

Earthquake®

OPERATOR'S MANUAL & PARTS EXPLOSIONS E43 EARTH AUGER POWERHEAD



INTRODUCTION

THANK YOU . . .

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

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REGISTRATION

Record your model number and serial number in the space provided for easy reference. 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 _____

Date of Purchase _____

Place of Purchase _____

WARRANTY

Earthquake, a division of Ardisam Incorporated, offers a **one year** limited warranty to be free from defects in materials and workmanship for the service life of the product including the engine, not to exceed twelve consecutive months from the date of purchase. This warranty applies to the original owner with a proof of purchase and is not transferable. This warranty applies only to products which have not been subjected to negligent use, misuse, alteration, accident or if repairs have been made by anyone outside our factory. 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. 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 replacement instructions, contact our customer service department at 800-345-6007 or by writing to: Ardisam, Inc., 1690 Elm Street, Cumberland, WI 54829. All items must be shipped prepaid. Ardisam, Inc. 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.

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 Earthquake 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.

- 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 earth auger will not turn in a hole, turn engine off and allow to cool before attempting to remove it manually.
- Use only original equipment parts from Ardisam including all nuts and bolts.

CAUTION

CAUTION INDICATES YOU CAN BE HURT OR YOUR EQUIPMENT DAMAGED 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.

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: hot 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, 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 and gas cap vent screw unscrewed.
- 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.
- When storing, screw down gas cap vent screw tightly.
- 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.

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.

This engine is designed to operate using a catalytic converter which contributes to the engine's compliance with the EPA.

CAUTION

HOT GASES ARE A NORMAL BY-PRODUCT OF A FUNCTIONING CATALYTIC CONVERTER. FOLLOW ALL SAFETY INSTRUCTIONS TO PREVENT BURNS AND 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

Before starting your powerhead engine, make sure the black throttle cable housing is seated all the way into the brass ferrule at the engine side of the cable.

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 throughout the life of the engine. Use unleaded regular gas only.

Mixture

Run earth 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 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 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 EARTH AUGER UNTIL YOU HAVE READ THE PREVIOUS SECTION OF THIS MANUAL. IF YOU HAVE READ THESE, FOLLOW THE STEPS BELOW TO START YOUR EARTH 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.

IMPORTANT

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

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.

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.

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.
3. Never run engine indoors. Exhaust fumes are deadly.
4. Do not use an earth auger in the ice.
5. To attach auger to powerhead, align hole at top of auger shaft with the output shaft hole. Insert 3/8-16 x 1-1/2" bolt and secure bolt with provided 3/8" bi-way lock nut using a wrench.

USING THE SCREW TYPE, MANUAL VENTING GAS CAP

Your power earth 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 earth 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. 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 in an upright position 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 hose 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 rocker switch to the **ON** position.
6. Squeeze throttle control with right hand. 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 unit fires or runs. 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 rocker 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. If blade performance decreases, turn unit off and disconnect spark plug wire. Carefully inspect cutting edge of blade for any signs of wear. If blades show any of these signs, they need to be sharpened or replaced.

ENGINE MAINTENANCE

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.

⚠ 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.

Spark Plug

The recommended spark plug is a NGK BM6A which cross references to a Champion CJ8.

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 .030" 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.*

Carburetor

Never tamper with factory setting of the carburetor.

TRANSPORTING YOUR EARTH 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 earth auger. Allow to dry.

LONG TERM STORAGE

If your earth auger will not be used 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).

CAUTION

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

AVOID INJURY! NEVER STORE EARTH 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.

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.

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, 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

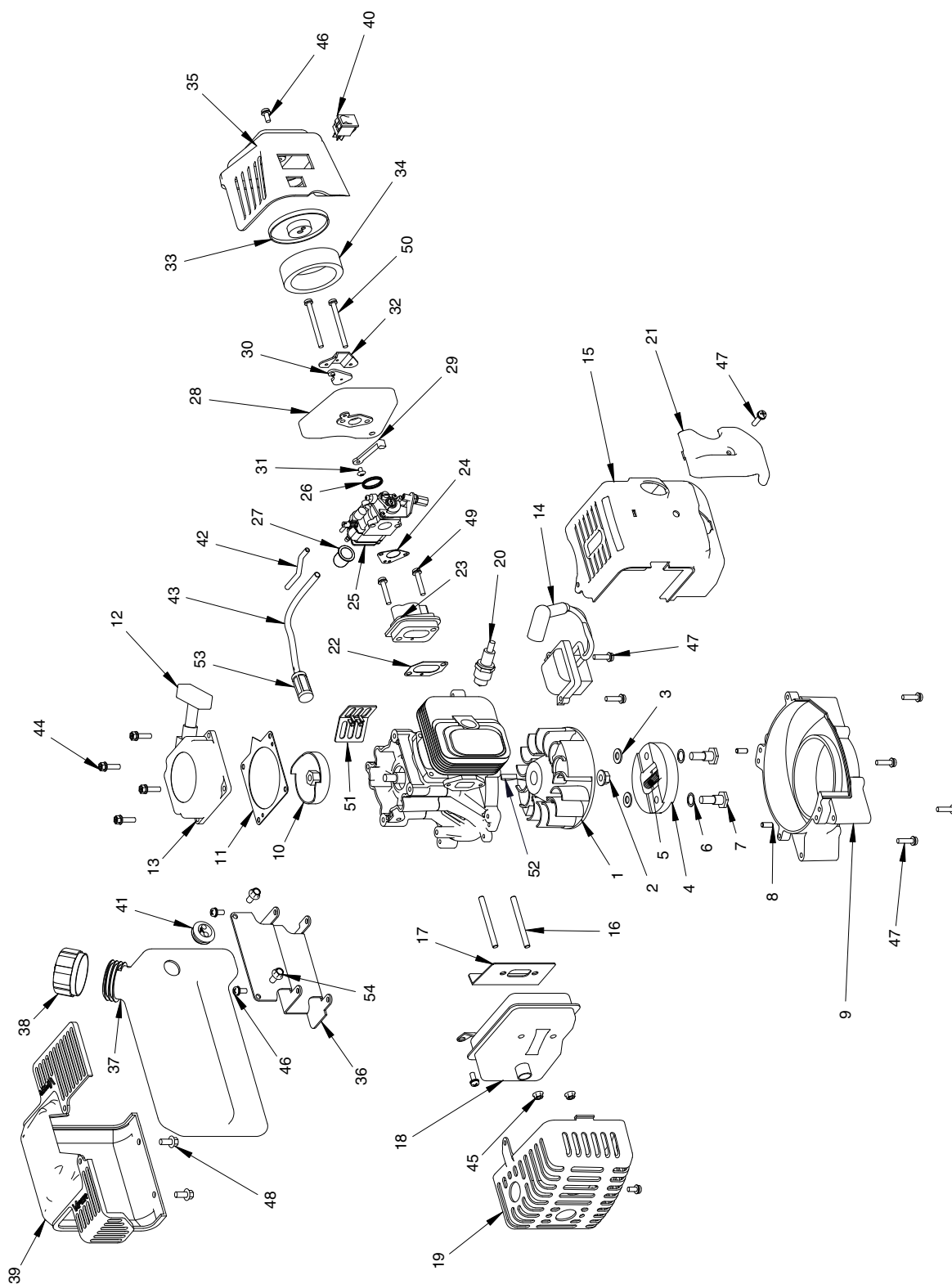
PRACTICE SAFETY AT ALL TIMES. ENGINE MUST BE TURNED OFF AND ALLOWED TO COOL, AND SPARK PLUG WIRE MUST BE DISCONNECTED BEFORE ATTEMPTING ANY MAINTENANCE OR REPAIR.

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 |
| | 5. Throttle control not held open | 5. Squeeze throttle control when pulling recoil handle |
| | 6. Fuel line hose not positioned in bottom of gas tank | 6. Push fuel line down into fuel in gas tank |
| 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 |
| | 4. Throttle control not held open | 4. Prime unit 3 more times, squeeze throttle when pulling recoil handle |
| Engine misses or lacks power | 1. Clogged gas tank | 1. Remove and clean |
| | 2. Clogged air filter | 2. Clean or replace |
| | 3. Carburetor out of adjustment or bad | 3. Call factory |
| | 4. Spark plug wet, faulty or improperly gapped | 4. Clean, replace or gap spark plug |
| Engine runs, then quits | 1. Gas cap not venting | 1. Open manual venting gas cap screw all the way open (counterclockwise) |
| | 2. Plugged fuel filter | 2. Clean or replace |
| | 3. Carburetor out of adjustment or bad | 3. Call factory |
| Engine revs too high | 1. Carburetor out of adjustment | 1. Call factory |
| Auger turns at idle | 1. Idle speed too high | 1. Adjust idle speed lower |
| | 2. Broken clutch spring | 2. Replace spring |
| 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 spring |
| | 5. Worn engine lower seat | 5. Call factory |
| Auger jumps | 1. Blade damaged | 1. Replace with new blade |
| Auger cuts slowly | 1. Dull blade | 1. Buy new blade, or have blade sharpened at factory |
| | 2. Damaged fishtail point | 2. Replace fishtail point |

Contact service provider if above remedies fail at 800-345-6007.

E43 ENGINE PARTS EXPLOSION

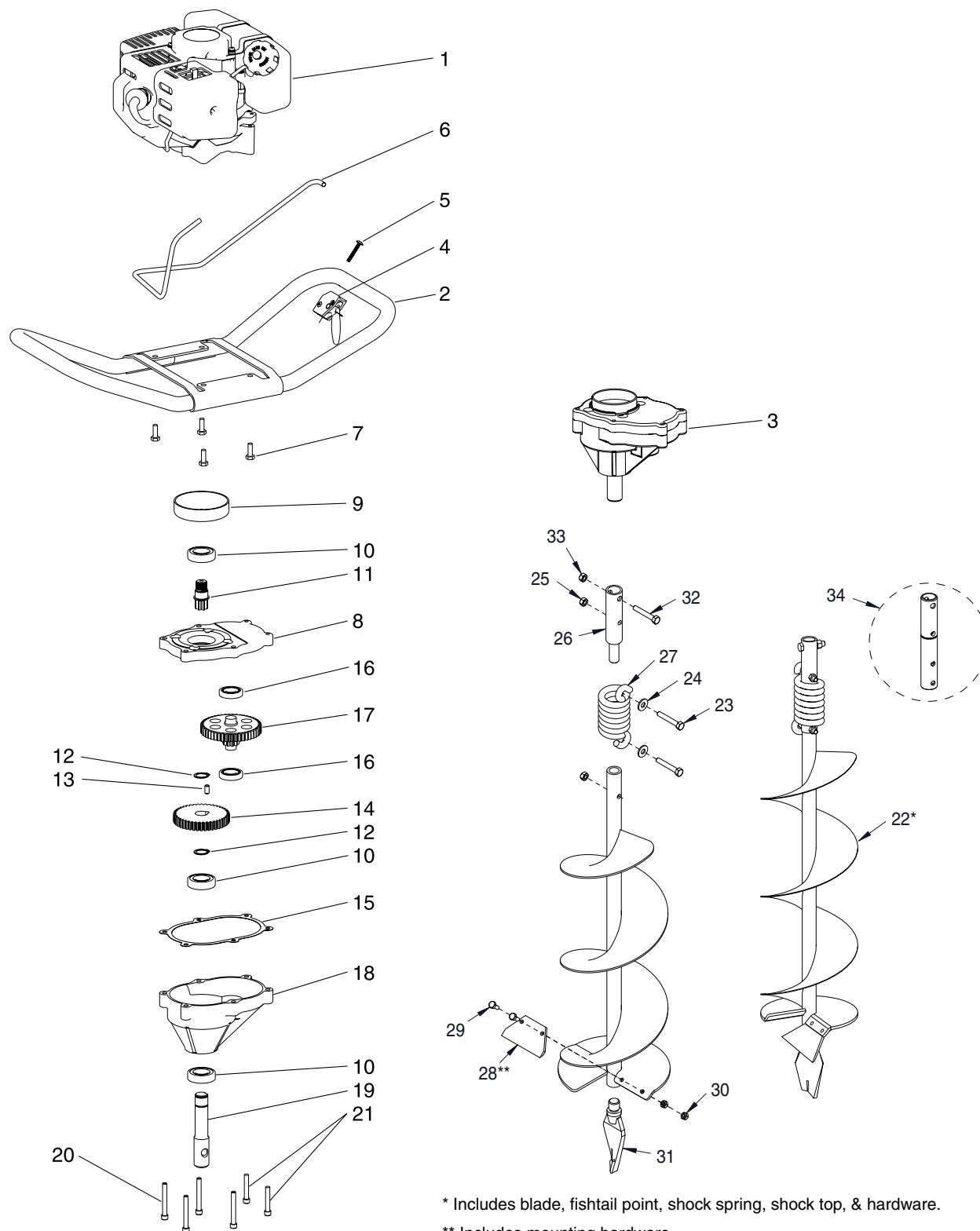


E43 ENGINE PARTS LIST

| KEY NO. | PART NO. | DESCRIPTION | QTY. |
|---------|----------|--------------------------------------|------|
| 1 | 300484 | FLYWHEEL, MAGNETO | 1 |
| 2 | 300337 | NUT, FLANGE M8 | 1 |
| 3 | 300462 | WASHER, ROTOR | 2 |
| 4 | 300413 | CLUTCH ROTOR ASSEMBLY | 1 |
| 5 | 300412 | SPRING, CLUTCH | 1 |
| 6 | 300449 | WASHER, SPRING | 2 |
| 7 | 300450 | BOLT, SHOULDER | 2 |
| 8 | 300467 | PIN, LOCATING | 2 |
| 9 | 3004110 | MOUNT RING & SHROUD | 1 |
| 10 | 300491 | RECOIL CLUTCH | 1 |
| 11 | 300429 | PLATE, RECOIL | 1 |
| 12 | 3004121 | HANDLE, RECOIL (STANDARD) | 1 |
| 13 | 300430 | RECOIL ASSEMBLY WITH STANDARD HANDLE | 1 |
| 14 | 300472 | IGNITION COIL | 1 |
| 15 | 300482 | SHROUD, ENGINE | 1 |
| 16 | 300493 | BOLT, STUD M6 X 62MM | 2 |
| 17 | 300475 | GASKET, MUFFLER | 1 |
| 18 | 4813 | MUFFLER | 1 |
| 19 | 4812 | COVER, MUFFLER | 1 |
| 20 | BM6A | SPARK PLUG | 1 |
| 21 | 300483 | COVER, ENGINE SHROUD | 1 |
| 22 | 300476 | GASKET, INTAKE | 1 |
| 23 | 300478 | WINDPIPE, INTAKE 43CC/51CC | 1 |
| 24 | 300479 | GASKET, CARBURETOR | 1 |
| 25 | 300486 | CARBURETOR | 1 |
| 26 | 300481 | O-RING, CARBURETOR | 1 |
| 27 | 3004109 | PRIMER BULB | 1 |
| 28 | 300329 | BASE, INTAKE | 1 |

| KEY NO. | PART NO. | DESCRIPTION | QTY. |
|---------|----------|-----------------------------|------|
| 29 | 300489 | LEVER, CHOKE | 1 |
| 30 | 300328 | CHOKE COVER | 1 |
| 31 | 3004132 | SCREW, THROTTLE LEVER | 1 |
| 32 | 300455 | PLATE, INTAKE COVER ADAPTER | 1 |
| 33 | 300457 | COVER, AIR FILTER | 1 |
| 34 | 300435 | AIR FILTER | 1 |
| 35 | 300330 | COVER, INTAKE | 1 |
| 36 | 56105 | BRACKET, GAS TANK | 1 |
| 37 | 300331 | GAS TANK | 1 |
| 38 | 300401 | GAS CAP, MANUAL VENTING | 1 |
| 39 | 300332 | SHROUD, GAS TANK | 1 |
| 40 | 1021 | SWITCH, ROCKER | 1 |
| 41 | 300494 | GROMMET, 2-HOLE GAS TANK | 1 |
| 42 | 300497 | HOSE, PRIMER LINE | 1 |
| 43 | 300498 | HOSE, FUEL LINE | 1 |
| 44 | 300335 | BOLT W/WASHER PHILLIPS HH | 4 |
| 45 | 300492 | NUT, FLANGE M6 | 2 |
| 46 | 300471 | BOLT W/WASHER M5 X 12MM | 5 |
| 47 | 300439 | BOLT W/WASHER PH M5 X 18MM | 7 |
| 48 | 300336 | BOLT HH M6 X 10MM | 2 |
| 49 | 300438 | BOLT W/WASHER M5 X 25MM | 2 |
| 50 | 300456 | BOLT M5 X 50MM | 2 |
| 51 | 300326 | GUARD, SCREW | 1 |
| 52 | 300338 | KEY, FLYWHEEL | 1 |
| 53 | 3004103 | FILTER, FUEL | 1 |
| 54 | 300351 | BOLT HH M6 X 8MM | 2 |
| - | 300470 | FUEL LINE HOSE & FILTER | 1 |
| - | 3004113 | KIT, CARBURETOR | 1 |

E43 POWERHEAD & AUGER PARTS EXPLOSION



* Includes blade, fishtail point, shock spring, shock top, & hardware.

** Includes mounting hardware.

E43 POWERHEAD & AUGER PARTS LIST

| KEY NO. | PART NO. | DESCRIPTION | QTY. |
|---------|----------|--------------------------------------|------|
| 1 | E43CC2 | GAS ENGINE, 43CC | 1 |
| 2 | 1027F | HANDLEBAR, FOAMED | 1 |
| 3 | 3004119 | TRANSMISSION COMPLETE | 1 |
| 4 | 4809 | TRIGGER ASSEMBLY | 1 |
| 5 | 4814 | BOLT 10-24 X 1-1/4 PHILLIPS TRUSS HD | 1 |
| 6 | 4811 | THROTTLE CABLE | 1 |
| 7 | 8930B | BOLT 1/4-20 X 3/4 HH GR5 BLK | 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 | 8931F | BOLT 1/4-20 X 2 SHCS F-T | 4 |

| KEY NO. | PART NO. | DESCRIPTION | QTY. |
|---------|----------|--|------|
| 22* | EA2F | EARTH AUGER 2", COMPLETE | 1 |
| | EA3F | EARTH AUGER 3", COMPLETE | 1 |
| | EA4F | EARTH AUGER 4", COMPLETE | 1 |
| | EA6F | EARTH AUGER 6", COMPLETE | 1 |
| | EA8F | EARTH AUGER 8", COMPLETE | 1 |
| | EA10F | EARTH AUGER 10", COMPLETE | 1 |
| 23 | 1423 | BOLT 5/16-18 X 2 HHCS GR5 | 2 |
| 24 | WF516 | WASHER, FLAT 5/16" STANDARD | 2 |
| 25 | 60G56 | NUT 5/16-18 BI-WAY LOCK | 2 |
| 26 | 53684 | SHOCK TOP 1-PC | 1 |
| 27 | 8980 | SHOCK SPRING | 1 |
| 28** | EB4 | EARTH BLADE, 4" | 1 |
| | EB6 | EARTH BLADE, 6" | 1 |
| | EB8 | EARTH BLADE, 8" | 1 |
| | EB10 | EARTH BLADE, 10" | 1 |
| - | EB4HD | HEAVY DUTY EARTH BLADE, 4" | 1 |
| | EB6HD | HEAVY DUTY EARTH BLADE, 6" | 1 |
| | EB8HD | HEAVY DUTY EARTH BLADE, 8" | 1 |
| | EB10HD | HEAVY DUTY EARTH BLADE, 10" | 1 |
| 29 | EBOLT | BOLT 1/4-28 X 5/8 HH GR5 | 2 |
| 30 | ENUT | NUT 1/4-28 BI-WAY LOCK | 2 |
| 31 | 8958HD | FISHTAIL POINT SHARPENED | 1 |
| | 8970 | POINT, EARTH 2" & 3" AUGERS | 1 |
| 32 | 1433 | BOLT 3/8-16 X 1-1/2 HH | 1 |
| 33 | 2104 | NUT 3/8-16 HEX LOCK BI-WAY | 1 |
| 34 | SM | SHOCK MECHANISM (USED ON 6" OR LARGER EARTH AUGERS BEFORE 11/05) | 1 |
| - | EXT6 | DEPTH EXTENSION 6" | 1 |
| | EXT6 | DEPTH EXTENSION 12" | 1 |
| | EXT6 | DEPTH EXTENSION 18" | 1 |

* INCLUDES BLADE, FISHTAIL POINT, SHOCK SPRING, SHOCK TOP, & HARDWARE

** INCLUDES MOUNTING HARDWARE

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