 inch	
<b>Allowed:</b>	15 x 8 inch	15 x 8 inch	
<b>Tyres allowed:</b>	60% minimum aspect ratio, refer approved tyre list.		

## SECTION 4 - GENERAL

### 4.1 FUEL SYSTEM

<b>Tank Location:</b>	Boot	<b>Capacity:</b>	N/A
<b>Fuel pump type and location:</b>	Mechanical, engine block	<b>Make:</b>	GM

### 4.2 ELECTRICAL SYSTEM

<b>Voltage:</b>	Twelve	<b>Alternator:</b>	Fitted
<b>Battery Location:</b>	Engine compartment		

### 4.3 BODYWORK

<b>Type:</b>	Closed	<b>Material:</b>	Steel
<b>No. of seats:</b>	Five	<b>No. doors:</b>	Two

### 4.4 DIMENSIONS

<b>Track - Front:</b>	1501 mm	<b>Rear:</b>	1501 mm
<b>Wheelbase:</b>	2819 mm	<b>Overall length:</b>	4694 mm
<b>Dry weight:</b>	1497 kg		

### 4.5 SAFETY EQUIPMENT

*Refer applicable Group Regulations*

#### ADDITIONAL INFORMATION

Muncie Transmission was never factory fitted to this vehicle

#### Appendix

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

#### Engine Block Casting Numbers

3782870	3790721	3791362	3858174	3858180	3892657	3903352
3914660	3914678	3932386	3932388	395618	3970010	3970014
3970016						

OR OTHERS BY SPECIFIC APPROVAL

#### 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

## 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.