



ROYAL AUTOMOBILE CLUB

FALL MALL, LONDON, S.W.1.

Federation Internationale de l'Automobile.

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

Manufacturer Riley Motors Limited
Model Riley Elf Year of Manufacture 1961
Chassis R/A2S1/
Serial No. of Engine 8WR/U/H or 8WR/PAU/H
Type of Coachwork Saloon - 2 door
Recognition is valid from 29 Juin 1962 In category Touring



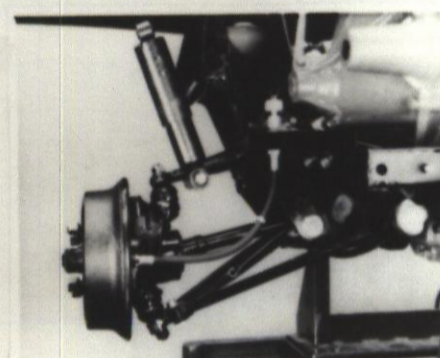
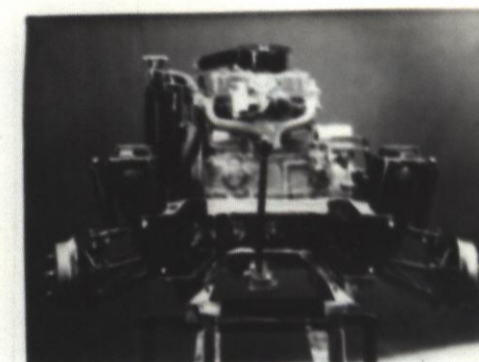
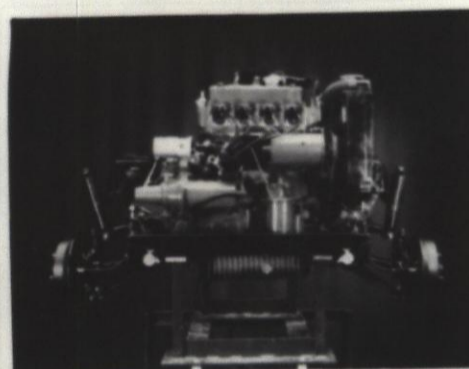
Stamp of F.I.A./R.A.C. to be affixed here.

Form: R.F.I.A.

General description of car:

Specify here material/s of chassis/body construction

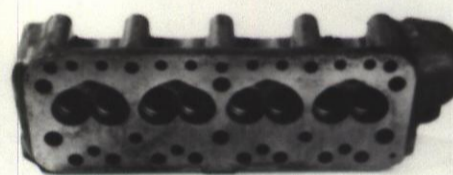
2 door steel saloon of unitary construction
4 cylinder OHV engine/gearbox unit built
transversely driving front wheels.
All independent suspension via rubber
springs.



ENGINE

in line Yes
No. of cylinders 4 in V -
opposed -
Cycle 4 Firing order 1,3,4,2
Capacity 848 c.c. Bore 62.94 m.m. Stroke 68.26 m.m.
Maximum rebore 1.016mm Resultant capacity 878 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 218.31/218.57 m.m.
Material of cylinder head Cast Iron Volume of one combustion chamber 24.5 c.c.
Compression ratio 8.3:1
Material of piston Aluminium alloy No. of piston rings 4
Distance from gudgeon pin centre line to highest point of piston crown 37.822/37.873 m.m.
Bearings { Crankshaft main bearings: Type White metal Dia. 44.46 m.m.
Connecting rod big end: Type Copper lead Dia. 41.29 m.m.
Weights { Flywheel 7.0 kg.
Crankshaft 8.5 kg.
Connecting rod .69 kg.
Piston with rings .283 kg.
Gudgeon pin .039 kg.
No. of valves per cylinder 2 Method of valve operation Push rod & rocker
No. of camshafts 1 Location of camshafts In crankcase
Type of camshaft drive Chain
Diameter of valves: Inlet 27.89 m.m. Exhaust 25.4 m.m.
Diameter of port at valve seat: Inlet 24.34 m.m. Exhaust 22.83/23.2 m.m.
Tappet clearance for checking timing: Inlet .48 m.m. Exhaust .48 m.m.
Valves open: Inlet 5° BTDC Exhaust 40° BTDC
Valves close: Inlet 45° ABDC Exhaust 10° ATDC
Maximum valve lift: Inlet 7.15 m.m. Exhaust 7.15 m.m.
Degrees of crankshaft rotation from zero to—
Maximum lift: Inlet 110° ATDC Exhaust 75° ABDC
Maximum lift: Inlet 62½° ATDC Exhaust 27½° ABDC
Valve springs: Inlet Coil Exhaust Coil
Type Coil No. per valve One
Carburettor: Type Semi down draught No. fitted One
(up or down draft, horizontal)
Make S.U. Model HS2 or H4 alternative
Flange hole diameter 31.75 m.m. Choke diameter 31.75 m.m.
Main jet identification No. - Needle EB

Air filter: Type Combined cleaner/silencer No. fitted 1
Inlet manifold:
Diameter of flange hole at carburettor 31.75 m.m.
Diameter of flange hole at port 26.98 m.m.



Exhaust manifold:
Diameter of flange hole at port Centre 26.95 x 25.4 outer 26.95 x 22.22 m.m.
Diameter of flange hole at connection to silencer inlet pipe 28.55 m.m.



Photogr

1 here.

Photograph of exhaust manifold to be affixed here

See above

ENGINE ACCESSORIES

Make of fuel pump S.U. No. fitted One
Method of operation Electric
Type of ignition system Coil coil or magneto
Make of ignition Lucas Model DA2
Method of advance and retard Centrifugal & vacuum
Make of ignition coil Lucas Model LA12
No. of ignition coils 1 Voltage 12
Make of dynamo Lucas Model C4C
Voltage of dynamo 12 Maximum output 15 amps.
Make of starter motor Lucas Model L35G
Battery: No. fitted One Voltage 12 Capacity Standard 34 amp hour
Oil Cooler (if fitted) type - Capacity Export 43 pints



ROYAL AUTOMOBILE CLUB

FALL MALL, LONDON, S.W.1.

Federation Internationale de l'Automobile.

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

Manufacturer Riley Motors Limited
Model Riley Elf Year of Manufacture 1961
Serial No. of Chassis R/A2S1/
Engine 8WR/U/H or 8WR/FAU/H
Type of Coachwork Saloon - 2 door
Recognition is valid from 29 Juin 1962 In category Touring



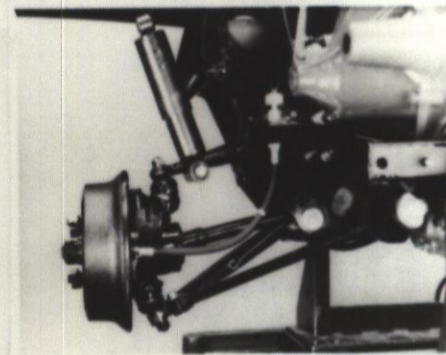
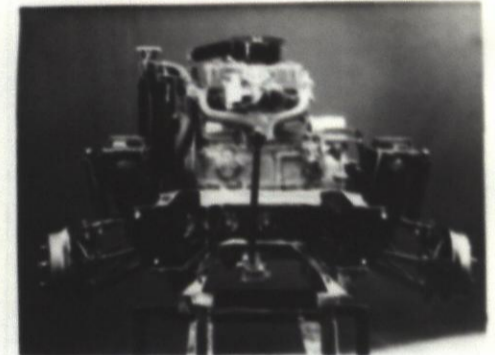
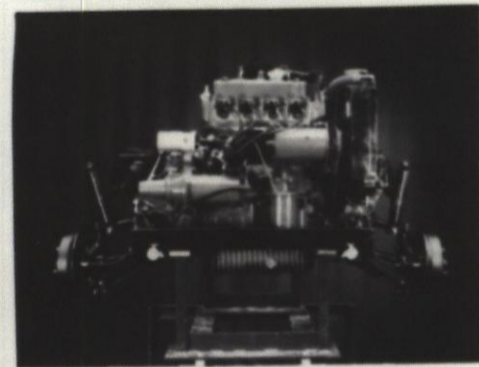
Stamp of F.I.A./R.A.C. to be affixed here.

Form: R.F.I.A.

General description of car:

Specify here materials of chassis/body construction

2 door steel saloon of unitary construction
4 cylinder OHV engine/gearbox unit with
transversely driving front wheels.
All independent suspension via rubber
springs.

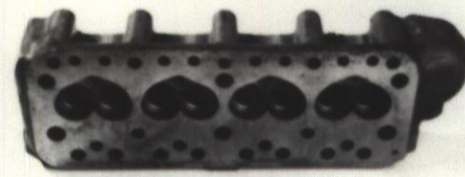


2

ENGINE

in line Yes
No. of cylinders 4 in V -
opposed -
Cycle 4 Firing order 1,3,4,2
Capacity 848 c.c. Bore 62.94 m.m. Stroke 68.26 m.m.
Maximum rebore 1.016mm Resultant capacity 878 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 218.31/218.57 m.m.
Material of cylinder head Cast Iron Volume of one combustion chamber 24.5 c.c.
Compression ratio 8.3:1
Material of piston Aluminium alloy No. of piston rings 4
Distance from gudgeon pin centre line to highest point of piston crown 37.822/37.973 m.m.
Bearings { Crankshaft main bearings: Type White metal Dia. 44.46 m.m.
Connecting rod big end: Type Copper lead Dia. 41.29 m.m.
Weights { Flywheel 7.0 kg.
Crankshaft 8.5 kg.
Connecting rod .69 kg.
Piston with rings .283 kg.
Gudgeon pin .039 kg.
No. of valves per cylinder 2 Method of valve operation Push rod & rocker
No. of camshafts 1 Location of camshafts In crankcase
Type of camshaft drive Chain
Diameter of valves: Inlet 27.89 m.m. Exhaust 25.4 m.m.
Diameter of port at valve seat: Inlet 24.34 m.m. Exhaust 22.83/23.2 m.m.
Tappet clearance for checking timing: Inlet .48 m.m. Exhaust .48 m.m.
Valves open: Inlet 5° BTDC Exhaust 40° BTDC
Valves close: Inlet 45° ABDC Exhaust 10° ATDC
Maximum valve lift: Inlet 7.15 m.m. Exhaust 7.15 m.m.
Degrees of crankshaft rotation from zero to—
Maximum lift: Inlet 110° ATDC Exhaust 75° ABDC
1/2 Maximum lift: Inlet 62 1/2° ATDC Exhaust 27 1/2° ABDC
Valve springs: Inlet Coil Exhaust Coil
Type Coil No. per valve One
Carburettor: Type Semi down draught No. fitted One
(up or down draft, horizontal)
Make S.U. Model HS2 or H4 alternative
Flange hole diameter 31.75 m.m. Choke diameter 31.75 m.m.
Main jet identification No. - Needle EB

Air filter: Type Combined cleaner/silencer No. fitted 1
Inlet manifold:
Diameter of flange hole at carburettor 31.75 m.m.
Diameter of flange hole at port 26.98 m.m.



Exhaust manifold:
Diameter of flange hole at port Centre 26.95 x 25.4 outer 26.95 x 22.22 m.m.
Diameter of flange hole at connection to silencer inlet pipe 28.55 m.m.

Photogr



1 here.

Photograph of exhaust manifold to be affixed here

See above

ENGINE ACCESSORIES

Make of fuel pump S.U. No. fitted One
Method of operation Electric
Type of ignition system Coil coil or magneto
Make of ignition Lucas Model D12
Method of advance and retard Centrifugal & vacuum
Make of ignition coil Lucas Model LA12
No. of ignition coils 1 Voltage 12
Make of dynamo Lucas Model C4C
Voltage of dynamo 12 Maximum output 15 amps.
Make of starter motor Lucas Model L35G
Battery: No. fitted One Voltage 12 Capacity Standard 3 amp hour
Oil Cooler (if fitted) type - Capacity Export 4.3 pints

4

Make Riley Model Elf F.I.A. Recognition No. _____
 Manufacturers Reference No. of Application ADO15R/61

TRANSMISSION

Make of clutch B.M.C. Type Direct acting (single Plate)
 Diameter of clutch plate 7 7/8 - 181mm No. of plates 1
 Method of operating clutch Hydraulic
 Make of gearbox B.M.C. Type Synchromesh in unit with engine
 No. of gearbox ratios 4 forward & 1 reverse & final drive
 Method of operating gearshift Manual
 Location of gearshift Centre of car floor mounted next to driver
 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	No. of Teeth
1.	3.6275	$\frac{32}{13} \times \frac{28}{19}$					
2.	2.1717	$\frac{28}{19} \times \frac{28}{19}$					
3.	1.41225	$\frac{23}{24} \times \frac{28}{19}$					
4.	1.0:1	$\frac{24}{24}$					
5.	3.6275	$\frac{18 \times 32 \times 28}{13 \times 18 \times 19}$					

Type of final drive Single helical wheel & pinion
 Type of differential Bevel gear
 Final drive ratio 3.7651 Alternatives 4.133:1, 3.44:1
 No. of teeth 64/17 15/62, 18/62
 Overdrive ratio, if fitted -

WHEELS

Type Disc Weight 3.175 kg.
 Method of attachment Four studs & nuts
 Rim diameter 254 m.m. Rim width 88.9 m.m.
 Tyre size: Front 5.20 x 10 Rear 5.20 x 10

BRAKES

Method of operation Hydraulic system
 Is servo assistance fitted? No
 Type of servo, if fitted -
 No. of hydraulic master cylinders One Bore 19.05 m.m.

5

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 _____

7

	Front		Rear	
No. of wheel cylinders per brake	<u>One</u>		<u>One</u>	
Bore of wheel cylinders	<u>23.81</u> m.m.		<u>19.05</u> m.m.	
Inside diameter of brake drums	<u>177.8</u> m.m.		<u>177.8</u> m.m.	
No. of shoes per brake	<u>2</u>		<u>2</u>	
Outside diameter of brake discs	- m.m.		- m.m.	
No. of pads per brake	-		-	

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	<u>171.45</u> m.m.		<u>171.45</u> m.m.	
Width	<u>31.75</u> m.m.		<u>31.75</u> m.m.	
Total area per brake	<u>10,867</u> m.m. ²		<u>10,867</u> m.m. ²	

SUSPENSION

	Front	Rear
Type	<u>Transverse wishbone</u>	<u>Trailing arm</u>
Type of spring	<u>Rubber cone</u>	<u>Rubber cone</u>
Is stabiliser fitted?	<u>No</u>	<u>No</u>
Type of shock absorber	<u>Telescopic</u>	<u>Telescopic</u>
No. of shock absorbers	<u>One per wheel</u>	<u>One per wheel</u>

STEERING

Type of steering gear Rack & pinion
 Turning circle of car 9.449 m., approx.
 No. of turns of steering wheel from lock to lock 2 1/2

CAPACITIES AND DIMENSIONS

Fuel tank 25 litres Sump 5.12 litres
 Cooling system radiator 3.5 litres
 Overall length of car 327.02 cm. Overall width of car 140.97 cm.
 Overall height of car, unladen (with hood up, if appropriate) 134.62 cm.
 Distance from floor to top of windscreen:
 Highest point 101.6 cm. Lowest point 71.75 cm.
 Width of windscreen:
 Maximum width 113.39 cm. Minimum width 113.39 cm.
 *Interior width of car 116.84 cm.
 No. of seats 4
 Track: Front 120.6 cm. Rear 116.5 cm.
 Wheelbase 203.5 cm. Ground clearance 161.9 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 666.4 kgs.

6

Optional equipment affecting preceding information:—

B.M.C.
COWLEY
NEG. 106796 No.
PLEASE QUOTE WHEN
RE-ORDERING