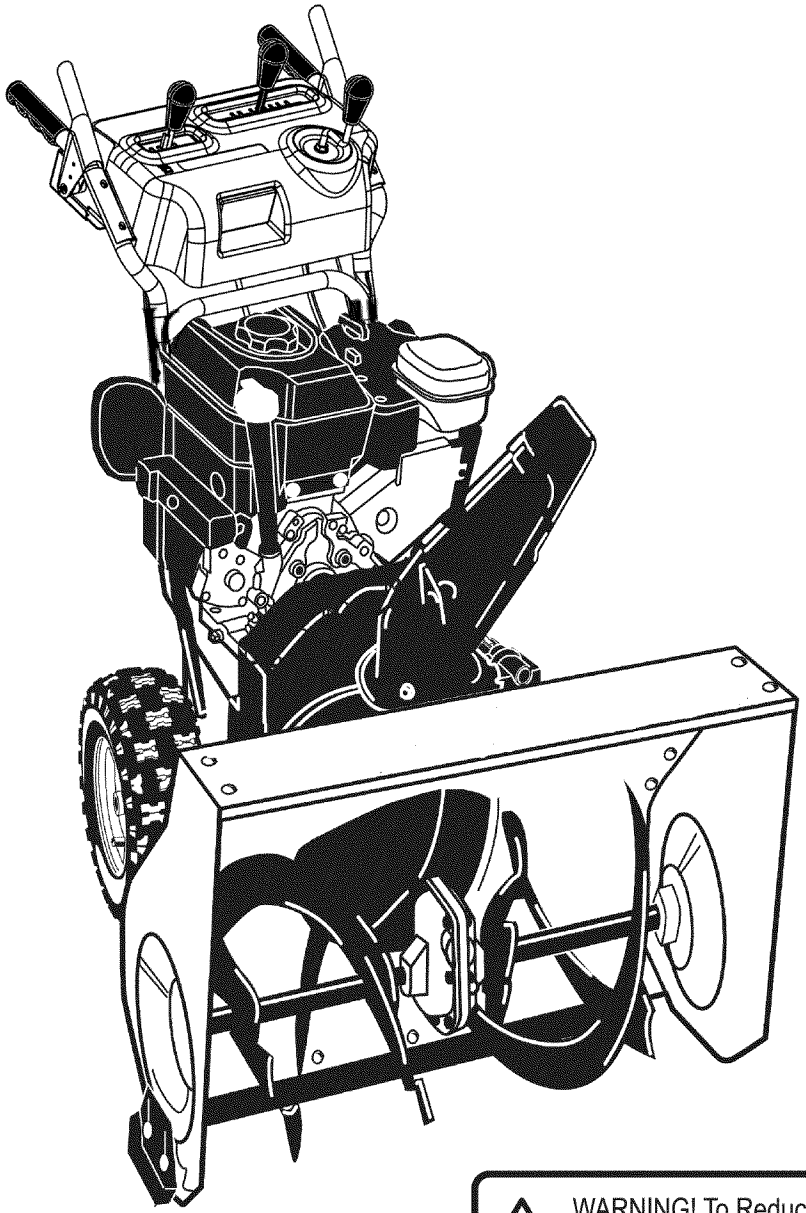
STEELE®
products

Owner s Manual

26″ 302cc Snow Blower



WARNING! To Reduce The Risk Of Injury, User Must Read And Understand Instruction Manual.

SP-SB2621

FOR SERVICE CALL:
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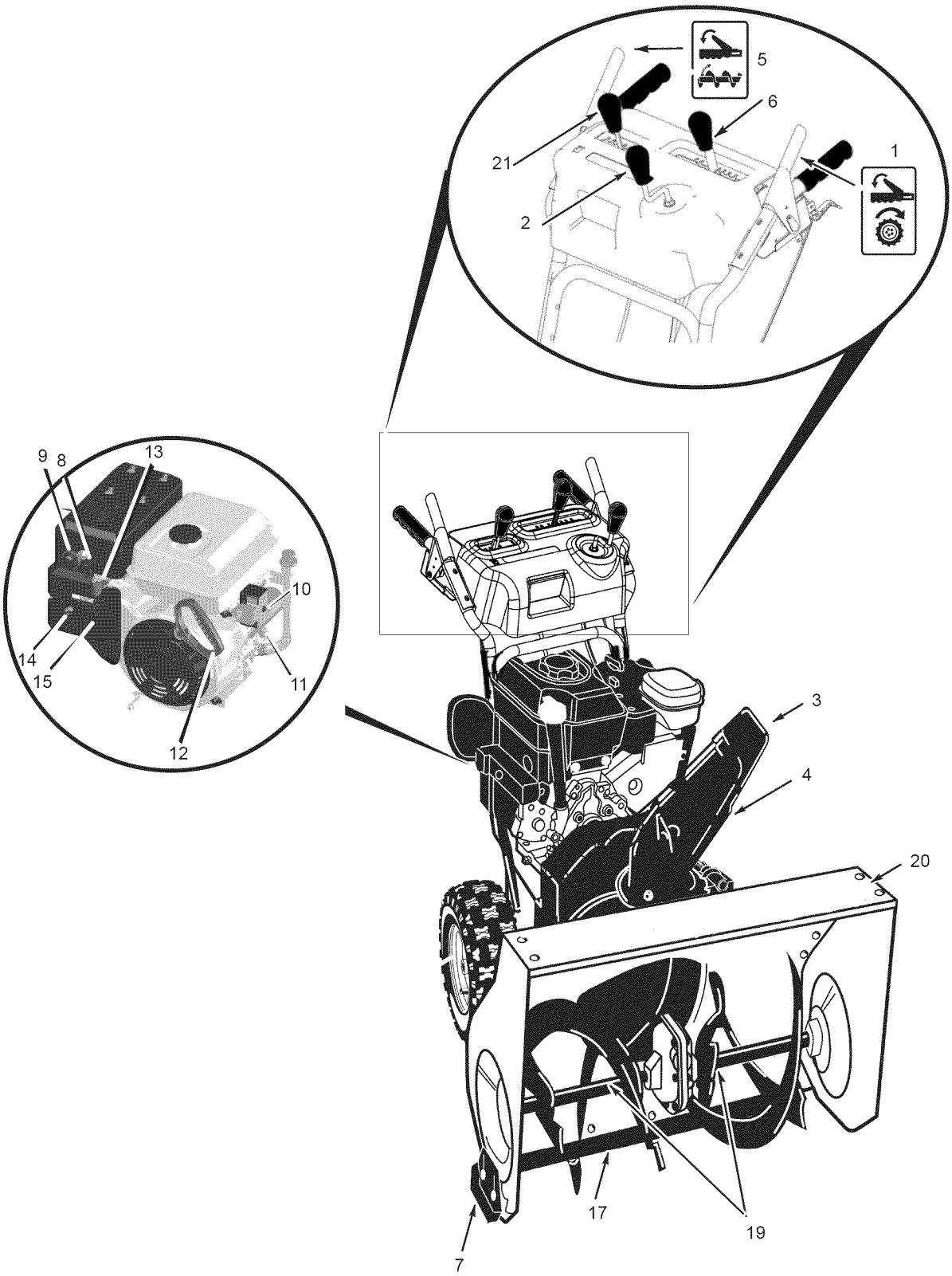


CONTENTS

Figures (Example: Figure 1) are located on the inside front and back pages of this manual located before the parts list.

General Information

This instruction book is written for a person with some mechanical ability. Like most service books, not all the steps are described. Steps on how to loosen or tighten fasteners are steps anyone can follow with some mechanical ability. Read and follow these instructions before you use the unit.

Know your product: If you understand the unit and how the unit operates, you will get the best performance. As you read this manual, compare the illustrations to the unit. Learn the location and the function of the controls. To help prevent an accident, follow the operating instructions and the safety rules. Keep this manual for future reference.

IMPORTANT: Many units are not assembled and are sold in cartons. It is the responsibility of the owner to make sure the assembly instructions in this manual are exactly followed. Other units are purchased in an assembled condition. On assembled units, it is the responsibility of the owner to make sure the unit is correctly assembled. The owner must carefully check the unit according to the instructions in this manual before it is first used.

Need Assistance?

If you need additional information on assembling, operating, or servicing your equipment contact your local Dealer.

This manual contains safety information to make you aware of the hazards and risks associated with snow throwers, and how to avoid them. The snow thrower is designed and intended for removal of snow, and should not be used for any other purpose. It is important that you read and understand these instructions, and anyone operating the equipment read and understand these instructions.

⚠ WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

A signal word (DANGER, WARNING, or CAUTION) is used with the alert symbol to indicate the likelihood and the potential severity of injury. In addition, a hazard symbol may be used to represent the type of hazard.

⚠ **DANGER** indicates a hazard which, if not avoided, **will result in death or serious injury.**

⚠ **WARNING** indicates a hazard which, if not avoided, **could result in death or serious injury.**

⚠ **CAUTION** indicates a hazard which, if not avoided, **might result in minor or moderate injury.**
CAUTION, when used **without** the alert symbol, indicates a situation that **could result in damage to the equipment.**

Controls & Equipment Features *(see Figure 1)*

Traction Drive Lever (1) – Select the forward or reverse direction of travel.

Crank Assembly (2) – Changes the direction of the discharge chute.

Chute Deflector (3) – Changes the distance the snow is thrown.

Discharge Chute (4) – Changes the direction the snow is thrown.

Auger Drive Lever (5) – Starts and stops the auger (snow gathering and throwing) which also propels the snowthrower.

Speed Shift Lever (6) – Selects the speed of the snow thrower.

Height Adjust Skid (7) – Adjusts the ground clearance of the auger housing.

Drift Cutters (18) – (if equipped) Cuts a path through snow higher than the auger housing.

Shear Bolts (19) – To protect the machine, special shear bolts are designed to break is an object becomes lodged in the auger housing. The use of a harder bolt will destroy the protection provided by the shear bolt.

Engine Features

Safety Key (8) – Must be inserted to start the engin and pulled out to stop the engin.

Primer Button (9) – Injects fuel directly into the carburetor for fast starts in cold weather.

Electric Start Button (10) – On electric start models,used to start the engine.

Switch Box (11) – On electric start models,used to attach a 220 volt electric power cord.

Recoil Starter Handle (12) – Use to manually start the engine.

Throttle lever(13) - Use to set engin speed.

Choke Control (14) – Use to start a cold engine.

Fuel valve levers(15) - Use to control the fuel support.

Hazard Symbols and their meanings

These symbols are used on your equipment and defined in your operating manual. Review and understand the meanings. The use of one of these symbols combined with a signal word will alert you to potential hazards and how to avoid them.


Safety Alert □ Identifies safety information about hazards that can result in personal injury.


Operator's Manual □ Read and understand before performing any activity or running equipment.


Rotating auger


Rotating impeller


Toxic fumes


Rotating gears


Thrown objects


Keep a safe distance from the equipment.


Never reach into rotating parts.


Shut off engine and remove spark plug connector before performing maintenance or repair work.


Fire


Explosion


Shock


Hot Surface

Operating Symbols and their meanings

These symbols are used on your equipment and defined in your operating manual. It is important that you review and understand the meanings. Failure to understand the symbols might result in harm to you.


Oil


Fuel


On Off


Primer bulb


Throttle


Choke off


Choke on


Stop


Slow


Fast


Engage


Traction


Auger Collector


Auger Clutch


Drive Clutch


Engage

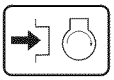

Disengage


Forward
Neutral
Reverse


Ignition On


Ignition Off


Ignition Key


Push to engage electric start


Electric Start


Engine Start


Engine Run


Engine Off

⚠ DANGER

Avoid death or serious injury from rotating auger.
Keep hands, feet and clothing away.
Unclogging discharge chute is a hazardous activity.

- Never attempt to clear auger of debris or clogged snow while equipment is engaged or engine is running. Clogged or blocked augers store energy and can rotate unexpectedly, EVEN WITH ENGINE OFF.
- **Stop engine and remove keys when performing maintenance on equipment.**
- Never leave the equipment unattended while engine is running. Always disengage the auger and traction controls, stop engine, and remove keys.
- Keep children, pets, and others out of the area during operation. Children are often attracted to the equipment. Be mindful of all persons present.
- Keep all loose clothing far away from front of snow thrower and auger. Scarves, mittens, dangling drawstrings, loose clothes and pants can quickly become caught in the rotating device and dismemberment will occur. Tie up long hair and remove jewelry.
- The snow thrower is intended to remove snow only. Do not use for purposes other than what is intended.
- Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
- Do not use the snow thrower on surfaces above ground level such as roofs of residences, garages, porches or other such structures or buildings.

⚠ DANGER

Discharge chute contains rotating impeller to throw snow. Never clear or unclog discharge chute with your hands, or while engine is running.
Fingers can quickly become caught and traumatic amputation or severe laceration can result.

- Unclogging the discharge chute is a hazardous activity. Clogged or blocked augers store energy and can rotate unexpectedly, even with engine off.
- Never place hands in or near discharge chute.
- With engine OFF, wait for all moving parts to cease movement, then with a stick, clear the chute. Even with engine off, parts may rotate and dismemberment can occur.
- Clogged snow can hide other obstructions in the chute and cause damage to the equipment, impeller or auger. Take precautions when restating the equipment after snow removal.

⚠ WARNING

Engines give off carbon monoxide, an odorless, colorless, poison gas.
Breathing carbon monoxide can cause nausea, fainting or death.

- Start and run engine outdoors.
- Do not start or run engine in enclosed area, even if doors or windows are open.

⚠ DANGER

Objects can be picked up by auger and thrown from chute.
Never throw snow toward people or cars, and never allow anyone in front of the snow thrower.

- Be aware of your environment while operating equipment. Running over items such as gravel, doormats, newspapers, toys, and rocks hidden under snow, can all be thrown from chute or jam in the auger.
- Always be aware of the direction the snow is being thrown. Nearby pedestrians, pets or property may be harmed by objects being thrown.
- Familiarize yourself with the area you plan to work. Mark off boundaries of walkways and driveways to prevent property damage from thrown objects.
- Take caution when snow throwing in unfamiliar areas. Stay alert for hidden hazards and traffic.
- After striking a foreign object, turn engine OFF, wait for moving parts to cease movement, and check immediately for damage. If damaged, repair before starting and operating snow thrower.
- With engine OFF, wait for moving parts to stop and always use a stick to clear discharge chute.
- If unit vibrates abnormally, turn engine OFF. Vibration is generally a warning of trouble. See an authorized dealer if necessary for repairs.

⚠ WARNING

Gasoline and its vapors are extremely flammable and explosive.
Fire or explosion can cause severe burns or death.

WHEN ADDING FUEL

- Turn engine OFF and let engine cool at least 2 minutes before removing gas cap.
- Fill fuel tank outdoors or in well-ventilated area.
- Do not overfill fuel tank.
- Keep gasoline away from sparks, open flames, pilot lights, heat, and other ignition sources.
- Check fuel lines, tank, cap, and fittings frequently for cracks or leaks. Replace if necessary.

WHEN STARTING ENGINE

- Make sure spark plug, muffler, fuel cap and air cleaner are in place.
- Do not crank engine with spark plug removed.
- If fuel spills, wait until it evaporates before starting engine.
- If engine floods, set choke to OPEN/RUN position, place throttle in FAST and crank until engine starts.

WHEN OPERATING EQUIPMENT

- Do not choke carburetor to stop engine.

WHEN TRANSPORTING EQUIPMENT

- Transport with fuel tank EMPTY.

WHEN STORING GASOLINE OR EQUIPMENT WITH FUEL IN TANK

- Store away from furnaces, stoves, water heaters or other appliances that have pilot light or other ignition source because they can ignite gasoline vapors.

RULES FOR SAFE OPERATION

WARNING: This machine is capable of amputating hands and feet and throwing objects. Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of unit, severe personal injury or death to you, or bystanders, or damage to property or equipment. The triangle ⚠ in text signifies important cautions or warnings which must be followed.

Safe Operation Practices for Snowthrowers

IMPORTANT: Safety standards require operator presence controls to minimize the risk of injury. Your snowthrower is equipped with such controls. Do not attempt to defeat the function of the operator presence control under any circumstances.

Training

1. Read, understand, and follow all instructions on the machine and in the manuals before operating this unit. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
2. Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction.
3. Keep the area of operation clear of all persons, particularly small children and pets.
4. Exercise caution to avoid slipping or falling especially when operating in reverse.

Preparation

1. Thoroughly inspect the area where the equipment is to be used and remove all doormats, sleds, boards, wires, and other foreign objects.
2. Disengage all clutches and shift into neutral before starting the engine (motor).
3. Do not operate the equipment without wearing adequate winter outer garments. Wear footwear that will improve footing on slippery surfaces. Avoid loose fitting clothing that can get caught in moving parts.
4. Handle fuel with care; it is highly flammable.
   a. Use an approved fuel container.
   b. Never add fuel to a running engine or hot engine.
   c. Fill fuel tank outdoors with extreme care. Never fill fuel tank indoors. Replace fuel cap securely and wipe up spilled fuel.
   d. Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground, away from your vehicle, before filling.
   e. When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
   f. Keep nozzle in contact with the rim of the fuel tank or container opening at all times, until refueling is complete. Do not use a nozzle lock-open device.
   g. Replace gasoline cap securely and wipe up spilled fuel.
   h. If fuel is spilled on clothing, change clothing immediately.
5. Use extension cords and receptacles as specified by the manufacturer for all units with electric drive motors or electric starting motors.
6. Adjust the collector housing height to clear gravel or crushed rock surfaces.
7. Never attempt to make any adjustments while the engine (motor) is running (except when specifically recommended by manufacturer). including speed shift lever,traction drive lever,auger drive lever ,the clutch drive lever, upper chut assembly and crank assembly.)
8. Let engine (motor) and snowthrower adjust to outdoor temperatures before starting to clear snow.
9. Always wear safety glasses or eye shields during operation or while performing an adjustment or repair to protect eyes from foreign objects that may be thrown from the machine.

Operation

1. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
2. Exercise extreme caution when operating on or crossing gravel drives, walks or roads. Stay alert for hidden hazards or traffic.
3. After striking a foreign object, stop the engine (motor), disconnect the cord on electric motors, thoroughly inspect snowthrower for any damage, and repair the damage before restarting and operating the snowthrower.
4. If the unit should start to vibrate abnormally, stop the engine (motor) and check immediately for the cause. Vibration is generally a warning of trouble.
5. Stop the engine (motor) whenever you leave the operating position, before unclogging the collector/impeller housing or discharge chute and when making any repairs, adjustments, or inspections.
6. When cleaning, repairing, or inspecting, make certain the collector/impeller and all moving parts have stopped. Disconnect the spark plug wire and keep the wire away from the spark plug to prevent accidental starting.
7. Do not run the engine indoors, except when starting the engine and for transporting the snowthrower in or out of the building. Open the outside doors; exhaust fumes are dangerous (containing CARBON MONOXIDE, an ODORLESS and DEADLY GAS).
8. Do not clear snow across the face of slope.Exercise extreme caution when operating on slopes. Do not attempt to clear steep slopes.
9. Never operate the snowthrower without proper guards, plates, or other safety protective devices in place and working.
10. Never operate, the snowthrower near glass enclosures, automobiles, window wells, drop-off, and the like without proper adjustment of the snow discharge angle.
11. Never direct the discharge toward people or areas where property damage can occur. Keep children and others away.
12. Do not overload the machine capacity by attempting to clear snow at too fast a rate.
13. Never operate the machine at high transport speeds on slippery surfaces. Look behind and use care when operating in reverse.
14. Disengage power to the collector/impeller when snowthrower is transported or not in use.
15. Use only attachments and accessories approved by the manufacturer of the snowthrower (such as tire chains, etc.).
16. Never operate the snowthrower without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.
17. Never touch a hot engine or muffler.

18. Never direct discharge at bystanders or allow anyone in front of the unit.
19. Never leave a running unit unattended. Always disengage the auger and traction controls, stop engine, and remove keys.
20. Do not operate the unit while under the influence of alcohol or drugs.
21. Keep in mind the operator is responsible for accidents occurring to other people or property.
22. Data indicates that operators, age 60 years and above, are involved in a large percentage of power equipment□related injuries. These operators should evaluate their ability to operate the unit safely enough to protect themselves and others from injury.
23. DO NOT wear long scarves or loose clothing that could become entangled in moving parts.
24. Snow can hide obstacles. Make sure to remove all obstacles from the area to be cleared.

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the unit and the operating activity. Never assume that children will remain where you last saw them.

1. Keep children out of the area and under the watchful care of another responsible adult.
2. Be alert and turn off if children enter the area.
3. Never allow children to operate the unit.
4. Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure vision.

Clearing A Clogged Discharge Chute

Hand contact with the rotating impeller inside the discharge chute is the most common cause of injury associated with snowthrowers. Never use your hand to clean out the discharge chute.

To clear the chute:

1. SHUT OFF THE ENGINE.
2. Wait 10 seconds to be sure the impeller blades have stopped rotating.
3. Always use a clean out tool, not your hands.

Service, Maintenance And Storage

1. Check shear bolts (pins) and other bolts at frequent intervals for proper tightness to be sure the equipment is in safe working condition.
2. Never store the machine with fuel in the tank inside a building where ignition sources are present such as hot water and space heaters, or clothes dryers. Allow the engine to cool before storing in any enclosure.
3. Always refer to operator's manual for important details if the snowthrower is to be stored for an extended period.
4. Maintain or replace safety and instruction labels as necessary.
5. Run the machine a few minutes after throwing snow to prevent freeze□up of the collector/impeller.
6. If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapors have dissipated.
7. Always observe safe refueling and fuel handling practices when refueling the unit after transportation or storage.
8. Always follow the engine's manual instructions for storage preparations before storing the unit for both short and long term periods.
9. Always follow the engine manual instructions for proper start-up procedures when returning the unit to service.
10. Keep nuts and bolts tight and keep equipment in good condition.
11. Never tamper with safety devices. Check their proper operation regularly and make necessary repairs if they are not functioning properly.
12. Components are subject to wear, damage, and deterioration. Frequently check components and replace with manufacturer's recommended parts, when necessary.
13. Check control operation frequently. Adjust and service as required.
14. Use only factory authorized replacement parts when making repairs.
15. Always comply with factory specifications on all settings and adjustments.
16. Only authorized service locations should be utilized for major service and repair requirements.
17. Never attempt to make major repairs on this unit unless you have been properly trained. Improper service procedures can result in hazardous operation, equipment damage and voiding of manufacturer's warranty.

Emissions

1. Engine exhaust from this product contains chemicals known, in certain quantities, to cause cancer, birth defects, or reproductive harm.
2. If available, look for the relevant Emissions Durability Period and Air Index information on the engine emissions label.

Ignition System

1. This spark ignition system complies with Canadian ISO14982:2009.

ASSEMBLY

Read and follow the assembly and adjustment instructions for your snow thrower. All fasteners are in the parts bag. Do not discard any parts or material until the unit is assembled.

WARNING: Before doing any assembly or maintenance to the snow thrower, remove the wire from the spark plug.

NOTE: In this instruction book, left and right describe the location of a part from the operator's position behind the unit.

NOTE: Torque is measured in foot pounds (metric N.m). This measurement describes how tight a nut or bolt must be. The torque is measured with a torque wrench.

NOTE: Fasteners and loose parts are shown at full size in Figure 2 on page 15.

NOTE: Illustrations are located on page 2 and on pages 16 through 20.

Tools Required

1 Knife
1 Pliers
2 1/2 inch open end wrenches
2 9/16 inch open end wrenches
2 3/4 inch open end wrenches
1 Measuring tape or ruler
1 Screwdriver
1 3/8 inch open end wrench
1 7/16 inch open end wrench

How To Remove The Snow Thrower From The Carton

1. *(Figure 3)* The snow thrower is shown in the shipping position.
2. Remove packing material from wheels, handle, and auger housing.
3. Locate and remove the parts bag (some models do not have a parts bag).
4. Cut open the end of the carton next to the handle.
5. To roll the snowthrower off of the carton, pull on the handle.
   CAUTION: DO NOT back over cables.
6. Remove any packing material that remains from handle and auger housing.
7. Cut black plastic shipping ties that may secure the control cables to the LOWER HANDLE.
8. If the control cables have become disconnected from the control levers, then attach the cable to the levers (see Owner's Manual for illustration of cable and lever).

How To Assemble The Handle

1. *(Figure 4)* Loosen, but do not remove, the **fasteners (1)** in the upper holes of the lower handle.
2. Raise the **upper handle (2)** to the operating position.
3. Tighten all handle fasteners.

NOTE: Make sure the cables are not caught between the upper and lower handle.

How To Assemble The Chute Deflector

NOTE: The chute ring assembly (1) comes installed on the unit from the factory (see Figure 7).

1. Turn **crank assembly (18, Figure 5)** until the arrow on **outer ring (2, Figure 7)** of chute ring assembly points forward.
2. Place **chute ring (3)** onto **outer ring (2)** so the slot in the chute ring aligns with the arrow on the outer ring.
3. Install **chute deflector (4)** using three **screws (5)** and **nuts (6)** in holes as shown. The chute deflector must point forward for proper installation.
4. Tighten screws snugly but be careful not to over-tighten.

Check The Cables

1. *(Figure 8)* Check the **traction drive cable (1)** and the **auger drive cable (2)**. If the bottom of the cables have become disconnected, reinstall the cables.
2. *(Figure 10)* If the top of the **cables (5)** have become disconnected from the **drive levers (6)**, attach the **cables (5)** to the **"Z" fitting (7)**.

How To Set The Skid Height *(Figure 1)*

The snow thrower is equipped with **height adjustable skids (7)** mounted on the outside of the **auger housing (4)**. To adjust the height of the skids, see "How To Adjust The Height Of The Skids" in the Maintenance section.

How To Set The Length Of The Cables

The cables were adjusted at the factory and no adjustments should be necessary. However, after the handles are put in the operating position, the cables can be too tight or too loose. If an adjustment is necessary, see "How To Check And Adjust The Cables" in the Service And Adjustment section.

How To Assemble The Drift Cutter (if equipped)

Drift cutters are used to cut a path through snow deeper than the auger housing.

1. *(Figure 11)* Loosen the **fasteners (2)** that secure the **drift cutters (1)** to the auger housing.
2. Raise the **drift cutters (1)** to the desired height.
3. Tighten the **fasteners (2).**

How To Prepare The Engine

NOTE: The engine was shipped from the factory filled with oil. Check the level of the oil. Add oil as needed.

WARNING: Follow the engine manufacturer's instructions for the type of fuel and oil to use. Always use a safety fuel container. Do not smoke when adding gasoline to the engine. When inside an enclosure, do not fill with gasoline. Before you add fuel, stop the engine. Let the engine cool for several minutes.

Check the oil. See the engine manufacturer's instructions for the type of fuel and oil to use. Before you use the unit, read the information on safety, operation, maintenance, and storage.

Important! Before You Start Operating

❒ **Check the fasteners. Make sure all fasteners are tight.**

OPERATION

NOTE: Illustrations are located on page 2 and on pages 16 through 20.

CAUTION: Use only attachments and accessories approved by the manufacturer of the snow thrower (such as tire chains, electric start kits, etc.).

Know Your Snow Thrower *(Figure 1)*

Read this Instruction Book and safety rules before operation the snow thrower. Compare the illustration with your snow thrower to familiarize yourself with the location of various controls and adjustments.

How To Control The Discharge Of The Snow

WARNING: Never direct the discharge of snow toward bystanders.

WARNING: Always stop the engine before unclogging the discharge chute or the auger housing and before leaving the snow thrower.

1. *(Figure 1)* Turn the **crank assembly (2)** to change the discharge direction of the snow.
2. Turn the **upper chut assembly(21)** to set the distance.
3. *(Figure 12)* Move the **chute deflector (2)** UP for more distance, DOWN for less distance.

How To Stop The Snow Thrower *(Figure 1)*

1. To stop discharging snow, release the **auger drive lever (5)**.
2. To stop the wheels, release the **traction drive lever (1)**.
3. To stop the engine, pull out the **safety key(8).**

CAUTION: To stop the engine, do not move the choke control to CHOKE position. Backfire or engine damage can occur.

How To Go Forward or Backward *(Figure 1)*

1. To change the ground speed, first release the **traction drive lever (1)** and then move the **speed shift lever (6)** to the desired speed.
2. Ground speed is determined by snow conditions. Select the speed by moving the **speed shift lever (6)** into the appropriate notch on the shift lever plate.

Speed 1	Wet, Heavy
Speed 2	Light
Speed 3	Very Light
Speed 4,5	Transport only

3. To go forward, engage the **traction drive lever (1)**. Maintain a firm hold on the handle as the snow thrower starts to move forward. Do not attempt to push the snow thrower.
4. To go backward, release the **tractor drive lever (1)**.
5. Move the **speed shift lever (6)** into either first or second reverse.
6. Engage the **traction drive lever (1).**

IMPORTANT: Do not move the speed shift lever (6) while the traction drive lever (1) is engaged.

How To use clutch drive lever *(Figure 6)*

1. **Clutch drive lever(2)** used to make machine easily turning.
2. Before gripping **Clutch drive lever(2)** , the **traction drive lever (1)** must be in disengagement,then machine can be turned right or left.
3. After releasing the**Clutch drive lever(2)** , two wheels keep same speed moving.

IMPORTANT: When clutch drive lever can not be gripped up at some time, you can move handles left and right until clutch drive lever easily gripped up.

How To Throw Snow *(Figure 1)*

1. Engage the **auger drive lever (5)**.
2. To stop throwing snow, release the **auger drive lever (5)**.

WARNING: The operation of any snow thrower can result in foreign objects being thrown into the eyes, which can result in severe eye damage. Always wear safety glasses or eye shields while operating the snow thrower. We recommend standard safety glasses or use a wide vision safety mask over your glasses.

Before Starting The Engine

1. Before you service or start the engine, familiarize yourself with the snow thrower. Be sure you understand the function and location of all controls.
2. Check the tension of the clutch cable before starting the engine. See "How To Adjust The Clutch Cable" in the Maintenance section of this manual.
3. Make sure that all fasteners are tight.
4. Make sure the height adjust skids are properly adjusted. See "How To Adjust The Height Of The Skids" in the Maintenance section of this manual.
5. Check the air pressure in the tires. The correct air pressure is 14 PSI (1 BAR) to 17 PSI (1.25 BAR). Do not exceed the maximum amount of air pressure shown on the side of the tire.

How To Stop The Engine *(Figure 1)*

1. Pull out the **safety key (8).**
2. Turn the **fuel valve lever (15)** to the OFF position. (If with it)

CAUTION: To stop the engine, do not move the choke control to CHOKE position. Backfire or engine damage can occur.

How To Start The Engine *(Figure 1)*

Models equipped with an Electric Starter

NOTE: An electric starter kit can be added to recoil start engines. Electric starter kits are available from your nearest authorized service center.

WARNING: The starter is equipped with a three-wire power cord and plug and is designed to operate on A.C. household current. The power cord must be properly grounded at all times to avoid the possibility of electrical shock which can injure the operator. Carefully follow all instructions in the "How To Start The Engine" section. Make sure that your house wiring is a three-wire grounded system. If you are not sure, ask a licensed electrician. If your house wire system is not a three-wire grounded system, do not use this electric starter under any conditions. If your system is grounded but a three-hole grounded receptacle is not available to start the engine, have a three-hole grounded receptacle installed by a licensed electrician. To connect an A.C. power cord, always connect the power cord to the switch box (11) on the engine first. Then, plug the other end into the three-hole grounded receptacle. When disconnecting the power cord, always unplug the end from the three-hole grounded receptacle first.

How To Start A Cold Engine *(Figure 1)*

1. Check the engine oil.
2. Fill the fuel tank with regular unleaded petrol. See "How To Prepare The Engine".
3. Make sure the **traction drive lever (1)** and the **auger drive lever (5)** are in the disengaged (released) position.
4. Move the **fuel valve lever (15)** to the ON position.
5. Move the **choke control (14)** to the CHOCK position.
6. Move the **throttle lever (13)** from the SLOW position,about 1/3 of the way toward the fast position.
7. Put the **safety key (8)** in the key hole.
8. ***(Electric Start)*** Connect the power cord to the starter motor located on the engine.
9. ***(Electric Start)*** Plug the other end of the power cord into a three-hole, grounded A.C. receptacle. (See the WARNING in this section).
10. Push the **primer button (9).** Every time you push the **primer button (9)**, wait two seconds. For the number of times required to push the **primer button (9),** see the engine manufacturer's instructions.
11. ***(Electric Start)*** Push on the **electric start button (10)** until the engine starts. Do not crank for more than 5 seconds at a time. Wait one minute between starts to allow the starter to cool.
12. ***(Recoil Start)*** Slowly pull the **recoil starter handle (12)** until resistance is felt and then pull rapidly to start the engine. Do not allow the **recoil starter handle (12)** to snap back. Slowly return the **recoil starter handle (12).**
13. If the engine does not start in 5 or 6 tries, See the "Trouble Shooting Chart" Instructions.
14. Allow the engine to warm up for several minutes. As the engine warms up, adjust the **choke knob (14)** toward the RUN position. Wait until the engine runs smoothly before each choke adjustment.
15. ***(Electric Start)*** First disconnect the power cord from the three-hole receptacle. Then, disconnect the power cord from the starter motor.

NOTE: In temperatures below 0°F (-18°C), allow the engine to warm up for several minutes before blowing snow.

WARNING: Never run the engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas. Keep hands, feet, hair and loose clothing away from any moving parts located on the engine or the snow thrower. The temperature of muffler and nearby areas may exceed 150°F (66°C). Avoid these areas.

How To Start A Warm Engine *(Figure 1)*

If an engine has been running and is still warm, leave the **choke control (14)** in the OPEN position and do not push the **primer button (9)**. If the engine fails to start, follow the instructions "How To Start A Cold Engine".

NOTE: Do not use the primer button (9) to start a warm engine.

How To Start An Engine With A Frozen Electric Starter *(Figure 1)*

If the electric starter is frozen and will not turn the engine, follow the instructions below.

1. Pull as much starter rope as possible out of the starter.
2. Release the starter handle and let it snap back against the starter. Repeat until the engine starts.

Warm engines will cause condensation in cold weather. To prevent possible freeze□up of recoil starter and engine controls, proceed as follows after each snow removal job.

1. Run the snow thrower a few minutes after throwing snow to prevent freeze□up of the auger/impeller.
2. With engine off, allow engine to cool for several minutes.
3. Pull starter rope very slowly until resistance is felt, then stop. Allow the starter rope to recoil. Repeat three times.
4. With the engine not running, wipe all snow and moisture from the carburetor cover in area of controls and levers. Also, move the choke control and starter handle several times.

How To Remove Snow or Debris From The Auger Housing

WARNING: Do not attempt to remove snow or debris that may become lodged in auger housing with your hands. Use the clean□out tool or a pry bar to remove snow or debris.

(Figure 21) On some models, a **clean□out tool (1)** is attached to the top of the auger housing. Use the **clean□out tool (1)**to remove snow from the auger housing.

1. *(Figure 1)* Release the **auger drive lever (5)**.
2. Pull out the **safety key (8)**.
3. Do not place your hands in the **auger housing (4)** or the **discharge chute (3)**.
4. *(Figure 21)* Use the **clean□out tool (1)**or a pry bar to remove any snow or debris.

Snow Throwing Tips

1. For maximum snow thrower efficiency in removing snow, adjust ground speed. Go slower in deep, freezing or wet snow. If the wheels slips, reduce forward speed.
2. Most efficient snow throwing is accomplished when the snow is removed immediately after if falls.

   CAUTION: Do not overload the machine capacity by attempting to clear snow at too fast a rate.
3. For complete snow removal, slightly overlap each previous path.
4. Whenever possible, discharge the snow down wind.
5. For normal usage, set the skids so that the scraper bar is 1/8" (3 mm) above the skids. For extremely hard□packed snow surfaces, adjust the skids upward so that the scraper bar touches the ground.
6. Rocks and gravel must not be picked up and thrown by the machine. On gravel or crushed rock surfaces, set the skids at 1□1/4 inch (32 mm) below the scraper bar. See "How To Adjust The Height Of The Skids" in the Maintenance section.
7. After each snow throwing job, allow the engine to idle for a few minutes. The snow and accumulated ice will melt off the engine.
8. Clean the snow thrower after each use.
9. Remove ice, snow and debris from the entire snow thrower. Flush with water to remove all salt or other chemicals. Wipe snow thrower dry.

MAINTENANCE CHART

CUSTOMER RESPONSIBILITIES

SERVICE RECORDS Fill in dates as you complete regular service.	Before Each Use	First 2 Hours	Every 5 Hours	Every 10 Hours	Every 25 Hours	Each Season	Before Storage	SERVICE DATES
Check Engine Oil Level	√		√			√		
Change Engine Oil					√	√		
Check And Tighten All Screws and Nuts	√					√		
Check Spark Plug					√	√		
Adjust Drive Belt		√			√	√		
Check Fuel	√							
Drain Fuel							√	
Check Auger Clutch Cable Adjustment (See Cable Adjustment)		√				√		
Check Traction Clutch Cable Adjustment (See Cable Adjustment)		√				√		
Lubricate All Pivot Points				√			√	
Lubricate Auger Shaft (See Shear Bolt Replacement)				√			√	
Lubricate Drive Chains and Sprockets				√			√	

MAINTENANCE

NOTE: Illustrations are located on page 2 and on pages 16 through 20.

Use the following maintenance section to keep your unit in good operating condition. All the maintenance information for the engine is in the engine manufacturer's instructions. Before you start the engine, read this book.

WARNING: Before you make an inspection, adjustment (except carburetor), or repair, disconnect the wire from the spark plug.

General Recommendations

The warranty on this snow thrower does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, the operator must maintain the snow thrower as instructed in this manual.

Some adjustments must be made periodically to properly maintain the snow thrower.

After Each Use

- Check for any loose or damaged parts.
- Tighten any loose fasteners.
- Check and maintain the auger.
- Check controls to make sure they are functioning properly.
- If any parts are worn or damaged, replace immediately.
- Check all safety and instruction decals and labels. Replace any decals or labels that are missing or cannot be clearly read.

All adjustments in the Maintenance section of this manual should be checked at least once each season.

As Required

The following adjustment should be preformed more than once each season.

1. Adjust the auger drive belt after the first 2 to 4 hours, again at mid□season, and twice each season thereafter. See "How To Adjust The Auger Drive Belt" in the Maintenance section.

Lubrication

Every 10 Hours *(Figure 13)*

1. Lubricate the **Zerk fittings (1)** every ten hours with a grease gun.
2. Each time a shear bolt is replaced, the auger shaft must also be greased.
3. Lubricate all pivot points.

Every 25 Hours

Chute Rotation Gear

(Figure 5) Lubricate the **chute rotation gear (1)** with automotive type oil.

Chains

1. *(Figure 1)* Move the **speed shift lever (6)** to first gear.
2. Remove the gas from the gas tank. Stand the snow thrower up on the front end of the **auger housing (4)**.

WARNING: Drain the gasoline outdoors, away from fire or flame.

3. *(Figure 14)* Loosen the **bolts (3)** on each side of the **bottom panel (2)**.
4. Remove the **bottom panel (2).**
5. *(Figure 15)* Lubricate the **chains (5)** with a chain type lubricant.
6. Wipe the **hexshaft and sprockets (6)** with 5W30 motor oil.

   NOTE: If grease or oil come in contact with the disc drive plate (1) or the friction wheel (3), damage can result. Clean off any oil or grease with a alcohol base solvent.
7. *(Figure 14)* Install the **bottom panel (2)**.
8. Tighten the **bolts (3)** on each side of the **bottom panel (2)**.

Items Not To Lubricate *(Figure 15)*

1. Do not lubricate the **hex shaft and sprockets (6)**. All bearings and bushings are lifetime lubricated. For storage, put a slight amount of 5W□30 motor oil on a cloth and wipe the **hex shaft and sprockets (6)** to prevent rust.
2. If grease or oil comes in contact with the **disc drive plate (1)** or the **friction wheel (3)**, the **friction wheel (3)** can be damaged. Make sure to thoroughly clean the **disc drive plate (1)** and the **friction wheel (3)**.

   CAUTION: Any greasing or oiling of the above components can cause contamination of the friction wheel (3). If the disc drive plate (1) or the friction wheel (3) become contaminated with grease or oil, damage to the friction wheel will result.
3. The auger gear case is lubricated at the factory and does not require additional lubrication. If for some reason the lubricant leaks out, have the auger gear case checked by a factory authorized service center.

How To Adjust The Height Of The Skids *(Figure 1)*

This snow thrower is equipped with two height **adjustable skids (7).** These skids elevate the front of the snow thrower. For normal hard surfaces, such as a paved driveway or walk, adjust the skids as follows.

1. Put the snow thrower on a level surface.
2. Make sure both tires are equally inflated. The correct air pressure is 14 PSI (1 BAR) to 17 PSI (1.25 BAR). Do not exceed the maximum amount of air pressure shown on the side of the tire.
3. Put the extra shear bolts (**found in the parts bag**) under each end of the **scraper bar (17)** next to the **adjustable skids (7)**.
4. Loosen the **mounting nuts (16)** that hold the **adjustable skids (7)**. To bring the front of the snow thrower down, raise each **adjustable skids (7)**. Tighten the **mounting nuts (16)**.

NOTE: For rocky or uneven surfaces, raise the front of the snow thrower by moving the adjustable skids (7) down.

WARNING: Be certain to maintain proper ground clearance for the area to be cleared. Objects such as gravel, rocks or other debris, if struck by the impeller, can be thrown with sufficient force to cause personal injury, property damage or damage to the snow thrower.

How To Adjust The Scraper Bar *(Figure 1)*

After considerable use, the **scraper bar (17)** will become worn. The **scraper bar (17)**, in conjunction with the skids, must be adjusted to allow 1/8 inch clearance between the **scraper bar (17)** and the sidewalk or area to be cleared.

1. Put the snow thrower on a level surface.
2. Make sure both tires are equally inflated. The correct air pressure is 14 PSI (1 BAR) to 17 PSI (1.25 BAR). Do not exceed the maximum amount of air pressure shown on the side of the tire.
3. Loosen the carriage bolts and nuts that hold the **scraper bar (17)** to the **auger housing (20)**
4. Adjust the **scraper bar (15)** to allow 1/8 inch clearance between the **scraper bar (17)** and the sidewalk or area to be cleared.
5. Tighten the carriage bolts and nuts. Make sure that the **scraper bar (17)** is parallel with the sidewalk or area to be cleared.

How To Check And Adjust The Cables

The traction drive cable and the auger drive cable are adjusted at the factory. During normal use, a cable can become stretched and must be checked and adjusted as follows.

How To Check The Cables *(Figure 16)*

1. To check for correct adjustment, disconnect the **"Z" fitting (1)** from the **drive lever (2)**.
2. The control cable is correctly adjusted if the center of the **"Z" fitting (1)** is **aligned (4)** with the hole in the **drive lever (2)** and there in no droop in the cable.

How To Adjust The Auger Drive Cable

1. Remove the gas from the gas tank. Stand the snow thrower up on the front end of the auger housing.

WARNING: Drain the gasoline outdoors, away from fire or flame.

2. *(Figure 16)* Disconnect the **"Z" fitting (1)** from the **drive lever (2).**
3. *(Figure 17)* Pull the spring cover up to expose the **spring (5)**. Push the **cable (6)** through the **spring (5)** to expose the **square end (7)** on the **cable (6)**.
4. Hold the **square end (7)** with pliers and adjust the **locknut (8)** in or out until the excess slack is removed.
5. Pull the **cable (6)** back through the **spring (5).**
6. *(Figure 16)* Connect the **"Z" fitting (1)** to the **drive lever (2)**.

NOTE: When the auger drive belt is adjusted or replaced, check and adjust the cable.

How To Adjust The Traction Drive Cable

1. Remove the gas from the gas tank. Stand the snow thrower up on the front end of the auger housing.

WARNING: Drain the gasoline outdoors, away from fire or flame.

2. *(Figure 14)* Loosen the **bolts (3)** on each side of the **bottom panel (2)**.
3. Remove the **bottom panel (2).**
4. *(Figure 16)* Disconnect the **"Z" fitting (1)** from the **traction drive lever (2).**
5. *(Figure 23)* Slide the **cable boot (3)** off the **cable adjustment bracket (4).**
6. Push the bottom of the **traction control cable (5)** through the **cable adjustment bracket (4)** until the **"Z" hook (6)** can be removed.
7. Remove the **"Z" hook (6)** from the **cable adjustment bracket (4).** Move the **"Z" hook (6)** down to the next adjustment hole.
8. Pull the **traction control cable (5)** up through the **cable adjustment bracket (4).**
9. Put the **cable boot (3)** over the **cable adjustment bracket (4).**
10. *(Figure 16)* Install the **"Z" fitting (1)** to the **traction drive lever (2).**

11. ***(Figure 15)*** To check the adjustment, depress the drive lever and check the **length "A"** of the **drive spring (7).** In correct adjustment, the **length "A"** of the **drive spring (7)** is as follows:
minimum 3 inches (76 mm)
maximum 3-3/8 inches (85 mm).
12. ***(Figure 14)*** Install the **bottom panel (2)**.
13. Tighten the **bolts (3)** on each side of the **bottom panel (2)**.

How To Adjust The Belts

The belts will stretch during normal use. If you need to adjust the belts due to wear or stretch, proceed as follows.

How To Adjust The Auger Drive Belt

If the snow thrower will not discharge snow, check the adjustment of the auger drive cable. See "How To Check And Adjust The Cables" in the Maintenance section. If the adjustment is correct, then check the condition of the auger drive belt. If the auger drive belt is damaged, replace the auger drive belt. See "How To Replace The Belts" in the Maintenance section. If the auger drive belt is loose, adjust as follows.

1. Disconnect the spark plug wire.
2. ***(Figure 18)*** Remove **screw (2)** from **belt cover (1)**. Remove the **belt cover (1)**.
3. ***(Figure 19)*** Loosen the **nut (2)** on the **idler pulley (3)** Move the **idler pulley (3)** 1/8 inch (3 mm) toward the **auger drive belt (4)**.
4. Tighten the **nut (2)**.
5. ***(Figure 22)*** Depress the auger drive lever. Check the tension on the **auger drive belt (4)**. In correct adjustment, the **auger drive belt (4)** will deflect **1/2 inch (12.5 mm) (5)** with moderate pressure. If the adjustment is not correct, repeat the adjustment.
6. ***(Figure 18)*** Install the **belt cover (1)**. Tighten **screw (2)**.
7. Check the adjustment of the auger drive cable. See "How To Check And Adjust The Cables" in the Maintenance section.
8. Attach the spark plug wire.

Traction Drive Belt

The traction drive belt has constant spring pressure and does not require an adjustment. If the traction drive belt is slipping, replace the belt. See "How To Replace The Belts" in the Maintenance section.

How To Replace The Belts

The drive belts are of special construction and must be replaced with original factory replacement belts available from your nearest authorized service center.

Some steps require the assistance of a second person.

How To Remove the Auger Drive Belt

If the auger drive belt is damaged, the snow thrower will not discharge snow. Replace the damaged belt as follows.

1. Disconnect the spark plug wire.
2. ***(Figure 14)*** Loosen the **bolts (3)** on each side of the **bottom panel (2)**.
3. Remove the **bottom panel (2).**
4. ***(Figure 18)*** Remove **screw (2)** from **belt cover (1)**. Remove the **belt cover (1)**.
5. ***(Figure 19)*** Loosen the **belt guide (9).** Pull the **belt guide (9)** away from the **engine pulley (10).**
6. Pull the **idler pulley (3)** away from the **auger drive belt (4)** and slip the **auger drive belt (4)** off of the **idler pulley (3)**.
7. Remove the **auger drive belt (4)** from the **engine pulley (10).** To remove the **auger drive belt (4),** the **engine pulley (10)** may have to be partially rotated.
8. ***(Figure 20)*** Remove the top four **bolts (21)** that hold together the **auger housing (22)** and the **motor box (23)**. Loosen the bottom two **bolts (24).** The **auger housing (22)** and the **motor box (23)** can now be split apart for removal of the belt.
9. ***(Figure 19)*** Remove the old **auger drive belt (4)** from the **auger drive pulley (11)**. Replace the **auger drive belt (4)** with an original factory replacement belt available from an authorized service center.
10. Install the new **auger drive belt (4)** onto the **auger drive pulley (11)**.
11. Assemble the **auger housing (22)** to the **motor box (23)** with the four **bolts (21)** that were removed in step 8. Tighten the bottom two **bolts (24).**
12. Install the **auger drive belt (4)** onto the **engine pulley (10)**.
13. Slip the **auger drive belt (4)** under the **idler pulley (3)**.
14. Adjust the **auger drive belt (4)**. See "How To Adjust The Auger Drive Belt" in the Maintenance section.
15. Adjust the **belt guide (9)**. See "How To Adjust The Belt Guide" in the Maintenance section.
16. ***(Figure 18)*** Install the **belt cover (1)**. Tighten **screw (2)**.
17. Check the adjustment of the cables. See "How To Check And Adjust The Cables" in the Maintenance section.
18. Connect the spark plug wire.

How To Remove the Traction Drive Belt

If the snow thrower will not move forward, check the traction drive belt for wear or damage. If the traction drive belt is worn or damaged, replace the belt as follows.

1. Disconnect the spark plug wire.
2. Remove the auger drive belt. See "How To Remove The Auger Drive Belt" in the Maintenance section.
3. ***(Figure 19)*** Remove the **e□ring (17)** from one end of the **swing plate axle rod (18).** Remove the **swing plate axle rod (18)** to allow the the swing plate to pivot forward.
4. Remove the **traction drive spring (16).**
5. Remove the old **traction drive belt (13)** from the **traction drive pulley (14)** and from the **engine pulley (15)**. Replace the **traction drive belt (13)** with an original factory replacement belt available from an authorized service center.
6. Install the new **traction drive belt (13)** onto the **traction drive pulley (14)** and onto **engine pulley (15).**
7. Make sure the **traction drive idler pulley (12)** is properly aligned with the **traction drive belt (13)**.
8. Attach the **traction drive spring (16).**
9. Install the **swing plate axle rod (18)** and secure with the **e□ring (17)** removed earlier.
10. ***(Figure 31)*** The bottom of the **swing plate (20)** must be positioned between the **alignment tabs (19).** Make sure the **swing plate (20)** is properly secured.
NOTE: If the drive will not engage after the traction drive belt has been replaced, then check to make sure that the swing plate is positioned between the alignment tabs (19).
11. ***(Figure 19)*** Install and adjust the **auger drive belt (4)**. See "How To Remove The Auger Drive Belt" in the Maintenance section.
12. Adjust the **belt guide (9)**. See "How To Adjust The Belt Guide" in the Maintenance section.
13. ***(Figure 14)*** Install the **bottom panel (2)**.
14. Tighten the **bolts (3)** on each side of the **bottom panel (2)**.
15. ***(Figure 18)*** Install the **belt cover (1)**. Tighten **screw (2)**.
16. Check the adjustment of the cables. See "How To Check And Adjust The Cables" in the Maintenance section.
17. Connect the spark plug wire.

How To Adjust The Belt Guide

1. Disconnect spark plug wire.
2. ***(Figure 18)*** Remove **screw (2)**. Remove the **belt cover (1)**.
3. ***(Figure 1)*** Engage the **auger drive lever (5)**.
4. ***(Figure 24)*** Measure the distance between the **belt guide (2)** and **auger drive belt (3)**. The **correct distance (4)** is 1/8 inch (3 mm).
5. If an adjustment is necessary, loosen the mounting bolt for the **belt guide (2)**. Move the **belt guide (2)** to the **correct position (4)**. Tighten the mounting bolt for the **belt guide (2)**.
6. ***(Figure 18)*** Install the **belt cover (1)**. Tighten **screw (2)**.
7. Connect the spark plug wire.

How To Adjust Or Replace The Friction Wheel

How To Check The Friction Wheel

If the snow thrower will not move forward, check the traction drive belt, the traction drive cable or the friction wheel. If the friction wheel is worn or damaged, it must be replaced. See "How To Replace the Friction Wheel" in this section. If the friction wheel is not worn or damaged, check as follows.

1. ***(Figure 1)*** Remove the gas from the gas tank. Stand the snow thrower up on the front end of the **auger housing (4)**.

WARNING: Drain the gasoline outdoors, away from fire or flame.

2. Disconnect the spark plug wire.
3. ***(Figure 14)*** Loosen the **bolts (3)** on each side of the **bottom panel (2)**.
4. Remove the **bottom panel (2)**.
5. ***(Figure 1)*** Position the **shift speed lever (6)** in the Neutral speed.

6. *(Figure 25)* Note the position of the **friction wheel (4).** Put the **friction wheel (4)** in the center of **friction Disk (5)** If the **friction wheel (4)** is not in the correct position, adjust as follows.

How To Adjust The Friction Wheel

1. *(Figure 1)* Position the **shift speed lever (6)** in the neutral speed.
2. *(Figure 9)* Pull out the **hair pin (1)** on the **speed control rod (8).** then remove the **speed control rod (8).**
3. *(Figure 25)* Move the **friction wheel (4)** to the correct position.
4. *(Figure 9)* Adjust the position of **joint pin (2)** on the **speed control rod (8)** , then put it in the hole of the **bracket(3).**
5. *(Figure 9)* Put in the **hair pin (1)** on the **speed control rod (8),**
6. *(Figure 14)* Install the **bottom panel (2).**
7. Tighten the **bolts (3)** on each side of the **bottom panel (2).**

How To Replace The Friction Wheel

If the friction wheel is worn or damaged, the snow thrower will not move forward. The friction wheel must be replaced as follows.

1. *(Figure 1)* Remove the gas from the gas tank. Stand the snow thrower up on the front end of the **auger housing (4).**

WARNING: Drain the gasoline outdoors, away from fire or flame.

2. Disconnect the spark plug wire.
3. *(Figure 29)* Remove the fasteners that secure the left **wheel (10).** Remove the **left wheel (10)** from the **axle (11).**
4. Loosen the **bolts (3)** on each side of the **bottom panel (2).**
5. Remove the **bottom panel (2).**
6. *(Figure 30)* Remove the fasteners that secure the **drive sprocket (12)** to the **axle(11).**
7. Remove the right wheel, **axle (11),** and **drive sprocket (12)** .
8. *(Figure 31)* Remove the **rings(10)** on each end of the **axle(9)** and the **axle(9).**
9. Remove the four **bolts (16)** that hold the **bearings (7)** on each side of the **hex shaft (8).** .
10. *(Figure 32)* Remove the **hex shaft (8)** and **bearings (7).**
    NOTE: Take special note of the position of the washers (17).
11. *(Figure 27)* Remove the three **fasteners (4)** that hold the **friction wheel (5)** to the **hub (6).**
12. *(Figure 27)* Remove the **friction wheel (5)** from the **hub (6).** Slip the **friction wheel (5)** off the **hex shaft (8).**
13. Assemble the new **friction wheel (5)** onto **hub (6)** with the fasteners removed earlier.
14. *(Figure 32)* Install the **hex shaft (8)** and **bearings (7)** with the four bolts removed earlier.
    Make sure the washers (17) are properly installed in the original position. Also, make sure the two washers (13) are properly aligned with the actuator arms (14).
15. Make sure the **hex shaft (8)** turns freely.
16. *(Figure 30)* Install the right wheel, **axle (11),** and **drive sprocket (12)** with the fasteners removed earlier.
17. Check the adjustment of the friction wheel. See "How To Adjust The Friction Wheel" in this section.
18. Make sure the friction wheel and the disc drive plate are free from grease or oil.
19. *(Figure 31)* Install the **axle (9)** then put on the **rings(10)** to the end.
20. *(Figure 14)* Install the **bottom panel (2).**
21. Tighten the **bolts (3)** on each side of the **bottom panel (2).**
22. *(Figure 30)* Install the **left wheel (10)** to the **axle (11)** with the fasteners removed earlier.
23. Connect the spark plug wire.

How To Replace the Auger Shear Bolt

The augers are secured to the auger shaft with special shear bolts. These shear bolts are designed to break and protect the machine if an object becomes lodged in the auger housing. Do not use a harder bolt as the protection provided by the shear bolt will be lost.

WARNING: For safety and to protect the machine, use only original equipment shear bolts.

To replace a broken shear bolt, proceed as follows. Extra shear bolts were provided in the assembly parts bag.

1. *(Figure 1)* Move the **stop switch (8)** to the stop position. Disengage all controls.
2. Disconnect the spark plug wire. Make sure all moving parts have stopped.
3. *(Figure 13)* Lubricate the auger shaft **Zerk fitting (1),** if equipped, with a grease gun.
4. *(Figure 26)* Align the hole in the auger with the hole in the auger shaft. Install the new **shear bolt (2), spacer (3),** and **locknut (4).**
5. Connect the spark plug wire.

How To Prepare The Snow Thrower For Storage

WARNING: Do not remove gasoline while inside a building, near a fire, or while you smoke. Gasoline fumes can cause an explosion or a fire.

If the snow thrower is to be stored for an extended period, refer to the engine manufacturer's operating manual (included with some models) for important maintenance or storage details.

1. Drain the fuel tank.
2. Let the engine run until it is out of gasoline.
3. Never store the snow thrower with fuel in the tank inside a building where ignition sources are present such as hot water and space heaters, clothes dryers, and the like. Allow the engine (motor) to cool before storing in any enclosure.
4. Drain the oil from the warm engine. Fill the engine crankcase with new oil.
5. Thoroughly clean the snow thrower.
6. Lubricate all lubrication points. See the Maintenance section.
7. Be sure that all nuts, bolts and screws are securely fastened. Inspect all visible moving parts for damage, breakage and wear. Replace if necessary.
8. Cover the bare metal parts of the blower housing, auger, and the impeller with spray rust preventative lubricant.
9. Put the unit in a building that has good ventilation. Store in a clean and dry area, but NOT near a stove, furnace or water heater which uses a pilot light or any device that can create a spark.
10. If the machine must be stored outdoors, block up the snow thrower to be sure the entire machine is off the ground.
11. Cover the snow thrower with a suitable protective cover that does not retain moisture. Do not use plastic.

How To Order Replacement Parts

The replacement parts are shown either on the back pages of this Instruction Book or in a separate Parts List Book.

Use only manufacturer's authorized or approved replacement parts. Do not use attachments or accessories not specifically recommended for this unit. In order to obtain proper replacement parts you must supply the model number (see nameplate).

To obtain replacement parts, contact your local Dealer.

Replacement parts for the engine, transaxle, or transmission, are available from the manufacturer's authorized service centre found in the yellow pages of the telephone directory. Also, see the individual engine or transmission warranties to order replacement parts.

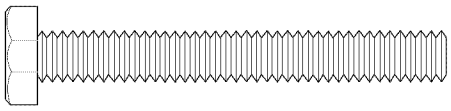
When ordering the following information is required:

(1) The Model Number
(2) Serial Number
(3) Part Number
(4) Quantity

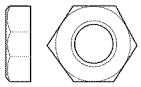
TROUBLE SHOOTING CHART

TROUBLE	CAUSE	CORRECTION
Difficult starting	Defective spark plug.	Replace spark plug.
	Water or dirt in fuel system.	Use carburetor bowl drain to flush and refill with fresh fuel.
Engine runs erratic	Blocked fuel line, empty gas tank, or stale gasoline.	Clean fuel line; check fuel supply; add fresh gasoline.
Engine stalls	Unit running on CHOKE.	Set choke lever to RUN position.
Engine runs erratic; Loss of power	Water or dirt in fuel system.	Use carburetor bowl drain to flush and refill with fresh fuel.
Excessive vibration	Loose parts: damaged impeller.	Stop engine immediately and disconnect spark plug wire. Tighten all bolts and make all necessary repairs. If vibration continues, have the unit serviced by a competent repairman.
Unit fails to propel itself	Drive belt loose or damaged.	Replace drive belt.
	Incorrect adjustment of traction drive cable.	Adjust traction drive cable.
	Worn or damaged friction wheel.	Replace friction wheel.
Unit fails to discharge snow	Auger drive belt loose or damaged.	Adjust auger drive belt; replace if damaged.
	Auger control cable not adjusted correctly.	Adjust auger control cable.
	Shear bolt broken.	Replace shear bolt.
	Discharge chute clogged.	Stop engine immediately and disconnect spark plug wire. Clean discharge chute and inside of auger housing.
	Foreign object lodged in auger.	Stop engine immediately and disconnect spark plug wire. Remove object from auger.

2



2 - GB5780 M8x45



2 - GB6184 M8

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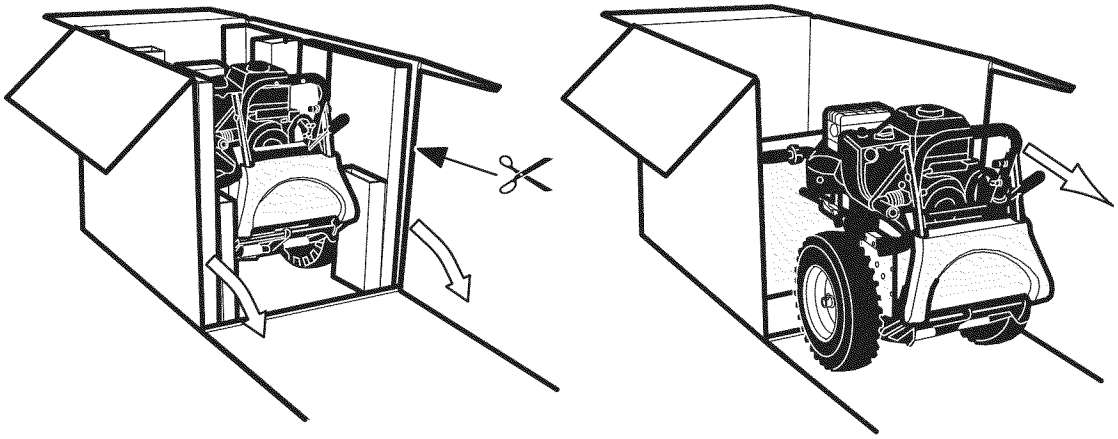

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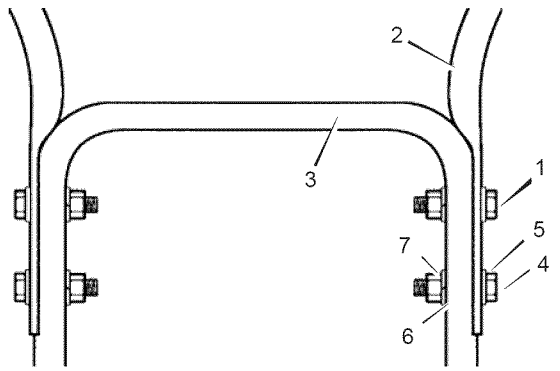

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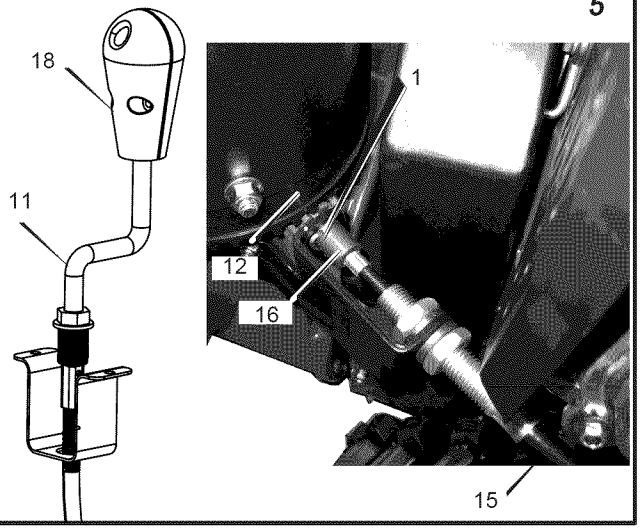

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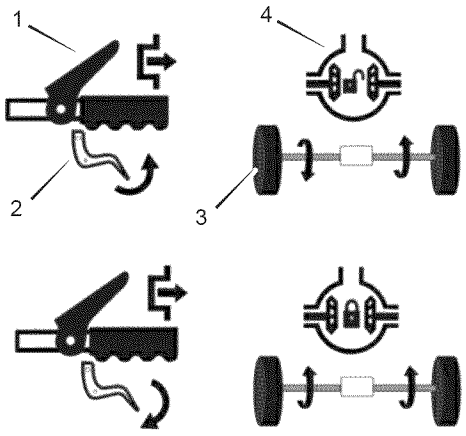

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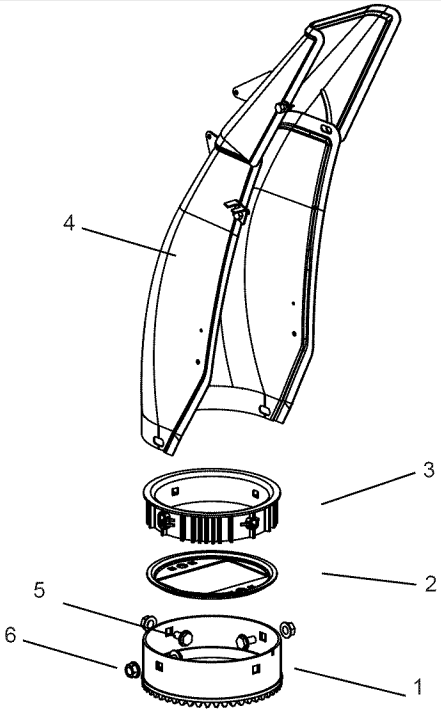

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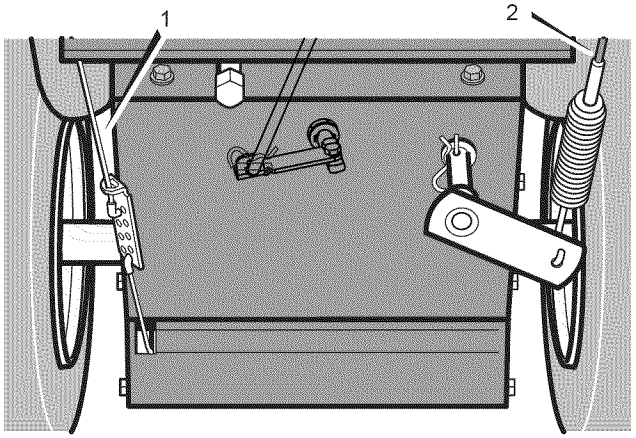

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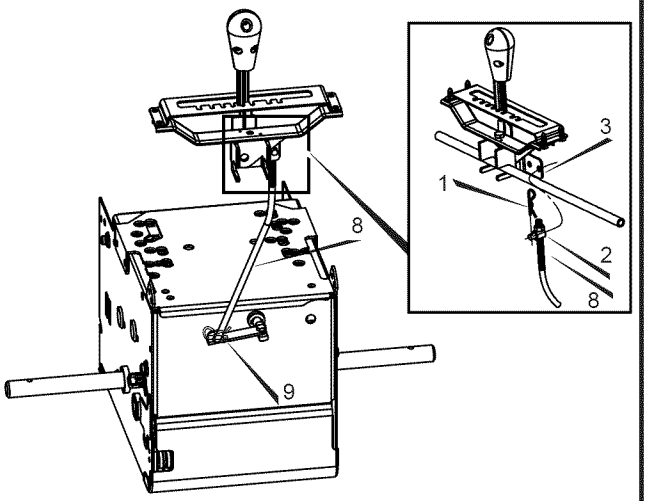

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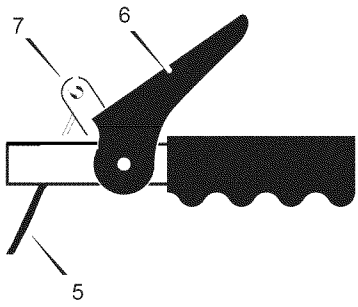

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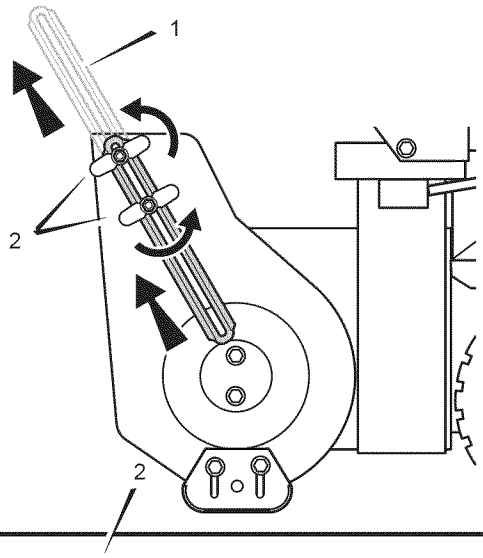

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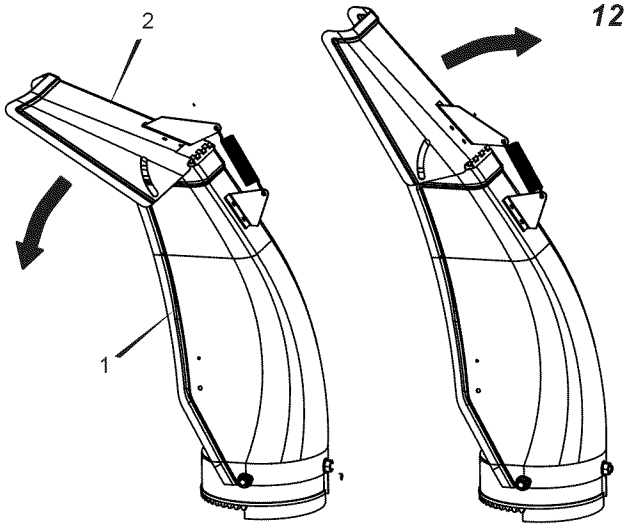

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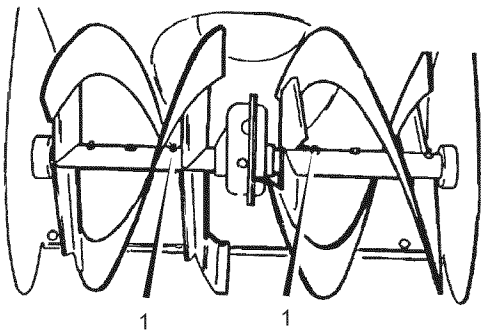

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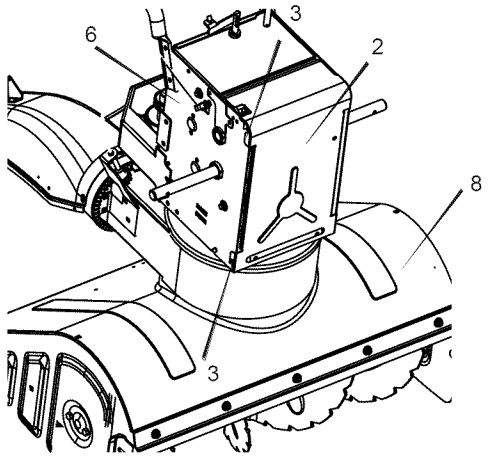

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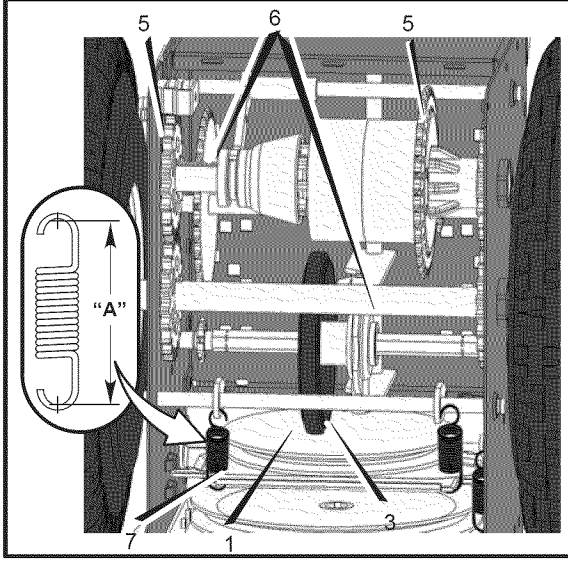

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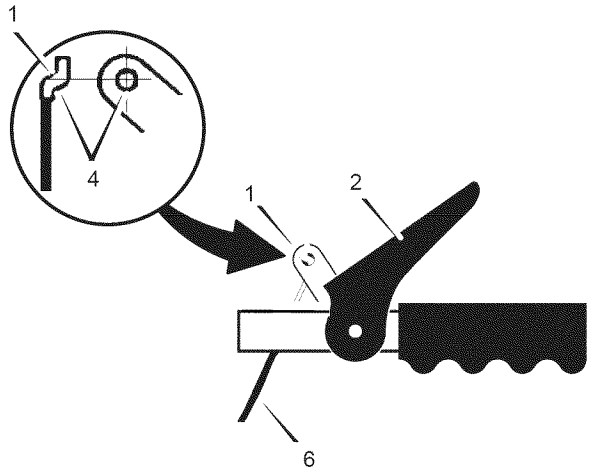

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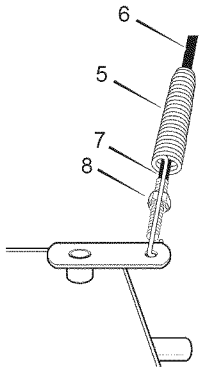

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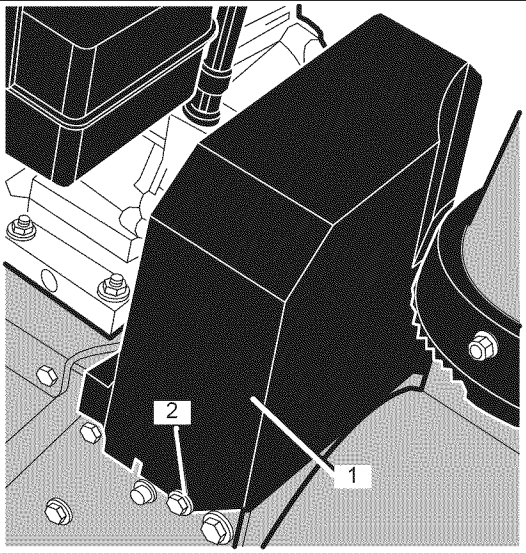

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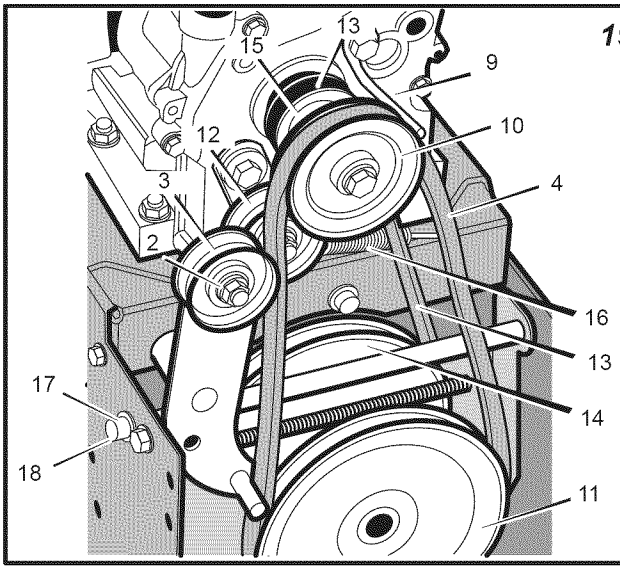

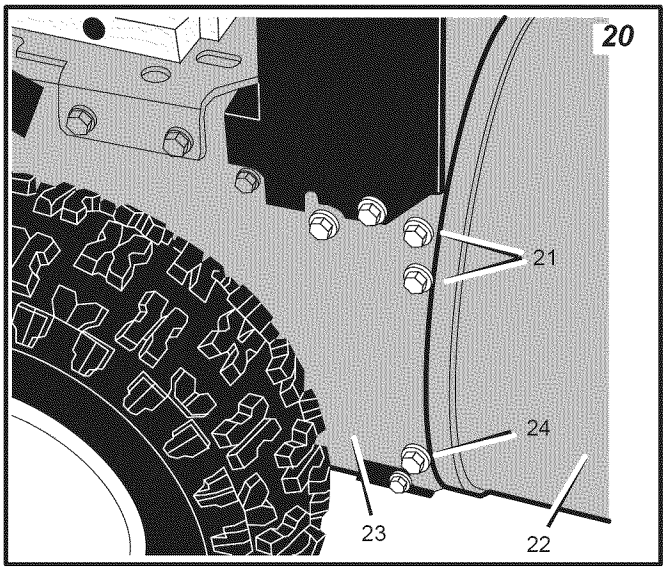
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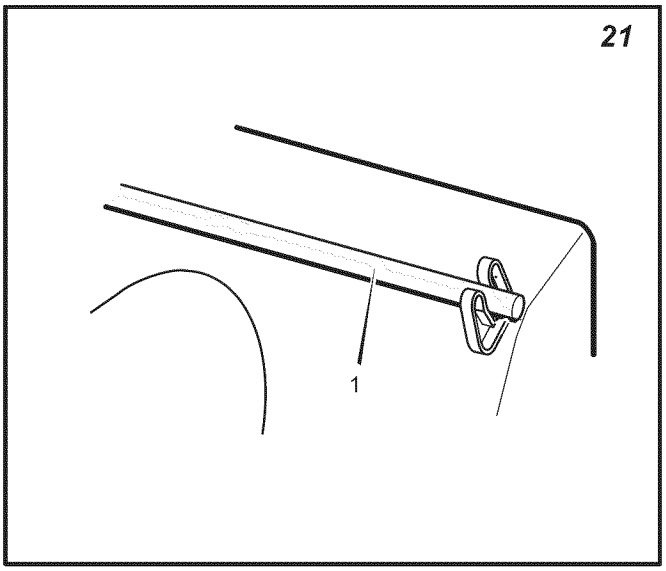
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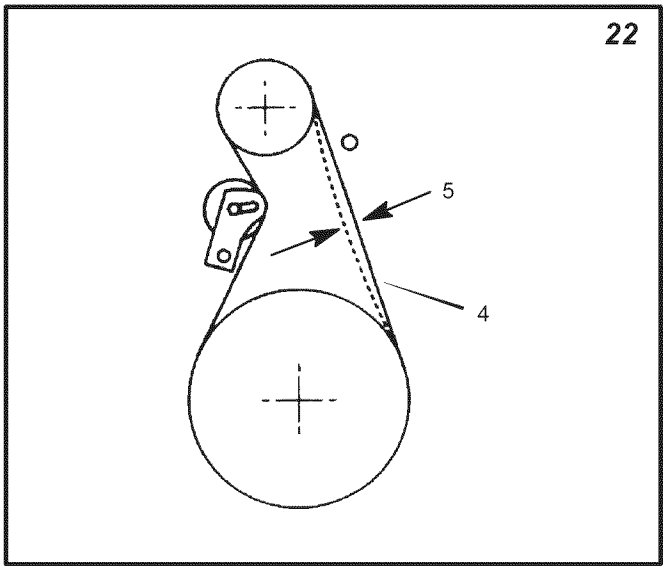
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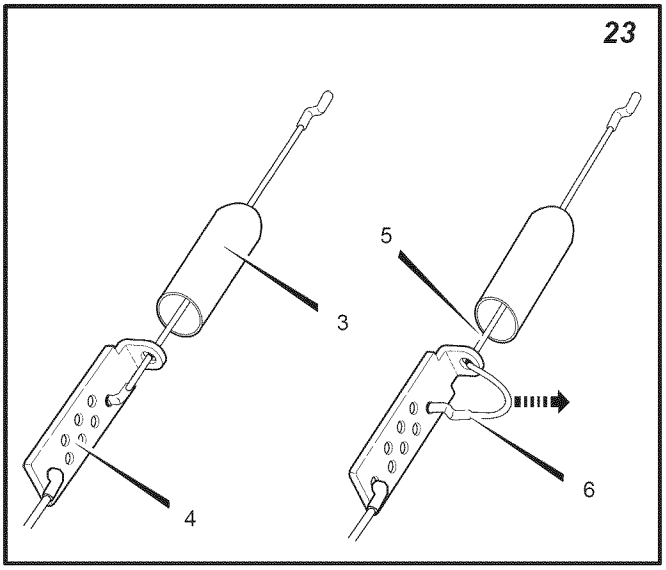
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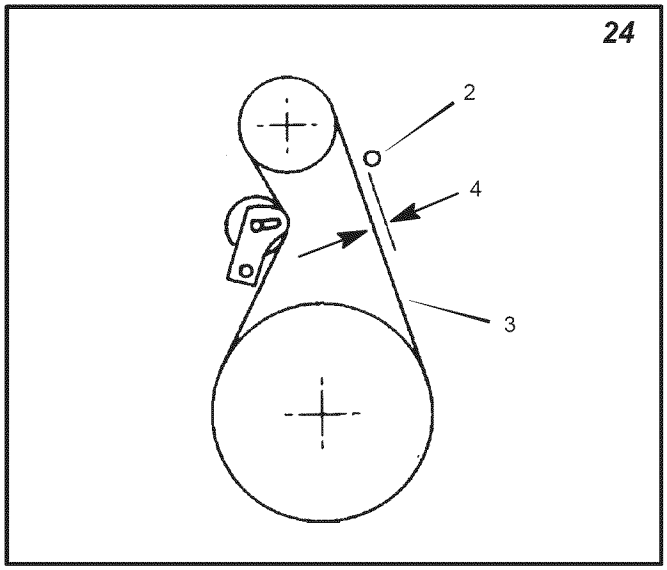
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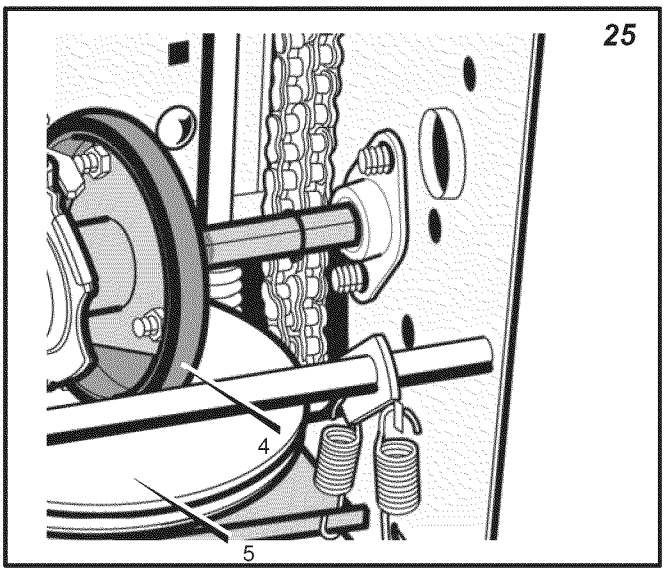
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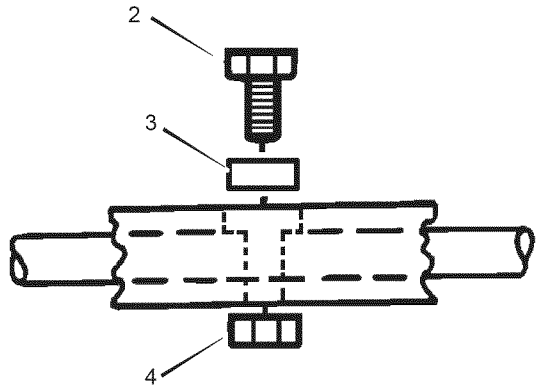

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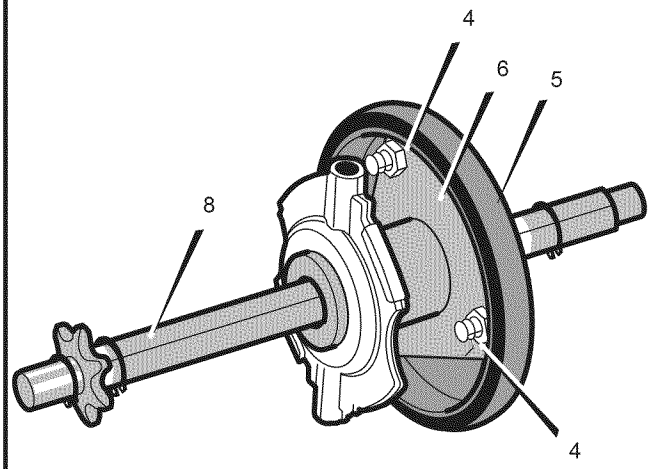

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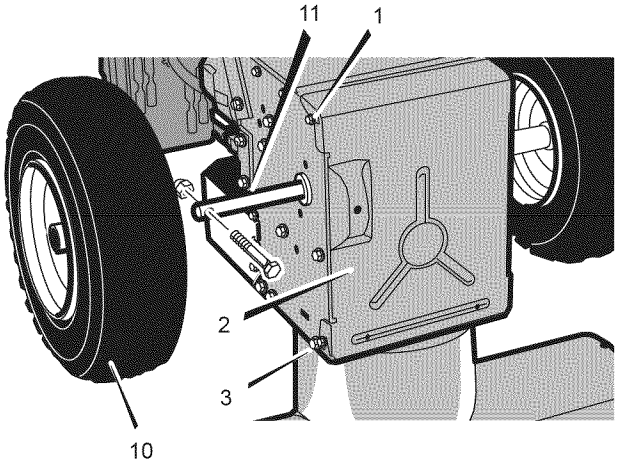

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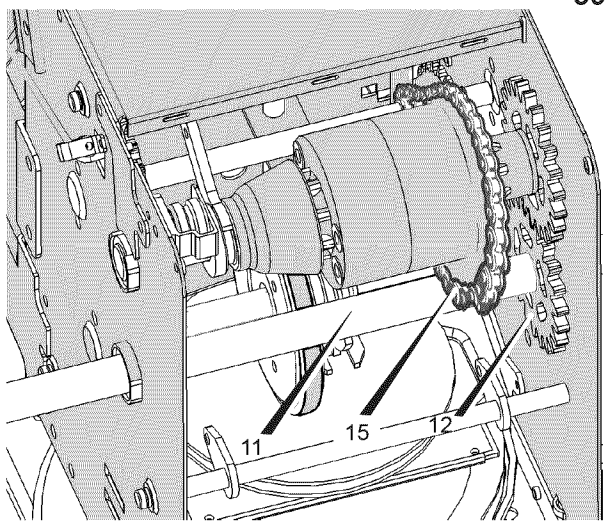

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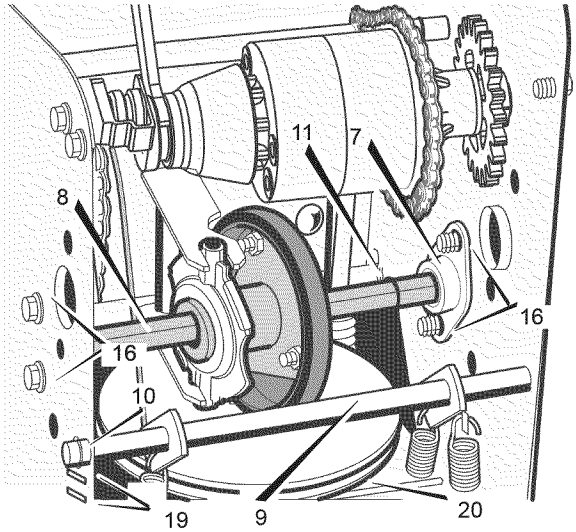

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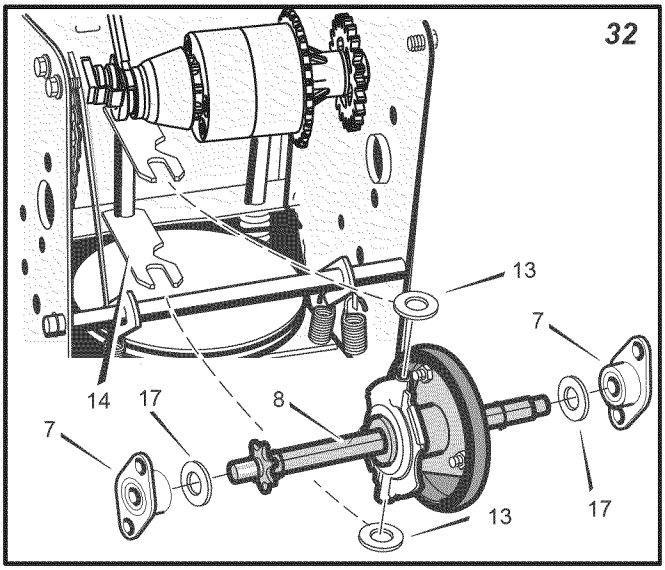
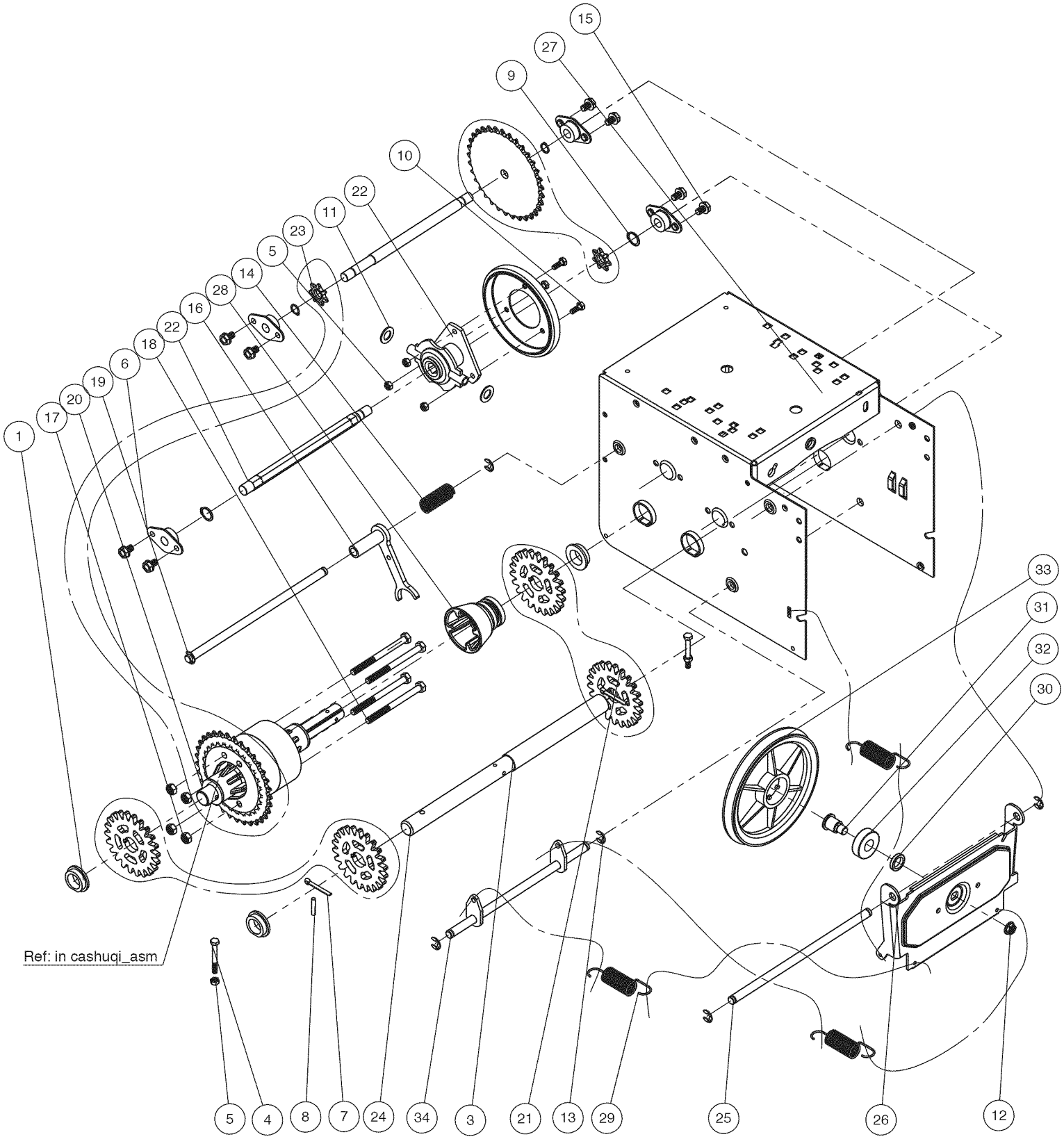


A. Drive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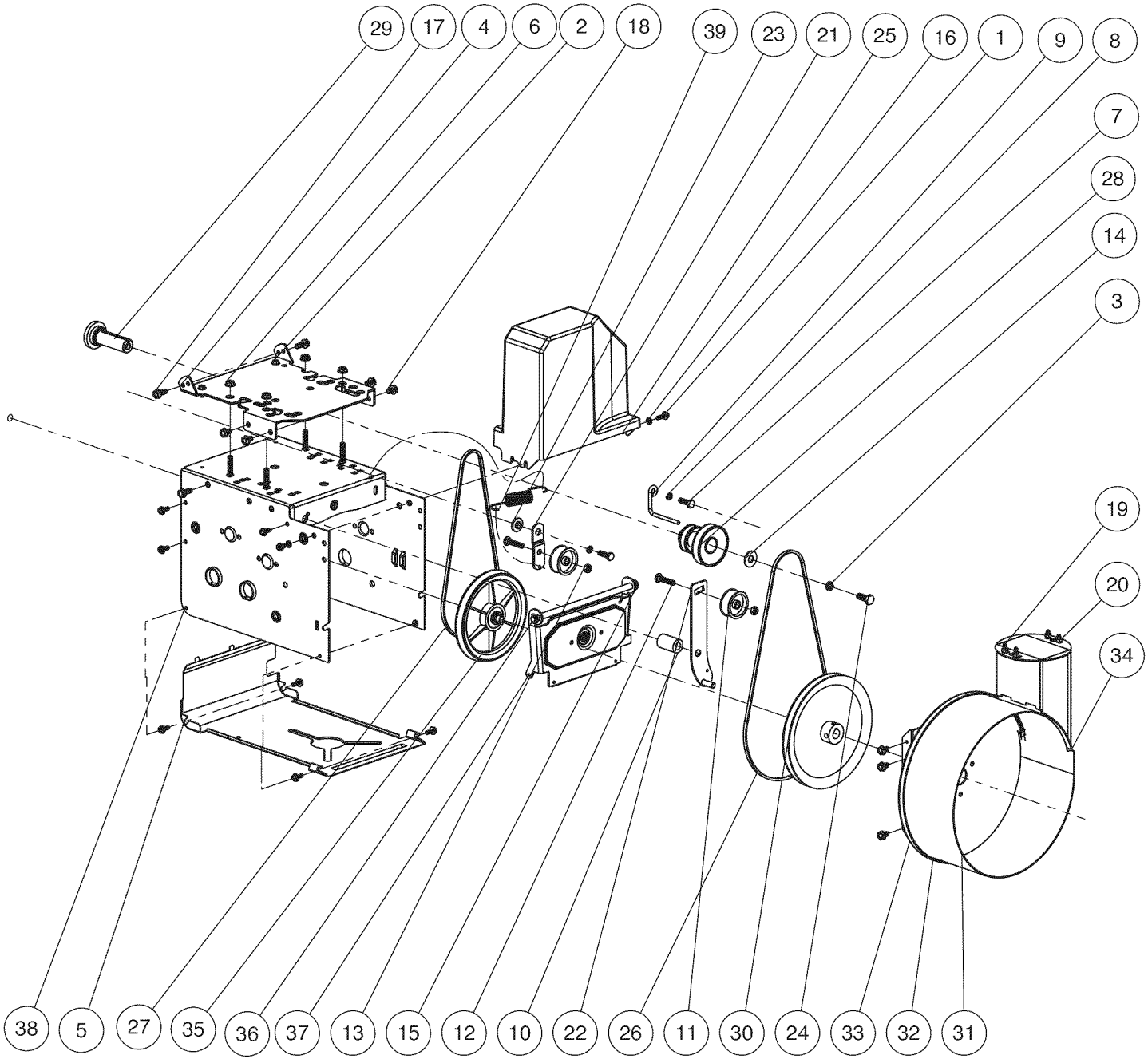
Key No.	APA Parts No.	Description
1	SB2621-A-01-SZMR	Bearing axle
2	SB2621-A-02-SZMR	Screw
3	SB2621-A-03-SZMR	Tube shaft axle
4	SB2621-A-04-SZMR	Screw
5	SB2621-A-05-SZMR	Nut
6	SB2621-A-06-SZMR	Retainer & bushing ASSY
7	SB2621-A-07-SZMR	Pin
8	SB2621-A-08-SZMR	Pin
9	SB2621-A-09-SZMR	Retainer ring
10	SB2621-A-10-SZMR	Screw
11	SB2621-A-11-SZMR	Washer flat
12	SB2621-A-12-SZMR	Nut
13	SB2621-A-13-SZMR	Retainer ring
14	SB2621-A-14-SZMR	Spring
15	SB2621-A-15-SZMR	Screw
16	SB2621-A-16-SZMR	Adjuster rod assembly
17	SB2621-A-17-SZMR	Nut
18	SB2621-A-18-SZMR	Screw
19	SB2621-A-19-SZMR	Axle
20	SB2621-A-20-SZMR	Differential gear parts
21	SB2621-A-21-SZMR	Gear
22	SB2621-A-22-SZMR	Friction wheel
23	SB2621-A-23-SZMR	Sprkt & hub
24	SB2621-A-24-SZMR	Shaft axle
25	SB2621-A-25-SZMR	Axle
26	SB2621-A-26-SZMR	LF plate swinging YZ
27	SB2621-A-27-SZMR	Frame motor box
28	SB2621-A-28-SZMR	Differential gear
29	SB2621-A-29-SZMR	Spring
30	SB2621-A-30-SZMR	Spacer,friction pulley
31	SB2621-A-31-SZMR	Shaft pulley
32	SB2621-A-32-SZMR	Bearing ball
33	SB2621-A-33-SZMR	Pulley friction
34	SB2621-A-34-SZMR	LF ASSY spring link YZ

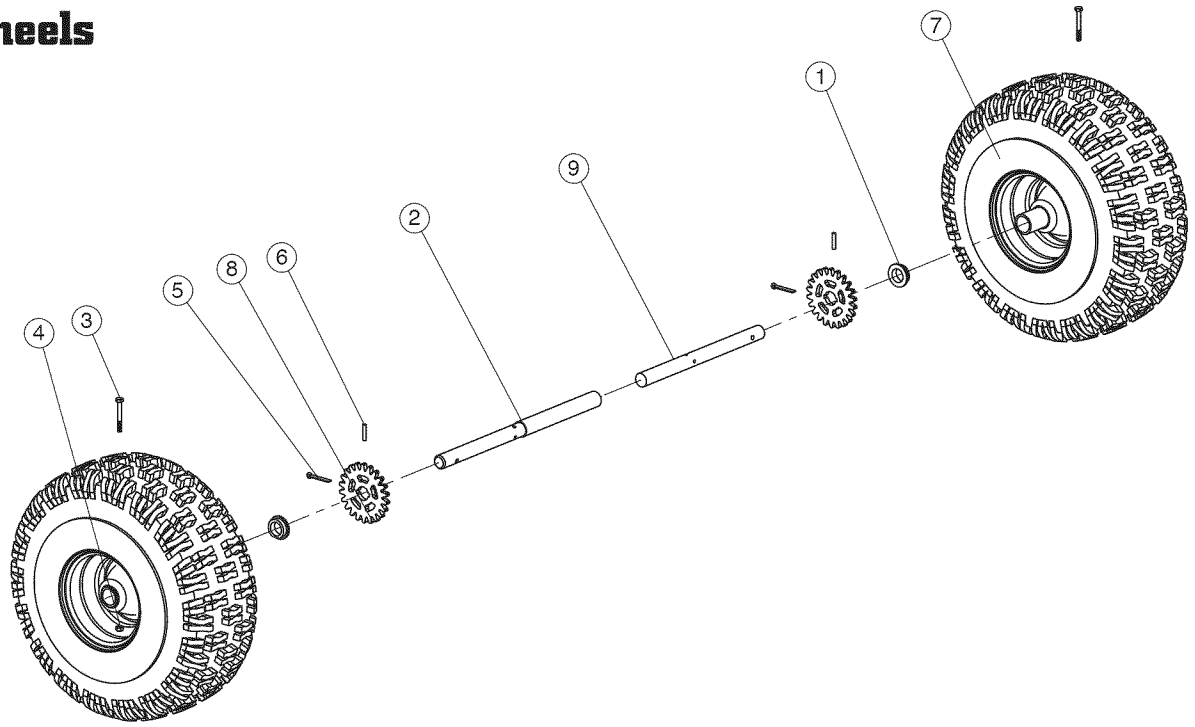
B. Engine Drive



Key No.	APA Parts No.	Description
1	SB2621-B-01-SZMR	Screw
2	SB2621-B-02-SZMR	Screw
3	SB2621-B-03-SZMR	Washer sptlk
4	SB2621-B-04-SZMR	Plate,engine mount
5	SB2621-B-05-SZMR	Cover bottom
6	SB2621-B-06-SZMR	Nut
7	SB2621-B-07-SZMR	Screw
8	SB2621-B-08-SZMR	Washer sptlk
9	SB2621-B-09-SZMR	Guide belt
10	SB2621-B-10-SZMR	Spacer auger bracket
11	SB2621-B-11-SZMR	Pulley idler
12	SB2621-B-12-SZMR	Screw
13	SB2621-B-13-SZMR	Nut
14	SB2621-B-14-SZMR	Washer flat
15	SB2621-B-15-SZMR	Retainer ring
16	SB2621-B-16-SZMR	Washer flat
17	SB2621-B-17-SZMR	Screw
18	SB2621-B-18-SZMR	Screw
19	SB2621-B-19-SZMR	Screw
20	SB2621-B-20-SZMR	Nut
21	SB2621-B-21-SZMR	Bracket assembly inler
22	SB2621-B-22-SZMR	Bracket auger idler
23	SB2621-B-23-SZMR	Bushing inler brkt
24	SB2621-B-24-SZMR	Screw
25	SB2621-B-25-SZMR	Cover belt
26	SB2621-B-26-SZMR	Belt auger
27	SB2621-B-27-SZMR	Belt drive
28	SB2621-B-28-SZMR	Pulley engine
29	SB2621-B-29-SZMR	Engine
30	SB2621-B-30-SZMR	Pulley
31	SB2621-B-31-SZMR	Panel impeller
32	SB2621-B-32-SZMR	Backplate impeller MF
33	SB2621-B-33-SZMR	Brkt impeller HSGMT
34	SB2621-B-34-SZMR	Base chute impeller HS

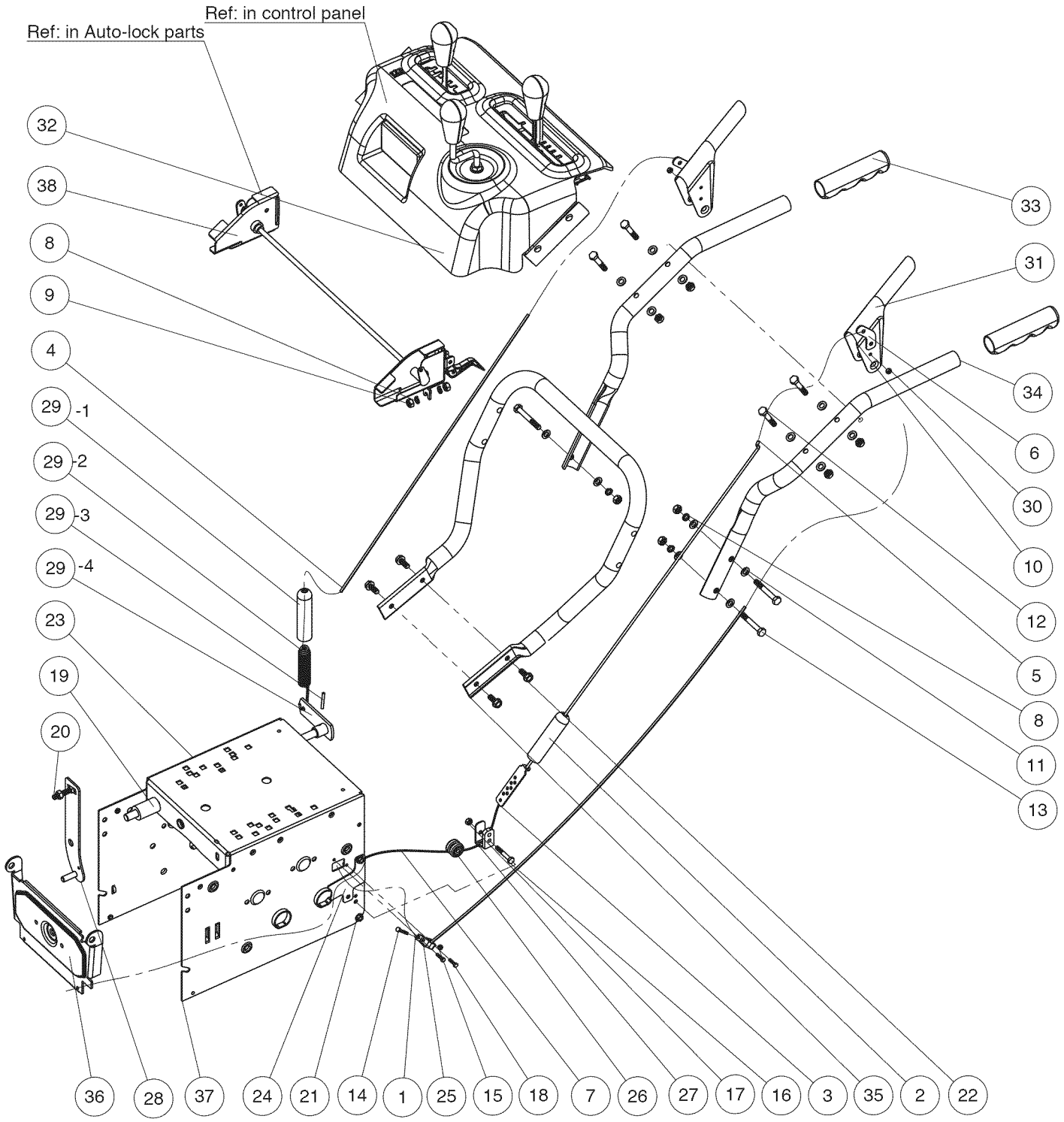
Key No.	APA Parts No.	Description
35	SB2621-B-35-SZMR	Friction pulley assembly
36	SB2621-B-36-SZMR	LF axle swing plate YZ
37	SB2621-B-37-SZMR	LF plate swinging YZ
38	SB2621-B-38-SZMR	Frame motor box
39	SB2621-B-39-SZMR	Spring

C. Wheels



Key No.	APA Parts No.	Description
1	SB2621-C-01-SZMR	Bearing axle
2	SB2621-C-02-SZMR	Tube shaft axle
3	SB2621-C-03-SZMR	Screw
4	SB2621-C-04-SZMR	Nut
5	SB2621-C-05-SZMR	Pin
6	SB2621-C-06-SZMR	Pin
7	SB2621-C-07-SZMR	Tire & rim
8	SB2621-C-08-SZMR	Gear
9	SB2621-C-09-SZMR	Shaft axle

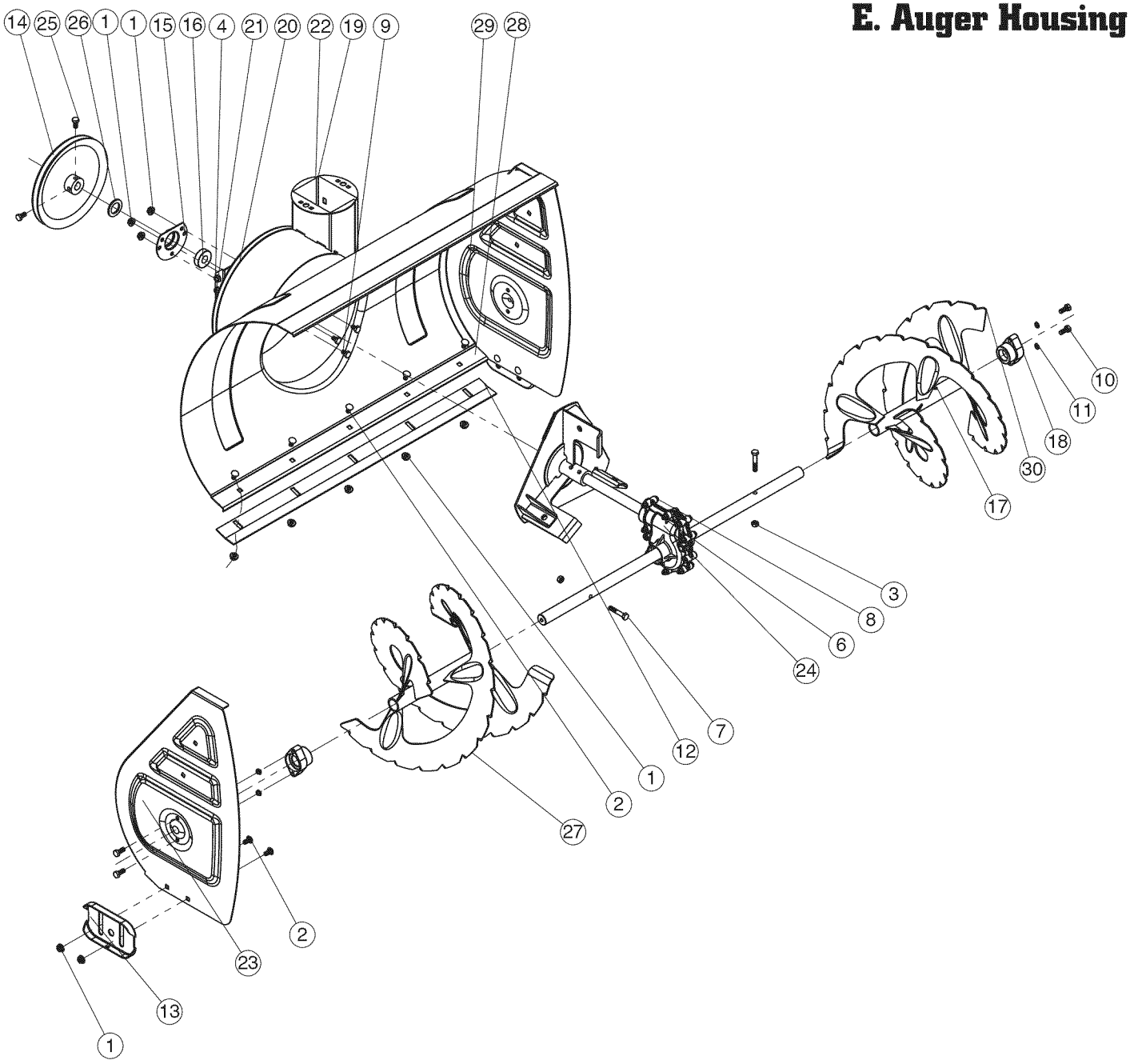
D. Handle Parts



Key No.	APA Parts No.	Description
1	SB2621-D-01-SZMR	Cable
2	SB2621-D-02-SZMR	Boot clutch spring
3	SB2621-D-03-SZMR	Bracket cable adjusting BGA yellow Zinc
4	SB2621-D-04-SZMR	Cable, auger clutch
5	SB2621-D-05-SZMR	Cable-FRDR P1, P2, P3, P7 T
6	SB2621-D-06-SZMR	Lug, clutch lever
7	SB2621-D-07-SZMR	Cabel, lower drive
8	SB2621-D-08-SZMR	Washer ϕ 8
9	SB2621-D-09-SZMR	Nut M8
10	SB2621-D-10-SZMR	Bolt M5 X 12
11	SB2621-D-11-SZMR	Washer ϕ 8
12	SB2621-D-12-SZMR	Bolt M8-45
13	SB2621-D-13-SZMR	Bolt M8-60
14	SB2621-D-14-SZMR	Bolt M4-25
15	SB2621-D-15-SZMR	Nut M4
16	SB2621-D-16-SZMR	Bolt M6-40
17	SB2621-D-17-SZMR	Nut M6
18	SB2621-D-18-SZMR	Bolt M4-16
19	SB2621-D-19-SZMR	Spacer, auger bracket
20	SB2621-D-20-SZMR	Bolt M8-40
21	SB2621-D-21-SZMR	Screw
22	SB2621-D-22-SZMR	Screw, flange, M8-20
23	SB2621-D-23-SZMR	Screw, flange, M8-12
24	SB2621-D-24-SZMR	Cover board
25	SB2621-D-25-SZMR	Assembly
26	SB2621-D-26-SZMR	Spool cable auger ctrl
27	SB2621-D-27-SZMR	Brkt, cable spool YZ
28	SB2621-D-28-SZMR	Rod assy., speed select
29	SB2621-D-29-SZMR	Bracket bearing
30	SB2621-D-30-SZMR	Nut
31	SB2621-D-31-SZMR	Lever, assy clutch drive
32	SB2621-D-32-SZMR	See control panel (explode)
33	SB2621-D-33-SZMR	Grip handle finger
34	SB2621-D-34-SZMR	Handle upper

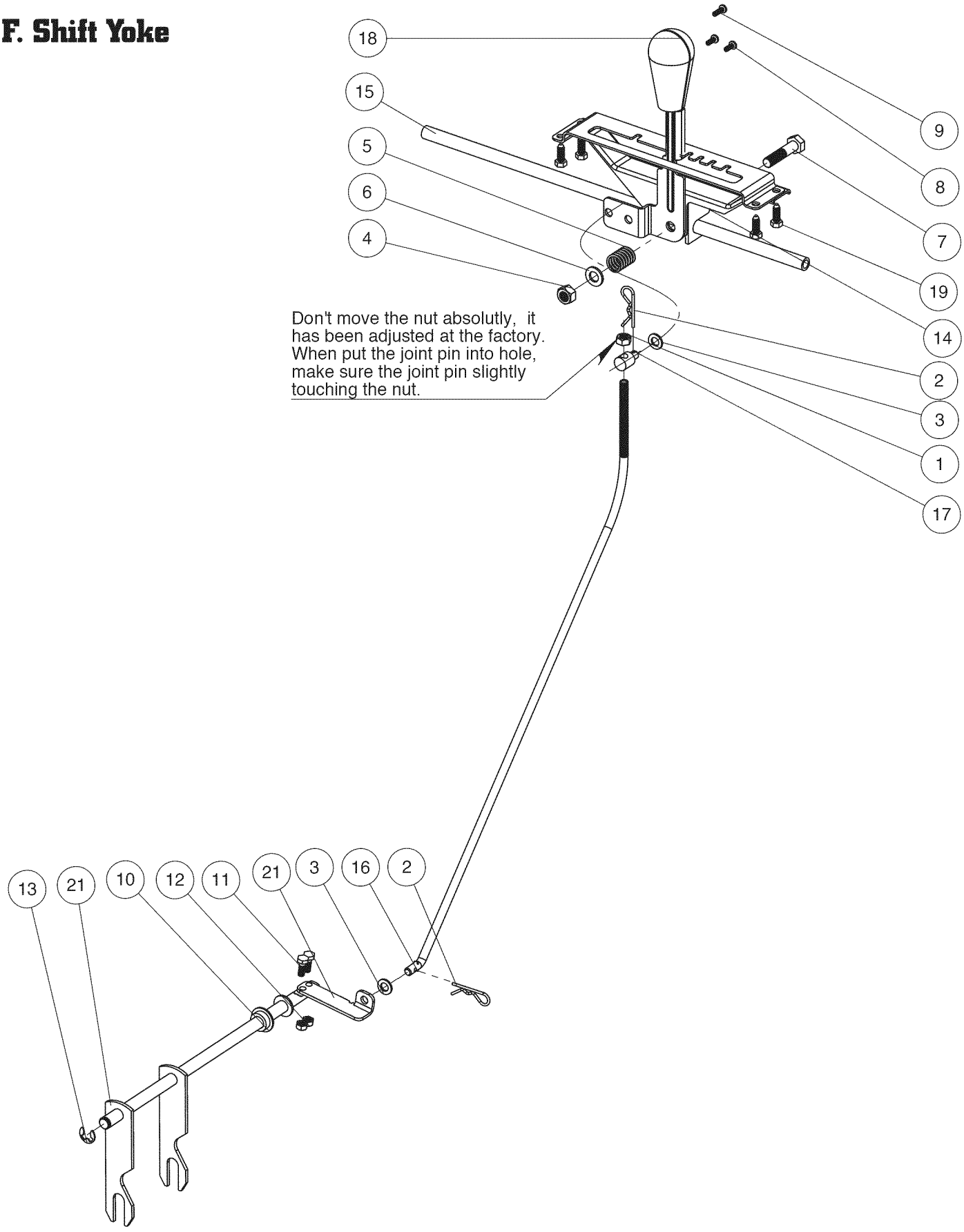
Key No.	APA Parts No.	Description
35	SB2621-D-35-SZMR	Handle lower
36	SB2621-D-36-SZMR	Plate swinging YZ
37	SB2621-D-37-SZMR	Frame motor box
38	SB2621-D-38-SZMR	See auto-lock parts (explode)

E. Auger Housing



Key No.	APA Parts No.	Description
1	SB2621-E-01-SZMR	Nut
2	SB2621-E-02-SZMR	Screw
3	SB2621-E-03-SZMR	Nut
4	SB2621-E-04-SZMR	Screw
5	SB2621-E-05-SZMR	Screw
6	SB2621-E-06-SZMR	Nut
7	SB2621-E-07-SZMR	Screw
8	SB2621-E-08-SZMR	Screw
9	SB2621-E-09-SZMR	Screw
10	SB2621-E-10-SZMR	Screw
11	SB2621-E-11-SZMR	Washer sptlk
12	SB2621-E-12-SZMR	Blade scraper
13	SB2621-E-13-SZMR	Skid height adjust
14	SB2621-E-14-SZMR	Pulley
15	SB2621-E-15-SZMR	Retainer, ball bearing
16	SB2621-E-16-SZMR	Bearing ball
17	SB2621-E-17-SZMR	Tube auger
18	SB2621-E-18-SZMR	Bearing flange
19	SB2621-E-19-SZMR	Panel impeller 12
20	SB2621-E-20-SZMR	Backplate impeller MF
21	SB2621-E-21-SZMR	Backplate impeller MF
22	SB2621-E-22-SZMR	Base, chute 12 impeller HS
23	SB2621-E-23-SZMR	Plate auger end H3 HBL
24	SB2621-E-24-SZMR	See gear case (explode)
25	SB2621-E-25-SZMR	Screw
26	SB2621-E-26-SZMR	Spacer, friction pulley
27	SB2621-E-27-SZMR	Auger, assy. RH
28	SB2621-E-28-SZMR	Housing auger
29	SB2621-E-29-SZMR	Plate auger end H3 HB R
30	SB2621-E-30-SZMR	Auger, assy. LH

F. Shift Yoke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Don't move the nut absolutly, it has been adjusted at the factory. When put the joint pin into hole, make sure the joint pin slightly touching the nut.
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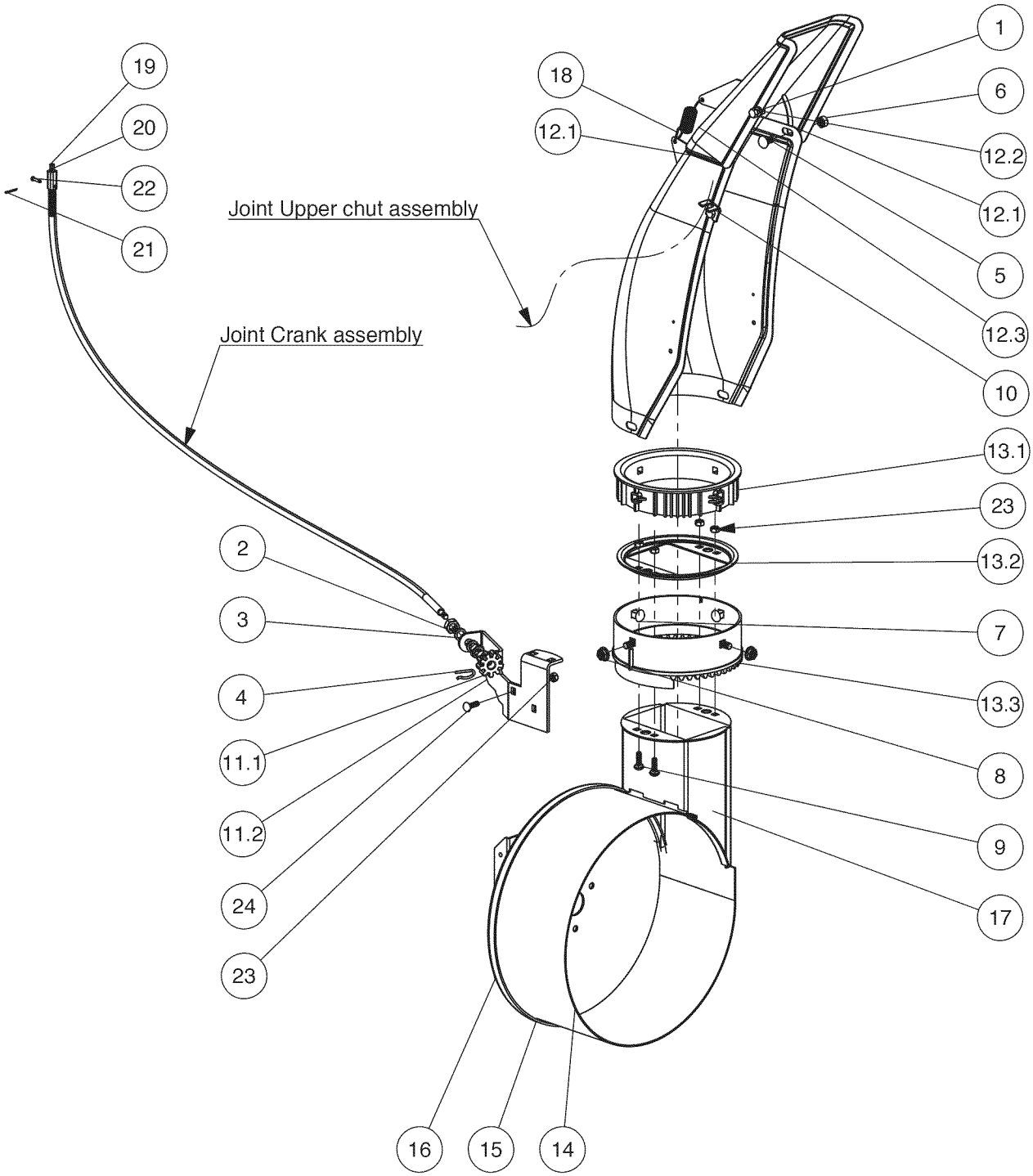
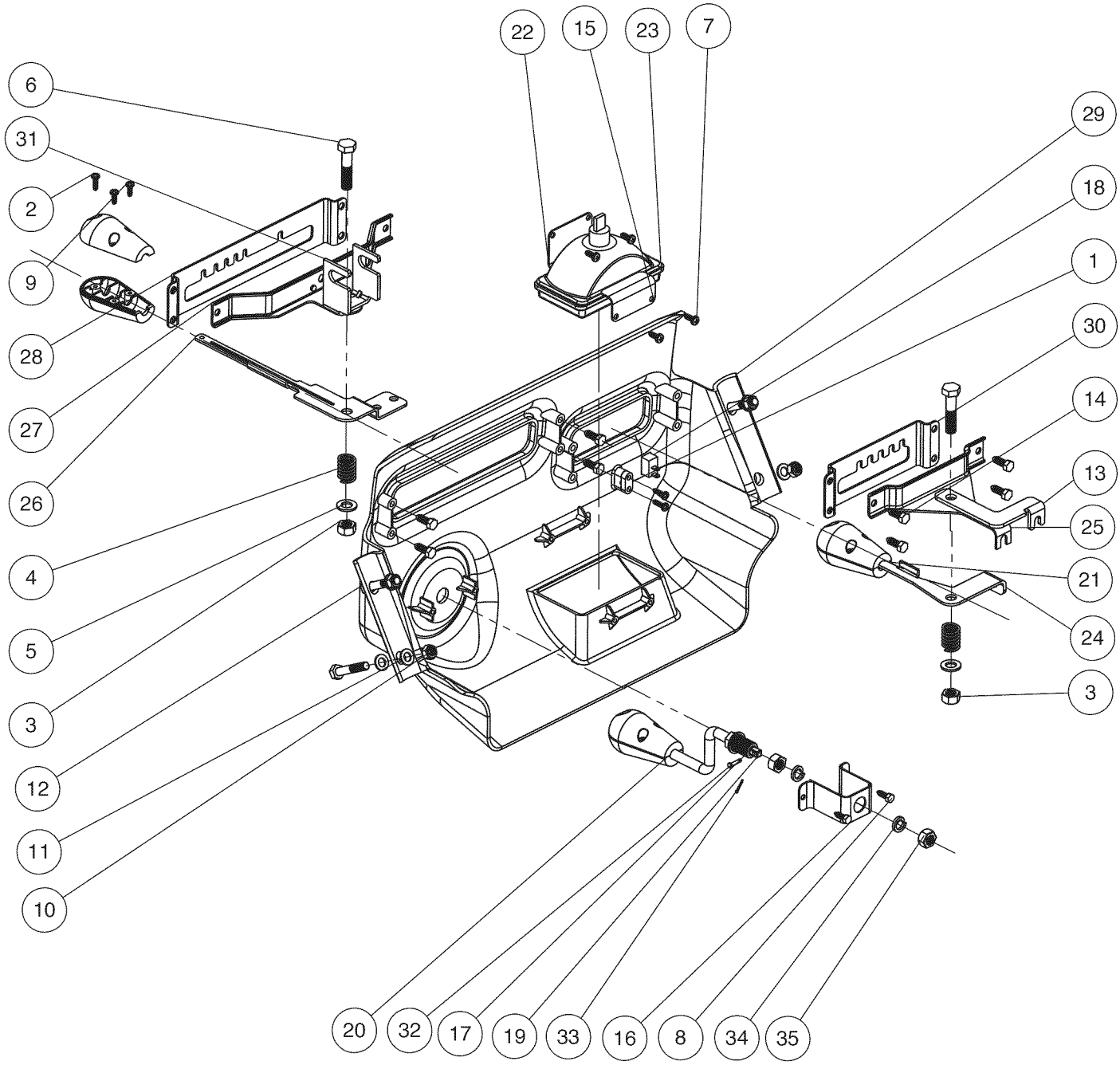
Key No.	APA Parts No.	Description
1	SB2621-F-01-SZMR	Nut
2	SB2621-F-02-SZMR	Pin-hair .38DIA 1.64LG yellow
3	SB2621-F-03-SZMR	Washer
4	SB2621-F-04-SZMR	Nut
5	SB2621-F-05-SZMR	Spring
6	SB2621-F-06-SZMR	Washer
7	SB2621-F-07-SZMR	Bolt
8	SB2621-F-08-SZMR	Screw
9	SB2621-F-09-SZMR	Screw
10	SB2621-F-10-SZMR	Bring, flange .500ID x .876SOD
11	SB2621-F-11-SZMR	Bolt
12	SB2621-F-12-SZMR	Nut
13	SB2621-F-13-SZMR	Spring gasket
14	SB2621-F-14-SZMR	Panel
15	SB2621-F-15-SZMR	Support bushing asle
16	SB2621-F-16-SZMR	Speed control rod
17	SB2621-F-17-SZMR	Shift adjust lever connect
18	SB2621-F-18-SZMR	Control panel
19	SB2621-F-19-SZMR	Screw
20	SB2621-F-20-SZMR	Joint panel
21	SB2621-F-21-SZMR	Speed adjustable assembly

G. Discharge Chute



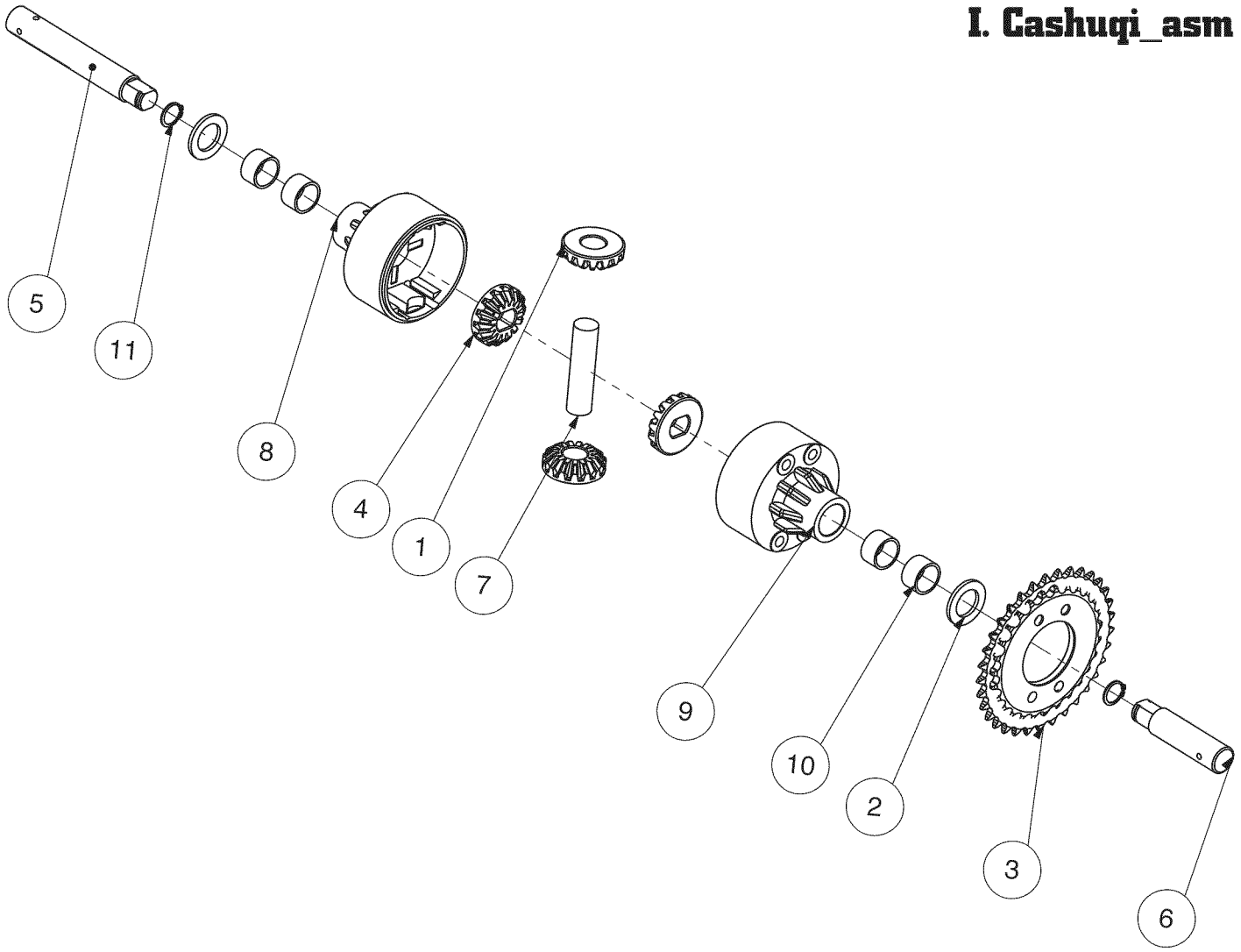
Key No.	APA Parts No.	Description
1	SB2621-G-01-SZMR	Nut
2	SB2621-G-02-SZMR	Nut
3	SB2621-G-03-SZMR	Spring gasket
4	SB2621-G-04-SZMR	Pin, hair chute gear
5	SB2621-G-05-SZMR	Bolt
6	SB2621-G-06-SZMR	Nut
7	SB2621-G-07-SZMR	Bolt
8	SB2621-G-08-SZMR	Nut, flange
9	SB2621-G-09-SZMR	Bolt-CRG .25-20 X .75
10	SB2621-G-10-SZMR	Fixed part
11	SB2621-G-11-SZMR	Assembly
11.1	SB2621-G-11.1-SZMR	Gear, 9 tooth 8DP
11.2	SB2621-G-11.2-SZMR	Back, chute short
12	SB2621-G-12-SZMR	Chute deflector
12.1	SB2621-G-12.1-SZMR	Chute short
12.2	SB2621-G-12.2-SZMR	Deflector short
12.3	SB2621-G-12.3-SZMR	Hinge
13	SB2621-G-13-SZMR	Chute ring assembly
13.1	SB2621-G-13.1-SZMR	Chute ring
13.2	SB2621-G-13.2-SZMR	Collar chute rotate YZ
13.3	SB2621-G-13.3-SZMR	Outer ring black plastic
14	SB2621-G-14-SZMR	Panel, impeller 12
15	SB2621-G-15-SZMR	Backplate, impeller MF
16	SB2621-G-16-SZMR	Brkt, impeller HSG MT
17	SB2621-G-17-SZMR	Base chute impeller HSG
18	SB2621-G-18-SZMR	Spring
19	SB2621-G-19-SZMR	Plastic axle
20	SB2621-G-20-SZMR	Plastic bushing
21	SB2621-G-21-SZMR	Split pin
22	SB2621-G-22-SZMR	Pin
23	SB2621-G-23-SZMR	Nut
24	SB2621-G-24-SZMR	Screw

H. Control Panel



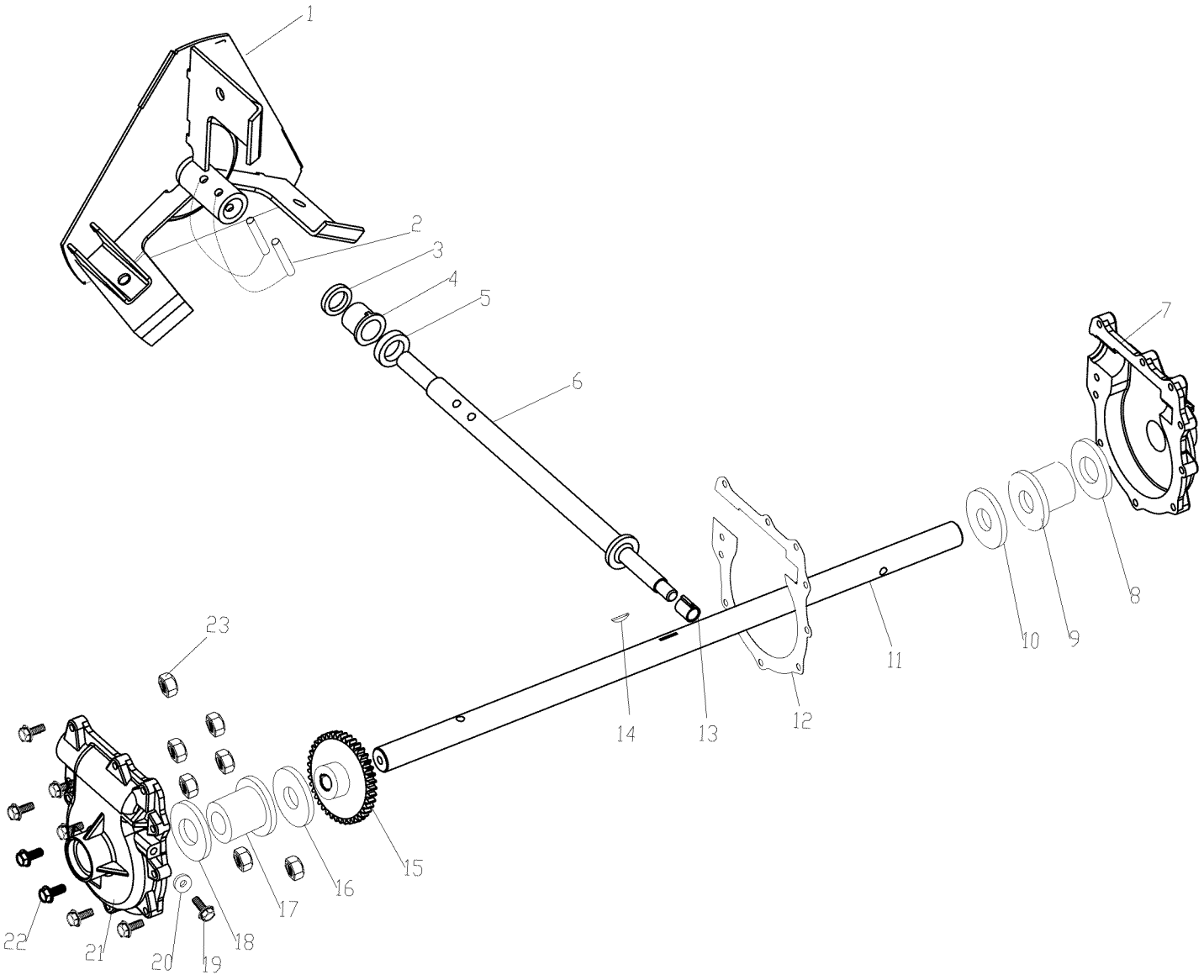
Key No.	APA Parts No.	Description
1	SB2621-H-01-SZMR	Plate
2	SB2621-H-02-SZMR	Self tapping screw
3	SB2621-H-03-SZMR	Nut
4	SB2621-H-04-SZMR	Spring
5	SB2621-H-05-SZMR	Flat
6	SB2621-H-06-SZMR	Screw bolt
7	SB2621-H-07-SZMR	Self tapping screw
8	SB2621-H-08-SZMR	Self tapping screw
9	SB2621-H-09-SZMR	Self tapping screw
10	SB2621-H-10-SZMR	Nut
11	SB2621-H-11-SZMR	Flat
12	SB2621-H-12-SZMR	Screw bolt
13	SB2621-H-13-SZMR	Fixed installtion
14	SB2621-H-14-SZMR	Self tapping screw
15	SB2621-H-15-SZMR	Fixed installtion
16	SB2621-H-16-SZMR	Fixed board
17	SB2621-H-17-SZMR	Bushing
18	SB2621-H-18-SZMR	Switch
19	SB2621-H-19-SZMR	Adjust pole
20	SB2621-H-20-SZMR	Hand hold
21	SB2621-H-21-SZMR	Hand hold
22	SB2621-H-22-SZMR	Fixed installtion
23	SB2621-H-23-SZMR	Lamp
24	SB2621-H-24-SZMR	Crank assy.
25	SB2621-H-25-SZMR	Fixed board
26	SB2621-H-26-SZMR	Shift rod
27	SB2621-H-27-SZMR	Fixed board
28	SB2621-H-28-SZMR	Brkt, gear selector
29	SB2621-H-29-SZMR	Control panel
30	SB2621-H-30-SZMR	Adjust pole
31	SB2621-H-31-SZMR	Support board
32	SB2621-H-32-SZMR	Pin rall
33	SB2621-H-33-SZMR	Cotter
34	SB2621-H-34-SZMR	Spring ring
35	SB2621-H-35-SZMR	Nut

I. Cashuqi_asm



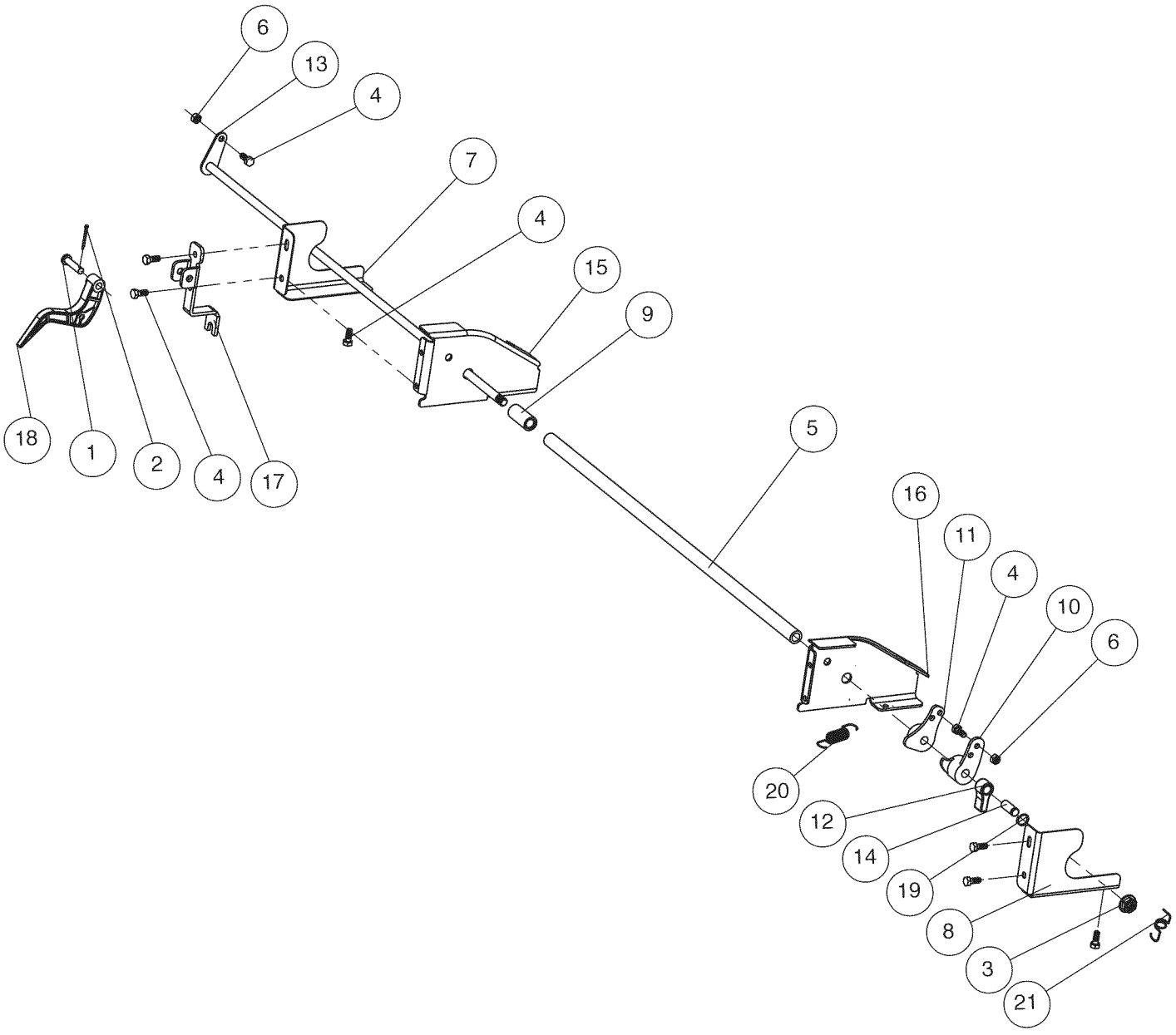
Key No.	APA Parts No.	Description
1	SB2621-I-01-SZMR	Gear
2	SB2621-I-02-SZMR	Washer
3	SB2621-I-03-SZMR	Chain wheel
4	SB2621-I-04-SZMR	Gear
5	SB2621-I-05-SZMR	Differential machanism wheel and axle
6	SB2621-I-06-SZMR	Differential machanism wheel and axle
7	SB2621-I-07-SZMR	Wheel and axle
8	SB2621-I-08-SZMR	Minor axis of differential gear
9	SB2621-I-09-SZMR	Right of the differential gear
10	SB2621-I-10-SZMR	Copper sheathing
11	SB2621-I-11-SZMR	Spring ring

J. Gear Case



Key No.	APA Parts No.	Description
1	SB2621-J-01-SZMR	Rotor parts
2	SB2621-J-02-SZMR	Pin
3	SB2621-J-03-SZMR	Oil seal
4	SB2621-J-04-SZMR	Big bushing
5	SB2621-J-05-SZMR	Thrust bearing
6	SB2621-J-06-SZMR	Worm
7	SB2621-J-07-SZMR	The left of turbine
8	SB2621-J-08-SZMR	Oil seal
9	SB2621-J-09-SZMR	Bushing
10	SB2621-J-10-SZMR	Gasket
11	SB2621-J-11-SZMR	Auger bearing
12	SB2621-J-12-SZMR	Seal of burbine
13	SB2621-J-13-SZMR	Small bushing
14	SB2621-J-14-SZMR	Bond
15	SB2621-J-15-SZMR	Turbine
16	SB2621-J-16-SZMR	Gasket
17	SB2621-J-17-SZMR	Bearing
18	SB2621-J-18-SZMR	Oil seal
19	SB2621-J-19-SZMR	Hexagon bolt
20	SB2621-J-20-SZMR	O-Ring
21	SB2621-J-21-SZMR	The right of turbine
22	SB2621-J-22-SZMR	Tapping screw
23	SB2621-J-23-SZMR	Nut

K. Auto-lock Parts



Key No.	APA Parts No.	Description
1	SB2621-K-01-SZMR	Pin
2	SB2621-K-02-SZMR	Split pin
3	SB2621-K-03-SZMR	Screw
4	SB2621-K-04-SZMR	Bolt
5	SB2621-K-05-SZMR	Support bube
6	SB2621-K-06-SZMR	Nut
7	SB2621-K-07-SZMR	Left auto-lock cover
8	SB2621-K-08-SZMR	Right auto-lock cover
9	SB2621-K-09-SZMR	Plastic gasket
10	SB2621-K-10-SZMR	Auto-lock
11	SB2621-K-11-SZMR	Auto-lock adjust
12	SB2621-K-12-SZMR	Auto-lock pressure
13	SB2621-K-13-SZMR	Auto-lock connecting lever parts
14	SB2621-K-14-SZMR	Fixed pin
15	SB2621-K-15-SZMR	Left bracket
16	SB2621-K-16-SZMR	Right bracket
17	SB2621-K-17-SZMR	Handle bracket
18	SB2621-K-18-SZMR	Small handle
19	SB2621-K-19-SZMR	Washer
20	SB2621-K-20-SZMR	Spring
21	SB2621-K-21-SZMR	Spring