

INSTRUCTION BOOK

*Agroplus*

60 70 80



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## Important

**1** - DO NOT use the tractor before having read and understood this manual in its entirety. The purchaser and user is in fact responsible for reading this Use and Maintenance manual and for following the safety precautions and the instructions for use and maintenance herein.

**2** - Make sure that you are familiar with all the safety instructions on the warning notices represented in this manual and on the tractor. If you do not understand any of the instructions, contact your authorised dealer to obtain further clarification.

**3** - If this tractor is to be lent or hired out to anyone, it is the owner's responsibility to ensure that any prospective users have read and fully understood the Use and Maintenance manual before using the tractor, and that they have received suitable instruction on the safe and correct use of the vehicle.

**4** - The operator is responsible for the daily inspection of the tractor and its maintenance. He must make sure that any parts that could render continued use of the tractor unsafe or cause excessive wear or damage of other components are repaired or replaced. NEVER attempt to carry out repairs or adjustments unless qualified to do so.

**5** - When new parts are required, it is important that only genuine parts are used.  
Extensive damage may occur as a result of the fitment of parts of inferior quality. Customer are advised that warranty expires immediately if not genuine parts are used.

**6** - These tractor are designed solely for use in customary agricultural operations (intended use). Use in any other way is considered as contrary to the intended use. The tractor maker accepts no liability for any damage or injury resulting from misuse and these risks must be borne solely by the user.

- Alighting from the driving position when the engine is running, although permitted in emergencies, creates a hazardous situation for which additional precautions must be taken as regards the tractor and any implements connected to it. In any case, before leaving the driving position, make sure that all the safety devices are in place, that no-one is in the vicinity of the tractor, that the tractor is parked on a level surface, that the handbrake is applied and that all the drive control levers are in neutral position. While alighting from the tractor, keep well clear of any moving parts.



- NEVER operate the tractor inside a building with the doors closed. It is essential to ensure that the area is sufficiently ventilated.

- Fluids under pressure can cause severe injury. NEVER use your hands to trace an oil or fuel leak. Use instead a piece of wood or cardboard for this purpose. Before disconnecting any part of a normally pressurised circuit, always make sure that the circuit is fully depressurised. If engine oil, hydraulic fluid or any fluid from a pressurised circuit penetrates your skin, seek medical assistance IMMEDIATELY.



- DO NOT use explosive ether based products to facilitate cold starting. Follow the instructions given in this manual in the section "Cold starting".
- Incorrect connection of the battery terminals or between the battery and a battery charger could damage the electrical system or even cause the battery to explode. NEVER connect the battery terminals together. The acid electrolyte contained in the battery is highly corrosive and can cause burns or even blindness if it enters the eyes. When filling/topping up a battery with electrolyte, NEVER smoke or allow a naked flame in the vicinity and always wear safety goggles.

## Servicing the Tractor

- DO NOT service the tractor while the engine is running or hot, or if the tractor is in motion.
- Before making adjustments to, or servicing the electrical system, disconnect the battery negative (-) cable first.
- To prevent fires or explosions keep open flame away from the battery or cold weather starting aids. To prevent sparks which could cause explosions use jump cables according to instructions.
- When making repairs or adjustments it is recommended that you consult your Dealer, and have the work carried out by trained personnel.
- The implement and/or tractor must be supported on suitable wooden blocks or stands, NOT a hydraulic jack.
- Check all nuts and bolts periodically for tightness, especially wheel hub and rim nuts. Tighten to the prescribed torque values.
- Check the brakes regularly, top up the reservoir and/or adjust where necessary. Make sure that the brakes are evenly adjusted, especially when using a trailer.



## Starting

### Warn Personnel before Starting

Before starting, walk completely around the tractor and any attached equipment. Make sure that no one is under it, on it, or close to it. Let other workers and bystanders know you are starting up and don't start until everyone is clear of the tractor, implements and towed equipment. Ensure that all bystanders, particularly children, are a suitable distance away before starting the engine.

- **DO NOT** overload an attachment or towed equipment. Use proper counter-weights to maintain tractor stability. Hitch loads to the drawbar only.
- A safety chain will help control drawn equipment should it be accidentally separated from the drawbar while transporting. Using the appropriate adaptor parts, attach the chain to the tractor drawbar support or other specified anchor location. Provide only enough slack in the chain to permit turning. See your Dealer for a chain with a strength rating equal to, or greater than the gross weight of the towed machine.
- Make sure any towed implements are equipped with a safety chain linking tractor and implement.
- Pull only from the approved drawbar. Towing or attaching to other locations may cause the tractor to overturn.

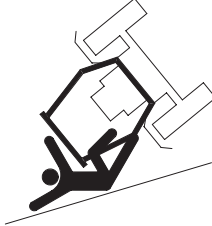




**WARNING: TRACTOR REQUIRES CORRECT TRAILER BRAKING EQUIPMENT BE INSTALLED AND CONNECTED TO THE EQUIPMENT.**

#### **Safety - Towing**

- For towed equipment **WITHOUT** brakes, **DO NOT** tow equipment:
  - at speeds over 30 km/h (19 miles/h);
  - that, when fully loaded, weighs more than 1 times the weight of the towing unit (please refer to local rules).
- For towed equipment **WITH MECHANICAL** brakes, **DO NOT** tow equipment:
  - at speeds over 30 km/h (19 miles/h);
  - that, when fully loaded, weighs more than 1 times the weight of the towing unit or 5000 Kg (please refer to local rules).
- For towed equipment **WITH HYDRAULIC OR PNEUMATIC** brakes, **DO NOT** tow equipment:
  - at speeds over 40 km/h (25 miles/h);
  - that, when fully loaded, weighs more than 4 times the weight of the towing unit, with a maximum of 20000 Kg (please refer to local rules).
- When parking tractor and towed trailer, engage the lowest transmission gear, engage parking brake, shut off the engine, remove the key and chock both tractor and trailer wheels
- Stopping distance increases with speed and weight of towed loads, and on hills and slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control. Consider the total weight of the equipment and its load.

**11 - P/N 2.9929.858.0**  
**Location:** On top of right fender (for tractors without cab).

<b>⚠ WARNING</b>	
	
<p><b>Whenever clearance permits:</b></p> <ul style="list-style-type: none"> <li>•Keep Rollover Protection Structure fully extended and locked.</li> <li>•Keep seat belt fastened.</li> </ul> <p><b>When structure must be lowered:</b></p> <ul style="list-style-type: none"> <li>•Drive with extra care.</li> <li>•Seat belt use is not recommended. No ROPS protection is provided in the lowered position.</li> </ul>	
<small>2.9929.858.0</small>	

<b>⚠ DANGER</b>	<b>⚠ DANGER</b>
	
<p><b>Pull only from approved drawbar or lower links of 3 point linkage at orizontal position or below</b></p>	<p><b>Rotating driveline contact may cause serious injury or death</b></p> <p><b>keep all driveline, tractor and equipment shields in place during operation</b></p>
<small>2.9929.856.0</small>	

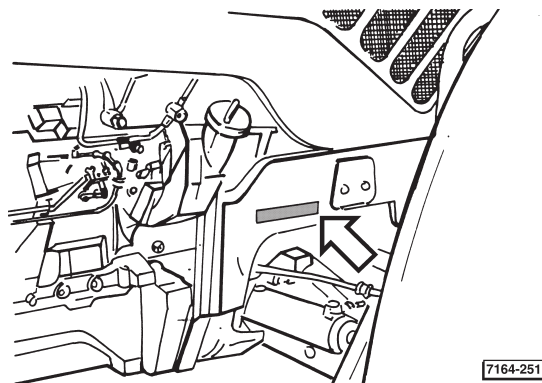
**12 - P/N 2.9929.856.0**  
**Location:** On top left P.T.O. shields.

## **SECTION 2 - Original spare parts**

The use of "ORIGINAL SPARE PARTS" is recommended to ensure optimum tractor efficiency, as well as to optimize your investment and operational expenses. Spare parts orders must specify the following:

- 1 - Tractor serial number and engine serial number**  
(if the engine is involved).
- 2 - Name and reference number of the required spare part.**

### **Tractor serial number**



The tractor serial number is stamped on the right-hand side at the front.

SECTION III                      OPERATING CONTROLS AND INSTRUCTION

To open the door from the inside, push down the lever on the door lock.



Access to the driving seat for platform tractors.



**WARNING: DO NOT ALLOW ANY PASSENGERS ON THE TRACTOR OR TOWED EQUIPMENT.**

**Passenger Seat**



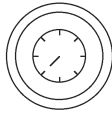
Passenger Seat (for tractor with cab)



**CAUTION: DO NOT PERMIT OTHERS TO RIDE ON THE TRACTOR OR THE IMPLEMENT UNLESS AN APPROVED PASSENGER SEAT HAS BEEN INSTALLED OR MADE AVAILABLE AS AN OPTION BY THE MANUFACTURE(S).**

**Operation**

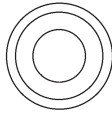
The selection and content of the functions displayed are governed by pressing buttons, denoted **P1**, **P2** and **P3**.



Button **P1** - Colour green - Positioned to left of panel.

**Used to select the function displayed**

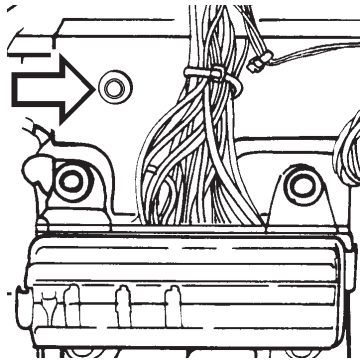
The 3 available functions (speedometer, P.T.O. speed, trip meter) are displayed cyclically by pressing P1 repeatedly. The function selected is indicated by a relative Led on the instrument panel.




Button **P2** - Colour green - Positioned to right of panel.


**Used to reset the function selected**

Press this to select another function.



Button **P3** - Colour red - Located in the compartment on the right- hand side of the driver (cover must be removed to gain access),


Auxiliary electrical systems on (turn the ignition key to position  ) the current total of working hours lapsed will be displayed.

Then, turn the ignition key to position , when the engine is started, the display sets itself to indicate ground speed (speedometer). To display a function other than ground speed, simply press P1 repeatedly to select the function required.

## Engine shut down

If engine is exceptionally hot, allow it to idle for a few minutes.

Put the gear lever in neutral; in the case of tractors with an electronic regu-

lator, turn the ignition key to position  .

In the case of tractors with mechanical accelerators, operate the engine stop command until engine comes to a stop, then turn the ignition key to

position  .

The engine stop command has a self-lock function; to unlock before starting the engine, pull the lever located below.




**WARNING: DO NOT DISENGAGE THE CLUTCH OR ATTEMPT TO SHIFT GEAR AFTER YOU HAVE STARTED DOWNHILL.**



**Transmission speed selection**


- Before attempting to start the engine, place forward-reverse control lever into neutral position and the P.T.O. selector button in the OFF position. Engine will not start and run if either forward-reverse or P.T.O. is in the engaged position.
- Depress the clutch pedal and start the engine.
- Select one of the 3 speed ranges at your disposal (or 4 speed ranges if a super-reduction gear is fitted) by means of the concerned lever and shift into the desired gear. The speed choice depends a great deal on soil conditions, implement used, work to be performed, etc. In any case, always avoid using a gear which results in engine overloading.

**IMPORTANT:** For gearbox equipped with MINI-REDUCTION GEAR UNIT

When using either the Mini-reduction gear unit or the reversing gear unit

control lever to shift from the forward fast speed  to the reverse speed RM, it will first be necessary to place the lever in neutral position and subsequently into RM position. This is due to interlock that prevents a direct shift from forward-fast to reverse speed RM.

This will prevent the reverse speed RM from being accidentally engaged when shifting from the forward fast speed  into the mini-reduced forward-slow speed .

To pass from the RM position to the forward fast speed , no previous shifting into neutral position is required.

To check in a simple way if the engine is overloaded, it is suggested to carry out the following test: keep the hand throttle at 1/4th of its travel, then suddenly accelerate to maximum speed.

If the engine revs do not increase, but on the contrary decrease, this means the engine is overloaded, then shift into a lower gear.

To make a correct choice we suggest you to consult the graph in the technical data section.



**CAUTION: ONLY OPERATE THE SUPER-REDUCTION LEVER WHEN THE TRACTOR IS STATIONARY AND THE CLUTCH PEDAL IS FULLY DEPRESSED.**

### Rear power take-off (540/1000 r.p.m.)

The following power take-off packages are available:

- 540 - 750 r.p.m.
- 540 - 1000 r.p.m.
- 540 - 750 - 1000 r.p.m.



**CAUTION: WHEN OPERATING PTO DRIVEN EQUIPMENT OR WHEN TOWING HEAVY EQUIPMENT AT TRANSPORT SPEEDS, LOCK THE DRAWBAR IN ITS CENTER POSITION WITH RETAINING PINS AND ATTACH IMPLEMENT SAFETY CHAINS.**

### Rear P.T.O. clutch command

Activation and deactivation of the P.T.O. clutch are piloted by a dedicated control unit.



The activate/deactivate control function is selected by pressing the **button**, which returns to the off position when released.

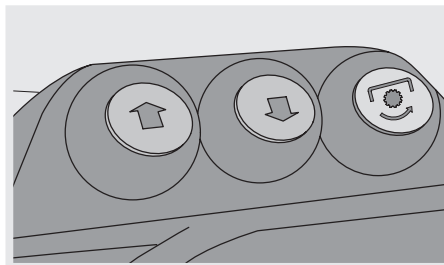
An integral light shows when the function is activated, and serves also to indicate the type of fault that may affect the electrohydraulic control. When the engine is started, the warning light blinks to indicate that the control system is activated.

The P.T.O. is engaged by pressing and holding the button for at least 2 seconds.

If the button is held for more than 10 seconds, or if there is a fault with the electrohydraulic control, the P.T.O. will be deactivated automatically.

The control unit also disengages the P.T.O. every time the engine is switched off.

The rear P.T.O. can be engaged by pressing the ground-operated pushbutton located on the rear right-hand fender.

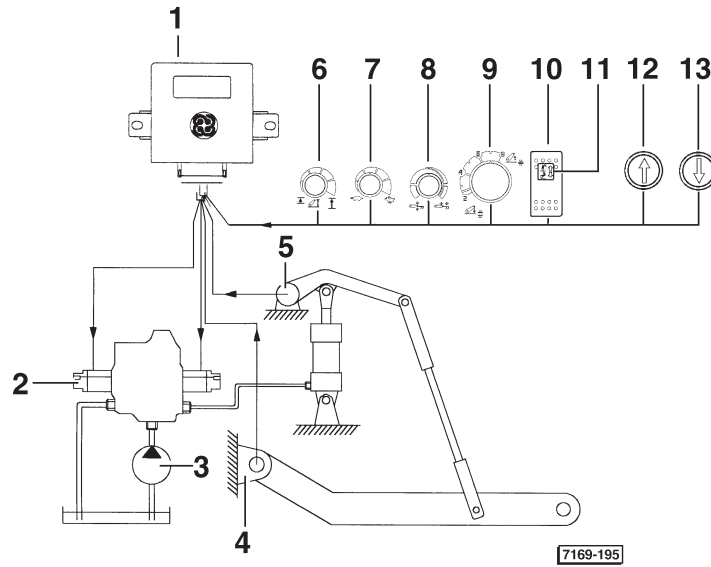


### Electronic lift

This hydraulic lift system is governed electronically by a dedicated control unit and control panel.

The electronic control unit processes a number of input signals and pilots the directional control valve of the lift electrohydraulically on the basis of the information received.

The lift can be operated using Draft and Position control.



#### Configuration of electronic lift system

- 1 - Control panel
- 2 - Directional control valve, operated electrohydraulically  
(2 proportional solenoid valves)
- 3 - Hydraulic pump
- 4 - Draft sensor
- 5 - Position sensor
- 6 - Maximum lift height control knob
- 7 - Rate of drop control knob
- 8 - Draft/wheelslip mix control knob
- 9 - Implement depth control knob
- 10 - Up/down control
- 11 - Lock and Alarm lamp
- 12 - Manual up control
- 13 - Manual down control

### Auxiliary hydraulic services control valve

The auxiliary hydraulic services control valve enables the control of external implements with hydraulic rams and motors, meeting the operating requirements for all applications.

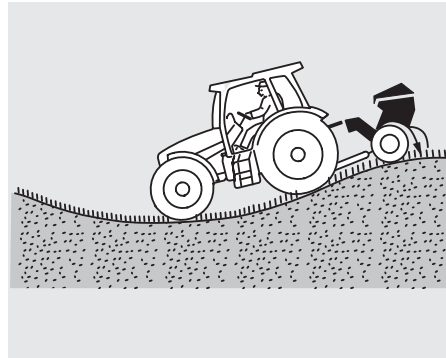


**WARNING: CONTROL LEVER MUST BE MECHANICALLY RETURNED TO THE NEUTRAL POSITION ONCE THE HYDRAULIC CYLINDER HAS REACHED THE END OF ITS TRAVEL. FAILURE TO DO SO WILL RESULT IN THE HYDRAULIC CIRCUIT BEING PLACED UNDER A STRAIN WHICH COULD RESULT IN OVERHEATING OF HYDRAULICS AND DAMAGE TO TRACTOR HYDRAULIC COMPONENTS AND/OR IMPLEMENT.**



**WARNING: HYDRAULIC FLUID UNDER PRESSURE CAN PENETRATE THE SKIN OR EYES AND CAUSE SERIOUS INJURY, BLINDNESS OR DEATH. FLUID LEAKS UNDER PRESSURE, MAY NOT BE VISIBLE. LOOSEN CONNECTIONS SLOWLY, KEEPING HANDS AND FINGERS CLEAR OF LOOSENED FITTINGS. USE A PIECE OF CARDBOARD OR WOOD TO LOCATE LEAKS, DO NOT USE YOUR FINGERS OR HANDS. WEAR SAFETY GOGGLES FOR EYE PROTECTION. IF ANY FLUID IS INJECTED INTO THE SKIN, SEEK MEDICAL ATTENTION IMMEDIATELY.**

In the case of diggers, shovels and loaders, moving the control lever to the float position will allow the cylinder to move freely and thus the bucket to follow the contours of the terrain.



N.B.: float position may also be used to lower the tipping body of a trailer when the ram is operated as a single-acting cylinder. In this case it is essential that the control valve is first converted to single-acting.

**IMPORTANT:** In the case of control valves not equipped with a Kick-out valve, do not continue to hold the control lever in position when the implement cylinder has reached the end of its stroke in order to avoid prolonged operation of the pressure relief valve. This could cause the oil to overheat and cause damage to the hydraulic system and transmission.

**N.B.:** on our tractors, the auxiliary services and the hydraulic lift are supplied by the same hydraulic circuit. Therefore it is not possible to operate the auxiliary service control valve and the lift simultaneously.



**DANGER: ON CONNECTING THE HYDRAULIC LINES OF THE IMPLEMENT TO THE HYDRAULIC LINES OF THE TRACTOR, ALWAYS FOLLOW CAREFULLY THE INSTRUCTION SHOWN ON THE TRACTORS DECALS OR DESCRIBED INSIDE THIS MANUAL. WRONG CONNECTIONS OF THE HYDRAULIC LINES BETWEEN IMPLEMENT AND TRACTOR COULD CAUSE UNEXPECTED MOVEMENTS IN THE IMPLEMENTS, WITH SERIOUS RISK OF PERSONAL INJURY.**

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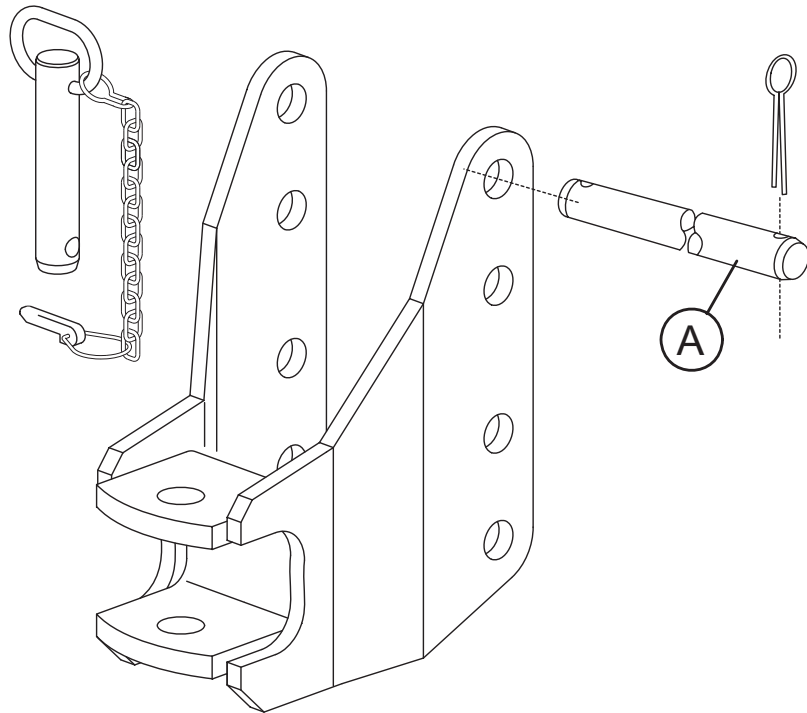


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### Class “C” towing hitch

The class “C” towing hitch is fixed to the support brackets by two lock pins **A**. To alter the height of the hitch, remove the pins and re-insert them in the required position.



**CAUTION: DO NOT USE THE FRONT HITCH FOR TOWING EQUIPMENTS. IT'S FOR EMERGENCY ONLY.**



**CAUTION: WEIGHT OF TOWED EQUIPMENT, WITHOUT BRAKES, SHOULD NOT EXCEED WEIGHT OF TRACTOR.**



**WARNING: DO NOT REMOVE OR OBSCURE DANGER, WARNING, CAUTION OR INSTRUCTION DECALS. REPLACE ANY DANGER, WARNING, CAUTION OR INSTRUCTION DECALS THAT ARE NOT READABLE OR ARE MISSING. REPLACEMENT DECALS ARE AVAILABLE FROM YOUR DEALER IN THE EVENT OF LOSS OR DAMAGE. THE ACTUAL LOCATION AND ORDERING CODE OF THESE SAFETY DECALS IS ILLUSTRATED AT THE END OF THIS SECTION.**

**WHEN YOU REPLACE A PART THAT CARRIES A SAFETY LABEL, MAKE SURE THAT THE SAME LABEL IS APPLIED TO THE NEW PART. DO NOT USE FUEL OR SOLVENTS ETC. TO CLEAN SAFETY LABELS. USE A CLEAN CLOTH DAMPED IN SOAPY WATER.**



**CAUTION: THE CAB IS IN FULL CONFORMITY WITH THE INTERNATIONAL STANDARDS AS TO THE CAB'S SOUNDPROOFING. BE VERY CAREFUL WHEN OPERATING IN SMALL SPACES AND ALWAYS PROTECT YOUR EARS WHENEVER OTHER WORKING EQUIPMENT IS GENERATING DANGEROUS NOISE LEVELS.**

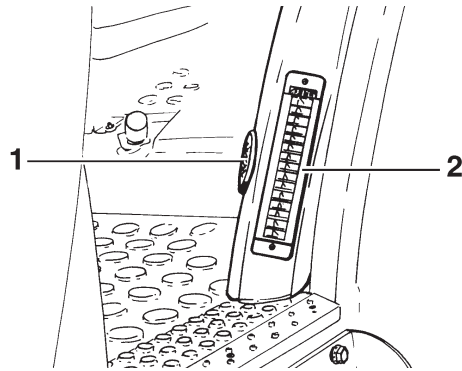


**DANGER: DO NOT WELD, DRILL, BEND OR MODIFY THE ROPS OR THE CABIN. TO DO SO REDUCES THE PROTECTION IT OFFERS.**

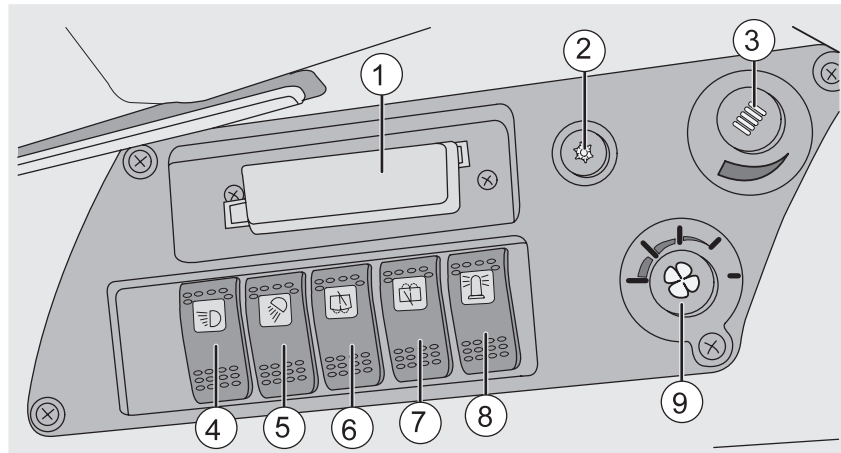


**WARNING: YOUR TRACTOR IS A ONE-PERSON MACHINE. DO NOT PERMIT OTHERS TO RIDE ON THE TRACTOR OR THE IMPLEMENT. IN SOME TERRITORIES A PASSENGER SEAT MUST BE FITTED TO CARRY PASSENGERS. DO NOT ALLOW ANYONE TO RIDE ON THE IMPLEMENTS OR OTHER EQUIPMENT INCLUDING TRAILERS, EXCEPT ON CERTAIN HARVESTING EQUIPMENT, SPECIFICALLY DESIGNED FOR RIDERS DURING THE ACTUAL HARVEST OPERATION ONLY (NOT DURING TRANSPORT). SUCH EQUIPMENT MUST HAVE PROVISION FOR A SAFE RIDING AREA. DO NOT ALLOW CHILDREN ON THE TRACTOR.**

**SECTION III OPERATING CONTROLS AND INSTRUCTION**



Lower directable vents  
1 - Footwell vent  
2 - Door vent



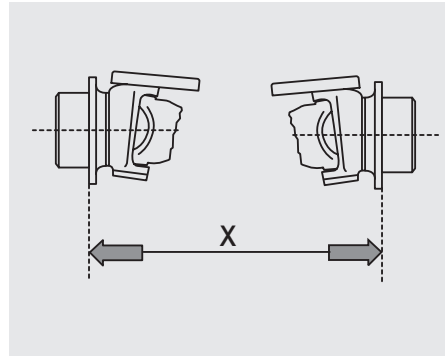
Control panel  
1 - Fuse box for cab electrical system  
2 - Air conditioning control  
3 - Heater control  
4 - Front work lights switch  
5 - Rear work lights switch  
6 - Windscreen wiper control  
7 - Rear screen wiper control  
8 - Flashing light switch  
9 - Blower control

**Width of the front axle (without wheels)**

for tractor 4WD

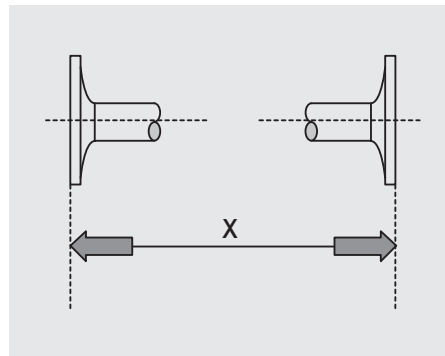
1500 mm (59.10 in)

for tractor 2WD

1387 mm (54.65 in)**Mechanical ratio (front wheel revolutions / rear wheel revolution)**

30 Km/h	40 Km/h
(18.6 mph)	(24.8 mph)

AGROPLUS 60 - 70 - 80

1.3790      1.3830**Width of rear axle (without wheels)**1540 mm (60.68 in)**Row crop tires**

When changing the tractor over to row crop (bar tread) tires, observe load rating and speed limits!

Given the tremendous variety of tyres available, always ask your nearest dealer for information on alternative tyres and data on homologation, capacity, pressure, track, etc..



**WARNING:**  
NEVER INFLATE BEYOND 35 POUNDS OF PRESSURE TO SEAT BEADS.

NEVER STAND, LEAN OR REACH OVER THE ASSEMBLY DURING INFLATION.

INSPECT BOTH SIDES OF THE TIRE TO BE SURE THAT THE BEADS ARE EVENLY SEATED. IF TIRE IS MOUNTED ON A MACHINE THAT DOES NOT HAVE A POSITIVE LOCK-DOWN DEVICE TO HOLD THE WHEEL, INFLATION SHOULD BE DONE IN A SAFETY CAGE OR OTHER RESTRAINING DEVICE. IF BOTH BEADS ARE NOT PROPERLY SEATED WHEN PRESSURE REACHES 35 PSI, COMPLETELY DEFLATE THE ASSEMBLY, REPOSITION THE TIRE AND/OR TUBE ON THE RIM, RELUBRICATE AND REINFLATE. INFLATING BEYOND 35 PSI AIR PRESSURE WHEN TRYING TO SEAT THE BEADS IS A DANGEROUS PRACTICE THAT MAY BREAK A TIRE BEAD (OR EVEN THE RIM) WITH EXPLOSIVE FORCE, POSSIBLY RESULTING IN SERIOUS INJURY OR DEATH. AFTER THE BEADS ARE FULLY SEATED, PRESSURE MAY BE INCREASED ABOVE 35 PSI TO OPERATING PRESSURES, NOT TO EXCEED THE MAXIMUM MOLDED ON THE TIRE SIDEWALL.



**WARNING:**  
STAY OUT OF THE TRAJECTORY AS INDICATED BY SHADED AREA. ALWAYS USE A SAFETY CAGE OR OTHER RESTRAINING DEVICE IN COMPLIANCE WITH OSHA REGULATIONS.

NOTE: UNDER SOME CIRCUMSTANCES, THE TRAJECTORY MAY DEVIATE FROM ITS EXPECTED PATH



**WARNING:** AN UNBALANCED TRACTOR COULD OVERTURN AND CAUSE INJURY OR DEATH. MAKE SURE FRONT FRAME COUNTERWEIGHTS, WHEEL WEIGHTS AND WHEEL BALLAST ARE USED AS RECOMMENDED BY THE MANUFACTURER. DO NOT ADD EXTRA COUNTERWEIGHTS TO COMPENSATE FOR AN OVERLOADED TRACTOR, IT IS RECOMMENDED TO REDUCE THE LOAD. KEEP ALL PARTS OF YOUR BODY INSIDE THE OPERATOR'S COMPARTMENT WHILE OPERATING THE TRACTOR.

## Maintenance intervals

The recommended maintenance intervals apply to normal operating conditions.



**CAUTION: BEFORE STARTING THE TRACTOR, CHECK ITS CONDITION FOR OPERATING SAFELY ON THE PUBLIC HIGHWAY.**

If the tractor is subjected to extreme working conditions and/or dusty environments, the intervals between maintenance operations will have to be reduced accordingly.

Scrupulously observe the recommended maintenance intervals and only use recommended lubricants and fluids.

Using inferior quality lubricants in order to save money can result in serious damage to the tractor.

Failure to have the tractor serviced at the recommended maintenance intervals and to use the prescribed lubricants will invalidate the manufacturer's warranty.



**DANGER: TO AVOID EYE INJURY, NEVER EXPOSE EYES TO WAVE EMISSION ZONES WHEN RADAR IS IN OPERATION. DO THE RADAR MAINTENANCE ONLY AFTER ENGINE TURNED OFF AND IGNITION KEY IN STOP POSITION.**



**DANGER: WHEN HANDLING BATTERIES:**  
- AVOID BREATHING IN FUMES PRODUCED BY THE ACID SOLUTION (if the acid is accidentally swallowed, drink plenty of water or milk, then drink beaten eggs or vegetal oil; seek medical attention immediately)  
- USE THE APPROPRIATE PROCEDURE WHEN CHARGING  
- CLEAN ALL PARTS WHERE ACID SOLUTION MIGHT HAVE SPILLED. IF IT SPILLS ON THE HANDS, NEUTRALIZE IT WITH HYDRATED LIME OR SODIUM BICARBONATE. IF IT HITS THE EYES, RINSE REPEATEDLY FOR 10-15 MINUTES, THEN SEEK MEDICAL ATTENTION IMMEDIATELY.

Proceed as follows:

Unscrew the drain plug on the oil sump.



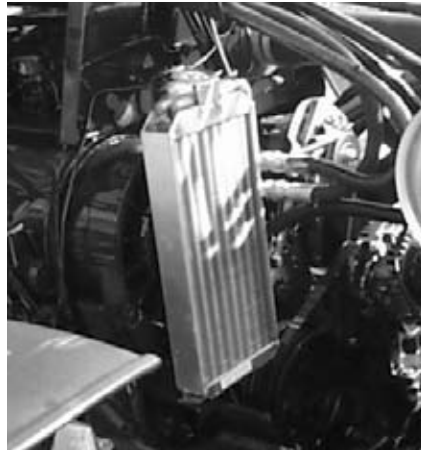
**DANGER: FLUIDS THAT ARE UNDER PRESSURE CAN PENETRATE HUMAN TISSUE CAUSING SERIOUS INJURY. IT IS RECOMMENDED TO ALWAYS STOP THE ENGINE AND RELIEVE THE PRESSURE BEFORE CONNECTING OR DISCONNECTING LINES.**

Renew the engine oil filter following the instructions given below. When all the oil has drained from the sump, inspect the drain plug seal and, if necessary, renew it before replacing the drain plug. Pour oil of the prescribed quality into the sump through the oil filler until the level reaches the upper notch on the dipstick. Run the engine for a few minutes and check the seals around the oil drain plug and the new oil filter. Check the oil level again and top up if necessary.

### **Changing the engine oil filter**

- Position a suitable receptacle under the filter.
- Unscrew the filter cartridge.
- Oil the new filter cartridges using the same oil as that used in the engine.
- Screw the new cartridge on by hand.
- On starting the engine, check for leaks around the cartridge seals.
- Check the engine oil level.



**Cleaning the oil cooler**

The oil cooler can be cleaned with a compressed air jet, or, if necessary, a steam jet (max. pressure 6 bar/87 psi) or a water jet.

If the engine is to be cleaned at the same time, protect the air filter, the alternator and the starter motor.

Once all the components have been replaced, run the engine for a few minutes so that it heats up and dries any parts still wet.

**Cleaning with detergents**

If you use detergents to clean the oil cooler, use commercial products that dissolve oil.

The detergent can be mixed with water for application by spray gun or brush.

After applying the solution, wait a few minutes, then rinse off with clean water.

**Cleaning with compressed air**

This operation is only suitable for removing dust. When cleaning the grilles or cab filter screens, make sure that the compressed air jet is directed in the opposite direction to the normal air flow.

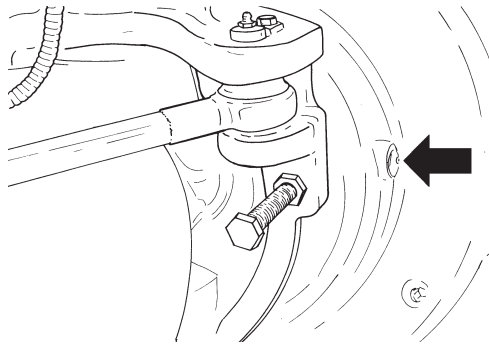
**Important:** failure to keep the oil cooler clean can lead to overheating of the lubricated parts.

**Warning:** every time you clean the tractor, observe the applicable regulations for environmental protection.

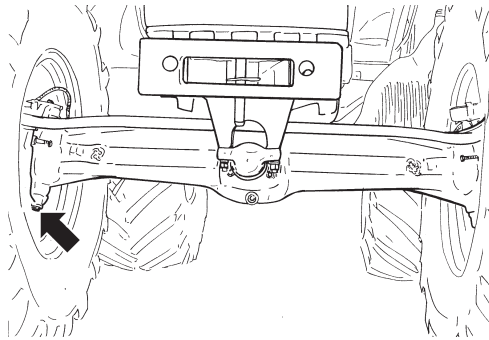
**Hub reduction units*****Checking the oil level***

Rotate the hub so that filler/level plug is aligned horizontally with the centre of the hub, and remove the plug.

The oil level should be up to the lower edge of the hole.

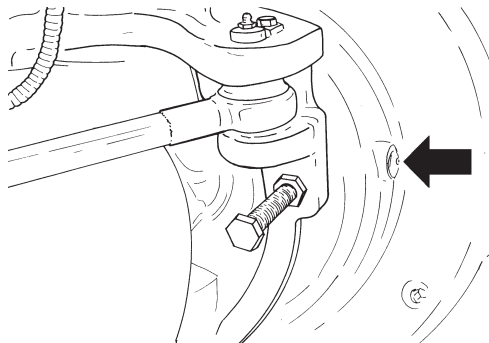
***Changing the oil***

Drain the used oil from the drain hole located at the bottom of the hub.



Fill through the filler/level hole until the oil level is up to the lower edge of the hole.

**Important:** collect used oil in suitable containers prior to taking it to an authorised disposal centre.

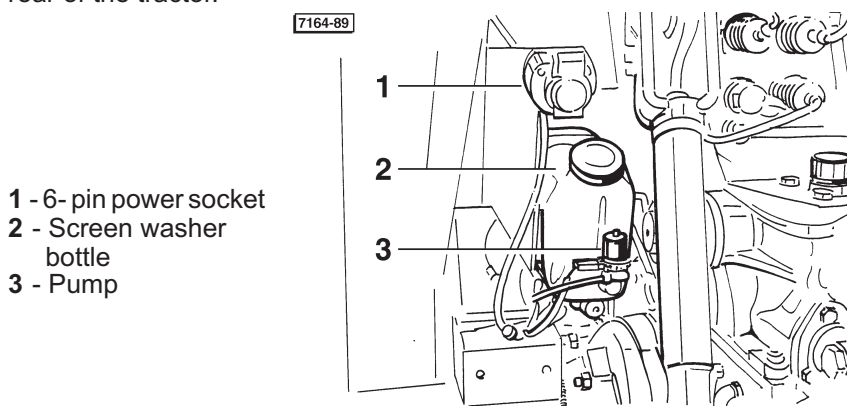


**CAUTION: APPLY THE PARKING BRAKE AFTER THE ENGINE HAS STOPPED AND BEFORE LEAVING THE TRACTOR.**

## Cab

### Windscreen washer

Check the level of screen wash liquid in the plastic reservoir located on the rear of the tractor.



Clean blocked screen washer jets using a pin. Adjust the direction of the jets so that the spray hits the screen at the top of the arc described by the wiper blade.

During winter, it is advisable to add a suitable antifreeze or methyl alcohol to the screenwash fluid.

***IMPORTANT:*** Always keep all the cab windows clean. Mirrors must also be kept clean and correctly positioned.

### Windscreen and rear screen wipers

The wiper blades have a bayonet fitting. To remove the blade, raise the tab of the centre clip.



**CAUTION: REPAIRS TO THE AIR CONDITIONING SYSTEM MUST ONLY BE CARRIED OUT BY A SPECIALIZED SERVICE CENTRE.**

To remove the battery from the tractor, proceed as follows:

- 1 - A) Remove the side panels  
(for tractors without front lift and front P.T.O.)  
B) First remove the side panels and then the front grille  
(for tractors with front lift and front P.T.O.)
- 2 - **Disconnect the earth lead from the negative terminal first and then disconnect the lead from the positive terminal**
- 3 - Loosen the 4 screws of the 2 retaining brackets and remove the battery from its support.

Always keep the battery terminals clean; smear them with vaseline to protect them against corrosion.



When refitting the battery, always connect the positive lead first and then the earth lead.

**Important:** Check frequently that the battery is securely anchored to its support.



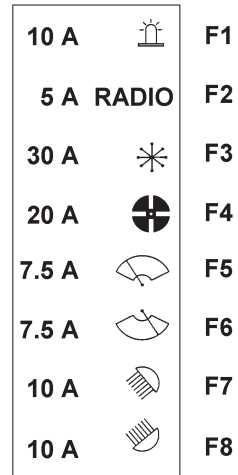
**WARNING: WEAR EYE PROTECTION WHEN CHARGING OR BOOSTING BATTERY.**



**WARNING: CONNECT ONLY TO A 12 VOLT SUPPLY TO BOOST BATTERY.**

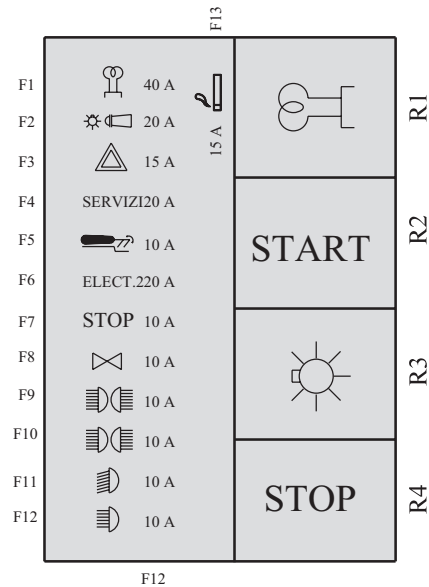
**Cab fuse box**

- F1 - Flasher unit
- F2 - Radio
- F3 - Air conditioning
- F4 - Blower/heater
- F5 - Front wiper
- F6 - Rear wiper
- F7 - Front work lights
- F8 - Rear work lights



**Tractor fuse box**

- F1 - Thermostarter
- F2 - Sidelights - Horn
- F3 - Hazard warning lights
- F4 - Worklight - 12 V socket
- F5 - Electronic lift
- F6 - Preheater control unit/instrument panel/H-M-L
- F7 - Engine STOP
- F8 - Direction indicators
- F9 - Sidelights
- F10 - Sidelights
- F11 - Dipped beam headlights
- F12 - Full beam headlights
- F13 - Cigar lighter
- R1 - Preheat
- R2 - Start
- R3 - Lights
- R4 - STOP



- Cover the exhaust pipe with a plastic sheet held in place with adhesive tape. The tractor must be completely clean; touch-up any scratches in the paintwork to prevent rust from forming.
- Apply a layer of grease to exposed metal surfaces as a protection against rust.

*The tractor should be stored in a suitable garage, and preferably not exposed to dust. If the tractor has to be stored outside, cover it with a sheet.*

**IMPORTANT:** do not leave the tractor idle for a long period without having first carried out the operations listed above.

### **Preparing the tractor for use after a long period of storage**

- Remove the tractor from the wheel stands (if used).
- Remove the cover sheet (if any);
- Remove the cover from the exhaust.
- Charge and refit the battery (follow the instructions given in this manual).
- Start the engine and allow to tick over slowly for a few minutes.
- Do not use the throttle until you are sure that the engine is running correctly.
- Carry out all the operations prescribed in this manual for the start of the working season; the tractor will then be ready to be put back into service.

**Unladen weight of tractor (with ballast)**

AGROPLUS		WEIGHT OF TRACTOR WITH FRAME Kg (lb)		
		Anteriore	Posteriore	TOTALE
60	2WD	A = 1104 (2433.88) B = *	A = 1520 (3350.99) B = *	A = 2624 (5784.87) B = *
70		A = 1154 (2544.11) B = *	A = 1580 (3483.27) B = *	A = 2734 (6027.38) B = *
80		A = 1144 (2522.06) B = *	A = 1620 (3571.45) B = *	A = 2764 (6093.51) B = *
60	4WD	A = 1434 (3161.40) B = 1600 (3527.36)	A = 1520 (3350.99) B = 1490 (3284.85)	A = 2954 (6512.39) B = 3090 (6812.21)
70		A = 1464 (3227.53) B = 1650 (3637.59)	A = 1650 (3637.59) B = 1600 (3527.36)	A = 3114 (6865.12) B = 3250 (7164.95)
80		A = 1464 (3227.53) B = 1600 (3527.36)	A = 1650 (3637.59) B = 1680 (3703.73)	A = 3114 (6865.12) B = 3280 (7231.09)
		WEIGHT OF TRACTOR WITH CAB Kg (lb)		
60	2WD	A = 1194 (2632.29) B = *	A = 1620 (3571.45) B = *	A = 2814 (6203.74) B = *
70		A = 1244 (2742.52) B = *	A = 1680 (3703.73) B = *	A = 2924 (6446.25) B = *
80		A = 1204 (2654.34) B = *	A = 1820 (4012.37) B = *	A = 3024 (6666.71) B = *
60	4WD	A = 1514 (3337.76) B = 1650 (3637.59)	A = 1600 (3527.36) B = 1580 (3483.27)	A = 3114 (6865.12) B = 3230 (7120.86)
70		A = 1554 (3425.95) B = 1680 (3703.73)	A = 1750 (3858.05) B = 1740 (3836.00)	A = 3294 (7261.95) B = 3420 (7539.73)
80		A = 1494 (3293.67) B = 1650 (3637.59)	A = 1830 (4034.42) B = 1820 (4012.37)	A = 3324 (7328.09) B = 3470 (7649.96)

**A** - Tractor without front lift

**B** - Tractor with front lift

\* - Version not available

*SECTION VIII*

*TECHNICAL SPECIFICATIONS*

Speed at 2200 engine r.p.m. Version 30 Km/h (18.6 mph)  
20 AV + 10 RM with min.

Front tires	12.4 R 20"	360/70 R 20"	11.2 R 24"	320/70 R 24"
Rear tires	14.9 R 30"	420/70 R 30"	16.9 R 30"	480/70 R 30"

Reverse gears

1 M	1.187	1.187	1.241	1.241
2 M	1.696	1.696	1.773	1.773
3 M	2.430	2.430	2.540	2.540
4 M	3.396	3.396	3.549	3.549
5 M	4.724	4.724	4.937	4.937
1 V	6.534	6.534	6.828	6.828
2 V	9.333	9.333	9.754	9.754
3 V	13.373	13.373	13.976	13.976
4 V	18.688	18.688	19.531	19.531
5 V	25.995	25.995	27.168	27.168

**Note: to convert Km/h in mph multiply by: 0.6214**

Dark smoke from exhaust

- Check that the air filter element is clean:
  - Clean or replace as necessary. Check the efficiency of the injectors and calibrate if necessary. Check the calibration of the electronic rpm control (operation to be carried out by a specialised service centre).

Engine does not respond well to sudden acceleration

- Inspect the air filter element:
  - Clean or replace as necessary.
- Inspect the fuel filter:
  - Replace if necessary and bleed air from the system if necessary.
- Poor compression:
  - Check valve clearances are 0.3 mm/0,012 in (operation to be carried out by a specialised service centre); grind or replace valves as necessary. If the problem persists, check piston rings and cylinder liners for wear and replace if necessary.

The engine does not run at a constant speed

- Check for water in the fuel system:
  - Drain the fuel tanks and refill with clean fuel.
  - Check the calibration of the injectors (operation to be carried out by a specialised service centre).

Engine overheats

- Check drivebelt tensions:
  - Adjust drivebelt tensions. Clean air intake grilles.
- Check the injection pump timing (operation to be carried out by a specialised service centre):
  - Calibrate the pumps and, if necessary, the injectors.
  - Check the pressure in the turbocharger outlet; clean the the turbocharger.

Consideration of rear mounted implement and front/rear combinations

**1) Calculation of minimum ballasting at the front  $G_{V \min}$**

$$G_{V \min} = \frac{G_H \times (c + d) - T_V \times b + 0.2 \times T_L \times b}{a + b}$$

Record the calculated minimum ballasting which is needed at the front of the tractor into the table.

Front mounted implement

**2) Calculation of the minimum ballasting at the rear  $G_{H \min}$**

$$G_{H \min} = \frac{G_V \times a - T_H \times b + 0.45 \times T_L \times b}{b + c + d}$$

Record the calculated minimum ballasting which is needed at the rear of the tractor into the table.

**3) Calculation of the real front axle load  $T_{V \text{ tot}}$**

(If with the front mounted implement ( $G_V$ ) the required minimum front ballasting ( $G_{V \min}$ ), cannot be reached, the weight of the front mounted implement has to be increased to the weight of the minimum ballasting at the front!)

$$T_{V \text{ tot}} = \frac{G_V \times (a + b) + T_V \times b - G_H \times (c + d)}{b}$$

Record the calculated real front axle load and the permissible front axle load of the tractor into the table.

**4) Calculation of the real total weight  $G_{\text{tot}}$**

(If with the rear mounted implement ( $G_H$ ) the required minimum rear ballasting ( $G_{H \min}$ ) cannot be reached, the weight of the rear mounted implements has to be increased to at least the weight of the minimum ballasting at the rear!)

$$G_{\text{tot}} = G_V + T_L + G_H$$

Record the calculated real and the permissible total weight given in the instruction handbook for the tractor into the table.

**5) Calculation of the real rear axle load  $T_{H \text{ tot}}$**

$$T_{H \text{ tot}} = G_{\text{tot}} - T_{V \text{ tot}}$$

Record the calculated real and the permissible rear axle load given in the instruction handbook for the tractor into the table.

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