

Eskimo®

ICE FISHING GEAR

ASSEMBLY INSTRUCTIONS & PARTS EXPLOSIONS

Mako Ice Augers



M43Q10, M43Q9, M43Q8

REGISTRATION

Record the model number and serial number (if applicable) in the space provided for easy reference. Fill out and mail the registration card located in the parts packet. Warranty is valid only if the completed registration card is received by Ardisam, Inc. within 30 days of purchase.

OWNERSHIP RECORDS		
Place of Purchase:		
Place of Purchase Address:		
City:	State/Province:	Zip Code/Postal Code:
Model Number:		Serial Number:
Date of Purchase:		
Notes:		

FEDERAL EMISSION INFORMATION

Ardisam, Inc. warrants to the retail purchaser, that this small, off-road engine was designed, built and equipped to conform at the time of initial sale to all applicable regulations of the U.S. Environmental Protection Agency (EPA).

THANK YOU . . .

for purchasing an Eskimo® Power Ice Auger from Ardisam, Inc. We have worked to ensure that the ice auger meets high standards for usability and durability. With proper care, your ice 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 ice auger. Congratulations on your investment in quality.

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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.

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

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.

CAUTION

CAUTION INDICATES YOU CAN OR YOUR EQUIPMENT CAN BE HURT IF THE SAFETY INSTRUCTIONS THAT FOLLOW THIS SIGNAL WORD ARE NOT OBEYED.

IMPORTANT

INDICATES HELPFUL INFORMATION FOR PROPER ASSEMBLY, OPERATION, OR MAINTENANCE OF YOUR EQUIPMENT.

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.

Below are three of the warning decals attached to the auger. It is important to read all safety precautions and locate the warning labels before using this product.

WARNING

Do not carry auger between holes with engine running. Carry powerhead and auger by handle bars only, NOT by auger. Activating throttle control when carrying auger may cause personal injury if hands or clothing are on or near rotating auger.

LBLVM43

WARNING!

Failure to read, understand and follow all warnings and instructions listed could result in serious injury or death. Keep all body extremities, loose clothing and foreign objects clear of rotating auger. Be sure auger is securely attached to powerhead during use. Never carry auger between holes with the engine running. This auger is not designed to be utilized as an anchoring device. Use this auger/powerhead as per provided instructions only.

LBLAUGER Rev. 04/24/08

WARNING!

Auger blades are EXTREMELY SHARP. To avoid injury USE CAUTION when removing or replacing blades or guards.

Eskimo

LBLBPE

- 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:

water 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 the fuel tank.
- Never allow children to fill the fuel tank.

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.

OPERATION

STEPS FOR WORKING ON ENGINE OR AUGER

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 auger.
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 auger.

6. Replace spark plug wire.

PREPARING ENGINE FOR STARTING

IMPORTANT NOTE: THIS ENGINE USES A GAS/OIL MIXTURE. DO NOT RUN ON STRAIGHT GAS ONLY, ENGINE DAMAGE WILL RESULT.

GAS AND OIL

Quality

To operate the engine, we recommend using "VIPER" brand 2-cycle oil (PN 300400) to ensure that the engine operates correctly during the break-in period and the life of the engine. Use unleaded regular gas only.

Mixture

Run ice auger with a 50:1 ratio.

GAS	OIL	RATIO
1 gallon	2.5 ounces	50:1
2 gallons	5 ounces	50:1
5 gallons	13 ounces	50:1

MIXING FUEL AND FILLING GAS TANK

Mixing Fresh 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 with fuel stabilizer.
4. Screw container cap on straight and tight.
5. Shake the container to mix fuel and oil.
6. Unscrew gas 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

DO NOT ALTER/MODIFY ENGINE OR AUGER:

AVOID INJURY! NEVER ALTER OR MODIFY THE ENGINE FROM THE FACTORY. SERIOUS INJURY OR DEATH MAY OCCUR IF ENGINE IS MODIFIED OR ALTERED.

AVOID INJURY! WHEN WORKING ON OR REPLACING PARTS FOR THE ENGINE OR AUGER YOU MUST ALWAYS DISCONNECT SPARK PLUG WIRE FROM THE SPARK PLUG AND KEEP IT AWAY FROM THE SPARK PLUG.

AVOID INJURY! ALWAYS WEAR HEARING PROTECTION WHILE OPERATING ENGINE.

AVOID INJURY! PLEASE DO NOT START YOUR ICE AUGER UNTIL YOU HAVE READ THE PREVIOUS SECTION OF THIS MANUAL. IF YOU HAVE READ THESE, FOLLOW THE STEPS BELOW TO START YOUR ICE AUGER.

AVOID INJURY! NEVER STORE ENGINE WITH GAS IN THE TANK INDOORS. FUEL AND FUEL VAPORS ARE HIGHLY FLAMMABLE.

AVOID INJURY! NEVER MIX FUEL AND OIL DIRECTLY IN ENGINE GAS TANK. USE ONLY NON-METAL, PORTABLE FUEL CONTAINERS APPROVED BY THE UNDERWRITER'S LABORATORY (U.L.) OR THE AMERICAN SOCIETY FOR TESTING & MATERIALS (ASTM).

AVOID INJURY! AN ADULT MUST ALWAYS HANDLE AND FILL THE ENGINE WITH FUEL.

AVOID INJURY! ALWAYS HANDLE FUEL IN A WELL VENTILATED AREA, OUTDOORS, AWAY FROM FLAMES OR SPARKS.

Filling Gas Tank

1. Shut-off engine and allow engine to completely cool before refilling the gas tank.
2. Move to a well ventilated area, outdoors, away from flames and sparks.
3. Clean debris from area around the gas cap.
4. Loosen gas 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 gas cap and tighten. Wipe off spilled fuel and allow to dry before starting engine.

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. Drill 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.

IMPORTANT NOTE: The A-weighted emission sound pressure level has been measured at 97 dB L_{PA} . The A-weighted sound power level emitted has been measured at 107 dB L_{WA} . The total vibration value for Mako power ice auger was measured at 45.7 m/s^2 .

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.
6. To attach auger to powerhead if not done, align hole 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.

USING THE SCREW TYPE, MANUAL VENTING GAS CAP

Your power ice auger is equipped with a screw type, manual venting gas cap.

1. Before starting the engine, turn the screw in the top of the gas cap all the way open (counterclockwise) to its venting position. To ensure that gas will not spill during use, check that the gas cap is screwed on tightly and the gas cap screw is in the venting position.
2. After using the power ice auger and before putting away or transporting it in a vehicle, screw the gas cap screw on (clockwise) tightly. This will prevent gas from leaking during storage.

⚠ CAUTION

AVOID INJURY! ALWAYS HANDLE FUEL IN A WELL VENTILATED AREA, OUTDOORS, AWAY FROM FLAMES OR SPARKS.

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.

The gas cap will not leak gas during storage if the gas cap is tight and the screw at the top is tight.

NOTE: When storing unit for prolonged periods of time in warm weather, vent gas cap to prevent gas from leaking from carburetor.

STARTING AND STOPPING ENGINE

- Move engine to a well ventilated area, outdoors, to prevent carbon monoxide poisoning.
- Move to an area away from flames or sparks to avoid ignition of vapors if present.
- Remove all debris from air cleaner holes and gas cap to ensure proper air flow.

COLD ENGINE START: Starting engine for first time or after engine has cooled off or after running out of fuel.

1. Open gas cap vent screw all the way (counterclockwise).
2. Move choke lever to **RUN or OFF** position.

NOTE: Choke must be in the **RUN or OFF** position when pushing or using the primer bulb.

3. Prime unit until primer tube is filled with gas.

NOTE: When using the primer bulb, allow the bulb to return completely to its original position between pushes.

4. Move choke lever to **CHOKE or ON** position.

NOTE: **CHOKE** position is defined by moving the choke lever as far to the **ON** position as possible.

5. Push toggle switch to the **ON** position.
6. Grasp starter handle with left hand and pull out slowly, until it pulls slightly harder. Without letting starter handle retract, pull rope with a rapid full arm stroke. Let it return to its original position very slowly until the engine fires or runs, engage the throttle. Repeat this step every time the starter rope is pulled.

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

7. After engine starts running, move choke lever to **HALF CHOKE** position until unit runs smoothly.

NOTE: **HALF CHOKE** is defined when the choke lever is between **CHOKE** and **RUN or ON and OFF**.

8. Move choke lever to **RUN or OFF** position and move throttle to desired speed.

NOTE: Run at full throttle when possible. Do not let unit idle for extended periods of time.

9. To stop engine, push toggle switch to **OFF** position.

WARM ENGINE START:

1. Open gas cap vent screw all the way (counterclockwise).
2. Move choke lever to **CHOKE or ON** position.

NOTE: **CHOKE** position is defined by moving the choke lever as far to the **ON** position as possible.

3. Continue with Step 5 of Cold Engine Starting.

⚠ CAUTION

AVOID INJURY! ALWAYS HANDLE FUEL IN A WELL VENTILATED AREA, OUTDOORS, AWAY FROM FLAMES OR SPARKS.

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.

AVOID INJURY! IF AUGER IS MOUNTED TO ENGINE, ALL SAFETY GUARDS MUST BE SECURELY ON TO AVOID SERIOUS INJURY.

AVOID INJURY! STARTER ROPE CAN CAUSE AN UNANTICIPATED JERK TOWARDS ENGINE. PLEASE FOLLOW INSTRUCTIONS TO AVOID INJURY.

AVOID INJURY! IF ENGINE FAILS TO START AFTER TRYING STARTING PROCEDURES, PLEASE CONTACT OUR CUSTOMER SERVICE DEPARTMENT AT 800-345-6007.

AVOID INJURY! NEVER LEAVE ENGINE RUNNING WHILE UNATTENDED. TURN OFF AFTER EVERY USE.

AVOID INJURY! NEVER CARRY POWERHEAD AND AUGER BETWEEN HOLES WHILE ENGINE IS RUNNING.

⚠ WARNING

AVOID INJURY! MAKE SURE THE UNIT IS IN A STABLE POSITION BEFORE PULLING THE STARTER HANDLE.

AVOID INJURY! WHEN THE UNIT STARTS TO FIRE OR RUN, RELEASE THE THROTTLE CONTROL MOMENTARILY WITH YOUR RIGHT HAND AND RETURN YOUR LEFT HAND TO THE HANDLEBAR POSITION TO MAINTAIN CONTROL AND STABILITY OF THE UNIT WITH BOTH HANDS.

HOT ENGINE START:

1. Open gas cap vent screw all the way (counterclockwise).
2. Continue with Step 5 of Cold Engine Starting.
3. If engine does not fire, refer to Step 2 of Warm Engine Starting.

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.

MAINTENANCE AND STORAGE**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.
5. If blade performance decreases, turn unit off and disconnect spark plug wire. Carefully inspect cutting edge of blades for any knicks or shiny areas. If blades show any of these signs, they need to be resharpened or replaced.

ENGINE MAINTENANCE

Please read the maintenance schedule and observe these recommendations to extend the life of your engine.

Good maintenance is essential for safe, economical, and trouble-free operation. It will also help reduce air pollution. To help you properly care for your engine, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures using basic hand tools.

MAINTENANCE SCHEDULE

MAINTENANCE ITEM		Every 8 hours (daily)	Every 20 hours or seasonally	Yearly
Clean Engine and Check Bolts & Nut		X		
Air Filter (See Air Filter section)	Check	X		
	Clean *		X	
	Replace		X	X
Spark Plug (Gap .028") (See Spark Plug section)	Check/Adjust		X	
	Replace			X

* Service more frequently under dusty conditions

⚠ 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.

AVOID INJURY! TEMPERATURE OF MUFFLER AND NEARBY AREAS MAY EXCEED 150° F (65° C). AVOID THESE AREAS.

AVOID INJURY! CHECK AUGER OFTEN FOR LOOSE NUTS AND BOLTS. KEEP THESE ITEMS TIGHTENED.

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.

AVOID INJURY! AN ADULT MUST ALWAYS DO MAINTENANCE AND REPAIR ON ENGINE AND AUGER.

AVOID INJURY! ENGINE MUST BE SHUT-OFF, COOL, AND SPARK PLUG WIRE REMOVED BEFORE ANY REPAIR OR MAINTENANCE CAN BE DONE.

Other service tasks that are more difficult, or require special tools, are best handled by professionals and are normally performed by a technician or other qualified mechanic.

Maintenance, replacement or repair of the emissions control devices and systems may be performed by any non-road engine repair establishment or individuals. However, items must be serviced by an authorized dealer to obtain "no charge" emissions control service.

The maintenance schedule applies to normal operating conditions. If you operate your engine under unusual conditions, such as sustained high-load or high-temperature operation, or use in unusually wet or dusty conditions, consult your servicing dealer for recommendations applicable to your individual needs and use.

Cooling Fins

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

Air Filter

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 filter daily in extremely dusty conditions.

Steps for Cleaning Air Filter

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 air cleaner cover to the engine.

Spark Plug

The recommended spark plug is a NGK BM6A.

1. Check spark plug every 50 operating hours.
 2. Disconnect the spark plug cap, and clean any debris from around the spark plug area.
 3. Remove spark plug and replace if any of the following occur; pitted electrodes, burned electrodes, cracked porcelain, or deposits around electrodes.
 4. After analysis, seat spark plug and tighten with spark plug wrench.
- Reinstall original spark plug, tighten additional 1/2 turn.
 - Installing new spark plug, adjust spark plug gap to .028" and tighten additional 1/8 – 1/4 turn .

NOTE: *Loose spark plug may overheat and damage engine. Over tightened spark plug may damage threads in the cylinder head.*

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 fuel 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.

⚠ CAUTION

AVOID INJURY! TO AVOID INJURY OR DEATH, NEVER SIPHON FUEL BY MOUTH.

AVOID INJURY! NEVER STORE ICE AUGER WITH FUEL IN THE GAS TANK INSIDE AN ENCLOSED AREA OR BUILDING.

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.

AVOID INJURY! AN ADULT MUST ALWAYS DO MAINTENANCE AND REPAIR ON ENGINE AND AUGER.

AVOID INJURY! ENGINE MUST BE SHUT-OFF, COOL, AND SPARK PLUG WIRE REMOVED BEFORE ANY REPAIR OR MAINTENANCE CAN BE DONE.

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.
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

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 below, under the section ordering repair parts.

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.

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, write or order online @ www.ardisam.com:

Ardisam, Inc.
1360 First Avenue, Cumberland, Wisconsin 54829
1-800-345-6007 • 1-715-822-2415
E-mail: info@ardisam.com

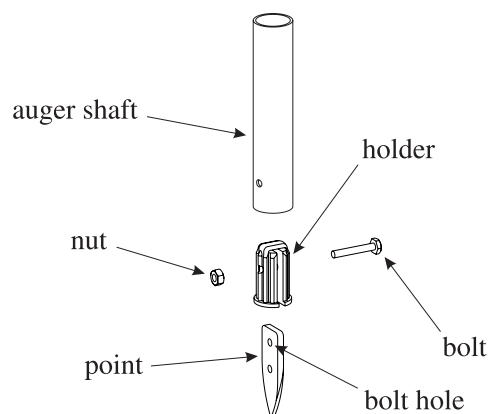
Please include the following information with your order:

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

⚠ CAUTION

AVOID INJURY! AUGER BLADES AND POINT ARE EXTREMELY SHARP. USE CAUTION WHEN REMOVING & REPLACING.

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.

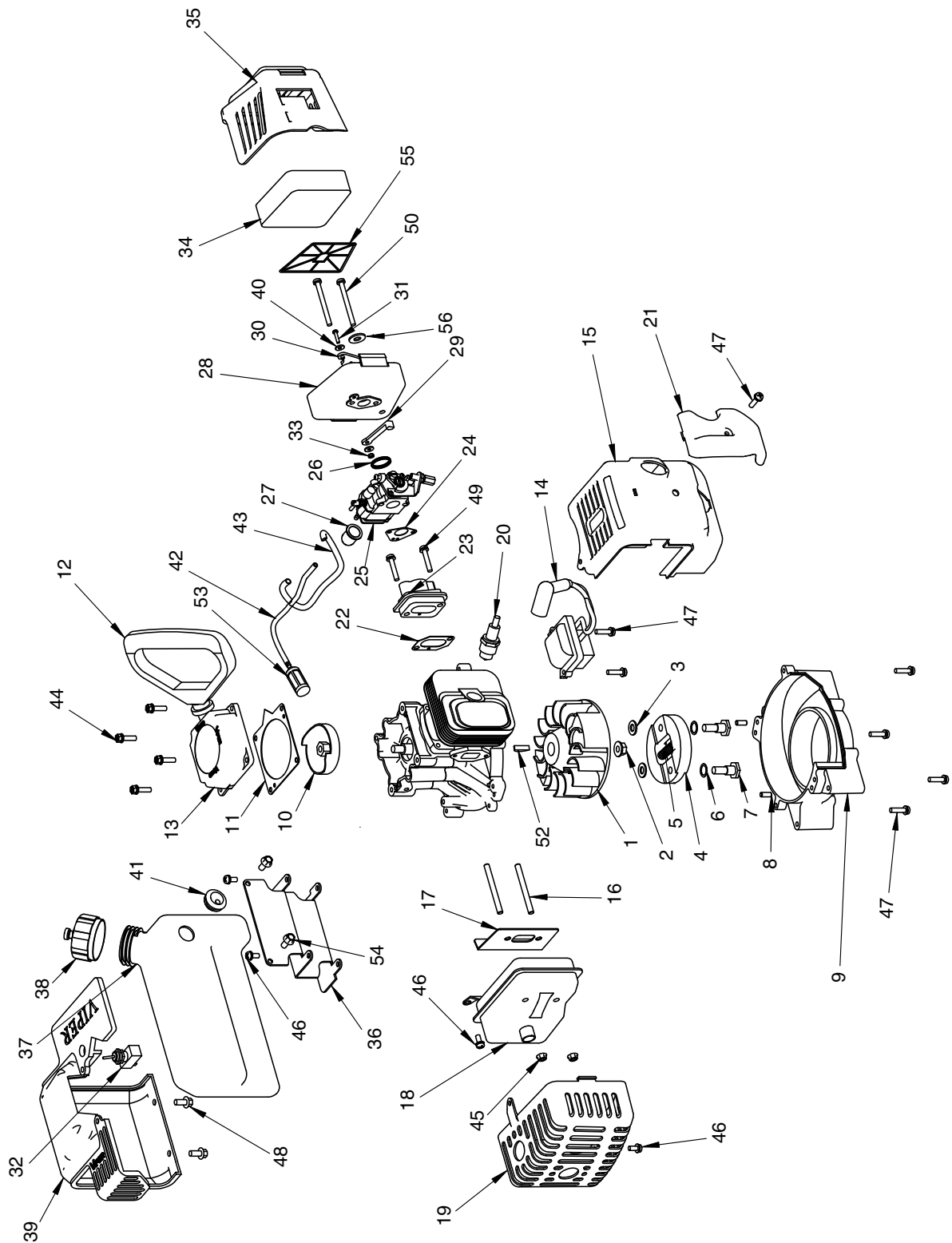


TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDY/ACTION
Engine will not start	1. Power switch off	1. Flip switch to ON position
	2. Spark plug wire disconnected	2. Connect spark plug wire to spark plug
	3. Out of fuel	3. Refuel
	4. Spark plug wet, faulty or improperly gapped	4. Clean, replace or gap spark plug
Engine runs rough, floods during operation	1. Dirty air filter	1. Clean or replace air filter
	2. Choke partially engaged	2. Turn off choke
	3. Carburetor out of adjustment	3. Call factory
Engine is hard to start	1. Stale fuel	1. Drain old fuel and replace with fresh. Use gas stabilizer at end of season
	2. Spark plug wire loose	2. Make sure spark wire is securely attached to spark plug
	3. Dirty carburetor	3. Clean carburetor, use gas stabilizer, new gas can
Engine misses or lacks power	1. Clogged fuel filter	1. Remove and clean or replace
	2. Clogged air filter	2. Clean or replace
Engine runs, then quits	1. Gas cap not venting	1. Open manual venting screw on gas cap all the way
Auger turns at idle	1. Idle speed too high	1. Adjust idle speed lower
	2. Broken clutch spring	2. Replace both springs
Auger turns, but has no power	1. Choke on	1. Turn off choke after engine is running
	2. Carburetor out of adjustment	2. Call factory
	3. Broken transmission	3. Call factory
	4. Worn clutch shoes	4. Replace clutch shoes and springs
	5. Worn engine lower seat	5. Call factory
Auger jumps on ice	1. Blades damaged or sharpened incorrectly	1. Replace with new blades, or have blades sharpened at factory
Auger cuts slowly	1. Dull blades	1. Buy new blades, or have blades sharpened at factory
	2. Damaged point	2. File point, or replace point

Contact service provider if above remedies fail.

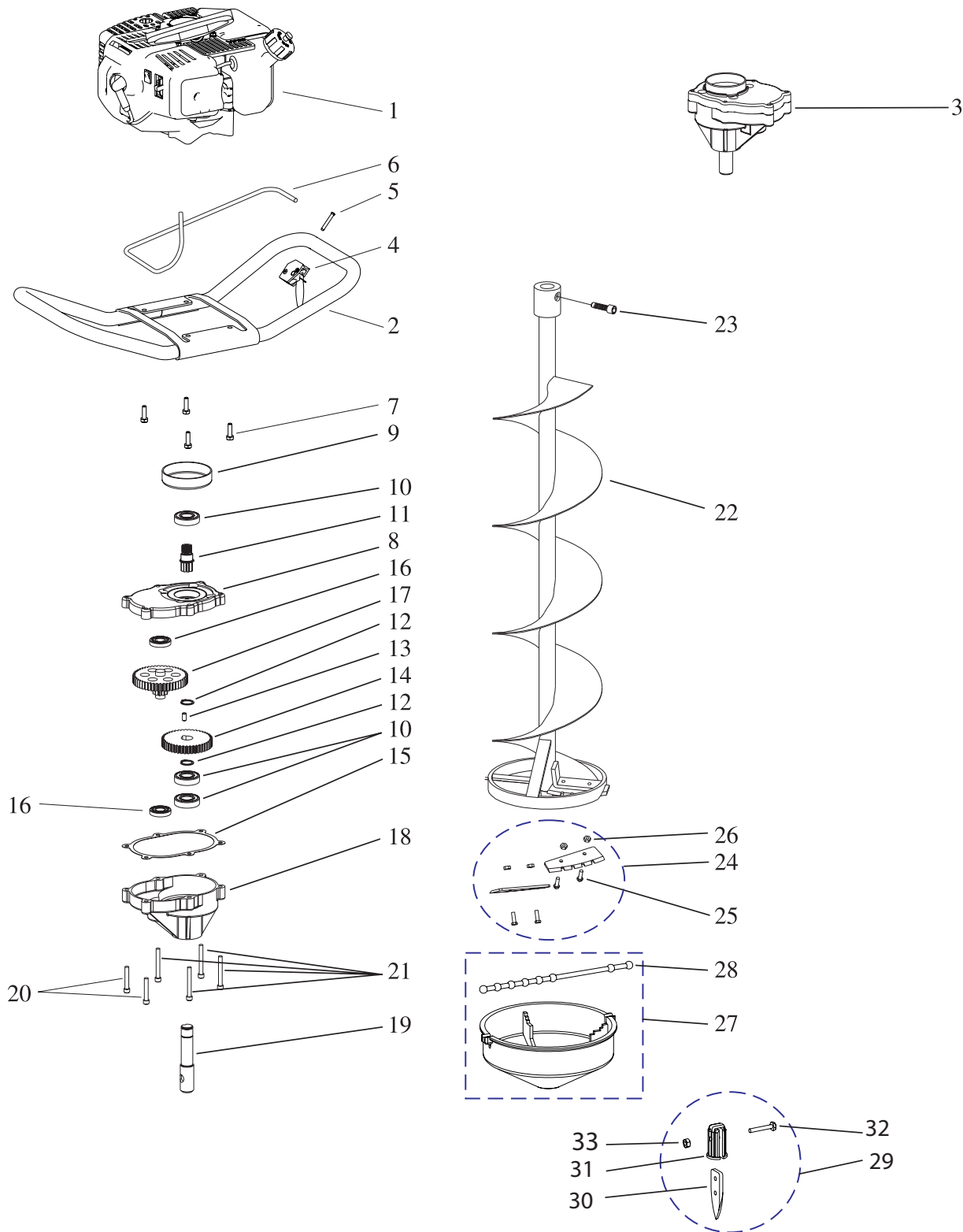
M43 MAKO ENGINE PARTS EXPLOSION



M43 MAKO ENGINE PARTS LIST

KEY NO.	PART NO.	DESCRIPTION	QTY.	KEY NO.	PART NO.	DESCRIPTION	QTY.
1	300484	FLYWHEEL, MAGNETO	1	36	56105	BRACKET, GAS TANK	1
2	300337	NUT, FLANGE M8	1	37	300331	GAS TANK	1
3	300462	WASHER, ROTOR	2	38	300401	GAS CAP, MANUAL VENTING	1
4	300413	CLUTCH ROTOR ASSEMBLY	1	39	300332	SHROUD, GAS TANK	1
5	300412	SPRING, CLUTCH	1	40	3004155*	WASHER, CHOKE LEVER	2
6	300449	WASHER, SPRING	2	41	300466	GROMMET, GAS TANK	1
7	300450	BOLT, SHOULDER	2	42	300498	HOSE, FUEL LINE	1
8	300467	PIN, LOCATING	2	43	300490	PRIMER LINE HOSE	1
9	3004110	MOUNT RING & SHROUD	1	44	300335	BOLT W/WASHER PHILLIPS HH	4
10	300491	RECOIL CLUTCH	1	45	300492	NUT, FLANGE M6	2
11	300429	PLATE, RECOIL	1	46	300471	BOLT W/WASHER M5 X 12MM	4
12	300334	HANDLE, RECOIL	1	47	300439	BOLT W/WASHER PH M5 X 18MM	7
13	300333	RECOIL	1	48	300336	BOLT HH M6 X 10MM	2
14	300472	IGNITION COIL	1	49	300438	BOLT W/WASHER M5 X 25MM	2
15	300482	SHROUD, ENGINE	1	50	300456	BOLT M5 X 50MM	2
16	300493	BOLT, STUD M6 X 62MM	2	51	--	--	--
17	300475	GASKET, MUFFLER	1	52	300338	KEY, FLYWHEEL	1
18	300474	MUFFLER	1	53	3004103	FUEL FILTER	1
19	300473	COVER, MUFFLER	1	54	300351	BOLT HH M6 X 8MM	2
20	BM6A	SPARK PLUG	1	55	3004157	PLATE, REINFORCEMENT	1
21	300483	COVER, ENGINE SHROUD	1	56	3004159	WASHER, PRIMER HOSE RETENTION	1
22	300476	GASKET, INTAKE	1	-	300470	FUEL LINE HOSE & FILTER	1
23	300478	WINDPIPE, INTAKE	1	-	3004103	FILTER, FUEL	1
24	300479	GASKET, CARBURETOR	1	-	3004114	KIT, CARBURETOR REPAIR	1
25	300486	CARBURETOR	1	-	KITTU101	KIT, TUNE-UP (INCLUDES SPARK PLUG, BOTTLE OF VIPER 2-CYCLE OIL & 1 PACKAGE OF STA-BIL FUEL STABILIZER)	1
26	300481	O-RING, CARBURETOR	1	-	*3004160	AIR FILTER BASE MUST BE ORDERED AS ASSEMBLY UNIT ONLY	1
27	3004109	PRIMER BULB	1				
28	30041601*	BASE, INTAKE	1				
29	3004151*	CHOKE LEVER, SIDE MOUNT	1				
30	3004152*	COVER, CHOKE	1				
31	3004153*	BOLT CHOKE	1				
32	300524	SWITCH, TOGGLE	1				
33	3004154*	NUT, NYLOC, CHOKE LEVER	1				
34	3004156	AIR FILTER	1				
35	3004161	COVER, AIR FILTER	1				

M43 MAKO POWERHEAD & AUGER PARTS EXPLOSION



M43 MAKO POWERHEAD & AUGER PARTS LIST

KEY NO.	PART NO.	DESCRIPTION	QTY.
1	300416	GAS ENGINE, 43CC	1
2	1027F	HANDLEBAR	1
3	3004119	TRANSMISSION COMPLETE	1
4	4819	TRIGGER ASSEMBLY, LONG THROW	1
5	4814	BOLT 10-24 X 1-1/4 PPH	1
6	4811	THROTTLE CABLE	1
7	90148	BOLT 1/4-20 X 3/4 HH GR5 BLK ZN W/PATCH	4
8	3004111	GEAR CASE TOP	1
9	3004100	CLUTCH DRUM	1
10	8922	BALL BEARING R12 DOUBLE LIP	3
11	9814	GEAR 7T PINION THREADED	1
12	8924	SNAP RING	2
13	8915	DOWEL PIN STEEL 1/4" X 1/2"	1
14	8912	GEAR 44T 3/4" HOLE	1
15	8919	GASKET	1
16	8923	BALL BEARING R10	2
17	9214	GEAR 10T/48T ONE-PIECE CLUSTER	1
18	8939	GEAR CASE BOTTOM	1
19	8913	SHAFT OUTPUT 7/8"	1
20	8929	BOLT 1/4-20 X 1-1/2 SHCS	2
21	90149	BOLT 1/4-20 X 2 SHCS F-T W/PATCH	4
22	QT8N	ICE AUGER 8" QUANTUM	1
	QT9N	ICE AUGER 9" QUANTUM	1
	QT10N	ICE AUGER 10" QUANTUM	1

KEY NO.	PART NO.	DESCRIPTION	QTY.
23	8955	BOLT 3/8-16 X 1-1/4 SHCS	1
24	QB8	ICE BLADES 8" QUANTUM, COMPLETE SET OF 2 BLADES	1
	QB9	ICE BLADES 9" QUANTUM, COMPLETE SET, SET OF 2 BLADES	1
	QB10	ICE BLADES 10" QUANTUM, COMPLETE SET OF 2 BLADES	1
25	IB5816	BOLT 5MM X 0.8 X 16MM HH	4
26	IN58	NUT-NYLOC 5MM X 0.8	4
27	232A	BLADE PROTECTOR KIT 8" QUANTUM	1
	233A	BLADE PROTECTOR KIT 9" & 10" QUANTUM	1
28	8651	RUBBER STRAP	1
29	90129	ICE POINT REPLACEMENT ASSEMBLY	1
30	90166	POINT	1
31	90165	HOLDER, POINT	1
32	90136	BOLT 10-24 X 1-1/4 HH STAINLESS	1
33	53606	NUT 10-24 HEX NYLOC	1

Eskimo®

MAKO ICE AUGER POWERHEADS

Warranty Terms and Conditions

PRODUCT WARRANTY: 2-YEAR LIMITED WARRANTY

Ardisam, Inc., a manufacturing company, warrants this **ESKIMO® ICE AUGER POWERHEAD** to be free from defects in the material or workmanship for a period of two years from the date of purchase. During the two-year warranty of this product, Ardisam will, at their discretion, furnish parts and labor to correct any defect caused by faulty material or workmanship. Any unit used in a commercial application is covered for a period of 90 days after purchase. This warranty applies to the original owner with a proof of purchase and is not transferable. This guarantee is void unless the warranty card is properly filled out and received by Ardisam, Inc., within 30 days of purchase or go to www.GetEskimo.com for online registration.

For replacement parts, phone 800-345-6007 or go online to www.GetEskimo.com.

ENGINE WARRANTY: 2-YEAR LIMITED WARRANTY

Ardisam, Inc., a manufacturing company warrants its Viper Engines under a two-year limited warranty to be free from defects in materials and workmanship for the service life of the product not to exceed twenty four consecutive months from the date of purchase for consumer applications. As an Ardisam Viper small engine owner, you are responsible for executing proper maintenance listed in your Operating and Maintenance Instructions. The warranty period begins on the date of purchase by the first retail consumer or commercial end user, and continues for the period of time stated above.

*These warranties apply only to products which have not been subjected to negligent use, misuse, alteration, accident, unauthorized parts, failure to use proper fuel and oil, or if repairs have been performed at non-authorized service centers. These warranties supersede all other warranties either expressed or implied and all other obligations or liabilities on our part. Ardisam, does not assume, and does not authorize any other person to assume for us, any liability in connection with the sale of our products. To be at "No Charge," warranty work must be sent directly to Ardisam, Inc. or one of our authorized service centers and performed by them. To obtain warranty service and/or replacement instructions, contact our customer service department at 800-345-6007 Monday through Friday from 8 a.m. to 5 p.m. or visit www.ardisam.com. If you choose to ship your product to Ardisam for warranty repair, you must first have prior approval from Ardisam by calling our customer service department at 800-345-6007 for a return material authorization number (RMA#). Under these circumstances, all items must be shipped prepaid. Ardisam will at no charge, repair or replace, at their discretion, any defective part which falls under the conditions stated above. Ardisam retains the right to change models, specifications and price without notice.



ESKIMO

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GetEskimo.com

Explanation of Emissions Control Warranty Provisions

Viper Engines are designed, built and equipped to meet all EPA requirements. It warrants that it is free from defects in material and workmanship that could cause failure to the warranted part; and that it is identical in all material respects to the engine described in the manufacturer's application for certification. When a warrantable condition exists, Viper will repair your engine at no cost to you, including parts and labor. The engine emissions label will indicate certification information. If the purchaser is in need of a warrantable repair and is not within 100 miles distance from an Ardisam authorized repair center, Ardisam will pay for shipping costs to and from an authorized Ardisam repair center.

Listed below are the parts covered by the emissions control systems warranty. Some parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part. Coverage under this warranty includes only the parts listed below (the emission and evaporation control systems) if so equipped:

- Air Filter Assembly (only to the first scheduled replacement point)
- Fuel Filter (only to the first scheduled replacement point)
- Carburetor
- Fuel Lines, Fuel Line Fittings and Clamps
- Fuel Metering Valve (if equipped)
- Evaporative System (if equipped)
 - Canister (if equipped)
 - Canister filter (if equipped)
 - Vapor hose (if equipped)
 - Orifice connector (if equipped)
 - Fuel tank
 - Fuel cap
 - Primer bulb canister (if equipped)
- Spark Plugs
- Magneto Ignition System
- Muffler Assembly

LIMITATIONS

The Emission Control Systems Warranty shall not cover any of the following:

- a) Repair or replacement required because of misuse or neglect, improper maintenance, repairs improperly performed or replacements not conforming to Ardisam, Inc. specifications that adversely affect performance and/or durability and alterations or modifications not recommended or approved in writing by Ardisam, Inc.
- b) Replacement of parts and other services and adjustments necessary for required maintenance at or after the first scheduled replacement point;
- c) Consequential damages such as loss of time, inconvenience, loss of use of the engine or equipment, etc.
- d) Diagnosis and inspection fees that do not result in eligible warranty service being performed; and
- e) Any add-on or modified part, or malfunction of authorized parts due to the use of add-on or modified parts.

These items will be covered for a period of **two years** from the date of the original purchase. Viper warrants that: the components are designed, built and equipped so as to conform with all applicable regulations adopted by the EPA; that they are free from defects in material and workmanship that could cause failure to the engine or other; and that the components used are identical in all material respects to the engine described in the manufacturer's application for certification. The warranty period begins on the date the engine is originally purchased.

MAINTENANCE AND REPAIR REQUIREMENTS

The owner is responsible for the proper use and maintenance of the engine. Ardisam, Inc. recommends that all receipts and records covering the performance of regular maintenance be retained in case questions arise. If the engine is resold during the warranty period, the maintenance records should be transferred to each subsequent owner. Ardisam, Inc. reserves the right to deny warranty coverage if the engine has not been properly maintained; however, Ardisam, Inc. may not deny warranty repairs solely because of the lack of repair maintenance or failure to keep maintenance records.

Normal maintenance replacement or repair of emission control devices and systems may be performed by any repair establishment or individuals; however, warranty repairs must be performed by an Ardisam authorized service center. Any replacement parts or service that is equivalent in performance and durability may be used in non-warranty maintenance or repairs, and shall not reduce the warranty obligations of the engine manufacturer.

The warranty on emissions-related parts is as follows:

- Any warranted part that is not scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the warranty period stated above. If any such part fails during the period of warranty coverage, that part will be repaired or replaced at no charge to the owner. Any such part repaired or replaced under the warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled only for regular inspection in the owner's manual supplied, is warranted for the warranty period. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part will be repaired or replaced at no charge to the owner. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- Add on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any nonexempted add on or modified parts by the owner will be grounds for disallowing a warranty claim. The manufacturer will not be liable to warrant failures of warranted parts caused by the use of a nonexempted add on or modified part.

DP0951 CE Declaration

**EC DECLARATION
OF CONFORMITY****Name and Address of the manufacturer:**

Ardisam Manufacturing Inc.
1690 Elm Street, Cumberland,
WI U.S.A 54829

**Name and Address of person authorised
to compile the technical file:**

Mr Andrew Clark, Designplus (Eng.) Ltd.,
10 Chapel Lane, West Bergholt, Colchester, Essex, CO6 3EG.
United Kingdom.

Description of Equipment:

Ice Auger

Model / Type:

Shark Z51
Mako M43
Stingray S33

Serial No.:

25,000 – 99,999

**Directives / Conformity Assessment
Procedures:**

Machinery Directive (2006/42/EC) / Annex VIII
EMC Directive (2004/108/EC) / Art.10.1

Technical standards and specifications:

EN 12100-1: 2003 Safety of machinery. Basic concepts, general principles
for design – Part 1: Basic terminology, methodology.
EN 12100-2: 2003 Safety of machinery. Basic concepts, general principles
for design – Part 2: Technical principles and specifications.

Declaration:

**The person signing below declares that the above named equipment
fulfils all the relevant provisions of the stated directives.**

Place of Declaration & Date:

Ardisam Inc., Cumberland, WI, USA

April 2010

Signed:**Printed Name of Authorised Signatory:**

Kirk Hyatt

Position in Company:

Product Development Manager

Ardisam Ice Augers
Page 1 of 1

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Eskimo®

ICE FISHING GEAR

Eskimo, Division of Ardisam, Inc.
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E-mail: info@ardisam.com

All weights, specifications and features are approximate and are subject to change without notice. Due to continuous product improvements, product images may not be exact. Items used for props not included. Some assembly may be required.

