

Motor Trader

SERVICE DATA NO. 492

TRIUMPH G.T.6 Mk.11

Manufacturers: Standard-Triumph, Ltd., Coventry (members of the Leyland Motor Corporation)

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REVISED version of the GT6, the Mk11, has improved body styling and performance with roadholding to match.

The well proven swing axle/transversely mounted leaf spring rear suspension has been modified to reduce the tendency for the wheels to tuck in and lose adhesion on severe bends. In the engine, combustion chamber shape has been re-profiled to raise performance and improve fuel economy.

Gross bhp of the 1,998cc six cylinder unit derived from the Mk11 2000 is now 104 at 5,300rpm; the engine working at a compression ratio of 9.25:1, using a minimum octane rating of 97RM.

Transmission of the drive is taken through an hydraulically operated single dry plate strap-drive clutch to the four-speed all-synchromesh gearbox, and by conventional propeller shaft arrangement to the final drive gear contained within the differential casing, and thence by drive shafts to the rear wheels. Overdrive, of Laycock de Normanville pattern, is available as an optional extra.

Front suspension is independent and utilizes coil springs as the suspensory medium, and telescopic hydraulic shock absorbers are co-axially mounted. Wishbones of this suspension layout have rubber bushed pivots, and an anti-roll bar is fitted. Rear suspension is also independent, and comprises a swing axle, transversely mounted leaf spring, radius rods and inverted wishbones. The system is damped by telescopic hydraulic shock absorbers.

Body mounting is carried out in broadly similar fashion to that employed in Herald/Vitesse/Spitfire vehicles in which the body is attached to the separate chassis frame.

Mechanical components bear considerable similarity to those which are used on other cars in the Standard-Triumph range and their use endorses the manufacturer's continuing policy of parts and unit standardisation throughout their



GT6 Mk 11 retains the same basic body shape of its predecessor but has louvred vents on bonnet and wings, raised front bumper, through-flow ventilation and sporty nave plates

product range. The engine has twin carburettors, Stromberg CD units. There is a closed curcuit crankcase ventilation system.

Vehicles are numbered in familiar Standard-Triumph manner, by commission and unit numbers. The commission, paint and trim code numbers are to be found stamped on a plate which is attached to the bonnet scuttle left-hand side panel. The body number is stamped on a separate plate mounted below the commission number plate. Engines are serial numbered and these numbers are stamped on a boss on the left-hand side of the cylinder block casting. The rear axle number is stamped on the hypoid housing flange and the gearbox serial number is stamped on the side of the gearbox casing. Commission numbers and engine numbers should be quoted when referring to the vehicle manufacturers, or when ordering spare parts. In this context, it should be noted that it is manufacturer's policy that all matters of spares, service and warranty work should be channelled through the Standard-Triumph dealer network, to whom all such queries should be addressed.

Special tools for use in overhaul and repair work are made and marketed by V. L. Churchill & Co., Ltd., London Road, Daventry, Northants. A selection of those which are considered essential to efficient repair work is set out in these pages, together with the relevant part numbers for ordering purposes. The use of these tools is

approved by the vehicle manufacturers. In many cases, it will be found that certain repair operations are difficult, costly and lengthy without them.

Threads and hexagons are, in the main, of the Unified thread series pattern and form, although there are some proprietary components which have different thread patterns. In all cases of doubt, it is preferable to replace all threaded parts exactly as they were dismantled, taking care to renew nuts bolts, etc., which have stretched or damaged threads. It is impossible to tighten malformed screw threads to the correct torque loading.

ENGINE

Mounting

At front, flanged, composite mountings are bolted up to chassis abutments and to feet which are, in turn, bolted up to bosses on either side of crankcase casting.

At rear, cylindrical rubber blocks are bolted up to each side of gearbox extension casing and to cradle, which is bolted to chassis frame. Tighten all nuts and bolts fully.

Removal

Engine may be removed with, or without gearbox. To remove with gearbox as unit proceed as follows:

Disconnect earth lead from battery. Drain coolant from engine and oil from engine, take off air

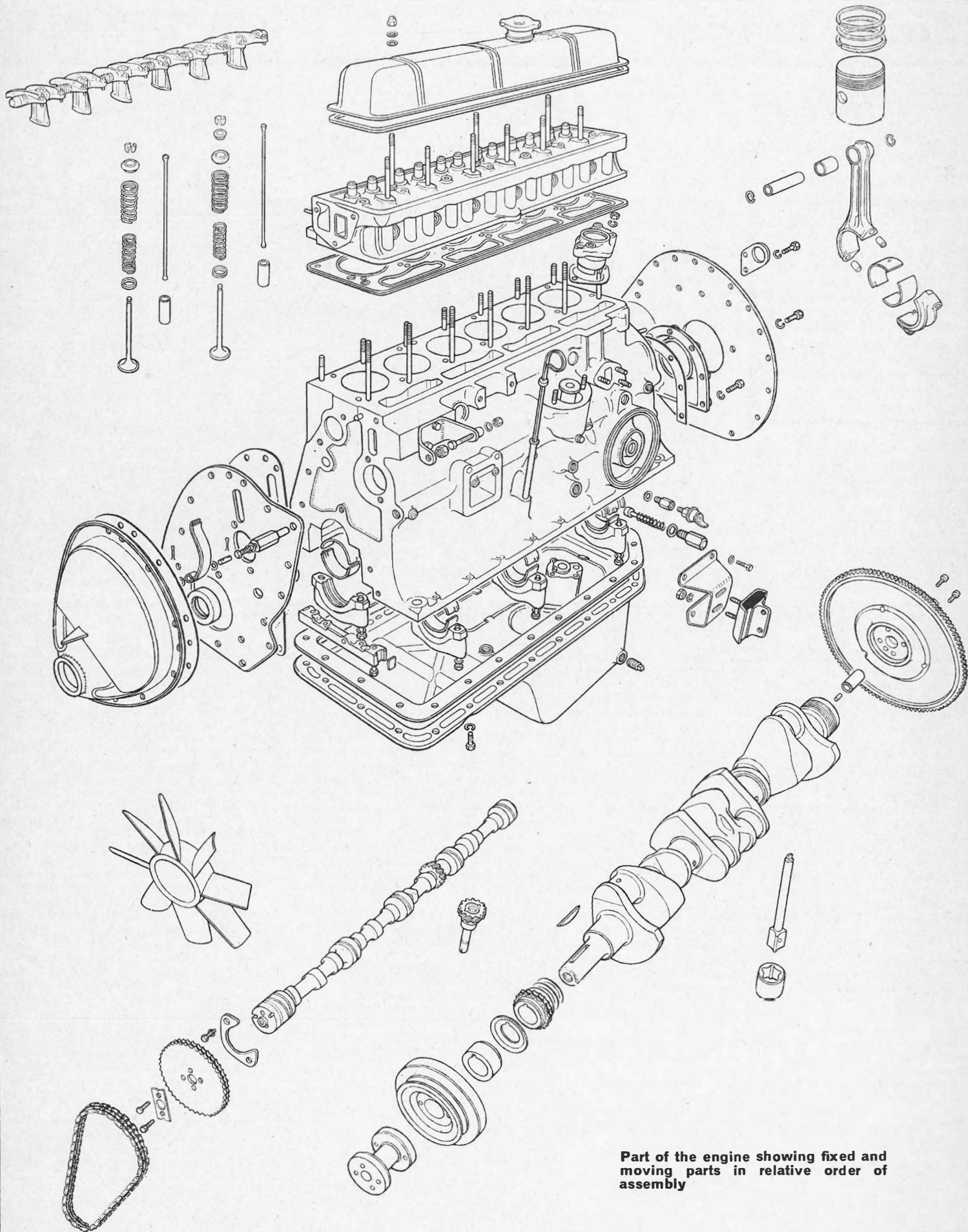
cleaner. Remove bonnet after taking out hinge bolts, undoing lighting snap connectors and removing over-riders.

Take out radiator matrix (2 retaining bolts either side), air ducting and water hoses. Take out engine compartment side valances (3 bolts at front, 2 bolts at rear). Release gearbox attachments as follows: Remove facia support bracket after taking out 6 bolts; remove gearlever knob, take out carpets and undo and remove 12 screws and plates to remove gearbox cover.

Disconnect propeller shaft and undo front mounting nuts and rear mounting bracket nuts. Disconnect fuel inlet pipe from fuel pump.

Disconnect all pipes, wires, controls and hoses to and from all ancillaries and engine unit. Disconnect exhaust pipe at manifold flange and at gearbox attachment point, disconnect earth lead from engine front plate. Take weight of engine/gearbox unit on sling, with suitable lifting tackle. Remove nuts, bolts and packing pieces from mountings. Raise engine, tilting it rearwards so that unit assumes sharp angle, engine uppermost, manoeuvre up and out clear of vehicle.

Engine may be removed without gearbox, after removal of bellhousing bolts and starter motor mounting bolts. Note: Gearbox should be supported while engine is drawn forwards to clear primary shaft splines and flywheel spigot. Replacement of engine/gearbox unit is a reversal of above processes.



Part of the engine showing fixed and moving parts in relative order of assembly

Crankshaft

Four main bearings. Steel-backed bi-metal lined shells located by tabs in block and caps. No hand fitting permissible. Shells may be removed and replaced with engine in position, but only in emergency. End-float controlled by split thrust washers fitted either side of rear main bearing. Oversize sets of washers available.

Flywheel fitted with shrunk-on ring gear, spigoted on rear flange of crankshaft and retained by four $\frac{3}{8}$ in bolts and located by one dowel. Oilite spigot bush in crankshaft boss. Camshaft drive sprocket and fan pulley keyed to front end of shaft with long Woodruff key, and retained by bolt. Dished oil thrower fitted between crankshaft sprocket and timing cover. Hub of fan pulley passes through lipped renewable oil seal pressed into timing cover.

Sealing block fitted to front end of cylinder block, rear oil seal retained on rear face of block by 7 setscrews. When fitting front sealing strips, tap in wooden filler pieces and trim flush with crankcase face. Rear oil seal has thread scrolled in inner diameter for oil return to sump and there must be .001in clearance between scroll and crankshaft. Seal housing incorporates lipped seal. Composition seal fitted around sump flange.

Connecting Rods

H-section stamping. Big ends thin-wall steel-backed bi-metal-lined shells located by tabs in rod and cap. No provision for hand fitting, rod split diagonally for removal through bores and cap dowel located on rod. Clevis split small end bush pressed in. Fully floating gudgeon pin located by circlips in piston. Fit with short shoulder of big end to camshaft side. Tighten bolts to torque figure specified.

Pistons

Aluminium alloy, flat topped split skirt. Pistons graded into two sizes of standard dimensions, "A" and "B", identified by one of these letters stamped on the piston crown. Grades of piston are matched with grade of cylinder bore by selective assembly. Identification mark of bore grade stamped on casting adjacent to bore in cylinder block.

Two compression rings and one slotted oil control ring are fitted above fully floating gudgeon pin.

Remove rod and piston assembly complete through bore; fit with split skirt of piston to non-thrust (camshaft) side of engine. When renewing gudgeon pin bushes, they should be broached to .8120-.8216in. Fit of pin is selective and should be tight push fit at room temperature.

Camshaft

Duplex endless roller chain drive with spring tensioner. Shaft runs in machined bores in cylinder block casing. End thrust is taken and location is effected by "C"-plate fitted to front engine plate, and retained by two setscrews. Driven wheel retained by two set-bolts on camshaft end boss. Provision made for adjustment of chain wheel to give $\frac{1}{4}$ tooth variations in valve timing.

Valves

Overhead non-interchangeable inlet larger than exhaust. Double springs for each valve, secured by split cone collets. Fit springs with close coils to cylinder head. Valve guides plain, no shoulder, press in from top until guide projects $\frac{3}{8}$ in from top of cylinder head. Inserts pressed in when required.

Tappets and Rockers

Plain barrel tappets sliding directly in crankcase. Tappets may be removed with long-nosed pliers after removal of cylinder head. Rockers are bushed, offset left- and right-handed in pairs, drilled for lubrication and run on hollow shaft. Each pair operates either side of rocker post and intermediary

rockers are separated by long coil springs. Oil fed from gallery is metered by flats on camshaft rear bearing and delivered via head drillings to rear rocker pedestal, and thence to shaft and individual rockers. Tappet clearance must be set to .040in for timing and .010in (cold) for normal running.

Lubrication

Hobourn-Eaton eccentric double rotor type pump, spigoted and flange bolted in sump. Centre rotor driven by shaft pressed into rotor and pegged in position. Upper end of rotor drive shaft engages with tongue on distributor shaft. Three long bolts attach pump body to cylinder block. Pump may be removed with engine in position. Oil pressure warning light provided on dashboard and cuts out at an oil pressure of 4-6 psi. Normal running pressure 40-60 psi. Full flow filter fitted.

Non-adjustable spring loaded release valve housed on near side of crankcase.

Cooling System

Pump and fan. Non-adjustable wax-type thermostat retained in outlet port of pump body by outlet elbow. Fan belt adjustment provided by swinging dynamo unit. Correctly adjusted belt has $\frac{3}{4}$ in play in longest run.

SPECIAL TOOLS	
	Part No.
ENGINE	
Con. rod aligner and con. rod aligner adaptor	S336 & S336
Valve guide adaptor (two)	60A-2 & 60A-6
Valve spring compressor main tool and compressor adaptor	6118A & S6118A-1
Rear oil seal alignment tool	S335
GEARBOX	
Hand press	S4221A
Mainshaft ball race remover and replacer	S4221A-19
Mainshaft circlip remover and replacer	S144 & S145
Slide hammer	S4235A
Constant pinion shaft remover	S4235A-2
REAR AXLE	
Differential case spreader	S101
Pinion height gauge	S108
Flange holder	S337
(dealers to modify 20SM98)	
Pinion pre-load gauge. Reduce dia. to $\frac{1}{4}$ in location pins	S98A
Pinion bearing remover—replacer	S4221A-20
Crown wheel carrier bearing remover	S4221A-8C
Inner axle shaft bearing remover replacer	S4221A-7
REAR SUSPENSION	
Hub remover	S109B
Rear hub bearing replacer	S304
Needle bearing remover—replacer	S300A
Rear hub remover (inner)	S4221A/14

NUT TIGHTENING TORQUE DATA		
	Bolt size (in)	lb. ft.
ENGINE		
Cylinder head stud nuts	$\frac{3}{8}$ UNF	42-46
Con. rod bolts	$\frac{3}{8}$ UNF	38-42
Flywheel to crankshaft	$\frac{3}{8}$ UNF	42-46
Main bearing caps (nuts)	$\frac{7}{16}$ UNF	55-60
GEARBOX		
Bell housing bolts	$\frac{3}{8}$ UNF	28-30
Extension to gearbox	$\frac{5}{16}$ UNF	14-16
Propeller shaft to mainshaft	$\frac{9}{16}$ UNF	90-100
REAR AXLE		
Bearing caps to housing	$\frac{3}{8}$ UNF	26-28
Crown wheel to diff. case	$\frac{3}{8}$ UNF	42-46
Front mounting plate to axle	$\frac{3}{8}$ UNF	26-28
Front mounting plate to chassis	$\frac{3}{8}$ UNF	26-28
Hypoid housing	$\frac{3}{8}$ UNF	32-34
Rear axle mounting	$\frac{7}{16}$ UNF	38-42

ENGINE DATA	
Type	ohv
No. of cylinders	6
Bore x stroke: mm	74.7 x 76
in	2.94 x 2.99
Capacity: c.c.	1,998
cu in	122
Max. bhp at rpm	104-5,300
Max. torque (lb.ft) at rpm	117-3,000
Compression ratio	9.25:1

VALVES		
	Inlet	Exhaust
Head diameter	1.301-1.305in	1.176-1.180in
Stem diameter	.3107-.3112in	.310-.3105in
Face-angle	45	45
Overall length		
	Inner	Outer
Spring length: free	1.56in	1.61in
fitted	1.14in	1.386in
at load	11-1416	27-301b

CAMSHAFT	
Bearing journal: diameter	1.8402-1.8407in
Bearing clearance	.0026-.0046in
End float	.004 to .008in
Timing chain: pitch	$\frac{3}{8}$ in
no. of links	62

PISTONS AND RINGS		
Clearance (skirt)	.008 to .013in	
Oversizes*	+.020in	
Max. weight variation per set	4 drams (7.09 grams)	
Gudgeon pin: diameter	.8122-.8125in	
fit in piston	fully floating	
fit in con. rod	light push fit at 68°F	
	Compression	Oil Control
No. of rings	.008-.013in	.008-.013in
Gap		
Side clearance in grooves	.0019-.0035in	.0007-.0027in
Width of rings	.0770-.0787in	.1553-.1563in
* O/S rings available +.010, .020, .030 and .040in		

CRANKSHAFT AND CON. RODS		
	Main Bearings	Crankpins
Diameter	2.0005-2.001in	1.8750-1.8755in
Length	1.360-1.362in	—
Running clearance: main brngs. big ends		.001-.002in
End float: crankshaft big ends		.001-.0027in
Undersizes		.006-.008in
		.008-.012in
		.010-.020 and .030in
No. of teeth on starter ring gear/pinion		117/9

GENERAL DATA	
Wheelbase	6ft 11in
Track: front	4ft 1in
rear	4ft 1in
Turning circle	25ft 3in
Ground clearance (laden)	4in
Tyre size	155SR-13in
Wheel type	Steel disc. 41/2 rim
Overall length	12ft 3in
Overall width	4ft 9in
Overall height (unladen)	3ft 11in
Weight (complete)	17cwt

ORDER OF CYLINDER HEAD STUD NUT TIGHTENING

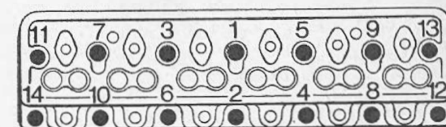


Diagram showing order of tightening cylinder head stud nuts. See also table of "Nut Tightening Torque Data"

TRANSMISSION

Clutch

Single dry plate diaphragm, hydraulically actuated, sintered ball thrust release bearing, pre-lubricated. No provision for adjustment in service. When refitting replacement unit checks must be made to ensure that maximum run-out of driven plate does not exceed .035in. Under no circumstances must clutch unit be dismantled or serviced for any reason whatsoever. Should a transmission fault be traced to this source, the complete clutch assembly must be replaced with a new unit.

Gearbox

Four-speed, all-synchromesh, centre lever control through selector mechanism in top cover. Gearbox may be removed in unit with engine, as detailed in Engine section, subsection Removal, or may be withdrawn separately.

Overdrive, when fitted, is of Laycock de Normanville pattern and design.

To Dismantle Gearbox

With gearbox on workbench, remove clutch housing, unclip release lever from pivot pin and remove lever and bearing. To remove rear extension, remove driving flange securing nut and remove flange from mainshaft. Unscrew and remove rear extension securing bolts and take off rear extension. Tap mounting lugs with hide face mallet if necessary. Take out retaining bolt and remove reverse idler gear spindle and distance tube. If necessary, eject ball-race and seal from extension casing.

Withdraw layshaft, and retain needle roller bearings by inserting length of tubing .655—6.5in. Using special tool no. S4235A-2 withdraw primary shaft assembly. Shake out spigot roller bearing and remove baulk ring. Remove snap ring and circlip and with tool no. S4221A and adaptor no. S4221A-19/1 extract ball race and oil thrower. Fit abutment plate, tool no. S 4221A-19, and remove snap ring, circlip and distance washer. With tool no. S 4221A and adaptor no. S 4221A-19/1 withdraw ballrace and speedometer drive gear. Take off abutment plate. Tilt mainshaft assembly and remove from gearbox.

Take off components in following order: 3rd/top synchro unit,

3rd gear baulk ring, thrust washer, 1st speed gear, 1st gear baulk ring, with tool no. S 144 remove securing circlip, and take off following items: washer, 3rd speed gear, bush thrust washer, 2nd speed, gear, bush, thrust washer 2nd gear baulk ring, 1st/2nd speed synchro unit and split collars. Note: preserve balls and springs if synchro, hubs are dismantled further. Lift layshaft cluster out of box, together with thrust washers. Needle rollers and retaining rings may also be removed at this stage if required. Take out reverse idler gear, unscrew securing nut, remove actuator and pivot pin.

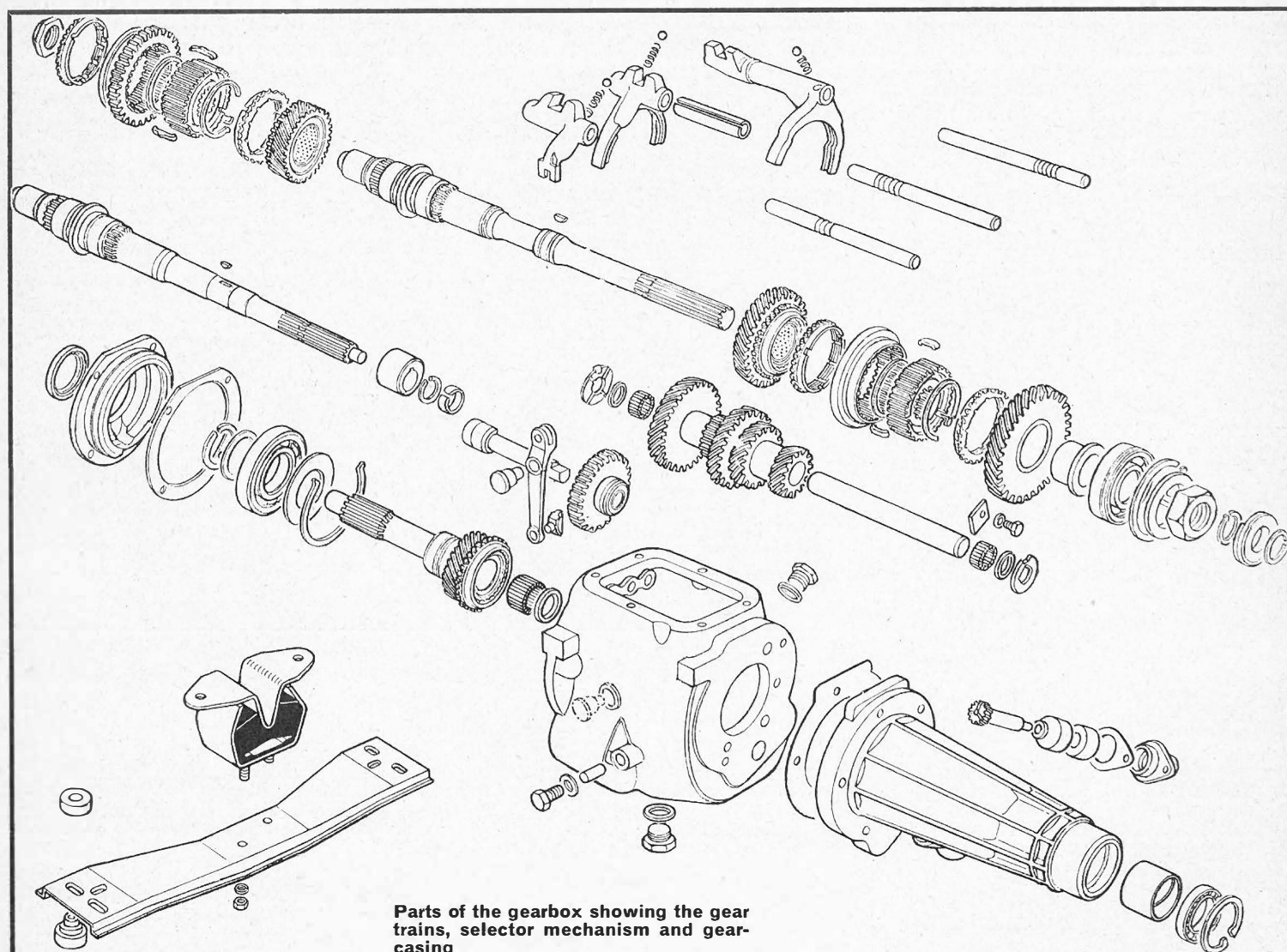
Assembly of gearbox is a reversal of dismantling, noting following points: check layshaft end-float correct at .007-.013in. Axial release loading of 3rd/top and 1st/2nd synchro hubs—19-21lb. If release loads differ from these figures, fit new springs, or add shims to obtain correct loading. End-float of gears on respective bushes should be .002-.006in. Fit new bush to increase float, or reduce bush length to decrease float. Overall end-float of mainshaft bushes is adjusted by selective use of thrust washers to obtain correct tolerance of .004-.010in. Thickness of mainshaft circlip washer should be determined with use of feeler gauges and selec-

tive use should be made of washers to obtain a zero—.002in. clearance fit.

When assembling mainshaft, replace items in following order: 1st/2nd synchro unit, 2nd gear baulk ring, thrust washer, 2nd speed gear bush, 2nd speed gear, thrust washer, 3rd gear bush, 3rd speed gear, and washer. Using tool no. S 145, refit circlip, followed by 3rd/top synchro unit, split collars, 1st gear baulk ring and 1st speed gear.

Rear Axle

Hypoid bevel swing axle. Drive is transmitted to rear road wheels via universally jointed drive shafts. Final drive housing is rubber mounted and through-bolted to chassis frame at four points. To remove differential casing jack up vertical links either side, remove Nyloc nuts and washers from damper lower attachment eyes and pull bottom of dampers clear of mounting pins. Remove exhaust silencer and tail pipe from vehicle. Disconnect inner shaft couplings and rear end of propeller shaft from hypoid unit. Take out front part luggage floor panel and remove spring access plate from floor. Release spring retaining plate and remove 3 studs from axle casing. Release rear attachment by remov-



Parts of the gearbox showing the gear trains, selector mechanism and gear-casing

ing Nyloc nut and washer and take out bolt. Undo forward mounting plate nuts securing plate to lugs on chassis frame. Remove rear attachment nuts and bolts passing through rubber bushed lugs on rear of differential casing. Unit may then be lowered out for bench service.

Hubs keyed to outer tapered ends of drive shafts (interchangeable) run on ball bearings at outer ends and on needle roller races at inner ends. Four stud hub flanges have lipped oil seal behind and hubs are retained by $\frac{1}{2}$ in nut. Tighten to torque figure specified in data tables when reassembling. Drive shaft may be removed with extractor after removal of brake drum, shoes and back plate.

Hypoid pinion runs in taper roller bearings, outer races pressed into final drive housing. Shims provided to govern depth of mesh of pinion with crown wheel. When assembling, pinion bearing preload without oil seal should be 12-16 lb. in; and on final assembly pinion nut should be locked up to 90-100 lb. ft torque. Note: addition or subtraction of a shim of .001 in thickness makes a difference of approximately 4 lb. in to torque readings. Crown wheel spigoted and bolted to one-piece differential gear carrier. Bearing caps, numbered, are dowel located on housing and differential assembly runs in taper roller bearing. When reassembling differential gear, check "run-out" with dial gauge. This should not exceed .003 in. Differential side bevel gears run directly in cage and planet pinions have spherical washers. Shims between differential cage

and outer faces of bearings provide mesh adjustment. Adjust to give backlash of .004-.006 in. When replacing assembly in housing, use a case spreader ensuring that bearing caps are in their correct positions and tighten bolts to correct torque loading of 42-46 lb. ft.

CHASSIS

Brakes

Girling hydraulic. Disc brakes at front, drum brakes at rear. Pedal operates front and rear brakes hydraulically but handbrake operates at rear wheels only, by mechanical expanders in rear wheel cylinder housings.

Front brakes are self-adjusting, pads should be replaced when worn to minimum thickness of approx. $\frac{1}{16}$ in. To renew pads, jack-up car and remove road wheels, remove pad retainer bolt spring clips retainer pins and take out pads. Push piston back to cylinder extremities, fit new pads and replace retainers and spring clips.

Adjustment of rear brakes is provided by square ended adjusters on brake back plates, one per drum. With handbrake released, turn each adjuster until resistance is felt and back off one notch. Depress brake pedal sharply to check that shoes are fully centralised in drums. Adjustment of brakes as described automatically adjusts handbrake, and resetting of cables is not advised as a general practice. Operating cable is threaded and has clevis and yoke ends providing

adjustment to compensate for cable stretch.

Rear Spring

Transverse semi-elliptic leaf, centre mounted on top face of differential unit, retained by six studs and nuts and top plate. Telescopic shock absorbers mounted at 45° angle on reversed lower wishbone mounting and attached to body. Spring centre through bolt is spigoted and located in machined face of differential housing. Rotoflex bushes pressed into spring eyes. Outer ends of radius rods mounted on outrigger chassis members are plain rubber bushed.

Front Suspension

Independent coil springs and double wishbone links. Upper wishbone ball jointed at outer ends and rubber bushed at inner ends. Lower wishbone nylon bushed at outer ends, rubber bushed at inner ends. Complete suspension units are handed and not interchangeable. Units are bolted up to chassis frame brackets and may be removed complete for service on the bench, or systematically dismantled for individual part service.

Upper end of each vertical link terminates in ball pin working in a sealed ball socket bolted between both arms of upper wishbone. Lower end of each vertical link is threaded and works in bronze swivel housing. Securing bolt passes through outer ends of lower fulcrum, steel sleeve and phosphor-

bronze trunnion; nylon bushed either side and locked up with Nyloc nut and plain washer.

To remove one suspension unit complete, jack up chassis at specified jacking points. Undo hydraulic connections and remove track rod from steering arm and detach anti-roll bar from lower wishbone. Detach lower wishbone arms and upper wishbone support bracket bolts from side and top side of chassis frame. Remove three Nyloc nuts from upper road spring plate, spring compressor is unnecessary, since telescopic damper controls extreme movement of coil spring. If coil spring is required to be dismantled, use compressor to take load off top nuts prior to release. Imperative to observe this method, since any other is dangerous and involves personal risk. Remove locknuts, nuts and washers from around top of damper. Release spring compressor slowly and withdraw coil spring. If damper is to be removed, undo lower mounting by releasing nut and removing securing through bolt.

Hubs run on taper roller bearings. Adjust by tightening slotted nut fully against washer and unscrew one flat. Felt oil seals in retainers pressed into hubs outside inner bearings. Tie rods have sealed ball joints.

Steering Gear

Rack and pinion. Inner ends of short track rods attached to ends of rack by adjustable ball joints covered by concertina gaiters and lubricated from steering gear.

CHASSIS DATA

Clutch Make Type	Borg & Beck diaphragm spring
Diameter	8 1/2 in
Flywheel/face cover	2.05 in
Max. travel	.290 in
Centre springs: no. colour	6 White/Lt. grn.
Linings: thickness (under 950 lb load)	.290 in
dia. ext.	8.0 in
dia. int.	5.75 in

FRONT-END SERVICE DATA

Castor	3 1/2° ± 1° pos
Camber: front	2 3/4° ± 1° pos
rear	0° ± 1°
King pin inclination	6° ± 1°
Toe-in	1/16-1/8 in
No. of turns lock to lock	4 1/2
Adjustments: castor	shims on lower ends of wishbones
camber	screwed tie-rod ends
toe-in	

SPRINGS

	Front	Rear
Length (eye centres, laden)	—	not quoted
Width or wire dia. of cls.	.45 in ± .002 in	not quoted
Dia. of coils	3.13 ± .020 in	—
No. of leaves or coils	9 1/2	8
Deflection rate	200 lb/in	—
Free camber length	12.46 in	—
Loaded camber length	8.06 ± .09 in	2.13 ± .13
Coil at load	at 880 lb	at 1238 lb

GEARBOX

Type	4-speed all synchromesh
Final ratios: 1st	8.66:1
2nd	5.82:1
3rd	4.11:1
4th	3.27:1
Rev.	10.15:1

STEERING BOX

Make	Alford & Alder
Type	rack and pinion
Adjustments: rack-end float	shims
cross shaft end float	shims under damper pad
mesh	

SHOCK ABSORBERS

Type	Telescopic front and rear
Service	Replacement

FUEL CONSUMPTION DATA

	mpg	l/pkm
70mph cruising	33.3	8.81
Town driving	25.2	11.2
Typical mpg	28	10.08

PROPELLER SHAFT

Type	needle roller bearing universal joint
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BRAKES

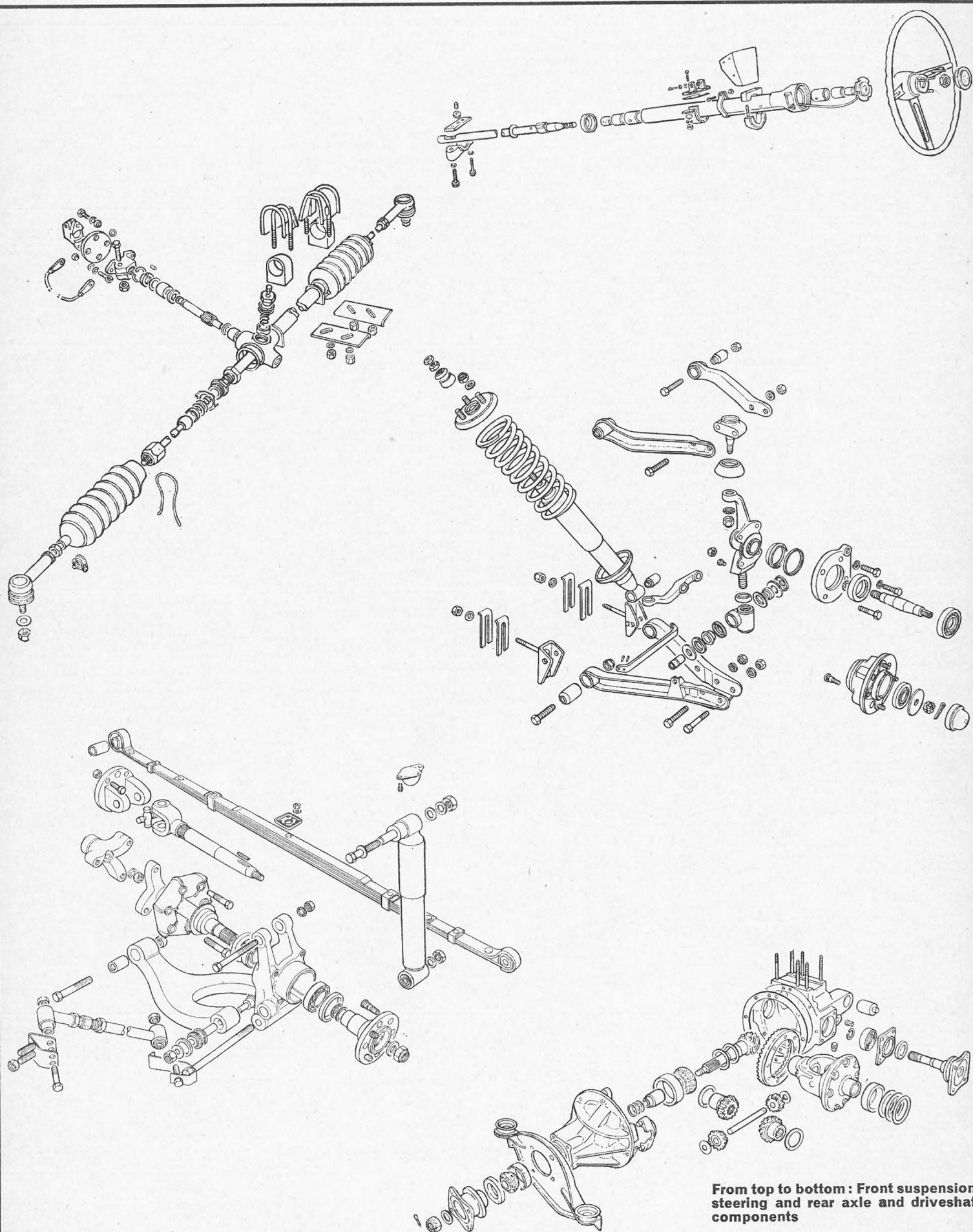
Type	Girling hydraulic, disc front, drum rear	
	Front	Rear
Diameter	9.7 in	8
Max. disc run-out	.006 in	—
Lining: length	—	1 1/4
width	—	3/16 in
thickness	—	1/16 in
Min. disc thickness	.460 in	bonded
Min. pad/lining thickness	1/8 in	
No. of rivets per shoe		
Total swept area	260 sq in	

FINAL DRIVE

Type	hypoid bevel
Crownwheel/bevel pinion teeth	3.27:1 (36/11)

PERFORMANCE DATA

	mph	kph
Maximum speeds		
1st gear	37	60
2nd gear	54	87
3rd gear	77	124
O/D 3rd	5,500rpm	150
4th	5,600rpm	152
O/D 4th	5,100rpm	172



From top to bottom : Front suspension, steering and rear axle and driveshaft components

ELECTRICAL EQUIPMENT

HORNS, WINDSHIELD WIPER, SUNDRY ITEMS & OVERDRIVE EQUIPMENT

	Model, type & note	Part No.
HORNS	9H W/T H.N. L.N.	54068164 54068078
Current consumption 3.5-4A per horn		

SUNDRY ITEMS		
Flasher unit	FL5	35011
Fuse/Junction box	8FJ	54939240
Steering column control	CC9	33577

OVERDRIVE		
Solenoid (transmission)	11S	76522
Switch, centrifugal (g/box)	SS10	33460
Relay	6RA	33213
Control switch	90SA	35749

WINDSHIELD WIPER	DR3A	75450
Motor	—	54711281
Wiper blade	—	54712026
Wiper arm (right & left)	—	—

SWITCHES

	Model	Part No.
Ignition (combined with starting motor control switch)	47SA	34680
Master lighting	57SA	35672
*Head	102SA	35674
*Side		
*Headlamp flash	125SA	35676
Direction indicator	SS10	34460
Reverse	57SA	35560
Heater	65SA	35562
Courtesy light	—	—

NOTE: Switches identified by a common symbol are combined in a dual or multi-purpose switch.

LUCAS EQUIPMENT

Part numbers quoted are basic equipment for right-hand drive vehicles. Variations may be found according to the Country in which the vehicle is used.

BATTERY and STARTING MOTOR SYSTEM

Battery
Starting Motor
Solenoid Switch

CHARGING SYSTEM

Generator

IGNITION SYSTEM

Distributor
Max. centrifugal advance (crank degrees) 16-20
Max. centrifugal advance (crank rev/min) 6400
No advance below 500 crank rev/min
Centrifugal advance springs (set of 2)
Max. vacuum advance (crank degrees) 18-22
No advance below 4 inches of mercury
Ignition Coil
Primary resistance (ohms) at 20°C 3.0-3.5
Running current (amps) at 1000 rev/min 1.0

Model

Part No.

CA9/7
M35G
4ST

54027663
25079
76766

15ACR

23562

22D6

41168

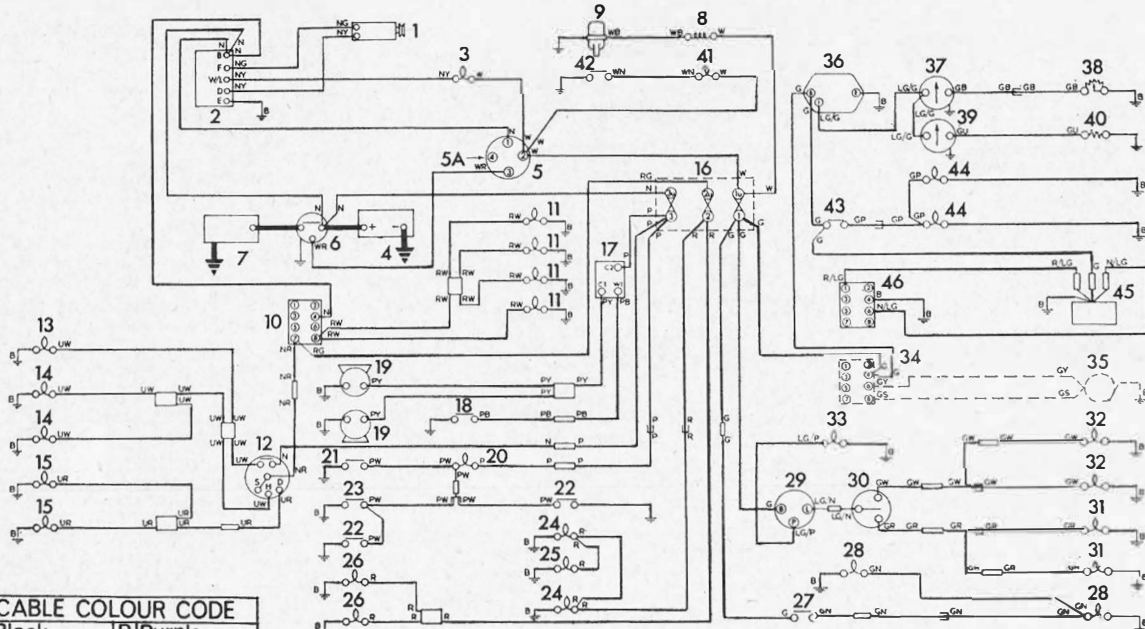
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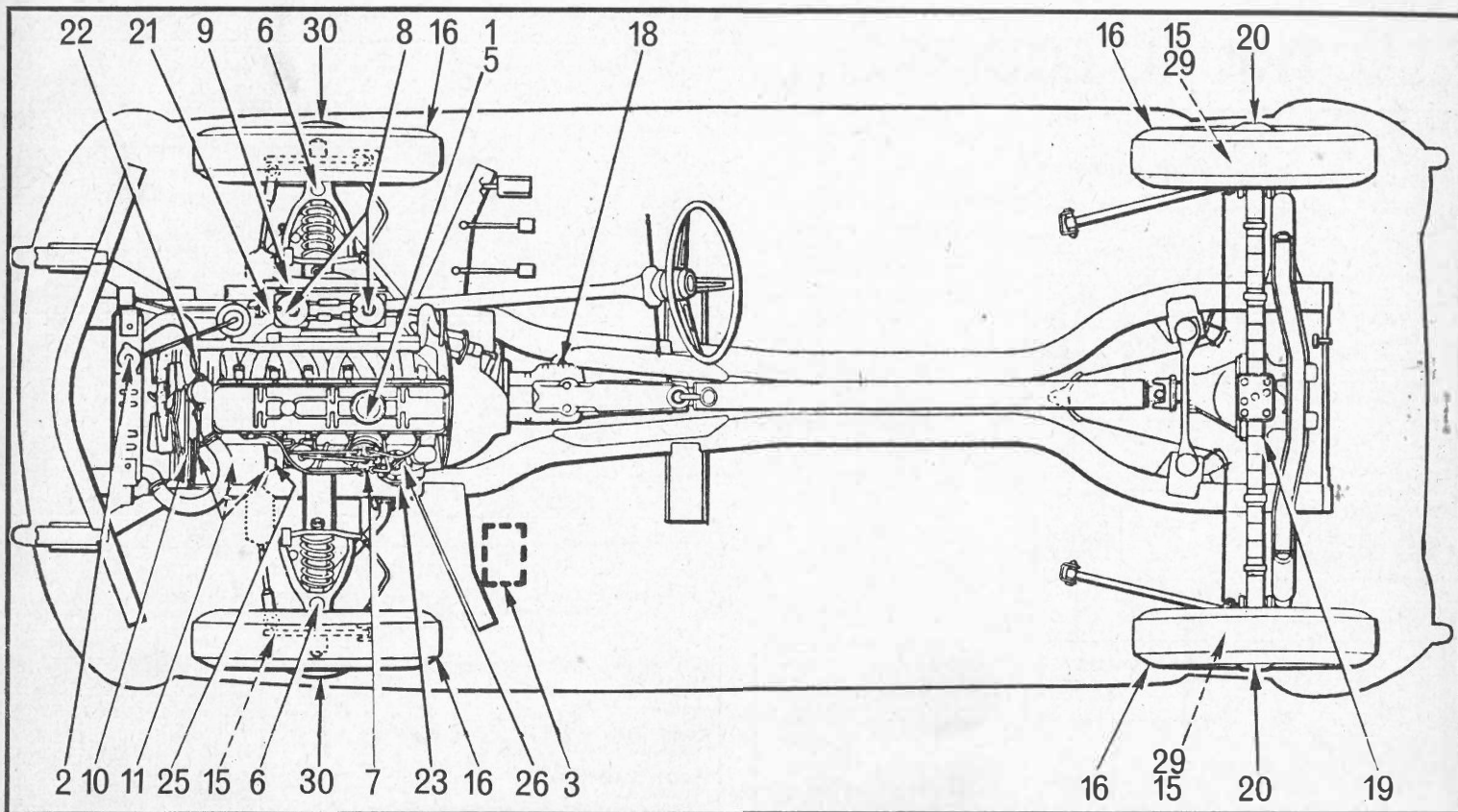
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LAMPS					
	Model	Part No.	Bulb or Sealed Beam Unit		
			Lucas No.	Wattage	Cap
FRONT LAMPS					
Head (right hand & left hand)	F700	59103	54521872	60/45	S.B.U.
Side & Flasher	677	52866	989 (S)	6	M.B.C.
			382 (F)	21	S.C.C.
REAR LAMPS					
Reverse	594	52345	383	21	S.C.C.
Stop/Tail	672	54138	380	6/21	S.B.C.
Rear Flasher	594	52337	382	21	S.C.C.
Number Plate	467	53093	989	6	M.B.C.
PANEL LAMPS					
Flasher	WL13	54360552	987	2.2	M.C.C.



CABLE COLOUR CODE			
B	Black	P	Purple
D	Dark	R	Red
G	Green	S	Slate
K	Pink	U	Blue
L	Light	W	White
M	Medium	Y	Yellow
N	Brown		



KEY TO MAINTENANCE DIAGRAM

WEEKLY

1. Engine sump
2. Radiator

} check and top up

MONTHLY

- *4. Clutch and brake master cylinders—check and top up

EVERY 6,000 MILES

5. Engine sump—drain and refill
6. Steering lower swivels—remove plug, fit nipple and lubricate with hypoid oil until oil exudes from the swivel
7. Distributor—oil auto. advance mechanism, contact breaker pivot, smear cam with grease, clean and reset points
8. Carburettor dashpots—top up with oil
9. Air cleaner elements—remove and de-dust
10. Fan belt tension—check
11. Generator attachments—check tightness
- *12. Valve rocker clearance—check and reset, necessary
- *13. Sparking plugs—clean and reset
- *14. Engine slow running—check and adjust, necessary
15. Brakes—examine pads and shoes, adjust or, if necessary, renew, examine hydraulic system for leaks, grease handbrake cable guides and compensator sector
16. Tyres and wheel nuts—check condition of tyres, check front and rear wheel alignment, check tightness of wheel nuts
- *17. Electrics—check operation of all equipment and adjustment headlamp focus if necessary
18. Gearbox/overdrive
19. Rear axle

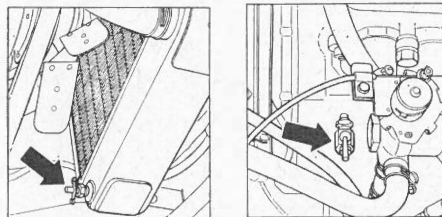
} check and top up

EVERY 12,000 MILES (as for 6,000 miles plus following)

20. Rear hubs } remove plugs, fit grease nipple,
21. Steering unit } lubricate with grease, avoid excess of grease to steering
22. Water pump—remove plug, fit nipple, lubricate with grease (five strokes of gun only)
23. Oil filter element—renew
- *24. Crankcase breather valve—dismantle, clean and re-assemble
25. Generator rear bearing—oil
26. Fuel pump—clean sediment bowl
- *27. Sparking plugs—renew
- *28. Exhaust system—examine for leaks
29. Brakes—remove rear drums and de-dust
30. Front hubs—check and adjust if necessary

* Not shown on diagram.

DRAINING POINTS



Left: shows the radiator matrix drain tap and right: the cylinder block drain tap

FILL-UP DATA

	Pints	Litres
Engine sump	8	4.5
Gearbox	1 1/2	.85
Rear axle	1	.57
Cooling system	11	6.2
Fuel tank	9 3/4 gal	44.3
Tyre pressures: front	20psi	1.4 kg/cm ²
rear	24psi	1.69 kg/cm ²

TUNE-UP DATA

Firing order	1-5-3-6-2-4
Tappet clearance (cold):	
inlet	.010in
exhaust	.010in
Valve timing:	
inlet opens	18° BTDC
inlet closes	58° ABDC
exhaust opens	58° BBDC
exhaust closes	18° ATDC
Standard ignition timing	13° BTDC*
Location of timing mark	pulley/pointer
Plugs: make	Champion
type	N-9Y
size	3/4 x 14mm
gap	.025in
Carburettor: make	Stromberg
type	150 CDS
Settings:	1.50in
choke	6J
needles	AC
Air cleaner: make	twin paper
type	elements
Fuel pump: make	AC
type	mechanical
pressure	11 1/2-21/2psi
Contact breaker gap	.015in

* Re-set to 7° BTDC if premium grade fuel is used

RECOMMENDED LUBRICANTS

Component	Mobil	Shell	Esso	B.P.	Castrol	Duckham's	Petrofina
Engine Carburettor dashpot Oil can	Mobiloil Special 20W/50 or Mobiloil Super	Super Motor Oil 100	Uniflo	Super Visco-Static 20W/50	GTX	Q20/50	Super Grade Motor Oil SAE 20W/50
Steering lower swivel, Gearbox, Rear axle	Mobilube GX 90	Spirax 90 E.P.	Gear Oil GP90/140	Gear Oil SAE 90EP	Hypov	Hypoid 90	Fina Pontonic MP SAE 90
Front and Rear hubs, Brake cables and Grease gun	Mobilgrease M.P.	Retinax A	Multi-Purpose Grease H	Energrease 2L	Castrollease LM	LB10	Fina Marson HTL2

Approved Anti-freeze Solutions: Smith's Bluecol, B.P. Anti-Frost, Castrol, Duckhams, Esso, Mobil Permazone, Fina Thermidor, Regent PT, Shell

Clutch and Brake Fluid Reservoir: Castrol Girling Brake and Clutch Fluid.

Where this proprietary brand is not available, other fluids to S.A.E. 70R3 specification may be used.

NOTE: Similar grades of Regent lubricant are also recommended.