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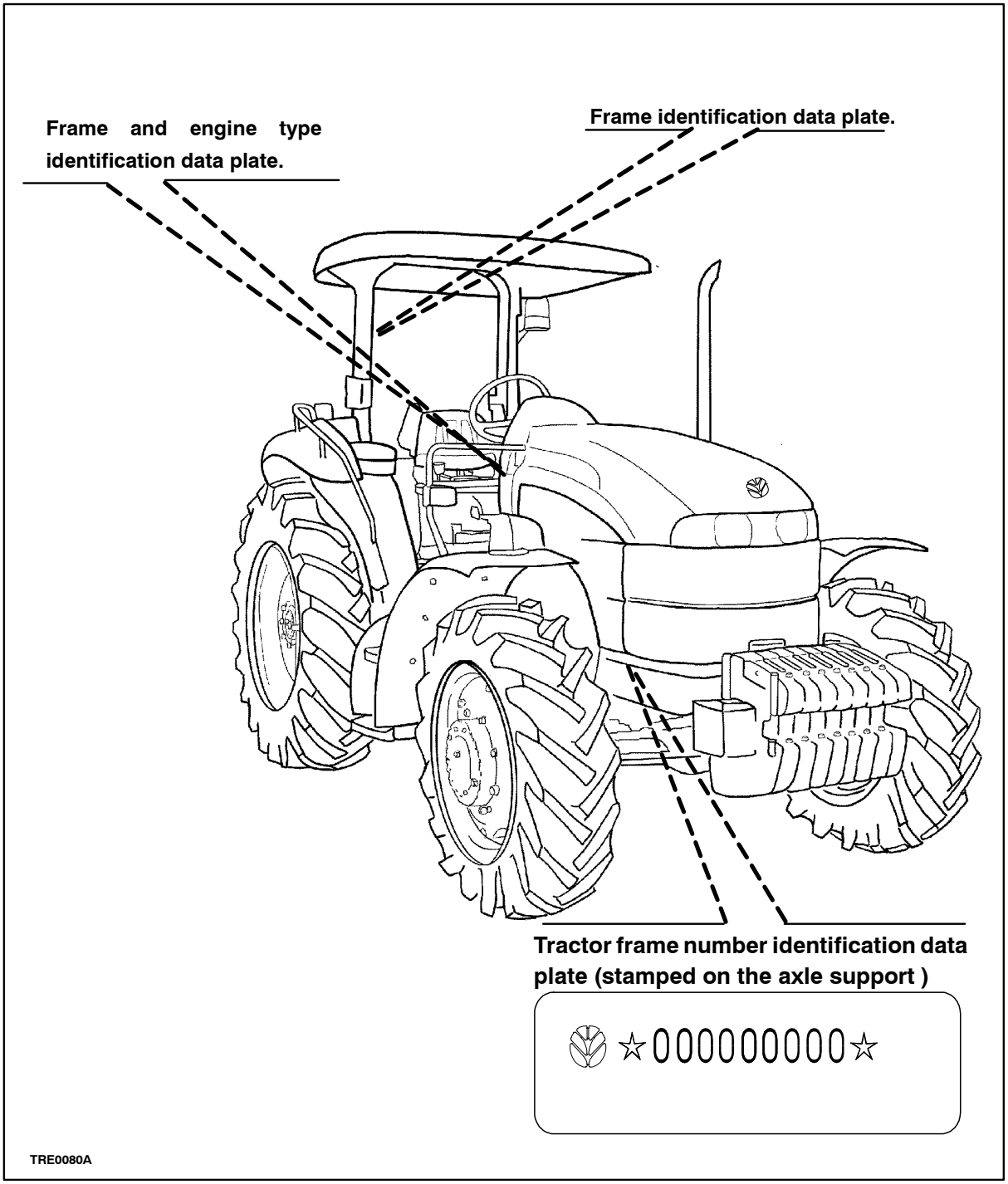
TRACTOR IDENTIFICATION

Serial numbers identify the tractor and its main components. The identification data must be supplied by the dealer for requests for spare parts or service operations. Identification data is of fundamental importance in the event of theft of the tractor. The location of the various identification data is shown below.



INTERNATIONAL SYMBOLS

As a guide to the operation of your tractor, various universal symbols have been utilised on the instruments, controls, switches, and fuse box. The symbols are shown below with an indication of their meaning.


Thermostart starting aid


Alternator charge


Fuel level


Automatic fuel shut-off


Engine speed (rev/min x 100)


Hours recorded


Engine oil pressure


Engine coolant temperature


Coolant level


Tractor lights


Headlamp main beam


Headlamp dipped beam


Work lamps

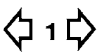

Stop lamps

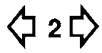

Horn


Radio

KAM Keep alive memory


Turn signals


Turn signals -one trailer


Turn signals -two trailers


Front wind-screen wash/wipe


Rear windscreen wash/wipe


Heater temperature control


Heater fan


Air conditioner


Air filter blocked


Parking brake


Brake fluid level


Trailer brake


Roof beacon


Warning! Corrosive substance


P.T.O.

N Transmission in neutral


Creeper gears


Slow or low setting


Fast or high setting


Ground speed


Differential lock


Rear axle oil temperature


Transmission oil pressure


FWD engaged


FWD disengaged


Warning!


Hazard warning lights


Variable control


Pressurised! Open carefully


Position Control


Draft Control


Accessory socket


Implement socket


% slippage


Hitch raise (rear)


Hitch lower (rear)


Hitch height limit (rear)


Hitch height limit (front)


Hitch dis-abled


Hydraulic and transmission filters


Remote valve extend


Remote valve retract


Remote valve float

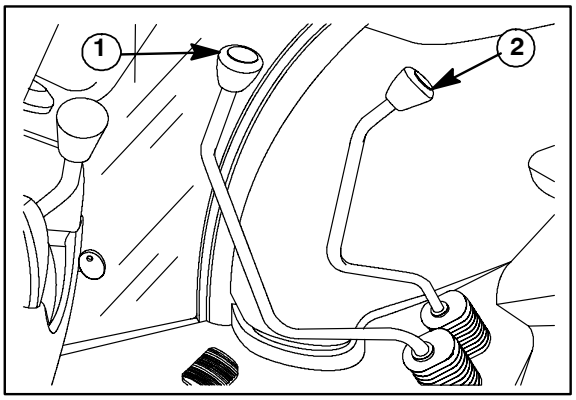

Malfunction! See Operator's Manual


Malfunction! (alternative symbol)

RIGHT-HAND SIDE OPERATING CONTROLS

Fig. 20

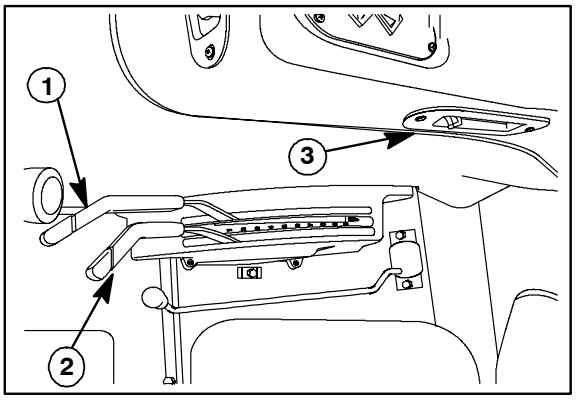
1. Main shift lever
2. Range lever



20

Fig. 21

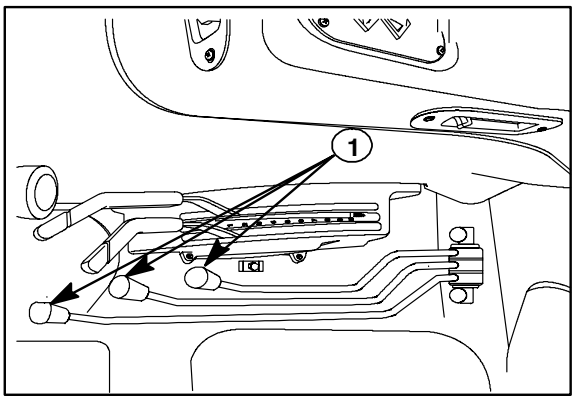
1. Hydraulic lift operating (position control) lever
2. Hydraulic lift operating (draft control) lever
3. Fast hydraulic lift up/down control (Lift-O-Matic™).



21

Fig. 22

1. Remote control valve levers

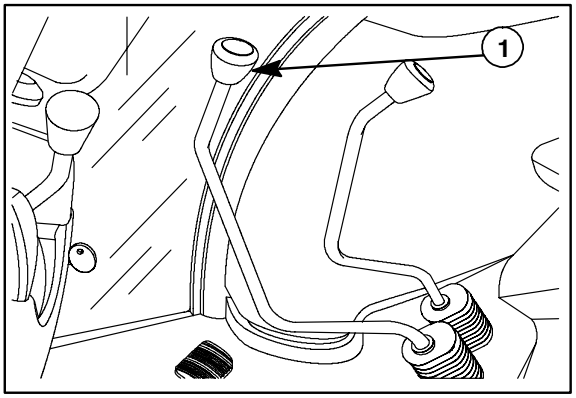


22

TRANSMISSION WITH RANGE GEAR AND SHUTTLE - 30 km/h (19 mp/h)
(12 FORWARD GEARS + 12 REVERSE GEARS - SYNCHRO SHUTTLE)

⚠ CAUTION ⚠

With the engine running and with just one gear lever in neutral, the tractor could be started accidentally if the lever is knocked, with consequent accident risk. To prevent this happening, move both levers (fig. 65) to neutral, lower any attached equipment and stop the engine before leaving the tractor.



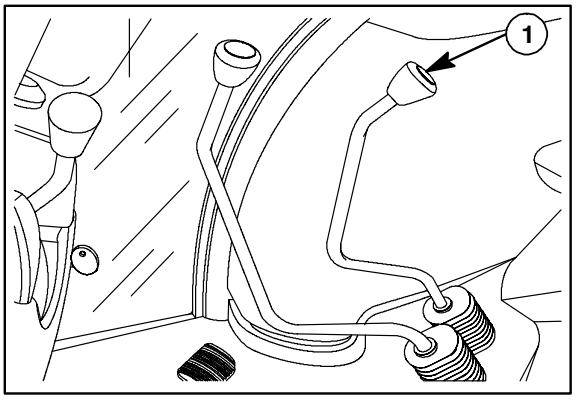
65

The transmission, range gear and shuttle are independently controlled by three levers.

The main shift lever (1) fig. 65 selects four speed ratios (**1**, **2**, **3, 4**).

The range lever (1) fig. 66 provides three forward ranges:

- I = low
- II = medium
- III = high



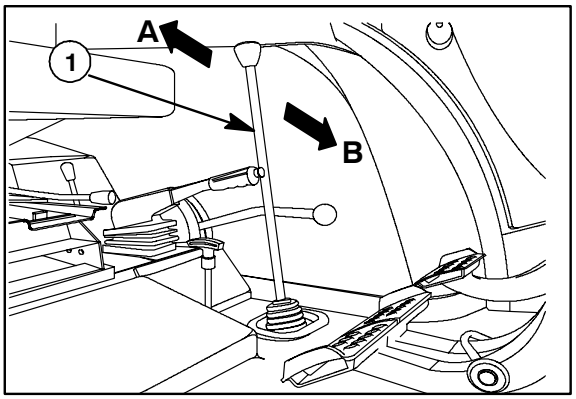
66

There are **twelve** forward and **twelve** reverse gears.

To change from a medium gear to a lower or higher one, stop the tractor, move the range lever to the right and shift it forward for lower gears or backward for higher gears.

To change from one speed to another in the same range (including reverse), shift the main shift lever after disengaging the clutch (the tractor does not have to be halted as the gears are Synchro-engaged).

To reverse the direction of travel, slow the tractor almost to a halt, move the shuttle lever (1) fig. 67 rearward, to position (**A**) to obtain reverse gears or forward (**B**) to disengage the shuttle and obtain forward gears. (The tractor does not have to be halted as the gears are Synchro-engaged).



67

SECTION 3

FIELD OPERATION

BEFORE USING THE TRACTOR

Read this section of the Operator's Manual carefully before using the tractor. This is particularly important if the tractor is to be used correctly as it contains all the information required on the layout and use of the tractor controls.

Even if you already have experience in using other makes of tractor, this section of the Manual especially must be studied carefully and thoroughly.

After reading this section in full, ensure that you are fully familiar with the layout and use of the controls. Ensure too that you know the specifications of the tractors in question.

Never start the engine and tractor if you have not already familiarised yourself with all the controls.

Finding out once the tractor is moving may be too late.

If you have any doubts about any functional aspect of the tractor, contact your dealer.

Particular attention needs to be paid to the tractor's running-in period, to obtain the best operating reliability and service life for which it is designed and built.

With regard to the reliability and service life of your tractor, study section 4 carefully.

Section 4 contains details of all the lubrication and general maintenance operations to be carried out on the tractor.

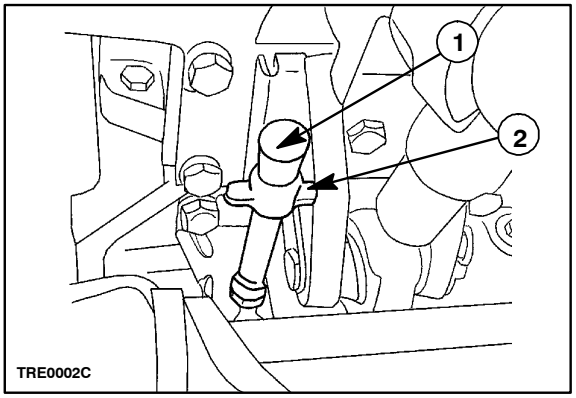
Tractor data and specifications are noted in Section 8.

POWER TAKE-OFF SPEED SELECTION

To select power take-off speeds, proceed as described below:

- lift the spring-loaded collar (2) fig. 12 upward;

- position the lever (1) fig. 12 to the required speed, as indicated by the decal at the base of the lever. Release the spring-loaded collar.



12

2-SPEED POWER TAKE-OFF (OPTIONAL)

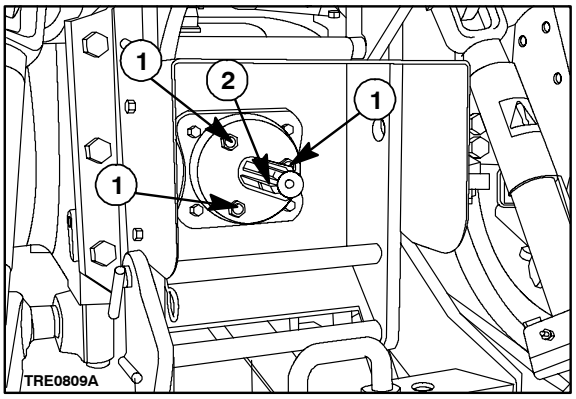
For 540/1000 rev/min versions an interchangeable PTO shaft is supplied.

The speed can be selected simply by replacing splined output shaft (2) fig. 13.

To replace splined output shaft fig. 13 remove the bolts (1) and fit the $1^{3}/_{8}$ in. diameter six-splined shaft for a speed of 540 rev/min, or the $1^{3}/_{8}$ in. diameter 21-splined shaft for a speed of 1000 rev/min.

⚠ CAUTION ⚠

Use the power take-off at 1000 rev/min only after fitting the appropriate $1^{3}/_{8}$ in. 21-splined output shaft from the accessories kit.

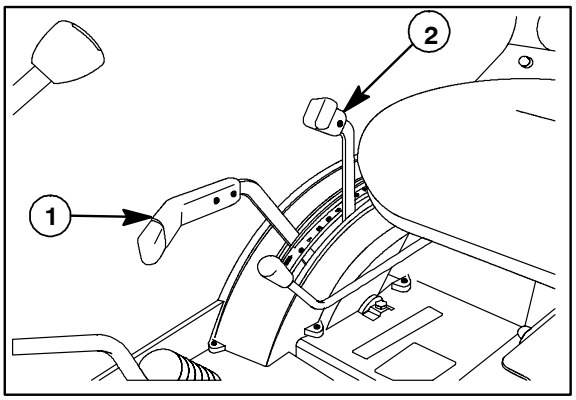


13

DRAFT CONTROL

- Move position control lever (1) fig. 20 fully forward.

- Set the desired implement depth in the ground by gradually moving the draft control lever (2) fig. 20 forward. Forward movement of the lever will increase implement depth and rearward movement will reduce the depth. Changes in draft loading are sensed through the lower link arms. The hydraulic system responds by raising or lowering the implement to restore the original draft setting.

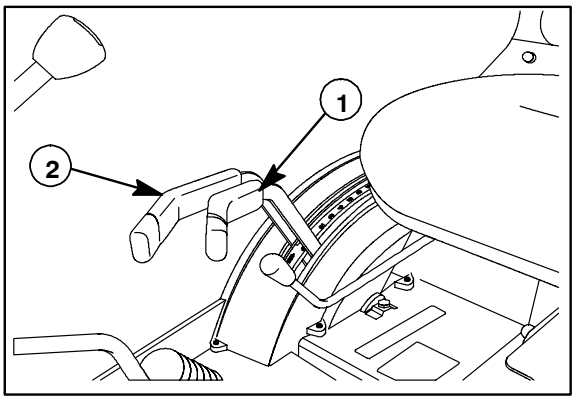


20

FLOAT OPERATION

- To operate the lift in float mode, i.e. to enable the link arms to float freely, move both levers (1) and (2) fig. 21 fully forward.

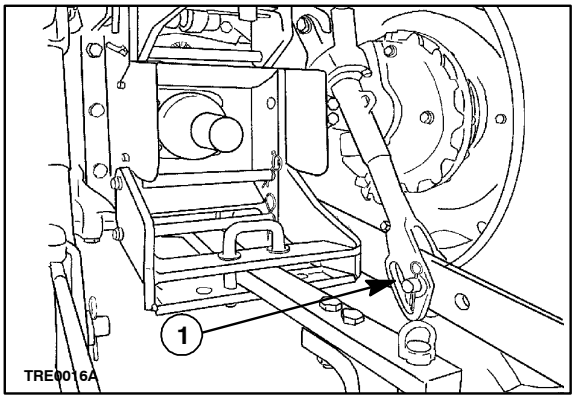
- Always use the Lift-O-Matic™ controls (1) and (2) fig. 15 to raise and lower implements at the headland.



21

⚠ WARNING ⚠

When working in float mode, with an implement connected to the power take-off and using the lift, to avoid damaging the universal joint:
The lift rods must be connected to the lower arms by inserting the pins in the slots (1) fig. 22, thereby allowing free movement of the implement.



22

REMOTE CONTROL VALVES

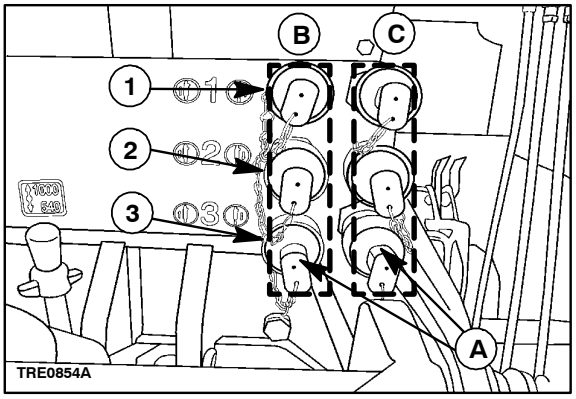
QUICK-FIT COUPLERS - Fig. 40

One, two or three control valves (which use the same oil circuit as the hydraulic lift), can be fitted to your tractor for remote control of single-acting and double-acting cylinders.

Each valve has two slide lock type female $^1/_2$ in. couplers which can be connected with pressurised male couplers. You can thus connect the control cylinder lines with two hands.

⚠ WARNING ⚠

The couplers have no breakaway capability with the hoses in them.



40

Valves and their colours are shown at Figures: 40 and 43.

Valve no:	Colour
1.	Green
2.	Blue
3.	Brown

Remote outlets shown in Fig. 40 on left side (line B) is used to retract the cylinder, on right side (line A) is used to extend the cylinder.

Before fitting and releasing the hoses, first slide the collar of female couplers, but only after first:

- switching off the engine;
- lowering any implements connected to the lift;
- thoroughly cleaning the two parts to be connected.

⚠ WARNING ⚠

When not using the female couplers, protect them with plastic caps (A) fig. 40.

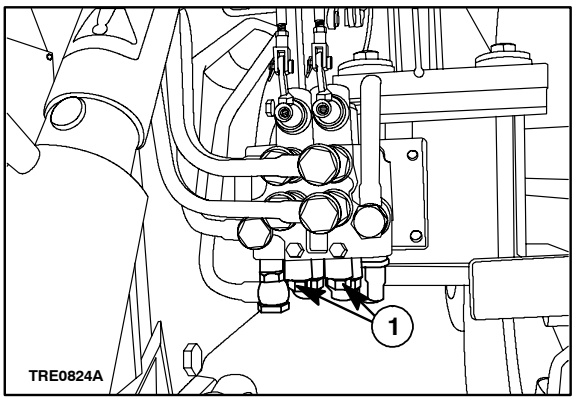
SINGLE-ACTING/DOUBLE-ACTING SWITCHING - Fig. 41

To switch the control valves to:

- **Single-acting**, slacken screw (1) fig. 41 near to the valve control lever pivot until it stops.
- **Double-acting**, fully tighten (1) fig. 41.

When using single acting, in order to accelerate the identification of the coupler to which the implement is to be connected, actuate the valve lever and observe the two lines to which the couplers are connected: the line carrying the oil should move.

For greater safety, check that the line to which the implement connected using single acting is on the valve body that connected furthest from the change over screw.



41

TYRE PRESSURES FOR FOUR-WHEEL DRIVE MODELS

NOTE - pressures are expressed in bar (Psi)

TD 90D MODEL

Tyre combinations		Tyre pressures 30/40 km/h (19/25 mph)	
Front	Rear	GOOD YEAR	
		Front	Rear
360/70R24	18.4R-30	1.4 (20.3)	1.2 (17.4)
12.4R-24	13.6R-38	1.4 (20.3)	1.4 (20.3)
12.4R-24	18.4R-30	1.4 (20.3)	1.4 (20.3)
13.6R-24	16.9R-34	1.5 (21.8)	1.5 (21.8)
360/70R24	480/70R34	1.2 (17.4)	1.4 (20.3)

TD 95D MODEL

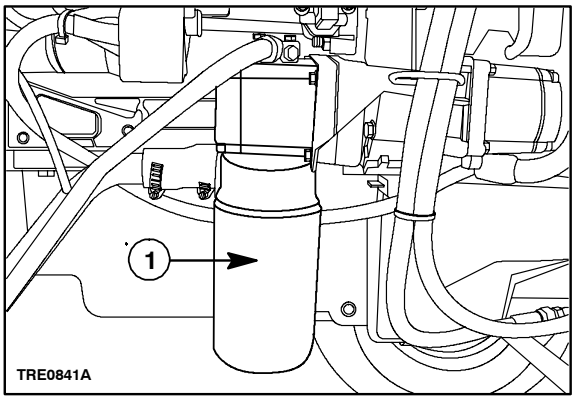
Tyre combinations		Tyre pressures 30/40 km/h (19/25 mph)	
Front	Rear	GOOD YEAR	
		Front	Rear
12.4R-24	18.4R-30	1.4 (20.3)	1.4 (20.3)
360/70R24	18.4R-30	1.4 (20.3)	1.4 (20.3)
12.4R-24	13.6R-38	1.2 (17.4)	1.6 (23.2)
360/70R24	480/70R34	1.2 (17.4)	1.4 (20.3)
14.9R-24	18.4R-34	1.4 (20.3)	1.4 (20.3)
13.6R-24	16.9R-34	1.5 (21.8)	1.5 (21.8)

Hours of work	Operation number	Maintenance operations	Functional check	Top up	Clean	Grease	Adjust	Replace	Page
Every 300 hours	27	Engine oil						●	4-19
	28	Fuel filter						●	4-19
	29	Fuel pump filter			●				4-19
	30	Oil filter, hydraulic lift						●	4-20
	31	Engine oil filter						●	4-20
	32	Oil filter, hydrostatic steering (separate tank)						●	4-20
	33	Final reduction gears		●					4-21
	34	Dry air filter (external cartridge)			●				4-21
	35	Rear transmission and hydraulic lift	●	●					4-21
	36	Front axle housing 4WD	●	●					4-22
	37	Handbrake	●				●		4-22
	38	Front axle reduction hubs 4WD	●	●					4-23
	39	Front wheels 2WD				●			4-23
	40	Front axle swivel bearings 4WD				●			4-23
	41	Oil bath air cleaner						●	4-24
Every 600 hours	42	Fuel sedimenter						●	4-24
Every 900 hours	43	Engine valves	●				●		4-24
Every 1200 hours or annually	44	Cab air filter						●	4-25
	45	Dry air filter (cartridges: internal and external)						●	4-25
	46	Fuel tank			●				4-25
	47	Hydrostatic steering oil (independent tank)						●	4-26
	48	Drive shaft sleeve for 4WD front axle connection	●					●	4-26
Every 1200 hours or every 2 years	49	Injectors	●				●		4-27
	50	Front axle housing oil, 4WD						●	4-27
	51	Front axle final drive hubs oil, 4WD						●	4-27
	52	Engine cooling system			●			●	4-28
	53	Transmission and hydraulic oil						●	4-30
	54	Final reduction oil						●	4-30
General maintenance	Bleeding the fuel system								4-31
	Bleeding the hydraulic brake system								4-31
	Electrical system								4-33
	Bodywork maintenance								4-40
	Lubrication capacities and specifications								4-41

OPERATION 30

HYDRAULIC LIFT OIL FILTER - Fig. 38

Unscrew and remove the filter (1). Oil the rubber seal then screw on and tighten the cartridge $^3/_4$ of a turn by hand. Top up the oil with fresh oil. (see operation. no.35 page 4-21).

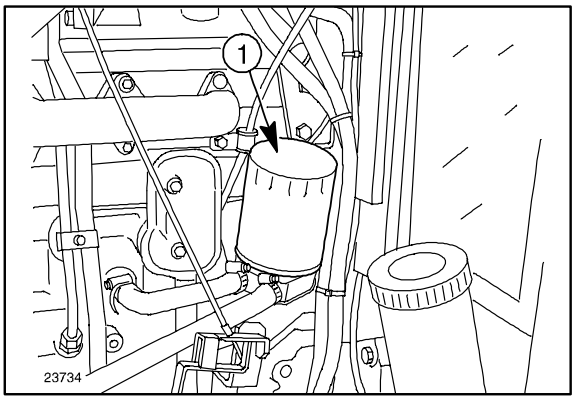


38

OPERATION 31

ENGINE OIL FILTER - Fig. 39

Unscrew and remove the filter (1). Oil the rubber seal then screw on and tighten the cartridge $^3/_4$ of a turn by hand. Top up the oil with fresh oil. (see operation no. 9 fig. 12 and 13).



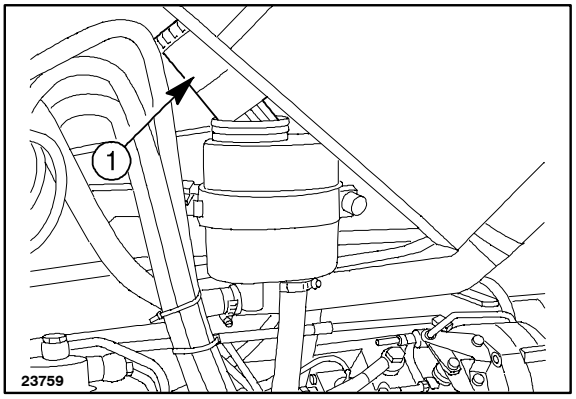
39

OPERATION 32

HYDROSTATIC STEERING - Fig. 40

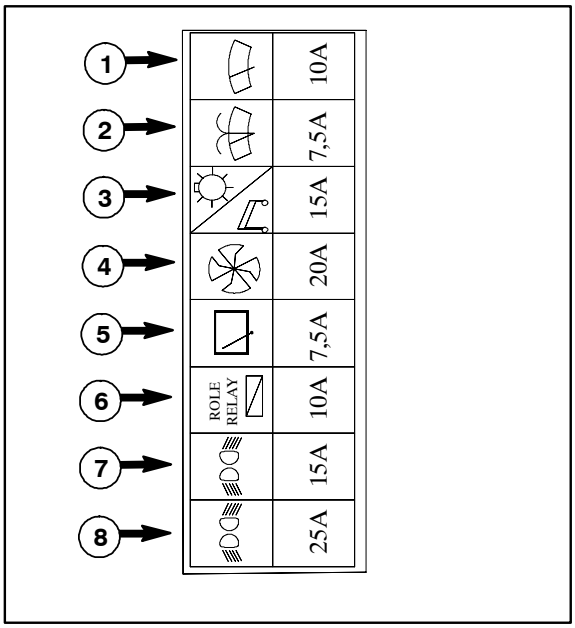
Remove the filter (1) (press downwards and move sideways) and wash the filter, together with the filler cap in mineral oil.

NOTE: *For oil grades, see the lubrication charts beginning on pages 4-41.*



40

FUSES AND RELAY BOX (INSIDE CAB)
FIG- 79 - 80

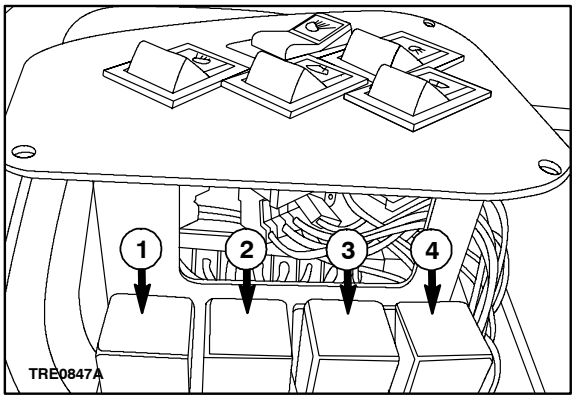


79

Fuses and protected circuits are listed below:

Fuses	PROTECTED CIRCUITS	Amps
1.	Front wiper	10
2.	Washer	7.5
3.	Beacon lamp, interior lamps, radio	15
4.	Heater/Air Conditioning	20
5.	Rear wiper	7.5
6.	Working lamps switches	10
7.	Front working lamps	15
8.	Rear working lamps	25

Relays and related circuits are listed below:



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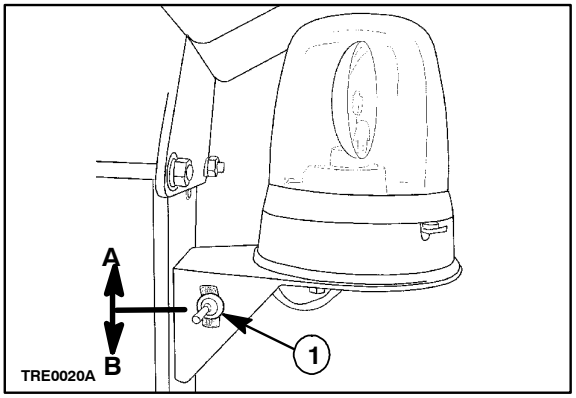
Relays	CIRCUITS
1.	Front work lights
2.	Rear work lights
3.	Power supply
4.	Power supply

BEACON LAMP (WITHOUT CAB)- Fig. 1

1. Beacon lamp ON/OFF button.

Position A: ON

Position B: OFF



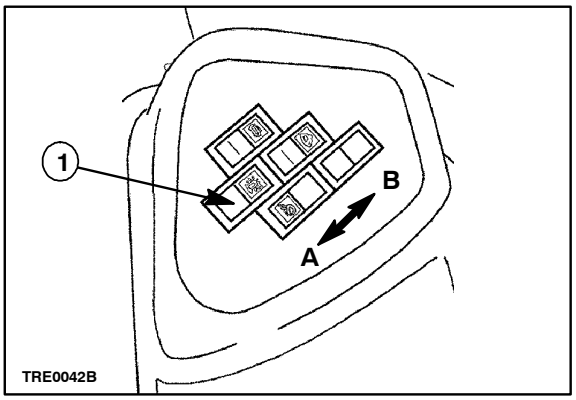
1

BEACON LAMP (WITH CAB)- Fig. 2

1. Beacon lamp ON/OFF button.

Position A: ON

Position B: OFF



2