

OPERATION AND PARTS MANUAL



Mikasa **SERIES**
MODEL MT74FAF
TAMPING RAMMER
(ROBIN EH-12-2D46051 GASOLINE ENGINE)

Revision #0 (09/15/16)

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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.



CALIFORNIA — Proposition 65 Warning

Gasoline engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects and other reproductive harm.

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MT74FAF Rammer

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NOTICE

Specifications and part numbers are subject to change without notice.

PARTS ORDERING PROCEDURES

Ordering parts has never been easier! Choose from three easy options:

Effective:
January 1st, 2006

www.multiquip.com



Order via Internet (Dealers Only):

Order parts on-line using Multiquip's SmartEquip website!

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- Print Specification Information



If you have an MQ Account, to obtain a Username and Password, E-mail us at: parts@multiquip.com.

To obtain an MQ Account, contact your District Sales Manager for more information.

Goto www.multiquip.com and click on

Order Parts to log in and save!

Use the **internet** and qualify for a **5% Discount** on *Standard orders* for all orders which include complete part numbers.*

Note: Discounts Are Subject To Change



Order via Fax (Dealers Only):

All customers are welcome to order parts via Fax.

Domestic (US) Customers dial:
1-800-6-PARTS-7 (800-672-7877)

Fax your order in and qualify for a **2% Discount** on *Standard orders* for all orders which include complete part numbers.*

Note: Discounts Are Subject To Change



Order via Phone: Domestic (US) Dealers Call:
1-800-427-1244

Non-Dealer Customers:

Contact your local Multiquip Dealer for parts or call 800-427-1244 for help in locating a dealer near you.



International Customers should contact their local Multiquip Representatives for Parts Ordering information.

When ordering parts, please supply:

- | | |
|---|--|
| <input type="checkbox"/> Dealer Account Number | <input type="checkbox"/> Specify Preferred Method of Shipment: |
| <input type="checkbox"/> Dealer Name and Address | <input checked="" type="checkbox"/> UPS/Fed Ex <input checked="" type="checkbox"/> DHL |
| <input type="checkbox"/> Shipping Address (if different than billing address) | <input type="checkbox"/> Priority One <input checked="" type="checkbox"/> Truck |
| <input type="checkbox"/> Return Fax Number | <input type="checkbox"/> Ground |
| <input type="checkbox"/> Applicable Model Number | <input type="checkbox"/> Next Day |
| <input type="checkbox"/> Quantity, Part Number and Description of Each Part | <input type="checkbox"/> Second/Third Day |

NOTICE

All orders are treated as *Standard Orders* and will ship the same day if received prior to 3PM PST.

WE ACCEPT ALL MAJOR CREDIT CARDS!



SAFETY INFORMATION

Do not operate or service the equipment before reading the entire manual. Safety precautions should be followed at all times when operating this equipment. Failure to read and understand the safety messages and operating instructions could result in injury to yourself and others.



SAFETY MESSAGES

The four safety messages shown below will inform you about potential hazards that could injure you or others. The safety messages specifically address the level of exposure to the operator and are preceded by one of four words: **DANGER**, **WARNING**, **CAUTION** or **NOTICE**.

SAFETY SYMBOLS

! DANGER

Indicates a hazardous situation which, if not avoided, **WILL** result in **DEATH** or **SERIOUS INJURY**.

! WARNING

Indicates a hazardous situation which, if not avoided, **COULD** result in **DEATH** or **SERIOUS INJURY**.

! CAUTION

Indicates a hazardous situation which, if not avoided, **COULD** result in **MINOR** or **MODERATE INJURY**.

NOTICE

Addresses practices not related to personal injury.

Potential hazards associated with the operation of this equipment will be referenced with hazard symbols which may appear throughout this manual in conjunction with safety messages.

Symbol	Safety Hazard
	Lethal exhaust gas hazards
	Explosive fuel hazards
	Burn hazards
	Respiratory hazards
	Accidental starting hazards
	Eye and hearing hazards

SAFETY INFORMATION

GENERAL SAFETY

CAUTION

- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, respiratory protection, hearing protection, steel-toed boots and other protective devices required by the job or city and state regulations.



- **NEVER** operate this equipment when not feeling well due to fatigue, illness or when under medication.
- **NEVER** operate this equipment under the influence of drugs or alcohol.



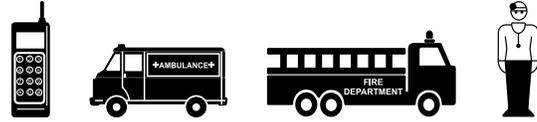
- **ALWAYS** check the equipment for loosened threads or bolts before starting.
- **DO NOT** use the equipment for any purpose other than its intended purposes or applications.

NOTICE

- This equipment should only be operated by trained and qualified personnel 18 years of age and older.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modification will void all warranties.
- **NEVER** use accessories or attachments that are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- **ALWAYS** know the location of the nearest fire extinguisher.
- **ALWAYS** know the location of the nearest first aid kit.



- **ALWAYS** know the location of the nearest phone or **keep a phone on the job site**. Also, know the phone numbers of the nearest **ambulance, doctor** and **fire department**. This information will be invaluable in the case of an emergency.



RAMMER SAFETY

DANGER

- **NEVER** operate the equipment in an explosive atmosphere or near combustible materials. An explosion or fire could result causing severe **bodily harm or even death**.



WARNING

- **NEVER** disconnect any **emergency or safety devices**. These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death. Disconnection of any of these devices will void all warranties.
- **DO NOT** use this machine on ground that is harder than the machine can handle, or for driving pilings or tamping rock beds. Furthermore, use of the machine on sloping ground, such as the side of an embankment, may make the machine unstable and can cause an accident. It can also result in premature machine wear due to uneven loads on the machine.

Use the machine with confidence for tamping earth and sand, soil, gravel, and asphalt. **DO NOT** use the machine for other types of jobs.

CAUTION

- **NEVER** lubricate components or attempt service on a running machine.

NOTICE

- **ALWAYS** keep the machine in proper running condition.
- Fix damage to machine and replace any broken parts immediately.
- **ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children and unauthorized personnel.

SAFETY INFORMATION

ENGINE SAFETY

DANGER

- The engine fuel exhaust gases contain poisonous carbon monoxide. This gas is colorless and odorless, and can cause death if inhaled.
- The engine of this equipment requires an adequate free flow of cooling air. **NEVER** operate this equipment in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause injury to people and property and serious damage to the equipment or engine.



WARNING

- **DO NOT** place hands or fingers inside engine compartment when engine is running.
- **NEVER** operate the engine with heat shields or guards removed.
- **DO NOT** remove the engine oil drain plug while the engine is hot. Hot oil will gush out of the oil tank and severely scald any persons in the general area of the rammer.



CAUTION

- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing equipment.



NOTICE

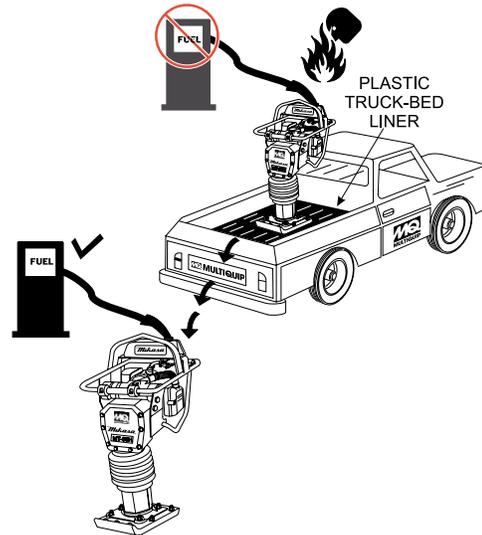
- **NEVER** run engine without an air filter or with a dirty air filter. Severe engine damage may occur. Service air filter frequently to prevent engine malfunction.
- **NEVER** tamper with the factory settings of the engine or engine governor. Damage to the engine or equipment can result if operating in speed ranges above the maximum allowable.



FUEL SAFETY

DANGER

- **DO NOT** add fuel to equipment if it is placed inside truck bed with plastic liner. Possibility exists of explosion or fire due to static electricity.



- **DO NOT** start the engine near spilled fuel or combustible fluids. Fuel is extremely flammable and its vapors can cause an explosion if ignited.
- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.
- **ALWAYS** use extreme caution when working with **flammable** liquids.
- **DO NOT** fill the fuel tank while the engine is running or hot.
- **DO NOT** overfill tank, since spilled fuel could ignite if it comes into contact with hot engine parts or sparks from the ignition system.
- Store fuel in appropriate containers, in well-ventilated areas and away from sparks and flames.
- **NEVER** use fuel as a cleaning agent.
- **DO NOT** smoke around or near the equipment. Fire or explosion could result from fuel vapors or if fuel is spilled on a hot engine.



TRANSPORTING SAFETY

CAUTION

- NEVER allow any person or animal to stand underneath the equipment while lifting.

NOTICE

- Before lifting, make sure that the equipment parts (hook and vibration insulator) are not damaged and screws are not loose or missing.
- Always make sure crane or lifting device has been properly secured to the lifting bail (hook) of the equipment.
- **ALWAYS** shutdown engine before transporting.
- **NEVER** lift the equipment while the engine is running.
- Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- Use adequate lifting cable (wire or rope) of sufficient strength.
- Use one point suspension hook and lift straight upwards.
- **DO NOT** lift machine to unnecessary heights.
- **ALWAYS** tie down equipment during transport by securing the equipment with rope.
- Never allow any person or animal to stand underneath the equipment while lifting.

ENVIRONMENTAL SAFETY

NOTICE

- Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil, fuel and fuel filters. 
- **DO NOT** use food or plastic containers to dispose of hazardous waste.
- **DO NOT** pour waste, oil or fuel directly onto the ground, down a drain or into any water source.

SPECIFICATIONS

Table 1. Rammer Specifications

Overall Height	41.5 in (1055 mm))
Overall Width	16.1 in (410 mm)
Over Length	29.1 in (739 mm)
Shoe Size (W x L)	13.4 x 11.2 in (340 x 285 mm)
No. of Impacts Per Minute	640-680
Impact Force	3,100 lb (1,400 kg)
Impact Plate Stroke	3.15 in. (80 mm)
Operating Weight	176 lbs (80 kg)
Travel Speedl	29.5 - 39.4 ft/min (9 - 12 m/min)

Table 2. Engine Specifications

Model	ROBIN EH12-2D46051 Engine
Type	Air-Cooled 4 Stroke Gasoline Engine
Piston Displacement	7.38 cu.in. (121 cc)
Max. Output	3.5 hp/3,600 rpm (2.6 KW)
Cooling System	Air-Cooled
Engine Oil Capacity	0.8 pint (0.4 liter)
Fuel	Unleaded gasoline
Fuel Tank Capacity	2.1 quart (2 liters)
Lubrication System	Oil Bath - 10W30 Motor Oil
Starting System	Recoil Starter

GENERAL INFORMATION

The Multiquip MT74FAF tamping rammer is a powerful compacting tool capable of applying a tremendous force in consecutive impacts to a soil surface. Its applications include soil compacting for road, embankments and reservoirs as well as backfilling for gas pipelines, water pipelines and cable installation work.

The impact force of the MT74FAF levels and uniformly compacts voids between soil particles to increase dry density.

Circular motion is converted to create impact force. The MT74FAF tamping rammer develops a powerful compacting force at the foot of the rammer. To maintain optimum performance, proper operation and service are essential.

The MT74FAF is equipped with an air cooled, four- cycle gasoline engine. Transmission of the power takes place by increasing the engine speed to engage the centrifugal clutch.

The MT74FAF uses an oil bath lubrication system. Always check the oil level through the oil level sight glass at the rear of the tamper foot.

Before starting the MT74FAF Tamping Rammer identify and understand the function of the controls.

CAUTION



Before starting operation check the lifting handle to:

1. Make sure that there is no damage on the bolts.
2. Make sure that there is no crack or breakage on handle.
3. Make sure that there is no fissure on the surface. If there is any abnormality or damage, replace with new one.

For operation:

This handle is to be used to lift up the shoe part of the machine with the body laid down on the ground or truck bed.

1. Use proper lifting techniques to avoid back injury. This handle is for manual lifting only.
2. Do not use this handle as a rammer lift point. Use the lifting point on the top of the machine.
3. Do not move the rammer with the lifting handle and the front rollers more than 16 feet (5 meters).

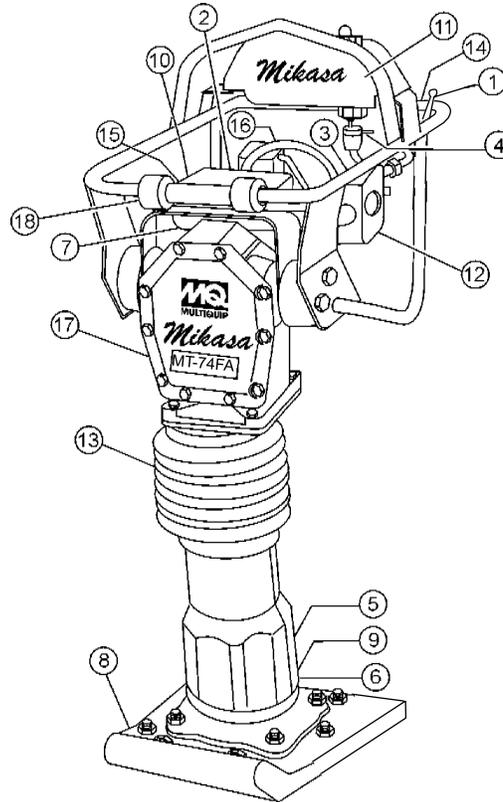


Figure 1. MT74FAF Rammer

Figure 1 shows the location of the controls and components for the MT74FAF Tamping Rammer. The functions of each control is described below:

1. **Throttle Lever** — Controls engine speed and the tamping action of the rammer.
2. **Engine Stop Switch** — Controls the starting and stopping of the engine. Switch must be in the "ON" position when starting the engine.
3. **Choke Lever** — Used when starting the engine. Normally used in cold weather conditions. In cold weather turn the choke lever to the fully closed position, in warm weather set choke lever half way or completely open.
4. **Fuel Shut-Off Valve** — Supplies fuel from the fuel tank to the engine. To begin fuel flow move the fuel shut-off valve downward.
5. **Oil Bath Fill Plug** — Open this plug to add oil to the oil bath reservoir.
6. **Drain Valve** — Open this valve to remove oil from the bellows.
7. **Pre-Cleaner** — Pre-cleans (first stage) dirt and other debris from entering the engine.
8. **Foot** — Laminated wood with tempered steel plate for superior shock absorption.
9. **Oil Level Sight Glass** — Indicates the level of oil in the oil bath reservoir.
10. **Recoil Starting Handle** — Used when starting the engine. Pull starter handle sharply and quickly, then return starter handle to starter case before releasing.
11. **Fuel Tank/Cap** — Poly fuel tank to avoid rust and corrosion, remove this cap to add gasoline.
12. **Engine Air Cleaner** — Prevents dirt (second stage) and other debris from entering the engine.
13. **Bellows** — Reservoir for oil bath.
14. **Handle** — To operate rammer, grip handle assembly firmly on both sides.
15. **Muffler** — Used to reduce noise and emissions.
16. **Spark Plug** — Provides spark to the ignition system, replace with engine manufactures recommended type spark plug.
17. **Nameplate** — Displays information regarding the rammer.

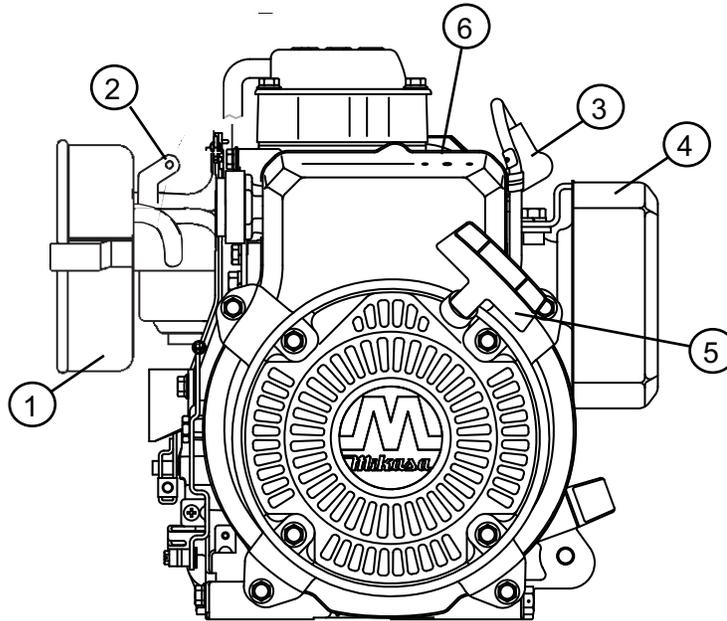


Figure 2. Robin EH-12-2D46051 Engine

The engine (Figure 2) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the engine manufacturer's manual for detailed operation and service information.

1. **Secondary Air Cleaner** — Prevents dirt and other debris from entering the fuel system. Remove wing-nut on top of air filter cannister to gain access to filter element.
2. **Choke Lever** — Normally used in starting the engine in cold weather conditions. In cold weather, turn the choke lever to the fully closed position. In warm weather, set the choke lever halfway or completely open.
3. **Spark Plug** — Provides spark to the ignition system. Set spark plug gap to 0.024 - 0.028 inch (0.6 - 0.7 mm). Clean spark plug once a week.
4. **Muffler** — Used to reduce noise and emissions.

5. **Recoil Starter (pull rope)** — Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly.
6. **Engine ON/OFF Switch** — Controls the starting and stopping of the engine. Switch must be in the "ON" position when starting the engine.

WARNING	
	Engine components can generate extreme heat. To prevent burns, DO NOT touch these areas while the engine is running or immediately after operating. NEVER operate the engine with the muffler removed.

NOTICE

Operating the engine without an air filter, with a damaged air filter, or a filter in need of replacement will allow dirt to enter the engine, causing rapid engine wear.

GENERAL INSPECTION

1. Check all nuts, bolts fasteners for tightness. Retighten as necessary.
2. Clean any dirt from the recoil starter and foot pedestal. Wipe the entire unit clean before operating.
3. Replace any missing or damaged Safety Operation decals.
4. Adjust height of handle. Adjust handle by loosening nuts and moving handle to suit operation. Retighten nuts.

RAMMER CRANKCASE AND SPRING CYLINDER OIL BATH

This unit uses an oil bath lubrication system. Perform the following:

5. Check the oil level through the oil level sight glass (Figure 3) at the rear of the tamper foot.

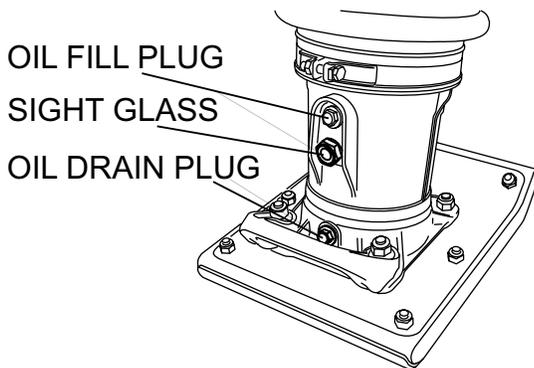


Figure 3. Foot Housing Sight Glass

6. If oil is not visible, add 10W-30 SE, SF or higher grade motor oil into the oil fill plug opening (Figure 3). The bath contains approximately 0.8 pints (0.4 liters)

NOTICE

The oil level should be kept at the half way point of the sight glass.

ENGINE

1. Fill the fuel tank (Figure 4) with unleaded gasoline. At the same time, check the engine oil and make it a habit to replenish it often (Figure 5).

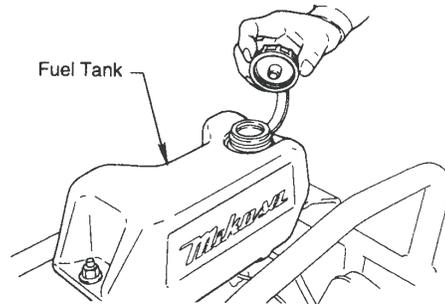


Figure 4. Fuel Tank

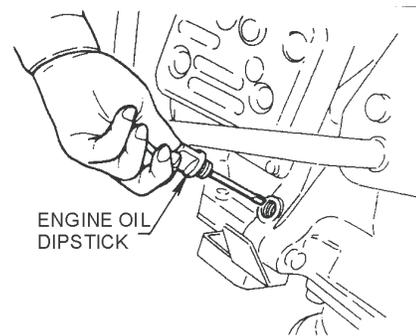


Figure 5. Engine Oil Dipstick

2. Low levels of oil may result in engine seizure due to high levels of consumption during operation.
3. Check the engine oil level and if the engine oil level is low, it should be refilled. Use the proper motor oil as suggested in the Table 3 below.

Table 3. Motor Oil Grade

Season or Temperature	Grade of motor oil (higher than MS class)
Spring, Summer or Autumn +120° F to +15° F	SAE 30
Winter +40° F to +15° F	SAE 30
Below +15° F	SAE 10W-30

INITIAL STARTUP

DO NOT use your rammer until this section is thoroughly understood.

CAUTION

Failure to understand the operation of the Tamping Rammer could result in severe damage to the unit or personal injury.

This section is intended to assist the operator with the initial start-up of the MT74FAF Tamping Rammer. It extremely important that this section be read carefully before attempting to operate the rammer. When starting the MT74FAF Tamping Rammer perform the following:

1. Open the fuel shut-off valve by moving the fuel cock lever to the open position (Figure 6) then set the engine **START/STOP** switch to the **START** position.

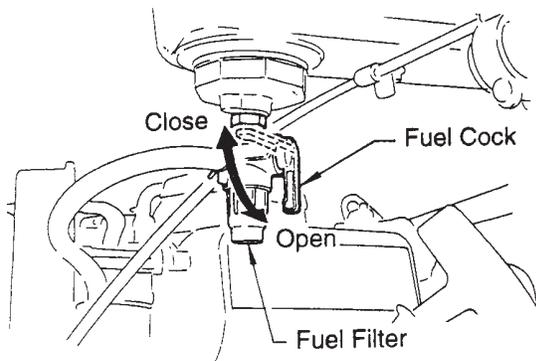


Figure 6. Fuel Cock

2. Set the engine **ON/OFF** switch (Figure 7) to the **ON** position (start).

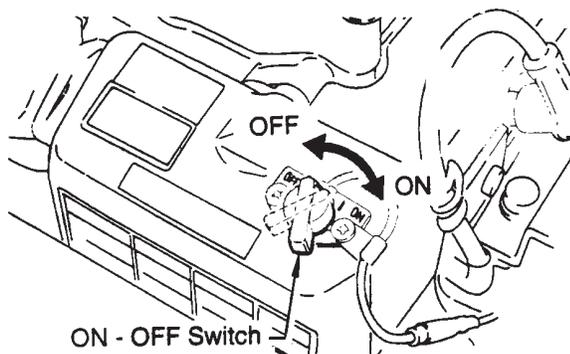


Figure 7. ON/OFF Switch

3. Close the choke lever (Figure 8) and move the throttle lever to the "Full Open" position. Turning the choke lever 90° clockwise closes the choke. In cold weather, start the unit with choke fully closed. In warm weather or when the engine is warm, the unit can be started with choke halfway or completely open.

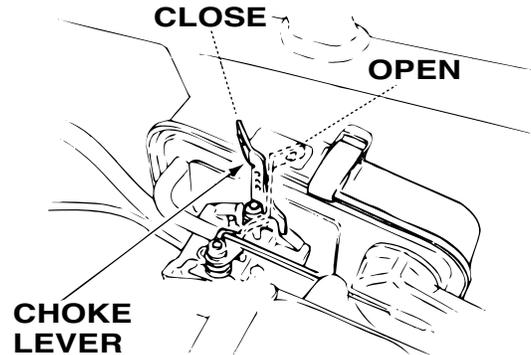


Figure 8. Choke Lever

4. Grip the starter rope handle (Figure 9) and pull it until you feel a slight resistance. Then pull sharply and quickly. Return the handle to the starter case before releasing.

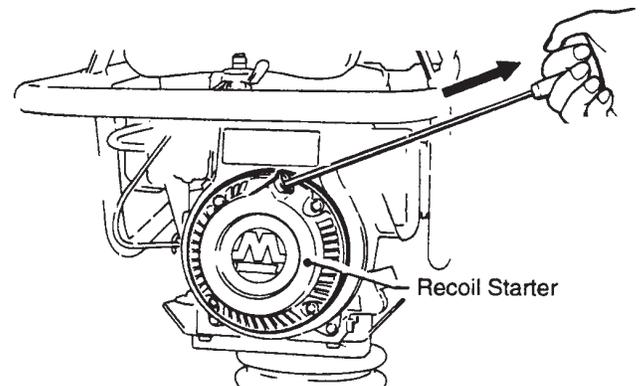


Figure 9. Recoil Starter

5. If engine fails to start, move the choke lever (Figure 8) to the half open position to avoid flooding.
6. Repeat steps 1 thru 5.
7. If the engine does not start after repeated attempts, check the spark plug for excess fuel. Clean and replace the spark plug as needed.

OPERATION

1. To start the rammer tamping action, move the throttle lever (Figure 10) **quickly** from **IDLE** to the **START** position. **DO NOT** move the throttle lever slowly as this may cause damage to the clutch or spring.

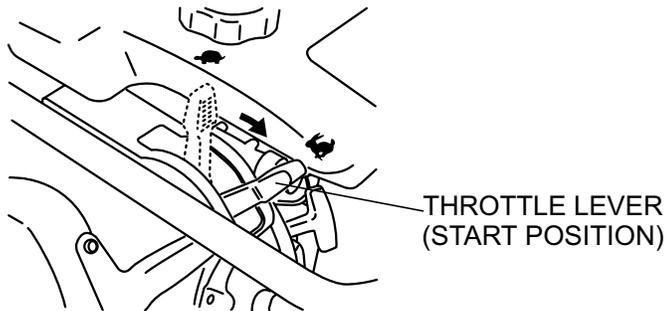


Figure 10. Throttle Lever (Start Position)

CAUTION

Make sure that the throttle lever is moved to the **FULL START** position. Operating the rammer at less than full speed can result in damage to the clutch springs or foot.

2. The MT74FAF tamping rammer is designed to run at 4,000 rpm. At optimum rpm the foot hits at the rate between 680 impacts per minute. Increasing throttle speed past factory set rpm does not increase impacts and may damage unit.

The MT74FAF is designed to advance while tamping. For faster advance, pull back slightly on the handle so that rear of foot contacts soil first.

3. To stop the tamping action, move throttle lever quickly from **START** to **IDLE** position (Figure 11).

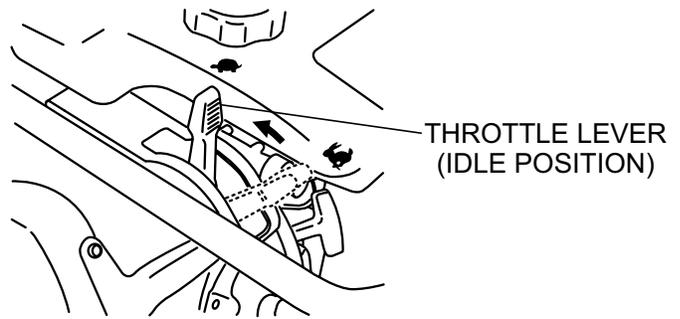


Figure 11. Throttle Lever (Stop Position)

STOPPING THE ENGINE

1. Move throttle lever quickly from the **START** to **IDLE** position (Figure 11) and run the engine for three minutes at low speed. After the engine **cools**, move the throttle lever to the **STOP** position (Figure 12). The engine will stop and the fuel cock is automatically closed.

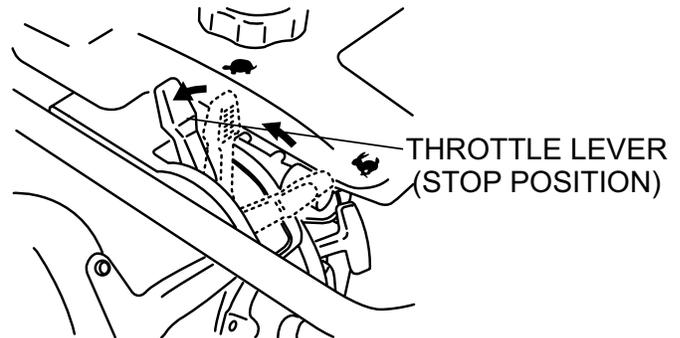


Figure 12. Throttle Lever (Stop Position)

2. If the engine does not stop due to a problem with the switch or the like, move the machine to a safe location and hold the throttle lever in the stop position. Let the machine run on idle and the machine will stop after a few minutes.

MAINTENANCE

Perform the scheduled maintenance procedures as indicated:

DAILY

- Thoroughly remove dirt and oil from the engine and control area.
- Clean or replace the air cleaner elements as necessary. Check and retighten all fasteners as necessary.
- Check the spring box and bellows for oil leaks. Repair or replace as needed.

WEEKLY

- Remove the fuel filter cap and clean the inside of the fuel tank.
- Remove or clean the filter at the bottom of the tank.
- Remove and clean the spark plug, then adjust the spark gap to 0.02~0.03 inch (0.6~0.7 mm). This unit has electronic ignition, which requires no adjustments.
- Clean air cleaner cover.

200 - 300 HOURS (Pre-Cleaner)

1. Remove the element from the pre-cleaner (Figure 13) at the top of the crankcase (body side) and clean it with cleaning oil (kerosene).

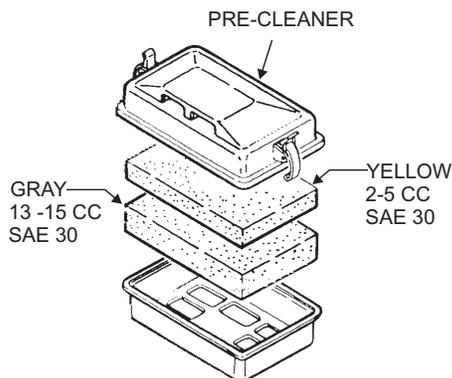


Figure 13. Pre-Cleaner

2. Lubricate the top element (yellow) with 2~5 cc of engine oil SAE-30.
3. Lubricate bottom element (gray) with 13 ~15 cc of engine oil SAE-30 and completely squeeze out the excess oil from the element before installing.
4. The air cleaner (Figure 14) on the engine side will hardly be contaminated. However, if it is after cleaning

the element with kerosene, dip it in mixed oil consisting of 3 parts of gasoline and 1 part of engine oil. Then tightly squeeze outer primary element (sponge) and shake off well the inner secondary element before installing them.

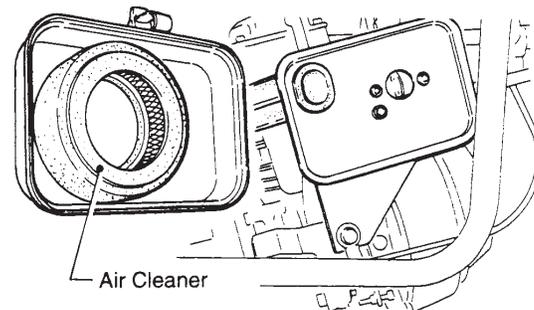


Figure 14. Engine Air Cleaner

200 - 300 HOURS (Oil Bath)

- Drain oil reservoir on foot housing (Figure 15). Refill with approximately 1.7 pint (800 cc) of 10W-30 motor oil. Oil should be midway in sight glass. Break in oil should be changed after first 50 hours.

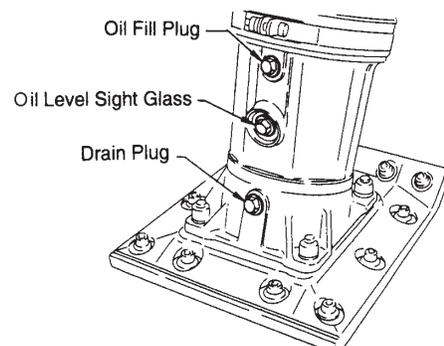


Figure 15. Foot Housing Drain Plug

YEARLY

- Check the fuel line and the oil line regularly for damage and to ensure that there are no leaks.
- Replace the oil and fuel lines every two years to maintain the performance and flexibility lines.

LONG TERM STORAGE

- Drain fuel from fuel tank, fuel line and carburetor.
- Remove spark plug and pour a few drops of motor oil into cylinder. Crank engine 3 to 4 times so that oil reaches all internal parts.
- Clean exterior with a cloth soaked in clean oil.
- Store unit covered with plastic sheet in moisture free and dust free location out of direct sunlight.

TROUBLESHOOTING

Troubleshooting (Engine)		
Symptom	Possible Problem	Solution
Difficult to start, fuel is available, but no spark at spark plug.	Combo lever in incorrect position?	Make sure combo lever is in start position.
	Spark plug bridging?	Check gap, insulation or replace spark plug.
	Carbon deposit on spark plug?	Clean or replace spark plug.
	Short circuit due to deficient spark plug insulation?	Check spark plug insulation, replace if worn.
	Improper spark plug gap?	Set to proper gap.
	Fuel reaching carburetor?	Check fuel line.
	Water in fuel tank?	Flush or replace fuel tank.
	Fuel filter clogged?	Replace fuel filter.
	Stuck carburetor?	Check float mechanism.
	Spark plug is red?	Check transistor ignition unit.
	Spark plug is bluish white?	If insufficient compression, repair or replace engine. If injected air leaking, correct leak. If carburetor jets clogged, clean carburetor.
	No spark present at tip of spark plug?	Check transistor ignition unit is broken, and replace defective unit. Check if voltage cord cracked or broken and replace. Check if spark plug if fouled and replace.
No oil?	Add oil as required.	
Difficult to start, fuel is available, and spark is present at the spark plug.	ON/OFF switch is shorted?	Check switch wiring, replace switch.
	Ignition coil defective?	Replace ignition coil.
	Improper spark gap, points dirty?	Set correct spark gap and clean points.
	Condenser insulation worn or short circuiting?	Replace condenser.
	Spark plug wire broken or short circuiting?	Replace defective spark plug wiring.
Difficult to start, fuel is available, spark is present and compression is normal.	Wrong fuel type?	Flush fuel system, replace with correct type of fuel.
	Water or dust in fuel system?	Flush fuel system.
	Air cleaner dirty?	Clean or replace air cleaner.
	Choke open?	Close choke.
Difficult to start, fuel is available, spark is present and compression is low.	Suction/exhaust valve stuck or protruded?	Reseat valves.
	Piston ring and/or cylinder worn?	Replace piston rings and/or piston.
	Cylinder head and/or spark plug not tightened properly?	Torque cylinder head bolts and spark plug.
	Head gasket and/or spark plug gasket damaged?	Replace head and spark plug gaskets.
No fuel present at carburetor.	No fuel in fuel tank?	Fill with correct type of fuel.
	Fuel cock does not open properly?	Apply lubricant to loosen fuel cock lever, replace if necessary.
	Fuel filter/lines clogged?	Replace fuel filter.
	Fuel tank cap breather hole clogged?	Clean or replace fuel tank cap.
	Air in fuel line?	Bleed fuel line.

TROUBLESHOOTING

Troubleshooting (Engine) - continued		
Symptom	Possible Problem	Solution
Weak in power, compression is proper and does not misfire.	Air cleaner dirty?	Clean or replace air cleaner.
	Improper level in carburetor?	Check float adjustment, rebuild carburetor.
	Defective spark plug?	Clean or replace spark plug.
	Improper spark plug?	Set to proper gap.
Weak in power, compression is proper but misfires.	Water in fuel system?	Flush fuel system and replace with correct type of fuel.
	Dirty spark plug?	Clean or replace spark plug.
	Ignition coil defective?	Replace ignition coil.
Engine overheats.	Spark plug heat value incorrect?	Replace with correct type of spark plug.
	Wrong type of fuel?	Replace with correct type of fuel.
	Cooling fins dirty?	Clean cooling fins.
	Intake air restricted?	Clear intake of dirt and debris. Replace air cleaner elements as necessary.
	Oil level too low or too high?	Adjust oil to proper level.
Rotational speed fluctuates.	Governor adjusted incorrectly?	Adjust governor.
	Governor spring defective?	Replace governor spring.
	Fuel flow restricted?	Check entire fuel system for leaks or clogs.
Recoil starter malfunctions. (if applicable)	Recoil mechanism clogged with dust and dirt?	Clean recoil assembly with soap and water.
	Spiral spring loose?	Replace spiral spring.
Starter malfunctions.	Loose, damaged wiring?	Ensure tight, clean connections on battery and starter.
	Battery insufficiently charged?	Recharge or replace battery.
	Starter damaged or internally shorted?	Replace starter.
Burns too much fuel.	Over-accumulation of exhaust products?	Check and clean valves. Check muffler and replace if necessary.
	Wrong spark plug?	Replace spark plug with manufacturer's suggested type.
Exhaust color is continuously "white".	Lubricating oil is wrong viscosity?	Replace lubricating oil with correct viscosity.
	Worn rings?	Replace rings.
Exhaust color is continuously "black".	Air cleaner clogged?	Clean or replace air cleaner.
	Choke valve set to incorrect position?	Adjust choke valve to correct position.
	Carburetor defective, seal on carburetor broken?	Replace carburetor or seal.
	Poor carburetor adjustment, engine runs too rich?	Adjust carburetor.
Will not start, no power with key "ON". (if applicable)	ON/OFF device not activated ON?	Turn on ON/OFF device.
	Battery disconnected or discharged?	Check cable connections. Charge or replace battery
	Ignition switch/wiring defective?	Replace ignition switch. Check wiring.

TROUBLESHOOTING

Troubleshooting (Rammer)		
Symptom	Possible Problem	Solution
Engine runs but rammer jumps erratically or not at all.	Operating speed of throttle lever is incorrectly set?	Set throttle lever to correct position.
	Oil in excess?	Drain excess oil. Bring to correct level.
	Clutch slips?	Replace or adjust clutch.
	Spring Failure?	Replace spiral spring.
	Speed of engine improper?	Adjust engine speed to correct operating RPM setting.
	Soil over-compacted?	Shut down machine and test soil.

EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	12345	BOLT	1	INCLUDES ITEMS W/%
2%		WASHER, 1/4 IN.		NOT SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN. ...	1	MQ-45T ONLY
3	12348	HOSE	A/R	MAKE LOCALLY
4	12349	BEARING	1	S/N 2345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol (@, #, +, %, or >) in the number column belong to the same assembly or kit, which is indicated by a note in the “Remarks” column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the “Remarks” Column.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the “Remarks” Column.

REMARKS Column

Some of the most common notes found in the “Remarks” Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

“INCLUDES ITEMS W/(unique symbol)”

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:

“S/N XXXXX AND BELOW”

“S/N XXXX AND ABOVE”

“S/N XXXX TO S/N XXX”

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

“XXXXX ONLY”

“NOT USED ON XXXX”

“Make/Obtain Locally” — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

“Not Sold Separately” — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.

SUGGESTED SPARE PARTS

MT-74FAF TAMPING RAMMER WITH ROBIN EH-12-2D46051 GASOLINE ENGINE

1 to 3 units

Qty.	P/N	Description
1.....	362910060.....	THROTTLE LEVER ASSY.
1.....	956100045.....	THROTTLE WIRE
3.....	354030030.....	ELEMENT, YELLOW
3.....	354030040.....	ELEMENT, GRAY
1.....	361910070.....	CAP, FUEL TANK
1.....	954300720.....	COCK, FUEL ASSY.
1.....	301419750.....	FILTER, FUEL
3.....	2523260207.....	ELEMENT, SET, ENGINE
1.....	0660000481.....	STOP SWITCH ASSY.
3.....	0650140580.....	SPARK PLUG
1.....	954406010.....	STRAINER, FUEL TANK
1.....	2825011118.....	STARTER ROPE

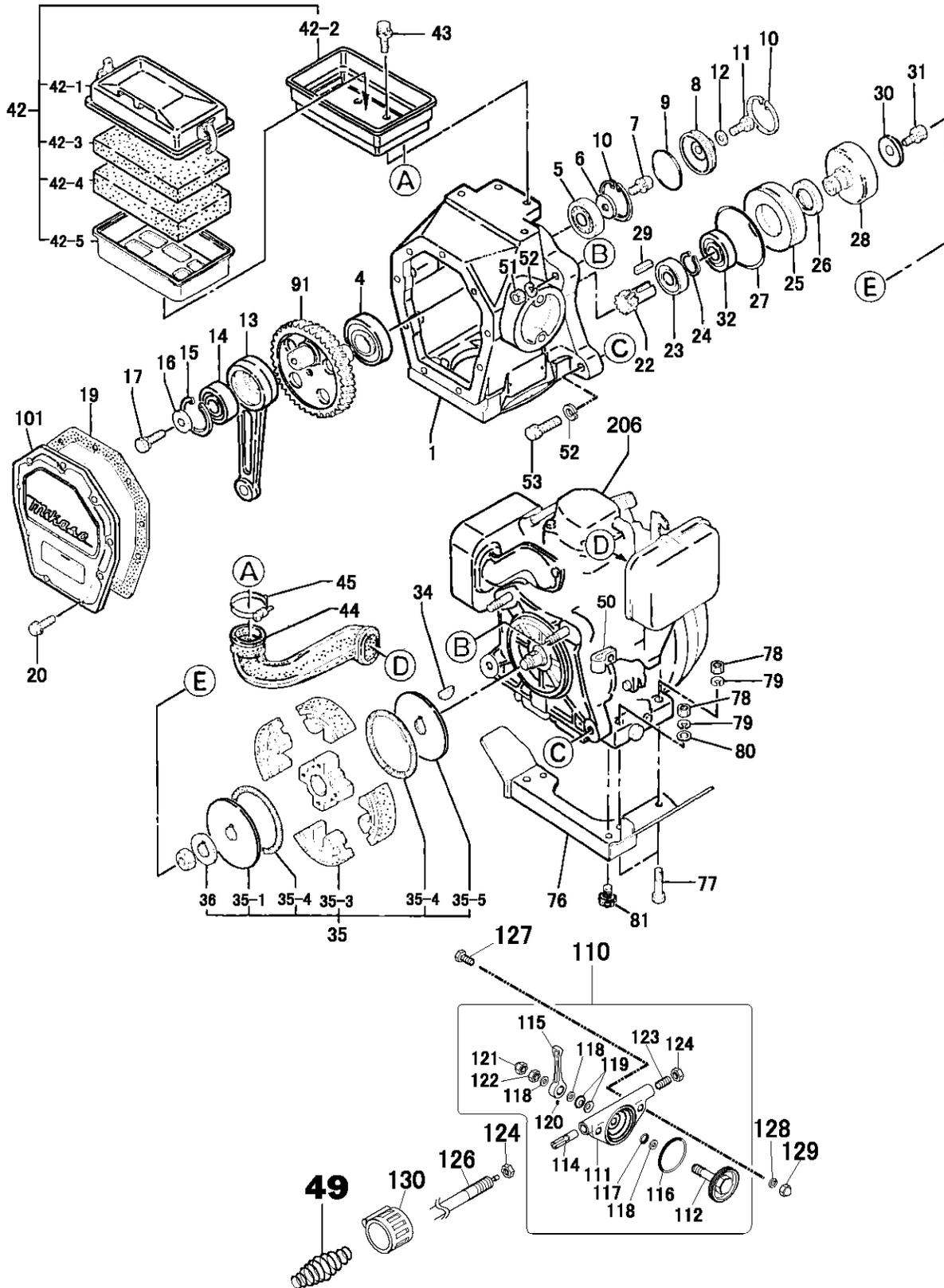
NOTICE

Part numbers on this Suggested Spare Parts list may supersede/replace the part numbers shown in the following parts lists.

NAMEPLATES AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	920202930	DECAL: START SWITCH.....	1.....	NPA293
2	920206020	DECAL: 3400~3600 RPM.....	1.....	NPA602
4	920210160	DECAL: SERVICE MONTHLY	1.....	NPA1016
5	920108310	DECAL: CLEANER ELEMENT	1.....	NP831
8	920203290	DECAL: CAUTION	1.....	NPA329
9		PLATE, SERIAL NO.....	1.....	CONTACT MQ PARTS DEPT.
10	920107000	DECAL: PRE-CLEANER.....	1.....	NP700
11	920204370	DECAL: PRE-CLEANER.....	1.....	NPA437
12	920209750	DECAL: CAUTION 4-CYCLE.....	1.....	NPA975
13	920203330	DECAL: EAR PROTECTION	1.....	NPA333
14	920203990	DECAL: CAUTION (FUEL COCK)	1.....	NPA399
16	920203980	DECAL: ELEMENT SET	1.....	NPA398
17	920207690	DECAL: CAUTION (MANUAL).....	1.....	NPA769
18	920210170	DECAL: GASOLINE ONLY	1.....	NPA1017
19	920208960	TAG, GASOLINE.....	1.....	NPA896
20	920210180	DECAL: CHECK DAILY (FILTER)	1.....	NPA1018
21	920209100	DECAL: CAUTION (RAMMER).....	1.....	NPA910
22	920100240	DECAL: (M-MARK).....	1.....	NP24
23	920211690	DECAL: LEVER OPERATION.....	1.....	NPA1169
24	920214100	DECAL: E/G FIRE WARNING.....	1.....	NPA1410
100	0732005760	LABEL, CAUTION	1	
101	0732004520	LABEL, OIL CAUTION	1	
102	0732003900	LABEL, WARNING	1	
103	0732005020	LABEL, CHOKE	1	

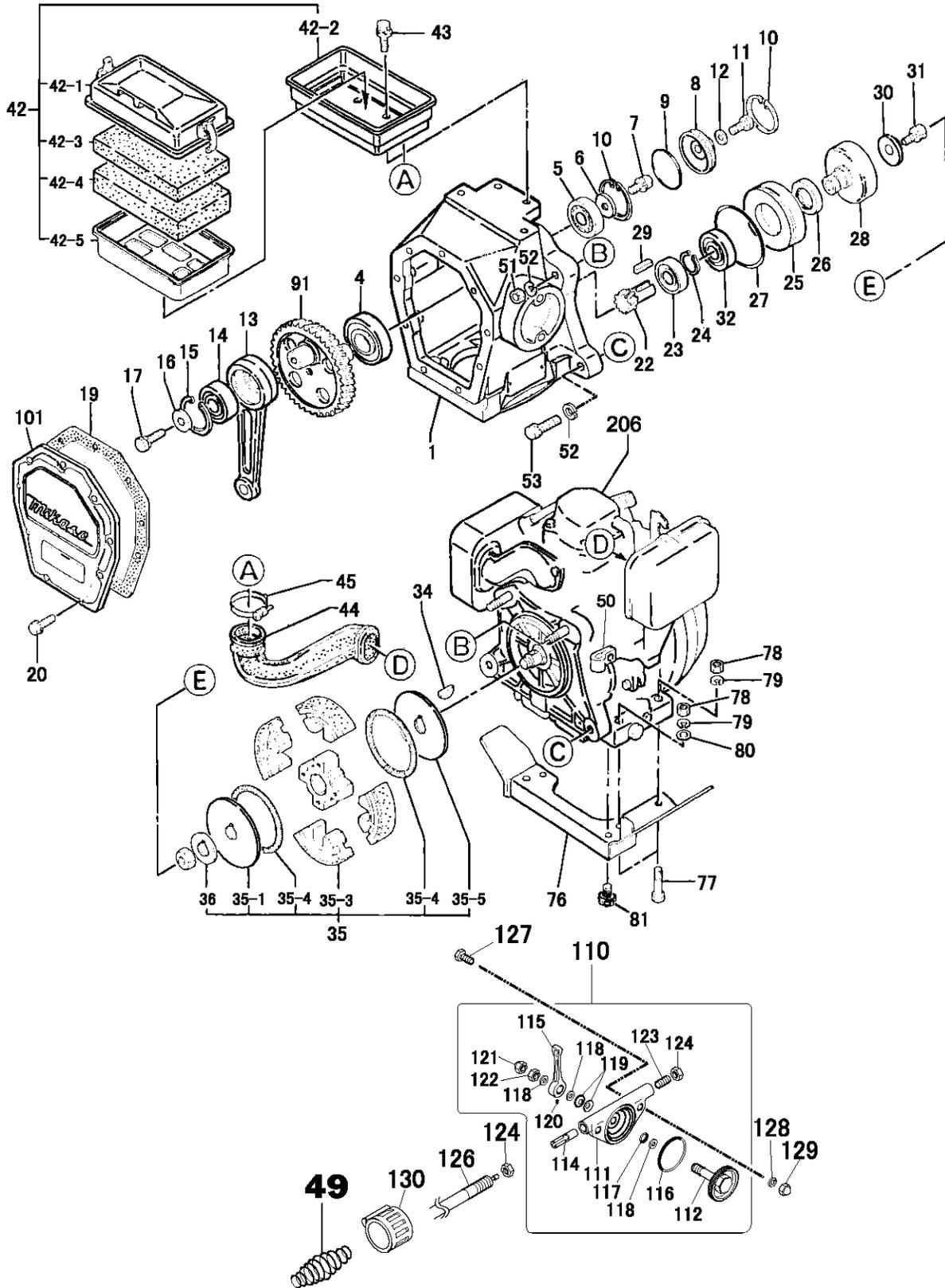
CRANKCASE AND ENGINE ASSY



CRANKCASE AND ENGINE ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	371113331	CRANK CASE	1	
4	040006207	BEARING	1	
5	0600200020	BEARING.....	1.....	REPLACES P/N 040006204
6	952400130	WASHER	1	
7	011708025	BOLT 8X25 H, SW.....	1.....	REPLACES P/N 002210825
8	371447650	BEARING COVER	1	
9	050300480	O-RING	1	
10	080100480	STOP RING	2	
11	011006010	BOLT 6X10 T.....	1.....	REPLACES P/N 001200610
12	952404470	WASHER M6.....	1.....	REPLACES P/N 031106100
13	371334730	CONNECTING ROD	1	
14	040006304	BEARING	1	
15	080100520	STOP RING	1	
16	952400130	WASHER	1	
17	011708025	BOLT 8X25 H, SW.....	1.....	REPLACES P/N 002210825
19	352444450	PACKING, FRONT COVER	1	
20	011706020	BOLT 6X20 H, SW.....	9.....	REPLACES P/N 002210620
22	361449320	PINION	1	
23	0600200020	BEARING.....	1.....	REPLACES P/N 040006204
24	080200350	STOP RING	1	
25	371449600	SPACER	1	
26	060404010	OIL SEAL	1	
27	050101000	O-RING	1	
28	361449330	CLUTCH DRUM	1	
29	951407340	KEY 5X5X20R	1	
30	952405490	WASHER, LOCK	1	
31	011008020	BOLT 8X20 H, SW.....	1.....	REPLACES P/N 002210820
32	041006007	BEARING	1	
34	0053204201	WOODRUFF KEY	1	
35	361463840	CLUTCH ASSY., CE120T.....	1.....	INCLUDES ITEMS W/\$
35-1\$	943060020	CLUTCH GUIDE/B	1	
35-3\$	361463840	CLUTCH SHOE.....	4.....	REPLACES P/N 943020020
35-4\$	943030021	CLUTCH SPRING	2	
35-5\$	943060100	CLUTCH GUIDE/A 1.6T	1	
36\$	301010210	WASHER, LOCK CLUTCH	1	
42	361213800	AIR CLEANER ASSY.....	1.....	INCLUDES ITEMS W/#
42-1#	354030011	BODY/W-CLEANER	1	
42-2#	361010020	BACK PLATE CP	1	
42-3#	354030030	ELEMENT, YELLOW	1	
42-4#	354030040	ELEMENT, GRAY	1	
42-5#	354030050	ELEMENT FRAME	1	

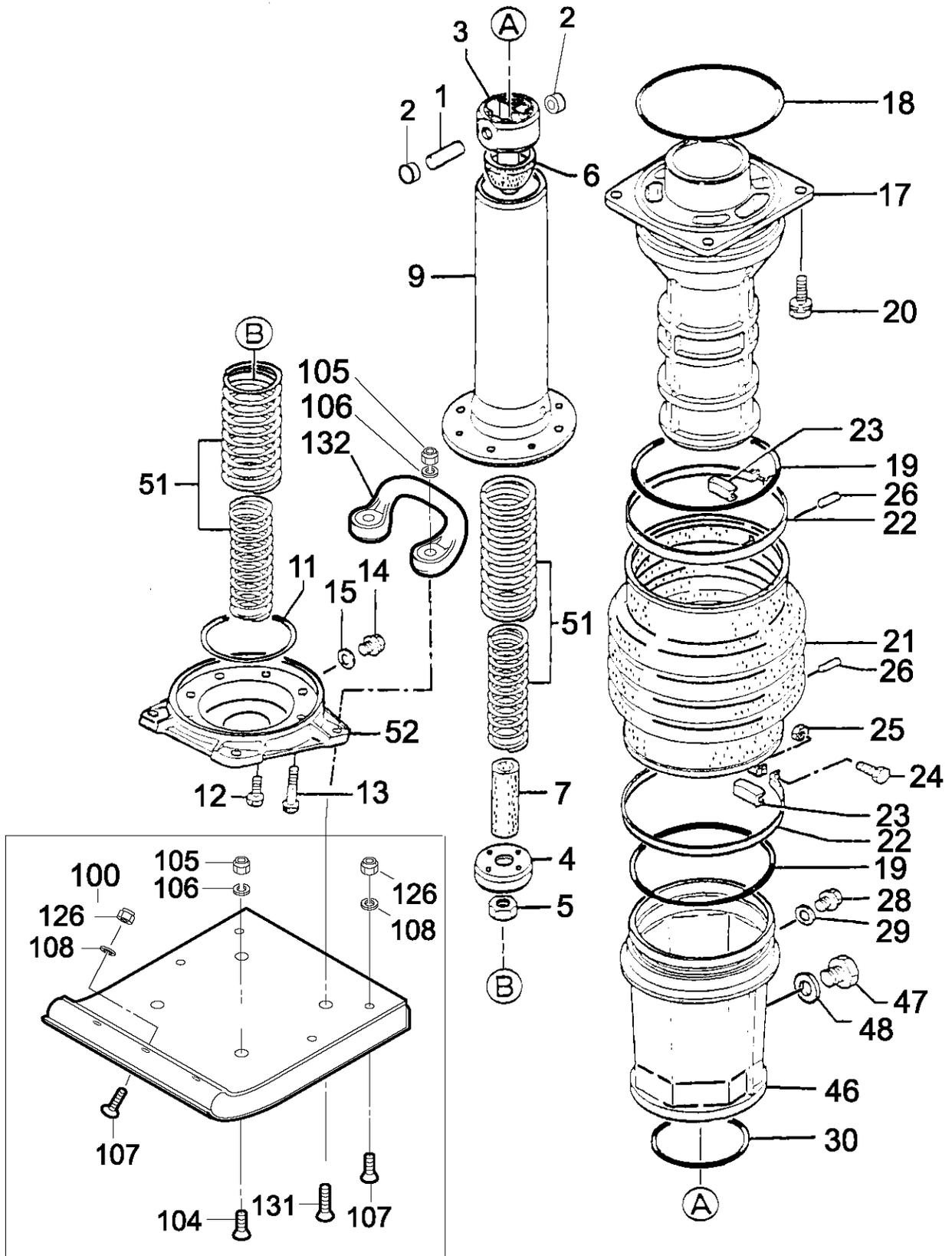
CRANKCASE AND ENGINE ASSY (CONTINUED)



CRANKCASE AND ENGINE ASSY (CONTINUED)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
43	011008020	BOLT 8X20 H, SW	4	REPLACES P/N 002200820
44	361336010	INTAKE PIPE	1	
45	954010230	HOSE BAND (B)	1	
49	402010110	COIL SPRING.....	1	REPLACES P/N 0830000010
50	959006120	CLIP	1	
51	020310080	NUT M10	2	
52	030210250	WASHER, SPRING LOCK M10	4	
53	012210050	BOLT 10X50 H.....	2	REPLACES P/N 001221050
76	361214201	UNDER PROTECTOR	1	
77	011008040	BOLT 8X40 T.....	3	REPLACES P/N 001220840
78	020108060	NUT M8.....	3	REPLACES P/N 020308060
79	030208200	WASHER, LOCK 8MM	3	
80	0401450080	WASHER, FLAT M8.....	3	REPLACES P/N 031108160
81	0011308180	BOLT AND WASHER ASSY.	2	
91	361335870	CRANK GEAR	1	
101	361010030	FRONT COVER	1	
110	362910060	THROTTLE LEVER ASSY.	1	INCLUDES ITEMS W/%
111%	362341550	THROTTLE BODY	1	
112%	362910090	THROTTLE GEAR CP, W/BOLT	1	
114%	362455620	SLIDER	1	
115%	362455630	THROTTLE LEVER	1	
116%	050100450	O-RING	1	
117%	050200100	O-RING	1	
118%	031110160	WASHER, FLAT M10	3	
119%	033910230	CONICAL LOCK WASHER	2	
119	032110180	CONICAL LOCK WASHER M10	2	
120%	096206006	SOCKET HEAD SCREW 6X6	1	
121%	022131008	CAP NUT M10	1	
122%	020310080	NUT M10.....	1	REPLACES P/N 020410060
123%	014208020	SOCKET HEAD SCREW 8X20	1	REPLACES P/N 096208020
124	020408050	NUT, M8	2	
126	956100045	THROTTLE WIRE	1	
127	011206020	BOLT 6X20 T.....	2	REPLACES P/N 001220620
128	030206150	WASHER, LOCK M6	2	
129	022130605	CAP, NUT M6	2	
130	303010450	BAND	1	
206	911211202	ENGINE, EH12-2D	1	

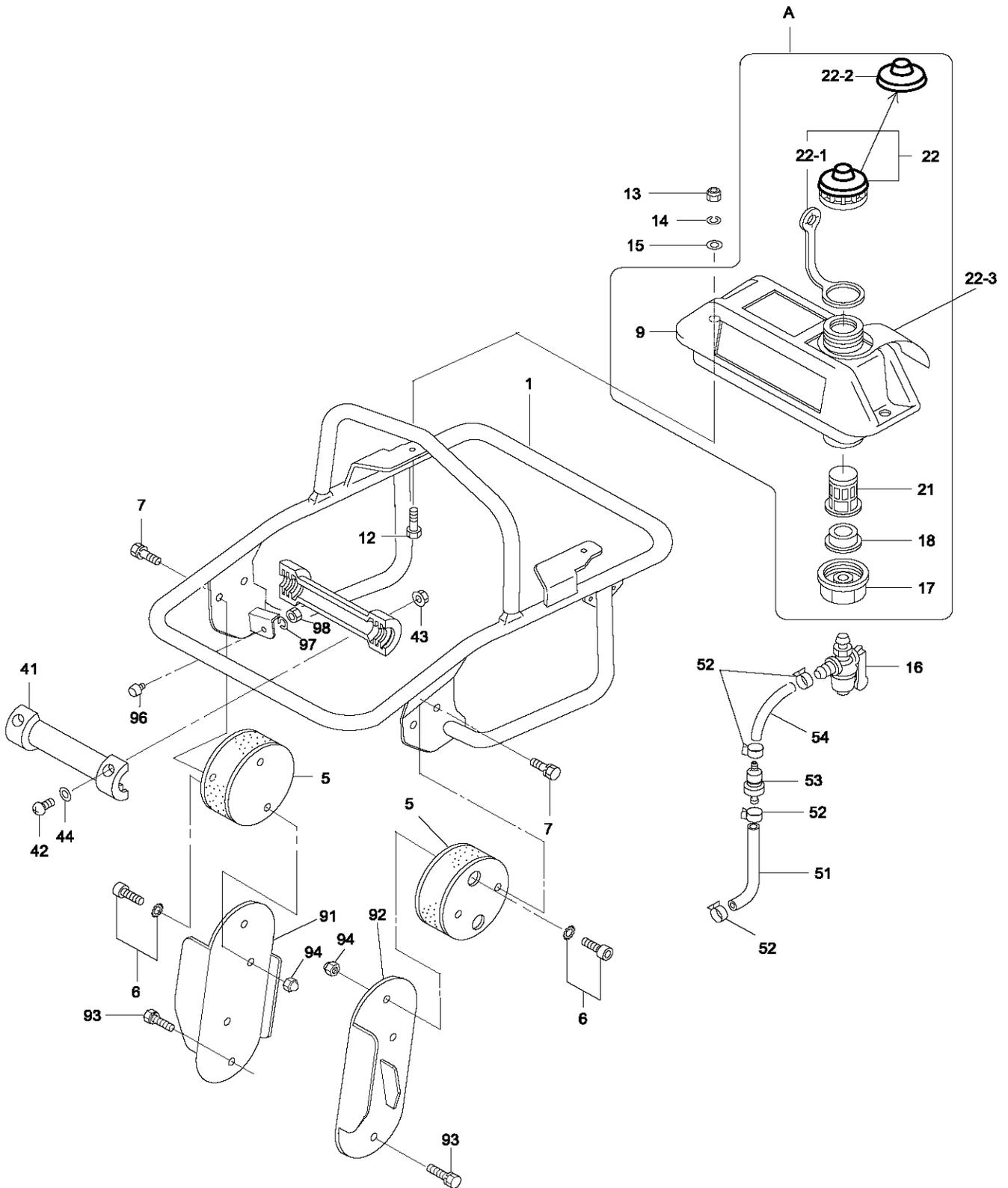
GUIDE CYLINDER AND FOOT ASSY



GUIDE CYLINDER AND FOOT ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	366900080	PISTON PIN.....	1.....	REPLACES P/N 366460100
2	366459910	PISTON PIN PLUG	2	
3	361344360	PISTON ROD	1	
4	355452340	PISTON END	1	
5	020118150	NUT M18X1.5P	1	
6	355447250	STOPPER, UPPER	1	
7	355447260	STOPPER, LOWER	1	
9	355334310	SPRING CYLINDER	1	
11	050100900	O-RING	1	
12	014210020	SOCKET HEAD BOLT 10X20 T.....	4.....	REPLACES P/N 001521020
13	014210040	SOCKET HEAD BOLT 10X40 T.....	4.....	REPLACES P/N 001521040
14	953405270	PLUG 1/4X14 13L	1	
15	953405260	PACKING 1/4 (CU)	1	
17	355213010	GUIDE CYLINDER	1	
18	050201500	O-RING	1	
19	050931500	O-RING	2	
20	012710035	BOLT 10X35 H, SW.....	4.....	REPLACES P/N 002211035
21	354010010	BELLOWS (L) ORANGE	1	
22	354336352	BELLOWS CLAMP	2	
23	354442340	BAND GUIDE, BELLOWS	2	
24	011008040	BOLT 8X40 H.....	2.....	REPLACES P/N 001220840
25	020108060	NUT M8.....	2.....	REPLACES P/N 020308060
26	354446170	PIN 6D-8.5L	2	
28	953405270	PLUG 1/4X14 13L	1	
29	953405260	PACKING 1/4 (CU)	1	
30	050100950	O-RING.....	1.....	S/N R5624 AND BELOW
30	050200950	O-RING.....	1.....	S/N R5625 AND ABOVE
46	355113960	PROTECTION SLEEVE.....	1.....	S/N R5624 AND BELOW
46	355119030	PROTECTION SLEEVE.....	1.....	S/N R5625 AND ABOVE
47	366460300	LEVEL GAUGE, PLUG TYPE	1	
48	953404670	COPPER PACKING 17X25.5X1	1	
51	355447270	MAIN SPRING	2	
52	355213000	FOOT PLATE	1	
100	8511S	FOOT ASSY.....	1.....	INCLUDES ITEMS W/\$ REPLACES P/N 366910020
104	009110034	SUNK HEAD BOLT 12X65 H	2	
105	021112140	NYLON NUT M12.....	4.....	REPLACES P/N 022711214
106	030212300	WASHER, LOCK M12	4	
107\$	009110036	SUNK HEAD BOLT 10X55 H.....	7.....	REPLACES P/N 001611051
108\$	030210250	WASHER, LOCK M10	7	
126\$	021110120	NYLON NUT M10.....	7.....	REPLACES P/N 022711012
131	009110035	SUNK HEAD BOLT 12X95 H	2	
132	363343390	HANDLE	1	

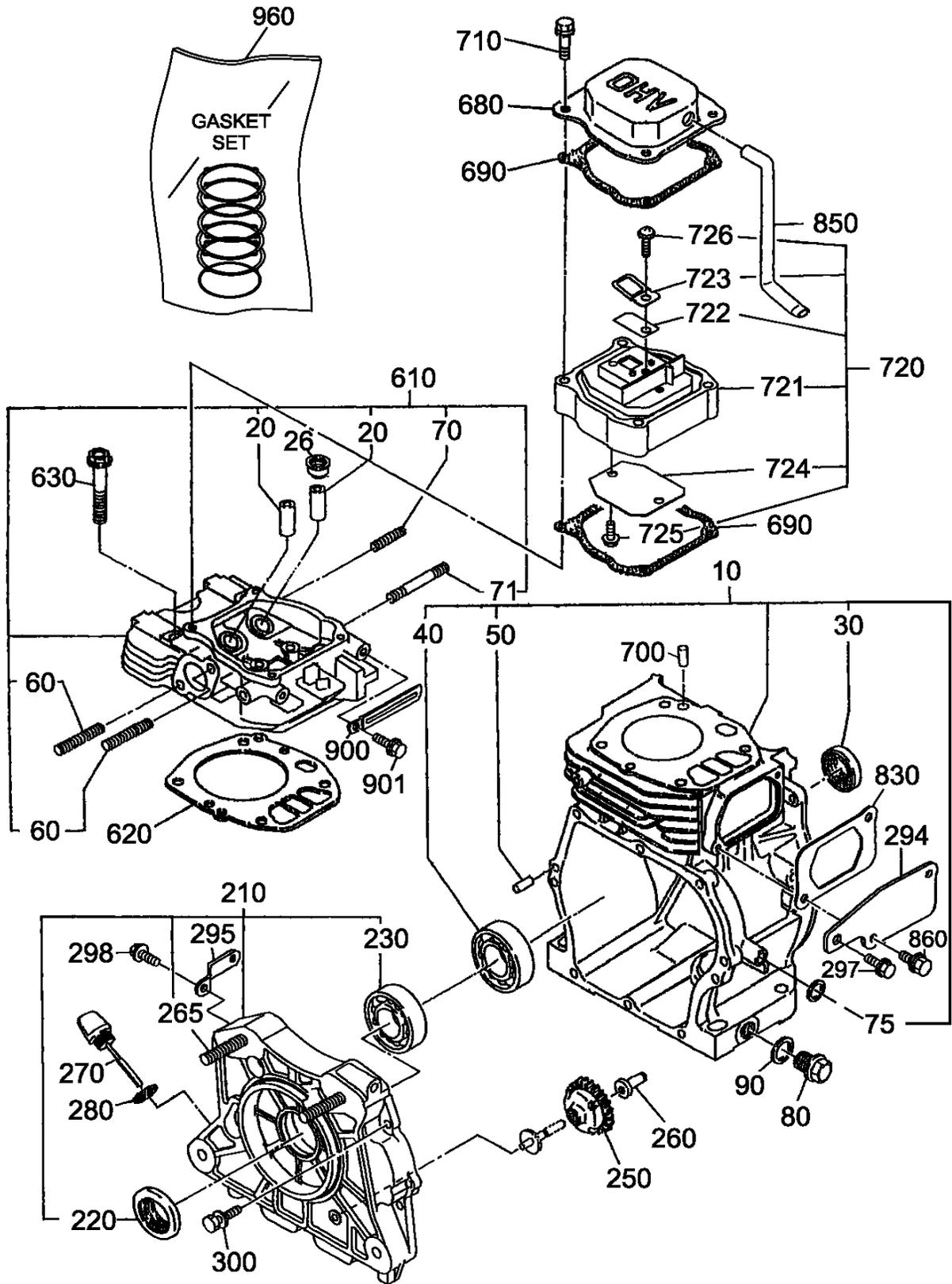
FUEL TANK AND HANDLE ASSY



FUEL TANK AND HANDLE ASSY

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
A	305910036	FUEL TANK ASSY.....	1.....	INCLUDES ITEMS W/# REPLACES P/N 305910032
1	361118300	HANDLE	1	
5	351337070	SHOCK ABSORBER	2	
6	009110007	CAP, GT SA, 10X20	4	
7	012210020	BOLT 10X20	4.....	REPLACES P/N 002211020
9#	363218260	FUEL TANK, GRAY	1.....	REPLACES P/N 362116890
12	001210830	BOLT 8X30 T	2	
13	022710809	NUT, NYLON M8	2	
14	030208200	WASHER, LOCK M8	2	
15	952401450	WASHER, FLAT 8.5X22X3	2	
16	954300720	FUEL COCK ASSY.	1	
17#	351437785	HOLDER, FUEL COCK	1	
18#	954406020	PACKING, COCK FUEL	1	
21#	954406010	STRAINER	1	
22#	361910070	CAP ASSY, TANK	1.....	INCLUDES ITEM W/%
22-1#%	353449010	STRAP, FUEL TANK CAP	1	
22-2#%	362458350	CAP SUB (B)	1	
22-3#	920208960	TAG, GASOLINE	1	
41	366217170	ROLLER, W/PIN	2	
42	0017105020	SCREW 5X20	4.....	REPLACES P/N 091005020
43	022610505	FLANGE NUT M5 H	4	
44	58151	WASHER, FLAT M5	4.....	REPLACES P/N 031105080
51	959328404	FUEL HOSE/B-95	1	
52	0561080020	CLAMP	4	
53	301419750	FILTER, FUEL	1	
54	959328405	FUEL HOSE	1	
91	361458840	STAY, SHOCK ABSORBER/R	1	
92	361458850	STAY, SHOCK ABSORBER/L	1	
93	012210025	BOLT 10X25 H, SW	4.....	REPLACES P/N 002211025
94	022131008	CAP NUT M10	4	
96	939010270	STOPPER RUBBER (70)	1	
97	030208200	WASHER, LOCK M8	1	
98	020108060	NUT M8.....	1.....	REPLACES P/N 020308060

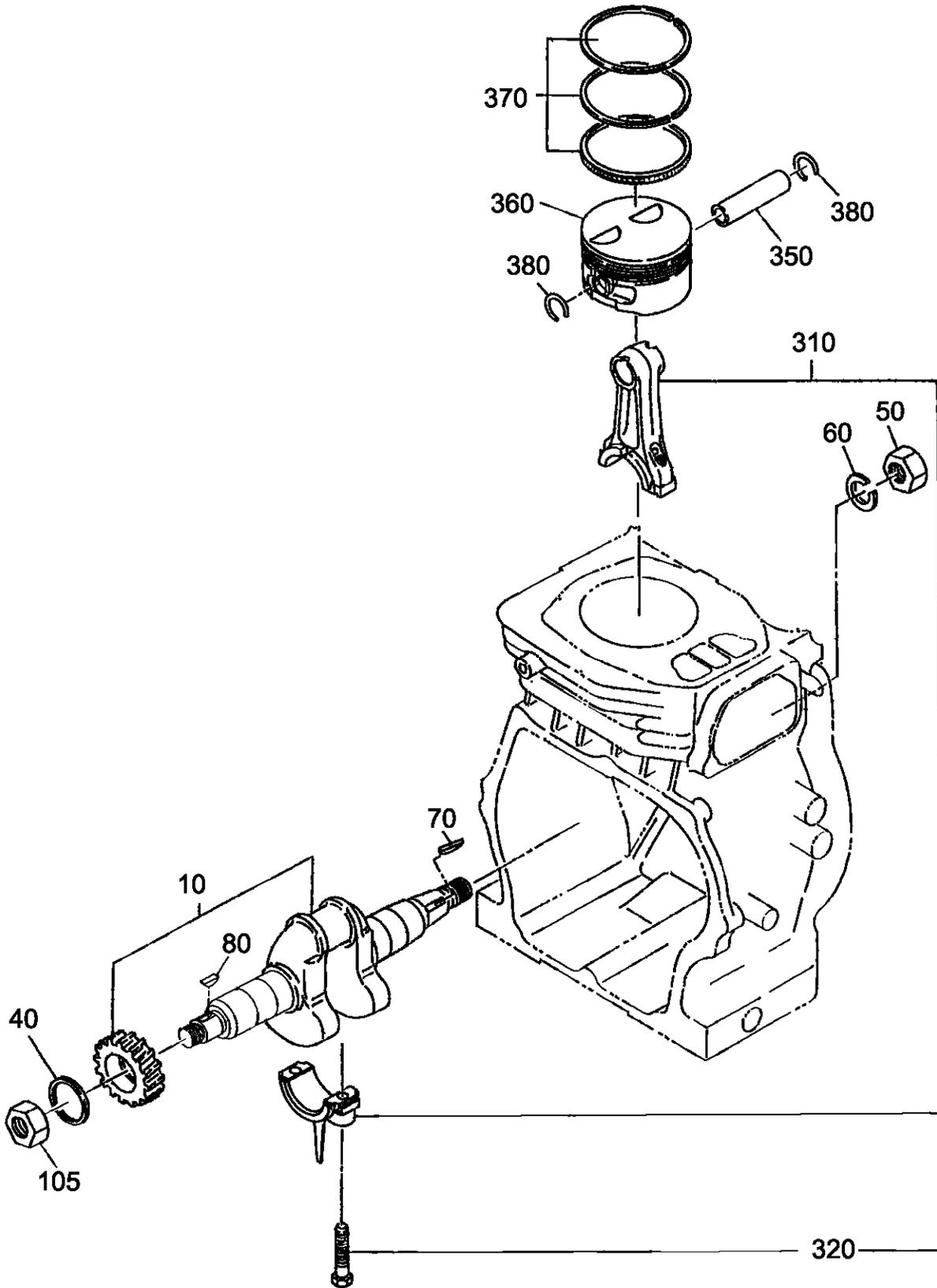
ROBIN EH-12-2D46051 ENG. — CRANKCASE AND CYL. ASSY.



ROBIN EH-12-2D46051 ENG. — CRANKCASE AND CYL. ASSY.

NO.	PART NO.	PART NAME	QTY.	REMARKS
10	2521030131	CRANKCASE.....	1.....	INCLUDES ITEMS W/% REPLACES P/N 2521030141
20#	2371420203	VALVE GUIDE, OVERSIZE	2	
26#	2771601001	STEM SEAL	1	
30%	0440250150	OIL SEAL	1	
40%	0600250010	BALL BEARING	1	
50%	0310060020	DOWEL PIN	2	
60#	0105080480	STUD	2	
70#	0105060131	STUD	1	
71#	0013906600	STUD	1	
75%	0440080010	OIL SEAL VC 8X14X4	1	
80	0401140030	PLUG	2	
90	0211140020	GASKET	2	
210	2521110121	MAIN BEARING COVER CP	1.....	INCLUDES ITEMS W/\$
220\$	0440250160	OIL SEAL	1	
230\$	0600250010	BALL BEARINGS, 6205C3	1	
250	2274500301	GOVERNOR GEAR COMPL	1	
260	2054190103	GOVERNOR SLEEVE	1	
265\$	0108100020	STUD	2	
270	2686360303	OIL GAUGE CP	1	
280	0213160020	GASKET	1	
294	2521700201	BRACKET CP (M.B.C.)	1	
295	2521700101	SUPPORT (M.B.C.)	1	
297	0011308160	BOLT AND WASHER ASSY.	1	
298	0011308160	BOLT AND WASHER ASSY.	2	
300	0130060200	BOLT AND WASHER ASSY.	8	
610	2681310121	CYLINDER HEAD CP	1.....	INCLUDES ITEMS W/#
620	2531500133	GASKET, HEAD	1	
630	0110080100	FLANGE BOLT	4	
680	2521550203	ROCKER COVER	1	
690	2691600403	GASKET, ROCKER COVER	2	
700	0310060020	DOWEL PIN	2	
710	0110060170	FLANGE BOLT, EY45V	4	
720	2521560120	SPACER ASSY, BREATHER	1.....	INCLUDES ITEMS W/@
721@	2521560103	SPACER, BREATHER	1	
722@	2521600103	LEAF VALVE	1	
723@	2521610103	RETAINER PLATE	1	
724@	2521440113	PLATE	1	
725@	0110060150	FLANGE BOLT EH11	2	
726@	0043506120	SCREW AND WASHER	1	
830	2681620103	GASKET, BREATHER COVER	1	
850	2521800203	RUBBER PIPE	1	
860	0011306160	BOLT AND WASHER ASSY.	2	
900	0566000250	CLAMP	1	
901	0110060020	FLANGE BOLT	1	
960	2689900207	GASKET SET	1	

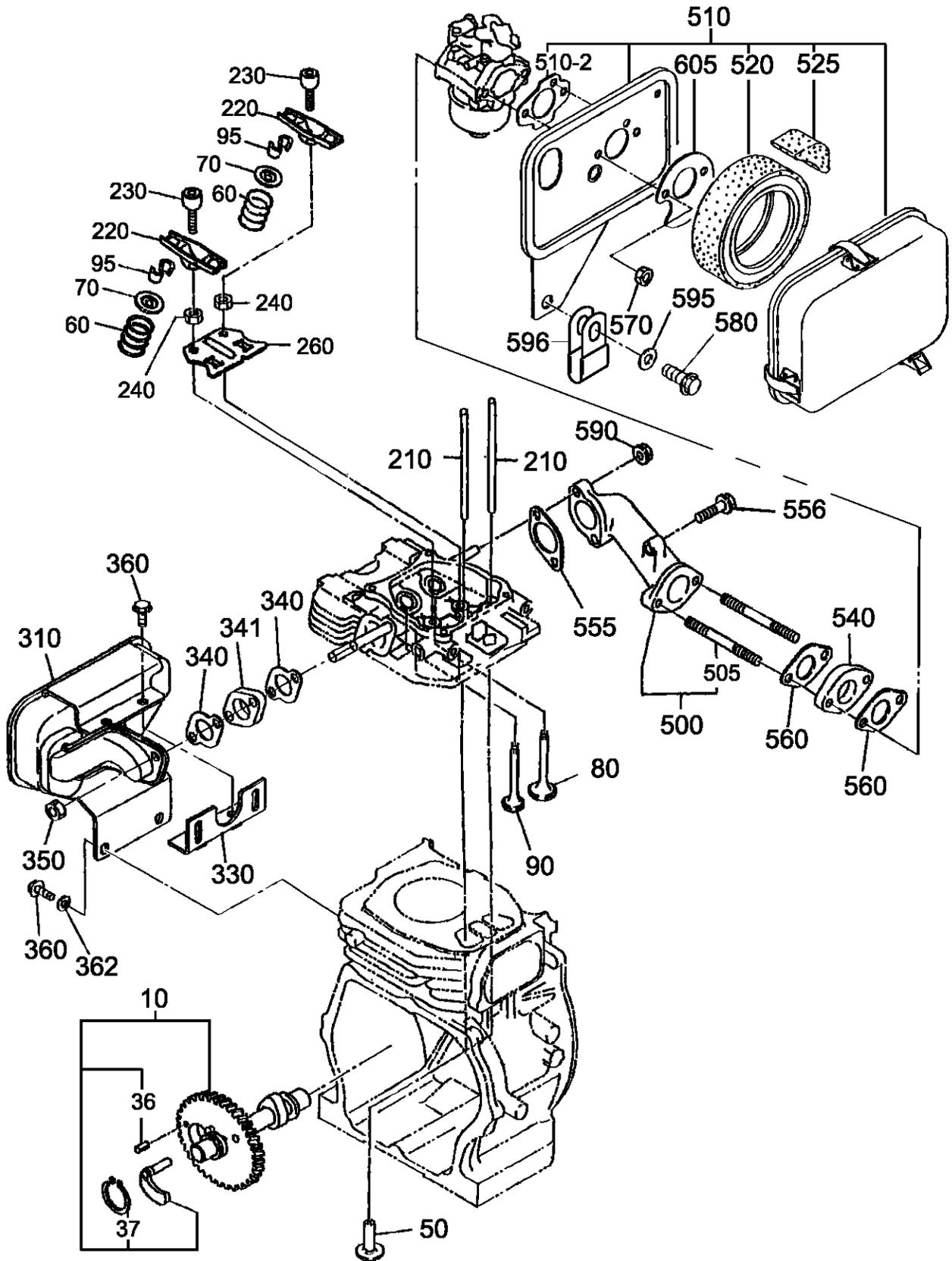
ROBIN EH-12-2D46051 ENG. — CRNKSHFT. AND PISTON. ASSY.



ROBIN EH-12-2D46051 ENG. — CRNKSHFT. AND PISTON. ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2682190101	CRANKSHAFT CP.....	1.....	REPLACES P/N 2682190111
40	0230250110	SPACER T=0.6.....	1.....	AS REQUIRED
40	0230250120	SPACER T=0.8.....	1.....	AS REQUIRED
40	0230250130	SPACER T=1.0.....	1.....	AS REQUIRED
50	0021814000	NUT	1	
60	0032014000	WASHER, LOCK	1	
70	0323030010	WOODRUFF KEY	1	
80	0053204201	WOODRUFF KEY	1	
105	0173120010	LOCK NUT	1	
310	2522250120	CONNECTING ROD ASSY.....	1.....	INCLUDES ITEM W/\$
320\$	2362300103	CONNECTING ROD BOLT	2	
350	2682330113	PISTON PIN	1	
360	26823401J3	PISTON STD.	1	
360	26823402J3	PISTON O.S. 0.25MM	1	
360	26823403J3	PISTON O.S. 0.50MM	1	
370	2522350117	PISTON RING SET, STD	1	
370	2522350217	PISTON RING SET, 0.25 O.S.	1	
370	2522350317	PISTON RING SET, 0.50 O.S.	1	
380	2152500403	CLIP	2	

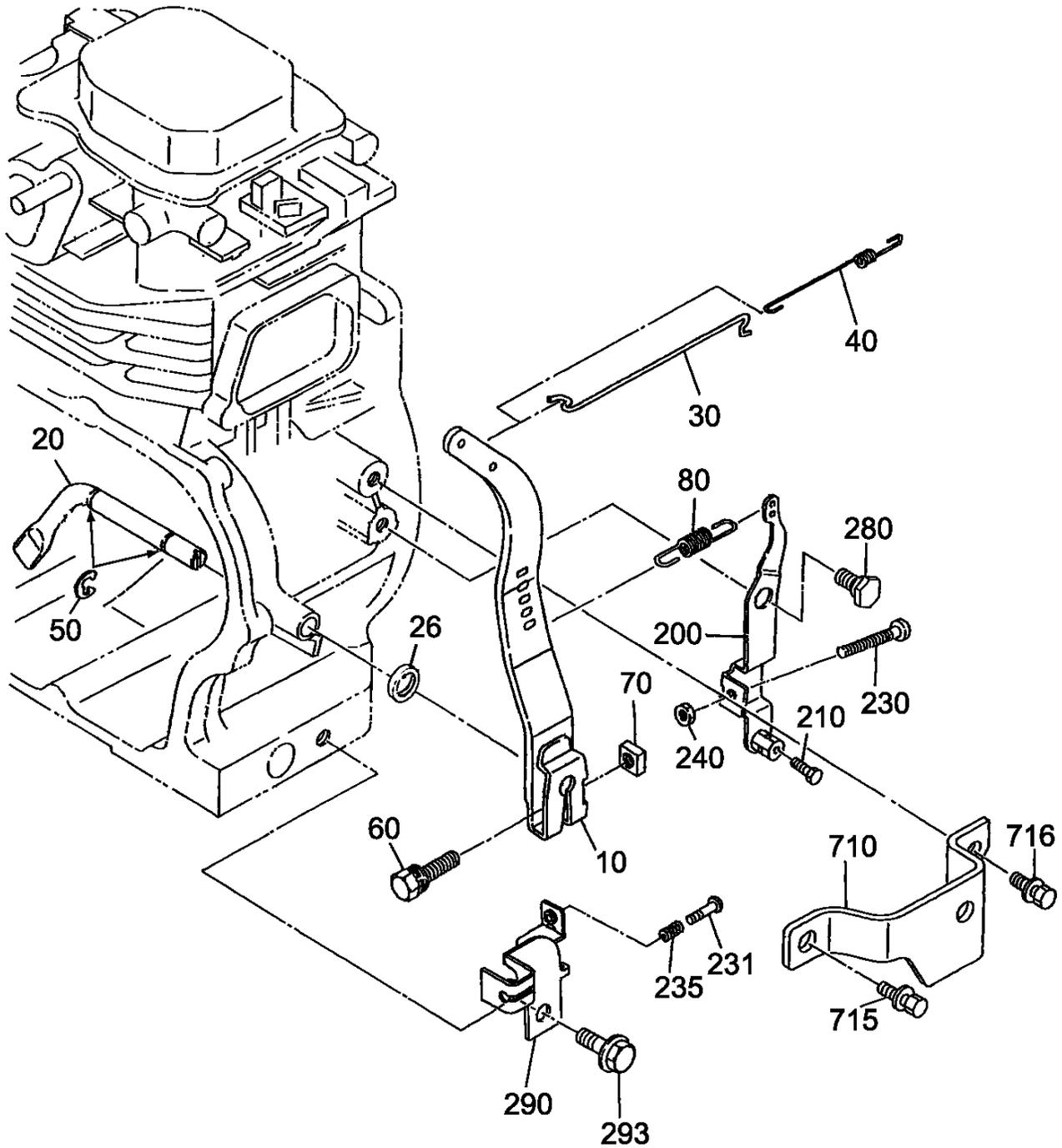
ROBIN EH-12-2D46051 ENG. — MUFFLER, AIR CLEANER, CAM ASSY.



ROBIN EH-12-2D46051 ENG. — MUFFLER, AIR CLEANER, CAM ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2533170111	CAMSHAFT CP	1.....	INCLUDES ITEMS W/#
36#	0051904100	SPRING PIN	1	
37#	0031522000	SNAP RING	1	
50	2393330113	TAPPET	2	
60	2533360103	VALVE SPRING	2	
70	2693370103	SPRING RETAINER	2	
80	2683340103	INTAKE VALVE	1	
90	2683350103	EXHAUST VALVE	1	
95	13210KA031	COLLECT VALVE	4	
210	2683530103	PUSH ROD	2	
220	2693600223	ROCKER ARM	2	
230	2693580103	BOLT, PIVOT	2	
240	0170060090	NUT	2	
260	2693650103	GUIDE PLATE	1	
310	2523040111	MUFFLER CP	1	
330	2523700111	BRACKET CP	1	
340	2533520103	GASKET, MUFFLER	2	
341	2523650123	SPACER, EXHAUST	1	
350	0176080030	SELF-LOCK NUT	2	
360	0011308160	BOLT AND WASHER ASSY.	4	
362	0031008000	WASHER	2.....	REPLACES P/N 0031108000
500	2683300311	INTAKE PIPE CP	1	
505	0105060230	STUD	2	
510	2523271140	AIR CLEANER ASSY.....	1.....	INCLUDES ITEMS W/\$
510-2\$	2263272008	PACKING	1	
520\$	2523260207	ELEMENT, SET	1	
525	2523261408	ELEMENT	1	
540	1063291203	INSULATOR	1	
555	2823590103	GASKET (INSULATOR)	1	
556	0011406400	BOLT AND WASHER ASSY.	1	
560	2363590303	GASKET (CARBURETOR)	2	
570	0176060030	SELF LOCK NUT	2	
580	0011308180	BOLT AND WASHER ASSY.	1	
590	0023706000	FLANGE NUT	2.....	REPLACES P/N 0023806000
595	0031008000	WASHER	1.....	REPLACES P/N 0200080080
596	959006120	CLAMP	1	
605	2523650203	PLATE, AIR CLEANER	1	

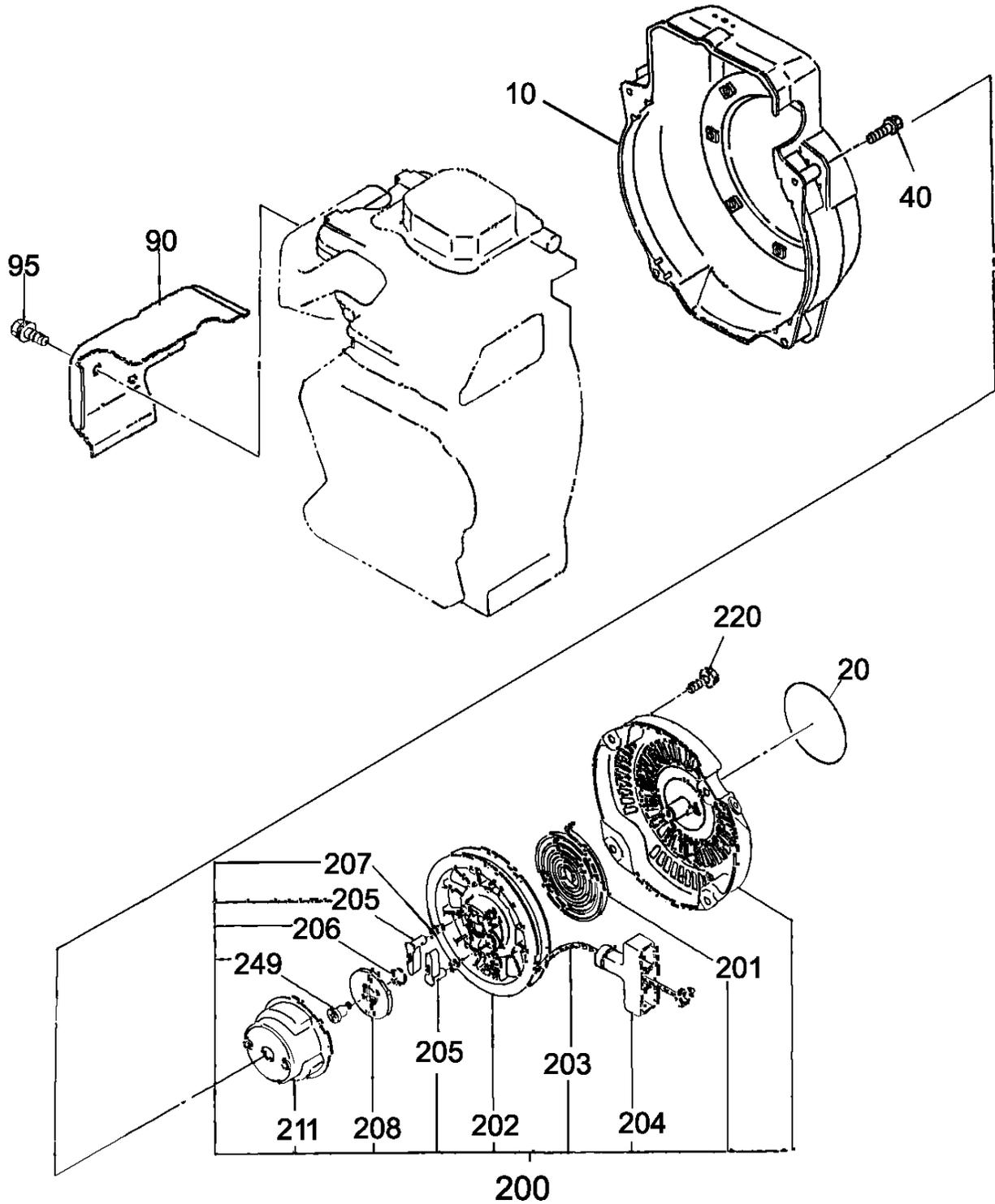
ROBIN EH-12-2D46051 ENGINE — GOVERNOR ASSY.



ROBIN EH-12-2D46051 ENGINE — GOVERNOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2524230303	GOVERNOR LEVER CP	1	
20	2274220103	GOVERNOR SHAFT	1	
26	0031008000	WASHER, FLAT	1	REPLACES P/N 0031108000
30	2544270101	GOVERNOR ROD CP	1	
40	2544280103	ROD SPRING	1	
50	0031306000	CLIP	2	
60	0011406300	BOLT AND WASHER ASSY.	1	
70	0186060020	NUT	1	
80	2524250323	GOVERNOR SPRING	1	
200	2524340230	SPEED CONTROL ASSY.	1	
210	0116040030	BOLT	1	
230	0043105250	SCREW, PAN HEAD	1	
231	0140040020	SCREW.....	1	REPLACES P/N 0043104250
235	2054600323	CONTROL SPRING	1	
240	0021705000	NUT	1	
280	22643101A1	LINK PIVOT	1	REPLACES P/N 2264310101
290	2684420201	WIRE BRACKET	1	
293	0110060030	FLANGE BOLT	1	
710	2524280111	PROTECTOR CP, GOVERNOR	1	
715	0011308160	BOLT AND WASHER ASSY.	1	
716	0110060030	FLANGE BOLT	1	

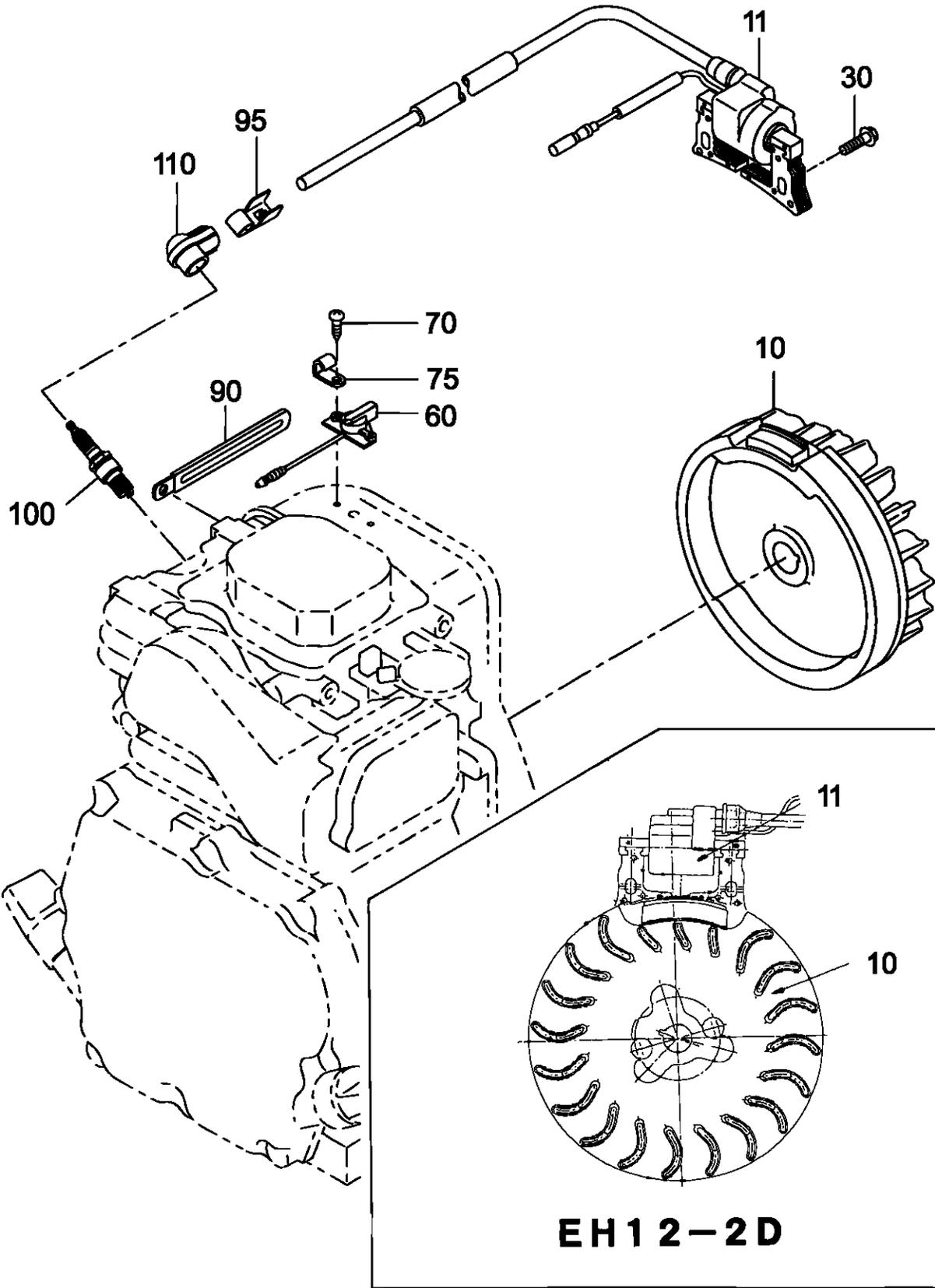
ROBIN EH-12-2D46051 ENG. — RECOIL STARTER ASSY.



ROBIN EH-12-2D46051 ENG. — RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2525165221	BLOWER HOUSING CP 2	1	
20	920100240	DECAL: M-MARK	1	
40	0011406550	BOLT AND WASHER ASSY.	4	
90	2685270303	HEAD COVER	1	
95	0110060140	FLANGE BOLT	2	
200	2685020140	RECOIL STARTER ASSY.	1.....	INCLUDES ITEMS W/\$
201\$	2705011508	SPIRAL SPRING	1	
202\$	2695012008	REEL	1	
203\$	2825011118	STARTER ROPE	1	
204\$	2615010018	STARTER KNOB	1	
205\$	2705012508	RATCHET	2	
206\$	2275013108	FRICTION SPRING	1	
207\$	2275013508	RETURN SPRING	2	
208\$	2705026108	RATCHET GUIDE	1	
211\$	2685014508	STARTER PULLEY	1	
220	957010600800	FLANGE BOLT.....	4.....	REPLACES P/N 0110060010
249\$	2275015208	SET SCREW	1	

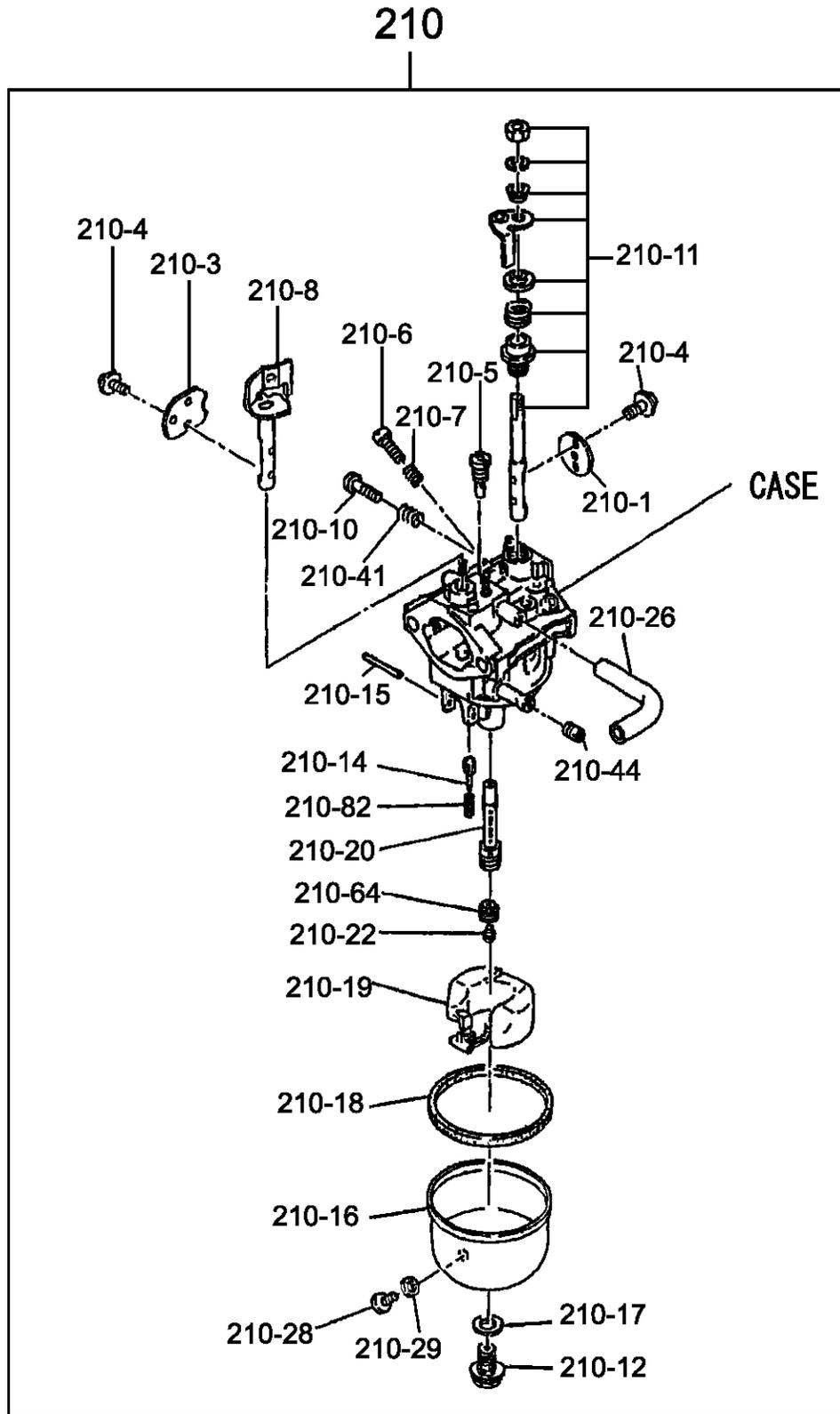
ROBIN EH-12-2D46051 ENGINE — MAGNETO ASSY.



ROBIN EH-12-2D46051 ENGINE — MAGNETO ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2687933201	FLYWHEEL CP	1	
11	2697943021	IGNITION COIL CP	1	
30	0011406250	BOLT AND WASHER ASSY.	2	
60	0660000481	STOP SWITCH ASSY. (ON-OFF)	1	
70	0150040090	TAPPING SCREW	2	
75	0566030010	CLAMP	1	
90	0566000250	CLAMP	1	
95	0659000010	SPARK PLUG CLIP	1	
100	0650140580	SPARK PLUG, BR6ES	1	
110	2307510113	SPARK PLUG CAP	1	

ROBIN EH-12-2D46051 ENGINE — CARBURETOR ASSY.



ROBIN EH-12-2D46051 ENGINE — CARBURETOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
210	2526255120	CARBURETOR ASSY.	1	
210-1	2526253508	THROTTLE VALVE	1	
210-3	2366252808	CHOKE VALVE	1	
210-4	2376245108	SCREW	4	
210-5	2166230308	PILOT JET	1	
210-6	2466243608	PILOT SCREW	1	
210-7	2306244608	SPRING	1	
210-8	2526252108	CHOKE SHAFT	1	
210-10	2466243508	ADJUST SCREW	1	
210-11	1616253008	SHAFT ASSY. (THROTTLE)	1	
210-12	2366245108	BOLT	1	
210-14	1616235208	NEEDLE	1	
210-15	2146251508	FLOAT PIN	1	
210-16	2366255208	FLOAT CHAMBER BODY	1	
210-17	2366245008	PACKING	1	
210-18	2366254008	PACKING, CHAMBER	1	
210-19	2366250508	FLOAT	1	
210-20	2526244008	MAIN NOZZLE	1	
210-22	2526240208	MAIN JET	1	
210-26	1616235308	HOSE	1	
210-28	2366235008	SCREW	1	
210-29	2366254108	PACKING	1	
210-41	2096244508	SPRING	1	REPLACES P/N 2106231808
210-44	1616240008	MAIN JET	1	
210-64	2356242508	GUIDE HOLDER	1	
210-82	2366244508	SPRING	1	

TERMS AND CONDITIONS OF SALE — PARTS

PAYMENT TERMS

Terms of payment for parts are net 30 days.

FREIGHT POLICY

All parts orders will be shipped collect or prepaid with the charges added to the invoice. All shipments are F.O.B. point of origin. Multiquip's responsibility ceases when a signed manifest has been obtained from the carrier, and any claim for shortage or damage must be settled between the consignee and the carrier.

MINIMUM ORDER

The minimum charge for orders from Multiquip is \$15.00 net. Customers will be asked for instructions regarding handling of orders not meeting this requirement.

RETURNED GOODS POLICY

Return shipments will be accepted and credit will be allowed, subject to the following provisions:

1. A Returned Material Authorization must be approved by Multiquip prior to shipment.
2. To obtain a Return Material Authorization, a list must be provided to Multiquip Parts Sales that defines item numbers, quantities, and descriptions of the items to be returned.
 - a. The parts numbers and descriptions must match the current parts price list.
 - b. The list must be typed or computer generated.
 - c. The list must state the reason(s) for the return.
 - d. The list must reference the sales order(s) or invoice(s) under which the items were originally purchased.
 - e. The list must include the name and phone number of the person requesting the RMA.
3. A copy of the Return Material Authorization must accompany the return shipment.
4. Freight is at the sender's expense. All parts must be returned freight prepaid to Multiquip's designated receiving point.

5. Parts must be in new and resalable condition, in the original Multiquip package (if any), and with Multiquip part numbers clearly marked.
6. The following items are not returnable:
 - a. Obsolete parts. (If an item is in the price book and shows as being replaced by another item, it is obsolete.)
 - b. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, and other rubber parts) that were purchased more than six months prior to the return date.
 - c. Any line item with an extended dealer net price of less than \$5.00.
 - d. Special order items.
 - e. Electrical components.
 - f. Paint, chemicals, and lubricants.
 - g. Decals and paper products.
 - h. Items purchased in kits.
7. The sender will be notified of any material received that is not acceptable.
8. Such material will be held for five working days from notification, pending instructions. If a reply is not received within five days, the material will be returned to the sender at his expense.
9. Credit on returned parts will be issued at dealer net price at time of the original purchase, less a 15% restocking charge.
10. In cases where an item is accepted, for which the original purchase document can not be determined, the price will be based on the list price that was effective twelve months prior to the RMA date.
11. Credit issued will be applied to future purchases only.

PRICING AND REBATES

Prices are subject to change without prior notice. Price changes are effective on a specific date and all orders received on or after that date will be billed at the revised price. Rebates for price declines and added charges for price increases will not be made for stock on hand at the time of any price change.

Multiquip reserves the right to quote and sell direct to Government agencies, and to Original Equipment Manufacturer accounts who use our products as integral parts of their own products.

SPECIAL EXPEDITING SERVICE

A \$35.00 surcharge will be added to the invoice for special handling including bus shipments, insured parcel post or in cases where Multiquip must personally deliver the parts to the carrier.

LIMITATIONS OF SELLER'S LIABILITY

Multiquip shall not be liable hereunder for damages in excess of the purchase price of the item with respect to which damages are claimed, and in no event shall Multiquip be liable for loss of profit or good will or for any other special, consequential or incidental damages.

LIMITATION OF WARRANTIES

No warranties, express or implied, are made in connection with the sale of parts or trade accessories nor as to any engine not manufactured by Multiquip. Such warranties made in connection with the sale of new, complete units are made exclusively by a statement of warranty packaged with such units, and Multiquip neither assumes nor authorizes any person to assume for it any other obligation or liability whatever in connection with the sale of its products. Apart from such written statement of warranty, there are no warranties, express, implied or statutory, which extend beyond the description of the products on the face hereof.

Effective: February 22, 2006

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON-HAND WHEN CALLING

UNITED STATES

Multiquip Corporate Office

18910 Wilmington Ave.
Carson, CA 90746
Contact: mq@multiquip.com

Tel. (800) 421-1244
Fax (310) 537-3927

MQ Parts Department

800-427-1244
310-537-3700

Fax: 800-672-7877

Service Department

800-421-1244
310-537-3700

Warranty Department

800-421-1244
310-537-3700

Fax: 310-943-2249

Technical Assistance

800-478-1244

Fax: 310-943-2238

CANADA

Multiquip

4110 Industriel Boul.
Laval, Quebec, Canada H7L 6V3
Contact: infocanda@multiquip.com

Tel: (450) 625-2244
Tel: (877) 963-4411
Fax: (450) 625-8664

UNITED KINGDOM

Multiquip (UK) Limited Head Office

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This manual MUST accompany the equipment at all times. This manual is considered a permanent part of the equipment and should remain with the unit if resold.

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