

Manufacturers Reference No. for Application



F.I.A. Recognition No.

69

ROYAL AUTOMOBILE CLUB

PALL MALL, LONDON, S.W.1.

Federation Internationale de l'Automobile.

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

Manufacturer TORNADO CARS LIMITED

Model TALISMAN Year of Manufacture 1961

Chassis TO/TA/1877/62 onwards

Serial No. of Engine S235350E -onwards

Type of Coachwork GRAND TOURING

Recognition is valid from 14 AOUT 1962 In category GT

General list 9
Additional list 15

Photograph to be affixed here $\frac{3}{4}$ view of car from front right.



Paul Studiers
For Secretary, C, S, I

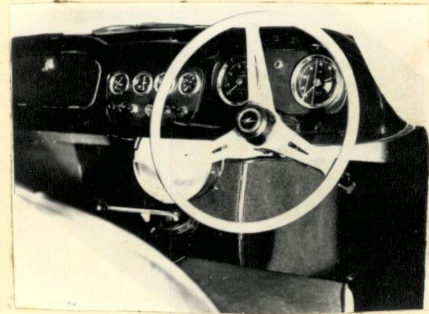
General description of car:

Photographs to be affixed below.

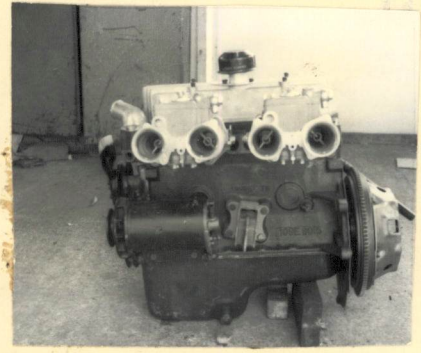
$\frac{3}{4}$ view of car from rear left.



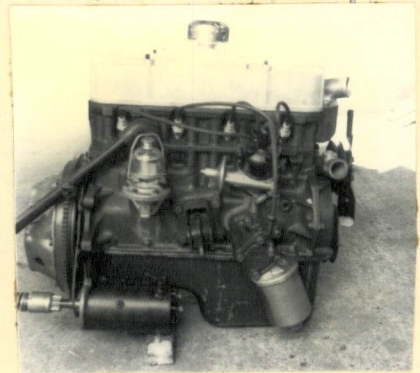
Interior view of car through driver's door.



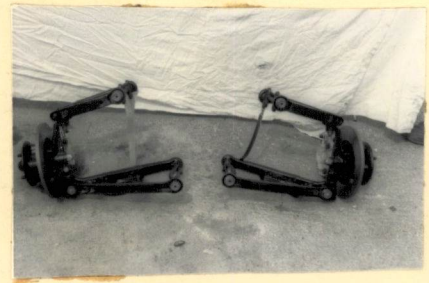
Engine unit with accessories from right.



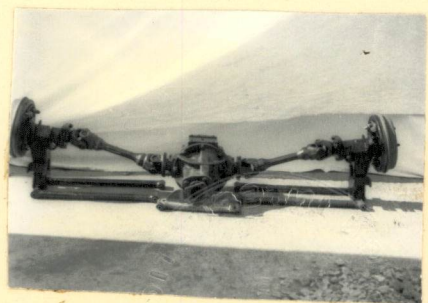
Engine unit with accessories from left.



Front axle complete (without wheels).



Rear axle complete (without wheels).

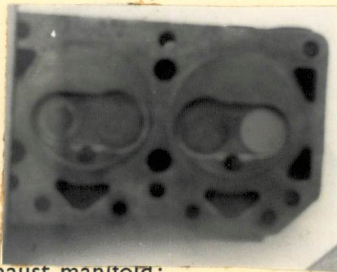


ENGINE

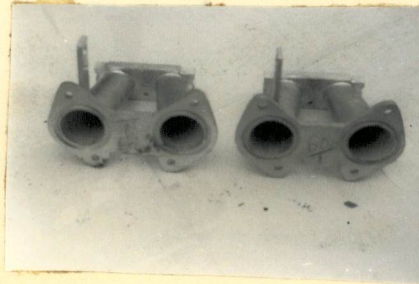
in line
 No. of cylinders Four in V
~~opposed~~
 Cycle 4 Stroke Firing order 1 2 4 3
 Capacity 1340 c.c. Bore 80.963 m.m. Stroke 65.0711 m.m.
 Maximum rebore 1.2 m.m. Resultant capacity 1380 c.c.
 Material of cylinder block Cast iron Material of sleeves, if fitted -
 Distance from crankshaft centre line to top face of block at centre line of cylinders 181.87 - 181.07 m.m.
 Material of cylinder head Cast iron Volume of one combustion chamber 24 - 25 c.c.
 Compression ratio 8.5:1
 Material of piston Alluminium Alloy No. of piston rings 3
 Distance from gudgeon pin centre line to highest point of piston crown 38.836, 38.887 m.m.
 Bearings { Crankshaft main bearings: Type W/M Steel Back Dia. 53.99 m.m.
 Connecting rod big end: Type Copper/Lead or Lead/Bronze- Steel back Dia. 49.20 m.m.
 Flywheel 6.64 kg.
 Crankshaft 7.535 kg.
 Weights { Connecting rod .5795 kg.
 Piston with rings .4145 kg.
 Gudgeon pin .097 kg.
 No. of valves per cylinder 2 Method of valve operation Push Rod & Rocker
 No. of camshafts 1 Location of camshafts In Block
 Type of camshaft drive Chain
 Diameter of valves: Inlet 32.18 m.m. Exhaust 31.175 m.m.
 Diameter of port at valve seat: Inlet 27.68 m.m. Exhaust 25.4 m.m.
 Tappet clearance for checking timing: Inlet .203 m.m. Exhaust .457 m.m.
 Valves open: Inlet 27° B.T.D.C. Exhaust 65° B.B.D.C.
 Valves close: Inlet 65° A.B.D.C. Exhaust 27° A.T.D.C.
 Maximum valve lift: Inlet 8.5852 m.m. Exhaust 8.5852 m.m.
 Degrees of crankshaft rotation from zero to—
 Maximum lift: Inlet 141° Exhaust 141°
 ¾ Maximum lift: Inlet 91° Exhaust 91°
 Valve springs: Inlet Exhaust
 Type Coil Coil
 No. per valve one one
 Carburettor: Type Horizontal No. fitted two
 (up or down draft, horizontal)
 Make Weber Model 40 DCOE 2
 Flange hole diameter 40 m.m. Choke diameter 30 m.m.
 Main jet identification No. 115

Air filter: Type None No. fitted
 Inlet manifold:
 Diameter of flange hole at carburettor 40 m.m.
 Diameter of flange hole at port 29 m.m.

Photograph of combustion chamber to be affixed here.



Photograph of inlet manifold to be affixed here.

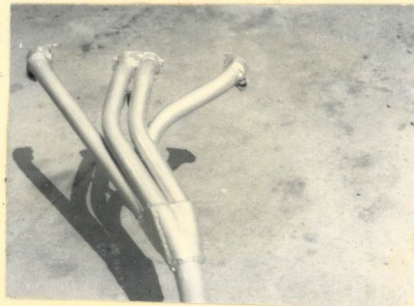


Exhaust manifold:
 Diameter of flange hole at port 29.5 m.m.
 Diameter of flange hole at connection to silencer inlet pipe 36.57 m.m.

Photograph of piston showing crown to be affixed here.



Photograph of exhaust manifold to be affixed here.



ENGINE ACCESSORIES

Make of fuel pump A.C. No. fitted One
 Method of operation Eccentric on Camshaft
 Type of ignition system Coil coil or magneto
 Make of ignition Lucas Model D M 2
 Method of advance and retard Centrifugal
 Make of ignition coil Lucas Model LA 12
 No. of ignition coils one Voltage 12
 Make of dynamo Lucas Model C 40
 Voltage of dynamo 12 Maximum output 20 amps.
 Make of starter motor Lucas Model M 35 H
 Battery: No. fitted One Voltage 12 Capacity 38 amp. hour

Make TORNADO Model PALISMAN F.I.A. Recognition No.

Manufacturers Reference No. of Application

TRANSMISSION

Make of clutch Ford/Borg and Beck Type Dry Plate
 Diameter of clutch plate 183.75 mm No. of plates one
 Method of operating clutch Hydraulic
 Make of gearbox Ford Type Conventional Synchronesh
 No. of gearbox ratios Four forward one reverse
 Method of operating gearshift Hand
 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.	4.118:1	$\frac{32 \times 35}{17 \times 16}$	2.967:1	$\frac{12 \times 23}{10 \times 16}$	2.917		3.45:1	
2.	2.396:1	$\frac{32 \times 28}{17 \times 22}$	1.8:1	$\frac{12 \times 29}{10 \times 22}$	1.697		2.01:1	
3.	1.412:1	$\frac{32 \times 21}{17 \times 28}$	1.472:1	$\frac{12 \times 27}{10 \times 25}$	1.280		1.185:1	
4.	1.000:1	Direct	1.21:1	$\frac{12 \times 27}{10 \times 24}$	1:1		1:1	
5.			1:1	$\frac{12 \times 30}{10 \times 22}$				

Type of final drive Fixed Hypoid Differential
 Type of differential Bevel Gears and Pinion
 Final drive ratio 4.11:1 Alternatives 4.55:1 . 4.875:1
 No. of teeth $\frac{37}{9}$
 Overdrive ratio, if fitted -

WHEELS

Type Disc Weight 4.98 kg.
 Method of attachment 4 Bolts
 Rim diameter 330 m.m. Rim width 92.0 m.m.
 Tyre size: Front 590 x 13 Rear 590 x 13

BRAKES

Method of operation Hydraulic
 Is servo assistance fitted? No
 Type of servo, if fitted -
 No. of hydraulic master cylinders One Bore 15.875 m.m.

	Front		Rear	
No. of wheel cylinders	-		One	
Bore of wheel cylinders	-	m.m.	19.05	m.m.
Inside diameter of brake drums	-	m.m.	177.8	m.m.
No. of shoes per brake	-		Two	
Outside diameter of brake discs	228.6	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	56.15	m.m.	170.45	m.m.
		m.m.		m.m.
Width	38.1	m.m.	31.75	m.m.
Total area per brake	8.557	m.m. ²	21.608	m.m. ²

SUSPENSION

	Front		Rear
Type	Independent		Independent
Type of spring	Coil		Coil
Is stabiliser fitted?	No		No
Type of shock absorber	Telescopic		Telescopic
No. of shock absorbers	Two		Two

STEERING

Type of steering gear..... Rack and Pinion

Turning circle of car..... 8 m., approx.

No. of turns of steering wheel from lock to lock..... 3½

CAPACITIES AND DIMENSIONS

Fuel tank..... 41 litres Sump..... 2.273 litres

Radiator..... 2.1 litres

Overall length of car..... 380 cm. Overall width of car..... 152 cm.

Overall height of car, unladen (with hood up, if appropriate)..... 125 cm.

Distance from floor to top of windscreen:

Highest point..... 94 cm. Lowest point..... 90 cm.

Width of windscreen:

Maximum width..... 117 cm. Minimum width..... 100 cm.

*Interior width of car..... 120 cm.

No. of seats..... 4

Track: Front..... 132.08 cm. Rear..... 132.08 cm.

Wheelbase..... 243.84 cm. Ground clearance..... 165.1 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..... 612.5 kgs.

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.

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.....

Optional equipment affecting preceding information:—

- | | |
|------------------|---|
| 1. Engine | Oil cooler
4-bladed fan
Sump shield |
| 2. Miscellaneous | Fuel tank shield |
| 3. Wheels | Rim Width: 101.6 mm 114.3 mm 127 mm |



TORNADO - TALISMAN

MARQUE ET MODELE

8/62

VALIDITE HOMOLOGATION

63

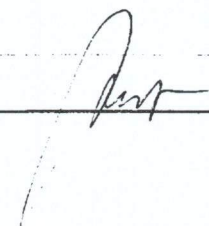
FICHE NR.

GT/1600

GROUPE / CLASSE

EXTENSIONS	DEBUT VALIDITE	DESCRIPTION	NOTES

Autres homologations du modèle

Vérifiée le 26/10/95 par  visée ce jour le _____ par _____