

RACING VERSION LOTUS ELAN S.2

INTRODUCTION:

The standard Lotus Elan as produced by Lotus Cars Ltd. is a production high performance luxury sports car designed to give the owner value on a £/performance basis hitherto unequalled in the small capacity market. It is not suitable for racing. Many of our customers, however, like to take advantage of the outstanding performance, road holding, and braking customary with our cars and use them for competition. Because of this, Lotus Components Ltd., the company within the Lotus Group who build all Lotus racing cars, have produced a Lotus Elan competition model, the specification of which is listed below. This specification should, however, be read in conjunction with the standard specification for the Lotus Elan as we have endeavoured to show here the major difference in the competition version.

ENGINE:

The standard 105 b.h.p. version of the Lotus Elan engine is modified by BRM Engine Development Division of Rubery Owen & Co Ltd. to give 145 b.h.p. minimum at 6,500 r.p.m. This is achieved by stripping the engine, boring out to 1594 c.c. (97.4 cu.ins) bore 83.5 mm. (3.288") stroke 72.75 mm. (2.864") and reassembling to racing specification, including balancing, polishing and modifying the cylinder head. Torque figure for the racing unit is 125 lbs./ft. at 5,000 r.p.m. Although many of the standard components are retained in the engine (crankshaft, main bearing caps, etc.) special racing pistons with 2 Dykes type compression rings and one oil control ring, modified camshafts, special steel connecting rods, racing valve springs, and Vandervell lead indium steel backed bearings are fitted. All engines delivered for the racing version of the Lotus Elan are run-in on the bench and tested to see if they are giving the minimum required output. After testing they are stripped for inspection and after the final build are delivered to Lotus Components Ltd. No engine which is faulted on inspection after test is delivered until it has been re-tested. BRM specification number for this engine is 84.

GEARBOX:

Light alloy bell housing and gearbox tail shaft replace the standard cast iron units. Special rear gearbox mounting. Four speed and reverse close ratio all synchromesh gearbox.

- FRONT SUSPENSION: To provide the car with a lower ride level special competition front wishbones, which are adjustable for camber settings, replace the standard Lotus Elan parts and are used in conjunction with competition adjustable shock absorbers and springs. A front anti roll bar of thicker diameter than standard is also incorporated. Competition hubs suitable for the racing wheels are used.
- REAR SUSPENSION: To provide the necessary camber and toe-in adjustment, a special rear wishbone with a threaded spherical bearing at its inboard end is fitted to magnesium hub carriers, which in turn are mounted on competition shock absorbers and springs. Special rear hubs are used in conjunction with the racing wheels. Heavy duty roller spline drive shafts with universal joints replace the standard fixed length drive shafts and rubber couplings.
- BRAKES: Light alloy calipers mounted on special caliper carriers are used in conjunction with a special disc on the front wheels the rear brakes remaining the same as those fitted to the standard Lotus Elan. Special racing pads (Ferodo DS.11) are used. A dual brake master cylinder system is fitted to allow an adjustable braking ratio to front and rear wheels. Racing heavy duty fluid is used in the system.
- REAR AXLE: A light alloy differential nose piece replaces the standard cast iron unit and is used in a magnesium differential carrier incorporating a 3.9:1 ratio with limited slip differential. Optional ratios are 4.1:1 and 4.4:1.
- STEERING: The standard Lotus Elan rack and pinion steering is used and a leather covered steering wheel is fitted (13" dia.) to the standard steering column.
- WHEELS AND TYRES: The standard pressed steel wheels are replaced by pin drive knock on cast magnesium wheels (6" front 6" rear rim width 13" diameter) which are secured by three-eared knock on nuts. The wheels are fitted with Dunlop R.6 covers and tubes sizes 550 x 13 front 600 x 13 rear.
- OIL SYSTEM: Wet sump system with special Lotus adaptor casting feeding a light alloy oil cooler. An auxiliary oil pressure warning lamp is fitted.
- FUEL SYSTEM: Twin Weber 40DCOE2 carburettors fitted with special chokes and jets. Mechanical fuel pump replaced with lightweight Bendix electrical fuel pump. Long range fuel tank and quick release filler cap available at extra cost - £27.10.--.
- EXHAUST SYSTEM: Large bore four branch tuned-length exhaust system fitted with



BODY:

Lightweight glass fibre monolithic one piece body fitted with hard top. Full range of body colours available. Lightweight glass fibre bucket seats. Full American specification triangulated roll over bar fitted behind drivers seat.

ELECTRICAL SYSTEM:

Standard battery replaced with lightweight racing Varley battery mounted behind passenger's seat. Standard vacuum operated headlamps replaced with small diameter units shrouded by perspex covers.

COOLING SYSTEM:

The standard copper radiator is replaced with a light alloy unit and a separate aluminium header tank is incorporated in the system.

NOTE (1):

Lotus Components Ltd. in accordance with their progressive policy, reserve the right to change the racing specification of this car and/or prices without prior notice.

NOTE (2):

Attention is drawn to the following excerpt of the Company's standard warranty conditions. "No claim under the Warranty will be accepted by the Company if after delivery:- Goods sold have been used in connection with motor racing or any motoring competition".

ADDITIONAL  
PERTINENT  
INFORMATION

- (i) 19.06 m.p.h. per 1000 r.p.m. 3.9:1 ratio 600 x 13 R.6 tyres giving 807 revs. per mile = max. speed @ 7000 r.p.m. 133.4 m.p.h.
- (ii) 18.13 m.p.h. per 1000 r.p.m. 4.1:1 ratio 600 x 13 R.6 tyres giving 807 revs. per mile. = max. speed @ 7000 r.p.m. 126.9 m.p.h.
- (iii) 16.74 m.p.h. per 1000 r.p.m. 4.44:1 ratio 550 x 13 R.6 tyres giving 807 revs. per mile = max. speed @ 7000 r.p.m. 117.1 m.p.h.

PRICE:

Ex works in component form - £1995 + £165 PHASE II + £100 PHASE III  
Assembled for export only ex works - £2095.

Manufacturers Reference No. for Application

26/H/1



F.I.A. Recognition No.

127

# ROYAL AUTOMOBILE CLUB

FALL MALL, LONDON, S.W.1.

## Federation Internationale de l'Automobile.

Amendment to Form of Recognition

Manufacturer Lotus Cars Ltd.

Model Elan

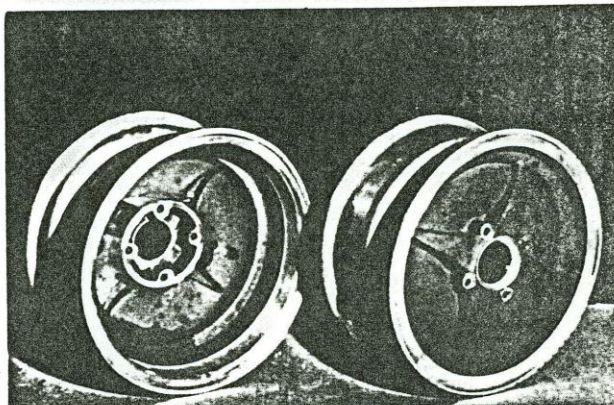
Add to Options.

Alternative magnesium wheels 6" rim width giving increase in track

front  $1\frac{1}{4}$ "

rear  $1\frac{1}{4}$ "

known ons  
47759  
2 1/8" WITS



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

Date amendment is valid from

16 Nov 1964

Form: R.F.I.B.