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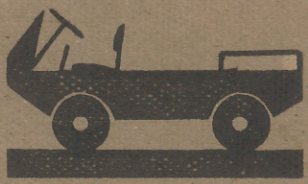

USER HANDBOOK

FOR

TRUCK, UTILITY, $\frac{1}{4}$ TON G.S. LIGHTWEIGHT

(HAFLINGER)

1966

IDENT No. 6002

REF. AFB-HU-002

MILITARY BOARD

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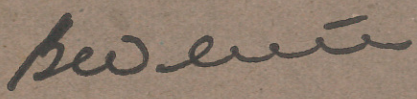

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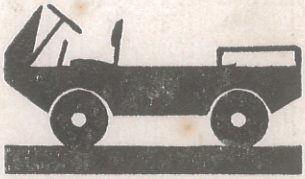

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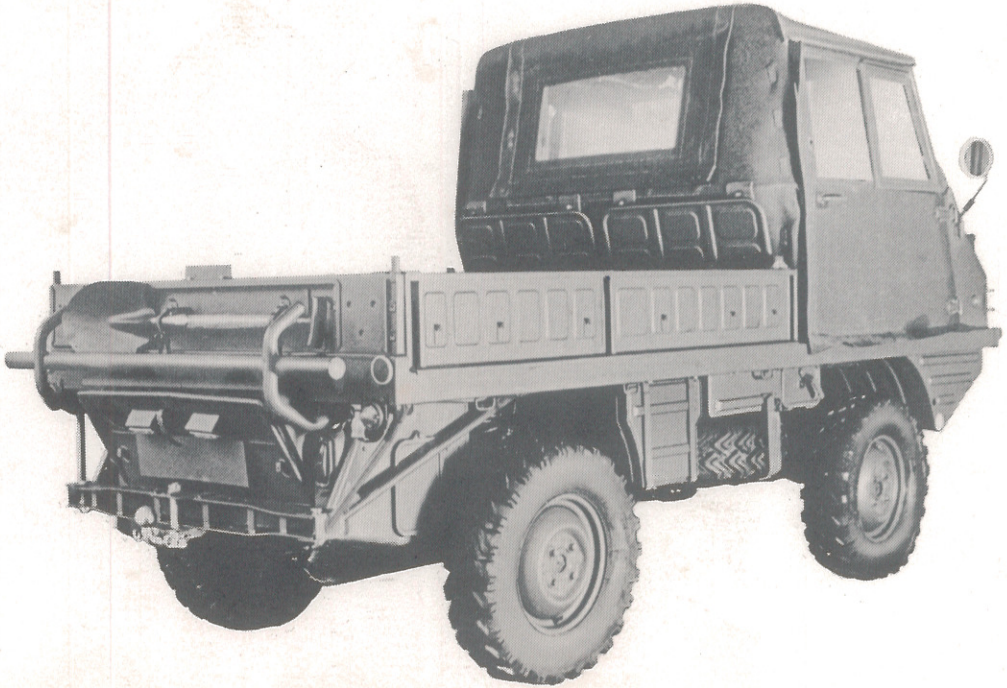
AMENDMENTS

AAO's	AMENDMENT No.	Signature & Date



P R E F A C E

This handbook contains brief specifications in addition to operating and user servicing instructions for the "Haflinger" ¼ Ton G.S. Lightweight Utility.

These instructions should be read and understood before operating the vehicle and the user servicing instructions carefully followed to ensure reliable and trouble free performance.

The figures in brackets refer to photographs and diagrams in the Appendix.

Where the references "Right hand side" (RHS) and "Left hand side" (LHS) are used, these are taken as looking from the rear of the vehicle to the front.

I N D E X

I N D E X

I. SPECIFICATION

TECHNICAL DATA

1. Engine:

Type	4 stroke, flat-twin air cooled engine opposed, fan cooled
Bore	3.15 in. (80 mm)
Stroke	2.51 in. (64 mm)
Cubic capacity ...	39.23 cu.in.(643 cc)
Compression ratio	7.2 : 1
Power developed ..	28 bhp SAE (24 bhp DIN) at 4500 rpm
Maximum torque ...	30.38 ft-lbs at 3000 rpm (4.2 mkg at 3000 rpm)
Speed governor ...	speed limited with a maximum of 4500 rpm
Ignition adjustment	0.275 in. (7 mm) below T.D.C. gauged on pulley
Valves	overhead type
Valve gap	intake 0.008 in. exhaust 0.008 in. both adjusted with cold engine
Lubrication	circulating pressure system (gear pump, oil cooler, and oil filter built into the main flow)
Oil capacity	about 3 pints (2 litres)

Fuel feed	fuel pump of diaphragm type
2. Carburettor	special cross-country down-draught carburettor, type Weber 32 ICS-HS
Adjustment :	draught scoop 27 main jet 135 air jet 220 idling jet 50
3. Air filter	oil bath air cleaner
4. Electrical installation	battery ignition generator Bosch 12 V/240 W regulator with starter relay battery 12 V/42 Ah sparking coil Bosch sparking plugs W 225 T 1 or equivalent Bosch distributor with centrifugal regulator
Position of engine	rear engine mounted on the rear flange of the gear-axle drive unit
5. Clutch:	
Type	single plate clutch, dry type
6. Gear axle drive unit:	
Gears	5 forward (all synchromesh), 1 reverse
Speedometer drive	by gears from front wheel drive

Gear shift	floor-mounted remote control
Axle drive	through spiral bevel gears to bevel gear differential, wheel driving shafts and spur wheel reduction within the wheel
Construction ...	gears and rear axle drive combined in one box

7. Gearing:

Axle reduction ..	4.22 (9 : 38)
Spur wheel reduction	3.0 (13 : 39)

Total Gear Ratio

1st speed	47.2 to 1
2nd speed	27.6 to 1
3rd speed	16.5 to 1
4th speed	9.0 to 1
reverse	44.9 to 1

The vehicle is provided with a creep gear (5th transmission)

Technical data: Creep gear transmission ratio 7.55 to 1

8. FRONT AXLE DRIVE

Through spiral bevel gears to bevel gear differential, wheel driving shafts and homokinetic driving joint to spur wheel reduction in the wheel. The front axle drive is directly driven from the rear axle. The driving shaft is carried within the central tube connecting both axle drive housings. The front wheel drive may be engaged or disengaged with a hand lever while driving.

9. DIFFERENTIAL LOCKS

The vehicle is designed with a differential lock for either front or rear differential. Differential locks may be applied separately by hand while the vehicle is in motion.

10. WHEEL SUSPENSION (Independent Axles)

Individually suspended wheels, forked independent axles built as a tubular sheet steel body within which the wheel driving shafts are carried.

11. SPRINGS

Front and rear coil springs and additional internal rubber cushions. The springs plus rubber give a progressively increasing resistance to excessive loading or rough travelling conditions.

Maximum wheel movement : about 200 mm (approximately 8 in. of free action).

12. SHOCK ABSORBERS

Hydraulic telescopic shock absorbers double-acting type both front and rear.

13. BRAKING

Foot brake	hydraulic four-wheel brake, brake drums, cast iron insert band of 8.4 in. (215 mm) diameter. Total lining area 10.2 sq. in. (658 cm^2)
Hand brake	mechanical operation on the rear wheels

14. STEERING

Worm and roller steering box, divided tie rods. Steering wheel revolutions for complete lock = 3. Minimum turning circle 21 ft. (6.5 m).

15. WHEELS AND TYRES

Disc wheels, rim 3.50 x 12 165 x 12,
4 ply, with special tread.
Pressure front and rear 20 psi-23 psi
respectively

16. CHASSIS

Consists of a central tube frame with attached axle drive housings and 4 independent half-axles. Two sheet steel transverse girders are attached to these axle drive housings for the support of the springs.

17. BODY

Table top platform built of heavy sheet steel plates with longitudinal and transverse girders and strengthened border. Headlight, switch board and steering column bearings are placed below the body front wall. Both front seats are longitudinally adjustable. Steering box and pedal bearings are placed in the foot recess at the body front end. One of the gear box covers is at the rear end of the body, the other one below. Fuel tank, battery, tool box, spare wheel and two covered sheet steel wells for the rear flap seats are placed below the body.

The table top platform is a most suitable cargo space for goods and passenger transport. The body is rubber-mounted on 4 points and securely screwed to the central tube frame.

18. SPECIAL EQUIPMENT

2 folding seats at the back.
Short canvas hood with 2 doors (detachable) and sheet steel side walls.
Power take-off depends on engine speed; reduction 1.65 : 1.
Provision for 2 NATO type stretchers.
Helicopter lifting attachments.
Provision for detachable floats.

19. MAIN DIMENSIONS AND WEIGHTS

Wheel base	60 in.	(1500 mm)
Track front and rear ...	44 in.	(1130 mm)
Overall length (over bumper bars)	122 in.	(3090 mm)
Overall width	54 in.	(1350 mm)
Overall width including canvas hood	55 in.	(1400 mm)
Height of platform (without load)	28 in.	(720 mm)
Overall height (steering wheel level, without load)	54 in.	(1360 mm)
Overall height, with canvas hood (without load) ...	69 in.	(1740 mm)
Weight (standard design, ready to start) approx.	1345 lbs	(610 kg)
Total permissible weight	2535 lbs	(1150 kg)
Ground clearance below differential (loaded)	9.4 in.	(240 mm)
Fording ability	20 in.	(350 mm)
Cargo space behind front seats: Length	61 in.	(1540 mm)
Width	50 in.	(1275 mm)
Total cargo space	3040 sq.in.	($1.96 m^2$)

20. FUEL AND OIL CAPACITIES

		Service Item
Fuel tank	7.3 imp.gal	74 M.T.Gas
Engine oil	3 pts imp.	OMD-110
Gear box and rear axle	4 pts imp.	OEP-220
Front axle	2 pts imp.	OEP-220
Wheel drive housing	0.3 pts imp.	Molybond Grease GMF10
Steering	0.3 pts imp.	OEP-220
Brake fluid	0.6 pts imp.	OX (Aust) 8
Fuel consumption on the road	36 miles/gal.	
Cross country drive	0.7-1.1 gal/hour	

21. PERFORMANCE

Top speed ..... (engine speed 4500 rpm)	34 MPH (52 km/h)
Minimum continuous speed (K gear) ..... (engine speed 1370 rpm)	1 MPH (1.3 km/h)
Maximum hill climbing capacity on dry roads with good traction (K gear)	70%

22. NUMBERS

The engine number (fig. 2) is engraved on the crankcase. The nomenclature plate is placed near the right seat (fig. 3). For spare part orders it is essential to indicate engine and frame number.

II. OPERATION

INSTRUMENTS

23. All instruments are on one control panel easily visible by operator. When switching on the ordinary lighting the instruments are automatically illuminated.

24. SPEEDOMETER AND MILEAGE RECORDER (Fig. 5/1)

The speedometer indicates the driving speed of the vehicle in m.p.h. The mileage recorder continuously registers the distance covered in miles. The permissible top speed of the various gears is:

Gear		MPH
Crawler gear	.....	3
1st speed	.....	6.6
2nd speed	.....	12
3rd speed	.....	20
4th speed	.....	34

25. HOUR METER (Fig. 5/12)

Indicates total engine operating hours and commences to record when ignition switch (fig. 5/6) is turned on.

26. OIL PRESSURE WARNING LIGHT (Fig. 5/2)

This light signal is located on the left near the light switch. After switching on the ignition a red light shows which should disappear as soon as the engine is started thus indicating that there is sufficient oil pressure. If the light flashes constantly with engine running you must stop immediately and check the oil-level and tightness of oil pipes. Do not operate engine before having eliminated the cause of light showing.

However, short flashing of the light when driving through narrow corners or on rough terrain is of no importance.

27. CHARGING CONTROL LIGHT (Fig. 5/3)

Located on the right near the light switch. When turning on the ignition a red light shows. Its disappearance when engine running is in order and indicates that battery is being charged by generator. Should the light show during service stop the engine and check if the dynamo is defective. If the belt slips fan movement would also stop and you must stop. If the generator is defective you may proceed without lights for a short time.

28. BLINKER CONTROL LAMPS (Fig. 5/4, 5/11)

Located on the lower part of the speedometer for vehicle and to left of speedometer for trailer. A green light flashes at the same intervals as the blinkers. Ensure that blinkers are not turned unnecessarily. The control light disappears as soon as the blinkers are turned off. Blinkers are not self cancelling.

29. HIGH BEAM INDICATOR LAMPS (Fig. 5/5)

Located on the speedometer. A blue light shows when the high (long distance) beam is turned on. Dim the lights when meeting other vehicles. The blue control light facilitates headlight switching.

30. RESERVE CONTROL LAMP (Fig. 5/13)

This lamp when illuminated indicates low fuel supply. Refuel as soon as possible as reserve is approximately 1 imp gallon (approximately 30 miles normal driving)

OPERATING CONTROLS

31. GEAR SHIFT LEVER (Fig. 6/2, 5/26)

The control lever positions (see fig. 7a) for the 4 forward speeds are identical to a normal four-speed drive. The control lever position for the reverse gear is obtained by pushing the lever to the left and forwards, for the crawling gear, by pushing the lever to the left and backwards. In order to engage the reverse gear, the control lever must be pressed down slightly from the neutral position. When engaging the crawler gear, it must be lifted from the neutral position.
Gear changing plan is located on dashboard (fig. 5/21)

32. DIFFERENTIAL LOCK CONTROL (Fig. 6/4, 6/5, 5/22, 5/23)

The levers for the differential locks front (fig. 6/4, 5/22) and rear (fig. 6/5, 5/23) are one behind the other between the front seats. Engage the locks by pulling up to the stop. Disengage by pressing down firmly.

33. FRONT WHEEL DRIVE CONTROL (Fig. 6/6, 5/24)

The operating lever is also between the front seats (fig. 6/6, 5/24). Engage the front wheel drive by pulling the lever up to the stop. Disengage by pressing down firmly.

34. HAND BRAKE (Fig. 6/3, 5/27)

The mechanically operated hand brake works on rear wheels only and is actuated by pulling the lever upwards. When brakes are on the lever is held in this position by a tooth locking catch. For releasing the brake, press the button on top of the lever.

35. CHOKE CONTROL BUTTON (Fig. 6/1)

For starting the engine when cold pull out the choke control button, located in front of gear shift lever on right.

36. THROTTLE HAND BUTTON (Fig. 6/8)

Set the throttle in the desired position by adjusting this button located in front of gear shift lever on left

37. POWER TAKE-OFF CONTROL (Fig. 5/25)

The lever is between the front seats behind front wheel drive lever (fig. 5/24). Engage the drive by pulling the lever up to the stop. Disengage by pressing down firmly.

38. ORDINARY LIGHTING (Fig. 5/8)

This switch operates headlights and tail lights as follows:

Position 1 Parking lights front, tail light rear

Position 2 Low beam head lights and tail lights rear

High beam head lights are obtained by foot operated dimmer switch (fig. 5/17).

39. BLACKOUT LIGHTING (Fig. 5/10)

This switch operates blackout head light, rear light and stop light as follows:

Position 1 Blackout head light, distance rear light and stop light

Position 2 Rear light and stop light

40. IGNITION SWITCH (Fig. 5/6)

No key is required to operate the ignition. To operate the ignition, switch on the ignition switch (fig. 5/6).

41. STARTER PRESS BUTTON (Fig. 5/7)

After having turned on the ignition switch (fig. 5/6) operate the starter by pressing the starter button.

42. BLINKER LEVER (Fig. 5/16)

The lever is on the steering column. When turning right push the lever down. When turning to the left push the lever up. Having passed the corner return the lever back to its initial position. This lever also controls the trailer blinker lights and the trailer blinker control light (fig. 5/11) indicates operation of trailer blinkers.

43. WIPER SWITCH (Fig. 5/9)

Pull button on the control panel operating the double-bladed wiper which works with ignition on only.

44. FOOT-OPERATED DIMMER SWITCH (Fig. 5/17)

Is operated with the left foot and dims the headlights.

45. PLUG SOCKET (Fig. 5/15)

This socket is provided to receive male plug on the trouble lamp supplied in the tool kit.

46. ADJUSTING THE FRONT SEATS (Fig. 6/7)

The front seats may be moved longitudinally. Fixing plates have longitudinal slots and are fixed by winged nuts (fig. 6/7). For adjusting the seats loosen both winged nuts, move seat and tighten the nuts again.

47. FOLDING UP TO THE REAR SEATS (Fig. 11/1, 11/2)

Open cover (fig. 11/1) on the platform and fold back. Then fold up back of the seat (fig. 11/2).

BEFORE STARTING UP

Proceed as follows:-

48. CHECK OIL LEVEL IN THE ENGINE (Fig. 14/1)

Open cover, the dip stick (fig. 14/1) is on the right hand at the back. The oil level should only be checked with non-running horizontally placed engine. Unscrew and remove dip stick, wipe and push back without screwing. Then pull out and read oil level which should be between the minimum and maximum marks. One pint is required to fill from minimum to maximum.

49. CHECK VEE-BELT TENSION (Fig. 15)

The vee-belts transmit power from the dyna-start to the crankshaft and also drive the dynastart (now acting as generator) and the cooling air fan. This requires good tightening of belts. A slight finger pressure should not move them more than approximately one half inch inwards. The small vee-belt drives the governor, the operation of which is essential. For adjustment see under "Maintenance" page 20.

50. CHECK TYRE PRESSURES

For good durability it is essential to observe the correct tyre pressure which should be 20 p.s.i. front and 23 p.s.i. rear.

51. CHECK FUEL SUPPLY (Fig. 16/2)

The filler pipe (fig. 16/2) for the fuel tank is on the right below the platform, easily accessible by opening the cover (fig. 16/1). Tank capacity 7.3 gal. There is also sufficient room for a 4.4 gal. spare tank below the left hand front seat. The engine is designed for use with standard gasoline.

RUNNING IN

52. It is advisable to break in new or overhauled engines most carefully for approximately 2,000 miles (3,000 km) avoiding top speeds and maximum r.p.m. Throttle should be opened between a quarter and half. During this period the speed should not exceed 80% of the maximum top speed.

STARTING THE ENGINE

53. Shift into neutral. Switch on the ignition which automatically turns on charge control and oil pressure warning lights.

With cold engine: Pull out choke (fig. 6/1). Do not operate accelerator pedal (fig. 5/20), throttle remains closed. Operate starter by pressing starter button (fig. 5/7). If the engine will not start immediately interrupt starting each 5 seconds giving the battery a rest of about the same time before starting again. When starting at extremely low temperatures, at 32°F (0°C) it is advisable and below 14°F (-10°C), it is essential to declutch.

With warm engine: Do not pull out choke. If the engine will not start for some time press down fully the accelerator pedal and release it immediately after the engine starts.

MOVING OFF AND OPERATION

54. MOVING OFF

For ordinary starting on level ground unladen, engage second gear. First gear is only to be used for starting in very difficult terrain or on steep hills.

Before engaging second gear depress clutch pedal. Release the handbrake. When starting on upgrades increase engine revs slightly then release clutch pedal and handbrake simultaneously.

55. GEAR-SHIFT

Having reached medium engine speed, change gears and engage the appropriate higher gears.

Observe these speed ranges for the various gears:-

Gear		MPH
Crawler gear	.....	3.0
1st speed	.....	6.6
2nd speed	.....	12
3rd speed	.....	20
4th speed	.....	34

On a level road or when ascending a steep slope the maximum r.p.m. cannot be exceeded as they are fixed by the speed governor at 4,500 r.p.m. However, when the vehicle pushes the engine, and the speed governor cannot cut back, the maximum revolution rate may be exceeded and the driver himself must observe the speed ranges of various gears, if necessary by braking. Double-clutching is not required. However, it is most important to declutch carefully and engage the lower speed slowly to avoid wear on the synchromesh device.

56. STOPPING AND PARKING

Occasionally observe charge control and oil pressure warning lights. Under normal driving conditions they should not show. Switch off ignition and before leaving the vehicle set hand brake.

57. ROAD DRIVING

On the road use the rear wheel drive only. Disengage front wheel drive and differential locks (push all 3 levers down).

58. CROSS COUNTRY DRIVING

When off the road and if on upgrades traction is not sufficient, first engage the front wheel drive. If insufficient traction or slipping of wheels occurs, engage differential locks. In narrow corners the front wheel differential should not be locked as this would badly affect steering properties. Engage and disengage front wheel drive and differential locks only at low engine speeds without declutching. A light pressure on the lever is sufficient for opening the front wheel drive claws. The front wheel drive and differential locks should not be disengaged when the vehicle is stationary, as the claws might jam with a badly parked vehicle and this creates excessive stress on the linkage. If possible do not engage differential locks on corners or on good roads, to avoid excessive stress.

59. TRACTION AIDS

Anti-skid chains are available to improve grip and traction of tyres if required. Do not tighten chains too much, as they should remain easily movable to enable automatic cleaning. Solid ground naturally requires tighter chains. On the road remove chains as soon as possible to avoid excessive chain and tyre wear. When descending shift back to lower speed before having reached the slope and engage the speed normally chosen for mounting the same upgrade. When descending or on rough ground engage front wheel drive to make use of adhesion and braking effect on all four wheels.

60. WARNING

Ensure differential locks are disengaged before jacking up vehicle for any purpose.

III. USER SERVICING AND ADJUSTMENTS (Refer Fig. 40)

LUBRICATION AND MAINTENANCE PLAN

61. First 300 miles on the road or on rough terrain every 10 hours:

	Lubricant
Check oil level in the engine	
If the engine is new change oil after 300 miles	OMD-110
If the engine is new change oil filter after 300 miles	

62. Every 600 miles or off the road every 20 hours:

Grease stub axle r.h. and l.h. also top and bottom king pin	XG-279
Grease drop arm bearing in the front axle drive housing and speedometer drive in the front axle drive housing (the latter each 6th time only)	XG-279
Check acid level and battery terminals	PX-103
Check oil level in the front axle drive housing	OEP-220
Check oil level in the rear axle drive housing	OEP-220
Check oil level in the 4 wheel drive housing	OEP-220
Check vee-belt tension and readjust if necessary	

63. Every 2,000 miles or off the road every 60 hours:

	Lubricant
Change engine oil (according to conditions between 1,000 and 2,000 miles)	OMD-110
Renew oil in the centrifugal governor (engine oil)	OMD-110
Clean air filter (see page 24)	OMD-110
Check brake fluid level	OX(Aust) 8
Check tyre pressures	
Check battery water level	Distilled water
Check, clean and lubricate battery terminals	PX-103

64. Every 4,000 miles or off the road every 120 hours:

Change oil and replace oil filter	OMD-110
Change oil in the front axle drive housing	OEP-220
Change oil in the rear axle drive housing	OEP-220
Change oil in the 4 wheel drive housings	OEP-220
Check oil in the steering gear housing and top up	OEP-220
Clean fuel filter	
Check whether the synthetic rubber gaiters of half axles and front wheel drive joints are tight	

65. STEERING

Steering Linkage:

Clean and lubricate ball joints. Occasionally (approximately every 8,000 miles (12,000 km) on the road and every 300 hours off the road) remove the rubber covers from tie-rod ball joints. If necessary clean and grease joints with XG-279.

Front wheel drive joints:

Clean and grease every 24,000 miles with Molybond grease GMF-10.

LUBRICATION

66. ENGINE

Every 300 miles check oil level by inserting dip stick (fig. 14/1). If the minimum mark is reached add oil up to the maximum mark. Use OMD-110 at all temperatures.

If the engine is new, change oil and replace oil filter after 300 miles (10 hours), (OMD-110). Thereafter change oil at least every 2,000 miles (60 hours). Depending on conditions each 1,000 miles (30 hours). Each second oil change needs a new oil filter element. It is not possible to clean and use the filter element again. Do not mix oil of different brands. Quantity of oil required for complete engine lubrication approximately is 3 1/4 pints (2.1) if oil filter is changed. For changing oil warm up the engine then stop it. Unscrew drain plug (fig. 17/1) ATTENTION - Remove cover of oil filter case after having unscrewed the fixing screw. Remove oil filter element and renew. Remove oil deposits from filter. Fit lid, screw in drain plugs (fig. 17/1), open the lid (fig. 18/1) of the filling pipe by removing the fixing spring (fig. 18/2) and refill 3 pints (1¾ l) engine oil through filling pipe. Start engine for a short time and stop again. Check oil level by inserting dip stick and refill oil up to the maximum mark.

Occasionally check the oil level in the speed governor housing. Add oil up to the bottom edge of bore through filler opening (fig. 15/2) (OMD-110).

67. GEAR BOX, AXLE DRIVE FRONT AND REAR, AND WHEEL DRIVE

Change oil at least every 4,000 miles (OEP-220).

68. CHANGING OIL OF FRONT AXLE DRIVE

Drain plug on the bottom of the axle drive housing easily accessible through opening in the bottom plate. The filling plug is on the right side of the housing near the front wheel drive control lever. The bottom edge of the filler opening indicates the oil level. Change oil after having operated the engine for some time and warmed up the oil (OEP-220).

69. CHANGING OIL IN THE GEAR BOX AND REAR AXLE DRIVE

Drain plugs are on the bottom of the gear box or axle drive housings easily accessible through openings in the bottom plate. The filling sleeve is at the rear on the left side of the gear box. The bottom edge of the filler sleeve indicates the oil level. The oil flows slowly so do not fill up rapidly. Change oil when warm (OEP-220).

70. CHANGING OIL IN THE WHEEL DRIVES FRONT AND REAR

The drain plugs are located for the front wheels at the bottom of the wheel drive cases and for the rear wheels at the side of the wheel housings near the brake bleeder screw. The filler opening for the front wheels is on the right side in front of wheel bearing setting lid on the wheel case, on the left behind the lid for the rear wheels on either side of the setting lid in front of the setting lid. The bottom edge of the filler opening indicates the oil level. Change oil when warm (OEP-220).

71. STEERING GEAR

The filler opening is on the steering gear box near the steering column. Fill up box. (OEP-220).

72. CHASSIS

Every 650 miles grease all nipples (apart from speedometer drive which only needs lubricating every 4,000 miles) with grease gun. Before lubricating carefully clean nipples with a rag. (XG-279).

MAINTENANCE

73. Open engine hood (fig. 23/2) after having loosened the lock (fig. 23/1). After opening the rear engine door this lock is accessible. Stop engine for this purpose.

74. CLEAN AIR FILTER (Fig. 24)

Oil bath air filters require new oil at least every 2,000 miles, in dusty conditions every 1,000 miles (OMD-110). Remove filter housing from below after opening the spring locks (fig. 24/1) and remove the wet air filter element. Clean filter element and oil reservoir with gasoline, soak element with clean oil, refill reservoir with engine oil and finally mount reservoir. Fill up with oil to the red mark, i.e. 1/8-3/16" (3-5 mm) below reinforcement ring in the tank. Check to ensure the carburettor air intake clamp (fig. 24/2) is tight.

75. TIGHTEN VEE-BELTS (Fig. 25)

Too much or too little tension on belts is damaging. To adjust belts remove nut (fig. 25/1). Before unscrewing or tightening the nut put a dowel into the hole in the fan wheel (fig. 25/2). Adjust the

belt tension by inserting washers between split pulleys. The washers (fig. 25/3) are placed between the rear half of pulley (fan wheel) and centre flange. Removing washers between pulley flange increases tension, inserting washers reduces tension. Washers removed from pulleys are attached to nuts at the front to keep the total distance unchanged. Both vee-belts must be renewed together. The speed governor vee-belt is adjusted by attaching washers (fig. 15/1) below the governor housing.

76. CLEANING THE FUEL FILTER

The filter is on the right hand side of engine box. Loosen winged nut (fig. 27/1) below sight glass, remove brackets (fig. 27/2), empty and clean sight glass (fig. 27/3). Renew cartridge if very dirty.

77. REPLACING FUSES (Fig. 5/14 and 31)

Fuse boxes are placed on the instrument panel (fig. 5/14). We recommend to keep a few spare fuses (8/15 ampere) as repairing fuses with wire or tin foil might be damaging. It is not sufficient to exchange a burnt fuse, also investigate and eliminate the cause of the short-circuit or overcharge.

78. BATTERY MAINTENANCE (Fig. 34)

The battery is located below the centre of the platform. Check acid level of cells (fig. 34/3) every week and top up with distilled water until the fluid level is 1/4 in. (5 mm) above the plates. Every 2,000 miles (3,000 km) check if terminals and cable connections are clean and well fitted and lubricate with terminal protective grease (PX-103). Check connection of earth cable. If the engine is not in use charge the battery at least once a month.

BRAKES

79. CHECKING THE BRAKE FLUID (Fig. 36)

Brake fluid reservoir is on the front side right near the instrument board. Check fluid level every 2,000 miles (3,000 km) and if necessary top up to 1/2 in. (1 cm) below top of the reservoir with OX(Aust) 8.

WHEELS

80. CHANGING WHEELS (Fig. 39)

First set hand brake and chock wheels on the opposite side. Lift one side of the vehicle by means of lifting jack (fig. 39/1). Loosen the four wheel nuts (fig. 39/2) with the wheel still on the ground. Lift wheel with lifting jack, remove nuts and wheel. Mount spare wheel, screw on nuts and tighten diagonally. Check nuts after removing jack.

81. WARNING

Ensure differential locks are disengaged before jacking up vehicle for any purpose.

TOOLS

82. Tools and lifting jack are kept in the tool box below the platform.

83. STEYR-PUCH "HAFLINGER" TYPE 700 APTL

This model is provided with an adjustable governor. When driving, the lever of the governor must remain in the upper position. For stationary operation of the power take off the lever of the governor must be pulled out, twisted and placed in the lower position.

Please note that for stationary operation of the power take off the lever of the governor must be in the lower position.

For stationary operation, the throttle is operated by means of the hand control (fig. 6/8).

84. FLOATATION AIDS

The vehicle is provided with mounting points for the attachment of floats. The location points are in the outer edge of the platform near the helicopter lifting lugs. The floats are supported on two shafts carried by four bearings bolted to the holes provided in the platform. The floats may be raised or lowered hydraulically by means of a control valve located in the drivers cabin.

The control valve controls the flow of oil to the hydraulic cylinder mounted on the left hand float arms. The hydraulic pump connected to the power take off is actuated by engaging the power take off control lever (fig. 5/25) located at the rear of the front wheel drive lever (fig. 5/24).

To lower the floats the control valve lever is pushed forward and when released the lever will return to the neutral position which automatically locks the floats in the desired position.

To raise the floats pull the control valve lever backwards until the floats are elevated. Disengage the hydraulic pump by pressing down the power take off control lever.

When floats are not required they may be removed from the two shafts and carried on the portability racks provided above the vehicle platform.

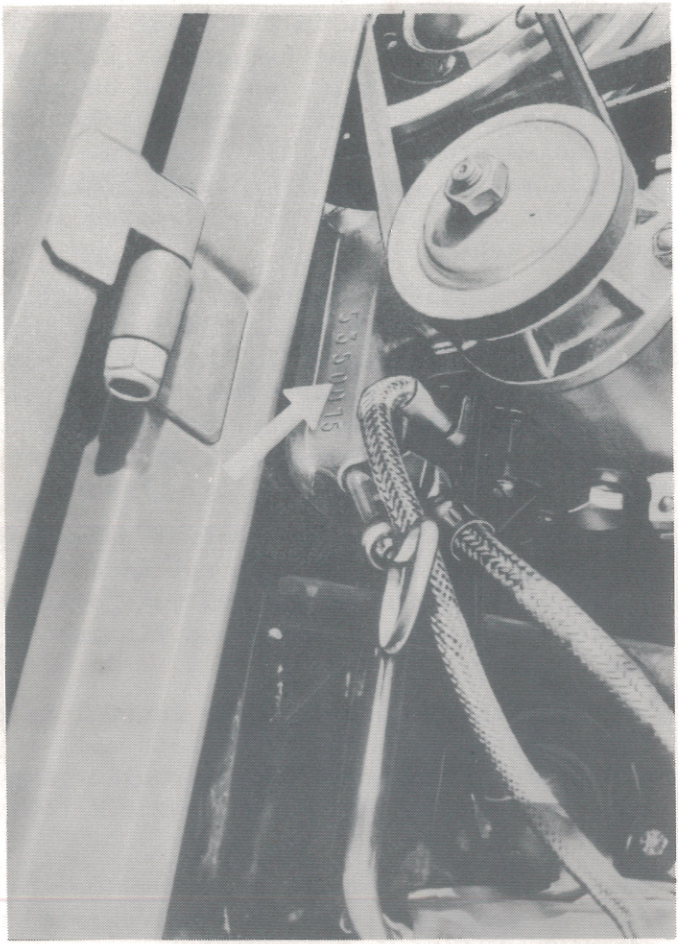


Fig. 2

Fig. 3

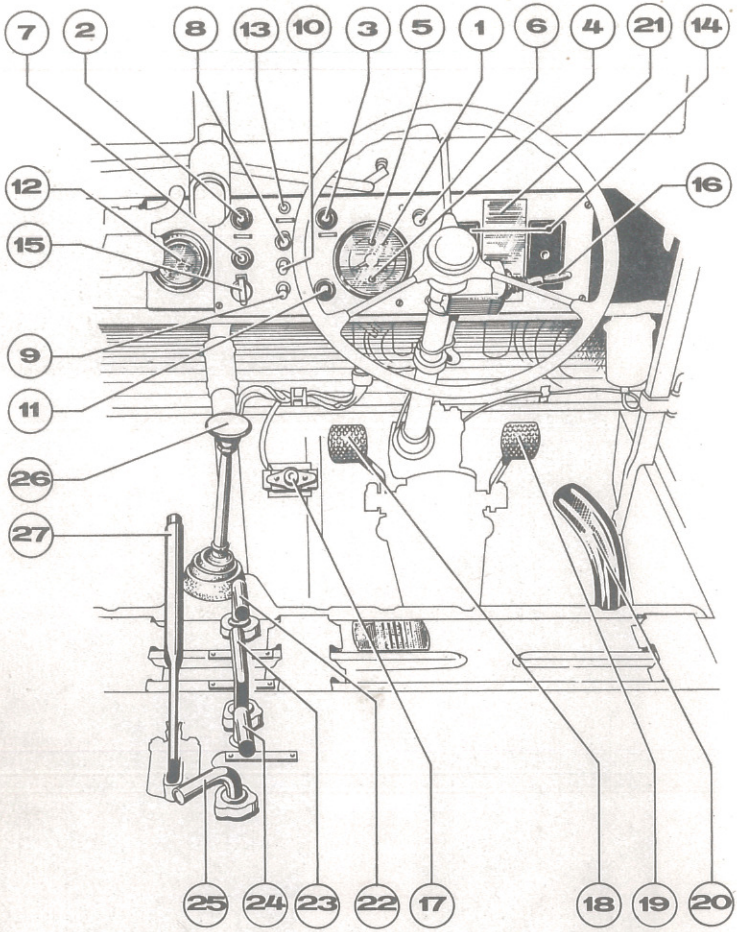


Fig. 5

1 speedometer
2 oil pressure warning light
3 charge control light
4 blinker control light
5 headlight control lamp
6 ignition switch
7 starter press button
8 light switch
9 wiper switch
10 blackout-light switch
11 blinker control light for trailer
12 hour meter
13 reserve control light
14 fuse boxes
15 plug socket
16 blinker switch with pass light
17 dimmer switch
18 clutch pedal
19 brake pedal
20 accelerator
21 gear changing plan
22 differential locks front
23 differential locks rear
24 front wheel drive
25 power take off
26 gear shift lever
27 hand brake lever

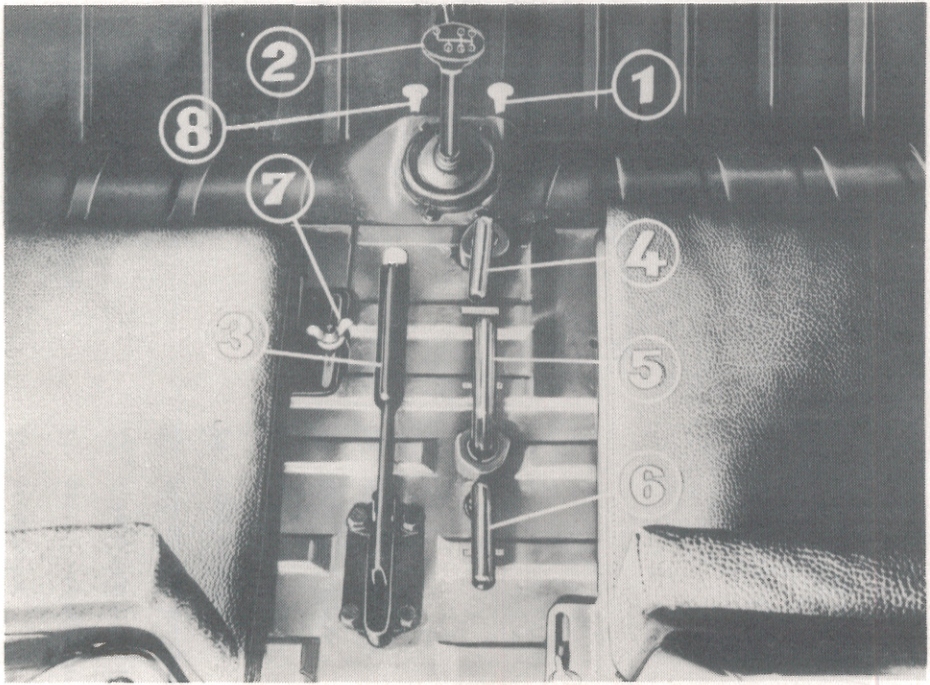


Fig. 6

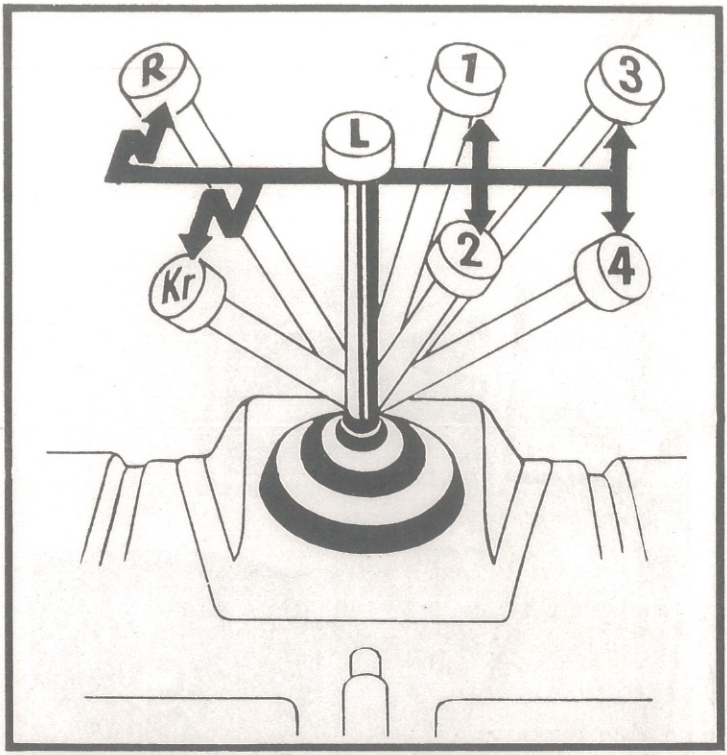


Fig. 7

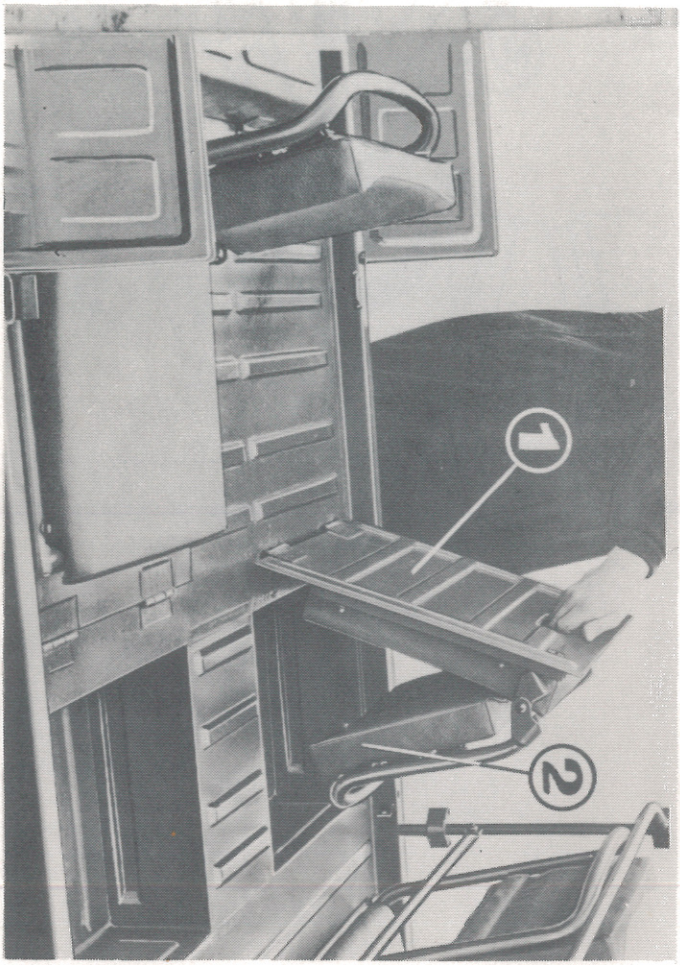


Fig. 11

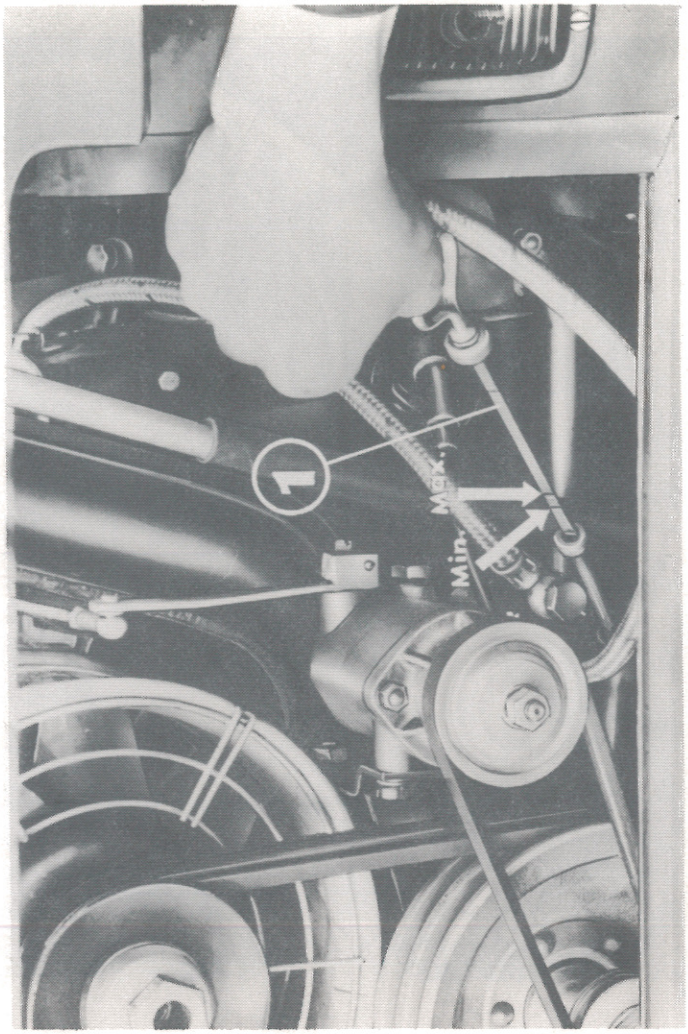


Fig. 14

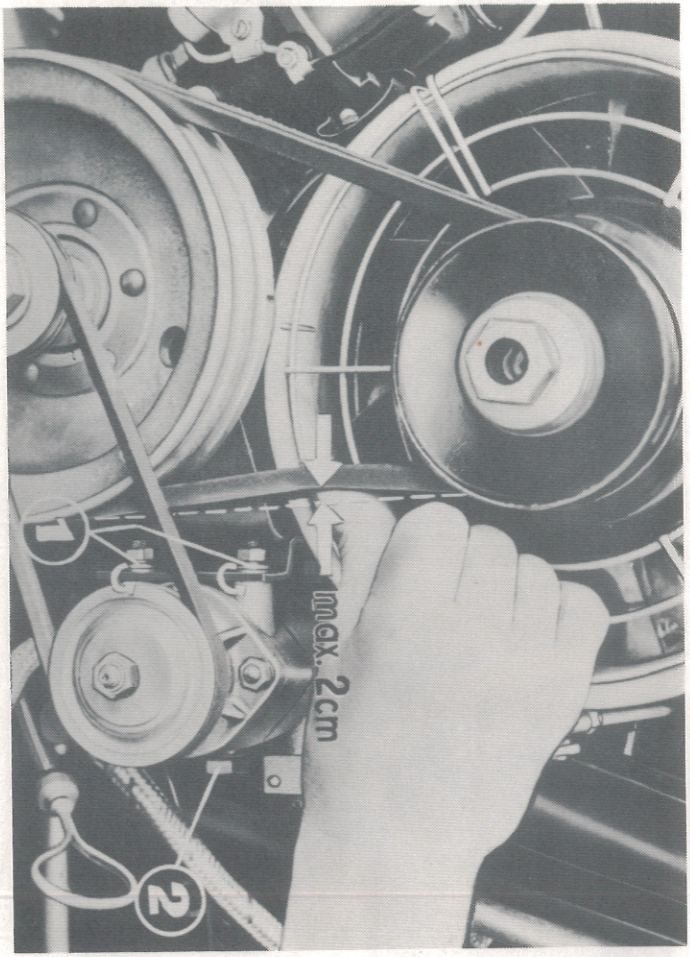


Fig. 15

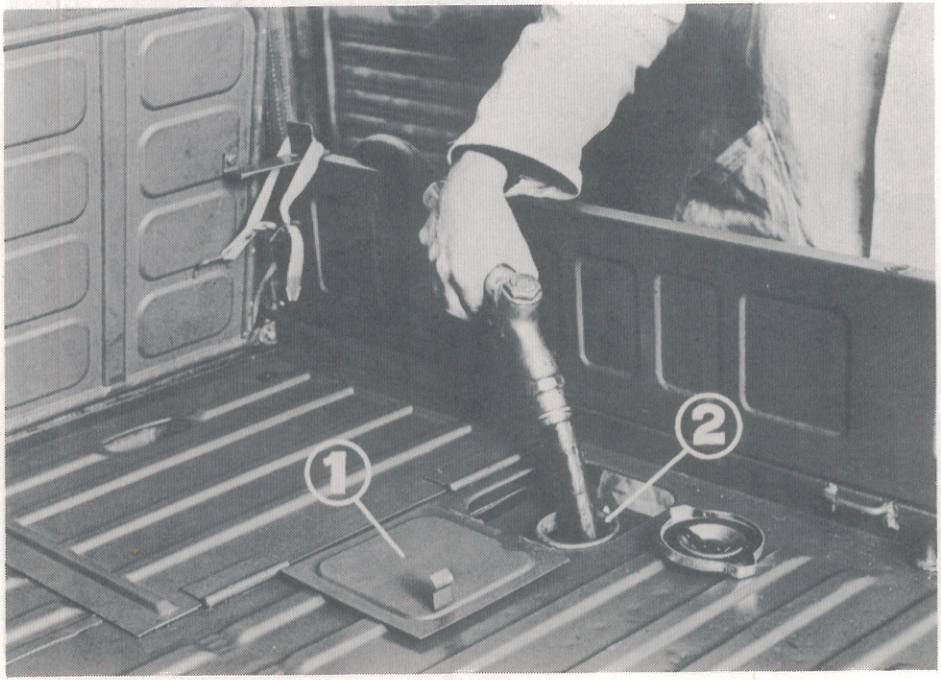


Fig. 16

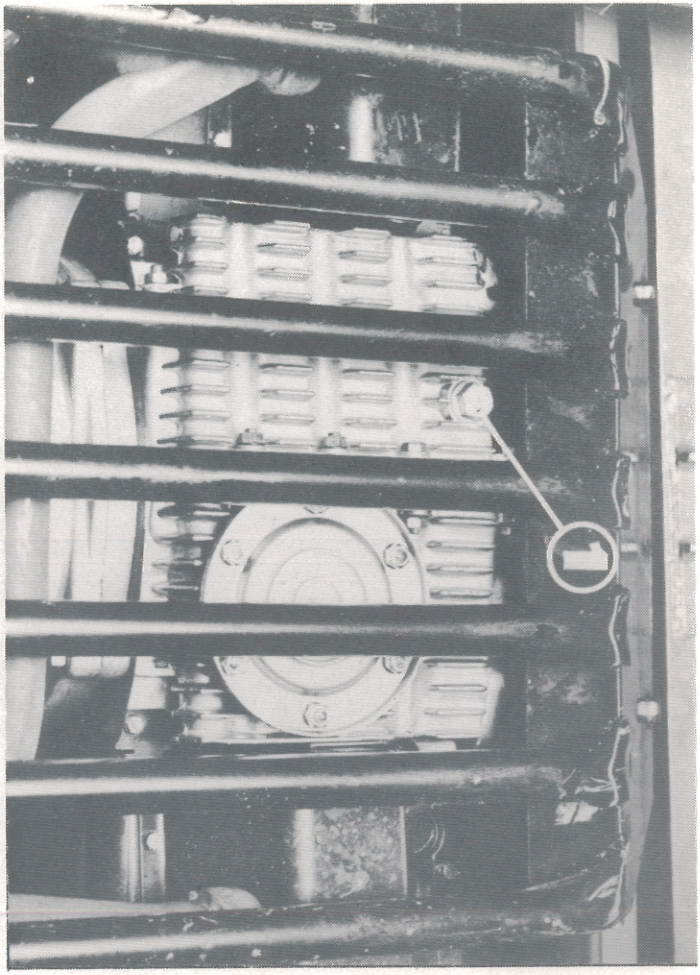


Fig. 17

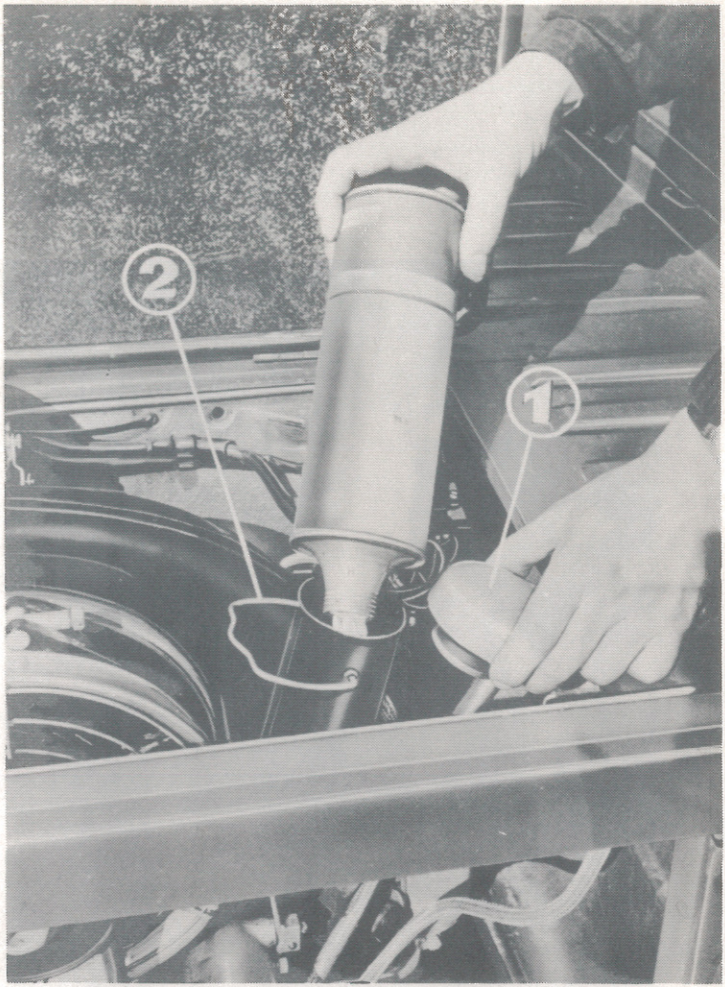


Fig. 18

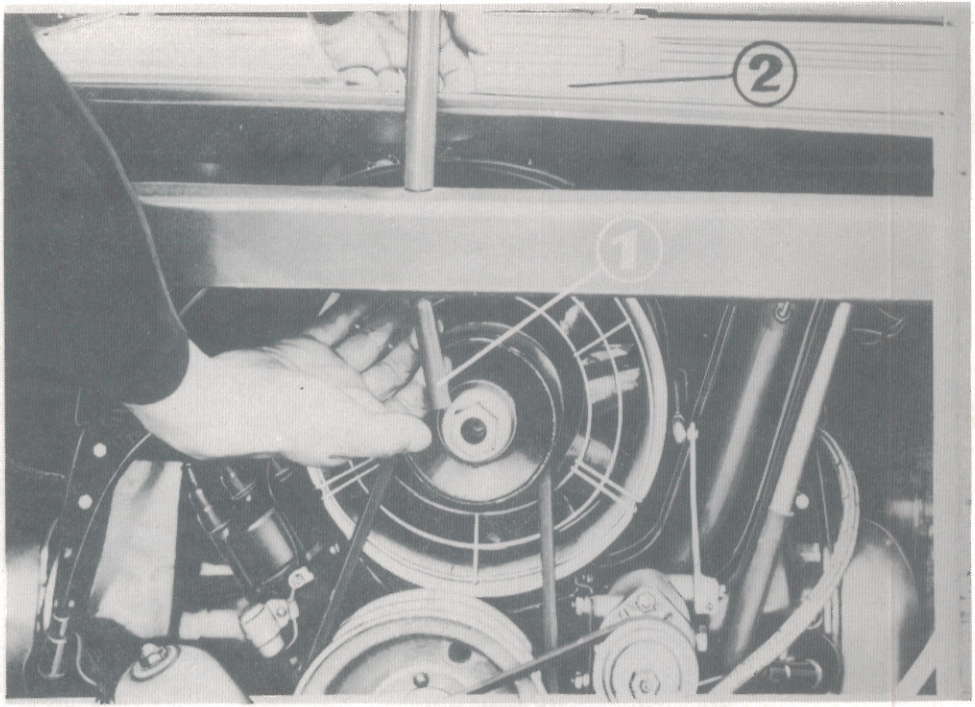


Fig. 23

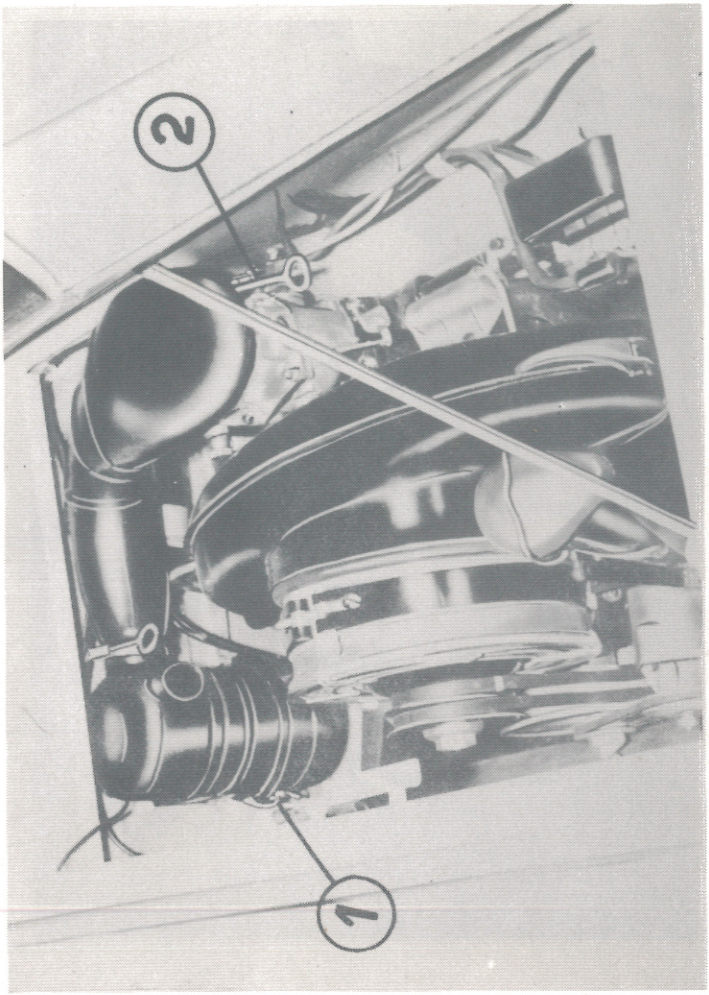


Fig. 24

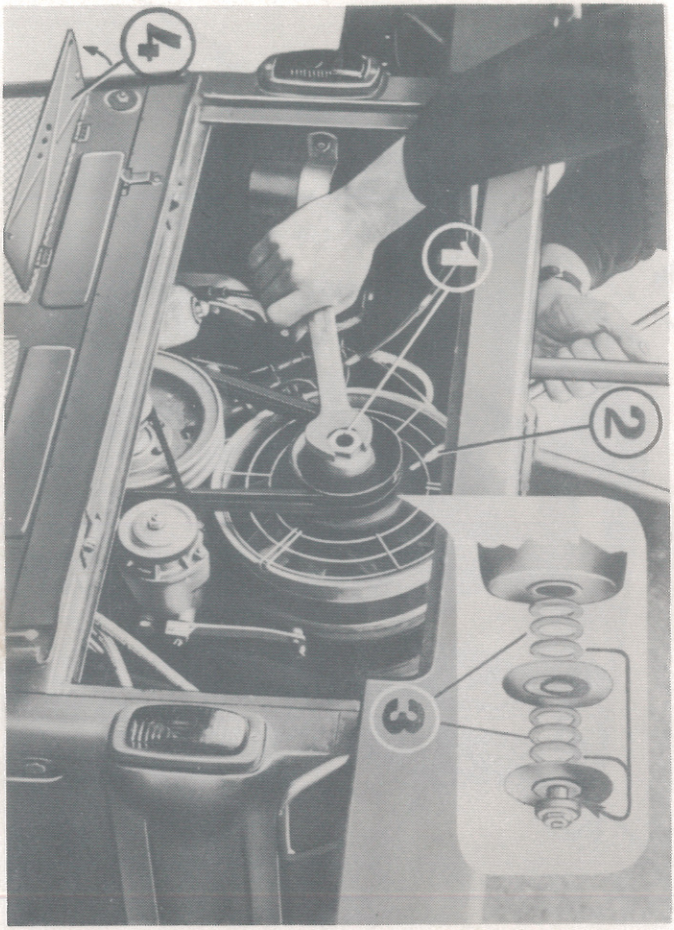


Fig. 25

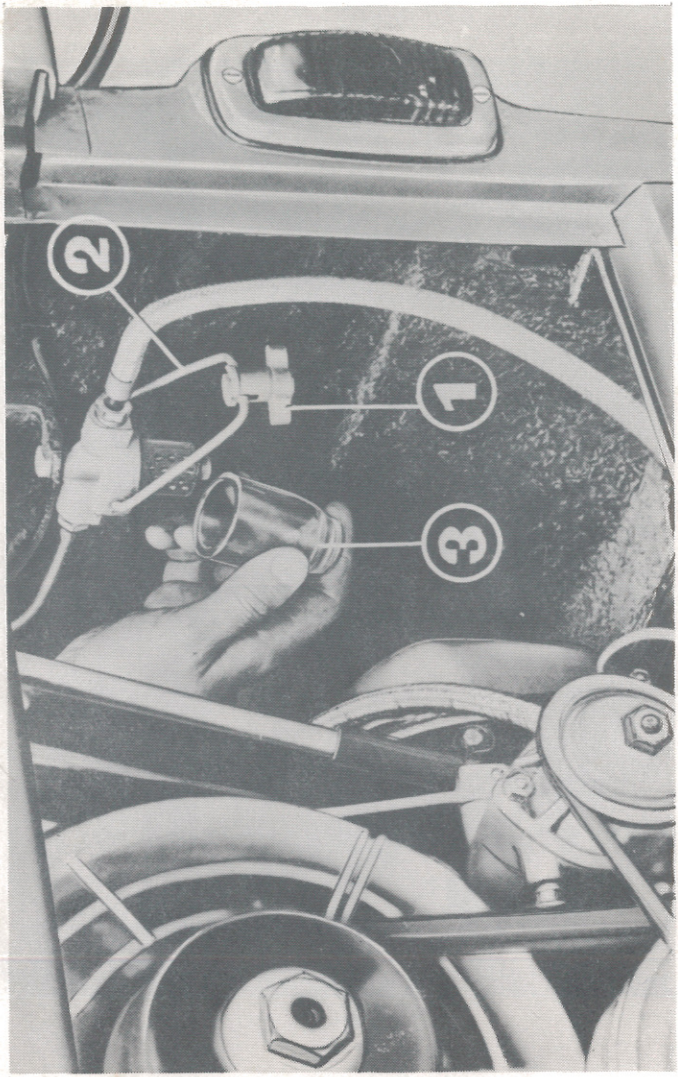


Fig. 27

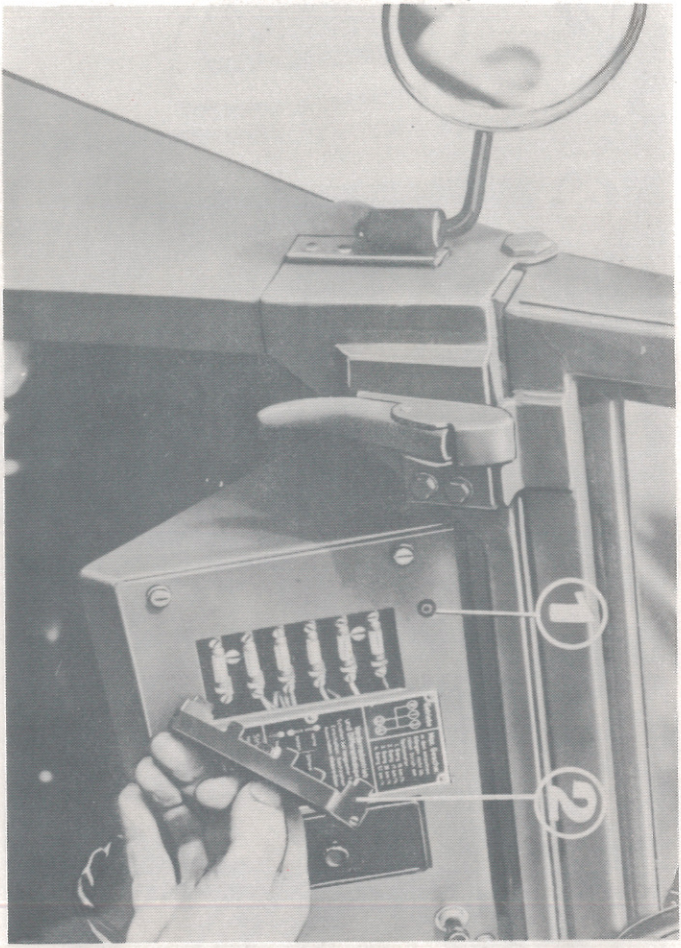


Fig. 31

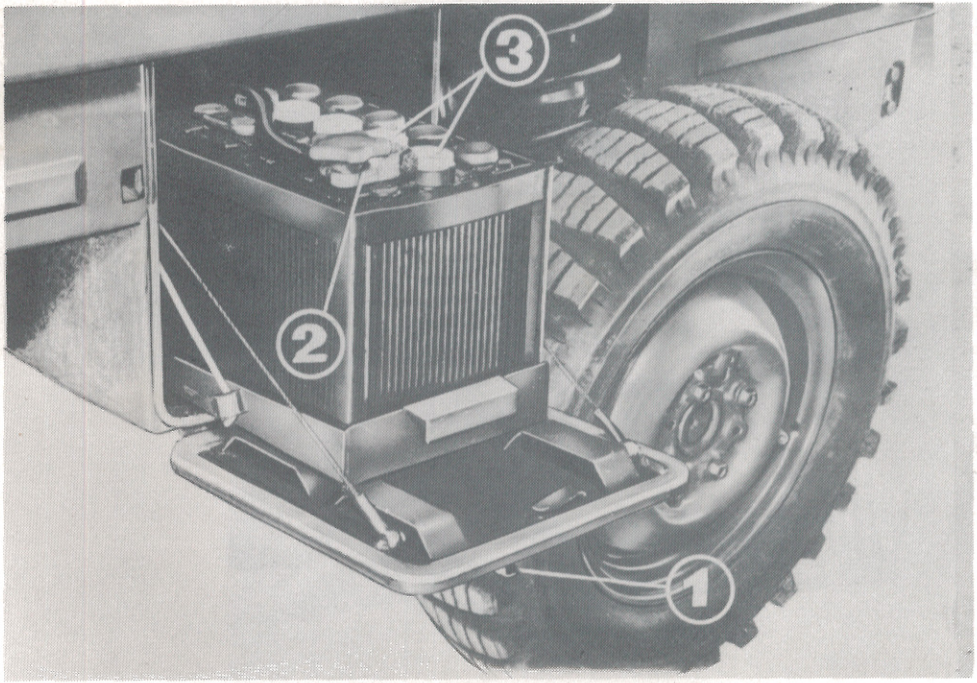


Fig. 34

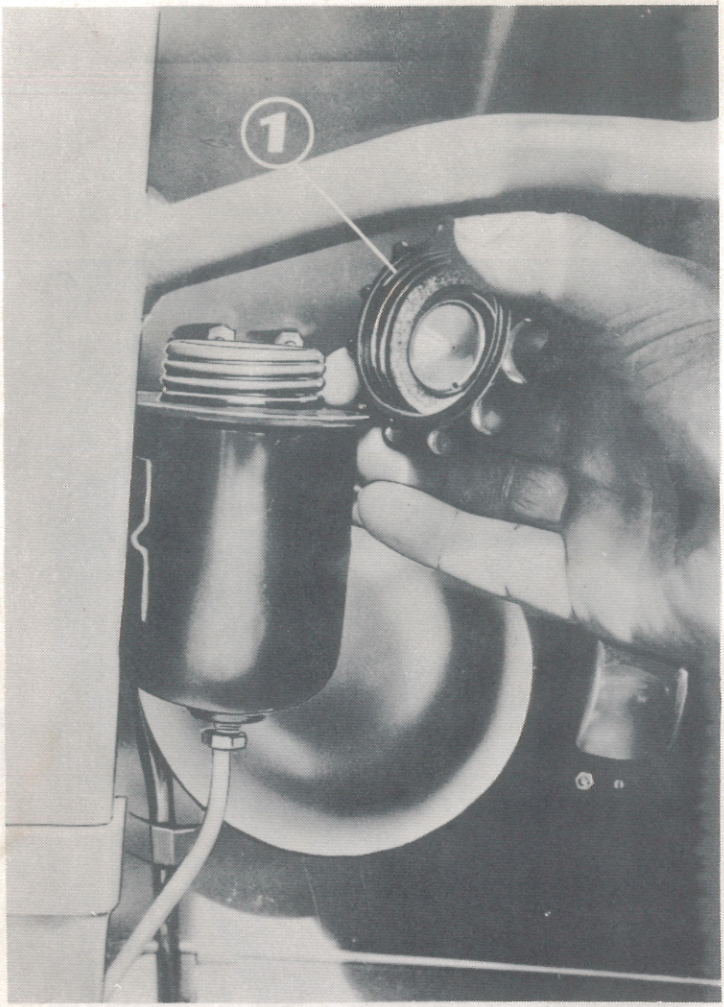


Fig. 36

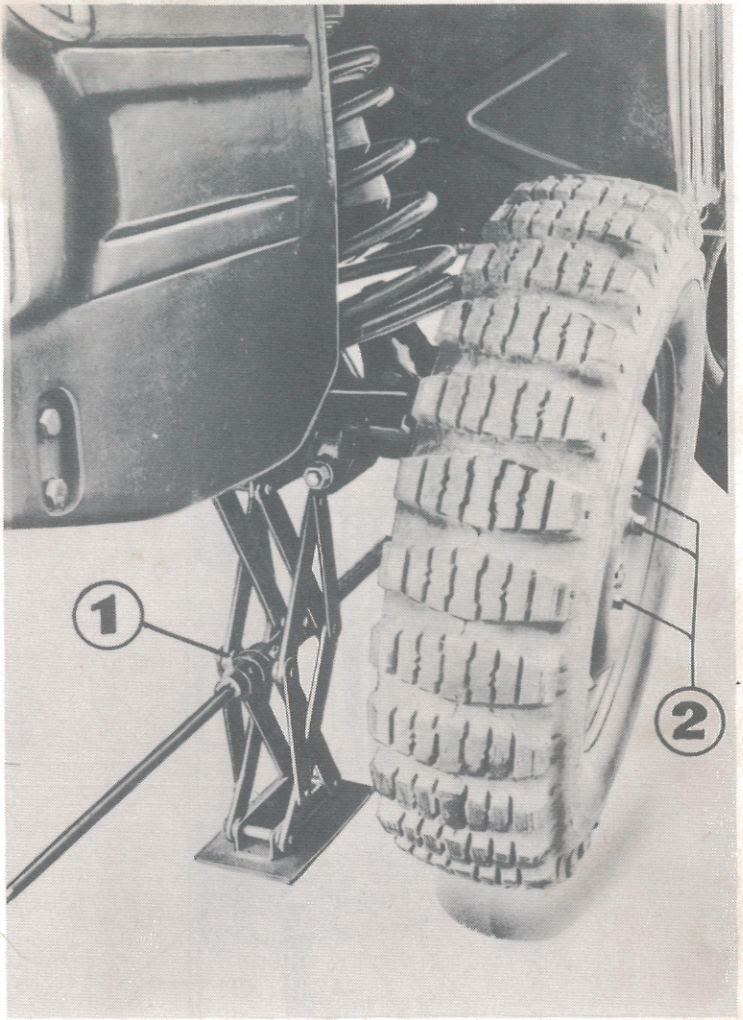


Fig. 39

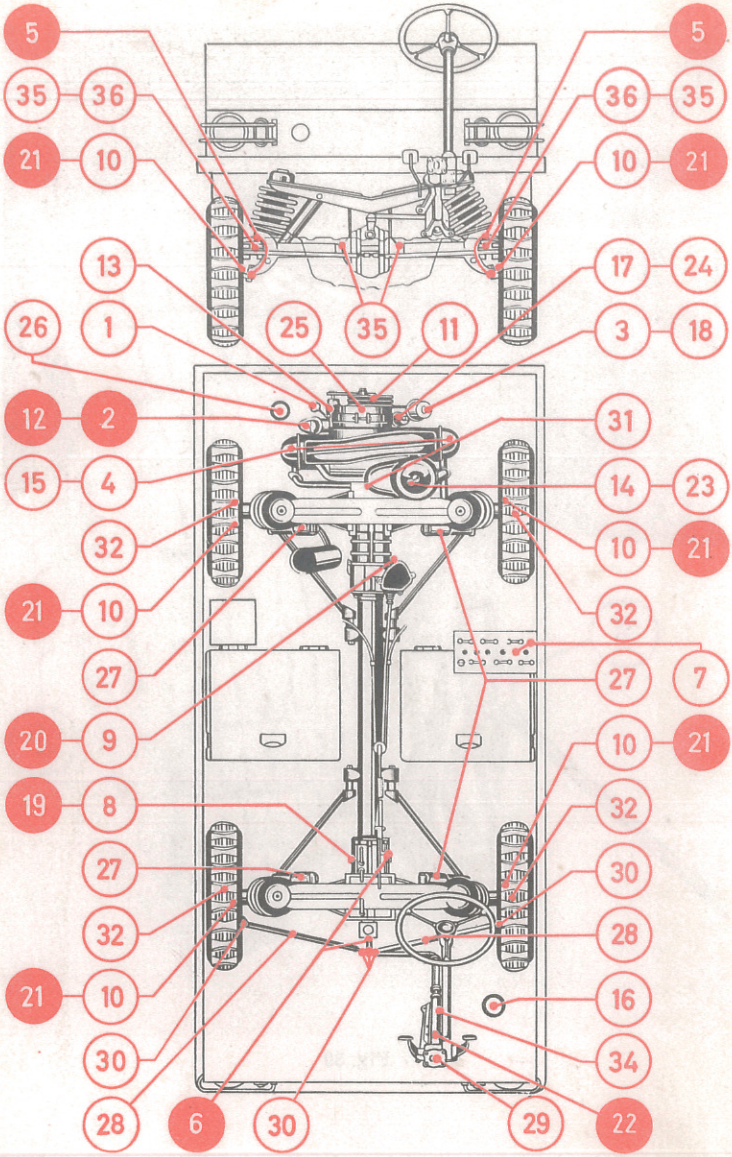

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Fig. 40

EXPLANATION OF SYMBOLS

		Lubricant
1	Engine oil level	OMD110
2	Engine oil top up	OMD110
3	Engine oil filter	OMD110
4	Engine valve clearance	
5	Stub axle RHS and LHS top and bottom	XG279
6	Steering drop arm and speedometer drive	XG279
7	Battery acid level	Distilled water
8	Front axle oil level	OEP220
9	Rear axle oil level	OEP220
10	Wheel drive housing oil level	OEP220
11	Vee belt tension	
12	Engine oil change	OMD110
13	Centrifugal governor oil level	OMD110
14	Air filter oil level	OMD110
15	Engine valve adjustment	
16	Brake fluid oil level	OX (Aust) 8
17	Ignition timing check	
18	Engine oil and filter change	OMD110
19	Front axle oil change	OEP220
20	Rear axle oil change	OEP220
21	Wheel drive housing change	OEP220
22	Steering box oil level	OEP220
23	Air cleaner oil change	OMD110
24	Distributor point clearance	
25	Dynastart brush check	
26	Fuel filter check	
27	Shock absorber check	
28	Steering geometry check	
29	Steering box adjustment check	
30	Steering linkage ball joint check	XG279
31	Carburettor check	
32	Brake adjustment	
33	Tyre pressure check	
34	Clutch adjustment check	
35	Plastic covers on half axles check tightness	
36	Front wheel drive joint check	Molybond grease GMF10
	Control cable check	XG279
	Control linkage check	XG279