



5TH CATEGORY - HISTORIC RACING GROUP N APPROVED VEHICLE SPECIFICATION
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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:	Holden Torana	Model:	LC GTR-XU1
Period of Original Manufacture:	8/1970 – 11/1971		
Motorsport Australia Historic Group:	Nc		
Date of Issue of this Document:	1 January 2024		



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

Update Log

June 2018	Ian Moodie Cylinder Head permitted
1/1/2024	Inclusion of kerb and minimum racing weights

SECTION 1 - CHASSIS

1.1. CHASSIS

Description:	Unitary construction
Period of Manufacture:	1/1972 – 1973
Manufacturer:	Holden
Chassis Number From:	LJ00001S*
VIN:	82911CH100001
Chassis Number location:	Passenger side Inner front guard
Material:	Steel
Comments	VIN - 82911 prefix indicates that it is a GTR, J is for LJ and H1 is the plant code then it is the sequence number.

1.2. FRONT SUSPENSION

Description:	Double wishbone		
Spring Medium:	Coil		
Damper Type:	Telescopic	Adjustable:	No
Anti-sway bar:	Fitted	Adjustable:	No
Suspension adjustable:	Yes	Method:	Caster, camber and toe
Comments:	Refer to Appendix A		

1.3. REAR SUSPENSION

Description:	Live axle with trailing arms		
Spring Medium:	Coil		
Damper Type:	Telescopic	Adjustable:	No
Anti-sway bar:	No	Adjustable:	N/A
Suspension adjustable:	No	Method:	N/A
Comments:	Refer to Appendix A		

1.4. STEERING

Type:	Rack and pinion	Make:	GMH
Comments	None		

1.5. BRAKES

	Front	Rear
Type:	Disc, solid	Drum
Dimensions:	254 mm x 15 mm	228 mm diameter
Material of drum/disc:	Cast iron	Cast iron
No. cylinders/pots per wheel:	Two	One
Actuation:	Hydraulic	Hydraulic
Caliper make:	Girlock	
Caliper type:	Split	
Material:	Cast iron	
Master cylinder make:	PBR	
Type:	Tandem	
Adjustable bias:	No	
Servo Fitted:	Yes	
Comments:	None	

SECTION 2 - ENGINE

2.1. ENGINE

Make:	GMH		
Model:	Red 186		
No. cylinders:	Six	Configuration:	In-line
Cylinder Block-material:	Cast iron	Two/Four Stroke:	Four
Bore - Original:	92.07 mm	Max allowed:	93.57 mm
Stroke - original:	76.20 mm	Max allowed:	76.20 mm
Capacity - original:	3044 cc	Max allowed:	3144 cc
Identifying marks:	The engine number is on the engine boss, right hand side of the engine. It consists of a model identification number followed by a serial number that started at 1001 & ran consecutively regardless of the engine size. The pre Bathurst 1971 engines were stamped with a number that was prefixed with either 186X or 3100X i.e. 186X1001. The Bathurst 1971 XU1's were prefixed by CK & suffixed by an X i.e. CK1001X.		
Cooling method:	Liquid		
Comments:	None		

2.2. CYLINDER HEAD

Make:	GMH		
No. of valves/cylinder:	Two	Inlet: One	Exhaust: One
No. of ports total:	Nine	Inlet: Three	Exhaust: Six
No. of camshafts:	One	Location: Block	Drive: Gear
Valve actuation:	Pushrod and rocker		
Spark plugs/cylinder:	One		
Identifying marks:	N/A		
Comments:	The head fitted to the LC is a 161cu inch with larger valves & stronger springs. Any Holden 9 port rounded shoulder cylinder head may be used. The Ian Moodie XU1 Cylinder Head casting No 2815843 is allowed. See Appendix A.		

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:	Delco Remy		
Comments	Breakerless electronic ignition permitted		

2.5. FUEL SYSTEM

Carburettor Make:	Zenith Stromberg	Model:	150 CD
Carburettor Number:	Three		
Size:	1.75 inch		
Fuel injection Make:	N/A	Type:	N/A
Supercharged:	No	Type:	N/A
Comments:	None		

SECTION 3 - TRANSMISSION

3.1. CLUTCH

Make:	GMH
Type:	Diaphragm
Diameter:	219 mm
No. of Plates:	One
Actuation:	Mechanical
Comments:	None

3.2. TRANSMISSION

Type:	Synchromesh
Make:	GMH M20 or Opel
Gearbox location:	Behind engine
No. forward speeds:	Four
Gearchange type and location:	H pattern floor mounted
Case material:	Cast iron
Identifying marks:	N/A
Comments:	Pre Bathurst 1971 XU1's were fitted with the 'Opel' gearbox as fitted to the 186S Holden Kingswood etc. The stronger M20 box was fitted for Bathurst 1971.

3.3. FINAL DRIVE

Make:	GMH	Model:	N/A
Type:	N/A		
Ratios:	Various		
Differential type:	Free/Open		
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:	Alloy (period style)	Material - Allowed:	Alloy (period style)
Fixture method:	Studs	No. studs:	Five
Wheel dia. & rim width	FRONT		REAR
Original:	5.5" x 13"		5.5" x 13"
Allowed	7" x 13"		7" x 13"
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:	Boot	Capacity:	77 litres
Fuel pump, type:	Mechanical, engine block	Make:	AC
Comments:	Two Torana lower fuel tank sections were welded together to achieve this capacity. An alternate filler mounted through the Gauge hole should be strongly recommended as fuel surge under acceleration produces leakage through the standard filler.		

4.2. ELECTRICAL SYSTEM

Voltage:	12	Alternator fitted:	Alternator
Battery Location:	Engine compartment		
Comments:	None		

4.3. BODYWORK

Type:	Closed touring	Material:	Steel
No. of seats:	Four	No. doors:	Two
Comments:	See Appendix B.		

4.4. DIMENSIONS

Track - Front:	1331 mm	Rear:	1300 mm
Wheelbase:	2540 mm	Overall length:	4386 mm
Approved Manufacturer's kerb weight:	1031 kgs		
Approved minimum racing weight:	1005 kgs		
Comments:			

4.5. SAFETY EQUIPMENT

Refer applicable Group Regulations

Appendix A

Suspension

Front

Spring height adjustment permitted.

Rear

Spring height adjustment permitted.

Alternate Cylinder Head

Ian Moodie Cylinder head

- The Ian Moodie XU1 Cylinder Head casting No 2815843 is allowed.
- The cylinder head may be modified as permitted in the Group N regulations.
- The Ian Moodie Cylinder head requires the use of a MSD Soft Touch rev limiter Part No 8728 with a 7500 RPM limit. The limiter will be subject to testing at race meetings. The limiter will be located in an easily accessible position within the engine bay.

Appendix B

- Metal front spoiler & Fibreglass rear spoiler.
- Three vents cut in the lower section of the front guards behind the wheel opening.
- Sports steering wheel.
- A plastic centre console around the gear stick.
- The door trims 'GTR' in chrome lettering.
- The dashboard featured full instrumentation.
- High back seats without headrests were fitted.