



5TH CATEGORY - HISTORIC RACING  
**GROUP N**  
 APPROVED VEHICLE SPECIFICATION

This form details the approved specifications of individual vehicle models in the 5th Category Historic car group. To be issued with an 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.

<b>Make of Car:</b>	Plymouth Valiant	<b>Model:</b>	Barracuda
<b>Period of Original Manufacture:</b>	September 1963 - 1964		
<b>Motorsport Australia Historic Group:</b>	Nb		
<b>Date of Issue of this Document:</b>	1 January 2024		



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

***Update Log***

1/1/2024	Inclusion of kerb and minimum racing weights

## SECTION 1 - CHASSIS

### 1.1. CHASSIS

<b>Description:</b>	Unitary construction
<b>Period of Manufacture:</b>	September 1963 - 1964
<b>Manufacturer:</b>	Chrysler
<b>Chassis Number From:</b>	1000001 - 135403
<b>Chassis Number location:</b>	Left Front Door Hinge Pillar
<b>Material:</b>	Steel
<b>Comments</b>	None

### 1.2. FRONT SUSPENSION

<b>Description:</b>	Independent - upper wishbone & lower arm with castor rod		
<b>Spring Medium:</b>	Torsion bar		
<b>Damper Type:</b>	Telescopic	<b>Adjustable:</b>	No
<b>Anti-sway bar:</b>	No	<b>Adjustable:</b>	N/A
<b>Suspension adjustable:</b>	Yes	<b>Method:</b>	Caster, camber, ride height
<b>Comments:</b>	Refer to Appendix A		

### 1.3. REAR SUSPENSION

<b>Description:</b>	Live rear axle		
<b>Spring Medium:</b>	Semi elliptical leaf		
<b>Damper Type:</b>	Telescopic	<b>Adjustable:</b>	No
<b>Anti-sway bar:</b>	No	<b>Adjustable:</b>	N/A
<b>Suspension adjustable:</b>	No	<b>Method:</b>	N/A
<b>Comments:</b>	Refer to Appendix A		

### 1.4. STEERING

<b>Type:</b>	Recirculating ball	<b>Make:</b>	Chrysler
<b>Power steering</b>	Optional		
<b>Comments</b>	None		

### 1.5. BRAKES

	Front	Rear
<b>Type:</b>	Disc or Drum	Drum
<b>Dimensions:</b>	Disc - 279.4 mm x 56 mm Drum – 229 mm x 56 mm	Drum – 229 mm x 56 mm
<b>Material of drum/disc:</b>	Cast iron	Cast iron
<b>No. cylinders/pots per wheel:</b>	Disc – One Drum - Two	One
<b>Actuation:</b>	Hydraulic	Hydraulic
<b>Caliper make:</b>	Kelsey Hayes	
<b>Caliper type:</b>	Sliding	
<b>Material:</b>	Cast iron	
<b>Master cylinder make:</b>	Girlock	
<b>Type:</b>	Tandem	
<b>Adjustable bias:</b>	No	
<b>Servo Fitted:</b>	Disc – Yes Drum – No	
<b>Comments:</b>	None	

**SECTION 2 - ENGINE**

**2.1. ENGINE – 170 ci**

<b>Make:</b>	Chrysler		
<b>Model:</b>	Slant 6		
<b>No. cylinders:</b>	Six	<b>Configuration:</b>	In line
<b>Cylinder Block-material:</b>	Cast iron	<b>Two/Four Stroke:</b>	Four
<b>Bore - Original:</b>	86 mm	<b>Max allowed:</b>	89.5 mm
<b>Stroke - original:</b>	79.3 mm	<b>Max allowed:</b>	79.3 mm
<b>Capacity - original:</b>	2788 cc	<b>Max allowed:</b>	3000 cc
<b>Identifying marks:</b>	N/A		
<b>Cooling method:</b>	Liquid		
<b>Comments:</b>	Bore may be varied and/or stroke reduced to attain capacity limit for Class NbB - (3000 cc)		

**2.2. CYLINDER HEAD**

<b>Make:</b>	Chrysler		
<b>No. of valves/cylinder:</b>	Two	<b>Inlet:</b> One	<b>Exhaust:</b> One
<b>No. of ports total:</b>	Twelve	<b>Inlet:</b> Six	<b>Exhaust:</b> Six
<b>No. of camshafts:</b>	One	<b>Location:</b> Block	<b>Drive:</b> Chain
<b>Valve actuation:</b>	Pushrod and rocker		
<b>Spark plugs/cylinder:</b>	One		
<b>Identifying marks:</b>	N/A		
<b>Comments:</b>	None		

### 2.1. ENGINE – 225 ci

<b>Make:</b>	Chrysler		
<b>Model:</b>	Slant 6		
<b>No. cylinders:</b>	Six	<b>Configuration:</b>	In line
<b>Cylinder Block-material:</b>	Cast iron	<b>Two/Four Stroke:</b>	Four
<b>Bore - Original:</b>	86 mm	<b>Max allowed:</b>	89.5 mm
<b>Stroke - original:</b>	104.7 mm	<b>Max allowed:</b>	104.7 mm
<b>Capacity - original:</b>	3690 cc	<b>Max allowed:</b>	4500 cc
<b>Identifying marks:</b>	N/A		
<b>Cooling method:</b>	Liquid		
<b>Comments:</b>	Bore may be varied and/or stroke reduced to attain capacity limit for Class NbA2 - (4500 cc)		

### 2.2. CYLINDER HEAD

<b>Make:</b>	Chrysler		
<b>No. of valves/cylinder:</b>	Two	<b>Inlet:</b> One	<b>Exhaust:</b> One
<b>No. of ports total:</b>	Twelve	<b>Inlet:</b> Six	<b>Exhaust:</b> Six
<b>No. of camshafts:</b>	One	<b>Location:</b> Block	<b>Drive:</b> Chain
<b>Valve actuation:</b>	Pushrod and rocker		
<b>Spark plugs/cylinder:</b>	One		
<b>Identifying marks:</b>	N/A		
<b>Comments:</b>	None		

**2.1. ENGINE – 273 ci**

<b>Make:</b>	Chrysler		
<b>Model:</b>	V8		
<b>No. cylinders:</b>	Eight	<b>Configuration:</b>	Vee
<b>Cylinder Block-material:</b>	Cast iron	<b>Two/Four Stroke:</b>	Four
<b>Bore - Original:</b>	92.2 mm	<b>Max allowed:</b>	Variable
<b>Stroke - original:</b>	84.07 mm	<b>Max allowed:</b>	84.07 mm
<b>Capacity - original:</b>	4477 cc	<b>Max allowed:</b>	See comments
<b>Identifying marks:</b>	N/A		
<b>Cooling method:</b>	Liquid		
<b>Comments:</b>	Bore may be varied and/or stroke reduced to attain capacity limit for Class NbA1 - (over 4500 cc)		

**2.2. CYLINDER HEAD**

<b>Make:</b>	Chrysler		
<b>No. of valves/cylinder:</b>	Two	<b>Inlet:</b>	One
		<b>Exhaust:</b>	One
<b>No. of ports total:</b>	Eight	<b>Inlet:</b>	Four
		<b>Exhaust:</b>	Four
<b>No. of camshafts:</b>	One	<b>Location:</b>	Block
		<b>Drive:</b>	Chain
<b>Valve actuation:</b>	Pushrod and rocker		
<b>Spark plugs/cylinder:</b>	One		
<b>Identifying marks:</b>	N/A		
<b>Comments:</b>	None		

**2.3. LUBRICATION**

<b>Method:</b>	Wet sump	<b>Oil tank location:</b>	N/A
<b>Dry sump pump type:</b>	N/A	<b>Location:</b>	N/A
<b>Oil cooler standard:</b>	No	<b>Location:</b>	N/A
<b>Comments:</b>	None		

**2.4. IGNITION SYSTEM**

<b>Type:</b>	Points, coil & distributor		
<b>Make:</b>	Chrysler		
<b>Comments</b>	Breakerless electronic ignition permitted		

**2.5. FUEL SYSTEM**

<b>Carburettor Make – 170 and 225:</b>	Carter	<b>Model:</b>	2BBL
<b>Carburettor Make – 273:</b>	Carter	<b>Model:</b>	2BBL 4BBL optional
<b>Carburettor Number:</b>	One		
<b>Size:</b>	Various		
<b>Fuel injection Make:</b>	N/A	<b>Type:</b>	N/A
<b>Supercharged:</b>	No	<b>Type:</b>	N/A
<b>Comments:</b>	None		

**SECTION 3 - TRANSMISSION**

**3.1. CLUTCH**

<b>Make:</b>	Chrysler
<b>Type:</b>	Dry plate
<b>Diameter:</b>	235 mm
<b>No. of Plates:</b>	One
<b>Actuation:</b>	Mechanical – linkage
<b>Comments:</b>	None

**3.2. TRANSMISSION**

<b>Type:</b>	Synchromesh
<b>Make:</b>	Chrysler A-833
<b>Gearbox location:</b>	Behind engine
<b>No. forward speeds:</b>	Four
<b>Gearchange type and location:</b>	Floor lever
<b>Case material:</b>	Cast iron
<b>Identifying marks:</b>	Front input bearing retainer (snout) or the extension housing/tailshaft.
<b>Comments:</b>	3 speed manual and 3 speed automatic are also available

**3.3. FINAL DRIVE**

<b>Make:</b>	Chrysler	<b>Model:</b>	BW
<b>Type:</b>	Live axle		
<b>Ratios:</b>	Various		
<b>Differential type:</b>	Hypoid LSD		
<b>Comments:</b>	None		

**3.4. TRANSMISSION SHAFTS (EXPOSED)**

<b>Number:</b>	One
<b>Location:</b>	Gearbox to final drive
<b>Description:</b>	Open tail shaft with twin uni joints
<b>Comments:</b>	None

**3.5. WHEELS & TYRES**

<b>Wheel type - Original:</b>	Pressed disc	<b>Material - Original:</b>	Steel
<b>Wheel type - Allowed:</b>	Alloy	<b>Material - Allowed:</b>	Aluminium
<b>Fixture method:</b>	Stud and nut	<b>No. studs:</b>	Five
<b>Wheel dia. &amp; rim width</b>	<b>FRONT</b>		<b>REAR</b>
<b>Original:</b>	5" x 14" V8 – 5" x 14"		5" x 14" V8 – 5" x 14"
<b>Allowed</b>	6" x 15"		6" x 15"
<b>Tyre Section:</b>			
<b>Allowed:</b>	Refer approved tyre list.		
<b>Aspect ratio - minimum:</b>	60% minimum aspect ratio.		
<b>Comments:</b>	None		

## SECTION 4 GENERAL

### 4.1. FUEL SYSTEM

<b>Tank Location:</b>	Rear	<b>Capacity:</b>	80 litres
<b>Fuel pump, type:</b>	Mechanical on block	<b>Make:</b>	Various
<b>Comments:</b>	None		

### 4.2. ELECTRICAL SYSTEM

<b>Voltage:</b>	12	<b>Alternator fitted:</b>	Alternator
<b>Battery Location:</b>	Engine compartment		
<b>Comments:</b>	None		

### 4.3. BODYWORK

<b>Type:</b>	Sedan	<b>Material:</b>	Steel
<b>No. of seats:</b>	Four	<b>No. doors:</b>	Two
<b>Comments:</b>	None		

### 4.4. DIMENSIONS

<b>Track - Front:</b>	1420 mm	<b>Rear:</b>	1412 mm
<b>Wheelbase:</b>	2692 mm	<b>Overall length:</b>	4775 mm
<b>Approved Manufacturer's kerb weight:</b>	1335 kgs		
<b>Approved minimum racing weight:</b>	1308 kgs		
<b>Comments:</b>	None		

### 4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations
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## **Appendix A**

### **Suspension**

#### **Front**

Spring height adjustment permitted.

#### **Rear**

Spring height adjustment permitted.