

TRIUMPH HERALD 12/50

Manufacturers: Standard-Triumph International, Coventry

All rights reserved. This service Data Sheet is compiled by the technical staff of Motor Trader, from information made available by the component manufacturers and from our own experience. It is the copyright of this journal, and may not be reproduced, in whole or in part, without permission. While care is taken to ensure accuracy we do not accept responsibility for errors or omissions.



DISTINGUISHING FEATURES Rubber bumpers and chrome plated overriders are standard fitment, as is the Wesbastro roof. 12/50 flashes are fixed to each of the rear wing pressings

OVER two years ago, our last article in the data sheet series featuring the Triumph Herald car appeared. Since that time, there have been many changes to specifications and although these are of a detail nature rather than those of major structural change, these are further complicated by a complete change of servicing schedule since that time.

To provide the most up-to-date information on the subject, we give details of the changes as they affect service within the text matter, and separate data of the major units is set out in the usual manner. Readers' attention is drawn

to the Maintenance Diagram which appears on p.viii, and the key thereto, which sets out the latest servicing procedure for the Herald series of cars.

Power is provided by an 1147cc four-cylinder overhead valve engine, which is fitted with a single carburettor. In standard form, the engine has a power output of 51

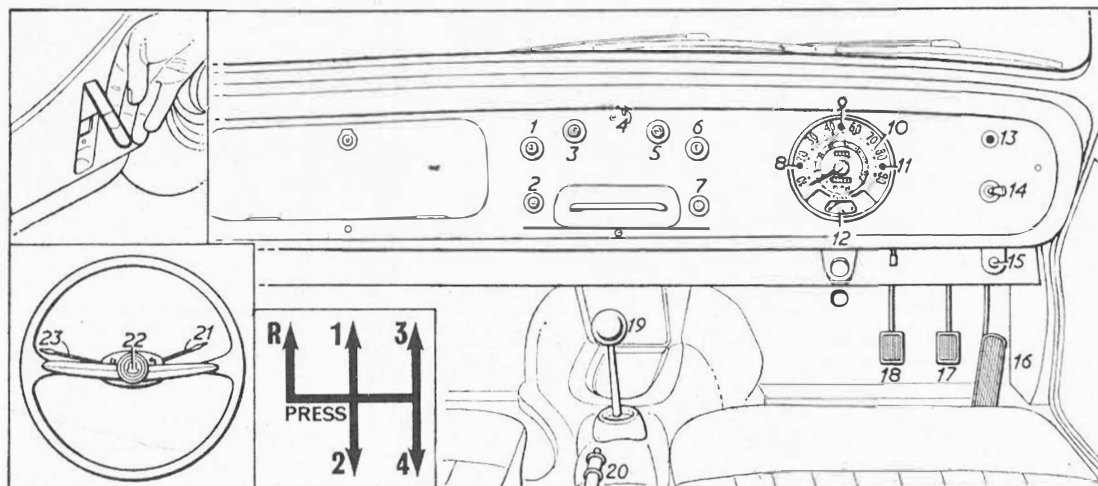
b.h.p. at an engine speed of 5,200 r.p.m., working at the higher of the two compression ratio states available, 8.5:1. Design of the engine is entirely orthodox, a mono-block cylinder casting carries the piston and con rod assemblies, crankshaft and other reciprocating and rotating parts. Overhead valves are push rod operated and are carried in a cast iron cylinder head.

Drive from the engine is taken through an hydraulically operated single dry plate clutch to the four-speed synchromesh gear box. From the gear box output shaft, the drive is taken by an open propeller shaft to the final drive unit, and by short open drive shafts to the rear wheels.

Chassis construction of the 12/50 is the same as for the other models in the Herald range. Suspension is independent all-round. At the front a conventional coil spring and wishbone link arrangement is used, and at the rear the familiar Herald layout, consisting of a single transverse leaf spring, is mounted above the rear axle assembly. Radial movement about the rear axle is controlled by telescopic hydraulic dampers and axial location is effected in two ways, through the semi-elliptic leaf spring mountings at either side of the chassis and by short radius rods between outrigger side members and spring shackles.

Vehicles and engines are numbered in serial and by Commission number. These are to be found stamped on a plate which is fixed

INSTRUMENTS, CONTROLS, GEAR POSITIONS AND BONNET LOCK



1. Screenwiper switch
2. Heater temperature control
3. Side/panel lights switch
4. Interior light switch
5. Choke control
6. Ignition/starter switch

7. Air distribution control
8. Main beam warning light
9. Oil pressure warning light
10. Speedometer
11. Ignition warning light
12. Fuel gauge

13. Flasher indicator warning light
14. Heater blower motor switch
15. Screenwasher control
16. Accelerator
17. Brake pedal
18. Clutch pedal

19. Gearlever
20. Handbrake lever
21. Flasher switch control
22. Horn push
23. Lighting switch

Inset upper left: shows the method of releasing the bonnet catch (one either side of bonnet), lower left: the siting of the steering column mounted controls, and inner lower left: the operative positions of the centre mounted gearlever

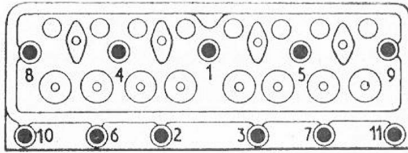
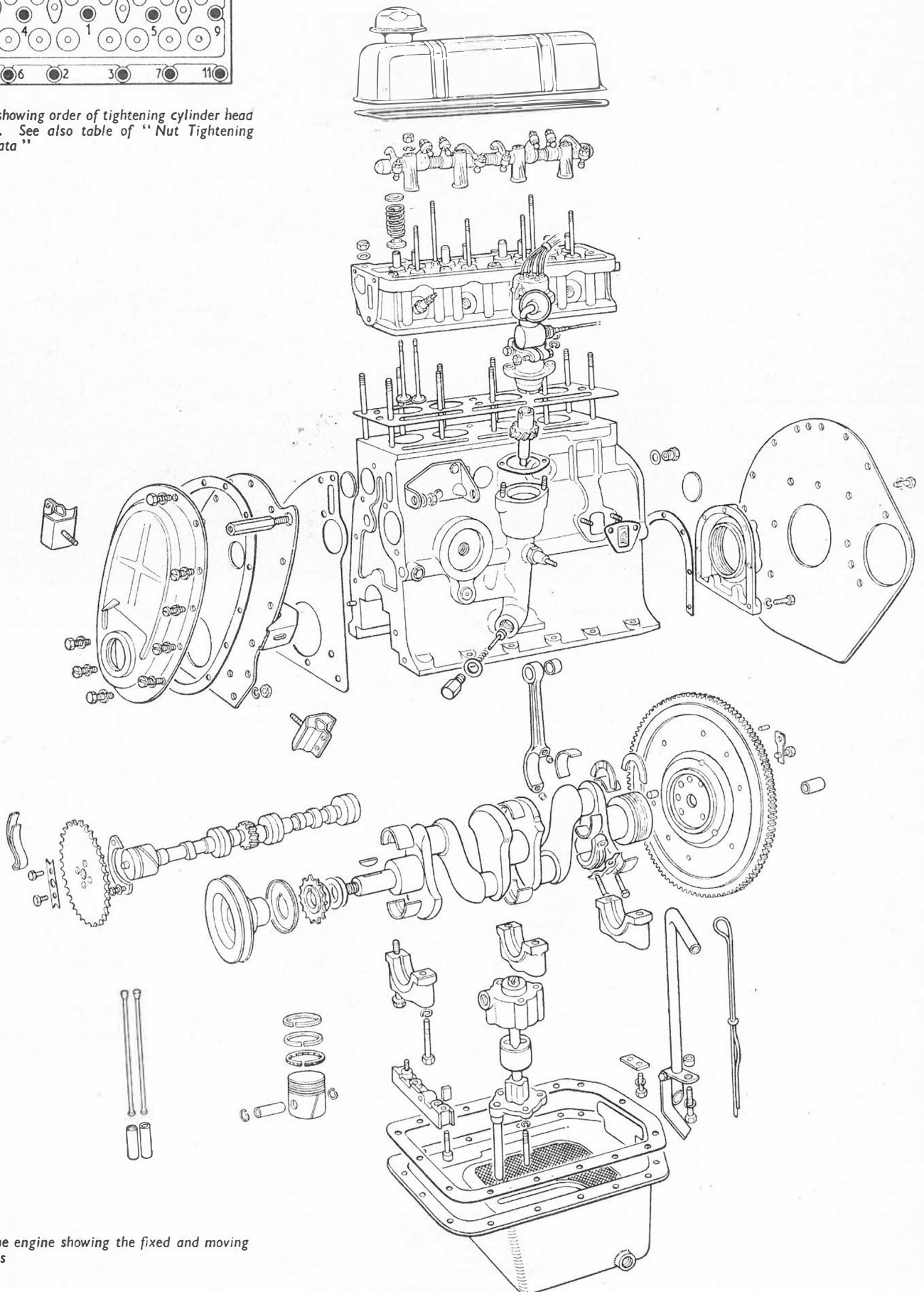


Diagram showing order of tightening cylinder head stud nuts. See also table of "Nut Tightening Torque Data"



Parts of the engine showing the fixed and moving components

to the engine side of the dash panel. Engine numbers are stamped on a boss on the left-hand side of the cylinder block casting. These numbers and letters should be quoted when corresponding with the vehicle manufacturers, or when ordering spare parts.

Special tools are manufactured by V. L. Churchill & Co., Ltd., London Road, Daventry, Northants, and their use facilitates repair work, speeding up jobs that without them might be lengthy and costly. Their use is approved by the vehicle manufacturers, and a list of those appropriate to the 12/50 is set out below.

Threads and hexagons are, in the main, of the Unified thread series pattern and form.

ENGINE

Mounting

At front, bonded rubber blocks bolted up to feet on front engine plate and to extensions on front suspension units. At rear, cylindrical rubber blocks bolted up to either side of gearbox extension casing and to cradle which is centre bolted to chassis frame. Tighten all nuts and bolts fully.

Removal

Engine may be removed with or without gearbox. To remove with

gearbox, remove bonnet by taking out each hinge bolt; disconnect battery, remove all pipes, wires and flexible controls to engine and gearbox. Drain coolant after removal of radiator cap. Take off top and bottom water hoses, remove radiator matrix held by bolts either side. Disconnect exhaust pipe at flange joint and at clip on clutch housing. Attach sling of lifting tackle to eye on front of dynamo adjusting link and eye at rear of cylinder head. Remove gearbox cover, 11 self-tapping screws—three accessible from behind engine. With sling in position around engine, undo front mounting nuts and rear mounting bracket nuts. Disconnect propeller shaft at slave cylinder mounting pinch bolt and clip. Arrange sling so that unit will assume a suitable angle and lift unit up and out of vehicle.

Engine may be removed without gearbox after removal of bellhousing bolts, starter mounting bolts and care being taken to see that gearbox is supported while engine is drawn forward to clear primary shaft splines and flywheel spigot. Replacement is reversal of above process.

Crankshaft

Three main bearings. Steel-backed, white 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 $\frac{1}{2}$ in bolts and located by one dowel. Oilite spigot bush pressed into crankshaft boss. Camshaft drive sprocket and fan pulley keyed to front end of shaft with long Woodruff key, and retained by starter dog nut and lock washer. Dished oil thrower fitted between camshaft sprocket and timing cover. Hub of fan pulley passes through lipped renewable oil seal pressed into timing cover.

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

Connecting Rods

H-section stamping. Big ends thin wall steel backed lead indium 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. Clevite 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 solid skirt. Pistons graded into three sizes of standard dimensions, "F," "G," and "H," identified by one of these letters stamped on the piston crown. Grades of piston are matched with grade of cylinder bore by selective assembly. Bore size increased in .0004 in steps on "F," "G" and "H" size markings respectively. Identification mark of bore grade stamped on casting adjacent to bore in cylinder block.

Two parallel faced 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 .938-.937 in. Fit of pin is selective and should be tight push fit at room temperature.

Camshaft

Single row endless roller chain drive with spring tensioner. Shaft runs in machined bores in cylinder block casting. End thrust is taken and location is effected by "C"-

SPECIAL TOOLS	
	Part No.
ENGINE	
Valve spring compressor	S 130
GEARBOX	
Extension bush remover and replacer	S 107
Layshaft aligning mandrel	S 110
Speedo drive and oil thrower removal and replacing ring (for use with Handpress S 4221A)	S 117
REAR AXLE	
Differential case spreader	S 101
Diff. bearing remover adaptors	S 102
Pinion bearing setting gauge	S 108
Pinion preload gauge	208 M98
Oil seal remover	S 122
Hub bearing remover and replacer	S 4221A/6
Inner axle shaft bearing remover and replacer	S 4221A/7
Hub needle roller bearing remover and replacer	S 300
FRONT SUSPENSION	
Coil spring remover and replacer	S 4221A/5
Multi-purpose handpress	S 4221A
Drop arm drawer	S 121

ENGINE DATA	
General	
Type	ohv
No. of cylinders	4
Bore x stroke: mm	69.3 x 76
	2.728 x 2.992
Capacity: c.c.	1147
	70
Max. b.h.p. at r.p.m.	51-5,200
Max. torque at r.p.m.	756lb in—2600
Compression ratio	8.5 or 6.8:1

CAMSHAFT	
Bearing journal: diameter	1.8402—1.8407in
Bearing clearance	.0026—.0046in
End float	.004—.005in
Timing chain: pitch	.375
no. of links	62

CRANKSHAFT AND CON. RODS		
Diameter	Main Bearings	Crankpins
	2.001-2.0005in	1.625-1.6255in
Length (in)	Front and Inter	Rear
	.995—.1055	1.2995 1.2975
Running clearance: main bearings big ends		.0005—.0032in
End float: main bearings big ends		.0005—.002in .004—.011in .008—.011in
Undersizes		.010, .020, .030, .040in
No. of teeth on starter ring gear/pinion		117/9

PISTONS AND RINGS		
Clearance (skirt)		.0012—.0019in
Oversizes		.010, .020, .030in
Weight without rings or pin		9oz 8dr \pm 3dr.
Gudgeon pin: diameter		.8125—.8126in
fit in piston		light push fit at 212°F
fit in con. rod		.0002in press fit at 68°F
No. of rings	Compression	Oil Control
	2	1
Gap	.008—.013in	.008—.013in
Side clearance in grooves	.003—.010in	.0007—.0027in
Width of rings	.0787—.0777in	.1553—.1563in

BALL AND ROLLER BEARING DATA		
	Int. dia., Ext. dia., Width (in. or mm)	Type
Note.—Upper limits only quoted		
GEARBOX		
(front)	1.0002 x 2.4995 x .750in	B
(centre)	1.0002 x 2.4995 x .750in	B
(rear)	.7502 x 1.8742 x .5825in	B
REAR AXLE		
Hubs	1.0002 x 2.4997 x .625in	B
Diff. housing	1.2506 x 2.4416 x .7525in	TR
Pinion head	1.0006 x 2.6881 x .8676in	TR
Pinion tail	.7506 x 2.1256 x .8575in	TR
FRONT SUSPENSION		
Hubs (inner)	1.0060 x 2.0006 x .557in	TR
(outer)	.6255 x 1.6256 x .578in	TR

NUT TIGHTENING TORQUE DATA		
	Bolt size (in)	lb. ft.
ENGINE		
Main bearing caps	$\frac{1}{2}$ in	55-60
Cylinder head studs	$\frac{1}{2}$ in	42-46
Flywheel	$\frac{1}{2}$ in	42-46
Gen-rod bolts	$\frac{1}{2}$ in	42-46
GEARBOX		
Clutch cylinder attachment	$\frac{1}{2}$ in	14-16
Clutch fork attachment	$\frac{1}{2}$ in	14-16
FRONT SUSPENSION		
Stub axle to vertical link	$\frac{1}{2}$ in	55-60
Tie rod ends	$\frac{1}{2}$ in	26-28
Suspension mounting to frame	$\frac{1}{2}$ in	26-28
REAR AXLE		
Bearing caps	$\frac{1}{2}$ in	32-39
Crownwheel attachment	$\frac{1}{2}$ in	35-40
Pinion flange	$\frac{1}{2}$ in	70-85
Hubs	$\frac{1}{2}$ in	100-110

VALVES		
	Inlet	Exhaust
Head diameter	1.245-1.241in	1.152-1.148in
Stem diameter	.311—.310in	.309—.308in
Face angle	45°	45°
Spring length: fitted at load		1.07in 117lb.

plate fitted to front engine bearer plate, and retained by two set-screws. Driven wheel retained by two setbolts 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. Springs secured by eccentric collar retainers. Fit springs with close coils to cylinder head. Valve guides plain, no shoulder, press in from top until guide projects $\frac{1}{4}$ in from top of cylinder head. Inserts shrunk 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 offset left- and right-handed in pairs, drilled for lubrication and run direct 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 grooved 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 7 lb/sq in. Full flow filter fitted.

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

Ignition

Coil, distributor incorporates auto and centrifugal advance mechanism. Distributor drive is taken from camshaft and helical gear at upper end has an offset slot for location of dogs on distributor drive shaft. When timing after re-assembly of oil pump and drive gears, correct position of distributor drive gear is obtained when smaller "half moon" formed by slot in gear is uppermost and slot is in direct line with centre hole of

oil filter boss, and engine is set for T.D.C. No. 1 cylinder firing.

Cooling System

Pump and fan. Non-adjustable bellows thermostat retained in outlet port of pump body by outlet elbow. Fan belt adjustment provided by swinging dynamo unit. Correctly adjusted belt has $\frac{1}{4}$ in play in longest run.

TRANSMISSION

Clutch

Borg and Beck single dry plate, hydraulically operated through sealed ball race release bearing. Actuating cylinder mounted to bulkhead and connected to slave cylinder, mounted on bellhousing, by pressure hose. Access to clutch unit for service after removal of gearbox.

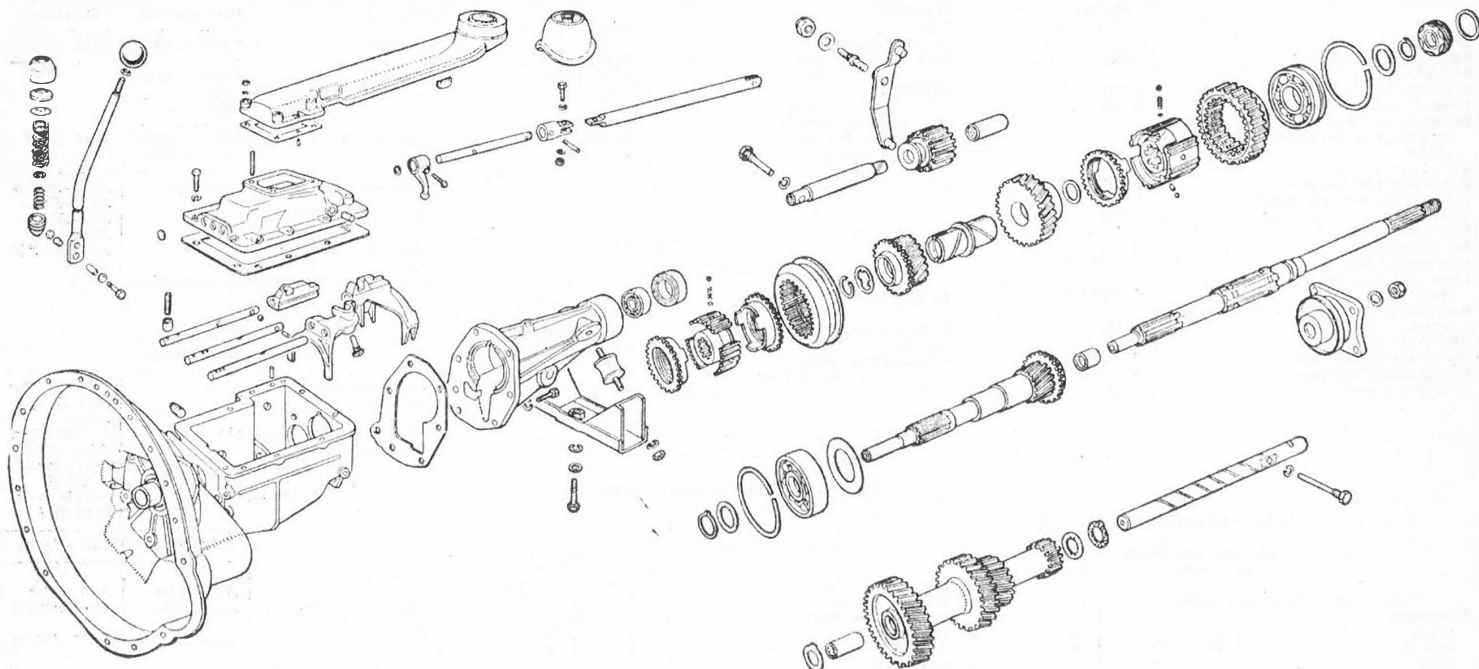
Gearbox

Four-speed, synchromesh engagement on second, third and top gears. Centre, remote control lever operating through selector mechanism in gearbox.

Removal

Proceed as detailed in engine section for removal with power unit. To remove gearbox by itself, take out floor coverings and take off cover. Disconnect front end of propeller shaft, remove speedometer cable and undo clutch operating cylinder, retaining pinch bolt, detach slave cylinder, tying up out of way. Remove heater flap box, two bolts, place a suitable jack or support under engine. Remove bellhousing bolts, release starter motor mounting bolts. Disconnect engine/gearbox rear mounting, cradle may also be removed if required. Raise rear of engine slightly, draw gearbox back and manoeuvre up and out into car.

To dismantle gearbox, remove nut retaining shaft flange and six setscrews and two bolts securing cover assembly and take off cover and gasket. Take off clutch actuating mechanism from gearbox and companion flange from the rear, withdraw six setscrews and one long bolt securing tail extension housing to main gearbox. Detach extension, remove speedometer cable attachment union, withdraw drive shaft and nylon driven gear. Eject reverse idler pinion rearwards. Remove locking pin and reverse pinion idler shaft, and remove operating lever with pivot pin. Take off clutch housing held by



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

CHASSIS DATA	
Clutch: Make Type Springs: no. colour free length Centre springs: no. colour Linings: thickness dia. ext. dia. int.	Borg & Beck sdp 9 not quoted 4 black .125in 6.25in 4.25in

GEARBOX	
Type No. of forward speeds Final ratios: 1st 2nd 3rd 4th Rev.	synchronesh 4 15.40:1 8.87:1 5.73:1 4.11:1 15.40:1

PROPELLER SHAFT	
Type	Open tubular— needle roller brg. U.J.

FINAL DRIVE		
Type Crownwheel/bevel pinion teeth ratio	Hypoid bevel 4.11: 1	
BRAKES		
Type Disc or drum diameter Max. run-out of disc Lining: length width thickness Material	Girling hydraulic	
	Front (disc)	Rear (drum)
	9in .004in	7in —
	—	6.5in
	—	1.4in
	Don 55	Ferodo MS1
SPRINGS		
Length (eye centres, laden) Width (or o.d. of coils) No. of leaves (or coils) Free camber (length, coil) Loaded camber (length, coil) at load	Front	Rear
	—	40.88- 41.13in
	3.13in	1.75in
	9½	11
	12.08in	1.03-1.29in
	8.18in ± .09in. at 790 lb.	1.27in neg at 1735 lb.

SHOCK ABSORBERS	
Make Type Service	Armstrong or Woodhead Monroe Telescopic Replacement
STEERING BOX	
Make Type Adjustments: column end float cross shaft end float mesh	Alford & Alder rack & pinion shims shims under plunger screwhead
FRONT-END SERVICE DATA	
Castor Camber King pin inclination Toe-in No. of turns lock to lock Adjustments: castor camber toe-in	4° pos 2° pos 6° 45' parallel—½ in. toe-in 3½ shims on lower ends of wishbones screwed tie-rod ends

five taper lock setscrews. Remove layshaft locking pin and drive out layshaft to rear. Extract primary shaft together with ball race, using special tool No. 20SM66B. Drift out mainshaft to rear until rear bearing is clear of housing and tip up shaft to extract third and top synchronesh unit and third speed synchronesh cup. Note: longer boss on hub faces forward. Extract circlip securing third speed mainshaft gear and withdraw mainshaft rearwards, taking off mainshaft gear cluster. Note: In removing mainshaft gears it is possible that three loading balls and springs in second speed synchro. sleeve will become displaced when second gear is engaged and not restrained by fork. Take out rear layshaft thrust washer, and remove layshaft.

To dismantle top and third or second speed synchronesh units, press inner splined hubs out of outer members, taking care to catch balls and springs as they are released. To dismantle mainshaft assembly, remove large circlip from annular groove in mainshaft ball race, press off speedometer driving gear and remove ball race locating circlip, which also releases washer. Place shaft under press and remove ball race.

To reassemble gearbox, reverse process of dismantling, taking care to replace and renew all gaskets, jointing material. Overall end-float of mainshaft gears on bushes is specified as .004in-.010in and lower limit is permissible allowing for an overall float on gear cluster of .004-.012in. If new laygear is fitted end float should be checked between floating washer and stationary thrust washer at .0015-.0125in. If end-float is excessive, thrust washer should be selected from top end of these limits.

Rear Axle

Hypoid bevel swing axle. Drive is transmitted to rear road wheels via short universal 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, undo drive

shaft flanges and main propeller shaft rear flange; lower jacks under suspension to release spring pressure. Remove exhaust pipe and silencer from car. Disconnect hydraulic and brake connections. Remove panel from floor inside car and undo six nuts on rear spring retaining plate, and remove plate. 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 ½ 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.

Bevel 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 70 lb. ft torque. Note: addition or subtraction of a shim of .001in 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 .003in. 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-.006in. When replacing assembly in housing, use a case spreader ensuring that bearing caps are in their correct positions and tighten bolts to correct torque loadings of 32-34 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. ½ 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 centralized in drums. Adjustment of brakes as described automatically adjusts handbrake, and resetting of cables is not advised as a general practice. Operating rod is threaded and has clevis and yoke ends providing adjustment to compensate for cable stretch.

Rear Spring

Transverse semi-elliptic leaf type, centre mounted on top face of differential unit, retained by six studs and nuts and top plate. Spring centre through bolt is spigoted and located in machined face of differential housing. Metal-istiek 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 both inner and outer ends. Com-

plete 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.

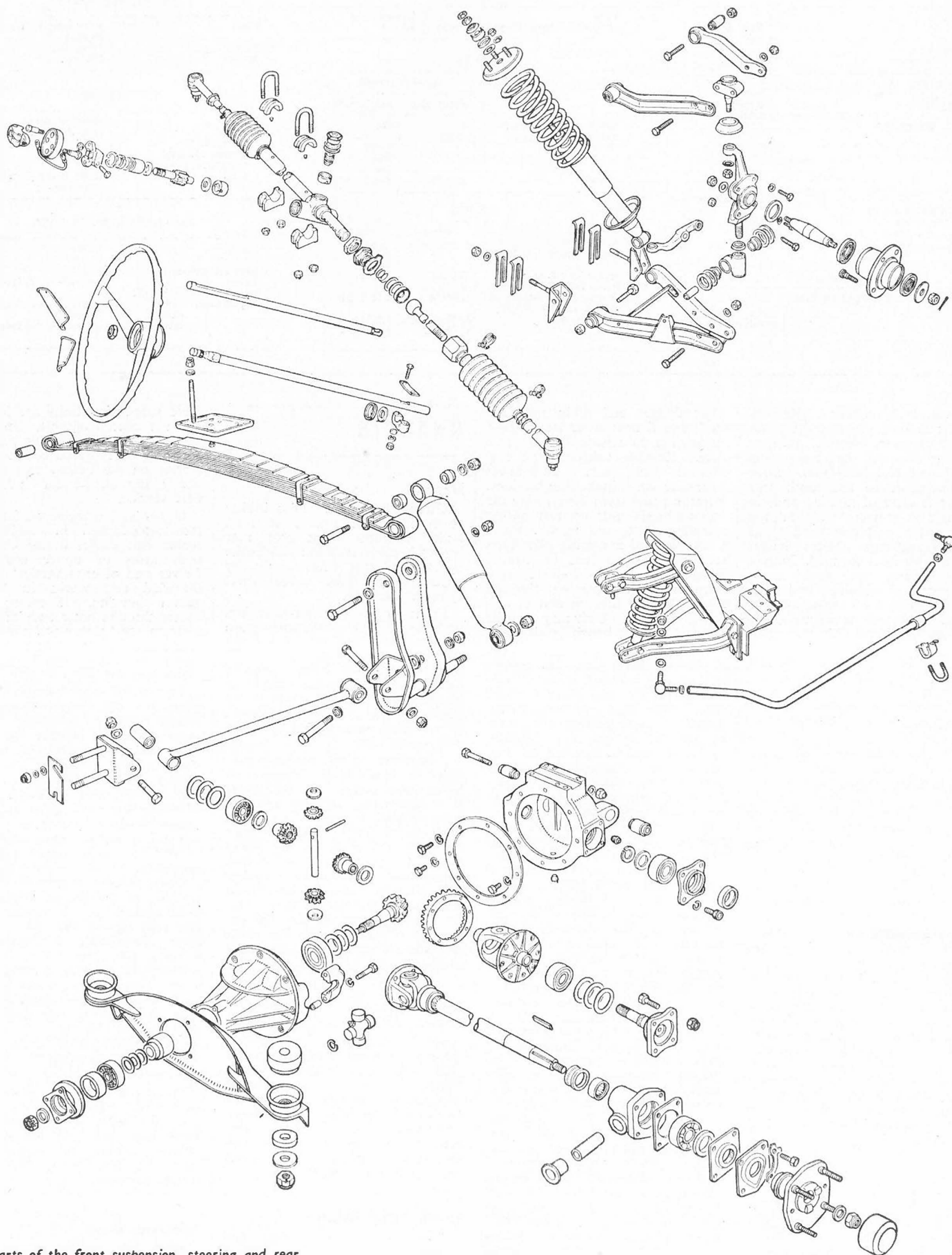
Upper end of each vertical link terminates in ball pin working in a sealed ball socket bolted between both arms of upper wishbone. Lower end of each vertical link is threaded and works in bronze swivel housing. Securing bolt passes through outer ends of lower fulcrum, steel sleeve and phosphor-bronze trunnion; nylon bushed either side and locked up with Nyloc nut and plain washer.

To remove suspension unit complete, jack up chassis at specified jacking points. Undo hydraulic connections and remove track rod from steering arm and anti-roll bar from chassis. Remove also, side valance, steering unit from column and radiator stay. Detach lower wishbone arms and upper wishbone support bracket bolts from side and top side of chassis frame (five bolts in all). 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.

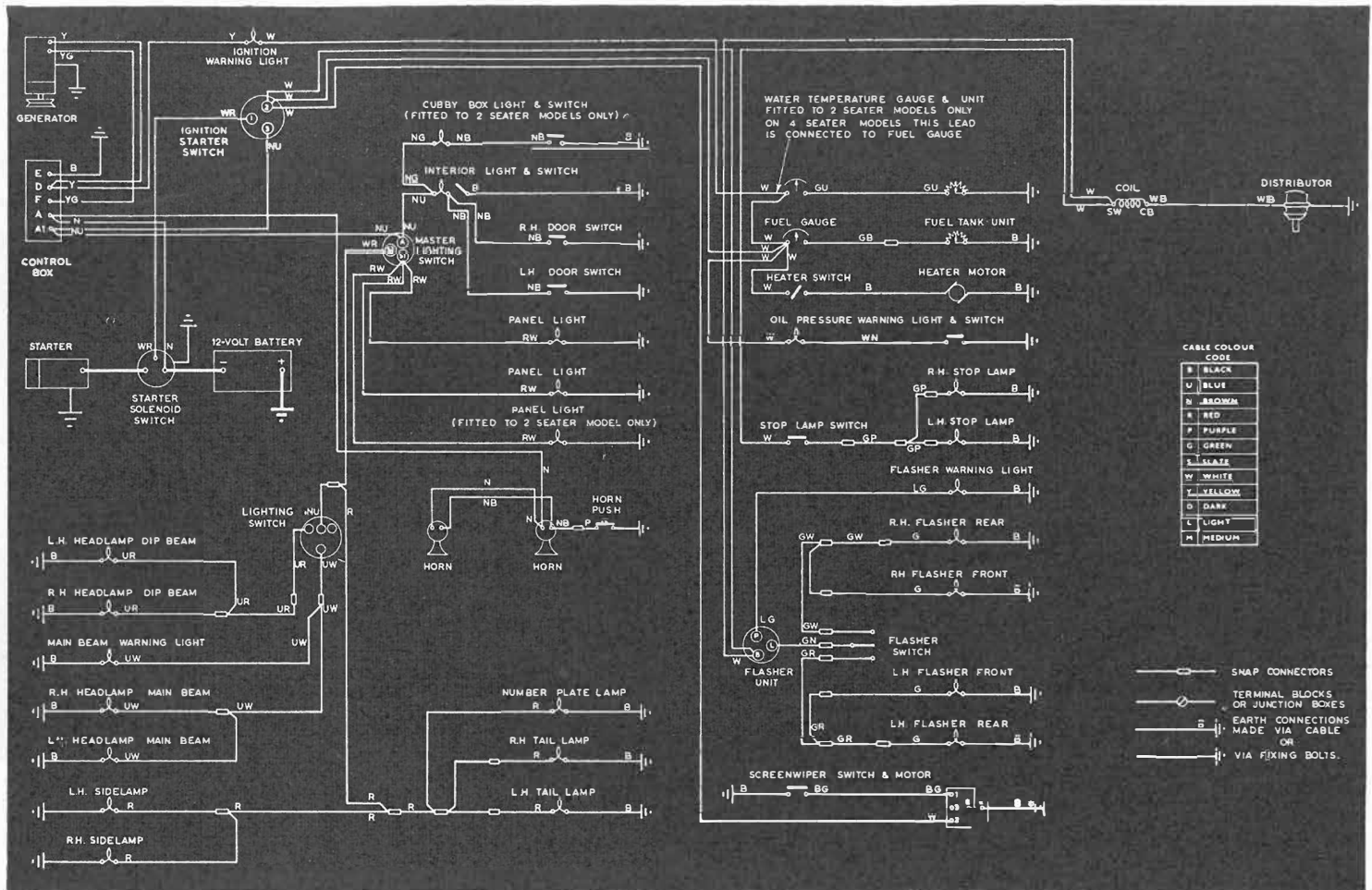
Hubs run on taper roller bearings. Adjust by tightening slotted nut fully against washer and unscrew one flat. Felt oil seals in retainers pressed into hubs outside inner bearings. Tie rods have sealed ball joints.

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.



Parts of the front suspension, steering and rear axle assemblies



Wiring diagram by permission of Joseph Lucas Ltd.

TUNE-UP DATA

Firing order	1-3-4-2
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	18° BTDC
Location of timing mark	c/shaft pulley pointer
Plugs: make	Lodge
type	CNY
size	14 mm
gap	.025in
Carburettor: make	Solex
type	B.30PSEI
Settings: choke	21.5mm
main jet	112.5°
air correction jet	175
pilot jet	45
air bleed	85
Econostat and petrol set	100 x 1.2†
Air cleaner: make	AC
type	paper element
Fuel pump: make	AC
type	mech.
pressure	1½-2½lb/sq in

* Later cars—115 † Later cars—115

LUCAS

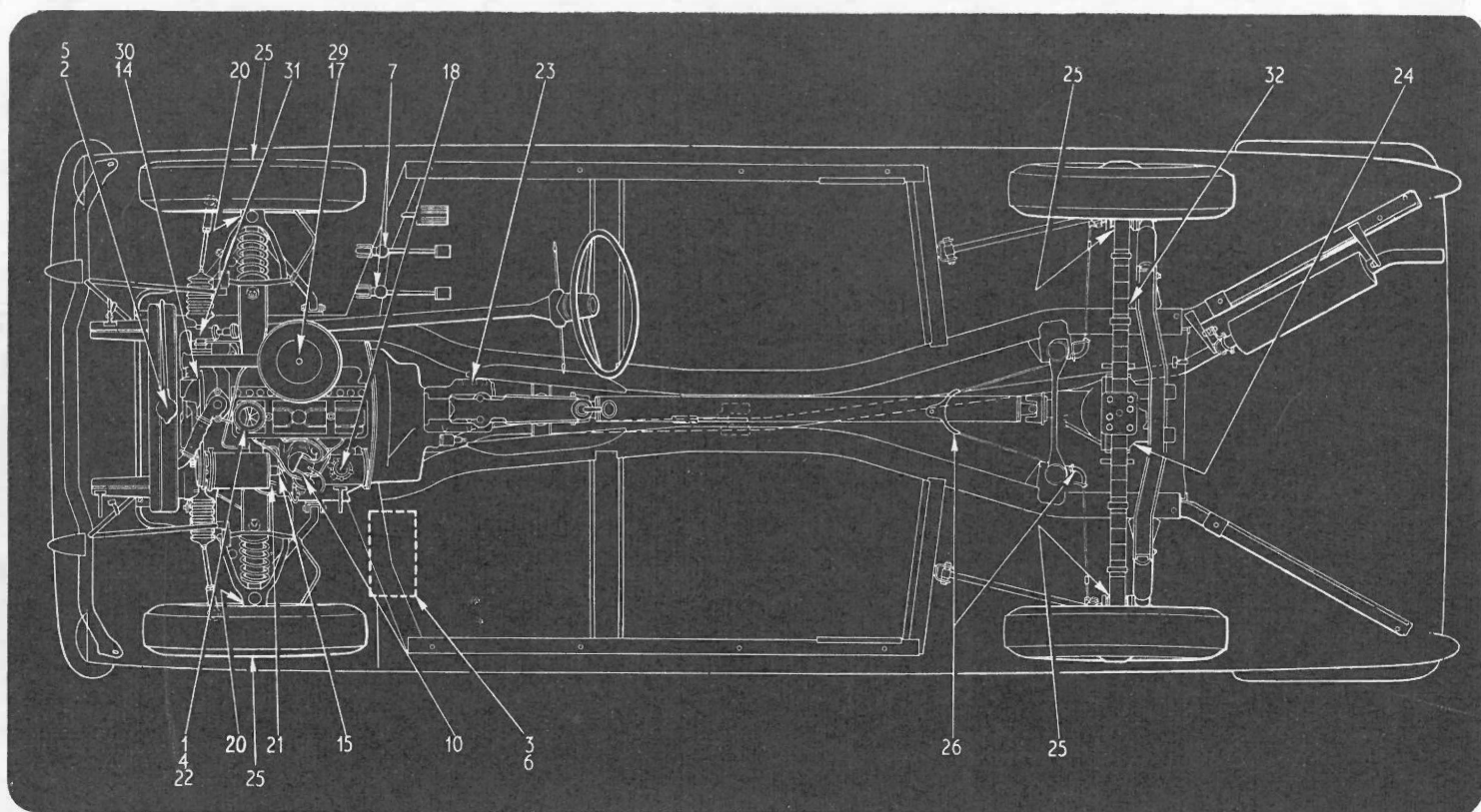
COMPONENT	Model	Part No.
Battery	BT7A	22700
Generator	C40	37290
Control box	RB106/2	25079
Starting motor	M35G	25079
Distributor	Drive SB Inboard	40791
Max. centrifugal advance (crank degrees)	2D54	40791
rev./min.		
No advance below 240 r.p.m.		
Centrifugal advance springs.	Part No. 54414000.	
Max. vacuum advance (crank degrees)	12°-16° at 25" Hg.	
No advance below 1½in Hg.		
Ignition Coil	HA12	45132
Primary resistance 3.0-3.5 ohms.		
Running current at 1,000 r.p.m. 1.0 amp.		
Windscreens wiper	DR3A	75446
Horn(s)	9H	54068019
Type: windtone		high note
Current consumption 3.0-3.5 amp. (per horn)		54068018
Flasher unit	FL5	low note
Fuse unit	4FJ	35020
Fuse ratings 35 amp.		
35 amp		

SUNDRY EQUIPMENT	Model	Part No.
Reflex reflectors	RER24	57111
Reflex reflectors Export Switzerland	RER14	57079
SWITCHES	Model	Part No.
Ignition/starter	475A	31873
Starter solenoid	28T	76464
* Lighting	718A	34403
Direction indicator	728A	34406
Dip Export NADA	218A	31419
Panel light Export NADA	P87-2	31419
Wiper	CC9	33577
Steering column control	65SA	34555
Horn isolating Export France		
See also addenda.		
SUNDRY EQUIPMENT	Model	Part No.
Heater	65SA	31828

Lamps	Model	Part No.	Lucas No.	Wattage	Cap
Head RHD, dip left	F700	59098	54521872	60/45	SBU
Head Export Europe	F700	59099	410	45/40	Unified European
Head Export France	F700	59166	411	45/50	Unified European
Head Export Sweden	F700	59100	410	45/40	Unified European
Head Export NADA	F700	59101			
Head Export Austria	F700	59102	410	45/40	Unified European
Side/flasher	595	52549	380	21/6	SBC
Side/flasher Export NADA	584	52478	9898 382F.	6 21	MCC SCC
Side/flasher Export Germany	584	52312	9898 382F.	6 21	MCC SCC
Stop tail and flasher	636	53772	3808T. 382F.	21/6 21	SBC SCC
Stop tail and flasher Export NADA	636	53816	3808T. 382F.	21/6 21	SBC SCC
Number plate	467/2	53093	989	6	MCC
Number plate Export NADA	467-2	53836	989	6	MCC
Panel	Bulbholder only	554734	987	2.2	MES
Ignition warning	Bulbholder only	863511	987	2.2	MES
Main beam warning	Bulbholder only	863511	987	2.2	MES
Flasher warning	WL13	54360552	987	2.2	MES
Oil warning	Bulbholder only	863511	987	2.2	MES

ADDENDA

COMPONENT	Model	Part No.
Battery dry charged, Export		BTZ7A
Distributor low compression engine	25D4	40790
Max centrifugal advance (crank degrees)	32° at 4000 rev/min.	
No advance below 740 rev/min		
Centrifugal advance springs	544 114 54	
Max. vacuum advance (crank degrees)	22-26 at 18" Hg	
No advance below 2" Hg.		
Lighting switch RHD	718A	34403
Lighting switch Export NADA	PPQI	31852
Master and panel lighting switch		



KEY TO MAINTENANCE DIAGRAM

EVERY 250 MILES (or weekly)

1. Engine sump } check and top up
2. Radiator

EVERY MONTH

3. Battery—check and top up

EVERY 6,000 MILES

4. Engine sump—drain and refill
5. Radiator
6. Battery
7. Clutch and brake master cylinders } check and top up
- * 8. Carburettor dashpots (if fitted) } up
- * 9. Hinges, locks, catches, controls etc.—oil can
10. Distributor—oil shaft bearing, auto. advance mechanism and contact breaker pivot, smear cam with grease
- * 11. Valve clearances, engine slow-running, fan belt tension brakes and tyre pressures—check and adjust, if necessary
- * 12. Hydraulic pipes and hoses—check for clearance and security
- * 13. Front and rear wheel track—check
14. Water pump } check for
15. Generator unit and pulley } security
- * 16. Electrical equipment—check operation
17. Air cleaner element—clean and de-dust
18. Petrol pump bowl and filter—clean
- * 19. Sparking plugs—clean and reset
20. Steering swivels—remove lower blanking plug, fit nipples and lubricate with oil

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

21. Engine oil filter element—renew
22. Engine oil filler cap—clean
23. Gearbox
24. Rear axle } check and top up

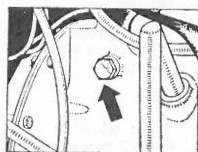
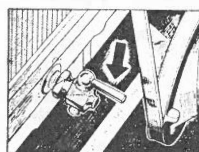
25. Front and Rear hubs—remove blanking plugs, fit nipples and lubricate with grease
26. Handbrake cables and guides—grease
- * 27. Sparking plugs—renew
- * 28. Brakes—de-dust and examine drums also pads and linings after removal of road wheels

EVERY 18,000 MILES (as for 6,000 Miles)

EVERY 24,000 MILES (as for 12,000 Miles plus following)

29. Air cleaner element—renew
 30. Water pump } remove blanking plugs, fit nipples and lubricate with grease
 31. Steering unit } grease
 32. Rear road spring—spray with oil
- * Not shown on diagram
N.B. Exhaust system to be checked for leaks & efficiency at 12,000 mile intervals

DRAINING POINTS



Left: shows the radiator matrix drain tap, access when bonnet is opened, or from below, and right: the cylinder block drain tap, access from above

FILL-UP DATA

	Pints	Litres
Engine sump	7½	4.25
Gearbox	1½	.85
Rear axle	1	.57
Cooling system	8½	4.8
Fuel tank	6½ galls	29.5
Tyre pressure:		
front	19lb/sq in	1.35Kg/cm²
rear (two up)*	24lb/sq in	1.70Kg/cm²

*Pressure in rear tyres should be increased 4 lb/sq in (.27Kg/cm²) when car contains four people.

GENERAL DATA

Wheelbase	7ft 7in
Track: front	4ft 0in
rear	25ft
Turning circle	25ft
Ground clearance	6½in
Tyre size: front	5.20-13
rear	12ft 9in
Overall length	5ft 0in
Overall width	4ft 4in
Weight (dry)	15½ cwt

RECOMMENDED LUBRICANTS

Component	Mobil	Shell	Esso	B.P.	Castrol	Duckham's	Regent
Engine	Mobiloil Special	X-100 20/20W or X-100 Multigrade 10W/30	Extra Motor Oil 20W/30	Energol Motor Oil 20W or Visco Static or Visco Static Longlife	Castrolite	M.O.L. Twenty or Q5500	Havoline 20/20W or Special 10W/30 Havoline
King Pin Lower Swivel, Gearbox, Rear Axle	Mobilube GX.90	Spirax 90 E.P.	Gear Oil GP 90/140	Energol SAE90EP	Hypoy	Hypoid 90	Universal Thuban 90
Front and Rear Hubs, Steering Unit, Engine Water Pump	Mobilgrease M.P.	Retinax A	Multi-Purpose Grease H	Energol L.2	Castrol L.M.	L.B10 Grease	Marfak Multi-purpose 2
Oil Can	Handy Oil	X-100 20W	Engine Oil	Energol Motor Oil SAE 20W	Everyman Oil	General Purpose Oil	Havoline 20/20W
Rear Road Spring			Old Rear Axle or Engine Oil				

Clutch and Brake Reservoir: Wakefield Girling Brake and Clutch Fluid

NB: Where this proprietary brand is not available, other fluids which meet the S.A.E. 70 R3 specification may be used.