



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>	Holden Torana	<b>Model:</b>	LJ GTR-XU1
<b>Period of Original Manufacture:</b>	1/1972 – 1973		
<b>Motorsport Australia Historic Group:</b>	Nc		
<b>Date of Issue of this Document:</b>	September 2021		



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

***Update Log***

June 2018	Ian Moodie Cylinder Head permitted

## SECTION 1 - CHASSIS

### 1.1. CHASSIS

<b>Description:</b>	Unitary construction
<b>Period of Manufacture:</b>	1/1972 – 1973
<b>Manufacturer:</b>	Holden
<b>Chassis Number From:</b>	LJ00001S*
<b>VIN:</b>	82911JH100001
<b>Chassis Number location:</b>	Passenger side Inner front guard
<b>Material:</b>	Steel
<b>Comments</b>	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

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

### 1.3. REAR SUSPENSION

<b>Description:</b>	Live axle with trailing arms		
<b>Spring Medium:</b>	Coil		
<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>	Rack and pinion	<b>Make:</b>	GMH
<b>Comments</b>	None		

### 1.5. BRAKES

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

## SECTION 2 - ENGINE

### 2.1. ENGINE

<b>Make:</b>	GMH		
<b>Model:</b>	Red 202		
<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>	92.07 mm	<b>Max allowed:</b>	93.57 mm
<b>Stroke - original:</b>	82.55 mm	<b>Max allowed:</b>	82.55 mm
<b>Capacity - original:</b>	3298 cc	<b>Max allowed:</b>	3406 cc
<b>Identifying marks:</b>	The engine number is on the engine boss, right hand side of the engine. JP1001 or Q1001		
<b>Cooling method:</b>	Liquid		
<b>Comments:</b>	The later model 3.3 red block is allowed.		

### 2.2. CYLINDER HEAD

<b>Make:</b>	GMH		
<b>No. of valves/cylinder:</b>	Two	<b>Inlet:</b> One	<b>Exhaust:</b> One
<b>No. of ports total:</b>	Nine	<b>Inlet:</b> Three	<b>Exhaust:</b> Six
<b>No. of camshafts:</b>	One	<b>Location:</b> Block	<b>Drive:</b> Gear
<b>Valve actuation:</b>	Pushrod and rocker		
<b>Spark plugs/cylinder:</b>	One		
<b>Identifying marks:</b>	N/A		
<b>Comments:</b>	Following on from the LC with the 173cu in head 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

<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, distributor & coil		
<b>Make:</b>	Delco Remy		
<b>Comments</b>	Breakerless electronic ignition permitted		

### 2.5. FUEL SYSTEM

<b>Carburettor Make:</b>	Zenith Stromberg	<b>Model:</b>	175 CD - 25
<b>Carburettor Number:</b>	Three		
<b>Size:</b>	1.75 inch		
<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>	GMH
<b>Type:</b>	Diaphragm
<b>Diameter:</b>	219 mm
<b>No. of Plates:</b>	One
<b>Actuation:</b>	Mechanical
<b>Comments:</b>	None

**3.2. TRANSMISSION**

<b>Type:</b>	Synchromesh
<b>Make:</b>	GMH M21
<b>Gearbox location:</b>	Behind engine
<b>No. forward speeds:</b>	Four
<b>Gearchange type and location:</b>	H pattern floor mounted
<b>Case material:</b>	Cast iron
<b>Identifying marks:</b>	N/A
<b>Comments:</b>	None

**3.3. FINAL DRIVE**

<b>Make:</b>	GMH	<b>Model:</b>	N/A
<b>Type:</b>	N/A		
<b>Ratios:</b>	Various		
<b>Differential type:</b>	Free/Open		
<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 Alloy	<b>Material - Original:</b>	Steel Alloy
<b>Wheel type - Allowed:</b>	Alloy (period style)	<b>Material - Allowed:</b>	Alloy (period style)
<b>Fixture method:</b>	Studs	<b>No. studs:</b>	Five
<b>Wheel dia. &amp; rim width</b>	<b>FRONT</b>		<b>REAR</b>
<b>Original:</b>	5.5" x 13" 6" x 13"		5.5" x 13" 6" x 13"
<b>Allowed</b>	7" x 13"		7" x 13"
<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>	Boot	<b>Capacity:</b>	77 litres
<b>Fuel pump, type:</b>	Mechanical, engine block	<b>Make:</b>	AC
<b>Comments:</b>	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

<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>	Closed touring	<b>Material:</b>	Steel
<b>No. of seats:</b>	Four	<b>No. doors:</b>	Two
<b>Comments:</b>	See Appendix B.		

### 4.4. DIMENSIONS

<b>Track - Front:</b>	1372 mm	<b>Rear:</b>	1323 mm
<b>Wheelbase:</b>	2540 mm	<b>Overall length:</b>	4386 mm
<b>Dry weight:</b>	1048 kg		
<b>Comments:</b>	Front track varied with fitment of Globe Sprint master wheels and spacers used in late 1972.		

### 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 & fiberglass rear spoiler as per LC Torana XU1.
- Dash panel revised & crash pad straightened out.
- Collapsible steering column & lock fitted with ignition key on steering column.
- Floor console around gear stick.
- High back seats with adjustable head restraints fitted.