

serie **A** STAGE V



ECCELLENZA ITALIANA

USE AND MAINTENANCE





1 FOREWORD

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1.1 GENERAL NOTES

Carefully READ THIS MANUAL to learn how to correctly operate and service your machine. You can hence avoid incidents or damage to the equipment.

THIS MANUAL SHALL BE CONSIDERED part of the machine and shall accompany it whenever sold.

RIGHT-HAND (RH) and LEFT-HAND (LH) sides are determined by facing in the direction the machine will travel when going forward.

PRODUCT IDENTIFICATION NUMBERS shall be written under the Specifications sections or Identification Numbers section. Carefully take note of all numbers to help machine research in case of theft. They are also useful for the Dealer for ordering spare parts. Store the identification numbers in the manual, at machine board.

SETTING FUEL DELIVERY BEYOND PUBLISHED FACTORY SPECIFICATIONS or otherwise overpowering will result in loss of warranty protection for this machine.

BEFORE DELIVERING THIS MACHINE, your dealer performed a pre-delivery inspection to ensure best performance.

After the first 50 working hours, arrange for an inspection at a Dealer in order to ensure trouble-free operation and top performance.

THIS TRACTOR IS DESIGNED SOLELY for use in agricultural or similar use ("INTENDED USE"). Use in any other way is considered as contrary to the intended use ("unintended use"). The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user.

Compliance with and strict adherence to the conditions of operation, service and repair as specified by the manufacturer also constitute essential elements for the intended use.

THIS TRACTOR SHALL BE OPERATED, serviced and repaired only by persons familiar with all its particular characteristics and acquainted with the relevant safety rules (accident prevention). Accident prevention regulations, all other generally recognised regulations on safety and occupational medicine and road traffic regulations must be observed at all times.

Any arbitrary modification carried out on this machine will relieve the manufacturer of all liability for any resulting damage or injury.



CAUTION! AVOID INJURY SAFETY WARNING!



This symbol is used to draw your attention to the safety rules the operator shall heed in order to avoid any injury. When you see this symbol, pay attention to the text nearby.

IN CASE THE TRACTOR IS RESOLD, MAKE SURE THIS MANUAL ACCOMPANIES IT AT ALL TIMES.

This manual was laid out based on the most updated information about the product as available when

This manual was being printed. The Company reserves the right to make modifications without prior notice and without being obliged to any notice, at any time. The indicated specifications, dimensions and weights are not binding and are no obligation for the Manufacturer. Said instructions might contain mistakes.

1.2 WARRANTY

All brand new tractors are covered by a warranty according to the regulations specified in the warranty certificate released to the buyer when the machine is delivered. Strictly heed the instructions in the warranty certificate or the warranty will become null and void.

Warranty lasts for months from date of delivery of the vehicle.



Date of delivery of tractor

...../...../.....

Warranty Policy:

Correct operation is guaranteed for the duration of the warranty period from the date of delivery. During this period Carraro Agritalia will replace or repair free of charge, excluding travel expenses, transportation and labour, all parts of its production which may prove useless due to materials or construction defects.

The warranty excludes all parts subject to normal wear and ageing, and those parts manufactured by third parties such as tires and engine, as their warranty is the responsibility of their respective manufacturers authorised services.

The warranty commitment is contingent upon receipt of the certificate of delivery within 30 days from date of purchase and of regular warranty slips execution.

This will not be valid if the machine has been tampered with by unauthorised personnel; if not suitable lubricants or fuels have been used (see relevant section) or if non-original spare parts have been fitted. Also if use and maintenance of the machine do not correspond to those prescribed by Carraro Agritalia and those reported on the use and maintenance manual, or otherwise if carelessness or negligence is evident.

During the warranty period any replacement request should be made to the dealer. The customer must still commit to pay the price of the material used if Carraro Agritalia Technical Service does not recognise their defects after analysing the replaced parts.

However, in no case will claims entitle the buyer to terminate the contract, to defer the payment or to require an extension of the warranty, to claim compensation for resulting damage and for productivity loss. Carraro Agritalia and its organisations are not liable for damages that may be caused to persons or property during the use of the machine even if the accident results from materials or construction defects.

Engine maintenance and repair must be performed at authorised FPT workshops. Contact your dealer for further information.

Engine warranty limits

The warranty is void if specified regulations and instructions for engine use and maintenance have not been complied with.

Moreover, the warranty is terminated in the following cases:

- Repairs carried out at unauthorised workshops
- Replacement of original parts with non-original parts
- Tampering with and / or modifications on the engine or injection system components
- Changes in the installation of the engine not authorised by FPT
- Use of fuels and lubricants not conforming to the specifications of FPT
- Installation of unauthorised accessories

- Failure to comply with the requirements and maintenance intervals

Replacement parts

Non-genuine spare parts could have a poorer quality than the set standards. The Company declines any and all liability for damage, injury or assumption of responsibility due to the use of said non-approved parts. Using said parts could lead to Manufacturer warranty becoming null and void.

The Client shall check the machine and replace or repair any worn out or damaged parts whenever continuous use could lead to parts damage or wear. The Client is also responsible for taking the machine to an authorised Dealer for servicing or replacing any parts covered by the warranty.

Should the Client, for his own convenience, request the Dealer to go to another centre, or to have the machine overhauled at the Dealer's service centre for servicing or inspections under warranty, all travel expenses are at the Client's charge.

Servicing after warranty expiry

During the warranty period, all repairs and servicing shall be performed by the authorised Dealer. This assures careful inspection of performance and progress throughout the tractor's life.

In order to obtain top performance from the tractor you purchased, it is important to continue carrying out suitable scheduled maintenance and servicing even after the warranty has expired.

Apply to your local dealer for all key servicing interventions required for the tractor; the presence of an expert mechanic ensures spotting any possible problems that might occur in-between two inspections. Mechanics are continuously trained and updated about product specifications, servicing techniques and the use of the modern service and diagnosis equipment. Dealers regularly receive Service Bulletins, have the Service Manuals and are aware of all information to ensure that any repair or servicing complies with the Manufacturer's standards.





2 IDENTIFICATION

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1.1 VEHICLE IDENTIFICATION

VIN Vehicle identification number

The vehicle identification number (1) is marked on front axle support on rear side.



Nameplates

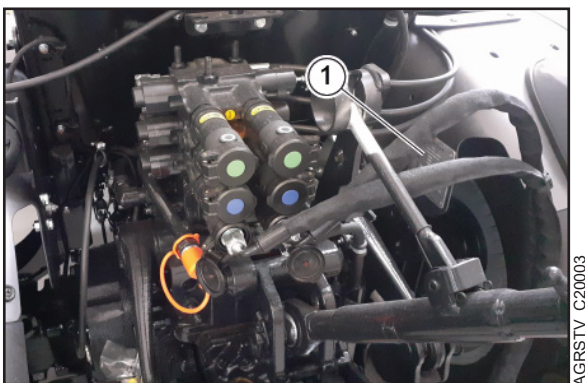
All tractors come with the following nameplates.

Letters and numbers on the nameplates identify a component or an assembly. All these characters are required when ordering spare parts and identifying a tractor or a component. They are also essential by law to find the tractor in case of theft. Accurately take note of these characters in the relevant spaces.

Product identification number

Nameplate (1) bearing the tractor identification number is at the front end of the vehicle.

Identification plate location and dimensions can vary according to the various regulations applicable in some countries.

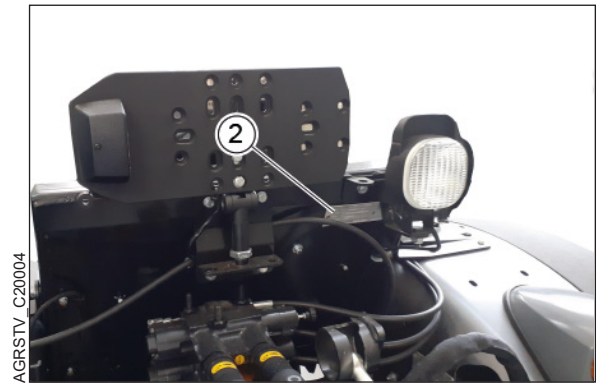


Protection structure identification number

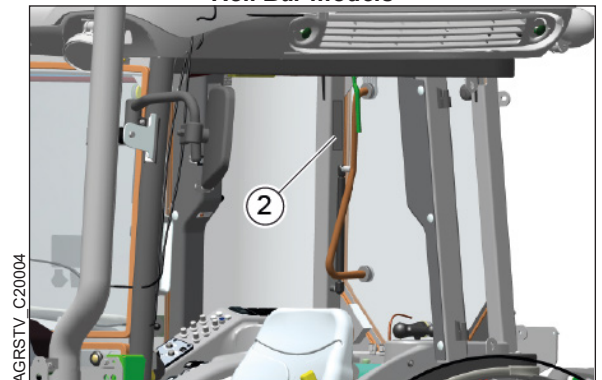
Nameplate (2) bearing the tractor identification number is at the rear end of the vehicle.

Identification plate location and dimensions can vary according to the various regulations applicable in some

countries.



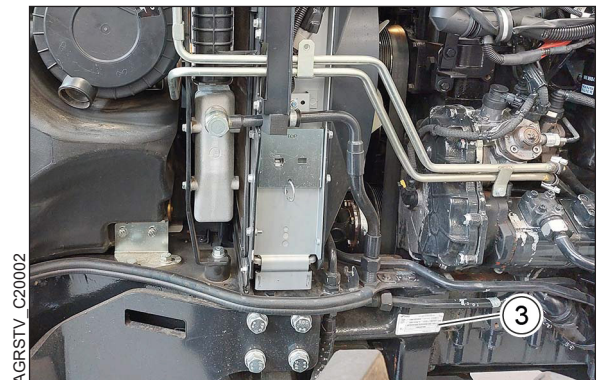
Roll Bar models



Cab models

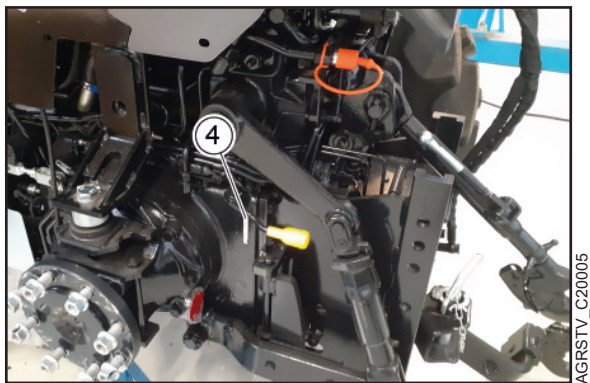
Engine serial number

Nameplate (3) bearing the engine serial number is on the LH side.



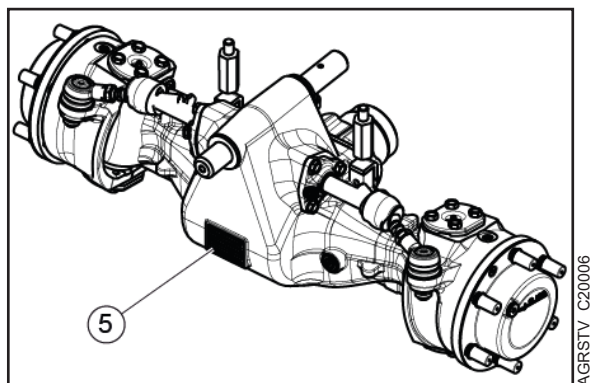
Transmission serial number

Nameplate (4) bearing the transmission serial number is at the back of the machine, in the top LH corner of the gearbox.

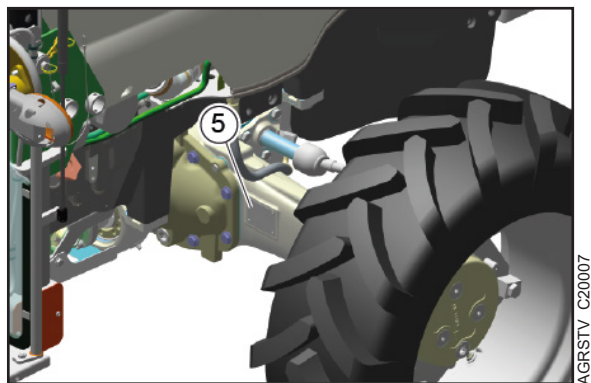


Axle serial number

Nameplate (5) bearing front driving axle serial number is at the rear RH side of the axle, or at the rear central side.



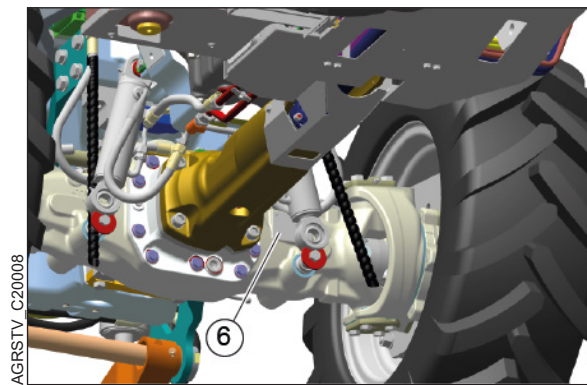
AV_N - AV_L models



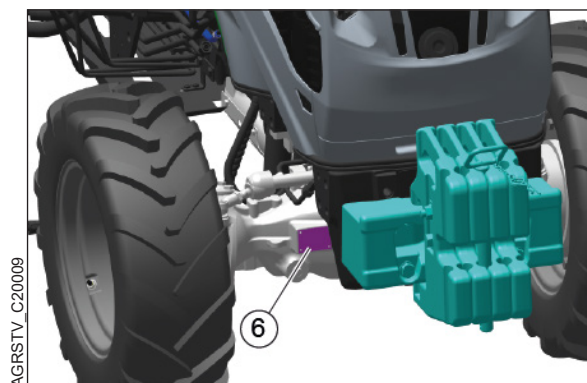
AF_N - AF_L - AF_B - AV_LB models

Suspended front axle identification plate

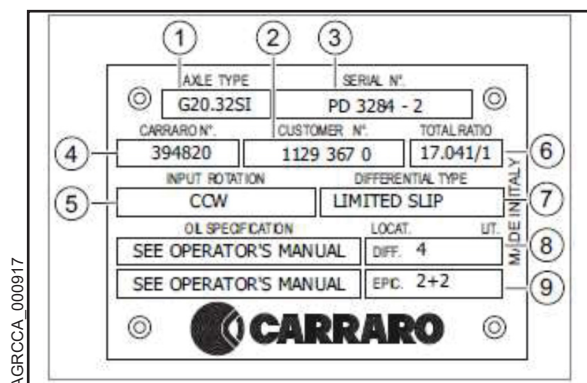
The suspended front axle identification plate (6) is located on the front right-hand side (AV_N model) or on the rear right-hand side (AV_L and AF_N models) of the suspended front axle.



AV_L - AF_N models



AV_N models



N	Description
1	Manufacturer model/type
2	Manufacturer reference
3	Manufacturer serial number
4	Manufacturer reference
5	Input shaft rotation direction
6	Gear ratio
7	Differential type
8	Volume of oil in the differential gearbox
9	Volume of oil in the final drives





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3.1 FOREWORD

CARRARO AGRICUBE PRO tractors are designed and manufactured to offer trouble-free performance for many years. We developed them to offer the best working conditions possible for both comfort and safety. Agricultural work always involves various hazards. Therefore it is better to be aware of them and act accordingly. Please note the following points requiring your utmost attention (not limited to these). Please contact your dealer for any further information about the tractor.



WARNING



This tractor is designed solely for use in customary agricultural or similar use ("intended use"). Use in any other way is considered as contrary to the intended use ("unintended use"). The manufacturer accepts no liability for damage or injury resulting from this misuse, and these risks must be borne solely by the user.

The tractor is designed to drive, carry and activate various attachments towed or mounted, however within specific physical restraints. Use the tractor solely for the specific operations it was designed for: push, pull, tow, drive and carry various interchangeable attachments conceived for agricultural works.

Use of tractors in forestry is limited to specific applications such as transport, stationary works (such as log splitting), propulsion or equipment with PTO, electrical or hydraulic system. Normal operations for these applications do not entail any risk of falling or cutting objects. Any forestry application different from the above, such as moving forward and loading, requires adjustment of the specific components according to application (FOPS, Falling Object Protection Structure and/or OPS, Operative Protective Structures).



CAUTION:

Agricube AV_LB and AF_B models are NOT equipped with OPS protection structure

Working speed and performance might be affected by several factors such as climate and soil conditions. Even though the tractor is designed for use of various equipment combinations, different factors might considerably limit the tractor and or the mounted or towed attachments performance.

Do not use the tractor for other purpose than the manufacturer's intended one as specified in this manual.

Before starting the engine or an operation, make sure nobody is standing by the tractor, the attachments and the work area. Never set your hands, feet and clothes close to the moving components.

Failure to strictly abide by these precautions when using the tractor or improper use could lead to serious injury. Pay attention to the hazards deriving from tractor use. Most common injury cases are due to:

- Tractor tipping over
- Collisions with motor vehicles
- Not-conforming starting procedures
- Entangling in PTO shafts
- Fall from the tractor
- Crushing and injury when mounting attachments

To avoid injury, take the precautions below:

- Never jump on or off the tractor while it is moving.
- Keep children and any not authorised staff away from the tractors and all attachments.
- Drive the tractor only using type-approved seats with safety belt.
- Ensure all protections / covers are duly in place.
- Use suitable visual and acoustic warning indications when working on public roads.
- Move to the side of the road before stopping.
- Decrease speed when steering, applying one brake at a time or working on bumpy or dangerous steep sloping ground.
- Couple brake pedals together when driving on the road.
- Pump on brake pedal to stop on slippery ground.
- Pay attention when towing heavy loads and stopping. Stopping distance increases with speed, weight of towed load and downhill slope. Towed load, with or without brakes, if too heavy for the type of tractor or towed at too high a speed could make you lose control of the tractor. Consider overall equipment and load weight.
- Fix any towed load solely to the approved devices or the vehicle might tip back.
- Engage the parking mechanism (e.g. parking pawl, parking brake).
- Before getting off, stop the engine, move attachment down to the ground and securely engage the parking mechanism (e.g. parking pawl, parking brake). After that, also remove the key if leaving tractor unattended. If you leave a gear engaged with engine stopped, tractor movement is NOT inhibited.
- Disable all hydraulic distributors.
- Disengage the PTO.
- Keep away from the PTO or attachments in operation.
- Before any maintenance intervention to the

machine, wait until all movements halt.

- This tractor is not designed for use as recreational vehicle.
- The tractor can be equipped with various safety control sensors. Tripping of these sensors establishes safety operating conditions. Do not try to disable these functions since this might lead to serious danger and tractor might respond in an unpredictable way.

NOTE: It is not possible to list all potential risks.

3.2 FORESTRY APPLICATIONS

Standard tractors do not offer sufficient protection against forestry application risks such as trees or branches falling on the protection structure and penetration of objects into the protection structure.

3.3 PRECAUTIONS BEFORE STARTING

Before starting the engine, make sure all controls are set to neutral position, especially the power take-off lever. Start the engine only in well ventilated environment. Before starting the tractor, ensure that nobody is standing nearby. Completely loosen the hand brake before moving off. Do not approach any job if tractor conditions are not satisfactory.

3.4 WEAR SAFETY GEAR

Wear close fitting clothing and safety equipment appropriate for the job. Operator's full attention is required to work in safety conditions. Do not wear earphones for radio or music when operating the machine. DO NOT wear loose clothes, jewels or other objects and gather up your hair, if long, since it could get entangled in the controls or other tractor parts.

3.5 NOISE PROTECTIONS

Prolonged exposure to loud noise can cause impairment or loss of hearing. To protect yourself against loud noise, use a suitable ear protector such as earmuffs or ear plugs.

3.6 PROPER USE OF STEPS AND HAND GRIPS

To avoid any fall, always face the machine when getting on and off. Keep 3 support points using steps and handrail. Never hold onto machine controls. Be extremely careful when mud, snow or humidity create slippery conditions. Keep steps clean and free from oil or grease. Never jump off the machine. Never jump on or off the vehicle while it is moving.



Warning: Fall hazard!

Jumping on or off the machine could cause an injury.

Always face the machine, use the handrails and steps, and get on or off slowly.

Maintain a three-point contact to avoid falling: both hands on the handrails and one foot on the step, or one hand on the handrail and both feet on the steps.

Failure to comply could result in death or serious injury.

Get on and off the machine only by using the specific accesses equipped with a handrail, steps or ladder.

Do not jump off the machine.

Check that the steps, ladders and platforms remain clean and clear of debris and foreign matter.

Slippery areas can be a cause of accidents.

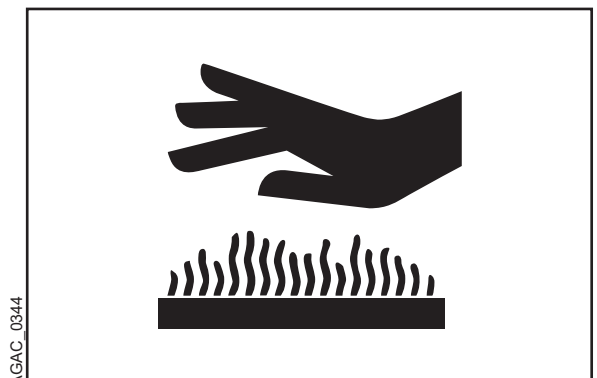
Never get on or off the machine while in movement.

Do not use the steering wheel or any other controls or accessories as a handrail when getting into or out of the cab.

3.7 TRACTOR CONDITIONS

Maintaining the tractor in perfect conditions and respecting the maintenance intervals (for oil change, top-ups, reconditioning, adjustments and full cleaning) will allow you to work under the best safety and performance conditions.

3.8 ADJUSTMENTS OR MAINTENANCE OPERATIONS



Keep away from the tractor hot parts such as the engine, the exhaust or the transmission.

Should you need to work on overhanging or hot parts, wear gloves and safety goggles.

3.9 HYDRAULIC SYSTEM

Transmission oil is used as hydraulic fluid for the lift and external connections. Inspect the tractor before starting the engine and once a day. Check the tractor and attachment hydraulic system. Repair or replace any leakage or damaged parts. Look for evidence allowing you to find a leakage from the tractor hydraulic system (traces of oil on the ground or on tractor).



WARNING:

Diesel fuel or hydraulic fluid under pressure could be injected in your skin or eyes leading to serious injury, blindness or even death.

Pressurised liquid/fluid leakage might be not visible.

Search for leaks with a piece of cardboard or wood. NEVER work bare handed.

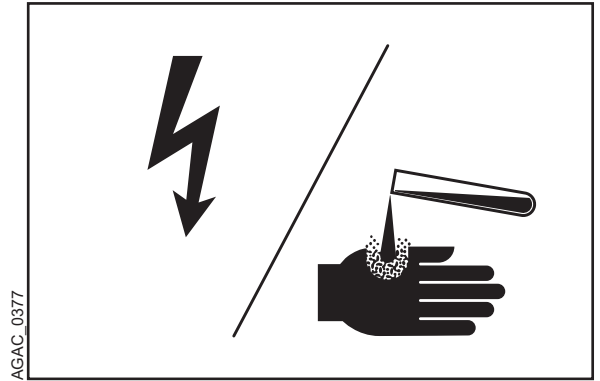
Wear safety goggles to protect your eyes. If liquid penetration occurs immediately contact a doctor specialized in this type of accident.

Never loosen a coupling when circuit is pressurised. After the engine is stopped, when hydraulic circuits pressure is released, a residual pressure could remain -locally- especially before and after the hydraulic accumulators. Before working on the hydraulic circuit:

- Set attachments down until they rest on the ground (Front loader - Front lift - Rear lift).
- Stop the engine.

Allow oil to cool down before working on the circuit, or oil flow could cause burns and scalds. Always stop the engine before proceeding with the maintenance and lubrication operations.

3.10 ELECTRICAL SYSTEM



Interventions on the electrical system shall be exclusively performed by qualified staff. In case of need (for installing any accessory, radio accessories, etc) contact your authorised service centre.

Moreover:

- Before attempting any work on the electrical circuit, always disconnect the battery negative pole.
- Never replace a faulty fuse with a higher rating one. Fire hazard.
- Never work on elements like the generator or cooling radiator fan while engine is running.
- Carry out any welding operations strictly following the recommendations given. See the general information at chapter 7.1.

Do not start the engine by making a jumper across the starter motor wires. If the normal electrical circuit is disabled the engine will start if gear is engaged. NEVER start the engine if you are not on the machine. Start the engine only from the driving position, with gear in neutral.



CAUTION:

The battery gives off gases that might explode. Keep batteries away from sparks and flames. Check the electrolyte level inside the battery using an electric torch. Do not check the battery charge by connecting the two poles with a metallic object. Use instead a voltmeter or a densimeter. Remove the battery negative terminal (-) first and refit it last. The sulphuric acid contained in the battery electrolyte is poisonous and caustic for the skin and tissues, and also causes blindness in contact with the eyes.



CAUTION:

Always use specific PPE for each service operation

3.11 FUEL



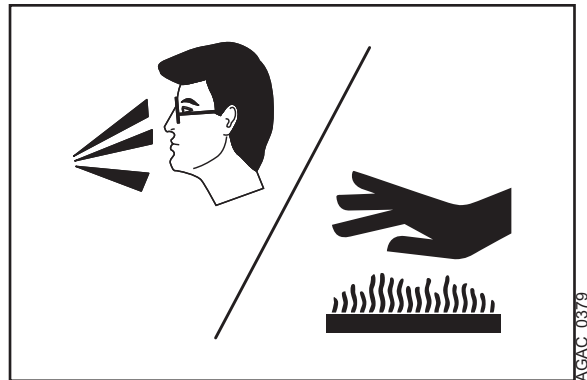
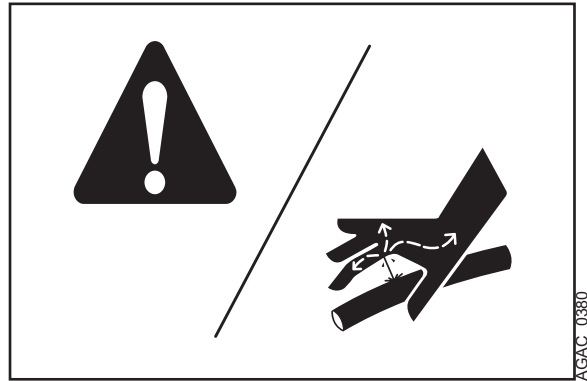
IMPORTANT: Use only diesel according the EN 590 norm.

Handle Diesel fuel with care since it is highly flammable. DO NOT smoke while refuelling. Keep away from any free flames. Stop the engine and allow for it to cool down before refuelling.

Fill Diesel fuel cans in the open air. Before filling the fuel tank, ensure that no mobile phone is nearby. Prevent fire by keeping the machine clean, free of dirt, grease and residues. Always clean any fuel spillage.

IMPORTANT: Use suitable vessels to handle fuel. These vessels shall be used only for this operation.

3.12 SAFE MAINTENANCE OF THE COOLING SYSTEM



The pressurised coolant system could blast out some fluid causing serious burns. Wear safety gloves and goggles. If coolant is ejected onto skin or eyes, immediately wash with plenty of water and seek medical advice.

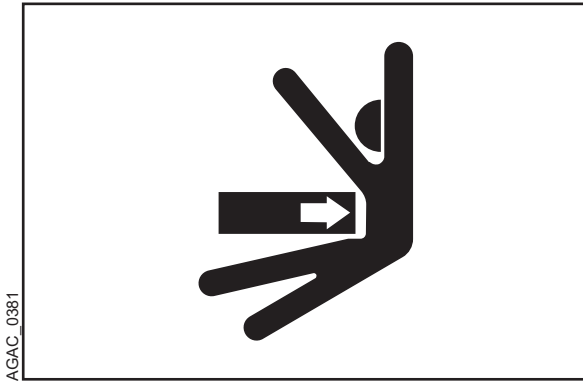


CAUTION:

Before removing radiator cap, stop the engine and let system cool down.

Before completely removing the cap, slowly loosen it until the first stop to release the pressure.

3.13 SETTING THE MACHINE ON SUPPORTS



If tractor shall be set onto some supports, first of all choose a perfectly flat, sturdy enough support surface. Do not use waste blocks or hollow bricks to support the machine or any other material susceptible to collapse under continuous load. Never work under a machine supported by just a jack. Use suitable supports for the load to be supported. When using equipment or accessories together with the machine, always strictly follow the safety precautions given in the operator's manual of the accessory or equipment. Before attempting any intervention on the machine, always set the accessory or equipment to the ground.

4-wheel drive tractor:

- If the rear axle is on the supports, do not start the engine (The tractor could in fact move if you work the brakes (service brake or hand brake)).
- If the rear axle is onto a support and if engine shall be started, the front axle must be set onto a support, too.

3.14 ROAD CIRCULATION

Under all circumstances, comply with the regulations about driving wheeled agricultural tractors applicable in the country of use. When driving the tractor on a public road, take several preventive measures.

Warning: DO NOT allow riders on the tractor nor on the towed equipment.

- Be familiar with the foreseen itinerary.
- Use flashers or beacon to drive on the road, at day or night, unless forbidden by law.
- Pay utmost attention when towing a load at transport speed, especially if the towed equipment has NO brakes.
- Respect all local or national rules about tractor's speed on the road.
- Use utmost care if doing the transport on snowy or slippery roads.

- Wait until the traffic allows tractor entry on the public road.
- Pay attention to any blind road crossing. Slow down until your visibility improves.
- DO NOT try to pass at any road crossing.
- Slow down in case of hairpin bends and turns.
- Describe wide and soft bends.
- Signal your intention to slow down, stop or turn.
- Shift down gears before driving uphill or downhill.
- Keep tractor's drive. DO NOT let the tractor move forward by inertia with clutch disengaged or gear in neutral.
- Do not move onto the lane for incoming traffic.
- Drive you vehicle in you lane as close as possible to the road side.
- If vehicles are queuing behind the tractor, set aside and let them pass.
- Drive carefully. Foresee the actions of the other drivers.
- When towing a load, start braking in advance and gradually slow down.
- Pay attention to any possible obstacles above the vehicle.
- Make sure the load does not hide any warning lights or other lights.
- Couple brake pedals together.

3.15 ROAD TRANSPORT

Before transporting the tractor on a public road, take several preventive measures.

- Couple brake pedals together.
- Raise all attachments in transport position and lock them in place.
- Reduce all attachments to the most compact transport configuration.
- Disengage the PTO and differential blocking.
- Ensure that any flag indicating clearance or hazard lights are in place and operating.
- Ensure you use a suitable fixing pin featuring a clip retainer.
- Clean the cat's eyes and front and rear road lights, then make sure they work.

Ensure the tractor and equipment are equipped with Slow Motion Vehicle (SMV) signals and any other marking recommended to improve your visibility, or a beacon, if the required by laws.

3.16 SAFE TOWING

Stopping distance increases with speed, trailer or equipment weight and downhill slope.

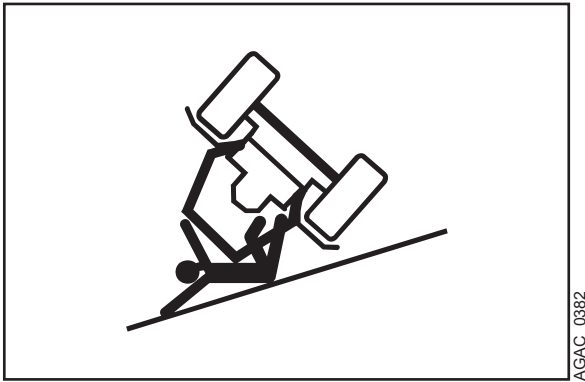
Towed load, with or without brakes, if too heavy for the type of tractor or towed at too high a speed could make you lose control of the tractor. Consider overall vehicle and load weight. When towing loads on rough surfaces, in a bend or on slopes, proceed with further care.

3.17 TRACTOR TRACK

To minimise any risk of tipping over, always use the maximum allowed track for the operation to perform.

NOTE: When the front loader use the suitable track and doesn't use NEVER the maximal track

3.18 ROLL OVER PROTECTION STRUCTURES (ROPS)



This tractor features a Roll Over Protection Structure (ROPS) or a ROPS safety cab protecting the operator in case the machine tips over.

Keep the roll over protection structure (ROPS) in fully extended and locked position. If the roll over protection structure is used in the folded position (e.g. to enter in a small building), drive with utmost care. When roll over protection structure is folded, DO NOT use the safety belts. Before using the tractor under normal conditions, take the roll over protection structure to fully extended and locked position. In this conditions, always use the safety belts.

It is recommended to abide by the following precautions:



CAUTION: the list provided concerning the possible cases of overturning is incomplete.

- Do not use the tractor on slopes or in such conditions as to jeopardise its safety and stability. Beyond its limits, the tractor could tip over or roll over. Strictly comply with the recommendations

given in this manual and pay special attention when running down steep slopes with tractor loaded.

- Do not drive tractor on or close to the edge of ditches, canals, banks or embankments with loose bottom or dug-out by rodents. The tractor could sink on one side and tip over.
- Do not use the tractor on bridges or crossings that are unstable and/or have loose bottom or insufficiently strong. These structures might collapse and cause tractor tipping over. Always check bridge, crossing and ramp conditions and capacity before driving on them.
- Do not use the tractor beyond its dynamic stability limits. High speed, harsh driving and narrow bends run at high speed increase risk of tipping over.
- Do not use the tractor for towing or extraction jobs if you do not know the extent of pulling effort, like for instance in log pulling. The tractor could roll over to the back if the log is hard to pull.
- Pay utmost attention when using the tractor on piles of silage products with no cement boundaries. To increase tractor side stability you can either install twin wheels or increase track.
- Be careful since tractor centre of gravity could shift upward while lifting loads with the front loader or three-point hitch. In these conditions the tractor might suddenly tip over.

3.19 FALLING OBJECTS PROTECTION STRUCTURE (FOPS)

The cab featuring type-approved FOPS protects against any hazard deriving from falling objects. It is recommended to install a type-approved FOPS when working with front loaders. The cabs featuring not-approved type FOPS offer insufficient protection against falling stones, bricks or blocks of cement.



CAUTION:

This symbol means that the tractor does NOT fit a FOPS roof (Falling Object Protective Structure) as standard.

For safety reasons, all standard tractors ordered with no front loader and without FOPS roof or simply featuring a roll over arc (safety arc), shall never be equipped with a front loader or used with a front loader.



CAUTION:

Agricube AV_LB and AF_B tractors are NOT equipped with FOPS protection structure.

3.20 USING THE FRONT LOADER ON TRACTORS WITH CAB

Do not use the front loader on tractors unless equipped with suitable protection structures against falling objects (FOPS roof). Heed the following precautionary measures when working with a front loader:

- Do not lift the front loader to such a height as to cause objects to fall on the operator.
- Always use the correct equipment (bale grabs, buckets, etc) suitable for the specific job to be performed in order to ensure load stability.
- Do not allow anyone to pass or work under a lifted loader.
- Do not use the loader as work platform.
- Do not lift or carry anyone on the loader, inside bucket or on any other equipment.
- Move loader to the ground before leaving operator station.

3.21 USING THE FRONT LOADER ON TRACTORS WITHOUT CAB

Strictly follow the precautions below:

- Do not lift the front loader to such a height as to cause objects to fall on the operator.
- Always use the correct equipment (bale grabs, buckets, etc) for the specific job to be performed in order to ensure load stability.
- The roll over protection structure (ROPS) is not enough to protect against loads falling onto operator station. To prevent loads from falling onto operator station, always use suitable equipment according to the specific applications.

3.22 USING OF HSC MOVEMENT SYSTEM

HSC is a plug-in hydraulic motor actuated super creeper system. This module is designed to provide to the vehicle the feature of a continuous controlled speed variation between 0 and 300 meters per hour both in forward and in reverse.

NOTE: when this module is active, the traditional transmission must be with reverser, gears and ranges in neutral conditions.



CAUTION: At HSC engagement, vehicle stationary condition at zero speed is not guaranteed (vehicle can move).



CAUTION: Do not leave the vehicle with HSC engaged: the movement at low speed or unexpected movement in neutral status could cause damage to driver, persons and/or things present within the range of the vehicle.



CAUTION: Do not command the HSC engagement if the speed gears, ranges and reverser are not in neutral position in order to avoid serious damages to the driveline system and to driver, persons and/or things present within the range of the vehicle.



CAUTION: In any condition such as downhill or soil irregularities vehicle velocity variation (acceleration) could occur. In those cases operator must control the velocity by brakes system because the HSC electronic control system does not manage this work condition.



CAUTION: In slope condition, when the operator commands the vehicle movement by the HSC, the system response time could cause the vehicle downhill movement (rollback). This could cause damage to driver, persons and/or things present within the range of the vehicle. It is recommended to perform this manoeuvre not in slope conditions.



CAUTION: Do not modify the hydraulic and electrical circuit, do not disconnect the sensors in order to avoid malfunctions and/or unexpected behaviour. This could cause damage to driver, persons and/or things present within the range of the vehicle.

3.23 GENERAL PRECAUTIONS TO IMPLEMENT WHEN WORKING WITH A FRONT LOADER

- Do not allow anyone to pass or work under a lifted loader. Do not allow anyone to stay near or under the front loader lifted bucket.
- Never use the front loader to lift persons requiring to reach a certain height for working.
- Do not use the front loader next to overhead power lines. In case of contact with overhead power lines, jump off the tractor so as to avoid touching ground and the machine at the same time. If possible, try to cut contact with the power lines.

3.24 PROTECTION STRUCTURES AGAINST PENETRATION OF OBJECTS (OPS)



CAUTION: Agricube AV_LB and AF_B tractors are NOT equipped with OPS protection structure.

3.25 ATTACHMENTS AND ACCESSORIES

To connect or disconnect an attachment, set the gear shift lever in neutral and engage the hand brake. Use a slow gear for any movement of the tractor.

Hitch bar: This component of the tractor can not have the same function as a hitch fork and hence can not bear any vertical load.

Do not overload attachments or towed equipment. Use suitable counterweights to keep tractor steady. The three-point hitch and side-mounted attachments form a much wider trajectory in a bend compared to towed equipment. Make sure you have enough space to turn. Only use approved accessories and attachments.

Using a safety chain will help keeping control on the towed equipment in case it accidentally detaches from the drawbar during transport. Using suitable adapters, connect the chain to tractor drawbar support or to other specific fixing points. Leave chain just enough clearance to allow to follow in a bend. Contact your dealer for the supply of a suitable chain having a nominal resistance equal to or higher than the gross weight of the towed machine.

When connecting or disconnecting an attachment, make sure nobody is standing between the tractor and the attachment.

3.26 STAY CLEAR OF ROTATING DRIVELINES



AGAC_0384

Entanglement in rotating shafts can cause serious injury or death. Make sure that all shields on tractor

and driveline are installed and that the mobile ones can turn smoothly. Wear tight clothes. Stop the engine and be sure PTO driveline is stopped before getting near it for adjustment, connections or cleaning the attachment driven by the PTO.

3.27 USING THE SAFETY BELT

On tractors with roll over protection structure (ROPS) or cab, use the safety belt to minimise any injury due to accidents or tipping over. Do not use the safety belt if tractor has no roll over protection structure or cab. Change the safety belt if the retainers, buckle, belt or retractor show sign of damage. Inspect the safety belt retainers at least once a year. Check for loosened parts or belt damage such as cuts, frays, faulty or considerable wear, discolouration or abrasion. Change parts using only approved spare parts for the relevant machine.

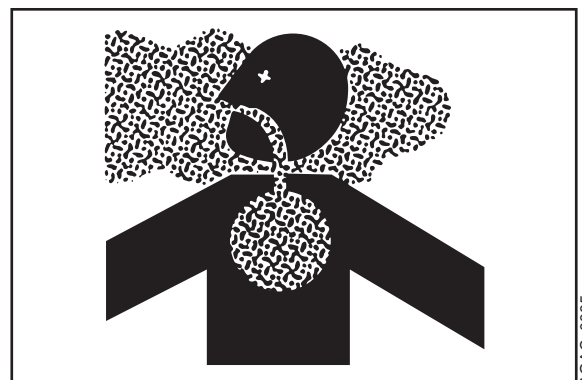
3.28 PASSENGERS

No passenger on board is allowed unless a special seat is provided and the driver's view is not obstructed. Carrying persons on the tractor in other positions, for instance on the front loader, is absolutely forbidden.

3.29 STATIONARY JOBS

If tractor shall work in a fixed location (use of stationary implements), lock tractor wheels, engage the hand brake and keep machine manned.

3.30 HARMFUL PRODUCTS



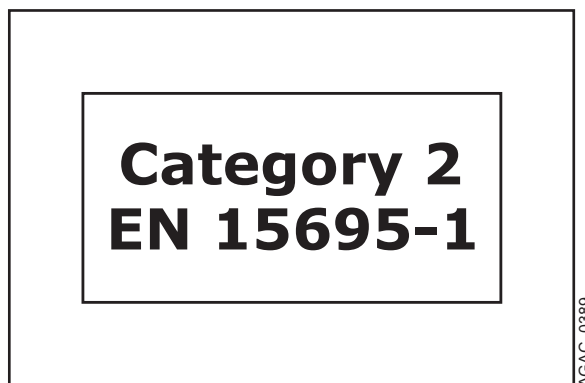
AGAC_0385

Though closed, the cab does not protect against breathing vapours, aerosol or dust. Follow the instructions of the chemical product manufacturer about protection against harmful chemical substances. If the pesticide instructions indicate product requires a breathing protection, wear a suitable breathing equipment inside the cab. Before entering the cab, clean your shoes/boots by removing the mud or other contaminated particles. The chemicals for agricultural use could be harmful for your health and the environment

if not used carefully. For efficient, safe and lawful use of the chemicals for agricultural use, always follow all instructions given on the labels. In case the tractor is used for treatments with pesticides, it is essential to:

- Use the appropriate personal protections.
- Attend specific training for efficient use of the personal protections.
- Do not leave any vessel containing or that contained harmful products inside the cab.
- Take off any dirty shoes and clothes before entering the cab.
- Keep cab clean inside.
- Ensure that the cab filters are in good conditions and correctly installed. Ensure that the seals are in good conditions. Change filters if they have holes or are worn.
- Do not blow inside filters.
- Always duly dispose of vessels. Rinse at least three times any empty vessel, pierce them or crush them and duly dispose of.
- Follow respective manufacturer's instructions for pesticides, personal protections, filtering elements and sprayers. Comply with national health and safety regulations.
- Store chemicals in a safe and locked place, away from food and fodder. Keep away from children.

3.31 FILTERING RATE



The decal on the vehicle indicates the category and gives information about protection against harmful substances such as: dust, fumes, aerosols etc.

3.31.1 CATEGORY 1 CAB DEFINITION

The cab meets requirements set in UNI EN 15695-1. This means that cab ventilation and filtering system does not offer any specific protection against harmful substances, but only protects from bad weather (rain, wind, snow, etc.)

3.31.2 CATEGORY 2 CAB DEFINITION

The cab meets requirements set in UNI EN 15695-1. This means that cab ventilation and filtering system

does offer specific protection against ingress of dust, keeping a minimum pressure head. The required filtration of the external air can be obtained using the air conditioning and setting the fan to maximum speed with doors, roof and windows closed.



CAUTION:

Category 1 cabs do not offer complete protection against ingress of dust, aerosol and vapours.

Category 2 cabs protect against ingress of dust, and doesn't it protect against ingress of aerosol and vapours.

Read and follow the instructions given by the manufacturer of the chemicals used (such as pesticides, fungicides, weed killers, etc) further to the ones given by the sprayer manufacturer.

Use the appropriate Personal Protection Equipment and clothes (PPE) whenever those instructions so require, in particular if tractor has no cab but even.

3.32 AIR CONDITIONING SYSTEM



CAUTION:

The refrigerant fluid in the air conditioning system can cause serious damage.

Never work personally on the system, contact an authorized workshop.

The air conditioning system is a safe system capable of ensuring long-term and risk-free use. However, it is important to follow few simple precautions, noted below, in order to avoid possible accidents.

- Do not bring flames near the installation of the conditioning system, because in case of leaks the combined effect of refrigerant and flames may produce a lethal gas.
- Avoid bringing heat sources near the installation of the conditioning system to avoid possible outbreaks.
- Inside the air conditioning system, the oil and coolant mixture is under pressure. Therefore avoid to loose fittings or tamper with the pipes.
- Wear suitable personal protective equipment.
- In case of considerable leak, absolutely avoid gas build-up (indoors or inside the cab).
- The refrigerant can cause freezing of skin and eyes. In the event of an accident, immediately request medical attention.

3.33 FUEL CIRCUIT

The high-pressure fluid remaining in the fuel lines could cause serious injury. Only authorised technicians are allowed to make repairs.

3.34 HANDLING WASTE PRODUCT

Incorrect disposal of waste could negatively affect the environment and the ecological balance. Potentially dangerous waste derives from:

- Oil
- Diesel fuel
- Refrigerant fluid
- Brake fluid
- Filters
- Batteries.

Use sealed vessels when draining fluids. Do not use food or drink containers that might be misleading and induce drinking of their content. Do not discharge waste in the soil, drainage system or water courses. Air conditioning refrigerant fluids dispersing outside could alter the atmosphere. It is recommended to have air conditioning refrigerants collected and recycled by qualified waste centres, especially if so required by law.

3.35 SERVICING TYRES SAFELY

Explosive separation of a tire and rim parts can cause serious injury or death. Do not attempt to mount a tire without the proper equipment and experience to perform the job. Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure. Never weld or heat a wheel and tire assembly. The heat can structurally weaken or deform the wheel or lead to tire explosion. When inflating tires, use a hose long enough to allow you to stand to one side and not in front of the tire. Use a protection cage, if necessary and available. Check tires for low pressure, cuts, bubbles, damaged rims or missing lug bolts and nuts.

3.36 TIGHTENING WHEEL NUTS AND BOLTS

Tighten all wheel nuts and bolts at the intervals specified in the relevant section: **"6.4 General maintenance chart"**.

3.37 PARKING THE TRACTOR SAFELY

Before working on the machine:

- Lower any implement possibly connected to the ground.
- Engage the hand brake.
- Stop engine and remove key.
- Disconnect battery negative cable.

- Set a warning panel saying 'DO NOT USE' in the driving place.

3.38 TOWING THE VEHICLE

In case of towing need, comply with the following instructions:

- Start the engine (idle speed)



CAUTION: If it is not possible to start the engine, consult an authorised workshop to find out the possibility of towing with the engine off.

- Take reverser lever to neutral.
- Set power take-off to neutral.
- Disengage the hand brake.
- Set the gear and range shift levers to neutral position.
- Make sure the slow or very slow range are disengaged.

IMPORTANT:

Start the engine to ensure transmission lubrication during transport. Maximum engine rpm should be 1000 rpm. The tractor could be towed only under exceptional cases, solely at low speed (below 5 kph [3.10 mph]) and over a short distance (below 2000 metres [78739 in]). Should it be necessary to cover a longer distance, load and safely anchor the tractor onto a trailer.

IMPORTANT:

With the engine off, transport the tractor only using a trailer (or transmission risks to seize). Consult an authorised service centre to learn about how to tow the tractor with engine off.

IMPORTANT:

Failure to stick to the above instructions could seriously damage the transmission.



CAUTION: Avoid injury! Incorrect towing procedures can cause accidents. When towing your machine, follow the procedure in this manual. Failure to comply could result in death or serious injury.

3.39 TRANSPORTING THE VEHICLE ON A TRUCK

The best way to move a faulty tractor is to carry it on the bed of a truck.

When tractor is in place on the truck:

- Stop the engine
- Engage the hand brake
- Block the wheels
- Fasten tractor to truck by means of slings or chains. Tractor axles and frame are suitable anchor points
- Ensure all objects are fastened to truck or tractor
- Remove the key.

Before carrying the tractor on a truck with lowered loading platform or on a flatcar, ensure the hood on tractor engine is well fastened and that doors, sunroof (if any) and windows are duly closed.

3.40 DATA SHEET ON TRACTOR'S VIBRATION LEVEL - HAZARDS DUE TO EXPOSURE TO VIBRATIONS

Vibrations transmitted to the body depends on several parameters, some of them are connected to the machine, some to the ground or surface on which machine runs, and many others are specific to the driver. Factors concerning the ground surface conditions and speed prevail.

Machine-transmitted vibrations cause inconvenience to the operator and might, in some cases, jeopardise health and safety. Ensure the machine is in good conditions and that service and maintenance have been duly carried out at the scheduled intervals. Check tyre pressure and steering and brake efficiency. Check that the driver's seat and the relevant adjustment devices are in good conditions, then adjust the seat according to operator's build and weight.

IMPORTANT:

Please refer to the specific publications for any further information about the Whole Body Vibrations (WBV) transmitted by tractors and see any local regulations concerning the corresponding risks.

To correctly assess statistical values based on tractor daily usage, use a specific gauge such as a 3-axis accelerometer for the seat.

The table below shows vibration level measured as Commission delegated regulations (EU) 1322/2014 - Annex XIV for the seats mounted on this tractor.

Seat model/type	Measured vibrations in m/s ² (sample weight)	
	Light build operator	Heavy build operator
SC74-M97	1,21	0,98
SC74-M200	1,22	1,06
Cobo GT62-M200	1,22	1,06
KAB XH2	1,14	0,98
Grammer MSG93/511	1,21	1,05

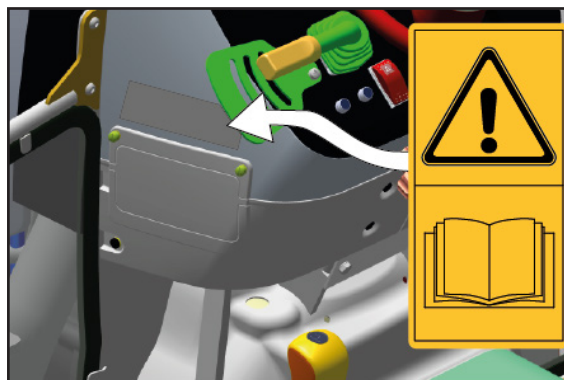
3.41 INSTRUCTION AND SAFETY LABELS



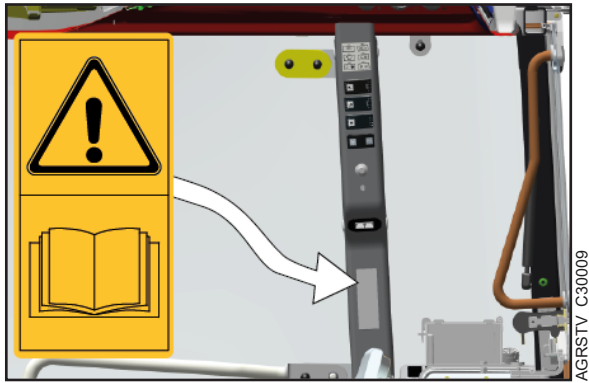
CAUTION: Change any damaged, missing or illegible safety labels. Apply a new label on all new parts replacing parts where such label was attached. Spare labels can be requested at any authorised dealer.

NOTE: It might happen that the labels described below are not actually present on the tractor, depending on the applicable regulations of the country of use.

Read and understand all warnings given in the Use and Maintenance Manual

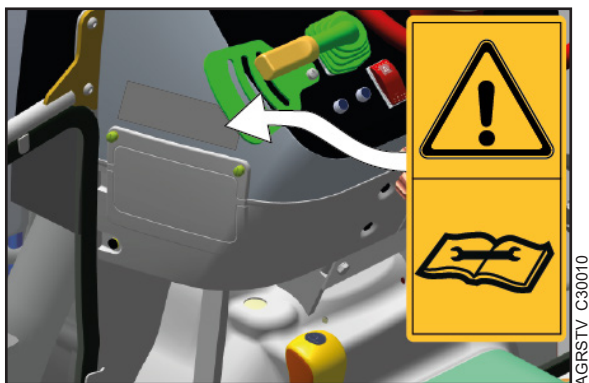


Roll Bar models

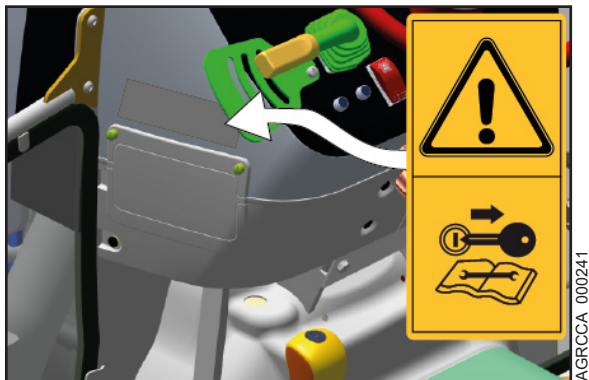


Cab models

Take account of the instructions and safety rules, and always use the tractor with great care.



Stop the engine and remove the key before carrying out maintenance or repairs.



3.41.1 RISK OF FALLING/TIPPING OVER

Do not carry passengers – do not allow any passenger to get on any part of the tractor or implement connected to it.



Roll Bar models

NOTE: Use Seat Belt Properly. Hold the latch and pull the seat belt across the body. Insert the latch into the buckle. Listen for a click. Tug on the seat belt to make sure that the belt is securely fastened. Snug the seat belt across the hips.



Roll Bar models



Cab models



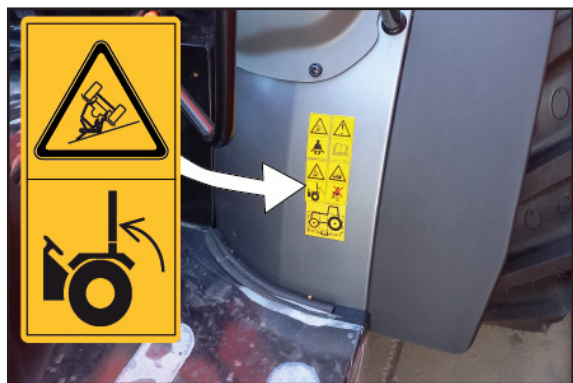
CAUTION: Avoid crushing injury or death during rollover. This machine is equipped with a foldable roll-over protective structure (ROPS). Keep the ROPS in the fully extended and locked position. USE a seat belt when you operate with a ROPS.



CAUTION: If this machine is operated with the ROPS folded (e.g., to enter a low building), drive with extreme caution. DO NOT USE a seat belt with the ROPS folded. Return the ROPS to the raised, fully extended position as soon as the machine is operated under normal conditions.

3.41.2 ROLL OVER HAZARD - CRUSHING HAZARD

Keep ROPS locked in vertical position.



AGRCCA_000220

3.41.3 ROLL BAR MODELS

To avoid injury to people, do not stay on the implement or between implement and tractor when using the external (remote) controls.



AGRSTV_C30001

Roll Bar models



AGRSTV_C30011

Cab models

3.41.4 ACCUMULATOR (TRACTORS WITH FRONT HITCH AND/OR SUSPENDED FRONT AXLE)

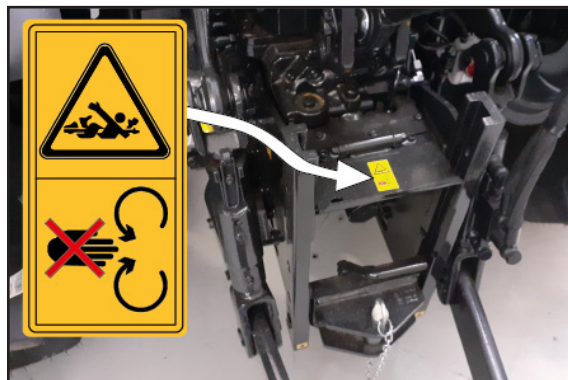
Releasing pressure may cause machine movement and exposure to fluid under pressure. See dealer for instruction on relieving pressure before servicing system.



AGRSTV_C30002



CAUTION: Avoid crushing and pinching.



AGRSTV_C30024

3.41.5 HYDRAULIC LINES AND HYDRAULIC COMPONENTS - REAR HITCH, FRONT HITCH AND FRONT DISTRIBUTORS.

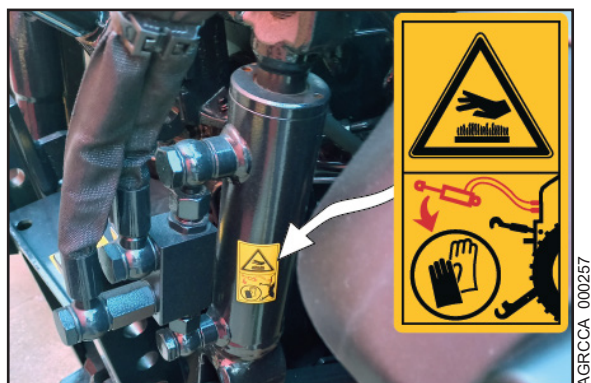
Hydraulic system components can get hot. Touching hot surfaces of the hydraulic system, accessories, or hoses and leads can cause personal injuries. Wear work gloves or allow the hydraulic components to cool before starting maintenance work on the hydraulic system.



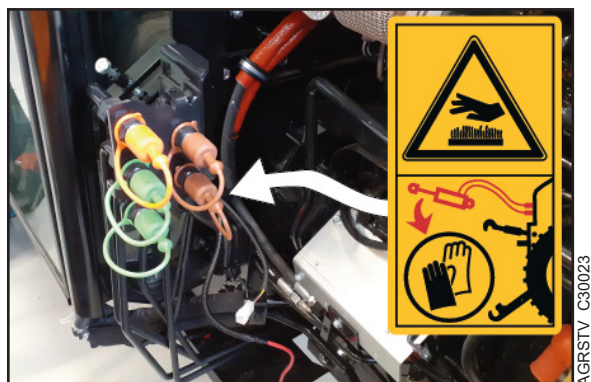
CAUTION: Avoid crushing and pinching.



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AGRCCA_000257



AGRSTV_C30023

3.41.6 FRONT HITCH

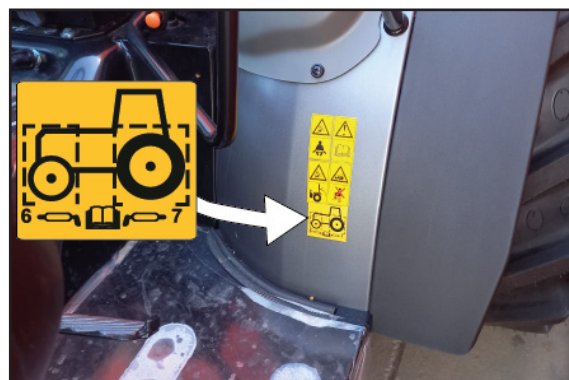
Do not exert a traction greater than 3 metric tons on the front tow hook.



AGRSTV_C30004

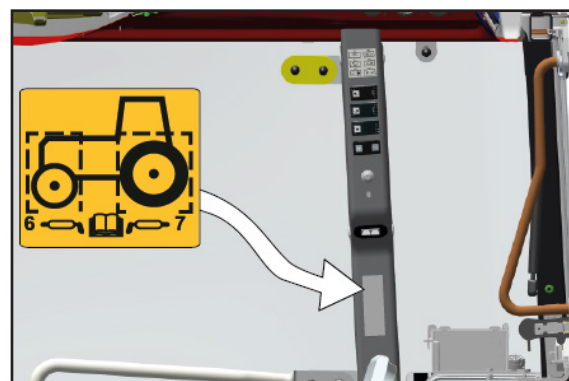
3.41.7 LUBRICATE THE TRACTOR

Refer to the maintenance plan in the use and maintenance manual, for more information.



AGRSTV_C30021

Roll Bar models

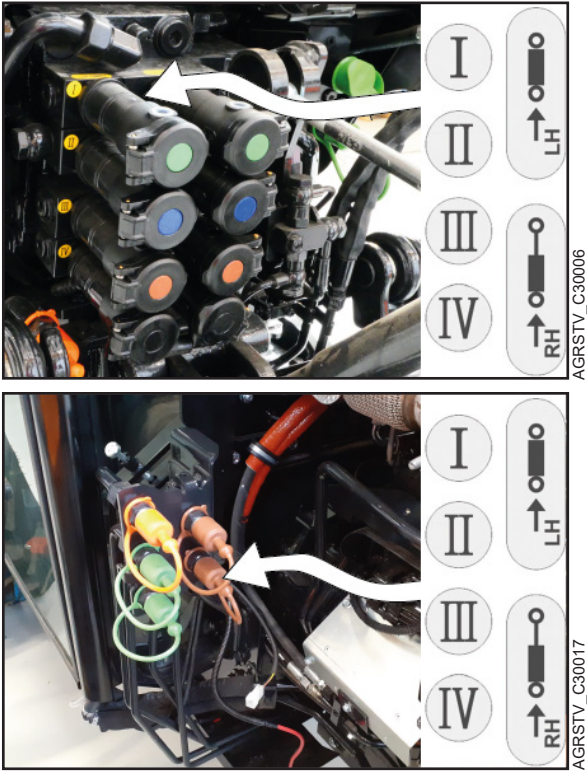


AGRSTV_C30022

Cab models

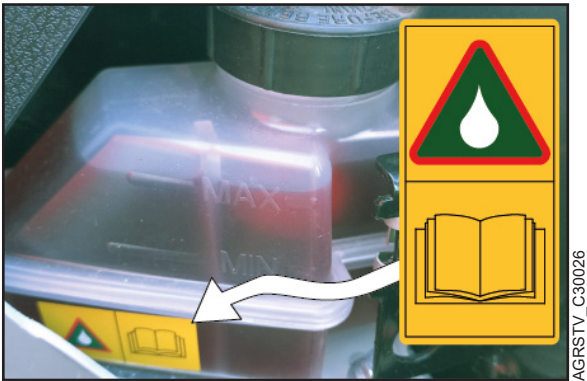
3.41.8 AUXILIARY CONTROL VALVE PRESSURE CONNECTORS

For more information, refer to the in the Use and Maintenance Manual.



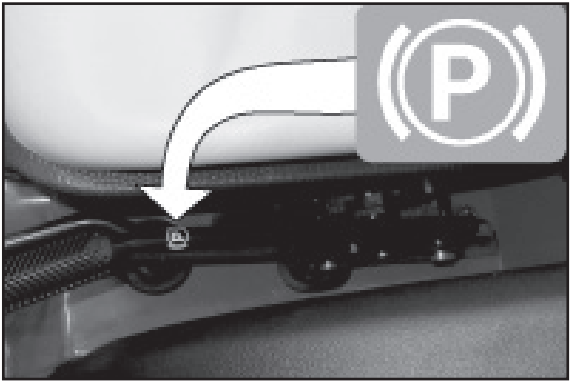
3.41.9 BRAKE FLUID

Observe the specifications of the brake fluid.



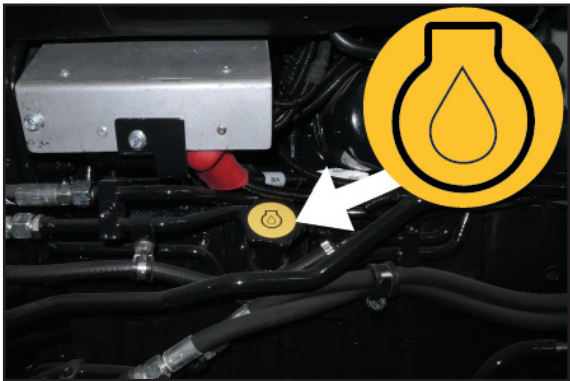
3.41.10 PARKING BRAKE

When the tractor is stopped, apply the hand brake.



3.41.11ENGINE OIL

Observe the specifications of the Engine Oil.



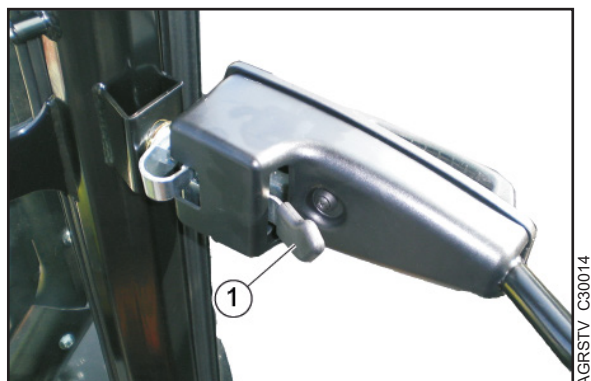
3.41.12 EMERGENCY EXIT

If necessary, use the tailgate as an emergency exit.



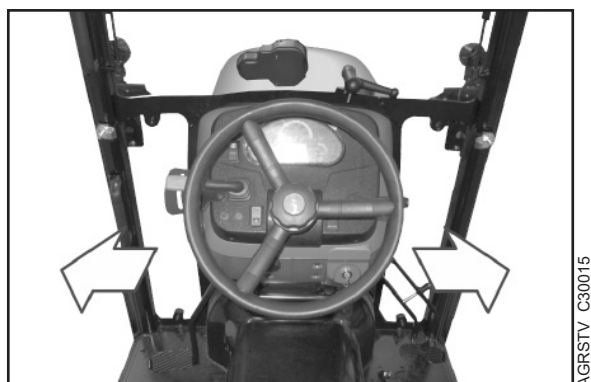
3.42 EMERGENCY EXIT

In an emergency exit the cab through the cab doors (1), if this is not possible, use the back door.



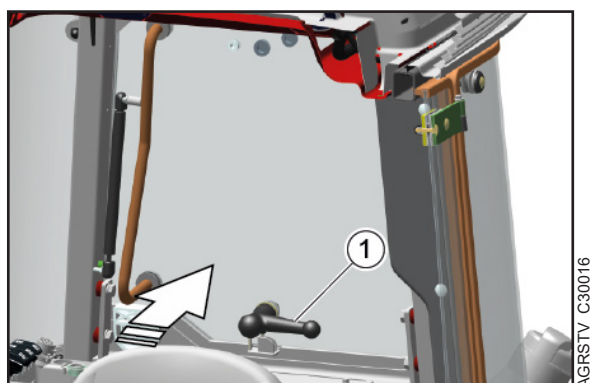
3.42.1 EXIT THROUGH DOOR

To open the doors, pull the lever (1) downwards and push them outwards.



3.42.2 EXIT THROUGH REAR WINDOW

To open rear window turn lever (3) to the left and push window outwards.





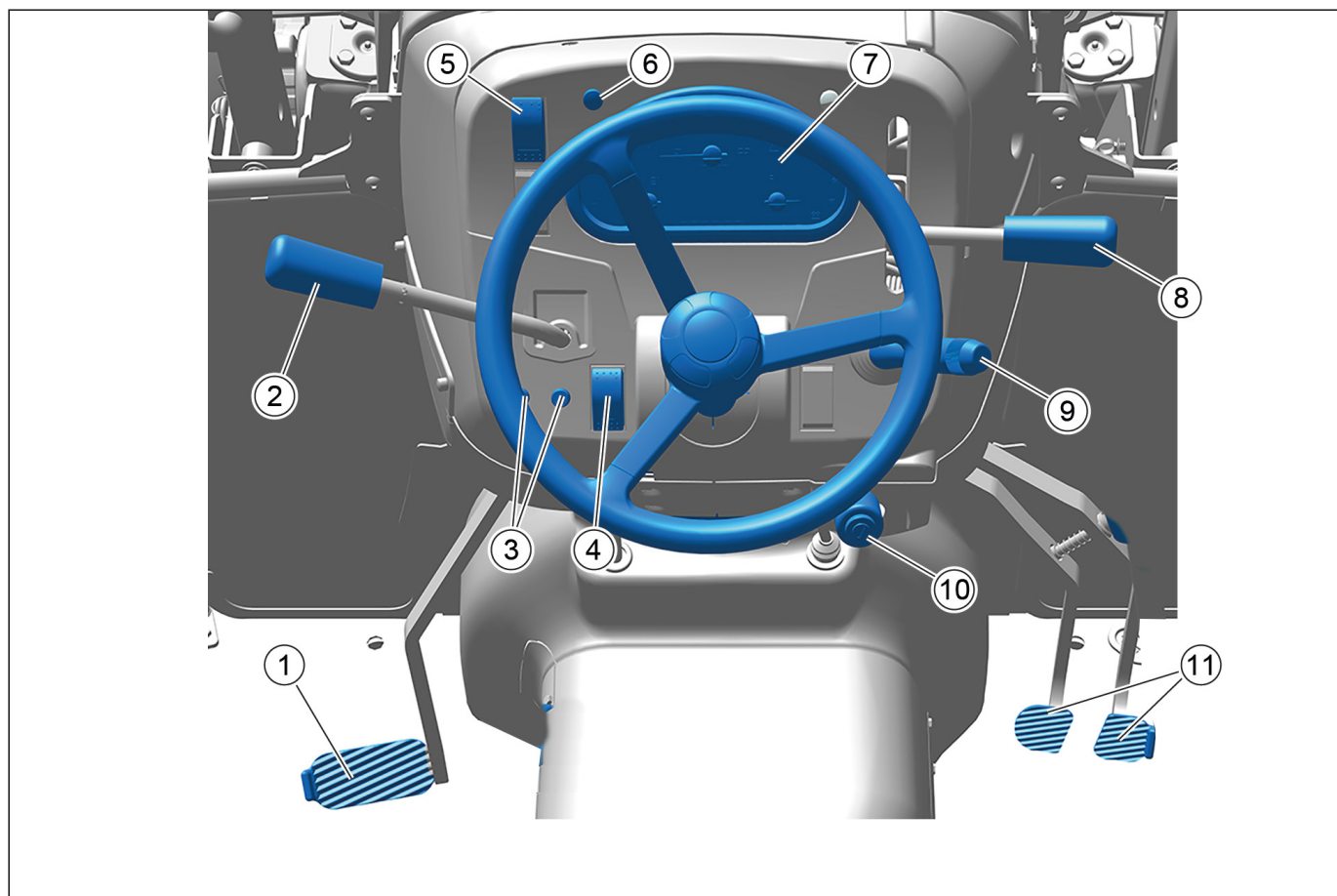


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1.1 CONTROLS AND INSTRUMENTS

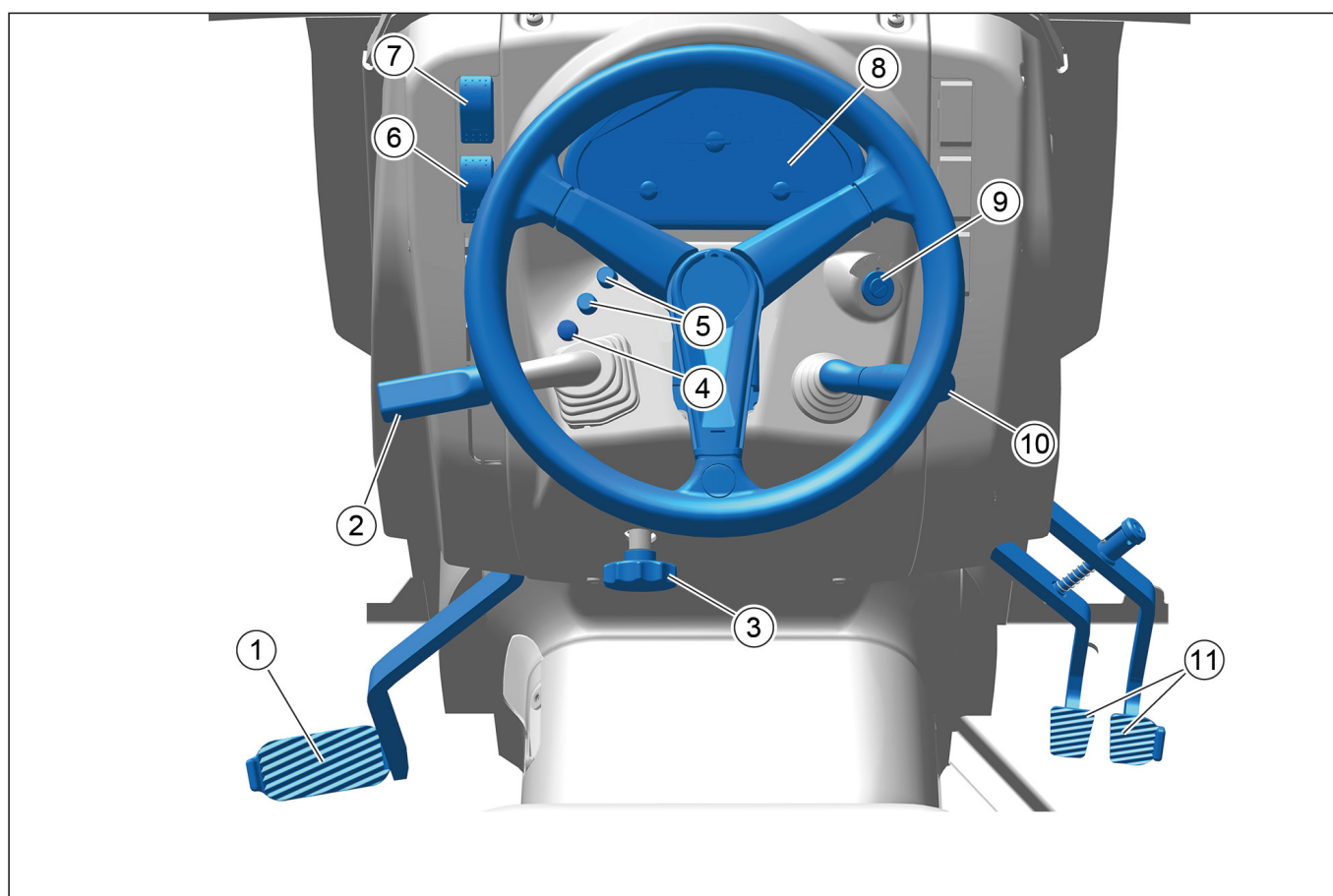
Roll Bar models



AGRSTV_C40010

- | | |
|------------------------------------|--|
| 1. Clutch pedal | 7. Instrument panel |
| 2. Reverser lever | 8. Mechanical HI-LO control lever |
| 3. Digital display control buttons | 9. Multifunction lever (horn/lights control) |
| 4. Hazard warning light switch | 10. Ignition key switch |
| 5. Beacon light switch | 11. Brake pedals |
| 6. Trailer brake test button | |

Cab version

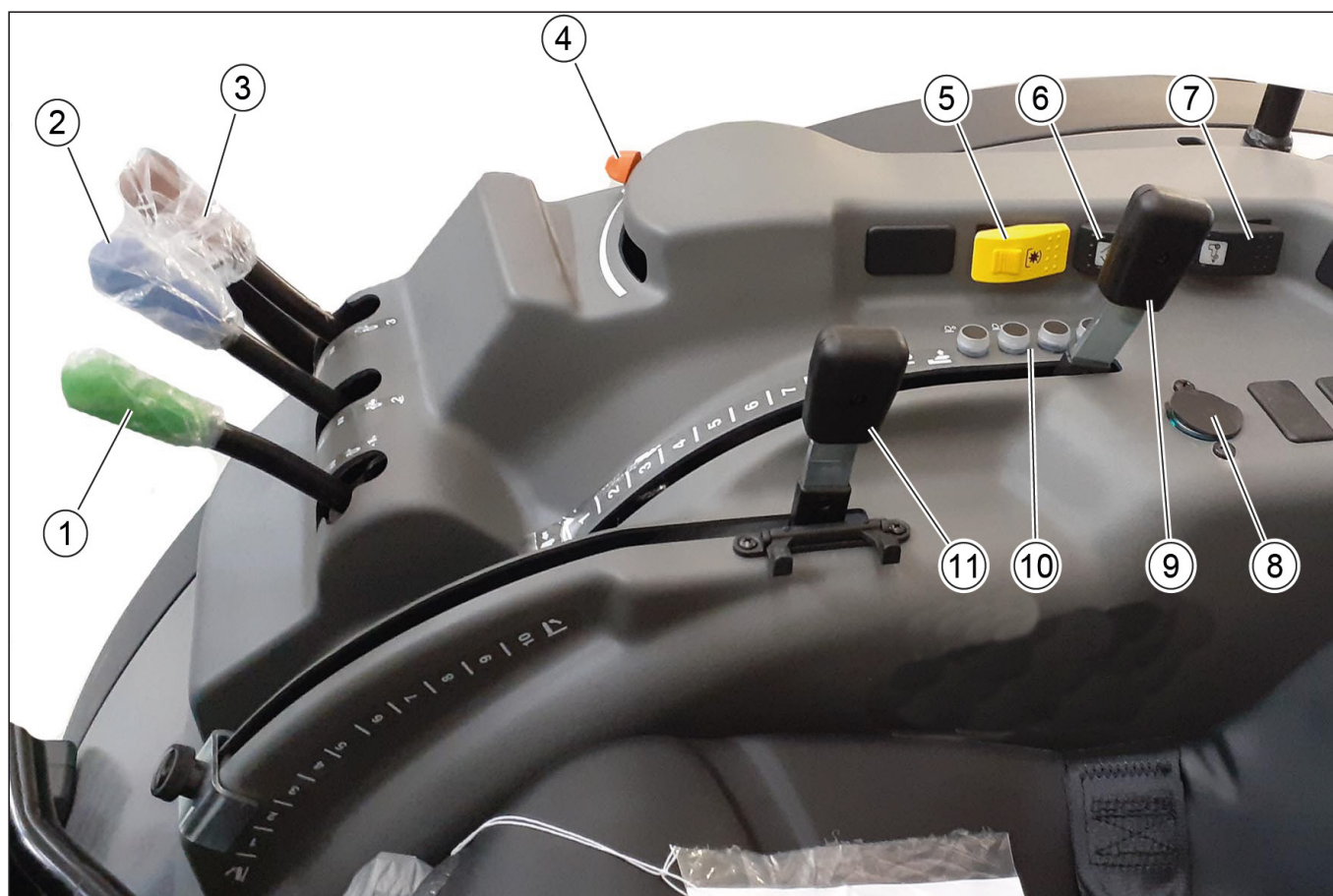


AGRSTV_C40011

- | | |
|------------------------------------|---|
| 1. Clutch pedal | 6. Beacon light switch |
| 2. Reverser lever | 7. Hazard warning light switch |
| 3. Steering wheel adjusting knob | 8. Instrument panel |
| 4. Trailer brake test button | 9. Ignition key switch |
| 5. Digital display control buttons | 10. Multifunction lever (horn/lights control) |
| | 11. Brake pedals |

1.2 RH SIDE CONTROLS

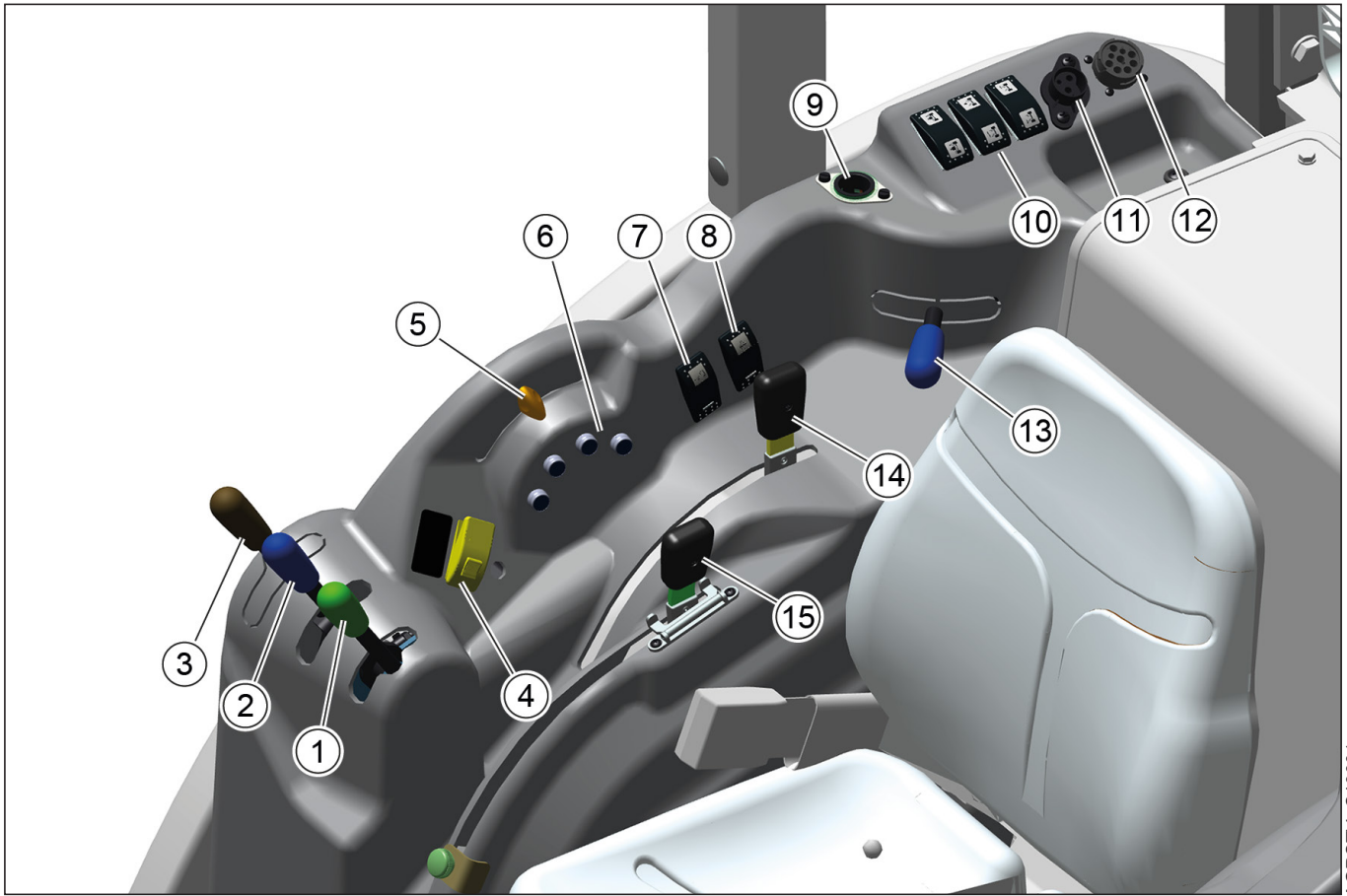
Roll Bar - mechanical version



AGRSTV_C40004

- | | |
|---|--|
| 1. Hydraulic distributors number 1 control levers | 7. 4-wheel drive switch |
| 2. Hydraulic distributors number 2 control levers | 8. Cigarette lighter socket |
| 3. Hydraulic distributors number 3 control levers | 9. Lift control levers - draft control |
| 4. Hand throttle control | 10. Cruise control setting switch |
| 5. Front PTO engagement switch | 11. Lift control levers - position control |
| 6. Differential lock switch | |

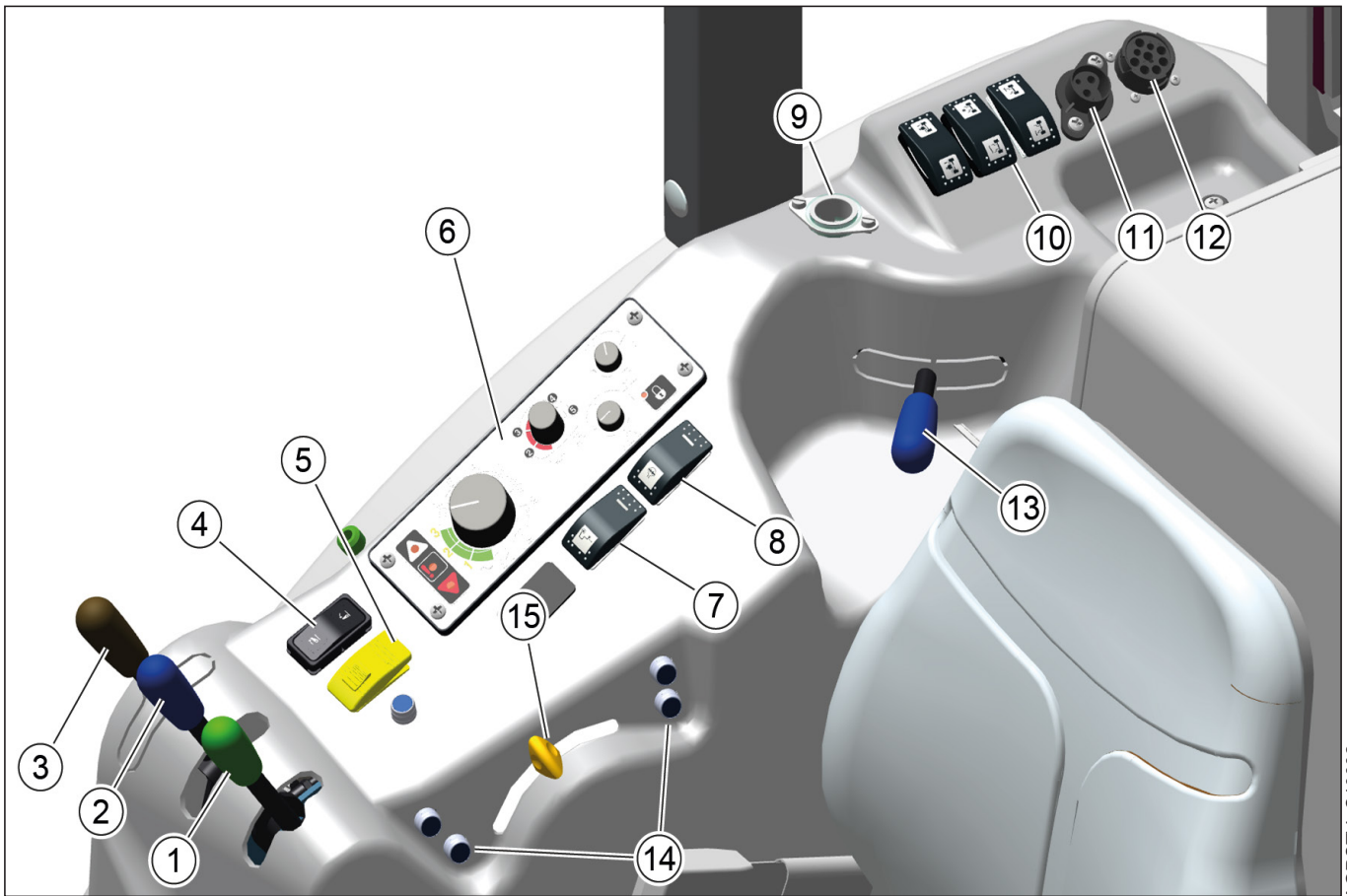
Cab - Mechanical version (low specification)



AGRSTV_C40001

- | | |
|---|--|
| 1. Hydraulic distributors number 1 control levers | 9. Cigarette lighter socket |
| 2. Hydraulic distributors number 2 control levers | 10. Depart control switches |
| 3. Hydraulic distributors number 3 control levers | 11. 3-pole socket |
| 4. Front PTO engagement switch | 12. Diagnostics socket |
| 5. Hand throttle control | 13. Hydraulic distributors number 4 control levers |
| 6. Cruise control setting switch | 14. Lift control levers - draft control |
| 7. 4-wheel drive switch | 15. Lift control levers - position control |
| 8. Differential lock switch | |

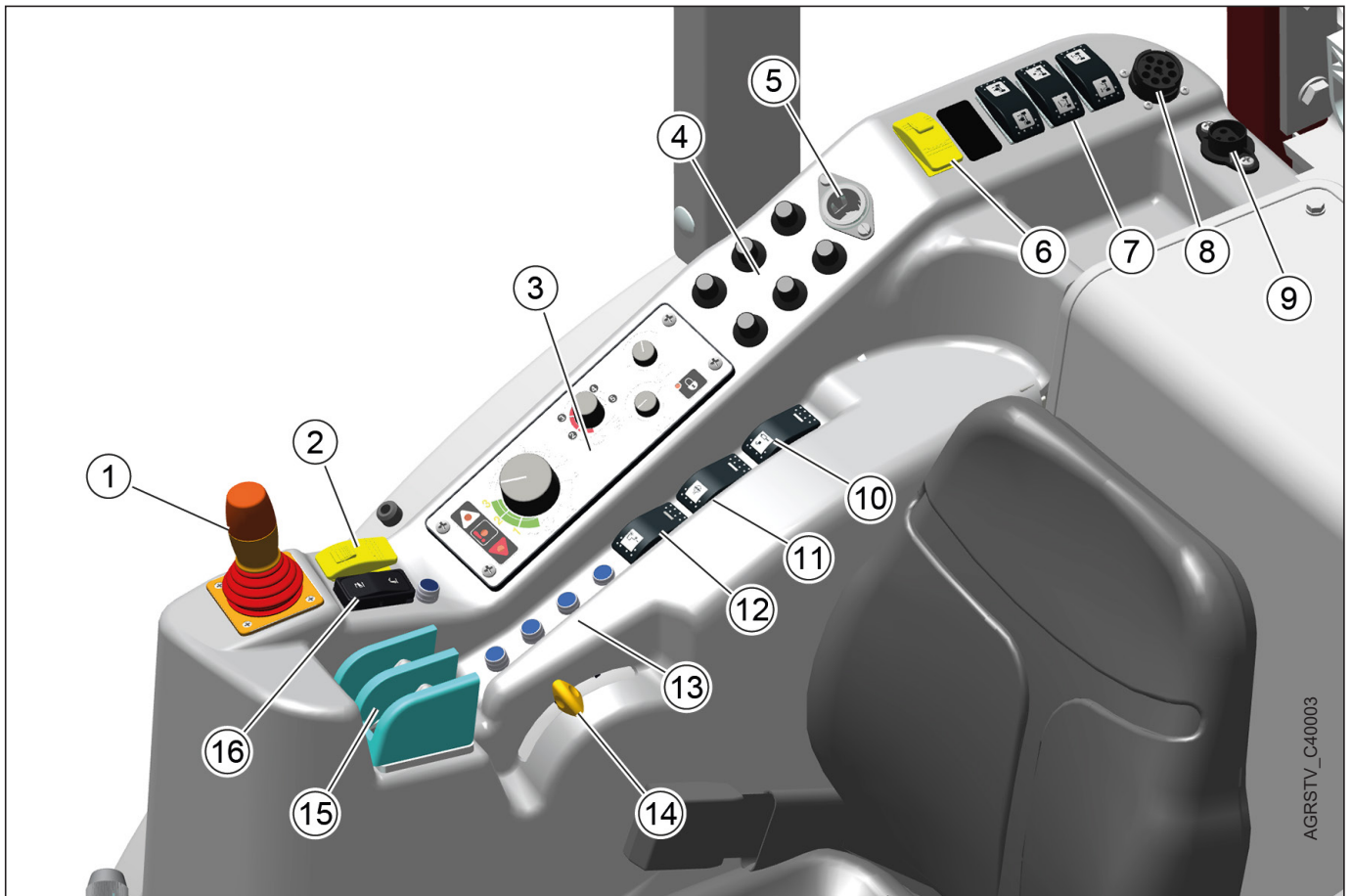
Cab - Mechanical version (mid specification)



AGRSTV_C40002

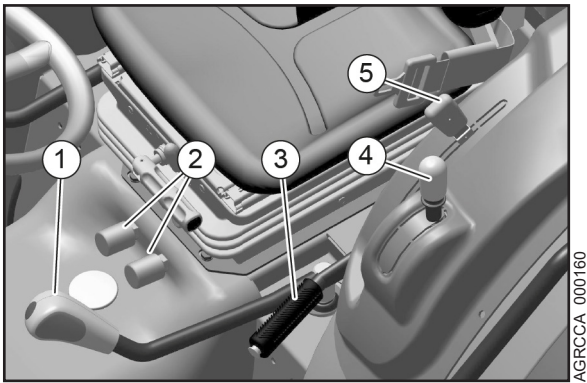
- | | |
|---|--|
| 1. Hydraulic distributors number 1 control levers | 9. Cigarette lighter socket |
| 2. Hydraulic distributors number 2 control levers | 10. Depart control switches |
| 3. Hydraulic distributors number 3 control levers | 11. 3-pole socket |
| 4. Lift control switch | 12. Diagnostics socket |
| 5. Front PTO engagement switch | 13. Hydraulic distributors number 4 control levers |
| 6. Electronic lift console | 14. Cruise control setting switch |
| 7. 4-wheel drive switch | 15. Hand throttle control |
| 8. Differential lock switch | |

Cab - Power Reverser version



- | | |
|--|--|
| 1. Joystick | 9. 3-pole socket |
| 2. Rear PTO engagement switch | 10. E-SCV on-off switch |
| 3. Electronic lift console | 11. Differential lock switch |
| 4. Electronic lift setting potentiometer | 12. 4-wheel drive switch |
| 5. Cigarette lighter socket | 13. Cruise control setting switch |
| 6. Front PTO engagement switch | 14. Hand throttle control |
| 7. Deport control switches | 15. Electro hydraulic valve control levers |
| 8. Diagnostics socket | 16. Lift control switch |

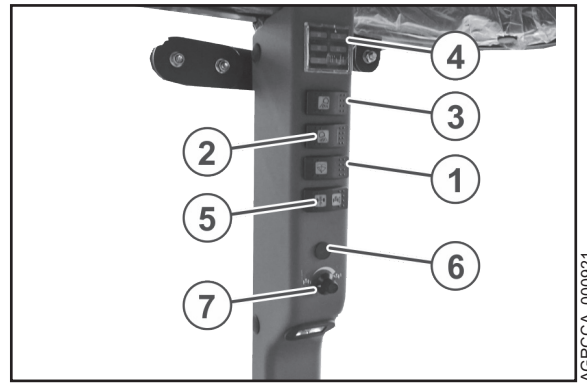
1.3 LH SIDE CONTROLS



AGRCCA_000160

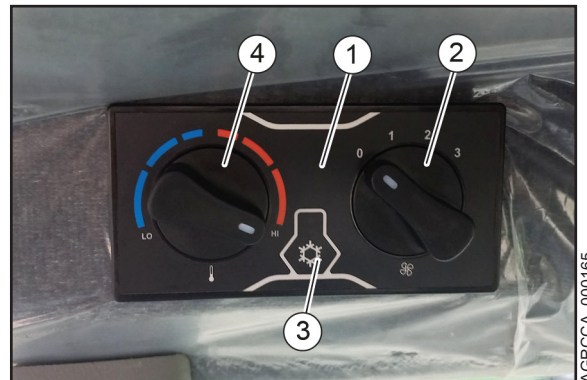
1. Range shift lever
2. Lift adjustment knob
3. Parking brake lever
4. Rear PTO engagement control (mechanical version)
5. Rear PTO selector lever (Independent or Ground Speed)

1.4 RH PILLAR CONTROLS



AGRCCA_000921

1. Windscreen washer/wiper switch
2. Rear Work lights switch
3. Front Work lights switch
4. Roof fan fuse box
5. Suspended front axle activation switch
6. Led indicator suspended front axle
7. Suspended front axle height regulation knob

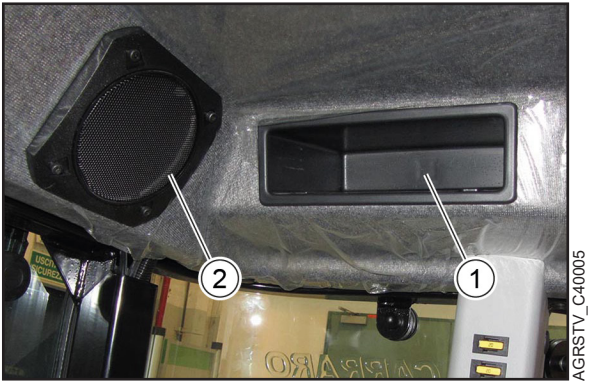


AGRCCA_000165

1. Air conditioning/heating control console
2. Fan speed adjustment
3. Air conditioning switch
4. Temperature adjustment air conditioning/heating control

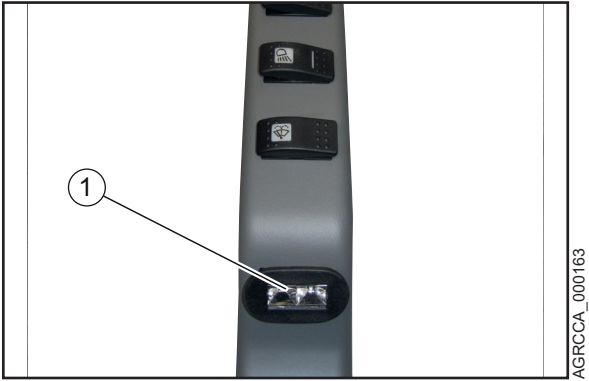
1.5 ACCESSORIES

Radio



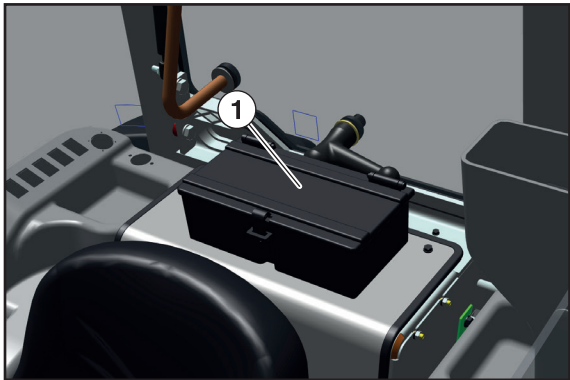
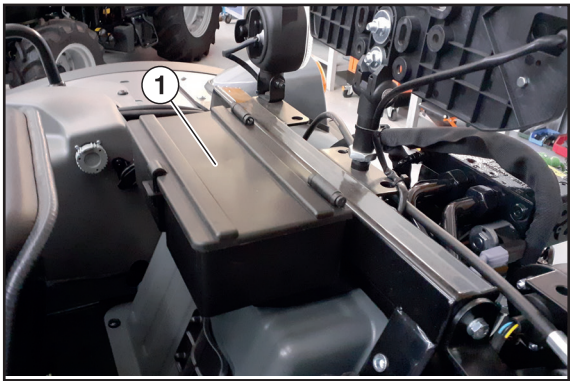
The radio and the speakers are located respectively in position (1) and (2).

Courtesy light



The courtesy light (1) is located on the left side on cab roof and on the right pillar side.

Tool Box

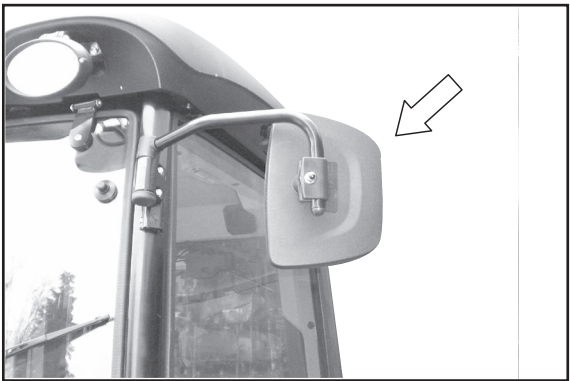


The tool box (1) is located at the rear of the vehicle, behind the seat.

Rear-view mirror (version with cab)



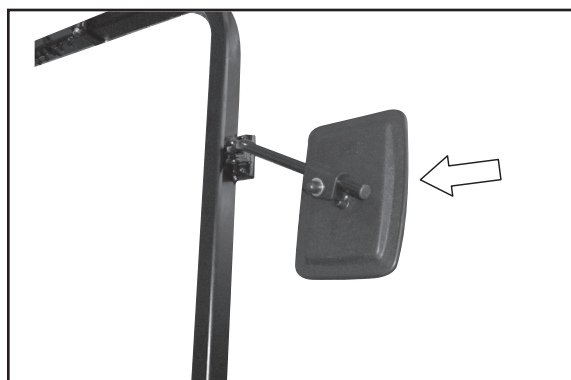
CAUTION: Before reaching the road, ensure the rear-view mirrors are correctly positioned and clean. For safety reasons, adjust and clean them when tractor is at a standstill.



Rear-view mirror (roll bar version)



CAUTION: Before reaching the road, ensure the rear-view mirrors are correctly positioned and clean. For safety reasons, adjust and clean them when tractor is at a standstill.



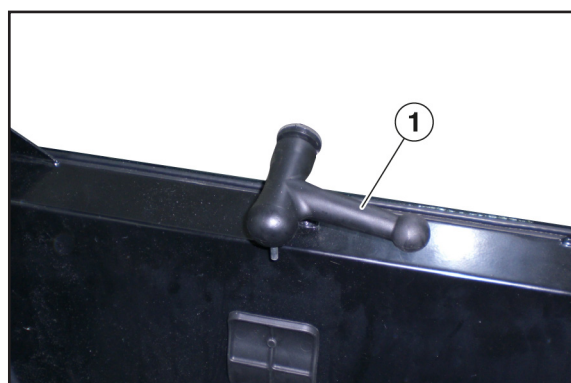
Window washer fluid tank



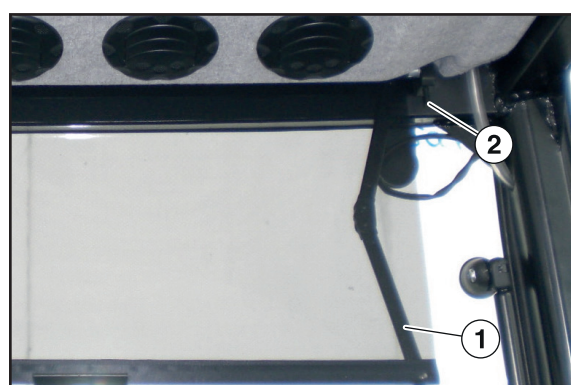
Front window lock lever



Rear window lock lever



Sun shade

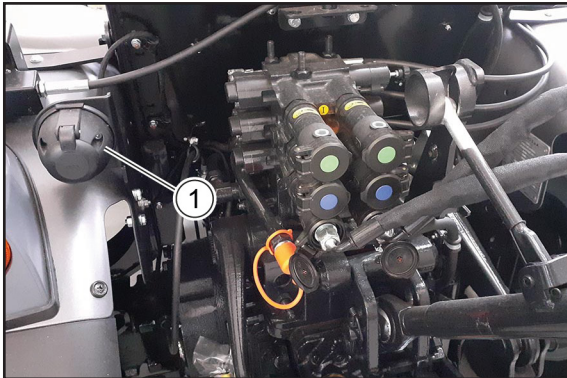


1. Sun shade
2. Sun shade winding button

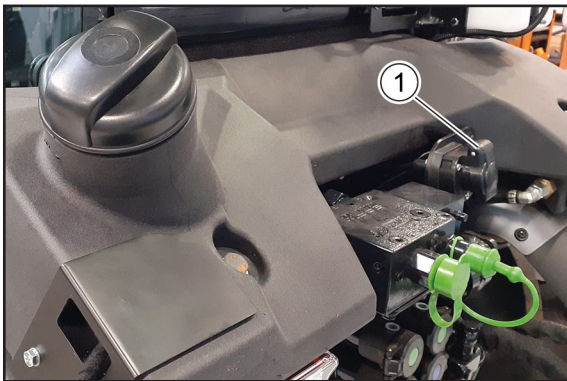
1.6 TRAILER (7-POLE) POWER SOCKET



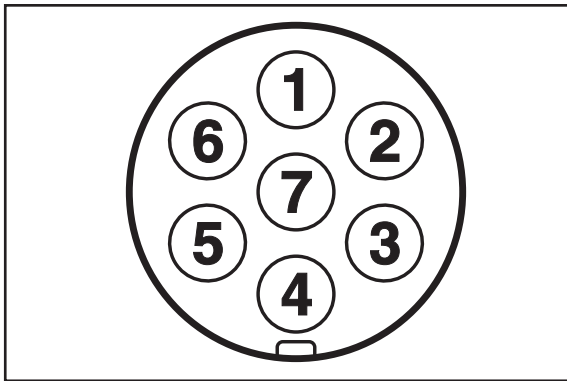
CAUTION: The power socket available on this vehicle complies with the prevailing laws. All interventions or modifications to the trailer or tool electrical circuit shall be carried out by qualified staff.



AGRSTV_C40007



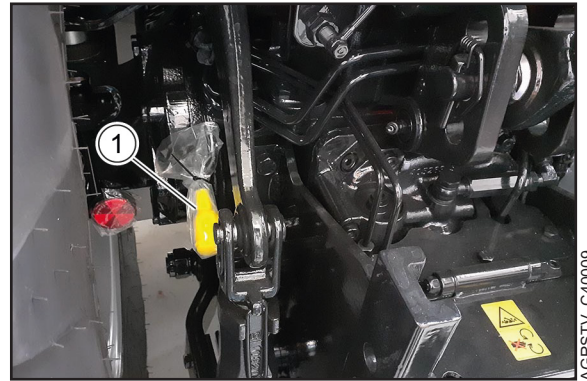
AGRSTV_C40008



AGAC_0037

1. LH side turn indicator
2. Spare
3. Ground
4. RH side turn indicator
5. RH tail light – license plate light
6. RH side and LH side stop lights
7. LH tail light

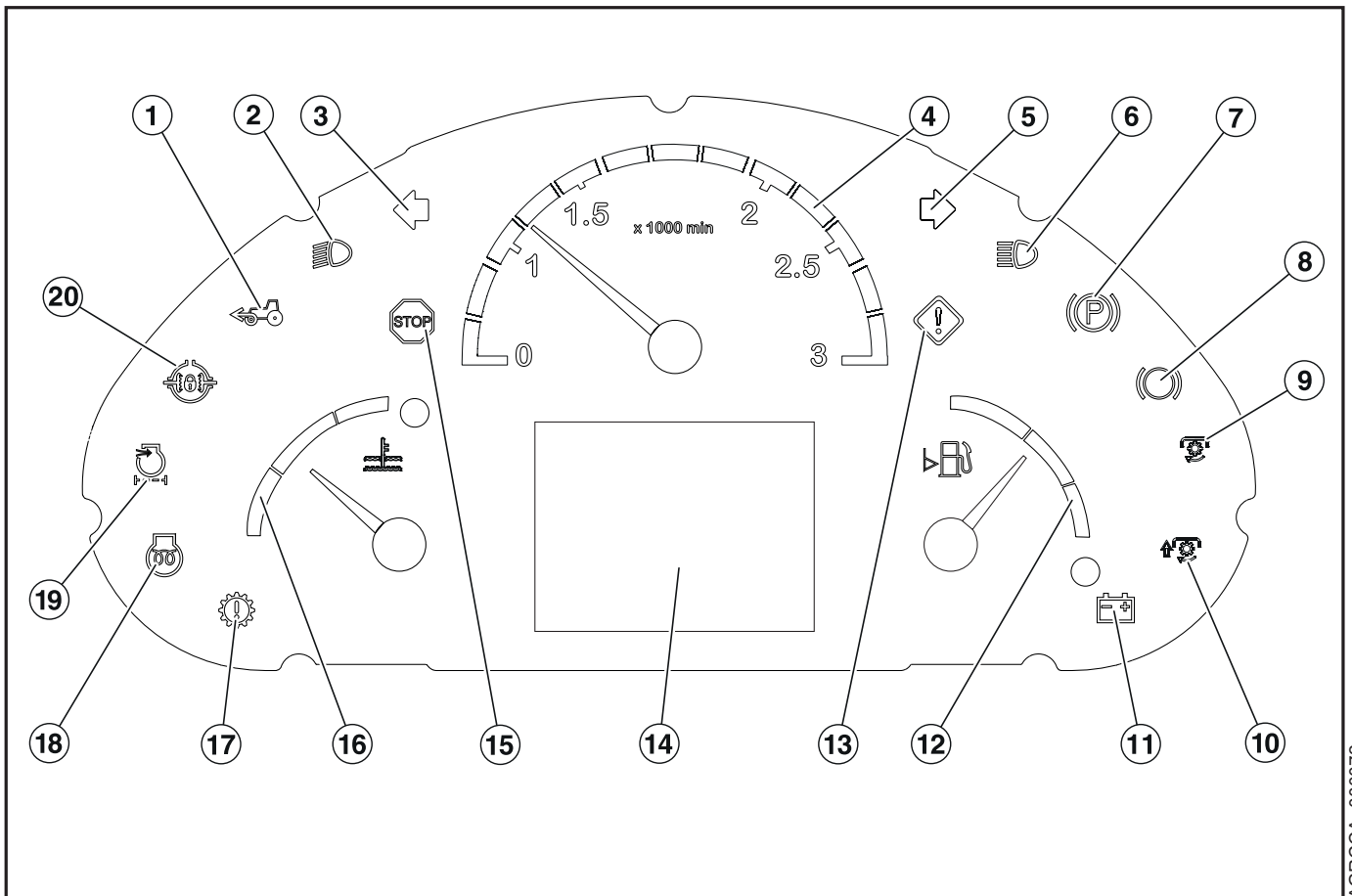
1.7 EXTERNAL CONTROLS



AGRSTV_C40009

1. PTO speed selection lever

1.8 INSTRUMENT PANEL



AGRCCA_000072

- | | |
|----------------------------------|---|
| 1. 4-wheel drive | 11. Battery |
| 2. Low beams | 12. Fuel level indicator |
| 3. LH side turn indicator | 13. Warning light indicator |
| 4. Rev counter | 14. Multifunction display |
| 5. RH side turn indicator | 15. Emergency stop indicator |
| 6. High beams | 16. Coolant temperature indicator |
| 7. Parking brake | 17. Transmission malfunction (power reverser) |
| 8. Oil brake level low indicator | 18. Preheating |
| 9. Rear power take-off | 19. Air filter clogged |
| 10. Front power take-off | 20. Differential lock |



5 OPERATING INSTRUCTIONS

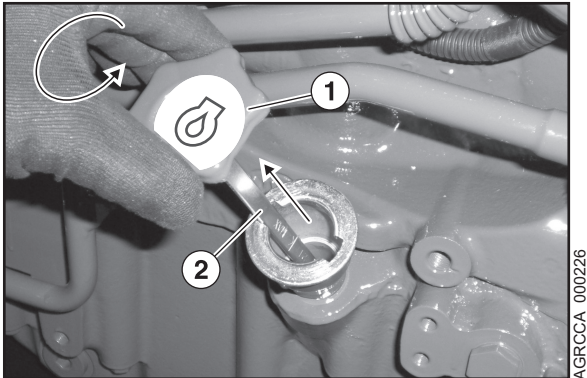
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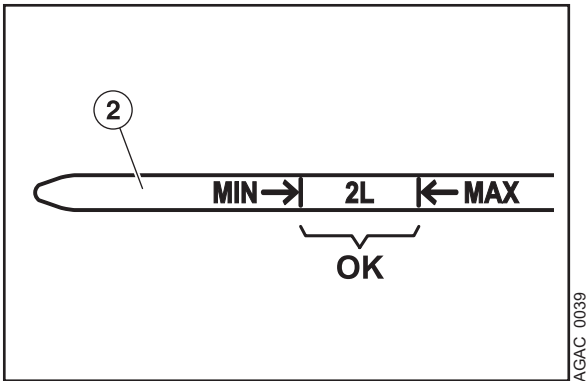
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5.1 INSPECTIONS AND PRELIMINARY CHECKS BEFORE STARTING

5.1.1 CHECK ENGINE OIL LEVEL



AGRCA_000226



AGAC_0039

- Turn the cap (1) with dipstick (2) and remove it.
- Clean the dipstick (2) with a clean cloth
- Reinsert the cap (1) with dipstick (2)
- Re-pull the dipstick (2) and check the engine lubricating oil level.

The engine lubricating oil level must always be between the MIN and MAX notches.

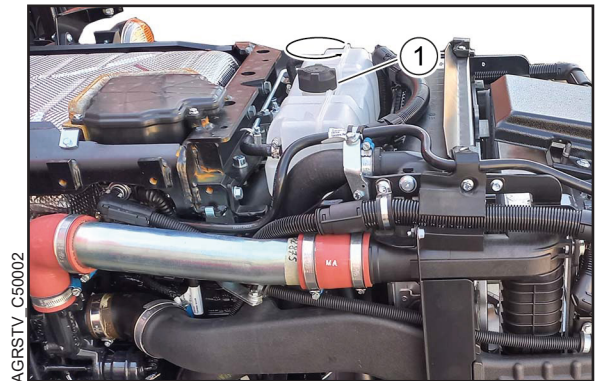
Do not start the engine if the oil level is below the minimum allowed. In this case, top up by using suitable oil until the correct level is reached.

5.1.2 CHECK COOLANT LEVEL



AGRSTV C50001

2.85 models



AGRSTV C50002

2.95 and 2.105 models

Coolant normal level is between MIN and MAX level. If level is below minimum allowed, top up using a recommended coolant in the lubricants chart of this manual. Slowly pour coolant.



CAUTION:

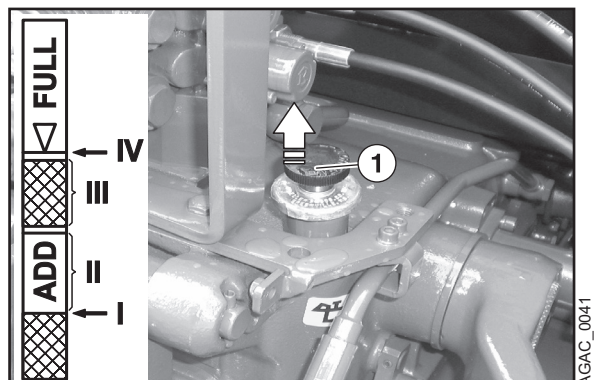
Before removing the cap (1) of the coolant reservoir stop the engine and let system cool down. Slowly remove the cap (1) only when coolant has cooled down.

IMPORTANT: Coolant normal level is 25 mm (0.98 in) below the cap. If level is below minimum allowed, top up using a suitable coolant. Slowly pour coolant.

IMPORTANT: Do not use cold water inside a warm engine. Do not use water only as coolant since it could create corrosion damage.

IMPORTANT: Do not start engine if coolant level is below minimum level allowed.

5.1.3 CHECK TRANSMISSION OIL LEVEL



AGAC_0041

Remove dipstick (1), carefully clean and put it back fully in. Take it out again and check oil level:

I = minimum level, top up before starting engine.

II = top up as soon as possible

III = normal level of use

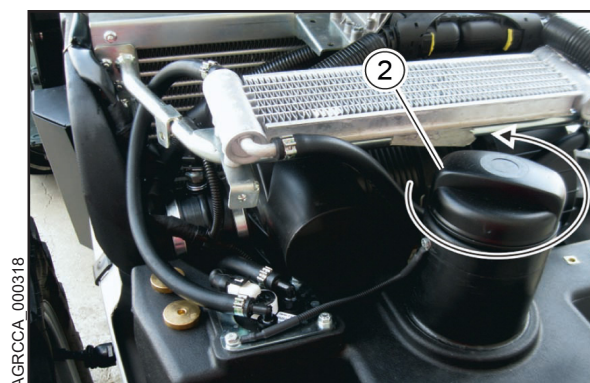
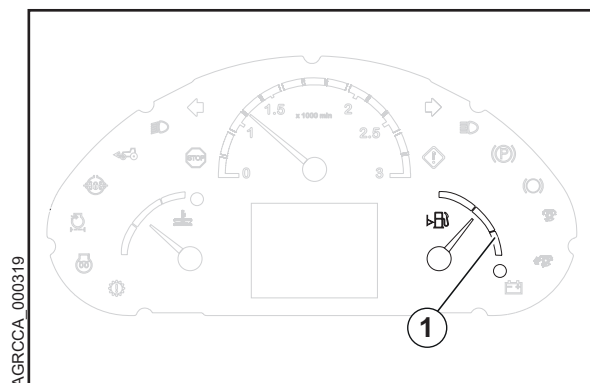
IV = maximum level

Do not start engine if oil level is below minimum level allowed. In this case, top up using suitable oil until reaching correct level. (See LUBRICANTS CHART, paragraph 8.1)

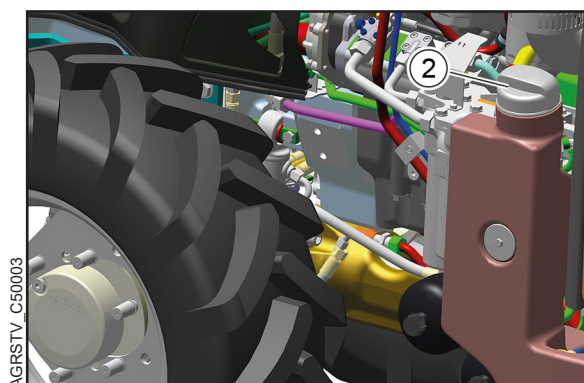
CAUTION: Failure to follow the instructions for checking oil level could lead to loss of the safety features and in some cases to serious damage to transmission.

IMPORTANT: Oil level shall never be below position (i) on dipstick. When using equipment requiring a great quantity of hydraulic oil for operation, first top up transmission oil so as to reach level (iv) on dipstick. Failure to comply with these provisions could in some cases cause serious damage to transmission.

5.1.4 CHECK FUEL LEVEL



2.85 models



2.95 and 2.105 Roll Bar models



2.95 and 2.105 Cab models

The indicator (1) on instrument panel indicates fuel level in the tank. Avoid running with empty tank since in that case it would be necessary to bleed the fuel system. Remove cap (2) and top up fuel. The operation shall be performed with engine off and taking appropriate precautions in order to avoid that any debris enter the fuel injection system.

Stick to the following provisions:

- A - let fuel settle for at least 24 hours before topping up so as to allow settling of any contaminants;
- B - do not fill tank with contaminated fuel;
- C - refuel using the suitable pump;
- D - carefully clean around filler neck;
- E - it is recommended to filter fuel when refuelling;
- F - do not overfill or spill fuel out.



CAUTION:
Refuel with engine off.



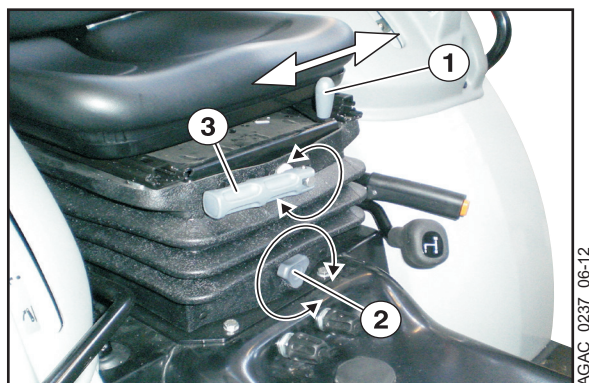
CAUTION:
Do not smoke while refuelling and keep away from sparks or flames.



CAUTION:
To avoid any fire hazard, eliminate any build-up of grease or dirt. E)
Check tyre pressure

Tyres long life and satisfying performance depend on their correct inflation. Too low a pressure causes early wear. Too high a pressure reduces grip and increases risk of skidding. A correct tyre pressure not only depends on tractor model, tyre size and manufacturer, but also on working conditions. It may be necessary to adjust pressure under special conditions. (See TYRE INFLATION PRESSURE)

5.1.5 ADJUSTING SEAT (MECHANICAL SUSPENSION)



Longitudinal adjustment

It is possible to adjust seat for persons of various height. Adjust seat to correct distance from pedals and steering wheel.

Operate lever (1) to release the seat. Move the seat forward or backward into the desired position. Once you have reached the desired position, let go of lever (1) and make sure that the seat is locked in position.

Height adjustment

To adjust seat height, loosen manual knob (2) and grab seat across seat part and back. When seat is at desired height, tighten manual knob (2).

Turn adjuster knob (3) to adjust seat according to operator's weight. Notches with weight indication are suggested settings for the seat suspension system to rely on the whole vertical travel available.

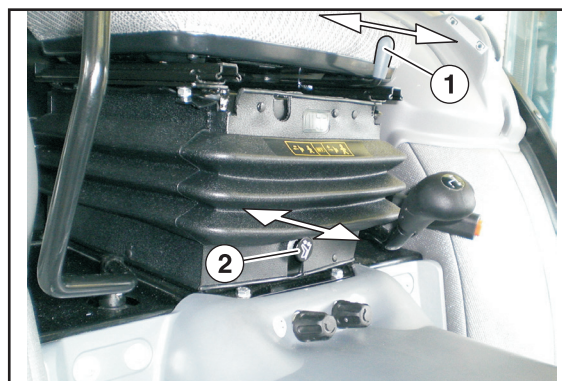


CAUTION:
Do not adjust seat while driving.



CAUTION:
After adjustment, the seat should remain in the setted position.

5.1.6 ADJUSTING SEAT (PNEUMATIC SUSPENSION)



Longitudinal adjustment

Operate lever (1) to release the seat. Move the seat forward or backward into the desired position. Once you have reached the desired position, let go of lever (1) and make sure that the seat is locked in position. Adjust seat position to a suitable distance from pedals and steering wheel.

Height adjustment

Activate the adjuster button (2) to adjust seat height. Press button (2) to lift the seat. Pull button (2) to lower the seat.



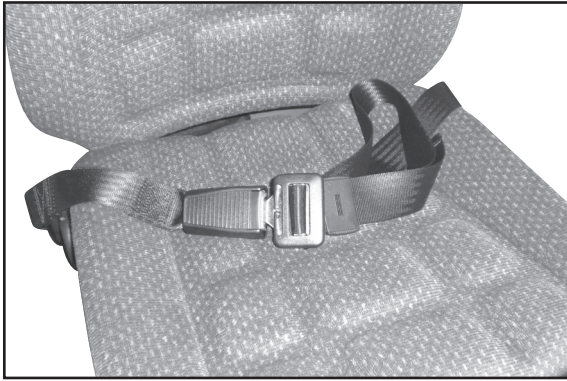
CAUTION:
Do not adjust seat while driving.



CAUTION:
After adjustment, the seat should remain in the setted position.

5.1.7 SEAT BELT





AGAC_0048



CAUTION: Using the safety belt is mandatory. Safety belt use is governed by the road rules. Comply with the country road rules.



CAUTION: Do not fasten the safety belts with the roll bar down (no cab version).



CAUTION: Always fasten the safety belts when working with the roll bar in vertical position and locked or a cab to minimise injury hazard due to an accident such as tipping over.

5.2 STEERING WHEEL

5.2.1 ADJUSTING TELESCOPIC AND TILTABLE STEERING COLUMN

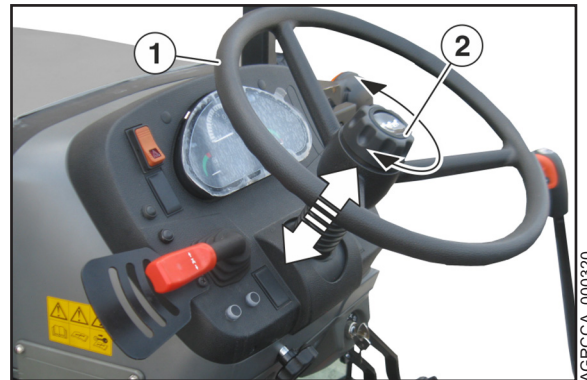


CAUTION: Do not adjust the position of the steering wheel while the vehicle is in motion. The tractor could move unexpectedly.

Adjust the position of the steering wheel (1) as follows:

- turn the knob (2) counter-clockwise to unlock the steering wheel.
- positioning the steering wheel to the desired height.
- turn the knob (2) clockwise to lock the steering wheel at the desired height.

NOTE: Make sure the steering wheel has been securely locked before driving.

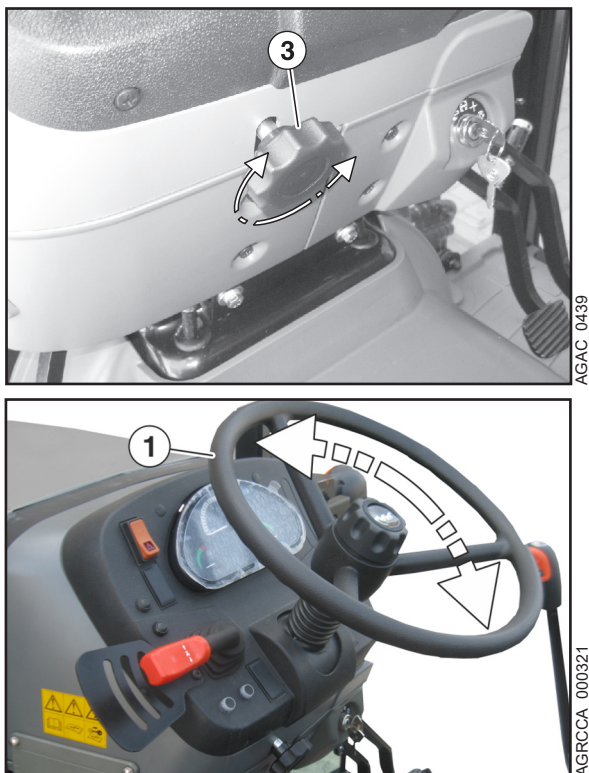


AGRCCA_000320

It is possible to adjust the steering wheel angle (1) as follows:

- turn the knob (3) counter-clockwise to unlock the steering wheel.
- positioning the steering wheel to the desired angle.
- turn the knob (3) clockwise to lock the steering wheel at the desired angle.

NOTE: Make sure the steering wheel has been securely locked before driving.



5.3 STARTING THE ENGINE



CAUTION: Carefully read and understand the section "safe starting" of this manual. Your and bystanders' life could be in danger during tractor starting.



CAUTION: Start tractor only from the driving position.



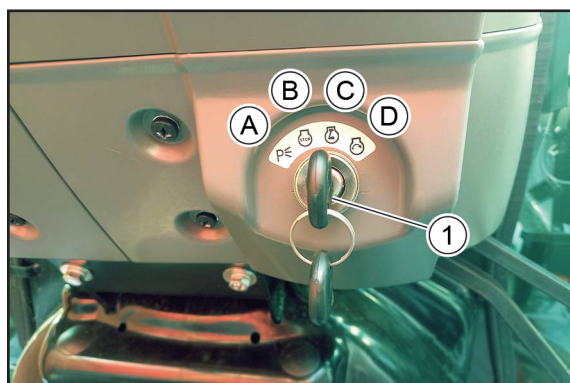
CAUTION: Start engine in a well-ventilated environment. Ensure there is appropriate ventilation if you have to work with engine running indoors.

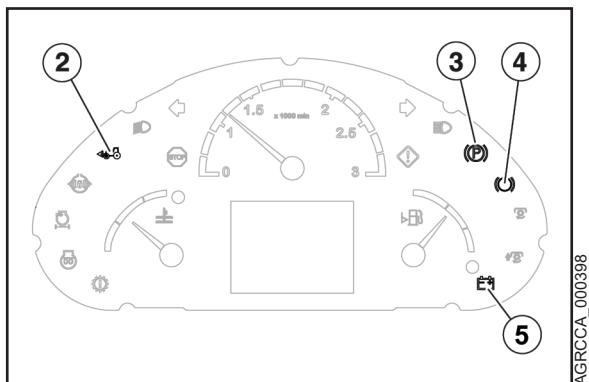


CAUTION: Do not short-circuit the battery.

- 1) Carry out daily maintenance as described in the relevant chapter of this manual.
- 2) Make sure there is enough fuel in the tank.
- 3) Pull the hand brake lever.
- 4) Position the gear shift lever in neutral.
- 5) Position the reverser lever in neutral.
- 6) Position the hi-lo lever in neutral (if any)
- 7) Position the hydraulic distributors levers in neutral.
- 8) Position the lift levers in down position (mechanical version)
- 9) Position the hand throttle lever at a medium speed (approx. one third of its travel).
- 10) Position the PTO speed selector lever to neutral.
- 11) Ensure the Power Take Off is not engaged (mechanical and hydraulic version).

5.3.1 CRANKING



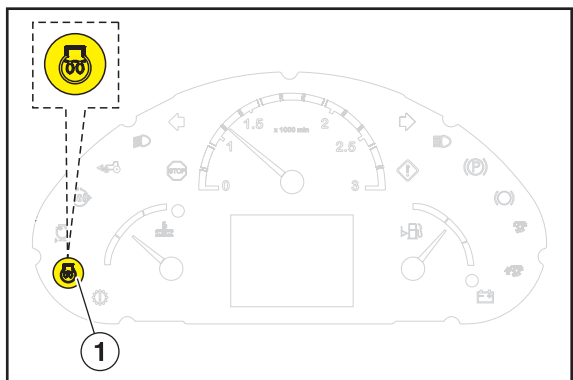


AGRCCA_000398

Turn the ignition key (1) to position (c).

When contact is established, system runs a test routine and warning lights (2), (3), (4) and (5) turn on for a few seconds.

If the warning lights do not turn on, check the protection fuse (see relevant section).



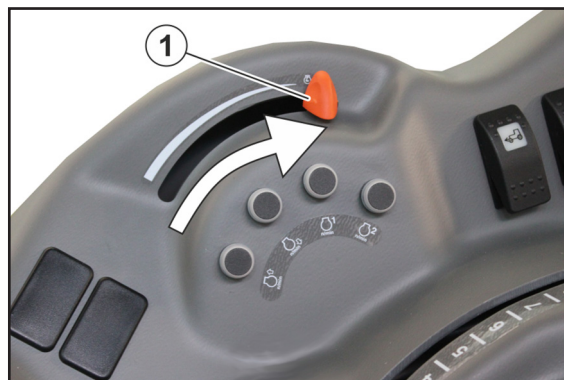
AGRCCA_000073

When engine temperature requires preheating, warning light (1) turns on. Allow for the light to go off before turning the key to ignition position. Release of the key when engine has started.

IMPORTANT: It is recommended to warm engine up for about ten minutes at a speed of 1200 rpm before using the tractor in any way, especially in winter.

IMPORTANT: In case of difficult starting, do not activate the ignition key for over 30 seconds. Allow 3 minutes then try again for a maximum of 30 seconds. Repeat this sequence for a maximum of 3 times. If problem persists, contact your authorised dealer.

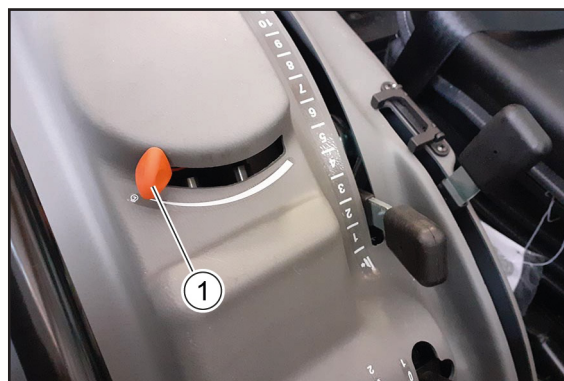
5.4 STOPPING ENGINE



AGRCCA_000322



AGRCCA_000323

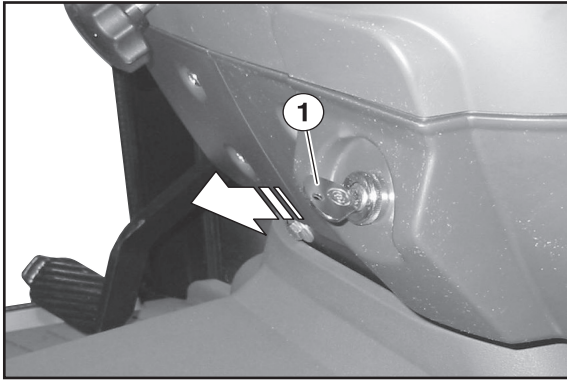


AGRSTV_C50104



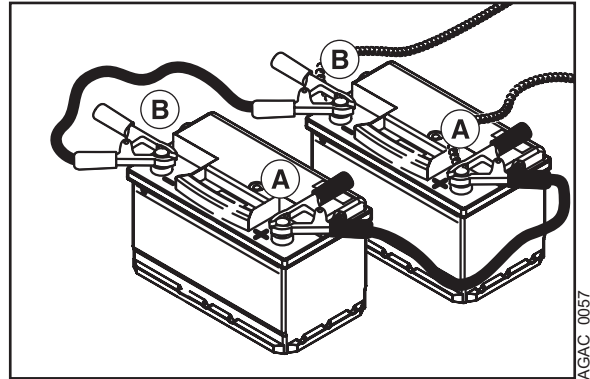
CAUTION: Move to the ground all connected equipment before stopping engine and leaving vehicle unattended.

1. Position the hand throttle lever (1) to low rpm. Let engine run at a low rpm for a few minutes.
2. Engage the hand brake.
3. Position the reverser lever in neutral.
4. Disengage the front and rear Power Take Off.
5. Stop machine motion.
6. Stop engine by taking ignition key (2) to the "B" position.



CAUTION: remove ignition key (1) to avoid that any untrained personnel could activate it.

5.5 STARTING WITH AN AUXILIARY BATTERY



Starting using an auxiliary battery not installed to another tractor.

IMPORTANT: Ensure to correctly connect battery terminals so as to prevent any short-circuit. Reversing polarity will damage the electric system. Always connect the positive pole cable (A) first, then the negative pole one (B).



CAUTION: The battery gives off extremely explosive gases. Keep batteries away from sparks and flames.

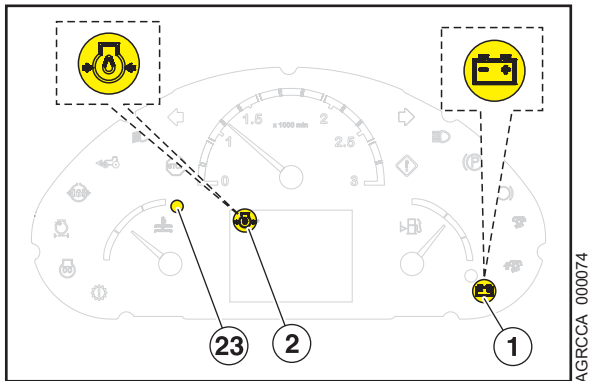


CAUTION: Handle the battery with care since it contains acid that shall not get in contact with eyes or skin. Wear protective gloves and goggles.

In case of accidental contact with the skin or eyes:

- A. Immediately rinse the skin.
- B. Wash your eyes with water for 15/30 minutes.
- C. Immediately seek specialist medical advice.

5.6 INSTRUMENT PANEL WITH ENGINE RUNNING



1. Generator
2. Engine oil pressure
23. Coolant temperature indicator

IMPORTANT: If warning lights (1) and (2) turn on upon engine starting, or the coolant temperature indicator (23) indicates a fault, stop engine and find trouble cause.

5.6.1 ENGINE OIL PRESSURE LIGHT

IMPORTANT: Never run engine with insufficient oil pressure. If light (2) comes on, immediately stop engine and check engine oil level. Top up engine oil. If the light stays on even with a normal oil level, contact your authorised dealer.

5.6.2 LOW LEVEL CHARGE ALTERNATOR LIGHT

The low level charge alternator light (1) turns on with low generator output voltage. The light should turn on when key is turned to starting position and turn off once engine has started. If light (1) stays on, stop engine and check generator belt tension and conditions. If these are fine and problem persists, contact your authorised dealer.

5.6.3 COOLANT TEMPERATURE INDICATOR

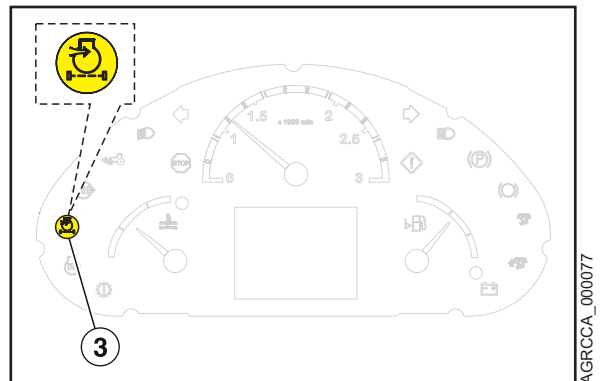
If this temperature indicator reaches the red area, the warning light (23) turns on. In this case, immediately stop engine and carry out the following checks:

- A. Check coolant level in radiator (6.5.2 - Check the coolant level).
- B. Check that grille, radiator and its shield are not clogged (6.5.4 - Clean the radiator and the radiator grilles) (6.5.5 - Clean the hood grilles)
- C. Check fan belt tension (6.5.7 - Check the engine alternator and water

pump belt tension)

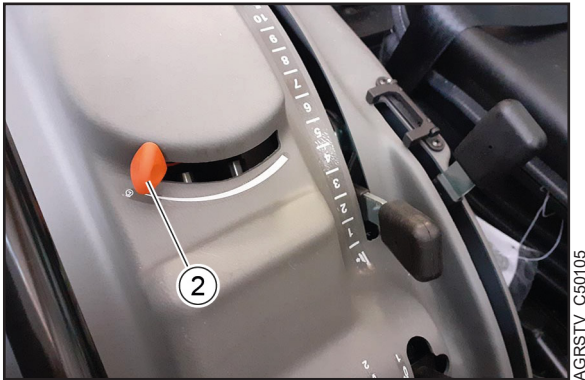
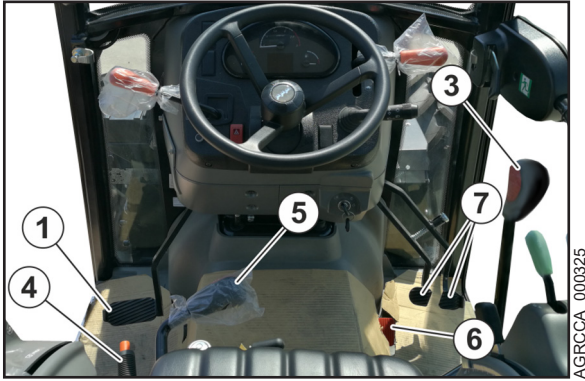
If problem persists, contact your authorised dealer.

5.6.4 AIR FILTER CLOGGED LIGHT:



The air filter clogged light (3) turns on if air filter is clogged. Clean or change the filtering elements as soon as possible.

5.7 STARTING AND STOPPING THE TRACTOR



5.7.1 STARTING THE TRACTOR

Press the clutch pedal (1) and engage the suitable gear and range. Should there be any problem in engaging the gear and range, release the clutch, press again clutch pedal (1) and engage the gear and the range.

Adjust hand throttle position (2) to set ground speed in selected gear and range.



CAUTION: Do not use the hand throttle when driving the tractor on public roads.

IMPORTANT: Set hand throttle to idle position (approx. 1200 rpm) and let engine idle for two-three minutes before starting any heavy-duty work operations.



5.7.2 STOPPING THE TRACTOR:

Set hand throttle lever (2) to idle.

Press the clutch pedal (1) and both brake pedals (7).

Set gear shift lever (3) to neutral.

With tractor stopped, release the clutch pedal (1) and pull the parking brake (4).



CAUTION: Do not use the hand throttle when driving the tractor on public roads.

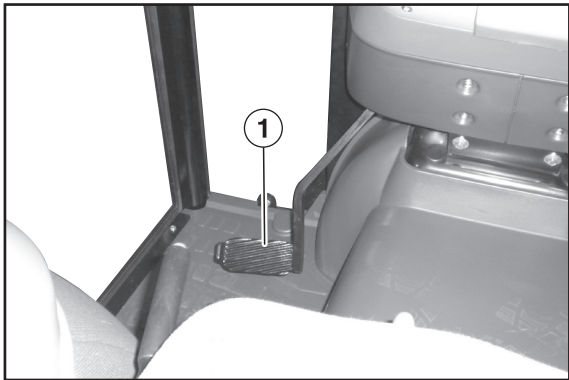
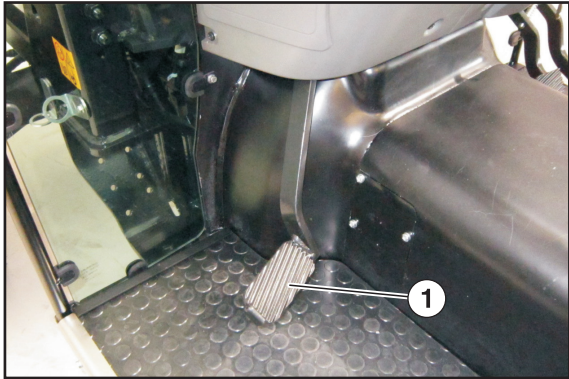


CAUTION: Move to the ground all connected equipment before stopping engine and leaving vehicle unattended.



CAUTION: Remove key from main switch to avoid that any untrained personnel could activate it.

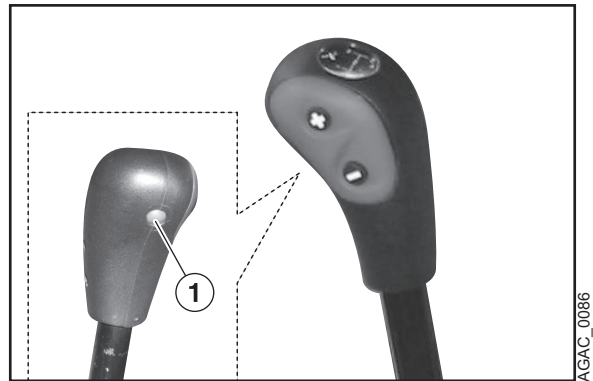
5.8 USING THE CLUTCH PEDAL



The clutch pedal (1) is used temporarily to disengage the motion when changing speed. Use the clutch pedal when moving the tractor over short distances. Use the clutch pedal to start the tractor from the parking position: slowly and gently release the clutch pedal to ensure a smooth start. The clutch pedal (1) also allows accurate control of the tractor when attaching an implement.

IMPORTANT: It is recommended to fully engage clutch since excessive slipping could lead to early wear.

5.9 USING CLUTCH ENGAGEMENT/ DISENGAGEMENT SWITCH (IF ANY)



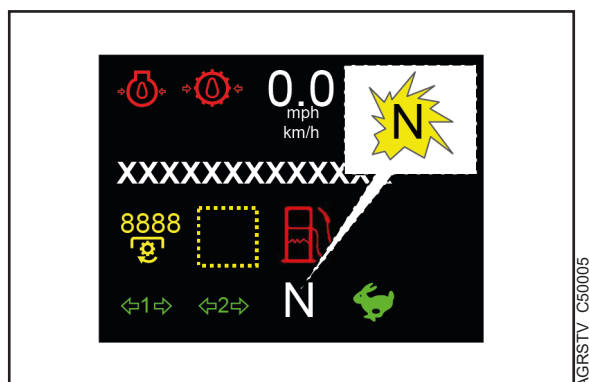
Pressing button (1) disengages the hydraulic clutch of the transmission. With button (1) pressed and held down, select the desired gear. Releasing the button engages the clutch.

5.10 DRIVERS' PRESENCE SENSOR (POWER REVERSER VERSION)

The tractor with Power Reverser transmission is equipped with a security system under the seat that detects the presence of a driver and inhibits all manoeuvres in case of absence.

The presence sensor **DOES NOT** inhibit engine ignition.

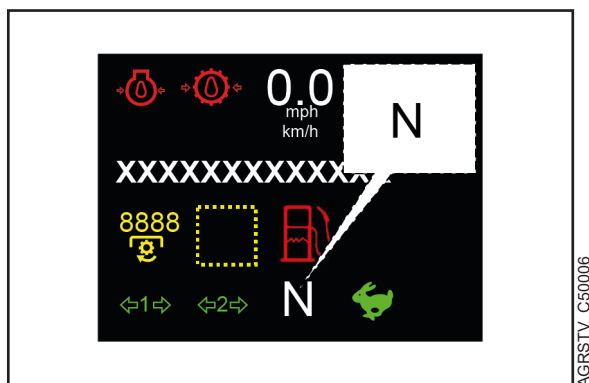
While driving, in case of driver's weight absence for over 3 seconds, tractor motion is stopped, transmission is set in neutral and "N" on the display flashes.



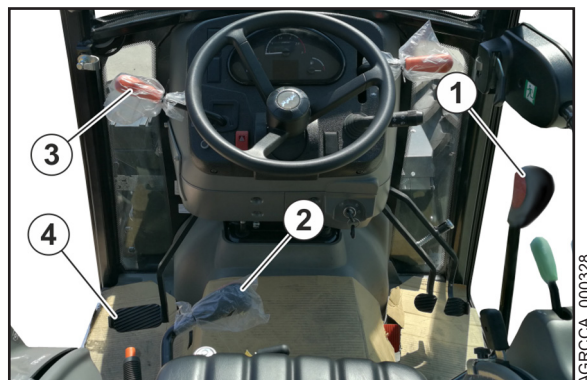
5.10.1 THE ENGINE CONTINUES TO RUN

To restore normal conditions, proceed as follows:

- occupy the normal driving position on the seat.
- place lever in neutral position "N"



5.11 USING THE GEAR SHIFT LEVER

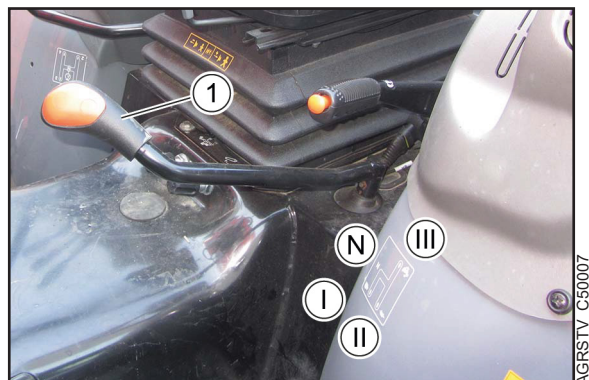


Gear selection is actuated through lever (1) located on the right-hand side of driver's position.

Before moving the range shift lever (2) and travel direction lever (3), press clutch pedal (4) and stop tractor. To prevent any transmission damage, do not change range when tractor is moving.

Before moving the gear shift lever (1), press clutch pedal (4). Gears can be selected with tractor moving.

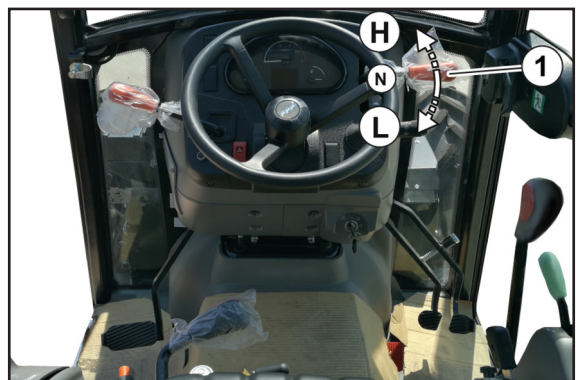
5.12 USING THE RANGE SHIFT LEVER



Range selection through lever (1) shall be carried out with the tractor at a standstill. For this purpose, press the clutch pedal, select desired range then gradually release clutch pedal to progressively apply load without creating any problem. Range shift lever (1) provides four positions:

- (N) = neutral
- (I) = slow
- (II) = medium
- (III) = fast

5.13 USING THE MECHANICAL HI-LO CONTROL LEVER (IF ANY)



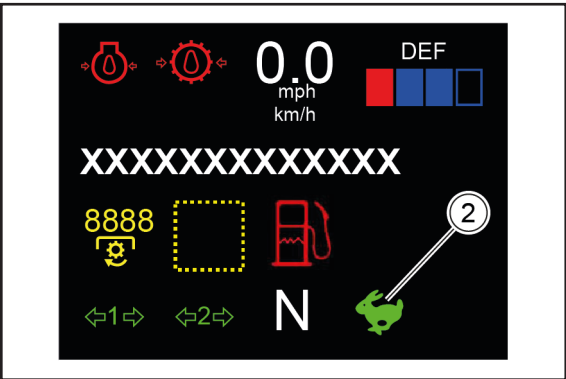
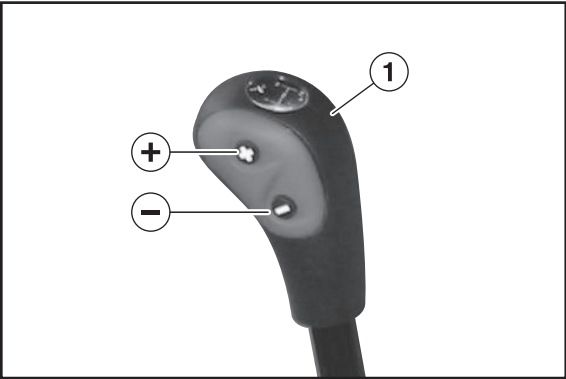
The lever controlling the mechanical hi-lo (1) offers two more range speeds. Its main function is to decrease or increase travel speed during operation or transport.

Before moving the mechanical hi-lo control shift lever (1), press clutch pedal. The mechanical hi-lo control could be shifted when tractor is moving. Then gradually release the clutch pedal to apply load without problem.

The mechanical hi-lo control lever provides three positions:

- (N) = neutral
- (H) = fast range (rabbit)
- (L) = slow range (turtle)

5.14 USING THE HYDRAULIC HI-LO CONTROL LEVER (IF ANY)



The lever controlling the hydraulic hi-lo (1) offers two more range speeds. Its main function is to decrease or increase travel speed during operation or transport.

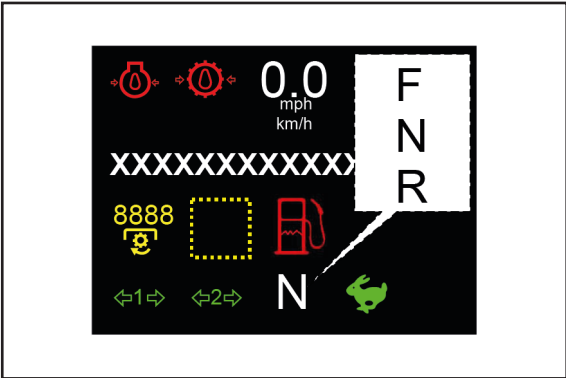
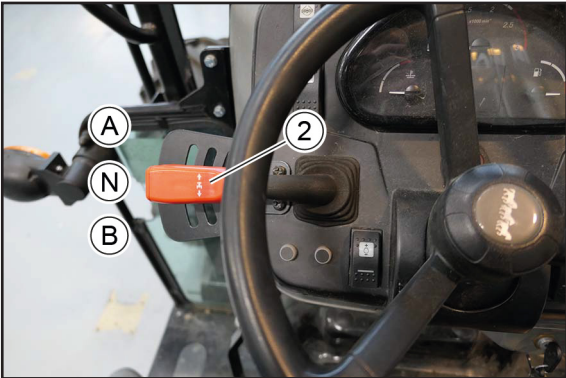
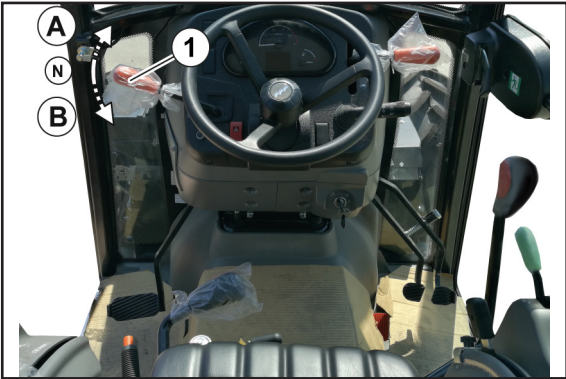
Hi-lo modes can be selected during operation, with no need to press clutch pedal and under load conditions by means of buttons (+) and (-) located on gear shift lever knob (1). Press buttons (+) or (-) to select the following modes, respectively:

- (+) = fast range
- (-) = slow range

IMPORTANT: When starting the engine, the slow range is selected by default.

When the fast range is selected (+) the relative viewing in the central display (2) turns on. When the slow range is selected (-) the relative viewing in the central display (2) turns off.

5.15 USING THE GEAR POWER REVERSER LEVER



Vehicle travel direction is selected through lever (1) on tractors with mechanical transmission, or through lever (2) on tractors with power reverser. Power reverse lever provides three positions:

- (N) = neutral
- (F) = forward direction
- (R) = reverse direction

5.15.1 MECHANICAL VERSION

Press and hold the clutch pedal and move the lever (1) from the neutral position to the forward to reverse gear to select reverse gear.

5.15.2 POWER REVERSER VERSION

The power reverser lever (2) can work even without pressing the clutch pedal. It is possible to reverse the travel direction by directly passing from position (A) to position (B) and vice versa.

When lever (2) is in neutral position, the warning light "N" on the display is on.

IMPORTANT: Reverse only if travel speed is below 10 kph (6.21 mph).

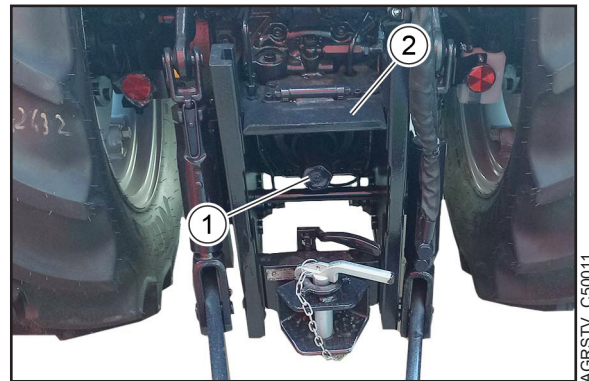
NOTE: In case of standing start, for manoeuvres requiring a short response time or when towing heavy loads, use the clutch pedal rather than simply using the power reverser lever to engage the clutch. The occupancy sensor (if any) under the seat is a safety device inhibiting all movements if driver is not sitting on the seat. If sensor detects no driver, the warning light "n" on the display will flash (with reverser lever set to neutral).



CAUTION: On tractors with power reverser, always engage the parking brake before restarting the tractor or the tractor could slightly move even if the travel direction lever is set to neutral.

5.16 REAR POWER TAKE OFF

5.16.1 POWER TAKE OFF PROTECTION



CAUTION: Remove the protection cap (1) only when you need to use the PTO. Refit cap (1) as soon as you remove the equipment controlled by the PTO.

Protection (2) can be raised when connecting certain equipment to the PTO, but shall be immediately repositioned as soon as equipment has been connected.



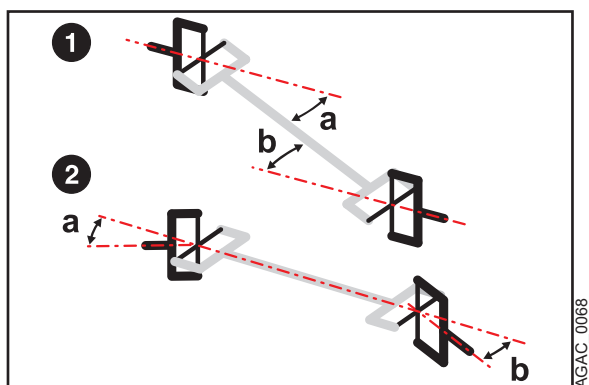
CAUTION: Do not activate the Power Take Off if main protection is not installed.



CAUTION: Verify the maximum articulation angle permitted by the cardan command shaft before using power take off. During functioning, the power take off cover and the cardan command shaft shall not be in contact. This is really important in tight curves. With type 3 power take off [45mm diameter (1.772 in.) - 20 splines], the free space in the PTO cover area could be limited. Keep this feature in mind during functioning to prevent avoidable damages. Use safety gloves when connecting the power take off.

NOTE: AGRICUBE PRO tractors are equipped with type 1 PTO [35mm diameter (1.378 in.) - 6 splines]

IMPORTANT: The technically possible inclination of the cardan shaft depends from the shape and the dimensions of the protecting shield and/or the free area around cardan shaft.



5.16.2 OPERATING INSTRUCTIONS

As far as possible, cardan joints angle (a) and (b) shall be the same at both ends of cardan shaft.

NOTE: The two schematics do not show the driving shaft protections. Presence of a protection is essential when using a driving shaft.

IMPORTANT: When using a “plug-in” driving shaft, it is necessary to align the forks at the ends of the intermediate shaft.

5.16.3 USING THE POWER TAKE OFF



CAUTION: All protection devices must be in place before engaging the Power Take Off.



CAUTION: Ensure nobody is standing in the dangerous area between tractor and equipment.



CAUTION: Keep away, at a safe distance from the cardan shaft connecting tractor to equipment.



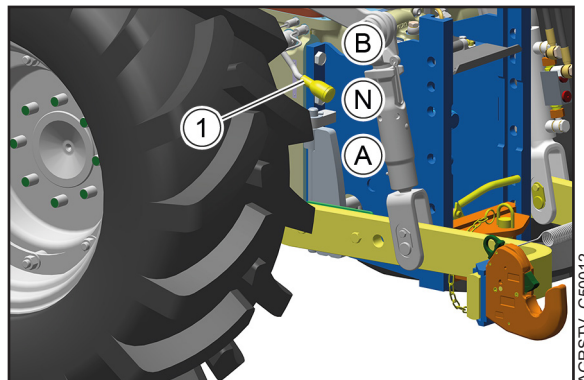
CAUTION: When disengaging the Power Take Off, equipment featuring high inertia will not stop immediately. Do not move close to equipment while decelerating. Do not work on equipment if still moving.



CAUTION: Ensure Power Take Off speed and direction of rotation are compatible with the ones of equipment to be connected.

Ensure the proportional PTO mode selector lever (3) located on the left-hand fender is in position (C) (independent Power Take Off operation).

5.17 SELECTING REAR POWER TAKE OFF SPEED



Rear Power Take Off speed selector lever (1) is located at the rear side of tractor, on the left-hand side.

Rear Power Take Off speed selector lever (1) provides three positions:

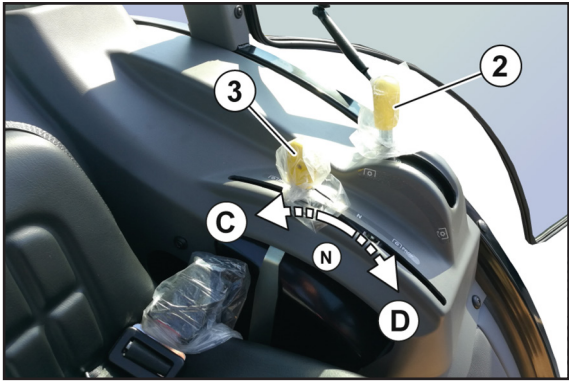
N = neutral

A = 540 rpm

B = 540E or 1000 rpm (depending on configuration)

IMPORTANT: Rear Power Take Off speed selector lever shall be used only when no equipment is connected to the PTO.

5.18 SELECTING SPEED OF POWER TAKE OFF PROPORTIONAL TO GROUND SPEED



N = neutral (only for mechanical version)
D = speed proportional to ground speed
C = independent operation

Selector lever (3) located on the left hand side of the operator's platform allows you to choose the type of operation of the Power Take Off, then to switch from a neutral position (N) to an independent operational position (C) or proportional to the forward speed of the tractor (D). For this last operation the tractor advance must be stopped.

NOTE: with electro-hydraulic PTO control, lever (3) can be setted in (C) and (D) positions, but not in the intermediate one (N)

In the independent PTO mode the speed of the PTO depends directly on the engine RPM.

In the speed proportional to ground speed mode, the speed of the PTO depends on the rotation of the rear wheels.

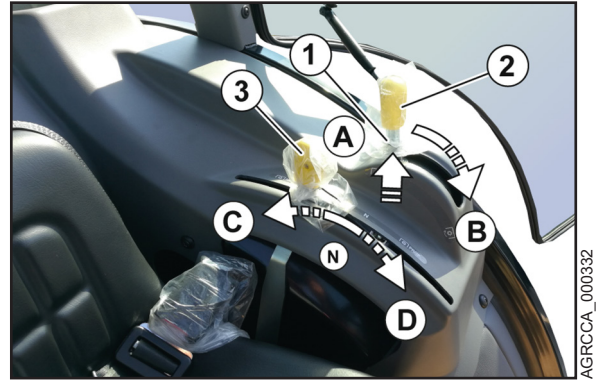
IMPORTANT: To selected the speed proportional to ground speed mode the tractor must be stationary.

If the PTO proportional to vehicle ground speed mode is active (lever 3 in position D), the PTO engagement lever (2) has no effect.



CAUTION: Even if Power Take Off engagement lever (2) is in disengaged position, the rear Power Take Off will turn when tractor moves.

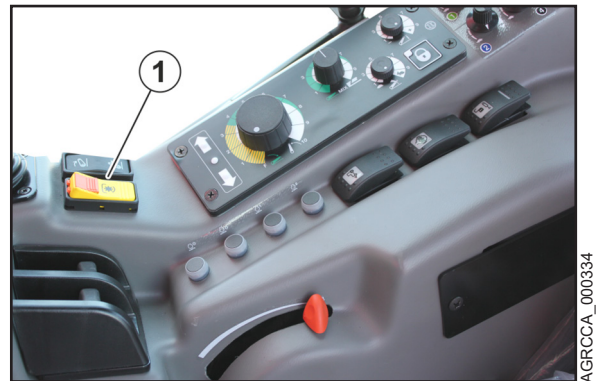
5.18.1 MECHANICAL-CONTROL POWER TAKE OFF



With engine at idle speed, pull collar (1) at the base of knob (2) to release the Power Take Off engagement lever. Move lever (2) forward to engage the Power Take Off and guide it in place to desired position. Release collar (1). Pull lever (2) back to disengage the Power Take Off.

Position A = PTO disengaged
 Position B = PTO engaged

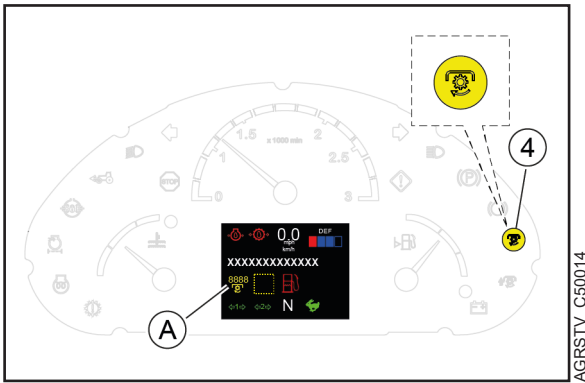
5.18.2 ELECTRO-HYDRAULIC-CONTROL POWER TAKE OFF



Electro-hydraulic engagement of the Power Take Off is obtained through button (1).

To engage the Power Take Off, with engine at idle speed, push button (1). To disengage the Power Take Off, push button (1).

5.18.3 PTO ENGAGEMENT VIEWING



The rear Power Take Off warning light (4) turns on when Power Take Off is engaged. The multifunction display reads the rear Power Take Off speed (A).



CAUTION: Turn key to off to stop engine and ensure that all mechanisms have stopped before cleaning the machine or adjusting the equipment driven by the Power Take Off.

On the multifunction display, when PTO proportional to vehicle ground speed is engaged the relevant "GND" indicator turns ON.

5.18.4 FEATURES

Power Take Off rated speed
540
540E
1000

Engine speed (rpm)
1940
1650
1960

Ratio between PTO speed and engine speed:	
540	3,6
540E	3
1000	1,9

5.19 ATTACHING THE EQUIPMENT DRIVEN BY THE POWER TAKE OFF



CAUTION: Before connecting any equipment driven by the Power Take Off, stop engine, remove ignition key, pull hand brake and disengage Power Take Off.



CAUTION: When disengaging the Power Take Off by shifting control lever, equipment featuring a great inertia will not stop immediately. Do not move close to equipment while decelerating. Do not work on equipment if still moving.



CAUTION: Do not connect, disconnect or adjust Power Take Off with engine running.

Take ignition key to off position so as to stop engine.

Secure equipment to tractor before connecting the transmission shaft to Power Take Off.

If not used, the three-point hitch shall be locked upward.

With the aim of obtaining a larger space for manoeuvres, the PTO protection could be temporarily shifted up.

With engine off, slightly turn shafts by hand, if necessary, to align the splines.

Connect transmission shaft with the corresponding cardan joint to Power Take Off shaft.

Pull shaft to ensure transmission shaft and its cardan joint are locked onto Power Take Off shaft.

Position the Power Take Off protection down.

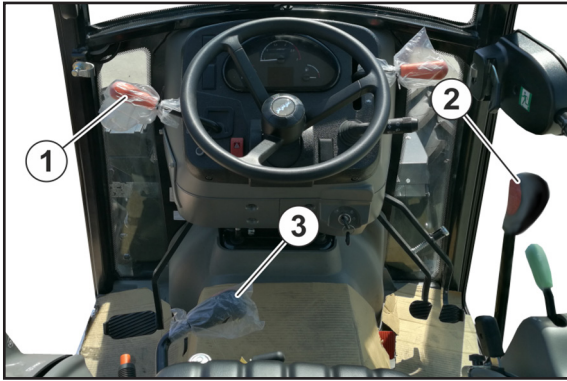
Make sure that all protections are in position and in good conditions.

Never activate the Power Take Off if main protection is not installed correctly.

With engine stopped, check integral protections on transmission shaft, making sure they turn freely on shaft. Lubricate or repair as needed.

Carefully check for interference, ensuring that the three-point hitch is locked upward when not in use.

5.20 POWER TAKE OFF CONDITION FOR STATIONARY WORKING



When carrying out stationary work, the following instructions must be respected:

- Position the tractor on flat, horizontal and stable ground.
- Apply the handbrake.
- Chock the tractor's wheels.
- Place the reverser lever (1) in neutral (mechanical or electro-hydraulic).
- Place the gear lever (2) in neutral.
- Place the range lever (3) in neutral.

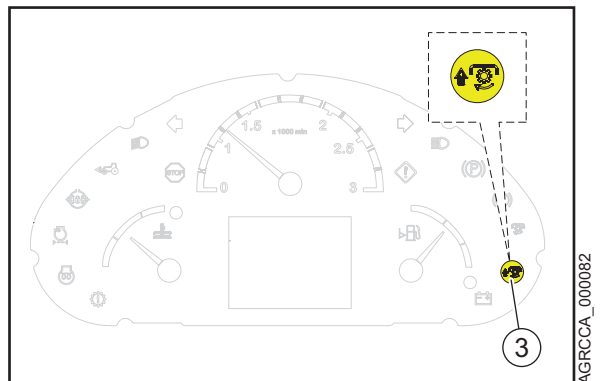
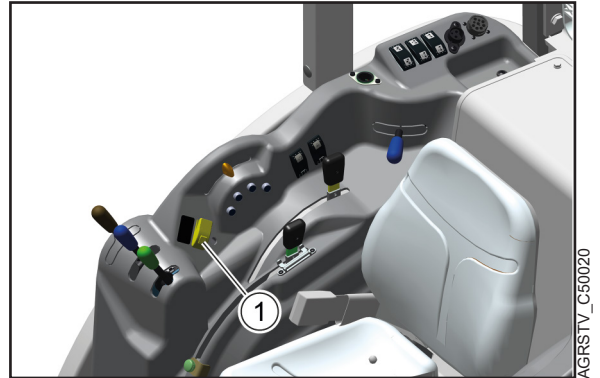
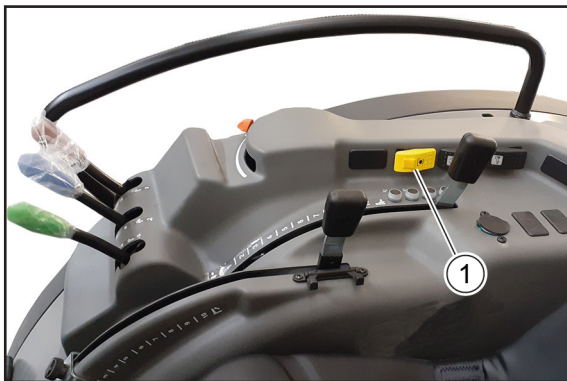
NOTICE: Automatic stoppage of the Power Take Off when the operator leaves the driver's seat and the Power Take Off is active. The buzzer is ON, also, for signal that the operator is not seat vehicle.

If stationary use requires the operator to leave the seat, the following operations must be carried out in addition to those described above:

- Engage the Power Take Off by lever or switch (mechanical or electro-hydraulic control).
- Leave the seat and within five seconds engage again the Power Take Off. The buzzer is OFF.

The Power Take Off remains engaged.

5.20.1 FRONT POWER TAKE OFF



5.20.2 FRONT POWER TAKE OFF ENGAGEMENT

The front Power Take Off is activated using the switch (1).

- Start the engine at idle speed.
- When engaging or stopping the front power take off, the engine speed must not exceed 1200 rpm.
- Press the switch (1).
- The indicator light (3) on the instrument panel comes on.
- The Power Take Off speed is displayed on central display.

NOTICE: Automatic stoppage of the Power Take Off when the operator leaves the driver's seat and the Power Take Off is active. The buzzer is ON for signal that the operator is not seat vehicle.

If stationary use requires the operator to leave the seat, the following operations must be carried out in addition to those described above:

- Engage the Power Take Off by switch (1).
- Leave the seat and within five seconds engage again the Power Take Off.

The Power Take Off remains engaged.



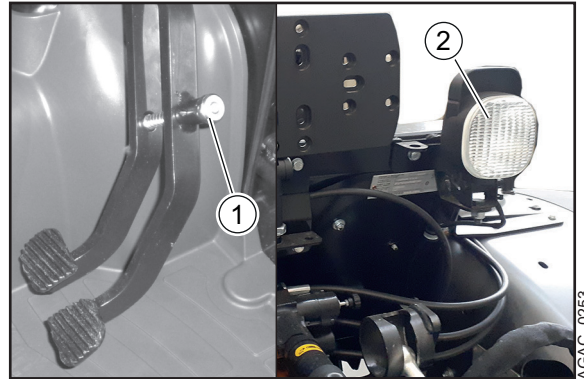
CAUTION: Danger of entrainment. Stay away from rotating shafts.

Be careful NOT to get caught by the PTO drive shaft. Always keep all guards mounted on the drive shafts of the tractor or implements.

- Do not wear loose clothing which could catch in moving parts.
- The engine must be stopped before coupling or uncoupling the implement's universal joint shaft.
- All protection devices must be in place before the Power Take Off is started.
- When repairing, adjusting or lubricating an implement in the field, always set the power take-off to neutral and stop the engine.
- Check that nobody is standing in the risk zone between the tractor and implement.
- When the Power Take Off is not being used, replace the protective cover.

Check that the speed and rotation direction of the tractor's Power Take Off match the speed and rotation direction accepted by the implement to be activated.

5.21 DRIVING TRACTOR ON PUBLIC ROADS



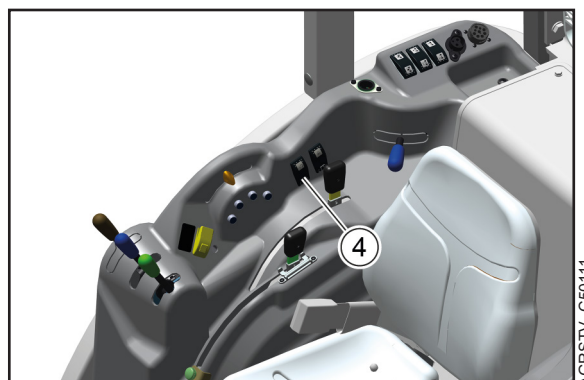
AGAC_0253



AGRSTV_C50016



AGRSTV_C50110



AGRSTV_C50111



surface.

- F) Keep differential lock not engaged.
- G) Drive at moderate speed to keep full control of the machine. Slow down to tackle slopes, bumpy surface and bends, especially if transporting heavy equipment and installed at the rear.
- H) Before going downhill, engage a lower gear to keep speed under control without using brakes. Do not drive downhill in neutral.
- I) When driving downhill and surface is covered with ice or gravel, pay ATTENTION to any skidding that could decrease steering control. To reduce likelihood of skidding, slow down and ensure tractor is suitably ballasted.
- J) Use utmost care when towing loads on bumpy surfaces and when braking or turning on slopes. Ensure track is wide enough to ensure perfect stability.



CAUTION: When driving tractor on the road use suitable lights and warning indications to warn other vehicles' operators of your vehicle's presence. Verify the applicable local rules. Keep safety equipment in good conditions. Replace any missing or damaged device.



CAUTION: Never activate the rear work light (2) during transport. A bright light at tractor back could create confusion in the drivers of other vehicles approaching behind you.



CAUTION: Before driving on public roads, couple brake pedals together using latch (1). Use brakes gradually and carefully at high speed.

- A) Couple brake pedals together using latch (1). Do not brake harshly. Decrease speed if towed load is heavier than tractor and has no brakes.
- B) Connect the electric connector of implement/trailer (if any) to tractor connector.
- C) Move the light switch (3) to the low beam or high beam front lamp position.
NEVER use working lights (2) (front and rear) for road traffic.
- D) Use the turn indicator when turning. Ensure to take turn indicator switch (3) back to central position after turning.
- E) Disengage 4-wheel drive using button (4) so as not to excessively wear out the front tyres on hard

5.22 DRIVING ON SLOPES

Solely operate with the roll over protection structure (ROPS) in vertical or extended position, whenever possible.

Avoid pressures, ditches and obstacles that could make tractor tip over, especially on slopes. Avoid hairpin bends uphill.

Do not drive vehicle close to the edge of canals or steep embankments since they could collapse.

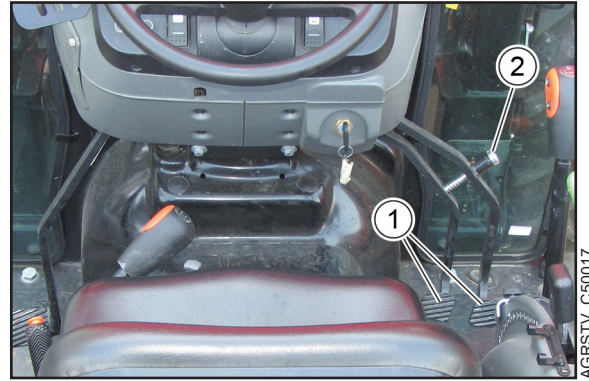
Driving forward to get out of a canal or muddy ground, or uphill on a steep slope, could make tractor tip back. Handle these situations in reverse, if possible.

Front-wheel drive considerably increases tractor's traction but does not enhance stability. With front-wheel drive engaged, the tractor can overcome steep slopes, but does not become steadier. When using this method, you shall be more careful on slopes. Compared to two-wheel drive, front-wheel drive keeps better grip on steeper slopes, yet increasing the likeliness of tipping over.

Risk of tipping over considerably increases at high speed, when track is set to narrow.

Tow loads only by means of the drawbar. If using a chain, slowly compensate for its slack.

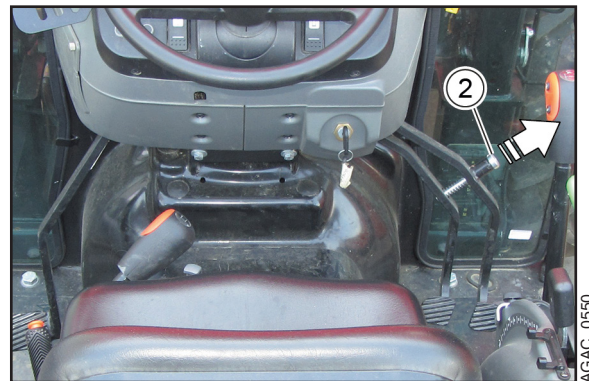
5.23 USING BRAKES



The brake pedals (1) are coupled by means of latch (2), this is why they can be pressed together (when driving on public roads).

To stop tractor, press both brake pedals.

Use brake pedals with no latch only in hairpin bends so as to assist steering (driving on field).



To uncouple pedals, pull and turn latch (2).



CAUTION: Before driving on public roads, couple brake pedals together using latch (2). Use brake gently and carefully according to transport speed.



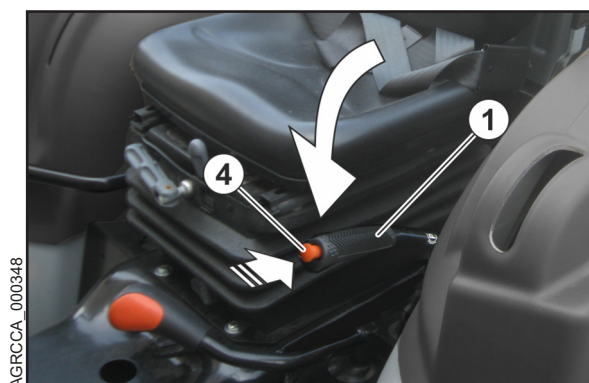
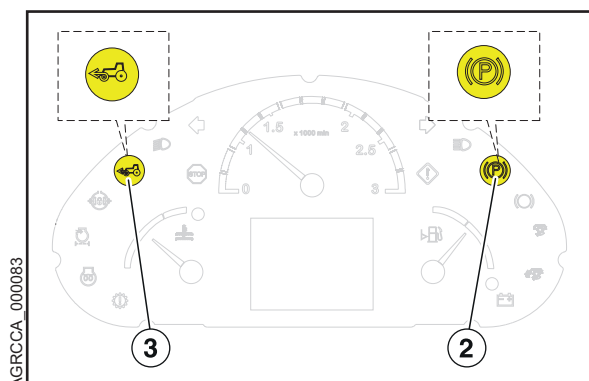
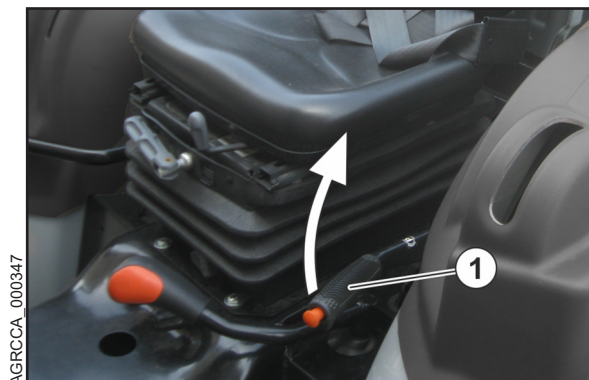
CAUTION: Check braking efficiency before moving. Comply with the safety distance according to load and speed.



CAUTION: Should you need to leave the driver's seat with engine running, comply with the following provisions:

- A) Engage the hand brake
- B) Set hand throttle lever to idle.
- C) Position the reverser lever in neutral.
- D) Position the transmission in neutral.

5.24 USING THE PARKING BRAKE



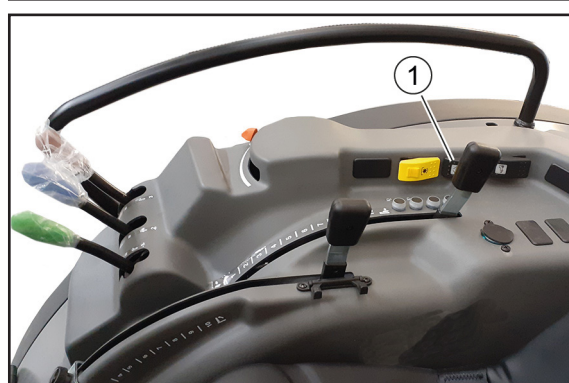
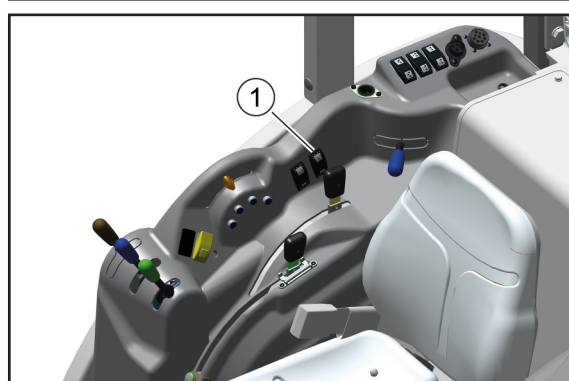
To engage parking brake, pull hand brake lever (1) up. Lever will remain locked in up position and warning lights (2) and (3) on instrument panel will turn on at the same time.

To disengage parking brake, press release button (4) and lower lever (1). Warning lights (2) and (3) on instrument panel will turn off.

NOTE: If driving with parking brake (1) not correctly disengaged, the warning lights (2) and (3) on instrument panel will remain on.

NOTE: Parking brake engagement provokes 4-wheel drive engagement so that all wheels will be braking.

Differential lock

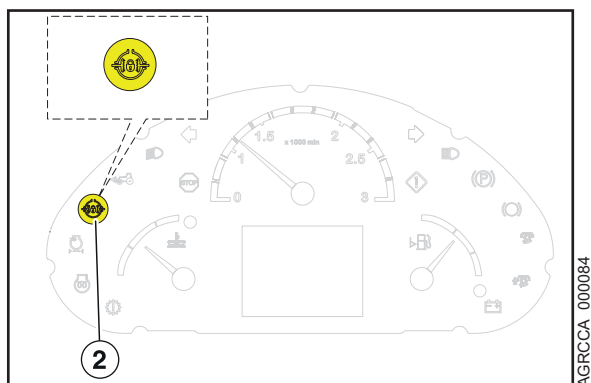


When a wheel starts to lose grip, engage differential lock by means of switch (1).

Decrease speed and press switch (1), differential stays locked until switch (1) is pressed again.

To release differential lock press the brake pedal.

Differential lock activation is indicated by the warning light (2) on instrument panel turning on.



CAUTION: Do not drive tractor at high speed or try to turn with differential locked.

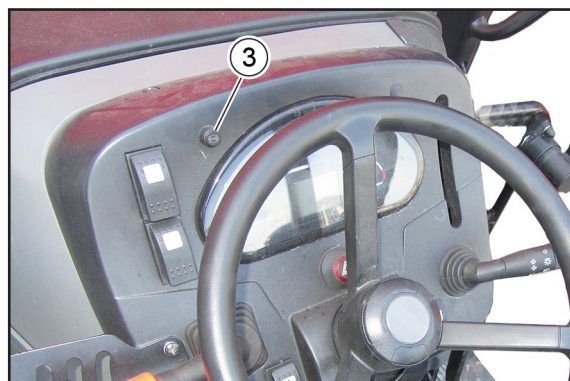
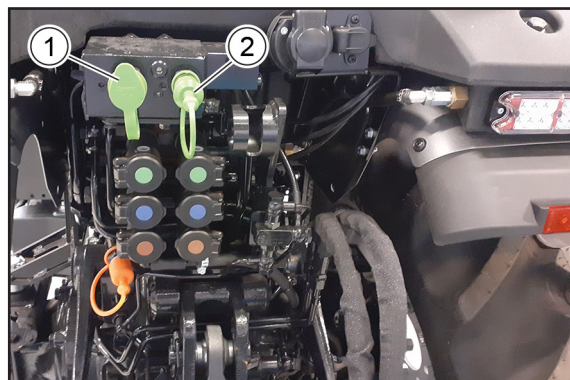


IMPORTANT: To avoid damaging the transmission, do not lock the differential when one wheel is turning and the other one is at a standstill.

NOTE: Differential lock is automatically deactivated when speed exceeds 14 km/h (8.69 mph).

NOTE: Differential lock is automatically deactivated after the engine has been switched-off

5.25 HYDRAULIC TRAILER BRAKE



Roll Bar models



Cab models

Remove cap from pressure pick-up point (1) and (2) for trailer brake, connect the trailer hose, making sure that couplings are clean.

To activate the hydraulic trailer brake, press both brake pedals that must compulsorily be coupled.

Braking effect depends on how much pressure is applied to press brake pedals. the warning light (3) on instrument panel, when is on, has the double function of indicate malfunctions to the braking system, and / or signal that the parking brake is engaged.

It also allows, if pressed, to check the operation of the trailer parking brake, simulating the insertion of the handbrake, trying to move the tractor should meet the

resistance of the parking brake of the trailer

IMPORTANT: To prevent brakes early wear, comply with the instructions below:

- Ensure the delivery hose is connected
- When driving downhill, engage the same gear you would use to run on the same road uphill
- Periodically check the trailer braking system to ensure it operates correctly.



CAUTION: The tractor exhaust brake has no effect on trailer brakes. Use the service brakes.



CAUTION: The tractor parking brake has no effect on the trailer hydraulic braking system. Operate trailer as indicated in the Manufacturer's instructions. This is **IMPORTANT** especially when engaging trailer parking brake.



CAUTION: The tractor hand brake has no effect on trailer brakes. Use the service brakes.



CAUTION: Tractor requires correct towed equipment braking option be installed and connected to the equipment.

Stopping distance increases with speed and weight of towed loads, and on hills and slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control. Consider the total weight of the equipment and its load.

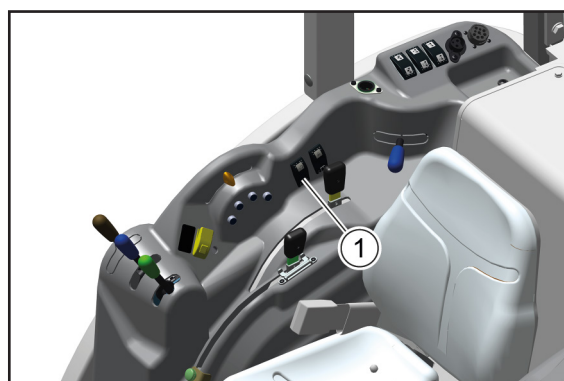


CAUTION: Tractor is capable of towing equipment at speeds faster than some equipment is designed for. Check with equipment manufacturer for maximum allowable towing speed.

5.26 USING 4-WHEEL DRIVE



AGRSTV_C50116



AGRSTV_C50117



AGRSTV_C50118



AGRSTV_C50115

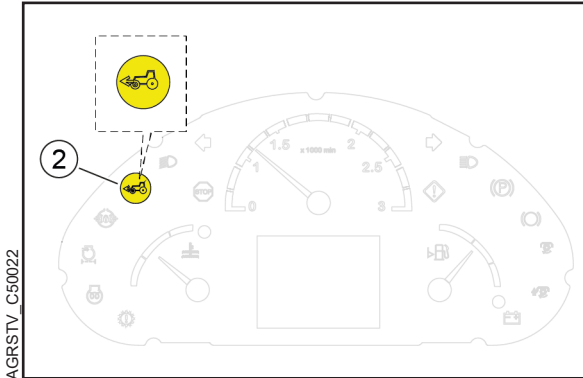
Use the front-wheel drive as needed to improve grip.

4-wheel drive is engaged and disengaged by means of switch (1) located on driver's seat right-hand side.

4-wheel drive can be used in two ways:

- Automatic mode
- Permanent mode

5.26.1 AUTOMATIC MODE



Automatic operating mode for 4-wheel drive depends on travel speed and use of brake pedals.

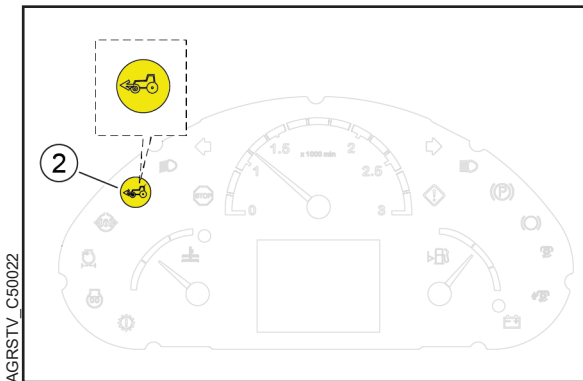
Press and release the switch (1) to activate this mode. When 4-wheel drive is engaged in automatic mode, the warning light (2) on instrument panel is on (steady).

Press the switch (1) to disengage the 4-wheel drive.

NOTE: 4-wheel drive is automatically activated when speed drops below 14 km/h (8.69 mph).

NOTE: 4-wheel drive is automatically deactivated when speed exceeds 23 km/h (14.29 mph).

5.26.2 PERMANENT MODE



Permanent operating mode for all-wheel drive does not depend on travel speed and use of brake pedals.

Press and hold switch (1) for about 5 seconds to activate this mode. When 4-wheel drive is engaged in permanent mode, the warning light (2) on instrument panel is on (blinking). Press the switch (1) to disengage the 4-wheel drive.



CAUTION: Front-wheel drive considerably increases grip. When using this option, be more careful on slopes. The 4WD machines maintain the draft on steeper slopes than the 2WD machines, thus increasing the danger of overturning. Failure to comply with these directions could cause injuries or death.



CAUTION: When driving the vehicle on icy, wet or gravelly surface, decrease speed and ensure tractor is duly ballasted in order to avoid slipping and loss of control on steering. To improve control, use front-wheel drive (if provided).



CAUTION: The tractor exhaust brake has no effect on trailer brakes. Use the service brakes.

5.27 BALLAST

Vehicles are ballasted at the factory so as to regularly respond in most use instances.

Nevertheless, there might be conditions where you could wish to add weight to the tractor to increase towing power of the drawbar and decrease excessive wheel skidding. Said additional weight could be a weight at the front end of the "suitcase" type. Weight depends on ground conditions and on the operations to be performed.

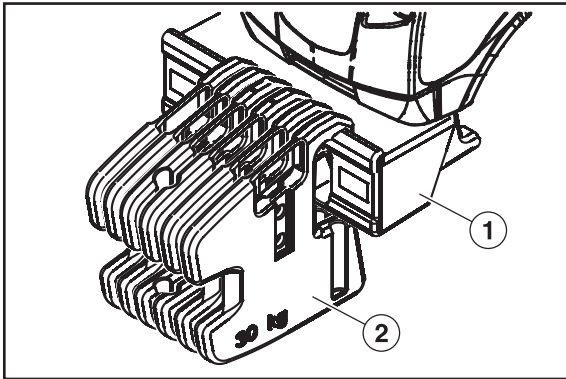
When adding weight to the rear wheels, towing power increase tends to reduce weight on the front wheels.

It is recommended to avoid using more weight than actually needed to enhance traction conditions. Total weight on each wheel shall not exceed the nominal weight specified by the tyre manufacturer and marked on the tyres.

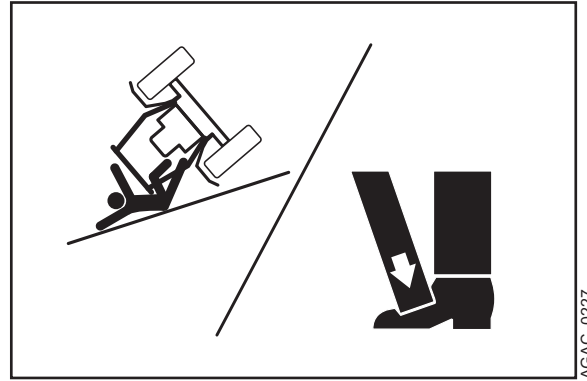
It is furthermore recommended to remove any added weight for light towing jobs such as tillage, sowing, etc. since carrying unnecessary weight increases soil compaction, fuel consumption and reduces life of tyres, bearings, gears and so on.

Contact the local dealer for further information about available ballast weights and relevant supports. The tractor weight shall be evenly distributed across all axles.

- 1 – Ballast holder
- 2 – Ballast elements



IMPORTANT: Modify original ballasting only after ensuring that assembling instructions were complied with.



IMPORTANT: Do not exceed above-specified ballasting limits.

NOTE: Once complex work is completed, restore basic ballasting.



CAUTION: Make sure the tractor is always loaded with sufficient weight at the front to ensure stability and prevent losing control on the steering.



CAUTION: Additional front ballast might be required to carry equipment mounted at the rear. When equipment is raised, drive at low speed on bumpy grounds, regardless of ballast used.



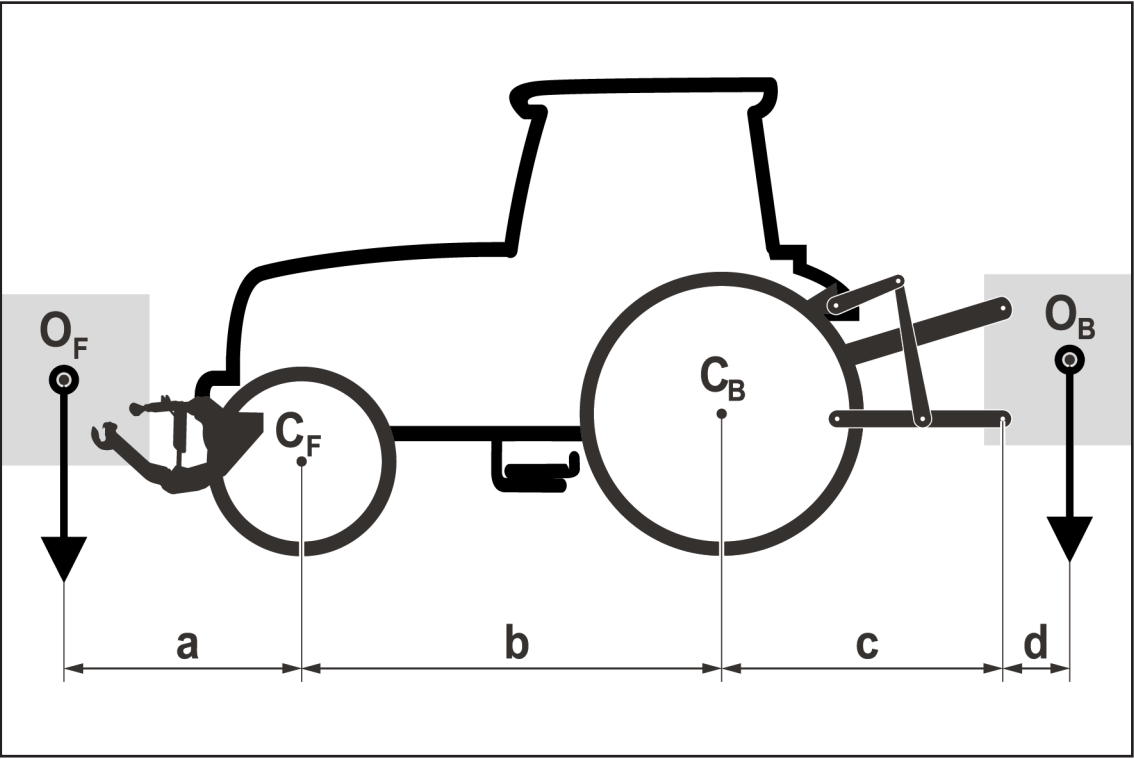
CAUTION: Consider axles maximum allowed load.



CAUTION: Use a hoisting equipment appropriate for handling the ballasts (weight over 25 kg [55 lb]).

5.27.1 MACHINE STABILITY

Before hitching tools onto the front and rear three-point hitches, check that the total allowable weight of the tractor, the loads allowable on the front and rear axles, and load capacities of the tires are not exceeded. The front axle of the tractor must always be loaded with at least 20 % tractor empty weight.



P	Tractor empty weight (kg)
C_F	Load on the front axle of empty tractor (kg)
C_B	Load on the rear axle of empty tractor (kg)
O_F	Total weight of the front tool or ballast (kg)
O_B	Total weight of the rear tool or ballast (kg)
a	Distance between the centre of gravity of the front tool or ballast and the front axle axis (m). Refer to the manual of the equipment or to measure.
b	Tractor wheelbase (m)
c	Distance between the rear axle axis and the axis of the lower bar ball joints (m)
d	Distance between the axis of the lower bar ball joints and the centre of gravity of the rear tool or ballast (m). Refer to the manual of the equipment or to measure.

IMPORTANT: Before purchasing a tool, check that all conditions are met using the following calculations or by weighing the tractor/tool combination.

5.27.2 BALLASTS CALCULATION

Calculation of minimum front ballast $O_F \text{ min}$

$$O_F \text{ min} = (O_B \cdot (c+d) - C_F \cdot b + 0,2 \cdot P \cdot b) / (a+b)$$

Calculation of minimum rear ballast $O_B \text{ min}$

$$O_B \text{ min} = (O_F \cdot a - C_B \cdot b + 0,45 \cdot P \cdot b) / (b+c+d)$$

5.27.3 LOADS CALCULATION

Calculation of the real load on the front axle C_F'

$$C_F' = (O_F \cdot (a+b) + C_F \cdot b - O_B \cdot (c+d)) / b$$

IMPORTANT: If with the front tool, reaching the minimum front ballast $O_F \text{ min}$ is impossible, the weight of the front tool carried must be increased to reach the minimum front ballast weight.

Calculation of the real total weight P

$$P' = O_F + P + O_B$$

IMPORTANT: If with the rear tool, reaching the minimum rear ballast $O_B \text{ min}$ is impossible, the weight of the rear tool carried must be increased to reach the minimum rear ballast weight.

Calculation of the real load on the rear axle C_B'

$$C_B' = P' - C_F'$$

Tire load capacity: See relevant section.

Summary table

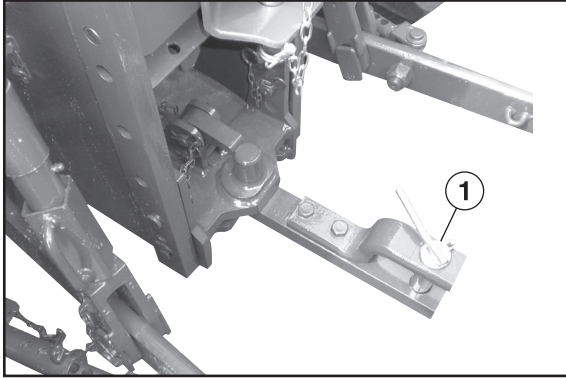
Real values according to calculation		Allowable values according to the user manual ⁽¹⁾		Tire load capacity ⁽²⁾	
Minimum front ballast ($O_F \text{ min}$) (kg)					
Minimum rear ballast ($O_B \text{ min}$) (kg)					
Real total weight (P') (kg)					
	≤	Total permissible laden weight (kg)			
Real load on the front axle (C_F') (kg)	≤	Maximum load capacity on front axle (kg)		≤	Load capacity of the front tires (kg)
Real load on the rear axle (C_B') (kg)	≤	Maximum load capacity on rear axle (kg)		≤	Load capacity of the rear tires (kg)
⁽¹⁾ Enter in this column the load capacities shown in the relevant section.					
⁽²⁾ Enter in this column the load capacities of the tires shown in the relevant section.					

IMPORTANT: The values calculated must be below or equal to allowable values.

5.28 DRAWBAR

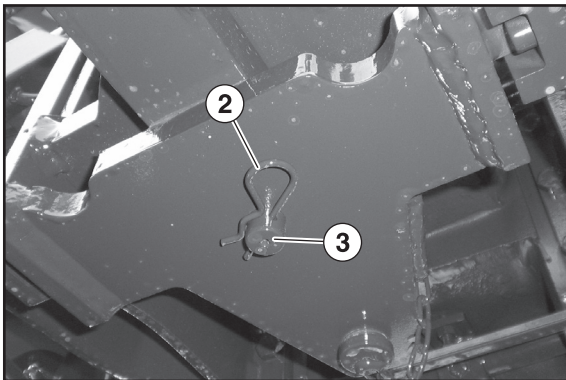


CAUTION:
Drawbar must be locked to central position for use on public roads.



The tractor features a drawbar (1) that can stand a vertical load. To exploit maximum traction and efficiency, the drawbar must be set at the centre, in the short position.

Maximum static vertical loads and drawbar allowed load are indicated below.



Drawbar (1) travel can be shifted to the right-hand side, left-hand side or fully open.

To set drawbar (1) to the desired position:

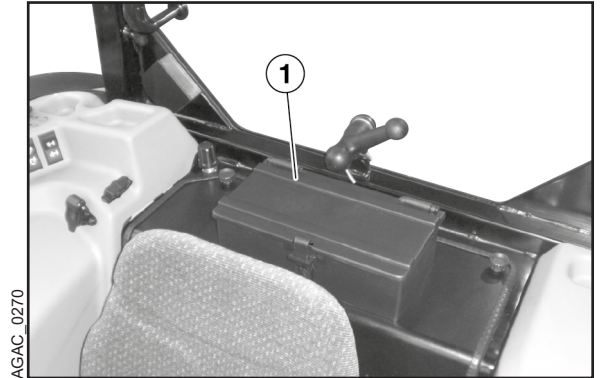
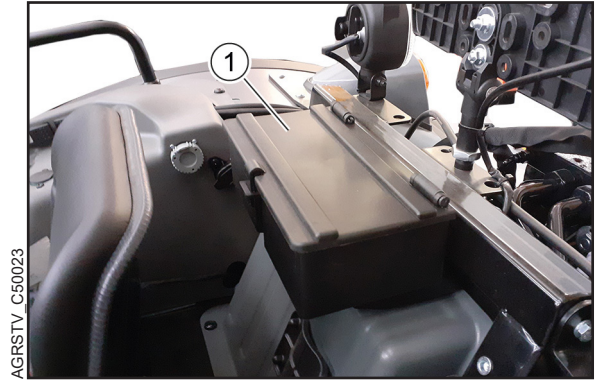
- Remove clip (2).
- Remove shaft (3).

Set drawbar (1) to the desired position:

- Fit shaft (3).
- Fit clip (2).

To leave drawbar (1) free to move:

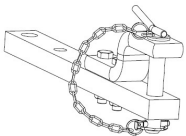
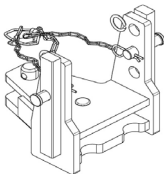
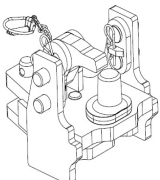
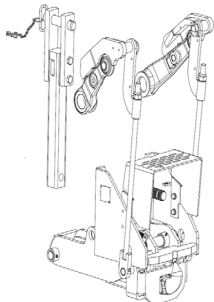
- Remove clip (2).
- Remove shaft (3).



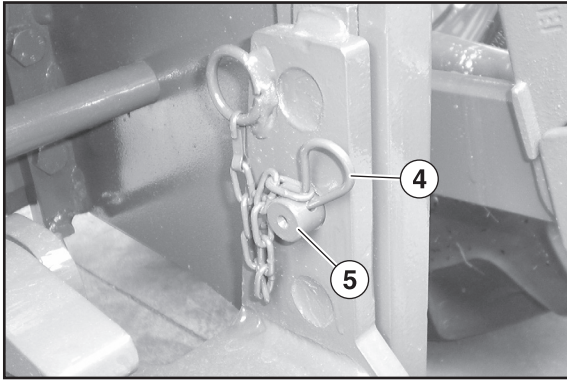
Keep shaft and clip in the tool box (1) if you do not use them.



WARNING:
The drawbar must be correctly set to allow towing of implement.

ROCKSHAFT MAXIMUM LOADING CAPACITY				
PICTURES	TYPE	ALLOWED VERTICAL LOAD ON THE COUPLING POINT ⁽¹⁾ (kg)	ALLOWED VERTICAL LOAD ⁽¹⁾ (kN)	MAX. TOWABLE LOAD ⁽²⁾⁽³⁾ (kg)
	Drawbar CBM X002BT/ xx Category x	0	-	6000
	Drawbar CBM GTB 30003 Category (2)	736	35	-
	Pin (piton) type mechanical coupling CBM GTP001	2000	-	2000
	Towing hook CBM GTU001 Pick-up hitch	3000	88.1	-
	Tractor drawbar CBM GTB 30020 Category (2)	1200	40	-
(1) Consider the tyres loading capacity. (2) Comply with local regulations. The values in the chart could be limited by traffic regulations applicable in the country of use. (3) The values in the chart could be limited by tractor maximum towable weight.				

5.29 ADJUSTING DRAWBAR HEIGHT



Set drawbar height as follows:

- Remove clip (4) on either side.
- Safely support drawbar mount and remove shaft (5) on either side.

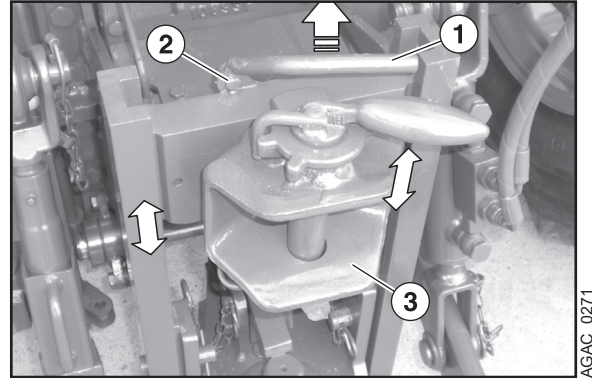
Set hitch to required position, reinstall side pins (5), remove the security support and install locking clips (4) on both sides.

5.30 HITCHES



CAUTION:
Comply with the maximum loading capacity allowed by tractor hitch.

Various configurations complying with the European standards CE, CUNA C or D2, are available as options.

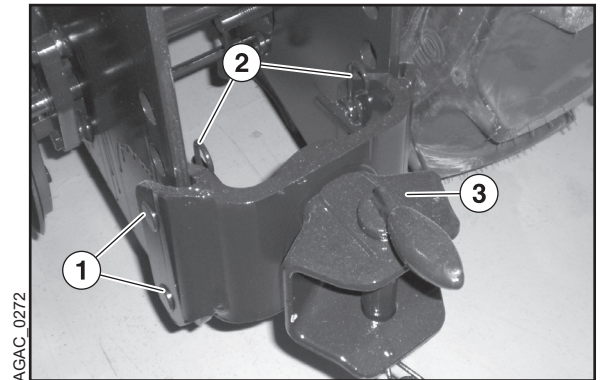


5.30.1 ADJUSTING HITCH HEIGHT FOR SLIDING MODEL.

Set hitch height as follows:

- Press button (2) and pull lever (1)
- Let hitch (3) slide to desired position.
- Release lever (1).

IMPORTANT: Before releasing lever (1), ensure that both safety pins are fully engaged in their holes.



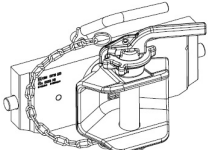
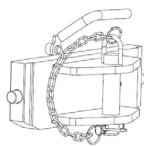
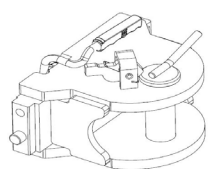
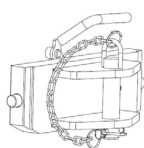
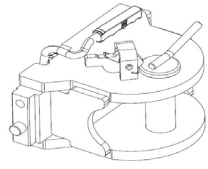
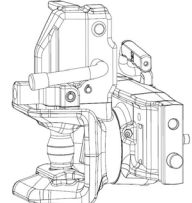
5.30.2 ADJUSTING HITCH HEIGHT FOR SLOTTED MODEL.

Set hitch height as follows:

- Remove clips (2)
- Remove locking pins (1)
- Let hitch (3) slide to desired position.
- Fit locking pins (1)
- Fit clips (2)

Maximum static vertical loads and hitch allowed load are indicated below.

5.31 HITCH MAXIMUM LOADING CAPACITY

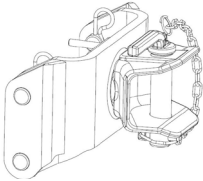
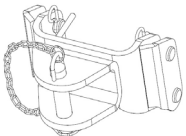
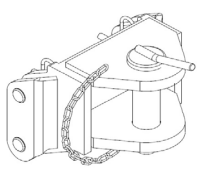
HITCH MAXIMUM LOADING CAPACITY				
PICTURES	TYPE	ALLOWED VERTICAL LOAD ON THE COUPLING POINT ⁽¹⁾ (kg)	ALLOWED VERTICAL LOAD ⁽¹⁾ (kN)	MAX. TOWABLE LOAD ⁽²⁾⁽³⁾ (kg)
	Clevis type mechanical coupling CBM GTF30023	1500	43,5	-
	No-swivel clevis coupling CBM X 244 SL-E/xx Category x	1500	-	6000
	No-swivel clevis coupling CBM Y 244 SL-E/xx Category y	2000	-	14000
	No-swivel clevis coupling CBM X 314 SL-E/xx Category x	1500	-	6000
	No-swivel clevis coupling CBM Y 314 SL-E/xx Category y	2000	-	14000
	Clevis type mechanical coupling CBM GTF30014	2000	96.4	-

(1) Consider the tyres loading capacity.

(2) Comply with local regulations. The values in the chart could be limited by regulations applicable in the country of use.

(3) The values in the chart could be limited by tractor maximum towable weight.

HITCH MAXIMUM LOADING CAPACITY

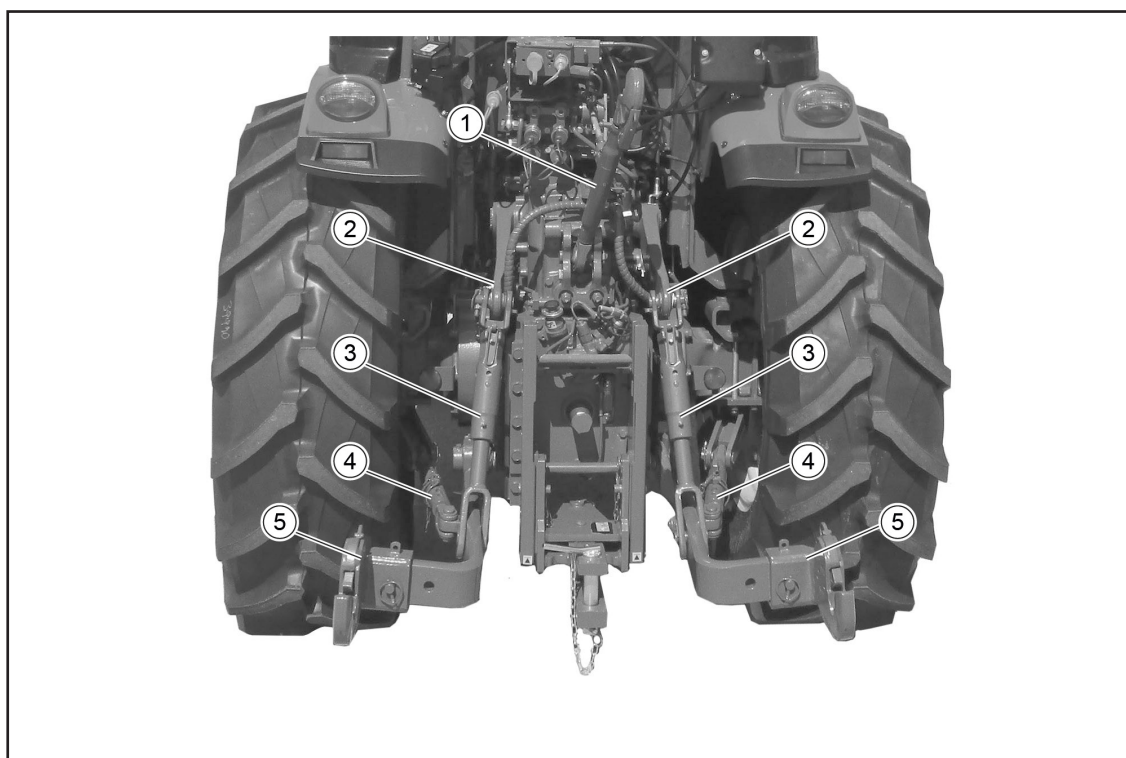
PICTURES	TYPE	ALLOWED VERTICAL LOAD ON THE COUPLING POINT ⁽¹⁾ (kg)	ALLOWED VERTICAL LOAD ⁽¹⁾ (kN)	MAX. TOWABLE LOAD ⁽²⁾⁽³⁾ (kg)
	Clevis type mechanical coupling CBM GTF30031	1350	40	-
	No-swivel clevis coupling CBM X 212 F/xx Category x	1500	-	6000
	No-swivel clevis coupling CBM X 212 F/xx Category y	2000	-	14000

(1) Consider the tyres loading capacity.

(2) Comply with local regulations. The values in the chart could be limited by regulations applicable in the country of use.

(3) The values in the chart could be limited by tractor maximum towable weight.

5.32 THREE-POINT HITCH COMPONENTS



1. Third-point hitch pull rod
2. Lifting arms
3. Lifting links
4. Stabilisers
5. Draft links

The three-point hitch system allows control of position and towing of implements for soil cultivation. This anchor point was designed to meet category II requirements, and is convertible into category I.



CAUTION: Ensure nobody is standing in the dangerous area between tractor and connected tool.



CAUTION: Before any movement, for devices equipped with a braking system, check that braking system is efficient.



CAUTION: Correctly connect the hydraulic fittings, electric and pneumatic connections across tractor and connected implement.



CAUTION: Comply with the maximum loading capacity allowed by tractor hitch.



CAUTION: Do not perform any welding, cutting, drilling or honing job on hitch devices. Change any worn or damaged parts.

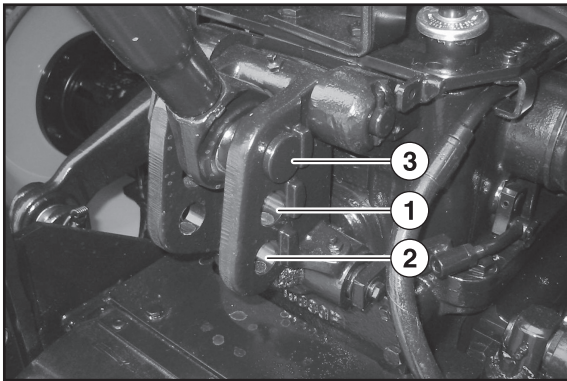
5.32.1 LEVELLING HITCH



CAUTION:
Comply with specified dimensions.

Adjusting implement tilt angle with respect to the ground is accomplished by adjusting the length of the third-point. Shorten the upper link to increase tilt angle, or lengthen it to decrease it.

Usually, with bottom links in horizontal position, the upper link rear end should tilt upward. The fixing of the third point on the tractor can be performed in three different positions.



Move 3rd point implement onto holes (1) or (3) if:

- Lift activity is excessive or erratic with draft control.
- Implement rear end raises too much when being lifted. The lowest position offers maximum lifting height but a smaller force, and is recommended when working with a plough.
- Set draft control lever range is too small.

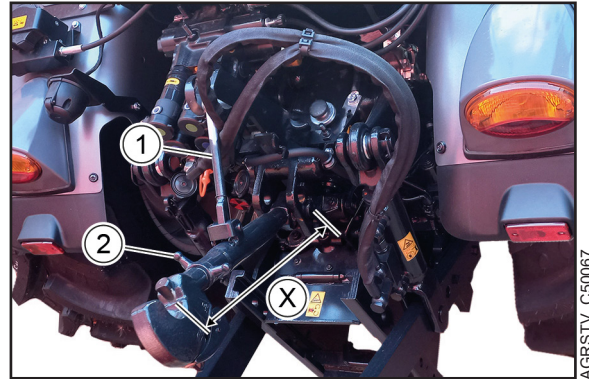
Move 3rd point implement onto holes (1) or (2) if:

- The lift unsatisfactorily responds to draft controls and engine rpm drops too much before lifting the equipment.
- Equipment rear end lowers or is dragged on the ground when equipment is lifted.

Lower equipment down to remove weight from hitch.

5.32.2 ADJUSTING THE THIRD POINT

- Adjust the third point to level implement front-to-rear.
- Unlock locking pin (1).
- Slacken ring nut (2).
- Turn upper link clockwise to lengthen link or counter clockwise to shorten it.



IMPORTANT: Centre distance (x) shall not exceed 830 mm (32.67 in).

IMPORTANT: Comply with specified dimensions. Sleeve thread could get damaged.

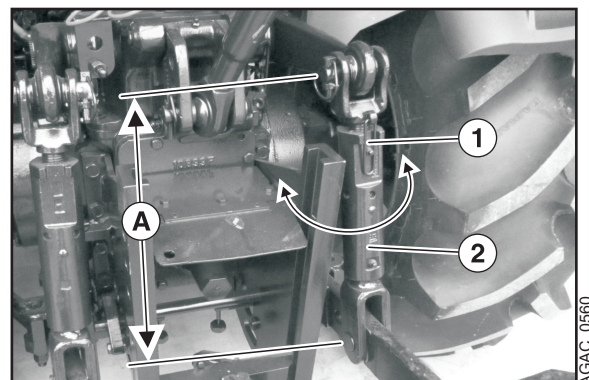
Once adjustment is completed, tighten ring nut (2). Reposition and tighten locking pin (1) if link is not in use.

5.32.3 ADJUSTING THE VERTICAL MECHANICAL PULL ROD

Adjust right or left link rods to level implement side-to-side: lift handle (2) and turn rod (2) clockwise to lift drawbar; lift and turn counter clockwise to lower it.

Rods length (A) shall be set within the following limits:

min. 420 mm (16.53 in) /max. 550 mm (21.65 in)

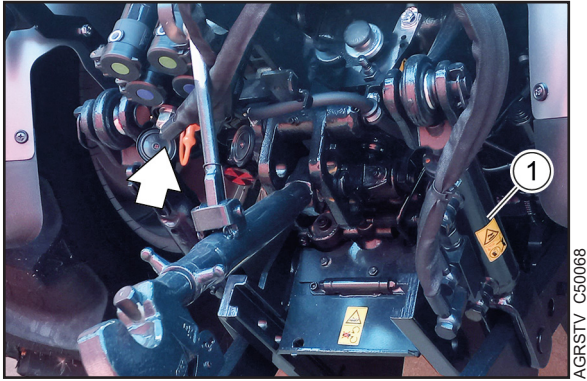


5.32.4 ADJUSTING THE HYDRAULIC VERTICAL PULL ROD:

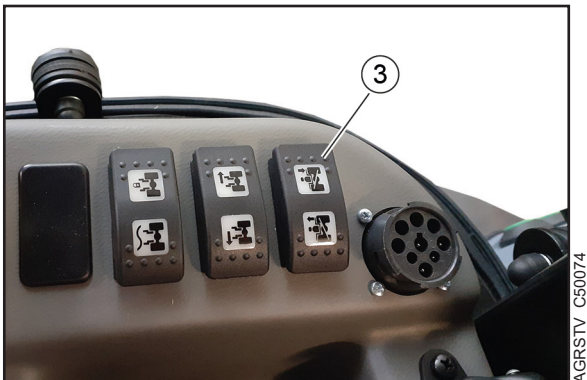
The hydraulic vertical pull rod (1) is connected to one of the rear hydraulic outputs.

The number and the colour of the control lever that control the hydraulic vertical pull rod matches that of rear hydraulic outputs where it is connected

The associated rear hydraulic outputs varies depending on the tractor's configuration

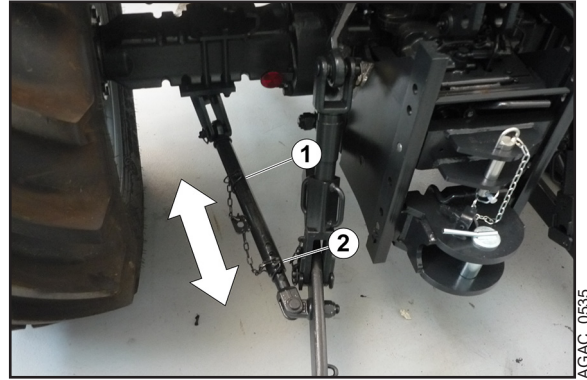


If tractor is equipped with an application for three-point hitch electro-hydraulic adjustment, the hydraulic pull rod is controlled by switch (3).



5.32.5 ADJUSTING THE MECHANICAL STABILISERS:

Stabilisers length could be adjusted by varying the position of retainers (1) and (2).



IMPORTANT: too narrow stabilisers could hinder lift lowering or make draft control inefficient.

5.32.6 ADJUSTING THE HYDRAULIC STABILISERS:

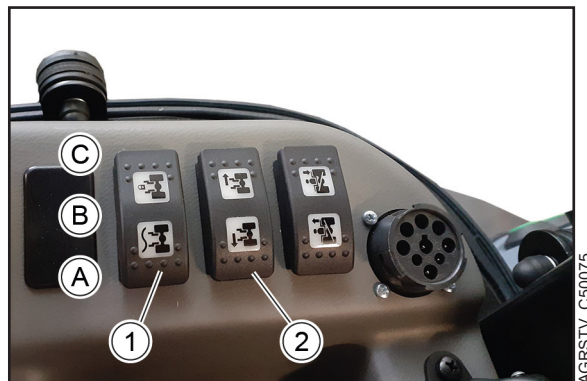
Hydraulic adjustment of stabilisers is performed by means of switches (1) and (2) on driver right-hand side.

Switch (1) controls the following:

- A) = Stabilizers in floating position
- B) = Neutral position
- C) = Stabilizers locked

Switch (2) controls the following:

- A) = Lateral adjustment left
- B) = Neutral position
- C) = Lateral adjustment right



Note: Set switch (2) to neutral position if hitch is not in use.

5.33 QUICK ATTACH DRAFT LINKS (HOOK-TYPE)



CAUTION: After hook-up, ensure that the automatic hooks are securely locked.

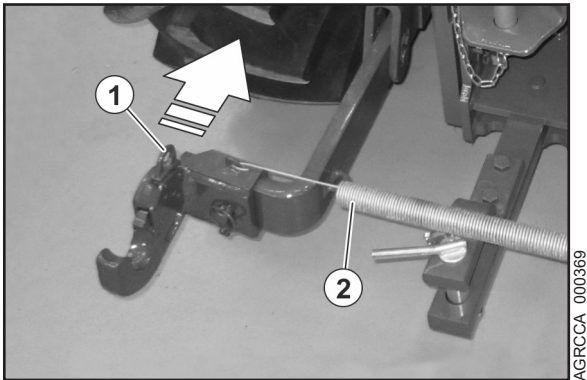


CAUTION: Draft links shall be locked to avoid accidental opening if equipment with asymmetric load is attached (e.g. side-mounted mower) or if driving in areas with tall bushes and trees (e.g. when working in a wood).

These draft links are designed for equipment belonging to category I, IN and category II. Equipment can be attached or detached from draft links with no need for the driver to quit the driving position.

Connect equipment as follows:

- Remove the elastic adjuster bar (2) (if any)
- Pull lever (1) to release the hook.



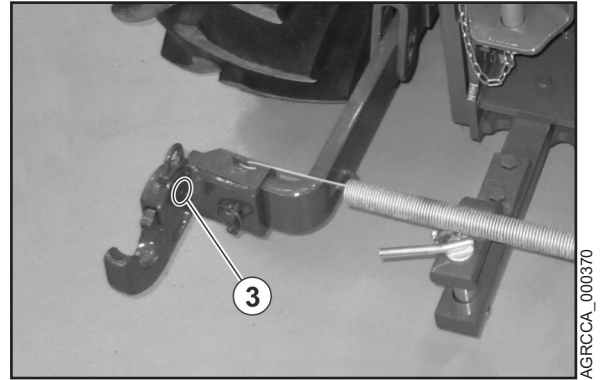
- With draft links down, drive tractor rearward until hooks are under the equipment couplers.
- Lift links until hooked ends engage in the balls and lock in place.
- Adjust third point to required length and fasten to the equipment frame upper mounting point.

IMPORTANT: Ensure that equipment is correctly locked to hooks.

To disconnect the tool, carry out the connection procedure in reverse.

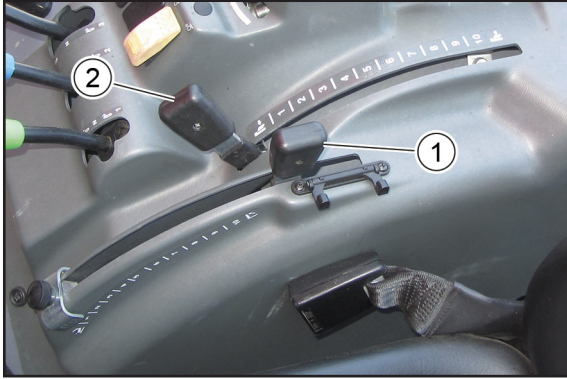
5.33.1 LOCKING THE AUTOMATIC HOOKS

IMPORTANT: Under special working conditions, the automatic hooks could be locked in place by means of a screw (3).

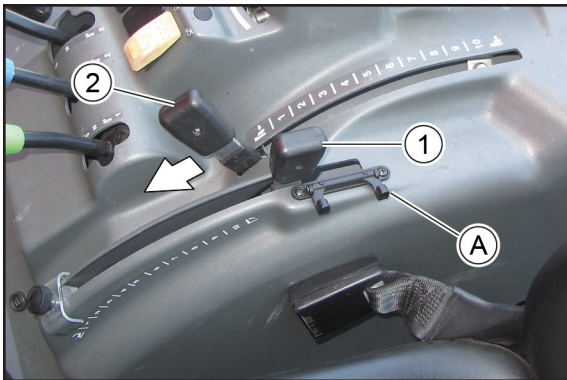


5.34 USING THE HYDRAULIC LIFT

Lift position is controlled by two levers, the one controlling position (1) and the draft control one (2) located on the right-hand side of the driver station.



CAUTION: To prevent accidental lowering of the equipment during transport, use latch (A) to lock lever (1). During transport and when lift is not used, push draft control lever (2) fully forward.



Pull back the position control lever (1) to raise the three-point hitch, or push it forward to lower it.

The draft control lever (2) controls three-point hitch position compared to draft loads.

5.34.1 ADJUSTING THE SPEED FOR THREE-POINT HITCH LOWERING



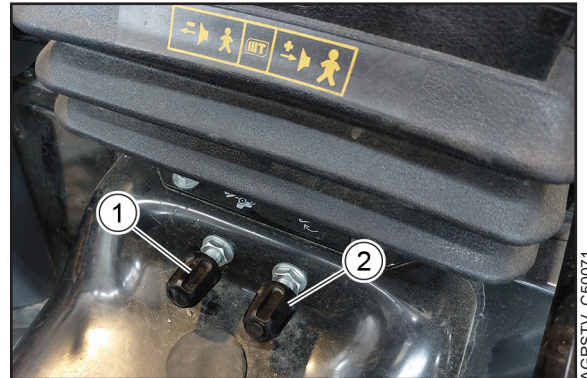
CAUTION: An excessive lowering speed could lead to damage or injury. Implement complete lowering should require at least 2 seconds.

The three-point hitch moves down more quickly when connected to a heavy implement. Adjust lowering speed so that it is slow enough to guarantee safety and avoid damaging the implement.

Turn three-point hitch lowering speed adjuster screw (2) clockwise to slow down; fully turning screw locks the three-point hitch (e.g. for transport). Turn counter clockwise to increase lowering speed.

5.34.2 ADJUSTING THE THREE-POINT HITCH SENSITIVITY

Turn three-point hitch sensitivity adjuster screw (1) clockwise to increase system sensitivity. Turn counter clockwise to decrease it. This adjustment adds up to the different positioning of the upper link. In some special cases, three-point hitch high sensitivity settings could cause vibrations. To eliminate these vibrations, gradually turn screw (1) counter clockwise.

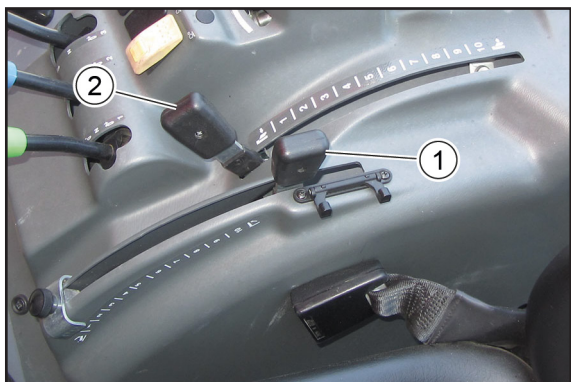


Using lift position control

IMPORTANT: Be careful not to raise equipment too much since it could lead to damages to the tractor rear end.

Lift position control (1) allows you to set the lifting arm at a fixed height above ground. Every lever position corresponds to a position of the lifting arms.

- Position draft control lever (2) fully forward (no draft control).
- Use lift position control lever (1) to set lifting arms at the desired height. Shift lever (1) forward to lower the lifting arms. Pull lever (1) back to raise the lifting arms.



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5.34.3 USING LIFT DRAFT CONTROL

Installed implements:

To adjust work depth you shall move the following controls in this sequence:

- Position control lever (1) forward
- Draft control lever (2) forward

Move off with the tractor then progressively shift lever (2) until obtaining the desired depth.

Operations

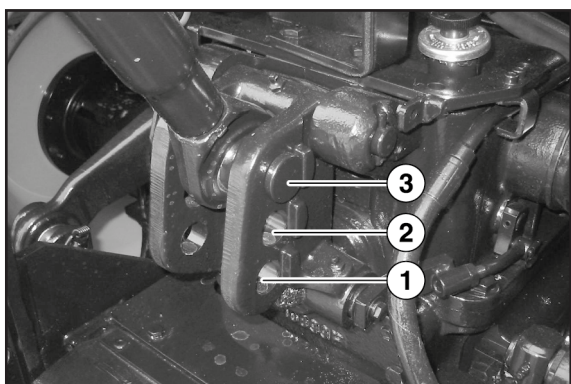
At the end of the path, take lever (1) back to raise the implement.

- At the beginning of the path, take lever (1) forward to take implement back in working position.
- To maintain always the same implement operating conditions, do not move lever (2).

When adjusting the draft control, adjuster knob is fully open.

The three-point upper link is coupled to the support according to desired sensitivity.

- 1 - Lower hole: maximum sensitivity
- 2 - Intermediate holes: medium sensitivity
- 3 - Upper hole: minimum sensitivity.



AGAC_0113

Shift the upper link to holes (2) or (3) when:

- Excessive oscillation or draft occur using the hitch control.

- Implement rear end raises too much when being lifted. The lowest position offers maximum lifting height but a smaller force, and is recommended when working with a plough.
- Set draft control lever range is too small.

Shift the upper link to holes (2) or (1) when:

- Three-point hitch response when using the draft control is unsatisfactory and engine speed drops too much before raising the implement.
- Implement rear end moves down and drags on ground while implement is being raised. In some special cases, lift high sensitivity settings could cause vibrations. To eliminate these vibrations, gradually turn adjuster knob (4) counter clockwise.

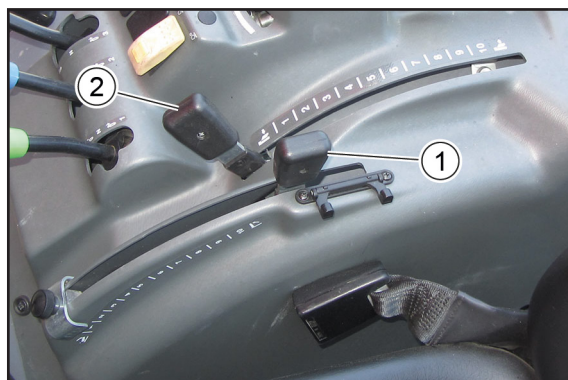
Floating position and position control:

This control allows to keep the implement at a determined height with respect to tractor.

Adjustment of implement position

Shift lever (2) forward.

Gradually shift lever (1) back until the implement reaches the desired position.



AGRSTV_C50069

Operations:

At the end of the path, take lever (1) back to raise the implement. To resume the operations, shift it forward again.

Implement follows the ground profile

- In this operation mode coupling is completely free. Implement is lowered to the ground and follows ground profile. This is obtained by shifting levers (1-2) to fully forward position.
- Raise the implement using lever (1).

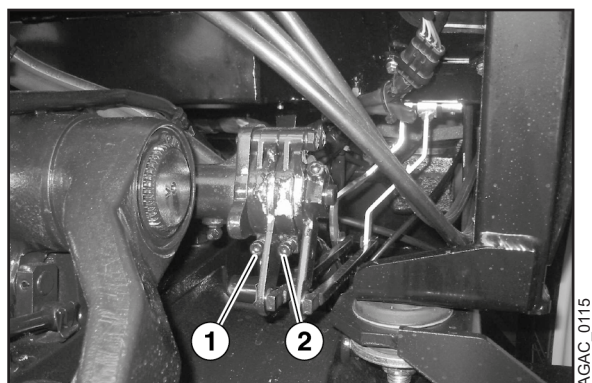
Carrying installed implements:

To carry any implement, shift lever (2) forward and take lever (1) fully back.

Adjusting friction of the three-point hitch control lever in back position

IMPORTANT: Ensure engine is not running and three-point hitch is in the lowest position.

If position or draft control levers for the three-point hitch does not stay in the set position, tighten bolt (1) of the draft control lever and/or bolt (2) of the position control lever until obtaining the desired friction.

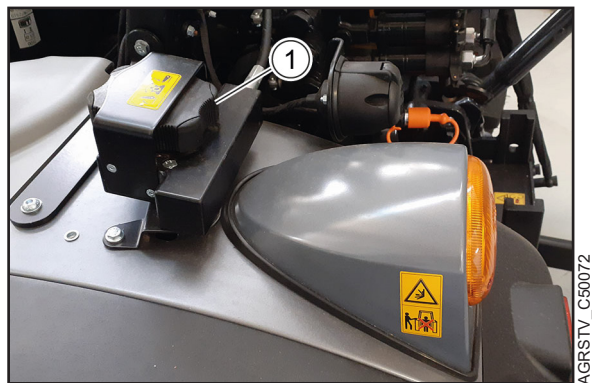


Lift remote control

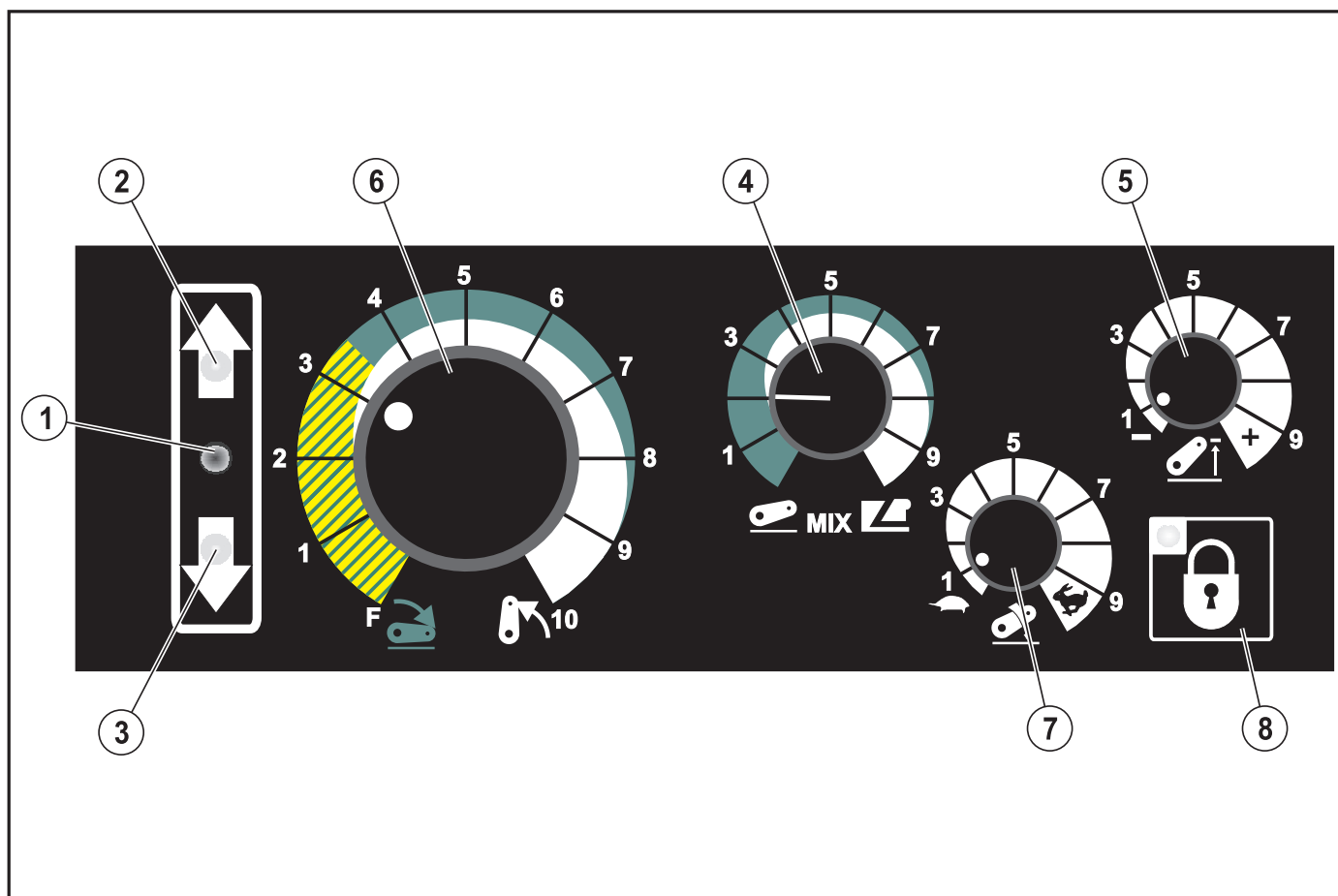
Mechanical remote control knob (1) lifts the three-point hitch when turned clockwise and lowers it when turned counter clockwise.



CAUTION: When using the remote control, keep clear of the three-point hitch lifting range. Engage the parking brake before lifting equipment.

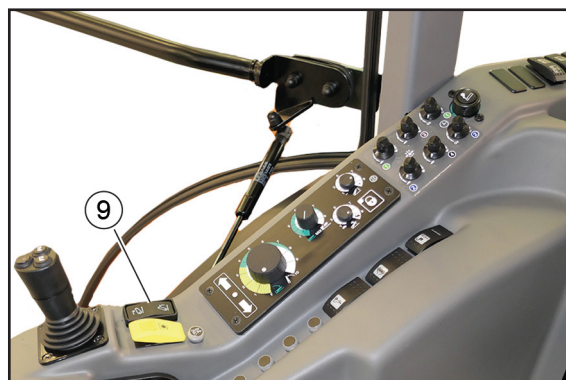


5.35 USING THE ELECTRONIC LIFT (POWER REVERSE TRANSMISSION)



AGAC_0128

- 1 - Stop position warning light.
- 2 - Hitch movement warning light (up).
- 3 - Hitch movement warning light (down).
- 4 - (Draft / position) Control mode setting.
- 5 - Upper limit setting selector.
- 6 - Setting adjustment ("mixed" or "draft" position).
- 7 - Speed reduction setting.
- 8 - Transport lock button.
- 9 - 3-position memory button.



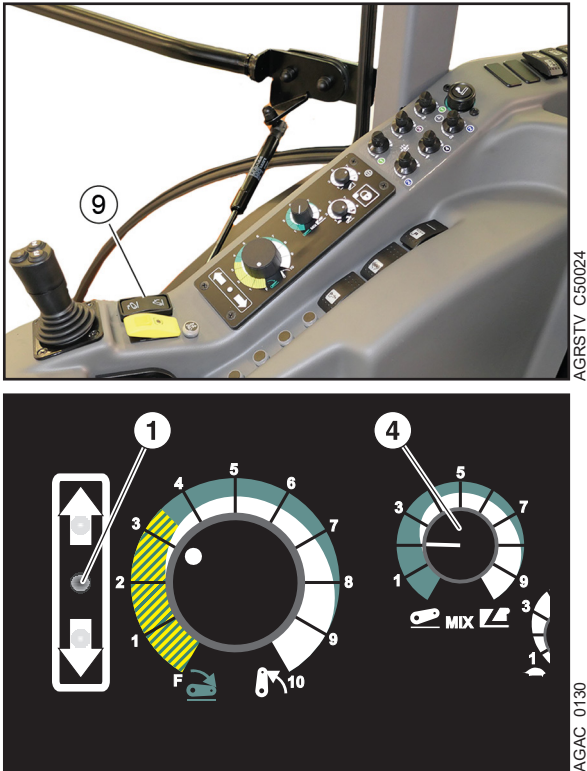
AGRSTV_C50024

5.35.1 USING THE HITCH

If the warning light (1) blinks at start-up, you shall reset the hitch.

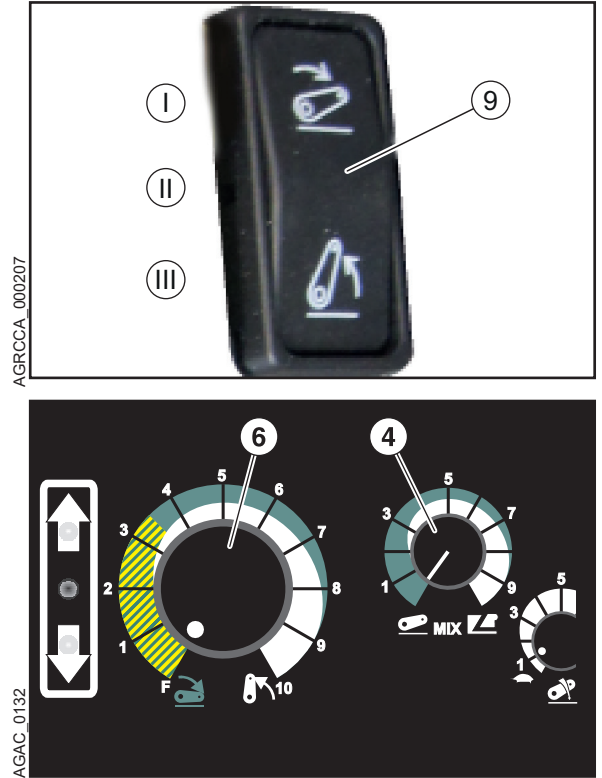
To reset hitch:

- Cancel draft control by turning adjuster knob (4) to the left.
- Set memory button (9) to operating position then to stop position.
- Find the actual arms position using the setting knob (6) until warning light goes off. Hitch is now operating.



5.35.3 OPERATION

- Set memory button (9) to operating position (II) and fully turn knob (4) counter clockwise (position control).
- Adjust hitch arms position by turning adjuster (6).
- Turn it to the right (clockwise) to lift hitch arms.
- Turn it to the left to lower hitch arms.



5.35.2 POSITION CONTROL

Position control allows you to position the lifting arms at a fixed height on the ground.

Every position setting (6) corresponds to a position of hitch arms.

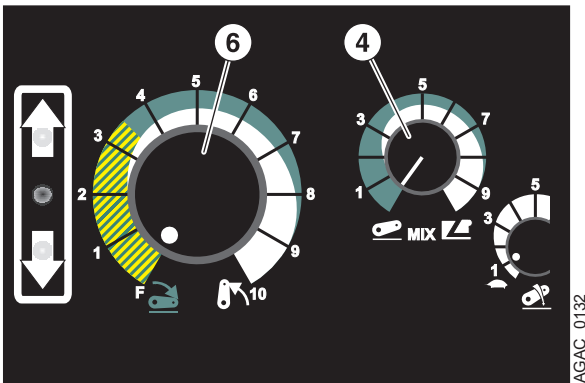
5.35.4 DRAFT CONTROL

Draft control adjusts lifting arms position with respect to applied load.

- Set draft control sensitivity using knob (4).

This knob works on the width of the corrections made to hitch.

- Knob (4) fully turned counter clockwise (position control): zero width.
- Knob (4) at midway (mixed control): medium width.
- Knob (4) fully turned clockwise (draft control): maximum width.
- Then adjust implement working depth working knob (6).

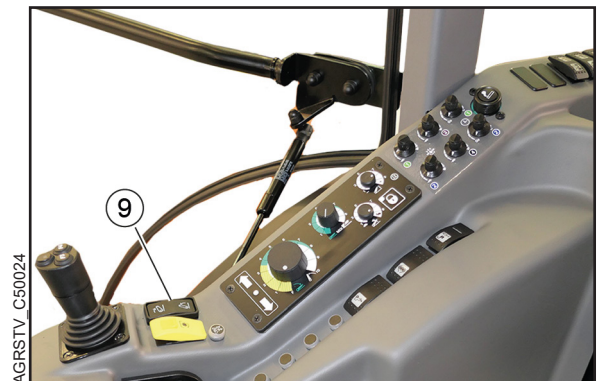
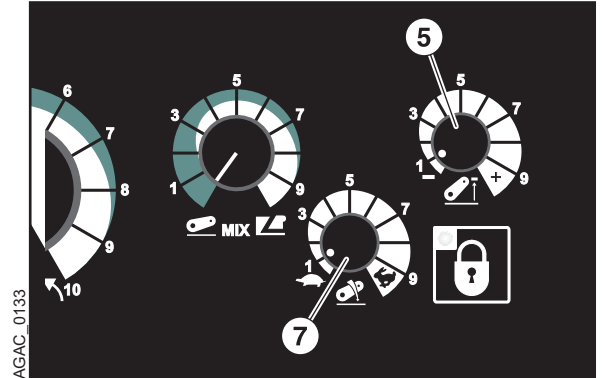
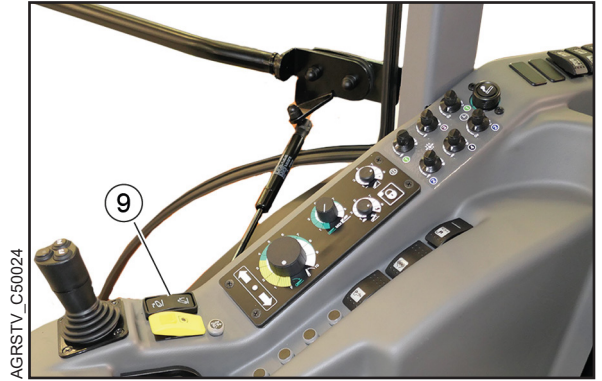
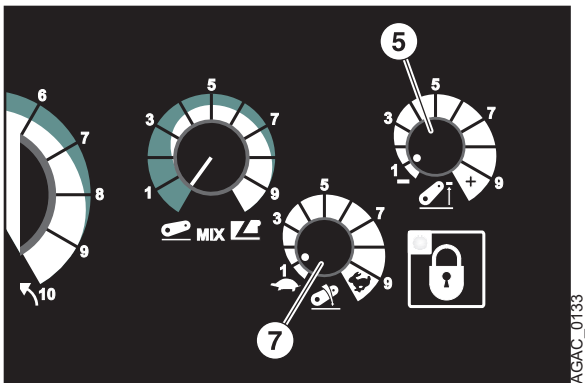


5.35.5 ADJUSTING THE UPPER LIMIT

Setting (5) of upper limit limits hitch arms upstroke.

This function:

- Prevents big implements from interfering with cab or structure.
- Prevents the maximum height that can be reached by the tool during the manoeuvres in the headland access path so that it does not reach the cardan working angle limit.



5.35.6 OPERATION

- Set upper stop knob (5) taking it to minimum position (fully turned counter clockwise).
- Set memory button (9) taking it to upper stop position.
- Then adjust upper position by working knob (5).
- Clockwise rotation (to the right) increases hitch arm upper stop height.
- Counter clockwise rotation (to the left) decreases hitch arm upper stop height.

IMPORTANT: Height limit has a higher priority compared to any other upward motion command possibly output (position setting, draft control and external (remote) controls). It shall never be exceeded.

5.35.7 ADJUSTING THE DOWN SPEED

Take button (9) to the upper position. Select minimum lowering speed by working on setting (7).

Take button (9) to the operating position.

Repeat the described operations and change the down speed as required:

- Clockwise rotation (to the right) increases hitch arm down speed.
- Counter clockwise rotation (to the left) decreases hitch arm down speed.

IMPORTANT: Any possible change in speed reduction will have no effect on draft control sensitivity.

IMPORTANT: As soon as job in the field is completed, set down speed to minimum to avoid damaging the implement connected when it is lowered on hard ground.

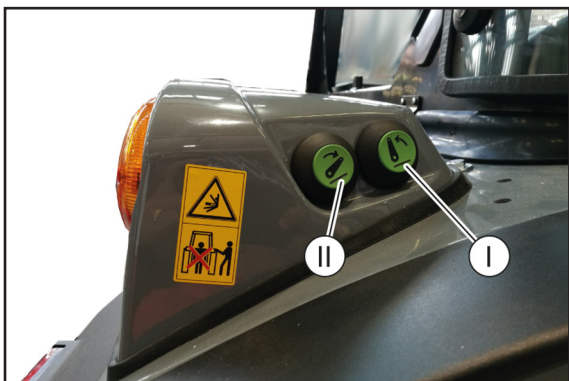
5.35.8 FUNCTION OF THE EXTERNAL (REMOTE) CONTROL BUTTONS.

On each rear fender features there are the controls for raising and lowering the rear lift arms during the implement connection and adjustment procedures:

- Button lift up arm (I).
- Button lift down arm (II).

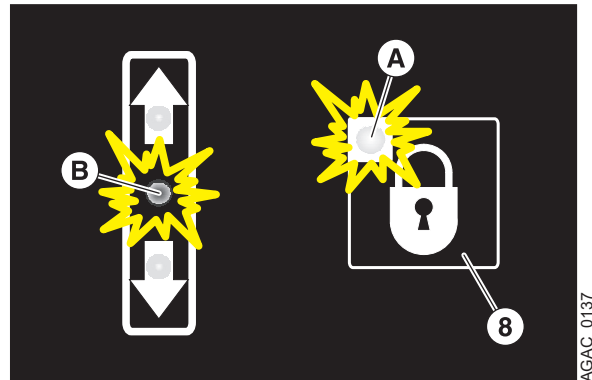
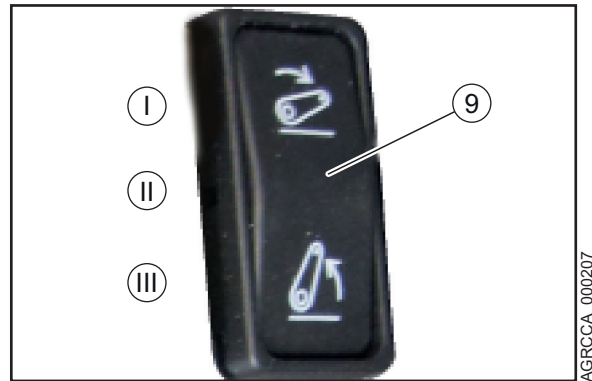
Pressing one of the buttons you obtain a shifting of about 10 cm toward the desired direction.

To obtain a greater shift, release and press again the button.



CAUTION: when using the external controls, keep a safe distance by placing yourself sideways to the outside and outside the bulk of the fenders. It is explicitly forbidden to operate the controls by placing yourself on the rear of the tractor or inside the wheels.

5.35.9 3-POSITION MEMORY BUTTON



Once basic settings are completed, end of field manoeuvres are performed by working the memory button (9), providing 3 positions.

5.35.10 LIFT DOWN POSITION (UNSTABLE POSITION)

When selector is set to position (I), lift arms move down to the working position selected for the implement.

5.35.11 NEUTRAL POSITION (STABLE POSITION)

Stop position (II), midway between top and bottom positions, stops lift arms at any time, during movement.

5.35.12 LIFT UP POSITION (UNSTABLE POSITION)

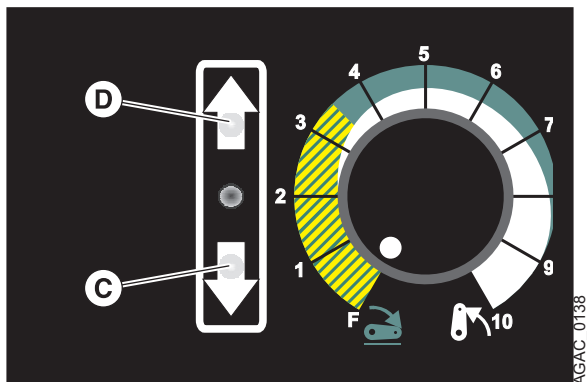
Selecting the lift up position (I) of memory button (9) raises the lift arms until they reach the upper limit stop.

5.35.13 TRANSPORT LOCK MODE FUNCTION

This function is only available when button (9) is in top position (I) and is activated by pressing and holding the button (over 3 seconds), i.e. until the warning light (A) turns on.

Now all unit controls are disabled, except for the "stop" and remote controls.

To cancel above-described transport function hold



button (8) pressed for over 3 seconds, i.e. until the warning light (A) goes off.

Meanwhile, warning light (B) will turn on to indicate stop.

To unlock the unit, set button (9) to “stop”: this condition is indicated by the stop warning light (B) going off.

5.35.14 WARNING LIGHT INDICATING MOTION

When one of the two warning lights (C), (D) turns on, it means the lift arms has started moving:

- Warning light (D) turning on indicates that lift arms is moving up.
- Warning light (C) turning on indicates that lift arms is moving down.

5.35.15 WARNING LIGHT INDICATING EMERGENCY SITUATIONS OR LIFT ARM SAFETY WARNING

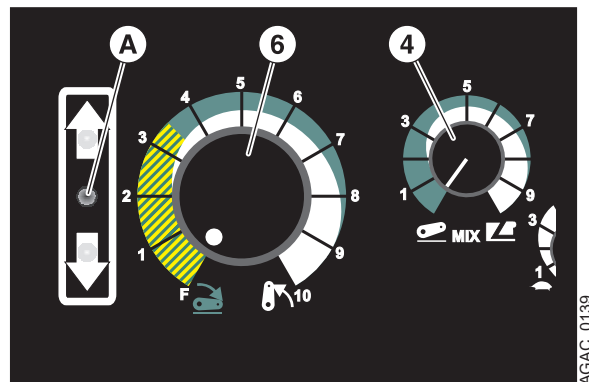
Warning light (A) turning on means that unit TCE 6 safety or emergency mode has triggered. The light could turn on in one of the two ways described below:

5.35.16 CONSTANT FLASHING

Control unit safety mode active. Follow the lift arms operation procedure to reset.

5.35.17 SLOW/FAST FLASHING

Indicates unit malfunction. Depending on fault type, the lift arm could be partially or completely out of service. Contact your authorised service centre.



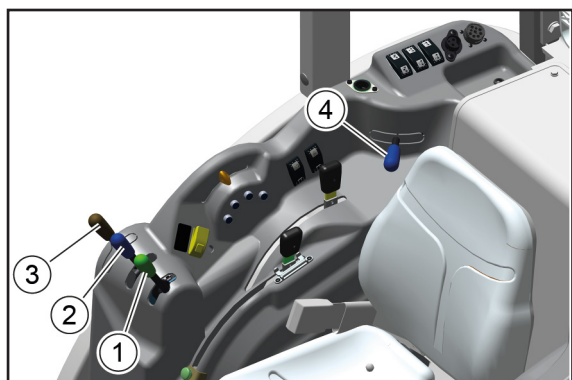
5.36 USING AUXILIARY DISTRIBUTORS CONTROLS

Sequence of hydraulic distributors control levers (1), (2), (3) and (4) corresponds to the hydraulic outputs one, (1), (2), (3) and (4) of rear distributors.

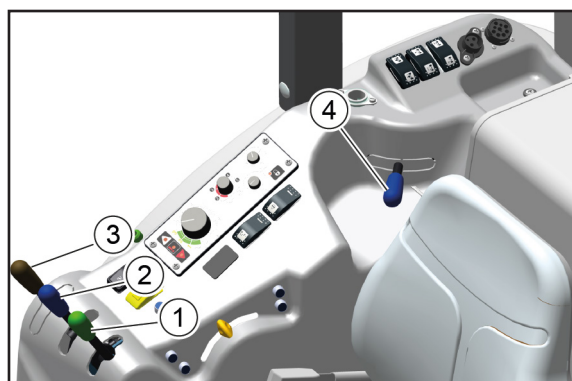
The number and the colours of the control lever matches that of rear hydraulic couplers.



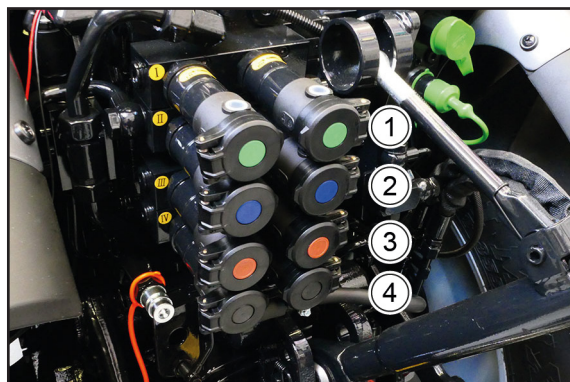
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AGRSTV_C50123



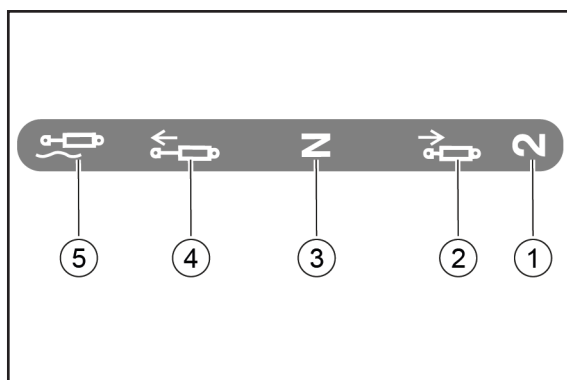
AGRSTV_C50122



AGRSTV_C50078

Each lever works as follows:

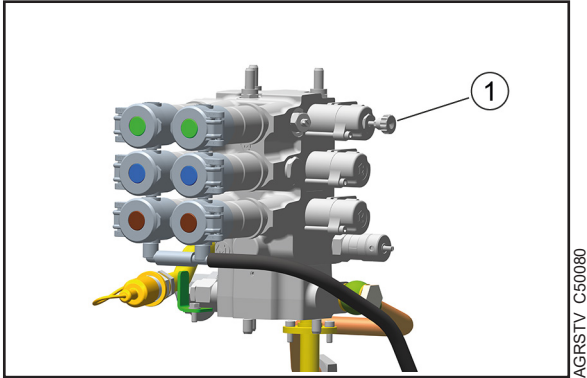
- 1 Number of the lever and the corresponding rear coupler
- 2 Retract position
- 3 Neutral position
- 4 Extend position
- 5 Float position



AGRSTV_C50079

5.36.1 DETENT FUNCTION - SETTINGS

The auxiliary distributors has the detent function, which allows you to keep the lever in the selected position, for extension or retraction. With the lever locked in the desired position, the operator can perform any other operation with both hands. The mechanical stop (Detent) settings have no effect on the "Floating" position.



Selector Knob Detent Setting (1)	
Screwed in (Loader operation)	No Detent: Lever returns to neutral when released
Unscrewed (Hydraulic Motor operation)	Continuous Detent always remains in operating position until manually returned to neutral

NOTE: After the engine has been switched-off, Continuous Detent is automatically deactivated within 20 seconds. If this function is manually set (by the relevant knob on the valve), it is restored when the engine is switched-on again. To avoid continuous Detent engagement, completely unscrew the knob to reach No Detent position

5.36.2 EXTEND AND RETRACT CYLINDERS

With hoses properly connected to couplers, pull lever back to retract the remote cylinder or push forward to extend.

The remote cylinder is held in place when the lever is in neutral.

- When the selector knob is set to "No Detent" (Loader) position, lever returns to neutral position when released.
- When the selector knob is set to "Continuous Detent" position (Hydraulic Motor) lever must be manually returned to neutral. With the lever in neutral, remote cylinder is hydraulically locked in position.

5.36.3 FLOAT POSITION

To activate the float position push the lever fully forward. "Float" operation allows the cylinder to extend and retract freely, such as when an implement follows ground contour. Manually return the lever to neutral when "Float" is no longer required.

The control levers can have four settings depending on the configuration identified by the decals.

The mechanical SCVs are kept in neutral position (safety condition) by a mechanical detention system (1). In order to activate the SCV, pull up the locking plate (1), then move forward or backwards as needed.



5.37 USING AUXILIARY ELECTRO-HYDRAULIC CONTROL VALVES



AGRSTV_C50083

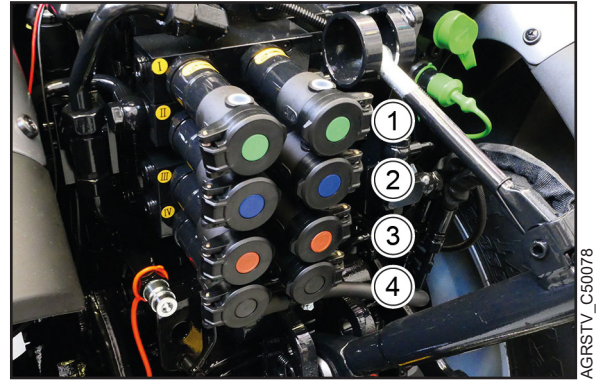
- 1 Electro hydraulic valve control activation button with indicator light
- 2 Electro hydraulic valve control levers.
- 3 Activation button for additional function F3
- 4 Activation button for additional function F4
- 5 Joystick activation button with indicator light
- 6 Electro hydraulic valve control joystick
- 7 Electro hydraulic valve control flow rate adjustment knob
- 8 Electro hydraulic valve control hydraulic timer adjustment knob

The controls (1), (2), (3) and (4) corresponds to the hydraulic outputs, (1), (2), (3) and (4) of rear distributors.

The number and the colours of the controls matches that of rear hydraulic couplers.



AGRSTV_C50082



AGRSTV_C50078

When the hydraulics are no longer in use, and when travelling on the road, the hydraulic system must be switched off using the switch (1).



AGRSTV_C50084

5.37.1 START UP

Press the switch (1):

- The indicator light for the switch (1) comes on briefly.
- The hydraulic system is then operational, but no controls are activated.

If there is a fault on the hydraulic system:

- The indicator light (1) remains lit.
- Please contact CARRARO TRACTORS authorized dealer.

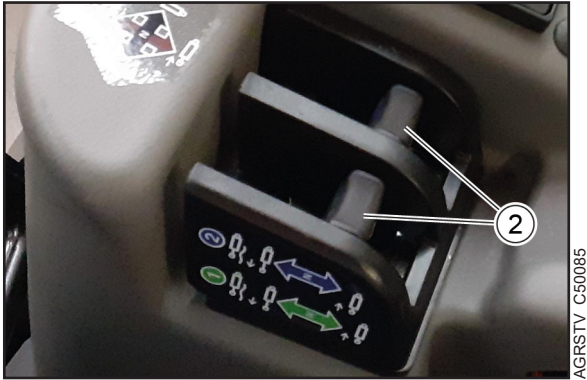
To activate the controls:

- Press the button (5) on the "Electropilot" joystick for 3 to 5 seconds.
- The indicator light come on.
- The joystick (6) and the linear controls (2) are activated.

5.37.2 VALVES CONTROL LEVER

The control levers (2) operate the relative electro-hydraulic distributors:

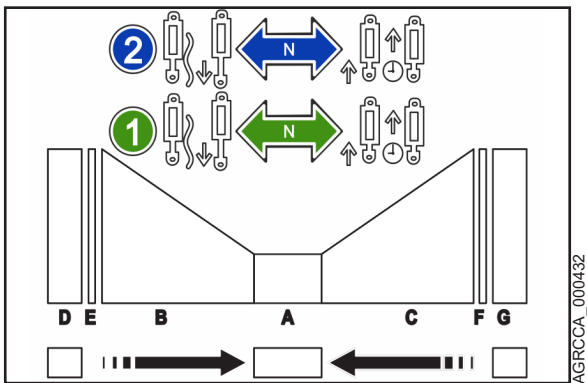
- **GREEN:** Electro hydraulic control valve n. 1
- **BLUE:** Electro hydraulic control valve n. 2



5.37.3 OIL PRESSURE ACTIVATION

Each control lever has the following operating positions:

- Position (A) = Neutral:
- Position (B) (C) = Supply proportional to the control movement.



5.37.4 FLOATING OPERATION ACTIVATION

Each control lever has floating operation:

- In the floating position (D), the pressure connectors are connected to the tank, which enables the hitched implement to follow the contours of the terrain.
- By operating the control lever beyond the resistance point (E) it locks in the floating position (D).

5.37.5 HYDRAULIC TIMER

To activate the auxiliary electro-hydraulic control valve hydraulic timer, bring the control lever of the auxiliary electro-hydraulic distributor concerned to position (G) beyond the point of resistance (F).

5.37.6 VALVE CONTROL JOYSTICK

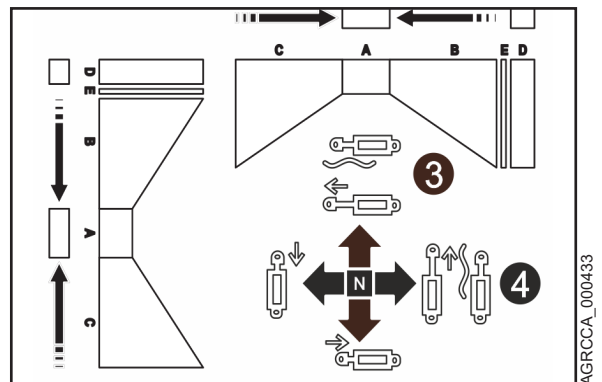
The joystick enables 2 auxiliary hydraulic control valves to be activated simultaneously (or independently):

- Moving the joystick along longitudinal axis (3) controls auxiliary hydraulic control valve no. 3 (Brown).
- Moving the joystick along longitudinal axis (4) controls auxiliary hydraulic control valve no. 4 (Black).



Each axis of the control joystick has the following operating positions:

- Position (A) = Neutral.
- Positions (B-C) = Supply proportional to the control movement.



5.37.7 FLOATING POSITION

The joystick has a floating function in both axes of movement:

- In the floating position (D), the pressure connectors are connected to the tank, which enables the hitched implement to follow the contours of the terrain. This position can be locked.
- Move the joystick beyond the resistance point (E) until it reaches the locking position (D).

5.37.8 OTHER FUNCTIONS

The buttons F3 and F4 located on the joystick allow functions 3 and 4 of a front loader to be controlled.

5.37.9 HYDRAULIC TIMER

The electro-hydraulic control valve (1) and (2) are equipped with a hydraulic timer which, when activated, keeps the last set oil flow rate for the programmed time.

The electro-hydraulic control valve (1) and (2) are operated by means of the relative control levers, moving them beyond the point of resistance (F) until reaching the lock position (G).

The change in the electro-hydraulic valves operating time is made using the knobs (1) and (2) which correspond to the relative distributors.



Turning the knob (1) or (2) clockwise (A) increases the duration of the operating time, vice versa by turning anticlockwise (B) it decreases.



To keep the electro-hydraulic distributor in position (G) locked for an indefinite time, turn knob (1) or (2) clockwise until it stops.

5.37.10 AUXILIARY ELECTRO-HYDRAULIC CONTROL VALVES

Follow the tooling manufacturer's instructions concerning the hydraulic flow rate accepted by the tool.

Each auxiliary electro-hydraulic control valve is fitted with a hydraulic flow controller:

- Adjustment knob (1): Auxiliary electro-hydraulic control valve no. 1.
- Adjustment knob (2): Auxiliary electro-hydraulic control valve no. 2.
- Adjustment knob (3): Auxiliary electro-hydraulic control valve no. 3.
- Adjustment knob (4): Auxiliary electro-hydraulic control valve no. 4.



All of the adjustment knobs use the same logic:

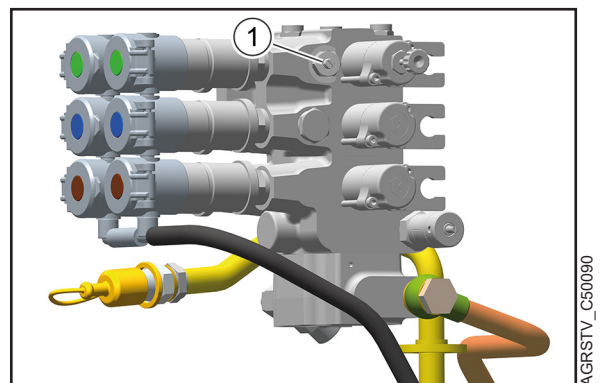
- Turn the setting knob in one direction or the other to adjust the flow rate of the auxiliary hydraulic control valve oil.
- Clockwise: Increase hydraulic flow.
- Anticlockwise: Decrease hydraulic flow.

5.37.11 DOUBLE/SINGLE ACTING CONTROL VALVES CONVERSION

According to the control valves configuration, the tractor can be equipped with double/single acting control valves. On the spool valve is fitted a square drive screw (1) for conversion between double and single acting.

Unscrew the screw until the mechanical stop is felt.

To use a spool valve in single acting mode, connect the implements hose to the left-hand outlet.



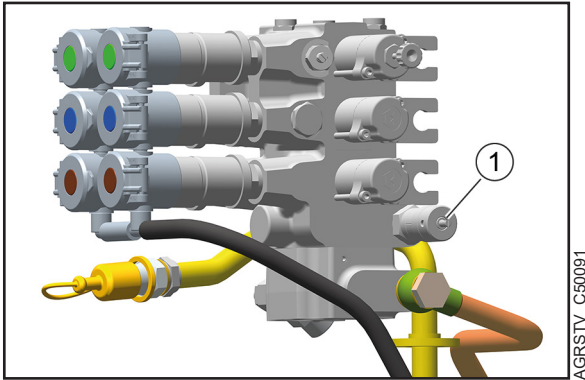
NOTE: The position can be different according to the tractor configuration.

5.37.12 FLOW DIVIDER VALVE

By the adjustment screw (1), the total amount of oil delivered by the hydraulic pump can be divided between the SCVs and the rear hitch.

The flow delivered by the SCVs, is depending from the engine rpm and from the knob set.

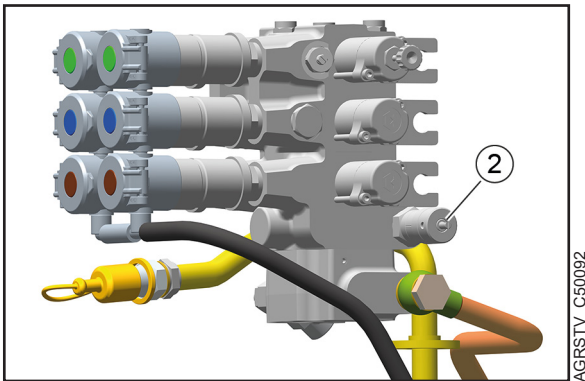
Independently from the set of the knob (1), the rear hitch has a priority in respect to the oil flow delivered by the pump.



NOTE: The position can be different according to the tractor configuration.

5.37.13 FLOW REGULATOR VALVE CONTROL

The flow regulator (2) can be fitted on tractor equipped with 2 or 3 pumps configuration, the behaviour of the hydraulic circuit can change according.



NOTE: The position can be different according to the tractor configuration.

5.37.14 2 PUMP CONFIGURATION

If there are tractors with 2 pumps configuration, by the set of the knob (2) the oil flow can be divided between the SCVs (4) above the flow regulator and the SCVs (3) including the rear hitch below the flow regulator.

The oil flow delivered by the SCV (4) is not constant according to the set of the knob (2). In this case, the flow increases or decreases according to the engine rpm. The oil flow delivered by the SCVs is constant according to the set of the knob (2), in this case the flow set by the knob (3) is not depending on the engine rpm.

Once the pump delivers the needed flow set by the knob the increase of the engine rpm will not increase the flow delivered by the SCV (constant flow). The maximum flow available on the SCV (4) is about the 60% of the maximum pump flow. Independently from the set of the knob (1), the rear hitch has a priority in respect to the oil flow delivered by the pump.

5.37.15 3 PUMP CONFIGURATION

In this case, the rear hitch is supplied by a dedicated hydraulic pump.

If there are tractors with 3 pumps configuration, by the set of the knob (2) the oil flow can be divided between the SCV (4) above the flow regulator and the SCVs (3) below the flow regulator.

The oil flow delivered by the SCVs (3) is not constant according to the set of the knob (2). In this case, the flow increases or decreases according to the engine rpm.

The oil flow delivered by the SCV (4) is constant according to the set of the knob (2). In this case, the flow set by the knob is not depending on the engine rpm.

Once the pump delivers the needed flow set by the knob, the increase of the engine rpm will not increase the flow delivered by the SCV (constant flow). The maximum flow available on the SCV (4) is about the 53% of the maximum pump flow.

5.38 REAR HYDRAULIC OUTPUTS

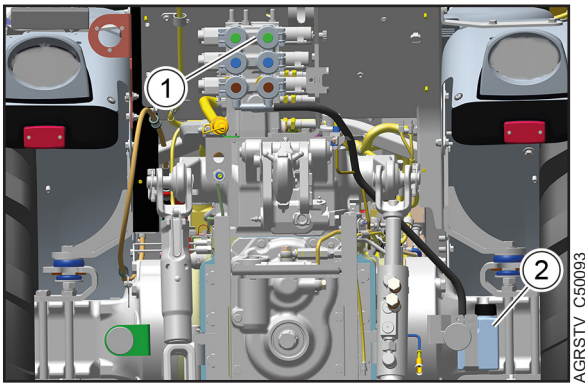
The rear hydraulic outputs are with quick coupling with oil recovery.

To connect the output pressure hose:

- Open the cap (1). The cap remains open.
- Push the hose into the connector.
- Make sure the hose is correctly connected.

To disconnect the output pressure hose:

- Remove the hose
- Close the cap (1).
- Any oil leaks are recovered in the tank (2).



Connect to the system as follows:

1. Read the implement's use and maintenance manual to make sure connection to tractor is correct.
2. Before connecting any hose, ensure the quick coupling ends and hose ends are clean and free of any dirt.
3. Make sure the implement hoses are duly connected.

Note: If implement is accidentally disconnected from tractor, hoses automatically uncouple to avoid suffering any damage.



CAUTION: Any pressurised hydraulic fluid spilt could be injected in your skin leading to serious injury.

- If fluid is injected in your skin, seek immediate medical advice since it might lead to gangrene.
- Stop engine and discharge all pressure before connecting or disconnecting any lines.
- Tighten all connections before starting the engine and pressurise the lines.



CAUTION: The hydraulic pipes/hoses could not work properly if damaged, squashed, old or exposed to harmful agents. Regularly inspect pipes. Change any damaged pipe or hose.

IMPORTANT: Ensure the oil in remote cylinders is clean, has not separated due to a long storage period and is of right quality. Any contaminated oil inside cylinders will flow through the tractor's hydraulic circuit when cylinders are operating and this might result in damages to the transmission or hydraulic components.

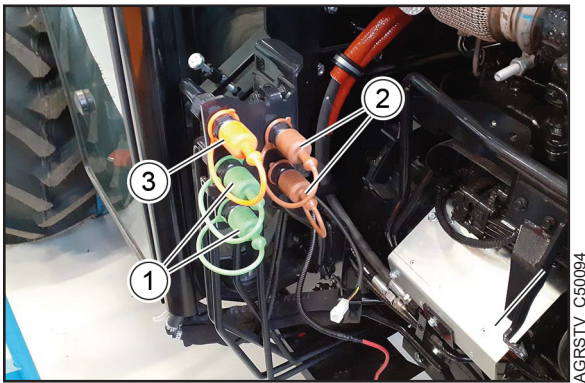
5.39 LATERAL PRESSURE CONNECTORS AND CONTROLS

To supply the lateral hydraulic pressure taps (1) or (2), use the controls located in the cab marked with the same colour.

The association between the lateral pressure taps and the controls located in the cab depend on the configuration of the tractor.

The lateral hydraulic pressure taps are connected to the rear hydraulic control valves.

The free return to the tank (3) allows the hydraulic oil to return freely from the implement to the tank.



5.40 FRONT POWER LIFT

5.40.1 FITTING CAPS ON THE PRESSURE CONNECTORS



CAUTION

Risk of crushing.

Death or serious injuries.

- Immobilise the tractor to prevent any accidental movement.
- Apply the handbrake.
- Stop engine and discharge all pressure before connecting or disconnecting any lines.
- Cut the supply to all of the hydraulic energy consumers in operation (rear linkage, hydraulic control valves, etc.).



CAUTION

Risk of crushing.

Death or serious injuries.

- Check that nobody is standing in the risk zone between the tractor and implement being carried or towed. Before entering or having someone enter the hazardous zone, immobilise the tractor and implement to prevent any accidental movement.
- Do not use the rear pressure connectors when the front linkage is in use.

When using the front linkage, the pressure connectors on the control valve assigned to the front linkage must be locked.

To lock the pressure connectors:

- Fit the caps on the pressure connectors for the control valve assigned to the front linkage.

5.40.2 CONVERTING THE SINGLE ACTION/DOUBLE ACTION FRONT LINKAGE



CAUTION

Risk of crushing.

Death or serious injuries.

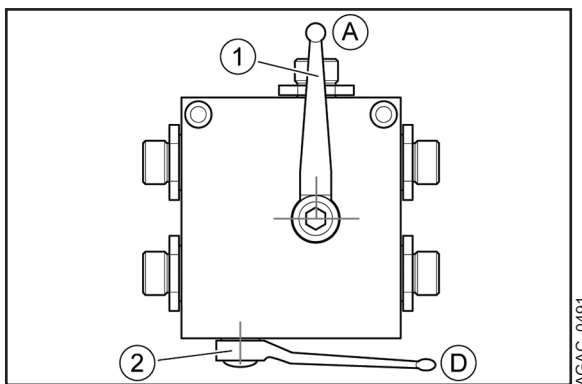
- Immobilise the tractor to prevent any accidental movement.
- Apply the handbrake.
- Cut the supply to all of the hydraulic energy consumers in operation (rear linkage, hydraulic control valves, etc.).

**CAUTION****Risk of crushing.****Death or serious injuries.**

- Check that nobody is standing in the risk zone between the tractor and implement being carried or towed. Before entering or having someone enter the hazardous zone, immobilise the tractor and implement to prevent any accidental movement.
- Do not use the rear pressure connectors when the front linkage is in use.

Front linkage in double-action operation:

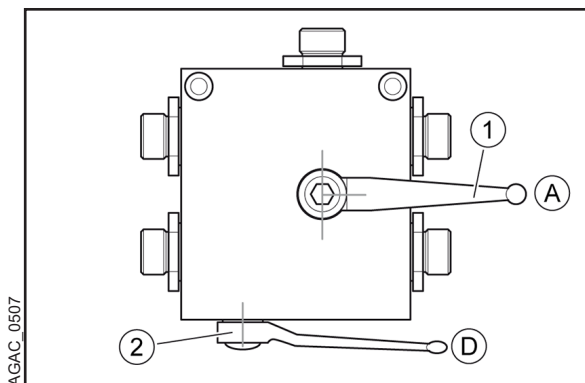
- Set the lever (1) to position (A).
- Set the lever (2) to position (D).



Front linkage in single-action operation:

- Set the lever (1) to position (A).
- Set the lever (2) to position (D).

The implement will be lowered under its own weight.

**5.40.3 LOCKING THE FRONT LINKAGE****CAUTION****Risk of crushing.****Death or serious injuries.**

- Immobilise the tractor to prevent any accidental movement.
- Apply the handbrake.
- Cut the supply to all of the hydraulic energy consumers in operation (rear linkage, hydraulic control valves, etc.).

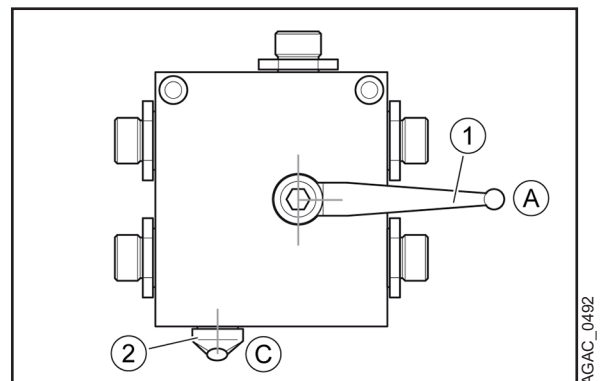
**CAUTION****Risk of crushing.****Death or serious injuries.**

- Check that nobody is standing in the risk zone between the tractor and implement being carried or towed. Before entering or having someone enter the hazardous zone, immobilise the tractor and implement to prevent any accidental movement.
- Do not use the rear pressure connectors when the front linkage is in use.

On the road, or when the front linkage is not being used, use of the front linkage must be inhibited.

In order to inhibit use of the front linkage:

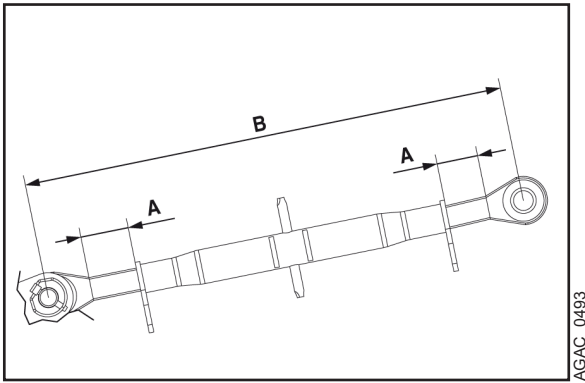
- Set the lever (1) to position (A).
- Set the lever (2) to position (C).

**5.40.4 TOP LINK****CAUTION****Risk of crushing.****Death or serious injuries.**

- Check that the uncovered thread lengths (A) are equal (maximum difference: 5 mm).
- The centre distance (B) of the top link must not exceed 550 mm.
- Turn the centre part to adjust the length of the link.
- Secure the link to the implement beam once

adjustment is completed.

- Re-tighten the locknuts.



5.40.5 LOWER CONNECTING RODS



CAUTION

Front linkage lower connecting rods not folded up.

Risk of collision.

Death or serious injuries, material damage.

- Always fold the lower connecting rods of the front linkage when the front linkage is not in use.



CAUTION

Load too heavy.

Loss of tractor control.

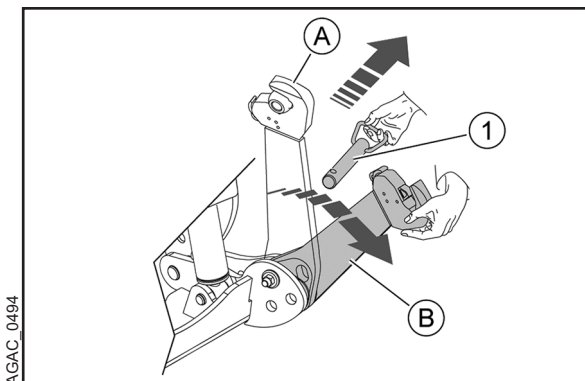
Death, serious injuries.

- Ensure that the tractor's maximum authorised hitch load is never exceeded.

Stop the engine and apply the hand brake before carrying out any adjustments on the lift arms.

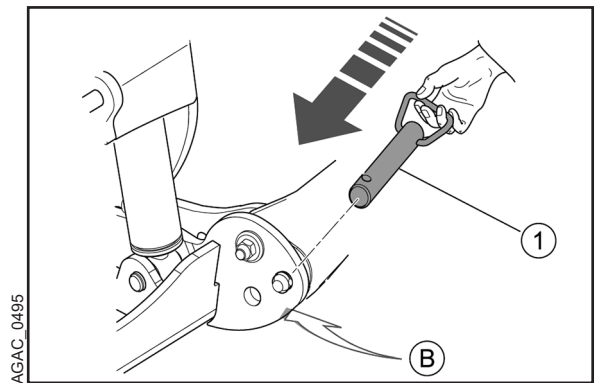
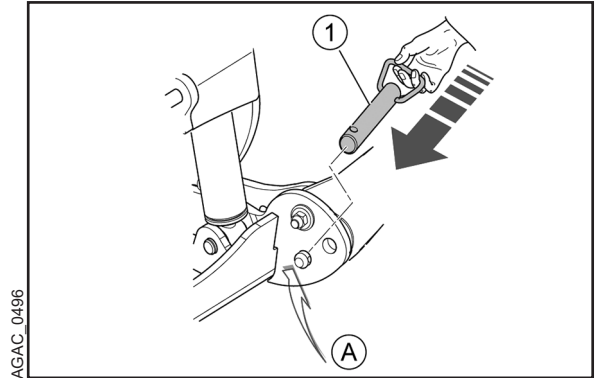
To change from "road" position (A) to "work" position (B):

- Extract the pin (1).
- Lower the lift arm.



5.40.6 WORKING POSITIONS

- Arm in fixed working position (A).
- Arm in floating working position (B).
- Refit the pin (1).



5.40.7 AUTOMATIC HOOKS



CAUTION

Tipping of the implement.

Death or serious injuries.

- In the event of an unstable implement, always attach the upper connecting rod before the lower connecting rods.

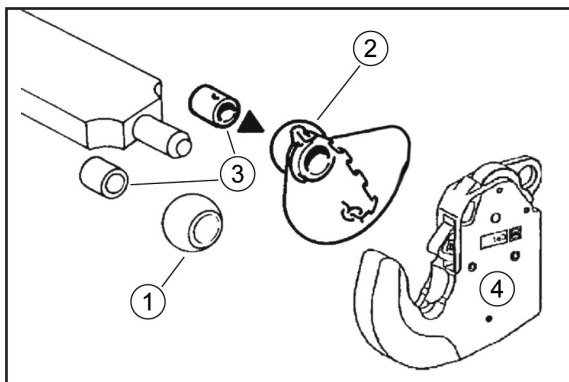


CAUTION

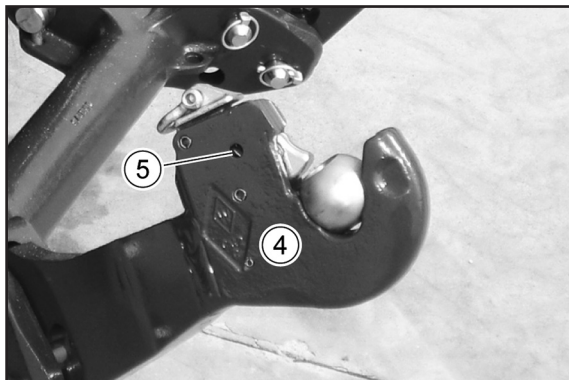
Implement not correctly locked.

Death, serious injuries, material damage.

- After each hitching operation, check that the automatic hitches are securely locked.



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NOTE: Particular working conditions (offset implements, rough or fallow terrain, etc.).

Unlocking the hooks can cause material damage.

- The automatic hooks (4) can be locked in position by inserting a screw at (5).
- Fit the appropriate hitching ball joints (1) or (2) on the implement hitch pins.
- If necessary, fit spacers (3).

NOTE: Check that the hitching ball joint diameters fit the implement's hitch pins (Cat 2 or Cat 3 standard hitch).

5.40.8 HITCHING/UNHITCHING AN IMPLEMENT. HITCHING RECOMMENDATIONS



CAUTION

Risk of crushing.

Death, serious injuries.

- Check that nobody is standing in the risk zone between the tractor and the implement being carried or towed.
- Always hitch the implements and trailers onto the recommended hitches.
- Before any movement, for towed equipment fitted with a braking system, check that the braking system is operational.
- Connect the hydraulic, electrical and air fittings properly between the tractor and the carried/towed implement.
- Comply with the maximum load capacity of the tractor's hitches.



CAUTION

Tipping the implement.

Death or serious injuries.

- Always connect the lower connecting rods before connecting the top link.
- Always disconnect the top link before disconnecting the lower connecting rods.



CAUTION

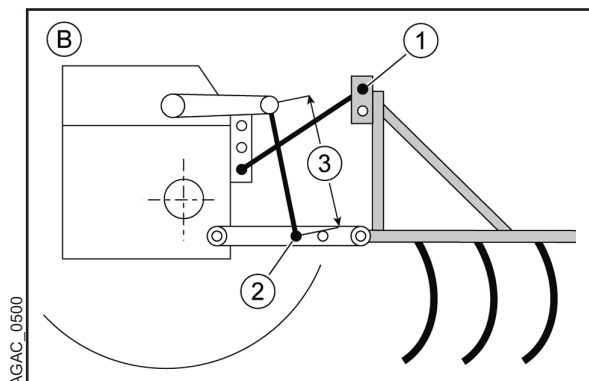
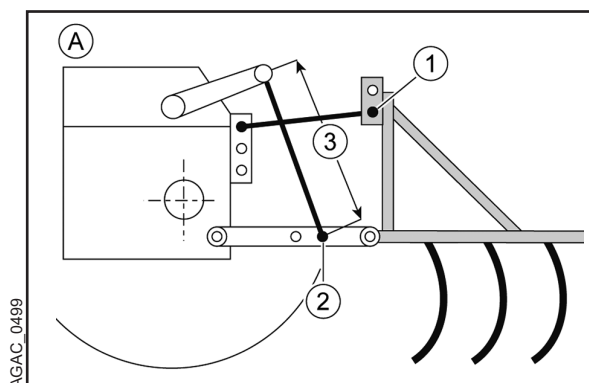
Worn or damaged parts.

Death, serious injuries, material damage.

- Never perform any welding, cutting, drilling or sanding work on hitching devices.
- Replace any worn or damaged parts.

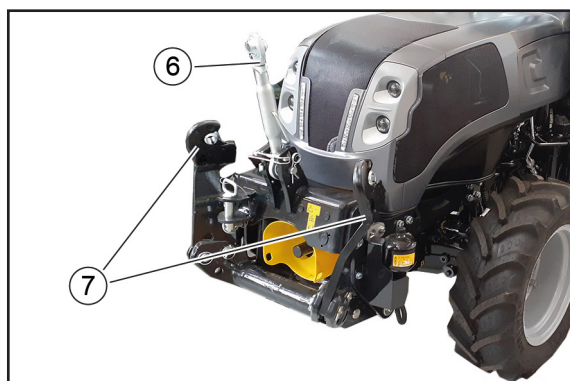
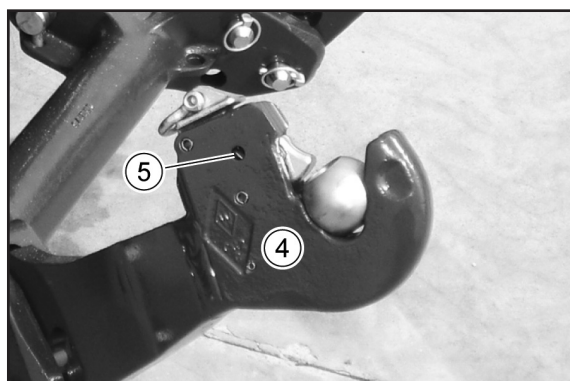
The 3-point hitch enables a wide range of implements to be hitched. You must identify the most appropriate hitch geometry for each application. To achieve this, the following components can be adjusted:

	DESCRIPTION
1	Top link (attachment point for the top link in relation to the wheel axis and the link length).
2	Lower connecting rods (attachment point between the adjustable links on the lower bars).
3	Adjustable links (adjustable link length).



- To achieve maximum lifting capacity (heavy implement), use the configuration corresponding to maximum mechanical benefit (A):
- Top link in the upper hole on the tractor side, in the lower hole on the implement side (1).
- Adjustable links fixed in the hole farthest back.
- Adjustable links fully extended (3).
- If the load to be lifted is light, the following hitching configuration corresponds to the minimum mechanical benefit (B):
- Top link in the lower hole on the tractor side, in the upper hole on the implement side (1).
- Adjustable links fixed in the hole farthest forward.
- Adjustable links fully shortened (3).

- Lower the front lift arms.
- Place the top link hitch over the implement's hitch pin.
- Depending on the equipment (refer to the operator's manual for the implement).
- Connect the transmission shaft linking the implement to the tractor.
- Connect the implement's hydraulic hoses.
- Connect the implement's electrical cables.
- In particular working conditions (offset implements, rough terrain, fallow, etc.), the automatic hooks can be locked in position by inserting a screw at (5).



5.40.9 HITCHING



CAUTION

Tipping the implement.

Death or serious injuries.

- In the event of an unstable implement, always attach the upper connecting rod before the lower connecting rods.



CAUTION

Implement not correctly locked.

Death, serious injuries, material damage.

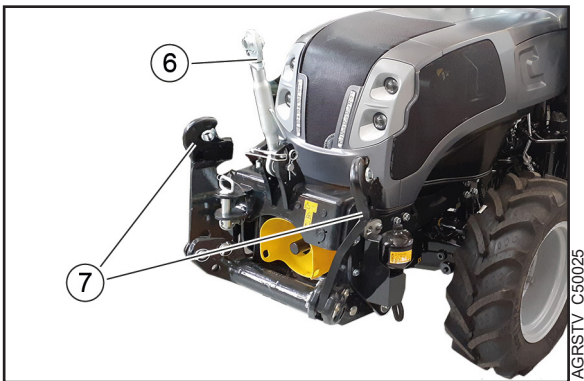
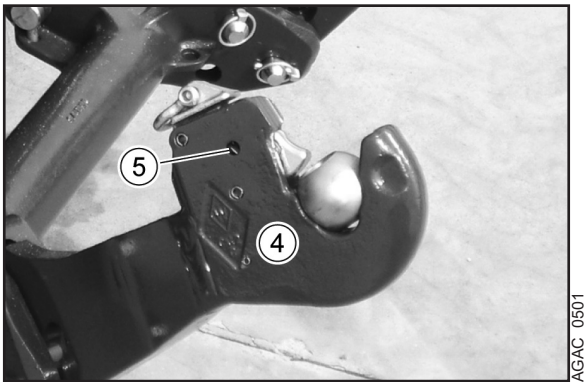
- After each hitching operation, check that the automatic hitches are securely locked.
- Offer up the tractor to the implement.
- Raise the front lift arms until the automatic hooks (4) are locked.

5.40.10 UNHITCHING

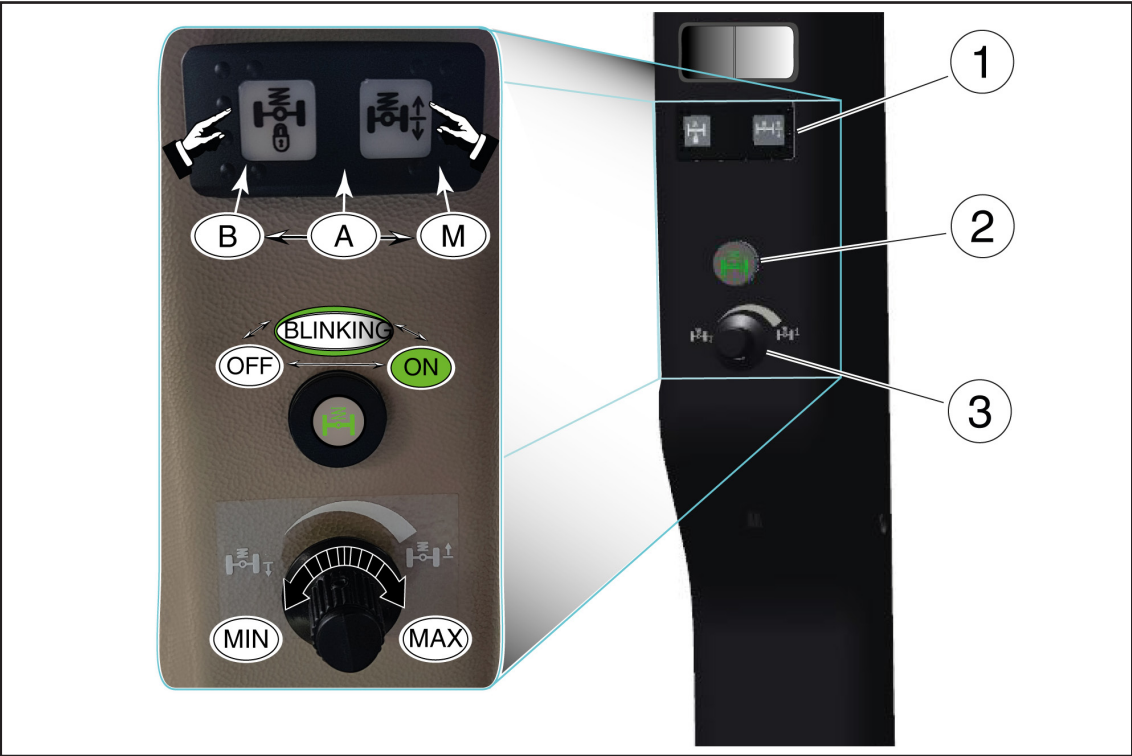
- Position the tractor and the hitched implement on flat, horizontal and stable ground.
- Lower the implement to the ground.
- Depending on the equipment (refer to the operator's manual for the implement).
- Disconnect the implement's hydraulic hoses.
- Disconnect the implement's electrical cables.
- Disconnect the transmission shaft linking the implement to the tractor.
- Detach the top link.
- Raise the implement slightly.
- Unlock the hooks (4) from the lower connecting rods.
- Lower the hitch until the hooks (4) disengage.

When the front linkage is no longer in use:

- Place the top link (6) and the front lift arms (7) in the "road" position when travelling on public roads.
- Comply with the highway code in your country.



5.41 SUSPENDED AXLE SYSTEM CONTROL



N	Description
1	Suspension system activation switch (Blocked - Automatic - Manual)
2	Activation LED indicator light (Off - On - Blinking)
3	Height regulation potentiometer knob (from "MIN" to "MAX" height position)

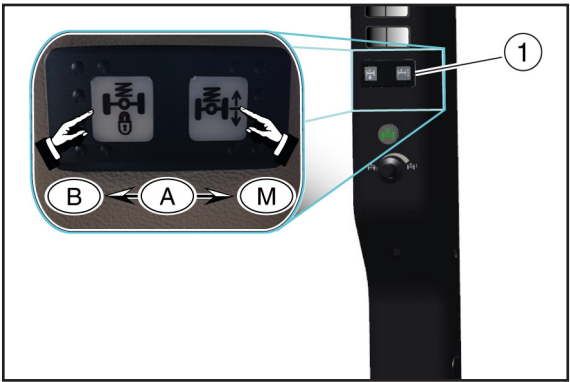
IMPORTANT: Do not perform any inspection and/or service interventions on the suspension system. The maintenance procedures have to be performed ONLY by a specialized service technician, refer to an authorized service centre. Risk of burns from hot surfaces, injuries and/or health problems.

5.41.1 SUSPENSION SYSTEM ACTIVATION SWITCH

The activation switch (1) is located on the right cab post and can be set in three different positions:

- Automatic mode (activation switch (1) in the central position “A” - default position): activates the automatic functioning of the suspended front axle;
- Manual mode (activation switch (1) pressed on the right “M” - unstable position1): activates the manual positioning of the suspended front axle. The height of the suspended front axle can be adjusted via the potentiometer knob (3);
- Blocked mode (activation switch (1) pressed on the left “B” - stable position2): locks the suspended front axle in intermediate central

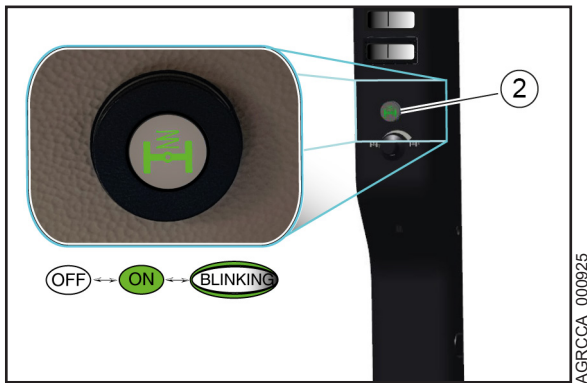
position.



5.41.2 ACTIVATION LED INDICATOR LIGHT

The LED indicator light (2) can display four possible states:

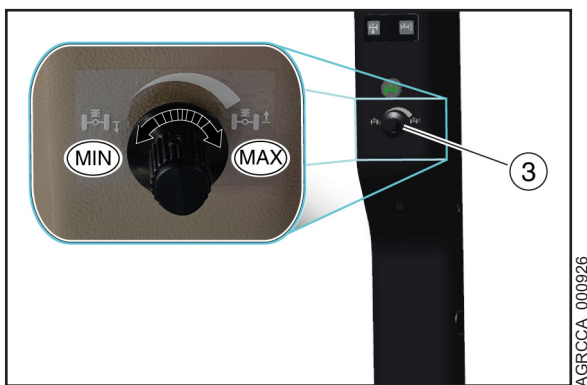
- LED indicator light OFF: suspension system in blocked mode.
- Steady LED indicator light ON (green lit): activation of automatic mode.
- Flashing LED indicator light (slow blinking): activation of manual mode.
- Flashing LED indicator light (fast blinking): malfunction error occurred in the axle suspension system.



5.41.3 HEIGHT REGULATION POTENTIOMETER KNOB

In manual mode, use the regulation potentiometer knob (3) to adjust the height of the front axle:

- Turn the knob clockwise to increase the height.
- Turn the knob counter-clockwise to reduce the height.



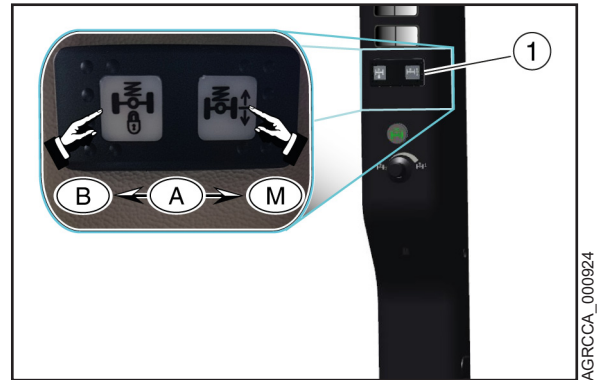
5.41.4 ACTIVATION OF THE SUSPENSION SYSTEM

Suspension system in automatic mode (active amortization)

To activate the automatic mode (automatic functioning of the suspension system):

- 1) Make sure the activation switch (1) is in the central position "A" (default position).
- 2) Turn the ignition key ON: the LED indicator light (2) is ON (steady green).

The suspension system is therefore in automatic mode (active amortization).

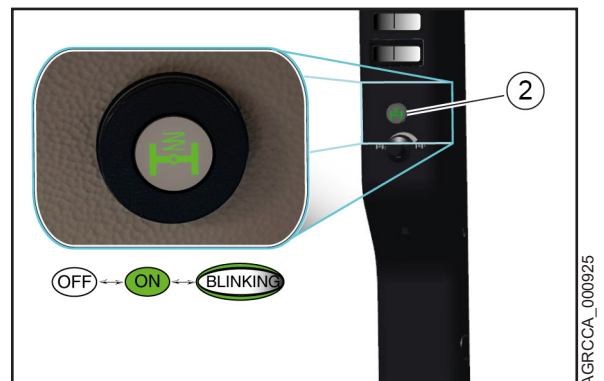


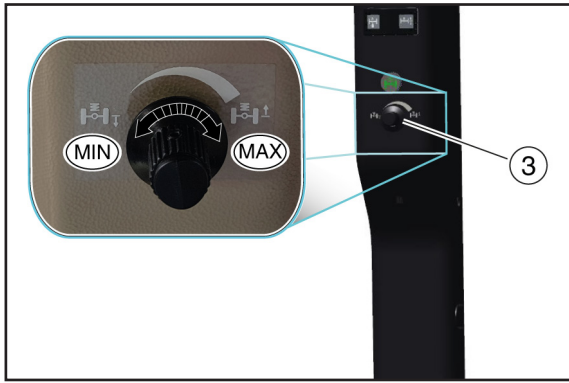
Suspension system in manual mode

IMPORTANT: Before activating the manual mode, make sure that the tractor is located on a flat surface.

To activate the Manual mode (manual functioning of the suspension system):

- 1) Turn the ignition key ON: the LED indicator light (2) is ON (steady green);
- 2) Move the vehicle above 2 Km/h speed threshold;
- 3) Press the activation switch (1) on the left (manual position "M") for more than three seconds and then release the switch;
- 4) The LED indicator light (2) from steady, starts flashing (fast blinking): the manual mode becomes active;
- 5) Turn the potentiometer knob 3) until the current position of the suspension system is matched: the flashing LED indicator light (2) at that point starts blinking slowly.





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In manual mode, once the flashing LED indicator light (2) blinks slowly, it is possible to adjust the height of the suspension front axle (up / down) by regulating the adjustment potentiometer knob (3):

- Turn the knob clockwise to increase the height of the front axle.
- Turn the knob counter-clockwise to reduce the height of the axle.

The selected height value remains unchanged as long as the vehicle speed does not exceed the threshold of 5 km/h.

If the speed threshold of 5 km/h is exceeded:

- The suspension system returns to automatic mode.
- The LED indicator light (2) from blinking becomes lit steady.
- The suspension front axle is automatically repositioned at the intermediate central position

Suspension system in blocked mode

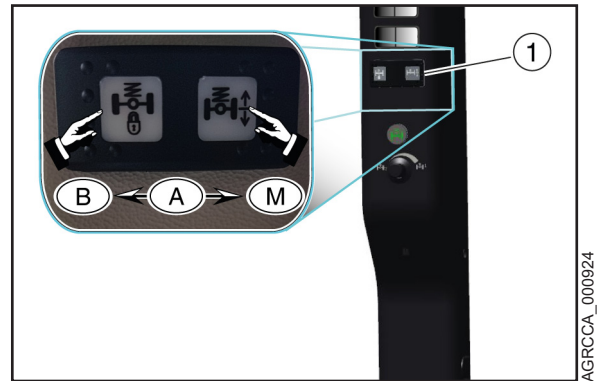
To activate the Blocked mode (suspended front axle in a locked position), press the activation switch (1) on the left (blocked position "B").

The activation LED indicator light (2) turns OFF. With speed range from 0 to 2 km/h, the suspended front axle locks in the current position (the same height value set before locking the suspension system).

With speed range from 2 to 25 km/h, if the suspended front axle has been previously locked in a position other than the intermediate, it will shift at the intermediate height and will lock in that position.

With a speed threshold major than 25 km/h:

- The control unit switches from locked mode to automatic mode.
- The LED indicator light (2) previously switched off becomes steady green lit (automatic mode active) and remains in this state until the tractor is stopped ($V = 0$ km/h).
- Once this condition is reached ($V = 0$ km/h), the control unit switches from automatic mode to locked mode (previously selected) and the activation LED indicator light (2) turns OFF.



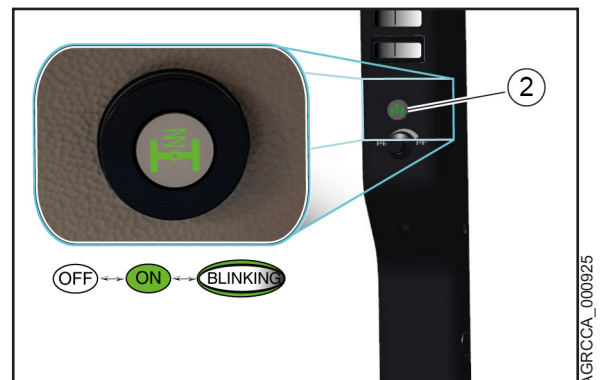
AGRCCA_000924

Suspension system in manual mode

IMPORTANT: The interventions of service maintenance and the calibration procedure have to be performed **ONLY** by a specialized service technician, refer to an authorized service centre.

If hydraulic or electrical malfunction is detected of the suspended axle system, the LED indicator light (2) will start to flash quickly (fast blinking), indicating to the operator that the system is in an error state. In the event of an active error or failure, Once the error state is entered, all coils are de-energized.

Refer to an authorized service centre for the inspection, troubleshooting and resolution of the malfunction.

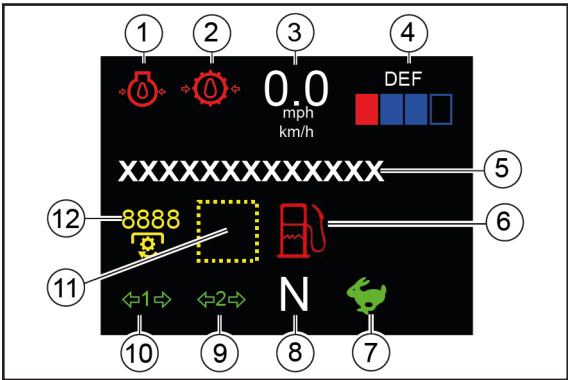


AGRCCA_000925

5.42 SETTING THE DIGITAL DISPLAY



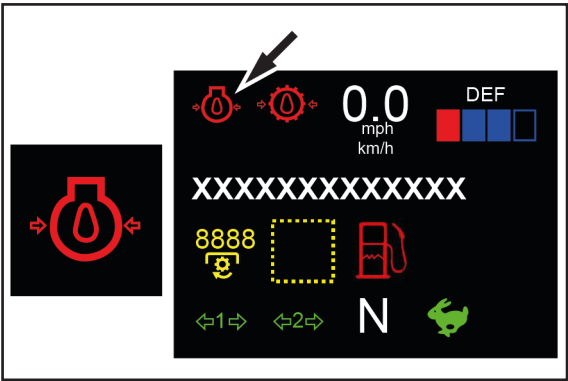
AGRCCA_000449



AGRSTV_C50026

- 1 - Engine oil pressure indicator light
- 2 - Transmission low oil pressure light
- 3 - Electronic vehicle speed indicator
- 4 - DEF level indicator (only 2.95 and 2.105 models)
- 5 - Software version and information messages
- 6 - Water in fuel warning light
- 7 - Hi-Lo status indicator
- 8 - Direction lever status (F/N/R) indicator
- 9 - 2nd trailer direction indicators repeater
- 10 - 1st trailer direction indicators repeater
- 11 - Inducement warning light
- 12 - PTO speed indicator

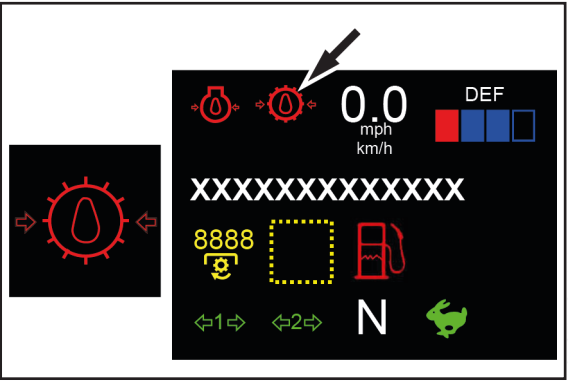
Engine oil pressure warning light



AGRSTV_C50027

Status	Message
Steady	Engine oil low pressure
Blinking	Engine oil replacement
Fast blinking	Engine oil life monitoring reset in progress

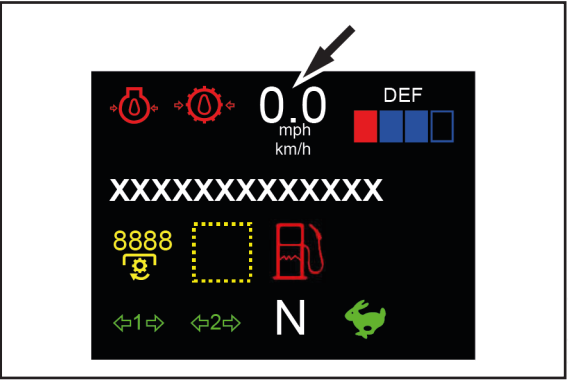
Transmission oil warning light



AGRSTV_C50028

Status	Message
Steady	Transmission oil low pressure

Electronic vehicle speed indicator

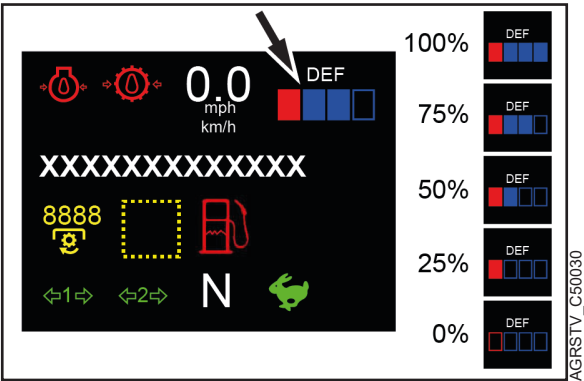


AGRSTV_C50029

Status	Message
Steady	Vehicle speed (mph o km/h)

DEF level indicator

NOTE 2.95 and 2.105 models only

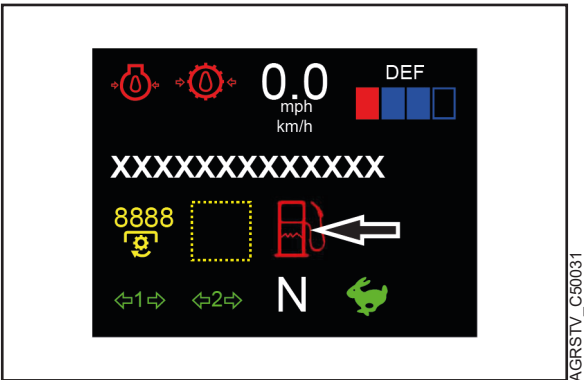


The DEF level indicator will take the form of "graf bar".
Each "bar" will represent a value, in percentage, equal to 25% of the total tank level (four bars = 100%)

Urea level will be displayed on TFT.

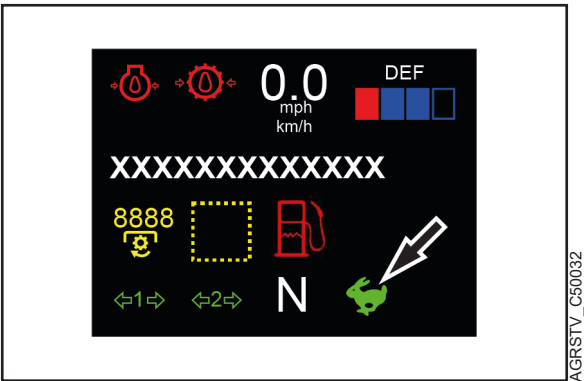
Refer to paragraph DEF Level for details about DEF level inducement strategy.

Water in fuel warning indicator



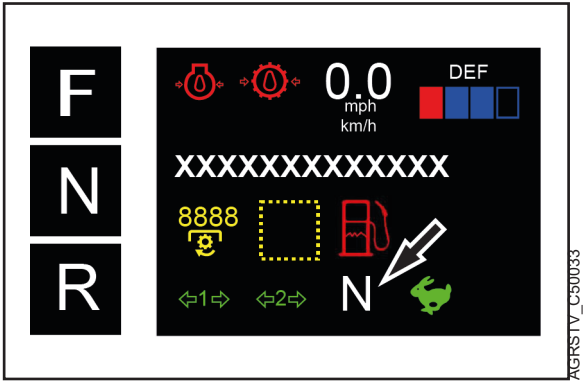
Status	Message
Steady	Water in fuel detected

Hi-Lo status indicator



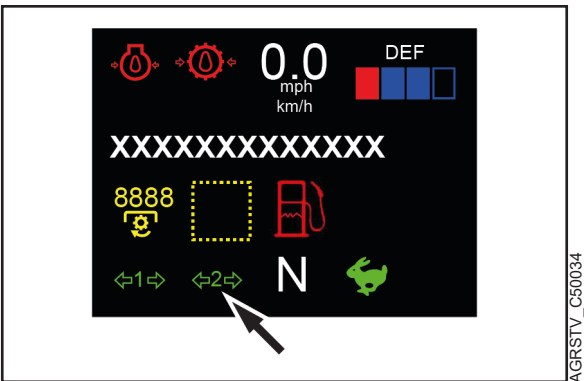
Status	Message
Steady	Hi-Lo engaged
Blinking	Hi-Lo in fault

Direction lever status



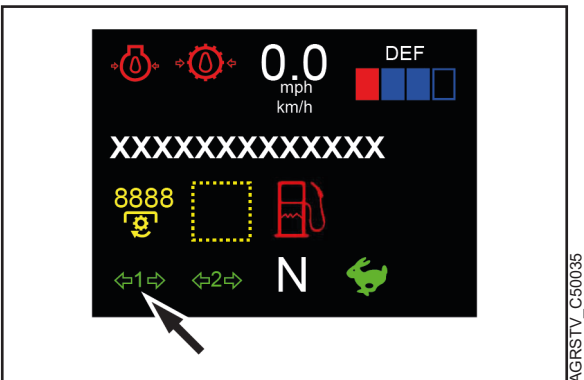
Status	Message
F	Forward
N	Neutral
R	Reverse

2nd trailer direction indicator repeater



Status	Message
Blinking	Trailer direction indicator repeater

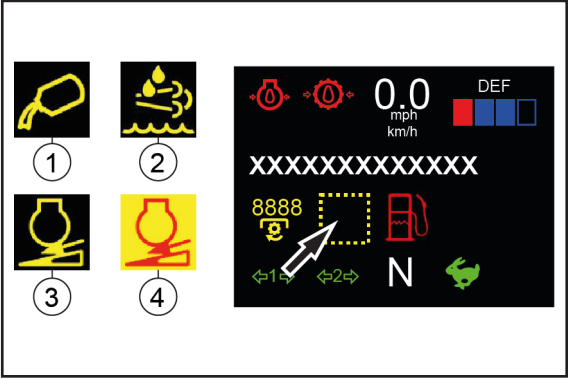
1st trailer direction indicator repeater



Status	Message
Blinking	Trailer direction indicator repeater

Inducement warning light

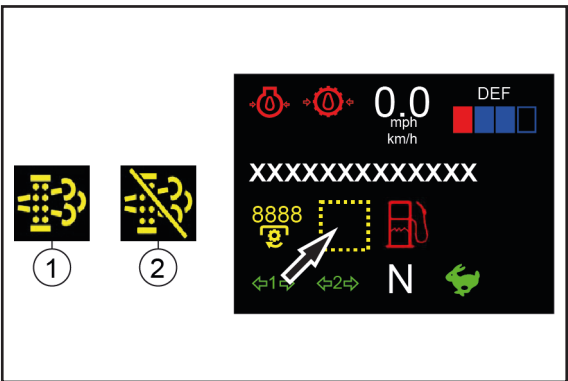
NOTE: 2.95 and 2.105 models only



AGRSTV_C50036

Icon	Description
1	DEF level mild inducement icon
2	Mild inducement icon
3	Moderate inducement icon
4	Severe inducement icon

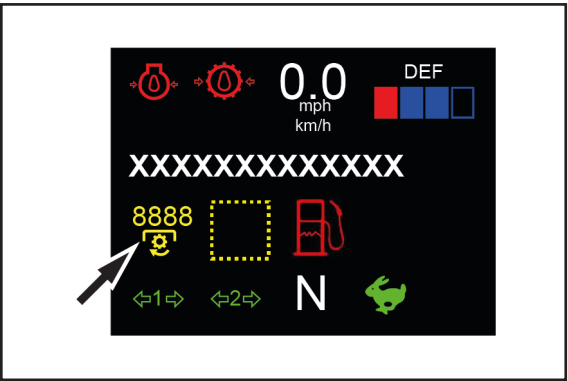
DPF regeneration warning light



AGRSTV_C50037

Icon	Status	Description
1	Steady	DPF regeneration running
1	Blinking	Forced regeneration required
2	Steady	Automatic regeneration inhibit status (ON = Inhibited, OFF= Enabled)
2	Fast Blinking	Forced Regeneration inhibit status (Fast blinking = inhibited)

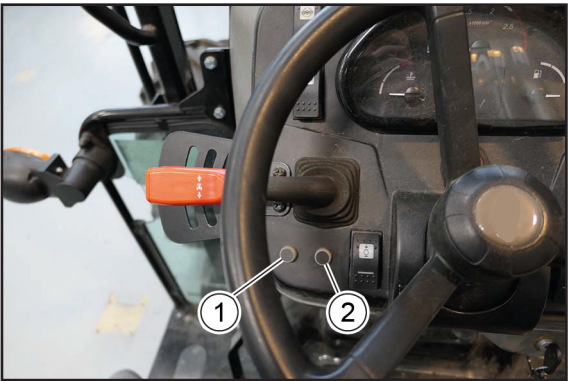
PTO speed indicator



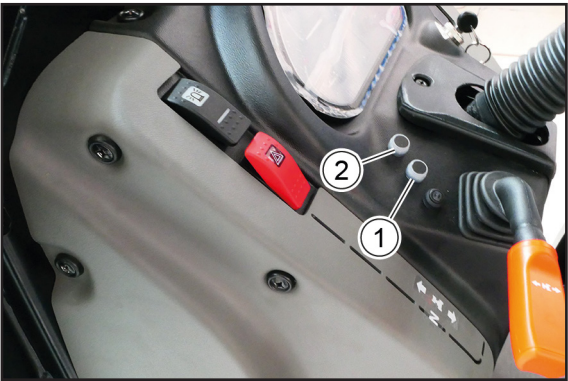
AGRSTV_C50038

Status	Message
Steady	PTO speed in rpm

5.42.1 DIGITAL DISPLAY - USER INTERFACE



Roll Bar models



Cab models

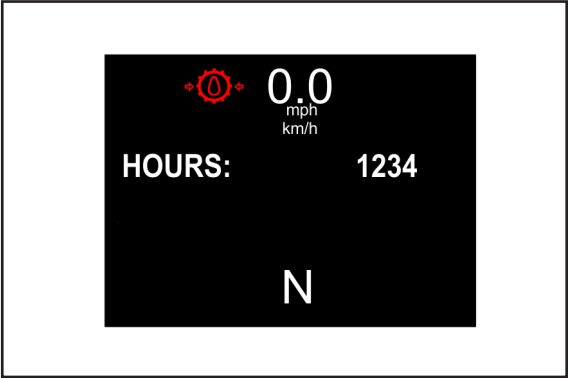
When you turn the ignition key in the ON position, the digital display on the instrument panel turns on and displays the Carraro Logo and then the main menu.

The menu control buttons (1) and (2) can be used to navigate the main menu displayed, i.e. to scroll the available list of choices, select and access one of the following sub-menus:

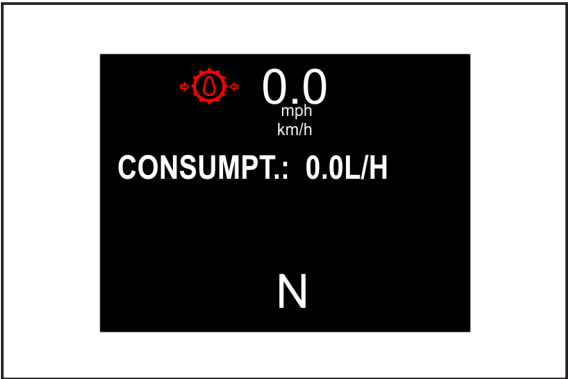
- 1. Working hours
- 2. Fuel consumption
- 3. DPF (Diesel Particulate Filter) percentage of clogging
- 4. Coolant Temperature
- 5. Transmission oil temperature (only Power Reverser transmissions)
- 6. Front PTO speed (if fitted)
- 7. Front wheel drive status (engagement of the 4WD)

Functions of button		
	(1)	(2)
Pressed for less than 0.3 seconds	Navigate upward	Navigate downward
Pressed for 1 second or longer	Confirm entry	Access and exit the sub menu

5.42.2 WORKING HOURS



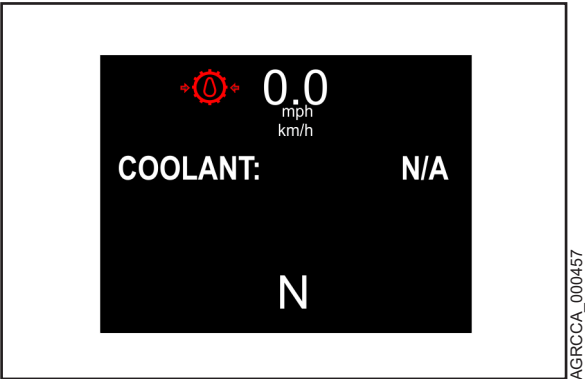
5.42.3 FUEL CONSUMPTION



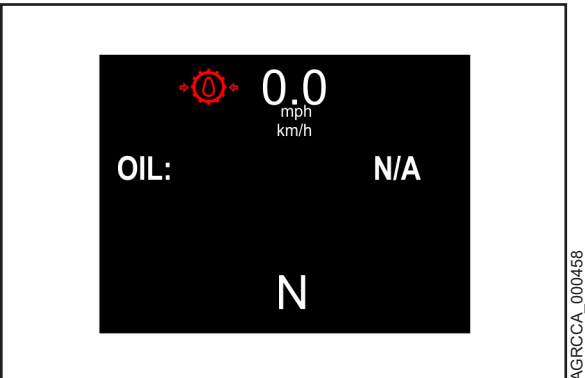
5.42.4 DIESEL PARTICULATE FILTER PERCENTAGE OF CLOGGING



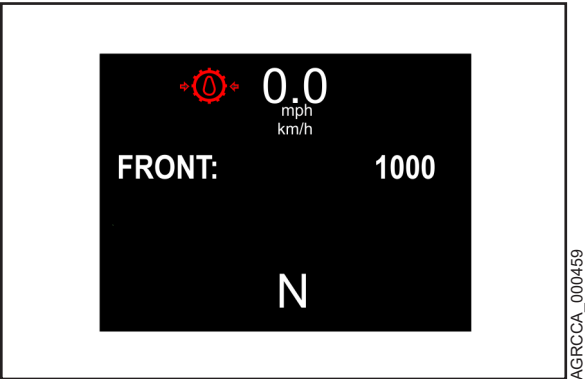
5.42.5 COOLANT TEMPERATURE



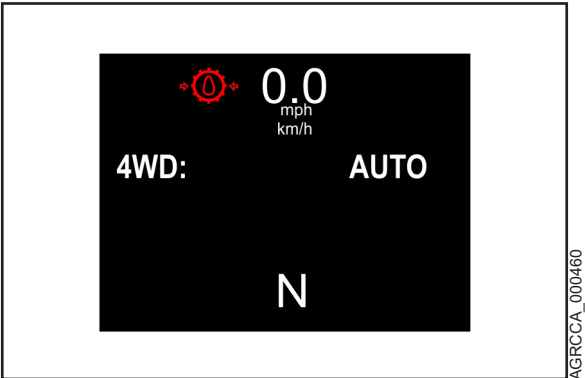
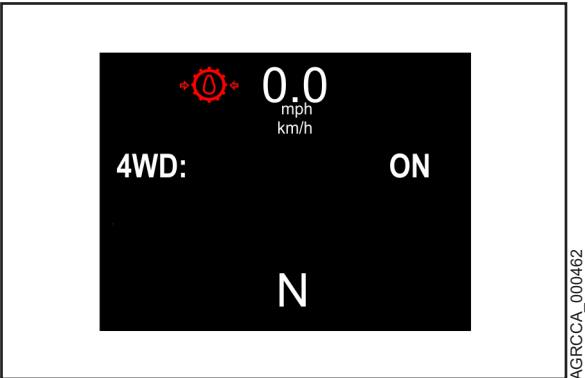
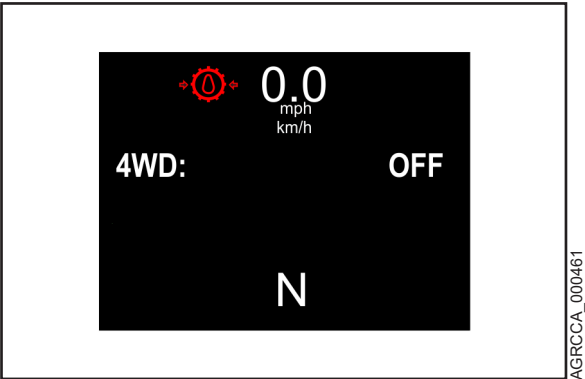
5.42.6 TRANSMISSION OIL TEMPERATURE



5.42.7 FRONT PTO SPEED (IF EQUIPPED)



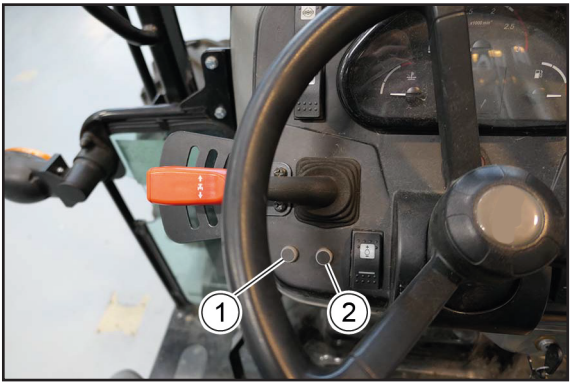
5.42.8 FRONT-WHEEL DRIVE STATUS



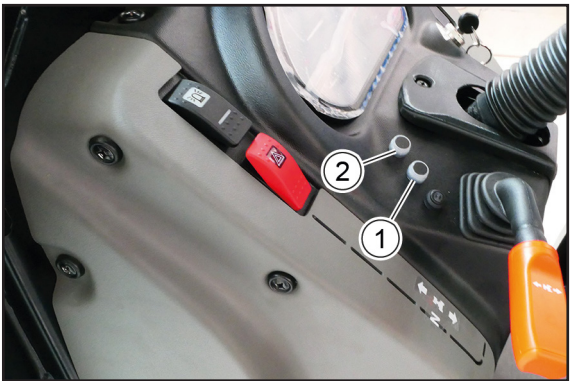
- Press the setting button (1) for enter in the menu.
- Press and hold the button (1) to confirm the selection and access the next sub-menu (ON - OFF - AUTO)
 - Keep the button (1) pressed for more than a second to confirm the selection needed.

5.42.9 USER MENU

NOTE: Stop the vehicle and engage the park brake before accessing the menu. The menu is automatically closed if the vehicle moves



Roll Bar models



Cab models

Functions of button		
	(1)	(2)
Pressed for less than 0.3 seconds	Navigate upward	Navigate downward
Pressed for 1 second or longer	Confirm entry	Access and exit the sub menu

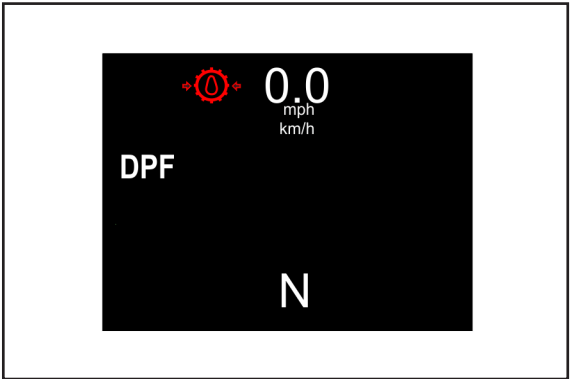
Press and hold the menu control button (1) for more than a second to enter the User Menu. Press the menu control button (1) or (2) to scroll the available list of choices. Press and hold the menu control button (1) for more than a second to enter the desired sub-menu.

Available pages:

- 1. DPF
- 2. HC STRATEGY INHIBITION
- 3. LANGUAGE
- 4. UNIT
- 5. TRANSMISSION ERRORS
- 6. ENGINE ERRORS
- 7. SPEED PULSE SETTING
- 8. SOFTWARE

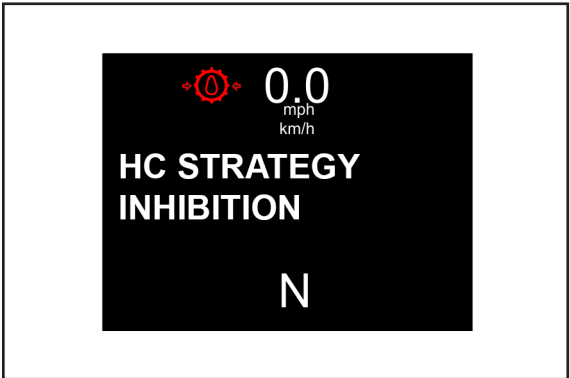
5.42.10 DPF

See “Particulate filter regeneration”

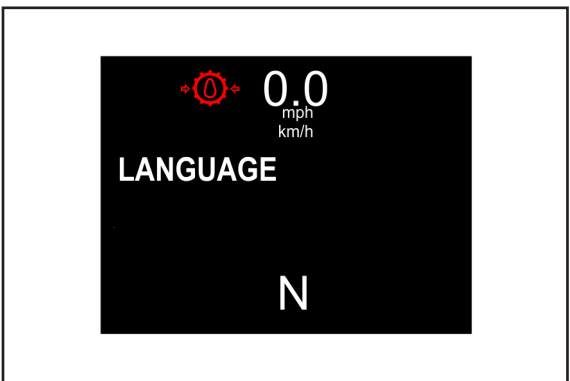


5.42.11 HC STRATEGY INHIBITION

See “Hydrocarbons (HC) removal”

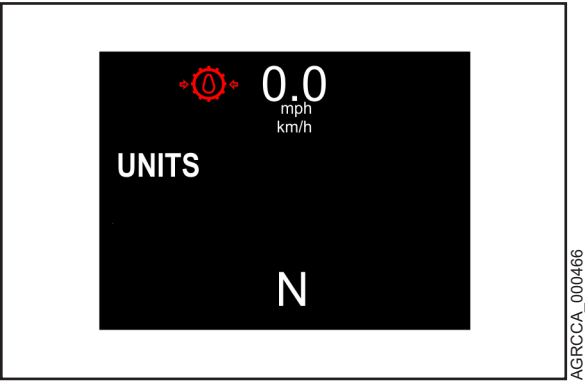


5.42.12 LANGUAGE



- Press the menu control button (1) or (2) to select the desired language.
- Press and hold the menu control button (1) for more than a second to confirm the setting.

5.42.13 UNITS

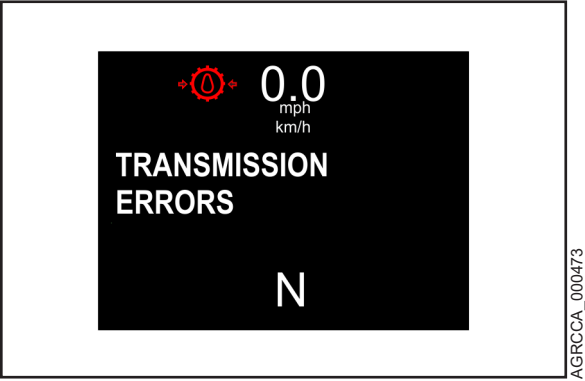


Press the menu control button (1) or (2) to configure the units of measure:

- Speed: km/h or mph
- Temperature: °C or °F.
- Power: kW or HP.

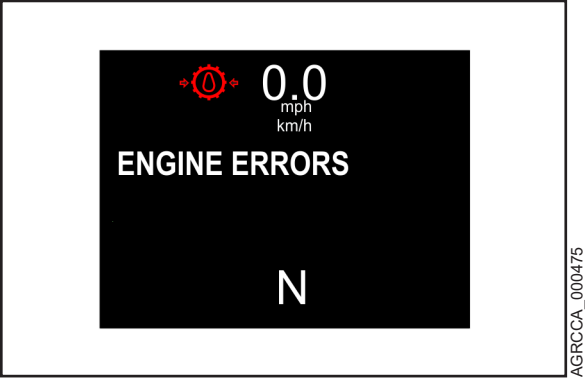
Press and hold the menu control button (1) for more than a second to confirm the setting

5.42.14 TRANSMISSION ERRORS



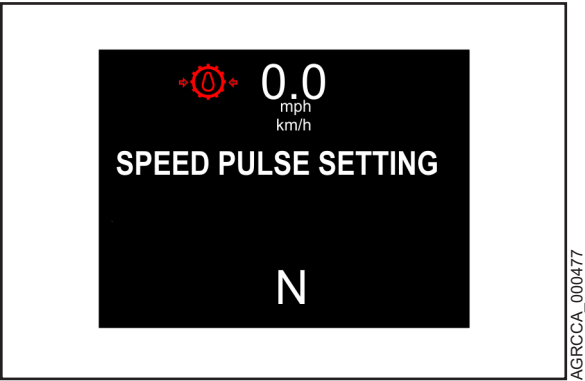
Press buttons (1) or (2) to scroll through the list of errors.

5.42.15 ENGINE ERRORS



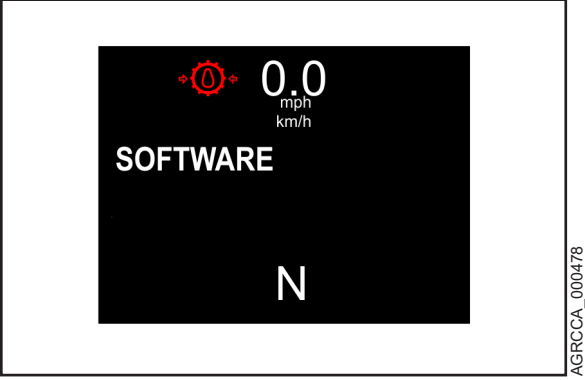
Press buttons (1) or (2) to scroll through the list of errors.

5.42.16 SPEED PULSE SETTING



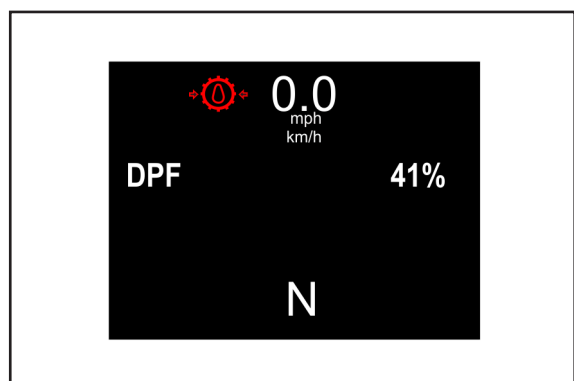
NOTE: The function management is reserved to authorised dealer.

5.42.17 SOFTWARE

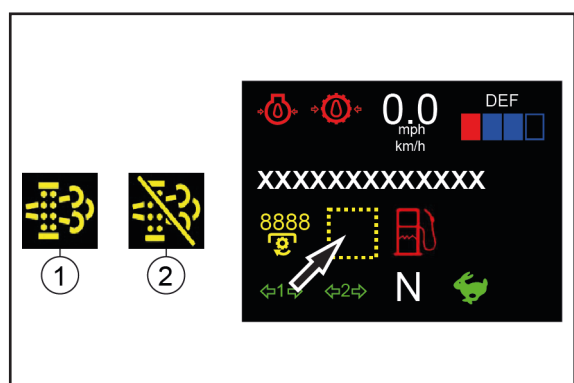


It is possible to view the software version of the dashboard control unit.

5.43 DIESEL PARTICULATE FILTER (DPF) REGENERATION



The particulate filter filling percentage can be viewed on the instrument panel display.



The soot accumulation requires a regular regeneration of the particulate filter.

The pictogram (1), displayed permanently on the digital display, indicates that particulate filter regeneration is in progress.



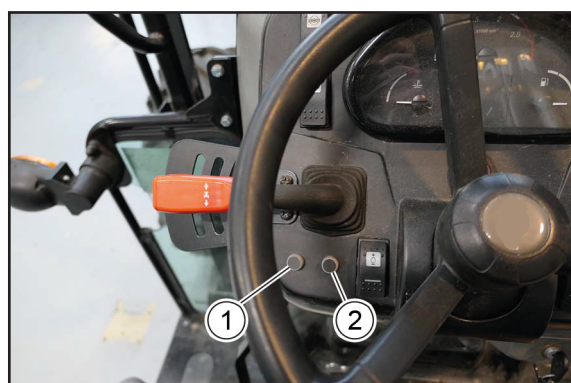
Warning: Do not shut down the engine during regeneration process. With automatic regeneration enabled, in case of steady pictogram (1) on digital display, wait until it turns off before shutting down the engine.

The pictogram (1), which flashes on the digital display, indicates that particulate filter manual regeneration is necessary.

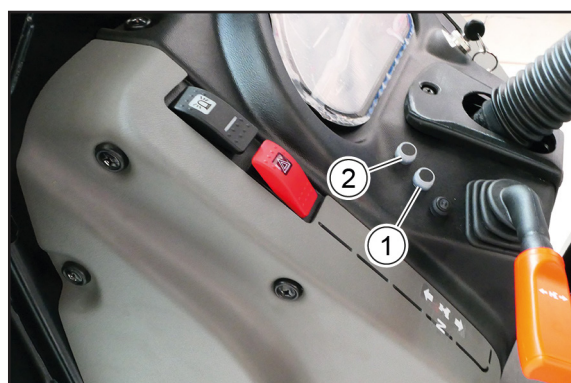
The pictogram (2), displayed permanently on the digital display, indicates that the automatic particulate filter regeneration is inhibited.

The pictogram (2), which flashes fast on the digital display, indicates that the manual regeneration can be performed only by service tool.

5.43.1 DPF AUTOMATIC REGENERATION



Roll Bar models



Cab models

The automatic regeneration can be done either in stationary or motion condition.

To access the DPF menu:

Scroll the available list of the user menu by pressing the menu control button (1) or (2) for less than a second to select the DPF menu.

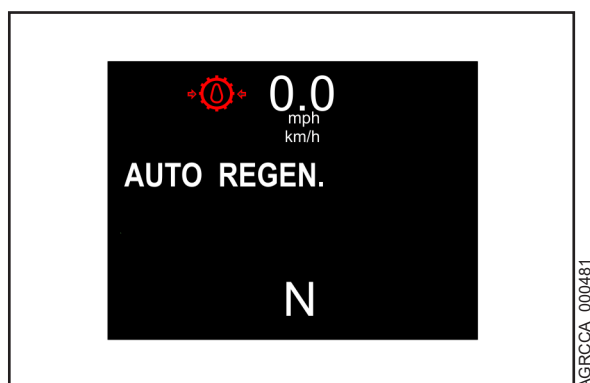
Keep the button (1) pressed for more than a second to confirm the selection and access the next sub-menus.

The possible sub-menus are:

- AUTO REGENERATION
- MANUAL REGENERATION

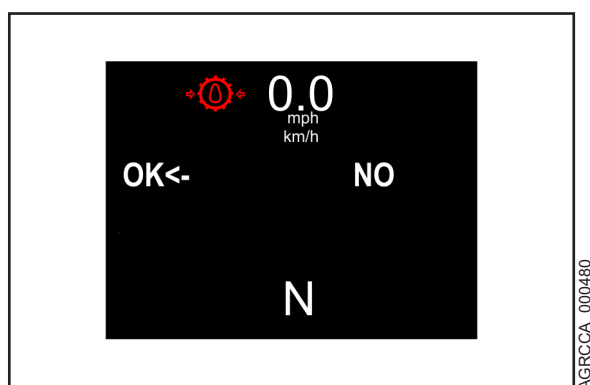
NOTE: the manual regeneration is available only if required by the Engine Control Unit.

Select the "AUTO REGENERATION" sub-menu.



Keep the button (1) pressed for more than a second to confirm the selection and access the next sub-menu.

Press the menu control button (1) or (2) to select the desired parameter ("OK" or "NO").



Keep the button (1) pressed for more than a second to confirm the selection.

Keep the button (2) pressed for more than a second to exit this sub-menu.

NOTE: The selection "OK" (automatic regeneration) is the recommended setting. If "NO" is selected, the function is inhibited and the DPF inhibited warning light comes ON (2). The setting will be effected by the ignition key turn. To change the setting, access again the DPF sub-menu

NOTE: The automatic regeneration runs when engine speed is more that 1300 rpm.

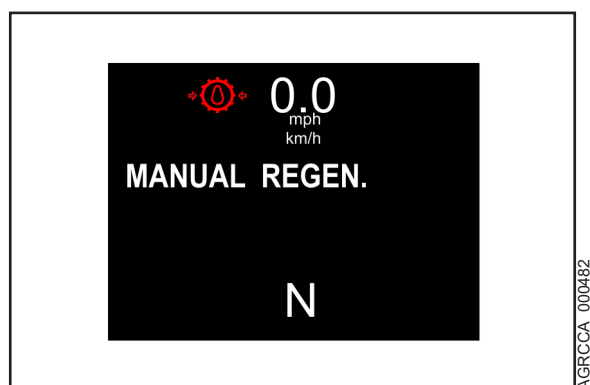
5.43.2 DPF MANUAL REGENERATION

The "Manual Regeneration" menu item is available only if a manual regeneration is required by the engine control unit.

Before starting the process, the following safety conditions have to be fulfilled:

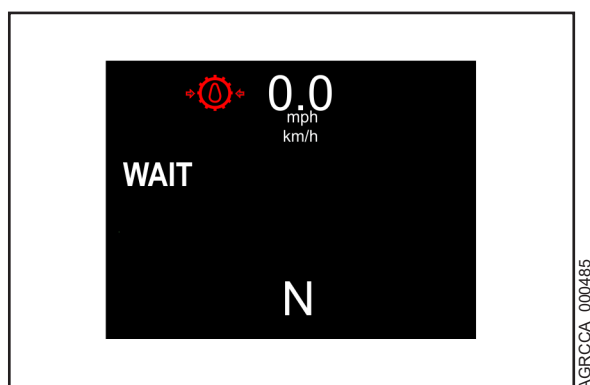
- Vehicle stopped.
- Handbrake engaged.
- Gear lever in neutral.
- Power Take Off deactivated (rear and front if equipped).

Select the "MANUAL REGENERATION" sub-menu.



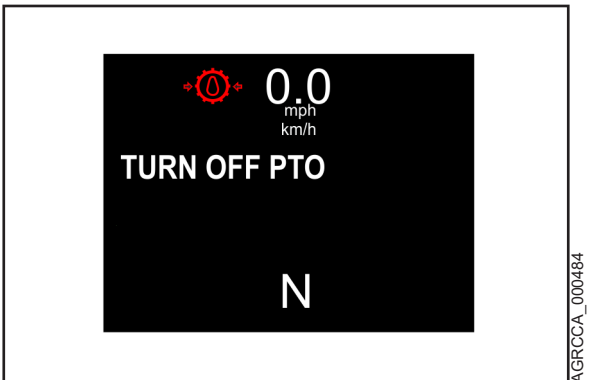
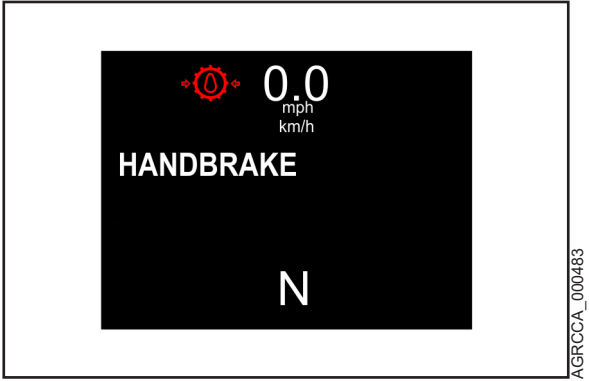
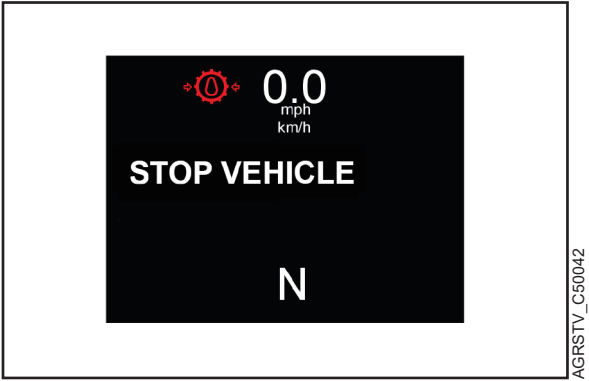
Press the menu control button (1) for more than a second to confirm the selection and start the manual regeneration process

The Control Unit performs a check of the safety conditions and the message "WAIT" flashes on digital display.



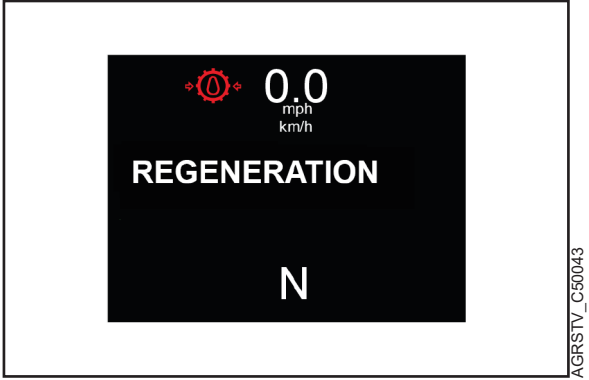
If one or more safety conditions do not match, the related warning messages are displayed on the instrument panel. Messages could be:

- STOP VEHICLE
- HAND BRAKE
- TURN OFF PTO



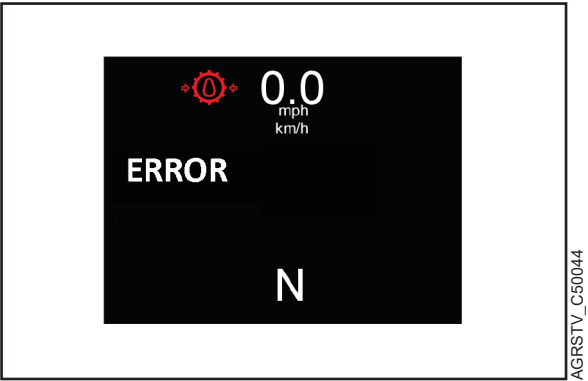
The operator has 10 second to resolve the unmatched conditions, after that the procedure will abort and the digital display returns to "MANUAL REGENERATION".

Otherwise the procedure will start and the message "REGENERATION" will be displayed.



If during regeneration process one or more safety

conditions are no longer fulfilled or an error occurs, the message "ERROR" flashes for 3 seconds, and the procedure will abort and the digital display returns to "MANUAL REGENERATION".



At successful completion the message "COMPLETED" is displayed.



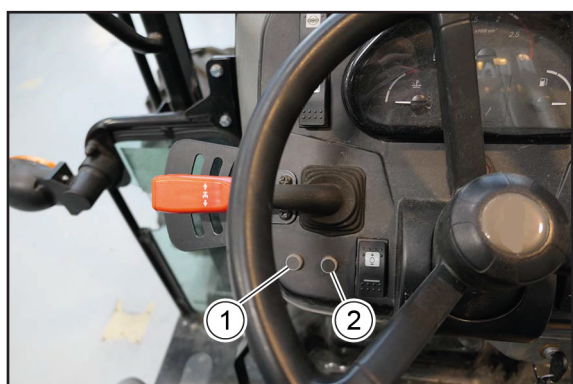
5.44 HYDROCARBONS (HC) REMOVAL

There are some situations where the engine can be left running at low idle for a substantial amount of time in order to keep the engine constantly warm.

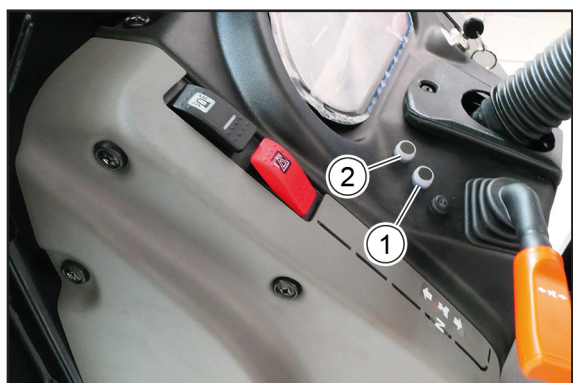
However in these conditions the accumulation of HC can be critical. For this reason in some situations the Engine Control Unit applies the HC REMOVAL STRATEGY by increasing the low idle speed for an amount of time necessary to reduce the HC accumulation.

The low idle increase inhibition can be set by the user, but is reset at every key cycle.

Scroll the available list of the user menu by pressing the menu control button (1) or (2) for less than a second to select the HC STRATEGY INHIBITION menu.



Roll Bar models

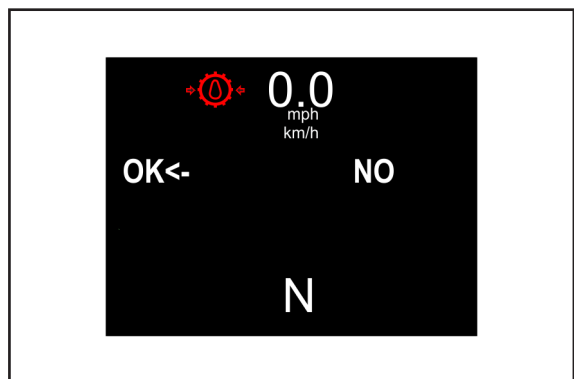


Cab models



Keep the button (1) pressed for more than a second to confirm the selection and access the next sub-menus.

Press the menu control button (1) or (2) to select the desired parameter ("OK" or "NO").



Keep the button (1) pressed for more than a second to confirm the selection. Keep the button (2) pressed for more than a second to exit this sub-menu.

- "OK": The low idle increase strategy is inhibit. The engine will not increase the low idle rpm (850 rpm)
- "NO": The low idle increase is active.

The engine will increase the low idle rpm at 1100 rpm, in order to reduce the HC accumulation.

The HC REMOVAL STRATEGY will be activated by the Engine Control Unit if the following conditions are met:

- Rear PTO OFF
- Front PTO OFF (If equipped)
- Hand brake engaged
- Vehicle speed = 0

If the safety conditions are satisfied, the strategy is activated and the low idle is increase to 1100 rpm for an amount of time necessary to reduce the HC accumulation.

If the safety conditions are not satisfied, the low idle set point is fixed to 850 rpm.

Warning messages are shown on digital display in order to inform the user about the strategy status:

- "LOW IDLE INCR. DESIRED": the increase engine idle speed is authorised.
- "LOW IDLE INCR. INHIBITED": the increase engine idle speed is inhibited.

5.45 DIESEL PARTICULATE FILTER (DPF) AND AFTER TREATMENT SYSTEM (ATS)

5.45.1 DPF (DIESEL PARTICULATE FILTER) - OPERATION LOGIC

Stationary or maintenance regeneration of the particulate filter. The aim of any regeneration of the particulate filter is to re-establish optimum engine running conditions. To do this, it is necessary to increase the exhaust gas temperature:

- The engine speed must not drop below 950 rpm once this has been reached or exceeded.
- The fuel injection is managed so as to increase the exhaust gas temperature.

The particulate filter keeps the soot from combustion within the engine to prevent it being discharged into the outside air. The accumulation of soot requires the particulate filter to be regenerated.

There are several particulate filter clogging levels that influence the system's operation.

The particulate filter keeps the soot from combustion within the engine to prevent it being discharged into the outside air. The accumulation of soot requires the particulate filter to be regenerated.

There are 6 particulate filter clogging levels that influence the system's operation.

Level	Description
L1	Continuous thermal management (passive treatment)
L2	Automatic thermal treatment (ATT)
L3	Automatic thermal treatment (ATT) or Manual (Forced) thermal treatment (FTT) in Parked/Service mode
L4	Enable engine protection with Manual (Forced) thermal treatment (FTT) in Parked/Service mode
L5	Service required, Manual (Forced) thermal treatment (FTT) in Service only
L6	Service required. No Thermal treatment possible, DPF replacement required

5.45.2 NORMAL OPERATION

Automatic thermal treatments are triggered at optimal level of soot loading estimation (i.e. 7g/l) determined by either soot model or equivalent DPF delta pressure sensing. Normal operation will loop between L1 and L2.

States	Soot load	Thermal treatment mode triggered	Active treatment Inhibition	Cluster info	
L1	0-7 g/l - (0-100%)	None	NA	None	-
L2	7-8.5 g/l (100% - 121%)	Automatic Thermal Treatment (ATT) Fuel induced thermal treatment at 600°C DOC outlet	Optional	ATT Ongoing	 Steady
				ATT Inhibited	 Blinking

When the engine is under high loads, the exhaust gas temperature increases. The soot is burnt up. This is passive regeneration of the particulate filter.

Passive regeneration of the particulate filter can take place at L1 level of filter clogging.

When the system detects an accumulation of soot at level L1 to level L2, it starts automatic regeneration (ATT) of the particulate filter if needed

5.45.3 TRIGGER FOR SOOT MODEL

In critical conditions (e.g. system failure, misuse...), soot loading can exceed the optimal level (>8g/l) leading to request of Manual (Forced) Thermal Treatment (FTT), till Service action, according to the following logic (L3 and more).

From L4, engine de-rating is applied to prevent risk of ATS exothermic reaction (e.g. in drop-to-Idle maneuver)

States	Soot load	Thermal treatment mode triggered	Active treatment Inhibition	Cluster info	
L3	8.5-10 g/l (121-143%)	ATT: "Fuel induced" thermal treatment at 600°C DOC outlet FTT: Manual (Forced) thermal treatment (FTT) possible at 620°C DOC outlet	Optional	FTT Recommended	 Blinking
				FTT Ongoing	 Steady
				FTT Inhibited	 Blinking
L4	10-13 g/l (143-185%)	Light power reduction and stop of ACM MCM: Forced thermal treatment at 620°C DOC outlet	Not possible	FTT Required	 Blinking and 
				FTT Ongoing	 Steady and 
L5	13-16 g/l (185-228%)	Limp home mode Service action mandatory FTT: Forced thermal treatment at 620°C DOC outlet	Not possible	Go to Service	
L6	>16 g/l (>228%)	Limp home mode Service action mandatory for ATS substitution	Not possible	Go to Service	

When the system detects an accumulation of soot at level L2 to level L3, it requests that the user carries out stationary regeneration of the particulate filter or activates automatic regeneration.

When the system detects an accumulation of soot at level L3 to L4, the engine ECU reduces the engine power. Stationary regeneration is then required. In case of failure, contact a qualified specialist workshop to attempt particulate filter

regeneration (success not guaranteed).

When the system detects an accumulation of soot at level L4 to level L5, the engine ECU reduces the engine power. Limp home mode is activated and Manual (Forced) thermal treatment (FTT) can be performed only by service tool,

When the system detects an accumulation of soot at level L6. Limp home mode is activated and the particulate filter must be replaced by service centre.

5.45.4 AFTER TREATMENT EQUIPMENT (DOC/SCR)

5.45.5 GENERAL INDUCEMENT STRATEGY

The system will distinguish among 5 failure categories:

1	DPF failures
2	Reagent level
3	Poor reagent quality
4	System Tampering
5	EGR failures

The system also will distinguish among 4 inducement steps:

1	Driver information	Warning lamp activated
2	First step	25% torque reduction
3	Second step	65% torque reduction and 40% engine speed reduction
4	Final step	Machine idle, limited to 50% maximum engine Torque

5.45.6 GENERAL ITEMS

- Vehicle reach final inducement after 4 hours of operation after failure detection.
- Three full power restarts (validation restarts for healing) can be operated during the 4 hours time frame.

5.45.7 VALIDATION RESTARTS

- Validation restarts are allowed at any time after failure detection (within 4 hours time frame).
- Validation restarts are key cycle locked to avoid unintended activation.
- Validation restarts are limited to 30 minutes each.
- After expiring of the 30 minutes the engine is immediately ramped down to final inducement.
- Validation restart are available only for failures that need heated up after treatment system or active dosing – not for electrical failures, DEF quality or DEF level.

5.45.8 PROCEDURE:

Key-off; wait at least 6 min. (to allow after-run ECU procedure); key-on for 10 sec.;

Key-off for 10 sec.; key-on for 10 sec.; cranking the engine

Yellow warning light appears when a failure has been detected, and stay on until failure has been removed

Red warning light appears when the inducement starts (engine loss of power), and stay on until failure has been removed

In case of multiple failure, the relevant icons show alternately (one after the other)

5.45.9 REPEATED OFFENDERS

In case of second event in 40h after first failure occurrence, the engine is ramp down in last step of inducement in 30 minutes.

No validation restart available

5.45.10 INDUCEMENT LOCK

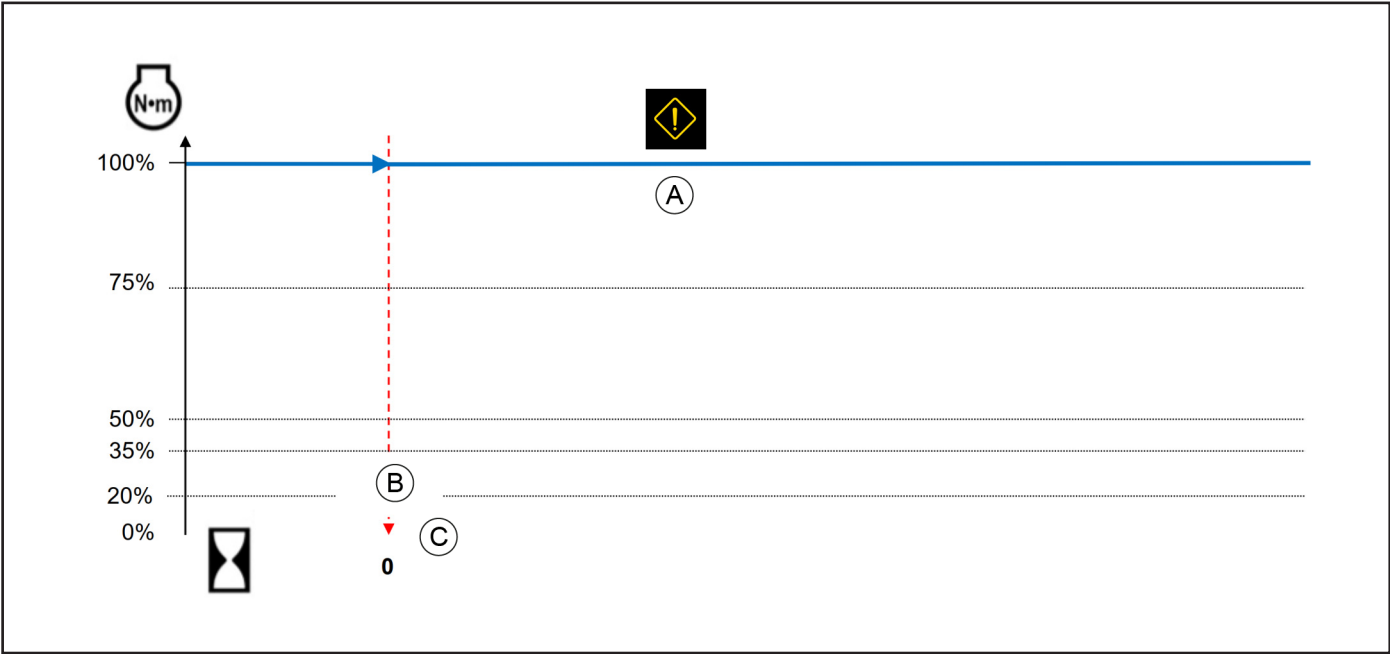
After 3 failure detections within 40 hours the inducement will be locked.

No validation restarts will be available

5.45.11 FAILURES

Failures can be reset only with a service tool.
Inducement failures when the machine is in lock condition or when in validation restart are not available.

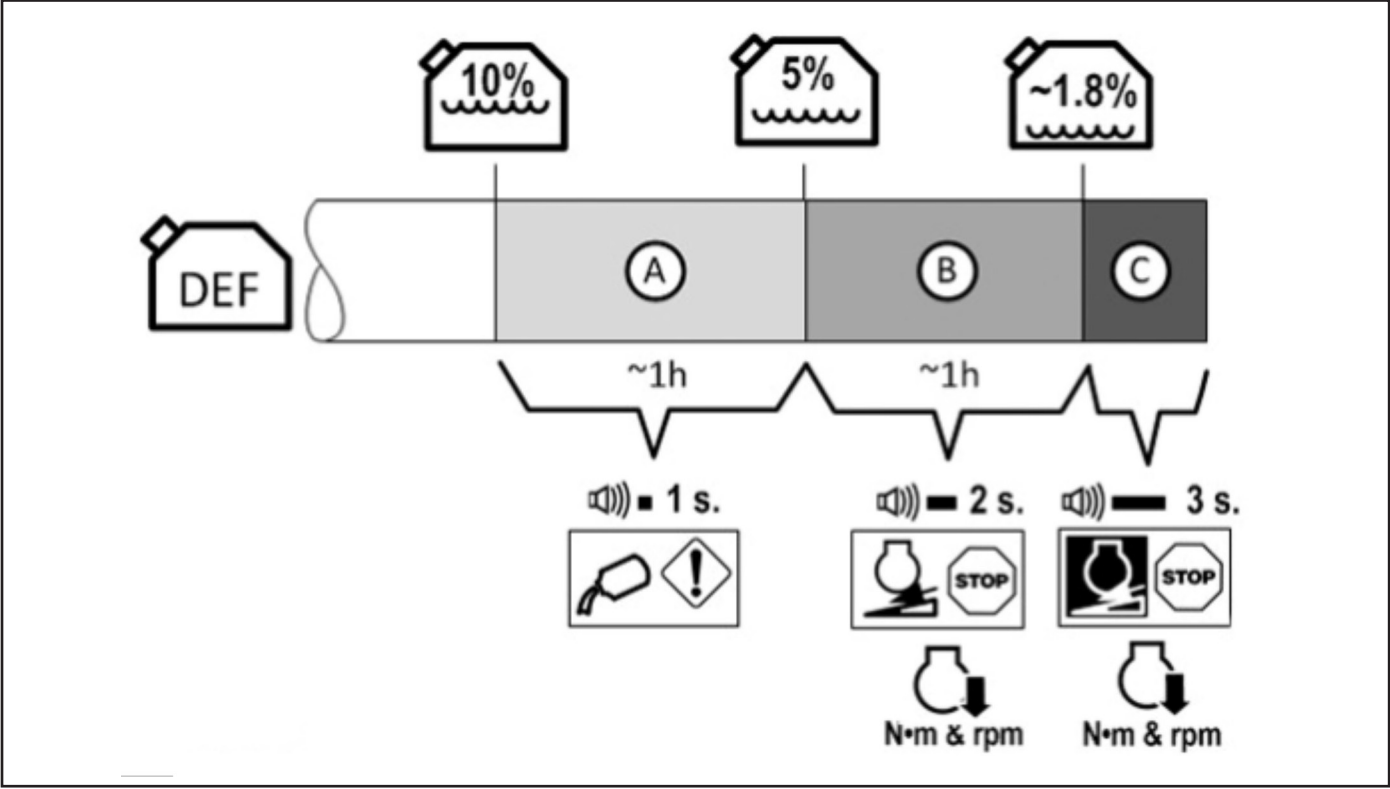
DPF failures



A	Driver warning (example)
B	Failure detected
C	Additional torque limitation applied for technical reason (component protection)

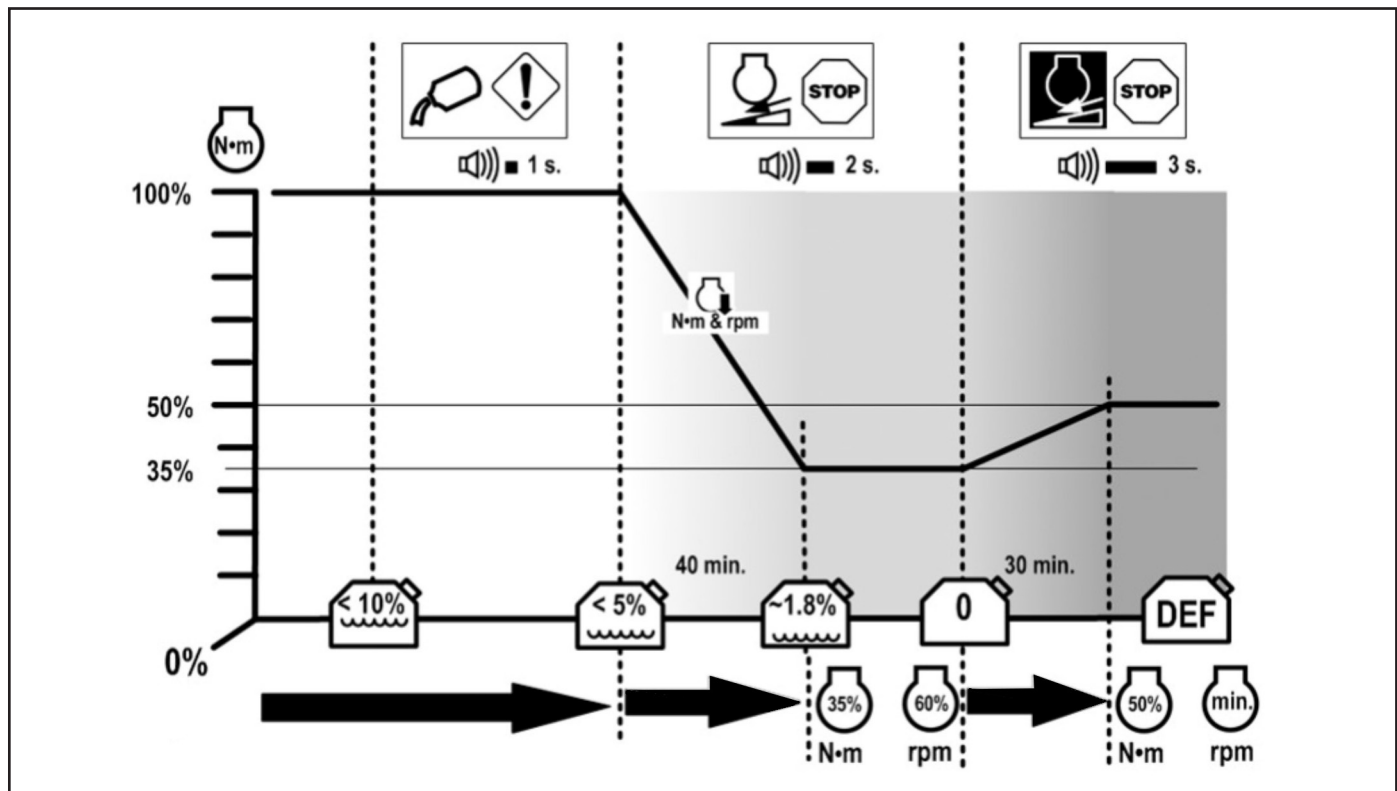
DEF level failures

- If the DEF Level decreases and reach the limit of 25%, the buzzer is activated for 1 second.
- If $10\% \leq \text{DEF Level} \leq 25\%$ each time a key-on / power-on event occurs the buzzer will be activated for 1 second .
- If $\text{DEF Level} < 10\%$, the inducement strategy will be applied with following behaviour:



A	Operator warning activated.
B	65 % torque reduction and 40% engine speed limitation (immediately ramped in within 40 minutes).
C	Engine commanded to idle immediately ramped in within 30 minutes.

NOTE: A small amount DEF is saved for cooling the DEF module.



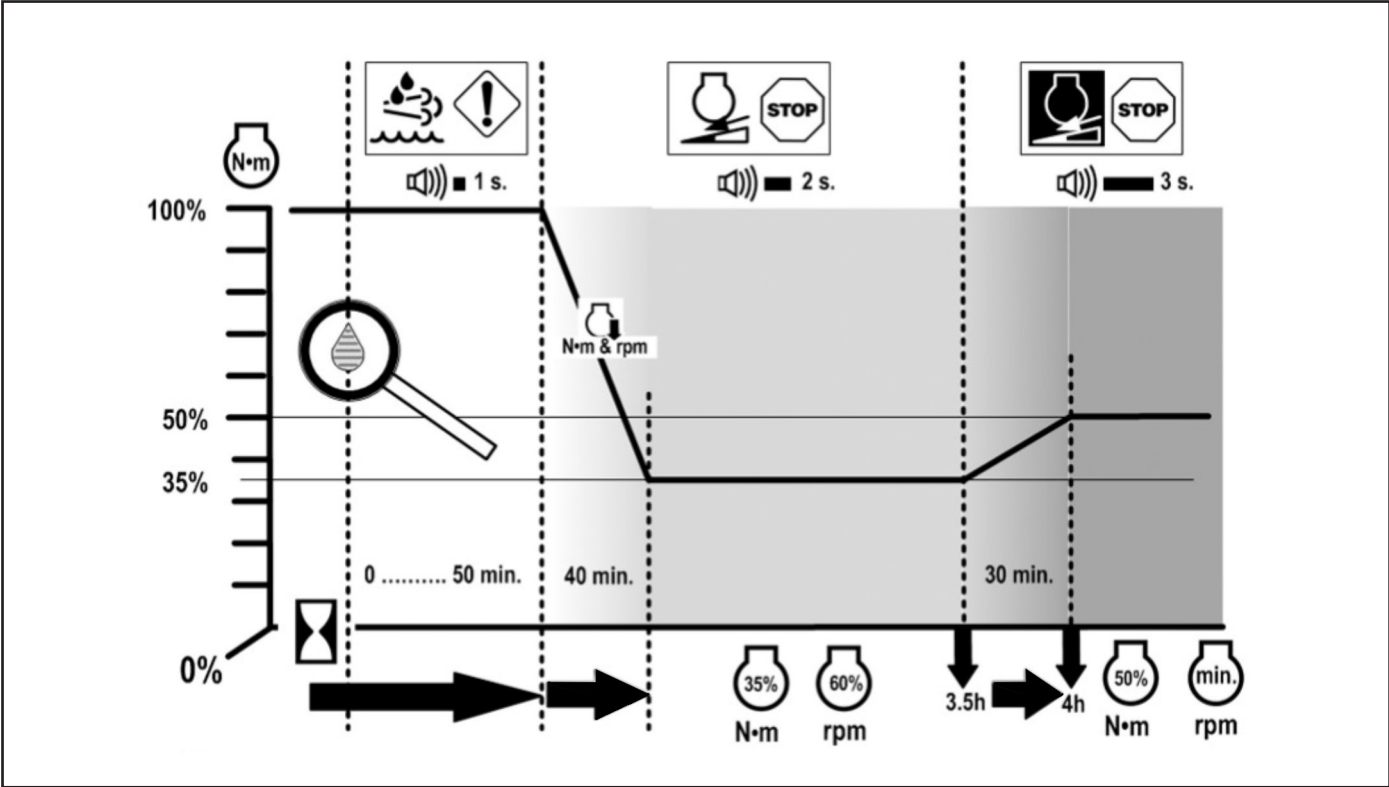
AGRSTV_C50047

DEF level	Yellow warning	1st Red warning	2nd Red warning	Torque	Engine speed	Time
>10%	-	-	-	100%	100%	-
10% / 5%	X	-	-	100%	100%	-
5% / 1,8%	-	X	-	35%	60%	Within 40 min
1,8% / empty	-	X	-	35%	60%	-
Empty	-	-	X	50%	Idle	Within 30 min
Empty	-	-	X	50%	Idle	-

(CAN) Signal status	Instrument Panel Messages
DEF Level > 10%	NO ACTION
10% < DEF Level < 5%	Driver Warning: the icon (1) will be displayed on digital display the Warning Lamp (5) will be commanded ON. Buzzer ON for 1 second.
5% < DEF Level < 1,8%	Second Step : the icon (3) will be displayed on digital display the RED STOP Lamp (6) will be commanded ON. Buzzer ON for 2 seconds
DEF Level < 1,8%	Driver Warning : the icon (4) will be displayed on digital display the RED STOP Lamp (6) will be commanded ON. Buzzer ON for 3 seconds

ICON 1	ICON 2	ICON 3	ICON 4	ICON 5	ICON 6

DEF Quality failures



AGRSTV_C50047

DEF quality	Yellow warning	1st Red warning	2nd Red warning	Torque	Engine speed	Time
OK	-	-	-	100%	100%	-
NO OK	X	-	-	100%	100%	Within 50 min
NO OK	-	X	-	35%	40%	Within 40 min
NO OK	-	X	-	35%	40%	Within 120 min
NO OK	-	-	X	50%	Idle	Within 30 min
NO OK	-	-	X	50%	Idle	-

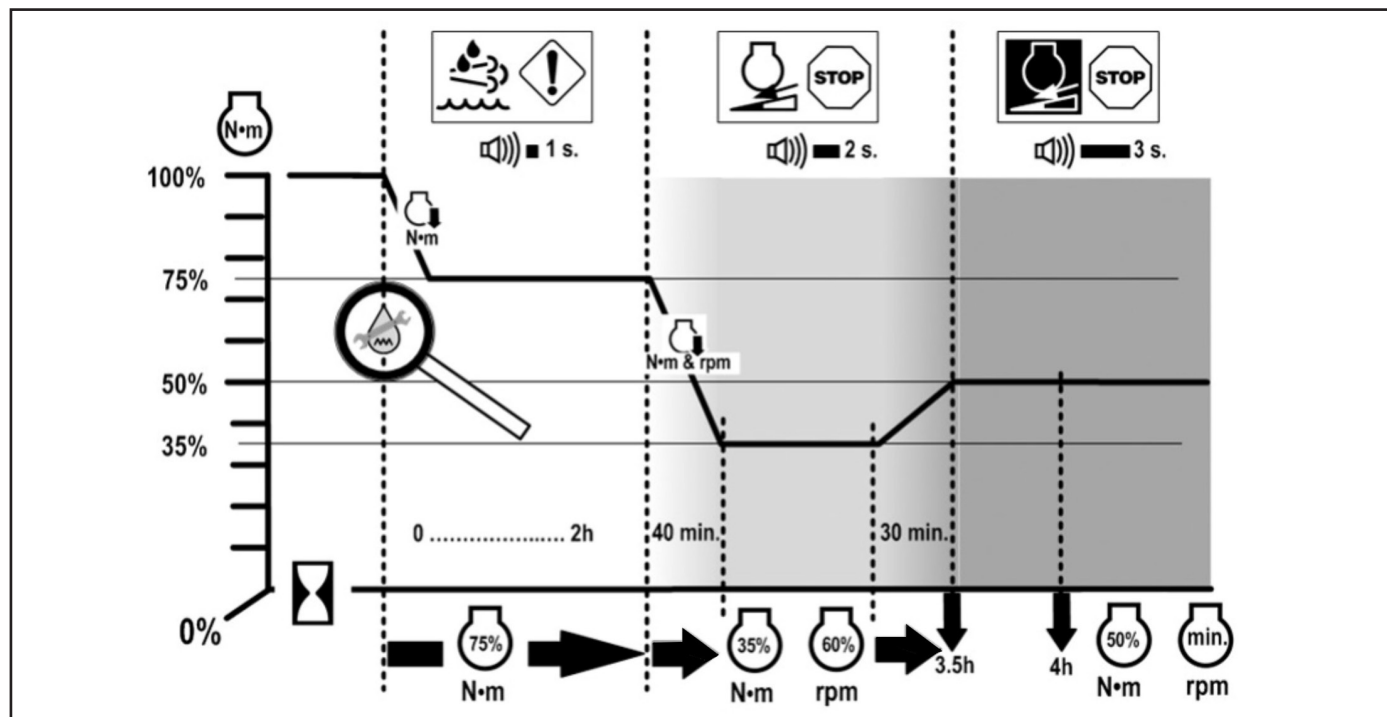
(CAN) Signal status	Instrument Panel Messages
DEF Quality = OK	NO ACTION
Poor DEF Quality detected	Driver Warning : the icon (2) will be dismayed the Amber Warning Lamp (5) will be commanded ON. Buzzer ON for 1 second
Poor DEF Quality detected	Second Step : the icon (3) will be dismayed the RED STOP Lamp (6) will be commanded ON. Buzzer ON for 2 seconds
Poor DEF Quality detected	Driver Warning : the icon (4) will be dismayed the RED STOP Lamp (6) will be commanded ON. Buzzer ON for 3 seconds

ICON 1	ICON 2	ICON 3	ICON 4	ICON 5	ICON 6

System tampering failures

System tampering failures could be:

- Electrical failures
- Technical failures
- Exhaust sensors plausibility



AGRSTV_C50049

System tampering failures	Yellow warning	1st Red warning	2nd Red warning	Torque	Engine speed	Time
NO	-	-	-	100%	100%	-
YES	X	-	-	75%	100%	Within 25 min
YES	X	-	-	75%	100%	95 min
YES	-	X	-	35%	40%	Within 40 min
YES	-	X	-	35%	40%	170 min
YES	-	X	-	50%	Idle	Within 30 min
YES	-	-	X	50%	Idle	-

(CAN) Signal status	Instrument Panel Messages
NO System tampering failures	NO ACTION
System tampering failures	Driver Warning : the icon (2) will be dismayed the Amber Warning Lamp (5) will be commanded ON. Buzzer ON for 1 second
System tampering failures	Second Step : the icon (3) will be dismayed the RED STOP Lamp (6) will be commanded ON. Buzzer ON for 2 seconds
System tampering failures	Driver Warning : the icon (4) will be displayed The RED STOP Lamp (6) will be commanded ON. Buzzer ON for 3 seconds

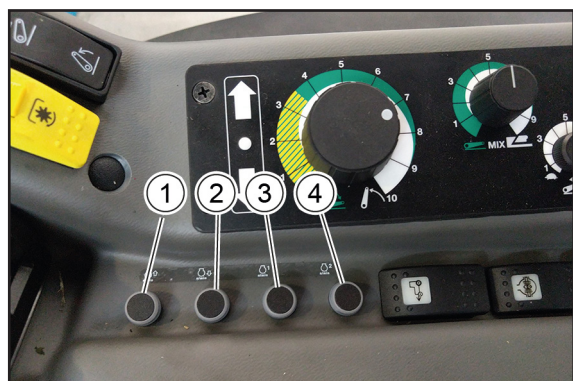
5.45.12 CRUISE CONTROL



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AGRSTV_C50052



AGRSTV_C50053

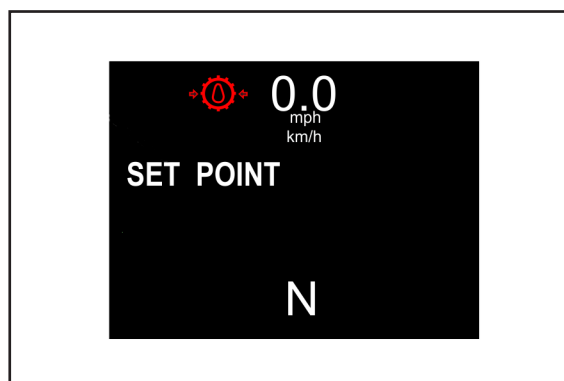
- 1 - Increasing the Engine speed
- 2 - Decreasing the Engine speed
- 3 - Cruise control activation and memory 1 button
- 4 - Cruise control activation and memory 2 button

Activating an engine speed memory

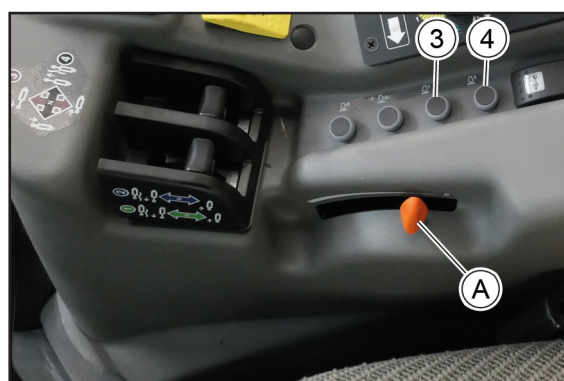
With engine ON, press button (3) memory 1 or button (4) memory 2 until the message "SETPOINT" appears on the digital display.

Adjust the desired engine speed by the foot throttle (B) or the hand throttle (A).

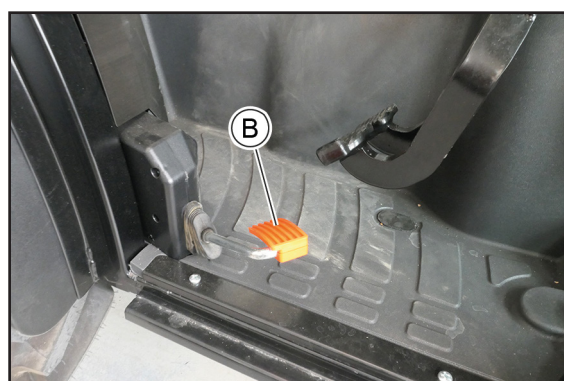
Press the button (3) or button (4) longer than 3 sec. to confirm the setting.



AGRCCA_000492

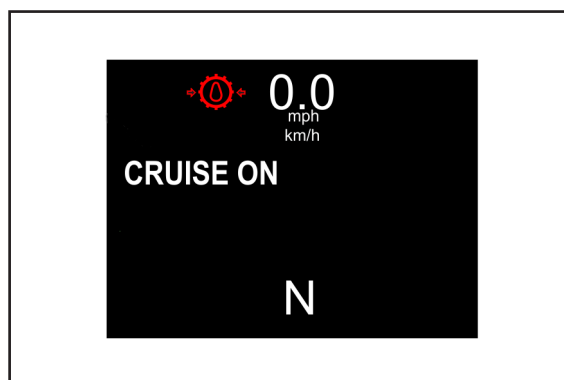


AGRSTV_C50054



AGRSTV_C50055

The message "CRUISE ON" appears on the digital display and indicates the activation of cruise control. If the hand or foot throttle is released, the engine speed will be maintained at the value stored.

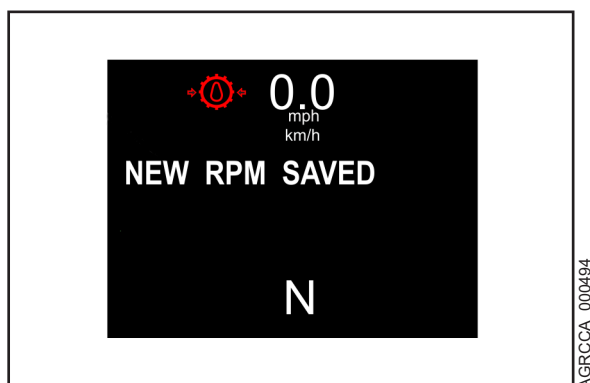


AGRCCA_000497

The engine speed can be corrected in steps of 25 rpm by pressing buttons (1) and (2). Press the button (1) to increase the speed or the button (2) to decrease it.

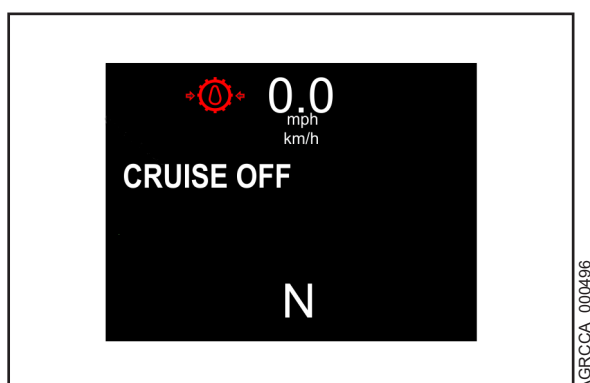
The set speed is then stored as default.

To change to a new engine speed press button (3) or button (4) longer than 3 sec. The message “NEW RPM SAVED” appears on the digital display.



Cruise Control Deactivation

Press button (3) or button (4) shorter than 3 sec. to switch OFF the cruise control. The message “CRUISE OFF” appears on the digital display.



NOTE: With Cruise Control ON at tractor speeds above 14Km/h, the activation of the brake pedals (both or only one side), will switch off the Cruise Control. The settings for cruise control will be deleted after switching OFF the tractor.

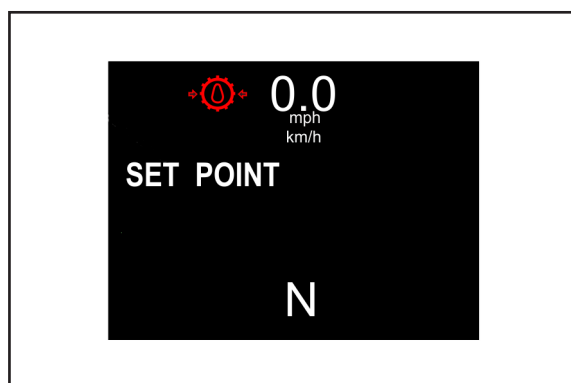
Manually adjusting the engine speed memories

Reach the desired engine speed using the hand accelerator or accelerator pedal.

- To save the engine speed reached in engine speed memory 1, press the switch (3) for more than three seconds.
- To save the engine speed reached in engine speed memory 2, press the switch (4) for more than three seconds.



When the new value is saved in the engine speed memory, the confirmation message “SET POINT” appears on the instrument panel display. The engine speed memory is automatically activated after the save has been confirmed. The engine speeds remain stored and available for following start-ups.



5.45.13 STEERING ANGLE-DEPENDENT AUTOMATED SYSTEM

Usage

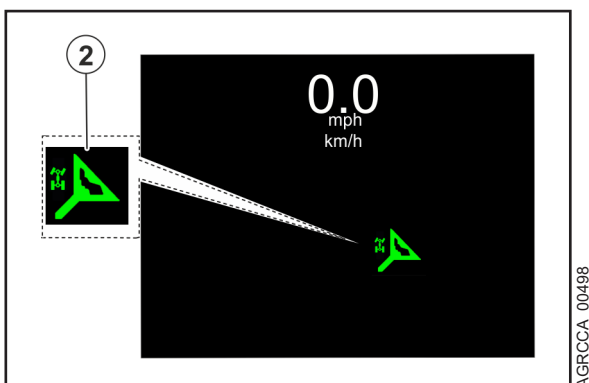
Comply with the following preliminary conditions:

- Engine started.
- The ground speed is below 23 km/h.
- Brake pedals released.
- Parking brake released.
- The front axle is engaged in automatic mode.

Engage the automated system by pressing the button (1).

The front axle automated system engagement indicator light (2) on the instrument panel lights up green.

To disengage the automated system, press the button (1) once.

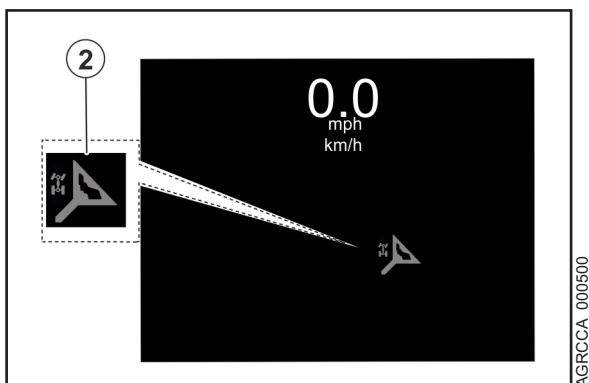


Operation

The front axle is automatically engaged when the steering angle is less than the angle saved in the instrument panel.

The front axle is automatically disengaged when the steering angle is greater than the angle saved in the instrument panel.

If the parking brake is applied or the brake pedals depressed, the indicator light (2) on the instrument panel lights up grey.



5.45.14 SETTING THE SYSTEM AUTOMATIC ANGLE OPERATION

Comply with the following preliminary conditions:

- Engine started.
- The ground speed is 0 km/h.
- Brake pedals released.
- Parking brake released.
- The wheels are turned to the desired angle.

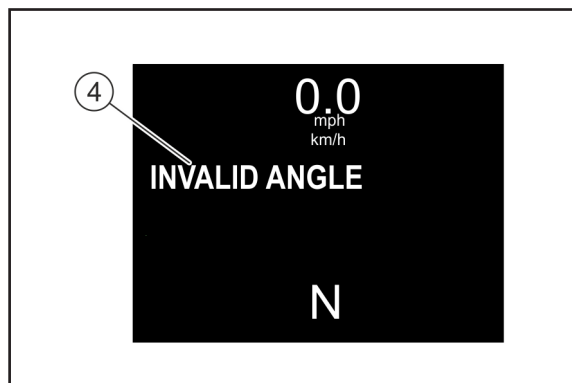
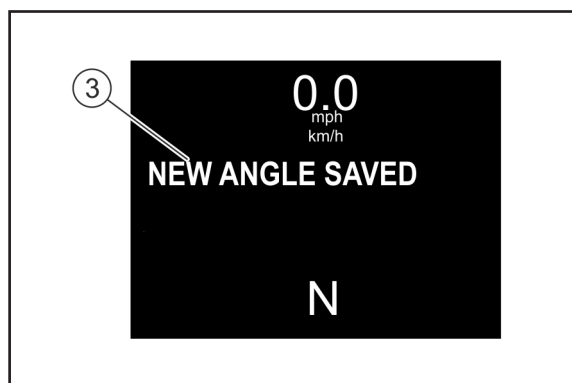
Keep the button (1) pressed for three seconds.

If the selected angle is acceptable, the message "new angle saved" (3) appears.

Keep the button (1) pressed for three seconds.

If the selected angle is not valid, the message "invalid angle" (4) appears.

The requested angle is probably too close to 0°.



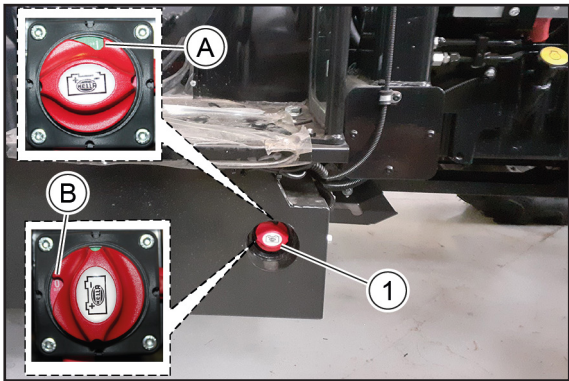
5.46 BATTERY CUT-OFF SWITCH

The battery cut-off switch (1) allows the battery to be disconnected from the electrical system

5.46.1 2.85 MODELS

The battery cut-off switch is located on the right side of the tractor.

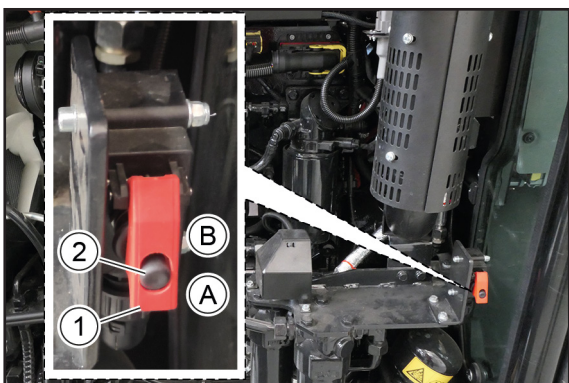
- To disconnect the battery, turn the switch (1) to position (B) - OFF.
- To connect the battery, turn the switch (1) to position (A) - ON.



5.46.2 2.95 AND 2.105 MODELS

The battery cut-off switch is located on the left side of the tractor.

- Open the protection cover (1).
- To disconnect the battery, move the switch (2) to position (A) - OFF.
- To connect the battery, move the switch (2) to position (B) - ON.
- Close the protection cover (1).



IMPORTANT: This vehicle is equipped with a battery cut-off switch that allows the battery to be disconnected from the electric system.

The cut-off switch is not a safety switch, and cannot be used to stop the engine!

Never use the battery cut-off switch when the

engine is still running: Switch-off the engine and wait at least 1 minute before activating the cut-off switch, to avoid serious damage to the vehicle electric/electronic system.

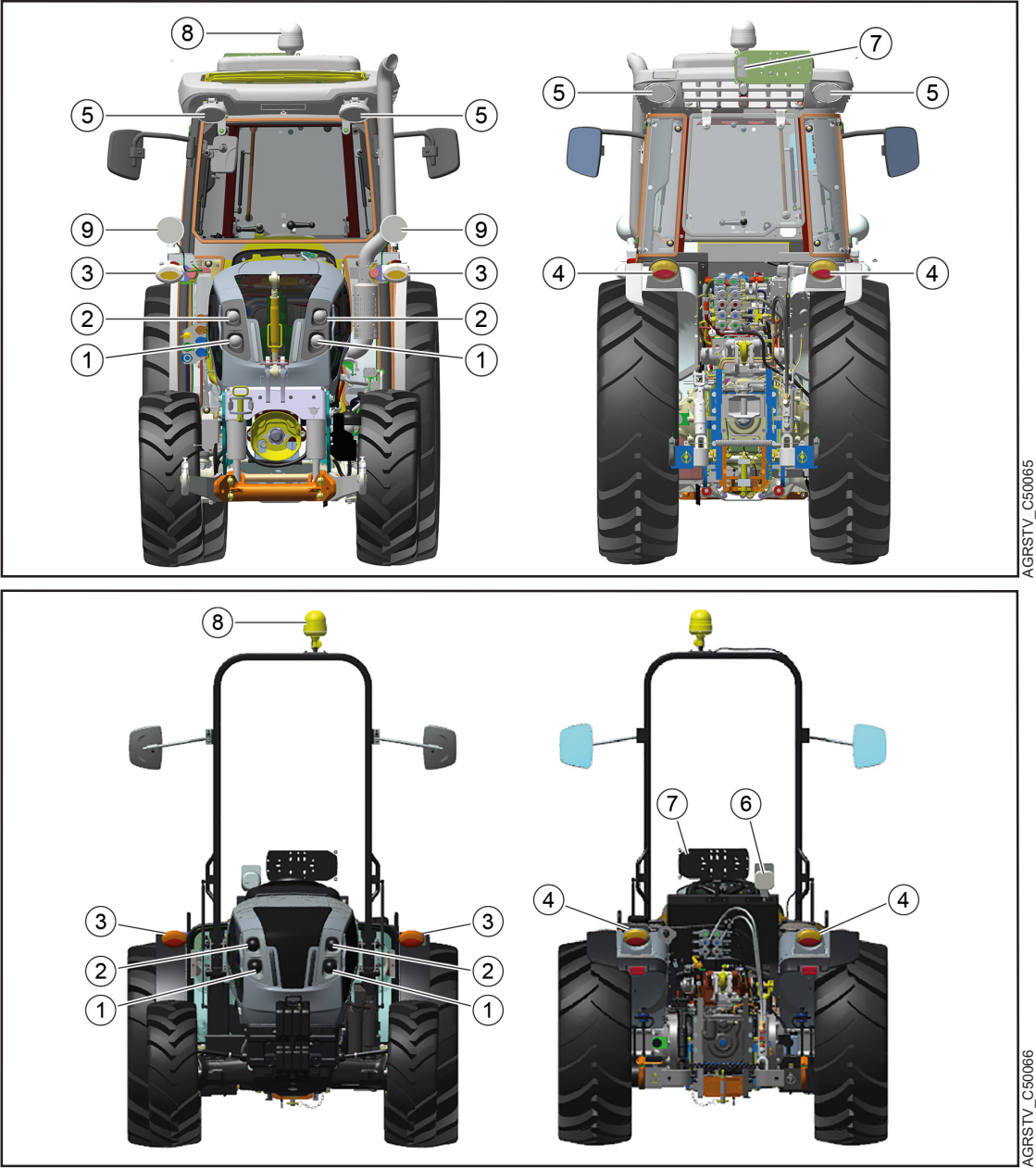
IMPORTANT: Before turning the battery cut-off switch to the OFF position, wait at least 1 minute from the last engine stops (key - off). This allows the various control units to disconnect properly.

After turning the battery cut-off switch to the ON position, wait at least 10 seconds before turning the ignition key to start the engine. This allows the various control units to operate correctly.



CAUTION: Always disconnect the battery before any intervention on the electrical system.

5.47 LIGHTS, FUSES AND RELAYS



Position	Description	Power
1	High beam lights	60W
2	Low beam lights	60W
3	Turn indicators	21W
	Front position lights	5W
4	Turn indicators	21W
	Stop lights	5W
5	Cab work lights	55W
6	Roll bar work light	55W
7	License plate light	10W
8	Beacon light	55W
9	H4 Work lights	55/60W

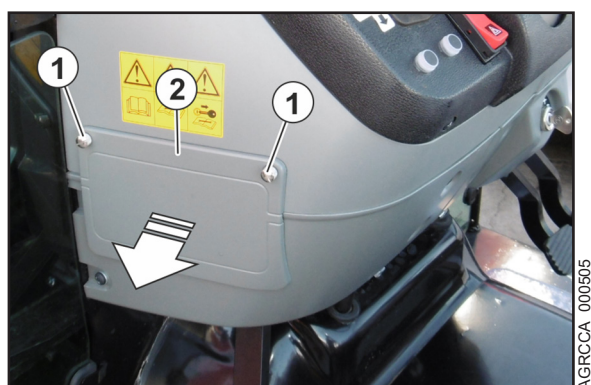
5.47.1 FUSES AND RELAYS

IMPORTANT: To avoid damaging the electric system, do not use fuses having a higher amperage than the installed ones. If the original fuse can not stand the electric load and continues to blow up, have the electric system inspected by Servicing.

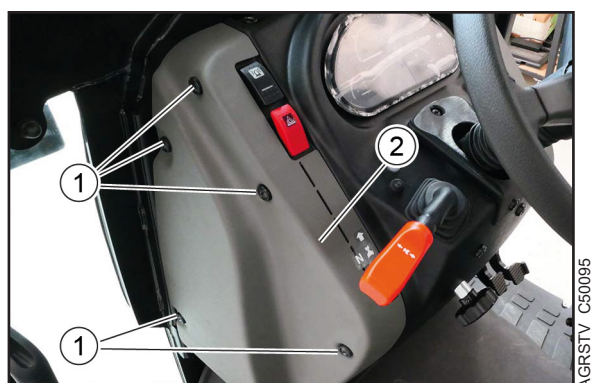
All electric circuits are protected by fuses. Rated amperage is marked on every fuse.

Main fusebox location and layout:

To reach the main fusebox, loosen screws (1) and remove cover (2) located under the LH panel of the dash panel.



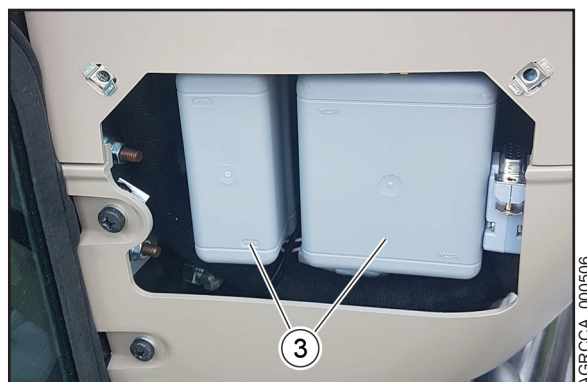
Roll Bar models



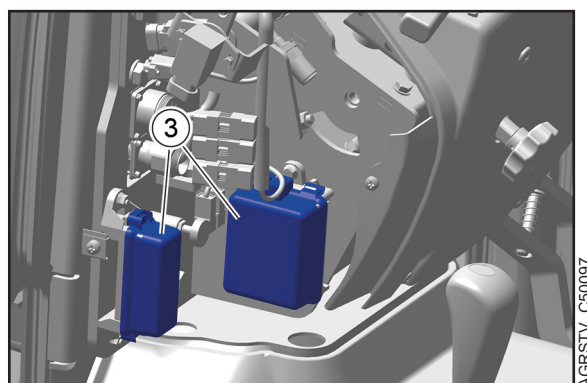
Cab models

Behind the cover there is a label with graphic information on the circuit covered by each fuse.

Remove the protection (3).

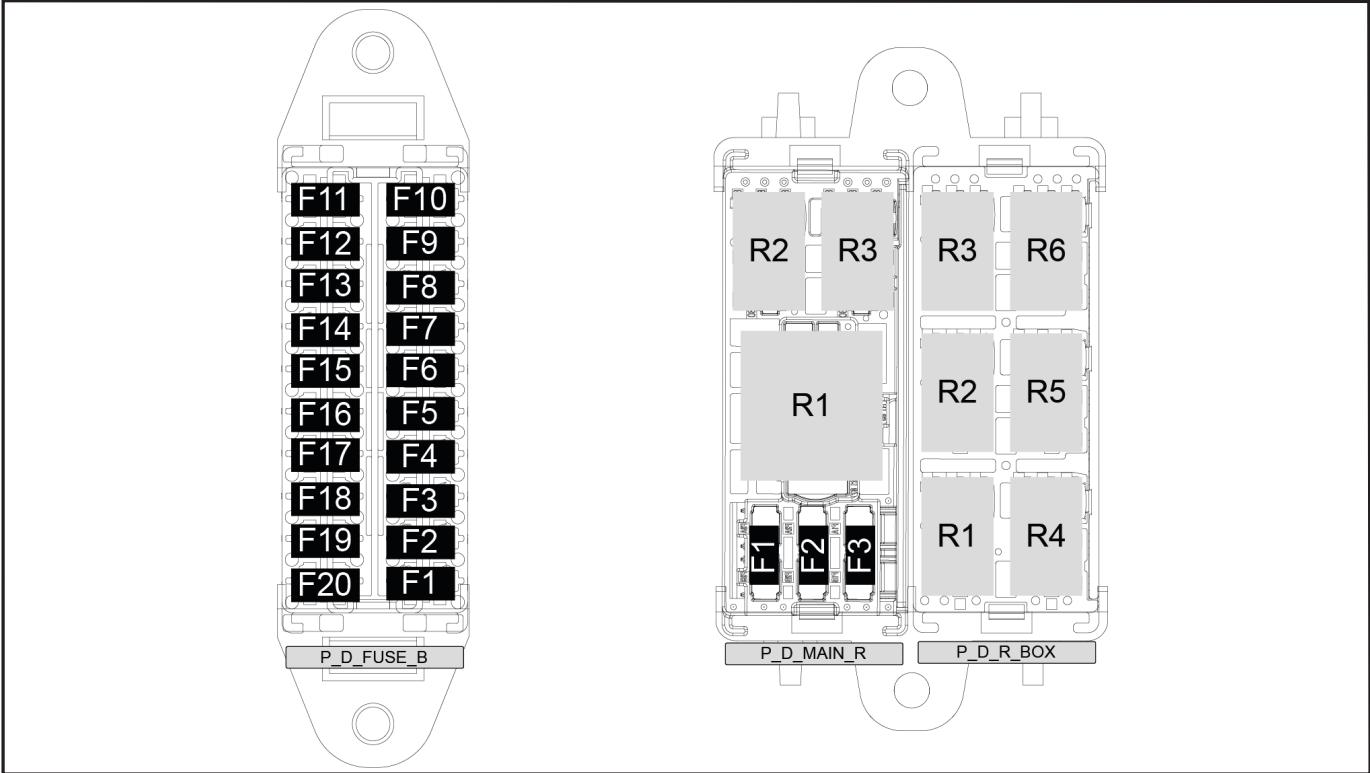


Roll Bar models



Cab models

5.47.2 MODELS WITHOUT CAB



AGRSTV_CS0098

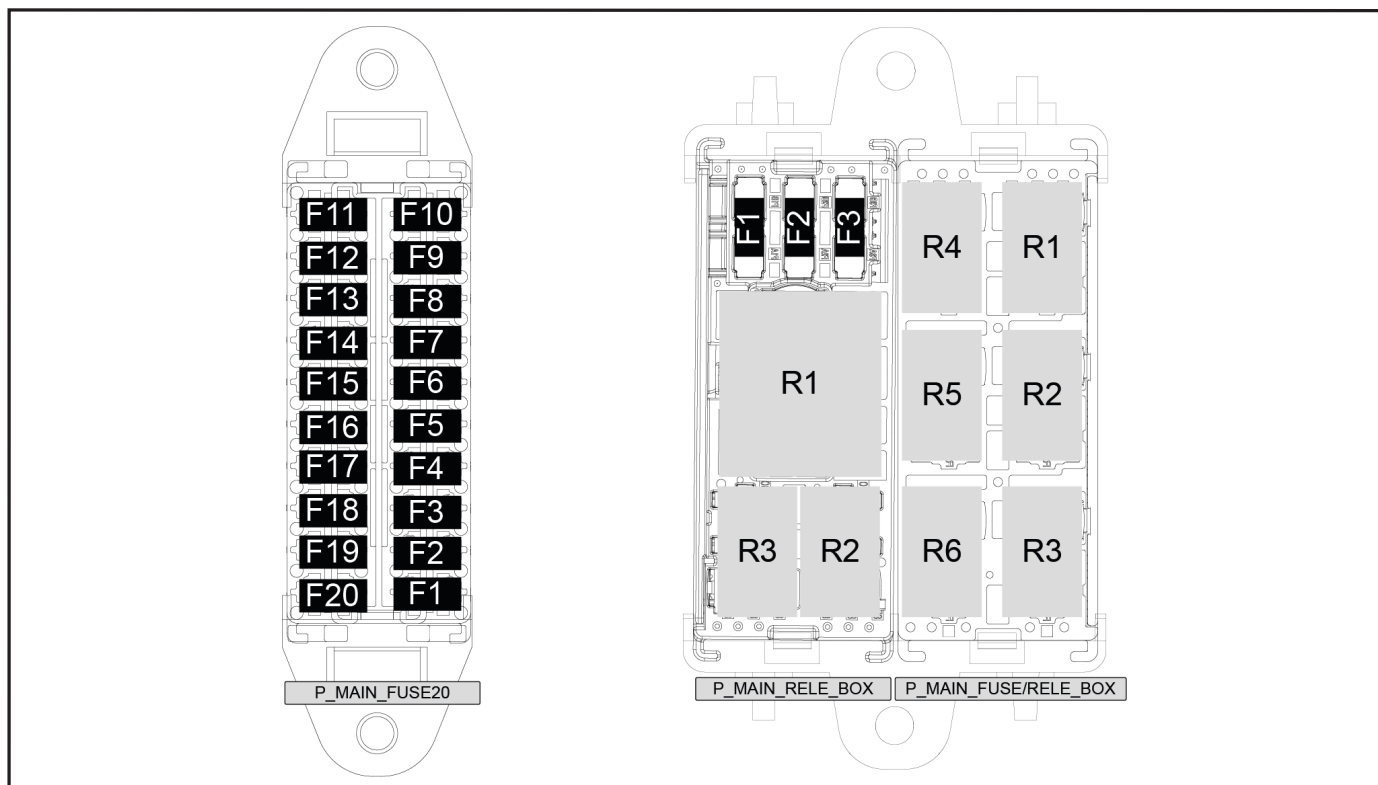
Mechanical version			
Module	Position	Type	Function
P_D_R_BOX	R1	Relay	Low beam
	R2	Relay	High beam
	R3	Relay	Trailer Brake Valve
	R4	Relay	Not used
	R5	Relay	Not used
	R6	Relay	Not used
P_D_MAIN_R	F1	60A	Main fuse
	F2	-	Not used
	F3	-	Not used
	R1	Relay	Power supply (+ 15)
	R2	Relay	Safety start
	R3	Relay	Not used
P_D_FUSE_B	F1	7.5 A	Supply for the "ECM" engine module (+ 15)
	F2	20 A	Implement electrical socket (3-pin) (+ 15), Air seat
	F3	10 A	Implement electrical socket (3-pin) (+ 30), Cigarette lighter
	F4	7.5 A	Four-wheel drive, F. throttle, Power Take Off sensor (+ 15)
	F5	7.5 A	Front Power Take Off, Signal for key relays
	F6	7.5 A	Trailer brake valve, steering sensor, Power Take Off, Four-wheel drive and differential lock switch
	F7	7.5 A	Instrument panel (+ 15),
	F8	10 A	Instrument panel (+ 30), Seat,

<i>Mechanical version</i>			
<i>Module</i>	<i>Position</i>	<i>Type</i>	<i>Function</i>
<i>P_D_FUSE_B</i>	<i>F9</i>	<i>15 A</i>	<i>Beacon (+ 30)</i>
	<i>F10</i>	<i>15 A</i>	<i>Brake lights</i>
	<i>F11</i>	<i>10 A</i>	<i>Horn, turn lights</i>
	<i>F12</i>	<i>15 A</i>	<i>Hazard warning lights (+ 30)</i>
	<i>F13</i>	<i>15 A</i>	<i>Low beam</i>
	<i>F14</i>	<i>15 A</i>	<i>High beam</i>
	<i>F15</i>	<i>5 A</i>	<i>Position lights right</i>
	<i>F16</i>	<i>5 A</i>	<i>Position lights left</i>
	<i>F17</i>	<i>10 A</i>	<i>Blink lever</i>
	<i>F18</i>	<i>7.5 A</i>	<i>Rear work light</i>
	<i>F19</i>		<i>Not used</i>
	<i>F20</i>		<i>Not used</i>

<i>Electro-hydraulic version</i>			
<i>Module</i>	<i>Position</i>	<i>Type</i>	<i>Function</i>
<i>P_D_R_BOX</i>	<i>R1</i>	<i>Relay</i>	<i>Low beam</i>
	<i>R2</i>	<i>Relay</i>	<i>High beam</i>
	<i>R3</i>	<i>Relay</i>	<i>Trailer Brake Valve</i>
	<i>R4</i>	<i>Relay</i>	<i>Not used</i>
	<i>R5</i>	<i>Relay</i>	<i>Not used</i>
	<i>R6</i>	<i>Relay</i>	<i>Not used</i>
<i>P_D_MAIN_R</i>	<i>F1</i>	<i>60A</i>	<i>Main fuse</i>
	<i>F2</i>	<i>-</i>	<i>Not used</i>
	<i>F3</i>	<i>-</i>	<i>Not used</i>
	<i>R1</i>	<i>Relay</i>	<i>Power supply (+ 15)</i>
	<i>R2</i>	<i>Relay</i>	<i>Safety start</i>
	<i>R3</i>	<i>Relay</i>	<i>Not used</i>
<i>P_D_FUSE_B</i>	<i>F1</i>	<i>7.5 A</i>	<i>Supply for the "ECM" engine module (+ 15)</i>
	<i>F2</i>	<i>20 A</i>	<i>Implement electrical socket (3-pin) (+ 15), Air seat</i>
	<i>F3</i>	<i>10 A</i>	<i>Implement electrical socket (3-pin) (+ 30), Cigarette lighter</i>
	<i>F4</i>	<i>7.5 A</i>	<i>Four-wheel drive, F. throttle, Power Take Off sensor (+ 15)</i>
	<i>F5</i>	<i>7.5 A</i>	<i>Front Power Take Off, Signal for key relays</i>
	<i>F6</i>	<i>7.5 A</i>	<i>Trailer brake valve, steering sensor, Power Take Off, Four-wheel drive and differential lock switch</i>
	<i>F7</i>	<i>7.5 A</i>	<i>Instrument panel (+ 15), Transmission control unit (+15), Power-shuttle lever, Position sensor,</i>
	<i>F8</i>	<i>10 A</i>	<i>Instrument panel (+ 30), Seat, Transmission control unit</i>
	<i>F9</i>	<i>15 A</i>	<i>Beacon (+ 30)</i>
	<i>F10</i>	<i>15 A</i>	<i>Brake lights</i>
	<i>F11</i>	<i>10 A</i>	<i>Horn, turn lights</i>
	<i>F12</i>	<i>15 A</i>	<i>Hazard warning lights (+ 30)</i>
	<i>F13</i>	<i>15 A</i>	<i>Low beam</i>
	<i>F14</i>	<i>15 A</i>	<i>High beam</i>

Electro-hydraulic version			
Module	Position	Type	Function
P_D_FUSE_B	F15	5 A	Position lights right
	F16	5 A	Position lights left
	F17	10 A	Blink lever
	F18	7.5 A	Rear work light
	F19		Not used
	F20		Not used

5.47.3 MODELS WITH CAB



Mechanical version			
Module	Position	Type	Function
P_MAIN_RELE_BOX	R1	Relay	Low beam
	R2	Relay	High beam
	R3	Relay	H4 low beam
	R4	Relay	H4 high beam
	R5	Relay	H3 work lights
	R6	Relay	Trailer Brake Valve
P_MAIN_FUSE/RELE_BOX	F1	60A	Main fuse
	F2	-	Not used
	F3	-	Not used
	R1	Relay	Power supply (+ 15)
	R2	Relay	Safety start seat
	R3	Relay	Safety start Power Take Off
P_MAIN_FUSE20	F1	7.5 A	Supply for the "ECM" engine module (+ 15)
	F2	20 A	Implement electrical socket (3-pin) (+ 15), Air seat

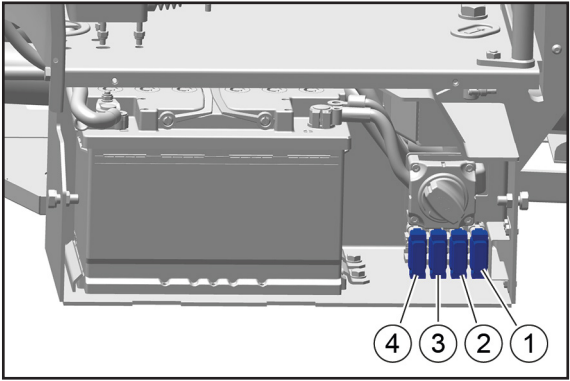
Mechanical version			
Module	Position	Type	Function
P_MAIN_FUSE20	F3	10 A	Implement electrical socket (3-pin) (+ 30), Cigarette lighter, Diagnosis socket, Electro-Hydraulic Selective Control Valves (E-SCVs) control unit (+ 30)
	F4	7.5 A	Four-wheel drive valve, F. throttle, Speed sensor
	F5	7.5 A	Front Power Take Off, Signal for key relays (+ 15), Telemetry (+15) control unit, Roof (+ 15), Deport
	F6	7.5 A	Trailer brake valve, Steering sensor, Rear Power Take Off, Hand throttle, Trailer brake warning lights, Four-wheel drive and differential lock switch
	F7	7.5 A	Instrument panel (+ 15), Gear
	F8	10 A	Instrument panel (+ 30), Seat
	F9	15 A	Beacon (+ 30), Work lights
	F10	15 A	Brake lights
	F11	10 A	Horn, Turn lights
	F12	15 A	Hazard warning lights (+ 30)
	F13	15 A	Low beam
	F14	15 A	High beam
	F15	5 A	Position lights right
	F16	5 A	Position lights left
	F17	10 A	Blink lever
	F18	7.5 A	Front axle suspension system
	F19	7.5 A	Electronic hitch control, Diverter
	F20	7.5 A	Electro-Hydraulic Selective Control Valves (E-SCVs)

Electro-hydraulic version			
Module	Position	Type	Function
P_MAIN_RELE_BOX	R1	Relay	Low beam
	R2	Relay	High beam
	R3	Relay	H4 low beam
	R4	Relay	H4 high beam
	R5	Relay	H3 work lights
	R6	Relay	Trailer Brake Valve
P_MAIN_FUSE/RELE_BOX	F1	60A	Main fuse
	F2	-	Not used
	F3	-	Not used
	R1	Relay	Power supply (+ 15)
	R2	Relay	Safety start seat
	R3	Relay	Safety start Power Take Off
P_MAIN_FUSE20	F1	7.5 A	Supply for the "ECM" engine module (+ 15)
	F2	20 A	Implement electrical socket (3-pin) (+ 15), Air seat
	F3	10 A	Implement electrical socket (3-pin) (+ 30), Cigarette lighter, Diagnosis socket, Electro-Hydraulic Selective Control Valves (E-SCVs) control unit (+ 30)
	F4	7.5 A	Four-wheel drive, F. throttle, Speed sensor
	F5	7.5 A	Front Power Take Off, Signal for key relays, Telemetry (+15) control unit, Roof (+15), Deport
	F6	7.5 A	Trailer brake valve, Steering sensor, Rear Power Take Off, Hand throttle, Trailer brake warning lights, Four-wheel drive and differential lock switch

<i>Electro-hydraulic version</i>			
<i>Module</i>	<i>Position</i>	<i>Type</i>	<i>Function</i>
<i>P_MAIN_FUSE20</i>	<i>F7</i>	<i>7.5 A</i>	<i>Instrument panel (+ 15), Gear, Transmission control unit (+15), Power-shuttle lever, Position sensor, Clutch pedal, PWM filter</i>
	<i>F8</i>	<i>10 A</i>	<i>Instrument panel (+ 30), Seat, Transmission control unit (+30)</i>
	<i>F9</i>	<i>15 A</i>	<i>Beacon (+ 30), Work lights</i>
	<i>F10</i>	<i>15 A</i>	<i>Brake lights</i>
	<i>F11</i>	<i>10 A</i>	<i>Horn, Turn lights</i>
	<i>F12</i>	<i>15 A</i>	<i>Hazard warning lights (+ 30)</i>
	<i>F13</i>	<i>15 A</i>	<i>Low beam</i>
	<i>F14</i>	<i>15 A</i>	<i>High beam</i>
	<i>F15</i>	<i>5 A</i>	<i>Position lights right</i>
	<i>F16</i>	<i>5 A</i>	<i>Position lights left</i>
	<i>F17</i>	<i>10 A</i>	<i>Blink lever</i>
	<i>F18</i>	<i>7.5 A</i>	<i>Front axle suspension system</i>
	<i>F19</i>	<i>7.5 A</i>	<i>Electronic hitch control, Diverter</i>
	<i>F20</i>	<i>7.5 A</i>	<i>Electro-Hydraulic Selective Control Valves (E-SCVs)</i>

5.47.4 OTHER FUSE LOCATED ON VEHICLE (ONLY 2.85 MODELS)

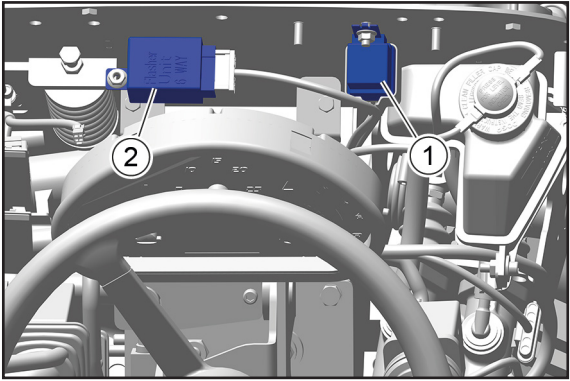
The following fuses are located to battery compartment.



Position	Type	Fuse function
1	50 A	Transmission main fuse
2	40 A	Engine main fuse
3	60 A	Glow plugs main fuse
4	70 A	Cab main fuse*

(*) Cab version only

The following components are located under dashboard cowl

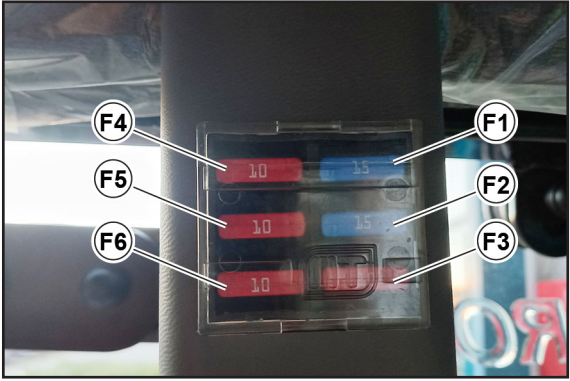


Position	Relay function
1	Starter Relay
2	Flasher

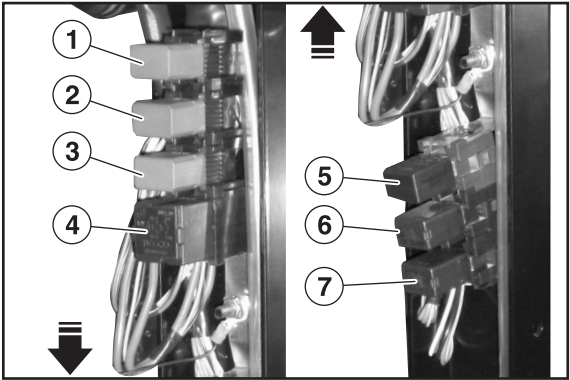
5.47.5 CAB FUSEBOX

The fusebox on cab versions is located in the central cab stanchion, on the RH side.

There is an adhesive label with the graphic indications of the relative electric circuits protected by each fuse



Position	Type	Fuse function
F1	15 A	Front work lights
F2	15 A	Rear work lights
F3	10 A	Radio (+15), rear wiper
F4	10 A	Radio (+30), courtesy light
F5	10 A	Windshield wiper, washer
F6	10 A	Air conditioning module



The following relays are located inside the cab stanchion, on the LH side.

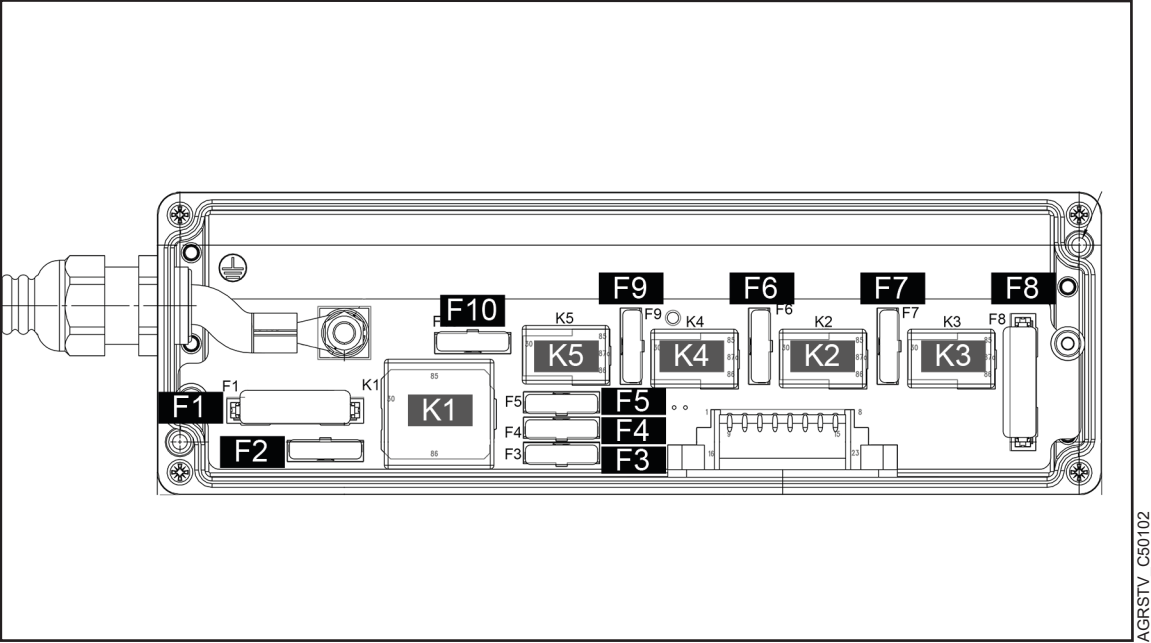
<i>Position</i>	<i>Type:</i>	<i>Fuse function</i>
1	12V / 30 A	Front work lights
2	12V / 30 A	Rear work lights
3	12V / 20 A	Air conditioning clutch
4	12V / 70 A	Cab roof power supply
5	12V / 20 A	Air conditioning / heating circuit power supply (Series)
6	12V / 20 A	Air conditioning / heating circuit power supply (Parallel)
7	12V / 20 A	Air conditioning / heating circuit power supply



The Air conditioning/heating circuit fan power supply fuse are located in the LH Cab stanchion, and the value of each fuse is shown on label (3).

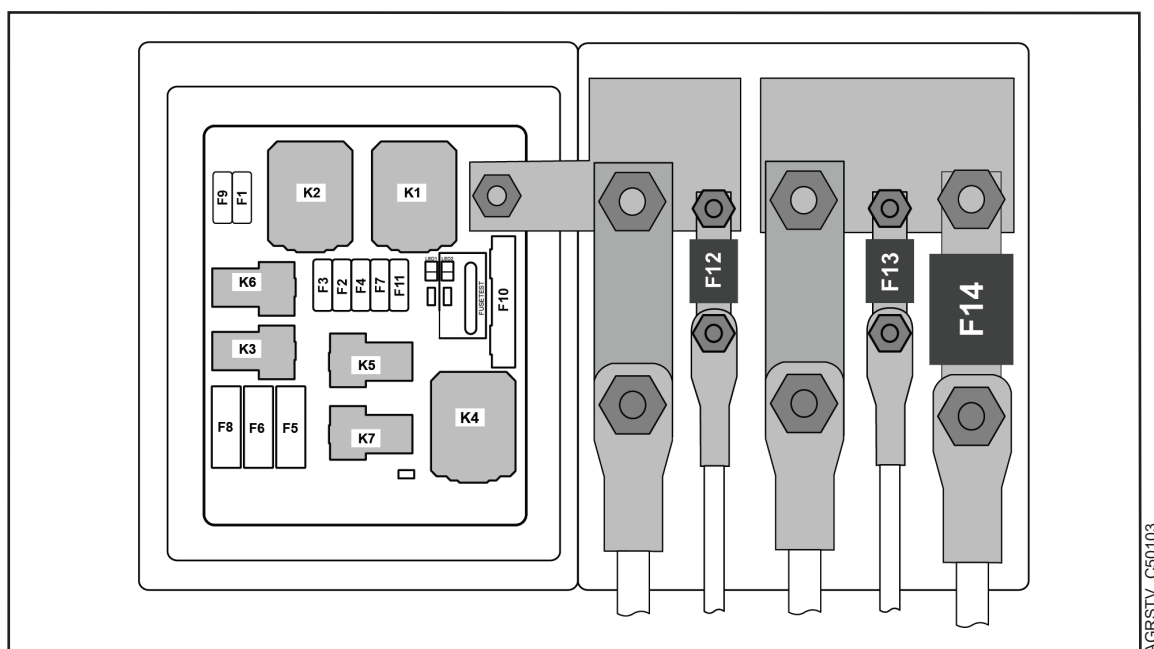
<i>Position</i>	<i>Type</i>	<i>Fuse function</i>
1	25 A	fan motor power supply fuse
2	30 A	fan motor power supply fuse

5.47.6 ENGINE POWER BOX FUSE AND RELAY - 2.85 MODELS



Position	Type	Function
F1	40 A	Main fuse
F2	5 A	Main fuse main relays solenoid
F3	20 A	ECU pin 3-5
F4	7,5 A	ECU pin 1
F5	7,5 A	Relay solenoids power supply
F6		Not used
F7		Not used
F8		Not used
F9	15 A	Fuel Heater
F10	3 A	Electronic Hitch Control (EHC)

5.47.7 ENGINE POWER BOX FUSE AND RELAY - 2.95 AND 2.105 MODELS

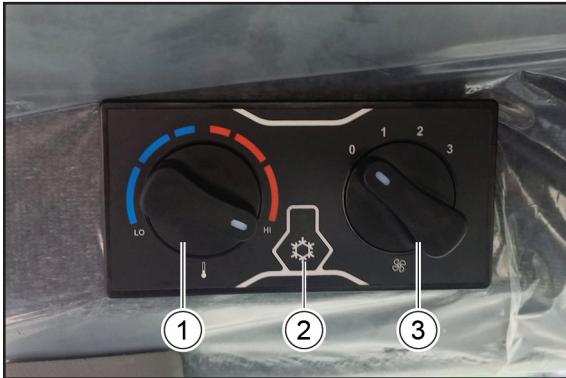


Position	Type	Function
F1	5A	Main relay protective fuse
F2	15A	SCR relay protective fuse
F3	7.5A	Fuel filter relay and boost pressure fuse
F4	7.5A	"ECM" engine module supply
F5	20A	"ECM" engine module supply
F6	25A	SCR and urea sensor
F7	10A	SCR valve and DeNOX module fuse
F8	25A	Fuel filter heat
F9	-	Not used
F10	60A	Isobus
F11	10A	A/C clutch
F12	40A	Heating Control Unit (HCU) fuse
F13	60A	Glow plug fuse
F14	150A	Main power supply fuse
K1		Main relay
K2		SCR main relay
K3		Fuel filter heater
K4		Isobus
K5		A/C clutch
K6		Front Power Take Off control
K7		Not used

5.48 CONTROLS FOR HEATER AND AIR CONDITIONER

The cab is designed to ensure comfortable work conditions for the operator with all windows closed. It is possible to convey fresh air from outside or use the air recirculation system with internal air being warmed up or chilled. Controls are:

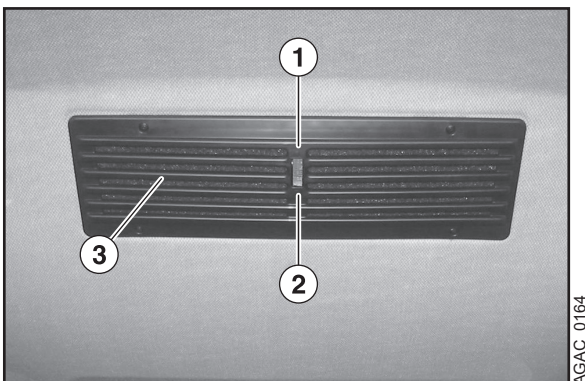
- 1 - Heating control
- 2 - Air conditioning switch
- 3 - Fan control



CAUTION: The cab air filter is designed to remove dust but can not remove chemical vapours. Follow the instructions of the chemical product manufacturer about protection against harmful chemical substances.

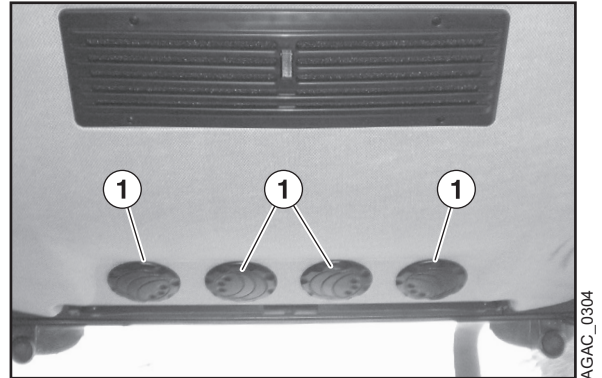
5.48.1 AIR RECIRCULATION CONTROL

Move the air recirculation flap control (1) up (closed) to maximise cool air in the cab. Move the air recirculation flap control (2) down (opened) to recirculate air in the cab. Recirculated air goes through flaps (3), air filter and goes back to fan. Move the air recirculation flap control (1) up (closed) to obtain cool air from outside the cab. This produces maximum cooling effect when air conditioning is off.



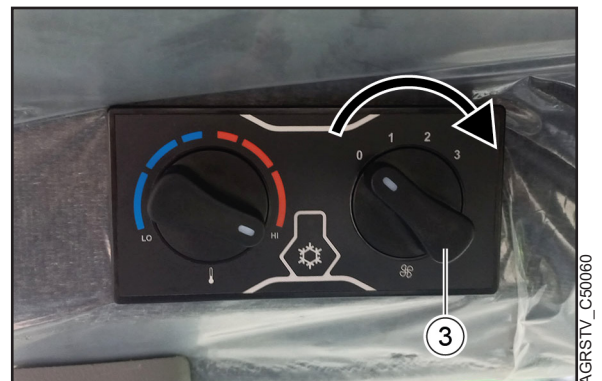
5.48.2 VENTILATION INLET FLAPS

Fresh air coming from outside goes through the air filter, the fan, the heater and the air conditioning evaporator. It is spread through four adjustable flaps (1) above the windshield.



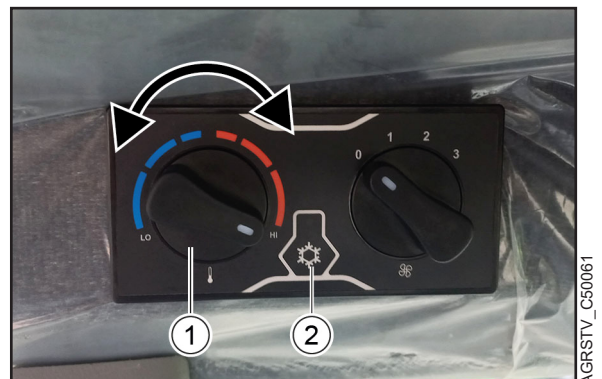
5.48.3 FAN CONTROL

The control knob (3) adjusts the fan speed from position (0) OFF to position 3 of maximum speed.



5.48.4 AIR CONDITIONER CONTROL

Press the switch (2) to activate the air conditioner and press again to deactivate it.



To adjust the temperature of the air conditioning turned the knob (1):

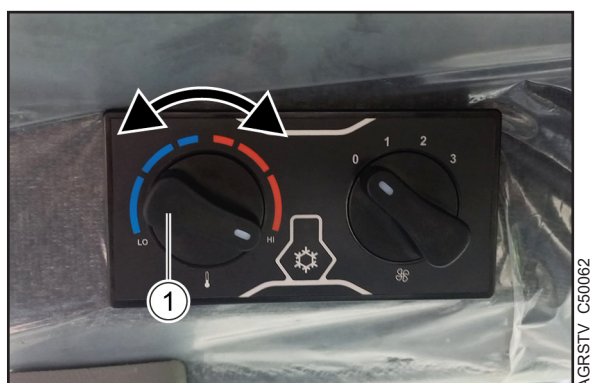
- Clockwise to increase the temperature.
- Anticlockwise to decrease the temperature.

5.48.5 HEATING CONTROL

To adjust the air temperature, turn the knob (1):

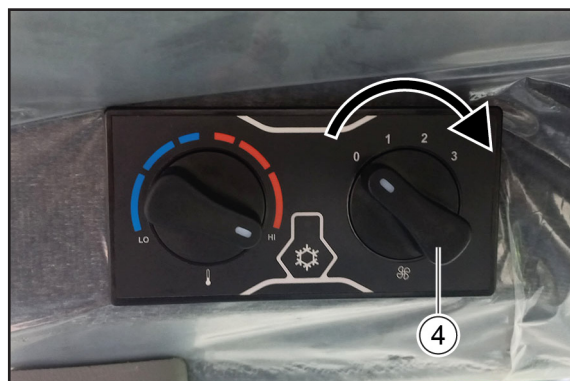
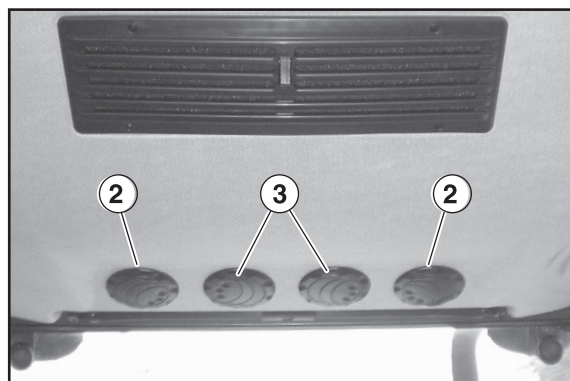
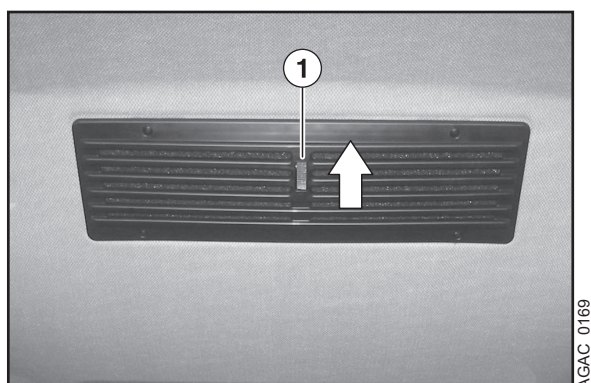
- Clockwise to increase the temperature
- Anticlockwise to decrease the temperature.

Maximum heat is obtained only when engine achieves operating temperature.



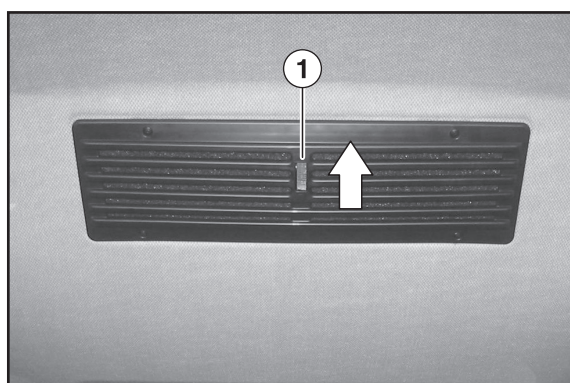
5.48.6 LOW-TEMPERATURE OPERATION

Open air recirculation control (1) to let warmed up air recirculate. This optimises the heating effect. It will be necessary to adjust opening of the various inlets (2) and (3) to balance hot air output between windshield and rear window. To move a great quantity of warm air toward the floor, open the RH and LH inlets (2) and partially close the other ones. Set fan control (4) to maximum speed.



5.48.7 WINDSHIELD DEFROST

Close air recirculation control (1) to remove humidity from cab air. Once dehumidified, open air recirculation control to let warmed up air recirculate. Open and aim inlets (4) and (5) toward windshield. Set fan control (3) to maximum speed.

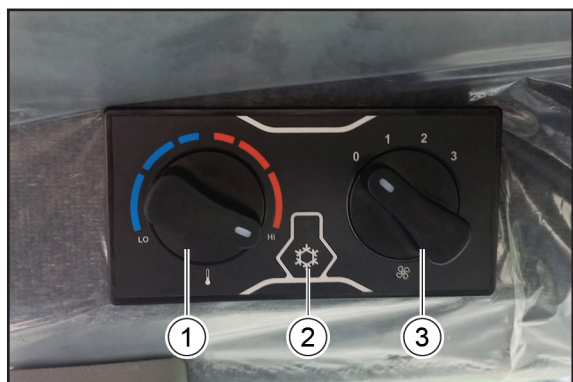


5.48.8 DUSTY CONDITIONS

Close air recirculation (1) and run fan at maximum speed to pressurise the cab.

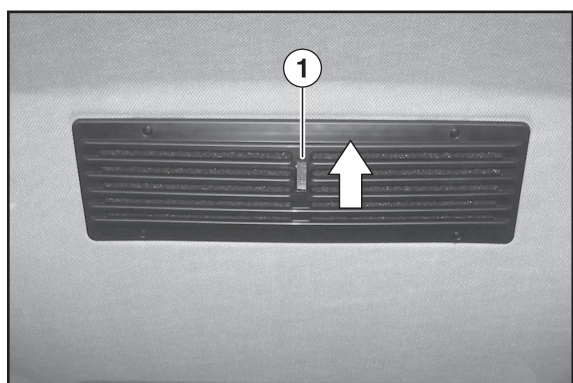
5.48.9 AIR CONDITIONING SYSTEM OPERATION

Make sure that all doors, windows and sunroof are closed. With engine running, activate the air conditioning by pressing the swith (2). Set fan control (3), to medium speed.

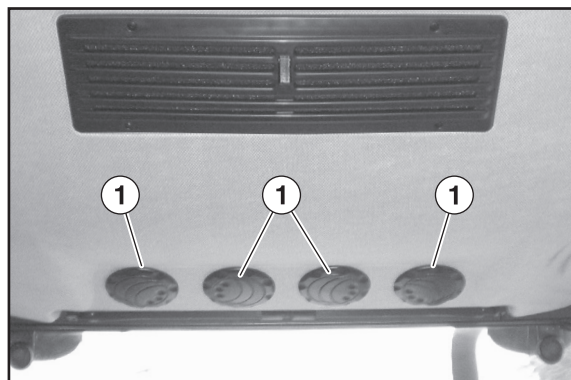


Fully open the air recirculation control (1).

This will let chilled air recirculate to obtain the best cooling results.



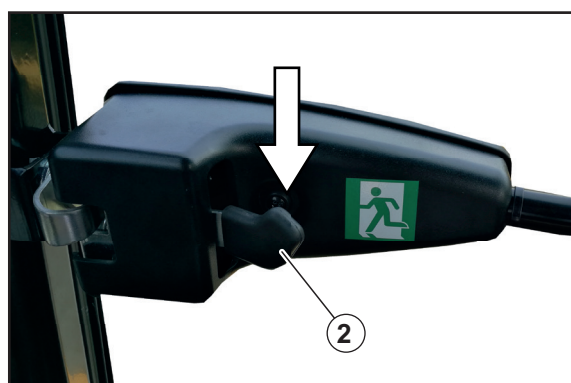
Open and adjust inlets (1), to obtain optimum cooling (ambient temperature and humidity). Fan lower speed will result in cooler air. When desired temperature is reached, set fan speed and temperature control to keep the achieved cooling level. Take a periodically look to the radiating surfaces: check if they are clogged, particularly those of the condenser.



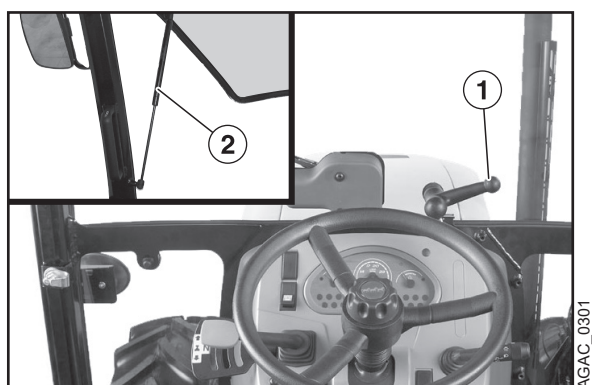
IMPORTANT: Switch air conditioning on for about 20 minutes every month, even in cold weather. This will allow lubrication of system moving parts such as the compressor, hence preventing any loss of refrigerant.

5.48.10 ACCESS CAB DOORS

Doors feature a lock with key (1). To open doors from outside, if door is not locked, press the button. To open it from inside, push down lever (2).



5.48.11 CAB WINDSHIELD



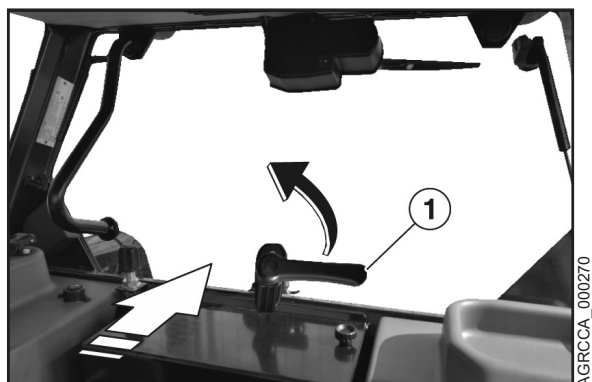
Windshield features an opening handle (1). Once open, window is kept in place by two dampers (2).



CAUTION: *Charger arms may engage with the windscreen, resulting in the risk of injury to persons caused by any glass fragments projected to the person present in the driver's seat. The presence of persons present within the range of the machine is not permitted.*

5.48.12 CAB REAR WINDOW

Rear window features an opening handle (1). Once open, window is kept in place by damper (2).







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6.1 GENERAL INFORMATION

6.1.1 INSTRUCTIONS

Only regular and accurate maintenance can guarantee trouble-free operation of the vehicle. Comply with the instructions for use given in this use and maintenance manual.

6.1.2 PERSONAL PROTECTIVE EQUIPMENT



DANGER:
Maintenance/repair work. Death, serious injuries. Wear appropriate personal protective equipment.

Many dangers are encountered during maintenance/repair operations. Maintenance/repair operators must be familiar with these dangers and wear appropriate personal protective equipment. The following table gives a not exhaustive list of the essential personal protective equipment to be worn according to the dangers encountered:

Risk-Danger	Proper Personal Protection Equipment (PPE)
Hot surfaces	Heat resistant protective gloves
Sharp surfaces	Gloves to protect against cuts
Splashing liquid	Protective goggles/ overalls/ impervious gloves
Heavy objects falling	Safety shoes, Protective hat, or hard hat
Head impacts	Protective hat, or hard hat
Noise pollution	Hearing protection
Atmosphere loaded with vapour, aerosols	Respiratory mask/ overalls/ protective goggles
Atmosphere loaded with dust	Respiratory mask, protective goggles

6.1.3 GENERAL CLEANING

Clean the whole vehicle and then carefully inspect it any time required. This will allow you to early find any malfunction or faults and prevent regrettable inconvenience



CAUTION: NEVER spray cold water onto injection pump when engine is running or the hydraulic head might seize.



IMPORTANT: Washing with a high pressure jet Aiming a water jet directly on electrical or electronic components, connectors, bearings, oil seals, injection pumps or any other delicate parts and components could damage the machine. Reduce pressure and aim at an angle ranging between 45 and 90°.

6.1.4 MAINTENANCE OF THE TRACTOR IN SAFETY

- Cut power to implements and stop engine before attempting any repair or adjustment.
- Disengage the Power Take Off.
- Disconnect the Battery between the battery cut-off switch
- Remove the ignition key
- Do not change engine speed governor setting or run engine at top speed.
- Keep the vehicle, the tools and the trailers in good operating conditions, diligently following the guidelines provided in this manual and in the relative user manual of the manufacturer of the equipment or of the trailer.
- Keep all safety devices in place and in good working conditions.
- Keep all the nuts, bolts and screws tightened so that you are sure that the equipment is in appropriate working conditions. Should you refer to a specific and well-defined tightening torque, make sure that you use a duly calibrated tool: if in doubt, calibrate the tool.
- Stop engine and allow for cooling before working on any engine parts. Engine red hot parts could cause burns.
- Do not turn the engine unless the reverser lever and transmission controls are in neutral position and the parking brake is engaged.
- Keep clothing, jewellery and long hair away from the fan, driving belts or any other engine moving parts to prevent them from getting caught.
- Any not authorised modification possibly made to machine could impair its operation and/or restrain its safety features and life.

6.1.5 WELDING

Electric (spot or arc) welding is dangerous for the vehicle since it could damage the tractor's electrical system and electronics. It is highly recommended not to perform any welding jobs on the vehicle. It is forbidden to make welds on the wheel rim to prevent damage to the tire and accidents.

NOTE: Contact an authorised service centre to have all welding jobs done on the vehicle.

6.1.6 TOPPING UP

If any fluid level drops (oil, coolant, etc.) top up as described in the relevant section. Apply to an authorised service centre if level continues to drop.

6.1.7 INSPECTION OF HYDRAULIC HONES

Check hydraulic hoses regularly, at least once a year, for leaks, kinks, cuts, tears, rubbing, bulges, corrosion, exposed fabric and other signs of wear and damage. Replace worn or damaged hoses immediately.

6.2 LUBRICATION AND PERIODICAL SERVICING

Intervals for checking, lubricating, servicing or adjusting the various parts are based on actual working hours, as indicated by the hour counter. Hour counter starts whenever engine is started.

Reads overall engine working hours. Based on hour counter reading, carry out all scheduled servicing according to the hour intervals indicated in the next pages. Always ensure the hour counter is efficient.



CAUTION: Do not lubricate or adjust tractor when engine is running, unless required.



CAUTION: After servicing, cleaning or repairing the machine, reinstall any protections or shields before operating the tractor again. When servicing, only use lubricants complying with the specifications detailed under "Fuels and lubricants"

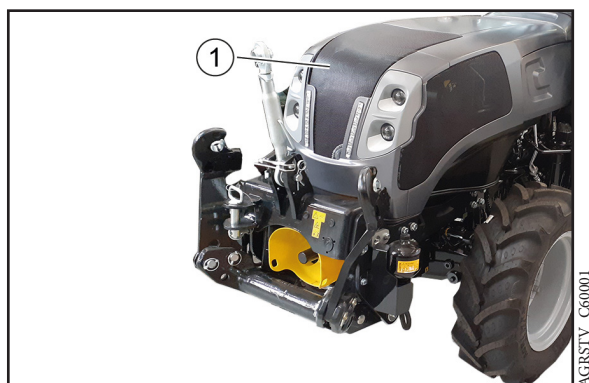
IMPORTANT: Recommended maintenance intervals refer to average conditions. Service more often if tractor is used in heavy duty conditions..

6.3 PRACTICE SAFE MAINTENANCE



CAUTION: *Never carry out servicing next to rotating or moving parts. Do not remove or open the service doors or other protections when engine is running or hot. Do not service engine or surrounding parts, with engine running. Prevent engine operation or starting when hood is open or protections are removed.*

The hood (1) is a protection.



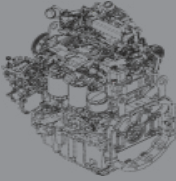
6.3.1 OPENING THE HOOD

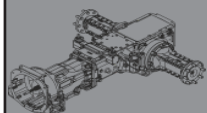
Insert a suitable tool in the hole (1) to unlock the engine bonnet

Press inside the hole to unlock the engine bonnet.



6.4 GENERAL MAINTENANCE CHART

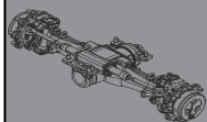
 ENGINE	MAINTENANCE INTERVAL									
	Every 10 hours or daily	Initial 50 hours service	Initial 100 hours service	Initial 500 hours service	Every 500 service	Every 1000 service	Every 1500 service	Every 2000 service	Every 3000 service	2 years Service as required
Operation description										
"6.5.1 Check the engine oil level"	X									
"6.5.2 Check the coolant level"	X									
"6.5.3 Check the cooling system seal"	X		X							
"6.5.4 Clean the radiator and the radiator grilles"	X									
"6.5.5 Clean the hood grilles"	X									
"6.5.6 Check the engine alternator and water pump belt"	X				X					
"6.5.7 Check the engine alternator and water pump belt tension"					X					
"6.5.8 Replace alternator belt and water pump"									X	
"6.5.9 Replace/clean engine air filters"						X				X
Replace the engine air filter safety cartridge								X		X
"6.5.10 Replace engine oil and cartridge"					X					X
"6.5.12 Check the air intake seal and hoses for leaks"			X	X						
"6.5.13 Check and clean the radiator cap"					X					
"6.5.14 Replace cooling fluid"									X	
"6.5.15 Check & clean turbo compressor"									X	
"6.5.16 Inspect the water pump"						X				
"6.5.17 Drain water and sediment from the fuel filter"	Lamp and message on the dashboard									X
"6.5.18 Replace fuel filter, fuel prefilter, and bleed fuel system"					X					
"6.5.19 Drain residue from fuel tank"					X					
"6.5.20 Replace oil vapour recirculation filter (blow-by)"							X			
"6.5.21 Clean the DEF (Diesel Exhaust Fluid) tank filling filter"					X					
"6.5.22 Drain the DEF (Diesel Exhaust Fluid) tank"					X					
"6.5.23 Replace the ATS system"	Every 4000 hours									
"6.5.24 Replace the Multi Function Unit (MFU) in-tank main filter"						X				
"6.5.25 Replace Supply Module main filter"									X	
(1) only when operating in extremely wet and muddy conditions. (2) if fitted. (3) performed maintenance every 20 hours and/or ones in a year depending on working condition.										



TRANSMISSION AND HYDRAULICS

MAINTENANCE INTERVAL

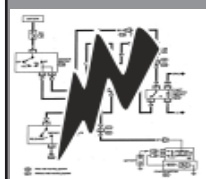
Operation description	Every 10 hours or daily	Initial 50 hours service	Initial 100 hours service	Initial 500 hours service	Every 500 service	Every 1000 service	Every 1500 service	Every 2000 service	Every 3000 service	2 years	Service as required
"6.6.1 Transmission oil level check"	X		X								
Lubricate bearings	X ⁽¹⁾		X		X						
"6.6.2 Replace transmission oil filter (I and II pump)"			X		X						
"6.6.3 Replace the transmission oil filter (III pump)"									X		
"6.6.4 Replace the oil suction strainer"				X		X					
"6.6.5 Replace the transmission oil"				X	X						
"6.6.6 Clutch & PTO clutch - Check free play"					X						
"6.6.7 Clutch pedal stroke adjustment"					X						
"6.6.8 Brake system - Check oil level"	X				X						
"6.6.9 Brake System - Check free play of parking brake and foot brakes"					X						
"6.6.10 Brake System - Replacement of the brake oil"										X	
"6.6.11 Replace brake fluid reservoir cap"								X			
(1) only when operating in extremely wet and muddy conditions. (2) if fitted. (3) performed maintenance every 20 hours and/or ones in a year depending on working condition.											



FRONT AXLE AND STEERING

MAINTENANCE INTERVAL

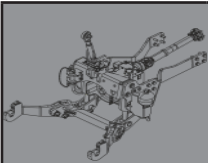
Operation description	Every 10 hours or daily	Initial 50 hours service	Initial 100 hours service	Initial 500 hours service	Every 500 service	Every 1000 service	Every 1500 service	Every 2000 service	Every 3000 service	2 years	Service as required
"6.7.1 Lubricate pivot pin and king pins" ⁽¹⁾	X						X				
"6.7.2 Lubricate all universal joints including shaft from transmission to front-wheel drive axle"	X						X				
"6.7.3 Check oil level in the axle housing"				X	X						
"6.7.4 Check oil level in the final drive housing"				X	X						
"6.7.5 Replace oil in the axle housing"			X	X		X					
"6.7.6 Replace oil in the final drive housing"			X	X		X					
"6.7.7 Check Hydrostatic Steering operational"	X										X
"6.7.8 Check the end play of king pins"							X		X		
Lubricate front axle shaft	X						X				
Lubricate suspended front axle system	X						X				
(1) only when operating in extremely wet and muddy conditions. (2) if fitted. (3) performed maintenance every 20 hours and/or ones in a year depending on working condition.											



ELECTRICAL SYSTEM AND INSTRUMENTS

MAINTENANCE INTERVAL

Operation description	Every 10 hours or daily	Initial 50 hours service	Initial 100 hours service	Initial 500 hours service	Every 500 service	Every 1000 service	Every 1500 service	Every 2000 service	Every 3000 service	2 years	Service as required
"6.8.9 Check that all lights"	X										
"6.8.10 Clean and grease the battery terminals"			X	X	X						
"6.8.11 Check the instrument panel operation (warning lights, alarms and digital displays)"	X		X	X	X						
"6.8.12 Check that the dry air filter clogged warning light is operating"				X	X						X
"6.8.13 Check the lights and lighting indicators"	X										
"6.8.14 Check neutral start circuit"			X	X	X						
(1) only when operating in extremely wet and muddy conditions. (2) if fitted. (3) performed maintenance every 20 hours and/or ones in a year depending on working condition.											

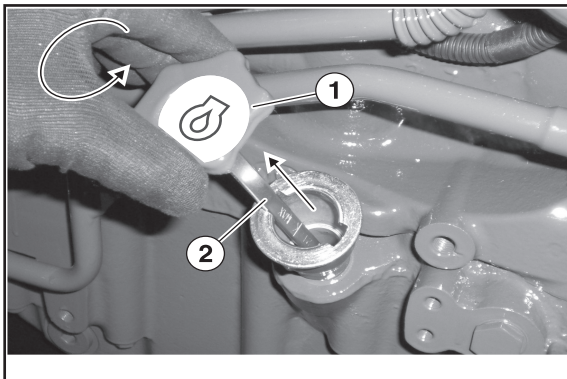
 IMPLEMENTS	MAINTENANCE INTERVAL										
Operation description	Every 10 hours or daily	Initial 50 hours service	Initial 100 hours service	Initial 500 hours service	Every 500 service	Every 1000 service	Every 1500 service	Every 2000 service	Every 3000 service	2 years	Service as required
Front PTO - Lubricate the cardan shaft	X ⁽³⁾										
"6.9.1 Front PTO - Check Oil level"			X		X						
"6.9.2 Front PTO - Replace oil and replace Oil filter"		X			X						
"6.9.3 Front hitch - Check torque on attaching screw of mounting frame" ⁽²⁾			X		X						
"6.9.4 Front hitch - Lubricate all grease fittings" ⁽²⁾	X ⁽³⁾										
"6.9.5 Check hydraulic circuit accumulator"			X		X						
"6.9.6 Check the tightness of the front weights"											X
(1) only when operating in extremely wet and muddy conditions. (2) if fitted. (3) performed maintenance every 20 hours and/or ones in a year depending on working condition.											

 GENERAL	MAINTENANCE INTERVAL									
	Every 10 hours or daily	Initial 50 hours service	Initial 100 hours service	Initial 500 hours service	Every 500 service	Every 1000 service	Every 1500 service	Every 2000 service	Every 3000 service	2 years Service as required
Operation description										
"6.10.1 Three-point hitch - Lubricate lift links and rockshaft" ⁽¹⁾	X ⁽¹⁾				X					X
"6.10.2 Three-point hitch - Lubricate all grease fittings" ⁽¹⁾	X ⁽¹⁾				X					X
"6.10.3 Trailer hitch - Lubricate all grease fittings" ⁽¹⁾	X ⁽¹⁾				X					X
"6.10.4 Trailer hitch - Check the tightening torque of the fixing screws"			X		X					
"6.10.5 Drawbar - Check the tightening torque of the fixing screws"			X		X					
Height-adjustable trailer hitch - Check torque on attaching screws			X		X					
"6.10.6 Components of drawbar and trailer hitches - Check all components for wear, check all components function properly"					X					
"6.10.7 Check torque of mounting bolts and nuts of Cab & ROPS"					X					
"6.10.8 Check washer tank fluid level"										X
"6.10.9 Wheels - Check torque of wheel and rim bolts"	X	X			X					
"6.10.10 Wheels - Check tyre inflation pressure"					X					
"6.10.11 Inspect seat belt for damage and ensure proper working order"					X					
"6.10.12 Clean the A/C condenser" ⁽²⁾	X									X
"6.10.13 Replace the A/C belt" ⁽²⁾							X			
"6.10.14 Clean the cab main air filter"	X				X					X
"6.10.15 Replace the cab main air filter"						X				
"6.10.16 Clean and replace the recirculation air filter"						X				X
"6.10.17 Activate the air conditioning (at least for 20 minutes)"					X					
(1) only when operating in extremely wet and muddy conditions. (2) if fitted. (3) performed maintenance every 20 hours and/or ones in a year depending on working condition.										

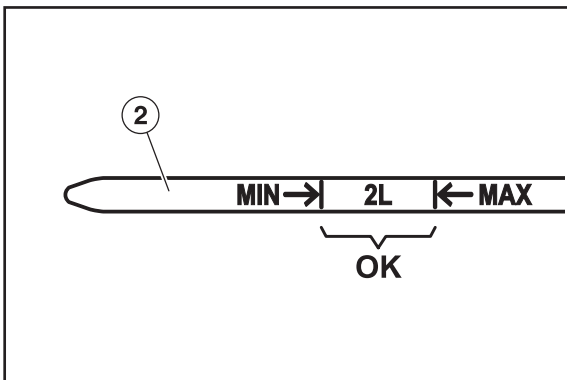
6.5 ENGINE MAINTENANCE

6.5.1 CHECK THE ENGINE OIL LEVEL

Park tractor on level ground for checking engine oil level. Remove cap (1) and extract dipstick (2) from left side of engine, wipe, clean and reinsert it fully. Once again remove them and check oil level on dipstick, correct oil level is in between the two marks "min" and "max" on dipstick.



AGRCCA_000226



AGAC_0039



IMPORTANT: DO NOT operate engine when oil level is below mark on dipstick. If level is low, fill up to correct level, see relevant paragraph. Use only suitable and recommended oil on relevant chart of this manual.

6.5.2 CHECK THE COOLANT LEVEL

Check coolant level through the two marks "min" and "max" on coolant level tank (1).



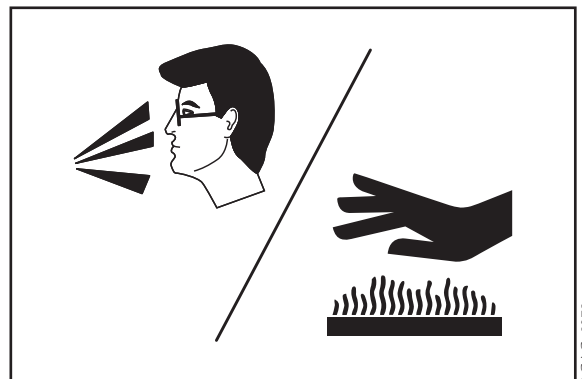
AGRSTV_C50001

2.85 models



AGRSTV_C50002

2.95 and 2.105 models



AGAC_0379



CAUTION: Before check the coolant level, stop the engine and let system cool down. Only when coolant has cooled down check the level.



CAUTION: Always use the specific PPE for the operation concerned. Beware of burns caused by hot coolant and engine parts.



CAUTION: If you find it necessary to top up the level several times after short trips, have the system checked by an authorized dealer.

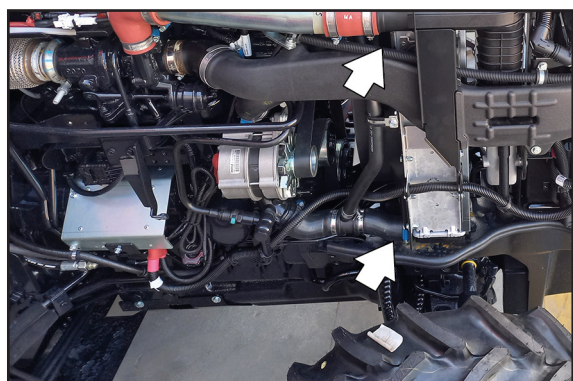
IMPORTANT: If level is below minimum allowed, top up using a suitable coolant in compliance with safety standards. Slowly pour coolant.

IMPORTANT: Do not use cold water inside a warm engine. Do not use water only as coolant since it could create corrosion damage.

IMPORTANT: Do not start engine if coolant level is below minimum level allowed.

6.5.3 CHECK THE COOLING SYSTEM SEAL

Check hoses status and hose clamps tightness of cooling system which could cause leaks or failure, replace damaged components as necessary.



AGRSTV_C60002

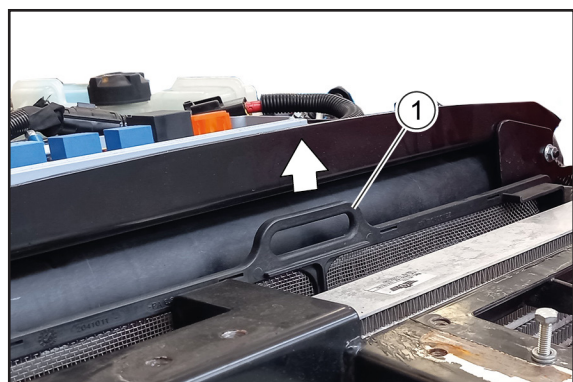


CAUTION: Always use the specific PPE for the operation concerned. Beware of burns caused by hot coolant and engine parts.

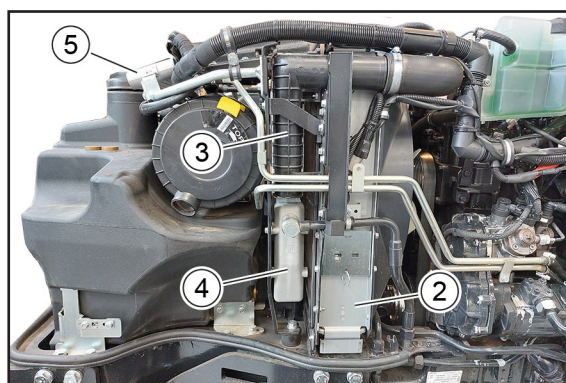
6.5.4 CLEAN THE RADIATOR AND THE RADIATOR GRILLES

Open the hood and see if dirt has built up on the charge air cooler (3), radiator (2), oil cooler (4), fuel cooler (5) and radiator protective grid (1).

If so, extract the protective grid (1) from above and remove the dirt using compressed air.

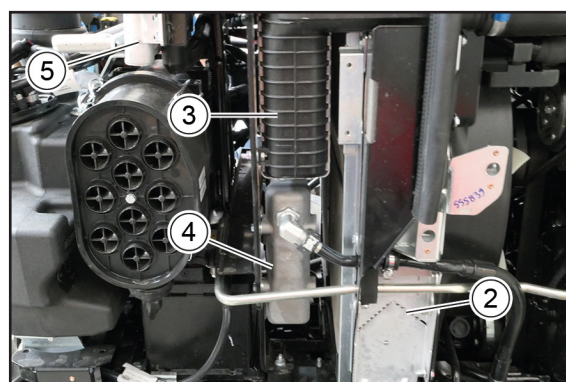


AGRSTV_C50003



AGRSTV_C50004

2.85 models



AGRSTV_C50005

2.95 and 2.105 models

If more thorough cleaning is required, clean the radiator (2) with a compressed air jet from the inside to the outside. Also check that the cooling fins are not deformed, otherwise restore the efficiency.



CAUTION: Reduce compressed air pressure to less than 210 kPa (2 bar; 30 psi) when using for cleaning purposes. Clear area of bystanders, guard against flying chips, and wear personal protection equipment including eye protection.



CAUTION: before cleaning by compressed air, wear individual protections, in particular goggles and a mask to protect your airways.



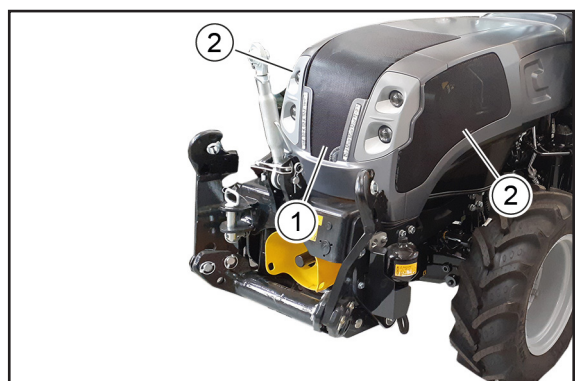
CAUTION! Never perform any maintenance work near rotating or moving parts. Do not remove or open service doors or any other protection when the engine is running or hot. Do not perform any maintenance work on the engine or around it while it is running.

6.5.5 CLEAN THE HOOD GRILLES

Whenever dirt build up on the front grill (1) and side grill (2) of the bonnet, it must be cleaned.

Lifting the bonnet and the accumulated dirt level by the

brushing or blowing with compressed air.



CAUTION: with the open bonnet, always turn off the engine, as with an open bonnet the protection from rotating parts is reduced. In this case, pay also great attention to hot parts. Wear specific PPE and keep away any persons not required for the service operations.



IMPORTANT: Do not use a high-pressure water jet cleaner for cleaning the components.

6.5.6 CHECK THE ENGINE ALTERNATOR AND WATER PUMP BELT

This operation must be performed by an authorised service centre.

6.5.7 CHECK THE ENGINE ALTERNATOR AND WATER PUMP BELT TENSION

This operation must be performed by an authorised service centre.

6.5.8 REPLACE ALTERNATOR BELT AND WATER PUMP

This operation must be performed by an authorised service centre.

6.5.9 REPLACE/CLEAN ENGINE AIR FILTERS



CAUTION: Always use the specific PPE for the operation concerned. Beware of burns caused by hot coolant and engine parts.

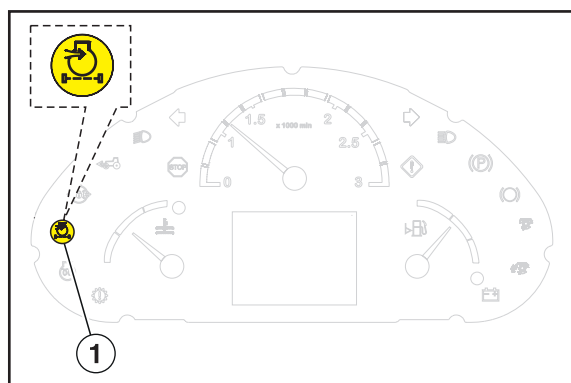


CAUTION: Never carry out servicing next to rotating or moving parts. Do not remove or open the service doors or other protections when engine is running or hot. Do not service engine or surrounding parts, with engine running.

IMPORTANT: Stop the engine. Do not start the engine when filters are removed.

IMPORTANT: This service operation shall be carried out with utmost care and away from dust since it heavily affects engine life.

If the air cleaner, indicator light (1) comes on during operation, remove and clean the primary filter element (4).



The service interval can be extended briefly, for example, until the next suitable opportunity. Provided the filter is serviced properly, this service is not adversely affecting the performance.

Periodically, more frequently if you work in a very dusty environment, or whenever the clogging light on the control panel becomes visible, you need to clean the external filter cartridge (4) with a jet of compressed air less than 5 bar of pressure, direct from inside the cartridge to the outside.

If the clogging light does not go out, replace the cartridge.

Should it be necessary to clean cartridge (4) while working in the field, a temporary solution could be to batter it on the palm of your hand.

The primary filter element (4) can be cleaned up to 5 times. Thereafter, it must be replaced after first 500 hours of operation or every 1000 hours.

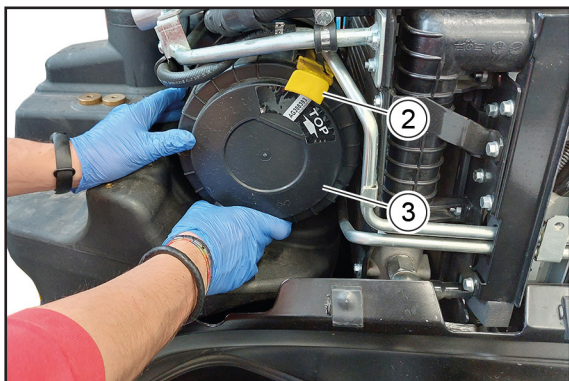
IMPORTANT: Ensure not to damage or deform the guiding ring.

IMPORTANT: Do not close hood cover or start engine before safely fastening the filter.

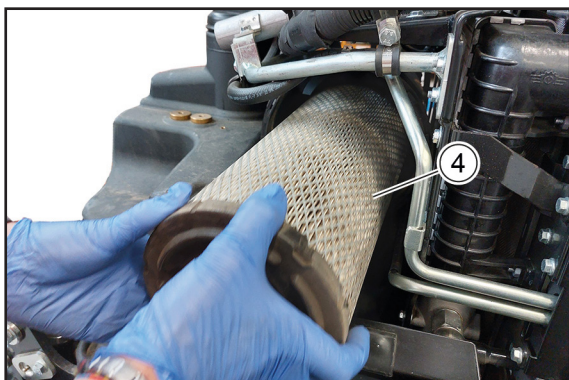
IMPORTANT: Do not try to clean secondary (safety) cartridge (5), always replace it.

2.85 models

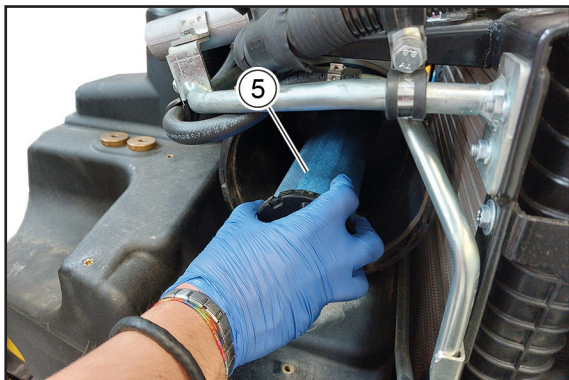
- Open the engine hood.
- Pull lever (2) to release the cover (3) and turn cover counter clockwise to remove it.



- Pull out the primary filter element (4) out of the filter housing.



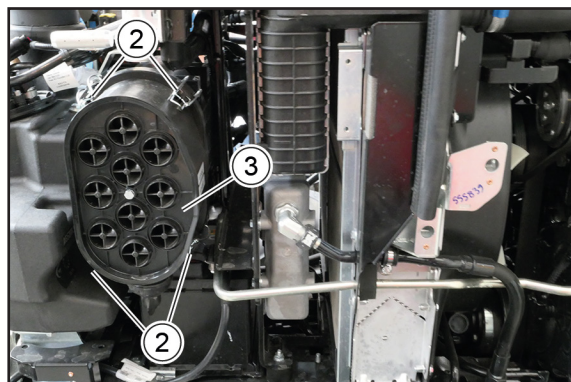
- Take out the secondary (safety) cartridge (5)
- Replace filter if damaged.



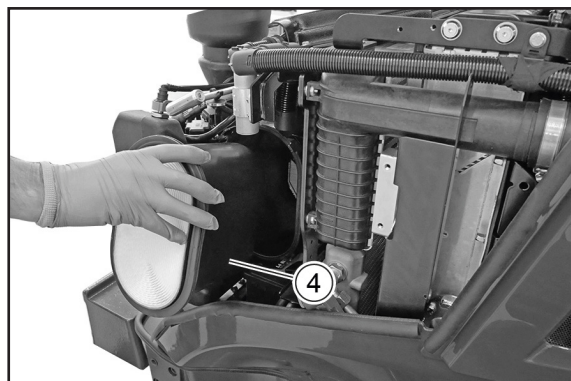
- Carry out the removal steps in reverse order.

2.95 and 2.105 models

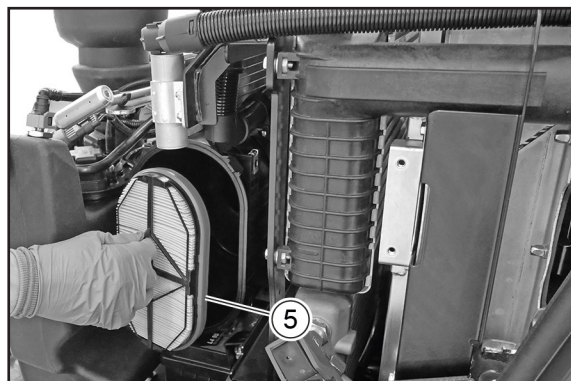
- Open the engine hood.
- Release the locking clips (2).
- Remove the cover (3).



- Pull out the primary filter element (4) out of the filter housing.



- Take out the secondary (safety) cartridge (5)
- Replace filter if damaged.

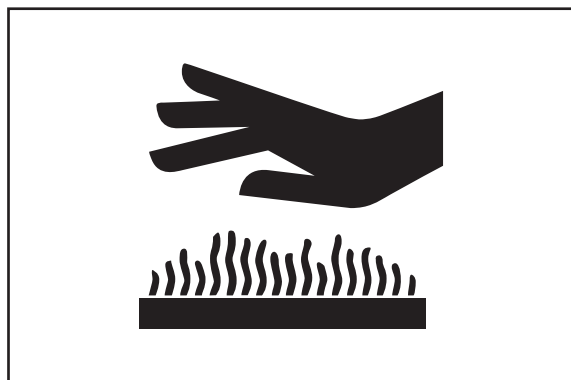


- Carry out the removal steps in reverse order.

6.5.10 REPLACE ENGINE OIL AND CARTRIDGE



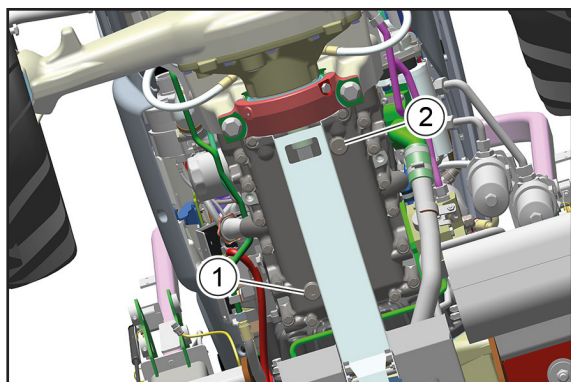
CAUTION: Burning hazard during oil discharge. Use suitable personal protection equipment.



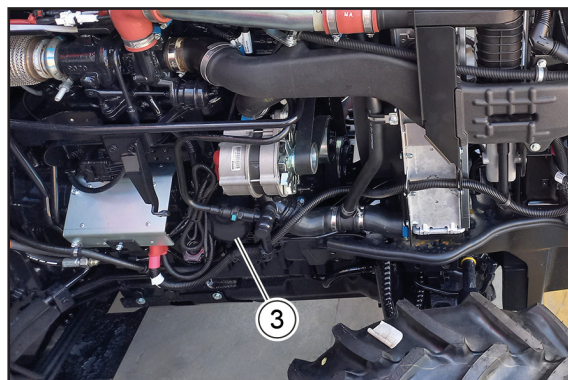
IMPORTANT: Use oil with a viscosity suitable for the relevant season. For oil specifications see the relevant chapter "8.1 Lubricants chart".

IMPORTANT: Dispose of discharged oil complying with prevailing rules.

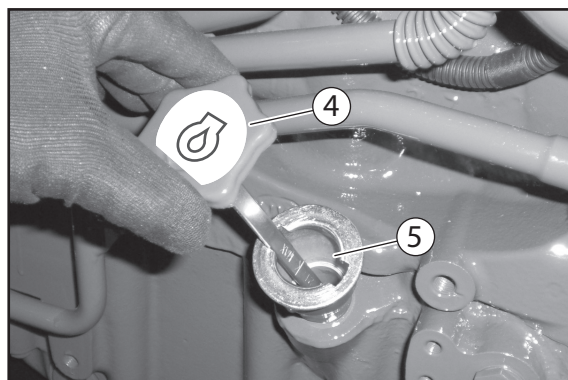
- Heat up the engine
- Park the tractor on level ground and turn off the engine.
- Place a vessel of suitable capacity under the engine
- Remove drain plugs (1) and (2) and drain oil.



- Open hood and unscrew engine oil filter (3).



- Apply a film of oil on the gasket before installing the new filter. Hand tighten the oil filter plus 1/2 turn.
- Install and tighten drain plugs (1) and (2) (use new seal rings).
- Fill up with specified oil quantity through filler neck (5).



- Close hood, run engine for short time, and check for leaks at the filter base and drain plugs.
- Stop engine, wait 15 minutes, and then recheck oil level.
- Remove dipstick (4), wipe clean, and reinsert it fully. Remove dipstick once again and check oil level.
- Top up if necessary.

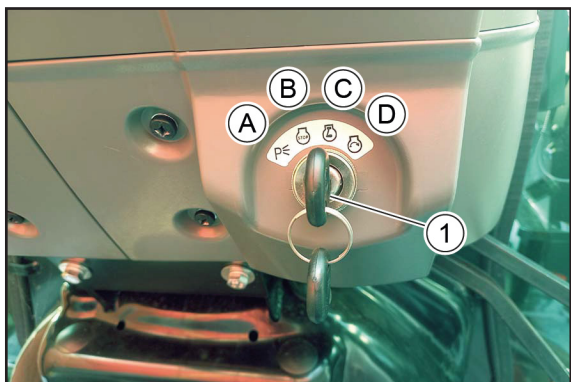
6.5.11 MAINTENANCE HOUR METER RESET

IMPORTANT: Reset Oil Service Message after each oil change. Failure to follow this procedure leads to engine derate.

After engine oil replacement, it is necessary to reset the timer of the oil life, time monitoring system.

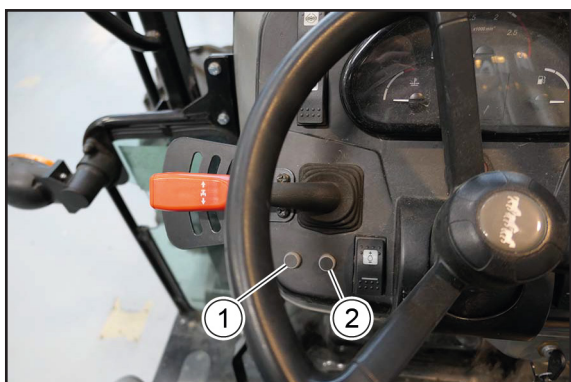
Procedure to reset the timer:

- Turn the key (1) in the ON position (B) without starting the engine.



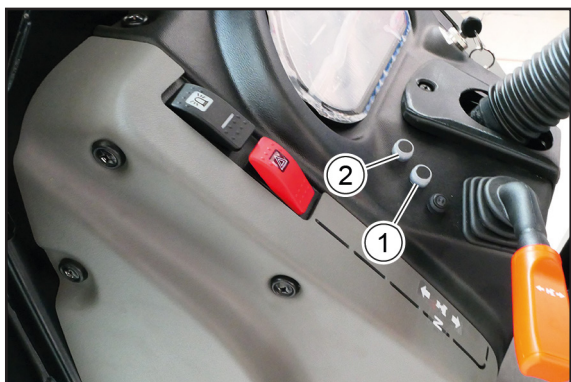
AGAC_0022

- Wait for 6 seconds.
- Press and hold the buttons (1) and (2) for at least 15 seconds.



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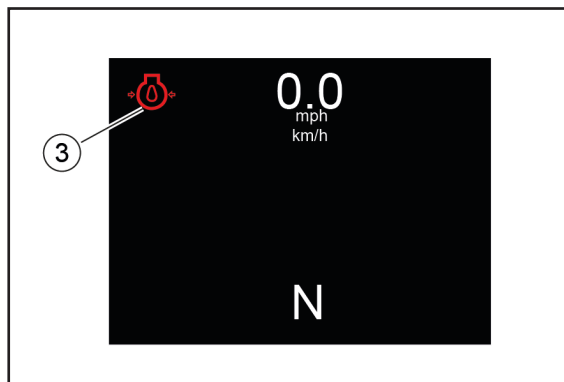
Roll Bar models



AGRSTV_C50040

Cab models

- After 15 seconds, release the buttons, icon (3) starts flashing and the buzzer sounds for a short time. It indicates the end of the procedure.



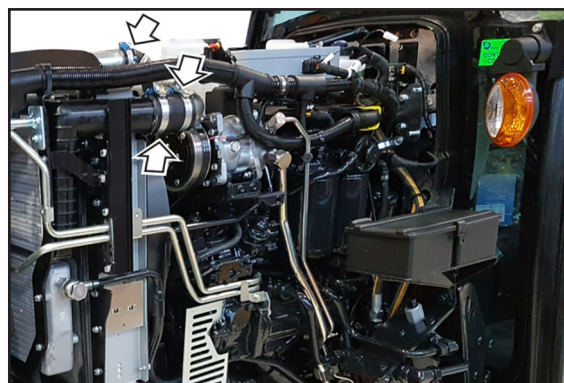
AGRSTV_C60016

- After this procedure, you can use the tractor normally.

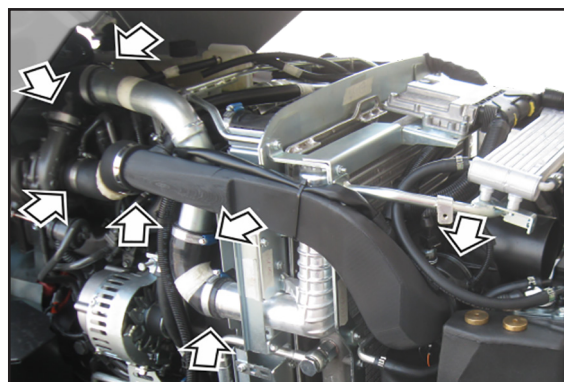
NOTE: The procedure can be performed only once per expiration. A further attempt has no effect on the timer.

6.5.12 CHECK THE AIR INTAKE SEAL AND HOSES FOR LEAKS

Check hoses status and hose clamps tightness of cooling system which could cause leaks or failure, replace damaged components as necessary



AGRCCA_000560



AGRCCA_000559

6.5.13 CHECK AND CLEAN THE RADIATOR CAP

This operation must be performed by an authorised service centre.

6.5.14 REPLACE COOLING FLUID

This operation must be performed by an authorised service centre.

6.5.15 CHECK & CLEAN TURBO COMPRESSOR

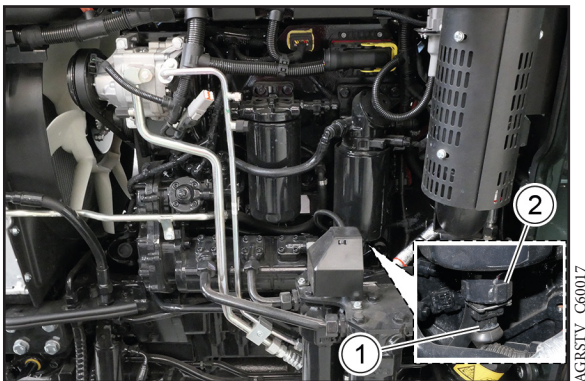
This operation must be performed by an authorised service centre.

6.5.16 INSPECT THE WATER PUMP

This operation must be performed by an authorised service centre.

6.5.17 DRAIN WATER AND SEDIMENT FROM THE FUEL FILTER

- Stop the engine.
- Remove the ignition key.
- Apply the hand brake.
- Cut the power supply.
- Wait until the engine has cooled.
- Open the hood.
- Disconnect the connector (1).



- Position a suitable container under the sensor
- Loosen the fuel filter bleed screw (2) until all of the water has drained.
- Retighten the bleed screw (2) when fuel starts to flow out.
- Connect the connector (1).

IMPORTANT: Dispose of fuel and filters in accordance with local regulations. DO NOT pour fuel on the ground, in the sewer or in containers that may leak. Respect the environment.

6.5.18 REPLACE FUEL FILTER, FUEL PREFILTER, AND BLEED FUEL SYSTEM

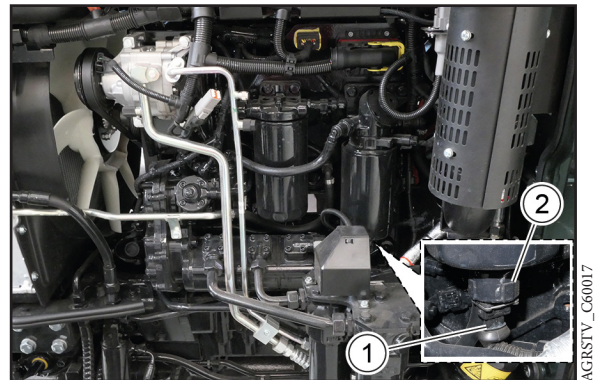


CAUTION: Before starting work, make sure that the engine is cold.

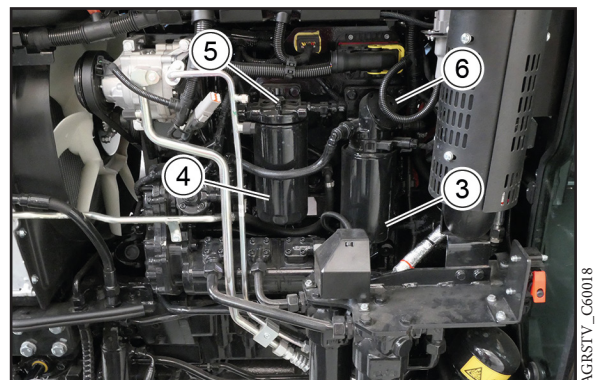


CAUTION: Handle fuel with care, it is highly flammable. Never perform work on the fuel system while smoking, or next to open flames or sparks.

- Stop the engine.
- Remove the ignition key.
- Apply the hand brake.
- Cut the power supply.
- Wait until the engine has cooled.
- Open the hood.
- Disconnect the connector (1).



- Position a suitable container under the filters.
- Unscrew the bleed screw (5).
- Unscrew the fuel prefilter (3) and fuel filter (4) cartridges.



- Clean the gasket seat on the support and slightly oil the gasket on the new fuel filter.
- Screw the new fuel filter cartridges (3) and (4) on their seats and hand-tighten them. Make sure that the gaskets are correctly seated. Tighten the cartridges.
- Operate the hand primer (6) on the fuel transfer

pump until fuel appears at the bleed screw (5).

- Tighten the bleed screw (5) after air has been removed from the system.
- Connect the connector (1).
- Close the hood.
- Connect the battery.

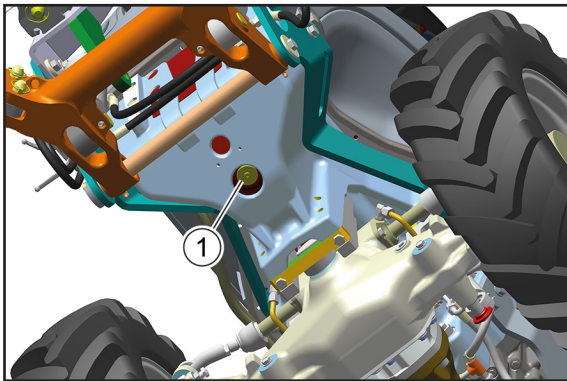
IMPORTANT: Dispose of fuel and filters in accordance with local regulations. DO NOT pour fuel on the ground, in the sewer or in containers that may leak. Respect the environment.

6.5.19 DRAIN RESIDUE FROM FUEL TANK

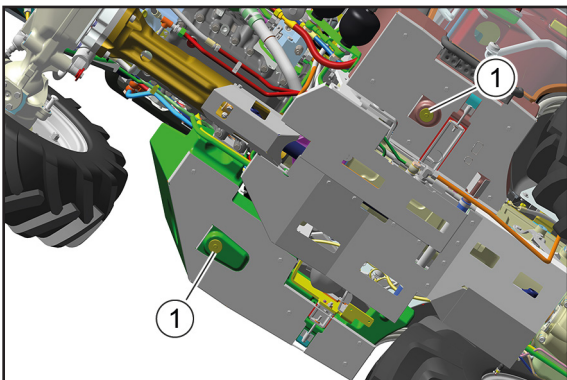
NOTE: Place a small container under the drain hole cap (1) to collect all leaking fuel.

Remove the fuel tank drain plug (1) to remove any traces of accumulated moisture and deposits.

Tighten the drain plug (1) when clean fuel comes out.



2.85 models



2.95 and 2.105 models



CAUTION: Never open the fuel system if the engine is warm. Handle fuel with care, it is highly flammable. Do not replace the fuel filter when smoking or near open flames or sparks.

IMPORTANT: Dispose of fuel and filters in accordance with local regulations. DO NOT pour fuel on the ground, in the sewer or in containers

that may leak. Respect the environment.

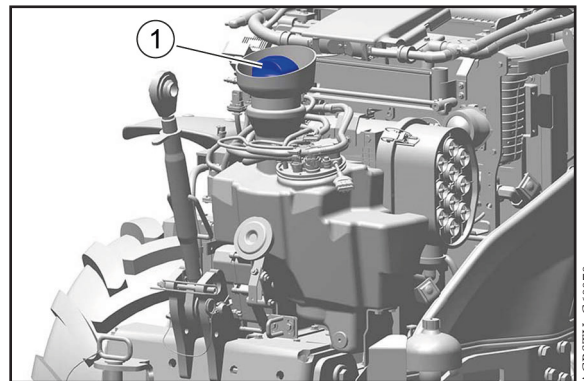
6.5.20 REPLACE OIL VAPOUR RECIRCULATION FILTER (BLOW-BY)

This operation must be performed by an authorised service centre.

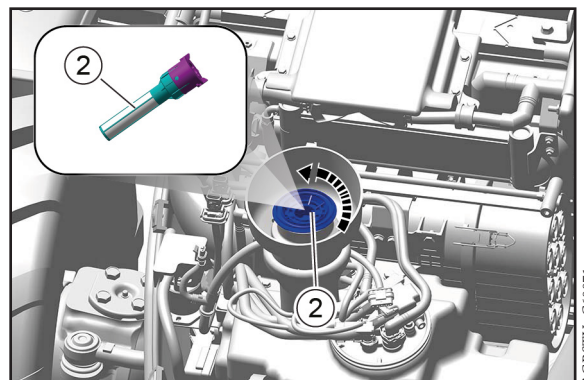
6.5.21 CLEAN THE DEF (DIESEL EXHAUST FLUID) TANK FILLING FILTER

NOTE: Only 2.85 models

- Open the engine bonnet.
- Remove the cap (1) from the DEF tank.



- Turn the DEF tank filling filter (2) counterclockwise to release it.
- Remove the filter (2) by pulling it.
- Clean the filter (2) using compressed air.
- If the filter is damaged replace with new one.



6.5.22 DRAIN THE DEF (DIESEL EXHAUST FLUID) TANK

NOTE: Only 2.95 and 2.105 models

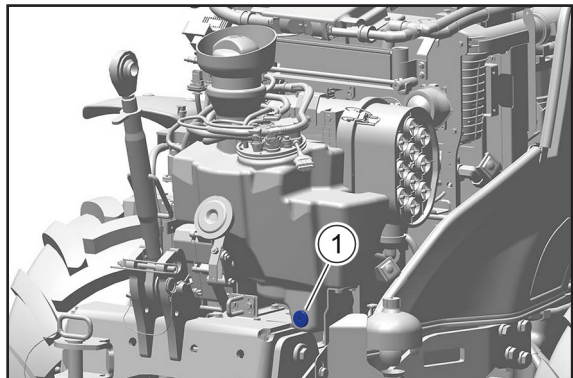


CAUTION: Handle DEF fluid carefully. Do not eat, drink, or smoke when using this product. Never fill the tank when the engine is running.

- Place a suitable container under the tank to collect

the draining DEF.

- Remove the plug (1) and drain the DEF and sediment.
- Reassemble the plug (1).
- Replace the DEF fluid according to the capacity and specifications (refer to the relevant chapter).



6.5.23 REPLACE THE ATS SYSTEM

NOTE: Only 2.95 and 2.105 models

This operation must be performed by an authorised service centre.

6.5.24 REPLACE THE MULTI FUNCTION UNIT (MFU) IN-TANK MAIN FILTER

NOTE: Only 2.95 and 2.105 models

This operation must be performed by an authorised service centre.

6.5.25 REPLACE SUPPLY MODULE MAIN FILTER

NOTE: Only 2.95 and 2.105 models

This operation must be performed by an authorised service centre.

6.6 TRANSMISSION AND HYDRAULIC MAINTENANCE

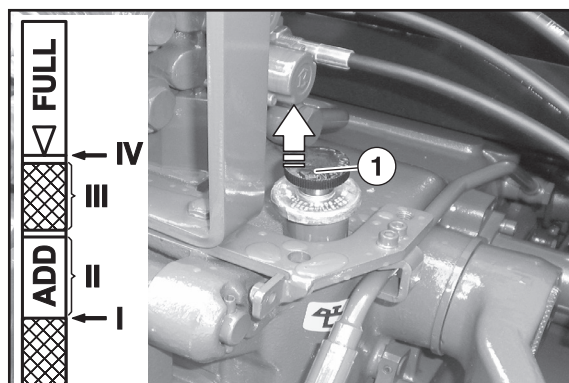
6.6.1 TRANSMISSION OIL LEVEL CHECK



CAUTION: This operation must be performed with the engine off.

IMPORTANT: The engine must have been off for at least 5 minutes before proceeding with this operation.

- Set vehicle on a flat horizontal surface.
- Apply the park brake
- Lower the rear lift completely.
- Remove the dipstick (1), thoroughly clean it and reinsert it completely. Pull it out again and check the oil level.
- Add specific oil if the level is low. Check lubricant table (chapter 8.1) in the manual.



I = min. level, restore level before restarting the engine

II = top up as soon as possible

III = normal level

IV = max. level

Do not start the engine if oil level is below the minimum allowed. In this case, top up using appropriate oil to reach required level.



CAUTION: no-compliance with the instructions to check oil level may result in loss of safety features and in some cases lead to considerable damage to the transmission.

IMPORTANT: Oil level should never be below position (I) on the dipstick. If using equipment which require a considerable amount of hydraulic oil, top up in advance in order to reach level (IV) on the dipstick. Failure to comply with these provisions could cause significant damage to the transmission

6.6.2 REPLACE TRANSMISSION OIL FILTER (I AND II PUMP)

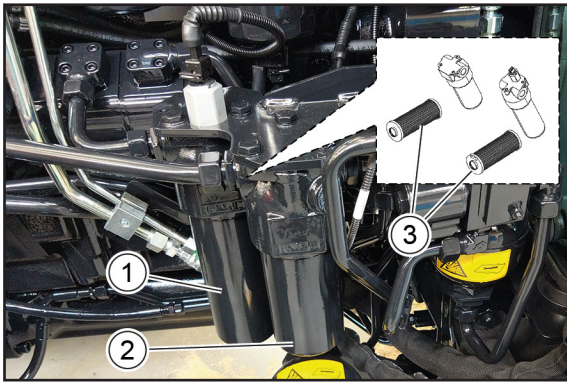


CAUTION: Do not perform the oil change while the oil is hot, as there is the risk of injury.



CAUTION: Before working on hydraulic oil filters, ensure that the hydraulic oil is cold. Wear impervious protective gloves. Otherwise risk of burns, injuries and/or health problems occurs.

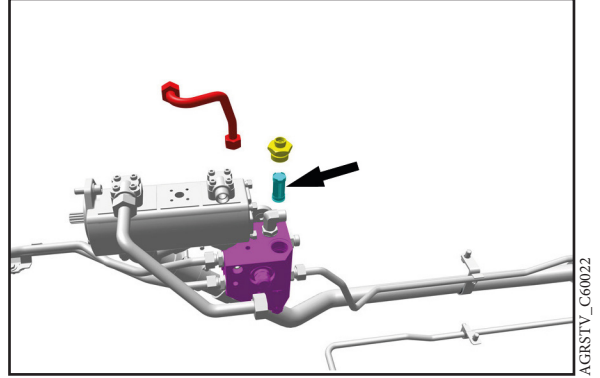
- Disconnect the battery.
- Arrange a suitable container for collecting the hydraulic oil.
- Unscrew the hydraulic filter bowls (1) and (2) using a filter wrench.



- Remove the filter cartridges (3).
- Properly clean the filter bowls (1) and (2) and their seats.
- Apply a film of oil on the gaskets.
- Install new filter cartridges (3).
- Refit the filter bowls (1) and (2), and tighten to the specification torque of 70 N·m (51.62 lb·ft).
- Restore the transmission oil level with proper oil, check lubricant table (chapter 8.1) in the manual
- Reconnect the battery.
- Run the engine for several seconds.
- Check the hydraulic oil level.
- Check for leaks.

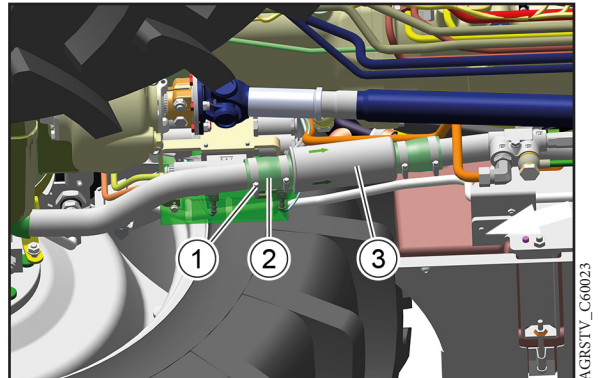
6.6.3 REPLACE THE TRANSMISSION OIL FILTER (III PUMP)

This operation must be performed by an authorised service centre.



6.6.4 REPLACE THE OIL SUCTION STRAINER

- Drain the transmission hydraulic oil.
- Remove the four clamps (1) and the two coupling sleeves (2) at both sides of the strainer (3).
- Replace the strainer (3) with a new one, performing the procedure in reverse order.



NOTE: Make sure that the arrow on the strainer body points forwards and that the fixing clamps are securely fitted in place.

- Refill transmission oil according to the capacity and hydraulic oil type specifications (refer to the relevant chapters).

6.6.5 REPLACE THE TRANSMISSION OIL



CAUTION: Burning hazard during oil discharge.



CAUTION: Use suitable personal protection equipment.

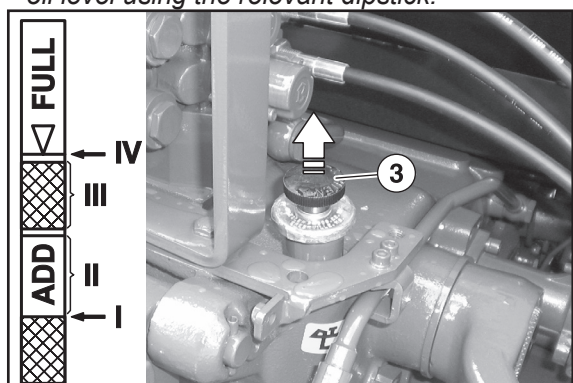
IMPORTANT: Dispose of discharged oil complying with prevailing rules.

IMPORTANT: Allow oil to cool down before working on the circuit. Burning hazard.

- Set vehicle on a flat horizontal surface.
- Set the rear hydraulic lift to down position.
- Place a vessel of suitable capacity under the gearbox.
- Loosen drain plugs (1) and (2) located at the bottom/rear part of the gearbox.
- Once oil has fully drained out, refit plugs (1) and (2).



- Fill transmission with oil through filler (3) and check oil level using the relevant dipstick.



- Top up if necessary, check the relevant chapter "8.1 Lubricants chart" in this manual.

6.6.6 CLUTCH & PTO CLUTCH - CHECK FREE PLAY

This operation must be performed by an authorised service centre.

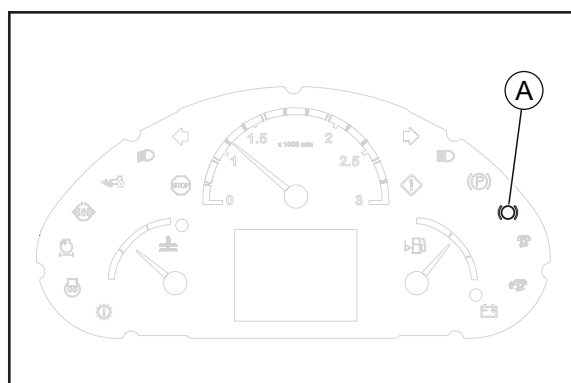
6.6.7 CLUTCH PEDAL STROKE ADJUSTMENT

This operation must be performed by an authorised service centre.

6.6.8 BRAKE SYSTEM - CHECK OIL LEVEL

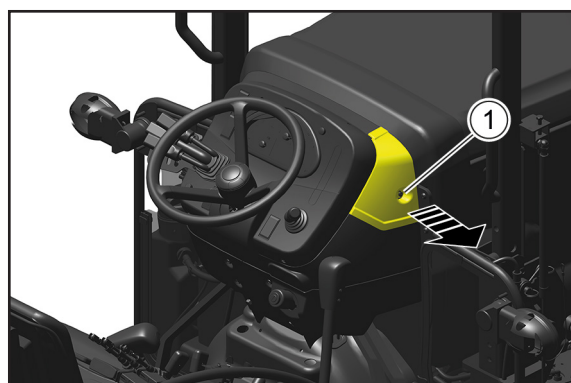
The brakes are hydraulically operated by an independent circuit and have a separate oil reservoir.

When the key switch is ON and the oil level in the brake system is low, the indicator light (A) glows up.

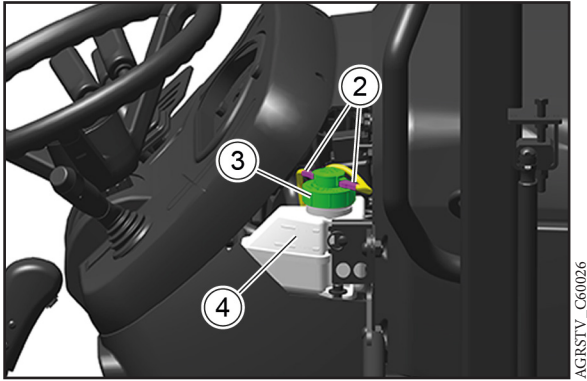


Roll Bar models

- Unscrew the screw (1) and remove the cover.



- Disconnect the electrical connectors (2) and remove the cap (3).

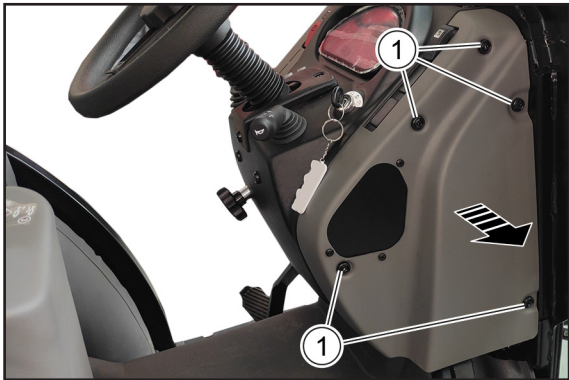


AGRSTV_C60026

- Fill the brake fluid reservoir to the maximum level indicator (4) with brake fluid, check lubricant table (chapter 8.1) in the manual.
- Carry out the removal steps in reverse order.
- To check the electrical system, press the top of the cap (3); the indicator light (A) must light up.

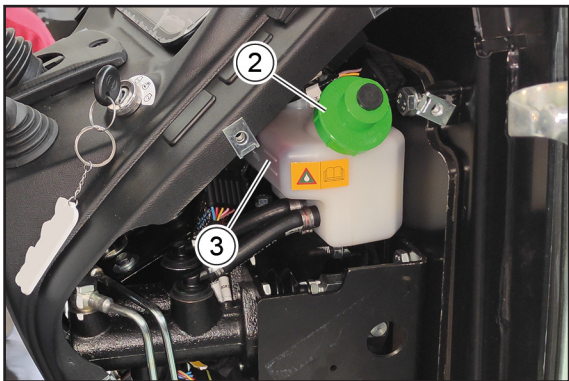
Cab models

- Unscrew the screws (1) and remove the cover.



AGRSTV_C60027

- Remove the cap (2).
- Fill the brake fluid reservoir to the maximum level indicator (3) with brake fluid, check lubricant table (chapter 8.1) in the manual.



AGRSTV_C60028

- Carry out the removal steps in reverse order.
- To check the electrical system, press the top of the cap (2); the indicator light (A) must light up.

6.6.9 BRAKE SYSTEM - CHECK FREE PLAY OF PARKING BRAKE AND FOOT BRAKES

This operation must be performed by an authorised service centre.

6.6.10 BRAKE SYSTEM - REPLACEMENT OF THE BRAKE OIL

This operation must be performed by an authorised service centre.

6.6.11 REPLACE BRAKE FLUID RESERVOIR CAP

This operation must be performed by an authorised service centre.

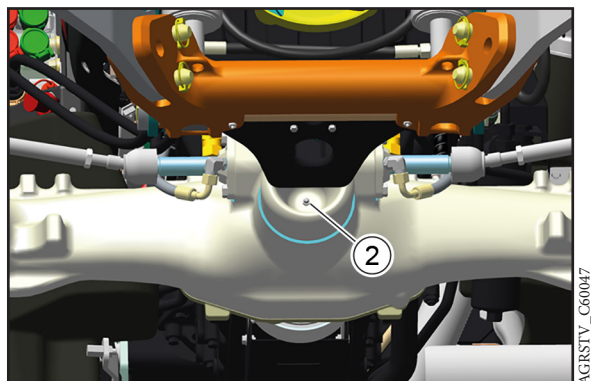
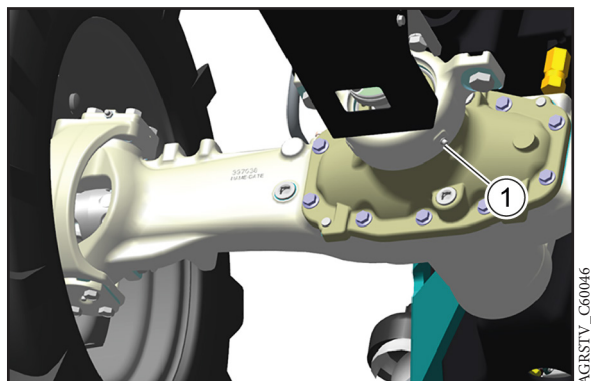
6.7 MAINTENANCE FRONT AXLE AND STEERING

6.7.1 LUBRICATE PIVOT PIN AND KING PINS

Apply several shots of multi-purpose grease to grease fittings shown.

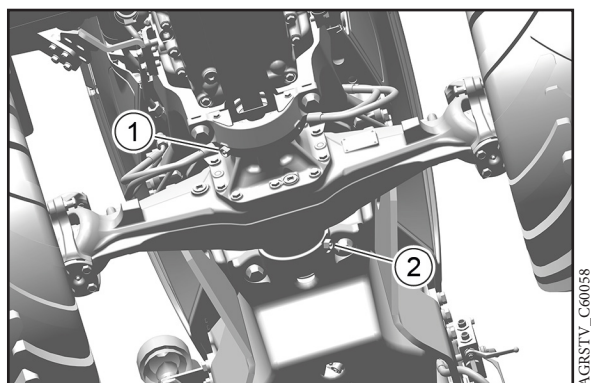
AF_N and AF_B Models

Clean grease nipples (1), (2) and lubricate



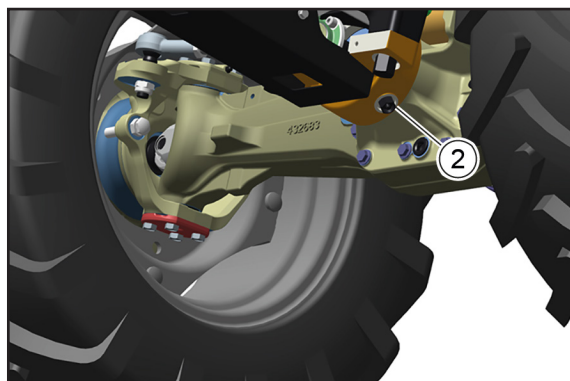
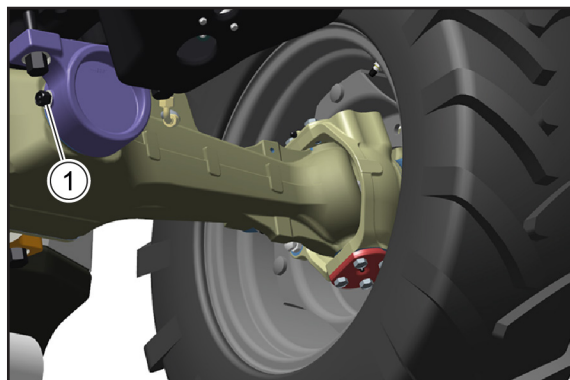
AV_LB Models

Clean grease nipples (1), (2) and lubricate.



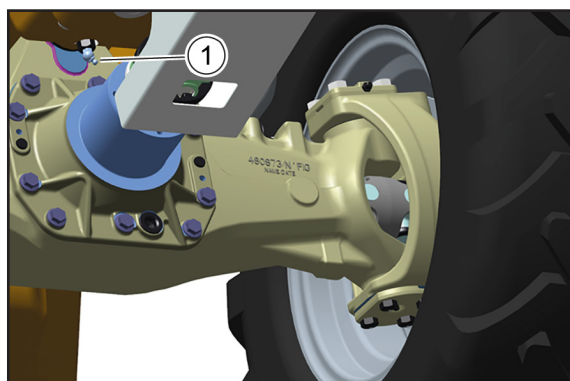
AF_L Models

Clean grease nipples (1), (2) and lubricate.



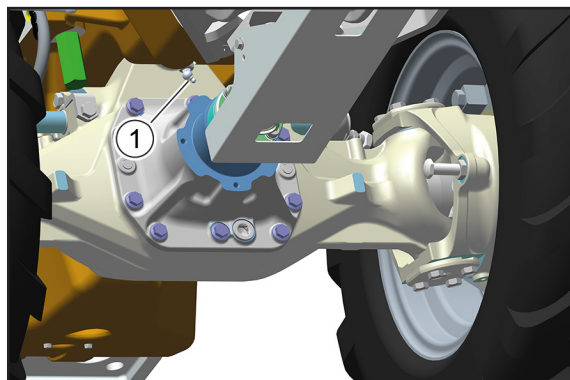
AV_L Models

Clean grease nipple (1) and lubricate.



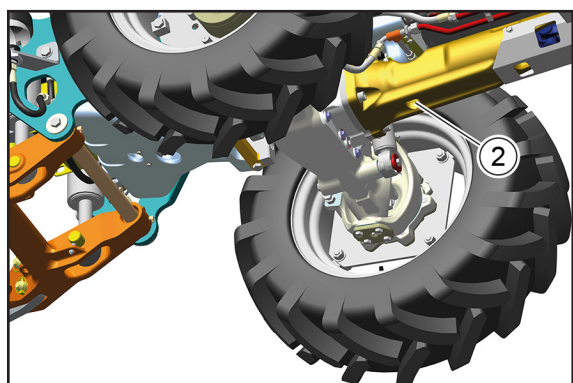
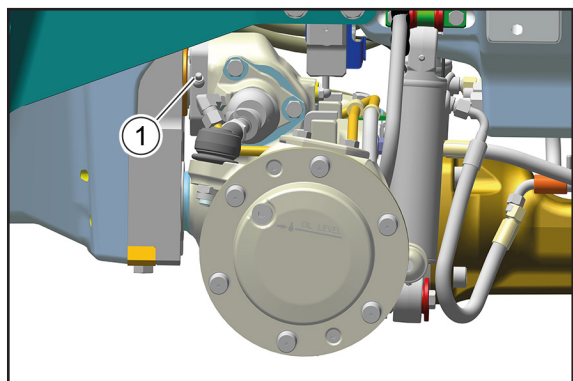
AV_N Models

Clean grease nipple (1) and lubricate.



Suspended front axle

Clean grease nipples(1) and lubricate.

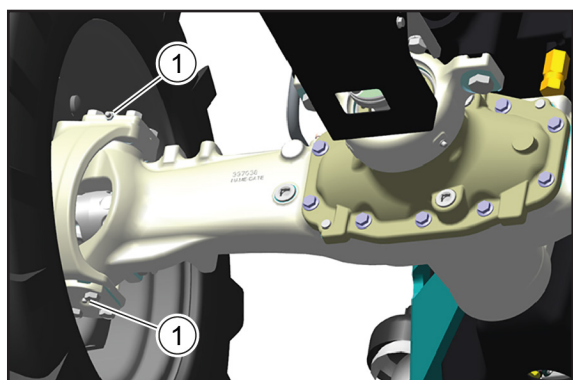


6.7.2 LUBRICATE ALL UNIVERSAL JOINTS INCLUDING SHAFT FROM TRANSMISSION TO FRONT-WHEEL DRIVE AXLE

Apply several shots of multi-purpose grease to below fittings .

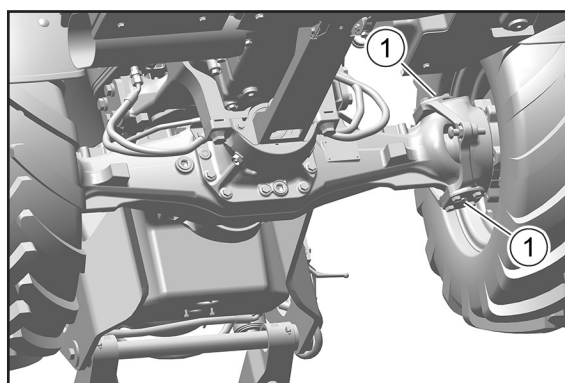
AF_N - AF_B Models

Clean grease nipples (1) and lubricate (on both side).



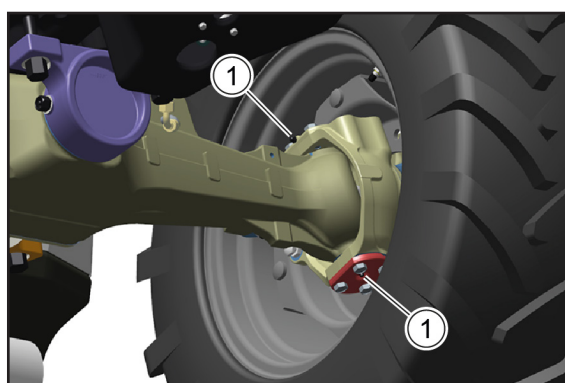
AV_LB Models

Clean grease nipples (1) and lubricate (on both side).



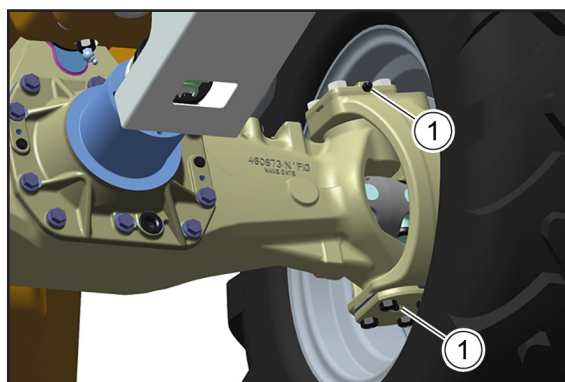
AF_L Models

Clean grease nipples (1) and lubricate (on both side).



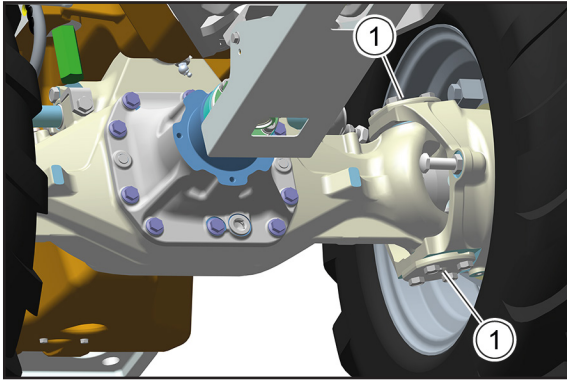
AV_L Models

Clean grease nipples (1) and lubricate (on both side).



AV_N Models

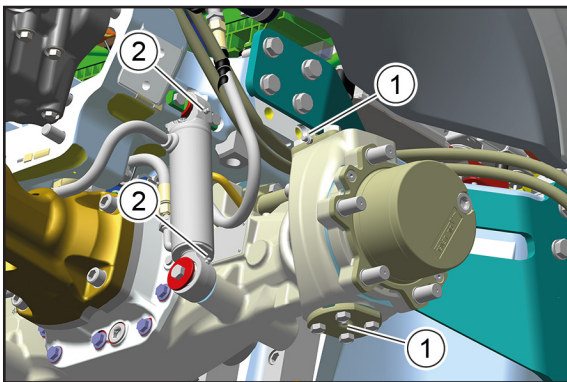
Clean grease nipples (1) and lubricate (on both side).



AGRSTV_C60056

Suspended front axle

Clean grease nipples (1), (2) and lubricate (on both side).



AGRSTV_C60057

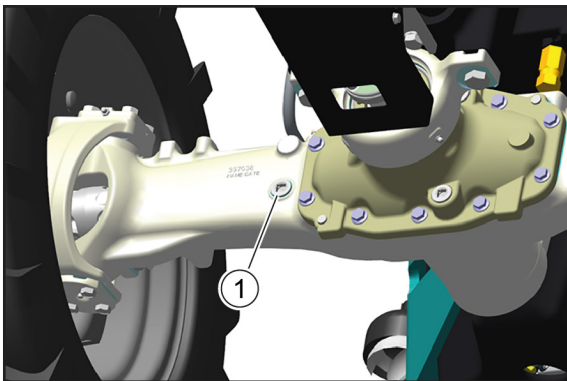
6.7.3 CHECK OIL LEVEL IN THE AXLE HOUSING



CAUTION: Use suitable personal protection equipment.

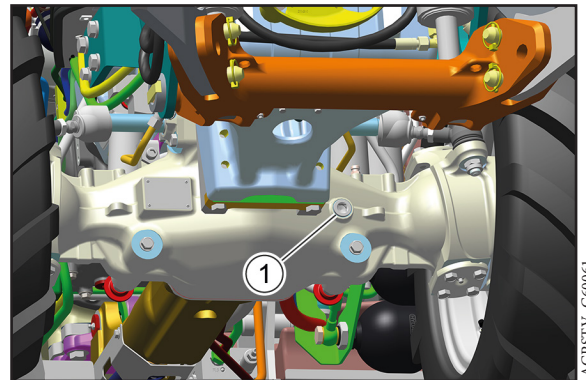
- Set vehicle on a flat horizontal surface.
- Slacken plug (1) and check oil level: under normal conditions it shall reach hole edge.
- Top up if necessary.
- Tighten plug (1).

AF_B - AV_LB - AF_L - AF_N - Models



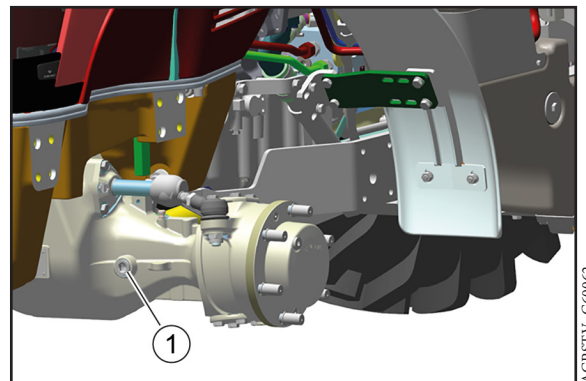
AGRSTV_C60060

Suspended front axle



AGRSTV_C60061

AV_N - AV_L Models

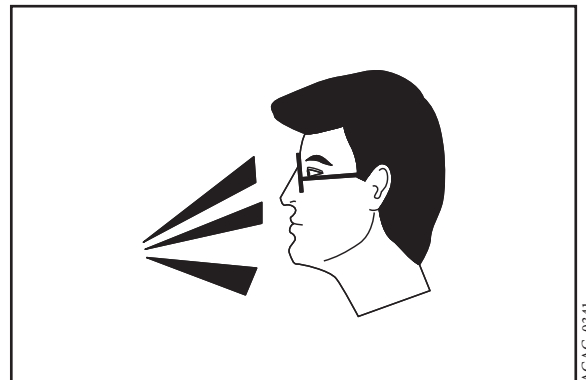


AGRSTV_C60062

6.7.4 CHECK OIL LEVEL IN THE FINAL DRIVE HOUSING



CAUTION: Use suitable personal protection equipment.



AGAC_0341

- Set vehicle on a flat horizontal surface.
- Set front axle with "OIL LEVEL" indication in horizontal.
- Slacken plug (1) and check oil level: under normal conditions it shall reach hole edge.
- Top up with proper oil if necessary, check lubricant table (chapter 8.1) in the manual.
- Tighten plug (1).



AGAC_0338

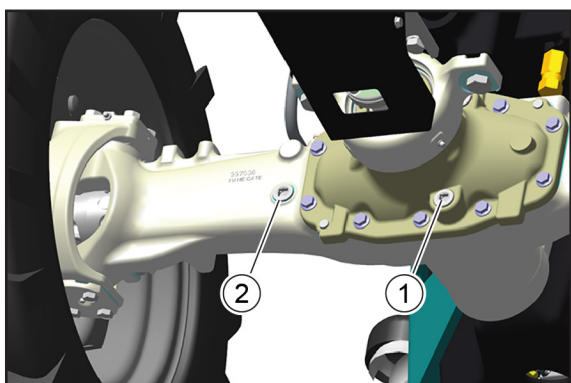
6.7.5 REPLACE OIL IN THE AXLE HOUSING



CAUTION: Use suitable personal protection equipment.

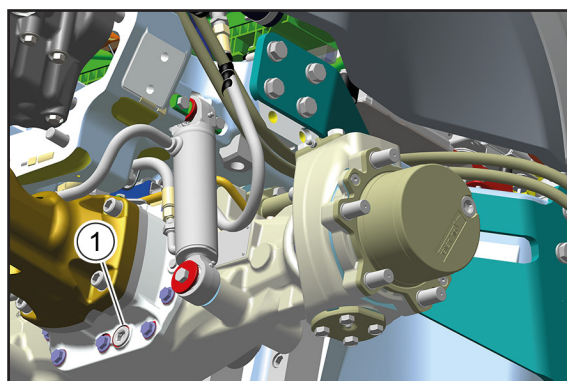
- Place a suitable container to collect the oil.
- Remove the drain hole plug (1) and the filler hole cap (2).
- Refit the drain hole plug (1).
- Fill the differential casing from the filler hole (2) with proper oil, check lubricant table (chapter 8.1) in the manual. The level should touch the edge of the hole.
- Refit and tighten the filler plug (2).

AF_B - AV_LB - AF_L - AF_N - Models

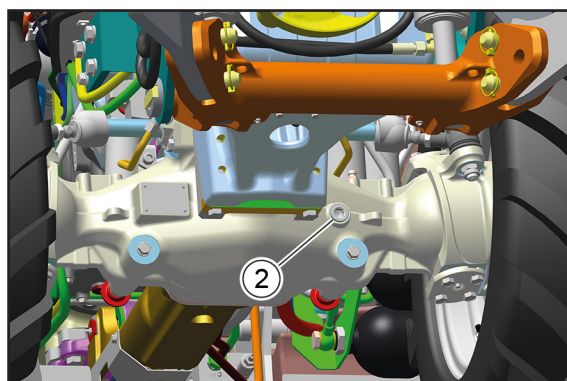


AGRSTV_C60063

Suspended front axle

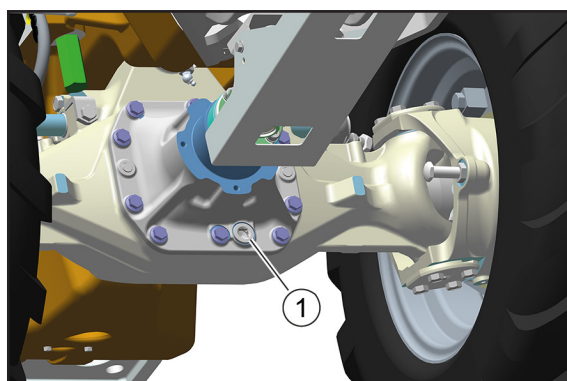


AGRSTV_C60064

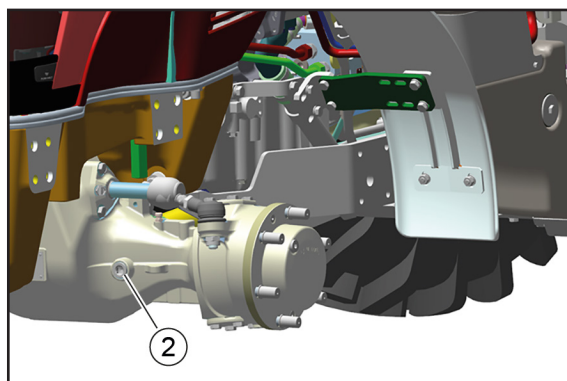


AGRSTV_C60065

AV_N - AV_L Models



AGRSTV_C60066

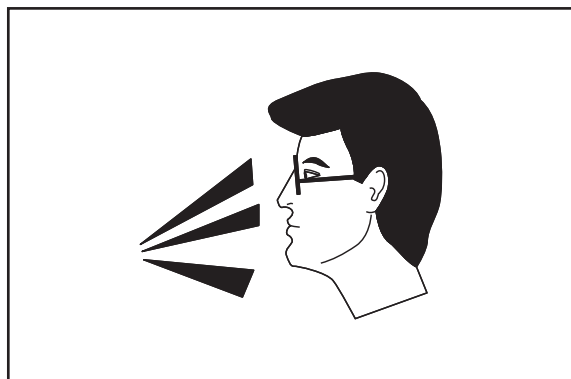


AGRSTV_C60067

6.7.6 REPLACE OIL IN THE FINAL DRIVE HOUSING



CAUTION: Use suitable personal protection equipment.



AGAC_0341

- Set vehicle on a flat horizontal surface.
- Turn wheel until drain plug (1) is at the bottom. Remove drain plug and drain oil into a suitable container.
- Set front axle with "OIL LEVEL" indication in horizontal.
- Fill with proper oil, check lubricant table (chapter 8.1) in the manual.
- Tighten plug (1).

IMPORTANT: Recheck oil level after 30 minutes. Add oil as needed.



AGAC_0338

6.7.7 CHECK HYDROSTATIC STEERING OPERATIONAL

This operation must be performed by an authorised service centre.

6.7.8 CHECK THE END PLAY OF KING PINS

This operation must be performed by an authorised service centre.

6.8 ELECTRICAL SYSTEM AND INSTRUMENTS MAINTENANCE

6.8.1 REMOVING THE BATTERY



CAUTION: Battery electrolyte contains sulphuric acid and can cause serious burns. The following good practices are therefore recommended.

- Wear leather heavy-duty gloves and protective clothes. In case of contact with the skin, wash with plenty of water.
- Batteries release flammable gases that can cause an explosion.
- DO NOT go near the battery with naked flames or cigarettes.
- In case of contact with the eyes, first flush with water, then seek medical help.
- Keep batteries well out of children's reach.
- NEVER dispose of batteries in general waste.
- Deliver and dispose of exhausted batteries only in suitable containers provided to this purpose at authorised centres, according to local rules.

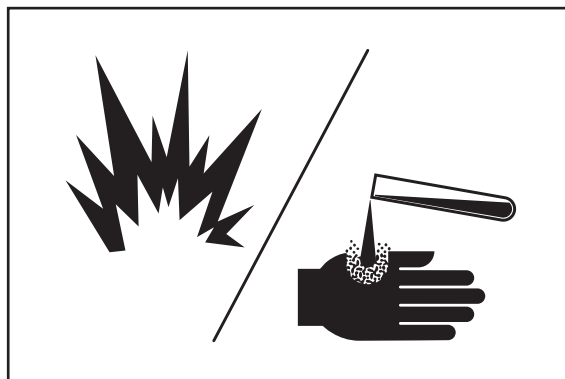


CAUTION: Connection layout could be different depending on battery manufacturer.

Always pay special attention to terminals polarity marked on battery.

To avoid creating sparks, connect the negative cable (ground) last and disconnect it first.

Keep all electrical protections in place. Pay utmost attention to the symbols present on the battery. To avoid creating sparks, connect the negative cable (ground) last and disconnect it first.

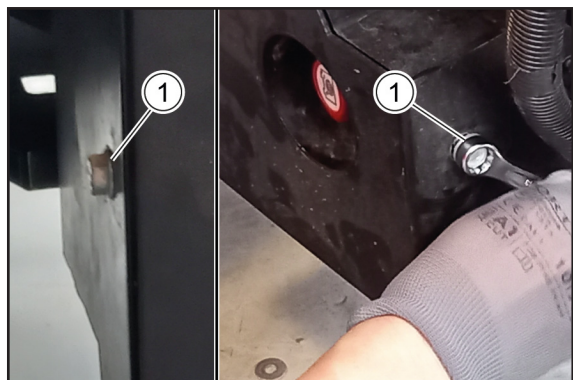


AGAC_0217

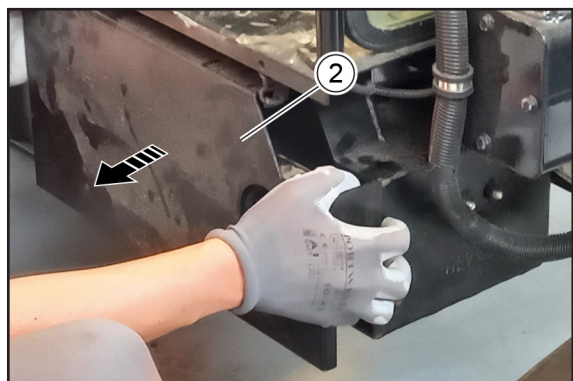
Procedure for 2.85 models

The battery is located on the right side of the tractor.

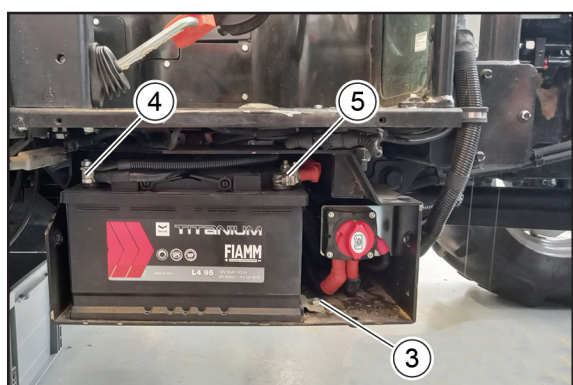
- Disconnect the battery.
- Remove the screws (1) on the left and right side.



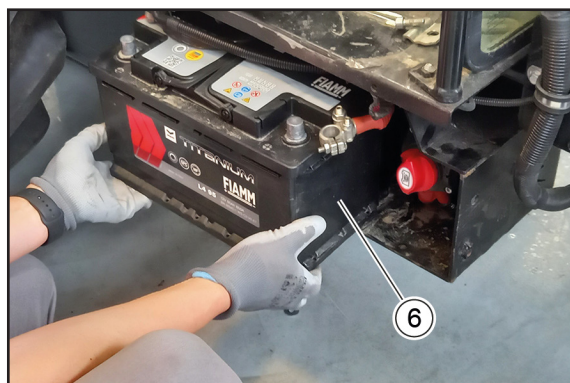
- Remove the cover (2).



- Remove the screw (3) and remove the bracket.
- Disconnect the battery negative pole (4).
- Disconnect the battery positive pole (5).



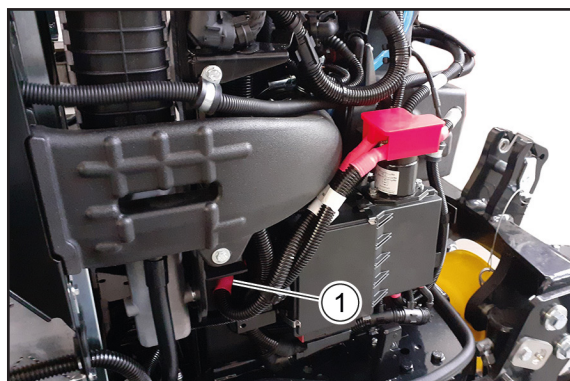
- Extract the battery (6). If necessary, change the battery and place it in its location.
- Carry out the removal steps in reverse order.



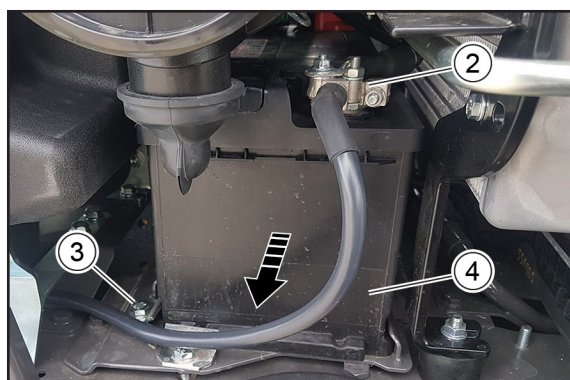
Procedure for 2.95 and 2.105 models

The battery is located on the left side of the tractor.

- Disconnect the battery.
- Disconnect the battery positive pole (1).



- Disconnect the battery negative pole (2).
- Remove the screw (3) and remove the locking plates.
- Extract the battery (4).



- If necessary, change the battery and place it in its location.
- Carry out the removal steps in reverse order.

6.8.2 REPLACING BULBS

When replacing a bulb, always comply with the following safety rules:



CAUTION: Always switch lights off before replacing any bulbs.



CAUTION: Allow for bulb to cool (burning hazard).



CAUTION: Wear protective goggles and gloves to change bulbs.



CAUTION: Bulb is made of glass and contains a gas under high pressure, so it might break into many fragments.



CAUTION: Do not use bulbs if dropped on the ground or showing scratches since.



CAUTION: Ensure the bulb is correctly engaged in its socket.



CAUTION: For any maintenance to be carried out at a height over 1.5 m, use suitable means for reaching required height.

IMPORTANT: Only use 12 V bulbs of the same type and wattage of the bulb to be replaced.

IMPORTANT: Never touch bulb glass surface; hold it at the base.

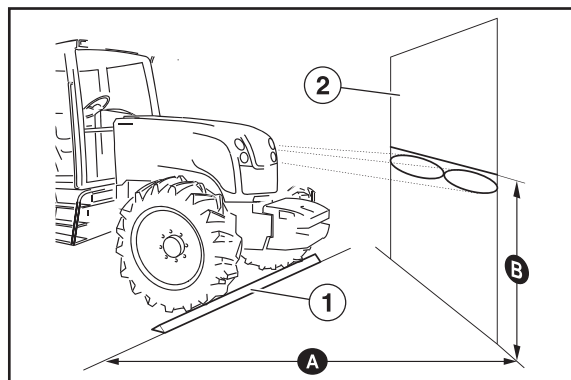
IMPORTANT: If tractor is equipped with halogen bulbs. Never touch a halogen bulb with bare hands since skin natural humidity makes bulb fail when turning it on. Always use a clean cloth or a paper tissue to handle halogen bulbs.

6.8.3 BEAMS ALIGNMENT



CAUTION: Before driving on public roads, check the correct beam alignment.

- Place a reference rod (1) on the ground parallel to the wall (2) at a distance (A).
- Set vehicle in front of wall, with front tyres against reference rod (1).
- Mark a horizontal line on the wall, at height (B), corresponding to maximum height of illuminated area.

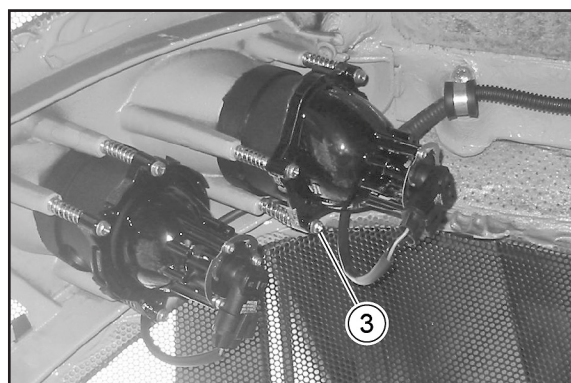


- Switch on the low beam and look at the illuminated area on the wall.

A: 1900 mm (74.80 in)

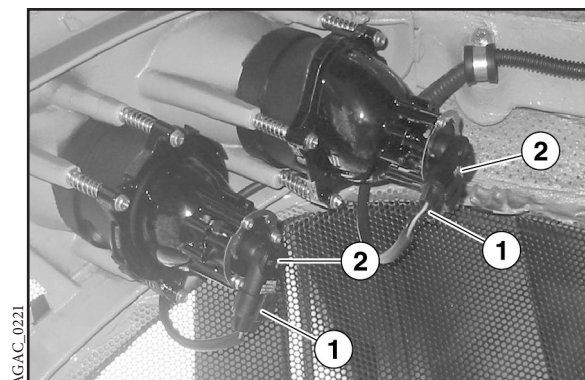
B: 1200 mm (47.24 in)

- Tighten the screw (3) to raise the illuminated area or loosen it to lower it. The illuminated area is correct when positioned just below of the limit (B) drawn on the wall.



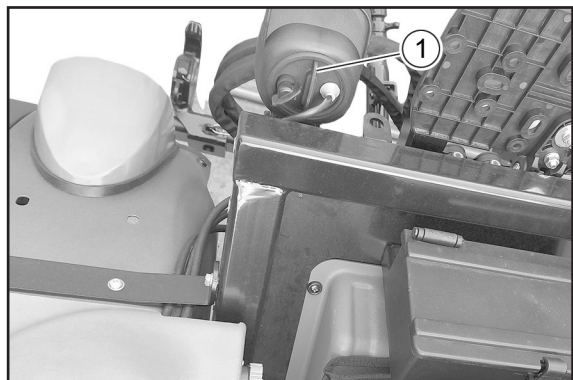
6.8.4 REPLACE THE HEADLIGHT BULBS

- Ignition off.
- Remove connector (1) from bulb.
- Turn and remove bulb (2)
- Install the new bulb and restore connection.



6.8.5 REPLACE THE REAR WORK LIGHT BULB, ROLL BAR VERSION

- Ignition off.
- Move the lever (1) to "OPEN" to be able to reach the bulb.
- Push bulb in place overcoming spring load. Turn bulb and remove it.
- Push new bulb in place, then turn it until it locks in place.
- Clean the lens and refit cover.
- Move the lever (1) to "CLOSE"



6.8.6 REPLACE THE WORK LIGHTS BULBS, CAB VERSION

- Ignition off.
- Remove the two glass retaining screws (1). Remove the glass.



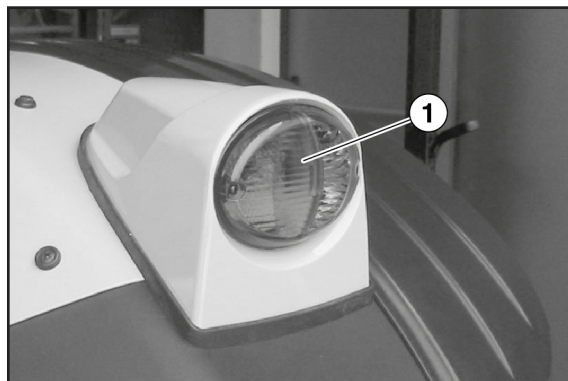
- Push bulb into socket overcoming spring load. Turn and pull to remove bulb.
- Push the new bulb into socket and turn until it locks in socket.
- Clean and install glass.



CAUTION: For any maintenance to be carried out at a height over 1.5 m, use suitable means for reaching required height.

6.8.7 REPLACE THE BULBS FOR REAR POSITION LIGHTS, TURN INDICATORS, STOP LIGHTS

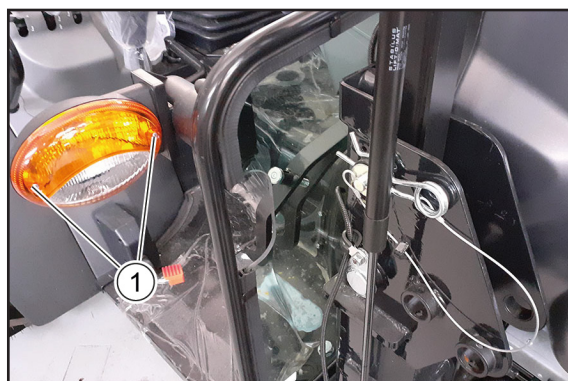
- Ignition off.
- Remove the two glass retaining screws. Remove glass (1).



- Push bulb into socket overcoming spring load. Turn and pull to remove bulb.
- Push the new bulb into socket and turn until it locks in socket.
- Clean and install glass (1).

6.8.8 REPLACE THE BULBS FOR POSITION LIGHTS/TURN INDICATORS

- Ignition off.
- Remove the two glass retaining screws(1). Remove glass.



- Push bulb into socket overcoming spring load. Turn and pull to remove bulb.
- Push the new bulb into socket and turn until it locks in socket.
- Clean and install glass.

6.8.9 CHECK THAT ALL LIGHTS

Check that the lights are operating correctly, especially before driving on public roads.

Comply with all legal regulations.

6.8.10 CLEAN AND GREASE THE BATTERY TERMINALS

IMPORTANT: Disconnect battery through the battery cut-off switch, before starting work.

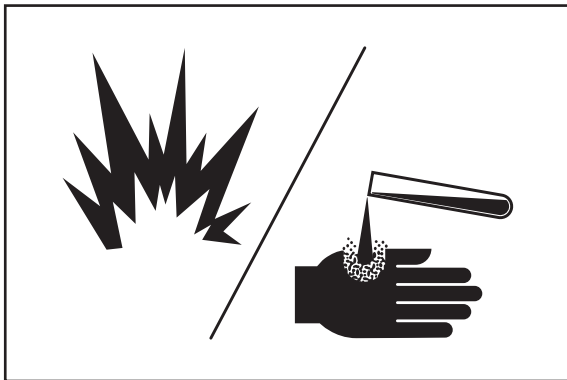


CAUTION: Battery electrolyte contains sulphuric acid and can cause serious burns. The following good practices are therefore recommended.

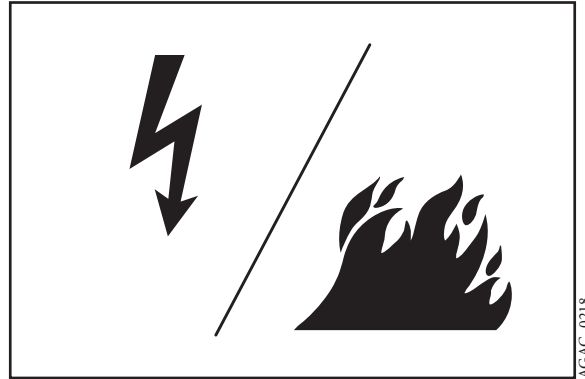
- Wear leather heavy-duty gloves and protective clothes. In case of contact with the skin, wash with plenty of water.
- Batteries release flammable gases that can cause an explosion.
- **DO NOT** go near the battery with naked flames or cigarettes.
- In case of contact with the eyes, first flush with water, then seek medical help.
- Keep batteries well out of children's reach.
- **NEVER** dispose of batteries in general waste.
- Deliver and dispose of exhausted batteries only in suitable containers provided to this purpose at authorised centres, according to local rules.



CAUTION: Connection layout could be different depending on battery manufacturer.



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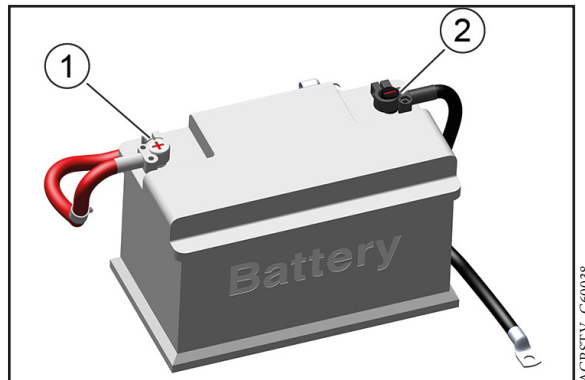


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Always pay special attention to terminals polarity marked on battery.

To avoid creating sparks, connect the negative cable (ground) last and disconnect it first.

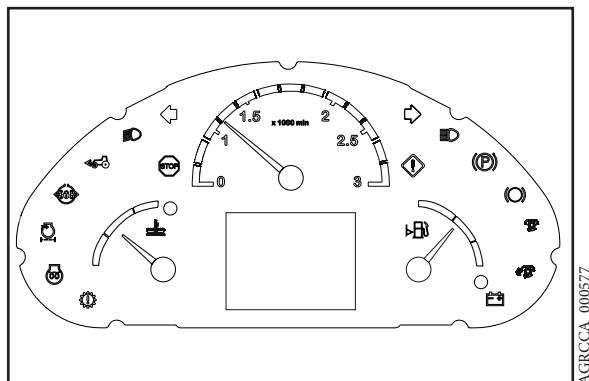
Clean and grease battery terminals (1) and (2).



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6.8.11 CHECK THE INSTRUMENT PANEL OPERATION (WARNING LIGHTS, ALARMS AND DIGITAL DISPLAYS)

Check that the instrument panel are operating correctly, especially before driving on public roads.



6.8.12 CHECK THAT THE DRY AIR FILTER CLOGGED WARNING LIGHT IS OPERATING

Check that the dry air filter clogging warning light is operating correctly.

6.8.13 CHECK THE LIGHTS AND LIGHTING INDICATORS

Check that lights and lighting indicators are operating correctly.

6.8.14 CHECK NEUTRAL START CIRCUIT

Check neutral start circuit is operating correctly.

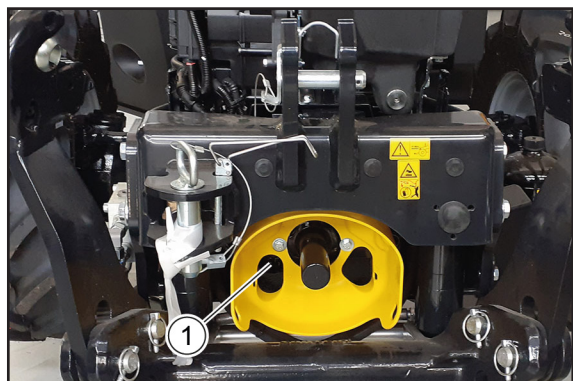
6.9 IMPLEMENTS MAINTENANCE

6.9.1 FRONT PTO - CHECK OIL LEVEL



CAUTION: Wear protective gloves.

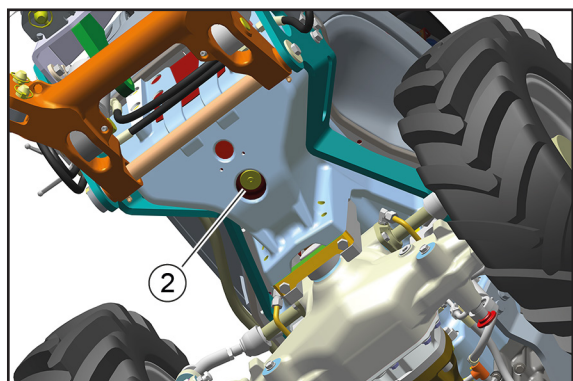
- Unscrew the cap (1) and check the oil level which in normal conditions must reach the edge of the hole.



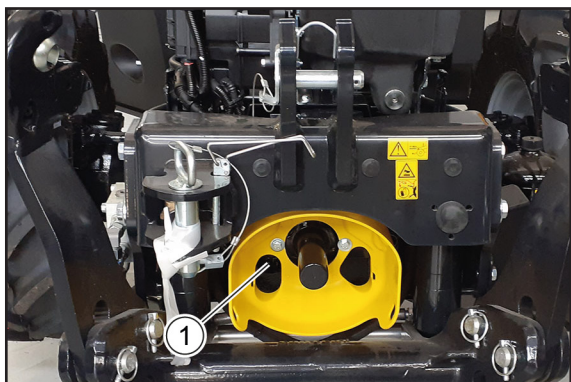
- Top up if necessary.
- Retighten the plug (1).
- Check the oil level regularly.
- Respect the specifications in terms of the oil grade.

6.9.2 FRONT PTO - REPLACE OIL AND REPLACE OIL FILTER

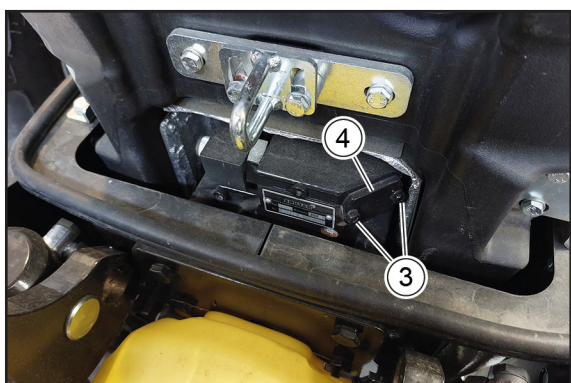
- Place the tractor on a flat, horizontal surface.
- Apply the parking brake and stop the engine.
- Remove key from the key switch.
- Lift the hood.
- Place a suitable container under the drain plug (2).



- Unscrew the cap (1).

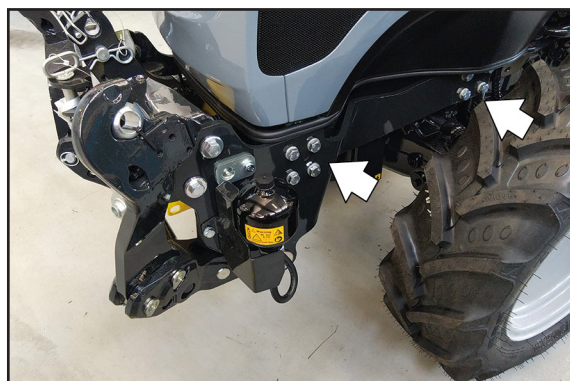


- Once all the oil has drained out, reinstall the plug (2).
- Unscrew the screws (3) and remove cover (4).



- Pull out and replace the oil filter.
- Replace the O-ring.
- Fit the cover (3) complete with O-ring.
- Introduce the new oil into the PTO through the hole in the cap (1). For quantity and type of oil see chapter 8.1 Lubricant table.
- Screw the closure cap (1).
- Start the engine and let it run for a few minutes.
- Stop the engine.
- Unscrew the cap (1) and check the oil level which in normal conditions must reach the edge of the hole. Top up if necessary.

6.9.3 FRONT HITCH - CHECK TORQUE ON ATTACHING SCREW OF MOUNTING FRAME

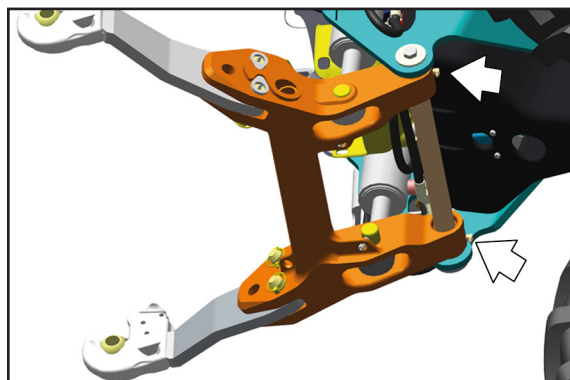
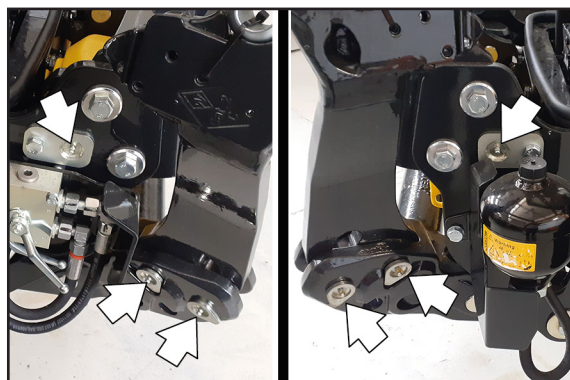


Check the tightness of the screws from front hitch to mounting frame (on both side).

6.9.4 FRONT HITCH - LUBRICATE ALL GREASE FITTINGS

NOTE: Before lubricating any parts provided with grease nipples carefully clean the nipples surfaces and be sure that their seal ball moves freely. After the lubrication, remove any trace of grease to avoid it to collect dirt or dust.

On tractors equipped with the front hitch, apply multi-purpose grease to greasing points indicated. Apply several shots of multi-purpose grease to all other pins.

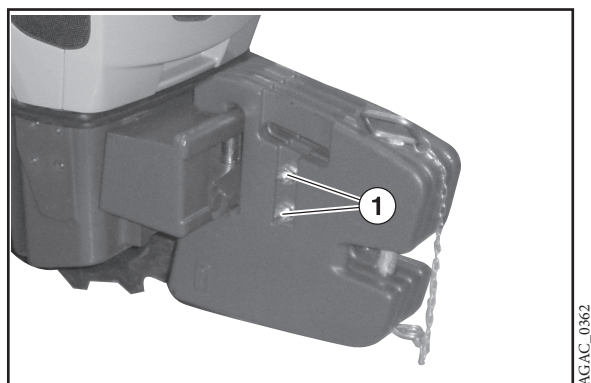


6.9.5 CHECK HYDRAULIC CIRCUIT ACCUMULATOR

This operation must be performed by an authorised service centre.

6.9.6 CHECK THE TIGHTNESS OF THE FRONT WEIGHTS

Check front ballasts bolts (1) tightening.



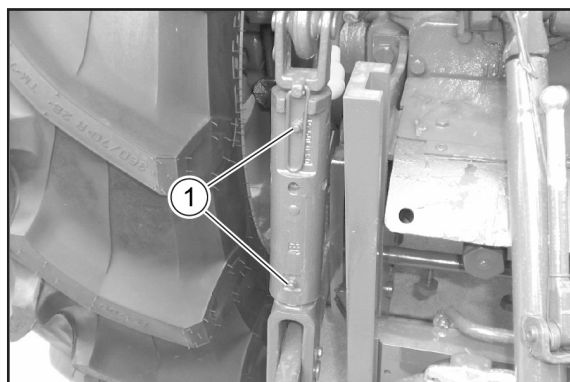
6.10 GENERAL MAINTENANCE

6.10.1 THREE-POINT HITCH - LUBRICATE LIFT LINKS AND ROCKSHAFT

6.10.2 THREE-POINT HITCH - LUBRICATE ALL GREASE FITTINGS

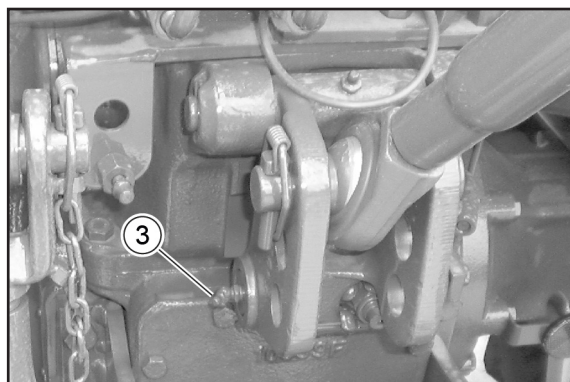
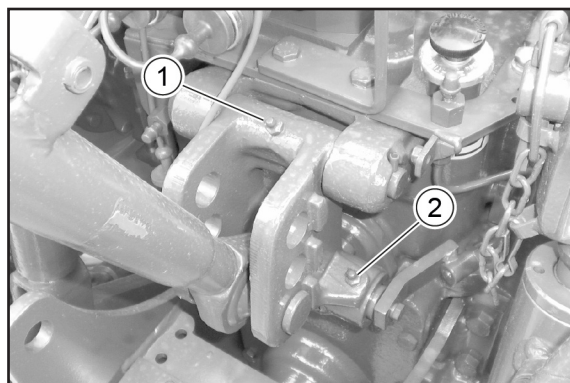
Rear vertical tie rods

Clean grease nipples (1) and lubricate.



Lift third-point hitch joint

Clean grease nipples (1), (2) and (3) and lubricate.



6.10.3 TRAILER HITCH - LUBRICATE ALL GREASE FITTINGS

6.10.4 TRAILER HITCH - CHECK THE TIGHTENING TORQUE OF THE FIXING SCREWS

This operation must be performed by an authorised service centre

6.10.5 DRAWBAR - CHECK THE TIGHTENING TORQUE OF THE FIXING SCREWS

This operation must be performed by an authorised service centre.

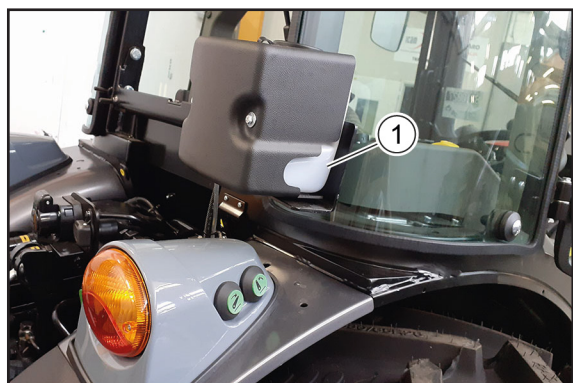
6.10.6 COMPONENTS OF DRAWBAR AND TRAILER HITCHES - CHECK ALL COMPONENTS FOR WEAR, CHECK ALL COMPONENTS FUNCTION PROPERLY

6.10.7 CHECK TORQUE OF MOUNTING BOLTS AND NUTS OF CAB & ROPS

This operation must be performed by an authorised service centre.

6.10.8 CHECK WASHER TANK FLUID LEVEL

Check the level of the washer fluid in the tank (1) located on the rear right side of the cab. Top up if necessary.



6.10.9 WHEELS - CHECK TORQUE OF WHEEL AND RIM BOLTS

This operation must be performed by an authorised service centre.

6.10.10 WHEELS - CHECK TYRE INFLATION PRESSURE

Tyres life and performance depend on the correct inflation pressure. Insufficient pressure leads to tyre early wear. Excessive pressure impairs grip and increases wheel skidding. Correct tyre pressure not only depends on work conditions and load, but even on tractor model and tyre size and brand. It is then recommended to ask advice to dealer or tyre manufacturer.

Check tyre pressure every 100 hours. Important: To obtain good results when working in the field, where maximum grip is required, tyre inflation pressure could be reduced up to 0.8 bar (11 psi) maximum. Please note that in this case loading capacity is greatly reduced. Inflation pressure of front and rear tyres shall always comply the values indicated in the specification chart. These values could be reduced proportionally up to allowed limits where this is required in order to ensure correct mechanical matching of front and rear wheels.



CAUTION: Do not stay next to tyre while inflating it. Explosion hazard.

- Inflate tyres at the pressure specified by the manufacturer
- Regularly check tyre pressure
- Check tyre wear conditions (sides and tread)
- Have maintenance and repair be carried out by authorised staff only.



Warning: The following events could lead to serious injury or even death:

Blowing up of tyre, rim and wheel in general is due to wrong assembly – never exceed installation pressure specified by the tyre manufacturer when settling tyre beads on rim. Overpressure could cause bead breakage or rim failure, creating a dangerous explosive power.

Always use the safety cage or other device and the clip-on extension hose. Tyres shall be assembled by qualified staff only.

Tyre damaged due to wrong assembly or inflation, overload or over-speed. Follow the instructions of the tyre manufacturer. Check inflation pressure quite often, using the suitable gauge.

Explosion of tyre/rim/wheel assembly caused by rim welding done without removing the tyre. Do not service, weld, heat or braze tyre/rim/wheel assembly



Warning: Tyre change could be dangerous and shall only be carried out by qualified staff, using suitable tools and procedures. Always carefully read the manufacturer's warnings specified in the customer literature or applied to tyre sidewall. Failure to comply with the described procedures could lead to tyre and/or rim parts wrong positioning causing the assembly to burst with deflagration sufficient to cause serious injury or even death. Do not use or install damaged tyres or rims.

6.10.11 INSPECT SEAT BELT FOR DAMAGE AND ENSURE PROPER WORKING ORDER

Replace entire seat belt if mounting hardware, buckle, belt, or retractor show signs of damage.

Inspect seat belt and make sure there are no signs of damage such as cuts, fraying, extreme or unusual wear, discolouration, or abrasion. Replace the belt system only with replacement parts approved for your machine.

The replace operation must be done by an authorised service centre.

6.10.12 CLEAN THE A/C CONDENSER

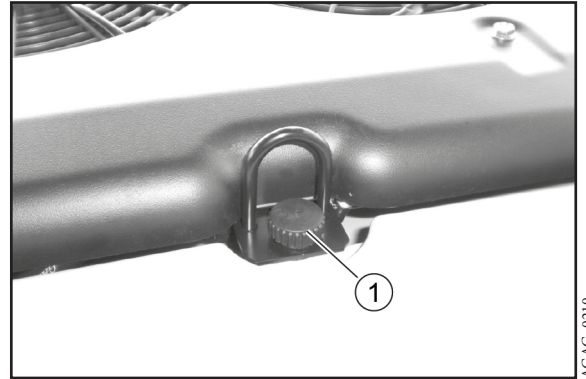


CAUTION: For any maintenance to be carried out at a height over 1.5 m, use suitable means for reaching required height.

The air conditioning system condenser is located inside the roof.

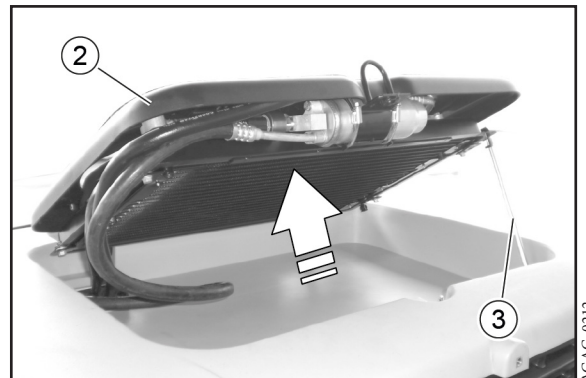
Gain access to it as follows:

- Slacken knob (1).



AGAC_0210

- Open cover (2) and keep it open using rod (3).
- Clean condenser and eliminate all foreign matter.
- Reposition cover (2) and tighten knob (1).



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6.10.13 REPLACE THE A/C BELT

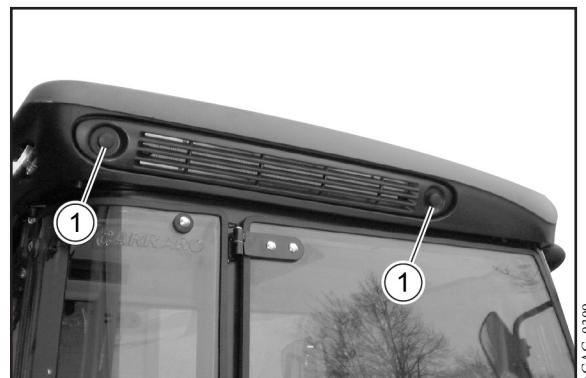
The operation must be done by an authorised service centre.

6.10.14 CLEAN THE CAB MAIN AIR FILTER



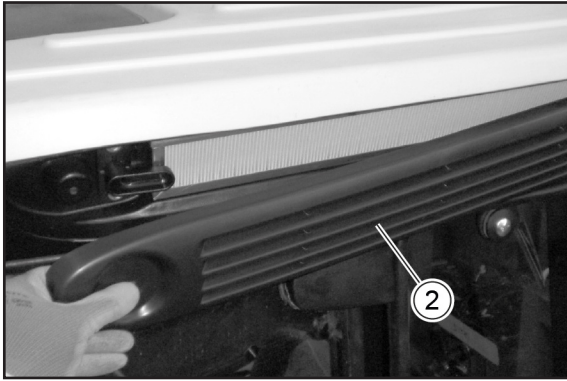
CAUTION: For any maintenance to be carried out at a height over 1.5 m, use suitable means for reaching required height.

- Remove knobs (1) to reach the cab air filters.



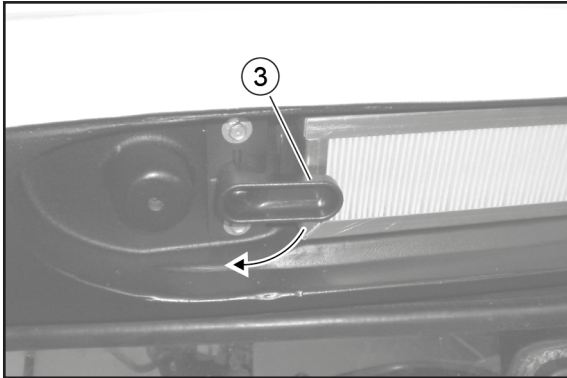
AGAC_0309

- Remove cover (2) on either side of cab roof.

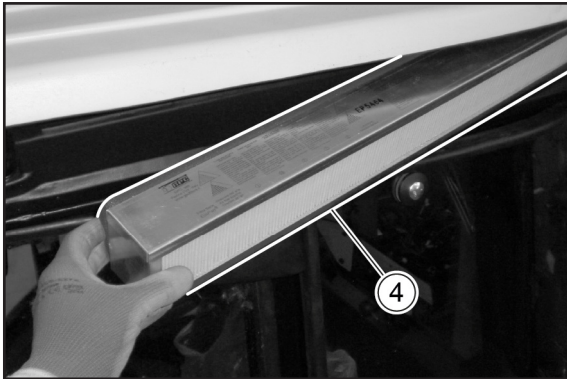


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- Turn lever (3) and take out filter elements (4).



AGAC_0311



AGAC_0312

- Blow filters clean.
- Before refitting them, wipe their housing with a damp cloth to remove any dust.



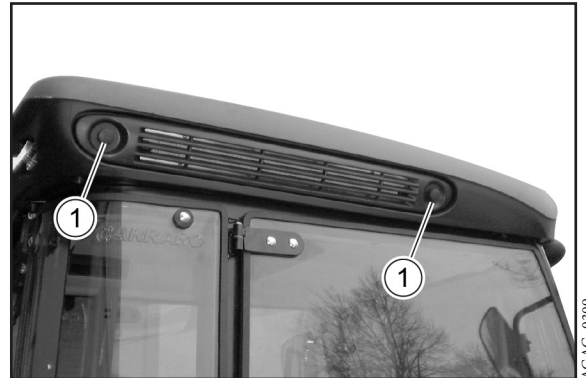
CAUTION: Cab air filters do not protect against breathing harmful pesticides and contact of this. During maintenance, wear appropriate gloves and respiratory protection inside the cab.

6.10.15 REPLACE THE CAB MAIN AIR FILTER



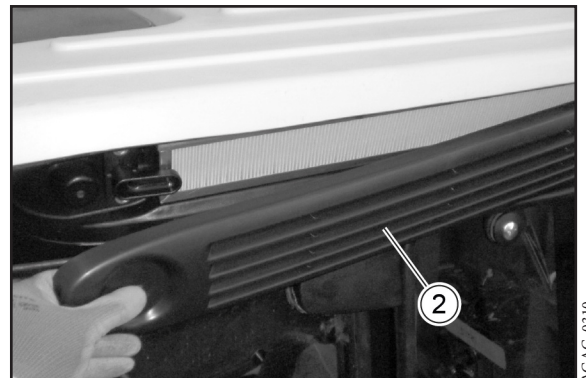
CAUTION: For any maintenance to be carried out at a height over 1.5 m, use suitable means for reaching required height.

- Remove knobs (1) to reach the cab air filters.



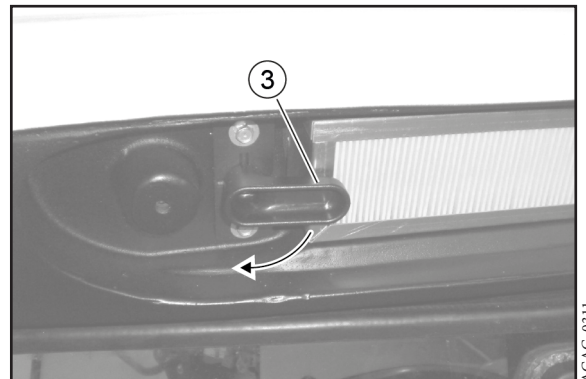
AGAC_0309

- Remove cover (2) on either side of cab roof.

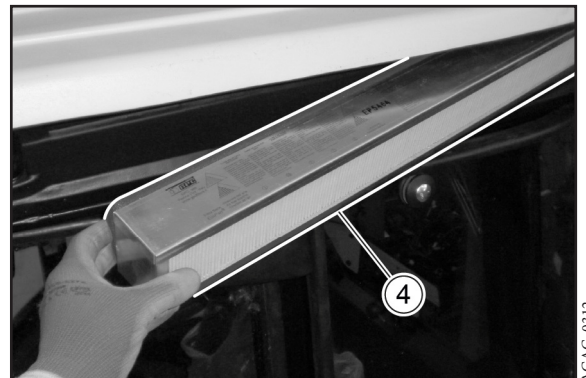


AGAC_0310

- Turn lever (3) and take out filter elements (4).



AGAC_0311



AGAC_0312

- Take out the filters and replace theirs.

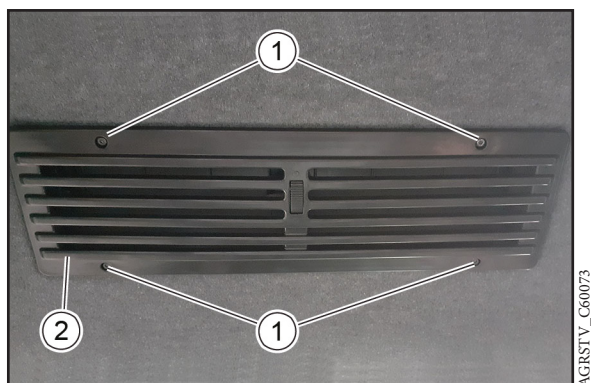
- Before refitting them, wipe their housing with a damp cloth to remove any dust.
- Reassemble the assembly in the reverse order of disassembly, respecting the orientation of the pieces.



CAUTION: Cab air filters do not protect against breathing harmful pesticides and contact of this. During maintenance, wear appropriate gloves and respiratory protection inside the cab.

6.10.16 CLEAN AND REPLACE THE RECIRCULATION AIR FILTER

- Unscrew the nut (1) and remove the cover (2).
- Inspect the air filter element, clean it or replace it as necessary.



6.10.17 ACTIVATE THE AIR CONDITIONING (AT LEAST FOR 20 MINUTES)

Activate the air conditioning system, if it is never used, periodically at least 20 minutes.





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7.1 TECHNICAL DATA

7.1.1 ENGINE

Model	2.85	2.95	2.105
Engine name	F6BFL413A*V003		F6BGL413A*V005
Displacement	2797 cm ³		
Bore	90.8 mm (3 5/16 in)		
Stroke	108 mm (4 1/4 in)		
Number of cylinder	4		
Maximum power ISO	55 kW 75 cv	67.4 kW 92 cv	75.6 kW 103 cv
Nominal rpm speed	2300	2300	2300
Maximum torque speed	1400	1500	1500
Maximum torque	358 Nm @ 1500 rpm	382 Nm @ 1500 rpm	416 Nm@1600 rpm
Type of clutch Only mechanical clutch	12" - independent, dry		

7.1.2 ELECTRICAL SYSTEM

Model	2.85	2.95	2.105
Battery	12V - 100 Ah		
Alternator	100 A - 14V		
Starter motor	3.2 kW		

7.1.3 TRANSMISSION

Number of gears (forward/reverse)	24 + 24
Type	Mechanical
Reverser	Syncho
Doubler (HI-LO)	Syncho
Number of gears	4
Number of ranges	3
Tractor speed	40 kph (24.85 mph)
Number of gears (forward/reverse)	24 + 12
Type	Electro-hydraulic
Reverser	Power
Doubler (HI-LO)	Power
Number of gears	4
Number of ranges	3
Maximum tractor speed	40 kph (24.85 mph)

7.1.4 BRAKES

Control	Built-in mechanics and hydraulics
Brakes configuration	Wet disc

7.1.5 DIFFERENTIAL LOCK

Type	Mechanical, with shaft
Engagement	Hydraulic

7.1.6 REAR AXLE

Model	AV_N	AV_L	AV_LB	AF_B	AF_N	AF_L
Type	Epicyclic					
Ratio	6:1					
Flange gap	892 mm (35 1/8 in)	972 mm (38 1/4 in)	972 mm (38 1/4 in)	1242 mm (48 7/8 in)	1242 mm (48 7/8 in)	1540 mm (60 5/8 in)
Diameter of implantation of wheel bolts	203 mm / (8 in)					
Wheel disc centring diameter	152 mm / (6 in)					
Number of wheel bolts	8 (each side)					
Wheel bolts type	M18 x 1.5					
Maximum loading capacity on rear axle ^{(1) (2)}						
- Roll bar models	-	-	2500 kg (5512 lb)	2500 kg (5512 lb)	3100 kg (6834 lb)	3100 kg (6834 lb)
- Cab models	3000 kg (6614 lb)	3100 kg (6834 lb)	-	-	3100 kg (6834 lb)	3100 kg (6834 lb)

(1) Consider the tyres loading capacity.

(2) Comply with local regulations. Values specified in the chart could be limited by the road regulations of every country.

7.1.7 POWER TAKE OFF (PTO)

Standard Power Take Off speed	540 1/min	540E 1/min	1000 1/min
Engine speed	1938 1/min	1648 1/min	1962 1/min
PTO end fitting diameter	1"3/8		
Number of splines	6		
Direction of rotation	Clockwise		
Gear ratio: Engine speed / PTO rpm	3.588	3.054	1.961

7.1.8 GROUND SPEED POWER TAKE OFF

Standard Power Take Off speed	540 1/min	540E 1/min	1000 1/min
Number of PTO turns for one rotation of a wheel (40 Kmh / 24.85 mph)	9.077	10.670	16.605

7.1.9 RIGID FRONT AXLE

Model	AV_N	AV_L	AV_LB	AF_B	AF_N	AF_L
Maximum steering angle	50°	54°	52°	52*	52°	55°
Rake	6°	6°	7°	7°	7°	8°
Differential type	Limited slip					
Flange gap	925 mm (36 7/16 in)	990 mm (39 in)	1155 mm (45 15/32 in)	1325 mm (52 5/32 in)	1326 mm (52 3/16 in)	1460 mm (57 15/32 in)

(1) Consider the tyres loading capacity.

(2) Comply with local regulations. Values specified in the chart could be limited by the road regulations of every country.

Model	AV_N	AV_L	AV_LB	AF_B	AF_N	AF_L
4WD Engagement	Electro-hydraulic					
Differential locking	Self-locking					
Number of wheel bolts	6	6	6	8	8	8
Wheel bolts type	M18					
Wheel disc centring diameter	162 mm (6 3/8 in)	162 mm (6 3/8 in)	162 mm (6 3/8 in)	221 mm (8 11/16 in)	221 mm (8 11/16 in)	221 mm (8 11/16 in)
Diameter of implantation of wheel bolts	205 mm (8 1/16 in)	205 mm (8 1/16 in)	205 mm (8 1/16 in)	275 mm (10 13/16 in)	275 mm (10 13/16 in)	275 mm (10 13/16 in)
Maximum loading capacity on front axle (1) (2)	2000 kg (4409 lb)	2000 kg (4409 lb)	2000 kg (4409 lb)	2200 kg (4850 lb)	2200 kg (4850 lb)	2200 kg (4850 lb)

(1) Consider the tyres loading capacity.
(2) Comply with local regulations. Values specified in the chart could be limited by the road regulations of every country.

7.1.10 SUSPENDED FRONT AXLE

Model	AV_N	AV_L	AF_N
Type	20.09S	20.09S	20.16S
Maximum steering angle	43° - 55°	30° - 51°	44° - 55°
Rake	6°	8°	9°
Turning Radius (max. track width)	(6.5 R16) 3370 mm (132 11/16 in)	(280/70 R18) 3720 mm (146 7/16 in)	(320/70 R20) 3560 mm (140 3/16 in)
Flange gap	925 mm (36 7/16 in)	990 mm (39 in)	1325 mm (52 3/16 in)
Suspension stroke	+ / - 40 mm + / - (1 9/16 in)		
Differential locking	Self-locking		
Number of wheel bolts	6	6	8
Wheel bolts type	M18		
Wheel disc centring diameter	162 mm (6 3/8 in)	162 mm (6 3/8 in)	221 mm (8 11/16 in)
Diameter of implantation of wheel bolts	205 mm (8 1/16 in)	205 mm (8 1/16 in)	275 mm (10 13/16 in)
Min loading capacity on front axle for suspension setting (1) (2)	980 kg (2160 lb)	1085 kg (2392 lb)	1120 kg (2469 lb)
Maximum loading capacity on front axle with F/F track width at 4 km/h (1) (2)	4060 kg (8951 lb)	4000 kg (8818 lb)	3970 kg (8752 lb)

(1) Consider the tyres loading capacity.
(2) Comply with local regulations, values specified in the chart could be limited by the road regulations of every country.

7.1.11 NOISE LEVEL

Model		2.85	2.95	2.105
<i>Maximum pass-by noise. Measurement method in accordance with regulation (EU) 2018/985 Annex II</i>				
Moving @2390 1/min	Roll bar (horizontal pipe)	77 dB(A)	78 dB(A)	78 dB(A)
	Cab (vertical pipe)	77 dB(A)	78 dB(A)	78 dB(A)
	Cab (horizontal pipe)	77 dB(A)	79 dB(A)	79 dB(A)
Stationary @2390 1/min	Roll bar (horizontal pipe)	77 dB(A)	75 dB(A)	76 dB(A)
	Cab (vertical pipe)	78 dB(A)	77 dB(A)	77 dB(A)
	Cab (horizontal pipe)	80 dB(A)	77 dB(A)	77 dB(A)
<i>Sound level at operator's ear. Measurement method in accordance with Regulation (EU) 1322/2014 Annex 13 Amendment R(EU) 2018/830</i>				
Roll bar (horizontal pipe)	-	84 dB(A)	82 dB(A)	82 dB(A)
Cab (vertical pipe) @2390 1/min	All openings closed	77 dB(A)	75 dB(A)	75 dB(A)
	Rear window open	76 dB(A)	75 dB(A)	75 dB(A)
Cab (horizontal pipe) @2390 1/min	All openings closed	78 dB(A)	76 dB(A)	76 dB(A)
	Rear window open	79 dB(A)	76 dB(A)	76 dB(A)

7.1.12 HYDRAULIC SYSTEM

Model	2.85	2.95	2.105
Hydraulic pump Auxiliary spool valves / Rear lift			
Maximum displacement	25 cm³	25 cm³	25 cm³
Capacity	66.8 l/min		
Hydraulic pump Steering / Transmission			
Maximum displacement	11 cm³	11 cm³	11 cm³
Capacity	29.8 l/min		
Hydraulic pump for rear lift - OPTIONAL			
Maximum displacement	11 cm³		
Capacity	29.8 l/min		

7.1.13 MAXIMUM PERMISSIBLE LADEN WEIGHT

Model	AV_N	AV_L	AV_LB	AF_B	AF_N	AF_L
Total permissible laden weight	4100 kg (9039 lb)	4400 kg (9700 lb)	4200 kg (9259 lb)	4200 kg (9259 lb)	4400 kg (9700 lb)	4400 kg (9700 lb)
Gross vehicle weight on the front axle	2000 kg (4409 lb)	2200 kg (4850 lb)	2000 kg (4409 lb)	2000 kg (4409 lb)	2200 kg (4850 lb)	2200 kg (4850 lb)
Gross vehicle weight on the rear axle	3000 kg (6613 lb)	3100 kg (6834 lb)	2500 kg (5512 lb)	2500 kg (5512 lb)	3100 kg (6834 lb)	3100 kg (6834 lb)

Take account of tyre loading capabilities.

Comply with local regulations. The values specified in this table may be limited by the highway code in each country.

7.1.14 LADEN WEIGHTS

Roll bar models

Model	AV_LB	AF_B	AF_N	AF_L
Total weight	2780-3015 kg (6129-6647 lb)	2840-3075 kg (6261-6779 lb)	2885-3120 kg (6360-6878 lb)	2975-3210 kg (6559-7077 lb)
Front weight	1235 - 1515 kg (2723-3340 lb)	1275-1555 kg (2811-3428 lb)	1275-1555 kg (2811-3428 lb)	1335-1615 kg (2943-3560 lb)
Rear weight	1545-1500 kg	1565-1520 kg	1610-1565 kg	1640-1595 kg

Weight without ballasting. Without weight carriers / 65 kg. Without removable weights. Without driver.

Cab Models

Model	AV_N	AV_L	AF_N	AF_L
Total weight	3080-3315 kg (6790-7308 lb)	3140-3375 kg (6923-7441 lb)	3250-3485 kg (7165-7683 lb)	3340-3575 kg (7363-7882 lb)
Front weight	1275-1555 kg (2811-3428 lb)	1305-1585 kg (2877-3494 lb)	1365-1645 kg (3009-3627 lb)	1425-1705 kg (3142-3759 lb)
Rear weight	1805-1760 kg (3979-3880 lb)	1835-1790 kg (4045-3946 lb)	1885-1840 kg (4156-4057 lb)	1915-1870 kg (4222-4123 lb)

Weight without ballasting. Without weight carriers / 65 kg. Without removable weights. Without driver.

7.1.15 MAXIMUM TOWABLE WEIGHT

Depending on how the towed weight is braked, the following weights are permitted

Model	AV_N	AV_L	AV_LB	AF_B	AF_N	AF_L
Trailer brake system	Tractor maximum towable weight					
Unbraked (Roll bar)			2000 kg (4409 lb)			
Unbraked (Cab)			1800 kg (3968 lb)			
Overrun brake			8000 kg (17636 lb)			
Hydraulic brake (Roll bar)	-	-	16700 kg (36817 lb)	16700 kg (36817 lb)	18000 kg (39683 lb)	18000 kg (39683 lb)
Hydraulic brake (Cab)	18000 kg (39683 lb)	19000 kg (41888 lb)	-	-	20000 kg (44092 lb)	20000 kg (44092 lb)

There may be legal limits in force that restrict weights and/or travel speeds to figures lower than those quoted here.

7.1.16 LOAD CAPACITY

Roll bar models

Front tire	Load index	Speed index	Load capacity (kg)	Load capacity (lb)	Models
10.0/75-15,3	106	A8	1900	4189	AF_N
180/95 R16	105	A8	1850	4079	AV_LB
240/70 R16	104	A8	1800	3968	AF_B / AV_LB
250/80 R16	119	G	3500	7716	AF_N / AF_L
250/80-16	113	A8	2300	5071	AF_N
260/70 R16	109	A8	2060	4542	AF_B / AV_LB
280/70 R16	112	A8	2240	4938	AF_N / AF_L / AF_B / AV_LB
280/70 R18	114	A8	2360	5203	AF_N / AF_L / AF_B / AV_LB
280/70 R20	116	A8	2500	5512	AF_N / AF_L
280/85 R20	112	A8	2240	4938	AF_L
300/70 R20	110	A8	2120	4674	AF_N / AF_L
320/65 R18	109	A8	2060	4542	AF_L
320/70 R20	113	A8	2300	5071	AF_N / AF_L
340/80 R18	138	D	5450	12015	AF_N / AF_L
400/60-15,5	126	A8	3740	8245	AF_N
420/65 R20	128	A8	3600	7937	AF_L
500/55-17	138	A8	5240	11552	AF_N / AF_L
7.50 R16	100	A8	1600	3527	AF_N
7.50 R20	104	A8	1800	3968	AF_N
9.5 R20	108	A8	2000	4409	AF_N / AF_L

Rear tire	Load index	Speed index	Load capacity (kg)	Load capacity (lb)	Models
270/95 R32	136	A8	4480	9877	AF_N
280/85 R24	115	A8	2430	5357	AV_LB
320/85 R28	124	A8	3200	7055	AF_N / AF_L
340/85 R28	127	A8	3500	7716	AF_N
360/70 R20	120	A8	2800	6173	AF_B / AV_LB
360/70 R24	122	A8	3000	6614	AF_N / AF_L / AF_B / AV_LB
360/80 R24	138	D	5450	12015	AF_N / AF_L
380/70 R20	122	A8	3000	6614	AF_B / AV_LB
380/70 R24	125	A8	3300	7275	AF_N / AF_L / AF_B / AV_LB
380/70 R28	127	A8	3500	7716	AF_N / AF_L
380/85 R28	133	A8	4120	9083	AF_N / AF_L
400/80 R28	146	D	6900	15212	AF_N / AF_L
420/70 R24	130	A8	3800	8378	AF_N / AF_L

<i>Rear tire</i>	<i>Load index</i>	<i>Speed index</i>	<i>Load capacity (kg)</i>	<i>Load capacity (lb)</i>	<i>Models</i>
420/70 R28	133	A8	4120	9083	AF_N / AF_L
440/65 R20	141	A8	5150	11354	AF_B
440/65 R24	131	A8	3900	8598	AF_B / AV_LB
440/65 R24	138	A8	3900	8598	AF_L
480/65 R24	136	A8	4480	9877	AF_N
480/65 R28	139	A8	4860	10714	AF_N / AF_L
480/70 R24	138	A8	4720	10406	AF_L
550/60-22,5	140	A8	5510	12147	AF_N
600/55-22,5	144	A8	6170	13603	AF_N
600/55-26,5	153	A8	8040	17725	AF_N / AF_L
VF420/70 R28	145	A8	5800	12787	AF_L
VF480/65 R28	148	A8	6300	13889	AF_L

Cab Models

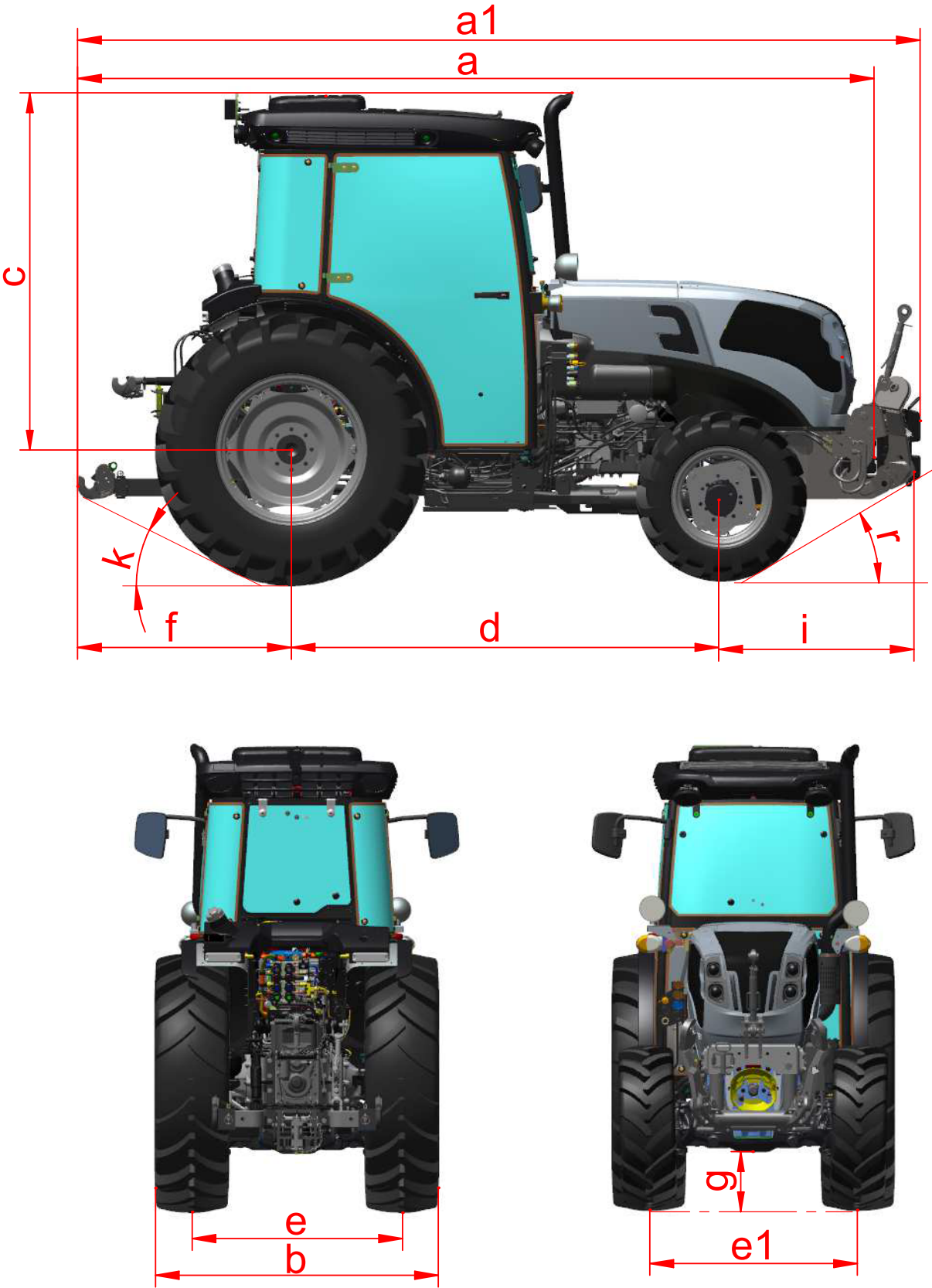
<i>Front Tire</i>	<i>Load index</i>	<i>Speed index</i>	<i>Load capacity (kg)</i>	<i>Load capacity (lb)</i>	<i>Models</i>
10.0/75-15,3	106	A8	1900	4189	AV_N / AF_N
180/95 R16	105	A8	1850	4079	AV_N / AV_L
200/70 R16	94	A8	1340	2954	AV_L
240/70 R16	104	A8	1800	3968	AV_N
240/70 R16	104	A8	2360	5203	AV_L
250/80 R16	119	G	3500	7716	AF_N / AF_L
250/80-16	113	A8	2300	5071	AF_N
260/70 R16	109	A8	2060	4542	AV_N / AV_L
280/70 R16	109	A8	2060	4542	AV_L
280/70 R16	112	A8	2240	4938	AV_N / AF_N / AF_L
280/70 R16	112	A8	2360	5203	AV_L
280/70 R18	114	A8	2360	5203	AV_N / AV_L / AF_N / AF_L
280/70 R20	116	A8	2500	5512	AF_N / AF_L
280/85 R20	112	A8	2240	4938	AF_L
300/70 R20	110	A8	2120	4674	AF_N / AF_L
320/65 R18	109	A8	2060	4542	AF_L
320/70 R20	113	A8	2300	5071	AF_N / AF_L
340/80 R18	138	D	5450	12015	AF_N / AF_L
400/60-15,5	126	A8	3740	8245	AF_N
420/65 R20	128	A8	3600	7937	AF_L
500/55-17	138	A8	5240	11552	AF_N / AF_L
6.00-16	98	A8	1500	3307	AV_N
6.50-16	99	A8	1550	3417	AV_N / AV_L
7.50 R16	100	A8	1600	3527	AV_N / AV_L / AF_N

Front Tire	Load index	Speed index	Load capacity (kg)	Load capacity (lb)	Models
7.50 R18	102	A8	1700	3748	AV_N / AV_L
7.50 R20	104	A8	1800	3968	AF_N
7.5L-15	110	A8	1600	3527	AV_N
8.25-16	104	A8	1800	3968	AV_N / AV_L
9.5 R20	108	A8	2000	4409	AF_N / AF_L

Rear Tire	Load index	Speed index	Load capacity (kg)	Load capacity (lb)	Models
250/85 R28 (9.5 R28)	112	A8	2240	4938	AV_N
270/95 R32	136	A8	4480	9877	AF_N
280/85 R28	118	A8	2640	5820	AV_N / AV_L
320/85 R24	122	A8	3000	6614	AV_N
320/85 R28	124	A8	3200	7055	AV_N / AV_L / AF_N / AF_L
340/85 R24	125	A8	3300	7275	AV_N / AV_L
340/85 R28	127	A8	3500	7716	AV_N / AV_L / AF_N
360/70 R24	122	A8	3000	6614	AV_N / AV_L / AF_N / AF_L
360/70 R28	125	A8	3300	7275	AV_N / AV_L
360/80 R24	138	D	5450	12015	AF_N / AF_L
380/70 R20	122	A8	3000	6614	AV_L
380/70 R24	125	A8	3300	7275	AV_N / AV_L / AF_N / AF_L
380/70 R28	127	A8	3500	7716	AV_L / AF_N / AF_L
380/85 R28	133	A8	4120	9083	AV_N / AV_L / AF_N / AF_L
400/80 R28	146	D	6900	15212	AF_N / AF_L
420/70 R24	130	A8	3800	8378	AV_L / AF_N / AF_L
420/70 R28	133	A8	4120	9083	AV_N / AV_L / F / AF_L
440/65 R24	138	A8	3900	8598	AF_L
480/65 R24	136	A8	4480	9877	AF_N
480/65 R28	139	A8	4860	10714	AV_L / AF_N / AF_L
480/70 R24	138	A8	4720	10406	AV_L / AF_L
480/70 R26	139	A8	4860	10714	AV_L
550/60-22,5	140	A8	5510	12147	AF_N
600/55-22,5	144	A8	6170	13603	AF_N
600/55-26,5	153	A8	8040	17725	AF_N / AF_L
VF420/70 R28	145	A8	5800	12787	AF_L
VF480/65 R28	148	A8	6300	13889	AF_L

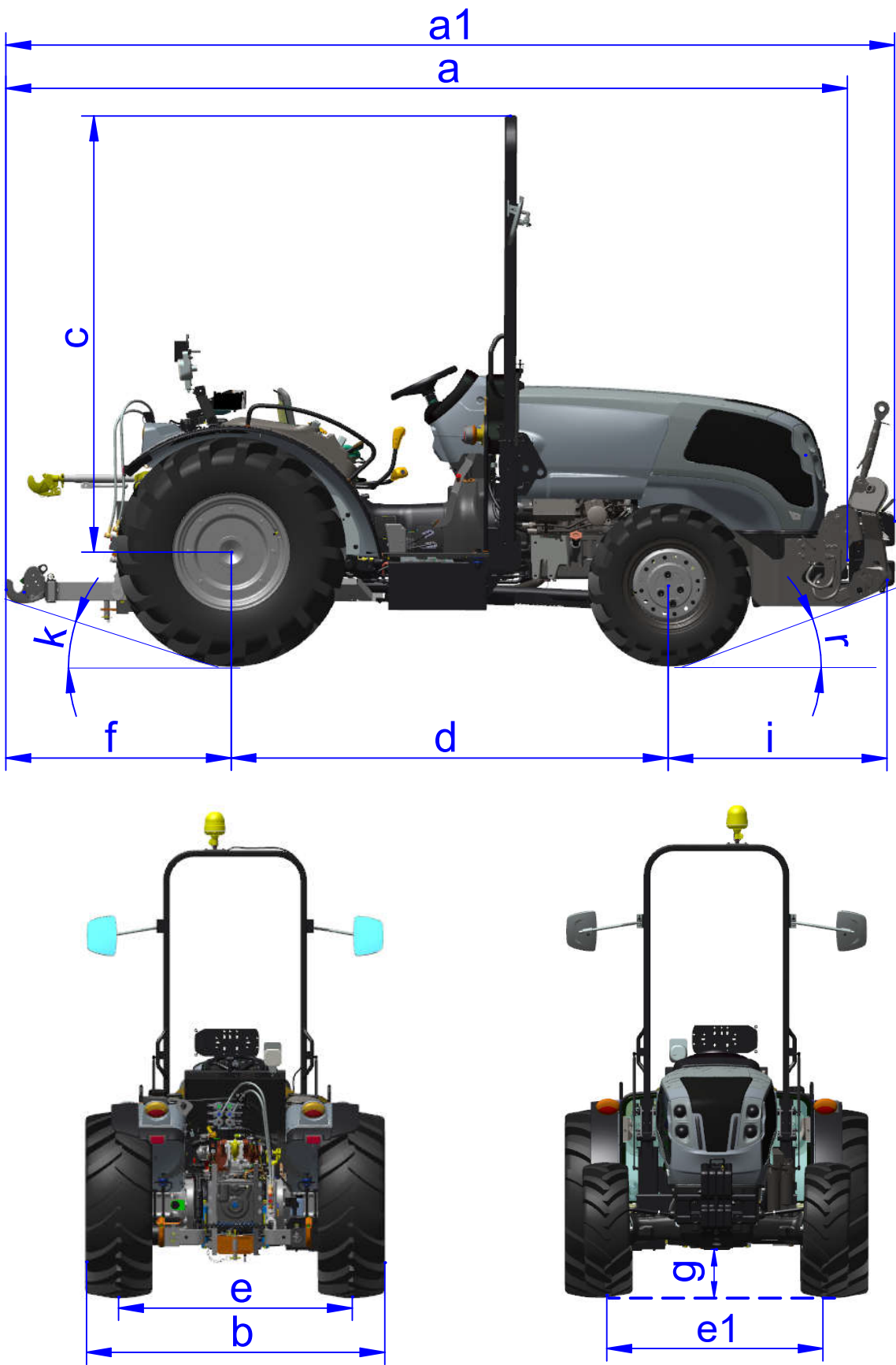
7.2 DIMENSIONS

7.2.1 CAB MODELS



	Model	AV_N	AV_L	AF_N	AF_L
a*	Minimum length for road usage		4038 - 4058 mm (159 - 159 $\frac{3}{4}$ in)		
a1**	Maximum length for road usage		4363 mm (171 $\frac{3}{4}$ in)		
b	Minimum width for road usage	991*** mm (39 in)	1257 mm (49 $\frac{1}{2}$ in)	1324 mm (52 $\frac{1}{8}$ in)	1490 mm (58 $\frac{1}{16}$ in)
b (2.85)	Maximum width for road usage	1686 mm (66 $\frac{3}{8}$ in)	1756 mm (68 $\frac{1}{8}$ in)	1966 mm (77 $\frac{3}{8}$ in)	2168 mm (85 $\frac{3}{8}$ in)
b (2.95 / 2.105)	Maximum width for road usage	1636 mm (64 $\frac{7}{16}$ in)	1736 mm (68 $\frac{3}{8}$ in)	1966 mm (77 $\frac{3}{8}$ in)	2260 mm (89 in)
c	Maximum height for road usage		1789 mm (70 $\frac{1}{16}$ in)		
d	Wheelbase		2178 mm (85 $\frac{3}{4}$ in)		2154 mm (84 $\frac{13}{16}$ in)
e	Rear track minimum width	756 mm (29 $\frac{3}{4}$ in)	955 mm (37 $\frac{5}{8}$ in)	1044 mm (41 $\frac{1}{8}$ in)	1145 mm (45 $\frac{1}{16}$ in)
e	Rear track maximum width	1279 mm (50 $\frac{3}{8}$ in)	1359 mm (53 $\frac{1}{2}$ in)	1555 mm (61 $\frac{1}{4}$ in)	1816 mm (71 $\frac{1}{2}$ in)
e1	Front track minimum width	939 mm (37 in)	949 mm (37 $\frac{3}{8}$ in)	1129 mm (44 $\frac{7}{16}$ in)	1262 mm (49 $\frac{1}{16}$ in)
e1	Front track maximum width	1048 mm (41 $\frac{1}{4}$ in)	1114 mm (43 $\frac{7}{8}$ in)	1603 mm (63 $\frac{1}{8}$ in)	1809 mm (71 $\frac{1}{4}$ in)
f	Rear overhang		1077 mm (42 $\frac{3}{8}$ in)		
g	Ground clearance with front ballast	213 mm (8 $\frac{1}{2}$ in)	223 mm (9 $\frac{3}{16}$ in)	223 mm (9 $\frac{3}{16}$ in)	223 mm (9 $\frac{3}{16}$ in)
g	Ground clearance without front ballast		348 mm (13 $\frac{1}{16}$ in)		
i	Front overhang without front lift		991 mm (39 in)		1013 mm (39 $\frac{7}{8}$ in)
k****	Maximum rear slope-out angle	14°	14°	17°	17°
r****	Maximum front slope-in angle	21°	21°	22°	22°
WEIGHT	Total weight without driver and without front ballasts	3080 kg (6790 lb)	3140 kg (6923 lb)	3250 kg (7165 lb)	3340 kg (7363 lb)
*with base ballast-front towing device					
**with 30kg ballast					
***minimum overall tyre (1000 mm minimum width axle)					
****values determined with minimum radius					

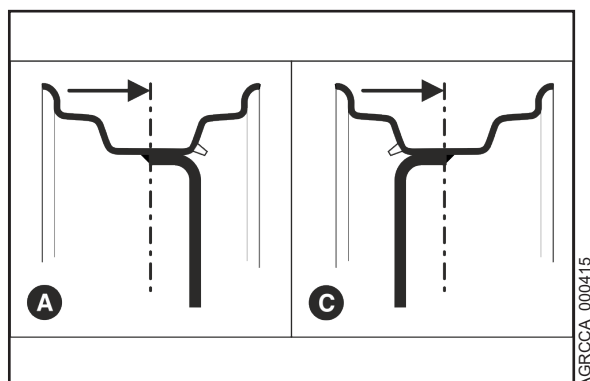
7.2.2 ROLL BAR MODELS



Model		AV_LB	AF_B	AF_N	AF_L
a*	Minimum length for road usage	3999 - 4018 mm (157 ⁷ / ₁₆ - 158 ³ / ₁₆ in)		4038 - 4058 mm (159 - 159 ³ / ₄ in)	
a1**	Maximum length for road usage	4324 mm (170 ¹ / ₄ in)		4363 mm (171 ³ / ₄ in)	
b	Minimum width for road usage	1215 mm (in)	1354 mm (in)	1227 mm (in)	1490 mm (in)
b	Maximum width for road usage	1726 mm (67 ¹⁵ / ₁₆ in)	1806 mm (71 ¹ / ₈ in)	1966 mm (77 ³ / ₈ in)	2168 mm (85 ⁵ / ₈ in)
c	Maximum height for road usage	2099 mm (82 ⁵ / ₈ in)			
d	Wheelbase	2115 mm (83 ¹ / ₄ in)	2105 mm (82 ⁷ / ₈ in)	2154 mm (84 ¹³ / ₁₆ in)	2154 mm (84 ¹³ / ₁₆ in)
e	Rear track minimum width	923 mm (36 ⁵ / ₁₆ in)	1116 mm (43 ¹⁵ / ₁₆ in)	947 mm (37 ¹ / ₄ in)	1145 mm (45 ¹ / ₁₆ in)
e	Rear track maximum width	1321 mm (52 in)	1477 mm (58 ¹ / ₈ in)	1555 mm (61 ¹ / ₄ in)	1812 mm (71 ⁵ / ₁₆ in)
e1	Front track minimum width	977 mm (38 ⁷ / ₁₆ in)	1181 mm (46 ¹ / ₂ in)	1049 mm (41 ⁵ / ₁₆ in)	1168 mm (46 in)
e1	Front track maximum width	1278 mm (50 ⁵ / ₁₆ in)	1445 mm (56 ⁷ / ₈ in)	1603 mm (63 ¹ / ₈ in)	1809 mm (71 ¹ / ₄ in)
f	Rear overhang	1037 mm (40 ¹³ / ₁₆ in)		1077 (42 ³ / ₈ in)	
g	Ground clearance without front ballast	312 mm (12 ¹ / ₄ in)		375 mm (14 ³ / ₄ in)	
i	Front overhang without front lift	995 mm (39 ³ / ₁₆ in)	1005 mm (39 ³ / ₁₆ in)	966 mm (38 in)	966 mm (38 in)
k***	Maximum rear slope-out angle	15°		17°	
r***	Maximum front slope-in angle	16°		22°	
WEIGHT	Total weight without driver and without front ballasts	2285 mm (89 ¹⁵ / ₁₆ in)	2975 mm (117 ¹ / ₈ in)	2840 mm (111 ¹³ / ₁₆ in)	2780 mm (109 ⁷ / ₁₆ in)
*with base ballast-front towing device					
**with 30kg ballast					
***values determined with minimum radius					

7.3 THREAD SETTINGS

7.3.1 FRONT FIXED RIM (2 POSITIONS)



Roll bar AF_B Models

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
240/70 R16	W8x16"	1264	1368
260/70 R16	W8x16"	1263	1367
280/70 R16	W8x16"	1262	1366
280/70 R18	W9x18"	1217	1413
31x15,5-15	13LBx15"	1306	1306

Roll bar AV_LB Models

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
180/95 R16	5.50Fx16"	-	1213
240/70 R16	8Jx16"	-	1224
260/70 R16	8Jx16"	-	1223
280/70 R16	8Jx16"	-	1222
280/70 R18	W9x18"	-	1225

Roll bar AF_N Models

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
280/70 R16	W8x16"	-	1366
280/70 R18	W9x18"	1181	1369
280/70 R20	W10x20"	1164	1462
300/70 R20	W10x20"	1163	1461
320/70 R20	W10x20"	1162	1460

Roll bar AF_L Models (1460 mm)

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
280/70 R20	W10x20"	1298	1596
300/70 R20	W10x20"	1298	1596

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
320/70 R20	W10x20"	1297	1595
500/55-17.0	16.00x17	1325	1573

Roll bar AF_L Models (1640 mm)

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
280/70 R20	W10x20"	1478	1776
300/70 R20	W10x20"	1478	1776
320/70 R20	W10x20"	1477	1775
500/55-17.0	16.00x17	1505	-

Cab AV_N Models

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
180/95 R16	5.50Fx16"	-	983
240/70 R16	W8x16"	-	1024
280/70 R16	W8x16"	-	1022
6.50-16	4.50Ex16"	-	1007
7.50 R16	5.50Fx16"	-	982
10.0/75-15,3	9.00x15.3"	-	1012

Cab AV_L Models

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
200/70 R16	W8x16"	-	1090
240/70 R16	W8x16"	-	1089
260/70 R16	W8x16"	-	1088
280/70 R16	W8x16"	-	1087
280/70 R18	W9x18"	-	1060
7.50 R16	5.50Fx16"	-	1047
7.50 R18	5.50Fx18"	939	1019
8.25-16	5.50Fx16"	-	1046

Cab AF_N Models

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
280/70 R18	W9x18"	1217	1413
280/70 R20	W10x20"	1164	1462
300/70 R20	W10x20"	1163	1461
320/70 R20	W10x20"	1162	1460

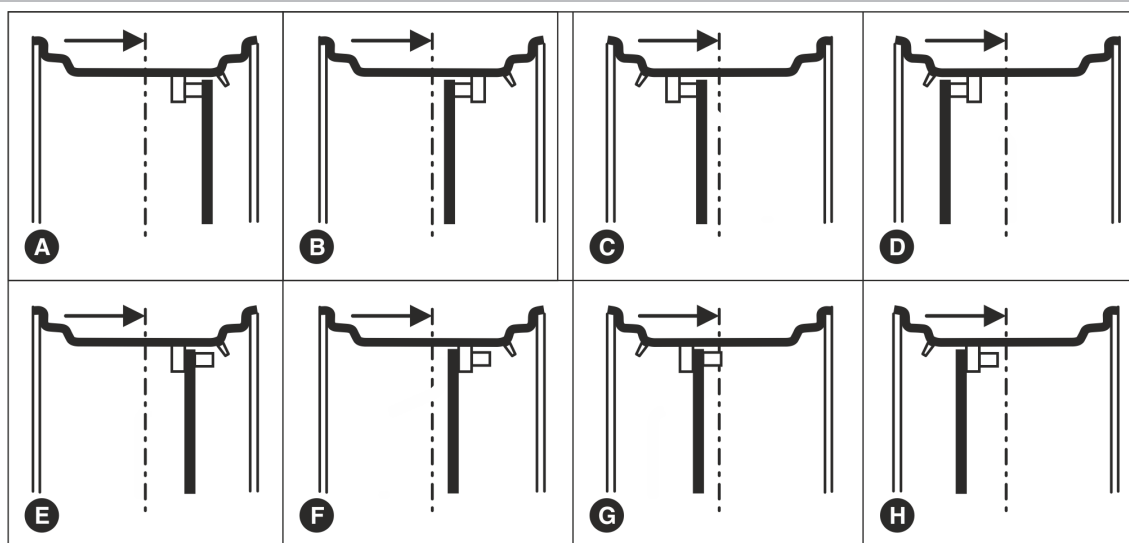
Cab AF_L Models (1460 mm)

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
280/70 R20	W10x20"	1298	1596
300/70 R20	W10x20"	1298	1596
320/70 R20	W10x20"	1297	1595
500/55-17.0	16.00x17	1325	1573

Cab AF_L Models (1640 mm)

Tires	Rim	Position of Rim and Wheel Disks	
		A	C
280/70 R20	W10x20"	1478	-
300/70 R20	W10x20"	1478	-
320/70 R20	W10x20"	1477	-

7.3.2 FRONT ADJUSTABLE REINFORCED RIM (8 POSITIONS)



Roll bar AF_B Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	-	-	1367	-	1185	1225	1405	1445

Roll bar AV_LB Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
180/95 R16	4.50Ex16"	-	1185	1109	1137	-	-	-	-
280/70 R18	W9x18"	-	1093	1197	1313	-	-	1235	-

Roll bar AF_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	-	1263	1367	1483	1185	1225	1405	1445
280/70 R20	W10x20"	-	1090	1126	1164	1200	1238	1274	1312
300/70 R20	W10x20"	-	1089	1125	1163	1199	1237	1273	1311

Roll bar AF_L Models (1460 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
Tire	Rim	A	B	C	D	E	F	G	H
280/70 R18	W9x18"	-	1398	1502	1618	1320	1360	1540	1580

Roll bar AF_L Models (1640 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	-	1578	1682	1798	1500	1540	1720	1760

Cab AV_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
6.50-16	4.50Ex16"	-	-	-	995	-	-	-	957

Cab AV_L Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	-	-	1032	1148	-	-	1070	1110

Cab AF_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	-	1263	1367	1483	1185	1225	1405	1445

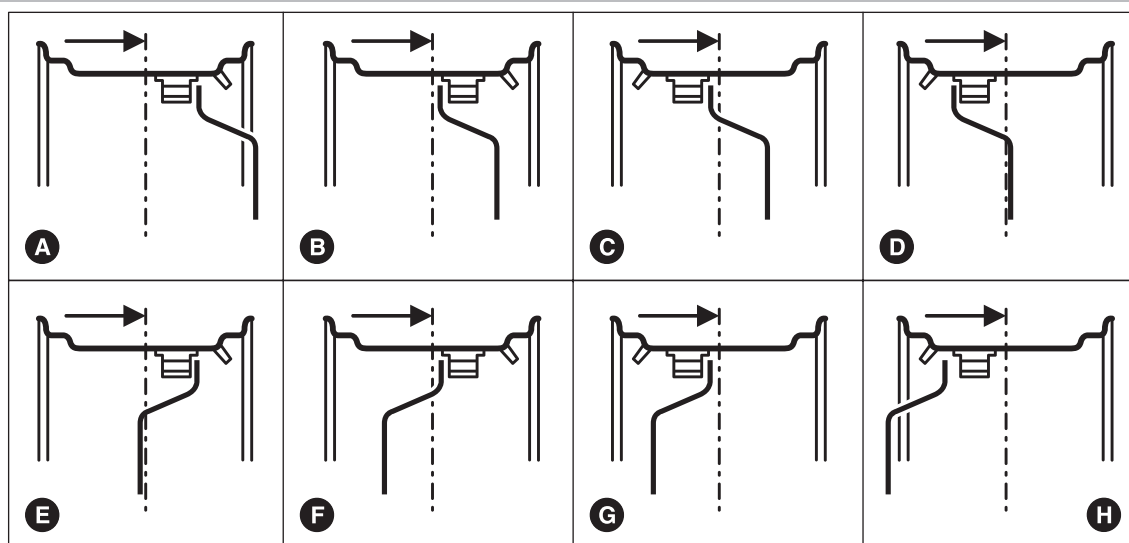
Cab AF_L Models (1460 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	-	1398	1502	1618	1320	1360	1540	1580

Cab AF_L Models (1640 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	-	1578	1682	-	1500	1540	-	-

7.3.3 FRONT ADJUSTABLE RIM (4 OR 8 POSITIONS)



Roll bar AF_B Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
240/70 R16	W8x16"	-	1334	-	1374	-	-	-	-
260/70 R16	W8x16"	-	1333	-	1373	-	-	-	-
280/70 R16	W8x16"	-	1332	-	1372	-	-	-	-
280/70 R18	W9x18"	1181	-	1369	1445	-	-	-	-

Roll bar AV_LB Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
180/95 R16	5.50Fx16"	-	1171	1119	1195	-	-	-	-
240/70 R16	W8x16"	-	-	1202	1278	-	-	-	-
260/70 R16	W8x16"	-	-	1201	1277	-	-	-	-
280/70 R16	W8x16"	-	-	1200	1276	-	-	-	-
280/70 R18	W9x18"	-	-	1199	1275	-	-	-	-

Roll bar AF_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R16	W8x16"	-	1332	-	1372	-	-	-	-
280/70 R18	W9x18"	1181	1257	1369	1445	-	-	-	-
280/70 R20	W10x20"	-	1130	-	1343	1280	1390	1494	1603
300/70 R20	W10x20"	-	1129	-	1342	1279	1389	1493	1602
320/70 R20	W10x20"	-	-	-	1341	1279	1388	1492	-
9.5 R20	W8x20"	-	1158	-	1312	1309	1418	1462	1572

Roll bar AF_L Models (1460 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	1316	1392	1504	1580	-	-	-	-
280/70 R20	W10x20"	-	1264	-	1478	1415	1524	1628	1738
280/85 R20	W10x20"	-	1262	-	1476	1413	1522	1626	1736
300/70 R20	W10x20"	-	1264	-	1477	1414	1524	1628	1737
320/70 R20	W10x20"	-	1263	-	1476	1414	1523	1627	1736
420/65 R20	W11x20"	-	-	-	1463	1423	1533	1614	-

Roll bar AF_L Models (1640 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	1496	1572	1684	1760	-	-	-	-
280/70 R20	W10x20"	-	1444	-	1658	1595	1704	1808	-
280/85 R20	W10x20"	-	1442	-	1656	1593	1702	1806	-
300/70 R20	W10x20"	-	1444	-	1657	1594	1704	1808	-
320/70 R20	W10x20"	-	1443	-	1656	1594	1703	-	-
420/65 R20	W11x20"	-	-	-	1643	1603	1713	-	-

Cab AV_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
10.0/75-15,3	9.00x15.3"	-	-	-	1010	-	-	-	-
180/95 R16	5.50Fx16"	-	941	-	965	-	-	-	-
240/70 R16	W8x16"	-	-	-	1048	-	-	-	-
280/70 R16	W8x16"	-	-	-	1046	-	-	-	-
7.50 R16	5.50Fx16"	-	940	-	964	-	-	-	-
7.50 R18	5.50Fx18"	-	-	884	960	-	-	-	-

Cab AV_L Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
200/70 R16	W8x16"	-	-	-	1114	-	-	-	-
240/70 R16	W8x16"	-	-	-	1113	-	-	-	-
260/70 R16	W8x16"	-	-	-	1112	-	-	-	-
280/70 R16	W8x16"	-	-	-	1111	-	-	-	-
280/70 R18	W9x18"	-	-	1034	1110	-	-	-	-
7.50 R16	5.50Fx16"	-	1005	-	1029	-	-	-	-
7.50 R18	5.50Fx18"	-	1005	949	1025	-	-	-	-
8.25-16	5.50Fx16"	-	1004	-	1028	-	-	-	-

Cab AF_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R16	W8x16"	-	1332	-	1372	-	-	-	-
280/70 R18	W9x18"	1181	1257	1369	1445	-	-	-	-
280/70 R20	W10x20"	-	1130	-	1343	1280	1390	1494	1603
300/70 R20	W10x20"	-	1129	-	1342	1279	1389	1493	1602
320/70 R20	W10x20"	-	-	-	1341	1279	1388	1492	-
7.50 R16	5.50Fx16"	-	1322	-	1382	-	-	-	-
9.5 R20	W8x20"	-	1158	-	1312	1309	1418	1462	1572

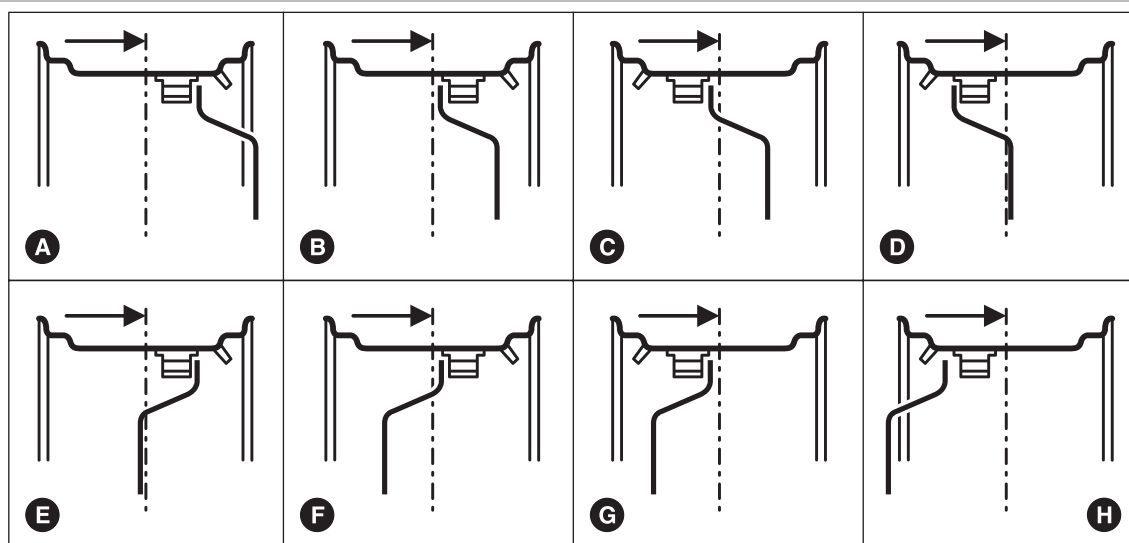
Cab AF_L Models (1460 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	1316	1392	1504	1580	-	-	-	-
280/70 R20	W10x20"	-	1264	-	1478	1415	1524	1628	1738
280/85 R20	W10x20"	-	1262	-	1476	1413	1522	1626	1736
300/70 R20	W10x20"	-	1264	-	1477	1414	1524	1628	1737
420/65 R20	W11x20"	-	-	-	1463	1423	1533	1614	-

Cab AF_L Models (1640 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/70 R18	W9x18"	1496	1572	1684	-	-	-	-	-
280/70 R20	W10x20"	-	1444	-	1658	1595	1704	-	-
280/85 R20	W10x20"	-	1442	-	1656	1593	1702	-	-
300/70 R20	W10x20"	-	1444	-	1657	1594	1704	-	-
320/70 R20	W10x20"	-	1443	-	1656	1594	-	-	-

7.3.4 REAR RIM (8 POSITIONS)



Roll bar AF_B Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
360/70 R20	W11x20"	-	-	-	1236	1264	1376	1384	-
360/70 R24	W12x24"	-	-	1196	1309	1195	1308	1364	-
380/70 R20	W11x20"	-	-	-	1236	1264	1376	1384	-
380/70 R24	W12x24"	-	-	1196	1309	1195	1308	1364	-
440/65 R20	W14Lx20"	-	-	1236	1345	1155	1264	-	-
440/65 R24	W14Lx24"	-	-	-	1305	1199	1312	1360	-

Roll bar AV_LB Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
280/85 R24 (11.2 R24)	W10x24"	-	-	-	1041	923	1036	1096	1209
360/70 R20	W11x20"	-	-	-	966	994	1106	1114	1226
360/70 R24	W12x24"	-	-	-	1039	-	1038	1094	1207
380/70 R20	W11x20"	-	-	-	966	994	1106	1114	1226
380/70 R24	W12x24"	-	-	-	1039	-	1038	1094	1207
440/65 R24	W15Lx24"	-	-	-	-	-	1040	1092	1205

Roll bar AF_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
270/95 R32	W8x28"	-	-	1094	1203	1297	1406	1394	1503
320/85 R28 (12.4 R28)	W10x28"	-	-	1118	1229	1273	1384	1518	1629
340/85 R24 (13.6 R24)	W12x24"	-	-	1196	1309	1195	1308	1364	1477
340/85 R28 (13.6 R28)	W12x28"	-	-	1114	1225	1277	1388	1514	-
360/70 R24	W12x24"	-	-	1196	1309	1195	1308	1364	1477
360/80 R24	W12x24"	-	-	1196	1309	1195	1308	1364	1477
380/70 R24	W12x24"	-	-	1196	1309	1195	1308	1364	1477

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
380/70 R28	W12x28"	-	-	1114	1225	1277	1388	1514	-
380/70 R28	W12x28"	-	-	1114	1225	1277	1388	1514	-
380/85 R28 (14.9 R28)	W12x28"	-	-	1114	1225	1277	1388	1514	-
400/80 R28	W12x28"	-	-	1114	1225	1277	1388	1514	-
420/70 R24	W12x24"	-	-	1196	1309	1195	1308	1364	1477
420/70 R28	W12x28"	-	-	1114	1225	1277	1388	1514	-
480/65 R24	W15Lx24"	-	-	-	1307	1197	1310	1362	1475
480/65 R28	W15Lx28"	-	-	-	1217	1285	1396	-	-
550/60-22.5	16.00x22,5	-	-	1350	-	-	-	-	-
600/55-22.5	20.00x22.5	-	-	1300	-	-	-	-	-
600/55-26.5	20.00x26.5	-	-	1300	-	-	-	-	-

Roll bar AF_L Models (1460 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
380/70 R24	W12x24"	1325	1438	1494	1607	1493	1606	1662	-
380/70 R28	W12x28"	-	-	1412	1523	1575	1686	-	-
380/85 R28 (14.9 R28)	W12x28"	-	-	1412	1523	1575	1686	-	-
420/70 R24	W12x24"	1325	1438	1494	1607	1493	1606	1662	-
420/70 R28	W12x28"	-	-	1412	1523	1575	1686	-	-
440/65 R24	W15Lx24"	-	-	-	1605	1495	-	-	-
480/65 R28	W15Lx28"	-	-	-	1515	1583	-	-	-
480/70 R24	W15Lx24"	-	-	-	1605	1495	-	-	-
600/55-26.5	20.00x26.5	1476	1506	-	-	1506	1506	-	-

Roll bar AF_L Models (1640 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
380/70 R24	W12x24"	1325	1438	1494	1607	1493	1606	1662	-
380/70 R28	W12x28"	-	-	1412	1523	1575	1686	-	-
380/85 R28 (14.9 R28)	W12x28"	-	-	1412	1523	1575	1686	-	-
420/70 R24	W12x24"	1325	1438	1494	1607	1493	1606	1662	-
420/70 R24	W13x24"	-	-	-	1654	-	-	-	-
420/70 R28	W12x28"	-	-	1412	1523	1575	1686	-	-
440/65 R24	W15Lx24"	-	-	-	1605	1495	-	-	-
480/65 R28	W15Lx28"	-	-	1404	1515	1583	-	-	-
480/70 R24	W15Lx24"	-	-	1492	1605	1495	1608	-	-
600/55-26.5	20.00x26.5	-	-	-	-	1506	1506	-	-

Cab AV_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
250/85 R28	W8x28"	-	783	-	826	974	1083	1017	1126
280/85 R28 (11.2 R28)	W10x28"	-	-	-	879	923	1034	1168	1279
320/85 R24 (12.4 R24)	W10x24"	-	-	-	961	-	956	1016	1129

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
320/85 R28 (12.4 R28)	W10x28"	-	-	-	879	923	1034	1168	1279
340/85 R24 (13.6 R24)	W12x24"	-	-	-	959	-	958	1014	1127
340/85 R28 (13.6 R28)	W12x28"	-	-	-	-	927	1038	1164	1275
360/70 R24	W10x24"	-	-	-	961	-	956	1016	1129
360/70 R28	W12x28"	-	-	-	-	927	1038	1164	1275

Cab AV_L Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
320/85 R28 (12.4 R28)	W10x28"	-	-	-	959	1003	1114	1248	1359
340/85 R28 (13.6 R28)	W12x28"	-	-	-	-	1007	1118	1244	1355
360/70 R24	W12x24"	-	-	-	1039	-	1038	1094	1207
380/70 R24	W12x24"	-	-	-	1039	-	1038	1094	1207
380/70 R28	W12x28"	-	-	-	-	1007	1118	1244	1355
380/70 R28	W12x28"	-	-	-	-	1007	1118	1244	1355
380/85 R28 (14.9 R28)	W12x28"	-	-	-	-	1007	1118	1244	1355
420/70 R24	W12x24"	-	-	-	-	-	1038	1094	1207
420/70 R28	W12x28"	-	-	-	-	-	1118	1244	-

Cab AF_N Models

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
270/95 R32	W8x28"	-	-	1094	1203	1297	1406	1394	1503
320/85 R28 (12.4 R28)	W10x28"	-	-	1118	1229	1273	1384	1518	1629
340/85 R24 (13.6 R24)	W12x24"	-	-	-	1309	1195	1308	1364	1477
340/85 R28 (13.6 R28)	W12x28"	-	-	1114	1225	1277	1388	1514	-
360/70 R24	W12x24"	-	-	1196	1309	1195	1308	1364	1477
360/80 R24	W12x24"	-	-	1196	1309	1195	1308	1364	1477
380/70 R24	W12x24"	-	-	1196	1309	1195	1308	1364	1477
380/70 R28	W12x28"	-	-	1114	1225	1277	1388	1514	-
380/85 R28 (14.9 R28)	W12x28"	-	-	1114	1225	1277	1388	1514	-
400/80 R28	W12x28"	-	-	1114	1225	1277	1388	1514	-
420/70 R24	W12x24"	-	-	1196	1309	1195	1308	1364	1477
420/70 R28	W12x28"	-	-	1114	1225	1277	1388	1514	-
480/65 R24	W15Lx24"	-	-	-	1307	1197	1310	1362	1475
480/65 R28	W15Lx28"	-	-	-	1217	1285	1396	-	-
550/60-22.5	16.00x22,5	-	-	1350	-	-	-	-	-
600/55-22.5	20.00x22.5	-	-	1300	-	-	-	-	-
600/55-26.5	20.00x26.5	-	-	1300	-	-	-	-	-

Cab AF_L Models (1460 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
380/70 R24	W12x24"	1325	1438	1494	1607	1493	1606	1662	-
380/70 R28	W12x28"	-	-	1412	1523	1575	1686	-	-

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
380/85 R28 (14.9 R28)	W12x28"	-	-	1412	1523	1575	1686	-	-
420/70 R24	W12x24"	1325	1438	1494	1607	1493	1606	1662	-
420/70 R28	W12x28"	-	-	1412	1523	1575	1686	-	-
440/65 R24	W15Lx24"	-	-	-	1605	1495	1608	1660	-
480/65 R28	W15Lx28"	-	-	-	1515	1583	-	-	-
480/70 R24	W15Lx24"	-	-	-	1605	1495	1608	1660	-
600/55-26.5	20.00x26.5	1476	1506	-	-	1506	1506	-	-

Cab AF_L Models (1640 mm)

Tires	Rim	Position of Rim and Wheel Disks							
		A	B	C	D	E	F	G	H
380/70 R24	W12x24"	1325	1438	1494	1607	1493	1606	-	-
380/70 R28	W12x28"	-	-	1412	1523	1575	-	-	-
380/85 R28 (14.9 R28)	W12x28"	-	-	1412	1523	1575	-	-	-
420/70 R24	W12x24"	1325	1438	1494	-	1493	1606	-	-
420/70 R28	W12x28"	-	-	1412	1523	1575	-	-	-
480/65 R28	W15Lx28"	-	-	1404	1515	-	-	-	-

7.4 TIRE COMBINATIONS

7.4.1 ROLL BAR MODELS

Roll bar AF_B Models

Rear tire	Rear rim	Front tire	Front rim
360/70 R20	W11x20"	240/70 R16	W8x16"
360/70 R24	W12x24"	280/70 R16	W8x16"
380/70 R20	W11x20"	260/70 R16	W8x16"
380/70 R24	W12x24"	280/70 R16	W8x16"
380/70 R24	W12x24"	280/70 R18	W9x18"
440/65 R20	W14Lx20"	260/70 R16	W8x16"
440/65 R24	W14Lx24"	280/70 R18	W9x18"

Roll bar AV_LB Models

Rear tire	Rear rim	Front tire	Front rim
280/85 R24 (11.2 R24)	W10x24"	180/95 R16	5.50Fx16"
280/85 R24 (11.2 R24)	W10x24"	180/95 R16	4.50Ex16"
360/70 R20	W11x20"	240/70 R16	W8x16"
360/70 R20	W11x20"	240/70 R16	8Jx16"
360/70 R24	W12x24"	260/70 R16	W8x16"
360/70 R24	W12x24"	280/70 R16	W8x16"
360/70 R24	W12x24"	280/70 R16	8Jx16"
380/70 R20	W11x20"	180/95 R16	5.50Fx16"
380/70 R20	W11x20"	260/70 R16	W8x16"
380/70 R20	W11x20"	260/70 R16	8Jx16"
380/70 R24	W12x24"	280/70 R16	W8x16"
380/70 R24	W12x24"	280/70 R16	8Jx16"
380/70 R24	W12x24"	280/70 R18	W9x18"
440/65 R24	W15Lx24"	280/70 R18	W9x18"

Roll bar AF_N Models

Rear tire	Rear rim	Front tire	Front rim
270/95 R32	W8x28"	9.5 R20	W8x20"
320/85 R28 (12.4 R28)	W10x28"	280/70 R20	W10x20"
340/85 R28 (13.6 R28)	W12x28"	280/70 R20	W10x20"
360/70 R24	W12x24"	280/70 R16	W8x16"
360/70 R24	W12x24"	7.50 R16	5.50Fx16"
380/70 R24	W12x24"	280/70 R16	W8x16"
380/70 R24	W12x24"	280/70 R18	W9x18"
380/70 R28	W12x28"	280/70 R20	W10x20"
380/70 R28	W12x28"	280/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	9.5 R20	W8x20"
380/85 R28 (14.9 R28)	W12x28"	300/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	320/70 R20	W10x20"
420/70 R24	W12x24"	280/70 R18	W9x18"
420/70 R24	W12x24"	280/70 R20	W10x20"

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
420/70 R28	W12x28"	300/70 R20	W10x20"
420/70 R28	W12x28"	320/70 R20	W10x20"
480/65 R24	W15Lx24"	280/70 R18	W9x18"
480/65 R28	W15Lx28"	320/70 R20	W10x20"

Roll bar AF_L Models (1460 mm)

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
380/70 R24	W12x24"	280/70 R18	W9x18"
380/70 R28	W12x28"	280/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	320/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	280/85 R20	W10x20"
420/70 R24	W12x24"	300/70 R20	W10x20"
420/70 R24	W12x24"	280/70 R20	W10x20"
420/70 R28	W12x28"	300/70 R20	W10x20"
420/70 R28	W12x28"	320/70 R20	W10x20"
440/65 R24	W15Lx24"	280/70 R18	W9x18"
480/65 R28	W15Lx28"	320/70 R20	W10x20"
480/70 R24	W15Lx24"	320/70 R20	W10x20"
600/55-26.5	20.00x26.5	500/55-17.0	16.00x17

Roll bar AF_L Models (1640 mm)

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
380/70 R24	W12x24"	280/70 R18	W9x18"
380/70 R28	W12x28"	280/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	280/85 R20	W10x20"
420/70 R24	W12x24"	280/70 R20	W10x20"
420/70 R24	W12x24"	300/70 R20	W10x20"
420/70 R28	W12x28"	300/70 R20	W10x20"
420/70 R28	W12x28"	320/70 R20	W10x20"
440/65 R24	W15Lx24"	280/70 R18	W9x18"
480/65 R28	W15Lx28"	320/70 R20	W10x20"
480/70 R24	W15Lx24"	320/70 R20	W10x20"
600/55-26.5	20.00x26.5	500/55-17.0	16.00x17

7.4.2 CAB MODELS

Cab AV_N Models

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
250/85 R28	W8x28"	180/95 R16	5.50Fx16"
250/85 R28	W8x28"	6.50-16	4.50Ex16"
280/85 R28 (11.2 R28)	W10x28"	180/95 R16	5.50Fx16"
280/85 R28 (11.2 R28)	W10x28"	6.50-16	4.50Ex16"
320/85 R24 (12.4 R24)	W10x24"	240/70 R16	W8x16"
320/85 R24 (12.4 R24)	W10x24"	180/95 R16	5.50Fx16"

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
320/85 R24 (12.4 R24)	W10x24"	6.50-16	4.50Ex16"
320/85 R28 (12.4 R28)	W10x28"	7.50 R16	5.50Fx16"
340/85 R24 (13.6 R24)	W12x24"	180/95 R16	5.50Fx16"
340/85 R24 (13.6 R24)	W12x24"	6.50-16	4.50Ex16"
340/85 R24 (13.6 R24)	W12x24"	10.0/75-15,3	9.00x15.3"
340/85 R28 (13.6 R28)	W12x28"	7.50 R16	5.50Fx16"
340/85 R28 (13.6 R28)	W12x28"	7.50 R18	5.50Fx18"
360/70 R24	W10x24"	240/70 R16	W8x16"
360/70 R28	W12x28"	280/70 R16	W8x16"

Cab AV_L Models

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
320/85 R28 (12.4 R28)	W10x28"	7.50 R16	5.50Fx16"
340/85 R28 (13.6 R28)	W12x28"	7.50 R16	5.50Fx16"
340/85 R28 (13.6 R28)	W12x28"	8.25-16	5.50Fx16"
340/85 R28 (13.6 R28)	W12x28"	280/70 R18	W9x18"
340/85 R28 (13.6 R28)	W12x28"	7.50 R18	5.50Fx18"
360/70 R24	W12x24"	240/70 R16	W8x16"
380/70 R24	W12x24"	260/70 R16	W8x16"
380/70 R28	W12x28"	280/70 R18	W9x18"
380/70 R28	W12x28"	280/70 R18	W9x18"
380/85 R28 (14.9 R28)	W12x28"	7.50 R18	5.50Fx18"
380/85 R28 (14.9 R28)	W12x28"	280/70 R18	W9x18"
420/70 R24	W12x24"	280/70 R16	W8x16"
420/70 R28	W12x28"	280/70 R18	W9x18"
480/70 R24	W15Lx24"	280/70 R16	W8x16"

Cab AF_N Models

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
270/95 R32	W8x28"	9.5 R20	W8x20"
320/85 R28 (12.4 R28)	W10x28"	280/70 R20	W10x20"
360/70 R24	W12x24"	280/70 R16	W8x16"
360/70 R24	W12x24"	7.50 R16	5.50Fx16"
380/70 R24	W12x24"	280/70 R16	W8x16"
380/70 R24	W12x24"	280/70 R18	W9x18"
380/70 R28	W12x28"	280/70 R20	W10x20"
380/70 R28	W12x28"	280/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	9.5 R20	W8x20"
380/85 R28 (14.9 R28)	W12x28"	300/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	320/70 R20	W10x20"
420/70 R24	W12x24"	280/70 R18	W9x18"
420/70 R24	W12x24"	280/70 R20	W10x20"
420/70 R28	W12x28"	300/70 R20	W10x20"
420/70 R28	W12x28"	320/70 R20	W10x20"
480/65 R24	W15Lx24"	280/70 R18	W9x18"
480/65 R28	W15Lx28"	320/70 R20	W10x20"

Cab AF_L Models (1460 mm)

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
380/70 R24	W12x24"	280/70 R18	W9x18"
380/70 R28	W12x28"	280/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	280/85 R20	W10x20"
420/70 R24	W12x24"	280/70 R20	W10x20"
420/70 R24	W12x24"	300/70 R20	W10x20"
420/70 R28	W12x28"	300/70 R20	W10x20"
420/70 R28	W12x28"	320/70 R20	W10x20"
440/65 R24	W15Lx24"	280/70 R18	W9x18"
480/65 R28	W15Lx28"	320/70 R20	W10x20"
480/70 R24	W15Lx24"	320/70 R20	W10x20"
600/55-26.5	20.00x26.5	500/55-17.0	16.00x17

Cab AF_L Models (1640 mm)

<i>Rear tire</i>	<i>Rear rim</i>	<i>Front tire</i>	<i>Front rim</i>
380/70 R24	W12x24"	280/70 R18	W9x18"
380/70 R28	W12x28"	280/70 R20	W10x20"
380/85 R28 (14.9 R28)	W12x28"	280/85 R20	W10x20"
420/70 R24	W12x24"	280/70 R20	W10x20"
420/70 R24	W12x24"	300/70 R20	W10x20"
420/70 R28	W12x28"	300/70 R20	W10x20"
420/70 R28	W12x28"	320/70 R20	W10x20"
420/70 R28	W12x28"	320/70 R20	W10x20"
480/65 R28	W15Lx28"	320/70 R20	W10x20"
600/55-26.5	20.00x26.5	500/55-17.0	16.00x17

7.5 SPEED CHART

NOTE: Travel speed values indicated in the chart are theoretical. Actual speed values vary according to tyre rolling circumference, load, pressure and brand, wheel skidding, etc. In case you need the exact speed for specific applications, it is necessary to measure it experimentally.

7.5.1 TRANSMISSION 24+24

Range	Gear	HI-LO	Tire index radius											
			650		625		600		575		550		525	
			kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph
I	1		0,5	0,3	0,5	0,3	0,5	0,3	0,5	0,3	0,4	0,3	0,4	0,3
			0,6	0,4	0,6	0,4	0,6	0,4	0,6	0,3	0,5	0,3	0,5	0,3
	2		0,8	0,5	0,7	0,5	0,7	0,4	0,7	0,4	0,7	0,4	0,6	0,4
			0,9	0,6	0,9	0,5	0,8	0,5	0,8	0,5	0,8	0,5	0,7	0,5
	3		1,1	0,7	1,1	0,7	1,0	0,6	1,0	0,6	0,9	0,6	0,9	0,6
			1,3	0,8	1,3	0,8	1,2	0,8	1,2	0,7	1,1	0,7	1,1	0,7
	4		1,6	1,0	1,6	1,0	1,5	0,9	1,4	0,9	1,4	0,9	1,3	0,8
			1,9	1,2	1,8	1,1	1,8	1,1	1,7	1,0	1,6	1,0	1,5	1,0
II	1		2,4	1,5	2,3	1,5	2,2	1,4	2,2	1,3	2,1	1,3	2,0	1,2
			2,9	1,8	2,7	1,7	2,6	1,6	2,5	1,6	2,4	1,5	2,3	1,4
	2		3,5	2,2	3,4	2,1	3,3	2,0	3,1	1,9	3,0	1,9	2,9	1,8
			4,2	2,6	4,0	2,5	3,8	2,4	3,7	2,3	3,5	2,2	3,4	2,1
	3		5,1	3,2	4,9	3,1	4,7	2,9	4,5	2,8	4,3	2,7	4,1	2,6
			6,0	3,7	5,8	3,6	5,6	3,5	5,3	3,3	5,1	3,2	4,9	3,0
	4		7,4	4,6	7,1	4,4	6,9	4,3	6,6	4,1	6,3	3,9	6,0	3,7
			8,7	5,4	8,4	5,2	8,0	5,0	7,7	4,8	7,4	4,6	7,0	4,4
III	1		10,7	6,7	10,3	6,4	9,9	6,2	9,5	5,9	9,1	5,6	8,7	5,4
			12,6	7,8	12,1	7,5	11,6	7,2	11,1	6,9	10,6	6,6	10,2	6,3
	2		15,7	9,7	15,1	9,4	14,5	9,0	13,8	8,6	13,2	8,2	12,6	7,9
			18,4	11,4	17,7	11,0	17,0	10,5	16,2	10,1	15,5	9,7	14,8	9,2
	3		22,6	14,1	21,8	13,5	20,9	13,0	20,0	12,4	19,2	11,9	18,3	11,4
			26,6	16,5	25,5	15,9	24,5	15,2	23,5	14,6	22,5	14,0	21,5	13,3
	4		32,8	20,4	31,5	19,6	30,3	18,8	29,0	18,0	27,7	17,2	26,5	16,5
			38,5	23,9	37,0	23,0	35,5	22,1	34,0	21,1	32,5	20,2	31,1	19,3

Tractor travel speed at an engine speed of 2300 rpm

7.5.2 TRANSMISSION 24+24 SPEED VARIANT

Range	Gear	HI-LO	Tire index radius					
			575		550		525	
			kph	mph	kph	mph	kph	mph
I	1		0,5	0,3	0,5	0,3	0,5	0,3
			0,6	0,4	0,6	0,4	0,6	0,4
	2		0,8	0,5	0,7	0,5	0,7	0,4
			0,9	0,6	0,9	0,5	0,8	0,5
	3		1,1	0,7	1,1	0,7	1,0	0,6
			1,3	0,8	1,3	0,8	1,2	0,8
	4		1,6	1,0	1,6	1,0	1,5	0,9
			1,9	1,2	1,8	1,1	1,7	1,1
II	1		2,5	1,5	2,3	1,5	2,2	1,4
			2,9	1,8	2,8	1,7	2,6	1,6
	2		3,5	2,2	3,4	2,1	3,2	2,0
			4,1	2,6	4,0	2,5	3,8	2,3
	3		5,2	3,2	4,9	3,1	4,7	2,9
			6,1	3,8	5,8	3,6	5,5	3,4
	4		7,5	4,6	7,2	4,4	6,8	4,2
			8,8	5,5	8,4	5,2	8,0	5,0
III	1		10,8	6,7	10,4	6,4	9,9	6,1
			12,7	7,9	12,2	7,6	11,6	7,2
	2		15,5	9,7	14,9	9,2	14,2	8,8
			18,2	11,3	17,4	10,8	16,7	10,3
	3		22,8	14,2	21,8	13,6	20,9	13,0
			26,8	16,6	25,6	15,9	24,5	15,2
	4		33,0	20,5	31,6	19,6	30,1	18,7
			38,7	24,1	37,0	23,0	35,4	22,0

Tractor travel speed at an engine speed of 2300 rpm

7.5.3 TRANSMISSION 24/12

Range	Gear	HI-LO	Tire index radius											
			650		625		600		575		550		525	
			kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph
I	1		0,5	0,3	0,5	0,3	0,5	0,3	0,5	0,3	0,4	0,3	0,4	0,3
			0,6	0,4	0,6	0,4	0,6	0,4	0,6	0,3	0,5	0,3	0,5	0,3
	2		0,8	0,5	0,7	0,5	0,7	0,4	0,7	0,4	0,7	0,4	0,6	0,4
			0,9	0,6	0,9	0,5	0,8	0,5	0,8	0,5	0,8	0,5	0,7	0,5
	3		1,1	0,7	1,1	0,7	1,0	0,6	1,0	0,6	0,9	0,6	0,9	0,6
			1,3	0,8	1,3	0,8	1,2	0,8	1,2	0,7	1,1	0,7	1,1	0,7
	4		1,6	1,0	1,6	1,0	1,5	0,9	1,4	0,9	1,4	0,9	1,3	0,8
			1,9	1,2	1,8	1,1	1,8	1,1	1,7	1,0	1,6	1,0	1,5	1,0
II	1		2,4	1,5	2,3	1,5	2,2	1,4	2,2	1,3	2,1	1,3	2,0	1,2
			2,9	1,8	2,7	1,7	2,6	1,6	2,5	1,6	2,4	1,5	2,3	1,4
	2		3,5	2,2	3,4	2,1	3,3	2,0	3,1	1,9	3,0	1,9	2,9	1,8
			4,2	2,6	4,0	2,5	3,8	2,4	3,7	2,3	3,5	2,2	3,4	2,1
	3		5,1	3,2	4,9	3,1	4,7	2,9	4,5	2,8	4,3	2,7	4,1	2,6
			6,0	3,7	5,8	3,6	5,6	3,5	5,3	3,3	5,1	3,2	4,9	3,0
	4		7,4	4,6	7,1	4,4	6,9	4,3	6,6	4,1	6,3	3,9	6,0	3,7
			8,7	5,4	8,4	5,2	8,0	5,0	7,7	4,8	7,4	4,6	7,0	4,4
III	1		10,7	6,7	10,3	6,4	9,9	6,2	9,5	5,9	9,1	5,6	8,7	5,4
			12,6	7,8	12,1	7,5	11,6	7,2	11,1	6,9	10,6	6,6	10,2	6,3
	2		15,7	9,7	15,1	9,4	14,5	9,0	13,8	8,6	13,2	8,2	12,6	7,9
			18,4	11,4	17,7	11,0	17,0	10,5	16,2	10,1	15,5	9,7	14,8	9,2
	3		22,6	14,1	21,8	13,5	20,9	13,0	20,0	12,4	19,2	11,9	18,3	11,4
			26,6	16,5	25,5	15,9	24,5	15,2	23,5	14,6	22,5	14,0	21,5	13,3
	4		32,8	20,4	31,5	19,6	30,3	18,8	29,0	18,0	27,7	17,2	26,5	16,5
			38,5	23,9	37,0	23,0	35,5	22,1	34,0	21,1	32,5	20,2	31,1	19,3

Tractor travel speed at an engine speed of 2300 rpm

7.5.4 TRANSMISSION 24+12 SPEED VARIANT

Range	Gear	HI-LO	Tire index radius					
			575		550		525	
			kph	mph	kph	mph	kph	mph
I	1		0,5	0,3	0,5	0,3	0,5	0,3
			0,6	0,4	0,6	0,4	0,6	0,4
	2		0,8	0,5	0,7	0,5	0,7	0,4
			0,9	0,6	0,9	0,5	0,8	0,5
	3		1,1	0,7	1,1	0,7	1,0	0,6
			1,3	0,8	1,3	0,8	1,2	0,8
	4		1,6	1,0	1,6	1,0	1,5	0,9
			1,9	1,2	1,8	1,1	1,7	1,1
II	1		2,5	1,5	2,3	1,5	2,2	1,4
			2,9	1,8	2,8	1,7	2,6	1,6
	2		3,5	2,2	3,4	2,1	3,2	2,0
			4,1	2,6	4,0	2,5	3,8	2,3
	3		5,2	3,2	4,9	3,1	4,7	2,9
			6,1	3,8	5,8	3,6	5,5	3,4
	4		7,5	4,6	7,2	4,4	6,8	4,2
			8,8	5,5	8,4	5,2	8,0	5,0
III	1		10,8	6,7	10,4	6,4	9,9	6,1
			12,7	7,9	12,2	7,6	11,6	7,2
	2		15,5	9,7	14,9	9,2	14,2	8,8
			18,2	11,3	17,4	10,8	16,7	10,3
	3		22,8	14,2	21,8	13,6	20,9	13,0
			26,8	16,6	25,6	15,9	24,5	15,2
	4		33,0	20,5	31,6	19,6	30,1	18,7
			38,7	24,1	37,0	23,0	35,4	22,0

Tractor travel speed at an engine speed of 2300 rpm

7.6 BALLASTS

Take into account the maximum authorised load capacities of the axles and tyres. (Total authorised laden weight and Technical specifications of tyres)

For better traction, use wider tyres.

Use the recommended tyre configurations and combinations.

Front weight block (a)	70 kg
Front weight block (b)	23 kg
-- 25 kg additional weight on front weight block	
Maximum number of additional weights	14
Value of additional weights (c)	350 kg
Total weight (a) + (c)	420 kg
Total weight (b) + (c)	373 kg
- 30 kg additional weight on front weight block	
Maximum number of additional weights	14
Value of additional weights (d)	420 kg
Total weight (a) + (d)	490 kg
Total weight (b) + (d)	443 kg
- Single-unit weight on the front linkage	
Front linkage weight	235 kg

7.7 TIRE INFLATION SETTINGS

7.7.1 AV_N MODELS

<i>Rear tyre</i>	<i>Inflation pressure (bar)</i>	<i>Front tyre</i>	<i>Inflation pressure (bar)</i>
250/85 R28	1,6	180/95 R16	3,2
280/85 R28	1,6	6.50-16	4
320/85 R24	1,6	240/70 R16	2,4
320/85 R24	1,6	6.50-16	4
320/85 R28	1,6	7.50 R16	3,2
360/70 R24	1,6	240/70 R16	2,4
360/70 R28	1,6	280/70 R16	2,4

7.7.2 AV_L MODELS

<i>Rear tyre</i>	<i>Inflation pressure (bar)</i>	<i>Front tyre</i>	<i>Inflation pressure (bar)</i>
320/85 R28	1,6	7.50 R16	3,2
340/85 R28	1,6	280/70 R18	2,4
360/70 R24	1,6	240/70 R16	2,4
380/70 R24	1,6	260/70 R16	2,4
380/70 R28	1,6	280/70 R18	2,4
380/85 R28	1,6	280/70 R18	2,4
420/70 R24	1,6	280/70 R16	2,4
420/70 R28	1,6	280/70 R18	2,4

7.7.3 AF_N MODEL

<i>Rear tyre</i>	<i>Inflation pressure (bar)</i>	<i>Front tyre</i>	<i>Inflation pressure (bar)</i>
380/70 R24	1,6	280/70 R18	2,4
380/70 R28	1,6	280/70 R20	2,4
380/85 R28	1,6	9.5 R20	2,8
420/70 R24	1,6	280/70 R18	2,4
420/70 R24	1,6	280/70 R20	2,4
420/70 R28	1,6	300/70 R20	1,6
420/70 R28	1,6	320/70 R20	1,6
480/65 R28	1,6	320/70 R20	1,6

7.7.4 AF_L MODELS

<i>Rear tyre</i>	<i>Inflation pressure (bar)</i>	<i>Front tyre</i>	<i>Inflation pressure (bar)</i>
420/70 R24	1,6	280/70 R20	2,4
420/70 R28	1,6	300/70 R20	1,6

420/70 R28	1,6	320/70 R20	1,6
440/65 R24	1,6	280/70 R18	2,4
480/65 R28	1,6	320/70 R20	1,6

7.7.5 AF_B MODELS

Rear tyre	Inflation pressure (bar)	Front tyre	Inflation pressure (bar)
360/70 R20	1,6	240/70 R16	2,4
360/70 R24	1,6	280/70 R16	2,4
380/70 R20	1,6	260/70 R16	2,4
380/70 R24	1,6	280/70 R16	2,4
380/70 R24	1,6	280/70 R18	2,4
440/65 R24	1,6	280/70 R18	2,4

7.7.6 AV_LB MODELS

Rear tyre	Inflation pressure (bar)	Front tyre	Inflation pressure (bar)
280/85 R24	1,6	180/95 R16	3,2
360/70 R20	1,6	240/70 R16	2,4
360/70 R24	1,6	280/70 R16	2,4
380/70 R20	1,6	260/70 R16	2,4
380/70 R24	1,6	280/70 R16	2,4



8 LUBRICANTS AND FLUIDS

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8.1 LUBRICANTS CHART

The below chart shows the features of lubricants and fluids recommended for the various tractor components.

IMPORTANT: When topping up, do not change the category of oil or fluid.

8.1.1 CAB MODELS

No.	DESCRIPTION	MODEL	CAPACITY	FLUID FEATURES
1	ENGINE OIL	2.85 (<55kW)	8.0L (7.20 kg) +	SAE 10W-40 API CJ-4* (recommended) SAE 5W-30 API CJ-4* (allowed) SAE 0W-20 API CK-4 (cold climates).
		2.95 - 2.105 (>55kW)	0.5L (0.45 kg)	SAE 5W-30 API CJ-4* (recommended) SAE 0W-20 API CK-4 (cold climates).
2	TRANSMISSION OIL / LIFTER	24+24 24+12	41L ÷ 45L	POWER LIFE LUB UNIVERSAL 80W ***
3	COOLING CIRCUIT		11L	SAE J1034 ETHYLENE GLYCOL TYPE 50% MIXTURE WITH WATER (IF CONCENTRATE)
4	FUEL TANKS	See tank capacities table	See tank capacities table	Use STANDARD fuel compliant to standards ASTM D975 or EN 590. The use of additive is not recommended. The fuel known as BIODIESEL is permitted only if compliant to standards EN 14214 - ASTM D6751, mixed with standard fuel in a maximum percentage of 7% (EN 14214) or 5% (standard ASTM D6751). The fuel can be accepted with the following restrictions: sulphur in fuel < 15 ppm.
5	ADBLUE® TANK	2.95 - 2.105 models only	10L	Only top up with permitted urea solutions in accordance with ISO 22241 / DIN 70 070. Top up only with pure urea solution. Mixtures are not permitted
6	FRONT AXLE FINAL DRIVES	AV_L	0.4 +/-0.1L **	POWER LIFE LUB UNIVERSAL 80W ***
		AV_N - AF_N AF_L	0.6L +/-15% **	
	FRONT AXLE DIFFERENTIAL HOUSING	AV_N	4L +/-10%	
		AV_L	3 +/-0.3L	
		AF_N	3.5 +/-0.3L	
		AF_L	4.4L +/-10%	
7	BRAKE CIRCUIT	All versions	0,5L	ATF DEXRON II-D
8	FRONT PTO	for all versions with front PTO	0.75L	POWER LIFE LUB UNIVERSAL 80W ***

NOTE: Choose viscosity based on expected ambient temperature.

NOTE: Select oil viscosity grade according to foreseen ambient temperature.

* or ACEA E9 or API CK-4

** for each final drive

*** specifications to be satisfied: SAE 10W-30 / API GL-4

No.	DESCRIPTION	MODEL	CAPACITY	FLUID FEATURES
9	CAB REFRIGERANT CIRCUIT	All versions	800 g	R 134 A
10	AIR CONDITIONING COMPRESSOR	All versions	135 cc	SP-20
NOTE: Choose viscosity based on expected ambient temperature. NOTE: Select oil viscosity grade according to foreseen ambient temperature. * or ACEA E9 or API CK-4 ** for each final drive *** specifications to be satisfied: SAE 10W-30 / API GL-4				

8.1.2 ROLL BAR MODELS

No.	DESCRIPTION	MODEL	CAPACITY	FLUID FEATURES
1	ENGINE OIL	2.85 (<55kW)	8.0L (7.20 kg) + 0.5L (0.45 kg)	SAE 10W-40 API CJ-4* (recommended) SAE 5W-30 API CJ-4* (allowed) SAE 0W-20 API CK-4 (cold climates).
		2.95 - 2.105 (>55kW)		SAE 5W-30 API CJ-4* (recommended) SAE 0W-20 API CK-4 (cold climates).
2	TRANSMISSION OIL / LIFTER	24+24 24+12	41L ÷ 45L	POWER LIFE LUB UNIVERSAL 80W ***
3	COOLING CIRCUIT		10L	SAE J1034 ETHYLENE GLYCOL TYPE 50% MIXTURE WITH WATER (IF CONCENTRATE)
4	FUEL TANK	See tank capacities table	See tank capacities table	Use STANDARD fuel compliant to standards ASTM D975 or EN 590. The use of additive is not recommended. The fuel known as BIODIESEL is permitted only if compliant to standards EN 14214 - ASTM D6751, mixed with standard fuel in a maximum percentage of 7% (EN 14214) or 5% (standard ASTM D6751). The fuel can be accepted with the following restrictions: sulphur in fuel < 15 ppm.
NOTE: Choose viscosity based on expected ambient temperature. NOTE: Select oil viscosity grade according to foreseen ambient temperature. * or ACEA E9 or API CK-4 ** for each final drive *** specifications to be satisfied: SAE 10W-30 / API GL-4				

No.	DESCRIPTION	MODEL	CAPACITY	FLUID FEATURES
5	ADBLUE® TANK	2.95 - 2.105 models only	10L	Only top up with permitted urea solutions in accordance with ISO 22241 / DIN 70 070. Top up only with pure urea solution. Mixtures are not permitted
6	FRONT AXLE FINAL DRIVES	AV_L - AV_LB	0.4 +/-0.1L **	POWER LIFE LUB UNIVERSAL 80W ***
		AV_N - AV_L - AF_N AF_L - AF_B	0.6L +/-15% **	
	FRONT AXLE DIFFERENTIAL HOUSING	AV_N	4L +/-10%	
		AV_L	3 +/-0.3L	
		AF_N	3.5 +/-0.3L	
		AV_LB - AF_L	4.4L +/-10%	
		AF_B	3.5 L +/-10%	
7	BRAKE CIRCUIT FLUID	All versions	0.5L	ATF DEXRON II-D
8	FRONT PTO	or all versions with front power take-off	0.75L	POWER LIFE LUB UNIVERSAL 80W ***
NOTE: Choose viscosity based on expected ambient temperature. NOTE: Select oil viscosity grade according to foreseen ambient temperature. * or ACEA E9 or API CK-4 ** for each final drive *** specifications to be satisfied: SAE 10W-30 / API GL-4				

8.1.3 TANK CAPACITIES

2.85 Models (55 kW)

		AV_N	AV_L	AV_LB	AF_N	AF_L	AF_B
Under bonnet without front PTO	Roll bar + Cab	72L	72L	72L	72L	72L	72L
Under bonnet with front PTO	Roll bar + Cab	52L	52L	52L	52L	52L	52L
Optional fuel tank (only with front PTO)	Roll bar + Cab	34L	34L	34L	34L	34L	34L

2.95 (67 kW) / 2.105 (75 kW) Models

		AV_N	AV_L	AV_LB	AF_N	AF_L	AF_B
ADBlue front fuel tank under bonnet	Roll bar + Cab	10L	10L	10L	10L	10L	10L
Fuel tank LH	Roll bar	-	-	28L	28L	28L	28L
	Cab	34L	34L	-	34L	34L	-
Fuel tank RH	Roll bar	-	-	47L	47L	47L	47L
Rear fuel tank	Cab	41L	41L	-	59L	59L	-
Total fuel tank capacity	Roll bar	-	-	75L	75L	75L	75L
	Cab	75L	75L	-	-	93L	93L



9 Vehicle putting out of operation and disposal

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9 VEHICLE PUTTING OUT OF OPERATION AND DISPOSAL

9.1 SCRAPPING AND WASTE DISPOSAL

9.1.1 PROTECT ENVIRONMENT!

Prevent pollution of the ground and watercourses

Recover used consumable (oil, lubricant, fuel, coolant, oil filters, air filters, etc) and discard them in accordance with the current regulations in the vehicle's country of use.

If the vehicle and/or its components reach the end of their service life and must be discharged, components must be disposed of in accordance with the current regulations in force; local authorities prescriptions must be respected.

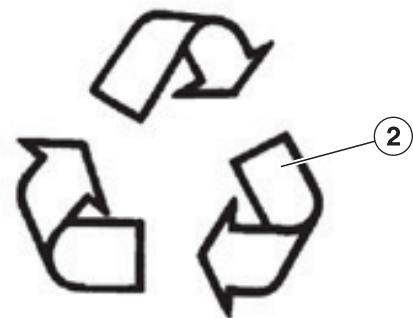
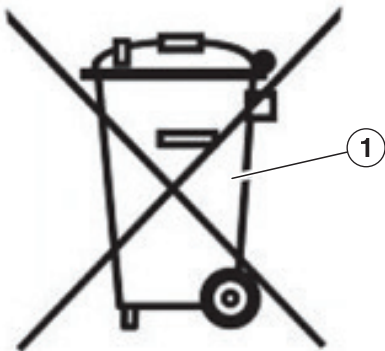
From the vehicle will be recovered:

- Battery
- Lubricants and fluids
- Fuel

Also, working components can be recovered to be used, while the components damaged/worn can be recycled.

No more usable components must not be released into the environment, and can not be disposed of with household waste, but must be disposed of in a particular way. For more information on waste disposal, contact the local authorities responsible or the nearest distributor/dealer.

- *Products accompanied by symbol (1) opposite must not be disposed of with household waste;*
- *Substances used accompanied by symbol (2) opposite must be recycled;*
- *Recover any components which can be reused (e.g. starters, alternators, etc.);*
- *Recover packaging materials and recycle them; do not dispose of them with household waste;*
- *Batteries, fuel, lubricants and fluids must be treated as hazardous waste by specialized companies with special equipment and techniques and disposed of in accordance with the regulations in force;*
- *Respect the prescriptions of the local authorities responsible.*





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