

*Date of Issue: February, 1937*

**Service Information Sheet No. 42**

**VALVE ROCKER RETURN SPRINGS**

It has been found as a result of a series of tests and experiments that the omission of the valve rocker return springs does not detract in any way from the efficiency of the TA Series Midget and SA Type Two-litre engines.

In consequence of these findings, Agents are notified that in future these springs will not be fitted or supplied for service requirements.

Should any difficulty occur due to the breaking of any one spring it is permissible to remove the complete set.

**Service Information Sheet No. 45**

**LOCKING PLATES FOR STEERING ARM BOLTS**

It has been considered necessary to reverse the position of the bolts in the steering arms through the knuckles. Up to the present time these bolts have been fitted with the heads inside the brake-drum and the nuts outside, secured by "Shake-proof" washers.

It is now requested that these bolts be fitted in the reverse direction, that is with the heads outside and the nuts inside the brake-drum. But instead of the "Shake-proof" washers, it has been considered more satisfactory to fit a tab locking washer, Part No. MG493/113. After the nut has been thoroughly tightened, the tabs are then turned up, which prevents the nuts from turning.

This modification has been incorporated on production commencing at Axle Number 1411.

All owners have been notified of the necessity for this alteration in our letter JWT/GL/1, dated 22nd March, 1937. Will Repair Shops please take immediate note of the details so as to be in a position to carry out the alteration on demand?

Date of Issue : April, 1937

**Service Information Sheet No. 46**

REMOVAL OF SUMP

Agents are advised that in order to remove the sump of the "T" Series Midget, it is *not* first necessary to remove the front exhaust pipe or disconnect the steering, as described in the *Manual*. To remove the sump it is necessary only to remove the starter securing bolts, when the starter can be drawn out as far as it will go to give access to otherwise inaccessible sump securing bolts.

Date of Issue: August, 1937

**Service Information Sheet No. 49**

ADJUSTMENT OF ENGINE MOUNTING

A point that may not be generally realised is the importance of the correct adjustment of the front engine mounting on the above models.

The seating rubbers with bolts secure the engine to the frame at the same time allowing flexibility, and the small rubber washers under the support brackets prevent the engine from lifting. If these latter are adjusted too hard against the engine brackets, much of the general flexibility is prevented, therefore the retaining plate should be fitted so that the rubber washer just makes contact with the support bracket and held in this position while the lock nut is tightened.



**Service Information Sheet No. 59**

**LUBRICATION OF THE KING PINS**

The king pin bushes for the above models have been modified to give more efficient lubrication of the king pins. The oil grooves are designed to lubricate the thrust surfaces also, and it must be noted, therefore, that there is a correct method of fitting the bushes to the stub axle. The same remark applies to both top and bottom bushes.

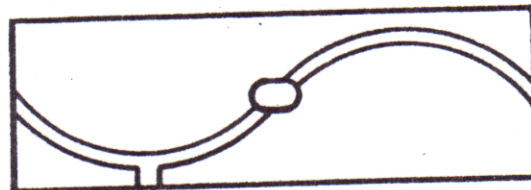
The sketch below illustrates the modified groove, and it is essential that the bush is fitted so that the oil leak is towards the axle beam.

It should be noted that when the new bushes are pressed into place, it is necessary to use a spiral reamer of sufficient length to do both bushes at the same time.

These can be supplied under Part Numbers :—

T.95 for the TA. Series Midget.

T.89 for the VA. Type 1½-Litre.



BUSH TO BE FITTED WITH GROOVE

TOWARDS AXLE BEAM

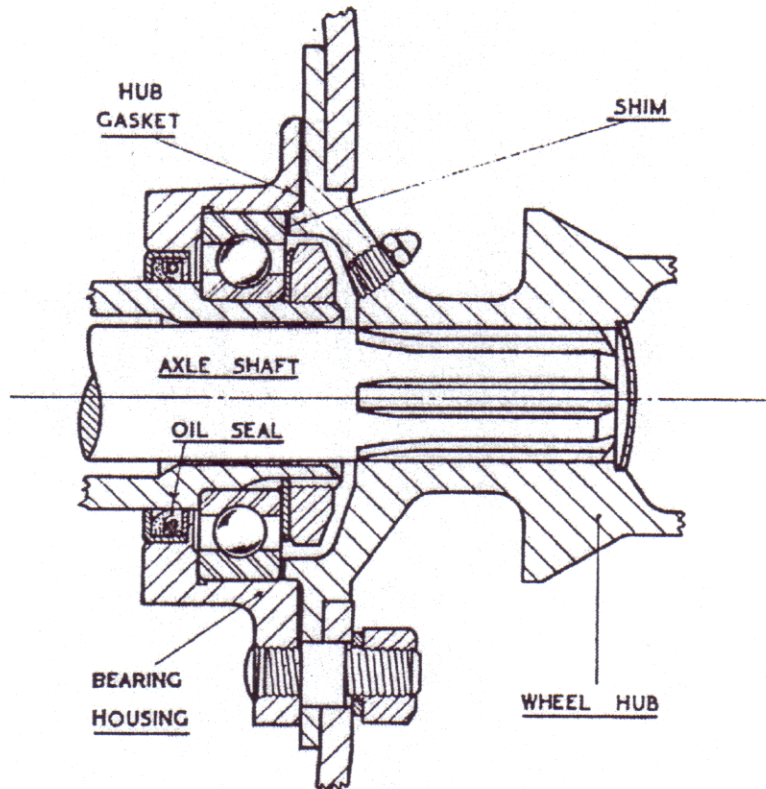
(View of Bush before being rolled)

**Service Information Sheet No. 60**

**METHOD OF CLAMPING REAR HUB BALL RACE**

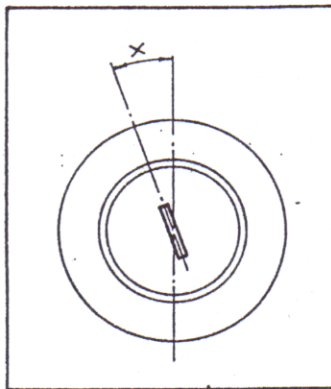
A gasket has been introduced between the rear hub and bearing housing to ensure an oil-tight joint.

In certain circumstances, due to machining limits, the introduction of this gasket gives a clearance between the ball race and the dowel of the hub, which allows the bearing housing to float on the ball race. To overcome this a shim should be fitted as illustrated in the sketch below. SA. Type Two-Litre Shim .010 in. (Part No. MG663/157), and TA. Series Midget and VA. Type 1½-Litre Shim .007 in. (Part No. MG689/143).

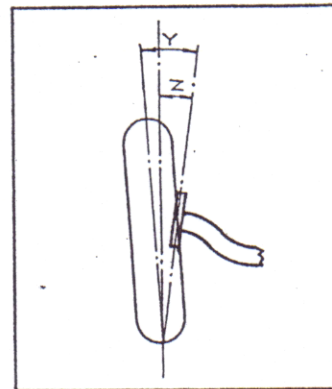


Service Information Sheet No. 61

STEERING ANGLES



B = BEAM.  
P = PACKING.  
S = SPRING.



The following information has been compiled to assist service stations when checking the steering gear on the various models. It is not intended for use in repairing damaged steering parts and attention is drawn to Service Information Sheet No. 10 on this subject.

Model	Castor Angle " X "	Knuckle Angle " Y "	King Pin Angle " Z "
M ... ..	3° (B Nil—P 3°—S Nil)	9°	6½°
D, J, F ... ..	6° (B 3°—P Nil—S 3°)	9°	6½°
L ... ..	7° (B 3°—P 1°—S 3°)	9°	6½°
K, KN, TA ...	6° (B 3°—P Nil—S 3°)	10½°	7½°
P, PB ... ..	8½° (B 3°—P 2½°—S 3°)	9°	6½°
N ... ..	8° (B 3°—P 2°—S 3°)	10½°	7½°
SA ... ..	4° (B Nil—P Nil—S 4°)	10°	8°
VA ... ..	4½° (B Nil—P 1½°—S 3°)	10°	8°
WA ... ..	6° (B Nil—P 2°—S 4°)	10°	8°



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**Service Information Sheet No. 67****SPEEDOMETER CABLES**

Complaints have been received of broken speedometer flexible cables, and oil finding its way up the cable and on to the numerals of the trip.

To obviate this, and commencing at Chassis No. TC.2196, a new cable, Pt. No. A.1270, Jaeger No. F.245, is being fitted. Cables incorporated on chassis prior to the one quoted may be changed for the later type if desired.

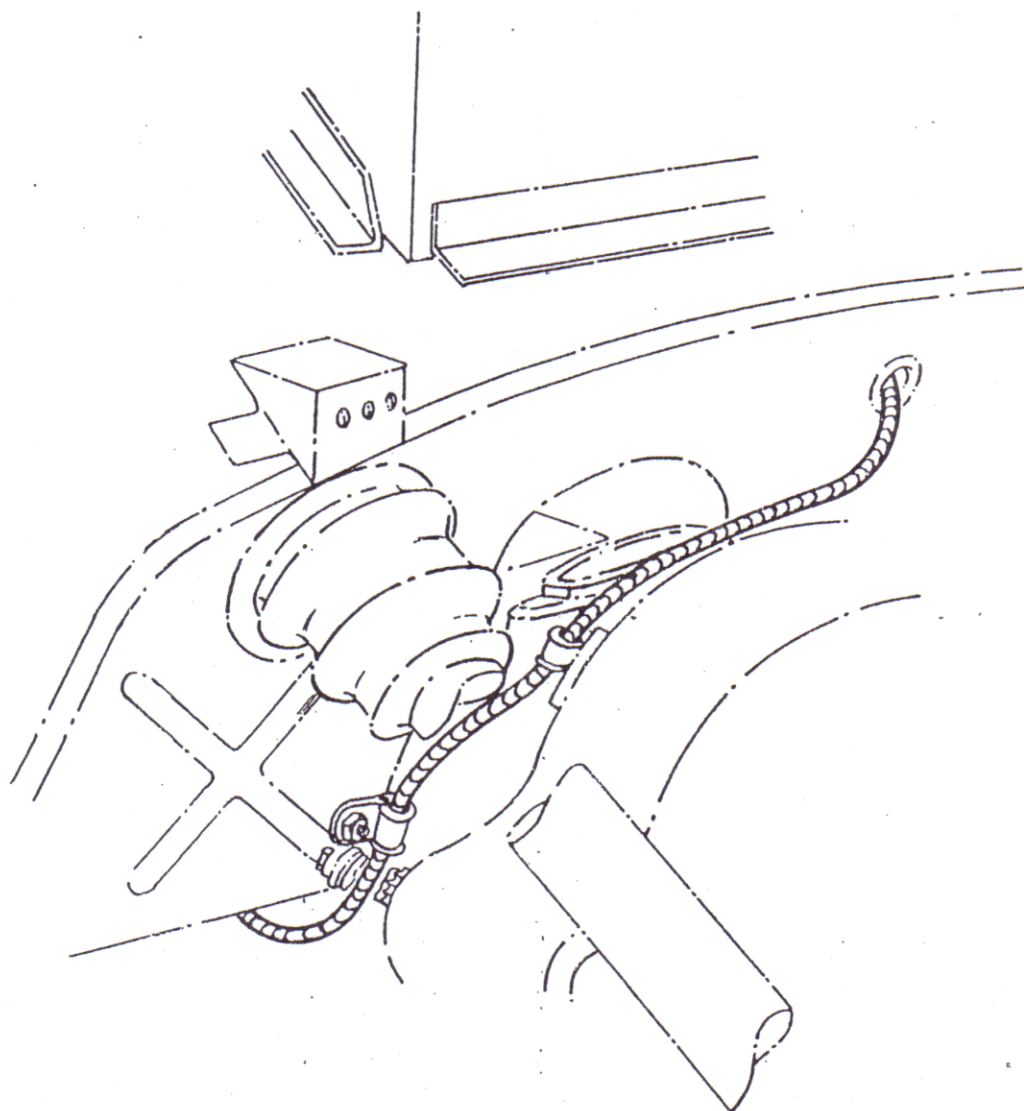
The run of the cable has also been modified, and from the drive it will now pass under the gearbox in a fair radius to clear the exhaust pipe and up the off-side, being clipped to the underside of the foot-ramp, and running over the clutch housing, clipped to the clutch housing bolt, and through existing hole and grommet, as shown in sketch overleaf. The clip on the clutch housing should be twisted to maintain the curve of the flex over the housing.

Additional material required is as follows:—

3 off.	S27/18.	Rubber ferrules.
3 off.	S2/50.	Clips.
1 off.	278D/1.	Plain washer ( $\frac{1}{4}$ in. $\times$ $\frac{1}{4}$ in. $\times$ .072 in.).
1 off.	258D/1.	Spring washer ( $\frac{1}{4}$ in. diameter).
1 off.	284J/2.	Countersunk screw ( $\frac{1}{4}$ in. $\times$ 26 $\times$ 1 $\frac{1}{4}$ in.), which replaces existing bottom R.H. screw 284D/2 (gearbox rubber cover to foot-ramp). This new screw is $\frac{1}{8}$ in. longer and protrudes sufficiently to carry the clip, washers and nut.
1 off.	FN104/K.	Hex. nut ( $\frac{1}{4}$ in. $\times$ 26).



Service Information Sheet No. 67 (continued)



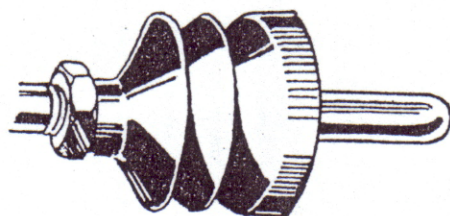
VIEW SHOWING SPEEDOMETER FLEXIBLE  
CABLE RUN BETWEEN FOOT RAMP AND  
CLUTCH HOUSING

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**Service Information Sheet No. 68**

**BRAKE MASTER CYLINDERS**

When assembling push rod to Lockheed brake master cylinder, care should be taken to see that the rubber boot is assembled with the vent hole at the bottom.



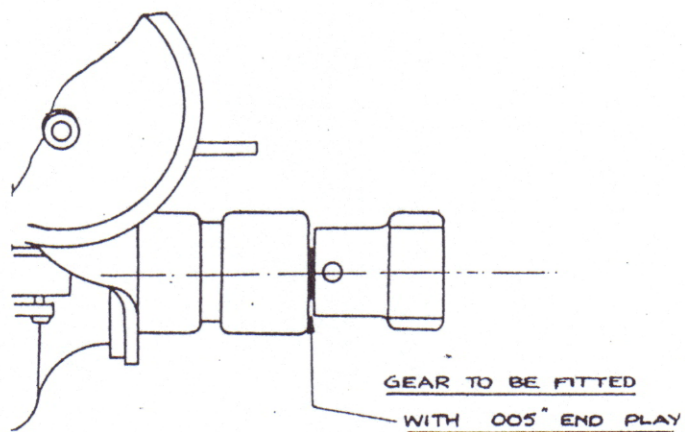
VENT HOLE AT BOTTOM

Date of Issue: May, 1947

**Service Information Sheet No. 69**

**DISTRIBUTORS**

When fitting the gear to a distributor spindle, .005 in. end play should be left as shown in the sketch below.





## Service Information Sheet No. 70

### OIL BASE JOINTS

When refitting the oil base particular care is necessary to ensure that oiltight joints are made around the front and rear crankshaft bearings.

In the first place it is necessary to take great care in cutting the gasket at the points X in Fig. 1. It is essential that the full length of the tags (shown at Y, Fig. 2) should be preserved, and that these should be cut perfectly square.

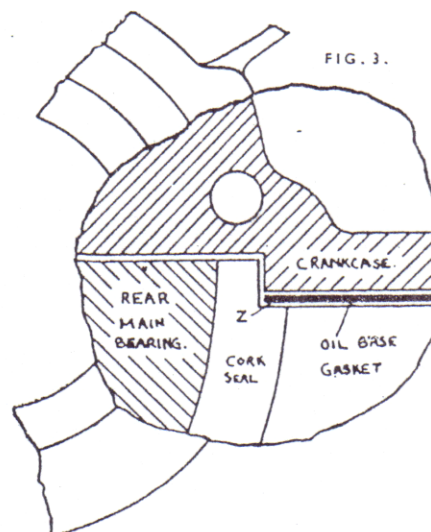
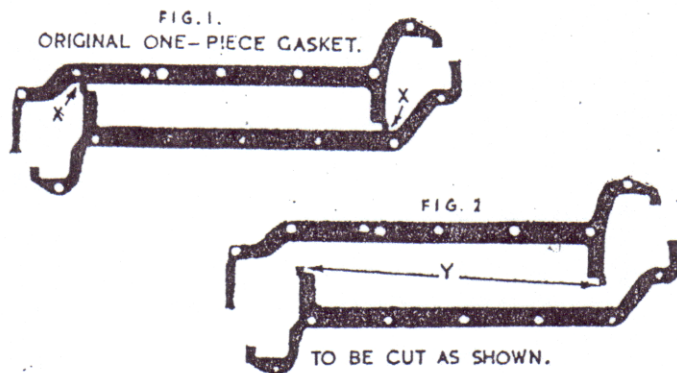
This done, the gasket should be stuck to the face of the *crankcase* with jointing compound, care being taken to ensure that the tags (Y, Fig. 2) come level with the edge of the machined face of the crankcase at the point where it is cut away to admit the rear main bearing cap (see Fig. 3).

At the front end the corresponding ends of the gasket should be laid *over* the ends of the timing chain case packing (which is recessed into the crankcase), and should abut against the crankshaft itself.

The rear main bearing cap should now be fitted.

The cork seal may now be stuck with jointing compound into the recess in the rear main bearing cap, care being taken to insert the ends of the seal between the bearing cap and the crankcase, as shown in Fig. 3. It is essential that there should be a good joint between the ends of the cork seal and the oil base gasket (as at Z, Fig. 3).

Finally the oil base should be refitted while the jointing compound mentioned above is still wet.



### Service Information Sheet No. 73

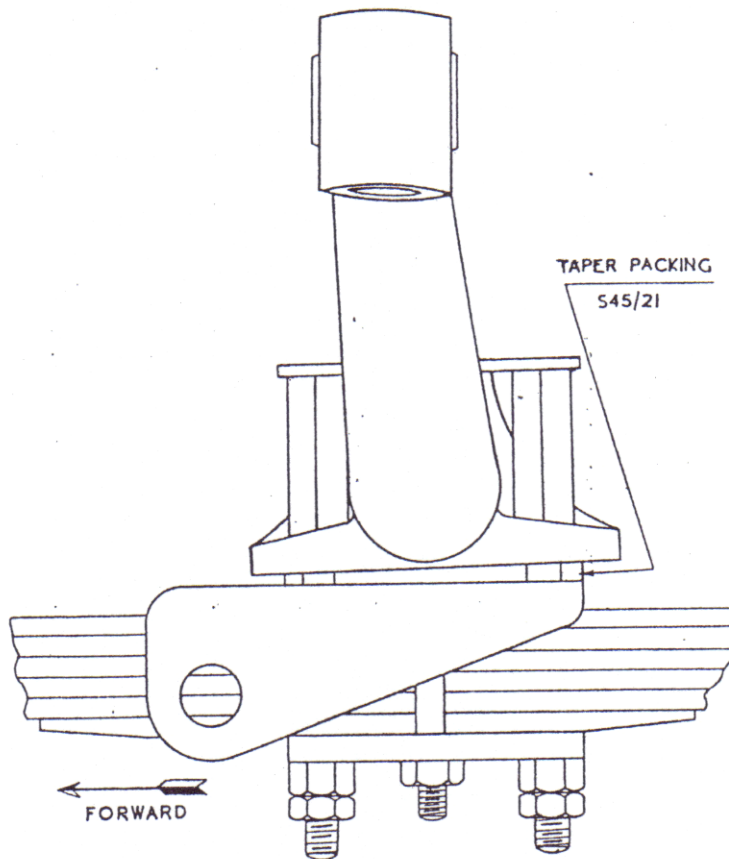
#### FRONT AXLE AND STEERING

An improvement is effected by reducing the castor angle from  $8^{\circ}$  to  $5\frac{1}{2}^{\circ}$ .

Cars produced prior to Chassis No. TC4251 may have this modification incorporated by fitting a taper plate—Part No. S45/21.

The correct position for the taper plate to be fitted is immediately beneath the front axle pad, with the *thicker* portion at the *rear* as shown in the sketch below.

In the majority of cases the existing bolts will be found to be of sufficient length, but if not, further bolts which are  $\frac{1}{4}$  in. longer may be obtained, Part No. S33/85.



**Service Information Sheet No. 76****ACCELERATION AND PICK-UP**

As from Car No. TC.3856, carburettors are fitted with hydraulic dampers, Part No. A1326/3, which are incorporated with brass suction pistons, Part No. A1311/3. E.S. needles are retained as standard.

The hydraulic suction piston damper is a device located in the hollow piston rod and attached to the oil cap nut. It consists of a plunger with a one-way valve, and its function is to give a slightly enriched mixture by preventing the piston from rising unduly quickly on acceleration. Its effect is therefore helpful in cases where hesitation in acceleration from the lower speeds is encountered.

The only attention necessary is to keep the dampers supplied with N.O.L. "Twenty" Oil. Replenishment once a month should be sufficient.

It should be noted that the hydraulic damper fitted to the TC Midget differs from that fitted to the 1½ litre. The ball valve of the former has a travel .040 in. greater than that of the latter, and this can be seen by the position of the ball retaining pin in the piston. In order to distinguish the TC damper from other dampers in stock, the TC damper is copper-plated, while the others are left with their brass finish.

A section drawing of the carburetter showing the damper is given below.

HYDRAULIC PISTON DAMPER CARBURETTORS PREVENTS THE SUCTION PISTON RISING TOO RAPIDLY DURING SNAP ACCELERATION. THE HOLLOW PISTON ROD SHOULD BE FILLED TO WITHIN HALF AN INCH OF TOP OF ROD WITH N.O.L. TWENTY ENGINE OIL - AFTER THE TOP BRASS CAP HAS BEEN UNSCREWED.

