

GASOLINE ENGINE SERIES

160F ● 168F ● 168F-1 ● 173F

177F ● 182F ● 188F ● 192F

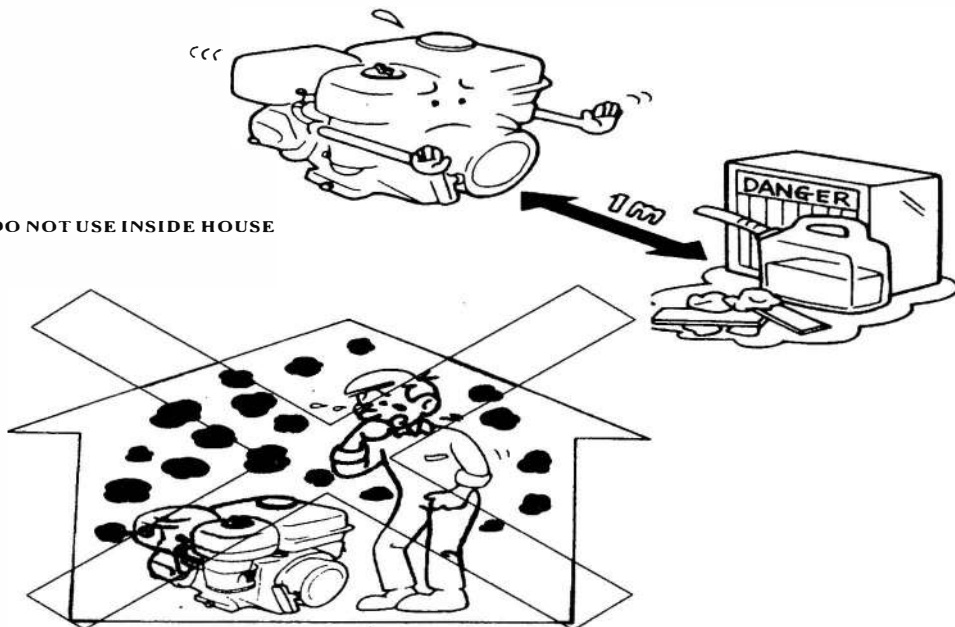
**OWNER'S
MANUAL**



※ GENERAL SAFETY.

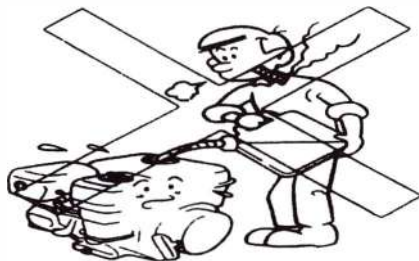
KEEP AWAY FLAMMABLE MATERIAL
MORE THAN 1 METER (THREE FOOT).

DO NOT USE INSIDE HOUSE

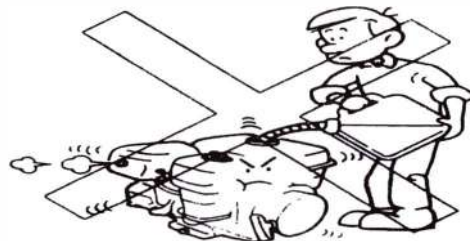


※ GENERAL SAFETY.

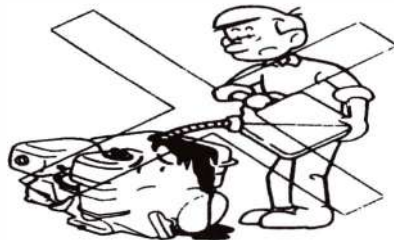
NO SMOKING.



STOP ENGINE WHEN
REFUELING



DO NOT SPILL.



※ PER-OPERATION CHECK



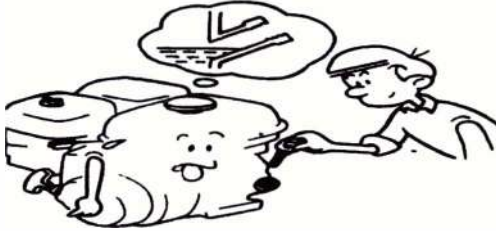
CAUTION: BE SURE TO CHECK THE ENGINE OIL LEVEL AFTER THE ENGINE STOPPED.

**4-STROKE
MOTOR OIL.**

**SAE 10W-30W
SAE 10W-30W**

1. OIL LEVEL

**CHECK THE OIL LEVEL,
IF THE OIL LEVEL IS LOW.**



**FILL THE OIL TO
THE UPPER LEVEL.**



※ PER-OPERATION CHECK

2.FUEL LEVEL



**CHECK THE FUEL LEVEL,
IF THE LEVEL IS LOW**



**NEVER USE AN OIL/GASOLINE
MIXTURE OR DIRTY GASOLINE.**

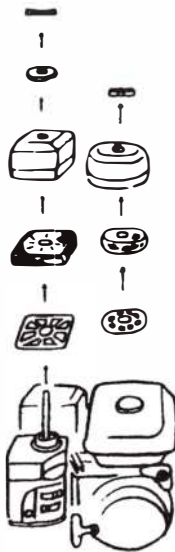
**FILL GASOLINE TO
PROPER LEVEL.**



※ PER-OPERATION CHECK

3. AIR CLEANER

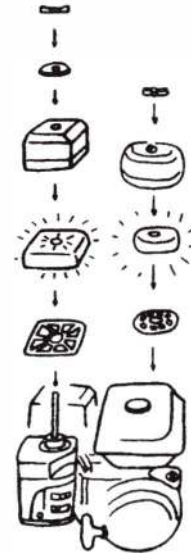
CHECK AIR CLEANER ELEMENT IF IT IS DIRTY.



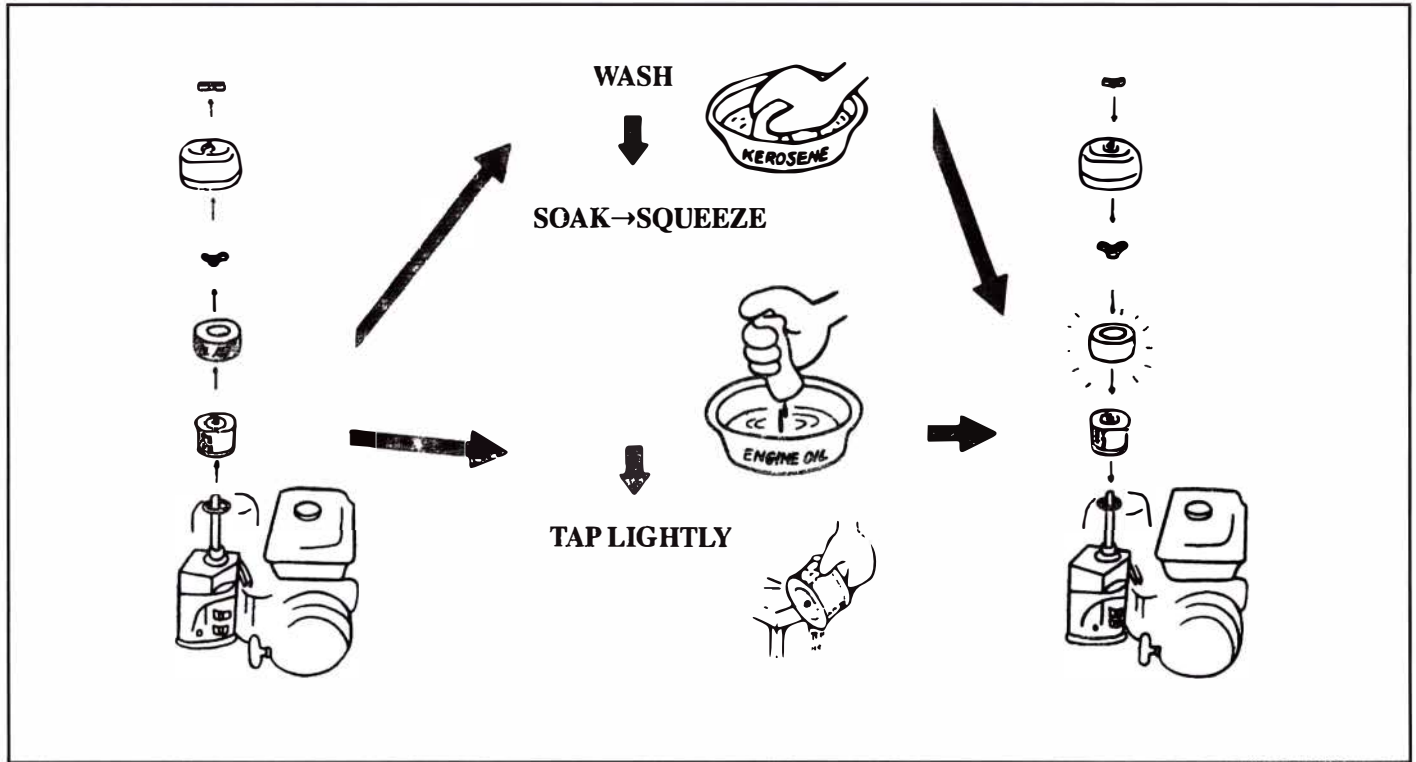
WASH



SOAK SQUEEZE



※ PER-OPERATION CHECK



※ STARTING THE ENGINE.

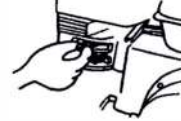
1. TURN THE FUEL VALVE TO THE "ON" POSITION.



2. MOVE THE THROTTLE LEVER LIGHTLY TO THE LEFT.



3. TURN THE CHOKE LEVER TO THE CLOSE POSITION.



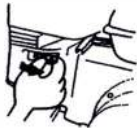
4. TURN THE ENGINE SWITCH TO THE "ON" POSITION.



5. PULL THE STARTER GRIP LIGHTLY UNTIL RESISTANCE IS FELT, THEN PULL BRISKLY.



6. TURN THE CHOKE LEVER TO THE OPEN POSITION.

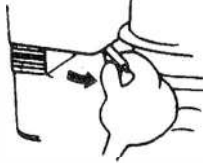


7. SET THE THROTTLE AT THE DESIRED POSITION.

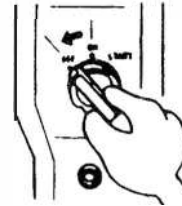


※ STOPPING THE ENGINE.

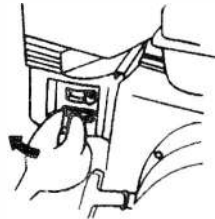
1. MOVE THE THROTTLE LEVER
TO THE RIGHT FULLY



2. TURN THE ENGINE SWITCH TO
THE "OFF" POSITION.



3. TURN THE FUEL VALVE TO
THE "OFF" POSITION.



※ MAINTENANCE

MAINTENANCE SCHEDULE

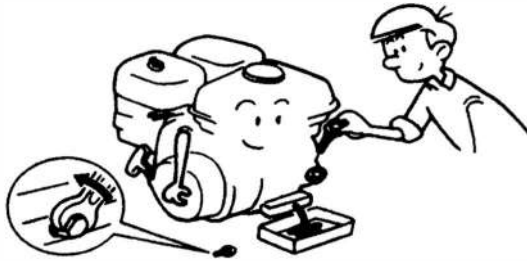


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※ OIL CHANGE

1. REMOVE THE OIL FILLER CAP.



2. REMOVE THE OIL DRAIN PLUG, AND DRAIN THE OIL.



3. TIGHTEN THE OIL DRAIN PLUG AND FILL THE OIL TO THE EDGE OF THE OIL FILLER NECK.

※ STARK PLUG

1.REMOVE THE SPARK PLUG.



2.CLEAN THE DEPOSIT.



3.MEASURE THE CLEARANCE.

0.7-0.8mm(0.028-0.031 in)



※ CARBURETOR

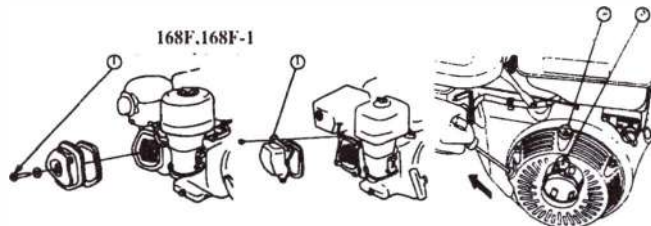
1.REMOVE THE
CARBURETOR CAP.



2.CLEAN THE CARBURETOR CAP.



※ VALVE CLEARANCE



- 1.REMOVE THE CYLINDER HEAD COVER.①
- 2.SET THE MARK ② ALIGN WITH THE MARK ② AT THE TIME OF THE COMPRESSION STROKE (BOTH VALVES FULLY CLOSED).
- 3.INSERT A FEELER GAUGE.④

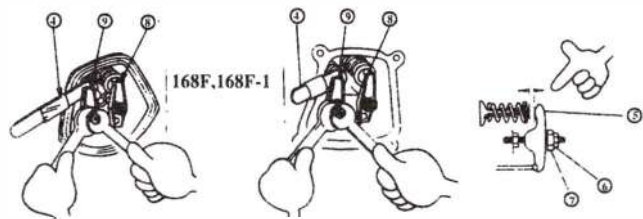
IF ADJUSTMENT IS NECESSARY,PROCEED AS FOLLOWS:

- a.HOLD THE ROCKER ARM PIVOT AND LOOSEN THE PIVOT LOCK NUT.
- b.TURN THE ROCKER ARM PIVOT TO OBTAIN THE SPECIFIED CLEARANCE.
- c.RETIGHTENS THE LOCK NUT WHILE HOLDING THE ROCKER ARM PIVOT.
- d.RECHECK VALVE CLEARANCE AFTER TIGHTENING THE LOCK NUT.

STANDARD VALVE CLEARANCE

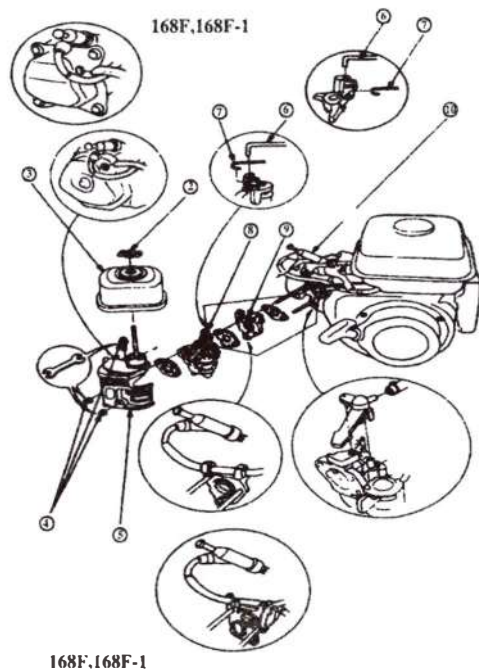
INTAKE $0.15 \pm \text{mm}(0.006 \pm 0.001\text{in})$

EXHAUST $0.20 \pm \text{mm}(0.008 \pm 0.001\text{in})$

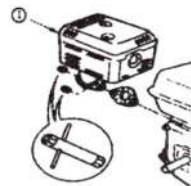


- ⑤ROCKER ARM
- ⑥LOCK NUT
- ⑦PIVOT
- ⑧INTAKE VALVE
- ⑨EXHAUST VALVE

※ CYLINDER HEAD CLEANING



168F,168F-1



168F,168F-1

※ CYLINDER HEAD CLEANING

CAUTION:IT IS NECESSARY TO COOL THE ENGINE BEFORE PROCEEDING IF THE ENGINE IS HOT WITH RUNNING

INSTALL THE REMAINING PARTS IN THE REVERSE ORDER OF DISASSEMBLY.

DISASSEMBLY THE PADRTS,IN THE ORDER SHOWN①→②

**② TORQUE 320-380kg-cm(23.1-27.5ft-lb)
(173F,177F,182F,188F)**

② CAUTION:BE CAREFUL NOT TO DAMAGE THE GASKET SURFACE.

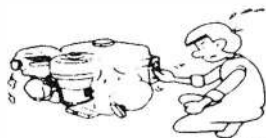
NOTE:DISASSEMBLE OR REASSEMBLE CAREFULLY ALL THE PARTS INSIDE CIRCLES IN THE ILLUSTRATION BELOW.

**① TORQUE 220-260kg-cm(15.9-18.8ft-lb)
(168F,168F-1)**

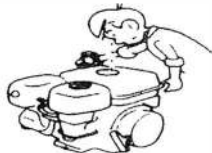
CAUTION:IT IS NECESSARY TO COOL THE ENGINE BEFORE PROCEEDING IF THE ENGINE IS HOT WITH RUNNING.

※ TROUBLE SHOOTING

ENGINE NOT START



CHECK FUEL



CHECK OIL



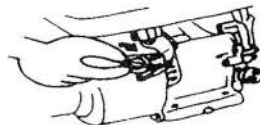
OK



REMOVE THE
SPARK PLUG.



ENGINE SWITCH ON



ON

CHECK SPARK

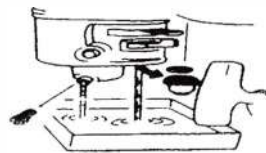


※ STORAGE

DRAIN THE FUEL FROM
THE FUEL TANK.



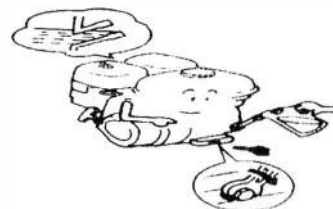
DRAIN THE FUEL FROM
THE CARBURETOR



REMOVE THE DRAIN PLUG
AND DRAIN THE OIL.



TIGHTEN THE OIL DRAIN PLUG AND
FILL THE OIL TO THE OIL FILLER NECK.



STORAGE THE ENGINE IN THE
CLEAN AREA.

