

OPERATION AND PARTS MANUAL



Plate Compactor *Mikasa* Model MVC-40G

(Robin EH09-2D Gasoline Engine)

Revision #4 (06/06/07)

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publication, visit our website at:
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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.



WARNING



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.

**Multiquip MVC-40G
Plate Compactor**

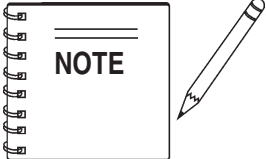
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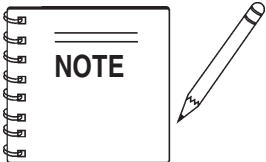
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Specification and part number are subject to change without notice.



As a continuing effort to update our parts book, contact the MULTIQIP literature department for the latest revision of your "Operation and Parts Manual"

PARTS ORDERING PROCEDURES

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

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Order via Internet (Dealers Only):

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- View Parts Diagrams
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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.*

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Order via Fax (Dealers Only):

All customers are welcome to order parts via Fax.

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1-800-6-PARTS-7 (800-672-7877)

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

Non-Dealer Customers:

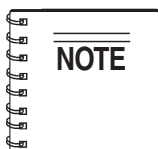
Contact your local Multiquip Dealer for parts or call 800-427-1244 for help in locating a dealer near you.



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"/> Fed Ex/UPS <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 |



Unless otherwise indicated by customer, all orders are treated as *Standard Orders* and will ship within 24 hours. We will make every effort to ship *Air Shipments* the same day the order is received, if received prior to 2PM PST. *Stock Orders* must be noted on fax or web order form.

WE ACCEPT ALL MAJOR CREDIT CARDS!



TABLE 1. COMPACTOR SPECIFICATIONS

Model	MVC-40G
Centrifugal Force (Blows)	1,573 ft-lbs (7.2 kN)
Vibration Frequency	6,200 vpm (103 Hz)
Maximum Forward Speed	75~82 ft/min (23~25 meters/min)
Plate Size (L x W)	16.53 x 11.41 in (420 x 290 mm)
Operating Weight	97 lbs. (43 kg)
Maximum Area of Compaction	4,711 sq. ft/hr (438 sq. m/hr)

Table 2. ENGINE SPECIFICATIONS

Engine	Model	ROBIN EH092D40010
	Type	Air-cooled 4 stroke, Single Cylinder, Horizontal Shaft, OHV Gasoline Engine
	Displacement	86 cc.
	Max Output	2.1 kW/4,200 R.P.M.
	Continuous Output	1.5 kW/3,600 R.P.M.
	Fuel Tank Capacity	Approx. .40 U.S. gallons (1.5 liters)
	Fuel	Unleaded Automobile Gasoline
	Lube Oil Capacity	.317 qts. (0.3 liters)
	Spark Plug	NGK BMR4A (Champion RCJ14)
Dimension (L x W x H)	9.80 x 11.8 x 15.0 in. (249 x 299 x 380 mm)	
Dry Net Weight	21.8 lbs. (9.9 Kg.)	

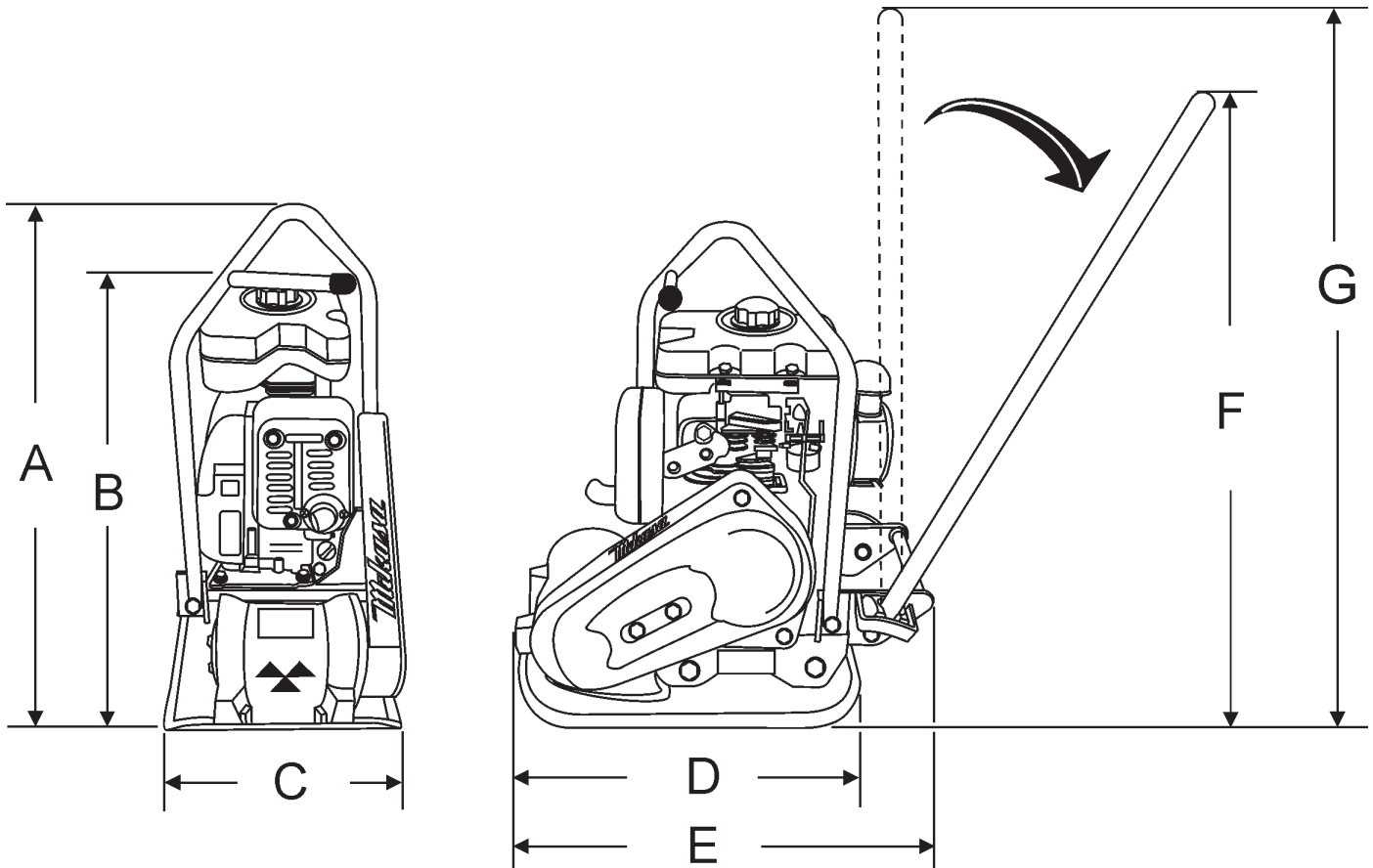


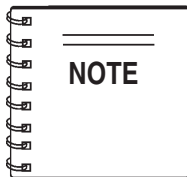
Figure 1. MVC-40G Plate Compactor Dimensions

TABLE 3. DIMENSIONS		
REFERENCE LETTER	DESCRIPTION	DIMENSION in. (mm)
A	Height (Lifting Bale)	23.5 in. (597 mm)
B	Height (Lifting Handle)	20.5 in. (521 mm)
C	Width	11.25 in. (286 mm)
D	Length (Plate)	16.25 in. (413 mm)
E	Length (Compactor)	19.00 in. (483 mm)
F	Height (Handle Upright)	40.50 in. (1,029 mm)
G	Height (Handle Tilted)	36.00 in. (914 mm)
	Plate Dimensions (L x W)	16.53 x 11.41 in. (420 x 290)

MVC-40G — SAFETY MESSAGE ALERT SYMBOLS

FOR YOUR SAFETY AND THE SAFETY OF OTHERS!

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.



This Owner's Manual has been developed to provide complete instructions for the safe and efficient operation of the **MQ Model MVC-40G Plate Compactor**. Refer to the engine manufacturers instructions for data relative to its safe operation.

Before using this plate compactor, ensure that the operating individual has read and understands all instructions in this manual.

SAFETY MESSAGE ALERT SYMBOLS

The three (3) 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 three words: **DANGER**, **WARNING**, or **CAUTION**.

DANGER

You **WILL** be **KILLED** or **SERIOUSLY** injured if you **DO NOT** follow directions.

WARNING

You **CAN** be **KILLED** or **SERIOUSLY** injured if you **DO NOT** follow directions.

CAUTION

You **CAN** be **INJURED** if you **DO NOT** follow directions.

HAZARD SYMBOLS

Potential hazards associated with the operation of the **MQ Model MVC-40G Plate Compactor** will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

WARNING - Lethal Exhaust Gas Hazards

Engine exhaust gases contain poisonous carbon monoxide. This gas is colorless and odorless, and can cause death if inhaled. **NEVER** operate this equipment in a confined area or enclosed structure that does not provide ample free flow air.



DANGER - Explosive Fuel Hazards

Gasoline is extremely flammable, and its vapors can cause an explosion if ignited. **DO NOT** start the engine near spilled fuel or combustible fluids.



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 approved containers, in

WARNING - Burn Hazards

Engine components can generate extreme heat. To prevent burns, **DO NOT** touch these areas while the engine is running or immediately after operations. Never operate the engine with heat shields or heat guards removed.



WARNING - Respiratory Hazards

ALWAYS wear approved **respiratory** protection when required.



MVC-40G — SAFETY MESSAGE ALERT SYMBOLS

CAUTION - Rotating Parts Hazards

NEVER operate equipment with covers, or guards removed. Keep fingers, hands, hair and clothing away from all moving parts to prevent injury.



CAUTION - Equipment Damage Hazards

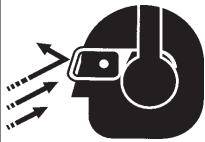
Other important messages are provided throughout this manual to help prevent damage to your light tower, other property, or the surrounding environment.

CAUTION - Accidental Starting Hazards

ALWAYS place the power source, circuit breakers or **ON/OFF** switch in the **OFF** position, when the generator is not in use, unless connected to transfer switch.



CAUTION - Eye and Hearing Hazards



ALWAYS wear approved eye and hearing protection.

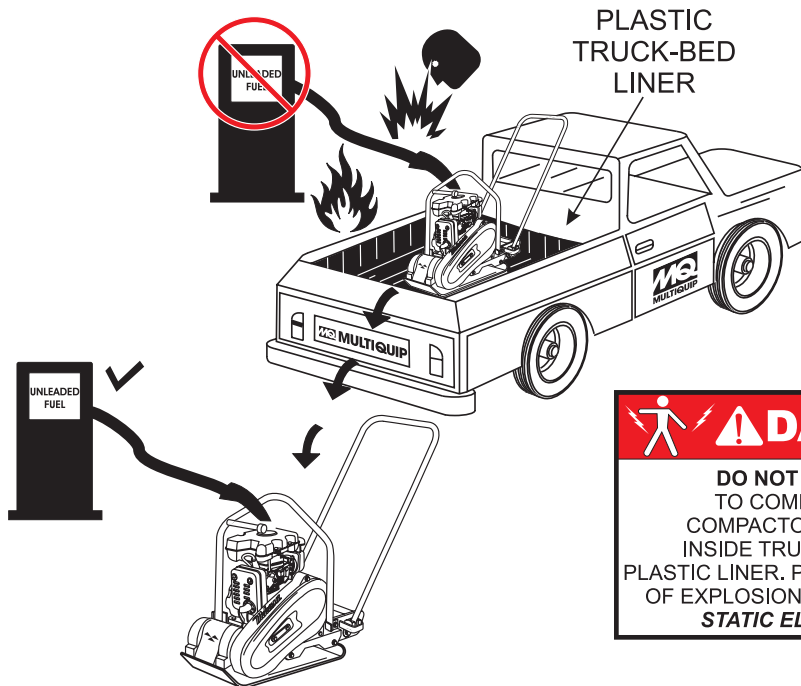
WARNING - Read Manual

Before attempting to operate the plate compactor, and to avoid serious injury to personnel, always read and understand operation manual. Failure to read and understand operation manual could result in serious harm or even death!



DANGER - Refueling Hazard

DO NOT refuel plate compactor if compactor is placed inside truck bed with **PLASTIC LINER**. Possibility exists of explosion or fire due to **static electricity**.



DANGER
DO NOT ADD FUEL TO COMPACTOR IF COMPACTOR IS PLACED INSIDE TRUCK-BED WITH PLASTIC LINER. POSSIBILITY EXISTS OF EXPLOSION OR FIRE DUE TO **STATIC ELECTRICITY**.

MVC-40G — RULES FOR SAFE OPERATION



CAUTION - Read Manual!

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 *MQ Mikasa Model MVC-40G Plate Compactor*.

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** wear proper respiratory (mask), hearing and eye protection equipment when operating the plate compactor.
- 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 mixer.



- **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 mixer requires an adequate free flow of cooling air. **NEVER** operate the compactor 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 compactor or engine and may cause injury to people. Remember the plate compactor's engine gives off **DEADLY** carbon monoxide gas.

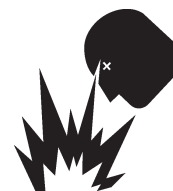


- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.

- **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 engine.



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



- Topping-off to filler port is dangerous, as it tends to spill fuel.
- Maintain this equipment in a safe operating condition at all times.
- **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.

MVC-40G — RULES FOR SAFE OPERATION

- **NEVER** run engine without air filter. Severe engine damage may occur.
- **ALWAYS** service air cleaner frequently to prevent carburetor malfunction.
- **ALWAYS** be sure the operator is familiar with proper safety precautions and operations techniques before using compactor.
- **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.

Loading and Unloading (Crane)

- Before lifting, make sure that machine parts (lifting bale and vibration insulator) are not damaged and screws are not loosened or lost.
- **ALWAYS** make sure crane or lifting device has been properly secured to the lifting bale on the compactor.



- **NEVER** lift the compactor while the engine is running.
- Use adequate lifting cable (wire or rope) of sufficient strength.
- Use one point suspension hook and lift straight upwards.
- **NEVER** allow any person or animal to stand underneath the machine while lifting.
- Try not to lift compactor to unnecessary heights.

TRANSPORTING

- **ALWAYS** shutdown engine before transporting.
- Tighten fuel tank cap securely and close fuel cock to prevent fuel from spilling.
- Drain fuel when transporting compactor over long distances or bad roads.

MAINTENANCE

- **NEVER** lubricate components or attempt service on a running compactor.
- **ALWAYS** allow the plate compactor a proper amount of time to cool before servicing.
- Keep the compactor in proper running condition.
- Fix damage to the plate compactor immediately and always replace broken parts.
- 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.

EMERGENCIES

- **ALWAYS** know the location of the nearest **fire extinguisher** and **first aid kit**.



- In emergencies **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.



MVC-40G — GENERAL INFORMATION

Definition of Plate Compactor

The Mikasa MVC-40G is a one direction (forward) walk behind, plate compactor designed for the compaction of sand, mixed soils and asphalt. This plate compactor is a powerful compacting tool capable of applying a tremendous force in consecutive high frequency vibrations to a soil surface. Its applications include compacting for road, embankments and reservoirs as well as backfilling for gas pipelines, water pipelines and cable installation work.

The MVC-40G is small and lightweight. It can be easily handled by one person in confined areas. It has an accessible front-mounted vibrator assembly. The sealed belt cover keeps dirt and rocks away from the belt.

Vibratory Plate

The vibratory plate of the compactor produces low amplitude high frequency vibrations, designed to compact granular soils and asphalt.

The resulting vibrations cause forward motion. The engine and handle are vibration isolated from the vibrating plate.

Frequency/Speed

The compactor's vibrating plate has a frequency of 6,200 vpm (vibrations per minute). The travel speed of the compactor is approximately 82 ft./minute (25 meters/minute).

Engine

The MQ Mikasa MVC-40G Plate Compactor is equipped with a air-cooled, 4-stroke ROBIN EH09-2D gasoline engine. When adding fuel, always use unleaded gasoline.

Controls

Before starting the MVC-40G Plate Compactor identify and understand the function of the controls and components as indicated Figure 3.

MVC-40G — COMPONENTS (PLATE COMPACTOR)

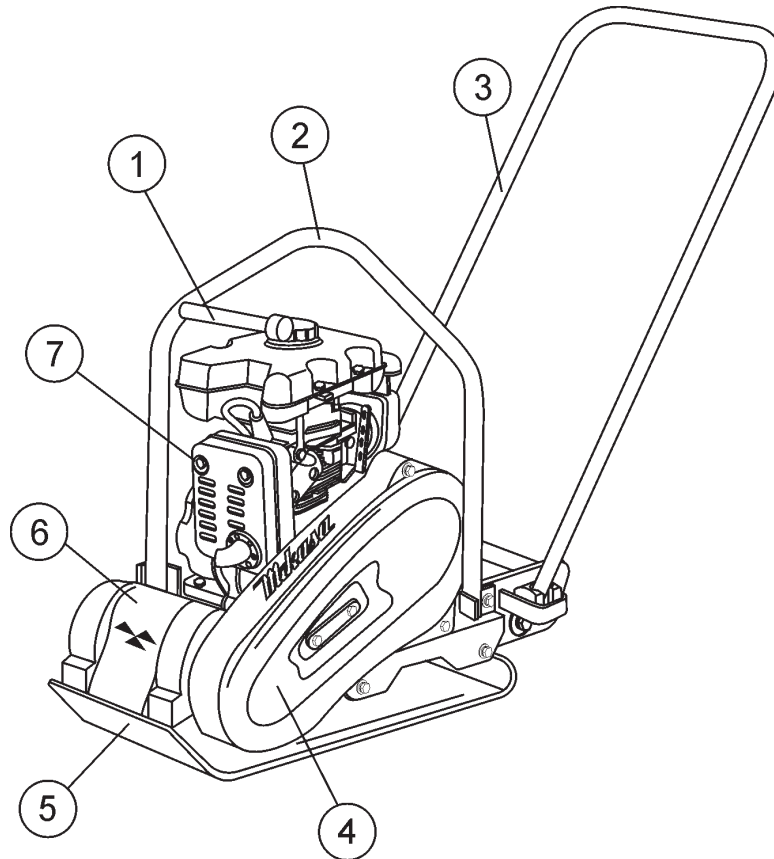


Figure 3. MVC-40G Plate Compactor Components

Figure 3 shows the location of the components and general maintenance parts. The function of each component is described below:

1. **Hand Lift Handle** – When lifting of the compactor by personnel is required, use this hand lift handle. **DO NOT** attach a crane or heavy lifting device to this handle to lift the compactor.
2. **Lifting Bale** – When lifting of the compactor is required either by forklift, crane etc., tie rope or chain around this lifting point.
3. **Handle Bar** – When operating the compactor use this handle bar to maneuver the compactor.
4. **Belt Cover** – Remove this cover to gain access to the V-belts. **NEVER** run the compactor without the V-belt cover. If the V-belt cover is not installed, the possibility exist that your hand may get caught between the V-belt and clutch, thus causing serious injury and bodily harm.
5. **Vibrating Plate** – A flat, open plate made of durable cast iron construction used in the compacting of soil.
6. **Vibration Case** – Encloses the eccentric, gears and counter weights.
7. **Gasoline Engine** – This plate compactor uses a 4-stroke, air cooled ROBIN EH09-2D gasoline engine. Refer to the ROBIN owner's manual for engine information.

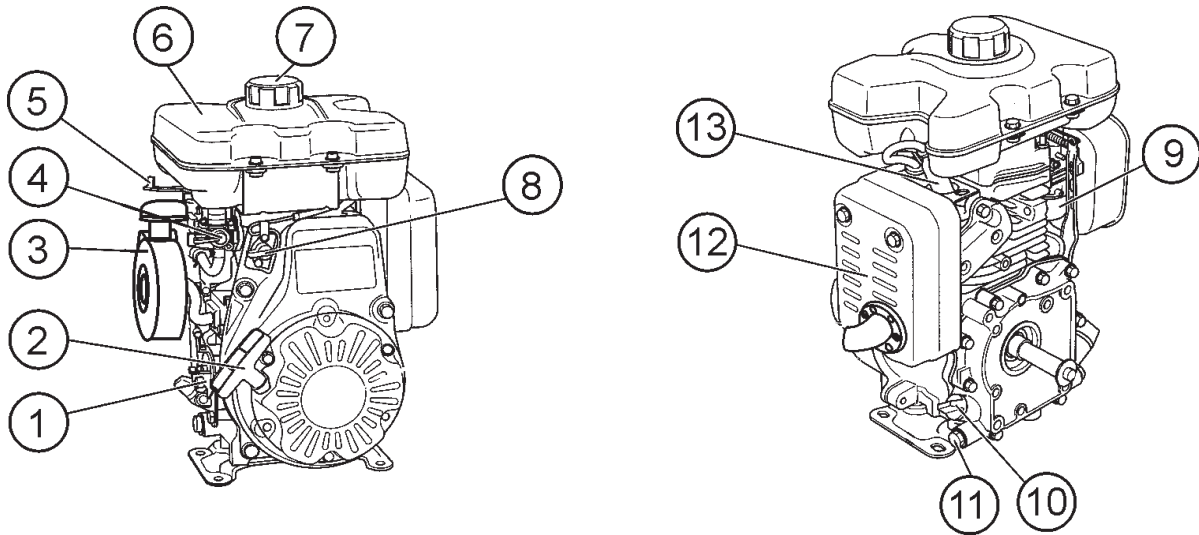


Figure 4. Engine Controls and Components

INITIAL SERVICING

The engine (Figure 4) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the **ROBIN** engine service manual for instructions and details for proper operation and servicing.

1. **Throttle Lever** – Used to adjust engine RPM. Push lever upwards for **SLOW**, and down for **FAST**.
2. **Recoil Starter (pull rope)** – Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly
3. **Air Cleaner** – Prevents dirt and other debris from entering the fuel system. Release clips on side of air filter canister to gain access to filter element.
4. **Fuel Valve Lever** – **OPEN** to let fuel flow, **CLOSE** to stop the flow of fuel.
5. **Choke Lever** – Used in the starting of a cold engine, or in cold weather conditions. The choke enriches the fuel mixture.
6. **Fuel Tank** – Holds .40 gals (1.5 liters) unleaded gasoline. For additional information refer to ROBIN engine owner's manual.
7. **Fuel Filler Cap** – Remove this cap to add unleaded gasoline to the fuel tank. Make sure cap is tightened securely. **DO NOT** over fill.
8. **Start/Stop Switch** – Place this switch in the "ON" position (1) to start the engine. Place in the "OFF" position (0) to stop the engine.

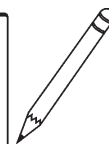
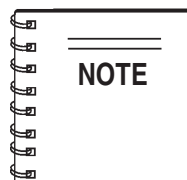
9. **Carburetor** – Regulates fuel flow.
10. **Oil Dipstick/ Filler Cap**– Remove the filler cap dipstick when checking the engine oil level. Add engine oil through this filler port. See Table 4 for recommended type engine oil.
11. **Oil Drain Plug** – Remove this plug to drain engine oil from the crankcase.
12. **Muffler** – Used to reduce noise and emissions. **ALWAYS** allow a sufficient amount of time for the muffler to cool before touching.

Warning - Hot Surface

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.



13. **Spark Plug** – Provides spark to the ignition system. Set spark plug gap to 0.6 - 0.7 mm (0.028 - 0.031 inch) Clean spark plug once a week.



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.

Before Starting

1. Read safety instructions at the beginning of manual.
2. Clean the compactor, removing dirt and dust. Particularly, the bottom of the plate, engine cooling air inlet, carburetor and air cleaner.
3. Check the air filter for dirt and dust. If the air filter is dirty, blow through the air filter cartridge from the inside, moving a jet of dry compressed air up and down until all dust is removed. Otherwise replace air filter with a new one.
4. Check carburetor for external dirt and dust. Clean with dry compressed air.
5. Check fastening nuts and bolts for tightness. Loosened screws or bolts due to vibration, could lead to unexpected accident.

Engine Oil Check

1. To check the engine oil level, place the plate compactor on secure level ground with the engine stopped.
2. Remove the filler cap/dipstick from the engine oil filler hole (Figure 5) and wipe it clean.

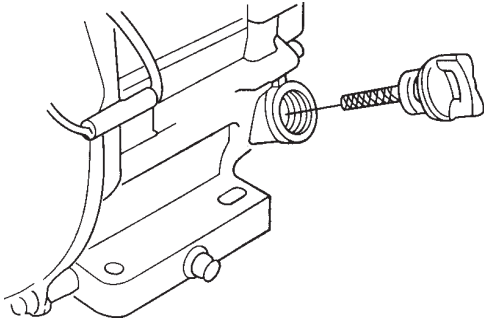


Figure 5. Engine Oil Dipstick

3. Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.
4. If the oil level is low (Figure 6), fill to the edge of the oil filler hole with the recommended oil type (Table 4).

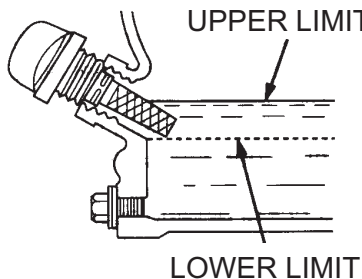
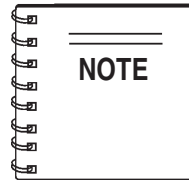


Figure 6. Engine Oil Dipstick



The Oil Alert system will automatically shut-down the engine if the engine oil level falls below safe operating limits. Always be sure to check the engine oil level prior to starting the engine.

Table 4. Oil Type

Season	Temperature	Oil Type
Summer	25°C or Higher	SAE 10W-30
Spring/Fall	25°C~10°C	SAE 10W-30/20
Winter	0°C or Lower	SAE 10W-10

! Danger - Flammable Fuel

Motor fuels are highly flammable and can be dangerous if mishandled. **DO NOT** smoke while refueling. **DO NOT** attempt to refuel the compactor if the engine is **hot!**, **running or in the dark.**

! Danger - Flammable Fuel

Adding fuel to the tank should be done only when the engine is stopped and has had an opportunity to cool down. In the event of a fuel spill, **DO NOT** attempt to start the engine until the fuel residue has been completely wiped up, and the area surrounding the engine is dry.

Fuel Check

1. Remove the gasoline cap located on top of fuel tank.
2. Visually inspect to see if fuel level is low. If fuel is low, replenish with unleaded fuel.
3. When refueling, be sure to use a strainer for filtration. **DO NOT** top-off fuel. Wipe up any spilled fuel.

V-Belt Check



Caution - V-Belt check

NEVER attempt to check the V-belt with the engine running. Severe injury can occur if your hand (Figure 7) gets caught between the V-belt and the clutch. Always use safety gloves.

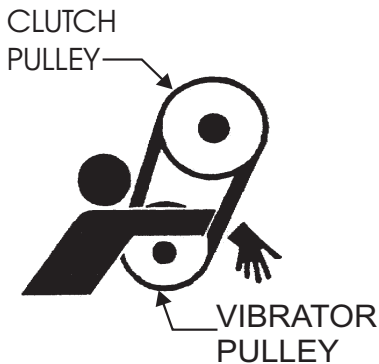


Figure 7. V-Belt Hazard

1. To check the V-belt tension, remove the bolts that secure the belt cover to the frame as shown in Figure 8.

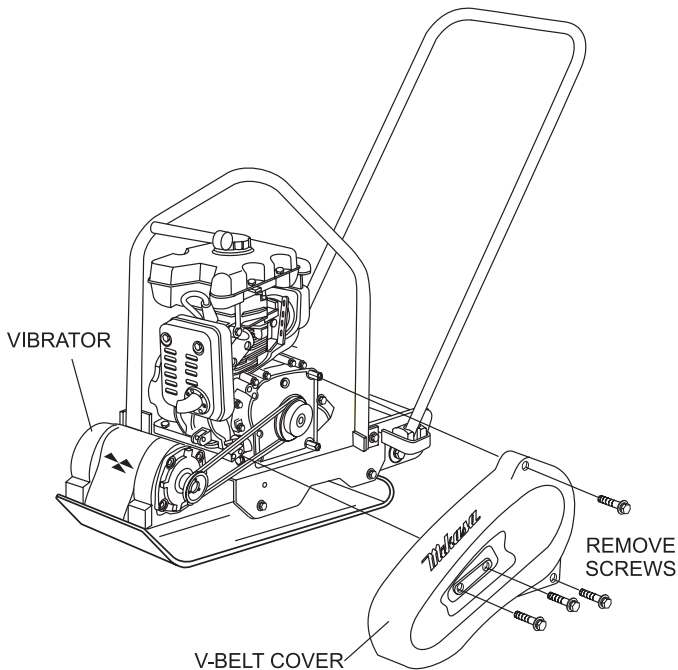


Figure 8. V-Belt Cover Removal

2. The V-belt tension is proper if the V-belt bends 10 to 15 mm (Figure 9) when depressed with finger at midway between the clutch and vibration pulley shafts.

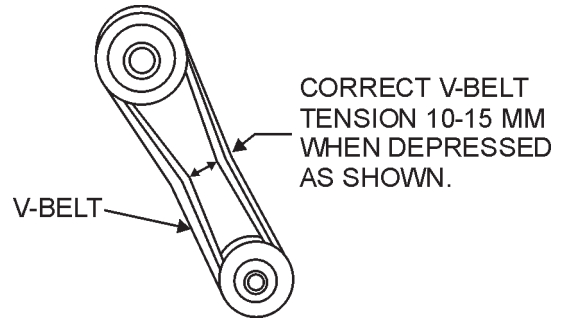


Figure 9. V-Belt Tension

3. A loose V-belt will decrease the power transmission output, causing reduced compaction and premature wear of the belt.
4. If the V-belt becomes worn or loose, replace it.

Vibrator Oil Check

1. Place the MVC-40G plate compactor horizontally on a flat surface. Make sure the compactor is level when checking the oil in the vibrator assembly.
2. Check vibrator oil level by removing the plug (vibrator oil gauge) as shown in Figure 10. The oil level should be up to the oil plug. If oil is required, replace using only SAE 10W-30 motor oil.

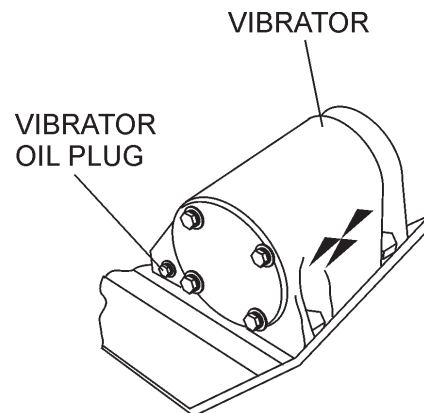


Figure 10. Vibrator Oil Plug

Caution - Read Manual

DO NOT attempt to operate the plate compactor until the Safety, General Information and Inspection sections of this manual have been *read and thoroughly understood*.



This section is intended to assist the operator with the *initial start-up* of the plate compactor. It is extremely important that this section be read carefully before attempting to use the compactor in the field.

Starting the Engine

1. Place the engine **fuel valve lever** (Figure 11) in the "ON" position.

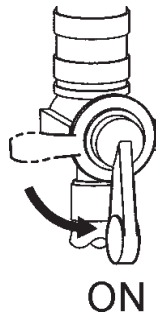


Figure 11. Engine Fuel Valve Lever (ON Position)

2. Place the **engine ON/OFF switch** (Figure 12) in the "ON" position.

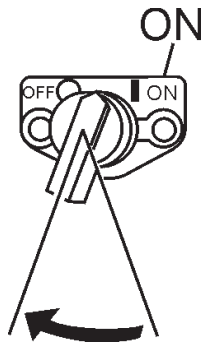
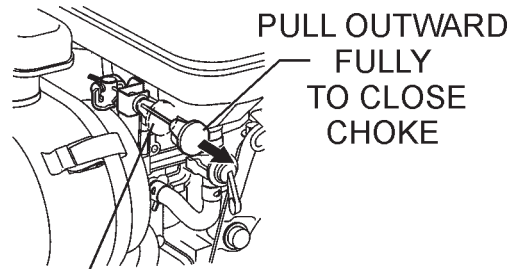


Figure 12. Engine ON/OFF Switch (ON Position)

3. Place the **choke lever** (Figure 13) in the "CLOSED" position if starting a **cold engine**, if starting a **warm engine** or the **temperature is warm**, place the **choke lever** in the "OPEN" position



PUSH INWARD
FULLY
TO OPEN
CHOKE

Figure 13. Engine Choke Lever (Closed)

4. Place the **throttle lever** (Figure 14) in the **slow** position (idle)

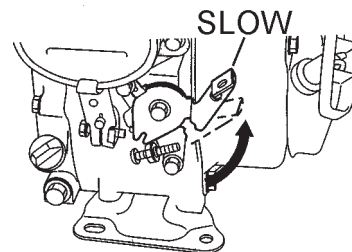


Figure 14. Throttle Lever (Slow)

5. Grasp the starter grip (Figure 15) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding to the compression point. Pull the starter grip briskly and smoothly for starting.

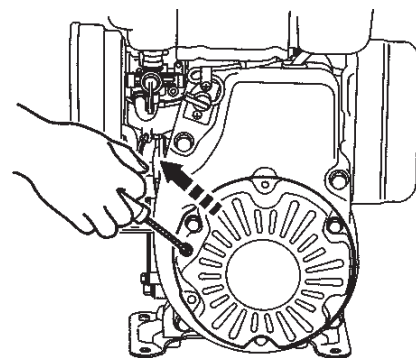


Figure 15. Starter Grip

6. Let the engine warm for a few minutes without a load and check for fuel leaks, and noises that would associate with a loose component.

MVC-40G — INITIAL START-UP

7. If the engine is running properly, slowly return (push inward) the choke lever (Figure 13) to the “**OPEN**” position. If the engine has not started repeat steps 1 through 6.
8. To begin compacting, place the throttle lever (Figure 16) in the “**fast**” (run) position.
2. After the engine **cools**, turn the engine ON/OFF switch to the “**OFF**” position (Figure 18).

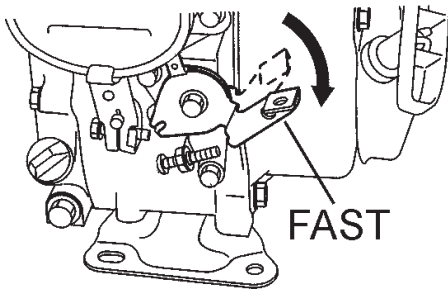


Figure 16. Throttle Lever (Fast)

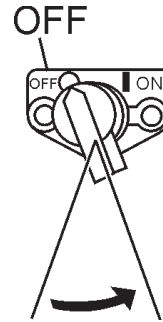


Figure 18. Engine ON/OFF Switch (OFF)

3. Place the **fuel shut-off lever** (Figure 19) in the **OFF** position.

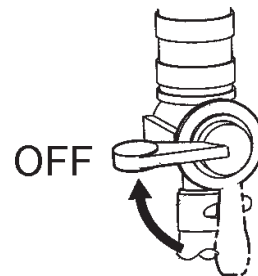


Figure 19. Fuel Valve Lever (OFF)

CAUTION - Compacting Speed

ALWAYS run engine at **full speed** while compacting.

Stopping The Engine

Normal Shutdown

1. Move the throttle lever to the **IDLE** position (Figure 17) and run the engine for three minutes at low speed.

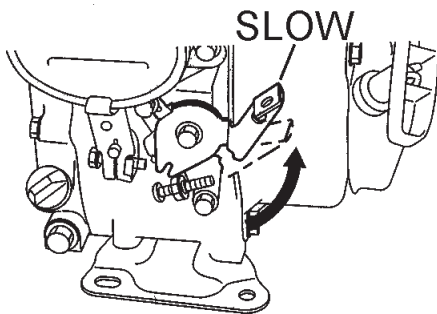


Figure 17. Throttle Lever (Idle)

Emergency Shutdown

1. Move the throttle lever quickly to the **SLOW** position, and place the engine ON/OFF switch in the **OFF** position.

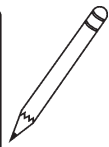
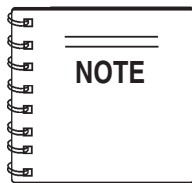
Operation



CAUTION - Safety Rules

Make sure to follow all safety rules referenced in the safety section of this manual before operating compactor. Keep work area clear of debris and other objects that could cause damage to the compactor or bodily injury.

1. Once the engine has started, move the engine throttle lever quickly to the **fast** position.
2. With the throttle lever in the fast position, the engine speed should be around 2,300 RPM, therefore engaging the centrifugal clutch.



Always move the throttle lever quickly without hesitation, because increasing the engine speed slowly causes the clutch to slip.

3. Firmly grasp the compactor's handle bar with both hands, the compactor will begin moving forward.
4. Slowly walk behind the compactor and be on the lookout for any large objects or foreign matter that might cause damage to the compactor or bodily injury.

5. Compactor traveling speed may drop on soils which contain clay, however there may be cases where traveling speed drops because the compaction plate does not leave the ground surface easily due to the composition of the soil. To rectify this problem do the following:

- Check the bottom plate to see if clay or equivalent material has been lodged in the plate mechanism. If so, wash with water and remove.
- Remember the compactor does not work as efficiently on clay or soils that have a high moisture content level.
- If the soil has a high moisture level, dry soil to appropriate moisture content level or carry out compaction twice.



CAUTION - Inspection

Inspection and other services should **always** be carried out on hard and level ground with the engine shut down.



CAUTION - Inspection Intervals

These inspection intervals are for operation under normal conditions. Adjust your inspection intervals based on the number of hours plate compactor is in use, and particular working conditions.

Inspection and Maintenance Service Tables.

- To make sure your plate compactor is always in good working condition before using, carry out the maintenance inspection in accordance with Tables 5 through 7.

TABLE 5. MVC-40G MACHINE INSPECTION

ITEM	HOURS OF OPERATION	REMARKS
Damaged Parts	Every 8 hours (every day)	
Loose or Lost Screws	Every 8 hours (every day)	
Function of Controlling System Part	Every 8 hours (every day)	
Vibrator Oil Check	Every 100 hours	See page 16
Vibrator Oil Replacement	Every 300 hours	See page 21
V-belt (clutch) Check	Every 200 hours	See page 21

Table 6. ENGINE MAINTENANCE

DESCRIPTION (3)	OPERATION	BEFORE	FIRST	EVERY	EVERY	EVERY	EVERY	
			MONTH OR 10 HRS.	3 MONTHS OR 25 HRS.	6 MONTHS OR 50 HRS.	YEAR OR 100 HRS.	2 YEARS OR 200 HRS.	
Engine Oil	CHECK	X						
	CHANGE		X					
Air Cleaner	CHECK	X						
	CHANGE			X (1)				
All Nuts & Bolts	Re-tighten If Necessary	X						
Spark Plug	CHECK-CLEAN				X			
	REPLACE						X	
Cooling Fins	CHECK			X				
Spark Arrester	CLEAN					X		
Fuel Tank	CLEAN					X		
Fuel Filter	CHECK					X		
Idle Speed	CHECK-ADJUST					X (2)		
Valve Clearance	CHECK-ADJUST						X (2)	
Fuel lines	CHECK		Every 2 years (replace if necessary) (2)					

(1) Service more frequently when used in **DUSTY** areas.

(2) These items should be serviced by your service dealer, unless you have the proper tools and are mechanically proficient. Refer to the ROBIN Manual for service procedures

(3) For commercial use, log hours of operation to determine proper maintenance intervals.



CAUTION - Inspection Intervals

Fuel piping and connections should be replaced every 2 years.

Daily Service

- Check for leakage of fuel or oil.
- Remove soil and clean the bottom of compaction plate.
- Check engine oil, see page 15.
- Check for loose screws including tightness. See Table 7 below (tightening torque), for retightening:

TABLE 7.

TIGHTENING TORQUE (in. kg/cm) Diameter

Material	6mm	8mm	10mm	12mm	14mm	16mm	18mm	20mm
4T	70	150	300	500	750	1,100	1,400	2,000
6-8T	100	250	500	800	1,300	2,000	2,700	3,800
11T	150	400	800	1,200	2,000	2,900	4,200	5,600
*	100 (6mm) 300 ~ 350 (8mm) 650 ~ 700 (10mm)							

* (In case counter-part is of aluminum)

(Threads in use with this machine are all right handed)

Material and quality of material is marked on each bolt, and screw.

ENGINE OIL

- Drain the engine oil when the oil is **warm** as shown in Figure 20.
- Remove the oil drain bolt and sealing washer and allow the oil to drain into a suitable container.
- Replace engine oil with recommended type oil as listed in Table 4. Engine oil capacity is .317 quarts (.3 liters). **DO NOT** overfill.
- Install drain bolt with sealing washer and tighten securely.

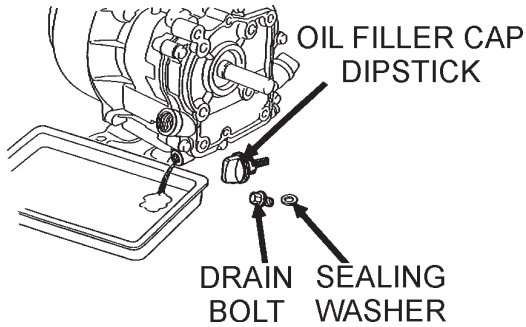


Figure 20. Engine Oil (Draining)

Engine Air Cleaner

1. Remove the air cleaner cover and foam filter element as shown in Figure 21.
2. Wash the gray foam outer filter element in kerosene or diesel fuel. Then saturate it in a mixture of 3 parts kerosene or diesel fuel and 1 part engine oil. Completely squeeze the element to remove the mixture and re-install it back into the air cleaner.

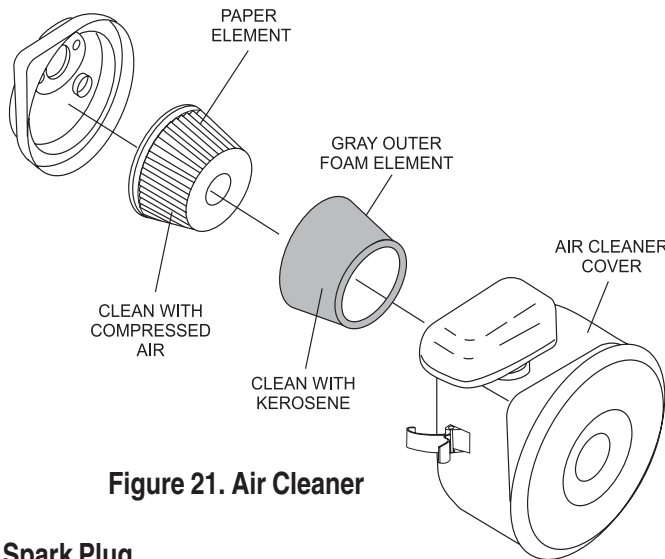


Figure 21. Air Cleaner

Spark Plug

1. Remove and clean the spark plug (Figure 22).
2. Adjust the spark gap to 0.028 ~0.031 inch (0.6~0.7 mm). This unit has electronic ignition, which requires no adjustments.

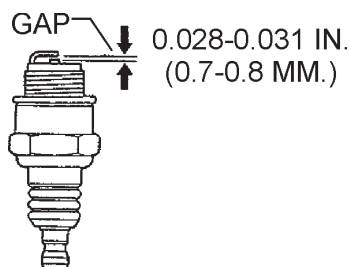


Figure 22. Spark Plug Gap

Changing Vibrator Oil

1. When changing the vibrator oil, remove the drain plug (Figure 10), and simply tip the compactor to drain the oil. Note that the oil will drain more easily while it is hot. Remember to use only 10W-30 motor oil when replacing vibrator oil.

Checking and Replacing the V-Belt and Clutch

1. After 200 hours of operation, remove the upper belt cover to check the V-belt tension. Tension is proper if the belt bends about 10 mm when depressed strongly with finger between shafts. Loose or worn V-belts reduces power transmission efficiency, causing weak compaction and reduces the life of the belt itself.

● Replacing the V-belt

Remove the upper and lower belt covers. Engage an offset wrench (13 mm) or the like to vibrator pulley (lower) fastening bolt. Engage waste cloth or the like at midway of V-belt on the left side and while pulling it back strongly, rotate the offset wrench clockwise so that the V-belt will come off.

● Reinstalling the V-belt

Engage V-belt to lower vibrator pulley and push the V-belt to left side of upper clutch and, in the same manner as in removal, rotate offset wrench clockwise so that the V-belt goes back on.

● Checking Clutch

Check the clutch simultaneously with V-belt checking. With belt removed, check outer drum of the clutch for seizure and "V" groove for wear or damage with your eyes. Clean the "V" groove as necessary. Wear of lining or shoe should be checked with running check. If the shoe is worn, power transmission becomes deficient and slipping will result.



WARNING - V-belt Hazard

NEVER attempt to check the V-belt with the engine running. Severe injury can occur if your hand (Figure 7) gets caught between the V-belt and the clutch. Always use safety gloves.



CAUTION - Vibration Check

Whenever the compactor's vibration becomes weak or lost during normal operation regardless of operation hours, check the V-belt and clutch immediately.

MVC-40G— PREPARATION FOR LONG -TERM STORAGE

Compactor Storage

For storage of the compactor for over 30 days, the following is required:

- Drain the fuel tank completely, or add STA-BIL to the fuel.
- Run the engine until the fuel in the fuel in the carburetor is completely consumed.
- Completely drain the oil from the engine crankcase and follow procedures described in the **ROBIN** engine Owner's Manual for engine storage.
- Completely drain the compactor's oil from the vibrating case.
- Clean entire plate compactor, especially the bottom plate removing all dirt and foreign matter.
- Cover plate compactor and engine with plastic covering or equivalent and store in a clean, dry place.

MVC-40G — TROUBLESHOOTING (ENGINE)

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the diagnosis based on the Engine Troubleshooting (Table 8) information shown below and on the proceeding page. If the problem cannot be remedied, please leave the unit just as it is and consult our company's business office or service plant.

TABLE 8. ENGINE TROUBLESHOOTING		
SYMPTOM	POSSIBLE CAUSE	SOLUTION
Difficult to start, "fuel is available, but no SPARK at spark plug".	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.
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, and replace with correct type of fuel.
	Water or dust in fuel system?	Flush fuel system.
	Air cleaner dirty?	Clean or replace air cleaner.
Difficult to start, "fuel is available, spark is present and compression is low"	Suction/exhaust valve stuck or protruded?	Re-seat 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.	Fuel not available 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 clogged?	Replace fuel filter.
	Fuel tank cap breather hole clogged?	Clean or replace fuel tank cap.
	Air in fuel line?	Bleed fuel line.

MVC-40G — TROUBLESHOOTING (ENGINE)

TABLE 8. ENGINE TROUBLESHOOTING (CONTINUED)

SYMPTOM	POSSIBLE CAUSE	SOLUTION
"Weak in power" compression is proper and does not misfire.	Air cleaner not clean?	Clean or replace air cleaner
	Improper level in carburetor?	Check float adjustment, re-build carburetor.
	Defective Spark plug?	Clean or replace spark plug.
	Defective Spark plug?	
"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 improper?	Replace with correct type of spark plug.
	Correct type of fuel?	Replace with correct type of fuel
	Cooling fins dirty?	Clean cooling fins.
Rotational speed fluctuates.	Governor adjusted correctly?	Adjust governor.
	Governor spring defective?	Replace governor spring.
	Fuel flow restricted?	Check entire fuel system for leaks or clogs.
Recoil starter malfunction.	Recoil mechanism clogged with dust and dirt?	Clean recoil assembly with soap and water.
	Spiral spring loose?	Replace spiral spring.

MVC-40G — TROUBLESHOOTING (PLATE COMPACTOR)

Practically all breakdowns can be prevented by proper handling and maintenance inspections, but in the event of a breakdown, please take a remedial action following the diagnosis based on the Compactor Troubleshooting (Table 9) information shown below and on the proceeding page. If the problem cannot be remedied, please leave the unit just as it is and consult our company's business office or service plant.

TABLE 9. PLATE COMPACTOR TROUBLESHOOTING		
SYMPTOM	POSSIBLE CAUSE	SOLUTION
Travel speed too low, and vibration is weak.	Engine speed too low?	Set engine speed to correct RPM.
	Clutch slips?	Check or replace clutch.
	V-belt slips?	Adjust or replace V-belt.
	Excessive oil in vibrator?	Drain excess oil and fill to proper level.
	Malfunction in vibrator housing?	Check eccentric, gears and counter weights.
Does not travel forward.	V-belt slips?	Replace V-belt.
	Clutch slips?	Check clutch springs and shoes.
	Vibrator locked?	Check vibrator housing (eccentric, gears and counterweights)

MVC-40G— 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.

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.

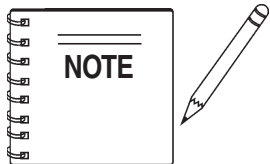
Sample Parts List:

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 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.



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 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.

MVC-40G— SUGGESTED SPARE PARTS

MQ MIKASA MVC-40G PLATE COMPACTOR WITH
ROBIN EH09-2D GASOLINE ENGINE

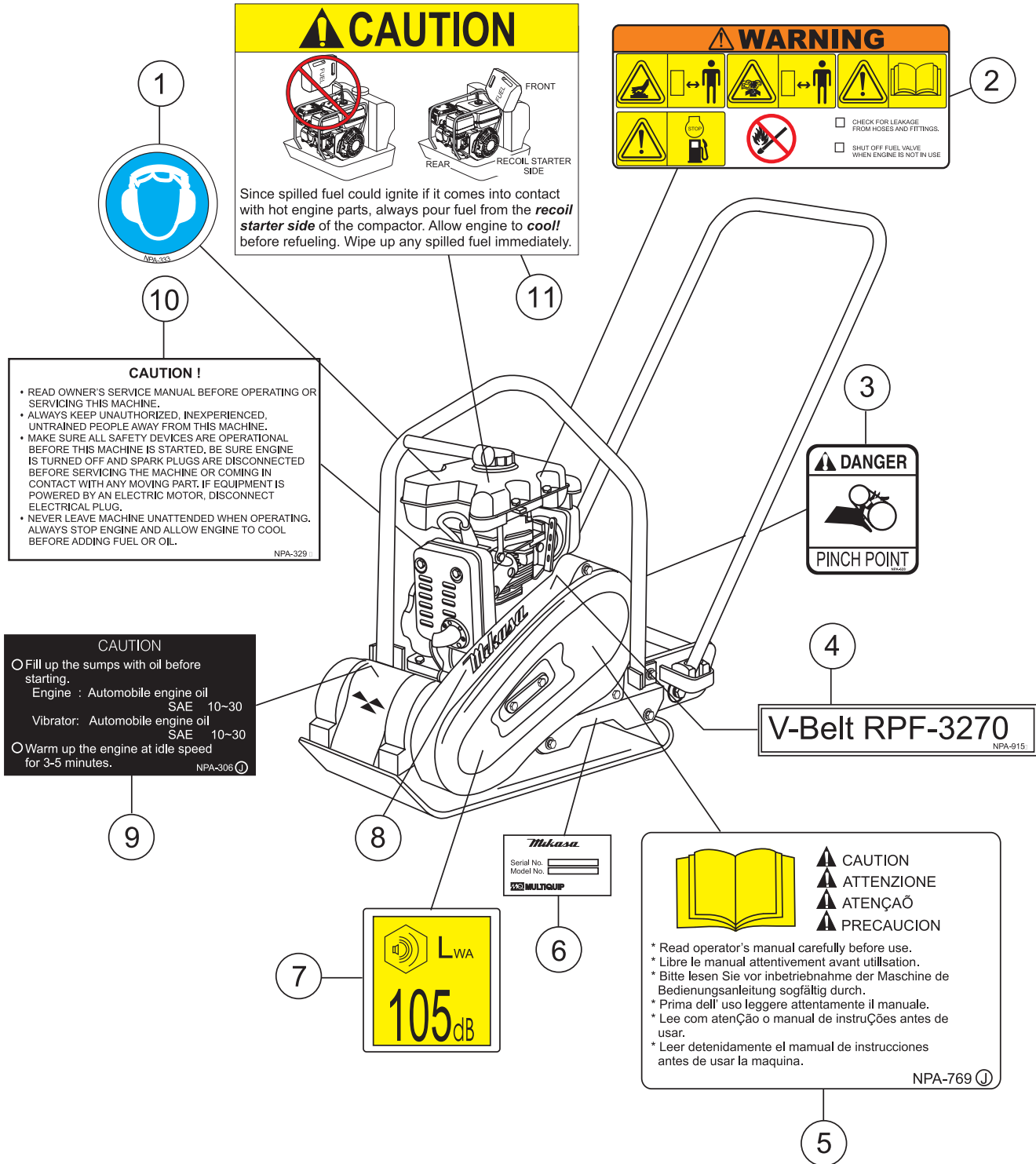
1 to 3 Units

<u>Qty.</u>	<u>P/N</u>	<u>Description</u>
3	070100272	V-BELT, A-27 BLUE
4	939010160	SHOCK ABSORBER
6	2263261007	ELEMENT SET, AIR CLEANER
3	0650140380	SPARK PLUG
1	2745011208	ROPE STARTER
1	0430440132	FUEL TANK CAP, ASSY.
1	0641420040	FUEL FILTER, TANK
3	0642004420	FILTER, V-STD, FUEL STRAINER

MVC-40G— NAME PLATE AND DECALS

Machine Safety Decals

The MVC-40G Plate Compactor is equipped with a number of safety decals. These decals are provided for operator safety and maintenance information. The illustration below shows these decals as they appear on the machine. Should any of these decals become unreadable, replacements can be obtained from your dealer.



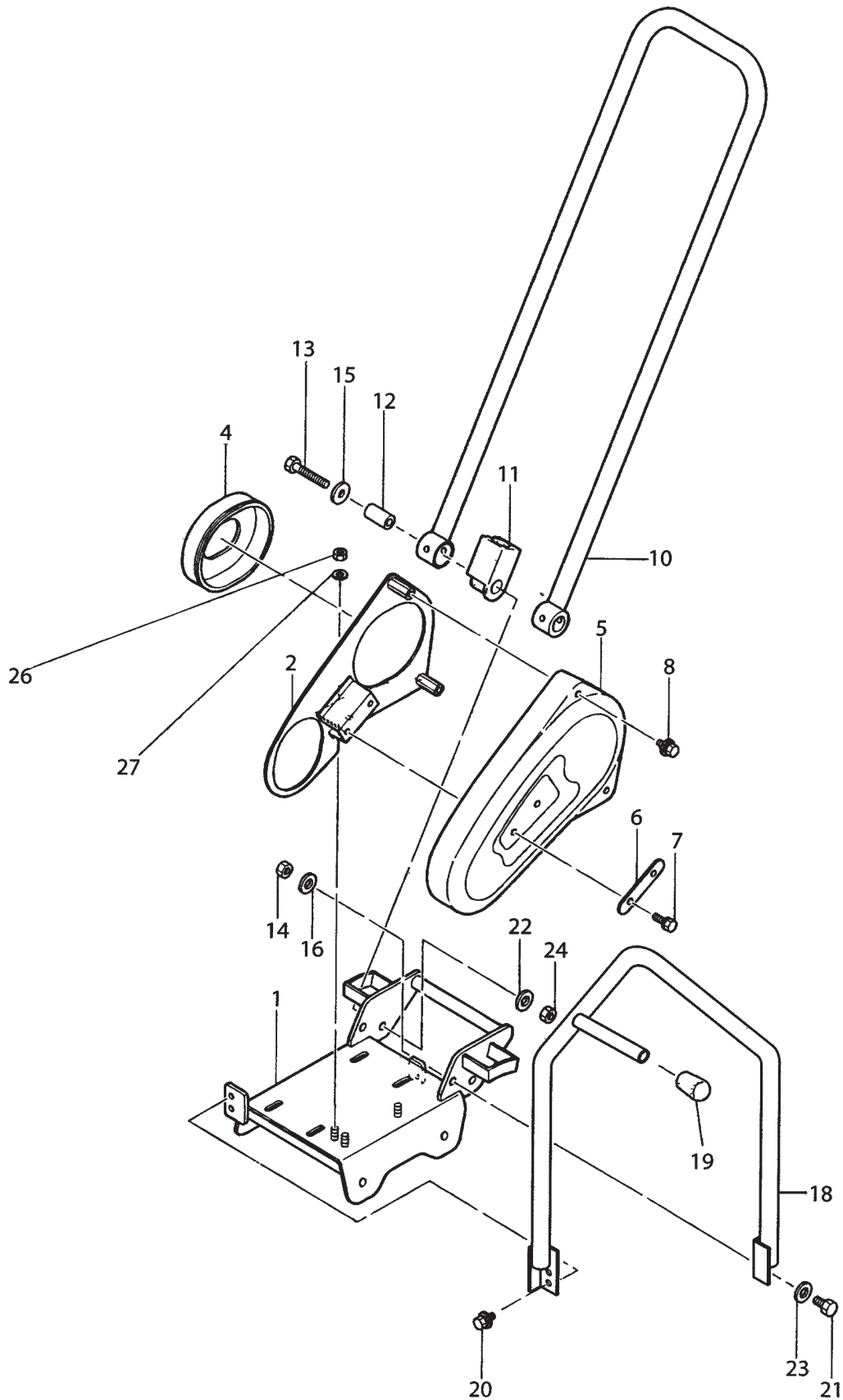
MVC-40G— NAMEPLATE AND DECALS

NAMEPLATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	920203330	DECAL; EAR PROTECTION LABEL	1	NPA-333
2	0732005181	DECAL; WARNING, HOT SURF., FUMES, GAS, READ .	1	
3	920206280	DECAL; DANGER	1	NPA-628
4	920209150	DECAL; V-BELT/ RPF-3270	1	NPA-915
5	920207690	DECAL; CAUTION, READ MANUAL	1	NPA-769
6		NAMEPLATE	1	CONTACT MQ PARTS DEPT.
7	920210330	DECAL; EC NOISE REQ. LWA105	1	NPA-1033
8	920109530	DECAL; MIKASA, 125MM YELLOW	1	NP-953
9	920203060	DECAL; CAUTION	1	NPA-929
10	920203290	DECAL; CAUTION	1	NPA-329
11	920212320	DECAL: CAUTION REFUELING	1	NPA-1232

MVC-40G— BASE AND HANDLE ASSY.

BASE AND HANDLE ASSY.



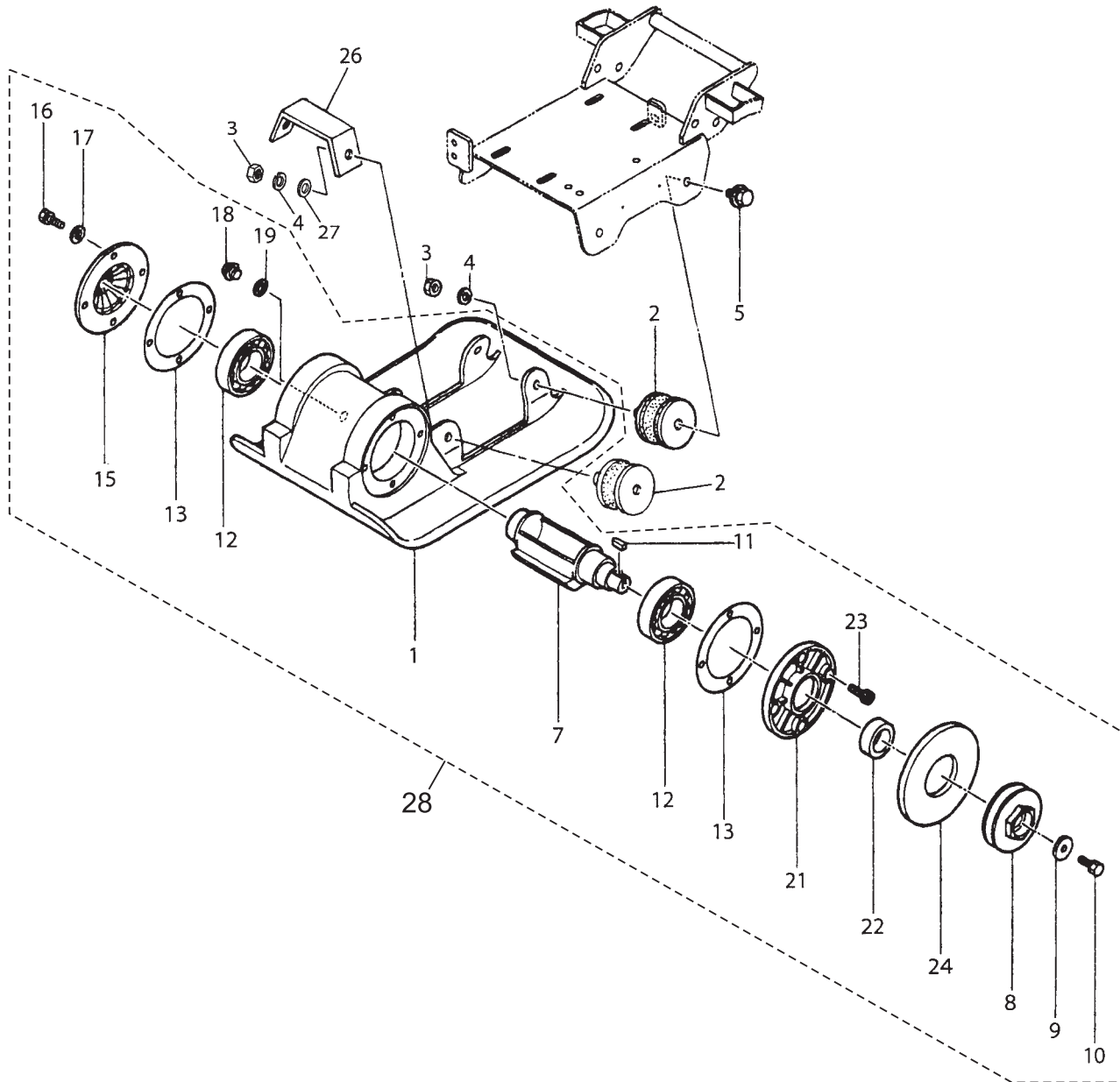
MVC-40G— BASE AND HANDLE ASSY.

BASE AND HANDLE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	417116270	BASE	1	
2	417116820	BELT COVER, IN	1	
4	417339980	COVER SEAL, E/G	1	
5	417116290	BELT COVER, OUT	1	
6	417454400	PLATE, BELT COVER	1	
7	002210820	BOLT, 8X20 H, SW	2	
8	002410815	BOLT, 8X15 H, SW, PW	2	
10	417118330	HANDLE	1	
11	417454410	HANDLE STOPPER	2	
12	417454420	COLLAR, 10.5-20-37.5L	2	
13	001221052	BOLT, 10X60 T	2	
14	020310080	NUT, M10	1	
15	952401660	WASHER, 103045	2	
16	030210250	WASHER, LOCK M10	1	
18	417215510	HOOK	1	
19	953406430	RUBBER CAP, 16D KP-622	1	
20	002410820	BOLT, 8X20 H, SW, PW	2	
21	001211025	BOLT, 10X25 H	1	
22	030210250	WASHER, LOCK M10	2	
23	031110160	WASHER, FLAT M10	1	
24	020310080	NUT, M10	2	
26	020308060	NUT, M8	3	
27	030208200	WASHER, LOCK M8	3	

MVC-40G—VIBRATING PLATE AND VIBRATOR ASSY.

VIBRATING PLATE AND VIBRATOR ASSY.



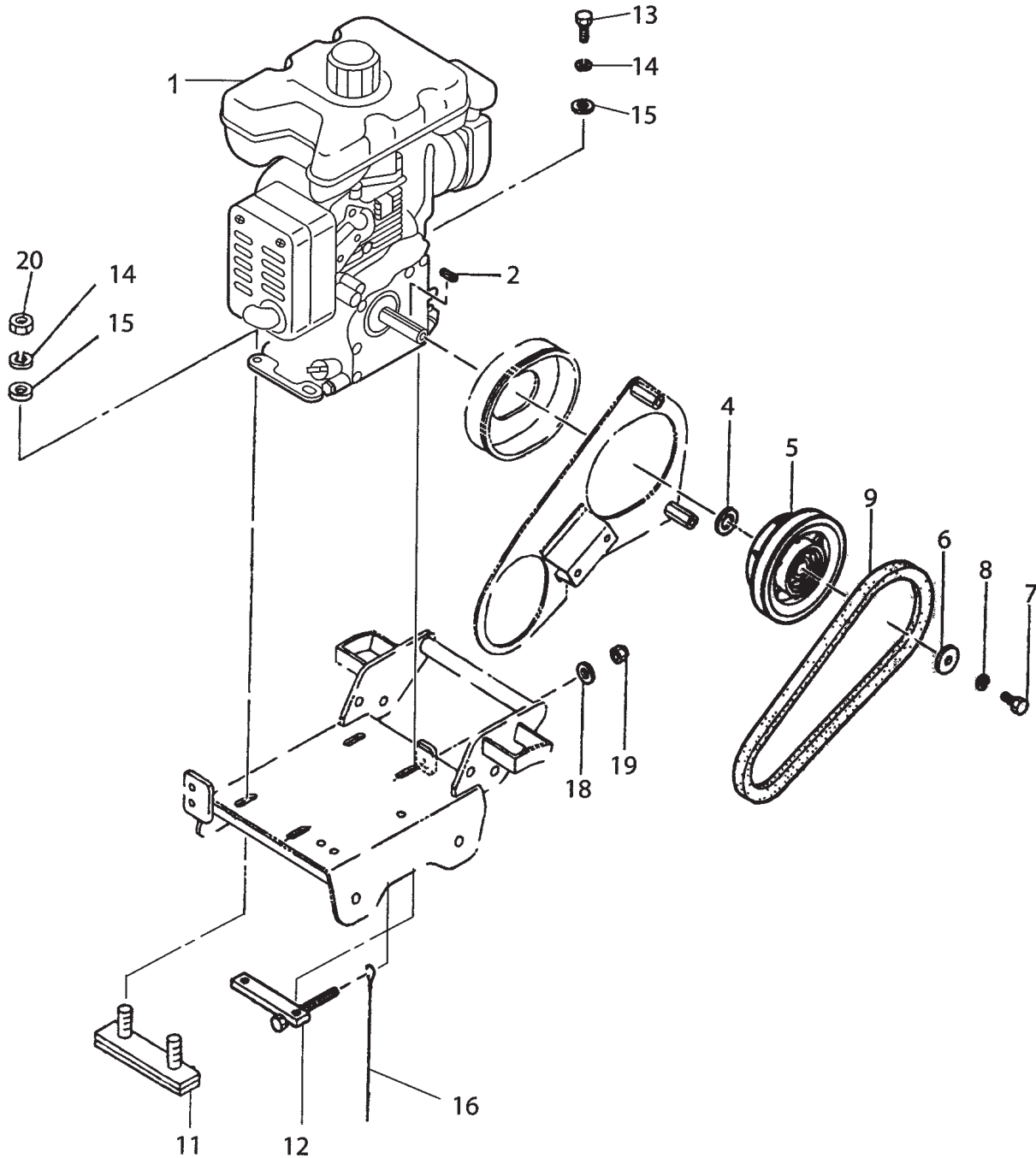
MVC-40G—VIBRATING PLATE AND VIBRATOR ASSY.

VIBRATING PLATE AND VIBRATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1#	417116663	VIBRATING PLATE	1	
2	939010160	SHOCK ABSORBER TAK-50	4	
3	020310080	NUT, M10	4	
4	030210250	WASHER, LOCK M10	4	
5	002411025	BOLT, 10X25 H, SW, PW	4	
7#	417215500	ECCENTRIC ROTATOR	1	
8#	417339920	PULLEY, A1-82-S22	1	
9#	952400130	WASHER, FLAT		
10#	002210825	BOLT, 8X25 H, SW	1	
11#	951405240	KEY, 7X7X19 R	1	
12#	040406208	BEARING, 6208C4	2	
13#	417454390	PACKING, VIB	2	
15#	417339890	CASE COVER, R	1	
16#	002210820	BOLT, 8X20 H, SW	4	
17#	031108160	WASHER, FLAT M8	4	
18#	953400270	PLUG, 1/4X14 10L	1	
19#	953405260	PACKING, 1/4 CU	1	
21#	417339900	CASE COVER, L	1	
22#	060403020	OIL SEAL, TC-30458	1	
23#	001520820	SOCKET HEAD BOLT, 8X20 T	4	
24#	417339910	COVER SEAL, VIB.	1	
26	417342700	SUPPORT OF STOPPER	1	
27	031110160	WASHER, FLAT M10	2	
28	417910010	VIBRATING PLATE ASSY	1	INCLUDES ITEMS W/#

MVC-40G— ENGINE ASSY.

ENGINE ASSY.

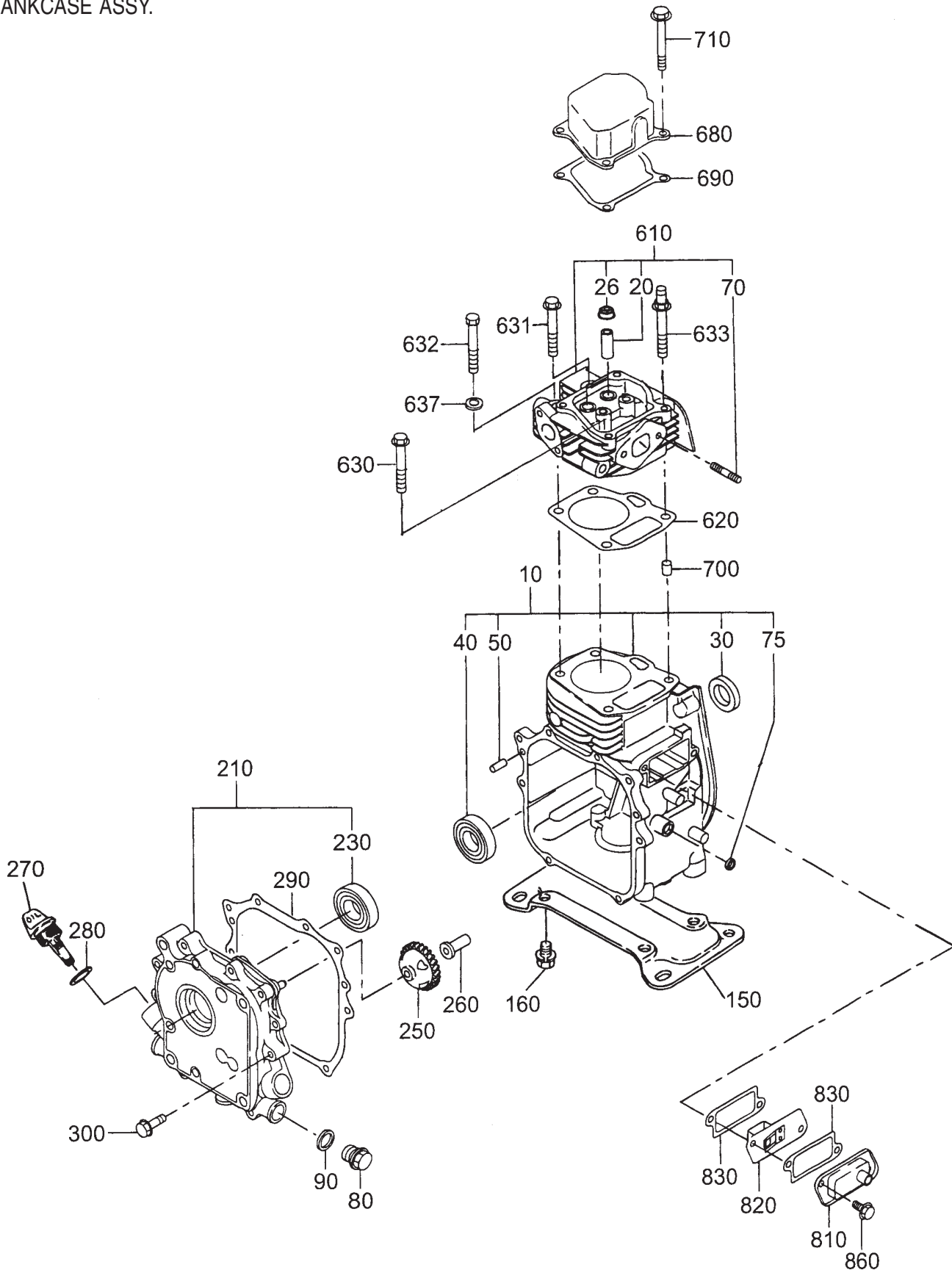


ENGINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	911210907	ENGINE ASSY., EH09-2D	1	
2	951401740	KEY, 5X5X20	1	
4	952404610	COLLAR, 17X30X3	1	
5	417456390	CLUTCH ASSY. D-17	1	
6	952400130	WASHER, FLAT	1	
7	001220820	BOLT, 8X20 T	1	
8	030208200	WASHER, LOCK M8	1	
9	070100272	V-BELT, A-27 BLUE/RPF-3270	1	
11	417456380	PLATE, BOLT W/RUBBER	1	
12	413436870	ENGINE NUT	1	
13	001220825	BOLT, 8X25 T	4	
14	030208200	WASHER, LOCK M8	4	
15	031108160	WASHER, FLAT M8	4	
16	959404350	EARTH WIRE	1	
18	031108160	WASHER, FLAT M8	1	
19	022710809	NYLON, NUT M8	1	
20	020308060	NUT, M8	2	

ROBIN EH09-2D — CRANKCASE ASSY.

CRANKCASE ASSY.



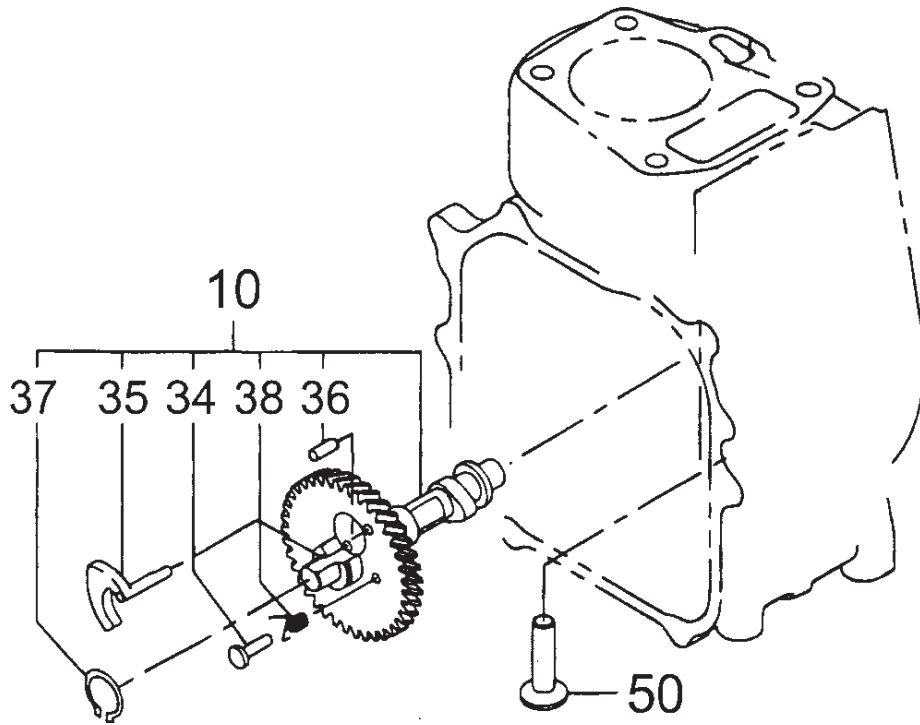
ROBIN EH09-2D — CRANKCASE ASSY.

CRANKCASE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2841010101	CRANKCASE ASSY.....	1	INCLUDES ITEMS W/%
20 #	2371420203	VALVE GUIDE O/S	2	
26 #	2771601001	STEM SEAL	1	
30%	0440200070	OIL SEAL TB20326	1	
40%	0600200110	BALL BEARING 6004C3	1	
50%	0310060020	DOWEL PIN	2	
70 #	0105060430	STUD	2	
75%	0440060020	OIL SEAL	1	
80	0401140030	PLUG	2	
90	0211140020	GASKET	2	
150	2841340101	BASE	1	
160	0011308180	BOLT AND WASHER ASSY.	4	
210	2841100121	MAIN BEARING COVER ASSY.	1	INCLUDES ITEMS W/*
230*	0600200110	BALL BEARING 6004C3	1	
250	2844500301	GOVERNOR GEAR	1	
260	2054190103	GOVERNOR SLEEVE	1	
270	2306360101	DIPSTICK	1	
280	TBD	O-RING	1	
290*	2841600303	GASKET, BEARING COVER	1	
300	0110060101	FLANGE BOLT	8	
610	2841300110	CYLINDER HEAD ASSY.	1	INCLUDES ITEMS W/#
620	2841500113	GASKET, HEAD	1	
630	0110080210	FLANGE BOLT	1	
631	0100080410	BOLT	1	
632	0100080420	BOLT	1	
633	0110080301	FLANGE BOLT	1	
637	0200080210	WASHER, FLAT	1	
680	2841550103	ROCKET COVER	1	
690	2841600703	GASKET, ROCKET COVER	1	
700	2771501103	PIPE KNOCK	2	
710	0100060400	BOLT	4	
810	2841430101	BREATHER COVER	1	
820	2841440101	BREATHER PLATE	1	
830	2301600613	GASKET TAPPET COVER	2	
860	0110060020	FLANGE BOLT	2	

ROBIN EH09-2D — CAMSHAFT ASSY.

CAMSHAFT ASSY.



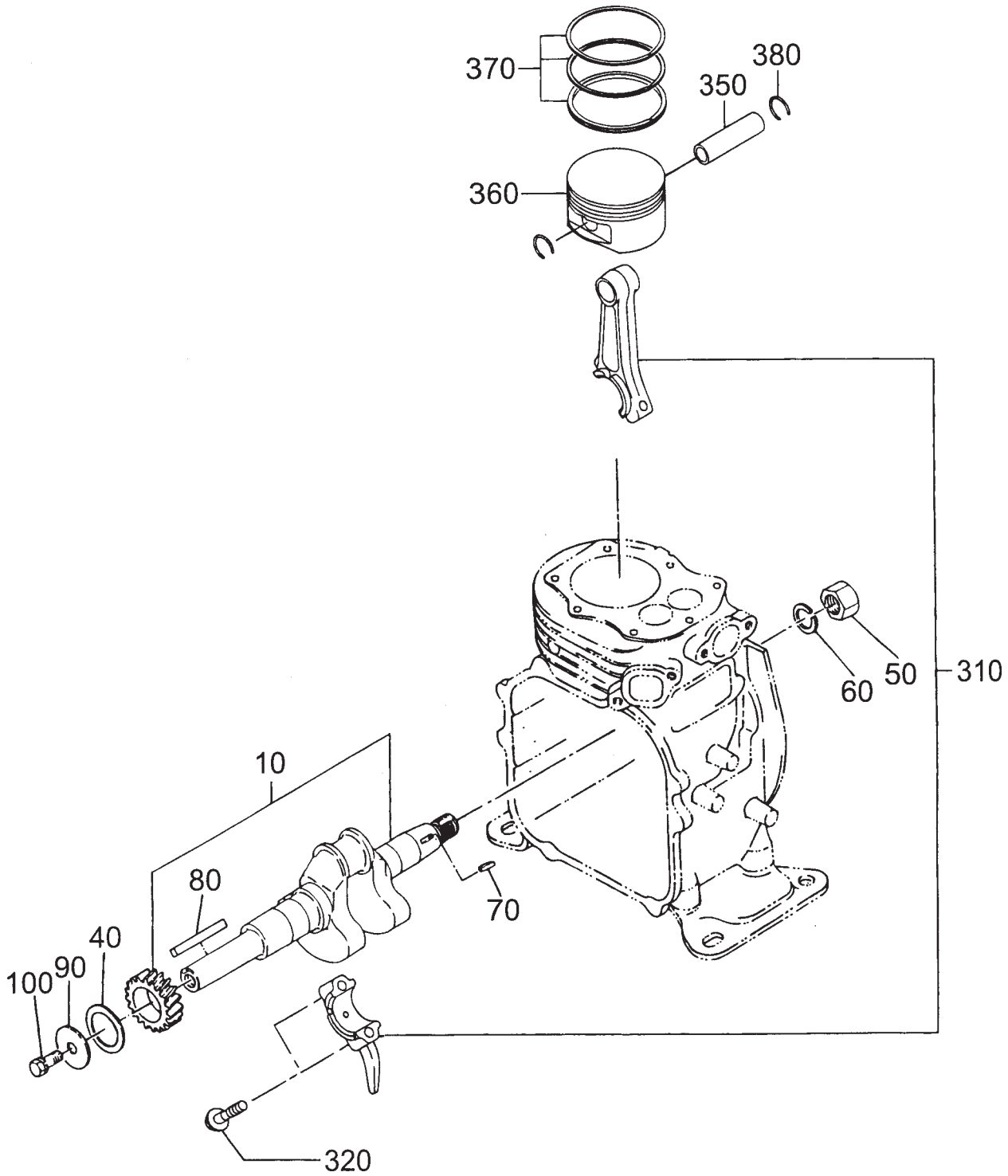
ROBIN EH09-2D — CAMSHAFT ASSY.

CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2843170211	CAMSHAFT ASSY.	1	INCLUDES ITEMS W/*
34*	2273860123	PIN, SPRING	1	
35*	2843640103	RELEASE LEVER	1	
36*	0051904100	SPRING PIN	1	
37*	0031517000	SNAP RING	1	
38*	2743870123	RETURN SPRING	1	
50	2743330103	TAPPET	1	

ROBIN EH09-2D — CRANKSHAFT AND PISTON ASSY.

CRANKSHAFT AND PISTON ASSY.



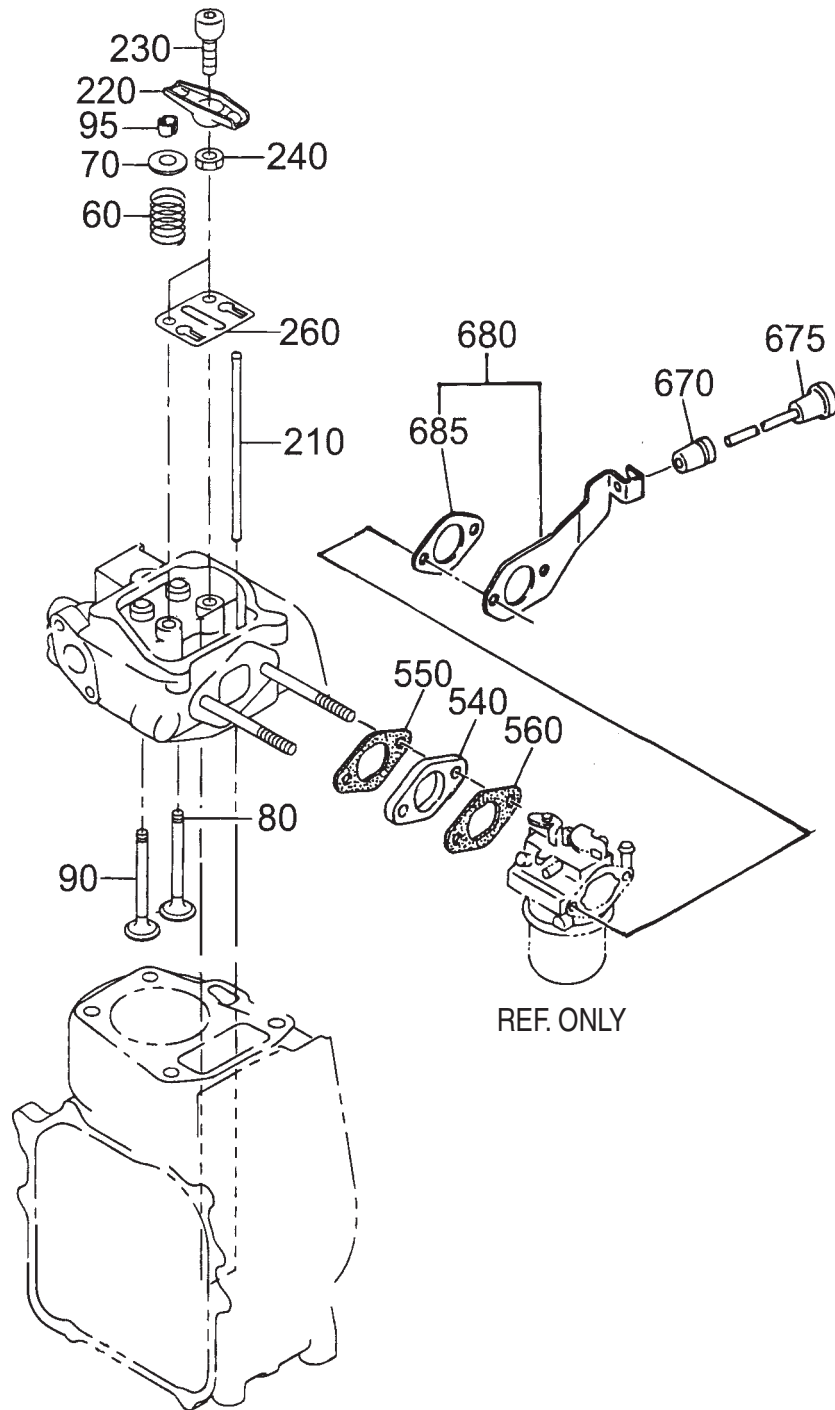
ROBIN EH09-2D — CRANKSHAFT AND PISTON ASSY.

CRANKSHAFT AND PISTON ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2842070111	CRANKSHAFT CP	1	INCLUDES ITEMS W/*
40	0230200100	SPACER 0.8T	1	
40	0230200110	SPACER 1.0T	1	
40	0230200120	SPACER 1.2T	1	
50#	0021814000	NUT	1	
60#	0032014000	SPRING WASHER	1	
70#	0053203101	WOODRUFF KEY	1	
80*	0320050010	KEY	1	
90	0200080050	WASHER	1	
100	0011308160	BOLT AND WASHER ASSY.	1	
310	2842250120	CONNECTING ROD ASSY.....	1	INCLUDES ITEMS W/#
320	2842300103	CONNECTING ROD BOLT	2	
350	2302330103	PISTON PIN	1	
360	2742340103	PISTON STD.	1	
360	2742340203	PISTON 25 MM. O.S.	1	
360	2742340303	PISTON 50 MM. O.S.	1	
370	2842352107	PISTON RING SET, STD.	1	
370	2842352207	PISTON RING SET, 25 MM.	1	
370	2842352307	PISTON RING SET, 50 MM.	1	
380	0565110010	CLIP	2	

ROBIN EH09-2D — INTAKE EXHAUST ASSY.

INTAKE EXHAUST ASSY.



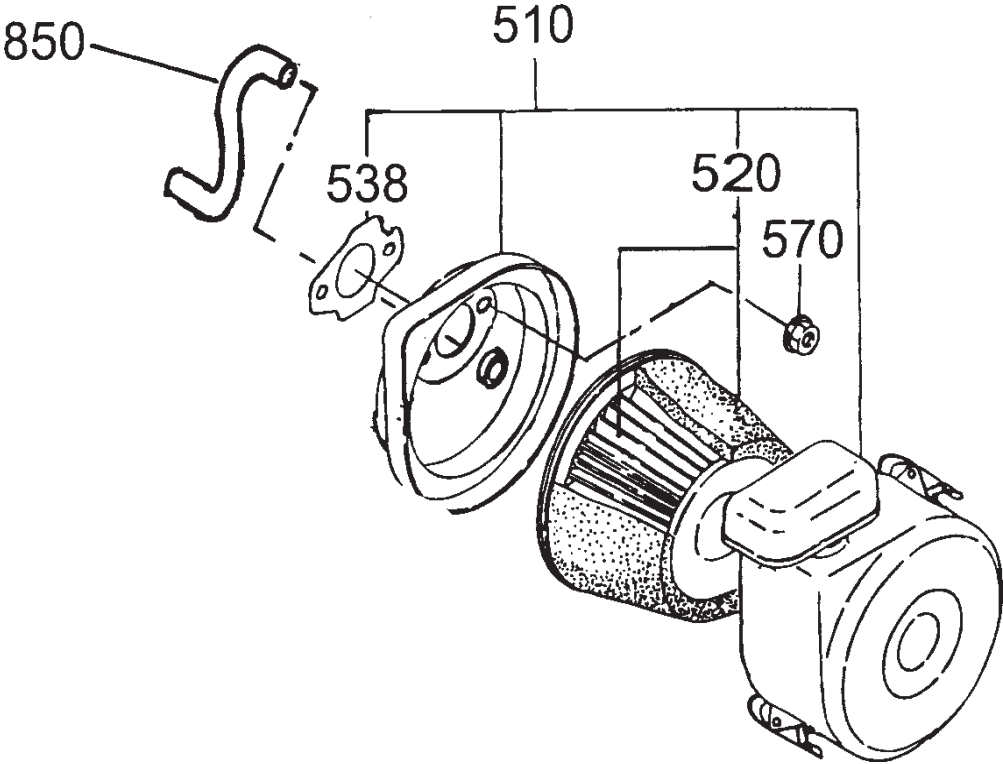
ROBIN EH09-2D — INTAKE EXHAUST ASSY.

INTAKE EXHAUST ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
60	2743360103	VALVE SPRING	2	
70	2743370203	SPRING RETAINER	2	
80	2743340103	INTAKE VALVE	1	
90	2743350103	EXHAUST VALVE	1	
95	13210KA031	COLLET VALVE	4	
210	2743530103	PUSH ROD	2	
220	2743600303	ROCKER ARM	2	
230	2693580103	BOLT, PIVOT	2	
240	0170060090	NUT	2	
260	2743650103	GUIDE PLATE	1	
540	1063291203	INSULATOR	1	
550	2843590203	GASKET, INTAKE	1	
560	1573500103	GASKET, INSULATOR	1	
670	0241020010	GROMMET	1	
675	2064390101	KNOB	1	
680	2844710101	CHOKE BRACKET	1	
685	2273590403	GASKET, 2 IN. NEWPUSTD	1	

ROBIN EH09-2D — AIR CLEANER ASSY.

AIR CLEANER ASSY.



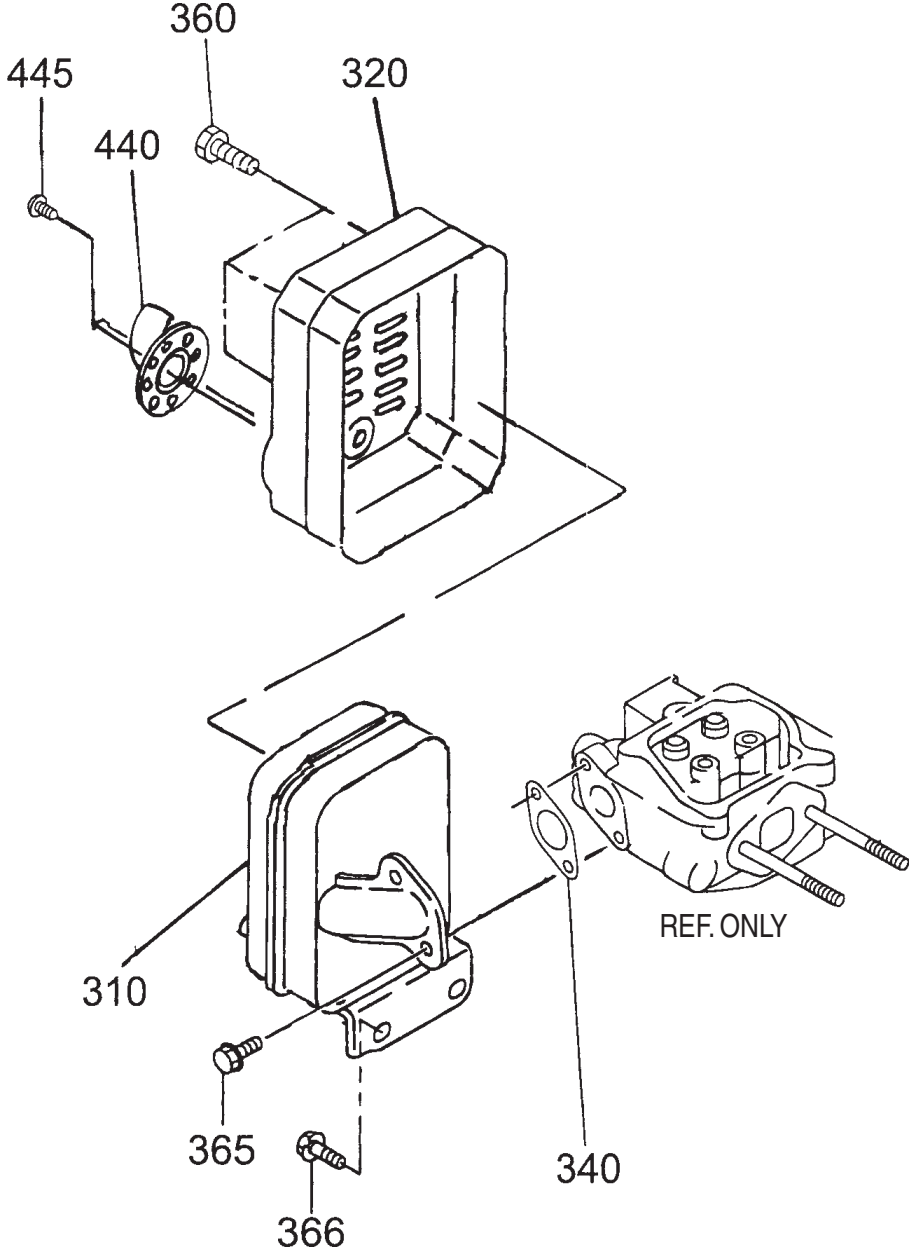
ROBIN EH09-2D — AIR CLEANER ASSY.

AIR CLEANER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
510	2843261000	AIR CLEANER ASSY.	1	INCLUDES ITEMS W/*
520*	2263261007	ELEMENT SET	1	
538*	2273590403	GASKET, 2 IN. NEW PU STD.	1	
570*	2263921200	NUT & WASHER ASSY.	2	
850	2841610103	RUBBER PIPE	1	

ROBIN EH09-2D — MUFFLER ASSY.

MUFFLER ASSY.



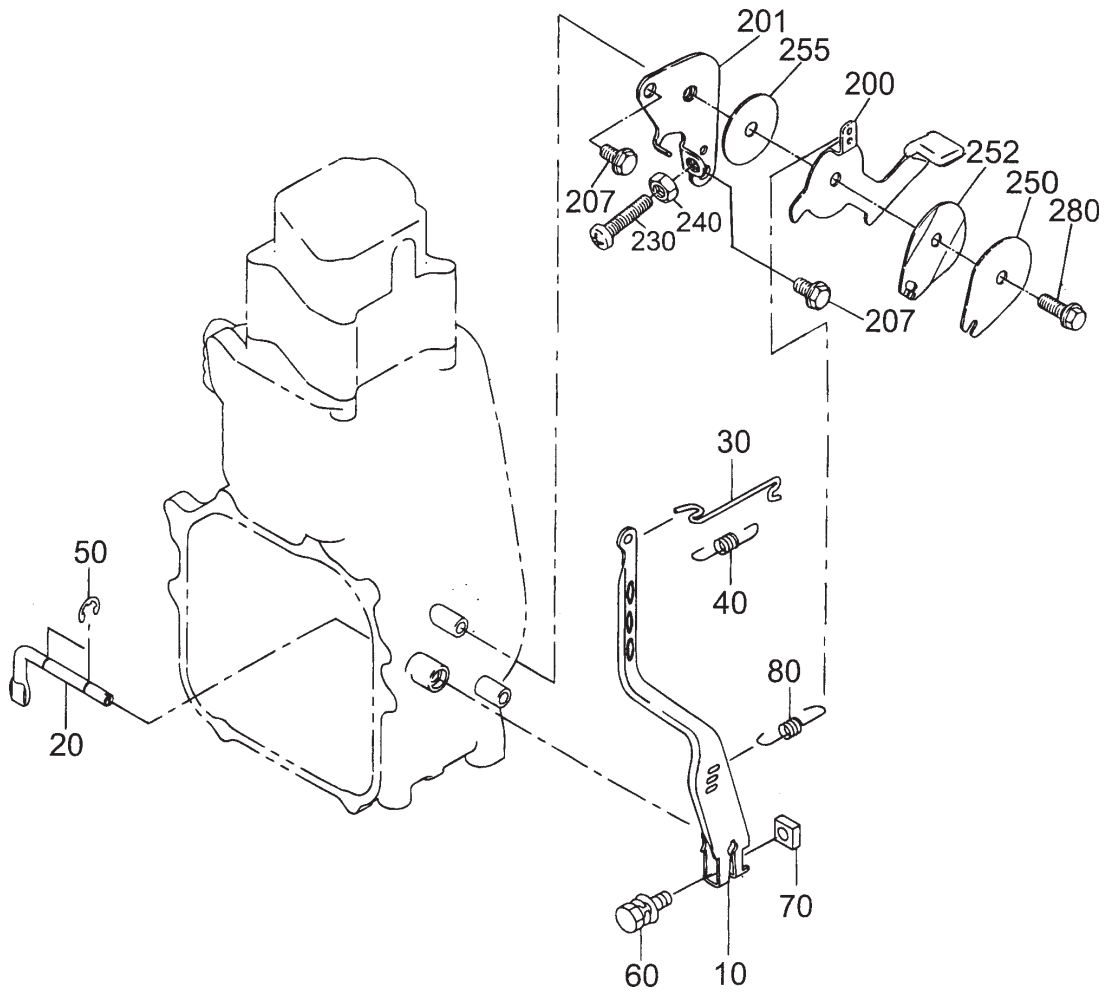
ROBIN EH09-2D — MUFFLER ASSY.

MUFFLER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
310	2843010112	MUFFLER	1	
320	2843420101	MUFFLER COVER	1	
340	2843520103	GASKET, EXHAUST	1	
360	0152060090	TAPPING BOLT	3	
365	0011306160	BOLT & WASHER ASSY	2	
366	0011408160	BOLT/WASHER 8X16	2	
440	2363700101	DEFLECTOR	1	
445	0150040050	TAPPING SCREW	2	

ROBIN EH09-2D — GOVERNOR ASSY.

GOVERNOR ASSY.



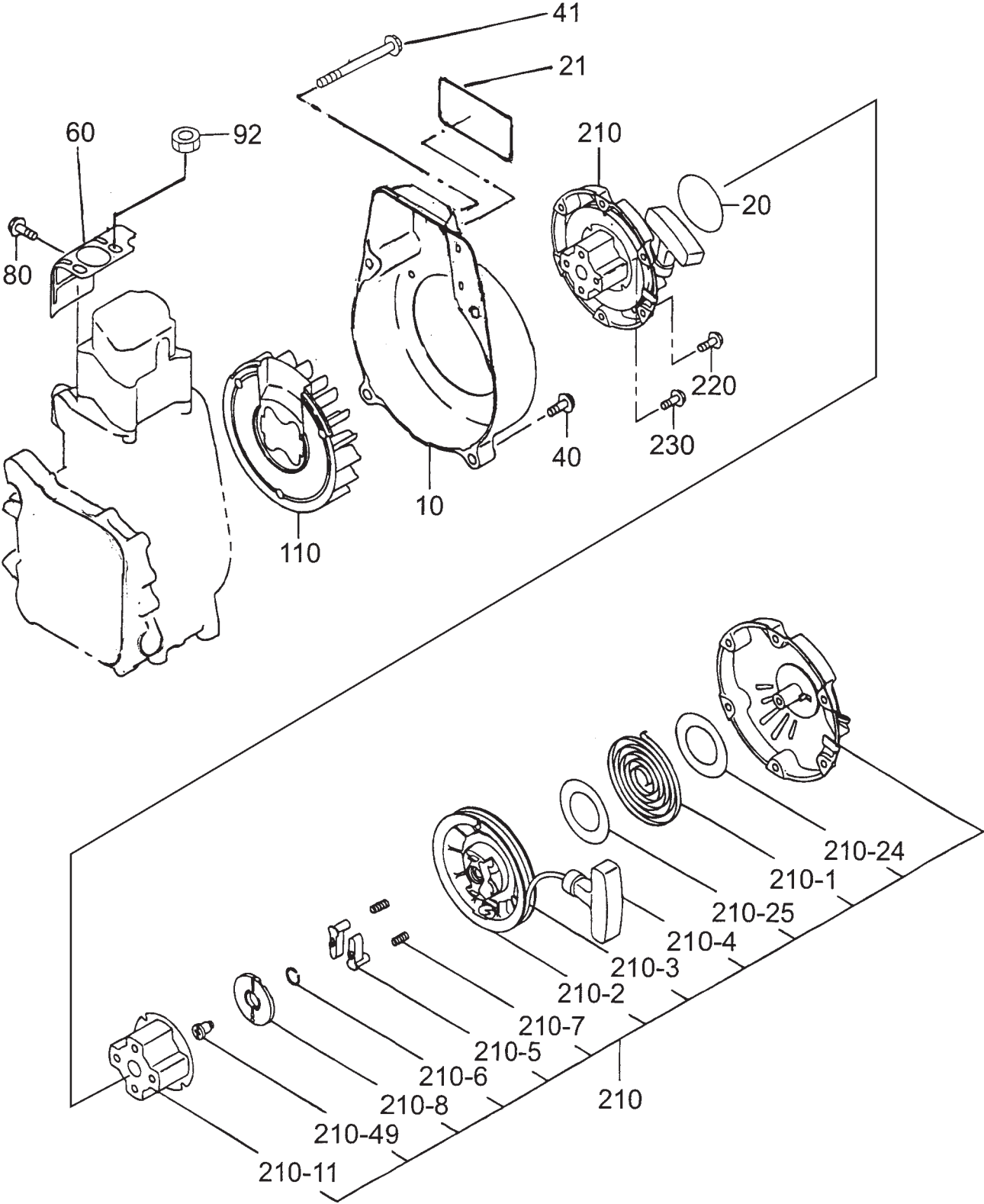
ROBIN EH09-2D — GOVERNOR ASSY.

GOVERNOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2844230603	GOVERNOR LEVER	1	
20	2304220103	GOVERNOR SHAFT	1	
30	2344270101	GOVERNOR ROD	1	
40	2344280113	ROD SPRING	1	
50	0031305000	CLIP	2	
60	0011406250	BOLT & WASHER ASSY.	1	
70	0186060020	NUT	1	
80	2844250603	GOVERNOR SPRING	1	
200	2844330101	SPEED CONTROL CP	1	
201	2304500111	BASE PLATE CP	1	
207	0110060010	FLANGE BOLT	2	
230	0043106300	SCREW	1	
240	0022706000	NUT	1	
250	2274350113	STOP PLATE STD.	1	
252	2274500203	SPRING WASHER	1	
255	0217060030	FRICTION WASHER	1	
280	0110060030	FLANGE BOLT	1	

ROBIN EH09-2D — COOLING, AND STARTING ASSY.

COOLING STARTING ASSY.



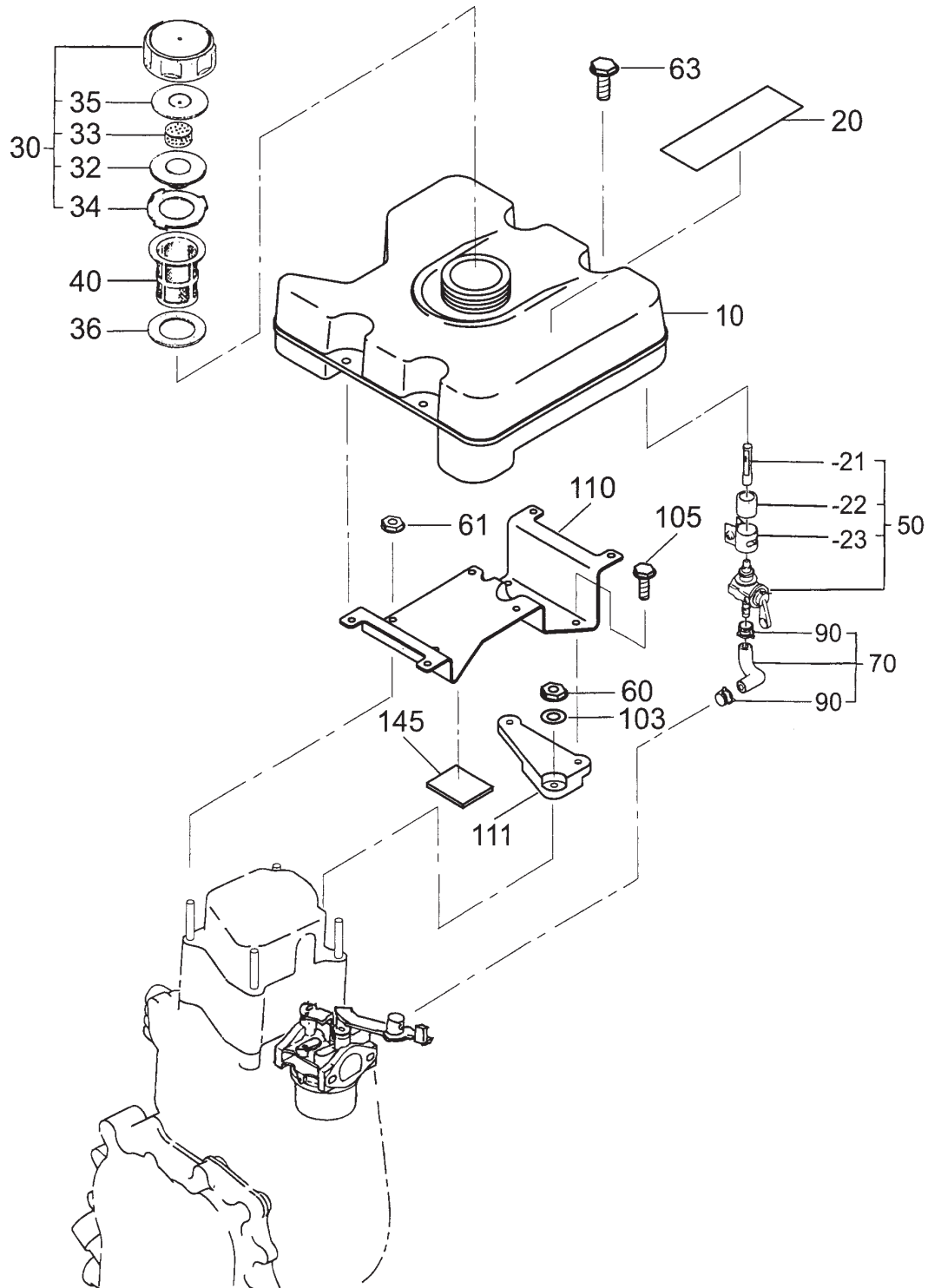
ROBIN EH09-2D — COOLING, STARTING ASSY.

COOLING STARTING ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2845130101	BLOWER HOUSING	1	
20	2849510203	LABEL, MODEL	1	
21	0732005470	LABEL, TM	1	
40	0010408160	FLANGE BOLT	3	
41	0010408505	FLANGE BOLT	1	
60	2845260123	CYLINDER BAFFLE	1	
80	0110060010	FLANGE BOLT	1	
92	0023808000	FLANGE NUT	1	
110	2845410103	COOLING BLOWER	1	
210	2845021120	RECOIL STARTER ASSY.	1	INCLUDES ITEMS W/*
210-1*	2745011508	SPIRAL SPRING	1	
210-2*	2745012018	REEL	1	
210-3*	2745011208	STARTER ROPE	1	
210-4*	2615010008	STARTER KNOB	1	
210-5*	2705012508	RATCHET	1	
210-6*	2745013108	FRICTION SPRING	1	
210-7*	2275013508	RETURN SPRING	1	
210-8*	2705026108	RATCHET GUIDE	1	
210-11*	2845014508	STARTER PULLEY	1	
210-24*	2745015208	SLIDE PLATE B	1	
210-25*	1315015008	SLIDE PLATE	1	
210-49*	22745015208	SET SCREW	1	
220	0110060010	FLANGE BOLT	3	
230	0110060020	FLANGE BOLT	4	

ROBIN EH09-2D — FUEL TANK ASSY.

FUEL TANK ASSY.



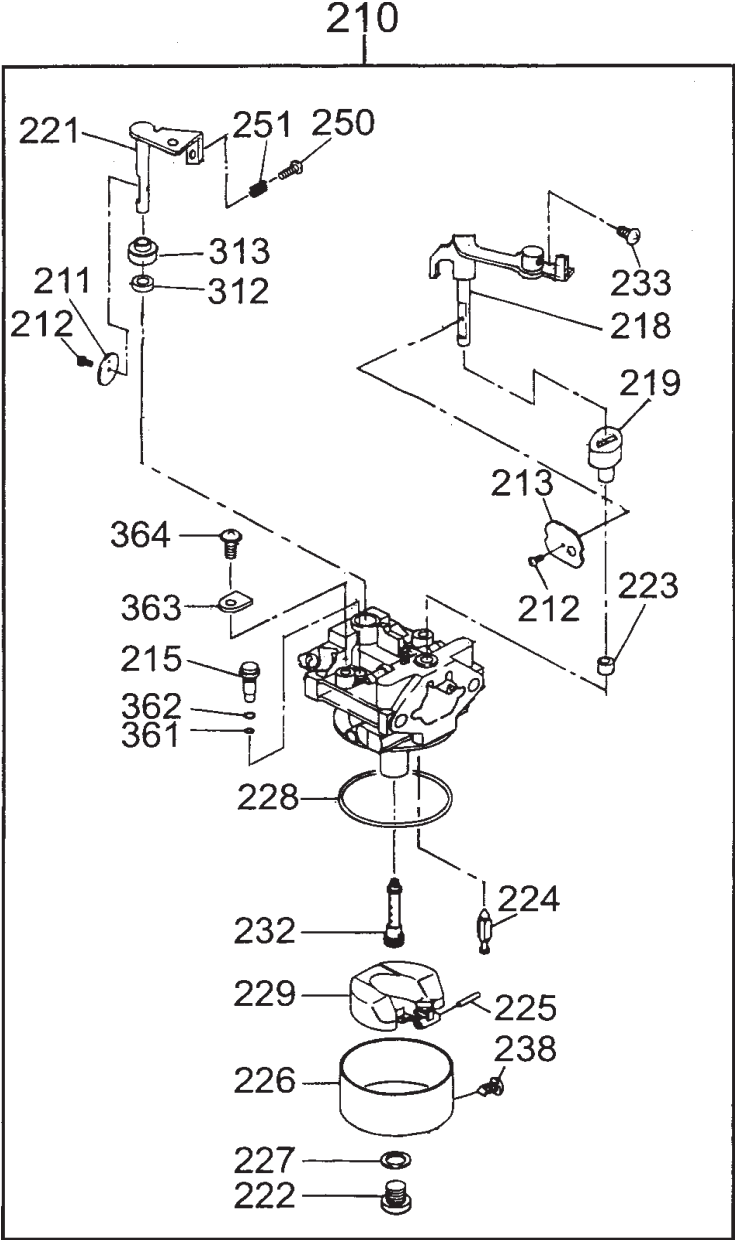
ROBIN EH09-2D — FUEL TANK ASSY.

FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2846010102	FUEL	1	
20	0732005181	LABEL, EXP.	1	
30	0430440132	FUEL TANK CAP ASSY.	1	INCLUDES ITEMS W/*
32*	0434180012	INNER CAP	1	
33*	0841260020	SPONGE	1	
34*	0210260050	GASKET CAP	1	
35*	0232420012	PARTITION PLATE	1	
36	0213310020	GASKET (FILTER)	1	
40	0641420040	FUEL FILTER	1	
50	0642004402	FUEL STRAINER ASSY.	1	INCLUDES ITEMS/W#
50-21#	0642004420	FILTER, V-STD	1	
50-22#	0642004490	JYJOINT PIPE, V-STD	1	
50-23#	0642004460	HOSE BAND ASSY. V-STD.	1	
60	0023808000	FLANGE NUT	1	
61	0023806000	FLANGE NUT	4	
63	0110060020	FLANGE BOLT	4	
70	2846260201	FUEL PIPE ASSY.	1	INCLUDES ITEMS/W%
90%	0561080020	HOSE CLAMP	2	
103	0200080220	WASHER	1	
105	0110060570	FLANGE BOLT	2	
110	2846160102	FUEL TANK BRACKET	1	
111	2846160203	BRACKET, 2 TANK	1	
145	2846500103	SPONGE, TANK BRACKET	1	

ROBIN EH09-2D — CARBURETOR ASSY.

CARBURETOR ASSY.



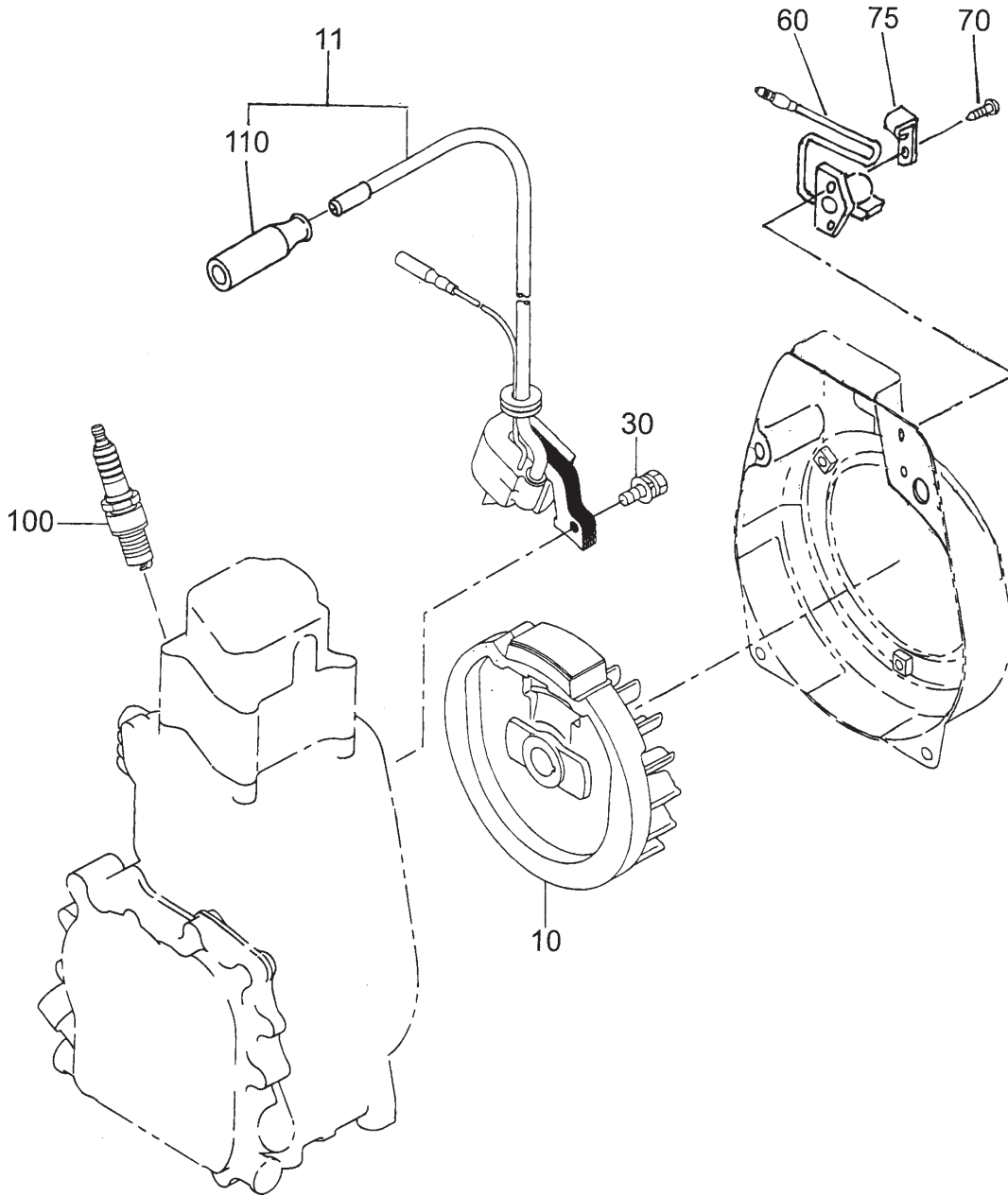
ROBIN EH09-2D — CARBURETOR ASSY.

CARBURETOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
210	2846232200	CARBURETOR ASSY.	1	INCLUDES ITEMS W/*
211*	2846253508	THROTTLE VALVE	1	
212*	2846245508	CSREW	2	
213*	2846252708	VALVE CHOKE	1	
215*	2846242008	SLOW JET	1	
218*	2846252208	LEVER ASSY. CHOKE	1	
219*	2796256318	COLLAR SHAFT, 1	1	
221*	2846253208	SHAFT SUB. ASSY. TH.	1	
222*	2846235508	SCREW	1	
223*	2796256408	COLLAR SHAFT, 2	1	
224*	2796250008	VALVE NEEDLE ASSY.	1	
225*	2846251508	PIN, FLOAT LEVER	1	
226*	2846255208	CHAMBER ASSY. FLOAT	1	
227*	2516235008	GASKET	1	
228*	2846254008	GASKET CHAMBER	1	
229*	2846250508	FLOAT ASSY.	1	
232*	2846240008	MAIBN JET	1	
233*	2846245608	SCREW	1	
238*	2516266108	DRAIN SCREW	1	
250*	2776258108	SCREW ADJUST	1	
251*	2516244908	SPRING	2	
312*	2516255908	BUSH	1	
313*	2846256008	COLLAR	1	
361*	2846245008	O-RING	1	
362*	2846245108	O-RING	1	
363*	2846256308	PLATE	1	
364*	2846245608	SCREW	1	

ROBIN EH09-2D — ELECTRIC DEVICE ASSY.

ELECTRIC DEVICE ASSY.



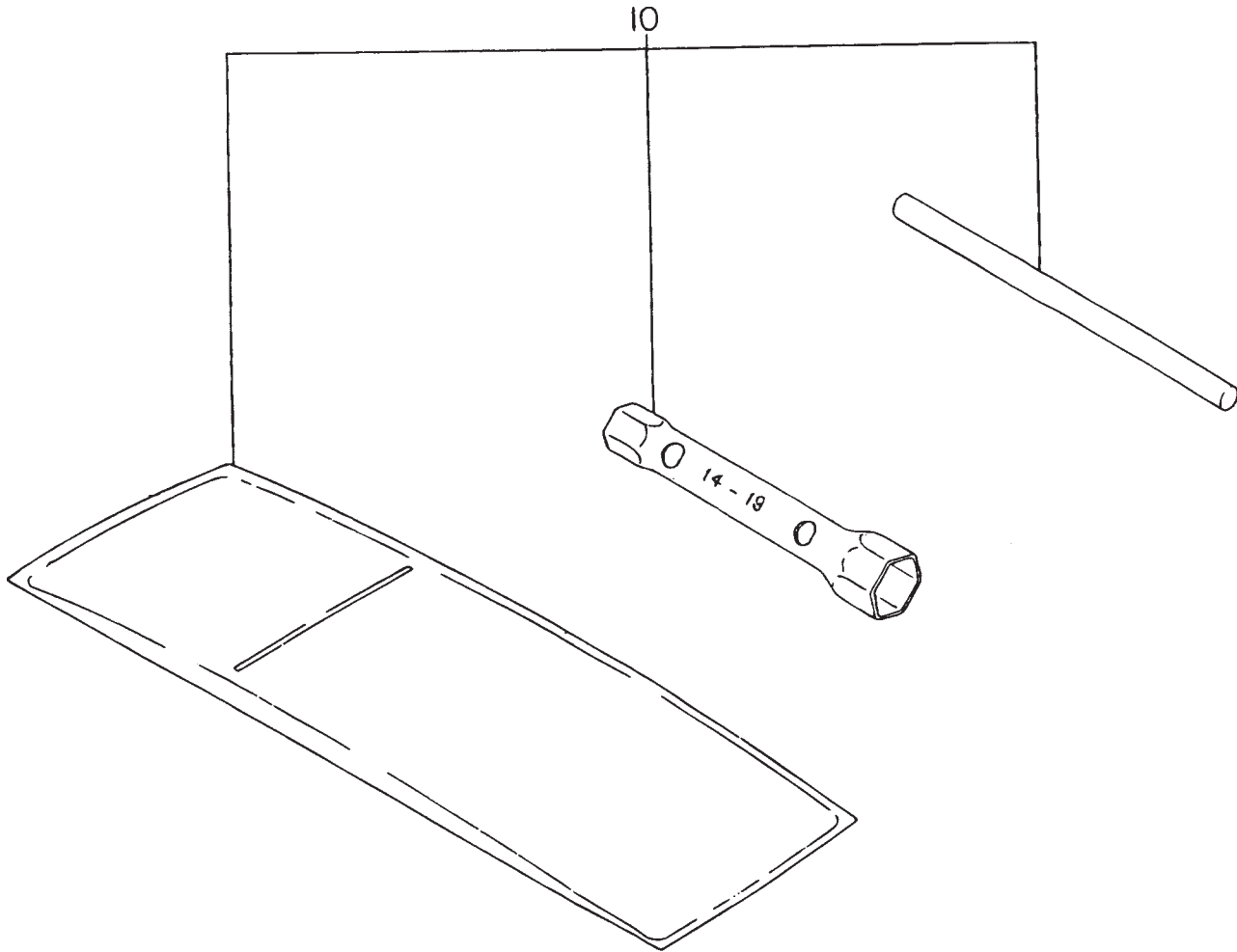
ROBIN EH09-2D — ELECTRIC DEVICE ASSY.

ELECTRIC DEVICE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2847934001	FLY WHEEL CP	1	
11	2847943021	IGNITION COIL CP	1	
30	0011706250	BOLT & WASHER ASSY.	2	
60	0660000371	STOP SWITCH ASSY., ON-OFF	1	
70	0150040090	TAPPING SCREW	2	
75	0566030010	CLAMP	1	
100	0650140380	SPARK PLUG	1	
110	2847510203	SPARK PLUG CAP	1	

ROBIN EH09-2D — ELECTRIC DEVICE ASSY.

ACCESSORY TOOL KIT



ROBIN EH09-2D — ACCESSORY TOOL KIT.

ACCESSORY TOOL KIT

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	2269030710	ACCESSORY TOOL KIT	1	

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.

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. Tel. (800) 421-1244
Carson, CA 90746 Fax (800) 537-3927
Contact: mq@multiquip.com

Mayco Parts

800-306-2926 Fax: 800-672-7877
310-537-3700 Fax: 310-637-3284

Service Department

800-421-1244 Fax: 310-537-4259
310-537-3700

MQ Parts Department

800-427-1244 Fax: 800-672-7877
310-537-3700 Fax: 310-637-3284

Warranty Department

800-421-1244, Ext. 279 Fax: 310-537-1173
310-537-3700, Ext. 279

Technical Assistance

800-478-1244 Fax: 310-631-5032

MEXICO

MQ Cipsa

Carr. Fed. Mexico-Puebla KM 126.5 Tel: (52) 222-225-9900
Momoxpan, Cholula, Puebla 72760 Mexico Fax: (52) 222-285-0420
Contact: pmastretta@cipsa.com.mx

CANADA

Multiquip

4110 Industriel Boul. Tel: (450) 625-2244
Laval, Quebec, Canada H7L 6V3 Fax: (450) 625-8664
Contact: jmartin@multiquip.com

UNITED KINGDOM

Multiquip (UK) Limited Head Office

Hanover Mill, Fitzroy Street, Tel: 0161 339 2223
Ashton-under-Lyne, Fax: 0161 339 3226
Lancashire OL7 0TL
Contact: sales@multiquip.co.uk

BRAZIL

Multiquip

Av. Evandro Lins e Silva, 840 - grupo 505 Tel: 011-55-21-3433-9055
Barra de Tijuca - Rio de Janeiro Fax: 011-55-21-3433-9055
Contact: cnavarro@multiquip.com.br, srentes@multiquip.com.br

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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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