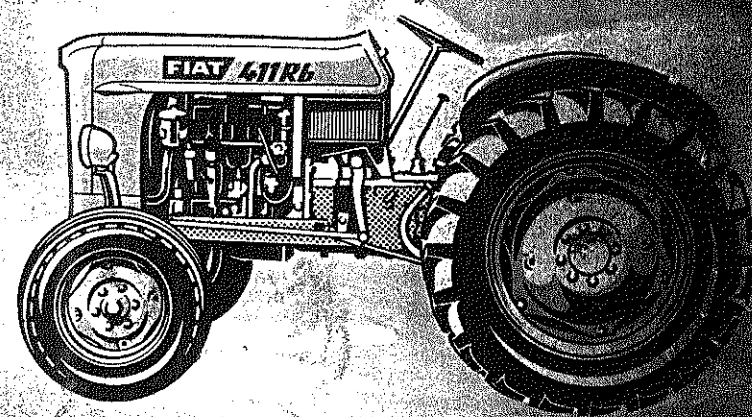


**FIAT**

**trattori**

# 411 Rb MODEL



**INSTRUCTION BOOK**

FIAT - SEZIONE MOTORIZZAZIONE AGRICOLA - Corso Marconi, 20 - TORINO - Italy

PRINTED IN ITALY — PRINT No. 304.325 — XII-1960 — 2500 — S. N.

FIAT — SEZIONE MOTORIZZAZIONE AGRICOLA — Corso Marconi, 20 — TORINO - Italy

PRINTED IN ITALY — 1st EDITION (1) — PRINT No. 304.325 — XII-1960 — 2500 — S.A.N.

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## 411 Rb MODEL

|                               |        |
|-------------------------------|--------|
| GAUGES AND CONTROLS . . . . . | page 7 |
| OPERATION . . . . .           | » 11   |
| MAINTENANCE . . . . .         | » 19   |
| ACCESSORY EQUIPMENT . . . . . | » 27   |
| <hr/>                         |        |
| SERVICE HINTS . . . . .       | » 36   |
| SPECIFICATIONS . . . . .      | » 42   |

# PRELIMINARY INSTRUCTIONS FOR TRACTOR OPERATION

The following is a list of the points on which the Owner should be instructed in order to be enabled to use immediately and properly his newly purchased tractor.

To avoid possible omissions, each item should be checked as it is explained and illustrated.

- ☐ Starting and stopping of engine and tractor.
- ☐ Running-in.
- ☐ Use of differential lock.
- ☐ Use of power take-off.
- ☐ Use of belt pulley.
- ☐ Use of hydraulic lifter.
- ☐ Wheel track adjustment.
- ☐ Lubrication and lubricants.
- ☐ Maintenance of air cleaner.
- ☐ Fuel and oil filters cleaning.
- ☐ Radiator cleaning.
- ☐ Clutch adjustment.
- ☐ Brake adjustment.
- ☐ Servicing the batteries.

## Foreword

*The purpose of this book is to familiarize the Owner with the use and the maintenance operations of the tractor.*

*This book has been divided in many sections so that the information needed can be easily and quickly found.*

*Particular importance has the section dealing with the basic maintenance rules upon the practical following out of which depends exclusively the satisfactory operation of the tractor, as well as its economical operation and long life.*

*The time spent for the maintenance operations herein described — even though some of them might seem needless — will result in a considerable advantage since a perfect efficiency of all parts of the tractor will be ensured.*

*The section «Service Hints» comprises some inspections and adjustments which, though requiring skilled servicemen and suitable equipment, have been described to assist those Shops to which you may entrust the repair work.*

## FIAT TRACTOR SERVICE

**SERVICE** - Repairs involving major disassembly operations should be entrusted to FIAT authorized Repairshops where skilled personnel and suitable equipment, as well as original spares, are available.

**SPARE PARTS** - To ensure perfect operation of your Tractor, it is essential that all worn or damaged parts be replaced with genuine FIAT spares.

In placing your order, please specify:

- Tractor model.
- Tractor and engine serial numbers.
- Part number.

## IDENTIFICATION DATA

FIAT 2411 RB  
106 45-134177

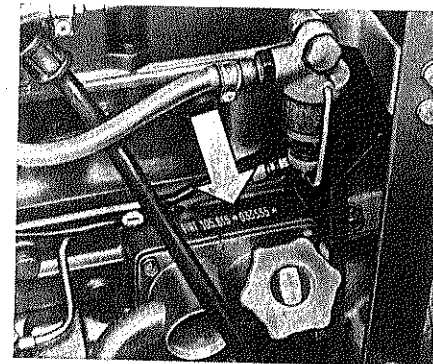


Fig. 1. - Engine serial number.

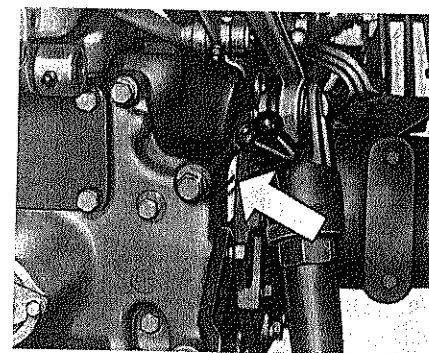


Fig. 2. - Tractor serial number.

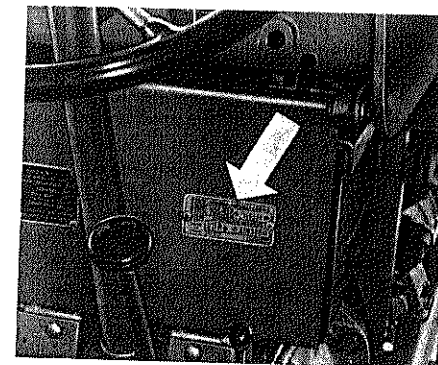


Fig. 3. - Identification plate.

## GAUGES AND CONTROLS

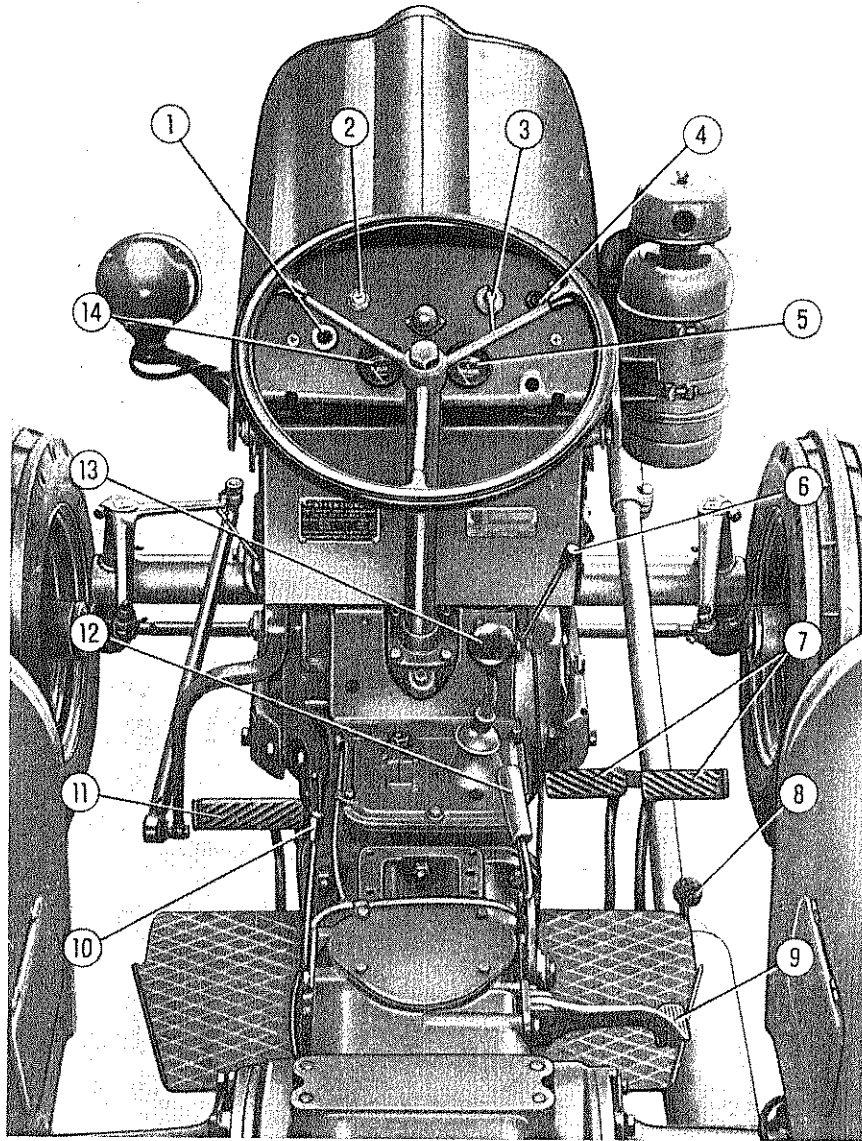


Fig. 4. - Gauges and controls.

The following items refer to fig. 4 and are described in the same numerical sequence.

**1. Generator charge indicator:** see page 14.

**2. Lock switch:**

- key in insertion position: no circuit energized;
- 1st click: engine starting circuit energized and generator charge indicator ON.
- 2nd click: engine starting circuit energized, generator charge indicator, front parking lights and panel lights ON.
- 3rd click: same as the 2nd click plus the headlamp low beams ON.
- 4th click: same as the 2nd click plus headlamp high beams ON.

The key can be removed from the switch only when horizontal.

**3. Engine starting rotary switch:** turn the grip to end of its travel and hold in this position until engine starts; when released, it will snap back to its original position.

This switch is energized only when lock switch is ON.

**4. Carburetor starting device choke knob:** a rich mixture is obtained by pulling the knob. See « Engine starting » on page 12.

**5. Engine cooling water temperature gauge:** the « green » sector of dial refers to a regular temperature; the « red » sector indicates excessive temperatures and the « white » sector insufficient temperatures.

**6. Engine accelerator lever:**

- all up = idle;
- all down = full throttle.

**7. Brake pedals:** the right and left pedals operate the right and left driving wheel brakes respectively. J

When tractor operates on the road, the brakes must be applied simultaneously on both driving wheels; it will therefore be necessary to interlock the two brake pedals by means of the proper plate.

**8. Accelerator pedal:** use this control only when tractor operates on road.

**9. Differential lock pedal:** when completely depressed, this pedal interlocks the two shafts which operate the driving wheels.

Thus the skidding of the wheel outside the furrow during ploughing jobs, will be avoided (see instructions for use on page 17).

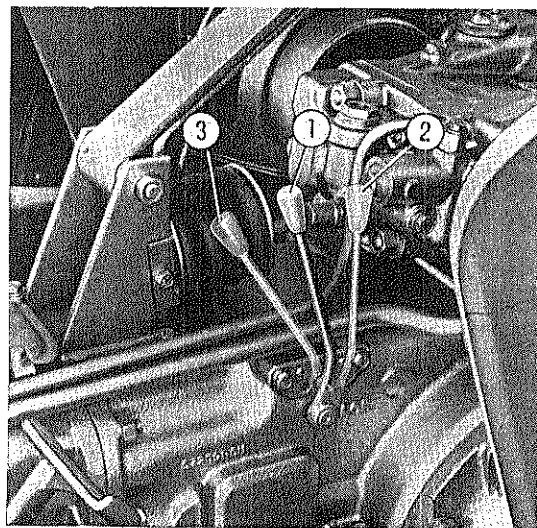


Fig. 5. - Power take-off and belt pulley control lever.

1. Central position: p.t.o. and belt pulley, disengaged.
2. Lever pulled backward: belt pulley engaged; p.t.o. directly driven by the engine.
3. Lever pushed forward: p.t.o. driven through transmission.

*Caution.* - Before displacing this lever, push clutch pedal fully in and wait a few seconds.

**10. Power take-off and belt pulley control lever:** the positions of this lever are shown in fig. 5.

**11. Clutch pedal:**

- pushed **half-way in**: it disengages the master clutch;
- pushed **fully-in**: it disengages also the clutch that transmits the drive from engine to P.T.O. or belt pulley.

A special stop plate on tractor side (figs. 6A and 6B) may be positioned to limit the pedal stroke to the point where only the master clutch is disengaged.

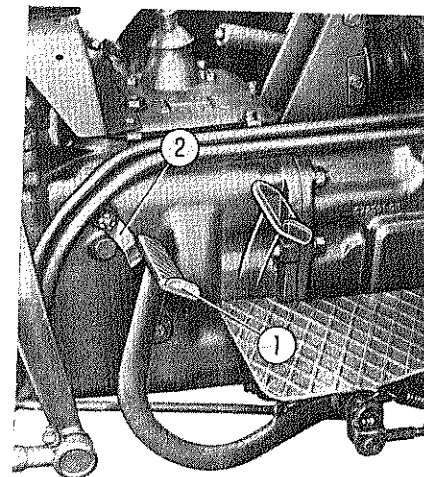


Fig. 6 A. - Clutch pedal (1) stopped half way by plate (2).

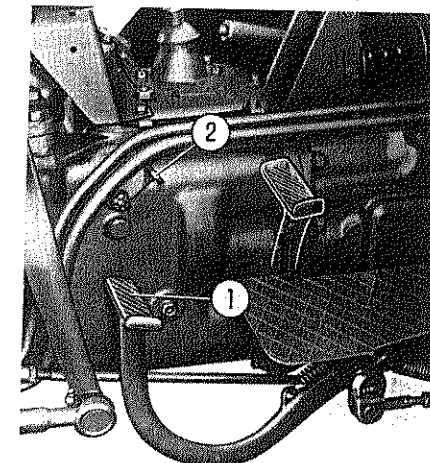


Fig. 6 B. - Clutch pedal (1) at travel end and plate (2) moved away.

**12. Brake locking hand lever:** it should be used only when the tractor has been stopped on sloping ground.

To lock the brakes apply the brake pedals and pull up the hand lever. To release the lock, depress the brake pedals, thumb in the button on lever grip and push down the lever.



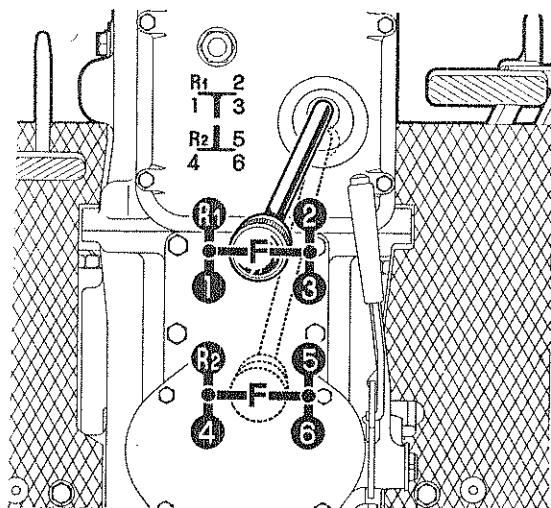


Fig. 7. - Gearshift lever positions.

- F. — Neutral.
- 1. — 1st gear.
- 2. — 2nd gear.
- 3. — 3rd gear.
- 4. — 4th gear.
- 5. — 5th gear.
- 6. — 6th gear.
- R1 — low reverse.
- R2 — high reverse.

**13. Gearshift lever:** the shifting positions of lever for the six speeds forward and two reverses are shown in fig. 7. To shift gears, always disengage the clutch.

**14. Engine oil pressure gauge:** the « green » sector of dial refers to normal pressure; the LH « red » sector signals insufficient pressure and the RH « red » sector excessive pressures.

## OPERATION

### RUN-IN PERIOD

A minimum run-in period of 60-hours is required. Proceed as follows:

- On starting, increase the engine speed slowly.
- Use the tractor on light work only.
- Avoid prolonged full throttle operation.

The above precautions also apply to newly overhauled engines.

### RUN-IN PERIOD CHECKS

Inspect the tractor frequently making sure there are no oil leaks.

After having operated the tractor for the first 60 hours:

- change the crankcase oil and clean the oil filter in sump and the oil filter cartridge;
- have the valve-to-rocker clearance checked;
- have the cylinder head hold-down nuts tightening checked.

## REPLENISHMENTS

For lubricant, water and fuel replenishments, refer to the « Maintenance Chart ».

Every day, before starting work, check that:

- engine sump oil level nears the « MAX » reference mark on indicator rod;
- radiator water nears the filler neck level;
- fuel in tank is sufficient.

## STARTING AND STOPPING THE TRACTOR

### STARTING THE ENGINE

1. Open the fuel tank cock.
2. Move the gearshift lever to neutral.
3. P.T.O. and belt pulley control lever in neutral.
4. Accelerator control lever in idle position (do not press accelerator pedal).
5. Pull out fully the choke knob (in warm season, pulling knob half-way will suffice; when engine is still warm after a short stop do not pull out the knob).
6. Insert key in lock switch and turn to first click.
7. Turn starting rotary switch grip to end of travel and release as soon as engine fires properly.
8. Once engine is started, the choke knob should be pushed back in **gradually** to ensure smooth engine warm up.
9. If engine was started from cold, let it idle for a few minutes (even longer in the cold season) before driving away the tractor. During this stage it might be necessary to rev up the engine idling rate by slightly moving the throttle lever.

When engine starting proves difficult leave an interval between successive cranking attempts.

### STARTING THE TRACTOR

1. Accelerate engine to half-throttle.
2. Depress the clutch pedal and set the gearshift lever to the desired gear speed.
3. Lower the brake lock hand lever and engage the clutch by slowly releasing the clutch pedal.

### STOPPING THE TRACTOR

1. Slow down the engine by shifting throttle control to idle position.
2. De-clutch, depress both brake pedals and, when tractor stops, move gearshift lever to neutral; release clutch pedal, pull hand brake lever and remove foot from brake pedals.

### STOPPING THE ENGINE

Turn lock switch key to stop position and pull out.

If outdoor temperature is below 0° C (32° F) and the cooling system contains no anti-freeze mixture, drain the radiator water through the cocks located under radiator and on engine left side.

## DURING OPERATION

During operation make sure that everything runs smoothly and correctly. Any irregularity, however small, should be immediately eliminated since if neglected it might develop into a more serious trouble.

**Engine lubricating oil pressure:** when the engine is hot the gauge pointer should be on the «green» sector of dial. Instead, if the pointer remains in the «red» sector on the right end of scale, this is a warning of excessive pressure in which case check the oil filter cartridge and replace if clogged (see operation No. 22 of Maintenance Chart). On the contrary, if the pointer dwells on the red sector on the left of scale, pressure is insufficient. In this case, stop immediately the engine and have the lubricating system checked by skilled personnel.

**Engine cooling water temperature:** when the engine is at the rated operation temperature, the gauge pointer should always be within the «green» sector of dial. Instead, if the pointer remains within



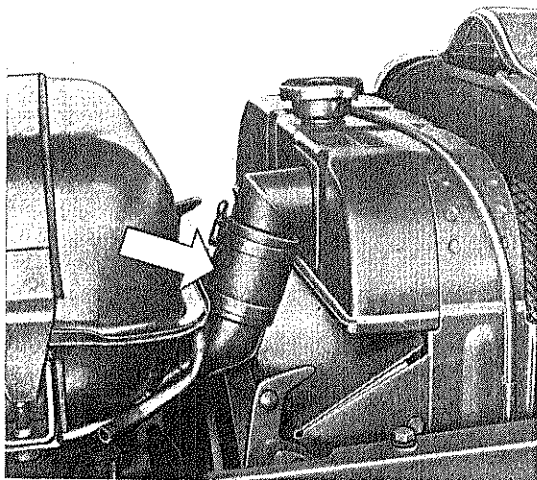


Fig. 8. - Thermostat location.

Check data:

- opening begins: 82°-87° C (180° to 189° F).
- max. opening: 6 to 7 mm (.24" to .28") at 90°-95° C (194° to 203° F).

the « white » sector (during light works and cold weather) this indicates that the water temperature is too low and the cool air draft through the radiator should be reduced by the curtain or other suitable means.

If the pointer moves on to the « red » sector, this is a warning of engine overheating.

Causes may be:

- water level in radiator too low;
- clogged honeycomb in radiator: remove the two grilles and clean with a water jet; avoid wetting the engine if warm;
- calcareous deposits in cooling system: flush as required (see page 24);
- slack fan belt: adjust tension;
- thermostat faulty operation: remove thermostat (see fig. 8) and have it checked by skilled servicemen.

**Generator charge indicator:** should be lit only when engine is idling and should go off as the engine is accelerated.

If after going off it glows again, though feebly, check and if necessary replace the regulator fuse (see page 26). If not blown, have the generator, regulator and ignition coil additional resistor inspected by an authorized shop.

**Engine operation at low speeds:** when tractor is stopped with engine running, the rpm must be kept at such a rate that the charge indicator remains decidedly OFF. Never leave the engine running at a speed which causes the generator charge indicator to go ON and OFF intermittently, since this might damage the generator regulating unit and therefore prevent a proper recharge of the battery.

## FUEL FEED

A faulty fuel feed may be caused by an excessive restriction of the strainer contained in bowl filter (see operation 23 of the Maintenance Chart); the Operator may wash the strainer with gasoline and blow dry with air.

## USE OF POWER TAKE-OFF

Power take-off shaft revolves clockwise (as seen from rear of tractor). The 6-spline shaft diameter is of  $1\frac{3}{8}$ ".

By means of the lever shown in fig. 5, the power take-off can be driven either off the engine or off the transmission.

- **Taking the drive directly from the engine** is not only useful to operate stationary farm machines but also as a power source for tractor-operated trailed implements (hay tedders, picker-balers, etc.) because if the trailed machine is temporarily bottlenecked in its work, the tractor may be stopped for a while **with implement operating** until the contingent overload is cleared and work resumes its normal pace. To do this, simply push clutch pedal in to midtravel or against the stop plate if properly positioned (see fig. 6A); if the stop plate was not moved down but left as shown in fig. 6B, in order to temporarily stop also the trailed implement just press in clutch pedal all the way. With engine at full throttle (2500 rpm) the P.T.O. operates at 625 rpm.

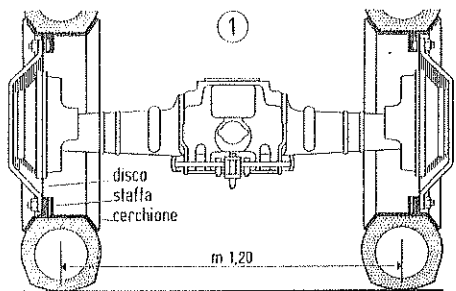
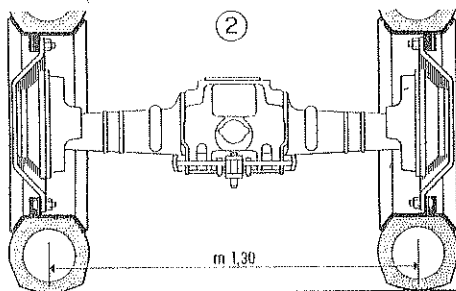
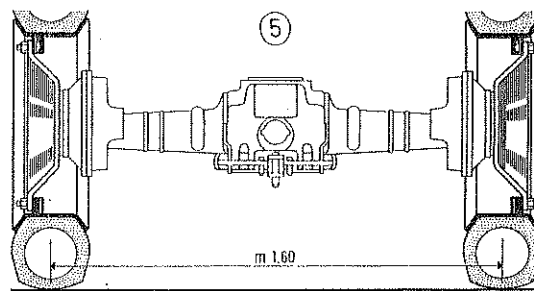


Fig. 10.  
REAR TRACK SETTINGS  
(see page 17)

Disco = **Disc**  
Staffa = **Clamp**  
Cerchione = **Rim**

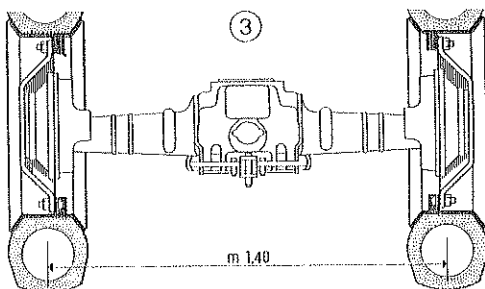
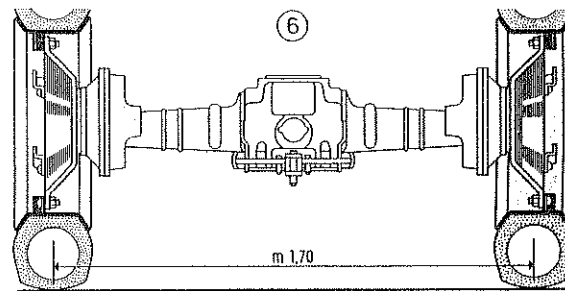
Track settings No. 1 and 5  
(47.2" and 63")

Rims are secured to discs with  
clamps inside the wheel.



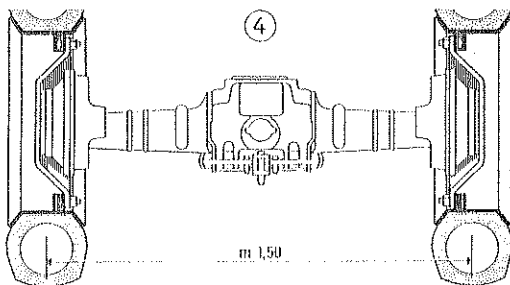
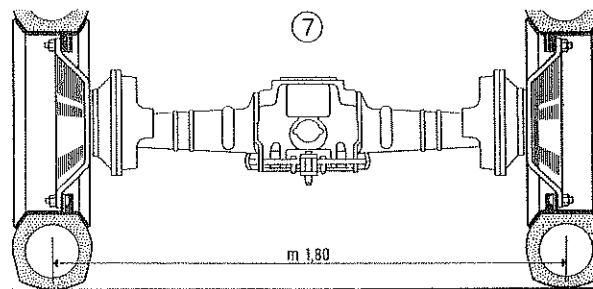
Track settings No. 2 and 6  
(51.2" and 67")

Rims are secured to discs with  
clamps outside the wheel.



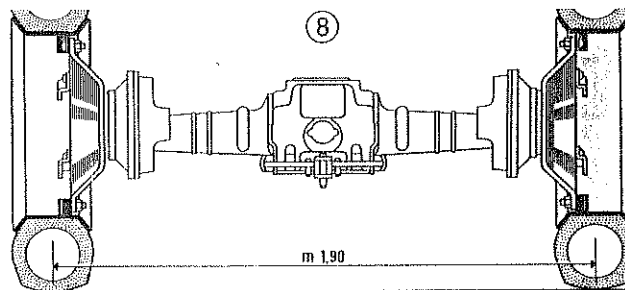
Track settings No. 3 and 7  
(55.1" and 71")

Wheel rims have been interchanged,  
without turning wheel inside out  
to avoid tyre tread lugs inversion.  
Rims are secured to discs as in  
track settings No. 1 and 5.



Track settings No. 4 and 8.  
(59" and 75")

Rims are arranged as in track  
settings No. 3 and 7, but are secured  
to disc as in track settings  
No. 2 and 6



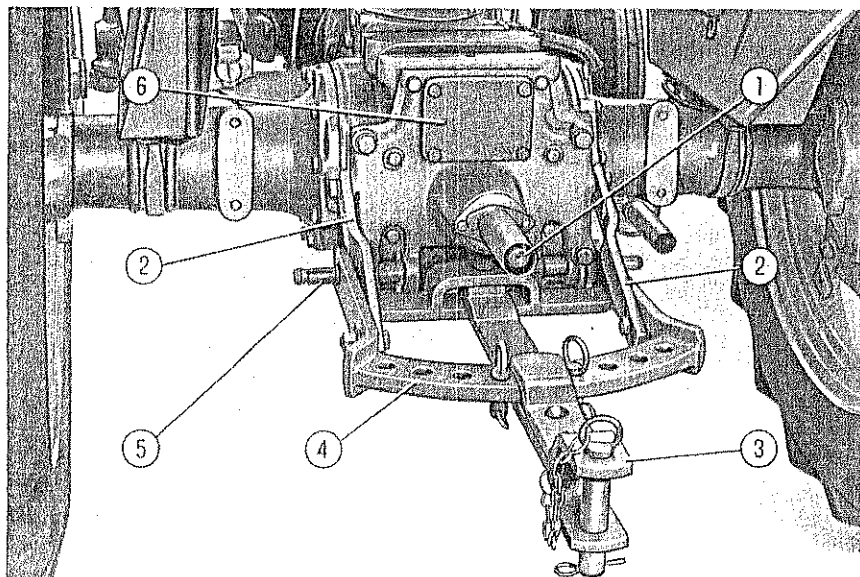


Fig. 9. - Towing device and power take-off.

1. Power take-off shaft - 2. Drawbar height adjustment tie rods - 3. Drawbar - 4. Drawbar plate - 5. Plate pin - 6. Supplementary power take-off cover.

— **Taking the drive from transmission** serves, instead, to hitch the tractor to drive-axle trailers which, evidently, allow the haulage of greater loads than conventional dead-axle trailers. In this case, the P.T.O. shaft makes about 3.8 turns for every meter (1.093 yd.) travelled by the tractor.

Whether the P.T.O. is connected directly to the engine or to the transmission, use exclusively the hand operated throttle control and not the accelerator pedal.

The cover located above the P.T.O. (6, fig. 9) protects a supplementary P.T.O. which turns counter-clockwise and can be used to drive a belt pulley or to operate some machines requiring a high speed rate (such as centrifugal pumps). The supplementary P.T.O. must be driven directly from the engine and can therefore reach a maximum speed of 2500 r.p.m.

## USE OF DIFFERENTIAL LOCK

The differential locking device is particularly useful in ploughing work, if the drive wheel outside the furrow slips (wet or manure covered ground, etc.) and turns faster than the other wheel.

To engage the differential lock slow down the tractor to minimum speed and depress the proper pedal all the way down.

As the pedal is released, the lock automatically disengages, but if it fails to do so, kick the brake pedal of the wheel outside the furrow. Differential locking should not be used on curves: if a curve has already been started with the lock engaged, brake the outer wheel to free the lock.

## REAR WHEEL BALLASTING

To better exploit engine power particularly in deep ploughing works, wheel adhesion may be increased by ballasting the rear wheels in two ways: either by fitting cast iron rings (see page 34) or by filling the tires with water and then inflating with air to the specified pressure. When water ballasts are used in winter, to provide protection against frost add calcium chloride ( $\text{CaCl}_2$ ) to the water in the proportion of 0,333 kg of calcium chloride per liter of water (3 1/3 lbs. per Imp. Gallon). During light works not requiring heavy towing, and particularly when sowing, the wheels should not be ballasted, to avoid ground compaction.

## WHEEL TRACK ADJUSTMENT

Re-setting the track is necessary when working in «row crops» where the wheels must pass between the rows without causing damages.

**Rear wheel track settings** (see fig. 10): eight different settings are possible, four with wheel dishing inwards and four with wheel dishing outwards. When adjusting the track be careful not to turn the wheel inside out. Dishing inversion is obtained by interchanging the two wheels. To avoid mistakes, check that the arrow molded on tire wall points in the wheel forward rolling direction.

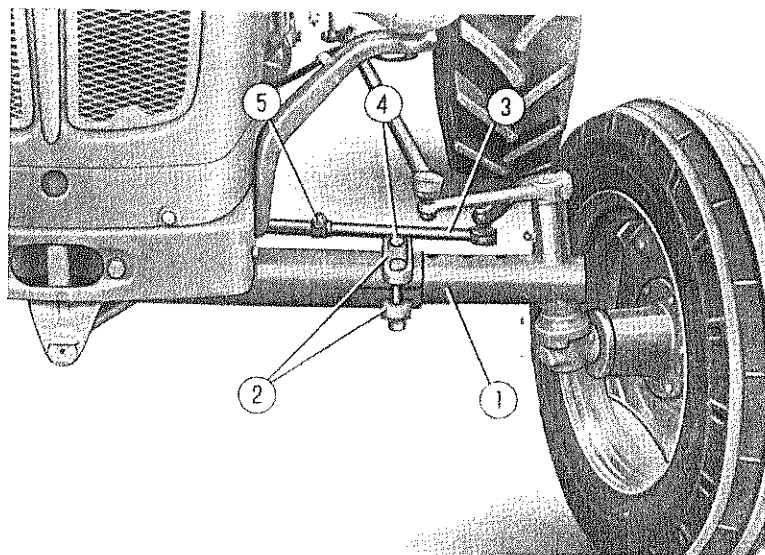


Fig. 11. - Front wheel track setting.

1. Adjustable axle section - 2. Axle clamps - 3. Steering control sliding tie rod - 4. Pin - 5. Steering rod adjusting clamp.

**Front wheel track settings** (see fig. 11): raise the tractor front axle, remove the screws of steering rod clamps 5, loosen the bolts of axle clamps 2 and slide out pin 4. Move adjustable axle section in or out until the desired track width is obtained and secure in position; finally, secure the steering-rod clamp.

In this way it is possible to obtain four different track widths: m 1,30 (51.2") - 1,40 (55.1") - 1,50 (59") and 1,60 (63").

If wheels are removed from hubs and mounted again inside out, further increase in track to 1,70 m (67") can be obtained.

## WINTER PRECAUTIONS

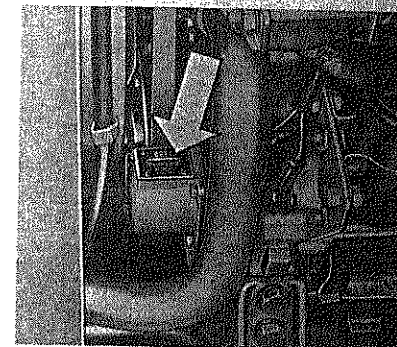
When outdoor temperature approaches 0° C (32° F), it is necessary to fill the radiator with a good commercial grade anti-freeze mixture (see Maintenance Chart).

Flush the cooling system before pouring in the anti-freeze mixture.

## MAINTENANCE SCHEDULE

(For illustrations see the « Chart » appended)

Hour recorder location



### Every 10 working hours

Check:

- engine sump oil level;
- radiator water level;
- air cleaner oil level and dust sediment.

### Every 20 working hours

Pack with grease:

- water pump shaft bearings (1 lubricator);
- clutch release inner sleeve bearing (1 lubricator);
- pedals shaft (2 lubricators);
- front wheel steering knuckles (2 lubricators);
- front axle trunnion (1 lubricator);
- steering rod articulations (4 lubricators);
- implement carrier support-to-lifter pivot and lifter linkage (4 lubricators).

Check belt pulley oil level.

### Every 150 working hours

Replace the engine sump oil.

Lubricate with grease the speed governor (2 or 3 shots only).

Clean the spark plugs and check if electrodes gap is as specified: 0,5 to 0,6 mm (.020" to .024").

Wash in kerosene the lower element of air cleaner.  
Screw in two or three turns the ignition distributor grease plug.

Check:

- tension of fan belt;
- oil level of transmission casing;
- oil level of final drives;
- oil level of steering box;
- oil level of hydraulic lifter;
- level of battery electrolyte.

### Every 300 working hours

Replace cartridge of engine oil filter.  
Clean oil filter in sump by brushing with kerosene.  
Wash fuel filter.

Check:

- brake pedal travel (5 cm = 2");
- clutch pedal free travel (3 cm = 1.2").

Lubricate front wheel bearings.

Have contact breaker points gap checked (specified gap = 0,42 to 0,48 mm - .016" to .018").

Have valve-to-rocker clearance checked (cold engine) (correct clearance = abt. 0,15 mm - abt. .0059").

### Every 600 working hours

Disassemble and wash air cleaner.  
Change oil of hydraulic lifter.

### Every 1200 working hours

Replace:

- transmission casing oil;
- final drive oil;
- belt pulley oil.

Flush cooling system.

Have the following items checked by an authorized shop:

- generator and starting motor commutators and brushes for wear;
- generator heads for lubrication.

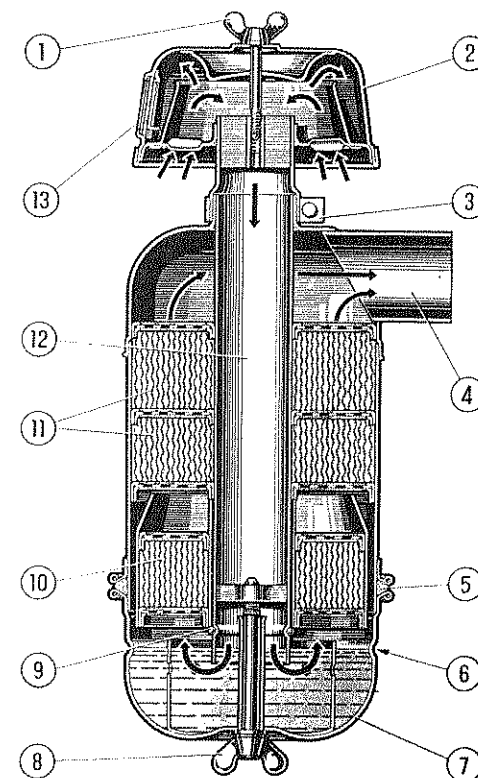
## M A I N T E N A N C E

All periodical maintenance operations required for good tractor efficiency are described and illustrated in the « Maintenance Chart ». Only the operations requiring a more detailed description and some occasional operations which the Operator can do himself are given here.

**Air cleaner oil level check** (operation No. 3 of the Chart): the oil level must be checked at least 15 minutes after engine has stopped to allow the oil to drip back into the bowl.

Fig. 12. - Air cleaner section.

1. Pre-filter cap thumb screw.
2. Pre-filter cap.
3. Pre-filter collar.
4. Filtered air duct to carburetor.
5. Gasket between filter and bowl.
6. Oil level fill mark.
7. Oil bowl.
8. Bowl thumb screw.
9. Lower filtering pad retaining snap ring.
10. Lower filtering pad, removable.
11. Upper filtering pads, non-removable.
12. Air cleaner inlet duct (center tube).
13. Pre-filter inspection window.



The oil must reach the fill mark and must be replaced when loaded with foreign matter or when it has thickened excessively with entrained dust or when the dust deposit on bowl bottom has built up to 1 cm (abt.  $\frac{1}{2}$ " ).

Normally, only Fiat Ager HD 30 (SAE 30) oil should be used, but if during the hot season a drop in oil level is experienced (due to the oil being sucked into the engine with the intake air), use Fiat Ager HD 50 (SAE 50) oil. Never use oil drained from sump.

When taking off the bowl for oil level inspection, check also the centre tube (12, fig. 12) protruding from filter body which must be kept **always clean**.

Check also the dust sediment in pre-filter. When the deposit reaches half the height of the inspection window, undo the cover upper screw (the screw is of the captive type and cannot be removed), take off the cap and brush off all dust.

Check that the cleaner hose collars are well taut to prevent that unfiltered air may reach the carburetor.

**NOTE** - When the tractor is operated in dusty areas check the air cleaner every five hours and if dust accumulation is excessive the lower filtering bed washing interval (operation No. 12 of the Chart) and the filter general cleaning interval (operation No. 29 of the Chart) should be shortened.

**Battery maintenance** (operation No. 20 of the Chart): check electrolyte level every 150 working hours, or more frequently during the hot season. This check must be carried out with tractor on level ground, engine stopped, and batteries cold and at rest.

First, check that battery self-levelling plugs are well taut in their seats, then remove their caps and pour some **distilled water** in the funnel of each plug (never into the central pipe). If the water does not flow into the element it means that the element is full. If it does flow, continue to pour in distilled water little by little until the level in funnel no longer drops, meaning that the element is refilled. At this point, refit the plug cap. Repeat the operation for all the elements.

The small amount of water remaining in the plug funnels will flow into the cells as soon as the tractor moves.

Wipe dry battery tops after refilling.

**Batteries must receive proper care since if allowed to run down no starting of the engine will be possible.**

The following pointers will help you preserve the batteries in tip-top condition:

- Never leave the key in lock switch (after stopping the engine), unless you wish to keep the lights on.
- Keep the batteries clean and dry.
- During short stops, let engine idle rather than resort to repeated starts since at every start a heavy current drain is imposed on the batteries.
- Should the batteries require topping up at shorter intervals than normal (for instance every two or three days) or are so run down that it is impossible to start the engine, take the batteries to a qualified shop for inspection.
- Never use acid or common water, which would damage the batteries, **but only distilled water or rainwater collected in clean glass or plastic containers**. Special care should be taken to prevent dirt or foreign matter from entering the batteries.
- Make sure that cable terminal clamps are firmly fixed to posts. Before carrying out any maintenance involving the terminals, always disconnect the ground cable connected to negative post of the RH battery.
- To loosen and tighten the terminal clamp nut, always use a wrench and never the pliers. Smear the terminal posts and clamps with pure vaseline and not with common grease.
- Never allow the batteries to discharge completely. If, for some reason, the tractor is left inoperative for a long period of time, remove the batteries from tractor, store in a dry place and recharge once a month.

\* **Clutch pedal travel adjustment** (operation No. 24 of the Chart): the pedal free travel, i.e., how far in the pedal must be pressed before it starts operating the master clutch disengagement, must range between 25 and 35 mm (1" and 1.4") as specified; when this travel is reduced to less than the minimum allowable limit, as a result of clutch discs wear, a re-adjustment is required as follows (see fig. 13):

- Unfasten yoke **1** from lever **2** by removing pin **3**.
- Slacken locknut **4** and **backout** yoke **1**: remember that one full turn of yoke increases pedal travel by about one centimeter (.4").
- Reassemble yoke on lever by installing the mounting pin and re-tighten the lock nut.



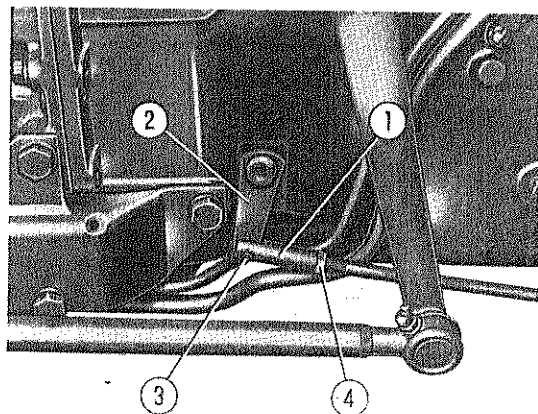


Fig. 13. - Clutch pedal free travel adjustment.

1. Yoke, clutch control tie rod.
2. Cranked lever.
3. Mounting pin.
4. Locknut.

After the adjustment the free travel must be 30-35 mm (1.2" - 1.4"). Once the free travel is set as specified, see if the further stroke required of clutch pedal to release the P.T.O. clutch is of 60 to 70 mm (2.4" to 2.8"). If this value does not check, re-set the clearance of the three adjustment-rods located inside clutch housing.

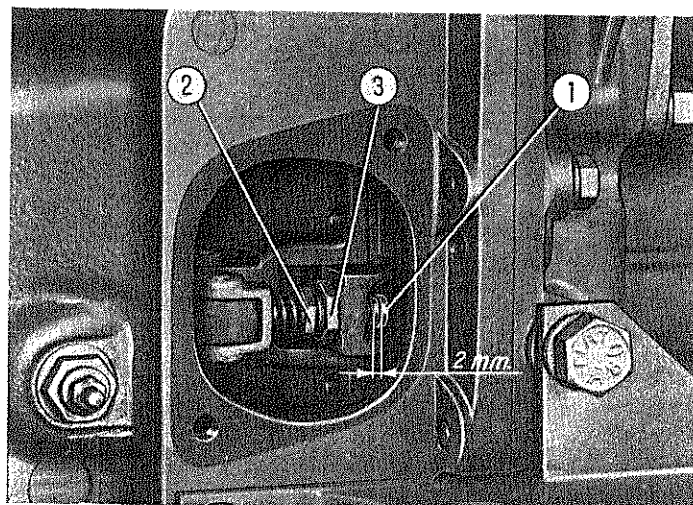


Fig. 14. - P.T.O. clutch release adjustment rods.

1. Adjustment rod tip - 2. Set screw - 3. Set screw locknut.

This operation should be performed by skilled servicemen, proceeding as follows:

- Take off the right side cover (see fig. 14).
- Engage the 6th speed and push the tractor until one of the adjustment rods appears in the opening (see fig. 14).
- Check the clearance between adjustment rod tip 1 and set screw tip 2 which must be of 2 mm (.0787"). If the clearance needs correction slacken nut 3, turn set screw in or out as required and re-tighten the locknut.
- Repeat this operation on the other two adjustment rods making sure that the 2 mm (.0787") rod-to-screw tip clearance is rigorously exact and the same for all rods.

**Brake pedals travel adjustment** (operation No. 25 of the Chart): pedal travel must be the same for both pedals and must not exceed 6-7 cm (2.4" to 2.8").

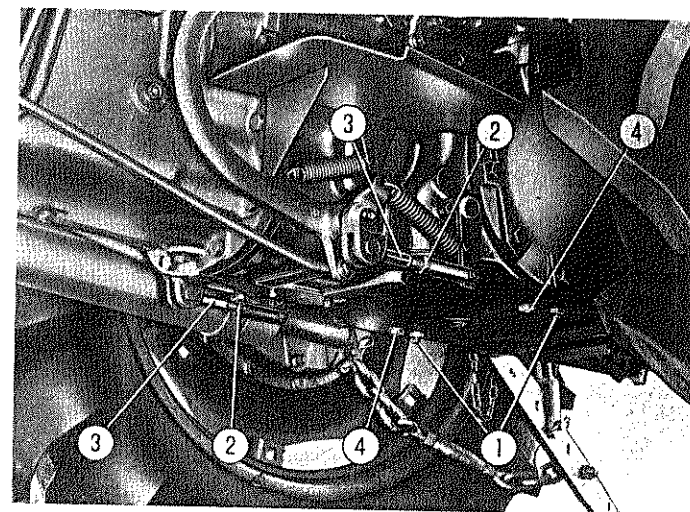


Fig. 15. - Brake pedals travel adjustment.

1. Brake bands centering screws - 2. Pedal travel adjustment rods locknuts - 3. Pedal travel adjustment rods - 4. Brake housings drain plugs.



If pedal travels are different or greater than specified, adjust as follows (see fig. 15):

- Fully tighten screws **1**, then back out 1 1/2 turn and secure by locknut.
- Slacken locknuts **2** and **backout** adjustment rods **3** until pedal travel is fully taken up; next, **screw in** the adjustment rods a few turns to obtain a 5 cm (2") pedal travel. Lock in position by nuts **2**.

After this adjustment, remove the two lower plugs located near the brake band centering screws to drain possible oil deposits in brake housings.

**Engine cooling system flushing** (operation No. 34 of the Chart): wash the engine cooling system every 1200 working hours, when changing from plain water to anti-freeze mixtures and viceversa, or whenever a drop in cooling system efficiency is noticed.

Flush as follows:

- Drain the water, with warm engine, by opening the cocks **under** radiator and on engine left side (remove radiator filler cap for faster draining).
- Dissolve .55 lbs. of sodium carbonate in about 2.2 Imp. gals. of water, filter the solution through a cloth and pour into radiator after the engine has cooled down.
- Use the tractor for about an hour in order to heat up the engine and then drain the cooling system.
- Wait until the engine has cooled down and circulate water in the system feeding it through the radiator cap and leaving the drain cocks open.
- Close drain cocks, fill with clean water, run the engine for a few minutes and drain again.
- Let the engine cool down and fill radiator to correct level. If temperature is close to or lower than 0° C (32° F) use an anti-freeze mixture.

**NOTE** - Water must be drained with engine inoperative.

**Oil replacement in lifter tank** (operation No. 30 of the Chart): when after 600 hours of operation the oil is changed in lifter, clean also the filter located inside the unit. To this end, after draining the used oil, remove the lid on upper end (secured by three screws) take out the filter and wash by dipping in kerosene.

Before refilling with new oil it is advisable to unscrew the vent plug on lifter unit top and the magnetic plug on oil feed line connection and clean both plugs in kerosene (marked D and E in the illustration of operation 30 on the Maintenance Chart).

For the oil grade to be used see « Fill-up data » on the Chart.

## BELT REPLACEMENT

Generally, the replacement of fan and generator drive belt presents no particular difficulty and is intuitive. When tractor is equipped with hydraulic system pump, the latter need not be removed for belt replacement: just slacken the two belt stretcher nuts (see operation 15 of the Chart), remove the bolt on pump shaft (see fig. 16) and slide shaft rear end forward to allow the passage of belt between the pulley and the shaft itself.

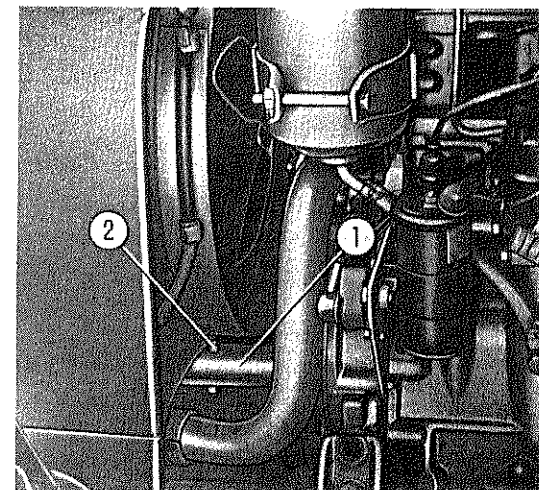


Fig. 16. - Hydraulic system pump drive shaft.

1. Shaft.
2. Bolt joining the two shaft sections (the nut is secured by collar).

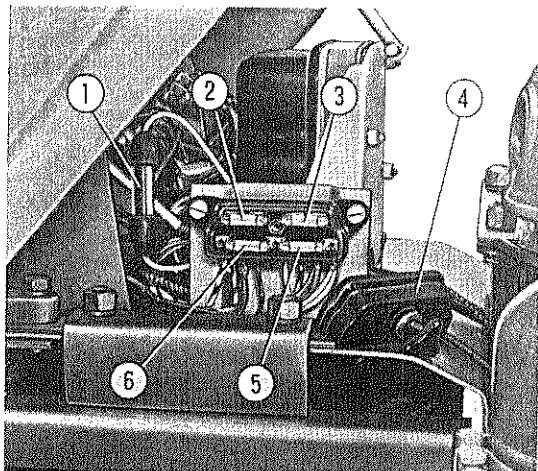


Fig. 17. - Fuses.

1. Generator regulator fuse.
2. Fuse 30/2.
3. Fuse 30/1.
4. Fusebox cover
5. Fuse 54/2.
6. Fuse 54/1.

## REPLACEMENT OF FUSES

The electric system protection fuses are shown in fig. 17: the four lighting equipment 8-Amp fuses are arranged in a fusebox and the 16-Amp fuse for regulator in a separate fuseholder.

Protected circuits:

- Fuse N. 30/1: headlamp low beams.
- Fuse N. 30/2: headlamp high beams.
- Fuse No. 54/1: right front parking lamp.
- Fuse No. 54/2: front left parking lamp and dashboard lamp.

If the 16-Amp fuse blows, the generator charge indicator will light up and **remain ON** even if the engine is accelerated to a high rpm rate: when this happens, the fuse must be immediately replaced because otherwise the batteries will not get any charge.

**Note.** - Tractors fitted with electric horn are provided with an additional 8-Amp fuse located on the horn circuit.

**CAUTION** - Blown fuses must be replaced immediately. If they blow again, there is a short circuit at some point in the electric system. In this case have the system inspected by a skilled electrician.

# ACCESSORY EQUIPMENT

## BELT PULLEY UNIT

It may be applied on the supplementary power take-off after removing the cover. This unit can be applied with the pulley on the right or left side, according to the desired rotation direction. In both cases the vent plug must be on top and the oil drain plug at bottom. Therefore, exchange the two plugs as required.

- Pulley diameter . . . . . 250 mm (9.84")
- Face width . . . . . 150 » (5.90")

To engage the pulley, move backward its lever, on transmission left side (see fig. 5).

With engine at full throttle, the belt pulley revolves at 1300 r.p.m. and the belt speed is 17 meters (55 ft. 9") per second.

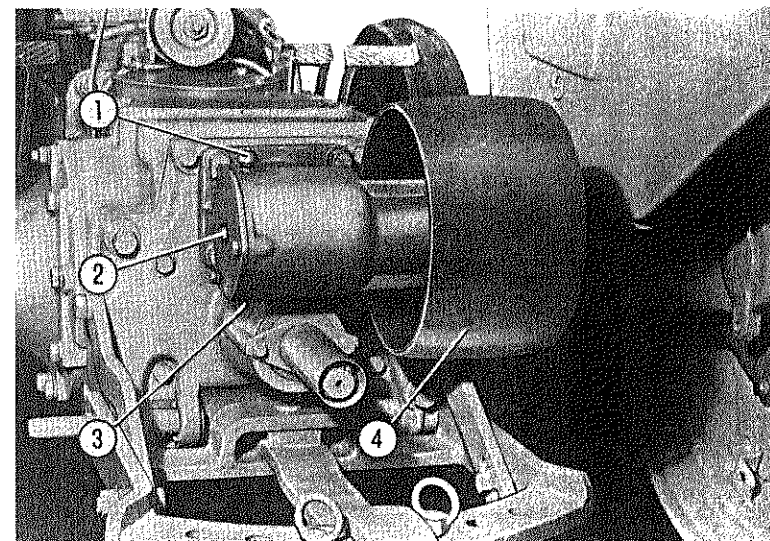


Fig. 18. - Belt pulley.

1. Vent plug - 2. Oil filler and level plug - 3. Oil drain plug - 4. Pulley.

## HYDRAULIC LIFTER

It consists of a gear pump fitted on engine front end, the lifting unit fitted on the transmission casing cover and the connecting lines. The hydraulic lifter operates the three-point linkage implement carrier device shown in fig. 21.

- Max. lifting capacity . . . . . 850 kg (1874 lbs.)
- Max. travel of lifting links measured at the link tips . . . . . 600 mm (23.62")

This type of hydraulic lifter can operate in the two ways: « position control » and « draft control ».

These two systems cannot operate simultaneously. To operate the hydraulic system on « position control », move DOWN the selector lever (9, fig. 20) and to operate on « draft control » move the selector lever UP. The selector lever movements must be done with the lifter links all the way up.

Furthermore, a hinged spacer block has been provided to avoid pointless and abnormal stresses of reaction spring: this block must be swung out (see fig. 19) **only when working on "draft control"**. When « position control » is used or during transfers of carried implements, this block must always remain in place (see fig. 19).

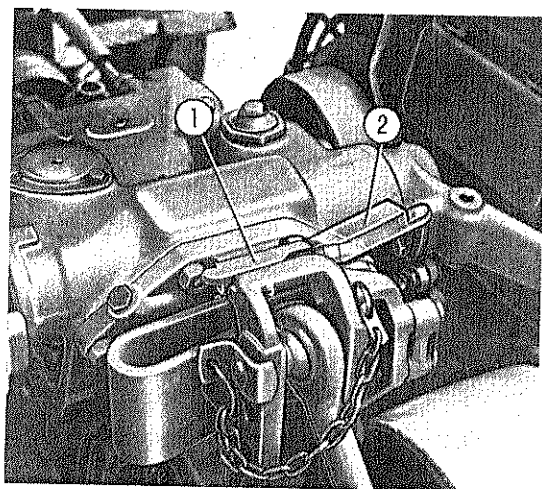


Fig. 19. - Hinged spacer block for implement carrier link support.

1. Spacer block in place (for position-control or carried implement transfer).
2. Spacer block moved out (only for draft-control operation).

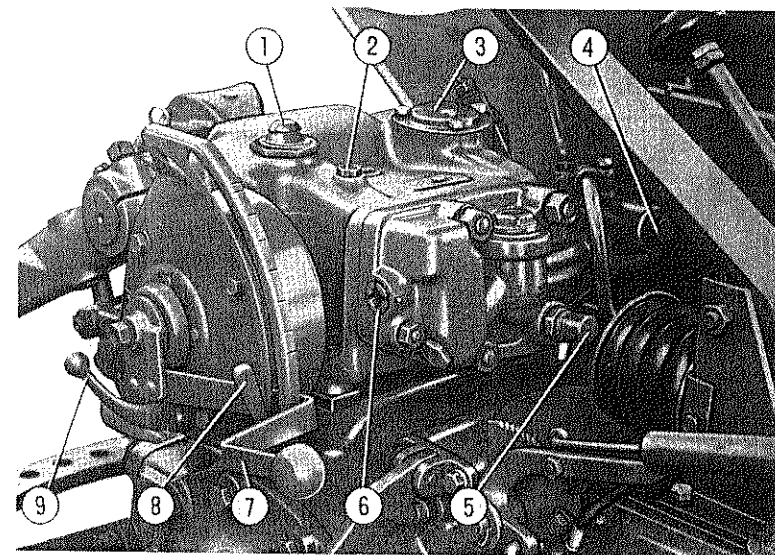


Fig. 20. - Hydraulic lifter.

1. Vent plug - 2. Lifting travel end adjusting screw - 3. Filter housing cover - 4. Pressure relief valve - 5. Cylinder pressure limiting valve - 6. Oil distributor adjusting plug - 7. Hand control lever - 8. Control lever adjustable stop - 9. Hydraulic lifter selector lever (UP: draft control; DOWN: position control).

Adjustment screw 2, valves 4 and 5, and adjustment plug 6 must never be removed.

### Position control operation.

The implement height can be adjusted during the position-control lifter operation. This system may be utilised on nearly level grounds of homogeneous composition, that is to say when the tractor must exert a nearly constant effort, such that the wheels will not slip. In addition, the position control operation becomes indispensable when the lifter is attached to some special implement like augers, scrapers, or blades.

**Control:** move lever (7, fig. 20) up to **lift** and down to **lower** the implement. Each position of lever provides a given height of implement. To ensure an equal distance for any and all implement lowerings, adjust the position of stop 8 (fig. 20) which limits the downward stroke of the lever.

### Draft control operation.

This type of operation greatly facilitates deep earth work, like ploughing, especially on non-level ground having variable toughness. When operating on draft-control, the necessary response corrections are obtained by adjusting the pulling effort required of the tractor to keep the implement working at the desired depth. Whenever the implement meets a different ground resistance, the lifter unit automatically takes care of raising or lowering the implement of about 2-3 cm (.80" to 1.20"): as a result, the tractor is exploited at constant power thus avoiding any slippage and/or stops. Therefore, if ground composition is nearly homogeneous the depth of work will be constant.

**Control:** every position of control lever (7, fig. 20) produces a given pull to which corresponds a given work depth for each type of terrain. The pulling effort increases when the lever is moved down and, consequently, also the ploughing depth increases.

To ensure identical working depths, adjust the position of stop (8, fig. 20) limiting the downward stroke of the lever. If the max. allowable plough depth without wheel slip is established while ploughing the first furrow (by gradually pulling down the lever) the Operator can then be sure that no wheel slippage will take place at any of the subsequent furrows.

To raise the implement out of the ground move lever UP to **stroke end**.

### Implement carrier adjustment (see fig. 21).

To correct the tilting of implements, adjust the length of right tierod 8 by the proper crank. Tie-rod 4 can be set in the three following positions:

- **Long** (movable pivot 2 above stationary pivot 3) in case the right tie-rod is already adjusted to its min. length but additional implement tilt is required.
- **Short** (movable pivot 2 below stationary pivot 3) to perform normal ploughing, harrowing, etc.

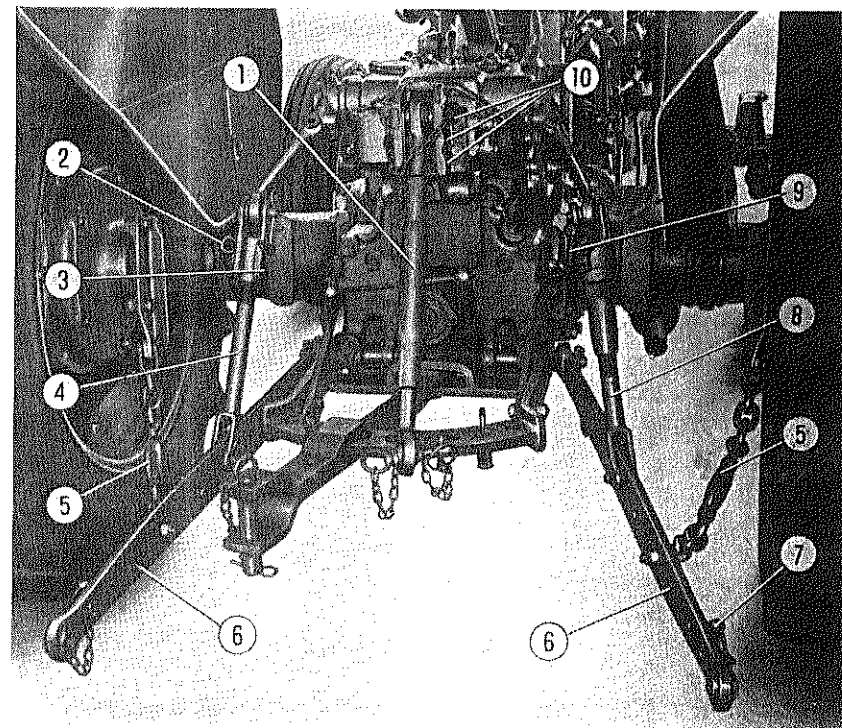


Fig. 21. - Implement carrier of hydraulic lifter.

1. Adjustable link - 2. Sliding movable pivot - 3. Stationary pivot - 4. Left tie-rod - 5. Side sway limiting adjustable chains with adjusting sleeve - 6. Lift links - 7. Snap stop pin - 8. Adjustable right tie-rod - 9. Handle for right tie-rod adjustment - 10. Holes for adjustable link pin location (see pages 31-32).

- **Sliding** (without movable pivot) to give the implement the possibility of some side sway, this being particularly useful for extra wide implements (sowing machines, cultivators, rippers).

To correct the implement setting angle adjust the length of link 1. Three holes are available to mount the link on its support and should be used as follows:

- **in position-control operation** - in which case the spacer block (see fig. 19) must be inserted to avoid unnecessary stressing of reaction spring, recourse may be had to any one of the three holes — according to need — to carry the implement but, usually, the lower hole is used;

— **in draft-control operation** - generally use the central hole but, if the tractor is hitched to « soil ripping » implements (scarifiers, disc ploughs, etc.) which transmit heavy loads to carrier adjustable link, the lower hole should be used. Exceptionally, and only for top soil works which demand slight efforts and high « response » control (in ricefields, for instance) the link may be secured to upper hole.

To adjust side sway of implements use chains 5.

During normal ploughing jobs the chains should be rather slack, thus allowing a limit of 3-4 cm (1.2"-1.6") for plough displacements. When working through row crops using harrows, ridgers, etc., the chains shall be tightened to avoid plant damages as a result of side oscillations. During transfer trips, keep the chains fully stretched to prevent the implement from striking the wheels.

**CAUTION** - Never tow implements by simply hooking them to the lifter or to the implements carrier; instead, use the proper towing device.

### ADDITIONAL POWER OUTLET ON LIFTER UNIT

This device may be installed in place of the cover on lifter unit left side. It is a power outlet for implements operated by either single-or double-acting hydraulic cylinders (see figs. 22-23). In case hydraulic pressure is taken from this outlet to power double-acting cylinders, it becomes necessary to insert an oil return check connection (3, fig. 23) while in the case of single-acting cylinders this check connection **must be removed** (to allow oil return) and the hole blanked by the plug and gasket shown in fig. 22.

**Note.** - If the capacity of cylinders and lines connected to the power outlet exceeds 2-2,5 liters (1.8 to 2.2 Imp. Qts.) the amount of oil in lifter unit will no longer be sufficient: an additional tank must be mounted on tractor to increase the oil supply.

Fig. 22. - Power outlet on lifter - when used for single-acting cylinders.

1. Control lever.
2. Power outlet body.
3. Blanking plug.
4. Overpressure valve.
5. Line, oil delivery to hydraulic operating cylinder.

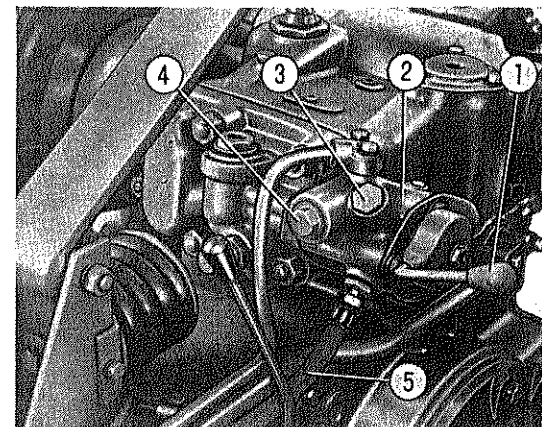
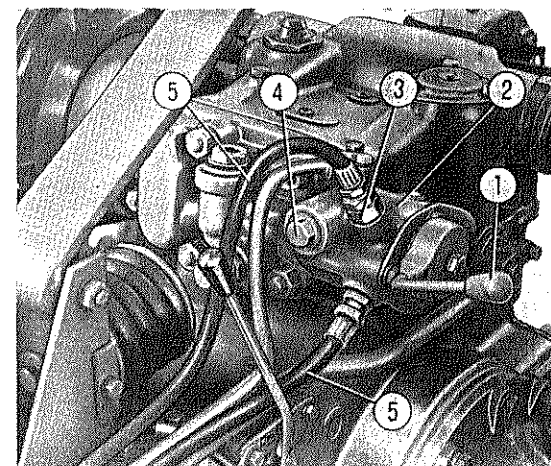


Fig. 23. - Power outlet on lifter - when used for double-acting cylinders.

1. Control lever.
2. Power outlet body.
3. Oil return check connection.
4. Overpressure valve.
5. Lines, oil delivery to hydraulic operating cylinder.



### SUPPLEMENTARY TOWING DEVICE

This attachment must be mounted on hydraulic lifter implement carrier as follows:

1. Set the lower links to the required towing height.
2. Install the stiffening links and the cross-member. Tighten the bolts fastening together the two link parts.

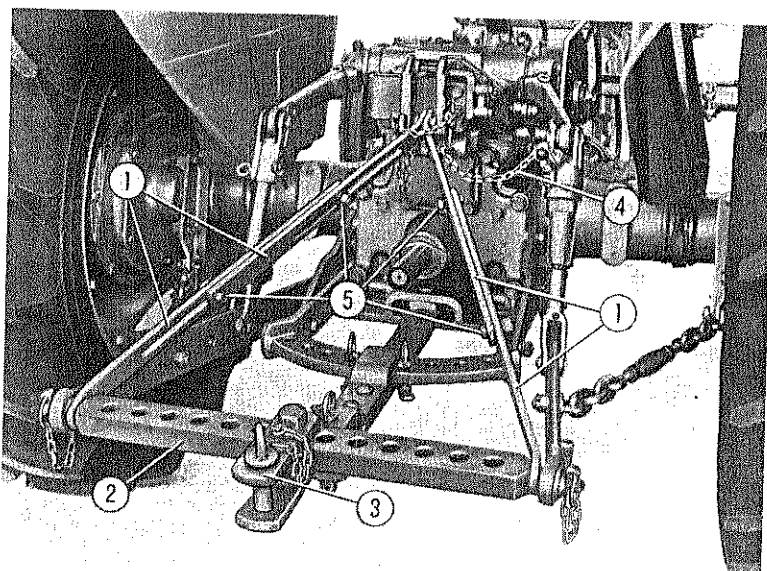


Fig. 24. - Supplementary towing device.

1. Tie-rods - 2. Cross-member - 3. Towing hook - 4. Chain, with stop screw of lift control hand lever - 5. Tie-rod connecting bolts.

3. Move lifter control lever to full stroke downwards and lock it in this position by inserting the locking screw in the proper slot (the screw is secured to the right tow link by a chain).

### WHEEL BALLAST WEIGHTS

Four weight rings are provided to ballast the rear wheels. Normally, two rings should be fitted on each wheel: one over the other.

However, when the tractor is used in ploughing work several weight rings can be stacked, on the rear wheel outside the furrow.

Also front wheels can be ballasted to improve the tractor behaviour when heavy rear-mounted implements are used.

- Weight of each rear wheel ballast ring . . . . . 55 kg (121 lbs.)
- Weight of each front wheel ballast ring . . . . . 35 kg (77 lbs.)

### RADIATOR CURTAIN

It is used during the cold season to adjust the water temperature and ensure the best possible operation conditions.

The curtain is mounted in front of the radiator and its control lever is located on battery frame left side.

### ELECTRIC HORN

The tractor may be fitted with an electric horn to be used when working or travelling on the road. The horn and its wiring (on which an 8-Amp. fuse is provided) should be connected to terminal No. 30/1 of the switch.

### REAR LAMP FOR NIGHT WORKS

It may be mounted on the right fender. Its incorporated switch, is wired to the circuit of fuse 54/2 and is therefore energized only when outer lights are turned ON. The lamp is fitted with 50 W bulb.

### VERTICAL EXHAUST

This special exhaust system is supplied as optional extra equipment.



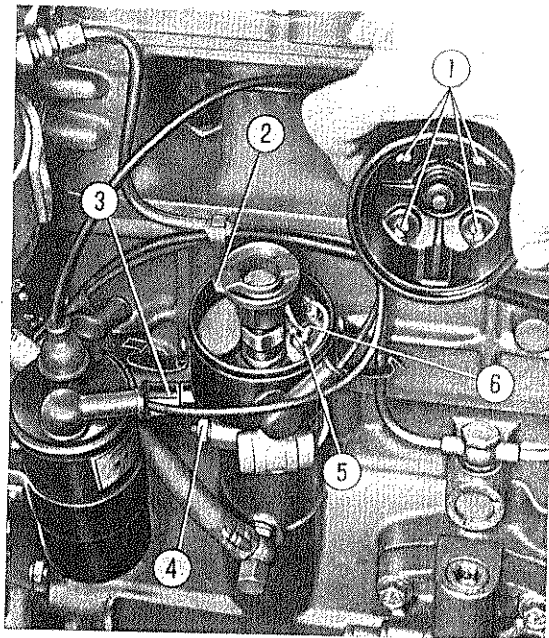
# SERVICE HINTS FOR THE SPECIALIZED SHOPS

## VALVE-TO-ROCKER CLEARANCE ADJUSTMENT

To adjust valve tappet clearance (operation to be performed when the engine becomes noisy or overheats) remove the head cover and check clearance by a feeler gauge: specified clearance is 0,15 mm (.0059") both for intake and exhaust.

## IGNITION DISTRIBUTOR CONTACTS ADJUSTMENT

Maximum contacts gap should be 0,42 to 0,48 mm (.017" to .019"). For gap adjustment: slacken screw 6 (fig. 25), move as required the contact carrier plate and relock in place.



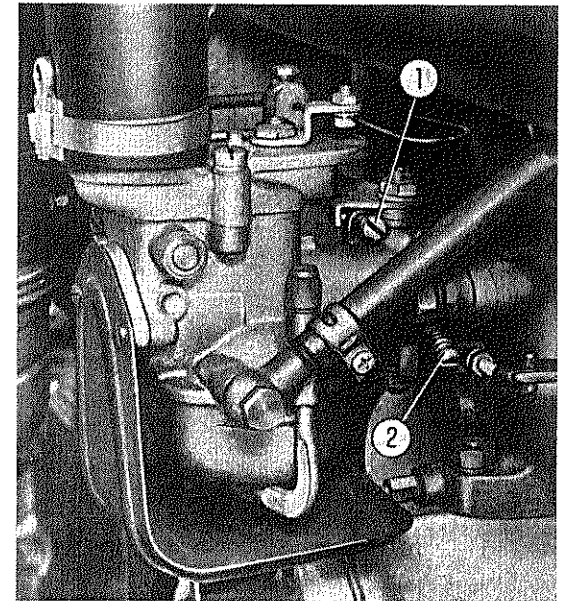
If on inspection (to be carried out every 300 working hours) contacts are found dirty, clean with a cloth moistened in gasoline; if contacts are unevenly worn or charred, trim with a fine cut file.

Fig. 25. - Ignition distributor.

1. Contacts (current to spark plugs).
2. Rotor.
3. Lubricator.
4. Distributor locking screw nut.
5. Contacts.
6. Stationary contact plate screw.

Fig. 26. - Idle speed adjustment screws on carburetor.

1. Throttle opening adjusting screw.
2. Idle speed mixture adjusting screw.



## IDLING SPEED ADJUSTMENT

If at idle speed the engine runs irregularly and tends to stop, adjust carburetion (fig. 26) with engine running and warm:

- first, set throttle to minimum opening by setscrew 1 so as to insure steady operation;
- next, by turning screw 2 in or out set mixture richness to the most suitable ratio for said throttle opening, thus accomplishing a fast and steady idling;
- reduce minimum throttle opening some more by screw 1 until best idling speed rate is obtained.

## VALVE GEAR TIMING

If the chain coupling the camshaft to crankshaft has been removed, before reinstallation make sure the sprockets are set with timing marks in line, as shown in fig. 27.



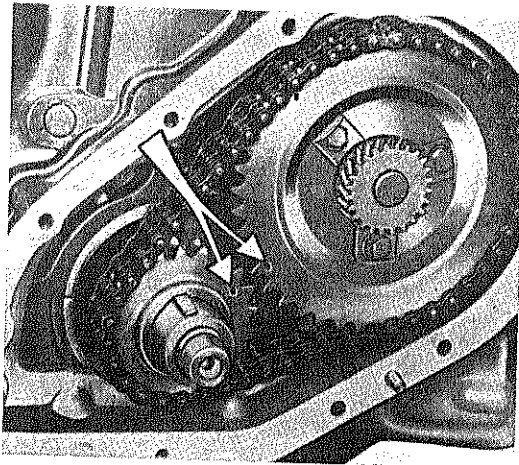


Fig. 27. - Reference marks on timing sprockets.

## CYLINDER HEAD

Engine efficiency drops if valve seats are scored, pitted or burned, preventing proper valve sealing. Should this trouble occur, remove cylinder head and reface valve seats. Replace valves if necessary.

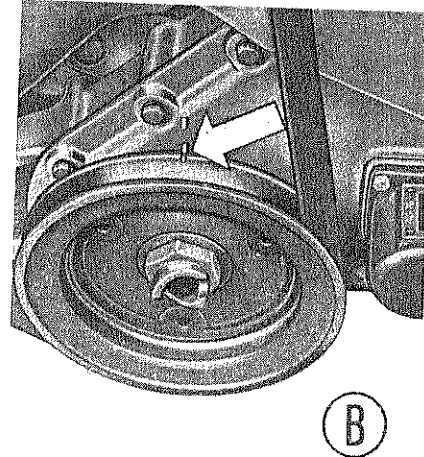
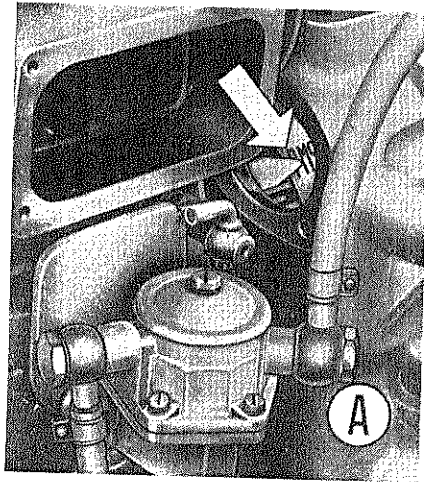


Fig. 28. - Ignition timing reference marks.

A. Timing mark on flywheel - B. Timing mark on crankshaft pulley.

At the same time, decarbonize the compression chambers and piston tops.

When reinstalling the cylinder head tighten to a 9 kgm (65,087 ft/lbs) torque the hold-down nuts in criss-cross sequence, starting from the center nuts.

## IGNITION TIMING

No timing is required if the distributor is removed and reinstalled without disturbing the crankshaft.

Instead, if the crankshaft has been rotated ignition must be re-timed as follows:

- Check that distributor contacts gap is as specified (see page 36).
- Bring mark PMS 1-4 on flywheel to coincide with the reference index (fig. 28A) or bring the notch on pulley edge in line with the reference mark on cover (fig. 28B).
- Check which of the two cylinders, 1 or 4, is in the compression stroke (both valves closed) and rotate the distributor rotor contact on the contact for firing in said cylinder.
- Next, insert the distributor in its seat.
- Before tightening the distributor locking nut (4, fig. 25) check that contacts are about to part.

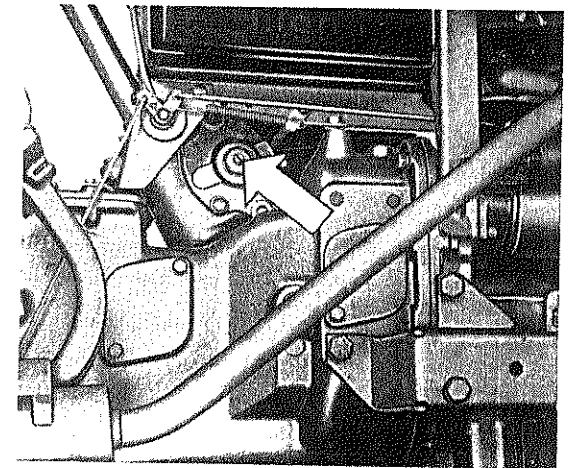


Fig. 29. - Steering control adjustment screw.

## STEERING CONTROL ADJUSTMENT

If after long use the steering wheel play has become excessive, adjust by tightening as required the screw on steering box (fig. 29). Should this prove insufficient to take up the steering wheel play, check the play in worm screw roller bearings and adjust by removing one or more of the shims mounted between the box and its upper cover.

## GENERATOR AND STARTER MOTOR

To check generator brushes and commutator, remove both heads; for the starter motor it is sufficient to remove the cover band. To lubricate the generator bearings (operation to be performed every 1200 working hours) remove the heads and pack with Fiat Jota 3 grease. On the contrary, the starter motor needs no periodic lubrication. Only when overhauling the motor pack the free wheel with Fiat Jota 2/M grease.

## ELECTRIC SYSTEM WIRING DIAGRAM

When servicing or repairing the electric system refer to the wiring diagram fig. 30.

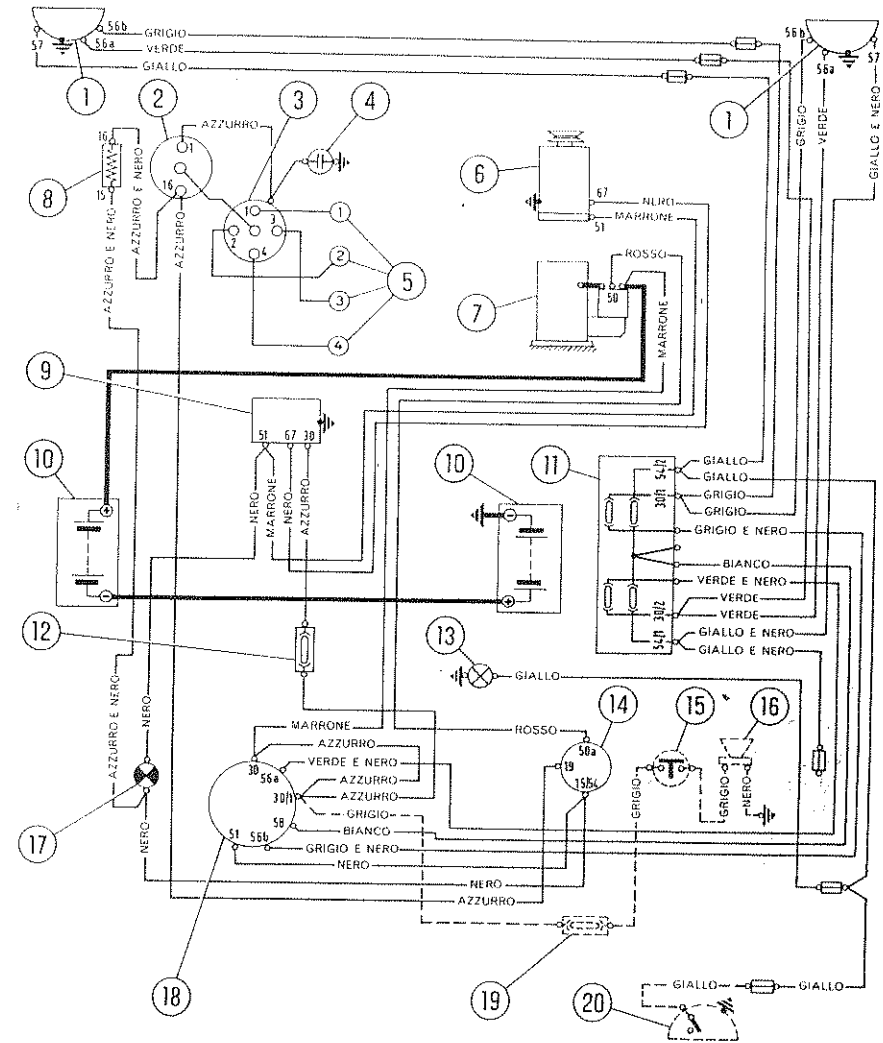


Fig. 30. - Wiring diagram.

1. Headlamps, with high and low beam bulb (50/45 W) and parking light (7 W) - 2. Ignition coil - 3. Ignition distributor - 4. Condenser - 5. Spark plugs - 6. Generator - 7. Starter motor - 8. Ignition coil additional resistor (6 ohms) - 9. Generator regulator - 10. Batteries - 11. 8-Amp. fuses - 12. Generator regulator fuse (16 Amps) - 13. Dash lamp (7-W bulb) - 14. Starter motor switch - 15. Horn button (optional) - 16. Horn (optional equipment) - 17. Generator charge indicator (7-W bulb) - 18. Lock switch (controls also outer lighting) - 19. Horn fuses (8 Amps) - 20. Rear lamp (50 W) for night works (optional equipment).

|                 |                |                 |               |
|-----------------|----------------|-----------------|---------------|
| Azzurro = Blue  | Bianco = White | Giallo = Yellow | Grigio = Grey |
| Marrone = Brown | Nero = Black   | Rosso = Red     | Verde = Green |

# SPECIFICATIONS

## GENERAL

### WEIGHTS AND DIMENSIONS

|                                    |                       |                     |
|------------------------------------|-----------------------|---------------------|
| Wheelbase                          | 1,78 m                | (70")               |
| Front track width (five spacings)  | from 1,30 m to 1,70 m | (51.2" to 67")      |
| Rear track width (eight spacings)  | from 1,20 m to 1,90 » | (47.2" to 75")      |
| Overall length                     | 2,89 »                | (113.8")            |
| Overall width                      | min. track            | 1,65 » (65.4")      |
|                                    | max. track            | 2,45 » (96.5")      |
| Max. height (at steering wheel)    | 1,46 »                | (57.5")             |
| Min. ground clearance (front axle) | 0,40 »                | (15.7")             |
| Weight of tractor in working order | without lifter        | 1240 kg (2734 lbs.) |
|                                    | with lifter           | 1330 kg (2933 lbs.) |

### SPEEDS AND FUEL CONSUMPTION

Speed (engine running at maximum speed rate):

|                |          |              |
|----------------|----------|--------------|
| — 1st gear     | 2,3 km/h | (1.4 m.p.h.) |
| — 2nd gear     | 4,2 »    | (2.6 » )     |
| — 3rd gear     | 6,7 »    | (4.2 » )     |
| — 4th gear     | 8,5 »    | (5.3 » )     |
| — 5th gear     | 15,4 »   | (9.6 » )     |
| — 6th gear     | 24,2 »   | (15 » )      |
| — low reverse  | 3,4 »    | (2.1 » )     |
| — high reverse | 12,5 »   | (7.8 » )     |

Approximate fuel consumption (average farmland works) 6 to 7 kg/h (13.2 to 15.4 lbs.)

## ENGINE

|  |                              |
|--|------------------------------|
| Type   | 105.615                      |
| No. of cylinders                               | 4                            |
| Bore and stroke                                | 82 x 90 mm (3.228" x 3.543") |
| Total piston displacement                      | 1901 cc                      |
| Compression ratio                              | 7,5 to 1                     |
| R.P.M. corresponding to max. output under load | 2500 R.P.M.                  |

## TIMING

Overhead valves. Timing data:

|         |                      |     |
|---------|----------------------|-----|
| Intake  | opens: before t.d.c. | 10° |
|         | closes: after b.d.c. | 51° |
| Exhaust | opens: before b.d.c. | 48° |
|         | closes: after t.d.c. | 11° |

Valve-to-rocker clearance (for timing checks) . . . . . 0,450 mm (.017")

Valve-to-rocker clearance **with cold engine** for normal operation  
(intake and exhaust) . . . . . 0,150 » (.0059")

## FEED

Mechanical fuel pump.

Carburetor: **Solex C 26 NH**, with easy starting device (choke).

### Carburetor data:

|                           |        |
|---------------------------|--------|
| Primary Venturi diameter  | 21 mm  |
| Main jet diameter         | 1,25 » |
| Idling speed jet diameter | 0,60 » |
| Emulsion air jet diameter | 1,25 » |
| Needle seat diameter      | 1,30 » |

Air intake through oil bath air cleaner.

Speed governor operating over the entire engine r.p.m. range, adjusted for the following rates:

|                                  |          |
|----------------------------------|----------|
| — max. engine speed under load   | 2500 RPM |
| — max. engine speed with no load | 2580 RPM |

## IGNITION

By battery, coil and camshaft-driven distributor.

|                               |                                  |
|-------------------------------|----------------------------------|
| Firing order                  | 1-3-4-2                          |
| Static advance                | 0°                               |
| Centrifugal automatic advance | 24° ± 2°                         |
| Breaker contacts gap          | 0,42 to 0,48 mm (.016" to .019") |

### Spark plugs **M 14-12/240**:

Spark plug gap . . . . . 0,50 to 0,60 mm (.020" to .024")

## LUBRICATION

Forced by gear-type pump.

Oil cleaning: by gauze filter on pump intake and replaceable cartridge by-pass filter.

Lubrication pressure (automatically adjusted by  
a valve) with hot engine at normal r.p.m. rate . 3 to 3,5 kg/cm<sup>2</sup> (42.7 to 49.8 p.s.i.)

## COOLING

water circulation by centrifugal pump.  
Upright pipe type radiator. Fan mounted on water pump shaft.  
Water circulation from engine to radiator controlled by thermostat.

## ENGINE STARTING

Direct by electrical starter motor.

## POWER TRAIN

### CLUTCH

single plate, dry, pedal-controlled.

### TRANSMISSION

6 forward and 2 reverse speeds.

### FINAL DRIVES

Bevel gears in differential and spur gears on each rear wheel.

### DIFFERENTIAL LOCK

Pedal controlled.

## TRACTOR FRONT AXLE

Tubular axle with central swivel pin.  
Track width adjustments, by sliding movement of outer axle sections (four track widths); max track width (5th setting) by turning the wheels inside out.  
Tyre size . . . . . 6.00-16  
Inflating pressure . . . . . 2,5 kg/cm<sup>2</sup> (35.6 p.s.i.)

## REAR WHEELS (DRIVING)

Consists of two parts: disc and rim.  
Track adjustments: by changing the relative position of rims to discs and of discs to wheel shafts (total: 8 settings).  
Tyre size . . . . . 11-28  
Inflating pressure { for farmland operation . . . . . 0,8 kg/cm<sup>2</sup> (11.4 p.s.i.)  
                          for road operation . . . . . 1,2 to 1,5 kg/cm<sup>2</sup> (17.1 to 21.3 p.s.i.)

## STEERING

Steering wheel control through worm screw and roller.  
Minimum turning circle diameter . . . . . 7,10 m (23 ft. 4")

## BRAKES

Band type, acting on drums fitted on differential axle shafts, separately controlled by pedals. Pedals interlocking plate for simultaneous braking when operating on road. Parking brake hand lever.

## TOWING DEVICE

Swinging drawbar and clevis, supported on adjustable height drawbar plate.

## HOOD

Rear-hinged, enclosing radiator, engine, fuel tank and batteries.

## ELECTRIC SYSTEM

Voltage . . . . . 24 V

### GENERATOR

Output, continuous . . . . . 196 W  
Generator regulator with voltage regulator, current regulator and cut-out in a single unit.

### BATTERIES

Two, 12-Volts each, series-connected, with 56 Amp/h capacity (20-hour discharge rate).

### ELECTRICAL STARTER MOTOR

3 kW output, pinion automatically engaged by electromagnet.

### LIGHTING SYSTEM

— Headlamps with 50/45 W double-filament bulb (high and low beams) and 7 W bulb (parking).  
— Dashboard light, with 7 W bulb.

## ACCESSORIES

- Generator charge indicator, with 7 W bulb.
- Four 8-ampere fuses.
- One 16-Ampere fuse for generator regulator.
- One 8-Ampere fuse for optional equipment horn.

## POWER TAKE-OFF

can be operated at two speeds, i.e.:

- directly coupled to engine, 625 r.p.m. max.
- coupled to transmission (about 3,8 r.p.m. of P.T.O. per meter (39.37") travelled by tractor).

Hand-controlled by a single lever.

## TOOL KIT

Tools and accessories for maintenance.

## ACCESSORY EQUIPMENT

- Belt pulley: diameter 250 mm (9.9"); face width 150 mm (5.9"); max r.p.m. 1300; peripheral speed 17 m/sec (55 ft. 9" per second).
- Hydraulic lift and implement carrier, with position-control and draft-control: maximum lift stroke measured at ends of lifting arms, 600 mm (23.62"); maximum liftable load 850 kg (1874 lbs); maximum oil pressure setting, 150 kg/cm<sup>2</sup> (2133 p.s.i.).
- Additional power outlet on hydraulic lifter.
- Supplementary towing device.
- Ballast for front wheels (total weight: 70 kg - 154.35 lbs.) and rear wheels (total weight: 220 kg - 485.1 lbs.).
- Radiator curtain.
- Electric horn.
- Rear lamp for night works, with 50 W bulb.
- Vertical exhaust.

## INDEX

|  | Page |  | Page |
|--|------|--|------|
| Preliminary instructions for tractor operation . . . . . | 2    | ACCESSORY EQUIPMENT . . . . .                      | 27   |
| Foreword . . . . .                                       | 3    | Belt pulley unit . . . . .                         | 27   |
| Fiat tractor service . . . . .                           | 4    | Hydraulic lifter . . . . .                         | 28   |
| Identification data . . . . .                            | 5    | Additional power outlet . . . . .                  | 32   |
|  |      | Supplementary towing device . . . . .              | 33   |
| GAUGES AND CONTROLS . . . . .                            | 7    | Wheel ballast weights . . . . .                    | 34   |
| OPERATION . . . . .                                      | 11   | Radiator curtain . . . . .                         | 35   |
| Run-in period . . . . .                                  | 11   | Electric horn . . . . .                            | 35   |
| Run-in period checks . . . . .                           | 11   | Rear lamp for night works . . . . .                | 35   |
| Replenishments . . . . .                                 | 11   | Vertical exhaust . . . . .                         | 35   |
| Starting and stopping . . . . .                          | 12   | SERVICE HINTS . . . . .                            | 36   |
| Starting the engine . . . . .                            | 12   | Valve-to-rocker clearance adjustment . . . . .     | 36   |
| Starting the tractor . . . . .                           | 12   | Ignition distributor contacts adjustment . . . . . | 36   |
| Stopping the tractor . . . . .                           | 13   | Idling speed adjustment . . . . .                  | 37   |
| Stopping the engine . . . . .                            | 13   | Valve gear timing . . . . .                        | 37   |
| During operation . . . . .                               | 13   | Cylinder head . . . . .                            | 38   |
| Use of power take-off . . . . .                          | 15   | Ignition timing . . . . .                          | 39   |
| Differential lock . . . . .                              | 17   | Steering control adjustment . . . . .              | 40   |
| Rear wheel ballasting . . . . .                          | 17   | Electric system wiring diagram . . . . .           | 40   |
| Wheel track adjustment . . . . .                         | 17   | Generator and starter motor . . . . .              | 40   |
| Winter precautions . . . . .                             | 18   |  |      |
| MAINTENANCE . . . . .                                    | 19   | SPECIFICATIONS . . . . .                           | 42   |
| Maintenance schedule (insert) . . . . .                  | —    | General . . . . .                                  | 42   |
| Detailed description of the following operations:        |      | Engine . . . . .                                   | 42   |
| — Air cleaner oil level check . . . . .                  | 19   | Power train . . . . .                              | 44   |
| — Battery maintenance . . . . .                          | 20   | Tractor front axle . . . . .                       | 44   |
| — Clutch pedal travel adjustment . . . . .               | 21   | Rear wheels . . . . .                              | 44   |
| — Brake pedals travel adjustment . . . . .               | 23   | Steering . . . . .                                 | 45   |
| — Engine cooling system flushing . . . . .               | 24   | Brakes . . . . .                                   | 45   |
| — Oil replacement in lifter tank . . . . .               | 25   | Towing device . . . . .                            | 45   |
| Belt replacement . . . . .                               | 25   | Hood . . . . .                                     | 45   |
| Fuses replacement . . . . .                              | 26   | Electric system . . . . .                          | 45   |
| Maintenance Chart (appended) . . . . .                   | —    | Power take-off . . . . .                           | 46   |
|  |      | Tool kit . . . . .                                 | 46   |
|  |      | Accessory equipment . . . . .                      | 46   |