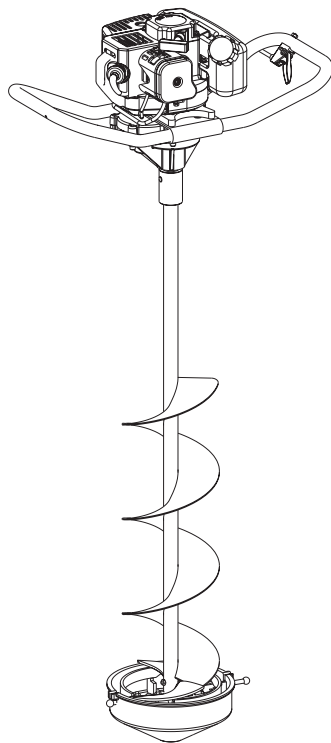




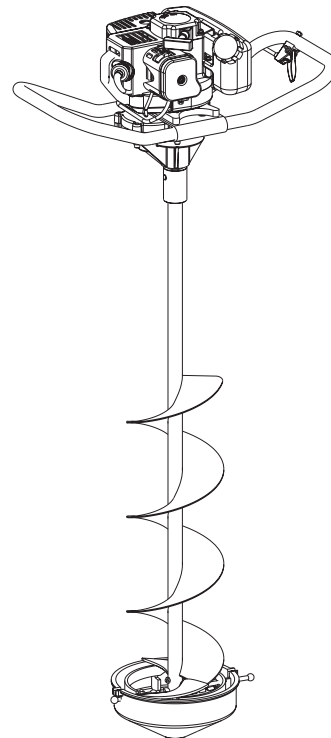
# Power Ice Auger Operator's Manual

***Mako***<sup>TM</sup>



**Models**  
M43, M43T8, M43Q8  
M43Q9, M43Q10

***StingRay***<sup>TM</sup>



**Models**  
S33  
S33Q8

IB-S33/M43  
Rev. 08/31/04

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## INTRODUCTION, REGISTRATION AND WARRANTY

### THANK YOU . . .

*for purchasing an Eskimo® Power Ice Auger from Ardisam, Inc. We have worked to ensure that it meets high standards for usability and durability. With proper care, your auger will provide many years of service. Please take the time to read this manual carefully to learn how to correctly operate and maintain your auger. Congratulations on your investment in quality.*

### REGISTRATION

Fill out and mail the registration card located in your parts packet. Warranty is valid only if your completed registration card is received by Ardisam, Inc., at time of purchase.

Model Number \_\_\_\_\_

Serial Number \_\_\_\_\_

Engine Serial Number \_\_\_\_\_

Date of Purchase \_\_\_\_\_

Place of Purchase \_\_\_\_\_

### WARRANTY

#### One Year Limited Warranty

The Ardisam, Inc., Manufacturing Company warrants this Eskimo® Ice Auger to be free from defects in material or workmanship. Conditions of this warranty include:

**What is covered under warranty:**

Ardisam, Inc. will repair or replace any part defective in workmanship or material within one year after delivery of the ice auger to the original purchaser.

**What is not covered under warranty:**

This warranty applies only to products which have not been repaired or altered outside our factory. It covers only defects resulting from normal use, and does not cover defects arising from misuse, alteration, negligence, commercial use, or accident. This warranty applies only to the original purchaser, and is not transferrable.

**How to obtain service:**

Return the product to us at the address below with transportation charges prepaid.

*This warranty supersedes all other warranties either expressed or implied and all other obligations or liabilities on our part. Ardisam, Inc., does not assume, and does not authorize any other person to assume for us, any liability in connection with the sale of our products. This guarantee is void unless warranty card is properly filled out and returned to Ardisam, Inc., Cumberland, Wisconsin, at time of purchase.*



**Ardisam, Inc.**  
1690 Elm Street, Cumberland, WI 54829  
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1-800-345-6007  
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[www.ardisam.com](http://www.ardisam.com)



# SAFETY

## Owner's Responsibility

Accurate assembly and safe and effective use of the auger is the owner's responsibility.

- Read and follow all safety instructions.
- Carefully follow all assembly instructions.
- Maintain the auger according to directions and schedule included in this Eskimo operator's manual.
- Ensure that anyone who uses the auger is familiar with all controls and safety precautions.

## Special Messages

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage.



### CAUTION

**Avoid injury! This symbol and text highlight potential hazards or death to the operator or bystanders that may occur if the hazards or procedures are ignored.**



**Avoid damage! This text is used to tell the operator of actions or conditions that might result in damage to the machine.**

**NOTE: General information is given throughout the manual that may help the operator in the operation or service of the machine.**



### WARNING

#### **CALIFORNIA PROPOSITION 65 WARNING**

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

## Important Safety Precautions

**Please read this section carefully.** Operate the auger according to the safety instructions and recommendations outlined here and inserted throughout the text. Anyone who uses this auger must read the instructions and be familiar with the controls.



**This symbol points out important safety instructions which if not followed could endanger your personal safety. Read and follow all instructions in this manual before attempting to operate this equipment.**

- The ice blades are very sharp. Use extreme caution when drilling a hole or replacing the blades. Put blade guard on after each use.
- Do not carry the auger powerhead between holes with the engine running.
- The auger should not rotate when the engine is idling. If it does rotate when engine is idling, contact Ardisam, Inc. for instructions.
- Always keep hands, feet, hair and loose clothing away from any moving parts on engine and auger.
- Do not allow children to operate this power auger. Do not allow adults to operate the auger without proper instruction.
- Do not operate any power equipment under the influence of alcohol or drugs.
- Keep all screws, nuts and bolts tight.
- Engine should be turned off and cool, spark plug wire must be removed from spark plug before any repairs are attempted.
- Temperature of muffler and nearby areas may exceed 150° F (65° C). Avoid these areas.
- Never run engine indoors or in an enclosed area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
- If the ice auger becomes unturnable in a hole, turn engine off and allow to cool before attempting to remove it manually.



## Engine Safety Precautions

### **Warning Carbon Monoxide Poisoning**

All engines contain carbon monoxide in their exhaust. Carbon monoxide is a deadly, colorless, tasteless, odorless gas which may be present even if you do not smell or see any engine exhaust. Levels of carbon monoxide, which can be deadly, can be present for days in an enclosed area that has poor ventilation. Any level of carbon monoxide, if inhaled, can cause headaches, drowsiness, nausea, dizziness, confusion and eventually death. If you experience any of these symptoms, seek fresh air and **medical attention immediately.**

### **Preventing Carbon Monoxide Poisoning**

- Never run engine indoors.
- Never try to ventilate engine exhaust indoors. Carbon monoxide can reach dangerous levels very quickly.
- Never run engine outdoors where exhaust fumes may be pulled into a building.
- Never run engine outdoors in a poorly ventilated area where the exhaust fumes may be trapped and not easily taken away. (Examples include: in a large hole or areas where hills surround your working area.)
- Never run engine in an enclosed or partially enclosed area. (Examples include: buildings that are enclosed on one or more sides, under tents, car ports or basements.)
- Always run the engine with the exhaust and muffler pointed in the direction away from the operator.
- Never point the exhaust muffler towards anyone. People should always be many feet away from the operation of the engine and its attachments.

### **Gasoline Fires or Handling Fuel Safely**

Fuel and fuel vapors are highly flammable. Never use fuel where a spark or flame may be present. Never use fuel where a potential source of ignition could occur. (Examples include: hotwater or space heaters, clothes dryer, electric motors, etc.) Keep flames and sparks away from engine and fuel to prevent fires. Fuel fires spread very quickly and are highly explosive.

### **Prevention of Gasoline Fires**

- Never fill your fuel tank with fuel indoors. (Examples include: basement, garage, barn, shed, house, porch, ice shelter, etc.)
- Always fill fuel tank outside in a well ventilated area.
- Never remove the fuel cap or add fuel with the engine running. Stop engine and allow to cool before filling.
- Never drain fuel from engine in an enclosed area.
- Always wipe up excess (spilled) fuel from engine before starting. Clean up spilled fuel immediately.
- Allow spilled fuel to dry, after wiping and before starting.
- Allow fuel fumes/vapors to escape from the area before starting engine.
- Test the fuel cap for proper installation before starting and using engine.
- Always run the engine with fuel cap properly installed on the engine.
- Replace fuel cap that allows gas to spill or leak.
- Never smoke while refilling engine fuel tank.
- Prevent fire and explosion caused by static electric discharge. Use only non-metal, portable fuel containers approved by the Underwriter's Laboratory (U.L.) or the American Society for Testing & Materials (ASTM).
- Do not store engine with fuel in fuel tank indoors. Fuel and fuel vapors are highly explosive.
- Never pour fuel from engine fuel tank.
- Never siphon fuel by mouth to drain fuel tank.
- Always have an adult fill the fuel tank.
- Never allow an adult or anyone under the influence of drugs or alcohol to fill engine.
- Never allow children to fill the engine.



## SAFETY

### Burns and Fires

The muffler, muffler guard and other parts of the engine become extremely hot during the operation of the engine. These parts remain extremely hot after the engine has stopped.

#### Prevention of Burns and Fires

- Never remove the muffler guard from the engine.
- Never touch the muffler guard because it is extremely hot and will cause severe burns.
- Never touch parts of the engine that become hot after operation.
- Always keep materials and debris away from muffler guard and other hot parts of the engine to avoid fires.

### Steps for Working on Engine or Attachment



#### CAUTION

**Do Not Alter/Modify Engine or Attachments:**  
**Avoid injury! Never alter or modify the engine from the factory. Serious injury or death may occur if engine is modified or altered.**



#### CAUTION

**Avoid injury! When working on or replacing parts for the engine or attachments you must always disconnect spark plug wire from the spark plug and keep it away from the spark plug.**

1. Turn off engine switch.
2. Disconnect the spark plug wire from the spark plug.
3. Securely place the disconnected spark plug wire away from the spark plug and any metal parts. This must always be done or arcing may occur between spark plug wire and metal parts.
4. Replace or repair the part on the engine or attachment.
5. Check all parts that were repaired, or removed during repair, that they are secure and fit correctly.

**NOTE: All repair parts must come from the factory. Never replace parts that are not specifically designed for the engine or attachment.**

6. Replace spark plug wire.



#### CAUTION

**Avoid injury! Always wear hearing protection while operating engine.**



#### CAUTION

**Avoid injury! Please do not start your auger until you have read the previous section of this manual. If you have read these, follow the steps below to start your auger.**

### Preparing Engine for Starting

#### GAS AND OIL

##### Quality

To operate the engine you must use a high quality 2-cycle oil to ensure that the engine operates correctly during the break-in period and the life of the engine. Use unleaded regular or unleaded premium gas only.

##### Mixture

Run ice auger with a 20:1 ratio for the first 20 hours of operation. After 20 hours of use, mix at a ratio of 25:1. See charts 1 & 2.

#### CHART 1

<u>GAS</u>	<u>OIL</u>	<u>RATIO</u>
1 gallon	6 ounces	20:1
2 gallons	12 ounces	20:1
5 gallons	30 ounces	20:1

#### CHART 2

<u>GAS</u>	<u>OIL</u>	<u>RATIO</u>
1 gallon	5 ounces	25:1
2 gallons	10 ounces	25:1
5 gallons	26 ounces	25:1



## OPERATION

### Mixing Fuel and Filling Fuel Tank



#### CAUTION

**Avoid injury! Never store engine with fuel in the tank indoors. Fuel and fuel vapors are highly flammable.**



#### CAUTION

**Avoid injury! Never mix fuel and oil directly in engine fuel tank. Use only non-metal, portable fuel containers approved by the Underwriter's Laboratory (U.L.) or the American Society for Testing & Materials (ASTM).**



#### CAUTION

**Avoid injury! An adult must always handle and fill the engine with fuel.**

### Mixing Fuel

1. Fuel must be mixed in a container outside in a well ventilated area.
2. Fill certified fuel container 1/4 full of recommended fuel.
3. Add recommended amount of 2-cycle oil.
4. Screw container cap on straight and tight.
5. Shake the container to mix fuel and oil.
6. Unscrew cap slowly to vent, add the remainder of fuel requirements.
7. Wipe away any spilled fuel or oil and allow to evaporate before moving or transporting.



#### CAUTION

**Avoid injury! Always handle gas in a well ventilated area, outdoors, away from flames or sparks.**



**This engine uses a gas/oil mixture. DO NOT run on straight gas only, engine damage will result.**

### Filling Fuel Tank

1. Shut-off engine and allow engine to completely cool before refilling the fuel tank.
2. Move to a well ventilated area, outdoors, away from flames and sparks.
3. Clean debris from area around the fuel cap.
4. Loosen fuel cap slowly. Place the cap on a clean, dry surface.
5. Carefully add fuel without spilling.
6. Do not fill gas tank completely full, allow space for fuel to expand.
7. Immediately replace fuel cap and tighten. Wipe off spilled fuel and allow to dry before starting engine.



#### CAUTION

**Avoid injury! DO NOT start engine if fuel is spilled. Wipe off excess fuel and allow to dry. Remove engine from area to avoid sparks.**



## OPERATION

### Starting and Stopping Engine

To attach auger to powerhead if not done, align hole in at top of shaft with output shaft hole. Insert bolt and secure bolt with provided allen wrench.

**NOTE: The ends of the bolt should be flush with auger collar. Bolt head and thread end should never go beyond ice collar.**



#### CAUTION

**Avoid injury! If auger is mounted to engine, all safety guards must be securely on to avoid serious injury.**

1. Move engine to a well ventilated area, outdoors, to prevent carbon monoxide poisoning.
2. Move to an area away from flames or sparks, to avoid ignition of vapors if present.
3. Remove all debris from air cleaner holes and fuel cap to ensure proper air flow.
4. Turn switch to the **ON** position.
5. **Priming:**
  - When using the primer bulb, allow the bulb to return completely to its original position between pushes.
  - Choke must be in the **OFF** position when pushing or using the primer bulb.

**First Start:** Starting new engine for first time or after running out of gas, prime 3 times.

**Cold Start:** Starting engine after it has been sitting or stored briefly with fuel in the tank, prime 1 time above 55° Fahrenheit or 2 times below 55° Fahrenheit.

**Warm Start:** Do not use primer or full choke if engine did not run out of gas or has not cooled completely. Flooding of engine will occur.

#### 6. Choke:

- **Full choke** position is defined by moving the choke lever as far to the **ON** position as possible. **Half choke** is defined when the choke lever is between **ON** and **OFF**.

**First Start & Cold Start:** After priming, move choke lever to full choke.

**Warm Start:** No choke or half choke is needed.



#### CAUTION

**Avoid injury! Starter rope can cause an unanticipated jerk towards engine. Please follow instructions to avoid injury.**

7. Grasp starter handle and pull out slowly, until it pulls slightly harder. Without letting it retract, pull rope with a rapid full arm stroke. Let it return to its original position very slowly. Repeat this step everytime the starter rope is pulled.

8. Pull recoil until engine fires or runs.

**NOTE: If engine fails to start after 5-6 pulls, push primer 1 time and pull starter rope again.**

9. After engine starts running, move choke lever to **HALF CHOKE**.

10. Run engine for 30 to 45 seconds at half choke position until engine warms up.

11. Move choke lever to **OFF** position and move throttle to desired speed.

12. To stop, flip switch to **OFF** position.



#### CAUTION

**Avoid injury! If engine fails to start after the above operations, please contact Ardisam, Inc. at 1-800-345-6007.**

**DO NOT attempt to start engine in the following ways:**

- **DO NOT** use starting fluid.
- **DO NOT** spray flammable liquids or vapors into air cleaner, carburetor or spark plug chamber.
- **DO NOT** remove spark plug and pull on starter rope. Flammable fuel can spray out & ignite from a spark from spark plug.



#### CAUTION

**Avoid injury! Never leave engine running while unattended. Turn off after every use.**



#### CAUTION

**Avoid injury! Never carry powerhead and auger between holes while engine is running.**





## OPERATION

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### Normal Operation

1. The clutch will transfer maximum power after about two hours of normal operation. During this break-in period clutch slippage may occur. The clutch should be kept free of oil or other moisture for efficient operation.
2. Dig holes without placing excessive body weight on the unit. The auger operates most efficiently with a shaving action caused by the weight of the unit itself.
3. Never run engine indoors. Exhaust fumes are deadly.
4. Do not use an ice auger in the earth.
5. The ice auger blade protector should be attached to the auger head when not in use. This will protect the cutting edge of the ice auger blades.

### Transporting Your Ice Auger

1. Never transport engine inside an enclosed space or vehicle. Fuel or fuel vapors may ignite causing serious injury or death.
2. If fuel is present in the fuel tank, transport in an open vehicle in an upright position.
3. If an enclosed vehicle must be used, remove gas into an approved red gasoline container. DO NOT siphon by mouth.
4. Run engine to use up the fuel in the carburetor and fuel tank. Always run engine in a well ventilated area.
5. Wipe away any spilled fuel from engine and ice auger. Allow to dry.



## MAINTENANCE AND STORAGE



### CAUTION

**To prevent accidental starting:**

**Avoid injury! Engine must be turned off and cool, and spark plug wire must be removed from spark plug before checking and adjusting engine or equipment.**



### CAUTION

**Avoid injury! Temperature of muffler and nearby areas may exceed 150° F (65° C). Avoid these areas.**



### CAUTION

**Avoid injury! Check auger often for loose nuts and bolts. Keep these items tightened.**

### Auger Maintenance

1. The gear case has 4 oz. of grease installed at the factory. It is recommended that once a year the gear case be split and the grease level checked. Add grease only if level of grease is below top of the gears. **DO NOT OVERFILL.**
2. Keep all screws, nuts, and bolts tight.
3. For cold weather operation, store the unit in a cool environment. Transferring the unit from a warm to a cold place can cause the build up of harmful condensation.
4. Always replace blade protector when power auger is not in use.

### Engine Maintenance



### CAUTION

**Avoid injury! Never store engine with fuel in the tank inside a building. Potential sparks may be present for ignition of fuel and fuel vapors.**



### CAUTION

**Avoid injury! An adult must always do maintenance and repair on engine and attachments.**



### CAUTION

**Avoid injury! Engine must be shut-off, cool, and spark plug wire removed before any repair or maintenance can be done.**

### Cooling Fins

- Cooling fins, air inlets and linkages must be free from any debris before each use.

### Air Filters

- Never run engine without air cleaner properly installed. Added wear and engine failure may occur if air cleaner is not installed on engine.
- Service air cleaner every 3 months or after 20 hours of operation. Clean and oil filter daily in extremely dusty conditions.

### Steps for Cleaning Air Filters



**Never twist air filters when cleaning. Always press.**

1. Wash in warm water with mild soap until dirt and debris are removed. Press filter when washing, do not twist.
2. Rinse in warm water until soap and dirt are removed.
3. Dry filter by wrapping in a clean cloth and pressing filter until it is dry.
4. Apply oil to the entire filter.
5. Remove excess oil.
6. Attach the filter and filter cover to the engine.

### Spark Plug

- Check spark plug every 50 operating hours.
1. Remove dirt and debris around the spark plug before removing.
  2. Remove spark plug and replace if any of the following have occurred: pitted electrodes, burned electrodes, cracked porcelain, or deposits around the electrodes.
  3. After analysis of the spark plug, install original or a new spark plug and tighten securely.

**NOTE: DO NOT OVERTIGHTEN!**

### Carburetor

- Never tamper with factory setting of the carburetor.



## MAINTENANCE AND STORAGE

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### Long Term Storage

- If your ice auger will not be ran for more than one month, prepare it for long term storage.

#### Steps for Long Term Storage

1. Add fuel stabilizer according to manufacturer's instructions.
2. Run engine for 10-15 minutes to ensure that the stabilizer reaches the carburetor.
3. Remove the remainder of the fuel from the gas tank into an approved fuel container.



#### **CAUTION**

**Avoid injury! To avoid injury or death, never siphon fuel by mouth.**



#### **CAUTION**

**Avoid injury! Never store ice auger with fuel in the fuel tank inside an enclosed area or building.**

4. Remove auger from powerhead and apply a thin layer of grease to the output shaft (8913).
5. Store auger and powerhead (engine) in a vertical position.
6. Remove all debris from auger and powerhead (engine).
7. Attach blade protector to bottom of auger.



## SERVICE, TROUBLESHOOTING AND REPAIR

### SERVICE INFORMATION



**IN CASE OF A SERVICE PROBLEM, DO NOT SEND UNIT BACK TO RETAILER. CONTACT ARDISAM, INC. AT 1-800-345-6007.**

*At Ardisam, we build quality and durability into the design of our products; but no amount of careful design by us, and careful maintenance by you, can guarantee a repair-free life for your auger. Most repairs will be minor, and easily fixed by following the suggestions in the troubleshooting guide in this section.*

*The guide will help you pinpoint the causes of common problems and identify remedies.*

*For more complicated repairs, you may want to rely on your retailer, an authorized mechanic or Ardisam, Inc. (contact your retailer for a list of authorized mechanics in your area). A parts catalog is included in this section.*

*We will always be glad to answer any questions you have, or help you find suitable assistance. To order parts or inquire about warranty, call or write us at the address found in the next column under the section ordering repair parts or check out our website - **[www.ardisam.com](http://www.ardisam.com)***

### ICE POINT REPLACEMENT

1. Remove blade protector and both blades.
2. Remove nut and retaining bolt from point.
3. Using a locking pliers, grasp point and pull out. If holder doesn't come out with the point, remove with pliers.
4. With locking pliers, push in new point and holder aligning bolt hole in point with holes in auger shaft. **DO NOT DAMAGE END OF POINT.**

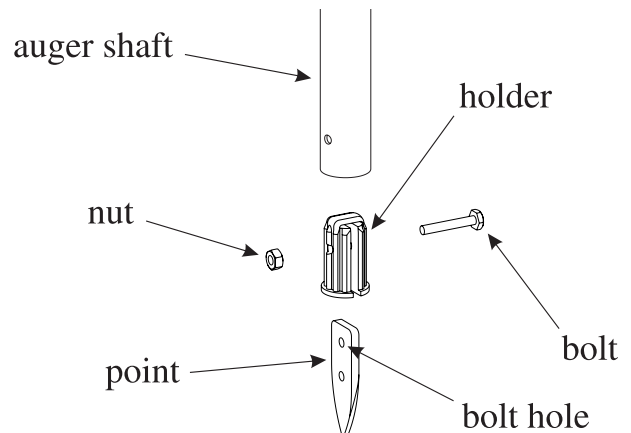
**NOTE: When installing holder in auger shaft, edges of holder may shave off.**

5. Insert retaining bolt and tighten with nut.
6. Re-attach both blades and put blade protector back on.



### CAUTION

**Avoid injury! Auger blades and point are extremely sharp. Use caution when removing & replacing.**





# SERVICE, TROUBLESHOOTING AND REPAIR

## ORDERING REPAIR PARTS

Parts can be obtained from the store where your auger was purchased or direct from the factory. To order from the factory, call or write to:

**Ardisam, Inc.**  
**1690 Elm Street, Cumberland, WI 54829**  
**Phone (715) 822-2415 Fax (715) 822-4180**  
**1-800-345-6007**  
**Email [info@ardisam.com](mailto:info@ardisam.com)**  
**[www.ardisam.com](http://www.ardisam.com)**

Please include the following information with your order:

1. Part numbers
2. Part description
3. Quantity
4. Model number and serial number



## CAUTION

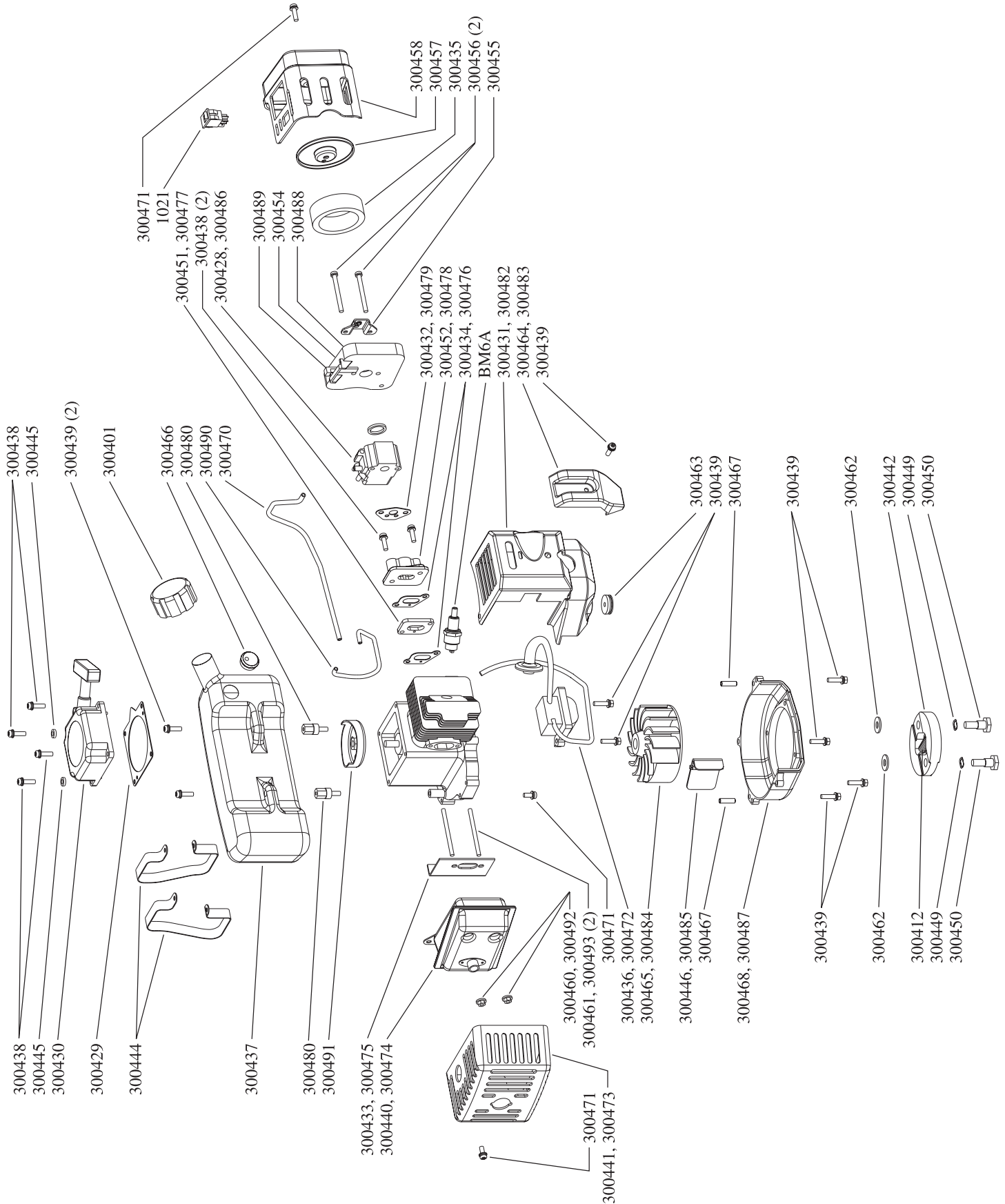
**Practice safety at all times. Engine must be turned off and allowed to cool, and spark plug wire must be disconnected before attempting any maintenance or repair.**

## TROUBLESHOOTING

Problem	Possible cause	Remedy/Action
Engine will not start	<ol style="list-style-type: none"> <li>1. Power switch off</li> <li>2. Spark plug wire disconnected</li> </ol>	<ol style="list-style-type: none"> <li>1. Flip switch to on position</li> <li>2. Connect spark plug wire to spark plug</li> </ol>
Engine runs rough, floods during operation	<ol style="list-style-type: none"> <li>1. Dirty air cleaner</li> <li>2. Choke partially engaged</li> <li>3. Carburetor out of adjustment</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean or replace air cleaner</li> <li>2. Turn off choke</li> <li>3. Call factory</li> </ol>
Engine is hard to start	<ol style="list-style-type: none"> <li>1. Stale fuel</li> <li>2. Spark plug wire loose</li> <li>3. Dirty carburetor</li> </ol>	<ol style="list-style-type: none"> <li>1. Drain old fuel and replace with fresh. Use gas stabilizer at end of season</li> <li>2. Make sure spark wire is securely attached to spark plug</li> <li>3. Clean carburetor, use gas stabilizer, new gas can</li> </ol>
Engine misses or lacks power	<ol style="list-style-type: none"> <li>1. Clogged fuel tank</li> <li>2. Clogged air cleaner</li> <li>3. Improper carburetor adjustment</li> <li>4. Spark plug dirty, improper gap, or wrong type</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove and clean</li> <li>2. Clean or replace</li> <li>3. Call factory</li> <li>4. Replace spark plug and adjust gap</li> </ol>
Auger turns at idle	<ol style="list-style-type: none"> <li>1. Idle speed too high</li> <li>2. Broken clutch spring</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust idle speed lower</li> <li>2. Replace both springs</li> </ol>
Auger turns, but has no power	<ol style="list-style-type: none"> <li>1. Choke on</li> <li>2. Carburetor out of adjustment</li> <li>3. Broken transmission</li> <li>4. Worn clutch shoes</li> <li>5. Worn engine lower seal</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn off choke after engine is running</li> <li>2. Call factory</li> <li>3. Call factory</li> <li>4. Replace clutch shoes and springs</li> <li>5. Call factory</li> </ol>
Auger jumps on ice	<ol style="list-style-type: none"> <li>1. Blades damaged or sharpened incorrectly</li> </ol>	<ol style="list-style-type: none"> <li>1. Buy new blades, or have blades sharpened at factory</li> </ol>
Auger cuts slowly	<ol style="list-style-type: none"> <li>1. Dull blades</li> <li>2. Damaged point</li> </ol>	<ol style="list-style-type: none"> <li>1. Buy new blades, or have blades sharpened at factory</li> <li>2. File point, or replace point</li> </ol>
Engine runs, then quits	<ol style="list-style-type: none"> <li>1. Gas cap not venting</li> </ol>	<ol style="list-style-type: none"> <li>1. Check self venting gas cap</li> </ol>



## S33 STINGRAY & M43 MAKO ENGINE PARTS LIST



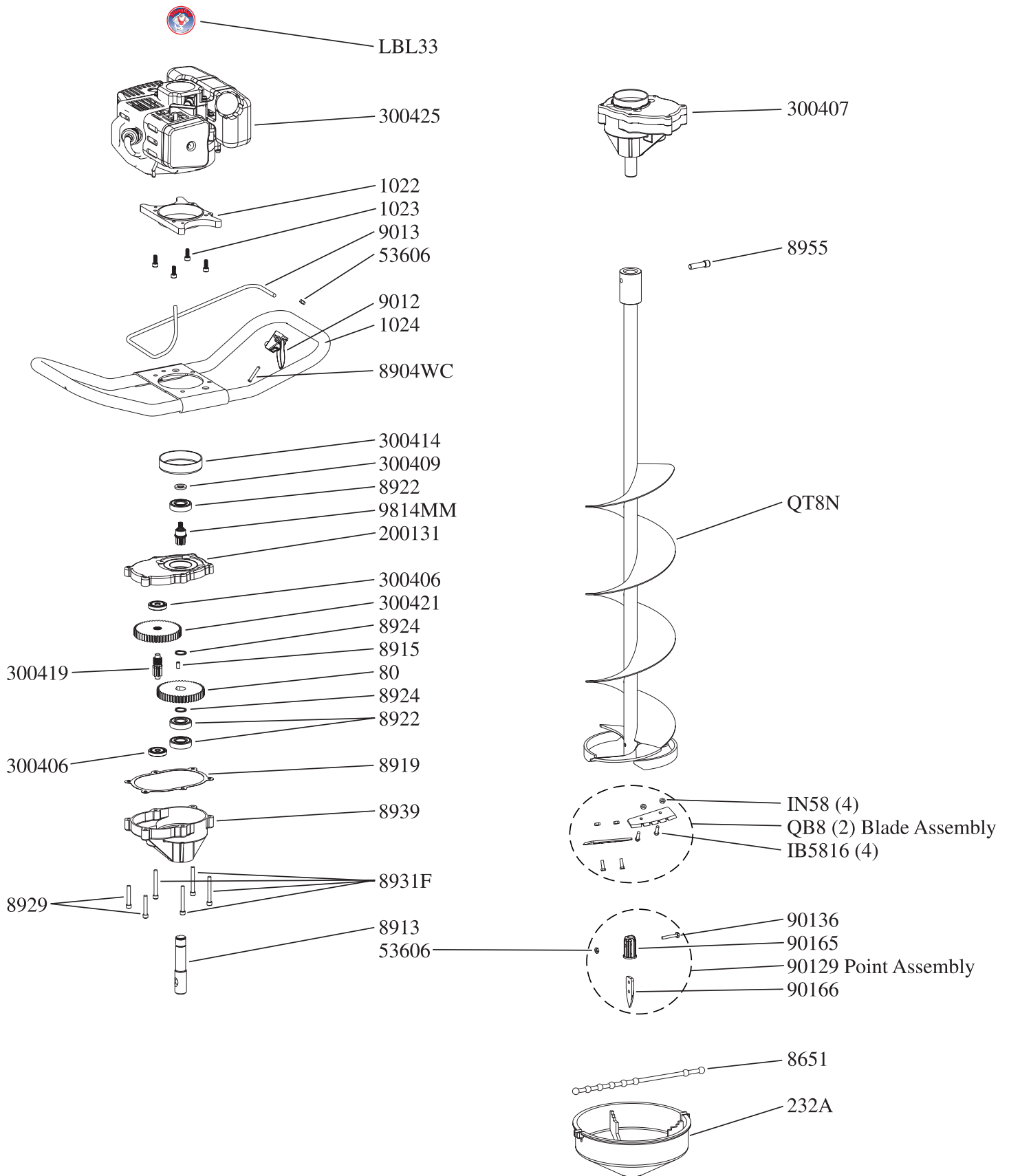


## S33 STINGRAY & M43 MAKO ENGINE PARTS LIST

MINIMUM ORDER ..... \$10.00

### POWERHEAD PARTS

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>	<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
1021	Rocker Switch	1	300462	Rotor Washer	2
300401	Fuel Tank Cap	1	300463	Grommet, Engine Shroud	1
300412	Clutch Spring	1	300464	Cover, Engine Shroud, S33	1
300428	Carburetor, S33	1	300465	Flywheel, Magneto, S33	1
300429	Recoil Plate	1	300466	Grommet, Fuel Tank	1
300430	Recoil Assembly	1	300467	Locating Pin	2
300431	Engine Shroud, S33	1	300468	Cover, Engine Mounting, S33	1
300432	Gasket, Carburetor, S33	1	300470	Fuel Line Hose & Filter	1
300433	Gasket, Muffler, S33	1	300471	Bolt, M5 x 12mm	3
300434	Gasket, Intake, S33	2	300472	Ignition Coil, M43	1
300435	Air Filter	1	300473	Cover, Muffler, M43	1
300436	Ignition Coil, S33	1	300474	Muffler, M43	1
300437	Fuel Tank	1	300475	Gasket, Muffler, M43	1
300438	Bolt w/washer, M5 x 25mm	6	300476	Gasket, Intake, M43	2
300439	Bolt w/washer, M5 x 18mm	9	300477	Heat Disk, M43	1
300440	Muffler, S33	1	300478	Intake Windpipe, M43	1
300441	Cover, Muffler, S33	1	300479	Gasket, Carburetor, M43	1
300442	Clutch Rotor Shoe	2	300480	Threaded Spacer, Fuel Tank	2
300444	Support, Fuel Tank	2	300482	Engine Shroud, M43	1
300445	Washer, M5	2	300483	Cover, Engine Shroud, M43	1
300446	Air Deflector, S33	1	300484	Flywheel, Magneto, M43	1
300449	Spring Washer, Rotor Shoulder Bolt	2	300485	Air Deflector, M43	1
300450	Shoulder Bolt, Rotor Assembly	2	300486	Carburetor, M43	1
300451	Heat Disk, S33	1	300487	Cover, Engine Mounting, M43	1
300452	Intake Windpipe, S33	1	300488	Choke	1
300454	Cover, Intake	1	300489	Choke Lever	1
300455	Adapter Plate, Intake Cover	1	300490	Primer Line Hose	1
300456	Bolt, M5 x 50mm	2	300491	Recoil Clutch	1
300457	Cover, Air Filter	1	300492	Nut, M6, M43	2
300458	Cover, Intake	1	300493	Stud Bolt, M6 x 62mm, M43	2
300460	Nut, M5, S33	2	BM6A	Spark Plug	1
300461	Stud Bolt, M5 x 60mm, S33	2			







## S33Q8 STINGRAY PARTS LIST

MINIMUM ORDER ..... \$10.00

### POWERHEAD PARTS

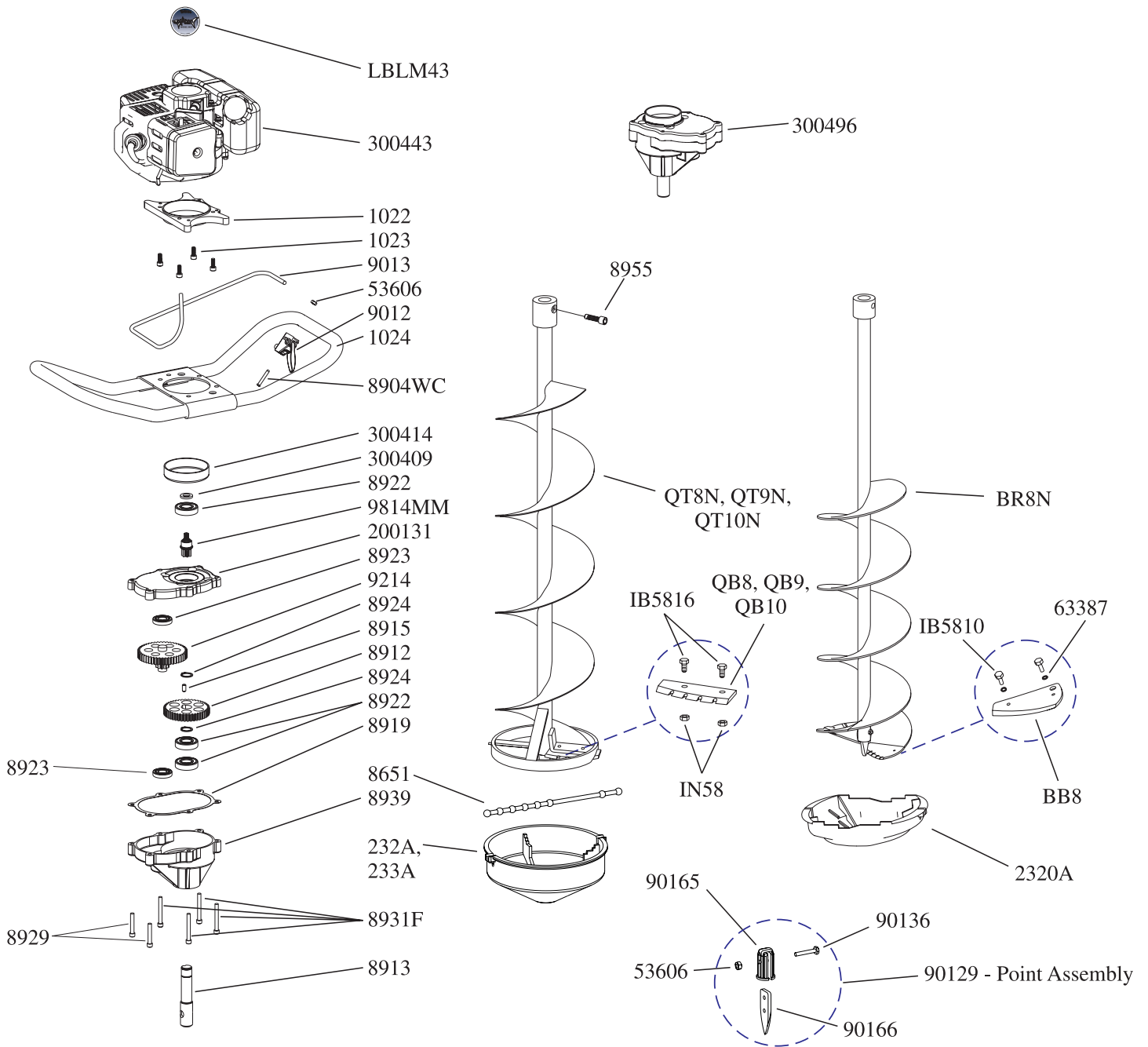
<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
80	48T Gear	1
1022	Adapter Ring (engine to handlebar plate)	1
1023	Bolt, M6 x 1 x 16mm (ring to engine)	4
1024	HandleBar	1
8904WC	Screw, Philips Pan Hd, #10 x 1-1/4"	1
8913	Output Shaft, 7/8"	1
8915	Dowel Pin, 1/4" x 1/2", hardened steel	1
8919	Gasket	1
8922	Ball Bearing	3
8924	Snap Ring	2
8929	Bolt-SHCS, 1/4-20 x 1-1/2" (gear case bottom to gear case top)	2
8931F	Bolt-SHCS, 1/4-20 x 2" (gear case to ring)	4
8939	Gear Case Bottom	1
9012	Throttle Control	1
9013	Throttle Cable	1
9814MM	Pinion Gear, 7 tooth threaded	1
53606	Nut, #10, nyloc	1
200131	Gear Case Top	1
300406	Ball Bearing	2
300407	Complete Transmission	1
300409	Spacer-Drum	1
300414	Clutch Drum	1
300419	Gear, 7T	1
300421	Gear, 48T left hand thread	1
300425	Gas Engine, 33cc	1
LBL33	Decal, StingRay, serialized	1
LBL332	Decal, StingRay oval, handlebar plate	1
LBLBPE	Decal, Blade Protector, Eskimo	1
LBLESKS	Decal, Eskimo oval, auger stem	1

### POWER AUGER PARTS

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
232A	Blade Protector, fits 6"-8" quantum auger (includes 8651)	1
8651	Strap, Blade Protector	1
8955	Auger Bolt-SHCS, 3/8-16 x 1-1/4" (auger to powerhead)	1
53606	Nut, #10, nyloc	1
90129	Point Replacement Assembly (includes 53606, 90136, 90165, 90166)	1
90136	Bolt, #10-24 x 1-1/4" stainless	1
90165	Point Holder	1
90166	Point	1
IB5816	Bolt, 5mm x 0.8 x 16mm, (ice blade to auger)	4
IN58	Nut, 5mm x 0.8 nyloc, (ice blade to auger)	4
QB8	Ice Blades, 8" Quantum, set of two (includes IB5816, IN58)	1
QT8N	Ice Auger, 8" Quantum, complete	1

### ACCESSORIES

EXT6	Depth Extension, 6"
EXT12	Depth Extension, 12"
EXT18	Depth Extension, 18"





# M43 MAKO PARTS LIST

MINIMUM ORDER ..... \$10.00

## POWERHEAD PARTS

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
1022	Adapter Ring (engine to handlebar plate)	1
1023	Bolt, M6 x 1 x 16mm (ring to engine)	4
1024	HandleBar	1
8904WC	Screw, Philips Pan Hd, #10 x 1-1/4"	1
8912	44T Gear	1
8913	Output Shaft, 7/8"	1
8915	Dowel Pin, 1/4" x 1/2", hardened steel	1
8919	Gasket	1
8922	Ball Bearing	3
8923	Ball Bearing	2
8924	Snap Ring	2
8929	Bolt-SHCS, 1/4-20 x 1-1/2" (gear case bottom to gear case top)	2
8931F	Bolt-SHCS, 1/4-20 x 2" (gear case to ring)	4
8939	Gear Case Bottom	1
9012	Throttle Control	1
9013	Throttle Cable	1
9214	48T & 10T Pinion Gear Cluster, left hand thread	1
9814MM	Pinion Gear, 7 tooth threaded	1
53606	Nut, #10, nyloc	1
200131	Gear Case Top	1
300409	Spacer-Drum	1
300414	Clutch Drum	1
300443	Gas Engine, 43cc	1
300496	Complete Transmission	1
LBLM43	Decal, Mako, serialized	1
LBLM432	Decal, Mako oval, handlebar plate	1
LBLBPE	Decal, Blade Protector, Eskimo	1
LBLESKS	Decal, Eskimo oval, auger stem	1

## POWER AUGER PARTS

<u>Part #</u>	<u>Description</u>	<u>Qty.</u>
232A	Blade Protector, fits 6"-8" quantum auger (includes 8651)	1
233A	Blade Protector, fits 9" & 10" quantum (includes 8651)	1
2320A	Blade Protector, fits 6"-8" turbo auger (includes 8651)	1
8651	Strap, Blade Protector	1
8955	Auger Bolt-SHCS, 3/8-16 x 1-1/4" (auger to powerhead)	1
53606	Nut, #10, nyloc	1
63387	Lockwasher, 5mm	4
90129	Point Replacement Assembly (includes 53606, 90136, 90165, 90166)	1
90136	Bolt, #10-24 x 1-1/4" stainless	1
90165	Point Holder	1
90166	Point	1
BB8	Ice Blades, 8" TurboCut (includes 63387, IB5810)	2
BR8N	Ice Auger, 8" Turbo	1
IB5810	Bolt, 5mm x 0.8 x 10mm, (turbo ice blade to auger)	4
IB5816	Bolt, 5mm x 0.8 x 16mm, (ice blade to auger)	4
IN58	Nut, 5mm x 0.8 nyloc, (ice blade to auger)	4
QB8	Ice Blades, 8" Quantum, set of two (includes IB5816, IN58)	1
QB9	Ice Blades, 9" Quantum, set of two (includes IB5816, IN58)	1
QB10	Ice Blades, 10" Quantum, set of two (includes IB5816, IN58)	1
QT8N	Ice Auger, 8" Quantum, complete	1
QT9N	Ice Auger, 9" Quantum, complete	1
QT10N	Ice Auger, 10" Quantum, complete	1

## ACCESSORIES

EXT6	Depth Extension, 6"
EXT12	Depth Extension, 12"
EXT18	Depth Extension, 18"



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