



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: Valiant Charger **Model:** R/T E38
Period of Original Manufacture: 1971
CAMS Historic Group: Nc
Date of issue of this document: July 1997 – Revised August 2014



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

SECTION 1 - CHASSIS

1.1 CHASSIS FRAME

Description: Unitary
Period of Manufacture: August 1971 to June 1972
Manufacturer: Chrysler Australia
Chassis no. from: VH7S29_____
Chassis no. location: Firewall RHS
Material: Steel
Comments: Chassis D363 (B-1971, C-1972) remaining 5 numbers are the engine number

1.2 FRONT SUSPENSION

Description: Independent with torsion bar
Spring Medium: Torsion Bar
Damper Type: Telescopic **Adjustable:** No
Anti-sway bar: Yes **Adjustable:** No
Suspension adjustable: Yes **Method:** Camber and Caster

1.3 REAR SUSPENSION

Description: Semi Elliptic Hotchkiss
Spring medium: Semi Elliptic Leaf
Damper type: Telescopic **Adjustable:** No
Anti-sway bar: No
Suspension adjustable: No

1.4 STEERING

Type: Recirculating Ball **Make:**
Comment: 16:1 ratio steering box with A84 & A87 Option

1.5 BRAKES

| | Front | Rear |
|--------------------------------------|---------------------------------------|-----------------------|
| Type: | Disc, Vented | Drum |
| Dimensions: | 279.4 (11") | 228 (9") finned drums |
| Material: | Cast Iron | Cast Iron |
| No. cylinders/pots per wheel: | Two | One |
| Actuation: | Hydraulic | Hydraulic |
| Caliper Make: | | |
| Caliper Type: | | |
| Caliper Material: | Cast Iron | |
| Master cylinder make: | | Type: Tandem |
| Adjustable bias: | No | |
| Servo Fitted: | Yes | |
| Comment: | B51 Option included power Brake Servo | |

SECTION 2 - ENGINE

2.1 ENGINE

Make: Chrysler
Model: Hemi
No. cylinders: 6
Configuration: Inline
Cylinder block material: Cast Iron
Two/Four Stroke: Four
Bore - Original: 99.31 mm
Max. allowed: 100.81 mm
Stroke - original: 93.47 mm
Capacity - original: 4344 cc
Max. allowed: 4476 cc
Cooling method: Water
Identifying marks: D265
Comment: E38 Option was the 6 pack engine – 280 BHP

2.2 CYLINDER HEAD

Make: Chrysler
No. of valves/cylinder: **Inlet:** One **Exhaust:** One
No. of ports total: **Inlet:** Six **Exhaust:** Six
No. of camshafts: One **Location:** Block **Drive:** Chain
Valve actuation: Pushrod
Spark plugs/cylinder: One
Identifying marks:

2.3 LUBRICATION

Method: Wet Sump **Oil cooler standard:** None
Comment: External single stage, wet, belt driven oil pump allowed. Refer appendix

2.4 IGNITION SYSTEM

Type: Distributor & Coil **Make:**

2.5 FUEL SYSTEM

Carburettor Make: Weber **Model:** DCOE
Carburettor number: Three **Size:** 45

SECTION 3 - TRANSMISSION

3.1 CLUTCH

Make: Borg Beck **Type:** Dry
Diameter: **No. of Plates:** Two
Actuation:

3.2 TRANSMISSION

Type: Single Rail **Make:** Borg Warner
No. forward speeds: Three **Gearbox location:** Behind Engine
Gear change type and location: H Pattern Floor Mounted
Case material: Alloy

3.3 FINAL DRIVE

Type: Live Axle
Make: Borg Warner **Model:** Sure Grip
Wheel drive method: Rear
Ratios: 2.92, 3.23, 3.5
Differential type: Limited Slip
Comment: D53 Option – Sure Grip 3.23 Rear Axle Ratio
D56 Option – Sure Grip 3.50 Rear Axle Ratio

3.4 TRANSMISSION SHAFTS (EXPOSED)

Number: One
Description: Tubular Tail Shaft

3.5 WHEELS & TYRES

| | | | |
|------------------------------------|---|-----------------------------|-------|
| Wheel type - Original: | A84 Option | Material - Original: | Alloy |
| Allowed: | | Allowed: | Alloy |
| Fixture method: | Studs | No. studs: | 5 |
| Wheel dia. & rim width: | FRONT | REAR | |
| Original: | 7" x 14" | 7" x 14" | |
| Allowed: | 8" x 15" | 8" x 15" | |
| Tyres original: | ER70/14 | | |
| Tyres allowed: | 60% minimum aspect ratio, refer approved tyre list. | | |

SECTION 4 - GENERAL

4.1 FUEL SYSTEM

| | | | |
|-------------------------------------|--|------------------|----------|
| Tank Location: | Rear | Capacity: | 78 litre |
| Fuel pump type and location: | Engine Block | Make: | Chrysler |
| Comments: | A84 option was a track pack that included 157.5l fuel tank and twin filler caps mounted on rear quarter panels. A87 option was a track pack that deleted the 157.5l fuel tank | | |

4.2 ELECTRICAL SYSTEM

| | | | |
|--------------------------|--------------------|------------------------------|------------|
| Voltage: | 12 | Alternator or Dynamo: | Alternator |
| Battery Location: | Engine Compartment | | |

4.3 BODYWORK

| | | | |
|----------------------|--|-------------------|-------|
| Type: | Fixed Head Coupe | Material: | Steel |
| No. of seats: | Five | No. doors: | |
| Comments: | A66 Options include Hood & Fender Dress up Package | | |

4.4 DIMENSIONS

| | | | |
|-----------------------|---------|------------------------|------|
| Track - Front: | 1634 | Rear: | 1644 |
| Wheelbase: | 2667 | Overall length: | 4564 |
| Dry weight: | 1472 kg | | |

4.5 SAFETY EQUIPMENT

Refer applicable Group Regulations

Appendix 1

External oil pump

Three options of pump brands permitted, Johnson, Moroso and SCP
The pumps are to be external single stage, wet, belt driven pump.

Maximum width of belt is to be 25mm

Maximum width of rotor / gear on pump is 1.1 inches

Mounting is to be below the horizontal centreline of the water pump.

Piping / Plumbing to be a maximum size of dash 12.

One hose in and one hose out of pump, single pick up, single return, can be via oil cooler / filter.

Pipes connected to the pump must be black in colour