

# PARTS AND OPERATION MANUAL



# *Mikasa*

## Tamping Rammer Model MTR-80L

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Revision #8(06/26/01)



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# **WARNING**



## **CALIFORNIA — Proposition 65 Warning**

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

## **HERE'S HOW TO GET HELP**

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

### ***PARTS DEPARTMENT***

*800-427-1244 or 310-537-3700*

*FAX: 800-672-7877 or 310-637-3284*

### ***SERVICE DEPARTMENT/TECHNICAL ASSISTANCE***

*800-478-1244 or 310-537-3700*

*FAX: 310- 537-4259*

### ***WARRANTY DEPARTMENT***

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### NOTE

*Specification and part number  
are subject to change without  
notice.*

- Dealer account number
- Dealer name and address
- Shipping address (if different than billing address)
- Return fax number
- Applicable model number
- Quantity, part number and description of each part
- Specify preferred method of shipment:
  - UPS Ground
  - UPS Second Day or Third Day\*
  - UPS Next Day\*
  - Federal Express Priority One (please provide us with your Federal Express account number)\*
  - Airborne Express\*
  - Truck or parcel post

*\*Normally shipped the same day the order is received, if prior to 2PM west coast time.*

## Earn Extra Discounts when you order by FAX!

All parts orders which include complete part numbers and are received by fax qualify for the following extra discounts:

<u>Number of line items ordered</u>	<u>Additional Discount</u>
1-9 items	3%
10+ items**	5%

### Get special freight allowances when you order 10 or more line items via FAX!\*\*

- UPS Ground Service at no charge for freight
- PS Third Day Service at one-half of actual freight cost

No other allowances on freight shipped by any other carrier.

\*\*Common nuts, bolts and washers (all items under \$1.00 list price) do not count towards the 10+ line items.

\*DISCOUNTS ARE SUBJECT TO CHANGE\*

Fax order discount and UPS special programs revised June 1, 1995

**Extra Fax Discount  
for Domestic USA  
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**Up to 5%  
extra savings!**

**UPS  
Special**  
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**Now! Direct TOLL-FREE access  
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# RULES FOR SAFE OPERATION

## CAUTION:



Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only.

The following safety guidelines should always be used when operating the MTR-80L Tamping Rammer:

### GENERAL SAFETY

- **DO NOT** operate or service this equipment before reading this entire manual.



- This equipment should not be operated by persons under 18 years of age.

- **NEVER** operate this equipment without proper protective clothing, shatterproof glasses, steel-toed boots and other protective devices required by the job.



- **NEVER** operate this equipment when not feeling well due to fatigue, illness or taking medicine.

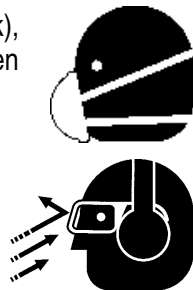


- **NEVER** operate this equipment under the influence of drugs or alcohol.



- **ALWAYS** check the machine for loosened threads or bolts before starting.

- **ALWAYS** wear proper respiratory (mask), hearing and eye protection equipment when operating the rammer.



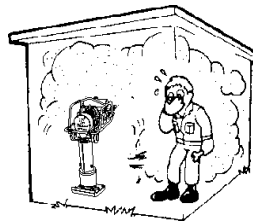
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacture does not assume responsibility for any accident due to equipment modifications.
- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.

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

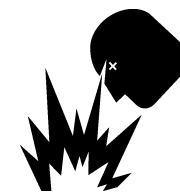


- **High Temperatures** – Allow the engine to cool before adding fuel or performing service and maintenance functions. Contact with *hot* components can cause serious burns.

- The engine section of this rammer requires an adequate free flow of cooling air. **NEVER** operate the rammer in any enclosed or narrow area where free flow of the air is restricted. If the air flow is restricted it will cause serious damage to the rammer or engine and may cause injury to people. Remember the rammer's engine gives off **DEADLY** carbon monoxide gas.



- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.



- **ALWAYS** use extreme caution when working with **flammable** liquids. When refueling, **stop the** engine and allow it to cool. **DO NOT** smoke around or near the machine. Fire or explosion could result from fuel vapors, or if fuel is spilled on a hot

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

## RULES FOR SAFE OPERATION

- **NEVER** Run engine without air filter. Severe engine damage may occur.
- Always service air cleaner frequently to prevent poor combustion and engine damage.
- Always be sure the operator is familiar with proper safety precautions and operations techniques before using rammer.
- 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.
- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- **NEVER** Run engine without air cleaner. Severe engine damage may occur.
- Always read, understand, and follow procedures in Operator's Manual before attempting to operate equipment.
- Refer to the **ROBIN Engine Owner's Manual** for engine technical questions or information recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.

### Transporting

- Always shutdown engine before transporting.
- Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- Drain fuel when transporting rammer over long distances or bad roads.
- When placing the rammer inside a truck-bed for transport, always tie-down the rammer in the upright position.

### Emergencies

- Always know the location of the nearest **fire extinguisher** and **first aid kit**. Know the location of the nearest telephone. Also know the phone numbers of the nearest **ambulance**, **doctor** and **fire department**. This information will be invaluable in the case of an emergency.

### Maintenance Safety

- **NEVER** lubricate components or attempt service on a running machine.
- Always allow the machine a proper amount of time to cool before servicing.
- Keep the machinery in proper running condition.
- Fix damage to the machine immediately and always replace broken parts and decals which are missing or difficult to read.
- 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.



P/N 920202630

## CAUTION

1. Check all nuts and bolts for tightness
2. Give each grease fitting 3 to 5 shots of grease with a hand grease gun every 8 hours. Be sure to use Shell darina EP-2 grease or benton base equal.
3. Fill the fuel tank with a fuel mixture of gasoline and outboard oil (25:1). 1/3 pint outboard oil to 1 gal. Regular gas.
4. To start engine, open the fuel filter located under the fuel tank. Close the choke lever on the carburetor and pull starter rope. When the engine starts, open choke fully.
5. When difficult to start engine up, open the drain cock located on lower part of crankcase. and discharge excess fuel by cranking the engine 2 or 3 times.
6. Allow the engine to warm up for 4 to 5 minutes before operation.
7. When starting to operate the machine quickly move the throttle lever on the handle quickly from "off" to "on" position.
8. Be sure the fuel filter is closed after operation to avoid irregular jumping.

NPA-181 (J)

P/N 920201810

NAMEPLATE

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

CONTACT MULTIQUIP  
SERVICE DEPT.

## CAUTION !

- READ OWNER'S SERVICE MANUAL BEFORE OPERATING OR SERVICING THIS MACHINE.
- ALWAYS KEEP UNAUTHORIZED, INEXPERIENCED, UNTRAINED PEOPLE AWAY FROM THIS MACHINE.
- MAKE SURE ALL SAFETY DEVICES ARE OPERATIONAL BEFORE THIS MACHINE IS STARTED. MAKE SURE ENGINE IS TURNED OFF AND SPARK PLUG WIRE DISCONNECTED BEFORE SERVICING THE MACHINE OR COMING IN CONTACT WITH ANY MOVING PART. IF EQUIPMENT IS POWERED BY AN ELECTRIC MOTOR, DISCONNECT ELECTRICAL PLUG.
- NEVER LEAVE MACHINE UNATTENDED WHEN OPERATING. ALWAYS STOP ENGINE AND ALLOW ENGINE TO COOL BEFORE ADDING FUEL OR OIL.

NPA-329 (J)

P/N 920203290

When you stop  
the engine, be  
sure to close  
the fuel cock.  
NPA-399 (J)

P/N 920203990

<p>エアクリーナ取扱注意</p> <p>エレメントが汚れた時は白灯油で洗浄し、洗浄後は混合油(白灯油2~4:エンジンオイル1)の中に押し、点滴しない程度によく振り切って粗込んで下さい。但しホコリの多い場所では早めに清掃して下さい。</p>	<p>NOTICE</p> <p>CLEAN THE ELEMENT WITH KEROSENE WHEN DIRTY. AFTER THE CLEANING, LUBRICATE IT MIXED OIL (KEROSENE 2~4: ENGINE OIL 1), SQUEEZE OUT THE OIL, AND REPLACE IT, AND CLEAN IT MORE OFTEN WHEN OPERATING IN DUSTY CONDITIONS.</p>
<p>TOKYO KOUKENSHA CO., LTD. JAPAN</p>	
<p>P/N 1073273308</p>	
<p>NPA-831 (J)</p>	

USE MIXED FUEL ONLY  
1/3 PT OUTBOARD OIL: 1GAL. GAS

NPA-50

P/N 920200500



## Definition of Tamping Rammer

The Mikasa MTR-80L 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.

### NOTE

Narrow extension shoe accessories are available from MQ.

The impact force of the MTR-80L levels and uniformly compacts voids between soil particles to increase dry density.

Circular motion is converted to create impact force. The MTR-60L tamping rammer develops a powerful compacting force at the foot of the rammer. To maintain optimum performance, proper operation and service are essential.

## Construction of Tamping Rammer

The Mikasa MTR-80L Tamping Rammer is equipped with an Robin air cooled, four cycle gasoline engine. Transmission of the power takes place by increasing the engine speed to engage the centrifugal clutch.

## Rammer Gearbox and Spring Cylinder

The Mikasa MTR-80L uses an grease lubrication system. Always apply grease to all grease fittings every 8 hours of operation. (Shell Darina EP2 or Equivalent).

## Controls

Before starting the MTR-80L Tamping Rammer, identify and understand the function of the controls, see Figure 1 on page 11.

**Table 1. MTR-80L Rammer Specifications**

MODEL	MTR-80L U.S. (metric)
Overall Height	40.5 in. (1,040 mm)
Overall Width	17 in (435 mm)
Over Length	31-1/2 in (800 mm)
Shoe Size	11-3/4 x 13.1/2 in. (300 x 345 mm)
Blows/minute	650
Tamping Area	1,614 - 2,153 ft <sup>2</sup> /hr (150 - 200 m <sup>2</sup> /hr)
Impact Force	2,850 lbs./blow (1,245 kg/blow)
Clutch	Automatic Centrifugal
Operating Weight	187 lbs. (85 kg)

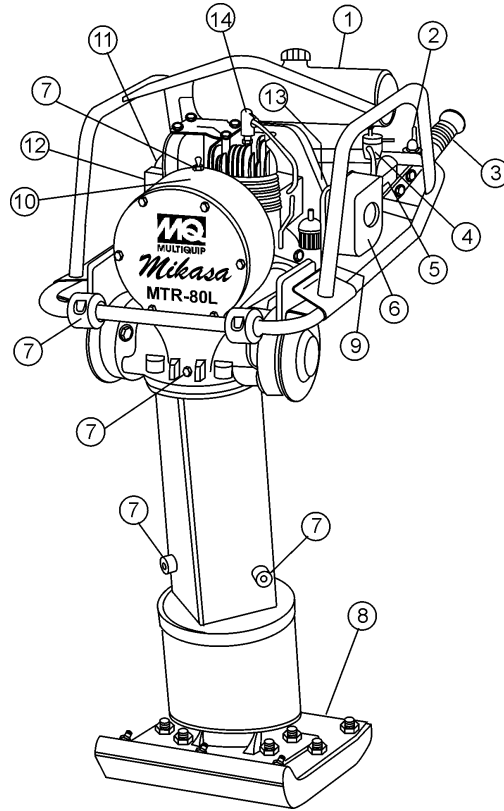
**Table 2. Robin EC-10G STD Engine Specifications**

MODEL	ROBIN EC-10G STD ENGINE
Type	Air-Cooled 2 Stroke Gasoline Engine
Bore X Stroke	1-31/32 X 1-31/32 in.( 50 X 50 mm)
Piston Displacement	5.99 cu.in. (98 cc)
Compression Ratio	6.3:1
Max. Output	4 hp/5,000 rpm
Rated output	3 hp/4,000 rpm
Max. Torque	4.47 ft-lb (0.62 kg-m) 3,700 rpm
Fuel Consumption	0.794 lb/HP/h (360gr/HP/h) 3 ps/4,000 rpm
Carburetor	MIC BV 18
Fuel Tank Capacity	0.39 gal. (1.5 liters) 2 hrs approx. operation
Lubrication System	Fuel-Lubrication Oil Spraying System
Fuel	25: Oil 1
Ignition System	Flywheel Magneto Type
Governing System	Centrifugal Flyweight Type
Spark Plug	NGK B4 or Equal
Starting System	Recoil Starter
Dry Weight	29 lbs (13.2 kg)

**NOTE**

Specifications are general and are subject to change without notice. If exact measurements are required, equipment should be weighed and measured.

# MTR-80L — CONTROLS AND COMPONENTS



**Figure 1. MTR-80L Tamping Rammer**

Figure 1 shows the location of the controls and components for the MTR-80L Tamping Rammer. The functions of each control is described below:

1. **Fuel Tank/Cap** – Remove this cap to add fuel. Tank holds .39 gallons (1.5 liters ) unleaded. Mix 32:1 ratio with outboard motor oil.
2. **Throttle Lever** – Controls engine speed and the tamping action of the rammer.
3. **Handle** – To operate rammer **GRIP** handle assembly firmly.
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. **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.
6. **Engine Air Cleaner** – Prevents dirt and other debris from entering the engine.
7. **Grease Fill Plugs** – Grease these plugs to lubricate the top and bottom mechanical component ends of the rammer.
8. **Foot**– Laminated wood with tempered steel plate for superior shock absorption.
9. **Fuel Valve** – Open this valve to remove excess fuel from the carburetor or crankcase.
10. **Nameplate**– Displays information regarding the rammer.
11. **Muffler**– Used to reduce noise and emissions.
12. **Recoil Starting Handle** – Used when starting the engine. Pull starter handle sharply and quickly, then return starter handle to starter case before releasing.
13. **Engine Stop Switch** – Controls the starting and stopping of the engine. Switch must be in the "ON" position when starting the engine.
14. **Spark Plug** – Provides spark to the ignition system, replace with engine manufactures recommended type spark plug.

## 1. Characteristics

The Mikasa rammer is a well-constructed, quiet, low maintenance rammer designed to do the perfect confined area compaction job. The MTR-80L is used primarily to compact all types of soils and is used in all types of construction.

## 2. Construction

The rammer is powered by a two-cycle air cooled gasoline engine. Power is transmitted from the engine by increasing the engine speed through a centrifugal clutch to pinion gear. The rotary motion of the engine is converted to a vertical up and down motion mechanism which is connected to a guided shoe.

## 3. Before Operation

3.1 If a cart is supplied, remove the tamping rammer from the two-wheel dolly cart. Make sure the rammer stands steady and does not fall over as damage may result.

3.2 Grease the tamping rammer with a hand gun before operating. **CAUTION: DO NOT USE A POWER OPERATED GREASE GUN AS DAMAGE MAY RESULT.** There are six (6) lubrication points on the rammer. Three are located on the rear head and three on the bottom part of the machine. Give each grease fitting five (5) shots of grease. Be sure to use MQ HIGH TEMPERATURE GREASE (PART #GRS2). If an inferior type grease is used, the grease could become too thick or too thin due to change in temperature and improper lubrication may result.

**GOVERNOR LUBRICATION.** Remove the oil plug, located on the top of the engine crank case, and pour in the proper amount of motor oil. (Summer: SAE #30; Winter: SAE #20). MTR-80L: 60cc (1-11/16 OZ.)

3.3 Fill the fuel tank with a fuel mixture of gasoline and oil. Use a well-blended mixture of 32 parts gasoline to one part motor oil. A regular grade gasoline should be used. High test ethyl gasoline is not recommended. Use any good quality outboard, two-cycle, or equivalent motor oil. **IMPORTANT:** For the first 20 hours of initial use, a mixture of 20 parts gasoline to one part motor oil must be used. When filling the rammer with fuel, be sure the filter (#112P19) is in place. Also make sure that the leak stopper (#159P19) is in the tank cap as the fuel will splash out through the vent hole in the cap when the rammer is operating.

3.4 Check all the screws and bolts for tightness. Vibration can cause screws and bolts to loosen, therefore periodically check for tightness to avoid problems.

3.5 Brush away dust from the following places: the wire gauze of the recoil starter; and guide spindle by removing the dust protection sleeve; and from the foot. Dust and dirt restrict proper lubrication and may cause excessive wear.

3.6 Adjust the height of the handle in accordance with the operator. The side handle is designed to be adjusted with ease by loosening the nuts.

## 4. Starting the Engine

4.1 Open the fuel cock assembly (#116AP19) on lower left side of fuel tank by moving the lever downward.

4.2 Close the choke lever of the carburetor and move the throttle lever of the handle to the "OFF" position. For cold engine starting, move the choke lever all the way up to the closed position. When the engine is warm, the choke should be half open. If you have difficulty in starting the engine, make sure the choke is in the half open position to prevent flooding the carburetor with fuel.

4.3 Crank the engine by pulling the grip of the recoil starter towards you and release.

4.4 When the engine starts, gradually move the choke lever back to full open position.

4.5 Allow the engine to warm up for 3 to 5 minutes before operating. This allows the lubricating oil to fully circulate and cover all engine parts.

4.6 If the engine will not start, remove and check the spark plug. If the spark plug is wet or dirty, clean it or replace the spark plug. After removing the spark plug, discharge any excess fuel by cranking the engine two or three times by hand. If the engine is flooded, open the fuel discharge cock located at the lower of part the crankcase and discharge the fuel by cranking the engine two or three times. Too much fuel in the crankcase will prevent the engine from running smoothly.

## 5. Operation

5.1 Move the throttle lever on the handle quickly from the "OFF" to the "ON" position, and the tamping rammer starts operating. **CAUTION:** Do not move the lever slowly as slow movement will cause irregular operation and may damage the clutch, springs, or foot.

5.2 After starting the rammer, adjust the tamping pressure in accordance with the soil conditions by adjusting the throttle lever. As a general rule, fast tamping is used on soft ground and slower tamping on hard ground. The foot of the rammer is designed to tamp the ground 600 to 650 times per minute with an engine speed of 3,800-4,000 rpm. The machine will work most efficiently in this range. An increase in the engine revolutions will not always increase the tamping pressure.

5.3 In cold weather, the engine may operate sluggishly when cold. To warm up engine, the best way is to let engine idle for 5-10 minutes with the of throttle lever at the “off position”.

5.4 The contact surface of the foot is covered with a heat treated steel plate. When tamping, try to have the foot tamp the ground evenly in order to prolong the life of the machine.

5.5 The machine is designed to advance or “walk” during operation. To increase the travel speed, press down on the handle.

5.6 To stop the tamping rammer, move the throttle lever quickly from “ON” to “OFF” position. Do not move the lever slowly.

## 6. Stopping engine

6.1 To stop the engine, put the throttle lever to the “OFF” position and allow the engine to run at low speed for three to five minutes. After the temperature of the engine falls, push the stop button until the engine stops completely. If the engine is shut off while it is still hot, the oil coating the cylinder bore may burn and cause unnecessary wear.

6.2 Shut off the fuel supply by moving the lever on the fuel cock assembly to the horizontal position. NOTE: The fuel supply should always be shut off when the rammer is not in use.

## 7. Service

7.1 Daily Service: Keep the machine clean by removing the dust, dirt, oil, etc. in the same manner mentioned in paragraph

7.2 Weekly Services (50 Hours): Remove the air cleaner element and wash in a solvent solution. After cleaning, dry the element in the sun and lubricate it with two-cycle engine fuel. Shake off excess fuel and replace element. Remove the spark plug; clean and adjust the spark gap to 0.7-0.8mm (0.027-0.031 in).

Check motor oil in the governor crankcase for prescribed quantity, and add oil if supply is low. Change oil every two months. NOTE: Do not overfill as governor control will not operate properly.

7.3 Monthly Services (200 hours): Remove the blower housing, and clean any dust or dirt that has accumulated in the fins of the cylinder head. Remove the muffler and cylinder head, and clean the bore and exhaust manifold. Remove the fuel filter cup and clean. Clean the outside of the rammer. Retighten the bolts and nuts. Replace oil in engine crankcase.

7.4 Storage: In case of long storage after using the rammer, drain all the fuel tank, fuel pipe and carburetor. Remove the spark plug and pour several drops of oil into the cylinder bore. Clean the outer surface of the machine and coat the surface with a light coat of oil. Cover the machine and store in a clean, dry place.

## 8. Dismantling the tamping rammer

When dismantling the machine, be sure to disassemble in a clean, dust-free area.

8.1 Removal of the Foot: Remove the dust sleeve strap. Then loosen the four nuts on the foot plate and remove bolts. The foot can now be removed by lightly tapping it.

8.2 Removal of the Foot Plate: After removing the foot, remove the lock washer by loosening bolt . Then remove the foot plate from the spindle rod .

8.3 Replacement of the Springs:

a. Loosen the four bolts which connect the guide cylinder and crankcase. Separate them, and locate the cylinder pin.

b. Remove the cylinder pin by taking off the stop rings fitted to the (bottom) cylinder cap, and the spring cylinder. Now the crankcase can be completely separated.

c. Next, remove the four bolts which connect the double guide and guide cylinder. The complete spring cylinder can be removed with the foot plate.

d. Remove the spring pin from the spring cylinder and remove the cylinder cap (bottom) by loosening it gradually. CAUTION: Be careful when removing bottom cylinder cap, as springs may spring out. Spring replacement should be made in sets only.

8.4 Replacement of the Crank Gear: Remove cylinder pin, guide cylinder , crankcase, front cover, bolt , and lock washer, and connecting rod. After removing bearing cover and stop ring, hit the crank gear from engine side, and remove.

8.5 Replacement of the Clutch: The clutch assembly can be taken off by loosening the nut on the engine crankshaft. When removing the clutch shoe, take off the washer to prevent turning the **front** clutch guide, clutch guide , and clutch spring . Replace the clutch shoes as one complete set.

8.6 Replacement of Pinion Gear: Remove engine. Tap on the head of pinion using a hammer to pull out the pinion. Remove the bolt and lock washer. After that disassemble them from the bolt side in order.

## 9.1 Idle Adjustment

9.1-1 Adjust idle when engine is warm.

9.1-2 With the throttle in a "off" position, adjust idle screw (Fig. 1) to approximately  $1,200 \pm 100$ .

## 9.2 Pilot Adjustment

9.2-1 Turn pilot screw (Fig. 2) to closed position. Open approximately one full turn for smooth engine idling.

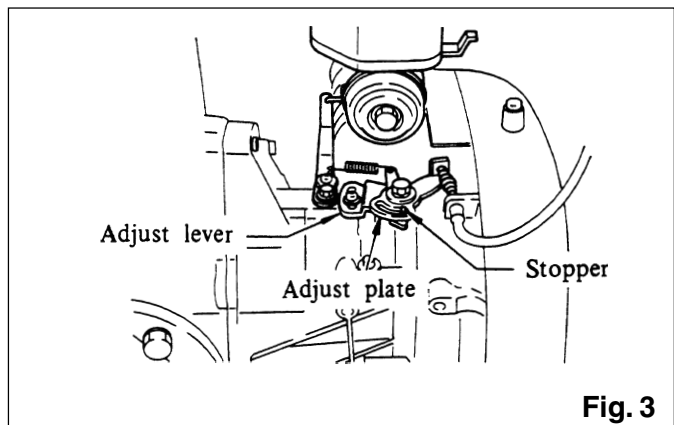
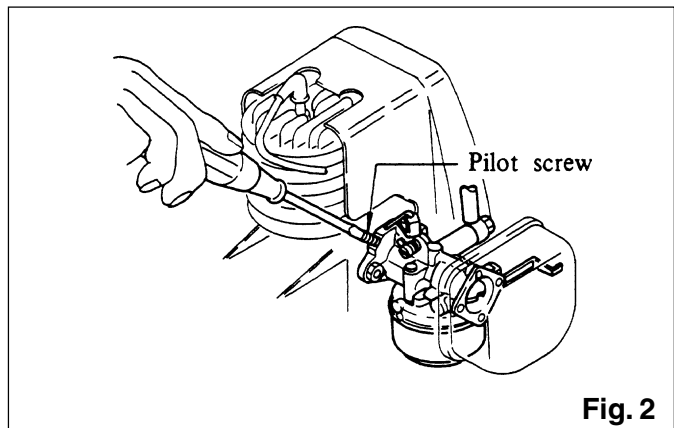
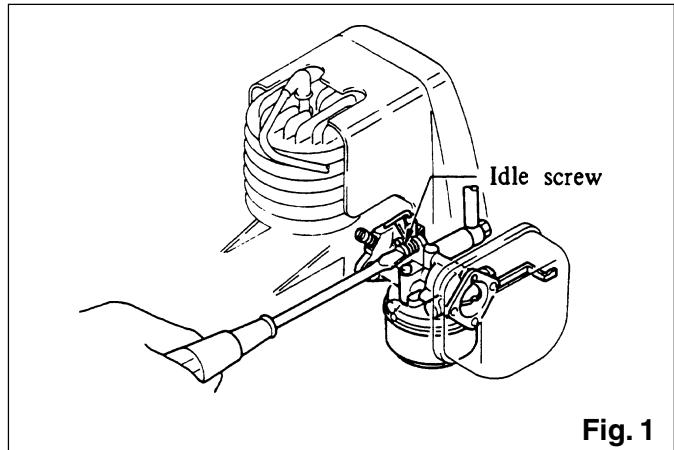
## 9.3 High speed Adjustment

9.3-1 Loosen adjust plate screw and adjusting lever bolt (Fig. 3).

9.3-2 For slower speed, move stopper (Fig. 3) toward the recoil starter. This shortens the throttle movement.

9.3-3 To increase speed, move stopper (Fig. 3) away from recoil starter. This increases the throttle movement.

9.3-4 Set engine at correct speed of approximately  $3,900 \pm 100$  rpm. Tighten adjust plate screw and adjusting lever bolt.



# MTR-80L — TROUBLESHOOTING GUIDE

TABLE 4. ENGINE TROUBLESHOOTING

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
<b>Difficult to start</b>		
Fuel is available but spark plug will not ignite. (Power available at high tension cable).	Ignition plug being bridge?	Check ignition system.
	Carbon deposit at ignition?	Clean or replace ignition.
	Short circuit due to defective insulators?	Replace insulators.
	Improper spark gap?	Set spark plug gap to the correct gap.
Fuel is available but spark plug will not ignite. (Power <b>NOT</b> available at high tension cable).	Short circuit at stop switch?	Check stop switch circuit. Replace stop switch if defective.
	Ignition coil defective?	Replace ignition coil.
Fuel is available and spark plug ignites (compression <b>normal</b> ).	Muffler clogged with carbon deposits?	Clean or replace muffler.
	Mixed fuel quality is inadequate?	Check fuel to oil mixture.
	Fuel in use inadequate (water, dust)?	Flush fuel sytem and replace with fresh fuel.
	Air Cleaner clogged?	Clean or replace air cleaner.
Fuel is available and spark plug ignites (compression <b>low</b> ).	Defective cylinder head gasket?	Tighten cylinder head bolts or replace head gasket.
	Cylinder worn?	Replace cylinder.
	Spark plug loose?	Tighen spark plug.
<b>Operation not satisfactory</b>		
Not enough power available (compression normal, no miss-firing).	Air cleaner clogged?	
	Air in fuel line?	Bleed (remove air) from fuel line.
	Fuel level in carbureator float chamber improper?	Adjust carbureator float
	Carbon deposits in cylinder?	Clean or replace cylinder
Not enough power available (compression normal, miss-firing).	Ignition coil defective?	Flush fuel sytem and replace with fresh fuel.
	Ignition plug often shorts?	Replace ignition wires, clean ignition.
	Fuel in use inadequate (water, dust)?	Flush fuel sytem and replace with fresh fuel.
Engine overheats.	Mixed fuel quality is inadequate?	Check fuel to oil mixture.
	Excessive carbon depostion in combustion chamber?	Clean or replace crankcase.
	Exhaust or muffler clogged with carbon.	Clean or replace muffler.
	Spark plug heat value incorrect?	Replace spark plug with correct type spark plug.

# MTR-80L — TROUBLESHOOTING GUIDE

**TABLE 4. ENGINE TROUBLESHOOTING (continued)**

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
<b>Operation not satisfactory</b>		
Rotational speed fluctuates.	Governor adjustment improper?	Adjust governor to correct lever.
	Governor spring defective?	Clean or replace ignition.
	Fuel flow erratic?	Check fuel line.
	Air taken in through suction line?	Check suction line.
Recoil starter not working properly.	Dust in rotating part?	Clean recoil starter assembly.
	Spring spring failure?	Replace sprial spring.

**TABLE 5. RAMMER TROUBLESHOOTING**

SYMPTOM	POSSIBLE PROBLEM	SOLUTION
Engine rotates but amplituide not uniform or does not strike.	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 sprial spring.
	Speed of engine improper?	Adjust engine speed to correct operating RPM setting.





# EXPLANATION OF CODE IN REMARKS COLUMN

How to read the marks and remarks used in this parts book.

## Items Found In the “Remarks” Column

Serial Numbers-Where indicated, this indicates a serial number range (inclusive) where a particular part is used.

Model Number-Where indicated, this shows that the corresponding part is utilized only with this specific model number or model number variant.

## Items Found In the “Items Number” Column

All parts with same symbol in the number column, \*, #, +, %, or ■, belong to the same assembly or kit.

### NOTE

If more than one of the same reference number is listed, the last one listed indicates newest (or latest) part available.

### NOTE

*The contents of this catalog are subject to change without notice.*

# MTR-80L SUGGESTED SPARE PARTS

## MTR-80L Mikasa Rammer 1 to 3 Units

Qty.	PIN	Description
10	GRS2	Grease, high temp.
3	0650140010	Spark plug
1	956300060	Lever, throttle assy.
1	501302060	Wire, throttle
1	0643000101	Drain Cock
2	505015060	Nipple, A-grease
2	505015070	Nipple, B-grease
1	301910081	Tank cap assy.
1	954300390	Fuel cock
3	301419750	Filter, in-line fuel
1	959401750	Stopper for wire
1	402010110	Spring, return throttle
3	1063270407	Element, air cleaner
1	0669900207	Button, stop (S/N C1092 & Below)
1	0660000370	Switch, stop (S/N C1093 & Above)

## MTR-80L Mikasa Rammer 3 to 5 Units

Qty.	PIN	Description
10	GRS2	Grease, high temp.
3	0650140010	Spark plug
2	956300060	Lever, throttle assy.
2	501302060	Wire, throttle
1	0643000101	Drain Cock
2	505015060	Nipple, A-grease
2	505015070	Nipple, B-grease
1	301910081	Tank cap assy.
2	954300390	Fuel Cock
5	301419750	Filter, in-line fuel
2	959401750	Stopper for wire
2	402010110	Spring, return throttle
4	1063270407	Element, air cleaner
1	0669900207	Button, stop (S/N C1092 & Below)
1	1066230207	Kit, carburetor
1	0660000370	Switch, stop (S/N C1093 & Above)

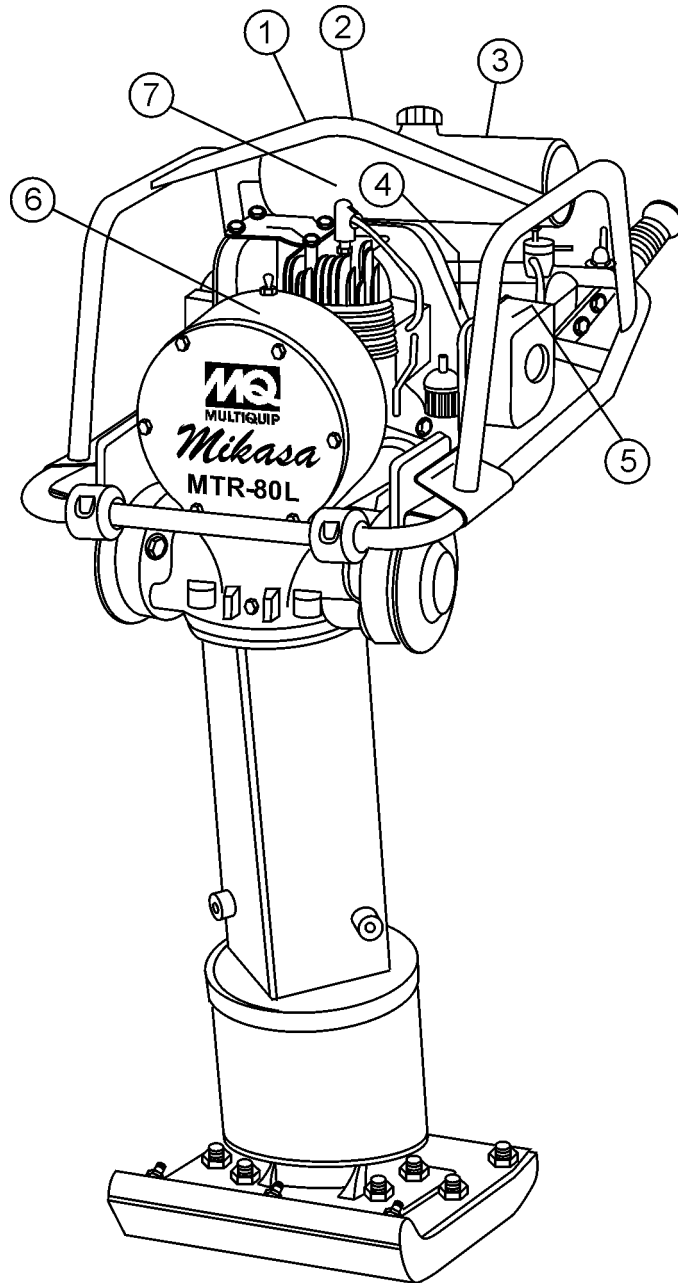
## MTR-80L Mikasa Rammer 5 to 10 Units

Qty.	PIN	Description
10	GRS2	Grease, high temp.
10	0650140010	Spark plug
1	0655000051	Cap, spark plug
3	956300060	Lever, throttle assy.
3	501302060	Wire, throttle
2	0643000101	Drain cock
4	505015060	Nipple, A-grease
4	505015070	Nipple, B-grease
2	301910081	Tank cap assy.
2	954300390	Fuel cock
10	301419750	Filter, in-line fuel
3	959401750	Stopper for wire
3	402010110	Spring, return throttle
2	1069900107	Gasket set
2	1062350107	Ring set, standard
10	1063270407	Element, air cleaner
3	0669900207	Button, stop (S/N C1092 & Below)
2	1066230207	Kit, carburetor
3	0660000370	Switch, stop (S/N C1093 & Above)
3	0642001410	Bowl, fuel cock
3	954405080	Fuel filter, tank cap

## MTR-80L Mikasa Rammer 10+ Units

Qty.	PIN	Description
20	GRS2	Grease, high temp.
14	0650140010	Spark plug
2	0655000051	Cap, spark plug
4	956300060	Lever, throttle assy.
4	501302060	Wire, throttle
5	0643000101	Drain cock
6	505015060	Nipple, A-grease
6	505015070	Nipple, B-grease
3	301910081	Tank cap assy.
3	954300390	Fuel cock
12	301419750	Filter, in-line fuel
4	959401750	Stopper for wire
4	402010110	Spring, return throttle
3	1069900107	Gasket set
3	1062350107	Ring set, standard
12	1063270407	Element, air cleaner
4	0669900207	Button, stop (S/N C1092 & Below)
4	1066230207	Kit, carburetor
1	1066251600	Carburetor
4	0642001410	Bowl, fuel cock
4	954405080	Fuel filter, tank cap
1	1065081310	Recoil starter assembly
3	0660000370	Switch, stop (S/N C1093 & Above)
1	301421360	Clutch assembly
1	1063272800	Air cleaner assembly

# MTR-80L— NAME PLATE AND DECALS



# MTR-80L— NAMEPLATE AND DECALS

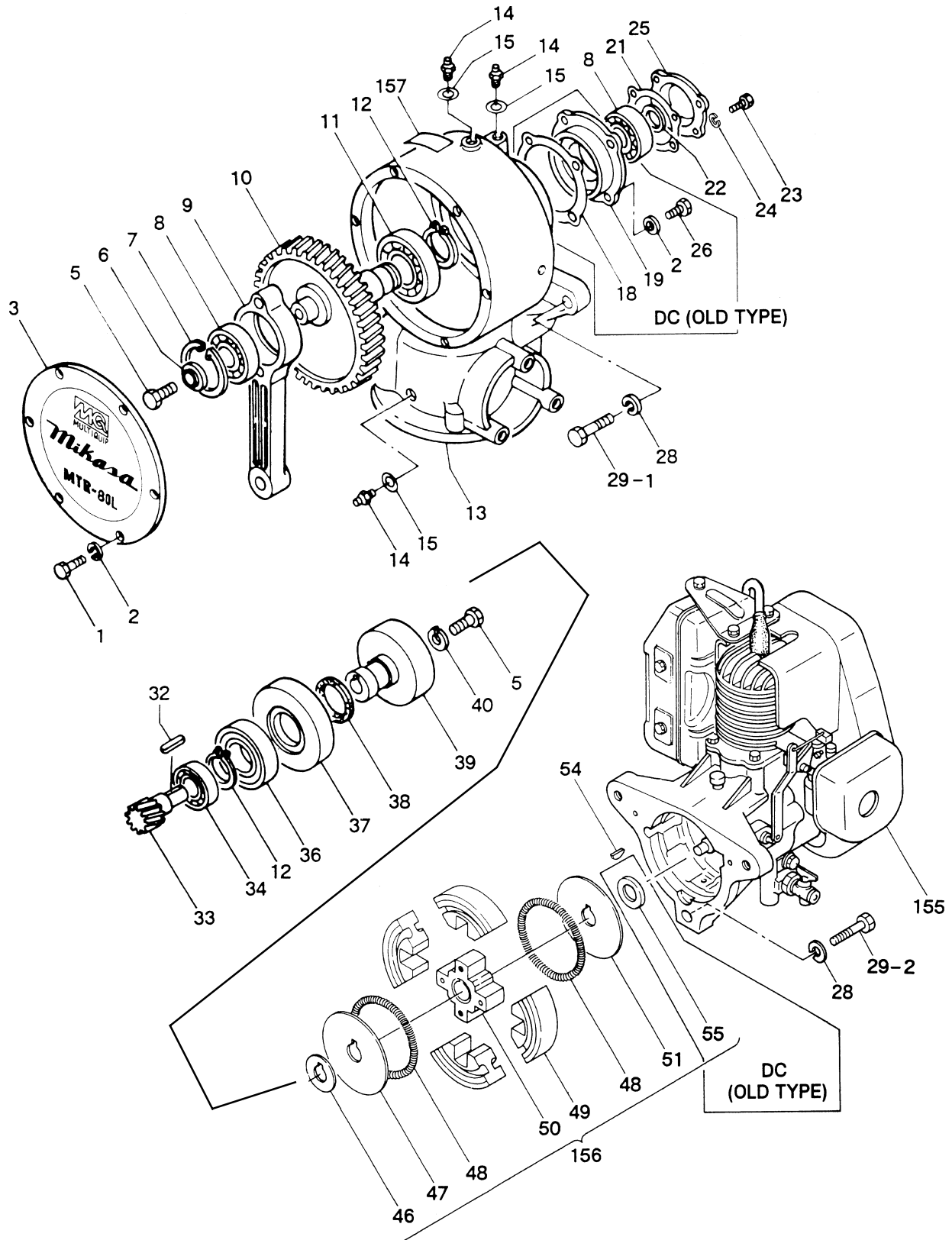
## NAME PLATE AND DECALS

<u>NO</u>	<u>PART NO</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1*	920200500	DECAL: MIXED FUEL	1	NPA-50
2*	920203290	DECAL: CAUTION READ	1	NPA-329
3*	920201810	DECAL: CAUTION	1	NPA-181
5*	920203990	DECAL: FUEL SHUT-OFF	1	NPA-399
6		PLATE, SERIAL NO.	1	CONTACT MQ SERVICE DEPT. W/MODEL & S/N
7*	920202630	DECAL: MIKASA LOGO	1	NAP-263
10	DCLMTR-80L	KIT, DECAL .....	1 .....	INCLUDES ITEMS W/*

SEE DECAL ILLUSTRATIONS ON PAGE 8.

# MTR-80L — CRANKCASE AND ENGINE ASSY.

CRANKCASE AND ENGINE ASSY.



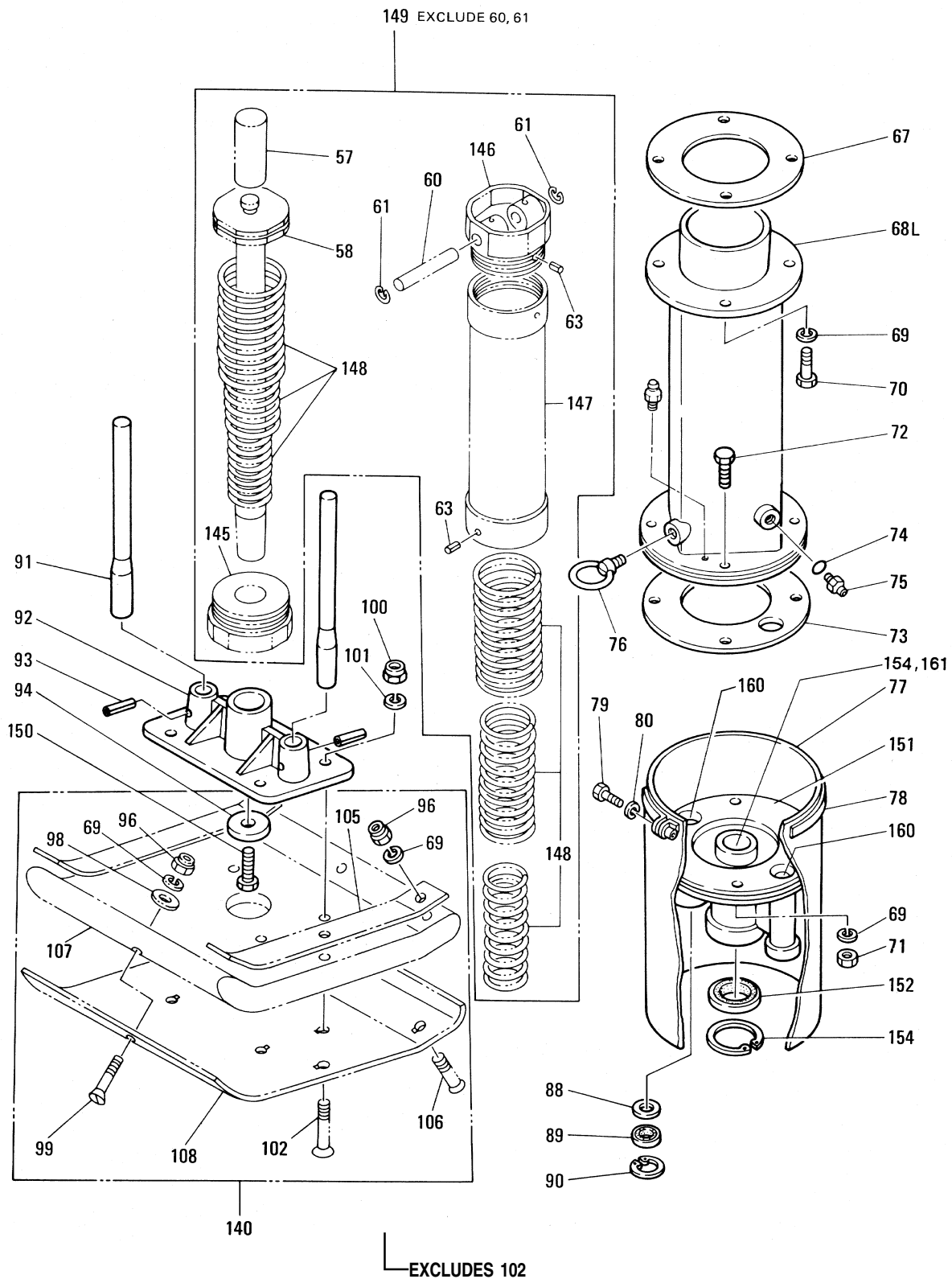
# MTR-80L — CRANKCASE AND ENGINE ASSY.

## CRANKCASE AND ENGINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	2008020	BOLT 8X16 .....	6	REPLACES 001200816 AND 0017108016
2	030208200	WASHER SW M8	10	
2	030208200	WASHER SW M8 .....	6	QC
3	301205230	FRONT COVER MTR-80L	1	
3	301300060	FRONT COVER MTR-80G	1	
5	011008020	BOLT 8X20 H .....	2	REPLACES 001210820
6	301010050	LOCK WASHER, 8X32 .....	1	BELOW S/N C9661
6	952400690	WASHER 9X35X4.5 .....	1	S/N C9661 AND ABOVE
6	030208200	WASHER LOCK 8MM .....	1	S/N C9661 AND ABOVE
7	080100620	STOP RING R-62	1	
8	042006305	BEARING 6305ZZ	2	
9	301300530	CONNECTING ROD	1	
10	301300120	CRANK GEAR .....	1	BELOW S/N C9661
10	301300126	CRANK GEAR .....	1	S/N C9661 AND ABOVE
11	041006307	BEARING 6307Z	1	
12	080200350	STOP RING S-35	2	
13	301010071	CRANK CASE MTR-80L	1	
13	301010080	CRANK CASE MTR-80G	1	
14	505015060	GREASE FITTING A MTR-80L	3	
14	505015070	GREASE FITTING B MTR-80-G	1	
15	920100200	PLATE, GREASE MARK .....	3	IN KIT DCL 80L
18	301010110	PACKING, BEARING HOLDER .....	1	DC
19	301010120	BEARING HOLDER .....	1	DC
21	301010130	PACKING, BEARING COVER	1	
22	080200250	STOP RING S-25	1	
23	001200616	BOLT 6X16	4	
23	011706020	BOLT 6X20 H, SW .....	4	REPLACES 002210620
24	030206150	WASHER SW M6 .....	4	DC
25	301441360	BEARING COVER .....	1	REPLACES 301010140
26	2008020	BOLT 8X16 .....	4	DC REPLACES 001200816 AND 0017108016
28	030210250	WASHER SW M10	3	
29	001211040	BOLT 10X40 H .....	3	DC
29-1	0105051045	BOLT 10X45 H .....	2	OX
29-2	012210035	BOLT 10X35 H .....	1	OX
32	951010060	KEY 5X5X32	1	
33	301010160	PINION	1	
34	042006205	BEARING 6205ZZ	1	
36	042006207	BEARING 6207ZZ	1	
37	301441350	SPACER, CLUTCH DRUM .....	1	REPLACES 301010170 & 301321460
38	301010180	FELT RING	1	
39	352437870	CLUTCH DRUM .....	1	REPLACES 301010190
40	301010200	LOCK WASHER 8X25	1	
46*	301010210	LOCK WASHER, CLUTCH	1	
47*	943060020	CLUTCH GUIDE/B	1	
48*	943030020	CLUTCH SPRING	2	
49*	943020020	CLUTCH SHOE	4	
50*	943050050	CLUTCH BOSS	1	
51*	943060010	CLUTCH GUIDE/A	1	
54	0053204201	WOODRUFF KEY .....	1	REPLACES 951403420
55	301420750	SPACER 15X21X4T, CLUTCH .....	1	DC BELOW S/N V4260
155	911101005	ENGINE ASSY. EC10G .....	1	REPLACES 911101008
156	301421360	CLUTCH ASSY./C812A .....	1	INCLUDES ITEMS W/*
157		PLATE, SERIAL NO. ....	1	CONTACT MQ SERVICE DEPT. W/MODEL & S/N

# MTR-80L — CYLINDER GUIDE AND FOOT ASSY.

CYLINDER GUIDE AND FOOT ASSY.





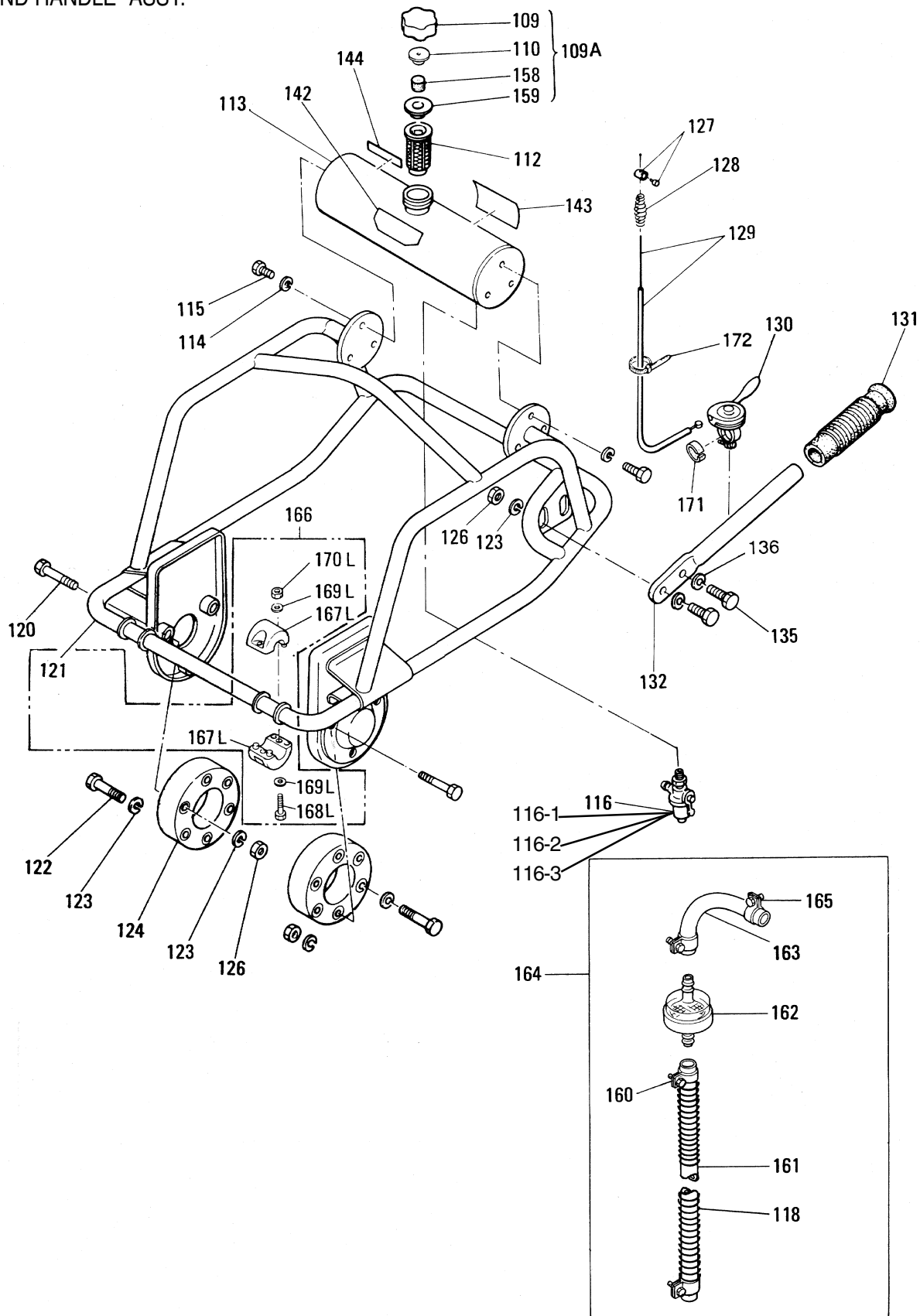
# MTR-80L — CYLINDER GUIDE AND FOOT ASSY.

## CYLINDER GUIDE AND FOOT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
57#	301010310	PROTECTOR RUBBER	1	
58#	301300520	SPINDLE ROD	1	
60	301010340	CYLINDER PIN	1	
61	080100150	STOP RING R-15 .....	2	REPLACES 301010350
63#	025404010	SPRING PIN 4X10W .....	4	DC
67	301010380	PACKING, GUIDE CYL. (TOP)	1	
68	301100422	GUIDE CYLINDER .....	1	REPLACES 301100420
69*	030210250	WASHER SW M10	16	
70	001211032	BOLT 10X32 H	4	
70	012210035	BOLT 10X35 H .....	4	XO REPLACES 001211035
71	020310080	NUT M10	4	
72	001211032	BOLT 10X32 H	4	
72	001211040	BOLT 10X40 H .....	4	OX
73	301010410	PACKING, GUIDE CYL. (BOTTOM)	1	
74	920100200	PLATE, GREASE MARK	3	
75	505015060	GREASE FITTING A/MQ	3	
76	301010420	EYE BOLT M12X20 .....	1	DC
77	301304990	DUST SLEEVE	1	
78	301010450	STRAP .....	1	REQUIRES 79,80, AND NUT P/N 020108060
79	011208030	BOLT 8X25 T .....	1	REPLACES 001400830
80	030208200	WASHER SW M8	1	
88	301010460	RUBBER SPACER	2	
89	065101030	DUST SEAL DK1-183069	2	
90	080100300	STOP RING R-30	2	
91	301010480	GUIDE SPINDLE	2	
92	301010490	FOOT PLATE	1	
93	025306032	SPRING PIN 6X32 .....	2	REPLACES 025406032
94	301400080	LOCK WASHER	1	
96%	021110120	NYLON NUT M10 .....	8	REPLACES 022711012
98*	506404060	WASHER 11X34X3.2 .....	2	REPLACES 301010540
99*	015110055	SUNK HEAD BOLT 10X55 H .....	5	INCL'S ITEM W/% REPLACES 001611051
100\$	021112140	NYLON NUT M12 .....	4	REPLACES 022711214
101	030212300	WASHER SW M12	4	
102	015112060	SUNK HEAD BOLT 12X70 H .....	4	INCL'S ITEM W/\$ REPL. 001611254 & 015112075
105*	301010550	FOOT FITTING	2	
106*	015110055	SUNK HEAD BOLT 10X55 H .....	3	INCL'S ITEM W/% REPLACES 001611051
107*	301010560	FOOT 11-3/4 (W) X 14 (L) STD.	1	
107		FOOT 14" .....	1	OPTION SOLD THROUGH UNIT SALES DEPT. REPLACES 301010990
108*	301010570	METAL SHT. 11-3/4 (W) X 14 (L) STD.	1	
108		METAL SHEET 14" .....		NO LONGER AVAILABLE SEPARATELY
140	301910030	FOOT ASSY. 300W-6T 11-3/4" W/HOLE .....	1	INCLUDES ITEMS W/*
145#	301300150	CYLINDER CAP (BOTTOM)	1	
146#	301300136	CYLINDER CAP (TOP) .....	1	REPLACES 301300130
147#	301300140	SPRING CYLINDER	1	
148#	301300110	MAIN SPRING (A,B,C)	2	
149	301910050	SPRING CYLINDER ASSY. ....	1	INCLUDES ITEMS W/#
150	001121440	BOLT 14X40 T,P1.5	1	
151	301106210	DOUBLE GUIDE CP (W/BUSH) .....	1	INCLUDES ITEMS W/+
152	065103020	DUST SEAL DK1-3446710	1	
154+	080100470	STOP RING R-47 .....	2	REPLACES 080510470
160+	301406100	SLEEVE DOUBLE GUIDE	2	
161+	301424060	BUSHING (B) DOUBLE GUIDE	1	

# MTR-80L — TANK AND HANDLE ASSY.

## TANK AND HANDLE ASSY.



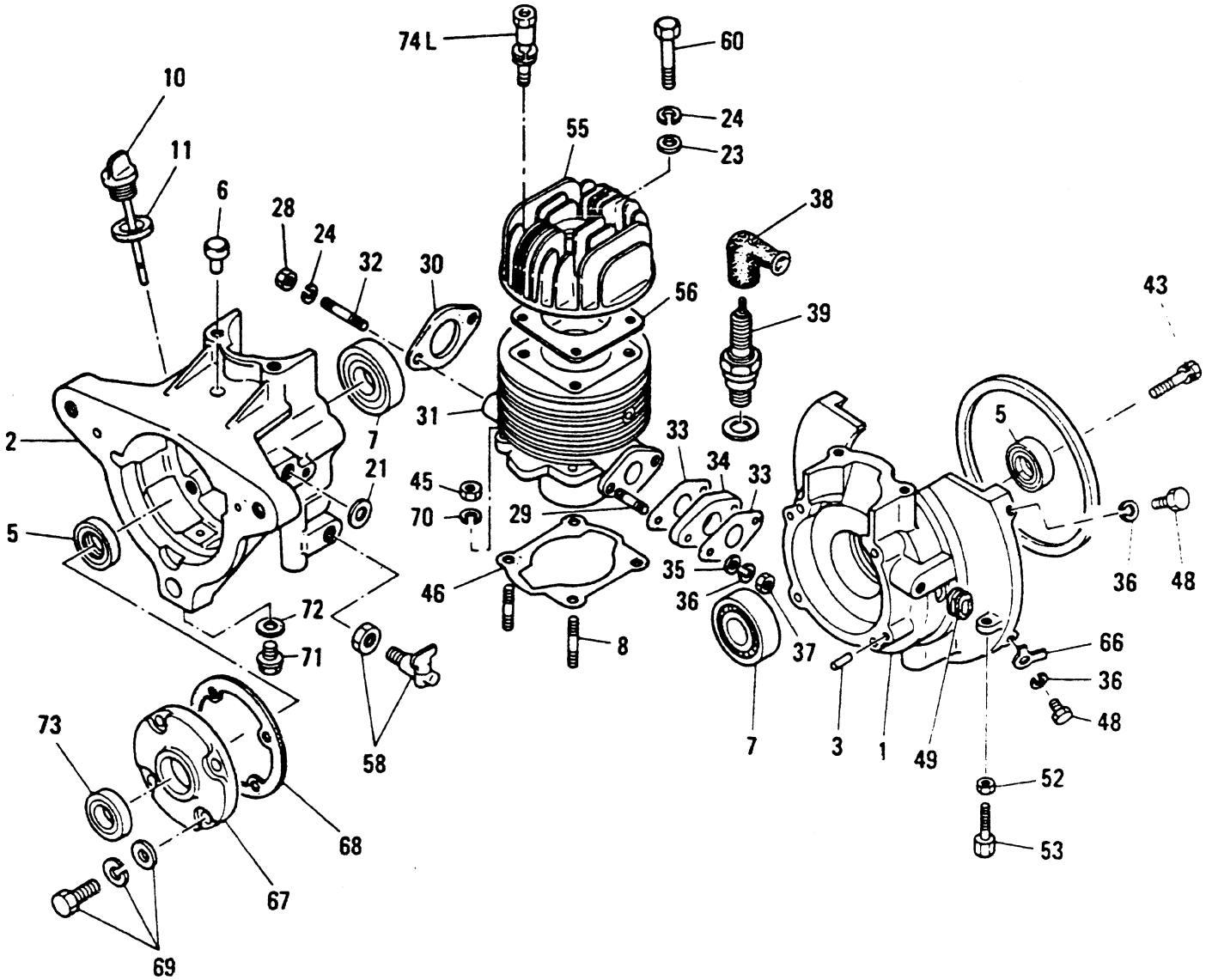
# MTR-80L — TANK AND HANDLE ASSY.

## TANK AND HANDLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
109A	301910081	TANK CAP ASSY .....	1	INCLUDES ITEMS W/*
109*	953404280	TANK CAP .....	1	00 REPLACES 301010740
110*	301420050	PLATE	1	
112	954405080	FUEL FILTER .....	1	REPLACES 301010760
113	301010780	FUEL TANK 1		
114	030208200	WASHER SW M8	6	
115	001200815	BOLT 8X15	6	
116	954300390	FUEL COCK ASSY .....	1	INCLUDES ITEMS W/# REPLACES 301322990
116-1#	0642001410	CUP, FUEL COCK	1	
116-2#	0642001420	SCREEN, FUEL COCK	1	
116-3#	0642001430	RUBBER PACKING, FUEL COCK	1	
118+	301420540	PROTECT SPRING 10X180	1	
120	001201081	BOLT 10X58	6	
121%	301105270	HANDLE 80L	1	
122	001201050	BOLT 10X50	6	
123	030210250	WASHER SW M10	14	
124	301010810	RUBBER COUPLING	2	
126	020310080	NUT M10	8	
127	959401750	WIRE STOPPER, ASSY.	1	
128	402010110	RETURN SPRING .....	1	REPLACES 301010950
129	301010900	THROTTLE WIRE-80G	1	
129	501302060	THROTTLE WIRE-80L .....	1	REPLACES 301312630
130	956300060	THROTTLE LEVER ASSY.	1	
131	301010830	RUBBER GRIP	1	
132	301010840	SIDE HANDLE	1	
135	001211030	BOLT 10X30 H	2	
136	031110160	WASHER PW M10	2	
142■	920202630	DECAL, TRADE MARK/RAMMER .....	1	REPLACES 920100340
143■	920201810	DECAL, CAUTION	1	
144■	920200500	DECAL, MIXED FUEL	1	
158*	301010850	SPONGE	1	
159*	301010860	LEAK STOPPER	1	
160+	301420730	HOSE CLAMP 11 .....	2	REPLACES 303010490
160+	301420730	HOSE BAND (8)	4	
161+	301420330	FUEL HOSE R-170 (8")	1	
161+	302420320	FUEL HOSE (3") .....	1	REPLACES 301419760
162+	301419750	FUEL FILTER	1	
163+	302420320	FUEL HOSE	1	
164	301910090	FUEL HOSE ASSY .....	1	INCLUDES ITEMS W/+
165+	301420730	HOSE CLAMP	2	
166	301910100	HANDLE ASSY. 80L W/ROLLER .....	1	INCLUDES ITEMS W/%
167%	301421840	ROLLER	4	
168%	001200525	BOLT 5X25	4	
169%	031105080	WASHER PW M5	8	
170%	020305040	NUT	4	
171	959403750	RUBBER SLIP STOP	1	
172	2267510103	CLAMP	1	
■	DCL80	DECAL KIT	1	INCLUDES ITEMS W/■ AND P/N 920100980 E/G RPM IN CRANKCASE AND ENGINE ITEM 15

# ROBIN EC-10G ENGINE — CRANKCASE AND CYLINDER ASSY.

CRANKCASE AND CYLINDER ASSY.



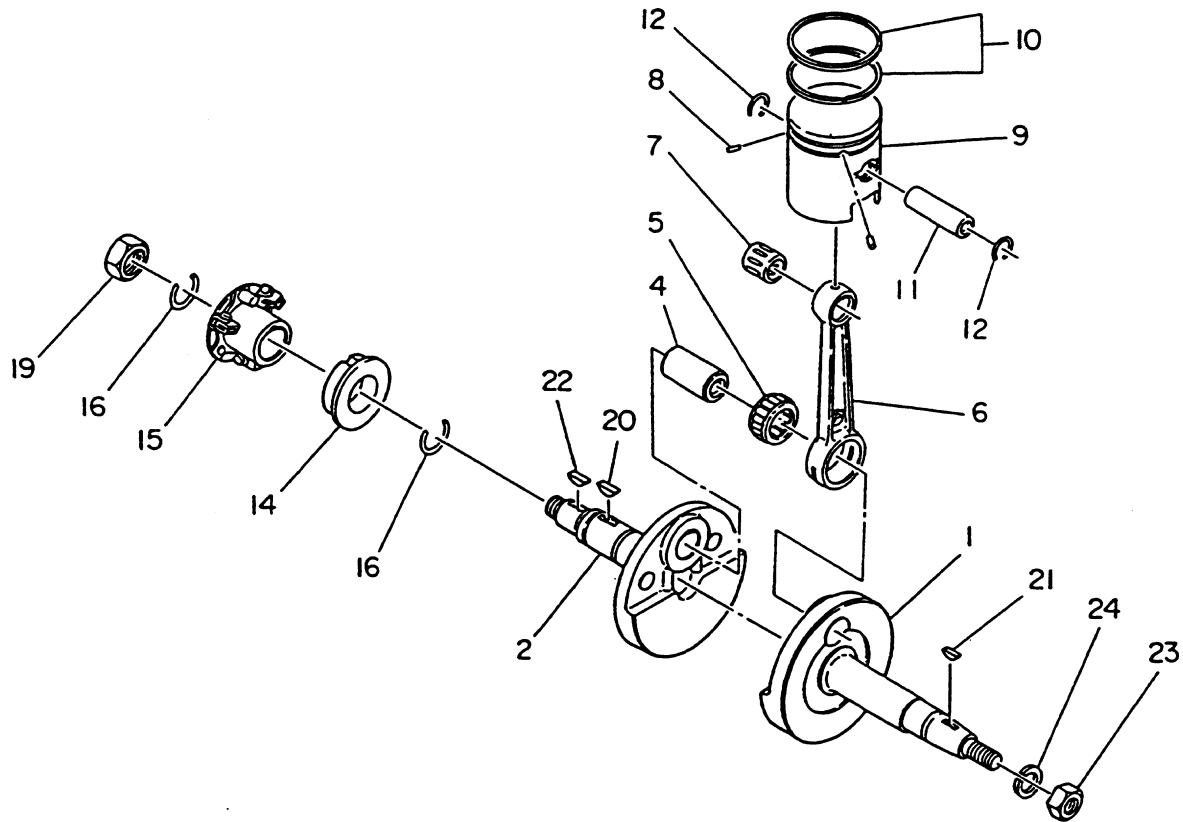
# ROBIN EC-10G ENGINE — CRANKCASE AND CYLINDER ASSY.

## CRANKCASE AND CYLINDER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1061030501	CRANKCASE ASSY.....	1	INCLUDES ITEMS W/#, REPLACES 1061030211 & 1061030131
5#	0440200010	OIL SEAL TB20328	3	
6	0670070100	AIR BREATHER	1	
7#	0600200020	BEARING 6204 C3	2	
8#	0105070010	STUD	4	
10	1066360601	OIL GAUGE CP. ....	1	INCLUDES ITEMS W/+
11+	0210160010	GASKET	1	
21#	0440080010	OIL SEAL VC8144	1	
23	0031008000	WASHER	2	
24	030208200	SPRING WASHER 8MM .....	4	REPLACES 0032008000
28	020108060	NUT 8MM .....	2	REPLACES 0021908000
29	0013106301	STUD BOLT	2	
30%	1063510201	GASKET CP. EXHAUST	1	
31	1061240901	CYLINDER CP. ....	1	INCLUDES ITEMS W/%, REPLACES 1061240511
32	0013108301	STUD BOLT	2	
33%	1063500103	GASKET	2	
34	1063290203	INSULATOR	1	
35	0031006000	WASHER	2	
36	030206150	SPRING WASHER 6MM .....	6	REPLACES 0032006000
37	020106050	NUT 6MM .....	2	REPLACES 0022706000
38	0655000051	SPARK PLUG CAP .....	1	REPLACES 0655000050
39	0650140010	SPARK PLUG NGK B-4	1	
43#	0011406350	BOLT AND WASHER ASSY.	4	
45	0170070020	NUT	4	
46*	1061500123	GASKET CYLINDER	1	
48	0016606120	BOLT	4	
49	0241070090	GROMMET	1	
52	020106050	NUT 6MM .....	1	REPLACES 0022706000
53	0149060040	ADJUSTING SCREW	1	
55	1061300113	CYLINDER HEAD	1	
56*	1061510111	GASKET CP HEAD	1	
58	0643000101	DRAIN COCK .....	1	REPLACES 0643000100
60	0103080010	BOLT HEAD	2	
66	0205060010	LOCK WASHER	4	
67	1061160111	CRANK CASE COVER	1	
68*	1061500203	GASKET CASE COVER	1	
69	0011406160	BOLT AND WASHER ASSY.	4	
70	0302088200	SPRING WASHER	4	
71	0401080020	PLUG .....	1	REPLACES 0401080010
72	0210080010	GASKET DRAIN	1	
74L	0130080071	BOLT AND WASHER ASSY.	2	
*	1069900107	GASKET SET .....	1	INCLUDES ITEMS W/*
73	0440200010	OIL SEAL	3	

# ROBIN EC-10G ENGINE — CRANKSHAFT AND PISTON ASSY.

CRANKSHAFT AND PISTON ASSY.



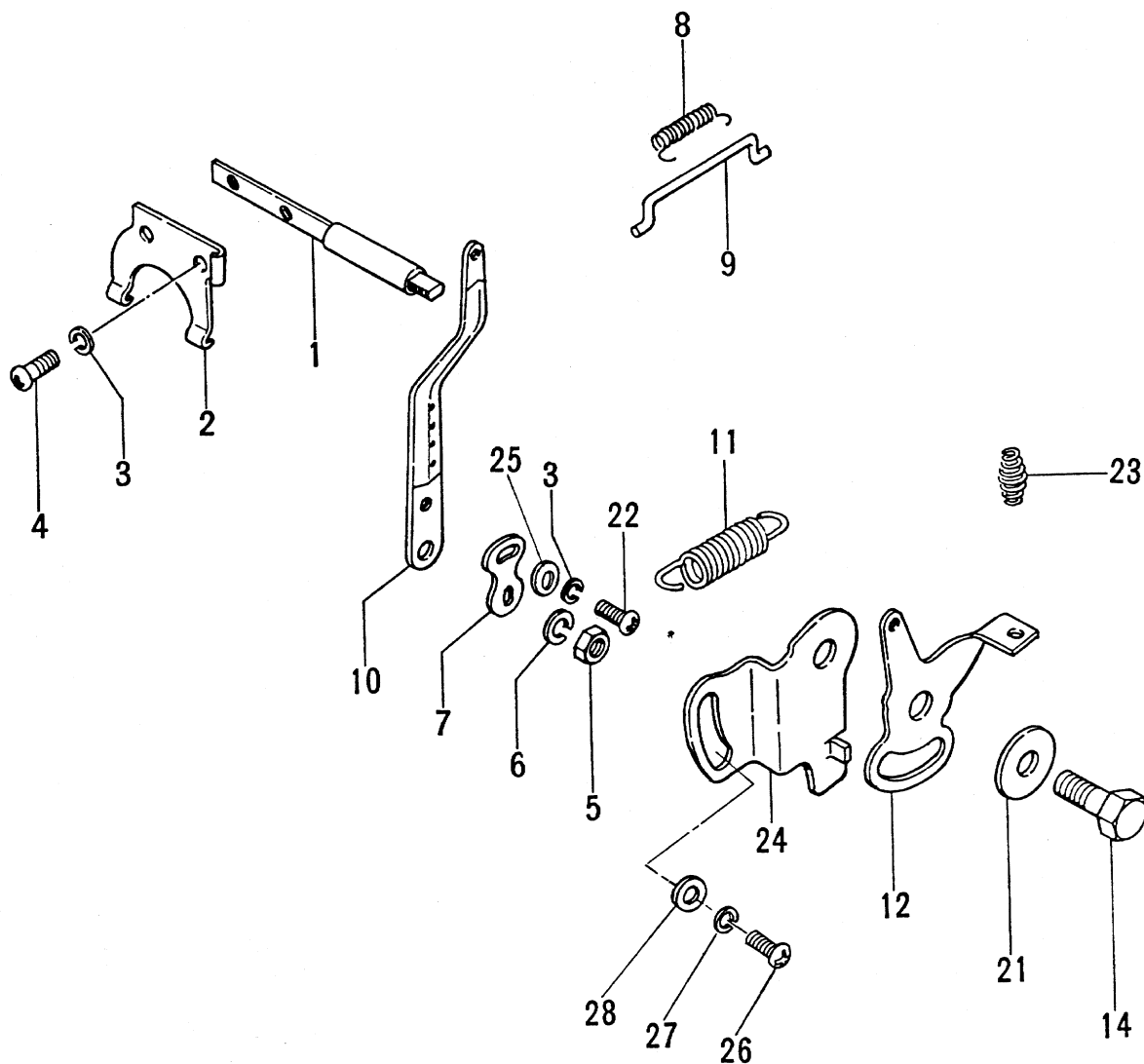
# ROBIN EC-10G ENGINE — CRANKSHAFT AND PISTON ASSY.

## CRANKSHAFT AND PISTON ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1062020210	CRANKSHAFT ASSY. ....	1	INCLUDES 2,4-6
7	0610120010	NEEDLE BEARING	1	
9	1062340111	PISTON COMPL, STD .....	1	INCLS. 8
9	1062340211	PISTON COMPL, 0.25 MM O/S .....	1	INCLS. 8, REPLACES 1062340201
9	1062340311	PISTON COMPL, 0.50 MM O/S .....	1	INCLS. 8, REPLACES 1062340301
10	1062350107	PISTON RING SET, STD	1	
10	1062350207	PISTON RING SET, 0.25 MM O/S	1	
10	1062350307	PISTON RING SET, 0.50 MM O/S	1	
11	1062330113	PISTON PIN	1	
12	0565120010	CLIP	2	
14	1064190303	GOVERNOR SLEEVE	1	
15	1064170201	GOVERNOR PLATE COMPL.	1	
16	0565200020	CLIP	2	
19	0173120010	LOCK NUT	1	
20	0053204201	WOODRUFF KEY .....	1	REPLACES 0323040010
21	0053204201	WOODRUFF KEY	1	
22	0053204201	WOODRUFF KEY	1	
23	0170100010	NUT	1	
24	030210250	SPLIT WASHER 10MM .....	1	REPLACES 0032010000

# ROBIN EC-10G ENGINE — GOVERNOR ASSY.

GOVERNOR ASSY.





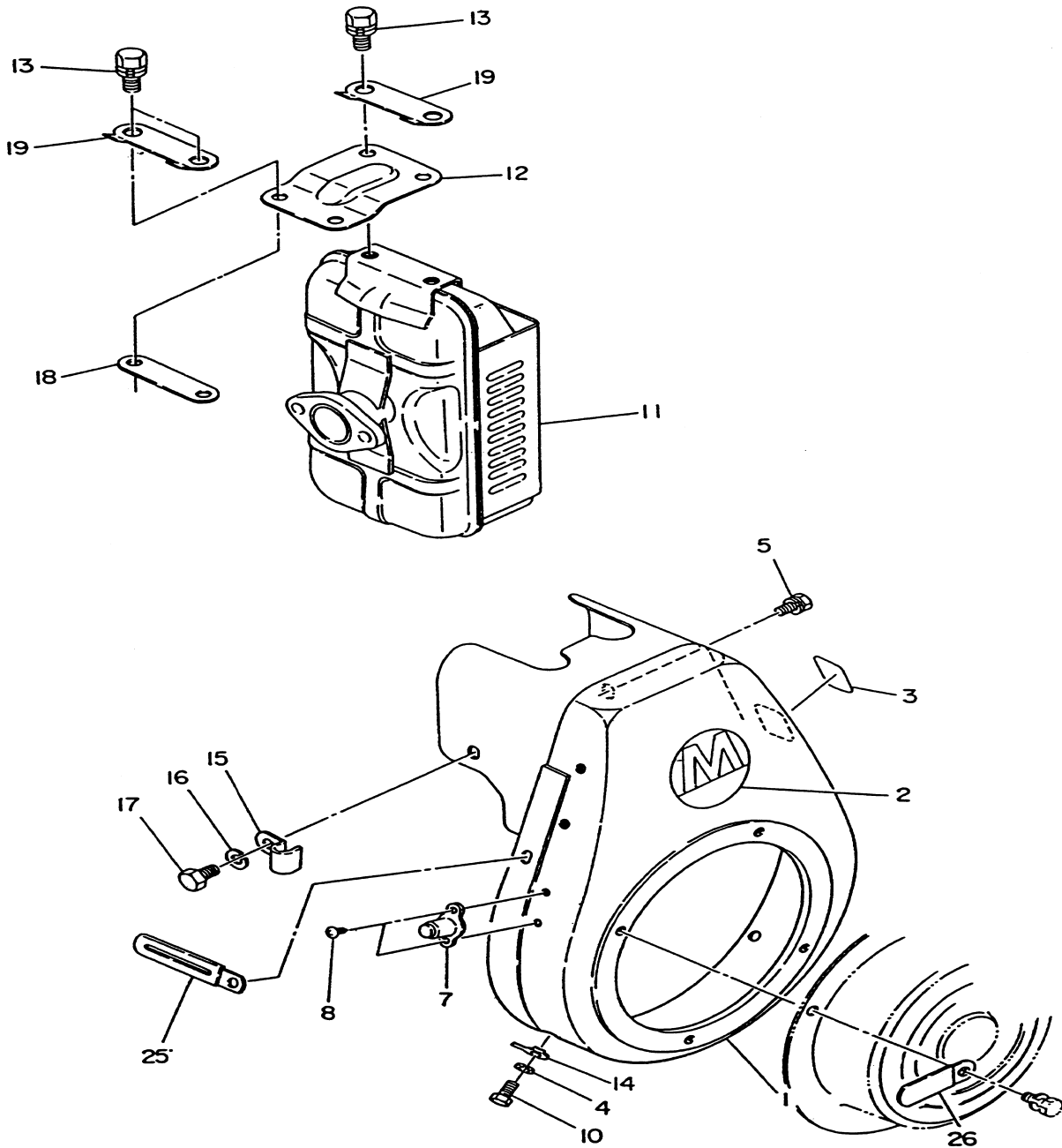
# ROBIN EC-10G ENGINE — GOVERNOR ASSY.

## GOVERNOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1064220103	GOVERNOR SHAFT	1	
2	1064210113	GOVERNOR YOKE	1	
3	0032004000	WASHER, SPRING	3	
4	0043504060	SCREW .....	2	REPLACES 0043104060
5	020106050	NUT .....	1	REPLACES 0022706000
6	030206150	SPRING WASHER 6MM .....	1	REPLACES 0032006000
7	1064240101	ADJUSTING PLATE	1	
8	1064280113	ROD SPRING .....	1	REPLACES 1064280111
9	1054270111	GOVERNOR ROD	1	
10	1064230111	GOVERNOR LEVER .....	1	REPLACES 1064230101
11	1054250103	GOVERNOR SPRING .....	1	REPLACES 1054250101
12	1064330620	GOVERNOR CONTROL .....	1	REPLACES 1054330109
14	0043108160	SCREW .....	1	REPLACES 0011708160
22	0043504080	SCREW AND WASHER ASSY. ....	1	REPLACES 0043604080
23	402010110	COIL SPRING .....	1	REPLACES 0830000010
24	1064350400	STOP PLATE .....	1	REPLACES 1054350121
25	0031004000	WASHER	1	
26	0043606100	SCREW AND WASHER ASSY. ....	1	REPLACES 0043106100
27	030206150	WASHER .....	1	REPLACES 0032006000
28	0031106000	WASHER	1	

# ROBIN EC-10G ENGINE — MUFFLER AND BLOWER ASSY.

## MUFFLER AND BLOWER ASSY.



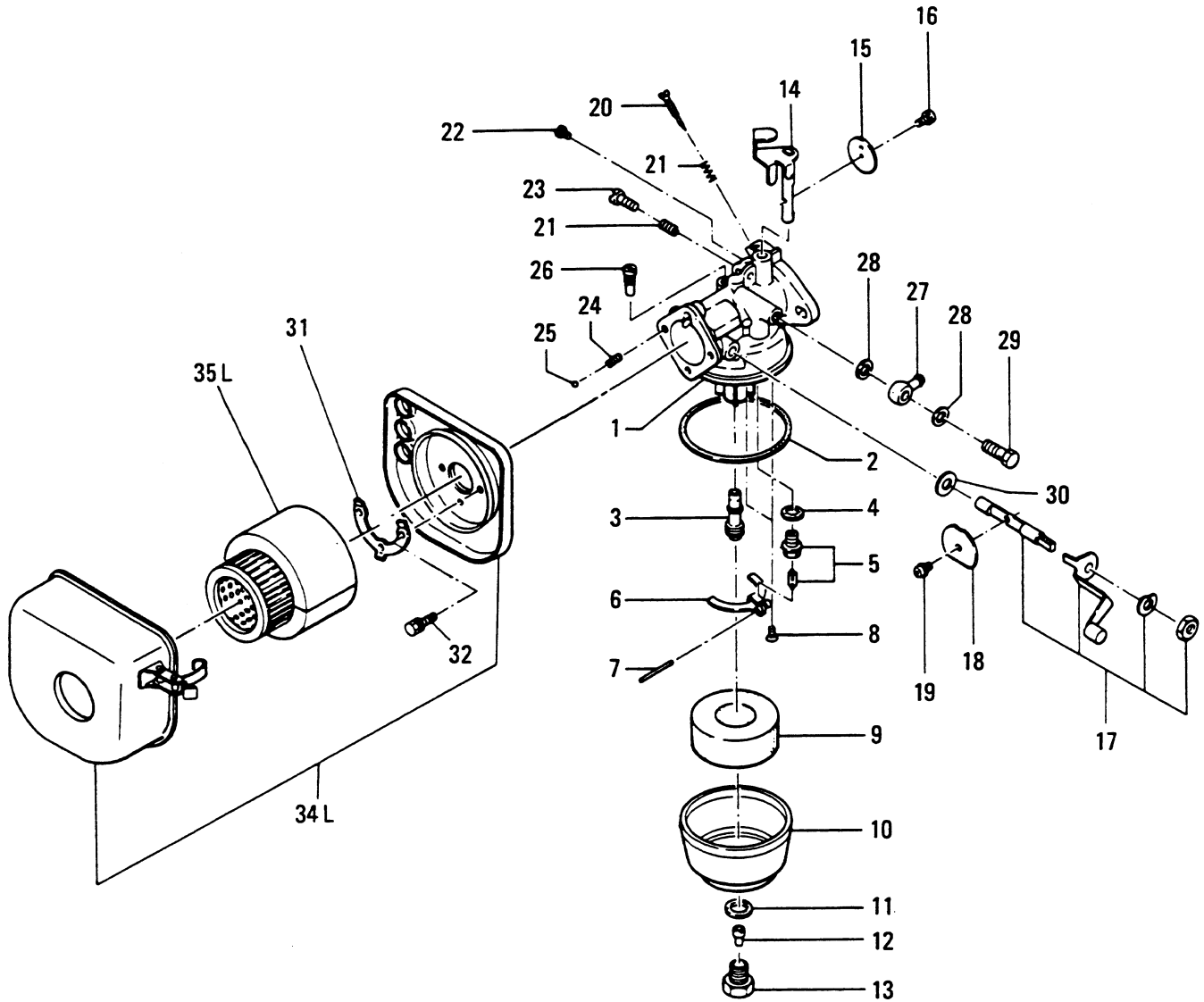
# ROBIN EC-10G ENGINE — MUFFLER AND BLOWER ASSY.

## MUFFLER AND BLOWER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1065184601	BLOWER HOUSING COMPL. ....	1	INCLUDES ITEMS W/*
2*	920100240	LABEL .....	1	REPLACES 2069170103
3*	1069181533	LABEL ENGINE NAME	1	
4	030206150	SPRING WASHER .....	4	REPLACES 0032006000
5	0016606120	BOLT AND WASHER ASSY. ....	2	REPLACES 0011006120
7	0662000011	STOP BUTTON .....	1	S/N C-1092 & BELOW
7A	0660000370	SWITCH, STOP .....	1	ABOVE S/N C-1092
8	0043504080	TAPPING SCREW .....	2	S/N C-1092 & BELOW REPLACES 0150040010
8A	0043504120	SCREW/WASHER .....	2	ABOVE S/N C-1092
11	1063011801	MUFFLER CP	1	
12	1063560401	BRACKET MUFFLER	1	
13	0011308160	BOLT AND WASHER ASSY.	4	
14	0205060010	LOCK WASHER	4	
15	1067501701	CLAMP COMPL.	1	
16	030208200	SPRING WASHER 8MM .....	1	REPLACES 0032008000
17	0016508120	BOLT	1	
18	1063530201	SPACER	1	
19	1056510121	LOCK WASHER	2	
25	1507520103	CLAMP	1	
26	2267510103	CLAMP	1	

# ROBIN EC-10G ENGINE — CARBURETOR AND AIR CLEANER ASSY.

CARBURETOR AND AIR CLEANER ASSY.



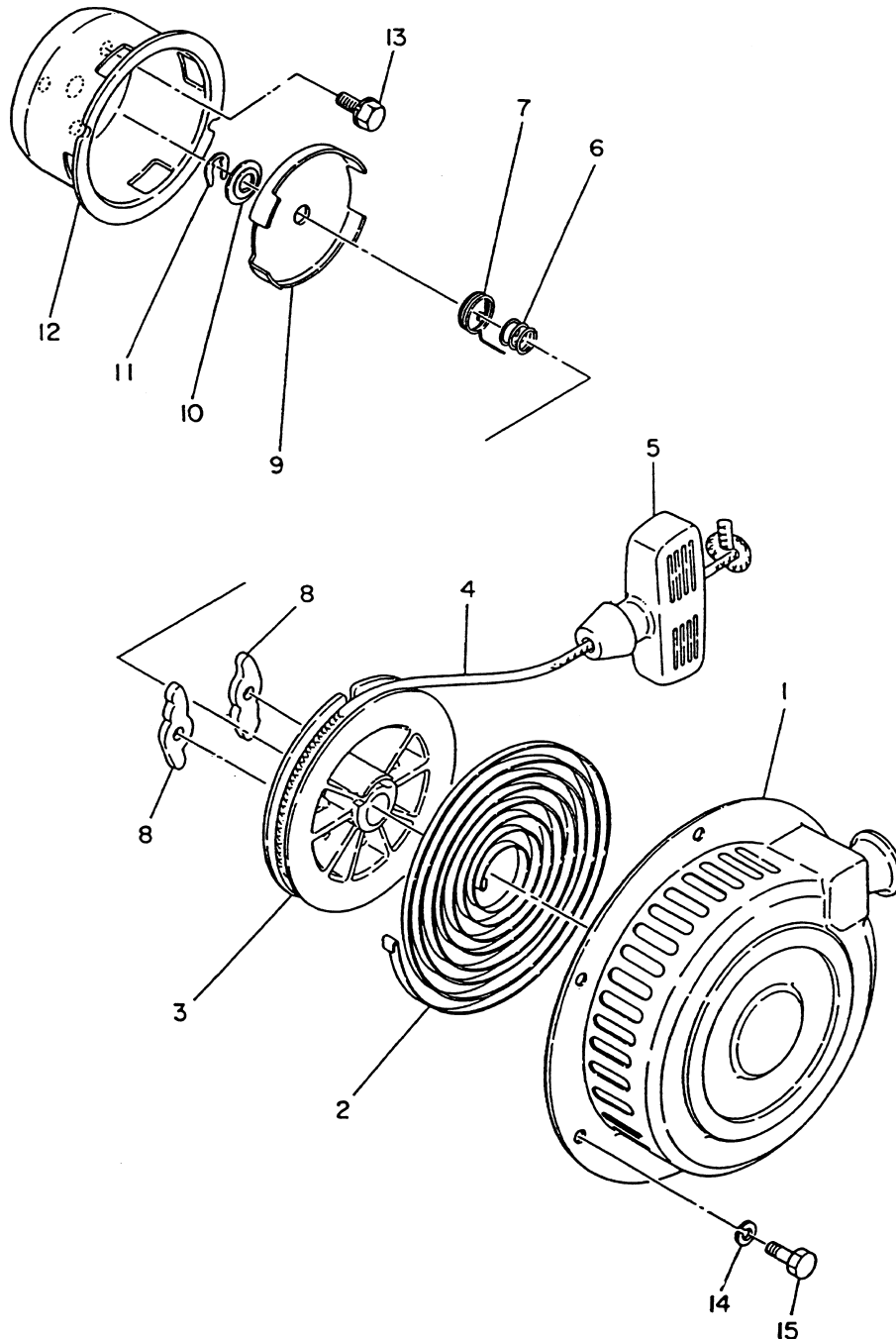
# ROBIN EC-10G ENGINE — CARBURETOR AND AIR CLEANER ASSY.

## CARBURETOR AND AIR CLEANER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1066251600	CARBURETOR ASSY. ....	1	INCLUDES ITEMS W/#
2#*	1066254708	PACKING, CHAMBER	1	
3#	1066244208	MAIN NOZZLE BV18/235	1	
4#*	1066238108	PACKING	1	
5#*	1286250008	NEEDLE VALVE (1.5DIA)	1	
6#	1066251108	FLOAT ARM	1	
7#	1066251608	PIN, FLOAT	1	
8#	1306235808	SCREW	1	
9#	1066250808	FLOAT	1	
10#	1066238908	FLOAT CHAMBER BODY	1	
11#*	2066243108	PACKING	1	
12#*	2076240308	REVERSE MAIN JET (82.5)	1	
13#	2066235008	BOLT	1	
14#	1066253408	SHAFT ASSY. (THROTTLE)	1	
15#	1616253508	THROTTLE VALVE	1	
16#	2096235108	SPRING WASHER CROSS SCREW	1	
17#	1066252428	SHAFT ASSY. CHOKE .....	1	REPLACES 1066255308
18#	1066255408	CHOKE VALVE	1	
19#	2096235108	SPRING WASHER CROSS SCREW	1	
20#*	1066243608	PILOT SCREW	1	
21#*	2066244608	SPRING	2	
22#	1066235708	GUIDE SCREW	1	
23#	1066235808	SCREW	1	
24#	2096244608	SPRING	1	
25#	2096235308	STEEL BALL	1	
26#*	2076242008	PILOT JET	1	
27	0521060100	BANJO .....	1	NOT INCLUDED W/CARBURETOR
28#*	2076234508	WASHER	2	
29#	2096233508	BANJO BOLT	1	
30#*	5806083210	SEAL .....	1	REPLACES 1066239208
31	1063520101	LOCK WASHER .....	1	REPLACES 1063520111
32	0011305100	BOLT AND WASHER ASSY.	3	
34L	1063272800	AIR CLEANER ASSY. SQUARE 80L ...	1	INCLUDES ITEMS W/+ REPLACES 1063271720
34G	1063271210	AIR CLEANER ASSY. ROUND 80G ....	1	INCLUDES ITEMS W/%
35L+	1063270407	ELEMENT SET, F/SQ. TYPE 80L	1	
35G%	1063260207	ELEMENT SET, F/ROUND TYPE 80G	1	
*	1066230207	KIT, CARBURETOR, MTR-80L .....	1	INCLUDES ITEMS W/*

# ROBIN EC-10G ENGINE — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.



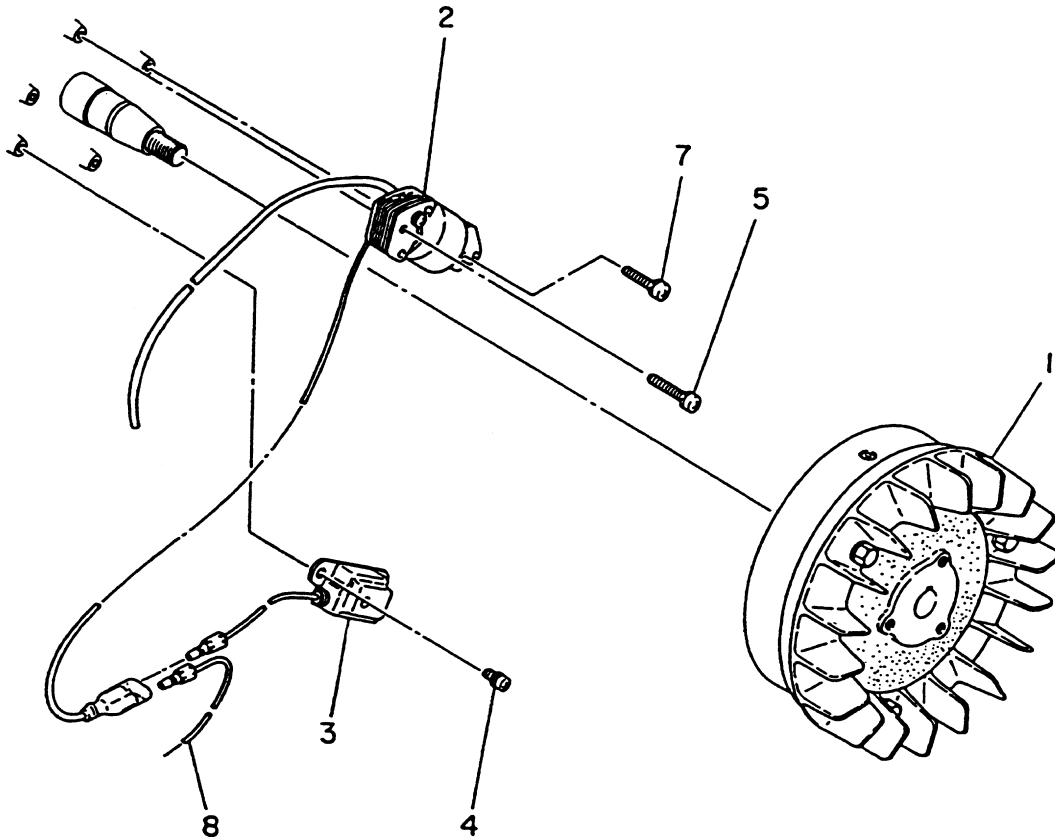
# ROBIN EC-10G ENGINE — RECOIL STARTER ASSY.

## RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	1065081310	RECOIL STARTER ASSY. ....	1	INCLUDES ITEMS W/*
2*	1065011608	SPIRAL SPRING	1	
3*	1065018418	REEL COMPLETE	1	
4*	1065011308	STARTER ROPE	1	
5*	2065010108	STARTER KNOB COMPLETE	1	
6*	1065013208	FRICTION SPRING	1	
7*	1065013618	RETURN SPRING	1	
8*	1065012818	RATCHET	2	
9*	1065014408	FRICTION PLATE	1	
10*	1065018508	THRUST WASHER	1	
11*	1065018608	CLAMP	1	
12*	1065018318	STARTING PULLEY	1	
13	0016606120	BOLT AND WASHER ASSY. ....	3	REPLACES 0011006120
14	030206150	SPRING WASHER 6MM .....	4	REPLACES 0032006000
15	0016606120	BOLT	4	

# ROBIN EC-10G ENGINE — MAGNETO ASSY.

MAGNETO ASSY.





# ROBIN EC-10G ENGINE — MAGENTO ASSY.

## MAGNETO ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
		MAGNETO ASSY. ....		NO LONGER AVAILABLE OLD P/N 1067021000
1	1067017508	FLYWHEEL COMPLETE	1	
2	1067011018	GENERATING ASSY. TCI .....	1	REPLACES 1067011008
3	1067024708	T.C.I. UNIT	1	
4	0011305100	BOLT AND WASHER ASSY.	2	
5	0043504250	SCREW AND WASHER ASSY.	1	
7	0043504200	SCREW AND WASHER ASSY.	1	
8	1067330101	WIRE COMPLETE	1	

**PAYMENT TERMS**

Terms of payment for parts are net 10 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 listed in the parts price book 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 5 working days from notification, pending instructions. If a reply is not received within 5 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 \$20.00 to \$50.00 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 here under 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. A part 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.


# PARTS AND OPERATION MANUAL

## **HERE'S HOW TO GET HELP**

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

### **PARTS DEPARTMENT**

*800-427-1244 or 310-537-3700*

*FAX: 800-672-7877 or 310-637-3284*

### **SERVICE DEPARTMENT/TECHNICAL ASSISTANCE**

*800-478-1244 or 310-537-3700*

*FAX: 310- 537-4259*

### **WARRANTY DEPARTMENT**

*888-661-4279, or 310-661-4279*

*FAX: 310- 537-1173*

### **MAIN**

*800-421-1244 or 310-537-3700*

*FAX: 310-537-3927*



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WWW: [multiquip.com](http://multiquip.com)

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