GENERAL SPECIFICATION DATA

GEARBOX AND OVERDRIVE

Number of forward gears		4 (synchromesh)	
Ratios:		Gearbox	Overall
	Reverse	2.819 : 1	8.657 : 1
	First	3.138 : 1	9.637 : 1
	Second	1.974 : 1	6.062 : 1
	Third	1.259 : 1	3.866 : 1
	Fourth: Standard	1.00 : 1	3.071 : 1
	Overdrive	0.82 : 1	2.518 : 1
Top gear speed per 1000 rev/min:	Standard	23 m.p.h. (37 km/h)	
	Overdrive	28 m.p.h. (45 km/h)	
Speedometer gear ratio		8/21	

PROPELLER SHAFT

Type	Hardy Spicer, telescopic, flange type, tubular
Universal joints	Needle roller

FINAL DRIVE

Type		Hypoid, semi-floating
Ratio		3.071 : 1 (14/43)
Differential bearing pre-load		0.002 in (0.05 mm) 'nip' per bearing
Backlash adjustment:	Crown wheel*	Shims
	Pinion	Head washer

STEERING

Type		Rack and pinion
Steering-wheel diameter		15½ in (394 mm)
Turns–lock to lock		2.93
Turning circle:	Left lock	34 ft (10.36 m)
	Right lock	33 ft 1 in (10.08 m)
Pinion end-float		0.002 to 0.005 in (0.05 to 0.12 mm)
Damper end-float		0.0005 to 0.003 in (0.01 to 0.08 mm)
Toe-in		$\frac{1}{16}$ to $\frac{3}{32}$ in (1.6 to 2.4 mm)

FRONT SUSPENSION

Type		Independent. Coil spring and wishbone
Spring: Coil diameter (mean)		3.238 in (82.2 mm)
	Free height	9.32±0.06 in (236.7±1.5 mm)
	Static length at 1193 lbf (540.1 kgf)	6.84 in (173.7 mm)
Number of free coils		7.2
Camber angle		Nominal 1° positive (+¼°, – 1¼°)
Caster angle		Nominal 7° (+¼°, –2°)
King pin inclination		Nominal 8° (+ 1°, –¾°)
Dampers		Armstrong, lever arm, hydraulic
Arm centres		8 in (203.2 mm)

continued

MGBGTV8 Workshop Manual Supplement AKD8468 – General Specification Data, Steering, page 04-6

J

THE STEERING GEAR

GENERAL DESCRIPTION

The steering gear is of the direct-acting rack-and-pinion type, providing light and accurate control under all conditions.

It consists of a rack bar and toothed pinion mounted on the front suspension cross-member.

No adjustment for bearing wear in the box is provided, except by fitting of the necessary new parts.

The steering inner column is attached to the pinion by a universal coupling.

CAUTION.—If the vehicle is hoisted with its front wheels clear of the ground care should be taken to avoid forceful movement of the wheels from lock to lock, as damage may occur within the steering mechanism.

LUBRICATION

(Early cars)

Give the lubricating nipple on the steering-gear housing up to 10 strokes of the oil gun, but no more.

On R.H.D. cars the nipple is accessible from above the steering gearbox and on L.H.D. cars from below the car under the radiator.

Section J.1

FRONT WHEEL ALIGNMENT

The wheels should toe in $\frac{1}{16}$ to $\frac{3}{32}$ in. (1.6 to 2.4 mm.).

See that the tyres are inflated to the correct pressures. Set the wheels in the straight-ahead position.

Set the arms of a suitable trammel to the height of the hub centre on the outside of the wheels.

Place the trammel to the rear of the wheels and adjust the pointers to register with the wheel rims. Chalk the position of the pointers in each wheel rim and push the car forward one half-turn of the wheels. Take the front reading from the same marks on the rims.

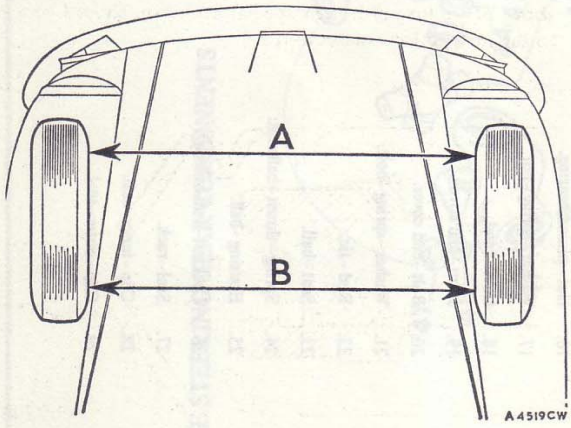

Fig. J.1
The front wheel alignment check must be taken with the front wheels in the straight-ahead position. Dimension (B) is $\frac{1}{16}$ to $\frac{3}{32}$ in. (1.6 to 2.4 mm.) greater than (A)

If adjustment is necessary, proceed as follows.

Slacken the locknuts at the ends of the short tie-rods and the clips securing the rubber gaiters to the tie-rods.

Use a wrench to rotate each of the tie-rods **equally** in the desired direction. These both have right-hand threads.

NOTE.—To ensure that the steering gearbox is in the central position and that the steering geometry is correct, it is important that the tie-rods are adjusted to exactly equal lengths. This can be ascertained by measuring the amount of thread visible behind each locknut, which should be equal.

After adjustment re-tighten the ball joint locknuts and rubber gaiter clips and ensure that the machined under sides of the ball joints are in the same plane.

Section J.2

STEERING—WHEEL

Release the three grub screws and remove the horn-push hub centre. Unscrew the steering-wheel nut and mark the wheel hub and column to ensure replacement in the original position. Pull off the wheel with a suitable tool. When replacing the wheel position it on the column splines in the original position to place the spokes equally about a horizontal datum line. Tighten the nut to the torque wrench setting given in **'GENERAL DATA'.**

GHN and GHD5 cars

1. Remove the steering-wheel motif assembly; it is a press-fit. Later type, remove the horn contact plunger.
2. Turn back the lock ring tabs and remove the bolts, lock ring, and steering-wheel.

NOTE: Early cars only, have lock tabs integral with the lock ring.

HUB

3. Slacken the steering-wheel nut and fit Service tool 18G 1181 to the hub using the special bolts.* Mark the hub and column to assist correct re-alignment and pull the hub until it is a loose fit on the steering-column. Remove 18G 1181, the steering-wheel nut and hub.
4. When refitting the hub, position it on the column splines in the original position. Fit the nut and tighten to the torque wrench setting given in **'GENERAL DATA'.**

*LATER TYPE STEERING WHEEL USE TWO $\frac{5}{16}$ UNF, $\frac{7}{8}$ in. threaded, $\frac{7}{8}$ in. plain shank, bolts to fit service tool 18G 1181.

Section J.3

STEERING-COLUMN

Removing and replacing

Withdraw the clamping bolt and nut securing the universal joint to the inner steering-column. Unscrew the four set screws from the direction indicator cowling and remove the indicator. Withdraw the clamping bolts, nuts, and spring