

Motor Trader

SERVICE DATA No. 497

Triumph Spitfire Mk IV

Manufacturers: Triumph Motor Co. Ltd., Coventry

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INTRODUCED late October this year, the Spitfire Mk IV embodies many of the features found in the larger models of the Triumph range.

From the technical aspect a most important step is the modification of the swing axle rear suspension. The transverse leaf spring now pivots in the centre, except for the master leaf which is fixed to the differential housing, as before. This is said to reduce road stiffness at the rear and to compensate this a larger diameter roll bar has been fitted at the front, where the double wishbone type suspension is retained.

The 63bhp (net) 1,296cc four cylinder engine of the earlier Spitfire is retained but the new model incorporates larger big end journals and main bearings. An alternator is now standard equipment.

A claimed maximum speed of 97mph is attributable to a higher axle ratio, 3.89:1, compared to 4.1:1. Synchronesh is now fitted to first gear, the ratio of which has been lowered. A seven blade polycarbonate fan and Vitesse style air cleaner/silencer are said to reduce engine noise.

The body shell has been changed to give the car a family resemblance to the recently announced Stag model, and is mounted on a separate chassis frame which is broadly similar to that employed in the Herald/Vitesse/GT6 ranges.

Mechanical components are similar to those which are used on other cars in the Triumph range, but some are specifically adapted for this model.

Transmission of the drive is taken through a single dry plate hydraulically operated clutch to a four-speed, all-synchromesh gear box, and from the output shaft of the gearbox by short universally jointed propeller shaft to the hypoid bevel final drive reduction gear contained within the rear axle. Drive to the rear road wheels is transmitted by short drive shafts which are universally jointed at their inner ends. This design allows independent suspension of the rear wheels and independent suspension at the front of the car is provided by a coil spring and wishbone link arrangement. Spring damping is achieved



Spitfire Mk IV is restyled for the '70's: Rakish front with quasi-Stag rear; sporty pressed steel wheels new hood and door handles, deeper screen plus a completely revised rear suspension system

by the use of co-axially mounted telescopic hydraulic shock absorbers at the front and by similar units at the rear, in which application the shock absorbers are used to control the radial movement of the wheel assemblies about the rear axle and axial location is obtained in two ways, through the transverse leaf spring mountings at either side of the chassis and by short radius rods which are mounted between plates bolted to the body floor and the spring shackles.

Vehicles are identified in the customary Triumph manner, by Commission and unit numbers. The Commission number is to be found stamped on a plate on the left-hand side of the scuttle panel and is visible when the bonnet is raised. The engine number is stamped on a boss on the left-hand side of the cylinder block. The gearbox number is stamped on the right-hand side of the gearbox housing and the rear axle number is to be found stamped under the hypoid nose-piece. It is essential that the Commission number is quoted when referring to the vehicle manufacturers, or when ordering spare parts.

Special tools for use in repair and overhaul work are made and marketed by V. L. Churchill & Co., Ltd., London Road, Daventry, Northants. These tools are approved by the vehicle manufacturers, and a list of those considered the more essential is set out on page iii.

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

ENGINE

Mounting

At front, bonded rubber blocks bolted up to front engine plate and

to extension on front suspension turrets. At rear, cylindrical rubber blocks bolted up to either 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, 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 gearbox. Attach sling of lifting tackle to eye on front of alternator adjusting link and eye at rear of cylinder head. Undo securing bolts and remove facia support panel from inside car. Remove gearbox cover.

Undo front mounting nuts and rear mounting bracket nuts. Disconnect propeller shaft at gearbox flange joint, remove clutch slave cylinder mounting pinch bolt. 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 bell-housing 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, bi-metal shells located by tabs on

block and caps. No hand fitting permissible. Shells may not be removed and replaced with engine and transmission in position. End-float controlled by split thrust washers fitted either side of rear main bearing. Oversize sets of washers available.

Flywheel spigoted on rear flange of crankshaft and retained by four 3/4in 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 nut. Dished oil thrower fitted between camshaft sprocket and timing cover. Hub of fan pulley passes through lipped renewable oil seal pressed into timing cover. Starter ring gear bolted to carrier which is in turn bolted up to pulley hub, by six bolts. Clamp plate fixed behind carrier.

Sealing strip fitted to front end of cylinder block. Rear oil seal housing 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. 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 rods and caps. No provision for hand-fitting, rods split diagonally for removal through bores and caps dowel located on rod. Fit with short shoulder of big end to camshaft side. Tighten bolts to torque figure specified. Note: Gudgeon pins are light press fit in con rod small ends.

Pistons

Aluminium alloy, flat-topped solid skirt. Pistons graded into two sizes

Parts of the engine showing the fixed and moving components

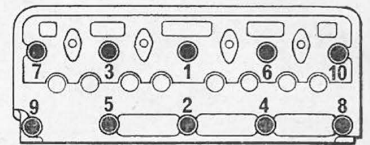
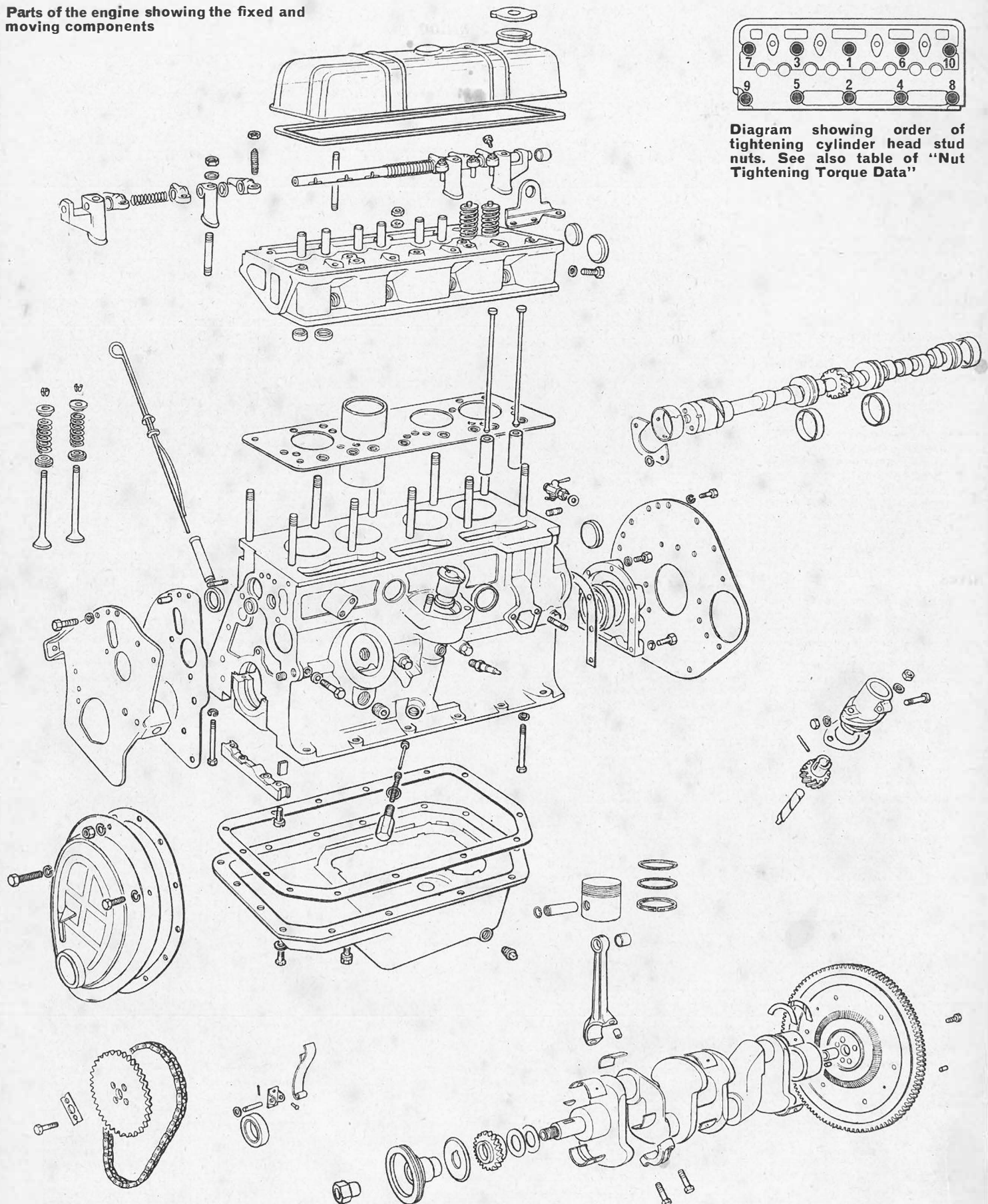


Diagram showing order of tightening cylinder head stud nuts. See also table of "Nut Tightening Torque Data"

of standard dimensions, "F" and "G", 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 .0004in steps on "F" and "G" size markings respectively. Identification mark of bore grade stamped on casting adjacent to bore in cylinder block. Pistons marked with arrow which, when assembly is fitted to engine, must point to front.

One parallel-faced, one taper faced compression ring and one slotted oil control ring are fitted above fully floating gudgeon pin.

Remove rod and piston assembly complete through bore. Gudgeon pins fully floating, retained in piston bosses by circlips.

Camshaft

Single row endless roller chain drive with spring tensioner. Shaft runs in split bushes in cylinder block casting. End thrust is taken and location is effected by "C"-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 1/2-tooth variations in valve timing. Scribed marks on chain wheels should be in line, to give correct timing when No. 1 piston is at TDC compression stroke. In this position, crankshaft chain wheel keyway is also at top centre.

Valves

Overhead, non interchangeable, inlet larger than exhaust. Springs

secured by split cotters. Fit springs with close coils to cylinder head. Valve guides plain, no shoulder, press in from top until guide projects 3/4in above top face 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 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 belts 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 psi. Normal running pressure 60 psi. Full flow filter fitted.

Non-adjustable spring loaded re-

lease 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 reassembly 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 TDC No. 1 cylinder firing.

Cooling System

Pump and fan. Non-adjustable wax thermostat retained in outlet port of pump body by outlet elbow. Fan belt adjustment provided by swinging alternator unit. Correctly adjusted belt has 3/4in play in longest run.

TRANSMISSION

Clutch

Borg and Beck single dry plate diaphragm type, 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 after removal of gearbox. This type

of clutch unit must not be dismantled for any reason. Should a fault be traced to a clutch unit in service a replacement must be fitted.

Gearbox

Four-speed, all-synchromesh engagement. Centre, remote control lever operating through selector mechanism in gearbox. Overdrive switch, if fitted, mounted in gear lever knob.

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. Place a suitable jack or support under engine, remove bell-housing 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 set-screws 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

ENGINE DATA		
General Type		4
No. of cylinders		73.7×76
Bore × stroke: mm		2.9×2.99
in		1.296
Capacity: cc		79.2
cu in		75-6,000
Max. bhp at rpm		1,837lb.in.
Max. torque at rpm		3,500rpm
Compression ratio		9:1

CRANKSHAFT AND CON. RODS		
Diameter	Main Bearings	Crankpins
	2.3120-2.3115in	1.8750-1.8755in
Length	Front & Inter.	Rear
	.995-.1055in	1.2995-1.2975in
		.9085-.9886in
Running clearance: main bearings		.005-.0002in
big ends		.0005-.002in
End float: main bearings		.004-.011in
big ends		.0025-.0086in
Undersizes		.010, .020, .030in
No. of teeth on starter ring gear/pinion		117/9

PISTONS AND RINGS		
Clearance (skirt)		.0024in
Oversizes		.010, .020, .030in
Gudgeon pin: diameter		.8123-.8125in
fit in piston		floating
fit in con. rod		interference fit 10lb. ft
No. of rings	Compression	Oil Control
	2	1
Gap (fitted)		.099-.019in
Side clearance in grooves		.0015-.0035in
Width of rings:		—
Top		.1553-.1563in
2nd		

VALVES		
	Inlet	Exhaust
Head diameter	1.308-1.304in	1.172-1.168in
Stem diameter	.310-.311in	.310-.3105in
Face-angle	45°	45°
Spring length: free	1.07in	
fitted load	117lb	
No. of coils	6	

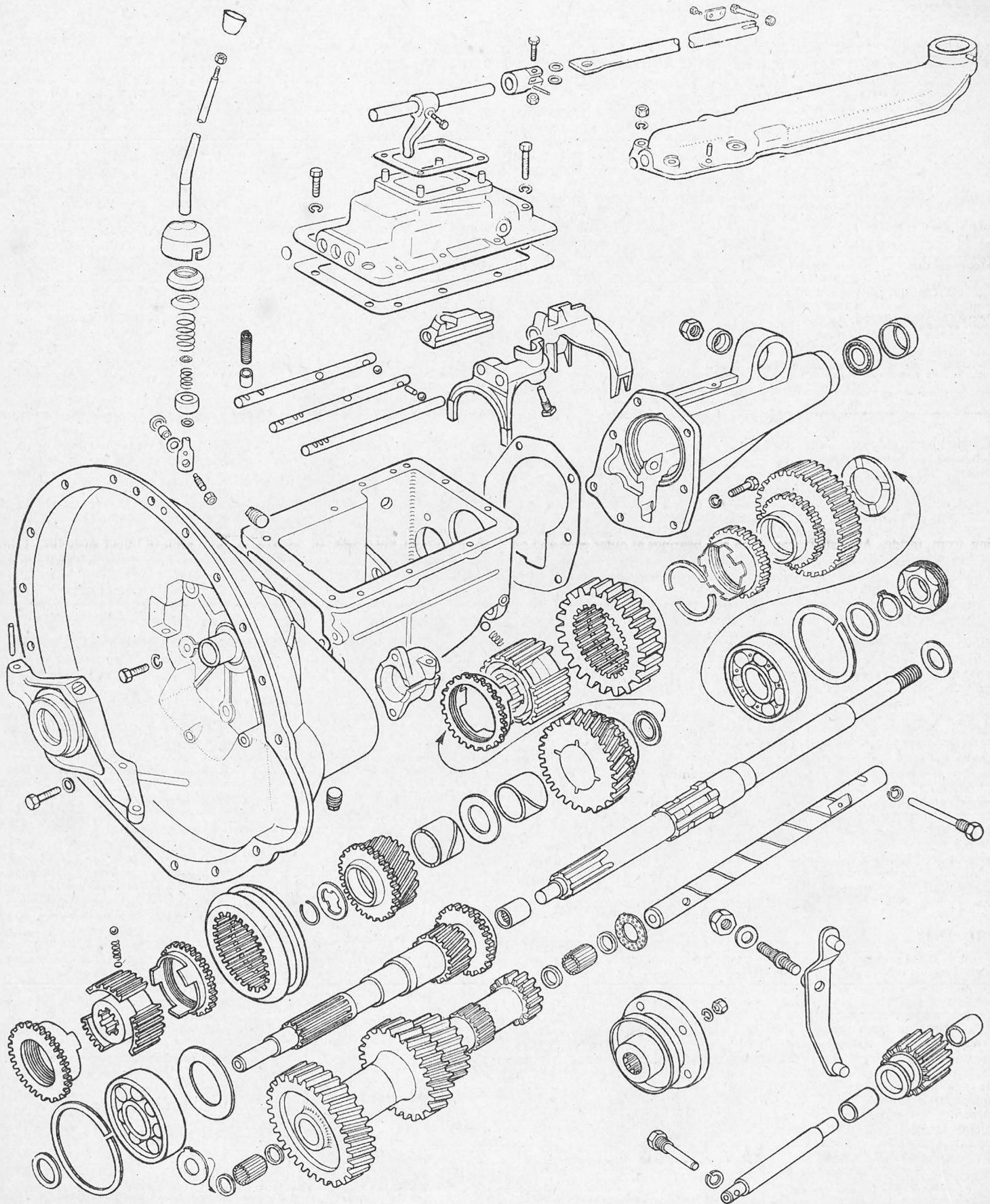
CAMSHAFT	
Bearing journal: diameter	1.9654-1.9649in
Bearing clearance	.0026-.0048in
End float	.0035-.0085in
Timing chain: pitch	.375in
no. of links	62

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	20S 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/S
Multi-purpose handpress	S 4221/A
Drop arm drawer	S 121

NUT TIGHTENING TORQUE DATA		
	Bolt size (in)	lb. ft
ENGINE		
Main bearing caps	7/16	55-60
Cylinder head studs	3/8	38-42
Flywheel	3/8	42-46
Con-rod bolts	3/8	42-46
GEARBOX		
Clutch cylinder attachment	5/16	14-16
Clutch fork attachment	5/16	14-16
FRONT SUSPENSION		
Stub axle to vertical link	1/2	55-60
Tie rod ends	3/8	26-28
Suspension mounting to sub-frame	3/8-20	28-30
REAR AXLE		
Bearing caps	3/8	32-34
Crownwheel attachment	9/16	22-24
Pinion flange	9/16	60-80
Hubs	5/8	110

BALL AND ROLLER BEARING DATA		
	Int. dia Ext. dia., Width (in. or mm)	Type
Note.—Upper limits only quoted.		
GEARBOX		
Mainshaft (front)	1.0002×2.4995×.750in	B
(centre)	1.0002×2.4995×.750in	B
(rear)	.7502×1.8742×.5625in	B
REAR AXLE		
Hubs	1.0002×2.2497×.625in	B
Diff. housing	1.2506×2.4416×.7525in	TR
Pinion head	1.0006×2.6881×.8676in	TR
Pinion tail	7506×1.256×.8575in	TR
FRONT SUSPENSION		
Hubs (inner)	1.0006×2.0006×.557in	TR
(outer)	.6255×1.6256×.578in	TR

Parts of the gearbox, showing gear trains, selector mechanism, clutch release mechanism and gearcasing



GENERAL DATA		PROPELLER SHAFT		FRONT-END SERVICE DATA	
Wheelbase	6ft 11in	Type	tubular open, needle roller bearing	Castor	3° pos.
Track: front	4ft 1in			Camber	2° pos.
rear	4ft			King pin inclination	6½°
Turning circle	24ft			Toe-in	1/16-1/8in toe in
Ground clearance	5in.			No. of turns to lock	3½
Tyre size	5.20S-13			Adjustments: castor	shims on lower ends of wishbones
	14S-13 Radial ply optional			camber	screwed tie-rod ends
	12ft 5in			toe-in	
Overall length	4ft 10.5in	FINAL DRIVE			
Overall width	3ft 11.5in	Type	hypoid bevel		
Overall height (unladen) hood up	3ft 8.5in	Crownwheel/bevel	3.89:1		
hood down	14.5cwt				
Weight (dry)	20cwt.				
Max. gross laden weight					

SPRINGS			GEARBOX	
	Front*	Rear	Type	Constant mesh synchromesh 2nd, 3rd, top 4
Length (eye centres, laden)	—	40.88-41.13in	No. of speeds	1st 15.4:1
Width	—	1.75in	Final ratios:	2nd 8.37:1
Colour identity	green paint strip	—		3rd 5.73:1
No. of leaves	—	7		4th 4.11:1
Free camber (length, coil)	12.59in	1.03-1.29in		15.4:1
Loaded camber (length, coil) at load	7.80in ± .09in @718lb.	1.53in neg ± .13in @1420lb.		
*Alternative spring (blue paint marked). Free length: 12.21in. Length at load: 7.42in ± .09in @718lb.			SHOCK ABSORBERS	
			Make	Armstrong
			Type	telescopic linking
			Service	replacement

BRAKES		
Type	Hydraulic	
Make	Girling	
Drum diameter	7in	
Disc diameter	9in	
	Front	Rear
Disc run-out (max.)		
Lining: length	.004in	623/32in
width	—	1½in
thickness	—	5/32in
Material	Don 55	Ferodo M81

and nylon driven gear. Take off clutch housing. Extract primary shaft together with ball race.

Remove mainshaft centre bearing circlip and washer and drive mainshaft forwards into gearbox approximately 1½in. Drive bearing out of casing from inside. Mainshaft can then be lifted out through top of casing.

Take off components in following order: 3rd/top synchro unit, 3rd gear baulk ring, thrust washer, 1st speed gear, 1st gear baulk ring. 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 reversal of dismantling, remembering to hold needle roller bearings with thick grease.

Rear Axle

Hypoid bevel swing axle. Drive is transmitted to rear road wheels via short 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, undo drive shaft flanges and main propeller shaft rear flange; remove damper attachments and 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 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 ½in nut. Tighten to torque figure specified in data tables when re-assembling. 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 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 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. ¼in. 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 type pivots in the centre with the exception of the main leaf which is fixed to the differential unit, retained by four studs and nuts and top plate. Spring centre through bolt is spigoted and located in machined face of differential housing. Metalastik 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 inner ends. Complete wishbone nylon bushed at outer ends, rubber bushed 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.

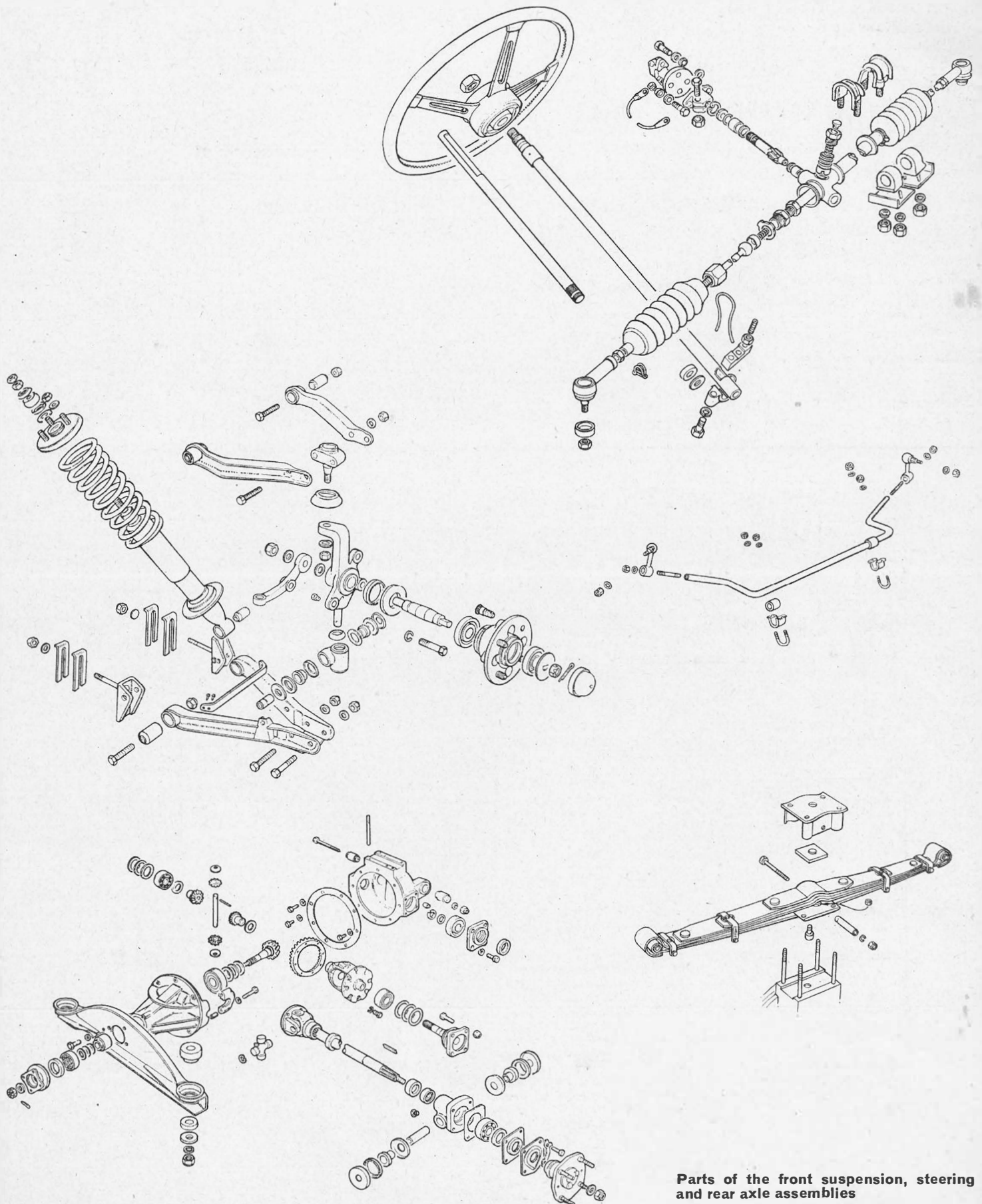
Upper end of each vertical link terminates in ball pin working in a sealed ball socket bolted between both arms of upper wishbone. Lower end of each vertical link is threaded and works in bronze swivel housing. Securing bolt passes through outer ends of lower fulcrum, steel sleeve and phosphor-bronze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

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.

	Model	Part No.
BATTERY and STARTING MOTOR SYSTEM		
Battery	D9	54028971
Starting motor	M35G	25079
Solenoid switch	4ST	76771
CHARGING SYSTEM		
Generator	15ACR	23636
IGNITION SYSTEM		
Ignition coil	HA12	45212
Primary resistance (ohms) at 20°C. 3.0-3.5		
Running current (amps) at 1000 rev/min 1.0		

LAMPS

	Model	Part No.	Bulb or Sealed Beam Unit	Lucas No.	Wattage	Cap
FRONT LAMPS						
Head (right hand & left hand)	F700	58811	54521872	60/45	S.B.U.	
Side & Flasher	878	56158	989	6	M.C.C.	
REAR LAMPS						
Stop/Tail, Flasher & Reverse	880	56161 (rh) 56162 (lh)	380 S/T 382 F&R	6/21	S.B.C.	
Number Plate	766	54866	207	6	S.C.C.	
SUNDRY LAMPS						
Side-Repeater (flasher)	841	54965 (lh) front 54977 (rh) Front 54976 (lh) Rear 54964 (rh) Rear	989	6	M.C.C.	
PANEL LAMPS						
Flasher	WL13	54360552	987		M.E.S.	

SWITCHES

	Model	Part No.
Ignition (combined with starting motor control switch)	157SA	39415
*Head/side/headlamp-flash	102SA	35778
Direction indicator	125SA	35774
Windshield wiper	PS7	31869
Reverse	SS10	34460
Heater	65SA	31828
Hazard warning	152SA	39171
Master Lighting	58SA	34477

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

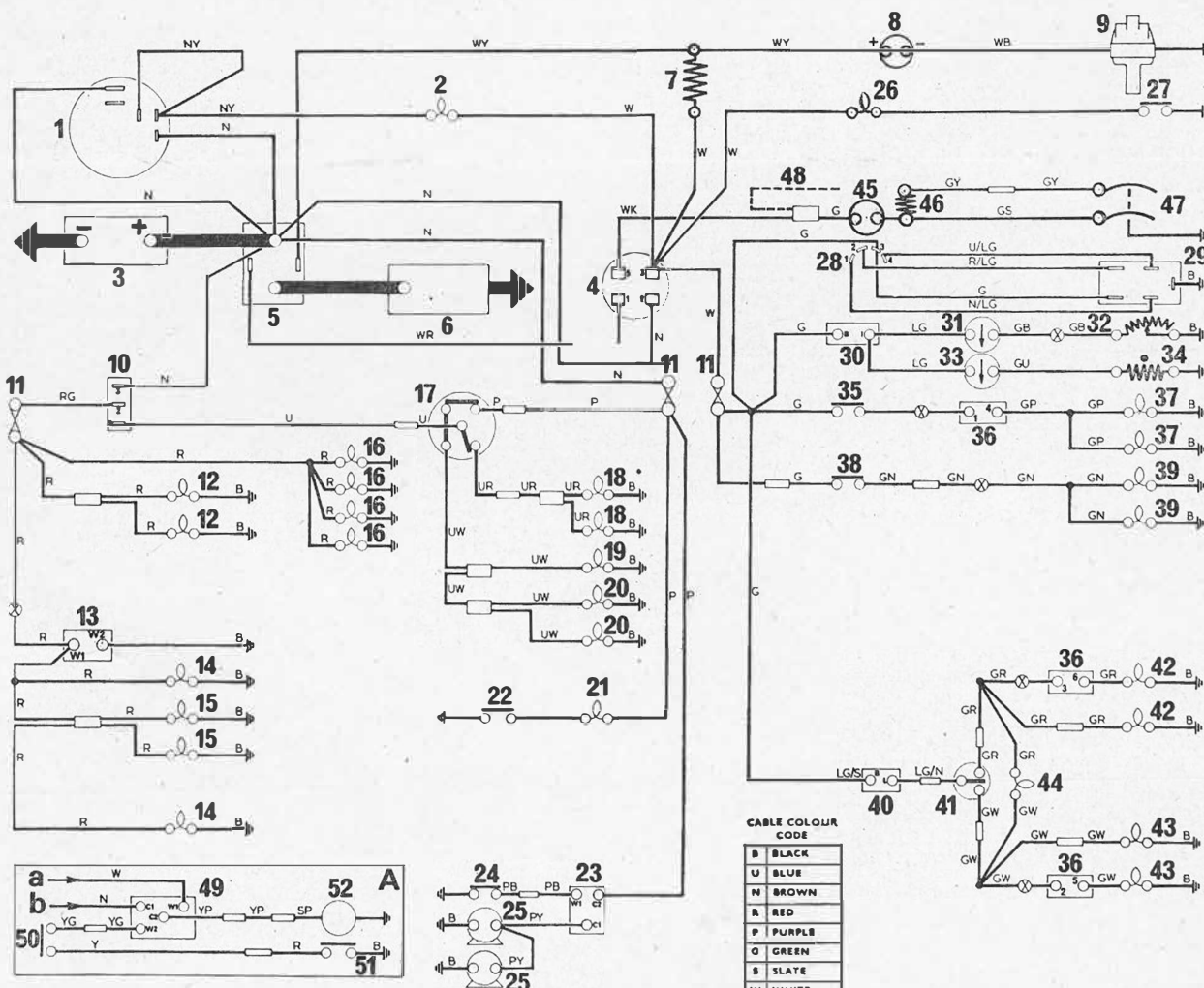
KEY TO WIRING DIAGRAM

1. Alternator
2. Ignition warning light
3. Battery
4. Ignition starter switch
5. Starter solenoid
6. Starter motor
7. Ballast resistor
8. Ignition coil—6 volt
9. Ignition distributor
10. Master light switch
11. Fuse
12. Front parking lamp
13. Night beam relay wind
14. Tail lamp
15. Plate illumination lamp
16. Instrument illumination
17. Column light switch
18. Deep feed
19. Main beam warning light
20. Main beam
21. Courtesy light
22. Door switch
23. Horn relay
24. Horn push
25. Horn
26. Oil pressure warning light
27. Oil pressure switch
28. Windscreen wiper switch
29. Windscreen wiper motor
30. Voltage stabiliser
31. Fuel indicator
32. Fuel tank unit
33. Temperature indicator
34. Temperature transmitter
35. Stop lamp switch
36. Night dimmer relay
37. Stop lamp
38. Reverse lamp switch
39. Reverse lamp
40. Turn signal flasher unit
41. Turn signal switch
42. Left hand flasher lamp
43. Right hand flasher lamp
44. Turn signal warning light
45. Heater motor
46. Heater rheostat
47. Heater switch
48. Radio facility

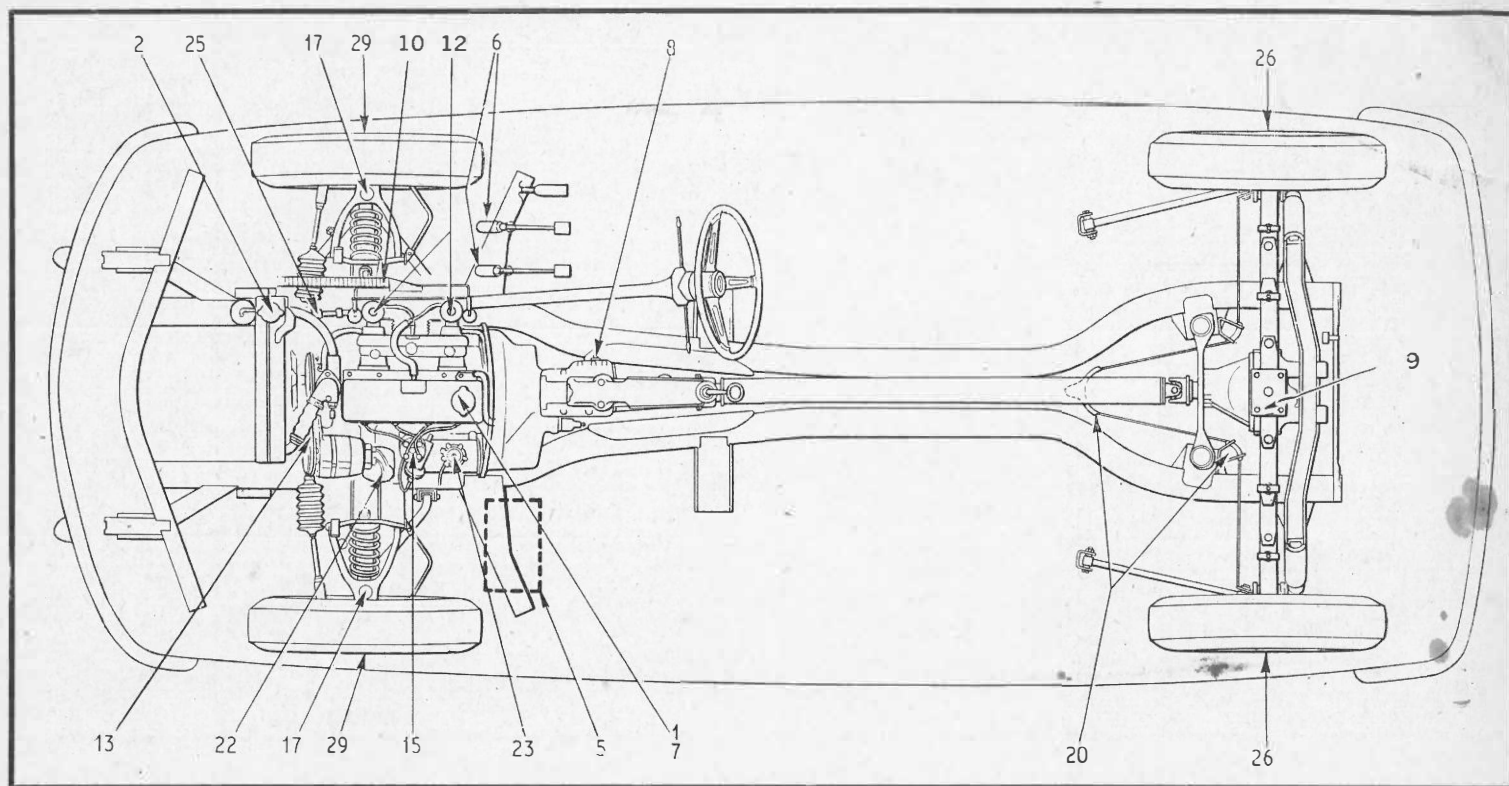
Overdrive optional extra

Overdrive relay

- gearbox switch
- gear lever switch
- solenoid



Wiring diagram by courtesy of Triumph Motor Co. Ltd.



KEY TO MAINTENANCE DIAGRAM

WEEKLY

- 1. Engine sump
 - 2. Radiator
 - *3. Screenwasher
 - *4. Tyres—check pressures when cold
- } check and top up

MONTHLY

5. Battery
6. Clutch and Brake master cylinder } check and top up

EVERY 6,000 MILES (additional to periodic checks)

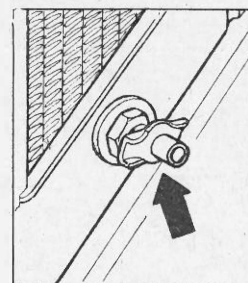
7. Engine sump—drain and refill
8. Gearbox/or overdrive } check and top up
9. Rear axle }
10. Air cleaners—remove elements and de-dust
- *11. Valve rocker clearances—check (see "Tune-up Data")
12. Carburettor piston dampers—check and top up (Engine oil)
13. Fan belt tension—check (3-lin.)
- *14. Sparking plugs—clean and reset
15. Distributor—clean and reset contact points (.015 in.) oil auto. advance mechanism, contact breaker pivot, smear can with grease
- *16. Engine oil filler cap—clean
17. Steering lower swivels—remove blanking plugs, fit nipples and lubricate with hypoid oil
- *18. Brake pads and shoes—check and adjust, renew if necessary
- *19. Clutch and brake hoses—examine for leakage and renew defective hoses
20. Handbrake cable guides—grease
- *21. Door locks, hinges, catches, etc.—oil can

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

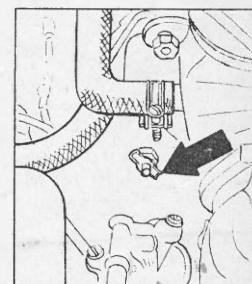
- 22. Engine oil filter element—renew
 - 23. Fuel pump—clean
 - *24. Sparking plugs—renew
 - 25. Steering unit } remove blanking plug, fit nipple,
 } apply grease gun (five strokes
 } only)
 - 26. Rear hubs—remove plug, fit nipple, apply grease
gun until grease exudes from bearing
 - *27. Rear brakes—remove drums, de-dust, renew shoes
if necessary
 - *28. Front brake pads—check condition, renew if
necessary (min. pad thickness $\frac{1}{16}$ in.)
 - 29. Front hubs—strip, clean and repack with grease,
check end-float
- *Not shown on diagram

FILL-UP DATA	Pints	Litres
Engine sump	8	4.5
Gearbox	1.5	.85
Gearbox and overdrive	2.38	1.35
Rear axle	1	.57
Cooling system	7	4
Cooling system and heater	8	4.5
Fuel tank	8.25gals	37.6
Tyre pressure:		
front	21 psi	
rear	26 psi	

DRAINING POINTS



Left: shows the radiator matrix drain tap, accessible from above or below.



Right: the cylinder block drain tap.

RECOMMENDED LUBRICANTS

Component	Mobil	Shell	Esso	B.P.	Castrol	Duckhams'	Petrofina
Engine Carburettor Dashpot Oil Can	Mobiloil Special 20W/50 or Mobiloil Super SAE 10W/50	Super Motor Oil	Uniflo	Super Visco-Static 20W/50	GTX	Q20/50	Fina Super Grade Motor Oil SAE 20W/50
Steering, Lower Swivel, Gearbox, Rear Axle	Mobilube GX 90	Spirax 90 EP	Gear Oil GP90/140	Gear Oil SAE 90EP	Hypoy	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 L2	Castrolase LM	LB10 Grease	Fina Marson HTL2

Approved Anti-freeze Solutions:- Smith's Bluecol B.P. Anti-Frost, Castrol, Duckhams, Esso, Mobil Permazone, Fina Thermidor, Regent PF, 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. 7083 specification may be used.

NOTE: Similar grades of Regent lubricant are also recommended.