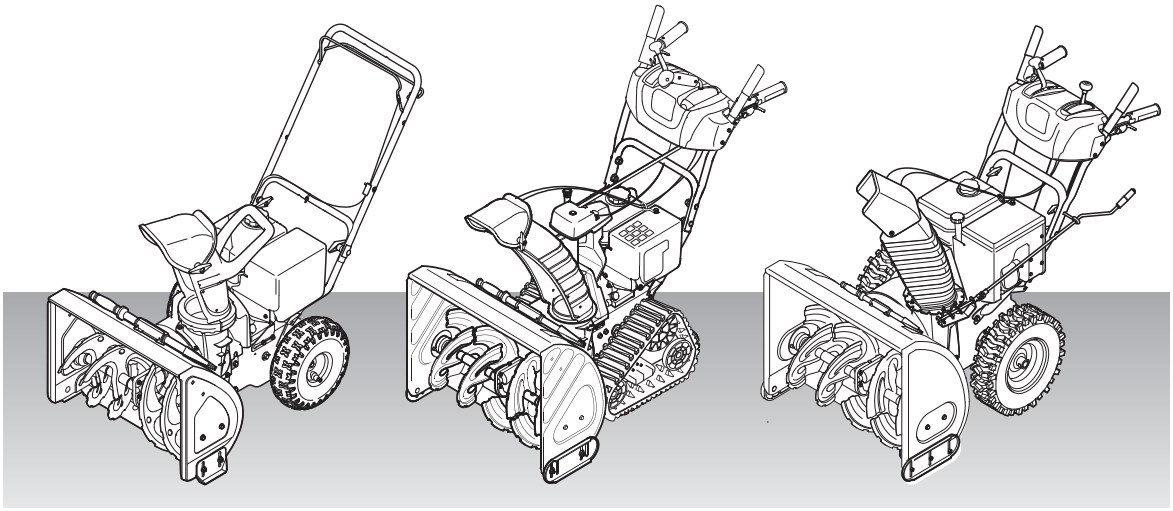
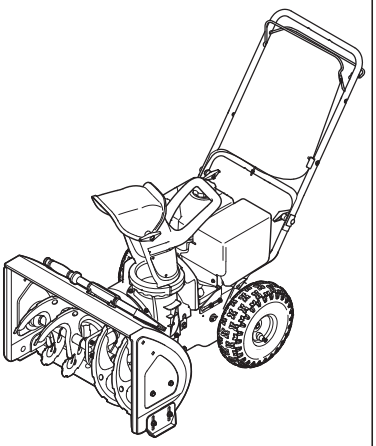
MTD
For A Growing World.™
®



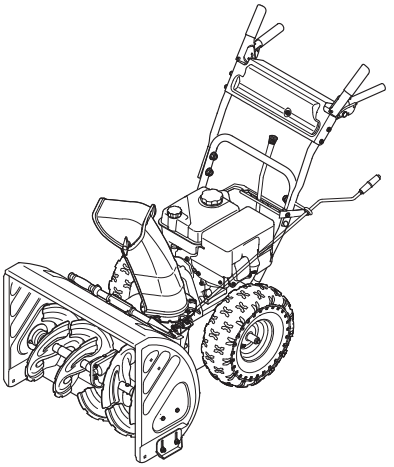
H16
FORM NO. 769-02539H

MTD Products Aktiengesellschaft • Saarbrücken • Germany

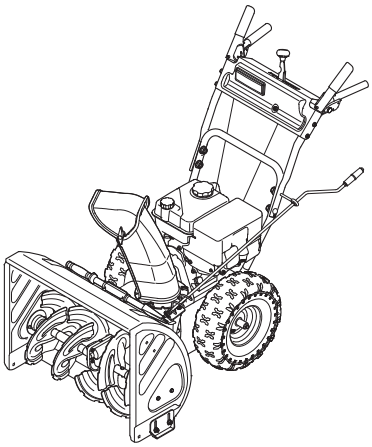
Typ 1



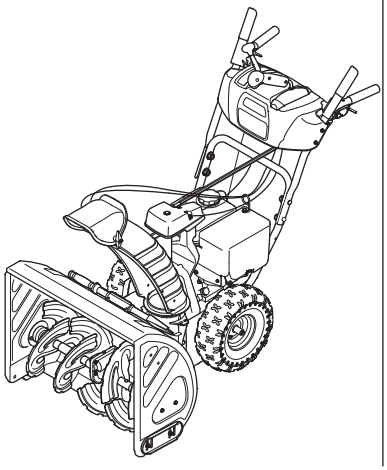
Typ 2



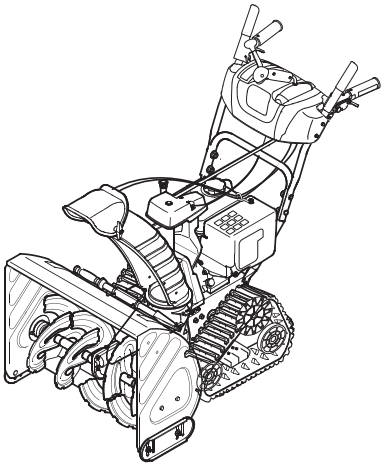
Typ 3



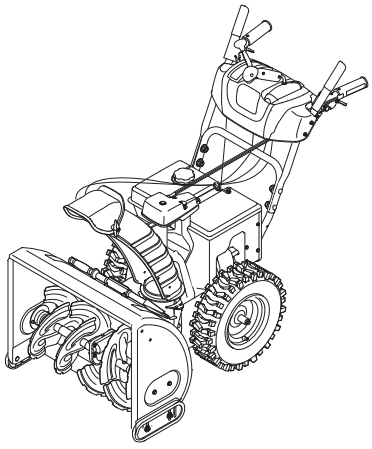
Typ 4



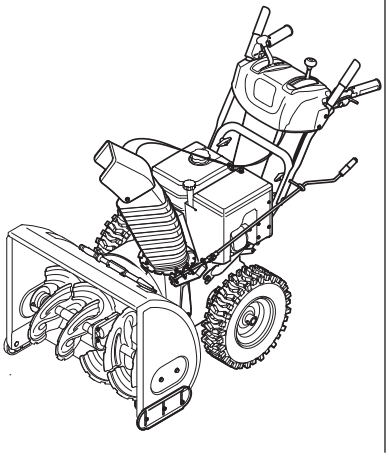
Typ 5



Typ 6

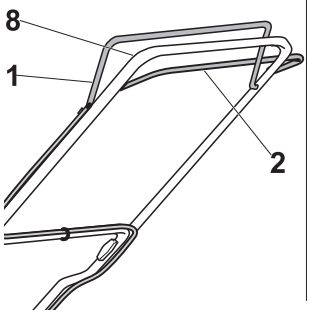


Typ 7

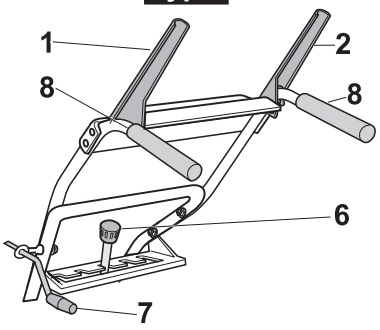


1

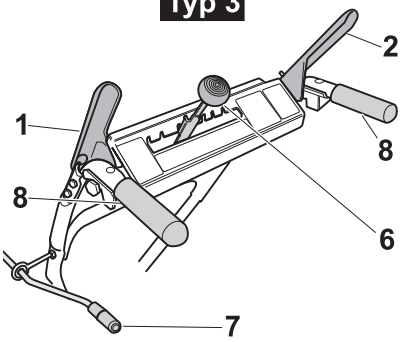
Typ 1



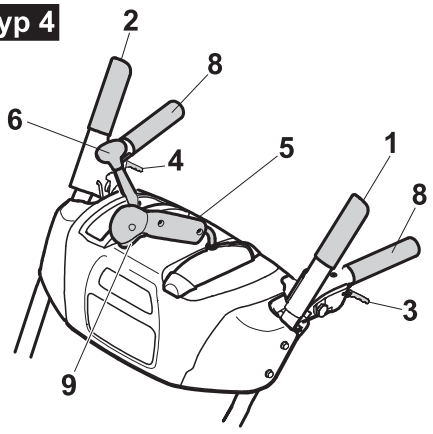
Typ 2



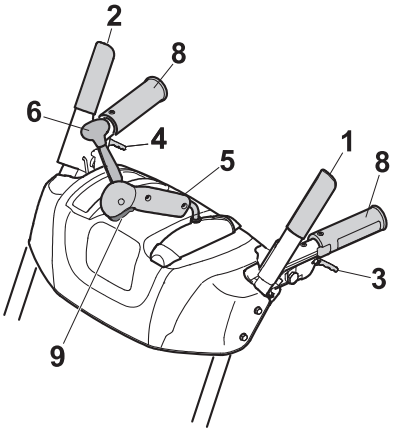
Typ 3



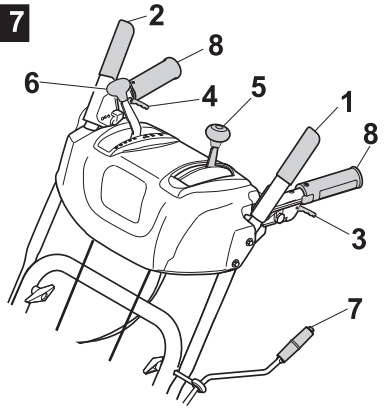
Typ 4



Typ 5-6

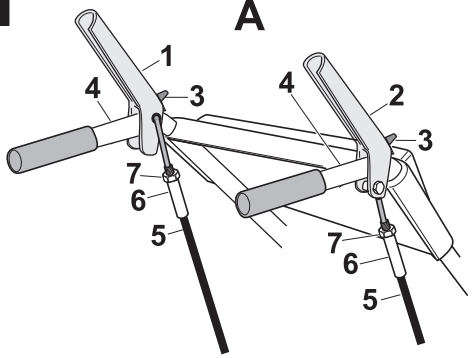


Typ 7

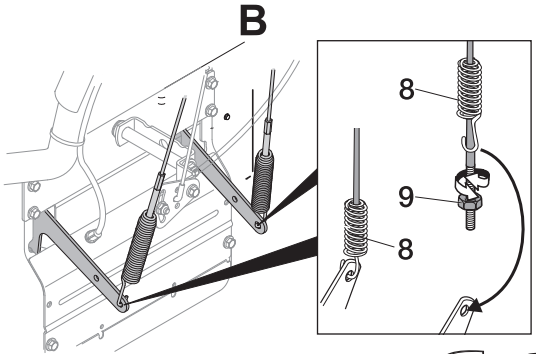


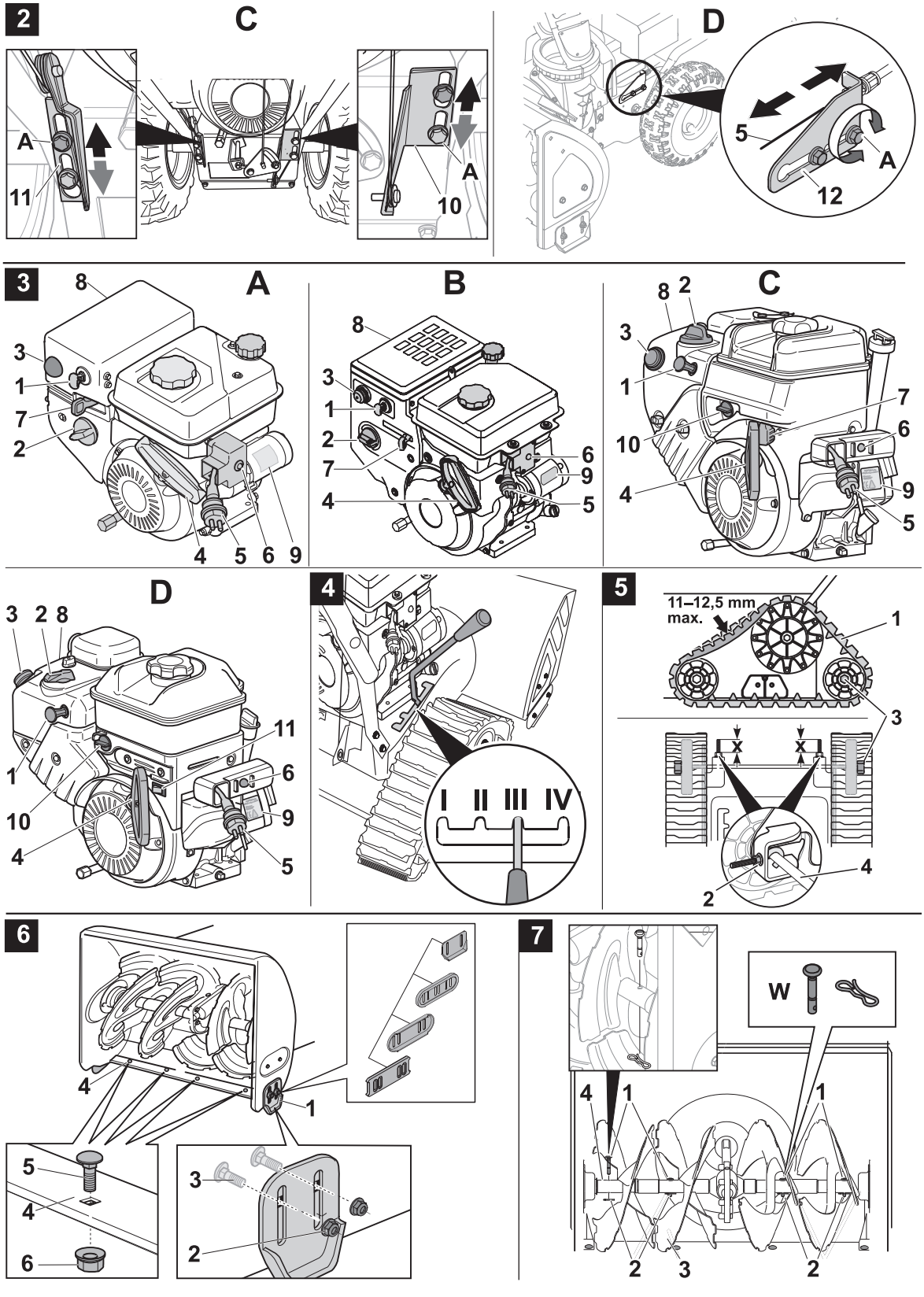
2

A



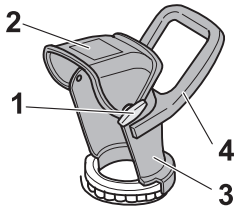
B



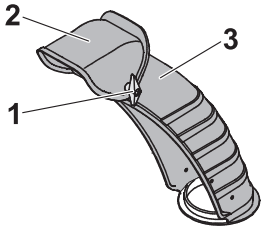

2
C
A
11
A
10
D
5
A
12
3
A
8
3
1
7
2
4
5
6
9
B
8
3
1
2
7
4
6
9
5
C
8
2
3
1
10
4
7
6
9
5
D
3
2
8
1
11
6
10
9
4
5
4
I
II
III
IV
5
11–12,5 mm
max.
1
3
4
2
6
5
4
6
3
2
7
W
4
1
1
2
3
2

8

A

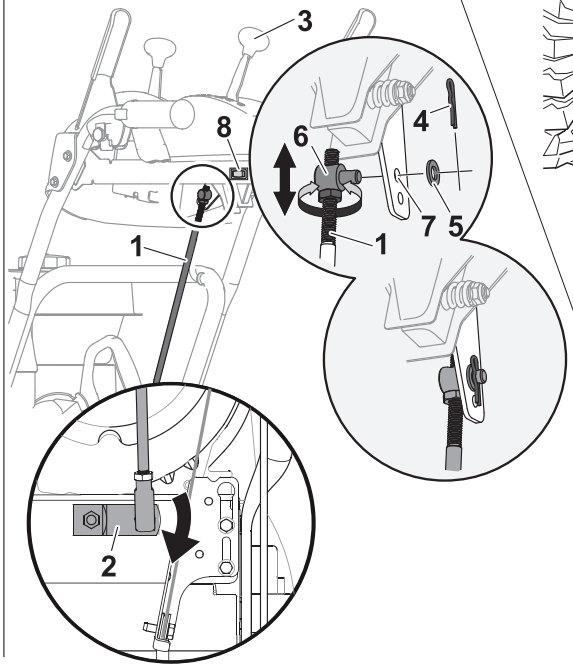


B

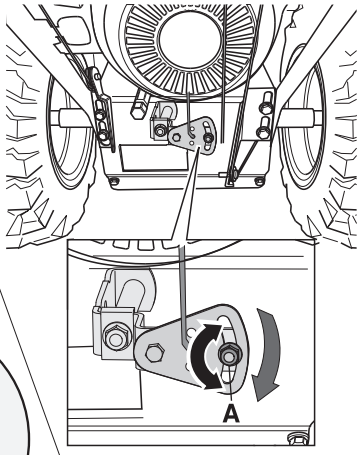


9

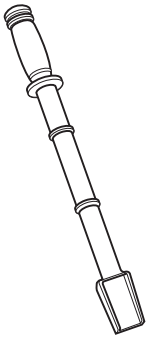
A



B

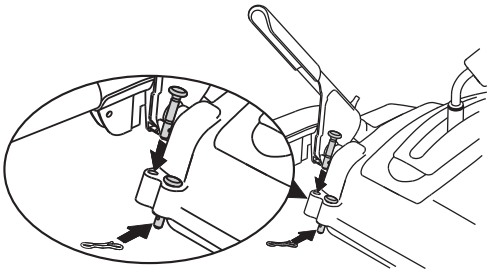


10

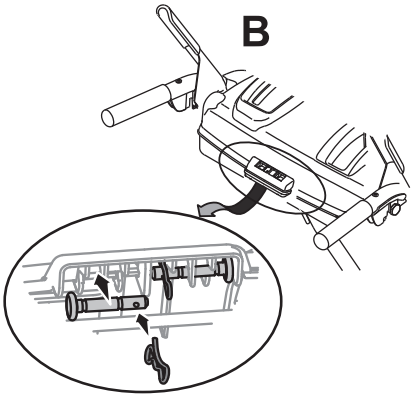


11

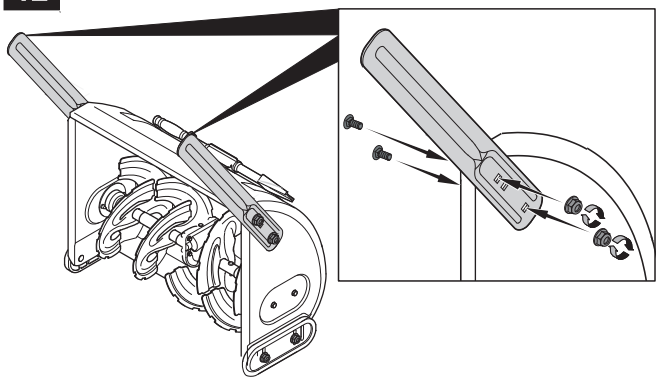
A



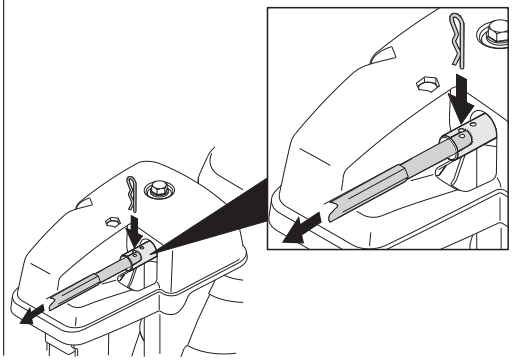
B

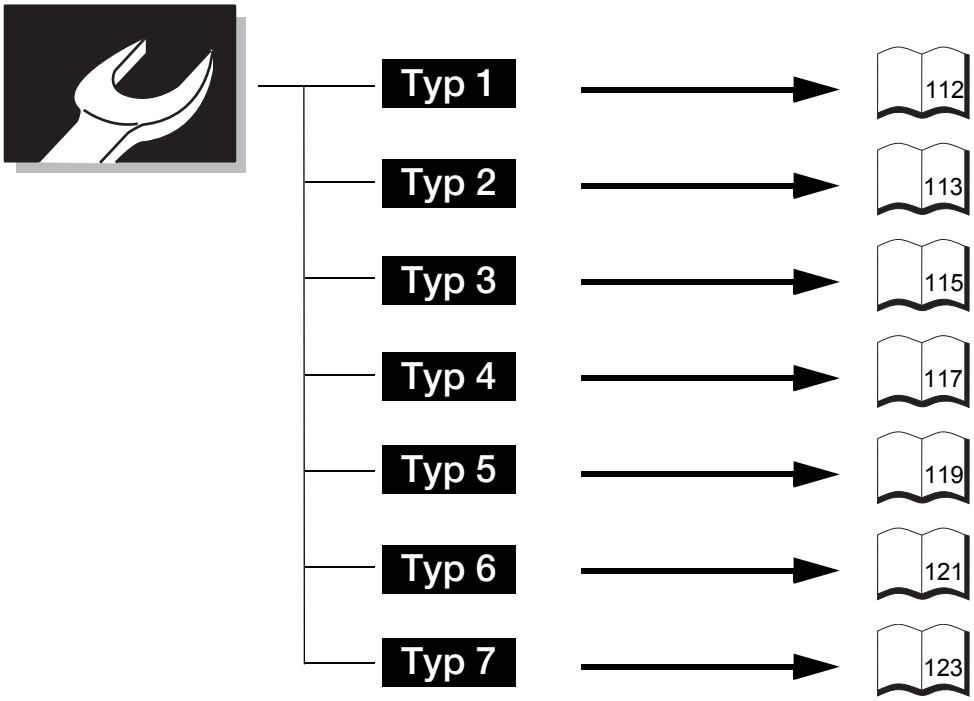


12



13




Typ 1
112
Typ 2
113
Typ 3
115
Typ 4
117
Typ 5
119
Typ 6
121
Typ 7
123

English **4**
(Original operating instructions)

Français **14**
(Notice d'instructions d'origine)

Deutsch **25**
(Originalbetriebsanleitung)

Nederlands **35**
(Originele gebruiksaanwijzing)

Italiano **45**
(Istruzioni per l'uso originali)

Svenska **56**
(Originalbruksanvisning)

Dansk **65**
(Originale driftsvejledning)

Norsk **74**
(Originale driftsanvisningen)

Suomi **83**
(Alkuperäinen käyttöohjekirja)

Magyar **92**
(Eredeti üzemeltetési útmutató)

Polski **102**
(Oryginalna instrukcja obsługi)

Contents

For your safety 4
Unpacking and assembly 5
Before using the machine for the first time 6
Always adjust machine before using 6
Operating the machine 6
Transportation 9
Maintenance 9
Preparing the machine for non-use 11
Warranty 12
Engine 12
Troubleshooting 12

Information on the identification plate

This information is very important for later identification of the machine when ordering spare parts and when using the Customer Service.

You will find the identification plate in the vicinity of the engine.

Copy all the information on this identification plate into the following space.

This and other appliance information can be found on the separate CE declaration of conformity which is a component of these operating instructions.

Various models are described in these operating instructions. Models are designated as Type 1 to Type 7 (see overview of units on the front fold-out pages).

The graphical representations may differ in detail from the unit which you purchased.

For your safety

Use the machine properly

This machine is designed exclusively for use

- as a snow thrower for the removal of snow from reinforced paths and areas around the house and recreation ground,
- in accordance with the descriptions and safety instructions indicated in this operating manual.

Any other use is not as intended. Improper use is not covered by the warranty and the manufacturer will reject any liability. The user is liable for any injuries to third parties and/or damage to their property.

Unauthorised changes to the unit exclude liability of the manufacturer for any resulting damage and/or injury.

General notes on safety

As user of this machine, read these operating instructions through carefully before using the machine for the first time. Follow these instructions and keep them safe for later use or in case of a change of ownership.

Do not allow any person under the age of 16 to handle this machine (it is possible that local regulations define the minimum age of the user).

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

Keep other people, especially children, and domestic animals away from the danger area.

Pay attention to national regulations in force if you are in charge of the machine on public roads or paths.

Never use the machine to transport someone.

Operate the unit only in the technical condition stipulated and delivered by the manufacturer.

Never change the engine settings preset at the factory.

When working, wear gloves, hearing protection, goggles, close-fitting winter clothing and sturdy footwear with non-slip soles.

Never refuel the machine in an enclosed space or when the engine is running or hot.

Never allow parts of the body or clothing to come close to rotating or hot parts of the machine.

Turn off the engine, remove the ignition key and the spark-plug connector whenever

- you are not working with the machine,
- you leave it for a time or
- you make adjustments to it or undertake maintenance or repair work.

Let the engine cool down before you park the machine in an enclosed space.

Store the machine and fuel in a safe place

- away from sources of fire (sparks, flames),
- inaccessible to children.

Spare parts and accessories must satisfy the requirements specified by the manufacturer.

Therefore use original spare parts and original accessories only or spare parts and accessories authorised by the manufacturer.
Replace a damaged exhaust, tank or tank cap.

Have the machine repaired only by a professional workshop.

Safety features

Fig. 1

Safety devices are provided for your protection and must always function properly. You may not remove, change or circumvent them.

Coupling bar (1)

Type 1

When the user releases hold of this bar, the worm drive switches off. Type 1 unit also stops at the same time.

Coupling lever for the worm drive (1)

Type 2 to Type 7

The worm drive switches off if the user releases this drive clutch lever. This lever can be locked in the de-pressed position (optional for Types 3 to 7) if the user presses and holds down the clutch lever for the travel drive (2). As soon as the user lets go of the lever (2), both levers jump back; worm drive and drive system are simultaneously switched off.

Drive clutch lever/drive clutch handle for the wheel drive (2)

Type 1 to Type 7

The wheel drive switches off if the user releases this drive clutch lever/ drive clutch handle.

Protective grid in the throw-out chute

The protective grid stops you from reaching into the throw-out chute.

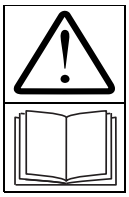
Discharge flap

Fig. 8

The discharge flap (2) prevents injuries from ejected objects.

Symbols on the machine

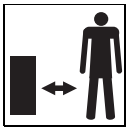
At various places on the machine you will find safety and warning notices represented by symbols or pictograms. The symbols have the following precise meanings:



Attention! Please read the operating instructions before putting the machine into operation!

Risk of being burnt! Keep at a safe distance from hot parts of the machine

Wear eye and hearing protection!



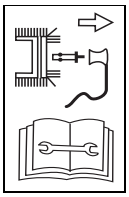
Keep third parties away from the danger area!

Risk of injury from thrown-out snow or solid objects!

Risk of injury from rotating parts! Keep hands and feet away from rotating parts. Wait until all rotating parts have come to a standstill.

Clean discharge chute with cleaning tool only.

Risk of explosion! Never exceed the maximum tyre pressure of 1.4 bar/20 psi.



Before doing any work, e.g. adjusting, cleaning, checking the machine etc., switch off the machine and disconnect the spark-plug terminal!

Always keep these symbols on the appliance in a legible state.

Symbols in the user's guide

Symbols are employed in the user's guide to indicate hazards or draw attention to important information. They have the following specific meanings:

⚠ ***Danger***

Draws your attention to sources of potential danger associated with the task you are undertaking at the time which constitute a danger to persons.

⚠ ***Caution***

Used to highlight hazards which are associated with the activity that is being described, whereby damage could occur to the appliance.

i Note

This indicates important information and application tips.

Unpacking and assembly

The assembly of the unit is illustrated at the end of the operating instructions or on a supplementary sheet.

i Disposal instructions

Dispose of packaging remnants, old machines, etc., in accordance with local regulations.

Before using the machine for the first time

⚠ ***Attention!***

Always check the oil level and, if required, fill with/top up engine oil (see "Engine manual").

- (Type 1 to Type 7) Check that the safety devices, controls and associated clutch cables and other cables as well as all screw connections are not damaged and are secure. Replace damaged parts before operating the unit.
- (Types 1–4 and Types 6–7) For transportation reasons, the tyres may show a higher tyre pressure. Check tyre pressure and adjust accordingly. Recommended tyre pressure: 1 bar.
- (Type 2 to Type 7) check clutch for auger drive and traction drive (see "Maintenance").
- (Type 3 to Type 7) check shift lever (see "Maintenance").
- (Type 1) check clutch for worm drive (see "Maintenance").

Always adjust machine before using

⚠ ***Risk of injury***

Before doing any work on this machine

- *Turn off the engine.*
- *Wait until all moving parts have come to a standstill; the engine must have cooled down.*
- *Remove the ignition key and the spark-plug connector.*

Adjust the machine to conform to the ground and snow conditions

Adjust working position (Machines with caterpillar drive)

Fig. 4

- Use setting lever (1) to select a position to match the conditions:
  - Position I: For heavy snow which has iced over. Worm is pressed onto the ground.
  - Position II: For normal snow conditions.
  - Position III: For clearing uneven paths and crushed stone and gravel paths.
  - Position IV: For transporting the unit. The auger is at a greater distance from the ground.

Adjust the skids

Fig. 6

With the skids (1), the distance between the ground and the clearing plate (4) can be set in such a way that no parts of the ground (e.g. earth or stones) can be taken up.

- (Machines with caterpillar drive) Set setting lever (Fig. 4, Pos. 1) to position II.
- Loosen nuts (2) on both sides of the machine.
- Adjust skids to conform to the ground conditions:
  - lower for uneven or non-hard-surfaced paths,
  - higher for even paths.
- Fasten the skids with nuts (2) in such a way that they uniformly touch the ground.

Fill up with fuel and check the oil level

⚠ ***Danger of explosion and risk of being burnt***

Fill up with fuel only in the open air and when the engine has been switched off and is cold.

Do not smoke whilst filling up.

Never fill up with fuel to the top. If fuel overflows, let the overflowed fuel evaporate completely before you start the engine.

Store fuel only in suitable containers designed to take fuel.

Do not use fuel of specification E85.

Also follow the instructions in the engine operating manual.

- Check the oil level and, if required, /top up the engine oil (see "Engine manual").
- Fill up with fuel (for types of fuel see specifications in the engine instructions), close fuel tank cap and wipe away remains of fuel.

Operating the machine

⚠ ***Risk of injury***

Keep other people, especially children, and domestic animals away from the danger area.

Operate the machine only when it is in a faultless and safe-to-operate condition.

Always observe the safety distance to the rotating tool specified by the steering handle.

Inspect the ground over which the machine is to operate and remove all objects which could be picked up by the machine and hurled out.

Work only when there is sufficient illumination.

Only push the machine along at walking pace.

Work slowly and carefully, especially on uneven or non-hard-surfaced paths, or when you are moving backwards.

Set the distance between worm housing and ground in such a way that no extraneous material (e.g. stones) is taken up by the machine.

⚠ ***Danger of asphyxiation due to carbon monoxide poisoning.***

Run the internal combustion engine outdoors only.

⚠ ***Risk of fire***

Keep the engine and exhaust free of dirt and leaking oil.

⚠ ***Caution***

Possibility of doing damage to the machine

- *If the machine strikes extraneous material (e.g. stones) or exhibits unusual vibrations, switch off the machine off and inspect it for damage. Get any damage you discover repaired before you work with the machine again.*
- *Do not operate the machine if it is not in perfect working order. Before operating the unit, always carry out a visual inspection.*

Check in particular that the safety devices, controls and associated clutch cables and other cables as well as all screw connections are not damaged and are secure. Replace damaged parts before operating the unit.
– *Before you put the machine to work, let the engine run to warm up.*
– *When you have finished work, leave the engine running for a few minutes to eliminate the moisture.*

Operating times

Comply with the national/municipal regulations concerning the times when the machine may be used (if required, contact your local authority).

Location details

Details of specific locations on the appliance (e.g. left, right) are always quoted as seen from the steering handle and while facing forward.

Starting the engine

Fig. 3

Danger

Before starting the unit, release the drive clutch lever or drive clutch handle (Fig. 1, Pos. 1 and 2).

Note

Some models have no throttle and the speed is adjusted automatically. The engine always runs at optimum speed.

- Check contents of fuel tank and oil level, as required fill up with oil and fuel (see engine instructions).

Start with pull starter

- Set shut-off valve (10), if fitted, to “ON/OPEN”.
- Put spark-plug connector (8) onto the spark plug.
- Set throttle (7), if fitted, to “ / FAST”. If machine has no throttle, set the engine stop switch (11) to “ON”.
- Set choke (2) for cold start to “ /ON/CHOKE”.
- Insert ignition key (1) in the ignition lock, but do not turn it.
- Press primer button (3) once or 2 to 7 times if engine is cold (depending on engine typesee engine operating manual).
- Pull the pull starter (4) slowly until some resistance is felt, then quickly and vigorously. Do not let the pull starter recoil quickly but lead it back slowly.
- When the engine is running, gradually move the choke (2) back to “RUN/OFF/ ”.

Start with electric starter (optional)

Risk of electric shock

If it is raining, do not use the electric starter.

Make sure that the mains supply network is protected with a fault current circuit-breaker.
If required, have an appropriate circuit-breaker fitted, but only by a trained electrician.

Connect the electric starter to the power supply only with those extension cables (not included in product package) which are permitted to be used outdoors and which feature a protective conductor.

For example up to a maximum length of 50 m:
– *H07RN-F 3x1.5 mm² up to –25 °C,*
– *H07BQ-F 3x1.5 mm² up to –40 °C.*
Before starting the engine, always check the extension cable and the cable/connector on the engine for damage.
Immediately have damaged parts replaced by an electrical engineer.
If parts are damaged, never start the machine with the electric starter.

Caution

If the electric starter is not connected properly, damage could occur to the machine or in its vicinity.

Make sure that the power supply
– *is running at 220–230 V and 50 Hz in accordance with the specifications on the starter rating plate (Fig. 3, Pos. 9)*
– *and is fused with the appropriate fuse (at least 10 A).*

- Set shut-off valve (10), if fitted, to “ON/OPEN”.
- Put spark-plug connector (8) onto the spark plug.
- Set throttle (7), if fitted, to “ / FAST”. If machine has no throttle, set the engine stop switch (11) to “ON”.
- Insert ignition key (1) in the ignition lock, but do not turn it.
- Connect extension cable first with the plug (5) and then with a mains socket.
- Set choke (2) for cold start to “ / ON/CHOKE”.
- Press primer button (3) once or 2 to 7 times if engine is cold (depending on engine typesee engine operating manual).
- Press starter button (6) long enough (max. 5 sec.) for the engine to start.
  Wait at least 30 s before attempting to start the engine again.
- When the engine is running, gradually move the choke (2) back to “RUN/OFF/ ”.
- Separate the extension cable first from the mains and then from the electric starter.

Stop the engine

Fig. 3

- To avoid damage to the machine or starting problems arising from moisture, let the engine run for a few minutes before switching it off (to dry out).
- Set throttle (7), if fitted, to “ / STOP”. If machine has no throttle, set the engine stop switch (11) to “OFF”.
- Pull out ignition key (1).
- Set shut-off valve (10), if present, to “OFF/CLOSE”.

Put in gear

Type 2 to Type 7

Fig. 1

⚠ ***Caution***

Release coupling levers (1 and 2) before you select a gear or change gear.

- Select a gear with the shift lever (6):
- Forwards: “1” (slow) up to “5”/“6” (fast).
- Backwards: “R/R1” (slow) and “R /R2” (fast).

Set the direction and distance of throw

Fig. 8

⚠ ***Risk of injury***

Do not set the flap (2) of the throw-out chute (3) in the direction of people, animals, windows, cars and doors.

Set the direction of throw

Type 1

- Rotate the discharge chute (3) with the handle (4) in the required direction.

Note:

Do not use the handle (4) to lift the unit.

Type 2, Type 3, Type 7

- Put the throw-out chute (3) in the desired direction by rotating the handle (Fig. 1, Pos. 7)

Type 4 to Type 6

- Rotate discharge chute (3): Press button (Fig. 1, Pos. 9) and simultaneously move lever (Fig. 1, Pos. 5) to left or right.

Set the throw distance

The steeper the angle of the flap (2) is set, the higher and further the snow will be ejected.

- Units with 2/4-way lever (Type 4 to Type 7): Press lever (Fig. 1, Pos. 5) forwards to move the flap (2) higher and vice versa.
- Units with 2/4-way lever (Types 1–3): Loosen wing nut (1) and raise or lower flap (2) as required.

Working with the snow-clearing machine

Type 1

Fig. 1

- Adjust throw-out chute (see “Set the direction and distance of throw and distance of throw”).
- Start the engine (see “Starting the engine”).
- Press the drive clutch handle (1) and hold in position; the auger and the impeller are driven.
- Fully pull the drive clutch handle (2) for the wheel drive and hold in position; the unit moves forwards.
- To throw snow, press both handles (1, 2) firmly against the steering handle (8) and hold in position.

Type 2 to Type 7

Fig. 1

- Adjust throw-out chute (see “Set the direction and distance of throw and distance of throw”).
- Start the engine (see “Starting the engine”).
- With the coupling levers (1 and 2) released, choose a forwards gear with shift lever (6).
- Press coupling lever for worm drive (1) and hold it down; worm and throw turbine are driven.
- Press coupling lever for the drive system (2) and hold it down; the machine moves forwards and clears the snow.
  As long as this lever is pressed (optional for Types 3 to 7), the clutch lever for the worm drive (1) remains locked and can be released.
- If you want to change gear, first release the coupling lever for the drive system (2) and then change gear with the shift lever (6).

i Note

Depending on the model, the unit is fitted with freewheel levers (3 and 4). Using these enables the machine to be steered more easily:

- to the right: pull on the right free-wheel lever (4),
- to the left: pull on the left free-wheel lever (3).

Working on slopes

⚠ ***Risk of injury from machine tipping over***

Work slowly and carefully, especially when you change direction.
Guide the machine up or down the slope, not crosswise to it.
Watch out for obstacles, do not work near inclines.
Do not use the machine on slopes with a gradient greater than 20%.

Tips on clearing snow

- Clear snow immediately after it has stopped snowing; later on, the underneath layer will ice up and will make clearing the snow more difficult.
- If at all possible, clear snow in the direction of the wind.
- Clear the snow in such a way that the tracks you have cleared overlap slightly.

Eliminate any blockages in the worm or the throw-out chute

⚠ ***Risk of injury***

Before doing any work on this machine

- *Turn off the engine.*
- *Wait until all moving parts have come to a standstill; the engine must have cooled down.*
- *Remove the ignition key and the spark-plug connector.*

- Remove the blockage with the cleaning tool (Fig. 10 – enclosed with the unit depending on the model) or with a shovel.

Heatable handles (optional depending on model)

Fig. 9

Switch (8) on the dashboard:

- I/ON = switched on
- 0/OFF = switched off

At the end of work move the switch to OFF.

Note:

Heatable handles do not replace gloves.

Light (optional depending on model)

– The headlight is on when the engine is running.

"Drift cutters" (optional depending on model).

Fig. 12

– Facilitates working in extremely deep snow.

Snow chains (optional)

In extreme weather conditions, snow chains can be obtained from specialist dealers and used on the machine.

Transportation

Driving

To manoeuvre or get across short distances.

- Start the machine.
- Select a forwards or reverse gear.
- Press the drive clutch lever/drive clutch handle for the wheel drive and hold in position.
- Move the machine carefully.

Transporting the machine without it operating from its own power

⚠ ***Risk of injury***

Before transporting the unit

– *Turn off the engine.*
– *Wait until all moving parts have come to a standstill; the engine must have cooled down.*
– *Remove the ignition key and the spark-plug connector.*

⚠ ***Attention***

Damage in transit

– *The means of transport (e.g. transport vehicle, loading ramp, etc.) must be used as intended (see respective operating instructions).*

- Empty the fuel tank before transporting the machine.
- Transport the unit horizontally on or in a vehicle.
- Secure the machine against rolling or slipping.

Maintenance

⚠ ***Risk of injury***

Before doing any work on this machine

– *Turn off the engine.*
– *Wait until all moving parts have come to a standstill; the engine must have cooled down.*
– *Remove the ignition key and the spark-plug connector.*

ⓘ ***Note***

Follow the maintenance instructions in the engine operating manual.

Maintenance schedule

Once in the season:

Have the machine checked over and maintained in a specialist workshop.

Each time before using the machine:

Check the oil level and top up as necessary.

Check all screw fittings for firm seating, tighten them if necessary.

Check the safety features.

If machine features an electric starter: Check cable and connector on the engine.

Maintenance tasks	After use	25 h	50 h	100 h	End of season	As required
Clean throw-out chute, worm and worm casing	●					
Change oil [3][1]			●[4]			
Lubricate mobile and rotating parts					●	●
Clean spark plugs [1]		●				
Have spark plugs changed [2]					●	
Check tyre pressure, increase as required					●	●
Clean air cooling system and exhaust [1]	●					●
Lubricate drive shaft for Type 2 to Type 7 [2]		●				
Check coupling adjustment, readjust as required						●
Have the carburettor setting checked [2]						●
Inspect the clearing plate, replace worn-out clearing plate						●
Check skids, replace worn-out skids in pairs.						●

Maintenance tasks	After use	25 h	50 h	100 h	End of season	As required
Check caterpillar track, readjust as required. Replace defective caterpillar track. [2])						•
Replace the tank cap						•
Have exhaust silencer replaced [2])						•

[1]) See “Engine instructions”
[2]) Have this work carried out only by a specialist workshop
[3]) First oil change after 5 h
[4]) Oil change every 25 operating hours (h) when operating under a heavy load or at a high ambient temperature

Maintenance tasks

⚠ ***Caution***
Possibility of doing damage to the machine
When replacing parts of the machine use only original spare parts.

⚠ ***Caution***
Engine oil is hazardous to the environment
After changing the oil, take the waste oil to a waste oil collecting point or to a waste disposal company.

Clean the machine

⚠ ***Attention***
Do not clean the unit with a high-pressure cleaner

- Park the machine on a firm, even and horizontal piece of ground.
- Remove any dirt sticking to it.
- Clean the machine by pouring water through the throw-out chute, leave it to dry.
- Clean engine with a cloth and brush.

Lubrication

Lubricate all rotating and mobile parts with a light oil.

Adjust tyre pressure

⚠ ***Attention***
Risk of explosion!
Never exceed the maximum tyre pressure of 1.4 bar/20 psi.

Recommended tyre pressure: 1.0 bar.

Checking and setting the worm drive clutch

Fig. 2A

- Release clutch lever/handle (1). There must be no slackness on the coupling cable (5) but it must not be taut either. Adjust if necessary (see “Making adjustments to the coupling cable”).
- It must be possible to depress the clutch lever/handle (1) all the way. If it does not, the coupling cable is tightened too firmly and must be slackened (see “Making adjustments to the coupling cable”).

Additional check: (see “Working with the unit/ operating sequence”)

- When the motor is running (“ ”), switch on the auger drive for 10 seconds.
- Release the clutch lever, the snow-throwing auger must no longer rotate.

Check and set clutch for travel drive

Type 2 to Type 7

Fig. 1

- (Machines with caterpillar drive) Set setting lever (Fig. 4, Pos. 1) to position IV (Transport).
- Set shift lever (6) to the fastest forward gear (highest figure).
- Having released the coupling lever (2), push the machine forwards.
- While pushing, move the shift lever (6) to fastest reverse gear “R /R2” and then to fastest forward gear.
- If some resistance is felt while you are pushing the machine or changing gear, you need to slacken the coupling cable (see “Making adjustments to the coupling cable”).
- While you are pushing the machine, press coupling lever (2). The wheels/caterpillar tracks must become blocked. If not, tighten the coupling cable a little (see “Making adjustments to the coupling cable”).
- If the setting is still not correct, repeat the process.

Making adjustments to the coupling cable

Type 1

Fig. 2D

- For clutch cable with setting plate for worm drive (12)

– Tension: Loosen screw (A), push setting plate backwards and retighten screw (A).
– Slacken: Loosen screw (A), push setting plate forwards and retighten screw (A).

Type 2 to Type 7

Fig. 2A

- For coupling cables with adjusting sleeves (6):

– Tighten: loosen nut (7) and screw adjusting sleeve (6) against it.
– Slacken: loosen adjusting sleeve (6) and screw nut (7) against it.

Fig. 2B
- For clutch cables with relieving spring (8):
– Before making the setting, unhook the spring, then hook in again. The coupling cable is correctly adjusted when the spring expands 2 to 3 cm when coupling takes place.
– Tighten: Screw lock-nut (9) upwards.
– Slacken: Screw lock-nut (9) downwards.

Fig. 2C
- For clutch cables with adjusting plate for wheel drive (10) or for worm drive (11):
– Tension: Loosen screw (A) depending on the adjusting plate, push down adjusting plate and retighten screw (A).
– Slacken: Loosen screw (A) depending on adjusting plate, push up adjusting plate and retighten screw (A).

Adjust shift lever

Type 3 to Type 7

Units with shift linkage (1)

Fig. 9A
- Remove spring clip (4) and washer (5), extract spindle nut (6) from the hole (7).
- Press gearshift arm (2) downwards, set shift lever (3) to gear “6”.
- Rotate spindle nut (6) in such a way that the pin can be put into the same hole (7).
- Secure spindle nut with washer and spring clip.

Units with shift cable

Fig. 9B
- Set shift lever to the fastest forward gear.
- Loosen screw (A) and press down holder until the shift cable is taut.
- Retighten screw (A).
- Check for correct setting.

Note

This setting is not required unless the quickest gear (forwards or backwards) cannot be engaged.

Adjusting the caterpillar track (Machines with caterpillar drive)

Note

Have this work carried out only by a specialist workshop.

Fig. 5

The caterpillar track (1) has been set correctly when it can be depressed manually by 11–12.5 mm (applying a pressure of 4.5–6.5 kg).

If it can be forced down by a greater or lesser amount, it must be adjusted:
- Position unit on a secure and level surface.
- Loosen nut (3) on each caterpillar side.
- Rotate nut (2) until the caterpillar track has the correct tension:
– To tighten, rotate in clockwise direction.
– To slacken, rotate in anti-clockwise direction.
- Retighten nut (3) on each caterpillar side.

Note

Adjust both caterpillar tracks evenly so that the rear axle (4) is parallel to the front axle. In doing so, the length of the thread (x) on both adjusting screws should be the same.

Replacing shear bolt

Fig. 7

The worm drives (3) are attached to the drive shaft (4) with shearing pins (1) and safety split pins (2). The bolts are designed to break (shear) if the auger hits solid debris, thereby preventing damage to the unit. Replace these parts with original spare parts only. Replacement shearing pins and safety split pins are optionally included in the product package (part W).
- Remove sheared pin and split pin, clean and lubricate attachment point.
- Use new shearing pin as well as new safety split pin.

Note

Depending on the model, the replacement shearing pins and safety split pins can be attached to the dashboard (Fig. 11).

Replacing the clearing plate

Note

Depending on the model, the skids must be removed beforehand (see “Replace skids”).

Fig. 6
- Remove screws (5) and nuts (6).
- Replace clearing plate (4).
- Screw new clearing plate to housing with screws and nuts.

Replace skids

Fig. 6
- Remove nuts (2) and bolts (3).
- Replace skids (1) on both sides of the housing.
- Adjust new skids (see “Adjust the skids”).

Re-adjusting chute adjusting rod

Type 4 to Type 6

Fig. 13

If required, the chute adjusting rod can be re-adjusted if the chute can no longer be fully rotated.
- Removing split pin.
- Pull adjusting rod slightly backwards and fix in the 2nd mounting hole with the split pin.

Preparing the machine for non-use

⚠ Danger of causing an explosion by fuel fumes igniting

Before you prepare the machine for non-use, empty the fuel tank into a suitable container in the open air (see “Engine instructions”).

When the machine is not to be used for more than a month, e.g. after the winter:
- Prepare engine (see “Engine instructions”).
- Clean the machine.
- To protect from rust, wipe over all metal parts with an oily cloth or spray with spray lubricant.
- Park the machine in a clean, dry enclosed space.

Warranty

The warranty terms issued by our company or importer are valid in every country.

Faults will be repaired free of charge within the framework of the guarantee, provided that they have been caused by a material defect or manufacturing error.

Should you need to call upon the warranty, please apply to the vendor of your machine or to the nearest agency.

Engine

The manufacturer of the engine is liable for all engine-related problems with respect to output power, power measurement, specifications, warranties, and service.
More detailed information can be found in the owner/operator handbook provided separately by the engine manufacturer.

Troubleshooting

⚠ ***Risk of injury from starting the machine by mistake***

Before doing any work on this machine

- *Turn off the engine.*
- *Wait until all moving parts have come to a standstill; the engine must have cooled down.*
- *Remove the ignition key and the spark-plug connector.*

⚠ ***Caution***

Faults encountered when operating the machine sometimes have simple causes which you can remedy yourself. If you are in any doubt, or if expressly instructed to do so, seek the help of a specialist workshop.

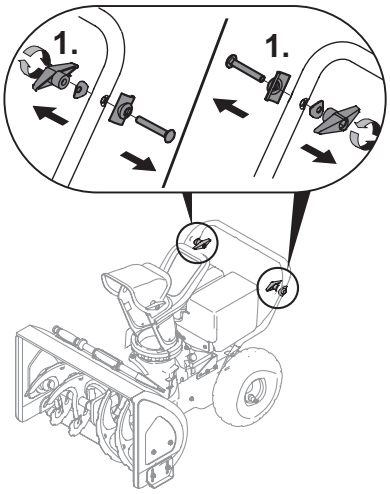
Have repair work carried out only by a specialist workshop which will use original replacement parts.

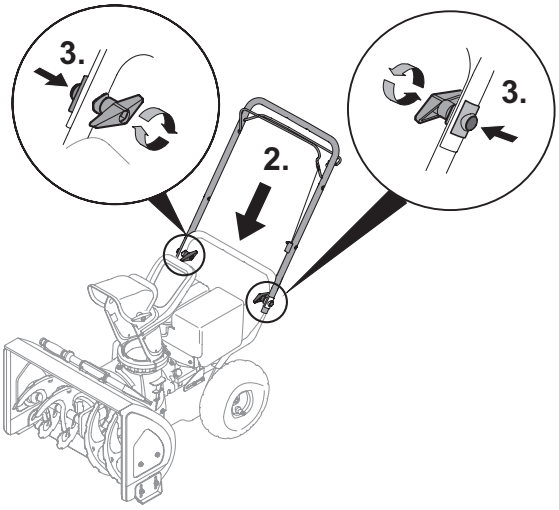
Fault	Possible cause	Action to take
Engine does not start.	Fuel tank empty.	Fill fuel tank.
	Stale fuel.	Drain out stale fuel into a suitable container in the open air [1]). Fill up tank with clean, fresh fuel.
	Engine is cold. Choke lever is not set to "⎍/ON/CHOKE".	Set choke lever to "⎍/ON/CHOKE".
	Throttle lever is not set to "🐇/FAST"	Set throttle lever to "🐇/FAST".
	Engine stop switch (for machine without throttle) not set to "ON".	Set engine stop switch to "ON".
	Spark-plug connector not connected.	Put spark-plug connector on the spark plug.
	Spark plug dirty or defective.	Clean spark plugs [1]). Have defective spark plugs replaced [2]).
	Carburettor flooded.	Set choke lever to "RUN/OFF/⎍" and start engine.
	Primer not actuated.	Actuate primer.
Engine runs unevenly (stutters).	Choke lever set to "⎍/ON/CHOKE".	Set choke lever to "RUN/OFF/⎍".
	Spark-plug connector loosely connected.	Connect spark-plug connector firmly.
	Stale fuel. Water or dirt in the fuel system.	Drain out stale fuel into a suitable container in the open air [1]). Fill up tank with clean, fresh fuel.
	Vent hole in fuel filler cap blocked.	Clean fuel filler cap and vent hole.

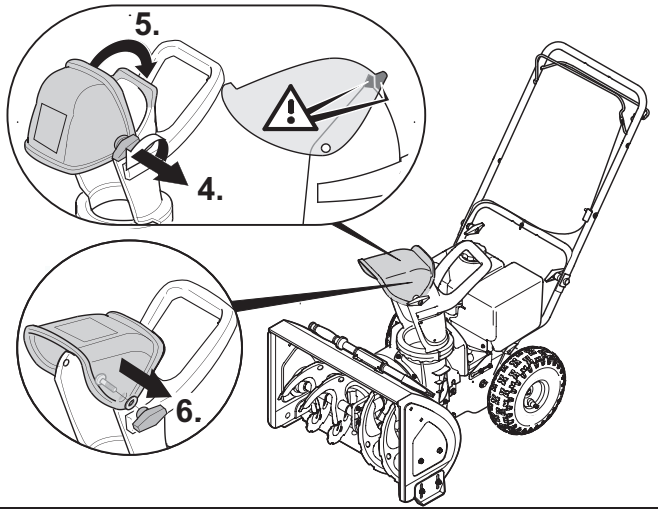
Fault	Possible cause	Action to take
Machine does not clear snow.	Shear bolt torn off.	Replace shear bolt (see “Replacing shear bolt”).
	Worm or throw-out chute blocked.	Stop engine, disconnect spark-plug connector. Eliminate blockage.
	Coupling cable for worm drive not correctly adjusted.	Adjust coupling cable (see “Making adjustments to the coupling cable for the worm drive”).
	V-belt slack or torn.	Have slack V-belt tightened [2]). Have torn V-belt replaced [2]).
Machine does not drive along.	Coupling cable for drive system not adjusted correctly (Type 2 to Type 7).	Adjust coupling cable (see “Adjust coupling cable for the drive system”).
	V-belt slack or torn.	Have slack V-belt tightened [2]). Have torn V-belt replaced [2]).
	Friction-wheel rubber torn.	Have friction-wheel rubber replaced [2]).
Excessive vibration.	Loose parts or damaged worm.	Stop engine immediately and pull off spark-plug connector. Tighten loose bolts and nuts. Have damaged worm repaired [2]).
Gears can only be changed with difficulty (Type 2 to Type 7).	Coupling cable for drive system not adjusted correctly.	Adjust coupling cable (see “Adjust coupling cable for the drive system”).
	Shift lever not correctly adjusted (Type 3 to Type 7).	Set shift lever (see “Settingshift lever”).

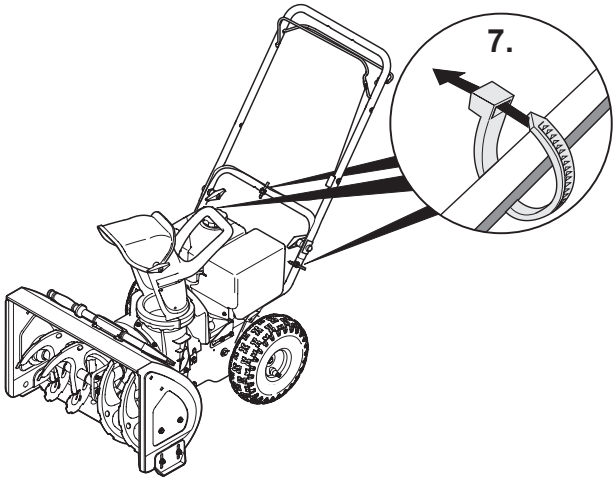
[1]) See “Engine instructions”.

[2]) Have this work carried out only by a specialist workshop.

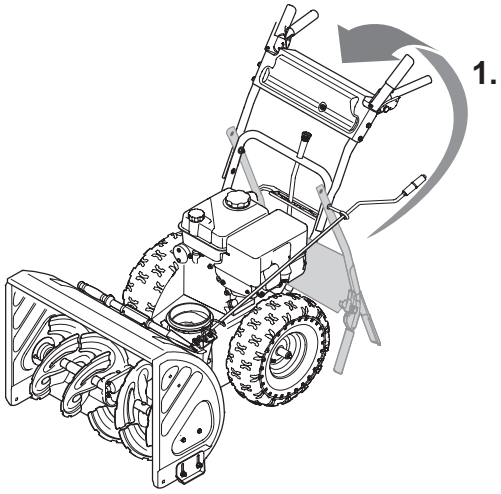

1.
1.

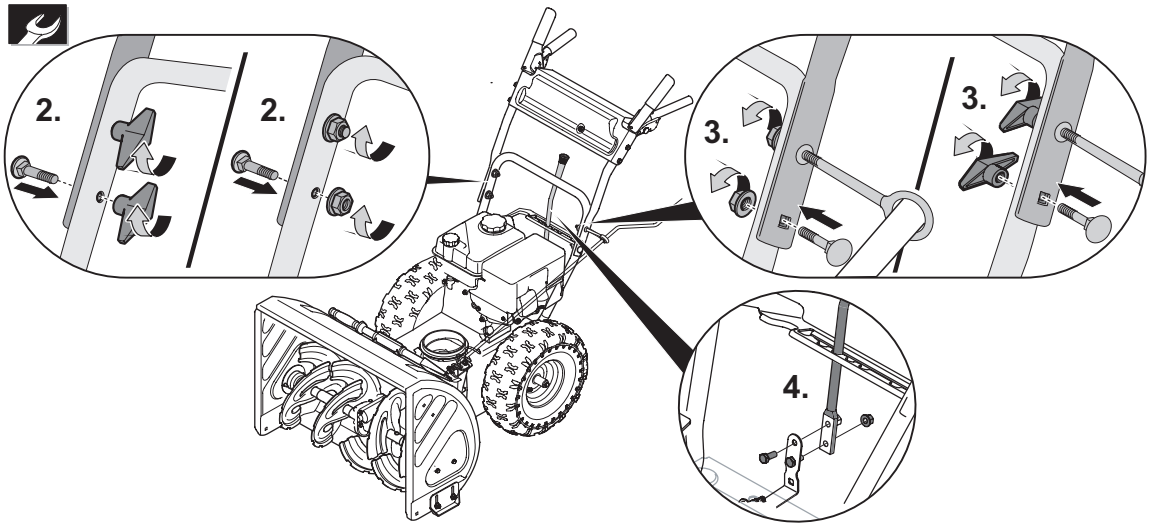

3.
2.
3.

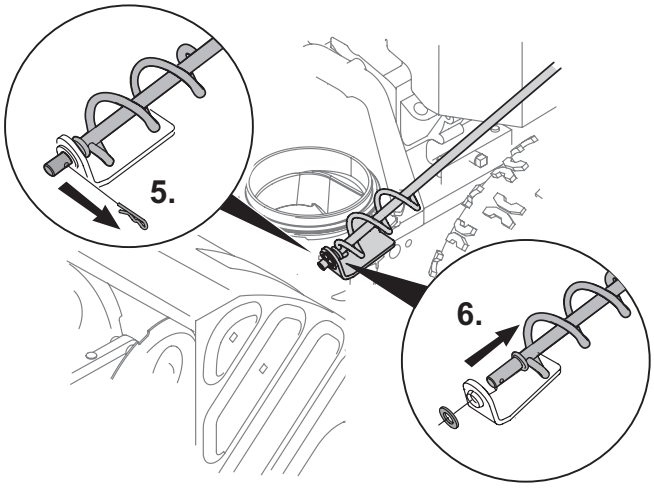

5.
4.
6.

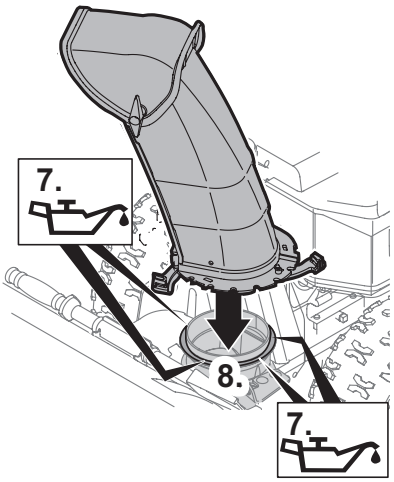

7.

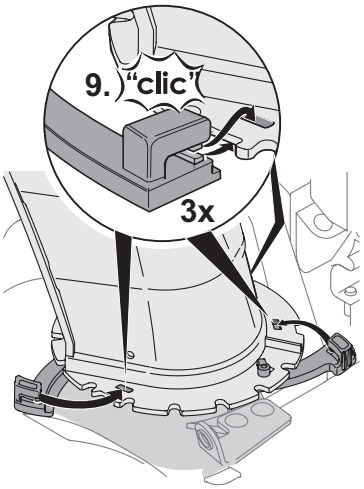
TYP 2

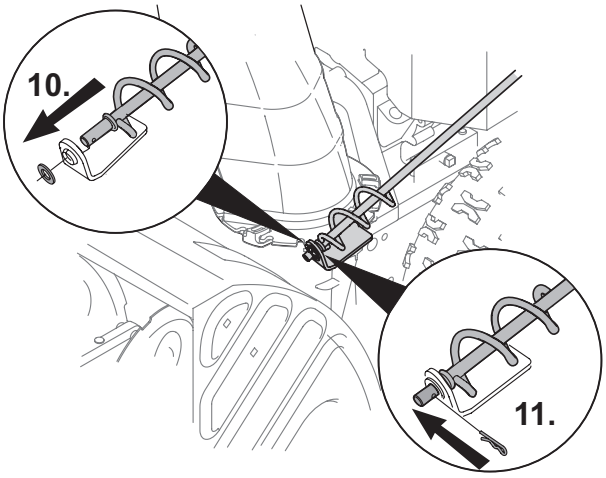


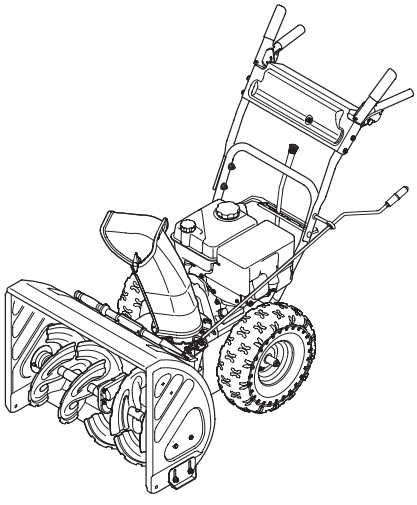




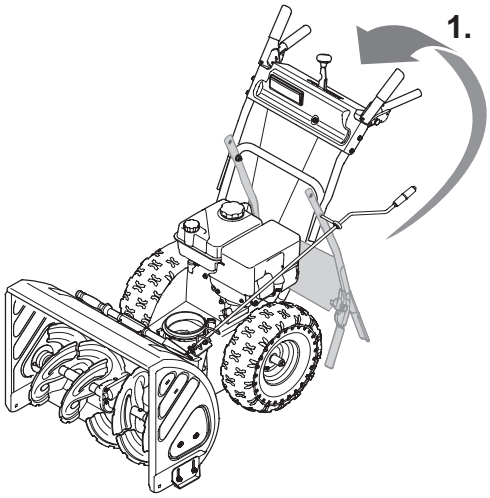

7.
8.
7.

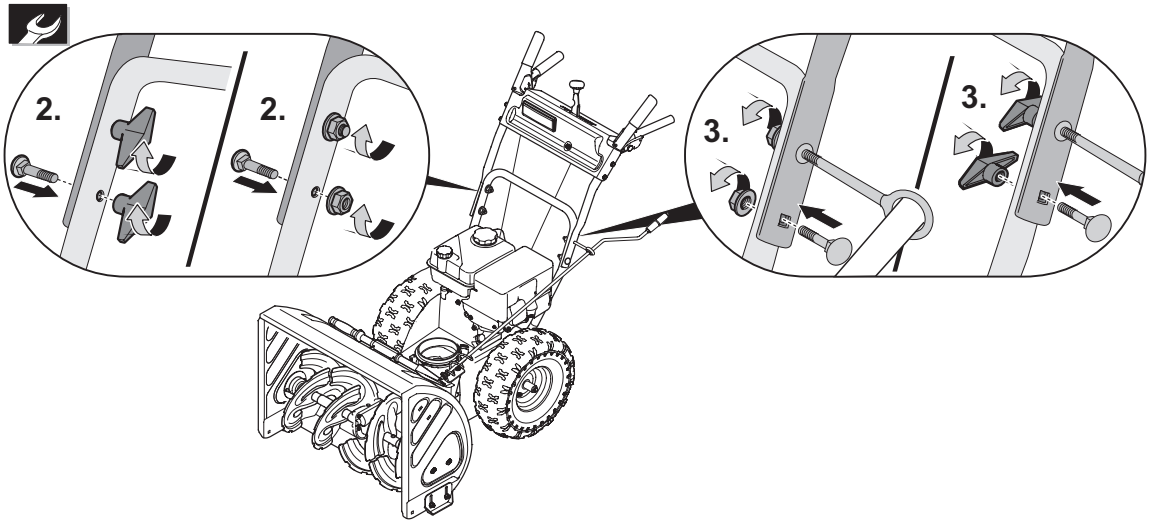

9.)"clic"(
3x

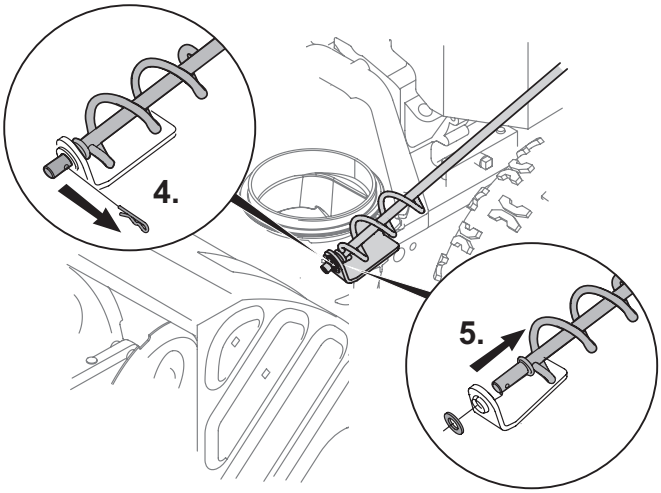

10.
11.

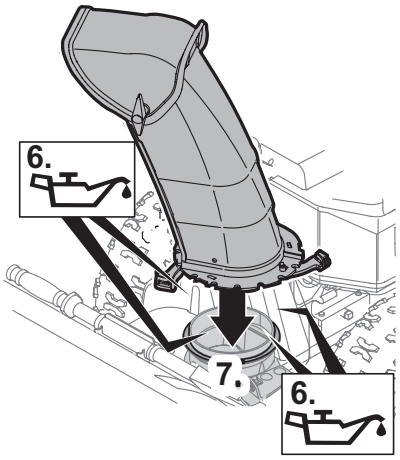


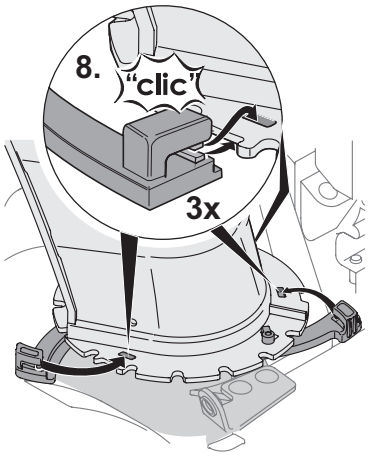
Typ 3

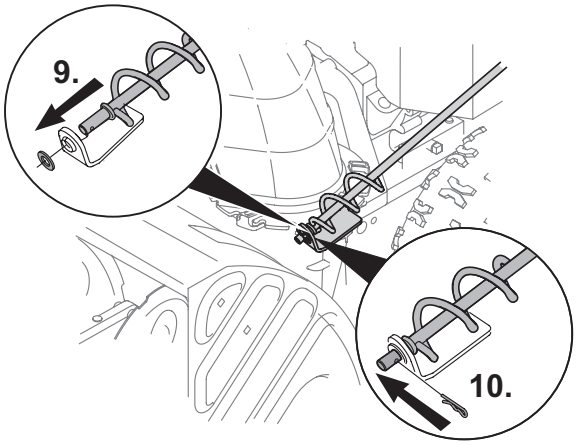


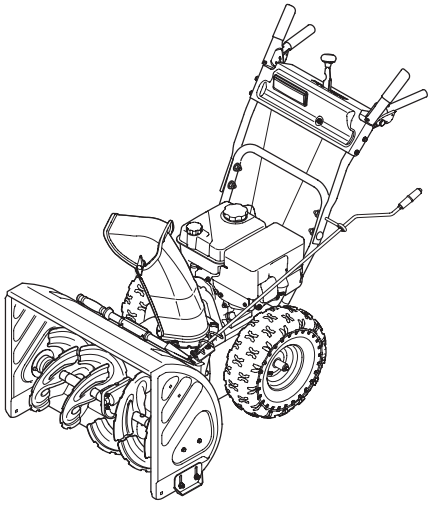




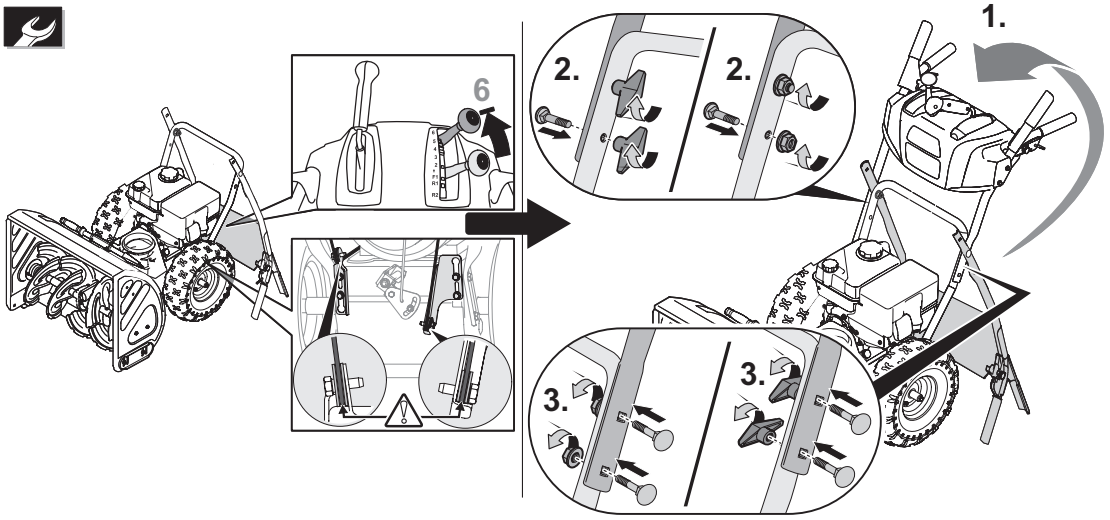

6.
7.
6.

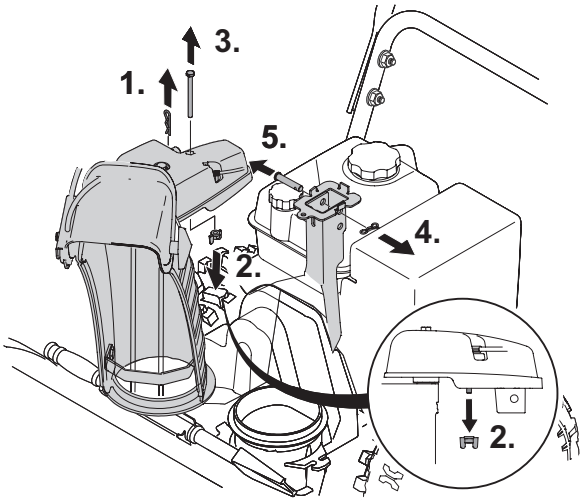

8.
"clic"
3x

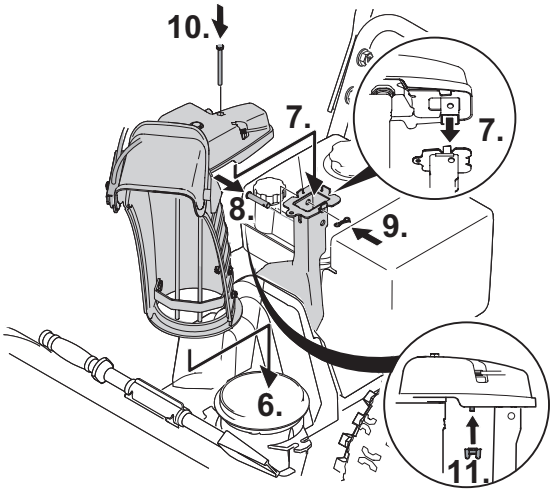

9.
10.

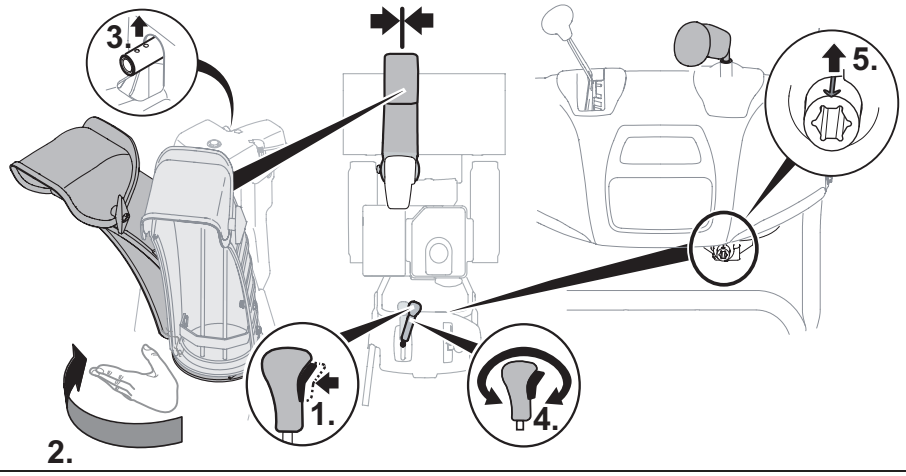


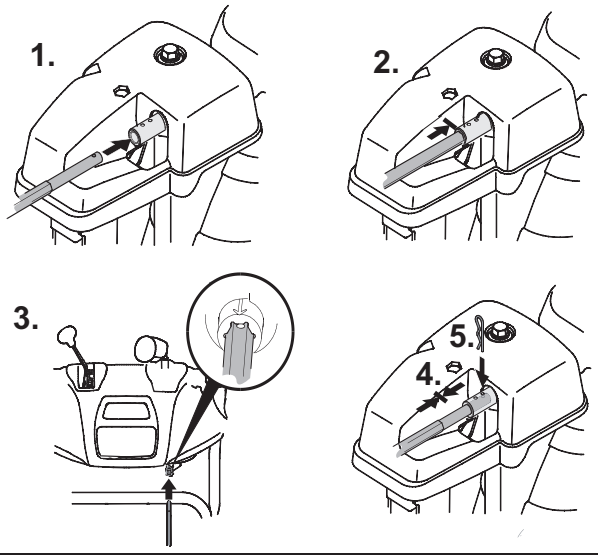
Typ 4

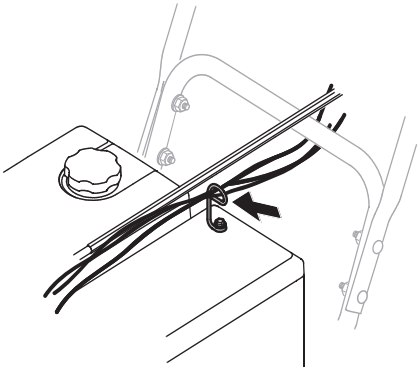


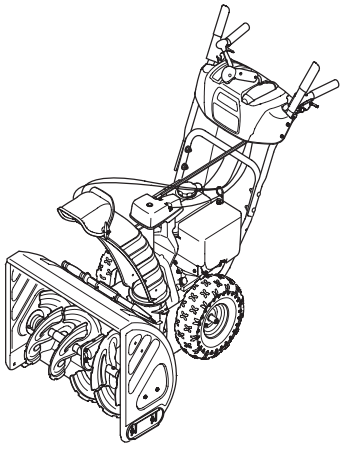


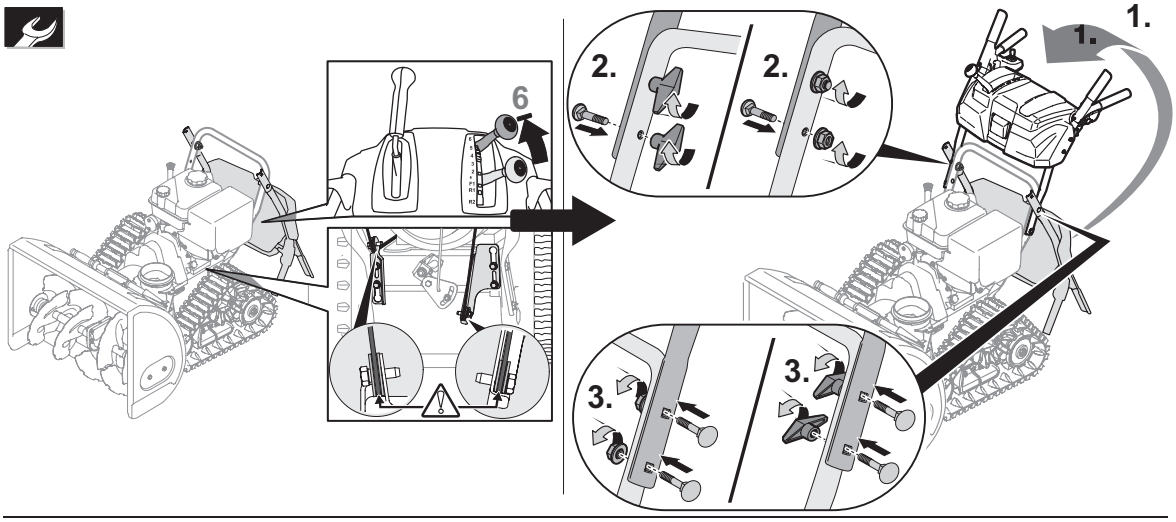


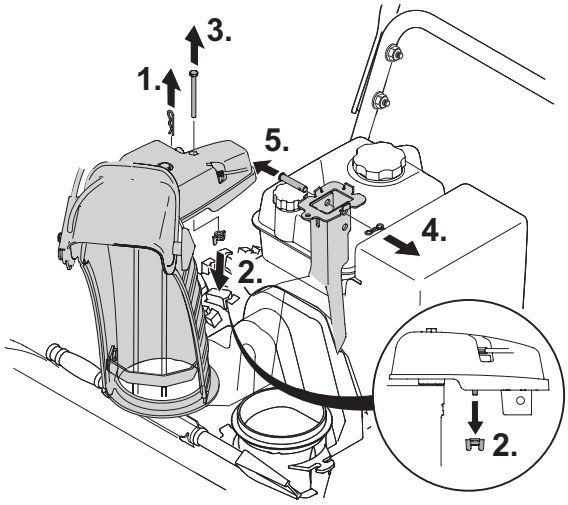

3.
5.
1.
4.
2.

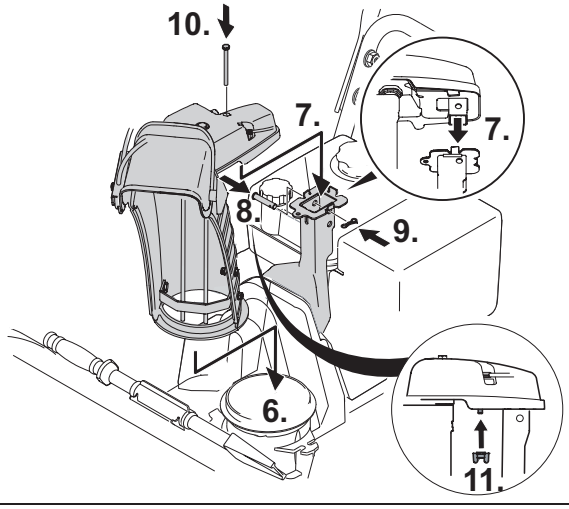

1.
2.
3.
5.
4.

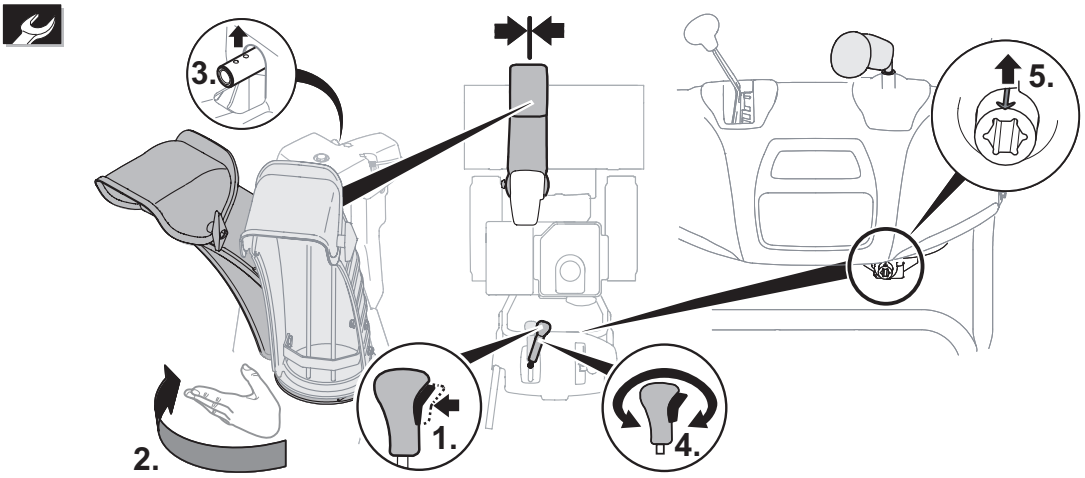


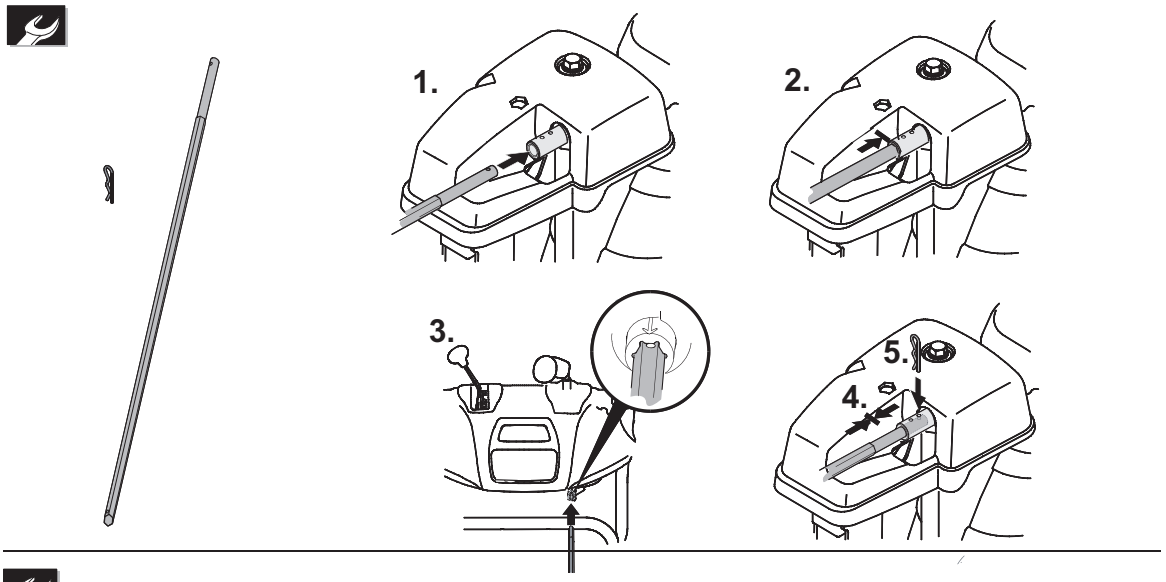


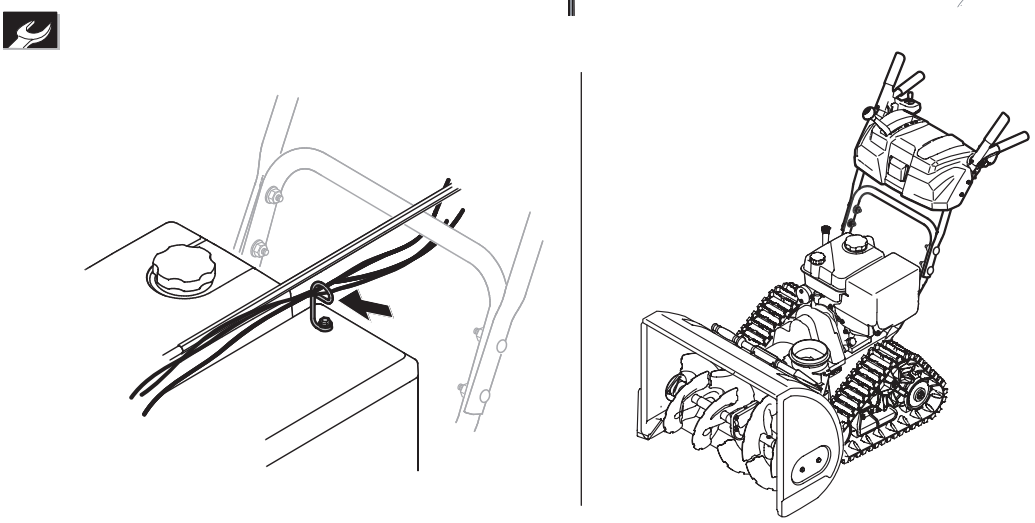

6
2.
2.
1.
1.
3.
3.


3.
1.
5.
4.
2.
2.

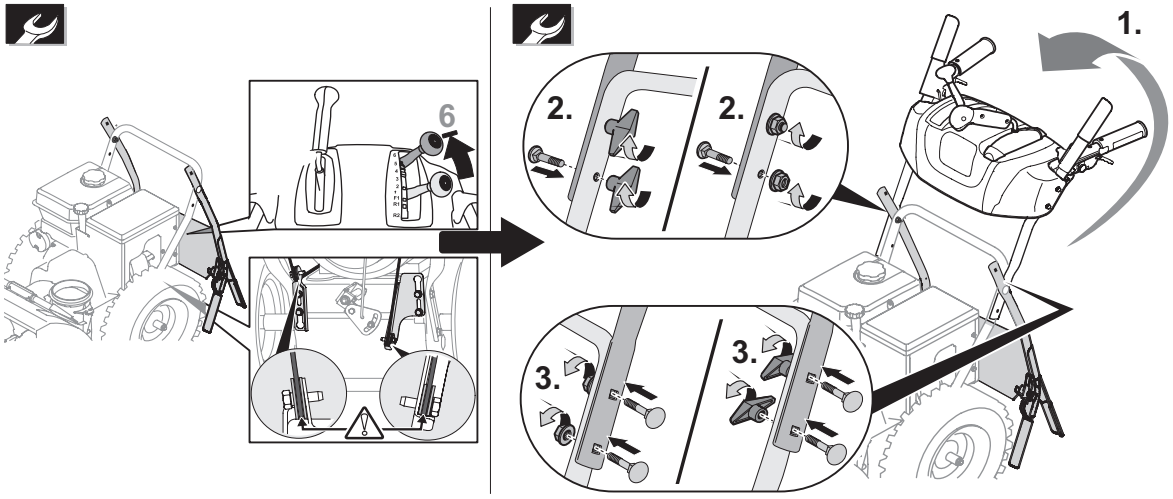

10.
7.
7.
8.
9.
6.
11.

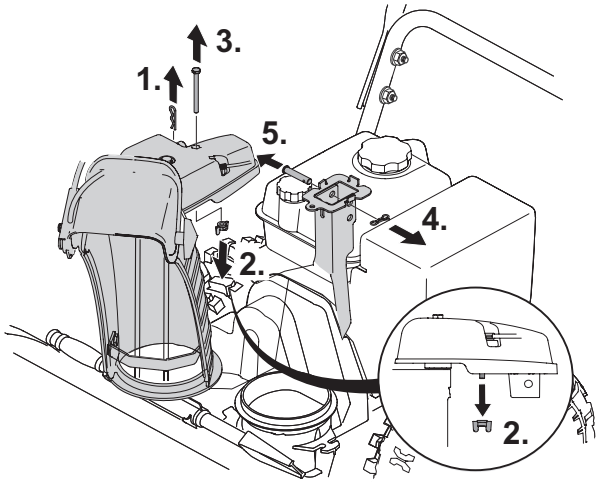

3.
5.
1.
2.
4.

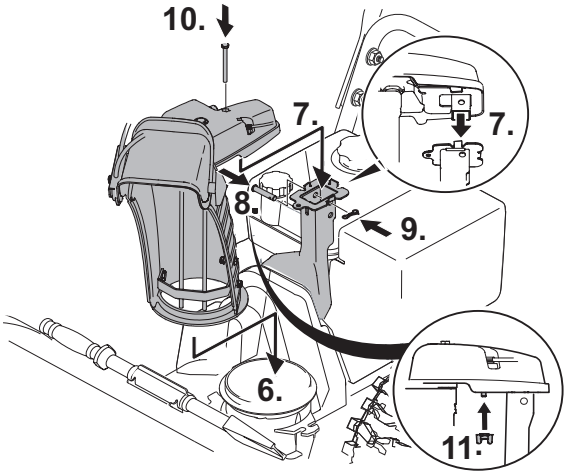

1.
2.
3.
4.
5.

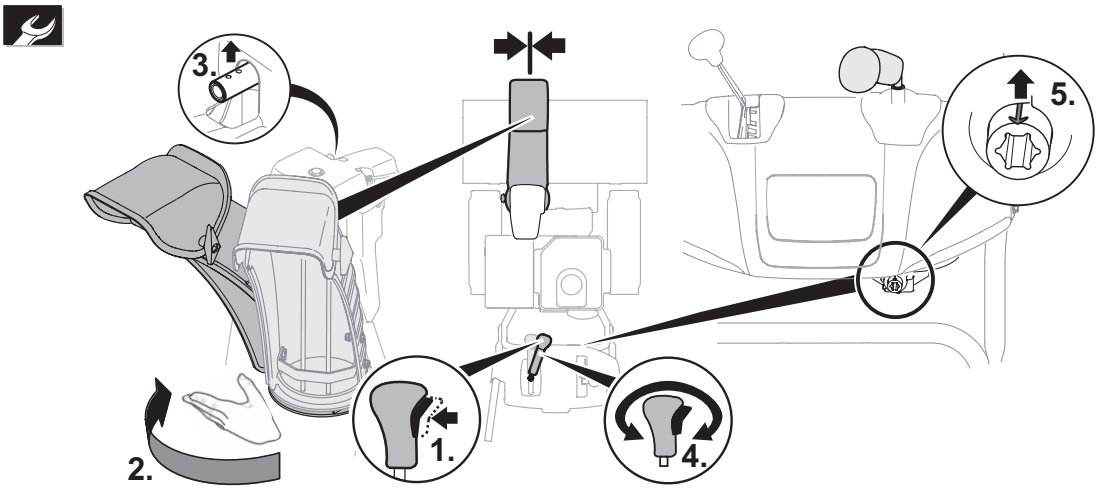


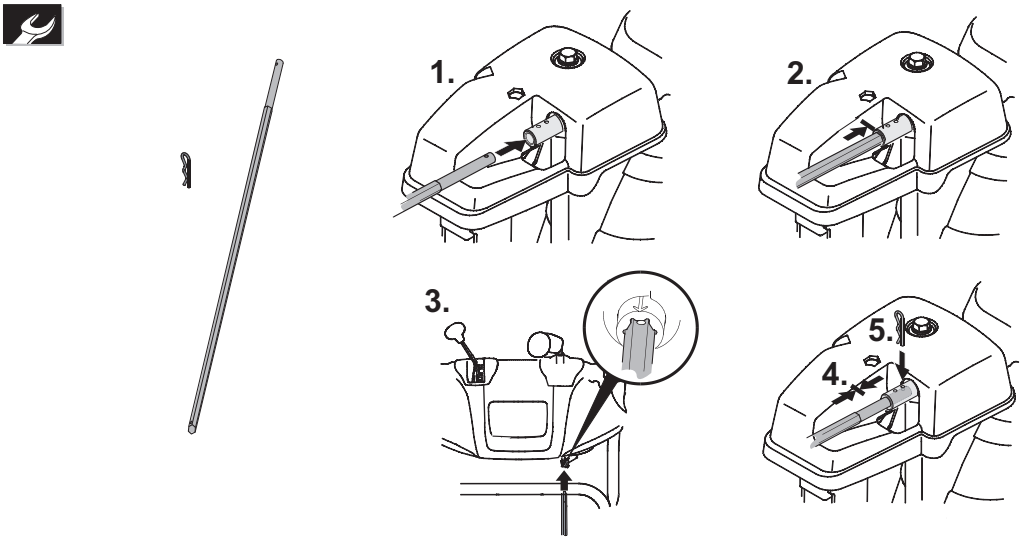
Typ 6

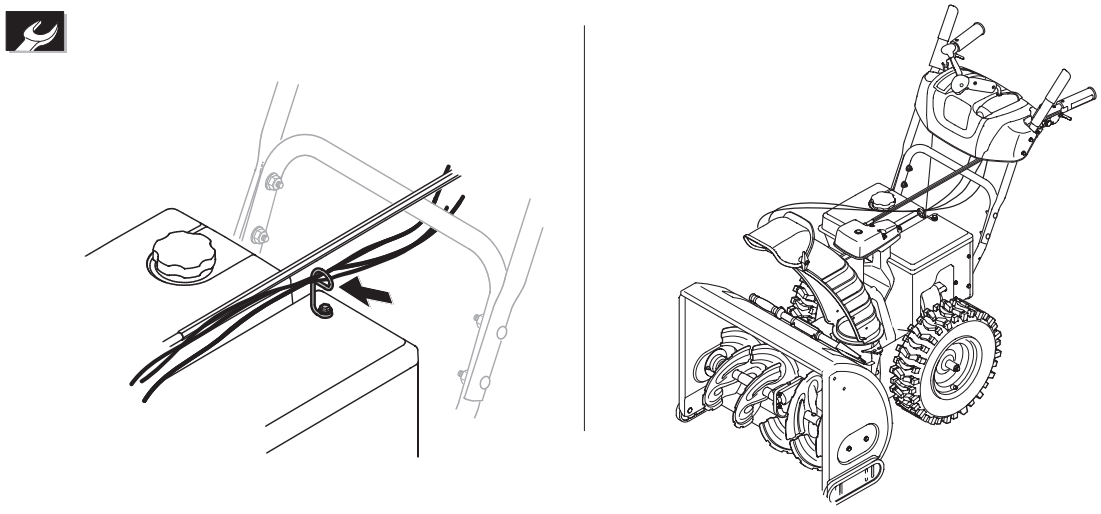




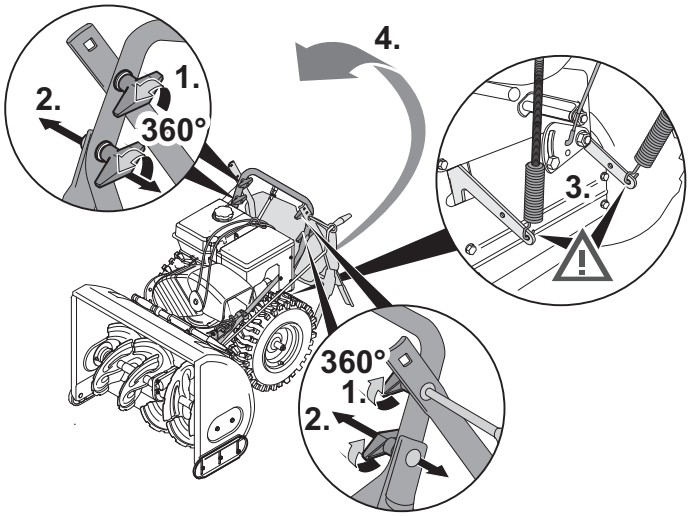


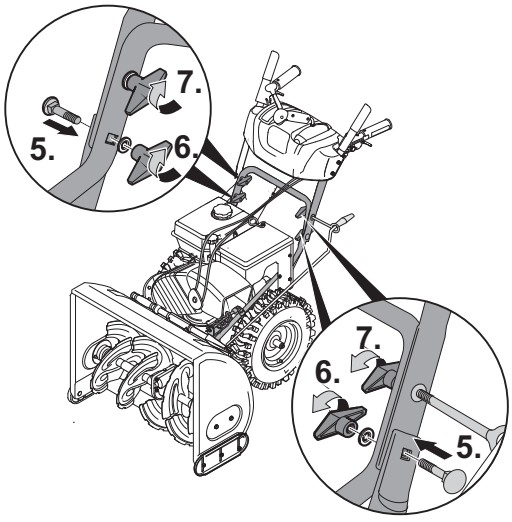

3.
5.
2.
1.
4.

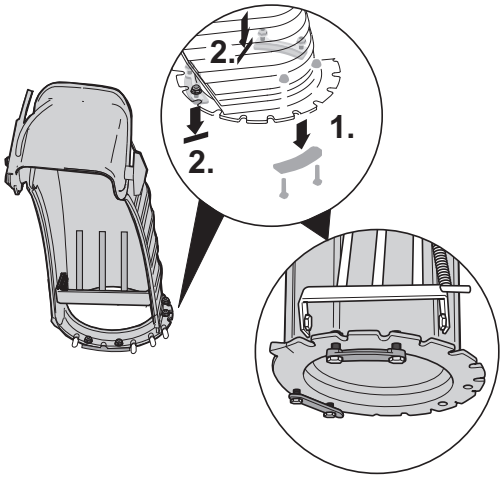

1.
2.
3.
5.
4.

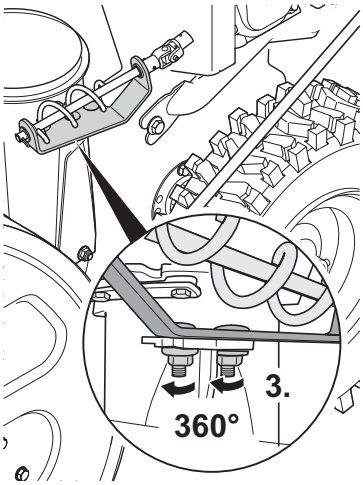


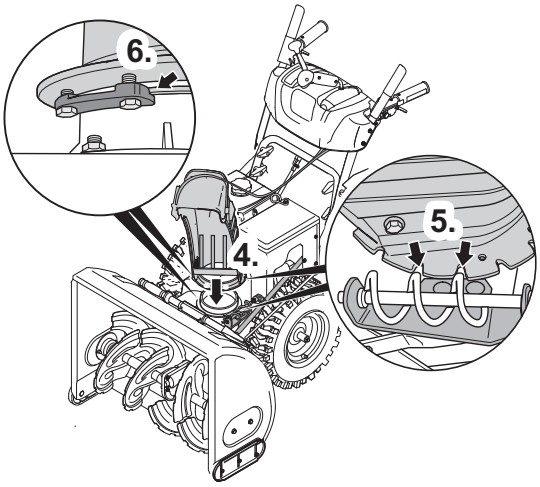
Typ 7

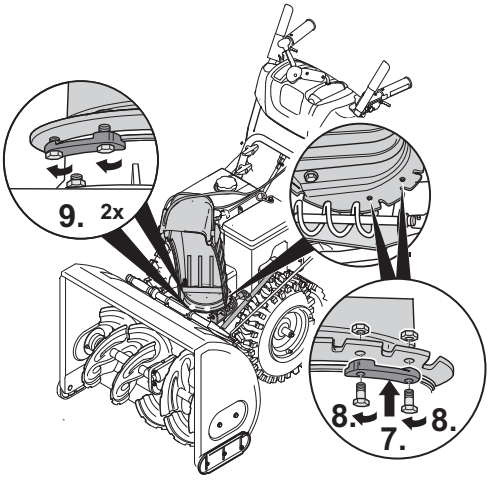


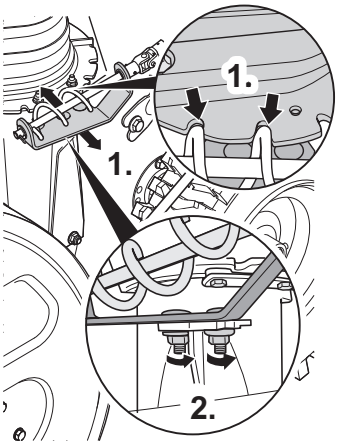


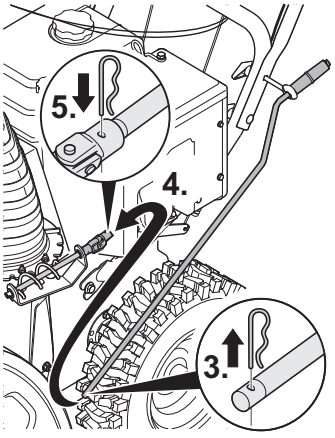


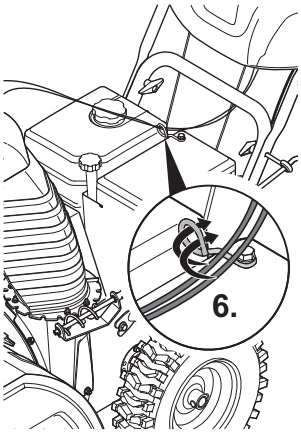
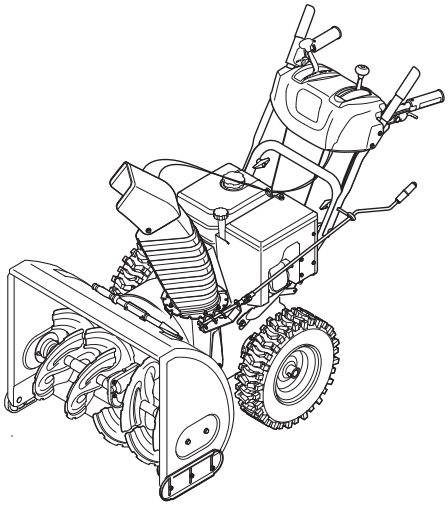



6.
4.
5.


9. 2x
8.
7.
8.


1.
1.
2.


5.
4.
3.


6.