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SNOWDOG®

User's manual

Snowdog
Sport B13 MER
Long Track B13 MER

Content

1 Introduction

Thank you for purchasing the Snowdog!

To get the most of your Snowdog, please read this manual carefully. Following technical instructions and safety tips ensures continuous years of reliable product usage. Snowdog Sport is a compactly designed and highly reliable towing machine, equipped with a quality Briggs & Stratton engines and suitable for off-road work or recreation.

All information in this manual corresponds to the state of the products at the date of signing and printing the document. The manufacturer reserves the right to make changes to design without prior notice and without any obligations. If a difference is found between this Manual and yours, please contact your Snowdog dealer for the latest information.

Service life of Snowdog is 5 years, provided the operation and maintenance rules specified in the Manual are observed.

2 Safety tips

This Owner's manual contains important information on safety tips and operating instructions for Snowdog. In case of resale, please transfer this document and the engine service manual to the next Snowdog owner due to the importance of the information contained. Please read this manual carefully before operating the Snowdog.

⚠ Warning

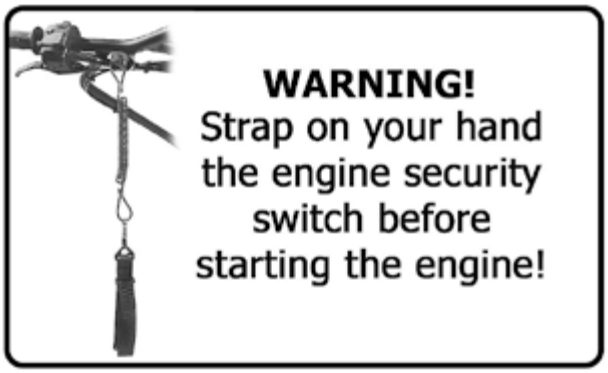
Non-compliance with the following rules and instructions may cause serious damage and even injuries. Snowdog operating safety tips and instructions are marked with "Warning" tag listed herein.

All the information on operating safety tips and instructions for Briggs & Stratton engine is in the Briggs & Stratton user's manual. Please read the manual carefully before using the Snowdog. Non-compliance with the operation instructions and non-acquaintance with the information in the user's manual may cause serious damage and even injuries.

⚠ Warning

- **Before operating the Snowdog you must read the Owner's manual and engine operator's manual.**
- **Always engage the parking brake before starting the engine. This Snowdog is equipped with an automatic clutch system that, under certain circumstances, can lead to sudden unexpected movement of the machine when starting the engine. To avoid possible injury or damage, be aware of your surroundings and only start the engine when there are no people, animals or objects in front of or behind the Snowdog.**
- **It is prohibited to operate the Snowdog for minors under 16 years old, and not recommended to operate Snowdog for people who are not capable of safe operating due to different reasons.**
- **It is prohibited to operate the Snowdog under the influence of alcohol and/or drugs.**
- **It is prohibited to use Snowdog without the chain protection cover, mud flaps and emergency engine shutdown switch.**
- **Operating a faulty or defective Snowdog unit is prohibited.**
- **Operating the Snowdog on public roads and trails is strictly prohibited.**
- **Snowdog is designated strictly for outdoor use. Indoor use is prohibited.**
- **Park the Snowdog at a safe distance from people and animals.**
- **Before starting the engine make sure there are no people, animals, or objects near the Snowdog that may be damaged or injured.**
- **Strap the engine security switch on your hand before starting the engine.**
- **Before starting the engine, please make sure the throttle control lever moves freely and is not fixed.**
- **Do not start the engine if the handlebar is folded.**
- **Do not fold the handlebar while the engine is running.**
- **Always check the parking brakes.**
- **Stay clear of the moving gears in the drive shaft and chain!**
- **Any maintenance of the Snowdog and the engine shall be carried out only after the engine is shut off, unless otherwise required for maintenance.**
- **Make sure all the screws on sprockets and shafts are tightened before operating the Snowdog.**
- **If any malfunction occurs, stop the operation immediately, locate the problem and fix it.**
- **Wear protective gloves when riding the Snowdog.**
- **Wear protective helmet when riding the Snowdog.**

- **Wear ear protectors to reduce the harmful effects of noise caused by the Snowdog.**
- **Sled or semi-trailers must be fixed to the Snowdog with rigid drawbars only.**



3 Snowdog purpose

The Snowdog is designed primarily to be used during wintertime. For operating it during warm season it is necessary to remove the wear strips and the plastic covers and to take measures to prevent engine overheating.

The Snowdog is a labor-saving support equipment (towing module), which is operated by a nearby operator. It is designed for hauling cargo on sledge or semi-trailer. For operating it during warm dry season, it is recommended to use a semi-trailer. The Snowdog is not meant to be used on roads, sandy soils and on the water.

4 Technical specifications

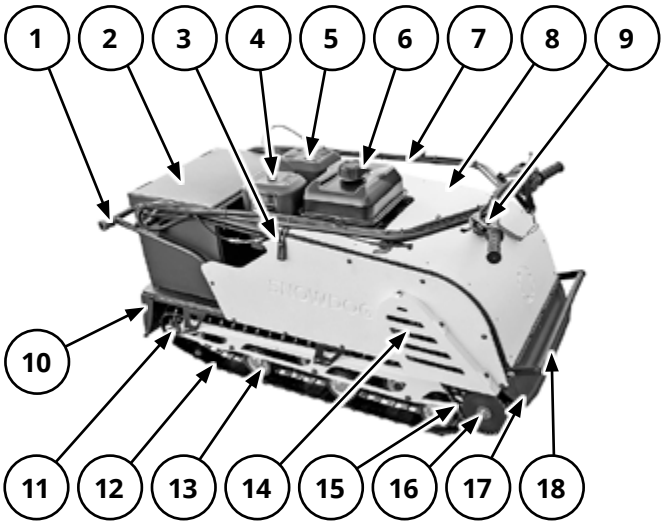
Model	Sport B13 MER	Long Track B13 MER
Engine model	Briggs & Stratton 25T237	
Engine series	XR 2100	
Engine Displacement, cc	420	
Length in transport/ operating position, in (mm)	58 / 94.5 (1 430 / 2 400)	69 / 106.7 (1 755 / 2 710)
Width (including the handlebar), in (mm)	30.7 (780)	
Height, in (mm)	30.3 (770)	30.6 (785)
Maximum speed, mph (km/h)	15 (25)	
Weight, lb (kg)	342 (155)	360 (163)
Maximum load capacity on top of the Snowdog, lb (kg)	110 (50)	132 (60)
Maximum sledge load capacity, lb (kg)	440 (200)	550 (250)
Fuel type (gasoline)	87 octane	
Fuel tank, gal (l)	1.74 (6.6)	
Transmission type	CVT	
CVT belt, mm	30 × 14 × 1 120	30 × 14 × 1 380
Center distance between CVT pulleys, in (mm)	10.43–10.83 (265–275)	15.5 (395)
Track type	Standard	Long Track

5 Snowdog overview

⚠ WARNING

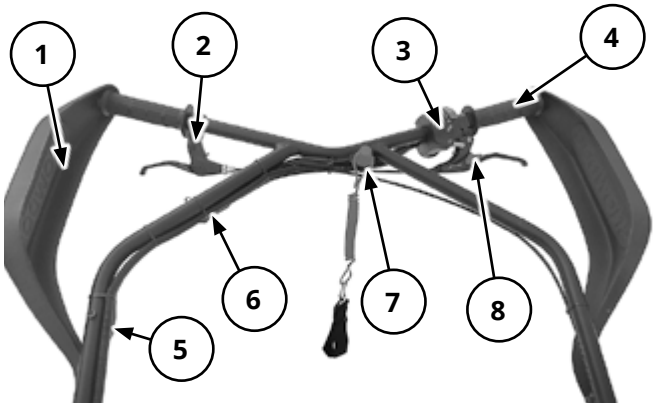
All the images in the Manual are for referential use only. The actual appearance of the Snowdog may vary.

5.1 Basic elements for Snowdog:



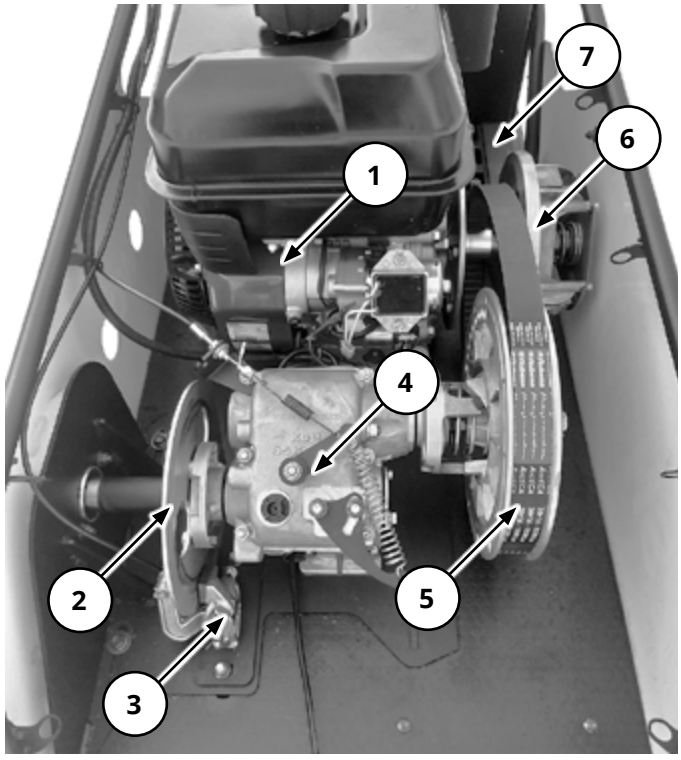
1. Rear handle
2. Cargo box
3. Rubber hood latch
4. Air filter
5. Muffler
6. Fuel tank
7. Handlebar
8. Hood
9. LED-headlight
10. Rear mud flap
11. Track tensioner
12. Track
13. Bogie suspension
14. Protection cover
15. Transmission chain
16. Driven sprocket
17. Front mud flap
18. Front handle

5.2 Basic controls



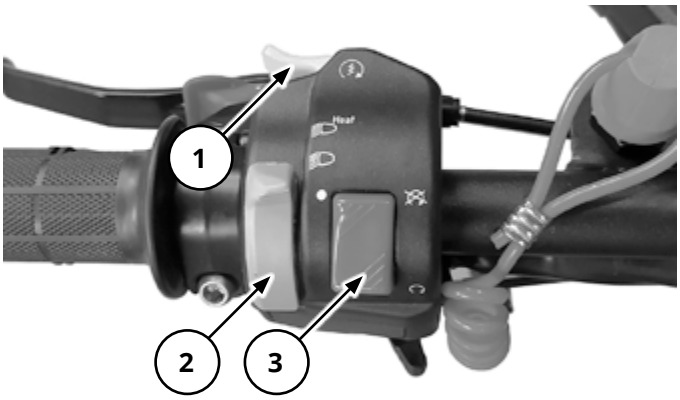
1. Plastic handguards
2. Throttle control lever
3. Handle switch assembly
4. Handle grip
5. Gearbox shift mechanism
6. DC outlet for external devices
7. Kill switch
8. Parking control lever with lock

5.3 Top view



1. Engine
2. Brake disk
3. Brake caliper
4. Reverse gearbox
5. CVT belt
6. Driving pulley of CVT
7. Battery

5.4 Handle switch assembly



(1) — Electric starter start button. When this button is pressed, the electric starter is working and the engine can be started. Do not hold the button down for more than 10 seconds.

(2) — Headlight switch (front light). When the switch is in position Heat, the light, DC outlet and heaters are working.

When switch is in position , the light and DC outlet are working.

When switch is in position ●, both the light and heaters are off. DC outlet is working.

⚠ Warning

Do not switch on the headlight if the battery is not connected!

(3) — Ignition on/off switch.

When the switch **(3)** is in position (toward the operator), the ignition is on. The engine can be started.

When the switch **(3)** is in position (away from the operator), the ignition is off. The engine cannot be started.

5.5 Engine security kill switch

There is the engine emergency kill switch in the middle of the handlebar, it consists of the button and the safety pin.

The operator of the Snowdog should always operate it with safety pin strap belt around his hand. If the operator should leave the machine during a movement, the safety pin will leave the button thereby turning the engine off.

5.6 Reverse gearbox (if available)

Choosing the direction of moving:

To shift the gear into the "forward" position, stop the Snowdog and switch on the parking brake. Reduce the engine to idle. Make sure the CVT belt is stoped rotating. Switch the lever forward as shown on the picture. Slowly start moving.

To shift the gear into the "reverse" position, stop the Snowdog and switch on the parking brake. Reduce the engine to idle. Make sure the CVT belt is stoped rotating. Switch the lever backward as shown on the picture. Slowly start moving.

If the CVT belt is moving or there are difficulties with shifting gears, shut off the engine, switch off the parking brake and rock the Snowdog back and forth.

⚠ Warning

Never shift gears if the CVT driven pulley is rotating.

Never change the direction of moving when the parking brake is switched off. Never start moving while the parking brake is switched on.

Never use the full throttle immediately after the shift of the gear.

Start moving smoothly, with minimal possible speed. For the first couple of meters after the shift, move with the lowest possible engine load.

5.7 DC outlet

The DC outlet can be used for plugging lighting devices, radio devices, etc. The outlet should be used only when the engine is running.

Maximum values permitted for using the outlet:

- rated voltage — 12 V;
- maximum power — 20 W (1.6 A).

⚠ Warning

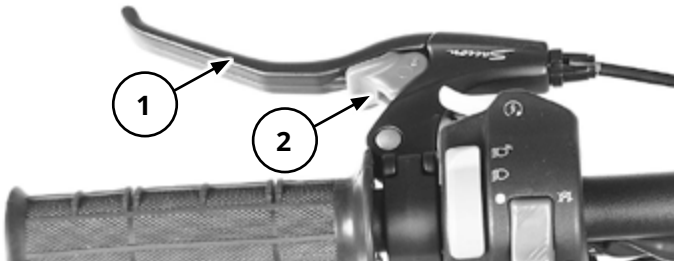
When the outlet is not in use it must always be covered by a cap.

Do not plug in external power consuming devices which require more power than the aforementioned maximum value.

If external power consuming devices will be used while the engine is not running, the battery may lose its charge and it will be impossible to start the engine using the electric starter.

Do not use car cigarette lighter and other accessories with plugs that can produce heat as this can damage the outlet.

5.8 Parking brake lever



1. Parking brake lever.
2. Parking brake lever lock.

5.8.1 Switching the parking brake on:

1. Press the lever **(1)**.
2. Press and hold the lock **(2)**.
3. Release the lever **(1)**.
4. Release the lock **(2)**.

5.8.2 Switching the parking brake off:

1. Press the lever **(1)**.
2. Release the lever **(1)**.

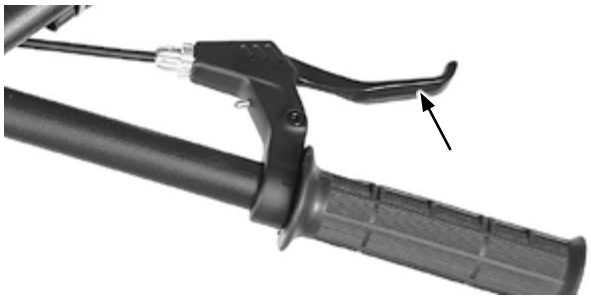
⚠ Warning

Never start the engine while the parking brake is switched off or faulty.

Never start moving while the parking brake is switched on.

5.9 Throttle control lever

1. Gently press the lever to increase the RPMs in the engine.



2. Release the lever for deceleration.

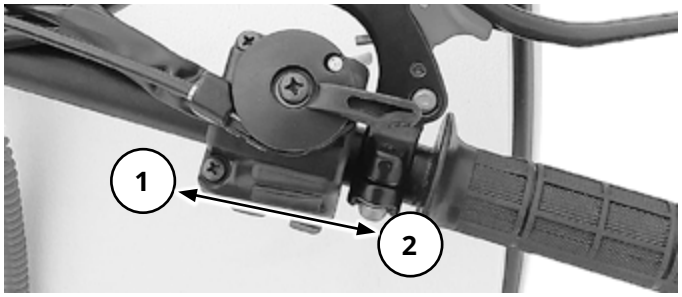
⚠ Warning

Check the operation of the throttle control lever before every use.

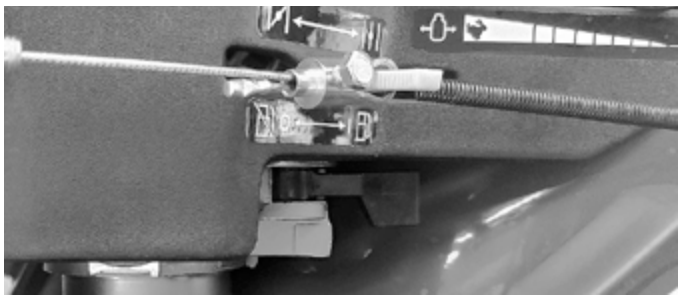
5.10 Choke control lever

When the choke control lever is in the position **(1)**, the choke is open (used during the Snowdog operation).

When the choke control lever is in the position **(2)**, the choke is closed (used for starting the engine).



5.11 Fuel lock



Fuel lock controls the flow of fuel from the fuel tank to carburetor.

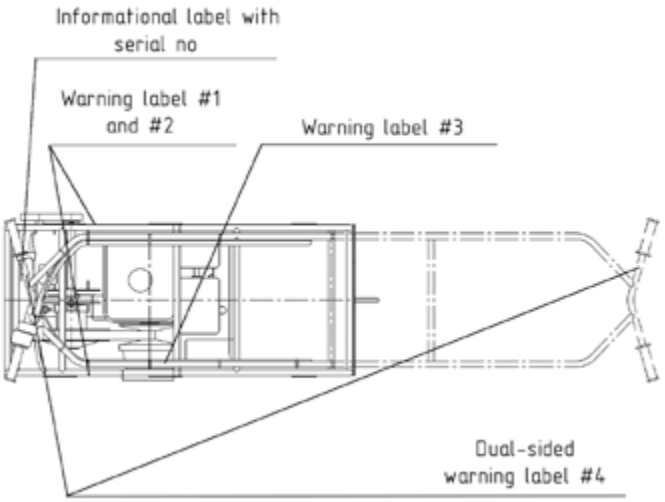
The fuel lock is open when the lever is in position **(I)**. The fuel lock is closed when the lever is in position **(O)**.

⚠ Warning

If you store and transport the Snowdog with an open fuel lock, the fuel will get into the crankcase and mix with the oil.

6 Snowdog identification, informational labels location

Manufacturer's informational labels with the information on the manufacturer, model, and Snowdog serial number (double) are located on the front of the engine mount.



6.1 Informational label with serial no.

6.2 Warning labels #1 and #2.

6.3 Warning label #3.

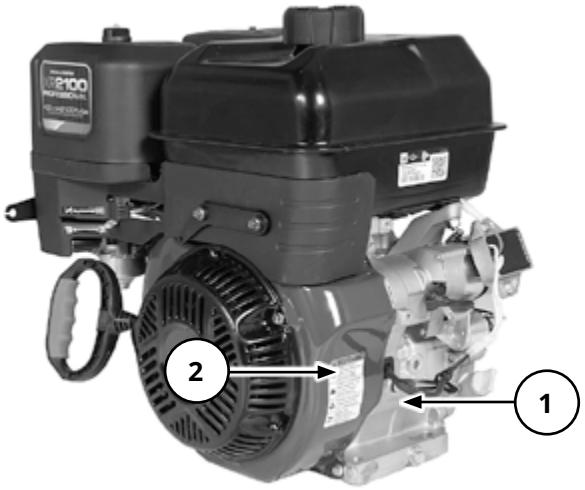
6.4 Dual-sided warning label #4.

6.5 Snowdog serial number

Serial number is placed on the rear part of the engine mount (under the cylinder) using point marking method.

6.6 Engine identification

Number, model and type of the engine are placed on the front of the crankcase **(1)** using point marking method. An adhesive label with the serial number and barcode **(2)** is affixed to the front of the engine.



7 Operating the Snowdog

⚠ Warning

Please read the user's manual for the engine and the Snowdog carefully before operation. Make sure you have completely understood the instructions for the operation and maintenance of Snowdog.

Please read the Briggs & Stratton engine user's manual carefully before using Snowdog. All the information on engine maintenance contained in this manual serves as guidelines. If the maintenance instructions in this Snowdog owner's manual are different from those in the Briggs & Stratton engine user's manual, follow the instruction specified in the latter.

The first 20 hours of operating the Snowdog are needed for engine and transmission to adjust. During this period, use Snowdog with lowest possible load.

When operating the Snowdog at an ambient temperature of over 41 °F (+ 5 °C), it is necessary to remove the covers.

When operating under severe conditions the maintenance should be carried out more often.

7.1 Snowdog set-up

⚠ Warning

Please read the user's manual for the engine and the Snowdog carefully before operation.

Make sure you have completely understood the instructions for the operation and maintenance of Snowdog.

7.1.1 Battery installation

1. It is necessary to install and connect the battery before using the Snowdog. You will need a battery (supplied with the Snowdog), a metric wrench (is not provided as standard) and a Philips screwdriver (not included).
2. Unscrew 2 bracket mounting screws using metric wrench.
3. Install the battery and tighten it with the bracket using the metric wrench.
4. Connect the electric wires to the battery, strictly observing the polarity. Wire with the red cover is connected to the cleat marked with "**+**" sign, wire with black cover is connected to the cleat marked with "**-**" sign. Tightly secure the contacts.

General view of the assembled battery is shown below.

⚠ Warning

Pay attention to the polarity when connecting the battery!

Do not switch on the headlight if the battery is not connected!

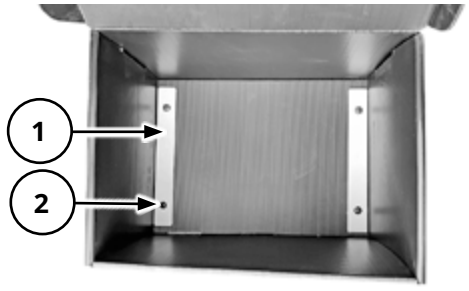
The voltage of the charged battery should be within the range of 12.6–12.9 V. If the battery voltage is less than 12.6 V, it must be charged.

Use chargers designed for AGM batteries. Do not use chargers with voltages above 14.6 V as they will damage the battery.

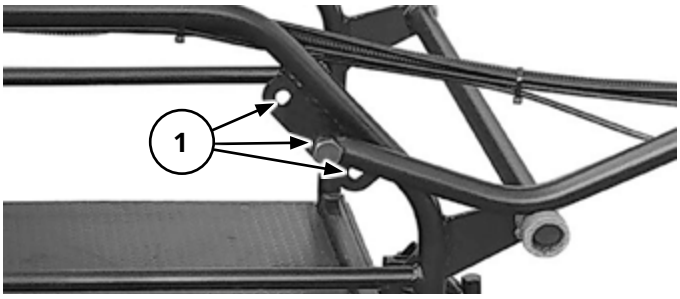
7.1.2 Cargo box installation (if available)

Put the cargo box into luggage compartment. Align the holes in the box and on the frame.

Install the plates **(1)** and tighten the screws **(2)**.



7.1.3 Handlebar height adjustment



To adjust the height of the handlebar you must rearrange fixture in one of the three holes **(1)**. In order to raise the wheel higher, move the mounting holes in the bottom. In order to lower the wheel, move the handlebar to the upper hole.

Please NOTE, both mountings of the handlebar must be on the same level.

⚠ Warning

Special attention shall be paid to the fastening of the handlebar, as well as to the attachment of the wiring and cables for throttle and parking brakes. Make sure that they are not caught between the handlebar and the crossarm. Make sure the wiring and cables are not stretched when the handlebar is unfolded. Make sure the wiring and cables are not breaking or damaging when folding the handlebar.

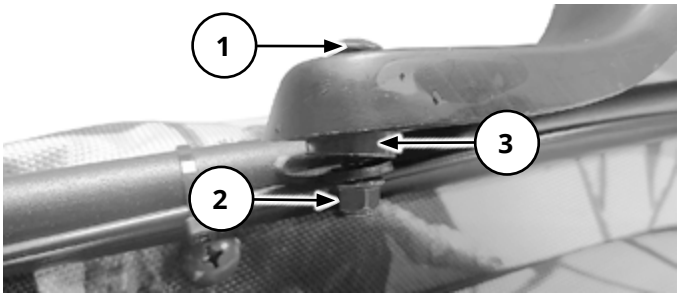
Do not press the handlebar during operation on hard surface. Do not lift the front of the Snowdog using the handlebar.

7.1.4 Installation of handguards

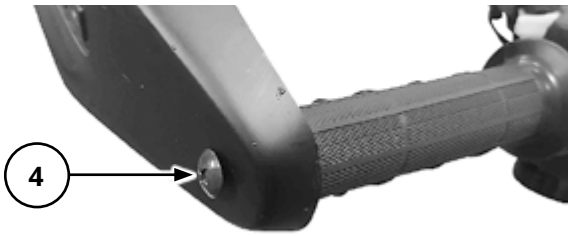
⚠ Warning

Left and right handguards are different.

1. Attach the handguards to the handles with a screw **(1)**, bushing **(3)** and nut **(2)** but do not tighten.



2. Install a bushing **(3)** and a screw **(4)** through the handguards.



3. Tighten the screws.

7.2 Preparation for moving

⚠ Warning

Always engage the parking brake before starting the engine. Snowdog is equipped with an automatic clutch system that, under certain circumstances, can lead to sudden unexpected movement of the machine when starting the engine. To avoid possible injury or damage, be aware of your surroundings and only start the engine when there are no people, animals, or objects in front of or behind the Snowdog.

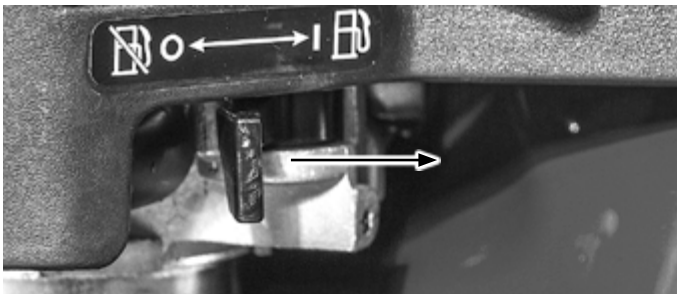
1. Move the handlebar from the transport to the operating position.
2. Make sure the control cables (throttle, choke, brake, and reverse) are not overly bended, crushed or damaged.
3. Clean the engine carburetor control levers from snow and other contaminations. Make sure the carburetor control lever moves and is not blocked.
4. Make sure the throttle lever is not faulty, moves freely and returns to the initial position. Lubricate or change the throttle cable, if necessary.
5. Make sure the brake lever is not faulty, moves freely and returns to the initial position. Lubricate or change the brake cable, if necessary.
6. Switch on the parking brake. Make sure it is functional and prevents Snowdog from moving.
7. Check the lubrication and the chain tension. If necessary, lubricate and tighten the chain.
8. Attach the sled or semi-trailer to the Snowdog using the hitch. Check the mounting of the hitch.
9. Check the oil level in the engine.
10. Prepare the engine for starting, as described in the Briggs & Stratton engine manual.
11. Check the fuel level. Add fuel, if necessary. Make sure the tank cap is securely closed.
12. Check the position of the suspension bogies and sliders (if available).
13. Shift the reverse into the “forward”.

7.3 Starting the engine

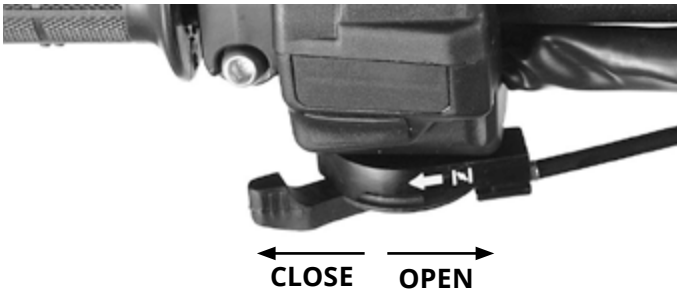
⚠ Warning

Snowdog is equipped with an automatic clutch system that, under certain circumstances, can lead to sudden unexpected movement of the machine when starting the engine. It is recommended to lock the Snowdog in place with an obstacle, if you start a Snowdog, which is faulty, or after long idle time, or at extremely low temperatures. Check the throttle lever operation before starting the engine. Switch on the parking brake before starting the engine.

1. Open the fuel lock.

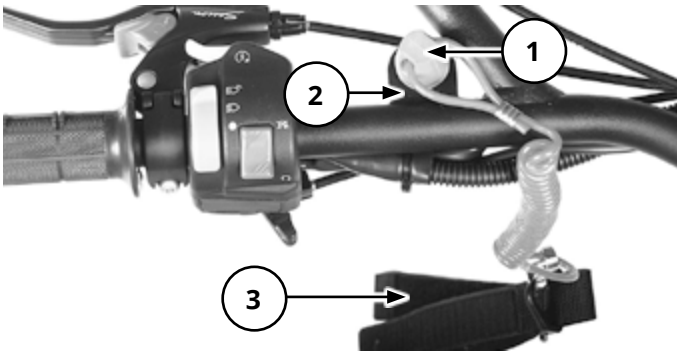


2. Close the choke on engine or on handlebar.

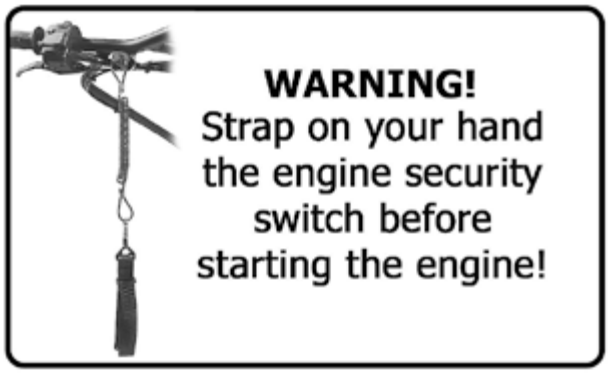


3. Shift the ignition switch located on the switch assembly to “**ON**” position — ↻.

4. Install the safety pin of the kill switch **(1)** on the button **(2)**, put the belt **(3)** on your hand or attach it to your belt.



5. Check how the kill switch is installed. Kill switch which is not installed completely may lead to incorrect work of the engine.



6. Check the throttle lever operation.
7. Check the carburetor control levers and springs between the engine and fuel tank. Clear any snow or ice which may interfere with their operation.
8. Make sure the parking brake is on.

9. Make sure there are no people, animals, or objects near the Snowdog that may be damaged or injured by it.
10. Start the engine with an electric starter (if you will not use the manual starter). To start the engine press and hold the electric starter button on the handlebar switch. Release the button right after the engine started. Make sure the starter button does not touch the parking brake lever.

⚠ Warning

When starting the engine with the electric starter do not hold the button for more than 10 seconds at each attempt. If the engine does not start, release the starter button. Wait 30 seconds before making the next attempt.

11. To start the engine with a manual starter, pull out the starter handle until first noticeable resistance. Without returning it to its place, swiftly pull the handle further out and the engine started. After the engine started, slowly return the handle back to its initial position, allowing for the cord to wind-up.

⚠ Warning

Do not twitch the handle when starting. Do not pull the cord out all the way until it stops. Do not release starter handle abruptly after the engine has started.

12. After 5 failed attempts to start, wait at least 30 seconds before the next try.
13. Let the engine run with choke for about a minute, and then gradually open the choke. Let the engine warm up for at least two minutes.
14. Switch off the parking brake from the fixed position before moving.

7.4 Movement

The throttle lever on the right side of the handlebar adjusts the RPMs, changing the speed and the towing force. The Snowdog starts moving at approximately ¼ stroke of the throttle lever. Start moving slowly, avoid sharp increase in the RPMs.

To make a turn while moving, tilt the handlebar in the opposite direction. While moving in the deep snow, you can make a turn by tilting the Snowdog in the direction of the turn.

7.5 Maintenance during movement

When moving on wet snow, or snow with water under it, or on puddles, clean the transmission and the suspension of snow and ice regularly.

⚠ Warning

When operating the Snowdog for more than an hour, it is necessary to stop and check the following:

1. **Check the throttle lever operation.**
2. **Check the carburetor and centrifugal governor levers. There should not be any ice or frozen snow on them.**
3. **Check the drive chain, lubricate if necessary.**
4. **Visually inspect the mounting, paying particular attention to the attachment of the hitch and handlebar mounting.**

7.6 Stopping the Snowdog

To stop the Snowdog, cut the throttle. The Snowdog will slow down and eventually stop.

To shut down the engine in case of emergency, flip the ignition switch located on the handle switch assembly on the left side of the handlebar to “OFF” position or pull out the engine security switch. When the Snowdog stops, switch the parking brake on. When the Snowdog is stopped and the parking brake is on, you can switch off the engine. When stopping for more than 10 minutes, close the fuel lock. Turn off the headlight. Switch off any accessories or electrical devices that may consume power from the battery. When it is raining or snowing, or the temperature is close to 32 °F (0°C) or lower, it is necessary to protect the Snowdog with cover for the time of parking. Otherwise, snow and water may freeze on engine control levers and other parts of the Snowdog making controlling the Snowdog impossible.

If Snowdog is used in water or wet snow conditions then parked in freezing temperatures, water left in the drive components can freeze resulting in inability of the machine to move. Clear built-up snow from machine before it is left unused in freezing temperatures.

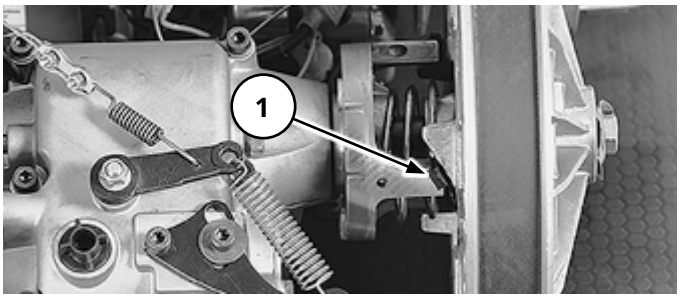
7.7 Inspection and maintenance after operation

1. Close the fuel lock.
2. Switch off the ignition.
3. Switch off the headlight.
4. Unload the Snowdog. Do not leave it loaded to prolong the life of the suspension springs.
5. Clean the Snowdog of any snow, ice, branches, leaves or dirt.
6. Check the chain tension. If necessary, lubricate and tighten the chain.

⚠ Warning

It is recommended to use aerosol lubricants designed for motorcycle chains.

7. Check the condition of the driving and the driven sprockets.
8. Carefully inspect the CVT. Clean up, if necessary.



9. Check the condition of the plastic inserts in the CVT and lubricate them. If plastic inserts are missing, damaged or worn out, replace with new ones.
10. Visually check the track tension. If necessary, tighten the track.
11. Visually inspect the Snowdog for leakage (fuel, oil).
12. Check the bogies and sliders (if available).

8 Snowdog inspection and maintenance

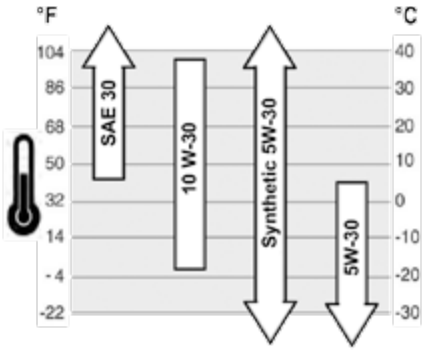
⚠ Warning

Please read the Briggs & Stratton engine user’s manual carefully before using Snowdog. All the information on engine maintenance contained in this manual serves as guidelines. If the maintenance instructions in this Snowdog owner’s manual are different from those in the Briggs & Stratton engine user’s manual, follow the instruction specified in the latter.

8.1 Engine oil

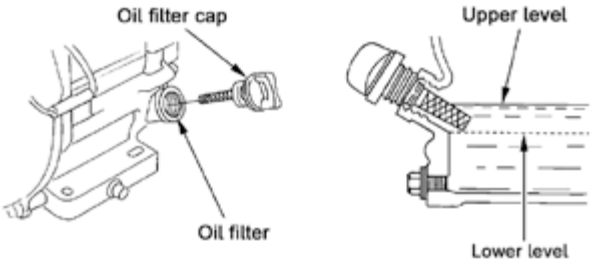
Recommended oil

Use engine oil that meets or exceeds SJ or SL standards of API. Do not use special additives. Always check the API service mark on the oil container to be sure it contains the letters SJ, SL or equivalent.



8.1.1 Checking oil level

Oil level should be checked with the engine shut off and on a horizontal surface.



1. Take the dipstick off and wipe it clean.
2. Put the dipstick into the oil fill neck to measure the oil level, but do not tighten it. Take the dipstick out and check the oil level.
3. If the oil level is near or lower the minimum mark on the dipstick, add the recommended oil to the upper mark level (lower edge of the oil fill). Do not pour oil above the level.
4. Put the dipstick back.

⚠ Warning

Operation with low oil level may damage the engine.

Increased oil level indicates water or fuel ingress.

Do not start the engine if the dipstick is taken out.

8.1.2 Changing the oil

Change the oil for the first time after 5 hours of engine operation.

Then change the oil every 50 hours of engine operation.

Change the oil only in a warmed-up engine.

1. Take the dipstick off and clean the oil fill area of any debris.
2. Pump the oil out through the oil fill. Please make sure to dispose of the used oil in an environmentally safe way. We recommend that you take the used oil in a closed container to your nearest waste disposal site.

⚠ Warning

Dispose of the oil in accordance with current legislation.

3. The engine should be located on a horizontal surface. Add the recommended oil to the upper mark level (lower edge of the oil hole).
4. Put the dipstick cap back and tighten it.

Use engine oil that meets or exceeds SJ and SL standards of API. Do not use special oil additives. Always check the API service mark on the oil container to make sure it contains SJ, SL or equivalent symbols.

SAE 10W-30 or SAE 5W-30 oil is recommended for common use. Engine oil capacity is 1.1 liters.

8.2 Fueling

⚠ Warning

Fill the gasoline engine according to the Briggs & Stratton engine manual.

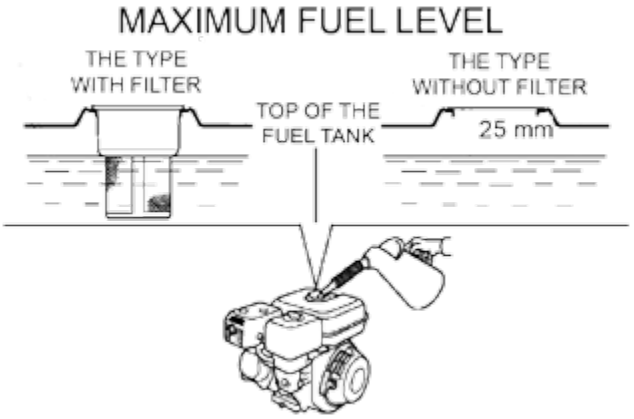
Fuel is highly flammable and explosive, you should avoid getting burned and injured while working with it.

Stop the engine before refueling. Make sure there are no heating appliances, sparks or flames around.

Refuel only outdoors or in a well-ventilated area and only if the engine is stopped. If the engine has been recently running, let it cool down first.

Spilled fuel is not only highly flammable but toxic and may be harmful to people and the environment. If fuel spills, wipe it up as soon as possible.

Make sure that there is enough fuel in the tank. Fill the fuel tank up to the bottom part of the filler neck, as shown in Figure.



⚠ Warning

Do not fill the tank with fuel above the maximum level. The fuel expands when heated. If the tank is overfilled, then the fuel heated by engine or sun can leak from the tank.

Do not spill fuel, especially on the engine and the muffler as it may cause fire and heavy injuries. Wipe the spilled fuel dry.

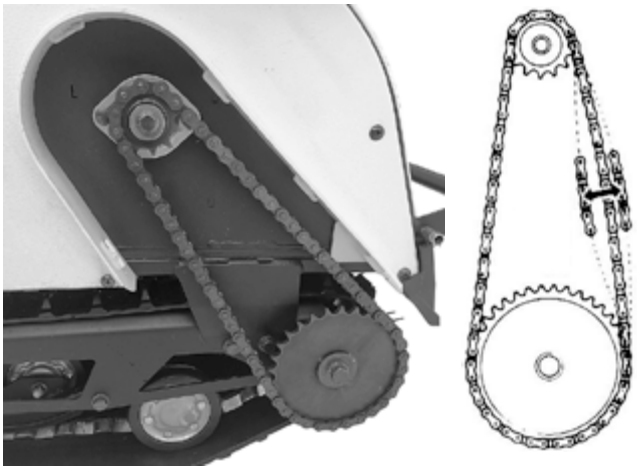
After refueling make sure that the cap of the fuel tank is sealed tightly.

If the Snowdog leans heavily or turn over it is possible for the fuel to leak through the fuel tank cap.

8.3 Chain

8.3.1 Checking the chain tension

Visually inspect the proper tension of the chain after each use. There should be no damage to the rollers or chain links. There should be no jamming or rusty links.



It is necessary to remove the protection cover (if available) to check the chain tension. Correctly tensioned chain will have a loose lift of 0.2 in (5 mm) between the sprockets. Loose lift less than 0.2 in (5 mm) will result in rapid chain wear and will lead to fast sprocket wear. An excessively loose chain can fall off during operation. Loose chain needs to be tightened.

While operating, the chain stretches and the distance between chain links changes. If the adjustment range is not enough, the chain should be replaced. Do not shorten the chain by removing links.

8.3.2 Chain lubrication

During visual inspection, it should be clear that the chain is lubricated. However, it should not be lubricated excessively so as to avoid sand and dirt sticking. Before lubrication, clean the chain of dirt and the old lubricant with an aerosol cleaner or a cloth moistened in kerosene or solvent. After cleaning, wipe the chain dry.

After cleaning the chain, lubricate it with aerosol lubricate for motorcycle chains. Lubrication should be sprayed into the gap between the links and rollers of the chain. Wipe the excess lubricant with a dry cloth.

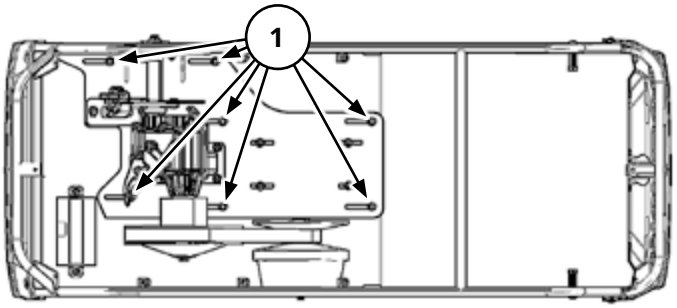
⚠ Warning

It is recommended to use aerosol lubricates for motorcycle chains.

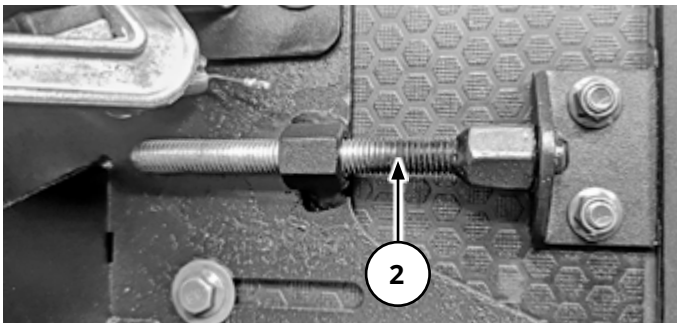
8.3.3 Adjusting the chain tension.

To adjust the chain tension:

1. Loosen screws **(1)** that mount engine bracket with Snowdog's chassis platform.



2. To loosen the chain, you need to move the engine bracket forward in the direction of movement; to tighten the chain, you need to move the engine bracket back against the direction of Snowdog movement. Rotate the bolt **(2)** to move the engine bracket.



3. Tighten screws **(1)** to the engine mounts of the Snowdog chassis platform.

8.4 Track

8.4.1 Checking the track tension

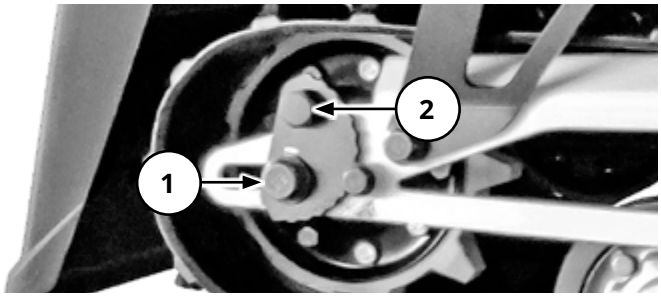
Before starting any movement check the condition and tension of the track.

The track tension is adjusted by feel.

Overtension causes significant overloads during running. Low tension leads to fast wear of soft sprockets.

8.4.2 Track tensioning

1. Loosen the screws **(1)** on both sides of the rear mounting shaft.
2. Turn eccentric **(2)** to adjust the tensioner axis.



3. Check the track tension.
4. Tighten the bolts.

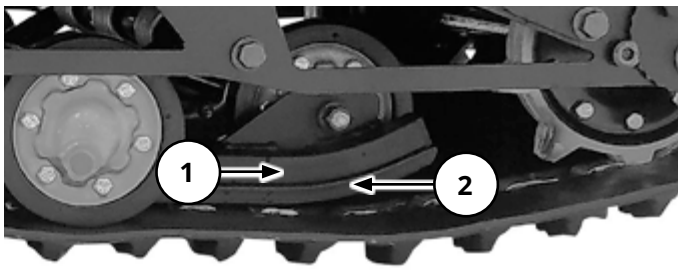
⚠ Warning

If the Snowdog is regularly leaning to one side, increase the tension of the track on the same side. On the opposite side, loosen the tension of the track.

8.5 Sliders maintenance (if provided)

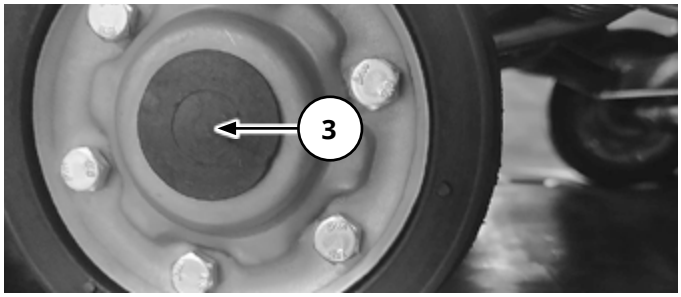
After each operation check the condition of sliders **(1)**. Make sure that the sliders pads **(2)** is tightly adjacent to the metal frame.

Make sure that no less than 7 mm of the sliders pads thickness remains. Otherwise, replace the sliders pads .

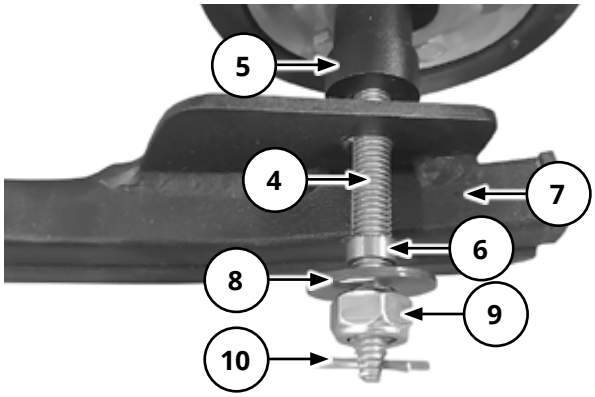


8.5.1 Sliders installation (if provided)

1. Loosen the track.
2. Unscrew and remove the central bogie (if provided).
3. Remove the plugs **(3)** from the wheels.



4. Install the axle **(4)** inside the bogie.



5. Install the bushings **(5)** and **(6)** on the axle.
6. Install the sliders **(7)**.
7. Install the washers **(8)** and the nuts **(9)**. Tighten the nuts.
8. Install and unbend the pins **(10)**.

8.6 CVT belt

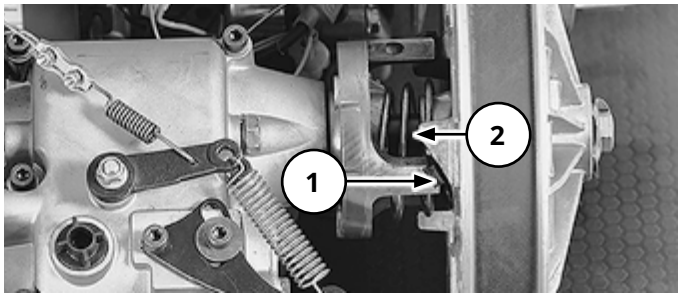
⚠ Warning

All the works on the CVT should be carried out only with the stopped engine.

Carefully inspect the CVT. Clean up, if necessary.

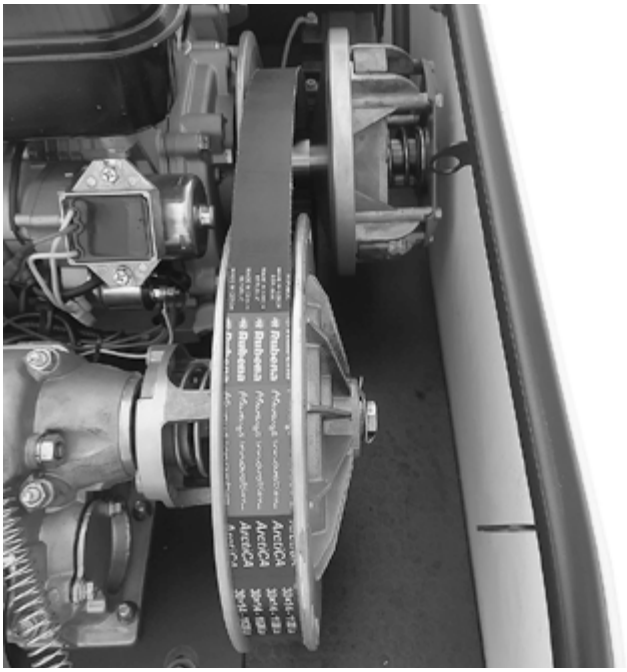
Check the condition and availability of plastic inserts after each case of use. Lubricate the working surface, if necessary. If plastic inserts are missing or worn out — install new ones.

Lubricate the inserts **(1)** and the CVT shaft **(2)** every month.



8.6.1 CVT belt removal

1. Stop the engine.
2. Lift the hood and provide free access to the CVT.
3. Pull the part of the belt off to the external side of the driven pulley of the CVT.
4. Rotate the driven pulley and guide the belt to its external side.
5. After the belt is completely off the driven pulley of the CVT, take it off the driving pulley.



8.6.2 CVT belt installation

1. Put the belt on the driving pulley of the CVT.
2. Put a part of the belt on the driven pulley of the CVT.
3. Rotate the driven pulley and guide the belt to the working part of the pulley.

8.7 Air filter

The air filter body is fixed on the carburetor.

The filter element is located under the air filter cap.

To take the filter cap off, simply unscrew the wing nut.

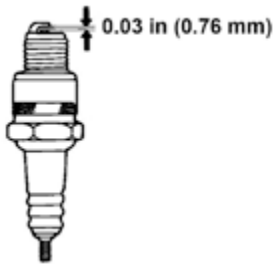
When you install and uninstall the filter cap, pay attention to the condition of the air filter. If there are contaminations on the filter, it needs to be cleaned or replaced. If there is ice or snow on the filter, it needs to be dried.

8.8 Spark plug maintenance

⚠ Warning

Use only spark plugs recommended by Briggs & Stratton. Using spark plugs with the wrong heat grade can damage the engine.

1. Take the high-voltage wire connector off the spark plug and unscrew the spark plug using a wrench.
2. Inspect the spark plug. If you find any cracking or significant electrode wear, replace the spark plug.
3. Measure the gap between the electrodes. If the gap needs to be fixed, bend the side electrode. The gap should be 0.03 in (0.76 mm).



4. Check the condition of the washers. Engage the spark plug with your hands preventing it from thread misalignment.
5. Screw the spark plug in. Tightening torque is 31 N·m.

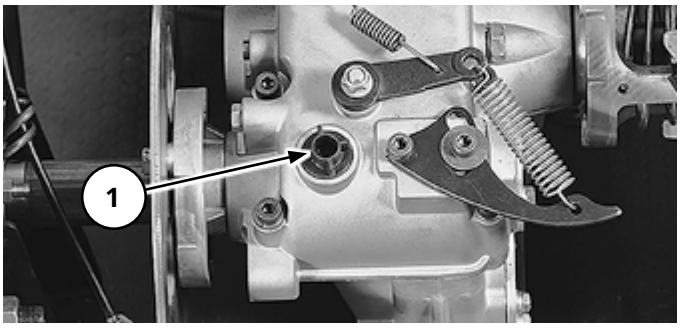
⚠ Warning

Spark plugs shall be tightened. Otherwise, it can lead to engine damage.

8.9 Reverse gearbox (if available)

8.9.1 Oil change

1. Unscrew the oil filling plug **(1)** of the reverse gearbox.



2. Pump out the used oil from the reverse gearbox.
3. Fill the gearbox with the new oil and close the oil filling plug.

⚠ Warning

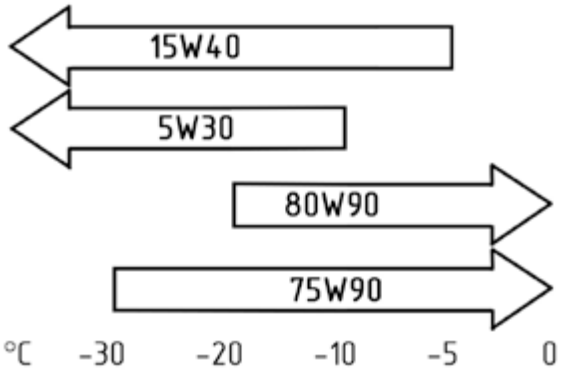
Required amount of oil in the empty gearbox is 100 ml (3.38 fl. oz).

Required amount of oil when changing is 80 ml (2.7 fl. oz).

The oil level in the reverse gearbox can be checked with pumping oil out and pouring a measured amount of it.

Recommended oil viscosity depending on the ambient temperature:

- outside temperature +14 °F (-10 °C) and below SAE 5W30,
- outside temperature +23 °F (-5 °C) and below SAE 15W40,
- outside temperature -22 °F (-30 °C) and higher SAE 75W90,
- outside temperature -4 °F (-20 °C) and higher SAE 80W90.



⚠ Warning

Dispose of the oil in accordance with current legislation.

8.9.2 Adjustment of the shift cable

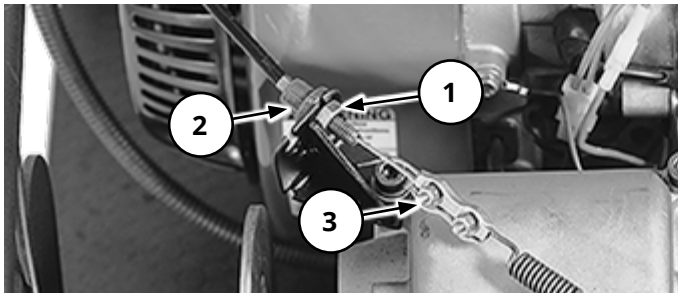
If the shift cable of the reverse gearbox is sag or there are difficulties with shifting gears, adjust the shift cable.

⚠ Warning

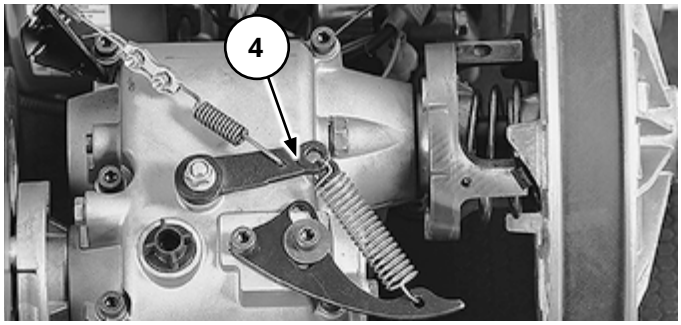
Operating the Snowdog with insufficient adjustment of the shift cable will cause damage to the reverse gearbox.

1. Shut down the engine. Switch the lever of the reverse gearbox into the "**forward**" position.

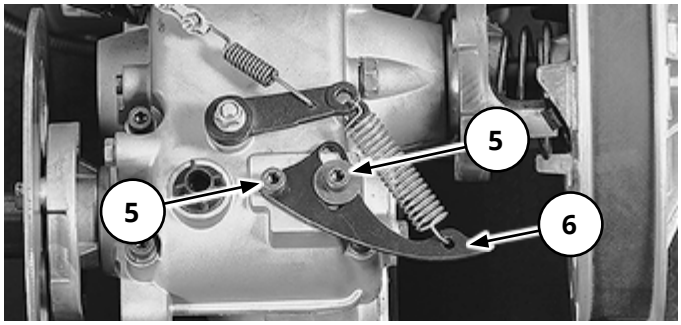
2. Loosen the locknut **(1)**, tighten the adjusting screw **(2)**. Loosen the cable fixing nut **(3)**.



3. Move the lever **(4)** all the way down. Rotating the driven pulley of CVT, make sure the gear "**forward**" is switched on.



4. Loosen the screws **(5)** and move the bracket **(6)** down until the moment of a significant tension of the spring. Tighten the screws **(5)**.



5. Pull the shift cable and tighten the cable fixing nut **(3)**.
6. Create the required tension using the adjusting screw **(2)** and tighten the locknut **(1)**.
7. Shift the lever of the reverse gearbox into the "**reverse**" position. Rotating the driven pulley of CVT, make sure the gear "**reverse**" is switched on.

8. Repeat the adjustment if necessary.

8.10 Battery maintenance

The Snowdog can be equipped with a Delta CT 1211 (12 V/11 A·h) battery or its alternatives: MG12ZS-C, EBZ12-4-1, YT12B-BS, YTZ14S.

Service life of a battery depends on its operating conditions.

When the engine is started with an electric starter, the battery gives up part of the charge and later makes up for this loss during the driving. Prolonged driving at low speeds with a headlight switched on, as well as frequent starts of the engine result in the battery not having enough time to charge. The voltage of a charged battery should be 12.6–12.9 V. If the battery voltage is less than 12.3 V, the charge is around 70%. Charge the battery.

⚠ Warning

Do not store the battery discharged. Leaving the battery discharged or storing it at low temperatures for a long time leads to its damage.

Connect and disconnect the battery only when the ignition is switched off. Connect the red wire to the plus (+) terminal; connect the blue or black wire to a minus (-) battery terminal.

⚠ Warning

Incorrect battery connection will damage the Snowdog.

To charge the battery, use a charger for AGM batteries.

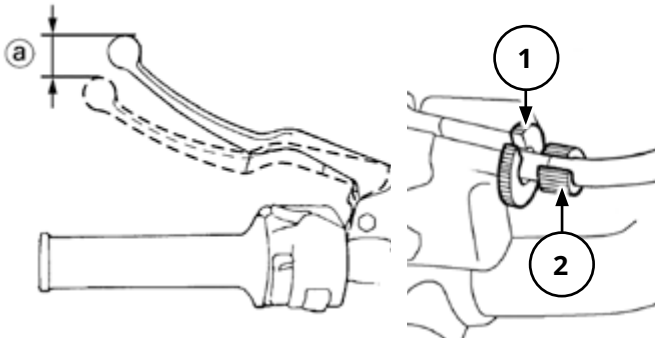
⚠ Warning

The use of a charger that is not intended for AGM batteries will lead to the failure of the battery.

8.11 Parking brake

8.11.1 Brake cable adjustment

Check the free movement of parking brake lever A. It should have a value of 0.2–0.4 in (5–10 mm).



To do this, loosen the locknut **(1)** and rotate the adjusting screw **(2)** counterclockwise to pull cable so that the brake lever has a free run within 0.2–0.4 in (5–10 mm).

To loosen the brake cable, loosen the locknut **(1)** and rotate the adjusting screw **(2)** clockwise.

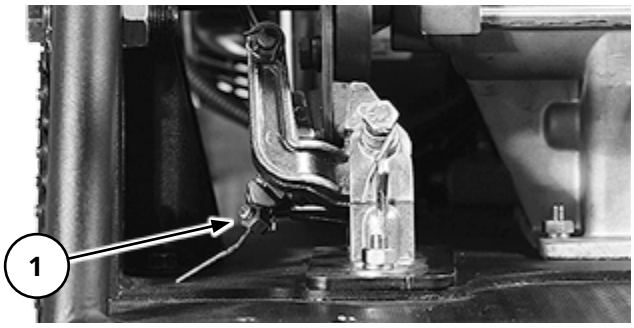
If the adjustment capability at the lever is at its maximum and the brake is still not performing adequately, then there's also adjustment capability at the brake caliper. If this is the case, the adjustment at the lever should be backed off, as in loosened the opposite way of what you're trying to achieve, then adjust the brake at the caliper. The brake lever adjustment should be left for finer adjustment of the brake.

8.11.2 Adjusting the brake caliper on the Snowdog with the reverse gearbox

Fully loosen the tension of the brake cable on the lever.

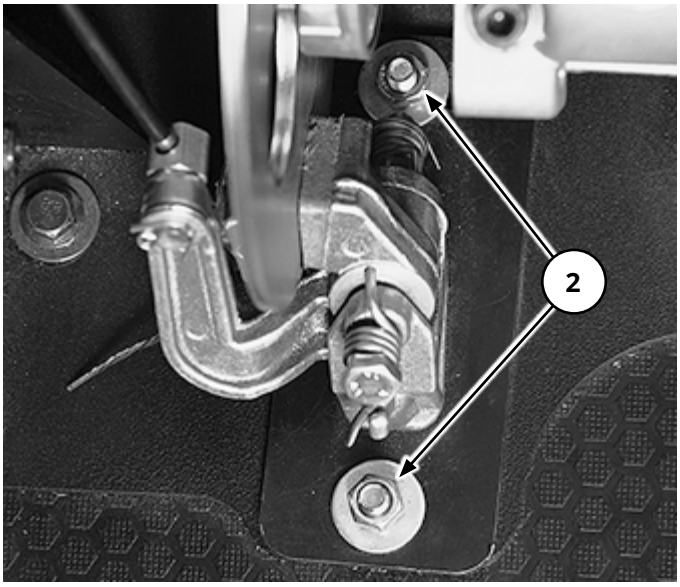
Lever should move freely without binding or restriction. If it does not, lubricate or replace the cable.

Loosen the screw **(1)** and pull the cable until the necessary clearance between the brake pads and the brake disk is set up.



Tighten the screw **(1)** and check the movement of the parking brake lever.

Loosen the nuts **(2)** of the brake caliper bracket and adjust the position of the brake pads to the brake disk.

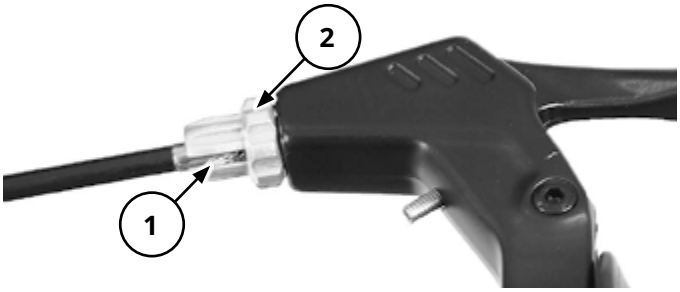


Check the functioning of the parking brake.

If the brake is adjusted too tightly it won't allow the disk to rotate freely. At this point the brake adjustment should be loosened.

8.12 Adjusting the throttle

To adjust the throttle lever, loosen the locknut **(2)** and rotate the adjusting screw **(1)** counterclockwise. Pull the rope so that the throttle has a free run within 0.2–0.3 in (5–7 mm).



1. To loosen the throttle cable, loosen the locknut **(2)** and rotate the adjusting screw **(1)** clockwise. Loosen the cable.
2. Screw the adjusting screw **(2)** in to increase the free movement of the throttle lever. Unscrew the adjusting screw **(2)** to decrease the free travel of the throttle lever.
3. At the end of the adjustment, tighten the locknut **(1)**.
4. If you cannot achieve the needed throttle lever by rotating the adjusting screw or the throttle cable jams while moving, please contact the Snowdog dealer to adjust, lubricate or change the throttle cable.

8.13 Washing and cleaning

After each trip, clean the Snowdog of any snow, ice, branches, leaves, dirt, or other foreign parts. Use water and a cleansing agent. Before using the cleansing agent, read its instructions for use.

⚠ Warning

Do not direct a jet of water under pressure at bearings, suspension parts, muffler, air filter or electrical parts. Water can wash out the lubricant from the bearings and damage other parts.

8.14 Routine maintenance

Maintenance of the Snowdog should be carried out with Snowdog dealers. For a list of Snowdog authorized service dealers, visit www.snowdog.com

We recommend addressing any Briggs & Stratton authorized service dealer for all maintenance work on the engine and engine components. For a list of Briggs & Stratton authorized service dealers, visit www.briggsandstratton.com.

⚠ Warning

Engine maintenance should be carried out in accordance with Briggs & Stratton engine user's manual. All the information on engine maintenance contained in the manual serves as guidelines. If the maintenance instructions in this Snowdog owner's manual are different from those in the Briggs & Stratton engine user's manual, follow the instruction specified in the latter.

Maintenance intervals specified in this manual are valid for the Snowdog operation in normal conditions.

When operating under severe conditions the maintenance should be carried out more often.

Heavy duty operating conditions include:

- Moving on deep loose snow (more than 16 inches in depth);
- Moving at temperature below -13 and above 50 °F (-25 °C and above +10 °C);
- Moving on wet snow and on snow containing water;
- Moving on surfaces flooded by water;
- Moving on rocky terrain;
- Moving on snow crust which cannot withstand the weight of the Snowdog and sled;
- Participation in races and competitions;
- Prolonged moving at low speed, "tightly strained";
- Moving with a towed load more than 330 lb (150 kg);
- Moving on hard-surfaced roads;
- Moving in mud;
- Moving on the sand;
- Prolonged moving uphill, downhill, or on slopes;
- Short trips with frequent stops;
- Prolonged idling of the engine.

8.14.1 After the first 5 hours of Snowdog operation

1. Change the engine oil.

8.14.2 Every 8 hours of Snowdog operation or daily

1. Check the engine oil level.
2. Clean the area around the muffler and the controls.
3. Clean the air intake grilles.

8.14.3 After the first 20 hours of Snowdog operation but no later than in 1 month

1. Clean or change the air filter.
2. Lubricate the throttle and parking brake cables with silicon oil.
3. Lubricate the chain.
4. Adjust free movement of the throttle and parking brake levers.
5. Adjust the chain tension.
6. Check the transmission bearings.
7. Check all the screws fastening bogies, bearings and chain sprockets for tightness.
8. Check the reverse gearbox shift mechanism (if available).

8.14.4 Maintenance every 50 hours of operation, but not less than once a year

1. Change the engine oil.
2. Clean or change the air filter.
3. Change the spark plug.
4. Lubricate the throttle and parking brake cables with silicon oil.
5. Lubricate the chain.
6. Check the transmission bearings.
7. Adjust free movement of the throttle and parking brake levers.
8. Adjust the chain tension.
9. Check all the screws fastening bogies, bearings and chain sprockets for tightness.

8.15 Snowdog maintenance table

	Before each trip or every 8 hours of running	After each trip	After the first 5 hours of operation	After the first 20 hours of operation or every month*	Every 50 hours of operation or every year*	Under severe operation conditions	Preparation for transportation	Maintenance after transportation	Preparation for long storage	During long storage	Commissioning after long storage
Engine oil	I		R		R						
Fuel	I						I	I	I		R
Process fluids leakage	I	I		I	I					I	
Throttle lever	I			A	A						
Parking control lever movement	I			A	A						
Fuel lock	I			I	I		I	I	I		
Electric starter operation	I			I	I						
Manual starter operation	I			I	I	I					
Engine idling	I			I	I	I					
Engine response to throttle lever position	I			I	I						

	Before each trip or every 8 hours of running	After each trip	After the first 5 hours of operation	After the first 20 hours of operation or every month*	Every 50 hours of operation or every year*	Under severe operation conditions	Preparation for transportation	Maintenance after transportation	Preparation for long storage	During long storage	Commissioning after long storage
Unusual sounds with running engine	I			I	I	I					
Handlebar and their fitting	I			I	I	I					
Hooking device attachment	I	I		A	A	A					
Reverse gear shifting	I			I							
Kill switch	I										
Handle switch	I										
Chain	I	A C L		A L	A L	A L			L		C L
Headlight	I	I		I	I						
Cleaning from dirt or snow	I	C				C					
Battery		I		I	I				I	I	I
Track		I C		A	A				A	I	A
Cleaning carburetor controls from snow	I	C				C					
Sprockets		I C		I	I						
Sprocket fastening		I		I	I	I					
Track shafts		I				I					
Suspension bogies		I		I	I	I					
Transmission shaft bearings		I		I	I	I					
Bogie bearings		I		I	I	R					
CVT pulleys		I		I L		I L					I
CVT belt		I		I	I						
Plastic inserts		I		L	L						
Gearbox oil					R				R		
Throttle cable	I			L	L	L			L		L
Air filter				I C	R	I C					I
Fuel hose				I	I						I
Battery cables				I	I		I	I			I
Charging				I	I						I
Parking brake pads and brake caliper				I	I	I					
Parking brake disk				I	I	I					
Parking brake cable lubrication				I	L	L					L
Side plate fastening				I	I	I					
Suspension bogie fastening				I	I	I					
Support wheels fastening				I	I	L					
Engine fastening				I	I	I					
Gearbox fastening				I	I						
Engine mount fastening				I	I						
Spark plug					R						I
Carburetor									C		I

A: Adjust. C: Clean. I: Inspect. L: Lubricate. R: Replace

* carried out by a Snowdog dealer

9 Transportation

Shut down the fuel lock before transporting the Snowdog. The Snowdog must be in a horizontal position during loading and unloading. When transporting the Snowdog, make sure it is secure. It is recommended to use the hitch on the rear part of the Snowdog and the carry handle on the front part.

10 Storage

Snowdog should be stored in a dry ventilated room or outdoors under a canopy with a waterproof cover. Snowdog must be protected from direct sunlight.

⚠ Warning

Make sure the storage area is free of high humidity or dust.

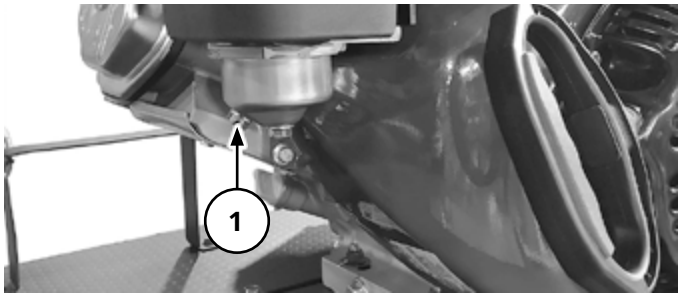
Engine maintenance must be carried out in accordance with Briggs & Stratton user's manual. If the instructions in this Snowdog owner's manual are different from those in the Briggs & Stratton engine user's manual, follow the instruction specified in the latter.

10.1 Preparation for short storage (less than one month)

1. Clean or wash the Snowdog.
2. Lubricate the throttle and parking brake cables with silicon oil.
3. Lubricate the chain.

10.2 Preparation for long storage (more than one month)

1. Clean the Snowdog.
2. Warm up the engine and change the engine oil.
3. Fill the fuel tank completely.
4. Shut down the fuel lock.
5. Unscrew the drain bolt **(1)** on the carburetor and drain the fuel.



6. Take the battery off and charge it. Check the battery charge at least every two months. Charge as needed.
7. Store the battery in a room with a temperature range of 33 °F (+1 °C) to 68 °F (+20 °C).
8. Rotate the track half a turn at least every six months.
9. Cover the Snowdog from dust.

This preservation ensures the safety of the Snowdog for up to 12 months, provided the storage rules are observed.

After 12 months, prepare the Snowdog for operation and run the engine for a few minutes. If further storage is required, prepare it for storage again.

10.3 Snowdog commissioning after long storage

1. Clean the Snowdog of dust and dirt.
2. Fill the fuel tank with fresh fuel.
3. Charge and install the battery.
4. Lubricate the chain.
5. Adjust free movement of the throttle and parking brake levers.

11 Snowdog manufacturer's warranty

11.1 Manufacturer's official representative (SNOWDOG LLC) warranties against defects of material or workmanship for a period of 12 months from the original date of sale (this warranty is not transferable). Snowdog will repair or replace any parts or assembly that is proven to be defective in material or workmanship under normal use during the applicable warranty time period. Warranty repairs will be made without charge for parts and/or labor. Any part or assembly replaced under warranty becomes the property of SNOWDOG LLC and all parts and assemblies replaced under warranty will be considered as part of the original product and any warranty on those parts will expire coincident with the original Snowdog warranty (certain exceptions to this warranty are listed herein).

11.1.1 Throttle cable, choke cable, revers cable, parking brake cable, wire harness, including stop switch and track will be covered for a period of 90 days to be free of defects. Abuse and neglect are not covered under this warranty.

11.1.2 Drive chain, sprockets, driving and driven pulleys of the CVT, headlight, heaters and protective covers will be covered for a period of 30 days to be fine of defects. Abuse and neglect are not covered under this warranty.

11.1.3 Battery will be covered for a period of 30 days from date of sale. Undercharged, overcharged or frozen batteries are not covered by this warranty. Abuse and neglect are not covered under this warranty.

11.2 The warranty does not cover:

11.2.1 Engine warranties are the responsibility of the manufacturer. Contact the authorized dealer for repairs.

11.2.2 Consumables and parts subject to wear and overcharge depending on the style, intensity and conditions of operation, namely: supporting wheels, drive wheels, suspension springs, suspension wheels, shift lever, slide-ways, tubes, bearings, rubber metal elements, dust caps, hitch mechanism and its mount, CVT belt, CVT sliders, parking brake pads, protection elements, filling liquids, various types of gaskets, drive shafts, gears, and consumables.

11.2.3 Any damage done to the frame and sub-frame, provided there are no holes and/or voids in the material and welding seams.

11.2.4 Any Snowdog damage resulting from water ingestion: riding through water, or contamination of parts and components (if they haven't been cleansed in timely manner) or hitting an obstacle.

11.2.5 Snowdog serviced by an un-authorized dealer or using non OEM parts.

11.2.6 Any damages done to the plastic, glass, rubber, paper, and cloth parts.

11.2.7 Any damages resulting from Snowdog exposure to extreme environment, such as storage in improper conditions, use of pressure washers, hitting a stone, industrial waste, wood tar, salt, hail, storm, lightning, natural disasters or other environmental

disasters, as well as acts of vandalism or other uncontrolled action.

11.2.8 Snowdogs, upgraded with parts which were not approved by the Manufacturer's official representative (including different-size sprockets and chain), or Snowdogs with altered serial number and engine number.

11.2.9 Any damages resulting from a collision (if they were not caused by technical faults).

11.2.10 Snowdog used in sporting events, competitive driving, for commercial purposes, as well as the Snowdog with damages resulting from an overloading.

11.2.11 Snowdog which failed to pass scheduled technical maintenance.

11.2.12 Any damages resulting from incomplete or improper care (disregard of daily or routine maintenance).

11.2.13 Any Snowdog faults, which can be eliminated by adjustment (track tension and position adjustments, chain tension adjustment etc.).

11.2.14 Any sounds, noises, squeaks, vehicle vibrations that do not affect the overall performance and efficiency of the Snowdog.

11.2.15 Any parts and components damaged as a result of normal wear and tear.

11.2.16 Any additionally installed equipment and accessories.

11.2.17 Slight leakage of oil or other fluids through the insulation causing no change in their level.

11.2.18 Consequences arising from operating the faulty Snowdog.

11.2.19 Any Snowdog misuse. The defects that appeared as a result of such misuse are to be paid by the end user.

11.2.20 Expenses incurred by the owner associated with the breakdown of the Snowdog, such as:

- technical assistance;
- Snowdog towaway and transportation;
- compensation for the inconvenience and commercial losses;
- leasing and purchasing another equipment

11.3 You must at your expense, take the Snowdog, warranty card and proof of purchase to any authorized Snowdog dealer in during their normal business hours. Any defects in material or workmanship will be repaired at no charge to the end user. Abuse and neglect, including section 11.2 are not covered by this warranty.

12 Warranty card

Snowdog model	Date of purchase
Serial number	
Engine number	
Seller name	
Seller address	
Seller phone number	
Buyer name	

_____
Seller stamp

Buyer hereby confirms that the Seller:

- has transferred the Snowdog and owner's manual to the Buyer;
- has explained the Snowdog operating rules and the provisions of the conditions of the manufacturer's warranty, the necessity of timely technical service.

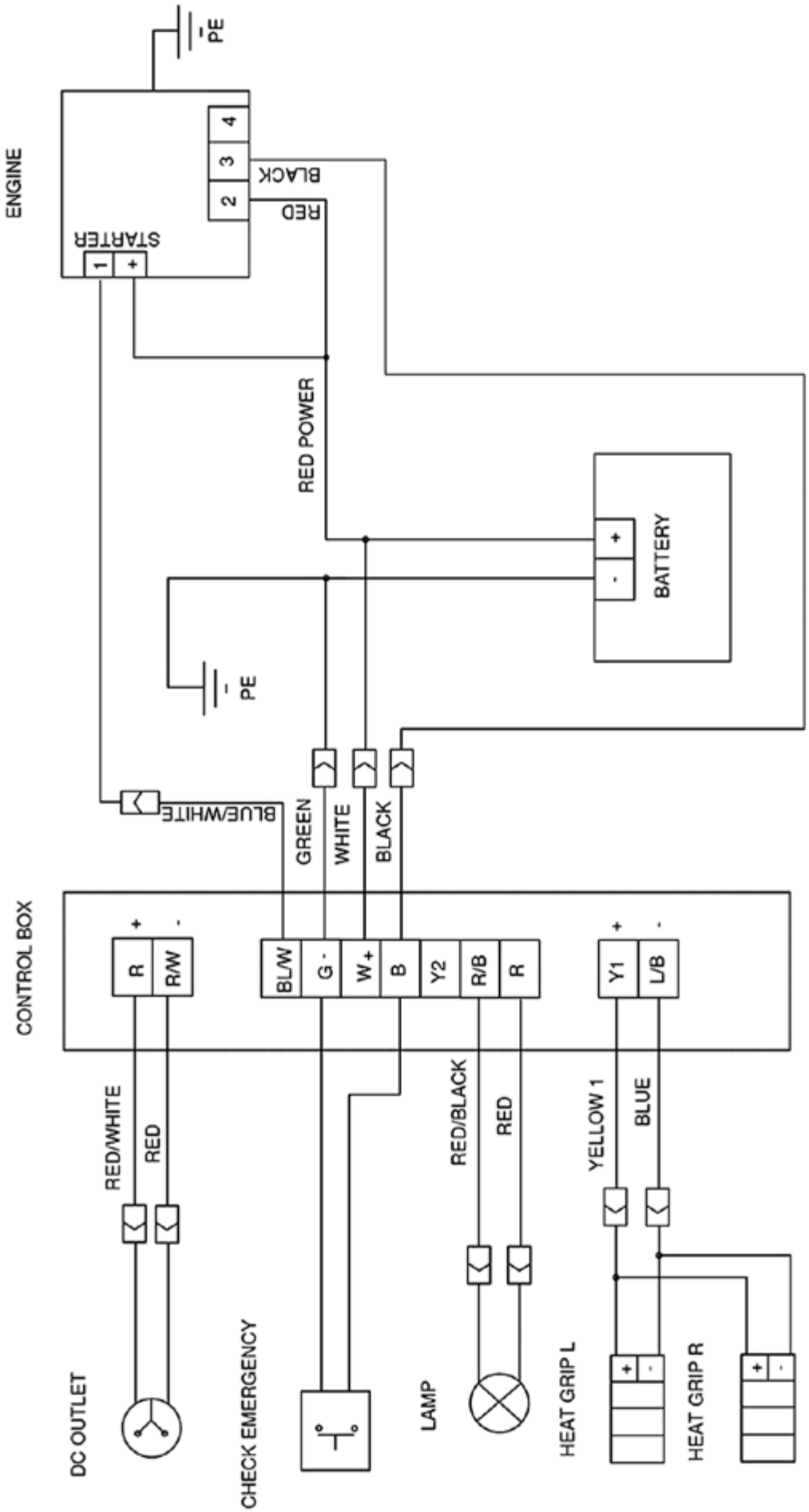
The Buyer has no claims regarding the Snowdog exterior condition _____.
Signature

For detailed warranty terms please refer to section 11 of this manual: Snowdog manufacturer's warranty.

13 Service list

Maintenance services Date «_____»_____20____ _____ Signature	**Maintenance services** Date «_____»_____20____ _____ Signature
Maintenance services Date «_____»_____20____ _____ Signature	**Maintenance services** Date «_____»_____20____ _____ Signature
Maintenance services Date «_____»_____20____ _____ Signature	**Maintenance services** Date «_____»_____20____ _____ Signature

14 Electrical drawing



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