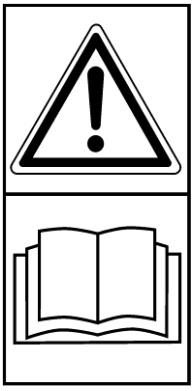
Issue: 2022-11

TREJON OPTIMAL

Instruction Manual and Maintenance Directions

Hydraulically powered snow blower 151H, 191H



Important!
Read the Instruction Manual before use

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Tel: + 46 (0)935 39 900
Web: trejon.se

CE

SAFETY SYMBOLS

NOTE! You will find this general warning symbol throughout this Instruction Manual to make you aware of safety instructions concerning yourself, your employees and other persons coming into contact with the machine. Neglecting these instructions may lead to serious injury and even death.

This symbol has the following meaning:

WARNING!
LOOK OUT!
YOU ARE IN DANGER!

Warning Labels

Be aware of the warning text **WARNING!** and **NOTE!** (NB) in safety texts. These words have been chosen based on the following guidelines:

Warning!
Warns of dangerous situations which, unless avoided, could lead to serious injury or even death. This also includes dangers that can occur when protective equipment and/or protective screens are removed. Warning labels can also be used to warn of hazardous use.

NB!
Highlight risky situations where slight or minor injuries can result if they are not avoided. Used also to warn of machine damage that can arise if the directions are not followed.

Dear customer,

Thank you for choosing an OPTIMAL product – we hope you will be pleased.

Reading this manual and following its recommendations will ensure you get the longest possible service life and an efficient use of the machine.
We have produced this manual to give you a good overview of how the machine works and what safety and maintenance directions that must be followed when working with it.
If any questions should arise in its use or when reading this manual, you are always welcome to contact us.

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Dear Dealer,

In order for the warranty to come into force and all legal requirements to be met, we would like you to complete the warranty certificate together with the customer and send it back to TREJON.

The warranty will come into force on the same day as the machine is transferred to the customer.

Delivery inspection checklist:

Check for any transport damage. Report to carriers	
Inspect the equipment thoroughly before use and make sure all packing material has been removed. Dispose of all packing materials in an environmentally responsible manner.	
Check that the delivery is complete in accordance with the machine order/packing note.	
Make sure the machine has been lubricated as described under “Service and Maintenance”.	
Check the oil level in the gearbox through the lower level plug on the side of the gearbox.	
Make sure the hydraulic motor housing is 50% filled with hydraulic oil before starting.	
Check the chain tension. Refer to section 4.2.	
With the assistance of the Instruction Manual, run through and explain commissioning, use and maintenance of the machine with accessories for the customer.	
Perform function test	
Instruction Manual handed over to customer.	
Complete the warranty certificate together with the customer and register on **trejon.se**. Available as an appendix to this manual and as a copy at the back.	

Enter the serial number of the machine in the field on the right (machine/gearbox)	S/N:
Enter the hydraulic motor’s serial number in the field to the right.	S/N:

1 Introduction

1.1 Getting Started

Thank you for choosing this OPTIMAL snow blower. We have concentrated on making a powerful, good-quality snow blower that will serve you for many years. As the service life of the machine does not wholly depend on us, but also you, the user, we have compiled an instruction manual in which we describe its correct care and use. So read through these directions thoroughly. Always get in touch with the company where you bought your machine when ordering spares or other service. When ordering spares, always specify the correct model, type and serial number found on the name plate on the chassis.

1.2 Description

The machine is designed for clearing snow from flat surfaces such as roads and car parks. The snow blower is connected to the tractor's loader or similar via a connection frame. The snow blower is designed to be powered by the tractor's existing hydraulics, which can supply the recommended flow. The tractor's hydraulic oil flow and working pressure to the snow blower's hydraulic motor are the factors that determine what power output the snow blower's hydraulic motor will deliver. The hydraulic motor's power output determines what capacity the snow blower will have in practice.
TREJON supplies the snow blower with customised hydraulic motor sizes to match the tractor's hydraulics, which are specified when ordering a new machine.

The snow blower works best if it is mounted on a tractor that can deliver the recommended oil flow, regardless of the driving speed. For this reason, tractors with hydrostatic transmission are particularly well suited for hydraulically powered snow blowers.

To operate the snow blower's hydraulic motor, the following hydraulic outlets are required on the tractor:

- One hydraulic outlet that can deliver the recommended flow to the snow blower.
- One hydraulic outlet with depressurised return directly to the tractor's oil tank for the hydraulic motor's return oil.
- One hydraulic outlet with depressurised (max. 4 bar back pressure) return directly to the tractor's oil tank for the hydraulic motor's leak-oil line.

Other functions require:

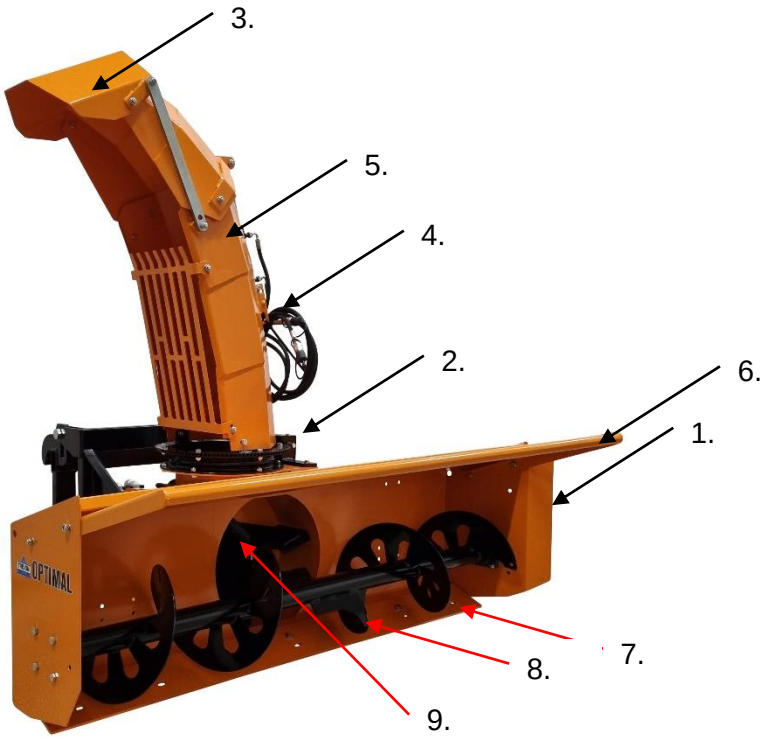
- One double-acting hydraulic outlet is required to turn the discharge chute.
- If the machine has been additionally equipped with hydraulic flap regulation, an additional double-acting outlet is required.

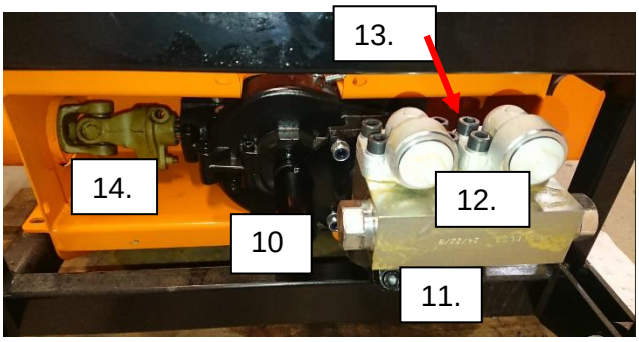
1.3 Working method

The machine operates in three stages: 1 - Breaking-up and self-cleaning feeding screw(s) with cutting action, 2 - Transport to ejection rotor, 3 - The ejection rotor ejects the snow with considerable force through the discharge chute, which is adjustable both in terms of direction and throwing distance.

1.4 Detailed description

1	Chassis
2	Turning unit
3	Twin flap
4	Flap regulation (hydraulic on vehicle = accessory)
5	Discharge chute (short)
6	Roll bar
7	Reversible cutting edge
8	Feeding screws
9	Ejection rotor
10	Gearbox
11	Hydraulic motor
12	Connection for working hydraulics
13	Connection for leak-oil line
14	Break connection, feeding screw





Technical specifications

Specifications/Model	151H	191H
Art. no.	431003	431004
Operating width, mm	1570	1870
Chassis height, mm	630	630
Rotary cutters, quantity	1	1
Rotary cutter, ∅ mm	340	340
Ejection rotor, ∅ mm	450	450
Gearbox operation, type	Hydraulic	Hydraulic
Ejector turning, Std. type	Hydraulic	Hydraulic
Chute flap regulation, Std. type	Mechanical	Mechanical
Weight, base unit, kg	334	340
Connection options*	F – R	F – R
Category 3-point	0+1	0+1

Due to a policy of continuous development, the data specified in our documents is not binding and may be changed without prior notice.

* F = Front-mounted, R = Reversing

2 Safety Instructions

2.1 Safety Regulations

Read the manual. All machine operators should read and understand the entire contents of this manual and the safety regulations so there is no uncertainty as to the use of the machine/tool before it is taken into service. Get in touch with your dealer if you have any questions.
Use of the machine is strictly forbidden if the operator is not aware of the risks involved in conjunction with the use of the machine and cannot act correctly if a risk situation should arise.

Read, observe and understand the meaning of all safety, operating, warning and positioning decals on the machine and in the manual.

Actions may occur when using this equipment that cannot be prevented in its design or with the use of mechanical parts.
Unfortunately, human carelessness may cancel the function of our integrated safety features. Accordingly, the prevention of accidents and operating safety features are dependent on the responsible use of the equipment and its integrated safety features.
Only trained personnel should use this equipment.

The machine is intended for outdoor use only.

Operation. Learn and practise the machine's working methods and controls before it is used.

Coupling the Machine. Connect the machine in the correct manner and keep away from the area between the tractor and the machine when coupling.
Make sure the equipment is correctly mounted, adjusted and in working order.

Safe Work Area. Keep unauthorized persons, especially children, away from the working zone of the machine or when it is being repaired.

Observe the risk of injury from material that can be thrown from the machine while work is in progress and clear away any stones, twigs and other foreign objects in the work zone that may cause personal injury or damage to property.
Never aim the snow outlet towards people, animals or buildings.

Moving parts in this tool have been designed and tested to withstand heavy use. However, in the event of impacts with heavy, solid objects, such as steel railings, concrete supports or rocks, broken pieces of metal could be ejected at high velocities. In order to avoid any damage to property, personal injury and even death, make sure never to drive into such obstacles.

The Machine's Safety Equipment. The machine may only be used if all the manufacturer's original safety equipment for moving mechanisms are positioned correctly and in working order.

Ensure all safety and operating decals are in good order and affixed in the correct manner and replace them if necessary.
New safety and operating stickers can be ordered at no extra cost. Write the model and serial number when ordering.

Moving Parts. Keep arms, legs and other body parts as well as clothing away from any moving parts of the machine. Do not wear loose fitting clothes.
Leave the machine to work on its own and do not insert hands or fingers in an attempt to give assistance.

Lifting and lowering of the machine.
Be careful when lifting and lowering the machine/machine part.

Stability. The machine must not be operated with a tractor that does not weigh enough over the front/rear axle so that tractor stability is affected. At least 20% of the tractor weight shall rest on the front axle to ensure tractor steering and braking ability.
Mount ballast weights if necessary, see tractor instruction manual.

Operating the Machine. Take great care when working on uneven ground conditions, close to ditches and fences, look out for hidden dangers and adapt your working rate.
Great care should be observed when working on steep slopes:
Try to drive in the same direction as the incline and not across it.
Avoid fast starts and heavy braking when driving the machine up and down inclines.
If it is absolutely necessary to drive across steep inclines then reduce your speed and watch out for unevenness, avoid sudden turns and be aware of the shift in centre of gravity that occurs when lifting mounted tools.
Hold onto the steering wheel tightly if the tractor should overturn.

Operating at Night. The work area must be illuminated when working in the dark.

Driver. Operators who are tired, intoxicated, drugged or under the influence in any other way so that they cannot control their movements must not use the machine.
The machine may only be operated by one person sitting in the tractor, no passengers are allowed.
It is prohibited for people without authorisation to use the machine.

Personal protective equipment. Protective equipment such as helmets, protective goggles, protective shoes and gloves are recommended for personnel during assembly, operation, adjustment and maintenance.

Protective Cab. The machine should only be driven by a tractor equipped with an approved protective cab. Keep doors and windows close while working.
All moving parts, including engine, must be stationary and the handbrake applied before the tractor driver leaves the cab.

Maintenance. Inspect, adjust and maintain the machine according to the directions.

Regular Inspection. Inspect the entire machine regularly. Locate any loose, worn and damaged components and leaks.

Safety During Maintenance and Service. The machine must be standing on firm, even ground for maintenance and adjustment.
The tractor engine must be shut off, all moving parts stationary, the machine lowered to the ground and the handbrake applied during all cleaning, inspection, adjustment, maintenance and repair work.
Clean the machine thoroughly before repair and storage.
Bearing and hydraulic components should not the cleaned with high-pressure jets.
If excessively high pressure is used for general cleaning, this may damage the paint.
After cleaning, the machine must be lubricated according to the lubrication schedule and a short test run carried out.

Vibration. If any vibration should occur in the machine, it must be shut down immediately and the cause located. Change any damaged parts.

Emergency stop. Stop the machine immediately if it should hit an obstruction. Shut off the engine, remove the key, check for and repair any damage before recommencing work.
Make yourself aware of how emergency stops work on the tractor and the tool, and be prepared of how they work in an emergency situation.

Hydraulic Hoses. Hydraulic hoses on the machine contain oil at very high pressure. Do not touch hoses and hydraulic components if the system is pressurised. In case of leaks, oil at high pressure may penetrate the skin and cause serious injury. In the event of an accident, contact a doctor immediately.
Check the condition of hydraulic hoses with respect to damage. Chafed and leaking hoses should be replaced immediately with new that meet the manufacturer's technical requirements.
When changing tractor, always check the length of hoses. Hoses that are too long or too short may be damaged.
The use of incorrect hydraulic hoses that do not meet with specifications is strictly forbidden.
The hydraulic motor and hoses become extremely hot while in operation, with a risk of burn injuries. Do not loosen hoses while the oil is hot, wait for it to cool down.

Welding. Protect bearings, hydraulics and electronic components if welding is being carried out. Before welding commences, electronic components must be disconnected and the welder's ground clamp placed as close to the welding site as possible.

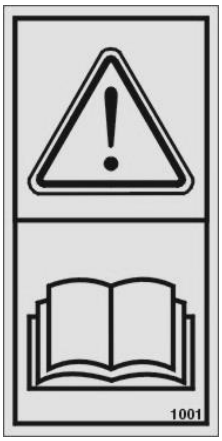
Fire Risk. If overheating of machine parts should occur, the cause must be located and the machine shut down.

Spare Parts. Use only original spare parts on the machine.
If you should have any questions concerning the machine or its function, please get in touch with your dealer or Trejon AB

2.2 Safety symbols

The symbol on the right shows the following:

Warning!
Sticker 1: Study the instruction manual carefully before use, so that the user is very familiar with the machine.



Warning!
Sticker 2: Keep arms or legs away from the machine's moving parts. Failure to respect this can result in life-threatening injuries and even lead to death.

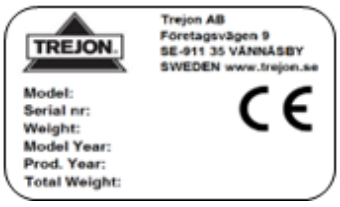
Warning!
Sticker 3: Flying objects such as rocks and lumps of ice can be ejected from the machine during operation. Do not remain in the vicinity of the machine when it is in operation. At the same time, the operator must have a good view of where the snow is being blown. Operating in the vicinity of people, animals and buildings should be avoided.

Warning!
Sticker 4: Keep arms or legs away from the intake wings when the machine is in operation. In the event of a stoppage, apply the tractor's brakes, turn off the engine, set the thrower down on the ground and shut off the hydraulic oil flow.

Warning!
Sticker 5: Crush risk. Do not stand between machine and tractor when coupling. Always apply the brake on the tractor when leaving the cab during all coupling or uncoupling

Warning!
Sticker 6: Crush risk! When the ejector tube is lowered, the tractor and the power take-off must be turned off. Never use your arms or legs to clear the ejector tube.

Sticker 7: Machine name plate with CE marking.
This includes the machine's serial number and model number.



3 Using the machine

3.1 Assembly

NOTE!
Ensure no-one is inside the risk area when lifting.

Take care with straps and wires when they are removed as they are tensioned very hard. They can also be very sharp.

The following steps will be performed when assembling the machine:

Remove all packaging and wrapping material, and dispose of this in an environmentally friendly way.

Fold out the discharge chute and screw it into place (see section “Adjustments” for options). Be aware of the risk of pinching injuries that exists during this operation.

The connection frame is bolted to the machine.

Ensure all guards are in place.

Before starting to use the machine, the points under section 3.3 “Before starting the machine” must be carried out.

3.2 Coupling the machine to the tractor

Warning!
Crush risk. Do not stand between machine and tractor when coupling. Always apply the brake on the tractor when leaving the cab during all coupling and uncoupling.

The machine may only be coupled to a tractor with sufficient weight over the front and rear axles respectively so that steering and brakes function when the machine is coupled. Use ballast weights as necessary, see the tractor's instruction manual.

The machine must be coupled on an even and flat surface.

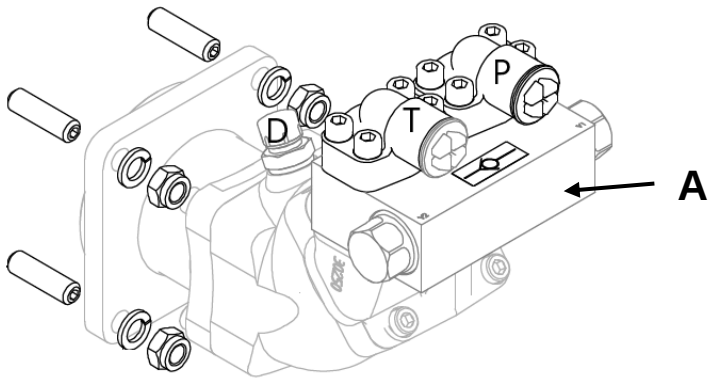
Attach the machine to the tractor's connection frame.
Stop the tractor and apply the handbrake.

The machine is supplied without hoses to the hydraulic motor. Adapt the hydraulic hoses to the tractor in terms of their length and suitable quick couplings. The return must be connected directly to the tank with as little back pressure as possible.

Hydraulic motor connections
The snow blower's hydraulic motor is available in different sizes to match the tool carrier's hydraulics.

This calculation is performed when ordering the machine. If the tool carrier's flow does not match the details that have been provided, there is a risk that the snow blower will not deliver full power. Both the machine's capacity and its throwing distance will be affected.
Incorrect pressure and flow information that requires the size of the motor to be changed is NOT covered by any manufacturer's warranty.
The type of motor is indicated on the motor's type plate.

The motor is also fitted with an anti-cavitation valve (A).
This valve has two functions: 1. To ensure the correct direction of rotation and provide freewheel.
2. To refill the motor when the flow from the tool carrier ceases.



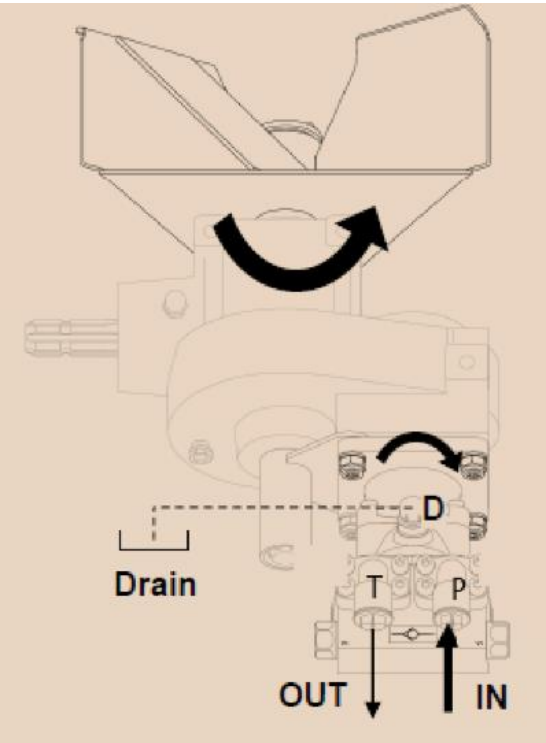
Port P, Pressure:
Oil to the hydraulic motor's pressure side is supplied from a suitable outlet on the tractor, which delivers the recommended oil flow and pressure. The oil flow from the outlet must be able to be adjusted from the tractor cab. Adjust the length of the hose and install suitable quick couplings to the tractor.

Port T, Return:
Oil from the hydraulic motor's return side must be led back to the tractor's tank via an outlet that has free flow (low back pressure). Adjust the length of the hose and install suitable quick couplings to the tractor.

Leak-oil line D:
To lubricate and cool the hydraulic motor's bearings and components, oil is deliberately supplied into the hydraulic motor housing during operation. This oil must be led back to the tractor's tank through a separate line. If the leak-oil line is not connected to a separate depressurised return (max. 4 bar back pressure), the shaft seal on the hydraulic motor will fail.
The leak-oil line must NOT be connected together with the return line. If this happens, the shaft seal or the motor will sustain damage.
The motor has a ½" external adapter for connecting the leak-oil line, after which the leak-oil line is connected directly to the tractor's tank. Adjust the length of the hose and install suitable quick couplings to the tractor.

Connect the hydraulic hoses for operating the discharge chute to double-acting outlets on the tractor. Clean the couplings thoroughly before connecting. Practice this function so that the operator is familiar with the directions of movement before putting the machine into service.

Make sure that the machine moves freely from the tractor in all possible work situations.



T = Return connection, directly to the tank

P = Pressure connection

D = Leak-oil line must be connected by a separate line to the tank, MAX 4 bar back pressure

Warning!

T-Return connection and D-Leak-oil line must NOT be connected together. If this is done, the shaft seal and motor will sustain damage. This is NOT covered by any manufacturer's warranty.

3.3 Before starting the machine

Warning!
Hydraulic hoses on the machine contain oil at very high pressure. Do not touch hoses and hydraulic components if the system is pressurised. Relieve the pressure from the system first. In case of leaks, oil at high pressure may penetrate the skin and cause serious injury.

Check no-one is present in the vicinity of the machine during test operation.

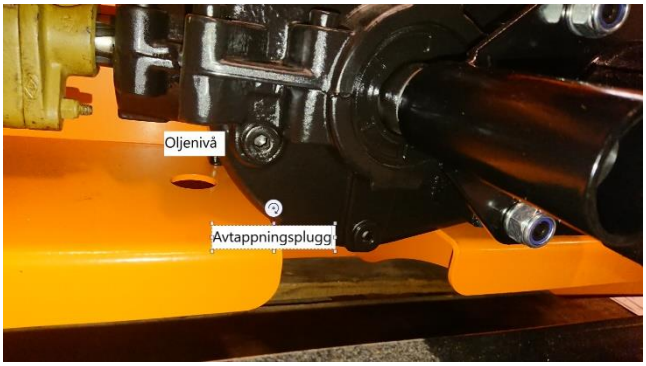
Before using the machine, check the following items on the machine:

That all screws and nuts are tightened (see maintenance schedule for subsequent intervals). Refer to the table in “Service and Maintenance” for correct tightening torques.

Ensure all guards are in place.

Lubricate the machine (refer to “Service and Maintenance”).

Check the oil level in the gearbox. The oil level in the gearbox must reach the level plug on the side of the gearbox (see “Service and maintenance”). The gearbox is filled with SAE 80W/90 API GL4/GL5 oil, Industrial gear oil ISO VG 220.



Adjust the height of the cutting edge using the support feet, as well as the machine’s incline using the loader’s tilt function (see section “Adjustments”).

Make sure that no objects have become wrapped around the machine’s moving parts.

Test-start the machine by slowly **directing the oil flow to the snow blower with the tractor’s engine at idle speed**, then increase the engine speed until you achieve the recommended oil flow. Check that the snow blower is rotating in the right direction (by studying the direction of rotation of the ejection rotor) and that there are no oil leaks.
To turn off the snow blower, perform the above procedure in reverse order:

1. Reduce the engine speed to idling.
2. Stop the oil flow to the machine.

If the ejection rotor is moving in the wrong direction, contact your Trejon centre.

3.4 Adjustments

Warning!
Never rely on the tractor's lifting arrangement, support the tool properly on axle stands or the like so that the machine does not fall down.

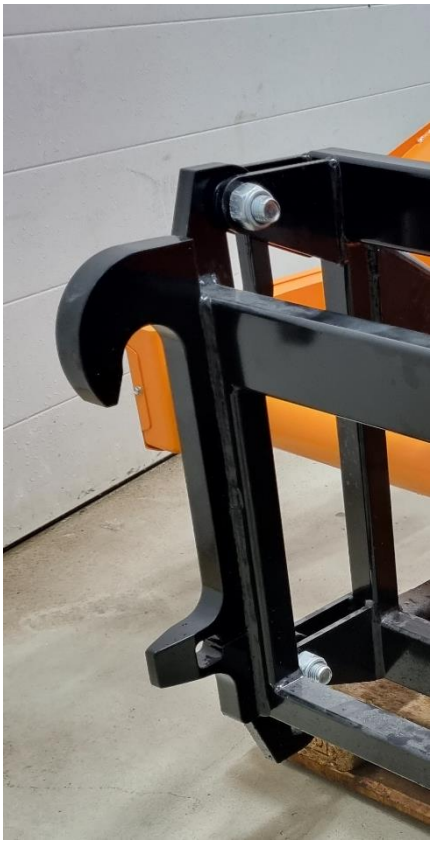
Take care when disconnecting the latch hook for the discharge chute's flap regulation, as there is a risk of crush injuries.

When any type of adjustment or service has to be carried out on the machine, make sure that the machine has stopped and the tractor's engine is turned off. Remove the key from the ignition switch.

Support feet

The machine's working depth is adjusted at the rear with the aid of two support feet. The machine's angle is adjusted using the tilt function on the tractor's loader, which affects how well the equipment follows the variations in the surface. If the machine is tilted forwards, it is easier for it to cut e.g. hard snow and ice. A suitable basic setting when the machine is resting on its support feet, is to leave the tip of the cutting edge 10 mm above the ground. Position the tractor's loader so that the attachment is in the centre of the oblong holes on the tool frame. However, always aim to keep the machine level during operation.
Adjust the support feet as the cutting edge becomes worn down. Adjust the support feet vertically by undoing the mounting screws and then refitting them in a different set of holes.

Screws that have to be undone when adjusting the height of the support feet.



Discharge chute

You determine where you want the ejected snow to go using the machine's discharge chute. The machine is fitted with a hydraulically turned discharge chute as standard.
At the top of the discharge chute is a flap that regulates the distance the snow is thrown. Turn up the handle that secures the pierced strut, move the strut to the desired position and lock. Hydraulic (or electric) operation is available as an option, and this function is useful if you need to change the throwing distance during operation.

Mechanical flap regulation (Std)

Hydraulic flap regulation (optional)

The discharge chute has two attachment heights at the front, which can be used to further adjust the snow's throwing distance.

3.5 Operating the Machine

Warning!
The operator must have a good overview of the work and the area where the ejected snow lands.
Heavy objects in the snow, such as stones, can be thrown significantly further than the snow.

Under no circumstances leave the driver's position before the oil flow has been turned off.

NOTE!
The shear bolt is no guarantee that the snow blower will not sustain damage in the event of collisions with solid objects.

Do not reverse with the machine lowered in the working position, raise the machine above the ground before reversing the tractor.

A doubling of the work rate means that the tool is subjected to four times the stress. Do not operate the machine faster than is absolutely necessary. Damage to the snow blower caused by the blade having impacted a solid object is not covered by the product warranty. The operator must have a good overview of the work and the area where the ejected snow lands.

The temperature of the hydraulic oil must not exceed 75°C during operation of the machine.

Lower the snow blower to the surface that is to be cleared of snow. Start the snow blower by slowly **starting the oil flow with the tractor's engine at idle speed**. Then increase the tractor's engine to working revs. To turn off the snow blower, perform the above procedure in reverse order: 1. Reduce the engine speed to idling, 2. Stop the oil flow to the machine.

We advise you against using the snow blower as a plough: always allow the machine to work its way through the snow through normal operation. When clearing large volumes of snow, you should work through the snow in two runs.

When operating in wet and heavy snow, more power is required, so make sure that the machine is maintaining the recommended revs before it starts working on the snow. In the event the machine should come to a halt, stop the tractor, raise the equipment and reverse a little, lower the equipment to the ground and try again. In the event of an obstruction in the discharge chute, the tractor and oil flow must always be stopped before the machine may be cleaned. Notify anybody in the vicinity that work is being performed on the machine. Lower the discharge chute and clear the obstruction.

When using the machine for the first time in the cold season, you should make sure that it is tilted back a little. This ensures that the scraper steel does not pick up loose stones and debris that can be ejected. Once the road surface has become compacted and hard, you can set the machine to a more aggressive angle.

4 Service and Maintenance

Warning!
Make sure that the machine has stopped and the tractor's engine is turned off before performing any kind of maintenance or service on the machine. Remove the key from the ignition switch.

Depressurise the hydraulic system before starting work. If the machine is hot, allow it to cool.

Never rely entirely on the tractor's lifting device, but support the tool properly on axle stands or similar so that it cannot fall down. Always use protective equipment such as goggles and gloves when carrying out maintenance.

In order to prevent personal injury, never use your fingers to explore narrow openings.

It is absolutely necessary to renew worn and damaged protective details (e.g. protective guards, shaft guards, etc.) in good time.

Make sure there is nobody in the vicinity that can be injured.

4.1 General

Carefully maintain the machine in order to obtain a cost-efficient operation, long service life and retained machine value. Use only top quality lubricants and appropriate hand tools. All work being performed under a raised machine must be done after securing the machine with axle stands. Keep the machine clean under the chassis for good function and to prevent corrosion. Never use high-pressure jets when cleaning bearings, electronics and hydraulic components. After cleaning, lubricate the machine according to the lubrication schedule and test run for a brief period.

Use the table below to see the correct tightening torques for screw unions on the machine.

Table 1 - Tightening torques for screw unions

Diameter	Quality 8.8		Quality 10.9	
	Nm	lb.ft.	Nm	lb.ft.
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	215	155	305	225
M18	295	217	420	309
M20	420	302	590	438
Increase tightening torque 5 % when a lock nut is used.				

4.2 Maintenance Schedule

Position	Interval	Type	Number	Remark
All screw unions	8 h	Check	The whole machine	Check that all screws are tightened and have not come loose.
Cutting edge	Daily	Check	1 pcs	Check the cutting edge for wear, replace or reverse if necessary.
Cross shaft	40 h	Grease	1 pcs	NLGI2 EP
Shear bolt coupling	40 h	Grease	2 pcs	NLGI2 EP
Feeding screws	40 h	Grease	2 pcs/screw	NLGI2 EP
Support bearing	40 h	Grease	1 pcs	NLGI2 EP
Chain transmission, feeding screw	40 h	Oil	1 pcs	Engine oil 10W40
Turntable gear	40 h	Grease	2 pcs	NLGI2 EP
Chain tensioner	40 h	Adjustment	2 pcs	Check the tension. You should be able to press the chain down approx. 7 mm. The feeding screw should run smoothly without any grating sounds from the chain.
Gearbox	40 h	Check	1 pcs	Check the oil level in the gearbox. Oil 80W90 API GL4/GL5, Industrial gear oil ISO VG 220.
Gearbox	First 50 h	Oil change		Oil 80W90 API GL4/GL5, ISO VG 220.
Gearbox	500 h/yearly	Oil change		Oil 80W90 API GL4/GL5, ISO VG 220.

Use NLGI 2 grease with EP features of good quality and which can withstand low temperatures for lubrication. Do not use graphite grease on ball bearings. Compressed air driven grease guns must not be used to lubricate sealed bearing as the seal may come loose or be damaged. Clean the grease nipples before applying the grease gun.
These intervals apply to normal operation, continuous operation requires more frequent lubrication. Always lubricate after cleaning with water.

4.3 Before season start

All the above points shall be performed. If the machine is serviced well, it will have a considerably longer service life and more carefree use.

4.4 At End of Season

the machine must be thoroughly cleaned and then lubricated and serviced. Replace worn or damaged parts. When dry, we recommend applying a thin coat of oil to places on the machine where the paint has been worn away.

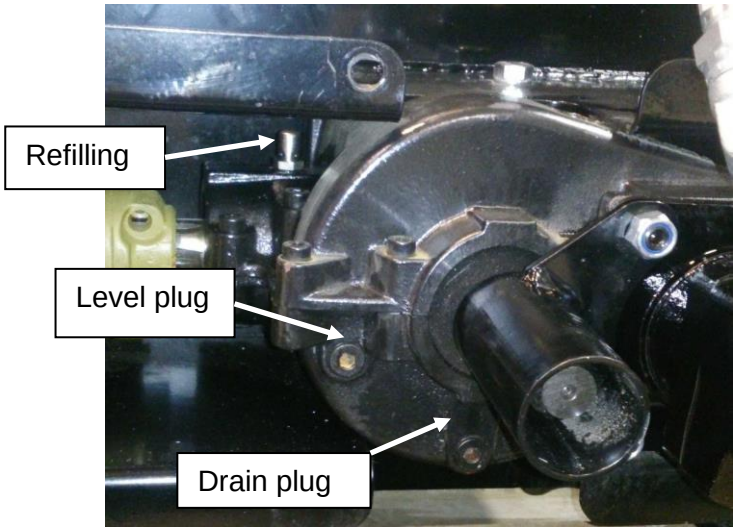
4.5 Checking and changing the oil

Check the oil level when the gearbox is cold and the machine is on a level surface. The oil level in the gearbox must reach the level plug on the front of the gearbox. If necessary, top up with the recommended oil through the air/filling nipple on the top of the gearbox.

Oil change, gearbox.
The oil in the gearbox must be changed after the first 50 hours of operation, and thereafter every 500 hours or at least once a year.
Start the power take-off and run the machine until the gearbox becomes warm (at a temperature of 40°C).
Unscrew the air/filling nipple at the top of the gearbox. Drain the oil into a vessel through the drain plug at the bottom of the gearbox, then tighten the plug. Unscrew the level plug on the front of the box. Then fill up with oil until it reaches the level plug. After filling, allow the oil to sink into the gearbox's bearings before reading off the correct level. When the level is correct, tighten the level plug and the air/filling nipple. Wipe away any spills.

Oil: SAE 80W90 API GL4/GL5, Industrial gear oil ISO VG 220, Volume 1.2 litres

NOTE! Dispose of the old oil in an environmentally friendly way in accordance with the current regulations in your country.



5 Troubleshooting

Warning!
When some form of cleaning, maintenance, repair or service is to be carried out on the machine, make sure the machine has been lowered to the ground and the tractor engine turned off. Remove the key from the ignition switch.

Problem	Probable cause	Action
Rotor and feeding screw do not rotate.	No oil flow/pressure to the snow blower. Obstruction in discharge chute/rotor housing.	Check the hydraulics on the tractor. Clear of snow and ice. Check that nothing is blocking the rotor.
Feeding screw does not rotate.	Shear bolt is broken on the cross shaft.	Replace bolt M8 6.8 (grade 6.8). Do not use fully threaded screw.
Low capacity	Oil flow and working pressure too low. Frozen snow/ice in the machine.	Check that the tractor is delivering the correct flow and pressure compared to that specified when the machine was ordered. Clear of frozen ice and snow. Defrost the machine.
There are frequent stoppages.	Wet snow. Frozen snow in the frame. Speed too high. Working depth	Increase rotor speed. Clean. Reduce the speed. Reduce the depth.
The blower leaves snow.	Support feet set too high. The blower is tilted backwards. The cutting edge is worn.	Adjust the height. Adjust the tilt. Reverse or replace.

Shear bolt for the feeding screw M8x55 6.8 art. no. 970813

6 Spare parts

You are faced with the choice of “original” and “copy”!
The choice often depends on the price. A “cheap” purchase can often end up being expensive.

Some reasons to choose TREJON’s original spare parts:
Quality and fit
Reliable function
Longer life and thereby better economy
Guaranteed availability through TREJON’s sales partners

TREJON original spare parts and accessories are designed especially for these machines. The fitting and/or use of non-original spare parts and accessories can negatively change the technical features of your machine. The manufacturer’s warranty will not apply to any damage caused by the use of non-original spare parts or accessories.

The warranty does not apply to arbitrary modifications that have been made to the machine.

Get in touch with the dealership where you bought your machine when ordering spares or other service.
When ordering spares, always specify the correct model, type and serial number found on the name plate on the chassis.

EC certificate of conformity

according to EC standard 2006/42/EC

We TREJON FÖRSÄLJNINGS AB
(tenderer's name) .....

SE – 911 35 Vännäsby, Företagsvägen 9
.....
(Full Company Address - In case of affiliated partners with registered office within the EC, the manufacturer's company name and address are also stated)

declare with sole responsibility that the following product,

Snow blower OPTIMAL 151H
Snow blower OPTIMAL 191H
.....
(make, type)

for which this certificate applies, complies with the current basic safety and health protection regulations in accordance with EC Standard 2006/42/EC,
(if applicable)
and also meets the requirements of other applicable EC standards.

— — —
.....
(title and / or number and publication date of other EC standards)

(if applicable)

The following standard(s) and/or technical specification(s) have provided the basis for the professional introduction of the safety and health regulations set out in the EC standards:

EN ISO 12100-1 : 2003 EN ISO 12100-2 : 2003
.....
(title and/or number as well as publication date of standard(s) and/or technical specification(s))

Henrik Johansson
CEO

Vännäsby, 1 November 2022
.....
Issued (place/date)

.....
(Name, position and signature of authorised employee)

Guarantee- /assignment certificate

Guarantee terms	-	Valid between retailer (Trejon AB dealer) and machine purchaser.
General about guarantee	-	In order to obtain valid guarantee terms set forth below, and the specific guarantee terms set by each provider. These are attached to the user manual for each machine, as appropriate.
Validity of guarantee	-	The guarantee is 12 months from date of purchase. In some cases, the guarantee can be limited by running time.
The guarantee covers	-	Damaged parts, which have broken down because of defective production operations of materials in course of normal use of the machine.
	-	Only the labor cost for replacement of defective warranted part.
The guarantee does not cover	-	Transport costs applicable to the machine or the parts.
	-	Travel costs.
	-	Any resulting costs incurred as a result of damage to the machine.
	-	If the machine has been modified by the owner.
	-	Damage due to normal wear and tear of the machine – Not related to manufacturing defects, poor service, user inexperience or use of spare parts that are not original.
	-	Excessive or inappropriate use of the machine.
	-	The guarantee is not applicable to parts which are subject to wear, for example hoses, sealing, oil, belts, batteries, chains, knifes, glass panes etc.
	-	The guarantee period for replaced parts during the guarantee period expires with the machine's guarantee.
	-	Normal adjustments, maintenance or supervision
Guarantee procedures	-	Contact place of purchase as soon as any damage or malfunction is detected. Do not use the machine if the damage can be worse.
	-	Guarantee repairs must be performed by Trejon AB approved workshop.
ATTENTION!		**The guarantee shall enter into force provided that the machine GUARANTEE/ ASSIGNMENT CERTIFICATE has been fully completed and signed by both parties (archived by the seller), and recorded on the Trejon web portal no later than 14 days from date of sale (the seller is responsible for this happening).**

Assignment certificate:
Machine Buyer shall confirm with his signature that he had received manual containing operating instructions, and received information about the operating, security and maintenance requirements described in this and made the final inspection of the machine.

PLEASE FILL IN!

Product: _____ Serialno. _____

Salesman: _____ Company: _____

Signature of salesman: _____ Date of purchase: _____

Name of buyer: _____ Telephone: _____

E-mail: _____

Address: _____ Zipcode: _____

City: _____ Country: _____

Date: _____ Signature of buyer: _____

We store personal data, see our privacy policy: https://www.trejon.se/enu/Dataskyddspolicy/

TREJON AB reserves the right to modify or improve shown models with technical or commercial motivations without the requirement to carry out the same modifications on machines already delivered. Illustrations in this Instruction Manual do not necessarily show the machine that has been delivered.

Technical information, dimensions and weights are not binding. All misprints reserved.

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