

RASER R1/ RASER FX OWNER'S MANUAL

IMPORTANT NOTES FOR SAFE OPERATION

FAILURE TO FOLLOW THE INSTRUCTIONS CONTAINED HEREIN MAY RESULT IN DAMAGE TO YOUR SCOOTER, DECREASE ENGINE LIFE, CAUSE INJURY TO YOURSELF OR OTHERS AND MAY ALSO VOID THE WARRANTY

WARNING!
THIS SCOOTER IS NOT DESIGNED FOR STANDING
DON'T RAISE THE STEERING BAR TOO HIGH

- ✂ **BEFORE ASSEMBLING AND STARTING THE SCOOTER YOU MUST CAREFULLY READ AND STUDY THIS ENTIRE MANUAL**
- ✂ IT IS THE VEHICLE OWNERS' RESPONSIBILITY TO ENSURE THAT ALL LOCAL AND STATE LEGISLATION REGARDING THE USE OF MOTOR SCOOTERS ARE COMPLIED WITH. PLEASE CHECK WITH YOUR LOCAL DMV OFFICE OR DEPARTMENT OF STATE FOR REQUIREMENTS REGARDING MINIMUM LEGAL DRIVING AGE, LICENSING AND/OR REGISTRATION REQUIREMENTS IF ANY
- ✂ DURING THE FIRST MONTH OF OPERATION – THE “BREAKING-IN” PERIOD - NEVER APPROACH MAXIMUM SPEED, AVOID SUDDEN ACCELERATION AND DO NOT DRIVE AT HIGH SPEEDS FOR EXTENDED PERIODS OF TIME.
- ✂ ALWAYS WEAR A STRONG HELMET AS WELL AS SUITABLE PROTECTIVE GEAR SUCH AS HAND, KNEE AND ELBOW PROTECTORS WHEN DRIVING
- ✂ DO NOT OPERATE THE SCOOTER WITHOUT PROPER FULLY ENCLOSED FOOTWEAR. NEVER DRIVE WITH HIGH HEELS, SANDALS, SLIPPERS OR BARE FEET
- ✂ DO NOT CARRY OR TRANSPORT LARGE OBJECTS ON THE SCOOTER. DO NOT HANG OBJECTS INCLUDING BACKPACKS, SHOPPING BAGS ETC. FROM THE HANDLEBARS OR SEATS

- ✘ DRIVING THIS SCOOTER ON HIGHWAYS OR FREEWAYS IS ILLEGAL AND DANGEROUS
- ✘ DO NOT OPERATE ON SIDEWALKS OR PEDESTRIAN ONLY WALKWAYS
- ✘ ALWAYS ADHERE TO ALL TRAFFIC REGULATIONS. IT IS THE OWNER AND OPERATOR'S RESPONSIBILITY TO ALWAYS BE AWARE OF AND COMPLY WITH ALL OPERATION AND DRIVING REGULATIONS AND REQUIREMENTS
- ✘ THIS SCOOTER MAY NOT BE RIDDEN BY MORE THAN ONE PERSON AT ANY GIVEN TIME. CARRYING PASSENGERS MAY CAUSE DAMAGE TO THE SCOOTER, REDUCE ENGINE LIFE AND IS DANGEROUS
- ✘ DO NOT DRIVE DURING NIGHT OR IN LOW VISIBILITY WITHOUT SUITABLE FRONT HEADLIGHTS
- ✘ DO NOT DRIVE ON MUDDY, WET, SLIPPERY OR SANDY SURFACES OR ROADS COVERED WITH FROST, SNOW OR EXCESSIVE WATER
- ✘ PERSONS UNDER THE AGE OF 18 MUST USE THIS SCOOTER ONLY UNDER ADULT SUPERVISION AND ONLY IF LOCAL OR STATE LEGISLATION PERMITS
- ✘ PERSONS UNDER 16 ARE PROHIBITED FROM OPERATING THIS SCOOTER UNDER ANY CIRCUMSTANCES
- ✘ DO NOT DRIVE UNDER THE INFLUENCE OF DRUGS, ALCOHOL OR AFTER TAKING MEDICATION.
- ✘ DO NOT OPERATE THIS SCOOTER WHEN SUFFERING FROM LACK OF SLEEP OR SEVERE EXHAUSTION
- ✘ OPERATING RESTRICTIONS AND/OR LIMITATIONS AS A RESULT OF ANY MEDICAL, PHYSICAL OR MENTAL DISABILITY APPLYING TO OTHER VEHICLES ALSO APPLY TO THIS SCOOTER. PLEASE CONSULT YOUR PHYSICIAN PRIOR TO STARTING THIS SCOOTER
- ✘ DRIVING AT CONSTANT AND LOWER SPEEDS WILL INCREASE ENGINE LIFE AND REDUCE FUEL CONSUMPTION. DRIVE SLOWLY, CAREFULLY AND STAY SAFE!
- ✘ ALWAYS CHECK ALL MOVING PARTS AS WELL AS NUTS, BOLTS ETC. FOR TIGHTNESS PRIOR TO STARTING AND DRIVING THE SCOOTER
- ✘ FAILURE TO PERFORM SCHEDULED MAINTENANCE AS OUTLINED IN THIS MANUAL MAY RESULT IN DAMAGE TO THE ENGINE AND SCOOTER, DECREASE ENGINE LIFE AND MAY VOID ANY WARRANTY WHETHER EXPRESSED OR IMPLIED
- ✘ THE USE OF THIS VEHICLE FOR RACING, COMPETITION AND COMMERCIAL USE IS NOT ALLOWED AND WILL VOID ANY WARRANTY

- ⚡ DO NOT START THE SCOOTER UNLESS IT HAS BEEN PROPERLY ADJUSTED AND MAINTAINED OR DAMAGE MAY OCCUR
- ⚡ START THE SCOOTER IN A WELL VENTILATED AREA ONLY. THE EXHAUST GAS OF THIS VEHICLE CONTAINS POISONOUS CARBON MONOXIDE. DO NOT START OR DRIVE IN ENCLOSED AREAS OR INDOORS
- ⚡ DO NOT TOUCH ANY PART OF THE ENGINE, EXHAUST OR MUFFLER DURING OR WITHIN 2 HOURS AFTER OPERATION. THESE PARTS BECOME EXTREMELY HOT AND MAY CAUSE SEVERE BURNS IF TOUCHED
- ⚡ DO NOT PLACE ANY PART OF YOUR BODY OR FOREIGN OBJECT ON OR NEAR THE DRIVE BELTS DURING OPERATION OR JUST PRIOR TO STARTING.
- ⚡ KEEP CHILDREN CLEAR OF THE FRONT AND REAR OF THE VEHICLE WHEN STARTING OR OPERATING THE SCOOTER
- ⚡ ANY UNAUTHORIZED MODIFICATIONS OR ATTACHMENTS MADE OR ADDED TO THIS SCOOTER WILL VOID ANY WARRANTY

DRIVE SAFELY

DRIVE CAREFULLY

DRIVE SLOWLY

DISCLAIMER:

IN THE EVENT OF THE PRECEDING OR FOLLOWING INSTRUCTIONS CONTAINED IN THIS MANUAL ARE NOT ADHERED TO, WHETHER IN FULL OR IN PART, NEITHER THE MANUFACTURER, EXPORTER, IMPORTER OR ANY THIRD PARTY DISTRIBUTORS SHALL ASSUME ANY LEGAL OR FINANCIAL LIABILITY FOR, BUT NOT LIMITED TO, INJURY TO THE OWNER, OPERATOR AND/OR ANY THIRD PARTY; DAMAGE TO THE VEHICLE AND/OR OTHER PROPERTY; AND/OR PROSECUTION DUE TO NON-COMPLIANCE WITH STATE OR FEDERAL DRIVING REGULATIONS & REQUIREMENTS

PARTS AND DESCRIPTION

PARTS LIST

PART NR.	DESCRIPTION	QUANTITY
SJ-G001	SCOOTER FRAME / BODY	1
SJ-G002	-	
SJ-G003	FRONT FORK	1
SJ-G004	HEAD SET	1
SJ-G005	STEERING TUBE SET	1
SJ-G006	STEERING BAR SET	1
SJ-G007	HANDLEBAR ASSEMBLY	2
SJ-G008	HANDLEBAR	1
SJ-G009	HANDLEBAR ASSEMBLY COVER	1
SJ-G010	HANDLEBAR ASSEMBLY SCREW	1
SJ-G011	BASE PLATE	1
SJ-G012	-	
SJ-G013	REAR WHEEL BRACKET	1
SJ-G014	ENGINE BRACKET	1
SJ-G015	THROTTLE	1
SJ-G016	THROTTLE LINER ADAPTOR	1
SJ-G017	REAR BRAKE HANDLE	1
SJ-G018	REAR BRAKE LINER	1
SJ-G019	REAR BRAKE DRUM	1
SJ-G020	ENGINE POWER OFF BUTTON	1
SJ-G021	FUEL TANK	1
SJ-G022	40CC GASOLINE POWERED ENGINE	1
SJ-G023	FUEL FILTER	1
SJ-G024	EXHAUST PIPE	1
SJ-G025	STEERING QUICK RELEASE ASSEMBLY	1
SJ-G026	SEAT TUBE	1
SJ-G027	PADDED SEAT	1
SJ-G028	REAR FORWARD AXLE	1
SJ-G029	CONNECTOR PLATE	1
SJ-G030	BEARING SEAT	2
SJ-G031	REAR FORWARD HUB	2
SJ-G032	REAR WHEEL BRACKET BOLT	2
SJ-G033	REAR SUSPENSION BOLT	1

SJ-G034	DRIVE BELT COVER BOLT	2
SJ-G035	FRONT AXLE	1
SJ-G036	FRONT WHEEL SET	1
SJ-G037	FRONT WHEEL WASHER	4
SJ-G038	FRONT WHEEL NUT	2
SJ-G039	REAR WHEEL AXLE	1
SJ-G040	REAR WHEEL FRAME	1
SJ-G041	REAR WHEEL	1
SJ-G042	REAR INNER TUBE	1
SJ-G043	REAR WHEEL HUB	2
SJ-G044	REAR SHOCK ABSORBER	1
SJ-G045	DRIVE WHEEL – SMALL	1
SJ-G046	DRIVE WHEEL – LARGE	1
SJ-G047	DRIVE BELT – ENGINE	1
SJ-G048	DRIVE BELT – WHEEL	1
SJ-G049	ADJUSTMENT SCREW	2
SJ-G050	PARKING STAND	
SJ-G051	DRIVE BELT COVER	1
SJ-G052	REAR REFLECTOR PANEL	1
SJ-G053	MUD GUARD	1
SJ-G054	-	
SJ-G055	FRONT HUB	1
SJ-G056	ENGINE SHOCK REDUCTION GASKET	1
SJ-G057	REAR SUSPENSION CONNECTOR	
SJ-G058	FUEL PUMP BOLT	
SJ-G059	COVER SCREW	1
SJ-G060	REAR CARRY HANDLE	1
SJ-G061	TOOL PACK (NOT SHOWN)	1
SJ-G062	OWNER'S MANUAL (NOT SHOWN)	1
SJ-G063	FUEL / OIL MIXING BOTTLE (NOT SHOWN)	1
SJ-G064	MUFFLER GUARD	1
SJ-G065	C-RING A	2
SJ-G066	C-RING B	2
SJ-G067	FOOT BOARD LOGO ANTI SLIP STICKERS	2
SJ-G068	SPEED CONTROL UNIT (NOT INCLUDED/OPTIONAL EXTRA)	1

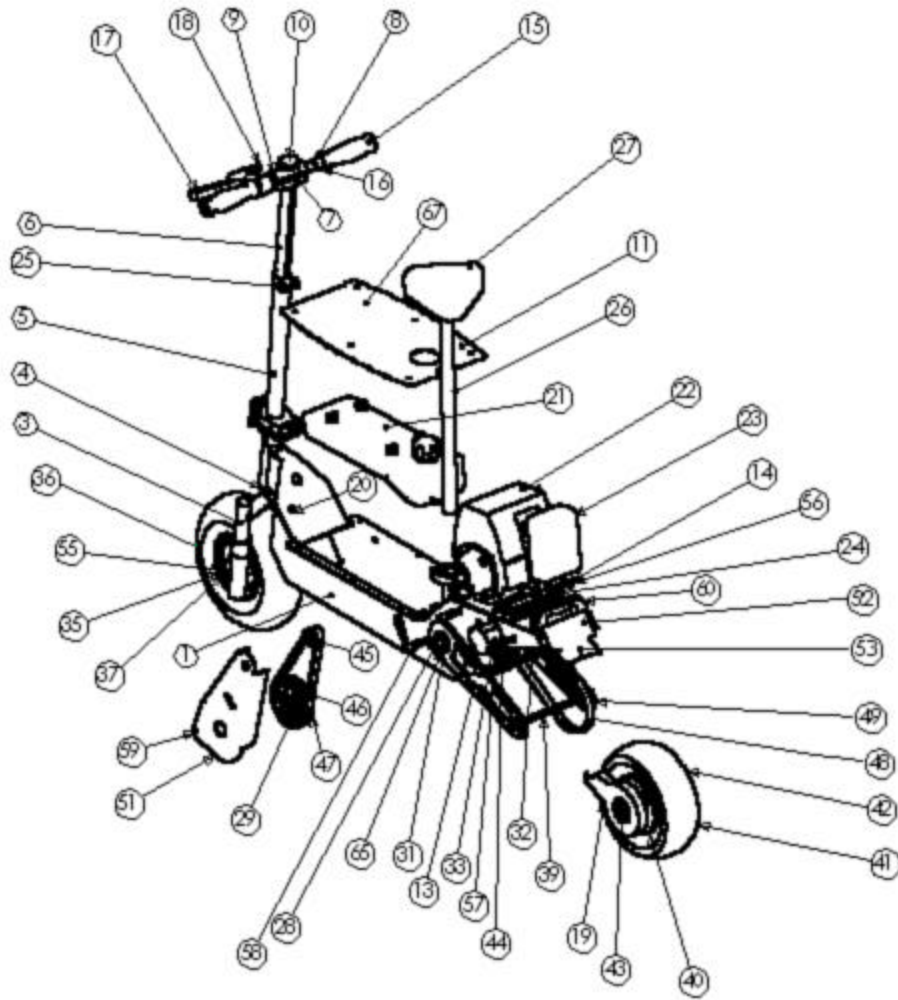


fig. 1 - Locations of parts

ASSEMBLY & PREPARATION

A. UNPACKING

After careful unpacking you should find the following:

1. 1 scooter with handlebars & engine attached
2. 1 seat – separate
3. 1 fuel and oil mixing bottle

4. 1 tool set consisting of spark plug remover/screw driver combination and Allen key.
5. 1 instruction manual
6. 1 warranty registration card



B. ASSEMBLY

1. Place the scooter on a solid level surface and extend the parking stand.
2. Open the quick release lever at the bottom of the steering column and unfold to fully upright position. Securely tighten the quick release lever.
3. Adjust the handlebars to the required height by loosening the quick release lever on center of steering column and tightening securely after required height is achieved.
4. Insert the seat tube into the rear of the foot board and securely tighten the quick release lever.
5. Check tire pressure. Tire pressure must be up to 32 psi.
6. Mix gasoline with 2 stroke lubricating oil as specified below.

C. Mixing and adding fuel to the fuel tank

- ✍ Mix a regular grade unleaded gasoline and a quality-proven motor oil for air-cooled 2 cycle engines.
- ✍ (see fig. 2)
- ✍ **RECOMMENDED MIXING RATIO = Gasoline: Oil = 30: 1**
- ✍ A higher ratio oil will cause excessive smoke and lower ratio will damage the engine.



fig. 2

STARTING & OPERATING THE SCOOTER

A. PRIOR TO STARTING

The following steps are important and must be followed before starting the engine each time it is used.

THOROUGHLY CHECKING YOUR SCOOTER TAKES ONLY A FEW MINUTES AND MAY SAVE YOUR LIFE!

- ✗ **Check the fuel level in the fuel tank** – Ensure that it is fully fueled with the correct fuel/oil mixing ratio
- ✗ **Check the brake operation** – Tightly squeeze the brake lever and firmly push the scooter backwards and forwards. If the scooter moves with the brakes applied then the brakes need replacement or adjustment. Do not drive with worn or defective brakes.
- ✗ **Check the tire tread** – Ensure that at least 1/8 inch tread remains on the tires. If not then you should consider replacement.
- ✗ **Check the tire surface** – Look for uneven surfaces, bumps or embedded objects that could cause tire failure or blowouts. Do not drive if the tire surface is uneven or if objects such as nails or stones are embedded in the tire or tread.
- ✗ **Check the tire pressure** – Tires must be inflated to 32 psi. Driving with too low air pressure in the tire may cause accidents. Never inflate over 32 psi.
- ✗ **Check the throttle for smooth operation** – Rotate the throttle and release a couple of times. Ensure that it smoothly returns to the original position without manual assistance.
- ✗ **Check the steering** – Turn the steering from side to side several times. Ensure that it

can fully turn without sticking.

- ✗ **Check the front wheel** – Lift up the front end of the scooter and spin the front wheel. Ensure that it turns smoothly.
- ✗ **Check the fuel tank cap** – Make sure that it is tightly closed.
- ✗ **Check the front steering column** – Double-check that the handlebar assembly and telescopic extension quick-release levers as well as folding mechanism is firmly tightened.
- ✗ **Check the seat** – Turn and gently pull on the seat to ensure that it is securely tightened.
- ✗ **Check the drive belts** – Check to ensure that both engine and wheel drive belts are in good condition (not torn or frayed) and not too slack.
- ✗ **Check all nuts, bolts and fasteners AGAIN** – Ensure that all wheel nuts, seat and handlebar assembly etc. are securely fastened. Use the included tool kit.

B. STARTING PROCEDURE

Park the vehicle on a level surface

Check for sufficient fuel in the fuel tank

Follow the check-list on previous page

1. Move the choke lever to the “OFF” position.

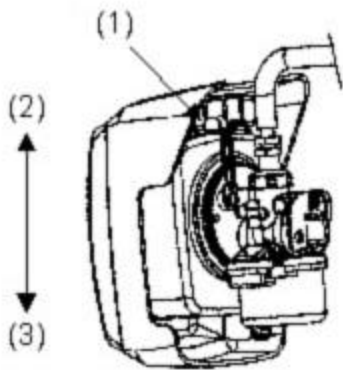


fig. 3

(see *fig. 3*)

(1) Choke lever

(2) UP – “OFF” Position

(3) DOWN – “ON” Position

NOTE: If you want to restart the engine right after it is turned off, move the choke lever to the down position.

2. Turn the throttle about one third to halfway



fig. 4

(see fig. 4)

- (1) Idling
- (2) Starting (1/3~1/2 open)
- (3) Full throttle

NOTE: If you want to restart the engine right after it is just turned off, fully release throttle to the idling position.



fig. 5

3. Pull the starter rope firmly. (see fig.5)
4. After the engine is running, open the choke gradually.
5. Idle for 2 to 3 minutes to warm up the engine prior to driving.

NOTE: Don't accelerate the engine rapidly just after starting since the engine needs time to warm up and for the oil to spread

C. BREAK-IN YOUR ENGINE

VERY IMPORTANT!

DURING THE FIRST MONTH OF OPERATION – THE “BREAKING-IN” PERIOD - NEVER APPROACH MAXIMUM SPEED, AVOID SUDDEN ACCELERATION AND DO NOT DRIVE AT HIGH SPEEDS FOR EXTENDED PERIODS OF TIME.

FOLLOWING THE ABOVE RULES WILL GREATLY ENHANCE LONG TERM PERFORMANCE, ENGINE LIFE AND REDUCE ENGINE TROUBLE

D. STOPPING THE ENGINE

- ✍ Fully release the throttle
- ✍ Press the engine stop button.
- ✍ Turn off the fuel cock.

E. ADJUSTING THE CARBURETOR

By adjusting the fuel flow into the carburetor, you can control the engine idle speed.

Turning the screw (*see fig. 6*) clockwise will increase fuel flow and idle speed and counter-clockwise turns will decrease fuel flow.



fig. 6

MAINTENANCE

A. DAILY INSPECTION

The following steps are important and must be followed before starting the engine each time it is used.

THOROUGHLY CHECKING YOUR SCOOTER TAKES ONLY A FEW MINUTES AND MAY SAVE YOUR LIFE!

- ✗ **Check the fuel level in the fuel tank** – Ensure that it is fully fueled with the correct fuel/oil mixing ratio
- ✗ **Check the brake operation** – Tightly squeeze the brake lever and firmly push the scooter backwards and forwards. If the scooter moves with the brakes applied then the brakes need replacement or adjustment. Do not drive with worn or defective brakes.
- ✗ **Check the tire tread** – Ensure that at least 1/8 inch tread remains on the tires. If not then you should consider replacement.
- ✗ **Check the tire surface** – Look for uneven surfaces, bumps or embedded objects that could cause tire failure or blowouts. Do not drive if the tire surface is uneven or if objects such as nails or stones are embedded in the tire or tread.
- ✗ **Check the tire pressure** – Tires must be inflated to 32 psi. Driving with too low air pressure in the tire may cause accidents. Never inflate over 32 psi.
- ✗ **Check the throttle for smooth operation** – Rotate the throttle and release a couple of times. Ensure that it smoothly returns to the original position without manual assistance.
- ✗ **Check the steering** – Turn the steering from side to side several times. Ensure that it can fully turn without sticking.
- ✗ **Check the front wheel** – Lift up the front end of the scooter and spin the front wheel. Ensure that it turns smoothly.
- ✗ **Check the fuel tank cap** – Make sure that it is tightly closed.
- ✗ **Check the front steering column** – Double-check that the handlebar assembly and telescopic extension quick-release levers as well as folding mechanism is firmly tightened.
- ✗ **Check the seat** – Turn and gently pull on the seat to ensure that it is securely tightened.
- ✗ **Check the drive belts** – Check to ensure that both engine and wheel drive belts are in good condition (not torn or frayed) and not too slack.
- ✗ **Check all nuts, bolts and fasteners AGAIN** – Ensure that all wheel nuts, seat and handlebar assembly etc. are securely fastened. Use the included tool kit.

B. MAINTENANCE SCHEDULE

It is imperative that the scooter is thoroughly checked and maintained regularly to ensure that it is clean and all parts are fully operational. For your own safety and to extend engine and scooter life, please follow the maintenance schedule:

	HR	START-UP	25 Hrs	50 Hrs	100 Hrs
INSPECTION					
FUEL		?			
BOLTS, NUTS ETC.		?			
CLEAN AIR INTAKE			?	?	?
SPARK PLUG			?	?	?
CLEAN FUEL TANK					?
CYLINDER BOLTS					?
ALL ENGINE BOLTS					?
BRAKES & CABLE		?	?	?	?
FUEL FILTER			?	?	?

Failure to maintain your scooter may result in danger to yourself, reduce engine life and void any warranty.

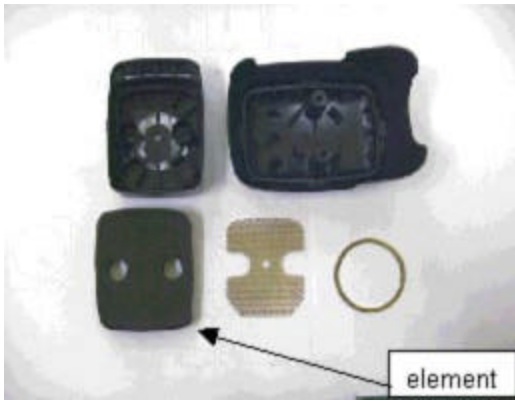
ALWAYS STORE SCOOTER IN DRY PLACE AND AVOID DIRECT SUNLIGHT.

C. PARTS MAINTENANCE

1. AIR CLEANER. (fig.7)

- ⚡ The air cleaner will accumulate dust and must be cleaned periodically. A dirty air cleaner will decrease the scooter power. If riding in very dusty areas, the filter must be cleaned more frequently. Remove the air cleaner cover, and remove the filter from the cleaner case. Check and clean the filter element with warm and soapy water. Rinse with clean water and dry completely before re-installing. If the element is broken or shrunk, please replace.

NOTE: A clogged air filter may increase fuel consumption while reducing the engine power. Operate the scooter without the air filter or with a deformed filter element will quickly ruin the engine.



1. FUEL FILTER

- ✍ Drain the fuel from the tank. Remove the fuel filter and clean.

NOTE: A clogged fuel filter may cause poor acceleration.

1. SPARK PLUG

- ✍ Remove the spark plug, inspect and clean the area around the cylinder cooling fins.

D. LONG-TERM STORAGE

When shutting down the engine for extended periods of time, the following maintenance procedures are required. (fig.6)

1. Open the drain valve on the carburetor as pictured and drain all remaining fuel. Then, turn on the engine and leave it running until it stops. Close the drain valve.
2. Remove the spark plug and fill with 1 to 2 cc of two-cycle oil. Draw the starter rope 2~3 times, and replace the spark plug.
3. Apply anti-rust oil to exposed metal parts such as the throttle cable, brake cable etc.
4. Clean the fuel strainer and suction pipe with gasoline.

TROUBLESHOOTING

1. The engine does not start

- ✍ Check the fuel tank
- ✍ Is the correct ratio of gasoline plus lubricating oil in the fuel tank?
- ✍ Make sure choke is in open position (see page 12).
- ✍ The gasoline may be contaminated with water.
- ✍ The spark plug may need cleaning or replacement

- ✗ The air filter may need cleaning. (see page 16)
- ✗ The fuel filter may need cleaning. (see page 16)
- ✗ The engine may be flooded with gasoline. Wait about 15 minutes and try again.

1. Engine starts but fails to run at high speed.

- ✗ Check if the choke is fully open. (see page 12)
- ✗ Check if the fuel mixture is within correct ratio.
- ✗ The gasoline may be contaminated with water.
- ✗ The air filter may need cleaning. (see page 16)
- ✗ The fuel filter may need cleaning. (see page 16)
- ✗ Adjust fuel flow valve. (see page 13)

1. Engine runs but has no power or acceleration.

- ✗ Check if the choke is fully open. (see page 12)
- ✗ Check if the fuel mixture is within correct ratio.
- ✗ The gasoline may be contaminated with water.
- ✗ The air filter may need cleaning. (see page 16)
- ✗ The fuel filter may need cleaning. (see page 16)
- ✗ Adjust fuel flow valve. (see page 13)

1. Engine fails to run smoothly.

- ✗ Check if the choke is fully open. (see page 12)
- ✗ Check if the fuel mixture is within correct ratio.
- ✗ The gasoline may be contaminated with water.
- ✗ The air filter may need cleaning. (see page 16)
- ✗ The fuel filter may need cleaning. (see page 16)
- ✗ Adjust fuel flow valve. (see page 13)

1. Engine can run at high speed, but stops when idling.

- ✗ The spark plug may need cleaning or replacement