B. J. EPPS MOTORS
5350 Queens Chapel Road
W. Hyattsville, Md.

SPRITE

Marks II, III, and IV

MIDGET

Marks I, II, and III

B. J. EPPS MOTORS
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W. Hyattsville, Md.

WORKSHOP MANUAL

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British Leyland (Austin-Morris) Limited
Service division, Cowley, Oxford, England

Telephone: Oxford (0865) 78941

B. J. EPPS MOTORS
5350 Queens Chapel Road
W. Hyattsville, Md.

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INTRODUCTION

DESCRIPTION

This Manual is intended to assist the skilled mechanic in carrying out repairs and replacements in a minimum of time.

References to left- or right-hand side in this Manual are made when viewing the car from the rear.

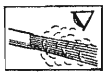
MANUAL ARRANGEMENT

The first part of the Manual includes the General Data, and Engine Tuning Data.

A Service Tools section and the Recommended Lubricants Chart are featured at the end of the Manual.

The remainder of the Manual is divided into sections and each section carries a reference letter that identifies the section with an assembly or a major component. Each section is preceded by a contents page and is sub-divided numerically. The pages and illustrations are numbered consecutively within each section and the section title and letter are shown at the top of each page.

Maintenance items within the Sections should be carried out at the intervals specified in the Passport to Service or Driver's Handbook.

IMPORTANT 

On cars fitted with emission control equipment service operations and adjustments showing this symbol must be followed by an exhaust emission check.

Servicing and adjusting vehicle control equipment must be carried out in accordance with the instructions given in **Workshop Manual Supplement AKD 4957.**

REPAIRS AND REPLACEMENTS

When replacements are required it is essential that only genuine **British Leyland** parts and **Unipart** replacements are used.

Attention is particularly drawn to the following points concerning repairs and the fitting of replacement parts and accessories:

Safety features embodied in the car may be impaired if other than genuine parts are fitted. In certain territories, legislation prohibits the fitting of parts not to the vehicle manufacturers specification.

Torque wrench setting figures given in the Manual must be strictly adhered to.

Locking devices, where specified, must be fitted. If the efficiency of a locking device is impaired during removal it must be renewed.

Owners purchasing accessories while travelling abroad should ensure that the accessory and its fitted location on the car conform to mandatory requirements existing in their country of origin. **The terms of the Owner's Service Statement may be invalidated by the fitting of other than genuine British Leyland parts and Uniparts.**

All **British Leyland** parts and **Unipart** replacements have the full backing of the Owner's Service Statement.

Genuine parts are supplied in cartons bearing one or both of these symbols.

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SPECIFICATION

Purchasers are advised that the specification details set out in this Manual apply to a range of vehicles and not to any particular vehicle. For the specification of any particular vehicle Purchasers should consult their Distributor or Dealer.

The Manufacturers reserve the right to vary their specifications with or without notice, and at such times and in such manner as they think fit. Major as well as minor changes may be involved in accordance with the Manufacturer's policy of constant product improvement.

Whilst every effort is made to ensure the accuracy of the particulars contained in this Manual, neither the Manufacturer nor the Distributor or Dealer, by whom this Manual is supplied, shall in any circumstances be held liable for any inaccuracy or the consequences thereof.

Getting the Best from your Car

Compression ratios 8·8 : 1 and 8·9 : 1

The high-compression engine is a highly developed unit, and it is essential that you should know something about the specialized maintenance it requires if you are to maintain it at the peak of its mechanical efficiency. Special recommendations on the sparking plugs, ignition settings, and fuel to be used are given by the manufacturers, and it is stressed that failures are bound to occur if these are not strictly adhered to. Particular care is needed with this engine owing to its high compression ratio, which makes it extremely sensitive to variations in fuel, ignition timing, and the heat range of the sparking plugs.

In lower compression engines a much wider range of fuels can be tolerated without causing serious damage to the engine, and ignition settings will stand variations of a reasonable amount. Also, even if the incorrect sparking plugs are used, no more damage may be incurred than burnt-out plugs or leaky valves. But with an engine having a very high compression ratio the range of fuels, sparking plugs, and ignition settings is much narrower and it is essential that the mixture should always be correct, and particularly never overweak at maximum load or power.

High-compression engines are very sensitive to variations in spark advance (over-advance) and to fuel/air ratio (mixture). Variations in these settings will increase the combustion temperature, and if the variation is excessive pre-ignition will cause high shock waves, resulting in damage to the engine.

The engine should be decarbonized at regular intervals as excessive deposits of ash from the combustion of lubricating oil and fuel can cause pre-ignition difficulties.

Choice of fuel

Compression ratio 8·9 : 1

The octane number of a motor fuel is an indication given by the fuel technicians of its knock resistance. High-octane fuels have been produced to improve the efficiency of engines by allowing them to operate on high compression ratios, resulting in better fuel economy and greater power. Owing to the high compression ratio of this engine, fuels with an octane rating below 98 are **not** suitable; should it be necessary to use a fuel with a lower octane number, the car must be used very carefully until the correct fuel can be obtained.

It is necessary to use Super grade fuels in the 100-octane range unless Premium fuels of minimum 98-octane Research are available.

Compression ratio 8·8 : 1

Fuels with an octane rating below 94 are **not** suitable.

Premium grade fuels with octane ratings of 97 to 99 must be used when optimum performance is required.

Sparking plugs

The correct grade of sparking plug for use under normal driving conditions is given in **'GENERAL DATA'.** Plugs of a lower heat range (hotter running) should not be used, otherwise pre-ignition will occur, with consequent rise in combustion temperature and resulting engine damage. For competition work or hard driving where high output is consistently sustained refer to Tuning Booklet C–AKD 5098. Accumulated deposits of carbon, leaking or cracked insulators, and thin electrodes are all causes of pre-ignition. The plugs should therefore be examined, cleaned, and adjusted at the specified intervals and defective ones renewed. New plugs should be fitted at regular intervals.

Ignition setting

It is of the utmost importance that the correct setting should always be maintained. It will be appreciated that any variation in the contact breaker gap will affect the ignition setting, and your particular attention is called to the check and adjustment of the distributor points specified in Section B. After adjusting the contact breaker gap to the correct setting (see **'GENERAL DATA'**) it is advisable to check the ignition timing, and to correct it if necessary.

An accurate static check can be carried out by a very simple electrical method. To do this, connect a 12-volt lamp between the low-tension terminal on the side of the distributor and a good earth point on the engine. With the ignition switched on and the sparking plugs removed, turn the crankshaft until the crankshaft pulley T.D.C. pointer is exactly at the correct number of degrees as stated under **'GENERAL DATA'.** If the ignition timing is correct the lamp will light at exactly this point. Any discrepancy in the ignition setting can be rectified by turning the vernier adjusting nut on the distributor until the test lamp lights at exactly the correct setting. If pinking should occur due to the use of a fuel of a lower range than our recommendations, retarding the ignition 2 to 3° can be tolerated. Under no circumstances should the ignition be advanced beyond the correct setting.

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