Mr. W. Phillips

THE BRITISH MOTOR CORPORATION (AUST.) PTY. LTD.

SERVICE LIAISON SUMMARY

DATE 23rd July, 1964. ISSUE NO. 50

MODEL	SUBJECT
AUSTIN FREEWAY/WOLSELEY 24/80	INTRODUCTION MK. II MODEL.

BODY

The external appearance of the vehicle has been revised at the rear by the use of the U.K. Wolseley 16/60 rear fenders, bumper and lamps on the Wolseley version, together with the addition of a "Mark II" nameplate. This change reduces the prominence of the rear fins. There are no changes to the external appearance of the Austin saloon or station waggon. The "Automatic" nameplate has been re-styled and is common to all versions.

Internally, the main changes concern the seating, but in addition, adjustable arm rests of the Morris 1100 type and new style door trim pads have been added to the front and rear doors of the Wolseley version. The Wolseley front seat strapping has been redesigned to give a lower and softer seat and the revised trim pads and coverings continue this theme. The Austin saloon and station waggon front seat has new pads and coverings to improve comfort.

The saloon rear seat in both Austin and Wolseley has been redesigned with full foam pads replacing the spring cases in cushion and squab, together with new style coverings and a longer centre arm rest in the Wolseley giving increased comfort. The station waggon squab has been redesigned using foam pads and the cushion lowered.

The Wolseley carpet is of a better quality and appearance.

Modified Zone windscreens giving improved safety are fitted to all versions.

MECHANICAL.

The saloon ride has been considerably improved by the use of softer rear springs and complementary changes to front and rear shock absorber valving. In order to control wheel hop with the softer rear springs it has been necessary to lengthen the springs and reposition the rear spring hanger brackets on the underbody longitudinals to suit. This rework is considered too extensive to be undertaken in the field on existing vehicles. There has been some increase in body roll with the softer springs, but the good handling standard has been maintained. The station waggon rear springs have not been lengthened.

The accelerator control has been redesigned to eliminate lost motion associated with the throttle shaft and its support bracket and now has a short cable connection between the carburetter and the lever on the accelerator shaft. This change considerably improves the throttle action, particularly on automatics

The dust sealing of the front swivel pins has been improved in accordance with a U.K. change in order to increase the swivel pin life.

Servo assistance has been provided for the foot brake, using a P.B.R. VH-44B vacuum booster. The characteristics of this unit have been carefully chosen to give a low crack point, or commencement of boost; and a boost ratio and knee point have been selected so as to control wheel locking. For a 50% deceleration at 30 m.p.h., the pedal effort has been reduced from 62 lbs. to 28 lbs. In order to permit satisfactory bleeding of the brake system, a line pressure valve set to 4 p.s.i. maximum has been added to the system at the inlet side of the servo unit.

The exhaust system has been raised by 5/8" at the muffler in order to increase the ground clearance at this point.

The windscreen wiper motor torque has been increased by approximately 15% in order to reduce the likelihood of stalling under adverse conditions.

As the first part of a planned series of changes to increase the engine power output, the cylinder head has been redesigned with larger valves and ports of the M.G.B. type. The new combustion chamber shape requires a change to the piston crown and cylinder head joint washer, and the compression ratio of both manual and automatic versions will be common at 8.2 to 1. The new joint washer will be used to service existing Freeway/Wolseley engines. The use of 21-4N material for the exhaust valves will overcome the few complaints of valve stretching which have been received from areas where operating conditions are severe. The distributor has been retuned to suit the new combustion chamber and an expected increase in the fuel octane rating which has not yet materialised.

GENERAL DATA

The following revisions should be made to the General Data section of the Freeway/Wolseley 24/80 Workshop Manual, TP.564. Supplements to manuals will be issued.

Engine

Compression Ratio		:	8.2 : 1
Capacity of Combustion Chamber (Valves fitted)		:	42.5 - 43.5 cc.
B.H.P.		:	85 at 4,400 r.p.m. gross.
B.M.E.P.		:	132 p.s.i. gross at 1,600 r.p.m.
Torque		:	130 lbs. ft. gross at 1,600 r.p.m.

Valves and Valve Gear

Seat Angle	- Inlet	:	$45\frac{1}{2}^{o}$
	Exhaust	:	$45\frac{1}{2}^{o}$
Head Diameter	- Inlet	:	1.560 - 1.570
	Exhaust	:	1.340 - 1.350
Stem Diameter	- Inlet	:	.3420 - .3427
	Exhaust	:	.3415 - .3422
Valve Stem to Guide Clearance	- Inlet	:	.00155 - .00275
	Exhaust	:	.00205 - .00325

Valve Guides

Fitted Height above Head	:	$.625 \begin{smallmatrix} +0 \\ -1/64 \end{smallmatrix}$

Ignition System

Distributor Centrifugal Advance	:	At 1950 r.p.m. camshaft 14^{o} - 16^{o} At 1475 r.p.m. camshaft $11\frac{1}{2}^{o}$ - $13\frac{1}{2}^{o}$ At 1000 r.p.m. camshaft 9^{o} - 11^{o} At 700 r.p.m. camshaft 5^{o} - 7^{o} At 400 r.p.m. camshaft 1^{o} - 3^{o} No advance below 175 r.p.m.
Distributor Vacuum Advance	:	Advance commences at 4" Hg. finishes at 14" Hg, with 8^{o} advance.
Timing	:	T.D.C. at 500 r.p.m.

Ignition System (Cont.)

Timing	:	T.D.C. at 500 r.p.m.

Clutch

Facing Material	:	Veeloc 1133C

Rear Suspension

Length between eye laden	:	48"
Deflection at given load	:	5"
Deflection at full bump	:	Delete
Laden Camber	:	.94" negative
Number of Leaves	:	2 off $1\frac{3}{4}$ x .281 3 off $1\frac{3}{4}$ x .250

Shock Absorbers

Front Blow-off -	Rebound	:	1500 in.lbs. $\pm$ 150
	Compression	:	1000 in.lbs. $\pm$ 100
Leak -	Rebound	:	150 in.lbs. $\pm$ 30
	Compression	:	150 in.lbs. $\pm$ 30
Rear Blow-off -	Rebound	:	1300 in.lbs. $\pm$ 130
	Compression	:	800 in.lbs. $\pm$ 80
Leak -	Rebound	:	100 in.lbs. $\pm$ 20
	Compression	:	100 in.lbs. $\pm$ 20

Brakes

Servo Unit Make and Type	:	P.B.R. VH-44B
Crack Point	:	35 p.s.i: input
Knee Point	:	950 p.s.i. output at 450 p.s.i. input at 20" Hg.
Line Pressure Valve	:	4 p.s.i. maximum.

Control Box

Windscreen Wiper Type	:	10RW Self-Switching.

AUTOMATIC TRANSMISSION

There have been no changes to the automatic transmission associated specifically with the Mk. II Series. However, there have been a number of running changes to the unit during its life.

The valve recalibration to soften the sharpness of the changes has not been implemented in production but this is to be reconsidered.

New front and rear ungrooved bands giving improved life have been introduced, together with a reed valve in the front clutch piston to ensure disengagement of the front clutch when in neutral and thus prevent clutch plate wear. There is also a new front pump oil seal having better temperature resistance and sealing qualities, and a stronger rear pump driving peg. We have no advice of change points for these modifications.