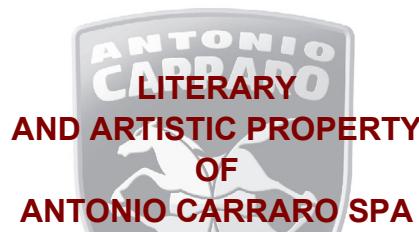


Series **ERGIT S**

TX 7800 S
TRX 7800 S

Series **ERGIT 100**

TRX 7800
TRX 8400
TRX 9800
TRX 9900
TRX 10400
TRX 10900
TRG 9800
TRG 9900
TRG 10400
TRG 10900



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Use and maintenance

Translation of the "ORIGINAL INSTRUCTIONS"

Ed. June - 2016
Code 47302324/05

Congratulations! You made an excellent choice. Your machine has been designed and built with advanced technological processes.

The "Antonio Carraro" machines are extremely versatile and can be used for various applications in several sectors: in agriculture, in industry, in government agencies, etc..

In the National and International sectors "Antonio Carraro" represents a high technological value and corresponds with development programs with the objective of confirming the strong and strongly innovative leadership of this mark.

Antonio Carraro S.p.A.

Via Caltana, 24

35011 CAMPODARSEGO (Padova) Italia

Tel. 049/9219921 - Fax 049/9219999 - <http://www.antoniocarraro.com>

**Use and maintenance manual supplied
with the machine identified by the items listed**

Machine model Serial number..... Year of manufacture.....



Tractor people

Antonio Carraro S.p.A.

Via Caltana, 24 - 35011 Campodarsego Padova Italy
Phone +39 049 921 9921 - info@antoniocarraro.it - www.antoniocarraro.com
Partita IVA IT 00186830287 - Cap. Soc. 2.107.320 i.v. - M/PD010221
R.E.A. PD 126503 - Registro imprese PD060-9846

CE DECLARATION OF CONFORMITY CE FOR MACHINES

(Machinery Directive 2006/42/CE, Attached II A)

Manufacturer: ANTONIO CARRARO S.p.A.

Address: Via Caltana, 24 - 35011 Campodarsego - PD - ITALY

Name and address of the person authorised to constitute the technical file:

Name: (ANTONIO CARRARO S.p.A. – GENERAL MANAGEMENT)

Address: Via Caltana, 24 - 35011 Campodarsego - PD - ITALY

We herewith declare that the machine

Farming tractor

series/model: ERGIT 100 / TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX
10400 - TRX 10900 - TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900

series/model: ERGIT S / TX 7800 S - TRX 7800 S

Identification n. see the identification plate

is compliant with the pertaining dispositions of **Machinery Directive (2006/42/EC)** and successive modifications,is compliant with the **2003/37/CE Directive**, and successive modifications, relating to approval of farming tractors

Campodarsego,

 / /

Signature:

ANTONIO CARRARO S.p.A.

MARCELLO CARRARO

Director General

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PURPOSE OF THIS MANUAL

- The purpose of this manual is to transfer the "User instructions" to the addressees (driver and operators), to prevent and minimise risks in man-machine interaction.

The information is professionally written by the manufacturer in the original language (ITALIAN), in compliance with ISO 3600:1996 and the current Standards.

To facilitate reading and understanding the information, principles of communication most suitable to the addressees characteristics have been adopted.

To know the exact definition of certain specific terms used in the manual, go to paragraph "Terms and definitions".

The information may be translated into other languages to satisfy commercial and/or legal requirements.

The manuals must be translated directly, without changes, from the ORIGINAL INSTRUCTIONS.

Every translation (including that realised by the sender or whoever introduces the machine in the linguistic area in question) must have the wording "TRANSLATION OF THE ORIGINAL INSTRUCTIONS".

- The manual addressees must know the machine features, respect the safety warnings and comply with the laws in force in the work place.
- Keep this manual safe for the working life of the machine, in a known and easily accessible place so that it is always readily available for consultation.
- Consult the analytic index to easily trace the specific subjects of interest.
- Some information may not fully correspond to the effective configuration of the delivered machine.

The eventually inserted additional information does not influence legibility and does not jeopardise the level of safety.

- The illustrations may represent the machine without safety protections and devices, to make the information clearer and immediate.

The illustrations without the safety protections and devices MUST NOT be taken as reference during the normal operation of the machine.

- The manufacturer reserves the right to change the information without prior notice of any kind, as long as these modifications do not alter the safety level.
- The symbols represented and described below are used to highlight particularly important text or specifications.



Pericolo Attenzione

The symbol identifies situations of imminent danger which, if ignored, lead to serious risks to personal health and safety.



Cautela Avvertenza

The symbol identifies situations in which it is essential to behave in a certain way to avoid risks to personal health and safety and risks of damage to equipment.



Importante

The symbol identifies specially important technical and operational information that must not be ignored.

REQUESTING TECHNICAL ASSISTANCE

- For any need, please contact our official service network.
When making a request for technical assistance relating to the machine, indicate the details shown on the i/d data plate, the approximate number of hours operation, and the nature of the defect.

ACCOMPANYING DOCUMENTATION

Customers receive the following documentation along with this manual.

- Operation and service manual for the motor
- Certificate of warranty
- CE Declaration of Conformity

The CE Declaration of Conformity is issued for machines introduced into the European Community States.

TERMS AND DEFINITIONS

The list shows some terms and definitions, with a brief explanation of the meaning to facilitate understanding when reading.

Terms

- **CATEGORY 1 (cab)**: the code identifies that the cab DOES NOT have a specific protection for the driver during the spraying of plant protection products.
- **IPD (Individual Protection Devices)**: must be worn by the operators, depending on the type of risk, to protect their safety during work.
- **EGR (Engine Gas Recirculation)**: the code identifies the motor exhaust gas recirculation plant valve.
- **FOPS (Falling Objects Protective Structure)**: the code identifies the structure that protects the driver in the event of falling objects.
- **OPS (Operator Protective Structure)**: the code identifies the structure that protects the driver in the event of side penetration of objects.
- **ROPS (Roll Over Protective Structure)**: the code identifies that the safety arch and cab/frame structures are approved and reduce risks of injury for the driver in case of overturning.

Definitions

Some definitions are written in simplified form (e.g. "machine stopped in safe condition") without repeating the full explanation to avoid excessive redundancies.

Machine stopped in safe conditions

This state foresees the listed conditions to be carried out in the indicated order.

- Position the machine on to a stable and flat surface.
- Engage the reverser lever in the "forward gear" or "reverse gear" position. (if present)
- Position the gearbox lever in "first gear".
- Engage the parking brake of the machine.
- Deactivate the PTO of the machine.
- a) With equipment carried: lower the power lift unit until it rests on the ground.
- b) With equipment towed: engage the parking brake of the equipment.
- Switch off the engine and remove the ignition key.
- Place the safety wedges below the wheels to improve stopping conditions.

Machine parked and on in safe conditions

This state foresees the listed conditions to be carried out in the indicated order.

- Position the machine on to a stable and flat surface.
 - Bring the reverser lever to the "neutral gear" position. (if present)
 - Bring the gearbox lever to the "neutral gear" position.
 - Engage the parking brake of the machine.
 - Deactivate the PTO of the machine.
 - a) With equipment carried: lower the power lift unit until it rests on the ground.
 - b) With equipment towed: engage the parking brake of the equipment.
- Place the safety wedges below the wheels if operating conditions so require.

Machine operation

The definition indicates "all intended uses where man-machine interaction happens".

The man-machine interaction includes, for example, transport, driving, use, routine maintenance, etc.

"Cab" version machine

The definition indicates "driver's seat equipped with closed cab". May also be with air conditioning system.

"Frame" version machine

The definition indicates "driver's seat equipped with cab without doors and lateral windows".

Ordinary maintenance

The definition indicates "the set of service operations that must be performed in order to keep the machine functional and fully effective".

The routine maintenance is normally scheduled by the manufacturer, who states the intervals and the necessary instructions.

Service Engineer

The definition indicates "a person who has received the necessary qualifications and instructions to perform interventions without risks and is authorised to do so".

Major servicing

The definition indicates "the set of service operations that must be performed in order to keep the machine functional and fully effective".

The extraordinary maintenance is not described in the "use and maintenance" manual and must be executed by the service engineer.

Authorised service centre

The definition indicates "structure selected and authorised by the machine manufacturer to perform routine and extraordinary maintenance".

Residue risk

The definition indicates "all residue risks despite all safety solutions have been used and integrated during designing".

Operator

The definition indicates "staff with recognised capacities able to interact during the different working phases of the machine".

Carrier

The definition indicates "staff with recognised capacities in charge of loading and unloading the machine onto transport means".

Incorrect use

The definition indicates "different use of machine to that indicated in the user manual, that may derive from the easily predictable human behaviour".

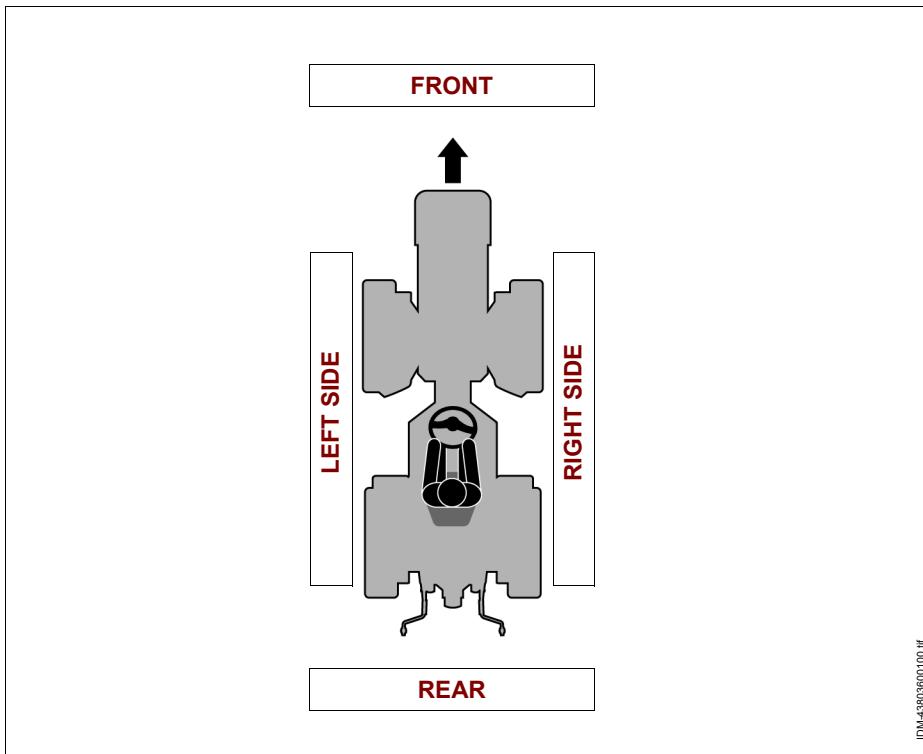
Dangerous area

The definition indicates "any area around and/or near the machine, in which an individual constitutes a personal risk to health and safety".

Driver

The definition indicates "staff with recognised capacities able to drive the machine during the different working phases".

The illustration carries the directional preferences used in the manual.



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INTRODUCTION TO SAFETY WARNINGS

- The "Safety information" section contains the warnings to make the addressees (driver and operator) interacting with the machine pay particular attention".
- The information recalls attention on the behaviours to have, in order to minimise risks during man-machine interaction.
- The list shows the safety warnings divided according to operational activity.
 - **General safety warnings**
 - **Safety warnings for the employer**
 - **Safety warnings for handling and transport**
 - **Safety warnings for the driver**
 - **Safety warning regarding circulation on roads**
 - **Safety warnings before use**
 - **Safety warnings for connection and disconnection of implements (carried or towed)**
 - **Safety warnings during use**
 - **Safety warnings during use on sloping or uneven terrains**
 - **Safety warnings regarding use with tools (carried or towed)**
 - **Warnings for use with spraying tools**
 - **Safety warnings regarding use in forestry**
 - **Safety warnings regarding use with ballasts installed**
 - **Safety warnings at end of use**
 - **Safety warnings for regulations and maintenance**
 - **Safety warnings regarding environmental impact**
 - **Warnings on residual risks**

Also reported in the safety warnings are the INCORRECT USES associated with the relative operational activity.

Importante

The safety warnings are also repeated in view of operational phases, to emphasise the necessary caution and behaviours the operators must have.

GENERAL SAFETY WARNINGS

The general safety warnings indicate some principles that must be respected during man-machine interaction, to prevent and minimise the risks throughout the life-span.

Accidents (often serious) involving the use of farming implements and machines depend on many factors.

One factor that may affect safety is often the environmental condition when working, where it is not always possible to foresee all risks.

Other factors that may determine risks during man-machine interaction, are the poor attention, the behaviours and incompetence of the operators.

- As well as complying with the laws in force, during designing the manufacturer has adopted all correct manufacturing techniques.

The Evaluation of Risks has been carried out to identify the limits of use, the dangers and estimate risk to protect personal safety.

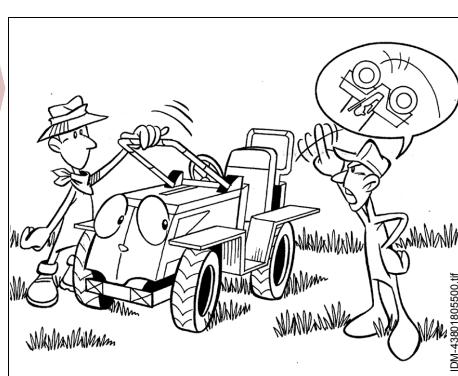


- It has arisen from the Evaluation of Risks that the machine has been equipped with all devices that make safety intrinsic.

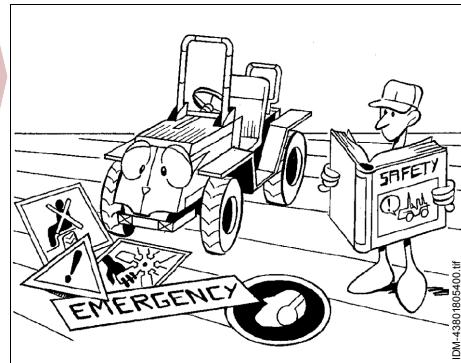
- The incorrect or "negligent" use of the machine by the driver can cause accidents (even fatal) despite the adopted safety solutions.

- Use the machine ONLY with original safety devices installed by the manufacturer.

The tampering and avoidance of the safety devices can cause risks (even fatal) for the operators.



- Caution is always necessary. Safety is also in the hands of the operators working the machine throughout its life span.
It is always too late to remember that which should have been done when it has already occurred.
- Carefully read the "User instructions" in this manual and those directly applied on the machine.
It is important to read the "User instructions" to minimise risks and avoid dangerous accidents.
The driver must ensure having understood the "User instructions" before interacting with the machine.
- Carefully read the SAFETY WARNINGS in the "User instructions" and those directly applied on the machine.
- Ensure the information signals are legible and respect the reported indications.
The information signals can be of different shapes and colours, to signal dangers, obligations, prohibitions and indications.



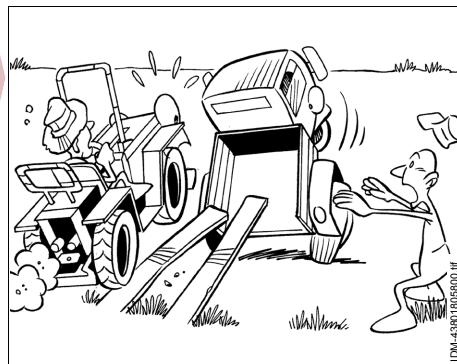
SAFETY WARNINGS FOR THE EMPLOYER

- Entrust driving of the machine ONLY to competent and experienced operators in using farming machines or similar sectors.
- Foresee a training plan for operators that may not have the necessary competences for using the machine.
- Inform the operators on the reasonably predictable INCORRECT USES and on the RESIDUAL RISKS.
- The operator must be able to read and understand the user manual and recognise the safety signals.
- The operator must prove to have the adequate competences and be in adequate conditions to safely carry out the activities.
- The employer should document the training attended by the operators, so that it can be produced in the event of a dispute.
- To avoid inadequate safety conditions DO NOT entrust unsuitable operators with driving the machine.

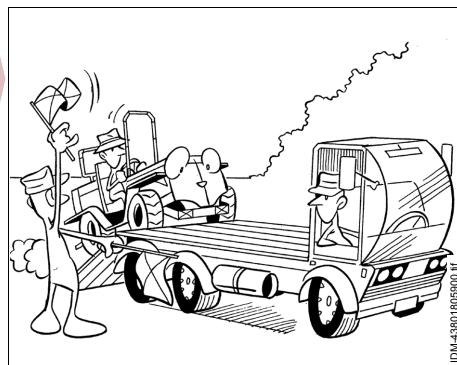
SAFETY WARNINGS FOR HANDLING AND TRANSPORT

The safety warnings indicate some principles that staff (driver and operator) must respect during machine handling and transporting.

- The machine can be transported directly with the driver in the driver's seat, or with the machine loaded onto a transport mean.
- Carry out load, unload and transfer following the information reported directly on the machine and in the "User instructions".
- Staff in charge of loading and unloading onto a transport mean to transfer the machine, must be competent and skilful and work cautiously.
- ONLY use suitable ramps or other systems able to ensure safe conditions during loading and unloading from the mean of transport.
- ONLY use relevant bar (correctly hooked to the hitching points of the machine) when the towed machine must be loaded/unloaded.
- An assistant may be used (situated at a safe distance) to signal the manoeuvres during loading and unloading of the machine onto the transport mean.
- ALWAYS deactivate the PTO of the machine before loading it onto the transport mean.
- Disconnect the interchangeable equipment from the machine in the event of health risks during loading and unloading onto the transport mean.
- Ensure the machine and its components are safely anchored to the transport mean.



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- Verify and arrange the opportune signals, if the shape of the machine exceeds the admitted clearance for road circulation.
- Perform transport using suitable means and of adequate capacity.
- On reception, check the integrity of the machine and components. In the event of damage or lack of parts, contact the manufacturer or local authorised dealer to agree on the procedure to be followed.

Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT lift the machine using lifting devices with hook (crane) or forks (lifting truck).

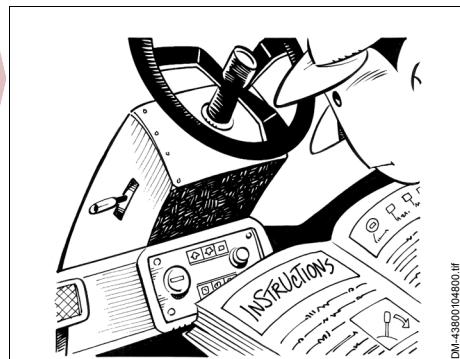
The safety warnings emphasise the attention and behaviour the driver of the machine must have, to be able to safely interact.

Accidents (often serious) involving the use of farming implements and machines depend on many factors.

One factor that may affect safety is often the environmental condition when working, where it is not always possible to foresee all risks.

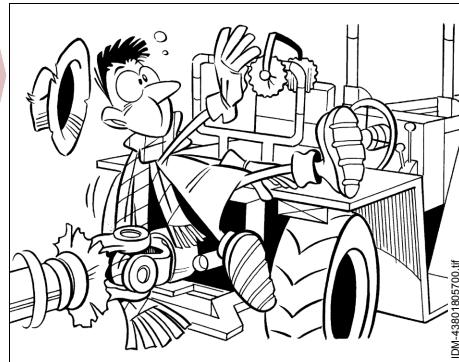
Other factors that may determine risks during man-machine interaction, are the poor attention, the behaviours and incompetence of the operators.

- ONLY use the machine after having read the manual, having identified the control functions and having simulated some manoeuvres, particularly start and stop.
- Drive the machine ONLY if experienced in using farming machines or similar sectors.
- The machine must ONLY be used by persons having the requirements requested by the legislations in force in the country of use.
- Learn the functions of all controls to correctly and naturally manoeuvre the machine.
- Drive the machine carefully and responsibly, and try to perceive potential risks that may exist.
The machine must ONLY be driven in suitable psycho-physical conditions and having suitable skills to perform the activities requested.
- Pay attention when driving and avoid being destructed (use of communication devices, drinking and eating etc.).
- ONLY use the machine for the uses and with methods intended by the manufacturer.
- The driver's seat must ONLY be occupied by the driver.
- ONLY wear conform clothing and shoes, to be able to correctly activate the controls and not become entangled in moving parts.



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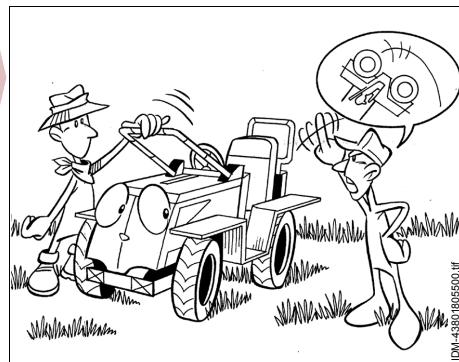
- Use the IPD indicated in the "User instructions" and those envisioned by the laws in force at work.
- Always keep the first-aid kit at hand in the driver's seat (which is not an obstruction) and keep it filled.



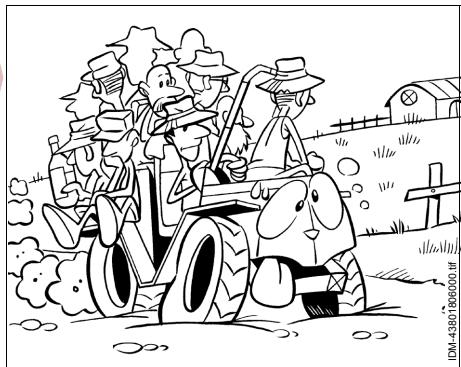
Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- Do NOT "recklessly" drive the machine.
- DO NOT use the machine under the influence of substances or medicines altering reflexes during driving.
- DO NOT use the machine if you do not know the function of the controls and how to perform manoeuvres naturally, correctly and without risks.
- DO NOT tamper with, exclude, eliminate or by-pass the safety devices installed on the machine.
- NEVER let inadequately trained, documented and authorised operators use the machine.
- NEVER let operators unable to read and understand the "User instructions" and recognise the safety signals use the machine.
- DO NOT carry out different activities (e.g. answer communication devices) that may distract the attention when using and driving the machine.



- DO NOT transport persons, domestic animals or any object in the driver's seat, in other parts of the machine or on the hitched tools.
- DO NOT wear clothing that may become entangled in moving parts or accidentally activate the controls.
- DO NOT use unsuitable shoes (bare feet, slippers, etc.) that may obstruct or prevent correctly activating the controls.



The safety warnings indicate some principles that the driver must, as well as respect the highway code, comply with to prevent accidents during circulation.

- ONLY circulate on public roads with the machine configured as envisaged upon approval.
- Before taking the machine on the road for whatever purpose, activate all the required safety devices, and those designed to ensure proper braking and road-holding. Secure any parts that could cause sudden shifting movements.

The machine equipped with oscillating tow bar is not approved for travelling on public roads

- Before circulating on public roads, check the effectiveness of the signal and lighting devices of the machine, the pressure and wear of tyres.
- Adjust the drive during road circulation (town or out of town roads) to the traffic and routes conditions.
- Moderate speed during road circulation with hitched tools (carried or towed). Consider that hitched tools modify the distribution of weights, alters stability and reduces braking efficiency.
- ONLY drive the machine on public roads with the driver's seat in the normal position and not in reverse position.
- ONLY use the accelerator with pedal control (with hand lever in "minimum" position) when circulating on public roads.
- Transport on public roads ONLY with the lifting device locked in high position.
- When driving on flat ground, it is recommended to disconnect the front-wheel drive during road circulation to avoid unnecessary wear of tyres and to improve manoeuvring of the machine.



Importante

In the downhill routes, especially with hitched interchangeable tools, the front wheel drive **MUST** be engaged to achieve a greater braking action.

- **ALWAYS** make sure, before circulating on the road, that the brake pedals are in "bound" position to avoid dangerous skidding during braking.



Importante

Consult your vehicle registration document, when changing tyres, so as to identify which tyres can be fitted according to the type approval.

Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT use the machine equipped with tyres blast with liquids during road circulation.
- DO NOT use the machine with the driver's seat turned in reverse position during road circulation.
- DO NOT use the machine configured differently from that envisioned upon approval during road circulation.
- DO NOT travel on public roads with towed equipment if the machine is equipped with oscillating tow bar, since it is not approved for that.
- DO NOT use the accelerator lever control during road circulation.
- DO NOT use the brake pedals in "independent" position during circulation on the road.

The safety warnings indicate some principles that staff (driver and operator) must respect during man-machine interaction.

- For operator safety, ALWAYS evaluate the dangers associated with use, to establish whether the machine is adequately equipped.
- The dangers to be considered are risk of overturning, the falling of objects and/or materials from a height, the risk of inhaling spray plant protection products, etc.
- Clean the machine to better identify the defectiveness and any breaks.
- For correct operation, visually check the machine is in good state, without fluid leaking and without loose components.
- ONLY use the machine if the scheduled maintenance interventions have been regularly carried out.
- Check the general conditions of the tyres (intact chassis, without damages, etc.) and that the track is not excessively worn.
- Check that the silencer is in efficient conditions for the good operation of the engine and to limit acoustic pollution.
- Always keep the ascent platforms and control pedals clean and free from mud and/or debris.
- Check that the driver's seat is clear from objects so as not to obstruct the activating of the controls.
- Check the position of the seat, of the wheel and the rearview mirrors to assure correct ergonomics and visibility from the driver's seat.
- Orientate the driver's seat (normal or turned into the reverse position) depending on the travel direction necessary for the activity to be carried out.
- Turn the driver's seat ONLY with machine not steered and stopped in safe conditions.
- After having turned the driver's seat, always check that the control devices function correctly.
- Check that all guards, protection and safety devices installed (sensors, safety arch, safety belts, etc.) are integral and efficient.
- Refill fuel in an open and aired space, with engine at ambient temperature and machine stopped in safe conditions.
- Fill the machine without completely filling the tank in order to avoid fuel leaking (it expands if temperature rises).

Fuel leaks or spillage on hot surfaces and on electrical components can cause fires.

- ALWAYS make sure that the safety arch is blocked correctly in the lifted position and fasten safety belts, to reduce risks in case of overturning.
- It is possible to lower the safety arch ONLY to temporarily move the machine in areas without RISK of overturning and for short distances.

When the safety arch is lowered, the driver MUST NOT fasten the safety belts and, as he is not protected in case of overturning, must cautiously manoeuvre the machine.

- Keep cab windows clean (inside and outside) to assure maximum visibility. If fogged, activate the relative controls.
- The cab IS NOT CERTIFIED as FOPS and OPS safety device against the risk of falling and/or side penetration of material.
- The machine equipped with pressurised cab and active charcoal filters allows hitching tools to spray plant protection products with lower risk of inhaling. ALWAYS wear the IPD to spray plant protection products to minimise the risk of inhaling, even if the cab is pressurised and with active charcoal filters.

Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT use the machine if the scheduled maintenance interval has expired.
- DO NOT use the machine if the tyres are not in good condition or have technical and dimensional features different to those envisioned by the manufacturer.
- DO NOT use the machine with ballasts installed and tools disconnected, to avoid risk of instability.
- DO NOT use the machine with safety arch lifted, without having fastened the safety belts.
- Unless absolutely necessary and temporarily, DO NOT use the machine with the safety arch lowered.
- DO NOT fasten the safety belts if it is necessary to temporarily, and for short distances, move the machine with the safety arch lowered.
- DO NOT spray plant protection products without wearing the IPD, even if the cab is pressurised and with active charcoal filters.
- DO NOT use the machine (even with cab) with risk of material falling from a height, as IT IS NOT CERTIFIED as FOPS safety device.
- DO NOT use the machine (even with cab) with risk of side penetration of ma-

terial, as IT IS NOT CERTIFIED as OPS safety device.

- DO NOT smoke while filling up with fuel and DO NOT fill the machine in potentially dangerous environments (risk of fire and/or explosion).
- DO NOT hitch towed tools unless compatible with the machine (power, effort at the towing hook, number of PTO revs, braking system, etc.).
- DO NOT use the machine with the safety devices not perfectly installed and effective.



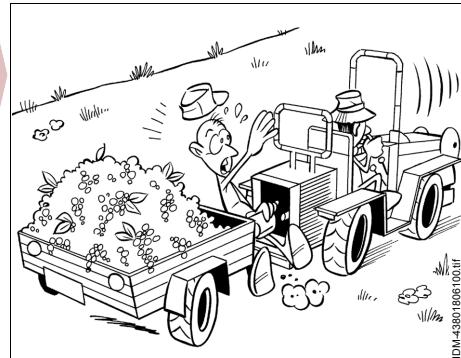
SAFETY WARNINGS FOR CONNECTION AND DISCONNECTION OF IMPLEMENTS (CARRIED OR TOWED)

The safety warnings indicate some principles that staff (driver and operator) must respect during man-machine interaction.

- Do not allow persons not involved in the hitching and disconnection of the interchangeable tools to approach the operational area.
- Based on the work to be carried out, evaluate the most suitable tools to be hitched (carried or towed), to prevent dangers and minimise the risks.
- Refer to the "User instructions" of the tools to be hitched to understand the operating methods and risks associated with its use.
- Apply the specific formula (indicated by the machine manufacturer) to calculate the compatibility of the carried tool to be hitched.
- ONLY hitch carried tools conform with the values obtained with specific formula to maintain the machine stable.
- **Who plans to combine equipment NOT MANUFACTURED by the machine manufacturer must identify the risks in the machine-equipment matching and take responsibility to eliminate them.**

The machine manufacturer has evaluated and eliminated ONLY the risks of the machine with no equipment or combined with equipment manufactured by it (only for combinations specified by the manufacturer).

- Correctly install the necessary ballasts (calculated with specific formula), in a way to assure stability and correct adherence of the machine.
- Carry out all hitching and removal operations of the tools (carried or towed) **ALWAYS** with machine stopped in safe conditions.
- Correctly hitch the carried tools to the power lift unit to avoid accidental disconnection.
- Control that the carried tools are correctly fastened and that the power lift unit does not oscillate to avoid accidental disconnection.
- ONLY hitch the towed tools to the towing hook and NOT to the machine's trailer hook.



The towed tools must be compatible with the machine features (power, effort at the towing hook, admitted towable weight, number of PTO revs, braking system, etc.).

- Verify that the number of PTO revolutions of the tools is compatible with that of the machine.
- ALWAYS select, using relative machine control, the requested number of revolutions for the correct operation of the tools.
- Check that all safety protections of the Cardan shaft are integral and efficient and respect the relative "User instructions".

The incorrect installation of the cardan shaft and inefficiency of the safety protections can cause accidents (even fatal).

- Connect the Cardan shaft first to the tool PTO (carried or towed) and then to that of the machine.

Respect the connection sequence of the cardan shaft, to avoid fatal whiplash if the machine's PTO accidentally starts.

- ALWAYS correctly connect the safety chains to prevent the rotation of the Cardan shaft protections.
- Verify that the Cardan shaft (in particular upon first machine-tool coupling) has a suitable length so as not to "stop dead" during use.
- Clean and check integrity of the quick couplings and the couplings, before hydraulically connecting the tool to the machine.

In the tool disconnection phase, insert the relative plugs to protect the hydraulic couplings and correctly put back the pipes to avoid damaging them.

- The machine can tow equipment without brakes (trailers, tankers, etc.) or with an inertia braking system or an independent mechanical system.

The operation of the brake control with independent mechanic system takes place through the lever to be placed in the appropriate support on the machine (See "Description of the main parts").

- The towed equipment that can be attached to the machine must have a maximum weight that falls within the limits indicated by the manufacturer (See "Technical data tables").

- Adjust the towing hook so that the drawbar of the towed tools is correctly positioned to avoid altering the vertical and drive effort.

- Insert the retainer devices (plugs, cotter pins, etc) to avoid accidental disconnections and make correct electric and hydraulic tools connections.

- Use different coloured quick couplings to connect the hydraulic system of tools hitched to the machine, in front and behind the machine (carried or towed).

Incorrect uses

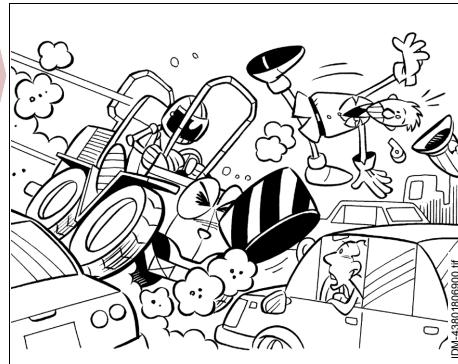
The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT use the front towing hook to tow interchangeable tools or to perform other non-pertinent activities.
- DO NOT hitch tools (carried or towed) if not compatible with the technical features of the machine.
- DO NOT hitch the front loader to the machine, if not equipped by the manufacturer with hitching points for these tools.
- DO NOT hitch tools (carried or towed) if not equipped with all safety devices correctly installed and efficient.
- DO NOT hitch the tools to the machine if the information in the relative manuals are not thorough to avoid unforeseen residual risks.
- DO NOT use the tools (carried or towed) if the Cardan shaft is not correctly connected and the safety protections are not intact.
- DO NOT connect and disconnect the tools and connect the power supply, if the machine is not stopped in safe conditions.
- DO NOT use same coloured quick couplings to ?connect the hydraulic system of tools hitched to the machine, in front and behind the machine (carried or towed).
- NEVER use the emergency hook (front) to tow any interchangeable tool.

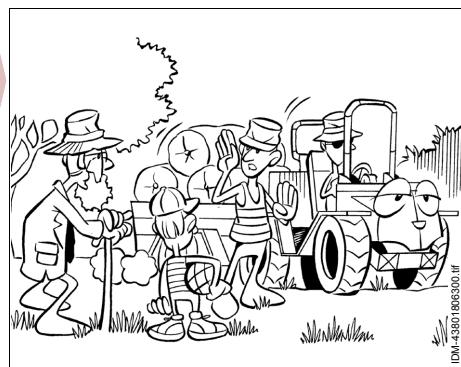
SAFETY WARNINGS DURING USE

The safety warnings indicate some principles that staff (driver and operator) must respect during man-machine interaction.

- ONLY use the machine in compliance with the laws disciplining the work and, in case of circulation on public roads, those requested by the highway code.
- Climb into and out of the driver's seat ONLY using the foreseen points and the appropriate platforms and handrail to avoid risk of falling.
- Before starting the engine, check that all controls are in neutral to prevent uncontrolled and dangerous start-ups.
- ONLY start the engine when sitting in the driver's seat and safety belts fastened during the working activity.
- Pre-heat the engine suitably (when ticking over) using the accelerator level control, before starting work activities.
It is recommended to pre-heat the engine, in particular during running in and in the event of low temperatures.
- Use the accelerator control lever ONLY when starting up and/or when running the engine at a constant speed during the work phases.
- Immediately stop the machine and switch the engine off if during use anomalies, noises and/or suspect vibrations are detected.
Re-start the machine ONLY after having restored the normal use conditions.
- Moderate engine rpm to avoid disturbing when using the machine in built-up areas.
- Verify that, with the machine equipped with tools, the view from the driver's seat is sufficient to note the presence of persons or other dangers.
- Check that the work area has suitable manoeuvring space and ideal environmental conditions.
- ONLY use the machine at night with lighting devices perfectly intact and efficient.



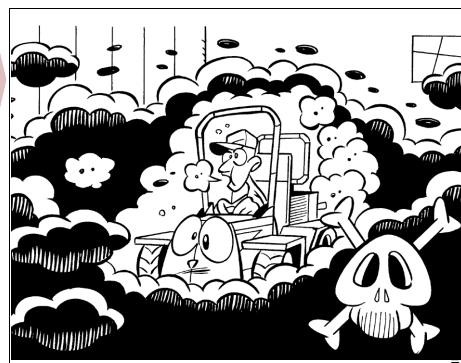
- Immediately stop the machine if there are unauthorised persons (children, elderly, animals, etc.) within the action range.
- ONLY climb on, descend and/or abandon the driver's seat with the machine stopped in safe conditions.
- Activate the lighting devices when in poor visibility conditions and adjust driving to the environmental conditions.



Incorrect uses

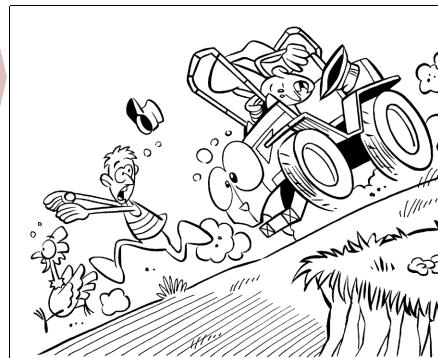
The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT access the driver's seat from points different to those envisioned and indicated by the manufacturer in the "User instructions".
- DO NOT use the machine without having pre-heated the engine at adequate rev, in particular during running in or in the event of low temperatures.
- DO NOT continue using the machine if anomalies, noise or suspect vibrations are encountered.
- DO NOT continue using the machine if, from the driver's seat, the action range is not clearly visible and if there are persons and/or animals present.
- DO NOT climb on or off the machine if not stopped in safe conditions.
- Never leave the engine running in closed or inadequately ventilated environments. Exhaust fumes are potentially dangerous to health.
- DO NOT work at night unless all lighting devices on the machine and on the tools are not perfectly intact and efficient.
- DO NOT work with risk of dangerous substances being emitted without wearing the IPD, even if cab is pressurised and with active charcoal filters.

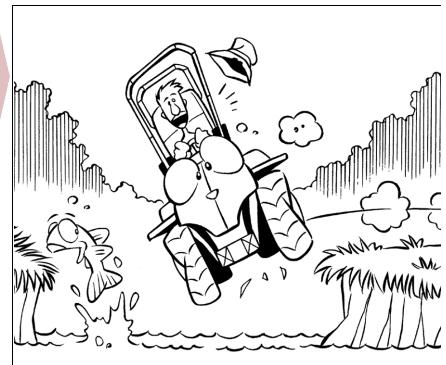


The driver must drive the machine appropriately and **ALWAYS** proceed with caution, especially in conditions entailing the risk of overturning.
It is difficult to formulate a complete list of all the conditions linked to behavioural and environmental factors which can cause the risk of overturning.
Compliance with the listed warnings can decrease but NOT completely eliminate the risk of overturning.

- **ALWAYS** adapt the advancement speed of the machine to the conditions of the ground and always proceed with great care.
- Pay attention to risk of overturning when working on sloping terrains, in particular with machine equipped with tools and ballasts.
- Avoid any type of obstacle which can endanger stability with the risk of the machine overturning, especially on steep terrains (ditches, holes, soft ground, etc.).
- Activate the integral traction to improve holding on the ground in critical conditions (uneven, soft, with excessive gradient, etc.).
Drive safely, with four-wheel-drive engaged, to reduce the risk of the machine overturning.
- Insert a low transmission ratio before facing steep descents (to make use of the engine brake) and steep ascents (to have good traction).
- Be careful when the machine is in conditions in which it can easily tip up (such as coming out of the ditch) to avoid the risk of tipping over backwards.
The risk of overturning increases suddenly and uncontrollably when driving too fast or if the machine is configured with "narrow track".



- Be careful when working on soft ground (even flat) due to adverse weather conditions (heavy rains, flooded fields, etc.)
- Pay maximum attention when operating near to ditches, slopes, channels etc. as the ground is less compact and could slide.
- Maintain control of the machine, stay in the driver's seat and avoid instinctive and unreasonable gestures in case of risk of overturning.
In case of overturning, hold tightly onto the steering wheel and at the same time, lean towards the opposite side, pressing feet onto footboard and back into the seat.
- Identify the escape ways (indicated in the manual) to react in case of overturning with machine equipped with cab.



Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT perform sudden steering actions at high speed, in order to prevent the loss of stability of the machine and the risk of overturning.
- NEVER change gear during descent on steep ground, in order to prevent the gear not being inserted correctly (gear in neutral).

SAFETY WARNINGS REGARDING USE WITH TOOLS (CARRIED OR TOWED)

The safety warnings indicate some principles that staff (driver and operator) must respect during man-machine interaction.

- ONLY activate PTO with tools (carried or towed) in work position.
- Lift the carried tool and block it suitably during circulation on roads, so as to prevent uncontrolled and unexpected movements.

Transport on public roads ONLY with the lifting device locked in high position.

- ONLY transfer the machine with carried tools in lifted position and activate the safety devices to hold the position.

- Moderate speed during road circulation with hitched tools (carried or towed).

Cautiously drive to limit risk of instability if tools (carried or towed) are hitched to the machine.

Consider that hitched tools modify the distribution of weights, alters stability and reduces braking efficiency.

- Cautiously drive during use of hitched tools (carried or towed) envisioning the presence of other operators, to protect their safety.
- Inform on the behaviours and methods to be respected for safety purposes, when the use of tools (hitched to machine) envisions the presence of operators.
- Adopt suitable measures to prevent dangerous movements, if the machine is equipped with tools that work in static mode (saw, woodcutter, etc.).
- Take appropriate measures in the event of fall and/or lateral penetration of material during operation.



The driver protection structure is NOT CERTIFIED as a FOPS and OPS safety device.

The machine does not have points to apply FOPS and OPS protection devices or front loaders.

Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT perform brakes or sudden manoeuvres but adjust speed if the machine is equipped with tools (carried or dragged).
- DO NOT activate the PTO of tools (carried or towed) hitched to the machine when they are not in work position or during road circulation.

WARNINGS FOR USE WITH SPRAYING TOOLS

The safety warnings indicate some principles that staff (driver and operator) must respect during man-machine interaction.

- Refer to the "User instructions" of the spraying tools to understand the operating methods and risks associated with its use.
- The driver's seat, even if equipped with CATEGORY 1 cab, does not protect the driver against dangerous substances.
- Refer to the instructions on the plant protection products to be used, to evaluate the type of IPD to wear as protection against inhalation and contact.
- Respect the information on the plant protection products (in particular those relating to safety), and arrange adequate preventive measures.
- Interrupt spraying if there are persons within the action range, exposed to risk of inhaling the plant protection products.
- Always keep the doors and windows closed during spraying to avoid inhaling plant protection products.
- After spraying wash the tools and the machine also (if necessary) to eliminate plant protection product residues deposited on the surfaces.
- Carry out washing in a suitable place to avoid dispersing the washing residue in the environment.
- Park the machine with spraying tools in a non-accessible place, to avoid unauthorised persons coming into contact with the plant protection products.
- Accurately clean the IPD used during spraying and deposit them in a suitable place to maintain them efficient and functioning.

Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT spray plant protection products without wearing the IPD, even if the cab is pressurised and with active charcoal filters.

SAFETY WARNINGS REGARDING USE IN FORESTRY

The safety warnings indicate some principles that staff (driver and operator) must respect during man-machine interaction.

The list shows the most common risks during use of machine in forestry.

- Risk of trees, logs or other material falling from a height in the area reserved to the driver.
- Risk of side penetration of trees, logs or other material in the area reserved to the driver.
- Carry out forestry work ONLY with machine stopped, tools hitched and activated by PTO.
- Take appropriate measures in the event of fall and/or lateral penetration of material during operation.

The driver protection structure is NOT CERTIFIED as a FOPS and OPS safety device.

The machine does not have points to apply FOPS and OPS protection devices or front loaders.

Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT use the machine in forestry even, if equipped with cab, if there is the risk of falling and/or side penetration of material.

The safety warnings indicate some principles that staff (driver and operator) must respect during man-machine interaction.

- To correctly balance the machine ONLY proportionally install the necessary amounts of ballasts.
- To keep the machine balanced, install the same amount of ballasts on both sides.
- Have the machine ballasting carried out with the insertion of liquids in the tyres, ONLY by expert staff.
During cold periods, to prevent the liquid inserted in the tyres freezing, insert specific antifreeze liquid.
- Apply the ballasts in the front part in order to maintain stability, when the heavy and long interchangeable tools are hitched to the vehicle.
- ALWAYS remove the ballasts when disconnecting the carried tools in order to maintain machine stability unaltered.
The machine with ballasts installed, but without carried tools disconnected, becomes unstable, premature wear of the tyres and consumption of more fuel.

Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT use the machine with ballasts installed and tools disconnected, to avoid risk of instability.
- DO NOT use the machine with the ballasts not suitably distributed depending on the type of interchangeable tool hitched and the conditions of the ground where the operations must be performed.
- DO NOT use the machine equipped with the ballasts, if they are not necessary, so as not to jeopardise its performance and functionality.
- DO NOT overload the machine with ballasts over the maximum weight allowed.

SAFETY WARNINGS AT END OF USE

The safety warnings indicate some principles that staff (driver and operator) must respect during man-machine interaction.

- Safely park and stop the machine in an adequate place, so that it is not an obstruction and danger.
- Set-up suitable conditions and lock the doors (machine equipped with cab) to prevent access to unauthorised persons.
- If parking the machine in a closed place, check the environment is sufficiently aired.
- To avoid any risk of fire, allow the engine to cool down properly.
- In cold periods, remove the battery to prevent the electrolyte from freezing.
- Disconnect the battery cable (negative pole) and cover the two battery poles with Vaseline.
- In case of prolonged machine inactivity, adopt adequate procedures to preserve functioning and prevent deteriorations.

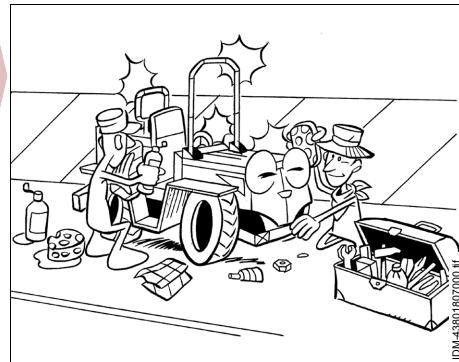
Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- Do not park the machine in enclosed or unventilated spaces with the engine still warm.
- DO NOT abandon the driver's seat without having stopped the machine in safe conditions.

The safety warnings indicate some principles that staff (driver and operator) must respect during machine adjustment and maintenance.

- The warranty expires if the periodical service and the inspection and maintenance intervals indicated in the user manual are not respected.
Services must be carried out at enabled and authorised workshops according to the manufacturer procedures.
- Keep the machine in perfect running conditions and carry out scheduled maintenance according to the frequency and methods provided by the manufacturer.
- Refer to the maintenance table to avoid using the machine if the scheduled interval has expired.
Good maintenance will maintain the best performance, a longer working duration and a constant preservation of the safety requirements through time.
- Keep all main parts constantly clean (engine, battery, fuel tank etc.) to prevent the risk of fire owing to the accumulation of dust and residues.
- Keep that the silencer in efficient conditions for the good operation of the engine and to limit acoustic pollution.
- The normal adjustments and routine maintenance must be performed by operators having competence and experience acquired and recognised in the sector of intervention.
- Carry out the interventions following indications in the user manual, ONLY using suitable tools, not worn and with adequate tools and/or devices.
- Before carrying out adjustment and maintenance interventions in dangerous areas, set-up adequate safety conditions complying with the laws in the work place.
- Safely block the machine elements that must be lifted during adjustment and maintenance, to avoid the risk of suddenly lowering.

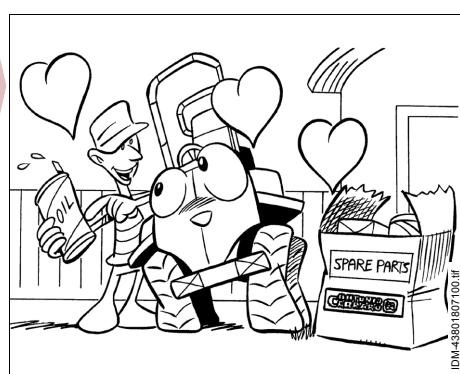


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- Wear the IPD indicated in the "User instructions" and/or on the machine and those envisioned by the laws in force at work.
- In searching for pressurised oil leaks, use suitable individual protection devices to avoid perforations of body parts.
- Before carrying out maintenance and adjustment interventions, activate all machine safety devices.
- Carry out adjustment and maintenance operations with machine stopped in safe conditions.
- Before carrying out adjustment and maintenance interventions on the engine or near-by areas, ensure the temperature of the components does not entail risk of burns.
- The operators authorised to carry out any intervention on the machine, must have experience acquired and recognised in the specific sector.
- Have the extraordinary maintenance interventions carried out ONLY by experts, able to work in compliance with the laws at work.



- Replace parts that are too worn, especially those relative to safety, ONLY using original spare parts or parts that have the exact same features.
The use of the machine equipped with non-original components or those with different features (in particular the components relative to safety) exonerates the manufacturer from any liability and makes the warranty rights in force become null and void.
- ONLY use lubricants (oils and greases), refrigerant gas and cooling liquids recommended by the manufacturer. All this assures machine functioning and provided safety level.



Incorrect uses

The listed prohibitions represent the most common incorrect uses. The non compliance can entail risks for the personal health and safety.

- DO NOT perform interventions different to those indicated in the user manual without the manufacturer's express authorisation
- DO NOT perform any intervention on the machine or interchangeable tools if the machine has not been stopped in the safe conditions indicated.
- DO NOT carry out any interventions on the electric plant or welding operations on the machine without first disconnecting the battery and any circuit board connectors, thus preventing irreversible damage to the components.
- DO NOT clean the machine using pressurised jets of water aimed directly onto the electric components and do not use inflammable and/or corrosive products so as not to damage the components.
- DO NOT perform any intervention on the components of any pressurised circuit (hydraulic plant, air conditioning, etc.), without first having eliminated the pressure and having controlled that there is not residual energy present.
- Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.

SAFETY WARNINGS REGARDING ENVIRONMENTAL IMPACT

Every organisation has the task of applying procedures in order to identify, evaluate and control the effect that its activities (products, services, etc.) have on the environment.

The procedures to follow in order to identify significant impact on the environment must consider the following factors:

- Emissions into the atmosphere
- Discharging liquids
- Management of waste
- Contamination of the ground
- Use of raw materials and natural resources
- Local problems relative to environmental impact

With the purpose of minimising environmental impact, the manufacturer below supplies some indications that must be taken into consideration by anyone which, for any reason, interacts with the machine during its envisioned life span.

- All packaging components must be disposed of with respect to the laws in force on this subject.
- With the machine engine running in closed environments, make sure that there is suitable fresh air in order to prevent the concentration of unhealthy air for persons.
- During use and maintenance, do not disperse pollutant substances into the environment (oils, greases, etc.) and dispose of them separately depending on the composition of the different products and with respect for the laws in force regarding this subject.
- Keep noise levels to a minimum to reduce acoustic pollution.
- Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.
- The WEEE can contain dangerous substances with potentially noxious effects on the environment and the health of persons. Disposal must be performed correctly.
- In the disposal phase, select all components depending on their chemical features and dispose of them separately with respect to the laws in force regarding this subject.
- With reference to the WEEE Directive (Waste Electric and Electronic Elements), in the disposal phase the user must separate the electric and electronic components and dispose of them in relative authorised centres or return them still installed to the dealer on making a new purchase.

- All components, which must be separated and disposed of in a specific manner, are marked by the relevant sign.
- The abusive disposal of Waste Electric and Electronic Elements (WEEE) is punished with legal sanctions regulated by the laws in force in the territory where the infraction is committed.

WARNINGS ON RESIDUAL RISKS

Residue risk

The definition indicates "all residue risks despite all safety solutions have been used and integrated during designing".

The list shows the residual risks typical of this type of machine.

- **Risk of loosing stability:** the operator must drive safely and responsibly to avoid the risk of tilting and/or overturning the machine.
The risk of instability could increase if work tools are hitched to the machine, if ballasts are installed, if it operated in proximity of ditches and precipices, on soft ground, on unlevelled ground and in unfavourable environmental conditions.
- **Risk of tripping:** the operator, when climbing on and descending from the driver's seat, must be careful not to trip on any control devices.
- **Risk of blows or projection:** in the installation phase of the mechanical transmission Cardan shaft, the driver MUST FIRST CONNECT IT TO the interchangeable tool and then the machine.
In the shaft disconnection phase, the driver MUST ALWAYS DISCONNECT IT FIRST from the machine transmission.
To prevent the very dangerous "WHIPLASH", the hitching and disconnection phases of the Cardan shaft of the machine MUST be carried out correctly and in the sequence envisioned.
- **Risk of crushing:** the operator must connect and disconnect the equipment ONLY from the driver's seat and MUST NOT allow anyone to stand in the connecting area.
- **Risk of shearing:** DO NOT approach the cooling fan or moving parts without guards, with the upper limbs.
- **Risk of inhaling dangerous substances:** the operator MUST NOT use the machine in closed or insufficiently aired ambients.
ALWAYS wear IPD to carry out work with risk of dangerous substances being emitted, even if cab is pressurised and with active charcoal filters.
- **Risk of dragging and entanglement:** DO NOT go near the rear and front mechanical transmission shaft in motion in order to avoid the danger of becoming entangled and being dragged.
- **Risk of friction or abrasion:** the driver MUST NEVER touch the tyres when the machine is in movement.

DESCRIPTION OF SAFETY SIGNS

The illustrations represent the safety signs and information applied to the machine. The meaning is given at the side of every sign.

A) Generic risk: switch off the engine and remove the ignition key before doing any type of work on the machine.



B) Risk of cutting or amputation: keep your hands well clear of moving parts.



C) Risk of burns: take care! Hot surfaces.



D) Fall and crash danger: in order to guarantee safety, do not carry passengers in absence of appropriate seats other than the driver's.

DO NOT climb on or off the machine if not stopped in safe conditions.



E) Risk of crushing: do not stand within the machine's operating area.



F) Risk of overturning: do not use the machine without making certain the roll bar (Roll Over Protective Structure) is correctly positioned.



G) Risk of crushing body parts: keep clear of the area when moving parts are in operation.



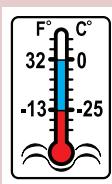
H) Risk of entanglement: do not approach mechanical parts when in motion



L) General hazard: the mains power must be inserted only to operate the equipment installed on the machine.



M) Warning sign: indicates the temperature at which the cooling liquid starts to freeze.

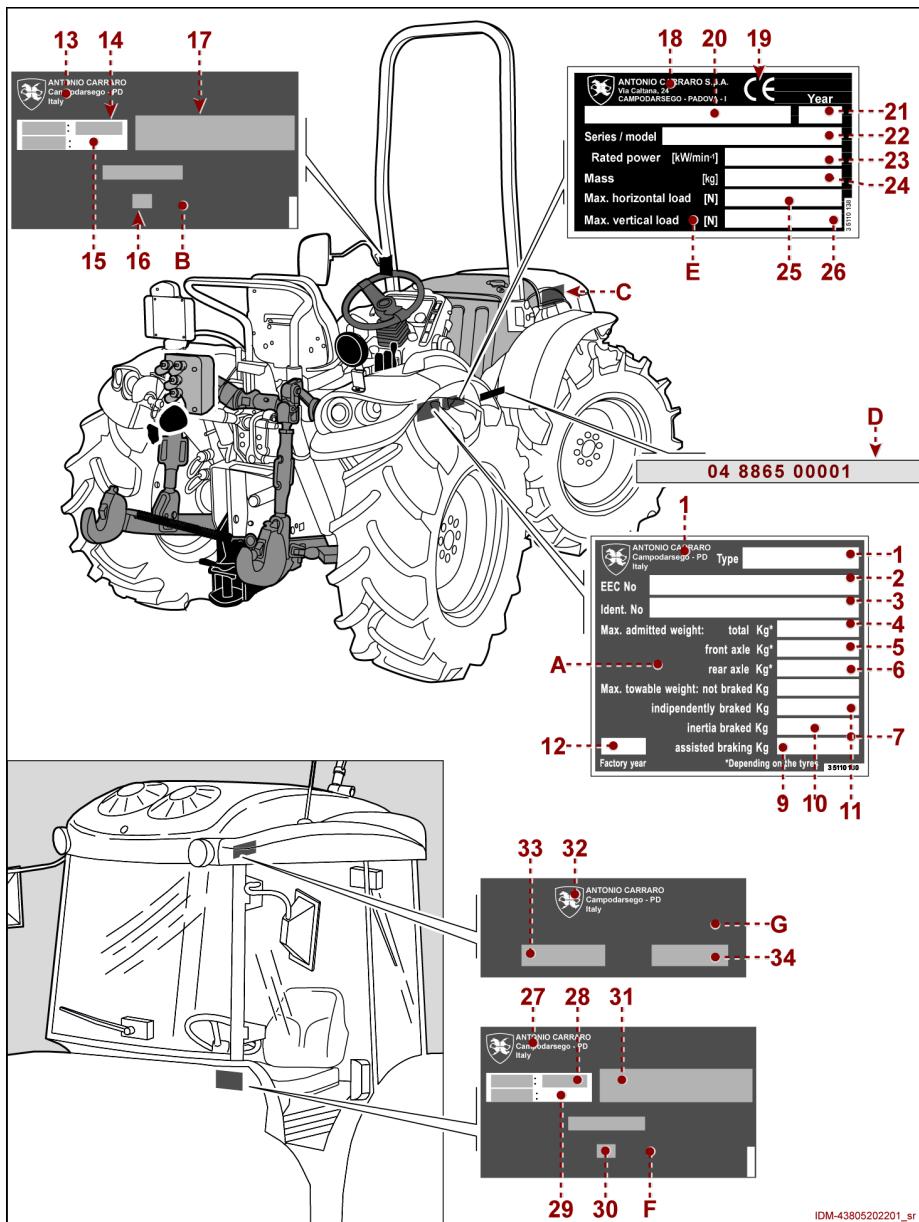


Importante

With temperatures near to those indicated in the sign, it is necessary to replace the cooling liquid with an effective mixture also at lower temperatures.

IDENTIFICATION OF THE MACHINE AND ITS MANUFACTURER

The illustration represents the identification plates and their position.



- The list indicates the descriptions given in each individual plate.

A) Manufacturer and machine identification data plate

- 1) Name of manufacturer
- 2) Model of machine
- 3) CEE type approval number
- 4) Serial number
- 5) Permissible weight: total
- 6) Permissible weight: front axle
- 7) Permissible weight: rear axle
- 8) Permissible trailer weight: no brakes
- 9) Permissible trailer weight: independent braking
- 10) Permissible trailer weight: inertia braking
- 11) Permissible trailer weight: power assisted braking
- 12) Year of manufacture

B) Roll bar approval data plate (ROPS)

- 13) Name of manufacturer
- 14) type of structure
- 15) Serial number
- 16) Model of machine
- 17) CE type-approval number

C) Engine identification data plate

Important

See the electric motor's own instruction manual for motor identification data.

D) Machine serial number

E) CE conformity marking plate

18) Name of manufacturer

19) CE conformity marking

20) Model of machine

21) Year of manufacture

22) Range and model

23) Nominal power

24) Weight of the machine

25) Maximum horizontal load on rear hook

26) Maximum vertical load on rear hook

F) Cab approval plate with safety device (ROPS)

27) Name of manufacturer

28) type of structure

29) Sticker progressive number

30) Model of machine

31) CE type-approval number

G) Cab identification data plate:

32) Name of manufacturer

33) Cabin model

34) Cabin serial number

GENERAL DESCRIPTION OF THE MACHINE (TRX S - TRX - TRG)

- The "Ergit 100 TRX S - TRX - TRG" range machine was designed and manufactured to satisfy the different needs of the agricultural market.
- The machine is suitable for pushing, pulling and driving carried, semi-carried and towed interchangeable tools.



Important

The machine does not have points to apply FOPS and OPS protection devices or front loaders.

- The machine is characterised by an integral oscillating "steering wheel" type frame ACTIO™, to allow rapid manoeuvres even in narrow spaces.
- The four-wheel drive system ensures a good hold even on difficult ground.
- The "sharknose" line improves visibility from the driver's seat and its conformation facilitates maintenance operations.
- The engine compartment is protected by a large woven grid, which guarantees efficient heat exchange.
- The machine is equipped with a reversible driver's seat and is extremely versatile for operations on flat or hilly ground, also with accentuated gradients.
- The width and small dimensions, the low barycentre and the minimum steering radius, make the machine particularly indicated for specialised crop jobs, gardening for public bodies, etc.
- All functional and dimensional features (power, dimensions, weights, etc.) are found in the technical data tables.
- The machine is available as per standard with three-point hydraulic power lift, towing hook, PTO and rear hydraulic hitches to control and drive the different interchangeable tools, installed to satisfy all operational requirements.
- To increase the performance, on request the machine can be equipped in the front part with 3 point hydraulic power lift, PTO and hydraulic hitches (**Tractor model TRX - TRG only**).
- From the driver's seat the driver has direct and indirect visibility (rearview mirrors) for activation of the machine in declared uses and in safe conditions.
- To make the driver's seat more comfortable, on request the machine can be supplied in the "frame" or "cab" version.
For more details, see "Description of the main parts ("frame" version)" - "Description of the main parts ("cab" version)" heading.
- The machine can be equipped with a reducer "HI-LO" that decreases machine speed (20%) and keeps the driving torque at the wheels unaltered (**Tractor model TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRG 9800 - TRG 9900**

only).

- The machine can be equipped with an ESC device (Electronic Speed Control) that enables the advancement mode setting (constant speed or constant rpm) without using the accelerator controls (pedal or lever) (**Tractor model TRX - TRG only**).
- The machine has been subjected to various lab trials to test its performances, in particular to identify the maximum admitted slopes and the overturning limits.

 **Important**

Respect of maximum admitted slopes does not exclude the risk of overturning, as it is difficult to foresee and reproduce the possible environmental conditions in the lab.

- The machine is approved for operation on public roads ONLY with the driver's seat in the normal position and NOT turned into the reverse position.
- JUST ONE OPERATOR (driver) is requested for use of the machine, sitting at the driver's seat, with the safety arch blocked in the lifted position, the safety belts fastened correctly and all safety devices integral and efficient.
- The driver, as well as being adequately trained and informed on the use of the machine, MUST have adequate capability and skills for the type of working activity to be carried out and MUST be in suitable conditions to safely do so.
- IT IS FUNDAMENTAL THAT THE DRIVER IS RESPONSIBLE AND AWARE OF THE LIMITS OF USE and behaves suitable, to safeguard his own safety and that of other persons that could be involved.**

GENERAL DESCRIPTION OF THE MACHINE (TX S)

- The "Ergit 100 TX S" range machine was designed and manufactured to satisfy the different needs of the agricultural market.
- The machine is suitable for pushing, pulling and driving carried, semi-carried and towed interchangeable tools.

Important

The machine does not have points to apply FOPS and OPS protection devices or front loaders.

- The machine is characterised by an integral oscillating "steering wheel" type frame ACTIO™, to allow rapid manoeuvres even in narrow spaces.
- The four-wheel drive system ensures a good hold even on difficult ground.
- The "sharknose" line improves visibility from the driver's seat and its conformation facilitates maintenance operations.
- The engine compartment is protected by a large woven grid, which guarantees efficient heat exchange.
- The machine is extremely versatile for operations in flat and hilly land and also on steep slopes.
- The width and small dimensions, the low barycentre and the minimum steering radius, make the machine particularly indicated for specialised crop jobs, gardening for public bodies, etc.
- All functional and dimensional features (power, dimensions, weights, etc.) are found in the technical data tables.
- The machine is available as per standard with three-point hydraulic power lift, towing hook, PTO and rear hydraulic hitches to control and drive the different interchangeable tools, installed to satisfy all operational requirements.
- From the driver's seat the driver has direct and indirect visibility (rearview mirrors) for activation of the machine in declared uses and in safe conditions.
- To make the driver's seat more comfortable, on request the machine can be supplied in the "frame" or "cab" version.
For more details, see "Description of the main parts ("frame" version)" - "Description of the main parts ("cab" version)" heading.
- The machine has been subjected to various lab trials to test its performances, in particular to identify the maximum admitted slopes and the overturning limits.

Important

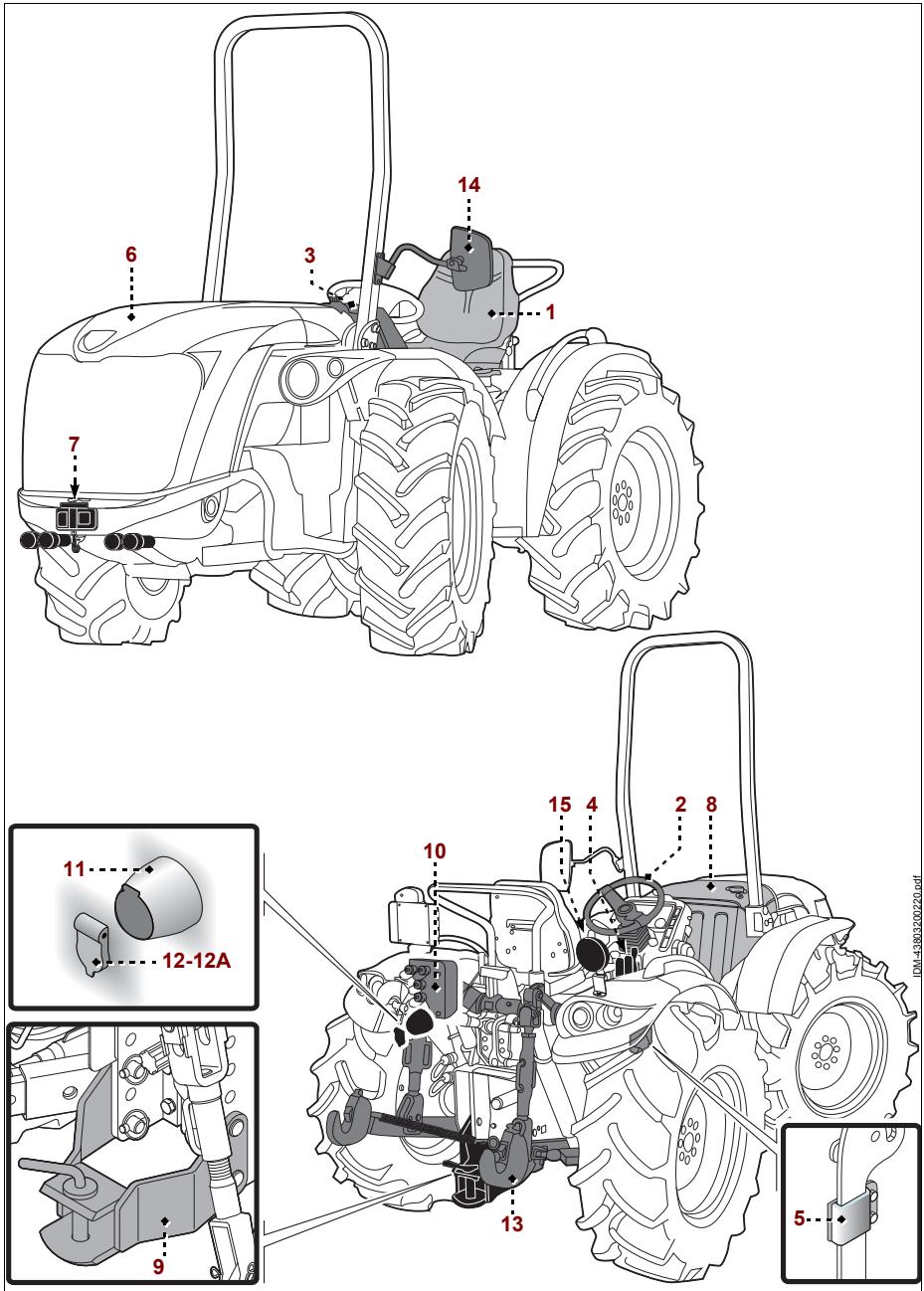
Respect of maximum admitted slopes does not exclude the risk of overturning, as it is difficult to foresee and reproduce the possible environment.

mental conditions in the lab.

- The machine is type-approved for road use.
- JUST ONE OPERATOR (driver) is requested for use of the machine, sitting at the driver's seat, with the safety arch blocked in the lifted position, the safety belts fastened correctly and all safety devices integral and efficient.
- The driver, as well as being adequately trained and informed on the use of the machine, MUST have adequate capability and skills for the type of working activity to be carried out and MUST be in suitable conditions to safely do so.
- **IT IS FUNDAMENTAL THAT THE DRIVER IS RESPONSIBLE AND AWARE OF THE LIMITS OF USE and behaves suitable, to safeguard his own safety and that of other persons that could be involved.**

DESCRIPTION OF THE MAIN PARTS (MACHINE)

The illustration represents the main components and the list gives the description and their function.



1)Driver's seat: designed and built with ergonomic principles, it can be adjusted by the driver to obtain different posture conditions.

- The driver's seat can be turned to reverse position or in normal position in machine model TRX S - TRX - TRG.
- The driver can easily control and activate all machine controls from the driver's seat.

2)Steering unit: via steering wheel equipped with hydrodrive, it allows to steer the front wheels in a proportional manner.

3)Dashboard: it is equipped with control devices (speed, LEDs etc.) and with controls for drive of services and utilities.

For more details, see "Description of dashboard controls" heading.

4)Hydraulic services drive levers: they are used to control the power lift unit and the interchangeable tools (carried or towed).

- The hydraulic plant is an integral part of the machine construction.

For more details, see "Description of hydraulic circuits" heading.

5)Support: used to support the lever device of the towed interchangeable tool braking system.

6)Engine bonnet: it is equipped with key lock and can be opened for necessary inspections.

- The key for opening it must be kept by the person responsible for the machine so that it is not accessible to unauthorised personnel.

7)Front towing bracket: for towing the machine in case of breakdown

8)Tank: contains the engine fuel. There is draining point in the cap area, to allow fuel to flow out.

9)Towing hook: used to hitch the towed interchangeable tools.

- The component can be supplied in different configurations depending on the type-approval requested.

10)Rear hydraulic couplings: they are equipped with quick coupling fittings and are used to connect the hydraulic services of the interchangeable tools.

11)Trailer socket: used to connect the electrical system of a hitched trailer or implement

12)3 pin socket: used to connect the electrical system of a hitched trailer or implement (**Tractor model TRX - TRG only**).

12A)One-way socket: used to connect the electrical system of a hitched trailer or implement (**Tractor model TX S - TRX S only**).

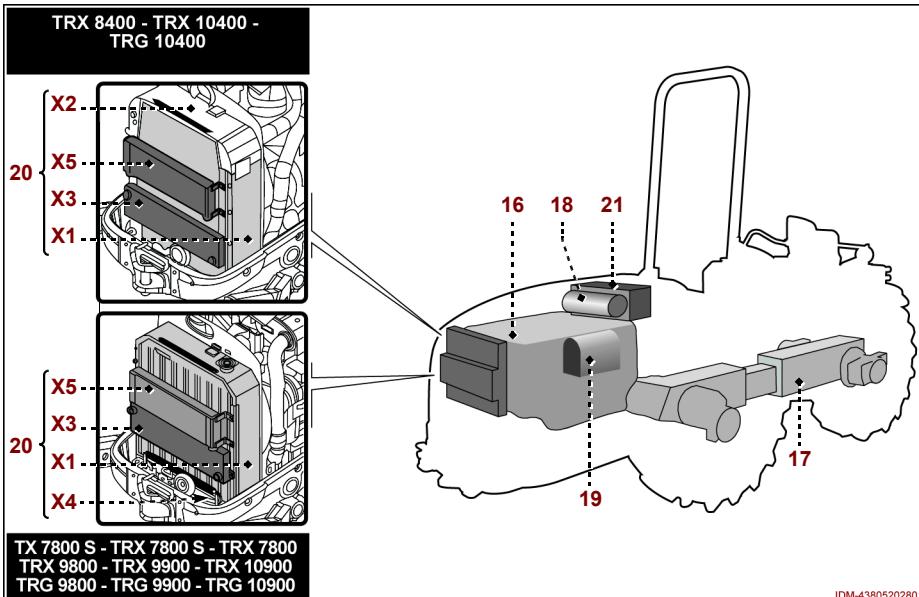
13)Hydraulic lift unit: with three point linkage for hitching and lifting implements.

- On request, the power lift unit , can be supplied in the most suitable version for the different operating requirements.

For more details, see "Description of rear power lifting unit ("ball joints" version)" - "Description of rear power lifting unit ("quick coupling" version)" heading.

14)Rearview mirror: it is mandatory for road circulation of the machine.

15)Rear work light (pivotable): to light the work areas in conditions with little visibility (Optional for machine model TX S - TRX S).



16)Engine: develops the power to drive all main power users on the machine (For more details, consult the table showing technical data).

17)Transmission unit: it is the mechanical integral traction type with axles with differentials.

- **Front axle:** it is equipped with independent reducers (one per wheel) and with electro-hydraulically controlled differential blocking.
- **Gear box:** has 32 fast ratio (16 forward gear and 16 reverse) and is equipped with synchronised reverser.
- **Power take-off (PTO):** it is used to transmit the power from the machine to the interchangeable tool (carried or towed).
- The PTO has progressive electro-hydraulic coupling and can function with independent speed or at a speed synchronised with the machine advancement speed.
- **Rear axle:** it is equipped with independent reducers (one per wheel) and with

electro-hydraulically controlled differential blocking.

18) Air filter: cleans the air entering the engine intake. On request the filter can be equipped with safety filtering cartridge.

19) Silencer: conveys the exhaust gases and reduces the noise produced by the engine.

20) Heat exchanger: it reduces the working temperature (engine cooling liquid, hydraulic oil etc.) and includes the elements listed.

- **Radiator (X1):** cools the liquid of the engine cooling circuit.

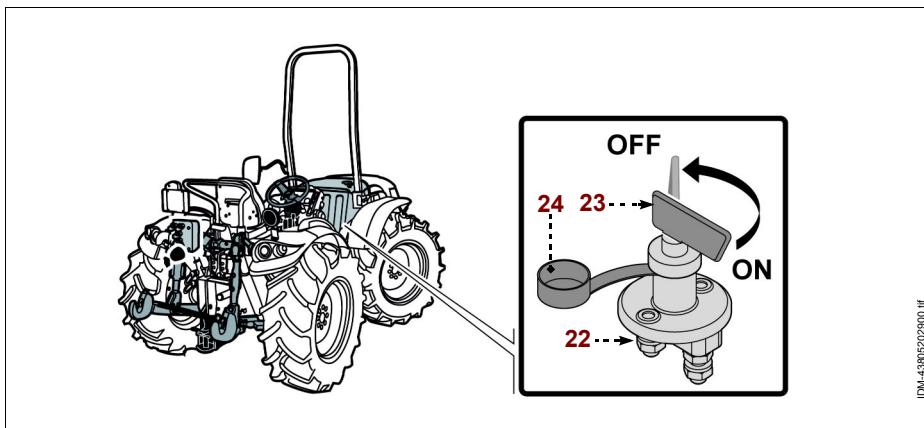
- **Radiator (intercooler) (X2):** it cools the air pushed by the turbocompressor into the engine.

- **Radiator (optional) (X3):** cools the oil of the gearbox and HI-LO device (Tractor model TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRG 9800-TRG 9900 only).

- **Finned pipe (X4):** cools the engine fuel.

- **Radiator (X5) (optional):** it cools the oil of the hydraulic circuit of the "Joystick unit".

21) Battery: it is securely fastened to the machine and is used to power the electric plant.



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- The connection between the battery and the electric plant can be isolated using the battery detachment device (22).
- **Control in position "ON":** the battery is connected (the key (23) remains inserted).
- **Control in position "OFF":** the battery is disconnected (remove the (23) key and insert the specific protection (24)).
- The battery detachment device is used to perform interventions on the electric plant, leave the machine inactive for long periods and prevent start-up by unauthorised persons.

- Before carrying out any welding interventions on the machine, disconnect the battery cables and any circuit board connectors , thus preventing irreversible damage to the components.

Important

To isolate the electric plant from the battery, position the control on "OFF", remove the key (23) and keep it so that it cannot be accessed by unauthorised staff.

DESCRIPTION OF THE MAIN PARTS ("FRAME" VERSION)

The "frame" version machine is approved for road circulation and is an optional equipment that must be requested in the order phase.

- The "frame" version is not set-up with hitching points for the FOPS and OPS device.
- The illustration represents the main components and the list gives the description and their function.

A) Frame: it is approved as

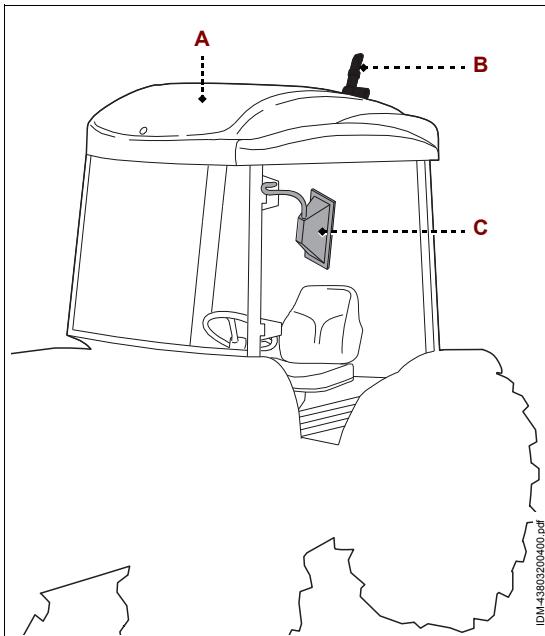
ROPS safety device and it is the version without windows (front and rear) doors and side protections (supplied upon request).

Important

The frame IS NOT CERTIFIED as FOPS and OPS safety device against the risk of falling and/or side penetration of material.

B) Flashing light support: it is equipped with a unipolar electric socket for installation of the flashing light (rotating light)

C) Rearview mirror: it is mandatory for road circulation of the machine.



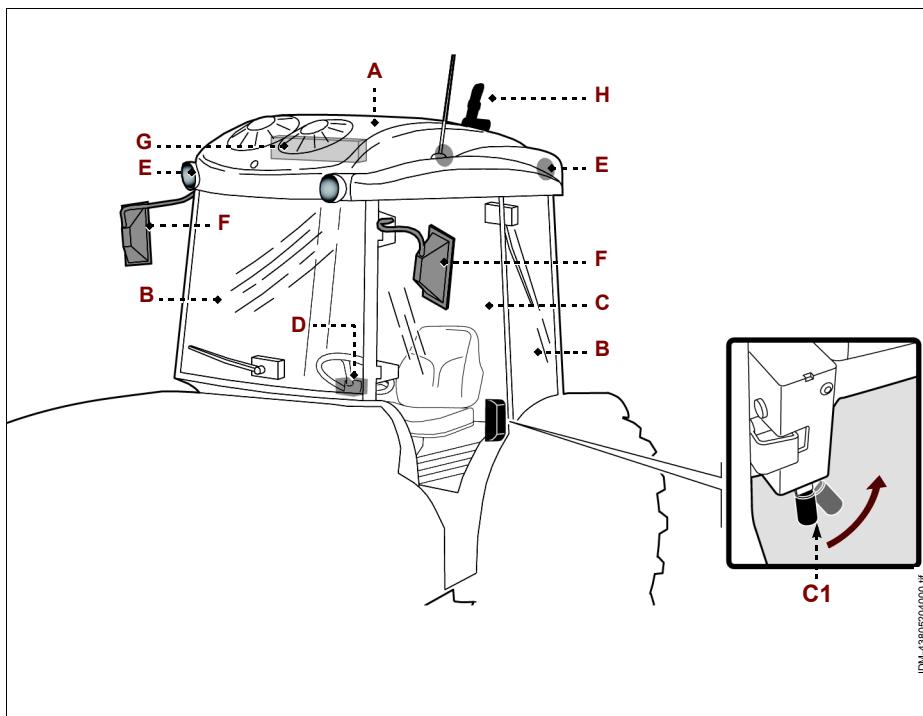
DESCRIPTION OF THE MAIN PARTS ("CAB" VERSION)

The "cab" version machine is approved for road circulation and is an optional equipment that must be requested in the order phase.

Important

The cab is **CATEGORY 1** and does not protect the driver against dangerous substances.

- Always wear the IPD to avoid exposure to dangerous substances, even if the cab is pressurised and equipped with active charcoal filters.
- Refer to the instructions on the plant protection products to be used, to evaluate the type of IPD to wear as protection against inhalation and contact.
- Always keep the doors and windows closed during spraying to avoid inhaling plant protection products.
- The "cab" version is not set-up with hitching points for the FOPS and OPS device.
- The illustration represents the main components and the list gives the description and their function.



A) Cab: it is approved as ROPS safety device and it is the sound-proof version to improve driver comfort.

- The cab is equipped with the controls to activate all of its devices (lights switch-on, windscreen washer, etc) and with conditioning system (heating and air conditioning).

For more details, see "Description of cab controls" heading.

 Important

The cab IS NOT CERTIFIED as FOPS and OPS safety device against the risk of falling and/or side penetration of material.

B) Front and rear windscreens: made from tempered crystal.

- The windscreens are hinged in the upper part in order to open them in a tilting manner and they are equipped with gas springs to keep them in the open position.
- Both windscreens are equipped with electric windscreen wipers, with washing system and independent activation controls.

C) Doors: they are positioned on both sides of the cab and are equipped with an anti-intrusion closure system.

- Act on the lever (**C1**) to open the corresponding door.
- **In case the machine overturns, the doors have the emergency exit function.**

D) Tank: contains the detergent solution used to wash the front and rear windscreens.

E) Lighting: they can be moved manually to aim the light beam at the area of interest.

F) Rearview mirrors: they are mandatory to approve the machine for road circulation.

G) Air filter: withholds impurities in the air conditioning system.

- In the order phase, the machine can be requested with other types of filter.
For more details, see "Description of the equipment on request (TRX - TRG)" - "Description of the equipment on request (TX S - TRX S)" heading.

H) Flashing light support: it is equipped with a unipolar electric socket for installation of the flashing light (rotating light)

DESCRIPTION OF HYDRAULIC CIRCUITS

The illustration represents the main components and the list gives the description and their function.

Model TX 7800 S - TRX 7800 S

A) Tank: supplies the oil for lubricating the front bevel gears.

B) Tank: supplies the oil to the pump , which powers the hydraulic circuits listed.

- Front wheel drive supply circuit
- Differential blocking device power supply circuit
- PTO drive power supply circuit
- Steering system supply circuit
- Power supply circuit of the rear power lift unit
- Supply circuit of the rear hydraulic couplings

C) Tank: supplies the oil to the hydraulic circuits listed.

- Machine braking system power supply circuit
- Clutch control supply circuit

Model TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900

- TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900

A) Tank: supplies the oil to the pump , which powers the hydraulic circuits listed.

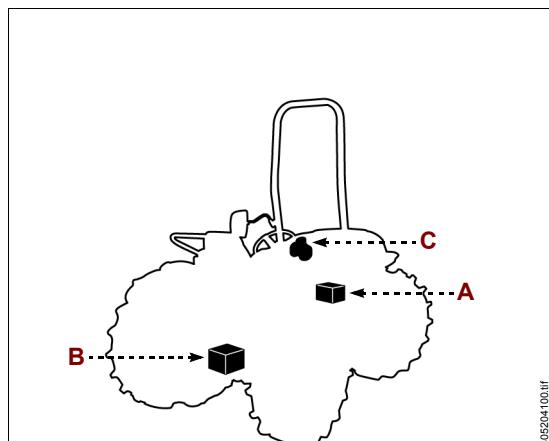
- Power supply circuit of the rear power lift unit
- Supply circuit of the rear hydraulic couplings

B) Tank: supplies the oil to the pump , which powers the hydraulic circuits listed.

- Front wheel drive supply circuit
- Reducer power supply circuit "HI-LO"
- Differential blocking device power supply circuit
- PTO drive power supply circuit
- Steering system supply circuit

C) Tank: supplies the oil to the hydraulic circuits listed.

- Machine braking system power supply circuit
- Clutch control supply circuit



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DESCRIPTION OF THE FRONT POWER LIFTING UNIT

The three point power lift unit (front), it is equipped with a "quick coupling" interchangeable tool hitching and disconnection system.

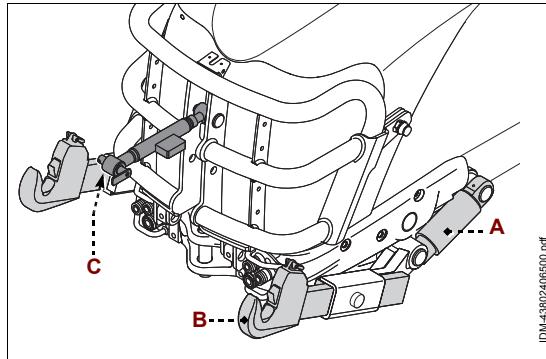
- The illustration represents the main components and the list gives the description and their function.

A) Hydraulic cylinders: activate the movement of the lifting unit.

B) Booms: used to lift the interchangeable tools with compatible dimensions.

C) Strut: used to hitch the third point of the interchangeable tool.

- For information regarding the technical and dimensional features of the three-point lifting unit, see chapter "Technical data tables".

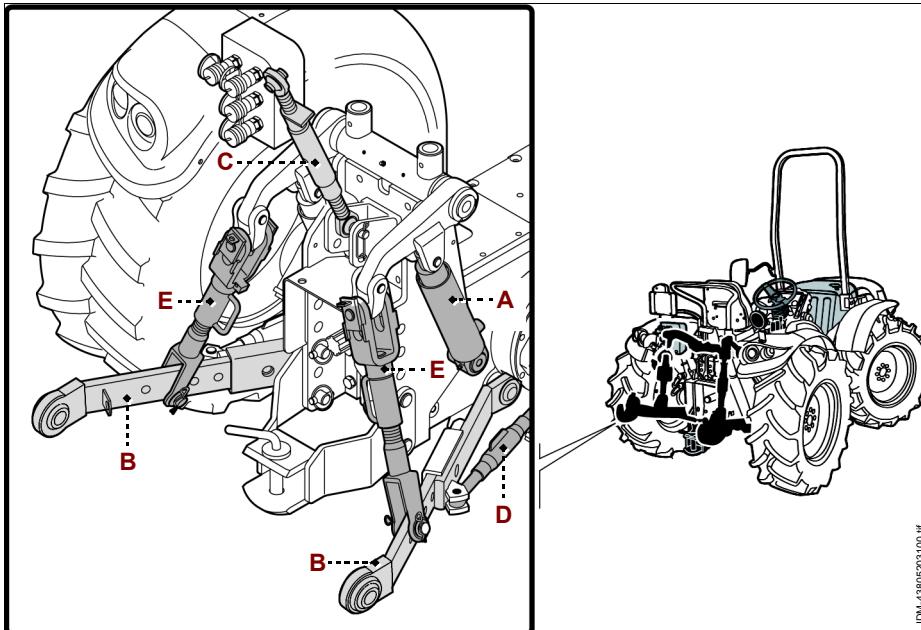


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DESCRIPTION OF REAR POWER LIFTING UNIT ("BALL JOINTS" VERSION)

In the standard configuration of the three point power lift unit (rear), it is equipped with a "ball joint" interchangeable tool hitching and disconnection system.

- The illustration represents the main components and the list gives the description and their function.



A) Hydraulic cylinders: activate the movement of the lifting unit.

B) Booms: they are equipped with tie-rods (**E**) in order to regulate the height and with tie-rods (**D**) to facilitate connection of the interchangeable tools and to stabilise them.

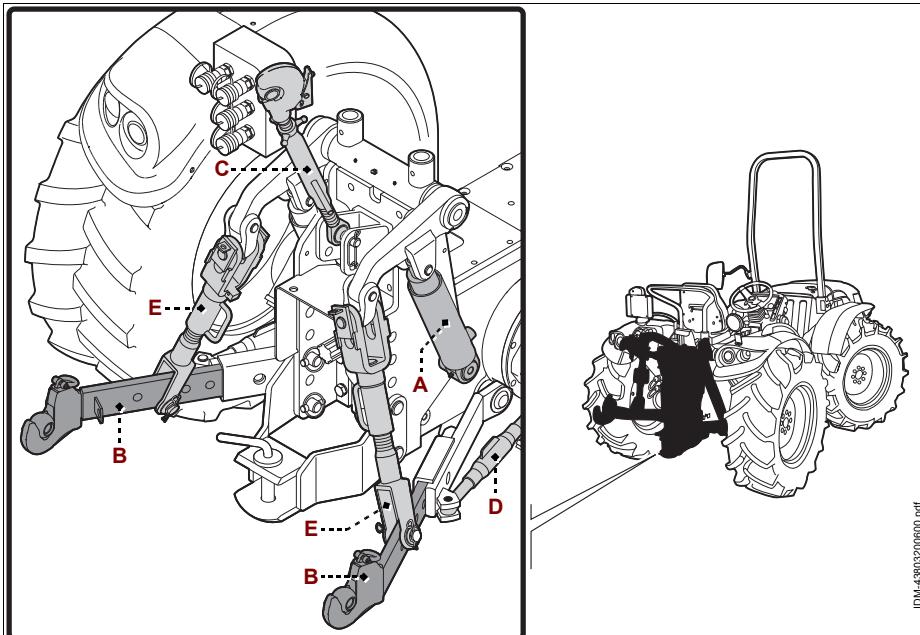
C) Strut: used to hitch the third point of the interchangeable tool.

- For information regarding the technical and dimensional features of the three-point lifting unit, see chapter "Technical data tables".

DESCRIPTION OF REAR POWER LIFTING UNIT ("QUICK COUPLING" VERSION)

In the standard configuration of the three point power lift unit (rear), it is equipped with a "quick coupling" interchangeable tool hitching and disconnection system.

- The illustration represents the main components and the list gives the description and their function.



A) Hydraulic cylinders: activate the movement of the lifting unit.

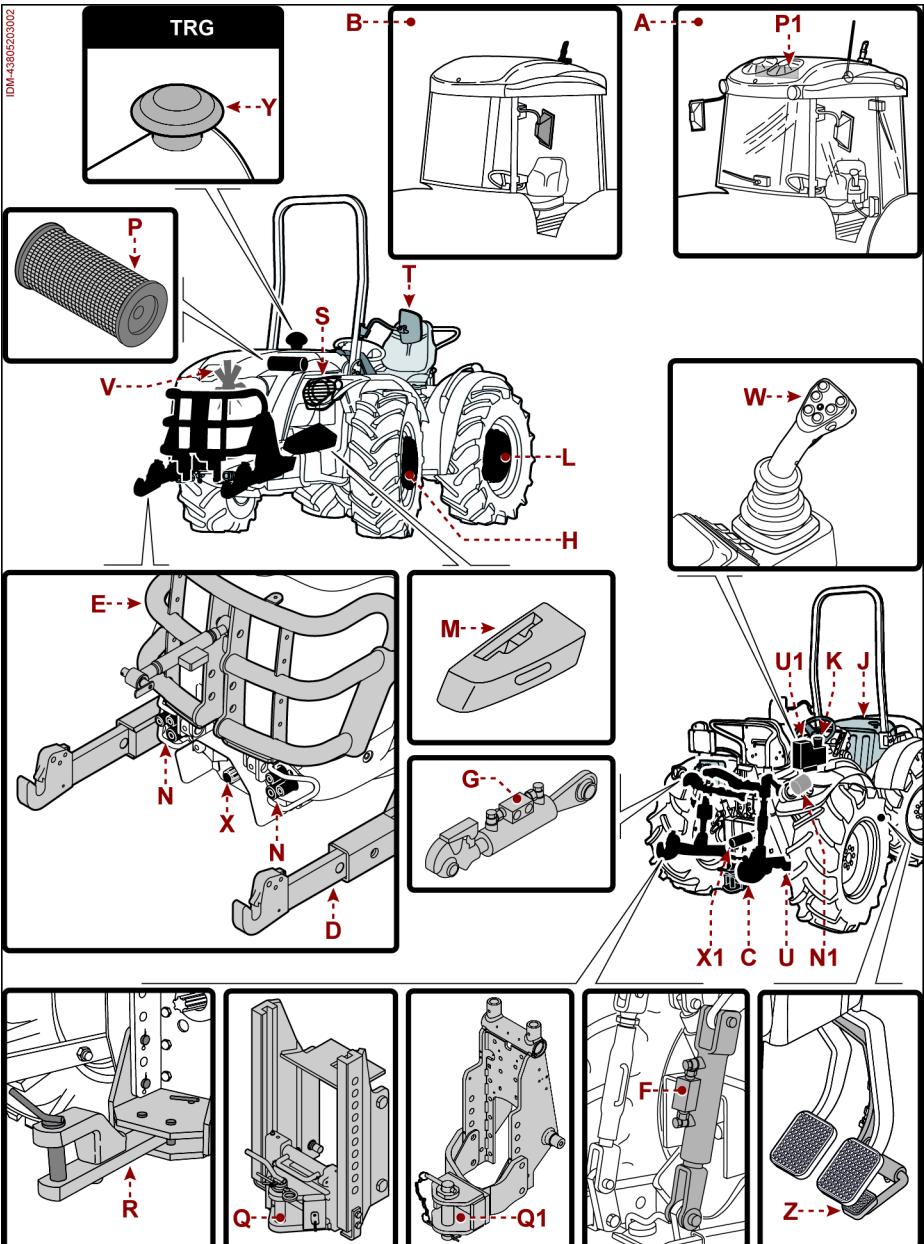
B) Booms: they are equipped with tie-rods (**E**) in order to regulate the height and with tie-rods (**D**) to facilitate connection of the interchangeable tools and to stabilise them.

C) Strut: used to hitch the third point of the interchangeable tool.

- For information regarding the technical and dimensional features of the three-point lifting unit, see chapter "Technical data tables".

DESCRIPTION OF THE EQUIPMENT ON REQUEST (TRX - TRG)

The illustration represents the accessories that can be supplied on request and the list states their description and function.



- A) Cab:** approved ROPS safety device and used for driving on public roads. It is a sound-proof version that improves the driver's comfort.
For more details, see "Description of the main parts ("cab" version)" heading.
- B) Frame:** approved as ROPS safety device and for driving on public roads. It is the version without windows (front and rear), doors and side protections (supplied upon request).
For more details, see "Description of the main parts ("frame" version)" heading.
- C) Rear lifting unit (with quick coupling):** it is a "three-point" unit with a quick system for coupling the equipment.
- D) Front power lift unit:** "three point" type.
– the unit is always supplied coupled with the protection structure (bullbar) (**E**).
- E) Protection structure (Bullbar):** protects the radiator and the engine and acts as hitch for the strut of the front power lift unit.
- F) Hydraulically-controlled tie-rod:** it is installed on the rear right side, to regulate the height of the interchangeable tool hitching boom directly from the control at the driver's seat.
- G) Hydraulically controlled strut:** it is installed on the rear side, to adjust the height of the interchangeable tool directly from the driver seat control.
- H) Wheel ballasts:** used to improve machine traction capacity. They can be installed on front or rear wheels.
- J) ESC (Electronic Speed Control) device:** used to set constant engine speed (number of revolutions) without using the accelerator controls.
- K) "Electronic draft control" device:** maintains constant pressure of the implement on the ground.
- L) Ballasts with flange (rear wheels):** used to improve the machine's traction capacity. They must be installed with rims with specific dimensions.
– The installation of this type of equipment can only be performed by the manufacturer or authorised workshops.
- M) Lateral ballasts:** they are used to increase machine stability with carried tool hitched to the rear power lift unit.

Important

To determine the weight and quantity of ballasts to install depending on the working requirements, see "Installation of lateral ballasts" - "Front wheels ballasts installation" - "Rear wheels ballasts installation".

- N) Front hydraulic couplings:** they have quick coupling to connect the hydraulic services of the interchangeable tools.
- N1) Hydraulic braking for towed implement:** used to operate the hydraulic brakes of implement after connecting to the machine's hydraulic circuit.

For more details, see "Procedure for operating the hydraulic braking system (optional)" heading.

P) Air filter internal cartridge: particularly useful for prolonged jobs with the machine at maximum performance with heavy duty environmental conditions (dust, humidity, etc.).

P1) Air filter (active carbon): is for decreasing exposure of the driver to harmful substances when spraying plant protection products.

Q) Towing hook "Slider": allows to regulate the height of the hitching point of the interchangeable tools, towed easily and quickly.

Q1) Towing hitch "CUNA D2": used to increase the maximum towing capacity ONLY when the machine is equipped with hydraulic braking for towed implements (**Only for machines model TRX - TRG, drive 7800 - 9800 - 9900 and Italian type-approval**).

R) Oscillating towing bar: allows regulating the angle of the hitching point of the interchangeable tools, towed easily and quickly.

S) Protection grids

T) Seat with pneumatic springs: to improve the driver's comfort.

U) Reduction gear HI-LO: reduces the speed of the machine (20%) and keeps the driving torque at the wheels unaltered.

U1) Robotic gearbox controls: replace the conventional controls of the reverser and of the speed range selection ("high" or "low").

For more details, see "Description of drive and stop controls (robotic controls)" heading.

V) "Clean fix" Device: it is used to automatically clean the front grill of dust.

– With this equipment front side PTO (X) cannot be also installed.

W) "Joystick" control: used to activate, when combined with one of the selection buttons and with the maintained action control , the auxiliary services of the interchangeable tools that are hitched to the machine.

– When the machine is equipped with "Joystick" type controls , the hydraulic control tie-rod (F) is always supplied along with it.

X) Front side PTO: It is used to transmit the machine power to the interchangeable equipment (mounted or drawn) installed in the front part of the machine.

– The PTO works with a progressive electro-hydraulic clutch that operates at a speed, which is independent from the machine's forward speed.

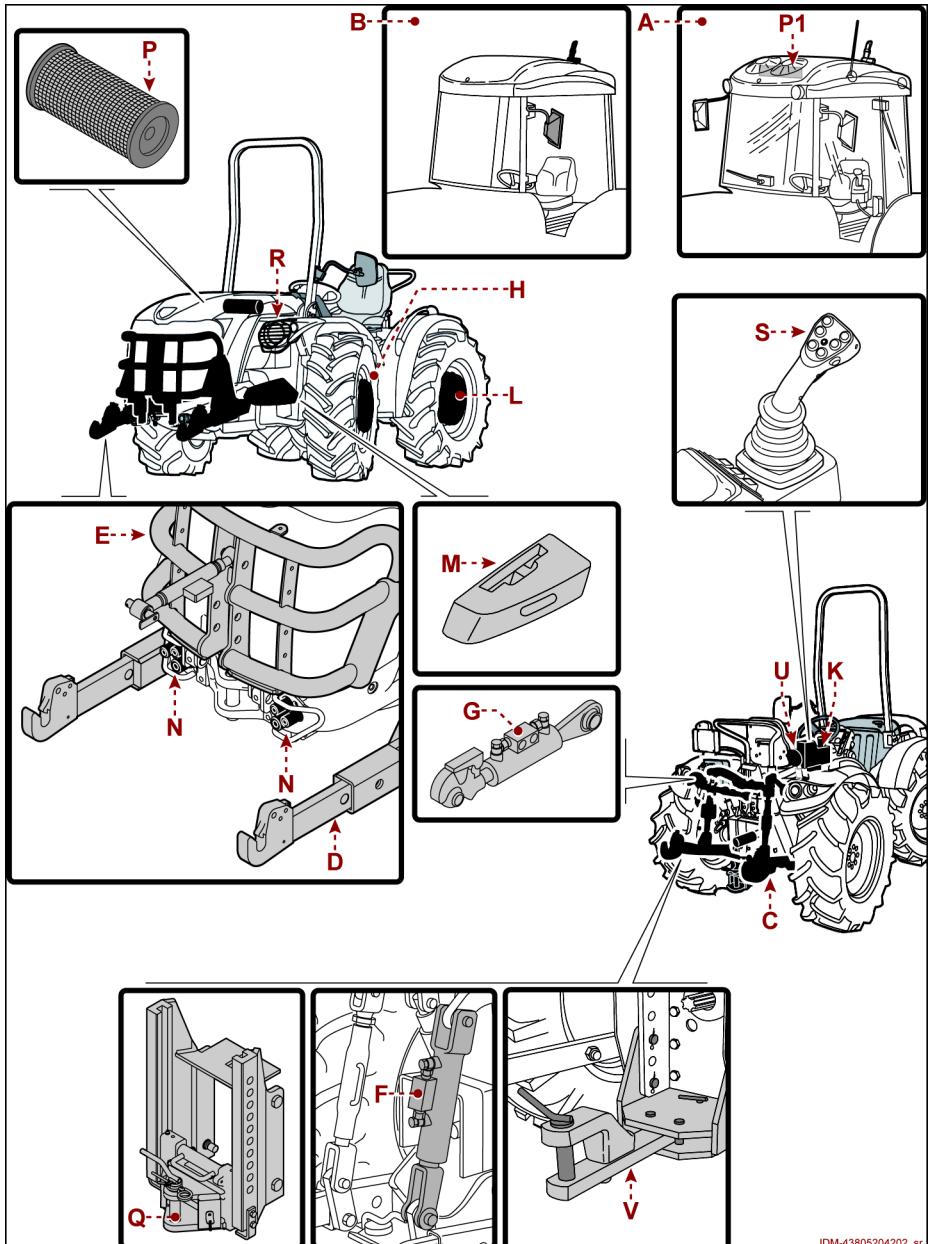
– With this equipment, "Clean fix" device(V) cannot be installed

X1) Power take-off (1000 version)

- Y) Air intake external system:** allows to intake colder air in order to keep motor performance unaltered also in high environmental temperatures (**Tractor model TRG only**).
- Z) "Suspended" accelerator pedal:** it varies the machine acceleration speed (**Tractor model TRX 9800 only**).

DESCRIPTION OF THE EQUIPMENT ON REQUEST (TX S - TRX S)

The illustration represents the accessories that can be supplied on request and the list states their description and function.



- A) Cab:** approved ROPS safety device and used for driving on public roads. It is a sound-proof version that improves the driver's comfort.
- For more details, see "Description of the main parts ("cab" version)" heading.
- B) Frame:** approved as ROPS safety device and for driving on public roads. It is the version without windows (front and rear), doors and side protections (supplied upon request).
- For more details, see "Description of the main parts ("frame" version)" heading.
- C) Rear lifting unit (with quick coupling):** it is a "three-point" unit with a quick system for coupling the equipment.
- D) Front power lift unit:** "three point" type.
- the unit is always supplied coupled with the protection structure (bullbar) (**E**).
- E) Protection structure (Bullbar):** protects the radiator and the engine and acts as hitch for the strut of the front power lift unit.
- F) Hydraulically-controlled tie-rod:** it is installed on the rear right side, to regulate the height of the interchangeable tool hitching boom directly from the control at the driver's seat (**Tractor model TRX S only**).
- G) Hydraulically controlled strut:** it is installed on the rear side, to adjust the height of the interchangeable tool directly from the driver seat control (**Tractor model TRX S only**).
- H) Wheel ballasts:** used to improve machine traction capacity. They can be installed on front or rear wheels.
- L) Ballasts with flange (rear wheels):** used to improve the machine's traction capacity. They must be installed with rims with specific dimensions.
- The installation of this type of equipment can only be performed by the manufacturer or authorised workshops.
- M) Lateral ballasts:** they are used to increase machine stability with carried tool hitched to the rear power lift unit.

 **Important**

To determine the weight and quantity of ballasts to install depending on the working requirements, see "Installation of lateral ballasts" - "Front wheels ballasts installation" - "Rear wheels ballasts installation".

- N) Front hydraulic couplings:** they have quick coupling to connect the hydraulic services of the interchangeable tools (**Tractor model TRX S only**).
- P) Air filter internal cartridge:** particularly useful for prolonged jobs with the machine at maximum performance with heavy duty environmental conditions (dust, humidity, etc.).
- P1) Air filter (active carbon):** is for decreasing exposure of the driver to harmful substances when spraying plant protection products.

Q) Towing hook "Slider": allows to regulate the height of the hitching point of the interchangeable tools, towed easily and quickly.

R) Protection grids

S) "Joystick" control: used to activate, when combined with one of the selection buttons and with the maintained action control , the auxiliary services of the interchangeable tools that are hitched to the machine (**Tractor model TRX S only**).

- When the machine is equipped with "Joystick" type controls , the hydraulic control tie-rod (**F**) is always supplied along with it.

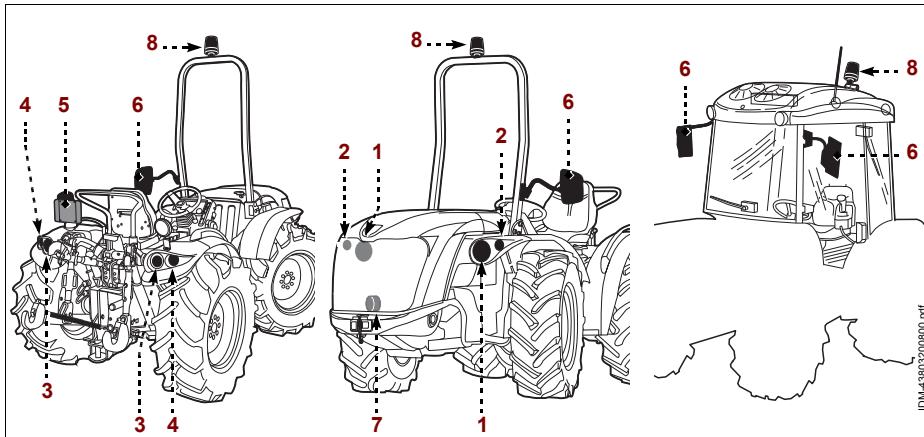
T) "Controlled effort" device: preserves constant pressure of the implement on the ground.

U) Rear work light (pivotable): to light the work areas in conditions with little visibility

V) Oscillating towing bar: allows regulating the angle of the hitching point of the interchangeable tools, towed easily and quickly.

DESCRIPTION OF DEVICES FOR DRIVING ON PUBLIC ROADS

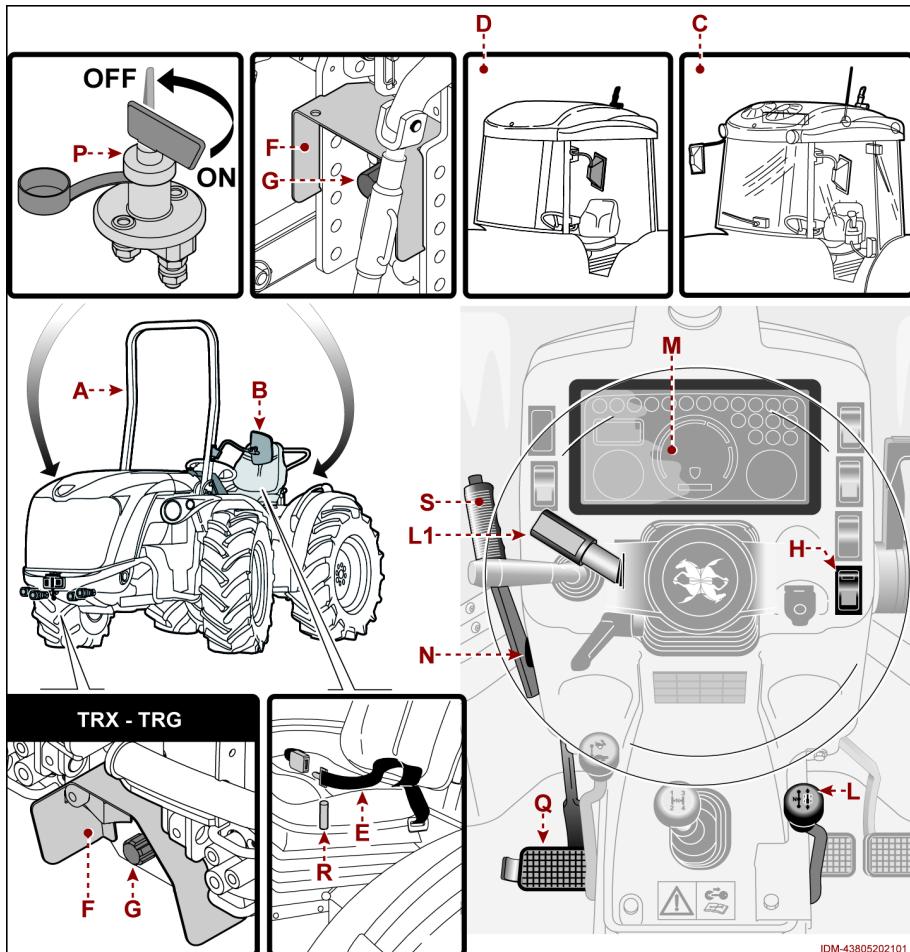
The figure shows the location of the various safety devices on the machine.



- 1)Headlights
 - 2)front direction indicators
 - 3)Tail lights
 - 4)Rear direction indicators
 - 5)Licence plate light
 - 6)Rear view mirror
 - 7)Horn
 - 8)Beacon (orange light) optional

DESCRIPTION OF SAFETY DEVICES

The illustration represents the position of the devices and the list gives the description and their function.



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A) Front safety arch (ROPS): protects the driver if the machine overturns.

B) Rear safety arch (ROPS): protects the driver if the machine overturns.

C) Cab: approved ROPS safety device and used for driving on public roads. It is a sound-proof version that improves the driver's comfort.

For more details, see "Description of the main parts ("cab" version)" heading.

Important

The ROPS devices are subjected to tests to carry out the safety device function in case of overturning or side tilting.

- D) Frame:** approved as ROPS safety device and for driving on public roads. It is the version without windows (front and rear), doors and side protections (supplied upon request).
For more details, see "Description of the main parts ("frame" version)" heading.

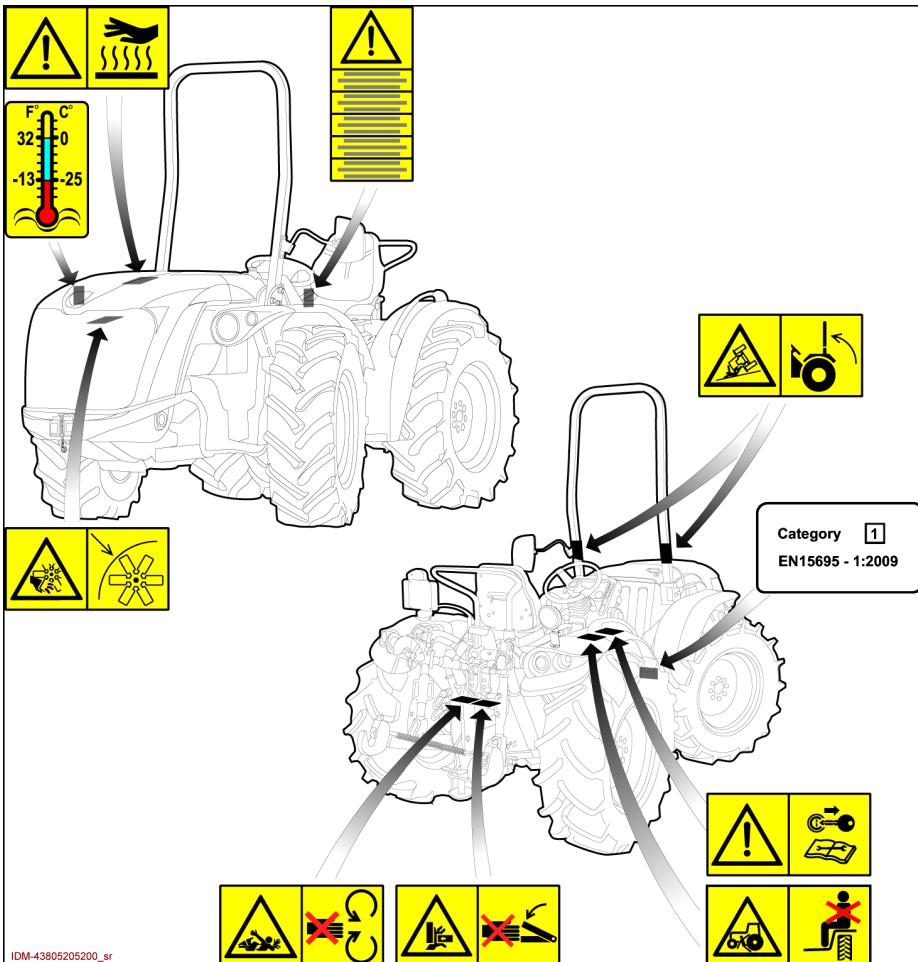
 Important

The ROPS devices are subjected to tests to carry out the safety device function in case of overturning or side tilting.

- E) Seat belt**
- F) Protection shield:** in combination with the Cardan shaft protection, it prevents contact with the machine PTO.
- G) Protection hood:** prevents accidental contact with the PTO coupling and keeps it integral.
- H) Sensor:** detects the functioning state of the PTO control. When the PTO is activated, the sensor prevents the start-up of the engine.
- L) Sensor:** detects the functioning state of the reverser. When the reverser is activated, the sensor prevents engine start-up (**Only for machines equipped with standard controls**).
- L1) Sensor:** detects the functioning state of the reverser. When the reverser is activated, the sensor prevents engine start-up (**Only for machines equipped with robotic controls**).
- M) Luminous LEDs:** individually or, when combined, they indicate a functioning anomaly or that a work control is activated.
For more details, see "Description of instruments and LEDs" heading.
- N) Horn:** signals, when combined with the switch-on of the dashboard LEDs , a functioning anomaly.
- With machine on and moving, it indicates that the operator is not sitting at the driver's seat or has not engaged the parking brake.
- P) Battery detachment device:** used to disconnect the battery from the machine's electric plant.
- Q) Sensor:** detects the position of the clutch pedal. When the pedal is not pressed, the sensor stops the engine from starting (**Only for machines equipped with robotic controls**).
- R) Sensor:** detects whether the operator is sitting in the driving seat.
- If the operator gets up off the driving seat without having engaged the parking brake , the sensor activates the audible warning (**N**) to signal the hazardous condition.
- S) Sensor:** detects the position of the parking brake.

POSITION SAFETY SIGNALS AND INFORMATION

The illustration indicates the positions of the safety plates. Their meaning is described in paragraph "Description of safety signs".

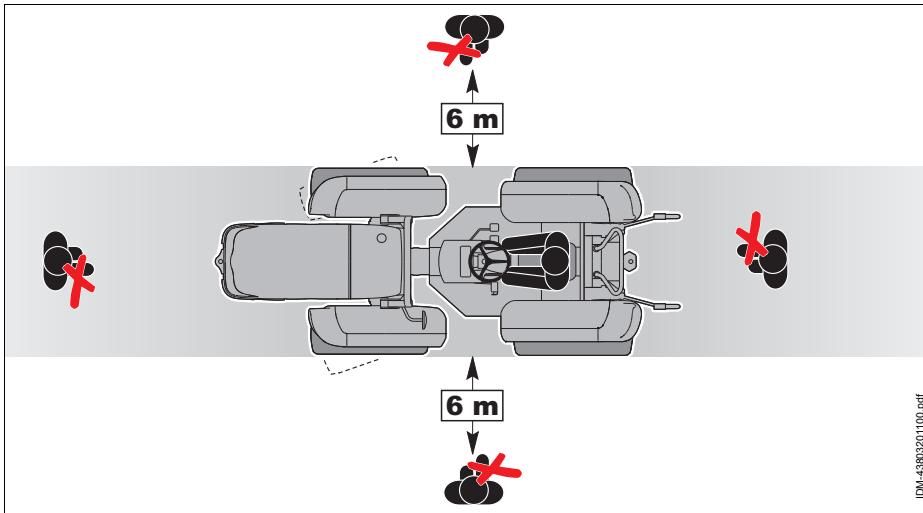


Important

Make certain that all plates and stickers are clearly legible; if not, wipe clean, or if necessary renew, positioning the replacement at the same point on the machine.

DANGEROUS AREAS AND ZONES

The figure shows the potentially dangerous area in which nobody should stand while the machine is in use. It is the operator's responsibility to ensure that nobody enters this area. If necessary, stop the machine and move people to a safe distance.



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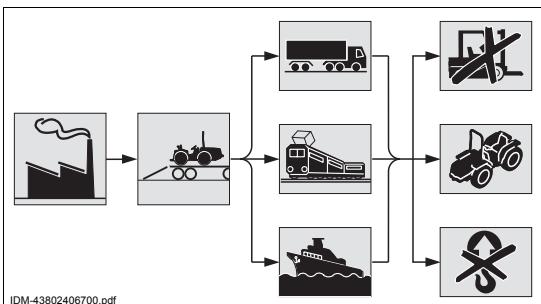
RECOMMENDATIONS FOR HANDLING, LOADING AND UNLOADING

- When handling and loading, refer to the information provided by the manufacturer, indicated directly on the machine, at the driving position and in the operating manual.

METHOD OF TRANSPORT

Depending on the destination, various types of vehicle may be used to transport the machine.

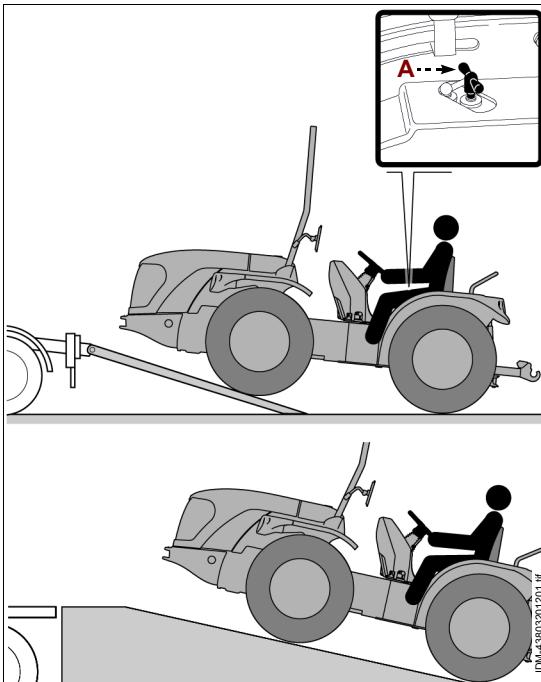
- The figure shows typical transport solutions.



LOADING AND UNLOADING METHOD

For this operation, proceed as follows.

1. Start the engine.
2. Raise the hydraulic lift by operating the relative controls
For more details, see "Description of power lifting unit controls (standard)" heading.
 - If the machine is started up in order to move it, operators must be aware of the procedures necessary to do so in safety.
3. Screw the knob completely **(A)** to block the power lift unit in the lifted position **(For machines with draft control hydraulic lift system only).**

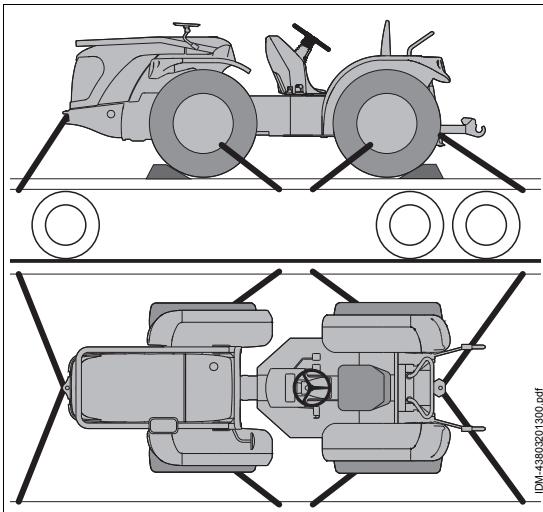


4. Remain properly seated in the driving position, and drive the machine on to the transporting vehicle.

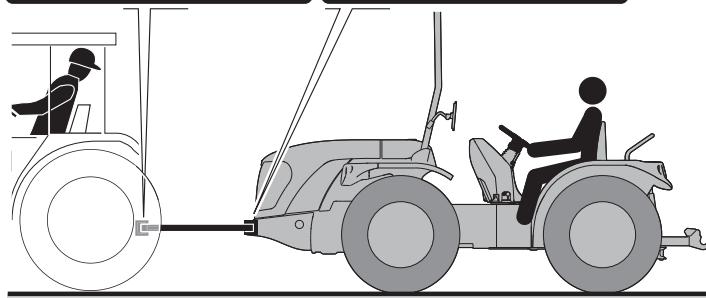
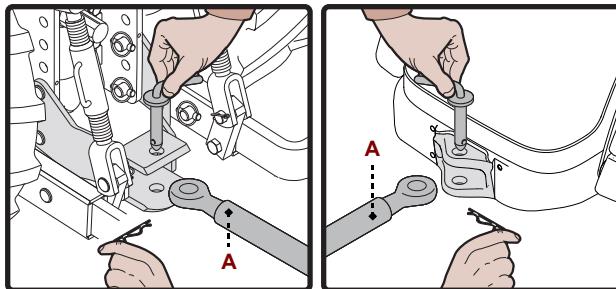
**Caution
Precaution**

Make sure that the ramps used to load the machine on to the vehicle are suitable for the weight of the machine.

5. Switch off the engine, apply the parking brake, engage a low ratio gear and remove the ignition key.
6. Anchor the machine to the vehicle with ropes and wheel chocks, as in the illustration.
7. Check that the shape of the machine does not exceed the maximum clearance of the means of transport.



MACHINE EMERGENCY TOWING METHOD



For this operation, proceed as follows.

1. Hitch the bar (**A**) to the front emergency hook of the machine and that in the middle used for towing.

Important

Control that the hitching pins are correctly inserted and blocked using the relative safety pins in order to prevent accidental disconnection.

2. Position the gear lever and the reverser lever in neutral.
3. Disengage the parking brake.
4. Tow the machine with an operator seated in the driving position.
 - If possible, tow the machine with its engine running to permit the hydrostatic steering system to operate.
 - The steering will feel heavier if the machine is towed with the engine off.

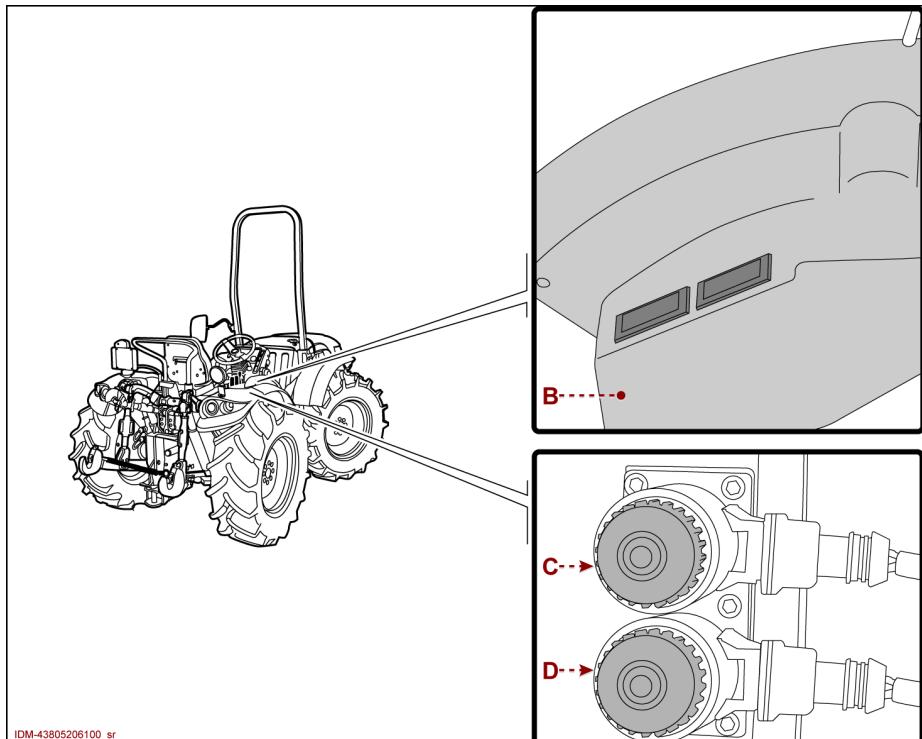
Important

Only use vehicles of adequate size and power to tow the machine.

- Towing must be limited to short distances and towing speed must not exceed 10 km/h.
- On completion of towing, return the machine immediately to normal operating conditions.

Lifting assembly release (electronic)

- When towing the machine with an implement connected and trouble with the lifting assembly , proceed as stated.



1. Remove the cover (**B**).
 2. Start the engine.
 3. Press the button (**C**) (inside the machine) to raise the implement.
 4. Tow the machine with an operator seated in the driving position.
- After towing ALWAYS restore the machine to its original conditions as indicated.
1. Press the button (**D**) (outside the machine) to rest the implement on the ground.
 2. Turn off the engine.
 3. Fit on the cover (**B**).



Important

The buttons (C-D) move the implement in proportion to the pressure the operator applies on them.

RECOMMENDATIONS REGARDING REGULATIONS

- Staff carrying out interventions must know the procedures, respect the safety warnings and adopt the necessary measures for safety in the work place.
- Unless otherwise indicated, every adjustment must be carried out with machine stopped in safe conditions.

Machine stopped in safe conditions

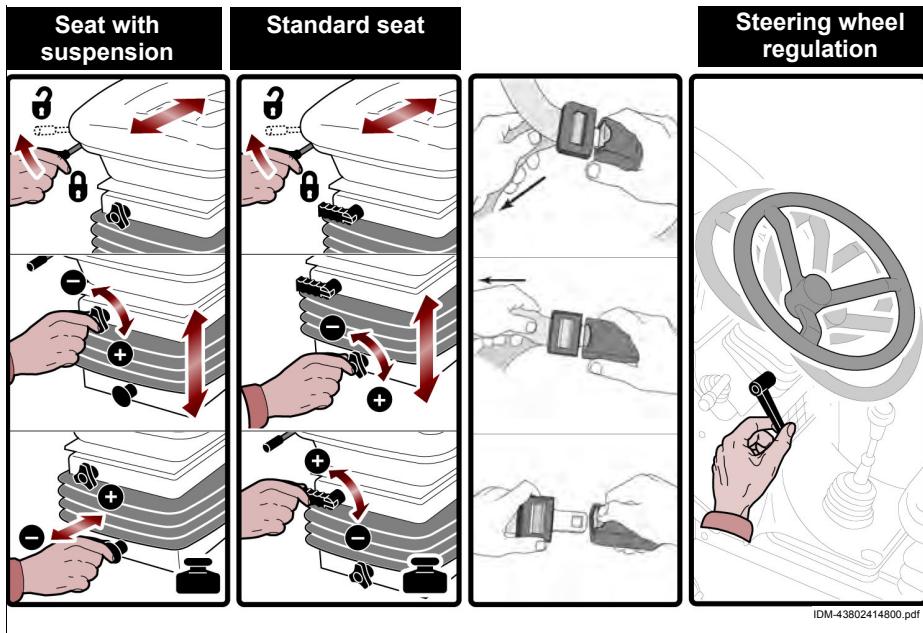
This state foresees the listed conditions to be carried out in the indicated order.

- Position the machine on to a stable and flat surface.
- Engage the reverser lever in the "forward gear" or "reverse gear" position. (if present)
- Position the gearbox lever in "first gear".
- Engage the parking brake of the machine.
- Deactivate the PTO of the machine.
- a) With equipment carried: lower the power lift unit until it rests on the ground.
- b) With equipment towed: engage the parking brake of the equipment.
- Switch off the engine and remove the ignition key.
- Place the safety wedges below the wheels to improve stopping conditions.

ADJUSTING THE DRIVING POSITION

Operators can adjust the steering wheel and the driving seat to achieve maximum comfort for their own stature.

- The illustrations represent how to perform the necessary regulations.

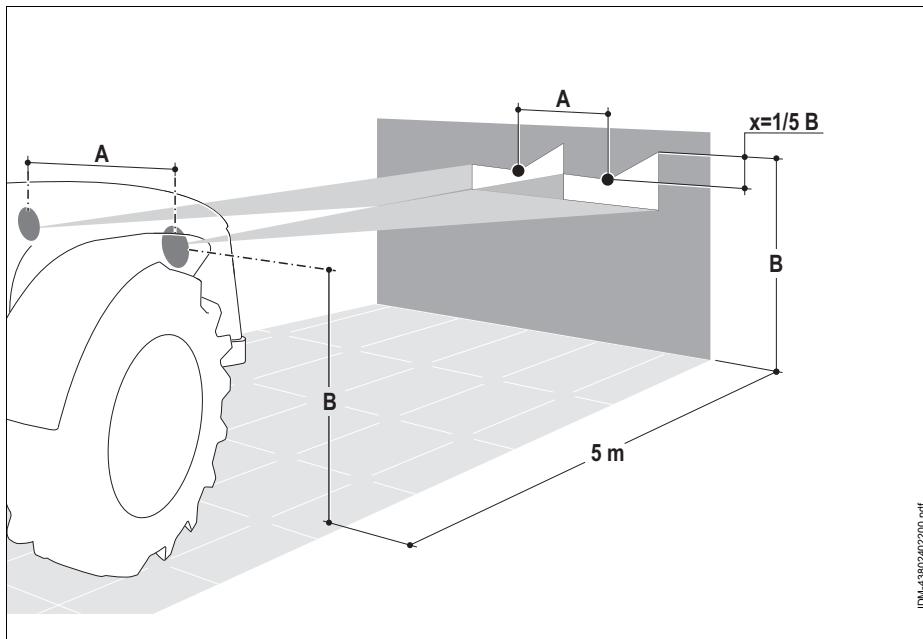


Caution Precaution

Only make adjustments with the machine stationary.

- After having made the regulation, control that the steering wheel is blocked in position.

ADJUSTMENT OF HEADLIGHTS



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Position the machine on level ground at a distance of 5 metres from a wall. Check that there is no load on the machine and that the pressure of the tyres is normal and correct.

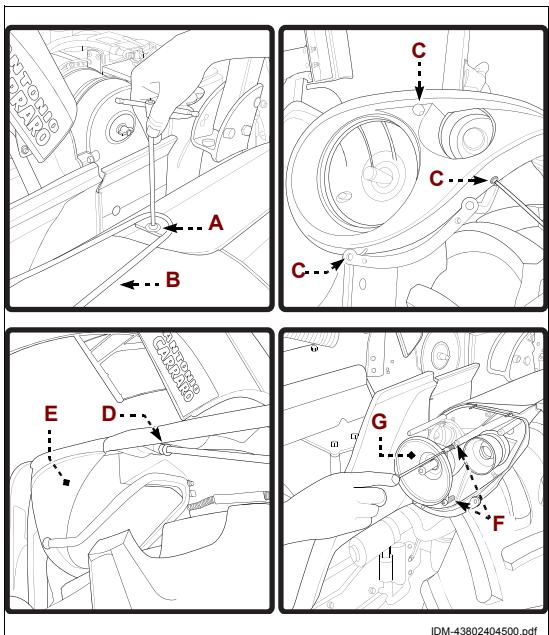
- Switch the low beam lights on and check that orientation is correct (see figure).
- If the orientation is not correct, proceed as indicated.

1. Loosen the screws (**A**) and remove the protection grid (**B**) (if present).
2. Undo the bolts (**C**).
3. Loosen the screws (**D**) and remove the support (**E**).
4. Turn the screws (**F**) one way or the other to adjust the position of the lights (**G**).

Important

When driving on the road, the headlights must be adjusted so as not to dazzle the drivers of other vehicles, and in accordance with the regulations of the highway code.

5. Re-mount the support (**E**) and the protection grid (**B**) when the operation has been completed.

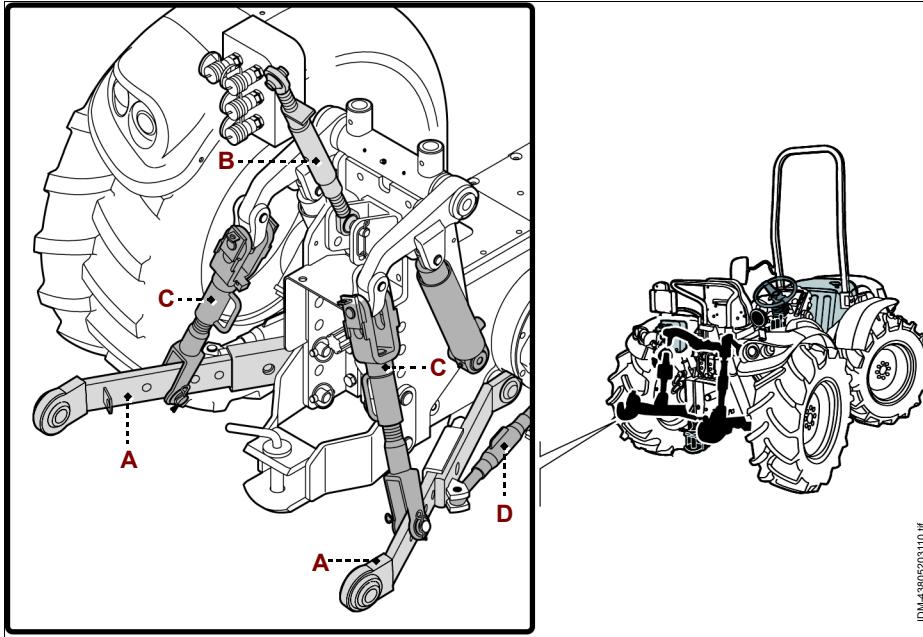


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"BALL JOINT" REAR LIFTING UNIT ADJUSTMENT:

The regulation must be made every time the machine is coupled with an interchangeable tool, which has hitching points different to those previously mounted.

- If it is the first time that coupling is performed with a type of carried interchangeable tool, it is necessary to check that the weight (at its barycentre) is compatible with the maximum capacity accepted at the machine hitching point.
- Evaluate whether it is necessary to install ballasts, in a way to maintain the stability of the machine during working phases.



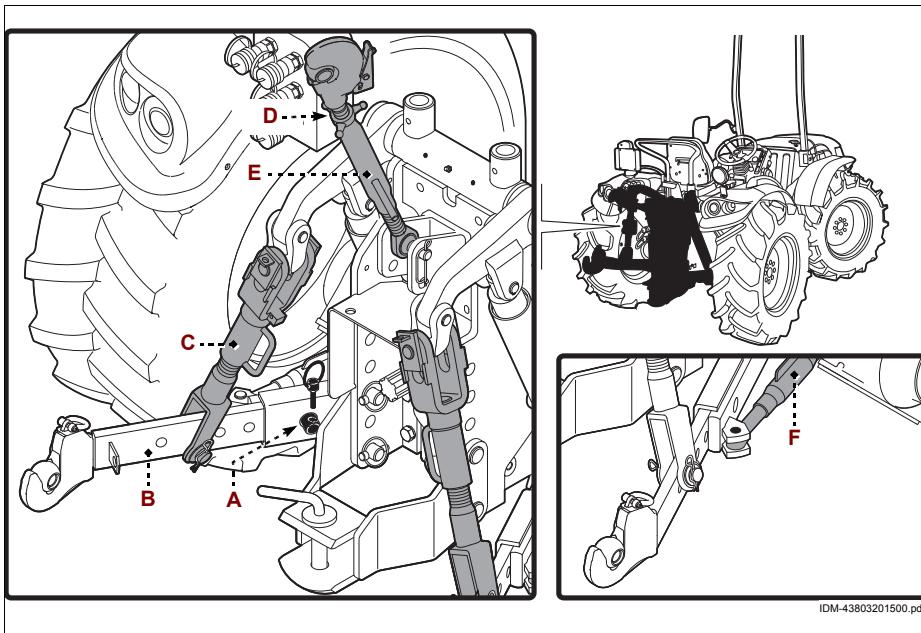
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1. Approach the machine to the interchangeable tool to be hitched.
2. Lower the booms of the power lift unit to the height of the hitching points of the interchangeable tool.
3. Stop the machine and activate all relevant safety devices.
4. Release the safety retainers of the tie-rods (**C**) and regulate them to define the height of the booms (**A**).
5. Release the safety retainers of the strut (**B**), regulate its length and block the retainer again.
6. The tie-rods (**D**) are used to stabilise the lifting booms (**A**) after having hitched the interchangeable tool.

"QUICK COUPLING" REAR LIFTING UNIT ADJUSTMENT:

The regulation must be made every time the machine is coupled with an interchangeable tool, which has hitching points different to those previously mounted.

- If it is the first time that coupling is performed with a type of carried interchangeable tool, it is necessary to check that the weight (at its barycentre) is compatible with the maximum capacity accepted at the machine hitching point.
- Evaluate whether it is necessary to install ballasts, in a way to maintain the stability of the machine during working phases.



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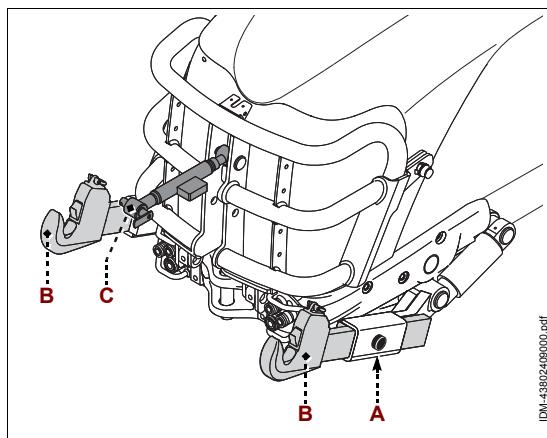
1. Approach the machine to the interchangeable tool to be hitched.
2. Lower the booms of the power lift unit to the height of the hitching points of the interchangeable tool.
3. Stop the machine and activate all relevant safety devices.
4. Remove the safety pins and slide the pins out (**A**).
5. Regulate projection of the boom (**B**).
6. Insert the pins (**A**) and block them using the relevant safety pins.
7. Repeat the operation on the other side.

8. Release the safety retainers of the tie-rods (**C**) and regulate them to define the height of the booms (**B**).
9. Release the safety retainers (**D**) of the strut (**E**), regulate its length and block the retainer again.
10. The tie-rods (**F**) are used to stabilise the lifting booms (**B**) after having hitched the interchangeable tool.

REGULATION OF THE FRONT LIFTING UNIT

The regulation must be made every time the machine is coupled with an interchangeable tool, which has hitching points different to those previously mounted.

- If it is the first time that coupling is performed with a type of carried interchangeable tool, it is necessary to check that the weight (at its barycentre) is compatible with the maximum capacity accepted at the machine hitching point.
 - Evaluate whether it is necessary to install ballasts, in a way to maintain the stability of the machine during working phases.
1. Approach the machine to the interchangeable tool to be hitched.
 2. Lower the booms (**B**) of the power lift unit to the height of the hitching points of the interchangeable tool.
 3. Stop the machine and activate all relevant safety devices.
 4. Remove the safety pins and slide the pins out (**A**).
 5. Regulate projection of the boom (**B**).
 6. Insert the pins (**A**) and block them using the relevant safety pins.
 7. Repeat the operation on the other side.
 8. Release the safety retainers of the strut (**C**), regulate its length and block the retainer again.

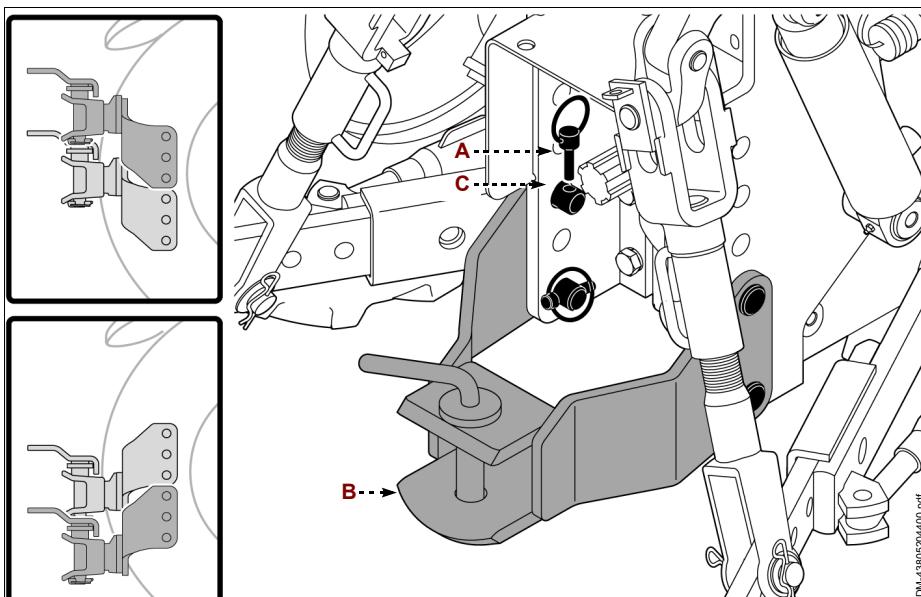


REGULATION OF TOWING HOOK HEIGHT

The regulation must be made every time the machine is coupled with an interchangeable tool, which has hitching points different to those previously mounted.

- If it is the first time that coupling is performed with a type of interchangeable tool, it is necessary to check that the maximum drive effort and the vertical effort are compatible with those of the machine towing hook.
- Evaluate whether it is necessary to install ballasts, in a way to maintain the stability of the machine during working phases.

1. Approach the machine to the interchangeable tool to be hitched.



2. Remove the safety pins from the pins (A).

3. Support the rear hook (B) and slide the pins out (C).

- If necessary, perform the operation with the aid of a helper.

4. Regulate the height and the position (normal or overturned) of the towing kook (B) and insert the pins (C).

5. Block the pins (C) using the safety pins (A).



Caution Precaution

Do not hitch any towed interchangeable tool if the towing hook is damaged.

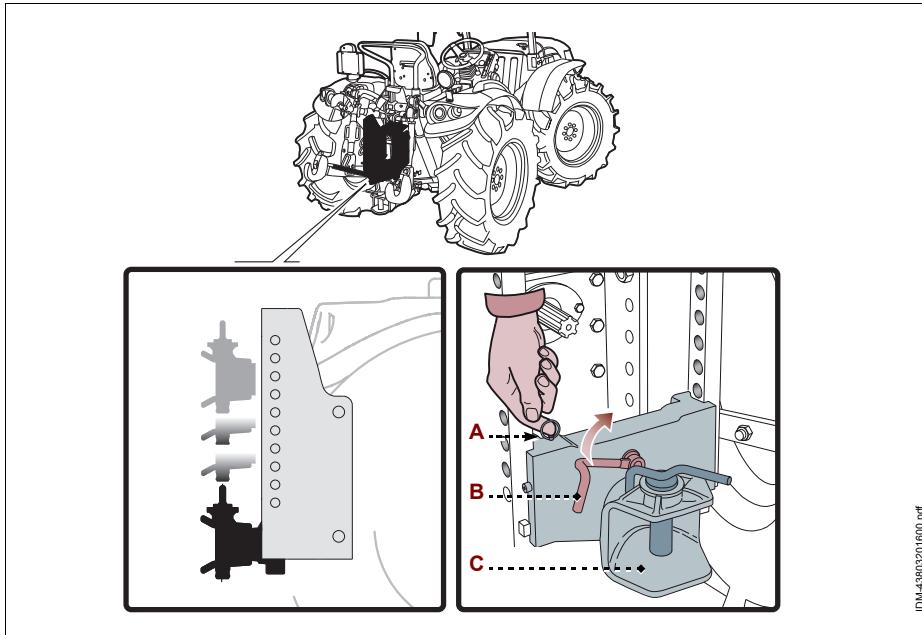
- Control that the pins and safety pins are correctly inserted and in good condition.

"SLIDER" TOW HOOK HEIGHT ADJUSTMENT

The regulation must be made every time the machine is coupled with an interchangeable tool, which has hitching points different to those previously mounted.

- If it is the first time that coupling is performed with a type of interchangeable tool, it is necessary to check that the maximum drive effort and the vertical effort are compatible with those of the machine towing hook.
- Evaluate whether it is necessary to install ballasts, in a way to maintain the stability of the machine during working phases.

1. Approach the machine to the interchangeable tool to be hitched.



2. Stop the machine and activate all relevant safety devices.

- **To prevent the hook unit lowering unexpectedly with risk of crushing, set-up a rest device or request aid.**
3. Identify the holes on the guide that correspond to the point where the hook unit is to be positioned.
 4. Pull the safety pin (**A**) and lift the handle (**B**) completely to release the hook unit (**C**).
 5. Take the hook unit (**C**) (via the handle) in correspondence with the holes selected.

6. Release the handle (**B**) and check that the hook unit is blocked correctly.
 - The complete insertion of the safety pin (**A**) into its own seat indicates that the tow bar unit lock pins are correctly inserted.

**Caution
Precaution**

Do not hitch any towed interchangeable equipment if the towing hook is damaged or if the engagement devices do not function correctly.

POSITION ADJUSTMENT OF THE OSCILLATING TOWING BAR

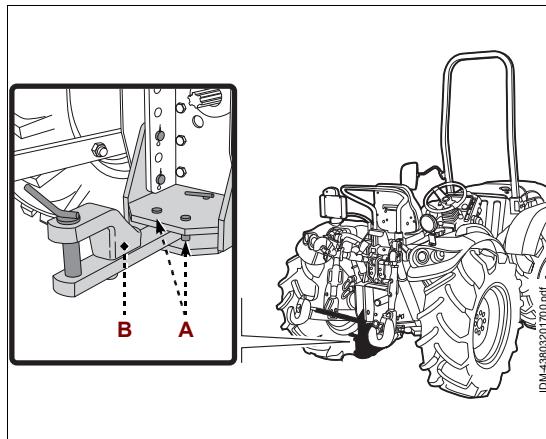
The regulation must be made every time the machine is coupled with an interchangeable tool, which has hitching points different to those previously mounted.

- If it is the first time that coupling is performed with a type of interchangeable tool, it is necessary to check that the maximum drive effort and the vertical effort are compatible with those of the machine towing hook.
- Evaluate whether it is necessary to install ballasts, in a way to maintain the stability of the machine during working phases.

i Important

The machine equipped with oscillating tow bar is not approved for travelling on public roads

1. Approach the machine to the interchangeable tool to be hitched.
2. Stop the machine and activate all relevant safety devices.
3. Remove the safety pins and slide the pins out (**A**).
4. Rotate the towing bar (**B**) in correspondence of the area of interest.
5. Insert the pins (**A**) and block them using the relevant safety pins.



**Caution
Precaution**

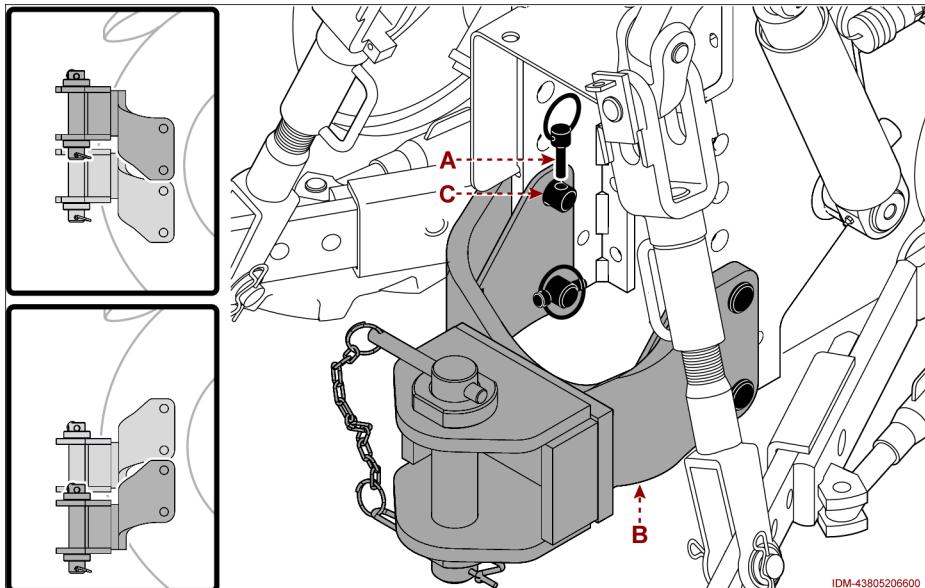
Do not hitch any towed interchangeable equipment if the towing hook is damaged or if the engagement devices do not function correctly.

HEIGHT ADJUSTMENT FOR TOWING HITCH TYPE "CUNA D2"

The regulation must be made every time the machine is coupled with an interchangeable tool, which has hitching points different to those previously mounted.

- If it is the first time that coupling is performed with a type of interchangeable tool, it is necessary to check that the maximum drive effort and the vertical effort are compatible with those of the machine towing hook.
- Evaluate whether it is necessary to install ballasts, in a way to maintain the stability of the machine during working phases.

1. Approach the machine to the interchangeable tool to be hitched.



2. Remove the safety pins from the pins (A).
3. Support the rear hook (B) and slide the pins out (C).
 - If necessary, perform the operation with the aid of a helper.
4. Regulate the height and the position (normal or overturned) of the towing kook (B) and insert the pins (C).
5. Block the pins (C) using the safety pins (A).

Caution **Precaution**

Do not hitch any towed interchangeable tool if the towing hook is damaged.

- Control that the pins and safety pins are correctly inserted and in good condition.

TRACK CHANGE-OVER

Before changing the track, consult the paragraph "Machine tracks" to evaluate and identify the most suitable for the effective operational requirement.



Important

This operation must be performed in a workshop equipped with suitable tools and by staff with precise technical skills.

- After every track change operation it must be checked that the wheels do not interfere with the bodywork or other parts of the machine.

RECOMMENDATIONS FOR USE AND FUNCTIONING

- The incidence of accidents related to the use of machines depends on many factors which are not always possible to prevent and control.
- Some accidents may depend on unforeseeable environmental factors. Many, however, are caused by reckless driving.
- At first use, the driver must ONLY use the machine after having read the use and maintenance manual, having identified the control functions and having simulated some manoeuvres.
- The knowledge of the functions of all controls is important to perform these correctly and naturally.
- Drive the machine carefully and responsibly, without loosing attention in order to perceive potential risks that may exist.
- Drive the machine ONLY if in suitable psycho-physical conditions and has suitable skills to perform the activities requested.
- Before operating the machine, the driver must make sure that all safety devices are correctly installed and functioning.
- Caution is always necessary. Safety is also in the hands of the operators working the machine throughout its life span.
- It is always too late to remember that which should have been done when it has already occurred.

DESCRIPTION OF CONTROLS

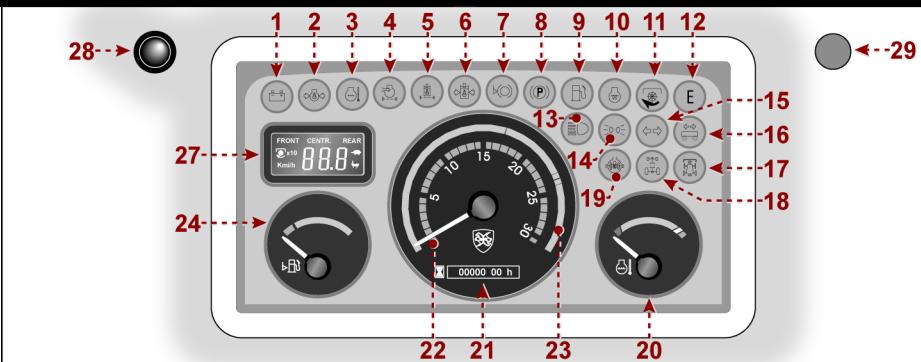
The controls can be divided into the following categories to make them more easily identifiable.

- Instruments and indicators
For more details, see "Description of instruments and LEDs" heading.
- Dashboard controls
For more details, see "Description of dashboard controls" heading.
- Driving and stopping controls
For more details, see "Description of drive and stop controls (standard controls)" - "Description of drive and stop controls (robotic controls)" heading.
- Work controls
For more details, see "Description of work controls" heading.
- Hydraulic lift controls standard
For more details, see "Description of power lifting unit controls (standard)" heading.
- "Controlled effort" power lifting unit controls
For more details, see ""Draft control" power lift unit use mode (lever)" heading.
- "Joystick" control
For more details, see "Description of "Joystick ON-OFF" controls (Models ERGIT 100)" - "Description of "Joystick ON-OFF" controls (Models ERGIT S)" heading.
- Cab controls
For more details, see "Description of cab controls" heading.

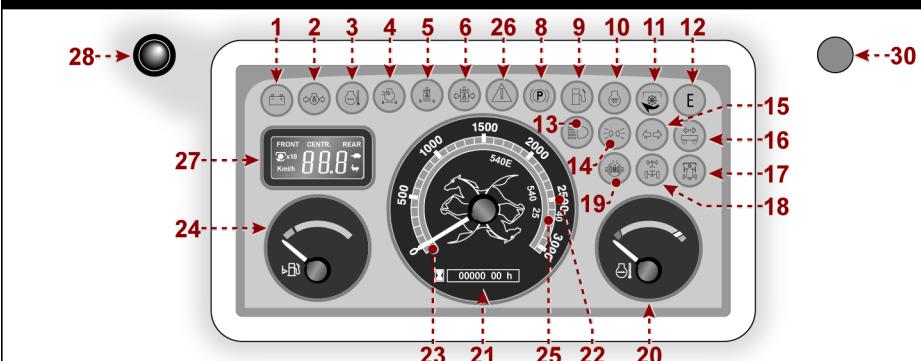
DESCRIPTION OF INSTRUMENTS AND LEDs

The illustration represents the devices while the list gives the description and their function.

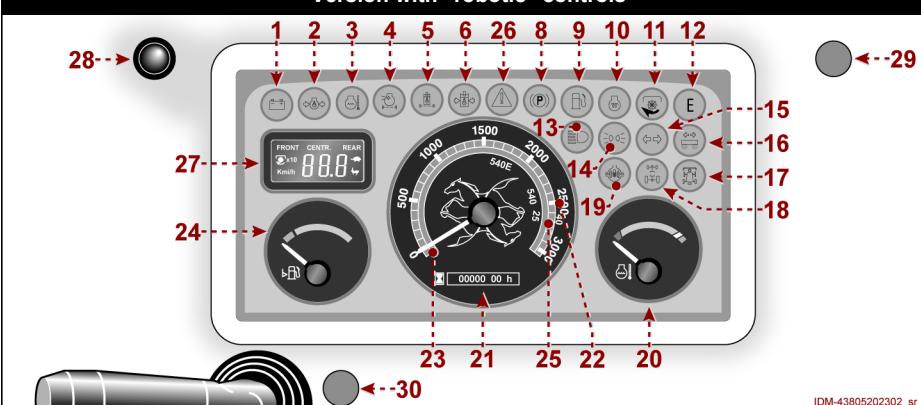
TRX 8400 - TRX 9900 - TRX 10400 - TRX 10900 - TRG 9900 - TRG 10400 - TRG 10900
Standard version - Version with "robotic" controls



TX 7800 S - TRX 7800 S - TRX 7800 - TRX 9800 - TRG 9800
Standard version



TRX 7800 - TRX 9800 - TRG 9800
Version with "robotic" controls



1)Luminous LEDs (red light): on, when combined with acoustic warning , it indicates that the alternator does not charge the battery.

- The acoustic warning remains active only if the engine is running, until he problem is eliminated.

2)Luminous LEDs (red light): on with acoustic warning , indicates that the engine oil pressure is insufficient.

- The acoustic warning remains active only if the engine is running, until he problem is eliminated.

3)Luminous LEDs (red light): on, if combined with acoustic warning , indicates that the temperature of the cooling liquid is too high.

- The acoustic warning remains active only if the engine is running, until he problem is eliminated.

4)Luminous LEDs (red light): on, when combined with acoustic warning , it indicates that the filter is clogged.

- The acoustic warning remains active only if the engine is running, until he problem is eliminated.

5)Luminous LEDs (red light): on means that the hydraulic circuit filters are clogged.

6)Luminous LEDs (red light): on, when combined with the acoustic warning , it indicates that the hydraulic oil pressure is insufficient.

- The acoustic warning remains active only if the engine is running, until he problem is eliminated.

7)LED not used

8)Luminous LEDs (red light): on, when combined with acoustic warning , it indicates that the parking brake is engaged.

- The warning signal remains active only if the engine is running and if the machine is moving, until the problem is eliminated.



Important

When the LEDs (1-2-3-4-6-8) switch-on, stop the engine immediately so as not to cause damage.

- The anomaly continues to be signalled by the reference LED on even with the engine off, because the machine has been stopped with the ignition key in position 1 (stand-by).

9)Luminous LED (yellow light): on, it signals that the fuel is in reserve.

10)Luminous LED (yellow light): on, it indicates the pre-heating of the engine spark plugs.

- 11) Luminous LEDs (red light):** on, it indicates that the rear PTO is activated.
- 12) Luminous LEDs (red light):** on, it indicates that the rear PTO is activated in economical mode (540 E).
- 13) Luminous LEDs (blue light):** on, it indicates the full beam lights are inserted.
- 14) Luminous LEDs (green light):** on, it indicates that the position lights and the low beam lights are inserted.
- 15) Luminous LEDs (green light):** flashing, it indicates that the direction indicators are inserted.
- Warning light comes on when the emergency lights are activated.
- 16) Luminous LEDs (green light):** flashing, it indicates that the direction indicators of the interchangeable tool are inserted.
- Warning light comes on when the emergency lights are activated.
- 17) LED not used**
- 18) Luminous LEDs (red light):** on, it indicates that the front wheel drive is deactivated.
- 19) Luminous LEDs (red light):** on, it signals that the differential blocking device is activated.
- 20) Thermometer:** indicates the temperature of the engine cooling liquid.
- 21) Hour counter:** counts the total number of hours worked by the machine.
- 22) engine revolutions (RPM)**
- 23) PTO revolutions (RPM)**
- 24) Fuel level indicator**
- 25) Machine speed with fast gear (km/h)**
- 26) Luminous LEDs (red light):** flashing, it indicates engine functioning anomaly (Tractor model TX 7800 S - TRX 7800 S - TRX 7800 - TRX 9800 - TRG 9800 only).

 **Important**

When the LED switches on , switch the engine off immediately and contact an authorised workshop to have the breakdown eliminated.

- 27) Speedometer:** to display the listed parameters.
- instantaneous machine speed (km/h or mi/h).
 - PTO revolutions (RPM)
- To display the parameter of interest, press the button **(28)**.
 - The speed sensor , when the machine is equipped with reduction gear "HI-LO", also displays its functioning status.
 - "Tortoise" icon on: reduction gear "HI-LO" activated.
 - "Tortoise" icon off: reduction gear "HI-LO" deactivated.

- 28)Change pushbutton:** allows to change the parameter viewed on the speedometer (27).
- 29)Warning light (orange):** when on, it signals that the reverser lever is in the neutral position (neutral) (**Version with "robotic" controls**).
- 30)Warning light (red):** when on, it signals operating trouble with the hydraulic braking system for towed implement (**Only for machines model TRX - TRG, drive 7800 - 9800 and Italian type-approval**).

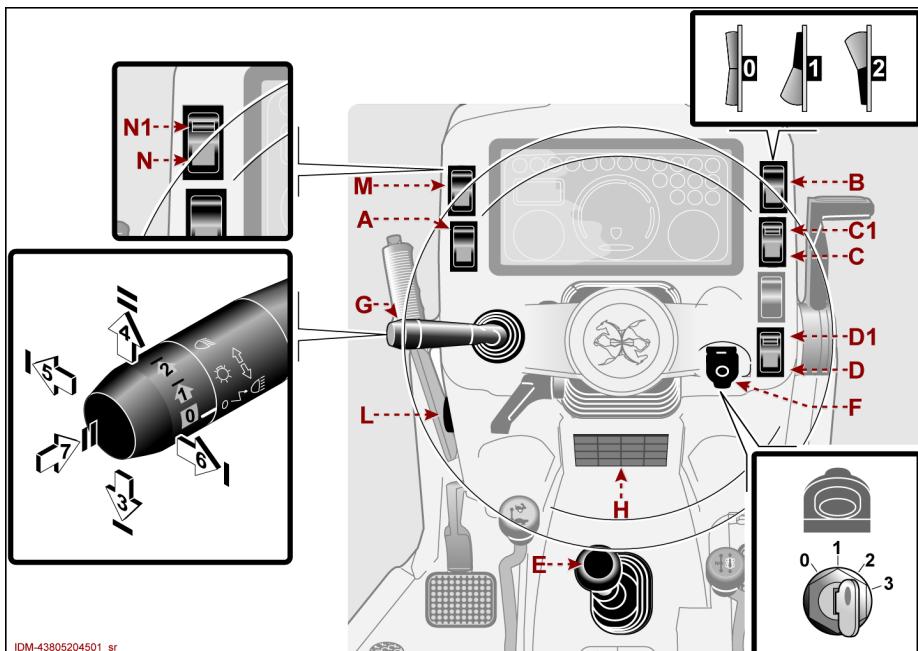


Important

When the warning light comes on, apply the parking brake , switch off the engine immediately and contact an authorized service centre to have the fault eliminated.

DESCRIPTION OF DASHBOARD CONTROLS

The illustration represents the devices while the list gives the description and their function.



A) Luminous switch (red light): used to activate the emergency lights.

- The light on (flashing) signals that the function is activated.

B) Luminous switch (green light): used to activate the differential locking device.

- **Control in position 0:** the rear and front axle differentials are released (light off).
- **Control in position 1:** the rear and front axle differentials are blocked (light on).
- **Control in position 2:** the rear axle differentials is blocked (light on).

C) Luminous switch (green light): in combination with the connected (**C1**) device it is necessary to activate and deactivate front wheel drive.

- The light on means that the function is deactivated.



Important

When driving on flat ground, it is recommended to disconnect the front-wheel drive during road circulation to avoid unnecessary wear of tyres and to improve manoeuvring of the machine.

- In the downhill routes, especially with hitched interchangeable tools, the front wheel drive **MUST** be engaged to achieve a greater braking action.

D) Luminous switch (green light): combined with the consent device (**D1**) it is used to enable the activation of the rear PTO.

- The light on means that the function is activated.

E) Switch (on gear lever): used to activate the reduction gear HI-LO which reduces the speed of the machine (20%) and keeps the driving torque to the wheels unchanged (**Tractor model (TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRG 9800 - TRG 9900) only**).

Important

It is possible to activate the device both while the machine is stopped as well as when it is in motion.

F) Starter switch: used to start the engine.

- Keep the key pressed in slightly when turning the starter switch.
 - **Control in position 0:** drive deactivated and key removable.
 - **Control in position 1:** the dashboard and parking lights switch-on. The key can be removed.
 - **Control in position 2:** the engine spark plug pre-heating phase starts.
 - **Control in position 3:** keep the key in position to start the engine.
- On release, the key goes back to position 2.

G) Multi-function control: used to activate the functions listed.

- **Control in position 0 (OFF):** drive deactivated.
- **Control in position 1:** the position lights switch on.
- **Control in position 2:** the full beam lights switch on.
- **Control in position 3:** the full beam lights switch on.
- **Control in position 4:** the control activated repeatedly, activates flashing of the full beam lights.
- **Control in position 5:** the direction indicators are activated (right).
- **Control in position 6:** the direction indicators are activated (left).
- **Control in position 7:** the control pressed activates the acoustic warning (Horn).

H) Fuse box: contains the protective fuses for the electrical system.

L) Audible warning: signals, in combination with a warning light coming on, a fault with the functioning of the machine or a control in the phase of activation.

- The anomaly is signalled by the horn only if the engine is running.
- The anomaly continues to be signalled by the reference LED on even with the engine off, because the machine has been stopped with the ignition key in position 1 (stand-by).

- The fault continues to be signalled by the reference warning light being on even when there is a fault with a sensor connected to the audible warning, provided the machine has been stopped with the ignition key in position 1 (standby).

With machine equipped with "Clean fix" device

M) Button: it is used for enabling the function of the "Clean Fix" device.

- The light on means that the function is activated.
- The device can be activated in two ways.
 - Press the button to activate the device and press again to deactivate.
 - Press the button and hold down: the fan device works in cycle blower mode for approx 25 seconds and in engine cooling mode for the next 15 minutes.
- To deactivate the device press the button again.

With machine equipped with front PTO

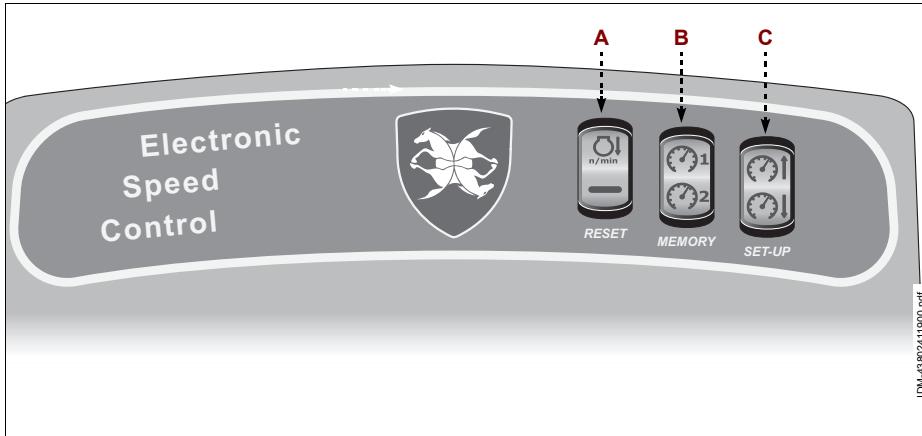
N) Luminous switch (green light): combined with the consent device (**P1**) it is used to enable the activation of the PTO.

- The light on means that the function is activated.

DESCRIPTION OF ESC (ELECTRONIC SPEED CONTROL) CONTROLS

The machine is equipped with an "ESC" (Electronic Speed Control) electronic system, which allows the setting of different advancement types without the use of the accelerator controls.

- The illustration represents the devices while the list gives the description and their function.



A) Button "reset": it is used to disable the operation mode with constant speed (Rpm engine)

B) Button "memory": it is used to enable the operational mode with constant revs (number of engine revolutions).

- Proceed as indicated to enable the function.
- Act on manual accelerator or on button **(C)** until reaching the desired Rpm.
- Keep pressed button **(B)** for about 4 seconds to memorise the number of Rpm.
- The machine will maintain the set amount of engine revs.
- **2 engine speed can be memorised (keep the button pressed in position 1 or in position 2)**
- In order to disable operation and bring the machine back to normal advancement conditions, carry out one of the following operations.
- Press button **(A)**.

C) Button "set-up": It is used to manually set the Rpm number (every button pressure corresponds to a variation of about 20÷25 Rpm/min).

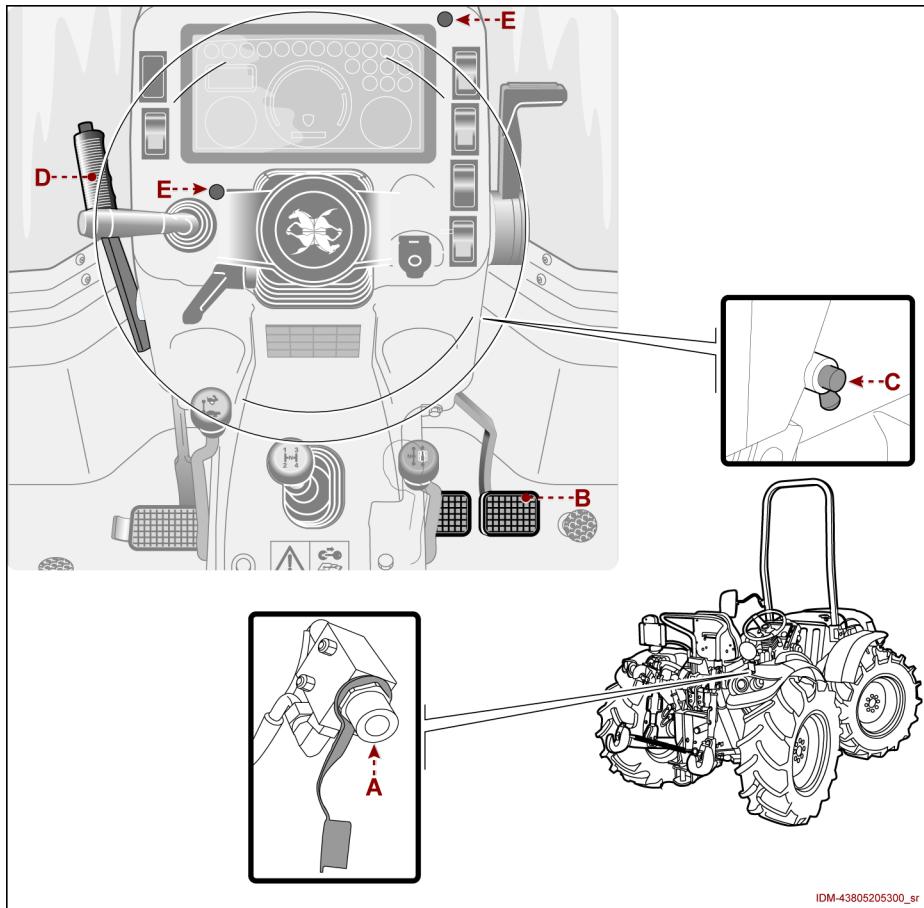
Important

When this device is installed, the ignition of the machine is delayed by one second to allow the electronic control unit to perform cross-checks on the engine.

PROCEDURE FOR OPERATING THE HYDRAULIC BRAKING SYSTEM (OPTIONAL)

The machine can be equipped with an auxiliary electro-hydraulic device that enables connecting a towed implement, fitted with a hydraulic braking system.

- The operating mode of the device varies depending on the kind of type-approval.



Italian type-approval (Tractor model TX 7800 S - TRX 7800 S - TRX 7800 - TRX 9800 - TRX 9900 - TRG 9800 - TRG 9900 only).

- For this operation, proceed as follows.
 1. Connect the pipe to the coupling (**A**).
 2. Make the brake pedals (**B**) integral by inserting the pin (**C**).
 3. Press the brake pedal (**B**) to activate braking the towed implement.
- The device can also be activated with the lever of the parking brake (**D**).

 **Important**

**With the machine switched off the towed implement is braked.
The hydraulic braking system is deactivated when the machine is switched on and is signalled by the warning light (E) going out.**

CE type-approval (Tractor model TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 -TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900 - TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900 only).

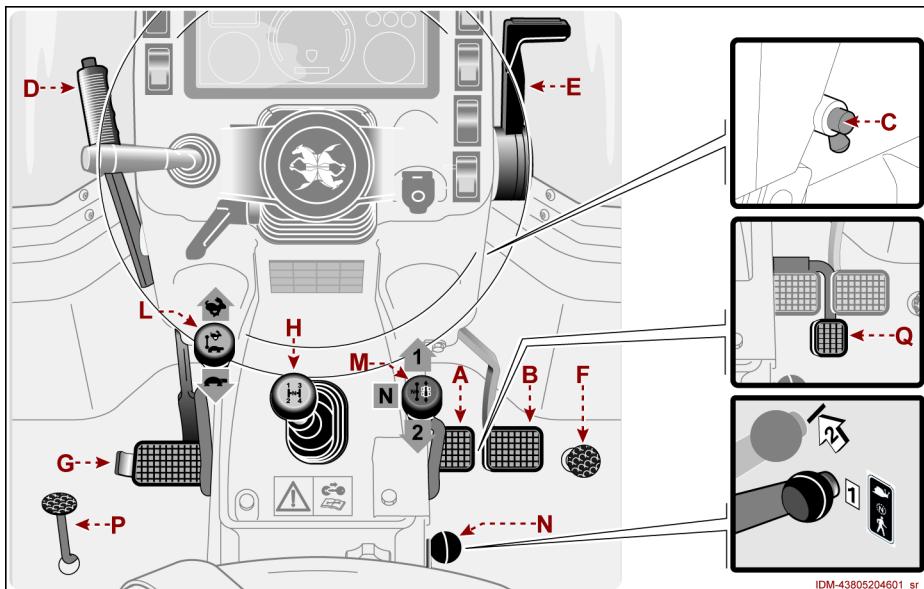
- For this operation, proceed as follows.
 1. Connect the pipe to the coupling (**A**).
 2. Make the brake pedals (**B**) integral by inserting the pin (**C**).
 3. Press the brake pedal (**B**) to activate braking the towed implement.
- The device is NOT activated with the lever of the parking brake (**D**).

 **Important**

With the machine switched off the towed implement is NOT braked.

DESCRIPTION OF DRIVE AND STOP CONTROLS (STANDARD CONTROLS)

The illustration represents the devices while the list gives the description and their function.



A) Brake pedal: applies braking action to the left rear wheel

B) Brake pedal: applies braking action to the right rear wheel

- Depressing one of the brake pedals "independently", the machine will pivot on the locked wheel (steering brake).

C) Pin: used to make the pedals integral in a way that the braking action is distributed on all wheels.

- By activating the "binding" pedals, the machine brakes on all four wheels.
- On machines equipped with hydraulic braking for towed implements, the trailer brakes are also activated.



Important

The two brake pedals must be utilized "independently" in special operating situations only, whereas when driving on roads, the pedals must always be "latched".

D) Parking brake lever: used to block the machine in position in the standstill or parking phases.

- On machines equipped with hydraulic braking for towed implements, the trailer brakes are also activated (**Only for machines with Italian type-approval**).

E) Hand throttle: used to select a constant engine speed



**Caution
Precaution**

The hand throttle is used only when starting, and in situations where a constant engine speed is required during operation.

F) Accelerator pedal: used to vary the advancement speed of the machine
(**Only for machines with standard acceleration pedal**).

G) Clutch pedal: used to operate the clutch when selecting the gears

H) gearshift lever: used to select the gear

L) Lever: used to select the speed range ("fast" or "slow").

- **Control in "hare" position:** "fast" speed range.

- **Control in "tortoise" position:** "slow" speed range.

M) Reverse shuttle lever: used to select the drive direction.

- **Control in position (N):** gear in neutral.

- **Control in "forward indicator" position:** the machine moves in the direction of the indicator.

- **Control in "reverse indicator" position:** the machine moves in the direction of the indicator.

N) Gear reduction lever: used to select the transmission ratio (normal or reduced) of the gears.

- **Control in position 1:** normal transmission ratio.

- **Control in position 2:** reduced transmission ratio.

P) Accelerator pedal: used to vary the advancement speed of the machine
(**Only for machine model TRX S - TRX - TRG with standard acceleration pedal**).



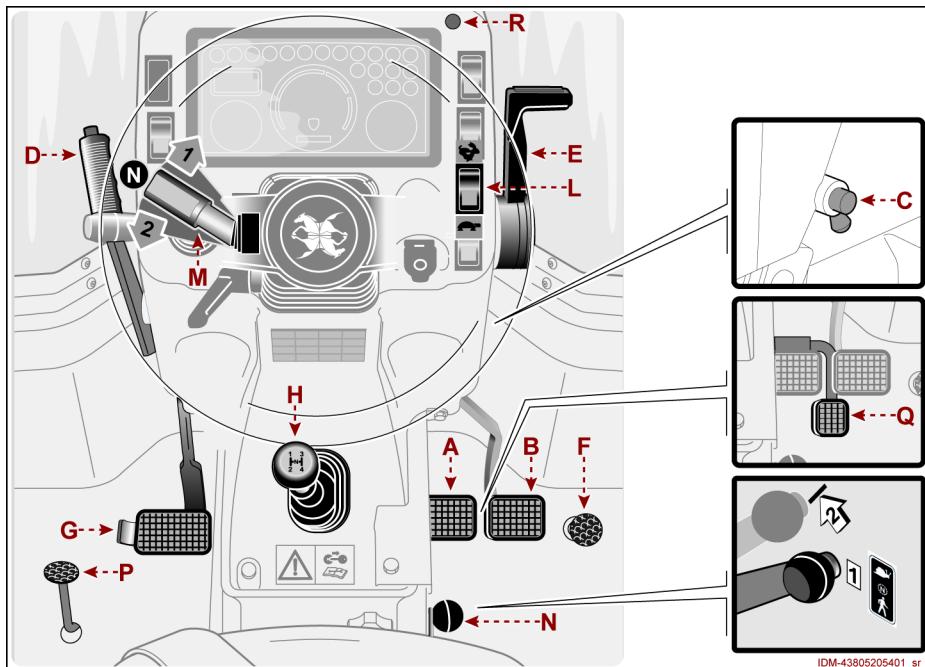
Important

Control only to be used with the driver's seat turned into the reverse position.

Q) Accelerator pedal: used to vary the advancement speed of the machine
(**Only for machines with suspended acceleration pedal**).

DESCRIPTION OF DRIVE AND STOP CONTROLS (ROBOTIC CONTROLS)

The illustration represents the devices while the list gives the description and their function.



A) Brake pedal: applies braking action to the left rear wheel

B) Brake pedal: applies braking action to the right rear wheel

- Depressing one of the brake pedals "independently", the machine will pivot on the locked wheel (steering brake).

C) Pin: used to make the pedals integral in a way that the braking action is distributed on all wheels.

- By activating the "binding" pedals, the machine brakes on all four wheels.
- On machines equipped with hydraulic braking for towed implements, the trailer brakes are also activated.



Important

The two brake pedals must be utilized "independently" in special operating situations only, whereas when driving on roads, the pedals must always be "latched".

D) Parking brake lever: used to block the machine in position in the standstill or parking phases.

- On machines equipped with hydraulic braking for towed implements, the trailer brakes are also activated (**Only for machines with Italian type-approval**).

E) Hand throttle: used to select a constant engine speed



**Caution
Precaution**

The hand throttle is used only when starting, and in situations where a constant engine speed is required during operation.

F) Accelerator pedal: used to vary the advancement speed of the machine (**Only for machines with standard acceleration pedal**).

G) Clutch pedal: used to operate the clutch when selecting the gears

H) gearshift lever: used to select the gear

L) Luminous switch (green): used to select the speed range ("high" or "low").

- Control in "hare" position: "fast" speed range.
- Control in "tortoise" position: "slow" speed range.

M) Reverse shuttle lever: used to select the drive direction.

- Control in position (N): gear in neutral. The warning light (R) comes on.
- Control in "forward indicator" position 1: the machine moves in the direction of the indicator.
- Control in "reverse indicator" position 2: the machine moves in the direction of the indicator.

N) Gear reduction lever: used to select the transmission ratio (normal or reduced) of the gears.

- Control in position 1: normal transmission ratio.
- Control in position 2: reduced transmission ratio.

P) Accelerator pedal: used to vary the advancement speed of the machine (**Only for machine model TRX S - TRX - TRG with standard acceleration pedal**).



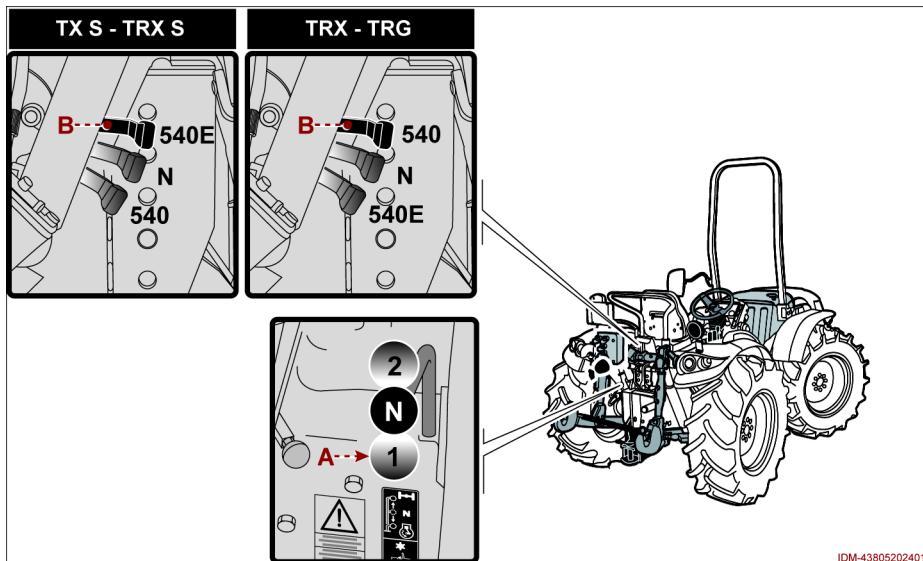
Important

Control only to be used with the driver's seat turned into the reverse position.

Q) Accelerator pedal: used to vary the advancement speed of the machine (**Only for machines with suspended acceleration pedal**).

DESCRIPTION OF WORK CONTROLS

The illustration represents the devices while the list gives the description and their function.



A) PTO lever: used to select the functioning mode of the PTO.

- **Control in position (N):** drive deactivated.
- **Control in position 1:** the PTO functions in "independent mode" (speed synchronised with the number of engine revs.).
- **Control in position 2:** the PTO functions in "synchronised mode" (speed synchronised with the machine advancement speed).

B) Lever: used to select the functioning mode (rpm) of the PTO.

- **Control in position (N):** drive deactivated.
- **Control in position 540:** the PTO functions at 540 rpm.
- **Control in position 540E:** the PTO functions at 540 rpm with the engine at a lower speed (reduced consumption).



Important

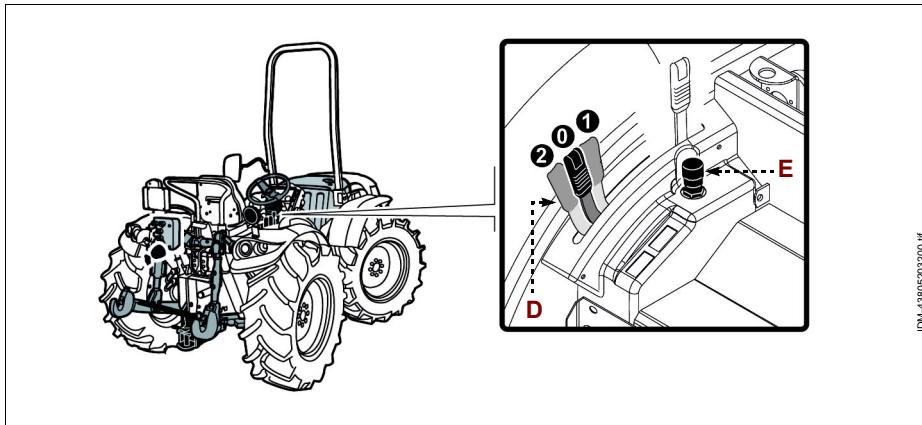
The machine is equipped with a PTO safety brake that automatically activates when the levers (A-B) are in the neutral position.

- When connecting with a towed self-propelled implement, put into neutral also the reduction gear of the implement or disconnect the drive shaft to avoid damaging the machine's power take-off.

DESCRIPTION OF POWER LIFTING UNIT CONTROLS (STANDARD)

The illustration represents the devices while the list gives the description and their function.

Hydraulic lift controls standard

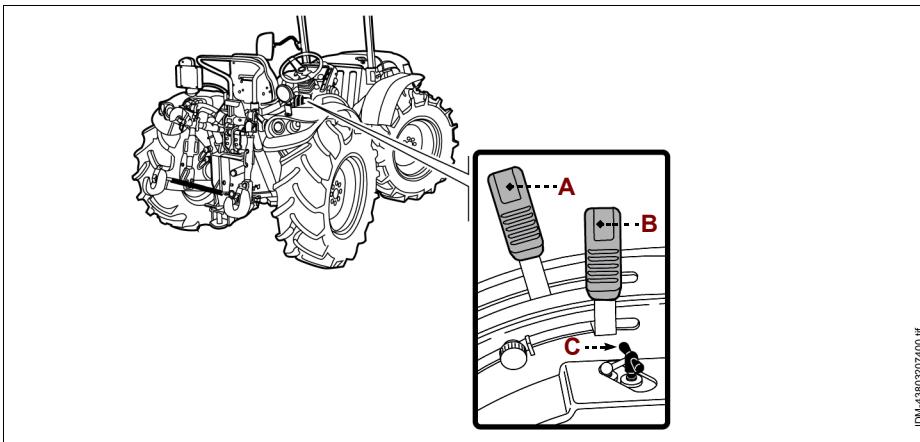


D) Lever: used to activate the rear power lift unit booms.

- **Control in position 0:** the booms of the power lift unit remain in their position.
- **Control in position 1:** the power lift unit booms rise. On release from the position 1, the control goes back to position 0.
- **Control in position 2:** the power lift unit booms lower. To stop the drive, take the control to position 0.

E) Adjustment knob:: used to control the rate of drop, or to lock the lifted implement in a stable position

Hydraulic lift controls with draft control



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- The illustration represents the devices while the list gives the description and their function.
- A) Lever:** used to control the position of the implement during operation
- B) Lever:** used to control draft on the implement during operation
- C) Adjustment knob:** used to control the rate of drop, or to lock the lifted implement in a stable position

"DRAFT CONTROL" POWER LIFT UNIT USE MODE (LEVER)

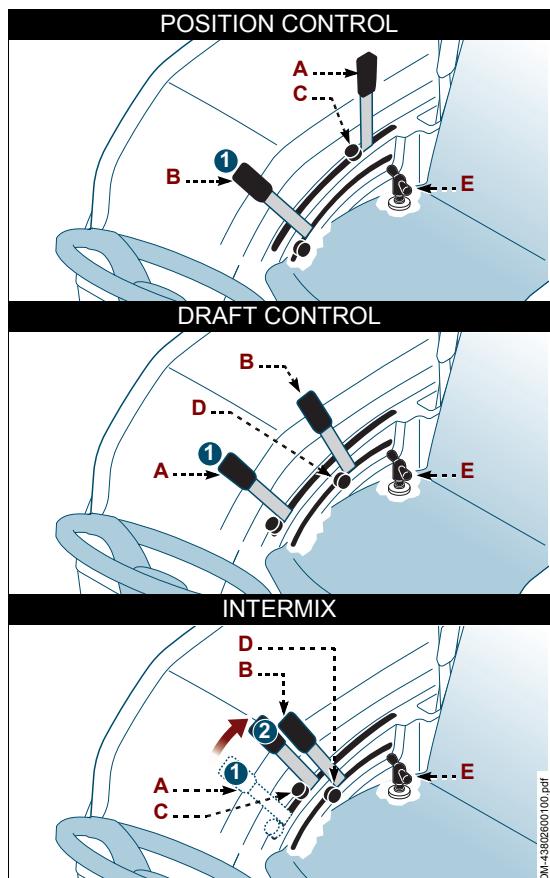
Different operating modes can be selected, according to the type of implement and the soil conditions:

Position control

- This type of control keeps the implement at a constant soil-engaging depth.
1. Take the draft control lever (**B**) to its full travel limit (pos. 1).
 2. Use the position control lever (**A**) to lower the implement to the required height.
 3. Position the stop (**C**) against the lever (**A**) to set the working position.
 4. Use the lever (**A**) to raise and lower the implement during operation.

Draft control

- This type of control maintains a constant soil-engaging force at the implement.
1. Take the draft control lever (**A**) to its full travel limit (pos. 1).
 2. Use the position control lever (**B**) to lower the implement to the required height.
 3. Position the stop (**D**) against the lever (**B**) to set the working position.
 4. Use the lever (**A**) to raise and lower the implement during operation.



- This type of control maintains a constant draft force through the linkage while keeping the implement at a constant working depth.
1. Take the draft control lever (**A**) to its full travel limit (pos. 1).
 2. Use the position control lever (**B**) to lower the implement to the required height.
 3. Position the stop (**D**) against the lever (**B**) to set the working position.
 4. Take the lever (**A**) to the point at which the lift links begin moving upwards.
 5. Position the stop (**C**) against the lever (**A**) to set the working position.
 6. Use the lever (**A**) to raise and lower the implement during operation.

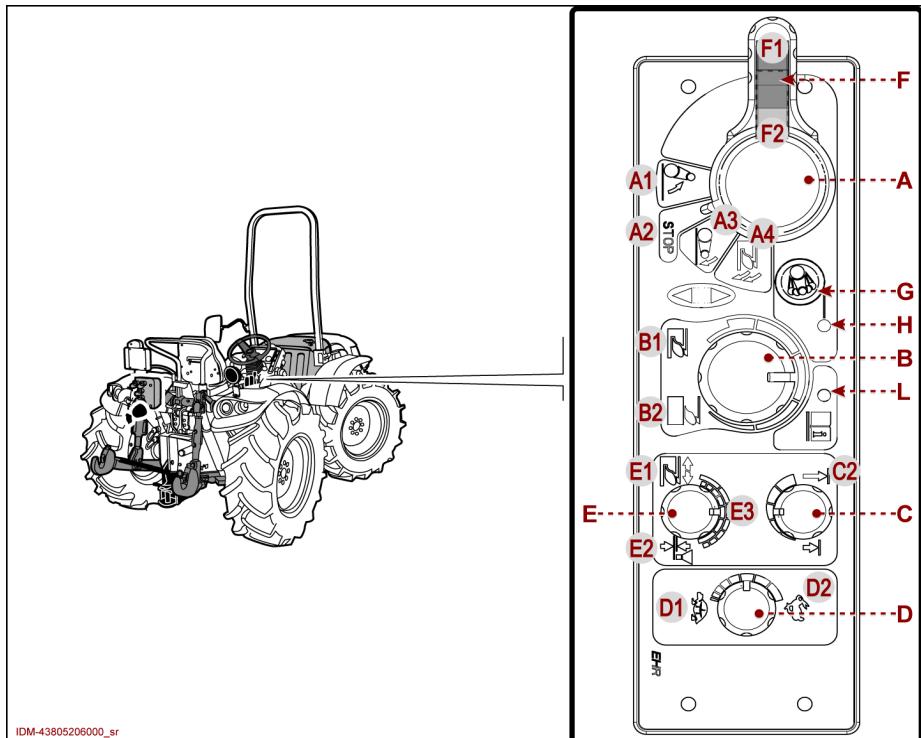


Important

During use, act on the knob (E) to adjust the handling speed of the power lifting unit.

DESCRIPTION OF LIFTING ASSEMBLY CONTROLS (ELECTRONIC)

The illustration represents the devices while the list gives the description and their function.



A) Knob: used to operate the arms of the rear lifting assembly.

- **Control in position "A1"** (transport): the arms of the lifting assembly raise within the maximum limit set by the potentiometer (**C**). In this position, to be used for on-road use, you can insert the safety catch (**F**).
- **Control in position "A2"** (stop): the arms of the lifting assembly remain locked in their position.
- **Control in position "A3"** (control): the arms of the lifting assembly lower to within the set values.
- **Control in position "A4"** (fast ground entry): the arms of the lifting assembly lower beyond the selected limit to make the implement immediately enter the ground down to the working depth. On release from the position "**A4**", the control goes back to position "**A3**".

B) Potentiometer: depending on the position of the control (**E**), this is used to adjust the position of the implement, or the force applied on it, during use.

- **With control (E) in position "E2":** used to adjust the height of the implement.

- **With control (E)** in position "E1" - "E3": used to adjust the force on the implement.
- **Control in position "B1"** and control (A) in position "A3": activates float mode.

C) Potentiometer: used to adjust the maximum permissible height for the lifting assembly.

- **The height limitation does not concern operation via the external controls (rear).**
- **Control in position "C1":** minimum implement height off the ground.
- **Control in position "C2":** maximum implement height off the ground.
- Proceed as directed to make the appropriate height adjustments for the lifting assembly.
 1. Attach the implement to the tractor (See "Implement connect and disconnect - rear power lifting unit ("quick coupling" version)" - "Hitching and disconnecting tool - rear power lift unit ("ball joints" version)".)
 2. Turn the knob (A) into position "A3" to lower the implement down to the ground.
 3. Turn the potentiometer (C) into position "C1" to set the minimum implement height.
 4. Turn the knob (A) into position "A1" to raise the implement.
 5. Turn the potentiometer (C) up to the maximum allowed by the overall dimensions.

D) Potentiometer: used to adjust the rate of descent of the implement or lock it in a stable position

- **The height limitation does not apply to operation via the external commands (rear) and with the "Damping" function on (button (G)).**
- **Control in position "D1":** the lifting assembly locks in the predetermined position.
- **Control in position "D2":** the lifting assembly moves at full speed.

E) Knob: used to select the operating mode of the lifting assembly.

- **Control in position "E1":** the lifting assembly operates in "draft control" mode.
- **Control in position "E2":** the lifting assembly operates in "position control" mode.
- **Control in position "E3":** the lifting assembly operates in "mixed control" mode.

F) Safety catch lever: used to lock the control (A) in position "A1" during road travel.

- **Control in position "F1":** position unlocked.
- **Control in position "F2":** position locked.

G) Button: used to activate the "Damping" function.

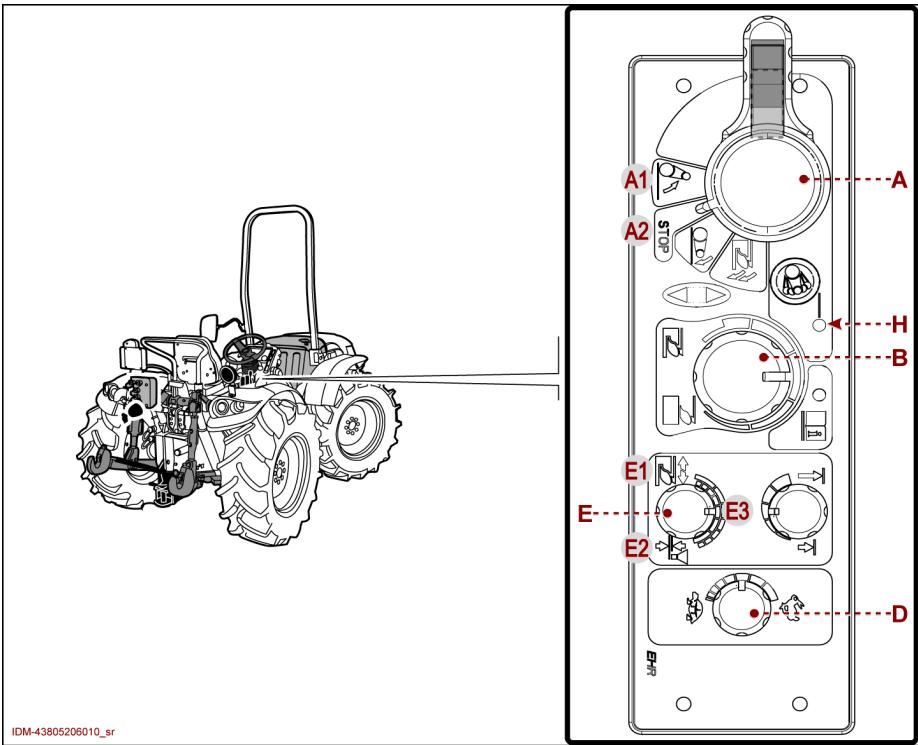
- The function is only activated with the control **(A)** in position "**A1**" and the safety lever in position "**F1**"

H) Warning light (amber): ON indicates that the "Damping" function is activated.

L) Warning light (red): indicates one of the following conditions.

- Warning light ON with a blinking light indicates an operating fault.
- Warning light on steady indicates that the lifting assembly is in the "stop" position "**A2**".

"DRAFT CONTROL" (ELECTRONIC) POWER LIFT UNIT USE MODE



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Different operating modes can be selected, according to the type of implement and the soil conditions:

Important

On starting the machine the device is always locked and the warning light (H) is on.

- To unlock the device , turn the knob (A) from position (A2) to position (A1).

Position control

- This type of control keeps the implement at a constant soil-engaging depth.
 1. Turn the knob (E) into position "E2".
 2. Turn the potentiometer(B) to lower the implement until work position is reached.
 3. Use the knob (A) to raise and lower the implement during use.

Draft control

- This type of control maintains a constant soil-engaging force at the implement.
 1. Turn the knob (E) into position "E1".
 2. Turn the potentiometer(B) to lower the implement until work position is reached.
 3. Use the knob (A) to raise and lower the implement during use.

Intermix

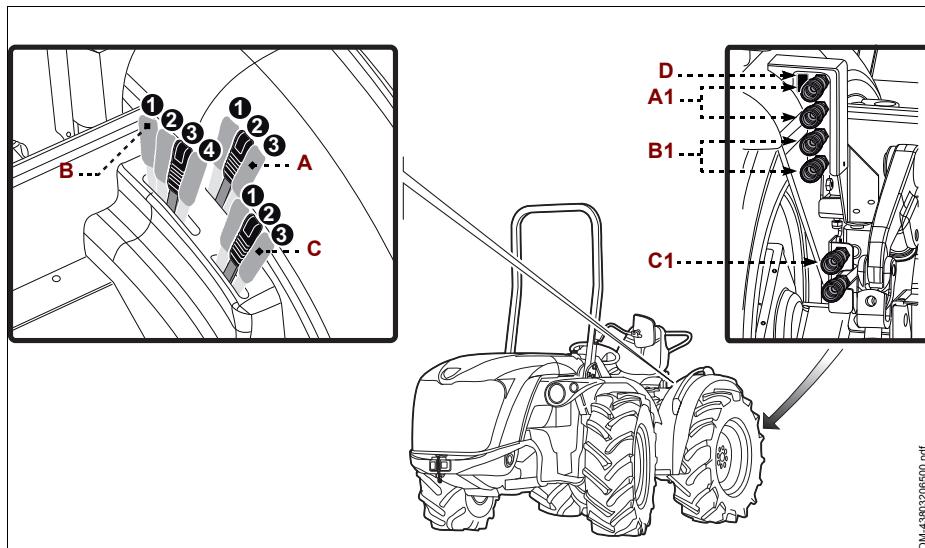
- This type of control maintains a constant draft force through the linkage while keeping the implement at a constant working depth.
 1. Turn the knob (E) into position "E3".
 2. Push the button (B) to lower the implement until the desired position is reached.
 3. Use the knob (A) to raise and lower the implement during use.

Important

During operation, use the potentiometer (D) to adjust the speed of the lifting assembly.

DESCRIPTION OF HYDRAULIC COUPLINGS CONTROLS (AS PER STANDARD)

The illustration represents the devices while the list gives the description and their function.



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A) External pressure ports control lever: used to operate the functions of the implement

- **Pos.1-3 (spring return):** used to operate the implement. With the lever in one of these positions, oil is directed under pressure to the external ports (**A1**). The lever returns to neutral (pos.2) when released.
- **Pos. 2:** Neutral.

B) External pressure ports control lever: used to operate the functions of the implement

- **Pos.1 (stable):** selects operation in float mode. With the lever in this position the equipment is made to float in order to adapt it to the characteristics of the terrain.
- **Pos.2-4 (spring return):** used to operate the implement. With the lever in one of these positions, oil is directed under pressure to the external ports (**B1**). The lever returns to neutral (pos.2) when released.
- **Pos. 3:** Neutral.

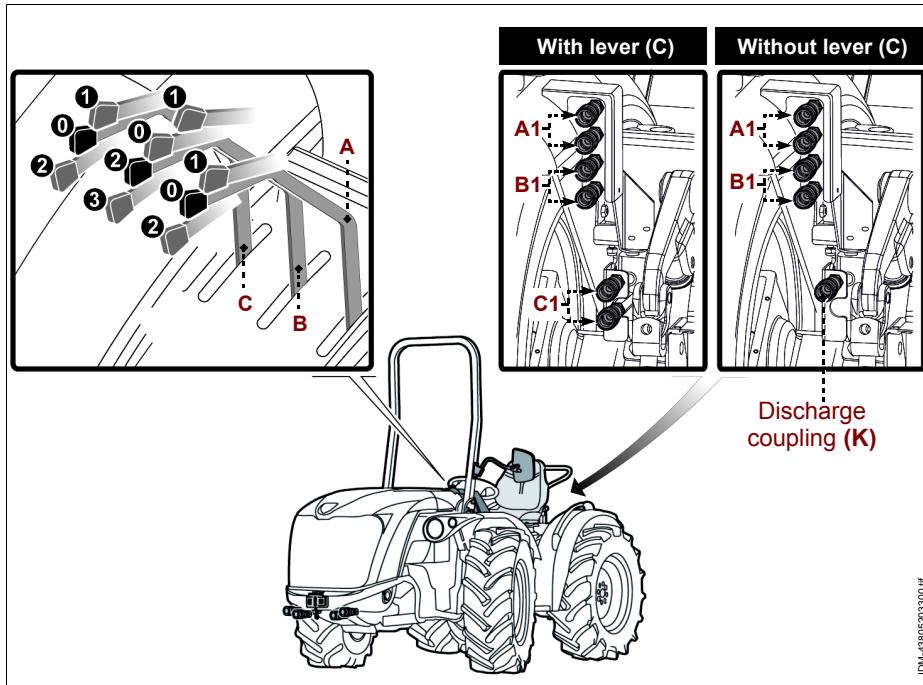
C) Hydraulic coupling control lever: used to operate the functions of the implement

- **Pos.1-3 (spring return):** used to operate the implement. With the lever in one of these positions the pressurised oil is sent to the hydraulic coupling (**C1**). The lever returns to neutral (pos.2) when released.
- **Pos. 2:** Neutral.

D) Switch (maintained action): used to activate the power lift unit (with driver on the ground at the side of the machine) during the carried interchangeable tool hitching.

DESCRIPTION OF HYDRAULIC COUPLINGS CONTROLS (OPTIONAL)

In addition to the standard hydraulic couplings, the machine can also be equipped with additional hydraulic couplings.



A) External pressure ports control lever: used to operate the functions of the implement

- **Pos. 1-2 (spring return):** used to operate the implement With the lever in one of these positions, oil is directed under pressure to the external ports (**A1**). The lever returns to neutral (pos.0) when released.

- **Pos. 0:** Neutral.

B) External pressure ports control lever: used to operate the functions of the implement

- **Pos. 1-2 (spring return):** used to operate the implement With the lever in one of these positions, oil is directed under pressure to the external ports (**B1**). The lever returns to neutral (pos.0) when released.

- **Pos. 0:** Neutral.

- **Pos.3 (stable):** selects operation in float mode. With the lever in this position the equipment is made to float in order to adapt it to the characteristics of the terrain.

C) External pressure ports control lever: used to operate the functions of the implement

- **Pos.1-2 (spring return):** used to operate the implement With the lever in one of these positions the pressurised oil is sent to the hydraulic coupling (**C1**). The lever returns to neutral (pos.0) when released.

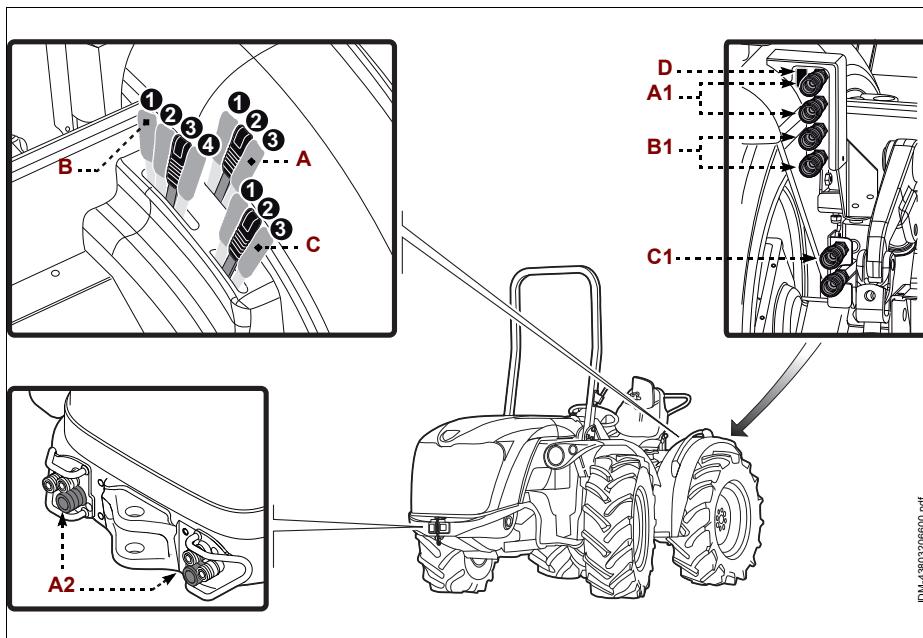
- **Pos. 0:** Neutral.

Important

If lever (C) is not installed, the machine is equipped with discharge coupling (K).

DESCRIPTION OF HYDRAULIC COUPLINGS AND FRONT POWER LIFT CONTROLS (OPTIONAL)

The illustration represents the devices while the list gives the description and their function.



A) External pressure ports control lever: used to operate the functions of the implement

- **Pos.1-3 (spring return):** used to operate the implement With the lever in one of these positions, oil is directed under pressure to the external ports (**A1-A2**). The lever returns to neutral (pos.2) when released.

- **Pos. 2:** Neutral.

B) External pressure ports control lever: used to operate the functions of the implement

- **Pos.1 (stable):** selects operation in float mode. With the lever in this position

the equipment is made to float in order to adapt it to the characteristics of the terrain.

- **Pos.2-4 (spring return):** used to operate the implement With the lever in one of these positions, oil is directed under pressure to the external ports (**B1**). The lever returns to neutral (pos.2) when released.
- **Pos. 3:** Neutral.

C) Hydraulic coupling and front power lift level: used to operate the functions of the implement

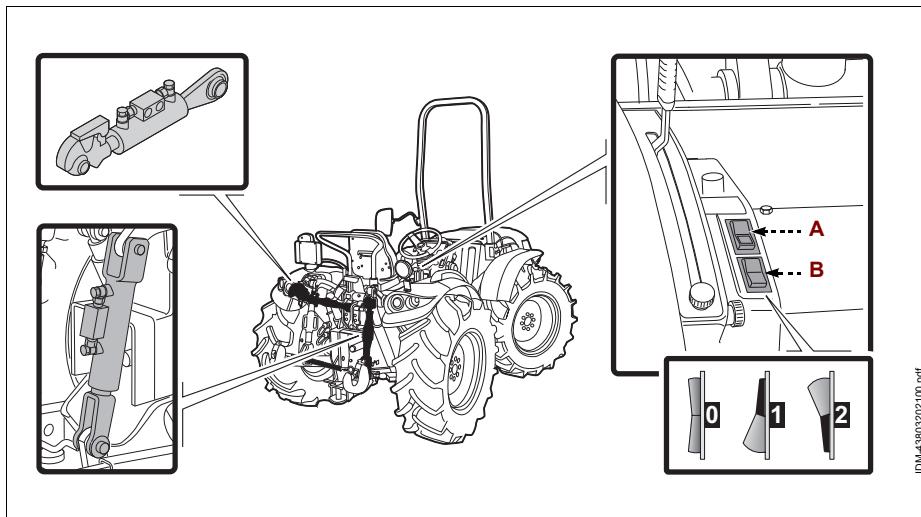
- **Pos.1-3 (spring return):** used to operate the implement With the lever in one of these positions the pressurised oil is sent to the hydraulic coupling (**C1**). The lever returns to neutral (pos.2) when released.

- **Pos. 2:** Neutral.

D) Switch (maintained action): used to activate the power lift unit (with driver on the ground at the side of the machine) during the carried interchangeable tool hitching.

DESCRIPTION OF VERTICAL TIE-ROD AND STRUT CONTROLS (OPTIONAL)

The illustration represents the devices while the list gives the description and their function.



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A) Luminous button with maintained action (red light): used to regulate the third point strut with hydraulic control (rear power lift unit).

- The control is available only if the unit is equipped with this type of device.
- **Control in position 0:** drive deactivated. On release from the position 1-2, the control goes back to position 0.

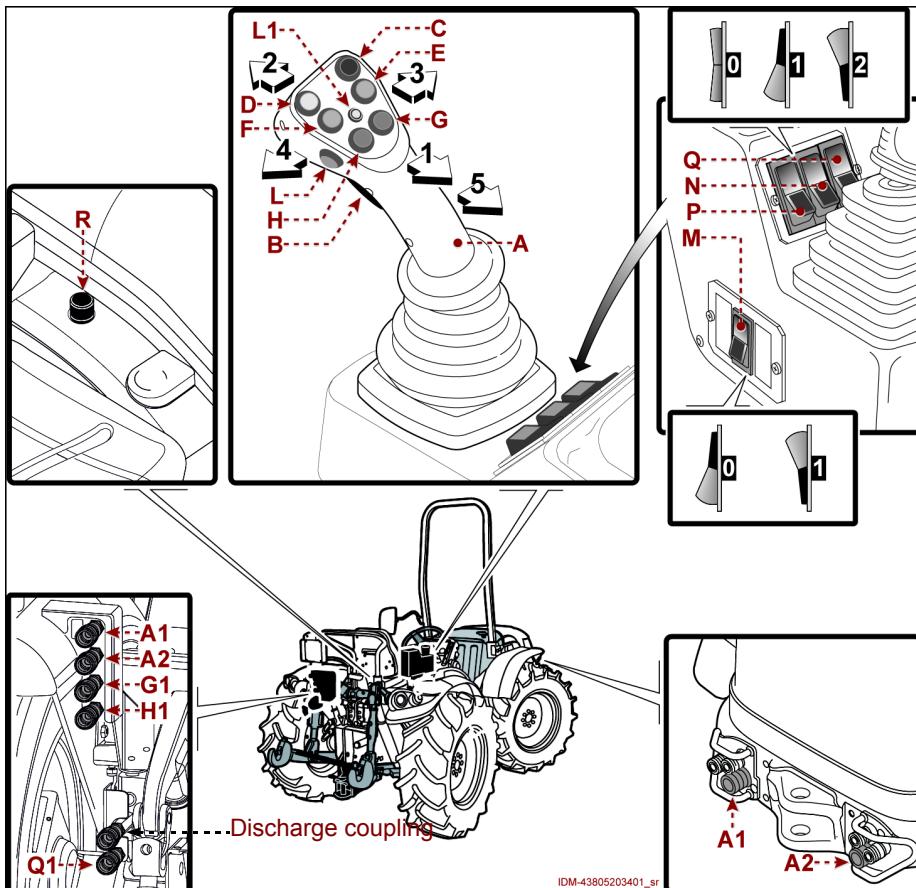
- **Control in position 1:** the strut lengthens.
- **Control in position 2:** the strut shortens.

B) Luminous button with maintained action (yellow light): it is used to activate the hydraulic tie-rod of the right boom of the rear power lift unit.

- The control is available only if the unit is equipped with this type of device.
- **Control in position 0:** drive deactivated. On release from the position 1-2, the control goes back to position 0.
- **Control in position 1:** the boom lowers.
- **Control in position 2:** the boom rises.

DESCRIPTION OF "JOYSTICK ON-OFF" CONTROLS (MODELS ERGIT 100)

The illustration represents the devices while the list gives the description and their function.



A) Lever: it is a "Joystick" control and is used to activate, combined with the maintained action button (**B**), the power lifting unit and the hydraulic couplings (orange) for the auxiliary services of the interchangeable tools that can be hitched to the machine.

- To activate the functions of control act on the switch (**M**).
- **Control activated in directions 1-2:** the rear power lift unit rises and lowers.
- **Control activated in direction 3:** the orange hydraulic coupling (**A1**) is activated.
- **Control activated in direction 4:** the orange hydraulic coupling (**A2**) is activated.

- Control activated in direction 5: the rear power lift unit quickly rises.
- B) Button (green):** with maintained action and used to enable the lever (**A**) functions.
- C) Button (blue):** it is with maintained action and it is used to activate the hydraulic actuation of the third point strut (elongation).
- D) Button (yellow):** it is with maintained action and it is used to activate the hydraulic actuation of the third point strut (shortening).
- E) Button (green):** it is with maintained action and it is used to activate the hydraulic actuation of the right arm of the power lifting unit (elongation).
- F) Button (green):** it is with maintained action and it is used to activate the hydraulic actuation of the right arm of the power lifting unit (shortening).
- G) Button (red):** it is maintained action and it is used to activate the red hydraulic coupling (**G1**).
- H) Button (red):** it is maintained action and it is used to activate the red hydraulic coupling (**H1**).
- L) Button:** used to activate and deactivate the floating effect of the power lift unit.
- M) Switch:** used to activate operation of lever (**A**).
 - Control in position 0: drive deactivated.
 - Control in position 1: drive activated.
 - The functioning speed of the lifting unit is not bound to positions of switch (**M**).
- N) Luminous switch (orange light):** pressed in combination with the consent device (**N1**), activates the orange hydraulic couplings "in continuous flow mode" (**A1-A2**).
- P) Luminous switch (red light):** used to activate the floating mode of the red hydraulic couplings (**G1-H1**).
- Q) Luminous switch (yellow light):** used to activate the yellow hydraulic coupling (**Q1**).
 - If the machine is equipped with a front power lift unit, button is used to activate the functions of unit.



Caution Precaution

The "Joystick" controls activate the rear and front hydraulic couplings that have the same colour.

- DO NOT connect the quick couplings of the rear part and those of the front part (that have the same colour), to activate the two interchangeable tools at the same time.

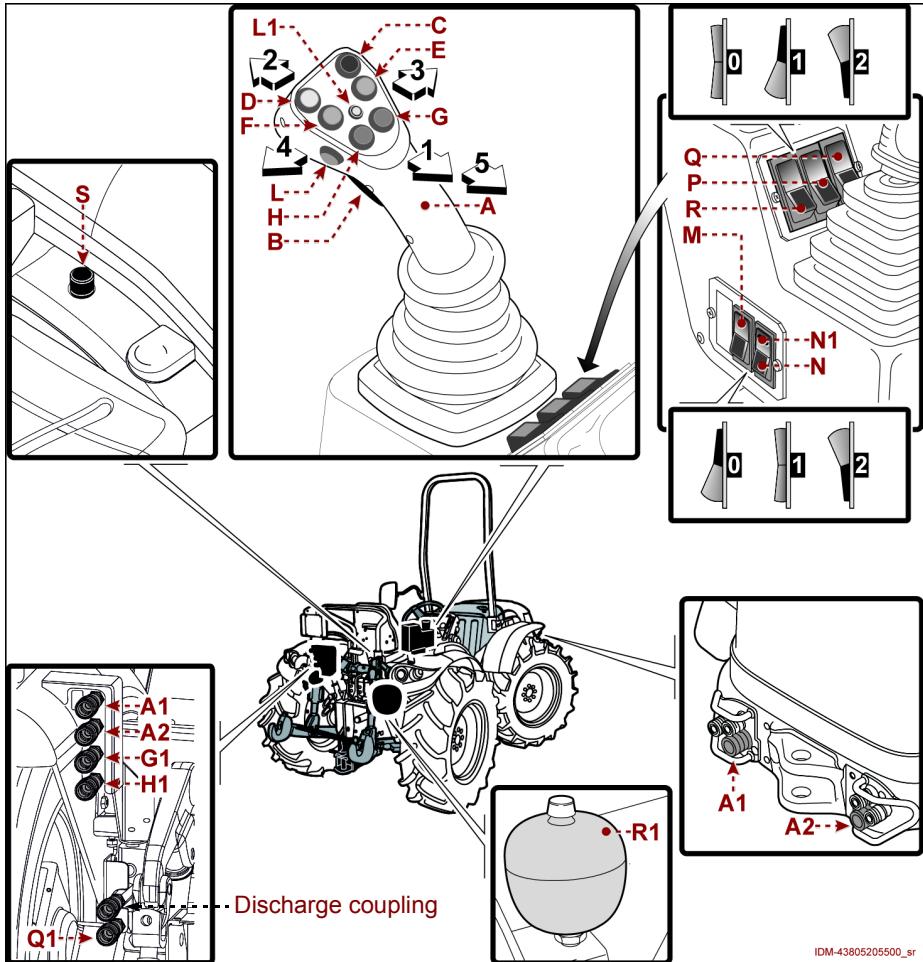
R) Regulator: used to regulate the power lift unit descent pressure (normal and not floating activation).

⚠ Important

At the end of every work day cover the "joystick" lever using the specific protection.

DESCRIPTION OF "JOYSTICK ON-OFF" CONTROLS (MODELS ERGIT S)

The illustration represents the devices while the list gives the description and their function.



A) Lever: it is a "Joystick" control and is used to activate, combined with the maintained action button (**B**), the power lifting unit and the hydraulic couplings (orange) for the auxiliary services of the interchangeable tools that can be hitched to the machine.

- To activate the functions of control act on the switch (**M**).
 - **Control activated in directions 1-2:** the rear power lift unit rises and lowers.
 - **Control activated in direction 3:** the orange hydraulic coupling (**A1**) is activated.
 - **Control activated in direction 4:** the orange hydraulic coupling (**A2**) is activated.
 - **Control activated in direction 5:** the rear power lift unit quickly rises.

B) Button (green): with maintained action and used to enable the lever (**A**) functions.

C) Button (blue): it is with maintained action and it is used to activate the hydraulic actuation of the third point strut (elongation).

D) Button (yellow): it is with maintained action and it is used to activate the hydraulic actuation of the third point strut (shortening).

E) Button (green): it is with maintained action and it is used to activate the hydraulic actuation of the right arm of the power lifting unit (elongation).

F) Button (green): it is with maintained action and it is used to activate the hydraulic actuation of the right arm of the power lifting unit (shortening).

G) Button (red): it is maintained action and it is used to activate the red hydraulic coupling (**G1**).

H) Button (red): it is maintained action and it is used to activate the red hydraulic coupling (**H1**).

L) Button: used to activate and deactivate the floating effect of the power lift unit.

- Switch on of the luminous LED (**L1**) signals that the function has been activated.
 - If the machine is equipped with hydraulic suspension, after having pre-charged accumulator (**R1**), using button (**R**), the power lifting unit works in suspension modality.
 - Pull the lever (**A**) in uphill to disable the floating and hydraulic suspension function of the power lifting unit.

M) Switch: used to activate lever (**A**) and set the speed of the hydraulic actuations of the connected equipment.

- **Control in position 0:** drive deactivated.
- **Control in position 1:** lever (**A**) activated by means of hydraulic actuations working slowly.
- **Control in position 2:** lever (**A**) activated by means of hydraulic actuations working quickly.

- The functioning speed of the lifting unit is not bound to positions (1-2) of switch (M).

N) Luminous switch (orange light): pressed in combination with the consent device (N1), activates the orange hydraulic couplings "in continuous flow mode" (A1-A2).

P) Luminous switch (red light): used to activate the floating mode of the red hydraulic couplings (G1-H1).

Q) Luminous switch (yellow light): used to activate the yellow hydraulic coupling (Q1).

- If the machine is equipped with a front power lift unit, button is used to activate the functions of unit.



Caution Precaution

The "Joystick" controls activate the rear and front hydraulic couplings that have the same colour.

- DO NOT connect the quick couplings of the rear part and those of the front part (that have the same colour), to activate the two interchangeable tools at the same time.

R) Luminous switch (green light): it is used to pre-charge the accumulator (R1) when the machine is equipped with hydraulic suspension.

- **Control in position 0:** drive deactivated.
- **Control in position 1:** hydraulic pressure pre-load phase.
- **Control in position 2:** hydraulic pressure discharge phase.

S) Regulator: used to regulate the power lift unit descent pressure (normal and not floating activation).

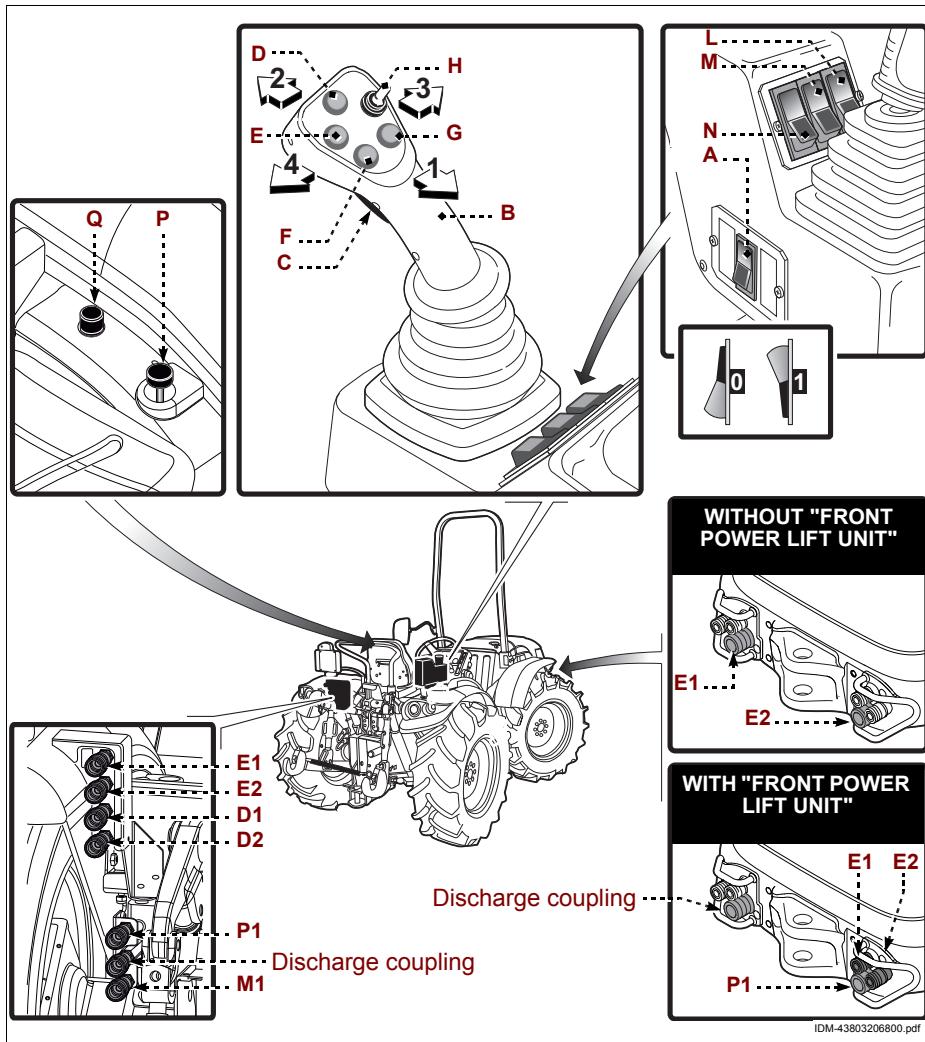


Important

At the end of every work day cover the "joystick" lever using the specific protection.

DESCRIPTION OF "PROPORTIONAL JOYSTICK" TYPE CONTROLS

The illustration represents the devices while the list gives the description and their function.



A) Luminous switch (green light): used to define the functioning state of all "Joystick" commands.

- Control in position **0**: drives deactivated (light off).
- Control in position **1**: drives activated (light on).

B) "Joystick" type control lever: used to activate, when combined with the maintained action control (**C**) and eventually with one of the selection buttons

(D-E-F), the auxiliary services of the interchangeable tools that are hitched to the machine.

- Some lever functions have direct activation while others are the proportional type with electronic control: the greater the movement of the control, the greater the activation speed of the function selected and vice versa.
- With button **(C)** held down and with the selection of the function via the yellow button **(D)**, the functions listed are activated (with direct action).
 - **Control activated in direction 1**: the hydraulic hitch is activated, orange **(D1)**, in direction 2 the function selected is annulled.
 - **Control activated in directions 3-4**: it lengthens and shortens the third point strut with hydraulic control.
- With button **(C)** held down and with the selection of the function via the red button **(E)**, the functions listed are activated (with direct action).
 - **Control activated in direction 1**: the hydraulic hitch is activated, orange **(E1)**, in direction 2 the function selected is annulled.
 - **Control activated in direction 3**: the hydraulic hitch is activated, orange **(E2)**, in direction 4 the function selected is annulled.
- With button **(C)** held down and with the selection of the function via the green button **(F)**, the functions listed are activated (with direct action).
 - **Control activated in directions 1-2**: the rear power lift unit rises and lowers.
 - **Control activated in directions 3-4**: the right boom of the rear power lift unit rises and lowers.

C) Button (red): with maintained action and used to enable the lever **(B)** functions.

D) Button (yellow): used to enable the "joystick" lever functions **(B)**.

E) Button (red): used to enable the "joystick" lever functions **(B)**.

F) Button (green): used to enable the "joystick" lever functions **(B)**.

G) Button (white): it is maintained action and, in combination with switch **(H)**, it is used to activate the hydraulic motor **(P1)**.

H) Switch: used to enable the functions of the control **(G)**.

- **Control in "forward" position**: drive deactivated.
- **Control in "back" position**: drive activated.

L) Luminous switch (red light): used to activate the floating mode of the red hydraulic couplings **(D1-D2)**.

M) Luminous switch (yellow light): used to activate the yellow hydraulic coupling **(M1)**.

- If the machine is equipped with a front power lift unit, button is used to activate the functions of unit.

 **Caution
Precaution**

The "Joystick" controls activate the rear and front hydraulic couplings that have the same colour.

- DO NOT connect the quick couplings of the rear part and those of the front part (that have the same colour), to activate the two interchangeable tools at the same time.

N) Luminous switch (red light): it is used to enable floating mode of the rear power lift unit.

P) Ball grip: it is used to adjust oil flow capacity of the single-acting hydraulic couplings (**P1**).

- The oil flow rate regulator is installed only in machines with "Joystick" controls.

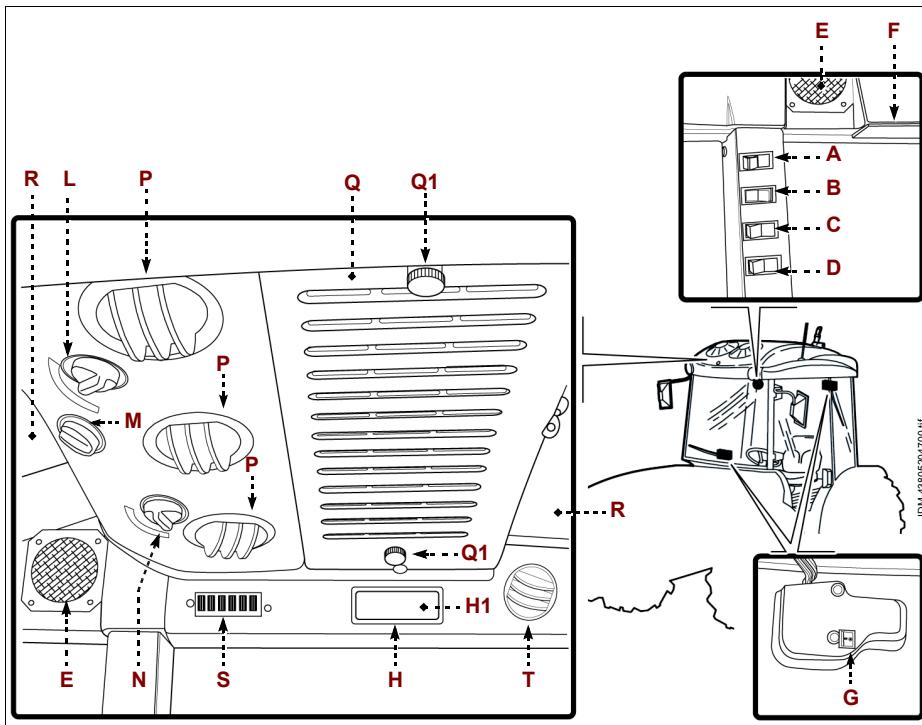
Q) Regulator: used to regulate the power lift unit descent pressure (normal and not floating activation).

 **Important**

At the end of every work day cover the "joystick" lever using the specific protection.

DESCRIPTION OF CAB CONTROLS

The illustration represents the devices while the list gives the description and their function.



A) Switch: used to switch the rear lights on and off.

- The control is available only on machines equipped with rear lighting.

B) Switch: used to activate the flashing light (rotating light).

C) Switch: operates the screenwash liquid circuit.

D) Switch: used to switch the front lights on and off.

E) Stereo system speakers

F) Radio housing compartment (on request)

G) Switch: operates the windscreen wiper.

H) Ceiling light: used to light the driver's position.

H1)Switch: used to switch the ceiling lights on and off.

L) Knob: used to activate and deactivate the fan and to regulate its functioning (3 speed).

- M) Knob:** used to regulate the heating of the cab.
- N) Knob:** used to activate, deactivate and regulate the temperature of the air conditioning.
- P) Air vents:** used to regulate the flow of air in the cab.
- Q) Air recirculation grid:** it is equipped with a filter for purifying the air.
- Q1)Ball grips:** used to regulate the recirculation of air.
- **Open grid:** cab air is circulated with air taken from the outside.
 - **Closed grid:** only air taken from outside is put into circulation.
- R) Sunshade:** used to protect the driver from direct sunlight.
- S) Fuse box:** contains the protective fuses for the electrical system.
For more details, see "replacing fuses" heading.
- T) Air vents:** used to address the flow on the front windscreen.

Defogging of the cab windows

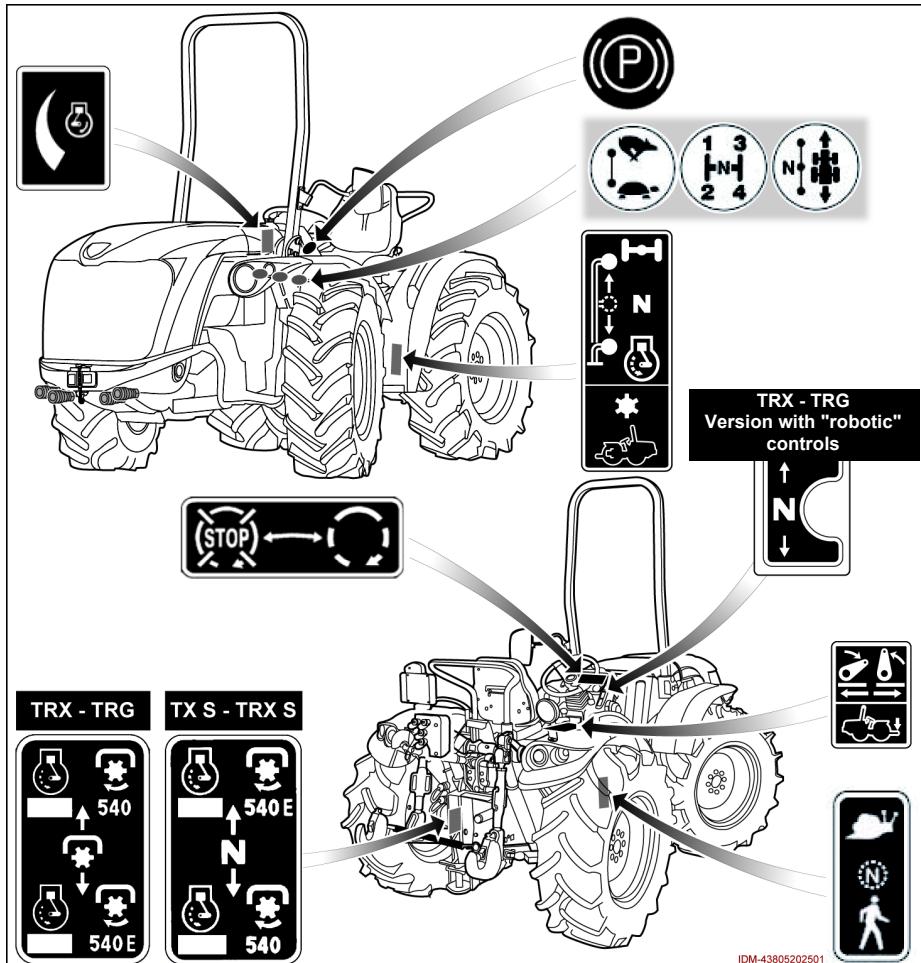
- For this operation, proceed as follows.
1. Direct the air vents (**P-T**) towards the windows to be defogged.
 2. Activate the air conditioner using the knob (**N**).
 3. Adjust the cab temperature to maximum by using the knob (**M**).
 4. Activate the fan at maximum speed using the knob (**L**), in order to accelerate operation.
 5. Gradually decrease the temperature if the windows continue being fogged.

 **Important**

A few minutes before stopping the machine, deactivate the air conditioning and leave the heating and fact active to avoid condensation forming.

DESCRIPTION OF CONTROL PLATES

The figure shows control symbols indicated on the machine.



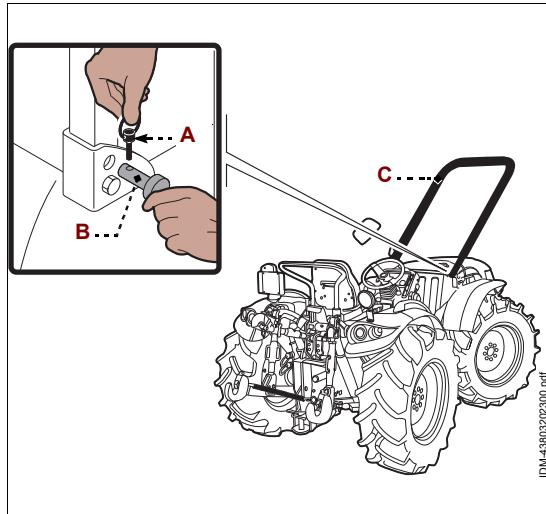
USE SAFETY ARCH (ROPS)

ALWAYS make sure that the safety arch is blocked correctly in the lifted position and always fasten safety belts suitably.

- It is possible to lower the safety arch ONLY to temporarily move the machine in areas without RISK of overturning and for short distances.
- When the safety arch is lowered, the driver MUST NOT fasten the safety belts and, as he is not protected in case of overturning, must cautiously manoeuvre the machine.
- The safety arch must be lowered as indicated.
 1. Remove the safety pins (**A**) and slide the pins out (**B**).
 2. Lower the safety arch (**C**).
 3. Insert the pins (**B**) and plugs (**A**) to block the safety arch.

Important

When the safety arch is lowered, the driver MUST NOT fasten the safety belts.



- On completion of work activities, take the safety arch immediately back to the lifted position as indicated.
- 1. Remove the safety pins (**A**) and the pins (**B**).
- 2. Raise the safety arch (**C**).
- 3. Insert the pins (**B**) and plugs (**A**) to block the safety arch.
- 4. Control that the pins and safety pins are correctly inserted and in good condition.

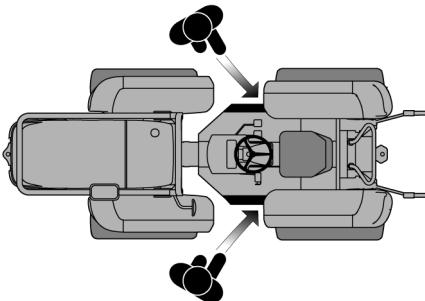
Danger Warning

Do not use the machine if the safety arch is not installed correctly and if it is damaged.

ACCESS TO DRIVER'S SEAT

The list gives some behaviour and measures that must be respected by the driver for safety reasons.

- Climb into and out of the driver's seat ONLY using the foreseen points and the appropriate platforms and hand-rail to avoid risk of falling.
- Always keep the ascent platforms and control pedals clean and free from mud and/or debris.
- Check that the driver's seat is clear from objects so as not to obstruct the activating of the controls.
- Check the cab windows (inside and outside) are clean and not fogged to assure maximum visibility.
For more details, see "Description of cab controls" heading.
- Check the position of the seat, of the wheel and the rearview mirrors to assure correct ergonomics and visibility from the driver's seat.



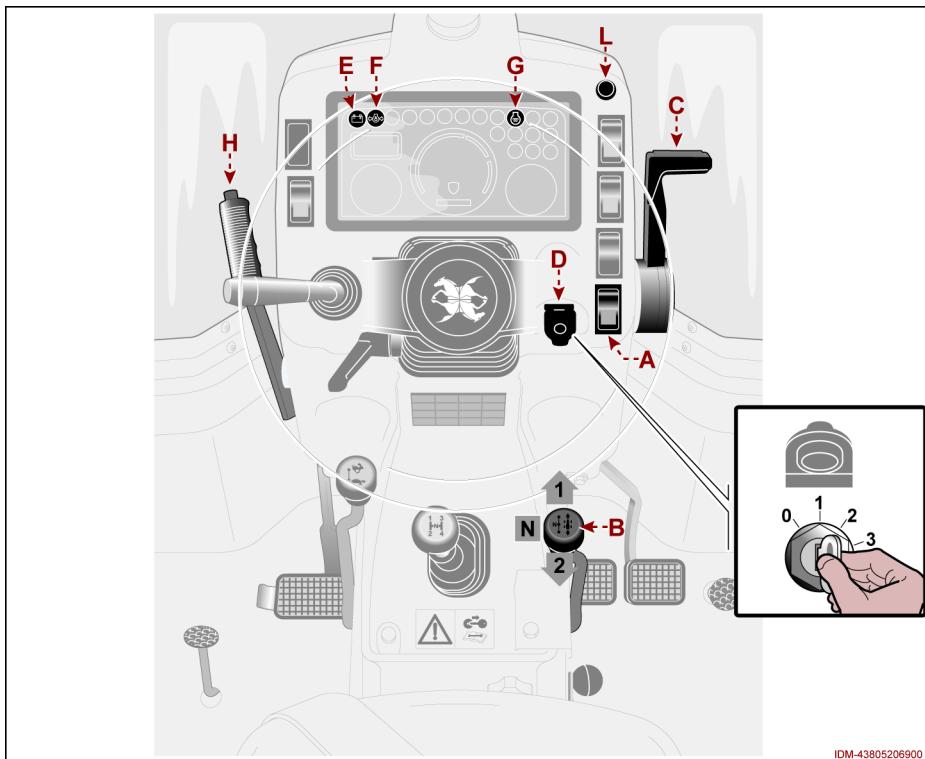
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Caution Precaution

The driver's seat must ONLY be occupied by the driver.

- ONLY climb on, descend and/or abandon the driver's seat with the machine stopped in safe conditions.



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For this operation, proceed as follows.

1. Seat in driver's seat.

Caution **Precaution**

ONLY start the engine when sitting in the driver's seat and safety belts fastened during the working activity.

2. Before starting the engine, make sure that the PTO is deactivated (switch (A) with light off) and that the control (B) of the reverser is in neutral position.
3. Set the hand throttle (C) at mid-travel to select the engine speed.
4. Insert the key (D) and turn clockwise to position "2".
 - The LEDs (E-F-G) switch-on.
 - If the indicator lights (E-F-G) do not switch on contact an authorised workshop.
 - On machines equipped with hydraulic braking for towed implements, the warning light (L) comes on too (**Only for machines with Italian type-approval**).

5. When the indicator (**G**) goes off, turn the key (**D**) further clockwise (pos. "3") to start the engine, then release.
 - The warning light (**L**) goes out.
 - **Do not make too many start-up attempts in quick succession so as not to damage the starter motor.**
 - **To be able to attempt starting again, the key must be moved back to the position "0".**
 - **Wait at least one minute between one attempt and the next to allow the starter motor to cool down.**
6. Act on the lever (**C**) and take it to the minimum speed position.
7. Pre-heat the engine suitably (when ticking over) before starting work activities.
 - **It is recommended to pre-heat the engine, in particular during running in and in the event of low temperatures.**

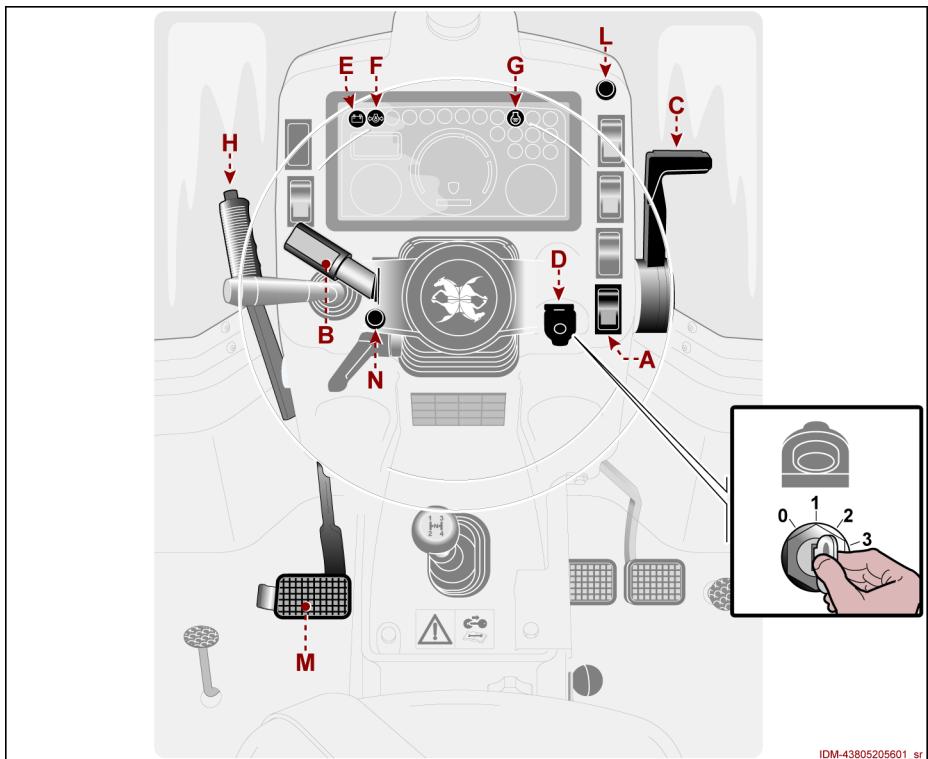


**Caution
Precaution**

Never leave the engine running in closed or inadequately ventilated environments. Exhaust fumes are potentially dangerous to health.

- Before stopping the engine, place the carried interchangeable tool on the ground.
1. Act on the lever (**C**) and take it to the minimum speed position.
 2. Act on the switch (**A**) to deactivate the PTO.
 3. Position the lever (**B**) so that the reverse shuttle is in neutral.
 4. Operate the lever (**H**) to apply the parking brake.
- On machines equipped with hydraulic braking for towed implements, the trailer brakes are also activated (**Only for machines with Italian type-approval**).
5. Turn the ignition key (**D**) anti-clockwise to stop the engine, then remove it and fit the switch cover.

STARTING AND STOPPING THE ENGINE (ROBOTIC CONTROLS)



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For this operation, proceed as follows.

1. Seat in driver's seat.

Caution **Precaution**

ONLY start the engine when sitting in the driver's seat and safety belts fastened during the working activity.

2. Press and hold the clutch pedal (M).
3. Before starting the engine, make sure that the PTO is turned off (switch (A) with light off) and that the reverser control (B) is in neutral (warning light (L) on).
4. Set the hand throttle (C) at mid-travel to select the engine speed.
5. Insert the key (D) and turn clockwise to position "2".
 - The LEDs (E-F-G) switch-on.
 - If the indicator lights (E-F-G) do not switch on contact an authorised workshop.

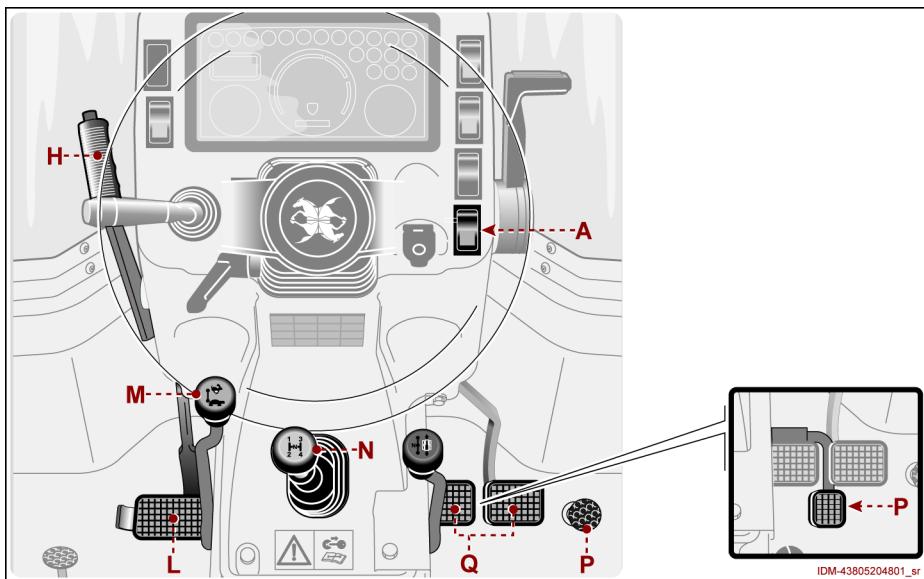
- On machines equipped with hydraulic braking for towed implements, the warning light (**N**) comes on too (**Only for machines with Italian type-approval**).
- When the indicator (**G**) goes off, turn the key (**D**) further clockwise (pos. "3") to start the engine, then release.
 - The warning light (**N**) goes out.
 - Do not make too many start-up attempts in quick succession so as not to damage the starter motor.**
 - To be able to attempt starting again, the key must be moved back to the position "0".**
 - Wait at least one minute between one attempt and the next to allow the starter motor to cool down.**
- Act on the lever (**C**) and take it to the minimum speed position.
 - Pre-heat the engine suitably (when ticking over) before starting work activities.
 - It is recommended to pre-heat the engine, in particular during running in and in the event of low temperatures.**



Caution Precaution

Never leave the engine running in closed or inadequately ventilated environments. Exhaust fumes are potentially dangerous to health.

- Before stopping the engine, place the carried interchangeable tool on the ground.
- Act on the lever (**C**) and take it to the minimum speed position.
 - Act on the switch (**A**) to deactivate the PTO.
 - Position the lever (**B**) so that the reverse shuttle is in neutral.
 - The warning light (**L**) comes on.
 - Operate the lever (**H**) to apply the parking brake.
 - On machines equipped with hydraulic braking for towed implements, the trailer brakes are also activated (**Only for machines with Italian type-approval**).
- Turn the ignition key (**D**) anti-clockwise to stop the engine, then remove it and fit the switch cover.



For this operation, proceed as follows.

1. Seat in driver's seat.

** Caution
Precaution**

ONLY start the engine when sitting in the driver's seat and safety belts fastened during the working activity.

2. Press and hold the clutch pedal (**L**).
3. Start the machine engine.
4. Select the speed range by shifting the lever (**M**).
5. Select a gear by shifting the lever (**N**).
6. Select the drive direction by shifting the lever (**B**).
7. Release the parking brake by operating the lever (**H**).
8. Release the clutch pedal (**L**) to let in the gears and move off.
9. Act on the accelerator pedal (**P**) and the brake (**Q**) to suitably adapt machine speed.

Proceed as indicated to stop the machine.

1. Release the accelerator pedal (**P**).
2. Depress the clutch and brake pedals (**L-Q**) to bring the machine to a halt.

- On machines equipped with hydraulic braking for towed implements, the trailer brakes are also activated (**Only for machines with Italian type-approval and only if the brakes have been made integral**).
3. Act on the levers (**B-N**) to position the gear box and reverser in neutral.
 4. Act on the switch (**A**) to deactivate the PTO.
 5. Operate the lever (**H**) to apply the parking brake.
 - On machines equipped with hydraulic braking for towed implements, the trailer brakes are also activated (**Only for machines with Italian type-approval**).
 6. Turn the ignition key anti-clockwise to stop the engine, then remove it and fit the switch cover.



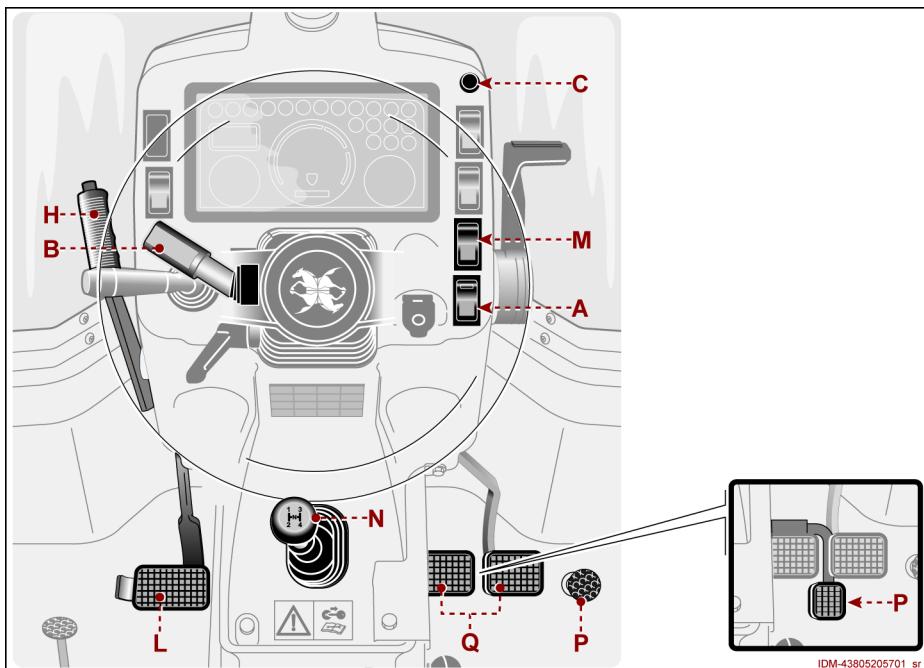
Caution Precaution

Always use the guard to prevent water from entering and oxidising the components inside and causing the electrical system to shortcircuit, creating irreparable damage.



Important

The machine must be stopped in a way that it cannot be activated from the driver's position by unauthorised persons and it must be parked in a suitable area so that it is not an obstruction and danger to circulation.



– For this operation, proceed as follows.

1. Seat in driver's seat.

**Caution
Precaution**

ONLY start the engine when sitting in the driver's seat and safety belts fastened during the working activity.

2. Press and hold the clutch pedal (**L**).
3. Start the machine engine.
4. Use switch (**M**) to select the speed range.
 - Correct engagement of the speed range is signalled by the audible warning.
5. Select a gear by shifting the lever (**N**).
6. Select the drive direction by shifting the lever (**B**).
 - The audible warning is activated and the warning light (**C**) goes out.

Important

To prevent damage to the transmission, wait for the acoustic signal to switch off before releasing the clutch pedal.

- When the audible warning is turned off the gear is correctly engaged.

Important

Operate the range shift and the reverse shuttle only with the machine at standstill.

Danger Warning

If the reverser is operated at a speed greater than 4 km/h, or without pressing the clutch pedal , reverser pre-selection is activated; the audible warning starts beeping and the control is not operated.

- The audible warning turns off when the speed drops below 4 km/h and you depress the clutch pedal.
7. Release the parking brake by operating the lever (**H**).
 8. Release the clutch pedal (**L**) to let in the gears and move off.
 9. Act on the accelerator pedal (**P**) and the brake (**Q**) to suitably adapt machine speed.
- Proceed as indicated to stop the machine.
1. Release the accelerator pedal (**P**).
 2. Depress the clutch and brake pedals (**L-Q**) to bring the machine to a halt.
 3. Act on the levers (**B-N**) to position the gear box and reverser in neutral.
- The warning light (**C**) comes on.
4. Act on the switch (**A**) to deactivate the PTO.
 5. Operate the lever (**H**) to apply the parking brake.
 6. Turn the ignition key anti-clockwise to stop the engine, then remove it and fit the switch cover.

Caution Precaution

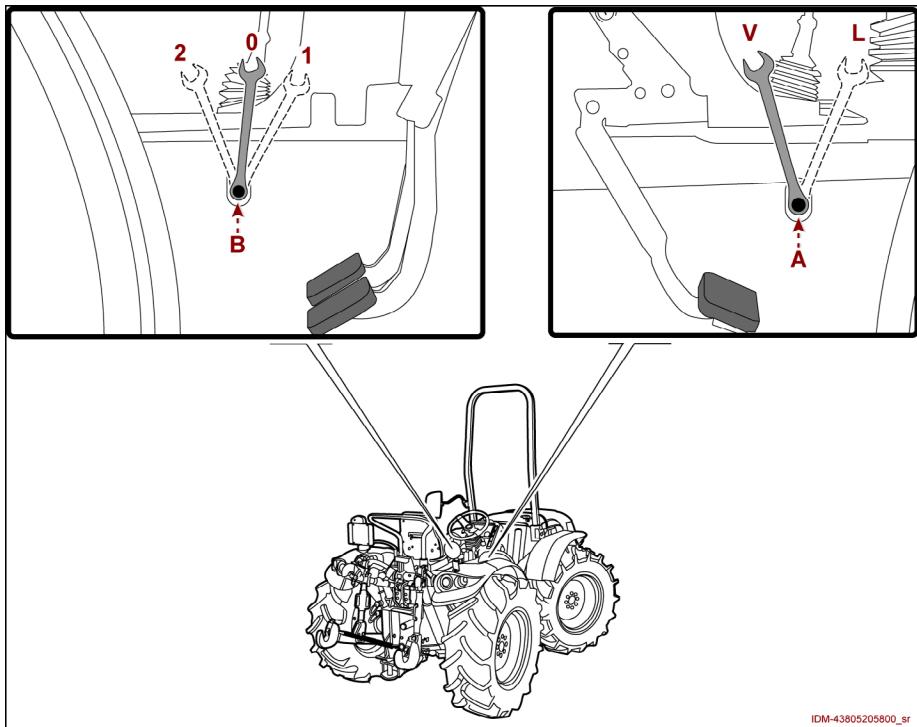
Always use the guard to prevent water from entering and oxidising the components inside and causing the electrical system to shortcircuit, creating irreparable damage.

Important

The machine must be stopped in a way that it cannot be activated from the driver's position by unauthorised persons and it must be parked in a suitable area so that it is not an obstruction and danger to circulation.

Operation with mechanical drive

- In the event of a fault in the operation of the reverser controls and the speed range , they can be operated mechanically.
- For this operation, proceed as follows.



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1. Remove the protective caps.
2. Put a spanner (17") on the nut (**A**) to select the speed range.
 - Position "**L - Position "**V****
3. Put a spanner (17") on the nut (**B**) to select the direction of travel.
 - Position "**0**": gear in neutral.
 - Position "**1**": the machine moves in the "forward" direction.
 - Position "**2**": the machine moves in the "reverse" direction.

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Danger **Warning**

The controls must **ONLY** be operated mechanically in order to move the machine into a safe area.

- Contact an authorized service centre to have the fault eliminated.

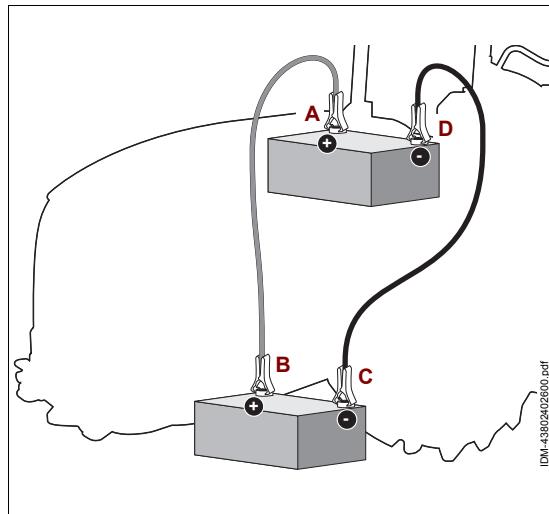
STARTING THE ENGINE WITH FLAT BATTERY

If the battery is flat, start the engine using another battery with identical nominal voltage and amperes the same or greater with respect to that of the flat battery.

Caution **Precaution**

Before proceeding with a jump start, every precaution must be taken to ensure there is no risk either of harm to individuals or of damage to the electrical components of both machines.

- Do not cause sparks or flames to ignite anywhere near the battery.
- Avoid contact with the battery electrolyte.
- For this operation, proceed as follows.
 1. Procure jump leads of suitable cross section, with insulated clips.
 2. Deselect all electrical accessories not essential for the purpose of starting the machine.
 3. Make certain the machine is properly at a standstill with the parking brake applied, the gearbox in neutral, the PTO disengaged and the ignition key in the "0" position.
 4. Unscrew the knobs and remove the grille.
 5. Connect the cables in sequence, according to the order **(A-B-C-D)**.
 6. Start the engine of the rescue machine and throttle the engine to a speed of at least 1500 rev/min.
 7. Sit in the driving position of the inoperative machine.
 8. Start the engine.
 9. Disconnect the cables in sequence, according to the order **(D-C-B-A)**.
 10. Shut the hood when finished.



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SET-UP FOR DRIVING ON PUBLIC ROADS.

Machines can be driven on a public highway provided that they are type-approved and that the driver is in possession of the necessary licence.

Important

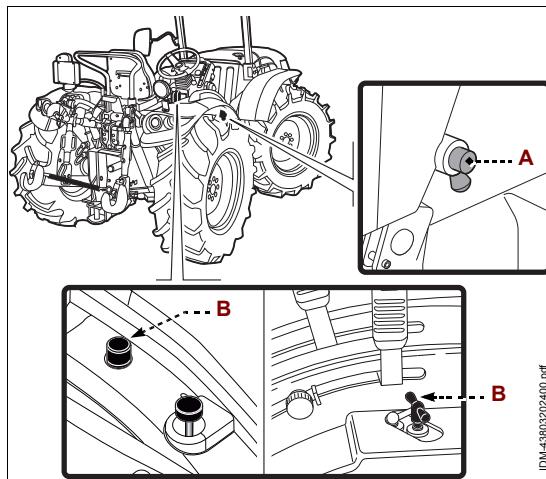
Before taking the machine on the road, check that the tyres and track width are in conformity with highway code regulations in the country of use.

- ONLY drive the machine on roads with the driver's set in the normal position NOT turned into the reverse position.
- For this operation, proceed as follows.
 1. secure all parts that could cause sudden and unexpected movements;
 2. clean any caked soil from the machine so that it will not be scattered on the road surface;
 3. check that the overall length, width and height are within permissible limits.
 - Fit the appropriate warning signs and/or lights, if necessary.
 4. Check that all road lights and indicators are in full working order.
 - Remove the headlights protection grid in a way that the visible ray is not obstructed.
 5. Raise any implement carried and lock it in place with the safety devices provided.

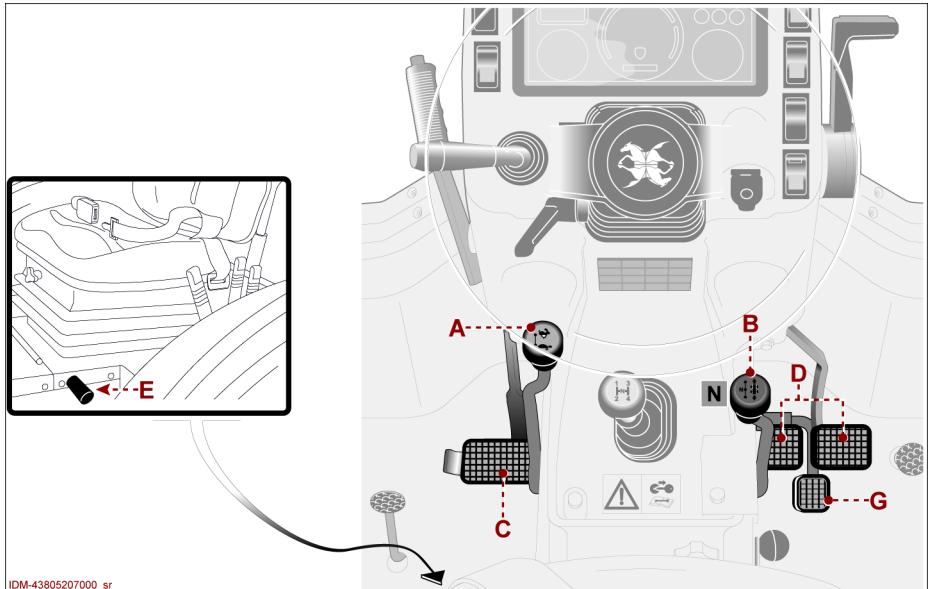
Caution

Precaution
Do not engage the differential lock when driving on a public road.

- 6. To integrate the brake pedals with insertion of the pin **(A)** in order to distribute the braking action onto all wheels.
- IT IS MANDATORY to integrate the brake pedals for circulation on roads.
- Screw the knob completely **(B)** to block the power lift unit in the lifted position.

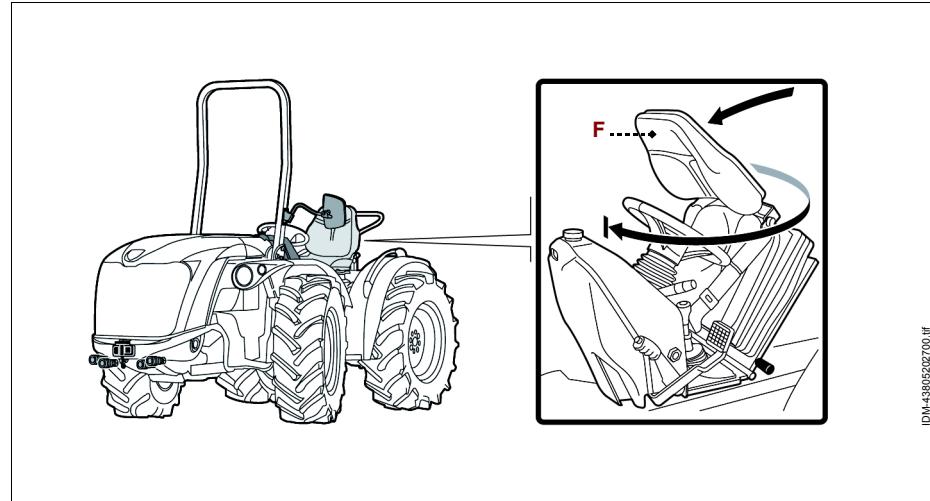


PROCEDURE FOR REVERSING THE DRIVING SEAT (STANDARD CONTROLS)



For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Fully press clutch pedal (**C**) and move the lever (**B**) into neutral position.
3. Lower the levers (**A-B**) (outwards) and take them to horizontal position.
4. Lift the pedals (**C-D**) and block them in the lifted position.
5. Lift pedal (**G**) (**Only for machines with suspended acceleration pedal**).
6. Release the driver's seat using the lever (**E**).



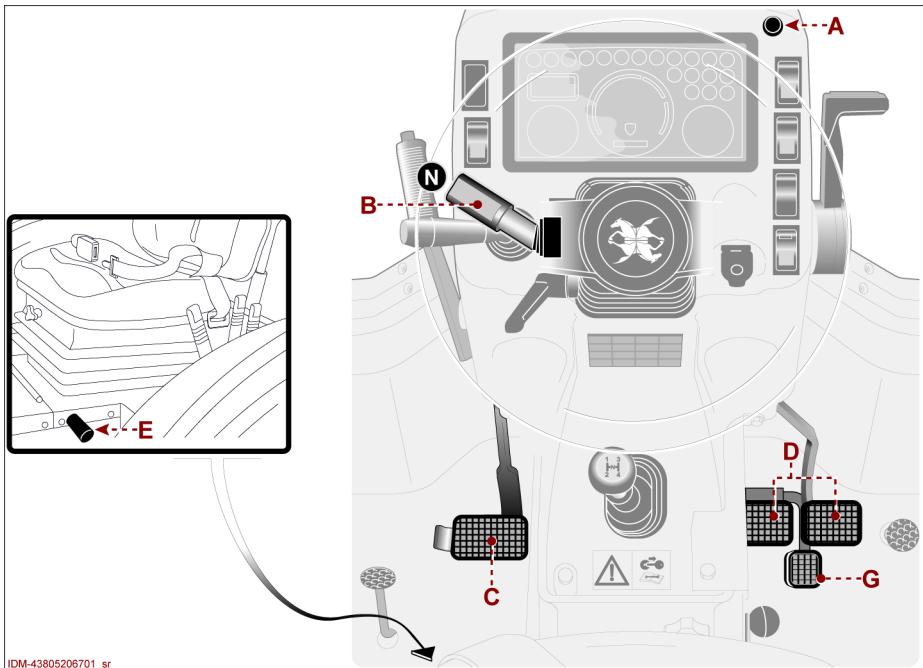
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7. Lift the seat (**F**) and turn it clockwise by 180°.
8. Lower the seat (**F**) and make sure that it is blocked in the new position.
9. Take the levers back (**A-B**) to the original position.
10. Lower the pedals (**C-D**) and take them to the original position.
11. Lower pedal (**G**) (Only for machines with suspended acceleration pedal).

Important

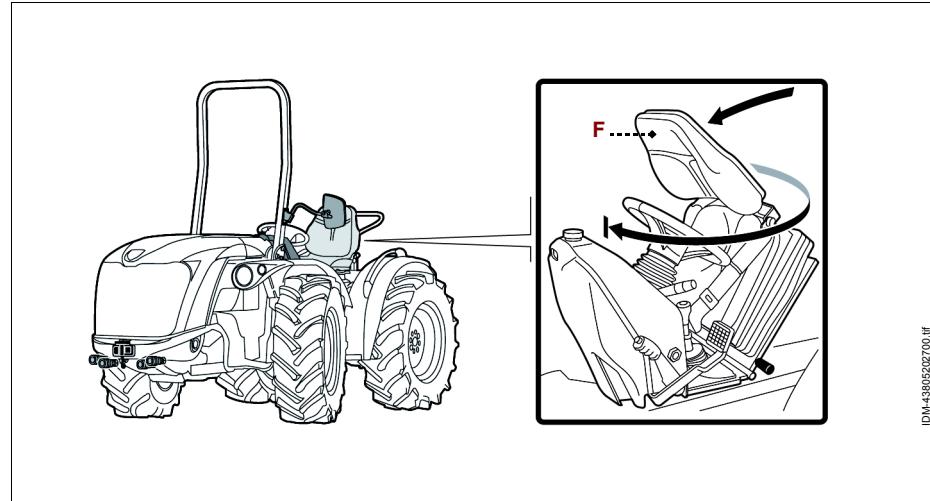
Every time the driver's seat is reversed, before starting the machine, check that all controls (steering, brakes, accelerator etc.) function correctly.

PROCEDURE FOR REVERSING THE DRIVING SEAT (ROBOTIC CONTROLS)



For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Fully press clutch pedal (**C**) and move the lever (**B**) into neutral position.
 - The warning light (**A**) comes on.
3. Lift the pedals (**C-D**) and block them in the lifted position.
4. Lift pedal (**G**) (**Only for machines with suspended acceleration pedal**).
5. Release the driver's seat using the lever (**E**).



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6. Lift the seat (**F**) and turn it clockwise by 180°.
7. Lower the seat (**F**) and make sure that it is blocked in the new position.
8. Lower the pedals (**C-D**) and take them to the original position.
9. Lower pedal (**G**) (Only for machines with suspended acceleration pedal).

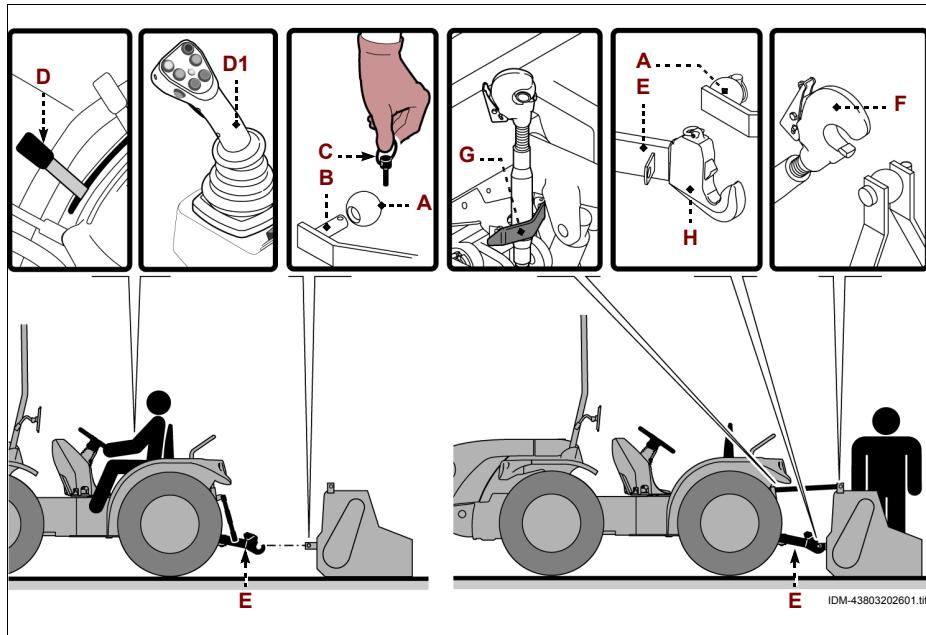


Important

Every time the driver's seat is reversed, before starting the machine, check that all controls (steering, brakes, accelerator etc.) function correctly.

IMPLEMENT CONNECT AND DISCONNECT - REAR POWER LIFTING UNIT ("QUICK COUPLING" VERSION)

The hitching and disconnection of the tool must be performed by a unique person (the driver) on compact, level ground.



- A helper can be used (situated in an area without risks), who indicates correct machine approach to the tool hitch points, to the driver.
- The method indicated to perform the operation start from the assumption that the machine-interchangeable tool coupling has already been defined.

Important

Who plans to combine equipment NOT MANUFACTURED by the machine manufacturer must identify the risks in the machine-equipment matching and take responsibility to eliminate them.

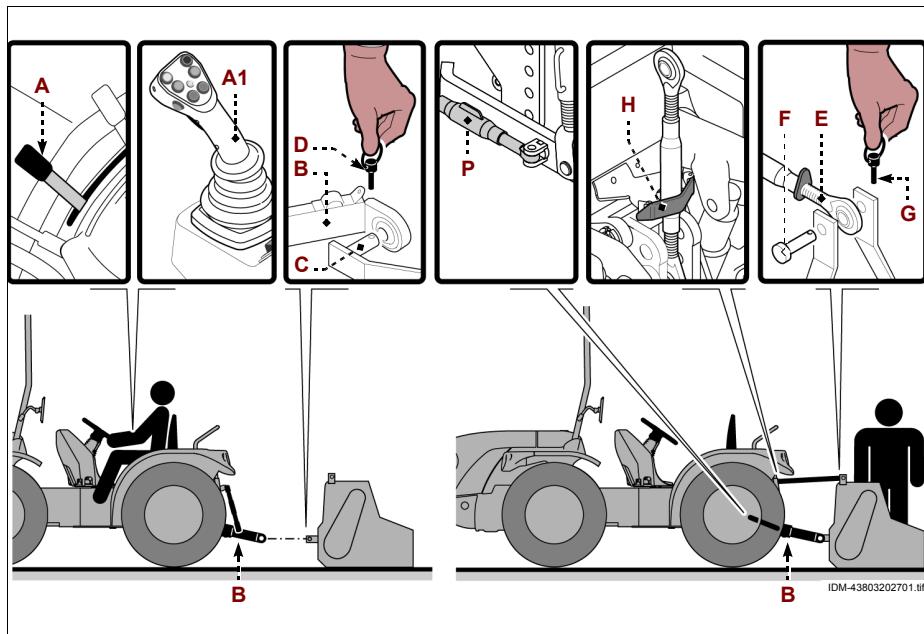
- The machine manufacturer has evaluated and eliminated ONLY the risks of the machine with no equipment or combined with equipment manufactured by it (only for combinations specified by the manufacturer).
- To make the regulations necessary for a new machine interchangeable tool coupling, see ""Quick coupling" rear lifting unit adjustment:".

1. Insert the ball joints (**A**) into the pins (**B**) and block them using the safety pins (**C**).

2. Approach the machine to the interchangeable tool and act on lever (**D**) or on joystick (**D1**) until the lifting booms (**E**) are hitched correctly to ball joints (**A**).
3. Stop the machine and activate all relevant safety devices.
4. Connect the strut (**F**) of the third point to the interchangeable tool.
5. Act on the lever (**D**) or on joystick (**D1**) to lift the equipment.
6. Lift the support foot of the interchangeable tool.
 - If the interchangeable tool is not parallel to the ground, release the safety retainers of the strut (**F**), regulate its length and block the retainer again.
7. Make the electric, hydraulic connections etc. of the interchangeable tool with the machine sockets.
8. Make the connection to the Cardan shaft PTO (tool with mechanical power transmission).
For more details, see "Connection and disconnection of the rear cardanic shaft." heading.
 - **Connect the Cardan shaft correctly and with the safety devices perfectly efficient. The incorrect installation and inefficiency of safety protections are the cause of most accidents (even fatal).**
 - To disconnect the interchangeable tool, identify a suitable area and stop the machine.
 1. Act on the lever (**D**) or on joystick (**D1**) to rest the equipment on the ground.
 2. Switch off the engine and remove the ignition key.
 3. Lower the support foot of the interchangeable tool.
 4. Disconnect the strut (**F**) of the third point and block it with the relevant belt (**G**).
 5. Disconnect the lifting booms (**E**).
 6. Remove the ball joints (**A**) from the pins and re-insert them inside the hooks seat (**H**).
 7. Disconnect the electric, hydraulic connections etc. from the machine sockets.
 8. Disconnect the Cardan shaft from the machine PTO and rest it on the relative support so as not to damage it.

HITCHING AND DISCONNECTING TOOL - REAR POWER LIFT UNIT ("BALL JOINTS" VERSION)

The hitching and disconnection of the tool must be performed by a unique person (the driver) on compact, level ground.



- A helper can be used (situated in an area without risks), who indicates correct machine approach to the tool hitch points, to the driver.
- The method indicated to perform the operation start from the assumption that the machine-interchangeable tool coupling has already been defined.

Important

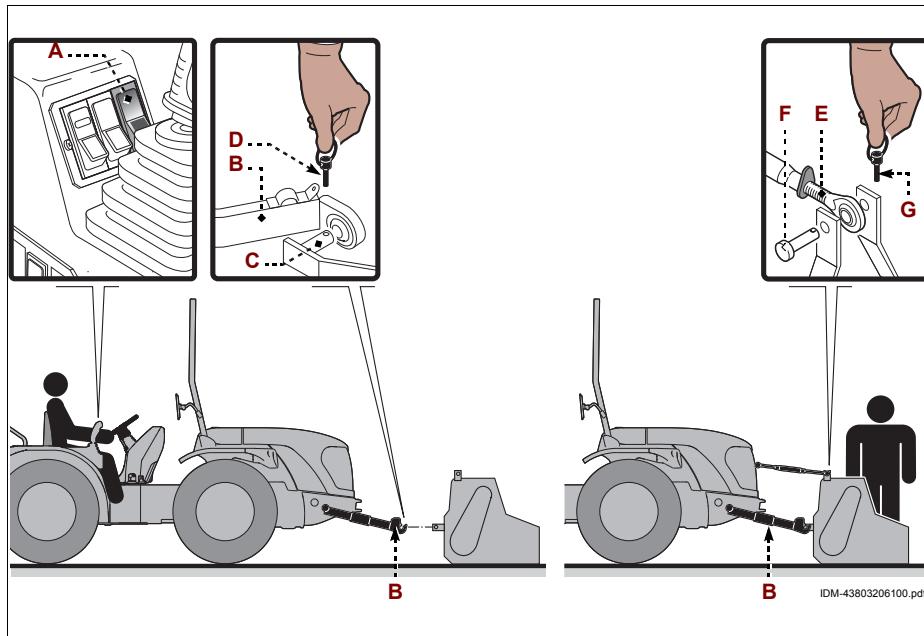
Who plans to combine equipment NOT MANUFACTURED by the machine manufacturer must identify the risks in the machine-equipment matching and take responsibility to eliminate them.

- The machine manufacturer has evaluated and eliminated ONLY the risks of the machine with no equipment or combined with equipment manufactured by it (only for combinations specified by the manufacturer).
 - To make the regulations necessary for a new machine interchangeable tool coupling, see "Description of rear power lifting unit ("ball joints" version)".
1. Approach the machine to the equipment and act on lever **(A)** or on joystick **(A1)**, until the lifting booms **(B)** are aligned with the connections.
 2. Stop the machine and activate all relevant safety devices.

3. Loosen the tie-rods (**P**).
4. Insert the booms (**B**) into the pins (**C**) and insert the safety pins (**D**).
5. Connect the strut (**E**) to the third point of the tool using the pin (**F**).
6. Replace the lynch pin (**G**).
7. Act on the lever (**A**) or on joystick (**A1**) to lift the equipment.
8. Lift the support foot of the interchangeable tool.
 - If the interchangeable tool is not parallel to the ground, release the safety retainers of the strut (**E**), regulate its length and block the retainer again.
9. Regulate the tie-rods (**P**) to eliminate the oscillations of the lifting booms.
10. Make the electric, hydraulic connections etc. of the interchangeable tool with the machine sockets.
11. Make the connection to the Cardan shaft PTO (tool with mechanical power transmission).
For more details, see "Connection and disconnection of the rear cardanic shaft." heading.
 - **Connect the Cardan shaft correctly and with the safety devices perfectly efficient. The incorrect installation and inefficiency of safety protections are the cause of most accidents (even fatal).**
 - To disconnect the interchangeable tool, identify a suitable area and stop the machine.
 1. Act on the lever (**A**) or on joystick (**A1**) to rest the equipment on the ground.
 2. Switch off the engine and remove the ignition key.
 3. Lower the support foot of the interchangeable tool.
 4. Disconnect the electric, hydraulic connections etc. from the machine sockets.
 5. Disconnect the Cardan shaft from the machine PTO and rest it on the relative support so as not to damage it.
 6. Remove the lynch pin (**G**) and draw out the pivot (**F**).
 7. Disconnect the strut (**E**) of the third point and block it with the relevant belt (**H**).
 8. Loosen the tie-rods (**P**).
 9. Remove the lynch pins (**D**) and separate the arms (**B**) from the studs to detach the implement.

HITCHING AND DISCONNECTING TOOL - FRONT POWER LIFT UNIT

The hitching and disconnection of the tool must be performed by a unique person (the driver) on compact, level ground.



- A helper can be used (situated in an area without risks), who indicates correct machine approach to the tool hitch points, to the driver.
- The method indicated to perform the operation start from the assumption that the machine-interchangeable tool coupling has already been defined.

Important

Who plans to combine equipment NOT MANUFACTURED by the machine manufacturer must identify the risks in the machine-equipment matching and take responsibility to eliminate them.

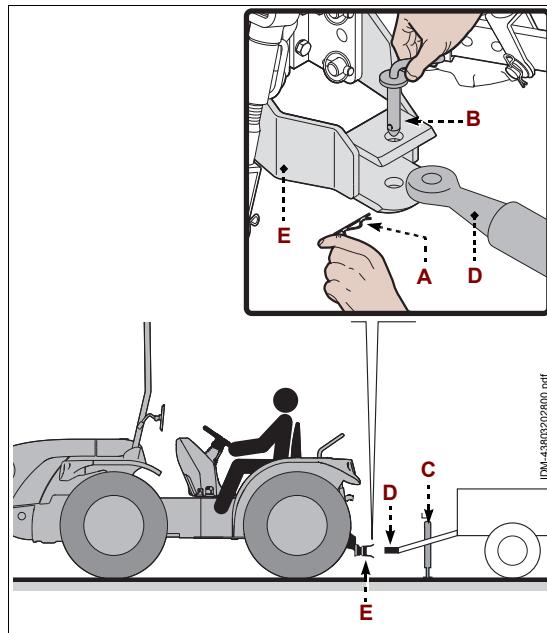
- The machine manufacturer has evaluated and eliminated ONLY the risks of the machine with no equipment or combined with equipment manufactured by it (only for combinations specified by the manufacturer).
1. Approach the machine to the tool and act on button(A) until the lifting booms (B) are aligned correctly to the couplings.
 2. Stop the machine and activate all relevant safety devices.
 3. Insert the booms (B) into the pins (C) and insert the safety pins (D).
 4. Connect the strut (E) to the third point of the tool using the pin (F).

5. Replace the lynch pin (**G**).
 6. Act on the button (**A**) to lift the interchangeable tool.
 7. Lift the support foot of the interchangeable tool.
 - If the interchangeable tool is not parallel to the ground, release the safety retainers of the strut (**E**), regulate its length and block the retainer again.
 8. Make the electric, hydraulic connections etc. of the interchangeable tool with the machine sockets.
 - To disconnect the interchangeable tool, identify a suitable area and stop the machine.
1. Act on the button (**A**) to rest the interchangeable tool on the ground.
 2. Switch off the engine and remove the ignition key.
 3. Lower the support foot of the interchangeable tool.
 4. Disconnect the electric, hydraulic connections etc. from the machine sockets.
 5. Remove the lynch pin (**G**) and draw out the pivot (**F**).
 6. Disconnect the strut (**E**) of the third point and fasten it to the protection structure.
 7. Remove the lynch pins (**D**) and separate the arms (**B**) from the studs to detach the implement.

HITCHING AND DISCONNECTING TOOL - TOWING HOOK

The hitching and disconnection of the tool must be performed by a unique person (the driver) on compact, level ground.

- A helper can be used (situated in an area without risks), who indicates correct machine approach to the tool hitch points, to the driver.
 - The method indicated to perform the operation start from the assumption that the machine-interchangeable tool coupling has already been defined.
 - To make the regulations necessary for a new machine interchangeable tool coupling, see "Regulation of towing hook height" - ""Slider" tow hook height adjustment".
1. Remove the lynch pin (**A**) and draw out the pivot (**B**).
 2. Approach the machine to the interchangeable tool.
 3. Act on the support foot (**C**) of the interchangeable tool until the O-hitch (**D**) of the drawbar is aligned with the towing hook (**E**).
 4. Back the machine up to bring the towing bracket into alignment with the towing eye
 5. Stop the machine and activate all relevant safety devices.
 6. Insert the coupling pin (**B**) and the lynch pin (**A**).
 7. Lift the support foot (**C**) of the interchangeable tool.
 8. Make the electric, hydraulic connections etc. of the interchangeable tool with the machine sockets.
 - If the machine is equipped with a hydraulic braking system , make the connection to the corresponding hydraulic coupler.
For more details, see "Procedure for operating the hydraulic braking system (optional)" heading.



9. Make the connection to the Cardan shaft PTO (tool with mechanical power transmission).

For more details, see "Connection and disconnection of the rear cardanic shaft." heading.

- Connect the Cardan shaft correctly and with the safety devices perfectly efficient. The incorrect installation and inefficiency of safety protections are the cause of most accidents (even fatal).

- To disconnect the interchangeable tool, identify a suitable area and stop the machine.

1. Switch off the engine and remove the ignition key.

2. Lower the support foot (**C**) of the interchangeable tool.

3. Disconnect the electric, hydraulic connections etc. from the machine sockets.

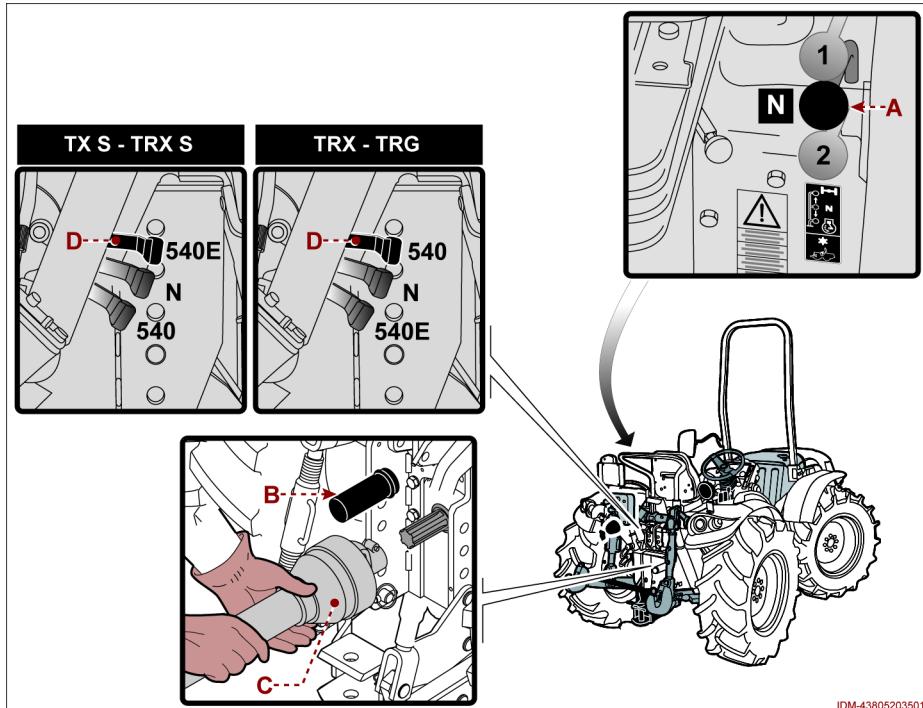
4. Disconnect the Cardan shaft from the machine PTO and rest it on the relative support so as not to damage it.

5. Remove the lynch pin (**A**) and draw out the pivot (**B**).

CONNECTION AND DISCONNECTION OF THE REAR CARDANIC SHAFT.

The connection and disconnection of the Cardan shaft from the PTO are part of the hitching and disconnection procedure of the interchangeable tool (carried or towed) of the machine.

- To connect the Cardan shaft to the interchangeable tool (carried or towed), proceed as indicated.



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1. Shift the lever (**A**) to the neutral position (pos. **N**).
2. Shift the lever (**D**) to the neutral position (pos. **N**).
3. Remove the protection (**B**) of the PTO.
4. Clean and check the integrity of the machine PTO shaft and the coupling of the Cardan shaft.
5. Couple the drive shaft (**C**) to the power take-off.

Danger **Warning**

The drive shaft must be connected first to the power take-off of the implement and then to the PTO shaft of the machine. If the shaft is connected first to the machine and the PTO accidentally activated, the resulting whiplash could cause fatal injury.

6. Connect the safety chains correctly to prevent the rotation of the Cardan shaft protections.
7. Make the electric, hydraulic connections etc. of the interchangeable tool with the machine sockets.
8. Test the setup to make certain that there are no problems when the shaft is at minimum and maximum length, and that there is enough space for the shaft to operate normally without being damaged.

 **Important**

The machine is equipped with a PTO safety brake that automatically activates when the levers (A-D) are in the neutral position.

- When connecting with a towed self-propelled implement, put into neutral also the reduction gear of the implement or disconnect the drive shaft to avoid damaging the machine's power take-off.
- To disconnect the Cardan shaft from the interchangeable tool (carried or towed), proceed as indicated.
 1. Shift the lever (**A**) to the neutral position (pos. **N**).
 2. Shift the lever (**D**) to the neutral position (pos. **N**).
 3. Disconnect the electrical and hydraulic systems of the implement.
 4. Release the safety chain of the Cardan shaft.
 5. Disconnect the Cardan shaft (**C**) from the machine PTO and rest it on the relative support so as not to damage it.
 6. Re-mount the protection (**B**) of the PTO.

 **Important**

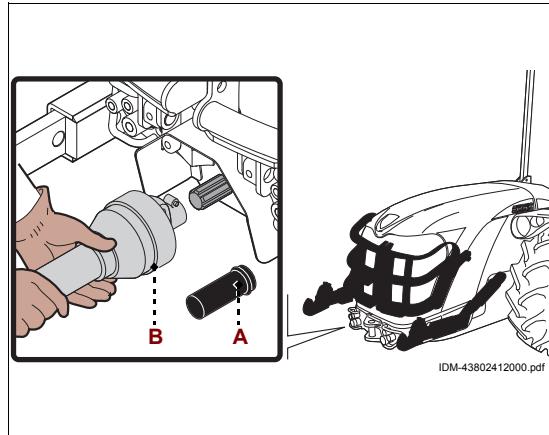
Further information on the cardan drive shaft can be found in the relative manual provided by the manufacturer.

CONNECTION AND DIS CONNECTION OF THE FRONT CARDANIC SHAFT.

The connection and disconnection of the Cardan shaft from the PTO are part of the hitching and disconnection process of the interchangeable (carried) equipment from the machine.

- To connect the Cardan shaft to the interchangeable (carried) equipment, proceed as indicated.

1. Stop the machine and activate all relevant safety devices.
2. Switch off the engine and remove the ignition key.
3. Remove the protection (A) of the PTO.
4. Clean and check the integrity of the machine PTO shaft and the coupling of the Cardan shaft.
5. Couple the drive shaft (B) to the power take-off.



Danger Warning

The drive shaft must be connected first to the power take-off of the implement and then to the PTO shaft of the machine. If the shaft is connected first to the machine and the PTO accidentally activated, the resulting whiplash could cause fatal injury.

6. Connect the safety chains correctly to prevent the rotation of the Cardan shaft protections.
 7. Make the electric, hydraulic connections etc. of the interchangeable tool with the machine sockets.
 8. Test the setup to make certain that there are no problems when the shaft is at minimum and maximum length, and that there is enough space for the shaft to operate normally without being damaged.
 - To disconnect the Cardan shaft from the interchangeable (carried) equipment, proceed as indicated.
1. Stop the machine and activate all relevant safety devices.
 2. Switch off the engine and remove the ignition key.
 3. Disconnect the electrical and hydraulic systems of the implement.
 4. Release the safety chain of the Cardan shaft.

5. Disconnect the Cardan shaft (**B**) from the machine PTO and rest it on the relative support so as not to damage it.
6. Re-mount the protection (**A**) of the PTO.

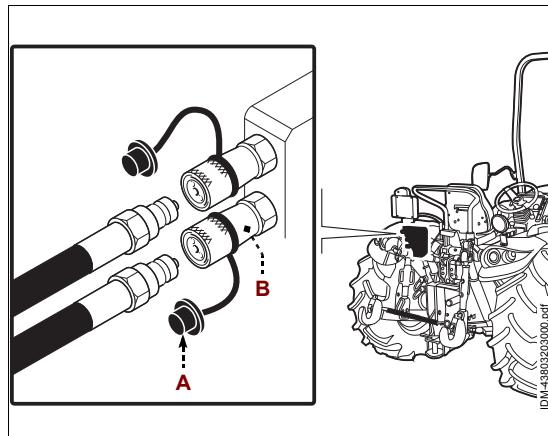
i Important

Further information on the cardan drive shaft can be found in the relative manual provided by the manufacturer.

HYDRAULIC COUPLING CONNECTION

The engagement and disconnection of the hydraulic pipes to the couplings is part of the hitching and disconnection procedure of the interchangeable tool (carried or towed) from the machine.

1. Clean and check integrity of the quick couplings (**B**) and the hydraulic couplings.
2. Engage the quick couplings to the hydraulic couplings.
3. Check that the connections have been made correctly and the movements of the controls correspond to the movements of the implement.
4. In the disconnection phase, protect the hydraulic couplings with the relevant lids (**A**) and deposit the hydraulic pipes in a way that the quick couplings are not damaged.



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i Important

Tractor model TX S - TRX S only

- The implements connected to the hydraulic outlets must use the same oil contained in the rear oil change box or an oil with the same characteristics to avoid causing serious damage to the machine.

For more details, see "Lubricant table" heading.

ELECTRIC COUPLINGS HITCHING

The engagement and disconnection of the electric connections to the couplings is part of the hitching and disconnection procedure of the interchangeable tool (carried or towed) from the machine.

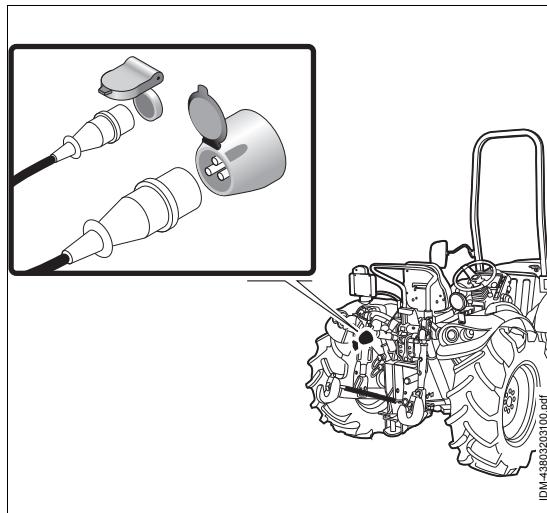
- Make the electrical connection as shown in the illustration.



Caution Precaution

Make the electric connections ONLY when the ignition key is disengaged.

- Check that all electrical power and signalling devices on the implement operate as they should.

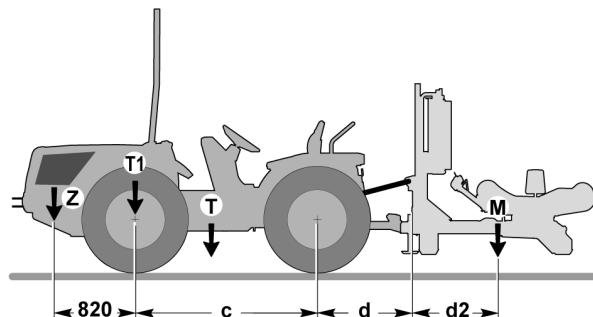


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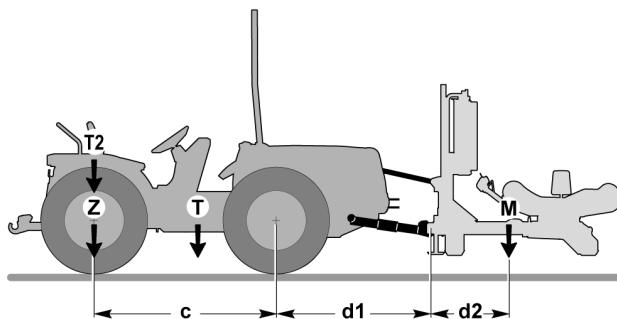
FORMULA FOR CALCULATING BALLASTS WITH CARRIED CARRIED TOOL

When hitching a carried tool, calculate the quantity of ballasts to be installed to compensate load on the front or rear axle.

- The illustration shows the diagram with the necessary quota to calculate the total weight of the ballasts to be installed.



$$Z \geq \frac{M \times (d + d_2) - (T_1 \times c) + (0,25 \times T \times c)}{c + 820}$$



$$Z \geq \frac{M \times (d_1 + d_2) - (T_2 \times c) + (0,25 \times T \times c)}{c}$$

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- Key

Z = Total weight of ballasts to be installed

M = Weight of carried tool to be hitched (Refer to tools user manual).

d = Distance between rear axle centre and the caps (See "Technical data tables").

d1 = Distance between front axle centre and the caps (See "Technical data tables").

d2 = Distance between barycentre of the hitched carried tool and the caps (Refer to tools user manual).

T = Kerb weight (See "Technical data tables").

T1 = Front axle empty weight (in running order) (See "Technical data tables").

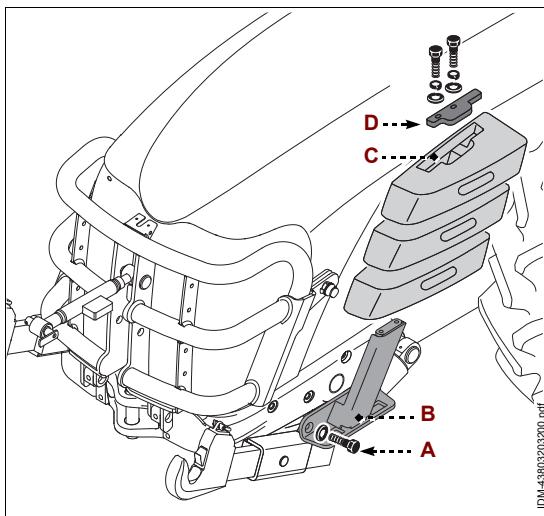
T2 = Rear axle empty weight (in running order) (See "Technical data tables").

c = Wheels axle (See "Technical data tables").

- The value obtained corresponds to the weight of the ballasts to be installed to maintain a sufficient load on the front axle.
- **Value with "-" (minus) mark:** no need to install the ballasts.
- **Value between "0" (zero) and the maximum weight of the installable ballasts:** it is necessary to install the necessary amount of ballasts to reach the obtained value.
- **Value above maximum weight of the installable ballasts:** hitching of the chosen tools is not possible.

INSTALLATION OF LATERAL BALLASTS

- ONLY install the ballasts when tool (carried and/or towed) is hitched, to make the machine more stable and improve traction capacity.
- All installation and removal operations of the ballasts should be performed with the machine positioned in a suitably equipped area (e.g. workshop) in order to perform the interventions in safe conditions.
- For this operation, proceed as follows.
 1. Remove the screws (**A**) (right and left side) from the machine frame.
 2. Install the support (**B**) and fix it with the screws (**A**).
 3. Repeat the operation on the other side.
 4. Define the quantity of ballasts (**C**) necessary to be inserted into the supports (**B**).
 5. Mount the retainer (**D**) and fix it using the relative screws and the washers.
 6. On completion, check that the ballasts are fixed correctly.



Caution Precaution

During mounting and/or removal of the ballasts, staff MUST pay attention to preventing the risk of crushing parts of the body.

- To keep the machine balanced, install the same amount of ballasts on both sides.
- The machine with ballasts installed, but without interchangeable tools, becomes unstable (braking and steering), premature wear of the tyres and consumption of more fuel.
- **ALWAYS remove the ballasts when disconnecting the interchangeable tools in order to maintain machine stability unaltered.**
- **DO NOT use the machine equipped with the ballasts, if they are not necessary, so as not to jeopardise its performance and functionality.**
- **DO NOT overload the machine with ballasts over the maximum weight allowed.**

FRONT WHEELS BALLASTS INSTALLATION

- ONLY install the ballasts when tool (carried and/or towed) is hitched, to make the machine more stable and improve traction capacity.
- All installation and removal operations of the ballasts should be performed with the machine positioned in a suitably equipped area (e.g. workshop) in order to perform the interventions in safe conditions.

Installation of 35 kg ballasts

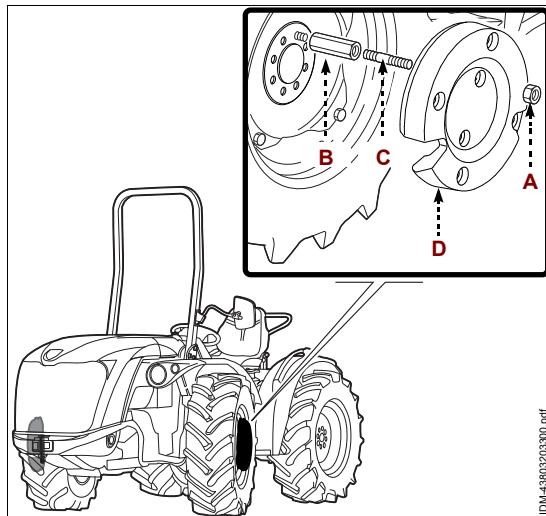
⚠️ Important

It is NOT possible to install the ballasts when the machine is equipped with 15" wheels.

- For this operation, proceed as follows.
 1. Remove the two fixing nuts (**A**) from the wheel (in an opposite manner).

⚠️ Important

On the choice of the nuts to be removed, consider that in the mounting phase, the recess of the ballast must correspond with the inflation valve.



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2. Mount the two extensions (**B**) and the studs (**C**).
3. Mount the ballast (**D**) and fix it using the nuts (**A**).
4. Repeat the operation on the other side.
5. On completion, check that the ballasts are fixed correctly.

⚠️ Caution Precaution

During mounting and/or removal of the ballasts, staff MUST pay attention to preventing the risk of crushing parts of the body.

- To keep the machine balanced, install the same amount of ballasts on both sides.
- The machine with ballasts installed, but without interchangeable tools, becomes unstable (braking and steering), premature wear of the tyres and consumption of more fuel.
- ALWAYS remove the ballasts when disconnecting the interchangeable tools in order to maintain machine stability unaltered.

- **DO NOT** use the machine equipped with the ballasts, if they are not necessary, so as not to jeopardise its performance and functionality.
- **DO NOT** overload the machine with ballasts over the maximum weight allowed.

REAR WHEELS BALLASTS INSTALLATION

- **ONLY** install the ballasts when tool (carried and/or towed) is hitched, to make the machine more stable and improve traction capacity.
- All installation and removal operations of the ballasts should be performed with the machine positioned in a suitably equipped area (e.g. workshop) in order to perform the interventions in safe conditions.

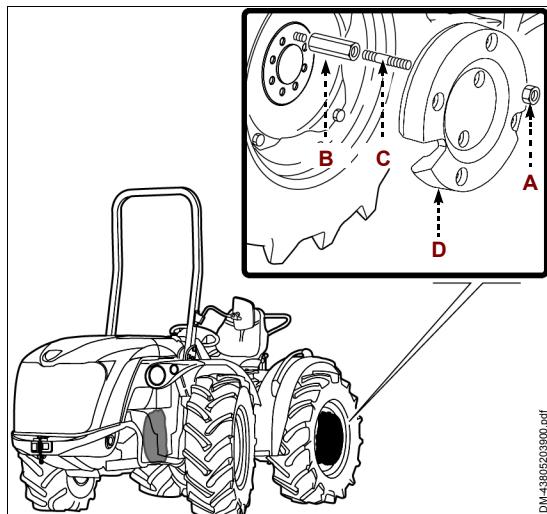


Important

The side ballasts must **NOT** be installed when a carried implement is attached to the front lifting unit.

Installation of 35 kg ballasts

- For this operation, proceed as follows.
1. Remove the two fixing nuts (**A**) from the wheel (in an opposite manner).
 2. Mount the two extensions (**B**) and the studs (**C**).
 3. Mount the ballast (**D**) and fix it using the nuts (**A**).
 4. Repeat the operation on the other side.
 5. On completion, check that the ballasts are fixed correctly.



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Important

On the choice of the nuts to be removed, consider that in the mounting phase, the recess of the ballast must correspond with the inflation valve.

2. Mount the two extensions (**B**) and the studs (**C**).
3. Mount the ballast (**D**) and fix it using the nuts (**A**).
4. Repeat the operation on the other side.
5. On completion, check that the ballasts are fixed correctly.



Caution Precaution

During mounting and/or removal of the ballasts, staff **MUST** pay attention to preventing the risk of crushing parts of the body.

- To keep the machine balanced, install the same amount of ballasts on both sides.

- The machine with ballasts installed, but without interchangeable tools, becomes unstable (braking and steering), premature wear of the tyres and consumption of more fuel.
- **ALWAYS** remove the ballasts when disconnecting the interchangeable tools in order to maintain machine stability unaltered.
- **DO NOT** use the machine equipped with the ballasts, if they are not necessary, so as not to jeopardise its performance and functionality.
- **DO NOT** overload the machine with ballasts over the maximum weight allowed.

INSTALLATION OF BALLASTS WITH FLANGE (REAR WHEELS)

ONLY install the ballasts when tool (carried and/or towed) is hitched, to make the machine more stable and improve traction capacity.

- The ballasts with flange, requested in the contract phase, are installed directly by the manufacturer. If requested after purchase of the machine, they must be installed at an authorised workshop.



Important

During mounting and/or removal of the ballasts, staff **MUST pay attention to preventing the risk of crushing parts of the body.**

OPERATING REMINDERS

The following are a number of indications to be observed when using the tractor.

- Even after having carefully read the documentation, when using the machine for the first time, simulate a number of test operations to identify the controls and the main functions.
- Leave the engine warm up thoroughly before operating in cold weather.
- Check all levels (oil, water, fuel).
- Inspect the tyres for wear and check the pressure.
- Check that the nuts and screws securing all main parts are tight.
- Operate the range shift and the reverse shuttle only with the machine at standstill.
- Use the vehicle with the safety arch (ROPS) in its raised position and wear correctly adjusted seatbelts.
- It is possible to lower the safety arch ONLY to temporarily move the machine in areas without RISK of overturning and for short distances.
- When the safety arch is lowered, the driver MUST NOT fasten the safety belts and, as he is not protected in case of overturning, must cautiously manoeuvre the machine.
- Keeping the safety arch (ROPS) in its raised position and wearing correctly adjusted safety belts can reduce the risk of injury in the event of the vehicle tipping or overturning.**
- Depress the clutch pedal fully when shifting the gears.
- Do not keep the clutch pressed down with the machine on the move.
- Verify the gradient of the soil so as to identify the conditions that will best ensure safe operation.
- Always select the right gear ratios for the gradient and the type of soil.
- Select the ground speeds appropriate for the type of implement hitched to the machine.
- Never allow the machine to run with the gearbox in neutral when on steep slopes or moving downhill.
- Stop the machine and take the engine to minimum speed, before starting the PTO.
- When in transit, deactivate the PTO so as to immobilize the functions of the implement.
- Disengage the PTO and raise the implement when reversing the machine.

- If a trailed implement with cardan drive shaft is hitched to the machine, disengage the PTO when steering so as to avoid damaging the universal joint of the shaft
- The mechanical components of the implement do not stop moving instantaneously when the PTO is disengaged: make certain all movement has ceased before approaching the implement.
- When moving the machine, also with engine off and gears in neutral, pay attention to the synchronised PTO because its activation depends on rotation of the wheels.

The live power take-off is driven by the transmission of the machine.

The direction of rotation of the live PTO inverts with the selection of forward and reverse drive from the shuttle.

- Throttle the engine down to idle speed before engaging the differential lock.
- Use the differential lock to counteract wheelslip or when there is a lack of grip at the wheels.
- Use the differential lock only when strictly necessary, and then only for short periods.
- Do not apply the differential lock when entering or negotiating bends.
- Do not steer the machine with the differential blocking inserted.

Before leaving the machine unattended or carrying out any repair or servicing operation, ensure the following conditions are in place.

- Disengage the PTO so that all implement functions are immobilized.
- Apply the parking brake.
- Lower the hydraulic lift so that a mounted or semi-mounted implement will rest directly on the ground.
- Turn off the engine.
- Remove the ignition key from the starter switch and protect the switch with the special cover to prevent oxidation of the contacts or a short-circuit in the electrical system.

REFUELING

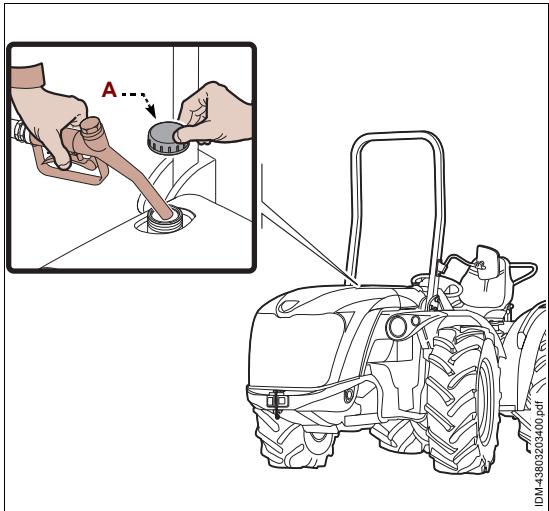
For this operation, proceed as follows.

1. Remove the filler cap (A) and top up the fuel tank. Do not overfill.

Important

The fuel must be for traction and conform with the rules specified by the engine manufacturer.

- Consult the manual accompanying the engine.
- 2. Screw the filler cap (A) back on completion of refuelling.



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Caution Precaution

All types of fuel are highly flammable. Fuel leaks or spillage on hot surfaces and on electrical components can cause fires. Never smoke while refuelling or while in a refuelling area.

Caution Precaution

During top-up do not disperse fuel into the environment. If necessary, prepare a container that corresponds to the fuel draining point.

PROLONGED MACHINE INACTIVITY

If the machine is to stand idle for any length of time, proceed as follows:

- Perform a general cleaning.
- Clean the radiator
- Clean the air filter.
- Grease all the parts with grease nipples.
- Disconnect the battery
- Apply an anti-corrosion treatment to all unpainted parts.
- Check all the parts of the machine and, if necessary, replace them.
- Check that the nuts and screws securing all main parts are tight.

- Leave the engine cool and drain the fuel tank before laying the machine up.



Caution Precaution

Empty the fuel tank in a suitably well ventilated place to avoid any possible risk of explosion or fire.

- Store the machine in a secure place where only authorised personnel have access to it.
- To prevent rust from forming on the surfaces of the machine, locate any areas where the paint has removed or where there are signs of wear, and touch up.
- To ensure the engine stays in efficient working order, start it up periodically and allow the crankshaft to turn over at idling speed for about (10-15) minutes.

PUTTING THE MACHINE BACK INTO SERVICE

Before returning the machine to service following a prolonged idle period, inspect the main components to ensure they are in efficient working order.

- In particular, complete the following procedure:
- Check the condition of the battery.
- Check all levels (oil, water, fuel).
- Check the tightness of the main fastening screws and bolts.
- Check the general condition of hydraulic pipelines.
- Lubricate at all grease points.
- Carry out any routine servicing that may be needed.
- Start the engine and run on idle until warm.
- Check the efficiency of all safety devices.
- Give the machine a general clean, taking particular care over the driving position and controls.
- Check the pressure of the tyres.

MAINTENANCE RECOMMENDATIONS

- Before carrying out any maintenance operation or adjustment, activate all safety devices on the machine and establish whether there is any need to inform persons close by, working or otherwise. In particular, post suitable warnings around the work area and disallow access to any devices that could, if activated, generate unexpected hazard conditions and constitute a risk to the health and safety of individuals.
- Keep the machine in perfect running conditions and carry out scheduled maintenance operations.
- ALWAYS perform the overhauls envisioned (indicated in the table "Maintenance interval table") at the manufacturer's authorised workshop, according to the frequencies indicated or at least once a year.
- Good maintenance will maintain the best performance, a longer working duration and a constant preservation of the safety requirements through time.
- Check the tightness of hydraulic fittings, of the main fastening bolts and of the wheel bolts.
- Only replace worn parts with original spare parts.
- Use oils and grease recommended by the manufacturer. Do not mix oils with different brand names or features.



Important

The manufacturer disclaims any liability arising from the use of "Long Life" lubricants.

- Do not disperse pollutant liquids, worn parts and maintenance residues in the environment. Respect all applicable legislation when disposing of such parts and materials.
- Unless explicitly instructed otherwise, perform all maintenance with the engine switched off, and with the ignition key removed and kept safe by the operator.
- Before carrying out any work on the engine or adjacent parts, make certain it has cooled down completely.
- Personnel authorised to perform maintenance must implement all measures necessary to ensure the safety of all persons involved, and must comply with all applicable legislation on safety at work.
- When performing interventions on the engine, ALWAYS make sure that the bonnet is completely raised correctly in order to prevent it being able to close unexpectedly with the risk of crushing the body.

Important

The warranty expires if the periodical service and the inspection and maintenance intervals indicated in the user manual are not respected.

- Services must be carried out at enabled and authorised workshops according to the manufacturer procedures.

MAINTENANCE DURING THE RUNNING-IN PERIOD

The machine is delivered from the factory in running order and with brief initial running-in.

- In the first period of use it is fundamental to respect the maintenance intervals indicated.

After the first 50 hours

- Change the engine oil
For further details refer to the engine's user manual.
- Replace the engine oil filter
For further details refer to the engine's user manual.

MAINTENANCE INTERVAL TABLE

Table 7.1: Periodic maintenance table

<i>Frequency</i>	<i>Component</i>	<i>Type of operation</i>	<i>Type of activity</i>
When necessary or yearly	Cab air filter	Clean	- See "Cleaning the cab air filter"
	Engine air cleaner	Clean	- See "Cleaning the engine air cleaner (TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400)"
		Replace	- See "Replacing the air filter (TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400)"
	"Cyclone" pre-filter	Clean	- See "'Cyclone" pre-filter cleaning"
	Gas springs	Replace	- See "gas spring replacement"
	Radiator	Clean	- See "Cleaning the radiator"
	Machine	Clean	- See "Cleaning the machine"
	Bleed brakes and clutch system	Bleed the circuit	- Consult an authorised workshop
Each workday	Hydraulic pipelines	Inspect and verify wear and corrosion	- Consult an authorised workshop
	Engine oil	Control level	- See "Checking the engine oil level"

Table 7.1: Periodic maintenance table

Frequency	Component	Type of operation	Type of activity
Every 50 h	Engine air cleaner (²)	Clean	- See "Cleaning the engine air cleaner (TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400)"
	Fuel filter	Bleed the circuit	- Consult the manual accompanying the engine.
	Alternator fan belt	Control voltage	- Consult the manual accompanying the engine.
	Windscreen washing liquid	Control level	- Top-up to suitable level
	Coolant	Control level	- See "Checking the engine coolant level"
	Front and rear transmission oil	Control level	- See "front and rear transmission oil level check (TX S - TRX S)" - "front and rear transmission oil level check (TRX - TRG)"
	Clutch oil	Control level	- See "Control brakes and clutch system oil level"
	Brake oil	Control level	- See "Control brakes and clutch system oil level"
Every 150 h	Machine components	Lubricate	- See "Location of lubrication points"
	Reduction gears oil	Control level	- See "Check (TX S - TRX S -TRX) oil level reducers." - "Check (TRG) oil level reducers."
	Tyres	Control pressure	- See "Checking the pressure of the tyres"
	Wheel bolts	Control tightness	- See "Changing tyres"
Every 200 h	Machine components	Lubricate	- See "Location of lubrication points"
	Engine oil (Tractor model TX 7800 S - TRX 7800 S - TRX 7800 - TRX 9800 - TRG 9800 only). (¹)	Replace	- Consult the manual accompanying the engine.
	Engine oil filter (Tractor model TX 7800 S - TRX 7800 S - TRX 7800 - TRX 9800 - TRG 9800 only). (¹)	Replace	- Consult the manual accompanying the engine.

Table 7.1: Periodic maintenance table

Frequency	Component	Type of operation	Type of activity
Every 300 h	Engine oil (Tractor model TRX 8400 - TRX 10400 - TRG 10400 only). (*)	Replace	- Consult the manual accompanying the engine.
	Engine oil filter (Tractor model TRX 8400 - TRX 10400 - TRG 10400 only). (*)	Replace	- Consult the manual accompanying the engine.
	Fuel filter (Tractor model TRX 8400 - TRX 10400 - TRG 10400 only).	Replace	- Consult the manual accompanying the engine.
Every 500 h	Engine oil (Tractor model TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900 only). (*)	Replace	- Consult the manual accompanying the engine.
	Engine oil filter (Tractor model TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900 only). (*)	Replace	- Consult the manual accompanying the engine.
	Fuel filter (Tractor model TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900 only).	Replace	- Consult the manual accompanying the engine.
	Engine cooling fan belt (Tractor model TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900 only).	Replace	- Consult the manual accompanying the engine.
Every 600 h	Front and rear transmission oil	Replace	- See "Front and rear transmission oil change (TX S - TRX S)" - "Front and rear transmission oil change (TRX - TRG)"
	Reduction gears oil	Replace	- See "Oil change, reduction units (TX S - TRX S - TRX)" - "Oil change, reduction units (TRG)"
	Hydraulic oil filters	Replace	- See "Hydraulic oil filter change"
	Fuel filter (Tractor model TX 7800 S - TRX 7800 S - TRX 7800 - TRX 9800 - TRG 9800 only).	Replace	- Consult the manual accompanying the engine.
	Battery	Check the charge level.	- See "Battery charge level (with indicator) control"

Table 7.1: Periodic maintenance table

<i>Frequency</i>	<i>Component</i>	<i>Type of operation</i>	<i>Type of activity</i>
Every 1200 hours or at the end of every year	Alternator fan belt	Replace	- Consult the manual accompanying the engine.
	Engine air cleaner	Replace	- See "Replacing the air filter (TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400)"
Every 2400 hours or at the end of every two years	Coolant	Replace	- Consult the manual accompanying the engine.
	Clutch oil	Replace	- Consult an authorised workshop
	Brake oil	Replace	- Consult an authorised workshop
Every 5 years	General hydraulic system pipes Brakes hydraulic system pipes Clutch hydraulic system pipes	Replace	- Consult an authorised workshop

(1) The first replacement must be performed after the first 50 hours

(2) Replace the element after 6 cleaning operations or every 12 months

In machines with filter unit equipped with internal cartridge, replace it every 2 replacements of the external one.

CLEANING THE MACHINE

For this operation, proceed as follows.

1. Remove the ignition key from the starter switch and protect the switch with the special cover to prevent oxidation of the contacts or a short-circuit in the electrical system.
2. Remove all residues of grass and leaves.
3. Wash the machine with a jet of water, taking care to avoid spraying directly on to electrical parts
 - **Use industrial biodegradable detergents for cleaning.**
 - DO NOT use aggressive chemical products and/or hydrocarbon or alcohol based solvents, especially for plastic components.
 - **Do not direct the jet of water onto the engine when hot, onto the exhaust pipe, or near any components that could be damaged by the pressure of the water**
4. Blow the implement dry with compressed air, then grease all greasing points and sliding surfaces with water-repellent grease.

CLEANING THE RADIATOR

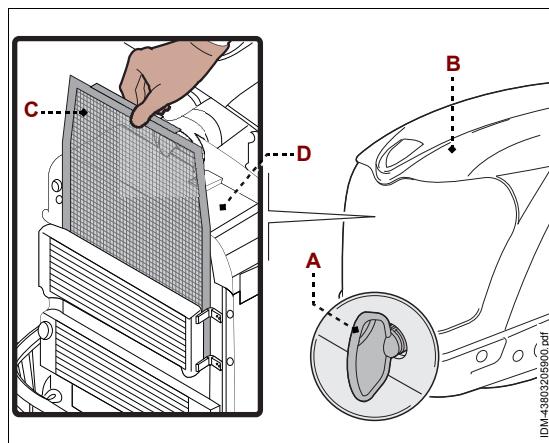
For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Allow the engine to cool down, so that there will be no risk of scalding.
3. Open engine bonnet (B) using the key (A).
4. Remove the protection grid (C).
5. Clean the grid (C) and the radiator (D) with a jet of compressed air.
 - **Do not go too close to the radiator fins with the jet of air, thus preventing damage.**
6. Re-mount the protection grid (C).
7. Shut the hood when finished.



Caution Precaution

Wear the eye protections and the mask to prevent the danger generated by dusts that can come into contact with the eyes and respiratory tract.



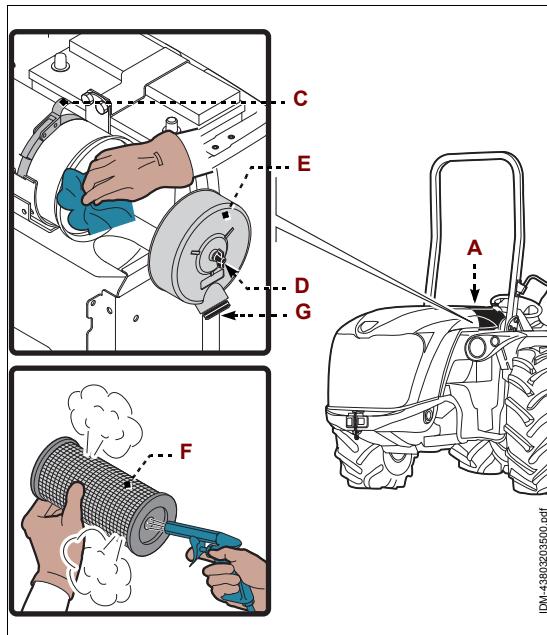
CLEANING THE ENGINE AIR CLEANER (TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400)

For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Allow the engine to cool down, so that there will be no risk of scalding.
3. Unscrew the knobs and remove the grille (**A**).
4. Release the strap (**C**) and lift the filter unit.
5. Loosen the screws (**D**) to remove the lid (**E**).
6. Remove the element (**F**).
7. Clean the element (**F**) with a jet of air (max 3 bar) directed inside out.
8. Clean the drain valve (**G**) and the internal part of the filter container with a damp cloth.
9. Refit the filter element (**F**) and the cover (**E**).
10. Re-position the filter unit and re-attach the strap (**C**).
11. Fit the guard (**A**) at the end of the operation.

Caution Precaution

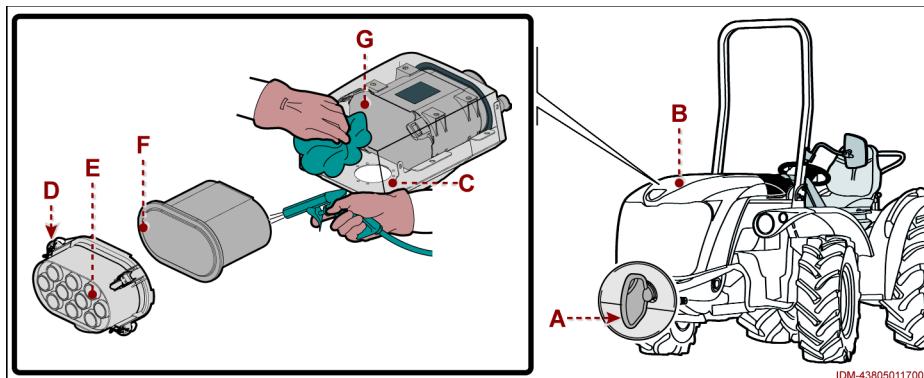
Wear the eye protections and the mask to prevent the danger generated by dusts that can come into contact with the eyes and respiratory tract.



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CLEANING THE ENGINE AIR CLEANER (TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900)

For this operation, proceed as follows.



1. Stop the machine and activate all relevant safety devices.
2. Allow the engine to cool down, so that there will be no risk of scalding.
3. Open engine bonnet (**B**) using the key (**A**).
4. Open the door (**C**).
5. Open the hooks (**D**) and dismantle the cover (**E**).
 - Lift the filter unit slightly, to make it easier to open the lower hooks.
6. Remove the element (**F**).
7. Clean the element (**F**) with a jet of air (max 3 bar) directed inside out.
8. Clean the internal part of the filter container (**G**) from dust residue with a damp cloth.
9. Refit the cartridge (**F**).
10. Assemble the cover (**E**) and fix it with the hooks (**D**).
 - Lift the filter unit slightly, to make it easier to close the lower hooks.
11. Insert the filter unit into its seat.
12. Close the door (**C**).
13. Shut the hood when finished.



Caution Precaution

Wear the eye protections and the mask to prevent the danger generated by dusts that can come into contact with the eyes and respiratory tract.

"CYCLONE" PRE-FILTER CLEANING

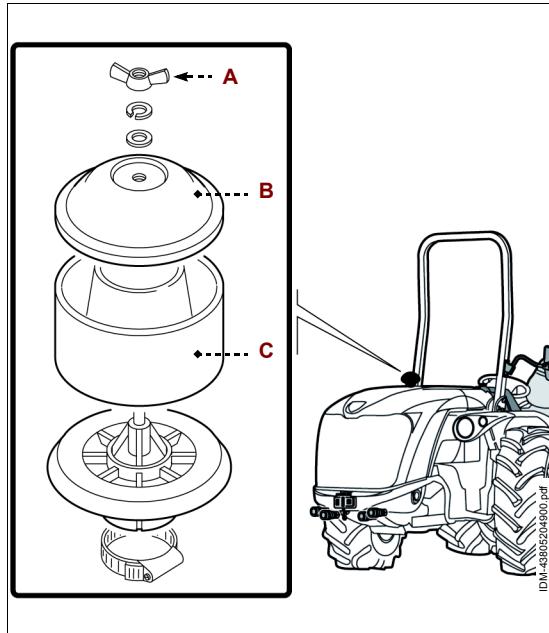
For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Undo the nut (**A**).
3. Remove the cover (**B**).
4. Disassemble the tray (**C**) and clean with a damp cloth.
5. Reassemble the tray (**C**) and the cover (**B**) when operation is complete.

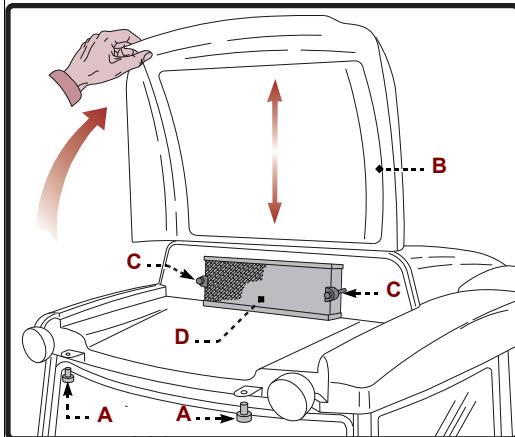


Caution Precaution

Wear the eye protections and the mask to prevent the danger generated by dusts that can come into contact with the eyes and respiratory tract.



CLEANING THE CAB AIR FILTER



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For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Unscrew the ball grips (**A**) and lift the roof (**B**).
3. Loosen the knobs (**C**) and rotate the locking levers of the filter (**D**).
4. Extract the filter (**D**) and clean it with a jet of compressed air.
 - Blow air from the inside towards the outside, until all the dust is completely removed.
 - **Do not aim the jet of air too near to the filter in order to prevent damage.**
5. Re-mount the filter (**D**).

Important

Check that the arrow on the filter faces towards the inside of the cab.

6. Loosen the locking levers of the filter and secure the knobs (**C**).
7. Lower the roof (**B**) and tighten the ball grips (**A**).

Caution Precaution

Wear the eye protections and the mask to prevent the danger generated by dusts that can come into contact with the eyes and respiratory tract.

CHECKING THE PRESSURE OF THE TYRES

For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Inspect the tyres for wear and check the pressure.

Important

Check the pressure without additional weights on the machine and without any interchangeable tool hitched.

- To ensure tyres are inflated to the correct pressure, be certain of:
 - the make and type of tyre
 - the tyre size
 - the equipment installed on the machine
 - the nature of the work to be carried out

Important

For maximum confidence when setting tyre pressures, it will always be advisable to follow the indications given by the manufacturer of the tyre.

Tyre pressures for use on loose soils

- A) correct inflation pressure:** Tyres inflated to the minimum pressure indicated for the load on the machine will give satisfactory results: the soil is penetrated correctly by the tyre lugs, good grip is obtained, and the tread stays clean.
- B) Inflation pressure too low:** Tyres inflated to a pressure insufficient for the load on the machine will give unsatisfactory results: the soil is not penetrated correctly by the tyre lugs, grip is poor, and the carcass of the tyre suffers damage, especially when subjected to traction forces.

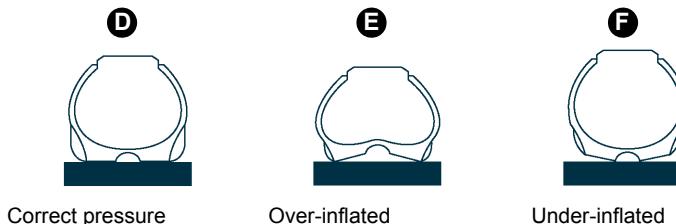
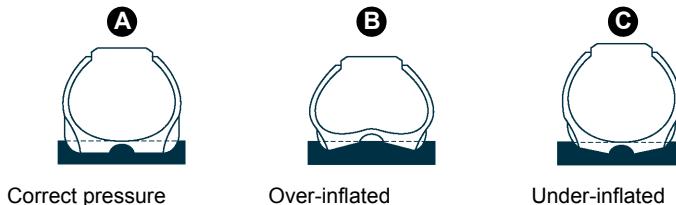
- C) inflation pressure too high:** Tyres inflated to a pressure higher than necessary for the load on the machine will give unsatisfactory results: less grip between tread and soil, a greater likelihood of the carcass being cut and damaged in the event of impact, and a conspicuous degrading effect on the soil.

Tyre pressures for use on firm soils or road surfaces

- D) correct inflation pressure:** Tyres inflated to the maximum pressure indicated for the load on the machine will give satisfactory results: less wear on the lugs of the tread, and better preservation of the carcass.
- E) Inflation pressure too low:** Tyres inflated to a pressure insufficient for the load on the machine will give unsatisfactory results: rapid and irregular wear on the tread, damage to the carcass, and unstable rotation of the tyre.
- F) inflation pressure too high:** Tyres inflated to a pressure higher than necessary for the load on the machine will give unsatisfactory results: a less than

comfortable ride for the driver, rapid and irregular wear on the tread, and a greater likelihood of the carcass being cut and damaged in the event of impact.

TYRES PRESSURE ON EARTH



TYRES PRESSURE ON ROAD

Table 7.2: Tyres pressure

Tyre type	Inflation pressure (front). bar	Inflation pressure (rear). bar	Maximum pressure bar
31x15.50-15 4 PR	0,8	0,8	1,4
36x13.50-15 4 PR	0,8	0,8	1,4
300/80-15.3 123/111 A8	1,4	1,4	2
11 LR 16 122 A8	1,4	1,4	2,4
425/55 R17 134G	1,4	1,4	3,5
400/55-17.5 8 PR	0,8	0,8	2
250/80-18 8 PR	1,4	1,4	3,1
280/70 R18 114 A8	1,4	1,4	2,4
320/65 R18 109 A8	1,4	1,4	1,6
340/65 R18 113 A8 / 110 B	1,4	1,4	1,6
9.5 R20 8 PR	1,4	1,4	2,8
11.2 R20 111 A8	1,4	1,4	1,6
280/85 R20 112 A8	1,4	1,4	1,6
300/70 R20 110 A8	1,4	1,4	1,6
320/70 R20 113 A8	1,4	1,4	1,6
335/80 R20 153 A2 / 141 B	-	1,4	1,6
360/70 R20 120 A8	-	1,4	1,6

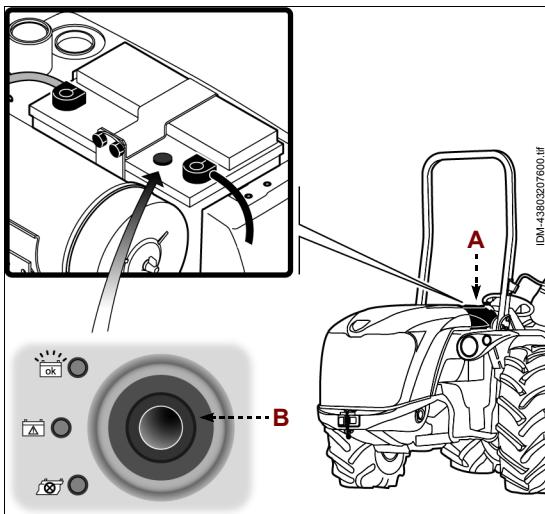
Table 7.2: Tyres pressure

Tyre type	Inflation pressure (front). bar	Inflation pressure (rear). bar	Maximum pressure bar
380/70 R20 122 A8	-	1,4	1,6
420/65 R20 125 A8	-	1,4	1,6
12,4 R24 119 A8	-	1,4	1,6
320/85 R24 122 A8	-	1,4	1,6
360/70 R24 122 A8	-	1,4	1,6
420/65 R24 121 A8	-	1	1,2

BATTERY CHARGE LEVEL (WITH INDICATOR) CONTROL

For batteries equipped with indicator proceed as indicated.

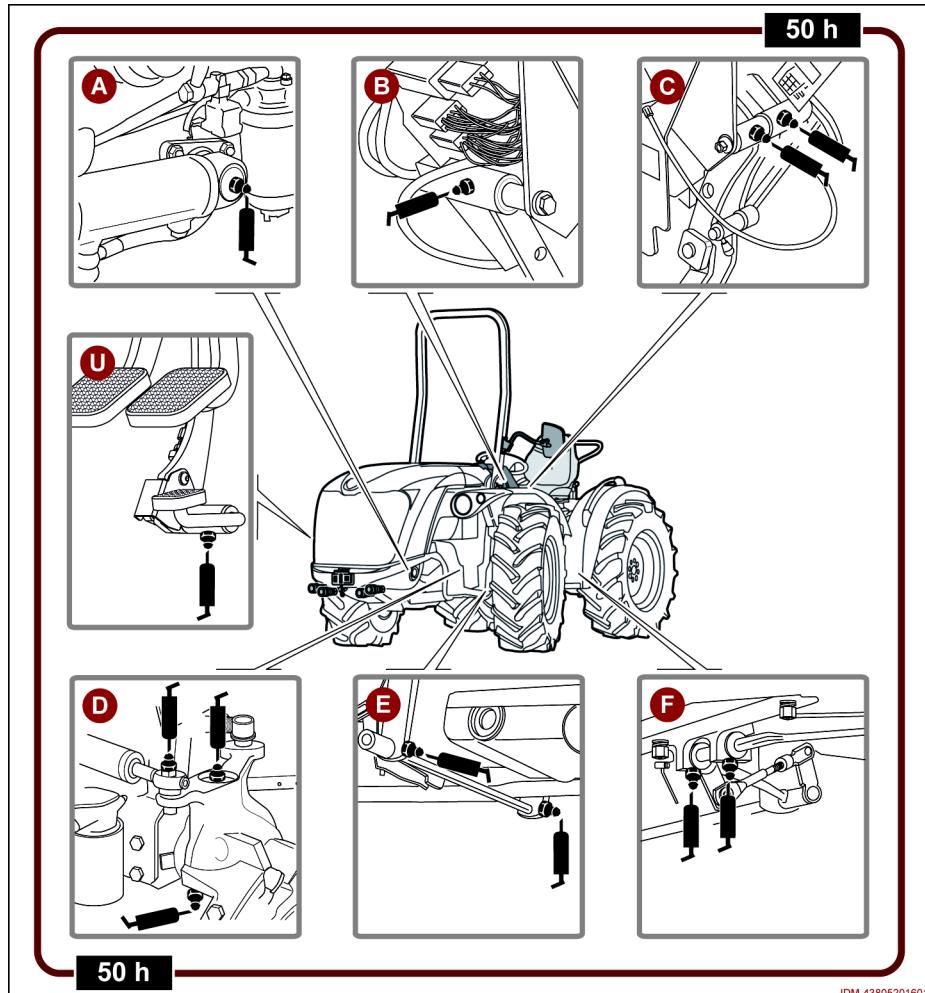
1. Stop the machine and activate all relevant safety devices.
2. Allow the engine to cool down, so that there will be no risk of scalding.
3. Unscrew the knobs and remove the grille (**A**).
4. Check the colour of the eyelet (**B**).
 - Green = battery charged.
 - Grey = battery exhausted.
 - White = battery to be replaced.
 For more details, see "Changing the battery" heading.
5. Fit the guard (**A**) at the end of the operation.



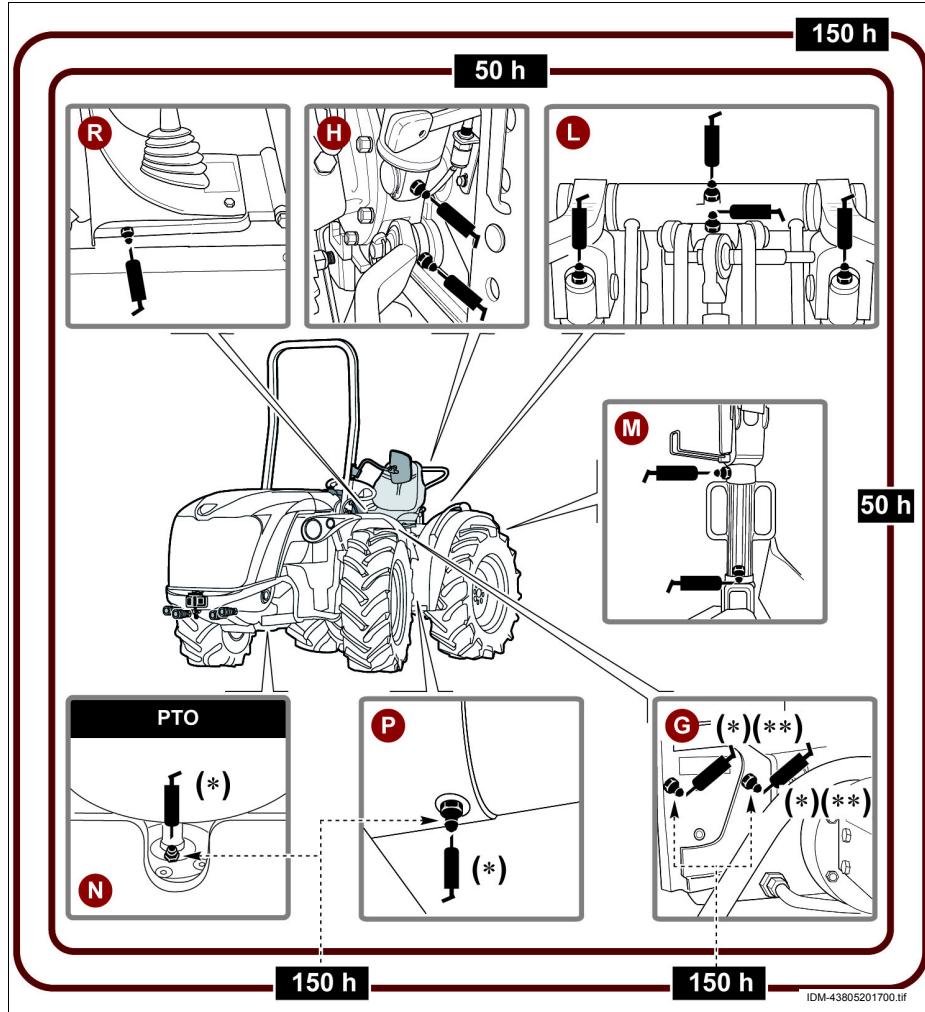
LOCATION OF LUBRICATION POINTS

Model TRX - TRG

- Lubricate all the parts shown at the intervals specified.



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(*) Use TECNOLUBESEAL fluorocarbon gel 875 L-MS Grease or equivalent.

(**) Interrupt refuelling when the grease leaks out of the bleeding valve opposite to the grease nipple.

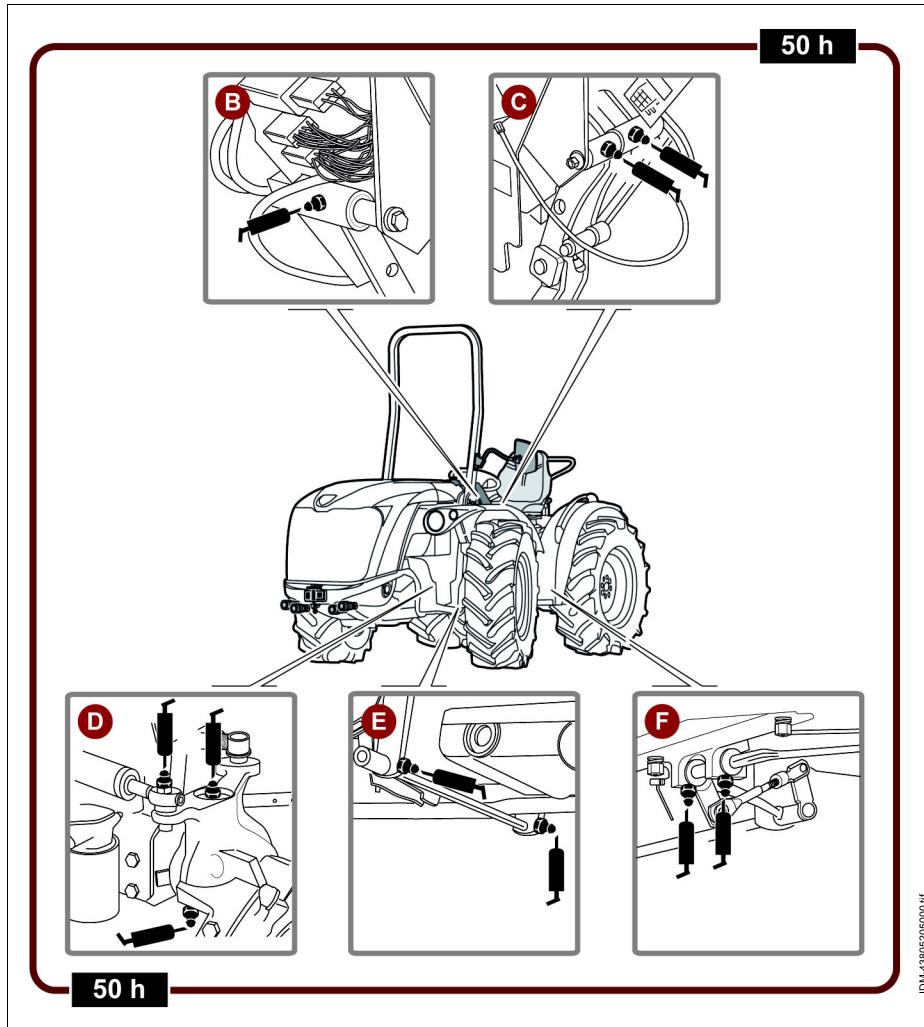


Important

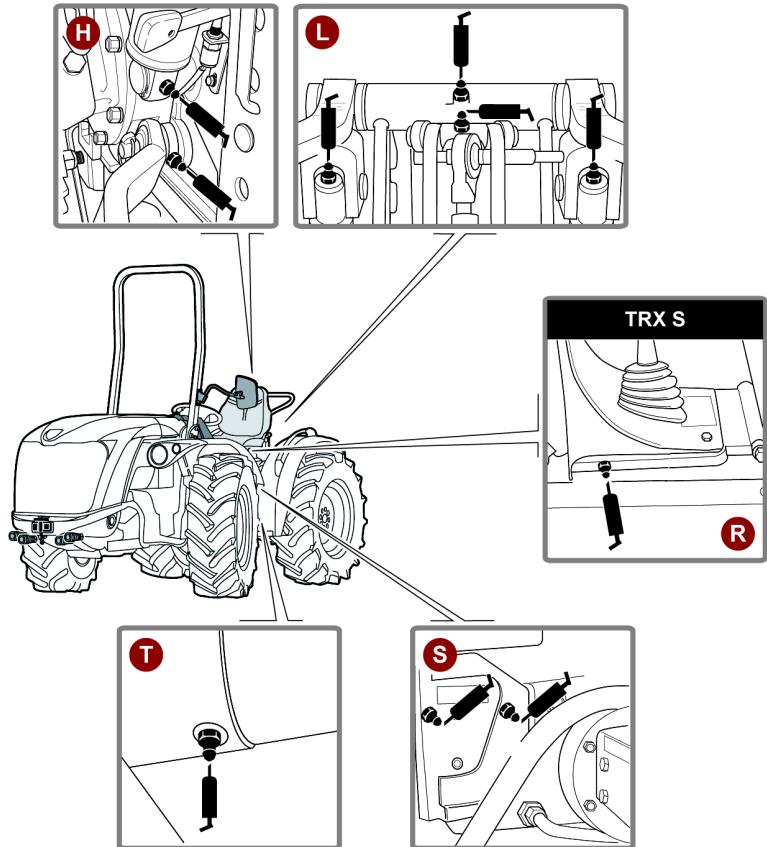
Clean the areas around grease nipples before injecting grease, to avoid injecting dirt together with the grease.

Model TX S - TRX S

- Lubricate all the parts shown at the intervals specified.



50 h



50 h

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Important

Clean the areas around grease nipples before injecting grease, to avoid injecting dirt together with the grease.

LUBRICANT TABLE

Antonio Carraro machines need lubricants that can ensure high performance in compliance with the technical specifications.

- With this goal, Antonio Carraro has selected special formulations of lubricants that will also be made available for "maintenance" after the initial filling in the factory.
- "Tony Gold Premium" is the only line of lubricants guaranteed by Antonio Carraro, which helps to reduce fuel consumption and, while being environmentally friendly, maintains high performance and maximum reliability.
- Ask your dealer for lubricants in the "Tony Gold Premium" line, available in handy, convenient packs.

Table 7.3: Lubricant features

<i>Lubricant type</i>	<i>Parts to be lubricated</i>	<i>Quantity (litres) (*)</i>
Oil Tony Gold PREMIUM ENGINE OIL 15W40 or Mobil Delvac MX Extra 10W-40 (²)	Engine (Tractor model TRX 8400 - TRX 10400 - TRG 10400 only).	see the manual accompanying the engine
Oil Tony Gold PREMIUM STOU 15W40 or Mobil Agri Super 15W-40	Engine (Tractor model TX 7800 S - TRX 7800 S - TRX 7800 - TRX 9800 only).	minimum 8 maximum 9
	Engine (Tractor model TRG 9800 only).	minimum 6,6 maximum 11,5
	Engine (Tractor model TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900 only).	13,2
Oil Tony Gold POWERFLUID XP or Mobilfluid 424	Front transmission housing (Tractor model TX S - TRX S only).	8
	Front transmission housing (Tractor model TRX - TRG only).	14
	Rear transmission housing (Tractor model TX S - TRX S only).	22
	Rear transmission housing (Tractor model TRX - TRG only).	24,5
oil Mobil Lube HD 85W 140	Front reduction gears (right + left)	1,8
	Rear reduction gears (right + left)	2,6
Oil Tony Gold POWERFLUID XP or Shell Spirax S6 TXME	Brake and clutch control linkages	-
grease MOBIL Grease XHP 222	Grease nipples (A-B-C-D-E-F-H-L-M-R-S-T-U)	-
grease TECNOLUBESEAL fluorocarbon gel 875 L-MS	central joint (G) (Tractor model TRX - TRG only).	-
	Front power take-off (N) (Tractor model TRX - TRG only).	-
	PTO shaft (P) (Tractor model TRX - TRG only).	-

(¹) Approximate values that do not take into account a possible top-up to be done after starting the vehicle.

(²) As an alternative the use of lubricant Mobil Delvac XHP LE 10W-40 is recommended.

Important

Tractor model TX S - TRX S only

- The implements connected to the hydraulic outlets must use the same oil contained in the rear oil change box or an oil with the same characteristics to avoid causing serious damage to the machine.

Table 7.4: Lubricant features "Mobilfluid 424"

<i>Description</i>	<i>Value</i>
Oil type	API GL-4
Viscosity (ASTM D 445 cSt 40°C)	55
Viscosity (ASTM D 445 cSt 100°C)	9,3
Viscosity (Brookfield cP -35°C)	55000
Viscosity index (ASTM D 2270)	145
Pour point (ASTM D 97)	-42
Flash point (ASTM D 92)	198
Density (ASTM D 4052 15°C)	0,88

COOLANT COMPOSITION TABLE

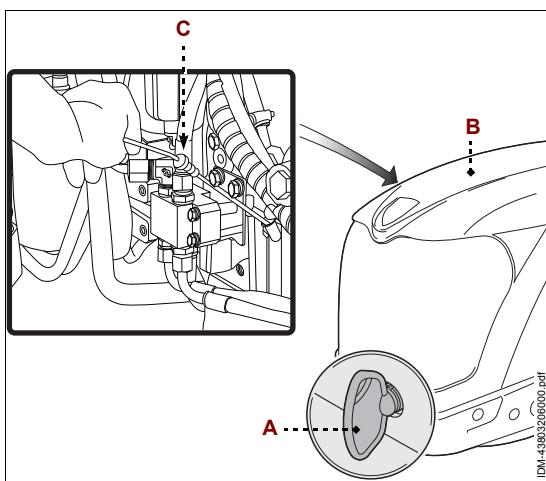
Table 7.5: Cooling liquid concentration percentage

<i>Percentage concentration (Gisteda-Flù antifreeze)</i>	<i>Operating temperature</i>
18%	down to -8°C
28%	down to -13°C
36%	down to -20°C
40%	down to -24°C
50%	down to -38°C

CHECKING THE ENGINE OIL LEVEL

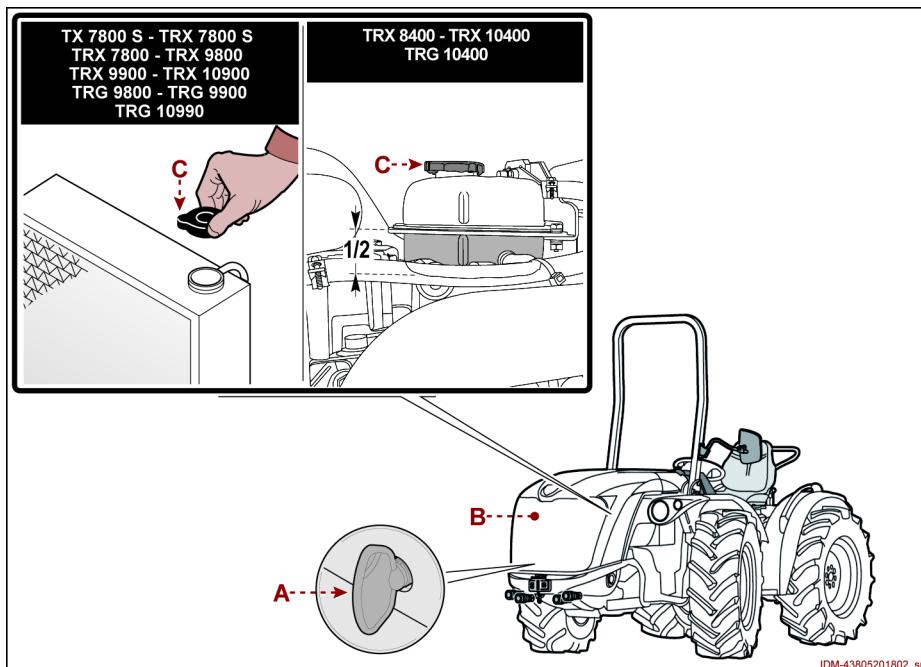
For this operation, proceed as follows.

- Stop the machine and activate all relevant safety devices.
- Allow the engine to cool down, so that there will be no risk of scalding.
- Only check and add oil with the machine parked on flat ground and with the engine cold.**
- Open engine bonnet (B) using the key (A).



- Pull out the dipstick (**C**) and check the oil level. Add oil as necessary, up to but not beyond the maximum level mark (Consult the manual accompanying the engine).
- Shut the hood when finished.

CHECKING THE ENGINE COOLANT LEVEL



For this operation, proceed as follows.

- Stop the machine and activate all relevant safety devices.
- Allow the engine to cool down, so that there will be no risk of scalding.
- Open engine bonnet (**B**) using the key (**A**).



Caution **Precaution**

DO NOT open the expansion tank cap before the refrigerant liquid has reached environment temperature (cold engine).

- Unscrew the cap (**C**) to inspect the level of the coolant in the header tank, and top up if necessary.

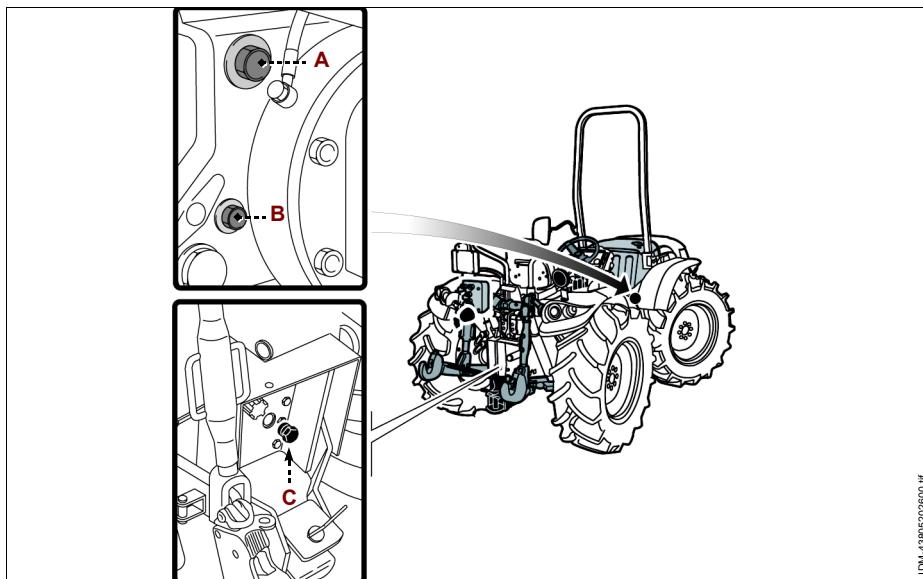


Important

The radiator must be maintained at the correct level with a mixture of distilled water and antifreeze liquid for its protection. Check the concentration of the mixture with the appropriate tool at least once a year.

5. Retighten the plug.
6. Shut the hood when finished.

FRONT AND REAR TRANSMISSION OIL LEVEL CHECK (TX S - TRX S)



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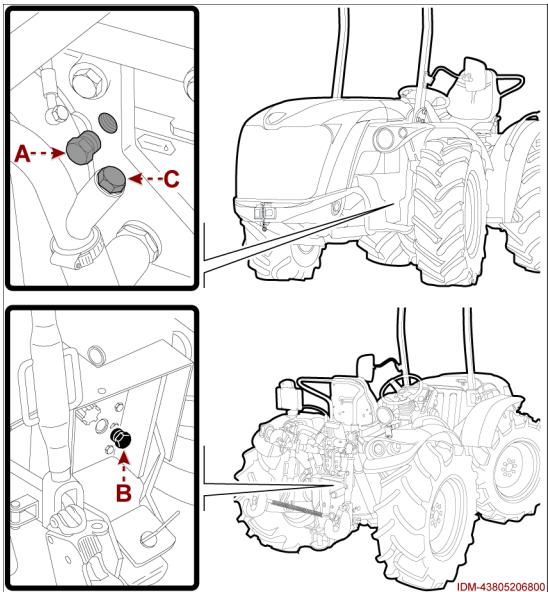
For this operation, proceed as follows.

1. Lower the power lift unit completely.
2. Stop the machine and activate all relevant safety devices.
3. Allow the engine to cool down, so that there will be no risk of scalding.
4. Unscrew the filler plug (**A**).
5. Loosen the cap (**B**) and check that the oil level arrives in proximity of the lower edge of the hole.
6. Pour in fresh oil through the hole vacated by the filler plug (**A**), continuing until the fluid is up to the bottom edge of the level plug hole (**B**)
7. Tighten the caps (**A-B**).
8. Loosen the cap (**C**) and check that the oil level arrives in proximity of the lower edge of the hole.
9. Top-up using the whole (**C**) (if necessary) and tighten the cap.

FRONT AND REAR TRANSMISSION OIL LEVEL CHECK (TRX - TRG)

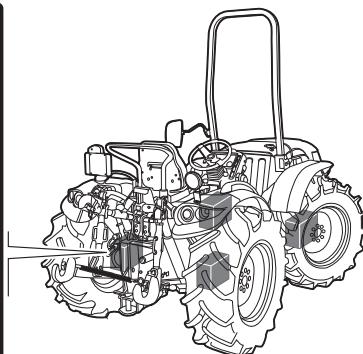
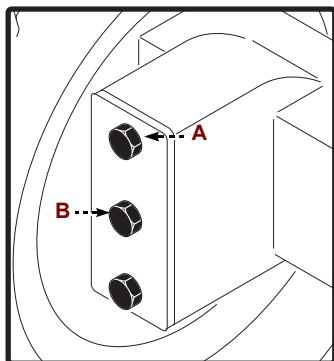
For this operation, proceed as follows.

1. Lower the power lift unit completely.
2. Stop the machine and activate all relevant safety devices.
3. Allow the engine to cool down, so that there will be no risk of scalding.
4. Unscrew the filler plug (**C**).
5. Loosen the cap (**A**) and check that the oil level arrives in proximity of the lower edge of the hole.
6. Pour in fresh oil through the hole vacated by the filler plug (**C**), continuing until the fluid is up to the bottom edge of the level plug hole (**A**)
7. Tighten the caps (**A-C**).
8. Loosen the cap (**B**) and check that the oil level arrives in proximity of the lower edge of the hole.
9. Top-up using the whole (**B**) (if necessary) and tighten the cap.



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CHECK (TX S - TRX S -TRX) OIL LEVEL REDUCERS.

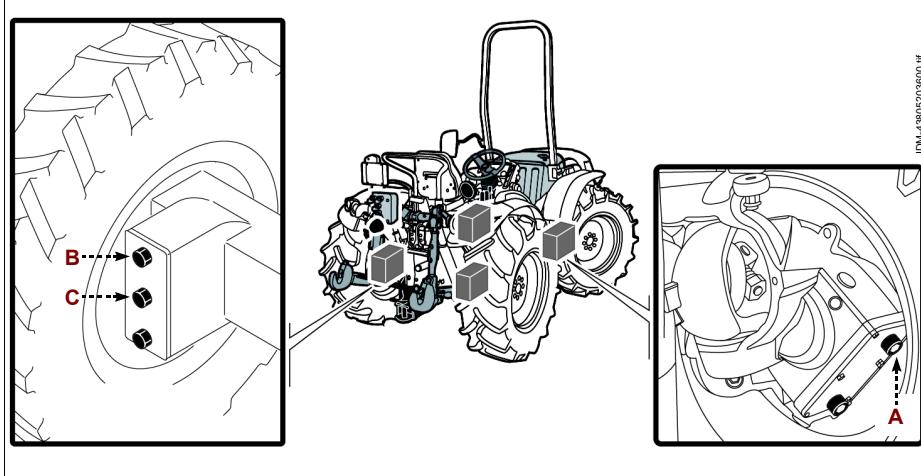


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For this operation, proceed as follows.

1. Lower the power lift unit completely.
2. Stop the machine and activate all relevant safety devices.
3. Allow the engine to cool down, so that there will be no risk of scalding.
4. Unscrew the filler plug (**A**).
5. Loosen the cap (**B**) and check that the oil level arrives in proximity of the lower edge of the hole.
6. Pour in fresh oil through the hole vacated by the filler plug (**A**), continuing until the fluid is up to the bottom edge of the level plug hole (**B**)
7. Tighten the caps (**A-B**).
8. Repeat the same operation on all other reduction gears.

CHECK (TRG) OIL LEVEL REDUCERS.



For this operation, proceed as follows.

1. Lower the power lift unit completely.
2. Stop the machine and activate all relevant safety devices.
3. Allow the engine to cool down, so that there will be no risk of scalding.

Front transmission housing

4. Loosen the cap (**A**) and check that the oil level arrives in proximity of the lower edge of the hole.
5. Top-up (if necessary) and tighten the cap (**A**).
6. Repeat the same operation on all other reduction gears.

Rear transmission housing

7. Unscrew the filler plug (**B**).
8. Loosen the cap (**C**) and check that the oil level arrives in proximity of the lower edge of the hole.
9. Pour in fresh oil through the hole vacated by the filler plug (**B**), continuing until the fluid is up to the bottom edge of the level plug hole (**C**)
10. Tighten the caps (**B-C**).
11. Repeat the same operation on all other reduction gears.

CONTROL BRAKES AND CLUTCH SYSTEM OIL LEVEL

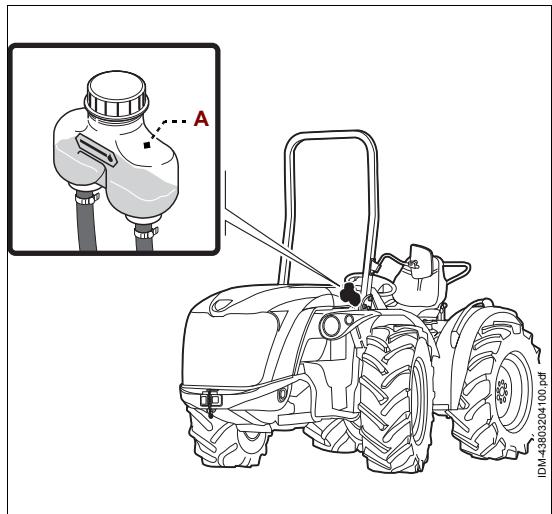
For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Check the level of the oil in the reservoir (A), and top up if necessary

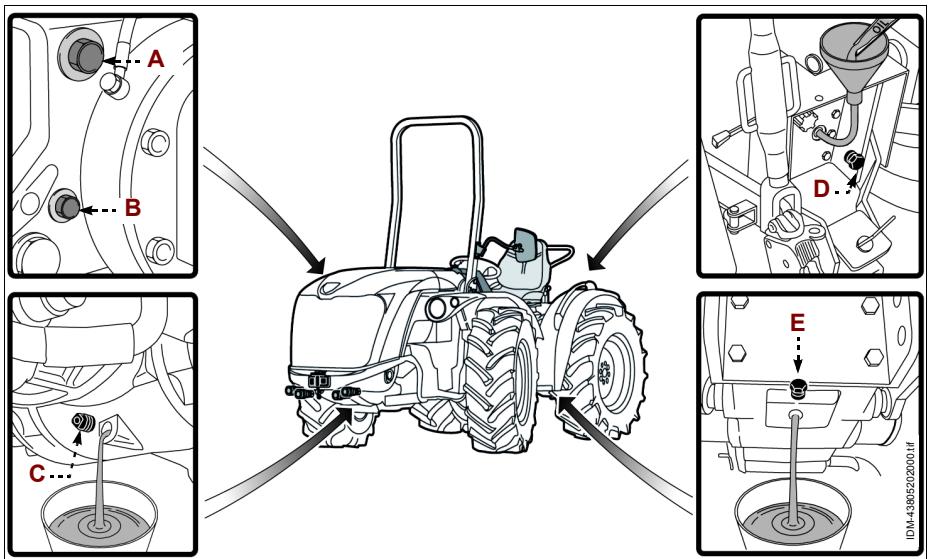
Important

Check that the oil level never drops underneath the minimum level marked.

- Use oil with specifications identical to those indicated in the "Lubricant Table"



FRONT AND REAR TRANSMISSION OIL CHANGE (TX S - TRX S)



For this operation, proceed as follows.

1. Lower the power lift unit completely.
2. Stop the machine and activate all relevant safety devices.

3. Allow the engine to cool down, so that there will be no risk of scalding.
4. Prepare a container with suitable capacity, which corresponds with the drain caps.

Front transmission housing

5. Unscrew the filler plug (**A**).
6. Unscrew the level plug (**B**).
7. Unscrew the drain plug (**C**) and leave the old oil drain out into the container.
8. Retighten the drain plug (**C**).
9. Introduce the new oil through the hole in the load cap (**A**) until the lower edge of the cap hole is reached (**B**).
10. Tighten the caps (**A-B**).

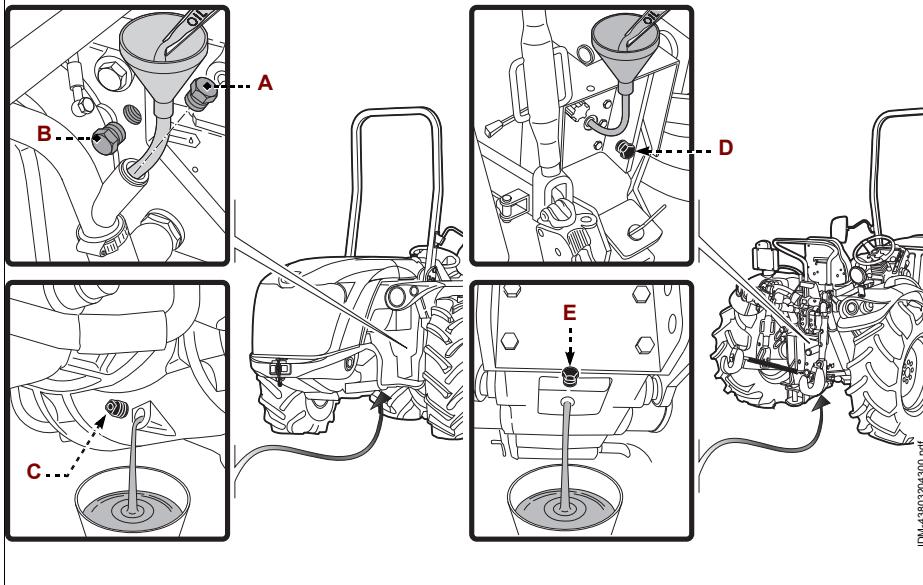
Rear transmission housing

11. Tighten the cap (**D**).
12. Unscrew the drain plug (**E**) and leave the old oil drain out into the container.
13. Retighten the drain plug (**E**).
14. Introduce the new oil through the hole in the cap (**D**) until the lower edge of the cap hole is reached.
15. Retighten the plug (**D**).
16. On completion of all operations, check that there are no leaks in proximity of the caps.

Important

Use oil with specifications identical to those indicated in the "Lubricant Table"

- Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.**



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For this operation, proceed as follows.

1. Lower the power lift unit completely.
2. Stop the machine and activate all relevant safety devices.
3. Allow the engine to cool down, so that there will be no risk of scalding.
4. Prepare a container with suitable capacity, which corresponds with the drain caps.

Front transmission housing

5. Unscrew the filler plug (**A**).
6. Unscrew the level plug (**B**).
7. Unscrew the drain plug (**C**) and leave the old oil drain out into the container.
8. Retighten the drain plug (**C**).
9. Introduce the new oil through the hole in the load cap (**A**) until the lower edge of the cap hole is reached (**B**).
10. Tighten the caps (**A-B**).

Rear transmission housing

11. Tighten the cap (**D**).

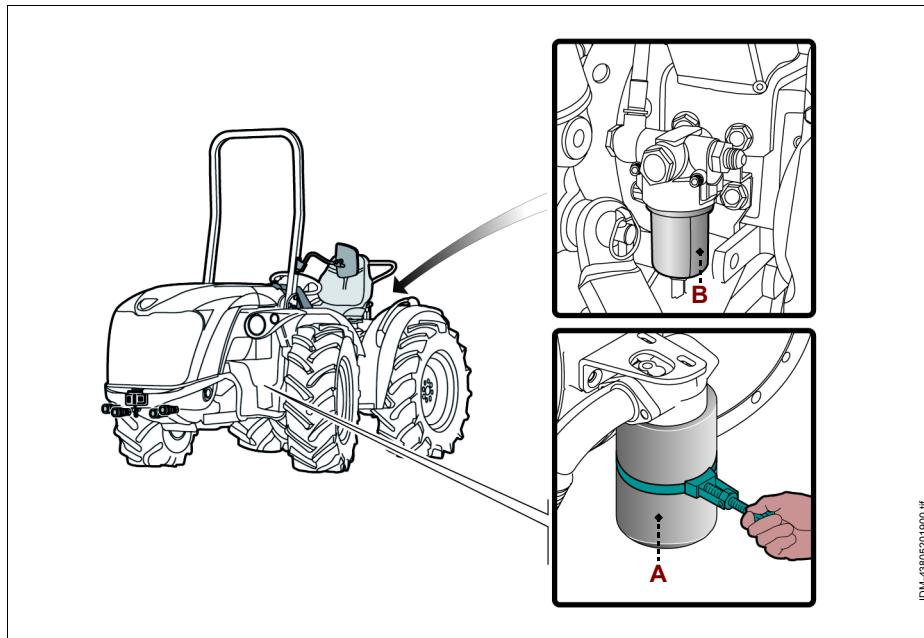
12. Unscrew the drain plug (**E**) and leave the old oil drain out into the container.
13. Retighten the drain plug (**E**).
14. Introduce the new oil through the hole in the cap (**D**) until the lower edge of the cap hole is reached.
15. Retighten the plug (**D**).
16. On completion of all operations, check that there are no leaks in proximity of the caps.

Important

Use oil with specifications identical to those indicated in the "Lubricant Table"

- **Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.**

HYDRAULIC OIL FILTER CHANGE



For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
 2. Allow the engine to cool down, so that there will be no risk of scalding.
- Only check and add oil with the machine parked on flat ground and with the engine cold.**

3. Position a container with suitable capacity in the oil draining area.

Important

Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.

4. Unscrew the intake hydraulic oil filter (**A**).
5. Lubricate the new filter gasket with hydraulic oil.
6. Mount the new filter and screw it only by hand.
7. Tighten the filter fully home using a relevant band wrench.
8. Check the level of hydraulic oil.

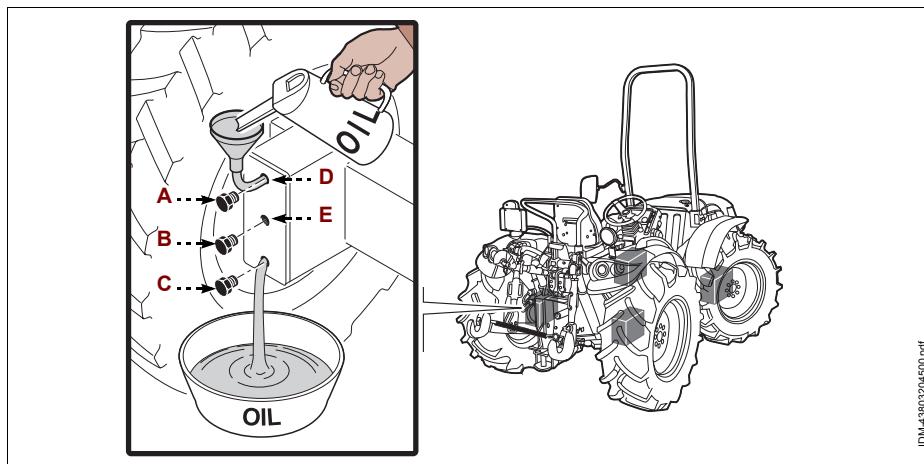
For more details, see "front and rear transmission oil level check (TX S - TRX S)" - "front and rear transmission oil level check (TRX - TRG)" heading.

Tractor model (TRX - TRG) only

9. Unscrew the pressurised hydraulic oil filet r(**B**).
10. Remove the filtering cartridge and clean the container.
11. Insert a new filtering cartridge into the container.
12. Re-mount the filter in its seat.
13. Check the level of hydraulic oil.

For more details, see "front and rear transmission oil level check (TRX - TRG)" heading.

OIL CHANGE, REDUCTION UNITS (TX S - TRX S - TRX)



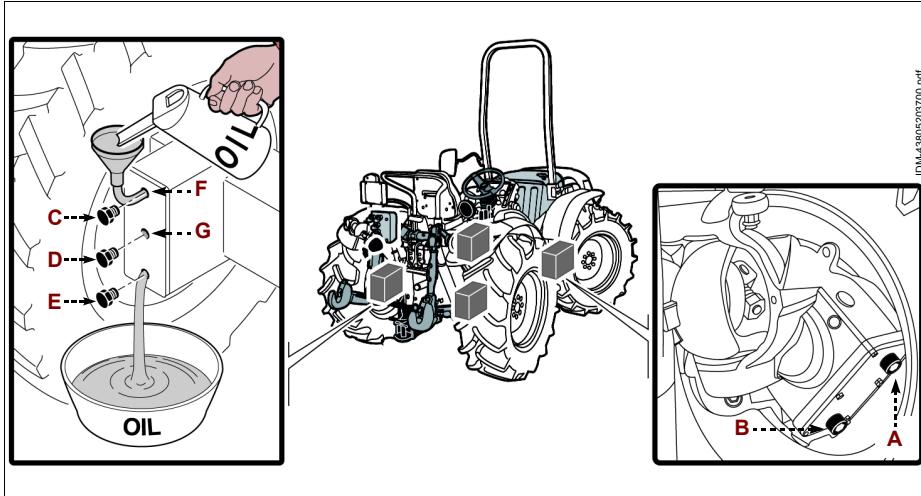
For this operation, proceed as follows.

1. Lower the power lift unit completely.
2. Stop the machine and activate all relevant safety devices.
3. Allow the engine to cool down, so that there will be no risk of scalding.
4. Position a container with suitable capacity in the oil draining area.
5. Unscrew the filler plug (**A**).
6. Unscrew the level plug (**B**).
7. Unscrew the drain plug (**C**) and leave the old oil drain out into the container.
8. Retighten the drain plug (**C**).
9. Pour in new oil through the filler hole (**D**), filling to the lower lip of the level plug hole (**E**)
10. Tighten the caps (**A-B**).
11. Repeat the same operation on all other reduction gears.
12. On completion of all operations, check that there are no leaks in proximity of the caps.

 **Important**

Use oil with specifications identical to those indicated in the "Lubricant Table"

- Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.**



For this operation, proceed as follows.

1. Lower the power lift unit completely.
2. Stop the machine and activate all relevant safety devices.
3. Allow the engine to cool down, so that there will be no risk of scalding.
4. Position a container with suitable capacity in the oil draining area.

Front transmission housing

5. Tighten the cap (**A**).
6. Unscrew the drain plug (**B**) and leave the old oil drain out into the container.
7. Retighten the drain plug (**B**).
8. Introduce the new oil through the hole in the cap (**A**) until the lower edge of the cap hole is reached.
9. Retighten the plug (**A**).
10. Repeat the same operation on all other reduction gears.

Rear transmission housing

11. Unscrew the filler plug (**C**).
12. Unscrew the level plug (**D**).
13. Unscrew the drain plug (**E**) and leave the old oil drain out into the container.
14. Retighten the drain plug (**C**).

15. Pour in new oil through the filler hole (**F**), filling to the lower lip of the level plug hole (**G**)
16. Tighten the caps (**C-D**).
17. Repeat the same operation on all other reduction gears.
18. On completion of all operations, check that there are no leaks in proximity of the caps.



Important

Use oil with specifications identical to those indicated in the "Lubricant Table"

- Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.

BLEED BRAKES AND CLUTCH SYSTEM

This operation must be performed in a workshop equipped with suitable tools and by staff with precise technical skills.

MAJOR SERVICING

This machine has been designed and built to give troublefree operation even in hostile environmental conditions; nonetheless, major servicing will be needed after a number of years to keep it in perfect running order and maintain standards of general safety.

- Servicing operations must be carried out by technicians with the proper skills, in suitably equipped workshops authorised by the manufacturer.

TROUBLESHOOTING

The information given below is designed to help identify and correct any faults and malfunctions that may occur during operation.

Important

For better results when solving problems, these operations should be performed by authorised workshops, where a general check-up can also be performed on the machine.

Table 8.1: Problems at engine start-up phase

Problem	Causes	Solution
Starter motor does not turn	Battery flat	- Recharge or replace the battery (See "Changing the battery").
	Battery terminals oxidised	- Clean the terminals and smear with grease to prevent oxidation
	Main fuse damaged	- Replace the fuse (See "replacing fuses").
	Starter motor damaged	- Replace the starter motor (1)
	Starter switch damaged	- Replace the switch (1)
	PTO control switch engaged	- Deactivate the PTO engagement control (See "Description of dashboard controls").
	Shuttle lever engaged	- Position the lever in neutral
	Safety sensors damaged	- Control sensors efficiency and, if necessary, replace them. (1)
	Clutch pedal not depressed (Machines equipped with robotic controls).	- depress the clutch pedal

Table 8.1: Problems at engine start-up phase

Problem	Causes	Solution
Engine does not start	Clogged fuel filter	- Clean or replace the filter (Consult the manual accompanying the engine).
	Air in the fuel feed circuit	- Bleed the circuit (Consult the manual accompanying the engine).
	Glow plug control unit fuse damaged	- Replace the fuse (See "replacing fuses").
	No fuel in the tank	- Refuel (See "Refuelling").
	Separator filter cock in closed position (OFF)	- Open the cock (ON).
	Engine injection pump electrovalve blocked	- Check the electrovalve and, if necessary, replace it (*)
	No power supply to the engine injection pump electrovalve electric circuit	- Consult an authorised workshop
Black smoke coming from exhaust	Safety sensors damaged	- Control sensors efficiency and, if necessary, replace them. (*)
	Injectors fouled or defective	- Clean or replace the injectors (*)
	Engine overloaded	- Select a lower gear ratio or reduce the load
Coolant temperature warning indicator alight with engine running	Engine oil level low	- Top up the oil level (Consult the manual accompanying the engine).
	Radiator dirty	- Clean the radiator
	Level of coolant in radiator too low	- Restore the correct level of coolant in the radiator
Excessive fuel consumption	Air filter clogged	- Clean or replace the filter (See "Cleaning the engine air cleaner (TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400)").
	Engine overloaded	- Select a lower gear ratio or reduce the load
	Injectors fouled or defective	- Clean or replace the injectors (*)

(*) Operations to be carried out in authorised workshops by persons with the proper skills

Table 8.2: Problems at the PTO and differential units

Problem	Causes	Solution
Power take-off does not turn	PTO selector lever in neutral position	- Shift the lever to select power take-off
	Fuse damaged	- Replace the fuse (See "replacing fuses").
	PTO electrovalve breakdown	- Check the electrovalve and, if necessary, replace it (*)
	Services electrovalve block maximum pressure valve breakdown	- Check the valve and, if necessary, replace it (*)
PTO clutch slipping	PTO electrovalve breakdown	- Check the electrovalve and, if necessary, replace it (*)
	Services electrovalve block maximum pressure valve breakdown	- Check the valve and, if necessary, replace it (*)
Four-wheel drive does not disengage	Fuse damaged	- Replace the fuse (See "replacing fuses").
	Traction disconnection electrovalve breakdown	- Check the electrovalve and, if necessary, replace it (*)
	Services electrovalve block maximum pressure valve breakdown	- Check the valve and, if necessary, replace it (*)
Differential lock does not engage	Fuse damaged	- Replace the fuse (See "replacing fuses").
	Differential blocking electrovalve breakdown	- Check the electrovalve and, if necessary, replace it (*)
	Services electrovalve block maximum pressure valve breakdown	- Check the valve and, if necessary, replace it (*)
	differential lock control linkage damaged	- Replace the control linkage (*)

(*) Operations to be carried out in authorised workshops by persons with the proper skills

Table 8.3: Power lift unit problems

Problem	Causes	Solution
Implement does not lift	The weight of the tool is greater with respect to the maximum capacity of the lifting device	- Unhitch the implement - Before connecting any implement, make certain the specifications are compatible with those of the machine.
	Low oil level	- Top up the oil level (See "front and rear transmission oil level check (TX S - TRX S)" - "front and rear transmission oil level check (TRX - TRG)").
	Oil pressure too low	- Replace the pump (')
	Hydraulic pump damaged	- Replace the pump (')
	Priority valve damaged	- Replace the valve (')
	Relief valve damaged on auxiliary spool valve controlling external ports	- Replace the valve (')
	The controls of the lifting assembly are faulty. (°)	- Stop the machine. - Turn the ignition key into position and check the controls work properly. - If the problem persists, contact an Assistance Centre authorised by the manufacturer.
		- Stop the machine and restart it after a few moments. - Turn the knob for operating the lifting assembly from position into position and check the controls work properly. - If the problem persists, contact an Assistance Centre authorised by the manufacturer.
Relief valve opening at main control valve with lift links fully up. (²)	Position control linkage rod not correctly adjusted	- Adjust the rod (')
Implement does not maintain selected working depth in draft control mode (²)	Control valve response not properly adjusted	- Adjust the valve response setting (')
Draft control mode not functioning (²)	Draft control linkage rod not correctly adjusted	- Adjust the rod (')

Table 8.3: Power lift unit problems

Problem	Causes	Solution
Position control mode not functioning (²)	Position control linkage rod not correctly adjusted	- Adjust the rod (¹)
	Position control lever not correctly adjusted	- Adjust the lever (¹)
	Control lever linkage rods damaged	- Overhaul the rods, or replace if necessary (¹)

(¹) Operations to be carried out in authorised workshops by persons with the proper skills

(²) For machines with draft control hydraulic lift system only.

(³) Only for machines with draft control (electronic) lifting assembly.

Table 8.4: Clutch, brake and steering units problems

Problem	Causes	Solution
Difficulty engaging gears	There is air in the steering circuit	- Bleed the circuit (See "Bleed brakes and clutch system").
	worn clutch discs	- replace clutch discs (¹)
Insufficient braking action and excessive brake pedal travel	There is air in the steering circuit	- Bleed the circuit (See "Bleed brakes and clutch system").
	Discs worn	- Replace the discs (¹)
	Hydraulic pump damaged	- Replace the pump (¹)
	Oil level low	- Top up the oil level (See "front and rear transmission oil level check (TX S - TRX S)" - "front and rear transmission oil level check (TRX - TRG)").
Parking brake difficult to apply	Rust or dirt fouling the control linkage	- Remove dirt and grease the linkage
	The drive cable does not run correctly in the sheath.	- Lubricate the cable
Uneven wear on tyres	Inflation pressure too low	- Restore the correct tyre pressure (See "Checking the pressure of the tyres").
The steering wheel is hard to turn	Oil pressure too low	- Replace the pump (¹)
	Hydraulic pump damaged	- Replace the pump (¹)
	Power steering defective	- Replace the power steering unit
The steering wheel does not steer the machine accurately	There is air in the steering circuit	- Bleed the circuit (¹)
	The steering cylinder seals are worn	- Replace the seals (¹)
	Hoses not securely connected	- Tighten the hose connections (¹)

Table 8.4: Clutch, brake and steering units problems

Problem	Causes	Solution
The machine does not steer at all	Oil pressure too low	- Replace the pump (*)
	Hydraulic pump damaged	- Replace the pump (*)
	Power steering defective	- Replace the power steering unit
	Oil level low in front transmission housing	- Top up the oil level (See "front and rear transmission oil level check (TX S - TRX S)" - "front and rear transmission oil level check (TRX - TRG)").

(1) Operations to be carried out in authorised workshops by persons with the proper skills

Table 8.5: Trouble with the hydraulic braking system of the towed implement

Problem	Causes	Solution
The implement remains braked (Italian type-approval only)	Low brake fluid level	- Top up the oil level (See "Control brakes and clutch system oil level").
	Low hydraulic oil level.	- Top up the oil level (See "front and rear transmission oil level check (TRX - TRG)").
	Hydraulic pump damaged	- Replace the pump (*)
	Implement hydraulic system faulty	- Refer to tools user manual.
The implement does not brake	Low brake fluid level	- Top up the oil level (See "Control brakes and clutch system oil level").
	Low hydraulic oil level.	- Top up the oil level (See "front and rear transmission oil level check (TRX - TRG)").
	Hydraulic pump damaged	- Replace the pump (*)
	Implement hydraulic system faulty	- Refer to tools user manual.
The warning light for braking system trouble remains lit (Italian type-approval only)	Low brake fluid level	- Top up the oil level (See "Control brakes and clutch system oil level").
	Low hydraulic oil level.	- Top up the oil level (See "front and rear transmission oil level check (TRX - TRG)").
	Hydraulic pump damaged	- Replace the pump (*)
	Implement hydraulic system faulty	- Refer to tools user manual.

Table 8.5: Trouble with the hydraulic braking system of the towed implement

Problem	Causes	Solution
The warning light for braking system trouble fails to light up (Italian type-approval only)	Idrostop on trailer brake valve damaged	- Replace the Idrostop (¹)

(¹) Operations to be carried out in authorised workshops by persons with the proper skills

Table 8.6: Electric plant problems

Problem	Causes	Solution
No power in electrical circuit	Main fuse damaged	- Replace the fuse (See "replacing fuses").
	Battery flat	- Recharge or replace the battery
	Battery terminals oxidised	- Clean the terminals and smear with grease to prevent oxidation
Alternator warning indicator remains alight with engine running	Alternator drive belt slack or damaged	- Tighten the belt, or replace if necessary (Consult the manual accompanying the engine).
	Alternator damaged	- Replace the alternator (Consult the manual accompanying the engine).
Oil pressure warning indicator remains alight with engine running	Oil level low	- Top up the oil level (Consult the manual accompanying the engine).
	Engine oil filter clogged	- Change the filter (Consult the manual accompanying the engine).
Coolant temperature warning indicator alight with engine running	Radiator dirty	- Clean the radiator (See "Cleaning the radiator").
	Level of coolant in radiator too low	- Restore the correct level of coolant in the radiator (See "Checking the engine coolant level").
	Engine cooling liquid pump breakdown	- Replace the pump (Consult the manual accompanying the engine).
Air filter warning indicator alight	Air filter clogged	- Clean or replace the filter cartridge (See "Cleaning the engine air cleaner (TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400)").
The engine anomaly signalling LED flashes	Engine breakdown	- Stop the machine, switch the engine off and look for the reasons for breakdown. (¹)

Table 8.6: Electric plant problems

<i>Problem</i>	<i>Causes</i>	<i>Solution</i>
The hydraulic oil pressure telltale light flashes during the PTO engagement	Electronic control unit answer delay	- Wait a few seconds so that the light turns off

(1) Operations to be carried out in authorised workshops by persons with the proper skills

Table 8.7: Cab unit problems

<i>Problem</i>	<i>Causes</i>	<i>Solution</i>
The cab heating system does not work	Engine cooling liquid level insufficient	- Restore the level of the engine cooling liquid (See "Checking the engine coolant level"). - Replace the fuse
	Electric fan breakdown	- Check the electric fan and, if necessary, replace it (1)
The air conditioning system does not work	Cab protection circuits fuses burned	- Replace the fuse (See "replacing fuses").
	Conditioned air system condenser dirty	- Clean the condenser (See "Cleaning the cab air filter").
	Air conditioning system compressor breakdown	- Check the tensioning and the wear of the transmission belt (1)
	Level of refrigerant liquid on the conditioned air system insufficient	- Restore the level of liquid refrigerant (1)

(1) Operations to be carried out in authorised workshops by persons with the proper skills

PART REPLACEMENT INSTRUCTIONS

- Before performing any maintenance on the machine, engage all the safety devices provided and assess whether you need to inform other personnel working with you or nearby.

Caution Precaution

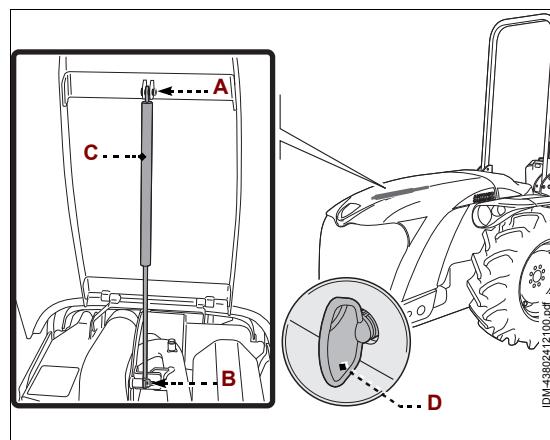
Unless specifically stated otherwise, all servicing operations must be carried out with the engine off, the parking brake applied, and the ignition key removed and kept safe by the driver. Persons entrusted with servicing operations must take all measures necessary to ensure the safety of individuals involved, in compliance with statutory requirements on safety in the workplace.

- Replace worn parts only with original spare parts. The manufacturer accepts no responsibility for injury or damage caused by the use of non-original spares or unauthorised repairs that may affect safety requirements. Follow the instructions given in the spare parts catalogue when ordering spare parts.

GAS SPRING REPLACEMENT

For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Allow the engine to cool down, so that there will be no risk of scalding.
3. Open engine bonnet using the key (**D**).
4. Lock the engine hood in the open position with a safety rod.
5. Remove the stop ring and the pin (**A**).
6. Undo the nut (**B**).
7. Replace the gas spring (**C**) with a new one.
8. Tighten the nut (**B**).
9. Insert the pin (**A**) and lock it using the stop ring.

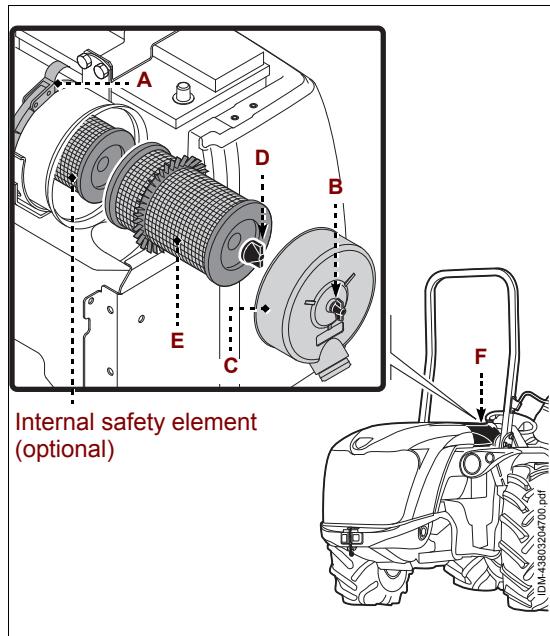


10. Remove the safety rod and check that the engine hood remains in the open position.
11. Shut the hood when finished.

REPLACING THE AIR FILTER (TX 7800 S - TRX 7800 S - TRX 7800 - TRX 8400 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400)

For this operation, proceed as follows.

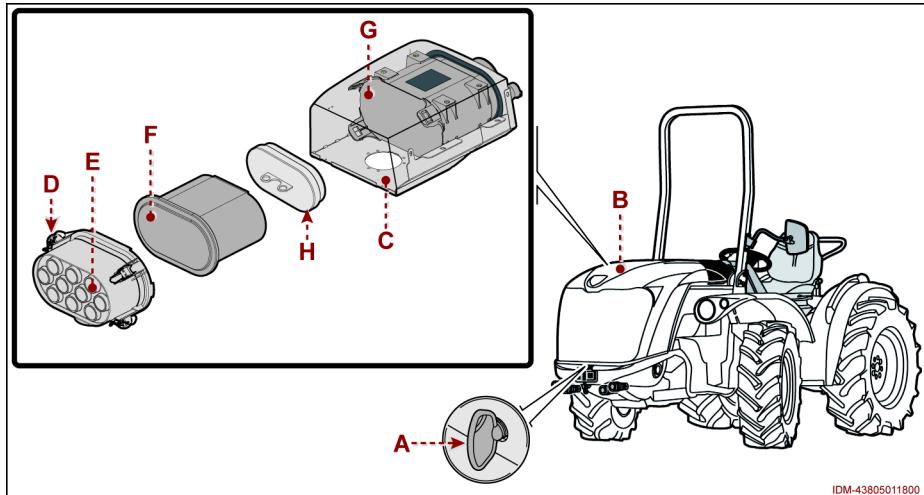
1. Stop the machine and activate all relevant safety devices.
2. Allow the engine to cool down, so that there will be no risk of scalding.
3. Unscrew the knobs and remove the grille (**F**).
4. Release the strap (**A**) and lift the filter unit.
5. Unscrew the knob (**B**) and lift off the air filter cover (**C**).
6. Undo the nut (**D**).
7. Pull out the filter element
8. Refit the filter element (**E**) and the cover (**C**).
9. Re-position the filter unit and re-attach the strap (**A**).
10. Fit the guard (**A**) at the end of the operation.



Important

Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.

For this operation, proceed as follows.



1. Stop the machine and activate all relevant safety devices.
2. Allow the engine to cool down, so that there will be no risk of scalding.
3. Open engine bonnet (**B**) using the key (**A**).
4. Open the door (**C**).
5. Open the hooks (**D**) and dismantle the cover (**E**).
 - Lift the filter unit slightly, to make it easier to open the lower hooks.
6. Remove the element (**F**).
7. Remove the safety cartridge (**H**).
 - **To make it easier to remove the cartridge (H), pull it and turn it slightly upwards at the same time.**
8. Fit the new filter cartridge (**H**).
9. Fit the new filter cartridge (**F**).
10. Assemble the cover (**E**) and fix it with the hooks (**D**).
 - Lift the filter unit slightly, to make it easier to close the lower hooks.
11. Insert the filter unit into its seat.
12. Close the door (**C**).
13. Shut the hood when finished.

i Important

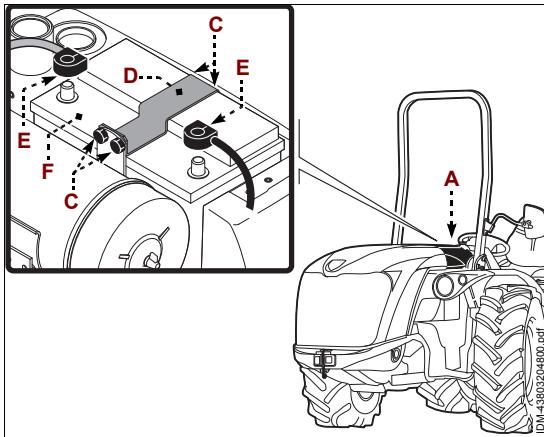
The cartridge (H) must be replaced every 2 replacements of the cartridge (F).

- Do not dispose of pollutant materials in the environment. Dispose of all such materials in compliance with applicable legislation.

CHANGING THE BATTERY

For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Allow the engine to cool down, so that there will be no risk of scalding.
3. Unscrew the knobs and remove the grille (A).
4. Loosen the screws (C) and remove the bracket (D).
5. Detach the terminals (E).



Caution Precaution

Disconnect the negative terminal (-) first.

6. Remove the battery (F) and fit the replacement.
7. Reconnect the terminals (E).

Caution Precaution

Be certain to match the polarity of the terminals and posts. Smear the positive terminal (+) with grease and connect first.

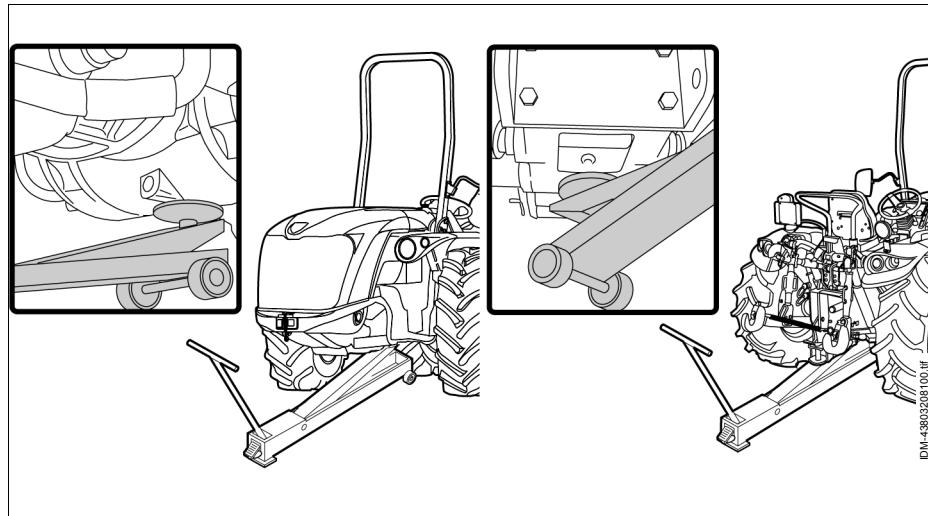
8. Mount the bracket (D) and fix it using the screws (C).
9. Fit the guard (A) at the end of the operation.

i Important

Do not dump used batteries. Spent batteries must be disposed of in accordance with current statutory regulations.

CHANGING TYRES

For this operation, proceed as follows.



1. Stop the machine and activate all relevant safety devices.
2. Place the jack in the indicated points for lifting.



Caution Precaution

Tyre replacement is an operation that can lead to risks, even considering the total weight of the machine.

- To prevent risks (even serious), this operation must be performed by expert staff (e.g. tyre dealer), able to carry out the intervention correctly and safely.
- 3. At the end of the replacement, check that the tightening torque of the screws or fixing nuts of the wheels is correct.

Table 9.1: Tightening torques

Dimensions of screws / nuts	Tightening torque Nm (kgm)
M14 x 1,5	140 (14,3)
M16 x 1,5	210,7 (21,5)
M16 x 1,5 (Flare nut).	210,7 (21,5)



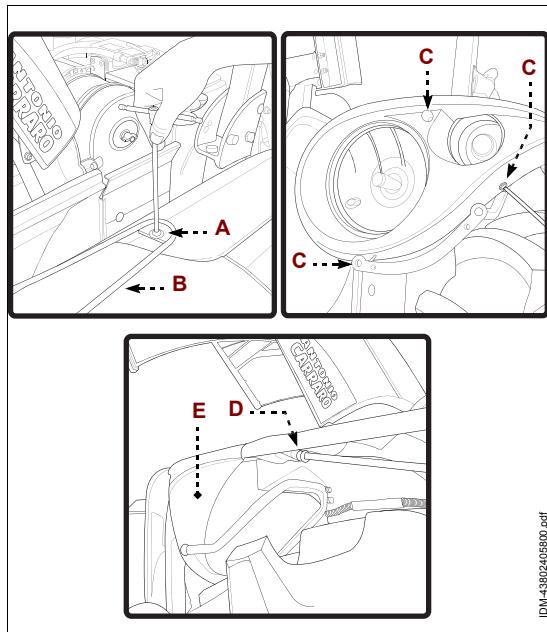
Important

Consult your vehicle registration document, when changing tyres, so as to identify which tyres can be fitted according to the type approval.

REPLACING FRONT LIGHTING BULBS

For this operation, proceed as follows.

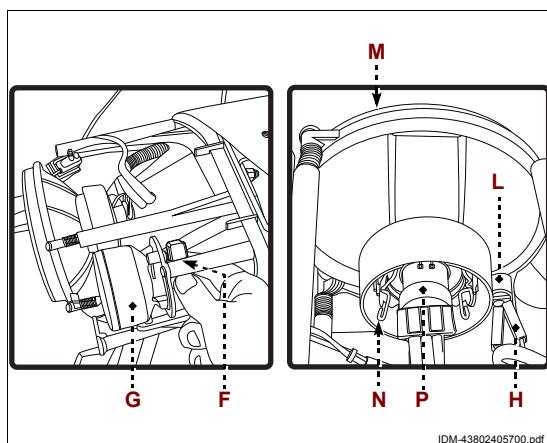
1. Stop the machine and activate all relevant safety devices.
2. Loosen the screws (**A**) and remove the protection grid (**B**) (if present).
3. Undo the bolts (**C**).
4. Loosen the screws (**D**) and remove the support (**E**).



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Direction indicator lights

5. Detach the connector (**F**).
6. Turn the lampholder (**G**) as indicated, and remove.
7. Remove the lamp and replace with a new one of identical rating.
8. Insert the lampholder (**G**) and turn to lock.
9. Attach the connector (**F**).



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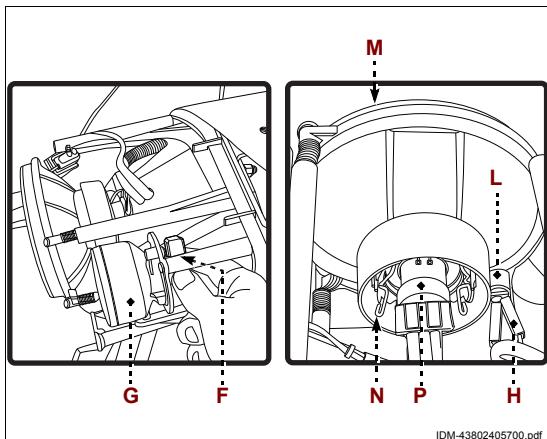
Position lights

10. Detach the connector (**H**).
11. Extract the bulb-holder (**L**) and replace the bulb with a new one having the same features.
12. Re-insert the bulb-holder (**L**).
13. Attach the connector (**H**).

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Low and full beam lights

14. Detach the connector.
15. Remove the shield (**M**).
16. Unclip the spring (**N**).
17. Extract the bulb-holder (**P**) and replace the bulb with a new one having the same features.

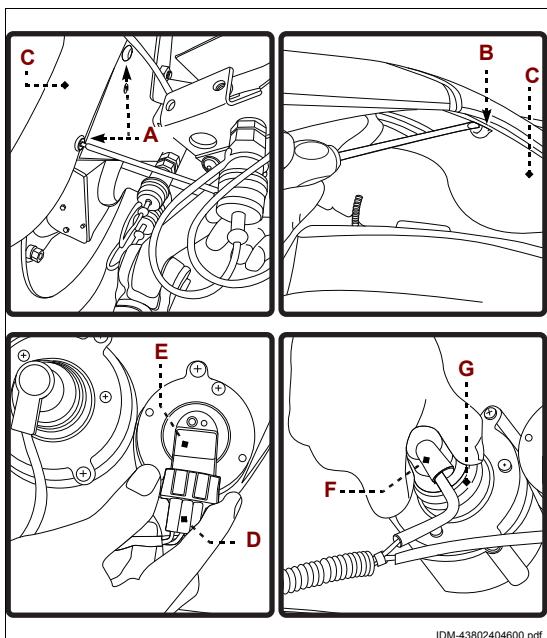


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REPLACING INDICATOR LIGHT BULBS (REAR)

For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Loosen the screws (**A-B**) to remove the lens unit (**C**).



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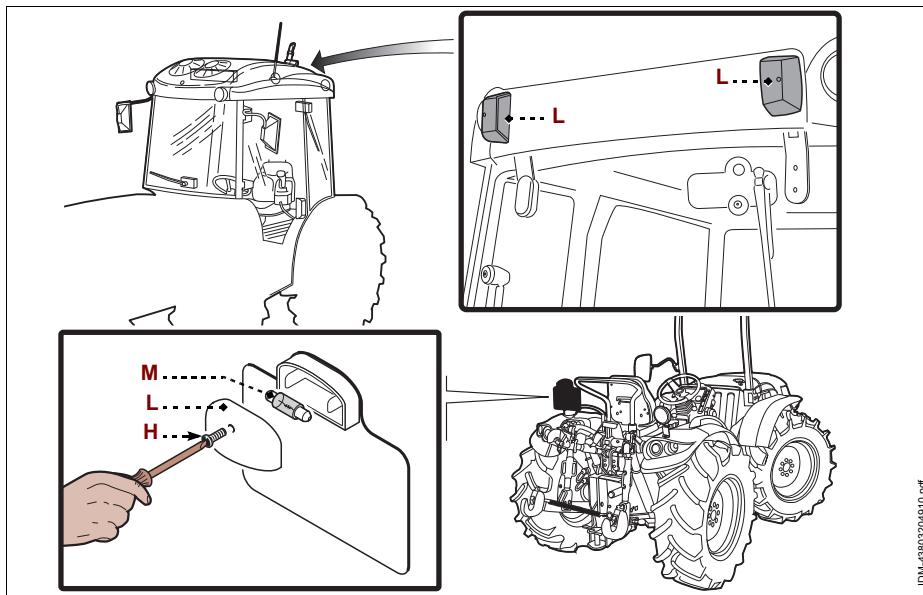
Direction indicator lights

3. Detach the connector (**D**).
4. Turn the lampholder (**E**) as indicated, and remove.
5. Remove the lamp and replace with a new one of identical rating.
6. Insert the lampholder (**E**) and turn to lock.
7. Attach the connector (**D**).

Position lights and stop lights

8. Detach the connector (**F**).
9. Turn the lampholder (**G**) as indicated, and remove.
10. Remove the lamp and replace with a new one of identical rating.

11. Insert the lampholder (**G**) and turn to lock.
12. Attach the connector (**F**).



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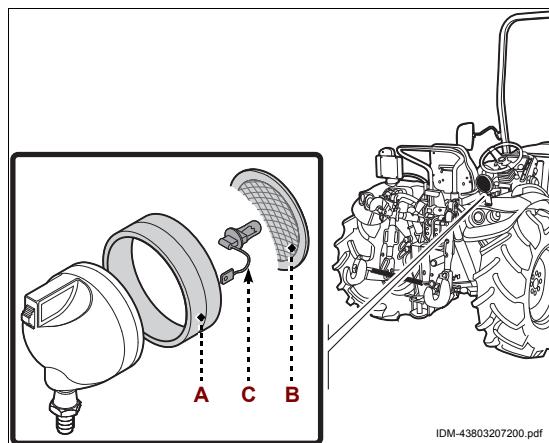
Licence plate light

13. Stop the machine and activate all relevant safety devices.
14. Undo the screw (**H**) and remove the protective cover (**L**).
15. Remove the lamp (**M**) and replace with a new one of identical rating.
16. Refit the protective cover (**L**) and tighten the screws (**H**).

REPLACEMENT OF THE WORK LIGHT LAMP

For this operation, proceed as follows.

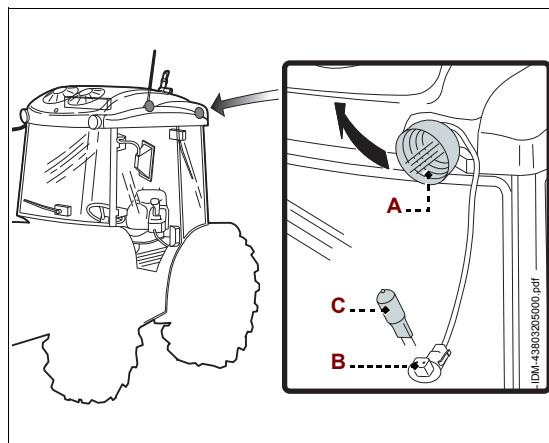
1. Stop the machine and activate all relevant safety devices.
2. Remove gasket (A) and guard (B).
3. Remove the lamp (C) and replace with a new one of identical rating.
4. Mount guard (B) and fasten it using gasket (A).



REPLACING CAB BULBS

For this operation, proceed as follows.

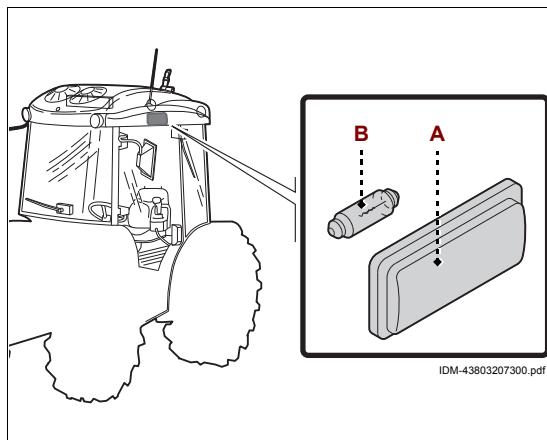
1. Stop the machine and activate all relevant safety devices.
2. Turn the light (A), turn the bulb-holder (B) and extract it.
3. Remove the lamp (C) and replace with a new one of identical rating.
4. Insert the lampholder (B) and turn to lock.



REPLACEMENT OF COURTESY LIGHT LAMP

For this operation, proceed as follows.

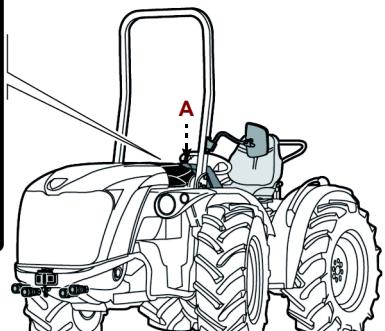
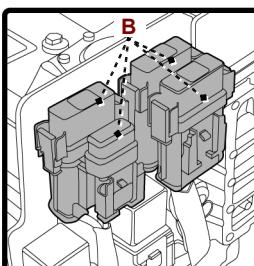
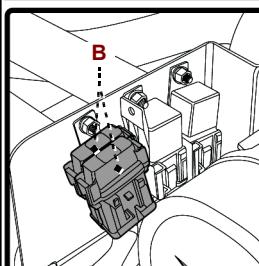
1. Stop the machine and activate all relevant safety devices.
2. Remove the cover (A).
3. Remove the lamp (B) and replace with a new one of identical rating.
4. Re-mount cover (A).



REPLACING FUSES

TRX 8400 - TRX 9900
TRX 10400 - TRX 10900
TRG 9900 - TRG 10400
TRG 10900

TX 7800 S - TRX 7800 S
TRX 7800 - TRX 9800
TRG 9800



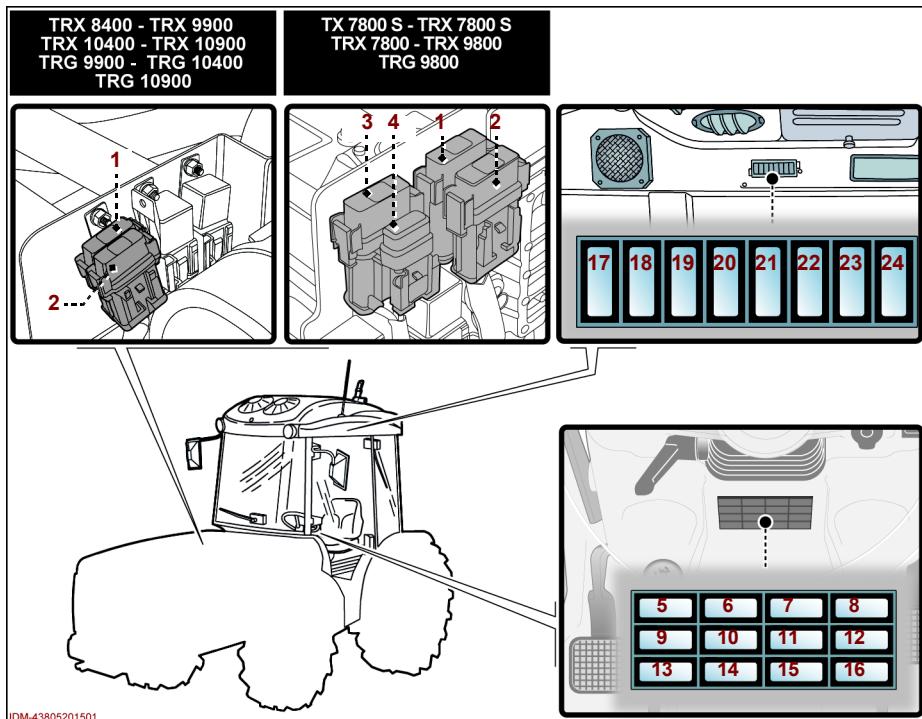
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For this operation, proceed as follows.

1. Stop the machine and activate all relevant safety devices.
2. Unscrew the knobs and remove the grille (A).
3. Pull off the shield(B) and replace the fuse with one of the same size and rating.
4. Re-mount the protection (B).
5. Fit the guard (A) at the end of the operation.

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- The illustration represents the position of the fuses and the list gives their functionality.



Important

Replace any burnt out fuses with ones of the same properties stated in the table.

Table 9.2: description of the fuses

position	Description	Unit of measurement	Value
Machine fuses			
1	Main electric plant	A	60
2	Engine starting plant and cab electric plant	A	60
3	Engine spark plugs	A	80
4	Engine electronic control unit and EGR valve (engine exhaust gas recirculation)	A	10
Dashboard fuses			
5	Emergency lights	A	15
6	Traction disengagement electrovalve, differential blocking and acoustic warning.	A	15
7	Front right and rear left position lights, number plate light, multipurpose instrument illumination	A	7,5

Table 9.2: description of the fuses

position	Description	Unit of measurement	Value
8	Front left and rear right position lights	A	7,5
9	Direction indicators and front electric couplings	A	15
10	Rear electric couplings	A	15
11	Right low beam light	A	7,5
12	Left low beam light	A	7,5
13	Engine pre-heating spark plugs, fuel level indicator, motor stop electrovalve	A	10
14	Front PTO solenoid valve, multipurpose instrument, speed sensor	A	10
15	Cab electric power supply, stop lights, work light, PTO indicator (dashboard) rear power lifting unit electrovalve	A	10
16	Main beam lights	A	10
Electric plant fuses ("cab" and "frame" version)			
17	Condenser left fan	A	15
18	Condenser right fan	A	15
19	Evaporator and compressor conditioner	A	15
20	Cab ceiling light and radio	A	5
21	Windscreen washing liquid pump and rotating light	A	7,5
22	Front and rear windscreens	A	10
23	Rear lighting	A	15
24	Front lighting	A	15

DISPOSAL AND SCRAPPING OF THE MACHINE

This operation must be performed by expert operators, in compliance with the legislation in force on safety in the workplace. Do not disperse non-biodegradable material, lubricant oils and non-ferrous parts (rubber, PVC, plastic, etc.) into the environment. Observe the legislation in force on waste disposal.

TECHNICAL DATA TABLES INTRODUCTION

To facilitate research and consultation, the technical data has been divided into several tables.

- The tables show all the generic and specific technical data (in particular pertaining to the vehicle type-approval).

KERB WEIGHT

The tables show the vehicle kerb weight values (without equipment and ballasts) with the tank full of fuel and a driver of 75 kg

Table 10.1: Empty weight of the machine (in running order)

TX 7800 S				
Description	Unit of measurement	Value		
		With safety arch	With frame	With cab:
Total empty weight	kg	2070÷2170	2120÷2220	2210÷2310
Front axle empty weight	kg	1380÷1430	1430÷1480	1460÷1510
Rear axle empty weight	kg	690÷740	690÷740	750÷800

Table 10.2: Empty weight of the machine (in running order)

TRX 7800 S				
Description	Unit of measurement	Value		
		With safety arch	With frame	With cab:
Total empty weight	kg	2080÷2180	2130÷2230	2220÷2320
Front axle empty weight	kg	1380÷1430	1430÷1480	1460÷1510
Rear axle empty weight	kg	700÷750	700÷750	760÷810

Table 10.3: Empty weight of the machine (in running order)

TRX 7800				
Description	Unit of measurement	Value		
		With safety arch	With frame	With cab:
Total empty weight	kg	2170÷2270	2235÷2335	2325÷2425
Front axle empty weight	kg	1380÷1430	1425÷1475	1455÷1505
Rear axle empty weight	kg	790÷840	810÷860	870÷920

Table 10.4: Empty weight of the machine (in running order)

TRX 8400				
Description	Unit of measurement	Value		
		With safety arch	With frame	With cab:
Total empty weight	kg	2050÷2150	2120÷2220	2210÷2310
Front axle empty weight	kg	1240÷1290	1280÷1330	1310÷1360
Rear axle empty weight	kg	810÷860	840÷890	900÷950

Table 10.5: Empty weight of the machine (in running order)

TRX 9800				
Description	Unit of measurement	Value		
		With safety arch	With frame	With cab:
Total empty weight	kg	2170÷2270	2240÷2340	2330÷2430
Front axle empty weight	kg	1380÷1430	1430÷1480	1460÷1510
Rear axle empty weight	kg	790÷840	810÷860	870÷920

Table 10.6: Empty weight of the machine (in running order)

TRX 9900 - TRX 10900				
Description	Unit of measurement	Value		
		With safety arch	With frame	With cab:
Total empty weight	kg	2170÷2270	2235÷2335	2325÷2425
Front axle empty weight	kg	1380÷1430	1430÷1480	1460÷1510
Rear axle empty weight	kg	790÷840	810÷860	870÷920

Table 10.7: Empty weight of the machine (in running order)

TRX 10400				
Description	Unit of measurement	Value		
		With safety arch	With frame	With cab:
Total empty weight	kg	2100÷2190	2160÷2260	2250÷2350
Front axle empty weight	kg	1305÷1350	1340÷1390	1370÷1420
Rear axle empty weight	kg	795÷840	820÷870	880÷930

Table 10.8: Empty weight of the machine (in running order)

TRG 9800				
Description	Unit of measurement	Value		
		With safety arch	With cab:	
Total empty weight	kg	2280÷2460	2420÷2600	
Front axle empty weight	kg	1410÷1460	1500÷1550	
Rear axle empty weight	kg	870÷1000	920÷1050	

Table 10.9: Empty weight of the machine (in running order)

TRG 9900 - TRG 10900			
Description	Unit of measurement	Value	
		With safety arch	With cab:
Total empty weight	kg	2280÷2460	2420÷2600
Front axle empty weight	kg	1410÷1460	1500÷1550
Rear axle empty weight	kg	870÷1000	920÷1050

Table 10.10: Empty weight of the machine (in running order)

TRG 10400			
Description	Unit of measurement	Value	
		With safety arch	With cab:
Total empty weight	kg	2200÷2380	2350÷2520
Front axle empty weight	kg	1330÷1380	1415÷1460
Rear axle empty weight	kg	870÷1000	935÷1060

MACHINE MAXIMUM WEIGHT ACCEPTED

The tables show the maximum weight values (including kerb weight) of the vehicle.

Table 10.11: Maximum weight accepted

TX 7800 S - TRX 7800 S			
Tyre type	Weight on front axle (kg)	Weight on rear axle (kg)	Total weight (kg)
31x15.50-15 4PR Good-Year	1690	1690	3380
31x15.50-15 4PR Fox Tyre	1740	1740	3480
300/80-15.3	2246	2246	4000
425/55 R17	2300	2300	4000
400/55-17.5	1930	1930	3860
250/80-18 8PR	2300	2300	4000
280/70 R18	2300	2300	4000
320/65 R18	2060	2060	4000
340/65 R18	2300	2300	4000
9.5 R20	2000	2000	4000
280/85 R20	2240	2240	4000
300/70 R20	2120	2120	4000
320/70 R20	2300	2300	4000

Table 10.12: Maximum weight accepted

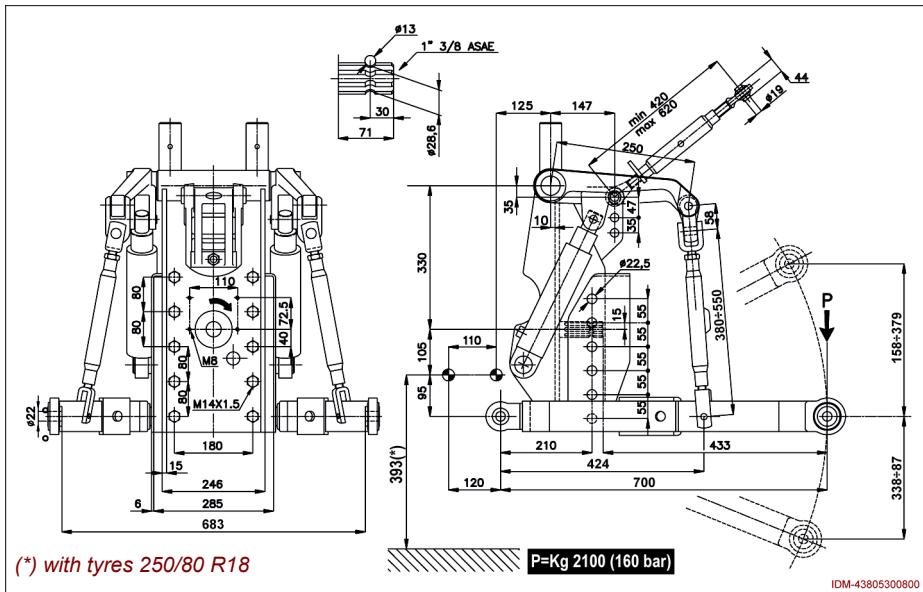
TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900			
Tyre type	Weight on front axle (kg)	Weight on rear axle (kg)	Total weight (kg)
31x15.50-15 4PR	1690	1690	3380
36x13.50-15	2300	2300	4000
300/80-15.3	2246	2246	4000
425/55 R17	2300	2300	4000
440/50 R17	2300	2300	4000
400/55-17.5	1930	1930	3860
250/80-18	2130	2130	4000
280/70 R18	2300	2300	4000
320/65 R18	2060	2060	4000
340/65 R18	2300	2300	4000
9.5 R20	1760	1760	3520
11.2 R20	2180	2180	4000
280/85 R20	2240	2240	4000
300/70 R20	2120	2120	4000
320/70 R20	2300	2300	4000

Table 10.13: Maximum weight accepted

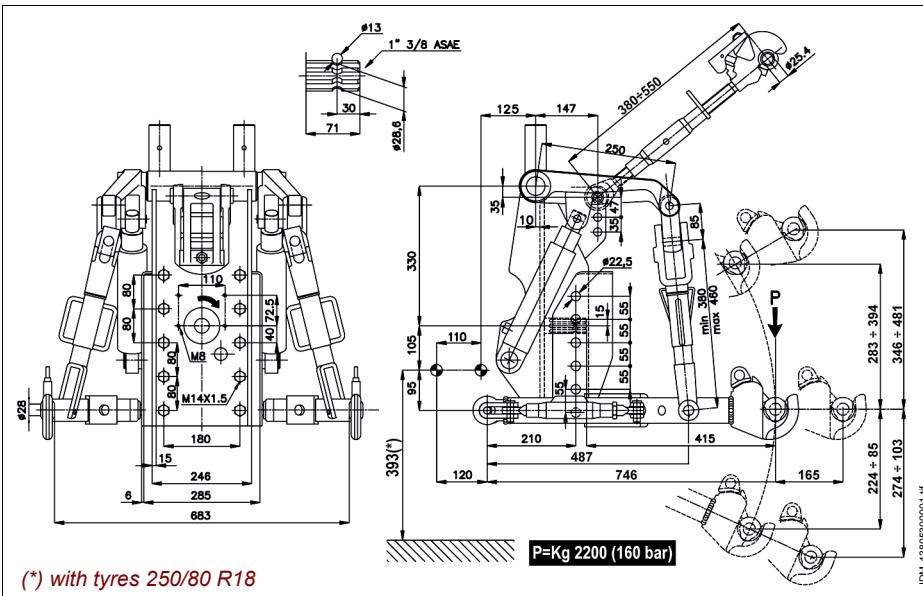
TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900			
Tyre type	Weight on front axle (kg)	Weight on rear axle (kg)	Total weight (kg)
280/70 R18	2300	-	4000
300/80-15.3	2180	-	4000
11 LR 16	2300	-	4000
320/65 R18	2060	-	4000
11.2 R20	2180	-	4000
280/85 R20	2240	-	4000
320/70 R20	2300	-	4000
335/80 R20	-	2300	4000
360/70 R20	-	2300	4000
380/70 R20	-	2300	4000
420/65 R20	-	2300	4000
320/85 R24	-	2300	4000
360/70 R24	-	2300	4000
420/65 R24	-	2300	4000

REAR POWER LIFT DIMENSIONS (TX S - TRX S)

The illustration shows the technical data of the rear "ball joint" power lift unit.



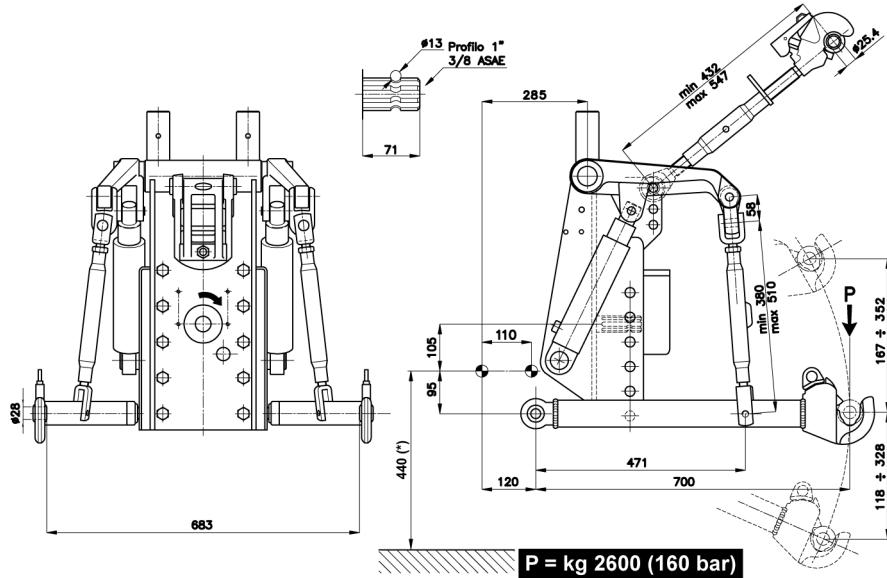
- The illustration shows the technical data of the rear "quick coupling with extendable bars" power lift unit.



REAR POWER LIFT DIMENSIONS (TRX - TRG)

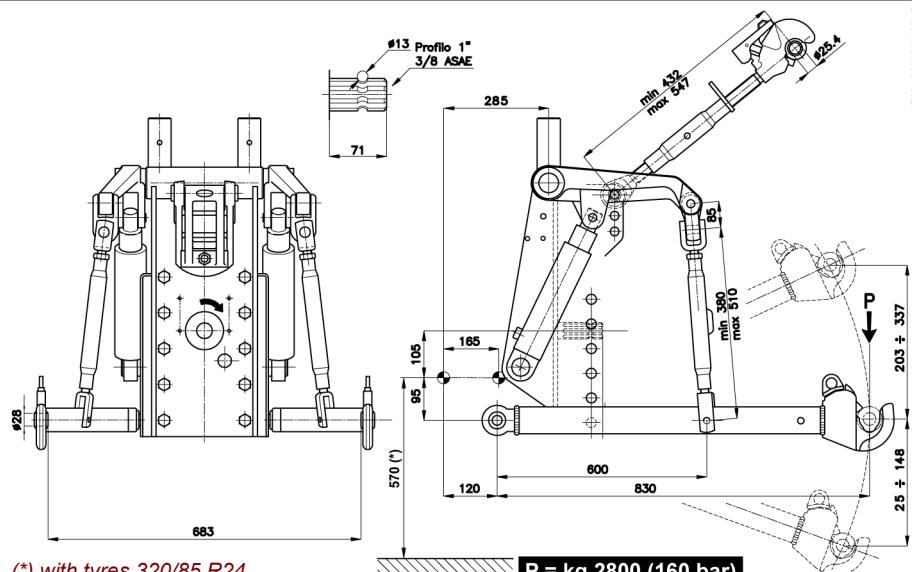
The illustration shows the technical data of the rear "quick coupling" power lift unit.

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900



(*) with tyres 250/80 R18

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900

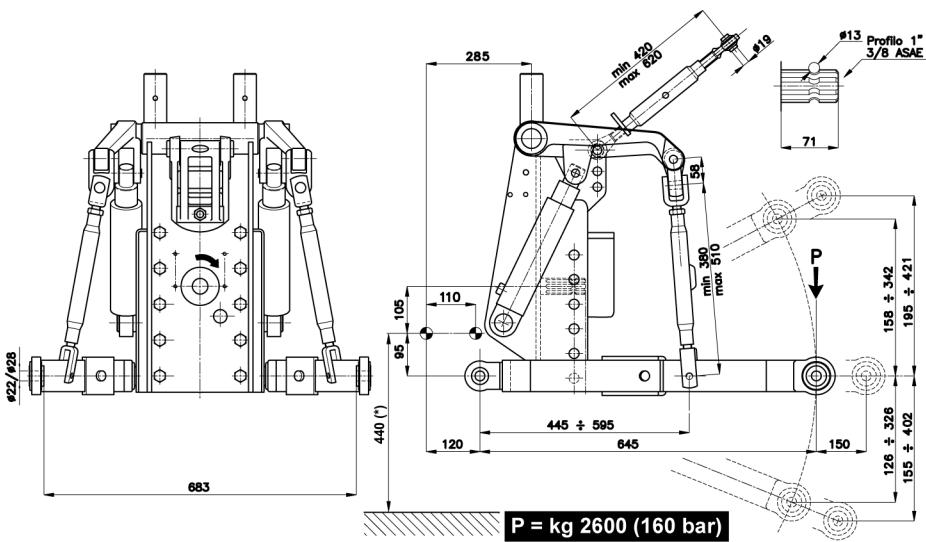


(*) with tyres 320/85 R24

P = kg 2800 (160 bar)

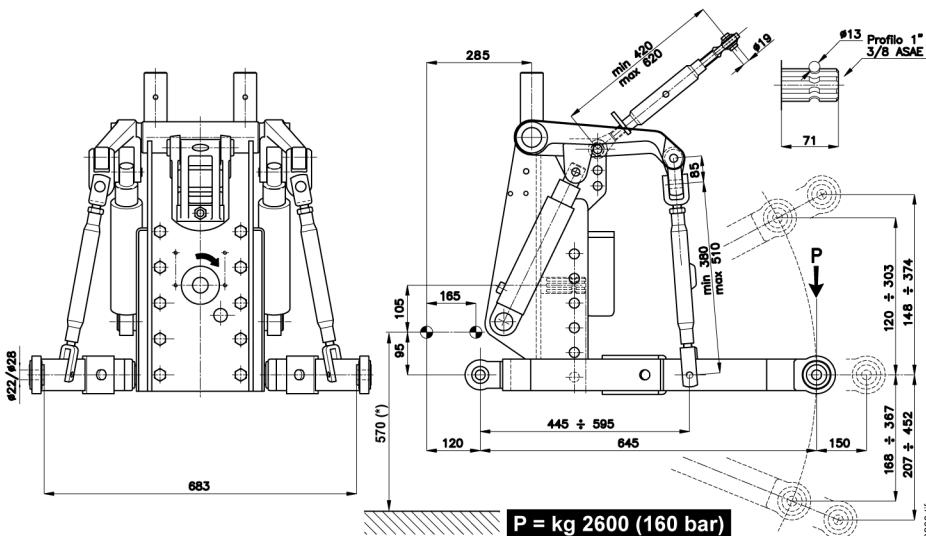
- The illustration shows the technical data of the rear "ball joint" power lift unit.

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900



(*) with tyres 250/80 R18

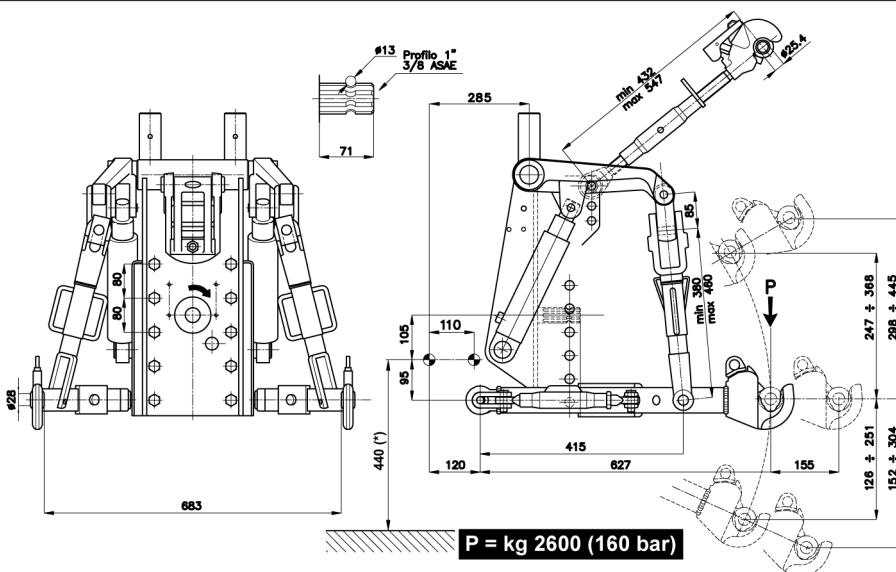
TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900



(*) with tyres 320/85 R24

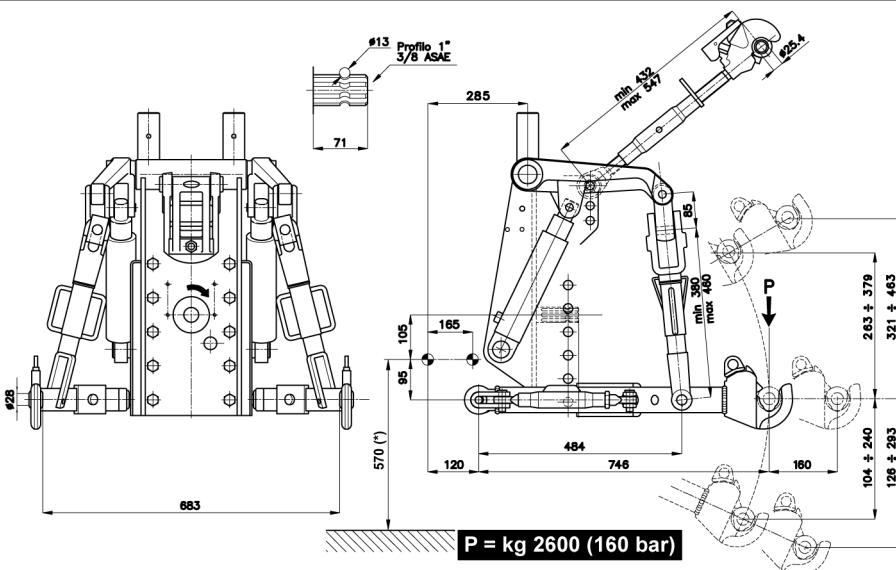
- The illustration shows the technical data of the rear "quick coupling with extendable bars" power lift unit.

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900



(*) with tyres 250/80 R18

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900

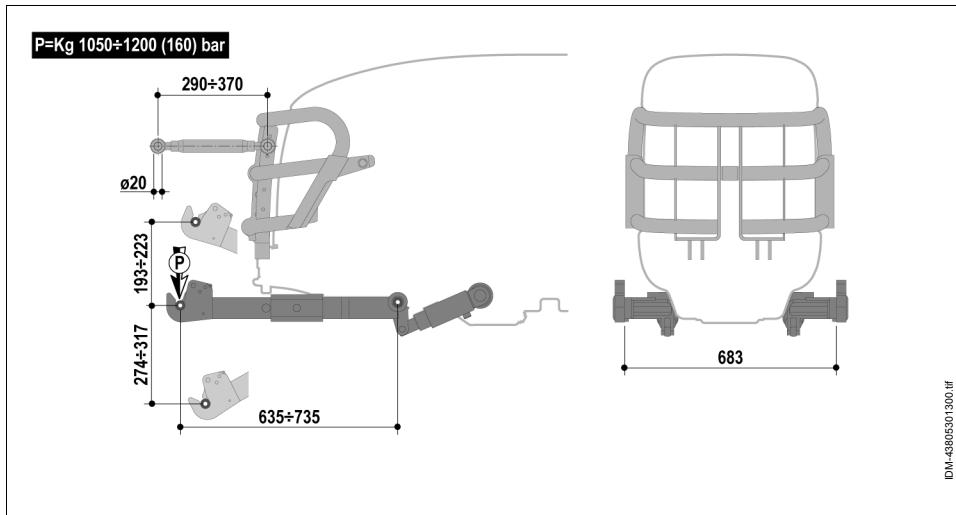


(*) with tyres 320/85 R24

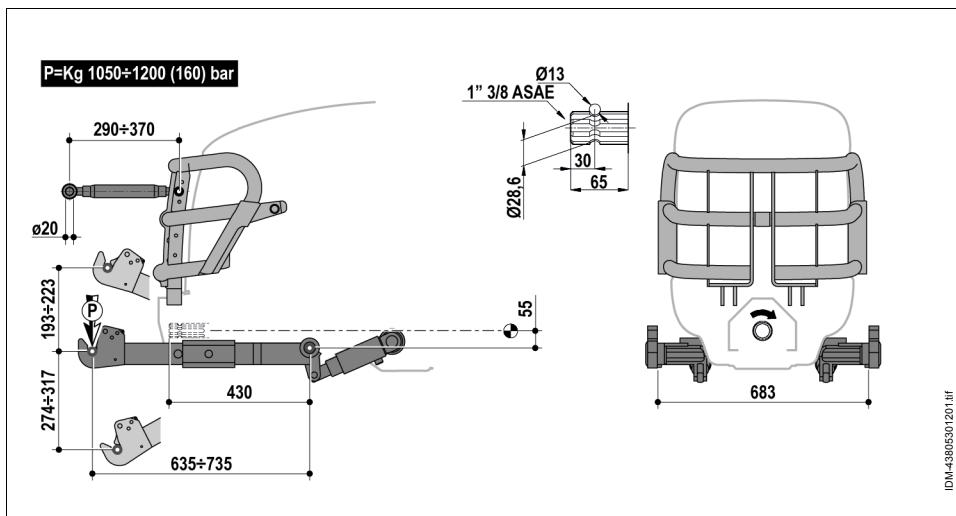
FRONT POWER LIFT DIMENSIONS

The illustration shows the technical data of the front "quick coupling" power lift unit.

Standard version



Version with front PTO



BALLASTS:

The table indicates the type and quantity of ballasts that can be installed to make the machine more stable and increase the haulage capacity if a very heavy tool is used.

- For the installation procedure, see "Ballast installation".

Table 10.14: Ballasts weight

Type	Unit weight	Quantity of ballasts (for each side)	Number of ballasts (for each wheel)	Number of ballasts (for each axle)	Ballast quantity (maximum total mass on the machine)
Lateral ballasts (Model TRG).	22 kg	2	-	-	4 (88 kg)
Lateral ballasts (Model TX S - TRX S - TRX).	22 kg	3	-	-	6 (132 kg)
Wheel ballasts (for front and rear wheels)	35 kg	-	2	4	8 (280 kg)
Ballasts with flange (only for rear wheels) (20")	65 kg	-	1	2	2 (130 kg)
Ballasts with flange (only for rear wheels) (24")	82 kg		1	2	2 (164 kg)

Important

On the rear axle it is not possible to install wheel ballast (35 kg) and flange ballast (65 kg) and (82 kg) simultaneously.

- **ALWAYS** remove the ballasts when disconnecting the interchangeable tools in order to maintain machine stability unaltered.
- The machine with ballasts installed, but without interchangeable tools, becomes unstable (braking and steering), premature wear of the tyres and consumption of more fuel.

Important

To keep the machine balanced, install the same amount of ballasts on both sides.

DIMENSIONS

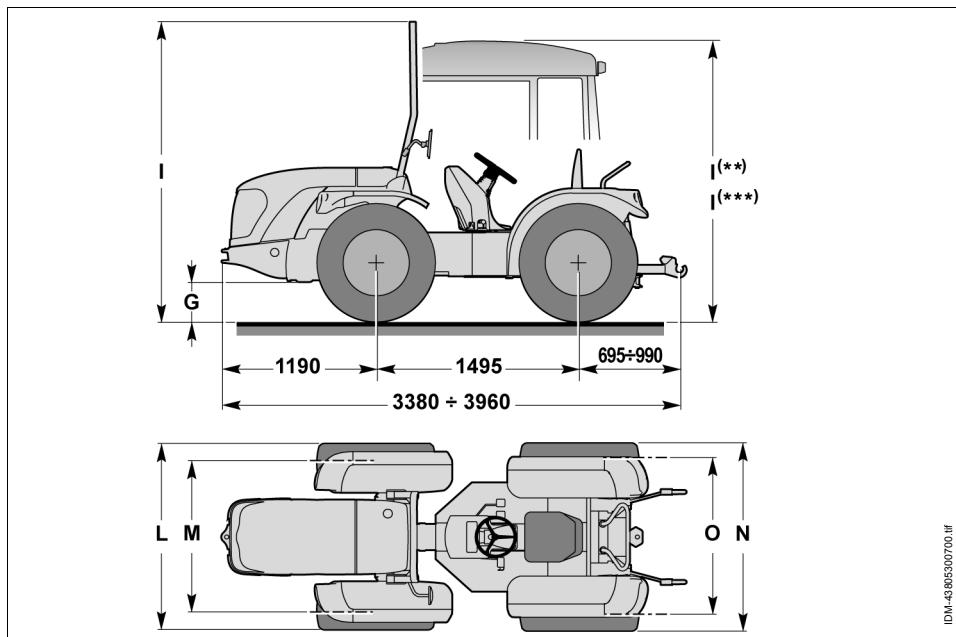


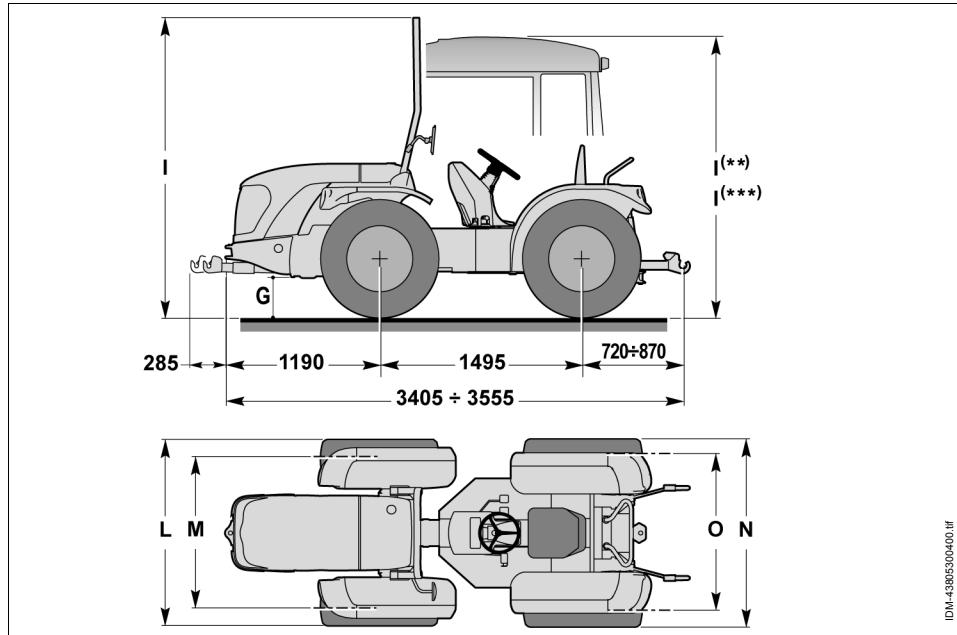
Table 10.15: Machine dimensions

TX 7800 S- TRX 7800 S								
Tyre type	G	I	I (**)	I (***)	L	M	N	O
31X15.50-15	240	2285	2100	2000	1690	To identify the quote, see "Machine tracks"	1690	To identify the quote, see "Machine tracks"
300/80-15.3	275	2320	2135	2035	1445÷1585		1440÷1615	
425/55 R17	285	2330	2145	2045	1725		1725	
400/55-17.5	260	2305	2120	2020	1690		1690	
250/80-18 (*)	275	2320	2135	2035	1380÷1650		1350÷1685	
280/70 R18	275	2320	2135	2035	1420÷1680		1410÷1680	
320/65 R18	275	2320	2135	2035	1460÷1720		1450÷1720	
340/65 R18	285	2330	2145	2045	1485÷1670		1475÷1670	
9.5 R20	310	2355	2170	2070	1390÷1730		1390÷1730	
280/85 R20	335	2380	2195	2095	1410÷1705		1435÷1715	
300/70 R20	310	2355	2170	2070	1410÷1705		1410÷1705	
320/70 R20	335	2380	2195	2095	1460÷1730		1435÷1730	

(*) Standard tyres

(**) With cab

(***) With frame



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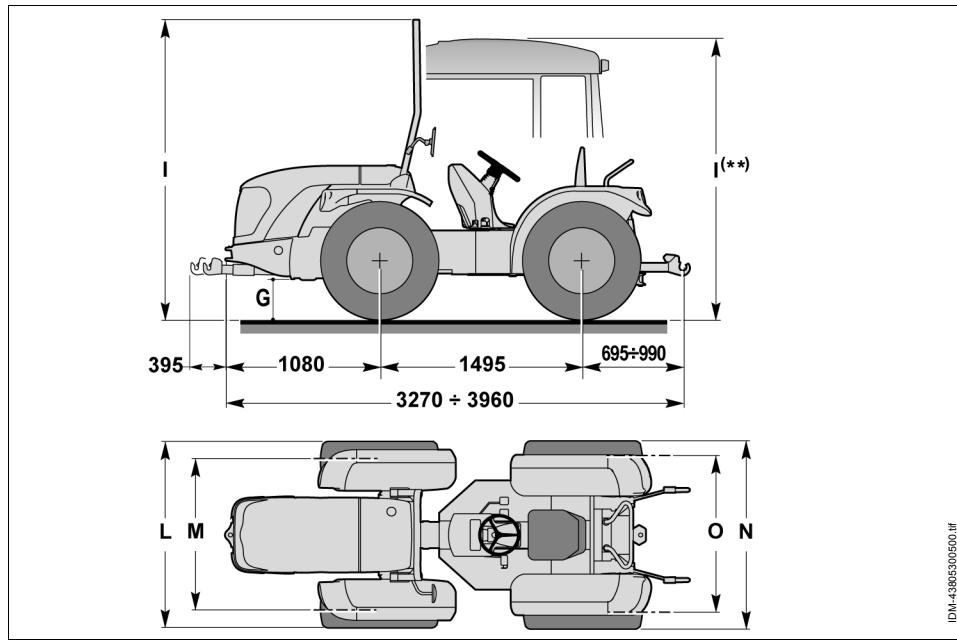
Table 10.16: Machine dimensions

TRX 7800 - TRX 9800 - TRX 10400									
Tyre type	G	I	I (**)	I (***)	L	M	N	O	
31X15.50-15	240	2285	2100	2000	1690		1690		
36x13.50-15	265	2310	2125	2025	1645		1645		
300/80-15.3	275	2320	2135	2035	1445÷1585		1440÷1615		
425/55 R17	285	2330	2145	2045	1725		1725		
400/55-17.5	260	2305	2120	2020	1690		1690		
250/80-18 (*)	275	2320	2135	2035	1380÷1650		1350÷1685		To identify the quote, see "Machine tracks"
280/70 R18	275	2320	2135	2035	1420÷1680		1410÷1680		To identify the quote, see "Machine tracks"
320/65 R18	275	2320	2135	2035	1460÷1720		1450÷1720		
340/65 R18	285	2330	2145	2045	1485÷1670		1475÷1670		
9.5 R20	310	2355	2170	2070	1390÷1730		1390÷1730		
11.2 R20	335	2380	2195	2095	1390÷1685		1415÷1695		
280/85 R20	335	2380	2195	2095	1410÷1705		1435÷1715		
280/85 R20 320/70 R20	335	2380	2195	2095	1410÷1705		1435÷1730		
300/70 R20	310	2355	2170	2070	1410÷1705		1410÷1705		
320/70 R20	335	2380	2195	2095	1460÷1730		1435÷1730		

(*) Standard tyres

(**) With cab:

(***) With frame



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Table 10.17: Machine dimensions

TRX 8400								
Tyre type	G	I	I (**)	I (***)	L	M	N	O
31X15.50-15	240	2285	2100	2000	1690		1690	
36x13.50-15	265	2310	2125	2025	1645		1645	
300/80-15.3	275	2320	2135	2035	1445÷1585		1440÷1615	
425/55 R17	285	2330	2145	2045	1730		1730	
400/55-17.5	260	2305	2120	2020	1690		1690	
250/80-18 (*)	275	2320	2135	2035	1380÷1650		1350÷1685	
280/70 R18	275	2320	2135	2035	1420÷1680		1410÷1680	
320/65 R18	275	2320	2135	2035	1460÷1720		1450÷1720	
340/65 R18	285	2330	2145	2045	1485÷1670		1475÷1670	
9.5 R20	310	2355	2170	2070	1390÷1730		1390÷1730	
11.2 R20	335	2380	2195	2095	1390÷1685		1415÷1695	
280/85 R20	335	2380	2195	2095	1410÷1705		1435÷1715	
280/85 R20 320/70 R20	335	2380	2195	2095	1410÷1705		1435÷1730	
300/70 R20	310	2355	2170	2070	1410÷1705		1410÷1705	
320/70 R20	335	2380	2195	2095	1460÷1730		1435÷1730	

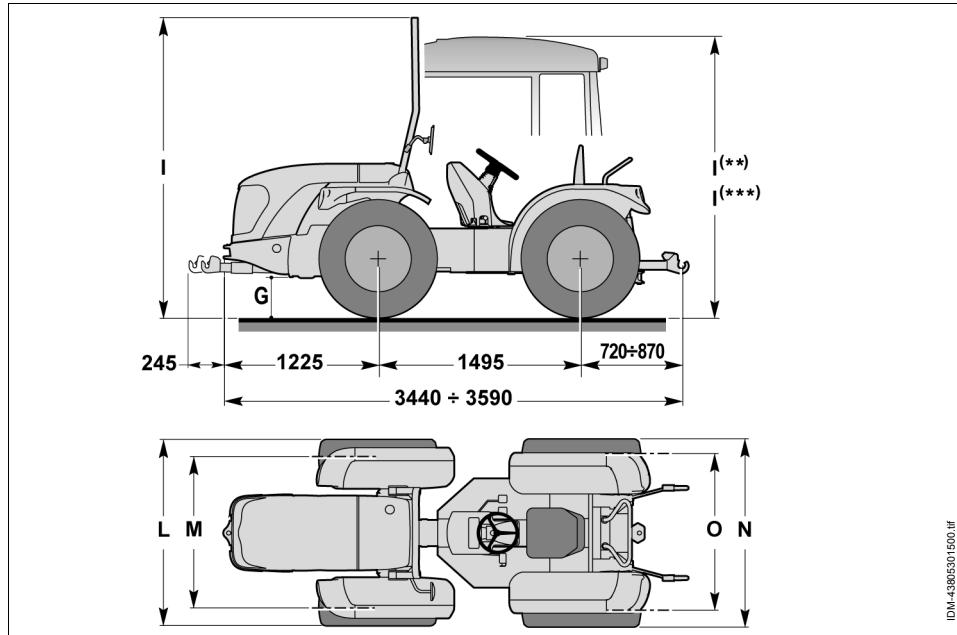
To identify the quote,
see "Machine tracks"

To identify the quote,
see "Machine tracks"

(*) Standard tyres

(**) With cab:

(***) With frame



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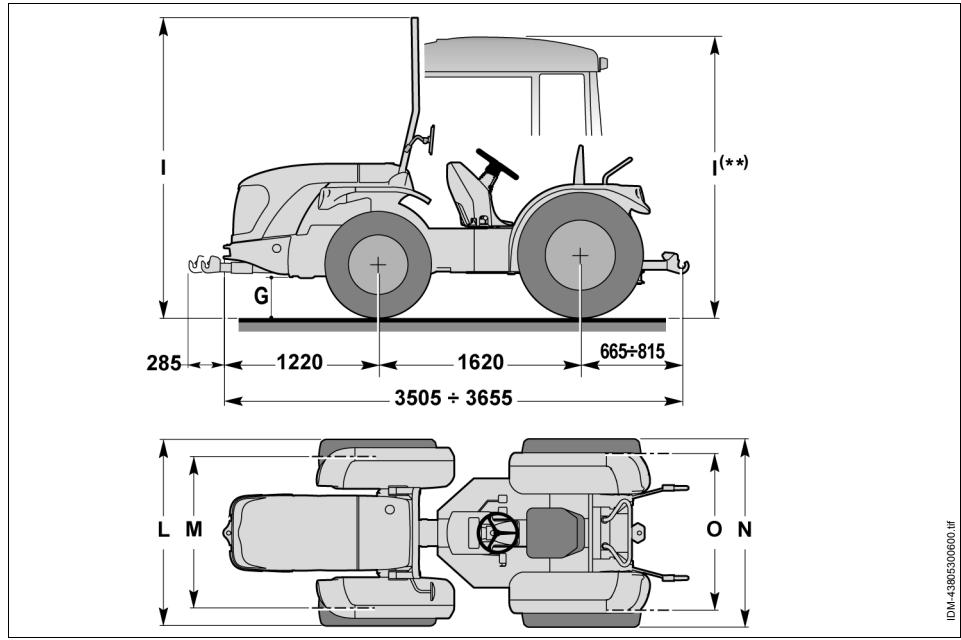
Table 10.18: Machine dimensions

TRX 9900 - TRX 10900									
Tyre type	G	I	I (**)	I (***)	L	M	N	O	
31X15.50-15	240	2285	2100	2000	1690		1690		
36x13.50-15	265	2310	2125	2025	1645		1645		
300/80-15.3	275	2320	2135	2035	1445÷1585		1440÷1615		
425/55 R17	285	2330	2145	2045	1725		1725		
400/55-17.5	260	2305	2120	2020	1690		1690		
250/80-18 (*)	275	2320	2135	2035	1380÷1650		1350÷1685		To identify the quote, see "Machine tracks"
280/70 R18	275	2320	2135	2035	1420÷1680		1410÷1680		To identify the quote, see "Machine tracks"
320/65 R18	275	2320	2135	2035	1460÷1720		1450÷1720		
340/65 R18	285	2330	2145	2045	1485÷1670		1475÷1670		
9.5 R20	310	2355	2170	2070	1390÷1730		1390÷1730		
11.2 R20	335	2380	2195	2095	1390÷1685		1415÷1695		
280/85 R20	335	2380	2195	2095	1410÷1705		1435÷1715		
280/85 R20 320/70 R20	335	2380	2195	2095	1410÷1705		1435÷1730		
300/70 R20	310	2355	2170	2070	1410÷1705		1410÷1705		
320/70 R20	335	2380	2195	2095	1460÷1730		1435÷1730		

(*) Standard tyres

(**) With cab:

(***) With frame



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Table 10.19: Machine dimensions

TRG 9800							
Tyre type	G	I	I (**)	L	M	N	O
300/80-15.3 360/70 R20	355	2305	2270	1470 1540		1480 1685	
300/80-15.3 380/70 R20						1510 1710	
11 LR 16 335/80 R20	355	2305	2270	1420 1685		1400 1730	
320/65 R18 420/65 R20						1610 1680	
11.2 R20 320/85 R24(*)	410	2360	2325	1415 1695		1390 1710	
280/85 R20 12.4 R24						1385 1705	
280/85 R20 320/85 R24	410	2360	2325	1395 1715		1390 1710	
320/70 R20 360/70 R24						1475 1695	
320/70 R20 420/65 R24	410	2360	2325	1495 1660		1535 1695	

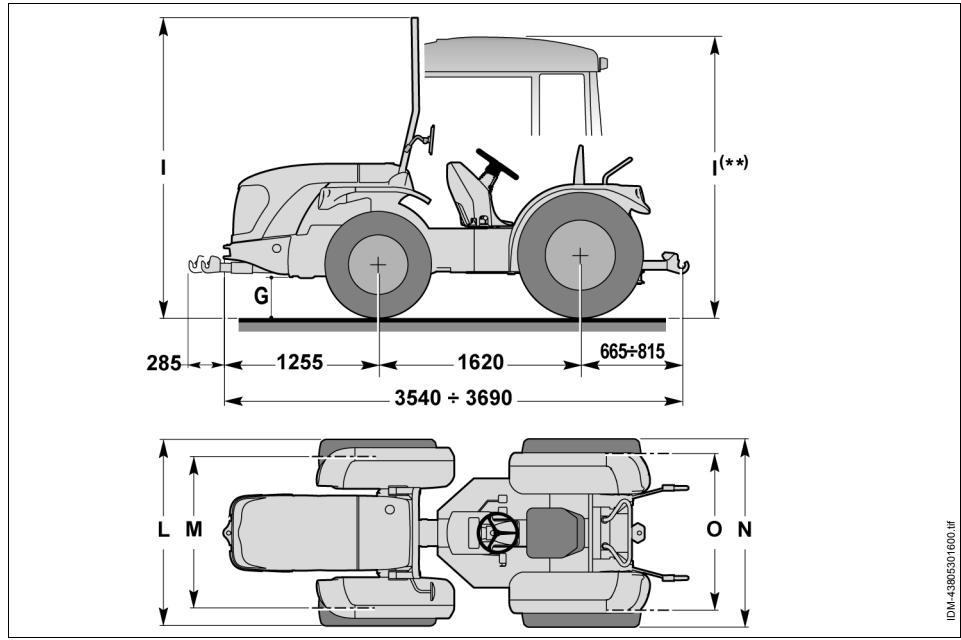
To identify the quote,
see "Machine tracks"

To identify the quote,
see "Machine tracks"

(*) Standard tyres

(**)

With cab:



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Table 10.20: Machine dimensions

TRG 9900 - TRG 10900								
Tyre type	G	I	I(**)	L	M	N	O	
300/80-15.3 360/70 R20	355	2305	2270	1470 1540		1480 1685		
300/80-15.3 380/70 R20								
11 LR 16 335/80 R20	355	2305	2270	1470 1540		1510 1710		
320/65 R18 420/65 R20								
11.2 R20 320/85 R24(*)	410	2360	2325	1420 1685		1400 1730		
280/85 R20 12.4 R24								
280/85 R20 320/85 R24	410	2360	2325	1570 1680		1610 1680		
320/70 R20 360/70 R24								
320/70 R20 420/65 R24	410	2360	2325	1460 1640		1390 1710		
(*) Standard tyres								
(**) With cab:					To identify the quote, see "Machine tracks"		To identify the quote, see "Machine tracks"	

(*) Standard tyres

(**)

With cab:

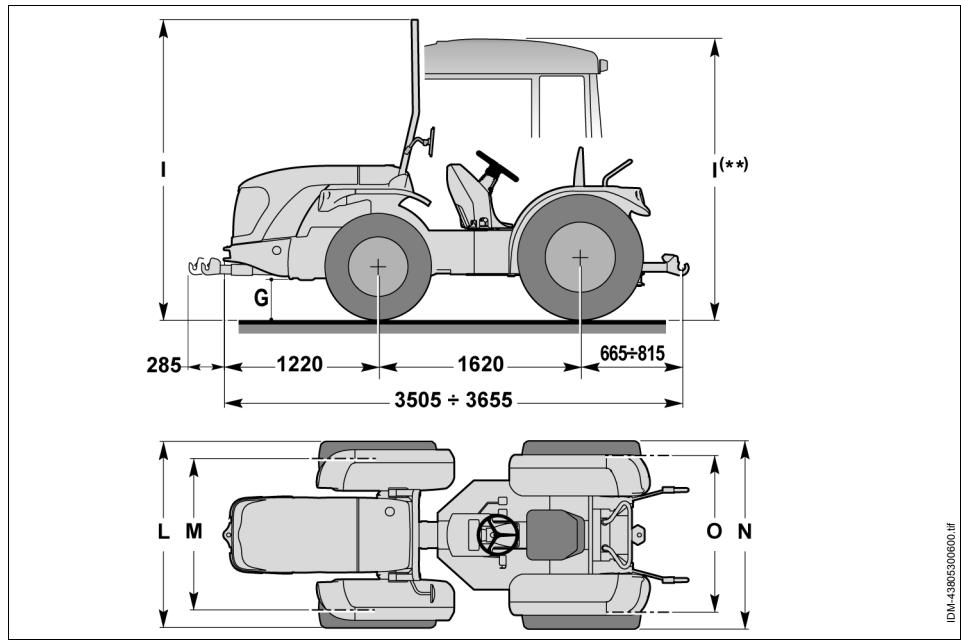


Table 10.21: Machine dimensions

TRG 10400							
Tyre type	G	I	I (**)	L	M	N	O
300/80-15.3	355	2305	2270	1470		1480	
360/70 R20				1540		1685	
300/80-15.3	355	2305	2280	1470		1510	
380/70 R20				1540		1710	
11 LR 16	355	2305	2270	1420		1400	
335/80 R20				1685		1730	
320/65 R18	355	2305	2280	1570		1610	
420/65 R20				1680		1680	
11.2 R20						1390	
320/85 R24(*)	410	2360	2325	1415		1710	
				1695			
280/85 R20	410	2360	2325	1395		1385	
12.4 R24				1715		1715	
320/70 R20						1475	
360/70 R24	410	2360	2325	1460		1695	
				1640			
320/70 R20						1535	
420/65 R24	365	2360	2325	1495		1695	
				1660			

To identify the quote,
see "Machine tracks"

To identify the quote,
see "Machine tracks"

(*) Standard tyres

(**) With cab:

ENGINE, TRANSMISSION AND PLANTS FEATURES

Table 10.22: Technical data

TX 7800 S			
Description and features	Unit of measurement	Value	
Motorisation			
Endothermic engine - model 3TNNA (4TNV98-ZNCR)			
- Exhaust gas emission class - Phase 3A			
- 4 stroke diesel supply			
- direct injection			
- Liquid cooling			
- Number of cylinders		4	
- Displacement	cm³	3319	
- Power	kW (CV)	52,1 (70,8)	
- Rotation speed (max)	rpm	2500	
- Maximum torque (at 1600 rev/min)	Nm	236,2	
- Specific fuel consumption	g/kWh (g/CVh)	236 (173,5)	
- Fuel tank capacity (With safety arch).	l	58	
- Fuel tank capacity (With frame or cab).	l	50	
- cooling circuit capacity	l	11	
Transmission parts			
Four wheel drive and axles with final reducers			
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)			
Differential blocking with electro-hydraulic engagement			
Single dry disc type, hydraulically operated by foot pedal			
- Front transmission housing oil capacity	l	8	
- Gearbox oil capacity	l	22	
Front reducers oil quantity (right + left)	l	1,8	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 250/80-18 and 4 wheel drive).	mm	1675	
- External steering minimum radius (m) (with tyres 250/80-18 and 4 wheel drive).	mm	3372	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			

Table 10.22: Technical data

TX 7800 S			
Description and features	Unit of measurement	Value	
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic gear pump			
- Displacement	cm³	14	
- Flow rate (at 2500 rev/min)	l/min	43	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 80	
- Starter motor	kW	2,6	
- "Maintenance free" battery	V - A	12 - 100	
Warning signals and road lights			
- Low beam light bulb (asymmetrical headlights)	W	55	
- High beam light bulb (asymmetrical headlights)	W	60	
- Sidelights bulb (front)	W	4	
- Lamp, direction indicators	W	21	
- Sidelights bulb (rear)	W	5	
- Lamp, rear brake lights	W	21	
- Lamp, licence plate light	W	5	
Lift unit			
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TX S - TRX S)" heading.			

Table 10.23: Technical data

TRX 7800 S			
Description and features	Unit of measurement	Value	
Motorisation			
Endothermic engine - model 3TNNA (4TNV98-ZNCR)			
- Exhaust gas emission class - Phase 3A			
- 4 stroke diesel supply			
- direct injection			
- Liquid cooling			
- Number of cylinders		4	
- Displacement	cm³	3319	
- Power	kW (CV)	52,1 (70,8)	
- Rotation speed (max)	rpm	2500	
- Maximum torque (at 1600 rev/min)	Nm	236,2	

Table 10.23: Technical data

TRX 7800 S			
Description and features	Unit of measurement	Value	
- Specific fuel consumption	g/kWh (g/CVh)	236 (173,5)	
- Fuel tank capacity (With safety arch).	l	58	
- Fuel tank capacity (With frame or cab).	l	50	
- cooling circuit capacity	l	11	
Transmission parts			
Four wheel drive and axles with final reducers			
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)			
Differential blocking with electro-hydraulic engagement			
Single dry disc type, hydraulically operated by foot pedal			
- Front transmission housing oil capacity	l	8	
- Gearbox oil capacity	l	22	
Front reducers oil quantity (right + left)	l	1,8	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 250/80-18 and 4 wheel drive).	mm	1675	
- External steering minimum radius (m) (with tyres 250/80-18 and 4 wheel drive).	mm	3372	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic gear pump			
- Displacement	cm³	14	
- Flow rate (at 2500 rev/min)	l/min	43	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 80	
- Starter motor	kW	2,6	
- "Maintenance free" battery	V - A	12 - 100	
Warning signals and road lights			

Table 10.23: Technical data

TRX 7800 S		
Description and features	Unit of measurement	Value
- Low beam light bulb (asymmetrical headlights)	W	55
- High beam light bulb (asymmetrical headlights)	W	60
- Sidelights bulb (front)	W	4
- Lamp, direction indicators	W	21
- Sidelights bulb (rear)	W	5
- Lamp, rear brake lights	W	21
- Lamp, licence plate light	W	5
Lift unit		
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TX S - TRX S)" heading.		

Table 10.24: Technical data

TRX 7800		
Description and features	Unit of measurement	Value
Motorisation		
Endothermic engine - model 3TNNA (4TNV98-ZNCR)		
- Exhaust gas emission class - Phase 3A		
- 4 stroke diesel supply		
- direct injection		
- Liquid cooling		
- Number of cylinders		4
- Displacement	cm ³	3319
- Power	kW (CV)	52,1 (70,8)
- Rotation speed (max)	rpm	2500
- Maximum torque (at 1600 rev/min)	Nm	236,2
- Specific fuel consumption	g/kWh (g/CVh)	236 (173,5)
- Fuel tank capacity (With safety arch).	l	58
- Fuel tank capacity (With frame or cab).	l	50
- cooling circuit capacity	l	11
Transmission parts		
Four wheel drive and axles with final reducers		
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)		
Differential blocking with electro-hydraulic engagement		
Single dry disc type, hydraulically operated by foot pedal		
- Front transmission housing oil capacity	l	14
- Gearbox oil capacity	l	24,5
Front reducers oil quantity (right + left)	l	1,8
Rear reducers oil quantity (right + left)	l	2,6

Table 10.24: Technical data

TRX 7800			
Description and features	Unit of measurement	Value	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 250/80-18 and 4 wheel drive).	mm	1675	
- External steering minimum radius (m) (with tyres 250/80-18 and 4 wheel drive).	mm	3370	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic pump with gears (unit 1)			
- Displacement	cm³	8	
- Flow rate (at 2500 rev/min)	l/min	24,6	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	14	
- Flow rate (at 2500 rev/min)	l/min	43	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 80	
- Starter motor	kW	2,6	
- "Maintenance free" battery	V - A	12 - 100	
Warning signals and road lights			
- Low beam light bulb (asymmetrical headlights)	W	55	
- High beam light bulb (asymmetrical headlights)	W	60	
- Sidelights bulb (front)	W	4	
- Lamp, direction indicators	W	21	
- Sidelights bulb (rear)	W	5	
- Lamp, rear brake lights	W	21	
- Lamp, licence plate light	W	5	
Lift unit			
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.			

Table 10.25: Technical data

TRX 8400			
Description and features	Unit of measurement	Value	
Motorisation			
Endothermic engine - model D753IE3 (04D/4)			
- Exhaust gas emission class - Phase 3A			
- 4 stroke diesel supply			
- Direct injection with overpowering and intercooler			
- Liquid cooling			
- Number of cylinders		3	
- Displacement	cm ³	2228	
- Power	kW (CV)	51,5 (70)	
- Rotation speed (max)	rpm	2300	
- Maximum torque (at 1650 rev/min)	Nm	255	
- Specific fuel consumption	g/kWh (g/CVh)	266,5 (196)	
- Fuel tank capacity (With safety arch).	l	58	
- Fuel tank capacity (With frame or cab).	l	50	
- cooling circuit capacity	l	10	
Transmission parts			
Four wheel drive and axles with final reducers			
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)			
Differential blocking with electro-hydraulic engagement			
Single dry disc type, hydraulically operated by foot pedal			
- Front transmission housing oil capacity	l	14	
- Gearbox oil capacity	l	24,5	
Front reducers oil quantity (right + left)	l	1,8	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 250/80-18 and 4 wheel drive).	mm	1675	
- External steering minimum radius (m) (with tyres 250/80-18 and 4 wheel drive).	mm	3370	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	

Table 10.25: Technical data

TRX 8400			
Description and features	Unit of measurement	Value	
Hydraulic pump with gears (unit 1)			
- Displacement	cm³	8	
- Flow rate (at 2300 rev/min)	l/min	21	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	16	
- Flow rate (at 2300 rev/min)	l/min	41,5	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 70	
- Starter motor	kW	-	
- "Maintenance free" battery	V - A	12 - 100	
Warning signals and road lights			
- Low beam light bulb (asymmetrical headlights)	W	55	
- High beam light bulb (asymmetrical headlights)	W	60	
- Sidelights bulb (front)	W	5	
- Lamp, direction indicators	W	21	
- Sidelights bulb (rear)	W	5	
- Lamp, rear brake lights	W	21	
- Lamp, licence plate light	W	5	
Lift unit			
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.			

Table 10.26: Technical data

TRX 9800			
Description and features	Unit of measurement	Value	
Motorisation			
Endothermic engine - model 3TTNA (4TNV98T-ZXCR)			
- Exhaust gas emission class - Phase 3A			
- 4 stroke diesel supply			
- Direct injection with overpowering			
- Liquid cooling			
- Number of cylinders		4	
- Displacement	cm³	3319	
- Power	kW (CV)	63,9 (86,9)	
- Rotation speed (max)	rpm	2500	
- Maximum torque (at 1850 rev/min)	Nm	286,7	

Table 10.26: Technical data

TRX 9800			
Description and features	Unit of measurement	Value	
- Specific fuel consumption	g/kWh (g/CVh)	236 (173,5)	
- Fuel tank capacity (With safety arch).	l	58	
- Fuel tank capacity (With frame or cab).	l	50	
- cooling circuit capacity	l	11	
Transmission parts			
Four wheel drive and axles with final reducers			
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)			
Differential blocking with electro-hydraulic engagement			
Single dry disc type, hydraulically operated by foot pedal			
- Front transmission housing oil capacity	l	14	
- Gearbox oil capacity	l	24,5	
Front reducers oil quantity (right + left)	l	1,8	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 250/80-18 and 4 wheel drive).	mm	1675	
- External steering minimum radius (m) (with tyres 250/80-18 and 4 wheel drive).	mm	3370	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic pump with gears (unit 1)			
- Displacement	cm³	8	
- Flow rate (at 2500 rev/min)	l/min	24,6	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	14	
- Flow rate (at 2500 rev/min)	l/min	43	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 80	

Table 10.26: Technical data

TRX 9800		
Description and features	Unit of measurement	Value
- Starter motor	kW	2,6
- "Maintenance free" battery	V - A	12 - 100
Warning signals and road lights		
- Low beam light bulb (asymmetrical headlights)	W	55
- High beam light bulb (asymmetrical headlights)	W	60
- Sidelights bulb (front)	W	4
- Lamp, direction indicators	W	21
- Sidelights bulb (rear)	W	5
- Lamp, rear brake lights	W	21
- Lamp, licence plate light	W	5
Lift unit		
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.		

Table 10.27: Technical data

TRX 9900		
Description and features	Unit of measurement	Value
Motorisation		
Endothermic engine - model V3800DI-T-E3B-ANT-S2		
- Exhaust gas emission class - Phase 3A		
- 4 stroke diesel supply		
- Direct injection with overpowering		
- Liquid cooling		
- Number of cylinders		4
- Displacement	cm ³	3769
- Power	kW (CV)	65,1 (88,5)
- Rotation speed (max)	rpm	2600
- Maximum torque (at 1600 rev/min)	Nm	284,7
- Specific fuel consumption	g/kWh (g/CVh)	251 (184,6)
- Fuel tank capacity (With safety arch).	l	58
- Fuel tank capacity (With frame or cab).	l	50
- cooling circuit capacity	l	10
Transmission parts		
Four wheel drive and axles with final reducers		
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)		
Differential blocking with electro-hydraulic engagement		
Single dry disc type, hydraulically operated by foot pedal		
- Front transmission housing oil capacity	l	14

Table 10.27: Technical data

TRX 9900		
Description and features	Unit of measurement	Value
- Gearbox oil capacity	l	24,5
Front reducers oil quantity (right + left)	l	1,8
Rear reducers oil quantity (right + left)	l	2,6
Steering unit		
Hydraulic steering with two single-acting cylinders, on central joint		
- Minimum steering radius (internal) (with tyres 250/80-18 and 4 wheel drive).	mm	1675
- External steering minimum radius (m) (with tyres 250/80-18 and 4 wheel drive).	mm	3370
Hydrodrive OSPC-80 ON		
Hydrodrive calibration	bar	125-130
Braking system		
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.		
Mechanical parking brake, with lever control that acts on the central transmission		
Hydraulic system		
- Cartridge oil filter with filtering rating	µ	25
Hydraulic pump with gears (unit 1)		
- Displacement	cm³	11
- Flow rate (at 2500 rev/min)	l/min	27,9
Hydraulic pump with gears (unit 2)		
- Displacement	cm³	16
- Flow rate (at 2500 rev/min)	l/min	40,5
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.		
- Maximum working pressure	bar	160
Electrical system		
- Power supply voltage	V	12
- Alternator	V - A	12 - 90
- Starter motor	kW	3,0
- "Maintenance free" battery	V - A	12 - 100
Warning signals and road lights		
- Low beam light bulb (asymmetrical headlights)	W	55
- High beam light bulb (asymmetrical headlights)	W	60
- Sidelights bulb (front)	W	4
- Lamp, direction indicators	W	21
- Sidelights bulb (rear)	W	5
- Lamp, rear brake lights	W	21
- Lamp, licence plate light	W	5
Lift unit		

Table 10.27: Technical data

TRX 9900		
Description and features	Unit of measurement	Value
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.		

Table 10.28: Technical data

TRX 10400		
Description and features	Unit of measurement	Value
Motorisation		
Endothermic engine - model D754IE3 (82 C/3)		
- Exhaust gas emission class - Phase 3A		
- 4 stroke diesel supply		
- Direct injection with overpowering and intercooler		
- Liquid cooling		
- Number of cylinders		4
- Displacement	cm ³	2970
- Power	kW (CV)	70 (95,2)
- Rotation speed (max)	rpm	2600
- Maximum torque (at 1000 rev/min)	Nm	420
- Specific fuel consumption	g/kWh (g/CVh)	243 (178,7)
- Fuel tank capacity (With safety arch).	l	58
- Fuel tank capacity (With frame or cab).	l	50
- cooling circuit capacity	l	13
Transmission parts		
Four wheel drive and axles with final reducers		
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)		
Differential blocking with electro-hydraulic engagement		
Single dry disc type, hydraulically operated by foot pedal		
- Front transmission housing oil capacity	l	14
- Gearbox oil capacity	l	24,5
Front reducers oil quantity (right + left)	l	1,8
Rear reducers oil quantity (right + left)	l	2,6
Steering unit		
Hydraulic steering with two single-acting cylinders, on central joint		
- Minimum steering radius (internal) (with tyres 250/80-18 and 4 wheel drive).	mm	1675
- External steering minimum radius (m) (with tyres 250/80-18 and 4 wheel drive).	mm	3370
Hydrodrive OSPC-80 ON		
Hydrodrive calibration	bar	125-130
Braking system		

Table 10.28: Technical data

TRX 10400			
Description and features	Unit of measurement	Value	
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic pump with gears (unit 1)			
- Displacement	cm³	8	
- Flow rate (at 2600 rev/min)	l/min	23,6	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	14	
- Flow rate (at 2600 rev/min)	l/min	41,4	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 70	
- Starter motor	kW	2,3	
- "Maintenance free" battery	V - A	12 - 100	
Warning signals and road lights			
- Low beam light bulb (asymmetrical headlights)	W	55	
- High beam light bulb (asymmetrical headlights)	W	60	
- Sidelights bulb (front)	W	4	
- Lamp, direction indicators	W	21	
- Sidelights bulb (rear)	W	5	
- Lamp, rear brake lights	W	21	
- Lamp, licence plate light	W	5	
Lift unit			
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.			

Table 10.29: Technical data

TRX 10900			
Description and features	Unit of measurement	Value	
Motorisation			
Endothermic engine - model V3800DI-T-E3B-ANT-S1			
- Exhaust gas emission class - Phase 3A			
- 4 stroke diesel supply			
- Direct injection with overpowering			
- Liquid cooling			
- Number of cylinders		4	
- Displacement	cm ³	3769	
- Power	kW (CV)	72,9 (99,1)	
- Rotation speed (max)	rpm	2600	
- Maximum torque (at 1600 rev/min)	Nm	320,2	
- Specific fuel consumption	g/kWh (g/CVh)	251 (184,6)	
- Fuel tank capacity (With safety arch).	l	58	
- Fuel tank capacity (With frame or cab).	l	50	
- cooling circuit capacity	l	10	
Transmission parts			
Four wheel drive and axles with final reducers			
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)			
Differential blocking with electro-hydraulic engagement			
Single dry disc type, hydraulically operated by foot pedal			
- Front transmission housing oil capacity	l	14	
- Gearbox oil capacity	l	24,5	
Front reducers oil quantity (right + left)	l	1,8	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 250/80-18 and 4 wheel drive).	mm	1675	
- External steering minimum radius (m) (with tyres 250/80-18 and 4 wheel drive).	mm	3370	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	

Table 10.29: Technical data

TRX 10900			
Description and features	Unit of measurement	Value	
Hydraulic pump with gears (unit 1)			
- Displacement	cm³	11	
- Flow rate (at 2500 rev/min)	l/min	27,9	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	16	
- Flow rate (at 2500 rev/min)	l/min	40,5	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 90	
- Starter motor	kW	3,0	
- "Maintenance free" battery	V - A	12 - 100	
Warning signals and road lights			
- Low beam light bulb (asymmetrical headlights)	W	55	
- High beam light bulb (asymmetrical headlights)	W	60	
- Sidelights bulb (front)	W	4	
- Lamp, direction indicators	W	21	
- Sidelights bulb (rear)	W	5	
- Lamp, rear brake lights	W	21	
- Lamp, licence plate light	W	5	
Lift unit			
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.			

Table 10.30: Technical data

TRG 9800			
Description and features	Unit of measurement	Value	
Motorisation			
Endothermic engine - model 3TTNA (4TNV98T-ZXCR)			
- Exhaust gas emission class - Phase 3A			
- 4 stroke diesel supply			
- Direct injection with overpowering			
- Liquid cooling			
- Number of cylinders		4	
- Displacement	cm³	3319	
- Power	kW (CV)	63,9 (86,9)	
- Rotation speed (max)	rpm	2500	
- Maximum torque (at 1850 rev/min)	Nm	286,7	

Table 10.30: Technical data

TRG 9800			
Description and features	Unit of measurement	Value	
- Specific fuel consumption	g/kWh (g/CVh)	236 (173,5)	
- Fuel tank capacity	l	58	
- cooling circuit capacity	l	11	
Transmission parts			
Four wheel drive and axles with final reducers			
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)			
Differential blocking with electro-hydraulic engagement			
Single dry disc type, hydraulically operated by foot pedal			
- Front transmission housing oil capacity	l	14	
- Gearbox oil capacity	l	24,5	
Front reducers oil quantity (right + left)	l	1,8	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 280/85 R20 - 320/85 R24 and 4 wheel drive).	mm	2078	
- External steering minimum radius (m) (with tyres 280/85 R20 - 320/85 R24 and 4 wheel drive).	mm	3822	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic pump with gears (unit 1)			
- Displacement	cm³	8	
- Flow rate (at 2500 rev/min)	l/min	24,6	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	14	
- Flow rate (at 2600 rev/min)	l/min	43	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 80	
- Starter motor	kW	2,6	

Table 10.30: Technical data

TRG 9800		
Description and features	Unit of measurement	Value
- "Maintenance free" battery	V - A	12 - 100
Warning signals and road lights		
- Low beam light bulb (asymmetrical headlights)	W	55
- High beam light bulb (asymmetrical headlights)	W	60
- Sidelights bulb (front)	W	4
- Lamp, direction indicators	W	21
- Sidelights bulb (rear)	W	5
- Lamp, rear brake lights	W	21
- Lamp, licence plate light	W	5
Lift unit		
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.		

Table 10.31: Technical data

TRG 9900		
Description and features	Unit of measurement	Value
Motorisation		
Endothermic engine - model V3800DI-T-E3B-ANT-S2		
- Exhaust gas emission class - Phase 3A		
- 4 stroke diesel supply		
- Direct injection with overpowering		
- Liquid cooling		
- Number of cylinders		4
- Displacement	cm³	3769
- Power	kW (CV)	65,1 (88,5)
- Rotation speed (max)	rpm	2600
- Maximum torque (at 1600 rev/min)	Nm	284,7
- Specific fuel consumption	g/kWh (g/CVh)	251 (184,6)
- Fuel tank capacity	l	58
- cooling circuit capacity	l	10
Transmission parts		
Four wheel drive and axles with final reducers		
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)		
Differential blocking with electro-hydraulic engagement		
Single dry disc type, hydraulically operated by foot pedal		
- Front transmission housing oil capacity	l	14
- Gearbox oil capacity	l	24,5
Front reducers oil quantity (right + left)	l	1,8

Table 10.31: Technical data

TRG 9900			
Description and features	Unit of measurement	Value	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 280/85 R20 - 320/85 R24 and 4 wheel drive).	mm	2078	
- External steering minimum radius (m) (with tyres 280/85 R20 - 320/85 R24 and 4 wheel drive).	mm	3822	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic pump with gears (unit 1)			
- Displacement	cm³	11	
- Flow rate (at 2500 rev/min)	l/min	27,9	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	16	
- Flow rate (at 2600 rev/min)	l/min	40,5	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 90	
- Starter motor	kW	3,0	
- "Maintenance free" battery	V - A	12 - 100	
Warning signals and road lights			
- Low beam light bulb (asymmetrical headlights)	W	55	
- High beam light bulb (asymmetrical headlights)	W	60	
- Sidelights bulb (front)	W	4	
- Lamp, direction indicators	W	21	
- Sidelights bulb (rear)	W	5	
- Lamp, rear brake lights	W	21	
- Lamp, licence plate light	W	5	
Lift unit			
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.			

Table 10.32: Technical data

TRG 10400			
Description and features	Unit of measurement	Value	
Motorisation			
Endothermic engine - model D754IE3 (82 C/3)			
- Exhaust gas emission class - Phase 3A			
- 4 stroke diesel supply			
- Direct injection with overpowering and intercooler			
- Liquid cooling			
- Number of cylinders		4	
- Displacement	cm³	2970	
- Power	kW (CV)	70 (95,2)	
- Rotation speed (max)	rpm	2600	
- Maximum torque (at 1000 rev/min)	Nm	420	
- Specific fuel consumption	g/kWh (g/CVh)	243 (178,7)	
- Fuel tank capacity	l	58	
- cooling circuit capacity	l	13	
Transmission parts			
Four wheel drive and axles with final reducers			
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)			
Differential blocking with electro-hydraulic engagement			
Single dry disc type, hydraulically operated by foot pedal			
- Front transmission housing oil capacity	l	14	
- Gearbox oil capacity	l	24,5	
Front reducers oil quantity (right + left)	l	1,8	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 280/85 R20 - 320/85 R24 and 4 wheel drive).	mm	2078	
- External steering minimum radius (m) (with tyres 280/85 R20 - 320/85 R24 and 4 wheel drive).	mm	3822	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic pump with gears (unit 1)			

Table 10.32: Technical data

TRG 10400			
Description and features	Unit of measurement	Value	
- Displacement	cm³	8	
- Flow rate (at 2600 rev/min)	l/min	23,6	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	14	
- Flow rate (at 2600 rev/min)	l/min	41,4	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 70	
- Starter motor	kW	2,3	
- "Maintenance free" battery	V - A	12 - 100	
Warning signals and road lights			
- Low beam light bulb (asymmetrical headlights)	W	55	
- High beam light bulb (asymmetrical headlights)	W	60	
- Sidelights bulb (front)	W	4	
- Lamp, direction indicators	W	21	
- Sidelights bulb (rear)	W	5	
- Lamp, rear brake lights	W	21	
- Lamp, licence plate light	W	5	
Lift unit			
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.			

Table 10.33: Technical data

TRG 10900			
Description and features	Unit of measurement	Value	
Motorisation			
Endothermic engine - model V3800DI-T-E3B-ANT-S1			
- Exhaust gas emission class - Phase 3A			
- 4 stroke diesel supply			
- Direct injection with overpowering			
- Liquid cooling			
- Number of cylinders		4	
- Displacement	cm³	3769	
- Power	kW (CV)	72,9 (99,1)	
- Rotation speed (max)	rpm	2600	
- Maximum torque (at 1600 rev/min)	Nm	320,2	

Table 10.33: Technical data

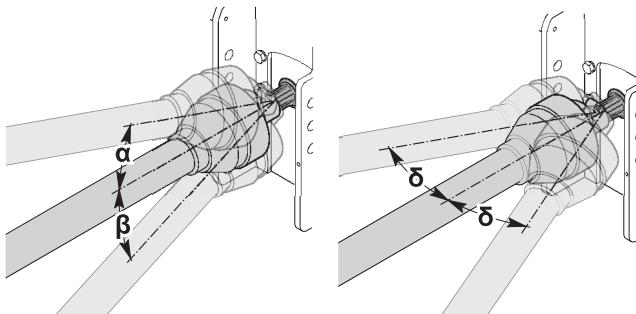
TRG 10900			
Description and features	Unit of measurement	Value	
- Specific fuel consumption	g/kWh (g/CVh)	251 (184,6)	
- Fuel tank capacity	l	58	
- cooling circuit capacity	l	10	
Transmission parts			
Four wheel drive and axles with final reducers			
Synchronised mechanical gearbox with 32 gears (16 forward - 16 reverse)			
Differential blocking with electro-hydraulic engagement			
Single dry disc type, hydraulically operated by foot pedal			
- Front transmission housing oil capacity	l	14	
- Gearbox oil capacity	l	24,5	
Front reducers oil quantity (right + left)	l	1,8	
Rear reducers oil quantity (right + left)	l	2,6	
Steering unit			
Hydraulic steering with two single-acting cylinders, on central joint			
- Minimum steering radius (internal) (with tyres 280/85 R20 - 320/85 R24 and 4 wheel drive).	mm	2078	
- External steering minimum radius (m) (with tyres 280/85 R20 - 320/85 R24 and 4 wheel drive).	mm	3822	
Hydrodrive OSPC-80 ON			
Hydrodrive calibration	bar	125-130	
Braking system			
Hydraulic type service brakes with discs in oil bath and pedal control that acts on all wheels.			
Mechanical parking brake, with lever control that acts on the central transmission			
Hydraulic system			
- Cartridge oil filter with filtering rating	µ	25	
Hydraulic pump with gears (unit 1)			
- Displacement	cm³	11	
- Flow rate (at 2500 rev/min)	l/min	27,9	
Hydraulic pump with gears (unit 2)			
- Displacement	cm³	16	
- Flow rate (at 2600 rev/min)	l/min	40,5	
Hydraulic couplings with quick coupling for single-acting, double-acting and double-acting with floating system services.			
- Maximum working pressure	bar	160	
Electrical system			
- Power supply voltage	V	12	
- Alternator	V - A	12 - 90	
- Starter motor	kW	3,0	

Table 10.33: Technical data

TRG 10900		
Description and features	Unit of measurement	Value
- "Maintenance free" battery	V - A	12 - 100
Warning signals and road lights		
- Low beam light bulb (asymmetrical headlights)	W	55
- High beam light bulb (asymmetrical headlights)	W	60
- Sidelights bulb (front)	W	4
- Lamp, direction indicators	W	21
- Sidelights bulb (rear)	W	5
- Lamp, rear brake lights	W	21
- Lamp, licence plate light	W	5
Lift unit		
- Hydraulic power lifting unit with three-point hitch (category 1-2). For more details, see "Rear power lift dimensions (TRX - TRG)" heading.		

CARDAN SHAFT

During the work phase, it is opportune to keep the axis of rotation, of PTO and of motion receiving shaft of the tool, as much aligned as possible.



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- The table shows the values of the admitted joint angles of the cardan shaft connected with the machine.

Table 10.34: Cardan shaft joint angles

Description	Maximum
Vertical gap (high) (α)	45°
Vertical gap (low) (β)	35°
Side gap (with power lift unit installed) (δ)	30°
Side gap (without power lift unit installed) (δ)	50°

Important

The maximum admitted joint angles of the Cardan shaft are given in the manual issued by its manufacturer.

PTO FEATURES

PTO features for mechanical transmission

- Independent electro-hydraulic controlled PTO (Clockwise direction of rotation).
- Live PTO, driven from transmission (Clockwise rotation direction with forward gear, anti-clockwise with reverse gear).
- Splined shaft ASAE 1" 3/8
- The tables show the PTO rpm values (independent or synchronised with the gearbox).


Important

Before connecting interchangeable equipment, refer to the manual to verify the required speed and select it for the vehicle

Table 10.35: Rpm rear PTO

TX 7800 S - TRX 7800 S			
version	PTO independent from gearbox		Live PTO, driven from transmission
	PTO revolutions	Max. engine speed	PTO revolutions - wheel revolution
540 power take-off	540	2360	4,023
540 E power take-off	540	1650	5,585

Table 10.36: Rpm rear PTO

TRX 7800 - TRX 9800			
version	PTO independent from gearbox		Live PTO, driven from transmission
	PTO revolutions	Max. engine speed	PTO revolutions - wheel revolution
540 power take-off	540	2360	3,543
540 E power take-off	540	1650	5,062
1000 power take-off (if present)	1000	2366	6,538

Table 10.37: Rpm rear PTO

TRX 8400			
version	PTO independent from gearbox		Live PTO, driven from transmission
	PTO revolutions	Max. engine speed	PTO revolutions - wheel revolution
540 power take-off	540	2055	4,061
540 E power take-off	540	1650	5,062
1000 power take-off (if present)	970	2300	6,538

Table 10.38: Rpm rear PTO

TRX 9900 - TRX 10400 - TRX 10900			
version	PTO independent from gearbox		Live PTO, driven from transmission
	PTO revolutions	Max. engine speed	PTO revolutions - wheel revolution
540 power take-off	540	2360	4,066
540 E power take-off	540	1650	5,809
1000 power take-off (if present)	1000	2366	7,503

Table 10.39: Rpm rear PTO

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900			
version	PTO independent from gearbox		Live PTO, driven from transmission
	PTO revolutions	Max. engine speed	PTO revolutions - wheel revolution
540 power take-off	540	2360	4,257
540 E power take-off	540	1650	6,081
1000 power take-off (if present)	1000	2366	7,855

Table 10.40: Rpm front PTO

TRX 7800 - TRX 9800 - TRX 10400 - TRG 9800 - TRG 10400		
version	PTO revolutions	Max. engine speed
1000 power take-off	1000	2500

Table 10.41: Rpm front PTO

TRX 8400		
version	PTO revolutions	Max. engine speed
1000 power take-off	920	2300

NOISE LEVELS

The tables give the noise levels detected with the machine in determined operational conditions and in the configurations indicated.

- The values have been detected in compliance with the Directives and the Laws in force regarding this subject.

Table 10.42: Noise level

Description		Measured value		
		With safety arch	With frame	With cab:
Sound level emission (environmental impact) (¹)	Sound level with machine at standstill	82 dB(A)	82 dB(A)	82 dB(A)
	Sound level with machine in motion	82 dB(A)	82 dB(A)	82 dB(A)
noise level at driver's seat (²)	Sound level at driver's ear	86 dB(A)	85 dB(A)	85 dB(A)

Table 10.43: Noise level

TRX 7800				
Description		Measured value		
		With safety arch	With frame	With cab:
Sound level emission (environmental impact) (¹)	Sound level with machine at standstill	80 dB(A)	80 dB(A)	80 dB(A)
	Sound level with machine in motion	81 dB(A)	81 dB(A)	81 dB(A)
noise level at driver's seat (²)	Sound level at driver's ear	86 dB(A)	84 dB(A)	83 dB(A)

Table 10.44: Noise level

TRX 8400 - TRX 10400 - TRG 10400				
Description		Measured value		
		With safety arch	With frame	With cab:
Sound level emission (environmental impact) (¹)	Sound level with machine at standstill	80 dB(A)	80 dB(A)	80 dB(A)
	Sound level with machine in motion	78 dB(A)	78 dB(A)	78 dB(A)
noise level at driver's seat (²)	Sound level at driver's ear	86 dB(A)	82 dB(A)	82 dB(A)

Table 10.45: Noise level

TRX 9800 - TRG 9800				
Description		Measured value		
		With safety arch	With frame	With cab:
Sound level emission (environmental impact) (¹)	Sound level with machine at standstill	80 dB(A)	80 dB(A)	80 dB(A)
	Sound level with machine in motion	81 dB(A)	81 dB(A)	81 dB(A)
noise level at driver's seat (²)	Sound level at driver's ear	85 dB(A)	84 dB(A)	83,5 dB(A)

Table 10.46: Noise level

TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900				
Description		Measured value		
		With safety arch	With frame	With cab:
Sound level emission (environmental impact) (¹)	Sound level with machine at standstill	83 dB(A)	83 dB(A)	83 dB(A)
	Sound level with machine in motion	83 dB(A)	83 dB(A)	83 dB(A)

Table 10.46: Noise level

TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900				
<i>Description</i>		<i>Measured value</i>		
		<i>With safety arch</i>	<i>With frame</i>	<i>With cab:</i>
noise level at driver's seat (¹)	Sound level at driver's ear	85 dB(A)	85 dB(A)	83 dB(A)

(¹) The values have been detected in compliance with Directive 2009/63/CE.

(²) The values have been detected in compliance with Directive 2009/76/CE.

**Caution
Precaution**

If the machine is to be operated for lengthy and unbroken periods, wear personal protective devices (ear defenders) to limit the level of noise audible when seated in the driving position.

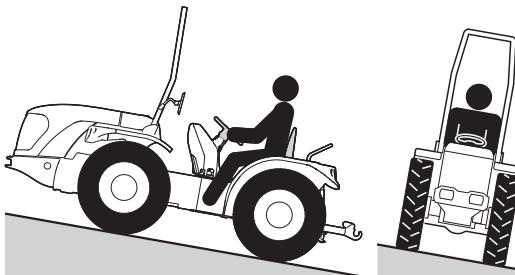
VIBRATIONS TRANSMITTED TO THE DRIVER

The level of vibration, detected in the driver's seat, is always $1,25 \text{ m/s}^2$ or less.

- The value was detected in compliance with Directive 78/764/CEE, and successive modifications, and can vary depending on the driver's weight.

GRADIENTS (MACHINE IN STATIC POSITION)

The values of the gradients are the result of different static tests performed by the manufacturer.



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- The tests were performed with the machine stopped on an inclined plane, not steered and without tools and/or ballasts applied.
- In laboratory testing it is not possible to reproduce environmental conditions, therefore values shown in the table are only for static reference and MUST NOT be considered as a "safe limit" within which to operate without an overturning risk in the work environment.

Table 10.47: Overturning limit (machine in static position)

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900			
Machine position	Measured value		Notes
	With safety arch	With cab:	
Machine stopped uphill (longitudinal position)	33°	33°	
Machine stopped downhill (longitudinal position)	33°	33°	Stability tests carried out with the machine equipped as indicated. - Tyres 320/70 R20
Machine stopped in inclined position (right transverse)	38°	32°	- Front track 1205 mm - Rear track 1280 mm
Machine stopped in inclined position (left transverse)	38°	32°	

Table 10.48: Overturning limit (machine in static position)

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900			
Machine position	Measured value		Notes
	With safety arch	With cab:	
Machine stopped uphill (longitudinal position)	40°	40°	
Machine stopped downhill (longitudinal position)	40°	40°	Stability tests carried out with the machine equipped as indicated. - Front tyres 320/70 R20
Machine stopped in inclined position (right transverse)	38°	28°	- Rear tyres 360/70 R24 - Front track 1200 mm
Machine stopped in inclined position (left transverse)	38°	28°	- Rear track 1140 mm



Important

The driver must drive the machine appropriately and **ALWAYS** proceed with caution, especially in conditions entailing the risk of overturning.

MACHINE TRACKS

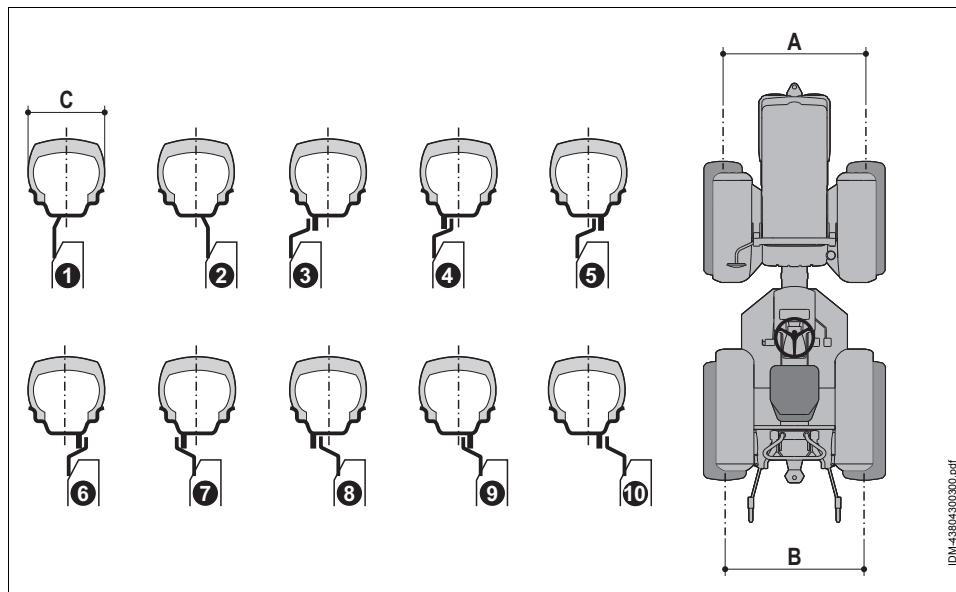


Table 10.49: Track dimensions

		TX 7800 S - TRX 7800 S					
Type	Quote (mm)	Tyre type					
		31x15.50-15	300/80-15.3	425/55 R17	400/55-17.5	250/80-18	280/70 R18
1	A		1145				
	B		1140				
2	A	1295	1285	1305	1290		
	B	1295	1315	1305	1290		
3	A						
	B						
4	A					1130	
	B					1100	1130
5	A					1240	1240
	B					1205	1240
6	A					1315	1315
	B					1280	1315
7	A					1140	1140
	B					1175	1140
8	A					1220	1220
	B					1250	1220
9	A					1325	1325
	B					1360	1325

Table 10.49: Track dimensions

TX 7800 S - TRX 7800 S						
Type	Quote (mm)	Tyre type				
		31x15.50-15	300/80-15.3	425/55 R17	400/55-17.5	250/80-18
10	A					1400
	B					1435
	C	395	300	425	400	250
						280

Table 10.50: Track dimensions

TX 7800 S - TRX 7800 S						
Type	Quote (mm)	Tyre type				
		320/65 R18	340/65 R18	9.5 R20	280/85 R20	300/70 R20
1	A					
	B					
2	A					
	B					
3	A					
	B					
4	A				1115	1115
	B	1130	1130			1115
5	A	1240	1240	1145	1215	1215
	B	1240	1240	1145	1140	1215
6	A	1315	1315	1210	1280	1280
	B	1315	1315	1210	1205	1280
7	A	1140	1140	1245	1175	1175
	B	1140	1140	1245	1250	1175
8	A	1220	1220	1290	1240	1240
	B	1220	1220	1290	1320	1240
9	A	1325	1325	1445	1340	1340
	B	1325	1325	1445	1420	1340
10	A	1400	1400 ⁽¹⁾	1485	1410	1410
	B	1400	1400 ⁽¹⁾	1485	1485 ⁽¹⁾	1410
	C	320	345	245	295	320

(1) track widths that can be used for working purposes, but not when driving on public roads.

 **Important**

After every track change operation it must be checked that the wheels do not interfere with the bodywork or other parts of the machine.

 **Important**

At the end of the track change, check that the tightening torque of the screws or fixing nuts of the wheels is correct (See "Tyre replacement").

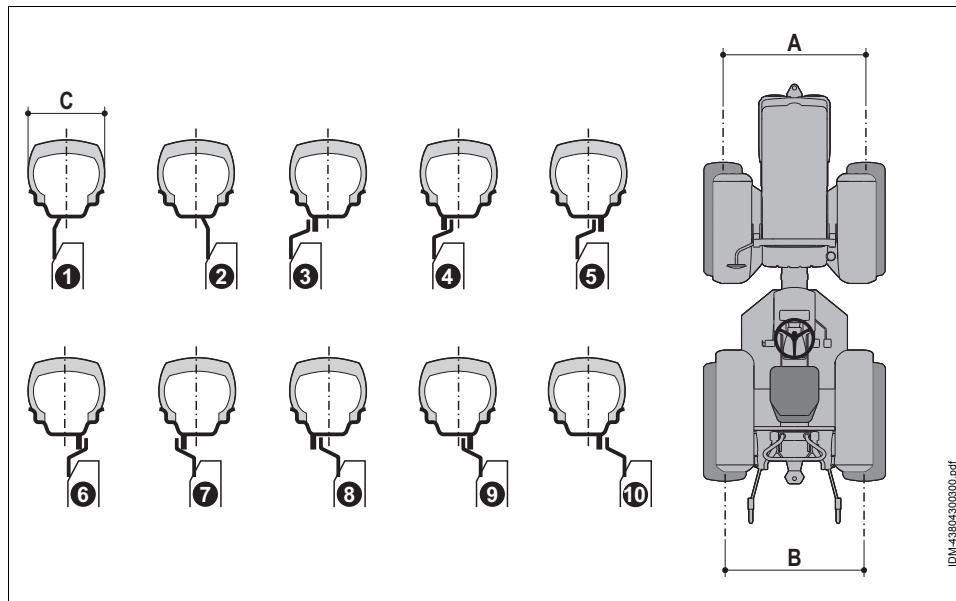


Table 10.51: Track dimensions

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900								
Type	Quote (mm)	Tyre type						
		31x15.50-15	36x13.50-15	300/80-15.3	425/55 R17	400/55-17.5	250/80-18	280/70 R18
1	A			1145				
	B			1140				
2	A	1295	1265	1285	1305	1290		
	B	1295	1265	1315	1305	1290		
3	A							
	B							
4	A					1130		
	B					1100	1130	1130
5	A					1240	1240	1240
	B					1205	1240	1240
6	A					1315	1315	1315
	B					1280	1315	1315
7	A					1140	1140	1140
	B					1175	1140	1140
8	A					1220	1220	1220
	B					1250	1220	1220
9	A					1325	1325	1325
	B					1360	1325	1325
10	A					1400	1400	1400
	B					1435	1400	1400

Table 10.51: Track dimensions

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900								
Type	Quote (mm)	Tyre type						
		31x15.50-15	36x13.50-15	300/80-15.3	425/55 R17	400/55-17.5	250/80-18	280/70 R18
	C	395	380	300	425	400	250	280
								320

Table 10.52: Track dimensions

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900								
Type	Quote (mm)	Tyre type						
		440/50 R17	340/65 R18	9.5 R20	11.2 R20	280/85 R20	280/85 R20 320/70 R20	300/70 R20
1	A							
	B							
2	A	1305						
	B	1305						
3	A							
	B							
4	A				1115	1115	1115	1115
	B		1130				1115	1115
5	A		1240	1145	1215	1215	1215	1215
	B		1240	1145	1140	1140	1215	1215
6	A		1315	1210	1280	1280	1280	1280
	B		1315	1210	1205	1205	1280	1280
7	A		1140	1245	1175	1175	1175	1175
	B		1140	1245	1275	1250	1175	1175
8	A		1220	1290	1240	1240	1240	1240
	B		1220	1290	1320	1320	1240	1240
9	A		1325	1445	1340	1340	1340	1340
	B		1325	1445	1420	1420	1340	1340
10	A		1400 ⁽¹⁾	1485	1410	1410	1410	1410
	B		1400 ⁽¹⁾	1485	1485 ⁽¹⁾	1485 ⁽¹⁾	1410	1410
	C	430	345	245	275	295	295 320	295
								320

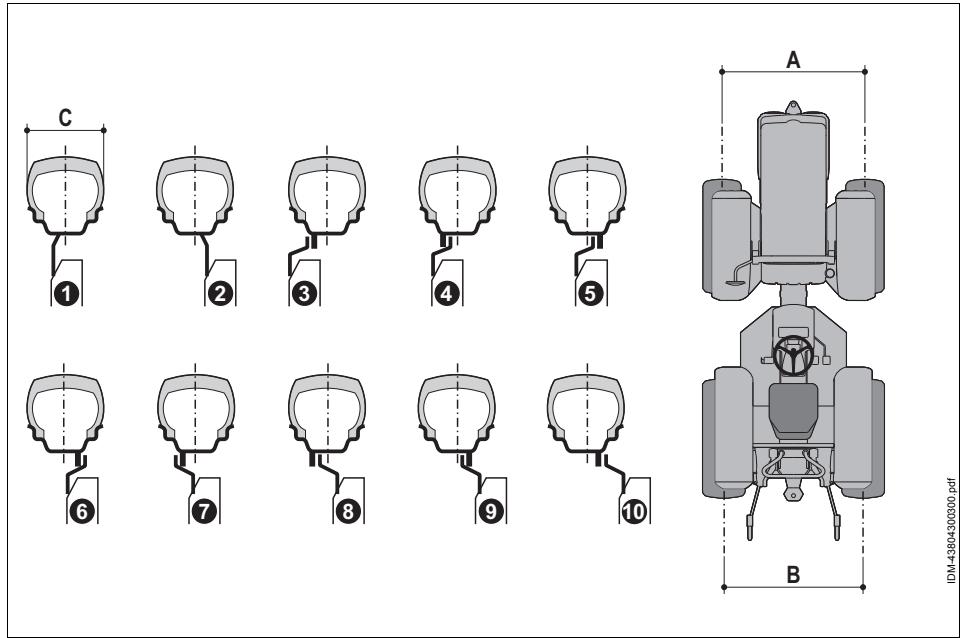
(¹) track widths that can be used for working purposes, but not when driving on public roads.

Important

After every track change operation it must be checked that the wheels do not interfere with the bodywork or other parts of the machine.

Important

At the end of the track change, check that the tightening torque of the screws or fixing nuts of the wheels is correct (See "Tyre replacement").



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Table 10.53: Track dimensions

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900						
Type	Quote (mm)	Tyre type				
		300/80-15.3 360/70 R20	300/80-15.3 380/70 R20	11 LR 16 335/80 R20	320/65 R18 420/65 R20	11.2 R20 320/85 R24
1	A					
	B					
2	A					
	B					
3	A					
	B			1060		1070
4	A					
	B	1130	1130	1130		1140
5	A					1140
	B					1120
6	A					1205
	B					1190
7	A	1170	1170	1140		1250
	B	1190	1190	1190	1190	1270
8	A	1240	1240	1205	1250	1320
	B	1255	1255	1255	1260	1340
9	A			1340	1360	1420
	B	1330	1330	1330	1330	1320

Table 10.53: Track dimensions

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900						
Type	Quote (mm)	Tyre type				
		300/80-15.3 360/70 R20	300/80-15.3 380/70 R20	11 LR 16 335/80 R20	320/65 R18 420/65 R20	11.2 R20 320/85 R24
10	A			1450	1435(1)	1485(1)
	B	1395(1)	1395(1)	1390	1400(1)	1390
	C	300 355	300 380	280 340	320 420	275 320

Table 10.54: Track dimensions

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900						
Type	Quote (mm)	Tyre type				
		280/70 R18 360/70 R20	280/85 R20 12.4 R24	280/85 R20 320/85 R24	320/70 R20 360/70 R24	320/70 R20 420/65 R24
1	A					
	B					
2	A					
	B					
3	A					
	B		1070	1070		
4	A					
	B	1130	1140	1140	1140	1135
5	A	1205	1100	1100	1140	1215
	B		1120	1120	1120	1115
6	A	1280	1205	1205	1205	1285
	B		1190	1190	1190	1185
7	A	1175	1250	1250	1250	1175
	B	1190	1270	1270	1270	1275
8	A	1250	1320	1320	1320	1245
	B	1255	1340	1340	1340	1345(1)
9	A	1360	1420(1)	1420(1)	1420	1340
	B	1330	1320	1320	1320	1325(1)
10	A	1435	1485(1)	1485(1)	1485(1)	1410(1)
	B	1395	1390	1390	1390(1)	1395(1)
	C	295 355	295 315	295 320	320 355	320

(1) track widths that can be used for working purposes, but not when driving on public roads.

Important

After every track change operation it must be checked that the wheels do not interfere with the bodywork or other parts of the machine.


Important

At the end of the track change, check that the tightening torque of the screws or fixing nuts of the wheels is correct (See "Tyre replacement").

VEHICLE SPEED

Table 10.55: machine speed (with engine at 2500 rpm)

TX 7800 S - TRX 7800 S									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio	"Normal" transmission ratio						
31x15.50-15	1°	0,57	1,78	3,49	10,94	0,53	1,65	3,24	10,15
	2°	0,92	2,88	5,64	17,68	0,85	2,67	5,23	16,41
	3°	1,20	3,78	7,40	23,20	1,12	3,50	6,87	21,53
	4°	1,65	5,18	10,15	31,84	1,53	4,81	9,42	29,55
300/80-15.3	1°	0,66	2,06	4,03	12,65	0,61	1,91	3,74	11,74
	2°	1,06	3,33	6,52	20,44	0,98	3,09	6,05	18,97
	3°	1,39	4,37	8,55	26,81	1,29	4,05	7,94	24,89
	4°	1,91	5,99	11,74	36,80	1,77	5,56	10,89	34,16
425/55 R17	1°	0,66	2,07	4,05	12,69	1,61	2,92	4,76	12,78
	2°	1,06	3,34	6,54	20,51	1,99	4,10	7,07	20,03
	3°	1,40	4,38	8,58	26,90	2,30	5,06	8,96	25,97
	4°	1,92	6,01	11,78	36,93	2,78	6,58	11,93	35,27
400/55-17.5	1°	0,64	2,01	3,93	12,34	0,59	1,86	3,65	11,45
	2°	1,03	3,25	6,36	19,94	0,96	3,01	5,90	18,50
	3°	1,36	4,26	8,34	26,16	1,26	3,95	7,74	24,28
	4°	1,86	5,84	11,45	35,90	1,73	5,42	10,63	33,32
250/80-18	1°	0,62	1,95	3,81	11,96	0,58	1,81	3,54	11,10
	2°	1,00	3,15	6,16	19,33	0,93	2,92	5,72	17,94
	3°	1,32	4,13	8,09	25,36	1,22	3,83	7,50	23,53
	4°	1,81	5,67	11,10	34,80	1,68	5,26	10,30	32,30
280/70 R18	1°	0,63	1,97	3,86	12,11	0,58	1,83	3,58	11,24
	2°	1,02	3,19	6,24	19,57	0,94	2,96	5,79	18,16
	3°	1,33	4,18	8,19	25,67	1,24	3,88	7,60	23,82
	4°	1,83	5,74	11,24	35,23	1,70	5,32	10,43	32,70
320/65 R18	1°	0,63	1,97	3,86	12,11	1,58	2,83	4,58	12,24
	2°	1,02	3,19	6,24	19,57	1,94	3,96	6,79	19,16
	3°	1,33	4,18	8,19	25,67	2,24	4,88	8,60	24,82
	4°	1,83	5,74	11,24	35,23	2,70	6,32	11,43	33,70

Table 10.55: machine speed (with engine at 2500 rpm)

TX 7800 S - TRX 7800 S									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
340/65 R18	1°	0,66	2,08	4,08	12,80	0,62	1,93	3,79	11,88
	2°	1,07	3,37	6,60	20,68	1,00	3,12	6,12	19,19
	3°	1,41	4,42	8,65	27,13	1,31	4,10	8,03	25,18
	4°	1,93	6,06	11,88	37,24	1,79	5,63	11,02	34,56
9.5 R20	1°	0,69	2,18	4,26	13,37	0,64	2,02	3,96	12,41
	2°	1,12	3,52	6,89	21,61	1,04	3,26	6,40	20,05
	3°	1,47	4,61	9,04	28,35	1,37	4,28	8,39	26,31
	4°	2,02	6,33	12,41	38,91	1,87	5,88	11,52	36,11
280/85 R20	1°	0,73	2,28	4,47	14,03	1,68	3,12	5,15	14,02
	2°	1,18	3,69	7,23	22,67	2,09	4,42	7,71	22,04
	3°	1,54	4,84	9,48	29,74	2,43	5,49	9,80	28,60
	4°	2,12	6,64	13,02	40,82	2,97	7,17	13,08	38,88
300/70 R20	1°	0,69	2,16	4,24	13,29	0,64	2,01	3,93	12,33
	2°	1,11	3,50	6,85	21,47	1,03	3,24	6,36	19,93
	3°	1,46	4,59	8,98	28,17	1,36	4,26	8,34	26,15
	4°	2,01	6,30	12,33	38,67	1,86	5,84	11,45	35,89
320/70 R20	1°	0,73	2,28	4,47	14,03	0,68	2,12	4,15	13,02
	2°	1,18	3,69	7,23	22,67	1,09	3,42	6,71	21,04
	3°	1,54	4,84	9,48	29,74	1,43	4,49	8,80	27,60
	4°	2,12	6,64	13,02	40,82	1,97	6,17	12,08	37,88

Table 10.56: machine speed (with engine at 2500 rpm)

TRX 7800 - TRX 9800									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
31x15.50-15	1°	0,57	1,78	3,49	10,94	0,53	1,65	3,24	10,15
	2°	0,92	2,88	5,64	17,68	0,85	2,67	5,23	16,41
	3°	1,20	3,78	7,40	23,20	1,12	3,50	6,87	21,53
	4°	1,65	5,18	10,15	31,84	1,53	4,81	9,42	29,55

Table 10.56: machine speed (with engine at 2500 rpm)**TRX 7800 - TRX 9800**

Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
36x15.50-15	1°	0,66	2,06	4,03	12,65	0,61	1,91	3,74	11,74
	2°	1,06	3,33	6,52	20,45	0,99	3,09	6,05	18,98
	3°	1,39	4,37	8,55	26,82	1,29	4,05	7,94	24,90
	4°	1,91	5,99	11,74	36,82	1,77	5,56	10,90	34,17
300/80-15.3	1°	0,66	2,06	4,03	12,65	0,61	1,91	3,74	11,74
	2°	1,06	3,33	6,52	20,44	0,98	3,09	6,05	18,97
	3°	1,39	4,37	8,55	26,81	1,29	4,05	7,94	24,89
	4°	1,91	5,99	11,74	36,80	1,77	5,56	10,89	34,16
425/55 R17	1°	0,66	2,07	4,05	12,69	0,61	1,92	3,76	11,78
	2°	1,06	3,34	6,54	20,51	0,99	3,10	6,07	19,03
	3°	1,40	4,38	8,58	26,90	1,30	4,06	7,96	24,97
	4°	1,92	6,01	11,78	36,93	1,78	5,58	10,93	34,27
440/50 R17	1°	0,64	1,99	3,90	12,24	0,59	1,85	3,62	11,36
	2°	1,03	3,22	6,31	19,78	0,95	2,99	5,86	18,36
	3°	1,35	4,23	8,28	25,96	1,25	3,92	7,68	24,09
	4°	1,85	5,80	11,36	35,63	1,72	5,38	10,55	33,07
400/55-17.5	1°	0,64	2,01	3,93	12,34	0,59	1,86	3,65	11,45
	2°	1,03	3,25	6,36	19,94	0,96	3,01	5,90	18,50
	3°	1,36	4,26	8,34	26,16	1,26	3,95	7,74	24,28
	4°	1,86	5,84	8,34	35,90	1,73	5,42	10,63	33,32
250/80-18	1°	0,62	1,95	3,81	11,96	0,58	1,81	3,54	11,10
	2°	1,00	3,15	6,16	19,33	0,93	2,92	5,72	17,94
	3°	1,32	4,13	8,09	25,36	1,22	3,83	7,50	23,53
	4°	1,81	5,67	11,10	34,80	1,68	5,26	10,30	32,30
280/70 R18 320/65 R18	1°	0,63	1,97	3,86	12,11	0,58	1,83	3,58	11,24
	2°	1,02	3,19	6,24	19,57	0,94	2,96	5,79	18,16
	3°	1,33	4,18	8,19	25,67	1,24	3,88	7,60	23,82
	4°	1,83	5,74	11,24	35,23	1,70	5,32	10,43	32,70
340/65 R18	1°	0,66	2,08	4,08	12,80	0,62	1,93	3,79	11,88
	2°	1,07	3,37	6,60	20,68	1,00	3,12	6,12	19,19
	3°	1,41	4,42	8,65	27,13	1,31	4,10	8,03	25,18
	4°	1,93	6,06	11,88	37,24	1,79	5,63	11,02	34,56
9.5 R20	1°	0,69	2,18	4,26	13,37	0,64	2,02	3,96	12,41
	2°	1,12	3,52	6,89	21,61	1,04	3,26	6,40	20,05
	3°	1,47	4,61	9,04	28,35	1,37	4,28	8,39	26,31
	4°	2,02	6,33	12,41	38,91	1,87	5,88	11,52	36,11

Table 10.56: machine speed (with engine at 2500 rpm)

TRX 7800 - TRX 9800									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
300/70 R20	1°	0,69	2,16	4,24	13,29	0,64	2,01	3,93	12,33
	2°	1,11	3,50	6,85	21,47	1,03	3,24	6,36	19,93
	3°	1,46	4,59	8,98	28,17	1,36	4,26	8,34	26,15
	4°	2,01	6,30	12,33	38,67	1,86	5,84	11,45	35,89
11.2 R20 280/85 R20 320/70 R20	1°	0,73	2,28	4,47	14,03	0,68	2,12	4,15	13,02
	2°	1,18	3,69	7,23	22,67	1,09	3,42	6,71	21,04
	3°	1,54	4,84	9,48	29,74	1,43	4,49	8,80	27,60
	4°	2,12	6,64	13,02	40,82	1,97	6,17	12,08	27,60

Table 10.57: machine speed (with engine at 2500 rpm)

TRX 7800 (HI-LO) - TRX 9800 (HI-LO)									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
31x15.50-15	1°	0,45	1,41	2,77	8,68	0,42	1,31	2,56	8,03
	2°	0,73	2,28	4,47	14,03	0,67	2,11	4,14	12,98
	3°	0,96	3,00	5,87	18,40	0,88	2,77	5,43	17,02
	4°	1,31	4,11	8,06	25,26	1,21	3,80	7,45	23,37
36x15.50-15	1°	0,52	1,63	3,20	10,04	0,48	1,51	2,96	9,28
	2°	0,84	2,64	5,17	16,22	0,78	2,44	4,78	15,00
	3°	1,10	3,46	6,79	21,28	1,02	3,20	6,28	19,68
	4°	1,52	4,75	9,31	29,21	1,40	4,40	8,62	27,02
300/80-15.3	1°	0,52	1,63	3,20	10,03	0,48	1,51	2,96	9,28
	2°	0,84	2,64	5,17	16,21	0,78	2,44	4,78	15,00
	3°	1,10	3,46	6,78	21,27	1,02	3,20	6,28	19,68
	4°	1,52	4,75	9,31	29,20	1,40	4,40	8,61	27,01
425/55 R17	1°	0,52	1,64	3,21	10,07	0,48	1,52	2,97	9,31
	2°	0,84	2,65	5,19	16,27	0,78	2,45	4,80	15,05
	3°	1,11	3,47	6,81	21,34	1,02	3,21	6,30	19,74
	4°	1,52	4,77	9,34	29,30	1,41	4,41	8,64	27,10
440/50 R17	1°	0,50	1,58	3,10	9,71	0,47	1,46	2,87	8,98
	2°	0,81	2,56	5,01	15,70	0,75	2,36	4,63	14,52
	3°	1,07	3,35	6,57	20,59	0,99	3,10	6,07	19,05
	4°	1,47	4,60	9,01	28,26	1,36	4,26	8,34	26,14

Table 10.57: machine speed (with engine at 2500 rpm)

TRX 7800 (HI-LO) - TRX 9800 (HI-LO)									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio	"Normal" transmission ratio						
400/55-17.5	1°	0,51	1,59	3,12	9,79	0,49	1,52	2,98	9,35
	2°	0,82	2,57	5,04	15,82	0,78	2,46	4,82	15,11
	3°	1,08	3,38	6,62	20,75	1,03	3,23	6,32	19,82
	4°	1,48	4,64	9,08	28,48	1,41	4,43	8,68	27,21
250/80-18	1°	0,49	1,54	3,03	9,49	0,46	1,43	2,80	8,14
	2°	0,80	2,50	4,89	9,49	0,74	2,31	4,52	14,18
	3°	1,04	3,27	6,42	20,12	0,97	3,03	5,93	18,61
	4°	1,43	4,49	8,80	27,61	1,33	4,16	8,14	25,54
280/70 R18 320/65 R18	1°	0,50	1,56	3,06	9,60	0,46	1,45	2,83	8,88
	2°	0,81	2,53	4,95	15,52	0,75	2,34	4,58	14,36
	3°	1,06	3,32	6,49	20,36	0,98	3,07	6,01	18,84
	4°	1,45	4,55	8,91	27,95	1,34	4,21	8,25	25,85
340/65 R18	1°	0,53	1,65	3,24	10,15	0,49	1,53	2,99	9,39
	2°	0,85	2,67	5,23	10,15	0,79	2,47	4,84	15,18
	3°	1,12	3,50	6,86	21,53	1,03	3,24	6,35	19,91
	4°	1,53	4,81	9,42	21,53	1,42	4,45	8,72	27,33
9.5 R20	1°	0,55	1,73	3,38	10,61	0,51	1,60	3,13	9,81
	2°	0,89	2,79	5,47	17,14	0,82	2,58	5,06	15,86
	3°	1,17	3,66	7,17	22,49	1,08	3,39	6,63	20,80
	4°	1,60	5,03	9,84	22,49	1,48	4,65	9,11	28,55
300/70 R20	1°	0,55	1,72	3,36	10,54	0,51	1,59	3,11	9,75
	2°	0,88	2,77	5,43	17,04	0,82	2,57	5,03	15,76
	3°	1,16	3,64	7,13	22,35	1,07	3,37	6,59	20,67
	4°	1,59	4,99	9,78	30,68	1,47	4,62	9,05	28,38
11.2 R20 280/85 R20 320/70 R20	1°	0,58	1,81	3,55	11,13	0,53	1,68	3,28	10,29
	2°	0,93	2,93	5,73	17,98	0,86	2,71	5,30	16,63
	3°	1,22	3,84	7,52	23,59	1,13	3,55	6,96	21,82
	4°	1,68	5,27	10,33	32,38	1,56	4,88	9,55	29,95

Table 10.58: machine speed (with engine at 2300 rpm)

TRX 8400									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio	"Normal" transmission ratio						
31x15.50-15	1°	0,52	1,64	3,21	10,07	0,49	1,52	2,98	9,34
	2°	0,84	2,65	5,19	16,27	0,78	2,46	4,81	15,10
	3°	1,11	3,47	6,81	21,34	1,03	3,22	6,32	19,81
	4°	1,52	4,77	9,34	29,29	1,41	4,43	8,67	27,19
36x15.50-15	1°	0,60	1,89	3,71	11,64	0,56	1,76	3,45	10,80
	2°	0,98	3,06	6,00	18,81	0,91	2,84	5,57	17,46
	3°	1,28	4,02	7,87	24,68	1,19	3,73	7,30	22,90
	4°	1,76	5,51	10,80	33,87	1,63	5,12	10,03	31,44
300/80-15.3	1°	0,60	1,89	3,71	11,64	0,56	1,76	3,44	10,80
	2°	0,98	3,06	6,00	18,80	0,91	2,84	5,57	17,45
	3°	1,28	4,02	7,87	24,67	1,19	3,73	7,30	22,90
	4°	1,76	5,51	10,80	33,86	1,63	5,12	10,02	31,43
425/55 R17	1°	0,61	1,90	3,72	11,67	0,56	1,76	3,46	10,84
	2°	0,98	3,07	6,02	18,87	0,91	2,85	5,58	17,51
	3°	1,28	4,03	7,98	24,75	1,19	3,74	7,33	22,97
	4°	1,76	5,53	10,83	33,97	1,64	5,13	10,06	31,53
440/50 R17	1°	0,58	1,83	3,59	11,26	0,54	1,70	3,33	10,45
	2°	0,94	2,96	5,80	18,20	0,88	2,75	5,39	16,89
	3°	1,24	3,89	7,62	23,88	1,15	3,61	7,07	22,16
	4°	1,70	5,34	10,45	32,78	1,58	4,95	9,70	30,42
400/55-17.5	1°	0,59	1,85	3,62	11,35	0,55	1,71	3,36	10,53
	2°	0,95	2,99	5,85	18,34	0,88	2,77	5,43	17,02
	3°	1,25	3,92	7,67	24,06	1,16	3,64	7,12	17,02
	4°	1,71	5,38	10,53	33,03	1,59	3,64	9,78	30,65
250/80-18	1°	0,57	1,79	3,51	11,00	0,53	1,66	3,26	10,21
	2°	0,92	2,89	5,67	17,78	0,86	2,69	5,26	16,50
	3°	1,21	3,80	7,44	23,33	1,12	3,52	6,90	21,65
	4°	1,66	5,21	10,21	23,33	1,54	4,84	9,48	21,65
280/70 R18 320/65 R18	1°	0,58	1,81	3,55	11,14	0,54	1,68	3,30	10,34
	2°	0,93	2,93	5,74	18,00	0,87	2,72	5,33	16,71
	3°	1,23	3,84	7,53	23,62	1,14	3,57	6,99	21,92
	4°	1,68	5,28	10,34	32,41	1,56	4,90	9,59	30,08
340/65 R18	1°	0,61	1,92	3,75	11,77	0,57	1,78	3,48	10,93
	2°	0,99	3,10	6,07	19,03	0,92	2,87	5,63	17,66
	3°	1,30	4,06	7,96	24,96	1,20	3,77	7,39	23,17
	4°	1,78	5,58	10,93	34,26	1,65	5,18	10,14	31,80

Table 10.58: machine speed (with engine at 2300 rpm)

TRX 8400									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
9.5 R20	1°	0,64	2,00	3,92	12,30	0,59	1,86	3,64	11,42
	2°	1,03	3,24	6,34	19,88	0,96	3,00	5,88	18,45
	3°	1,35	4,25	8,32	26,08	1,26	3,94	7,72	24,21
	4°	1,86	5,83	11,42	35,80	1,72	5,41	10,60	33,22
300/70 R20	1°	0,63	1,99	3,90	12,23	0,59	1,85	3,62	11,35
	2°	1,03	3,22	6,30	19,76	0,95	2,98	5,85	18,34
	3°	1,35	4,22	8,27	25,92	1,25	3,92	7,67	24,06
	4°	1,85	5,79	11,35	35,58	1,71	5,38	10,53	33,02
11.2 R20 280/85 R20 320/70 R20	1°	0,67	2,10	4,12	12,90	0,62	1,81	3,82	11,98
	2°	1,08	3,39	6,65	20,85	1,00	3,15	6,17	19,35
	3°	1,42	4,45	8,73	27,36	1,32	4,13	8,10	25,39
	4°	1,95	6,11	11,98	37,55	1,81	5,67	11,11	34,85

Table 10.59: machine speed (with engine at 2300 rpm)

TRX 8400 (HI-LO)									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
31x15.50-15	1°	0,41	1,30	2,55	7,99	0,38	1,20	2,36	7,39
	2°	0,67	2,10	4,12	12,90	0,62	1,94	3,81	11,94
	3°	0,88	2,76	5,40	16,93	0,81	2,55	4,99	15,66
	4°	1,21	3,78	7,41	23,24	1,12	3,50	6,86	21,50
36x15.50-15	1°	0,48	1,50	2,94	9,23	0,44	1,39	2,72	8,54
	2°	0,77	2,43	4,76	14,92	0,72	2,25	4,40	13,80
	3°	1,02	3,19	6,24	19,58	0,94	2,95	5,78	18,11
	4°	1,40	4,37	8,57	26,87	1,29	4,05	7,93	24,86
300/80-15.3	1°	0,48	1,50	2,94	9,23	0,44	1,39	2,72	8,54
	2°	0,77	2,43	4,76	14,92	0,72	2,25	4,40	13,80
	3°	1,02	3,19	6,24	19,57	0,94	2,95	5,77	13,80
	4°	1,39	4,37	8,57	26,86	1,29	4,04	7,92	24,85
425/55 R17	1°	0,48	1,51	2,95	9,26	0,44	1,39	2,73	8,57
	2°	0,78	2,44	4,77	14,97	0,72	2,25	4,41	13,84
	3°	1,02	3,20	6,26	19,64	0,94	2,96	5,79	18,16
	4°	1,40	4,39	8,59	26,95	1,29	4,06	7,95	24,93

Table 10.59: machine speed (with engine at 2300 rpm)

TRX 8400 (HI-LO)									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio	"Normal" transmission ratio						
440/50 R17	1°	0,46	1,45	2,85	8,94	0,43	1,35	2,64	8,27
	2°	0,75	2,35	4,60	14,44	0,69	2,17	4,26	13,36
	3°	0,98	3,08	6,04	18,95	0,91	2,85	5,59	17,52
	4°	1,35	4,23	8,29	26,00	1,25	3,92	7,67	24,05
400/55-17,5	1°	0,47	1,47	2,87	9,00	0,43	1,36	2,66	8,33
	2°	0,76	2,37	4,64	14,55	0,70	2,19	4,29	13,46
	3°	0,99	3,11	6,09	19,09	0,92	2,87	5,63	13,46
	4°	1,36	4,27	8,36	26,20	1,26	3,95	7,73	24,24
250/80-18	1°	0,45	1,42	2,78	8,73	0,42	1,31	2,57	8,07
	2°	0,73	2,30	4,50	14,11	0,68	2,12	4,16	13,05
	3°	0,96	3,01	5,90	18,51	0,89	2,79	5,46	17,12
	4°	1,32	4,14	8,10	25,40	1,22	3,82	7,49	23,50
280/70 R18 320/65 R18	1°	0,46	1,44	2,82	8,84	0,42	1,33	2,61	8,17
	2°	0,74	2,32	4,55	14,28	0,69	2,15	4,21	13,21
	3°	0,97	3,05	5,97	18,74	0,90	2,82	5,53	17,33
	4°	1,33	4,19	8,20	25,71	1,23	3,87	7,59	23,79
340/65 R18	1°	0,48	1,52	2,98	9,34	0,45	1,41	2,76	8,64
	2°	0,78	2,46	4,81	15,09	0,72	2,27	4,45	13,96
	3°	1,03	3,22	6,32	19,80	0,95	2,98	5,84	18,32
	4°	1,41	4,42	8,67	27,18	1,31	4,09	8,02	25,14
9,5 R20	1°	0,51	1,59	3,11	9,76	0,47	1,47	2,88	9,03
	2°	0,82	2,57	5,03	15,77	0,76	2,37	4,65	14,59
	3°	1,07	3,37	6,60	20,69	0,99	3,12	6,10	19,14
	4°	1,47	4,62	9,06	28,40	1,36	4,28	8,38	26,27
300/70 R20	1°	0,50	1,58	3,09	9,70	0,47	1,46	2,86	8,97
	2°	0,81	2,55	5,00	15,67	0,75	2,36	4,62	14,50
	3°	1,07	3,35	6,56	20,56	0,99	3,10	6,07	19,02
	4°	1,47	4,59	9,00	28,22	1,36	4,25	8,33	26,11
11,2 R20 280/85 R20 320/70 R20	1°	0,53	1,67	3,26	10,24	0,49	1,54	3,02	9,47
	2°	0,86	2,69	5,28	16,54	0,79	2,49	4,88	15,30
	3°	1,13	3,53	6,92	21,71	1,04	3,27	6,40	20,08
	4°	1,55	4,85	9,50	29,79	1,43	4,49	8,79	27,56

Table 10.60: machine speed (with engine at 2600 rpm)

TRX 9900 - TRX 10400 - TRX 10900									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio	"Normal" transmission ratio						
31x15.50-15	1°	0,51	1,61	3,16	9,92	0,48	1,50	2,94	9,20
	2°	0,83	2,61	5,11	16,02	0,77	2,42	4,74	14,87
	3°	1,09	3,42	6,70	21,02	1,01	3,18	6,22	14,87
	4°	1,50	4,70	9,20	28,86	1,39	4,36	8,54	26,78
36x15.50-15	1°	0,60	1,87	3,66	11,74	0,55	1,73	3,39	10,64
	2°	0,96	3,02	5,91	18,53	0,89	2,80	5,48	17,53
	3°	1,26	3,96	7,75	24,31	1,17	3,67	7,20	22,56
	4°	1,73	5,43	10,64	33,37	1,61	5,04	9,88	30,97
300/80-15.3	1°	0,60	1,87	3,66	11,46	0,55	1,73	3,39	10,64
	2°	0,96	3,02	5,91	18,52	0,89	2,80	5,48	17,19
	3°	1,26	3,96	7,75	24,30	1,17	3,67	7,19	22,56
	4°	1,73	5,43	10,64	33,36	1,61	5,04	9,87	30,96
425/55 R17	1°	0,60	1,87	3,67	11,50	0,55	1,74	3,40	10,67
	2°	0,96	3,03	5,93	18,59	0,90	2,81	5,50	17,25
	3°	1,27	3,97	7,78	24,38	1,17	3,68	7,22	22,63
	4°	1,74	5,45	10,67	33,47	1,61	5,06	9,91	31,06
440/50 R17	1°	0,58	1,81	3,54	11,10	0,53	1,68	3,28	10,30
	2°	0,93	2,92	5,72	17,93	0,86	2,71	5,31	16,64
	3°	1,22	3,83	7,50	23,53	1,13	3,55	6,96	21,83
	4°	1,68	5,26	10,30	32,29	1,56	4,88	9,56	29,97
400/55-17.5	1°	0,58	1,82	3,57	11,18	0,54	1,69	3,31	10,38
	2°	0,94	2,94	5,76	18,07	0,87	2,73	5,35	16,77
	3°	1,23	3,86	7,56	23,71	1,14	3,58	7,02	22,00
	4°	1,69	5,30	10,38	32,54	1,57	4,92	9,63	30,20
250/80-18	1°	0,56	1,76	3,46	10,84	0,52	1,64	3,21	10,06
	2°	0,91	2,85	5,59	17,52	0,84	2,65	5,18	16,26
	3°	1,19	3,74	7,33	22,98	1,11	3,47	6,80	21,33
	4°	1,64	5,13	10,06	31,54	1,52	4,77	9,34	29,28
280/70 R18 320/65 R18	1°	0,57	1,79	3,50	10,97	0,53	1,66	3,25	10,18
	2°	0,92	2,89	5,65	17,73	0,85	2,68	5,25	16,46
	3°	1,21	3,79	7,42	23,26	1,12	3,52	6,89	21,59
	4°	1,66	5,20	10,18	31,93	1,54	4,82	9,45	29,64
340/65 R18	1°	0,60	1,89	3,70	11,60	0,56	1,75	3,43	10,76
	2°	0,97	3,05	5,98	18,74	0,90	2,83	5,55	17,40
	3°	1,28	4,00	7,84	24,59	0,90	3,72	7,28	22,82
	4°	1,75	5,49	10,76	33,75	1,63	5,10	9,99	31,33

Table 10.60: machine speed (with engine at 2600 rpm)

TRX 9900 - TRX 10400 - TRX 10900									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
9.5 R20	1°	0,63	1,97	3,86	12,12	0,58	1,83	3,59	11,25
	2°	1,02	3,19	6,25	19,58	0,94	2,96	5,80	18,18
	3°	1,33	4,18	8,19	25,69	1,24	3,88	7,60	23,85
	4°	1,83	5,74	11,25	35,26	1,70	5,33	10,44	32,73
300/70 R20	1°	0,63	1,96	3,84	12,04	0,58	1,82	3,56	11,18
	2°	1,01	3,17	6,21	19,46	0,94	2,94	5,76	18,06
	3°	1,33	4,16	8,14	25,53	1,23	3,86	7,56	23,70
	4°	1,82	5,71	11,18	35,05	1,69	5,30	10,37	32,53
11.2 R20 280/85 R20 320/70 R20	1°	0,66	2,07	4,05	12,71	0,61	1,92	3,76	11,80
	2°	1,07	3,34	6,55	20,54	0,99	3,10	6,08	19,07
	3°	1,40	4,39	8,60	26,95	1,30	4,07	7,98	25,02
	4°	1,92	6,02	11,80	36,99	1,78	5,59	10,95	34,33

Table 10.61: machine speed (with engine at 2500 rpm)

TRG 9800									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
335/80 R20	1°	0,63	1,96	3,84	12,04	0,58	1,81	3,55	11,14
	2°	1,01	3,17	6,21	19,46	1,37	2,93	5,74	18,00
	3°	1,33	4,16	8,14	25,54	1,23	3,85	7,53	23,62
	4°	1,82	5,71	11,18	35,05	1,68	5,28	10,34	32,42
360/70 R20 420/65 R20	1°	0,64	2,00	3,92	12,29	0,59	1,85	3,63	11,37
	2°	1,03	3,23	6,33	19,86	1,39	2,99	5,86	18,37
	3°	1,35	4,24	8,31	26,06	1,25	3,92	7,69	24,10
	4°	1,86	5,82	11,41	35,76	1,72	5,39	10,55	33,08
380/70 R20	1°	0,67	2,10	4,12	12,90	0,62	1,94	3,81	11,94
	2°	1,08	3,39	6,65	20,85	1,46	3,14	6,15	19,29
	3°	1,42	4,45	8,73	27,36	1,31	4,12	8,07	25,31
	4°	1,95	6,11	11,98	37,55	1,80	5,65	11,08	34,74
320/85 R24 360/70 R24 420/65 R24	1°	0,70	2,20	4,31	13,52	0,65	2,04	3,99	12,51
	2°	1,13	3,56	6,97	21,85	1,53	3,29	6,44	20,21
	3°	1,49	4,67	9,14	28,66	1,38	4,32	8,46	26,51
	4°	2,04	6,40	12,55	39,34	1,89	5,92	11,61	36,39

Table 10.62: machine speed (with engine at 2500 rpm)

TRG 9800 (HI-LO)									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio	"Normal" transmission ratio						
335/80 R20	1°	0,50	1,56	3,05	9,56	0,46	1,44	2,82	8,84
	2°	0,80	2,51	4,92	15,44	0,74	2,33	4,55	14,28
	3°	1,05	3,30	6,46	20,26	0,97	3,05	5,98	18,74
	4°	1,44	4,53	8,87	27,81	1,34	4,19	8,20	25,72
360/70 R20	1°	0,51	1,59	3,11	9,75	0,47	1,47	2,88	9,02
	2°	0,82	2,56	5,02	15,76	0,76	2,37	4,65	14,57
	3°	1,07	3,37	6,59	20,67	0,99	3,11	6,10	19,12
	4°	1,47	4,62	9,05	28,37	1,36	4,27	8,37	26,25
420/65 R20	1°	0,53	1,67	3,26	10,24	0,49	1,54	3,02	9,47
	2°	0,86	2,69	5,28	16,54	0,79	2,49	4,88	15,30
	3°	1,13	3,53	6,92	21,71	1,04	3,27	6,40	20,08
	4°	1,55	4,85	9,50	29,79	1,43	4,49	8,79	27,56
380/70 R20	1°	0,56	1,75	3,42	10,73	0,52	1,61	3,16	9,92
	2°	0,90	2,82	5,53	17,33	0,83	2,61	5,11	16,03
	3°	1,18	3,70	7,25	22,74	1,09	3,42	6,71	21,03
	4°	1,62	5,08	9,95	31,21	1,50	4,70	9,21	28,87
320/85 R24 360/70 R24 420/65 R24	1°	0,56	1,75	3,42	10,73	0,52	1,61	3,16	9,92
	2°	0,90	2,82	5,53	17,33	0,83	2,61	5,11	16,03
	3°	1,18	3,70	7,25	22,74	1,09	3,42	6,71	21,03
	4°	1,62	5,08	9,95	31,21	1,50	4,70	9,21	28,87

Table 10.63: machine speed (with engine at 2600 rpm)

TRG 9900 - TRG 10400 - TRG 10900									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio	"Normal" transmission ratio						
335/80 R20	1°	0,63	1,96	3,84	12,04	0,58	1,81	3,55	11,14
	2°	1,01	3,17	6,21	19,46	1,37	2,93	5,74	18,00
	3°	1,33	4,16	8,14	25,54	1,23	3,85	7,53	23,62
	4°	1,82	5,71	11,18	35,05	1,68	5,28	10,34	32,42
360/70 R20 420/65 R20	1°	0,64	2,00	3,92	12,29	0,59	1,85	3,63	11,37
	2°	1,03	3,23	6,33	19,86	1,39	2,99	5,86	18,37
	3°	1,35	4,24	8,31	26,06	1,25	3,92	7,69	24,10
	4°	1,86	5,82	11,41	35,76	1,72	5,39	10,55	33,08
380/70 R20	1°	0,67	2,10	4,12	12,90	0,62	1,94	3,81	11,94
	2°	1,08	3,39	6,65	20,85	1,46	3,14	6,15	19,29
	3°	1,42	4,45	8,73	27,36	1,31	4,12	8,07	25,31
	4°	1,95	6,11	11,98	37,55	1,80	5,65	11,08	34,74

Table 10.63: machine speed (with engine at 2600 rpm)

TRG 9900 - TRG 10400 - TRG 10900									
Tyre type	Gear	Speed (km/h)							
		Forward drive				Reverse drive			
		"Reduced" transmission ratio		"Normal" transmission ratio		"Reduced" transmission ratio		"Normal" transmission ratio	
		Low speed	High speed	Low speed	High speed	Low speed	High speed	Low speed	High speed
320/85 R24	1°	0,70	2,20	4,31	13,52	0,65	2,04	3,99	12,51
360/70 R24	2°	1,13	3,56	6,97	21,85	1,53	3,29	6,44	20,21
420/65 R24	3°	1,49	4,67	9,14	28,66	1,38	4,32	8,46	26,51
	4°	2,04	6,40	12,55	39,34	1,89	5,92	11,61	36,39

REAR TOWING HOOK

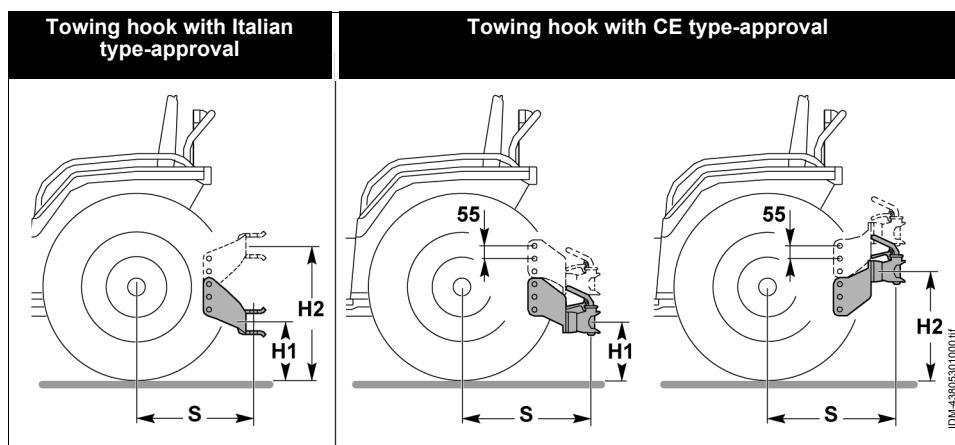


Table 10.64: Towing hook height

TX 7800 S - TRX 7800 S						
Tyre type	Towing hook with Italian type-approval			Towing hook with CE type-approval		
	S	H1 (mm)	H2 (mm)	S	H1 (mm)	H2 (mm)
31X15.50-15	415	220	605	445	220 ÷ 385	440 ÷ 605
300/80-15.3		255	640		255 ÷ 420	475 ÷ 640
250/80-18		265	650		265 ÷ 430	485 ÷ 650
280/70 R18		240	625		240 ÷ 405	460 ÷ 625
320/65 R18		290	675		290 ÷ 455	510 ÷ 675
425/55 R17		315	700		315 ÷ 480	535 ÷ 700
340/65 R18						
400/55-17.5						
9.5 R20						
300/70 R20						
280/85 R20						
320/70 R20						

Table 10.65: Towing hook height

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900						
Tyre type	Towing hook with Italian type-approval			Towing hook with CE type-approval		
	S	H1 (mm)	H2 (mm)	S	H1 (mm)	H2 (mm)
31X15.50-15	475	220	605	505	220 ÷ 385	440 ÷ 605
36x13.50-15		245	630		245 ÷ 410	465 ÷ 630
300/80-15.3						
440/50 R17					255 ÷ 420	475 ÷ 640
250/80-18		255	640			
280/70 R18						
320/65 R18						
425/55 R17		265	650		265 ÷ 430	485 ÷ 650
340/65 R18					240 ÷ 405	460 ÷ 625
400/55-17.5		240	625		290 ÷ 455	510 ÷ 675
9.5 R20						
300/70 R20		290	675			
11.2 R20						
280/85 R20					315 ÷ 480	535 ÷ 700
320/70 R20		315	700			

Table 10.66: Towing hook height

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900						
Tyre type	Towing hook with Italian type-approval			Towing hook with CE type-approval		
	S	H1 (mm)	H2 (mm)	S	H1 (mm)	H2 (mm)
335/80 R20	420			450	340 ÷ 505	560 ÷ 725
360/70 R20		340	725			
380/70 R20						
420/65 R20						
320/85 R24					395 ÷ 560	615 ÷ 780
360/70 R24		395	780			
420/65 R24						

"SLIDER" REAR TOWING HOOK

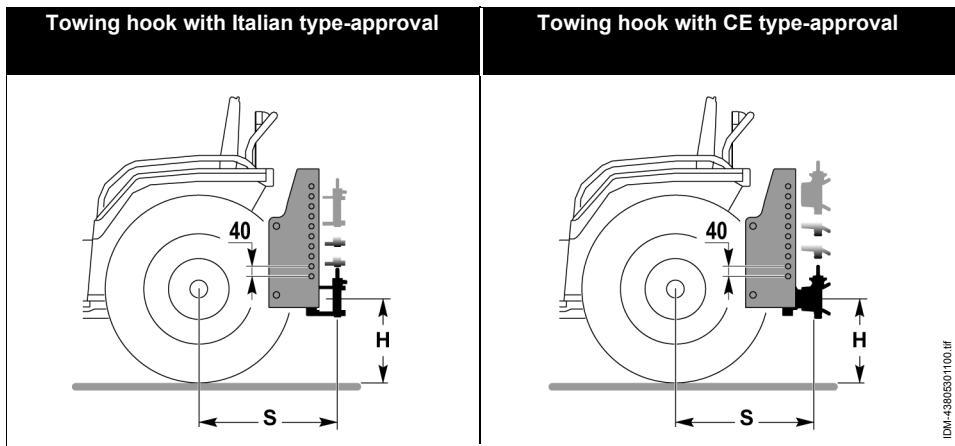


Table 10.67: Towing hook height

TX 7800 S - TRX 7800 S				
Tyre type	Towing hook with Italian type-approval		Towing hook with CE type-approval	
	S	H (mm)	S	H (mm)
31x15.50-15	440	255 ÷ 655	450	255 ÷ 655
300/80-15.3		290 ÷ 690		290 ÷ 690
250/80-18		300 ÷ 700		300 ÷ 700
280/70 R18		275 ÷ 675		275 ÷ 675
320/65 R18		325 ÷ 725		325 ÷ 725
425/55 R17		350 ÷ 750		350 ÷ 750
340/65 R18				
400/55-17.5				

Table 10.68: Towing hook height

TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900				
Tyre type	Towing hook with Italian type-approval		Towing hook with CE type-approval	
	S	H (mm)	S	H (mm)
31x15.50-15	500	255 ÷ 655	510	255 ÷ 655
36x13.50-15		280 ÷ 680		280 ÷ 680
300/80-15.3				
440/50 R17				290 ÷ 690
250/80-18		290 ÷ 690		
280/70 R18				
320/65 R18				
425/55 R17		300 ÷ 700		300 ÷ 700
340/65 R18				
400/55-17.5		275 ÷ 675		275 ÷ 675
9.5 R20				
300/70 R20		325 ÷ 725		325 ÷ 725
11.2 R20				
280/85 R20				
320/70 R20		350 ÷ 750		350 ÷ 750

Table 10.69: Towing hook height

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900					
Tyre type	Towing hook with Italian type-approval		Towing hook with CE type-approval		
	S	H (mm)	S	H (mm)	
335/80 R20	470	375 ÷ 735	480	375 ÷ 735	
360/70 R20					
380/70 R20		430 ÷ 790		430 ÷ 790	
420/65 R20					
320/85 R24	420/65 R24	430 ÷ 790	480	430 ÷ 790	
360/70 R24					
420/65 R24					

REAR TOW HOOK TYPE "CUNA D2"

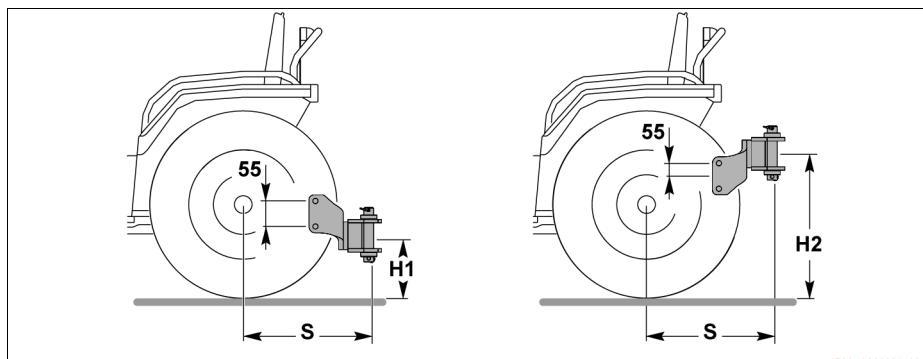


Table 10.70: Towing hook height

TX 7800 S - TRX 7800 S			
Tyre type	Towing hook with Italian type-approval		
	S	H1 (mm)	H2 (mm)
31X15.50-15	450	235	590
300/80-15.3			
250/80-18		270	625
280/70 R18			
320/65 R18			
425/55 R17		280	635
340/65 R18			
400/55-17.5		255	610
9.5 R20		305	660
300/70 R20			
280/85 R20	330		
320/70 R20		330	685

Table 10.71: Towing hook height

TRX 7800 - TRX 9800 - TRX 9900			
Tyre type	Towing hook with Italian type-approval		
	S	H1 (mm)	H2 (mm)
31X15.50-15	510	235	590
36x13.50-15		260	615
300/80-15.3			
440/50 R17			
250/80-18		270	625
280/70 R18			
320/65 R18			
425/55 R17		280	635
340/65 R18			
400/55-17.5		255	610
9.5 R20	305		
300/70 R20			
11.2 R20		305	660
280/85 R20	330		
320/70 R20		330	685

Table 10.72: Towing hook height

TRG 9800 - TRG 9900			
Tyre type	Towing hook with Italian type-approval		
	S	H1 (mm)	H2 (mm)
335/80 R20	455		
360/70 R20		355	710
380/70 R20	410		
420/65 R20			
320/85 R24		410	765
360/70 R24	420/65 R24		
420/65 R24			

MAXIMUM VERTICAL LOAD PROVIDED FOR ON THE COUPLING HOOK

Before hitching a towed interchangeable tool, the maximum vertical efforts and maximum traction efforts tables, envisioned at the machine towing hook, must be consulted.

- DO NOT hitch interchangeable tools to the machine (carried or towed) with technical and operational features that are not compatible with those supplied by the machine (power, mass, effort at the towing hook, category, number of PTO revs, etc.).

Italian type-approval

Table 10.73: Maximum vertical load

TX 7800 S -TRX 7800 S					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With safety arch - With frame	31X15.50-15 4PR Good-Year	7161,3 (730)	7063,2 (720)	6082,2 (620)	5984,1 (610)
	31X15.50-15 4PR Fox Tyre	7455,6 (760)	7357,5 (750)	6376,5 (650)	6278,4 (640)
	300/80-15.3 280/85 R20	11379,6 (1160)	11281,5 (1150)	10300,5 (1050)	10202,4 (1040)
	425/55 R17 280/70 R18 340/65 R18 320/70 R20	11870,1 (1210)	11673,9 (1190)	10791 (1100)	10594,8 (1080)
	400/55-17.5	9025,2 (920)	8927,1 (910)	7946,1 (810)	7848 (800)
	250/80-18	10594,8 (1080)	10398,6 (1060)	9515,7 (970)	9319,5 (950)
	320/65 R18	10006,2 (1020)	9908,1 (1010)	8927,1 (910)	8829 (900)
	9.5 R20	7749,9 (790)	7651,8 (780)	6670,8 (680)	6572,7 (670)
	300/70 R20	10496,7 (1070)	10300,5 (1050)	9417,6 (960)	9319,5 (950)

Table 10.73: Maximum vertical load

TX 7800 S - TRX 7800 S					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With cab:	31X15.50-15 4PR Good-Year	6670,8 (680)	6572,7 (670)	5591,7 (570)	5591,7 (570)
	31X15.50-15 4PR Fox Tyre	7063,2 (720)	6965,1 (710)	5984,1 (610)	5886 (600)
	300/80-15.3 280/85 R20	10889,1 (1110)	10791 (1100)	9810 (1000)	9711,9 (990)
	425/55 R17 280/70 R18 340/65 R18 320/70 R20	11379,6 (1160)	11281,5 (1150)	10300,5 (1050)	10202,4 (1040)
	400/55-17.5	8534,7 (870)	8436,6 (860)	7455,6 (760)	7357,5 (750)
	250/80-18	10104,3 (1030)	9908,1 (1010)	9025,2 (920)	8927,1 (910)
	320/65 R18	9515,7 (970)	9417,6 (960)	8436,6 (860)	8338,5 (850)
	9.5 R20	7259,4 (740)	7161,3 (730)	6180,3 (630)	6082,2 (620)
	300/70 R20	10006,2 (1020)	9908,1 (1010)	8927,1 (910)	8829 (900)

Table 10.74: Maximum vertical load

TRX 8400					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With safety arch	31X15.50-15 4PR Good-Year	6082 (620)	5984 (610)	5101 (520)	5003 (510)
	31X15.50-15 4PR Fox Tyre	6475 (660)	6279 (640)	5396 (550)	5297 (540)
	36x13.50-15 425/55 R17 400/55-17.5 280/70 R18 340/65 R18 320/70 R20	10692 (1090)	10398 (1060)	9613 (980)	9417 (960)
	300/80-15.3 280/85 R20	10202 (1040)	10006 (1020)	9221 (940)	8927 (910)
	250/80-18	9417 (960)	9123 (930)	8338 (850)	8142 (830)
	320/65 R18	8927 (910)	8632 (880)	7848 (800)	7651 (780)
	9.5 R20	6670 (680)	6474 (660)	5591 (570)	5493 (560)
	11.2 R20	9810 (1000)	9515 (970)	8730 (890)	8534 (870)
	300/70 R20	9319 (950)	9123 (930)	8240 (840)	8044 (820)

Table 10.74: Maximum vertical load

TRX 8400					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With frame or cab	31X15.50-15 4PR Good-Year	5494 (560)	5297 (540)	4415 (450)	4316 (440)
	31X15.50-15 4PR Fox Tyre	5788 (590)	5592 (570)	4709 (480)	4611 (470)
	36x13.50-15 425/55 R17 400/55-17.5 280/70 R18 340/65 R18 320/70 R20	10006 (1020)	9711 (990)	8927 (910)	8730 (890)
	300/80-15.3 280/85 R20	9515 (970)	9319 (950)	8534 (870)	8338 (850)
	250/80-18	8730 (890)	8534 (870)	7651 (780)	7455 (760)
	320/65 R18	8240 (840)	8044 (820)	7161 (730)	6965 (710)
	9.5 R20	5984 (610)	5787 (590)	4905 (500)	4806 (490)
	11.2 R20	9123 (930)	8927 (910)	8044 (820)	7848 (800)
	300/70 R20	8632 (880)	8436 (860)	7651 (780)	7455 (760)

Table 10.75: Maximum vertical load

TRX 7800 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With safety arch	31X15.50-15 4PR Good-Year	6278 (640)	6082 (620)	5199 (530)	5101 (520)
	31X15.50-15 4PR Fox Tyre	6572 (670)	6377 (650)	5494 (560)	5396 (550)
	36x13.50-15 425/55 R17 400/55-17.5 280/70 R18 340/65 R18 320/70 R20	10791 (1100)	10594 (1080)	9810 (1000)	9515 (970)
	300/80-15.3 280/85 R20	10398 (1060)	10104 (1030)	9319 (950)	9123 (930)
	250/80-18	9515 (970)	9319 (950)	8534 (870)	8338 (850)
	320/65 R18	9025 (920)	8829 (900)	7946 (810)	7749 (790)
	9.5 R20	6768 (690)	6670 (680)	5787 (590)	5591 (570)
	11.2 R20	9908 (1010)	9515 (970)	8927 (910)	9632(880)
	300/70 R20	9515 (970)	9221 (940)	8436 (860)	8240 (840)

Table 10.75: Maximum vertical load

TRX 7800 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With frame or cab	31X15.50-15 4PR Good-Year	5886 (600)	5788 (590)	4905 (500)	4709 (480)
	31X15.50-15 4PR Fox Tyre	6180 (630)	6082 (620)	5199 (530)	5003 (510)
	36x13.50-15 425/55 R17 400/55-17.5 280/70 R18 340/65 R18 320/70 R20	10496 (1070)	10202 (1040)	9417 (960)	9123 (930)
	300/80-15.3 280/85 R20	10006 (1020)	9711 (990)	8927 (910)	8730 (890)
	250/80-18	9221 (940)	8927 (910)	8142 (830)	7946 (810)
	320/65 R18	8632 (880)	8436 (860)	7651 (780)	7455 (760)
	9.5 R20	6474 (660)	6278 (640)	5395 (550)	5297 (540)
	11.2 R20	9515 (970)	9319 (950)	8534 (870)	8338 (850)
	300/70 R20	9123 (930)	8927 (910)	8044 (820)	7848 (800)

Table 10.76: Maximum vertical load

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With safety arch	335/80 R20 360/70 R20 380/70 R20 420/65 R20 320/85 R24 360/70 R24 420/65 R24	10104 (1030)	9810 (1000)	8829 (900)	8534 (870)
With cab:	335/80 R20 360/70 R20 380/70 R20 420/65 R20 320/85 R24 360/70 R24	9614 (980)	9418 (960)	8338 (850)	8142 (830)

Table 10.77: Maximum vertical load

TX 7800 S - TRX 7800 S					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With safety arch	31X15.50-15 4PR Good-Year	6670,8÷6670,8 (680÷680)	6670,8÷6670,8 (680÷680)	5689,8÷5689,8 (580÷580)	5591,7÷5591,7 (570÷570)
	31X15.50-15 4PR Fox Tyre	6965,1÷6965,1 (710÷710)	6965,1÷6965,1 (710÷710)	5984,1÷5984,1 (610÷610)	5886÷5886 (600÷600)
	300/80-15.3	7848÷10889,1 (800÷1110)	6965,1÷10791 (710÷1100)	7161,3÷9810 (730÷1000)	6278,4÷9711,9 (640÷990)
	400/55-17.5	8044,2÷8534,7 (820÷870)	7161,3÷8436,6 (730÷860)	7455,6÷7455,6 (760÷760)	6572,7÷7357,5 (670÷750)
	250/80-18	7848÷10006,2 (800÷1020)	6965,1÷9908,1 (710÷1010)	7161,3÷8927,1 (730÷910)	6278,4÷8927,1 (640÷910)
	280/70 R18	7848÷10300,5 (800÷1050)	6965,1÷11183,4 (710÷1140)	7161,3÷10202,4 (730÷1040)	6278,4÷10202,4 (640÷1040)
	320/65 R18	7848÷9417,6 (800÷960)	6965,1÷9417,6 (710÷960)	7161,3÷8436,6 (730÷860)	6278,4÷8338,5 (640÷850)
	340/65 R18	7651,8÷11281,5 (780÷1150)	6768,9÷11183,4 (690÷1140)	7063,2÷10202,4 (720÷1040)	6180,3÷10202,4 (630÷1040)
	9.5 R20	7259,4÷9025,2 (740÷920)	6376,5÷8927,1 (650÷910)	6572,7÷7946,1 (670÷810)	5787,9÷7946,1 (590÷810)
	280/85 R20	6867÷10791 (700÷1100)	6082,2÷10791 (620÷1100)	6180,3÷9711,9 (630÷990)	5395,5÷9711,9 (550÷990)
	300/70 R20	7259,4÷9908,1 (740÷1010)	6376,5÷9810 (650÷1000)	6572,7÷8829 (670÷900)	5787,9÷8829 (590÷900)
	320/70 R20	6867÷10791 (700÷1100)	6082,2÷11183,4 (620÷1140)	6180,3÷10202,4 (630÷1040)	5395,5÷10202,4 (550÷1040)

Table 10.77: Maximum vertical load

TX 7800 S -TRX 7800 S					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With frame or cab	31X15.50-15 4PR Good-Year	5984,1÷5984,1 (610÷610)	5886÷5886 (600÷600)	4905÷4905 (500÷500)	4905÷4905 (500÷500)
	31X15.50-15 4PR Fox Tyre	6278,4÷6278,4 (640÷640)	6180,3÷6180,3 (630÷630)	5199,3÷5199,3 (530÷530)	5199,3÷5199,3 (530÷530)
	300/80-15.3	8044,2÷10104,3 (820÷1030)	7063,2÷10006,2 (720÷1020)	7455,6÷9025,2 (760÷920)	6474,6÷9025,2 (660÷920)
	400/55-17.5	7749,9÷7749,9 (790÷790)	7357,5÷7651,8 (750÷780)	6670,8÷6670,8 (680÷680)	6670,8÷6670,8 (680÷680)
	250/80-18	8044,2÷9221,4 (820÷940)	7063,2÷9221,4 (720÷940)	7455,6÷8142,3 (760÷830)	6474,6÷8142,3 (660÷830)
	280/70 R18	8044,2÷10496,7 (820÷1070)	7063,2÷10496,7 (720÷1070)	7455,6÷9417,6 (760÷960)	6474,6÷9417,6 (660÷960)
	320/65 R18	8044,2÷8730,9 (820÷890)	7063,2÷8632,8 (720÷880)	7455,6÷7651,8 (760÷780)	6474,6÷7651,8 (660÷780)
	340/65 R18	7848÷10496,7 (800÷1070)	6965,1÷10496,7 (710÷1070)	7259,4÷9417,6 (740÷960)	6376,5÷9417,6 (650÷960)
	9.5 R20	7455,6÷8240,4 (760÷840)	6572,7÷8240,4 (670÷840)	6768,9÷7259,4 (690÷740)	5886÷7161,3 (600÷730)
	280/85 R20	6965,1÷10104,3 (710÷1030)	6180,3÷10006,2 (630÷1020)	6376,5÷9025,2 (650÷920)	5493,6÷8927,1 (560÷910)
	300/70 R20	7455,6÷9123,3 (760÷930)	6572,7÷9123,3 (670÷930)	6768,9÷8142,3 (690÷830)	5886÷8044,2 (600÷820)
	320/70 R20	6965,1÷10496,7 (710÷1070)	6180,3÷10496,7 (630÷1070)	6376,5÷9417,6 (650÷960)	5493,6÷9417,6 (560÷960)

Table 10.78: Maximum vertical load

TRX 8400					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With safety arch	31X15.50-15 4PR Good-Year	6082 (620)	5984 (610)	5003 (510)	4905 (500)
	31X15.50-15 4PR Fox Tyre	6377 (650)	6278 (640)	5297 (540)	5199 (530)
	36x13.50-15	6867÷10202 (700÷1040)	6474÷10104 (660÷1030)	6867÷10202 (700÷1040)	5493÷8927 (560÷910)
	425/55 R17	6572÷10496	6180÷10398	5984÷9515	5297÷9319
	340/65 R18	(670÷1070)	(630÷1060)	(610÷970)	(540÷950)
	440/50 R17	7455÷10693 (760÷1090)	6475÷10497 (660÷1070)	5788÷9516 (590÷970)	7455÷10693 (760÷1090)
	400/55-17.5	6965÷7749 (710÷790)	6572÷7651 (670÷780)	6376÷6768 (650÷690)	5689÷6670 (580÷680)
	280/70 R18	6670÷10496 (680÷1070)	6376÷10398 (650÷1060)	6082÷9515 (620÷970)	5395÷9319 (550÷950)
	320/70 R20	5787÷9417 (590÷960)	5493÷10398 (560÷1060)	5199÷8632 (530÷880)	4610÷9319 (470÷950)
	300/80-15.3	6670÷10104 (680÷1030)	6376÷10006 (650÷1020)	6082÷9123 (620÷930)	5395÷8927 (550÷910)
	280/85 R20	5787÷9417 (590÷960)	5493÷9908 (560÷1010)	5199÷8927 (530÷910)	4610÷8927 (470÷910)
	250/80-18	6670÷9221 (680÷940)	6376÷9123 (650÷930)	6082÷8240 (620÷840)	5395÷8142 (550÷830)
	320/65 R18	6670÷8730 (680÷890)	6376÷8632 (650÷880)	6082÷7749 (620÷790)	5395÷7651 (550÷780)
	9.5 R20	6180÷6572 (630÷670)	5787÷6474 (590÷660)	5493 (560)	4905÷5395 (500÷550)
	11.2 R20	5787÷9417 (590÷960)	5493÷9515 (560÷970)	5199÷8632 (530÷880)	4610÷8436 (470÷860)
	300/70 R20	6180÷9221 (630÷940)	5787÷9025 (590÷920)	5591÷8142 (570÷830)	4905÷8044 (500÷820)

Table 10.78: Maximum vertical load

TRX 8400					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With frame or cab	31X15.50-15 4PR Good-Year	5395 (550)	5297 (540)	4316 (440)	4316 (440)
	31X15.50-15 4PR Fox Tyre	5690 (580)	5494 (560)	4611 (470)	4611 (470)
	36x13.50-15	6965÷9417 (710÷960)	6572÷9319 (670÷950)	5984÷8338 (610÷850)	5984÷8240 (610÷840)
	425/55 R17	6572÷9810 (670÷1000)	6278÷9711 (640÷990)	5984÷8829 (610÷900)	5689÷8730 (580÷890)
	340/65 R18				
	440/50 R17	7455÷10006 (760÷1020)	6475÷9810 (660÷1000)	6867÷8927 (700÷910)	5886÷8829 (600÷900)
	400/55-17.5	7063÷7161 (720÷730)	6082 (620)	6670÷7063 (680÷720)	5984 (610)
	280/70 R18	6768÷9810 (690÷1000)	6376÷9711 (650÷990)	6180÷8829 (630÷900)	5787÷8730 (590÷890)
	320/70 R20	5886÷9711 (600÷990)	5493÷9711 (560÷990)	5199÷8829 (530÷900)	4905÷8730 (500÷890)
	300/80-15.3	6768÷9417 (690÷960)	6376÷9319 (650÷950)	6180÷8436 (630÷860)	5787÷8338 (590÷850)
	280/85 R20	5886÷9417 (600÷960)	5493÷9319 (560÷950)	5199÷8338 (530÷850)	4905÷8240 (500÷840)
	250/80-18	6768÷8632 (690÷880)	6376÷8436 (650÷860)	6180÷7553 (630÷770)	5787÷7455 (590÷760)
	320/65 R18	6768÷8044 (690÷820)	6376÷7946 (650÷810)	6180÷7063 (630÷720)	5787÷6965 (590÷710)
	9.5 R20	5886 (600)	5787 (590)	4905 (500)	4806 (490)
	11.2 R20	5886÷8927 (600÷910)	5493÷8829 (560÷900)	5199÷7946 (530÷810)	4905÷7848 (500÷800)
	300/70 R20	6180÷8534 (630÷870)	5886÷6474 (600÷660)	5591÷7455 (570÷760)	5297÷7357 (540÷750)

Table 10.79: Maximum vertical load

TRX 7800 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With safety arch	31X15.50-15 4PR Good-Year	6180 (630)	6082 (620)	5199 (530)	5101 (520)
	31X15.50-15 4PR Fox Tyre	6475 (660)	6377 (650)	5494 (560)	5396 (550)
	36x13.50-15 300/80-15.3	7455÷10300 (760÷1050)	7063÷10104 (720÷1030)	6867÷9221 (700÷940)	6474÷9123 (660÷930)
	425/55 R17 340/65 R18	7259÷10692 (740÷1090)	6867÷10496 (700÷1070)	6670÷9613 (680÷980)	6278÷9515 (640÷970)
	440/50 R17	7455÷10693 (760÷1090)	6475÷10497 (660÷1070)	5788÷9516 (590÷970)	7455÷10693 (760÷1090)
	400/55-17.5	7651÷7946 (780÷810)	7259÷8829 (740÷900)	7063÷6965 (720÷710)	6670÷6867 (680÷700)
	280/70 R18	7455÷10692 (760÷1090)	7063÷10496 (720÷1070)	6867÷9613 (700÷980)	6474÷9515 (660÷970)
	320/70 R20	6474÷10300 (660÷1050)	6180÷10496 (630÷1070)	5886÷9613 (600÷980)	5493÷9515 (560÷970)
	280/85 R20	6474÷10300 (660÷1050)	6180÷10104 (630÷1030)	5886÷9221 (600÷940)	5493÷9123 (560÷930)
	250/80-18	7455÷9319 (760÷950)	7063÷9221 (720÷940)	6867÷8338 (700÷850)	6474÷8240 (660÷840)
	320/65 R18	7455÷8927 (760÷910)	7063÷8730 (720÷890)	6867÷7848 (700÷800)	6474÷7749 (660÷790)
	9.5 R20	6572 (670)	6474 (660)	5493 (560)	5493 (560)
	11.2 R20	6474÷9810 (660÷1000)	6180÷9613 (630÷980)	5886÷8730 (600÷890)	5493÷8632 (560÷880)
	300/70 R20	6867÷9319 (700÷950)	6474÷9221 (660÷940)	6278÷8338 (640÷850)	5886÷8240 (600÷840)

Table 10.79: Maximum vertical load

TRX 7800 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With frame or cab	31X15.50-15 4PR Good-Year	5787 (590)	5689 (580)	4806 (490)	4708 (480)
	31X15.50-15 4PR Fox Tyre	6082 (620)	5984 (610)	5101 (520)	5003 (510)
	36x13.50-15 300/80-15.3	7651+9908 (780+1010)	7259+9711 (740+990)	7063+8829 (720+900)	6670+8730 (680+890)
	425/55 R17 340/65 R18	7553+10300 (770+1050)	7063+10104 (720+1030)	6867+9221 (700+940)	6474+9123 (660+930)
	440/50 R17	7455+10006 (760+1020)	6475+9810 (660+1000)	6867+8927 (700+910)	5886+8829 (600+900)
	400/55-17.5	7553 (770)	7455 (760)	6572 (670)	6474 (660)
	280/70 R18	7651+10300 (780+1050)	7259+10104 (740+1030)	7063+9221 (720+940)	6670+9123 (680+930)
	320/70 R20	6670+10300 (680+1050)	6376+10104 (650+1030)	6082+9221 (620+940)	6376+10104 (650+1030)
	280/85 R20	6670+9908 (680+1010)	6376+9711 (650+990)	6082+8829 (620+900)	5689+8730 (580+890)
	250/80-18	7651+8927 (780+910)	7259+8829 (740+900)	7063+7946 (720+810)	6670+7848 (680+800)
	320/65 R18	7651+8534 (780+870)	7259+8436 (740+860)	7063+7553 (720+770)	6670+7357 (680+750)
	9.5 R20	6180 (630)	6082 (620)	5199 (530)	5101 (520)
	11.2 R20	6670+9417 (680+960)	6376+9319 (650+950)	6082+8436 (620+860)	5689+8240 (580+840)
	300/70 R20	7063+8927 (720+910)	6670+8829 (680+900)	6474+7946 (660+810)	6082+7848 (620+800)

Table 10.80: Maximum vertical load

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With safety arch	335/80 R20				
	360/70 R20	6965+9908 (710+1010)	7259+9810 (740+1000)	6475+8632 (660+880)	5690+8534 (580+870)
	380/70 R20				
	420/65 R20				
	320/85 R24	6082+9908 (620+1010)	6278+9810 (640+1000)	5592+8632 (570+880)	4709+8534 (480+870)

Table 10.80: Maximum vertical load

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900					
version	Tyre type	Without ballasts N (kg)		With ballasts N (kg)	
		Towing bracket	"SLIDER" towing hook	Towing bracket	"SLIDER" towing hook
With cab:	335/80 R20				
	360/70 R20	7357÷9516 (750÷970)	5886÷9319 (700÷950)	6573÷8240 (670÷840)	5984÷8044 (610÷820)
	380/70 R20				
	420/65 R20				
	320/85 R24	6376÷9516 (650÷970)	5886÷9319 (600÷950)	5592÷8240 (570÷840)	5003÷8044 (510÷820)
360/70 R24					

MAXIMUM DRAWBAR PULL PROVIDED FOR AT THE COUPLING HOOK, IN NEWTONS

The machine can tow equipment without brakes (trailers, tankers, etc.) or with an inertia braking system or an independent mechanical system.

- The brake control with the independent mechanical system is operated via the lever to be placed in the holder on the machine (See "Description of the main parts").

Italian type-approval
Table 10.81: Maximum drawbar pull

TX 7800 S			
Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	20110,5 (2050)	20797,2 (2120)	21582 (2200)
Towed tools with independent braking (mechanical)	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with inertia braking	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with assisted braking (hydraulic/pneumatic)	81227 (8280)	83189 (8480)	86720 (8840)

Table 10.82: Maximum drawbar pull

TRX 7800 S			
Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	20110,5 (2050)	20895,3 (2130)	21778,2 (2220)
Towed tools with independent braking (mechanical)	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with inertia braking	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with assisted braking (hydraulic/pneumatic)	81619 (8320)	83581 (8520)	87113 (8880)

Table 10.83: Maximum drawbar pull

Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	19620 (2000)	20797 (2120)	21582 (2200)
Towed tools with independent braking (mechanical)	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with inertia braking	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with assisted braking (hydraulic/pneumatic)	85151 (8680)	87701 (8940)	91233 (9300)

Table 10.84: Maximum drawbar pull

Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	20111 (2050)	20797 (2120)	21582 (2200)
Towed tools with independent braking (mechanical)	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with inertia braking	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with assisted braking (hydraulic/pneumatic)			Not foreseen

Table 10.85: Maximum drawbar pull

Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	20601 (2100)	21190 (2160)	22073 (2250)
Towed tools with independent braking (mechanical)	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with inertia braking	58860 (6000)	58860 (6000)	58860 (6000)
Towed tools with assisted braking (hydraulic/pneumatic)			Not foreseen

Table 10.86: Maximum drawbar pull

Type of braking	version N (kg)	
	With safety arch	With cab:
Towed tools not braked	21582 (2200)	23054 (2350)
Towed tools with independent braking (mechanical)	58860 (6000)	58860 (6000)
Towed tools with inertia braking	58860 (6000)	58860 (6000)
Towed tools with assisted braking (hydraulic/pneumatic)	89467 (9120)	94961 (9680)

Table 10.87: Maximum drawbar pull

TRG 10400		
Type of braking	version N (kg)	
	With safety arch	With cab:
Towed tools not braked	21582 (2200)	23054 (2350)
Towed tools with independent braking (mechanical)	58860 (6000)	58860 (6000)
Towed tools with inertia braking	58860 (6000)	58860 (6000)
Towed tools with assisted braking (hydraulic/pneumatic)	Not foreseen	

CE type-approval**Table 10.88:** Maximum drawbar pull

TX 7800 S - TRX 7800 S			
Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	20111 (2050)	21582 (2200)	21582 (2200)
Towed tools with independent braking (mechanical)	78480 (8000)	78480 (8000)	78480 (8000)
Towed tools with inertia braking	78480 (8000)	78480 (8000)	78480 (8000)
Towed tools with assisted braking (hydraulic/pneumatic)	88290 (9000)	90743 (9250)	95648 (9750)

Table 10.89: Maximum drawbar pull

TRX 7800			
Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	20601 (2100)	22563 (2300)	22563 (2300)
Towed tools with independent braking (mechanical)	78480 (8000)	78480 (8000)	78480 (8000)
Towed tools with inertia braking	78480 (8000)	78480 (8000)	78480 (8000)
Towed tools with assisted braking (hydraulic/pneumatic)	90742,5 (9250)	98100 (10000)	103005 (10500)

Table 10.90: Maximum drawbar pull

TRX 8400			
Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	20601 (2100)	21582 (2200)	21582 (2200)
Towed tools with independent braking (mechanical)	78480 (8000)	78480 (8000)	78480 (8000)
Towed tools with inertia braking	78480 (8000)	78480 (8000)	78480 (8000)
Towed tools with assisted braking (hydraulic/pneumatic)	88290 (9000)	93195 (9500)	95647,5 (9750)

Table 10.91: Maximum drawbar pull

TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900			
Type of braking	version N (kg)		
	With safety arch	With frame	With cab:
Towed tools not braked	20601 (2100)	22563 (2300)	22563 (2300)
Towed tools with independent braking (mechanical)	78480 (8000)	78480 (8000)	78480 (8000)
Towed tools with inertia braking	78480 (8000)	78480 (8000)	78480 (8000)
Towed tools with assisted braking (hydraulic/pneumatic)	93195 (9500)	98100 (10000)	103005 (10500)

Table 10.92: Maximum drawbar pull

TRG 9800 - TRG 9900 - TRG 10400 - TRG 10900		
Type of braking	version N (kg)	
	With safety arch	With cab:
Towed tools not braked	21582 (2200)	23053 (2350)
Towed tools with independent braking (mechanical)	78480 (8000)	78480 (8000)
Towed tools with inertia braking	78480 (8000)	78480 (8000)
Towed tools with assisted braking (hydraulic/pneumatic)	98100 (10000)	107910 (11000)

WIRING DIAGRAM, ENGINE HARNESS

TX 7800 S - TRX 7800 S - TRX 7800 - TRX 9800 - TRG 9800

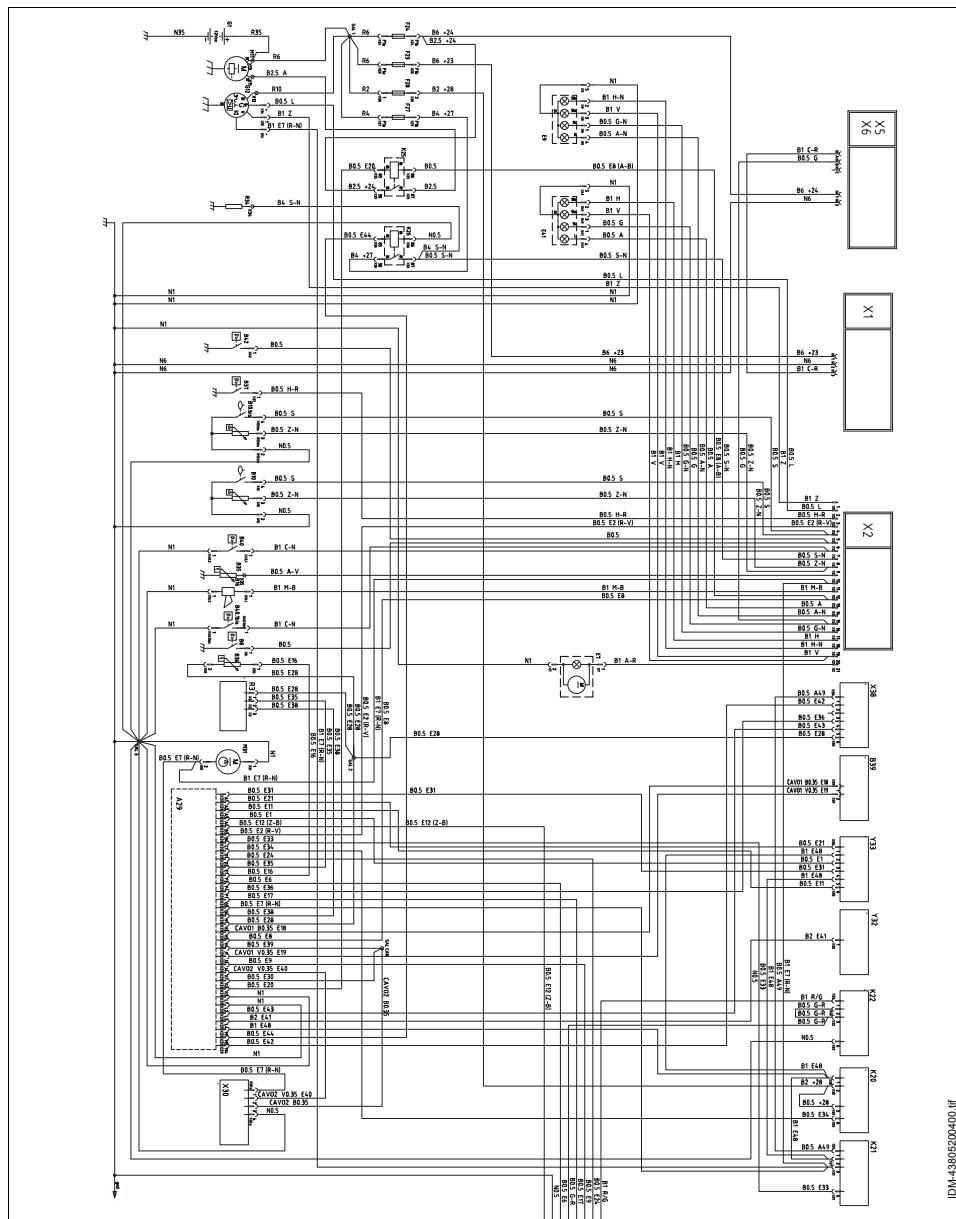


Table: electric plant components

Ref	Description
A29	ECU electronic controller
B8	Hydraulic oil filter clogged pressure switch
B10	Indicator sensors and fuel reserve
B10.bis	Indicator sensors and fuel reserve
B16	Horn
B35	Engine water temperature thermistor
B36	Water temperature sensor
B37	Engine oil pressure switch
B39	Speed sensor
B40	Clogged air filter pressure switch
B40.1bis	Clogged air filter pressure switch
B42	Hydraulic oil filter clogged pressure switch
E7	Rotating light
E9	Front LEFT headlight
E41	Front RIGHT headlight
F23	Machine main fuse
F24	Ignition/cab main fuse
F27	Spark plugs fuse

Ref	Description
F28	Main fuse (MAIN) for motor management control unit and EGR valve
G1	Battery
G12	Alternator
K20	Main relay
K21	Rack Actuator relay
K22	Secondary relay
K25	Starter relay
K26	Pre-heat resistance relay
M11	Starter
M31	Fuel supply pump
R3	Accelerator
R34	Pre-heat resistance
X30	Service instrument connection
X38	Rack actuator
Y32	CDS solenoid valve
Y33	EGR solenoid valve
X1	Dashboard line connector
X2	Dashboard line connector
X4	Additional controls connector
X5	Cabin line connector
X6	Cabin line connector

Table: Electric cables colour key

Code	Colour
A	Light blue
B	White
C	Orange
G	Yellow
H	Grey
L	Blue

Code	Colour
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

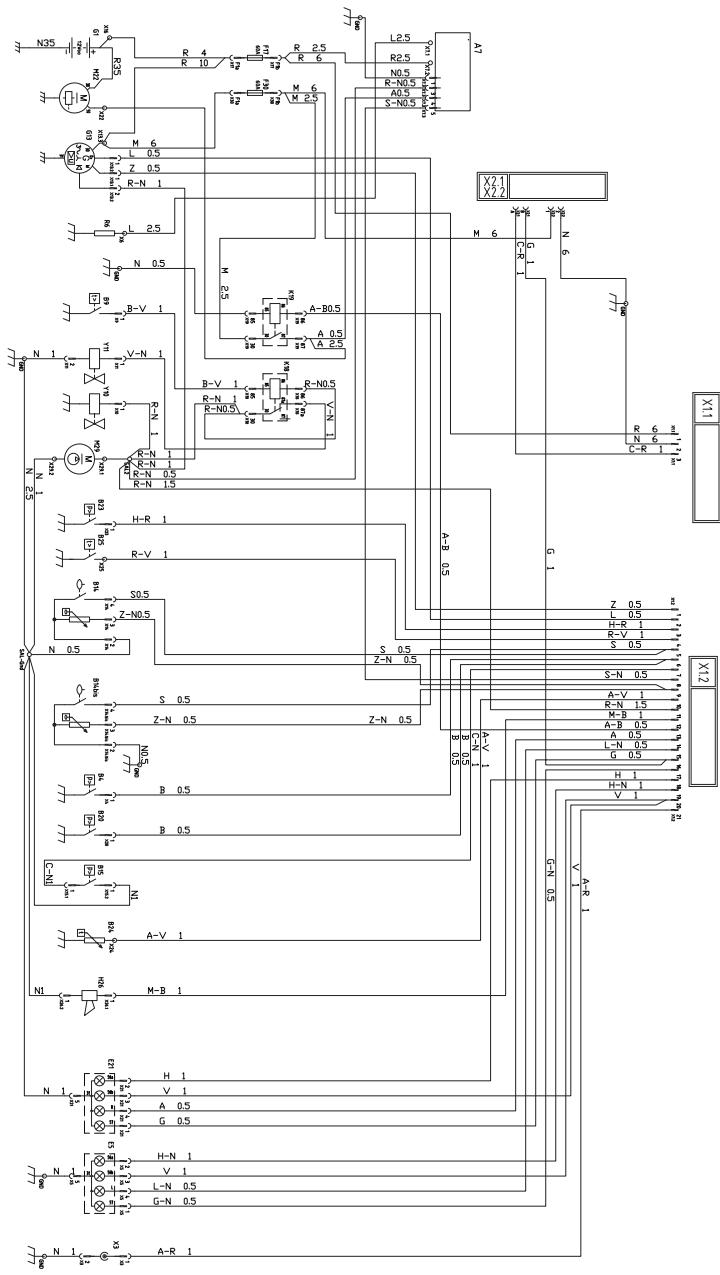


Table: electric plant components

<i>Ref</i>	<i>Description</i>
A7	Spark plugs re-heat control unit
B4	Hydraulic oil filter pressure switch
B9	Advance cold start-up temperature thermistor
B14	Fuel level transducer
B14bis	Fuel level transducer
B15	Clogged air filter pressure switch
B20	Hydraulic oil filter pressure switch
B23	Engine oil pressure switch
B24	Engine water temperature sensor
B25	Engine water temperature thermostat
E5	Front LEFT headlight
E21	Front RIGHT headlight
F17	Machine main fuse
F30	Cabin main fuse

<i>Ref</i>	<i>Description</i>
G1	Battery
G13	Alternator
H26	Horn
K18	KSB electromagnet relay
K19	Starter relay
M22	Starter motor
M29	Electric fuel pump
R6	Spark plugs
X3	Rotating light socket
Y10	Fuel electrovalve on injection pump
Y11	Advance cold start-up electrovalve
X1.1	Dashboard interface connector
X1.2	Dashboard interface connector
X2.1	Cabin interface connector
X2.2	Cabin interface connector

Table: Electric cables colour key

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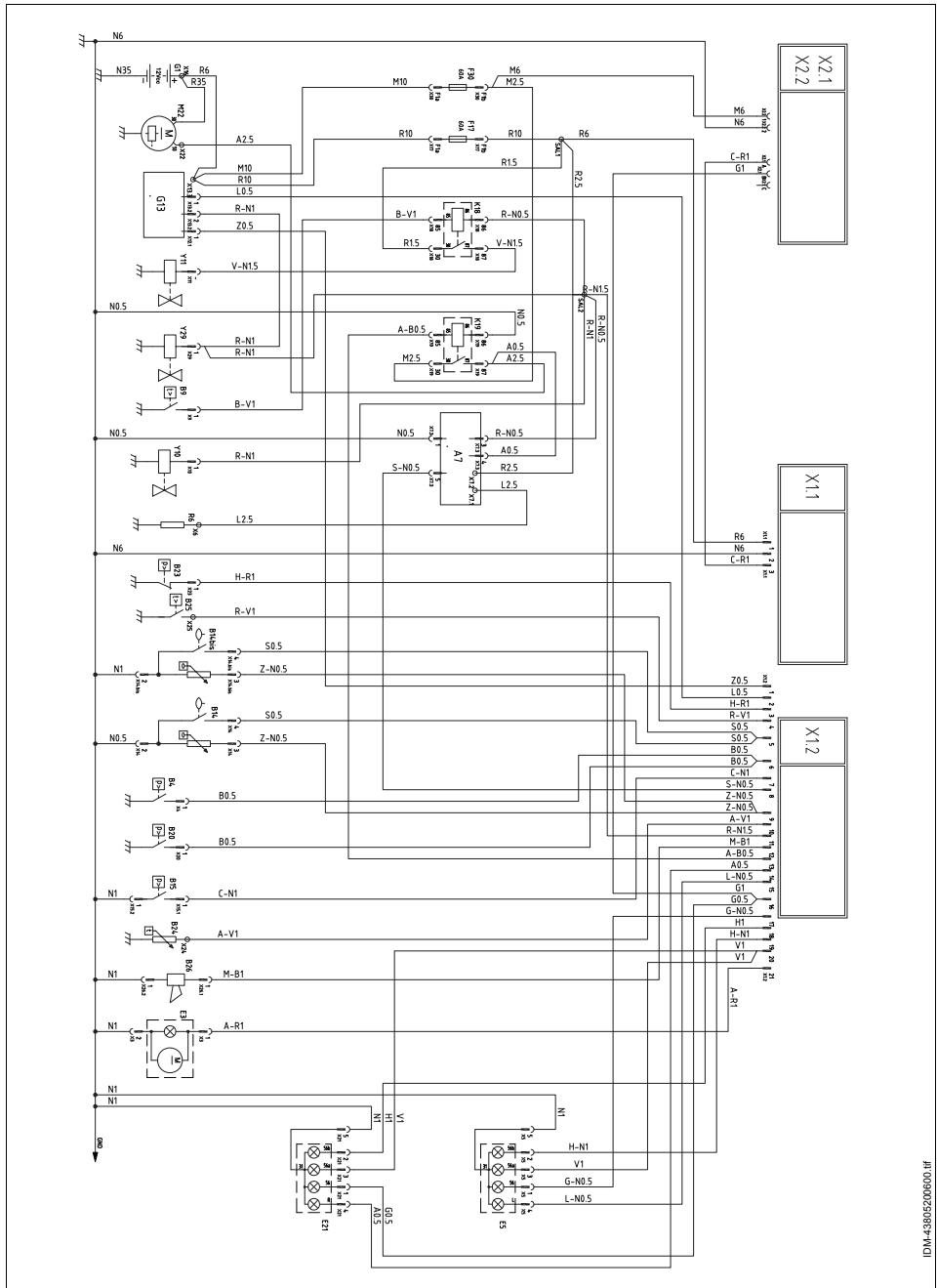


Table: electric plant components

<i>Ref</i>	<i>Description</i>
A7	Spark plugs re-heat control unit
B4	Hydraulic oil filter clogged pressure switch
B9	Electro-magnets temperature sensor
B14	Reserve sensor and float n.1 indicator
B15	Clogged air filter pressure switch
B20	Hydraulic oil filter clogged pressure switch
B23	Engine oil minimum pressure switch
B24	Engine water temperature thermistor
B25	Engine water temperature sensor
B26	Horn
B14bis	Reserve sensor and float n.2 indicator
E3	Rotating light
E5	Front LEFT headlight

<i>Ref</i>	<i>Description</i>
E21	Front RIGHT headlight
F17	Machine main fuse
F30	Cabin main fuse
G1	Battery
G13	Alternator
K18	KSB electro-magnet control relay
K19	Starter relay
M22	Starter
R6	Spark plugs
Y10	Pump switch off electrovalves
Y11	KSB electromagnet
Y29	Filter additional switch-off electrovalve
X1.1	Dashboard line connector
X1.2	Dashboard line connector
X2.1	Cab line connection connector
X2.2	Cab line connection connector

Table: Electric cables colour key

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TRX 9900 - TRX 10900 - TRG 9900 - TRG 10900

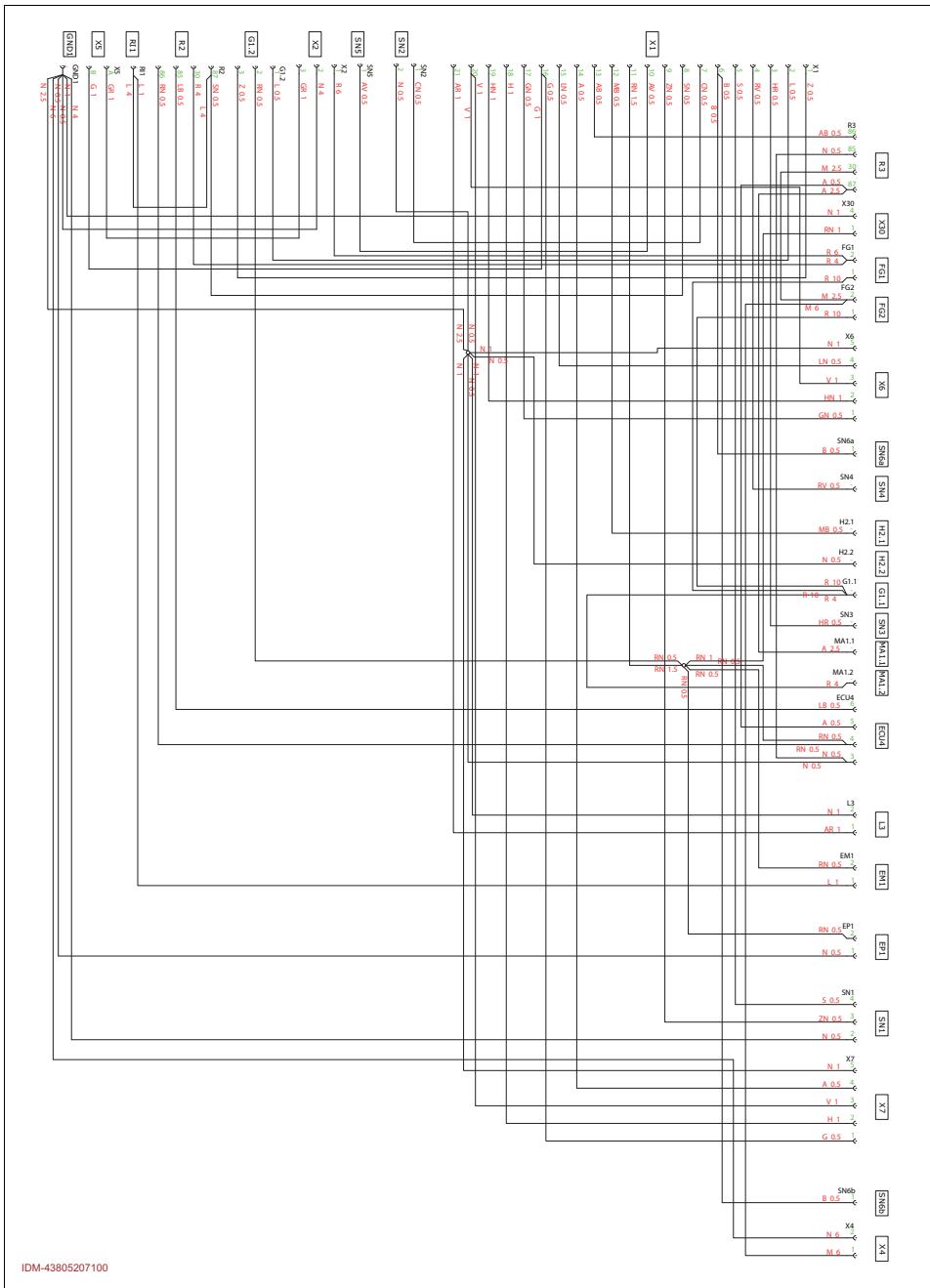


Table: electric plant components

Ref	Description
ECU4	Glow plugs control unit
EM1	Electromagnet on/off
EP1	Fuel a/c pump
FG1	Machine main fuse
FG2	Cabin main fuse
G1.1	Alternator
G1.2	Alternator
GND1	Mass
H2.1	Horn
H2.2	Horn
L3	Revolving light connection
MA1.1	Starter
MA1.2	Starter
R2	Glow plug control relay
R3	Start relay
RI1	Spark plugs

Ref	Description
SN1	Floating indicator
SN2	Air filter switch
SN3	Engine oil pressure switch
SN4	Max refrigerant temperature LED sensor
SN5	Refrigerant temperature indicator sensor
SN6a	Utilities oil filter clogging switch
SN6b	Services oil filter clogging switch
X1	Dashboard line connector
X2	Dashboard line connector
X30	Power supply kit connection
X4	Cab line connection connector
X5	Cab line connection connector
X6	Front LEFT headlight
X7	Front RIGHT headlight

Table: Electric cables colour key

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A	Light blue
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L	Blue

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V	Green
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DASHBOARD WIRING DIAGRAM

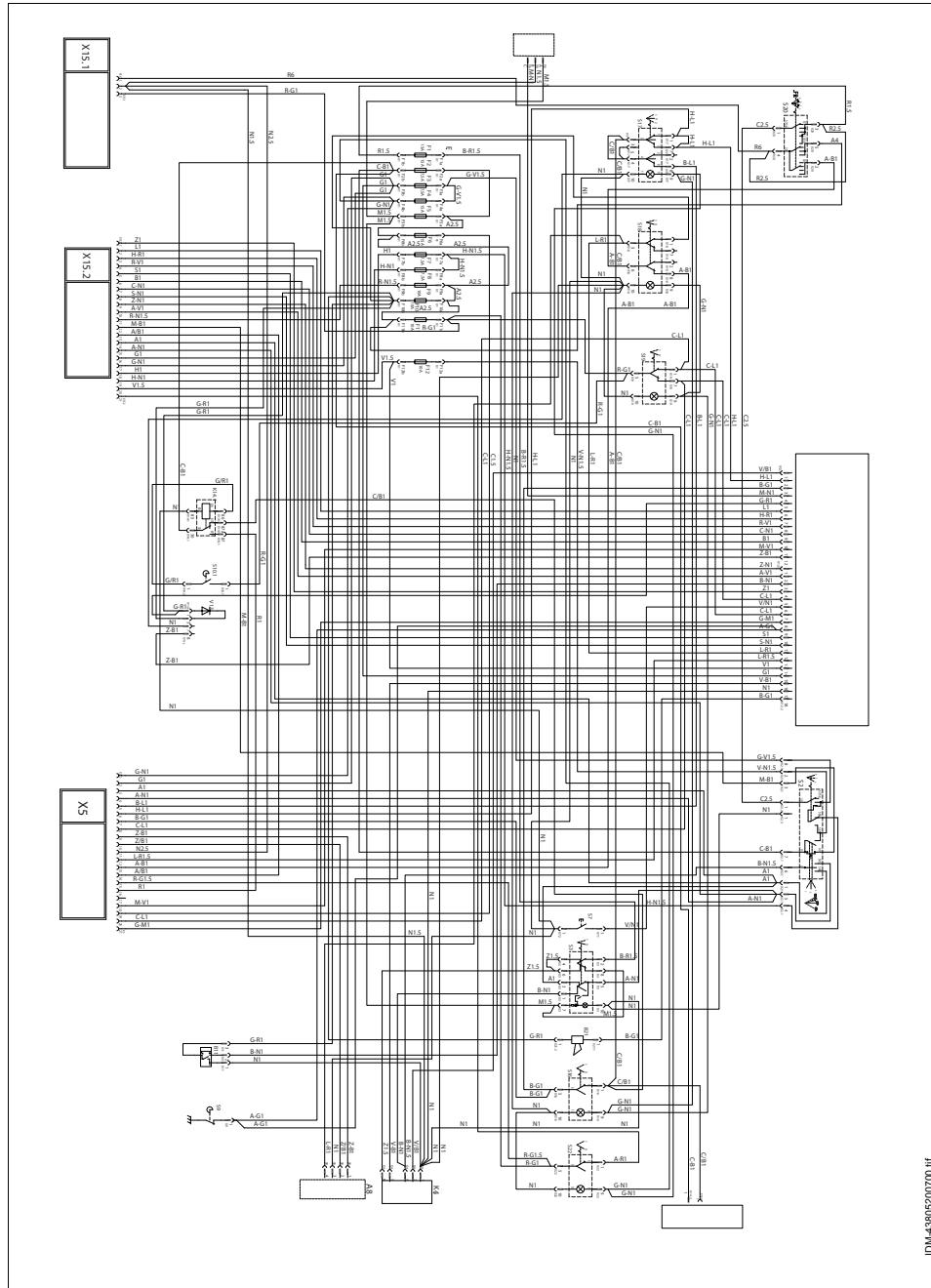


Table: electric plant components

Ref	Description
A8	Rear PTO engagement control unit
B11	Speedometer sensor
B21	Alarms buzzer
F1	4 15A indicator light warning internal fuse
F2	Traction disengagement solenoid valve fuses, separate blocking SV, 15A horn
F3	front right and rear left light fuses, number plate light, 7.5A multipurpose instrument lighting warning light
F4	Front left and rear right position lights fuses
F5	15A front user's kit indicators fuse
F6	15A rear opt. kit fuse
F7	Right 7.5A dipper beam lights fuse
F8	Left 7.5A dipper beam lights fuse
F9	10A spark plugs control unit fuse, fuel level indicator, electro/switch off
F10	Fuse EV. Front PTO, multifunctional tool, 10A speed sensor
F11	Fuse +15 for cab, stop lights, work light, PTO indicator, 10A HI-LO solenoid valve
F12	10A full beam lights fuse
K4	Intermittence
K14.1	Ignition control mini-relay 2

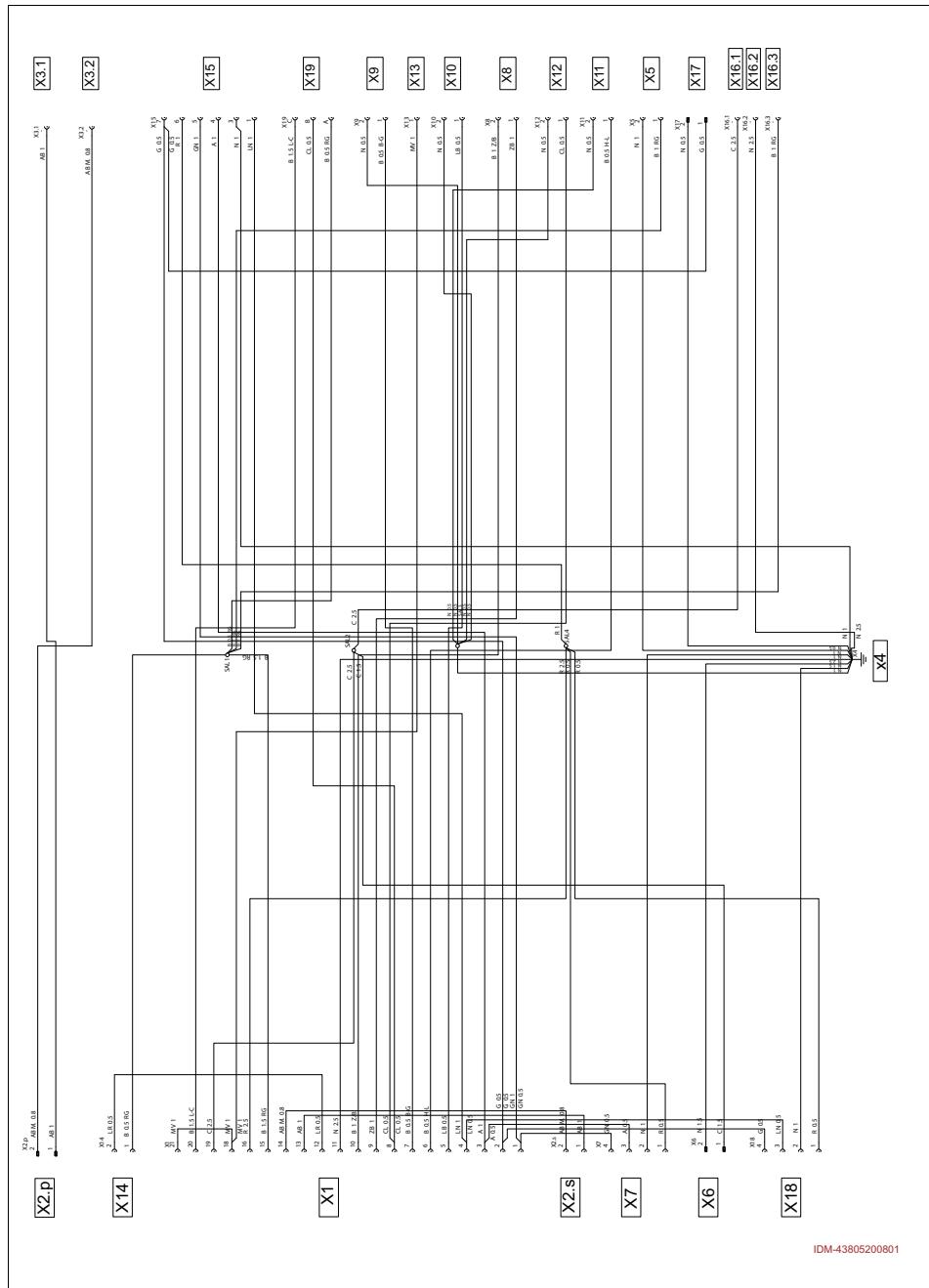
Ref	Description
S1	Starter board
S2	Lights switch
S3	Four direction indicator switch
S7	PTO change pushbutton
S9	Hand brake switch engaged
S10	Stop lights switch
S16	Traction disengagement switch
S17	Locking device switch
S18	PTO-start consent control switch
S19	Hi-lo control switch
S22	Rotating light switch
V13	Anti-return diode connection
X5	Connect with X1
X6	Front user's kit connector, front PTO or Cleanfix
X8	PTO engagement control unit
X12.1	Multifunction panel
X12.2	Multifunction panel
X14.2	Traction and traditional blocking connection
X14.3	Traction and traditional blocking connection
X15.1	Connection with front line (X1.1)
X15.2	Connection with front line (X1.2)

Table: Electric cables colour key

Code	Colour
A	Light blue
B	White
C	Orange
G	Yellow
H	Grey
L	Blue

Code	Colour
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N	Black
R	Red
S	Pink
V	Green
Z	Purple

REAR CABLING WIRING DIAGRAM



C1143805203 fm

IDM-43805200801

Table: electric plant components

<i>Ref</i>	<i>Description</i>
X1	Instrument panel connection
X2.s	Starting enable extension connection
X2.P	Starting enable extension connection
X3.1	Starting enable switch
X3.2	Starting enable switch
X4	Ground
X5	Work light
X6	Rear kit connection
X7	RH rear light
X8	Rear PTO solenoid valve
X9	Drive solenoid valve

<i>Ref</i>	<i>Description</i>
X10	Front lock solenoid valve
X11	Rear lock solenoid valve
X12	HI-LO solenoid valve
X13	Services oil warning light pushbutton switch
X14	PTO E warning light switch
X15	Trailer socket
X16.1	3-pin socket-positive 15
X16.2	3-pin socket-negative
X16.3	3-pin socket-positive command 15
X17	Number plate light position
X18	LH rear light
X19	HI-LO control button

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
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H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

ELECTRICAL DIAGRAM OF VERTICAL TIE-ROD AND THIRD POINT

TX 7800 S - TRX 7800 S

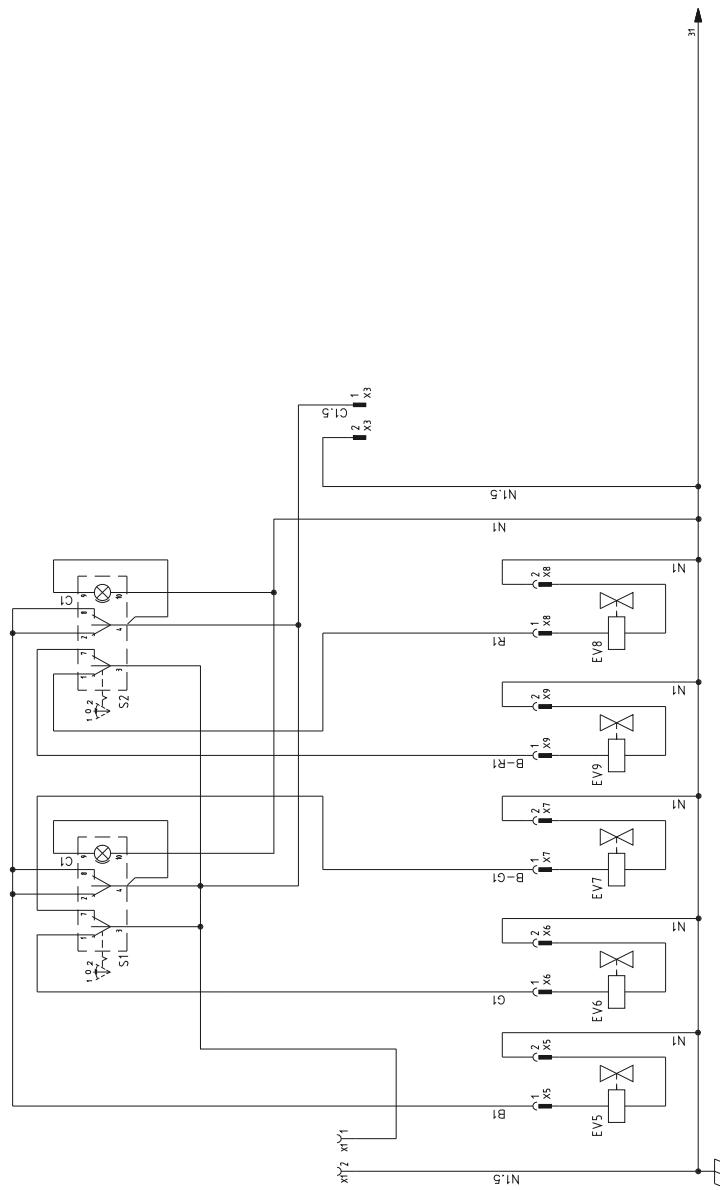


Table: electric plant components

<i>Ref</i>	<i>Description</i>
EV5	on/off electrovalve
EV6	3rd hydraulic point electrovalve
EV7	3rd hydraulic point electrovalve
EV8	Vertical arm electrovalve
EV9	Vertical arm electrovalve
S1	Hydraulic 3rd point tie-rod switch
S2	Vertical arm switch

<i>Ref</i>	<i>Description</i>
X1	Deutsch 2-way connector
X3	Deutsch 2-way connector
X5	Deutsch 2-way connector
X6	Deutsch 2-way connector
X7	Deutsch 2-way connector
X8	Deutsch 2-way connector
X9	Deutsch 2-way connector

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
B	White
C	Orange
G	Yellow
H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

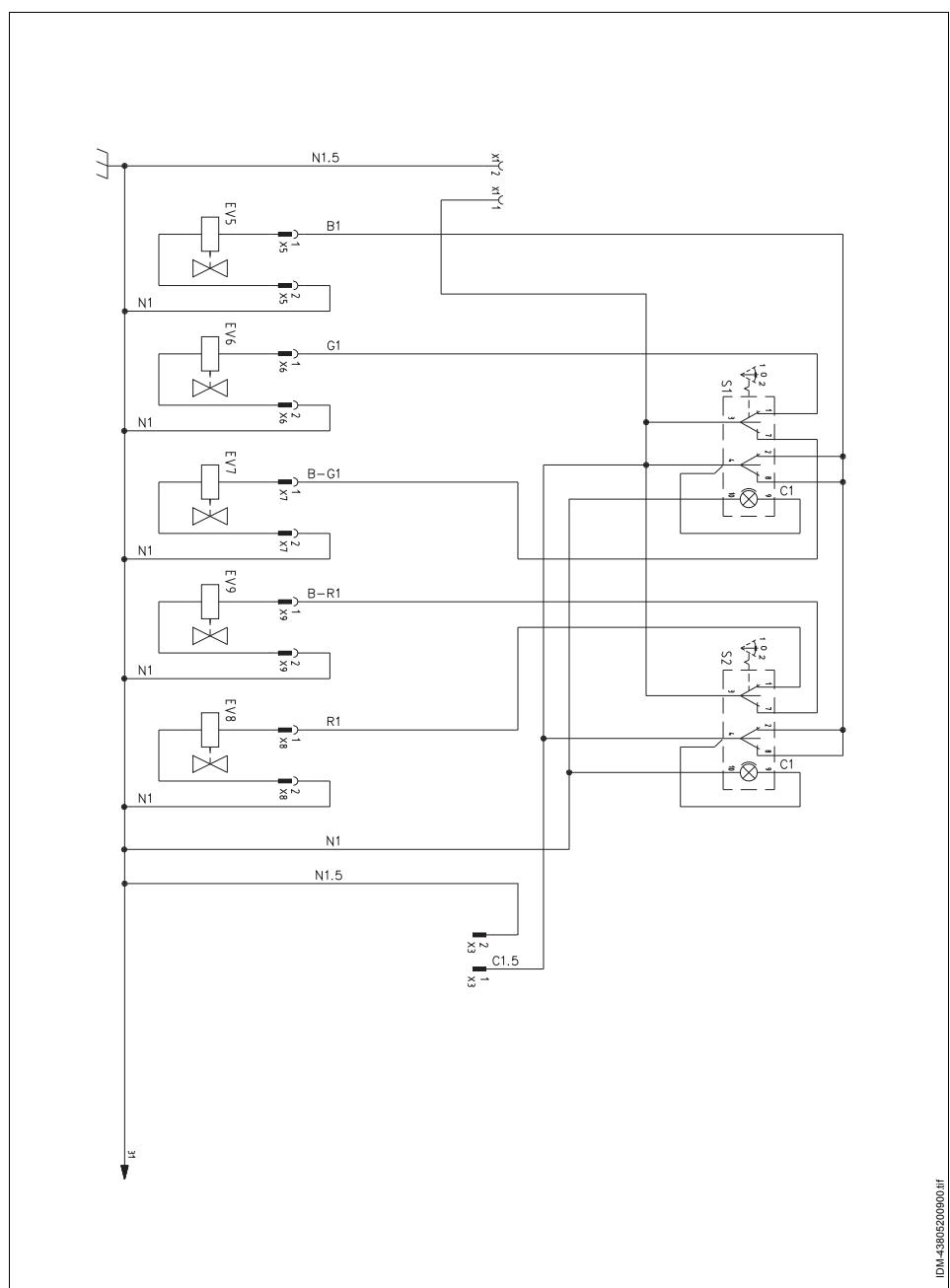


Table: electric plant components

<i>Ref</i>	<i>Description</i>
EV5	on/off solenoid valve
EV6	3rd hydraulic point solenoid valve
EV7	3rd hydraulic point solenoid valve
EV8	Vertical arm solenoid valve
EV9	Vertical arm solenoid valve
S1	Hydraulic 3rd point tie-rod switch
S2	Vertical arm switch

<i>Ref</i>	<i>Description</i>
X1	Deutsch 2-way connector
X3	Deutsch 2-way connector
X5	Deutsch 2-way connector
X6	Deutsch 2-way connector
X7	Deutsch 2-way connector
X8	Deutsch 2-way connector
X9	Deutsch 2-way connector

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
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G	Yellow
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<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

ELECTRIC CIRCUIT DIAGRAM OF THE ELECTRONIC LIFT DRAFT CONTROL

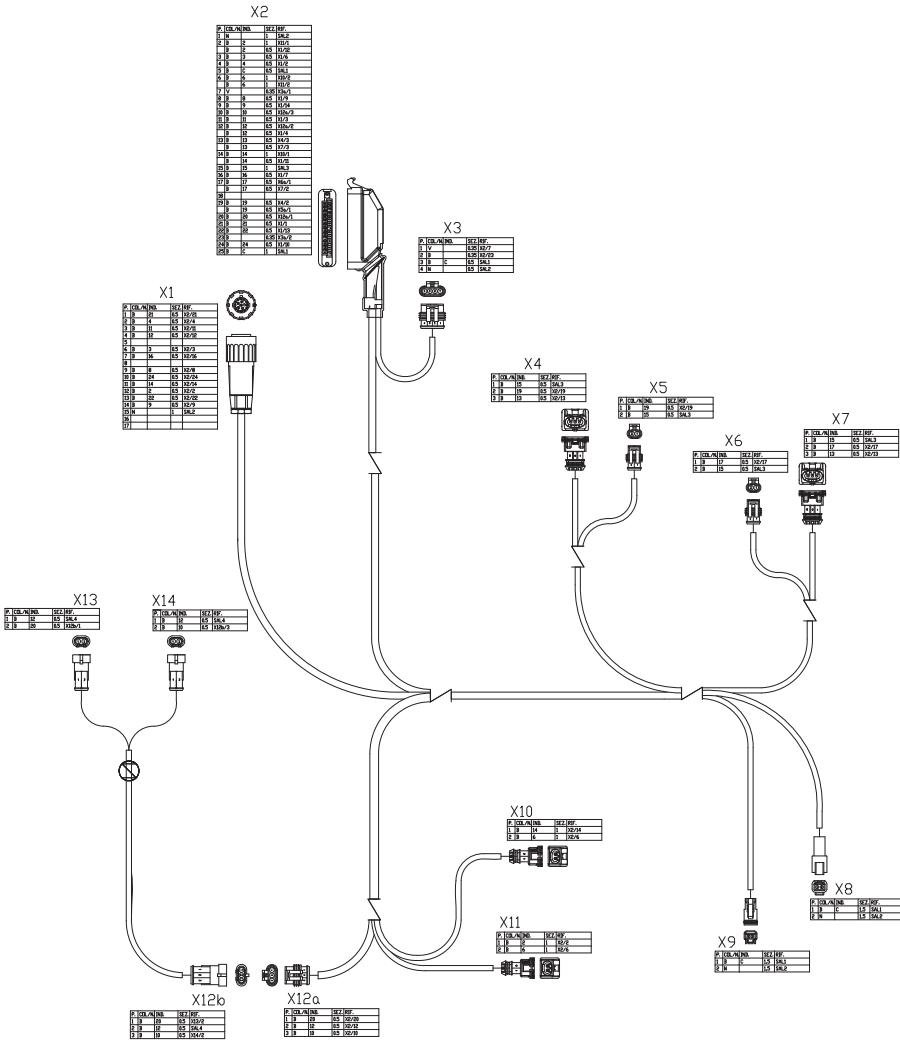


Table: electric plant components

<i>Ref</i>	<i>Description</i>
X1	Connection with control panel (EHB-B controller)
X2	Connection with electronic control unit (EHB-B ECU)
X3	CAN service connection
X4	Position sensor connection
X5	Position sensor SET socket
X6	Draft sensor SET socket
X7	Draft sensor connection

<i>Ref</i>	<i>Description</i>
X8	Power supply connection
X9	Power supply connection
X10	Lifting down solenoid valve
X11	Lifting up solenoid valve B
X12a	External sw connection
X12b	External sw connection
X13	Actuator extension connection
X14	Actuator extension connection

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
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L	Blue

<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

WIRING DIAGRAM FOR HYDRAULIC BRAKING (ITALIAN TYPE-APPROVAL ONLY)

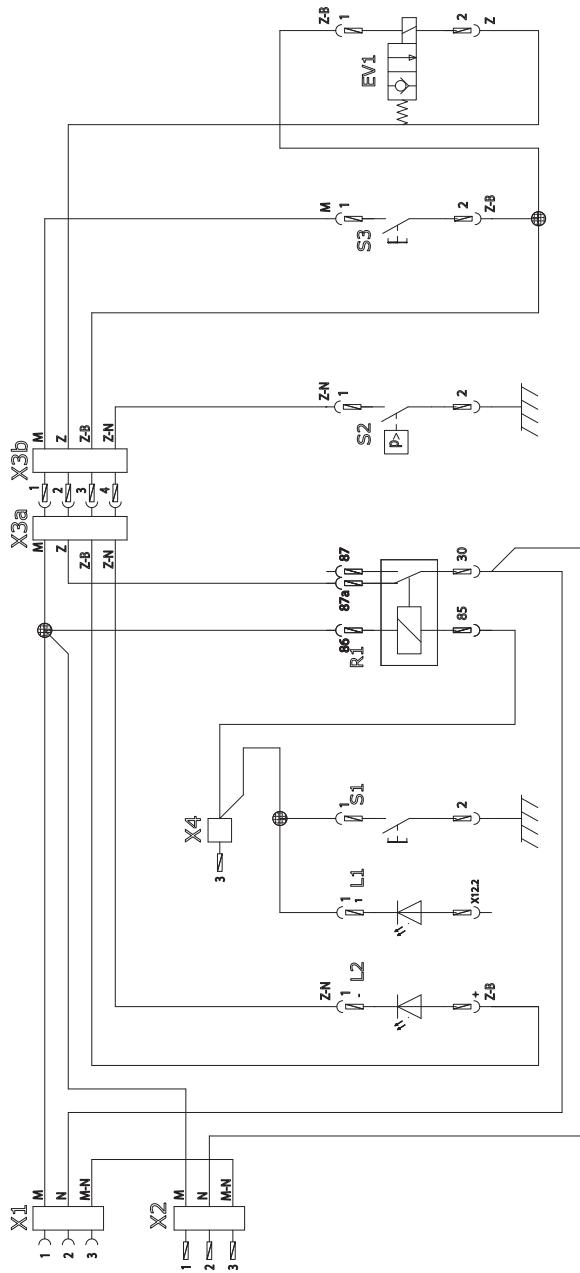


Table: electric plant components

<i>Ref</i>	<i>Description</i>
X1	Connection to instrument panel line
X2	Connection for ESC line
X3a	Connection on instrument panel
X3b	Rear extension connection
X4	Handbrake warning light line connection
S1	Handbrake indicator light switch

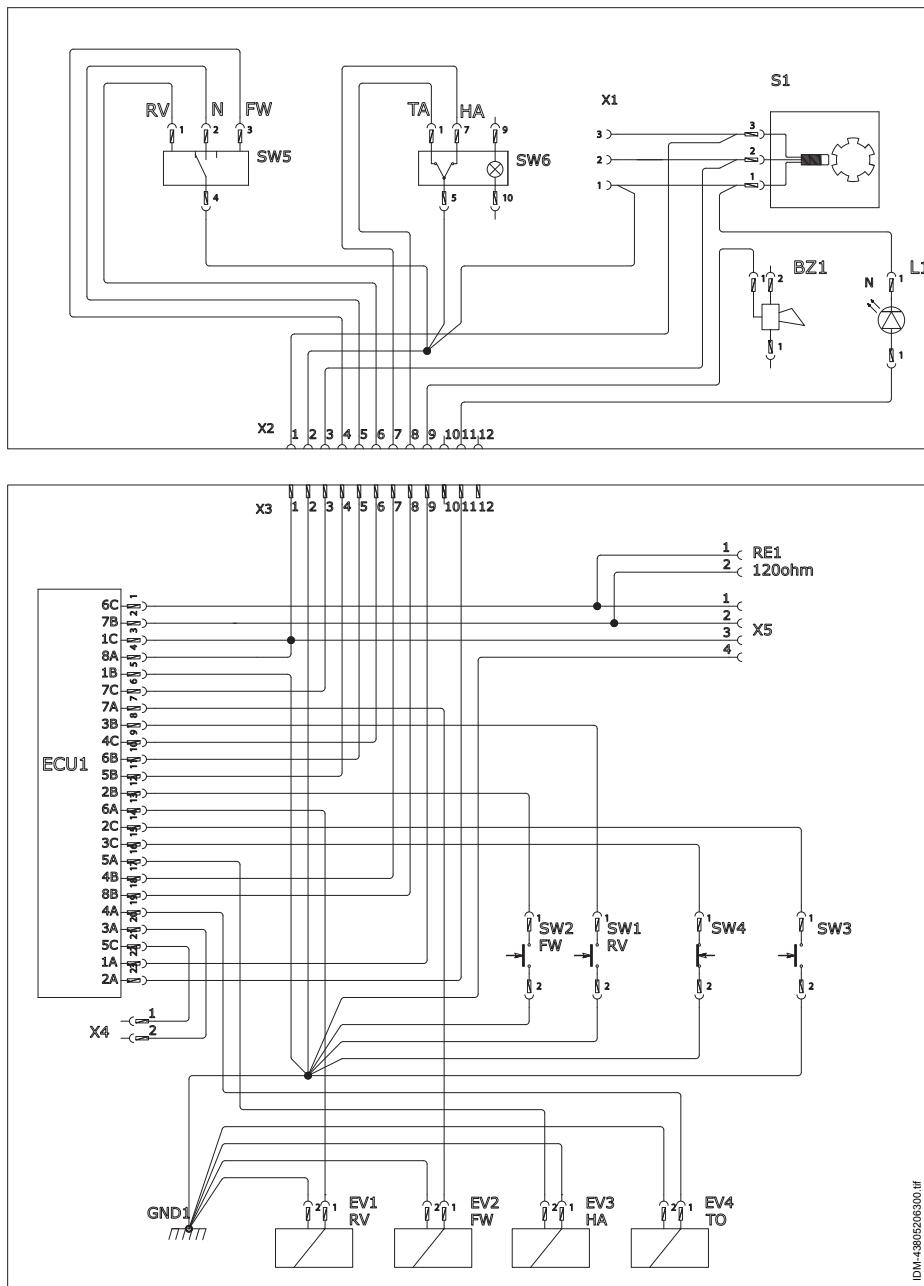
<i>Ref</i>	<i>Description</i>
S2	Low pressure switch connection
S3	Coupling switch connection
EV1	Brake SV connection
L2.1	Low pressure warning light
L2.2	Low pressure warning light
R1	SV control mini relay

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
B	White
C	Orange
G	Yellow
H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

WIRING DIAGRAM FOR ROBOTIC CONTROLS



C1143905203.htm

Table: electric plant components

Ref	Description
X1	Speedometer sensor
X2	Connection to rear line
BZ1	Depressed clutch pushbutton switch
SE1	Speedometer sensor
SW5	Reverser command (FW=forward, RV=reverse)
SW6	Range command (HA=hare, TO=tortoise)
L1	Reverser command neutral indicator light
X3	Connection to instrument panel line
X4	Starting enable connection
X5	CAN Service connection

Ref	Description
SW1	Reverse gear switch on
SW2	Forward gear switch on
SW3	Clutch limit switch
SW4	Direction switch
RE1	resistance 120ohm
EV1	Reverse solenoid valve
EV2	Forward solenoid valve
EV3	Tortoise solenoid valve
EV4	Hare solenoid valve
ECU1	IO-EASY control unit connection
GND1	Ground

Table: Electric cables colour key

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ESC (ELECTRONIC SPEED CONTROL) WIRING DIAGRAM

TRX 8400 - TRX 10400 - TRG 10400

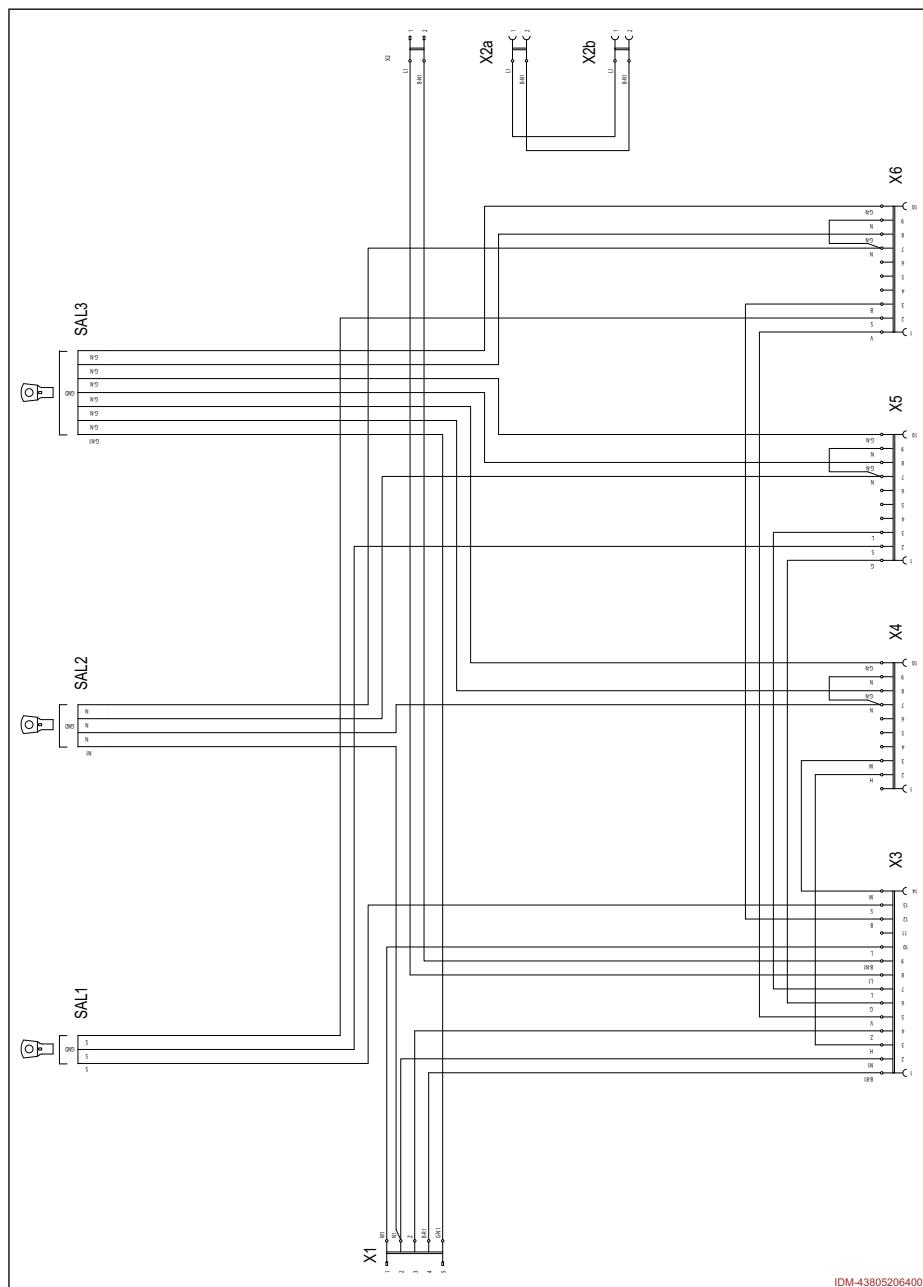


Table: electric plant components

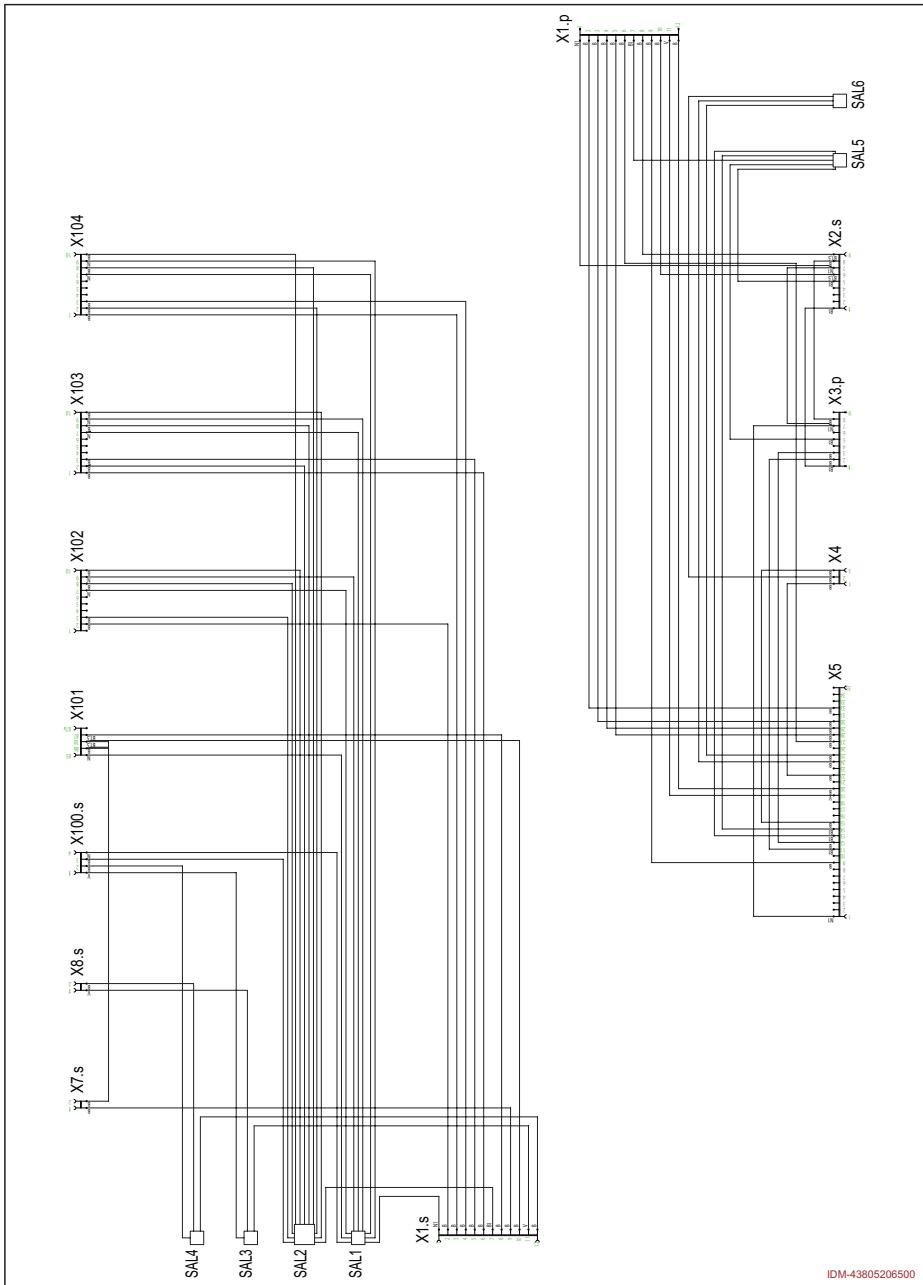
Ref	Description
SAL1	Buttons common
SAL2	Ground
SAL3	Engine gas up/down lighting
X1	Conn. to instrument panel line
X2	Actuator extension connection
X2a	Control line connection

Ref	Description
X2b	Actuator connection
X3	Tempomat control unit connection
X4	Return to minimum button
X5	Return to minimum button
X6	Engine gas up/down button

Table: Electric cables colour key

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V	Green
Z	Purple



IDM-43805206500

Table: electric plant components

<i>Ref</i>	<i>Description</i>
SAL1	Ground
SAL2	Positive from F10b
SAL3	CAN H
SAL4	CAN L
SAL5	Positive from F10b
SAL6	Out accelerator
X1.s	Connection to hydraulic block line
X1.p	To upper instrument panel ESC Yanmar
X2.s	To instrument panel line
X3.p	To engine line

<i>Ref</i>	<i>Description</i>
X4	Accelerator
X5	Midac control unit
X7.s	Anti-return diode
X8.s	Resistance 120 Ohm
X100.s	Self service
X101	Starting enable
X102	Return button
X103	Button M1-M2
X104	Engine Gas up/down button

Table: Electric cables colour key

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"ON-OFF JOYSTICK" LIFT ELECTRIC CIRCUIT DIAGRAM.

TRX 7800 S

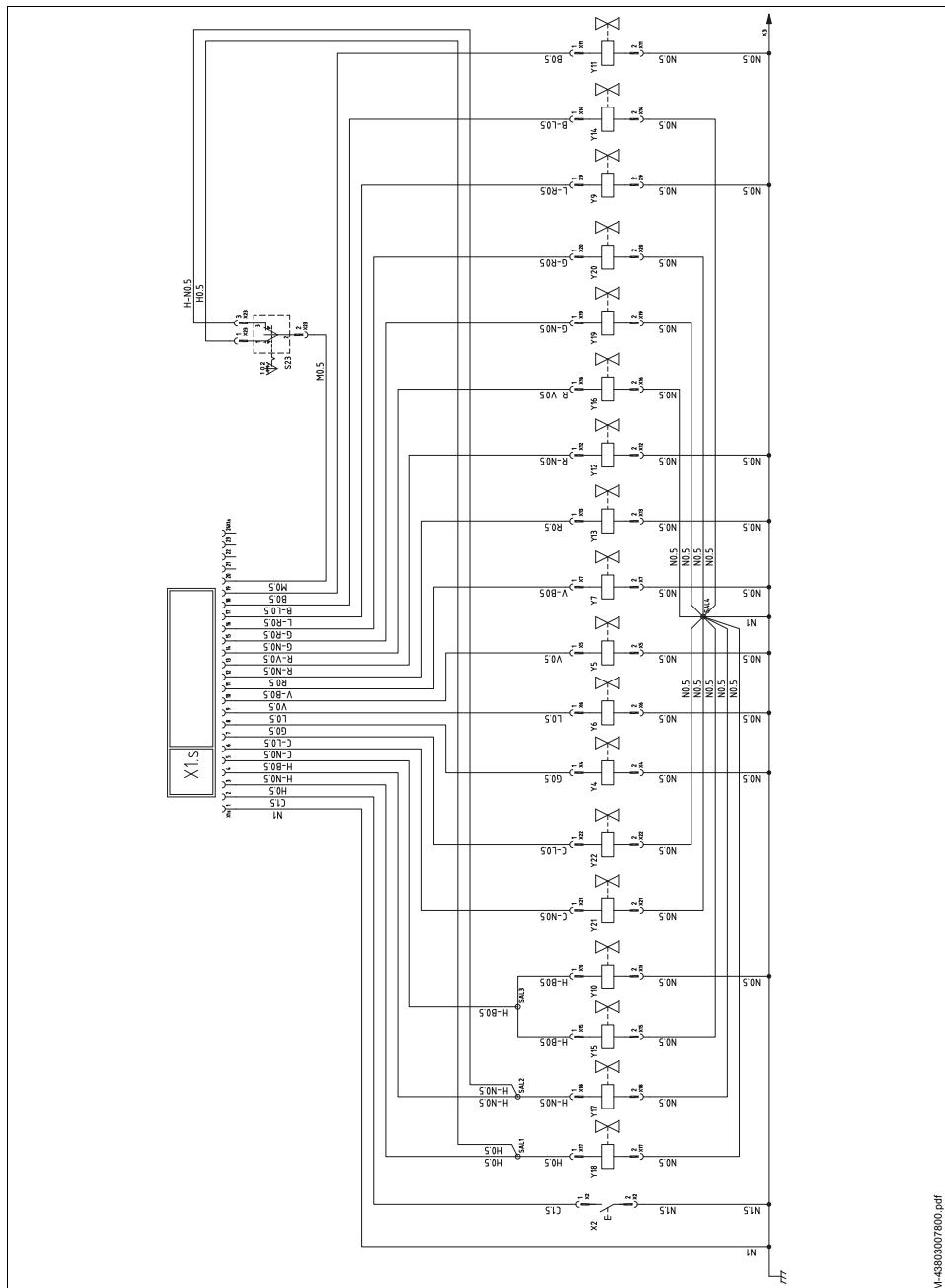


Table: electric plant components

<i>Ref</i>	<i>Description</i>
K7	Hydraulic engine Ev control relay
K8	Descent/suspension control relay
K9	On/off control relay
K10	Discharge release relay
S4	Yellow SE switch
S5	Red floating DE switch

<i>Ref</i>	<i>Description</i>
S6	Orange switch
S11	1st/2nd Off switch
S13	Joystick
Y12.2	Orange electrovalve
Y12.3	Engine electrovalve
X1	Power lift line interface connector

Table: Electric cables colour key

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<i>Code</i>	<i>Colour</i>
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R	Red
S	Pink
V	Green
Z	Purple

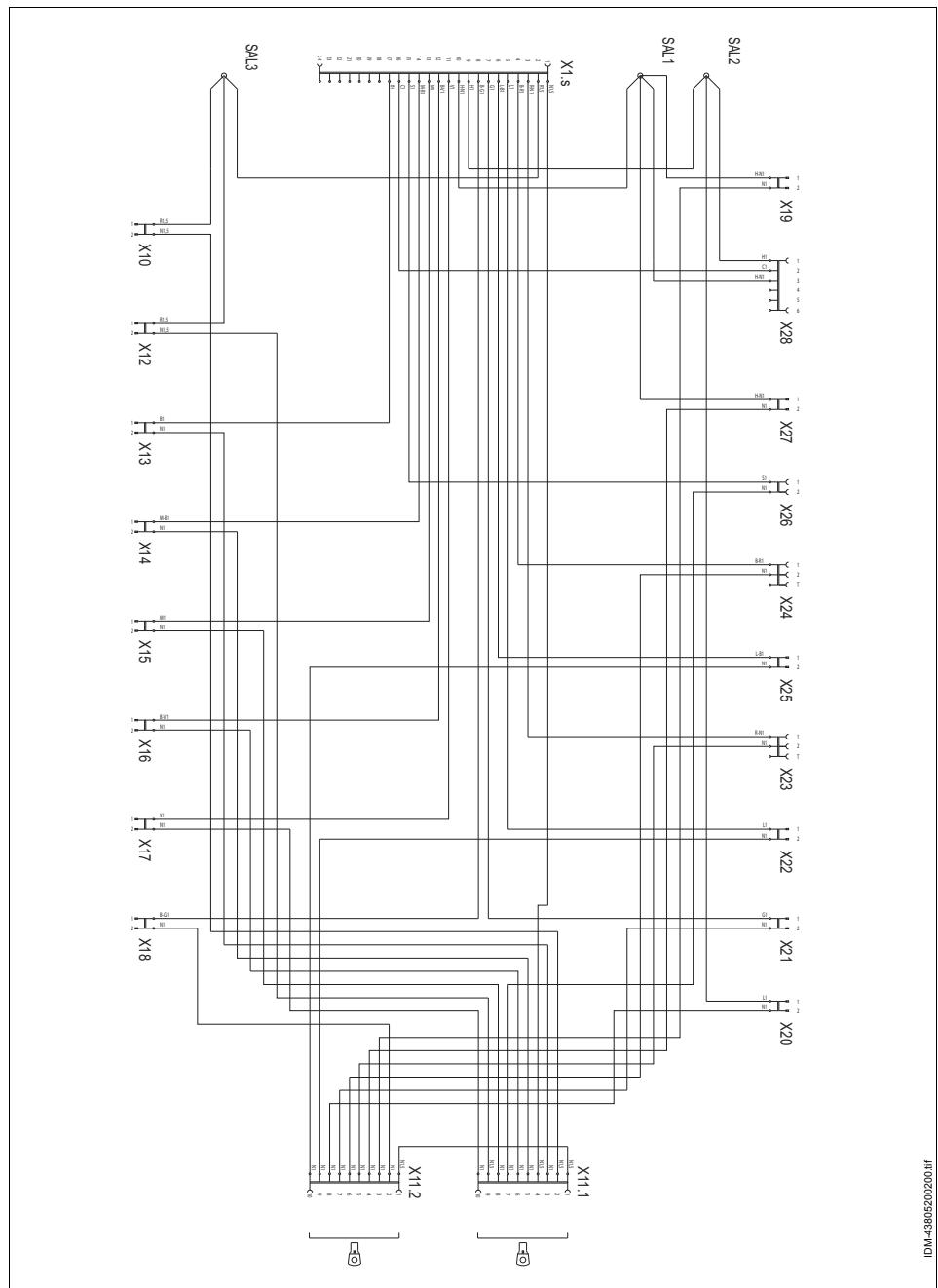


Table: electric plant components

<i>Ref</i>	<i>Description</i>
X1.s	POWER LIFT LINE CONNECTION
X10	FURTHER POWER SUPPLY CONNECTION KITS OPT.
X11.1	WEIGHT
X11.2	WEIGHT
X12	MACHINE SET CONN.
X13	ON/OFF ELECTROVALVE
X14	HYDRAULIC 3RD POINT ELECTROVALVE
X15	HYDRAULIC 3RD POINT ELECTROVALVE
X16	VERTICAL TIE-ROD ELECTROVALVE
X17	VERTICAL TIE-ROD ELECTROVALVE
X18	YELLOW DISCHARGE ELECTROVALVE
X19	POWER LIFT DESCENT ELECTROVALVE
X20	POWER LIFT ASCENT ELECTROVALVE
X21	YELLOW DELIVERY ELECTROVALVE

<i>Ref</i>	<i>Description</i>
X22	RIGHT DOUBLE-ACTING ORANGE COUPLING ELECTROVALVE
X23	ABOVE RIGHT FLOATING RED DOUBLE-ACTING COUPLING ELECTROVALVE
X24	BELOW FLOATING RED DOUBLE-ACTING COUPLING ELECTROVALVE
X25	LEFT DOUBLE-ACTING ORANGE COUPLING ELECTROVALVE
X26	POWER LIFT ASCENT CONTROL ELECTROVALVE
X27	ASCENT/DESCENT POWER LIFT SWITCH
X28	ASCENT/DESCENT POWER LIFT SWITCH
SAL1	POWER LIFT DESCENT POWER SUPPLY
SAL2	POWER LIFT ASCENT POWER SUPPLY
SAL3	POWER SUPPLY

Table: Electric cables colour key

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V	Green
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"ON-OFF JOYSTICK" CONTROLS WIRING DIAGRAM

TRX 7800 S

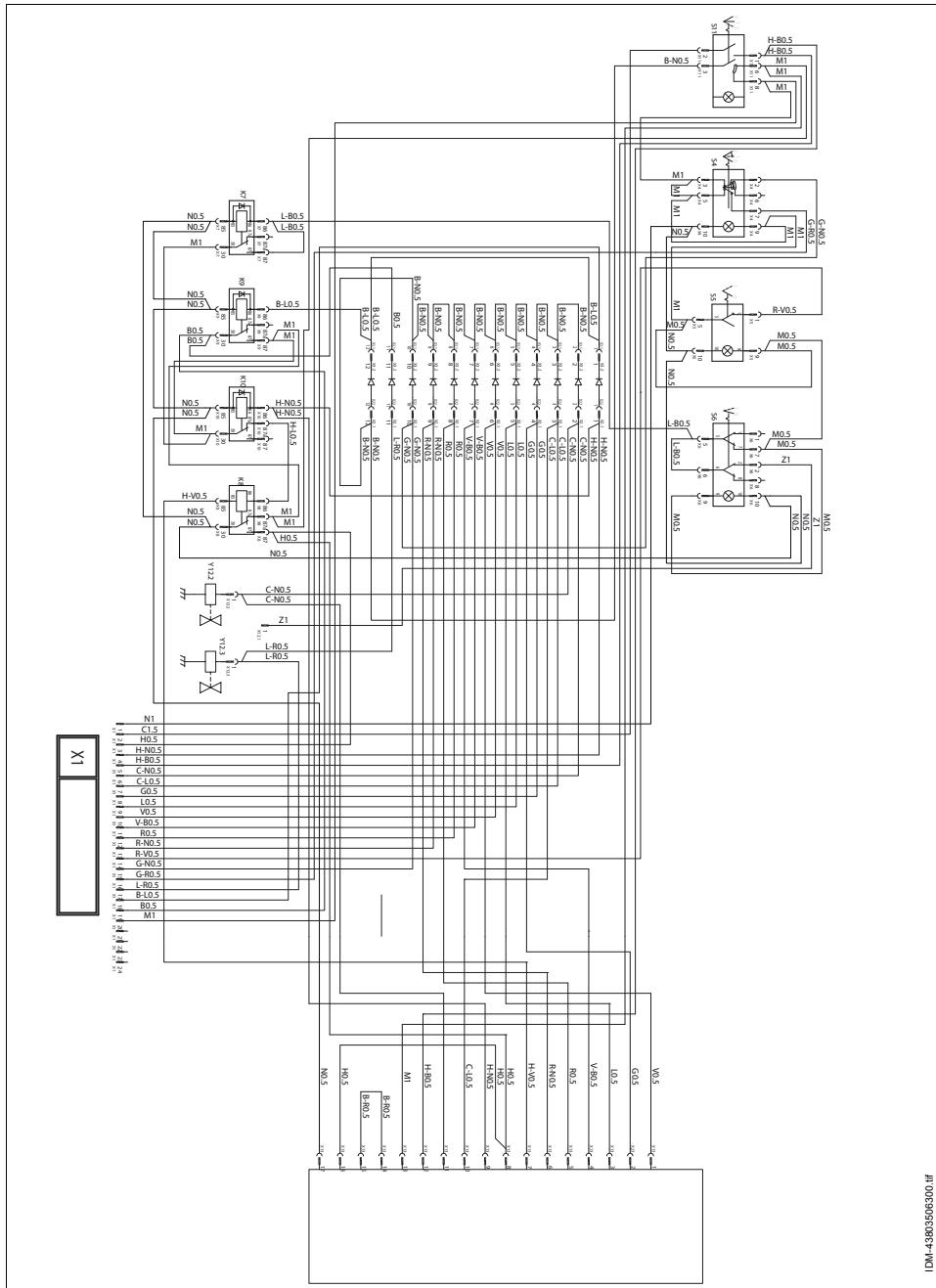


Table: electric plant components

<i>Ref</i>	<i>Description</i>
K7	Hydraulic engine Ev control relay
K8	Descent/suspension control relay
K9	On/off control relay
K10	Discharge release relay
S4	Yellow SE switch
S5	Red floating DE switch

<i>Ref</i>	<i>Description</i>
S6	Orange switch
S11	1st/2nd Off switch
S13	Joystick
Y12.2	Orange electrovalve
Y12.3	Engine electrovalve
X1	Power lift line interface connector

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
B	White
C	Orange
G	Yellow
H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

**TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900 - TRG 9800 -
TRG 9900 - TRG 10400 - TRG 10900**

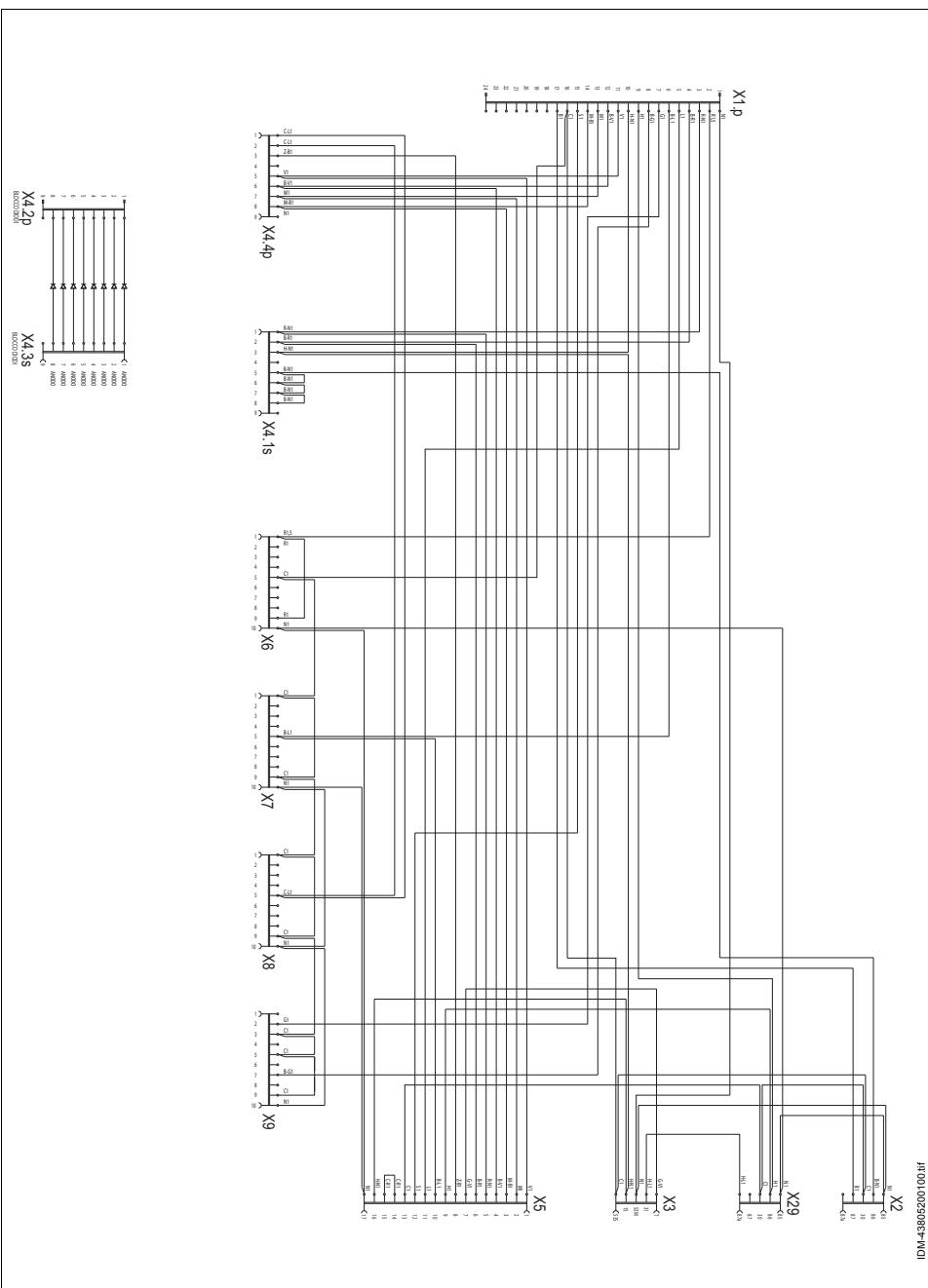


Table: electric plant components

<i>Ref</i>	<i>Description</i>
X1.p	CONN. POWER LIFT LINE
X2	COM. MINI RELAY ON/OFF
X3	SUSPENSION DESCENT CONTROL RELAY
X4.1s	CONN. ANTI-RETURN DIODES
X4.4p	CONN. ANTI-RETURN DIODES
X5	JOYSTICK
X6	MAIN SWITCH

<i>Ref</i>	<i>Description</i>
X7	ORANGE SWITCH
X8	RED FLOATING DOUBLE ACTING COUPLING SWITCH
X9	YELLOW COUPLING SINGLE-ACTING SWITCH
X29	LOAD RELEASE MINI RELAY

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
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H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
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R	Red
S	Pink
V	Green
Z	Purple

"PROPORTIONAL JOYSTICK" CONTROLS WIRING DIAGRAM

**TRX 7800 - TRX 8400 - TRX 9800 - TRX 9900 - TRX 10400 - TRX 10900 - TRG 9800 -
TRG 9900 - TRG 10400 - TRG 10900**

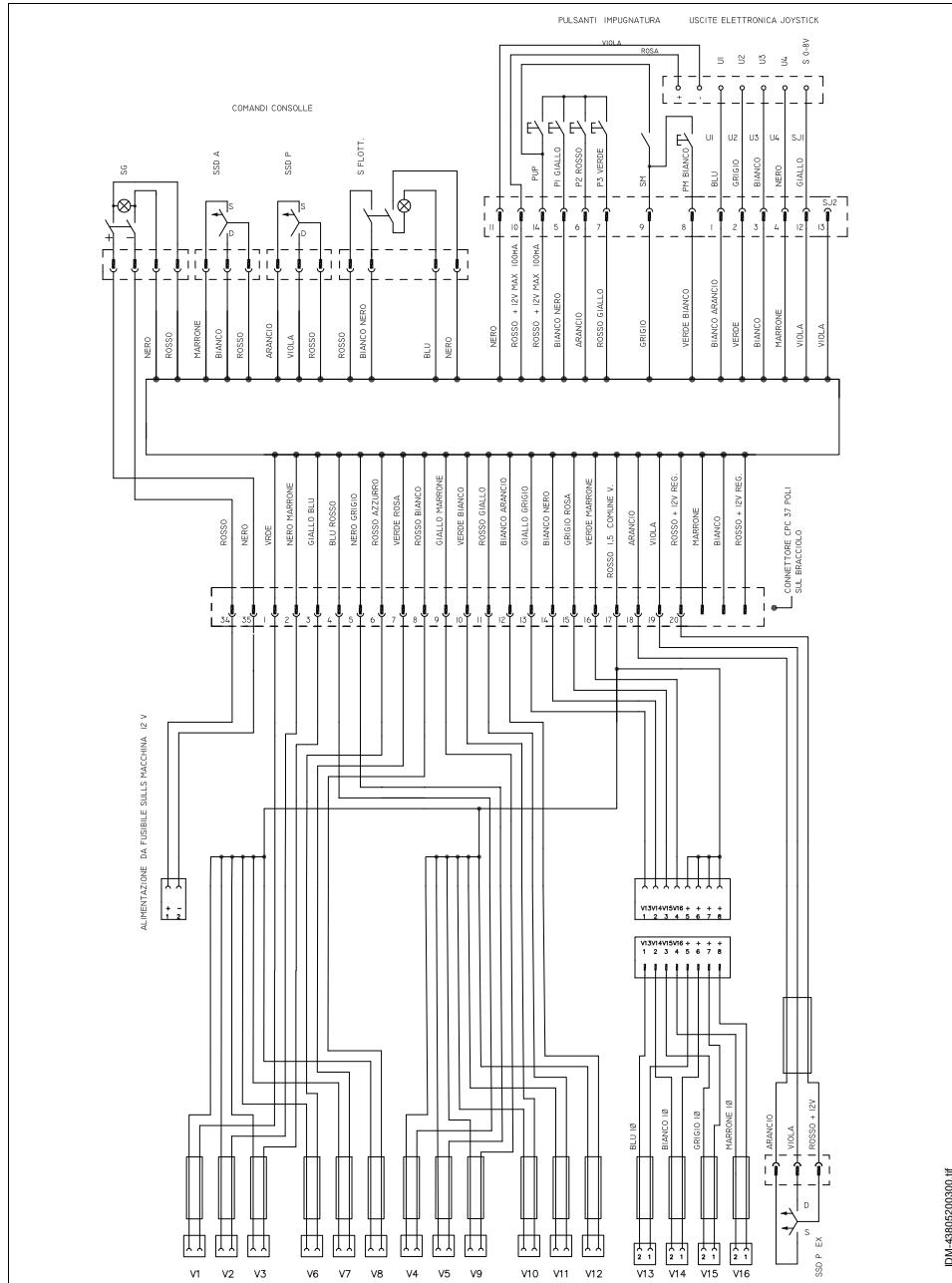


Table: electric plant components

<i>Ref</i>	<i>Description</i>
SG	Master switch
SSD A	Front power lift switch
SSD P	Rear power lift switch
S FLO	Floating switch
PUP	Dead man button
P1	Yellow button
P2	Red button
P3	Green button
SM	Continuous flow hydraulic coupling switch
PM	White button
SSD P EX	Power lift switch on mud guard

<i>Ref</i>	<i>Description</i>
V1	Three-way valve
V2	Continuous delivery outlet switch (for hydraulic motor)
V3	Proportional valve
V4-5-6-7	Double-acting valves
V8	Double-acting valve for floating
V9-10	Single-acting valves for rear power lift
V11-12	Single-acting valves
V13-14-15-16	Vertical tie-rod and 3rd point valves

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
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G	Yellow
H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

FRONT USERS' CONTROL KIT ELECTRIC CIRCUIT DIAGRAM

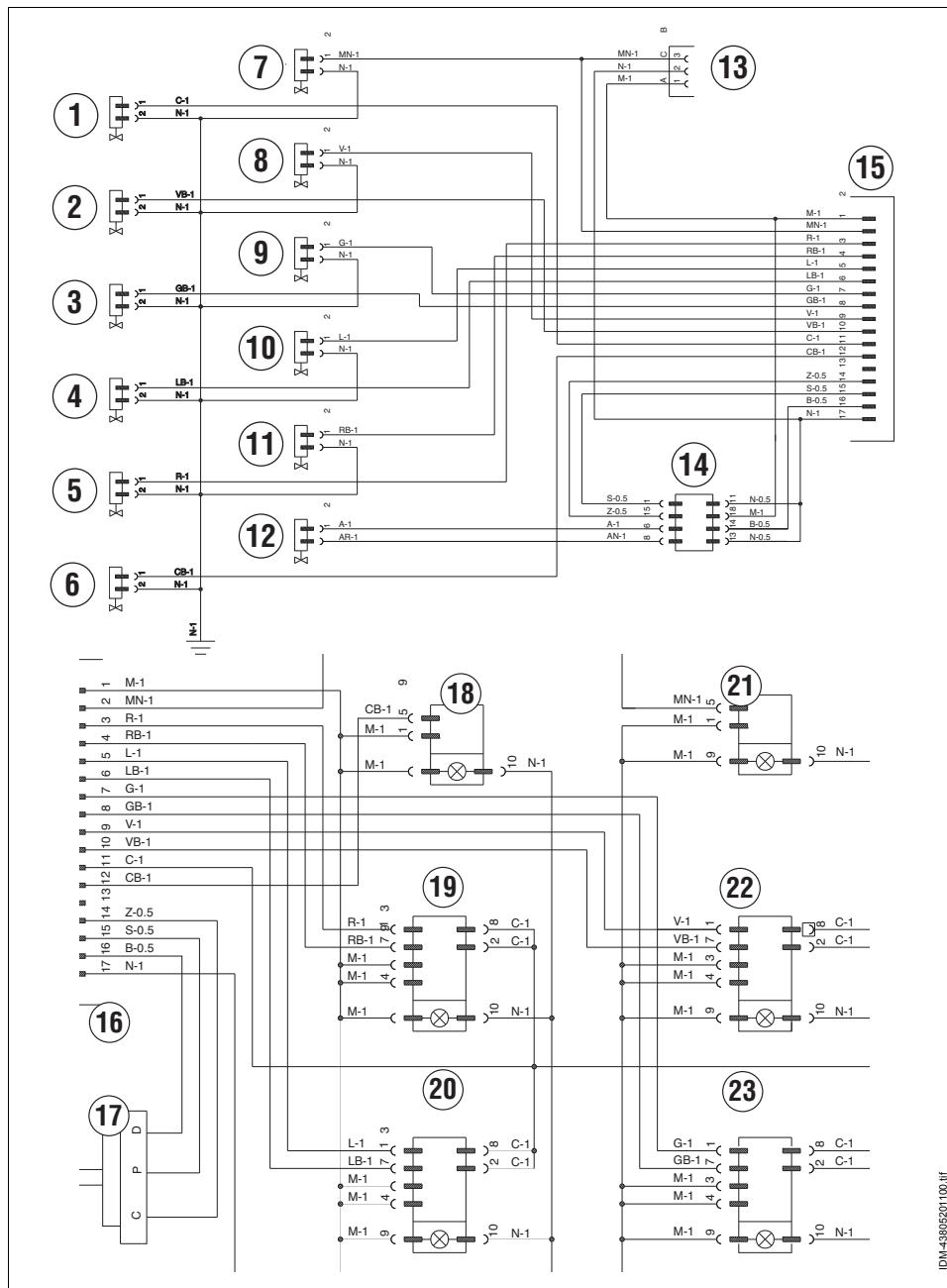


Table: electric plant components

<i>Ref</i>	<i>Description</i>
1	On/off intercepting EV connection
2	Green discharge EV connection
3	Yellow left EV connection
4	Blue left EV connection
5	Red right EV connection
6	Pilot-operated discharge EV connection
7	Front PTO EV connection
8	Green right delivery EV connection
9	Yellow right EV connection
10	Blue right EV connection
11	Red left EV connection
12	Proportional EV connection
13	Machine system connection

<i>Ref</i>	<i>Description</i>
14	Proportional EV control CPA connection
15	Dashboard line connection
16	Front line wiring connection
17	Proportional valve control and adjustment potentiometer connection
18	Pilot-operated discharge EV control switch connection
19	Red EV control switch connection
20	Blue EV control switch connection
21	Front PTO EV control switch connection
22	Green EV control switch connection
23	Yellow EV control switch connection

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
B	White
C	Orange
G	Yellow
H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

"CAB" VERSION WIRING DIAGRAM

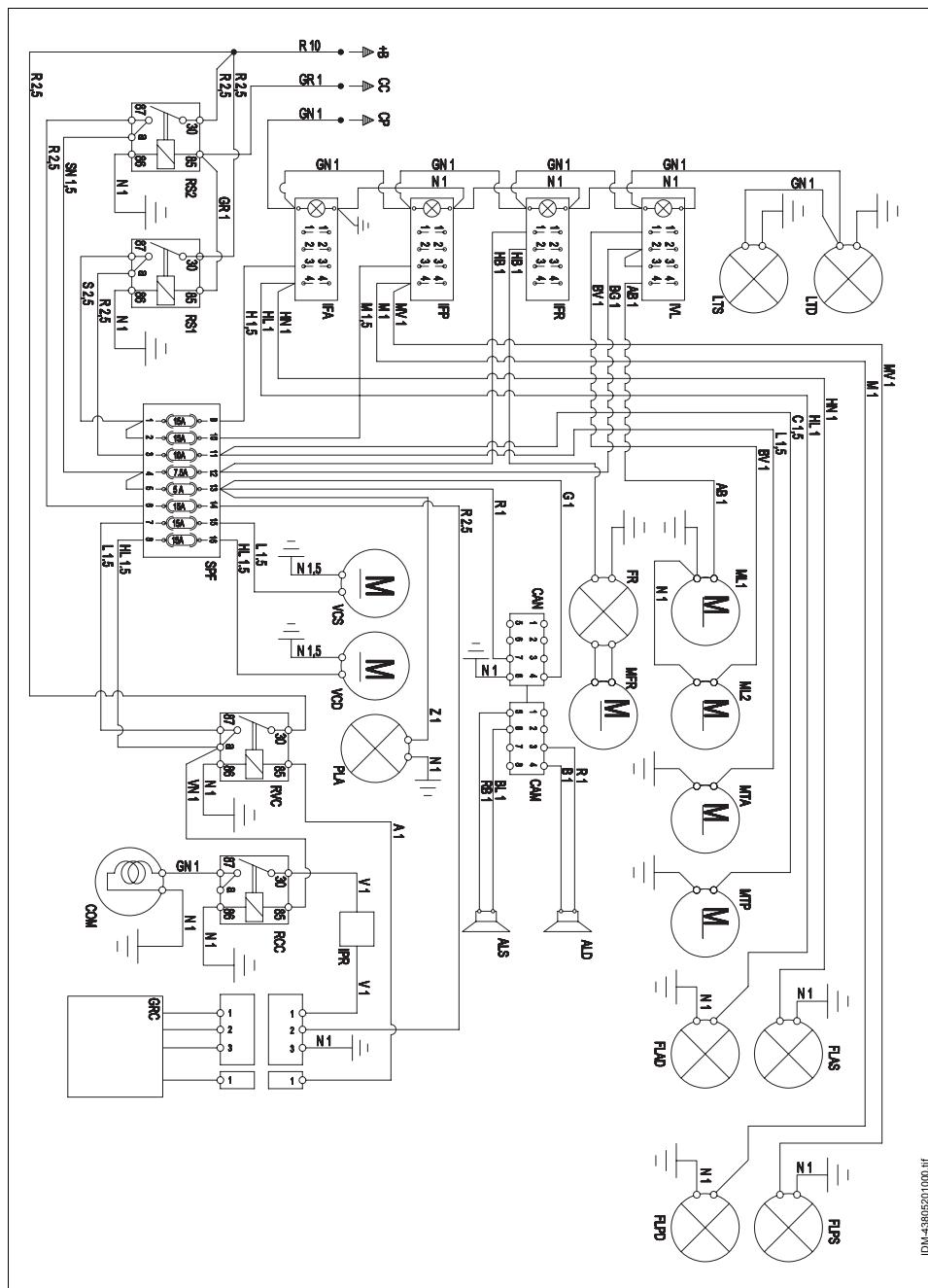


Table: electric plant components

<i>Ref</i>	<i>Description</i>
+B	Battery positive pole
CC	Starter key positive signal
CP	Position lights positive signal
RS1	Relay under key no.1
RS2	Relay under key no.2
RVC	Condenser fan blade relay
RCC	Compressor electroclutch control relay
SPF	Fuse-holder box
VCS	Condenser left fan
VCD	Condenser right fan
PLA	Cab ceiling light
PR	Pressure switch
COM	Compressor electroclutch
GRC	Evaporator/heater unit
IFA	Front work lights switch
IFP	Rear work lights switch
IFR	Revolving light switch
IVL	Windshield washer liquid pump switch

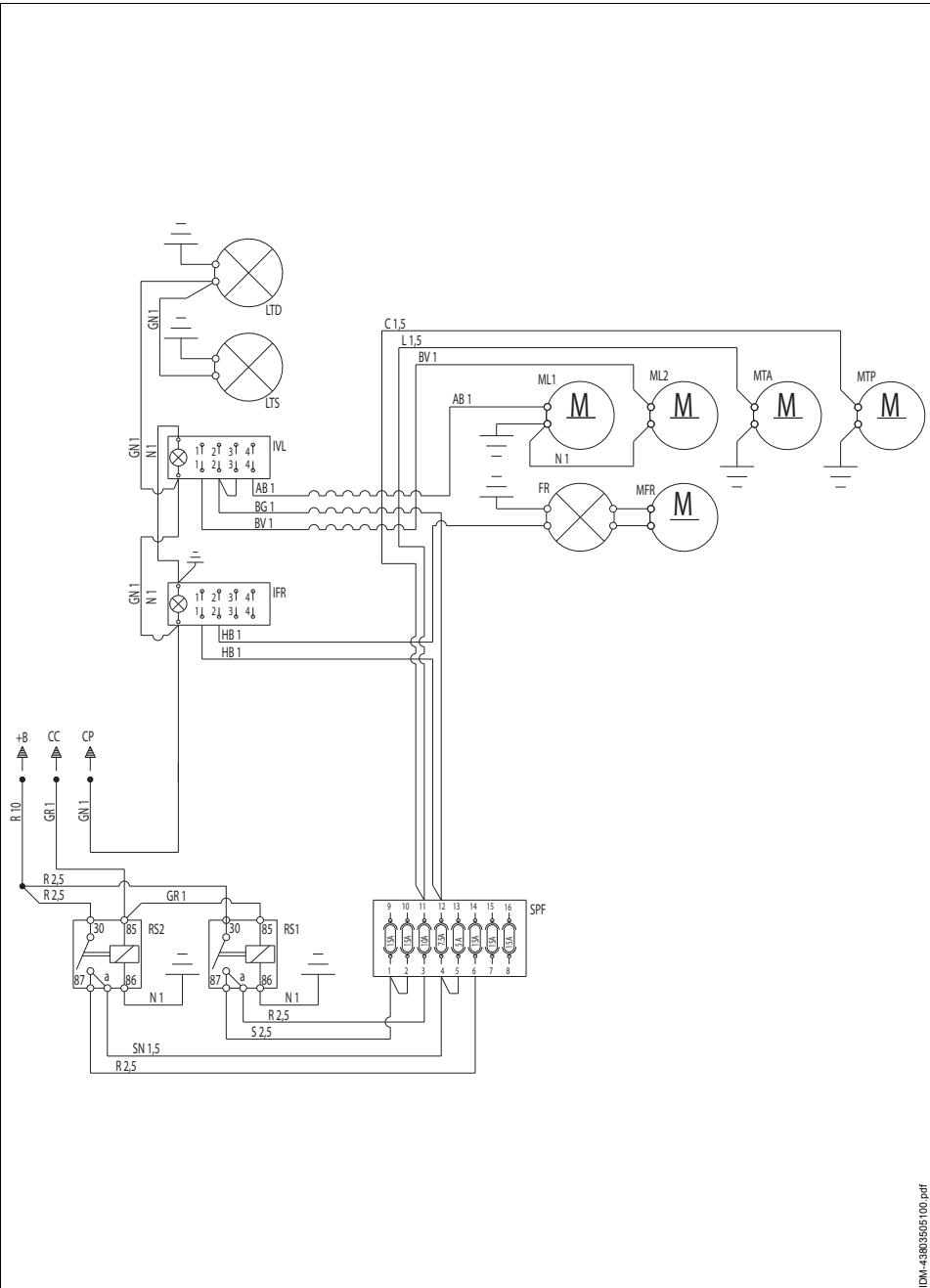
<i>Ref</i>	<i>Description</i>
LTS	Left licence plate light
LTD	Right licence plate light
ML1	Windshield washer liquid motor no. 1
ML2	Windshield washer liquid motor no. 2
MTA	Front windscreen wiper motor
MTP	Rear windscreen wiper motor
FR	Revolving light (single-pin outlet)
MFR	Revolving light motor (single-pin outlet)
CAN	Black radio connector (power supply)
CAM	Brown radio connector (audio signals)
ALD	Right speaker
ALS	Left speaker
FLAS	Left front work light
FLAD	Right front work light
FLPS	Left rear work light
FLPD	Right rear work light

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
B	White
C	Orange
G	Yellow
H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
M	Brown
N	Black
R	Red
S	Pink
V	Green
Z	Purple

"FRAME" VERSION WIRING DIAGRAM



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IDM-43803505100.pdf

Table: electric plant components

<i>Ref</i>	<i>Description</i>
+B	Battery positive pole
CC	Starter key positive signal
CP	Position lights positive signal
RS1	Relay under key no.1
RS2	Relay under key no.2
SPF	Fuse-holder box
IFR	Revolving light switch
IVL	Windshield washer liquid pump switch
LTS	Left licence plate light

<i>Ref</i>	<i>Description</i>
LTD	Right licence plate light
ML1	Windshield washer liquid motor no. 1
ML2	Windshield washer liquid motor no. 2
MTA	Front windscreen wiper motor
MTP	Rear windscreen wiper motor
FR	Revolving light (single-pin outlet)
MFR	Revolving light motor (single-pin outlet)

Table: Electric cables colour key

<i>Code</i>	<i>Colour</i>
A	Light blue
B	White
C	Orange
G	Yellow
H	Grey
L	Blue

<i>Code</i>	<i>Colour</i>
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V	Green
Z	Purple

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