



SOLARIS with standard tyres



SOLARIS with Garden tyres

Follow a Safety Programme

For Safe Operation

For safe operation of an agricultural tractor, you must be a qualified and authorized operator. To be qualified you must understand the written instructions supplied in this Operator Instruction Book, have training, and know the safety rules and regulations for the job.

Some regulations specify that no one under the age of 16 years, for example, may operate power machinery. This includes tractors. It is your responsibility to know what these regulations are, and obey them, in the operating area or situation.

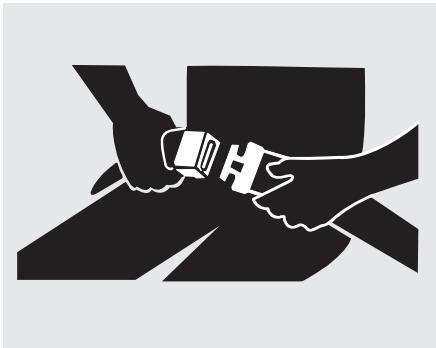
These will include, but are not limited to, the following instructions for safe tractor operation.



WARNING: AN OPERATOR SHOULD NOT USE ALCOHOL OR DRUGS WHICH CAN AFFECT HIS ALERTNESS OR CO-ORDINATION. AN OPERATOR ON PRESCRIPTION OR 'OVER THE COUNTER' DRUGS NEEDS MEDICAL ADVICE ON WHETHER OR NOT HE OR SHE CAN SAFELY OPERATE MACHINES.

General safety rules

- DO NOT allow children or unqualified persons to operate your tractor. Keep others away from your area of work.
- Securely fasten your seat belt when the tractor has a ROPS (Roll Over Protective Structure) frame in the upright position or is fitted with a cab.
- Before starting the engine, check that all the tractor controls are in neutral position. This is to prevent accidental movement of the vehicle or the starting of tractor-driven implements.
- ONLY operate the controls when seated in the driver's seat.



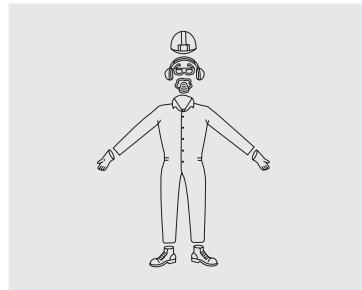
Prepare for Safe Operation

Protect Yourself

Wear all the protective clothing and personal safety devices issued to you or called for by job conditions. Don't take chances.

You may need:

- A hard hat.
- Safety glasses, goggles, or face shield.
- Hearing protection.
- Respirator or filter mask.
- Foul weather clothing.
- Reflective clothing.
- Heavy gloves (neoprene for chemicals, leather for rough work).
- Safety boots.



Note where fire extinguishers and first-aid or emergency equipment is kept and get to know where to find help in a hurry. Make sure you know how to use this equipment.



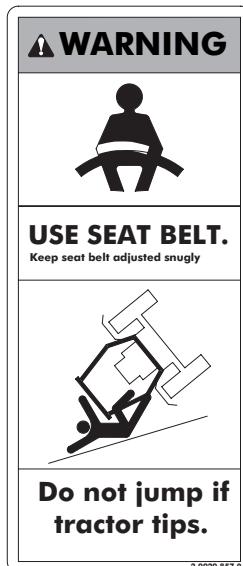
DO NOT wear loose clothing, jewellery or other items and tie up long hair which could entangle in controls or other parts of the tractor.

Risks from exposure to noise

The tractor and any implements attached to it constitute a source of noise of which the intensity and frequency can be measured using the appropriate instruments.

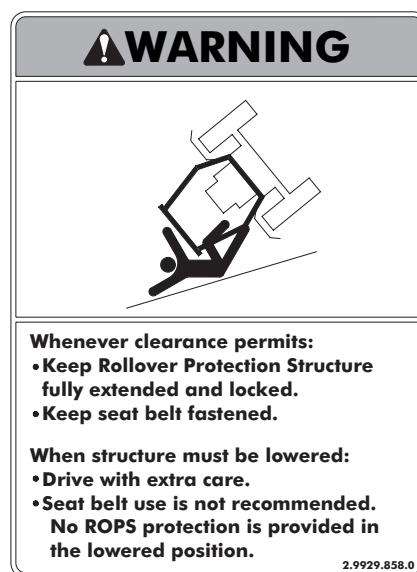
Anyone who uses the tractor must know that:

- exposure to excessive and/or prolonged noise can cause serious damage, not just to the hearing but also to general health. The higher the noise level (dbA) and the greater the duration of exposure, the higher the risk. The combination of both these factors can be expressed in the value LEP (level of personal exposure to noise).
- you therefore need to know the noise level generated by the tractor. This information can be found in the Use and Maintenance Handbook, under the chapter heading "Technical Data".



11 - P/N 2.9929.857.0

Location: On the left fender (near the platform)



12 - P/N 2.9929.858.0

Location: On the right fender (next to the driver's seat)

Original replacement parts

This use and maintenance manual covers all the models in the **SOLARIS** range.

The models in this range are all very similar and have many parts in common.

Model**SOLARIS 35****SOLARIS 45****SOLARIS 55**

Your authorized SAME dealer is obliged to provide all the Technical Assistance necessary and to offer you technical support through his workshop and specially trained personnel to ensure that your tractor continues to offer the very best performance.

In order to obtain replacement parts or prompt and efficient technical assistance, the owner must provide the tractor model, the tractor serial number, the engine model and the engine serial number.

Use the space below to record your tractor identification data:

* Tractor model

* Tractor serial number

* Engine model

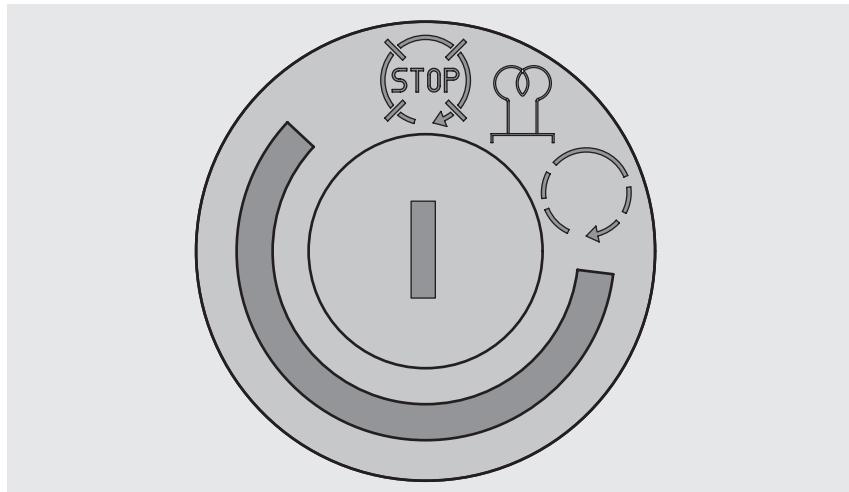
* Engine serial number

* Date of purchase

* Dealer's name

* Dealer's telephone number

Ignition switch



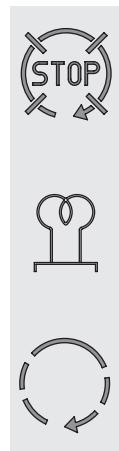
Ignition switch

Controls and checkover instruments

Electrical system deenergized - key removable;

Active electric circuit: - Lamps indicating operation of the alternator and low engine oil pressure light up on the instrument panel.

Engine starting



WARNING: BEFORE STARTING THE ENGINE MAKE SURE THERE IS PLENTY OF VENTILATION. DO NOT OPERATE THE ENGINE IN A CLOSED BUILDING. THE EXHAUST FUMES MAY CAUSE ASPHYXIA-TION.

Handbrake lever

The handbrake operates independently of the service brakes and is applied by pulling up on the handbrake lever.

The handbrake warning light on the instrument panel will illuminate when the handbrake is applied.



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



CAUTION: THE PARKING BRAKE SHOULD ALWAYS BE APPLIED WHEN TRACTOR IS PARKED OR LEFT UNATTENDED.

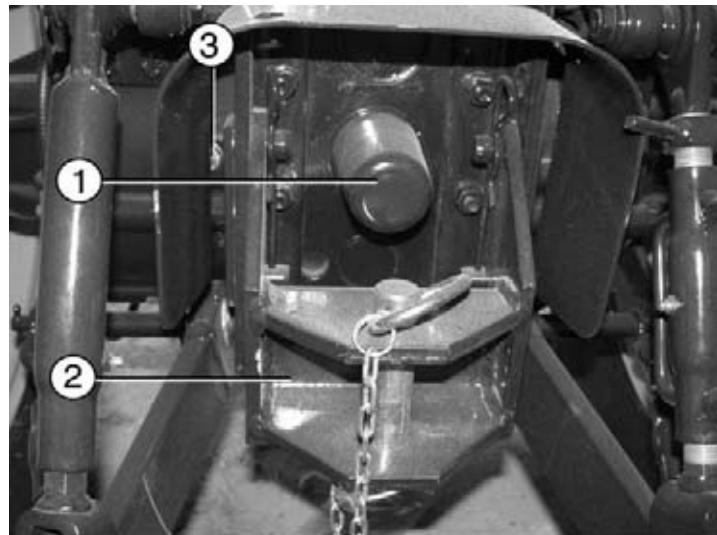
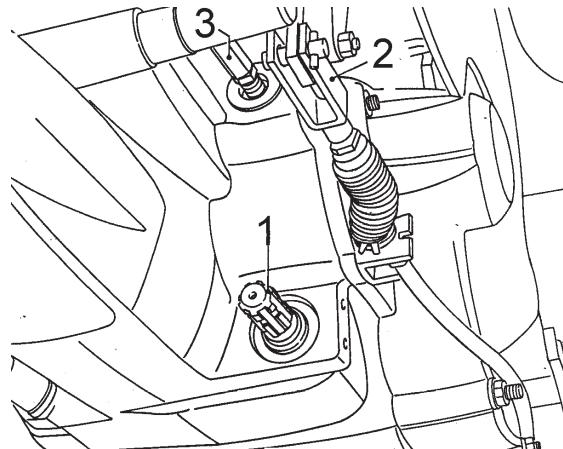
Accelerator pedal



Underside P.T.O. for control of implements mounted underside

Underside P.T.O. (2000 rpm)

- 1 - Underside P.T.O. shaft
- 2 - Parking brake froked rod
- 3 - Left service brake rod



Rear P.T.O. shafts

- 1 - 540/1000 rpm shaft (*or 540 ECO rpm*) /Ground speed P.T.O. shaft
- 2 - Tow hook
- 3 - Gearbox oil level



Checking the transmission oil level

CAUTION: Before connecting implement hoses to the service couplers, stop the engine and check that the connection fittings are clean. After having connected the hoses and started the engine, check that the hydraulic system is functioning correctly.

Then, after having operated the cylinders a few times to equalise the pressure (moving the control lever to the lowering position, then to the lifting position and then back to neutral), check the transmission oil level (circular gauge **A**) with the cylinders both extended (lifting), and retracted (lowering). The transmission oil should **never** be allowed to fall below the minimum level (with cylinders extended) and should not ever greatly **exceed the maximum level**, as the same oil supplies both the external hydraulic services and the transmission.

NOTE: using the tractor with too little oil in the gearbox can cause serious damage.



Transmission oil filler plug

Hydraulic front lift

On request, the tractor can be fitted with a hydraulic front lift.



To operate the front lift, turn the cock **A** on the right side of the tractor to the relevant position and then use the auxiliary control valve lever.



Front three point linkage

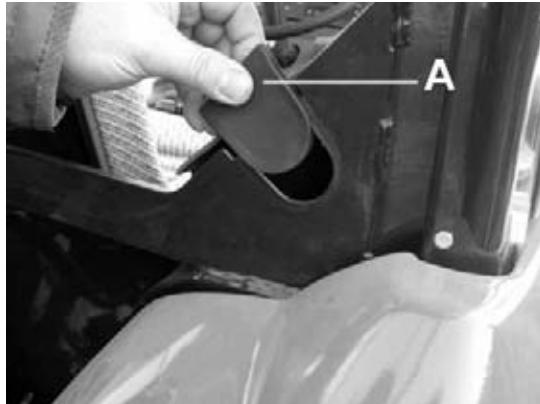


CAUTION: ENSURE THAT ANY IMPLEMENTS ATTACHED TO THE TRACTOR DO NOT EXCEED THE MAXIMUM PERMISSIBLE LOADS INDICATED BY THE MANUFACTURER.

Cable channel for passing external implement control cables into the cab

At the rear right side of the cab there is a cable channel for passing external implement control cables into the cab.

To open the channel, pull the sliding cover **A** upwards as shown in the figure

**Hazard warning triangle**

The triangle is located at the rear of the cab, in the compartment behind the seat.

Screen wash liquid reservoir

This is located inside the cab at the bottom of the left hand rear upright.

A - Screen wash liquid reservoir

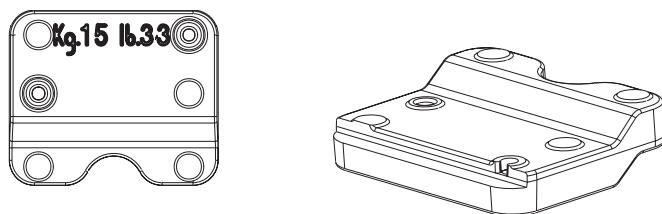


WARNING: YOUR TRACTOR IS A ONE-PERSON MACHINE. DO NOT PERMIT OTHERS TO RIDE ON THE TRACTOR OR THE IMPLEMENT. IN SOME TERRITORIES A PASSENGER SEAT MUST BE FITTED TO CARRY PASSENGERS. DO NOT ALLOW ANYONE TO RIDE ON THE IMPLEMENTS OR OTHER EQUIPMENT INCLUDING TRAILERS, EXCEPT ON CERTAIN HARVESTING EQUIPMENT, 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.

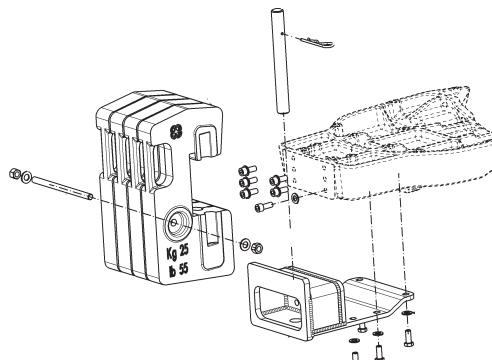
Ballast

Front horizontal ballast blocks

- ballast in **15 kg (33.07 lb)** cast iron blocks. Up to a maximum of 4 blocks can be applied, giving a total ballast of **60 Kg (132.28 lb)**. Each horizontal block is secured by 2 ballast mounting rods under the front ballast frame.



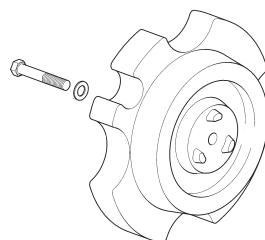
The horizontal blocks can be augmented by 4 vertical blocks (25 kg (55.12 lb) each), fitted on a special mounting frame at the front of the tractor



Rear ballast

ballast in the form of metal wheel rings, one each side. The cast iron wheel ballast must be fitted to the rear wheel flange and bolted to the half-axle.

- 2 ballast weights (1 per wheel) weighing 43 kg (94.80 lb) each, for a total of 86 kg (189.60 lb).



CAUTION: ALWAYS FASTEN YOUR SEAT BELT. THE USE OF A SEAT BELT REDUCES THE RISK OF SERIOUS INJURY IN CASE OF AN ACCIDENT.

Engine maintenance



CAUTION: WITH A COLD ENGINE YOU MAY NOTICE ABNORMAL COMBUSTION. THIS SHOULD CLEAR UP ONCE THE ENGINE HAS REACHED NORMAL OPERATING TEMPERATURE.

Before carrying out any work on the engine, wait until it has cooled down.



WARNING: ALWAYS SWITCH THE ENGINE OFF BEFORE CARRYING OUT ANY MAINTENANCE OPERATIONS. FOR ADDITIONAL SAFETY, REMOVE THE KEY FROM THE IGNITION.

During maintenance operations, apply the handbrake and position the chock under one of the wheels.

On completion of the work, replace all guards and covers, refit the side panels and close the hood.



WARNING: FLUIDS THAT FACILITATE ENGINE STARTING ARE HIGHLY FLAMMABLE. WHEN USING THEM, KEEP AWAY FROM SPARK SOURCES (BATTERIES, CONNECTORS, ETC). THESE FLUIDS SHOULD BE KEPT IN COOL AREAS AND THE CONTAINERS PROPERLY STORED.



**WARNING: BEFORE CARRYING OUT ANY WORK ON THE ENGINE, WAIT UNTIL IT HAS COOLED DOWN.
DURING MAINTENANCE OPERATIONS, APPLY THE HANDBRAKE AND POSITION THE CHOCK UNDER ONE OF THE WHEELS.
ON COMPLETION OF THE WORK, REPLACE ALL GUARDS AND COVERS, REFIT THE SIDE PANELS AND CLOSE THE HOOD.**

Gearbox clutch

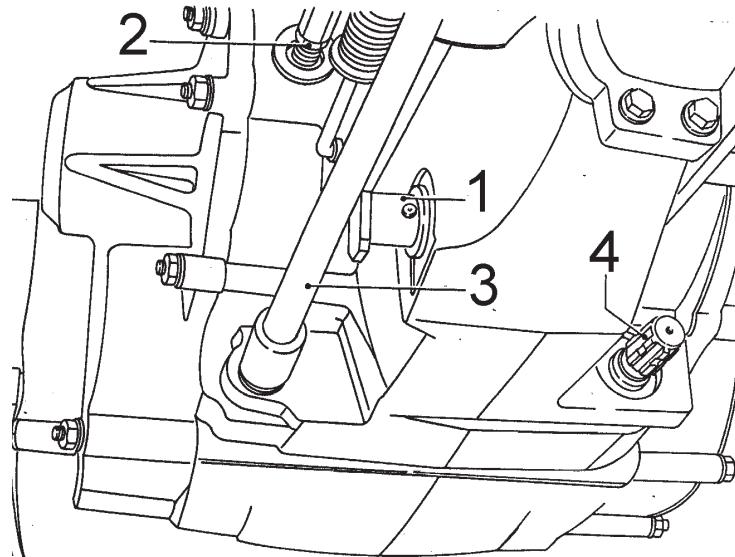
Every 150 hours: check the pedal's free travel. This should be approximately 25 mm (0,985 in).

Otherwise turn to one of our Authorized Service Workshops and have it adjusted.

Rear and underside P.T.O. clutch

Periodically: operate the control and verify that engagement occurs correctly.

Otherwise turn to one of our Authorized Service Workshops and have it recalibrated.



View of tractor underside
1 - Front-wheel drive control lever
2 - Service brakes control
3 - Rear differential lock control
4 - Underside P.T.O. shaft

Lights

Cleaning the headlights and sidelights

Clean with water or specific commercial products. We recommend that you switch off the lights before cleaning.

Bulb replacement

Front headlights H4 12V 60/55W double filament bulb

The headlights have double- filament bulbs for main and dipped beam illumination.

To replace the bulbs, remove the front grille and proceed as follows:

- detach connector **1** from the base of the bulb.
- peel back and remove the rubber cover **2**.
- turn slightly the spring clip **3** that holds the bulb base **4** in position and detach it from the reflector.

WARNING: *avoid touching the inner surface of the reflector. Make sure no foreign material gets inside the reflector.*



- Insert the new bulb so that the locator tabs engage the notches in the rim of the reflector **5**.
- Replace the rubber cover **2**, making sure that it fits snugly against the edge of the reflector.
- Push connector **1** onto the terminals on the bulb base.

