

**D 201 AHG**

**D 301 AHG**



# OPERATOR'S MANUAL

ENGLISH

Original Manual



68.14GB0.00

Revision B



**RENTWAY**

**RENTWAY**

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**D 201 AHG**  
**D 301 AHG**



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| Revision | Updates    |                           |
|----------|------------|---------------------------|
| A        | 19-12-2022 | Original Issue of Manual. |
| B        | 02-10-2023 | Add model D 201 AHG       |

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POB 194

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# 1

## INTRODUCTION

RENTWAY

## CONTENTS INDEX

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## WELCOME

This operator's manual has been designed and compiled with the help of engineers and technical service specialists, to inform the operator of the different aspects of the machine.

The machine operator must take the necessary time to thoroughly read and understand this manual, so they can operate and maintain the machine safely and correctly.

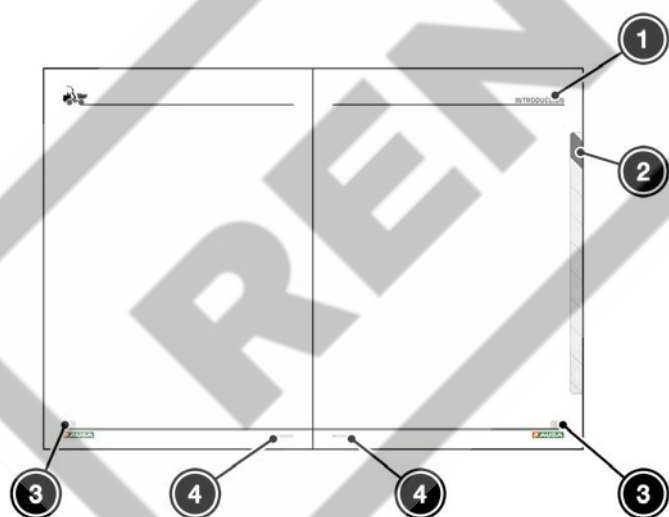
## HOW TO USE THIS MANUAL

The general index lists this manual's contents. In addition, each chapter has a detailed index, indicating the page where different contents can be located.

This manual contains information regarding safety, driving, use, transportation, storage and maintenance of the machine.

The pages of each chapter present the following information:

1. Chapter name.
2. Chapter number.
3. Page number.
4. Manual part number.



*Page format*

**Information:** This manual should be stored in the document case, under the bonnet.

**Information:** The machine may optionally have a document holder fitted for manuals, protected by an anti-vandal system.



*Location of the operator's manual*

## HOW TO USE THIS MANUAL

### Machine identification

This operator's manual covers the following machine models:

- D 201 AHG
- D 301 AHG

Given that this operator's manual may include information about different machine models, it is very important that the operator correctly identifies the machine they are operating.

**Information:** Knowing the correct machine model affects issues such as safety, operation and maintenance.

**Information:** Throughout the manual, any information which refers exclusively to one machine model is identified with the appropriate label:

**D 201 AHG**

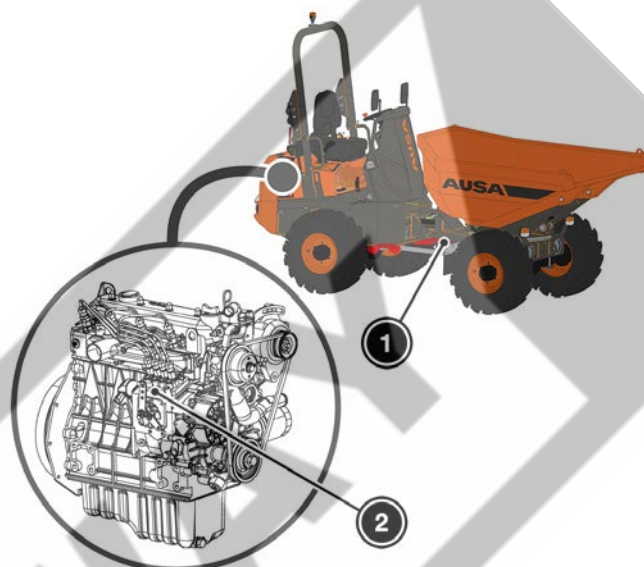
**D 301 AHG**

If the information does not have any of these labels, then it refers to all machine models covered in this manual.

**Information:** If the information has the following label, then it refers to elements and/or functionalities not included in the standard machine. **ACCESSORY**

To identify the machine, it is necessary to know the following information:

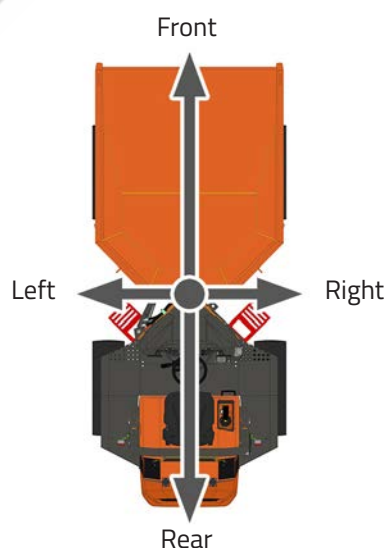
- Machine model
- Date of purchase
- Chassis number (1)
- Engine number (2)



**Information:** The machine model is indicated on the identification plate. For additional information, refer to 'Plates and decals' in Chapter 2.

### Machine orientation

**Information:** The terms right, left, front and rear, when used in this manual, refer to these positions from the operator's seat looking forward.



**Machine orientation**



## WARNINGS

**⚠ DANGER** Indicates a dangerous situation which, if not avoided, will result in death or irreversible injury.

**⚠ WARNING** Indicates a dangerous situation which, if not avoided, may result in death or irreversible injury.

**⚠ CAUTION** Indicates a dangerous situation which, if not avoided, may result in moderate or reversible injury.

**NOTICE** Used to indicate practices not related to physical injury.

**Information:** Convenient information to take into account.

**📖 Environment:** Information related to conditions, practices or procedures which may pose a risk to the environment.

## ACRONYMS

| Term | Meaning                                                                     |
|------|-----------------------------------------------------------------------------|
| ECU  | Electronic Control Unit<br>( <i>Electronic control unit</i> )               |
| ROPS | Roll Over Protective Structure<br>( <i>Roll Over Protective Structure</i> ) |

| Term | Meaning                                                                                       |
|------|-----------------------------------------------------------------------------------------------|
| PPE  | Personal Protection Equipment.                                                                |
| FNR  | Forward (F) – NEUTRAL (N) – Reverse (R)<br>( <i>Forward (F) - NEUTRAL (N) - Reverse (R)</i> ) |
| EN   | European Standard.                                                                            |
| N/A  | Not Applicable.                                                                               |
| W/N  | Without Number.                                                                               |
| SAE  | Society of Automotive Engineers<br>( <i>Society of Automotive Engineers</i> )                 |

## RESPONSIBILITY AND GUARANTEE

This section provides indications regarding liability and warranties related to the machine and its use.

**Information:** AUSA is continually improving its products and reserves the right to make improvements without incurring any obligation to make changes to machines previously sold. Therefore, claims cannot be made based on the data, illustrations or descriptions set forth in this operator's manual.

### Display **ACCESSORY**

**⚠ WARNING Risk of serious injury by electrical shocks.**

Electrically live parts are located inside the display box.

**⚠ WARNING Risk of accident by careless driving.**

The FVS of the machine should be used with caution, complying with applicable driving regulations.

**NOTICE Risk of damage by using high-pressure water.**

Never use high-pressure water on the display. Although it is waterproof, dampness may cause general interior damage.

**NOTICE Risk of damage by incorrect disassembly.**

Disassembling the camera components or the monitor will render the warranty void.

Disassembling the camera will damage the integrity of the camera's watertight seal.

**Information:** The specifications are subject to change without prior warning.

### Machines with built-in electronic control units

**NOTICE Risk of damage by welding with active connections.**

Disconnect all the connectors for the control units during welding operations.

**NOTICE Risk of damage by defective components.**

Replace the defective control units and sensors with new ones, never repair them.

**NOTICE Risk of damage by disconnecting the battery too soon.**

Do not disconnect the battery immediately after stopping the engine. Wait at least two minutes before disconnecting.

### Spare Parts

To guarantee the machine maintains the same technical level as the date it was supplied, always use original AUSA spare parts.

**Information:** For additional information regarding spare parts, please contact an authorised AUSA dealer.



## RESPONSIBILITY AND GUARANTEE

### Fuel

**NOTICE** Risk of damage by using non-conforming fuel.

The use of fuel that does not comply with standard EN 590/ASTM D975 does not guarantee the safe operation or the durability of the different components of the diesel engine.

The use of fuel that does not comply with standard EN 590/ASTM D975 will void the warranty.

**Information:** The specifications of the fuel used, as well its sulphur content, are necessary to meet the compliance requirements in relation to exhaust gas emission where the machine is used.

### Transportation

AUSA is not responsible for the transportation of the machine; this is the dealer's responsibility.

### Protection

**⚠ DANGER** Risk of death or serious injury by not using the ROPS.

Whenever the machine is in use, the Roll Over Protective Structure (ROPS) should be in its operational position. Otherwise, in the event of an accident, the operator may suffer severe injury or death from being crushed by the machine in the case of rollover.

**Information:** Current legislation does not require the mounting, as standard, of a structure for protection from falling objects.

### Lighting equipment

The use of the machine without lighting equipment is allowed only during daylight hours or in well-lit areas.

## EC DECLARATION

In countries where applicable, the machine will be accompanied with the following declaration of conformity:



### EU DECLARATION OF CONFORMITY

The manufacturer **AUSA Center, S.L.U.**, established on c/ Castelladral, 1, 08243 – Manresa – Barcelona – Spain, declares that the machine assigned below:

Generic denomination: **DUMPER**  
 Model/Type: **model**  
 Serial number: **chassis**  
 Year of manufacture: **year\_manufacture**

fulfils all the relevant provisions from the following harmonization legislation from the European Union:

Machinery Directive, 2006/42/EC  
 Electromagnetic Compatibility Directive 2014/30/EU  
 Sound level Directives of machinery used outdoors, 2000/14/EC and Regulation (EC) No 219/2009  
 Directive 2014/53/EU relating to the making available on the market of radio equipment, (when the machine is fitted with a radio equipment for fleet tracking)

based on the following European Standards:

EN 474-1:2006+A6:2019 – Earth-moving machinery – Safety – Part 1: General requirements.  
 EN 474-6:2006+A1:2009 – Earth-moving machinery – Safety – Part 6: Requirements for dumpers.  
 EN ISO 13766-1:2018 – Construction machinery – Electromagnetic compatibility of machines with internal power supply.

The assessment procedure has been carried out in accordance with the provisions relating to non-dangerous machinery in the above mentioned Directives.

Name and address of the person authorized to compile the technical file:

Mr./Mrs.  
**AUSA Center, S.L.U.**  
 c/ Castelladral 1, 08243 – Manresa – Barcelona



Mr./Mrs.  
 Manresa, dd/mm/yyyy

AUSA Center, S.L.U.  
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## UKCA DECLARATION

Machines being placed on the Great Britain market after Brexit will be accompanied with the following declaration of conformity:



### UK DECLARATION OF CONFORMITY

The manufacturer AUSA Center, S.L.U., established on c/ Castelladral, 1, 08243 – Manresa – Barcelona – Spain, declares, under the sole responsibility, that the machine assigned below:

Generic denomination: DUMPER  
Model/Type: model  
Serial number: chassis  
Year of manufacture: year\_manufacture

fulfils all the relevant provisions of the following UK Regulations, (and their amendments):

Supply of Machinery (Safety) Regulations 2008  
Electromagnetic Compatibility Regulations 2016  
Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001  
Radio Equipment Regulations 2017, (when the machine is fitted with a radio equipment for fleet tracking)

based on the following UK designated standards:

EN 474-1:2006+A6:2019 – Earth-moving machinery – Safety – Part 1: General requirements.  
EN 474-6:2006+A1:2009 – Earth-moving machinery – Safety – Part 6: Requirements for dumpers.  
EN ISO 13766-1:2018 – Construction machinery – Electromagnetic compatibility of machines with internal power supply.

The assessment procedure has been carried out in accordance with the provisions relating to non-dangerous machinery in the above mentioned Regulations.

Name and address of the person authorized to compile the technical file:

Mr./Mrs.  
AUSA Center, S.L.U.  
c/ Castelladral 1, 08243 – Manresa – Barcelona



Mr./Mrs.  
Manresa, dd/mm/yyyy

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## SAFETY MEASURES

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### Safety standards must be adhered to without exception.

- Health and safety at work and accident prevention standards should be adhered to during all transport, maintenance or repair operations.
- Follow all operation, maintenance and repair conditions specified in this manual.

AUSA manufactures their machines in accordance with demands for intrinsic protection, as established by current law or standards for the countries where the machine is sold, against dangers of any kind, which may present a risk to health or life, whenever the machine is used and maintained in accordance with such legislation or standards.

Any hazard resulting from improper use, not in compliance with these instructions or others specifically provided with the machine will be the responsibility of the operator and not AUSA.

This chapter gives instructions on how the machine must be used as per the provisions in:

- the 2006/42/EC Machine Safety Directive.
- the EN 474 Part 1 and Part 6 Safety Requirements.
- the Supply of Machinery (Safety) Regulations 2008.

## USING THE MACHINE

### Intended Use

**Information:** Any use other than that intended will be considered improper.

The machine has been designed and manufactured for the transport, dumping and/or dispersion of bulk materials (mortar, concrete, sand, gravel, rubble, etc.). It may also be used in jobs related to gardening, forestry, etc.

The machine has not been designed for full-load long distance transport. Long-distance trips are allowed if they are roundtrips, within a delimited area where one way the machine is full and the other way the machine is empty.

When circulating on public roads, check first the laws that may be applicable where the machine is operated.

### Improper Use

**Information:** Improper use is defined as any use of the machine that does not conform to the criteria and instructions detailed in this manual, or any other uses different than those described here.

### Improper use of the machine may cause serious injury to persons, the machine or the environment.

Below, some of the most frequent and dangerous instances of improper use are listed:

- Failing to comply with the instructions for use and maintenance set forth in this manual.
- Working on floor surfaces with slopes that exceed the recommended operating limits. Refer to *"Driving and Operation on Slopes"* to know the stability limits.
- Working on unstable, unconsolidated ground or on the edge of ditches and trenches.
- Using accessories and equipment for purposes other than those for which they are designed.
- Using accessories and equipment not authorised by AUSA.
- Transporting persons in the skip or on any part other than the operator's seat.
- Transporting objects that stand-out from the skip, or that may be projected during the machine operation.

### USING THE MACHINE

- Transporting materials that adhere to the skip (clay mud, etc.) or that may get in the skip (stone blocks, etc.).
- Overloading. Refer to 'Technical Specifications Table' to check the machine's load capacity.

### OPERATOR REQUIREMENTS AND QUALIFICATIONS

The operator of the machine must not use it until they have read and fully understood this operator's manual, training is accomplished, and operation of the machine is completed under the supervision of an experienced and qualified operator.

It is important that the operator know and comply with all laws and rules applicable on the job site where the machine is operating, including those requiring operator training and certification. It is the user's responsibility to comply with these laws.

The operator of this machine must possess a valid, applicable driver's license, be in good physical and mental condition, have normal reflexes and reaction time, good vision and depth perception, and normal hearing. Operator must not be using medication which could impair abilities or be under the influence of alcohol or any other intoxicant during the work shift.



## GENERAL SAFETY INFORMATION

| Context                      | Description                                                                                                                                                                                                                                                                                                                                                                                                      | Context              | Description                                                                                                                                                                                                                                                                                                                   |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MODIFICATIONS TO THE MACHINE | Any modification which affects the capacity and safety of the machine must be authorised by AUSA or by a responsible manufacturer, modifying, where necessary, the operator's manual and corresponding plates.                                                                                                                                                                                                   | USE                  | The machine may only be used for the purposes for which it has been designed.                                                                                                                                                                                                                                                 |
|                              | AUSA will not be held responsible for any incidences or accidents resulting from the use of non-original spare parts or repairs carried out by unauthorised workshops.                                                                                                                                                                                                                                           | MAINTENANCE          | The operator should carry out periodic maintenance when using the machine to ensure it meets the functional safety requirements.                                                                                                                                                                                              |
|                              | In the case of accessories and equipment being assembled on the base frame of the machine by companies not connected to AUSA, all the requirements and limitations of the machine in relation to mass and dimensions, efficiency of the lighting equipment and adjustments thereto, along with the need for protection or additional systems, must be respected in order to guarantee the safety of the machine. | DAMAGE               | If the Roll Over Protective Structure (ROPS) suffers permanent damage or deformation, it must be replaced with a new one.                                                                                                                                                                                                     |
|                              | Any modifications to the machine may alter the safety conditions and invalidate any declaration issued regarding the machine. Contact AUSA for additional information.                                                                                                                                                                                                                                           | OPTIONAL ACCESSORIES | The use of accessories may reduce the load capacity of the machine.<br>If the machine is equipped with accessories, read carefully the instructions manual specific to that accessory prior to using it. The manuals of all accessories, supplied by their manufacturers, are delivered together with this operator's manual. |

## DURING REFUELLING

| Context             | Description                                                                                                                                                                                                                                                                                                                                                                       | Context      | Description                                                                                                                                                                                                                                                                                                                          |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FIRES OR EXPLOSIONS | <p><b>Risk of fire or explosion by smoking or flames close to fuel vapours.</b></p> <p>Fuel vapours are explosive.</p> <ul style="list-style-type: none"> <li>Do not smoke or cause flames or sparks in refuelling areas.</li> </ul>                                                                                                                                              | PPE          | <p>In order to avoid allergic reactions and other hazards affecting the skin, replenishing of fuel or other fluids should be carried out wearing protective gloves.</p>                                                                                                                                                              |
|                     | <p><b>Risk of fire and explosions by storing fuel in enclosed areas.</b></p> <p>Concentrated fuel vapours may cause fires or explosions.</p> <ul style="list-style-type: none"> <li>Do not store fuel in enclosed areas.</li> </ul>                                                                                                                                               | TRANSFERRING | <p><b>Risk of exposure to explosive vapours by refuelling at unsafe locations.</b></p> <ul style="list-style-type: none"> <li>When refuelling by transferring fuel from a tank, barrel or drum, slowly open the tank's fuel outlet valve. If the tank or drum does not have an outlet valve, use an adequate vacuum pump.</li> </ul> |
| TOXICITY            | <p><b>Risk of intoxication by fuel contact.</b></p> <p>Fuel is toxic if ingested or if it comes into contact with the skin.</p> <ul style="list-style-type: none"> <li>Avoid direct contact of hands and mouth with the fuel.</li> <li>Never transfer the fuel by sucking it through a hose using your mouth.</li> </ul>                                                          | SPILLS       | <p>In the case of a fuel spill, clearly mark the area, spread absorbent material, and inform your supervisor. Take the necessary measures to avoid risks until the spilled fuel has been completely removed and the surface is sufficiently dry.</p>                                                                                 |
|                     | <p><b>Risk of intoxication by vapour inhalation.</b></p> <p>In high concentrations, the fuel vapours may cause dizziness, lack of concentration and even death in the case of prolonged exposure.</p> <ul style="list-style-type: none"> <li>Avoid inhalation of fuel vapours.</li> <li>If symptoms of dizziness are experienced, seek medical assistance immediately.</li> </ul> |              |                                                                                                                                                                                                                                                                                                                                      |



## FOR THE OPERATOR

| Context          | Description                                                                                                                                                                                             |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TRAINING         | Before using the machine, read this operator's manual thoroughly and pay attention to all the safety plates and decals installed on the machine. When in doubt, check with your supervisor.             |
|                  | Operation, maintenance and repair of the machine must only be entrusted to duly trained personnel, who have the required tools and know the intervention and safety procedures relating to the machine. |
| MOBILE TELEPHONE | <p><b>Risk of accident by using mobile phones.</b></p> <p>The use of mobile phones is prohibited while operating the machine, unless the machine is equipped with an approved hands-free system.</p>    |

| Context    | Description                                                                                                                                                                                                                                                                                                   |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PPE        | <p>Request the necessary personal protection equipment to carry out the work in a safe and comfortable fashion, for example:</p> <ul style="list-style-type: none"> <li>▪ Helmet.</li> <li>▪ Ear protectors.</li> <li>▪ Warm clothing.</li> <li>▪ Reflective equipment.</li> <li>▪ Safety goggles.</li> </ul> |
| ENTRAPMENT | <p><b>Risk of entrapment with inappropriate clothing.</b></p> <ul style="list-style-type: none"> <li>▪ Do not operate the machine while wearing bracelets, chains, loose clothing, long hair which is not tied back, etc. as they might get caught in the controls, rotating parts, on edges, etc.</li> </ul> |

## DURING OPERATION

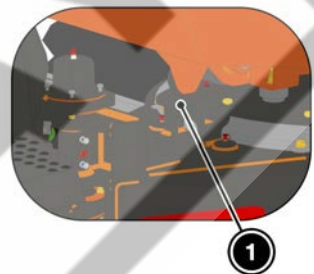
| Context                          | Description                                                                                                                                                                                                                                                                                                                              |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WORKING IN ENCLOSED ENVIRONMENTS | <b>Risk of fire or explosion in enclosed environments.</b> <ul style="list-style-type: none"> <li>Do not operate the machine in areas where there is a risk of fire or explosion, unless it has been prepared for that purpose.</li> </ul>                                                                                               |
|                                  | <b>Risk of intoxication from excessive exhaust fumes in enclosed environments.</b> <p>If the work is to be carried out in closed spaces, make sure the area is well-ventilated to prevent the excessive build-up of exhaust fumes.</p> <ul style="list-style-type: none"> <li>Always stop the engine when it is not required.</li> </ul> |
|                                  | Use ventilation systems to remove dust or flammable gases in the work area.                                                                                                                                                                                                                                                              |
| FIRE                             | <b>Risk of fire with exhaust gas.</b> <p>The exhaust gases from the muffler are very hot.</p> <ul style="list-style-type: none"> <li>To prevent a fire, do not expose dry grass, mowed grass, oil or any other combustible materials to the exhaust gas.</li> <li>Keep the engine and muffler clean at all times.</li> </ul>             |
| BEFORE OPERATION                 | <b>Risk of accident by lack of visibility.</b> <ul style="list-style-type: none"> <li>Make sure that the work area is well illuminated to prevent accidents. Do not operate the machine with insufficient lighting.</li> </ul>                                                                                                           |

| Context                         | Description                                                                                                                                                                                                                                               |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BEFORE OPERATION<br>(continued) | <b>Risk of accident by obstacles in the area or lack of signalling.</b> <ul style="list-style-type: none"> <li>The work area must be in a suitable condition and signposted.</li> <li>Operate in manoeuvre zones free of obstacles and people.</li> </ul> |
|                                 | <b>Risk of death or serious injuries due to unadjusted seat belt.</b> <ul style="list-style-type: none"> <li>Correctly adjust and fasten the seat belt before operating the machine.</li> </ul>                                                           |
|                                 | <b>Risk of injuries due to unadjusted seat.</b> <ul style="list-style-type: none"> <li>Adjust the seat position to the operator's physical build.</li> </ul>                                                                                              |
|                                 | <b>Risk of accident by starting the machine without operator.</b> <ul style="list-style-type: none"> <li>Do not start the machine, or operate the controls if the operator is not on the seat.</li> </ul>                                                 |
|                                 | <b>Risk of death or serious injury by not using the Roll Over Protective Structure (ROPS).</b> <ul style="list-style-type: none"> <li>The Roll Over Protective Structure (ROPS) should be raised (in the operating position).</li> </ul>                  |



## DURING OPERATION

| Context          | Description                                                                                                                                                                                                                                                                        |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DURING OPERATION | <b>Risk of accident due to obstruction of controls.</b> <ul style="list-style-type: none"> <li>Keep the operator's position clear of all objects or tools that could move about and might obstruct the controls or prevent the performance of a maneuver when required.</li> </ul> |
|                  | <b>Risk of accident by using a damaged or defective machine.</b> <ul style="list-style-type: none"> <li>Any anomaly observed whilst using the machine should be reported immediately to a superior or to the maintenance service.</li> </ul>                                       |
|                  | <b>Risk of serious injuries due to body parts exiting the protection area.</b> <ul style="list-style-type: none"> <li>Keep hands, feet and, in general, the entire body inside the protection area of the Roll Over Protective Structure (ROPS).</li> </ul>                        |
|                  | <b>Risk of accident due to unclear visibility.</b> <ul style="list-style-type: none"> <li>Ensure clear forward visibility.</li> <li>If the load impedes forward vision, travel in reverse while exercising caution.</li> </ul>                                                     |
|                  | <b>Risk of fire through contact of flammable elements with the muffler.</b> <p>Make sure there are no flammable elements around the muffler.</p>                                                                                                                                   |

| Context                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DURING OPERATION<br>(continued) | <b>Risk of accident due to undesired movements of the skip.</b> <p>During transport, the longitudinal axis of the skip should be positioned in the direction of travel. To guarantee this, the skip should be inserted in the lock (1).</p>                                                                                                                                      |
|                                 | <b>Risk of severe burn injuries by touching the muffler.</b> <ul style="list-style-type: none"> <li>Do not touch the muffler or become exposed directly to the gases.</li> </ul>                                                                                                                                                                                                                                                                                     |
|                                 | <b>Risk of accident by driving regularly at maximum speed.</b> <p>Regularly driving the machine at maximum speed may represent a danger to the operator and to his or her surroundings.</p> <ul style="list-style-type: none"> <li>Adjust the speed of the machine at all times to the work conditions, and to the area where it is being carried out.</li> <li>Drive at slow speed and in accordance with the ground conditions when transporting loads.</li> </ul> |

## DURING OPERATION

| Context                         | Description                                                                                                                                                                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DURING OPERATION<br>(continued) | <b>Risk of accident by reversing without checking the path of travel.</b> <ul style="list-style-type: none"> <li>Before traveling in reverse, the operator should check that doing so will not put at risk either the machine itself or nearby people or objects.</li> </ul> |
|                                 | <b>Risk of accident by driving with the skip raised.</b> <ul style="list-style-type: none"> <li>Do not drive with the skip raised.</li> </ul>                                                                                                                                |
|                                 | <b>Risk of accident by activating two skip movements simultaneously.</b> <ul style="list-style-type: none"> <li>Do not activate two skip movements simultaneously.</li> </ul>                                                                                                |
|                                 | <b>Risk of accident by turning steering wheel and activating skip movements simultaneously.</b> <ul style="list-style-type: none"> <li>Do not turn the steering wheel and activate skip movements simultaneously.</li> </ul>                                                 |
|                                 | <b>Risk of accident caused by insufficient ground resistance.</b> <p>Check that the resistance of the ground on which you are driving is sufficient for the loaded machine, in particular on access to bridges, embankments, slabbed areas, loading areas, etc.</p>          |
|                                 | <p>Depending on the work to be carried out, the operator must determine the existence of hazards that might require adopting special measures.</p>                                                                                                                           |

| Context                         | Description                                                                                                                                                                                                                                                                |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DURING OPERATION<br>(continued) | <b>Risk of accident caused by driving without due care and attention.</b> <p>Pay full attention to the work. The safety of both the operator and others depends on the operator's caution.</p>                                                                             |
|                                 | <b>Risk of accident by raising too much dust.</b> <ul style="list-style-type: none"> <li>Depending on the ground, try to raise as little dust as possible while traveling.</li> </ul>                                                                                      |
|                                 | <b>Risk of accident by driving too close to persons.</b> <ul style="list-style-type: none"> <li>The operator should ensure that there are no persons in the work area of the machine during operation.</li> </ul>                                                          |
|                                 | <b>Risk of damage to devices with high electromagnetic sensitive.</b> <ul style="list-style-type: none"> <li>If the machine is used in areas where there are devices that are very sensitive to electromagnetic emissions, make sure they will not be affected.</li> </ul> |
|                                 | <b>Risk of accident by loading the skip while operator is in the operator's position.</b> <ul style="list-style-type: none"> <li>The operator must leave the operator's position when the skip is loaded by shovel, crane or other similar external methods.</li> </ul>    |
|                                 | <b>Risk of accident by transporting objects that are too wide.</b> <ul style="list-style-type: none"> <li>Do not transport objects wider than the machine's width, particularly if they are unstable.</li> </ul>                                                           |



## DURING OPERATION

| Context                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DURING OPERATION<br>(continued) | The machine is not designed to tow other vehicles. In the inevitable event that this may be necessary, a load should be placed in the skip to ensure traction.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| DRIVING AND OPERATION ON SLOPES | <p><b>Risk of accident by operating on slopes that are too steep.</b></p> <ul style="list-style-type: none"> <li>Do not operate on slopes which exceed the recommended gradient.</li> <li>Respect the machine's stability limits:</li> </ul> <div style="text-align: center;">  <p>&lt;35% (19°)</p>  <p>&lt;25% (14°)</p>  <p>&lt;20% (11°)</p> </div> |
|                                 | Only access slopes where the ground is stable, as the machine may slide (even on low gradients) on grass, brush, damp metal surfaces, frozen ground, snow, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Context                                        | Description                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRIVING AND OPERATION ON SLOPES<br>(continued) | <p><b>Risk of accident by traveling transversally on a slope.</b></p> <ul style="list-style-type: none"> <li>When accessing a slope, always place the machine on a straight line.</li> <li>Avoid driving diagonally.</li> <li>For transversal traveling, carry out a change in position on flat ground, and then enter the slope in a straight line.</li> </ul> |
|                                                | Pay special attention when working on slopes; move slowly, and avoid diagonal orientation.                                                                                                                                                                                                                                                                      |
|                                                | Gradeability does not mean that this slope can be manoeuvred on with absolute safety under any load, terrain or handling conditions.                                                                                                                                                                                                                            |
|                                                | The machine may skid sideways on stony ground and may lose stability on ground that is uneven.                                                                                                                                                                                                                                                                  |
|                                                | The presence of surface stones and humidity may impair the traction and stability of the machine.                                                                                                                                                                                                                                                               |
|                                                | <p><b>Risk of accidents caused by the machine rolling over on slopes with soft ground.</b></p> <p>On soft ground, the machine may sink and the wheels may become buried. This increases the machine's angle (maximum slope and maximum lateral inclination), which may cause it to tip over.</p>                                                                |

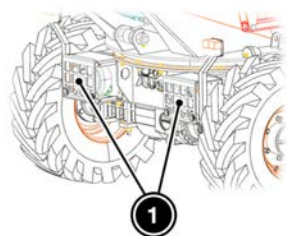
## DURING OPERATION

| Context                                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Context                      | Description                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRIVING AND OPERATION ON SLOPES<br>(continued) | When operating on a slope, it is not advisable to swivel or tip skip.                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MACHINE LOADS<br>(continued) | <b>Risk of accident by transporting people.</b> <ul style="list-style-type: none"> <li>The machine must not be used to transport people, other than the operator.</li> <li>Transporting persons in the skip is prohibited.</li> </ul>                                                                                                                                                                    |
|                                                | Tip the skip to unload it only on the upside of the slope.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                              | <b>Risk of accident by transporting sticking materials.</b> <ul style="list-style-type: none"> <li>Avoid transporting materials that stick to the skip (clayey mud, etc.) or that may get stuck inside (stone blocks, etc.), as they may make the machine unstable during unloading.</li> </ul>                                                                                                          |
|                                                | When traveling on slopes with the skip loaded, the skip should always face the upslope, regardless of the direction of travel.                                                                                                                                                                                                                                                                                                                                                                                                       |                              | <b>Risk of fire or intoxication accident by transporting prohibited materials.</b> <ul style="list-style-type: none"> <li>Do not transport flammable or explosive materials, nor substances that are detrimental to health.</li> </ul>                                                                                                                                                                   |
|                                                | <b>Risk of accident caused by stopping the engine on a slope.</b><br>If the engine stops during operation on a slope, put the travel selector (FNR) in NEUTRAL and restart the engine.                                                                                                                                                                                                                                                                                                                                               |                              | <b>Risk of accident by loading and distributing the material incorrectly.</b><br>The handling, stability and braking distance are affected when loading the machine; for this reason, it is important that the weight is correctly loaded and distributed. <ul style="list-style-type: none"> <li>Always place the load as low as possible to reduce the effects of a high centre of gravity.</li> </ul> |
| MACHINE LOADS                                  | <b>Risk of accident by overloading the machine.</b><br>Overloading the machine makes it unstable, hard to handle and may cause the machine to tip over or components to break. <ul style="list-style-type: none"> <li>Always ensure that the maximum authorised weight of the machine or the maximum axle load when collecting materials in the skip is not exceeded. Refer to 'Technical Specifications Table' in Chapter 7.</li> <li>Carry out maneuvers gently, especially when changing direction on slippery ground.</li> </ul> |                              |                                                                                                                                                                                                                                                                                                                                                                                                          |



## DURING OPERATION

| Context                           | Description                                                                                                                                                                                                                                                                                                            |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| UNLOADING THE SKIP<br>(continued) | <b>Risk of accident by unloading the skip near an unreinforced bank.</b> <ul style="list-style-type: none"> <li>Do not unload the contents of the skip near a bank which is not reinforced, unless there is a safety stop bar for the wheels at a safe distance from the edge.</li> </ul>                              |
|                                   | <b>Risk of accident by unloading with no caution.</b> <ul style="list-style-type: none"> <li>Perform the unloading maneuver progressively, maintaining the stability of the machine.</li> <li>Exercise greater caution when unloading the skip, as the centre of gravity of the machine may change.</li> </ul>         |
|                                   | <b>Risk of accident by unloading close to persons.</b> <ul style="list-style-type: none"> <li>There should be no one near the machine when it is going to tip out the contents of the skip.</li> <li>Before raising or lowering the skip, the operator should ensure that all persons are out of its reach.</li> </ul> |
| ON PUBLIC ROADS                   | <p>To drive the machine on public roads, all necessary approvals and licences must be obtained in accordance with the current legislation of the country where the machine is used, also incorporating the signalling and safety elements included in the legislation.</p>                                             |

| Context                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ON PUBLIC ROADS<br>(continued) | <b>Risk of accident by driving on public roads without caution.</b> <ul style="list-style-type: none"> <li>When driving on public roads, adherence to current applicable laws is mandatory.</li> <li>In some countries, transporting any type of load whilst driving on public roads it is not permitted. Consult the laws that may be applicable where the machine is operated.</li> <li>When approaching a crossroads with poor visibility, slow down, sound your horn and move forward slowly, in accordance with the given visibility conditions.</li> <li>Give way to any pedestrians you might come across while driving.</li> </ul> |
|                                | <b>Risk of accident by driving on public roads with headlights protective grills.</b> <p>If the machine is equipped with a lighting equipment remove the headlights protective grills (1) while driving on public roads.</p>                                                                                                                                                                                                                                                                                                                          |

## DURING OPERATION

| Context                        | Description                                                                                                                                                                                                | Context                        | Description                                                                                                                                         |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| ON PUBLIC ROADS<br>(continued) | <b>Risk of accident by driving on public roads without rotating beacon.</b> <ul style="list-style-type: none"> <li>Activate the rotating beacon when the machine is operating on a public road.</li> </ul> | TOWING TOW LOAD<br>(continued) | <p>Tow loads have restrictions when driving on public roads.</p> <p>When in doubt, check with the local authorities. See 'Towing' in Chapter 6.</p> |
| TOWING TOW LOAD <sup>A</sup>   | Drive carefully and at a reduced speed; and if the tow load is not equipped with an overrun brake, make sure the brakes are strong enough for both the machine mass and that of the tow load.              |                                | The operator must know, at all times, the turning radius and how the towed trailer will behave.                                                     |

## DURING MAINTENANCE

| Context  | Description                                                                                                                                                                                                                                                                                                                   | Context                 | Description                                                                                                                                                                                                                                                                                  |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TRAINING | Maintenance, repair, adjustment, assembly or removal tasks of the machine elements can only be carried out by people who have familiarised themselves with the operator's manual. It is recommended that a list of these persons is made, in which they confirm they have familiarised themselves with the operator's manual. | TRAINING<br>(continued) | Always keep the machine well maintained. Specialised personnel should be assigned to this task and equipped with the necessary tools and appropriate instructions. Only authorised personnel should carry out maintenance and repair work.                                                   |
|          | Respect the environment. When changing oil, fluids, tyres, batteries, etc., take the used materials to the corresponding recycling centres.<br><br>Refer to 'End of Useful Life' in Chapter 6.                                                                                                                                | MACHINE STOPPED         | <b>Risk of death or serious injuries due to performing maintenance tasks in unsafe conditions.</b><br><br>Unless unavoidable, all work on the machine must be done with the machine stationary, the engine stopped, the machine empty, and all the immobilising and locking devices engaged. |
|          | Persons who carry out repairs that carry out repairs, assembly, disassembly or adjustment tasks should follow the instructions contained herein or, where applicable, the instructions supplied separately by AUSA.                                                                                                           |                         | Maintenance, servicing, repair and adjustment tasks on the hydraulic motors should only be carried out with the engine stopped.                                                                                                                                                              |



## DURING MAINTENANCE

| Context                          | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MACHINE STOPPED<br>(continued)   | <p><b>Risk of poisoning in poorly-ventilated areas.</b></p> <p>If the engine of the machine is running in an area with inadequate ventilation or in an enclosed area, there is a risk of fume poisoning.</p>                                                                                                                                                                                                    |
| ERGONOMICS                       | <p><b>Risk of death or serious injuries due to performing maintenance tasks in unsafe conditions.</b></p> <p>Some operations are easier done with the skip raised, and in the unloading position.</p> <p>Before doing so, precautions must be taken to prevent any involuntary movement, using the devices on the machine specifically designed for this purpose. See 'Immobilising the skip' in Chapter 4.</p> |
| IDENTIFICATION PLATES AND DECALS | <p>The plates and decals, instructions and warnings attached to the machine must be kept in a perfectly legible condition.</p> <p>In the event of loss or damage, replace with a new one with the same characteristics as the original one.</p>                                                                                                                                                                 |
| TOWING THE MACHINE               | <p>Before performing the towing operation, follow the instructions provided in 'Towing' in Chapter 6.</p> <p>Ensure that the towing vehicle has sufficient towing and braking capability to be able to perform this operation.</p>                                                                                                                                                                              |

| Context                            | Recommendation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOWING THE MACHINE<br>(continued)  | <p>If the machine needs to be towed, use a tow bar whenever possible or, if none is available, a cable that is strong enough for the job.</p> <p>In all cases, anchor it to the points indicated by AUSA. See 'Towing' in Chapter 6.</p> <p>Perform the maneuver at a speed no greater than 2 km/h, for a distance below 1 km. When driving a towed machine, pay attention to the position of your hands on the steering wheel, so that wheel-whiplash movements do not cause damage.</p>                                                                                                                                                                            |
| HOISTING AND ANCHORING THE MACHINE | <p>During transportation of the machine, the user assumes responsibility for choosing the method of transportation as well as the appropriate anchoring system, ensuring that the equipment used is capable of supporting the weight of the machine being transported, and that all instructions and warnings detailed in this manual are adhered to, in addition to consulting and complying with current transport legislation in force for each country. See 'Transporting on the bed of a vehicle' in Chapter 6.</p> <p>The process of hoisting the machine for manipulation or inspection must be performed at the points indicated in it for this purpose.</p> |

## DURING MAINTENANCE

| Context                                           | Recommendation                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HOISTING AND ANCHORING THE MACHINE<br>(continued) | Before proceeding to hoist the machine, the articulation safety prop should be placed between the two chassis bodies, so that the articulation is immobilised. See ' <i>Immobilising the Chassis</i> ' in Chapter 4.                                                                                                                                                      |
| ELECTRICITY                                       | <p><b>Risk of electrical short cut by contacting unprotected battery posts.</b></p> <p>Unprotected battery posts can accidentally be shorted out by a tool, part, etc.</p> <ul style="list-style-type: none"> <li>Protect the battery posts when carrying out any repair work.</li> </ul>                                                                                 |
|                                                   | <p><b>Risk of damage to electrical and electronic components caused by electrical welding on the machine.</b></p> <ul style="list-style-type: none"> <li>Before carrying out any electrical welding work on the machine, remove the electric and electronic equipment and disconnect the positive post of the battery to avoid possible damage to the wirings.</li> </ul> |
| WHEELS                                            | Split wheels must not be used (those made of two rims bolted together).                                                                                                                                                                                                                                                                                                   |

| Context                                | Recommendation                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WHEELS<br>(continued)                  | When changing a tyre, make sure it is fitted with the tread pattern facing the right way.                                                                                                                                                                                                                                                    |
|                                        | When replacing the tyres, ensure their interchangeability and follow the tyre manufacturer's safety instructions.                                                                                                                                                                                                                            |
| BEFORE MAINTENANCE WORK<br>(continued) | Before carrying out work on the machine, the articulation safety prop should be placed between the two chassis bodies so the articulation is immobilised. See ' <i>Immobilising the Chassis</i> ' in Chapter 4.                                                                                                                              |
|                                        | <p><b>Risk of serious burns from hot coolant spraying.</b></p> <p>If the coolant is hot, opening the coolant tank can spray hot coolant out.</p> <ul style="list-style-type: none"> <li>Before removing the coolant tank cap or working on the engine cooling system, wait 30 minutes for the coolant temperature to drop enough.</li> </ul> |
| AFTER MAINTENANCE WORK                 | Once the adjustment or maintenance tasks are completed, place all protection devices in their original position.                                                                                                                                                                                                                             |



## DURING MAINTENANCE

| Context    | Recommendation                                                                                                                                                                                                                                                       |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HYDRAULICS | Before disconnecting the hydraulic hoses, identify or mark them so they may be reconnected correctly later.                                                                                                                                                          |
|            | <b>Risk of fluid spraying.</b> <ul style="list-style-type: none"><li>Before disconnecting fluid systems, make sure there is no pressure in them and take steps to avoid unexpected spills. See "Depressurizing the hydraulic circuit" in <i>Chapter 8</i>.</li></ul> |
|            | <b>Risk of fires and explosions by using naked flames for fluid inspections.</b> <p>Never use a naked flame to check fluid levels and leaks.</p>                                                                                                                     |

## DANGEROUS AREAS AROUND THE MACHINE

During operation and use, there are dangerous areas around the machine.

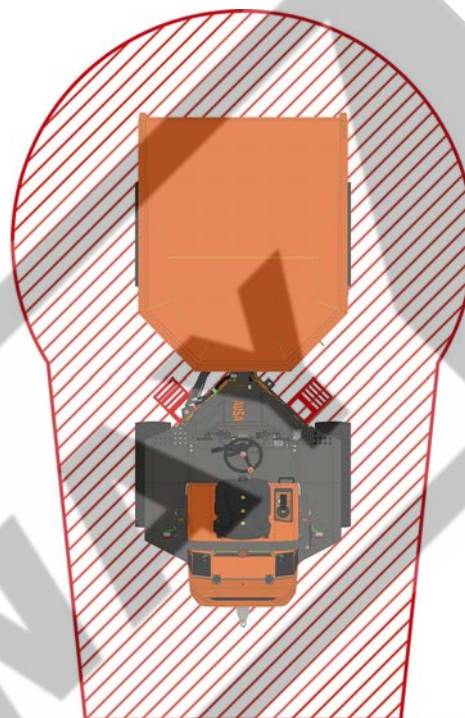
Dangerous areas are determined as follows:

- Front and side of the machine: 1 m.
- Back of the machine: 2 m.

The operator must stop the machine and avoid using it if there are people within these dangerous areas, or whenever someone could enter them imminently.

**⚠ WARNING** Risk of accident by people being within the dangerous areas.

Warn anyone located around the machine to keep away from dangerous areas during machine use.



*Dangerous areas around the machine.*



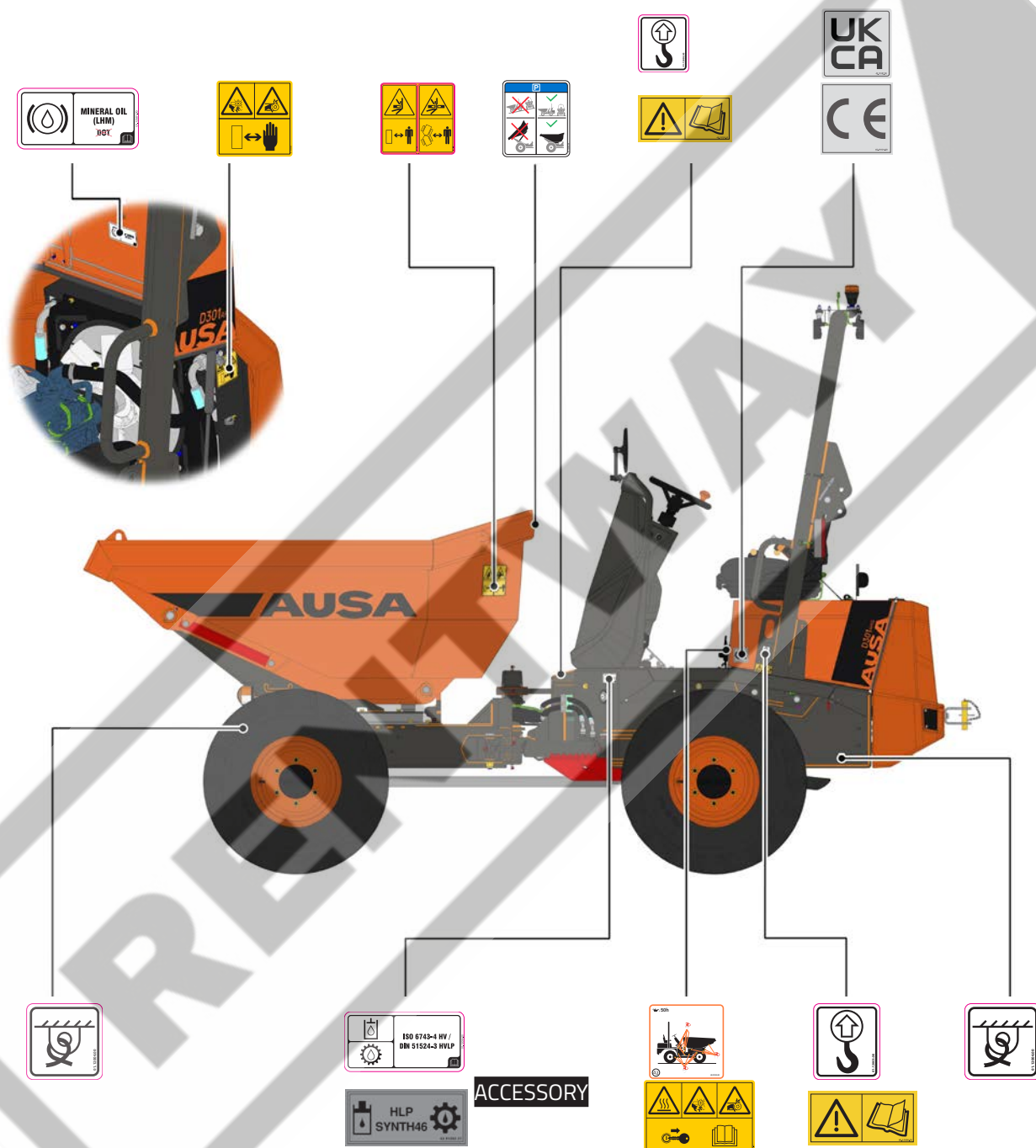
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## IDENTIFICATION PLATES AND DECALS

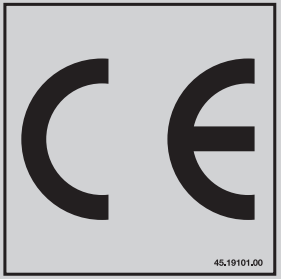
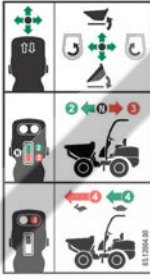
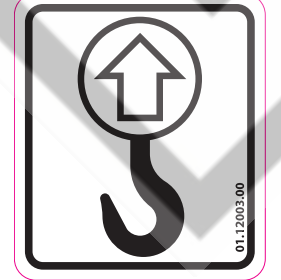




## IDENTIFICATION PLATES AND DECALS



## IDENTIFICATION PLATES AND DECALS

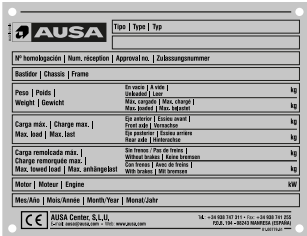
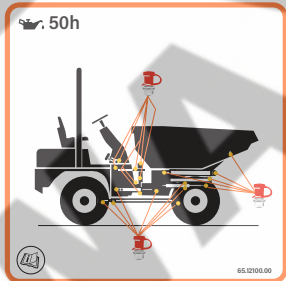
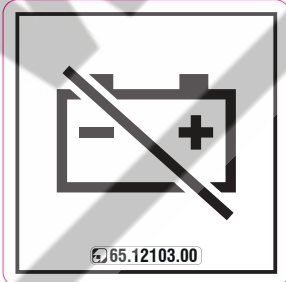
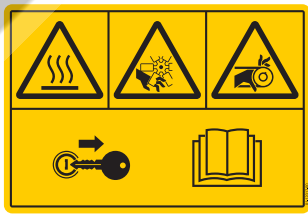
| Plate                                                                               | Description                                                                                                                                                               | Plate                                                                                | Description                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | EC marking indication (except machines being placed on non-EU market).                                                                                                    |    | Provide information about joystick operation and the functionalities of each component.                                                                                                                                                                                                                                                   |
|   | UKCA marking indication (only machines being placed on the Great Britain market after Brexit).                                                                            |   | Warns staff and provides information about machine operation: <ul style="list-style-type: none"> <li>Direction of travel with the machine loaded and maximum slope.</li> <li>Direction of travel with the machine unloaded and maximum slope.</li> <li>Avoid operational dangerous situations in the work area of the machine.</li> </ul> |
|  | Provides information about fuel specifications and refers to the operator's manual.                                                                                       |  | Provides information about: <ul style="list-style-type: none"> <li>Read and understand the operator's manual.</li> <li>Fasten your seat belt.</li> <li>Use of ear protectors.</li> </ul>                                                                                                                                                  |
|  | Provides information about the location of the tie-down points where the slings or chains are to be attached when anchoring the machine to a platform for transportation. |                                                                                      |                                                                                                                                                                                                                                                                                                                                           |
|  | Provides information about the location of the hoisting points where the slings or chains are to be attached when lifting the machine.                                    |                                                                                      |                                                                                                                                                                                                                                                                                                                                           |



## IDENTIFICATION PLATES AND DECALS

| Plate | Description                                                                                                                               | Plate | Description                                                                                        |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------|
|       | <p>Provides information about tyre inflation pressure and refers to the operator's manual.</p> <p><b>D 201 AHG</b></p>                    |       | <p>Provides information about the type of hydraulic oil, and refers to the operator's manual.</p>  |
|       | <p>Provides information about tyre inflation pressure and refers to the operator's manual.</p> <p><b>D 301 AHG</b></p>                    |       | <p>Provides information about the type of biodegradable hydraulic oil.</p> <p><b>ACCESSORY</b></p> |
|       | <p>Provides information about the guaranteed acoustic power in the workplace environment where the machine operates.</p>                  |       | <p>Warn staff and provide information regarding proximity to high-temperature areas.</p>           |
|       | <p>Warns staff and provides information about people other than the operator, who should keep away from the machine during operation.</p> |       | <p>Warns staff and provides information regarding proximity to areas with rotating parts.</p>      |
|       | <p>Warns staff and provides information about the out of order machine.</p>                                                               |       | <p>Roll Over Protective Structure (ROPS) characteristics plate.</p>                                |

## IDENTIFICATION PLATES AND DECALS

| Plate                                                                               | Description                                                                                 | Plate                                                                                | Description                                                                                                                                                 |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | Provides information about brake fluid specifications, and refers to the operator's manual. |    | Refers to the operator's manual.                                                                                                                            |
|   | Machine specifications plate.                                                               |   | Provides information about greasing points and frequency, and refers to the operator's manual.                                                              |
|  | Provides information about engine oil specifications, and refers to the operator's manual.  |  | Provide information about the location of the battery cut-off switch.                                                                                       |
|                                                                                     |                                                                                             |  | Warns staff and provides information about stopping the engine before opening covers to access the engine compartment, and refers to the operator's manual. |

# 3

## GETTING TO KNOW THE MACHINE

RENTWAY

### CONTENTS INDEX

|                                         |    |
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## GETTING TO KNOW THE MACHINE

The machine is designed for moving earth using a skip.

Depending on the features of each model, the following types are identified:

Payload:

- 2000 Kg **D 201 AHG**
- 3000 Kg **D 301 AHG**

Download type:

- Swivel

The machine travels using the following systems:

Transmission:

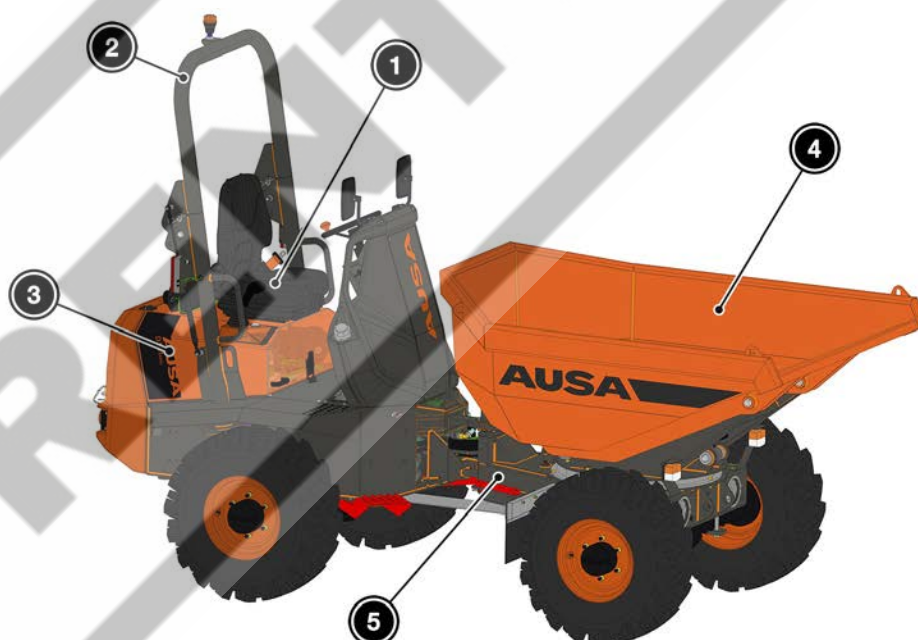
- Hydrostatic

Engine:

- Diesel

### Machine Parts

| Item | Part                                  |
|------|---------------------------------------|
| 1    | Seat                                  |
| 2    | Roll Over Protective Structure (ROPS) |
| 3    | Diesel engine                         |
| 4    | Skip                                  |
| 5    | Chassis                               |



Machine Parts

## OPERATOR'S POSITION

### Getting in and out of the machine

**⚠ WARNING** Risk of serious injuries by grabbing or jerking the steering wheel to get in and out of the machine.

- Get in and out the operator's position facing the machine, using the 3 support points and ensuring that no part is activated in the process.
- Never grab or jerk the steering wheel to get in and out of the machine.

**⚠ WARNING** Risk of accident by using the machine with dirty or wet hands and shoes.

- Always check that your hands and the soles of your shoes are clean and dry before getting in/out of the machine.

The machine has steps (1) and handles (2) on both sides to facilitate operator access.



### Seat belt

**⚠ DANGER** Risk of death or serious injuries by using the machine without the seat belt.

The seat belt is an important part of this safety system and the operator must always fasten it before operating the machine. If the seat belt is not fastened and the machine tips over, the driver may suffer serious injury or death as a result of being crushed.

- Always fasten the seat belt before operating the machine.

**Information:** If the machine is parked on a steep slope, the seat belt roller may lock.

*The machine's seat belt is the roll-up type.*

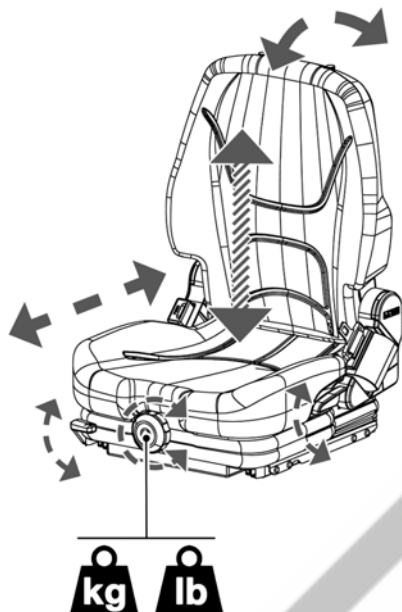


**Seat belt**



## OPERATOR'S POSITION

### Seat adjustment

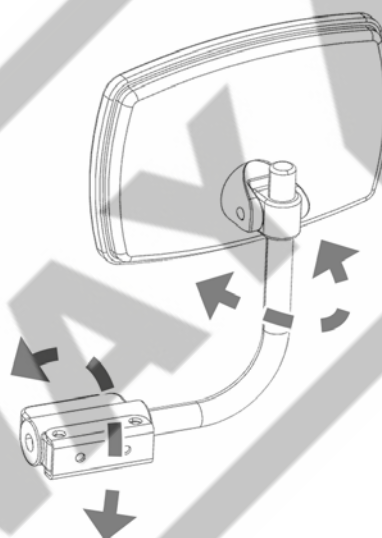


**Adjust the position and suspension of the seat**

**Information:** The seat is an essential component, reducing vibrations and impacts to the operator. Consult the official AUSA dealer, if the seat is to be replaced. For additional information on the vibration levels, see "Technical Features Table" in Chapter 7.

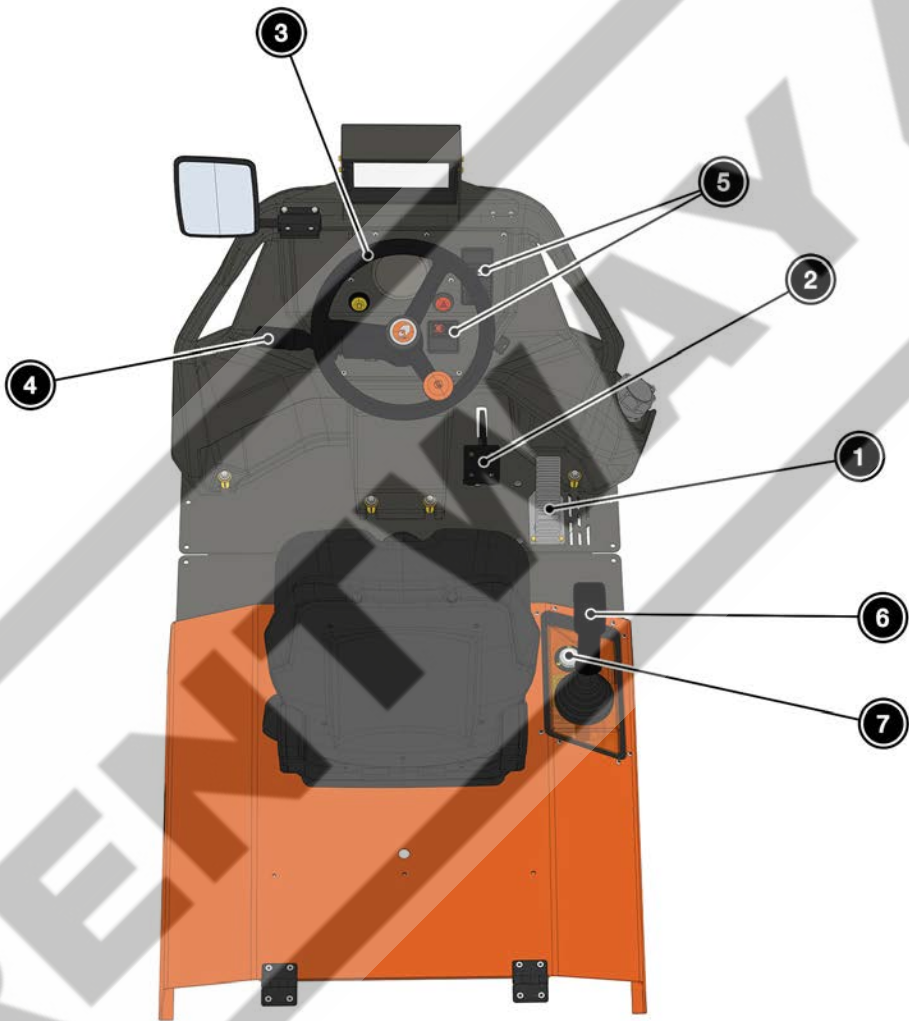
### Adjust the rear-view mirrors

**Information:** Objects in rear-view mirrors are closer than they appear.



**Adjust the rear-view mirrors**

CONTROLS

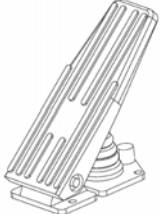
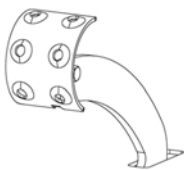
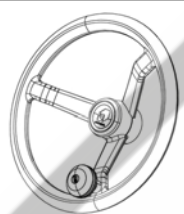
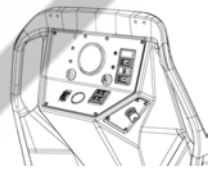


Control panel

|   |
|---|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |
| 8 |
| 9 |



## CONTROLS

| No. | Part                                     | Figure                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----|------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Accelerator pedal                        |    | Used to increase the revolutions of the diesel engine. Releasing it reduces the revolutions to idle speed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2   | Brake pedal                              |    | Used to activate the brakes proportionally.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3   | Steering wheel                           |   | Used to drive the direction of the machine, turning the articulation of the chassis towards the left or right.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4   | Multifunction switch<br><b>ACCESSORY</b> |  | <p>Allows the following elements of the machine to be controlled:</p> <ul style="list-style-type: none"> <li>▪ Horn: Activated by pressing the switch on the end of the lever.</li> <li>▪ Indicators: Push the lever forward or backwards to activate the right or left side direction.</li> <li>▪ Lighting equipment: Turning the switch on its axis allows selecting between the types of illumination: <ul style="list-style-type: none"> <li>▪ Lights off.</li> <li>▪ Sidelights.</li> <li>▪ Low beam.</li> <li>▪ Pushing down the lever activates the high beam.</li> </ul> </li> <li>▪ Passing signal: Activates when pulling up the lever.</li> </ul> |
| 5   | Control panel                            |  | See ' <i>Instruments panel</i> ' in this chapter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

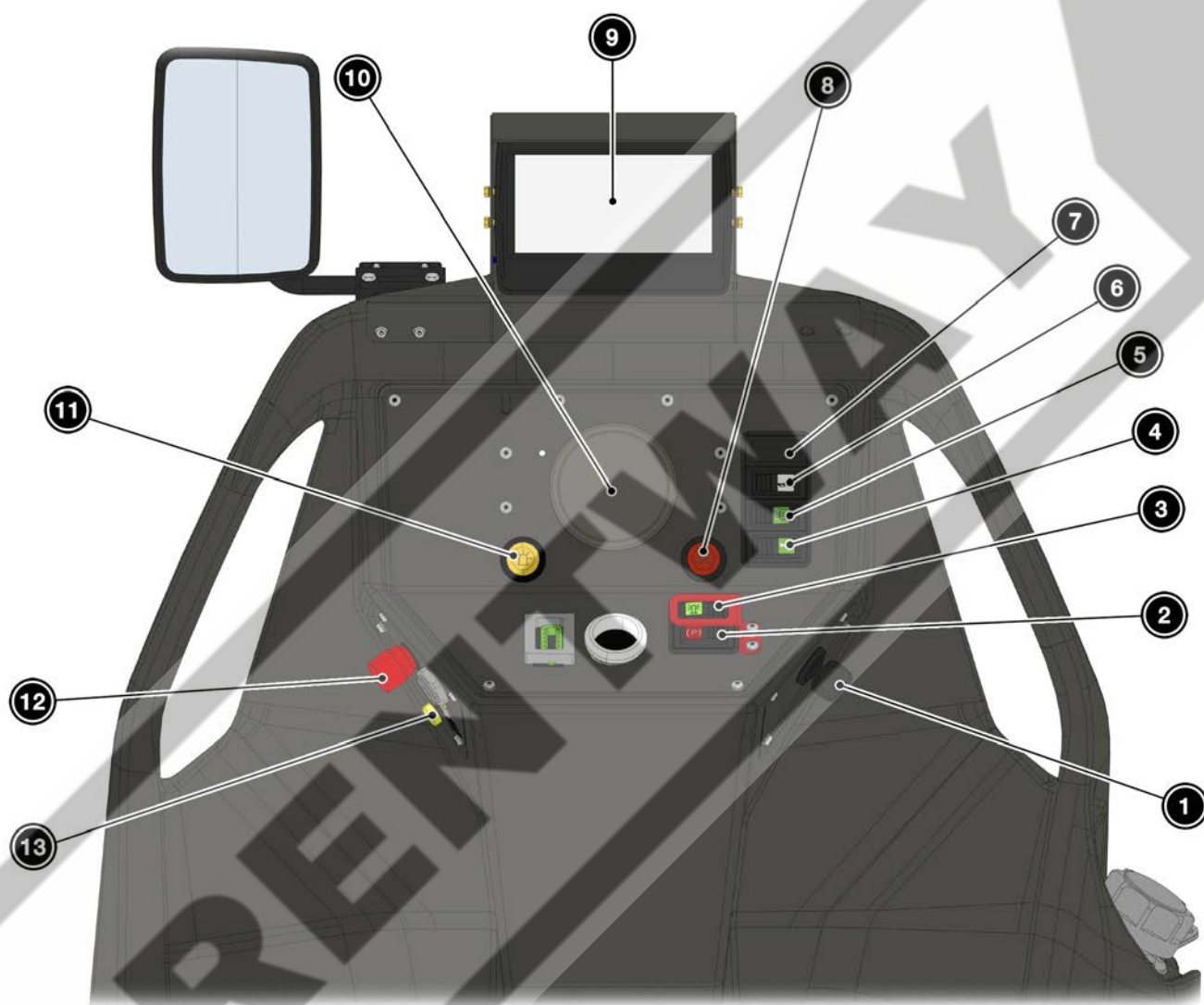
CONTROLS

| No. | Part     | Figure                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----|----------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6   | Joystick |  | <p>Allows the following machine functions to be controlled:</p> <ul style="list-style-type: none"><li>Travel selector (FNR).<br/>The direction of travel is chosen by a switch located on the lower part of the joystick handle. The selected travel direction is displayed on the upper part of the joystick and the multifunction panel:</li><li>FORWARD (F): Forward arrow.</li><li>NEUTRAL (N): Arrows off.</li><li>REVERSE (R): Reverse arrow.</li></ul> <p><b>Information:</b> See 'Machine Orientation' in Chapter 1.</p> <p>Transmission slow / fast speed:<br/>Button (1) on the lower part of the joystick handle can be used to select between fast and slow speed.<br/>The selected speed is displayed on the multifunction panel.</p> <p><b>Information:</b> When the machine is started, the selected default speed is slow.</p> <p>Skip movements:</p> <ul style="list-style-type: none"><li>Forward/back: Used to raise or lower the skip.</li><li>Left/right: Used to swivel the skip.</li></ul> <p><b>NOTICE</b> Before swivelling the skip, raise it to take out the central lock (1). Also, when lowering the skip, try to center it as much as possible so that it inserts correctly in the central lock.</p>  |



## CONTROLS

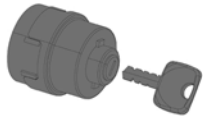
### Control panel



*Control panel*

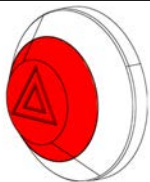
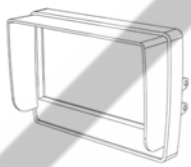
**Information:** All switches and push-buttons are backlit, so that they can be easily identified in low-light conditions.

## CONTROLS

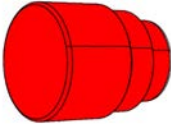
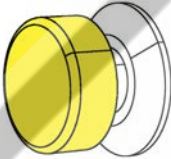
| No. | Part                               | Figure                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----|------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Ignition switch                    |    | It has the following positions: <ul style="list-style-type: none"> <li>▪ Stop (0).</li> <li>▪ Ignition (I).</li> <li>▪ Start (II).</li> </ul>                                                                                                                                                                                                                                                                                                                                         |
| 2   | Parking brake                      |    | Used to apply the parking brake; it has two positions: <ul style="list-style-type: none"> <li>▪ Deactivated.</li> <li>▪ Activated.</li> </ul> While the parking brake is activated, the switch remains on.<br><b>Information:</b> The parking brake activates automatically in the following conditions: <ul style="list-style-type: none"> <li>▪ 3 seconds after leaving the operator's seat.</li> <li>▪ 3 seconds after selecting NEUTRAL with the travel selector (FNR)</li> </ul> |
| 3   | Green rotating beacon<br>ACCESSORY |  | Deactivates the green rotating beacon when the seat belt is fastened; it has two positions: <ul style="list-style-type: none"> <li>▪ Activated.</li> <li>▪ Deactivated.</li> </ul> While the green rotating beacon is deactivated, the switch light remains on.                                                                                                                                                                                                                       |
| 4   | Horn                               |  | When pressed, the horn sounds.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5   | Work lights<br>ACCESSORY           |  | Used to activate the work lights; it has 2 positions: <ul style="list-style-type: none"> <li>▪ Deactivated.</li> <li>▪ Activated.</li> </ul> While the work lights are on, the switch remains on.                                                                                                                                                                                                                                                                                     |
| 6   | Reverse travel alarm<br>ACCESSORY  |  | Used to deactivate the reverse travel alarm, only if the lighting system is on; it has two positions: <ul style="list-style-type: none"> <li>▪ Activated.</li> <li>▪ Deactivated.</li> </ul> While the reverse travel alarm is off, the switch light remains on.                                                                                                                                                                                                                      |



## CONTROLS

| No. | Part                              | Figure                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----|-----------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7   | Joystick lock<br><b>ACCESSORY</b> |    | <p>Locks the movement of the joystick; it has two positions:</p> <ul style="list-style-type: none"> <li>▪ Unlocked.</li> <li>▪ Locked.</li> </ul> <p>While the joystick is locked, the switch light remains on.</p>                                                                                                                                                                                                                |
| 8   | Hazard lights<br><b>ACCESSORY</b> |    | <p>Used to activate the hazard lights (the indicators come on simultaneously).</p> <p>While they are activated, the switch light flashes.</p>                                                                                                                                                                                                                                                                                      |
| 9   | FVS display<br><b>ACCESSORY</b>   |   | <p>Activated when the following conditions are met:</p> <ul style="list-style-type: none"> <li>▪ Ignition switch in IGNITION (I) position.</li> <li>▪ Forward or reverse travel selected.</li> <li>▪ Parking brake deactivated.</li> </ul> <p>For more information, see 'FVS display' in this chapter.</p> <p><b>Information:</b> There may be a switch to deactivate the proximity sensors acoustic warning. <b>ACCESSORY</b></p> |
| 10  | Multifunction instrument          |  | See 'Multifunction Instrument' in this chapter.                                                                                                                                                                                                                                                                                                                                                                                    |
| 11  | Rotating beacon                   |  | <p>Used to switch on the rotating beacon.</p> <p>While the rotating beacon is on, the switch remains on.</p>                                                                                                                                                                                                                                                                                                                       |

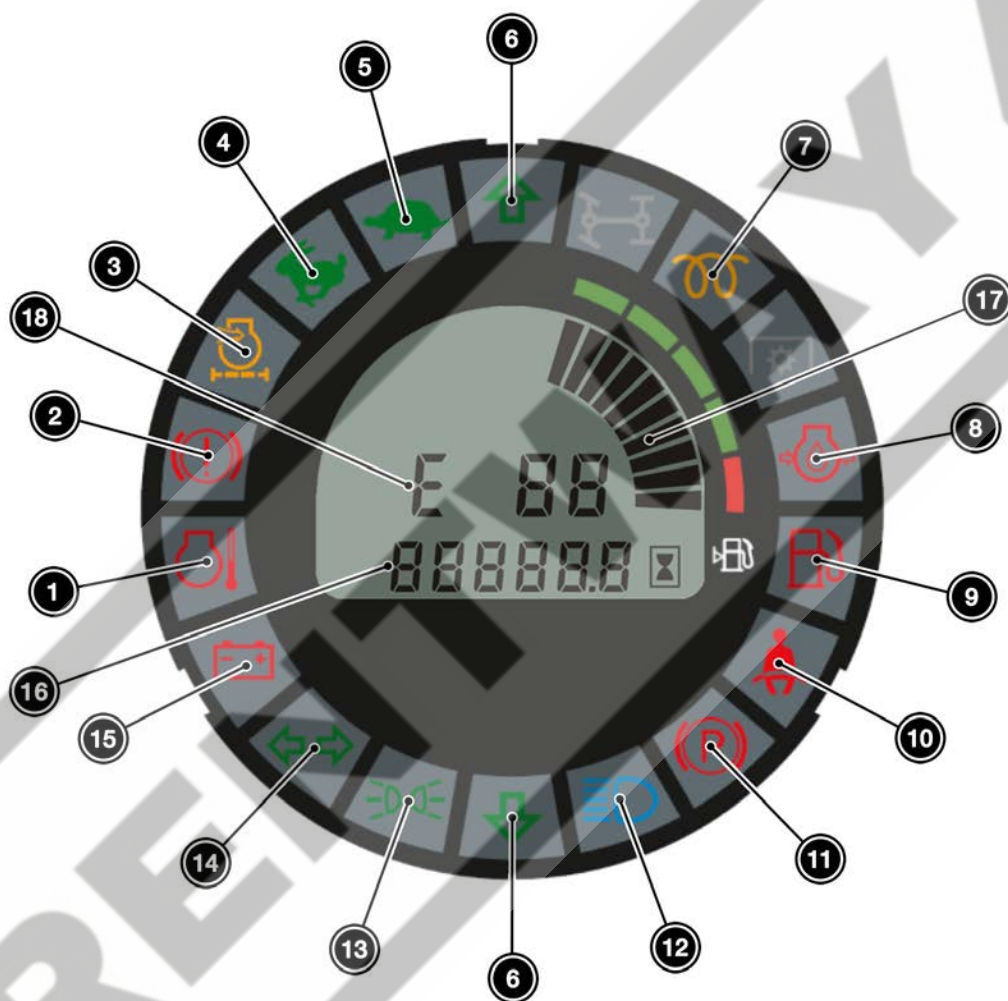
CONTROLS

| No. | Part                                                   | Figure                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----|--------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12  | Emergency stop<br>ACCESSORY                            |    | <p>Used to stop the machine in case of an emergency.</p> <ul style="list-style-type: none"><li>▪ Press to activate.</li><li>▪ To deactivate it, rearm the button turning it counterclockwise.</li></ul> <p><b>Information:</b> Before starting the machine again, identify the cause of the emergency stop.</p> <p><b>⚠ WARNING</b> Risk of accident by activating the emergency stop with the machine moving.</p> <p>The emergency button activates the parking brake regardless of the travel speed of the machine.</p> |
| 13  | Audible warning for FVS proximity sensors<br>ACCESSORY |  | <p>Used to activate/deactivate the audible warning for FVS proximity sensors.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                         |



## CONTROLS

### Multifunction instrument



*Multifunction instrument*

## CONTROLS

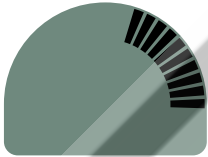
| No. | Part                                | Figure                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----|-------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | High coolant temperature            |    | Lights up when the temperature of the coolant is too high. A continuous audible warning sounds.<br>If this happens, proceed as instructed in <i>"Engine overheating" in Chapter 5.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 2   | Brake fluid level                   |    | Lights up when the level is too low.<br>See <i>'Refill brake fluid' in Chapter 8.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3   | Air filter clogged                  |    | Lights up when the air filter has become clogged.<br>Follow the procedure described in <i>'Cleaning or Changing the Air Filter' in Chapter 8.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 4   | High-speed indicator                |   | Lights up when activating the fast speed using the red button located on the lower part of the joystick handle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 5   | Slow speed indicator                |  | Lights up when activating the slow speed using the yellow button located on the lower part of the joystick handle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 6   | Forward / Reverse travel indicators |  | <p>Indicates the selected direction of travel:</p> <ul style="list-style-type: none"> <li>FORWARD (F): Forward arrow.</li> <li>NEUTRAL (N): Arrows off.</li> <li>REVERSE (R): Reverse arrow.</li> </ul> <p><b>Information:</b> The arrow indicators on the top part of the joystick handle only show the travel selector (FNR) position.</p> <p>For the forward travel or reverse travel indicator to light up on the multifunction panel, the following conditions must be met:</p> <ul style="list-style-type: none"> <li>Parking brake deactivated.</li> <li>Operator seated on the seat.</li> </ul> <p>If this is not the case, both arrows will remain off, regardless of the selection.</p> <p><b>Information:</b> After the engine starts, the parking brake is applied and released, or the operator leaves the machine while a direction of travel is selected, NEUTRAL must be selected to reengage forward or reverse travel.</p> |



## CONTROLS

| No. | Part                                     | Figure | Description                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----|------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7   | Cold start system                        |        | Lights up when the cold start system is in operation.<br>Start the engine when the ' <i>Cold start system</i> ' indicator light has switched off.                                                                                                                                                                                                                                                                  |
| 8   | Diesel-engine oil pressure               |        | Lights up with low diesel-engine oil pressure. A continuous acoustic warning sounds.<br>Stop the engine immediately and refill following the indications in ' <i>Refilling engine oil</i> ' in Chapter 8.                                                                                                                                                                                                          |
| 9   | Fuel reserve                             |        | Lights up when the fuel level in the tank is too low.<br>Refuel following the indications in section ' <i>Refuelling</i> ' in Chapter 4.                                                                                                                                                                                                                                                                           |
| 10  | Seat belt                                |        | Lights up when: <ul style="list-style-type: none"> <li>The presence of the operator is detected on the seat</li> <li>Forward travel or reverse travel is selected</li> <li>The operator is seated with the seat belt unfastened</li> </ul> Also, an intermittent acoustic warning sounds.                                                                                                                          |
| 11  | Parking brake                            |        | Lights up when the parking brake is activated.<br>It has 2 operating modes: <ul style="list-style-type: none"> <li>The parking brake has been applied by the operator using the parking brake switch.</li> <li>The parking brake has been automatically applied by the machine (hill-holder function). This function is activated 3 seconds after selecting NEUTRAL (N) with the travel selector (FNR).</li> </ul> |
| 12  | High-beam headlights<br><b>ACCESSORY</b> |        | Lights up when they are activated.                                                                                                                                                                                                                                                                                                                                                                                 |

## CONTROLS

| No. | Part                           | Figure                                                                              | Description                                                                                                                                  |
|-----|--------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 13  | Sidelights<br><b>ACCESSORY</b> |    | Lights up when they are activated.                                                                                                           |
| 14  | Indicators<br><b>ACCESSORY</b> |    | Flashes when the side direction lights are activated. When the flashing is too fast, this indicates that a light is not operating correctly. |
| 15  | Battery charge                 |    | Lights up when there is a fault in the battery charge circuit. Contact the AUSA authorised dealer.                                           |
| 16  | Fuel level                     |   | Shows the fuel level in the tank. If it is too low, the 'Fuel reserve' indicator comes on (9).                                               |
| 17  | Fault code                     |  | It appears when a fault is detected in the machine.<br>Contact the AUSA authorised dealer.                                                   |
| 18  | Hours of service               |  | It displays the period of time the operator has been using the machine.                                                                      |



## CONTROLS

### Full Visibility System

**ACCESSORY**

The Full Visibility System comprises two systems:

- Visualisation (cameras and display).
- Proximity sensors.

#### **⚠ WARNING Risk of accident due to careless driving.**

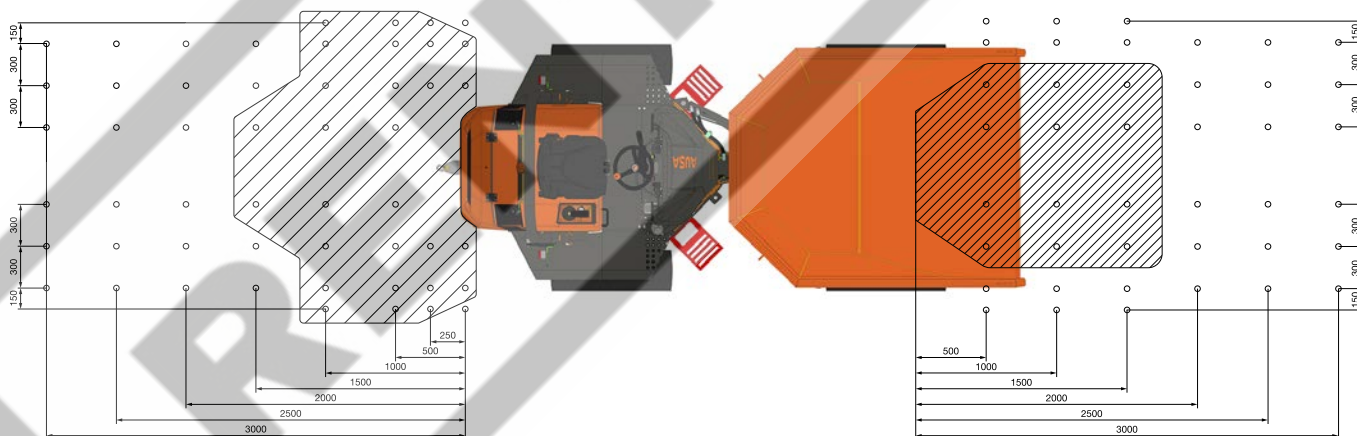
It is possible that the proximity sensors system does not detect thin or low objects, materials that absorb sound (snow, cotton, foam rubber) or objects located below the counterweight.

The proximity sensors system informs that an obstacle has been detected by flashing the appropriate asterisk, and emitting an acoustic signal with a voice message. The flashing frequency increases the closer the obstacle becomes to the sensor.

**Information:** The voice warnings are always in English.

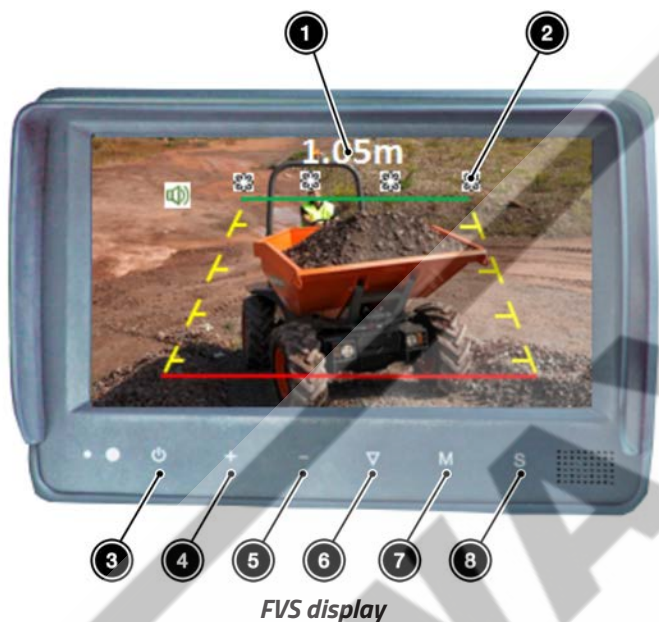
The guidance grid may not reflect the reality due to the position of the camera and its lens.

The objects within the camera's field of vision might be closer or further away than they appear.



**FVS range**

CONTROLS



| No. | Part                     | Figure | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----|--------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Distance to the obstacle | 1.05m  | Indicates the distance to the obstacle as detected by the sensors and corresponding to the image displayed on the screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2   | Active sensor            |        | Flashes when the corresponding sensor detects an obstacle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3   | Activation/Deactivation  |        | <p>Is used to activate and deactivate the screen.</p> <ul style="list-style-type: none"><li>When selecting a direction of travel, the appropriate camera is shown on the display, regardless of whether the display is on or off:<ul style="list-style-type: none"><li>FORWARD (F): skip-side camera.</li><li>REVERSE (R): counterweight side camera. <b>ACCESSORY</b></li></ul></li><li>With the travel selector (FNR) in NEUTRAL (N), the display shows the latest selection made by the operator:<ul style="list-style-type: none"><li>Display on: skip-side camera.</li><li>Screen deactivated.</li></ul></li></ul> |



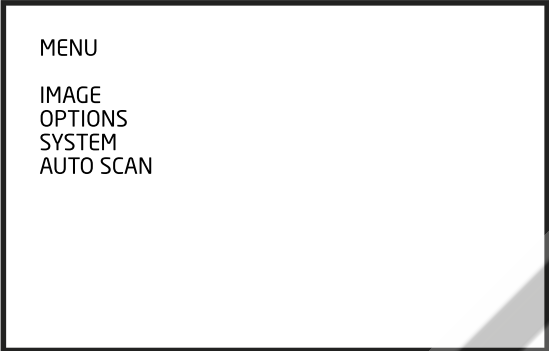
## CONTROLS

| No. | Part                                | Figure | Description                                                                                                                                                                                                         |
|-----|-------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4   | Increase brightness<br>Modify value | +      | <ul style="list-style-type: none"> <li>On the FVS screen: Used for increasing the screen brightness.</li> <li>In the FVS menu: It allows the operator to modify the value of the selected parameter.</li> </ul>     |
| 5   | Reduce brightness<br>Modify value   | —      | <ul style="list-style-type: none"> <li>On the FVS screen: Used for decreasing the display brightness.</li> <li>In the FVS menu: It allows the operator to modify the value of the selected parameter.</li> </ul>    |
| 6   | Guidance grid<br>Menu downwards     | ▽      | <ul style="list-style-type: none"> <li>On the FVS display: Used to toggle the display of the guidance grid.</li> <li>In the FVS menu: Used for going down, sequentially, through each of the parameters.</li> </ul> |
| 7   | Menu                                | M      | Allows the operator to access the FVS main menu. For additional information about the screens in this menu, see ' <i>FVS Menu</i> '.                                                                                |
| 8   | Camera                              | S      | With the travel selector (FNR) in NEUTRAL (N), it allows the operator to toggle the display between the skip side and counterweight side <b>ACCESSORY</b> .                                                         |

CONTROLS

FVS menu

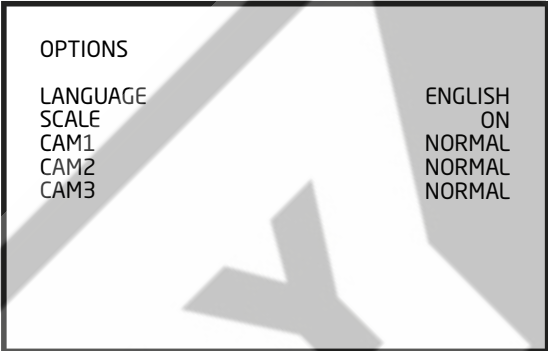
The following images show the different parameters that can be modified on each of the FVS menu screens.



FVS main menu



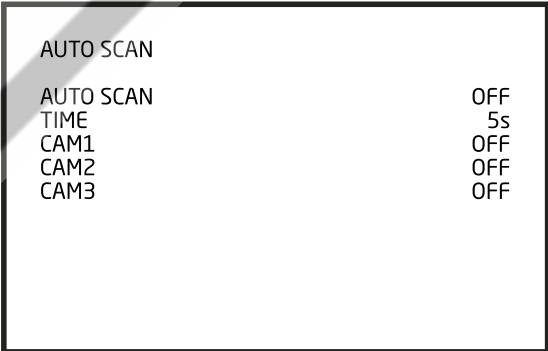
'Image' menu



'Options' menu



'System' menu



'Auto Scan' menu



# 4

## OPERATING THE MACHINE

RENTWAY

## **CONTENTS INDEX**

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| Disconnecting the battery.....                     | 10 |



**Information:** The engine performance depends on the following factors:

- Fuel temperature.
- Air temperature.
- Relative humidity in the air.
- Altitude.

The higher these values, the lower the engine performance, as the power it can supply is reduced.

## DAY-TO-DAY OPERATIONS

### Start of the Shift

Before starting working with the machine, complete the corresponding maintenance tasks detailed in 'Basic maintenance every 8 hours' in Chapter 8.

### End of the Shift

At the end of a working session with the machine, follow these steps:

1. Park the machine in areas specifically designated for this purpose, and not where it prevents people from passing or blocks exits or access to stairways or emergency equipment.
2. Put the skip in a straight, horizontal position (at rest).
3. Put all elements in their at rest position.

**⚠ CAUTION Risk of accident by undesired steering turn.**

- Leave the chassis in the straight position.

4. Activate the parking brake.

**⚠ DANGER Risk of death or serious injuries by leaving the machine on a slope without brakes.**

- If the machine is left on a slope, place chocks under the wheels in accordance with Standard DIN 76051, suitable for the size of the wheels and the machine weight. Refer to 'Technical Specifications Table' in Chapter 7.
5. Stop the engine, remove the key from the ignition switch and disconnect the battery following the indications in 'Disconnecting the battery'.
  6. Lock all mechanisms which impede use of the machine by unauthorised personnel.

## DAY-TO-DAY OPERATIONS

### Dimensions and operating range of the machine

The machine's dimensions and operating ranges must be taken into account when operating the machine to ensure that all operations are carried out safely.

| LEVEL           | D 201 AHG | D 301 AHG |
|-----------------|-----------|-----------|
| DIMENSIONS (mm) |           |           |
| A               | 3995      | 4140      |
| B               | 1880      | 1950      |
| C               | 1500      | 1750      |
| D               | 1235      | 1460      |
| E               | 1200      |           |
| F               | 480       | 490       |
| G               | 240       | 260       |
| H               | 2560      | 2605      |
| I               | 1805      | 1850      |
| J               | 3995      | 4140      |
| K               | 935       | 865       |
| L               | 1305      | 1420      |
| M               | 2910      | 2950      |
| N               | 1480      | 1700      |
| O               | 260       | 250       |
| DIMENSIONS (°)  |           |           |
| P               | 49        | 46,5      |



Dimensions and operating range of the machine



## DAY-TO-DAY OPERATIONS

### Parking and stopping the machine

**▲ WARNING** Risk of accident by performing maintenance without parking on level ground.

- Park the machine on level ground, both at the end of the shift and when performing maintenance tasks.
- Block the wheels with suitable chocks in accordance with Standard DIN 76051, suitable for the size of the wheels and the machine weight. Refer to 'Technical Specifications Table' in Chapter 7.

At the end of a shift, or simply when parking the machine and stopping the engine, follow these steps:

1. Perform a smooth stop, releasing the throttle pedal and gradually stepping on the brake pedal.

**NOTICE** If the machine has been operating at full load, keep the engine idling for at least one minute, to cool down.

2. Lower the skip, and leave it in its straight, horizontal position (resting).
3. Put all elements in their at rest position.
4. Put the travel selector (FNR) in the NEUTRAL position.
5. Activate the parking brake.

**NOTICE** When leaving the machine, ALWAYS activate the parking brake, regardless of whether or not the ignition is activated or whether the engine is running or stopped.

6. Stop the machine by turning the key to the STOP position (0).

**NOTICE** When leaving the machine, never leave the key in the ignition switch.

7. Lock all mechanisms which impede use of the machine by unauthorised personnel.
8. Disconnect the battery following the procedure described in 'Disconnecting the battery'.

### Starting the machine.

To start the engine, the following conditions must be met:

- Operator sitting in operator's position.
- Travel selector (FNR) in NEUTRAL position.
- Battery cut-off switch in the ON position. See 'Disconnecting the Battery'.
- Emergency stop deactivated. **ACCESSORY**

**Information:** If the machine is equipped with a GPS with an ignition disabler system, the GPS should be activated in order to start the engine. **ACCESSORY**

**▲ WARNING** Risk of death or serious injuries by starting the machine without safety measures.

Although this does not affect the engine start up, the following is also recommended:

- The operator has the seat belt fastened.
- The parking brake is activated.

Then, proceed to start the engine:

1. Insert the key in the ignition switch and turn it to the IGNITION position (I).

**NOTICE** Wait until the cold start system indicator turns off.

2. Turn the key to the START (II) position and the engine will start. Once started, release the key, which will return to the IGNITION (I) position.

**NOTICE** Do not keep the key in the START (II) position for longer than 15 seconds. If the engine does not start, repeat the previous steps, waiting 30 seconds between each attempt.

**NOTICE** At low temperatures, increase the revs gradually so the engine achieves a good level of lubrication.

## DAY-TO-DAY OPERATIONS

### Refuelling

**⚠ WARNING** Risk of fire or explosion by refuelling in enclosed areas.

- Refuel the machine in a well-ventilated area and with the engine off.

**⚠ WARNING** Risk of fire and explosions by smoking and refuelling simultaneously.

- Never smoke during refuelling.

**NOTICE** The fuel must meet the specifications set forth in 'Fuel' in Chapter 1 and 'Fuel Specifications' in Chapter 8.

**NOTICE** Never mix petrol or alcohol with the fuel.

**NOTICE** Do not use fuel mixtures with oils, other fuels or unsuitable additives.

1. Bring the machine near the fuel pump so the hose reaches the tank intake easily.
2. Activate the parking brake.
3. Switch the lighting equipment off. **ACCESSORY**
4. Stop the engine.

**Information:** If the pump has an earth-connection point for vehicles, connect it to a non-insulated metallic point on the machine.

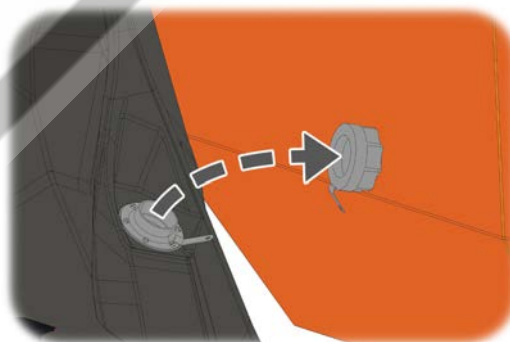
5. Access the fuel tank (1).



**Information:** This cover has a vandal-proof safety device.

6. Clean the area around the fuel tank cap to prevent accumulated dirt, water or other substances from entering the tank during refuelling.
7. Turn the fuel tank cap counterclockwise to remove it, and insert the pump hose.

**NOTICE** If you notice internal pressure (whistling sound heard when removing the fuel tank cap), contact your official AUSA dealer before operating the machine.



8. Fill up the tank, ensuring that its maximum capacity is not exceeded.



## DAY-TO-DAY OPERATIONS

### **⚠ WARNING** Risk of fire due to spilled fuel.

- Avoid spilling fuel outside the tank. Immediately clean any spillage, and dry the surface thoroughly.

**NOTICE** Never refuel before exposing the machine to high temperatures, since there might be fuel spillages through the vent.

9. Once the tank has been filled, remove the pump hose.

10. Place the cap and turn it clockwise until it stops.

**Information:** Secure the cap using the vandal-proof safety device.

## SPECIAL OPERATIONS

### Running-in the engine

**NOTICE** Long accelerations at full throttle, maintaining a high cruising speed and overheating are detrimental to the engine during the running-in period.

The machine's engine requires a running-in period of 50 hours before it is able to operate at full load.

During the running in period, the throttle pedal must not be pressed down more than  $\frac{3}{4}$  during normal operation of the machine.

**NOTICE** Once the 50 hours or 30 days running-in period is over, it will be necessary to have the machine serviced at an authorised AUSA dealer.

### Roll Over Protective Structure (ROPS)

#### **⚠ WARNING** Risk of accident by losing the balance.

- When changing between the operational and travelling position of the Roll Over Protective Structure (ROPS), adopt a position that maintains good balance.
- Also, make sure you keep your hands out of the articulation area, as this may cause serious injury.

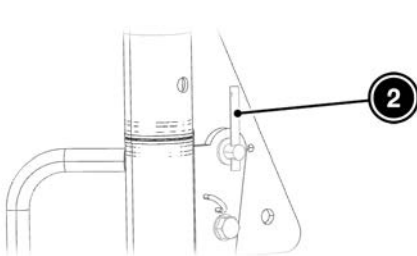
To put the Roll Over Protective Structure (ROPS) into travelling position:

1. Remove the split pins (1) of the bolt pins located on both sides of the Roll Over Protective Structure (ROPS).

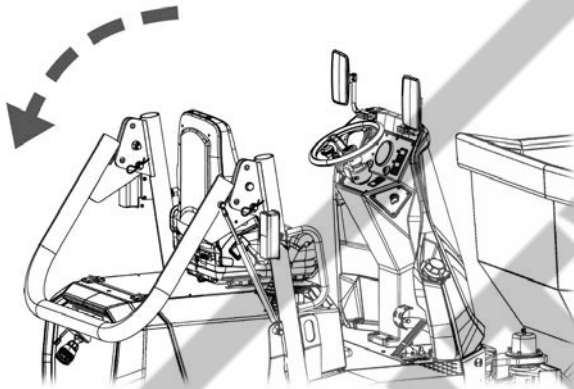


## SPECIAL OPERATIONS

2. Remove the bolt pins (2).



3. Carefully, fold the upper part of the Roll Over Protective Structure (ROPS) into its transport position.



**Information:** The Roll Over Protective Structure (ROPS) has a gas strut to compensate for the weight of the upper part during handling, and to reduce the risk of entrapment.

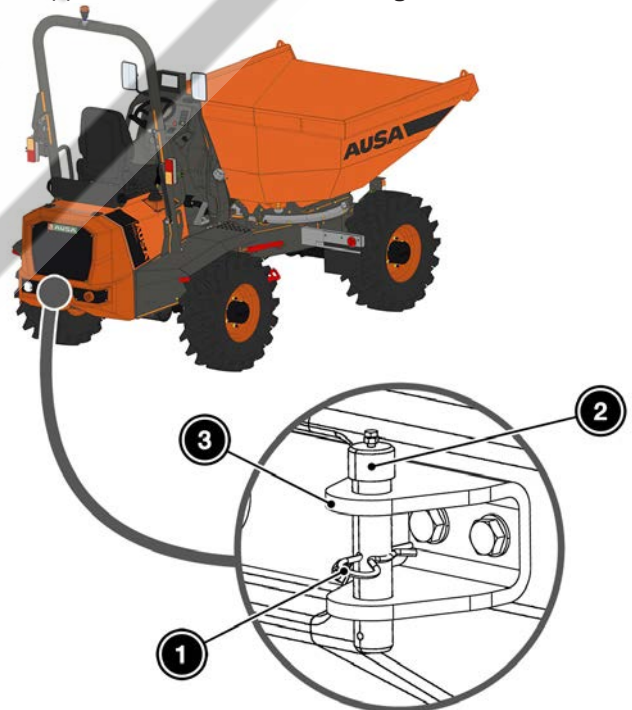
4. Once the Roll Over Protection Structure (ROPS) is in its travelling position, replace the pins (2) and their corresponding safety catches (1).

**Information:** To place the Roll Over Protection Structure (ROPS) in the operating position, follow the instructions in reverse order.

### Tow Bars

**Information:** The towing hitch socket on this machine is for towing the machine in case of a breakdown. It is not intended for towing a trailer. See 'Towing' in Chapter 6.

1. Remove the split pin (1) and pull the bolt pin (2) from the support bolted to the counterweight (3).





## SPECIAL OPERATIONS

2. Insert the bolt pin through the support bolted to the counterweight and towing device. Lock the bolt pin with the split pin.

**Information:** Various types of towing hitches may be equipped as an accessory. See 'List of Machine Accessories' in Chapter 9.

However, when towing a trailer on public roads, check and follow the applicable regulations of the country where the machine is being used.

### Immobilising the chassis

Immobilising the chassis prevents accidents as a result of undesired steering wheel turnings.

**⚠ WARNING Risk of accident by towing or hoisting the machine with a crane without locked chassis.**

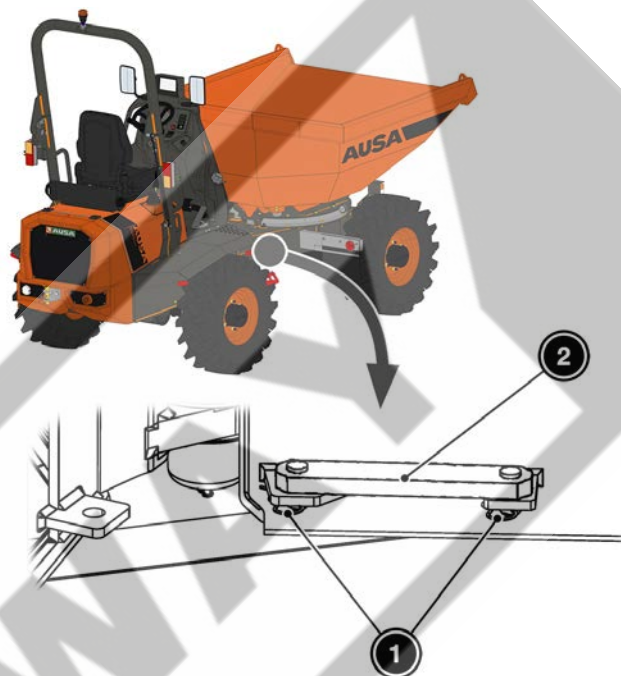
- Lock the machine's chassis before towing it or hoisting it with a crane.

**⚠ WARNING Risk of accident by performing maintenance operations without locked chassis.**

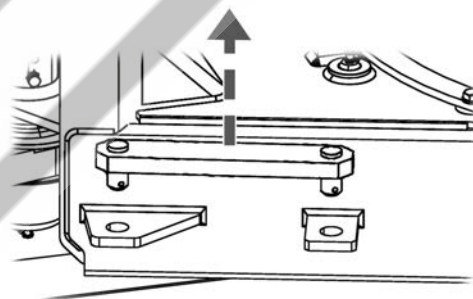
- Lock the machine's chassis before performing maintenance operations with the machine running.

**Information:** Before beginning this procedure, ensure that the chassis is in the straight position.

1. Remove the safety catches (1) of the chassis locking bar (2).



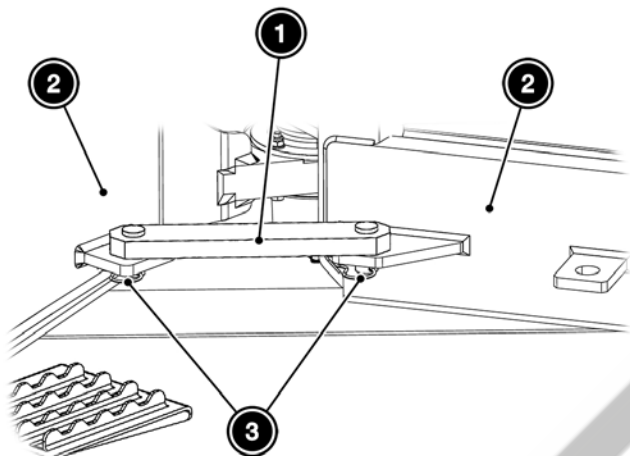
2. Remove the safety prop from the chassis.



3. Place the locking bar (1) so that it joins both chassis bodies (2).

## SPECIAL OPERATIONS

4. Install the split pins (3).



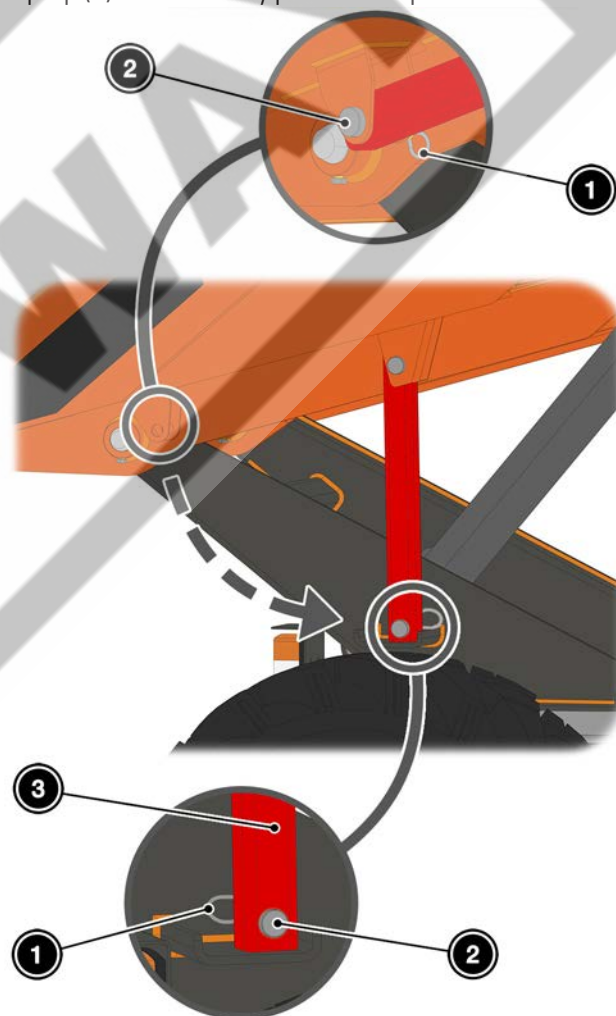
**Information:** If necessary, turn the steering wheel to adjust the position of the chassis bodies so that the safety prop may be correctly fitted.

### Immobilising the skip

**⚠ DANGER** Risk of death or serious injuries by carrying out maintenance tasks with raised skip.

➤ Lock the skip when carrying out maintenance tasks that require the skip to be in the raised position.

1. Raise the skip with the joystick following the instructions set forth in 'Controls' in Chapter 3.
2. Remove the split pin (1) and the bolt pin (2) of the safety prop (3) and manually place it into position.





## SPECIAL OPERATIONS

3. Install the bolt pin (2) and the split pin (1) to attach the safety prop (3) to the chassis.

### Transmission bypass function

The transmission bypass function is used to enable the machine to be towed, as described in 'Towing' in Chapter 6.

#### ACTIVATION

1. Stop the engine.
2. Remove the floor plate to access the two pressure-release valves of the hydrostatic system pump.



3. With a 13 mm spanner, loosen the nuts (1) on each of the two valves, turning them counterclockwise.
4. Hold the nuts (1) with a 13 mm spanner so they do not turn, and with a 4 mm hex wrench, adjust the screws (2) by turning them clockwise until they reach the body of the valve (3).

**Information:** The contact with the body of the valve (3) is perceived by an increase in resistance when turning the screws (2).

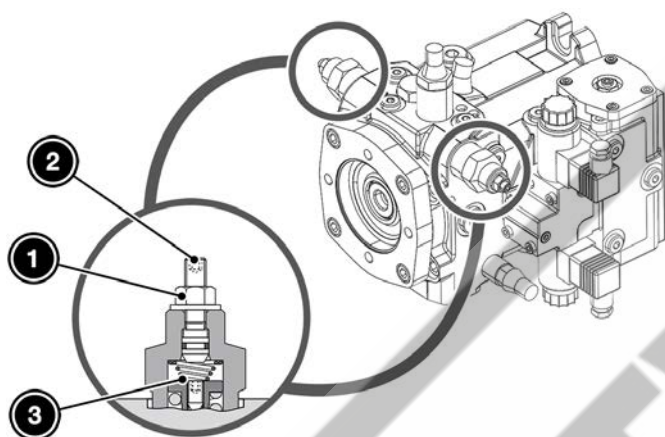
5. Tighten the screws (2) by two clockwise turns.

## SPECIAL OPERATIONS

### DEACTIVATION

**NOTICE** Risk of lack of traction by not deactivating the transmission bypass function.

- Deactivate the transmission bypass function immediately after towing.



1. Loosen the screws (2) until they are no longer in contact with bodies of the valves. (3)
2. Completely loosen the screws (2), turning them counter-clockwise until they reach the body of the valve (3).
3. Tighten the nuts (1) to a torque of **22 Nm**.

### Disconnecting the battery

**NOTICE** Risk of component damage by working on the electrical system with connected battery.

- Before performing any maintenance operation on the electrical system, the battery should be disconnected.

**NOTICE** Do not disconnect the battery immediately after stopping the machine's engine. Wait at least 2 minutes before doing so.

**Information:** It is good practice to disconnect the battery if the machine will be at standstill for more than 4 days.

1. Open the engine cover.
2. Turn the battery cut-off switch.



# 5

## EMERGENCY OR BREAKDOWN SITUATIONS

RENTWAY

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UNLOCKING THE BRAKES ..... 4

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RENTWAY



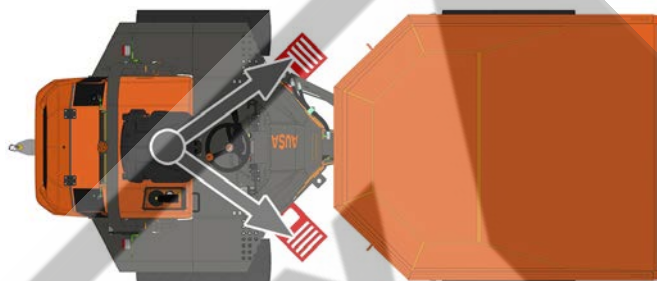
## EMERGENCY EXIT

In case of emergency, the machine can be exited from either side.

**⚠ WARNING** Risk of accident by falling during an emergency exit.

An emergency exit may cause injuries.

**Information:** The machine has steps and handles on both sides to facilitate the emergency exit.



Emergency exit

## EMERGENCY START

If the engine cannot start due to a dead battery, another 12 V booster battery can be used together with the corresponding jump leads to connect the two batteries. Proceed as described below:

**⚠ WARNING** Risk of explosion explosions by charging without a 12 V battery.

Other charging devices than a 12 V battery (such as battery chargers, etc.) might cause explosions in the battery or damage the electrical system.

- Use 12 V batteries only.

**NOTICE** Risk of electrical damaged caused by contact between a vehicle and the machine.

- When using a battery from another vehicle, try to prevent the vehicle from touching the machine.

1. Open the bonnet to access the battery.



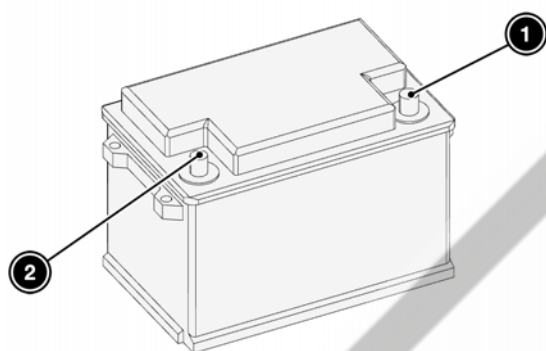
2. Disassemble the cover (1) of the positive post.

### EMERGENCY START

3. Connect the posts from the auxiliary battery to the posts of the machine's battery.

**NOTICE** Risk of electrical damage caused by mistaking the terminals.

- Connect the positive post from the auxiliary battery to the positive post of the machine's battery (1).
- Connect the negative post from the auxiliary battery to the negative post of the machine's battery (2).



4. Start the machine's engine normally, following the indications given in 'Starting the Engine' in Chapter 4.

5. Disconnect the cables from the posts.

**NOTICE** Risk of electrical damage caused by mistaking the terminals.

- First, disconnect the negative posts and then the positive posts.

### ENGINE OVERHEAT

**⚠ WARNING** Risk of burns caused by a hot radiator.

The radiator might be very hot.

- Use gloves before handling it.

If the coolant temperature indicator comes on when the machine is in operation, proceed as follows:

1. Reduce the speed and keep the machine moving so that air circulates through the radiator
2. If the indicator is still on after one minute, stop the machine. Put the travel selector (FNR) in NEUTRAL(N), apply the parking brake and stop the engine.

3. Wait for the engine to cool down, and perform the following checks:

- Inspect the radiator coolant fins and clean them following the procedure in 'Basic Maintenance every 50 hours' in Chapter 8.
- Check the coolant level and, if it is below the minimum, refill the tank following the procedure in 'Refilling coolant' in Chapter 8.



## UNLOCKING THE BRAKES

D 201 AHG

**⚠ DANGER** Risk of death or serious injuries by unlocking the brakes without chocks.

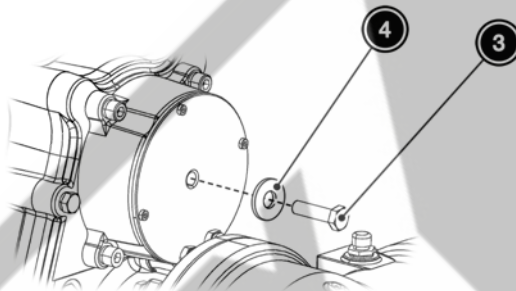
- Before unlocking the brakes, lock the wheels with appropriate chocks to prevent undesired movements of the machine, in accordance with Standard DIN 76051, suitable for the size of the wheels and the machine weight. See 'Technical Specifications Table' in Chapter 7.

### UNLOCKING

1. Stop the engine and remove the key from the ignition switch.
2. Access the rear axle.
3. Unscrew and remove the cap (1) and the gasket (2) of the negative brake assembly with a 7 mm hex wrench.



4. Insert into the hole 1 full thread M8x45 DIN 933 screw (3) with 1 M8 DIN 9021 oversized washer (4).



5. Tighten the screw (3) by hand until the head touches the washer (4).
6. Using a ratchet wrench and a 13 mm socket, tighten the screw (3) to compress the springs and allow the brake to be released.

### LOCKING

**⚠ WARNING** Risk of accident by starting the machine without brakes.

- Lock the brakes before starting the machine again.

1. Loosen screw (3) and remove it from the hole.
2. Remove the washer (4).
3. Replace the cap (1) with the gasket (2) and firmly tighten.

## UNLOCKING THE BRAKES

D 301 AHG

**⚠ DANGER** Risk of death or serious injuries by unlocking the brakes without chocks.

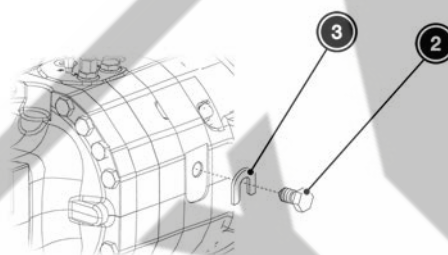
- Before unlocking the brakes, lock the wheels with appropriate chocks to prevent undesired movements of the machine, in accordance with Standard DIN 76051, suitable for the size of the wheels and the machine weight. See 'Technical Specifications Table' in Chapter 7.

### UNLOCKING

1. Stop the machine and remove the key from the ignition switch.
2. Access the front axle.
  - Using a 17 mm spanner. disconnect the parking brake hydraulic oil hose (1) from the port marked P1.



- Using a 24 mm spanner. loosen the two opposing screws (2) and remove the spacers (3) between the screw head and the axle housing.



3. Tighten the opposing screws (2) by hand, until they touch the internal thrust plate.
4. Using a 24 mm spanner, tighten the opposing screws (2) alternating ¼ turn towards each side, until the screws are fully inserted.

### LOCKING

**⚠ WARNING** Risk of accident by starting the machine without brakes.

- Lock the brakes before starting the machine again.

1. Loosen the opposing screws (2) alternating ¼ turn each side, until the spacers (3) can be installed between the screw head and the axle housing.
2. Retighten the opposing screw (2) to a torque of **95 ± 15 Nm**.
3. Connect again the parking brake hydraulic oil hose (1) to the port marked P1.



## ROLL OVER

If the machine rolls over, the operator must take into account the following recommendations to avoid being trapped between the machine and the ground:

- When the machine is in operation, operators shall keep their bodies inside the protective area of the Roll Over Protective Structure (ROPS) at all times, and with the seat belt fastened.
- Do not jump outside the protection area of the Roll Over Protective Structure (ROPS).
- Place your feet firmly on the floor of the operator's position.
- Grasp the steering wheel firmly.
- Try to stay away from the point of impact by leaning towards the opposite side of the roll-over.

After securing the area and ensuring the well-being of the affected operator, proceed with placing the machine again on its four wheels.

**NOTICE** Risk of serious damage to the machine caused by starting it after a roll-over.

Once the normal position has been restored, do not attempt to start the machine without first contacting the official AUSA dealer.

## IMMERSION

**NOTICE** Risk of serious damage to the machine.

- In case of immersion do not attempt to start the machine engine. Immersion can cause serious damage to the machine.
- Contact the AUSA authorised dealer.

## EMERGENCY OR BREAKDOWN SITUATIONS

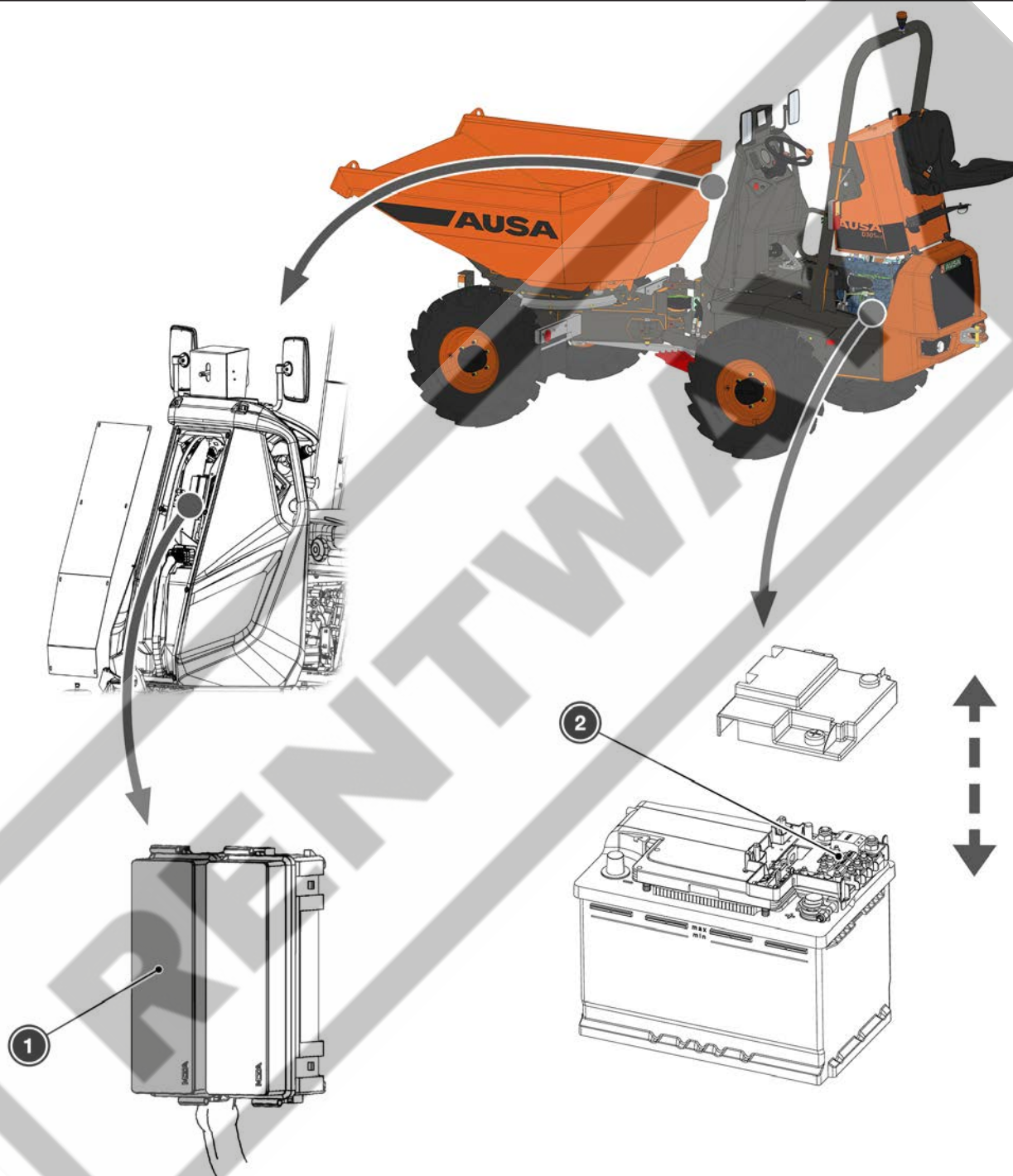
### FIRE

The following table indicates the effectiveness of each extinguishing agent depending on the fire source.

| Extinguishing agent                                | Type of Fire                                                        |                                                                    |       |        |                                                                 |
|----------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------|-------|--------|-----------------------------------------------------------------|
|                                                    | A                                                                   | B                                                                  | C     | D      | E                                                               |
|                                                    | Solids that create embers                                           | Liquids or liquefiable solids                                      | Gases | Metals | Presence of electrical voltage over 25 V                        |
| Water spray                                        | Excellent                                                           | Acceptable for non-water-soluble liquid fuels (diesel, oil, etc.). | Null  | Null   | Dangerous                                                       |
| Water jet                                          | Good                                                                | Null                                                               | Null  | Null   | Very dangerous                                                  |
| Carbon dioxide (CO <sub>2</sub> )                  | Acceptable Can be used for small fires Does not put out embers      | Acceptable Can be used for small fires                             | Null  | Null   | Good                                                            |
| Foam                                               | Good                                                                | Good Do not use with water-soluble liquids                         | Null  | Null   | Dangerous                                                       |
| Normal dry powder (BC)                             | Acceptable Can be used for very small fires Does not put out embers | Good                                                               | Null  | Null   | Good                                                            |
| Multipurpose dry powder (anti-reignition) (ABC)    | Good                                                                | Good                                                               | Null  | Null   | Good for voltages below 1000 V; do not use with higher voltages |
| Special dry powder for metals                      | Null                                                                | Null                                                               | Null  | Good   | Null                                                            |
| Halon substitutes (FM200, NAF SIII, INERGEN, etc.) | Acceptable Can be used for small fires                              | Acceptable Can be used for small fires                             | Null  | Null   | Good                                                            |

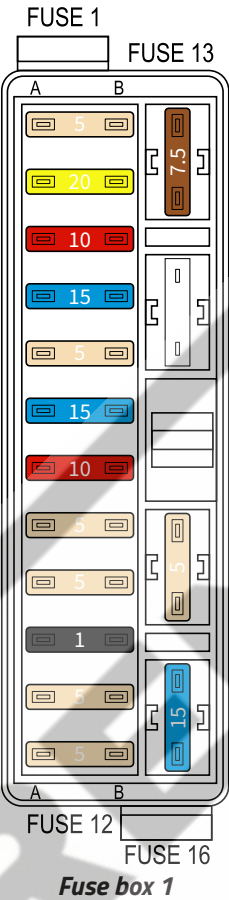


## FUSES



*Location of the fuse box*

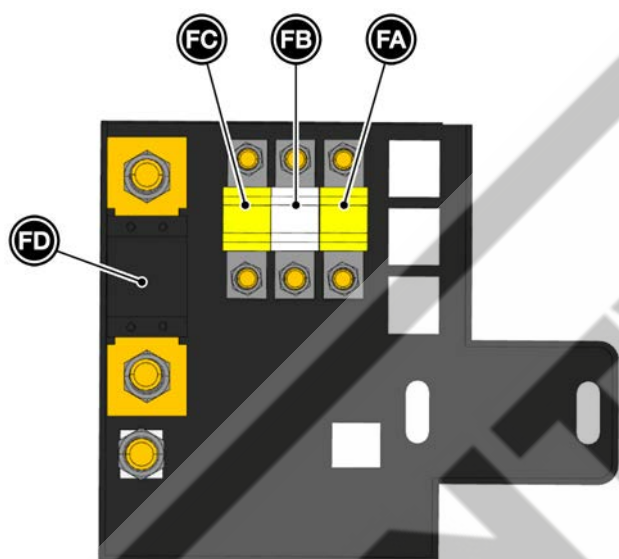
FUSES



| Item | Range (A) | Description                                                                                                                                           |
|------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| F1   | 5         | <ul style="list-style-type: none"><li>▪ Parking brake.</li><li>▪ Forward/Reverse travel solenoid valve.</li></ul>                                     |
| F2   | 20        | <ul style="list-style-type: none"><li>▪ Multifunction switch.</li><li>▪ Low beam.</li><li>▪ High beam.</li></ul>                                      |
| F3   | 10        | <ul style="list-style-type: none"><li>▪ Joystick unlock switch.</li><li>▪ Work lights switch.</li></ul>                                               |
| F4   | 15        | <ul style="list-style-type: none"><li>▪ Rotating beacon switch.</li><li>▪ Horn switch.</li></ul>                                                      |
| F5   | 5         | <ul style="list-style-type: none"><li>▪ Multifunction instrument.</li><li>▪ GPS.ACCESSORY</li></ul>                                                   |
| F6   | 15        | <ul style="list-style-type: none"><li>▪ Machine functions ECU.</li></ul>                                                                              |
| F7   | 10        | <ul style="list-style-type: none"><li>▪ FVS display.ACCESSORY</li><li>▪ FVS cameras.ACCESSORY</li><li>▪ Brake light.</li></ul>                        |
| F8   | 5         | <ul style="list-style-type: none"><li>▪ Seat belt sensor.</li><li>▪ Seat sensor.</li></ul>                                                            |
| F9   | 5         | <ul style="list-style-type: none"><li>▪ Fast speed.</li></ul>                                                                                         |
| F10  | 1         | <ul style="list-style-type: none"><li>▪ GPS.ACCESSORY</li></ul>                                                                                       |
| F11  | 5         | <ul style="list-style-type: none"><li>▪ Sidelights.</li></ul>                                                                                         |
| F12  | 5         | <ul style="list-style-type: none"><li>▪ Reverse travel alarm off switch.</li><li>▪ Sidelights.</li><li>▪ Registration plate light.</li></ul>          |
| F13  | 7.5       | <ul style="list-style-type: none"><li>▪ Alternator.</li><li>▪ Fuel pump.</li><li>▪ Engine stop solenoid valve.</li><li>▪ Cold start system.</li></ul> |
| F14  | -         | <ul style="list-style-type: none"><li>▪ Not used.</li></ul>                                                                                           |
| F15  | 5         | <ul style="list-style-type: none"><li>▪ Starting the engine.</li></ul>                                                                                |
| F16  | 15        | <ul style="list-style-type: none"><li>▪ Hazard lights switch.</li></ul>                                                                               |



## FUSES



*Fuse box 2*

| Item | Range (A) | Description            |
|------|-----------|------------------------|
| FA   | 30        | ▪ Starter motor relay. |
| FB   | 50        | ▪ Machine, general.    |
| FC   | 50        | ▪ Cold start system.   |
| FD   | 300       | ▪ Starter motor.       |

### MACHINE MALFUNCTION

When the machine's electronic management system detects that it should send a message to the operator or identifies a malfunction, error **E 01** appears on the multifunction instrument screen on the control panel. See *'Multifunction Instrument' in Chapter 3.*

The codes that may appear and their description are listed below:

- 10101: Attempted to start the diesel engine without having the travel selector (FNR) in NEUTRAL (N).
- 10102: Attempt to start the engine without the operator being present on the seat.
- 10103: Attempted to start the engine with the ignition disabler activated. **ACCESSORY**
- 10201: Coolant temperature too high.
- 10202: Diesel engine oil pressure too low.
- 10203: Battery charging circuit fault.
- 10301: Travel selector (FNR) fault. Both directions of travel (forward / reverse) are detected at the same time.

Contact the official AUSA dealer for a system diagnosis.

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# 6

TRANSPORTATION, WAREHOUSE STORAGE AND END OF USE FULL LIFE

RENTWAY

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    Loading using a crane ..... 1

    Towing ..... 2

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END OF USEFUL LIFE..... 3

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RENTWAY



## TRANSPORTING THE MACHINE

**Information:** Use only ISO 15818 standard-rated and approved fastening and lifting equipment capable of tie-down and hoisting the machine and its accessories and accumulated material.

Use edge protectors to avoid damage to both the machine and the fastening and lifting equipment.

### On the Bed of a Vehicle

**⚠ WARNING** Risk of accident due to unsuitable fastening equipment.

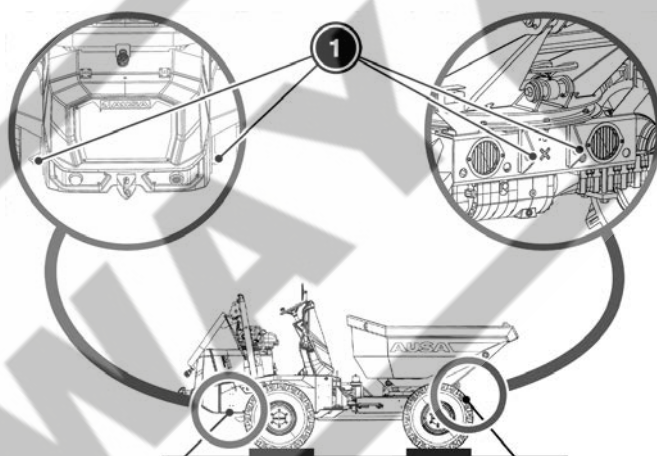
- When fixing the machine to the transportation vehicle platform, use a suitable system which is sufficient robust.

**Information:** Take into account the ADR Regulation requirements that may be applicable, according to UN No. 3528, and any other safety instructions from the country where the machine is being used.

Adhere to the following instructions when the machine has to be transported on the bed of another vehicle:

- Immobilise the chassis articulation following the procedure described in 'Immobilising the chassis' in Chapter 4.
- Fold the Roll Over Protection Structure (ROPS) following the procedure outlined in 'Roll Over Protection Structure (ROPS)' in Chapter 4.
- When operating the machine, correctly fasten the seat belt.
- Have the minimum level of fuel in the tank. Empty the fuel tank following the procedure described in SAC.R.03 the fuel tank in the advanced maintenance manual.
- Travel up and down carefully using the loading ramps.
- Activate the parking brake.
- Stop the machine and remove the key from the ignition switch.

- Apply chocks to the wheels and fix them to the vehicle bed.
- Tie-down the machine firmly to the bed using slings or another fastening system at the points (1) set for that purpose, to prevent any kind of movement.



### Loading using a crane

**⚠ DANGER** Risk of death or serious injuries from crushing.

- When hoisting the machine, there must be no one on top or within a 5 m radius around it.

**⚠ DANGER** Risk of death or serious injury caused by lifting the machine without horizontal guides.

- Lift the machine in the most horizontal position possible, using guide ropes or other systems to keep the machine from turning or pivoting.

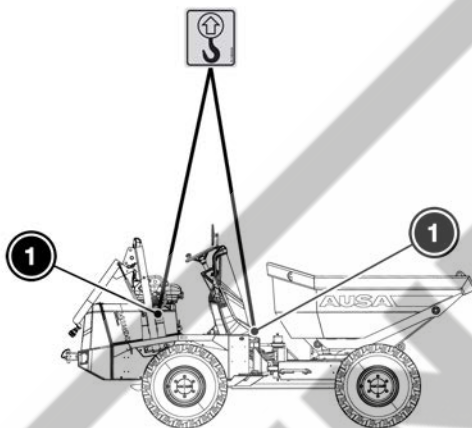
## TRANSPORTING THE MACHINE

When the machine is loaded using a crane, follow the indications below:

- Immobilise the chassis articulation following the procedure described in 'Immobilising the chassis' in Chapter 4.
- Fold the Roll Over Protection Structure (ROPS) following the procedure outlined in 'Roll Over Protection Structure (ROPS)' in Chapter 4.
- Attach the cable or the sling at point (1) on the machine set for that purpose.

**⚠ DANGER Risk of death or serious injury caused by hoisting the machine with unsuitable means.**

- Both the crane and the cables or slings have sufficient capacity to lift the machine. Refer to 'Technical Specifications Table' in Chapter 7.



- Before hoisting the machine, check that the cables or slings are firmly hooked.
- Undertake this operation with the machine unloaded, and on flat and horizontal ground.

### Towing

**⚠ CAUTION Risk of burns by the hydrostatic group components high temperature.**

- During and after the towing process, the hydrostatic group components might be hot; use suitable protective equipment.

**NOTICE Risk of serious damage of transmission components.**

- Towing the machine is only advisable if there is a fault, and when there is no other alternative, as this process might seriously damage the transmission components.
- Repairing the fault on site is recommended whenever possible.

**NOTICE Risk of damage through collision.**

- Use a solid towbar to avoid collisions.
- Make sure that the parking brake is deactivated.

**NOTICE Risk of damage to transmission components.**

- High-speed and long-distance towing might trigger heat generation and poor lubrication, which may damage the transmission components.
- Tow the machine slowly and over short distances.
- Recommended towing speed: below 2 km/h.
- Recommended towing distance: less than 1 km.

1. Lock the chassis articulation following the procedure described in 'Immobilising the chassis' in Chapter 4.
2. Proceed with the transmission bypass function following the steps set forth in 'Transmission bypass function' in Chapter 4.
3. Unlock the brakes following the procedure described in 'Unlocking the Brakes' in Chapter 5.



## STORAGE

### **NOTICE** Risk of damage caused by lack of maintenance during the storage period.

- Perform the maintenance tasks on the machine also during the storage period.
- Pay special attention to the level of the fluids and the elements that might age (tyres, weather strips, rubber gaskets, etc.).
- Before using the machine after the storage period, contact an AUSA official dealer to proceed with the necessary specific preparations.

If the machine is not going to be used for a long time, it should be stored following the recommendations below:

- Carefully clean the machine. Carefully, dry all its parts with compressed air.
- Proceed with a complete lubrication and polish of the machine.
- Perform a general inspection and replace all worn or damaged parts.
- Paint all worn or damaged parts.
- Dismantle the battery, grease the posts with Vaseline and store it in a dry place. If it is going to be used temporarily, for other purposes, check its charge level periodically.
- Store the machine in a covered, well-ventilated area.
- Start the engine once a month and let it run until it reaches the operating temperature (70-80 °C).
- Drain the coolant circuit in temperatures below -20 °C. See *REF.R.01* in the *Advanced maintenance manual*.

## END OF USEFUL LIFE

### Machine

 **Environment:** When the machine reaches the end of its useful life, it must be decommissioned and scrapped by specialised companies, in accordance with applicable regulations in the country where the machine is being disposed.

### Batteries

 **Environment:** As the batteries contain highly-polluting chemicals, they must be disposed of in accordance with applicable environmental regulations in the country where the machine is being used. They must be disposed of as soon as possible.

 **Environment:** The batteries to be disposed of must be stored in a dry, isolated place. Do not leave them on the floor, nor on wooden pallets or covered.

 **Environment:** Make sure the 12 V auxiliary battery is dry, and that all its caps are closed. If it is necessary to leave a battery to dry in an open area, apply Vaseline to the posts.

 **Environment:** Label any battery that is being disposed of, indicating that its use is prohibited.

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RENTWAY

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# 7

## TECHNICAL DATA

RENTWAY

CONTENTS INDEX

TECHNICAL SPECIFICATIONS TABLE..... 1

RENTWAY



## TECHNICAL SPECIFICATIONS TABLE

| Specifications and weights                            |                    |                                                                          |           |
|-------------------------------------------------------|--------------------|--------------------------------------------------------------------------|-----------|
| Feature                                               | Unit               | D 201 AHG                                                                | D 301 AHG |
| Discharge type                                        |                    | Swivel                                                                   |           |
| Payload                                               | kg                 | 2000                                                                     | 3000      |
| Maximum towing mass                                   |                    |                                                                          |           |
| ▪ Trailer without brakes                              | kg                 | 750                                                                      |           |
| ▪ Trailer with brakes                                 | kg                 | 1500                                                                     | 2500      |
| Chassis                                               |                    | Articulated and Pivoting                                                 |           |
| Chassis steering angle                                | °                  | 36                                                                       |           |
| Max. lateral inclination angle of the chassis         | °                  | 15                                                                       |           |
| Water skip capacity                                   | l                  | 695                                                                      | 984       |
| Struck skip capacity                                  | l                  | 1084                                                                     | 1320      |
| Heaped skip capacity                                  | l                  | 1337                                                                     | 1742      |
| Weights                                               |                    |                                                                          |           |
| ▪ Technically permissible maximum mass                | kg                 | 4250                                                                     | 5505      |
| ▪ Maximum authorised mass (*)                         | kg                 | 4250                                                                     | 5505      |
| ▪ Unladen weight (tare)                               | kg                 | 2083                                                                     | 2300      |
| ▪ Front axle maximum weight                           | kg                 | 2450                                                                     | 3550      |
| ▪ Rear axle maximum weight                            | kg                 | 1850                                                                     | 1955      |
| Service temperature                                   | °C                 | -15 to +40                                                               |           |
| Fuel tank capacity                                    | l                  | 37,5                                                                     |           |
| Roll Over Protective Structure                        |                    | Folding towards the counterweight side.<br>Compliant with ISO 3471:2008. |           |
| Maximum specific pressure on the ground (Front/ Rear) |                    |                                                                          |           |
| ▪ With BKT AS 504 tyres (Front/ Rear)                 | kg/cm <sup>2</sup> | 3,2 / 2,1                                                                | 4,5 / 2,5 |
| ▪ With STARCO AS Dumper tyres (Front/ Rear)           | kg/cm <sup>2</sup> | 3,1 / 2,1                                                                | 4 / 1,63  |
| Transmission                                          |                    |                                                                          |           |
| Type                                                  | -                  | Hydrostatic                                                              |           |
| Drive pump                                            | -                  | Variable flow, automatically-regulated, axial pistons pump.              |           |
| Drive motor                                           | -                  | Variable-flow axial pistons engine; 2 speeds selectable by the operator. |           |
| - Maximum service pressure                            | bar                | 345                                                                      |           |
| Travel selector (FNR)                                 | -                  | Electrohydraulic, with a switch below the joystick                       |           |
| Front axle                                            | -                  | Rigid with differential and wheel epicyclic gearing.                     |           |
| Rear axle                                             | -                  | Rigid with differential and wheel epicyclic gearing.                     |           |

**TECHNICAL SPECIFICATIONS TABLE**

| Engine                                                       |        |                                           |                 |
|--------------------------------------------------------------|--------|-------------------------------------------|-----------------|
| Feature                                                      | Unit   | D 201 AHG                                 | D 301 AHG       |
| Manufacturer                                                 | -      | Kubota                                    |                 |
| Model                                                        | -      | V1505-E4B                                 |                 |
| Power (SAE J1995)                                            | hp     | 24,8                                      |                 |
| Power (SAE J1995)                                            | kW     | 18,5                                      |                 |
| Maximum operating speed                                      | min-1  | 1500                                      | 2300            |
| Maximum torque                                               | Nm@rpm | 92,6@1700                                 |                 |
| Number of cylinders                                          | -      | 4                                         |                 |
| Emissions                                                    | -      | Stage V - EPA Tier 4                      |                 |
| Injection                                                    | -      | Mechanical pump                           |                 |
| Cooling system                                               | -      | Water/oil mixed radiator.                 |                 |
| Driving                                                      |        |                                           |                 |
| Maximum driving speed                                        | kg/h   | 19                                        | 17              |
| Speed in slow gear                                           | kg/h   | 7,4                                       | 6,5             |
| Gradeability                                                 | %      | 50                                        |                 |
| Safe authorised inclination                                  | %      | 35                                        |                 |
| Outside turning radius                                       | mm     | 3710                                      | 3955            |
| Front tyres (standard)                                       | -      | 10.0/75-15.3                              | 11.5/80-15.3    |
| ▪ Brand and model                                            | -      | BKT AS 504                                |                 |
| ▪ Inflation pressure                                         | bar    | 3,2                                       | 4,5             |
| ▪ Corresponding weight and speed <sup>(6)</sup>              | -      | 118 A8                                    | 126 A8          |
| ▪ Combinations of minimum admissible speed and load code (6) | -      | Not available at the date of publication. | 128 A4          |
| Front tyres (standard)                                       | -      | 225/75-15.3                               | 295 / 80 - 15.3 |
| ▪ Brand and model                                            | -      | STARCO AS Dumper                          |                 |
| ▪ Inflation pressure                                         | bar    | 3,1                                       | 4               |
| ▪ Corresponding weight and speed <sup>(6)</sup>              | -      | 107 A8                                    | 119 A8          |
| ▪ Combinations of minimum admissible speed and load code (6) | -      | Not available at the date of publication. | 128 A4          |
| Rear tyres (standard)                                        | -      | 10.0/75-15.3                              | 11.5/80-15.3    |
| ▪ Brand and model                                            | -      | BKT AS 504                                |                 |
| ▪ Inflation pressure                                         | bar    | 2,1                                       | 2,5             |
| ▪ Corresponding weight and speed <sup>(6)</sup>              | -      | 118 A8                                    | 126 A8          |
| ▪ Combinations of minimum admissible speed and load code (6) | -      | Not available at the date of publication. | 128 A4          |



## TECHNICAL SPECIFICATIONS TABLE

| Driving                                                      |        |                                                                                |                                                                                                        |
|--------------------------------------------------------------|--------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Feature                                                      | Unit   | D 201 AHG                                                                      | D 301 AHG                                                                                              |
| Rear tyres (standard)                                        | -      | 225/75-15.3                                                                    | 295 / 80 - 15.3                                                                                        |
| ▪ Brand and model                                            | -      | STARCO AS Dumper                                                               |                                                                                                        |
| ▪ Inflation pressure                                         | bar    | 2,1                                                                            | 1,65                                                                                                   |
| ▪ Corresponding weight and speed <sup>(6)</sup>              | -      | 107 A8                                                                         | 119 A8                                                                                                 |
| ▪ Combinations of minimum admissible speed and load code (6) | -      | Not available at the date of publication.                                      | 128 A4                                                                                                 |
| Steering                                                     |        |                                                                                |                                                                                                        |
| Type                                                         |        | Hydraulic orbitrol-type steering with two-ways acting cylinder                 |                                                                                                        |
| Maximum service pressure                                     | bar    | 170                                                                            |                                                                                                        |
| Hydraulic system                                             |        |                                                                                |                                                                                                        |
| Hydraulic tank capacity                                      | l      | 37,4                                                                           |                                                                                                        |
| Hydraulic pump                                               | -      | Single, geared, attached to the hydrostatic pump.                              |                                                                                                        |
| ▪ Displacement                                               | cc/rev | 12                                                                             |                                                                                                        |
| ▪ Flow (max. rpm)                                            | l/min  | 25                                                                             |                                                                                                        |
| ▪ Maximum service pressure                                   | bar    | 200 ± 10                                                                       |                                                                                                        |
| Control valve                                                | -      | Monoblock with 2 spools                                                        |                                                                                                        |
| Electrical equipment                                         |        |                                                                                |                                                                                                        |
| Starter motor                                                | kW     | 1,4                                                                            |                                                                                                        |
| Alternator and regulator                                     | A      | 60                                                                             |                                                                                                        |
| Battery                                                      | V      | 12                                                                             |                                                                                                        |
|                                                              | Ah     | 70                                                                             |                                                                                                        |
|                                                              | A      | 640                                                                            |                                                                                                        |
| Brakes                                                       |        |                                                                                |                                                                                                        |
| Service                                                      | -      | Hydrostatic, retention.<br>Spring activation (negative).                       | In the front wheels.<br>Totally-enclosed, multiplate, oil-immersed discs. Hydraulic drive              |
| Parking                                                      | -      | In the transfer box.<br>Spring drive (negative) and electro-hydraulic release. | In the front wheels<br>Multiple sealed disks<br>Spring drive (negative) and electro-hydraulic release. |

## TECHNICAL SPECIFICATIONS TABLE

| Sound levels                                                                  |                  |        |
|-------------------------------------------------------------------------------|------------------|--------|
| Sound power level A-weighted measured in the environment LwA <sup>(1)</sup>   | dB(A)            | 98     |
| A-weighted sound power level guaranteed in the environment LwA <sup>(1)</sup> | dB(A)            | 101    |
| Uncertainty factor KpA <sup>(2)</sup>                                         | dB(A)            | 2      |
| A-weighted sound power level in the operator's position LpA <sup>(3)</sup>    | dB(A)            | 83     |
| Vibration Levels                                                              |                  |        |
| Average acceleration value of the whole body <sup>(4)</sup>                   | m/s <sup>2</sup> | < 0,25 |
| Average acceleration value on boom-hand <sup>(5)</sup>                        | m/s <sup>2</sup> | < 0,5  |

### Legend of the table

<sup>(\*)</sup> These data may vary depending on the accessories installed on the machine.

<sup>(1)</sup> According to ISO 6395 (Directive 2000/14/EC)

<sup>(2)</sup> According to ISO 6396

<sup>(3)</sup> According to ISO 6394 (Directives 84/532/EC, 89/514/EC and 95/27/EC)

<sup>(4)</sup> According to ISO 2631 (Directive 2000/44/EC)

<sup>(5)</sup> According to ISO 5349-2 (Directive 2000/44/EC)

<sup>(6)</sup> Combinations with lower load indexes and higher speed rates might be valid and equivalent, according to the specifications established by the E.T.R.T.O. technical manual.

# 8

## MACHINE MAINTENANCE

RENTWAY

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**Information:** Inspections of the main systems of the machine must be carried out, and their results should be recorded in case they are required by the Work Authorities.

The aim of maintenance operations is to achieve an optimum performance and extend the useful life of the machine.

To achieve these objectives, the machine must be kept in good condition, and safe, harmless working routines must be performed.

There are 2 types of maintenance tasks:

- **BASIC MAINTENANCE**

These are the procedures that AUSA considers that may be carried out by the operator of the machine.

See 'Basic Maintenance Plan' in this chapter.

- **ADVANCED MAINTENANCE**

It is recommended that these procedures are carried out by an official AUSA dealer.

See 'Advanced Maintenance Plan' in this chapter.

## PRELIMINARY CONSIDERATIONS

- **⚠ DANGER Risk of death or serious injuries by operating maintenance tasks without safety measures**

All repairs and maintenance tasks must be carried out following these conditions:

- Machine unloaded.
- Travel selector (FNR) in NEUTRAL (N).
- Ignition switch in STOP position (0). See "Control Panel" in Chapter 3.
- Wheels blocked with suitable chocks.
- Unless otherwise specified, do not start the engine during maintenance operations.

- **Preparation before chassis alignment:**

Lock the chassis when carrying out maintenance tasks that require the chassis to be aligned, following the procedure described in 'Immobilising the chassis' in Chapter 4.

- **Preparation before raising the skip:**

Lock the skip when carrying out maintenance tasks that require the skip to be in the raised position, following the procedure described in 'Immobilising the skip' in Chapter 4.

- **Preparation before performing tasks in the electrical system:** Before performing any tasks on the electrical system, disconnect the battery following the indications specified in "Disconnecting the battery" in Chapter 4.

- **NOTICE Risk of damage by unplugged lines or hoses.**

Any open line or hose must be plugged immediately to avoid oil spillage and prevent foreign bodies from entering the circuit.

- **NOTICE Risk of damage by cleaning with unsuitable fabrics.**

- Clean using only lint-free fabrics.
- Keep the work area clean during maintenance operations.

## PRELIMINARY CONSIDERATIONS

### Manipulating Fluids

**⚠ WARNING** Risk of electrical shock by extinguishing fire with water.

- In the event of a fire, use fire extinguishers with dry carbon dioxide or foam. Do not use water.

See 'Fire' in Chapter 5.

**⚠ CAUTION** Risk of skin irritation through exposure to the fluids.

Prolonged skin contact with fluids may cause irritation.

- Use rubber gloves and protective goggles.
- After handling fluids, wash your hands thoroughly with water and soap.

**NOTICE** Fluids must be stored in a locked place, with suitable label identification.

Consider applicable local laws in relation to the storage of chemical products and/or flammable liquids.

**Information:** In the event of accidental spillage, use sand or an approved absorbing powder. Then, scrape the compound and dispose of it as a chemical substance.

**🌿 Environment:** In the event of leaks, take all the necessary precautions to contain them and reduce their impact.

Keep used fluids in special containers for their subsequent disposal through specialised collection points.

#### ▪ CONTACT WITH THE EYES

Rinse thoroughly with running water. If eye irritation persists, visit the nearest health centre.

#### ▪ INGESTION

Do not induce vomiting, and visit the nearest health centre.

#### ▪ EXCESSIVE AND/OR PROLONGED SKIN CONTACT

Wash with water and soap.

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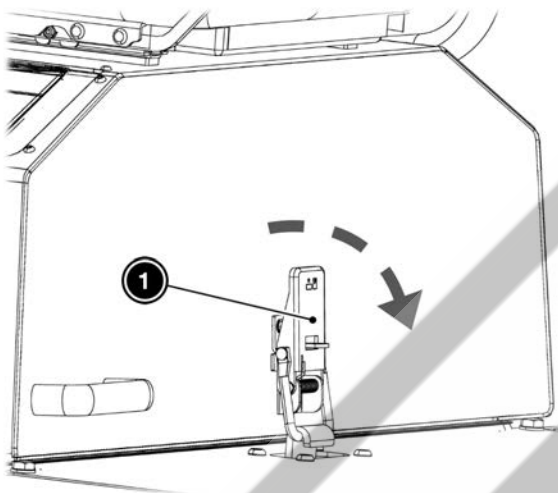
## MAINTENANCE ACCESS

### Engine cover

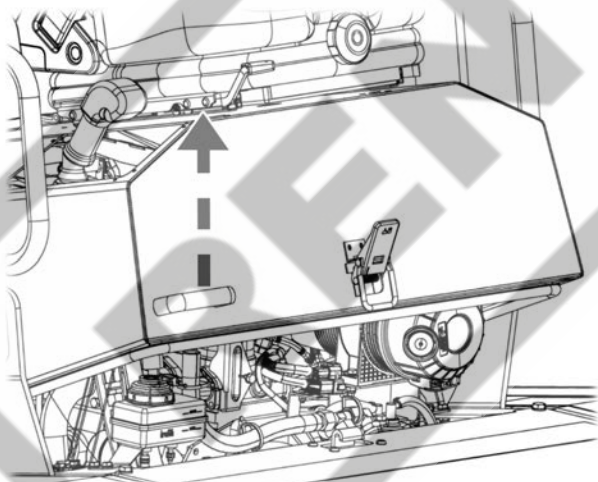
The engine cover will be lifted according to the procedure described below to access specific components that require maintenance:

1. Unlock the catch (1).

**Information:** This catch may have an antivandalism device.



2. Open the engine cover.



### Floor plate

The machine has a removable plate (1) on the floor for performing maintenance tasks on several components.



**Information:** To remove the floor plate, remove the 4 screws with a 17 mm spanner.

### Front plate

The machine has a removable plate (1) at the front of the operator position, providing access to fuses and relays for maintenance purposes.



**Information:** To remove the frontal plate (1), remove the 8 screws with a 4 mm hex wrench.

## CORRECTIONS, ADJUSTMENTS OR REPLACEMENTS

**⚠ WARNING** Risk of accident caused by working on the machine with the engine on.

- Before carrying out any task on the machine, ensure that the machine is off and the key is removed from the ignition switch.

**⚠ CAUTION** Risk of burns by contacting the engine surface.

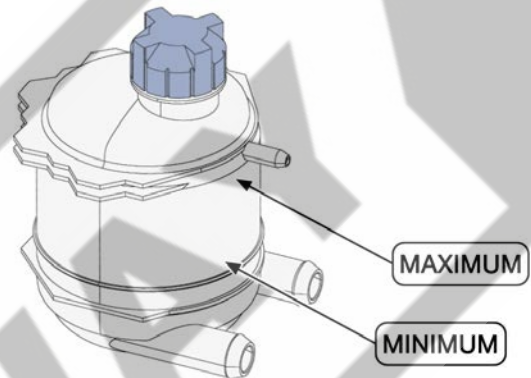
- Allow the engine to cool down for 30 minutes to avoid the risk of burns.

### Refilling coolant

1. Access the coolant tank (1).
2. Remove the coolant tank plug (2).



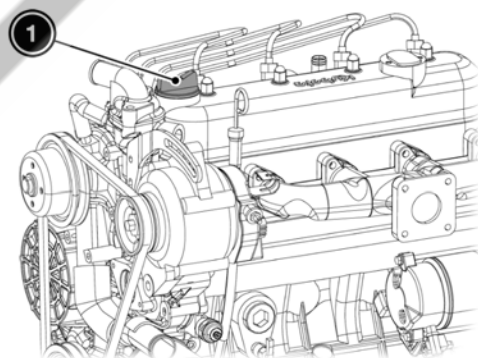
3. Fill the tank with coolant until it is between the minimum and maximum level.



4. Place the coolant tank cap.

### Refilling engine oil

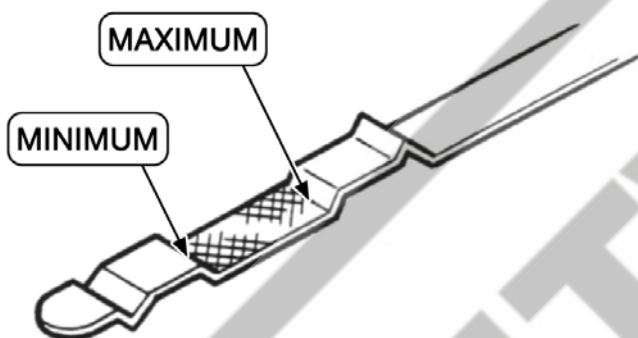
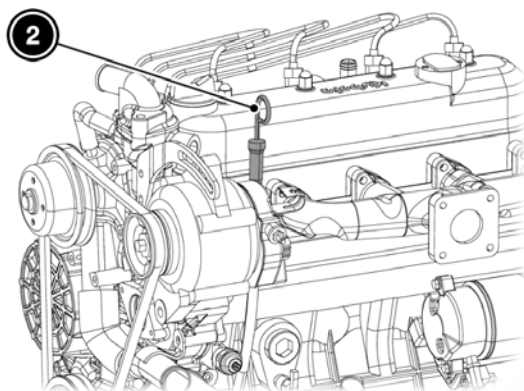
1. Remove the engine oil filling cap (1).





## CORRECTIONS, ADJUSTMENTS OR REPLACEMENTS

2. Fill with oil until it is between the minimum and maximum level on the dipstick.



**Information:** Use a funnel to avoid oil spills.

3. Replace the engine oil filling cap.

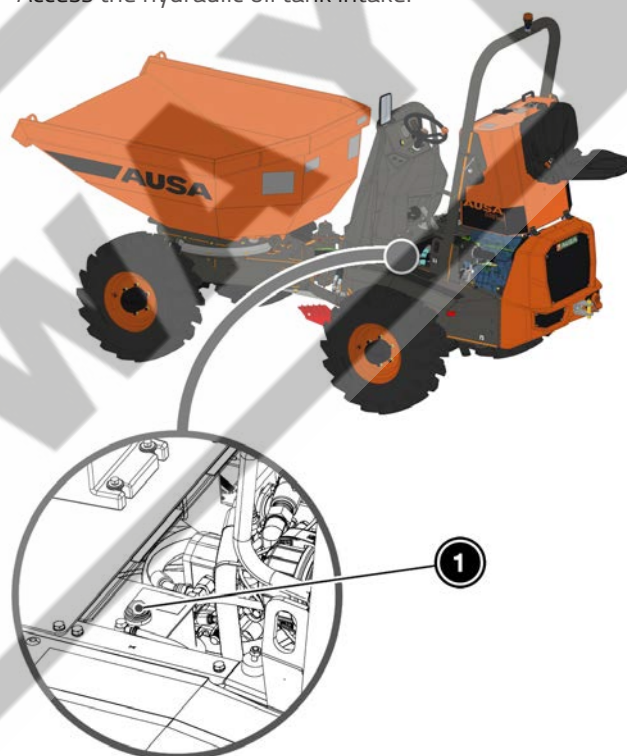
### Refilling hydraulic oil

**NOTICE** When checking the oil level, the skip must be in a straight, horizontal position.

**Information:** Avoid spilling oil outside the tank. Immediately clean any spillage, and dry the surface thoroughly.

**Information:** Use a funnel to avoid oil spills.

1. Access the hydraulic oil tank intake.



2. Clean the area around the hydraulic oil tank cap (1) to prevent accumulated dirt, water or other substances from entering the tank during refilling.
3. Unscrew and remove the hydraulic oil tank cap (1) with a **17 mm** hex wrench.

## CORRECTIONS, ADJUSTMENTS OR REPLACEMENTS

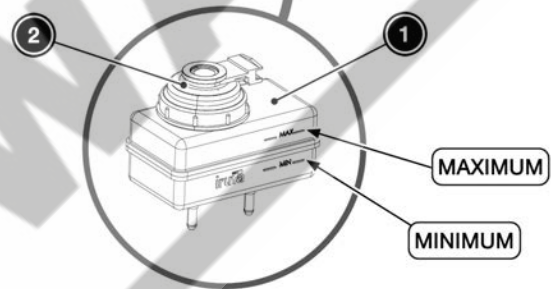
4. Fill up the tank, ensuring that its maximum capacity is not exceeded.
5. Check that the level is at the centre of the gauge (2).



6. Place the plug in the tank using a **17 mm** hex wrench, and apply a tightening torque of **35 Nm**.

### Refilling brake fluid

1. Access the brake fluid tank (1).
2. Remove the tank cap (2).



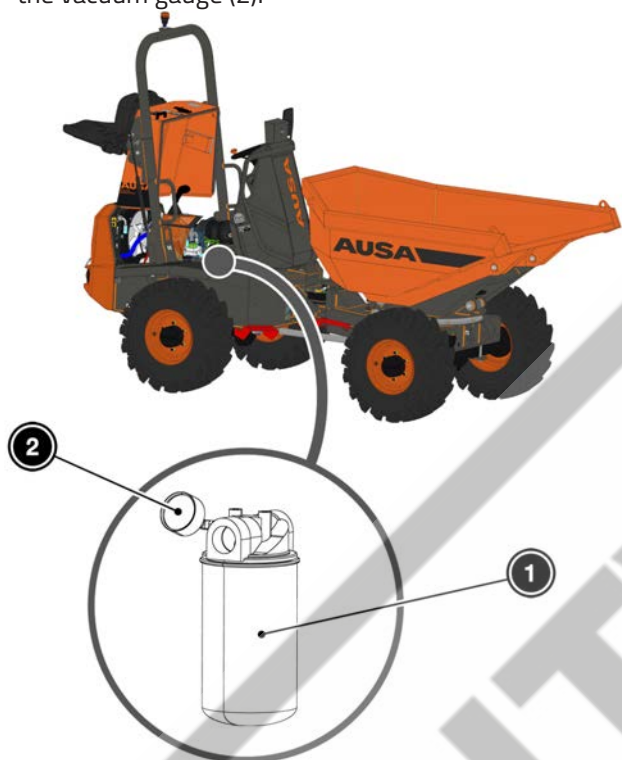
3. Fill the tank with brake fluid up to the maximum mark, while avoiding spills.
4. Replace the tank cap.



## CORRECTIONS, ADJUSTMENTS OR REPLACEMENTS

### Checking the hydraulic oil filter cartridge

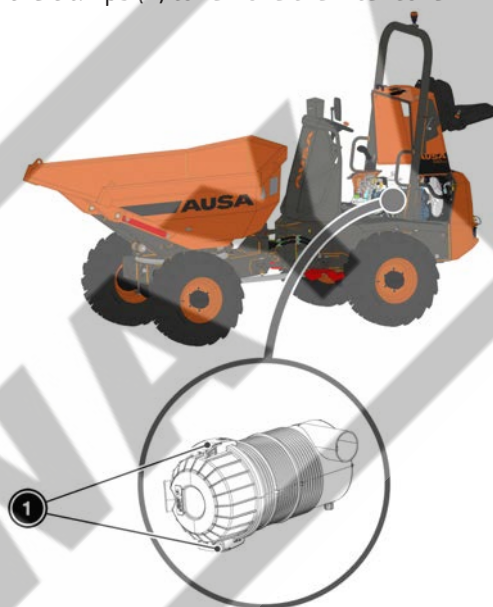
1. Check the saturation level of the cartridge filter (1) using the vacuum gauge (2).



**NOTICE** With the engine on and at maximum rpm, the vacuum gauge needle should be in the green or yellow area. If it approaches or marks the red area, contact an official AUSA dealer before operating the machine.

### Changing or Cleaning the Air Filter

1. Access the air filter.
2. Pull the clamps (1) to remove the filter cover.



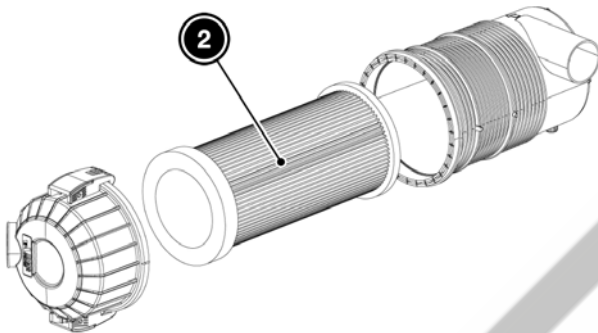
3. Clean the filter cover with pressurised air or water.

## CORRECTIONS, ADJUSTMENTS OR REPLACEMENTS

4. Remove the filter (2) and clean it with compressed air.

### NOTICE

- The cleaning air pressure must not exceed 5 bar.
- If there are signs of damage on the external filter, replace it with a new one.



5. Clean inside the filter housing.

**NOTICE** Exercise special caution when cleaning the housing with pressure air, so that no foreign objects enter the suction line.

6. Install the external air filter (2) back in place inside the housing.
7. Install the filter cover and affix it using the clamps.

## Depressurising the Hydraulic Circuit

**⚠ WARNING** Risk of damage caused by spraying fluids.

- Before carrying out maintenance or repair tasks on the hydraulic circuit, it must first be depressurised.

1. Make sure the machine is stationary on a leveled surface.
2. Ensure the skip is in horizontal position (at rest).
3. Insert the key in the ignition switch and turn it to the IGNITION position (I).

**Information:** Turn the ignition switch to the IGNITION position, but do not start the engine.

4. Move the joystick twice in each direction:
  - Forward.
  - Reverse.
  - Left.
  - Right.



## FLUIDS AND LUBRICANTS

### **NOTICE** Risk of damage by low fluid levels.

Always check the labels on fluids and lubricants containers to ensure that they meet the required specifications.

| Fluid or lubricant                                                 | Specifications                                                                                                                                                                                                                   | Observations                         | Capacity    |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------|
| Fuel                                                               | <ul style="list-style-type: none"> <li>▪ Diesel EN 590</li> <li>▪ Diesel ASTM D97</li> </ul>                                                                                                                                     | See 'Fuel Specifications.'           | 37.5 litres |
| Engine oil (standard)                                              | <ul style="list-style-type: none"> <li>▪ Standard MIL-L-2104C</li> <li>▪ Classification API CF-4 or higher</li> <li>▪ BTN<math>\geq</math>10</li> </ul>                                                                          | See 'Engine oil.'                    | 6 litres    |
| Engine coolant                                                     | Antifreeze mixture of ethylene-glycol and clean soft water that contains anti-foaming agents and corrosion inhibitors for aluminium and light-alloy internal combustion engines.                                                 | See 'Engine coolant.'                | 6,7 litres  |
| Hydraulic circuit oil                                              | <ul style="list-style-type: none"> <li>▪ ISO VG-32 (ambient temperature below 10 °C)</li> <li>▪ ISO VG-46 (ambient temperature between 10 °C and 40 °C) (1)</li> <li>▪ ISO VG-68 (ambient temperature above 40 °C)</li> </ul>    | ISO 6743/4-HV DIN-51524 Part 3 HVLP. | 37.5 litres |
| Hydraulic circuit oil<br><b>ACCESSORY</b>                          | <ul style="list-style-type: none"> <li>▪ ISO HLP-32 (ambient temperature below 10 °C)</li> <li>▪ ISO HLP-46 (ambient temperature between 10 °C and 40 °C) (1)</li> <li>▪ ISO HLP-68 (ambient temperature above 40 °C)</li> </ul> | Synthetic and biodegradable.         | 37.5 litres |
| Differential oil and front axle hub reductions<br><b>D 201 AHG</b> | <ul style="list-style-type: none"> <li>▪ API GL-4 - GL-5 EP Universal lubricant</li> </ul>                                                                                                                                       | -                                    | 3.3 litres  |
| Differential oil and rear axle hub reductions<br><b>D 201 AHG</b>  |                                                                                                                                                                                                                                  |                                      | 3.3 litres  |
| Transfer box<br><b>D 201 AHG</b>                                   | SAE 80W90 oil for transmissions, according to API GL5 LS / MILL.2105D                                                                                                                                                            | See 'Transfer box oil'               | 0,85 litres |

## FLUIDS AND LUBRICANTS

| Fluid or lubricant                                 | Specifications                                           | Observations                            | Capacity              |
|----------------------------------------------------|----------------------------------------------------------|-----------------------------------------|-----------------------|
| Front-axle differential oil<br>D 301 AHG           | UTTO (API GL4)<br>SAE 85W90 (API GL5)<br>J20/C, MF M1143 | With additives for oil-immersed brakes. | 4.1 litres            |
| Front and rear axle hub reduction oil<br>D 301 AHG |                                                          |                                         | 0.35 litres/<br>wheel |
| Rear axle and transfer-box oil<br>D 301 AHG        |                                                          |                                         | 4.7 litres            |
| Brake fluid                                        | LHM (green) type with mineral base (ISO VG32)            | See 'Brake Fluid'.                      | 1 litre               |
| Calcium grease for grease points                   | Consistency NLGI-3                                       | -                                       | -                     |

### Legend of the table

<sup>(1)</sup> The machine leaves the factory with ISO VG-46 / HLP-46 oil for the hydraulic circuit.



## FLUIDS AND LUBRICANTS

### Fuel specifications

- Only use diesel fuel EN 590 or ASTM D975.
- Apart from being necessary to meet approval requirements, a low sulphur level is also compulsory in areas regulated by US EPA. In those areas, use No.2-D S15 diesel fuel as per the following criterion:

- As an alternative to No.2-D.
- As an alternative to No.1-D for ambient temperatures below -10 °C.

**Information:** No.2-D is a distillate fuel of lower volatility for engines in industrial and heavy mobile service (SAE J313).

- Fuel cetane rating:
  - Minimum recommended: 45.
  - A rating over 50 is recommended, especially in ambient temperatures below -20 °C or altitudes over 1500 m.

### Engine oil

**NOTICE** Risk of engine damage by using unsuitable fluids.

- If different brands of oil are used, empty the sump completely before adding the new oil.
- SAE 10W-30, 10W-40 or 15W-40
  - (ambient temperature above 25 °C)
- SAE 10W-30, 10W-40 or 15W-40
  - (ambient temperature between -10 °C and 25 °C)
- SAE 5W-30 or 5W-40
  - (ambient temperature below -10 °C)

### Transfer box oil

D 201 AHG

**Information:** AUSA recommends TOTAL DYNATRANS DA 80W-90.

### Brake Fluid

**NOTICE** Risk of damage to the brake system caused by using unsuitable fluids.

- To avoid serious damage in the brake system, do not use fluids other than those recommended. When refilling, do not mix different fluids.
- Do not use synthetic brake fluids (DOT4) as per SAE J1703 under any circumstances.

### Engine Coolant

The antifreeze mixture must comply with the following specifications:

- UNE-26.361 - 88
- INTA 157413
- BRITISH STANDARD 6580
- AFNOR NFR 15601
- ASTM D 3306, D 4985
- SAE J 1034

**Information:** The machine leaves the factory with a coolant concentration of 50-50% for temperatures between -35 °C and 145 °C (in pressurised circuit).

# GENERAL MAINTENANCE CHART

| I: Inspect, check, clean, lubricate, replace if necessary<br>C: Clean<br>L: Lubricate<br>R: Replace | EVERY   |          |                   |                   |                  |                  |         |                  |         |
|-----------------------------------------------------------------------------------------------------|---------|----------|-------------------|-------------------|------------------|------------------|---------|------------------|---------|
|                                                                                                     | BASIC   |          | ADVANCED          |                   |                  |                  |         |                  |         |
|                                                                                                     | 8 hours | 50 hours | Initial inspec-   | 200 h.            | 400 h.           | 600 h.           | 1000 h. | 1600 h.          | 3000 h. |
|                                                                                                     |         |          |                   |                   |                  |                  |         |                  |         |
| <b>MECHANICAL FASTENINGS</b>                                                                        |         |          |                   |                   |                  |                  |         |                  |         |
| Check for unusual noise / vibration <sup>(5)</sup>                                                  |         |          |                   | I                 |                  |                  |         |                  |         |
| <b>ENGINE (MTR)</b>                                                                                 |         |          |                   |                   |                  |                  |         |                  |         |
| Oil                                                                                                 | I       |          | R                 | R                 |                  |                  |         |                  |         |
| Oil filter                                                                                          |         |          | R                 |                   | R                |                  |         |                  |         |
| Oil level                                                                                           |         |          |                   |                   |                  |                  |         |                  |         |
| Alternator belt                                                                                     | I       |          | I <sup>(14)</sup> | I <sup>(14)</sup> |                  | R <sup>(2)</sup> |         |                  |         |
| Engine supports                                                                                     | I       |          |                   |                   |                  |                  |         |                  |         |
| Fuel hoses and clamps                                                                               |         |          |                   |                   |                  |                  |         | R <sup>(2)</sup> |         |
| Valves set                                                                                          |         |          |                   |                   |                  |                  | I       |                  |         |
| <b>FUEL SYSTEM (SAC)</b>                                                                            |         |          |                   |                   |                  |                  |         |                  |         |
| Fuel level                                                                                          | I       |          |                   |                   |                  |                  |         |                  |         |
| Air filter element                                                                                  | I/C     |          |                   |                   | R <sup>(2)</sup> |                  |         |                  |         |
| Air filter intake hose                                                                              | I       |          |                   |                   |                  |                  |         | R <sup>(3)</sup> |         |
| Fuel prefilter                                                                                      |         |          | R                 | R <sup>(2)</sup>  |                  |                  |         |                  |         |
| Fuel filter                                                                                         |         |          |                   |                   | R <sup>(2)</sup> |                  |         |                  |         |
| Fuel tank                                                                                           |         |          |                   |                   |                  | C                |         |                  |         |
| Injection pump                                                                                      |         |          |                   |                   |                  |                  |         |                  | I       |
| Injection pressure of the fuel injection nozzle                                                     |         |          |                   |                   |                  |                  |         | I                |         |
| <b>COOLING CIRCUIT (REF)</b>                                                                        |         |          |                   |                   |                  |                  |         |                  |         |
| Coolant                                                                                             | I       |          |                   |                   |                  | R                |         |                  |         |
| Radiator hoses and clamps                                                                           |         |          |                   | I                 |                  |                  |         | R <sup>(3)</sup> |         |
| Condition of the fan blades                                                                         | I       |          |                   |                   |                  |                  |         |                  |         |
| Radiator                                                                                            | I       | C        |                   |                   |                  |                  |         |                  |         |
| <b>ELECTRICAL SYSTEM (ELE)</b>                                                                      |         |          |                   |                   |                  |                  |         |                  |         |
| Battery                                                                                             |         |          |                   | I <sup>(6)</sup>  |                  |                  |         | R                |         |
| Electrical components <sup>(8)</sup>                                                                | I       |          |                   |                   |                  |                  |         |                  |         |
| Electrical wiring and connections                                                                   | I       |          |                   |                   |                  |                  |         |                  |         |
| Control panel <sup>(7)</sup>                                                                        | I       |          |                   |                   |                  |                  |         |                  |         |
| Hours of service counter                                                                            | I       |          |                   |                   |                  |                  |         |                  |         |



## GENERAL MAINTENANCE CHART

| I: Inspect, check, clean, lubricate, replace if necessary<br>C: Clean<br>L: Lubricate<br>R: Replace | EVERY             |          |                  |        |        |        |         |                  |                  |
|-----------------------------------------------------------------------------------------------------|-------------------|----------|------------------|--------|--------|--------|---------|------------------|------------------|
|                                                                                                     | BASIC             |          | ADVANCED         |        |        |        |         |                  |                  |
|                                                                                                     | 8 hours           | 50 hours | Initial inspec-  | 200 h. | 400 h. | 600 h. | 1000 h. | 1600 h.          | 3000 h.          |
| <b>ELECTRICAL SYSTEM (ELE)</b>                                                                      |                   |          |                  |        |        |        |         |                  |                  |
| Fuses                                                                                               | I                 |          |                  |        |        |        |         |                  |                  |
| Travel selector (FRN)                                                                               | I                 |          |                  |        |        |        |         |                  |                  |
| <b>HYDRAULIC CIRCUIT (HDR)</b>                                                                      |                   |          |                  |        |        |        |         |                  |                  |
| Hydraulic oil                                                                                       | I                 |          |                  |        |        |        | R       |                  |                  |
| Tank internal oil strainer                                                                          |                   |          |                  |        |        |        | C       |                  |                  |
| Hydraulic oil filter cartridge                                                                      | I                 |          | R                |        |        |        | R       |                  |                  |
| Skip movements                                                                                      | I                 |          |                  |        |        |        |         |                  |                  |
| Steering movements                                                                                  | I                 |          |                  |        |        |        |         |                  |                  |
| Steering cylinder                                                                                   | I                 |          |                  |        |        |        |         |                  |                  |
| Skip cylinder                                                                                       | I                 |          |                  |        |        |        |         |                  |                  |
| Hydraulic hoses and connections                                                                     |                   |          |                  |        |        |        |         |                  | R <sup>(4)</sup> |
| <b>TRANSMISSION (TRN) D 201 AHG</b>                                                                 |                   |          |                  |        |        |        |         |                  |                  |
| Differentials and hub reductions oil                                                                |                   |          | R                |        | I      |        | R       |                  |                  |
| Transfer box oil                                                                                    |                   |          | R                |        | I      |        | R       |                  |                  |
| Wheels fastening lug nuts <sup>(12)</sup>                                                           |                   | I        |                  |        |        |        |         |                  |                  |
| Universal joints fastening nuts                                                                     |                   |          |                  |        | I      |        |         |                  |                  |
| Tyre pressure and wear                                                                              | I                 |          |                  |        |        |        |         |                  |                  |
| <b>TRANSMISSION (TRN) D 301 AHG</b>                                                                 |                   |          |                  |        |        |        |         |                  |                  |
| Differentials and hub reductions oil                                                                |                   |          | R <sup>(1)</sup> |        | I      |        | R       |                  |                  |
| Transfer box oil                                                                                    |                   |          | R <sup>(1)</sup> |        | I      |        | R       |                  |                  |
| Wheels fastening lug nuts <sup>(12)</sup>                                                           |                   | I        |                  |        |        |        |         |                  |                  |
| Universal joints fastening nuts                                                                     |                   |          |                  |        | I      |        |         |                  |                  |
| Tyre pressure and wear                                                                              | I                 |          |                  |        |        |        |         |                  |                  |
| <b>BRAKES (FRN)</b>                                                                                 |                   |          |                  |        |        |        |         |                  |                  |
| Brake fluid                                                                                         | I                 |          |                  |        |        |        |         | R <sup>(3)</sup> |                  |
| Brake pedal                                                                                         | I                 |          |                  |        |        |        |         |                  |                  |
| Parking brake                                                                                       | I <sup>(10)</sup> |          |                  |        |        |        |         |                  |                  |

## GENERAL MAINTENANCE CHART

| I: Inspect, check, clean, lubricate, replace if necessary<br>C: Clean<br>L: Lubricate<br>R: Replace | EVERY   |          |                 |        |        |        |         |         |         |
|-----------------------------------------------------------------------------------------------------|---------|----------|-----------------|--------|--------|--------|---------|---------|---------|
|                                                                                                     | BASIC   |          | ADVANCED        |        |        |        |         |         |         |
|                                                                                                     | 8 hours | 50 hours | Initial inspec- | 200 h. | 400 h. | 600 h. | 1000 h. | 1600 h. | 3000 h. |
| <b>GREASING POINTS (EGS)</b>                                                                        |         |          |                 |        |        |        |         |         |         |
| Refer to section 'Greasing points'                                                                  |         | L        |                 |        |        |        |         |         |         |
| <b>BODY / CHASSIS (CHS)</b>                                                                         |         |          |                 |        |        |        |         |         |         |
| Operator's position                                                                                 | I/C     |          |                 |        |        |        |         |         |         |
| Pedals operation                                                                                    | I       |          |                 |        |        |        |         |         |         |
| Roll Over Protective Structure (ROPS)                                                               | I       |          |                 |        |        |        |         |         |         |
| Seat and fastening guides                                                                           | I       |          |                 |        |        |        |         |         |         |
| Seat belt <sup>(9)</sup>                                                                            | I       |          |                 |        |        |        |         |         |         |
| Identification plates and decals                                                                    | I/C     |          |                 |        |        |        |         |         |         |
| Chassis joint and central joint nut                                                                 |         |          |                 |        |        |        | I       |         |         |
| Skip                                                                                                | C       |          |                 |        |        |        |         |         |         |
| Skip safety prop, chassis locking bar, and their fixings and support points                         | I       |          |                 |        |        |        |         |         |         |
| Manuals present in the document case                                                                | I       |          |                 |        |        |        |         |         |         |
| Engine cover catch                                                                                  | I       |          |                 |        |        |        |         |         |         |
| Protectors, lids, caps, safety stops and locks                                                      | I       |          |                 |        |        |        |         |         |         |
| Steps and handles to access the operator's position                                                 | I       |          |                 |        |        |        |         |         |         |
| Counterweight fastening.                                                                            |         |          |                 |        | I      |        |         |         |         |
| <b>ACCESSORIES (ACC)</b>                                                                            |         |          |                 |        |        |        |         |         |         |
| Lights and signalling equipment <b>ACCESSORY</b>                                                    | I/C     |          |                 |        |        |        |         |         |         |
| Maintenance                                                                                         | I       | I        |                 | I      |        |        |         |         |         |



## GENERAL MAINTENANCE CHART

### Legend of the table

- (1) Although AUSA recommends an oil change during the first 50 hours maintenance check, the axle's manufacturer allows the oil change at 100 hours and no later than 200 hours.
- (2) Or every year, whichever comes first.
- (3) Or every 2 years, whichever comes first.
- (4) Or every 6 years, whichever comes first.
- (5) Engine, transmission, exhaust system, hydraulic system, counterweight, moving parts, chassis
- (6) External damage, electrolyte losses, rusted posts.
- (9) The buckle needs to enter and exit the slot easily.
- The buckle should not come out of the slot if the release button is not pressed.
  - The anchors of the various components must be firmly secured.
  - The belt must not be cut nor frayed.
  - The seams of the belt must be in good condition.
  - The operator presence must work correctly.
- (10) With the parking brake activated, the wheels must remain locked.
- (11) Drain the water.
- (12) Tightening torque:
- 250 ± 30 Nm.** D 201 AHG
- 330 ± 30 Nm.** D 301 AHG
- (13) Between 3,000 and 6,000 hours. It will depend on each machine's conditions of use.
- (14) Check the voltage and inspect for possible damage.

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RENTWAY

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## BASIC MAINTENANCE PLAN

**⚠ WARNING** Risk of death or serious injuries as a result of non-maintenance.

All these tasks are essential for the correct and safe operation of the machine.

- These tasks can be carried out by the machine operator.

As part of the basic maintenance plan, the following tasks must be performed:

- Basic every 8 hours.
- Basic every 50 hours.

**NOTICE** Contact an authorised AUSA dealer if any parts are loose, detached or damaged, or if there are vibrations, noises, etc.

## ADVANCED MAINTENANCE PLAN

**⚠ WARNING** Risk of death or serious injuries as a result of non-maintenance.

All these tasks are essential for the correct and safe operation of the machine.

- These tasks should not be carried out by the machine operator, but by qualified technicians from an authorised AUSA dealer.

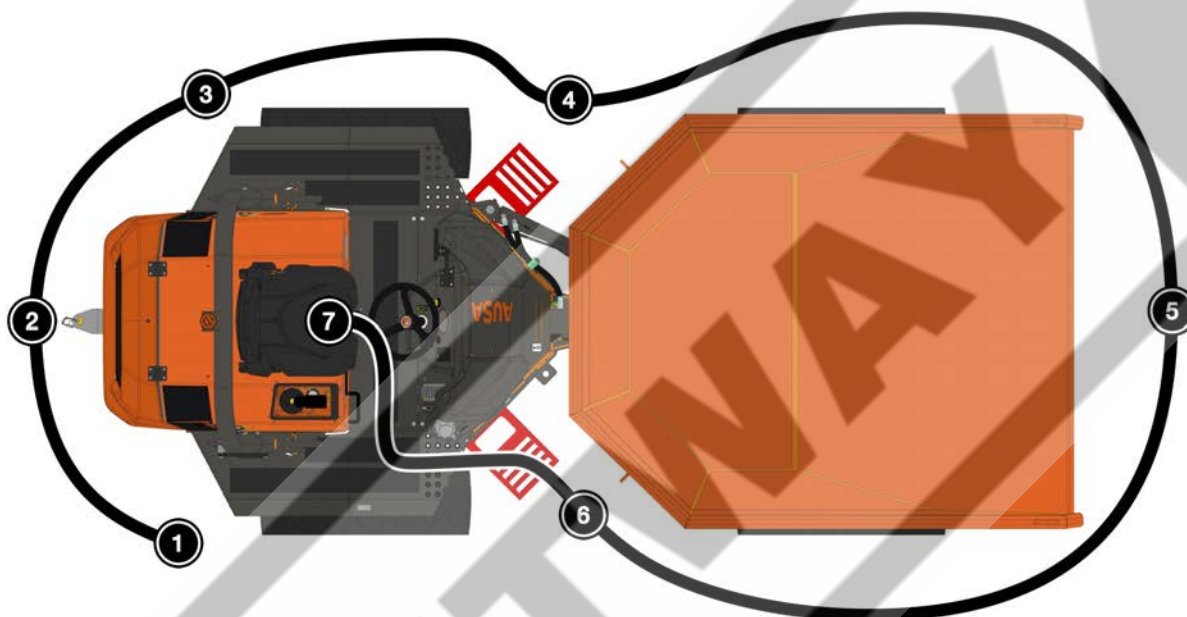
The following tasks should be carried out as part of the advanced maintenance plan:

- First 50 hours.
- Every 200 hours.
- Every 400 hours.
- Every 600 hours.
- Every 1000 hours.
- Every 1600 hours.
- Every 3000 hours.

## AT THE BEGINNING OF THE SHIFT

**NOTICE** If any anomaly is detected during this inspection, contact the official AUSA dealer.

Before using the machine, check the following: To make the daily inspection more efficient, it is recommended to follow the sequence below:

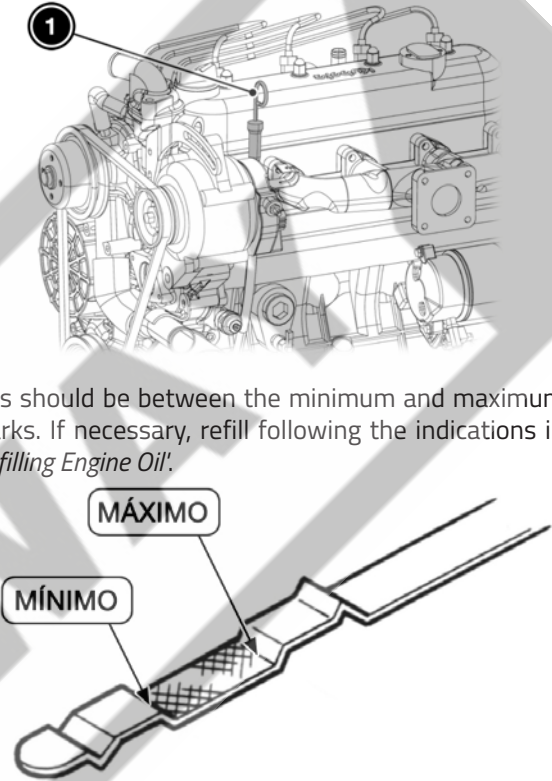


| Position | Task                                                                                                                                                                                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General  | If the machine includes accessories, carry out their appropriate maintenance operations. <b>ACCESSORY</b>                                                                                                                                         | The maintenance tasks for optional elements are described in <i>Chapter 9</i> .                                                                                                                                                                                                                                                                                                                                                                                                          |
|          | <p>Check the following components for leaks:</p> <ul style="list-style-type: none"> <li>▪ Engine.</li> <li>▪ Transmission.</li> <li>▪ Hydraulic system.</li> <li>▪ Cooling system.</li> <li>▪ Brake system.</li> <li>▪ Exhaust system.</li> </ul> | <p><b>NOTICE</b> Replace any damaged hose or tube immediately. The replacement components must always have the same characteristics as the original ones. If the path of a hose or tube is modified, pay special attention to their acceptable radius to avoid bottleneck effects.</p> <ul style="list-style-type: none"> <li>▪ Hoses and fixing flange brackets.</li> <li>▪ Hoses.</li> <li>▪ Couplings.</li> <li>▪ Fluid stains on the floor or on any part of the machine.</li> </ul> |

## AT THE BEGINNING OF THE SHIFT

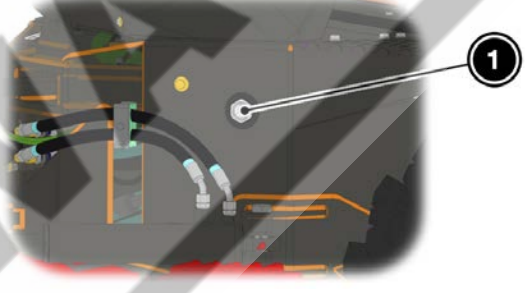
| Position | Task                                                                                                                                                                                                                                                                | Description                                                                                                                                                                                               |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General  | Check the condition of plates and decals.                                                                                                                                                                                                                           | See 'Identification plates and decals' in Chapter 2.                                                                                                                                                      |
|          | Verify that the following parts are in good condition: <ul style="list-style-type: none"> <li>▪ Protectors.</li> <li>▪ Covers.</li> <li>▪ Caps and plugs.</li> <li>▪ Safety props.</li> <li>▪ Locks.</li> <li>▪ Lights and pilot lights <b>ACCESSORY</b></li> </ul> | N/A                                                                                                                                                                                                       |
|          | Check the tyre pressure and wear.                                                                                                                                                                                                                                   | See Chapter 7.                                                                                                                                                                                            |
| 1        | Check the closing condition of the engine cover.                                                                                                                                                                                                                    | N/A                                                                                                                                                                                                       |
|          | Check that the manuals are in the document holder.                                                                                                                                                                                                                  | N/A                                                                                                                                                                                                       |
|          | Check the level of the following fluids and, if necessary, refill the tank. <ul style="list-style-type: none"> <li>▪ Coolant (1).</li> <li>▪ Brake fluid (2).</li> </ul>                                                                                            | <ul style="list-style-type: none"> <li>▪ See "Refilling Coolant".</li> <li>▪ See "Refilling Brake Fluid".</li> </ul>  |
|          | Check the condition of alternator belt.                                                                                                                                                                                                                             | N/A                                                                                                                                                                                                       |
|          | Check the condition of the engine mounts.                                                                                                                                                                                                                           | N/A                                                                                                                                                                                                       |
|          | Check the condition of the electrical wiring and its connections.                                                                                                                                                                                                   | N/A                                                                                                                                                                                                       |

## AT THE BEGINNING OF THE SHIFT

| Position | Task                                                                                                                                                                                                                                                                                                                           | Description                                                                                                                                                                                                                |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | Check the engine oil level (1).                                                                                                                                                                                                                                                                                                |  <p>This should be between the minimum and maximum marks. If necessary, refill following the indications in 'Refilling Engine Oil'.</p> |
| 2        | Verify the condition of the following elements: <ul style="list-style-type: none"> <li>▪ Tail lights.</li> <li>▪ Towing hitch socket (bolt pin and split pin).</li> <li>▪ Registration plate. <b>ACCESSORY</b></li> <li>▪ Registration plate light. <b>ACCESSORY</b></li> <li>▪ Proximity sensors. <b>ACCESSORY</b></li> </ul> | N/A                                                                                                                                                                                                                        |
|          | Verify the condition and cleanliness of the radiator.<br>Clean it if necessary.                                                                                                                                                                                                                                                | See 'Basic maintenance every 50 hours - At the end of the shift.'                                                                                                                                                          |
| 3        | Check the condition of the electrical wiring, the battery, the fuses and their connections.                                                                                                                                                                                                                                    | N/A                                                                                                                                                                                                                        |
|          | Check the condition of the engine mounts.                                                                                                                                                                                                                                                                                      | N/A                                                                                                                                                                                                                        |

## BASIC MAINTENANCE EVERY 8 HOURS

### AT THE BEGINNING OF THE SHIFT

| Position | Task                                                                                                                                                                                                         | Description                                                                                                                                                                                                                                 |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3        | Check the condition of the air filter element. Clean it if necessary.                                                                                                                                        | See 'Changing or Cleaning the Air Filter' in this chapter.                                                                                                                                                                                  |
|          | Check the state of the fan blades.                                                                                                                                                                           | Check for abrasions or missing parts.                                                                                                                                                                                                       |
|          | Check the condition of the air filter intake hose.                                                                                                                                                           | Check for abrasions or cracked rubber. Check that the fixing flange brackets are properly attached.                                                                                                                                         |
| 4        | Check the hydraulic oil level (1) and, if necessary, refill the tank.                                                                                                                                        | See 'Refilling Hydraulic Oil' in this chapter.<br>                                                                                                       |
|          | Check the elements for damage, cracks, oil leaks or other defects.                                                                                                                                           | <ul style="list-style-type: none"> <li>▪ Skip</li> <li>▪ Chassis central articulation.</li> <li>▪ Steering cylinder.</li> <li>▪ Hydraulic hoses and connections.</li> <li>▪ Steps and handles to access the operator's position.</li> </ul> |
|          | Verify the condition of the skip's safety prop and the articulation safety prop and of their anchor and support points.                                                                                      | N/A                                                                                                                                                                                                                                         |
| 5        | Verify the condition of the following elements: <ul style="list-style-type: none"> <li>▪ Headlights.</li> <li>▪ Skip side camera. <b>ACCESSORY</b></li> <li>▪ Proximity sensors. <b>ACCESSORY</b></li> </ul> | N/A                                                                                                                                                                                                                                         |

## AT THE BEGINNING OF THE SHIFT

| Position | Task                                                                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6        | Check the fuel level and, if necessary, refill the tank.                                | <p>See 'Refuelling' in Chapter 4.</p> <p><b>⚠ WARNING Risk of fire or explosion.</b></p> <ul style="list-style-type: none"> <li>➤ Do not smoke while handling fuel.</li> <li>➤ Always refuel with the engine stopped.</li> </ul>                                                                                                                                                                                                                                                                                            |
|          | Check for damage, cracks or other defects in the Roll Over Protective Structure (ROPS). | <p>Check that the bolt pins are properly inserted and fastened with the split pins.</p> <p>Refer to 'Roll Over Protective Structure (ROPS)' in Chapter 4.</p>                                                                                                                                                                                                                                                                                                                                                               |
| 7        | Check the condition of the seat and its tracks.                                         | <ul style="list-style-type: none"> <li>▪ Lubricate it if necessary.</li> <li>▪ Verify that the operator presence sensor works correctly.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                         |
|          | Check the seat belt sensor.                                                             | <ul style="list-style-type: none"> <li>▪ Verify that the latch enters and exits the buckle easily.</li> <li>▪ Check that, once engaged, the latch does not come out of the buckle without pressing the unlocking button.</li> <li>▪ Verify that the anchor points of the different seat belt elements are firmly attached.</li> <li>▪ Check that the strap has no cuts or frayed parts.</li> <li>▪ Verify the good condition of the seams.</li> <li>▪ Verify that the fastened seat belt sensor works correctly.</li> </ul> |

## AT THE BEGINNING OF THE SHIFT

| Position | Task                                                                                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7        | Check the hours of service counter to know whether it is necessary to perform advanced maintenance tasks. | <p>The frequency for these types of tasks is as follows:</p> <ul style="list-style-type: none"> <li>▪ Every 200 hours.</li> <li>▪ Every 400 hours.</li> <li>▪ Every 600 hours.</li> <li>▪ Every 1000 hours.</li> <li>▪ Every 1600 hours.</li> <li>▪ Every 3000 hours.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|          | Check the control panel.                                                                                  | <p>Verify the correct operation of the following elements:</p> <ul style="list-style-type: none"> <li>▪ Push buttons.</li> <li>▪ Switches.</li> <li>▪ Selectors.</li> <li>▪ Indicators.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|          | Check the machine elements.                                                                               | <ul style="list-style-type: none"> <li>▪ Turn the steering wheel until it stops in both directions, and check that it moves freely, with no stiff points.</li> <li>▪ Check that the steering wheel does not have free play.</li> <li>▪ Press the pedals several times to ensure that they move freely and that, when released, they return to their original position.</li> <li>▪ Start the machine, advance slowly and press the brake pedal to verify its correct operation.</li> <li>▪ Move the skip with the joystick to verify that it works properly.</li> <li>▪ Verify that the travel selector (FNR) operates correctly in its three positions: <ul style="list-style-type: none"> <li>▪ Forward (F).</li> <li>▪ NEUTRAL (N).</li> <li>▪ Reverse (R).</li> </ul> </li> </ul> |

## AT THE BEGINNING OF THE SHIFT

| Position | Task                                                                                              | Description                                                                                                                                                    |
|----------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7        | Verify that the lighting equipment operates correctly. <b>ACCESSORY</b>                           | N/A                                                                                                                                                            |
|          | Verify the operation of the reverse travel alarm disabler.                                        | Check that, when travelling in reverse, the audible warning sounds normally.                                                                                   |
|          | Check the correct operation of the horn.                                                          | N/A                                                                                                                                                            |
|          | Verify that the rotating beacon works properly.                                                   | N/A                                                                                                                                                            |
|          | Check the operation of the green rotating beacon. <b>ACCESSORY</b>                                | N/A                                                                                                                                                            |
|          | Check the emergency stop function. <b>ACCESSORY</b>                                               | With the machine on, press the emergency stop button to check that it triggers a complete stop of the machine.                                                 |
|          | Check the operation of the NEUTRAL (N) position of the travel selector (FNR).                     | With the travel selector (FNR) in NEUTRAL (N) and the machine running, verify that the machine does not move forwards or backwards when pressing the throttle. |
|          | Check the operation of the parking brake.                                                         | With the parking brake activated, the machine's wheels must remain locked.                                                                                     |
|          | Verify the operation of the skip side camera and the proximity sensors. <b>ACCESSORY</b>          | N/A                                                                                                                                                            |
|          | Verify the operation of the counterweight side camera and the proximity sensors. <b>ACCESSORY</b> | N/A                                                                                                                                                            |

### AT THE END OF THE SHIFT

**NOTICE** If the machine is used in areas with salt water (beaches, etc.) or mud, rinse with clean water to protect it against corrosion, and keep the signalling and lighting equipment **ACCESSORY** clean. Lubrication and protection of metallic parts is highly recommended.

At the end of the working day, clean the machine so that dirt does not cause premature wear of the components or affect their correct operation.

**NOTICE** Damaged painted parts must be repainted to prevent corrosion.

**⚠ WARNING Risk of burns through contact with flammable substances.**

If volatile and easily flammable aerosols or corrosion protection products are used, take the following recommendations into account:

- Try to ventilate the area sufficiently.
- Do not smoke, nor use fire or open flames.

 **Environment:** To prevent harm to the environment, the machine must only be cleaned at a wash station provided for such purpose, or in a washing bay.

**NOTICE** Clean with neutral soap.

Do not use flammable or abrasive cleaning products; using incorrect cleaning products or procedures damages the machine operating safety and endangers the health of the cleaning staff.

**NOTICE** Do not use degreasing agents, solvents, acetone, etc. to clean plastic parts.

**NOTICE** When washing, do not direct pressurised water spray towards the following components:

- Suction intake (air filter).
- Battery.
- Alternator.
- Control panel.
- Other electrical equipment which might become damaged.
- Skip slew ring.

## AT THE END OF THE SHIFT

| Task                                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clean the signalling and lighting system. <b>ACCESSORY</b> | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Clean the operator's position.                             | <ul style="list-style-type: none"> <li>Operator's position/cab floor.</li> <li>Access steps.</li> <li>Handles.</li> <li>Seat.</li> </ul> <p>Keep the seat belt clean. Coarse dirt damages the operation of the lock and the roller.</p> <p><b>NOTICE</b> Risk of fabric damage by cleaning with chemical products.<br/>The seat belt must only be cleaned when it is fastened, using a mild soap solution. Do not clean it with chemical products, as they might damage the fabric.</p> |
| Cleaning the air filter.                                   | Check the condition of the air filter and, if necessary, clean it following the procedure described in <i>"Changing or Cleaning the Air Filter"</i> .                                                                                                                                                                                                                                                                                                                                   |
| Cleaning all identification plates and decals.             | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Clean the skip.                                            | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

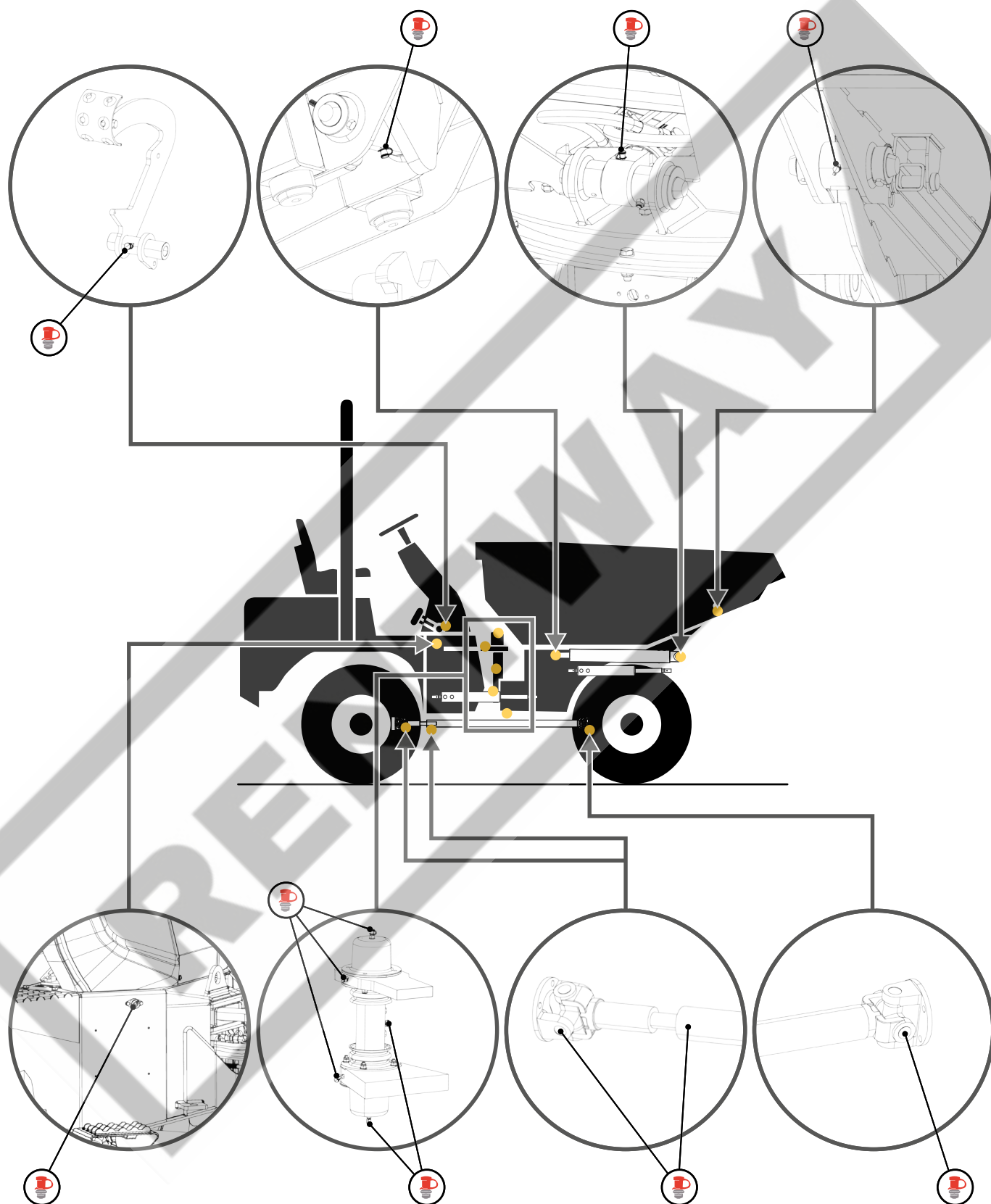
## BASIC MAINTENANCE EVERY 50 HOURS

### AT THE BEGINNING OF THE SHIFT

**NOTICE** If any anomaly is detected during this inspection, contact the official AUSA dealer.

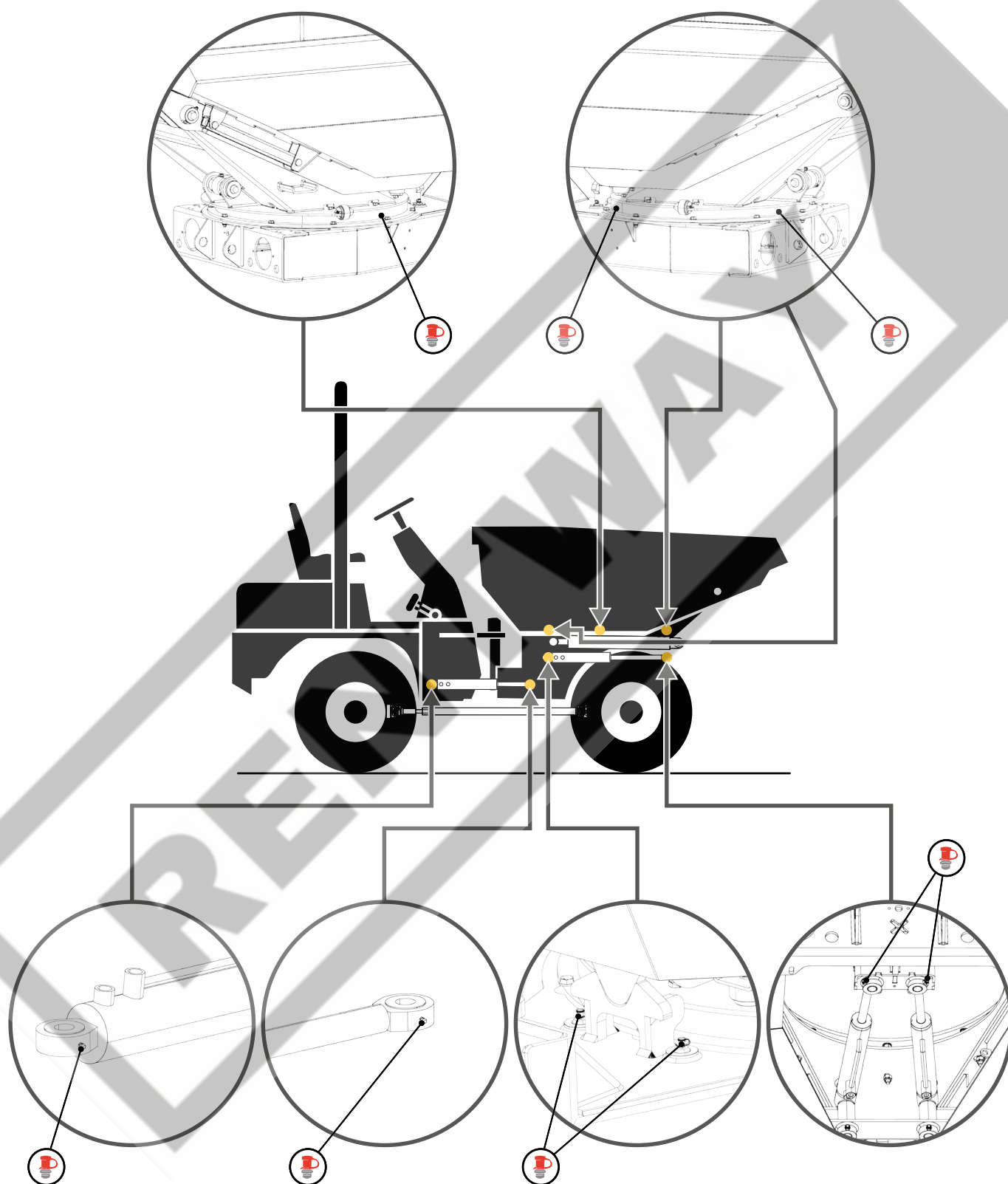
Every 50 hours, and before using the machine, the following checks should be carried out, together with those relative to basic maintenance every 8 hours:

| Task                                                                                                      | Description                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| If the machine includes accessories, carry out their appropriate maintenance operations. <b>ACCESSORY</b> | The maintenance tasks for optional elements are described in <i>Chapter 9</i> .                                                                          |
| Retighten wheels lug nuts.                                                                                | Tightening torque: <ul style="list-style-type: none"><li>▪ <b>250 ± 30 Nm.</b> <b>D 201 AHG</b></li><li>▪ <b>330 ± 30 Nm.</b> <b>D 301 AHG</b></li></ul> |
| Lubricating all grease points.                                                                            | The following figure indicates the grease points with the icon         |

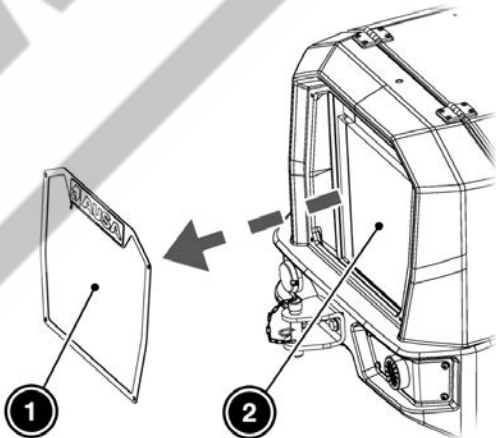


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## BASIC MAINTENANCE EVERY 50 HOURS



## AT THE END OF THE SHIFT

| Task                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clean the radiator. | <p><b>⚠ CAUTION</b> Risk of burns through contact with hot radiator.</p> <ul style="list-style-type: none"> <li>➤ Allow the radiator to cool down before cleaning.</li> </ul> <p><b>⚠ CAUTION</b> Risk of skin irritation through contact with radiator residues.</p> <ul style="list-style-type: none"> <li>➤ Use gloves to remove external residues from the radiator.</li> </ul> <p><b>NOTICE</b> Do not use high-pressure water to clean the radiator fins, as they may become damaged.</p> <p><b>NOTICE</b> Direct the water spray parallel to the radiator fins.</p> <p>Remove the external grille (1) and clean the radiator fins (2) with a low-pressure water hose.</p> <p>Take into account the following recommendations.</p>  <p><b>Information:</b> To remove the radiator grill, remove the four screws with a 4 mm hex wrench.</p> |

## INITIAL INSPECTION

Once the 50 hours or 30 days (whichever occurs first) break-in period is over, it will be necessary to carry out a main components inspection.

To carry out this inspection, it is necessary to perform the following maintenance tasks, together with those relative to basic maintenance every 50 hours:

| Task                                                                                            | Description                                             |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| Changing the engine oil and oil filter.                                                         | See <i>MTR.R.01 in the Advanced maintenance manual.</i> |
| Changing the hydraulic oil filter cartridge.                                                    | See <i>HDR.R.02 in the Advanced maintenance manual.</i> |
| Checking the tension of the alternator belt.                                                    | See <i>MTR.R.02 in the Advanced maintenance manual.</i> |
| Changing the fuel prefilter. <sup>(2)</sup>                                                     | See <i>SAC.R.02 in the Advanced maintenance manual.</i> |
| Changing the oil from the differentials and the hub reductions. <b>D 201 AHG</b>                | See <i>TRN.R.01 in the Advanced maintenance manual.</i> |
| Changing the oil from the transfer box. <b>D 201 AHG</b>                                        | See <i>TRN.R.02 in the Advanced maintenance manual.</i> |
| Changing the oil from the differentials and the hub reductions. <sup>(1)</sup> <b>D 301 AHG</b> | See <i>TRN.R.01 in the Advanced maintenance manual.</i> |
| Changing the oil from the transfer box. <sup>(1)</sup> <b>D 301 AHG</b>                         | See <i>TRN.R.02 in the Advanced maintenance manual.</i> |

<sup>(1)</sup> Although AUSA recommends an oil change during the first 50 hours maintenance check, the axle's manufacturer allows the oil change at 100 hours and no later than 200 hours.

<sup>(2)</sup> Or every year, whichever comes first.

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## ADVANCE MAINTENANCE EVERY 200 HOURS

Every 200 hours, the following maintenance tasks should be performed, together with maintenance tasks:

- basic every 8 hours.
- basic every 50 hours.

| Task                                                                                                      | Description                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Changing the engine oil.                                                                                  | See <i>MTR.R.01 in the Advanced maintenance manual.</i>                                                                                                                                                                                                                                                  |
| Checking the tension of the alternator belt.                                                              | See <i>MTR.R.02 in the Advanced maintenance manual.</i>                                                                                                                                                                                                                                                  |
| Changing the fuel prefilter. <sup>(2)</sup>                                                               | See <i>SAC.R.02 in the Advanced maintenance manual.</i>                                                                                                                                                                                                                                                  |
| Checking the radiator hoses and clamps.                                                                   | N/A                                                                                                                                                                                                                                                                                                      |
| Checking battery connections.                                                                             | <ul style="list-style-type: none"> <li>▪ Inspect the battery to confirm that there is no external damage.</li> <li>▪ Verify that there has been no electrolyte loss.</li> <li>▪ If there is rust on the posts, clean them and apply dielectric grease or Vaseline.</li> </ul>                            |
| Checking all mechanic anchor points.                                                                      | <p>Check that there are no abnormal noises or vibrations in the following items:</p> <ul style="list-style-type: none"> <li>▪ Engine.</li> <li>▪ Transmission.</li> <li>▪ Exhaust system.</li> <li>▪ Hydraulic system.</li> <li>▪ Counterweight.</li> <li>▪ Mobile parts.</li> <li>▪ Chassis.</li> </ul> |
| If the machine includes accessories, carry out their appropriate maintenance operations. <b>ACCESSORY</b> | The maintenance tasks for optional elements are described in <i>Chapter 9.</i>                                                                                                                                                                                                                           |

<sup>(2)</sup> Or every year, whichever comes first.

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## ADVANCE MAINTENANCE EVERY 400 HOURS

Every 400 hours, the following maintenance tasks should be performed, together with maintenance tasks:

- basic every 8 hours.
- basic every 50 hours.
- advanced every 200 hours.

| Task                                                         | Description                                                         |
|--------------------------------------------------------------|---------------------------------------------------------------------|
| Changing the engine oil and oil filter.                      | See <i>MTR.R.01</i> in the <i>Advanced maintenance manual</i> .     |
| Changing the air filter. <sup>(2)</sup>                      | See ' <i>Changing or Cleaning the Air Filter</i> ' in this Chapter. |
| Changing the fuel filter. <sup>(2)</sup>                     | See <i>SAC.R.01</i> in the <i>Advanced maintenance manual</i> .     |
| Inspecting the tightness of the universal joint fixing nuts. | N/A                                                                 |
| Ensuring the counterweight is properly attached.             | N/A                                                                 |

<sup>(3)</sup>Or every 2 years, whichever comes first.

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## ADVANCE MAINTENANCE EVERY 600 HOURS

Every 600 hours, the following maintenance tasks should be performed, together with maintenance tasks:

- basic every 8 hours.
- basic every 50 hours.
- advanced every 200 hours.

| Task                                         | Description                                             |
|----------------------------------------------|---------------------------------------------------------|
| Changing the alternator belt. <sup>(3)</sup> | See <i>MTR.R.02 in the Advanced maintenance manual.</i> |
| Changing the coolant fluid.                  | See <i>REF.R.01 in the Advanced maintenance manual.</i> |
| Emptying the fuel tank.                      | See <i>SAC.R.03 in the Advanced maintenance manual.</i> |

<sup>(3)</sup>Or every 2 years, whichever comes first.

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## ADVANCE MAINTENANCE EVERY 1000 HOURS

Every 1000 hours, the following maintenance tasks should be performed, together with maintenance tasks:

- basic every 8 hours.
- basic every 50 hours.
- advanced every 200 hours.

| Task                                                                                            | Description                                      |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Changing the hydraulic oil and cleaning the tank internal oil filter.                           | See HDR.R.01 in the Advanced maintenance manual. |
| Changing the hydraulic oil filter cartridge.                                                    | See HDR.R.02 in the Advanced maintenance manual. |
| Changing the oil from the differentials and the hub reductions. <b>D 201 AHG</b>                | See TRN.R.01 in the Advanced maintenance manual. |
| Changing the oil from the transfer box. <b>D 201 AHG</b>                                        | See TRN.R.02 in the Advanced maintenance manual. |
| Changing the oil from the differentials and the hub reductions. <sup>(1)</sup> <b>D 301 AHG</b> | See TRN.R.01 in the Advanced maintenance manual. |
| Changing the oil from the transfer box. <sup>(1)</sup> <b>D 301 AHG</b>                         | See TRN.R.02 in the Advanced maintenance manual. |
| Checking the set of valves.                                                                     | See the Engine workshop manual.                  |
| Inspecting the tightness of the central articulation nut.                                       | N/A                                              |

<sup>(1)</sup> Although AUSA recommends an oil change during the first 50 hours maintenance check, the axle's manufacturer allows the oil change at 100 hours and no later than 200 hours.

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## ADVANCE MAINTENANCE EVERY 1600 HOURS

Every 1600 hours, the following maintenance tasks should be performed, together with maintenance tasks:

- basic every 8 hours.
- basic every 50 hours.
- advanced every 200 hours.
- advanced every 400 hours.

| Task                                                          | Description                            |
|---------------------------------------------------------------|----------------------------------------|
| Checking the injection pressure of the fuel injection nozzle. | <i>See the Engine workshop manual.</i> |
| Changing the air-filter intake hose. <sup>(3)</sup>           | N/A                                    |
| Changing the radiator hoses and clamps. <sup>(3)</sup>        | N/A                                    |
| Changing the fuel hoses and clamps. <sup>(3)</sup>            | N/A                                    |
| Changing the brake fluid. <sup>(3)</sup>                      | N/A                                    |
| Changing the battery.                                         | N/A                                    |

<sup>(3)</sup>Or every 2 years, whichever comes first.

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## ADVANCE MAINTENANCE EVERY 3000 HOURS

Every 3000 hours, the following maintenance tasks should be performed, together with maintenance tasks:

- basic every 8 hours.
- basic every 50 hours.
- advanced every 200 hours.
- advanced every 600 hours.
- advanced every 1000 hours.
- advanced every 1600 hours.

| Task                                                         | Description                            |
|--------------------------------------------------------------|----------------------------------------|
| Changing the hydraulic hoses and connections. <sup>(4)</sup> | N/A                                    |
| Checking the injection pump.                                 | <i>See the Engine workshop manual.</i> |

<sup>(4)</sup>Or every 6 years, whichever comes first.

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## ACCESSORIES

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## LIST OF MACHINE ACCESSORIES

The machine may include the following accessories.

**Information:** For additional information, consult the official AUSA dealer.

| Safety                                                                                         |
|------------------------------------------------------------------------------------------------|
| Full vision cameras on the skip and counterweight side, and proximity sensors. (Metric system) |
| Green rotating beacon.                                                                         |
| Front LED work lights.                                                                         |
| Emergency stop.                                                                                |
| Rear reflective decals.                                                                        |
| Lighting and driving                                                                           |
| Road lights.                                                                                   |
| Front LED work lights.                                                                         |
| 20 km/h adhesive plate.                                                                        |
| Second rear-view mirror.                                                                       |
| Spanish regulation (Road lights).                                                              |
| Germany (Road lights, 20 km/h adhesive plate and rear reflective decals).                      |
| Austria (Road lights, 20 km/h adhesive plate).                                                 |
| Switzerland (Road lights, 20 km/h adhesive plate).                                             |
| Advanced equipment                                                                             |
| AUSAnow.                                                                                       |
| AUSAnow ignition disabling.                                                                    |
| Dual ID: PIN keypad (Mandatory with AUSAnow).                                                  |
| AUSAnow annual license extension.                                                              |

| Accessories                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Protector:</b> <ul style="list-style-type: none"> <li>Front mudguard.</li> </ul>                                                                                                        |
| <b>Travel alarm</b> <ul style="list-style-type: none"> <li>Reverse travel alarm disabler (Mandatory, Road lights.).</li> <li>Acoustic warning for reverse gear with white noise</li> </ul> |
| <b>Documents:</b> <ul style="list-style-type: none"> <li>Waterproof document case.</li> </ul>                                                                                              |
| <b>Environment:</b> <ul style="list-style-type: none"> <li>Biodegradable hydraulic oil.</li> </ul>                                                                                         |
| <b>Cold Weather Pack:</b> <ul style="list-style-type: none"> <li>BIO Cold Weather Pack (coolant and biodegradable low temperature oils).</li> </ul>                                        |
| <b>Filter:</b> <ul style="list-style-type: none"> <li>Water separator diesel filter.</li> <li>Air filter with cyclone pre-filter.</li> </ul>                                               |
| <b>Hitch:</b> <ul style="list-style-type: none"> <li>Ball towing hitch and clamp.</li> <li>Electrical outlet for towing.</li> </ul>                                                        |
| <b>Paint:</b> <ul style="list-style-type: none"> <li>Custom paint (only orange parts).</li> </ul>                                                                                          |
| Tyres                                                                                                                                                                                      |
| Narrow tyres 10.0 / 75 - 15.3" TL - 14PR.                                                                                                                                                  |
| Turf tyres 400/60-15.5" TL 14PR .                                                                                                                                                          |
| Language-specific decals and manuals                                                                                                                                                       |
| English.                                                                                                                                                                                   |
| French.                                                                                                                                                                                    |
| Additional decals and manuals and waterproof document holder.                                                                                                                              |
| Dutch.                                                                                                                                                                                     |

## LIST OF MACHINE ACCESSORIES

| Destination country finishes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| German finishes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| French finishes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Danish finishes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Irish finishes (right rear-view mirror).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Italian finishes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Norwegian finishes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Polish finishes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Portuguese finishes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Swedish finishes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| United Kingdom finishes (right rear-view mirror).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Spare Parts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <p>Spare wheels:</p> <ul style="list-style-type: none"> <li>▪ Spare wheels (1 unit) Standard.</li> </ul> <p>Spare wheels: <b>D 301 AHG</b></p> <ul style="list-style-type: none"> <li>▪ Narrow wheel 10.0 / 75 - 15.3" TL - 14PR (complete wheel, 1 unit)</li> <li>▪ 4 narrow wheels pack 10.0 / 75 - 15.3" TL - 14PR (complete wheels).</li> <li>▪ Turf tyres 400/60-15.5" TL 14PR (complete wheel, 1 unit).</li> <li>▪ 4 turf wheels pack 400/60-15.5" TL 14PR (additional).</li> </ul> <p>Kit:</p> <ul style="list-style-type: none"> <li>▪ 1000 h maintenance kit.</li> </ul> |

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