

# ***series 100***

*Minitransporter*



*Ed. 0*



**USER'S MANUAL AND MAINTENANCE**



**This manual should always be readily available so that the machine operator may consult it immediately, and it must be saved for the entire duration of the machine's life.**

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**CORMIDI**  
leading innovation

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## INTRODUCTION

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*Dear Customer,*

*We would like to take this opportunity to thank you for your confidence in us shown by purchasing a CORMIDI Minitransporter. This product was designed and constructed for longevity and to be used with maximum reliability.*

*It is, however, absolutely necessary to read this manual carefully in which the procedure for optimum use of the equipment is described: improper use may provoke harm to oneself and cause injury to persons and/or to one's health.*

*Therefore, always keep this manual within easy reach so that it may be consulted at any time, before, during, and after use. If the machine is resold, do not forget to give it to the new owner in that inside there is the EC compliance certificate.*

*We would like to remind you that the illustrations contained in the manual correspond for the most part*

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*to the base model and that our models are regularly improved and perfected with the goal of allowing our customers to enjoy the maximum benefits of innovations in technology: for this reason the characteristics and the information contained in the present manual may have been varied recently. We ask you to contact us in case you should encounter difficulty.*

*Remember for supplementary information you can always contact your sales representative/dealer, or you can contact us directly by telephone or by email at [info@cormidi.com](mailto:info@cormidi.com). If there is any doubt, it is better to ask rather than proceed on your own.*

*We leave you to your perusal of the manual and enjoyment of your machine!*

*Staff CORMIDI Srl*

## **1. GENERAL INFORMATION**

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### **1.1. WARRANTY**

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Your machine is guaranteed for 12 months from the date of its delivery and includes the substitution of anything in particular that has resulted as, in the opinion of our Technical Office, affected by construction defects.

Any part in particular that was not constructed by the manufacturer, parts used in/on terrain surfaces, and breakdowns caused by incompetence or carelessness, including fuelling, are excluded from the guarantee.

The motor, instead, is covered under the manufacturer of the motor's own warranty according to the foreseen conditions and terms.

The guarantee immediately expires if the machine is utilized for uses different from those foreseen by the Manufacturer, if it is damaged by the use of unauthorized accessories or if it is repaired using unsuitable parts.

With the machine a Certificate of Warranty was supplied which outlines the norms which regulate the service of assistance under warranty. We highly recommend reading the **warranty form** to fully

understand the various rights and responsibilities. Collaborate with your sales representative when filling out the form and make sure it is filled out correctly, in that the text and the other formalities (shipment within the time limit, etc.) represent the legal base for the warranty on the machine.

### **1.2. GOAL OF THE MANUAL**

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This manual has been drawn up by the manufacturer and is an integral part of the machine: it was written in Italian, the native language of the manufacturer.

The information contained here within is addressed to expert operators, equipped with specific knowledge and competence in the sector of use. The manual defines the objectives for which the machine was designed and constructed.

To avoid incorrect manoeuvres that risk accident, it is important to read this manual particularly before the first use to familiarize oneself with the principal commands and their functions.

A constant observance of the information

guarantees safety, economy of use, and a longer functional duration of the machine.

To give a higher prominence to the sections of the text which must not be ignored, they have been highlighted in bold and preceded with symbols illustrated and defined following here:



**READ CAREFULLY:** economy of use, and a longer functional duration of the machine.



**DANGER:** indicates imminently dangerous situations that can provoke serious injury or death if the instructions are not followed.

On the machine potential dangers have been indicated with a sticker characterized by a *red band with white text*.



**WARNING:** indicates a potentially dangerous situation that can provoke serious injury or death if the instructions are not followed.

On the machine the warnings are indicated with stickers characterized by an *orange band with black text*.

**CAUTION:** indicates a potentially dangerous situation that can provoke injury or damage to the machine if the instructions are not followed.



On the machine situations requiring caution are indicated by stickers characterized by a *yellow band with black text*.



**PROHIBITED:** prohibitions that must be observed by all persons who interact directly and/or indirectly with the machine so that risks may be limited.

### **1.3. MACHINE DESCRIPTION**

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The Series 100 machines are compact auto-unloading tracked vehicles that are equipped with a body and sometimes with other auto-loading equipment, designed and manufactured for the exclusive use of transporting inert materials.

To satisfy the various requirements of the market, the machine may be equipped with motors that have similar power but that have different brand names and characteristics.



**READ CAREFULLY:** Determine the type of motor that has been installed in your machine accurately, and read its manual to familiarize yourself with it.

#### **1.4. SAFETY INFORMATION**

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**READ CAREFULLY:** The information contained here is essential for your safety and for that of your co-workers!

During the production of this machine, every possible measure was taken to make your work safer. Simple prudence, however, is essential: there is no better rule to prevent accidents.



**WARNING:** The tool must always be operated by a competent and well-trained operator.

- ☞ Carefully read the information before using the machine or before performing maintenance and/or repairs.
- ☞ A few minutes of your time spent reading this manual will save you time and effort later on.
- ☞ Carefully read the warnings and information written on the signs on the machine and immediately

substitute missing or illegible ones. **Respect all regulations contained in these.**

- ☞ The machine was made exclusively for the transportation of inert materials. Any other use is prohibited.



**PROHIBITED:** It is strictly prohibited to use this machine for the transport of persons and/or animals.



**PROHIBITED:** It is strictly prohibited to use this machine to tow other machines, vehicles, and/or devices, not even temporarily or in an emergency situation.

- ☞ The machine constitutes a work instrument: always respect the national regulations, especially those relative to safety at the place of work.



**REQUIRED:** Always wear suitable work clothes and above all suitable work shoes diligently. Always use protective hearing devices.



**WARNING:** Never wear large or fly-away clothes (scarves, ties) that could easily get caught in the moving parts.

- ☞ It is always advisable to have a first aid kit close at

hand.

- ☞ Before turning on the motor, always be sure that there are not any people, animals, or things that could be an obstacle in the work area.

 **DANGER:** Never use the machine inside enclosed areas because the gasses emitted by the exhaust are lethal.

 **REQUIRED:** Carry out the disposal of oils, minerals, and harmful products with respect for the environment and in accordance with the current norms.

- ☞ Every intervention for cleaning, tuning, and/or maintenance must be done under good environmental conditions and with adequate light, **and always with the motor turned off**.

 **DANGER:** Never refuel the vehicle when the motor is on or hot, in the proximity of flames or while smoking. Always keep the machine cleaned of lubricant and/or combustible residues.

- ☞ Pay careful attention to not come into contact with the overheated parts of the motor.



**PROHIBITED:** It is strictly prohibited to remove protection and safety devices with which the machine is equipped

- ☞ Avoid working under unsuitable physical conditions or when you are very tired: in these cases interrupt your work.



**DANGER:** While working always be sure that the terrain has the required consistency and avoid working on the edge of embankments, ditches, or ravines or on excessively steep or uneven terrain.

- ☞ When putting away the machine take all precautions so that it might not be moved or turned on by incompetent or incapable persons.



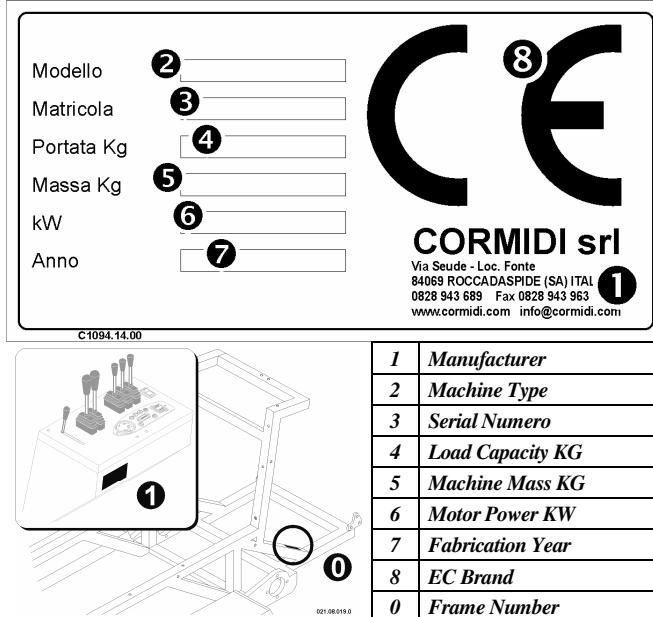
**CAUTION:** Never leave the machine unattended while the motor is on, not even temporarily: when you leave the area, turn off the motor of the machine and put on the parking brake!



**DANGER:** Never let children play with the machine, not even if it is turned off!

## 1.5. MACHINE AND MANUFACTURER IDENTIFICATION

The data which identifies the machine and the manufacturer are listed on the aluminium plate that is affixed on the dashboard of the machine. The frame number is stamped on the left of back side.



## 1.6. SAFETY DEVICES



**PROHIBITED:** it is strictly prohibited to use the machine with its safety devices and protection removed, blocked, or in any way made non functional.



**WARNING:** Before beginning work, verify the working order of the safety devices and substitute any worn-out and/or broken parts immediately.

### 1.6.1. BLOCKING THE BODY

The machine is equipped with a device to block the body in the raised position and to prevent it from lowering accidentally.

Before carrying out any repair maintenance work with the body raised, always block the piston following this procedure (see fig. 2):

- raise the body;
- turn off the motor;
- remove device “A” from its slot by unscrewing wheel “B”;
- insert the hole of the bar on the piston of the hydraulic jack;
- Turn the bar and position it so that it is parallel to the

piston;

- slowly lower the unit **with the motor off** until the correct fit of the device is obtained.

Afterwards remove the device and put it back in its slot.

#### 1.6.2. BLOCKING THE FOOTREST

The drive footrest must always be blocked in position to impede its accidental movement, by using the safety pin "B" (see fig.2).

- ☞ Introduce pin "B" into hole "1" to block the footrest in the raised position;
- ☞ Introduce pin "B" in hole "2" to block the footrest in the lowered position;

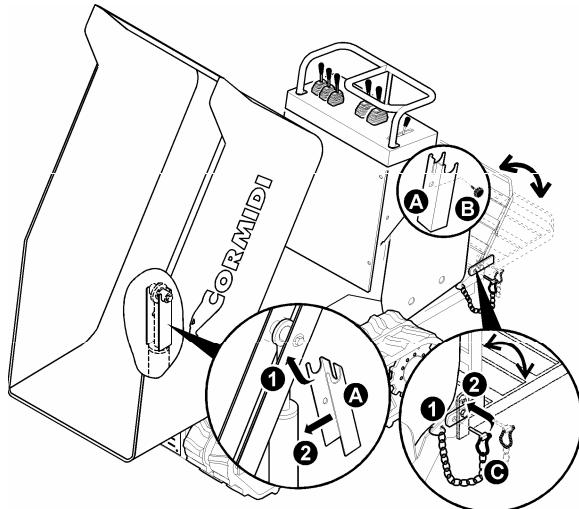


fig. 2 – Safety Devices

#### 1.7. ACCESSORIES

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**READ CAREFULLY:** Read the instructions and the mode of use for the accessories that have been installed on your machine carefully. Refer to the instruction manual that was provided with them.

The machine is furnished with equipment to make it

possible to carry out normal maintenance operations.

It is also equipped with a hydraulic force instrument: in the manual the instructions for its use have been furnished.

Also, the machine may also be equipped upon request with particular tools including:

- Cement mixer for mixing concrete;
- Auto-loading tools;
- Excavator;
- Demolition hammer.

## 1.8. SAFETY TAGS

**READ CAREFULLY:** During the design phase everything possible was done to prevent eventual risks: where it was technically impossible, specific pictograms were resorted to in order to highlight eventual potential and imminent risks.



Specific adhesive tags were made with signals and descriptions associated with pictograms to give a higher importance to possible dangers, in accordance with government norms UNI 9244-95 (E).



**PROHIBITED:** it is strictly prohibited to remove the stickers and the safety plates which the machine is equipped with: immediately substitute deteriorated and/or illegible ones.

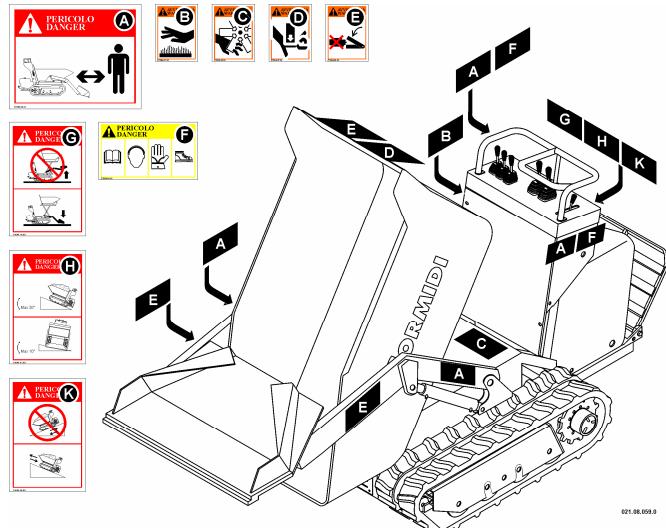


fig. 3 – Position of the safety tags

### 1.8.1. SAFETY DISTANCE



fig. 4 (cod. C1094.02.00)

Tag which alerts the serious danger of coming near and standing within the field of action of the machine in that there is an imminent risk of danger.

### 1.8.2. HOT SURFACE

Invites caution in that there is a risk of burning because of the nearness to the hot surface.

### 1.8.3. FAN



fig. 6 (cod. C1094.08.00)

Indicates a potential risk of danger in that there is a possibility of coming into contact with moving mechanical parts that can cause serious injury.



fig. 5 (cod. C1094.07.00)

### 1.8.4. CRUSHING

Tags which indicate a potential risk of crushing that may cause very serious injury or death.



fig. 7 (cod. C1094.09.00)

### 1.8.5. CUTTING

Tags which indicate a potential risk of cutting that may cause very serious injury or death.



fig. 8 (cod. C1094.09.00)

### 1.8.6. PROCEDURE FOR CAUTION

This adhesive which invites caution reminds one to adopt all anti-injury precautions, above all regarding the use of protective devices and individual prevention. The meaning of the



fig. 9 (cod. C1094.04.00)

pictograms is the following:

- Read the manual before turning the machine on for the first time, each time an operator is changed, and in any case in which doubt is raised as to how the machine functions;
- Wear a headset which protects hearing or another device of this type;
- Wear protective gloves of the prescribed type;
- Wear injury-preventive shoes of the prescribed type.

#### **1.8.7. OVERTURNING**

Indicates an imminent risk of overturning with serious consequences during use of the high unloading.

The correct procedure to carry out high unloading includes the necessity to rest the shovel of the auto-loading on the ground in a way that stabilizes the machine before raising the body and unloading.

Instead the upper part of the tag indicates the incorrect procedure which must be avoided absolutely, while the lower part shows the correct position to carry out the

unloading safely.

#### **1.8.8. MAXIMUM SLOPES**

Completely avoid working on terrains that have latitudinal slopes of more than  $10^\circ$  and longitudinal slopes of more than  $20^\circ$  to avoid the possibility of overturning with serious consequences for the safety of the operator. In every case, but especially in the case of slopes, it is important that the terrain is solid and stable.

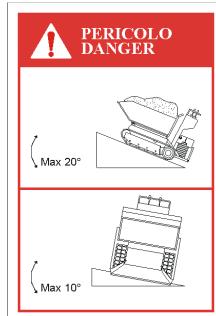


fig. 11 (cod. C1094.01.00)

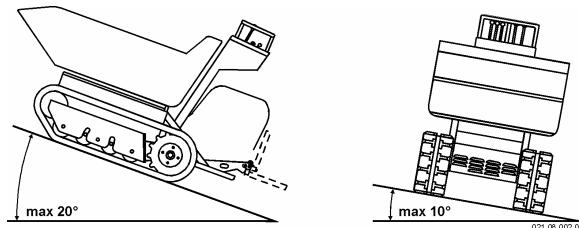
#### **1.8.9. PROCEDURE FOR ADDRESSING SLOPES**

Sign which indicates in what way one must address the downhill and uphill slopes to avoid serious consequences for the operator and for the machine in that there is the potential danger of overturning.



fig. 12 (cod. C1094.06.00)

## 1.9. ADMISSIBLE SLOPES



*fig. 13 – Maximum admissible slopes*

In figure 13 the maximum values for the latitudinal and longitudinal slopes of the terrain are shown on which it is possible to work. These conditions must never be surpassed to avoid the risk of overturning.

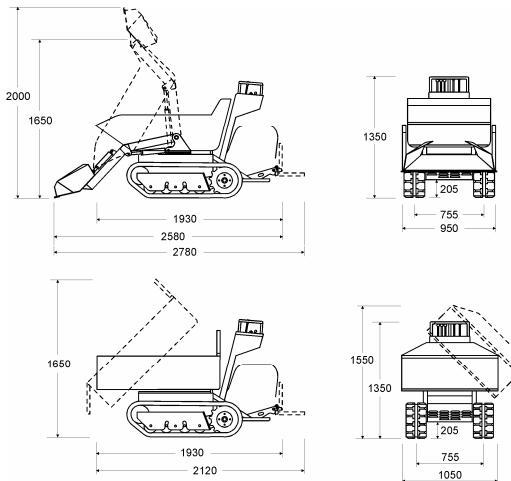


**DANGER: Always avoid working on terrain with slopes that are greater than those prescribed to avoid the possibility of overturning with possible serious consequences for the safety of the operator..**

In every case, but especially when working on slopes, it is important that the terrain is solid and stable.

## 1.10. DIMENSIONS

	Normal	Auto-loading	3S
Length	1930 mm	2580 mm	1930 mm
Width	950 mm	950 mm	1050 mm
Wheel Track	755 mm	755 mm	755 mm
Height	Min	1350 mm	1350 mm
	Max	1595 mm	2000 mm
			1650 mm



*fig. 14 – Dimensions*

## 1.11. TECHNICAL DATA

Model	Dumper		Self-loading		3S					
Type	14.100	18.100	14.100	18.100	14.100	18.100				
Mass [kg]	580	635	695	750	630	685				
Power [kW]	9,6	13,2	9,6	13,2	9,6	13,2				
Max Speed [km/h] - (m/s)	5,2 (1,4)	6,5 (1,8)	5,2 (1,4)	6,5 (1,8)	5,2 (1,4)	6,5 (1,8)				
Load Capacity [kg]	1000		1000		1000					
Start-up	Electric									
Accelerator	Manual command lever									
Transmission	Hydrostatic									
Parking Brake	Automatic									
Battery	12V - 40Ah with negative at ground									

Tipo		14.100	18.100
Continuous Equivalent Pondered Acoustic Power Level A	LpA =	100 dB(A)	100 dB(A)
Continuous Equivalent Pondered Acoustic Power Level A (assured)	LwA =	101 dB(A)	101 dB(A)
Vibrations Level	m/s <sup>2</sup>	on arms: ≤ 2,5 m/s <sup>2</sup> on body: ≤ 0,5 m/s <sup>2</sup>	

## 2. COMMANDS

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***Attention,*** the configuration of the machine's controls may vary from the configuration described here, according to version.

### 2.1. HYDRAULIC OVERTURNING VERSION

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#### Horn Command

The horn button is on the left side of the instrument panel. To sound the horn, push the button. Only intermittent mode horn operation is enabled. Continuous mode is not enabled.

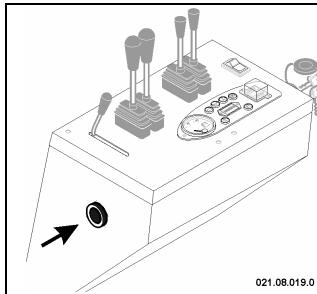
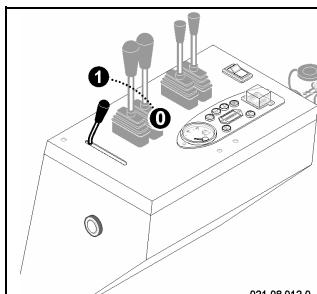


fig. 15 – Horn Command

#### Accelerator Command

Allows you to vary the motor rotation regimen, so that you may obtain the required power.



①	STABLE POSITION Minimum regimen
...	STABLE POSITION Intermediate regimens
①	STABLE POSITION Maximum regimen

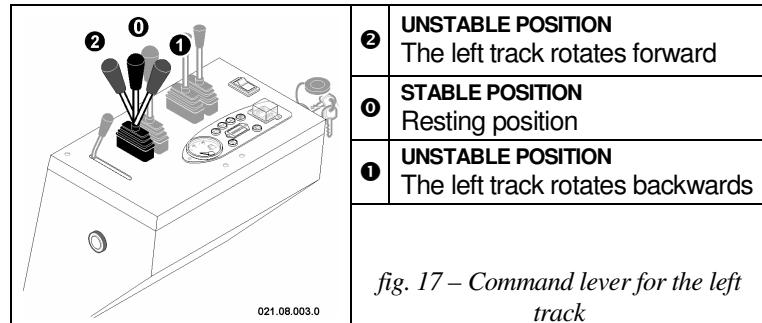
fig. 16 – Accelerator Command

## Drive Levers

The command levers control the rotation of the tracks through a hydraulic feed of the hydraulic motors.  
The command levers are active only when the motor is turned on.

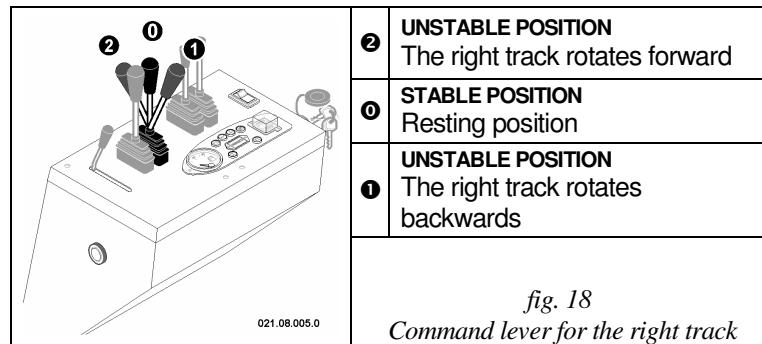
### ***The left Drive Lever***

The left-hand drive lever controls the left track.



### ***The right Drive Lever***

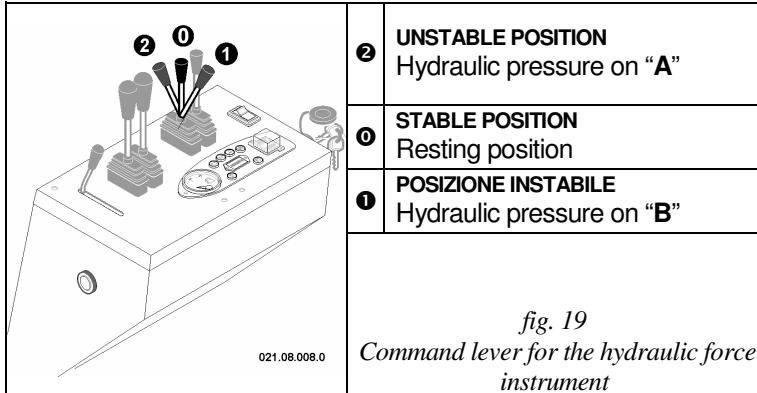
The right-hand drive lever controls the right track.



### **Command Lever for the Hydraulic Take-off Instrument**

The hydraulic take-off instrument is composed of two openings with rapid transmission of standard type, indicated by the letters "A" and "B", situated on the right side of the dashboard.

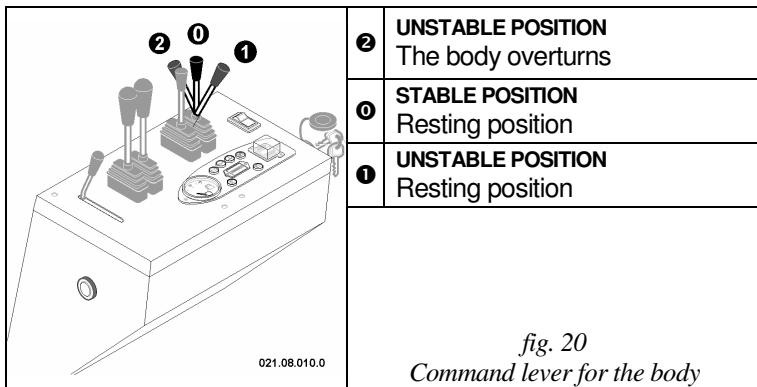
The auxiliary command lever allows you to put hydraulic oil pressure on the openings.



### **Command Lever for the Body**

The command lever for the body activates the hydraulic jack that activates the tipping of the body.

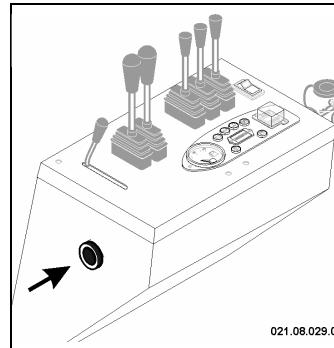
This position ② can only be used with the motor turned on, while this position ① can also be used when the motor is turned off.



## 2.2. AUTOLOADING VERSION

### ***Horn Command***

The horn button is on the left side of the instrument panel. To sound the horn, push the button. Only intermittent mode horn operation is enabled. Continuous mode is not enabled.

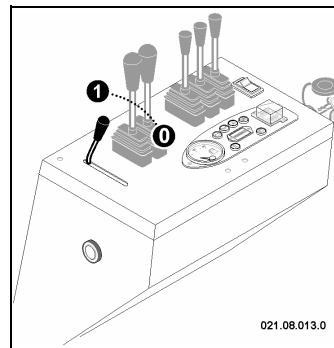


021.08.029.0

*fig. 21  
Horn Command*

### ***Accelerator Command***

The command lever for the accelerator acts upon the motor and allows one to vary the rotation regimen in order to obtain the required power.



021.08.013.0

①	<b>POSIZIONE STABILE</b> Minimum regimen
...	<b>POSIZIONE STABILE</b> Intermediate regimen
②	<b>POSIZIONE STABILE</b> Maximum regimen

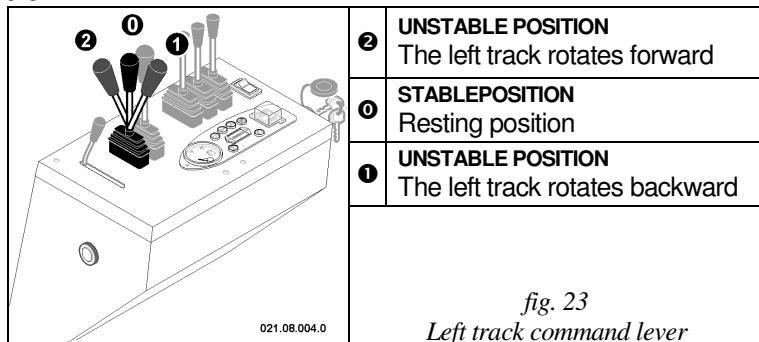
*fig. 22  
Accelerator Command*

## Drive Levers

The drive levers control the rotation of the tracks through a hydraulic feed to the hydraulic motors.  
The levers are active only when the motor is turned on.

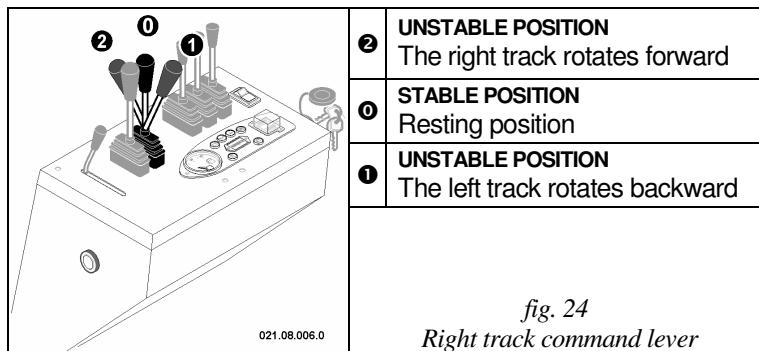
### Left Drive Lever

The left lever controls the left track.



### Right drive lever

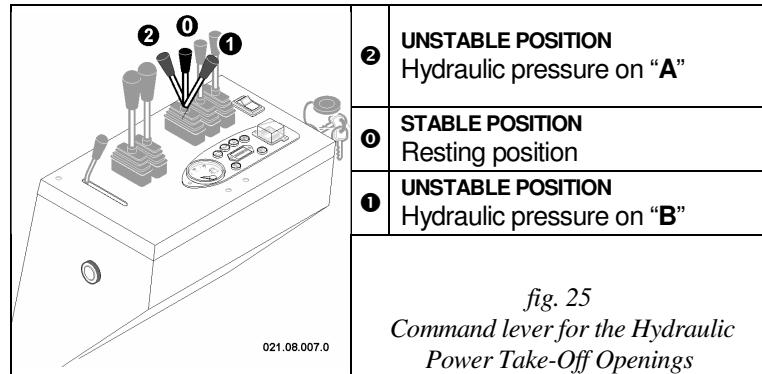
The right lever controls the right track.



### ***Command Lever for the Hydraulic Take-off Openings***

The hydraulic take-off instrument is composed of two openings with rapid transmission of standard type, indicated by the letters "A" and "B", situated on the right side of the dashboard.

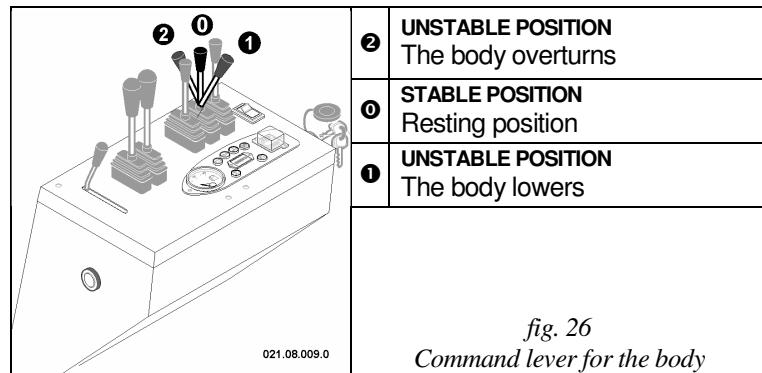
The auxiliary command lever allows you to apply hydraulic oil pressure on the openings.



### ***Command Lever for the Body***

The command lever for the body activates the hydraulic jack that activates the tipping of the body.

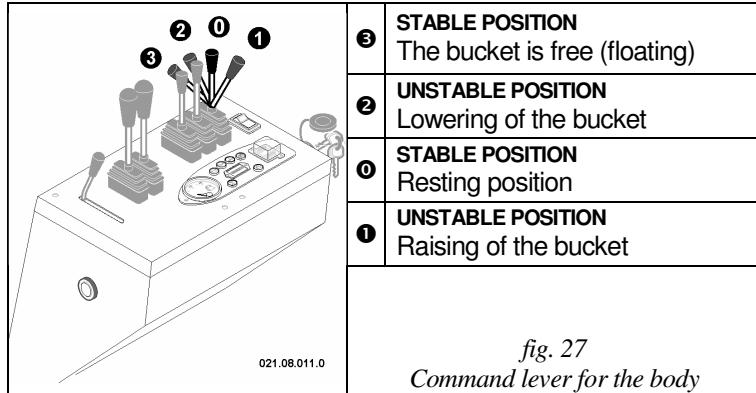
This position **②** can only be used with the motor turned on, while this position **①** can also be used when the motor is turned off.



### **Auto-loading Command Lever**

The command lever for the auto-loading tool works the hydraulic levers that provoke the raising of the auto-loading bucket.

This command may only be used when the motor is turned on.



## 2.3. AUTOLOADING VERSION WITH SWIVEL BUCKET

### Horn Command

The horn button is on the left side of the instrument panel. To sound the horn, push the button. Only intermittent mode horn operation is enabled. Continuous mode is not enabled.

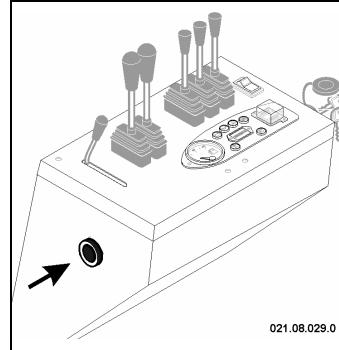


fig. 28

*Command lever for the parking brake*

### Accelerator Command

The command lever of the accelerator works on the motor and allows one to vary the rotation regimen in order to obtain the required power.

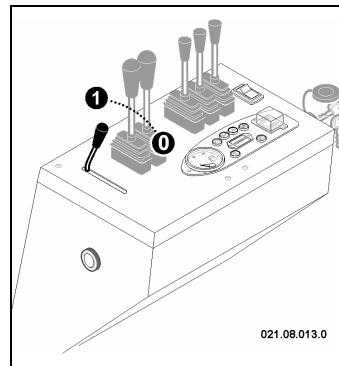


fig. 29

*Accelerator command*

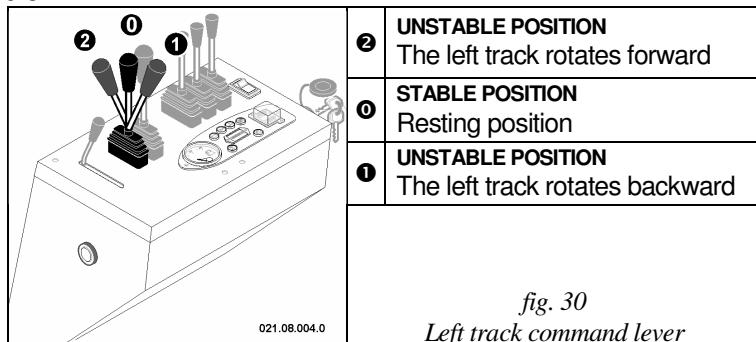
①	<b>STABLE POSITION</b> Minimum regimen
...	<b>STABLE POSITION</b> ... Intermediate regimen
②	<b>STABLE POSITION</b> Maximum regimen

## Drive Levers

The drive levers control the rotation of the tracks through a hydraulic feed to the hydraulic motors.  
The levers are active only when the motor is turned on.

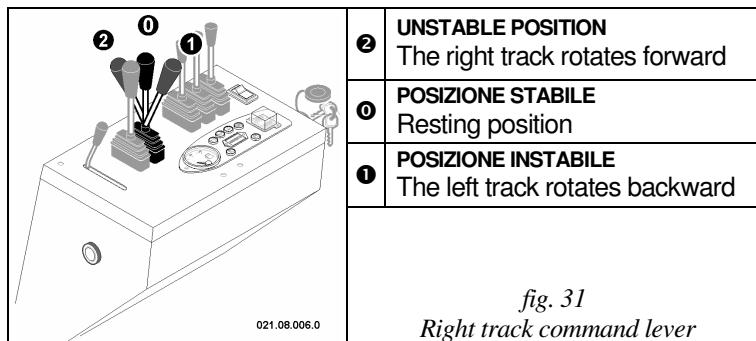
### Left Drive Lever

The left lever controls the left track.



### Right Drive Lever

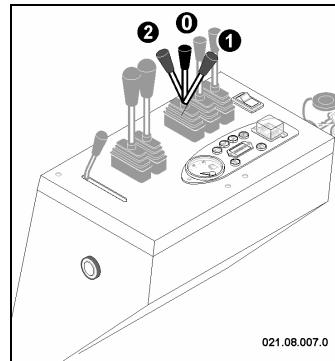
The right lever controls the right track.



### ***Command Lever for the Swivel Bucket***

The swivel bucket command lever works the hydraulic jack that provokes the rotation of the bucket of the auto-loading tool.

The command may only be used when the motor is on.



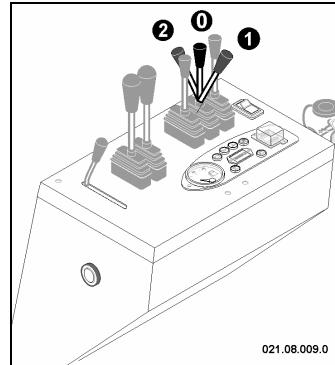
<b>② UNSTABLE POSITION</b>
The bucket turns towards the anterior side of the machine
<b>① STABLE POSITION</b>
Resting Position
<b>① UNSTABLE POSITION</b>
Provokes the rotation of the bucket towards the operator

*Fig. 32  
Swivel bucket command lever*

### ***Command Lever for the Body***

The command lever for the body activates the hydraulic jack that activates the tipping of the body.

This position ② can only be used with the motor turned on, while this position ① can also be used when the motor is turned off.



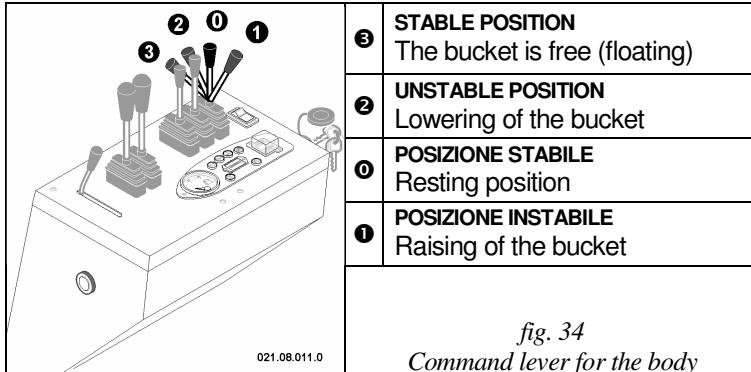
<b>② UNSTABLE POSITION</b>
The body overturns
<b>① STABLE POSITION</b>
Resting position
<b>① POSITION</b>
The body lowers

*fig. 33  
Command lever for the body*

### **Auto-loading Command Lever**

The command lever for the auto-loading tool works the hydraulic jack that provokes the raising of the auto-loading bucket.

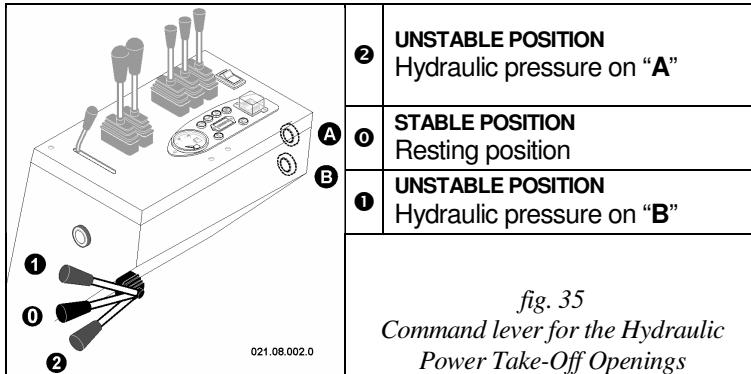
This command may only be used when the motor is turned on.



### **Command Lever for the Hydraulic Power Take-off Openings**

The hydraulic take-off instrument is composed of two openings with rapid transmission of standard type, indicated by the letters "A" and "B", situated on the right side of the dashboard.

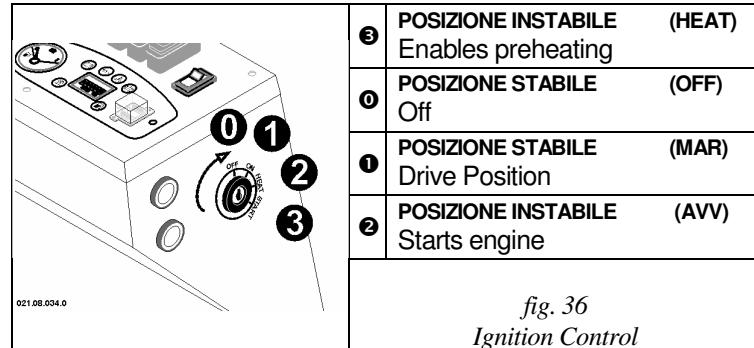
The auxiliary command lever allows you to apply hydraulic oil pressure on the openings.



### 2.3.1. IGNITION CONTROL

The ignition control is on the left side of the instrument panel as the operator faces it.

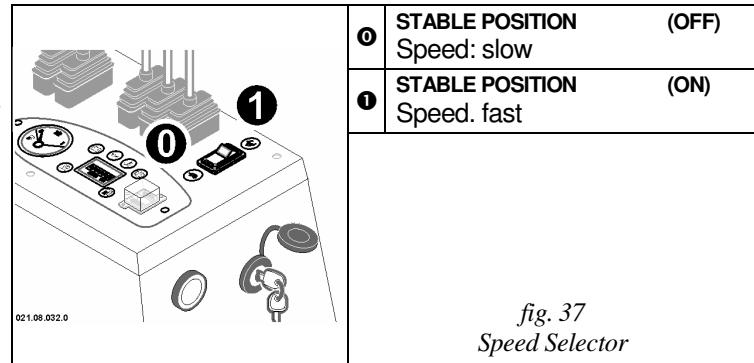
A key is required to enable this control.



### 2.3.2. SLOW / FAST SPEED SELECTOR

The speed selector is on the right side of the instrument panel as the operator faces it.

This control enables selection of desired speed of operation: slow - fast.



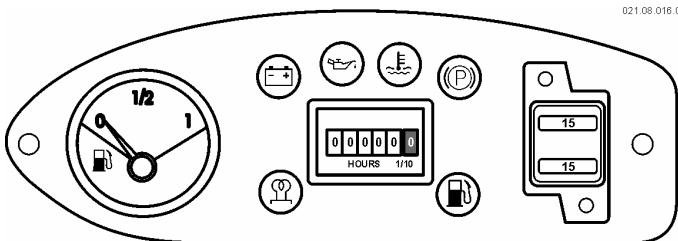
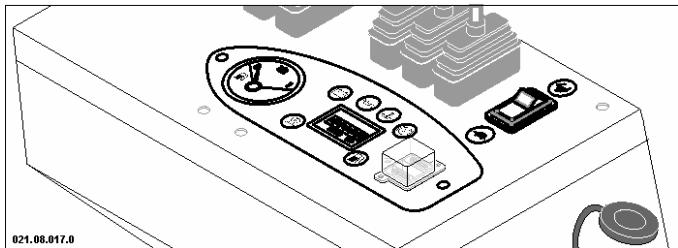
## 2.4. CONTROL PANEL

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The Control Panel (*fig.38*) gathers together the main optical signals for malfunction anomalies or function, apart from the instruments which indicate the temperature of the coolant and the level of fuel in the tank.

In the table below there are concise descriptions and indications: if it is present, go to the relevant paragraph for further details on the functioning.

If the indicator lights are still on after normal maintenance interventions, always have a mechanic with the specific competence intervene.



*fig. 38 – Control Panel*

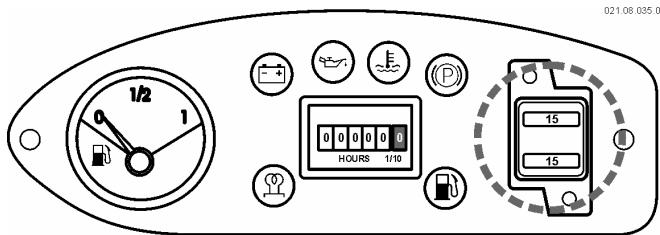
	Recharge Battery	Signals a defect in the battery recharge circuit. <b>Stop work immediately and turn off the engine.</b> Have a mechanic with the specific expertise intervene.
--	------------------	--

	Fuel Reserve	Indicates a low fuel level in the tank. Refuel as soon as possible ( <i>see specific section</i> ).
	Warm-up Device	Signals that the warm-up device is on ( <i>see specific section</i> ).
	Fast speed	Indicates that a fast gear speed is in use ( <i>see specific section</i> ).
	Slow speed	Indicates that a slow gear speed is in use ( <i>see specific section</i> ).
	Oil Temperature	Indicates when temperature of hydraulic oil is too high. <b>Halt operations immediately. Keep the engine ticking over (minimum revs) for 30 seconds. Turn off the engine and let it cool.</b> Top up the oil ( <i>see specific section</i> ).
	Parking	Indicates that the parking brake has been inserted ( <i>see specific section</i> ). <b>Please note: if the light does not go off while the machine is moving, halt the machine immediately and check the fuses. If the problem persists contact your dealer for assistance.</b>

## 2.5. FUSIBILI

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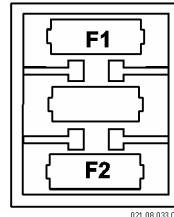
The electrical system on the machine is equipped with a fuses box (*fig.39*).



*fig. 39 - Fuses Box*

The box is located on the right hand side of the dashboard and is easily accessible.

It contains six fuses with varying amperages (*see fig. 40*), depending on the type of electrical circuit to be protected on the machine.



*fig. 40 - Fuses*

When fixing interrupted fuses, always use fuses of the same type and same calibration.

F1	15A	Battery
F2	15A	General Electric System



**DANGER:** To avoid short-circuits and danger of flame; eliminates the cause of the damage of the fuse, before replacing the same fuse.

### **3. INSTRUCTION FOR USE**

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#### **3.1. FIRST USE**

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**READ CAREFULLY:** Before using the machine you must read all of the instructions in this manual and the user's and maintenance manual of the motor installed on your machine scrupulously. Furthermore, always keep it attached to the machine.

The machine is normally delivered completely assembled and ready for use with an empty fuel tank.

Fill the fuel tank, open the fuel tap and follow the start-up procedure described in the appropriate paragraph.

#### **3.2. BREAKING-IN PERIOD**

---

The technology used during the construction of your machine does not require a break in period. However, during the first period of use, it is necessary to use these precautions:

☞ During the first 50 hours, avoid using the motor at over 70 % of the total power.



**READ CAREFULLY:** Read the user's manual and the maintenance manual for the motor installed in your machine carefully and follow the instructions prescribed for its own break in period.

- ☞ After the first 20 hours of operation, check the level of the hydraulic oil in the tanks.
- ☞ During the first period of use, the tracks undergo an adjustment, for which it is necessary, after the first 50 hours of operation, to carry out the regulation of the tension of the tracks.

#### **3.3. MOTOR START-UP**

---

Every time you wish to start up the motor, always verify and adhere to the following indications scrupulously:

- Always start up the motor outside and be certain that there are no other persons in the vicinity of the machine and/or other impediments.
- Check that there is fuel in the tank and, if necessary, add some.
- Always insert the parking brake.



**WARNING:** Before turning on the motor, always insert the parking brake to avoid eventual movement of the machine that could present safety issues for the operator.

- Follow the specific procedure prescribed by the constructor of the motor shown in the attached instructions.

When the motor is hot, in petrol operated motors, avoid inserting the starter.

### **3.4. REFUELING**

---



**DANGER:** Refuelling must always be done with the motor turned off! Do not smoke while refuelling or while handling fuel to avoid the risk of fire!

Refuelling and /or movement of the fuel from one container to another must always be done outside, always from fires or from other heat sources. Always check that the type of fuel is the correct one, specified for the motor of your machine.

- Position the machine on a clean surface.
- Unscrew the plug slowly.
- Pour the fuel into the tank slowly.
- Screw the plug on again tightly. Immediately dry any

fuel spills.



**WARNING:** Start up the motor only after having made certain that there are no traces of fuel that have accidentally spilled out!



**WARNING:** The conservation of the fuel must always be done with respect for the specific laws, in suitable places, away from sources of heat, and with clean, well closed suitable containers!



**REQUIRED:** Avoid the dispersion of fuel and/or fuel containers in the environment. Carry out the disposal according to the current laws and with respect for the environment.

### **3.5. DRIVING THE MACHINE**

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**DANGER:** Always avoid overloading the machine above the prescribed limits: during movement, an overload could create structural variations that were not foreseen and could provoke the overturning of the machine with serious safety consequences.



**WARNING:** Where possible, try to avoid travelling on rocky or icy terrain, on rails and railway sections because they may damage the tracks and reduce their longevity. Also avoid passing over material that could ruin the tracks, such as sharp objects, pieces of metal, etc. that could get caught up in the tracks and provoke a break.

At the start-up, regulate the number of rotations of the motor to the desired level by activating the accelerator lever, according to the required power (when the machine is loaded, you must bring the lever above the halfway mark between the minimum and maximum).

Under certain conditions, especially when the machine is loaded or going uphill, a loss of engine power may occur because of a motor overload; this may also cause it to shut down. In this case, slowly release the drive command lever, regulating the speed to a level that does not provoke an overload of the propeller.

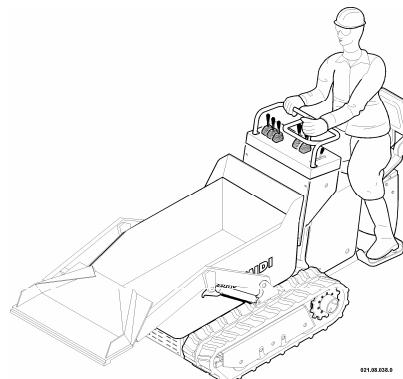
Being a machine equipped with a hydrostatic transmission, **it is not necessary that the rotations of the motor be at their maximum** for the transfer. Leaving the motor operating at its maximum number of rotations does not improve the functioning of the machine, rather **it certainly (and uselessly) increases**

**its fuel consumption:** it is advisable, therefore, to increase the rotations of the motor only where it is absolutely necessary (to proceed at maximum speed, to address steep slopes with a full load, etc.).

### 3.5.1. DRIVING POSITION

Your machine is driven manually and its speed and stability are operated by one's feet.

Alternatively, a driver's seat is available. This enables the driver to comfortably operate the machine (*see fig. 41*).



*fig. 41 – Driver position with seat*

Alternatively a footrest has been supplied (see fig. 42) upon which the operator may carry out all operations while remaining standing. To use this footrest you must position it in the correct way:

- Take out the safety pin which blocks the footrest;
- Rotate the footrest to a horizontal position;
- Block the footrest again by positioning the safety pin again.

**DANGER – Never drive with the footrest unblocked: always verify that the footrest is blocked and that the safety pin is positioned correctly.**

**WARNING – When you open or close the footrest, be careful with your hands: you may cut yourself or crush them.**

When the machine is in gear, always grasp the stronghold handle firmly with one hand and use the other hand simultaneously to activate both drive levers.

**Never release the handle to operate the command levers with both hands.**



**DANGER: When the machine is in gear, the operator must always maintain the prescribed driving position.**

Never speed when working, rather proceed at a speed adjusted to your walking speed, in this way you will maintain a safe control over the commands.



*fig. 42 – Driver position with platform*

### **3.5.2. FORWARD GEAR**

To allow the machine to advance one must activate both drive levers simultaneously by pushing them forward.

Avoid addressing downhill slopes in forward gear, refer to the paragraph: "Travelling on Slopes".

### 3.5.3. REVERSE GEAR

To allow the machine to back up you must activate both drive levers, pulling them back simultaneously.

Avoid addressing uphill slopes in reverse gear, especially with a loaded machine, rather follow the procedure described in the paragraph: "Travelling on Slopes".

**DANGER:** While in reverse gear, always check to see that there are no obstacles and/or persons in the vicinity.

### 3.5.4. TRAVELLING ON SLOPES

**DANGER:** Completely avoid working on terrains that have lateral slopes of more than 10° and longitudinal slopes of more than 20° to avoid the possibility of overturning with serious consequences for the safety of the operator.

When addressing sloped segments, especially when the machine is loaded, one must use this particular technique:

- ☞ Always address the uphill slopes in forward gear;
- ☞ Always address the downhill slopes in reverse gear.

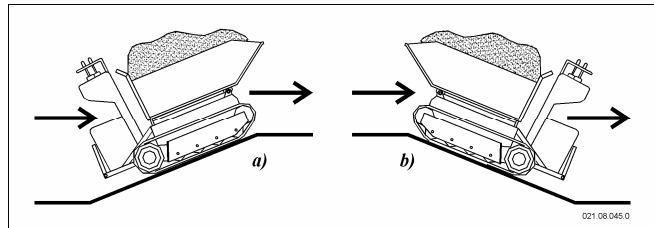


fig. 43 – a) going uphill; b) going downhill

On high slope ground is necessary to work with high regimen of motor (as the slope) minimizing the opening of drive levers (see fig. 44); otherwise could be verify cavitation problems and missing the "engine-brake" effect (the hydraulic motors are forced by the slope and they function like a pump): if the machine increase the speed "alone", release the drive levers.

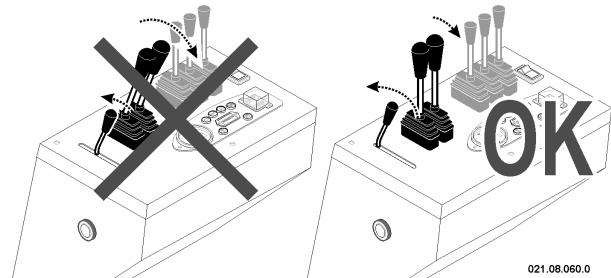


fig. 44 – Engine regimen going downhill



**DANGER:** if the machine travelling on high slope with minimum motor regimen and maximum opening of drive levers, "engine brake" effect is missing and the machine could increase the speed out of control with the possibility of serious consequences for the safety of operator and the proximity persons.

### 3.5.5. STOPPING MOVEMENT

To stop movement one must release the drive levers for the tracks simultaneously.

### 3.5.6. MOVEMENT IN CURVES

To allow the machine to turn one must release the lever on the side to which one intends to turn:

- ☞ To turn to the right, release the right-hand drive lever;
- ☞ To turn to the left, release the left-hand drive lever.

The steering is determined by the slowing of the speed of one track with respect to the other. Consequently the speed and the degree of steering are proportional to the intensity of the release and to the pressure with which you apply to each lever

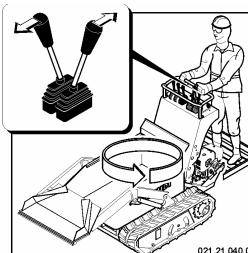
### 3.5.7. COUNTER-ROTATION

It is also possible to make the machine spin round, carrying out a complete "counter-rotation" around its axis, in order to carry out manoeuvres in small spaces.



- ☞ To make a clockwise counter-rotation (towards the direction of the clock hands) you must push the left-hand lever forward and pull the right-hand lever back;

*fig. 45 – Clockwise counter-rotation*



- ☞ To make a counter-clockwise counter-rotation (towards the opposite direction of clock hands) you must push the right-hand lever forward and pull the left-hand lever back.

*fig. 46 – Counterclockwise counter-rotation*

Using the counter-rotation manoeuvre often reduces the duration of the rubber tracks, especially if you do it upon rough surfaces.

### 3.6. HALTING AND PARKING

The machine is equipped with a hydrostatic system enabling halt quite simply on releasing the drive levers. The machine slows down proportionately as a function of the manner of release. When the levers are fully released, the machine halts.

If you wish to park, before halting, choose a position for the machine that is preferably on a surfaced area which is level, and in any case on ground which is level, stable and firm:

- Use the accelerator lever to lower engine revs, with the engine ticking over at minimum revs;
- Turn off the engine



**WARNING:** If you move away from the machine and leave it unattended, always activate the parking brake and be sure that no unauthorized persons may turn it on or move it. In the models which are equipped with one, always take out the start-up key and unplug the battery.

### 3.7. USE PARKING BRAKE

The machine is equipped with an electrohydraulic brake. Hence, when the drive levers are in the stable at-

rest position, the multidisk brakes in the reduction units are automatically enabled by means of an electronically controlled valve. Therefore, even when its engine is on, with a full load on a slope, the operator may leave the machine without running the risk of the machine moving in his/her absence.

When the engine is turned off, the aforementioned brake automatically (on this occasion, hydraulically) enables the disk brakes in the reduction units.

The machine is therefore immobilized where it has been parked.

### 3.8. TRANSPORTING LOADS



**PROHIBITED:** It is strictly prohibited to surpass the load capacity limits indicated in the table 1.11.

#### 3.8.1. CONSTRUCTION BODY (DUMPER)

The machine is equipped with a "dumper" type body to transport inert and solid materials, suitable mainly to be used for construction work.

#### 3.8.2. THREE-SIDED 3S TYPE BODY

According to requirements, your machine can be fitted

with a three-sided dumper type body (which can be opened on 3 sides for unloading material).

### **3.9. UNLOADING MATERIAL**

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#### **3.9.1. OVERTURNING OF THE BODY**

**WARNING - Before unloading, be certain that the terrain is flat, solid and compact. Carry out the dumping manoeuvre slowly and uniformly. Do not move forward with the machine during the dumping phase.**

Your machine is equipped with a hydraulic dumping device for the body which allows for the unloading of material.

To carry out the dumping manoeuvre:

- Position yourself on a level, solid, and compact surface or terrain;
- Push the lever forward to provoke the overturning of the body and the unloading of the material;
- Pull the lever back until the body has returned to travelling position, and then release the lever.



**CAUTION: During the unloading, if the body hits up against an obstacle, avoid moving the machine forward: this could damage the junctions of the body!**



**PROHIBITED: It is strictly prohibited to travel if the body is not in its resting position.**

When using a body which can be opened on 3 sides for unloading material (*see fig. 47*),



*fig. 47 – Three-sided 3S body*  
the side from which unloading is to take place

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depends on the position of the two "A" pins (see fig. 48):

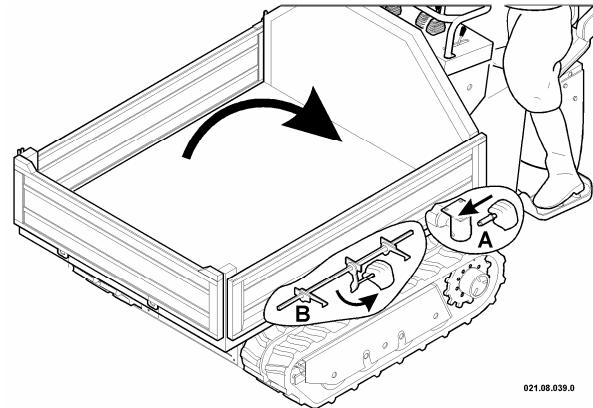
- ☞ If the pins are on the right side, body unloading shall take place from the right side;
- ☞ If the pins are on the left side, body unloading shall take place from the left side;
- ☞ If the pins are on the front, the body shall be tipped forward.



**WARNING – In order to avoid harming the tipping mechanism, before unloading, make sure that the two pins are positioned on the same side of the machine.**



**CAREFUL:** When raising the body for unloading from one side, if you see that the gate does not automatically open, lower the body once more and manually open the gate by pulling lever B under the body platform (see fig. 48). Then raise the body once more. To re-enable automatic gate opening, at the earliest opportunity, the operator is advised to adjust the rods located in the vicinity of the levers under the body platform.



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fig. 48 – Unloading from side

### 3.10. USE OF THE AUTO-LOADING

Your machine may be equipped with an auto-loading mechanism consisting of an anterior bucket that has a hydraulic command.



**CAREFUL:** During movement the auto-loading device must remain raised above the surface of the land to avoid collision with the terrain and must be in a position that does not obstruct visibility.

**Loading:** To be able to load the body using the auto-loading tool, you must follow this procedure:

- advance the machine towards the pile of material maintaining the benna in a horizontal position;
- raise the shovel by pulling the lever towards yourself until you have poured the contents into the body.

**Repositioning:** Push the lever forwards until the bucket has lowered to the correct height from the ground.

**Floating** (auto-levelling): the auto-loading tool may also be used to function as an auto-levelling device, useful, for example for levelling ground. To block the bucket in the floating position you must push the auto-loading lever forward past the lowering position until you have heard a click (the lever remains in stable position).

 **CAREFUL:** During the driving and movement of the machine, the auto-loading device must not remain in the floating position.

### 3.11. SUPPLEMENTARY HYDRAULIC COMMAND

Some versions may be equipped with a hydraulic force instrument for the command of auxiliary equipment.

The hydraulic force instrument is composed of two openings with rapid transmission of standard type,

indicated by the letters “A” and “B”, situated on the right side of the dashboard.

To obtain hydraulic oil pressure on the openings you must work the auxiliary command lever.

- ☞ To obtain pressure on the “A” opening, push the lever forward.
- ☞ To obtain pressure on the “B” opening, pull the lever backward, toward yourself.

 **READ CAREFULLY:** Read the user's instructions carefully for all accessories and/or tools that have been installed on your machine. Always refer to the manual which was provided with them and always keep it attached to this manual.

### 3.12. TRANSPORT

 **WARNING:** During transport, always position the machine levelly to avoid the spilling of oil or other liquids.

If the machine needs to be transported, one must proceed correctly to avoid dangers to persons and/or to the machine. Because of the weight of the machine, it is

not possible to move it manually. Thus, it is necessary to use suitable means of lifting to load it onto a means of transport.

To carry out this operation under the safest conditions possible, proceed as follows:

- Empty the fuel tank and close the plug;
- Fix the lifting hooks exclusively to the anchoring points that were prescribed by the manufacturer;

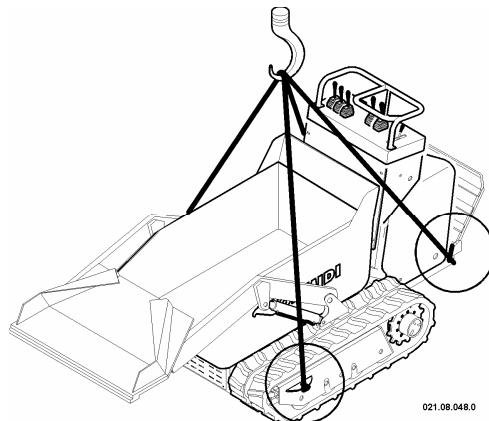


fig. 49 – Anchoring points to lift the machine



**WARNING:** Raise the machine by hooking it exclusively to the hooks predisposed for this purpose: the anchoring of the machine in other points can cause breakage with the consequent fall of the machine and can cause serious harm to persons.

- Fix it firmly to the surface of the means of transport pulling down firmly, and always connecting to the points as indicated in the figure.

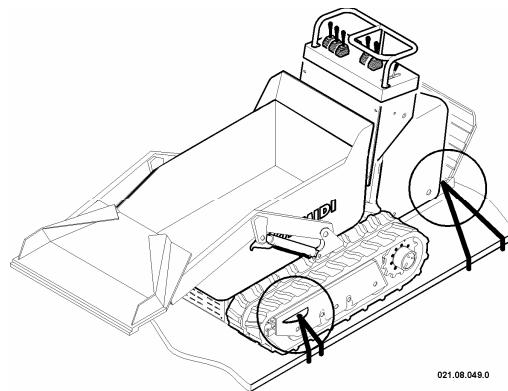


fig. 50 – Anchoring points for transport

### **3.13. STORAGE**

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Whenever the machine must remain inactive for several months, it is necessary to provide a correct garaging so that the machine is in perfect working order when it is used again.

In particular one must carry out storage by following all of these instructions:

- Carry out all necessary repairs;
- Empty the fuel tank completely;
- Proceed with a careful cleaning and remove all mud, and/or organic residues carefully;
- Proceed with all operations regarding the motor that are described in its own manual;
- Carry out a greasing of all points listed in the specific chapter;
- Place the machine in such a way that it is sheltered from atmospheric agents under stable conditions and on a flat surface;
- If the machine is equipped with batteries, unplug them and lubricate with the correct grease;
- Periodically, every two months, recharge the battery;
- If the motor is equipped with a start-up key, take it out and conserve in a safe place.

When putting the machine back into service:

- carry out all greasing again in all prescribed points found in the specific chapter;
- If the machine is equipped with a battery, recharge it and reattach it being certain of the correct polarity of the ends;
- Proceed with the operations concerning the motor described in its own manual;
- Check the oil level and add some if necessary.

## 4. MAINTENANCE



**DANGER:** always carry out all maintenance operations with the motor off and with the start up keys not inserted.

A good maintenance is necessary and is the secret to obtaining low running costs, to lengthening the life of your machine, and to always maintaining it at its highest efficiency.

Beyond the normal maintenance operations on the mechanic and hydraulic parts, it is a good rule to carry out a periodic washing of the machine and to proceed with a careful cleaning to take away all mud residues. After every wash it is necessary to grease all of the parts that are subject to friction, as specified in the paragraph "Greasing".

### 4.1. MAINTENANCE INTERVALS

To maintain the highest level of efficiency, it is necessary that the maintenance be carried out at regular programmed intervals.

In the following table a summary of the maintenance operations is listed that are to be carried out periodically.

(\*) Maintenance and Adjustment Table

Work Frequency	Description	Verify	Greasing	Cleaning	Adjustment	Substitution
Every 8 hours	Machine			✓		
	Drive Levers		✓			
	Command Levers		✓			
	Body	✓				
	Auto-loading	✓				
	Track rollers	✓				
Every 50 hours	Motor oil <sup>(1)</sup>	✓				
	Tracks				✓	
	Hydraulic oil	✓				
Every 100 h.	Air filter <sup>(1)(2)</sup>			✓		
	Parking Brake				✓	
Every 200 h.	Motor wheel hubs	✓				
Every year or 300 hours	Hydraulic oil				✓	
	Hydraulic services oil filter				✓	
	Hydraulic drive oil filter				✓	
	Dry air filters <sup>(1) (2)</sup>				✓	
	Motor oil <sup>(1)</sup>				✓	

(1) Check with the attached manual for the motor

(2) In dusty areas you must increase the frequency

## 4.2. ENGINE

---



**READ CAREFULLY:** Carefully read the instructions and the mode of use for the motor found in the attached specific manual.

The machine that was delivered could be equipped at the origin with different engine types for specific needs and/or markets.

A correct maintenance is the best way to conserve the motor of your machine so that it is always working at its highest efficiency and this allows you to maintain low operation costs.

For the maintenance of the motor, pay scrupulous attention to the attached manual that was given to you.

**REQUIRED:** When changing the motor oil, always use a suitable aspirator to remove old oil.



**Avoid the dispersion of oil and filters in the environment and carry out their disposal with respect for the environment and the regulations in force.**

## 4.3. HYDRAULIC CIRCUIT

---



### 4.3.1. HYDRAULIC OIL



**REQUIRED:** Avoid the dispersion of oil in the environment and carry out the disposal with respect for the environment and the regulations in force.



**DANGER:** The hydraulic oil can reach high temperatures, especially after a day of work: avoid substituting the oil when it is hot to avoid the risk of burning yourself.

The instrument panel of your machine (*see fig. 38*) includes a specific warning light to indicate, in the eventuality, that the temperature of the hydraulic oil in the tanks is too high, more than 90%.

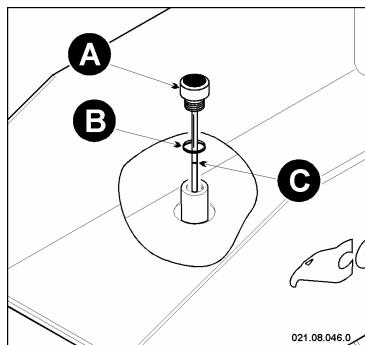
### Verifying Oil Level

<b>Every 8 hrs</b>	<b>Check</b> the level of hydraulic oil in the tank.
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By raising the body of the machine, we can check the hydraulic oil level. The level is correct when, with the machine not running and cool, the oil reaches the red line "C" at the base of the indicator (*see fig. 51*).

## Restoring Oil Level

- Unscrew the top "A" on the upper tank;



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- Stop the motor and check that the level of the oil "C" reaches the red line "D" and, if necessary, repeat the operation.

- Restore the level by adding the oil specified into the opening "A";
- Screw the top "A" back on sealing it properly, and turn on the motor following the correct procedure;
- Briefly operate the drive levers and the command levers;

using the thermometer.



**DANGER:** Always carry out the emptying operation of the tank when the engine is turned off, and with the body blocked by the appropriate bar.

- Unscrew the top "A" on the upper tank, removing the washer "B", and vacuum the oil using a suitable aspirator.
- You fill the tank up to the red line "C";
- Screw the top "A" back on with its washer "B" and turn on the engine;
- Briefly operate the drive and command levers;
- Turn off the engine and check the level if necessary, add more;
- After 8 hours of working, check the level again.

### 4.3.2. HYDRAULIC OIL FILTER

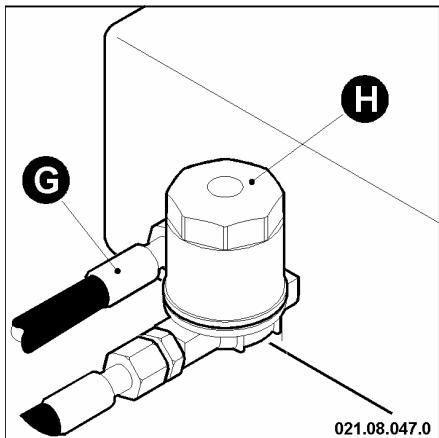
Your machine features two hydraulic oil circuit filters. These are located on the front part of the chassis, under the body. One of the filters is an immersion-type filter (this filter is screwed directly into the tank) (see fig. 52, pos. "G"). The other filter is a cartridge-type filter (see fig. 52, pos. "H") (this filter is positioned in the immediate

## Substitution

<b>Every 300 hrs</b>	<b>Replace</b> the hydraulic oil in the tank.
----------------------	---

To substitute the hydraulic oil, use a suitable aspirator and work when the oil is cool, verifying its temperature

vicinity of the other filter).



*fig. 52 – Substitution of oil filters*



**DANGER:** Always substitute the filters when the motor is shut off and the body is blocked by the appropriate bar.



**REQUIRED:** Carry out the disposal of the oil and filters with respect for the environment and for the regulations in force.

#### Drive Circuit

**Every 300 hrs**

**Replace** the hydraulic drive circuit oil filters.

The filter in the circuit which feeds from the auxiliary drive pump is a cartridge type and does not require any type of cleaning operation, however must be substituted at the prescribed intervals.

To substitute, carefully follow the described operations (see fig 52):

- Empty the oil tanks, by following the procedure in the preceding paragraph;
- Using the appropriate key, unscrew the old filter "H";
- Lightly lubricate the washer of the new filter;
- Screw the new filter down well, clenching tightly by hand only;
- Refill the oil level again.

#### Services Circuit

**Every 300 hrs**

**Substitute** the oil filter for the services circuit.

The filter for the circuit feed of the auxiliary service pump is an immersion type and is screwed directly to the inferior tank.

**Replacement:** to replace the filter, follow these instructions (see fig. 52):

- Empty the oil tanks, both the upper and anterior ones by following the correct procedure;
- Unscrew the oil tube “G” by working on the junction;
- Unscrew the filter and take it out of the tank;
- Put the nipple on the new filter always checking the lining;
- Screw the filter back into the tank;
- Screw the oil tube back on;
- Fill the tanks and check the levels.

#### 4.4. REDUCERS

**Every 50 hrs** Verify the oil level in the reducers.

The oil check must also be done in the reducers.

To that end, unscrew the cap 1, and check the level (see fig. 53).

If necessary, proceed with the filling through the opening of the cap 2, until the oil comes out of the opening 1.

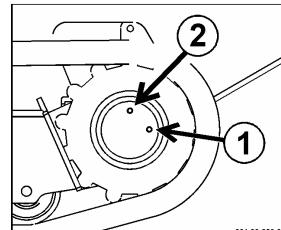


fig. 53 - Reducer oil level

#### 4.5. TRACKS

##### Registration

**Every 50 hrs** Register the tension of the tracks.

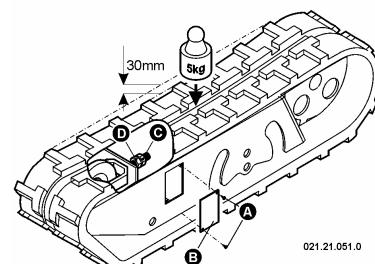


fig. 54-Adjustment of track tension

The correct tension of the tracks is important in order to guarantee their longevity and for your own safety: to check it, apply a force of 5kg on the track and check that the arrow is at about 30mm.

Proceed as follows for correct track tension adjustment:

- Remove the cover “B” by unscrewing both “A” screws;
- With two spanners, loosen the lock nut “C”;
- Adjust tension via nut “D”;
- Check that the value of the arrow is 30 mm;
- After adjusting, tighten the lock nut;
- Replace the cover;
- Repeat the same operations on the other track.

## Substitution



**DANGER:** Never work with the machine raised on a jack or suspended, rather always place it upon suitable trestles that can maintain the weight of the machine before starting work.

For the substitution of the tracks, proceed as follows:

- Raise the side of the machine on which you wish to work using hydraulic jacks or a crane;
- Position the machine on suitable trestles, and check to see that it is stable;
- Take off the cover “B” by unscrewing the screws “A”;
- Using two wrenches, loosen the counter-nut “C” and completely unscrew both the counter-nut and nut “D”;
- Take off the track “E” starting from the anterior part;
- Mount the new track lining it up with the teeth in the drive wheel “F”;

- Fit in the anterior part of the track onto the neutral wheel “G”;
- Register the tension by working on nut “D”;
- Check that the arrow is at 30mm;
- When the registering is done, block the counter-nut “C”;
- Put the cover back on.

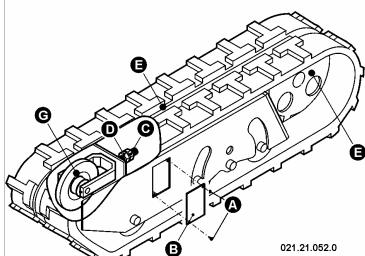
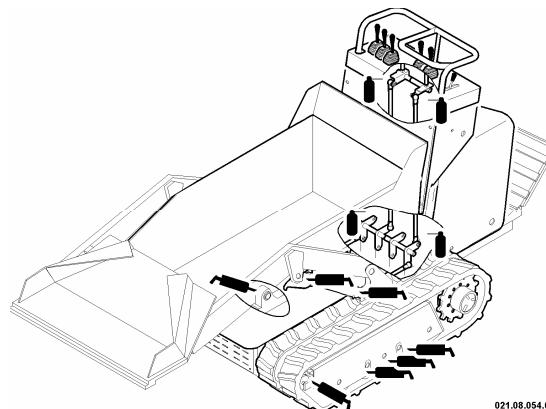


fig. 54 – Substitution of tracks

#### 4.6. GREASING

**Every 8 hrs**

Refurnish the grease in all prescribed points.



*fig. 56 – Greasing points*

Refurnish the grease in all prescribed greasing points, using a suitable grease.

Grease the drive levers using a spray type lubricant.

#### 4.7. RECOMMENDED LUBRICANTS

	Type	Quantity
Motor Oil	<b>15W40</b>	
Hydraulic Oil	<b>AT FII</b>	<b>16 l</b>
Grease	<b>MR thick fluid</b>	

## 5. INCONVENIENCES AND BREAKDOWNS

Inconvenience	Causes	Remedy
Hydraulic oil is leaking.	Excessive oil level.	Correct the oil level
	Overheated oil.	Turn off the machine and let it cool down
	Breakdown in the hydraulic circuits.	Have the machine looked at by a mechanic with specific competence
Oil leak.	Excessive oil level.	Correct the oil level
	Breakdown in hydraulic circuits or in washers.	Have the machine looked at by a mechanic with specific competence
The hydraulic commands do not respond correctly.	Insufficient oil level.	Refill to the correct level
	Breakdown in the hydraulic circuits.	Have the machine looked at by a mechanic with specific competence
The body or the arms of the bucket moves slowly.	Overheating of the oil.	Interrupt work and let it cool down
	The motor does not have power.	Have the machine looked at by a mechanic with specific competence
Lack of pressure in the auxiliary hydraulic openings.	Insufficient oil level.	Refill to the correct level
	Sleeves not correctly inserted.	Insert the sleeves correctly
	Breakdown in the hydraulic circuits.	Have the machine looked at by a mechanic with specific competence
Excessive oil temperature.	Insufficient oil level.	Refill to the correct level
	Overheating.	Interrupt work and let cool down
Parking brake does not deactivate.	The brake cable is broken.	Have the cable substituted by a mechanic
	The brake is blocked.	Move the machine slightly forward and backward and try again

<b>Inconvenience</b>	<b>Causes</b>	<b>Remedy</b>
The machine does not move.	The parking brake is activated.	Deactivate the parking brake
	Not enough oil in the hydraulic circuit.	Restore oil to the correct level
	The tracks are broken.	Replace the tracks
	Breakdown in the hydraulic components.	Have the motor looked at by a mechanic with this specific competence
Excessive noise from the tracks during movement.	Incorrect track tension.	Register the tension.
	Broken or worn tracks.	Replace the tracks.
	Broken rollers or ball bearings.	Have the motor looked at by a mechanic with this specific competence
Excessive noise from the body or from the arms of the bucket.	Needs greasing..	Greasing
	Broken rollers.	Have the machine repaired by a mechanic
The accelerator does not respond.	Il cavo dell'acceleratore è rotto.	Fate sostituire il cavo da un'officina meccanica
The motor does not work correctly or makes an excessive amount of noise.	Various causes.	Have the motor looked at by a mechanic with this specific competence
The motor does not develop power.	The air filter is blocked.	Replace the air filter.
	Various causes.	Have the motor looked at by a mechanic with this specific competence
The motor does not start.	Not enough fuel.	Refuel the machine
	The start-up procedure was not carried out correctly.	Follow the correct start-up procedure
	The battery is dead.	Have the battery recharged or replace it

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## **DICHIARAZIONE DI CONFORMITÀ**

QUESTO DOCUMENTO CERTIFICA CHE LA MACCHINA SOTTO  
INDICATA È CONFORME IN TUTTE LE SUE PARTI  
ALLE SEGUENTI NORMATIVE:

Decreto di recepimento Italiano

- D.p.r 24/07/1996 n° 459

Direttive Europee

- 98/37/CE (Sicurezza del Macchinario)

- 2000/14/CE (Emissione acustica ambientale delle macchine ed  
attrezzature destinate a funzionare  
all'aperto)

- 89/336/CE (Compatibilità elettromagnetica)

Norme armonizzate  
(applicabili)

Prodotto : Dumper autobilanciabile compatto con cingoli in gomma per  
il trasporto di materiale secco in cantiere.

Modello: \_\_\_\_\_

Numero di serie: \_\_\_/\_\_\_

Costruttore: CORMIDI srl-Via Seude snc 84050 Roccadaspide (SA)

Motore Tipo: Honda \_\_\_\_\_

Potenza Installata: kW \_\_\_\_\_

Certificato n° \_\_\_\_\_

Roccadaspide \_\_\_/\_\_\_/\_\_\_

**CORMIDI srl**  
*L'amministratore*