



F.I.A. Recognition No.

Group

~~50/2109~~
H2-1

FEDERATION INTERNATIONALE DE L'AUTOMOBILE
391 ST. KILDA ROAD, MELBOURNE, VIC. 3004

PRODUCTION CERTIFICATE

FEDERATION INTERNATIONALE DE L'AUTOMOBILE

Date January 25, 1971

Manufacturer: General Motors-Holden's Pty. Ltd. ,

Car Model: Torana GTR - Model 82911

Production Period From October, 1969 to December, 1970.

Total production from October, 1969 to October, 1970 - 4,544 units.

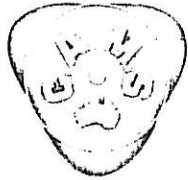
Monthly Production

Month/Year	Number
NOVEMBER, 1970	391
DECEMBER, 1970	233
TOTAL	624
Total built since inception, i. e. Remarks October, 1969 to December, 1970	5,168

I HEREBY certify that the production mentioned hereabove concerns cars which are entirely completed, identical and in conformity with the recognition form submitted for the said model.

(Signature)

Position: National Vehicle Distribution
Manager,
General Motors-Holden's
Sales Pty. Ltd. ,



F.I.A. Recognition No.

CONFEDERATION OF AUSTRALIAN MOTOR SPORT

(Authorised to control the sport of Automobilmism in the Commonwealth of Australia.)

Federation Internationale de l'Automobile.

*Form of Recognition in accordance with
Appendix J to the
International Sporting Code.*

Manufacturer..... GENERAL MOTORS-HOLDEN'S PTY. LIMITED

Model..... TORANA 'GTR' 82911 Year of Manufacture..... 1969

Serial No. of Chassis.....

Engine

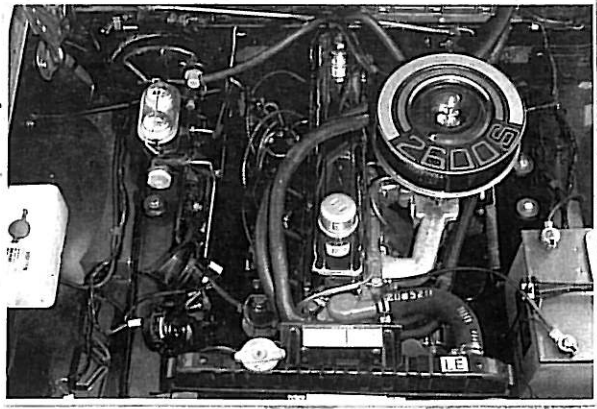
Type of Coachwork..... Integral body and frame - 2 Door Sedan, with Luggage Compartment

Recognition is valid from..... In category.....

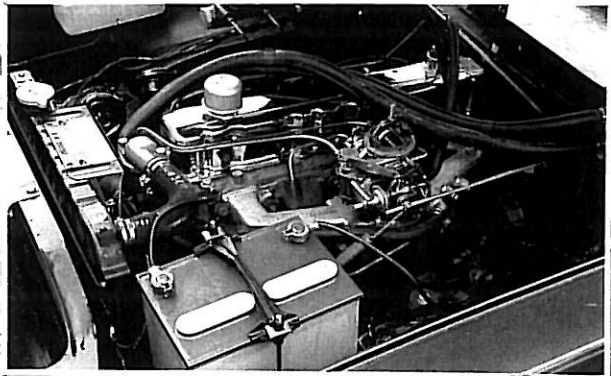
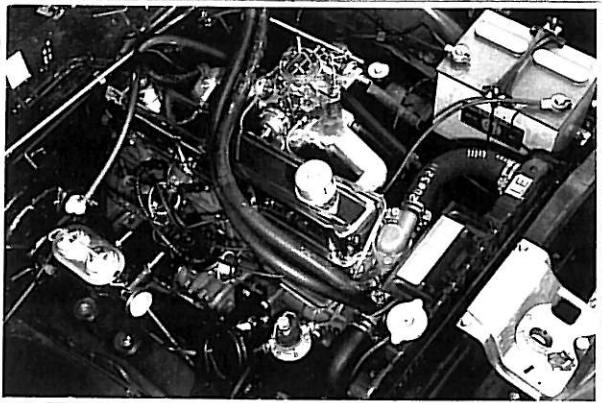
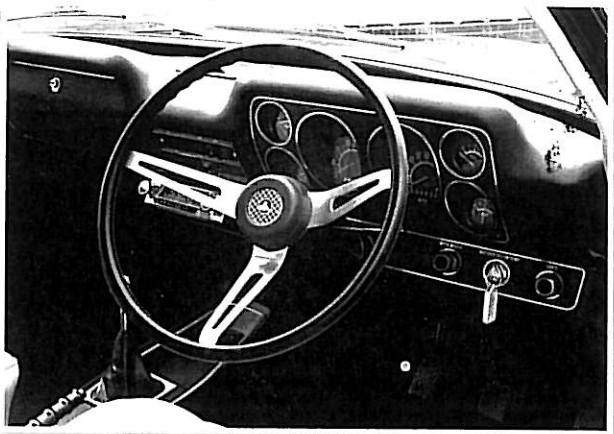


Stamp of F.I.A. to be
affixed here.

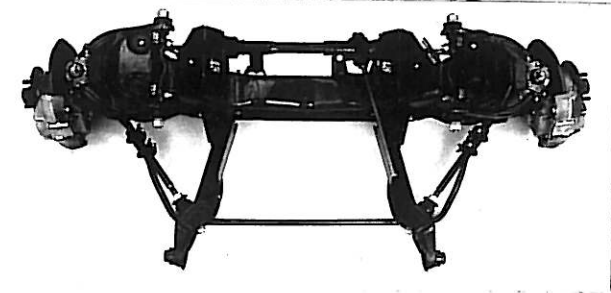
General description



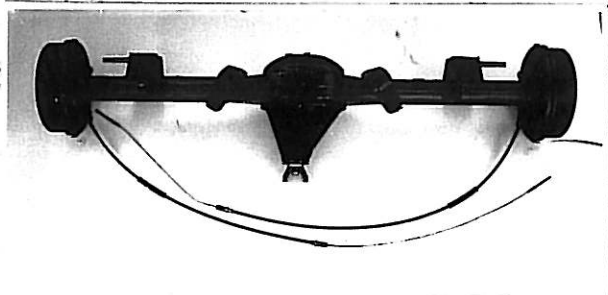
to be



Front axle complete (without wheels).



Rear axle complete (without wheels).



ENGINE

No. of cylinders 6 In line Yes
~~in line~~
~~opposed~~

Cycle 4-Stroke (Otto Cycle) Firing order 1-5-3-6-2-4

Capacity 2638 c.c. Bore 85.7 m.m. Stroke 76.2 m.m.
 - Up Piston

Maximum rebore .040" and clearance Resultant capacity 2706 c.c.

Material of cylinder block Cast alloy iron Material of sleeves, if fitted -

Distance from crankshaft centre line to top face of block at centre line of cylinders 217.80 (Nom.) m.m.

Material of cylinder head Cast iron Volume of one combustion chamber 45.37 c.c.

Compression ratio 9.2 : 1

Material of piston Aluminium alloy No. of piston rings Three

Distance from gudgeon pin centre line to highest point of piston crown 45.72 m.m.

Bearings { Crankshaft main bearings: Type Copper lead steel backed Dia. 55.88 m.m.
 Connecting rod big end: Type Copper lead steel Dia. 48.30 m.m.

Weights { Flywheel & ring gear 10.82 kg. packed
 Crankshaft 20.00 kg.
 Connecting rod Assy. 0.481 kg. - without bearing shells
 Piston with rings 0.470 kg.
 Gudgeon pin 0.113 kg.

No. of valves per cylinder 2 Method of valve operation Push rod & rocker arms

No. of camshafts 1 Location of camshafts In crankcase @ top RH side

Type of camshaft drive Gear

Diameter of valves: Inlet 37.92 (Nom.) m.m. Exhaust 32.41 (Nom.) m.m.

Diameter of port at valve seat: Inlet 34.80 (Nom.) m.m. Exhaust 28.22 (Nom.) m.m.

Tappet clearance for checking timing: Inlet Zero m.m. Exhaust Zero m.m.

Valves open: Inlet *23° BTC % 43 BTC Exhaust *58 BRC % 78 BRC

Valves-close: Inlet *53 ABC % 83 ABC Exhaust *18 ATC % 48 ATC

Maximum valve lift: Inlet 8.58 m.m. Exhaust 8.58 m.m.

Degrees of crankshaft rotation from zero to—
 Maximum lift: Inlet 105 Exhaust 250
 ¾ Maximum lift: Inlet 48 Exhaust 193

Valve springs: Inlet Exhaust
 Type Coil Coil
 No. per valve 1 1

Carburettor: Type Downdraft No. fitted One - 2 barrel
 (up or down draft, horizontal)

Make Bendix-Stromberg Model EW-2

Flange hole diameter 36.57 m.m. Choke diameter 30.16 m.m.

Main jet identification No. .050" ∅

* Without ramps

% With ramps

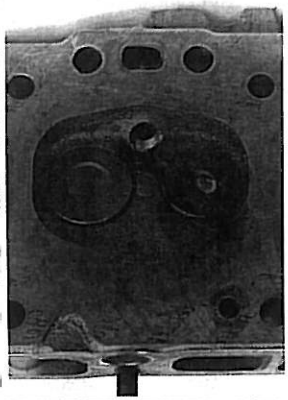
∅ Jet sizes subject to variations by carburetor manufacturer in order to meet engine manufacturer's airbox requirements.

Air filter: Type Fluid Treated paper element No. fitted One

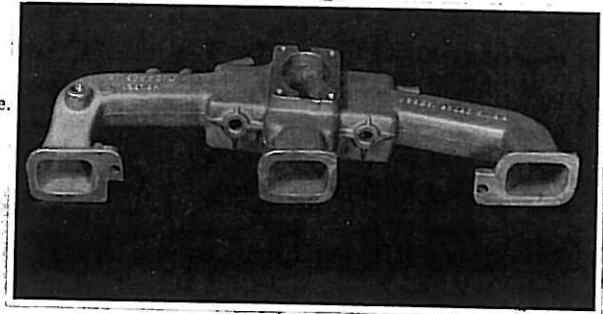
Inlet manifold:

Diameter of flange hole at carburettor As per attached drawing m.m.

Diameter of flange hole at port length 52.83 x width 35.03. Radius m.m.
corners 9.74



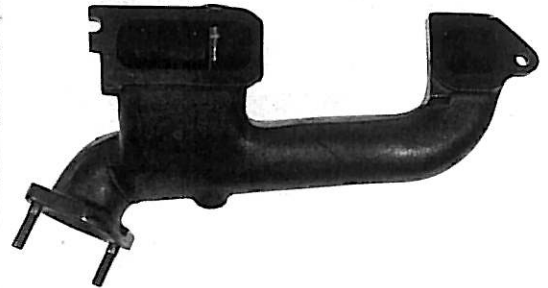
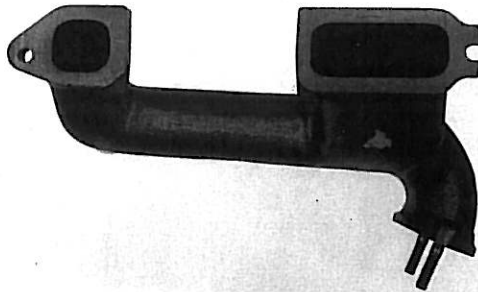
Injection chamber to be affixed here.



Exhaust manifold:

Diameter of flange hole at port 33.52 x 35.81 / 84.32 x 33.52 m.m.

Diameter of flange hole at connection to silencer inlet pipe 45.05 (Nom.) m.m.



ENGINE ACCESSORIES

Make of fuel pump AC No. fitted One

Method of operation Driven from camshaft

Type of ignition system Coil coil or magneto

Make of ignition Distributor- Bosch or Lucas Model U-ZV70/1Aa or 29D6

Method of advance and retard Vacuum and Centrifugal

Make of ignition coil Bosch or Lucas Model U-ZS/OK12N6-5 or 8C12

No. of ignition coils One Voltage 12

Make of dynamo Bosch or Lucas Model U-K1(RL)14V35A20 or 14 AC

Voltage of dynamo 13.5 (Mean) Maximum output 35 amps.

Make of starter motor Bosch or Lucas Model U-GE(R) or 140

Battery: No. fitted One Voltage 12 Capacity 44 or 48 amp. hour

Make HOLDEN TORANA Model GTR F.I.A. Recognition No. _____
 Manufacturers Reference No. of Application _____

TRANSMISSION

Make of clutch Ovm Type Diaphragm Spring Dry Plate
 Diameter of clutch plate 8.62" No. of plates One
 Method of operating clutch Mechanical
 Make of gearbox GM Type 4-Speed all synchro
 No. of gearbox ratios 4 Forward, one reverse
 Method of operating gearshift Remote - Manual shift lever
 Location of gearshift Floor
 Is overdrive fitted? No
 Method of controlling overdrive, if fitted -

	GEARBOX RATIOS		ALTERNATIVE RATIOS					
	Ratio	No. of Teeth	Ratio	No. of Teeth	Ratio	No. of Teeth	Ratio	No. of Teeth
1.	3.43	$\frac{16}{23} \times \frac{31}{13}$						
2.	2.16	$\frac{16}{23} \times \frac{24}{16}$						
3.	1.37	$\frac{16}{23} \times \frac{19}{20}$						
4.	1.00	Direct						
REVERSE	3.32							

Type of final drive Spiral Hypoid
 Type of differential Two pinion
 Final drive ratio 3.08 :1 Alternatives 3.36 :1
 No. of teeth 37/12 37/11
 Overdrive ratio, if fitted -

WHEELS

Type Short spoke - disc Weight 6.80 (Rim only) kg.
 Method of attachment 5 studs with nuts
 Rim diameter 330.2 m.m. Rim width 139.7 m.m.
 Tyre size: Front B70H 13 4 Ply Rear B70H 13 4 Ply

BRAKES

Method of operation Hydraulic
 Is servo assistance fitted? Yes
 Type of servo, if fitted Vacuum - Single diaphragm
 No. of hydraulic master cylinders *One-dual Bore 25.40 m.in.

* Tandem Master Cylinder feeding separate hydraulic circuits for front and rear brakes.

	Front	Rear
No. of wheel cylinders	Single caliper per wheel with two pistons	One per wheel
Bore of wheel cylinders	Caliper cyl. bore. m.m. 53.97	14.30 m.m.
Inside diameter of brake drums	- m.m.	228.60 m.m.
No. of shoes per brake	-	Two
Outside diameter of brake discs	25.4 (Nom.) m.m.	- m.m.
No. of pads per brake	Two	-
Dimensions of brake linings per shoe or pad (if all shoes or pads in each brake are not of same dimensions, specify each)		

	Front	Rear
Length	Total Pad Area 1587 m.m. ²	Primary 206.00 m.m.
		Secondary 233.68 m.m.
Width	Pad thickness 9.52 m.m.	44.45 (Nom.) m.m.
Total area per brake	m.m. ²	m.m. ²

SUSPENSION

	Front	Rear
Type	SIA Independent	4 link design
Type of spring	Coil	Coil
Is stabiliser fitted?	Yes	No
Type of shock absorber	Telescopic - Hyd.	Telescopic - Hyd.
No. of shock absorbers	Two	Two

STEERING

Type of steering gear Rack and Pinion

Turning circle of car 11.27 m., approx.

No. of turns of steering wheel from lock to lock 3.3

CAPACITIES AND DIMENSIONS

Fuel tank 45.4 litres Sump 3.4 litres

Cooling system Radiator 8.5 (approx.) litres

Overall length of car 438.6 cm. Overall width of car 160.0 cm.

Overall height of car, unladen (with hood up if appropriate) 137.9 cm.

Distance from floor to top of windscreen:

Highest point 106.6 cm. Lowest point 73.9 cm.

Width of windscreen:

Maximum width 129.6 (nom.) cm. Minimum width 109.2 (nom.) cm.

*Interior width of car 128.2 (nom.) cm.

No. of seats 5

Track: Front 132.5 cm. Rear 130.0 cm.

Wheelbase 254.0 cm. Ground clearance 127.0 m.m.

*(To be measured at the immediate rear of the steering wheel, and the width quoted to be maintained in a vertical plane of not less than 25 cms.)

Overall weight with water, oil and spare wheel, but without fuel 1028.1 kgs. Estimated

NOT APPLICABLE

Additional information for cars fitted with two-cycle engines

System of cylinder scavenging.....

Type of lubrication.....

Size of inlet port:

Length measured around cylinder wall.....m.m.

Height.....m.m. Area.....m.m.²

Size of exhaust port:

Length measured around cylinder wall.....m.m.

Height.....m.m. Area.....m.m.²

Size of transfer port:

Length measured around cylinder wall.....m.m.

Height.....m.m. Area.....m.m.²

Size of piston port:

Length measured around piston.....m.m.

Height.....m.m. Area.....m.m.²

Method of pre-compression.....

Bore and stroke of pre-compression cylinder, if fitted.....m.m.

Distance from top of cylinder block to lowest point of inlet port.....m.m.

Distance from top of cylinder block to highest point of exhaust port.....m.m.

Distance from top of cylinder block to highest point of transfer port.....m.m.

Drawing of cylinder ports.

NOT APPLICABLE

Supercharger, if fitted

Make..... Model or Type No.....

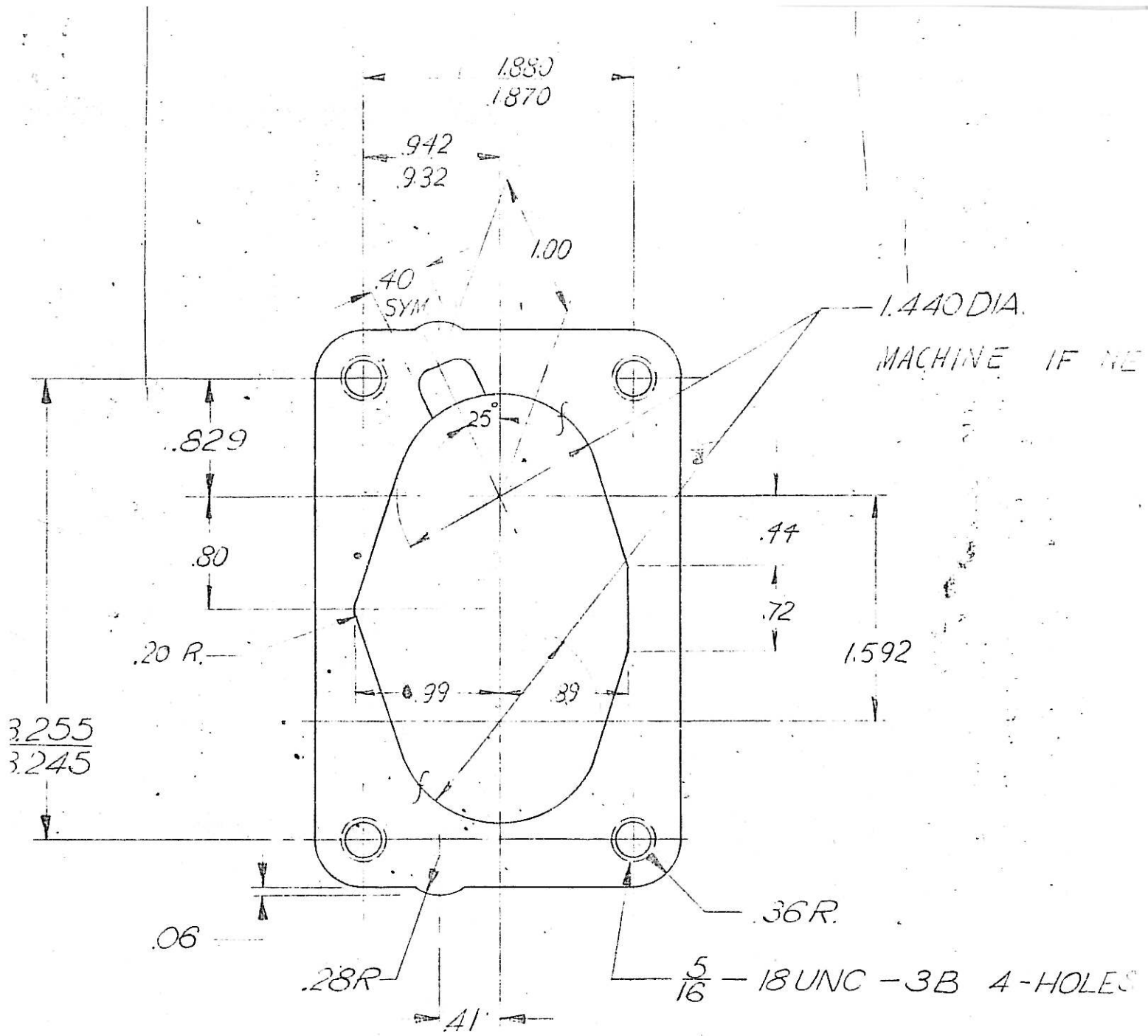
Type of drive..... Ratio of drive.....

Fuel injection, if fitted

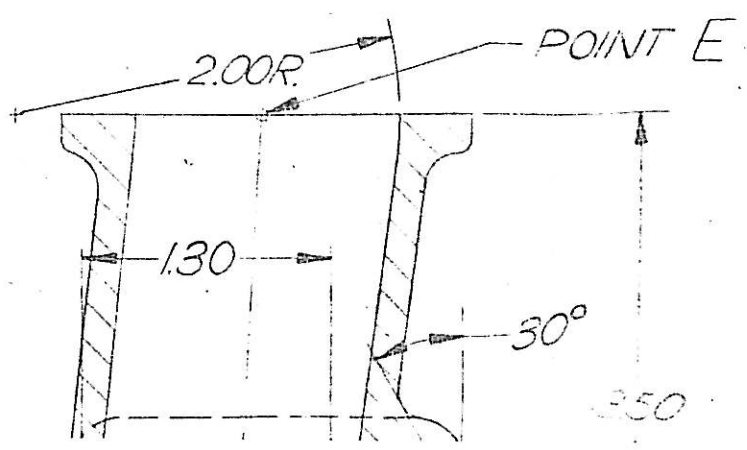
Make of pump..... Model or Type No.....

Make of injectors..... Model or Type No.....

Location of injectors.....



V IN DIRECTION OF ARROW A (B-4)





CONFEDERATION OF AUSTRALIAN MOTOR SPORT

394 ST. KILDA ROAD,
MELBOURNE, VIC. 3000

Manufacturer G.M.-H. P/L

Model Torana GTR 82911

C.A.M.S. Recognition No. ~~50772/009~~

Amendment No. 1/1E H2-1

Amendment to Form of Recognition

No.

Reference No.

ENGINE:

Bore	3.50"	8.89cm
Stroke	3.00"	7.62cm
capacity	173cu"	2834cc
compression		
rate		9.4:1

TRANSMISSION:

Gearbox ratios	3.05
	2.19
	1.51
	1.00:1

Final drive ratios	3.08 std
	3.36 optional
	3.55:1 optional

Date amendment is valid from

Stamp of CAMS