

VARI®

Mulcher

***Hurricane* F-700**



Instructions for use

2007

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1 Basic information

⚠ **Ask your dealer to provide the machine unpacking, assembly and briefing**

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

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

VARI, a.s. ordering number	4165
Model	F-700
Commercial name	<i>Hurricane</i>
Engine model	Honda GXV 340
Machine ser. no./Year of manufacture	/
Engine serial no.	
Date of delivery (sale)	
Supplier	
Address	
Tel./fax/E-mail/internet	

Your notes:

The 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 a machine from a wide range of machines and attachments made by **VARI**, a.s. as a system of gardening, farming, small agricultural and communal technology.

The **Hurricane F-700** mulcher is designed to meet the most exacting requirements of professional use. High-performance engine with a patent-protected edge on the cutting blade guarantee a problem-free mowing of different stand types. Mechanical 5-speed gearbox in combination with wide travel wheels and low machine centre of gravity enable an easy machine operation even in the most difficult terrains. The machine can be equipped with a snow plough, snow chains and a sulky, which makes its operation possible throughout the whole year. Automatic brake and a possibility to lock the front wheels in forward direction provide for a safe operation of the machine namely on slopes.

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 Basic 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 the intelligence.

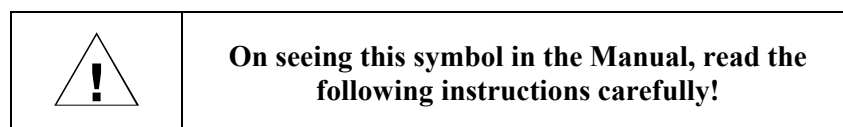
The machine can be operated only by persons in good mental and physical condition. For the professional use of the machine the machine owner is obliged to ensure a work safety training and provide instructions on machine control for operators and to keep records on these trainings and briefings. **Also, the owner 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 the manual.

The manual supplied with the machine is an integral part of the machine. It has to be available at any time, placed at a well accessible place with no risk of its 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 operators and other people occurring in the vicinity of the machine as well as damages on property, it is absolutely necessary to follow the safety regulations marked in the Instructions for use with the following warning safety symbol:



Note: Left and right as mentioned in the Manual – is at all times meant as viewed from the site of the operator.

3 Operation safety

3.1 Safety regulations

- ⚠ This international safety 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 following 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, switch off the engine!
- ⚠ Never let the engine running at maximum speed or idling for a long time with the cutting blade and wheel drive clutches 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 and 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 stones, wires, loose construction debris, etc., which could be flinging up or which might damage the machine. If these cannot be removed, don't work the places.
- ⚠ The machine is equipped with a rotating working implement. Maximum circumferential speed is **82 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 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 according 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 handlebars.
- ⚠ 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 noise and vibration values

<i>Hurricane F-700 with engine</i>	A	B	C
HONDA GXV 340	$L_{pAeq,T} = 89,0 \pm 1,0 \text{ dB}$	$L_{WA} = 98 \text{ dB}$	$a_{hv} = 2,5 \pm 1,3 \text{ m.s}^{-2}$

Explanatory notes:

A = declared emission level of acoustic pressure A at operator's site $L_{pAeq,T}$ (according to ČSN EN 836+A1/A2, Attachment H and ČSN EN ISO 11 201)

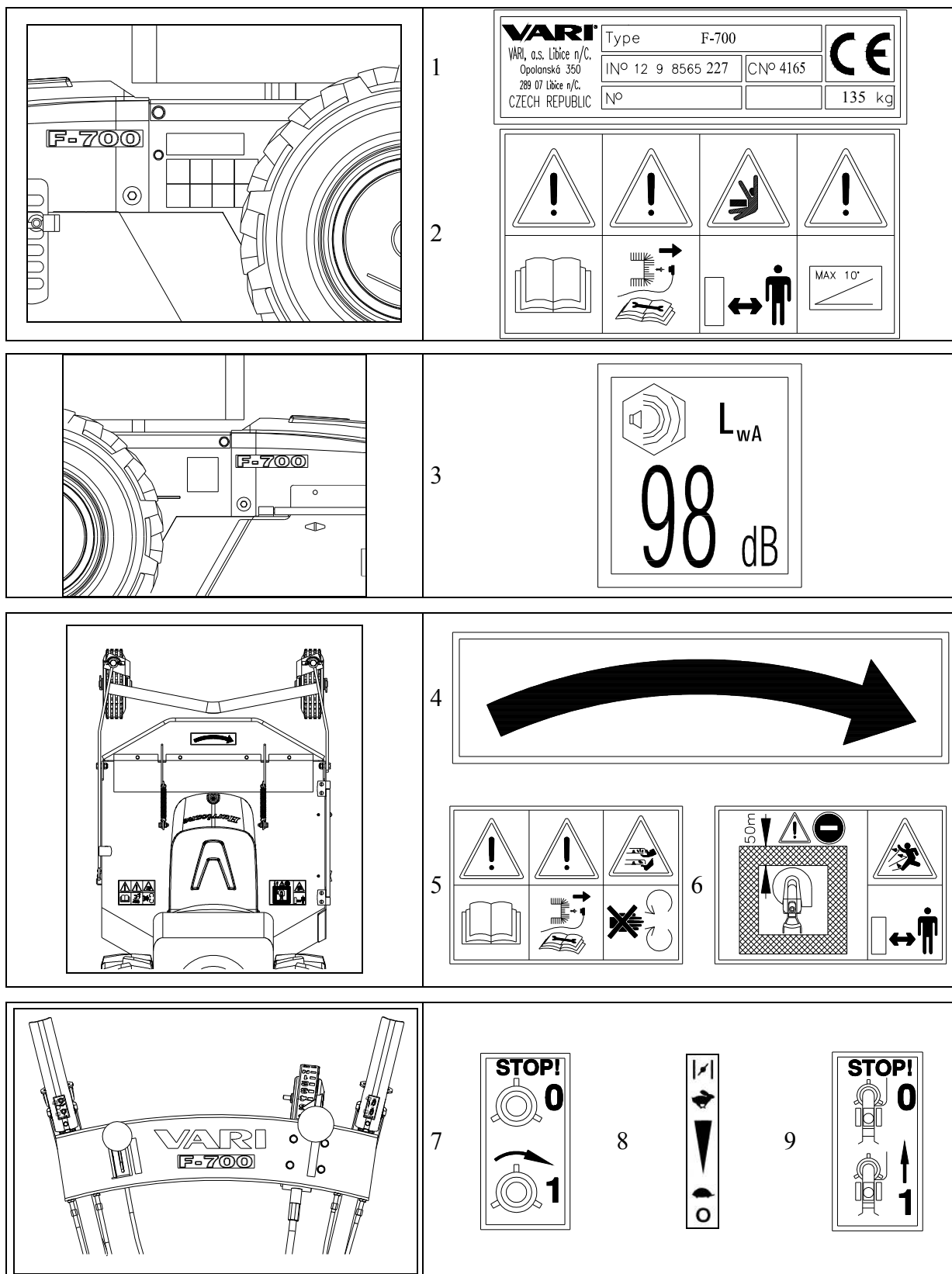
B = guaranteed level of acoustic performance of the machine L_{WA} (according to NV No. 9/2002 Gaz.)

C = declared sum of accelerated vibrations transmitted onto operator's hands/arms a_{hv} (according to ČSN EN 836+A1/A2, Attachment G and ČSN 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.	Safety information description
1	Type plate
2	Instructions for use to be studied prior to machine operation and maintenance During the machine maintenance the cable is to be disconnected from the spark plug Entry of exposed and other persons into the machine's working space is prohibited Safe slope accessibility
3	Guaranteed level of machine's acoustic performance
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 cable 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	Cutting blade drive switch. "0" = blade does not turn, "1" = blade in rotation
8	Lever positions for adjustment of engine rotations
9	Wheel drive switch. "0" = machine stands still, "1" = machine travels



4 Use, technical specifications and technical description of the machine

4.1 Machine use

This professional mulcher is designed for mowing grass stands of all kinds of stalky grasses, preferably old and dry, on both maintained and unkept sites. The mulcher can be used for cutting self-seeding woody species up to a diameter of 2 cm. Periods most suited for the machine use are those when the stands 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 stands emerged in the same period when cut is up to 50 cm. This maximum height may decrease according to stand density, moisture content and type.

⚠ Cutting width must be at all times accommodated to the density of the cut stand.

With respect to thread profile and system of cutting height set-up, the machine is not designed for park treatment of green areas.

4.2 Optional attachments

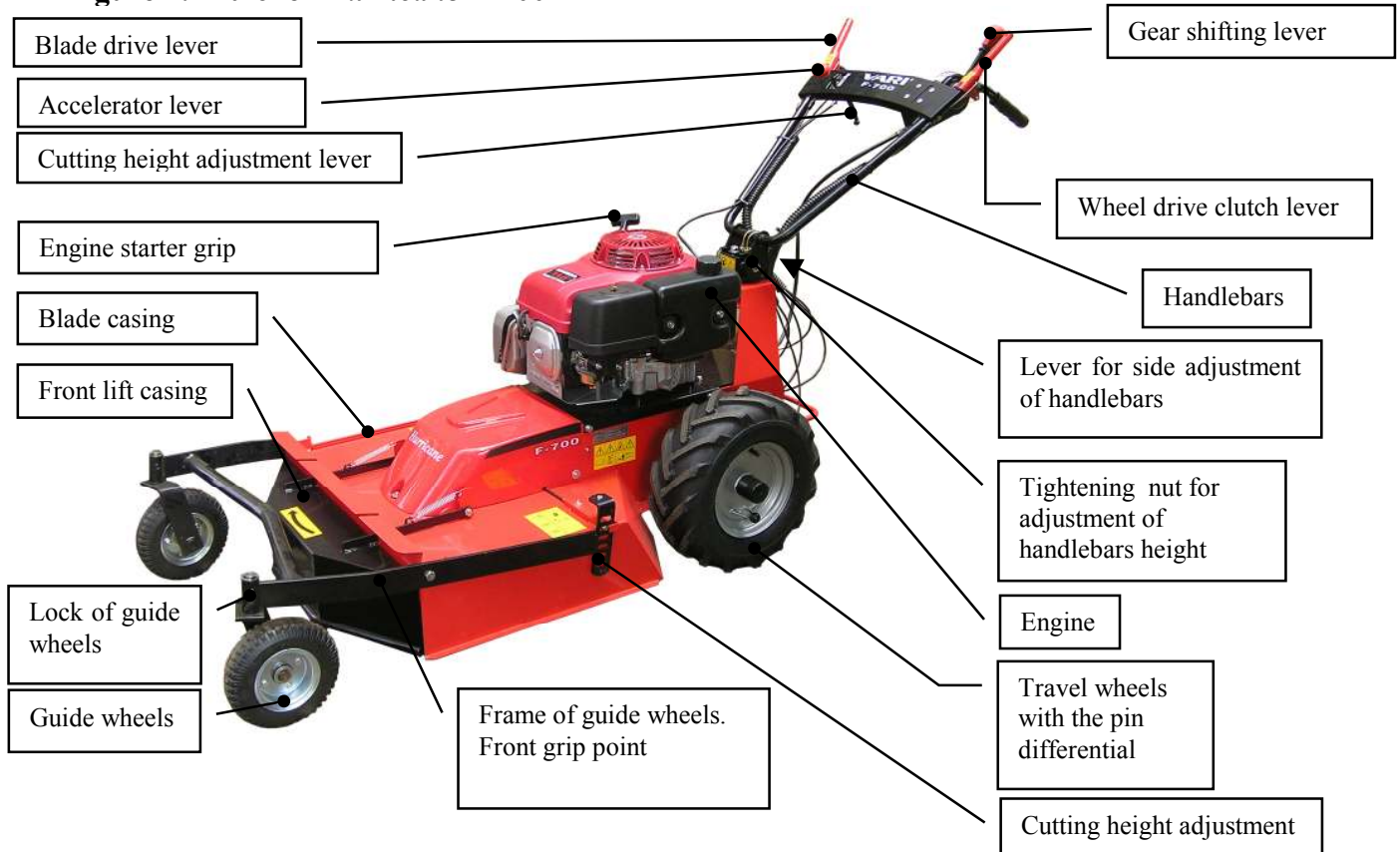
Snow plough ASR-700, snow chains, braked seat (sulky) AV-700.

Note: The above attachments are sold separately. Ask your dealer to inform you about the term of their market introduction.

4.3 Technical specifications

Hurricane F-700	Unit	Value
Length (incl. handlebars)	mm	2037
Width	mm	744
Height (incl. handlebars)	mm	1210
Weight	kg	135
Maximum cutting width of the machine	cm	68
Cutting blade adjustment height (6 positions)	cm	6-14
Blade speed (at max. engine revolutions)	min ⁻¹	2300
Circumferential blade speed (at max. engine revolutions, without load)	m.s ⁻¹	82
Travel speeds (at max. engine revolutions, without load)	km.h ⁻¹	1,53 – 2,32 – 2,94 – 4,07 – 6,75 – R 2,94
Area performance of the machine (according to stand type)	m ² /h	1000 – 4400
Engine	Unit	HONDA GXV 340
Displacement	cm ³	337
Bore x stroke	mm	82 x 64
Max. power at revolutions	kW/min ⁻¹	8,1/3600 (11 HP)
Max. torque at revolutions	N.m/ min ⁻¹	24/2500
Max. adjusted engine revolutions	min ⁻¹	3200 (+/-100)
Fuel tank capacity	litres	2,3
Petrol (unleaded)	octane No.	91-95
Oil filling	litres	1,1
Oil	API	SJ/CF (SG/CD)
Spark plug	--	NGK BPR5ES
	--	BRISK LR17YC

Figure 1: Mulcher *Hurricane* F-700



5 Instructions for use

5.1 Machine assembly

Ask your dealer to provide unpackaging of the machine and briefing in machine operation.

With respect to difficult withdrawal of the machine from the box, it is advised to cut the box through in corners and then to take off the machine onto a fixed rest. Grip points: Front: blade casing edge, Rear: tube of handlebars grip. Regarding the machine weight, work with a minimum of one other person.

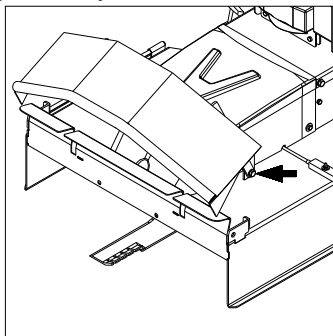
If you assemble the machine yourself, please follow the instruction below:

1. Remove all parts from the bag.
2. Cut the plastic tape holding the shifting lever on the frame of guide wheels. Put the guide wheels aside. Mount the front lift casing according to Fig. 2 (upper part).
3. Turn the handlebars so that the handrails point to the rear of the machine. Bowden cables must not be twisted!
4. Attach the handlebars (1) to the turntable (5) by means of bolt M10x110 with a square (2), washer Ø10,5 mm (3) and tightening nut M10 (4). Lubricate the thread of the bolt (2) with grease for hydraulic pumps. The tightening nut must be at the right. Fasten the bowden cables from control levers to the handlebar (at a distance of about 15 cm from the end of handlebar tube bending) by means of plastic tightening tapes (6).

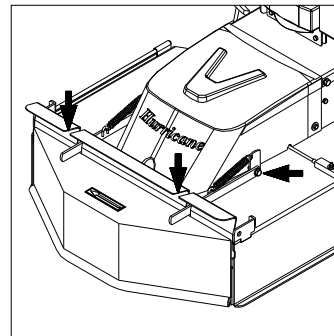
5. Fasten the gear shifting lever (7) by means of 3 bolts M6x50 (8), 3 flat washers (9) and 3 self-locking nuts M6 (10) from the left to the lever holder on the bottom part of handlebars. The bolt with the washer should be mounted from the right.
6. Hook the springs (11) into eyes in front casing arms and into holes in footings on the blade casing with suitable hooks.
7. Screw the guide wheels on the lugs in the front of blade casing by means of bolt (12), flat washer 10,5 mm (13) and self-locking nut M10 (14). When putting the frame of guide wheels into the lock-plate guiding, the locking pin must be pushed in (by pressing the locking lever of cutting height adjustment on the right handlebar grip – see Fig. 1).
8. Mount the bumper according to Fig. 2 (lower part).

Figure 2: Machine assembly

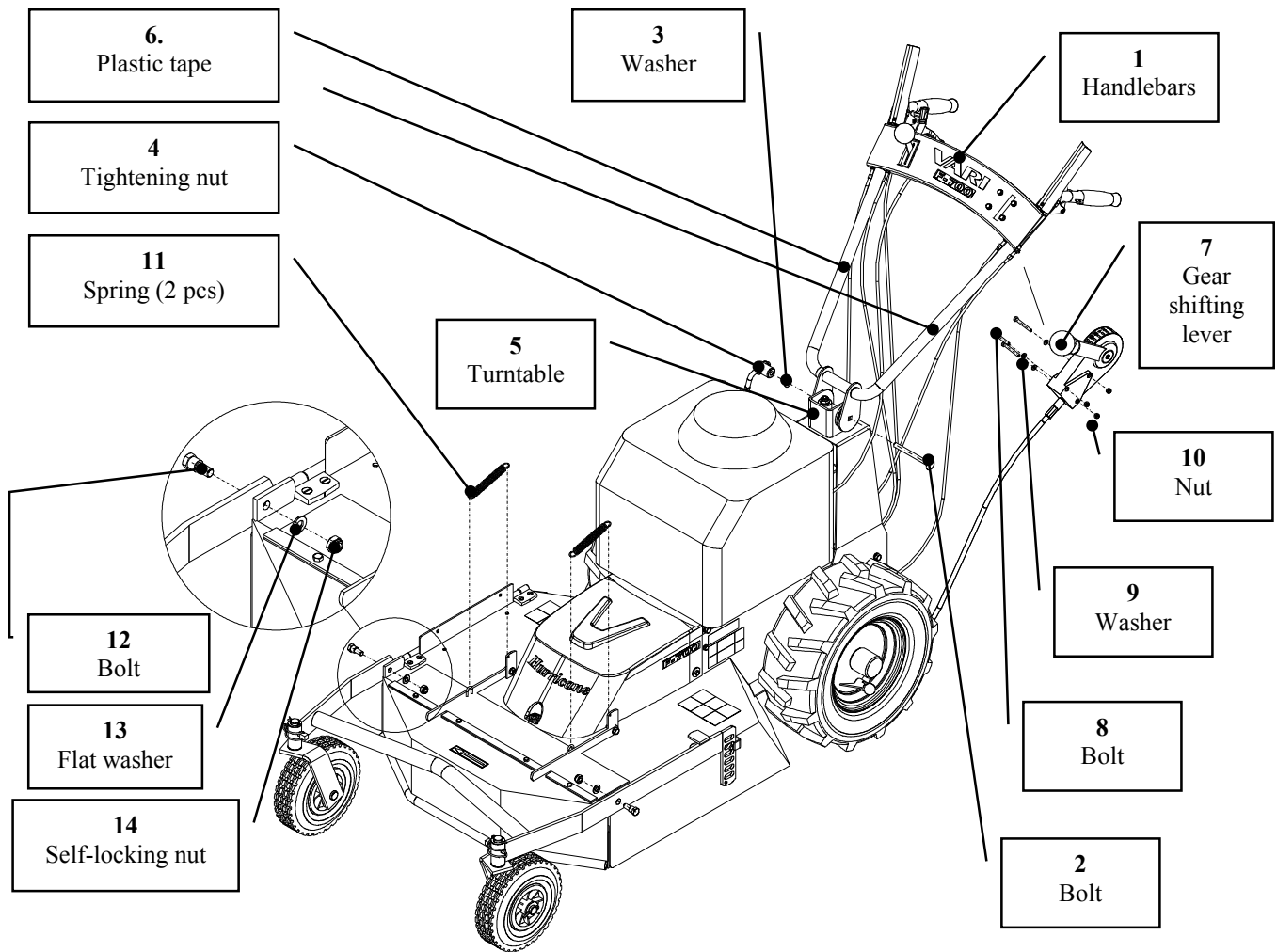
Front casing assembly



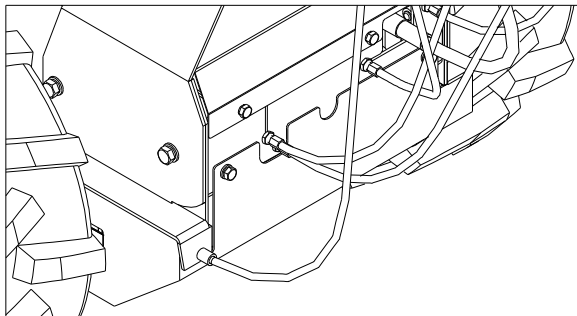
Unscrew the front casing from the machine chassis (on both sides).



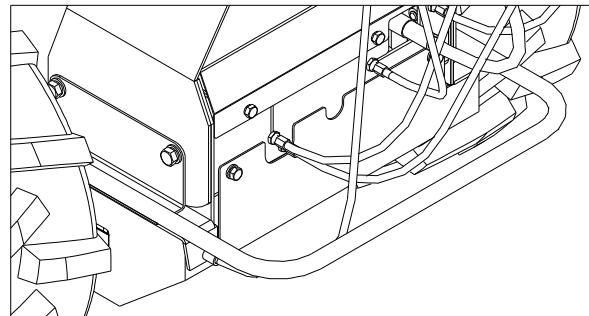
Put the front casing through the cut outs in the chassis deflector (when lifted, the front casing must stop against the deflector) and screw it back to the machine chassis – tighten the nuts, so that the casing can be freely lifted.



Bumper assembly



Unscrew 4 bolts M8x20 holding the handlebars holder on the machine chassis.



Put the bumper on the handlebars holder and screw the bolts M8x20 back. The bowden cable of brake must lead between the machine chassis and the bumper.

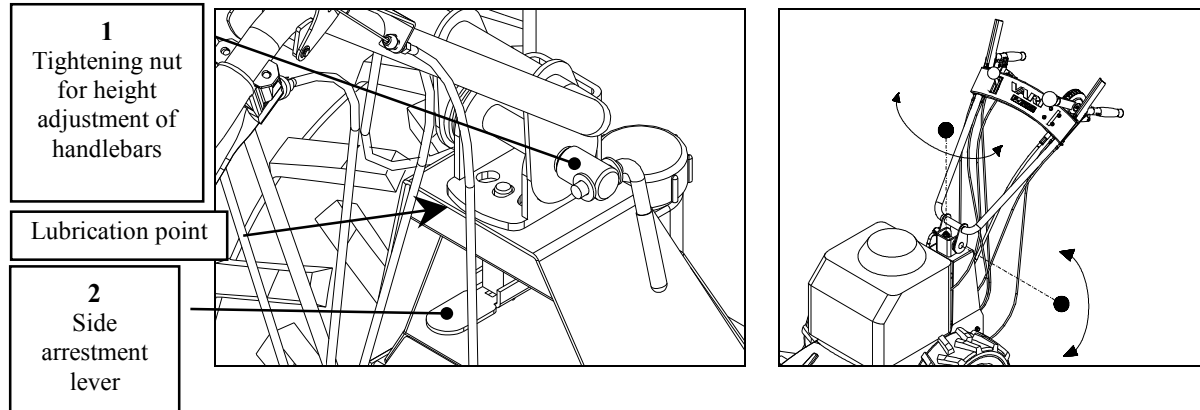
5.2 Adjustment of handlebars

Handlebars can be adjusted in two planes:

- Height: Loosen tightening nut M10 (position (1) in Fig. 3) and do the adjustment of handlebar grips at height comfortable for the operator.
- To sides: Press down the lever (position (2) in Fig. 3) and turn the handlebars by one position to the left or to the right.

In order to lessen the machine size e.g. for transport in a car, the handlebars should be either tilted forward over the engine or lowered into horizontal position and then turned clockwise by 180°. Bowden cables must be watched not to get tensioned somewhere on the machine construction.

Figure 3: Adjustment of handlebars



5.3 Putting into operation

- ⚠ **The machine may be delivered without engine fillings (in dependence on different national regulations)!**
- ⚠ **First thoroughly read the instructions 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 instructions for engine use).
- 3. Let the new or cold engine running on choke for about 30 seconds (accelerator lever in the „CHOKE“ position), 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!**

5.4 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 on the right handrail. (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 run in.

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

Note: If the blade drive is repeatedly switched on during cutting, engine stalling may occur due to resistance of grass biomass in the space of blade casing. This space must be - if possible - always properly emptied when starting the blade drive ([see point 5.7.4](#)).

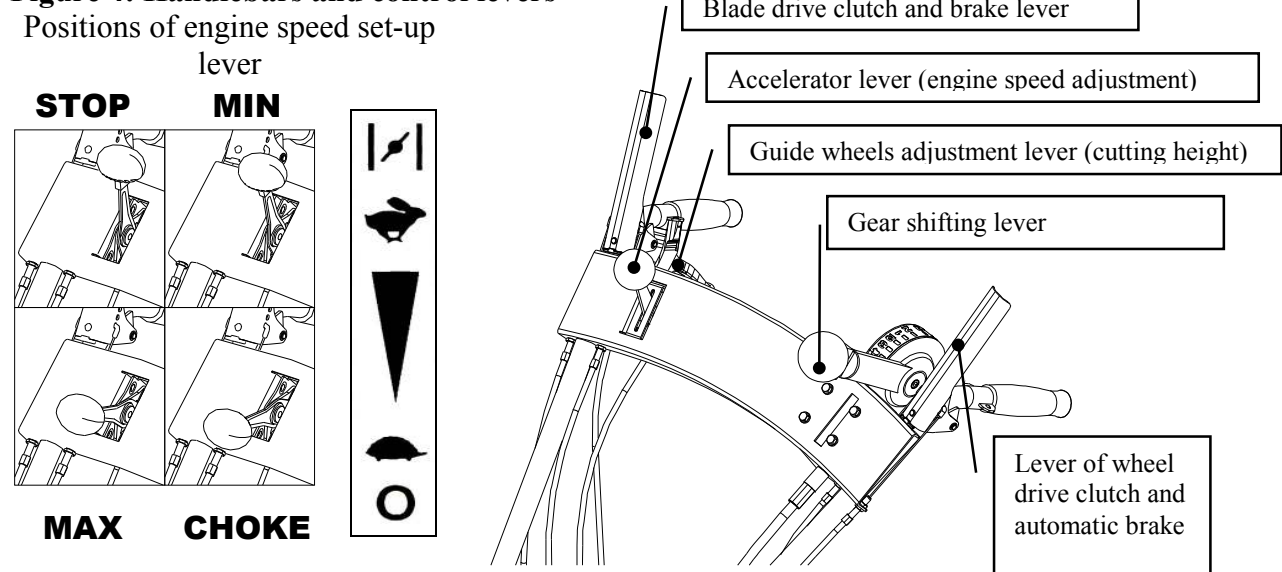
In a new or cold engine, a few of the cutting disk starts may result in engine stalling. The phenomenon will disappear after the engine warms up. If the blade drive cannot be started even after the engine has got warm, follow the table presented in Chapter [6.8](#) for diagnostics.

5.5 Machine travel forward and back

Machine travel **forward** and **back** is controlled by the **upper red** sheet-iron lever on the **left** grip of the handlebars.

- **Travel forward:** Shift into one of gears (1 - 5) by using the gear shifting level. Then press the upper red sheet-iron lever on the left handrail completely down to the grip and the machine will start moving forward (sometimes with a little delay due to the run-out of the pin differential in wheels). Start walking simultaneously with the machine start, adapting your walk pace to the direction and speed of the machine.
- ⚠ **Be prepared that the machine can start moving with a little jerk.**
- ⚠ **Starting the machine on the 5th gear, let the machine start moving at about ½ of the maximum engine speed. After the machine gets moving, set up an engine speed convenient to the pace of your safe walking.**
- **Travel back:** Shift the gear shifting level to the „R“ position. Then press the upper red sheet-iron lever on the left handrail down to the grip and the machine starts moving in reverse direction (sometimes with a little delay due to the run-out of the pin differential in wheels). Simultaneously with the machine start you have to start walking in the corresponding direction and at a corresponding pace.
- ⚠ **Be very careful when backing with the machine!**

Figure 4: Handlebars and control levers



Note: All four main positions of engine speed adjustment lever are arrested by means of a simple system (stamp/projection) in the lever body.

5.6 Machine stop

5.6.1 Stopping on the plain

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 immediately after release of the lever on the right handlebar grip. The blade will be stopped by the safety brake.

- ⚠ **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 wheel drive for a long time! Machine drive components (V-belt, belt pulley, clutch pulley, etc.) might suffer a 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. Do not hold on the machine! 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!)**

5.6.2 Stopping on the slope

The machine is equipped with an automatic brake which - if properly adjusted - will safely put the machine to stop on a slope up to 30°. The automatic brake is put into operation after releasing the wheel drive clutch lever on the left handlebar.

- ⚠ **Never let the engine running at maximum speed or idling with the cutting blade drive clutch released and with the released clutch of wheel drive for a long time! Machine drive components (V-belt, belt pulley, clutch pulley, etc.) might suffer a damage!**

5.7 Working with the machine

- ⚠ **Prior to the machine use, the stand must be cleared of solid bodies such as stones, wires, loose construction debris, etc., which could be flung or might damage the machine. Should these be impossible to remove, working of the places should be avoided.**
- ⚠ **Cutting 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.**

5.7.1 Adjustment of cutting height

Adjustment of cutting height is affected by several important factors:

- stand height and density
- plant species prevailing in the stand
- machine travel speed
- cutting width
- surface unevenness

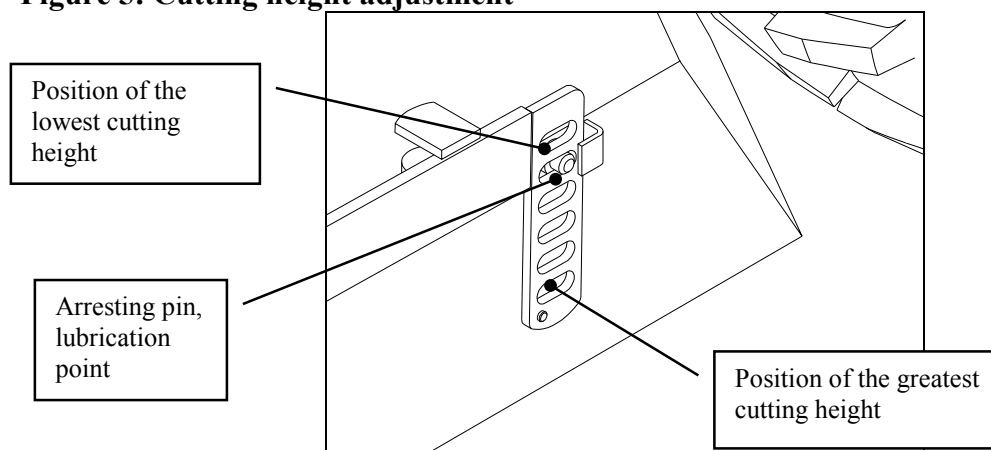
There is a general rule that the higher value of above mentioned factors, the greater height of guide wheels and cutting blade height adjustment above the surface. The cutting height should prevent overfilling of the blade working space as such a situation reduces the blade speed, the engine cannot work at optimum revolutions and the self-cleaning capacity of cutting blade space from accumulated grass biomass is impaired.

⚠ Prior to working a terrain irregularity, increase at all times the cutting height to the very maximum. In this way you will prevent a blade damage.

Cutting height adjustment by means of guide wheels:

- a) push on both handrails so that the arresting pin in the arresting plate is released;
- b) press the black plastic lever of cutting height adjustment on the bottom side of the right handlebar grip with fingers of your right hand (see Fig. 4);
- c) reduce or increase the height of guide wheels adjustment by pushing on the two handrails;
- d) adjust one of oval holes on the arresting plate against the arresting pin;
- e) release the lever.

Figure 5: Cutting height adjustment

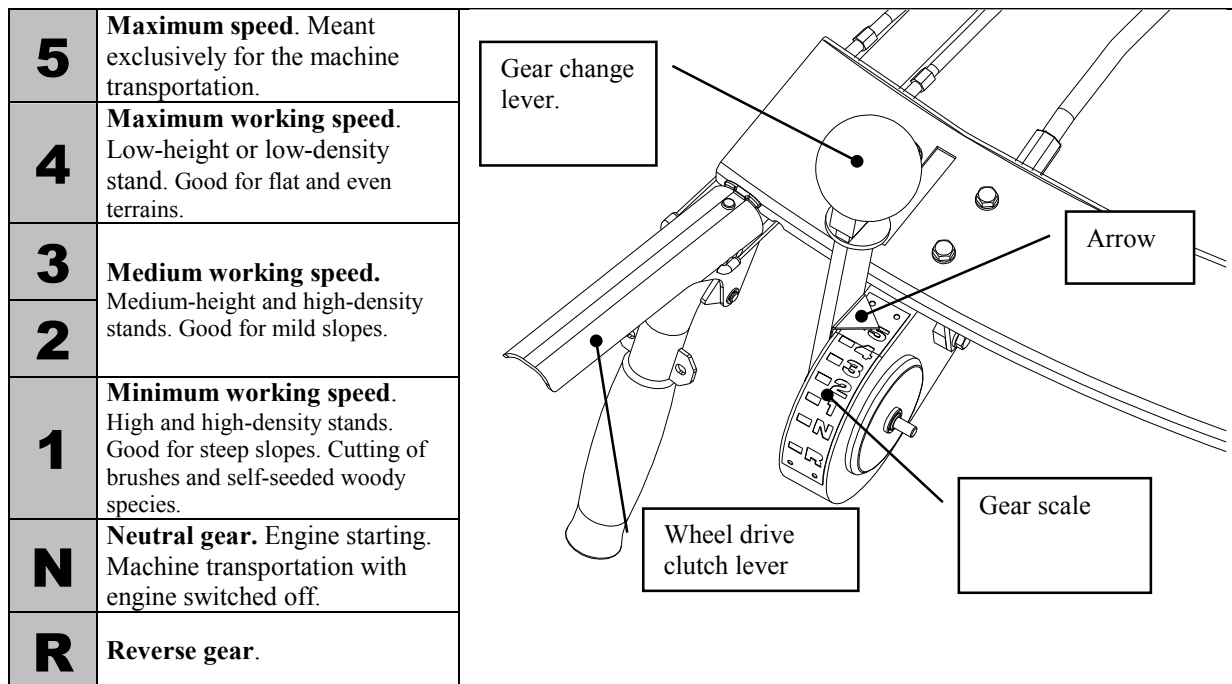


5.7.2 Travel speed choice

The adjustment of machine travel speed is ruled by similar factors as the adjustment of cutting height. The main principle dictates that the greater is the stand density or height, the lower is the machine travel speed. Gears are chosen by gear shifting lever situated on the left (as viewed from the operator's site) on the handlebars diagonal. The shifted gear is indicated by an arrow on the lever against the adjustment line at the gear number on the scale.

⚠ Gears should be shifted only with the wheel drive clutch released. Never change the gear when the machine is moving!

Figure 6: Travel speed choice



5.7.3 The way of stand cutting

Set the engine on the maximum speed, let the cutting blade rotate at the maximum speed and then get the machine into motion, facing the to-be-cut stand.

At cutting, you should proceed only in such a way that the to-be-cut stand is - if possible - 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 – up to 30 sec)!

If the cut stand is very dense, grown through, rotten from below or lodged, the machine cutting width must be accordingly reduced, greater cutting height adjusted or machine travel speed reduced so that the cutting blade rotations are not excessively slowed-down, which would result in the impaired cutting quality and engine overloading.

5.7.4 Problems at cutting

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

- Engine markedly losing speed but not stalling:** wheel drive to be switched off immediately (lever on the left handrail grip); the machine front to be slightly lifted by pushing down on handrails. Then shift in reverse gear (R) and slightly back with the machine. The space under the cutting blade cover will do itself a partial clearance from excessive grass. Then drive the machine against the stand again.
- Engine losing rotations and stalling:** release both levers on the handlebars, start the engine, shift in reverse gear and back with the machine out from the stand to be cut. Switch off the engine. Clean the space under the cutting blade cover and spread the cut grass across the ground surface. Start the engine, switch on the cutting blade drive and drive the machine against the stand again.

⚠ **Be very careful while lifting the machine and driving on reverse gear!**

- ⚠ **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!**
- ⚠ **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.**

5.7.5 Cutting on slopes

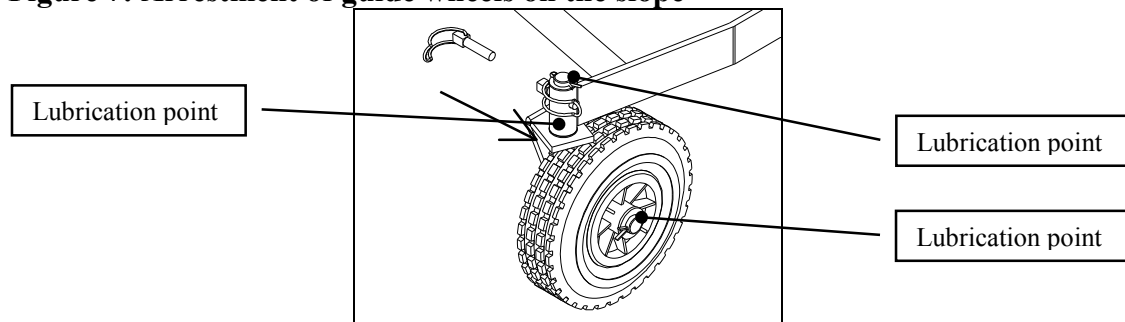
- ⚠ **If possible, do not use the machine on wet grass. Remember that the terrain you are moving on must always be safe. Walk (never run) at work. Be careful especially when changing the machine direction on slopes. Do not cut grass on steep slopes. When accidentally falling, immediately release your hold on the machine.**
- ⚠ **The safe slope accessibility of the machine is 10°.**

For a better steering control of the machine secure the guide wheels with locking pins in straight direction. The pins are included in machine accessories. If not to be used, they should be folded between lugs on the handrail tube. Use medium or minimum travel speed.

For cutting on slopes up to do 20° it is recommended to drive the machine along the contour. It is the safest movement on the slope. It is also possible to make use of the side adjustment of handlebars.

On slopes between 20° and 30° never drive the machine in the downhill direction for a long time. Engine oil filling level moves out of sucking points and the engine oiling is irregular and insufficient.

Figure 7: Arrestment of guide wheels on the slope



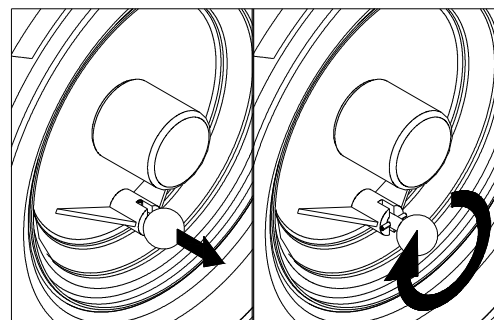
5.7.6 Machine transport with engine switched off

For the machine transport with engine switched off - when you push the machine - make use of a possibility to unlock the pin differential in wheels. Thus, the wheels can freely rotate around the axle and the machine can be easily pushed forward. Pull the pin partly out and turn it by 90°.

- ⚠ **The automatic parking brake is out of operation after unlocking the differential! This is why you are advised to unlock the differential at all times only on the plain!**

When transporting the machine with engine switched off on slopes, shift in neutral gear („N“) and press the travel clutch lever on the left handrail. The automatic brake will be unblocked and the machine can be pushed manually.

Figure 8: Unlocking of the differential



5.7.7 Cutting of high grass stands

This machine can also be used for cutting high grass stands without crushing. Herbage can be then used both for drying and as green fodder.

Note: with respect to the cutting method, the proportion of crushed plants is higher than in other methods more friendly to plants.

Instructions for assembly and use are enclosed in the package of side refuse casing.

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 safety devices are in good order. Check the blade, respective 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 blade and respective 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). Similarly as the current maintenance also the after-season maintenance of the machine should be entrusted to one of our authorized service workshops in the case that 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

Gearbox has permanent oil filling for the entire service life of the machine.

6.1.2 Engine oil replacement

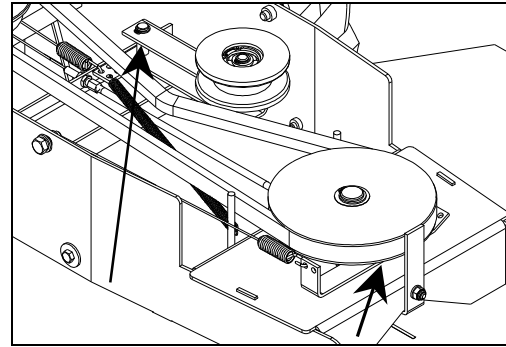
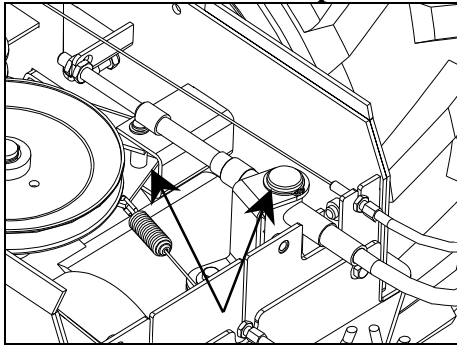
Information is to be found in the Instructions for engine operation and maintenance. Engine oil available on the Czech market and specially designed for air-cooled engines of gardening machines is **MOGUL FORTE ALFA**.

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

Table of machine lubrication

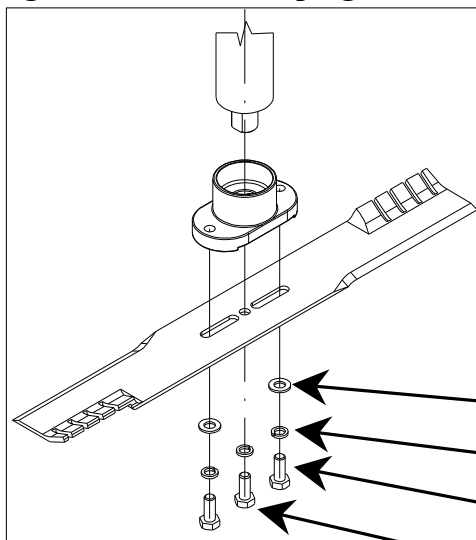
Machine lubrication	During season	After season	Lubricant	Figure no.
All wires on the input to Bowden cables and on the output from adjustment bolts	min 2x	yes	silicone oil in atomizer	-
Wheel pin and fork pin on the guide wheel hinge	min 1x weekly	yes	grease, engine oil	7
Contact area of handlebars with the holder of handlebars	min 2x	yes	grease	3
Detent pin of guide wheels	min 1x weekly	yes	grease	5
Arm pin of tension pulleys, gear shifting lever on the gearbox	min 2x	yes	grease, engine oil	9
Brake lever seating near the front belt pulley (after disassembling the plastic cover of the belt)	min 2x	yes	engine oil	9

Figure 9: Other lubrication points



6.2 Tightening of bolted connections

Figure 10: Blade clamping detail



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

Maximum tightening moments are as follows:

„A“ : two side bolts **48 N.m**

„B“ : central bolt **38 N.m**

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

Flat washer 10,5 mm

Spring washer 10 mm

Bolt M10x20

Bolt M10x1x25

6.3 Working blade replacement and sharpening

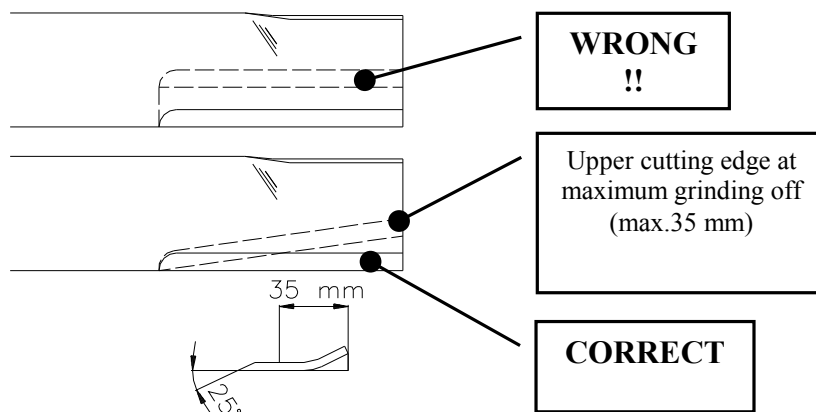
- ⚠ The machine must be standing on a firm support plate and must be secured so that the blade is easily accessible and an unexpected spontaneous machine motion cannot occur.**
- ⚠ Be very careful when dismantling the blade. Its cutting edges are sharp. Protect your hands with working gloves.**
- ⚠ The 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 helping hand):

- a) Release and unscrew the side bolts „A“. Then release and unscrew the central bolt „B“ 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 bolt M10x1x25 has a fine thread and therefore it must not be mistaken for the side bolts whose threads are normal!**
- ⚠ **It is always necessary to use the new spring washers (see the spare part list).**
- ⚠ **Apply an adhesive for threads (for example LOCTITE 243) on the thread of the central bolt M10x1x25 before you screw it in the blade shaft.**
- d) Tighten the bolts at a prescribed tightening moment.
- ⚠ **Should there be excessive vibrations on the machine handlebars after the installation, the blade must be unconditionally balanced once again!**

Figure 11: 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 Replacement of V-belts and adjustment of tension pulleys

6.4.1 Replacement of V-belts

V-belts should be replaced according to their 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 maximum. In this machine, belt pulled out to maximum is considered a belt in which distance between inner belt surfaces (at the pressed lever of the cutting blade drive clutch) is less than 7 mm.

Designation of recommended and by manufacturer approved V-belts on the machine:

1. V-belt of gearbox drive: **OPTIBELT X13 x 660Ld 6T6K**
2. V-belt of blade drive: **OPTIBELT X17 x 1290Ld 6T6K**

Ld = mean length of the belt

It is possible to use equivalent V-belts made by other manufacturers. However, the V-belt model must be with no rubber on sides! Only such a model of the V-belt guarantees that no belt stretching does occur and that the blade drive starting is smooth when letting-in the clutch.

⚠ **Should a different belt model be used than the original spare part, the machine manufacturer cannot guarantee a correct functioning of the gear!**

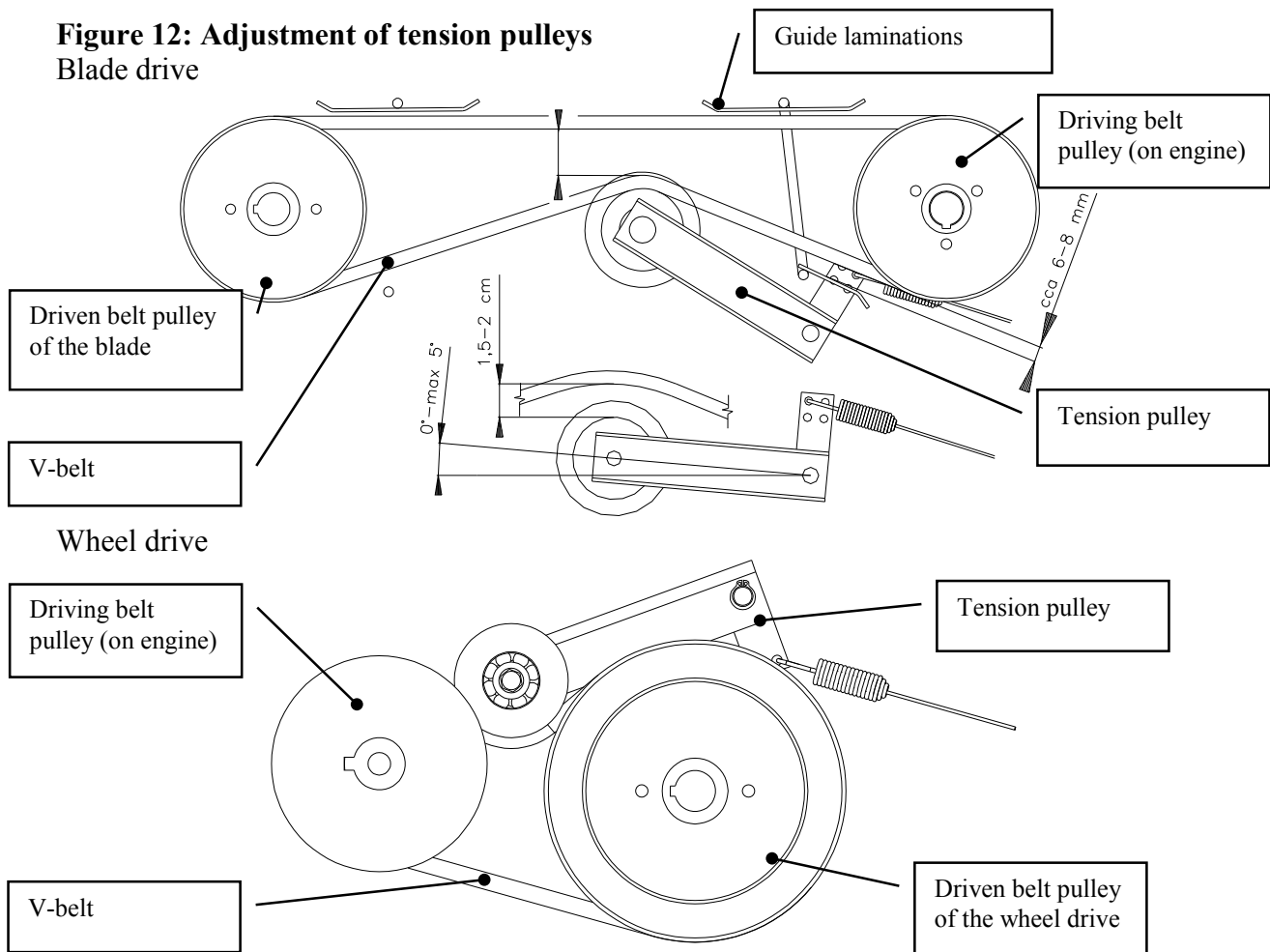
The procedure of replacing V-belts is as follows:

- a) Drain petrol from the engine tank. Remove the plastic ball from the accelerator lever. Dismount the accelerator lever from the handlebars crossbar. Bowden cable should never be dismantled from the control on the engine! Then dismount (or fold back) the handlebars holder (4x bolt M8) together with the handlebars.
 - b) Dismount the upper casing of gearbox and the front plastic casing of the belt.
 - c) Dismount the belt guiding in front of the front driven belt pulley of the blade.
 - d) Remove belts from the driven belt pulleys (leaving belts on the engine). Unscrew four bolts M8 from the engine plate and carefully remove the plate from the machine together with the engine and the belts by pulling upwards.
- ⚠ **Never put the engine on the side. Oil might get into the exhaust or into the air cleaner. The best engine seating is with the lower flange dwelling on two scantlings that are at least 10 cm high.**
- e) Replace the worn belts with new ones. It is advised that the two belts are both replaced in one operation.
 - f) Assemble the machine in a reverse sequence of operations. Check the adjustment of both tension pulleys prior to the assembly of casings (see „b“).
 - g) Complete the machine assembly.

6.4.2 Adjustment of tension pulleys

- 1) **Blade drive pulley:** With the lever on the right handlebar grip fully pressed down, the pulley must ensure a 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. 2 (see Fig. 12). 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 cm from the bottom of the tension pulley (see Fig. 12). The wire in the Bowden cable of the tension 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 tension pulley (see Fig. 12 in the middle; Note: this connection can be used already from the manufacturer) and belt tension can be adjusted once again. Guide laminations 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.
- 2) **Wheel drive clutch pulley:** With the lever on the left handlebar grip fully pressed down, the pulley must ensure a sufficient belt tension (spring on the cable being extended by about 10 mm as compared with the loose condition). Possible corrections are to be made by means of adjustment bolt No. 4 (see Fig. 13). With the lever switched off, the pulley must be parallel to the longitudinal machine axis. The wire in the tension pulley Bowden cable must not show any slackness. In the case that the adjustment bolt is completely unscrewed 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 tension pulley (Note: this coupling can be used already from the manufacturer) and belt tension can be adjusted once again.

Figure 12: Adjustment of tension pulleys
Blade drive



6.5 Setting up pulley wires, blade brake

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 atomizers (e.g. SILKAL, MD Spray, WD40). Correct functioning of the machine also requires the correct adjustment of drive controls.

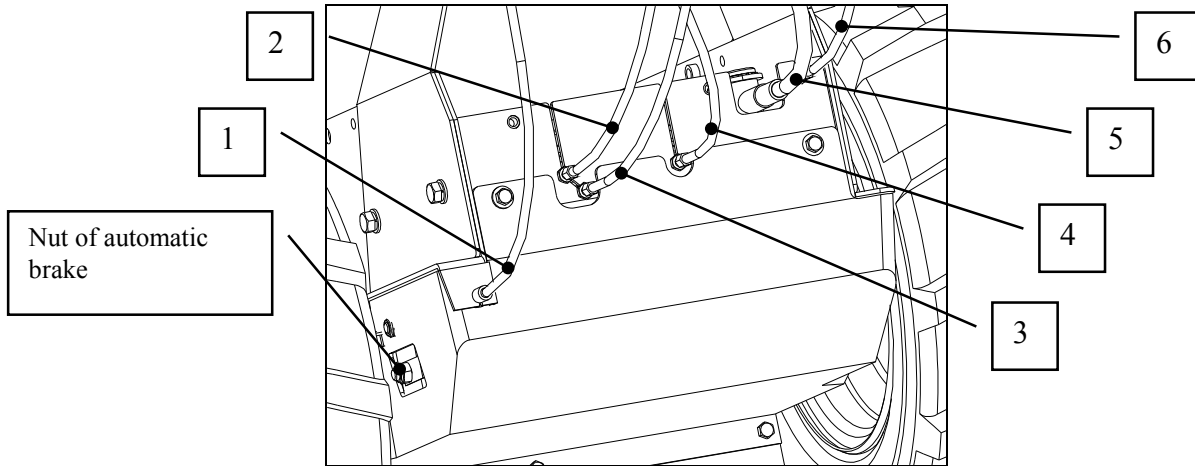
Wires in the Bowden cable of blade brake and in the Bowden cable of automatic brake must always exhibit a slight slackness of about 1 mm (with the levers released) so that the performance of brakes is satisfactory. In order to achieve a clearance of the wire in the Bowden cable, adjustment bolts have to be screwed into the chassis or handlebars crossbeam during the adjustment.

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

Safety nuts in all adjustment bolts should be tightened by using two flat wrenches No. 10 or 9 (according to the used size of nut M6). If there is no more pitch to be used in the adjustment bolt, it is possible to displace the hook on the wire into another hole on the arm of tightening pulley (see Fig. 12) so that the initial tension of the wires can be again regulated by the adjustment bolt.

Figure 13: Bowden cables and adjustment bolts

Bowden No.	1	2	3	4	5	6
Description	Automatic brake	Blade drive pulley	Arrestment of guide wheels	Wheel drive clutch	Gear shifting	Blade brake



6.6 Adjustment of the automatic brake

The automatic brake is activated by releasing the wheel drive clutch lever on the left side of handlebars. Correct function of the automatic brake can be checked by letting the machine down the hill on a suitable slope with inclination of 30° and the machine stoppage occurs after you will have released the wheel drive clutch lever. Suitable slope is understood to be a slope whose length is below 5m and beneath which a sufficiently large vacant space can be provided for the machine coasting.

- ⚠ **Be very careful when testing the function of the automatic brake. Guide wheels should be arrested and all persons or animals should be ordered out from the space in front of the machine.**
- ⚠ **With respect to the machine weight, the machine check and adjustment should be made by at least two persons.**
- ⚠ **The function of the automatic brake is to be checked always after a longer shutdown of the machine.**

Automatic brake adjustment procedure:

Place the machine on a suitable slope with the wheel drive clutch lever on the left handlebar grip switched-off. Tighten the nut of the automatic brake behind the left wheel (see Fig. 13) so that the machine can keep on the slope and will not continue in downhill movement. Gradually loosen the nut of the automatic brake until the moment when the machine starts moving. Then tighten the nut by about a half turn.

Check of the automatic brake adjustment:

With the pressed clutch lever and shifted-in neutral gear the machine must be travelling down the hill and after the wheel drive clutch lever release it must come to an unconditional stop. If not so, you have to tighten the nut slightly and to repeat the test.

6.7 The table of service operations

Operation	During season	After season
Engine oil check	prior to any use	*
Engine air filter check	prior to any use	*
Blade check for clamping and intactness	prior to any use, **	
Check of the condition of V-belts	as required	inspection, ***
Check of the function of automatic brake	prior to any use	inspection, adjustment
Cleaning of wheel hubs and exchange of lubrication grease	-	yes
Cleaning of the machine from dirt and stand residues	after each use	yes

* - 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 repair required!

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

6.8 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. 13)
	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 in its place
	V-belt torn	Replacement
	Excessive belt extension	Replacement
Blade brake performance is insufficient	Brake cable stressed	Set-up the brake wire so that its slackness at released lever on the right handlebar grip is about 1 mm
	Brake cam lever insufficiently greased - dragging	To be oiled
	Worn lining	Contact the nearest service shop
Wheel drive clutch does not switch off	Wrong adjustment of control cable V-belt carrying away	Set-up the pulley switching off so that the travel V-belt does not carry away at maximum engine speed
Wheel drive clutch does not switch on	Ruptured cable or some of cable shoes	Replacement. Contact the nearest service shop.
	Torn belt	Replacement
	Another problem of gearbox	Contact the nearest service shop
Gear shifting out of function	Problem in gear shifting lever	Contact the nearest service shop
	Another problem of gearbox	Contact the nearest service shop

6.9 Washing and cleaning of the machine

⚠ **Cleaning and washing the machine, proceed to observe valid regulations and legislation on the protection of water courses 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 blades, sharpen cutting edges (or replace the blades if necessary) and conserve the blades with conservation oil. Travel wheels should be dismounted 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!**

6.10 Machine storage

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

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

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

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.

6.11 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 stripped machine remainder and the dismantled parts are to be disposed according to Waste Law No. 185/2001 Gaz. (and its possible amendments) 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. Should you be uncertain about the correct identification of the component, send the damaged component either to the nearest service shop or directly to the manufacturer;
6. All components should be ordered in the nearest service shop or at your dealer's.

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 all your inquiries.

8 Contact to manufacturer

VARI, a.s.
Opolanská 350
Libice nad Cidlinou
CZECH REPUBLIC
289 07

Telephone:

Fax:

E-mail:

internet:

(+420) 325 607 111

(+420) 325 607 264

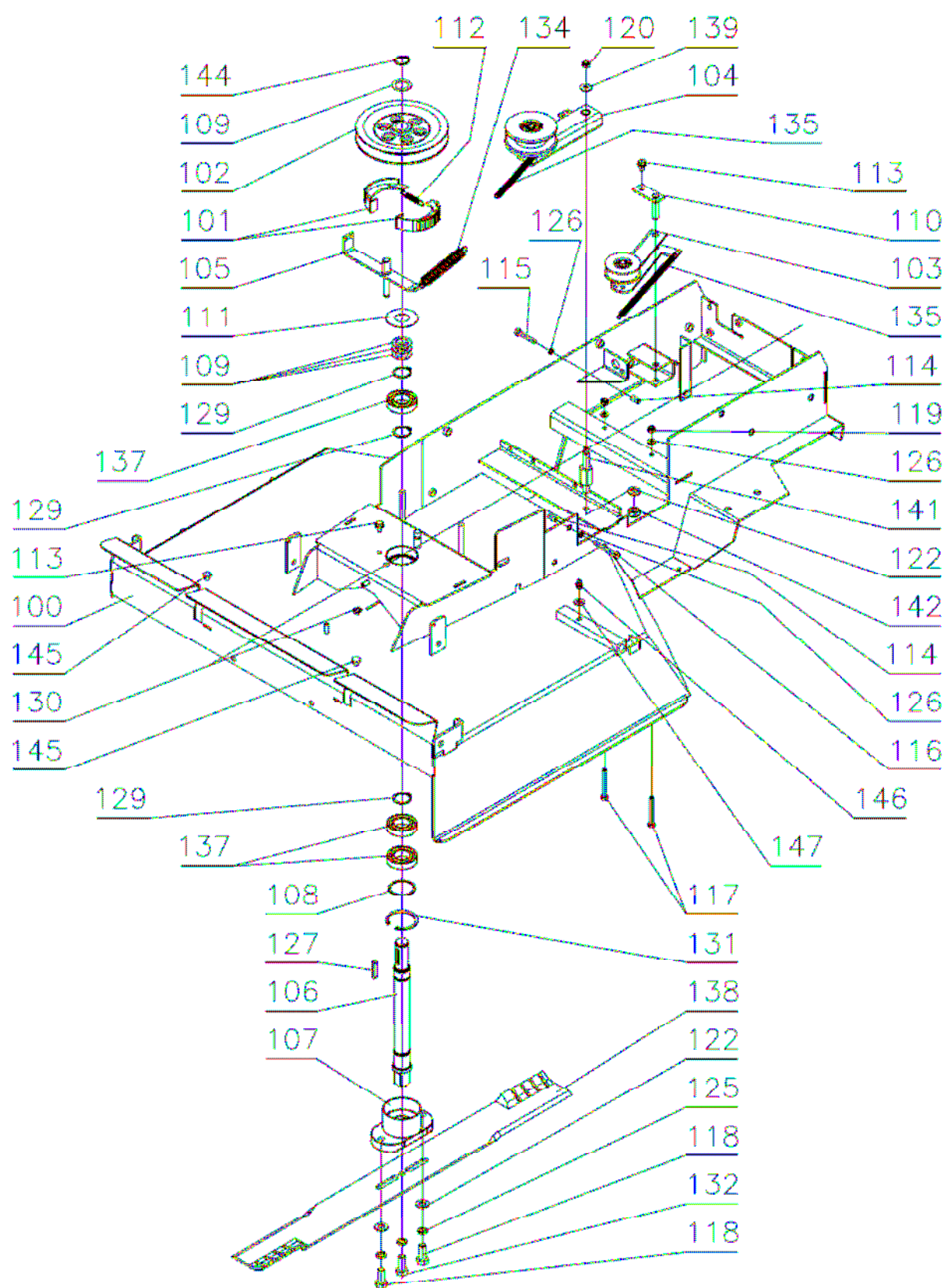
(+420) 325 637 550

vari@vari.cz

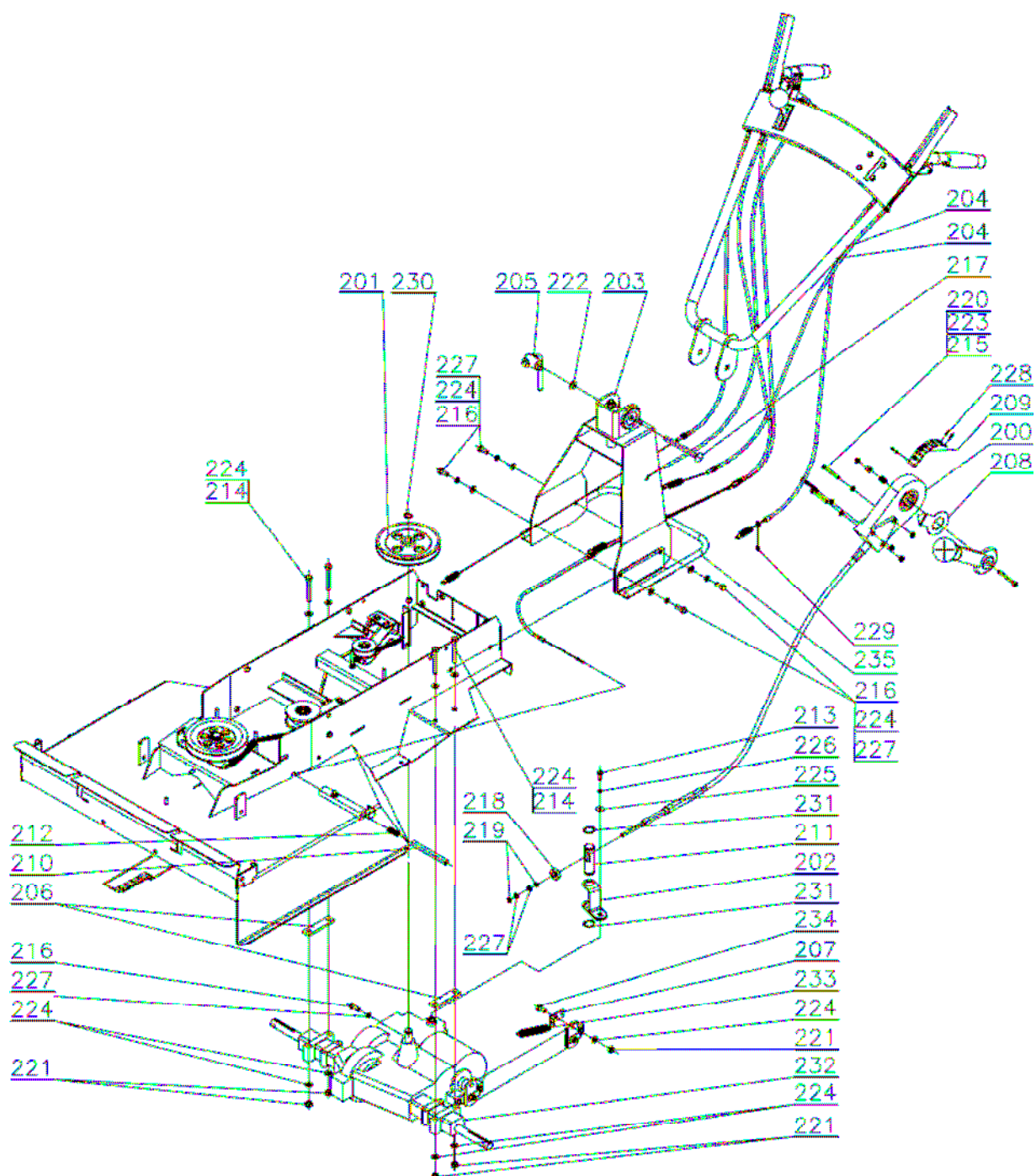
<http://www.vari.cz/>

9 The list of parts

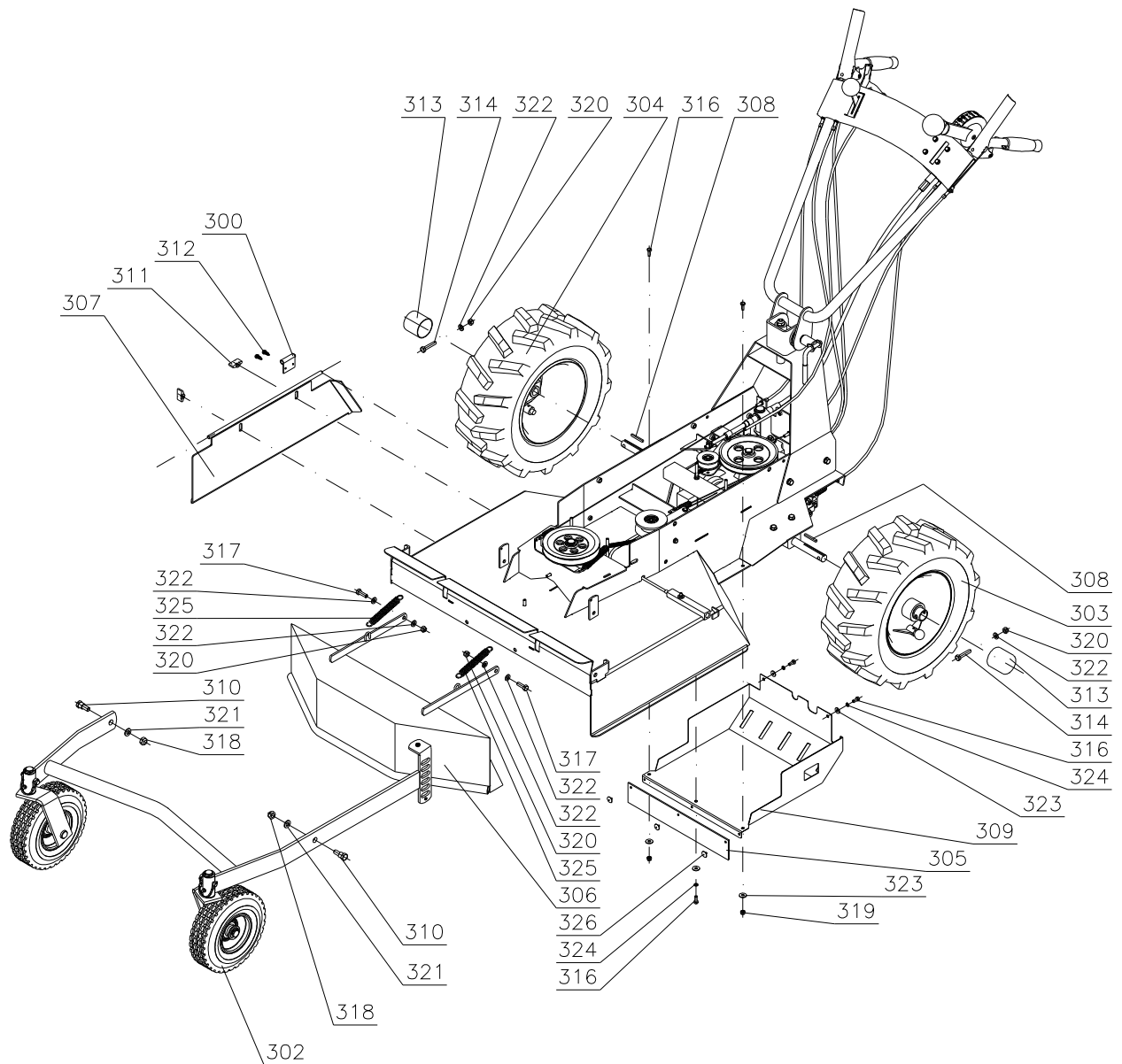
If not mentioned otherwise, the tables of spare parts hold for all models of the machine.



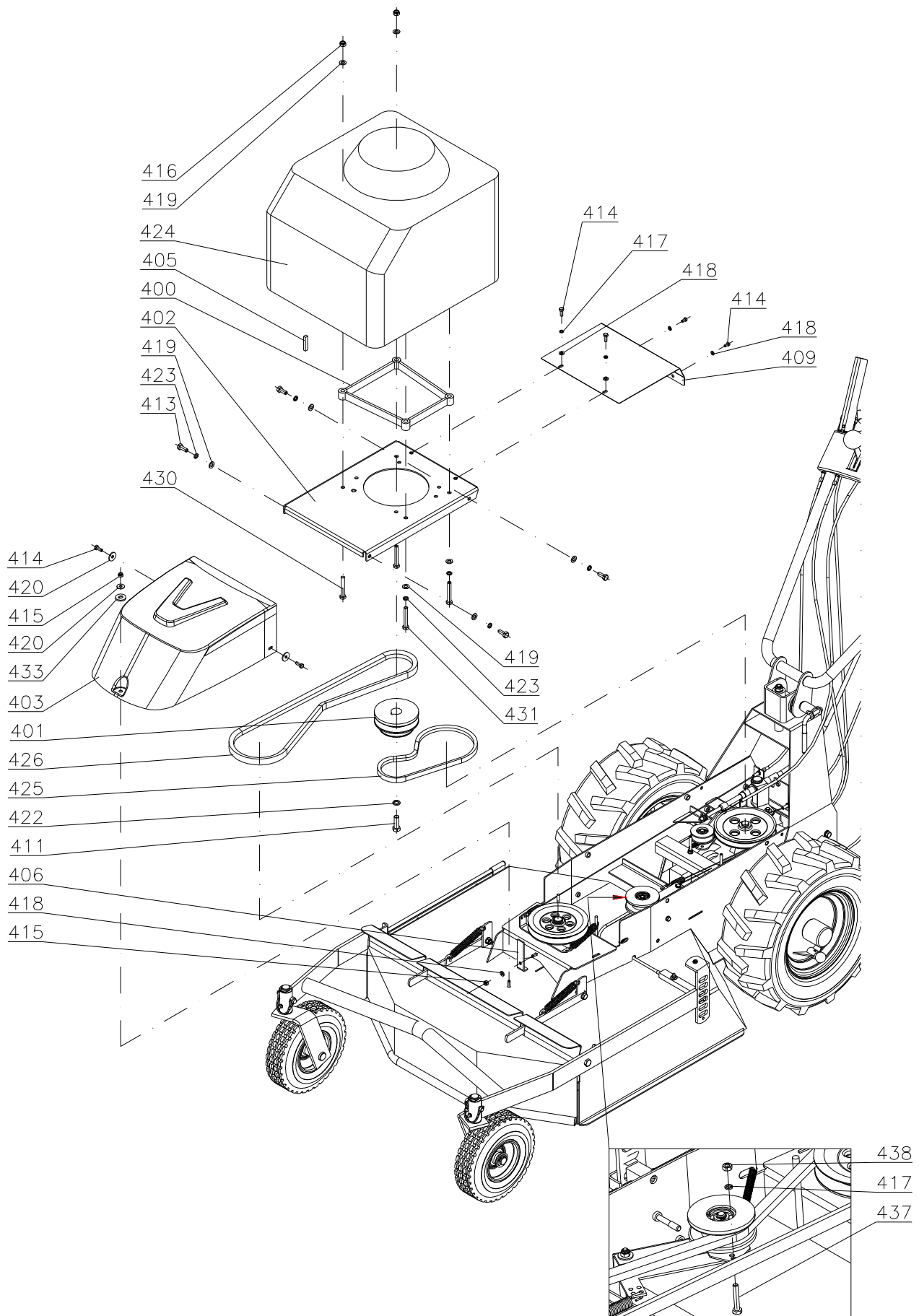
Frame and blade drive				
Pos.	Description	Drawing-Standard	Order.no.	Quantity
100	MULCHER CHASSIS	22 9 1536 059	184 115	1
101	BRAKE SHOE	22 9 1664 024	189 014	2
102	DRIVEN BELT PULLEY OF BLADE	3203325072	184 038	1
103	WHEEL DRIVE CLUTCH PULLEY	SEE SEPARATE PART LIST		1
104	BLADE DRIVE PULLEY	SEE SEPARATE PART LIST		1
105	BRAKE TOGGLE BDR 595	22 9 8032 048	196 003	1
106	BLADE SHAFT	32 0 3822 024	184 093	1
107	BLADE HOLDER	32 0 8021 035	184 094	1
108	SHIM T-20	32 0 9220 158	168 020	3
109	SHIM	32 0 9220 058	127 041	4
110	WHEEL DRIVE PULLEY PIN	22 9 9311 013	184 090	1
111	COVER	32 1 9220 126	127 014	1
112	BRAKE SHOE SPRING	632 0 9746 044	189 511	1
113	BOLT M6x10	BN 3326	184 529	3
114	CAP VYNILFLEX 6X20	BLACK	184 528	2
115	BOLT M6x35	ČSN 02 1103.25	184 587	1
116	BOLT M6x45	ČSN 02 1103.25	195 523	1
117	BOLT M6x50	ČSN 02 1103.25	184 551	2
118	BOLT M10x25	ČSN 02 1103.55	184 568	2
119	NUT M6	ČSN 02 1401.25	1800141	2
120	NUT M6	ČSN 02 1492.25	168 516	1
121				
122	WASHER 10,5	ČSN 02 1702.15	189 567	3
125	WASHER 10,2	ČSN 02 1740.05	106 530	3
126	WASHER 6,1	ČSN 02 1740.05	6510920	4
127	KEY 5e7x5x32	ČSN 02 2562	184 527	1
128				
129	RETAINING RING 25	ČSN 02 2930	131 520	3
130	WASHER 8	BN 13194	184 614	1
131	RETAINING RING 47	ČSN 02 2931	126 504	1
132	BOLT M10x1x25	ČSN EN 28676	137 501	1
133				
134	SPRING	TZ 1.8x16.2x63x20	169 514	1
135	SPRING	T 080.088.0632	184 553	2
136				
137	BEARING 6005 2RS	ČSN 02 1729.05	135 501	3
138	BLADE Hi-lift GATOR 68 cm		180 501	1
139	WASHER 6,6	ČSN 02 1729.05	195 530	1
140				
141	PULLEY ARM PIN	32 0 9311 180	184 092	1
142	NUT M10	ČSN 02 1492.25	195 527	1
143				
144	RETAINING RING 20	ČSN 02 2930	110 515	1
145	RUBBER WASHER	069-034-14x3/8	182 534	2
146	NIPPLE M8x1			1
147	WASHER 6,4	ČSN 02 1702.05	189 571	1



Gearbox, handlebars holder				
Pos.	Description	Drawing-Standard	Order.no.	Quantity
200	LEVER DC10	1LC0717001	184 534	1
201	DRIVEN BELT PULLEY OF WHEEL DRIVE	22 9 3325 039	184 041	1
202	GEAR SHIFTING LEVER WELDMENT	22 9 3832 008	184 045	1
203	HANDLEBARS HOLDER - PREASSEMBLY	SEE SEPARATE PART LIST		1
204	HANDLEBARS F-700 ASSEMBLY	SEE SEPARATE PART LIST		1
205	TIGHTENING NUT	22 9 9016 010	192 012	1
206	DISTANCE TAPE	32 0 1530 138	184 040	2
207	TOWING PLATE	32 0 1740 017	184 042	1
208	ARROW	32 0 3941 004	184 578	1
209	GEAR SHIFTING SCALE	32 0 8741 002	184 577	1
210	ARRESTMENT PIN OF GUIDE WHEELS	32 0 9311 188		1
211	PULL/PUSH BOWDEN CABLE PIN	32 0 9311 169	184 554	1
212	SPRING 1.25x11.25x28x8.5	32 0 9746 004	124 500	1
213	BOLT 1/4"x3/4"	BN69	184 558	1
214	BOLT M8x65	ČSN 02 1101.25	184 555	4
215	BOLT M6x50	ČSN 02 1103.25	184 551	3
216	BOLT M8x20	ČSN 02 1103.25	189 548	5
217	BOLT M10x110	ČSN 02 1319.25	184 550	1
218	NUT M16x1.5	ČSN 02 1403.25	184 556	1
219	NUT M8	ČSN 02 1403.25	1300197	2
220	NUT M6	ČSN 02 1492.25	168 516	3
221	NUT M8	ČSN 02 1492.25	104 622	5
222	WASHER 10.5	ČSN 02 1702.15	189 567	1
223	WASHER 6.4	ČSN 02 1702.15	189 571	3
224	WASHER 8.4	ČSN 02 1702.15	131 517	13
225	WASHER 6.6	ČSN 02 1729.05	195 530	1
226	WASHER 6.1	ČSN 02 1740.05	6510920	1
227	WASHER 8.2	ČSN 02 1740.05	104 574	5
228	RIVER WITH MANDREL 3x8	ČSN 02 2391.3	182 525	4
229	YOKE RING 5	ČSN 02 2929.05	150 606	1
230	RETAINING RING 16	ČSN 02 2930	108 503	1
231	RETAINING RING 22	ČSN 02 2930	125 504	2
232	GEARBOX MST 205 - 562		184 557	1
233	SPRING	TZ 1,8x16,2x63x20	169 514	1
234	BOLT M8x20	BN1206	184 588	1
235	BUMPER	22 9 8643 008	184 110	1
236				



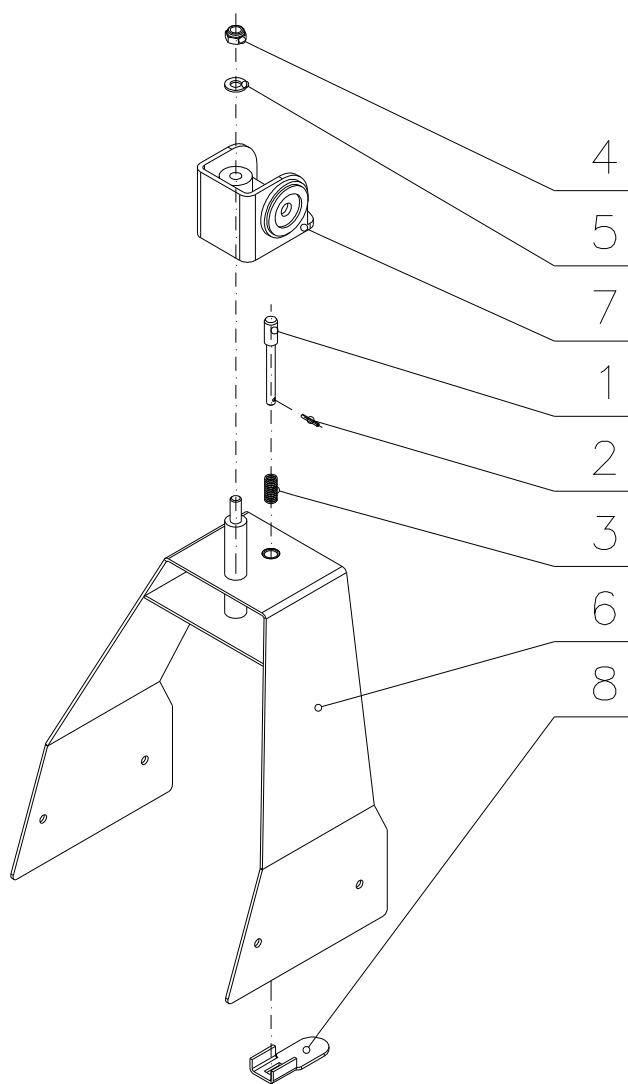
Wheels, guide wheels, covers				
Pos.	Description	Drawing-Standard	Order.no.	Quantity
300	HINGE	905500531 P	184 612	1
301				
302	GUIDE WHEELS F-700	SEE SEPARATE PART LIST		1
303	LEFT WHEEL F-700	SEE SEPARATE PART LIST		1
304	RIGHT WHEEL F-700	SEE SEPARATE PART LIST		1
305	MUD GUARD	32 0 8530 038	184 043	1
306	FRONT COVER ASSEMBLY	22 9 8549 025	184 600	1
307	SIDE FLAP F-700 WELDMENT	22 9 8549 037	184 122	1
308	KEY 3/16" x 70	32 0 3330 037	184 046	2
309	GEARBOX LOWER COVER	32 0 8545 072	184 559	1
310	BOLT	32 0 9016 089	182 038	2
311	CONTROL ELEMENT M8x14	VCF30	184 606	2
312	BOLT ST4,8x16	BN 1880	184 605	2
313	CAP VYNILFLEX 50x50	BLACK	184 560	2
314	BOLT M8x40	ČSN 02 1101.25	169 509	2
315				
316	BOLT M6x16	ČSN 02 1103.25	189 552	5
317	BOLT M8x25	ČSN 02 1103.25	110 525	2
318	NUT M10	ČSN 02 1492.25	195 527	2
319	NUT M6	ČSN 02 1492.25	168 516	2
320	NUT M8	ČSN 02 1492.25	104 622	4
321	WASHER 10,5	ČSN 02 1702.15	189 567	2
322	WASHER 8,4	ČSN 02 1702.15	131 517	6
323	WASHER 6,4	ČSN 02 1702.15	189 571	5
324	WASHER 6,1	ČSN 02 1740.05	6510920	3
325	SPRING	TZ 1.8x16.2x63x20	169 514	2
326	RIVET ASL 4810 MB		184 623	3



Engine HONDA GXV 340				
Pos.	Description	Drawing-Standard	Order.no.	Quantity
400	INTERMEDIATE FLANGE	22 9 2752 020	184 050	1
401	DRIVING BELT PULLEY F-700	22 9 3325 035	184 048	1
402	ENGINE PLATE F-700 WELDMENT	22 9 8032 054	184 049	1
403	COMPLETE COVER OF MULCHER BELT	22 9 8545 039	184 020	1
405	KEY 6.3e7x40	32 0 3330 038	184 055	1
406	FRONT BELT GUIDE	32 0 3340 007	184 056	1
409	GEARBOX UPPER COVER	32 0 8545 060	184 053	1
411	BOLT 7/16"x 1 1/4"	BN 69	184 561	1
412				
413	BOLT M8x20	ČSN 02 1103.25	189 548	4
414	BOLT M6x16	ČSN 02 1103.25	189 552	6
415	NUT M6	ČSN 02 1492.25	168 516	2
416	NUT M8	ČSN 02 1492.25	104 622	2
417	WASHER 6,1	ČSN 02 1740.05	6510920	3
418	WASHER 6,4	ČSN 02 1702.15	189 571	1
419	WASHER 8,4	ČSN 02 1702.15	131 517	8
420	WASHER 6,6	ČSN 02 1727.15	169 508	2
421				
422	WASHER 12,2	ČSN 02 1740.05	106 532	1
423	WASHER 8,2	ČSN 02 1740.05	104 574	6
424	ENGINE HONDA GXV 340 K2	DN4 OH		1
425	BELT X13 x 660Ld 6T6K	OPTIBELT	184 562	1
426	BELT X17 x 1290Ld 6T6K	OPTIBELT	184 563	1
430	BOLT M8x55	ČSN 02 1101.25	171 510	2
431	BOLT BN 5/16"x1 3/4"	BN 69	184 584	2
432				
433	RUBBER WASHER	32 0 9220 230	189 105	1
434				
435				
436	SHEET-METAL SCREW C2,9x6,5	ČSN 02 1235	184 632	1
437	BOLT M6x35	ČSN 02 1103.25	184 587	1
438	NUT M6	ČSN 02 1403.25	105 520	1

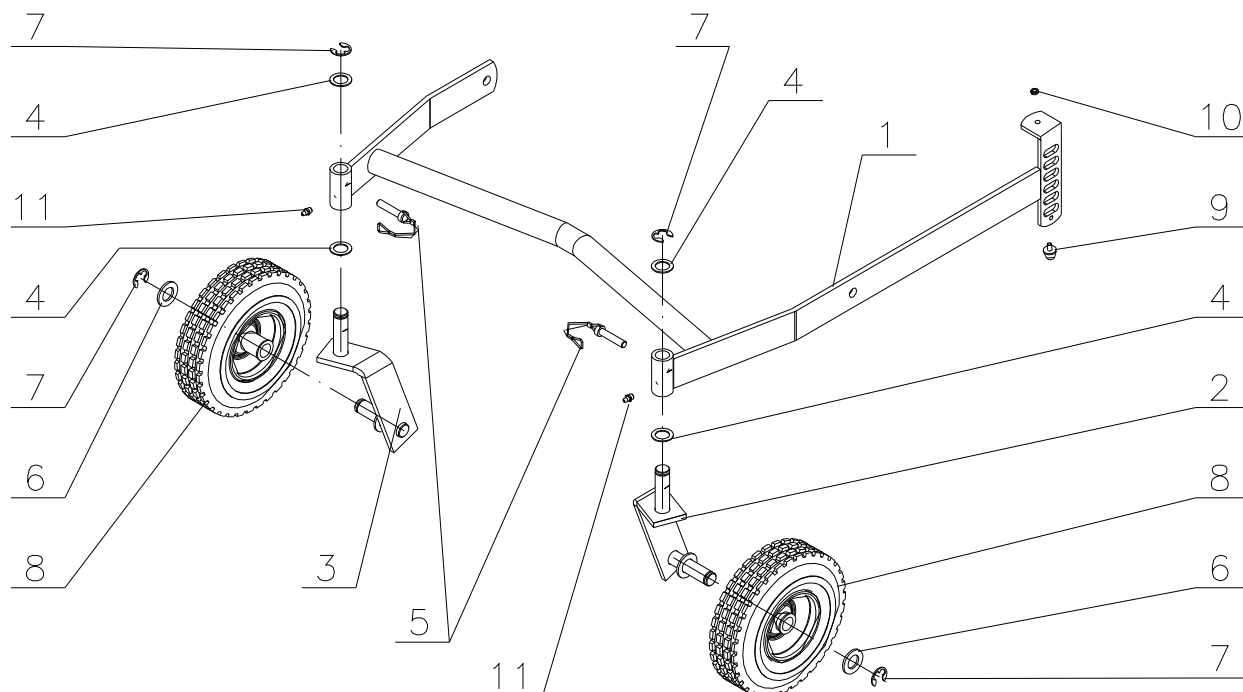
Note:

Exhaust fumes are directed by EXHAUST DEFLECTOR (Order.no. 18331-ZE2-810) installed on the engine



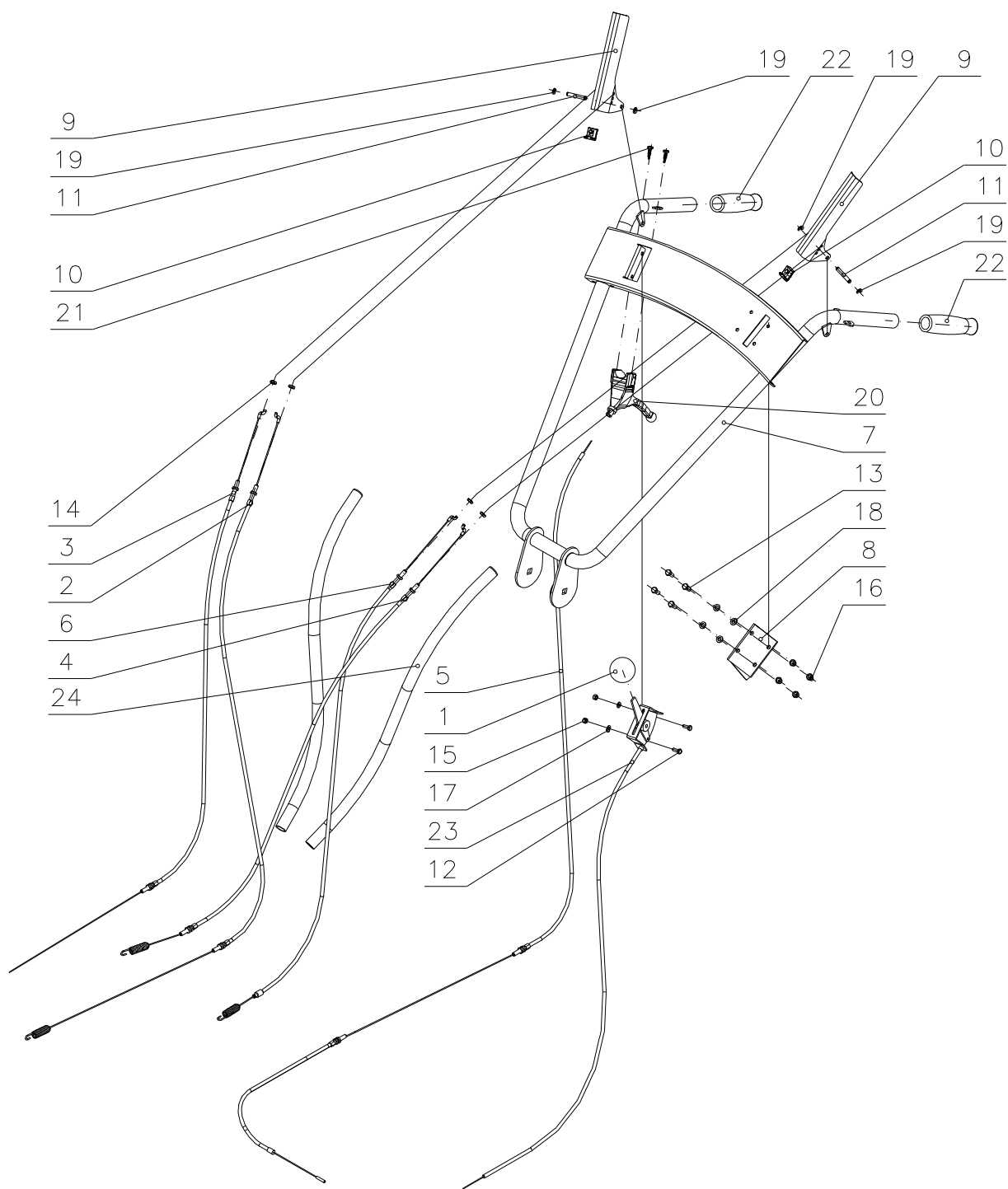
Handlebars holder

Pos.	Description	Drawing-Standard	Order.no.	Quantity
1	PIVOT	3209311103	192 007	1
2	PIN 3x18	CSN022156	127 504	1
3	SPRING 1.25x11x25x28x8.5	3209746004	124 500	1
4	NUT M10	CSN021492.25	195 527	1
5	WASHER 10,5	CSN021702.15	189 567	1
6	HANDLEBARS HOLDER F-700	2298045064	184 058	1
7	SWIVEL HOLDER WELDMENT	2298053013	184 003	1
8	DETENT LEVER	3208041018	184 004	1

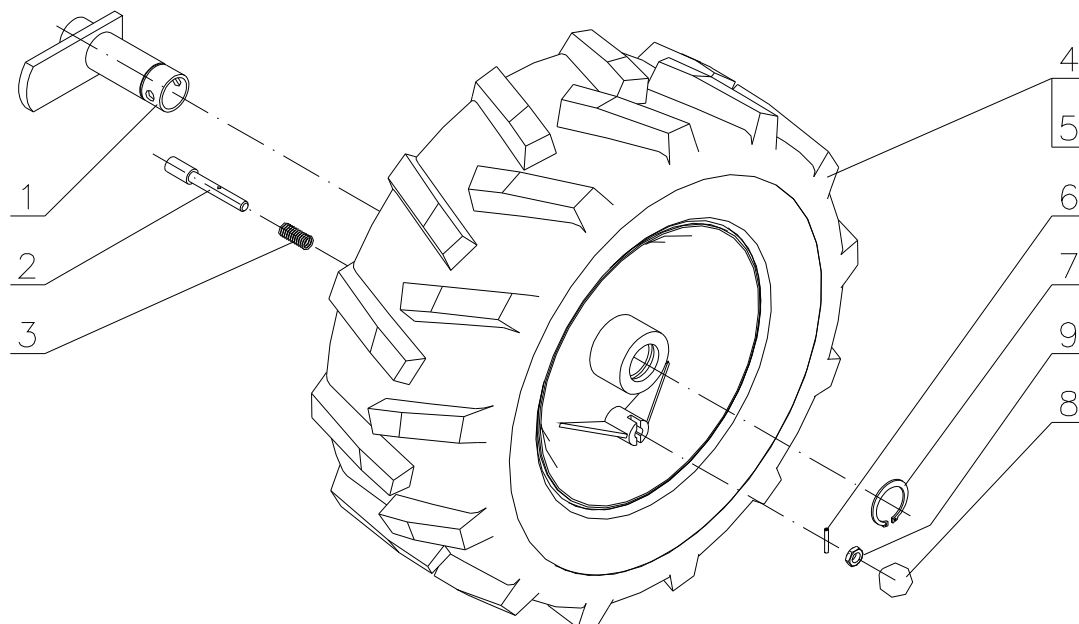


Guide wheels

Pos.	Description	Drawing-Standard	Order.no.	Quantity
1	GUIDE WHEELS FRAME F-700	22 9 1646 039	184 121	1
2	LEFT WHEEL HINGE	22 9 1646 036	184 104	1
3	RIGHT WHEEL HINGE	22 9 1646 037	184 105	1
4	SLIDE WASHER	32 0 9220 229	182 039	4
5	FLEXIBLE SPLIT PIN	AMA art. 2914	182 533	2
6	WASHER 21	ČSN 02 1702.15	124 530	6
7	YOKE RING 15	ČSN 02 2929.05	184 621	4
8	WHEEL 220/20F		184 625	2
9	BUFFER SPRING	N 77.16 42-85	182 531	1
10	NUT M6	ČSN 02 1403.25	105 520	1
9	OIL NIPPLE M8x1			2

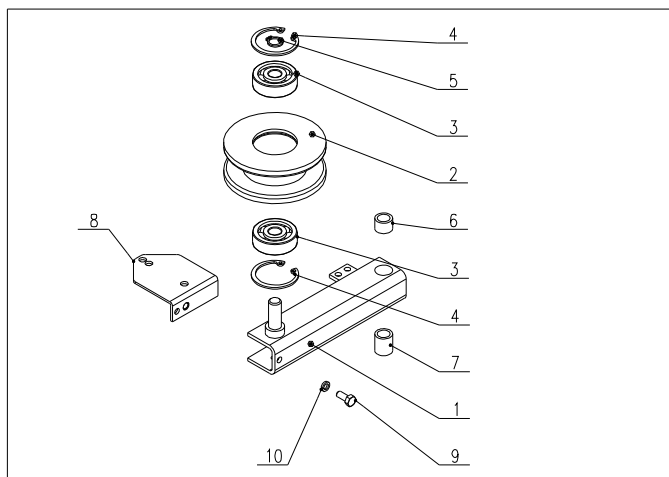


Handlebars				
Pos.	Description	Drawing-Standard	Order.no.	Quantity
1	RED KNOB	1AC02040	184 519	1
2	BOWDEN CABLE OF ROLLER F-700	22 9 8074 050	184 502	1
3	BOWDEN CABLE OF BRAKE F-700	22 9 8074 051	184 501	1
4	BOWDEN CABLE OF CLUTCH F-700	22 9 8074 053	184 503	1
5	BOWDEN CABLE OF WHEEL ARRESTMENT F-700	22 9 8074 054	184 504	1
6	BOWDEN CABLE OF AUTOMATIC BRAKE	22 9 8074 061	184 510	1
7	SWIVEL HANDLEBARS WELDMENT	22 9 8078 064	184 011	1
8	HOLDER OF LEVER DC10	32 0 8032 128	184 068	1
9	CONTROL LEVER	32 0 8058 009	196 013	2
10	RUBBER LEVER STOP	32 0 8065 002	196 519	2
11	LEVER PIN	32 0 9311 157	196 520	2
12	BOLT M5x12	ČSN 02 1103.25	184 524	2
13	BOLT M6X14	ČSN 02 1103.25	1512506	4
14	NUT M6	ČSN 02 1403.25	105 520	4
15	NUT M5	ČSN 02 1492.25	105 518	2
16	NUT M6	ČSN 02 1492.25	168 516	4
17	WASHER 5,3	ČSN 02 1702.15	189 581	2
18	WASHER 6,4	ČSN 02 1702.15	189 571	4
19	YOKE RING 4	ČSN 02 2929.05	189 576	4
20	LEVER OF HEIGHT ADJUSTMENT	SACCON LK0651B	184 517	1
21	BOLT KB 50(5)x20 ZN			2
22	BLACK RUBBER GRIP	START 1MA08010	184 518	2
23	LEVER START 1AT09014	vers. G, L=900/45mm	184 586	1
24	BOWDEN CABLE PROTECTION	32 0 8520 009	184 076	2



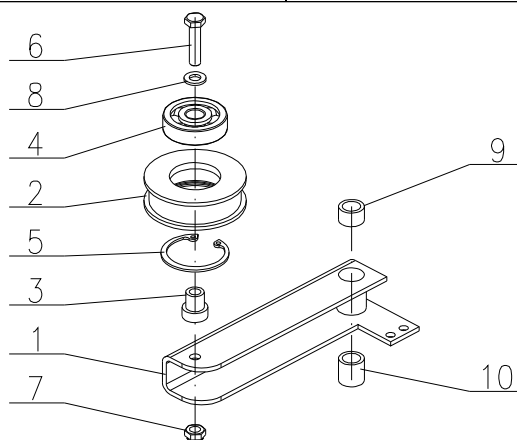
Wheel left, right

Pos.	Description	Drawing-Standard	Order.no.	Quantity
1	DRIVER OF DIFFERENTIAL	2291625029	184 059	1
2	DRIVER PIN	3209311165	184 057	1
3	SPRING 1.25x11.25x28x8.5	3209746004	124 500	1
4	WHEEL 16x6,5-8 F-700 LEFT	62291770037	184 526	1
5	WHEEL 16x6,5-8 F-700 RIGHT	62291770038	184 525	1
6	PIN 3x18	CSN022156	127 504	1
7	RETAINING RING 30	CSN022930	126 502	1
8	PLASTIC BALL	CSN025181.21	124 524	1
9	NUT M8	CSN021403.25	1300197	1



Blade drive pulley

Pos.	Description	Drawing-Standard	Order.no.	Quantity
1	PULLEY ARM	22 9 3330 021	184 069	1
2	PULLEY FOR BELT X17	632 0 3325 069	184 579	1
3	BEARING 6300 2RS		189 585	2
4	RETAINING RING 35	ČSN 02 2931	126 503	2
5	RETAINING RING 10	ČSN 02 2930	6021519	1
6	FRICTION BEARING A 10x14x10 SZ		184 599	1
7	FRICTION BEARING A 10x14x16 SZ		184 600	1
8	BELT GUIDE	32 1 3340 010	184 108	1
9	BOLT M5x12	ČSN 02 1103.25	184 524	1
10	WASHER 5,1	ČSN 02 1740.05	127 512	1




Wheel drive clutch pulley

Pos.	Description	Drawing-Standard	Order.no.	Quantity
1	WHEEL DRIVE CLUTCH PULLEY ARM	2293330025	184 091	1
2	WHEEL DRIVE PULLEY	63203325068	184 512	1
3	PULLEY BEARING SHELL	63209320071	196 528	1
4	BEARING 6300 2RS		189 585	1
5	RETAINING RING 35	CSN022931	126 503	1
6	BOLT M6x30	CSN021101.25	184 581	1
7	NUT M6	CSN1492.25	168 516	1
8	WASHER 6,4	CSN021702.15	189 571	1
9	FRICTION BEARING A 10x14x10 SZ		184 599	1
10	FRICTION BEARING A 10x14x16 SZ		184 600	1

10 Letter of Guarantee

To be completed by manufacturer

Name of product **Mulcher**
 Model **Hurricane F-700**
 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 including accessories supplied by VARI, a.s.

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 extincts 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 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 within the set-up time (this applies only for products with extended warranty period). Warranty inspections must be made in some 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. 47/1992 Gaz., and/or the Commercial Code No. 513/1991 Gaz. as amended.

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