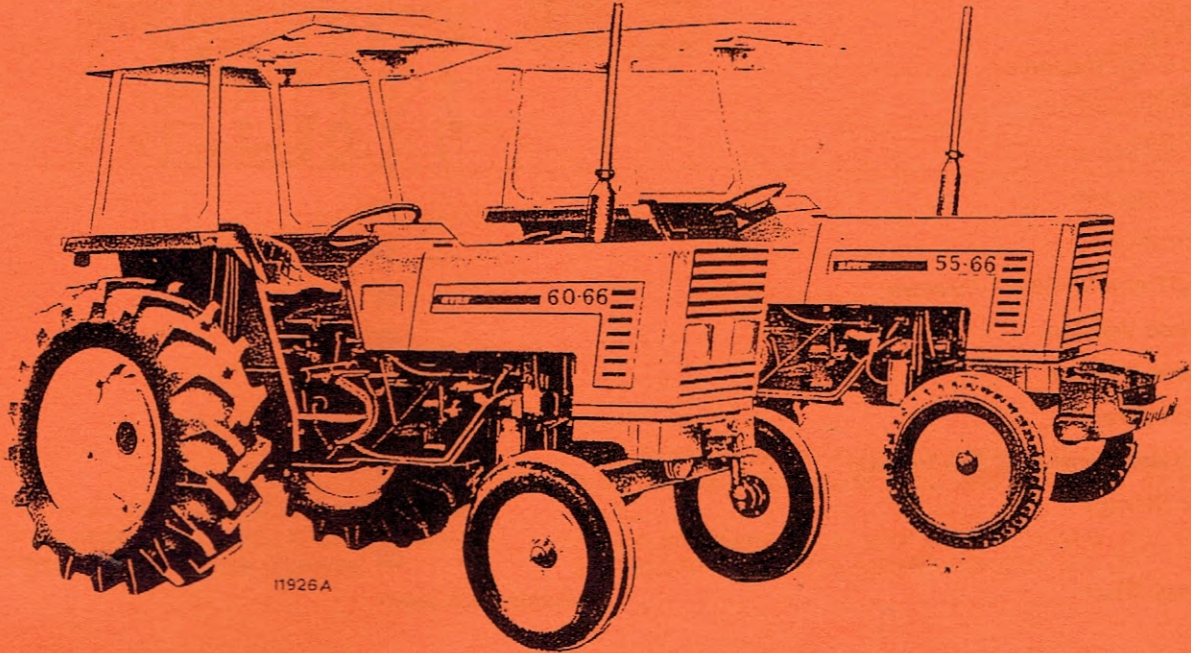


**FIAT**  
Trattori

11798  
**55-66**

**60-66**

**OPERATION - MAINTENANCE - SPECIFICATION**





# QUICK REFERENCE INDEX

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2

## Spares and after-sales servicing always close at hand

When you buy a Fiatagri agricultural machine, you also get something that does not catch the eye, but may well prove its worth in the future, namely the company's large and efficient after-sales and spares organisation.

At the San Matteo (Modena) spares centre, a highly modern installation with 21,600 square metres under roof and equipped with electronic

handling and retrieval systems holds a total of 21 million spare parts of more than 60,000 different kinds.

The Centre can handle up to 3000 request per day. Added to Fiatagri's efficient

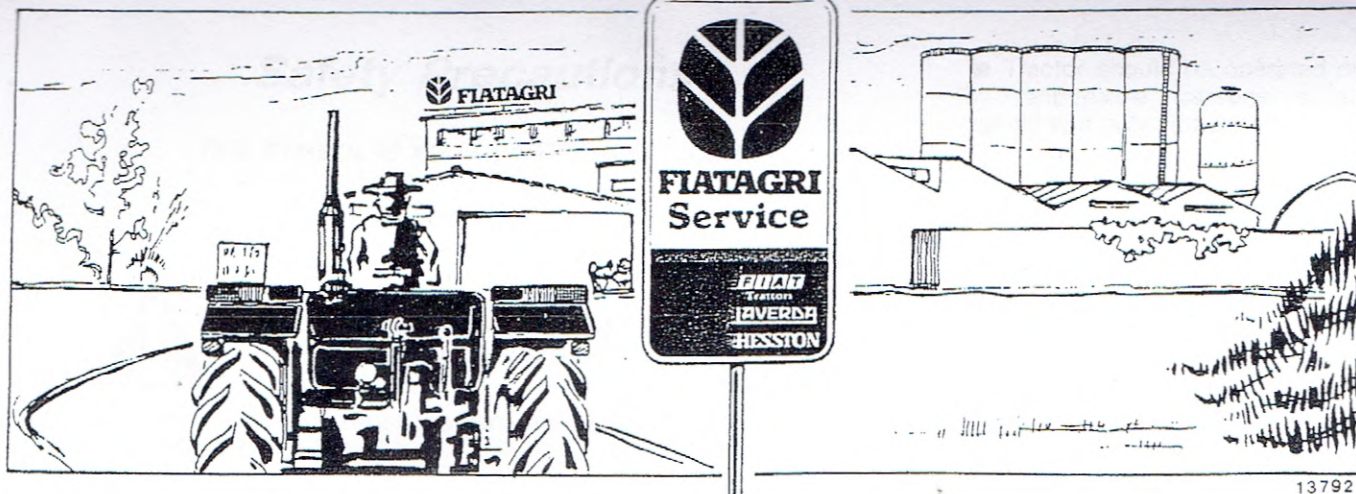
organisation and rapid service is the superior quality of its original spare parts — the quality that ensures that a Fiatagri agricultural machine never loses its value as time goes by.



13352

 **FIATAGRI**





## Service

An extended network of **FIATAGRI Authorized Shops**, equipped with all necessary means to perform any repair and overhaul work, is at your disposal.

Turn to these shops in full confidence. You will benefit from the assistance and know-how of skilled service-men.

FIAT's experience is at your service to help you solve any problem related to tractor operation and use.

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## Spare Parts

Use genuine FIAT parts only.

Failure to do this will:

- Cost you more.
- Not result in complete satisfaction.
- Seriously risk improper functioning of the tractor.

Original spares are sold by the FIAT Sales and Service Organization.

In all orders be sure to quote (see page 7):

- Tractor Model and Frame Number.
- Engine Type and Number.
- The Part No. of the spare needed (listed in the Spare Parts Catalogue).

## Maintenance

The 55-66 and 60-66 tractors were designed with the owner in mind and an effort has been made to simplify maintenance.

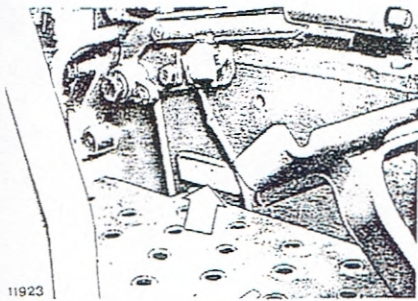
The purpose of this handbook is to familiarize the operator with the operation and regular servicing of the tractor.

Remember that the time spent on maintenance extends the life of your tractor.

Pay particular attention to the instructions covering fuel filtering, air cleaner maintenance and lubrication: remember that badly filtered fuel results in injection system deterioration and irregular air cleaner maintenance leads to premature engine wear, and reckon that a tractor oil change every 200 hours is equivalent to a truck oil change every 8,000 to 9,000 km.

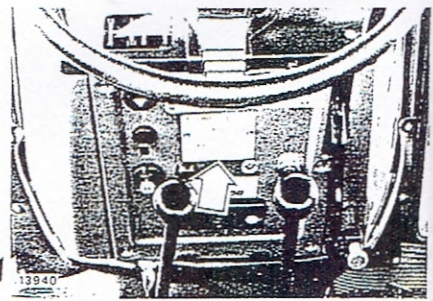


## Identification Data



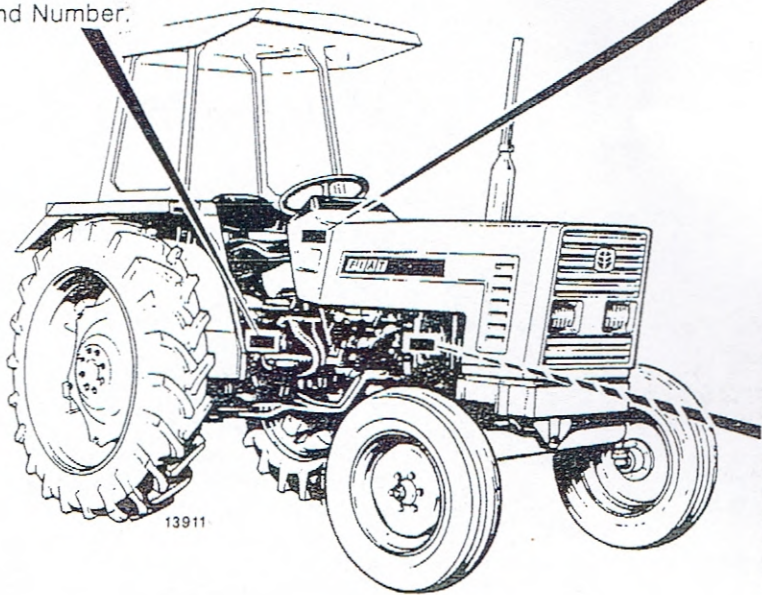
11923

Frame Type and Number.



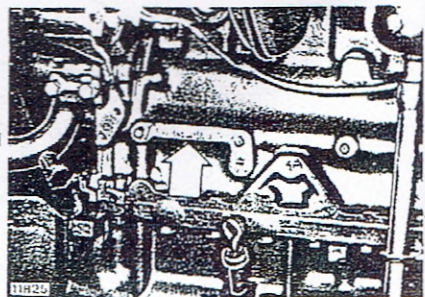
13940

Tractor Data Plate.



13911

Engine Type and Number.



11424



# Safety Precautions

THIS SYMBOL IS YOUR SAFETY ALERT SIGN

It means:



«ATTENTION - DANGER  
YOUR SAFETY IS INVOLVED»



Read and heed all safety instructions carrying the signal words **NOTE**, **CAUTION** and **DANGER**.

## GENERAL

■ You tractor was designed with safety very much in mind. However, there is no real substitute for caution and attention in preventing accidents. Once an accident has happened it is too late to think about what you should have done.

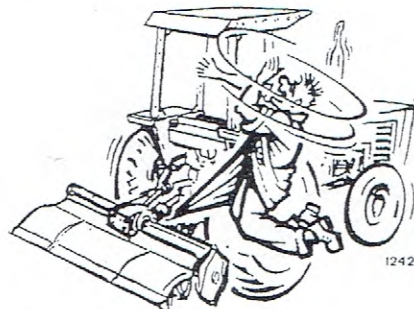
■ Remember that your tractor has been designed exclusively for agricultural use. Any other application must first be authorized by the manufacturer.

■ Read this manual thoroughly before attempting to start, operate, service or refuel the tractor. A few minutes reading will save time and trouble later.

■ Read and heed all machine-mounted safety decals before refueling or servicing the machine and replace any missing decals.

■ Keep a first aid kit handy.

■ Do not work with loose garments that could get caught in moving parts. Check that all rotating parts connected to the PTO shaft are well shielded.



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■ Do not attempt to increase max. engine rpm by altering injection pump governor setting.

■ Do not alter relief valve setting of hydraulic systems (power steering, hydraulic lift, remote control valves, etc.).

■ Do not operate tractor if you feel unwell. Stop working rather than risk an accident.

■ Always use steps and grab handles when getting in or out of the cab.

■ Never work without roll-over protection the frame or cab correctly fitted to tractor. Check that fasteners are not loose and that the frame is not damaged in any way. Do not alter cab by welding or drilling.

## TRACTOR STARTING

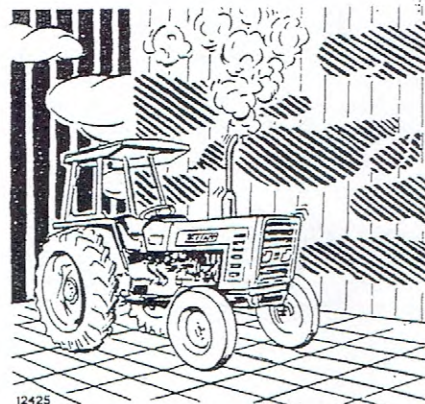
■ Prior to starting the engine check that parking brake is on and gear and PTO levers are in neutral, even if your tractor is fitted with a start inhibiting device. Never bypass start inhibitor switch. Consult trained servicing personnel if start inhibitor is not operating correctly.

■ Make sure that all implements are fully lowered before starting.

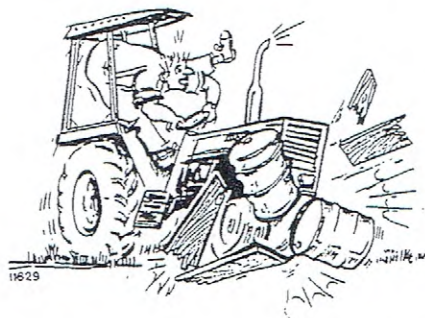
■ Ensure that all guards and protective devices are correctly installed before starting the tractor (ROPS frame or cab, hoob side panels, PTO guard, front axle drive shaft guard etc.).

■ Do not attempt to start or manoeuvre the tractor unless sitting in operator's seat.

■ Ensure that there are no persons or obstacles within range before starting the tractor.



■ Do not run engine in a closed building without adequate ventilation as exhaust fumes are dangerous.

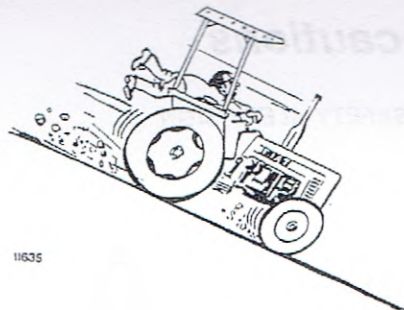


9



## OPERATION

■ Select the track width most suitable to the work in hand, keeping tractor stability in mind.



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■ Engage clutch pedal gradually: abrupt engagement, particularly uphill or under pull, could cause tractor to pitch dangerously. Immediately disengage clutch if front wheels start to rise.

■ Do not coast downhill in neutral or with clutch disengaged.

■ When the tractor is moving, its operator should always be sitting in the operator's seat.

■ Do not get on or off a moving tractor.

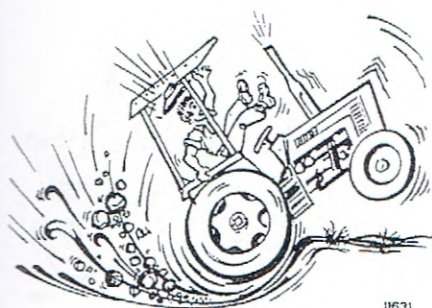
■ Always depress the brake pedal gently.

■ Do not corner at high speed.

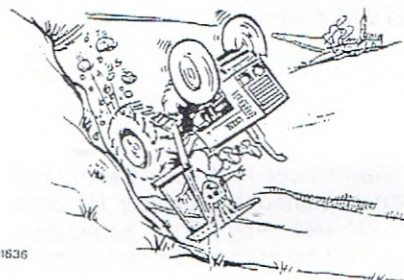
■ Always operate the tractor at a safe speed for the type of ground being worked. Reduce speed on slopes and curves to prevent roll-over.

■ When working on sloping ground, do not drive too fast, particularly when turning.

■ Use extreme caution when operating with the wheels near the edge of a slope.



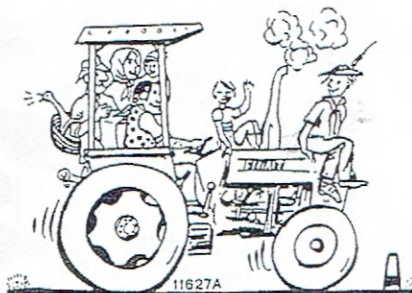
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10

## TOWING



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■ Unless your tractor is fitted with a regulation passenger seat, never carry passengers, even inside the cab.

■ Respect the highway code during on-road manoeuvres.

■ Do not ride the brake and clutch pedals.

■ Latch brake pedals during on-road transfer; otherwise dangerous skidding may occur when braking. Do not overwork brakes: downshift to slow tractor.

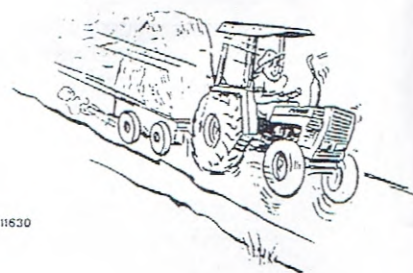
■ Adjust the towing attachment correctly to maintain tractor stability. See note on page 35.

■ Drive slowly when towing heavy trailers or wheeled implements.

■ Trailers should not be towed unless equipped with an independent braking system.

■ Always use drawbar when towing heavy loads. Do not pull from 3-point hitch links as tractor could pitch.

■ When towing, do not negotiate bends with the differential lock in, otherwise you may not be able to steer the tractor.



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## USING AGRICULTURAL IMPLEMENTS AND MACHINERY

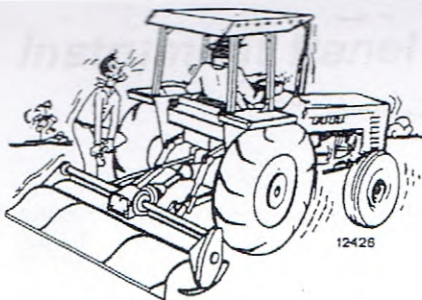
■ Always use implements or machinery rated for use with your tractor. Never use machinery designed for more powerful tractors.

■ Do not negotiate tight bends with the PTO under heavy load as this could damage the drive shaft universal joints.

■ When coupling, never stand between tractor and implement while the tractor is being backed up.

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■ Never operate a PTO driven implement without first ensuring that no one is on or too near the machine.

Check that all rotating parts connected to the PTO shaft are well shielded.

■ Install rear weights when using front lifting equipment.

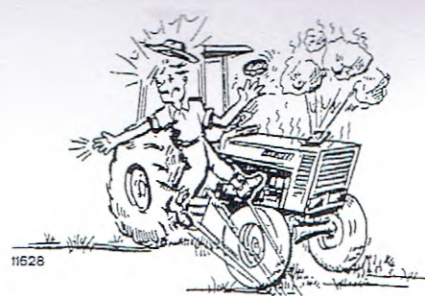
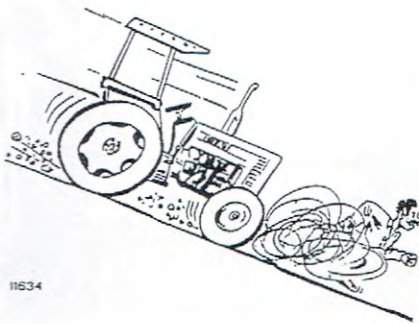
## STOPPING

■ Never leave equipment in the raised position with the tractor stationary.

■ Return gear lever to neutral, disengage PTO, apply parking brake, stop the engine and engage a gear before leaving the tractor seat. Always remove starter switch key before leaving tractor unattended.

■ Park tractor on level ground if possible, engage a gear and apply parking brake.

On gradients, apply parking brake and first gear uphill and reverse gear downhill. For greater safety, use the optional chock, especially with a trailer on tow.



## MAINTENANCE

■ Allow engine to cool down before removing radiator cap; with engine shut off, slowly turn cap to release pressure before removing cap completely.

■ Disconnect the battery ground lead before starting any work on the electrical system.

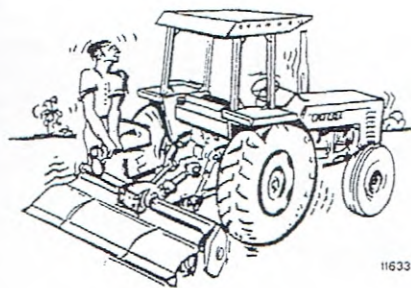
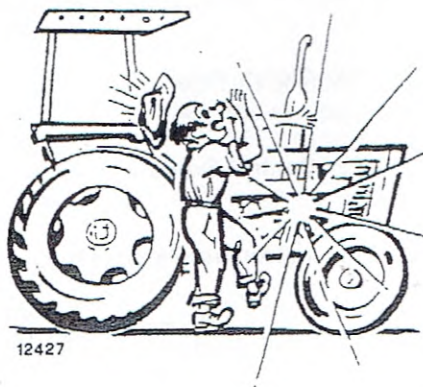
12

### NOTE

Some of the illustrations in this manual have been taken from photographs of prototypes. Standard production tractors may differ in some details.

■ Ensure that hydraulic system is not under pressure before disconnecting lines.

■ Hydraulic oil escaping under pressure could cause serious personal injury. When tracing oil leaks wear protective shields, glasses and gloves.



■ Before attempting to inspect, clean, adjust, repair or service the tractor or attached implement in any way, ensure that the engine is stopped, transmission in neutral, brakes are applied, PTO is disengaged and all moving parts are stationary.

■ Work on tires should be carried out only by experienced personnel using proper equipment. Incorrect tire installation could cause a serious accident. If in doubt, apply to qualified personnel for help.

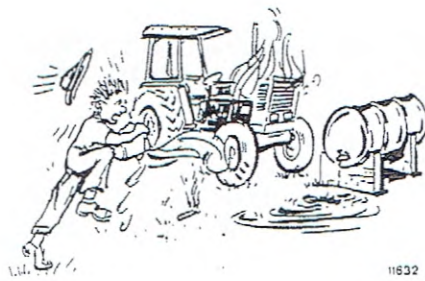
### CAUTION

In some of the photographs in this manual panels or covers have been removed for illustrative purposes. Never operate tractor without these panels or with shields removed.

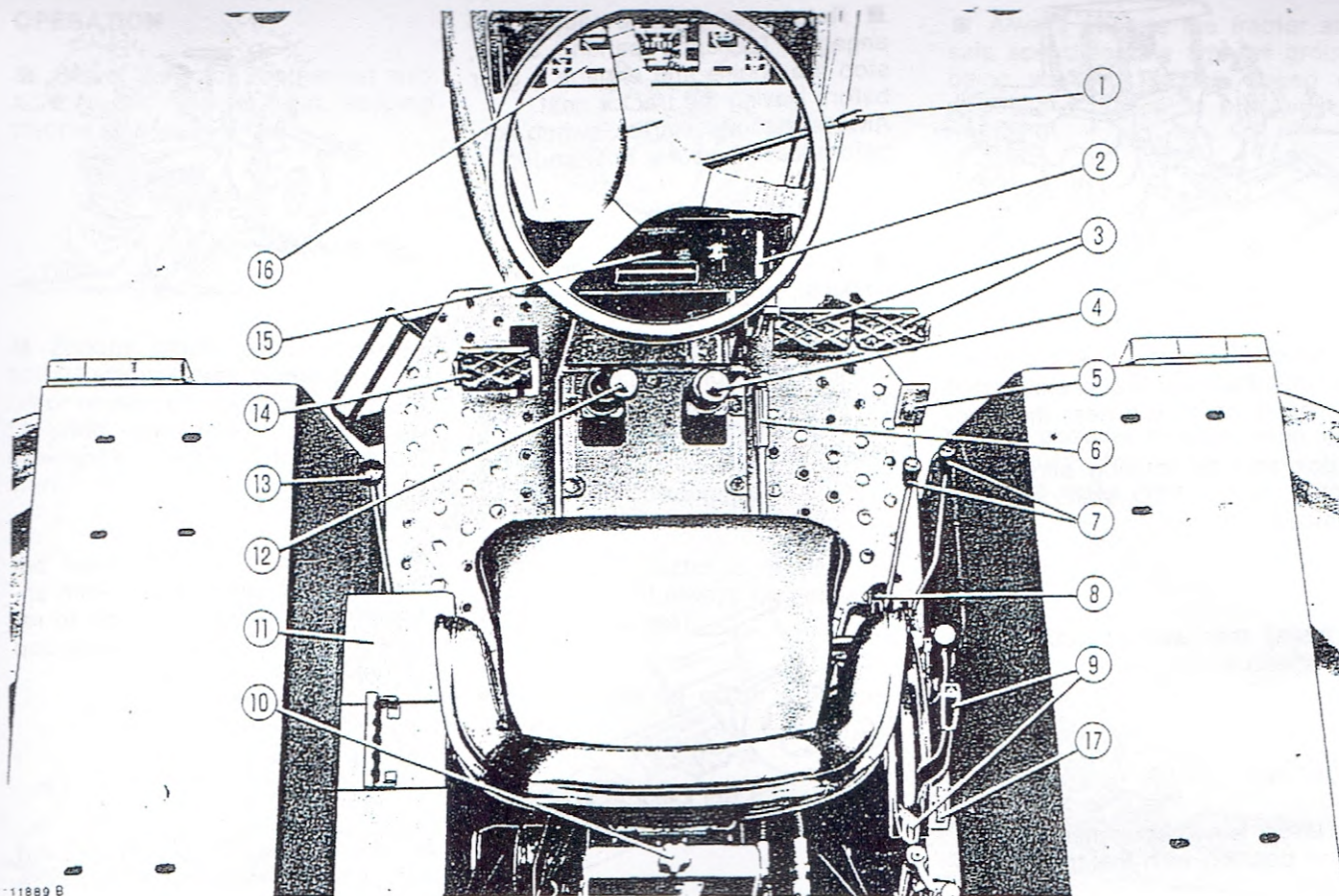
■ Do not fill tank completely when tractor is to be operated in strong sunlight, as fuel could expand and escape. Any escaping fuel should be wiped off immediately.

■ Tractor fuel may be dangerous. Never refuel with tractor in motion, near an open flame with a warm engine or when smoking.

■ Always keep a fire extinguisher within reach.







11889 B

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## CONTROLS AND INSTRUMENTS

1. Hand Throttle.

2. P.T.O. Clutch Lever (see page 24).

3. Brake Pedals.

4. Gear Lever (see page 19).

5. Accelerator Pedal.

6. Parking Brake Lever (with release button):  
 — Up = On.  
 — Down = Off.

### NOTE

*Depress lever button to release parking brake lever 6.*

7. Remote Control Valve Levers (see page 39).

8. Differential Lock Pedal.

9. Lift Controls (see page 29).

10. Seat Control (see page 23).

11. Tool Box.

12. Range Change Control Lever (see page 19).

13. Crawler Lever (see page 67).

14. Clutch Pedal.

15. Control Board (see page 18).

16. Instrument Panel (see page 16).

17. Lift-O-Matic (see page 29).



# Instrument Panel



**Battery charge indicator (red).**  
Should go off upon starting the engine.



**Parking brake flasher (red).**

## NOTE

*During running, keep an eye on the indicators and instruments. In case of abnormal operation stop the tractor without delay and remedy as necessary.*



**Low engine oil pressure indicator (red).**  
Should go off soon after starting the engine.

If the light fails to extinguish itself stop the engine and trace the fault. When the engine is idling warm, the light may come on although this is not evidence of malfunction.



**Spare.**



**Water temperature gauge.**

- Green = Normal.
- White = Low.
- Red = High.

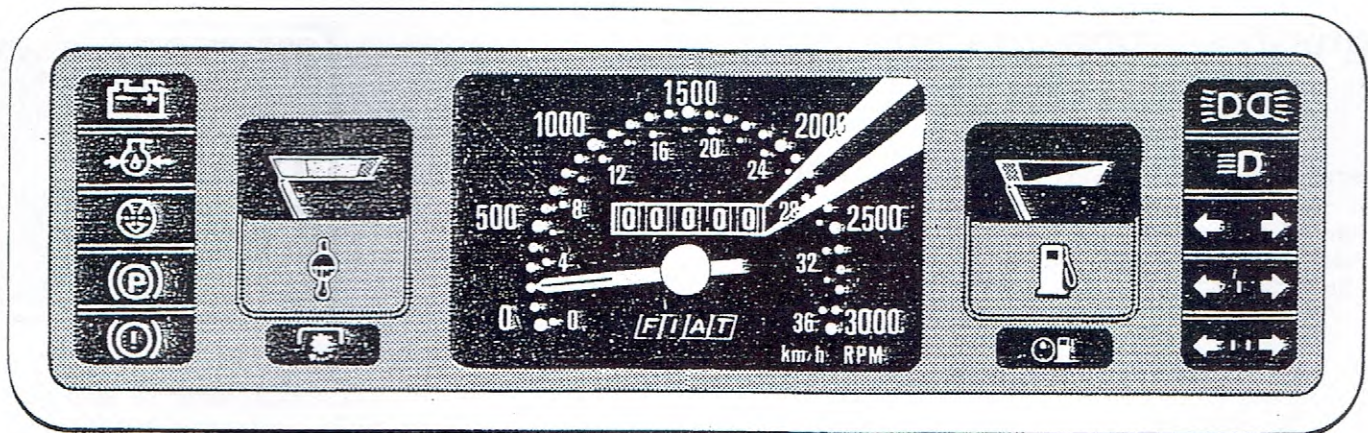
In case of overheating, return the engine to idle (do not stop) and if the trouble persists, inspect the cooling system.

**Tractor meter (central instrument).**  
Tachometer, speedometer, hourmeter and 5-digit totalizer. Black background digits indicate working hours and red background digit (last to right) 10ths of an hour. Green and red sectors on hourmeter indicate engine rpm for 540 and 1000 rpm PTO respectively.



**Dry air cleaner restriction indicator (red).**

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13906



**Fuel Gauge.**

- Needle to right - Full tank.
- Needle to left (red sector) - Less than 1/4 full.



**Parking Light Indicator (green).**



**Tractor Turn Signal Indicator (green).**



**High Beam Indicator (blue).**



**First Trailer Turn Signal Indicator (green).**



**Spare.**



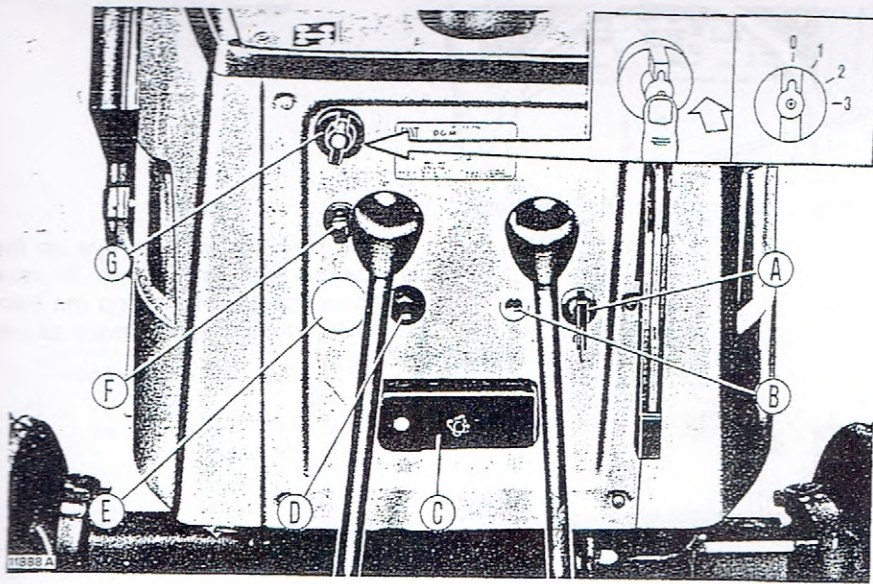
**Spare.**



**Second Trailer Turn Signal Indicator (green).**



## Control Board



F. Turn Signal Light Switch (switch A to 1, see page 20).

A. Starter Switch (see page 20).

D. Thermostarter or Start-pilot Control (see page 21).

B. Power Point (single pole).

E. Hazard Warning Control and Indicator. Always live even with key removed from starter switch A. Press to activate and press again to switch off.

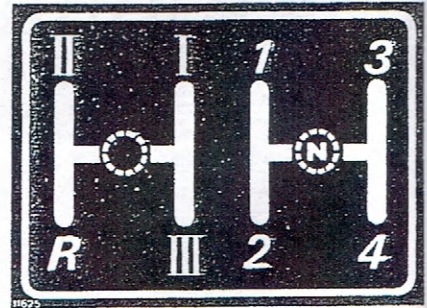
C. Fuse Box (see page 52).

G. Lighting Switch and Horn Push-button (switch A to 1, see page 20).

- 0. Off.
- 1. Parking.
- 2. Low Beam.
- 3. High Beam.
- In. Horn.

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## Transmission and Splitter



Transmission and splitter are controlled by two separate levers.

Transmission provides four gear ratios (1, 2, 3, 4).

Splitter provides three forward ranges:

- I = Low;
- II = Normal;
- III = High;

and one reverse (R) for each gear ratio.

Thus **twelve** forward and **four** reverse speeds are available.

To change gear range stop the tractor, push the splitter lever to the right and move it forward for low and back for high.

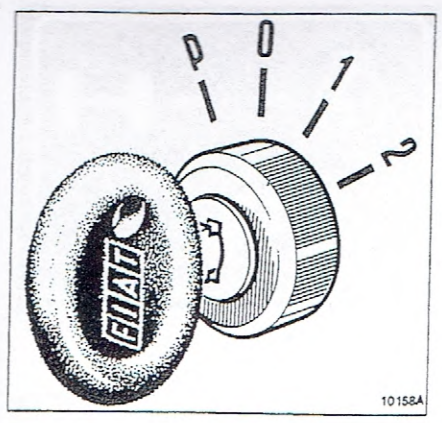
To select reverse R, stop the tractor and move splitter lever down and to the left.

To change up and down in the same range (reverse included) depress the master clutch pedal and shift the gear lever. Tractor need not be stopped, as all gears are synchromesh.

### Splitter Lever Positions

- I** Low.
- II** Normal.
- III** High.
- R** Reverse.





### ⚠ CAUTION ⚠

- Never start or run tractor in a closed area.
- Ensure all controls are in neutral position before starting.
- Operate controls from driver's seat only.
- Switch off engine before carrying out any service or maintenance operations.
- Use steps and grab handles for getting on and off the tractor.
- Ensure that guards are correctly mounted.
- When driving on the road, always signal when stopping, turning or reducing speed.
- Use appropriate slow moving vehicle signs when operating on public roads.

### ENGINE STARTING

- a. After extended inactivity or when starting in cold weather, prime fuel pump through 20 strokes and run engine for 5 to 10 seconds with injection pump in fuel shut-off condition.
- b. Declutch to de-activate starter inhibitor switch.
- c. Move throttle lever to mid-stroke.
- d. Turn starter switch key to position 2 and release as soon as engine fires.

### Starter Switch

0. Off. (key removable).
1. On.
2. Starting (when released key springs back to position 1).
- P. Parking lights, instrument lights (key removable).

## Starting and Stopping

### NOTE

Prior to starting in cold weather cover radiator to warm up coolant quickly. Subsequently, remove covering.

Also note the following points:

- Do not attempt repeated engine starts for more than 15 seconds unless the engine shows a tendency to start, in which case attempts may be protracted to 30 seconds;
- Wait at least one minute between attempts;
- To preserve battery charge, do not make more than six attempts.

### STARTING IN COLD WEATHER

#### Thermostarter Tractors

— Carry out operations a, b and c, described on page 20.

- Turn starter switch to position 1.
- Depress thermostarter button (see page 18) and hold for 10 to 15 seconds.
- Turn starter switch to position 2 holding button depressed for a further 10 to 15 seconds.

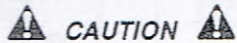
— After firing, release both starter switch and button. If after two or three attempts engine fails to start and considerable smoke is noticed, try again with the thermostarter off.

#### Start-Pilot Tractors

Start-Pilot is activated only upon energizing starter.

- Carry out operations a, b and c, described on page 20.
- Turn starter switch to position 2.
- Depress thermostarter button, (see page 18).
- After firing release both the starter switch and the button.

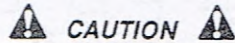




Use the start-pilot only when strictly necessary (below  $-15^{\circ}\text{C}$ ).  
With start-pilot activated, engine starting should occur at first attempt. If engine fails to start, do not insist, but turn to service network.

### STARTING THE TRACTOR

- Depress the master clutch pedal and shift transmission and splitter control levers to engage the desired gear (see page 19).
- Increase engine speed.
- Release the parking brake and slowly release the clutch pedal.



Do not allow the engine to labour continuously at full load above 6 kph (3.7 mph) i.e. in 3rd gear, normal range.

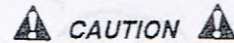
### STOPPING THE TRACTOR

- Reduce engine speed.
- Depress the master clutch pedal and apply brake.

When the tractor comes to rest, return the gear and splitter levers to neutral, release the clutch pedal and apply parking brake.

### STOPPING THE ENGINE

- Turn starter switch to position 0.
- When the engine comes to rest return the starter switch to position P if the parking lights are to be left on.

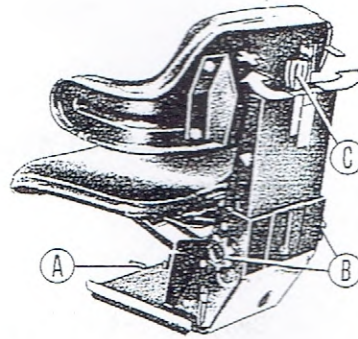


To prevent Diesel fuel from waxing in freezing weather, mix fuel with FIAT «Diesel Mix» antifreeze (or similar product) as directed on container.

*FIAT «Diesel Mix» must be added before fuel waxes, as once this starts nothing can be done. Pour antifreeze into tank and then add fuel.*

*FIAT «Diesel Mix» ensures optimum fuel supply without reducing performance even at temperatures below  $-20^{\circ}\text{C}$ .*

## Seat Adjustment



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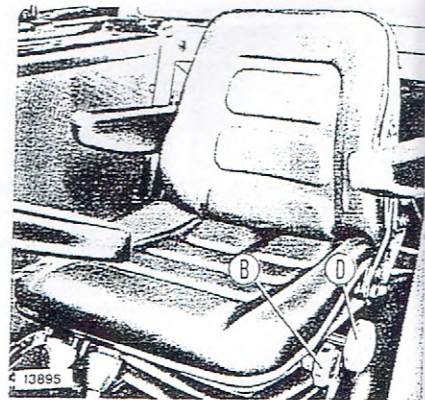
### STANDARD SEAT

#### A. Reach adjustment lever.

- Pull lever **A** sideways and move seat backward or forward as desired and release, ensuring that lever engages one of eleven locking slots.

#### B. Height controls.

- To raise or lower seat slacken knobs **B**, alter seat height as desired and clamp knobs.



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### DE-LUXE SEAT

#### C. Ride Control.

- Right (+) = Hard ride.
- Left (-) = Soft ride.

#### D. Ride control.

- To adjust turn handle **D** until yellow pointer lines up with body weight value.

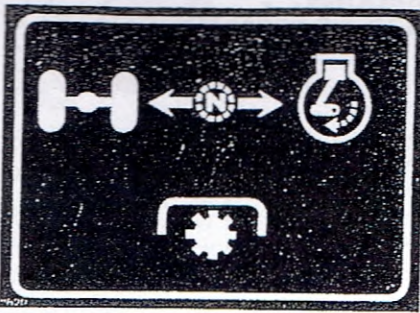
Operator's seat is adjustable for reach and ride.

Moreover, seat may be adjusted during operation.

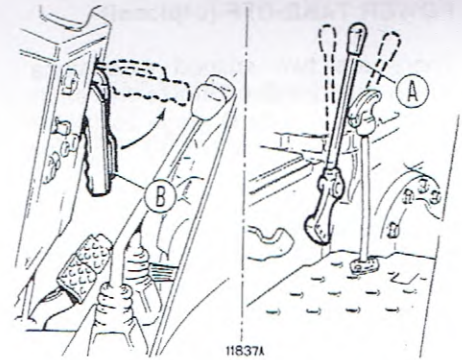
For maximum safety ride should not be too soft, especially on rough ground.

Use knob **C** or **D** for ride adjustment.





## Power Take-Off



**Engine driven P.T.O.** (lever A forward).

Engine-driven P.T.O. may be utilized with a standing or moving tractor.

P.T.O. operation is **fully independent** of tractor motion. Therefore, you may:

- Stop tractor without stopping P.T.O.; simply depress master clutch pedal.

- Stop P.T.O. without stopping tractor; simply withdraw P.T.O. clutch.

To activate P.T.O. proceed as follows:

- Withdraw P.T.O. clutch through lever B.

**B. P.T.O. clutch control lever:**

- Down = Clutch in
- Up = Clutch out

- Wait a few seconds and move lever A forward;

- Gently lower lever B to engage P.T.O. clutch.

Splined end direction of rotation clockwise when seen from rear of tractor.





**P.T.O. out** (lever A in neutral).



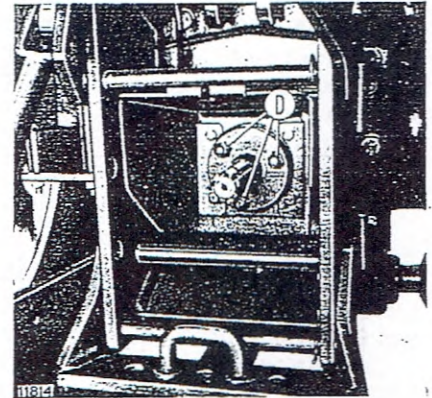
**Relative ground speed P.T.O.** (lever A back).

24

	
2200	540
2500	614
2380	1000
2500	1050

### 540 RPM POWER TAKE-OFF

The 6-spline extension is 1% in diameter. Standard 540 rpm is obtained at 2,200 engine rpm.



### **⚠ DANGER ⚠**

Prior to starting work on P.T.O. driven implement, withdraw the associated clutch (lever B) and set control A to P.T.O. out position or stop the engine.



**Engine Speed**



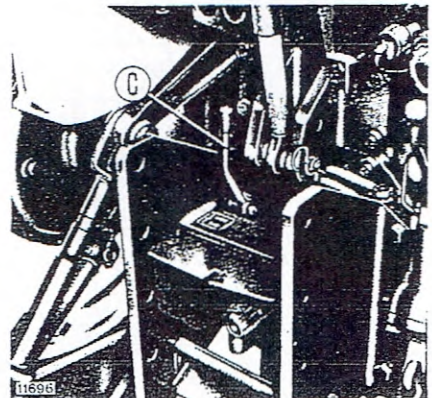
**P.T.O. Speed**

### NOTE

To disengage P.T.O. clutch pull lever B back to stop. To engage clutch depress button and lower lever.

### **⚠ CAUTION ⚠**

Before operating the P.T.O. actuated implement, check that the implement drive shaft mounted safety clutch is operating efficiently, i.e. slips under overload. At governed speed 2,500 rpm P.T.O. speed is 614 rpm.





**540 AND 1000 RPM  
POWER TAKE-OFF (optional)**

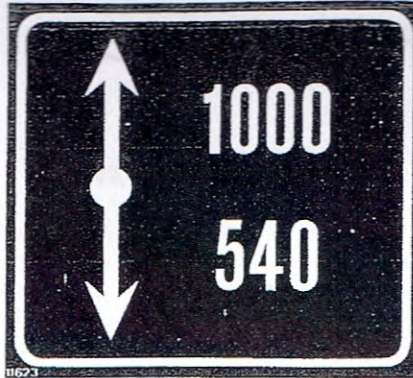
There are two splined extensions which may be fastened to the shaft by means of nuts **D**, page 25 (tightening torque 162 N · m, 16.5 kgm or 110 ft.lb.).

For the 540 rpm P.T.O., fit 1 $\frac{1}{2}$  in 6-spline extension, pull out lever **C**, page 25, and run engine at 2,200 rpm.

At governed speed (2,500 rpm) P.T.O. speed is 614 rpm.

For 1,000 rpm speed, fit 21-spline 1 $\frac{1}{2}$  in extension, push in lever **C**, page 25, and run engine at 2,380 rpm.

At governed speed (2,500 rpm) P.T.O. speed is 1,050 rpm.



P.T.O. selector plate (C, page 25).

**RELATIVE  
GROUND SPEED P.T.O.**

This is mainly used with live-axle trailers.

Tyre size and trailer reduction ratios must be chosen according to ground speed P.T.O. rpm.

Ground speed P.T.O. is transmission driven. When tractor is stationary, ground speed P.T.O. does not rotate; moving from forward to reverse gear direction of rotation is reversed.

Splined extension speed is **8.2 revs** (540 rpm P.T.O.) or **14.1 revs** (1000 rpm P.T.O.) to each rear wheel revolution.

To operate relative ground speed P.T.O., disengage P.T.O. clutch, pull back lever **A** page 24, and engage clutch.

**CAUTION**

When not using P.T.O. or when P.T.O. has been engaged through lever **A** with implement attached, move lever **B** down to engage P.T.O. clutch.

Always protect P.T.O. splined shaft with associated cover when not attached to implement.

**CAUTION**

21-spline 1 $\frac{1}{2}$  in 1,000 P.T.O. extension will be found in the tool box.

**NOTE**

Do not activate ground speed P.T.O. when tractor is in motion. When towing live axle trailers select 1000 rpm P.T.O.

**TRACTOR SPEEDS WITH P.T.O. AT STANDARD RPM**

GEAR	540 rpm P.T.O. - Engine at 2200 rpm															
	Model 55-66				Model 60-66								Model 55-66		Model 60-66	
	Rear tires															
	12.4/11-32		13.6/12-28		16.9/14-28		14.9/13-30		16.9/14-30		12.4/11-36		14.9/13-28			
	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph
1st Low	1.5	0.93	1.4	0.87	1.6	0.99	1.5	0.93	1.6	0.99	1.6	0.99	1.5	0.93	1.5	0.93
2nd "	2.3	1.43	2.2	1.36	2.4	1.49	2.4	1.49	2.5	1.55	2.5	1.55	2.3	1.43	2.3	1.43
3rd "	2.8	1.74	2.7	1.67	2.9	1.80	2.9	1.80	3.0	1.86	3.1	1.92	2.8	1.74	2.8	1.74
4th "	4.3	2.67	4.2	2.60	4.5	2.80	4.5	2.80	4.7	2.91	4.7	2.91	4.3	2.67	4.3	2.67
1st Normal	3.4	2.11	3.3	2.05	3.6	2.23	3.5	2.17	3.7	2.29	3.7	2.29	3.4	2.11	3.4	2.11
2nd "	5.3	3.29	5.0	3.10	5.4	3.35	5.4	3.35	5.6	3.47	5.7	3.53	5.2	3.22	5.3	3.29
3rd "	6.5	4.03	6.1	3.71	6.7	4.15	6.6	4.09	7.0	4.34	7.0	4.34	6.4	3.97	6.4	3.97
4th "	9.9	6.14	9.5	5.89	10.4	6.45	10.2	6.32	10.7	6.63	10.8	6.70	9.8	6.08	10.0	6.20
1st High	8.0	4.96	7.6	4.71	8.4	5.21	8.2	5.08	8.5	5.27	8.6	5.33	7.9	4.90	8.0	4.96
2nd "	12.2	7.56	11.7	7.25	12.8	7.94	12.7	7.87	13.2	8.18	13.3	8.25	12.2	7.56	12.2	7.56
3rd "	15.0	9.30	14.4	8.93	15.8	9.80	15.5	9.61	16.2	10.04	16.3	10.11	14.9	9.24	15.0	9.30
4th "	25.1	15.53	23.9	14.85	25.0	15.53	24.6	15.28	25.3	15.72	26.0	16.15	24.8	15.41	23.9	14.85
1st Reverse	3.8	2.36	3.6	2.23	3.8	2.36	3.8	2.36	3.9	2.42	4.0	2.48	3.9	2.42	3.6	2.23
2nd "	5.9	3.66	5.5	3.41	5.9	3.66	5.7	3.53	6.1	3.78	6.1	3.78	5.8	3.06	5.5	3.41
3rd "	7.2	4.47	6.7	4.16	7.1	4.40	7.0	4.34	7.4	4.59	7.4	4.59	7.1	4.41	6.9	4.38
4th "	10.6	6.58	10.1	6.27	11.9	6.38	10.9	6.76	11.4	7.07	11.4	7.07	10.5	6.52	10.6	6.57

GEAR	1000 rpm P.T.O. - Engine at 2380 rpm															
	Model 55-66		Model 60-66		Model 55-66								Model 60-66			
	Rear tires															
	14.9/13-28		12.4/11-32		13.6/12-28		16.9/14-28		14.9/13-30		16.9/14-30		12.4/11-36			
	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph
1st Low	1.6	0.99	1.6	0.99	1.6	0.99	1.5	0.93	1.7	1.05	1.6	0.99	1.7	1.05	1.7	1.05
2nd "	2.5	1.55	2.5	1.55	2.5	1.55	2.4	1.49	2.6	1.61	2.6	1.61	2.7	1.67	2.7	1.67
3rd "	3.0	1.86	3.0	1.86	3.0	1.86	2.9	1.80	3.1	1.92	3.1	1.92	3.2	1.98	3.3	2.05
4th "	4.6	2.85	4.7	2.91	4.6	2.85	4.6	2.85	4.9	3.04	4.9	3.04	5.0	3.10	5.0	3.10
1st Normal	3.6	2.23	3.7	2.29	3.6	2.23	3.5	2.17	3.9	2.42	3.8	2.36	4.0	2.48	4.0	2.48
2nd "	5.6	3.47	5.7	3.53	5.7	3.53	5.5	3.41	5.9	3.66	5.8	3.60	6.1	3.78	6.2	3.84
3rd "	6.9	4.28	7.0	4.34	7.0	4.34	6.8	4.09	7.2	4.46	7.1	4.40	7.5	4.65	7.5	4.65
4th "	10.6	6.57	10.8	6.70	10.7	6.63	10.3	6.39	11.2	6.94	11.0	6.82	11.6	7.19	11.7	7.25
1st High	8.6	5.33	8.7	5.39	8.6	5.33	8.2	5.08	9.0	5.58	8.9	5.52	9.2	5.70	9.3	5.77
2nd "	13.2	8.18	13.2	8.18	13.3	8.25	12.6	7.81	13.9	8.62	13.7	8.49	14.3	8.87	14.4	8.93
3rd "	16.1	9.98	16.3	10.11	16.3	10.11	15.6	9.57	17.0	10.54	16.8	10.42	17.5	10.85	17.6	10.91
4th "	26.8	16.65	25.8	16.03	27.1	16.83	25.8	16.03	27.0	16.77	26.6	16.52	27.8	17.27	28.0	17.39
1st Reverse	4.1	2.54	3.9	2.42	4.1	2.54	3.9	2.42	4.1	2.54	4.1	2.54	4.2	2.60	4.3	2.67
2nd "	6.3	3.91	6.0	3.72	6.4	3.97	6.0	3.72	6.4	3.97	6.2	3.84	6.6	4.09	6.6	4.09
3rd "	7.7	4.78	7.4	4.59	7.8	4.84	7.4	4.59	7.7	4.77	7.6	4.71	8.0	4.96	8.0	4.96
4th "	11.4	7.07	11.4	7.07	11.5	7.13	10.9	6.76	12.0	7.44	11.8	7.32	12.3	7.63	12.4	7.69



# Hydraulic Lift

## A. Variospeed (sensitivity control lever).

4-position lever is used to vary sensitivity when working with draft and combined draft and position control.

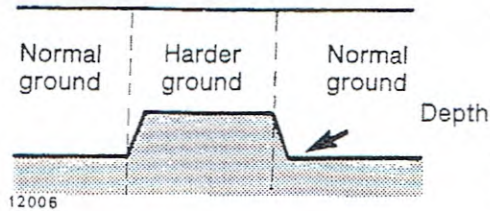
— Up (+) = Longer reaction times (low sensitivity)

— Down (-) = Shorter reaction times (high sensitivity)

With low sensitivity, implement weight is transferred to rear wheels more slowly, thus increasing traction considerably.

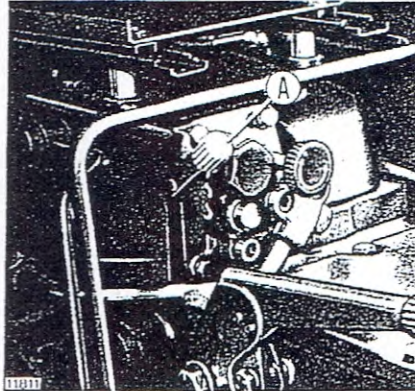
Moreover, slower reaction times eliminate jolts.

## VARIOSPEED LEVER DOWN (-)

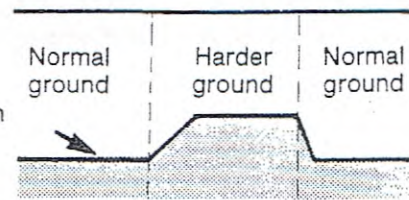


12006

The lift employs the axle lubricating oil, fluid pressure being obtained by means of a valve gear driven hydraulic pump.



## VARIOSPEED LEVER UP (+)



The lift senses the load on the lower links through the sensing bar and performs the following functions:

- Position control;
- Draft control;
- Float;
- Combined draft and position control.

The combined operation of control levers B and C, enables the operator to select the mode of operation most suited to the work in hand.

Consult Guide to Lift Operation (page 31) for selecting type of operation in relation to type of implement used.

## POSITION CONTROL

— Move the draft control lever C, fully forward.

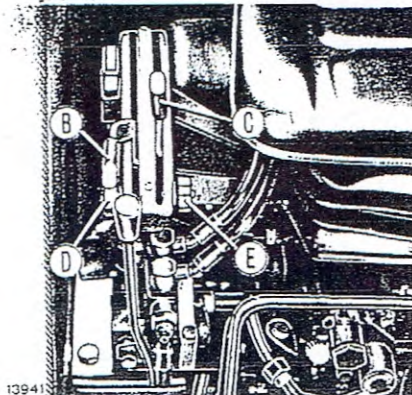
— Set implement position below or above ground by moving lever B forward to lower and backward to lift. Implement movement will be proportional to lever travel.

**B. Position Control Lever.**

**C. Draft Control Lever.**

**D. Stop for Lever B.**

**E. Stop for Lever C.**



13941

— To raise and lower implement at the beginning and end of each pass, actuate Lift-O-Matic only.

## DRAFT CONTROL

— Move position control lever B fully forward.

— Move lever C progressively forward to bring the implement to the desired depth. Implement depth will be proportional to draft as determined by ground consistency. In this condition the lift keeps the tractive effort steady automatically.

— To raise implement at the end of each pass simply actuate Lift-O-Matic.

## CAUTION

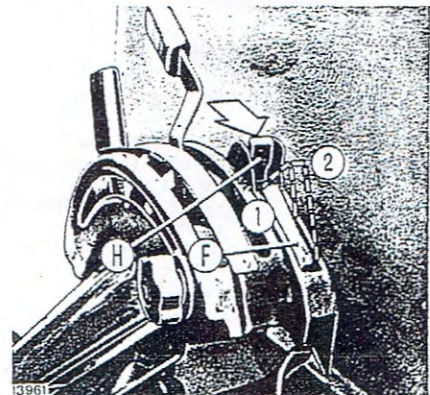
When using Lift-O-Matic with P.T.O. mounted implements, adjust lifting rods to max. length to prevent drive shaft damage.

**F. Lift-O-Matic (link raising/lowering button).**

1. Link lowering.
2. Link raising.

To raise implement quickly without altering the position of levers B and C pull back control H as shown.

Control F is released in the process and the implement will raise fully. To restore working position fully depress control F.



13961

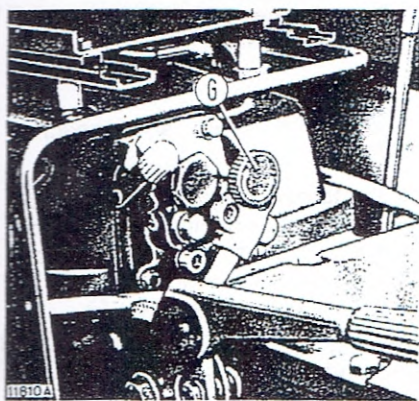


### G. Response control knob

- + = Increase (clockwise)
- = Decrease (counterclockwise).

#### NOTE

When driving on road with implements attached, back off knob **G** and maintain lever **B** (page 29) up to lock implements in desired position.



### FLOAT

- Move levers **B** and **C** fully forward to enable links to swing free along full stroke.
- Raise and lower the implement at the end of each pass and the start of the next, operating Lift-O-Matic (page 29) only.

#### NOTE

Do not use levers **B** and **C** to raise and lower implement.

### COMBINED DRAFT AND POSITION CONTROL

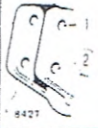

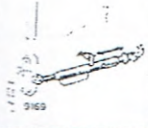
- Sink the implement to the desired depth as described for draft control.
- When the implement stabilizes at the desired depth, progressively move the position control lever **B** back until the lift arms tend to rise.

The lift operates in draft control but at the same time prevents the implement from sinking excessively in the event of a decrease in soil resistance, which could cause unsuitable soil to be brought to the surface.

- To raise and lower the implement at the start and end of each pass, move Lift-O-Matic (page 29) only.

## Guide to Lift Operation

The following information is for guidance only, as working technique and implement and ground characteristics may necessitate solutions the best guide to which is practical experience.

MACHINE OR IMPLEMENT	Top Link Mounting Holes (*)	Operation	Gauge Wheels	Check link Position (●)		Check chains	REMARKS
							
Moldboard Ploughs — Single-, double- and treble-furrow (one-way or two-way) — Four- and five-furrow	1-2	Draft or combined	No	■	■	Not taut	Adjust chains so that max. lateral displacement of implement is 12 cm or 0.5 in max. When implement is up lateral displacement should not be excessive.
Disc Ploughs — Two-disc — Three-disc — Four-disc							
Harrows, blade, tooth or disc Sub-soiler	1-2	Draft control	No	■	■	Not taut	
Ditchers							
Cultivators	1-2	Draft control	Yes/No	■	■	Not taut	
Weeders, Ridgers, etc.	1-2	{ Float Draft }	Yes No	■	■	Taut Not taut	
Carried Seed Drills and Manure Spreaders	1-2		Position control	Yes/No	■	■	
Grader Blades, Augers, Scrapers, Manure Forks, Rear Mounted Transport Boxes, etc.	1-2	Position control	No	■	■	Taut	
Mower Bars (side and rear mounted), Hay Rakes and Tedders, etc.							
Front Loaders, Dump Trailers, Hydraulically Controlled Towed implements	—	—	—	—	—	—	
Tractor driven without implements	—	—	—	■	■	Taut	
To facilitate implement attachment	—	—	—	■	■	Not taut	

(\*) Mounting hole selection depends on height of implement. — (●) Optional, instead of check chains

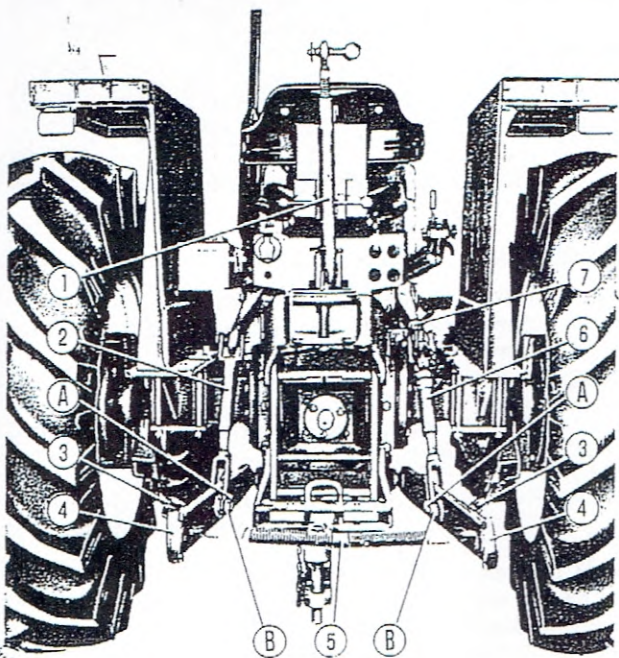


### Lower link stroke:

- Lifting rods fully out and connected to holes **A** . . . . . 790 mm or 31 in
- Lifting rods fully out and connected to holes **B** . . . . . 660 mm or 24 in

Maximum lift capacity with lower links horizontal throughout stroke (lifting rod connected to holes **B** and pivot **1** at top hole on top link support):

- At lower link swivel bushings . . . . . 3000 kg (6,613 lb)
- Center of gravity 610 mm or 24 in swivel bushings . . . . . 2260 kg (4,980 lb)
- Centre of gravity 1050 mm or 41.3 in from swivel bushings (model 55-66) . . . . . 2240 kg (4,940 lb)
- Center of gravity 1090 mm or 42.9 in swivel bushings (model 60-66) . . . . . 2200 kg (4,850 lb)



- A. Front lifting rod mounting holes.
- B. Rear lifting rod mounting holes.

1. Adjustable top link. 2. L.H. lifting rod. 3. Check chains (implement coupled). 4. Lower links. 5. Check spring (for transfer without implement). 6. R.H. lifting rod. 7. Levelling box handle with spring.

## Implement Attachment (Category 1 or 2 implements)

### Adjustable Top Link 1

May be connected to its supporting bracket using 2 holes. Use the most suitable for the height of the implement in hand.

### L.H. Lifting Rod 2

Adjust length by screwing in or backing off lower end.

### Adjustable Check Chains 3

Adjust the length by screwing in or backing off adjuster.

For guidance on link adjustment see "Guide to Lift Operation" page 31.

### R.H. Lifting Rod 6

Adjust through handle 7 (page 32) which may be reached from operator's seat.

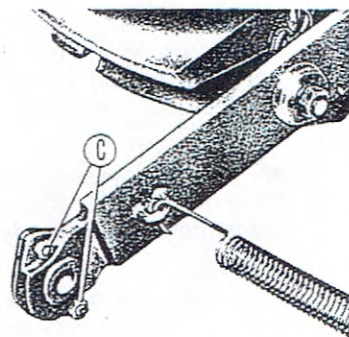
### NOTE

To permit use of either category 1 or 2 implements, the attachment device is supplied with:

- Two sets of swivel bushings for ends of lower links 22 mm or 0.866 in I.D. for category 1 implements, and 29 mm or 1.14 in for category 2 implements respectively.

- Two rear ends for top link provided with swivel bushings 19 mm or 0.75 in I.D. for category 1 implements and 25.5 mm or 1.004 in for category 2 implements.

To replace lower link bushings back off nut **C** and remove the associated cover.





## LOWER LINK POSITIONS

To obtain increased lift response while working with light implements in draft or combined draft and position control, assemble lower links 4 (page 32) with spacers 1 on inside of lower links.

For medium to heavy duty applica-

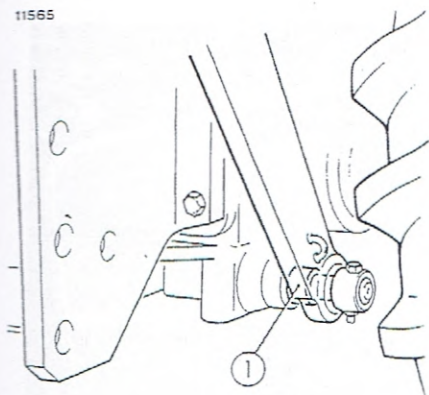
tions, assemble spacers 1 on outside of lower links.

This position decreases lift sensitivity for jobs requiring more tractive effort.

Figures below show correct position for both types of application.

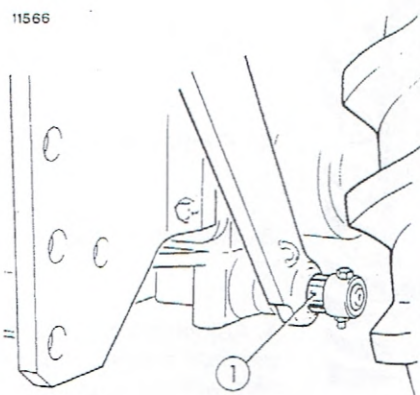
### Light Applications.

11565



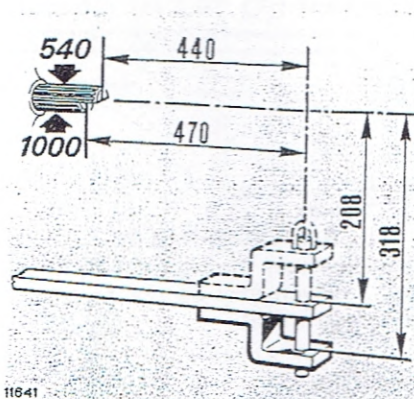
### Medium to Heavy Duty Applications.

11566



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## Towing Attachments



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### CAUTION

■ Towing device should be selected according to type of trailer or implement to be towed and in compliance with local regulations.

■ Tractor driveability and safety depend to a great extent on correct adjustment of towing device.

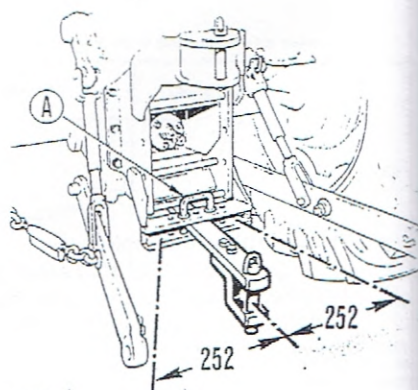
■ A high tow hook increases towing capacity but may result in dangerous pitching. Thus, keep towing point as low as possible.

■ When using front wheel drive, hitch trailer low so as to keep tow point as near as possible to the horizontal.

■ Avoid towing excessively heavy loads or trailers.

■ Always start off smoothly to prevent pitching.

■ Brake trailer first, and then tractor.



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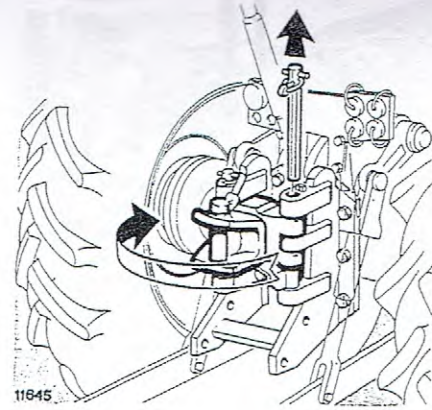
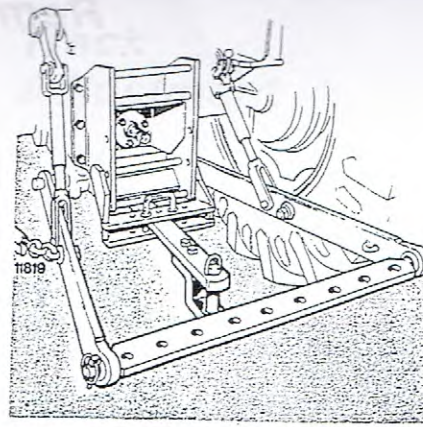
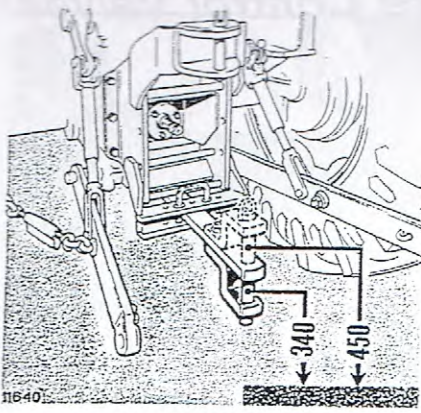
### SWINGING DRAWBAR

Use swinging drawbar to tow agricultural implements and two-axle trailers, but not single-axle trailers because load on drawbar could result in tractor pitching.

Available adjustment is extremely useful in case of equipment such as balers, requiring considerable lateral freedom of movement.

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Swinging drawbar is available with:

- Brackets for attachment of conventional and Rockinger type hooks.
- Towbar frame only.

Swinging drawbar may be adjusted for:

- Height, by overturning drawbar to position fork uppermost.
- Check lateral swing by means of U-pin A (page 35).

Drawbar fork positions with respect to P.T.O. shaft obtainable by imple-

### DRILLED CROSSMEMBER

Use for towing non-mounted implements and agricultural machines, even if P.T.O. activated, which do not involve excessive weight on crossmember to avoid risk of pitching.

menting the foregoing adjustments are shown on page 35.

To correctly couple implements to P.T.O. ensure that towbar fork faces downward.

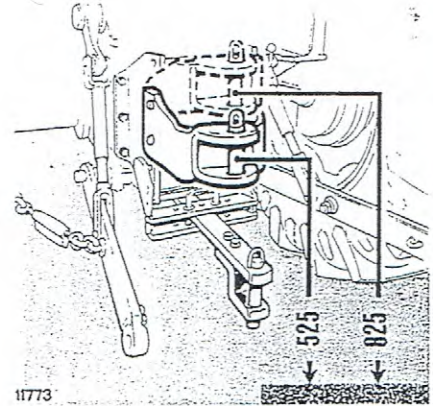
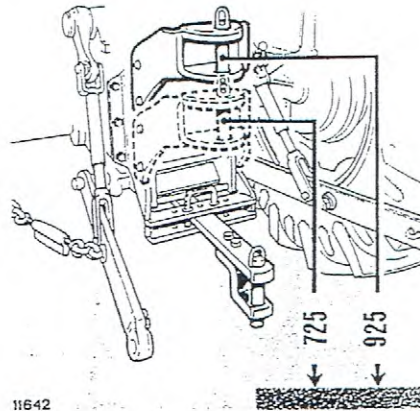
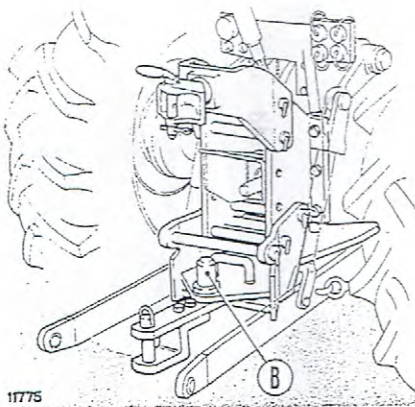
### ROCKINGER JAW HOOK

Jaw hook may pivot about its longitudinal axis and incorporates a safety-type automatic hitch and lock-up device.

To facilitate P.T.O. connection hook may be tilted sideways and clamped in position through the latch on inside of the hook.

This device may be adjusted for height in 3 positions and fitted together with the swinging drawbar.

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### SINGLE AXLE TRAILER TOW HOOK

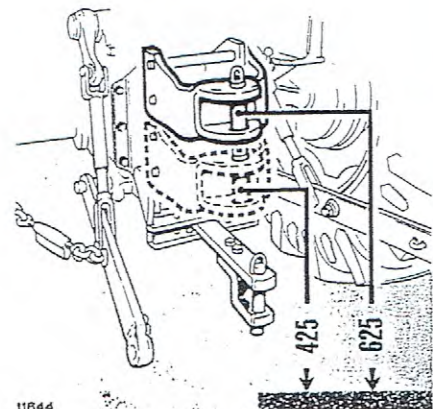
Provided together with drawbar. Hitch single trailers to pin **B** on drawbar support.

### ADJUSTABLE TOW HOOK

This type of hook is suitable for towing all types of trailers including single-axle trailers.

It may be adjusted for height both above and below P.T.O., adjustment positions being six.

This hook may be fitted simultaneously with swinging drawbar.

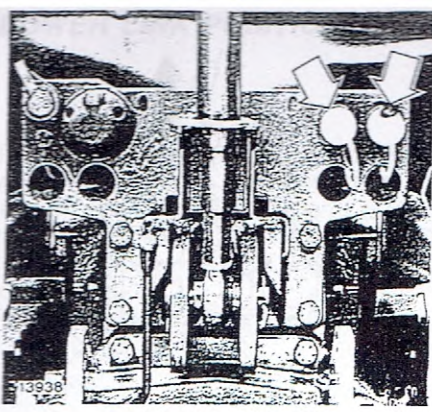


### NOTE

A pull hook is provided for emergency trailer towing operations or to tow tractor.

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Your tractor may be equipped with one, two or three remote control valves employing hydraulic lift oil to remotely control single- or double-acting cylinders.

Each control valve is provided with two quick-disconnect push-pull  $\frac{1}{2}$  in female half-couplings suitable for connection to quick connect push-pull male half-couplings.

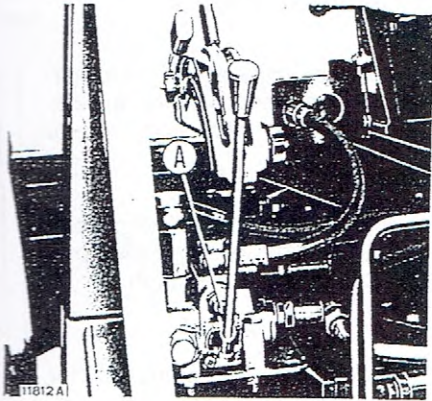
Auxiliary cylinder lines may be connected single handed.

Push to connect and pull to disconnect from sockets after:

- Stopping engine.
- Lowering any implements connected to lift.
- Thoroughly cleaning half-couplings.

Remote control valves can be either single or double-acting. To change to:

- **Single acting** - back off screw **A**, located near remote control valve lever articulation.
- **Double acting** - fully tighten screw **A**.



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To identify half-coupling to which implement should be attached when using single-acting valve, activate valve lever and observe the two hoses connected to the half couplings; hose through which oil passes will move.

For extra safety, check that implement in single-acting mode is connected to the hose fitted furthest from screw on valve body.

### Valves with float control

Your tractor may be equipped with remote control valves for float position.

To select float function, push lever of valve concerned forward past the first stop and up to second stop.

### NOTE

When not in use, coupling sockets should be protected by means of the plastic caps provided.

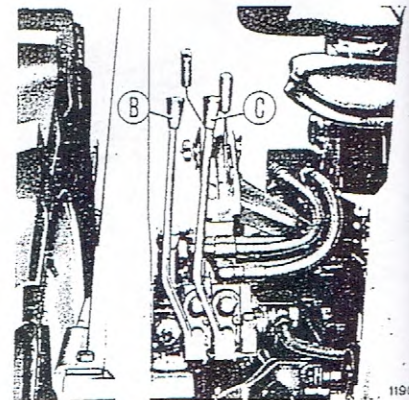
### Hydraulic trailer brake control valve

The hydraulic trailer brake control valve operates with lift oil. Valve is controlled through the left brake pedal and is provided with a quick-connect male half-coupling.



**DANGER**

For simultaneous tractor and trailer braking, always latch brake pedals through associated plate, as for road transfer.



**B and C. Single and double-acting cylinder valve control levers.**

Lever positions are as follows:

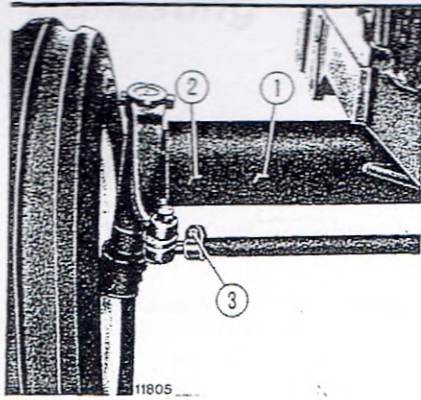
- Forward = Lower;
- Back = Raise.

### NOTE

When released, all levers return automatically to rest position, locking implement in the set position.



## Track Adjustment



### FRONT TRACKS

To adjust front track proceed as follows:

— Raise front end of tractor applying jack to underside of axle beam.

— Unclamp the two beam extensions by removing clamp bolts 1 and 2 (torqued at 220 N·m, 22.5 kgm or 163 ft.lb).

— Remove clamp bolt 3 (torqued at 39 N·m, 4 kgm or 29 ft.lb) and adjust track rod length.

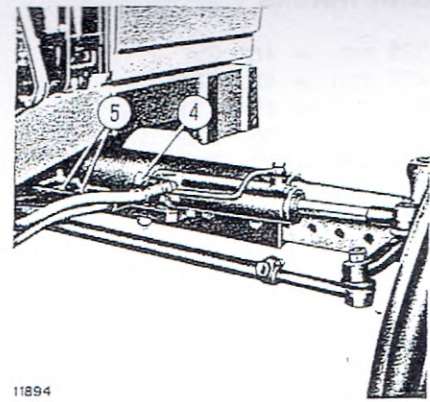
— Adjust track to one or six settings (1,410 mm or 4 ft 7 in, 1,510 mm or 4 ft 11 in, 1,610 mm or 5 ft 3 in, 1,710 mm or 5 ft 7 in, 1,810 mm or 5 ft 11 in, 1,910 mm or 6 ft 3 in)

1970 mm or 6 ft 6 in maximum track width is obtainable by inverting wheel position on hub.

Maximum track should only be used where strictly necessary.

Wheel nuts are torqued at 294 N·m, 30 kgm or 216 ft.lb.

**NOTE:** For front track adjustment on 55-66 DT and 60-66 DT versions, turn to page 66



### NOTE

Power steering version: L.H. wheel, proceed as described above. R.H. wheel, unclamp the sliding end, and alter the internal hydraulic cylinder attachment position as follows:

— Slacken cylinder hose fittings.

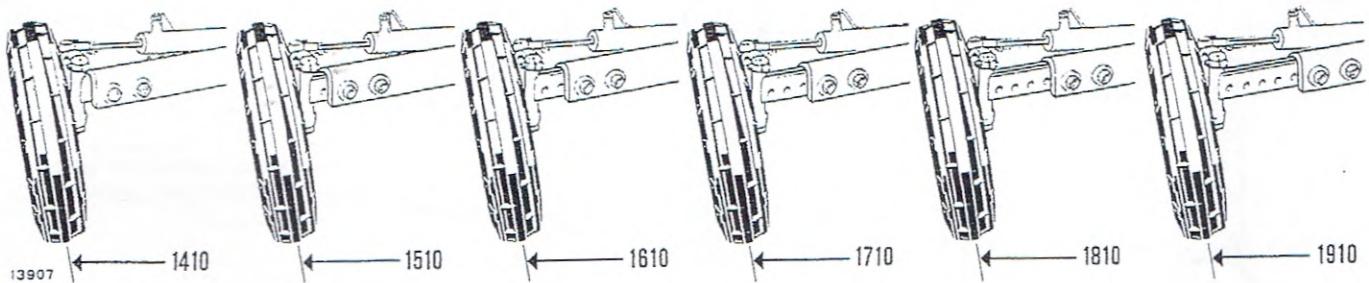
— Move pivot 4 into one of plastic plugged holes 5.

— Tighten pivot nut to 294 N·m - 30 kgm - 216 ft lb.

— Check that hoses are not twisted and tighten associated fittings.

40

### FRONT TRACKS



### REAR TRACKS

13.6/12-28 . . . . .	1325 mm or 4ft 4in
14.9/13-28 . . . . .	1325 mm or 4ft 4in
16.9/14-28 . . . . .	1325 mm or 4ft 4in
14.9/13-30 . . . . .	1425 mm or 4ft 8in
16.9/14-30 . . . . .	1425 mm or 4ft 8in
12.4/11-32 . . . . .	1325 mm or 4ft 4in
12.4/11-36 . . . . .	1325 mm or 4ft 4in

Rear wheel disc may be fitted with dish facing either toward inside or toward outside.

For each position track width varies as shown (pages 42 and 43).

Relative to tire size, minimum rear tracks are:

When changing rear track widths, ensure that arrow moulded on tire faces in the direction of forward travel.

### NOTE

Select the most suitable rear track width first, and then the front track.

Ensure that the front and rear wheels are symmetrical with respect to the tractor centerline.



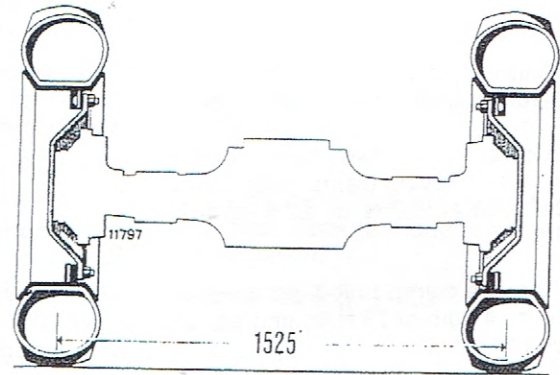
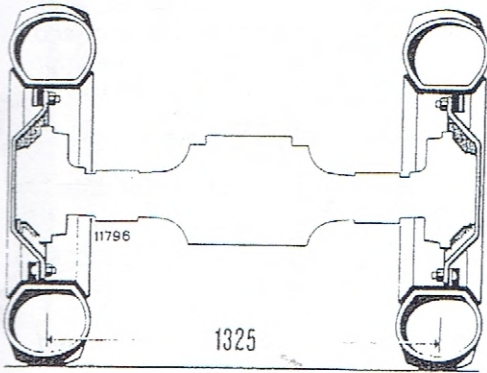
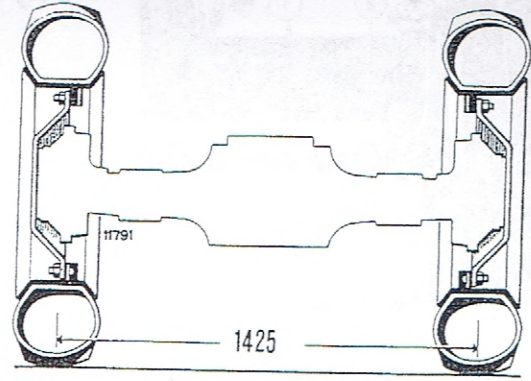
When removing rear wheels proceed with utmost care, using a suitable hoist for the heavier wheels.

41

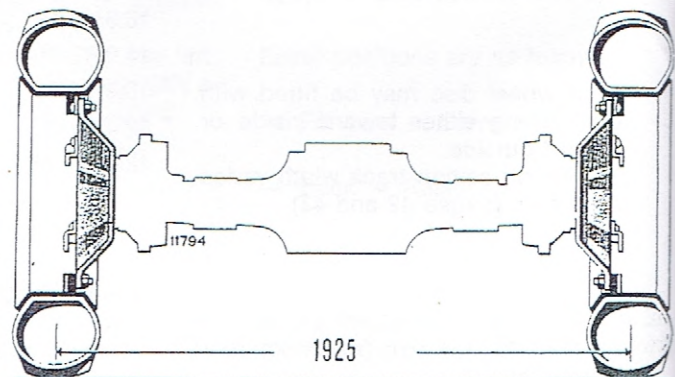
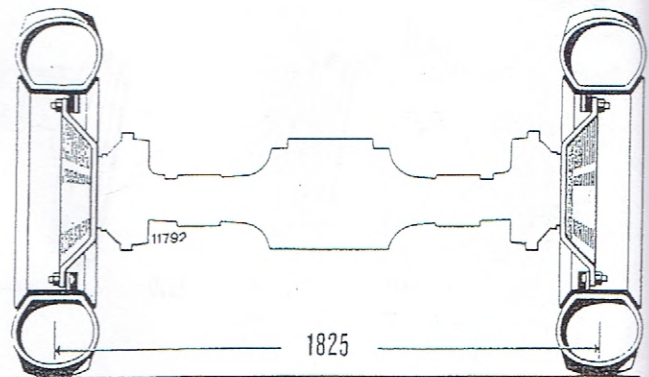
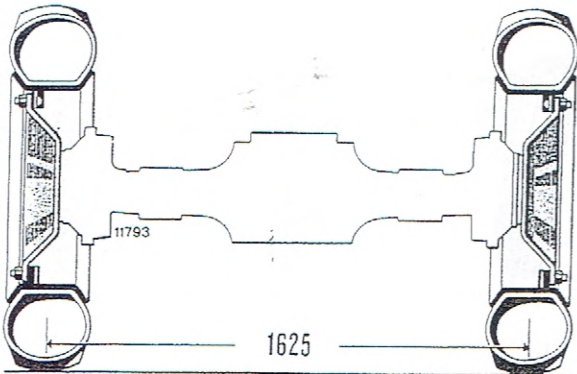


REAR TRACKS

- 1325 mm = 4ft 3in
- 1425 mm = 4ft 7½in
- 1525 mm = 4ft 11½in
- 1625 mm = 5ft 3½in
- 1725 mm = 5ft 7½in
- 1825 mm = 5ft 11½in
- 1925 mm = 6ft 3½in



42





Where extra drawbar pull is required and it is found necessary to increase adhesion on rear wheels, add cast iron weights, or water ballast rear wheels as directed on page 45.

This will prevent wheel slip caused by insufficient adhesion and consequent loss of power and speed, increased fuel consumption and premature tire wear.

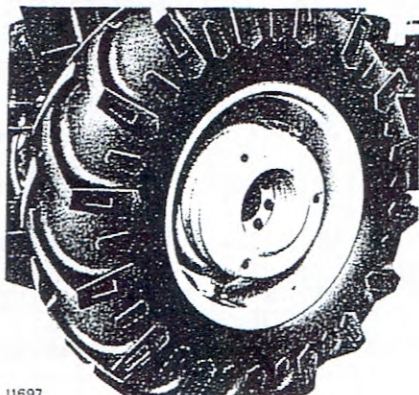
When using long and heavy implements which may adversely affect tractor stability, fit cast iron plates on the front axle.

### ⚠ CAUTION ⚠

Tractor operating weight without implement and with ballasting (metal or liquid) must not exceed 3,500 kg or 7,700 lb for both standard and DT versions.

## REAR WHEELS

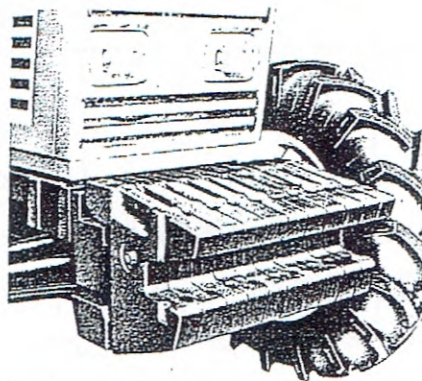
Cast iron rings (4 or 6) weighing 50 kg or 110 lb each, for a total of 200 kg or 330 kg (441 or 728 lb).



11697

## FRONT AXLE

Cast iron plates with handles (6 or 10) weighing 40 kg or 88 lb each, and associated support weighing 130 kg or 287 lb for a total of 370 kg or 530 kg (816 or 1,169 lb).



11699

44

## WATER BALLASTING

To ballast the rear tires, water may be pumped into the inner tubes.

### To fill

— Raise the wheel clear of ground and position the inflation valve uppermost.

— Unscrew the valve plunger and allow the tire to deflate.

— Apply the water connection to the valve seat and connect the hose to inlet 4. During filling, the residual air will be expelled through tube 3.

— Stop filling when the tire is  $\frac{3}{4}$  full, i.e. when water issues from tube 3 in its lowermost position. If less than maximum ballasting is desired, turn the wheel to position the valve lowermost.

— Remove fitting 2, refit the valve plunger and inflate to the specified pressure rating. The weight of water with  $\frac{3}{4}$  full tire is given hereafter.

Tire size	Water capacity	
	Liters	Imp. Gall.
12.4/11-32	135	30
12.4/11-36	145	32
14.9/13-28	190	42
14.9/13-30	200	44
16.9/14-30	250	55
13.6/12-28	162	36
16.9/14-28	240	53

### To Drain

— Raise the wheel and position the inflation valve lowermost.

— Unscrew the valve plunger and allow the water to drain.

— Fit the air connection to the valve seat and bring tube 3 in contact with the tire.

— Admit air pressure through inlet 4; the residual water will be expelled through tube 3.

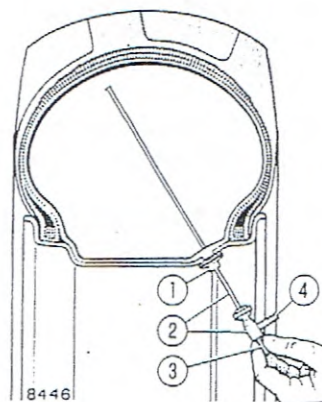
— Remove fitting 2, refit the valve plunger and inflate the tire.

### ⚠ CAUTION ⚠

Do not use ballasting systems other than those indicated. Do not ballast the tractor unless it is strictly necessary as where not needed ballasting may be dangerous.

Water Connection (Supplied by tire manufacturers).

1. Valve seat.
2. Water fitting.
3. Vent tube.
4. Water inlet.



8446

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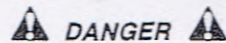


## Tire frost precautions

A suitable anti-freeze solution must be used to provide protection against frost. A solution of water and neutral calcium chloride is recommended. Prepare the solution by filling a clean container with the necessary amount of water and pouring

the calcium chloride slowly stirring continuously.

The approximate quantities of water and calcium chloride for  $\frac{3}{4}$  filling each tire with anti-freeze are given below.



Never add water to the calcium chloride.

Min. Temp. °C	TIRE SIZE																											
	13.6/12-28				14.9/13-28				16.9/14-28				14.9/13-30				16.9/14-30				12.4/11-32				12.4/11-36			
	Calcium chloride		Water		Calcium chloride		Water		Calcium chloride		Water		Calcium chloride		Water		Calcium chloride		Water		Calcium chloride		Water		Calcium chloride		Water	
	kg	lb	kg	Litre	kg	lb	kg	Litre	kg	lb	kg	Litre	kg	lb	kg	Litre	kg	lb	kg	Litre	kg	lb	kg	Litre	kg	lb	kg	Litre
-5°	16	35	140	30%	20	44	175	38½	24	53	208	45½	22	49	192	42½	29	64	250	55	14	31	126	27%	16	35	139	30½
-10°	28	62	134	29½	35	77	167	36%	41	90	200	44	38	84	184	40½	49	108	239	52½	25	55	120	26½	28	62	133	29%
-15°	37	82	131	28%	46	101	164	36%	54	119	195	43	50	110	180	39%	65	143	234	51½	33	73	118	26	36	79	131	28%
-20°	44	97	128	28%	55	121	160	35%	65	143	191	42%	60	132	176	38%	78	172	229	50½	39	86	115	25%	44	97	127	28
-25°	50	110	125	27½	62	137	157	34%	74	163	187	41%	68	150	172	37%	88	194	224	49%	45	99	113	24%	49	108	125	27½

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# MAINTENANCE

## Maintenance Schedule (55-66 60-66)

Numbers correspond to those of operations listed in the Servicing Chart (inside back cover).

### ◇ ADJUSTMENTS

4. Master clutch - pedal free travel 25 mm (1 in).
7. Brakes - pedal free travel = 45 mm (1.77 in).
10. Parking brake control.
12. Fan belt - deflection 10 to 15 mm or ½ in applying a 117 N, 12 kg or 26 lb load.
13. P.T.O. clutch - withdrawal lever pin free travel 4,5 mm (0.18 in).
29. Transmission brake - Grip free travel on toothed sector - 4 clicks.
30. Service and parking brakes (see ops. 7 and 10).

41. Engine valves - Clearance 0.25 mm or 0.010 in, intake and 0.35 mm or 0.014 in exhaust.
44. Fuel injectors - Release pressure 230 to 238 bar, (235 to 243 kg/cm<sup>2</sup> or 3,335 to 3,524 psi).
51. Starter.

### △ LEVEL CHECKS

1. Engine sump.
3. Radiator.
5. Power steering fluid reservoir.
6. Battery (see page 52).
9. Oil-bath air cleaner.
14. Windshield washer fluid reservoir.
27. Transmission and lift.
31. Front final drive (DT).
32. Final drives.

34. Steering unit.
37. Front wheel drive (DT).

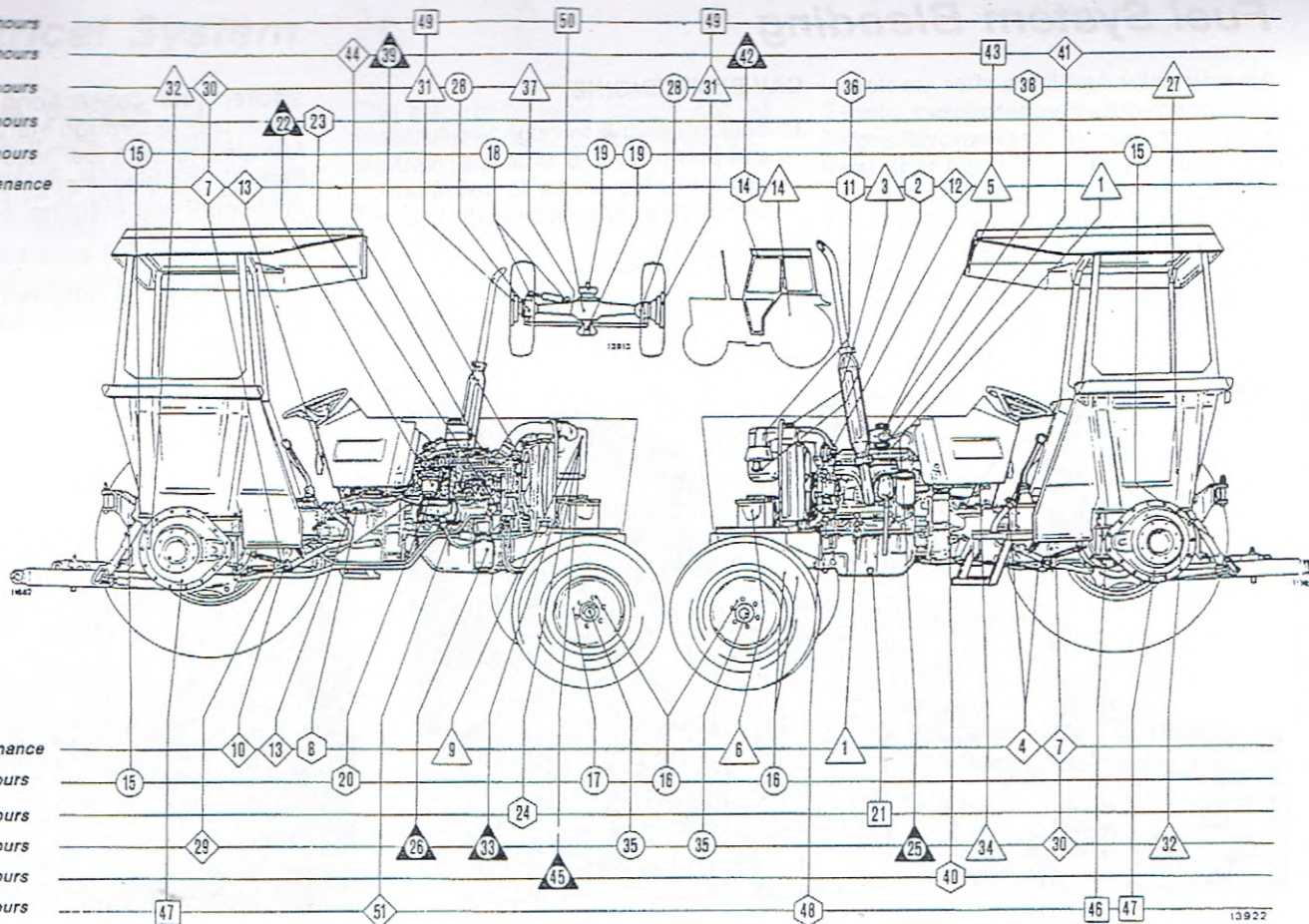
### ○ GREASING POINTS (grassofiat TUTELA G 9)

15. Lift and 3-point linkage (3 off).
16. Steering and axle pivot (4 off, 3 off on power steering version).
17. Power steering (1 off).
18. DT steering (2 off).
19. Live axle pivot (DT) (2 off).
28. King pins (DT) (4 off).
35. Front wheel hubs.

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Every 1,600 hours  
 Every 800 hours  
 Every 400 hours  
 Every 200 hours  
 Every 50 hours  
 Flexible maintenance



Flexible maintenance  
 Every 50 hours  
 Every 200 hours  
 Every 400 hours  
 Every 800 hours  
 Every 1,600 hours

○ CLEANING

▲ FILTER CHANGE

□ FLUID CHANGE

2. Cleaner drain valve.

22. First fuel filter.

21. Engine oil.

8. Transmission vent.

25. Engine oil filter.

43. Power steering fluid.

11. Dry cleaner outer element.

26. Lift oil filter.

46. Transmission and lift oil.

14. Cab air filter.

33. Dry cleaner inner cartridge.

47. Final drives oil.

20. First fuel filter condensate drain.

39. Second fuel filter.

49. Front final drive oil (DT).

23. Fuel pump filter.

42. Cab air filter.

50. Front wheel drive oil (DT).

24. Oil bath air cleaner lower element.

45. Dry cleaner inner and outer cartridge.

36. Oil bath air cleaner - all parts.

38. Power steering reservoir filter.

40. Fuel tank.

48. Engine cooling system (see page 55).

FIAT RECOMMENDED FLUID	OPERATION
oliofiat AMBRA SUPER	1-9-21-24-25-36
oliofiat TUTELA MULTI F	5-26-27-31-32-34-37-43-46-47-49-50
«PARAFLU 11» and water (see page 55)	3-49
«DP1» and water	14



# Fuel System Bleeding

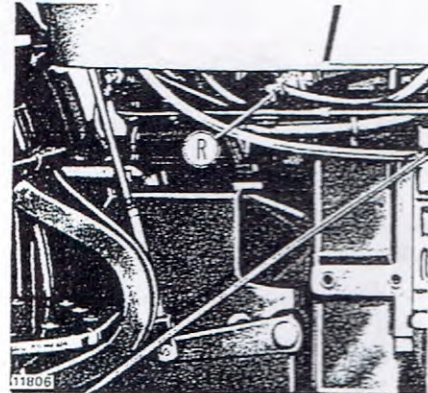
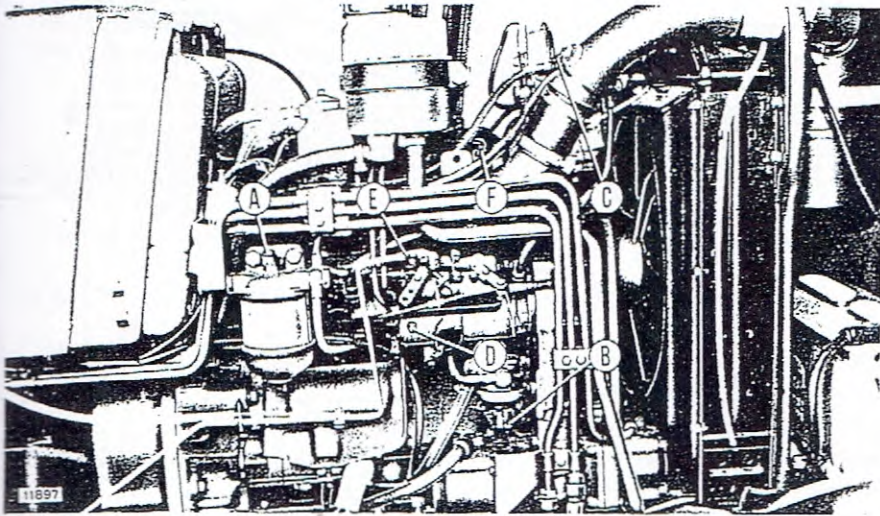
Air may enter fuel lines after tractor has been out of commission for some time, during filter removal and line disconnection, or if fuel tank is allowed to become empty. The presence of air in fuel system makes for difficult engine starting and should be eliminated with a full tank and valve R open.

## CAV PUMP ENGINE

1. Back off plug **A** through two turns and pump lever **B** until fuel issuing from plug orifice is free from air bubbles. Retighten plug.
2. Repeat on plug **C**.
3. Back off screw **D** and hexagonal screw **E** through two turns, fully

slacken four connections **F** and crank engine through starter until fuel issuing from fuel lines is free from air bubbles. Retighten connections **F** and exagonal screw **E** but not screw **D**.

4. Start engine and retighten screw **D** when issuing fuel is free from air bubbles.



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To gain access to engine, release rear straps shown and tilt hood.

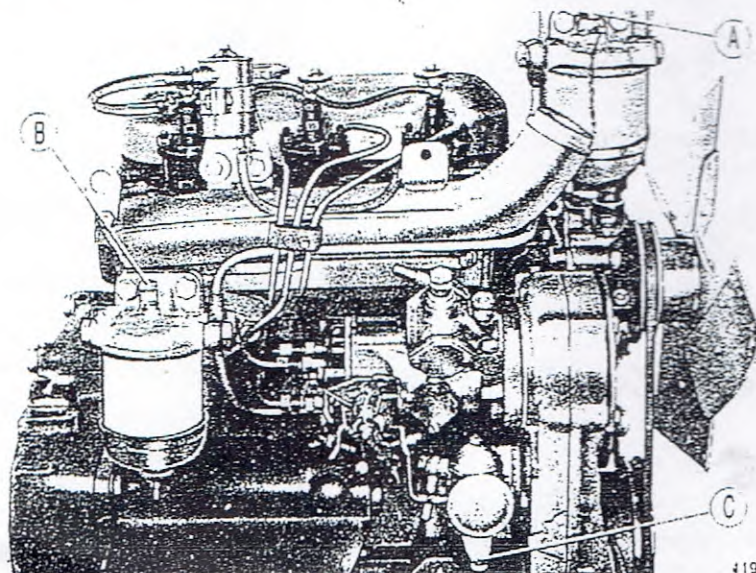
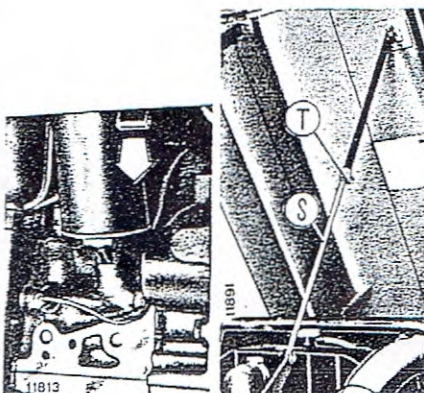
A telescopic prop **S** will hold hood in tilted position. To release depress button **T**.

## BOSCH PUMP ENGINE

1. Back off plug **B** through two turns and pump lever **C** until fuel issuing from orifice in plug is free from air bubbles. Retighten plug **B**.
2. Repeat on plug **A**. After retightening plug depress lever **C** a few times.

## NOTE

Your tractor is equipped with a distributor type fuel injection pump whose internal parts should be protected against rust whenever tractor is to remain out of commission for over a month. Accordingly, prior to stopping tractor add 10% of **oliofiat PROT 10 W/M** oil to existing fuel in tank and operate engine for half an hour.



11930

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## **⚠ DANGER ⚠**

Battery electrolyte is diluted sulphuric acid which can cause serious burns. Avoid all contact with skin, eyes and clothing. Keep sparks or open flames away from battery. Provide proper ventilation when charging or using batteries in a closed area.

The electrolyte level should not fall below the "LIVELLO ELETTROLITO" mark.

To top up remove battery caps and pour distilled water in apertures.

Also check state of charge using a hydrometer.

Hydrometer reading for a charged battery is **1.28** for normal duty, and **1.23** for tropicalised version. When battery is almost discharged hydrometer reading will be **1.16** for normal duty and **1.1** for tropicalised version.

## Sealed maintenance-free battery

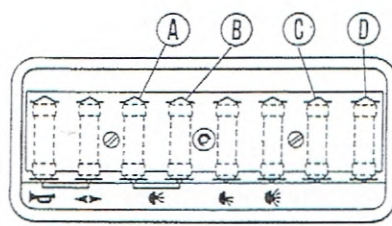
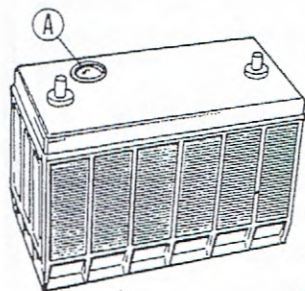
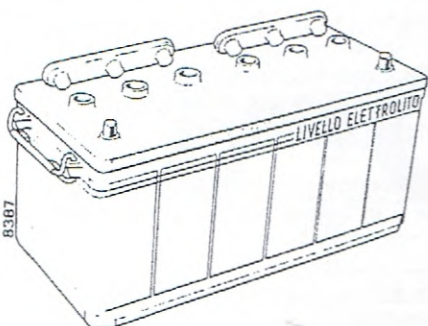
New 100 Ah sealed maintenance-free battery is now available as an alternative to standard 88/92 Ah and 110/120 Ah batteries.

An indicator "eye" **A** on the cover shows battery condition:

- Green = Battery is 65% charged.
- Black = Battery is below 65% and must be charged.
- Light = Electrolyte below minimum level. Replace.

## BATTERY

Check electrolyte level with a cold battery and engine off prior to starting work and with tractor on level ground.



## FUSES

Prior to replacing a blown fuse trace and rectify the fault.

Fuse	PROTECTED CIRCUITS	A
	Horn.	8
	Turn signal stop lights (tractor and trailers) and indicators, water temperature gauge, fuel gauge, dry air cleaner indicators, battery charge indicator, low oil pressure indicator. Parking brake on indicator and sending unit.	8
<b>A</b>	Front right and rear left parking lights. Number plate light, left trailer parking light, parking light indicator.	8
<b>B</b>	Front left and rear right parking lights, right trailer parking light, floodlight and gauge lights.	8
	Low beam.	8
	High beam and indicator.	8
<b>C</b>	Hazard warning light and flasher, single pole power point.	16
<b>D</b>	Thermostarter or start pilot.	16

## STARTING ENGINE WITH FLAT BATTERY OR WITHOUT BATTERY

To maintain alternator and regulator efficiency note the points below.

■ When tractor battery is partially discharged and engine starting requires the use of an auxiliary battery, connect the latter to the tractor battery matching terminals of the same sign, i.e. positive with positive and negative with negative. The same applies when the battery is recharged by means of an external source.

■ If the battery is completely flat or has been removed from the tractor bear in mind that:

- The engine cannot be started by towing the tractor since the solenoid-operated fuel shut-off device would be activated, thus inhibiting engine starting.



— Engine can be started using an auxiliary battery after disconnecting single flat pin **D+**, terminal **B+** and capacitor from alternator. However, as soon as the auxiliary battery is removed the engine will stop as the engine shut-off solenoid will cease to be energised.

— Engine should not be started with the single flat pin **D+**, terminal **B+** and capacitor connected to the alternator.

— Engine should be started with an appropriate 12 V battery which should then be replaced by the battery fitted in production (12 V, 82/92 Ah or 110/120 Ah capacity).

■ Normally the engine should not be run with the single flat pin **D+**, terminal **B+** and capacitor disconnected from the alternator.

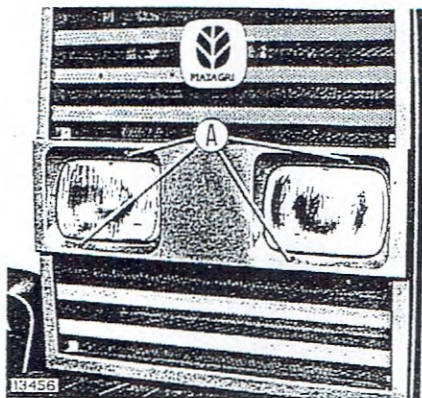
## HEADLAMP ALIGNMENT



8453

### NOTE

The beam pattern shown applies to R.H. traffic countries. A reversed beam pattern should be obtained for tractors operating in L.H. traffic countries.



13456

Check the headlamp alignment and adjust if necessary, adopting the following procedure:

— Check that the tire inflation pressures are as specified and place the unladen tractor on level ground in front of a bright wall.

— Draw two crosses on the wall corresponding to the headlamp centers.

— Back the tractor 5 meters or 16 ft from the wall and switch on the low beams.

— Reference points **P-P** should lie 5 cm or 2 in below cross marks on the wall.

— To adjust, turn screws in holes **A**, as necessary.

## Cooling System

Your coolant is a mixture of water and FIAT **PARAFU 11** antifreeze incorporating oxidation, corrosion, foam and scale control properties.

Mixture strengths of 20, 30, 40 and 50% give protection down to  $-8^{\circ}$ ,  $-15^{\circ}$ ,  $-25^{\circ}$  and  $-35^{\circ}\text{C}$  respectively.

Mixture strength and corresponding temperature are indicated on a plate attached to body.

Your coolant is effective for a period of **two years** or **1,600 hours**, after which time the system should be drained, flushed and refilled with fresh coolant.

In exceptional circumstances system may be topped up with water through the expansion tank filler (see Servicing Chart, Operation No. 3). After topping up, run the engine for a little while to ensure that the water mixes with the existing liquid.

### NOTE

In these circumstances system should be checked as soon as possible for malfunction, subsequently restoring correct strength of anti-freeze mixture.

### SYSTEM FLUSHING

(See Servicing Chart, Operation 48)

Every 1,600 hours and prior to using anti-freeze, flush cooling system as follows:

— Remove radiator cap and drain water with a warm engine.

— Allow engine to cool down and fill system with a filtered water and soda solution (250 grams or 9 oz of soda to every 10 liters or 2 1/4 gallons of water).

— Operate tractor for 1 hour and drain flushing solution.

— Allow engine to cool down and flush system with tap water inserting hose in radiator and leaving hose plug open.

— Tighten radiator hose plug, refill with water, run engine for a few minutes and drain system.

— Allow engine to cool down and refill to correct level.



### CAUTION

Water should be drained with a stationary engine.

### THERMOSTAT

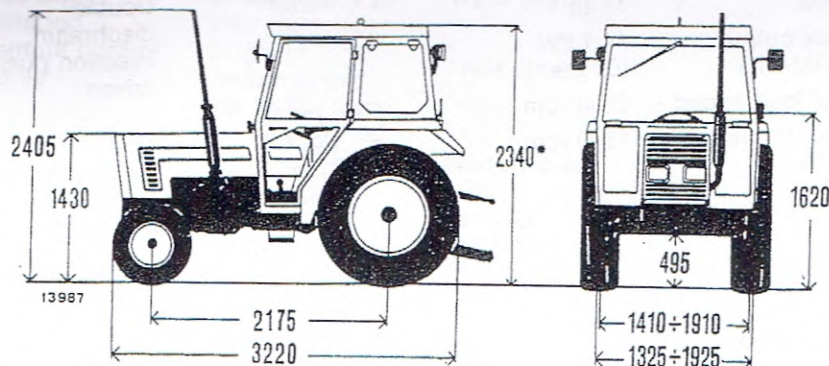
The cooling system comprises a thermostat preventing water from flowing through the radiator until the coolant has warmed up ( $85^{\circ}\text{C}$  approx.).

If thermostat malfunction is suspected, remove and inspect.

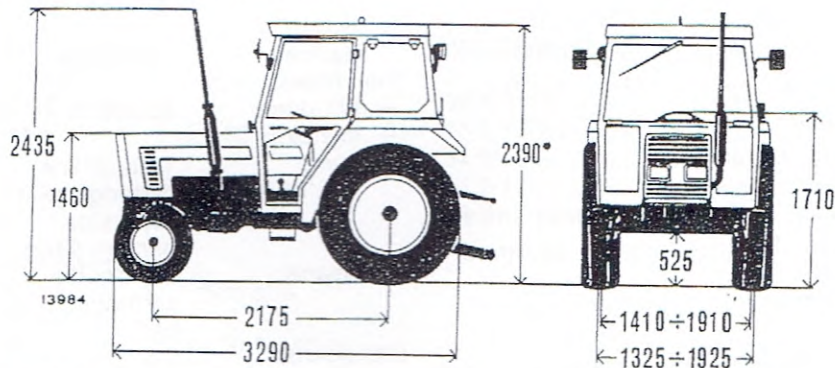
This operation should be entrusted to competent personnel.



# SPECIFICATION



(\*) 2375 mm (7 ft 8 in) with ROPS frame



(\*) 2425 mm (7 ft 10 in) with ROPS frame

## DIMENSIONS - MODEL 55-66

Front tire size 6.00 - 16 and rear tire size 12.4/11-32

## WEIGHTS - MODEL 55-66

Operating weight with 6.00-16 and 12.4/11-32 tires, lift with implement attachment, front hook, swinging drawbar and cab

..... 2400 kg or (5,291 lb.)

— As above with front weights (10 plates) and 6 rings on rear wheels

..... 3230 kg (7,120 lb.)

## DIMENSIONS - MODEL 60-66

Front tire size 7.50 - 16 and rear tire size 12.4/11-36

## WEIGHTS - MODEL 60-66

Operating weight with 7.50-16 and 12.4/11-36 tires, lift with implement attachment, front hook, swinging drawbar and cab

..... 2440 kg (5,379 lb.)

— As above with front weights (10 plates) and 6 rings on rear wheels

..... 3270 kg (7,208 lb.)

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## SPEEDS

Speeds are given at governed engine speed.

Model 55-66

Gear	Rear tires					
	12.4/11-32		13.6/12-28		14.9/13-28	
	kph	mph	kph	mph	kph	mph
1st Low	1,8	1.12	1,7	1.05	1,8	1.12
2nd "	2,7	1.67	2,6	1.61	2,7	1.67
3rd "	3,3	2.05	3,2	1.68	3,3	2.05
4th "	5,3	2.29	5,0	3.10	5,3	2.29
1st Normal	4,0	2.48	3,9	2.42	4,0	2.48
2nd "	6,3	3.91	6,0	3.72	6,2	3.84
3rd "	7,7	4.77	7,3	4.53	7,6	4.71
4th "	12,2	7.56	11,6	7.19	12,1	7.50
1st High	9,5	5.89	9,0	5.58	9,4	5.83
2nd "	14,6	9.05	13,9	8.62	14,5	8.99
3rd "	17,9	11.10	17,0	10.60	17,7	10.97
4th "	28,5	17.67	27,1	16.80	28,2	17.48
1st Reverse	4,3	2.67	4,1	2.54	4,3	2.67
2nd "	6,7	4.16	6,3	3.91	6,9	4.28
3rd "	8,2	5.09	7,8	4.84	8,1	5.03
4th "	13,5	8.37	12,9	8.00	13,4	8.31

Model 60-66

Gear	Rear tires									
	14.9/13-28		16.9/14-28		14.9/13-30		16.9/14-30		12.4/11-36	
	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph
1st Low	1,7	1.05	1,8	1.12	1,7	1.05	1,8	1.12	1,8	1.12
2nd "	2,6	1.61	2,7	1.67	2,7	1.67	2,8	1.74	2,8	1.74
3rd "	3,2	1.98	3,3	2.05	3,3	2.05	3,4	2.11	3,5	2.17
4th "	5,1	3.16	5,2	3.29	5,2	3.22	5,5	3.41	5,5	3.41
1st Normal	3,9	2.42	4,1	2.54	4,0	2.48	4,2	2.60	4,2	2.60
2nd "	6,0	3.72	6,2	3.84	6,1	3.78	6,4	3.97	6,5	4.03
3rd "	7,3	4.53	7,6	4.70	7,5	4.65	7,9	4.90	7,9	4.90
4th "	11,6	7.19	12,2	7.56	12,0	7.44	12,5	7.75	12,6	7.81
1st High	9,1	5.64	9,5	5.89	9,3	5.77	9,7	6.01	9,8	6.08
2nd "	13,9	8.62	14,6	9.05	14,4	8.93	15,0	9.30	15,1	9.36
3rd "	17,1	10.60	17,6	10.91	18,4	11.41	18,5	11.47	18,5	11.49
4th "	27,1	16.80	28,4	17.61	28,0	17.36	29,3	18.17	29,5	18.29
1st Reverse	4,1	2.54	4,3	2.67	4,3	2.67	4,4	2.73	4,5	2.70
2nd "	6,3	3.91	6,7	4.16	6,5	4.03	6,9	4.28	6,9	4.28
3rd "	7,8	4.84	8,1	5.03	8,0	4.97	8,4	5.21	8,4	5.21
4th "	12,9	8.02	13,5	8.37	13,3	8.25	13,9	8.62	14,0	8.68



ENGINE		Displacement	2931 cc	Fuel System	
<b>Model 55-66</b>		Compression ratio	17 to 1	Lift pump	Double diaphragm, injection pump driven
Fiat code		Max output	44.1 kW		
— BOSCH Pump	8035.06.206	DGM/DIG	(60 metric HP)		
— CAV Pump	8035.06.306	Full load speed	2500 rpm	CAV pump	
Type	Diesel, 4-stroke, direc. injection	Full torque speed	1500 rpm	— Code	DPS
No. of cylinders	3			— Type	Distributor
Bore and stroke	100x115 mm 3.93x4.52 in			— Governor	Centrifugal, all-speed
Displacement	2,710 cc			— Advance device	Automatic
Compression ratio	17 to 1			BOSCH pump	
Max. output	40.4 kW	<b>Valve Gear</b>		— Code	VE 3/11 F 1250
DGM/DIN	(55 metric HP)	Valves	Overhead	— Type	Distributor
Full load speed	2500 rpm	Intake opens	3° B.T.D.C.	— Governor	Centrifugal, all-speed
Full torque speed	1400 rpm	Intake closes	23° A.B.D.C.	— Advance device	Automatic
		Exhaust opens	48°30' B.B.D.C.	Fuel filters	
		Exhaust closes	6° A.T.D.C.	— Lift pump	Gauze
		Valve clearance (for timing check)	0.45 mm or 0.18 in	— Injection pump	Twin, in line, cartridge (water separator on primary filter)
<b>Model 60-66</b>		Valve clearance, normal (warm or cold)	normal (warm or cold)	Air cleaner	Dry double cartridge or oil bath
Fiat code		— Intake	0.25 mm or 0.010 in	Pre-cleaner	Centrifugal, self-cleaning
— BOSCH Pump	8035.05.206	— Exhaust	0.35 mm or 0.014 in	— Option	Hood mounted
— CAV Pump	8035.05.306				
Type	Diesel, 4-stroke, direct injection				
No. of cylinders	3				
Bore and stroke	104x115 mm 4.09x4.52 in				

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Timing (BTDC)	CAV 0 ± 1° BOSCH 6 ± 1°	Control		Relative ground speed	see page 26
Firing order	1-2-3	— Master	Pedal	Control	PTO clutch lever and engagement lever
Nozzles	3-orifice (model 60-66) or 4-orifice (model 55-66)	— P.T.O.	Manual	Rotation	Clockwise (tractor seen from rear)
Popping pressure	230 to 238 bar (235 to 243 kg/cm <sup>2</sup> or 3,335 to 3,451 psi)	Plate material	Organic compound		
<b>Lubrication System</b>		<b>Transmission</b>		<b>LIFT</b>	
Type	Forced-feed	Gear type	Helical, constant mesh	Type	Hydraulic, draft and position control
Pump	Gear	Speed ratios	Four	Draft sensitivity	Adjustable
Oil filters		Splitter	Pinion drive, 3 forward ranges and 1 reverse giving.	Lift response	Adjustable
— Pump inlet	Gauze		12 forward and 4 reverse ratios	Draft control	Lower links (sensing bar)
— Pump outlet	Cartridge	Synchromesh	All	Lift-O-Matic	Lower link lowering and raising
Line pressure (warm, full speed)	2.9 to 3.9 bar 3 to 4 kg/cm <sup>2</sup> or 42 to 57 psi	<b>Rear Transmission</b>		Hydraulic fluid	Rear transmission oil
<b>Cooling System</b>		Bevel drive ratio	9/43	Hydraulic pump	Gear, engine driven
Type	Water	Differential lock	Pedal control, automatic lock-out	— Type	FIAT A 31
Pump	Centrifugal	Final drives	Pinion drive	— Pump speed	2,328 rpm at governed speed
Radiator	Vertical tube, 3 deep			— Pump output	32.8 liter/min or 7.22 gall/min
Fan	Suction, water pump mounted	<b>P.T.O.</b>		— Relief valve setting	186 bar, 190 kg/cm <sup>2</sup> or 2,698 psi
Regulation	Thermostat	Type	Fully independent, 2 versions.		
<b>DRIVE TRAIN</b>		— 540 rpm	2200 engine rpm		
Clutch		— 540 and 1000 rpm	2200 and 2380 rpm		
Type	Dry, twin plate 11 in				

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Attachment Linkage	Category 2	<b>REAR WHEELS</b>	Model 55-66
Side sway limitation	3-point	Separate disc and wheel	Front
Remote control valves	Check chains or links (optional)	Track widths	6.00-16 to 13.6/12-28
	Single or double-acting (up to 3).	7	6.00-16 to 14.9/13-28
			6.00-16 to 12.4/11-32
			7.50-16 to 14.9/13-28
			7.50-16 to 12.4/11-32

### FRONT AXLE

Type	Inverted U, telescoping, center-pivoting
Track widths	6

### Model 55-66

Tire size	Rim size
14.9/13-28 pr 6	W13-28"
13.9/12-28 pr 6	W12-28"
12.4/11-32 pr 6	W11-32"

### Model 60-66

6.00-16	to 14.9/13-28
7.50-16	to 16.9/14-28
7.50-16	to 16.9/14-30
7.50-16	to 16.9/13-30
7.50-16	to 12.4/11-36
7.50-16	to 14.9/13-28

### FRONT WHEELS

Integral rims discs, pressed steel.

### Model 55-66

Tire size	Rim size
6.00-16 pr 6 or pr 8	4.00 E-16"
7.50-16 pr 6 or pr 8	5.50 F-16"

### Model 60-66

12.4/11-36 pr 6	W11-36"
16.9/14-30 pr 6	W13-30"
14.9/13-30 pr 6	W13-30"
16.9/14-28 pr 6	W13-28"
14.9/13-28 pr 6	W13-28"

### STEERING

Wheel Type	Central Ball recirculation or hydrostatic with separate circuit (page 64)
Turning radius (no brakes)	3,8 m (12 ft 6 in)

### Model 60-66

Tire size	Rim size
6.00-16 pr 6 or pr 8	4.00 E-16"
7.50-16 pr 6 or pr 8	5.50 F-16"

### SERVICE BRAKE

Type	Disc, oil bath, axle shaft mounted
Control	Latched pedals

Tire matching (to keep tractor horizontal).

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### PARKING/EMERGENCY BRAKE

Type	Mechanical
Control	Manual lever

### PARKING BRAKE (optional)

Type	Disc, independent
Position	Bevel pinion shaft mounted
Control	Manual lever

### BODY

Construction	Tilttable integral body
Fenders	Wrap-around
ROPS frame	Provision for
Fuel tank	Mounted ahead of operator's seat

### Seat

Suspension	Parallelogram and hydraulic damper
Reach	Adjustable
Ride	Adjustable

### TOWING ATTACHMENTS

Crossmember	Drilled
Drawbar	Swinging
Rear hook	Adjustable for height
Rear hook	Rockinger
Rear hook	Lemoine
Tow hook	Single axle trailer
Front hook	Pull type

### ELECTRICAL SYSTEM (12 V)

Alternator	
Rated output	400W at governed engine rpm

Voltage regulator

Integral

### Battery

Type	12V
Capacity	88/92 Ah or 110/120 Ah (20 hour rate) wet or dry charged, standard or tropicalised 100 Ah sealed type optional

### Starter

Output	2.5 kW
Operation	Solenoid

### Bulbs

Headlamps	45/40W, asymmetric, white or yellow
Front parking	5 W, white
Front turn signal	21 W, yellow
Rear parking	5 W, red
Rear turn signal	21 W, yellow
Stop	21 W, red
Number plate	5W
Reflectors	Red

### Instruments and Accessories

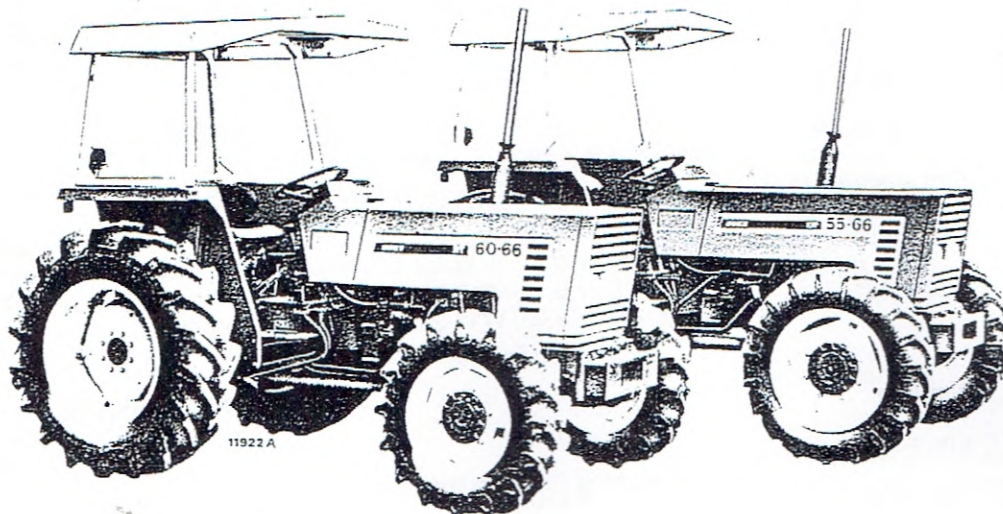
Panel	Multi-function (see page 16)
Power point	DIN, 7-pole
Power point	Single-pole
Cold start	Thermostarter
Hazard warning	Tractor and trailer
Flood light	35 W



# 55-66 DT 60-66 DT FOUR WHEEL DRIVE

This section contains four wheel drive operating instructions and specification differing from those of 12-speed and 20-speed versions.

For all other information see remaining text and Servicing Chart.



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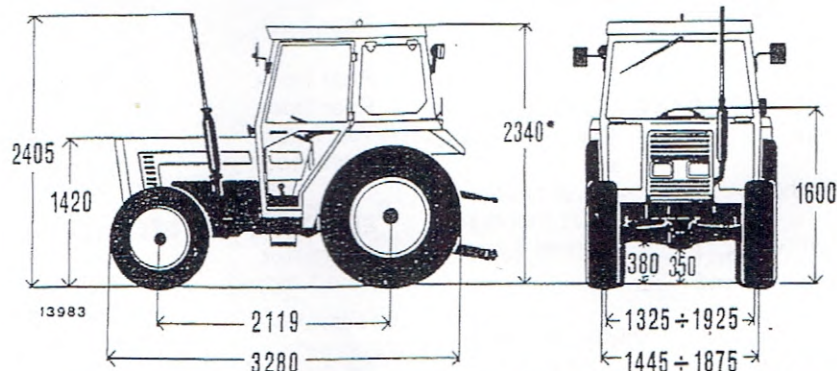
## DIMENSIONS - Model 55-66 DT

With front 8.3/8-24 and rear 12.4/11-32 tires

### TRACTOR WEIGHT - Model 55-66 DT

— Operating weight, with 8.3/8-24 and 12.4/11-32 tires, hydraulic lift with implement attachment, swinging drawbar and cab . . . . . 2600 kg

— As above, with front weights (10 plates) and 6 rings on rear wheels . . . . . 3430 kg



(\* ) 2375 mm (7 ft 8 in) with ROPS frame.

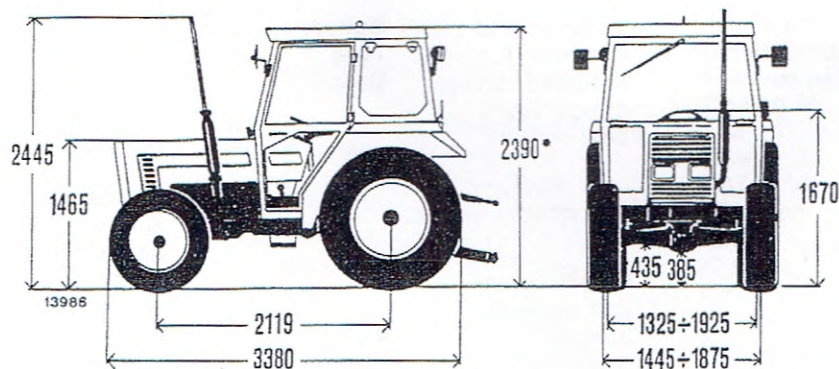
## DIMENSIONS - Model 60-66 DT

With front 11.2/10-24 and rear 12.4/11-36 tires

### TRACTOR WEIGHT - Model 60-66 DT

— Operating weight with 11.2/10-24 and 12.4/11-36 tires, hydraulic lift with implement attachment, swinging drawbar and cab . . . . . 2660 kg

— As above, with front weights (10 plates) and 6 rings on rear wheels . . . . . 3490 kg



(\* ) 2425 mm (7 ft 10 in) with ROPS frame.

## Specification



<b>LIVE FRONT AXLE</b>	
Type	Center pivoting
Shaft and joints	Co-axial, on tractor longitudinal centerline
Drive shaft	Unjointed
Differential	Two-pinion
Bevel drive ratio	9/38
Final drives	Planetary
Transfer	Spur gears, transm. mounted

**Front tires**

Wheels - Separate rim and pressed steel disc  
Track widths Five

**Model 55-66 DT**

Tire size	Rim size
8.3/8-24 pr 8	W8-24"
8.00-20 pr 6	6.00S-20"
11.2/10-20 pr 8	W9-20"

**Model 60-66 DT**

Tire size	Rim size
12.4/R20 pr 6	W9-20"
9.5/9-24 pr 8	W8-24"
11.2/10-20 pr 8	W9-20"
11.2/10-24 pr 6	W10-24"

Tire matching (to keep tractor horizontal)

**Model 55-66 DT**

8.00-20	to	13.6/12-28
8.3/9-24	to	12.4/11-32
11.2/8-20	to	14.9/13-28
11.2/10-20	to	12.4/11-32

**Model 60-66 DT**

9.5/9-24	to	14.9/13-30
9.5/9-24	to	16.9/14-28
12.4 R20	to	14.9/13-30
11.2/10-20	to	14.9/13-28
11.2/10-24	to	16.9/14-30
11.2/10-24	to	12.4/11-36
12.4 R20	to	16.9/14-28

**STEERING**

Wheel Type	Central Ball recirculation or hydrostatic with independent circuit
Fluid filter	Metal cartridge, in oil reservoir

Pump	Gear, engine driven
Type	FIAT C25
Pump speed	2328 rpm at engine governed speed
Corresponding pump output	26,4 liter/min (5.81 Gall/min)

Relief valve setting	
- 2 - wheel drive	100 bar (102 kg/cm <sup>2</sup> or 1,451 psi)
- 4 - wheel drive	125 bar (127.5 kg/cm <sup>2</sup> or 1,813 psi)

Turning radius:	
No brakes	
— Front wheel drive in	5.3 m (17ft 5in)
— Front wheel drive out	4.9 m (16ft 1in)
With brakes	
— Front wheel drive in	3.6 m (11ft 10in)
— Front wheel drive out	4.2 m (13ft 9in)

**OPERATION**

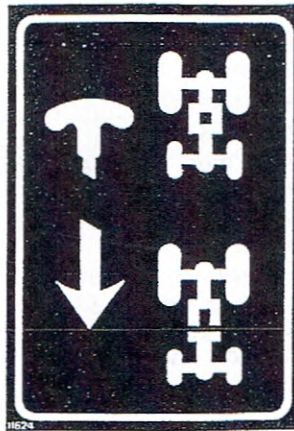
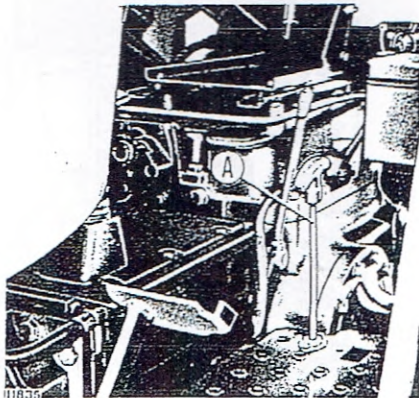
Front wheel drive increases wheel adhesion and its advantages are considerable when working on rough, muddy and slippery ground, when ploughing downhill or in any other difficult conditions.

If activation proves difficult hold the control in and steer slightly in both directions.

**NOTE**

To prevent premature tire wear do not drive on hard road surfaces with front wheel drive in and adhere to tire inflation pressures given.

Operate control A when on the move with tractor in straight-ahead driving posture and not under pull.



Control A up = In



Control A down = Out

**FRONT TRACK ADJUSTMENT**

Front wheels may be fitted with disc bulge facing either inward or outward to obtain different track widths as shown (page 66).

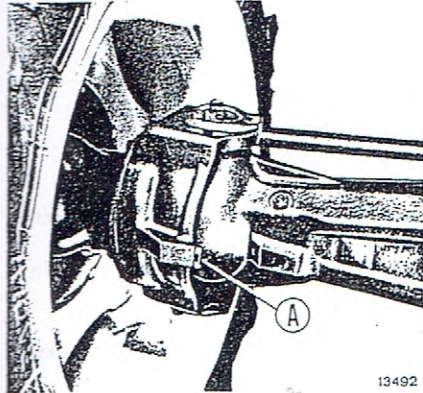
When changing track width, ensure that arrow moulded on tire faces in direction of forward travel.



## FRONT TRACKS

Steering angle may be increased by removing steering lock screw **A** from axle, starting from the following minimum track widths:

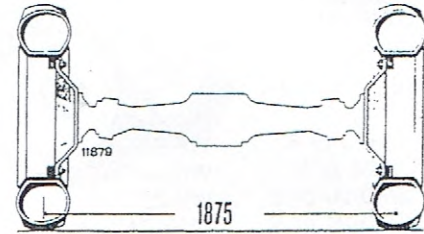
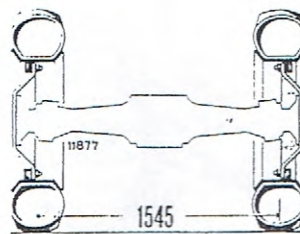
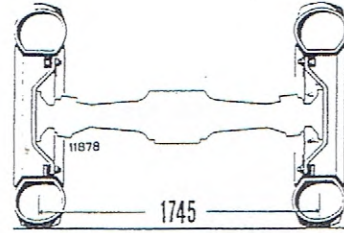
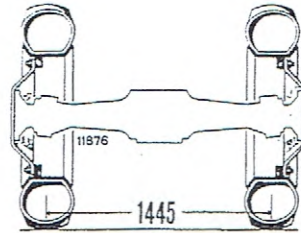
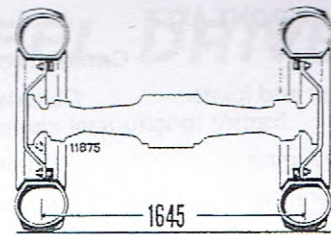
- 1445 mm or 4 ft 9 in with all tire size (model 55-66).
- 1445 mm or 4 ft 9 in with 8.00-20 and 8.3/8.24 and 11.2/10-20 tires (model 60-66).



13492

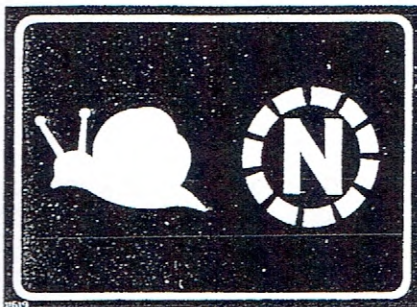
- 1545 mm or 5 ft 1 in with 11.2/10-24 tires (model 60-66).

With narrow track widths, tighten screw **A** fully to prevent tire from fouling hood when steering sharply or when entering or exiting furrow during ploughing.



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## 20 SPEED VERSION



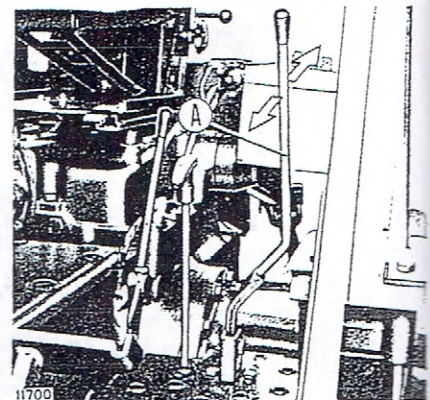
This tractor incorporates a pinion drive creeper gear between clutch and the 12-speed transmission which brings the number of available forward gears to 20 plus 8 reverse ratios.

### SPECIFICATION

(see also pages 56 and 63)

Operating weight 15 kg or 33 lb more than 12-speed version.

To engage creeper stop the tractor, declutch and pull back lever **A** as shown.



11700



Creeper out  
(lever **A** forward)



Creeper in  
(lever **A** back)

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**TRACTOR SPEEDS**  
in kph and mph with engine at governed speed.

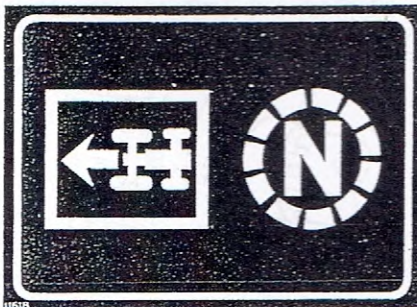
**Model 55-66**


**Model 60-66**


Gear	Rear tires					
	13.6/12-28		14.9/13-28		12.4/11-32	
	kph	mph	kph	mph	kph	mph
1st creep. low	0,3	0,19	0,3	0,19	0,3	0,19
2nd " "	0,5	0,31	0,5	0,31	0,5	0,31
3rd " "	0,6	0,37	0,6	0,37	0,6	0,37
4th " "	0,9	0,56	1,0	0,62	0,1	0,62
1st creep. nor.	0,7	0,43	0,7	0,43	0,7	0,43
2nd " "	1,1	0,68	1,1	0,68	1,1	0,68
3rd " "	1,3	0,81	1,4	0,87	1,4	0,87
4th " "	2,1	1,30	2,2	1,36	2,2	1,36
1st Low	1,7	1,05	1,8	1,12	1,8	1,12
2nd "	2,6	1,61	2,7	1,67	2,7	1,67
3rd "	3,2	1,98	3,3	2,05	3,3	2,05
4th "	5,1	3,16	5,3	3,29	5,3	3,29
1st Normal	3,9	2,42	4,0	2,48	4,0	2,48
2nd "	6,0	3,72	6,2	3,84	6,3	3,91
3rd "	7,3	4,53	7,6	4,71	7,7	4,77
4th "	11,6	7,19	12,1	7,50	12,2	7,56
1st High	9,0	5,58	9,4	5,83	9,5	5,89
2nd "	13,9	8,62	14,5	8,99	14,6	9,05
3rd "	17,1	10,60	17,7	10,97	17,9	11,10
4th "	27,1	16,83	28,2	17,52	28,5	17,70
1st Rev. low	0,7	0,43	0,8	0,50	0,8	0,50
2nd " "	1,1	0,68	1,2	0,74	1,2	0,74
3rd " "	1,4	0,86	1,5	0,93	1,5	0,93
4th " "	2,3	1,43	2,4	1,49	2,4	1,49
1st Rev. high	4,1	2,54	4,5	2,80	4,3	2,67
2nd " "	6,3	3,91	6,6	4,10	6,7	4,16
3rd " "	7,8	4,84	8,1	5,03	8,2	5,09
4th " "	12,9	8,00	13,4	8,31	13,5	8,31

Gear	Rear tires									
	14.9/13-28		16.9/14-28		14.9/13-30		16.9/14-30		12.4/11-36	
	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph
1st creep low	0,3	0,19	0,3	0,19	0,3	0,19	0,3	0,19	0,3	0,19
2nd " "	0,5	0,31	0,5	0,31	0,5	0,31	0,5	0,31	0,5	0,31
3rd " "	0,6	0,37	0,6	0,37	0,6	0,37	0,6	0,37	0,6	0,37
4th " "	0,9	0,56	0,9	0,56	0,9	0,56	1,0	0,62	1,0	0,62
1st creep nor.	0,7	0,43	0,7	0,43	0,7	0,43	0,8	0,50	0,8	0,50
2nd " "	1,1	0,68	1,1	0,68	1,1	0,68	1,2	0,74	1,2	0,74
3rd " "	1,3	0,81	1,4	0,87	1,4	0,87	1,4	0,87	1,4	0,87
4th " "	2,1	1,30	2,2	1,36	2,2	1,36	2,3	1,43	2,3	1,43
1st Low	1,7	1,05	1,8	1,12	1,7	1,05	1,8	1,12	1,8	1,12
2nd "	2,6	1,61	2,7	1,67	2,7	1,67	2,8	1,74	2,8	1,74
3rd "	3,2	1,98	3,3	2,05	3,3	2,05	3,4	2,11	3,5	2,17
4th "	5,1	3,16	5,3	3,29	5,2	3,22	5,5	3,41	5,5	3,41
1st Normal	3,9	2,42	4,1	2,54	4,0	2,48	4,2	2,60	4,2	2,60
2nd "	6,0	3,72	6,2	3,84	6,1	3,78	6,4	3,97	6,5	4,03
3rd "	7,3	4,53	7,6	4,70	7,5	4,65	7,9	4,90	7,9	4,90
4th "	11,6	7,19	12,2	7,56	12,0	7,44	12,5	7,75	12,6	7,81
1st High	9,1	5,64	9,5	5,89	9,3	5,77	9,7	6,01	9,8	6,08
2nd "	13,9	8,62	14,6	9,05	14,4	8,93	15,0	9,30	15,1	9,36
3rd "	17,1	10,60	17,9	10,91	17,6	10,91	18,4	11,47	18,5	11,49
4th "	27,1	16,80	28,4	17,61	28,0	17,36	29,3	18,17	29,5	19,29
1st Rev. low	0,7	0,43	0,8	0,50	0,8	0,50	0,8	0,50	0,8	0,50
2nd " "	1,1	0,68	1,2	0,74	1,2	0,73	1,2	0,74	1,3	0,81
3rd " "	1,4	0,86	1,5	0,93	1,5	0,93	1,5	0,93	1,5	0,93
4th " "	2,3	1,43	2,4	1,49	2,4	1,49	2,5	1,55	2,5	1,55
1st Rev. high	4,1	2,54	4,3	2,67	4,3	2,67	4,4	2,73	4,5	2,79
2nd " "	6,3	3,91	6,7	4,16	6,5	4,03	6,9	4,28	6,9	4,28
3rd " "	7,8	4,84	8,1	5,03	8,0	4,97	8,4	5,21	8,4	5,21
4th " "	12,9	8,00	13,5	8,31	13,3	8,25	13,9	8,62	14,0	8,69

## REVERSER VERSION



 Reverser in (lever A back).

 Reverser out (lever A forward).

Reverser version tractor incorporates a reverser-splitter unit inserted between clutch and 12-speed transmission which is not provided with reverse gear range R.

Reverser version provides 12 forward and 12 reverse speeds.

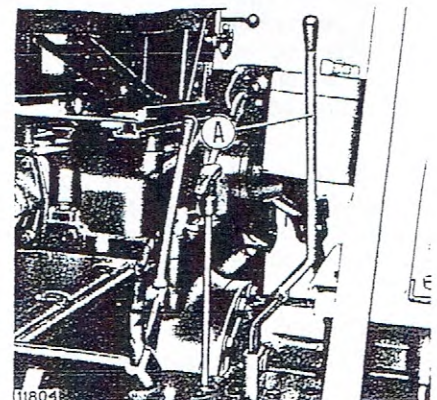
Reverser is controlled through lever A with which the desired direction of travel may be selected as shown in the diagram.

To change direction of travel stop tractor and disengage splitter for forward travel and move reverser lever back for reverse.

### SPECIFICATION

(see also pages 56 and 63).

Operating weight 20 kg or 44 lb more than 12-speed version.





## TRACTOR SPEEDS

Reverser speeds given below are at governed engine speed  
Forward speeds are those of standard version.

Model 55-66

Gear	Rear tires					
	12.4/11-32		13.6/12-28		14.9/13-28	
	kph	mph	kph	mph	kph	mph
1st Low	1,8	1.12	1,7	1.05	1,8	1.12
2nd "	2,7	1.67	2,6	1.61	2,7	1.67
3rd "	3,3	2.05	3,2	1.68	3,3	2.05
4th "	5,3	2.29	5,0	3.10	5,3	2.29
1st Normal	4,1	2.54	3,9	2.42	4,0	2.48
2nd "	6,3	3.91	6,0	3.72	6,2	3.84
3rd "	7,7	4.77	7,3	4.53	7,6	4.71
4th "	12,2	7.56	11,6	7.19	12,1	7.50
1st High	9,5	5.89	9,1	5.64	9,4	5.83
2nd "	14,7	9.11	14,0	8.68	14,5	8.99
3rd "	17,9	11.10	17,1	10.60	17,8	11.04
4th "	28,5	17.67	27,2	16.86	28,3	17.55

Model 60-66

Gear	Rear tires									
	14.9/13-28		16.9/14-28		14.9/13-30		16.9/14-30		12.4/11-36	
	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph
1st Low	1,7	1.05	1,8	1.12	1,7	1.05	1,8	1.12	1,8	1.12
2nd "	2,6	1.61	2,7	1.67	2,7	1.67	2,8	1.74	2,8	1.74
3rd "	3,2	1.98	3,3	2.05	3,3	2.05	3,4	2.11	3,5	2.17
4th "	5,1	3.16	5,3	3.29	5,2	3.22	5,5	3.41	5,5	3.41
1st Normal	3,9	2.42	4,1	2.54	4,0	2.48	4,2	2.61	4,2	2.60
2nd "	6,0	3.72	6,3	3.91	6,2	3.84	6,5	4.03	6,5	4.03
3rd "	7,3	4.53	7,7	4.77	7,5	4.65	7,9	4.90	7,9	4.90
4th "	11,7	7.25	12,2	7.56	12,0	7.44	12,6	7.81	12,7	7.87
1st High	9,1	5.64	9,5	5.89	9,4	5.83	9,8	6.08	9,9	6.14
2nd "	14,0	8.68	14,6	9.05	14,4	8.93	15,1	9.36	15,2	9.42
3rd "	17,1	11.16	18,0	10.97	17,7	11.47	18,5	11.53	18,6	11.53
4th "	27,2	16.86	28,5	17.67	28,1	17.42	29,3	18.17	29,6	18.35

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## NO-SPIN VERSION

### CAUTION

■ When servicing tractor axle or front wheels, stop the engine, engage a gear and apply parking brake before lifting front end of tractor.

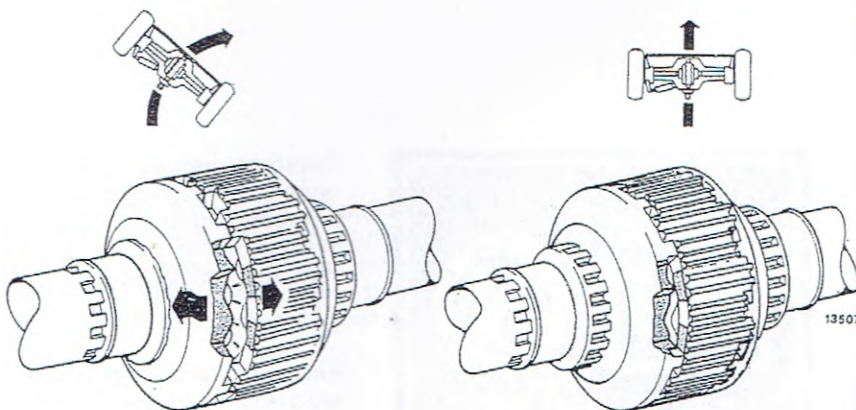
■ Be very careful on slippery ground and downhill to prevent side slip or fish-tailing.

In case of side slip do not brake but slow down by releasing accelerator pedal.

■ Do not use tractor if in straight-forward direction one of the wheels is permanently disengaged. Working with only one operating wheel may cause steering difficulties, as well as dangerous traction losses.

■ Downhill use a low gear, especially when turning, as with the NO-SPIN braking effectiveness is reduced on turns.

■ Both front tires must have the same rolling diameter. Check for correct tire pressure.



When installed on your tractor NO-SPIN unit is placed inside front axle ring gear housing instead of conventional differential unit.

NO-SPIN consists essentially of splined sleeves and dog clutch rings constituting a double joint which performs the following key functions:

— Permits full use of tractor pull;

— Prevents wheel-spin when one wheel loses traction.

— Compensates for differences in wheel travel which occur when turning or travelling over uneven ground.

When the tractor is in a straight-forward or reverse mode of operation the NO-SPIN allows equal speed to be distributed to both wheels.

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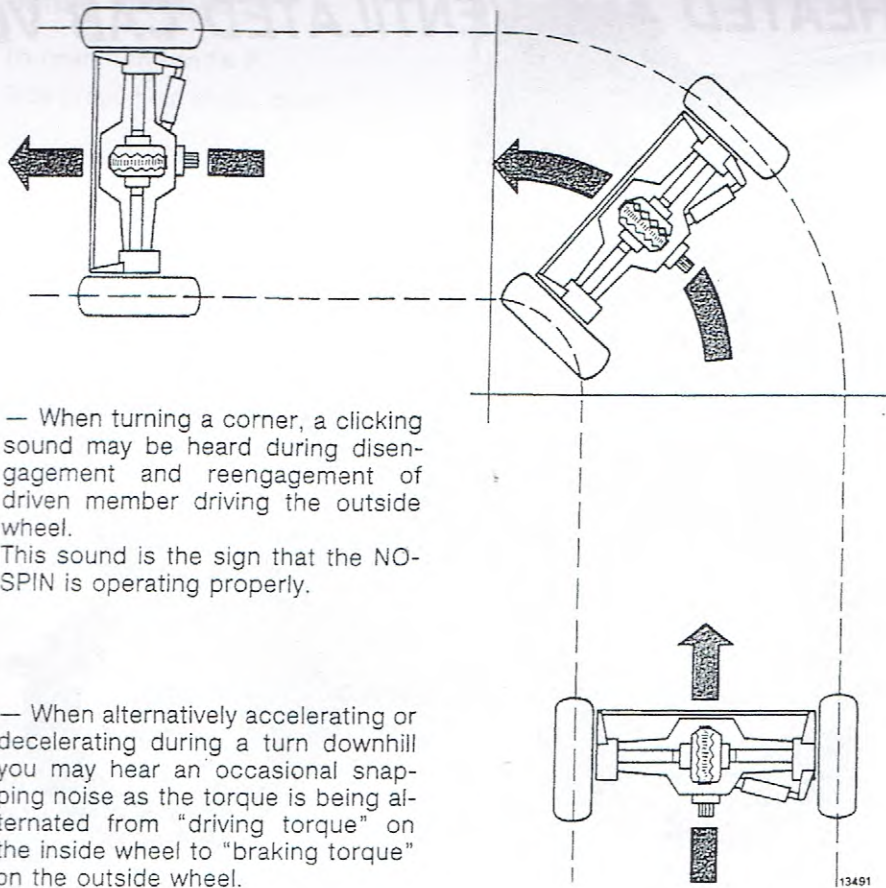


On wide turns the NO-SPIN works as a locked differential provided that the wheels travelling at the same speed are under pull. When the outer wheel loses traction NO-SPIN disengages the associated axle shaft and the wheel turns free.

If one wheel should lose traction momentarily, the opposite wheel which still has traction continues to pull the vehicle until traction is regained by both wheels.

When the tractor makes a turn or a front wheel passes over an obstruction, the outer wheel or the wheel riding over the obstruction must travel faster and farther than the other. To do this it automatically disengages, passes over the obstruction or negotiates the curve and reengages, again automatically, when the same rotation speed as that of the opposite wheel is reached.

The performance of a tractor equipped with NO-SPIN front axle is somewhat different from that of standard differential tractors. For example:



— When turning a corner, a clicking sound may be heard during disengagement and reengagement of driven member driving the outside wheel.

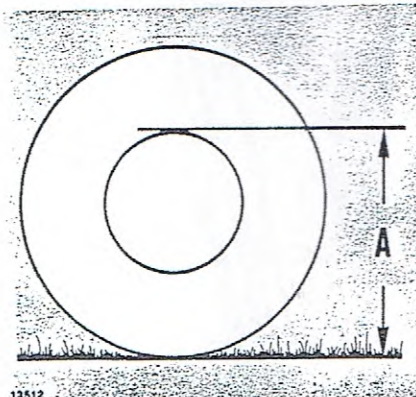
This sound is the sign that the NO-SPIN is operating properly.

— When alternatively accelerating or decelerating during a turn downhill you may hear an occasional snapping noise as the torque is being alternated from "driving torque" on the inside wheel to "braking torque" on the outside wheel.

— When the NO-SPIN equipped tractor is in a straight-forward mode of operation, a continuous click may be heard if the tires are not equal in rolling radii due to unequal wear or unequal inflating.

This can be corrected by matching the tires and checking pressure periodically.

If clicking continues, adjust tire pressures so that the distance **A** from the ground to the rim is equal as shown in figure.



Periodically, at least every three months, check NO-SPIN differential unit operation as follows:

— With engine off, engage a gear and the front wheel drive, apply parking brake and raise front end of tractor.

— Rotate front wheels in a forward direction to eliminate play.

— Hold right wheel and rotate left wheel rearward. NO-SPIN differential disengages and wheel rotates freely with an indexing or metallic clicking sound.

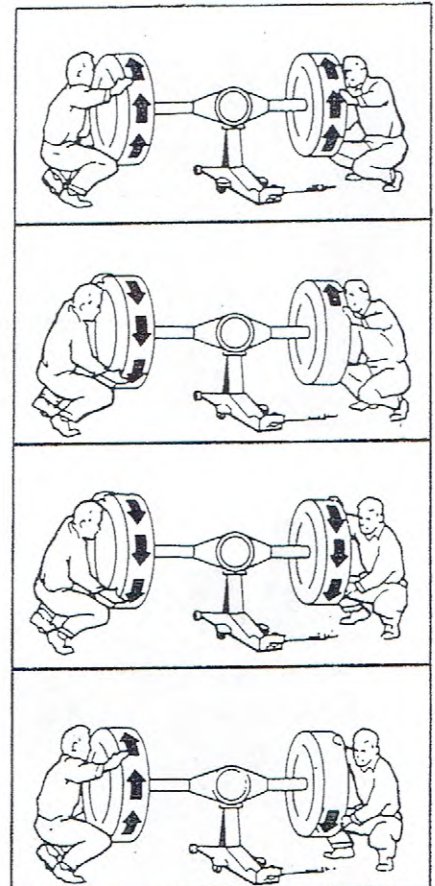
— Stop left wheel, then turn forward slightly; NO-SPIN differential engages and stops the wheel.

— Rotate both wheels rearward to eliminate play.

— Hold right wheel and rotate left wheel forward. NO-SPIN differential disengages and wheel rotates freely with an indexing or metallic clicking sound.

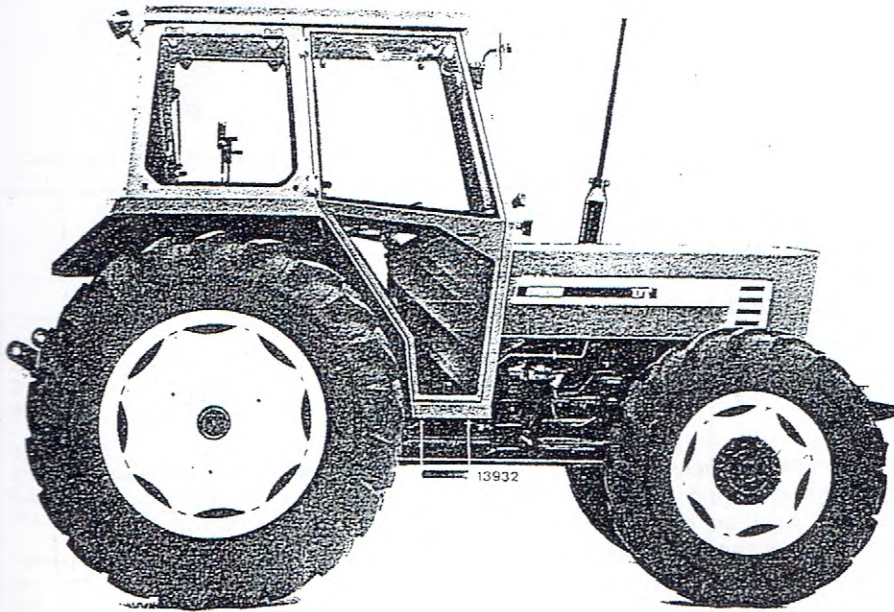
— Stop left wheel, then turn rearward slightly; NO-SPIN differential engages and stops the wheel.

— Repeat the above operations while holding left wheel.





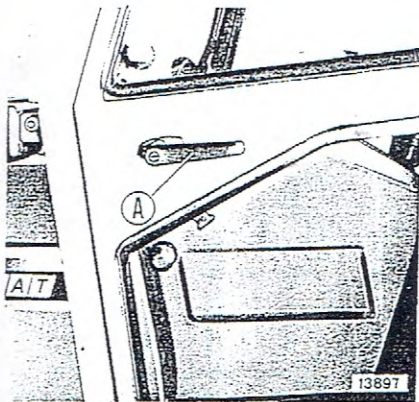
# HEATED AND VENTILATED CAB VERSION



This section contains heated and ventilated cab operating and maintenance instructions.

For all other information see the foregoing text and the enclosed Servicing Chart.

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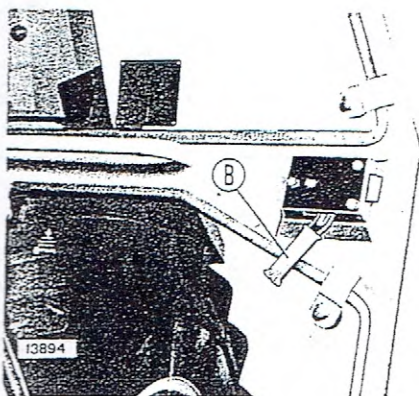
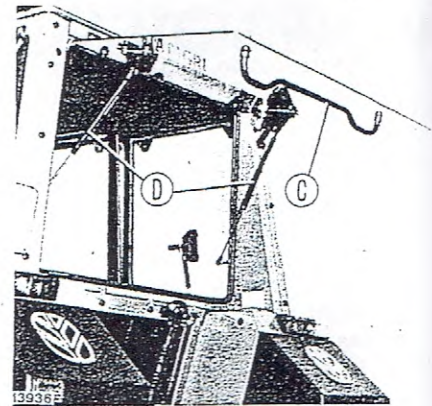


## DOORS

To open from outside. Unlock and pull lever A.

To open from inside. Push lever B forward.

To lock from outside. Doors may be locked from outside using the key provided.

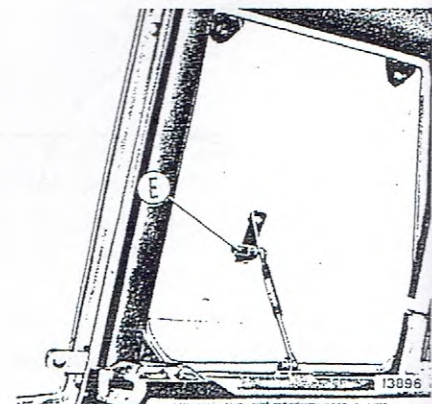


## BACK LIGHT

To open push handle C. Glass may be held open through props D.

## SIDE WINDOWS

To open push handle E outward. Glass may be held open through props.



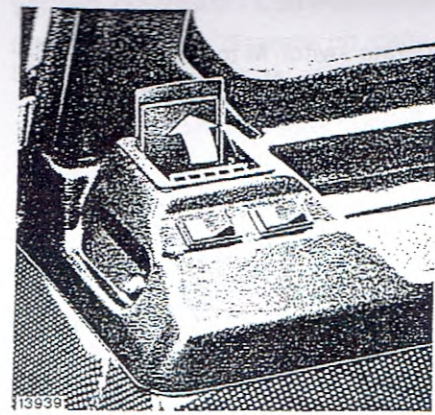
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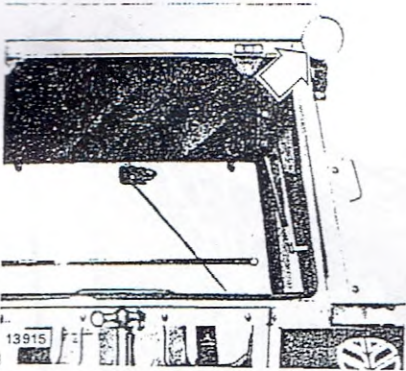
### TILTING WINDSHIELD

To open turn handle F.  
Side props hold shield open.



### ASHTRAY

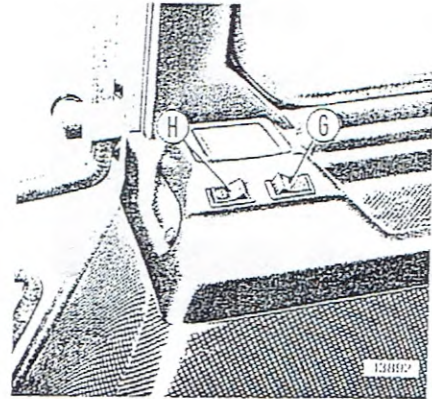
To open tilt lid down.  
To clean depress stubber and withdraw complete ashtray.



### FLOOD LAMP

(Flood light circuit is completed with starter switch in position 1, page 20).

To turn on operate switch G.  
To adjust aim turn lamp unit as desired.



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### WINDSHIELD WASHER

Washer circuit is completed with starter switch in position 1 (page 20).

To activate, depress washer switch H.

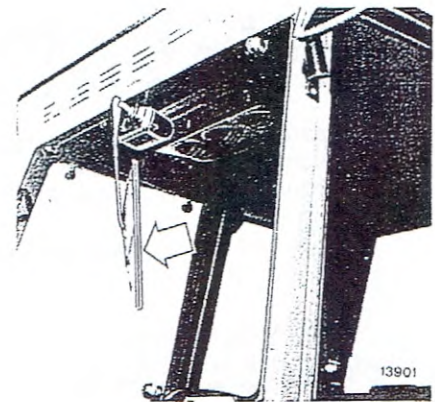
If nozzles fail to operate, clean by inserting a pin in nozzle orifice. To adjust aim, turn nozzle until jet impinges on shield at top of swept-area.

### NOTE

For topping up consult Servicing Chart.

### WINDSHIELD WIPER

To remove wiper blades tilt wiper arm, release blade from stop pin and slide off downward.

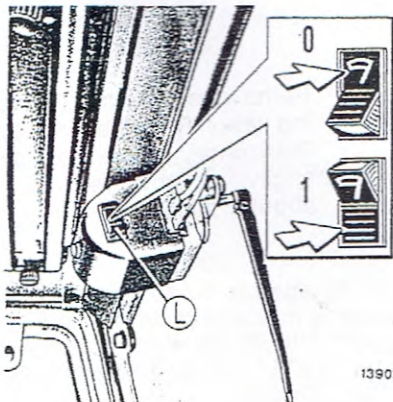


L = Windshield wiper control

Wiper circuit is completed with starter switch in position 1 (page 20).

0 = Off.

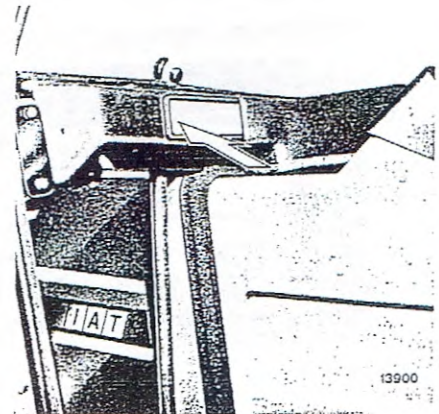
1 = On.



### CAB INTERIOR LAMP

Cab light circuit is completed with starter switch in position 1 (page 20).

Press lens as shown to turn on and press again to turn off.



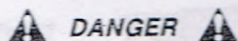
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## VENTILATION

Operate switch **M** to activate fan and adjust vents **N** to direct air flow where desired.

Air admitted to cab from outside is always filtered.



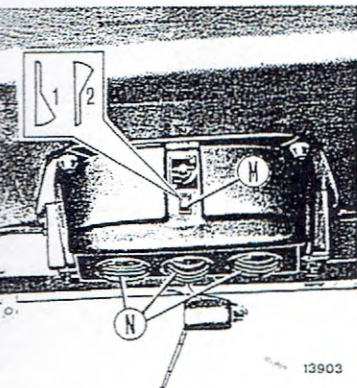
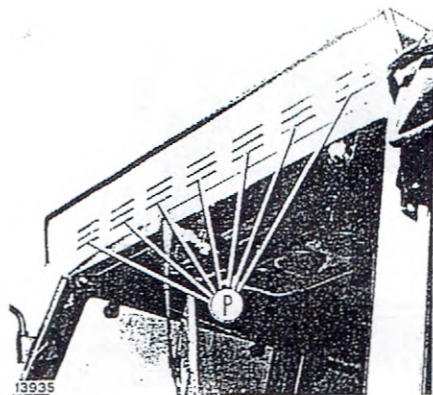
**DANGER**  
Cab air filter is not designed as protection against pesticides. Complete protection from these products can only be obtained following the specific instructions for each product.

With fan activated and windows and doors closed, cab interior pressure is higher than outside and air can only enter cab through filter-protected intakes **P**.

### Heater fan

Circuit of heater fan **M** is completed when starter switch key (see page 20) is turned to position 1.

1. Off.
2. On.



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## HEATING

Lever **R** controls temperature of heated air by regulating flow of coolant admitted from engine.

Heater fan **M** (page 78) increases volume of air admitted to interior through vents **N** (page 78).

To adjust air temperature use control level **R**

Vertical = Minimum

Horizontal = Maximum

Move to vertical position in order to prevent hot water circulation in cab.

### TO FLUSH SYSTEM

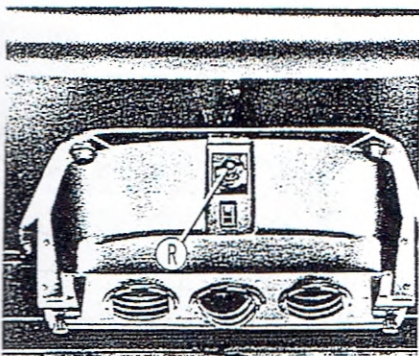
Cooling water from engine is directed to heater matrix prior to reaching radiator for cooling.

**NOTE** - Total cooling system capacity (including cab heater circuit) is 14 liters or about 3 gall.

For coolant details see page 55. For system flushing adhere to the instructions given on page 55 noting that to empty system completely, lever **R** must be moved to horizontal position.

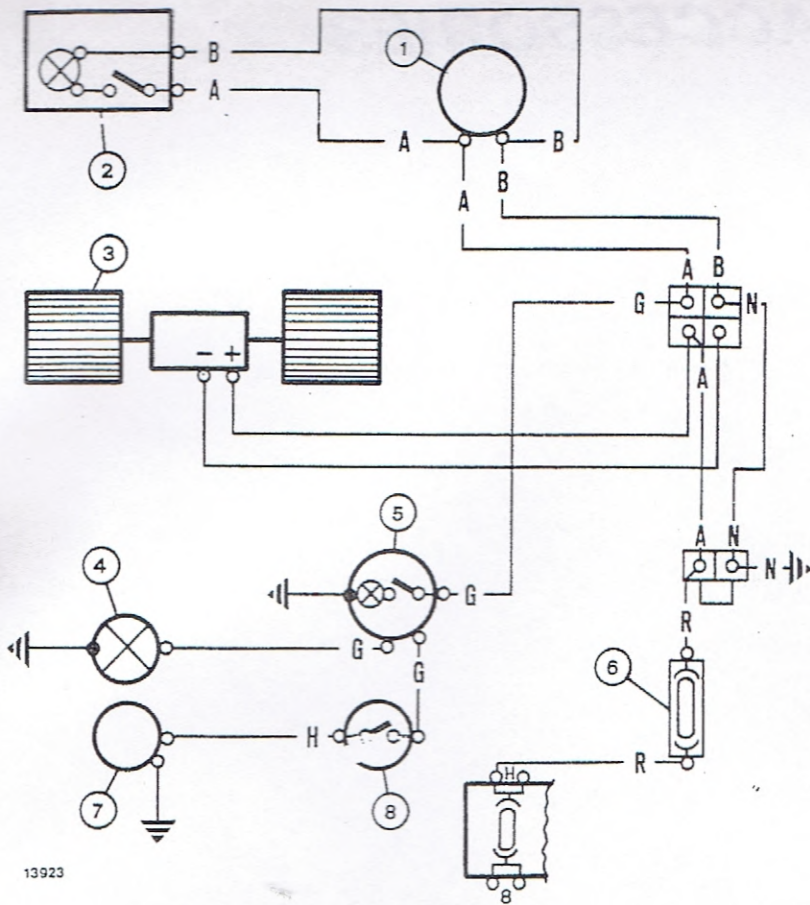
Fill engine cooling system and cab heating system as follows:

- Remove radiator cap, fill radiator with water and FIAT "PARAFLU 11" and refit the filler cap.
- Move heating lever **R** to cut off heating (vertical, red sector), start engine and run at fast idle for 5 to 10 minutes in order to warm up engine coolant.
- Remove radiator cap, move heating lever **R** to heating position (horizontal, red sector) and run engine at governed speed for about 5 minutes.
- Top up radiator with engine running at full throttle and refit radiator cap.



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## WIRING DIAGRAM - Cab version

Differences from diagram on page 55.

1. Windshield wiper motor (single speed).
2. Cab interior light.
3. Fan-heater unit
4. Flood lamp
5. Flood lamp switch
6. 25A fuse for windshield wiper, windshield washer, fan and cab light.
7. Washer pump.
8. Windshield washer switch.

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# TRACTOR STORAGE

If tractor is to be stored for an extended period carry out operations described below.

■ For distributor type fuel injection pump see page 50.

■ Protect engine as follows:

a. For periods of storage of up to one month no precaution is needed provided not more than 100 hours have elapsed since the last engine oil change, otherwise see below.

b. For storage periods in excess of one month, drain engine oil with a warm engine, fill sump with **oliofiat AMBRA SUPER** oil and run engine at part throttle for a few minutes.

c. Empty cleaner oil, clean bowl and refill with fresh fluid. Where a dry cleaner is fitted, remove cartridge and clean as directed in servicing chart.

d. Do not drain engine cooling system. In cold season ensure that strength of **FIAT PARAFLU 11** anti-freeze mixture is correct. To this end adhere to instructions given on page 55.

■ Thoroughly clean tractor and store in a dust-free and dry shed or garage.

■ Fill fuel tank to maximum level.

■ Remove battery and store in a warm room (10°C min) away from sunlight. Check every month and recharge as necessary.

■ Prop front axle and rear transmission to take tractor weight off wheels and deflate tires.

■ Cover tractor.

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# VARIANTS AND ACCESSORIES

This manual covers all your tractor equipment including the variants and optional accessories listed below:

- Mechanical reverser.
- Creeper.
- NO-SPIN differential.
- Thermostarter.
- Start-pilot.
- Power steering.
- 540/1000 rpm P.T.O.
- Dry air cleaner with dashboard mounted restriction indicator.
- Quick release male half couplings for remote control valve connection under pressure.
- Check links
- Quick connect implement attachment.
- Horizontal exhaust.
- Tool box.
- De-luxe seat.
- Transmission brake.
- Special valve for trailer hydraulic brake.
- Provision for trailer brake hand lever.
- Remote control valves.
- Implement attachment devices.
- Ballast.
- Flood lamp.
- Front fenders.
- Front fenders for four-wheel drive version (power steering).
- ROPS frame with canopy.
- Splashguards.
- Heated and ventilated cab with or without.
- Sun blind.

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