



Grillo

AGRIGARDEN MACHINES



02401-13

FD450

**OPERATOR'S MANUAL
MANUALE DELL'OPERATORE
MANUEL D'UTILISATION
BEDIENUNGSANLEITUNG
MANUAL DE INSTRUCCIONES**

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OPEN MANUAL- means that you must read the operator's manual very carefully.

MANUALE APERTO - significa che dovete leggere attentamente il manuale di uso e manutenzione.

MANUEL OUVERT – signifie qu'il faut lire avec attention le présent manuel.

OFFENES HANDBUCH – bedeutet, dass Sie die Gebrauchs- und Wartungsanleitung aufmerksam durchlesen müssen.

MANUAL ABIERTO – es decir que hay que leer muy atentamente el manual del operador.



CAUTION! - means that you have to pay particular attention to the operation you have to carry out, in particular if there is the indication "DANGER".

ATTENZIONE! - significa che dovete porre particolare attenzione all'operazione che dovete effettuare, in particolare se vi è anche l'indicazione di "Pericolo".

ATTENTION! - signifie qu'il faut faire particulière attention dans l'opération que vous allez faire, en particulier s'il y a aussi l'indication "DANGER".

VORSICHT! - bedeutet, dass Sie besondere Aufmerksamkeit beim Durchführen des Vorgangs haben müssen, insbesondere wenn auch der Hinweis "GEFAHR" aufgeführt ist.

ATENCIÓN! - es decir que hay que poner mayor atención en la operación a ejecutar si, en particular cuando hay también la indicación "Peligro".



INTERDICTION, YOU MUST NOT DO THAT! - means that it is absolutely forbidden to carry out the operations reported under this symbol because they could lead to mortal danger.

DIVIETO, NON FARE! - significa che non dovete assolutamente fare le operazioni riportate sotto questo simbolo, potrebbe comportare un pericolo mortale.

INTERDICTION, NE PAS FAIRE! - signifie qu'il est absolument interdit d'effectuer les opérations reportées sous cette indication, car elles pourraient conduire au danger de mort.

VERBOT, strengstens untersagt! - bedeutet, dass der Vorgang unter diesem Symbol absolut nicht durchgeführt werden darf, da er zur einer lebensgefährlichen Situation führen könnte.

PROHIBICIÓN, NO LO HAGAN! - es decir que no hay que hacer absolutamente las operaciones bajo este símbolo, podría comportar un peligro mortal.



NOTE, you have to pay particular attention to the note put next to this symbol

NOTA, dovete porre particolare attenzione alla nota posta accanto a questo simbolo.

NOTE, il faut faire attention particulière à la note mise à côté de ce symbole.

ANMERKUNG, besondere Aufmerksamkeit muss auf die Anmerkungen neben diesem Symbol gelenkt werden.

NOTA, hay que poner atención particular en la nota puesta a lado de este símbolo.



You must not repair nor lubricate the machine with moving parts or with the engine put on.

Non riparare o lubrificare la macchina con organi in movimento o motore acceso

Ne pas réparer ou lubrifier la machine avec des parties en mouvement ou à moteur en marche.

Niemals bei bewegenden Objekten oder bei laufendem Motor Reparationen oder Einschmierungen durchführen.

No reparar ni lubricar la máquina con órganos en movimiento o motor en marcha.



You must not smoke, light matches or lift flames, trigger frames nor cause sparks.

Vietato fumare, accendere fiammiferi o fiamme, lasciare fiamme libere o creare scintille.

Il est interdit de fumer, allumer des allumettes ou du feu, laisser des flammes libres ou de causer des étincelles.

Es ist untersagt zu Rauchen, Streichhölzer oder Feuer anzuzünden, Flammen auslösen oder Funken verursachen.

Prohibido fumar, encender cerillas o fuego, dejar llamas o crear chispas.



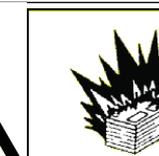
Use personal protective equipment.

Utilizzare mezzi di protezione individuali.

Utilisez l'équipement de protection individuelle.

Individuelle Schutzausrüstung benutzen.

Utilizar dispositivos de protección individual.

 	<p>Take special care not to touch hot parts of the engine.</p> <p><i>Prestate particolare attenzione a non entrare in contatto con parti surriscaldate del motore.</i></p> <p>Veiller tout particulièrement à ne pas toucher des éléments surchauffés du moteur.</p> <p><i>Achtung – keine heißen Motorteile berühren!</i></p> <p>No tocar partes recalentadas del motor.</p> <p><i>Tome muito cuidado para não entrar em contacto com as partes aquecidas do motor.</i></p>
 	<p>Engine exhaust fumes can cause sickness or death. If it is necessary to run an engine in an enclosed area, use an exhaust pipe extension to remove the fumes. Always try to work in a well ventilated area.</p> <p><i>I gas di scarico possono causare malanni o morte. Se è necessario mettere in moto un motore in uno spazio chiuso, usare una prolunga tubo di scarico per far uscire il fumo. Lavorare in una zona ben ventilata.</i></p> <p>L'exhalation des gaz d'échappement peut être cause d'intoxication ou de mort. S'il est vraiment nécessaire d'allumer le moteur à l'intérieur, appliquer au tuyau d'échappement un autre tuyau extensible pour permettre la sortie des gaz. Il est toujours mieux de travailler en plein air.</p> <p><i>Auspuffgase können Übelkeit oder Tod verursachen. Wenn es notwendig ist, einen Motor in einem geschlossenen Raum laufen zu lassen, benützen Sie eine Verlängerung, um das Auspuffgas abzuleiten. Versuchen Sie immer in einem gut belüfteten Raum zu arbeiten.</i></p> <p>Los gases de escape pueden provocar enfermedades o muerte. De tener que poner en marcha un motor en un espacio cerrado, usar una prolongación del tubo de escape para que salga el humo. Trabajar en una zona bien ventilada.</p> <p><i>Os gases de escape podem causar danos ou morte. Caso seja necessário fazer com que o motor funcione num espaço fechado, utilize uma extensão para o tubo de escape que os fumos sejam expulso para o exterior. Trabalhe numa área bem ventilada.</i></p>
 	<p>Caution! Never touch moving pulleys or belts. They can be very dangerous. Never do maintenance with engine running.</p> <p><i>Attenzione! Non toccare mai pulegge o cinghie in movimento, creano gravi danni alla persona. Non fare manutenzione col motore in moto.</i></p> <p>Attention! Ne jamais toucher ni poulies ni courroies en mouvement, elles peuvent provoquer des accidents aux personnes. Ne pas faire l'entretien quand le moteur est en marche.</p> <p><i>Vorsicht! Nie laufende Riemenscheiben oder Treibriemen anfassen, da es gefährlich ist. Nie bei laufendem Motor Instandhaltung machen.</i></p> <p>¡Atención! No tocar jamás poleas o correas en movimiento, porque pueden crear graves daños a la persona. No efectuar el mantenimiento con el motor en marcha.</p> <p><i>Atenção! Nunca toque nas polias ou correias em movimento devido ao alto risco de ferimentos. Nunca faça a manutenção da máquina com o motor ligado.</i></p>
 	<p>A burst which separates the tyre from the rim parts can cause serious injury or death.</p> <p><i>La separazione fra pneumatico e cerchione, causata dall'esplosione del pneumatico, può provocare serie ferite o addirittura la morte.</i></p> <p>La séparation entre le pneu et la jante, provoquée par l'explosion d'une roue peut causer des dommages, blessures ou la mort.</p> <p><i>Die Trennung der Räder von den Felgen durch Explosion kann schwere Verletzungen oder den Tod verursachen.</i></p> <p>La separación entre el neumático y la llanta producida por la explosión del neumático puede provocar graves herida e incluso la muerte.</p> <p><i>A separação entre o pneumático e o aro, provocada pela explosão do pneumático, pode causar graves ferimentos ou até mesmo a morte.</i></p>
 	<p>Prevent battery explosions: keep sparks, lighted matches and open flames away from the top of the battery. Battery gas can explode.</p> <p><i>Per prevenire l'esplosione della batteria, tenete scintille, fiammiferi accesi e fiamme lontani dalla stessa. Il gas della batteria può esplodere.</i></p> <p>Prévenir l'explosion de la batterie: tenir les étincelles, les allumettes et le feu loin de la batterie. Le gaz de la batterie peut exploser.</p> <p><i>Vorbeugung der Batterie-Explosion. Entfernen Sie Funken, Zündhölzer und Flammen von der Batterie. Das Batteriegas kann explodieren.</i></p> <p>Para prevenir la explosión de la batería, mantener chispas, cerillas encendidas y llamas lejos de la misma. El gas de la batería puede explotar.</p> <p><i>Para prevenir explosão da bateria ter centelhas, fósforos acendido e chamas longe da mesma. O gás da bateria poderia explodir.</i></p>
 	<p>Handle fuel with care, it is highly flammable: Do not refuel machine while smoking, when machine is near an open flame or sparks, or when the engine is running. Stop the engine.</p> <p><i>Maneggiare il carburante con cura, è altamente infiammabile; non fate rifornimento mentre fumate, o vicino a fiamme o scintille, o quando il motore è acceso.</i></p> <p>Manier avec soin le carburant car c'est très inflammable. Ne pas remplir le réservoir si vous êtes en train de fumer ou pendant que la machine est près du feu ou d'étincelles ou encore pendant que la machine travaille. Arrêter le moteur.</p> <p><i>Treibstoff vorsichtig handhaben, da er sehr entzündbar ist: beim Tanken nicht rauchen. Nicht tanken, wenn die Maschine in der Nähe von Flammen oder Funken ist oder wenn der Motor läuft. Immer den Motor abschalten.</i></p> <p>Manejar el combustible con cuidado porque es sumamente inflamable; no repostar mientras se fuma o cerca de llamas o chispas, o cuando el motor está encendido.</p> <p><i>Manuseie o carburante com cuidado, pois este é altamente inflamável; não fume durante o abastecimento da máquina ou enquanto o motor estiver ligado, não o aproximado de chama ou de faíscas.</i></p>

	<p>WARNING! SHARP PARTS. Keep hands and feet away. Do not operate the mower over gravel or foreign bodies which may be sucked up and ejected by the blades, generating a danger. Keep people away. Remove the key and read the instruction manual before attempting to carry out any maintenance or repairs to the machine.</p> <p>ATTENZIONE! ORGANO TAGLIENTE. Tenere lontano mani e piedi. Non lavorare col rasaerba sopra alla ghiaia o corpi estranei che possono essere aspirati e centrifugati dalle lame risultando molto pericolosi, tenere lontano le persone. Togliere la chiave e leggere le istruzioni prima di effettuare qualsiasi operazione di manutenzione e riparazione.</p> <p>ATTENTION! ORGANE TRANCHANT. Eloigner les mains et les pieds. Ne pas utiliser la tondeuse sur le gravier ou sur des corps qui peuvent être aspirés et centrifugés par les lames et devenir très dangereux. Les personnes doivent se trouver à une certaine distance. Enlever la clé et lire les instructions avant toute opération de maintenance et de réparation.</p> <p>ACHTUNG! SCHARFE KLINGEN. Hände und Füße fernhalten. Beim Mähen nicht über Schotter, Steine oder andere Fremdkörper fahren, da diese durch die Drehbewegung der Messer angesaugt und weggeschleudert werden können (Verletzungsgefahr). Nicht in der Nähe von anderen Personen mähen. Vor jedem Wartungs- bzw. Reparatureingriff den Startschlüssel abziehen und die Gebrauchsanleitung durchlesen.</p> <p>¡PELIGRO! ORGANO CORTANTE. Mantener alejados los pies y las manos. No limpiar la herramienta con el motor en marcha. ¡Peligro! Expulsión de objetos: mantener alejadas a las personas. Atención: quitar la llave y leer las instrucciones antes de efectuar cualquier operación de mantenimiento o reparación.</p> <p>ATENÇÃO! Órgão cortante. Ficar longe com pés e mãos. Não trabalhar com a máquina sobre cascalho ou objetos que podem ser aspirados e centrifugados gerando perigo, manter-se longe das pessoas.</p> <p>Tirar a chave de ignição e ler as instruções antes de efetuar qualquer operação de reparo ou serviço.</p>
	<p>Warning! Cutting edges, keep your hands and feet away. Do not clean the attachment when the engine is running.</p> <p>Attenzione! Organo tagliente, tenere lontano piedi e mani. Non pulire l'attrezzo col motore in moto.</p> <p>Attention! Organe tranchant, ne pas approcher main et pieds. Ne pas nettoyer le moteur quand le moteur est en marche.</p> <p>Achtung! Schneidende Klinge, Hände und Füße fernhalten. Niemals bei laufendem Motor reinigen.</p>
	<p>DANGER! READ THE INSTRUCTION MANUAL. KEEP SAFETY DISTANCES.</p> <p>PERICOLO! LEGGERE IL MANUALE D'ISTRUZIONE. TENERE LONTANO LE PERSONE.</p> <p>DANGER! LIRE LE MANUEL D'INSTRUCTIONS. RESPECTER LES DISTANCES DE SÉCURITÉ</p> <p>GEFAHR! DIE GEBRAUCHS ANLEITUNG DURCHLESEN. NICHT IN DER NÄHE VON ANDEREN PERSONEN MÄHEN.</p> <p>PELIGRO! LEER LAS INSTRUCCIONES. MANTENER ALEJADAS LAS PERSONAS.</p> <p>PERIGO! LER O MANUAL DE INSTRUÇÕES. MANTER AS PESSOAS AFASTADAS.</p>
	<p>Before using the machine, it is mandatory to put on the appropriate individual safety devices: body protection, protection gloves, security shoes, ear protection.</p> <p><i>Prima di utilizzare la macchina, è obbligatorio indossare gli appositi dispositivi di sicurezza individuali: protezione del corpo, guanti di protezione, calzature di sicurezza, protezione dell'udito.</i></p> <p>Avant d'utiliser la machine, il est obligatoire de mettre les dispositifs individuels de sécurité appropriés: protection du corps, gants de protection, chaussures de sécurité, protection de l'ouïe.</p> <p><i>Vor dem Gebrauch der Maschine ist es vorgeschrieben, die geeignete persönlichen Schutzkleidung anzuziehen: Körperschutz, Schutzhandschuhe, Sicherheitsschuhe, Gehörschutz.</i></p> <p>Antes de utilizar la máquina es obligatorio ponerse los dispositivos individuales de seguridad apropiados: protección del cuerpo, guantes de protección, calzado de seguridad, protección del oído.</p>

FD450

OUTFRONT MOWER WITH COLLECTION

Dear Customer,

Thank you for purchasing our Grillo FD450. We are confident that this machine will fully satisfy all your requirements. To use and maintain the mower at its best, we urge you to read and observe carefully the instructions given in this handbook; this will ensure the best possible results and will also safeguard your investment. Please keep this handbook in a safe place. It should accompany the machine throughout its working life.



ATTENTION! Read carefully before switching the engine on. The following warnings are important for the operator's safety!

WARNINGS

Caution is the main safeguard in preventing accidents!

We urge you to read the following warnings for use of the mower before starting any work at all.

Improper use of the mower and its equipment can be dangerous; to minimise risks, always observe the necessary precautions set out below:

- 1) Read the whole of this manual before turning on and using the mower for the first time.
- 2) Pay particular attention to the warnings and safety labels set around the mower.
- 3) The mower blade is very dangerous when rotating; **never place hands or feet underneath the mower deck.**
- 4) Before allowing others to use the machine, make sure they are aware of the safety precautions and how it is used.
- 5) **Before starting work always change into suitable working clothes, gloves, boots and goggles.**
- 6) Wear special acoustic protections (ear-caps) during work).
- 7) Before turning on the machine, make sure there are no persons around it; especially children.
- 8) Before driving the machine in reverse, make sure there are no persons or obstacles in the way.
- 9) Check the condition of the ground before mowing. Make sure there are no stones, sticks or other objects which could be run over and become very dangerous when projected.
- 10) If any impact with a foreign object occurs, disengage the blade, turn off the engine, remove the ignition key and examine the lawnmower; if the machine vibrates, have it repaired.
- 11) Before getting off the mower, disengage the PTO, turn off the engine, remove the ignition key and lower the deck to its lowest position.
- 12) Always drive slowly along uneven paths.
- 13) Keep the speed down when driving down slopes.
- 14) Always turn slowly when driving downhill.
- 15) The user is always liable for any damage caused to third parties.
- 16) Deformed or damaged blades must always be replaced, never just repaired.
- 17) Always use original GRILLO spare parts and accessories.
- 18) Only work in sunlight or under effective artificial lightning.
- 19) Only store fuel in suitable containers designed for the purpose.
- 20) Be very careful when working close to a road.
- 21) Lift and empty the grass catcher only when the machine is motionless and on a flat ground.
- 22) Allow the engine to cool before putting the machine away in a closed environment.

IMPROPER USE TO BE AVOIDED

- 23) Do not allow passengers to ride on the machine.
- 24) Do not allow under-age people to operate the machine: its use is prohibited to children under 16 years old.
- 25) Do not operate the machine when tired or after drinking alcohol.
- 26) Do not operate the mower near to ditches or verges which could collapse under the weight of the machine, especially when the surface is loose or wet.
- 27) Do not allow any fuel spillage and after filling the tank wipe away any spilled fuel before starting the engine.
- 28) **Do not tamper with safety devices or disable them.**
- 29) Do not change the engine settings, especially the maximum number of revs.
- 30) Do not rest heavy loads on the seat, the starter safety device could become disengaged.
- 31) Never attempt any adjustment or cleaning with the engine running.
- 32) Never allow anyone to check the machine while you are seated at the controls with the engine running.
- 33) Do not move the machine without the deck, because it may turn over and be very dangerous.
- 34) Replace worn or damaged mufflers.

FURTHER SAFETY ADVICE

The above mentioned warnings could not be enough to avoid any risk, if the operator does not use the lawnmower correctly. For your safety therefore we give you following advice:

- 35) **The mower blade is very dangerous when rotating, never put hands or feet underneath the mower deck.**
- 36) Do not engage the reverse gear at full power.
- 37) It is dangerous to operate the steering wheel abruptly with the motor at full power.
- 38) Fill the tank with fuel before starting the engine. Only refuel outdoors, always turn off the engine, keep away from sparks or naked flames, do not smoke! Always replace the cap on the fuel tank and those on fuel containers properly.
- 39) If the fuel tank has to be emptied, only do so outdoors.
- 40) If you have children, hide the ignition key after using the machine.
- 41) CAUTION: to avoid the risk of fire, keep the engine compartment, muffler, discharge outlets, battery, tank area and fuel pipes free of grass, leaves, dirt etc...
- 42) Do not store the machine inside any building where the engine fumes can reach naked flames, sparks or bare electrical wires.

Remove the implements, turn off the engine and disconnect the spark plugs:

- a) **before cleaning obstructed points.**
- b) **before checking or repairing the lawnmower.**
- c) **when the machine hits a foreign body (check the mower deck to see if it is damaged make repairs before you operate).**
- d) **if unusual vibration occurs, stop and inspect the machine. Contact the nearest authorized service centre if you need help.**

IDENTIFICATION AND SERVICING



IDENTIFICATION

The Grillo FD450 has an ID plate showing the serial number, located underneath the seat. Always state the serial number when ordering spare parts or asking for technical assistance

AFTER-SALES SERVICE

This handbook provides the instructions for using the mower. For correct servicing, contact your local dealer.

SPARE PARTS

Original spare parts should always be used, as they are the only guarantee of safety and interchangeability. When ordering, always state the machine's serial number and the code number of the spare part required. For engine parts, follow the instructions provided in the specific manual.

GUARANTEE

The guarantee is given in compliance with the current law. The dealer will have to give the client a copy of the registration card of the machine, which they will print up from the Grillo website. For the engine the guarantee of the relative manufacturers apply.

RECOMMENDED SPARE PARTS TO BE KEPT TO HAND

- 1 set of mower blades
- 1 set of belts
- 1 engine air filter
- 1 engine oil filter
- 1 throttle cable

HOW TO ORDER SPARE PARTS

Always state the machine's serial number and the code number of the spare part required. Contact your local Grillo service centre. For further information, our address is:

GRILLO S.p.A.
Via Cervese 1701 - 47521 CESENA (FC)
Tel. 0547.381.333 / Fax 0547.632.011
Web site: www.grillospa.it / e-mail: grillo@grillospa.it

TECHNICAL SPECIFICATIONS

ENGINE: BRIGGS & STRATTON 22 HP Professional (16,1 kW @ 3300 r.p.m.) OHV 656 cc twin-cylinder petrol version with oil pump.

STARTER: electric with 12V battery.

GEARBOX: hydrostatic transmission with differential lock.

DIFFERENTIAL LOCK: mechanical with pedal control.

SPEED: 0 – 11km/h (forward) and 0 – 6km/h (reverse) through pedal control device.

FUEL TANK: 17 litres – **REVERSE TANK:** 2,5 litres.

HOURLY CONSUMPTION: 4,6 litres.

CUTTING DECK: frontal with 3 blades for a total width of 1190 mm and equipped with solid wheels.

CUTTING WIDTH: 1130 mm.

ELECTRIC CUTTING HEIGHT ADJUSTEMENT: from 25 to 90 mm.

CLUTCH: electromagnetic for PTO with magnetic blade brake.

DRIVING SYSTEMS: with steering wheel, forward and reverse gears engaged through pedal.

SEAT: with adjustable suspension.

GRASS-CATCHER: 450 litres with full grass catcher motorized micro-switch.

GRASS-CATCHER DISCHARGE AND DECK LIFTING HYDRAULICALLY OPERATED THROUGH ELECTRIC BUTTONS.

DISCHARGE HEIGHT: 150 cm – **REAR OVERHANG:** 57 cm.

TYRES: front: 20×10.0-8; rear: 15×6.0-6.

PARKING BRAKE: disk brake.

STEERING RADIUS: 30 cm.

HOURLY CUTTING CAPACITY: 8000 m²/h (indicative).

INCLUDED IN THE MACHINE: tow bar.

ATTACHMENTS: mulching kit.

WEIGHT: 385 kg.

DIMENSIONS: Length: 2680 mm
 Width: 1190 mm
 Height: 1450 mm

PUTTING THE MACHINE INTO SERVICE

- 1) Check that the machine is complete and has not been damaged in transit.
- 2) Check the engine oil level (SAE30).
- 3) Check the tyre pressure:
Front wheels 20×10.0 – 8 (1 BAR)
Rear wheels 15×6.0 – 6 (1,2 BAR)
- 4) Check the battery voltage; it must be at least 12 Volts. Charge the battery if necessary.
IMPORTANT!!! When fitting the battery, ensure that the poles are correctly connected. Never start the engine if the battery is not connected.
- 5) Warning! In the hydrostatic transmission the level indicator is located on the right side of the tank (fig.14, ref. A). Use engine oil 20W50.

BATTERY – WARNING!

The gases released by the battery are explosive, keep it away from sparks or naked lights. Check the terminals periodically and keep them greased with Vaseline.

RUNNING-IN – WARNING!!

Change the engine oil after the first 20 working hours (SAE30). Change the oil in the hydrostatic axle after the first 50 hours. Check that there are no oil leaks or loose screws, especially the blade fixing screws. **IMPORTANT: the central screw of the right blade rotates to the left.**

INSTRUCTIONS FOR USE

Before starting the engine, always check that:

- the hydrostatic transmission cooling fins are clean (fig. 18).
- the engine cooling grids are clean (fig.13, A).
- the engine oil is at the correct level: screw the tap to check the level (fig.13, B)
- the speed selection pedal is not depressed (fig.1, n.1);
- the PTO switch is OFF (fig.2 n. 3);
- the air filter is clean (fig. 6).
- to inspect the engine, lift the grass catcher and insert the red safety devices on the hydraulic cylinders (fig. 40, A). To settle the safety devices press the button (fig.39, A) and hook them on the cylinder chromate rod. The safety devices hold their position thanks to a magnet.
- the cutting deck is clean (fig. 26).
- the grid inside the grass-catcher is clean (fig. 7).

Fill the fuel tank, using a funnel fitted with a very fine mesh filter (fig. 5, n.14). Adjust the seat with the aid of the lever (fig.3, no.10).

STARTING THE PETROL ENGINE

Push the throttle to half-way (fig.3, n.8). If the engine is cold, activate the choke (fig.3, n.9). Turn the ignition key on the dashboard (fig. 4, n. 15). Once the engine has started, release it, deactivate the choke and wait a few minutes for the engine to warm up.

SWITCHING ON THE HEADLAMP

To switch on the headlamp, put the ignition key in the second position (fig. 4, A). **IMPORTANT:** It is necessary to switch on the headlamp once the engine has started up to avoid battery discharge.

STARTING WORK

Rev up the engine and engage the PTO switch (fig.2, n.3). Adjust the cutting height using the lever (fig.2 n.4). The button (fig. 5, n. 11) is needed to lift the mower deck. During work the mower deck must be set in the floating position.

CAUTION: Do not insert the cutting blades with the engine running at maximum revs. The engine has to run at half speed. Insert the cutting blades at half speed and at some distance from the grass to be cut.

IMPORTANT

1) Adjust the travel speed in order to avoid overloading the deck when at work and cut with the engine at maximum revs.

2) Always keep the blades sharp.

In case of wear, sharpen or replace them as required.

Gently press the speed selection pedal (fig.1, n.1) and start work. Push the pedal to position A to travel forward and to position B to travel in reverse. If the pedal is released, the machine immediately stops. Lever (fig.3, n.7) is the parking brake; in the "P" position (fig. 2) the parking brake is engaged.

When the grass-catcher is full the blades automatically disengage. The grass-catcher is equipped with an inner moving sensor that automatically disengages the blades when the grass-catcher is full (fig.38). The grass-catcher has therefore to be emptied. The grass-catcher can be emptied directly from the driver's seat using the buttons (fig. 5, n.12 to lift the grass-catcher and n.13 to empty the grass-catcher). The grass-catcher door automatically opens. The grid inside the grass-catcher must always be kept clean to improve grass collection and to prevent clogging (fig. 7). During summer and in very dusty environment it is recommended to mount the plastic protection plate (fig. 7A) inside the grass-catcher. This plate and the necessary screws are delivered with the machine.

GRASS-CATCHER CLOSING

The grass-catcher can be checked opening the door (fig. 8, A). The closing can be regulated (fig. 8, B). The grass-catcher door opens automatically when the operator uses the button from the driver's seat. To keep the grass catcher door open use the rod (fig.9, A). **CAUTION:** Do not engage the blades when the grass catcher door is open.

GUIDELINES FOR EFFECTIVE USE

1. Check the condition of the ground before mowing. Make sure there are no stones, sticks or other foreign objects.
2. When mowing, keep the engine at full revs and adjust the speed to suit the height of the grass. Take care when you come to thick clumps of tall grass; slow down if necessary.
3. Sharpen the mower blades frequently; the cut will be better and the engine will be under less strain.
4. Engage the blades a few metres before you come to the grass for cutting.
5. Always keep the engine at full revs when mowing; if the engine slows down, decelerate for a moment to allow the engine to recover r.p.m.
6. For best lawn appearance, alternate one longitudinal and one transverse cut, both at the same height.
7. If the duct tends to become clogged with grass, reduce the travel speed since it may be too high for the lawn's condition. If the problem persists, probable causes are blunt blades, dented fins profile, slack belt or clogged grass catcher grid.
8. If the grass is very long, it is best to cut in two passes, the first with the blades at the highest level, perhaps working on reduced width, and the second at the final height required.
9. Take great care when cutting close to bushes and low kerbs which might damage the edge of the back and the blades.
10. When you finish work, engage the parking brake and always turn off the petrol tap (fig.3, no.7).

MOWING POSITION

To adjust the cutting height use the button (fig.2 n.4). On rough or uneven ground, always work with the deck in the highest cutting position in order to avoid knocks on the blades.

SLOPING GROUND

If possible always travel up and down rather than across slopes. When turning, take care that the wheels on the uphill side do not meet any obstacles (stones, logs, roots, etc.) which might make you lose control of the machine. If the drive wheels tend to slip, adjust the cutting deck floating springs to increase the load on the drive wheels and improve traction (fig. 10).

Always assess the working conditions and take care on damp grounds or wet grass since the machine might slip. When going downhill, start off slowly and try not to drive over dry or cut grass because the wheels lose grip. Never use this machine on slopes of more than 12° (21%). If the wheels tend to slip, use the differential lock (fig.1 n.2).

SAFETY DEVICES

Remember that the engine stops whenever:

- the operator gets up from the seat, the parking brake is disengaged and the PTO is engaged.

In addition, the engine will not start if:

- the blades are engaged;
- the operator is not sitting in the driving seat and the parking brake is not engaged;
- the travel pedal is not in the stop position;

If you start off the machine with the parking brake engaged, the engine stops.

MAINTENANCE AND LUBRICATION

CAUTION!

- **Disconnect the plug before performing any cleaning, maintenance or repair operation. Always wear suitable clothing and working gloves.**

- **When the machine or part of it is lifted to carry out maintenance operations, always remember to use suitable fixing tools such as holders and safety locks.**

- **When carrying out maintenance operations and/or when the machine is tilted without safety locks or supports, never leave it unguarded in places where inexperienced people and children could have easy access to it.**

- **Protect the environment: carefully dispose of used oils, petrol and any other pollutant product!**

- **Effective maintenance and correct lubrication help to keep the machine fully efficient.**

ENGINE

For the lubrication intervals, follow the instructions provided in the engine handbook. For the INTEK 7220 professional series engine use SAE 30 oil (quantity 2,2 litres). Oil drain plug (fig. 11, A): Use a lock wrench in the fixed part. Oil filter (fig. 13, C); oil level (fig. 13, B). Before draining the oil insert a pipe and drain the oil into a tank. Remember to protect the belts, they must not come in contact with the oil. **The first precaution is to ensure that the engine is correctly serviced with the air filter, cooling fins and cylinder head clean and the oil at the correct level.** Check the air filter every 4 hours or even more often in very dusty environments (fig. 6). Check that the engine cooling intake grid is always clean (fig. 13, A).

HYDROSTATIC AXLE

Check the level when the engine is cold using the oil level inspection plug (fig. 14,A).

Often clean the hydraulic motor cooling fins and the fan especially in summer every 4 hours in very dusty environments (fig.17). Change the engine oil after the first 50 hours, and then every 200 hours: use engine oil 10W60 or oil 20W50 approx. quantity 6 litres. To replace the oil do as follows:

1. remove the two taps (fig. 15, A and B);
2. remove the frame on the left side (fig. 16) to find the oil tap in the tank.
3. remove the oil filter, clean it and replace it if necessary (fig. 12, A).
4. the tank is provided with a hydraulic filter which requires few maintenance (fig. 14, B).
5. screw the two taps (fig. 15)
6. fill with synthetic oil approx. quantity 6 litres and put the tap back (fig. 16).
7. carry out the bleeding: activate the by-pass lever (fig. 27) to allow the oil to drain from the main hydrostatic circuit. Remove the cap from the hydrostatic transmission to let the air out (fig. 19, A).
8. Start up the engine and wait a few seconds to check the oil level using the indicator level (fig. 14, A). **To replace the oil in the hydrostatic transmission it is recommended to contact an authorized Grillo dealer.**

REAR WHEEL AXLE

Grease the rear wheel pivot pins every 20 hours (fig. 41, A). Lubricate the steering joints.

DIFFERENTIAL LOCK

To activate the differential lock press the pedal (fig. 1, n.2). Regulate the control cable and lever so that the differential lock can be correctly engaged and disengaged (fig. 9). Releasing the pedal the differential lock must disengage. Do not use the differential lock when changing direction because the differential lock components could be strained.

SHARPENING THE BLADES

A blunt blade pulls at the grass, giving it an unsightly appearance. The cutting edges of both blades must therefore always be kept sharp and worn blades must be replaced. To carry out the sharpening of the blades remove the mower deck (fig. 26) then follow the instructions below:

- 1) **Regulate the mower deck in the lowest cutting position.**
- 2) Remove the protection guard above the deck by unscrewing the two screws (fig. 25).
- 3) Remove the pin (fig. 25, A).
- 4) Turn the lever anti-clockwise (fig. 25, B).
- 5) Remove the PTO belt (fig. 25,C).
- 6) Release the fork (fig. 31, B), pull the deck forward and set it vertical (fig. 26).

It is recommended to open the grass catcher and take off the charge channel (fig. 32).

Wear-out blades lose their cutting efficiency and tend to become unbalanced, causing the mower to vibrate. If the unbalance persists even after sharpening, check the balance by inserting a screwdriver in the hole in the centre of the blade and grind until the blade remains horizontal and therefore balanced. To remove a blade, take hold of it firmly, wearing safety gloves, and undo the central screw. (ATTENTION: the right blade screw has the left thread).

CAUTION!

Always replace damaged or worn-out blades; never attempt to repair them! **ALWAYS USE ORIGINAL BLADES!**

CAUTION!

In order to reassemble the cutting deck, you have to fit together the cutting deck lead (fig.23, A) with the one which is located on the machine, between the wheels, in the centre.

LUBRICATION POINTS WITH GREASE

Follow the lubrications points scheme (fig. 41, A and B). Lubricate with grease every 40 hours the rear axle joints, the pedals, the grass-catcher lifting arms...

ADJUSTING THE CUTTING DECK

A level deck is essential for a uniform cut over the whole lawn. With the mower on a flat surface, check that the tyre pressure is correct and check the float spring tension (fig. 10). If a satisfactory parallel set-up cannot be achieved, adjust the register (fig. 20, A). To adjust the mowing height, place two 25 mm shims at the sides under the edge of the deck and put the lever in the lowest position using the button on the dashboard. Use the screw (fig. 24, B). Before carrying out this procedure loose the two screws (fig. 24, A).

DRIVE BELTS – HYDROSTATIC AXLE

These belts are self-adjusting and therefore do not require any adjustment. Simply check the tension of the springs. To replace these belts, release both tension springs (fig. 22, B).

PTO BELT

Caution! This belt is special, use only original belts. To replace the PTO belt proceed as already explained for replacement of the hydrostatic transmission belt (spring: fig. 22, B):

- 1) Remove the protection guard above the deck by unscrewing the two screws (fig. 25).
- 2) Remove the pin (fig. 25, A)
- 3) Turn the lever anti-clockwise (fig. 25, B)
- 4) Remove the PTO belt (fig. 25, C)
- 5) When refitting the belt make it completely pass through the bulkhead of the hydrostatic axle (fig. 37).

The PTO belt does not need to be regulated because it is self-adjusting.

DECK BELT

This belt is a A-A double-section special belt, it allows the blades contra-rotation. The belt tension is self-adjusting thanks to the spring (fig. 34, A). The spring must have 130 mm length (coils length). To replace the cutting deck belt, please follow this procedure:

1. Remove the cutting deck protection guard by unscrewing the two screws.
2. Remove the pin (fig. 25, A)
3. Turn the lever anti-clockwise (fig. 25, B)
4. Remove the PTO belt (fig. 25, C)
5. Release the fork (fig. 31, B), pull the deck forward and set it into vertical position (fig. 26). It is recommended to open the grass-catcher and remove the load chute first (fig. 32).
6. Remove the pulley by unscrewing the central screw (fig. 25, E).
7. Take off the cutting deck protection frame loosening the screws (fig. 31, C).
8. Unhook the spring (fig. 34, A);
9. Take off and put on the belt again (fig. 34, B), following the schema.

USE ORIGINAL BELTS ONLY!

HYDRAULIC PUMP BELT

The hydraulic pump belt is self-adjusting (fig. 21). To replace this belt, unhook the spring (fig. 21, A) and unscrew the two screws that fix the pump support plate (fig. 21, B).

MAINTENANCE SUMMARY TABLE						
PROCEDURE		EVERY 8 HOURS	AFTER 20 HOURS	EVERY 50 HOURS	EVERY 100 HOURS	ONCE A YEAR OR EVERY 200 HOURS
Engine oil	check the level	•				
	change		•		•	
Air filter	check	•				
	replace				*	
Hydrostatic axle oil	check the level		•	•		
	replace			(first change) •		•
Spark plug	check/adjust				•	
Check that the engine intake grid is clean		•				
Check that the hydraulic engine cooling fins are clean		•				
Check that blades are well-sharpened and well-fixed		•				
Lubricate with grease			•	•		

• recommended procedure

* procedure to be carried out if necessary

TROUBLESHOOTING-GUIDE

PROBLEM		
CAUSE		REMEDY
With the key in the ON position, the instrument panel remains off		
– Battery not supplying any power		– Check the connecting cables – Charge the battery – Replace the fuse
The instrument panel comes on, but with the key in the ON position, the starter motor does not turn		
– Battery not supplying enough power		– Charge the battery
– Start-up not enabled		– Travel pedal in STOP position – Disengage the blades – Sit in the driving seat

Engine difficult to start or runs unevenly

- Carburettor problems
 - Clean or replace the air filter
 - Adjust the carburettor (refer to the motor handbook)
 - Sediment or dirt in the fuel
 - Empty the tank and use fresh petrol
 - Check the fuel filter and replace if necessary
-

The starter motor turns but the engine will not start

- No petrol flow
 - Check that the choke is on (if the engine is cold)
 - Check level in fuel tank
 - Check the fuel filter and replace if necessary
 - Check that the fuel vent hole is not blocked
 - Ignition system fault
 - Check that the spark plug cap is on properly
 - Check that the electrodes are clean and the gap is correct
-

Engine revs fall during mowing

- Travel speed too high for mowing height
 - Decrease speed
 - Raise the deck a few settings
-

When the blades are engaged, the engine cuts out

- Engagement not enabled
 - Check the blade engagement micro-switch
 - Operator must be seated in the driving seat;
-

Uneven cutting and poor collection

- Cutter deck not parallel with the ground
 - Check tyre pressures
 - Adjust the deck until parallel
 - Blades not cutting properly
 - Check that blades are fitted correctly
 - Sharpen or replace blades
 - Adjust the tension of the PTO belt
 - Travel speed too high for mowing height and lawn condition
 - If possible cut grass with lawn dry
 - Reduce travel speed
-

Vibration while working

- Blades not balanced
 - Balance the blades or replace if damaged
 - Loose screws chassis fixing
 - Check and tighten the blade, engine and screws
-

COLLISION WITH A STONE OR OTHER OBSTACLE

- Stop the machine.
- Switch off the engine, unhook the lawnmower and check that the blade has not been damaged. If so, replace it (fig. 26).

IMPORTANT

To move the machine with the engine off, use the lever (fig. 27).

MECHANICAL PARKING BRAKE

It is important to keep the cable (fig. 28, B) properly adjusted; when disengaged, the lever must be free and in the zero position. To engage the brake, move the lever (fig.3 n.7) to the "P" position. When the parking brake is engaged and the PTO is disengaged, it is possible to temporarily leave the driving seat without that the engine turns off. Caution: never leave the machine when the engine is on.

THE MACHINE DOES NOT REMAIN IN NEUTRAL

Adjust the flow of oil in the hydraulic motor using the register (fig. 18, A). Loosen the counter-nut and adjust the central screw until the machine stops properly. This operation must be carried out when the engine is cold. By raising the stroke of the hydrostatic axle lever using the lever connected to the pedal, the wheels power is augmented. These operations must however be carried out by a Grillo authorized dealer.

GRASS-CATCHER

The hydraulic cylinder that lift and tip the grass-catcher can be adjusted. Pay attention not to force the cylinders against the stroke buffers. The parallelogram rod is provided with left and right-hand threads. These can be adjusted to make the grass-catcher perfectly fit the load chute (fig.40, B). The two brackets that fix the load chute can be adjusted too (fig. 32, B). This operation must be carried out when the grass-catcher is closed. The tipping hydraulic cylinder can be adjusted so that the grass-catcher leans against the front stroke buffers. Pay attention not to force the cylinders against the stroke buffers: the cylinder must just touch the buffers.

ELECTRO-HYDRAULIC DISTRIBUTOR

The electro-hydraulic distributor (fig. 13, E) is made up of 3 components held together thanks to four rods and nuts whose tightening torque is 5 N/m. If this value is not respected, the electro-hydraulic distributor does not work.

ELECTRICS

The electrical system is protected by two fuses. The 16A fuse (fig. 2, n. 6) is located on the dashboard: if tripped, only the engine can be started. The other 25A fuse is located near to the electro-hydraulic distributor. If tripped, this fuse stops all the electric functions of the machine (fig. 29). **After identifying and repairing the fault**, replace the blown fuse with another of the same rating. **Never replace a fuse with one of different rating.** If the problems persist after the above procedures have been carried out, contact your Authorised Service Centre. Never attempt to carry out complex repairs if you do not have the necessary equipment and technical skills. If the engine or the battery are out of order, the grass-catcher can be opened manually: insert the key and seat on the driver's seat. In this way the hydraulic valve is relieved. Push the button to open the grass-catcher (fig. 5, n. 13) and open the grass-catcher manually. The battery is located under the grass-catcher in the rear part of the machine (fig. 33). If it is out of order, the battery can be removed and recharged.

FUNCTIONING OF THE MAIN ELECTRICAL COMPONENTS

- A safety sensor detects if the grass-catcher is in working position (fig. 13, F). Otherwise the blades do not engage.
- On the forward pedal there is a micro-switch that allows to start the machine only if the pedal is in stop position (fig. 30).
- A micro-switch is located on the parking brake (fig. 28, A) that detects when the brake is engaged and allows the engine to stay on even if the operator is not seated. This micro-switch also switches off the engine if the forward pedal is pressed when the parking brake is engaged.
- On the electromagnetic clutch (fig. 12, B) there is a diode that prevents back current.
- A sensor is located in the grass-catcher that disengages the blades when the grass-catcher is full (fig. 38, A).
- Inside the steering column there are an electronic control unit (fig. 36) that controls all the electric functions of the machine (e.g. PTO, safety micro-switches...) and a relay that controls the electric buttons (fig. 35).

FINISHING WORK

When you finish mowing, disengage the blades. To stop the machine release the forward pedal (fig. 1 n. 1), set the throttle lever to the minimum and turn off the engine by turning the key into STOP position (fig. 4, n. 15). Engage the parking brake (fig. 3, n. 7).

CLEANING

Internal cutting deck washing: this operation must be done on a solid floor. You have to connect a water pipe in the proper joint (fig.31, A) and let the water flow in for a few minutes:

- the driver must be seated at the driver's seat.
- the engine must be in motion;
- the gearbox must be in neutral gear;
- the blades must be engaged.

During the cutting deck washing, the cutting deck must be set in the lowest position.

Never use a high-pressure water cleaner to wash out the engine compartment: use compressed air or a vacuum cleaner.

LOAD CHUTE

Remove the load chute by pulling it toward high (fig. 32), after having opened the grass catcher.

TOW BAR

It is used to connect a small driven trailer or a roller for sport grounds (fig. 33, B). Max. towable mass: 130 kg. Use the machine at low speed and always pay maximum attention.

MULCHING KIT

Assembly Instructions

- Remove and keep the two existing blades. Caution: the right blade screw has a left-hand thread.
- Fix the two mulching blades A and B (fig. 43) using the same nuts, bolts and spacers C provided with the mulching kit (fig. 44).
- Set the black mulching plate D (fig. 43) on the mower's deck load chute. It must completely fit to the end of the load chute and it must be well aligned with the blade's rotation axle.
- Fix the black mulching plate D on the upper part of the mower deck using the arm E, the bracket, the washer and the nut (fig. 45).

HOW TO MULCH: TIPS AND GUIDELINES

- Always try to mow dry grass wherever it's possible to get a perfect mulching.
- If wet grass is mowed, raise the cutting deck to maximise air flow through the deck.
- Periodically re-mow areas that have already been cut to spread cut grass evenly over the lawn.
- When mowing is finished, continue back over the cut lawn to ensure that all grass is discharged from inside the mower deck.

- **IMPORTANT: always remember to use the one-third rule.** Never cut more than one-third of the total length of the grass at a time.
- Mulching can sometimes require making two cuts.
- Decrease the speed over the ground to avoid putting too much strain on the mower deck and always cut with blades at full speed.
- The blades must always be well-sharpened. Replace blades that can no longer be sharpened.

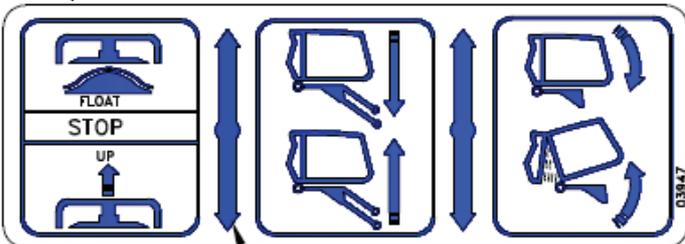
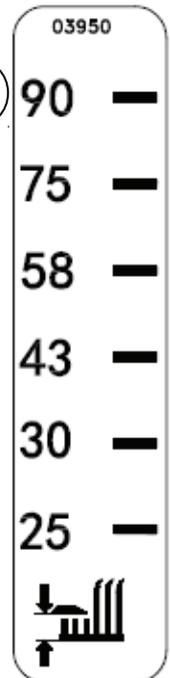
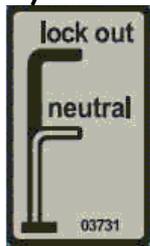
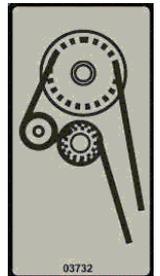
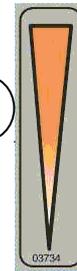
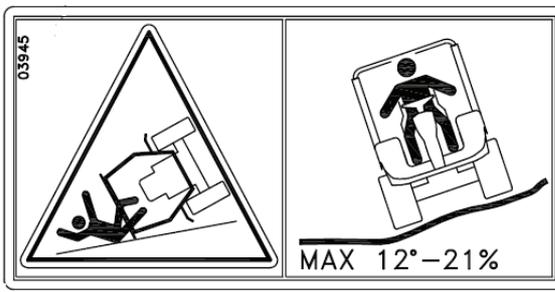
LONG PERIODS OF STORAGE

The machine should be stored in a dry place protected from the weather; cover it with a sheet of canvas if possible. If it is to be out of use for more than 1 month, disconnect the negative battery lead and follow the instructions in the engine handbook; also lubricate all the joints. Check the battery voltage periodically, ensuring that it does not drop below 12 Volts. If this occurs, charge the battery.

If the machine is to be out of use for more than 30 days (models with petrol engine), drain the fuel from the engine to prevent sticky deposits from forming in the fuel intake system or in vital parts of carburettor. To avoid this procedure, it is possible to save fuel in storage up to 12 months by using an appropriate fuel stabilizer. Add such additive to the fuel in the tank or in the fuel container. Run the engine for a while to let the stabilizer get into the fuel system. **Caution:** if the engine is fed with petrol containing alcohol, drain the fuel tank and run the engine until there is no fuel left.

TRANSPORTING THE MACHINE

If the machine has to be transported on a lorry or a trailer, engage the parking brake and fasten it to the vehicle using ropes or cables. To lift the machine tie the ropes into the points indicated by the arrows (fig. 42). Check that cranes, ropes and pulleys are sufficiently strong and stable to lift the machine. The machine's total weight is 385 Kg.



LEGEND – LEGENDA – LEGENDE – ZEICHNUNGERKLÄRUNG – LEYENDA

1- Cutting deck lifting button – grass-catcher lifting button – grass-catcher tilting button

2- **CAUTION, DANGER:** Read the instructions manual. Take off the key and read the instructions before carrying out any maintenance or repair operations. **CAUTION, TURNING GEARS:** Keep your hands and feet away and make sure there are no moving parts, not even by force of inertia.

3- **DANGER, MACHINE ROLL-OVER:** do not use this machine on slopes steeper than 12° (21%).

4- **CAUTION, CUTTING ELEMENTS:** Keep your hands and feet away. Do not work with the machine over gravel or other foreign objects that could be thrown away by the blades, being therefore very dangerous. Keep people at a minimum safety distance of 15 metres.

5- Parking brake

6- Noise level.

7- Accelerator (min.-max).

8- Belt assembling scheme

9- Differential lock

10- Cutting height adjustment

11- Hydrostatic transmission bypass lever

1- Pulsante sollevamento piatto – pulsante sollevamento cesto – pulsante ribaltamento cesto.

2- **ATTENZIONE, PERICOLO:** Leggere il manuale di istruzioni. Togliere la chiave e leggere le istruzioni prima di effettuare qualsiasi operazione di manutenzione e riparazione. **ATTENZIONE, ORGANO ROTANTE:** tenere lontano le mani e assicurarsi che non ci siano parti in movimento, neanche per inerzia.

3- **PERICOLO RIBALTAMENTO MACCHINA:** Non usare la macchina su pendii superiori a 12° (21%).

4- **ATTENZIONE, ORGANO TAGLIANTE:** Tenere lontano mani e piedi. Non lavorare con la macchina sopra ghiaia o altri corpi estranei che potrebbero essere scagliati lontano dalle lame risultando così molto pericolosi. Tenere le persone ad una distanza minima di sicurezza di 15 metri.

5- Freno di stazionamento.

6- Livello sonoro

7- Acceleratore min./max.

8- Schema di montaggio cinghia

9- Bloccaggio differenziale

10- Regolazione altezza di taglio

11- Leva by-pass trasmissione idrostatica.

1- Bouton relevage plateau de coupe – bouton relevage du bac -

2- **ATTENTION, DANGER:** Lire la notice d'utilisation. Enlever la clé de démarrage et lire les instructions avant d'effectuer toute opération de maintenance et de réparation. **ATTENTION, DANGER: ORGANE EN ROTATION.** Tenir à distance les mains et veiller à ce qu'aucune partie n'est en mouvement, même pas par inertie.

3- **DANGER RENVERSEMENT DE LA MACHINE:** ne pas utiliser cette machine dans des pentes supérieures à 12° (21%).

4- **ATTENTION, ORGAN TRANCHANT:** Tenir à distance mains et pieds. Ne pas travailler avec la tondeuse sur le gravier ou d'autres corps étrangers qui pourraient être projetés par les lames et devenir très dangereux. Maintenir les personnes à une distance minimale de 15 mètres.

5- Frein de stationnement.

6- Niveau sonore.

7- Accélérateur min-max.

8- Schéma montage courroie.

9- Blocage différentiel.

10- Réglage hauteur de coupe.

11- Levier by-pass boîte hydrostatique.

1- Druckknopf zum Anheben des Mähwerks – Druckknopf zum Anheben des Grasfangkorbs – Druckknopf zum Kippen des Grasfangkorbs.

2- **VORSICHT, GEFAHR:** Die Gebrauchsanleitung durchlesen. Den Schlüssel abziehen und die Anleitungen lesen, bevor Sie jegliche Wartungsoperationen und Reparaturen durchführen. **VORSICHT, DREHENDES TEIL:** Hände und Füße fernhalten und sicherstellen, dass sich keine Teile bewegen, auch nicht durch Trägheit.

3- **GEFAHR, UMKIPPEN DER MASCHINE:** Diese Maschine nicht auf Hängen einsetzen, die steiler als 12° (21%) sind.

4- **VORSICHT, SCHNEIDENDES TEIL:** Hände und Füße immer fernhalten. Mit dem Rasenmäher nicht auf Kies oder anderen Fremdkörpern arbeiten, diese könnten weggeschleudert werden und deswegen sehr gefährlich werden. Personen müssen einen Abstand von mindestens 15 Metern halten.

5- Feststellbremse.

6- Geräuschpegel.

7- Beschleuniger min-max.

8- Montage des Riemens.

9- Differentialsperre.

10- Schnitthöheeinstellung.

11- By-Pass-Hebel der hydrostatischen Achse.

1- Pulsador elevación del plato – pulsador elevación del cesto – pulsador vuelco del cesto.

2- **ATENCION, PELIGRO:** Leer el manual de instrucciones. Quitar la llave y leer las instrucciones antes de efectuar cualquier operación de manutención y reparación. **ATENCION, PELIGRO: ORGANO EN ROTACION.** Mantener las manos alejadas y verificar que ninguna parte está en movimiento, ni siquiera por inercia.

3- **PELIGRO: VOLCADO DE LA MAQUINA.** No utilizar esta máquina en pendientes superiores a 12° (21%).

4- **ATENCION, ORGANO CORTANTE:** mantener las manos y los pies alejados. No trabajar con el cortacesped sobre la grava u otros objetos que pueden ser centrifugados por las cuchillas y resultar muy peligrosos. Mantener las personas a una distancia mínima de 15 metros.

5- Freno de estacionamiento.

6- Nivel de ruido.

7- Acelerador min-max.

8- Esquema montaje correa.

9- Bloqueo diferencial.

10- Reglaje altura de corte.

11- Palanca by-pass transmisión hidrostática.

DESCRIZIONE COMANDI – DESCRIPTION OF CONTROLS – DESCRIPTION COMMANDES – BEDIENUNGSBESCHREIBUNG – DESCRIPCIÓN MANDOS

FIG. 1 -2 -3- 4- 5

- 1- Pedale avanzamento e retromarcia
- 2- Pedale bloccaggio differenziale
- 3- Pulsante inserimento PTO
- 4- Pulsante regolazione altezza di taglio
- 5- Contaore
- 6- Fusibile
- 7- Leva freno di parcheggio
- 8- Leva acceleratore
- 9- Leva starter
- 10- Leve regolazione sedile
- 11- Pulsante sollevamento piatto
- 12- Pulsante sollevamento cesto
- 13- Pulsante ribaltamento cesto
- 14- Tappo e livello carburante
- 15- Chiave di avviamento, arresto motore e accensione faro anteriore

- 1- Pédale marche avant et marche arrière
- 2- Pédale blocage différentiel
- 3- Interrupteur prise de force
- 4- Interrupteur réglage hauteur de coupe
- 5- Compteur
- 6- Fusible
- 7- Levier frein du parking
- 8- Levier accélérateur
- 9- Levier starter
- 10- Leviers réglage siège
- 11- Interrupteur relevage plateau de coupe
- 12- Interrupteur relevage bac de ramassage
- 13- Interrupteur basculement bac de ramassage
- 14- Tapon et niveau huile
- 15- Clé de démarrage et arrêt moteur, clé d'allumage feu avant.

- 1 - Pedal avance y marcha atrás
- 2 - Pedal bloqueo diferencial
- 3 - Pulsador embrague PTO
- 4 - Pulsador regulación altura de corte
- 5 - Cuenta-horas
- 6 - Fusible
- 7 - Palanca freno de estacionamiento
- 8 - Palanca acelerador
- 9 - Palanca estárter
- 10 - Palancas regulación asiento
- 11 - Pulsador levantamiento plato
- 12 - Pulsador levantamiento cesto
- 13 - Pulsador descarga cesto
- 14 - Tapón y nivel carburante
- 15 - Llave de arranque y paro motor, encendido faro delantero

- 1- Forward and reverse pedal
- 2- Differential lock pedal
- 3- P.T.O. engaging switch
- 4- Cutting height adjustment switch
- 5- Counter
- 6- Fuse
- 7- Parking brake lever
- 8- Throttle lever
- 9- Starter lever
- 10- Seat adjusting levers
- 11- Lifting cutting deck switch
- 12- Lifting grass-catcher switch
- 13- Tilting grass-catcher switch
- 14- Fuel cap and level
- 15- Ignition key/ Key to switch off the engine and switch on the front-light.

- 1- Vorwärts-und Rückwärtspedal
- 2- Differentialsperrepedal
- 3- Zapfwelleschalter
- 4- Schalter zur Schnitthöheinstellung
- 5- Stundenzähler
- 6- Schmelzsicherung
- 7- Handbremshebel
- 8- Gashebel
- 9- Anlasser-Hebel
- 10- Hebel zur Sitzeinstellung
- 11- Druckknopf zur Hebung des Mähdecks
- 12- Druckknopf zur Hebung des Grasfangkorbs
- 13- Druckknopf zum Kippen des Grasfangkorbs
- 14- Kraftstoffdeckel und Kraftstoffniveau
- 15- Zündschlüssel – Schlüssel zur Zündung des Frontlichtes

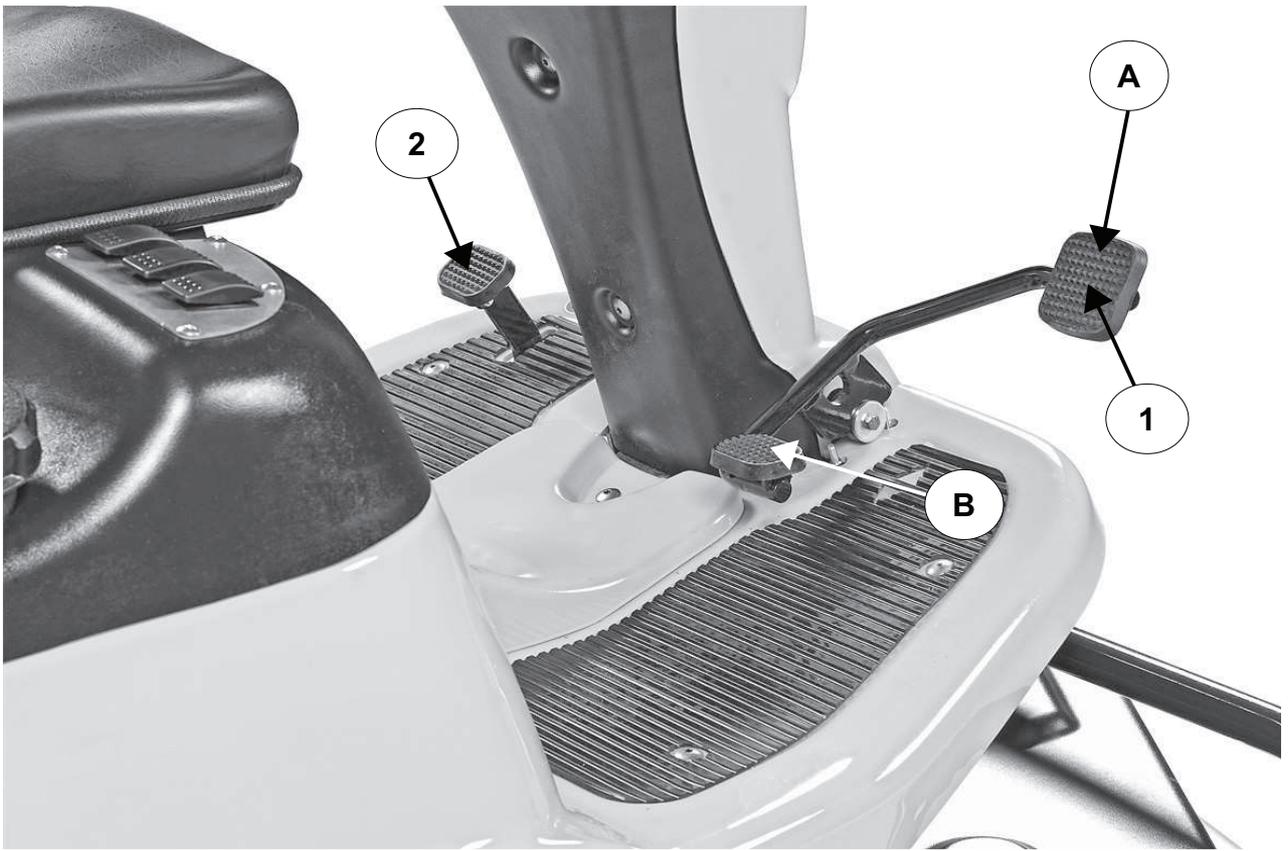


Fig. 1

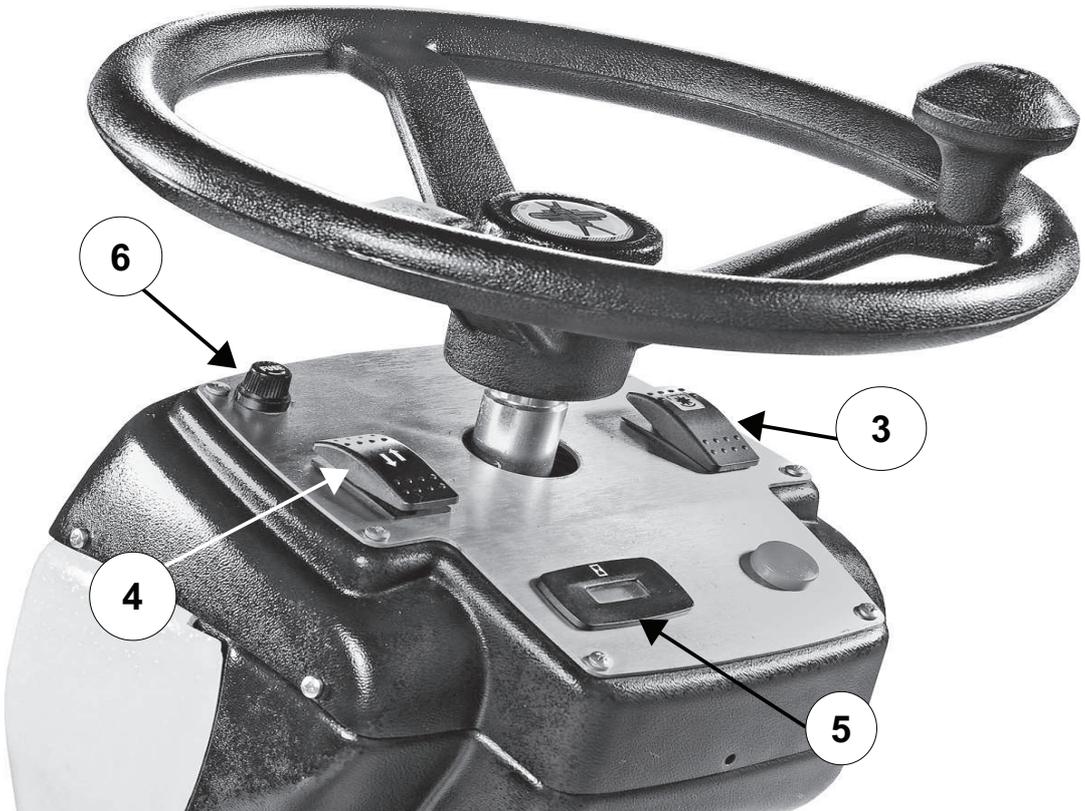


Fig. 2

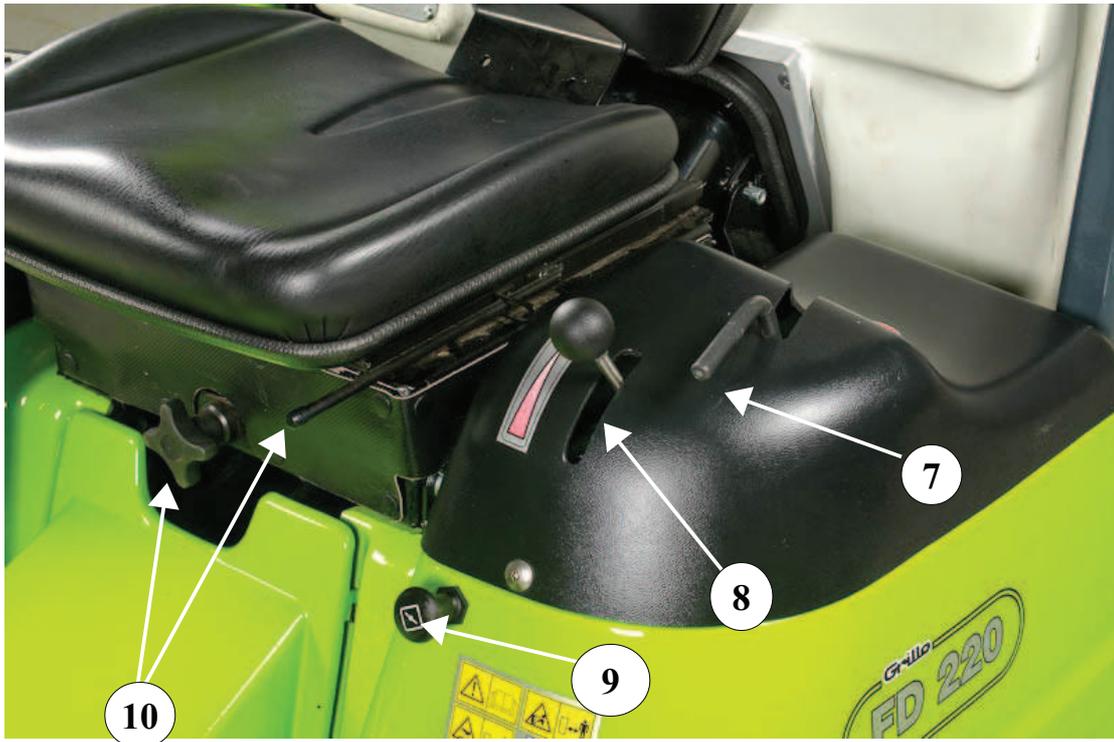


Fig. 3

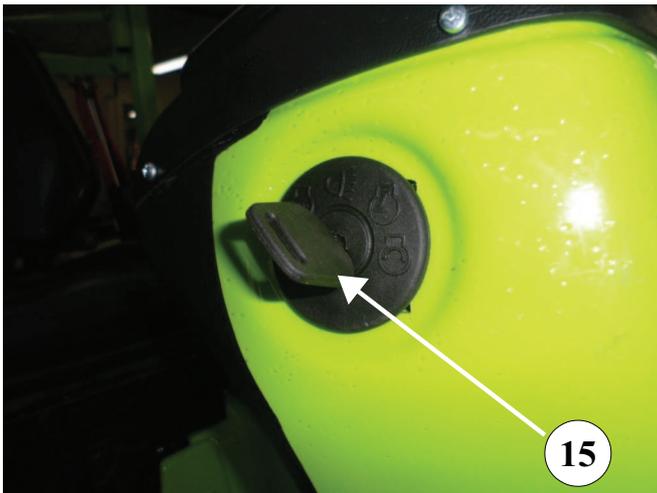


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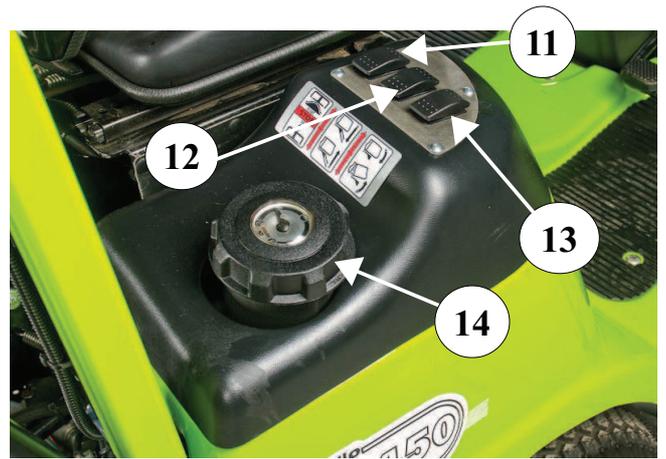


Fig. 5

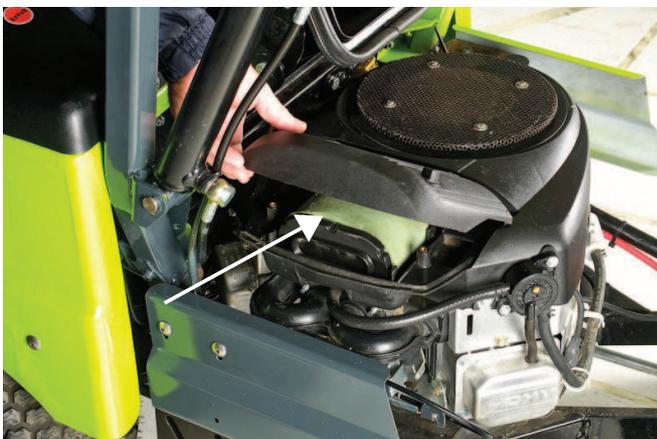


Fig. 6

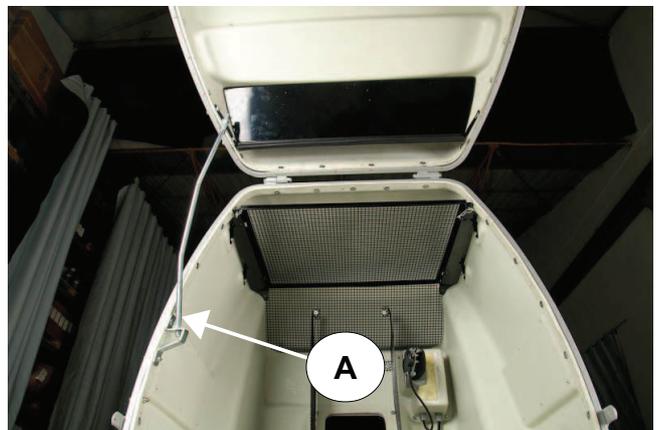


Fig. 7



Fig. 7A

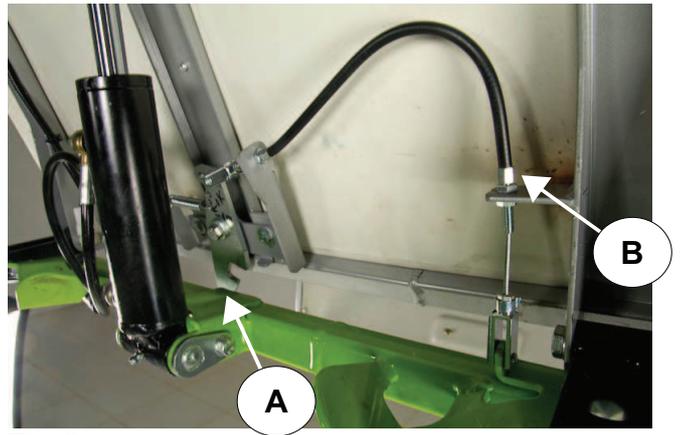


Fig. 8

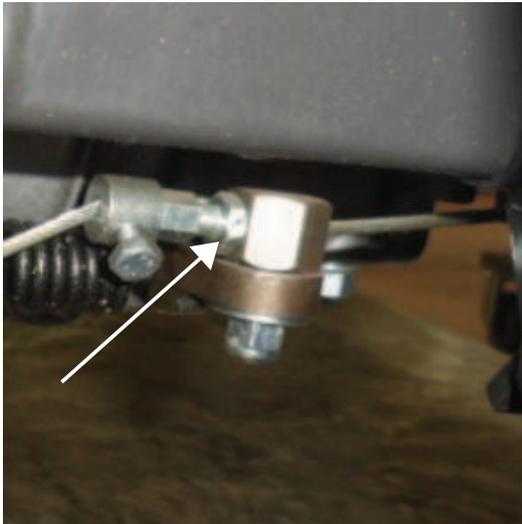


Fig. 9

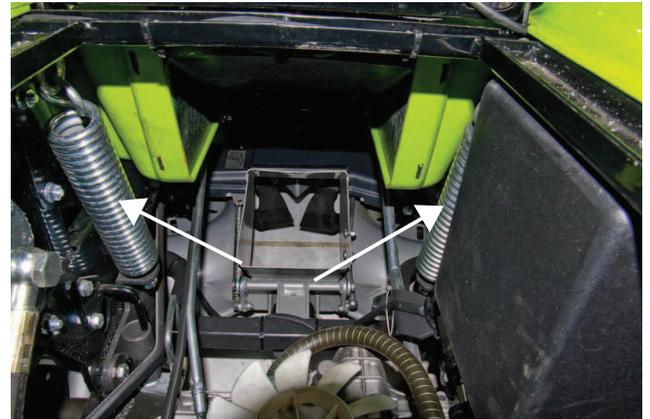


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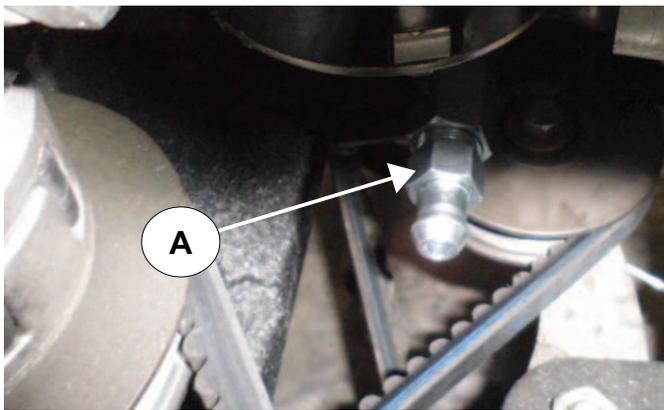


Fig. 11

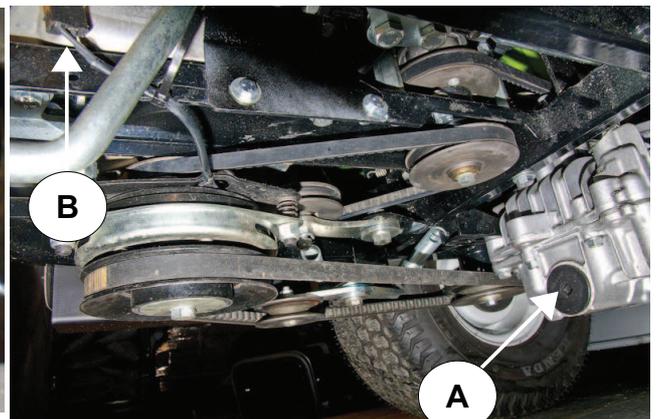


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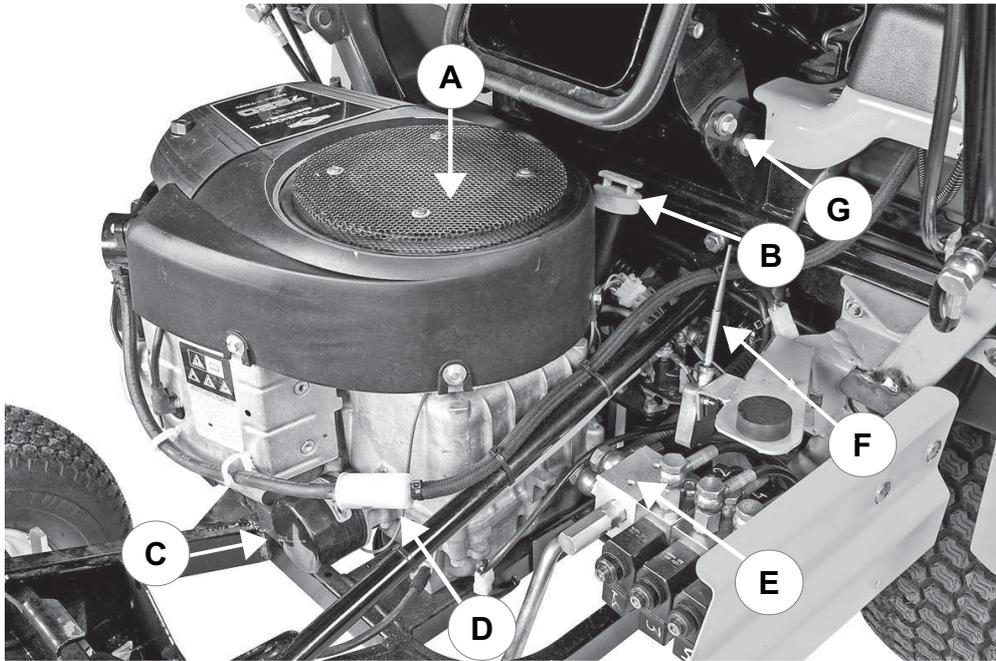


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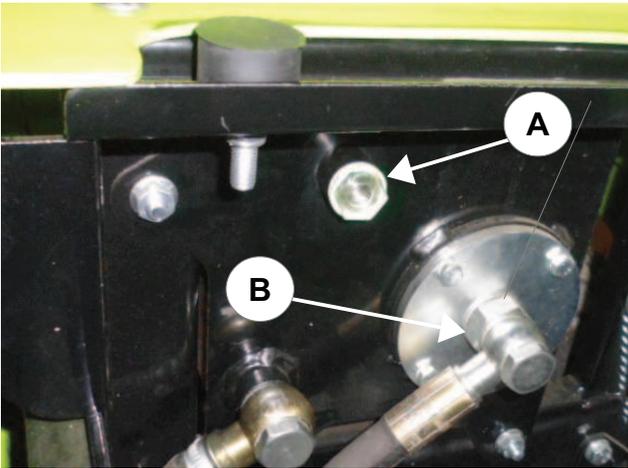


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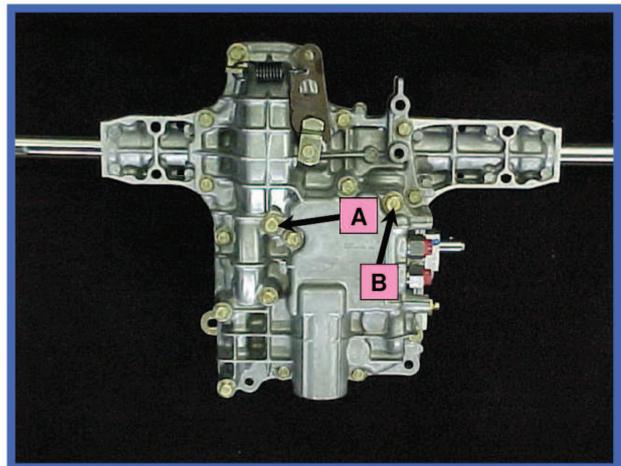


Fig. 15

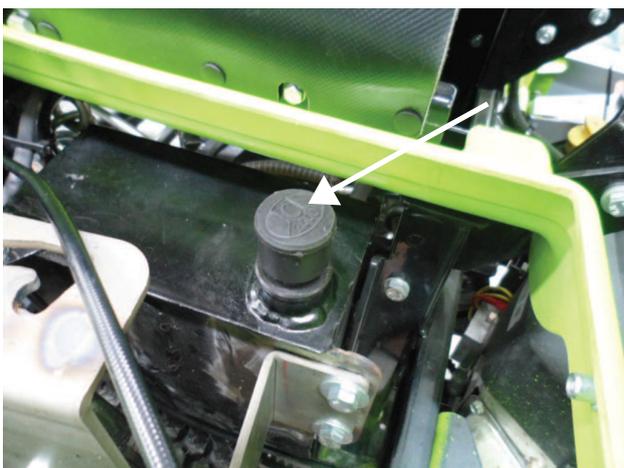


Fig. 16



Fig. 17

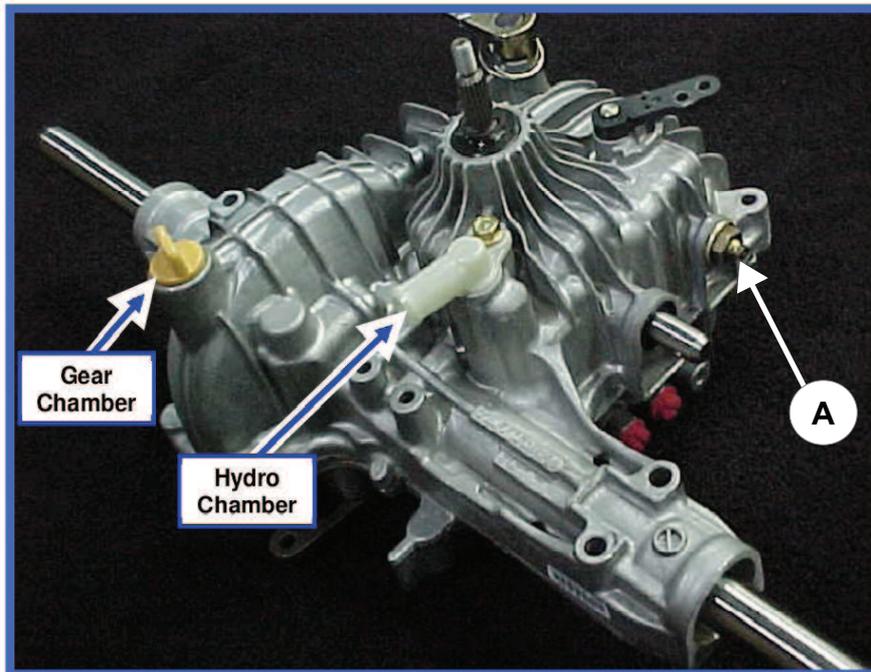


Fig. 18

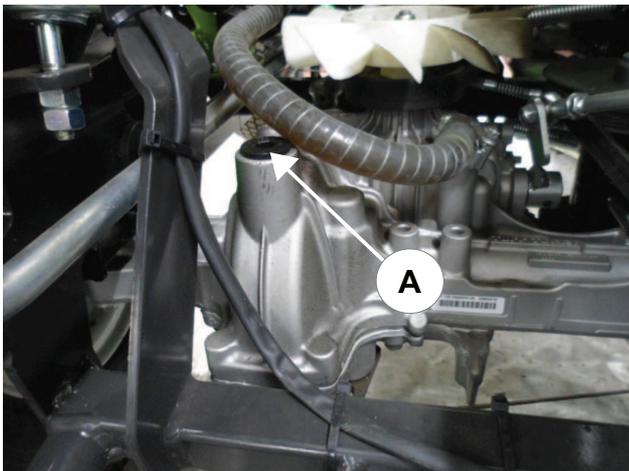


Fig. 19

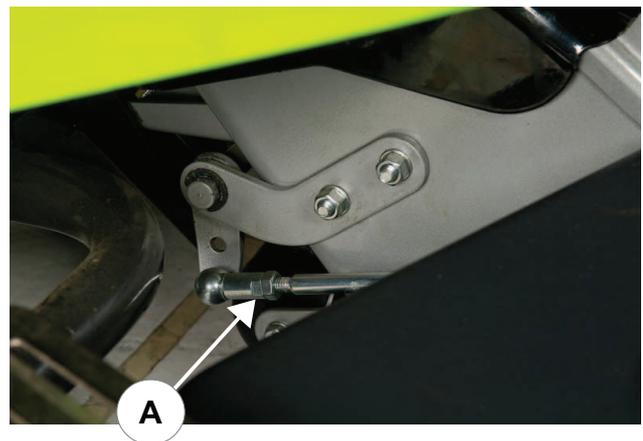


Fig. 20

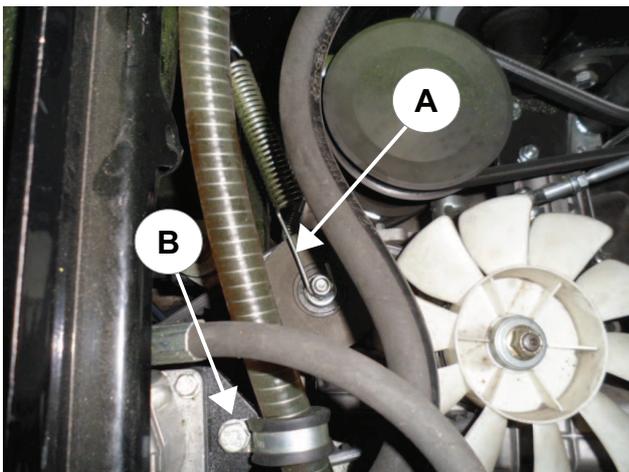


Fig. 21

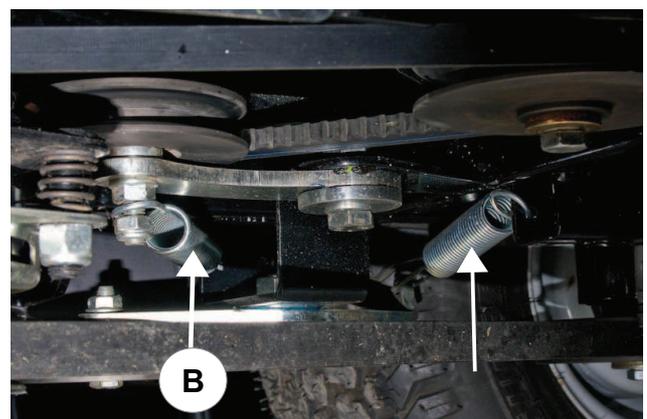


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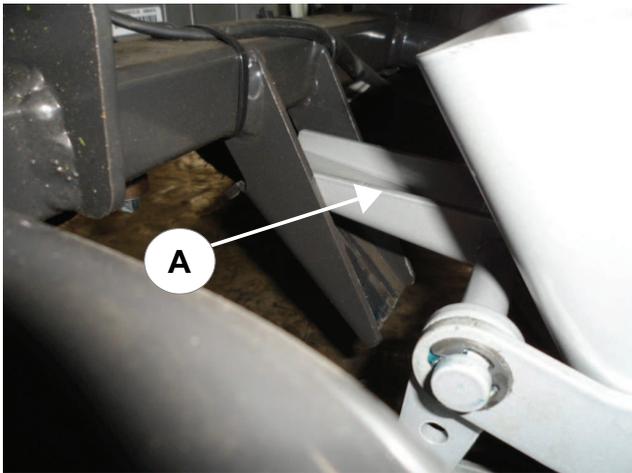


Fig. 23

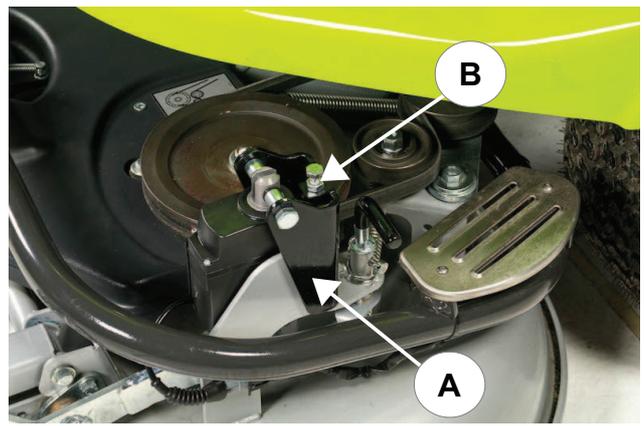


Fig. 24

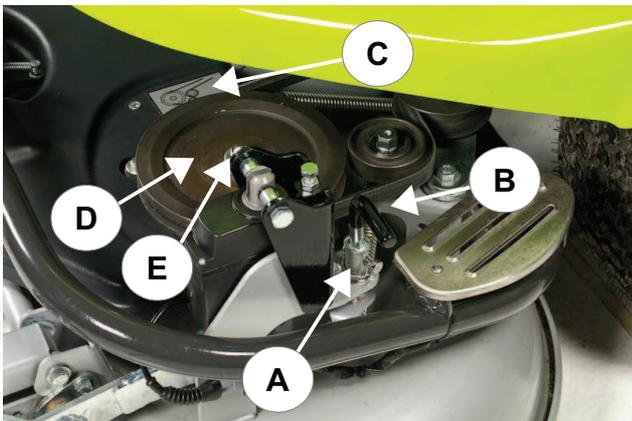


Fig. 25



Fig. 26

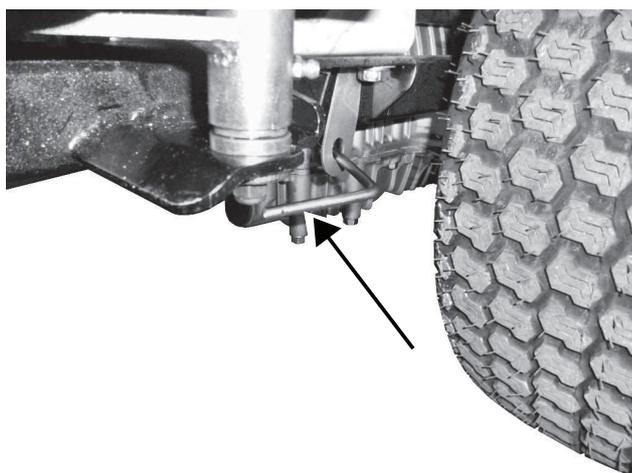


Fig. 27



Fig. 28A

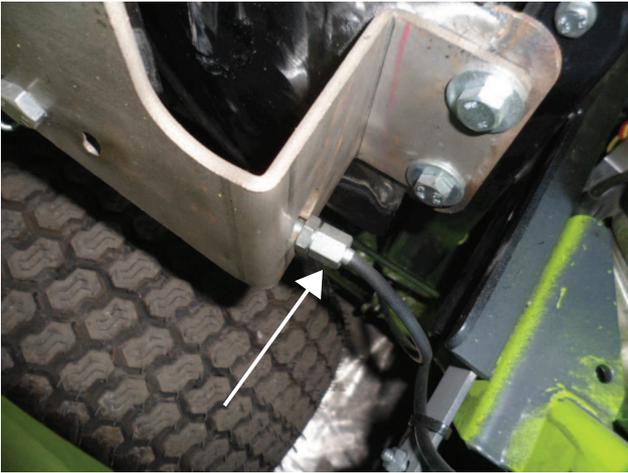


Fig. 28 B

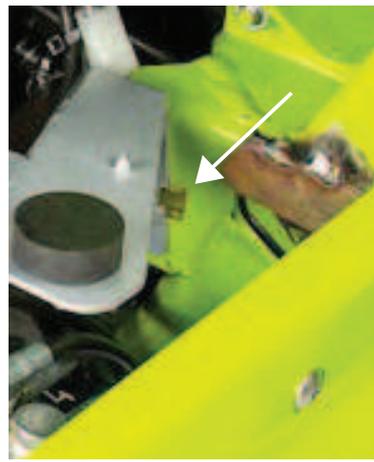


Fig. 29

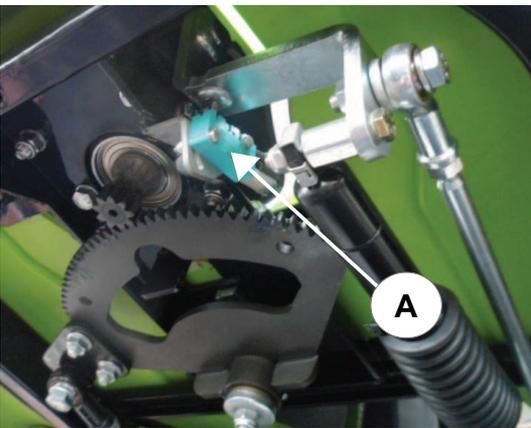


Fig. 30

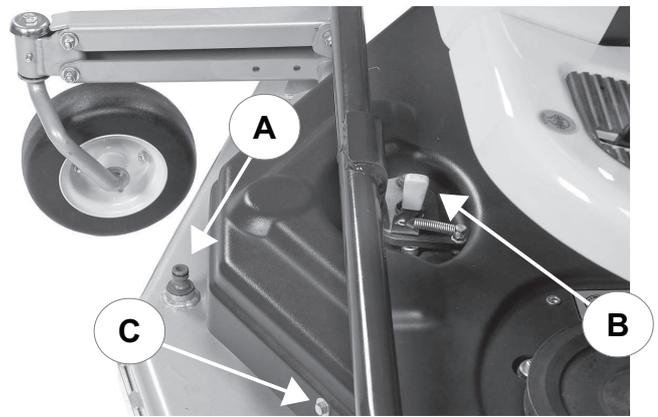


Fig. 31

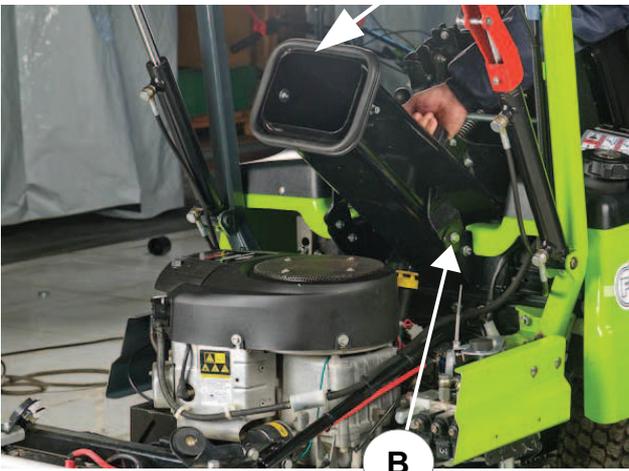


Fig. 32

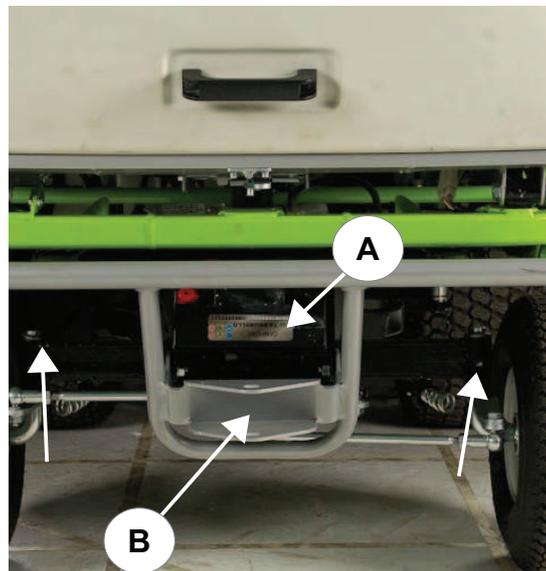


Fig. 33

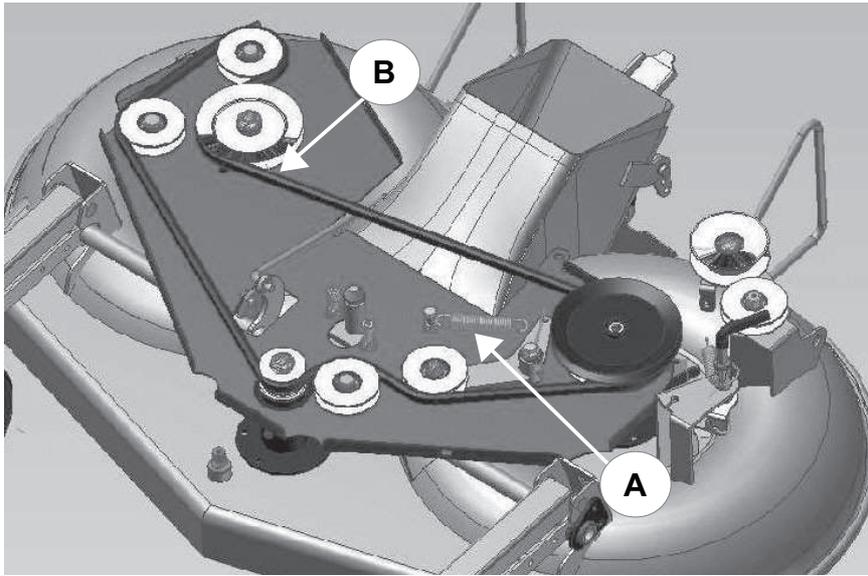


Fig. 34

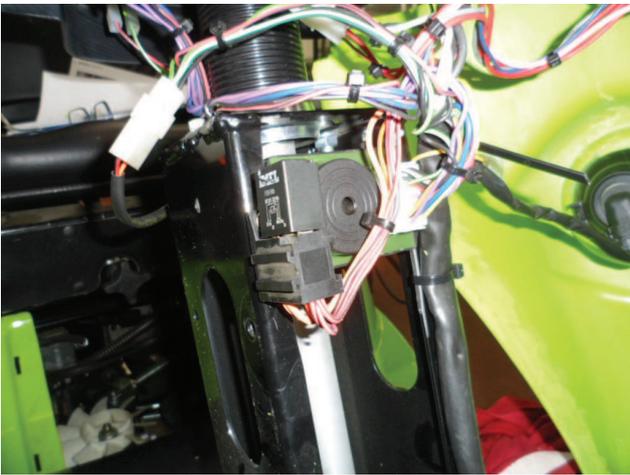


Fig. 35



Fig. 36

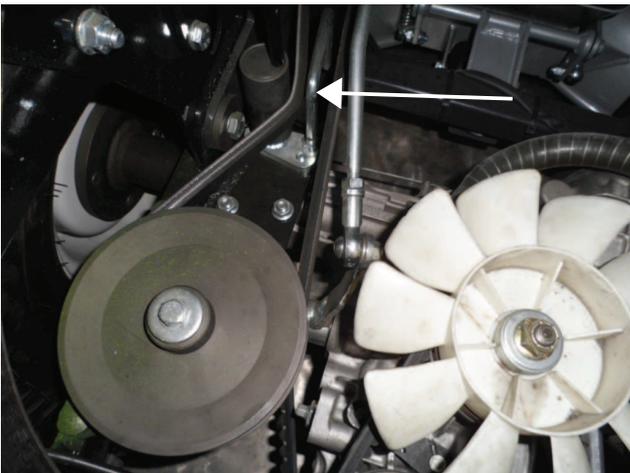


Fig. 37

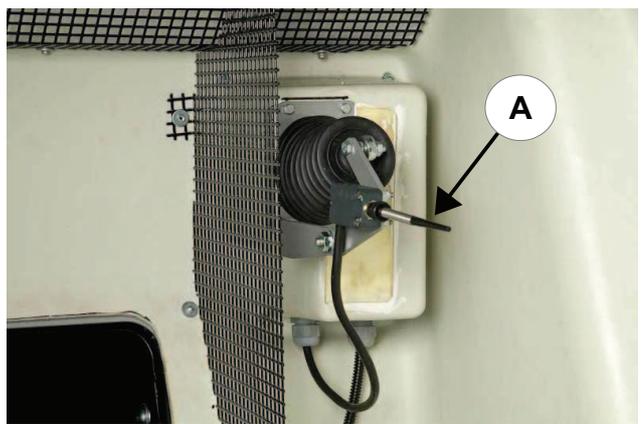


Fig. 38

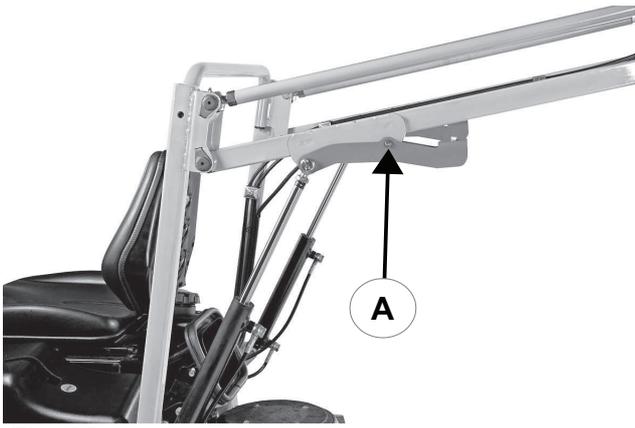


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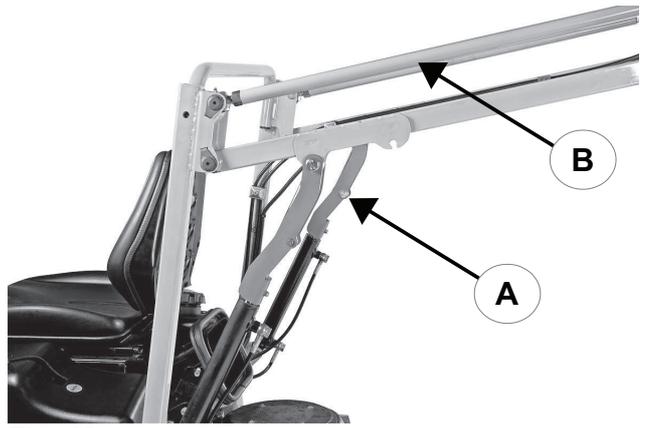


Fig. 40

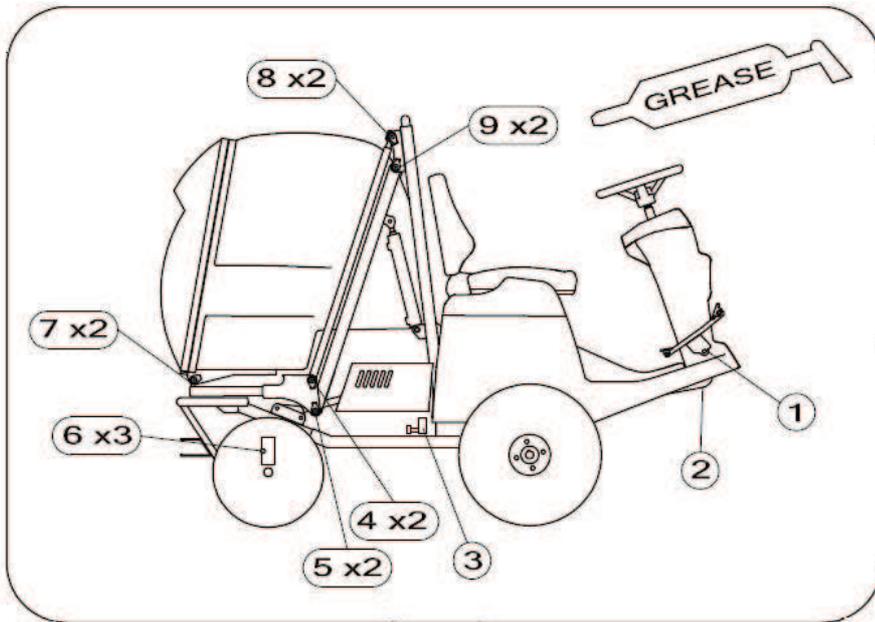


Fig. 41A

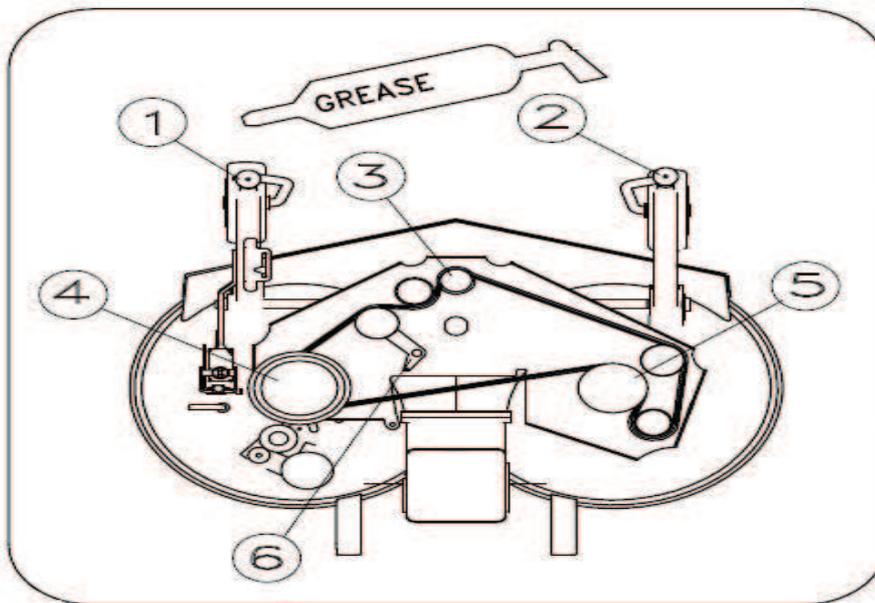


Fig. 41B



Fig. 42

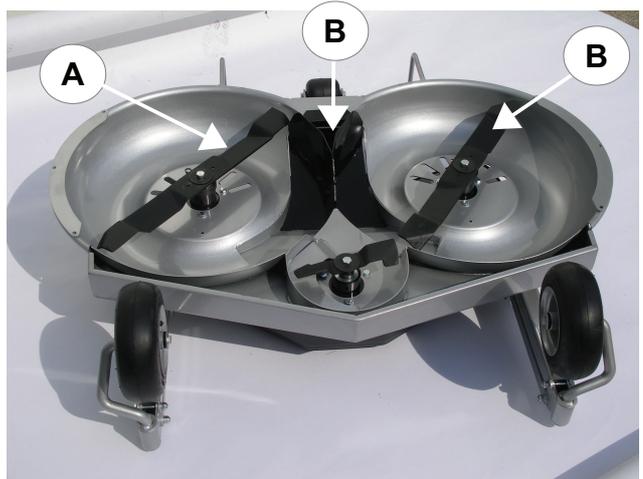


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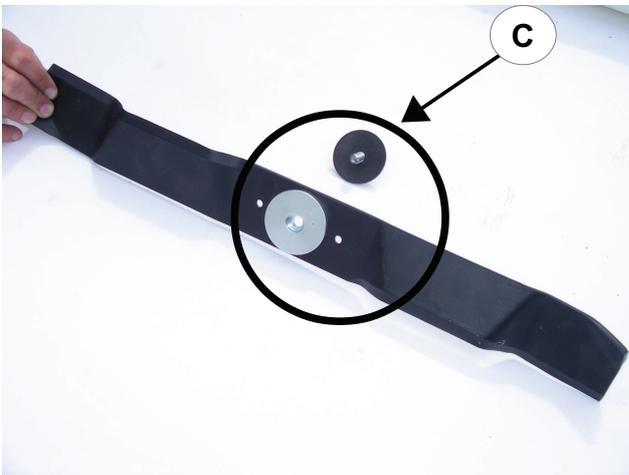


Fig. 44

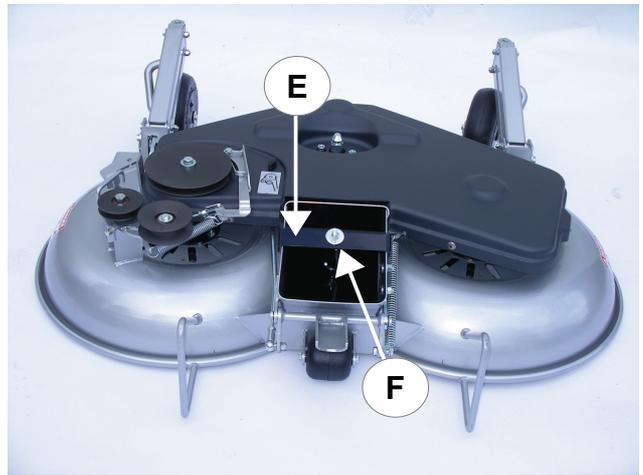


Fig. 45

EC DECLARATION OF CONFORMITY / DICHIARAZIONE DI CONFORMITÀ CE / CERTIFICAT DE CONFORMITE CE / EG-KONFORMITÄTSEKTLÄRUNG / CERTIFICADO DE CONFORMIDAD CE / DECLARAÇÃO CE DE CONFORMIDADE

(2006/42/CE, II.A)

The undersigned / Io sottoscritto / Je soussigné / Der Unterzeichner / Yo suscrito / Eu abaixo assinado:

Ing. Andrea Pinza

Authorized officer of / In qualità di legale rappresentante della / En qualité de représentant légal de la / Als rechtlicher Vertreter der / En calidad de legal representante de la / Na qualidade de representante legal da

GRILLO SPA – Via Cervese, 1701 – 47521 CESENA (FC) – ITALY

Hereby certifies that the underwritten machinery / Dichiaro che la macchina sotto indicata / Certifie que la machine indiquée ci-dessous / Bescheinigt, dass die untenstehende Maschine / Certifico que la máquina indicada a continuación / Certifica que a máquina abaixo indicada:	Authorized person to compile the relevant technical documentation / Persona autorizzata alla compilazione del fascicolo tecnico / Personne autorisée à constituer le dossier technique / Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen / Persona facultada para elaborar el expediente técnico / Pessoa autorizada a compilar a documentação técnica relevante:
---	--

Lawn mower / Rasaerba / Tondeuse / Rasenmäher / Cortacésped / Cortadora de relva	Ilario Rubaconti Grillo Spa Via Cervese, 1701 – 47521 CESENA (FC) – ITALY
--	--

Machine model / Maccina tipo / Machine type / Maschine Typ / Máquina tipo : FD450
Serial n° / Numero / Numéro / Nummer / Número :
Engine / Motore / Moteur / Motor / Motor : BRIGG&STRATTON INTEK 7220 PROFESSIONAL

Is in compliance with the relevant provisions of the Directive / Rispetta le disposizioni pertinenti della Direttiva / Satisfait à l'ensemble des dispositions pertinentes de la Directive / Entspricht allen einschlägigen Bestimmungen dieser Richtlinie / Cumple todas las disposiciones aplicables de la presente Directiva / Está em conformidade com as disposições relevantes da Directiva

2006/42/CE

And it is in conformity with the relevant provisions of the following EC Directives: / Inoltre essa è conforme alle disposizioni pertinenti delle seguenti direttive comunitarie: / Et elle est conforme aux dispositions pertinentes des suivantes directives communautaires: / Und stimmt mit den einschlägigen Bestimmungen folgender gemeinschaftlicher Richtlinien überein: / Y es conforme con las disposiciones pertinentes de las siguientes directivas comunitarias / E está em conformidade com as disposições relevantes das directivas comunitarias:

EN1553 – EN836

CESENA, _____



NOISE LEVELS: LWA 99- LpA 86,5 dBA, with 113cm cutting deck, at 3300 rpm engine speed.
RUMOROSITÀ: LWA 99- LpA 86,5 dBA, con piatto di taglio 113 cm e motore a 3300 giri/min.
NIVEAUX SONORES: LWA 99 - LpA 86,5 dBA, avec plateau de coupe 113 cm et régime moteur de 3300 tr/min.
GERÄUSCHEMISSION: LWA 99 - LpA 86,5 dBA, mit 113 cm Mähwerk und Motordrehzahl 3300 UpM.
NIVELES DE RUIDO: LWA 99 - LpA 86,5 dBA, con plato de corte de 113 cm y motor a 3300 rpm.

VIBRAZIONI VIBRATION SCHWINGUNG VIBRACIONES m/s ²		
X	1,19	0,23
Y	1,31	0,22
Z	1,84	0,26



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