

VARI®

Mulcher *Hurricane F-530*



Instructions for use
2007

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1 Basic information.

⚠ **Ask your dealer to provide the machine unpackaging and the briefing.**

Fill in the following data concerning your machine. The data are important for ordering spare parts.

It is advised to have a copy of this page with all data on the machine purchase for the case of loss or theft of the original record.

Type	F-530
Commercial name	<i>Hurricane</i>
Engine model	HONDA GCV160
Machine serial No. / Year of manufacture	/
Engine serial No.	
Date of delivery (sale)	
Supplier	
Address	
Phone/Fax/E-Mail/Internet	

Your notes:

Manufacturer **reserves** the right of technical modifications and machine innovations that do not impact the machine function and operation safety. The changes need not be included in this Manual.

2 Foreword.

Dear customer and user!

Thank you for trusting our products. You have become owner of machine from a wide range of machines and attachments made by **VARI**, a.s. as a system of gardening, farming, small agricultural and communal machinery.

The mulcher **Hurricane F-530** (from the year of manufacture of 2006) is a follow-up to the previous generation of the machine, very popular on the market thanks to its very easy operation, silent, high performing and fuel-saving engine HONDA. This new model of the mulcher retains all these features and at the same time improves the quality and performance of cutting as well as the lifetime. The main change is a modified shape of the blade cover. It ensures better crushing of the stand and its improved discharge from the blade cover space, together with new, improved shape of the blade. The slide shoe was replaced by a simple leading wheel. Thanks to the leading wheel it is easier to control the machine. The gearbox with reduced travel speed, together with the above-mentioned changes, ensure better passability through the stand and better utilization of the engine power.

Please read the Instructions for use carefully. If you follow them properly, you will have our product performing a reliable work for you for years.

2.1 General warnings.

The user is **obliged** to get acquainted with the Instructions for use and to follow all instructions for the machine operation so that the user's and other persons' health and property cannot suffer any harm.

Safety instructions contained in this manual do not describe all situations or conditions possibly occurring in practical use. Safety factors such as common sense, diligence and scrupulousness are not included; it is assumed, however, that all persons authorized for the machine operation or maintenance do possess them.

The machine can be operated only by persons in good mental and physical condition. For the professional use of the machine the machine owner is obliged to ensure a work safety training and provide instructions on machine control for operators and to keep records on these trainings and briefings. **Also, he is obliged to carry out a so-called categorization of works according to the relevant national legislation.**

Should some instructions in the manual be unintelligible, you are encouraged to contact **your dealer** or directly the manufacturer of the machine. The contact address and telephone/fax connection are to be found at the end of this manual.

The manuals of Instructions for use supplied with the machine are an integral part of the machine. They have to be available at any time, placed at a well accessible place with no risk of their damage. In the case that the machine is sold to another person, the Instructions for use must be given to the new machine owner. If the above conditions are not met, the manufacturer bears no responsibility for possible risks, accidents and injuries resulting from the machine operation.

The manufacturer bears no responsibility for damages caused by unauthorized and incorrect use of the machine and for damages caused by any machine modifications not authorized by the manufacturer.

To prevent injuries to yourself and other people occurring in the vicinity of the machine as well as property damage, it is especially necessary to follow the safety regulations. These instructions are marked in the Instructions for use with the following warning safety symbol:



3 Operation safety.

3.1 Safety regulations.

- ⚠ This international symbol indicates important messages concerning safety. When you see the symbol, be aware of a possible injury threatening to you or to other persons and read the attached instructions carefully.
- ⚠ The machine operator must be over **18 years of age**. **He (she) is obliged** to get acquainted with the instructions for use of the machine and is supposed to be informed of the general principles of work safety.
- ⚠ Prior to carrying out any activities in the near vicinity of the machine, switch the engine off and wait until the cutting blade stops moving! Before leaving the machine alone, always switch off the engine!
- ⚠ Never let the engine running at maximum speed or idling for a long time with the cutting blade and travel wheels drive clutch switched off! Components of the machine drive (V-belt, belt pulley, clutch pulley, etc.) might get damaged!
- ⚠ **Prior to each employment of the machine**, check its parts (working mechanism or its casing in particular) for a possible damage or loosening. **Defects must be rectified without any delay**. Repairs are to be made only with the original spare parts.
- ⚠ Before using the machine, the stand to be cut must be cleared of solid bodies such as stumps, branches, stones, wires, loose construction debris, etc., which could be flinging up or which might damage the machine. If these cannot be removed, avoid working in such places.
- ⚠ The machine is equipped with a rotating working implement. Maximum circumferential speed is **69,2 m.sec⁻¹**. Therefore, make sure that other persons move at a safe distance from the machine when it is in operation with regard to a possible flying away of the cut stand or flung out solid objects!
- ⚠ With respect to the exceeded recommended values of noise and vibrations, you are warned to observe the following instructions when working with the machine:
 - a) Protect your hearing by using suitable protective aids specified in **CSN EN 352-1** (shell ear protectors) or **CSN EN 352-2** (plug ear protectors). Require the aids from your dealer.
 - b) Working with the machine should be interrupted after max. 20 minutes for a minimum break of 10 minutes. During these breaks, the machine operator must not be exposed to the impact of another source of noise or vibrations.
- ⚠ Machine operators should use working aids authorized to **CSN EN 166** or **CSN EN 1731** (tight-fitting garments, sturdy shoes, working gloves and protection glasses). Keep a safe distance given by the handlebar.
- ⚠ Don't start the engine in enclosed spaces! Pay increased attention when handling the machine since the exhaust silencer remains hot after the engine has been switched off; make sure there are no leakages and spills on engine parts when refuelling. If they happen to occur, dry out the stained parts or wait until the petrol evaporates.

- ⚠ When the machine is in operation, all other persons (children in particular) and animals have to be outside the machine's working space. The machine operator can continue working only after they have been shown out to a **safe** distance (see Pictograph 6).

NOTE: The outer safety zone A around the inner working zone B is specified in standards EN 12733 and CSN EN 12733. Entry into the working zone is to be prevented by using appropriate prohibitory signs. Distance between the individual sides of zones A and B must not be less than 50 m. Should the dangerous zone of machine operation be entered by a person or animal, the machine operator must release the cutting implement drive lever without any delay and wait with the further work until the zone is clear again.

- ⚠ Removal of any protective equipment and casings from the machine is forbidden.
- ⚠ The **safe** slope accessibility of the machine is 10°. Maximum inclination of the engine at work is 20° for a long-time operation and 30° for a shorter time (up to 1 minute).

NOTE: The machine should be preferably not used on wet grass. The terrain you are moving on must be always safe. Do the work while walking not running. Be particularly careful when changing direction on the slope. Cutting on steeply inclined slopes should be prevented. If you fall, do not hold the machine but release your grip on it.

- ⚠ All kinds of the machine repair, adjustment, lubrication and cleaning are to be made with the machine switched off and spark plug cable disconnected.

3.2 Declared and guaranteed noise and vibration values.

Declared emission level of acoustic pressure A at operator's site $L_{pAeq,T} = 88 + 1 \text{ dB}$ (according to CSN EN 12733, Attachment B and CSN EN ISO 11 201)

Guaranteed level of acoustic performance of the machine $L_{WA} = 98 \text{ dB}$ (according to Government Regulation No. 9/2002 Gaz.)

Declared sum of accelerated vibrations transmitted onto operator's hands/arms $a_{hv} = 13,8 + 11,1 [\text{m.s}^{-2}]$ (according to CSN EN 12733, Attachment C and CSN EN 1033).

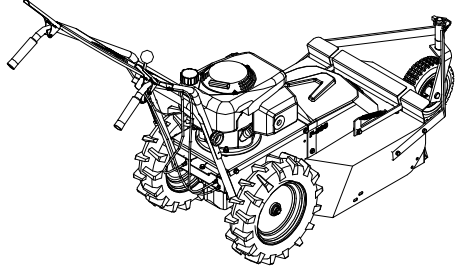
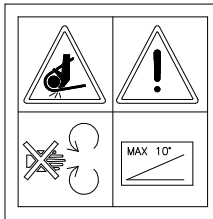
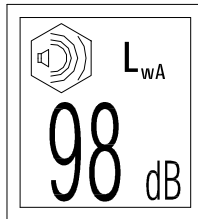
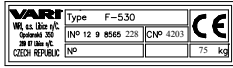
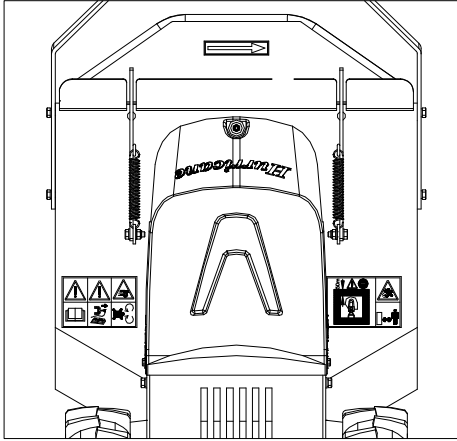
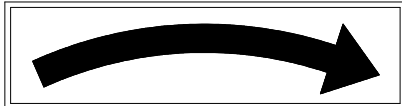
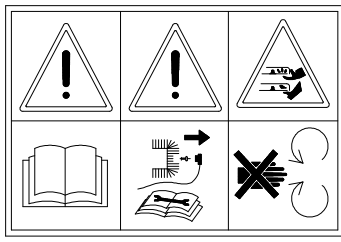
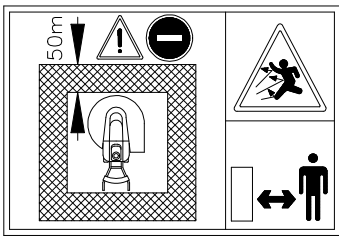
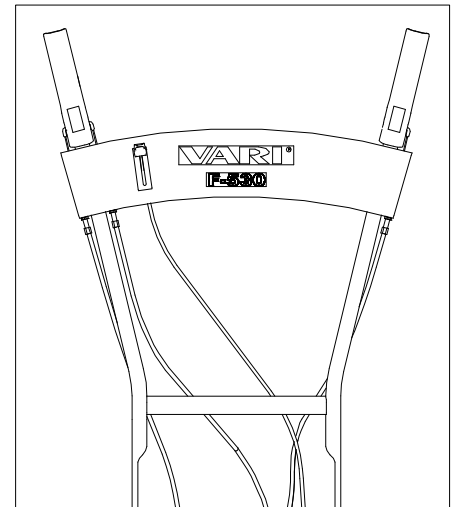
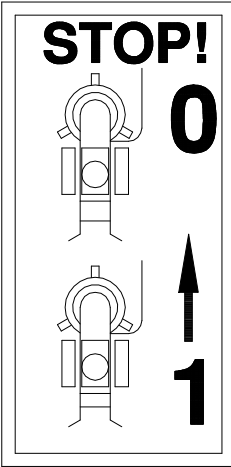
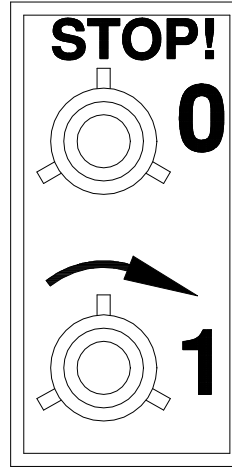
3.3 Safety pictographs.

The user is obliged to maintain the pictographs on the machine legible and to provide for their replacement in the case of damage.

Pictograph No.	Description of the safety information
1	Putting one's hands into the V-belt working space is prohibited – danger of nip. Safe slope accessibility.
2	Guaranteed level of machine's acoustic performance.
3	Manufacturing label.
4	Arrow for the direction of tool rotation – to the right.
5	Instructions for use to be studied prior to machine operation and maintenance. During the machine maintenance the conductor is to be disconnected from the spark plug. Putting one's hands or feet into the cutting blade working space is prohibited – danger of limb cut (off).
6	Entry forbidden for other persons and animals. Minimum safe distance from the machine. Danger of injury by flying-off material fragments and flung objects. Other persons and animals to be kept at a safe distance from the machine.
7	Machine travel switch. "0" = machine stands still, "1" = machine travels
8	Cutting blade drive switch. "0" = blade does not turn, "1" = blade in rotation.

Note:

The pictures of the self-adhesive labels with the pictographs in the right part of the table correspond with their position as seen from the operator's site.

	<div></div> <p>1.</p>	<div></div> <p>2.</p>	<div></div> <p>3.</p>
	<div></div> <p>4.</p>		
	<div></div> <p>5.</p>	<div></div> <p>6.</p>	
	<div></div> <p>7.</p>	<div></div> <p>8.</p>	

4 Use, technical specifications and technical description of the machine.

4.1 Machine use.

This mulcher is designed for mowing swards of all kinds of stalky grasses, preferably old and dry, on both maintained and non-maintained sites. The mulcher can be used for cutting woody species from self-seeding up to a diameter of 1 cm. It is not designed for park treatment of grass areas. Periods most suited for the machine use are those when the swards

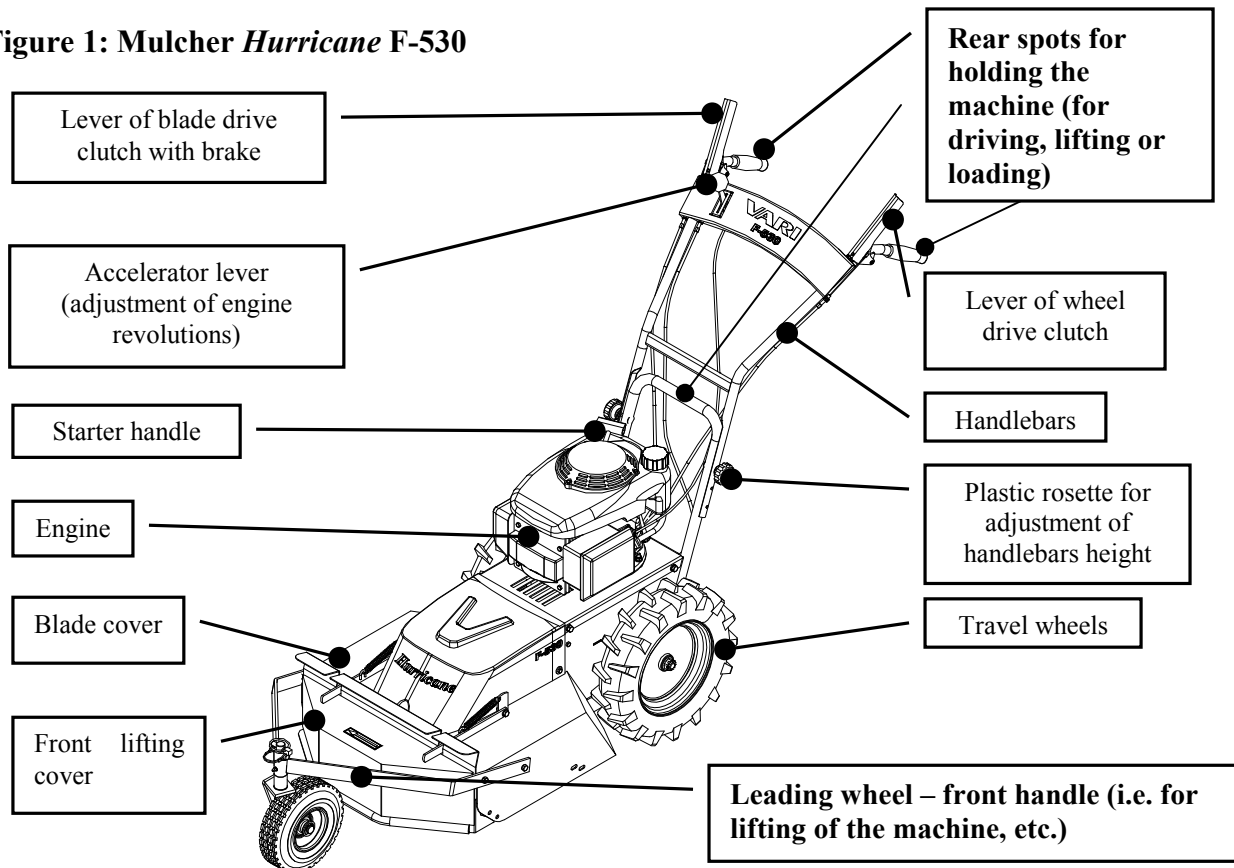
are dry and the cutting blades are capable of crushing them into small pieces which need not be removed from the surface. The maximum recommended height of swards emerged in the same period when cut is up to 40 cm. This maximum height may decrease according to sward density, moisture content and type.

The machine control is easier thanks to the leading wheel. The height adjustment (in two positions) is made with a spacing tube, put on the pin of the wheel hinge.

⚠ **Working width must be at all times accommodated to the density of the mown sward.**

4.2 Technical specifications.

Hurricane F-530	unit	value
Length (incl. handlebars)	mm	1600
Width	mm	620
Height (incl. handlebars)	mm	1155
Weight	kg	75
Maximum working width of the machine	cm	53,3
Cutting height (2 positions, measured on a solid surface)	cm	5 , 8
Blade speed (at max. engine revolutions)	min ⁻¹	2481
Circumfential blade speed (at max. engine revolutions)	m.s ⁻¹	69,2
Travel speed (at max. engine revolutions)	km.h ⁻¹	2,17
Area performance of the machine (according to sward type)	m ² /h	max. 1000
Oil filling in the gearbox	litre	0,5
Oil quality	API	GL - 4, GL - 5
	SAE	90, 80W - 90
Engine type	unit	value
HONDA GCV 160	--	--
Cylinder volume	cm ³	160
Bore x stroke	mm	64x50
Max. performance at revolutions	kW/rpm	4,1/3600 (5,5HP)
Max. torque at revolutions	N.m/rpm	11,4/2500
Max. engine revolutions adjusted	rpm	3200 (+/-100)
Fuel tank capacity	litre	1,1
Petrol (unleaded)	oct. no.	91-95
Oil filling	litre	0,55
Oil	API	SJ/CF (SG/CD)
Spark plug	--	NKG BPR6ES
	--	BRISK LR15YC

Figure 1: Mulcher *Hurricane F-530*


5 Instructions for use.

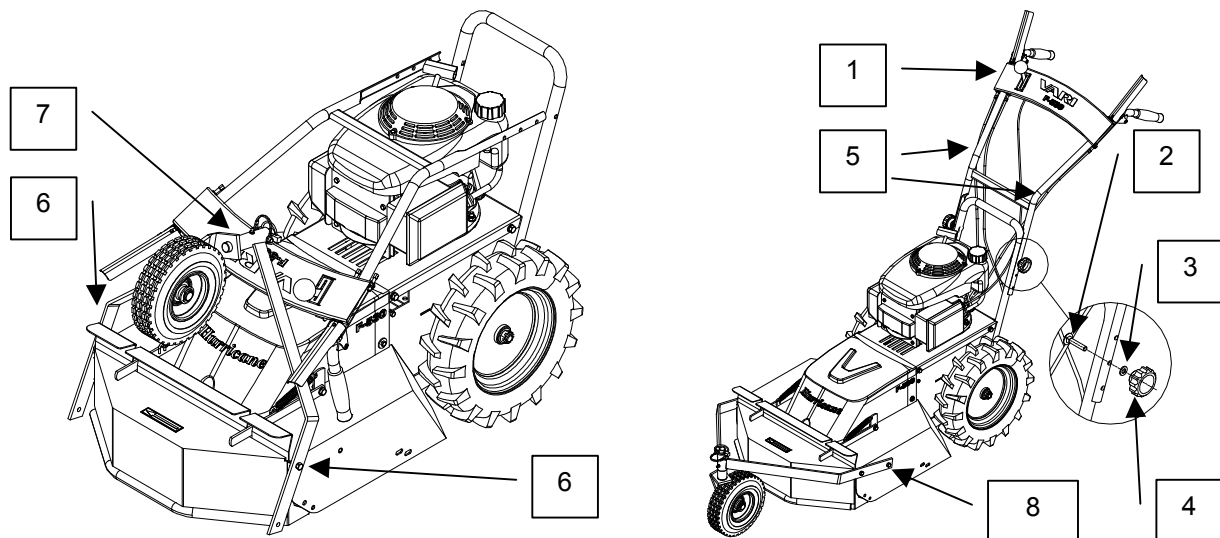
5.1 Machine assembly.

Ask your dealer to provide unpackaging of the machine and briefing in machine operation. Grip points for unpacking from the box: blade cover in the front, “U” tube of the machine frame at the back.

If you assemble the machine yourself, please follow the instruction below:

Note: the washer size (e.g. Ø8.4 mm) is always to be understood the diameter of the washer opening.

1. Take the machine out of the box and all parts from their packing.
2. Turn the handlebars so that the handrails point to the rear of the machine. Attach the handlebars (1) to the frame at a satisfactory height by means of bolts with square head (2), washers Ø8.4 mm (3) and plastic rosettes with female thread (4). Fasten the bowden cables from the sheet metal levers and the accelerator lever to the handlebar by means of plastic tightening tapes (5). Unloose two M8 bolts (6) holding the leading wheel (7) on the blade cover and tilt the leading wheel down. Screw on two M8 bolts (8) with safety washers (9) into the holes in the leading wheel frame. Now tighten all four bolts (6+8).

Figure 2: Machine assembly


5.2 Putting into operation.

- ⚠ The machine may be delivered without engine fillings (in dependence on different national regulations)!
 - ⚠ First thoroughly read the instruction for engine use! You can prevent a possible damage to the engine.
1. Check oil volume in the engine and/or fill the engine with the prescribed oil grade and volume. Fill the tank with the prescribed amount and type of petrol.
 2. Move the accelerator lever into the front position („CHOKE“). Start the engine by pulling on the manual starter (instructions for starting see guidelines for engine use).
 3. Let the new or cold engine running on choke for about 30 seconds (accelerator lever in the „CHOKE“ position), and then move the accelerator lever into the position „MAX“. In this position let the engine running for about 30 seconds.
- ⚠ Do not leave the machine alone when doing this!

5.3 Starting the cutting blade.

- ⚠ When starting the engine, the two levers on the handlebars must be in the off position.
1. Start the engine while adhering to instructions presented in the operating manual for engine use.
 2. Set-up maximum engine revolutions by using the accelerator lever in the right part of the handlebars crossbar. (Should the engine be cold, let it warm up at maximum revolutions for about 1 minute).
 3. Grasp the left handlebar grip with your left hand. Then slowly press the cutting blade drive clutch lever on the right handlebar grip with your right hand.
- ⚠ Press the lever slowly up to about two thirds of the stroke so that the cutting blade can start rotating and the engine does not stall.

Starting of the cutting blade is accompanied with a partial V-belt slippage and with the accompanying phenomena such as whistling, rattling, etc. The phenomenon usually disappears after the belt has started properly moving.

4. After the cutting blade starts turning, press the lever completely to the handrail and hold it firm.

If the blade drive is switched on during cutting again, engine stalling may occur due to resistance of grass biomass in the space of blade cover. This space must be – if possible – always properly emptied when starting the blade drive ([see Chapter 6.6.4](#)).

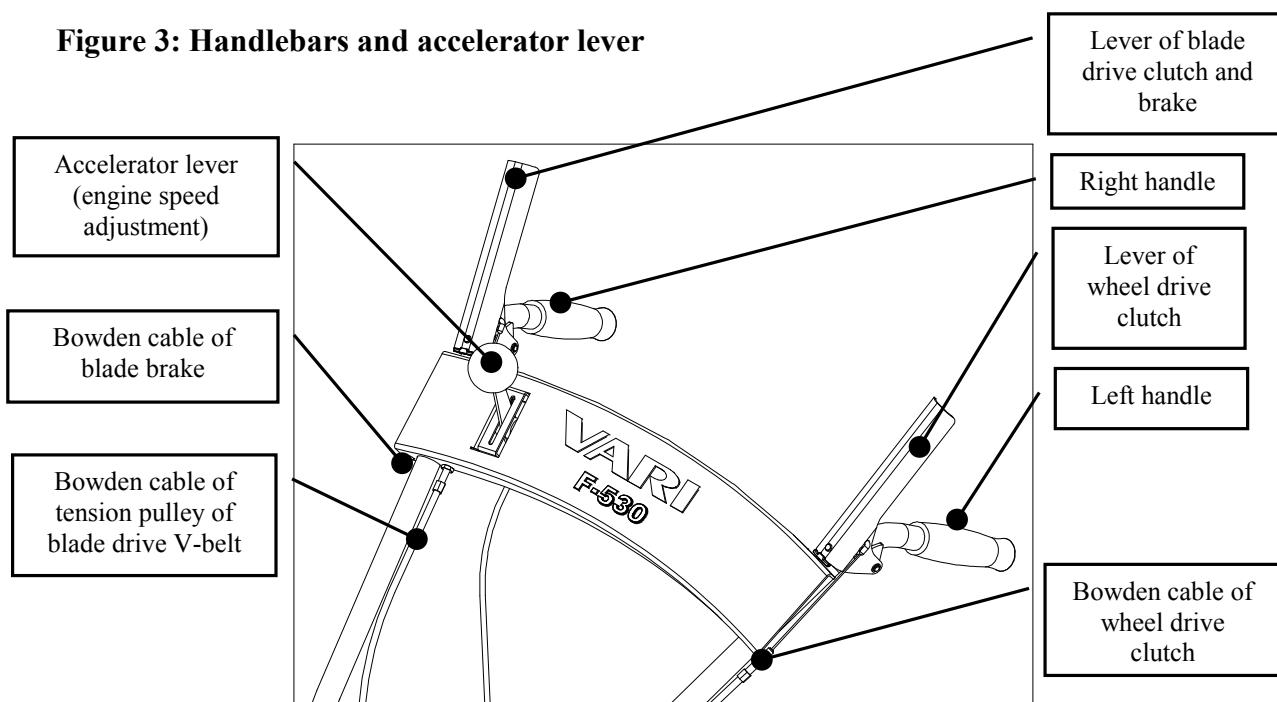
Note: In a new or cold engine, a few of the blade drive starts may result in engine stalling. The phenomenon will disappear after the engine warms up. If the blade drive cannot be started even after the engine has got warm, follow the table presented in Chapter [7.6](#) for diagnostics.

5.4 Machine travel.

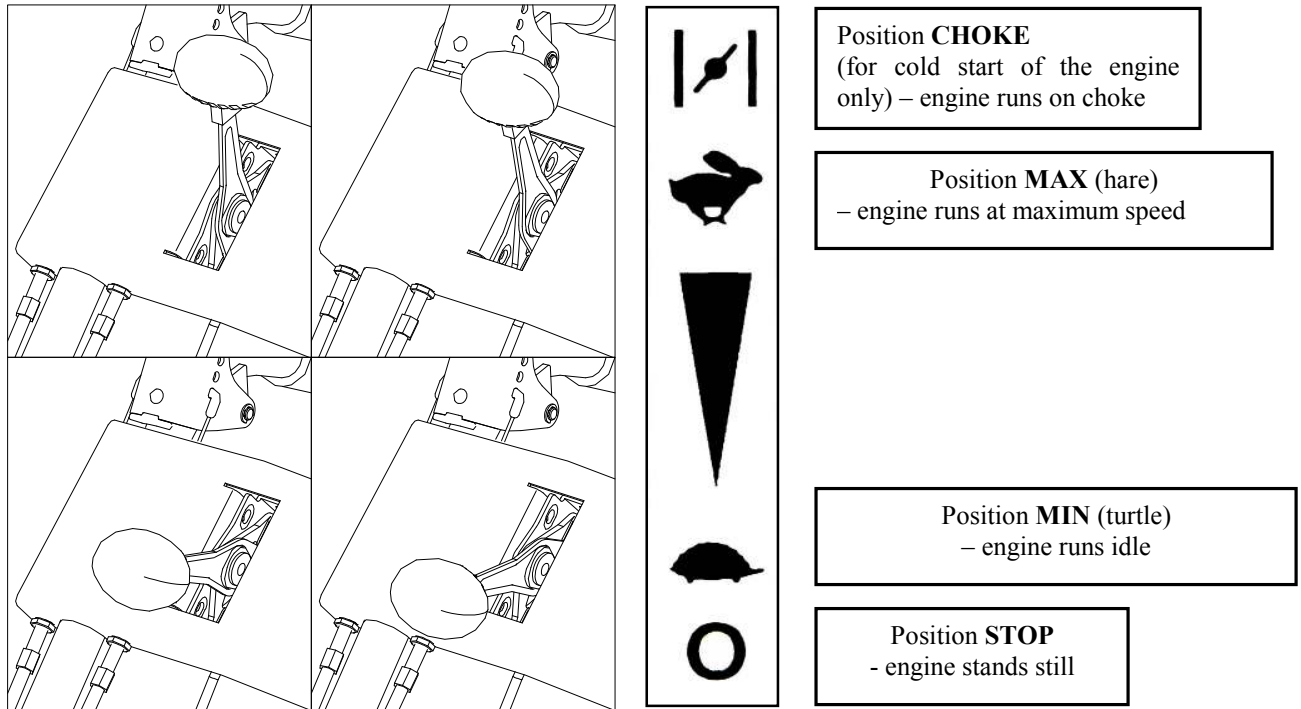
Machine travel is controlled by the lever on the left grip of the handlebars. Press the lever completely down to the grip and the machine will start moving forward. Start walking simultaneously with the lever pressing and machine start, adapting your walk pace to the speed of the machine.

⚠ **Be prepared when the machine starts moving with a little jerk.**

Figure 3: Handlebars and accelerator lever



Note: All four main positions of the accelerator lever are arrested by means of a simple system (dent/rib) in the lever body.



5.5 Machine stop.

If you wish to stop the machine travel, release the lever on the left handlebar grip. The machine will stop moving but the blade will still turn. The cutting blade drive will be switched off after release of the lever on the right handlebar grip. The safety brake will stop the blade.

- ⚠ **Prior to carrying out any activities in the near vicinity of the machine, switch off the engine and wait until the cutting blade stops! Always switch the engine off before leaving the machine!**
- ⚠ **Never let the engine running at maximum speed or idling with the cutting blade drive clutch released and with the released clutch of travel wheels drive for a long time! Machine drive components (V-belt, belt pulley, clutch pulley, etc.) might suffer damage!**

If you wish to switch the engine off, do it by shifting the lever to the „STOP" position.

- ⚠ **In the case of any critical situation, release your hold on the handlebars without any delay. The levers will return to their zero position, the machine and the cutting blade will stop (while the engine is still running at set-up revolutions; this is why it is to be switched off by shifting the lever to the „STOP" position as soon as possible!)**

5.6 Working with the machine.

5.6.1 Working width of the machine.

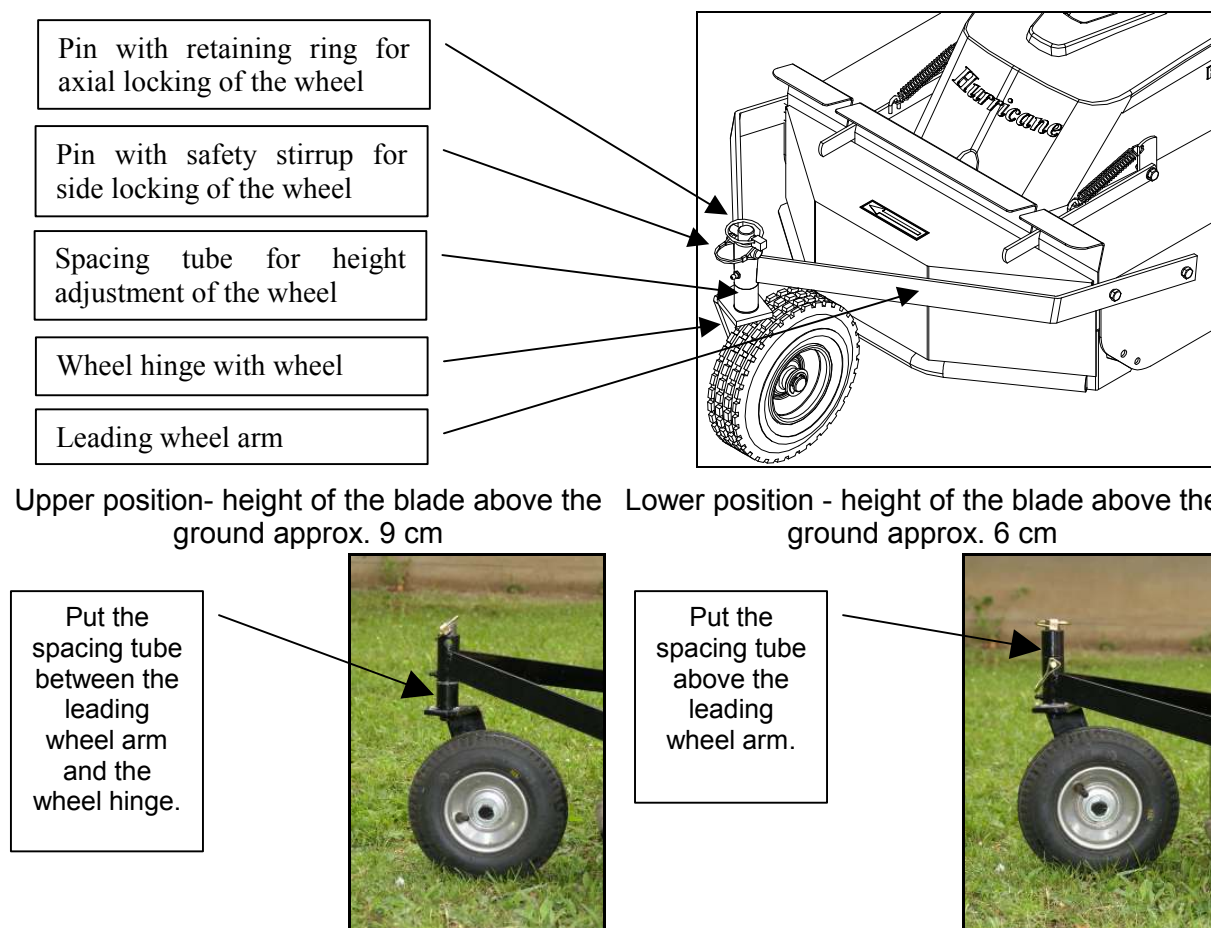
- ⚠ **Before using the machine, the stand to be cut must be cleared of solid bodies (such as stones, wires, loose construction debris, etc.), which could be flinging up or which**

might damage the machine. If these cannot be removed, avoid working in such places.

- ⚠ **Working width has to be at all times accommodated to stand density!**
- ⚠ **If possible, do not use the machine on wet grass. Remember that the terrain you are moving on must always be safe. Walk (never run) at work. Be careful especially when changing the machine direction on slopes. Do not cut on steep slopes. When accidentally falling, immediately release your hold on the machine.**

5.6.2 Adjustment of cutting height of the machine with leading wheel

The slide shoe was replaced by a simple leading wheel on the machines of this new generation. The machine became more controllable thanks to the leading wheel. The height adjustment in two positions was preserved from the previous generation and it is now made with a spacing tube put on the pin of the wheel hinge (see the positions on the picture below). The wheel can be locked against side movement with an auxiliary safety pin when mowing on a slope (movement along the contour lines is recommended). If you use the machine on flat areas or gentle slopes, store the pin with the safety stirrup or put it on a place on the machine protected from the cut stand.



5.6.3 Adjustment of cutting height of the machine with slide shoe

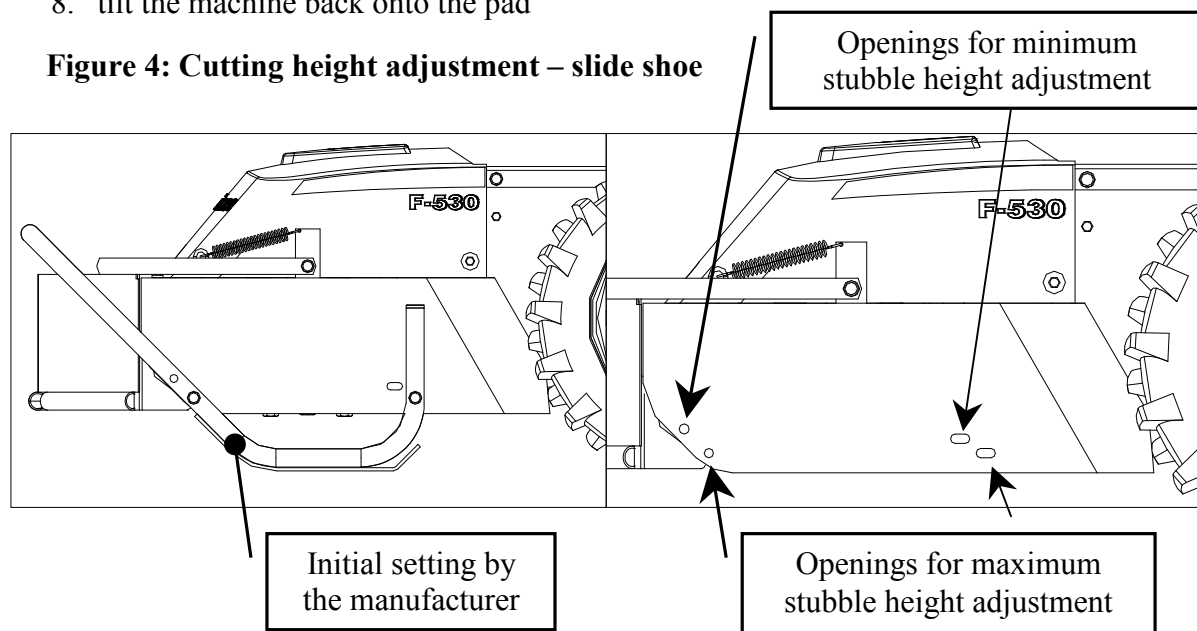
The slide shoe may be purchased as accessory equipment under the ord. number **4205**.

The cutting height is initially set in the position for higher stubble (approx. 8 cm). This position is intended for dense, tall stands and uneven terrains. If you are going to cut lower stands (up to 15 cm) and on the areas without terrain unevenness, it is possible to set the slide

shoe position for lower height of the stubble, approx. 5 cm. Always work with an assistant when changing the slide shoe position.

1. secure the machine against self-motion (by wedging) on a solid surface or a pad
2. lift the front part of the machine, so that the inner space of the blade cover is accessible
3. secure the machine against sudden tilt back onto the pad
4. clean the inner space of the cover on the sides, where the slide shoe is mounted (4 places)
5. dismount the slide shoe fixing (4 bolts and nuts with washers)
6. move the slide shoe to the other position
7. screw the slide shoe back with all the bolts and nuts
8. tilt the machine back onto the pad

Figure 4: Cutting height adjustment – slide shoe



5.6.4 Sward cutting.

Set the engine on the maximum speed, let the cutting blade rotate at the maximum speed (see [Chapter 6.3](#)) and then get the machine into motion (see [Chapter 6.4](#)), facing the to-be-cut sward.

At cutting, you should proceed only in such a way that the to-be-cut sward is on the left side of the machine. When cutting on slopes, it is advised to drive the machine along the slope contours. Watch a maximum permissible long-term machine inclination of 20° (30° over a short-term)!

If the cut stand is very dense, grown through, rotten from below or lodged, the machine working width must be accordingly reduced, so that the cutting blade rotations are not excessively slowed-down, which would result in the impaired cutting quality. Always set the slide shoe in the position for maximum stubble height for such swards.

5.6.5 Problems at cutting.

Choking of the space under the cutting blade cover with the grass biomass shows in:

- a) **Engine markedly losing speed but not stalling:** machine travel to be switched off immediately (lever on the left handrail grip), move the machine slightly back while the machine front is slightly lifted by pushing down on handrails. The space under the cutting blade cover will do itself a partial clearance from excessive grass. Then drive the machine against the sward again (see [Chapter 6.4](#)).

⚠ **Be very careful while lifting the machine and driving back!**

- b) **Engine losing rotations and stalling:** release both levers on the handlebars, lift the machine front by pushing down on handrails and move the machine slightly back. Clean the space under the cutting blade space and spread the cut grass across the ground surface. Start the engine, switch on the cutting blade drive (see [Chapter 6.3](#)) and drive the machine against the sward again (see [Chapter 6.4](#)).

⚠ **The engine must always be switched off when cleaning the space under the blade cover!**

⚠ **Tilt the machine always only backwards onto the handlebars. Be very careful while moving under the lifted machine! Secure the machine against its spontaneous motion and tilt!**

⚠ **Be very careful while cleaning the space under the cutting blade cover. Cutting edges of the blades are sharp. You should wear protective gloves or use a suitable piece of branch etc.**

6 Maintenance, care and storage.

To ensure a long-term satisfaction with our product, it must be given proper care and maintenance. Regular maintenance of the machine will prevent its early wear providing at the same time for a correct functioning of all its parts.

Prior to any machine use, check all bolts and nuts for their correct tightening. Make sure that all safeguards are in good order. Check the blades, fixing bolts and individual elements of cutting mechanism for a possible wear or damage. In order to keep a good balance of the machine, worn-out or damaged blades and fixing bolts should be replaced with original spare parts. All worn-out or damaged components should be replaced also for the reason of machine safety. Oil level in 4-stroke engines must range within limits described in the "Instructions for engine operation and maintenance".

Follow all instructions concerning the intervals of machine maintenance and adjustments. It is advised that you keep records on the number of machine working hours and on the conditions in which the machine was working (for service purposes). The after-season maintenance of the machine should be entrusted to one of our authorized service workshops, the current maintenance as well if you do not trust your own technical skills.

⚠ **Regarding the machine weight, all maintenance and adjustment procedures are to be done by two persons.**

6.1 Machine lubrication.

6.1.1 Gear oil change and replenishment.

⚠ **When replacing oils, follow the basic hygienic principles, regulations and laws on environment protection.**

The gearing works in an oil bath. Oil volume should be checked once a month (oil plugs see Fig. 5).

Minimum grade of gear oil should be GL-4, GL-5 according to API, 90 or 80W – 90 according to SAE.

Oil replacement in a new machine is to be made after the first 5 hours of operation and then after 100 working hours or after the end of the season. This will ensure that the gears will not suffer

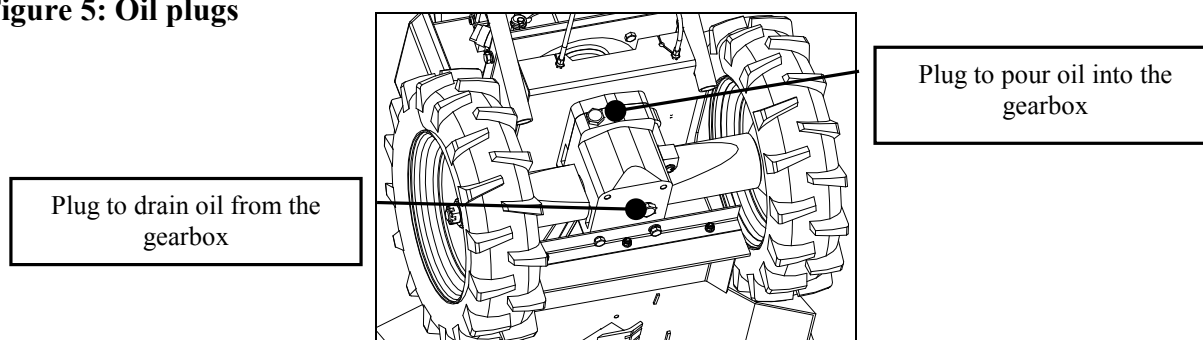
excessive wear. The exchange interval can be extended up to **130** hours with oils of higher grades (API GL – 5, SAE 80W – 90). The running-up period of 5 hours must be observed.

Czech oils fully meeting the requirements are „**MOGUL TRANS 90**“ or „**MOGUL TRANS 80W-90**“.

Oil replacement should be made when the box is warm and oil is easy to drain.

1. Clean around the oil plugs. Underlay the machine and secure it so that a space is created under the machine for a vessel to collect oil.
2. Loosen the pour-in plug on the rear wall of the box and the drain plug in the bottom of the gearbox (spanner No. 19).
3. After the oil has been drained, screw back the drain plug in the bottom of the box. Fill the gearbox with the new oil (it is advised to use a funnel with flexible tubing). Oil level should reach to the lower edge of the hole. Then screw the pour-in plug back. If the seals under the plugs are damaged, replace them with new ones.

Figure 5: Oil plugs

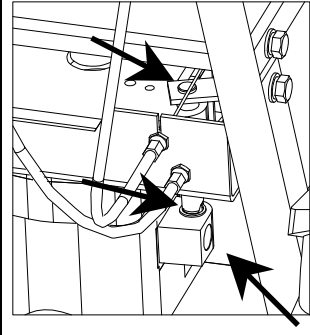
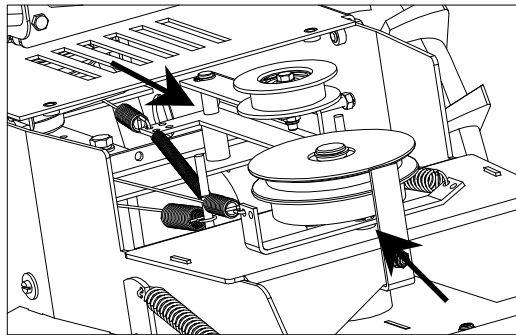
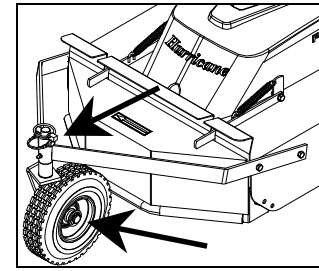


6.1.2 Engine oil replacement.

Information is to be found in the Instructions for engine operation. To drain oil, the machine should be either tilted to the side with the pour-in neck with oil gauge, or the engine should be dismantled from the machine (see [Chapter 7.4](#), items a),b),d)). Recommended engine oil available on the Czech market and specially designed for air-cooled engines of gardening machines is **HEKRA DYNAMIC Mineral 15W-40 (API SJ/CF)**.

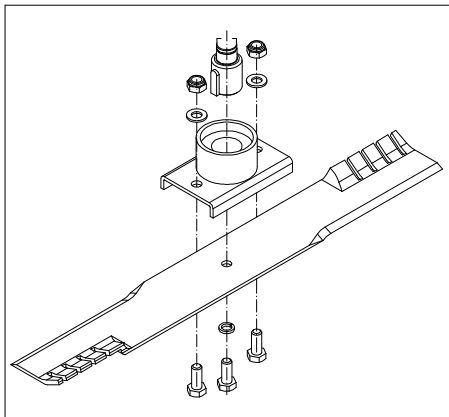
6.1.3 Table of machine lubrication.

Machine lubrication	During season	After season	Lubricant	Figure No.
All wires - on the input to Bowden cables - on the output from adjustment bolts	min 2x min 2x	yes yes	silicon oil in atomizer	-
Both swivel seatings of rotary lever in the gearbox	min 1x monthly	yes	silicon oil in atomizer	6.1
Tightening pulley arm pin (after disassembly of upper casing)	min 2x	yes	grease, engine oil	6.2
Brake lever seating near the front belt pulley (accessible after disassembly of upper casing)	min 2x	yes	grease, engine oil	6.2
Leading wheel pin and pin of the leading wheel fork	min 1x8 hrs	yes	grease, silicon oil in atomizer	6.3

Figure 6: Lubrication points
Figure 6.1: Swivel lever of the clutch

Figure 6.2: Tightening pulley arm pin and blade brake pin

Figure 6.3: Leading wheel


6.2 Tightening of bolted connections.

Regularly check the tightening of the bolted connections. Always check the tightening of bolts fastening the blade to the blade holder and blade holder to the shaft prior to any machine use.



Tightening torque of the M10x1x25 central bolt is **38 N.m**.
 Tightening torque of the M10x25 side bolts is **44 N.m**.

⚠ **Replacing bolts, use only original spare parts supplied by the manufacturer!**

⚠ **Check the bolt tightening prior to each new use as well as during mowing, especially after a possible impact on a solid obstacle!**

Figure 7: Set of blade and blade holder

6.3 Working blade replacement and sharpening.

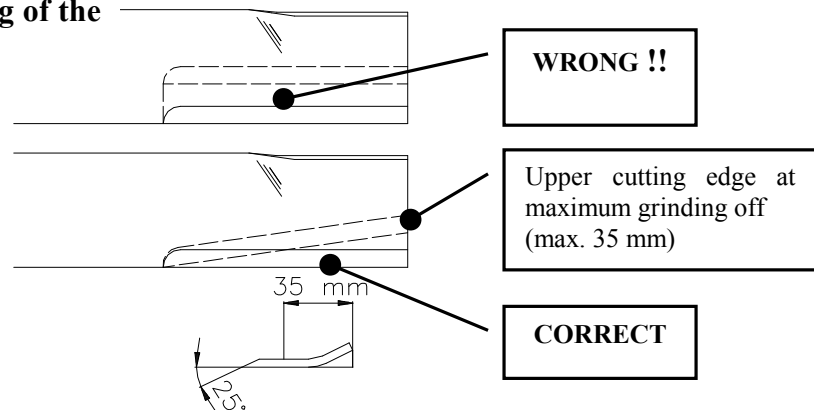
- ⚠ **The machine must be standing on a firm support plate and must be secured so that the blade is easily accessible and an unexpected spontaneous machine motion cannot occur.**
- ⚠ **Be very careful when dismantling the blade. Its cutting edges are sharp. Protect your hands with working gloves.**
- ⚠ **The engine must be switched off and the cable end connector to the spark plug disconnected!**

Working blade replacement procedure is as follows (always work with a helper):

- a) Release and unscrew outer M10x25 bolts. Then release and unscrew central M10x1x25 bolt and remove the blade and the blade holder from the blade shaft.
- b) Plane the blade and sharpen the cutting edges. Inclination of the sharpened cutting edge should be 25° with respect to the lower plane of the blade. The blade must be well balanced after the sharpening; the material loss at sharpening the two cutting edges should be therefore identical.
- c) Mount the blade and the blade holder back onto the blade shaft in a reverse order of operations.

- ⚠ **Central M10x1x25 bolt has a fine thread and therefore it must not be confused with outer bolts whose threads are normal!**
- d) Tighten the bolts at a prescribed tightening moment (see [Chapter 7.2](#)).
- ⚠ **Should there be excessive vibrations on the machine handlebars after the installation, the blade must be unconditionally balanced once again!**

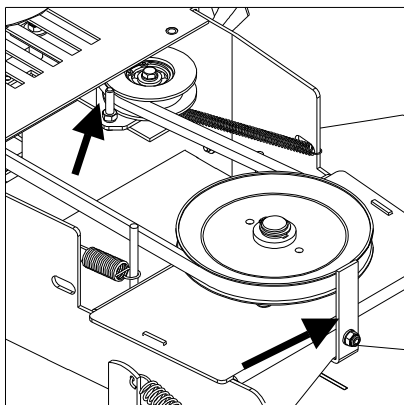
Figure 8: Correct sharpening of the blade



Note: Manufacturer does not answer for any damages caused by the machine due to unskilled repair or treatment of blades without the use of the original spare parts.

6.4 V-belt replacement and adjustment of tightening pulley.

V-belt should be replaced according to its wear (cracked sides, torn belt, sides worn out down to belt carrier fibres, belt “pulled” out of shape) or after about 200 hours of operation at the maximum. In this machine, the belt pulled out to maximum is considered a belt in which distance between inner belt surfaces (at the pressed lever of mowing disk drive clutch) is less than 7 mm. The replacement procedure is as follows:



- a) Drain petrol from the engine tank. Remove the red ball from the accelerator lever. Dismount the accelerator lever (2x spanner No. 8) from the handlebars. Bowden cable should in no case be dismantled from the control mechanism on the engine!
 - b) Unscrew three safety nuts (spanner No. 13) on the engine flange and pull the engine out from the machine frame upwards. Never use force to pull the engine out from the frame!
- ⚠ **Never put the engine on the side. Oil might get into the exhaust or into the air cleaner. Best engine placing is with the lower flange dwelling on two scantlings which are at least 7 cm high.**
- c) Dismount the V-belt cover (spanner No. 10). Dismount the front guide of the V-belt and the bolt on the pulley arm (spanner No. 10). It is sufficient to unscrew the bolt for about 15 mm, and then it is possible to take the V-belt out of the tightening pulley.

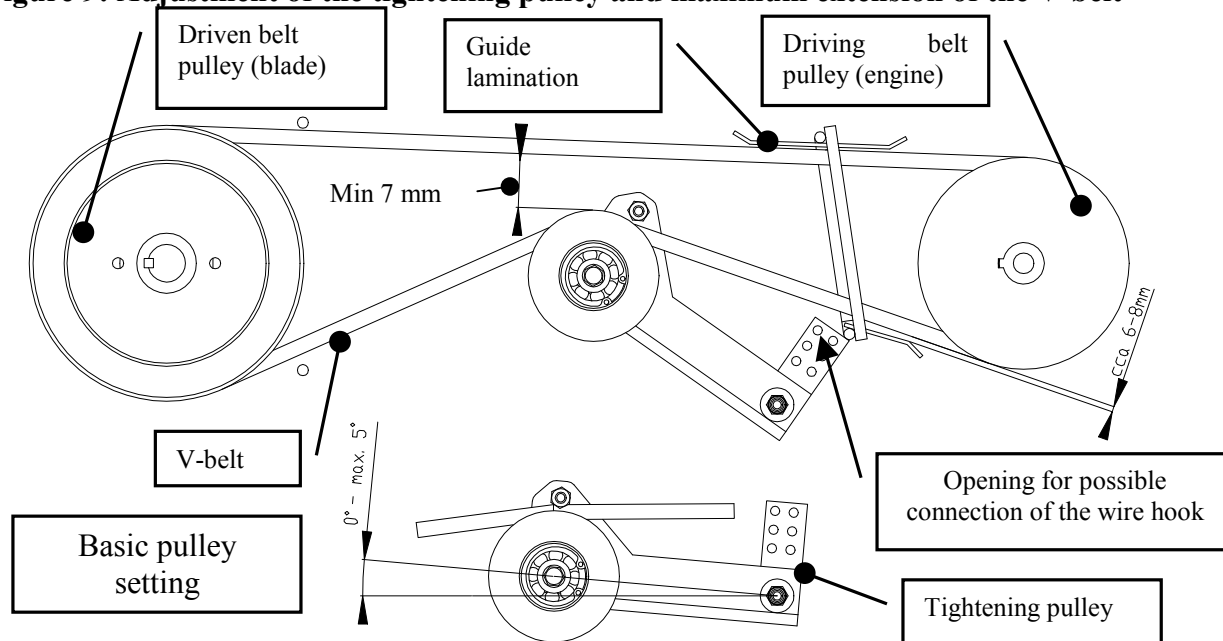
- d) Take the old V-belt off and replace it with a new one. Original V-belt marking is **OPTIBELT X13x1335 Ld 6T6K**, ord. No. **184 608**. It is also possible to use an equivalent V-belt made by other manufacturers at a size of A13x1300 Li (Li=internal length) or A53" (53" is the external length La). However, the belt must be made without rubber on sides! Only such a belt model will guarantee that the V-belt is not extended and the blade drive start is smooth at engaging the clutch.

⚠ Should another than the original recommended type and size of the belt be used, the machine manufacturer does not answer for correct and full functioning of the drive!

- e) After you put the new V-belt on the pulley, insert the V-belt into the groove in the tightening pulley and fully tighten the bolt on the pulley arm.
- f) Put the engine back in place. Pins in the driving belt pulley must fall into holes in the rubber element on the driven part of the clutch, installed on the gearbox. Bolt the engine with three M8 nuts with flat washers. Screw the accelerator lever back onto the handlebars and put the red ball back on the accelerator lever.
- g) Put the V-belt into the groove in the belt pulley on the engine.
- h) Check the operation of the tightening pulley and adjustment of guide lamination. With the lever on the right handlebar grip fully pressed down, the pulley must ensure sufficient belt tension (spring on the cable being extended by about 10 mm as compared with loose condition). Possible corrections are to be made by means of adjustment bolt No. 1 (see Fig. 10). With the lever switched off, the pulley must be tilted away from the longitudinal machine axis at an angle of max. $0 - 5^\circ$ = with the belt convex side being approx. 1,5 – 2,0 cm from the bottom of the tightening pulley (see Fig. 9). The wire in the Bowden cable of the tightening pulley must exhibit no slackness. In the case that the adjustment bolt is completely screwed out and it is necessary to tighten the V-belt, the spring on the cable can be hooked into the front hole on the arm of the tightening pulley (see Fig. 9 bottom, note: this connection can be used already from the manufacturer) and belt tension can be adjusted once again. Guide lamination on the right side of the machine must be parallel to the belt and at a maximum distance of 1 – 2 mm from the belt convex side.
- i) Mount the front belt guide back to its original position and mount back the plastic belt cover.

⚠ If the gearbox disassembly from the machine frame occurs, the reverse assembly must be made with a proper axial alignment of the gearbox and engine shafts. This is why the operation should be made by an authorized service workshop which has to have available an original and by manufacturer approved centring fixture.

Figure 9: Adjustment of the tightening pulley and maximum extension of the V-belt



6.5 Adjusting the wires of pulley, brake and wheel drive clutch.

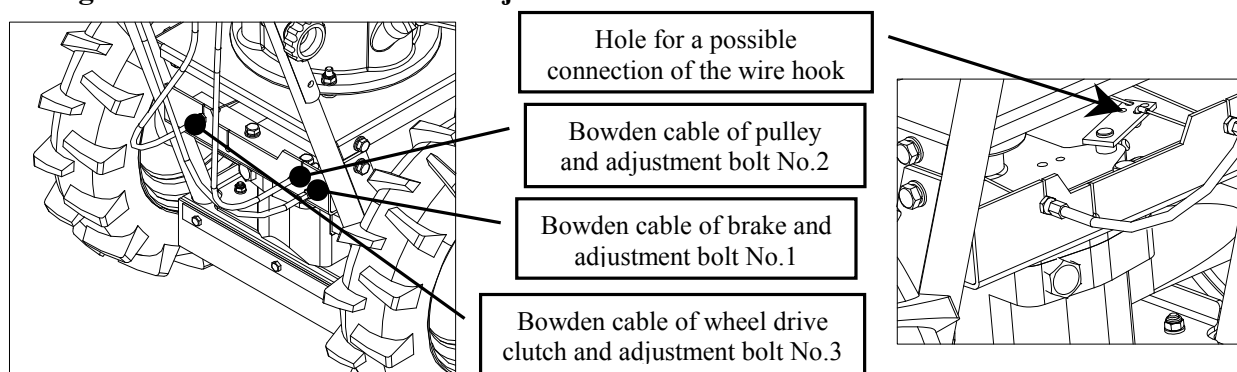
In order to guarantee low operating forces on levers which control the drive switching, it is advisable to lubricate the wires in Bowden cables at least 2x during the season with some of oils available in atomiser (e.g. SILKAL, MD Spray, WD40). Correct functioning of the machine also requires correct adjustment of drive controls.

The wire in the Bowden cable must always exhibit a slight slackness of approx. 1 mm (with the lever of the cutting disk drive clutch and brake released) so that the brake performance is sufficient. In order to achieve clearance of the brake wire in the Bowden cable, adjustment bolts have to be screwed into the chassis or handlebars crossbeam at the adjustment.

The wires in the Bowden cable of pulley and in the Bowden cable of wheel drive clutch must be without slackness, slightly tense. In order to make the wires tense, adjustment bolts have to be screwed out of the chassis or handlebars crossbeam at the adjustment.

Safety nuts in all adjustment bolts should be tightened by using two flat wrenches No. 10 or 9 (in accordance with the size of the M6 nut used). If there is no more step to be used in the adjustment bolt, it is possible to displace the hook on the wire into another hole in the sheet-metal lever on the handlebars (or on the wheel drive clutch lever on the gearbox and on the arm of the tightening pulley – see Figs. 9 and 10) so that the initial tension of the wires can be again regulated by the adjustment bolt.

Figure 10: Bowden cables and adjustment bolts



6.6 Diagnostics of driving problems.

Problem	Cause	Remedial action
Blade does not turn	Tension pulley not sufficiently stressing the belt	Set-up the tension pulley by means of adjustment bolt no. 2 (see Fig. 10)
	Cable fallen out from the tension pulley lever	Install the cable back
	V-belt fallen behind the tension pulley or down from the belt pulley	Install the belt back
	V-belt torn	Replace the V-belt by new one
	Excessive belt extension (see Fig. 9)	Replace the V-belt by new one
Brake performance is insufficient	Brake cable stressed	Set-up the wire so that it is slightly sagged at released lever on the right handlebar grip – screw in the adjustment bolt No. 1 (see Fig. 9)
	Brake cam lever insufficiently greased – dragging	Smear
	Worn lining	Contact the nearest service shop
Wheel drive jaw clutch does not switch off	Wrong adjustment of control cable	No rumbling must be heard from the gearbox when manually turning the travel wheel in counter-travel direction (wheel gear switched off). Keep screwing in the adjustment bolt No. 3 until the rumbling sound disappears
	Broken release spring Broken wire or wire ends	Contact the nearest service shop
Wheel drive jaw clutch does not switch on	Another problem of gearbox	Contact the nearest service shop

6.7 Table of service operations.

Operation	During season	After season
Gearbox oil check	1x monthly	yes,*
Engine oil check	prior to any other use	**
Engine air filter check	prior to any other use	**
Blade check for clamping and intactness	prior to any other use, ***	inspection
V-belt tension check	after 2 hrs, then after each 20 hrs. Or as required	inspection
Check of the V-belt condition	as required	inspection, ****
Cleaning of wheel hubs and exchange of lubrication grease	-	yes
Cleaning of the machine from dirt and sward residues	after each use	yes

* - the first change after 5 hrs., then after 100 – 130 hrs. (in dependence on oil grade)

** - oil and air filter change intervals see the Instructions for engine operation

*** - in the case of damage (also at cutting) – cracks, bending, breakage, etc. - urgent exchange required!

**** - or replacement after about 200 machine working hours

6.8 Washing and cleaning of the machine.

- ⚠ **Cleaning and washing the machine, proceed to observe valid regulations and legislation on the protection of watercourses and other water resources against pollution or contamination with chemical substances.**
- ⚠ **Never wash the engine with a stream of water! Electric equipment might fail when starting the engine.**

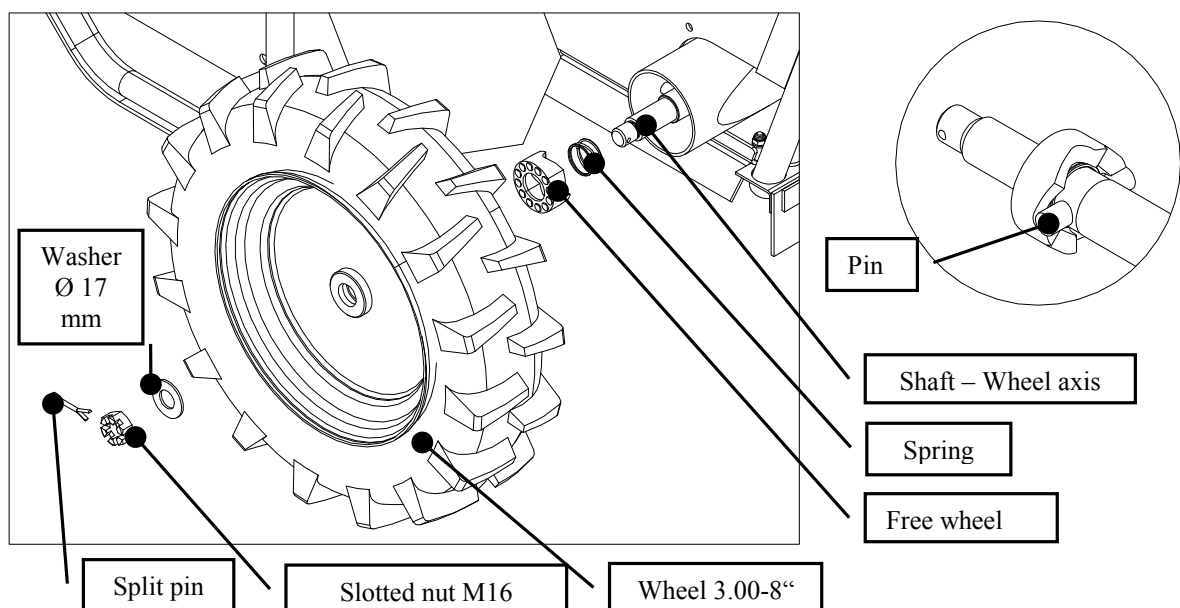
All dirt, debris and plant residues should be removed from the machine after the end of the season. Check the intactness of working blade, sharpen cutting edges (or replace the blade if necessary) and conserve them with conservation oil. Travel wheels should be dismantled from the axle once in a season, cleaned and the hubs inside filled with a new filling of plastic lubricant.

- ⚠ **The engine must be switched off and the cable termination to the spark plug disconnected!**

Procedure of wheel disassembly, lubrication and re-assembly:

- a) Underlay the machine so that the wheels can freely turn. The machine must be secured against spontaneous motion.
- b) Take out the split pin and screw the slotted nut out by using spanner No. 24. Remove the wheel from the axis.
- c) Clean the wheel hub inside, wheel hub flange with balls and the free wheel from dirt and old grease.
- d) Fill the hub inside with new grease (e.g. for water pumps) lubricating at the same time also the flange with balls and free wheel surfaces.
- e) Slide the free wheel on the wheel axis. The pin driven into the wheel axis must lean against the inclined surface on the free wheel (see Fig. 10). Put the wheel onto the axis, screw the nut to the stop; then release it by one split pin groove and secure the connection with a new split pin. The wheel must be freely turning with no great axial clearance.
- f) Check of the correct free wheel assembly: Press the wheel drive clutch lever, turn the driving wheel by hand in the direction of travel forward. The free wheel must be clicking.

Figure 11: Free wheel (on the left travel wheel, mirror wise on the right)



6.9 Machine storage.

Prior to any longer storage, clean the machine from all dirt and plant residues. Repair damaged paint on machine parts.

For any long-time storage of the machine it is advisable:

- a) to conserve the cutting blade
- b) to drain petrol out of the engine fuel tank and from the carburettor (more instructions see Instructions for engine operation)

Access of unauthorized persons to the machine is to be prevented. Protect the machine from weather impacts but don't use airtight protection due to a possibly increased corrosion under it.

6.10 Disposal of packaging and machine after the end of service life.

After unpacking the machine, you are obliged to provide for the disposal of the packaging material with taking into account the use of secondary raw materials according to Waste Law No. 185/2001 Gaz. (as amended) and with respect to the decrees issued by local town or municipal authorities.

The following procedure is recommended for the machine disposal after the end of its service life:

1. Dismount all parts from the machine that can still be used.
2. Dismount plastic machine parts and parts made of non-ferrous metals. The dismantled machine remainder and the dismantled parts are to be disposed according to Waste Law No. 185/2001 Gaz. (as amended) and with respect to the decrees of local town or municipal authorities.

7 Instructions for ordering spare parts.

The following data are to be used for an easier identification when ordering the spare parts:

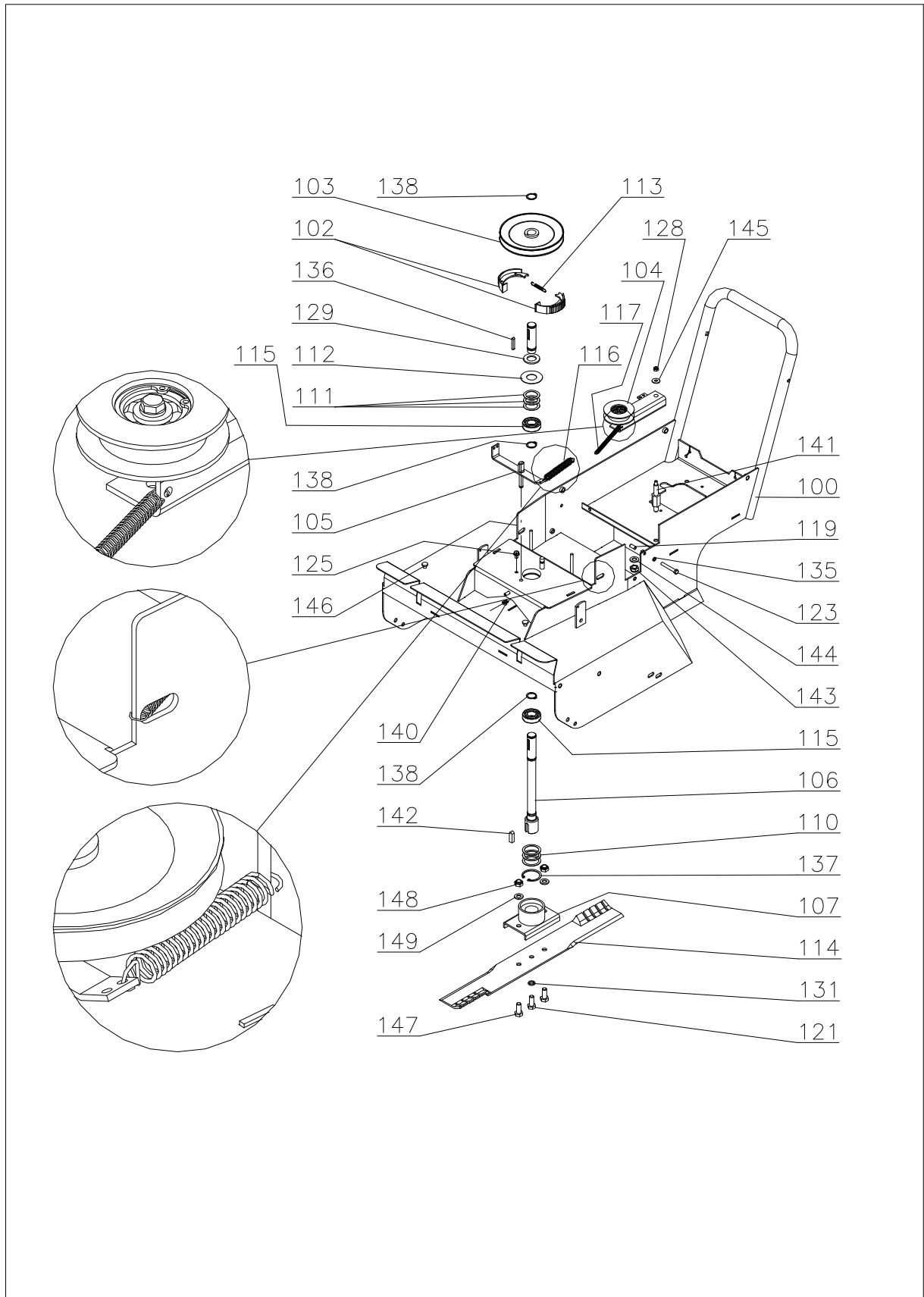
1. Machine type, engine type, machine serial number and year of manufacture;
2. Ordering number given by manufacturer and its name in the component list;
3. Number of ordered pieces separately for each item;
4. Precise address, telephone number, fax number or e-mail address;
5. In the case of any confusion concerning the correct identification of the component or technical issues, contact your dealer.

In the case of any confusions concerning the spare parts or technical issues, the VARI a.s. commercial, customer-service or technical departments are prepared to answer your inquiries.

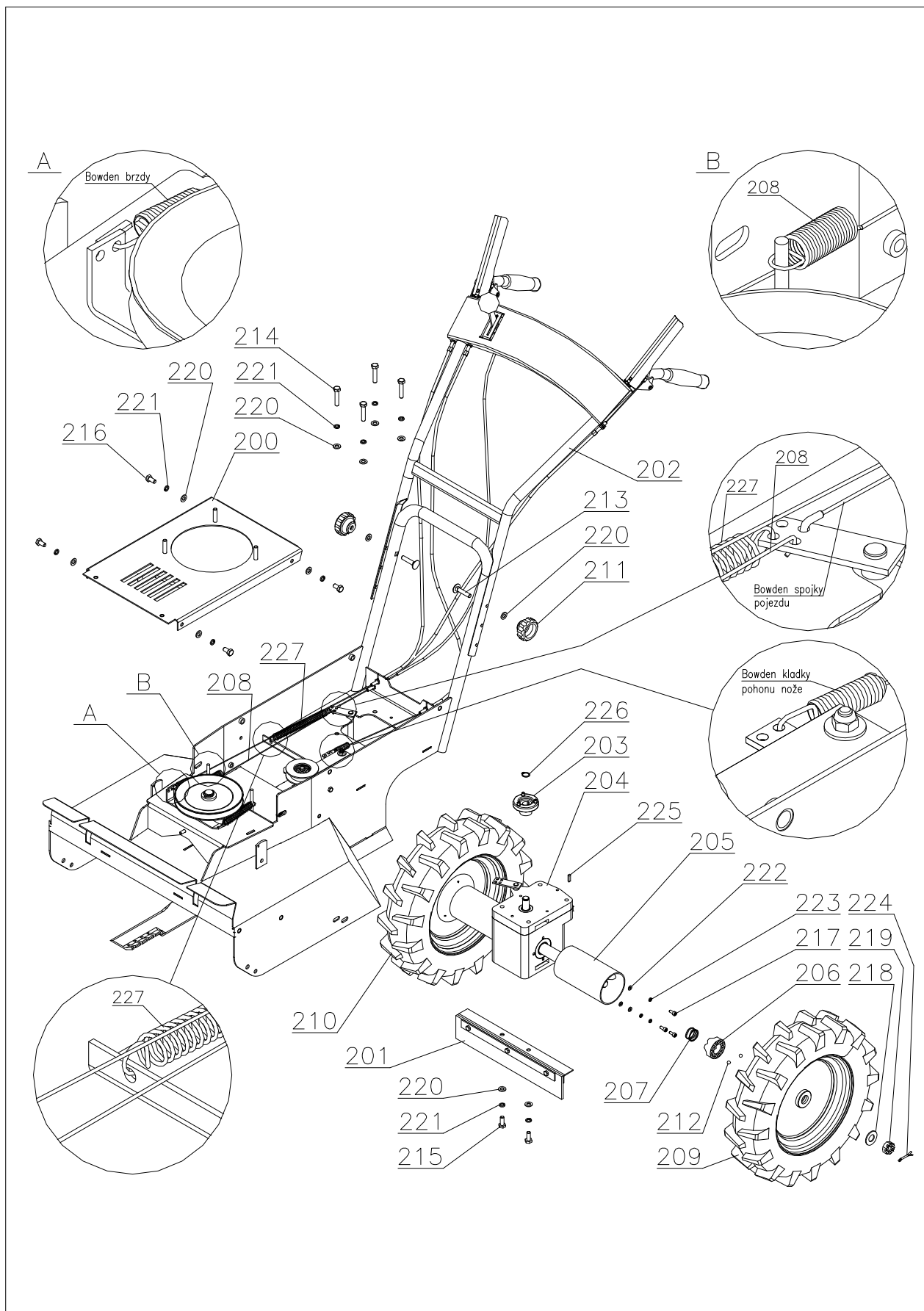
8 Contact to manufacturer.

VARI,a.s.	phone:	(+420) 325 607 111
Opolanská 350	fax:	(+420) 325 607 264
Libice nad Cidlinou		(+420) 325 637 550
CZECH REPUBLIC	e-mail:	vari@vari.cz
289 07	internet:	http://www.vari.cz/

9 The list of parts.



Blade drive					
Pos.	Part name	Dimensions	Drawing - Standard	Ord. No.	Pcs
100	Chassis of mulcher F-530	weldment	22 9 1536 060	184 111	1
101					
102	Brake shoe		22 9 1664 024	189 014	2
103	Driven pulley		22 9 3325 012	189 004	1
104	Pulley assembly		separate part list		1
105	Brake toggle	BDR-595	22 9 8032 048	196 003	1
106	Blade shaft		32 0 3822 027	184 112	1
107	Blade holder		32 0 8021 004	184 113	1
108					
109					
110	Shim	42x36x0,1	32 0 9220 024	110 012	3
111	Shim	30,5x20,2x0,3	32 0 9220 058	127 041	6
112	Cover		32 1 9220 126	127 014	1
113	Brake shoe spring		632 0 9746 044	189 511	1
114	Blade Hi-Lift GATOR	53,3 cm		180 500	1
115	Bearing	6004 2RS		9943158	2
116	Spring	TZ 1.8x16.2x63x20		169 514	1
117	Spring	T 080.088.0632		184 553	1
118					
119	Cap VINYL FLEX	6x20 black		184 528	1
120					
121	Bolt	M10x1x25	ČSN EN28676	137 501	1
122					
123	Bolt	M6x45	ČSN 02 1103.25	195 523	1
124					
125	Bolt	M6x10	BN 3326	184 529	1
126					
127					
128	Nut	M6	ČSN 02 1492.25	168 516	4
129	Washer	21	ČSN 02 1702.15	124 530	1
130					
131	Washer	10,2	ČSN 02 1740.05	106 530	1
132					
133					
134					
135	Washer	6,1	ČSN 02 1740.05	6510920	1
136	Key	5e7x5x32	ČSN 02 2562	184 527	1
137	Retaining ring	42	ČSN 02 2931	136 506	1
138	Retaining ring	20	ČSN 02 2930	110 515	3
139					
140	Safety washer	8	BN13194	184 614	1
141	Pin of pulley arm		32 0 9311 180	184 092	1
142	Key		32 0 3330 044	184 114	1
143	Nut	M10	ČSN 02 1492.25	195 527	
144	Washer	10,5	ČSN 02 1702.15	189 567	2
145	Washer	6,6	ČSN 02 1729.05	195 530	1
146	Pad	069-034 14x3/8		182 534	2
147	Bolt	M10x25	ČSN 02 1103.55	184 568	2
148	Nut	M10	ČSN 02 1492.25	195 527	2
149	Washer	10,5	ČSN 02 1702.05	189 567	2



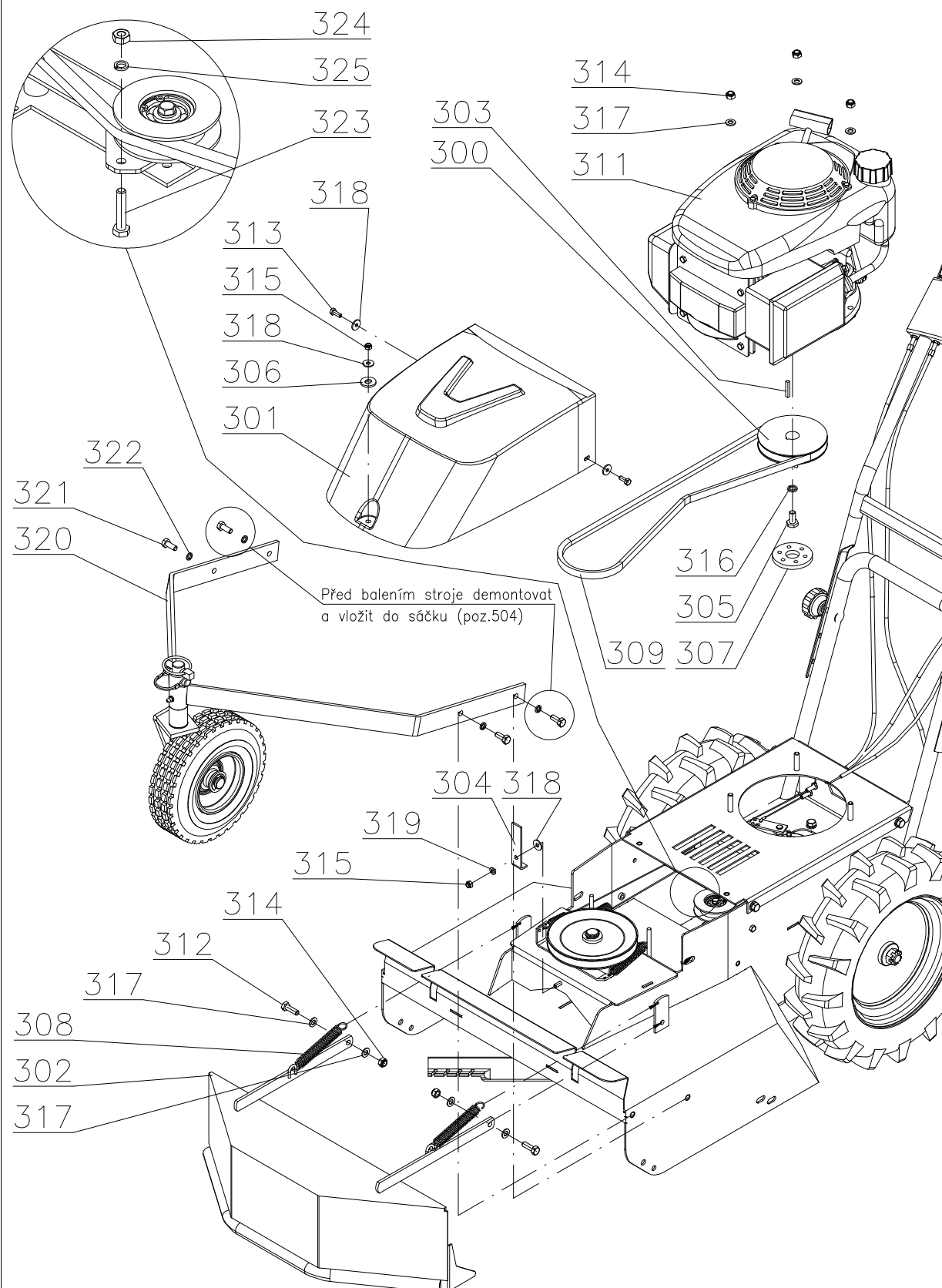
Wheel drive					
Pos.	Part name	Dimensions	Drawing - Standard	Ord. No.	Pcs
200	Engine plate		22 9 8032 050	196 008	1
201	Riveted mudflap		22 9 8534 010	196 059	1
202	Handlebars assembly		separate part list		1
203	Driven part of clutch		32 0 3625 029B	196 045	1
204	Gearbox F-530	assembly	622 9 3282 056	184 530	1
205	Wheel cuff	black	632 0 1642 008	189 507	2
206	Freewheel		632 0 8021 026	196 509	2
207	Spring		632 0 9746 046 Z	189 512	2
208	Wheel clutch spring		632 0 9746 056	196 518	1
209	Left wheel VDZ	3.5-8 4PR	-	see note	1
210	Right wheel VDZ	3.5-8 4PR	-	see note	1
211	Plastic rosette	M 8-D.50 'JJV'	-	189 521	2
212	Ball	Diam. 7.144	-	189 575	4
213	Bolt	M8x50	ČSN 02 1319.25	189 593	2
214	Bolt	M8x40	ČSN 02 1103.25	196 503	4
215	Bolt	M8x20	ČSN 02 1103.25	189 548	4
216	Bolt	M8x16	ČSN 02 1103.25	106 547	4
217	Bolt	M5x12	ČSN 02 1143.50	189 580	6
218	Nut	M16x1,5	ČSN 02 1412.25	189 560	2
219	Washer	17	ČSN 02 1702.15	189 566	2
220	Washer	8,4	ČSN 02 1702.25	131 517	12
221	Washer	8,2	ČSN 02 1740.05	104 574	10
222	Washer	5,3	ČSN 02 1702.15	189 581	6
223	Washer	5,1	ČSN 02 1740.05	127 512	6
224	Split pin	4x32	ČSN 02 1781.05	189 577	2
225	Key	4e7x4x18	ČSN 02 2562	196 508	1
226	Retaining ring	14	ČSN 02 2930	110 513	1
227	Spring	TZ 200.140.1420		184 632	1

Note:

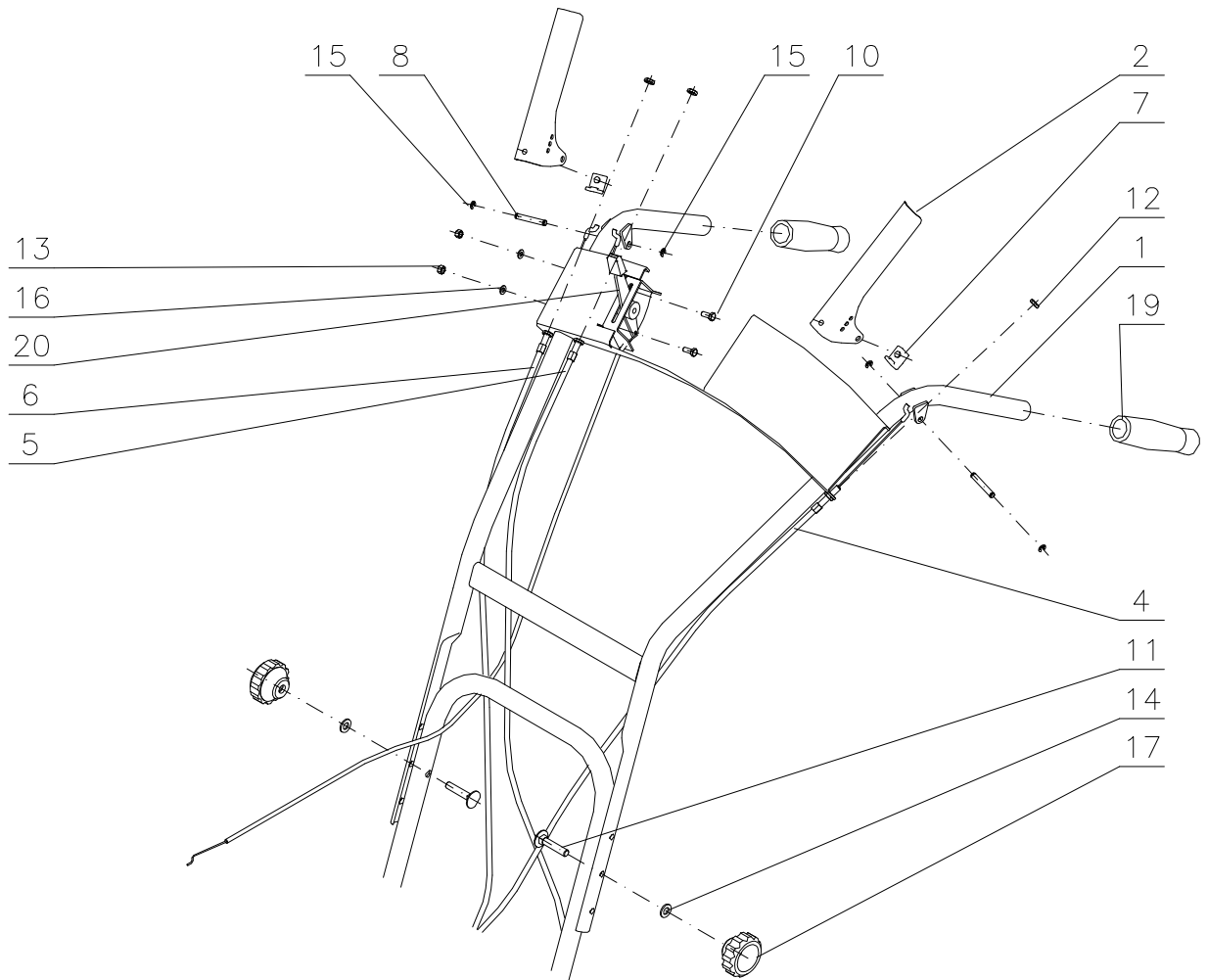
Positions 209 and 210 are supplied with pressed-on balls (pos. 212) only, see the positions below:

Pos.	Part name	Dimensions	Drawing - Standard	Ord. No.	Pcs
-	Left wheel VDZ assembly		22 1 1770 022A	184 119	1
-	Right wheel VDZ assembly		22 1 1770 023A	184 120	1

Pos. 323, 324 and 325 to be mounted after the V-belt (pos. 309) is put on

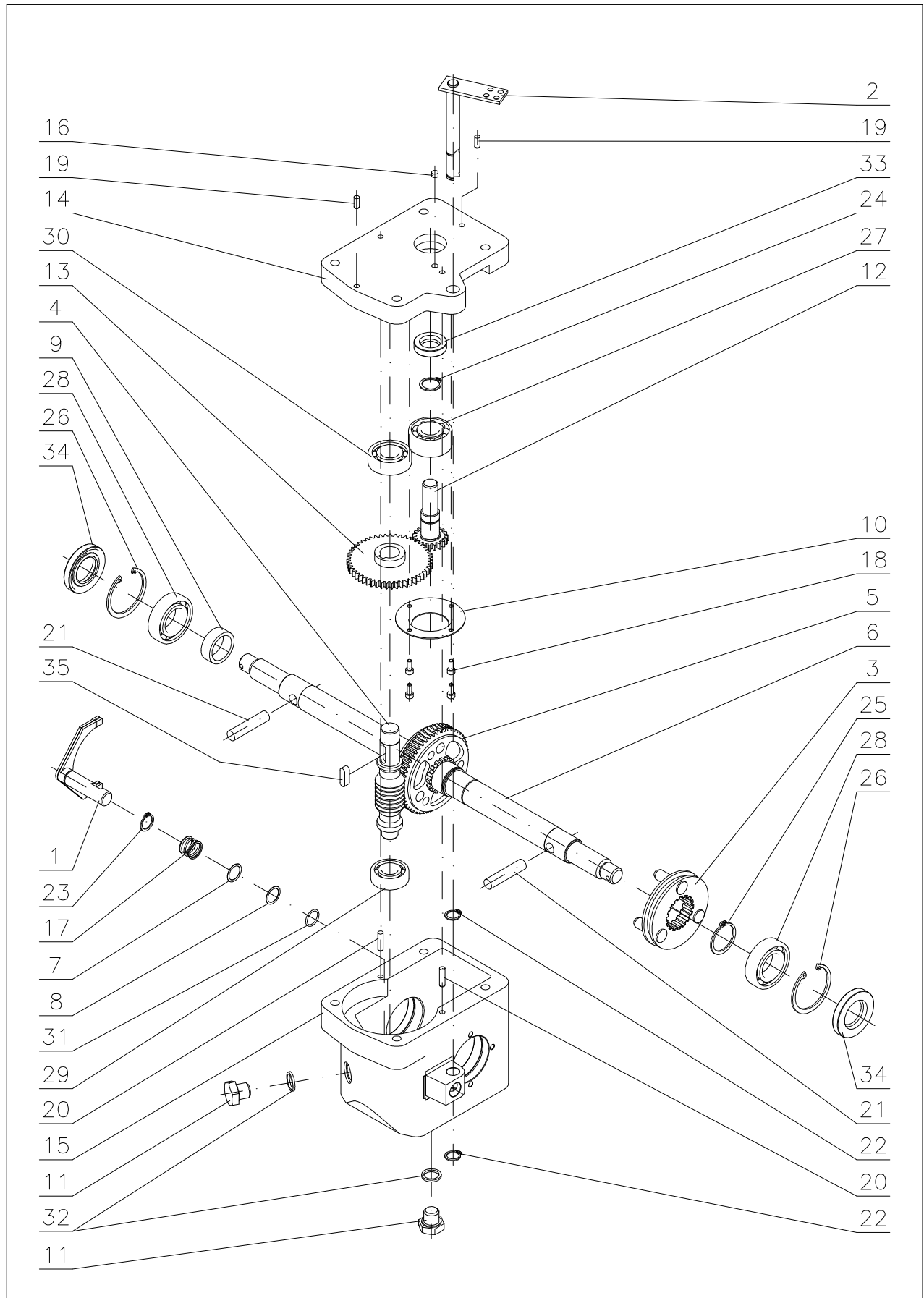


Engine and covers					
Pos.	Part name	Dimensions	Drawing - Standard	Ord. No.	Pcs
300	Driving pulley	diam. 106 dw assembly	22 9 3325 034	184 022	1
301	Mulcher V-belt cover	assembly	22 9 8545 039	184 020	1
302	Front cover weldment		22 9 8549 012	182 030	1
303	Key	3/16"	32 0 3330 021	189 036	1
304	Front V-belt guide		32 0 3340 007	184 056	1
305	Bolt	W 3/8"	32 0 9016 057	105 011	1
306	Rubber washer		32 0 9220 230	189 105	1
307	Rubber part of clutch	BDR-595	632 0 9220 231	196 545	1
308	Spring	TZ 1.8x16.2x63x20	-	169 514	2
309	V-belt	X13 x 1335 Ld 6T6K	-	184 608	1
310					
311	Engine HONDA GCV160	E-N2-E8-OH	-	171 535	1
312	Bolt	M8x25	ČSN 02 1103.25	110 525	2
313	Bolt	M6x16	ČSN 02 1103.25	189 552	2
314	Nut	M8	ČSN 02 1492.25	104 622	5
315	Nut	M6	ČSN 02 1492.25	169 516	2
316	Washer	10,2	ČSN 02 1740.05	106 530	1
317	Washer	8,4	ČSN 02 1702.15	131 517	7
318	Washer	6,6	ČSN 02 1727.05	169 508	4
319	Washer	6,4	ČSN 02 1702.15	189 571	1
320	Leading wheel		separate part list		
321	Bolt	M8x20	ČSN 02 1103.25	189 548	4
322	Washer	8,2	ČSN 02 1740.05	104 574	4
323	Bolt	M6x30	ČSN 02 1103.25	184 552	1
324	Nut	M6	ČSN 02 1401.25	1800141	1
325	Washer	6,1	ČSN 02 1740.05	6510920	1

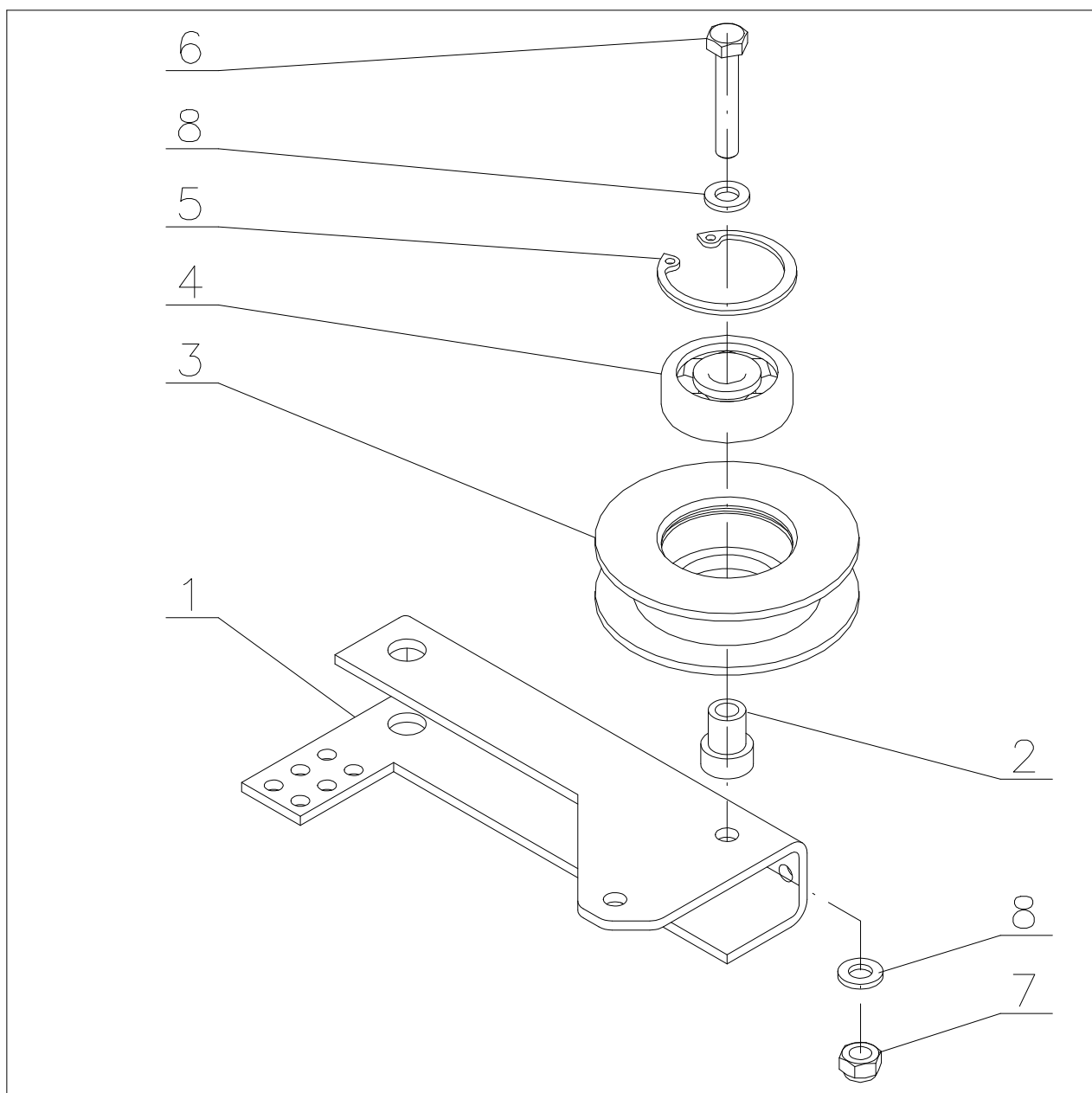


Handlebars					
Pos.	Part name	Dimensions	Drawing - Standard	Ord. No.	Pcs
1	Welded handlebars		22 9 8078 059	196 002	1
2	Control lever		32 0 8058 009	196 013	2
3					
4	Bowden cable of clutch		622 9 8074 044	196 515	1
5	Bowden cable of roller		622 9 8074 045	196 516	1
6	Bowden cable of brake		622 9 8074 046	196 517	1
7	Lever stop		632 0 8065 002	196 519	2
8	Lever pin		632 0 9311 157	196 520	2
9					
10	Bolt	M5x10	ČSN 02 1103.25	195 525	2
11	Bolt	M8x50	ČSN 02 1319.25	189 593	2
12	Nut	M6	ČSN 02 1401.25	1800141	3
13	Nut	M5	ČSN 02 1492.25	105 518	2
14	Washer	8,4	ČSN 02 1702.15	131 517	2
15	Yoke ring	4	ČSN 02 2929.05	189 576	4
16	Washer	5,3	ČSN 02 1702.15	189 581	2
17	Plastic rosette	M 8-diam. 50 „JJW“	EUROPLAST	189 521	2
18					
19	Rubber handle	ART 773 black		195 518	2
20	Accelerator lever	1AT09007, L900	START	196 548	1
21	Red knob	1AC02040 1AE00300	START	184 519	1

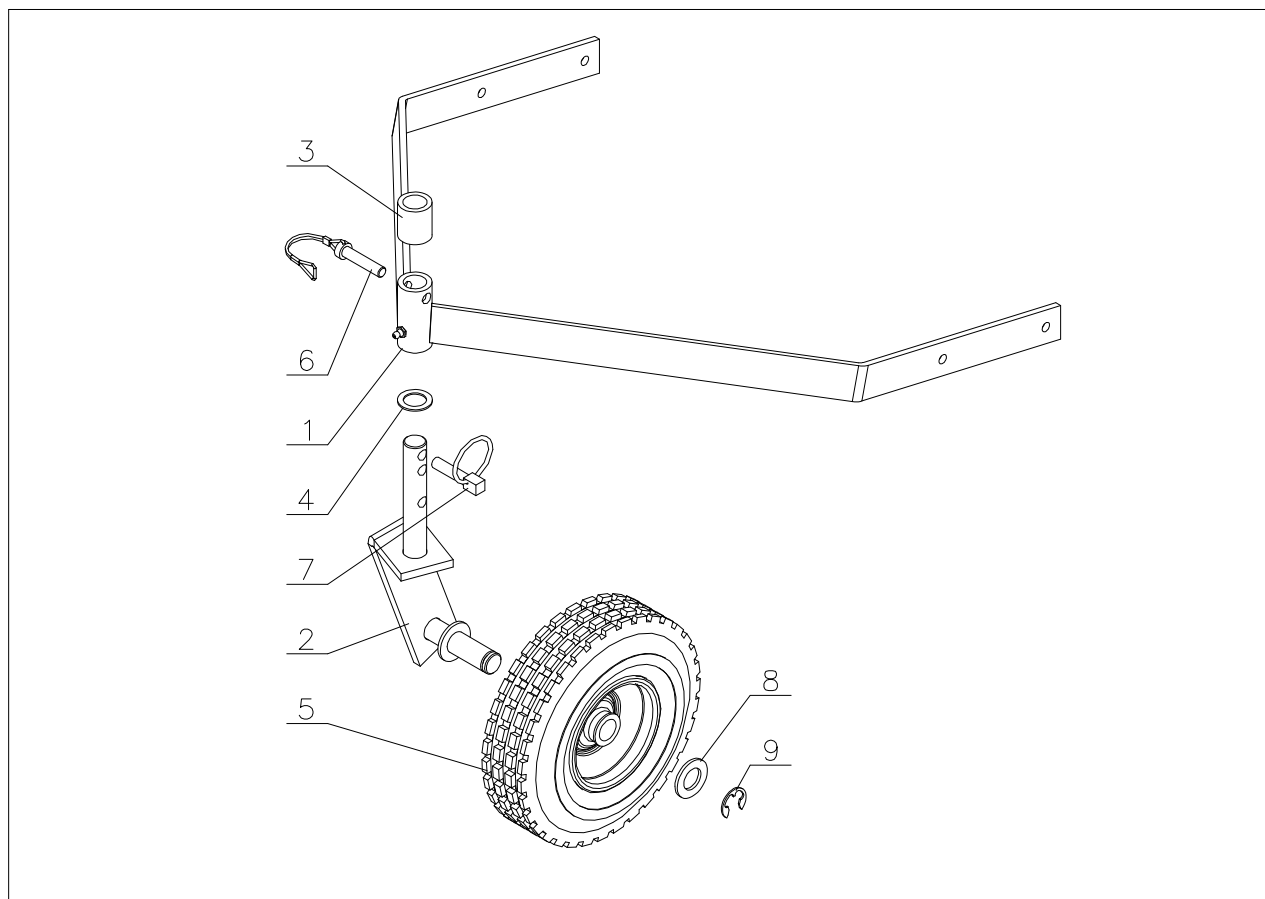
Note: Pos. 21 is not shown in the picture, it is put on the lever Pos. 20



Gearbox					
Pos.	Part name	Dimensions	Drawing - Standard	Ord. No.	Pcs
1	Fork weldment		22 1 3330 013A	189 078	1
2	Lever assembly		22 9 3330 017	196 022	1
3	Driving disc assembly		22 9 3616 006	189 029	1
4	Worm	2:54	32 0 3214 028	196 023	1
5	Worm wheel		32 0 3221 016	196 027	1
6	Shaft - Wheel axle		32 0 3814 008	189 028	1
7	Shim	20/14,2/0,2	32 0 9220 115	127 027	1
8	Shim	20/14,2/0,3	32 0 9220 114	127 026	1
9	Spacer ring 10,7		32 0 9220 195	189 032	1
10	Cup		32 0 9220 197	196 032	1
11	Plug		32 1 9016 036	106 050	2
12	Pinion 14 teeth		632 0 3014 011	196 541	1
13	Gear 56 teeth		632 0 3021 029	196 540	1
14	Cover		632 0 3253 044	196 511	1
15	Box		632 0 3253 045	196 510	1
16	Felt		632 0 9520 045	189 528	1
17	Spring		632 0 9746 047	189 527	1
18	Bolt	M4x10	ČSN 02 1143.50	196 521	4
19					
20	Pin	5x20	ČSN 02 2150	189 556	2
21	Pin	10x45	ČSN 02 2150	2010260	2
22	Retaining ring	12	ČSN 02 2930	6021502	2
23	Retaining ring	14	ČSN 02 2930	110 513	1
24	Retaining ring	17	ČSN 02 2930	110 514	1
25	Retaining ring	28	ČSN 02 2930	189 553	1
26	Retaining ring	47	ČSN 02 2931	126 504	2
27	Bearing	3203	ČSN 02 4630	196 533	1
28	Bearing	6005	ČSN 02 4630	129 535	2
29	Bearing	6202	ČSN 02 4630	9943131	1
30	Bearing	6203	ČSN 02 4630	106 507	1
31	Ring	18x14	ČSN 02 9280.2	189 591	1
32	Ring	14x18 AL	ČSN 02 9310.3	106 539	2
33	Gufero sealing	17x30x7	ČSN 02 9401.0	9943223	1
34	Gufero sealing	25x47x7	ČSN 02 9401.0	124 505	2
35	Key	6x6x20	ČSN 022562	196 536	1




Pulley assembly					
Pos.	Part name	Dimensions	Drawing - Standard	Ord. No.	Pcs
1	Pulley arm		32 0 3330 034	196 010	1
2	Pulley bearing shell		32 0 9320 071	196 528	1
3	Pulley		632 0 3325 040	189 586	1
4	Bearing	6300 2RS	ČSN 024630	189 585	1
5	Retaining ring	35	ČSN 02 2931	126 503	1
6	Bolt	M6x30	ČSN 02 1103.25	184 552	1
7	Nut	M6	ČSN 02 1492.25	168 516	1
8	Washer	6,4	ČSN 02 1702.15	189 571	2



Leading wheel					
Pos.	Part name	Dimensions	Drawing - Standard	Ord. No.	Pcs
1	Leading wheel frame	F-530 (2006)	22 9 1646 042	184 116	1
2	Wheel hinge F-530 (2006)		22 9 1646 040	184 117	1
3	Distance ring		32 0 9320 094	184 118	1
4	Sliding washer		32 0 9220 229	182 039	1
5	Wheel	220/20F		184 625	1
6	Cotter pin	AMA art. 2914		182 533	1
7	Pin with ring	160 039		125 500	1
8	Washer	21	ČSN 02 1702.05	124 530	1
9	Stirrup ring	15	ČSN 02 2929.05	184 621	1

10 Letter of Guarantee.

To be completed by manufacturer

Name of product **Mulcher**
 Model **Hurricane F-530**
 Serial number
 Engine serial number
 Warranty (months)
 Output control  ²⁴ *Vladimir Drobny*

The above product was passed over to the purchaser without any defects including the appropriate commercial and technical documentation and accessories. The purchaser was duly informed about the principles of correct operation and technical maintenance of the product.

To be completed by seller

Name of purchaser
 Address of purchaser
 Purchaser's signature
 Place of sale
 Date of sale

Seller's stamp and signature

GUARANTEE CONDITIONS
Subject of warranty:

Warranty relates to the basic product supplied by VARI a.s., including accessories

Warranty period:

Warranty period for the product and accessories supplied with the product is 24 months from the date of sale to the purchaser if not stated otherwise in the "Service Manual for VARI Machines and Systems Equipped with HONDA Engines". Time from the enforcement of liability for defects to the date when the user was obliged to take over the thing after the end of repair is not included in the warranty period.

The seller is obliged to give the purchaser a receipt confirming the date of the right exercise and repair and the time of its duration. If the product is exchanged, the warranty period starts running again from the date on which the purchaser took over the new product. If it is a whole assembly to be replaced, the warranty period starts running for the given assembly again from the date of product take-over.

Scope of manufacturer's liability:

Manufacturer bears responsibility for the product having properties usual for the kind of the product in question and specified parameters for the whole period of warranty. The manufacturer does not answer for defects of the product resulting from current wear or from the product's use for purposes other than specified.

Warranty extinction:
Claim of warranty becomes extinct if:

- the product was not used and maintained as specified in the Instructions for use, or it was damaged by any unauthorized operation by the user;
- the product was used in conditions or for purposes other than specified;
- the letter of guarantee for the product cannot be presented;
- data filled in the original product's documentation by the manufacturer, seller or service organization were intentionally falsified;
- a part of the product was replaced with a non-original component;
- the product was damaged or excessively worn due to improper maintenance;
- the product suffered an accident or was damaged by an Act of God;
- a modification was made to the product made without manufacturer's consent;
- defects result from improper storage of the product;
- defects result from natural and common operating wear of the product;
- the prescribed warranty inspection of the product was not made or was not made within the set-up time (this applies only for products with extended warranty period). Warranty inspections must be made in selected products with the extended warranty period according to terms stipulated in the "Service Manual for VARI Machines and Systems Equipped with HONDA Engines".
- the product was connected to or operated with the equipment not approved by the manufacturer.

Complaints:

Complaints are applicable by purchasers at the seller's. When applying a complaint, the purchaser is obliged to submit a duly filled in letter of guarantee. Warranty repairs are carried out by sellers or by special service shops appointed by them.

Legislation:

Other purchaser/seller relations are ruled by relevant stipulations of the Civil Code No. 40/1964 Gaz. (as amended), and/or Commercial Code No. 513/1991 Gaz. (as amended).

Warranty inspection 1 Date:Person in charge:..... Service shop stamp and signature	Warranty inspection 1 Machine model..... Serial No.:.....
Warranty inspection 2 Date:.....Person in charge:..... Service shop stamp and signature	Warranty inspection 2 Machine model..... Serial No.:.....
1st Warranty service Date of complaint delivery:..... Date of repair completion:..... Brief description of the defect:..... Replaced parts (new warranty of ... months):..... Parts:..... Repair made by: Service shop stamp and signature	1st Warranty service Machine model..... Serial No.:..... Date:..... Repair made by:..... Stamp and signature.....
2nd Warranty service Date of complaint delivery:..... Date of repair completion:..... Brief description of the defect:..... Replaced parts (new warranty of ... months):..... Parts:..... Repair made by: Service shop stamp and signature	2nd Warranty service Machine model..... Serial No.:..... Date:..... Repair made by:..... Stamp and signature.....
3rd Warranty service Date of complaint delivery:..... Date of repair completion:..... Brief description of the defect:..... Replaced parts (new warranty of ... months):..... Parts:..... Repair made by: Service shop stamp and signature	3rd Warranty service Machine model..... Serial No.:..... Date:..... Repair made by:..... Stamp and signature.....
4th Warranty service Date of complaint delivery:..... Date of repair completion:..... Brief description of the defect:..... Replaced parts (new warranty of ... months):..... Parts:..... Repair made by: Service shop stamp and signature	4th Warranty service Machine model..... Serial No.:..... Date:..... Repair made by:..... Stamp and signature.....