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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:** HQ Kingswood (V8)
Period of Original Manufacture: 1971 to 1974
CAMS Historic Group: Nc
Date of issue of this document: 24 Jan 2018



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

SECTION 1 - CHASSIS

1.1 CHASSIS FRAME

Description: Unitary construction and sub frame
Period of Manufacture: June 1971 to 1974
Manufacturer: GM Holden
Chassis no. from: HQ80469
Chassis no. location: Firewall
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, toe by tie rods

1.3 REAR SUSPENSION

Description: Live axle with trailing arms
Spring medium: Coil
Damper type: Telescopic **Adjustable:** No
Anti-sway bar: No
Suspension adjustable: By spring height

1.4 STEERING

Type: Recirculating ball **Make:** GMH

1.5 BRAKES

	Front	Rear
Type:	Disc – Vented	Drum
Dimensions:	279 mm dia.	254 mm dia.
Material:	Cast iron	Cast iron
No. cylinders/pots per wheel:	Two	One
Actuation:	Hydraulic	Hydraulic
Caliper Make:	PBR or Girling	
Caliper Type:	Split block	
Caliper Material:	Cast iron or Aluminium	
Master cylinder make:	PBR or Girling	Type: Tandem
Adjustable bias:	No	
Servo Fitted:	Yes	

SECTION 2 - ENGINE

2.1 ENGINE

Make: GM Holden
Model: 308
No. cylinders: Eight **Configuration:** Vee
Cylinder block material: Cast iron **Two/Four Stroke:** Four
Bore - Original: 101.6 mm **Max. allowed:** 103.01 mm
Stroke : 77.787 mm
Capacity - original: 5045 cc **Max. allowed:** 5195 cc
Cooling method: Liquid
Identifying marks: 308 cast on side of block , engine number prefix is QT
Comments: Four bolt mains blocks not permitted

2.2 CYLINDER HEAD

Make: GM Holden
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: "HC"

2.3 LUBRICATION

Method: Wet sump
Oil cooler standard: No

2.4 IGNITION SYSTEM

Type: Points, coil & distributor
Make: Bosch

2.5 FUEL SYSTEM

Carburettor Make: GM Rochester **Model:** Quadrajets
Carburettor number: One **Size:** 750 CFM

SECTION 3 - TRANSMISSION

3.1 CLUTCH

Make: OEM, various
Type: Diaphragm
Diameter: 11 inch **No. of Plates:** One
Actuation: Hydraulic

3.2 TRANSMISSION

Type: Synchronized
Make: GM M20 or M21
No. forward speeds: Four **Gearbox location:** Attached to engine
Gear change type and location: Remote on the floor
Case material: Cast iron

Comments:

Allowed Substitution - The GM Muncie alloy case 4 speed gearbox.
The original Bell housing to be replaced by either the suitable Castlemain Rod Shop bell housing or the suitable Dellow bell housing. The only modification required for the floor pan is for the installation of the shifter assembly.

3.3 FINAL DRIVE

Make: GM **Model:** HQ
Type: Salisbury or banjo
Wheel drive method: Rear
Ratios: Various
Differential type: Free /open
Comments: Refer appendix for component substitution with GM 10 bolt centre, 10 bolt round cover, 8.5" ring gear with 10-ring gear bolts, HQ axle tubes to be reused.

3.4 TRANSMISSION SHAFTS (EXPOSED)

Number: One
Description: Open tailshaft

3.5 WHEELS & TYRES

Wheel type - Original:	Disc	Material - Original:	Steel
Allowed:	Cast	Allowed:	Aluminium alloy
Fixture method:	Nuts	No. studs:	Five
Wheel dia. & rim width:	FRONT	REAR	
Original:	6 x 14 inch	6 x 14 inch	
Allowed:	8 x 15 inch	8 x 15 inch	
Tyres original:	ER70H14		
Tyres allowed:	60% minimum aspect ratio, refer approved tyre list.		

SECTION 4 - GENERAL

4.1 FUEL SYSTEM

Tank Location:	Under boot floor	Capacity:	74 litres
Fuel pump type and location:	Mechanical / block	Make:	GMH

4.2 ELECTRICAL SYSTEM

Voltage:	12	Alternator:	Fitted
Battery Location:	Engine compartment		

4.3 BODYWORK

Type:	Closed	Material:	Steel
No. of seats:	Five or six	No. doors:	Four
Comment:	Only modification allowed is to the floor pan for the installation of the shifter assembly when the GM Muncie alloy case 4 speed gearbox is fitted.		

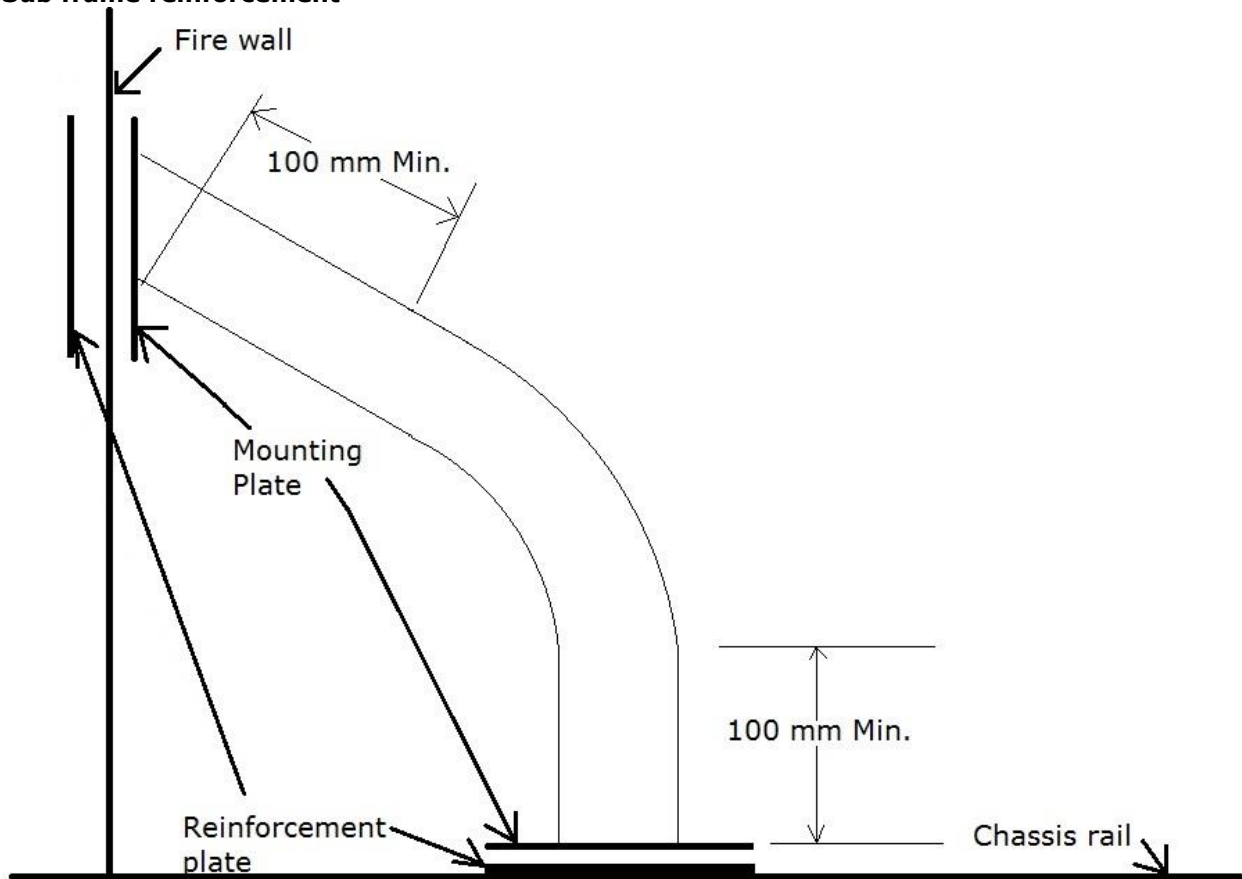
4.4 DIMENSIONS

Track - Front:	1527mm	Rear:	1527 mm
Wheelbase:	2819 mm	Overall length:	4763 mm
Dry weight:	1125 kg		

4.5 SAFETY EQUIPMENT

Refer applicable Group Regulations

Sub frame reinforcement



Requirements of sub frame reinforcements

Reinforcement plates:

On chassis rail – minimum of 8 mm thickness. To be the same size of tube mounting plate.
Firewall plate - 3 mm mild steel plate same size of tube mounting plate.
Maximum size of each mounting & reinforcement plates is 75 x 75 mm or 56.25 cm².

Reinforcement tube:

To be round mild steel tube 38mm dia. With 2.5 mm wall thickness.
Minimum length of straight tube from the end of the bent to the mounting plate is to be 100 mm.
The bend in the reinforcement tube is to be a included angle between 90° and 120°.

Location:

Lower chassis rail mounting point is on the chassis rail. Location is allowed from the firewall to 200 mm forward of the front wheel centre line.
The upper mount on the firewall is not to be aligned with any part of the roll cage.
The locating area on the firewall is defined by a rectangle within the following parameters.
The vertical area is from the top of the chassis rail to the top of the firewall.
The horizontal area is from the outer edge of the chassis rail (where it contacts the firewall) to 300 mm towards the centre line of the vehicle.

Mounting:

Chassis reinforcement plate to be welded to chassis rail, drill & tapped to allow mounting plate attachment.
Firewall reinforcement plate is to be bolted through the firewall & tube mounting plate.
Each mounting point to incorporate at least two fasteners having the minimum diameter of M8 and minimum quality 8.8 (ISO standard), self-locking or fitted with lock washers.

Real axle centre approved replacement. GM Holden HQ rear axle centre is allowed to be replaced with GM USA 10 bolt coil spring rear axle assemble centre and associated crown wheel & pinion.

GM USA 10 bolt rear axle assemble centre identification.

Bolt pattern is a circle; Casting lugs at 5 & 7 O'clock positions

