



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.

| | | | |
|---|----------------|---------------|---|
| Make of Car: | Volvo | Model: | 140 Series 142S – 2 door 144 – 4 door |
| Period of Original Manufacture: | 1967 – 1971 | | |
| Motorsport Australia Historic Group: | Nc | | |
| Date of Issue of this Document: | 2 January 2024 | | |



Refer to The *Manual*, Historic Appendix, Vehicle Eligibility, General Requirements & Historic Touring Cars Group N Regulations for permitted modifications.

Update Log

| | |
|----------|---|
| 1/1/2024 | Inclusion of kerb and minimum racing weights |
| 2/1/2024 | Update of kerb and minimum racing weights |
| 2/1/2024 | Inclusion of aluminium front and rear bumpers |

SECTION 1 - CHASSIS

1.1. CHASSIS

| | |
|---------------------------------|-------------------------------|
| Description: | Unitary construction |
| Period of Manufacture: | 1967 – 1971 |
| Manufacturer: | Volvo |
| Chassis Number From: | Prefix 1423342***, 1443342*** |
| Chassis Number location: | Bulkhead – engine bay |
| Material: | Steel |
| Comments | None |

1.2. FRONT SUSPENSION

| | | | |
|-------------------------------|---|--------------------|------------------------|
| Description: | Independent – upper and lower wishbones | | |
| Spring Medium: | Coil | | |
| Damper Type: | Telescopic | Adjustable: | No |
| Anti-sway bar: | Yes | Adjustable: | No |
| Suspension adjustable: | Yes | Method: | Caster, camber and toe |
| Comments: | None | | |

1.3. REAR SUSPENSION

| | | | |
|-------------------------------|----------------|--------------------|-----|
| Description: | Live rear axle | | |
| Spring Medium: | Coil | | |
| Damper Type: | Telescopic | Adjustable: | No |
| Anti-sway bar: | No | Adjustable: | No |
| Suspension adjustable: | No | Method: | N/A |
| Comments: | None | | |

1.4. STEERING

| | | | |
|-----------------|--------------|--------------|-------|
| Type: | Worm and peg | Make: | Volvo |
| Comments | None | | |

1.5. BRAKES

| | Front | Rear |
|--------------------------------------|------------------|-----------------|
| Type: | Disc, solid | Disc, solid |
| Dimensions: | 272 mm x 12.8 mm | 295 mm x 9.6 mm |
| Material of drum/disc: | Cast iron | Cast iron |
| No. cylinders/pots per wheel: | Four | Two |
| Actuation: | Hydraulic | Hydraulic |
| Caliper make: | Volvo | |
| Caliper type: | Fixed | |
| Material: | Cast iron | |
| Master cylinder make: | Volvo | |
| Type: | Tandem | |
| Adjustable bias: | No | |
| Servo Fitted: | Yes | |
| Comments: | None | |

SECTION 2 - ENGINE

2.1. ENGINE

| | | | |
|-----------------------------------|-------------------------------|-------------------------|----------|
| Make: | Volvo | | |
| Model: | B18, B20 | | |
| No. cylinders: | Four | Configuration: | In line |
| Cylinder Block-material: | Cast iron | Two/Four Stroke: | Four |
| Bore – Original – B18: | 84.14 mm | Max allowed: | 85.64 mm |
| Stroke – original – B18: | 80 mm | Max allowed: | 80 mm |
| Capacity – original – B18: | 1780 cc | Max allowed: | 1842 cc |
| Bore – Original – B20: | 88.9 mm | Max allowed: | 90.4 mm |
| Stroke – original – B20: | 80 mm | Max allowed: | 80 mm |
| Capacity – original – B20: | 1986 cc | Max allowed: | 2052 cc |
| Identifying marks: | Left side of the engine block | | |
| Cooling method: | Liquid | | |
| Comments: | B20 engine introduced in 1969 | | |

2.2. CYLINDER HEAD

| | | | | | |
|--------------------------------|--------------------|------------------|-------|-----------------|------|
| Make: | Volvo | | | | |
| 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: | Gear |
| Valve actuation: | Pushrod and rocker | | | | |
| Spark plugs/cylinder: | One | | | | |
| Identifying marks: | N/A | | | | |
| Comments: | None | | | | |

2.3. LUBRICATION

| | | | |
|-----------------------------|----------|---------------------------|-----|
| Method: | Wet sump | Oil tank location: | N/A |
| Dry sump pump type: | N/A | Location: | N/A |
| Oil cooler standard: | No | Location: | N/A |
| Comments: | None | | |

2.4. IGNITION SYSTEM

| | |
|-----------------|---|
| Type: | Points, distributor & coil |
| Make: | Bosch |
| Comments | Breakerless electronic ignition permitted |

2.5. FUEL SYSTEM

| | | | |
|-----------------------------|------------------|---------------|-----------|
| Carburettor Make: | SU | Model: | HS6 |
| Carburettor Make: | Zenith Stromberg | Model: | 175CD-2SE |
| Carburettor Number: | Two | | |
| Size: | Various | | |
| Fuel injection Make: | N/A | Type: | N/A |
| Supercharged: | No | Type: | N/A |
| Comments: | None | | |

SECTION 3 - TRANSMISSION

3.1. CLUTCH

| | |
|-----------------------|-----------|
| Make: | Volvo |
| Type: | Diaphragm |
| Diameter: | 216 mm |
| No. of Plates: | One |
| Actuation: | Hydraulic |
| Comments: | None |

3.2. TRANSMISSION

| | |
|--------------------------------------|------------------------------------|
| Type: | Synchromesh |
| Make: | Volvo Volvo (Laycock overdrive) |
| Gearbox location: | Behind engine |
| No. forward speeds: | Four (plus overdrive if fitted) |
| Gearchange type and location: | Floor - direct |
| Case material: | Cast iron |
| Identifying marks: | N/A |
| Comments: | Overdrive optional |

3.3. FINAL DRIVE

| | | | |
|---------------------------|------------------|---------------|-----|
| Make: | Volvo | Model: | M40 |
| Type: | Live rear axle | | |
| Ratios: | Various | | |
| Differential type: | Hypoid bevel/LSD | | |
| Comments: | None | | |

3.4. TRANSMISSION SHAFTS (EXPOSED)

| | |
|---------------------|--------------------------------------|
| Number: | One |
| Location: | Gearbox to final drive |
| Description: | Open tail shaft with twin uni joints |
| Comments: | None |

3.5. WHEELS & TYRES

| | | | |
|-----------------------------------|-------------------------------|-----------------------------|----------------|
| Wheel type - Original: | Pressed disc | Material - Original: | Steel |
| Wheel type - Allowed: | Steel Alloy (period style) | Material - Allowed: | Steel Alloy |
| Fixture method: | Stud and nut | No. studs: | Five |
| Wheel dia. & rim width | FRONT | | REAR |
| Original: | 4.5" x 15" | | 4.5" x 15" |
| Allowed | 7" x 15" | | 7" x 15" |
| Tyre Section: | | | |
| Allowed: | Refer approved tyre list. | | |
| Aspect ratio - minimum: | 60% minimum aspect ratio. | | |
| Comments: | None | | |

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SECTION 4 GENERAL

4.1. FUEL SYSTEM

| | | | |
|-------------------------|---------------------|------------------|-----------|
| Tank Location: | Rear | Capacity: | 58 litres |
| Fuel pump, type: | Mechanical on block | Make: | Volvo |
| Comments: | None | | |

4.2. ELECTRICAL SYSTEM

| | | | |
|--------------------------|------------|---------------------------|-----------|
| Voltage: | 12 | Alternator fitted: | Generator |
| Battery Location: | Engine bay | | |
| Comments: | None | | |

4.3. BODYWORK

| | | | |
|----------------------|--|-------------------|-------------|
| Type: | Coupe or Sedan | Material: | Steel |
| No. of seats: | Four | No. doors: | 2 or 4 door |
| Comments: | Aluminium front and rear bumpers are permitted | | |

4.4. DIMENSIONS

| | | | |
|---|--|------------------------|---------|
| Track - Front: | 1350 mm | Rear: | 1350 mm |
| Wheelbase: | 2600 mm | Overall length: | 4640 mm |
| Approved Manufacturer's kerb weight: | 2 – door – 1113 kgs 4 – door – 1113 kgs | | |
| Approved minimum racing weight: | 2 – door – 1091 kgs 4 – door – 1091 kgs | | |
| Comments: | None | | |

4.5. SAFETY EQUIPMENT

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|------------------------------------|
| Refer applicable Group Regulations |
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Appendix