Manufacturers Reference No. for Application

SUN RAP IV

F.I.A. Recognition No. 1239

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 SUNBEAM TALBOT LIMITED

Model SUNBEAM RAPIER IV Year of Manufacture 1963

Serial No. of Chassis B 3300001 /HHO

Engine B 3300001/HHO

Type of Coachwork 2 Door 4 Seater Saloon

Recognition is valid from 4th November 1963 In category TOURING

List 9/24

Photograph to be affixed here ¾ view of car from front right.

Stamp of F.I.A./R.A.C. to be affixed here.

Herbert Johnson

Form: R.F.I.A.

General description of car:

Specify here material/s of chassis/body construction

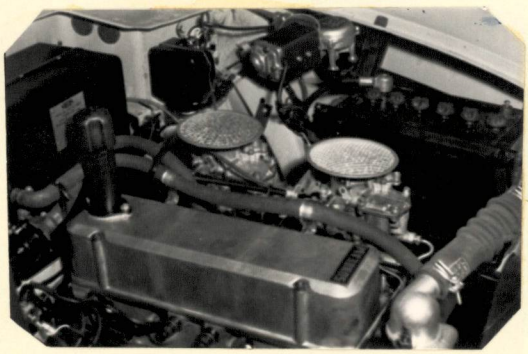
2 Door 4 Seater Steel Saloon
Convertible and Hard Top Models Available.

Photographs to be affixed below.

¾ *view of car from rear left.*

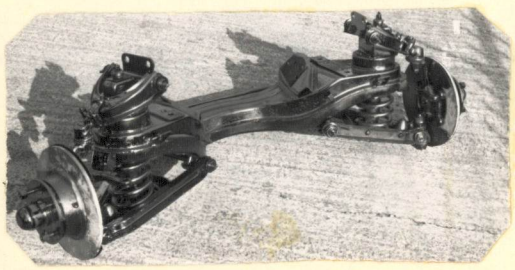
Interior view of car through driver's door.

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 In Line

No. of cylinders 4 in V

opposed

Cycle 4 Stroke Firing order 1.3.4.2.

Capacity 1592 c.c. Bore 81.534 m.m. Stroke 76.2 m.m.

Maximum rebore 82.296 Resultant capacity 1599 c.c.

Material of cylinder block Cast Iron Material of sleeves, if fitted none

Distance from crankshaft centre line to top face of block at centre line of cylinders 231.8 m.m.

Material of cylinder head Aluminium Volume of one combustion chamber 38.0 c.c.

Compression ratio 9.0:1

Material of piston Aluminium No. of piston rings 3

Distance from gudgeon pin centre line to highest point of piston crown 47 m.m.

Bearings
- Crankshaft main bearings: Type White Metal Dia. 57.137 -57.125 m.m.
- Connecting rod big end: Type Aluminium-Tin Dia. 50.83 -50.81 m.m.

Weights
- Flywheel 8.64 kg.
- Crankshaft 16.1 kg.
- Connecting rod .69 kg.
- Piston with rings .42 kg.
- Gudgeon pin .13 kg.

No. of valves per cylinder 2 Method of valve operation Pushrod

No. of camshafts 1 Location of camshafts In Block

Type of camshaft drive Duplex Chain

		Inlet		Exhaust	
Diameter of valves:	Inlet	38.37	m.m.	Exhaust 29.77	m.m.
Diameter of port at valve seat:	Inlet	34.3	m.m.	Exhaust 26.9	m.m.
Tappet clearance for checking timing:	Inlet	.427	m.m.	Exhaust .498	m.m.
Valves open:	Inlet	25.BTDC		Exhaust 63.BBDC	
Valves close:	Inlet	59.ABDC		Exhaust 21.ATDC	
Maximum valve lift:	Inlet	11.02	m.m.	Exhaust 11.00	m.m.

Degrees of crankshaft rotation from zero to—

		Inlet		Exhaust	
Maximum lift:	Inlet	159		Exhaust 151	
¾ Maximum lift:	Inlet	107		Exhaust 101	

Valve springs:

	Inlet	*Exhaust*
Type	Coil	Coil
No. per valve	2	2

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

Make Zenith Model 36 WI

Flange hole diameter 36 m.m. Choke diameter 30 m.m.

Main jet identification No. 150

Air filter: Type Wire Gauze No. fitted 2

Inlet manifold:

Diameter of flange hole at carburettor 36 m.m.

Diameter of flange hole at port 50.8 m.m.

Photograph of combustion chamber to be affixed here.

Photograph of inlet manifold to be affixed here.

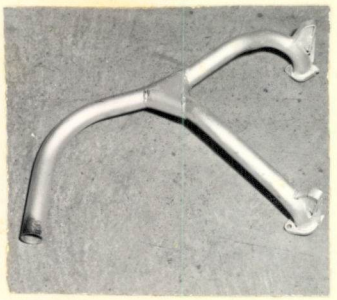
Exhaust manifold:

Diameter of flange hole at port 48.26 m.m.

Diameter of flange hole at connection to silencer inlet pipe No Flange Clip 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 1

Method of operation Mechanical

Type of ignition system Coil and Distributor coil or magneto

Make of ignition Lucas Model D.M.2.

Method of advance and retard Centrifugal and Vacuum

Make of ignition coil Lucas Model H.A.12

No. of ignition coils 1 Voltage 12

Make of dynamo Lucas Model C40

Voltage of dynamo 12 Maximum output 22 amps.

Make of starter motor Lucas Model M 35C

Battery: No. fitted 1 Voltage 12 Capacity 38 or 51 amp. hour

Oil Cooler (if fitted) type Radiator Capacity 2 pints

Make SUNBEAM Model RAPIER IV F.I.A. Recognition No.

Manufacturers Reference No. of Application SUN RAP IV

TRANSMISSION

Make of clutch Borg and Beck Type Dry

Diameter of clutch plate 8 inch No. of plates One

Method of operating clutch Mechanical and Hydraulic

Make of gearbox Rootes Type Constant Mesh

No. of gearbox ratios 4 Forward and Reverse

Method of operating gearshift Manual

Location of gearshift Centre Floor Lever

Is overdrive fitted? Optional

Method of controlling overdrive, if fitted Electrical through Solenoid

	GEARBOX RATIOS		ALTERNATIVE RATIOS					
	Ratio	No. of Teeth	Ratio	No. of Teeth	Ratio	No. of Teeth	Ratio	No. of Teeth
1.	3.346	29/20 x 30/15	3.32	27/21 x 30/13				
2.	2.141	29/20 x 31/21	1.9	27/21 x 31/21				
3.	1.392	29/20 x 24/25	1.24	27/21 x 24/25				
4.	1.00	Direct	1.00					
5. REV	4.329	29/20 x 30/13 x 19/15						

Type of final drive Hypoid

Type of differential 4 Bevel Pinion

Final drive ratio 3.89:1 Alternatives 3.70 4.22 4.44 4.86

No. of teeth 35/9 37/10 38/9 40/9 34/7

Overdrive ratio, if fitted 803:1

WHEELS

Type Pressed Steel Disc Weight 5.76 kg.

Method of attachment 4 Stud 7/16 UNF

Rim diameter 330.2 m.m. Rim width 116.5 m.m.

Tyre size: Front 600 x 13 Rear 600 x 13

BRAKES

Method of operation Hydraulic

Is servo assistance fitted? Yes

Type of servo, if fitted Lockheed

No. of hydraulic master cylinders 1 Bore 19.05 m.m.

	Front	Rear
No. of wheel cylinders	2 per wheel	One per wheel
Bore of wheel cylinders	54 m.m.	19.1 m.m.
Inside diameter of brake drums	m.m.	228.6 m.m.
No. of shoes per brake		2
Outside diameter of brake discs	247.5 m.m.	m.m.
No. of pads per brake	2	

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	Available Volume m.m.	219 m.m.
	29.6 cm^3 m.m.	m.m.
Width	m.m.	44.5 m.m.
Total area per brake	6260 $m.m.^2$	19,500 $m.m.^2$

SUSPENSION

	Front	Rear
Type	Independant	Live Axle
Type of spring	Coil	Semi Elliptic Leaf
Is stabiliser fitted?	Yes	No
Type of shock absorber	Telescopic	Telescopic
No. of shock absorbers	2	2

STEERING

Type of steering gear Recirculating Ball

Turning circle of car 10.97 m., approx.

No. of turns of steering wheel from lock to lock $3\frac{1}{4}$

CAPACITIES AND DIMENSIONS

Fuel tank 45.4 litres Sump 4.55 litres

Radiator 6.95 litres

Overall length of car 413 cm. Overall width of car 155 cm.

Overall height of car, unladen (with hood up, if appropriate) 147 cm.

Distance from floor to top of windscreen:

Highest point 108 cm. Lowest point 104.7 cm.

Width of windscreen:

Maximum width 115.5 cm. Minimum width 108 cm.

*Interior width of car 128.3 cm.

No. of seats 4

Track: Front 131 cm. Rear 125 cm.

Wheelbase 244 cm. Ground clearance 144.5 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 900 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.....

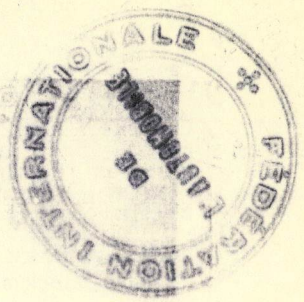
Fuel injection, if fitted

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

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

Location of injectors.....

Optional equipment affecting preceeding information:—



1. Oil Cooler R.G. 416

2. Long Range Fuel Tank 100 Litres R.G. 0410

3. Power Lock Diff Assembly R.G. 1041

4. Lightwei ght Seats R.G.M. 6

5. Wire Wheels Available Rim 4.5 x 13
   Tyre Size 6.00 x 13 Front and Rear

6. Pressed Steel Wheels available Rim Diam. = 381 mm
   Rim Width 101.6 mm
   Tyre Size 5.60/5.90 x 15 Front and Rear

7. Touring. Carburation System Available 1 Solex 32 P.A.I.A.
   Flange Holes Diam.= 33 MM
   Chokes Diam = Primary 24 mm
   Secondary 26 mm
   Main Jets Primary 117.5
   Secondary 130

8. Touring. Cast Iron One Piece Exhaust Manifold P. 2575298

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Amendment to Form of Recognition

Manufacturer Sunbeam-Talbot Ltd..

Model Rapier IV.

All synchromesh gearbox now fitted to this model
is standard equipment.
Part N o. 5220878.

FÉDÉRATION INTERNATIONALE DE L'AUTOMOBILE

Stamp of F.I.A./R.A.C. to be affixed here.

Date amendment is valid from 1st February 1965

Form: R.F.I.B.