



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 Motorsport Australia Manual of Motor Sport.

Make of Car:	Holden	Model:	HQ Kingswood (V8)
Period of Original Manufacture:	1971 to 1974		
Motorsport Australia Historic Group:	Nc		
Date of issue of this document:	24 Jan 2018		



Update Log	
October 2020	308 or 5.0 cast on side of block. GM Holden full production cast iron blocks only.
October 2020	Four bolt mains block and 4 bolt conversions permitted.

Refer to Motorsport Australia Manual, 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
Comment:	

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
Comment:			

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		
Comment:			

1.4 STEERING			
Type:	Recirculating ball	Make:	GMH
Comment:			

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		
Comment:			

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 or 5.0 cast on side of block. GM Holden full production cast iron blocks only.		
Comment:	Four bolt mains block and 4 bolt conversions 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"				
Comment:					

2.3 LUBRICATION			
Method:	Wet sump		
Oil cooler standard:	No		
Comment:			

2.4 IGNITION SYSTEM	
Type:	Points, coil & distributor
Make:	Bosch
Comment:	

2.5 FUEL SYSTEM			
Carburettor Make:	GM Rochester	Model:	Quadrajets
Carburettor number:	One	Size:	750 CFM
Comment:			

SECTION 3 – TRANSMISSION

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

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:	<p>Allowed Substitution - The GM Muncie alloy case 4 speed gearbox.</p> <p>The original Bell housing to be replaced by either the suitable Castlemaine 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.</p>		

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 A 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
Comment:	

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.		
Comment:			

SECTION 4 – GENERAL

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

4.2 ELECTRICAL SYSTEM			
Voltage:	12	Alternator:	Fitted
Battery Location:	Engine compartment		
Comment:			

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		
Comment:			

4.5 SAFETY EQUIPMENT			
<i>Refer applicable Group Regulations</i>			

Appendix A

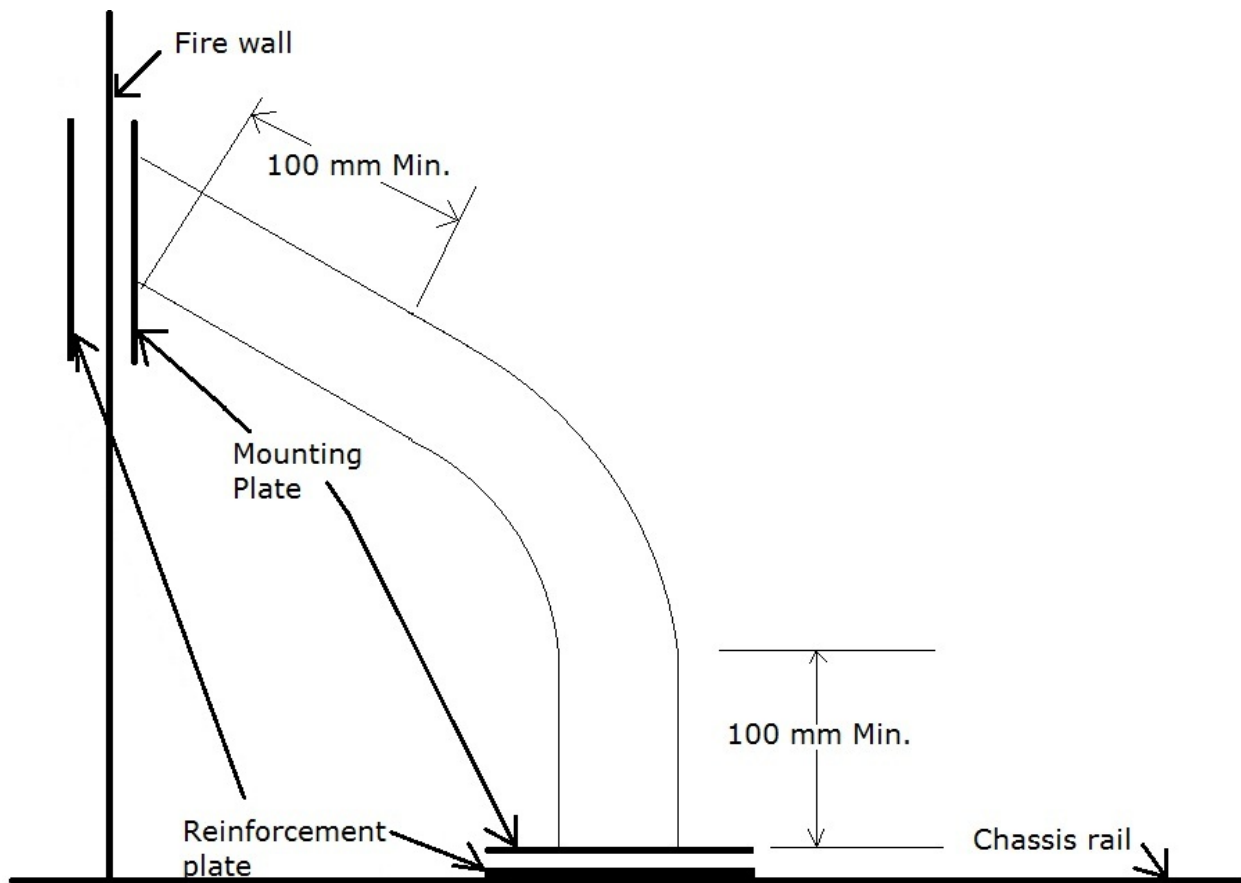
Rear axle centre approved replacement. GM Holden HQ rear axle centre is allowed to be replaced with GM USA 10 bolt coil spring rear axle assembly centre and associated crown wheel & pinion.

GM USA 10 bolt rear axle assembly centre identification.

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



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.