



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 E49  
**Period of Original Manufacture:** June 1972  
**CAMS Historic Group:** Nc  
**Date of issue of this document:** 14<sup>th</sup> May 1997 – Revised 28<sup>th</sup> April 2014



Comment: Note the no "4" on the bumble bee stripe this indicates that it is an E49 – included with A66 Hood and fender Dress-up package

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:** Unitary  
**Period of Manufacture:** June 1972 to March 1973  
**Manufacturer:** Chrysler Australia  
**Chassis no. from:** VH7S29\_\_\_\_  
**Chassis no. location:** Firewall RHS  
**Material:** Steel  
**Comments:** Chassis D364C (C-1972, D-1973)

### **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:** Chrysler  
**Comment:** 16:1 ratio steering box with A84 & A87 Option

### **1.5 BRAKES**

	<b>Front</b>	<b>Rear</b>
<b>Type:</b>	Disc, vented	Drum
<b>Dimensions:</b>	279.4 (11") x 24.6 mm	228 (9") x 50mm finned drums
<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>		
<b>Caliper Type:</b>		
<b>Caliper Material:</b>	Cast Iron	
<b>Master cylinder make:</b>		<b>Type:</b> Tandem
<b>Adjustable bias:</b>	No	
<b>Servo Fitted:</b>	Yes	
<b>Comment:</b>	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:** E49 Option was the 6 pack engine – 302 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:** Hydraulic

### **3.2 TRANSMISSION**

**Type:** Single Rail **Make:** Borg Warner  
**No. forward speeds:** Four **Gearbox location:** Behind Engine  
**Gear change type and location:** H Pattern Floor Mounted  
**Case material:** Alloy  
**Comment:** D20 Option was 4 speed manual transmission

### **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

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

## SECTION 4 - GENERAL

### 4.1 FUEL SYSTEM

<b>Tank Location:</b>	Rear	<b>Capacity:</b>	78 litre
<b>Fuel pump type and location:</b>	Engine Block	<b>Make:</b>	Chrysler
<b>Comments:</b>	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

<b>Voltage:</b>	12	<b>Alternator or Dynamo:</b>	Alternator
<b>Battery Location:</b>	Engine Compartment		

### 4.3 BODYWORK

<b>Type:</b>	Fixed Head Coupe	<b>Material:</b>	Steel
<b>No. of seats:</b>	Five	<b>No. doors:</b>	Two
<b>Comments:</b>	A66 Options include Hood & Fender Dress up Package		

### 4.4 DIMENSIONS

<b>Track - Front:</b>	1634 mm	<b>Rear:</b>	1644 mm
<b>Wheelbase:</b>	2667 mm	<b>Overall length:</b>	4564 mm
<b>Dry weight:</b>	1349 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