

OPERATION AND PARTS MANUAL



Mikasa SERIES
MODEL MVH-406DSZ
REVERSIBLE PLATE COMPACTOR
(ROBIN D1B40T92040 DIESEL ENGINE)

Revision #2 (08/13/07)

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publication, visit our website at:
www.multiquip.com



THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.



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.

MIKASA MVH-406DSZ REVERSIBLE PLATE COMPACTOR

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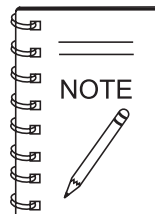
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Specifications and part numbers are subject to change without notice.

PARTS ORDERING PROCEDURES

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

Effective:
January 1st, 2006

www.multiquip.com



Order via Internet (Dealers Only):

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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.*

Note: Discounts Are Subject To Change



Order via Fax (Dealers Only):

All customers are welcome to order parts via Fax.

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

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

Note: Discounts Are Subject To Change



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

Non-Dealer Customers:

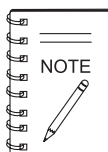
Contact your local Multiquip Dealer for parts or call 800-427-1244 for help in locating a dealer near you.



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

When ordering parts, please supply:

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



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

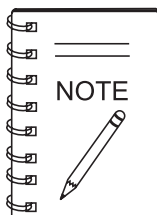
WE ACCEPT ALL MAJOR CREDIT CARDS!



MVH-406DSZ — 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 Multiquip MVH-406DSZ Plate Compactor. Refer to the engine manufacturer's 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.

Potential hazards associated with the operation of this equipment will be referenced with Hazard Symbols which appear throughout this manual, and will be referenced in conjunction with Safety Message Alert Symbols.

HAZARD SYMBOLS

WARNING - Lethal Exhaust Gasses

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.



WARNING - Explosive Fuel

Diesel Fuel 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 well-ventilated areas and away from sparks and flames.

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.



CAUTION - Respiratory Hazard

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



MVH-406DSZ — SAFETY MESSAGE ALERT SYMBOLS

⚠ CAUTION - Rotating Parts

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



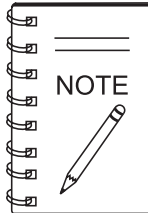
⚠ CAUTION - Accidental Starting

ALWAYS place the engine **ON/OFF** switch in the **OFF** position, when equipment is not in use.



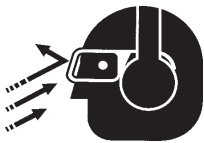
⚠ CAUTION - Equipment Damage Messages

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

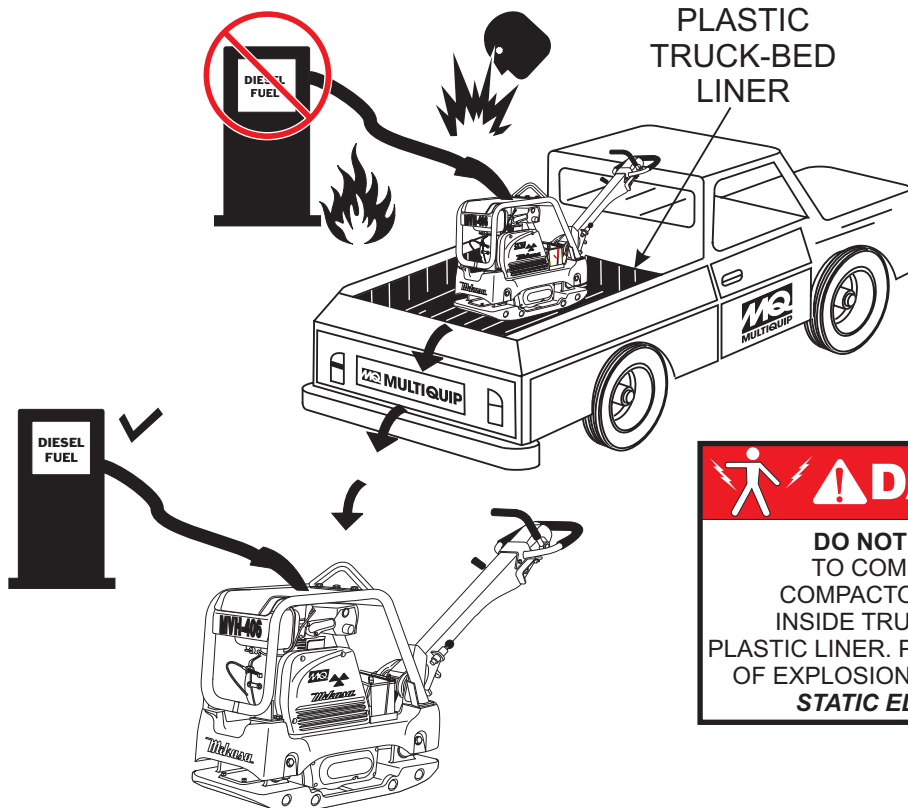


This equipment, other property, or the surrounding environment could be damaged if you do not follow instructions.

⚠ CAUTION - Sight and Hearing Hazards



ALWAYS wear approved eye and hearing protection.



⚠ 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.

MVH-406DSZ — RULES FOR SAFE OPERATION

WARNING - Read This 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 this equipment.

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 the saw under the influence of drugs or alcohol.

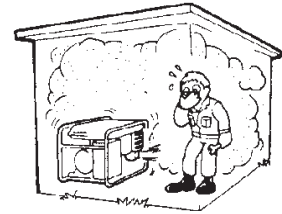


- **NEVER** use accessories or attachments, which are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modification will void all warranties.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- **ALWAYS** check all the bolts on the light tower for tightness.
- **NEVER** disconnect any "**emergency or safety devices**". These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death! Disconnection of any of these devices will void all warranties.

- **NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing engine or generator.
- **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 of this reversible plate compactor requires an adequate free flow of cooling air. **NEVER** operate the reversible plate 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 reversible plate compactor or engine and may cause injury to people and property. Remember the vibration roller's engine gives off **DEADLY** gases.



- **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 reversible 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.
- **ALWAYS** store the reversible plate compactor in a clean, dry location out of the reach of children.
- **NEVER** run engine without air cleaner. Severe engine damage may occur.
- **NEVER** leave the reversible plate compactor unattended, turn off engine.
- **CAUTION** must always be observed while servicing this reversible plate compactor. Rotating parts can cause injury if contacted.
- **DO NOT** leave reversible plate compactor with engine running.



MVH-406DSZ — RULES FOR SAFE OPERATION

- **NEVER** disconnect any "*emergency or safety devices*". These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death! Disconnection of any of these devices will void all warranties.

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.
- Always tie-down the compactor during transportation by securing the compactor's guard frame with an appropriate tie-down.

Loading and Unloading

- Before lifting, make sure that machine parts (hook 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 of compactor.
- **NEVER** lift the machine while the engine is running.
- Use a reliable chain, cable or strap of adequate lifting capacity.
- **NEVER** allow any person or animal to stand underneath the machine while lifting.
- Use a crane with a one point suspension hook and lift straight upwards or forklift to load and unload the compactor. A skilled crane operator is required to perform the job.
- **ALWAYS** use the lifting bale (Figure 1) on the machine when lifting is required. **DO NOT** use any other part of the machine for lifting.
- **ALWAYS** lift the machine vertically.
- Try not to lift machine to unnecessary heights.



Figure 18. Lifting the Compactor

Emergencies

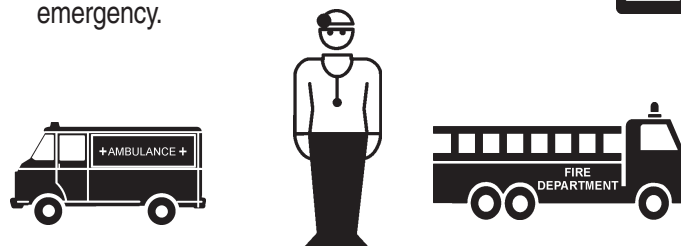
- **ALWAYS** know the location of the nearest *fire extinguisher*.



- **ALWAYS** know the location of the nearest 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.



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

MVH-406DSZ — OPERATION AND SAFETY DECALS

Figure 2 displays the operation and safety decals as they appear on the reversible plate compactor. Should any of these decals become damaged or unreadable, contact the Multiquip Parts Department for a replacement set.



P/N 920203330

MVH-406

P/N 920211640

Shell Tellus Oil
32

P/N 920211090



P/N 920201580



P/N 920201950



P/N 920211010



P/N 920211060



P/N 920204580

Fire Risk	Operate only in well-ventilated area	Do not stand next to machine while lifting	Do not use machine handle
Wear eye protection	Operate only in well-ventilated area	Do not touch moving parts in operation	Read operator's manual carefully before use

OPERATIONAL CAUTION

Prior to OPERATION, check the engine oil and fuel levels. If not enough, add to proper levels.

Warm up engine at low speed for 3-5 minutes.

Operate machine at full throttle speed. (incorrect clutch engagement causes clutch to burn.)

Use travel lever for forward & reverse motion. Do not push or pull travel lever strongly.

NPA-962 J

P/N: 920209620



P/N 920106760



P/N 920105070



CONTACT
MQ PARTS DEPT.

Figure 2. Operation and Safety Decals

Table 1. MVH-406DSZ Reversible Plate Compactor Specifications

Centrifugal Force	12,346 lbs. (5,600 kg)
Vibration Frequency	4,600 vpm (76.5 Hz)
Traveling Speed	0 to 76 ft/min (0 to 24 m/min)
Plate Size (L x W)	35.43 x 19.69 in (90 x 50 cm)
Plate Size with extension plates (L x W)	35.43 x 25.59 in (90 x 65 cm)
Max. Area of Compaction (no extensions)	7,510 sq. ft. (2,289 sq. meters)
Length (handle in working position)	63.39 in (1610 mm)
Height (handle in working position)	41.34 in (1050 mm)
Length (handle in vertical position)	37.6 in (955 mm)
Height (handle in vertical position)	55.12 in (1400 mm)
Operating Weight (without extension plates)	903.88 lbs. (410 kg)
Operating Weight (with extension plates)	936.97 lbs. (425 kg)

Table 2. Engine Specifications (ROBIN D1B40T92040)

Engine Make	FUJI HEAVY INDUSTRIES
Engine Type	Air-cooled 4-cycle Diesel Engine
Cylinder Bore X Stroke	3.5 x 3.45 in (88 x 76 mm)
Displacement	15.6 fl oz (462 cm ³)
Maximum Output	9.6 HP @3,200 RPM (7.2 kw @3,200 RPM)
Fuel Tank Capacity	5.2 quarts (5.0 liters)
Oil Capacity	1.6 quarts (1.55 liters)
Starting Method	Recoil/Electric
Dry Net Weight	118.3 lbs. (53.3 kg)
Dimensions (L x W x H)	12.40 x 15.51 x 18.89 in (315 x 394 x 480 mm)

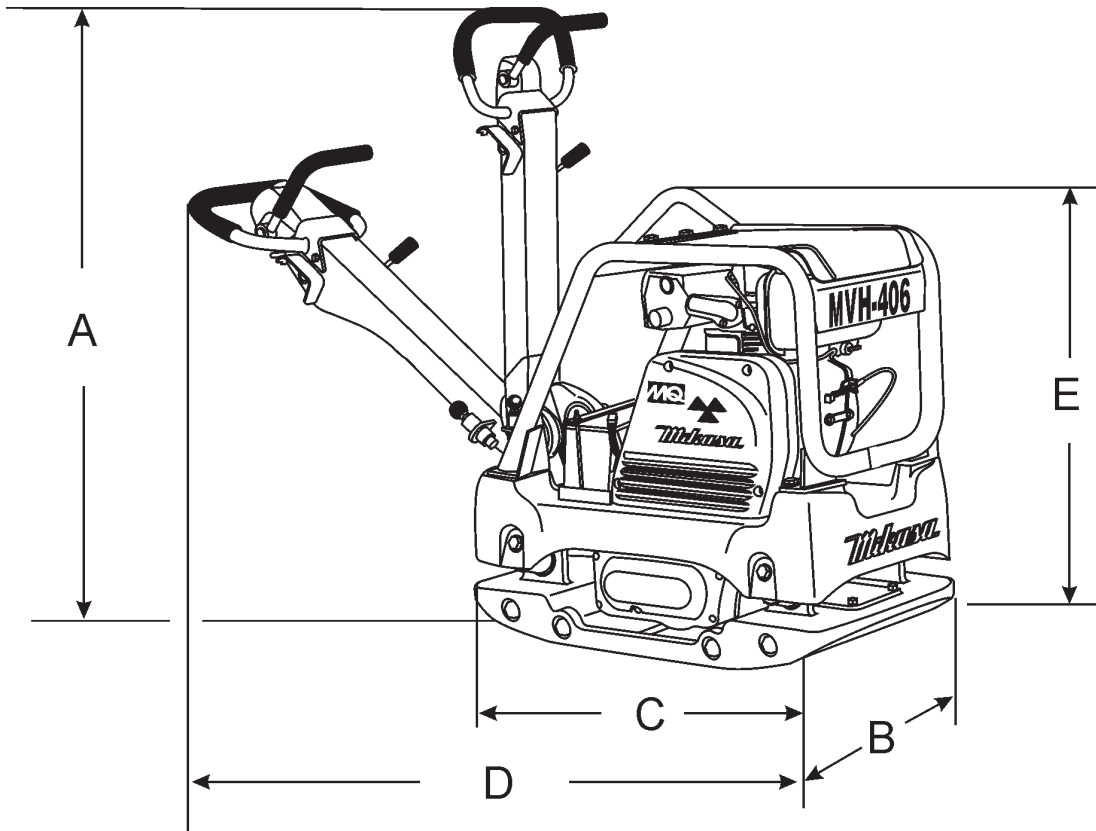


Figure 3. MVH-406DSZ Reversible Plate Compactor Dimensions

TABLE 3. DIMENSIONS	
REF.	DIMENSIONS
A	55.12 in. (140 mm.)
B	19.69 in. (50 cm.)
C	35.3 in. (90 cm.)
D	63.39 in. (161 cm.)
E	41.34 in. (105 cm.)

Plate Compactor

The Mikasa MVH-406DSZ is a walk behind, reversible plate compactor designed for the compaction of sand, clay 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 soil compacting for road, embankments and reservoirs as well as backfilling for gas pipelines, water pipelines and cable installation work.

Vibratory Plates

The vibratory plates of the MVH-406DSZ produce low amplitude high frequency vibrations, designed to compact granular soils.

The resulting vibrations cause forward motion. The engine and handle are vibration isolated from the vibrating plate. The heavier the plate, the more compaction force it generates.

Reversible Vibratory Plates

Reversible vibratory plates have two eccentric weights that allow a smooth transition for forward and reverse travel, plus increased compaction force as the result of dual weights.

Due to their weight and force, reversible plates are ideal for semi-cohesive soils.

Frequency/Speed

The compactor's vibrating plate maximum frequency is 4600 vpm (vibrations per minute). The forward and reverse travel speed of the compactor is approximately 76 ft./minute (23 meters/minute).

Engine

The Mikasa MVH-406DSZ Plate Compactor is equipped with a ROBIN D1B40T92040 diesel engine.

Controls

Before starting the MVH-406DSZ Plate Compactor, identify and understand the function of the controls and components as indicated in Figure 4.

MVH-406DSZ— PLATE COMPACTOR COMPONENTS

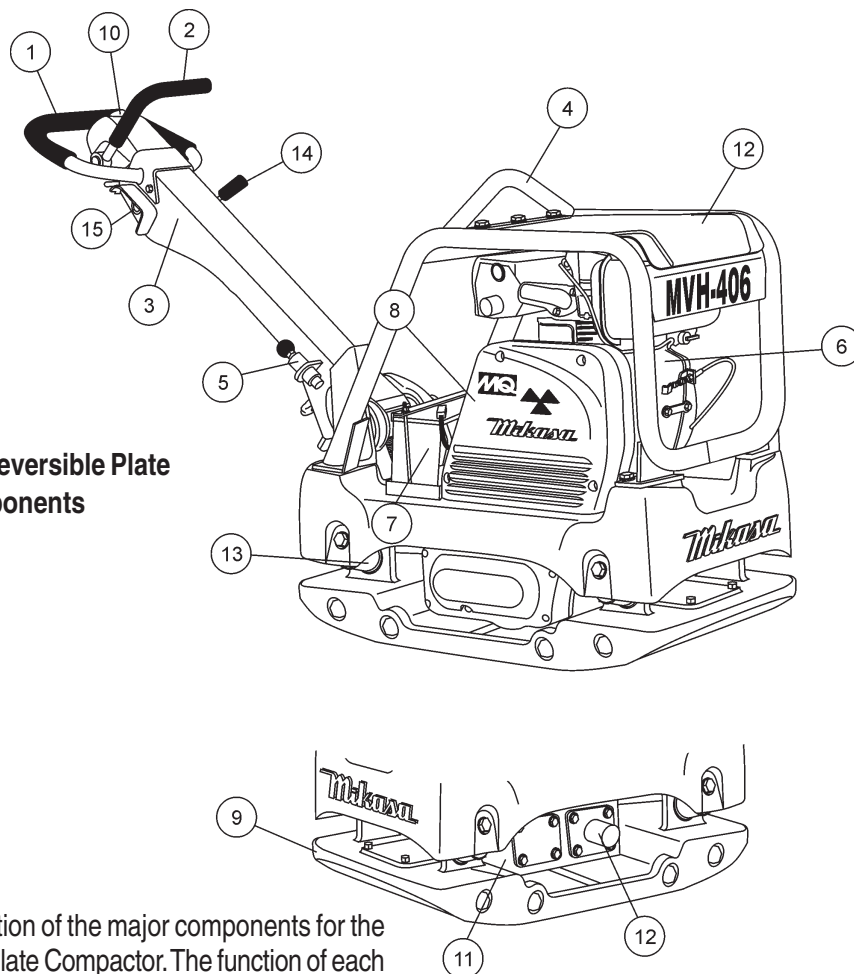


Figure 4. MVH-406DSZ Reversible Plate Compactor Components

Figure 4 illustrates the location of the major components for the MVH-406DSZ Reversible Plate Compactor. The function of each component is described below:

1. **Hand Grip** – When operating the compactor use this hand grip to maneuver the compactor.
2. **Forward & Reverse Lever** – *Push* the lever forward, the compactor will move in a forward direction, *pull* the lever backwards, the compactor will move in backwards direction. Placing the lever in the middle (midway) will cause the compactor not to move (neutral).
3. **Handle Bar** – When operating the compactor, this handle is to be in the downward position. When the compactor is to be *stored*, move the handle bar to the upright position.
4. **Guard Hook** - Used to lift the machine with crane or other lifting device.
5. **Stopper** - Locks the handle in place in the upward position for stowing.
6. **Engine** – This plate compactor uses a ROBIN D1B40T92040 diesel engine. Refer to the owner's manual for engine information and related topics.
7. **Battery (Option)** - This unit uses a 12-volt battery. See maintenance of this manual for proper care of battery.
8. **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.
9. **Base Plate** – Designed to compact sand, clay, and asphalt.
10. **Oil Reservoir** – Fill with Shell Tellus Oil 46 or equivalent grade hydraulic oil.
11. **Vibration Case** – Encloses the eccentric, gears and counter weights.
12. **Hydraulic Cylinder** – Activated by moving the travel lever. The cylinder controls the direction of movement by the plate compactor.
13. **Shock Absorber** – Protects plate compactor from damage by absorbing vibration during operation.
14. **Throttle Lever** – Controls speed of the plate compactor. Place straight vertically to start, *push* fully counterclockwise for full throttle and fully clockwise to stop plate compactor.
14. **Ignition Switch (Option)** – Provided for electric start models only.

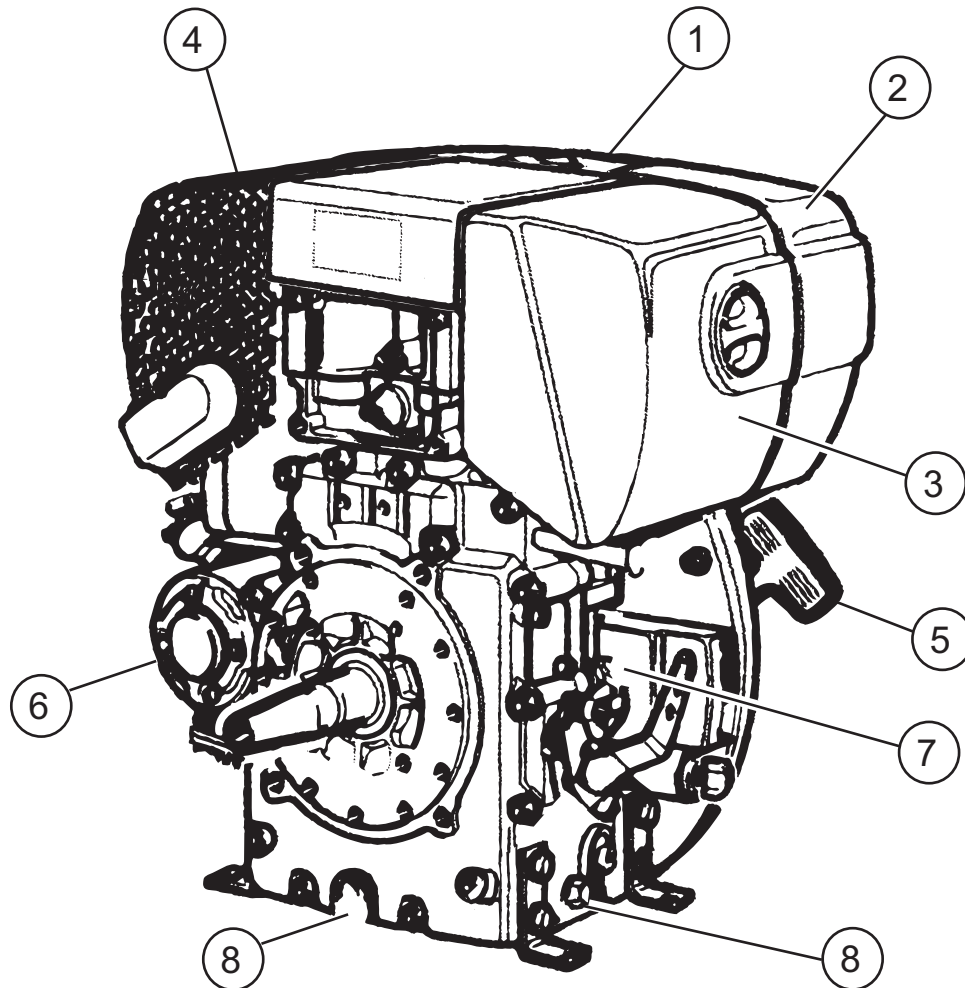


Figure 5. MVH-406DSZ Engine Components

ENGINE COMPONENTS

Figure 5 illustrates the location of the major lever components of the machine. Each component is described below:

1. **Fuel Filler Cap** – Remove this cap to add unleaded gasoline to the fuel tank. Make sure cap is tighten securely. **DO NOT** over fill.
2. **Fuel Tank** – Capacity is 5.3 quarts (5.0 liters) of diesel fuel.
3. **Air Cleaner** – Prevents dirt and other debris from entering the fuel system. Remove wing-nut on top of air filter cannister to gain access to filter element.
4. **Muffler** – Used to reduce noise and emissions.
5. **Recoil Starting Handle (pull rope)** – Type of engine starting method. Alternate type would be electric start (ignition key).
6. **Starter Motor** – Electric-starting method.
7. **Oil Filler Cap / Dipstick** – Remove this cap to add oil to the engine crankcase. Read dipstick to determine if oil level is low. **DO NOT** over fill.
8. **Oil Drain Plug** – Unscrew plug to drain oil from engine crankcase. Dispose of oil in a safe manner.

CAUTION

NEVER operate the compactor in a confined area or enclosed area structure that does not provide ample **free flow of air**.



ALWAYS wear approved eye and hearing protection before operating the compactor.



Before Starting

1. Read safety instructions at the beginning of manual.
2. Familiarize yourself with the operating and control elements of the machine and the working environment. This includes obstacles in the working area, bearing capacity of the ground and the necessary safety provisions.
3. Check the air filter for dirt and dust. If air filter is dirty, replace air filter with a new one as required.
4. Check fastening nuts and bolts for tightness. Loose threads may cause damage to the machine when vibrating.
5. Understand the geographical features and regulations of the job site.
6. Clean the compactor, removing dirt and dust. Particularly, the bottom of the plate, engine cooling air inlet.



Checking Engine Oil Level

1. To check the engine oil level, place the compactor on secure level ground with the engine stopped.
2. Remove the dipstick from the engine oil filler hole (Figure 6) and wipe it clean.
3. Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.

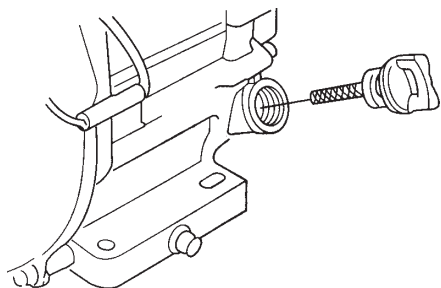


Figure 6. Engine Oil Dipstick Removal

4. If the oil level is low (Figure 7), fill to the edge of the oil filler hole with the recommended oil type (Table 4). Maximum oil capacity is 1.63 quarts (1.55 liters).

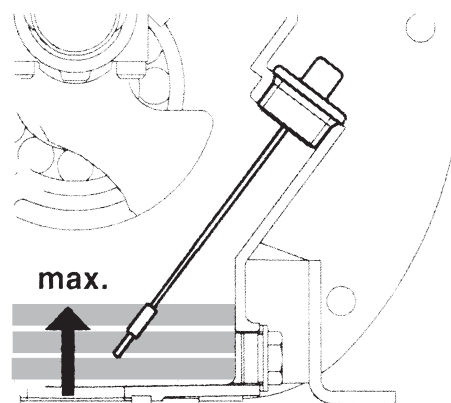


Figure 7. Engine Oil Level

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

Checking the Hydraulic Oil Level

1. To check the engine oil level, place the compactor on secure level ground with the engine stopped.
2. Remove the hydraulic oil breather cap located at the top of the hydraulic oil tank (Figure 8).
3. Using a 24 mm wrench, remove the hydraulic oil filler plug.
3. Visually inspect to determine if hydraulic oil level is low. If oil level is low add Shell Tellus 46 hydraulic oil or equivalent through the hand pump oil filler port.

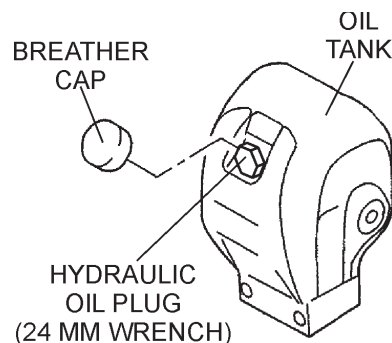


Figure 8. Hydraulic Oil Filler Plug Removal

CAUTION

DO NOT overfill hydraulic oil tank. This could cause oil leaks and sluggish operation. Clean cap and surrounding area before opening to prevent dirt from entering oil tank.

- When adding hydraulic oil, only fill to the specified oil level as marked on the front of the hydraulic oil tank (Figure 9). **DO NOT** overfill



Figure 9. Oil Tank (Front View)

Checking the Air Cleaner

- To check the engine oil level, place the compactor on secure level ground with the engine stopped.
- Loosen the wing nut (Figure 10), remove the air cleaner cover.

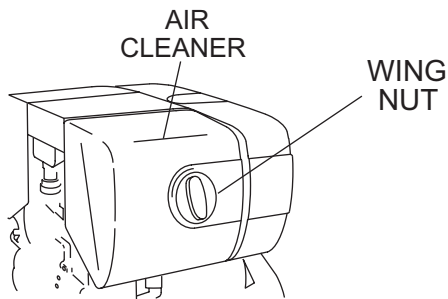


Figure 10. Air Cleaner

- Remove the air cleaner element (Figure 11) and inspect it for signs of wear or dirt. If air cleaner element is dirty, clean or replace element.

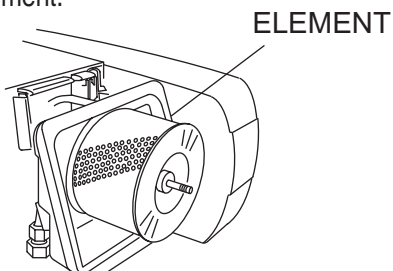
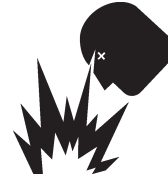


Figure 11. Air Cleaner Element

Explosive Fuel

DANGER



Diesel fuel is 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!** or **running**.

Checking The Fuel

- Remove the fuel cap located on top of fuel tank.
- Visually inspect to see if fuel level is low. If fuel is low, replenish with diesel fuel (Figure 12).
- When refueling, be sure to use a strainer for filtration. **DO NOT** top-off fuel. Wipe up any spilled fuel.

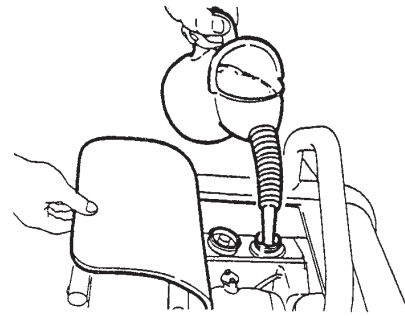


Figure 12. Refueling

DANGER

Fuel spillage on a hot engine can cause a **fire** or **explosion**. If fuel spillage occurs, wipe up the spilled fuel completely to prevent fire hazards. **NEVER!** smoke around or near the compactor.



CAUTION

DO NOT attempt to operate the 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 compactor. It is extremely important that this section be read carefully before attempting to use the compactor in the field.

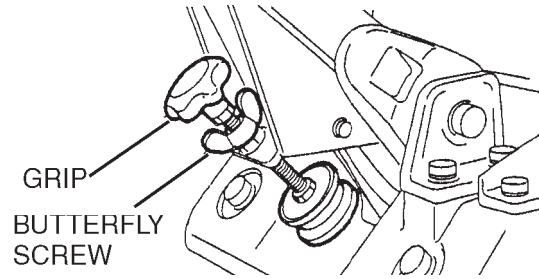


Figure 14. Handle Adjustment

Refer to Figure 3 for the location of controls and components.

Releasing the Handle

1. Pull the handle release pin, (Figure 13) then push down on the hand grip to release the handle.

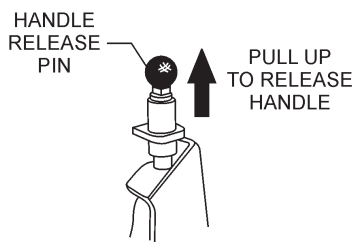
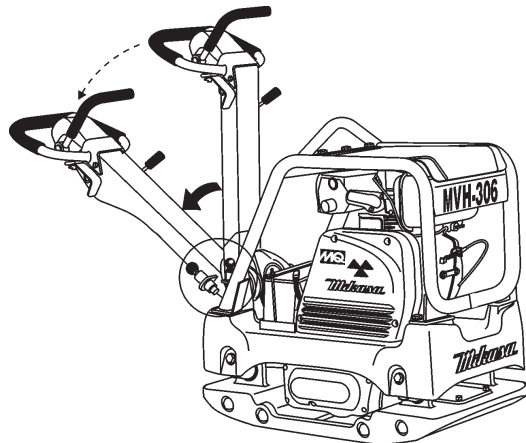


Figure 13. Handle Release Pin

Adjusting Handle Height

The height of the handle is adjustable for your comfort .

1. Loosen the butterfly screw (Figure 14).
2. Turn the grip clockwise to raise the handle or counterclockwise to lower the handle.
3. When the handle is raised to the desired height, tighten the butterfly screw.

STARTING THE ENGINE

Electric Start

1. Place the **throttle lever** (Figure 15) in the **START** position (center). Place the **travel lever** in the neutral position (center)

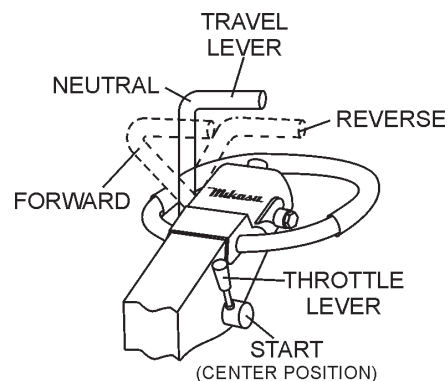


Figure 15. Travel/Throttle Lever (Start Positions)

2. Insert the ignition key into the ignition switch and turn it to the **RUN** position (Figure 16). The buzzer should sound at this time.
3. Turn the ignition key further to the right to the **START** position to start the engine. Buzzer stops sounding and the engine starts.
4. If the engine fails to start, **DO NOT** continue to rotate the ignition key for more than 5 seconds. Return the key to the **RUN** position and wait 10 seconds before starting again

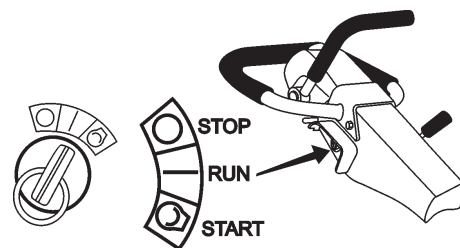
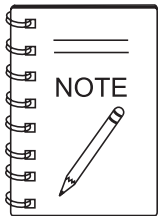


Figure 16. Starter Switch (Option)

CAUTION

While the engine is running, never try to turn the ignition key to the **START** position.

- After starting the engine, continue to warm up the engine for about 3 to 10 seconds especially in cold weather.
- If the buzzer does not stop sounding after the engine has started, shutdown engine immediately and check engine oil level. The buzzer functions as an engine oil level alarm warning device.



When starting a unit with an electric start capability, a decompressor is not normally required. However, when ambient temperature or battery charger level is low, use of a decompressor will help make the start-up easier.

Recoil Start

- Move the throttle lever to the **START** position (Figure 16).
- Grasp the starter grip (Figure 17) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding to the compression point.

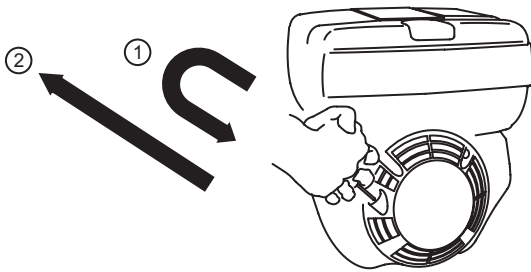


Figure 17. Engine Start Handle

- Pull the starter grip briskly and smoothly for starting.
- If the engine does not start, repeat steps 2 and 3.

TRAVELING

CAUTION

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 harm.

- Grasp the compactor's hand grip (Figure 18), and move the engine throttle lever (Figure 18) quickly to the **fast** position.
- With the throttle lever in the fast position, the engine speed should be around 3,400 RPM, therefore engaging the centrifugal clutch.

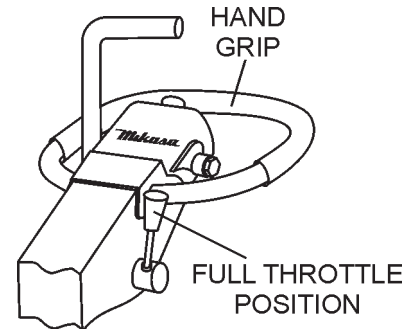
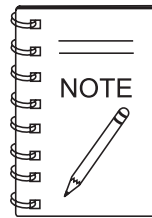


Figure 18. Throttle Lever (Fast)



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

- To make the compactor move in the forward direction push the travel lever (Figure 19) forward.

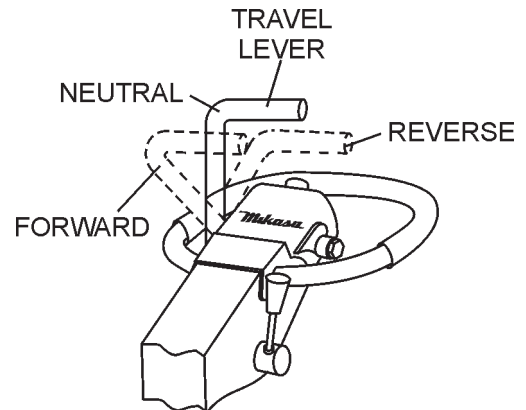


Figure 19. Travel Lever

4. To make the compactor move in the reverse direction pull the travel lever (Figure 21) backwards.
5. Firmly grasp the compactor's hand grip, the compactor will begin moving in the desired position when the direction lever has been placed in the desired position.
6. 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.
7. If travel lever is placed in the neutral position, the machine will vibrate in place.
8. To move the compactor laterally, hold the hand grip firmly and swing compactor. **DO NOT** swing compactor while gripping the travel lever.

Normal Shutdown

1. Return the throttle lever to the **START** position (Figure 16). Allow the machine to cool down for 2 to 3 minutes.
2. Place the travel lever in the **NEUTRAL** position.
3. Place the throttle lever in the **STOP** position (Figure 20) to stop the engine. If using an electric start unit, return the key switch to the **STOP** position (Figure 21) as soon as the engine stops.

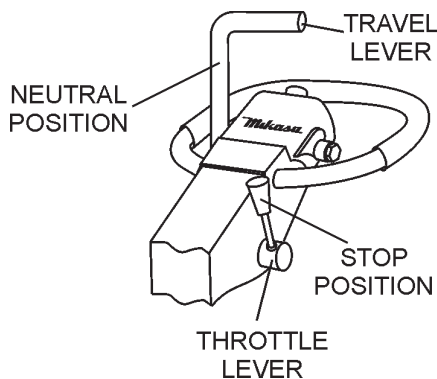


Figure 20. Throttle Lever (Stop)

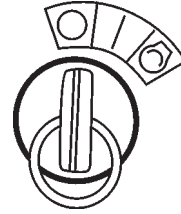


Figure 21. Starter Switch (STOP)

Emergency Shutdown

1. For a recoil start type engine, move the throttle lever quickly to the **STOP** position.
2. For a electric start type engine, place the engine **IGNITION** switch in the **OFF** position.

STOWING THE HANDLE

1. Push up the handle upward (Figure 22) until the handle locks in place.

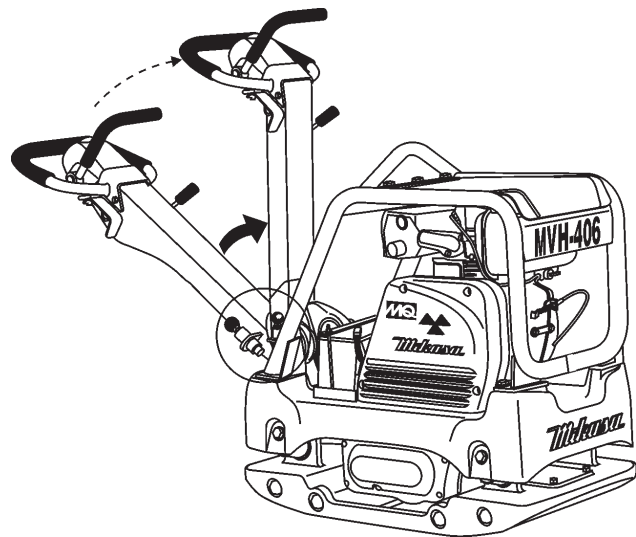


Figure 22. Stowing the Handle

CAUTION

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

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. MVH-406DSZ MACHINE INSPECTION

ITEM	HOURS OF OPERATION
Loose or Missing Screws	Every 8 hours (every day)
Damaged Parts	Every 8 hours (every day)
Function of Controlling System Part	Every 8 hours (every day)
Hydraulic System Leak	Every 100 hours
Vibrator Oil Check	Every 100 hours
Vibrator Oil Replacement	Every 300 hours
Hydraulic Oil Check	Every 100 hours
Hydraulic Oil Replacement	First after 200 hours, then every 1,000 hours
V-belt (clutch) Check	Every 200 hours
Battery Check	Every 100 hours

CAUTION

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

CAUTION

Fuel piping and connections should be replaced every 2 years.

TABLE 6. MVH-406DSZ ENGINE CHECK

ITEM	HOURS OF OPERATION
Oil or Fuel Leak	Every 8 hours (every day)
Tightness of Fastening Threads	Every 8 hours (every day)
Engine Oil Check and Replenishment	Every 8 hours (every day) (Replenish to specified maximum level)
Engine Oil Replacement	After first 25 hours then every 50 to 100 hours
Air Filter Cleaning	Every 100 hours
See separate engine manual for details on engine check.	

Daily Service

- Check for leakage of fuel or oil.
- 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	300~ 350	650 ~ 700					

* (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.

- Remove soil and clean the bottom of compaction plate.
- Check hand pump, piping and hose for any leakage. A loosened hydraulic hose can be a cause for leakage. Check hydraulic hose connections with wrench applied for tightness.
- Check engine oil.

Engine Oil Replacement:

1. Replace engine oil, in first 25 hours of operation and every 50 to 100 hours afterwards.
2. Oil may be drained more easily when it is warm after operation (For more details, see separate engine Owner's Manual).

Air Filter (Every 6 Months or 400 Hours)

1. The air filter element should be cleaned because a clogged air cleaner can cause poor engine starting, lack of power and shorten engine life substantially.

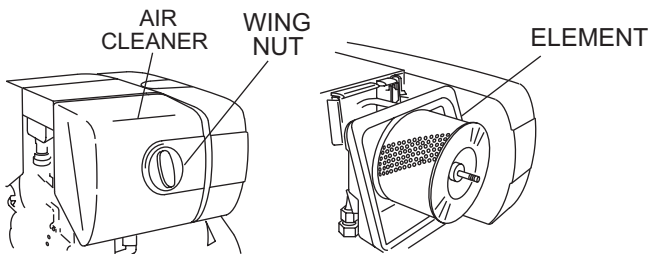


Figure 23. Engine Air Filter and Element

2. To clean or replace air filter loosen the wing nut on the air filter housing (Figure 23) remove the cover and take out air filter cartridge. If only cleaning of the air filter is desired blow through the air filter cartridge from the inside, moving a jet of dry compressed air up and down until all dust is removed.

CAUTION

NEVER attempt to check the V-belt with the engine running. Severe injury can occur if your hand gets caught between the V-belt and the clutch (Figure 24). Always use safety gloves.

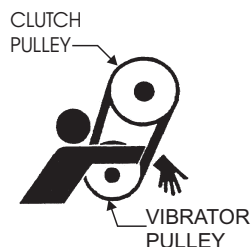


Figure 24. V-Belt Hazard

Checking and Replacing the V-Belt and Clutch

1. After 200 hours of operation, remove the belt cover to check the V-belt tension (Figure 25). Tension is proper if the belt bends about 3/8" (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.

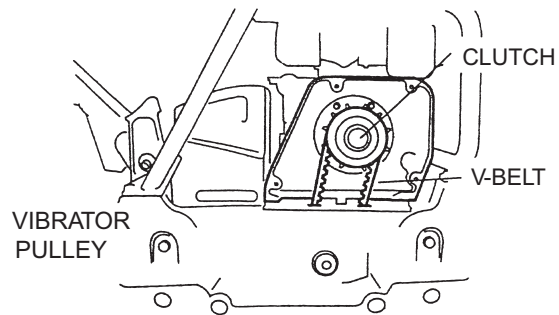


Figure 25. V-Belt Check

● Replacing the V-belt

Remove the belt cover. Engage an offset wrench 3/4" (19 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 cover 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. If the shoe is worn, power transmission becomes deficient and slipping will result.

● Replacing Clutch

Remove V-belt. Remove bolt at engine power output by giving a light tap with a hammer to an engaged wrench and rotate bolt counterclockwise. Remove clutch with a pulley extractor. To reinstall, reverse the procedure.

CAUTION

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

Vibrator Oil Level Check

CAUTION

Always clean the area around the vibrator oil level check plug before removing oil check plug. This will prevent dirt and debris from entering the system.

1. In every 100 hours of operation, with the machine positioned horizontally, use a 3/4" (19 mm) wrench and remove vibrator oil level check plug (Figure 26). Visually inspect and see if vibrator oil level is up to filler port. Be sure to clean area around check hole to prevent dirt and dust from entering.

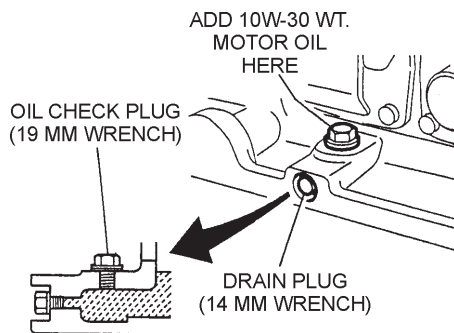
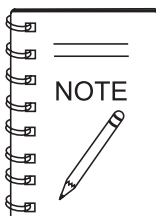


Figure 26. Vibrator Oil Drain and Check Plugs

Draining Vibrator Oil

1. Replace vibrator oil after first 200 hours and in every 1,000 hours of operation.
2. Position handle bar vertically (storage position).
3. Using a 14 mm wrench remove the vibrator oil drain plug (Figure 26) from the vibrating plate assembly.



For draining oil through level check hole, have the machine inclined with a sleeper or the like placed under the compaction plate on opposite side.

4. After hydraulic oil has been completely drained from machine, fill with 10W-30 motor oil to the appropriate safe operating level (Figure 26).
5. Reinstall drain plug into vibrating plate assembly. Apply seal tape or Loctite #575 to thread portion of drain plug.

Draining Hydraulic Oil

1. Disconnect the hydraulic hose (Figure 27) connected to the hydraulic oil cylinder.

2. Push the travel lever back and forth to drain the hydraulic oil from the hand pump (hydraulic oil reservoir).

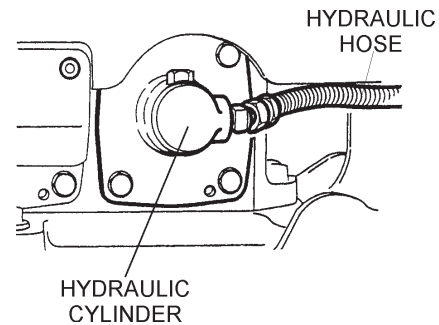


Figure 27. Hydraulic Oil Cylinder/Hose

3. After draining hydraulic oil, reconnect hydraulic oil hose to cylinder.
4. Place handle in upright position. Pull travel lever all the way back (reverse), and using a rope, secure travel lever to hand grip.

Adding Hydraulic Oil

1. Remove the breather cap and oil plug (Figure 28) from the hydraulic oil tank using a 24mm hex socket.

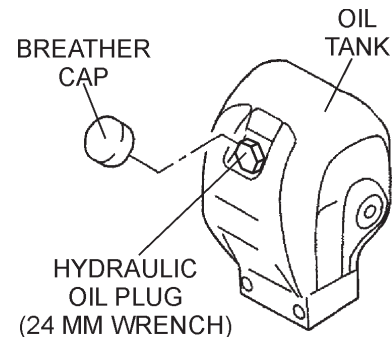


Figure 28. Hydraulic Oil Tank

2. Using a funnel, add **Shell Tellus Oil #46** or equivalent to the hydraulic oil tank through the oil filler port (Figure 29). Oil tank capacity is 50.7 fl. oz (1500 cc).

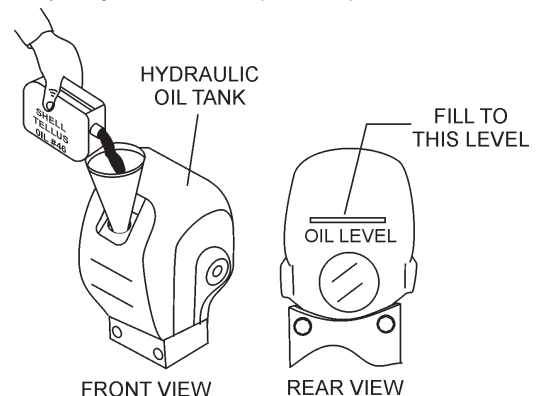


Figure 29. Hydraulic Oil Maintenance

CAUTION

Make sure hydraulic oil is at a normal safe operating level. **DO NOT** over fill. Over filling (excessive oil) will cause excess oil to blow out of bleeder plug.

- Loosen bleeder plug located at top of hydraulic cylinder on side of vibrator (Figure 30). Air remaining in the circuit will be forced out of the bleeder plug. Once all air has been purged from the hydraulic system, tighten bleeder plug securely
- Reinsert oil plug into hydraulic oil tank and tighten securely. Reinstall breather cap.

CAUTION

The **bleeder plug** should only be loosened, but not removed.

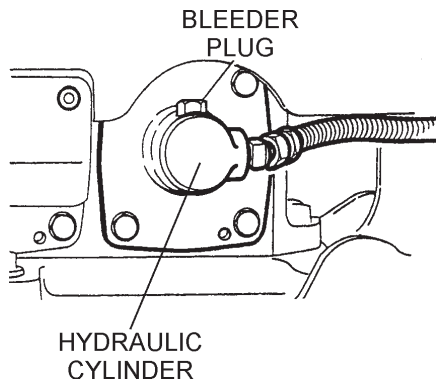


Figure 30. Bleeder Plug

BATTERY MAINTENANCE (Option)

Mishandling of the battery shortens the service life of the battery and adds to maintenance cost. When handling the battery do the following:

CAUTION

Wear **safety glasses** or **face mask**, **protective clothes**, and **rubber gloves** when working with battery.



- The battery electrolyte contains sulfuric acid, be careful not to let the battery electrolyte come in contact with your body or clothing.
- Always check the battery terminals periodically to ensure that they are in good condition.

- Always wear **eye protection** and **rubber gloves**, since the battery contains sulfuric acid which burns skin and eats through clothing. In case of contact, flush thoroughly with water and contact a doctor immediately.
- Use wire brush or sand paper to clean the battery terminals.
- Always check battery for cracks or any other damage. If white pattern appears inside the battery or paste has accumulated at the bottom, replace the battery.
- If the compactor will not be in operation for a long period of time, store in cool dry place and check the battery charge level every month to maintain the performance of the battery.
- Check the battery regularly and make sure that each electrolyte level is to the bottom of the vent well (Figure 31). If necessary add only distilled water in a well-ventilated area.

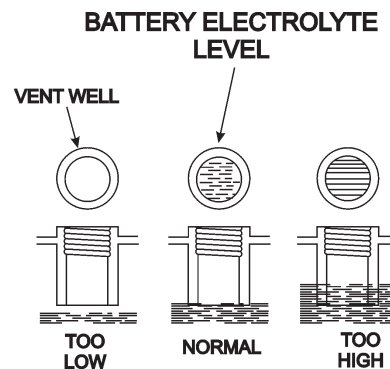




Figure 31. Battery Electrolyte Levels

BATTERY CHARGING

- DO NOT** charge battery with the battery cables connected to the compactor. The diodes will be damage by the high voltage.
- Batteries generate hydrogen gas which can be highly explosive. **DO NOT** smoke or allow flames or sparks near the battery, especially during charging of the battery.  
- Charge the battery in a open air environment (plenty of ventilation).
- Before charging , remove the cap from each cell of the battery.
- Connect the positive (+) lead of the charger to the positive (+) terminal of the battery and the negative (-) lead of the charger to the negative (-) terminal of the battery. **DO NOT** reverse the polarity when charging. Reverse polarity will damage the charger rectifier or the battery.

- Battery fluid will be lost through continuous charging and discharging.
- Discontinue charging if the electrolyte temperature exceeds 117° F (45° C).



During summer, much more battery fluid is lost than in winter. Before starting, check battery electrolyte levels and replenish with distilled water to the upper mark on the battery.

BATTERY CABLE CONNECTION

1. Take off the battery cover by removing the M8 bolts.
2. When removing cable, disconnect the ground side (normally negative) first (Figure 32).
3. When installing cable connect the ground side (normally negative) last.

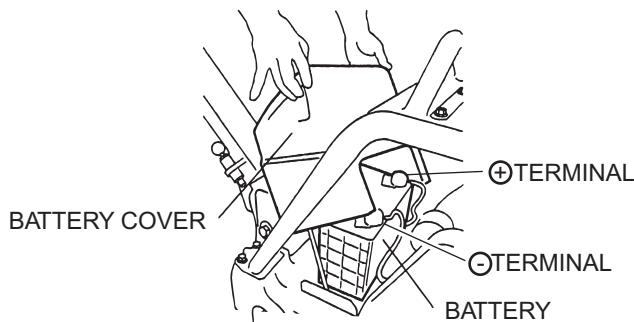


Figure 32. Battery Removal

CHECKING FUEL FILTER

1. Clean the fuel filter (Figure 33) every 3 months or 200 hours.
2. Replace fuel filter every 6 months or 400 hours.
3. To clean the fuel filter, loosen the nuts of the fuel cock and pull out the filter from the F.O. tank filler port. Wash the filter thoroughly with diesel fuel oil.
4. Pull fuel supply line "1" off fuel supply line "2" (Figure 33) and insert a new filter.

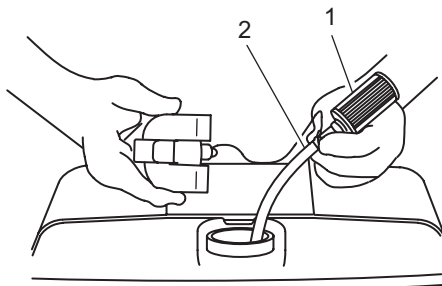


Figure 33. Fuel Filter

LONG TERM STORAGE

When storing your compactor for long periods do the following:

- Run the engine at idle speed for 3-5 minutes.
- Stop the engine. Drain the engine crankcase oil while the engine is still warm. Fill engine crankcase with fresh oil.
- The new engine can normally be stored dry for up to one year.
- In very humid climates or coastal regions, the protective treatment is sufficient for up to 6 months.
- For long periods of storage, please contact your nearest Robin service station.

Troubleshooting

See Tables 8 (engine) and 9 (plate compactor) on proceeding pages for engine and plate compactor troubleshooting guide.

MVH-406DSZ—TROUBLESHOOTING

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. 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

SYMPTON	POSSIBLE PROBLEM	SOLUTION
Engine will not start or start is delayed, although engine can be turned over.	Speed control lever is in "STOP" position?	Set speed control lever to "START" position.
	No fuel reaching injection pump?	Add fuel. Check entire fuel system.
	Defective fuel pump?	Replace fuel pump.
	Fuel filter clogged?	Replace fuel filter and clean tank.
	Faulty fuel supply line?	Replace or repair fuel line.
	Compression too low?	Check piston, cylinder and valves. Adjust or repair per engine repair manual.
	Fuel injector not working correctly?	Repair or replace injector in accordance with engine repair manual.
	Oil pressure too low?	Check engine oil pressure.
At low temperatures engine will not start.	Low starting temperature limit exceeded	Comply with cold starting instructions and proper oil viscosity.
	Fuel separates has inadequate resistance to low temperatures?	Check whether clear (not turbid) fuel emerges from the fuel line (detach from injection pump). If the fuel is turbid or separated, warm up the engine or drain the complete fuel supply system. Refuel with winter grade diesel fuel.
Engine oil too thick?		Refill engine crankcase with correct type of oil for winter environment.
Engine fires but stops soon as starter is switched off.	Throttle lever in STOP position?	Reposition throttle lever to RUN position.
	Fuel filter blocked?	Replace fuel filter.
	Fuel supply blocked?	Check the entire fuel system.
Engine stops by itself during normal operation.	Fuel tank empty?	Add fuel.
	Fuel filter blocked?	Replace fuel filter.
Low engine power, output and speed.	Fuel tank empty?	Fill with No.2 diesel fuel.
	Fuel filter clogged?	Replace fuel filter.
	Fuel tank venting is inadequate?	Ensure that tank is adequately vented.
	Speed control lever does not remain in selected position?	See engine manual for corrective action.
	Engine oil level too full?	Correct engine oil level?
Low engine power output and low speed, black exhaust smoke.	Air filter blocked?	Clean or replace air filter.
	Incorrect valve clearances?	Adjust valves per engine specification.
	Malfunction at injector?	See engine manual.

MVH-406DSZ—TROUBLESHOOTING

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. 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. TROUBLESHOOTING COMPACTOR

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Travel speed low and vibration weak.	Clutch slips?	Adjust or replace clutch.
	V-belt slips?	Adjust or replace V-belt.
	Excessive Oil in vibrator?	Fill to correct level..
	Trouble in vibrator internals?	Check vibrator assembly for any worn or defective parts, replace any defective parts.
	Aeration in hydraulic oil for for travel reversing syste.?	Purge air in hydraulic oil. (Bleed plug)
	Engine speed incorrect?	Set engine speed to correct RPM.
Travels forward or backward but unable to switch direction.	Travel reversing system inoperative.?	Check entire travel system.
	Reversing lever installation correct?	Clean installation of reversing lever.
	Broken or defective oil hose?	Replace oil hose.
	Aeration in hydraulic oil for for travel reversing syste.?	Purge air in hydraulic oil. (Bleed plug)
	Excessive oil in reversing system?	Fill to correct level..
	Selector valve clogged with trash?	Clean selector valve.
	Cylinder piston bearing failure?	Check piston bearing in cylinder for leakage at USH packing.
Does not travel in forward or reverse.	V-belt dis-engaged or slips?	Engage V-belt, adjust or replace.
	Clutch slips?	Adjust clutch, replace if necessary.
	Pump input shat key or adapter key-way damaged?	Replace input shatkey or adapter key-way
	Cylinder piston bearing failure?	Check piston bearing in cylinder for leakage at USH packing.
Reversing lever operating resistance great.	Excessive hydraulic oil?	Fill to correct level.

MVH-406DSZ — 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.

MVH-406DSZ — SUGGESTED SPARE PARTS

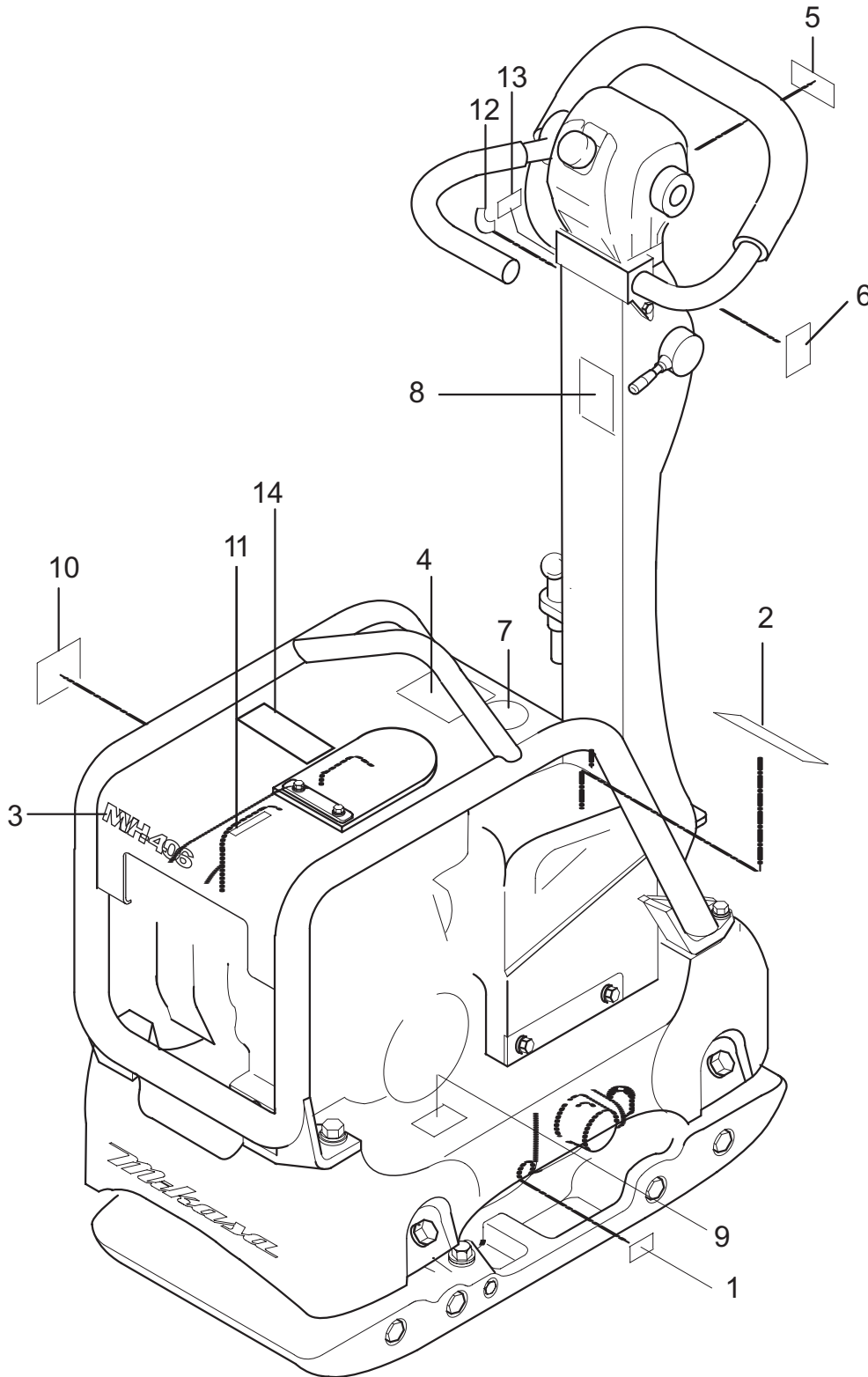
MVH-406DSZ W/ ROBIN D1B40T92040 DIESEL ENGINE

1 to 3 Units

Qty.	P/N	Description
2	956100060	THROTTLE WIRE
3	070200373	V-BELT
3	50484100	ELEMENT ASSY.
1	05088901	STARTER ROPE
3	01635210	FUEL FILTER ASSY.
1	01535302	CAP, FUEL TANK
1	01542702	OIL SUCTION FILTER ASSY.
4	939010260	SHOCK ABSORBER
3	50404900	KEY, STARTER SWITCH

MVH-406DSZ — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS



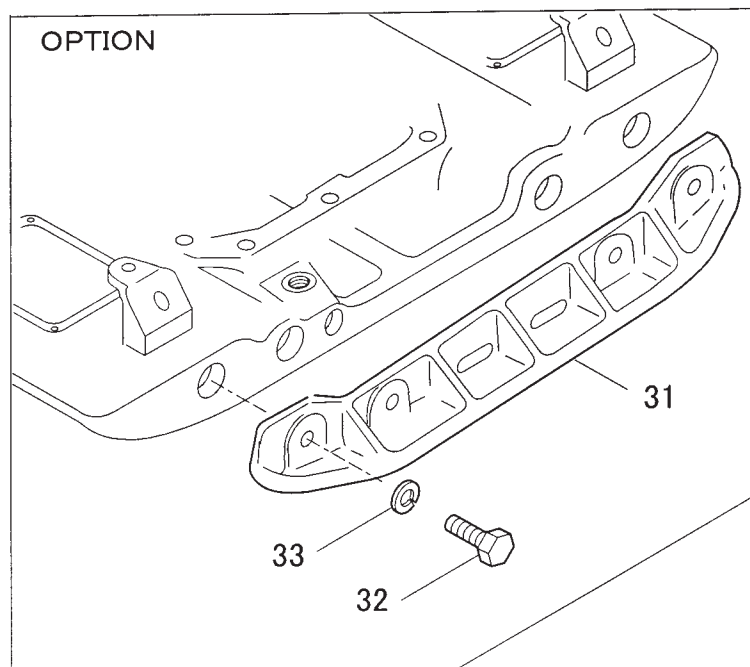
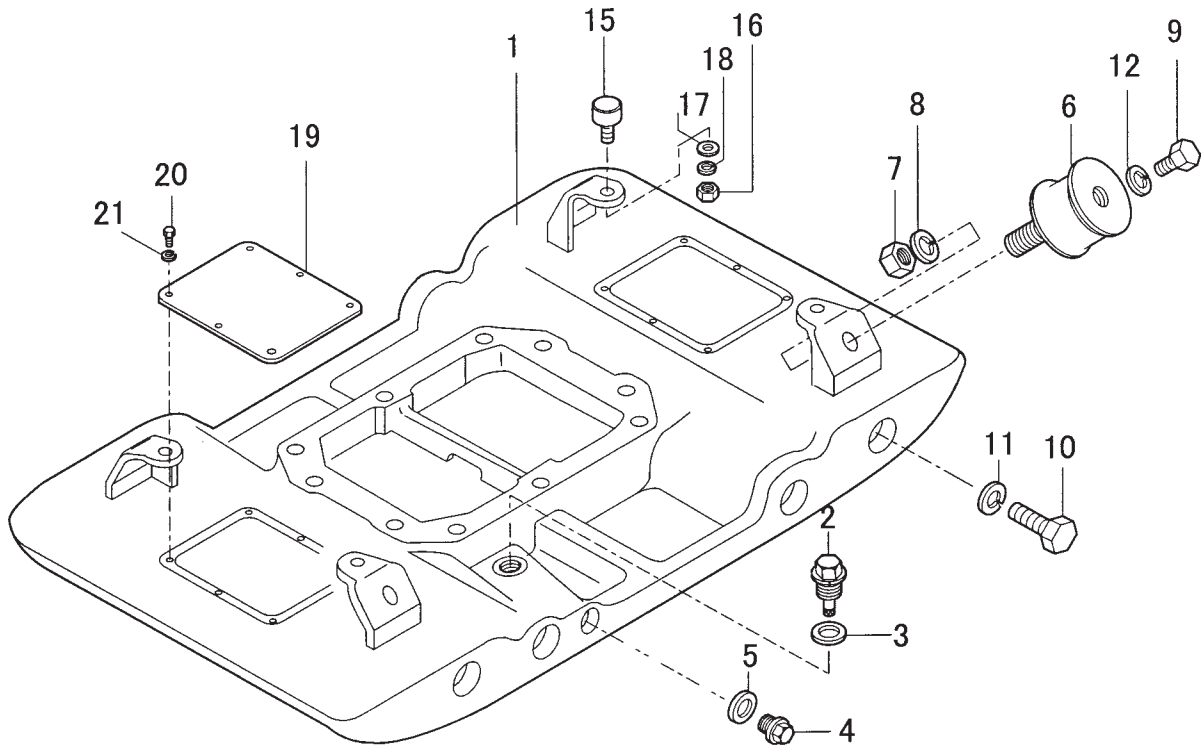
MVH-406DSZ — NAMEPLATE AND DECALS

NAMEPLATE AND DECALS

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	920201950	DECAL, OIL SAE 10W-30	1	NPA-195
2	920105070	DECAL, MIKASA MARK 125MM	1	
3	920211640	DECAL, MODEL LOGO	1	
4	920209620	DECAL, CAUTION	1	NPA-962
5	920207480	DECAL, SHELL TELLUS OIL 46	1	
6	920204580	DECAL, FULL THROTTLE	1	NPA-458
7	920203330	EAR PROTECTION LABEL	1	DCL-333
8	920211060	DECAL, CAUTION (TRAVEL LEVER)	1	NPA-1106
9		PLATE, SERIAL NO.	1	CONTACT PARTS DEPT.
10	920201580	DECAL, MQ MARK 71X55	1	
11	920211010	DECAL, V-BELT HDPF-5370	1	NPA-537
12	920106760	DECAL: STOP-RUN START	1	
13	0732004460	DECAL: STARTER SWITCH	1	
14	05298000	DECAL, CHECK/1B40	1	

MVH-406DSZ VIBRATING PLATE ASSY.

VIBRATING PLATE ASSY.



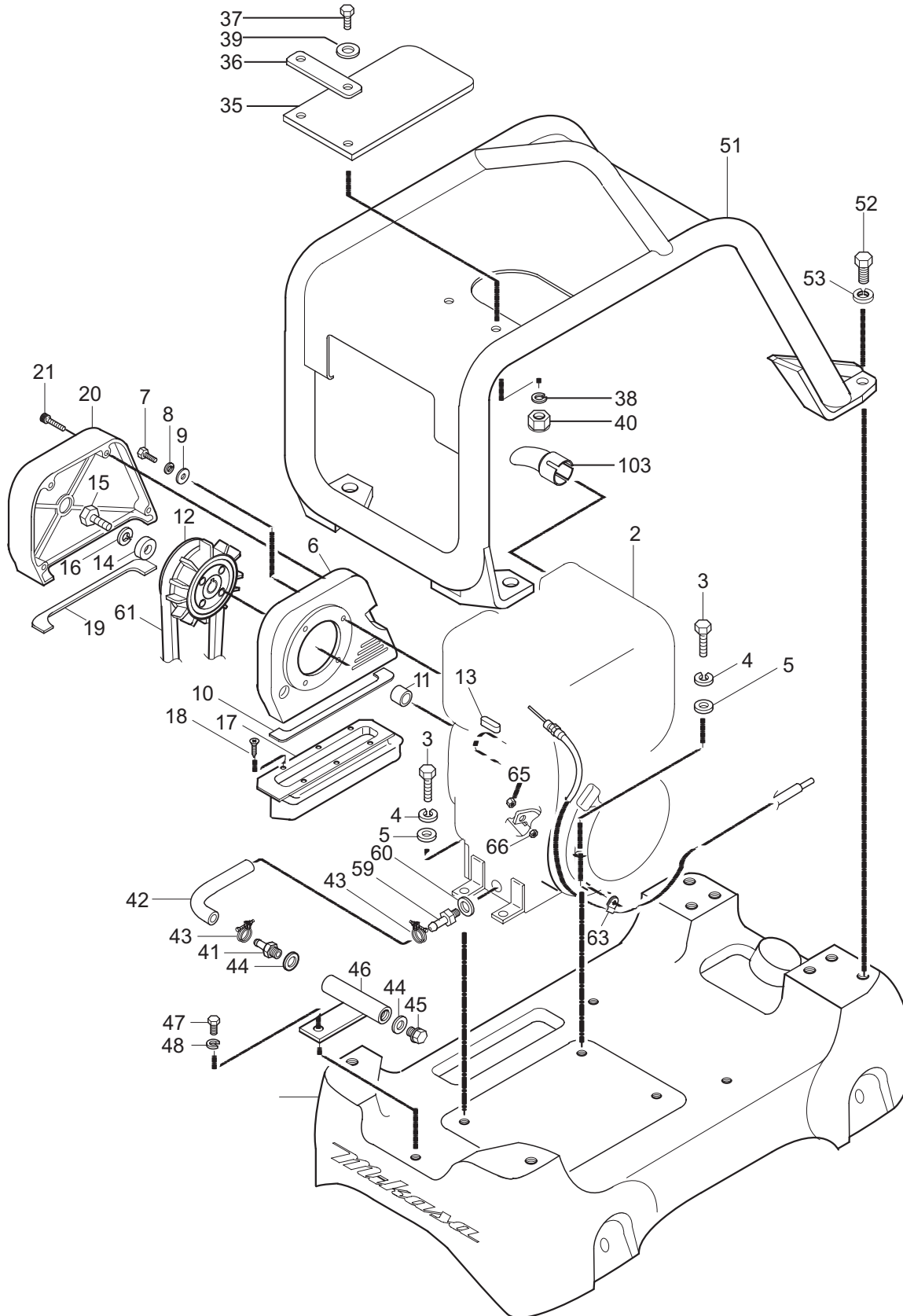
MVH-406DSZ — VIBRATING PLATE ASSY.

VIBRATING PLATE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	465118410	VIBRATING PLATE	1	
2	464458940	OIL GAUGE	1	
3	953402930	COPPER PACKING 19X30X1	1	
4	953400270	PLUG 1/4X14 10L	1	
5	953405260	PACKING 1/4 (CU)	1	
6	939010260	SHOCK ABSORBER 110X60H	4	
7	020316130	NUT M16	4	
8	030216400	WASHER, LOCK M16	4	
9	001221635	BOLT 16X35 T	4	
10	001221830	BOLT 18X30 T	8	
11	030218460	WASHER, LOCK M18	8	
12	030216400	WASHER, LOCK M16	4	
15	939010010	SHOCK ABSORBER, STOPPER 45	4	
16	020310080	NUT M10	4	
17	031110160	WASHER, FLAT M10	4	
18	030210250	WASHER, LOCK M10	4	
19	465345050	COVER, VIBRATING PLATE	2	
20	001220815	BOLT 8X15 T	12	
21	030208200	WASHER, LOCK M8	12	
31	456210690	EXTENSION PLATE	2	OPTION
32	001221850	BOLT 18X50 T	8	OPTION
33	030218460	WASHER, LOCK M18	8	OPTION

MVH-406DSZ — BASE AND ENGINE ASSY.

BASE AND ENGINE ASSY.



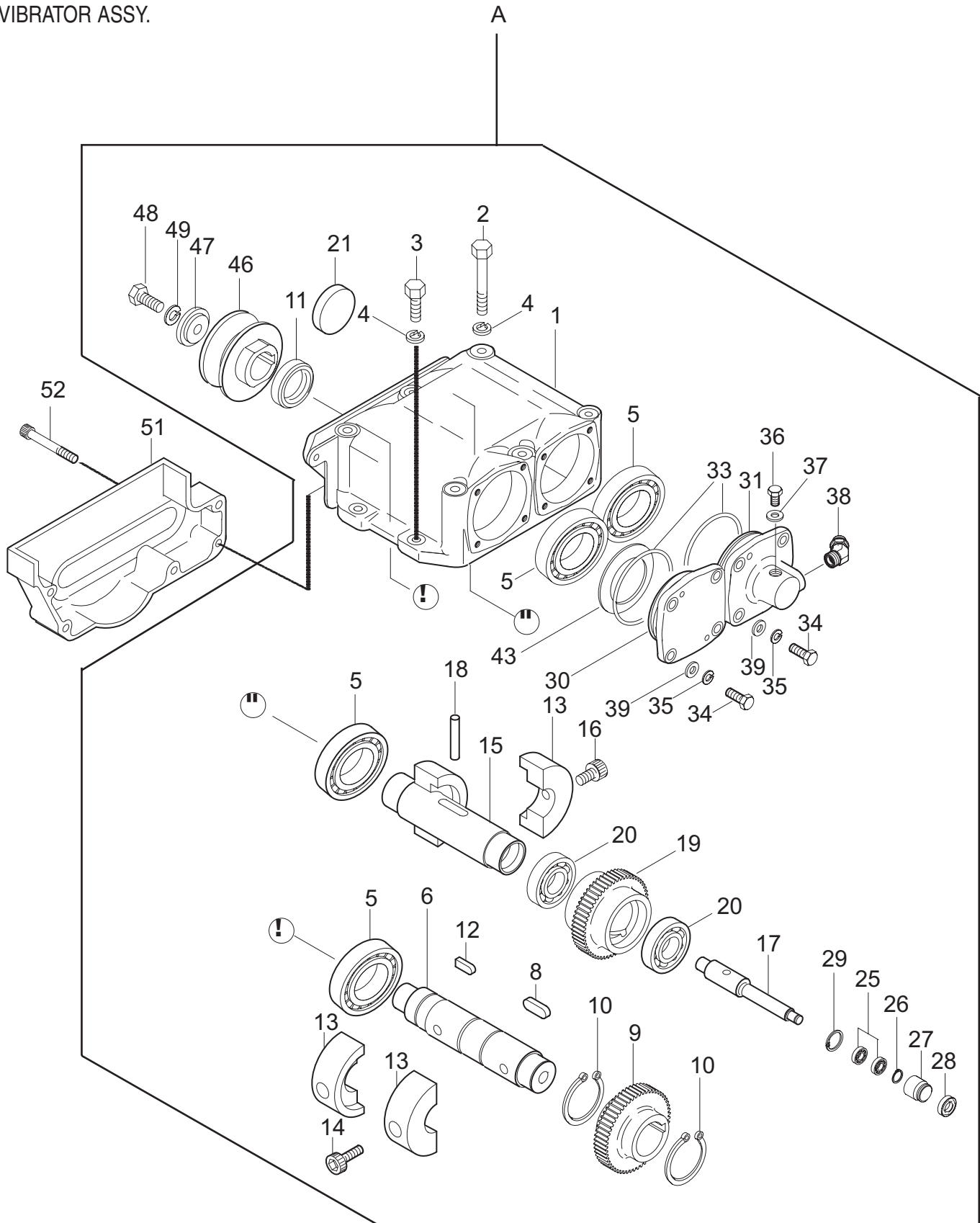
MVH-406DSZ — BASE AND ENGINE ASSY.

BASE AND ENGINE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	465118600	BASE	1	
2	918400800	ENGINE ASSY., 1B40	1	
3	001221030	BOLT 10X30T	4	
4	030210250	WASHER, LOCK M10	4	
5	031110160	WASHER, FLAT M10	4	
6	465217230	BELT COVER (IN) L100	1	
7	001221030	BOLT 10X30 T	4	
8	030210250	WASHER LOCK M8	4	
9	031108160	WASHER, FLAT M8	4	
10	465345100	DUST- PROOF SPONGE (IN)	1	
11	464457360	SPACER	1	
12	456343340	CLUTCH ASSY/CHM03/W. FAN	1	
13	951400110	KEY 7X7X35	1	
14	952403450	WASHER 11X35X4.5	1	
15	001221030	BOLT 10X30 T	1	
16	030210250	WASHER, LOCK M10	1	
17	465216990	DUST-PROOF COVER	1	
18	092006010	FLAT HEAD SCREW 6X10	6	
19	465345110	DUST-PROOF SPONGE (OUT)	1	
20	465217000	BELT COVER (OUT)	1	
21	001521045	SOCKET HEAD BOLT 10X45 T	4	
35	458450830	RUBBER COVER (GUARD FRAME)	1	
36	458450810	PLATE, COVER	1	
37	001220830	BOLT 8X30 T	1	
38	030208200	WASHER, LOCK M8	3	
39	031108160	WASHER, FLAT M8	3	
40	022710809	NYLON NUT M8	3	
41	2556390111	UNION	1	
42	2556380103	DRAIN HOSE	1	
43	0091720000	HOSE CLAMP	2	
44	0211140020	GASKET	2	
45	0401140030	PLUG	1	
46	464457380	DRAIN JOINT	1	
47	001220820	BOLT 8X20 T	1	
48	030208200	WASHER, LOCK M8	1	
49	454010020	CLAMP TC-100	1	
51	465118670	GUARD HOOK	1	
52	001221445	BOLT 14X45 T	4	
53	030214350	WASHER, LOCK M14	4	
59	465459670	UNION, OIL DRAIN	1	
60	50001600	JOINT A 22X27	1	
61	070200373	V-BELT	1	
63	2067550101	CLAMP COMPLETE	1	
65	020406040	NUT M6, H=4.2	1	
66	959406800	NUT M6 (SPECIAL-L10)	1	
103	465459660	EXHAUST PIPE	1	

MVH-406DSZ — VIBRATOR ASSY.

VIBRATOR ASSY.



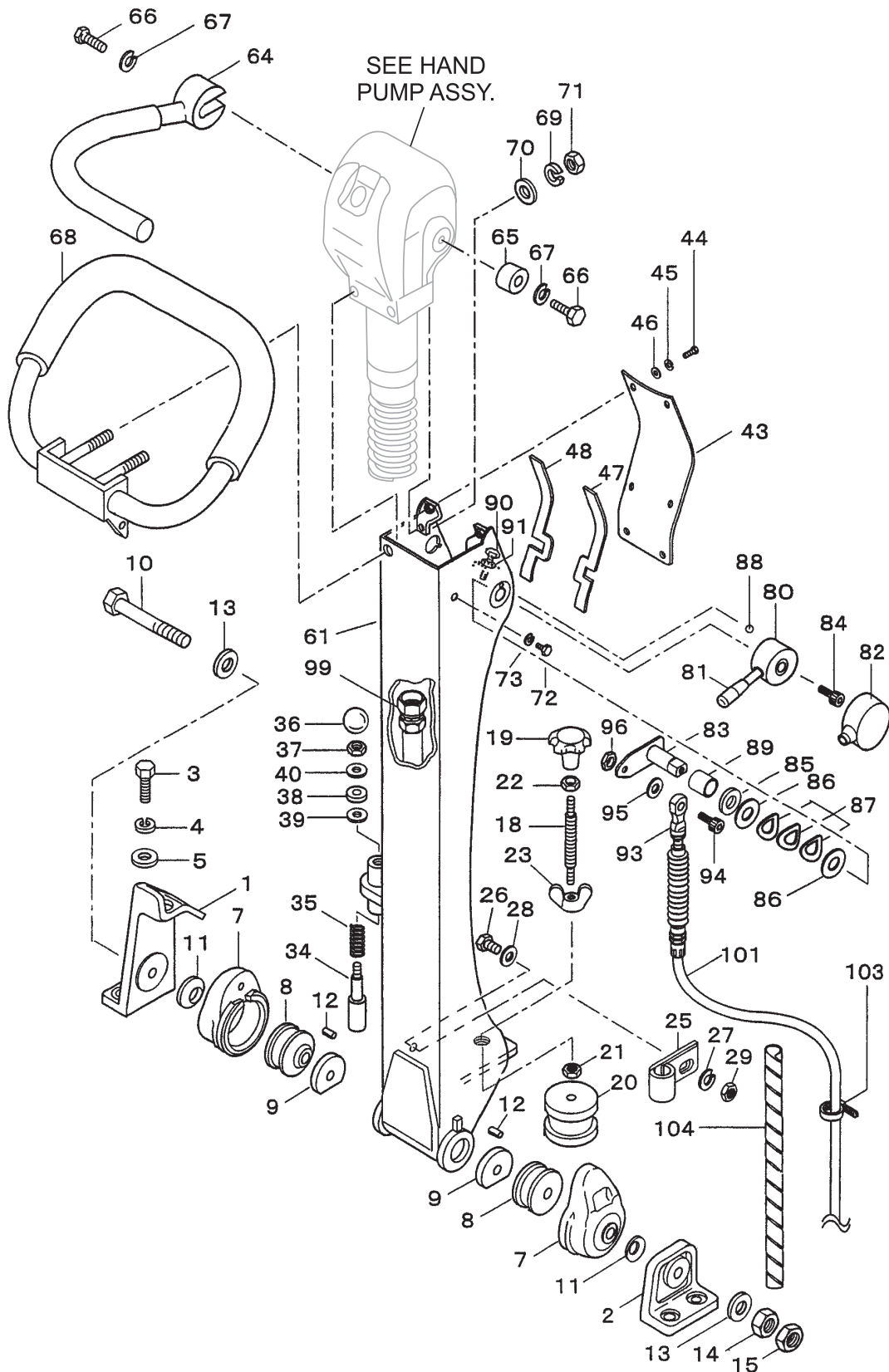
MVH-406DSZ — VIBRATOR ASSY.

VIBRATOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
A	465910010	VIBRATOR ASSY.	1	INCLUDES ITEMS W/#
1#	464117880	VIBRATING CASE	1	
2#	001221470	BOLT14X150T	6	
3#	001221450	BOLT 14X50 T	4	
4#	030214350	WASHER, LOCK M14	10	
5#	047920120	ROLLER BEARING NJ310EMC4	4	
6#	457212410	ROTARY SHAFT, DRIVE	1	
8#	951405370	KEY 15X10X39 RR	1	
9#	456327150	GEAR, DRIVE	1	
10#	080200550	STOP RING S-55	2	
11#	060105030	OIL SEAL SB-50729	1	
12#	951404970	KEY 12X8X30 R	1	
13#	465345080	ECCENTRIC ROTATOR	4	
14#	009120301	SOCKET HEAD BOLT 16X30 T	2	
15#	456337670	ROTARY SHAFT, DRIVEN/304B	1	
16#	009120302	SOCKET HEAD BOLT 16X30T	2	
17#	456337380	PISTON ROD	1	
18#	456010010	KNOCK PIN 10X70	1	
19#	464343720	GEAR (DRIVEN)	1	
20#	040006911	BEARING 6911	2	
21#	953010030	SEAL CAP/SC72-8N	1	
25#	042506000	BEARING 6000ZZSG	2	
26#	080200100	STOP RING S-10	1	
27#	455435051	PISTON, 22.4D	1	
28#	455010070	PACKING USH-22. 4X30X5	1	
29#	080100260	STOP RING R-26	1	
30#	456327130	BEARING COVER	1	
31#	456210636	CYLINDER (L)	1	
33#	050101050	O-RING G-105	2	
34#	001221025	BOLT 10X25 T	8	
35#	030210250	WASHER, LOCK M10	8	
36#	001220812	BOLT 8X12 T	1	
37#	953404600	COPPER PACKING 8X16X2	1	
38#	455010020	ELBOW 45 DEG. 15-0404	1	
39#	031110160	WASHER, FLAT M10	4	
43#	952405470	SHIM 90X110X0.5	2	
46#	465345090	PULLEY	1	
47#	456437920	WASHER, PULLEY	1	
48#	001221230	BOLT 12X30 T	1	
49#	030212300	WASHER, LOCK M12	1	
51	465217010	BELT COVER (LOWER)	1	
52	001520856	SOCKET HEAD BOLT 8X80 T	5	

MVH-406DSZ — CONTROL ASSY.

CONTROL ASSY.



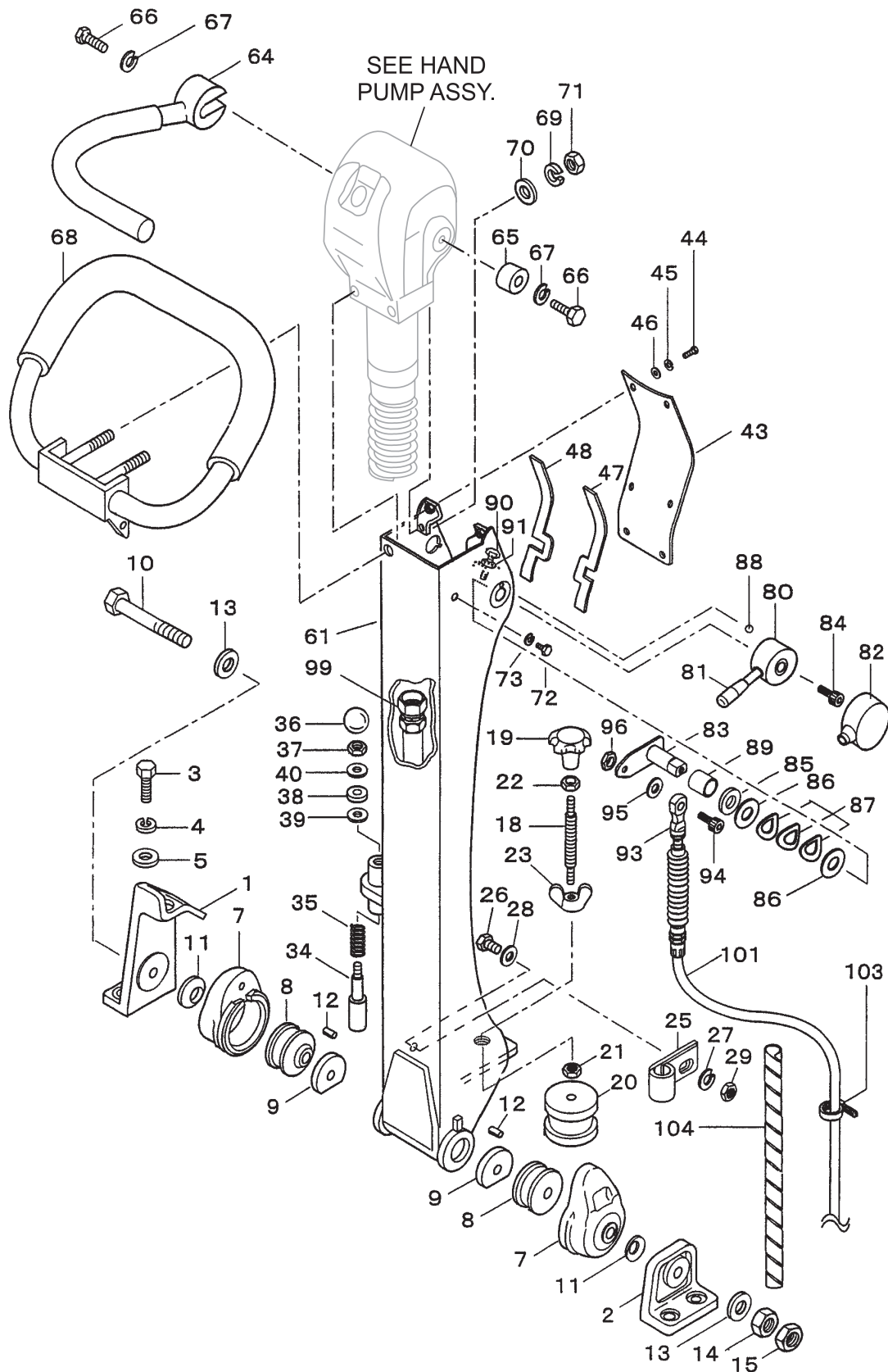
MVH-406DSZ — CONTROL ASSY.

CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	464343680	HANDLE BRACKET	1	
2	456336420	HANDLE BRACKET(R)	1	
3	001221235	BOLT 12X35 T	4	
4	030212300	WASHER, LOCK M12	4	
5	031112230	WASHER, FLAT M12	4	
7	456336400	RUBBER COUPLING	2	
8	456449940	SHOCK ABSORBER	2	
9	456449930	RUBBER PLATE	2	
10	001221681	BOLT 16X250 T	1	
11	032124400	CONICAL SPRING WASHER M24	2	
12	025406016	SPRING PIN 6X16	2	
13	031116260	WASHER, FLAT M16	2	
14	020316130	NUT M16	1	
15	020416100	NUT M16, H=10	1	
18	455434950	SPINDLE	1	
19	455010030	KNOB	1	
20	939010060	SHOCK ABSORBER 60	1	
21	020410060	NUT M10, H=6	1	
22	020412070	NUT M12, H=7	1	
23	022411635	WING NUT M16	1	
25	954404230	CLAMP SA120-18	1	
26	001220620	BOLT 6X20 T	1	
27	030206150	WASHER, LOCK M6	1	
28	031106100	WASHER, FLAT M6	1	
29	020306050	NUT M6	1	
34	501402870	HANDLE STOPPER	1	
35	501402880	SPRING/HANDLE (1.4X18X44)	1	
36	959403460	BALL GRIP 32D-M10	1	
37	020410060	NUT M10, H=6	1	
38	456449980	RUBBER PACKING 9D-20D-5T	1	
39	953405260	PACKING 1/4 (CU)	1	
40	031110160	PW M10	1	
43	465345520	HANDLE COVER	1	
44	001220615	BOLT 6X15 T	6	
45	030206150	WASHER, LOCK M6	6	
46	031106100	WASHER, FLAT M6	6	
47	464457710	PACKING A, HANDLE COVER	1	
48	464457720	PACKING B, HANDLE COVER	1	
61	465118650	HANDLE	1	
64	464216630	TRAVEL LEVER	1	
65	464457400	HANDLE BOSS	1	
66	001221030	BOLT 10X30 T	2	
67	030210250	WASHER, LOCK M10	2	
68	464216620	GRIP	1	

MVH-406DSZ — CONTROL ASSY.(CONTINUED)

CONTROL ASSY.



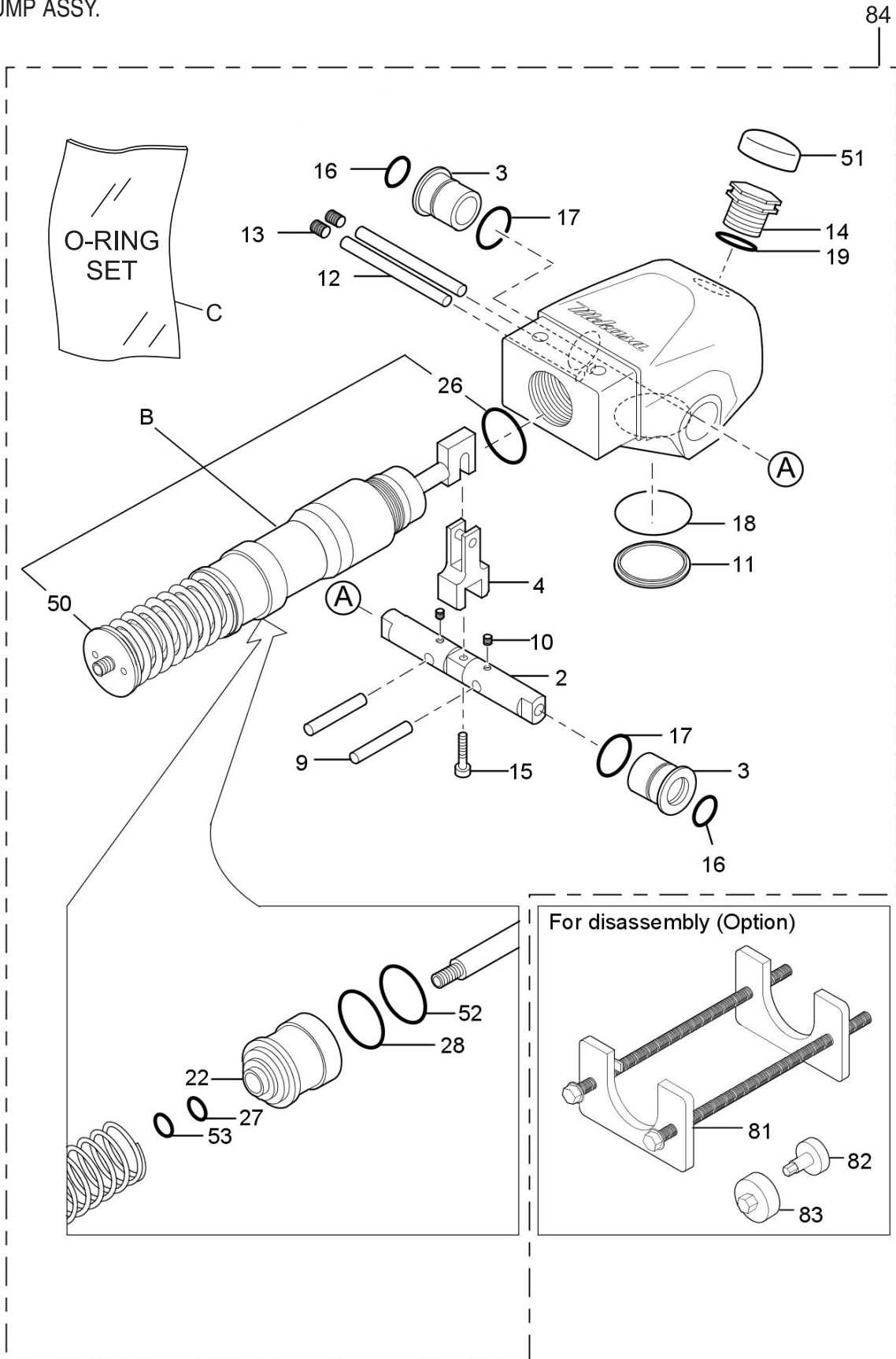
MVH-406DSZ — CONTROL ASSY. (CONTINUED)

CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
69	030210250	WASHER, LOCK M10	2	
70	031110160	WASHER, FLAT M10	2	
71	020310080	NUT M10	2	
72	001220825	BOLT 8X25 T	2	
73	030208200	WASHER, LOCK M8	2	
80	464457340	THROTTLE LEVER	1	
81	959403840	BAR GRIP, I.D. 12MM	1	
82	464457420	COVER, THROTTLE LEVER	1	
83	464457350	ARM, THROTTLE	1	
84	001520820	SOCKET HEAD BOLT 8X20 T	1	
85	031116260	WASHER, FLAT M16	1	
86	458450660	WASHER 16.4-35-0.6	2	
87	033910080	CONICAL SW 16,3X31.5X1.2	3	
88	464457440	STEEL BALL D6 (SUJ)	1	
89	464010010	DRY BUSHING /LFB-1620	1	
90	001220625	BOLT 6X25 T	2	
91	020306050	NUT M6	2	
93	464010020	ROD END M5	1	
94	001520520	SOCKET HEAD BOLT 5X20 T	1	
95	031105080	WASHER, FLAT M5	1	
96	020305040	NUT M5	1	
97	464457930	RUBBER PIECE (T2)	1	
99	954002270	OIL HOSE W/SPRING 1/4X920	1	
101	956100060	THROTTLE WIRE	1	
103	454010020	CLAMP TC-100	1	
104	959021810	SPIRAL TUBE KEP6/L=500	1	

MVH-406DSZ — HAND PUMP ASSY.

HAND PUMP ASSY.

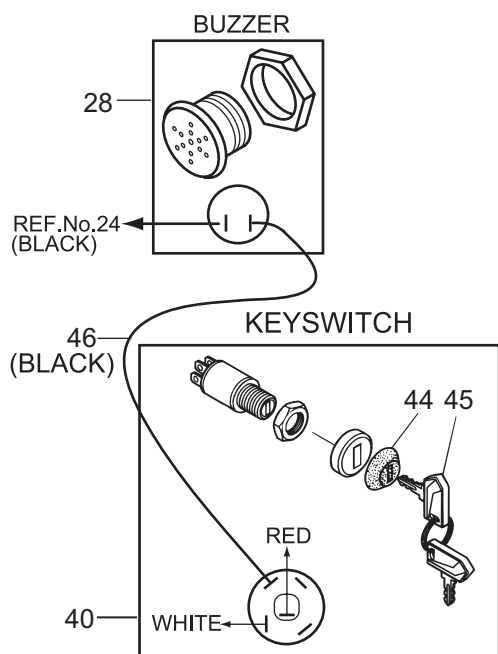


MVH-406DSZ — HAND PUMP ASSY.

HAND PUMP ASSY.

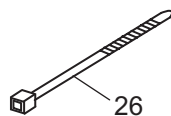
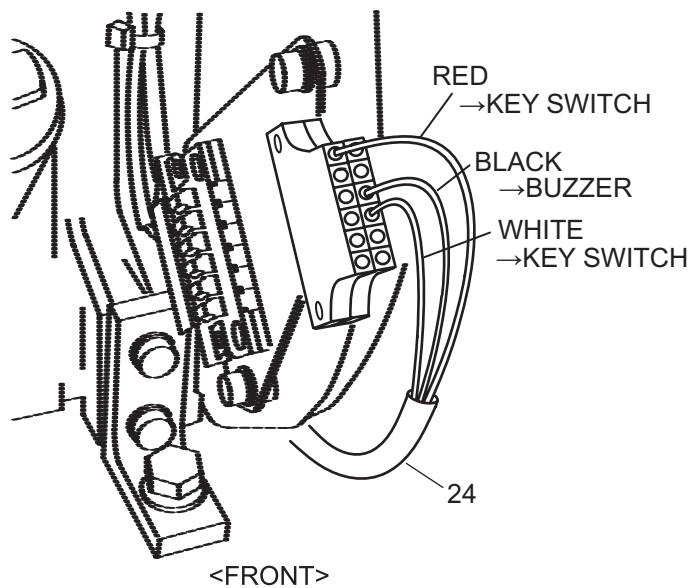
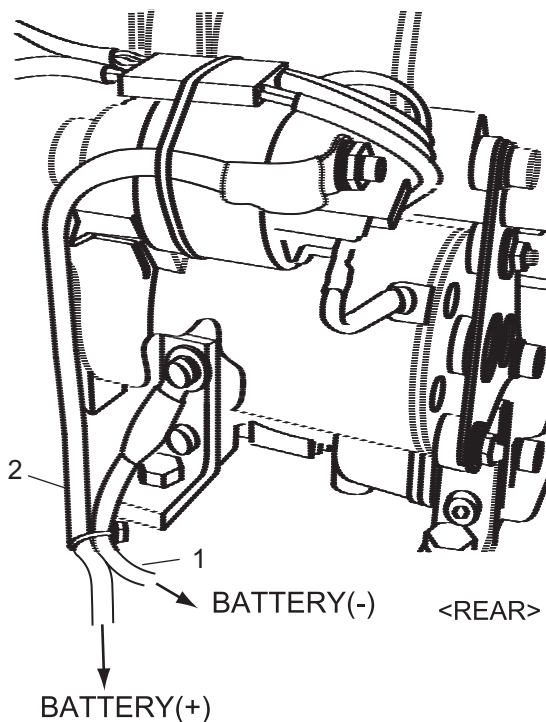
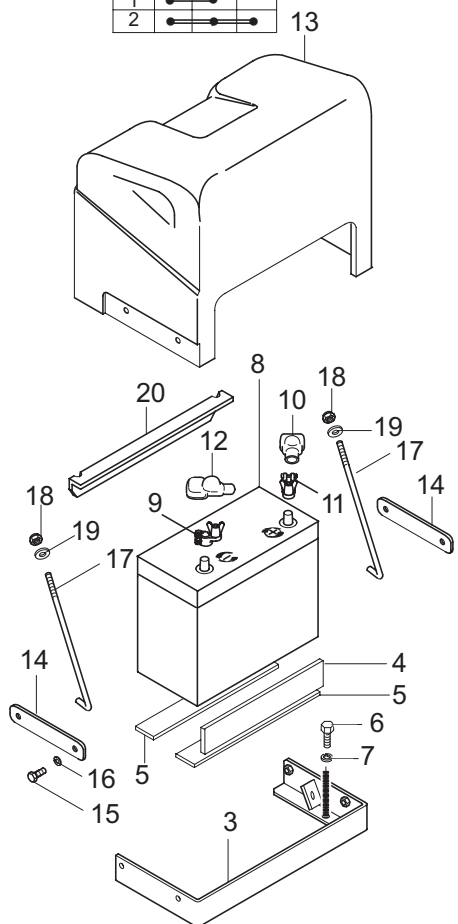
<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
B*	465910070	ACCUMULATOR	1	
C*	464910080	O-RING DUST,SEAL,SET	1	INCLUDES ITEMS W/#
2*	464010040	CONTROL SHAFT	1	
3*	464010050	BUSH	2	
4*	464010060	CAM	1	
9*	464010070	STOPPER	2	
10*	099205005	SOCKET HEAD SCREW 5X5 T	2	
11*	464010080	PLUG	1	
12*	464010090	PIN,STOPPER	2	
13*	464010100	PLUG	2	
14*	458010080	BREATHER	1	
15*	001520620	SOCKET HEAD BOLT 6X20 T	1	
16#*	050200200	O-RING P-20	2	
17#*	050200220	O-RING P-22	2	
18#*	050300380	O-RING S-38	1	
19#*	050200180	O-RING P-18	1	
22*	464010111	ACCUMULATOR CASE	1	
26#*	050300400	O-RING S-40	1	
27#*	050200150	O-RING P-15	1	
28#*	050100400	O-RING G-40	1	
50*	464010120	SPRING PLUG	1	
51*	458451630	BREATHER CAP	1	
52#*	069904010	DUST SEAL SER-40	1	
53#*	069901010	DUST SEAL SER-15	1	
81	984010030	SPRG.COMPRESSION TOOL	1	
82	984010040	DISASSEMBLING TOOL A	1	
83	984010050	DISASSEMBLING TOOL B	1	
84	465217100	HAND PUMP ASSY	1	INCLUDES ITEMS W/*

ELECTRIC DEVICE ASSY.



CONNECTION LIST

	B	IG	ST
OFF			
1	●	●	
2	●	●	●



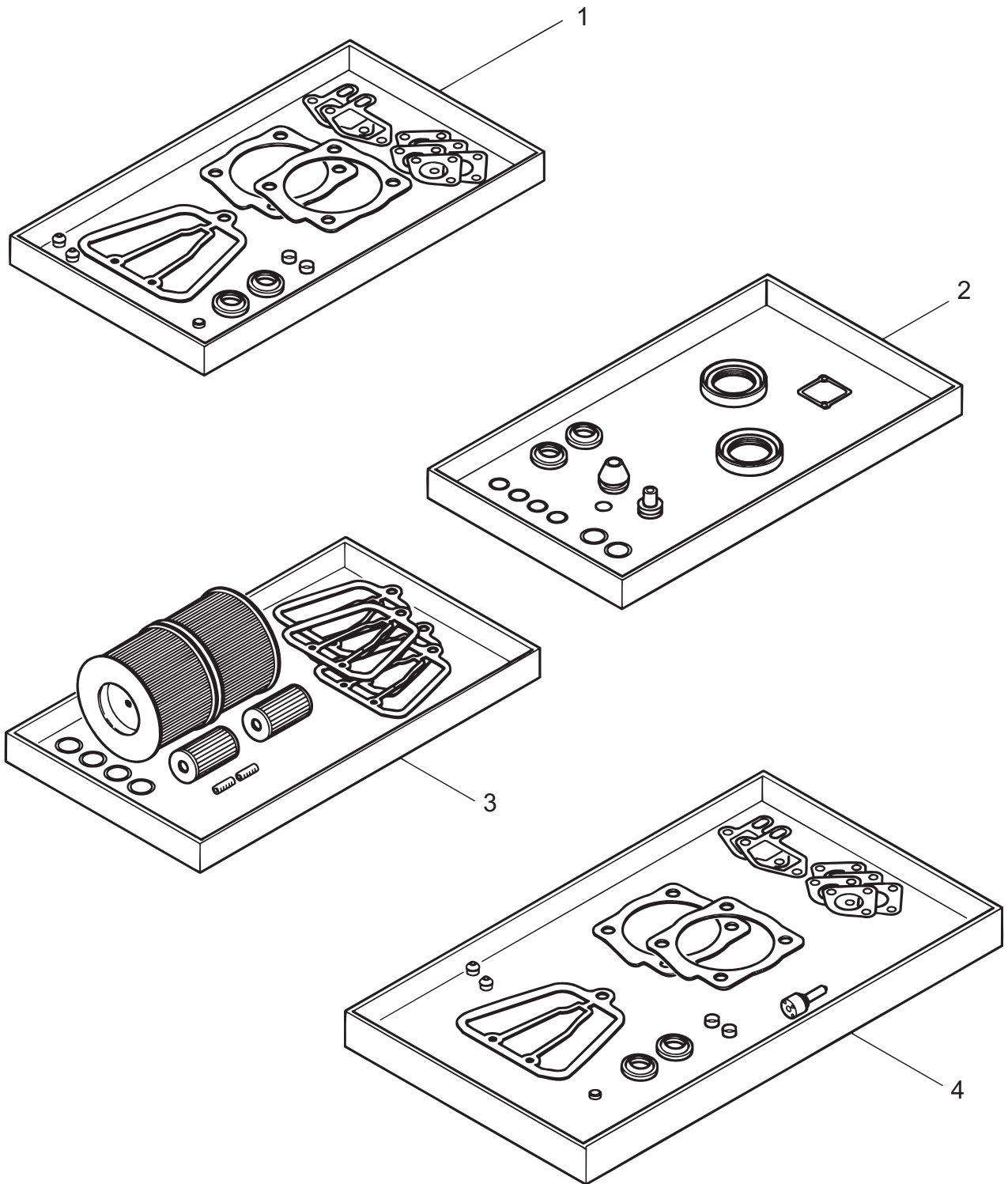
MVH-406DSZ — ELECTRIC DEVICE ASSY.

ELECTRIC DEVICE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	464457460	BATTERY CORD (-) 400L	1	
2	464457470	BATTERY CORD (+)550L	1	
3	464216660	CRADLE, BATTERY	1	
4	456447590	RUBBER PLATE (E) 28X240X5	1	
5	456447600	RUBBER PLATE 50X240X10	2	
6	001221020	BOLT 10X20 T	2	
7	030210250	WASHER, LOCK M10	2	
8	955010020	BATTERY 46B24L	1	
9	955300490	BATTERY TERMINAL (-)	1	
10	955300470	TERMINAL COVER (-)	1	
11	955300480	BATTERY TERMINAL (+)	1	
12	955300460	TERMINAL COVER (+)	1	
13	464021020	COVER, BATTERY	1	
14	464457410	FIXED PLATE, BATTERY COVER	2	
15	001220825	BOLT 8X25 T	4	
16	030208200	WASHER, LOCK M8	4	
17	464457390	BATTERY BOLT	2	
18	022710809	NYLON NUT M8	2	
19	031108160	WASHER, FLAT M8	2	
20	464343740	HOLDER, BATTERY	1	
24	465459640	WIRE COMPLETE	1	
26	454010020	CLAMP TC-100	3	
28	50465100	BUZZER	1	
40	50384401	STARTER SWITCH ASSY.....	1	INCLUDES ITEMS W/ #
44#	05126402	PROTECTION CAP	1	
45#	50404900	KEY, STARTER SWITCH	1	
46	465459680	RELAY CABLE/BUZZER	1	

ROBIN D1B40T92040 — SPARE PARTS KITS ASSY.

ELECTRIC DEVICE ASSY.



ROBIN D1B40T92040 — SPARE PARTS KITS ASSY.

ELECTRIC DEVICE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01679202	GASKET SET CYL.HEAD	1	
2	01679302	GASKET SET CRK.CASE	1	
3	01679400	1000H MAINTK.KIT	1	
4	01679510	EMERGENCY KIT	1	

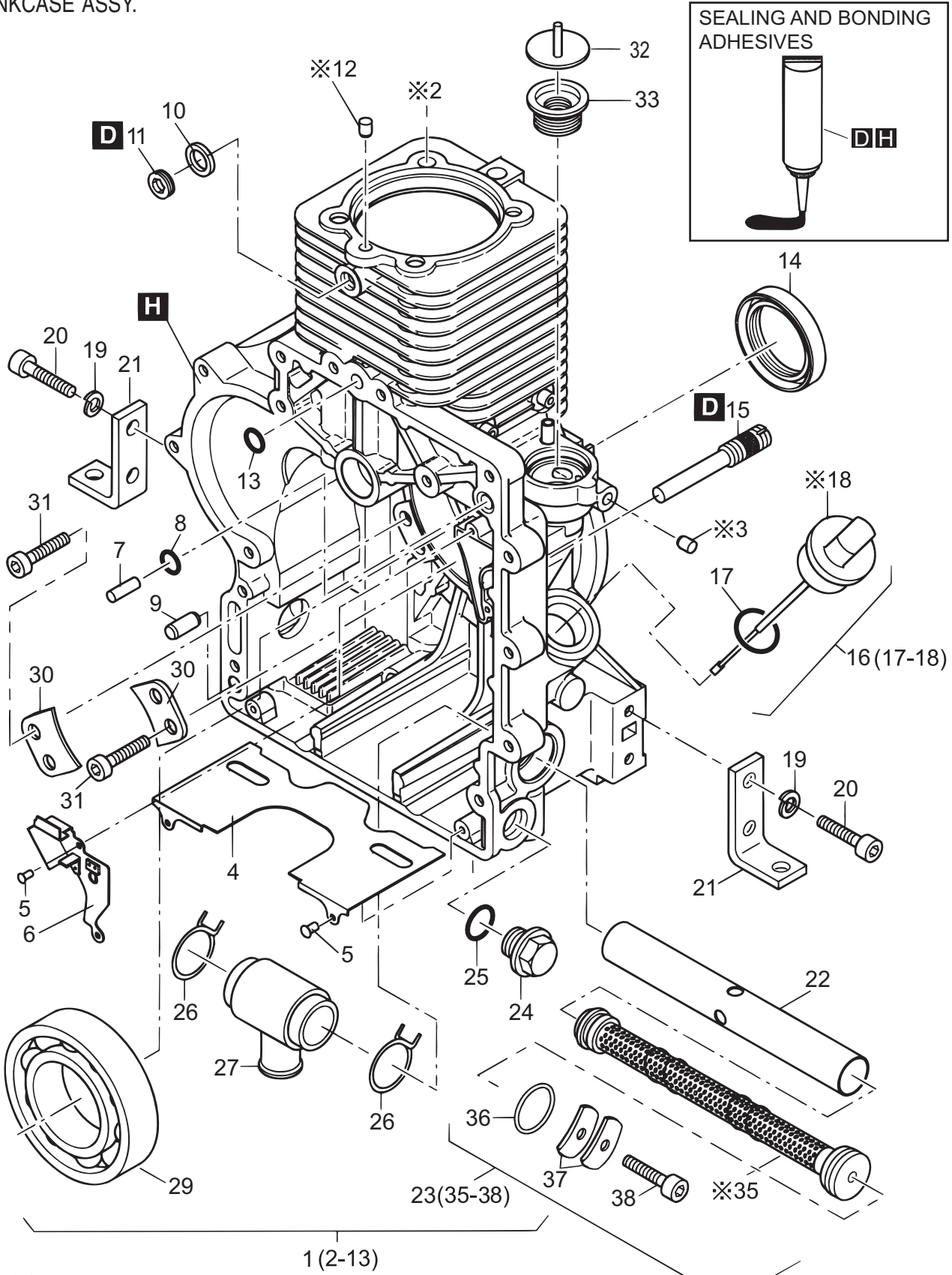
ROBIN D1B40T92040 — ACCESSORIES ASSY.

ACCESSORIES ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01329701	ACCESSORIES KIT	1	
2	01330901	TOOL SET	1	
3	05110402	LABEL CHECK	1	
4	05130000	LABEL STARTING	1	
5	05130100	LABEL LIFTING	1	

ROBIN D1B40T92040 — CRANKCASE ASSY.

CRANKCASE ASSY.



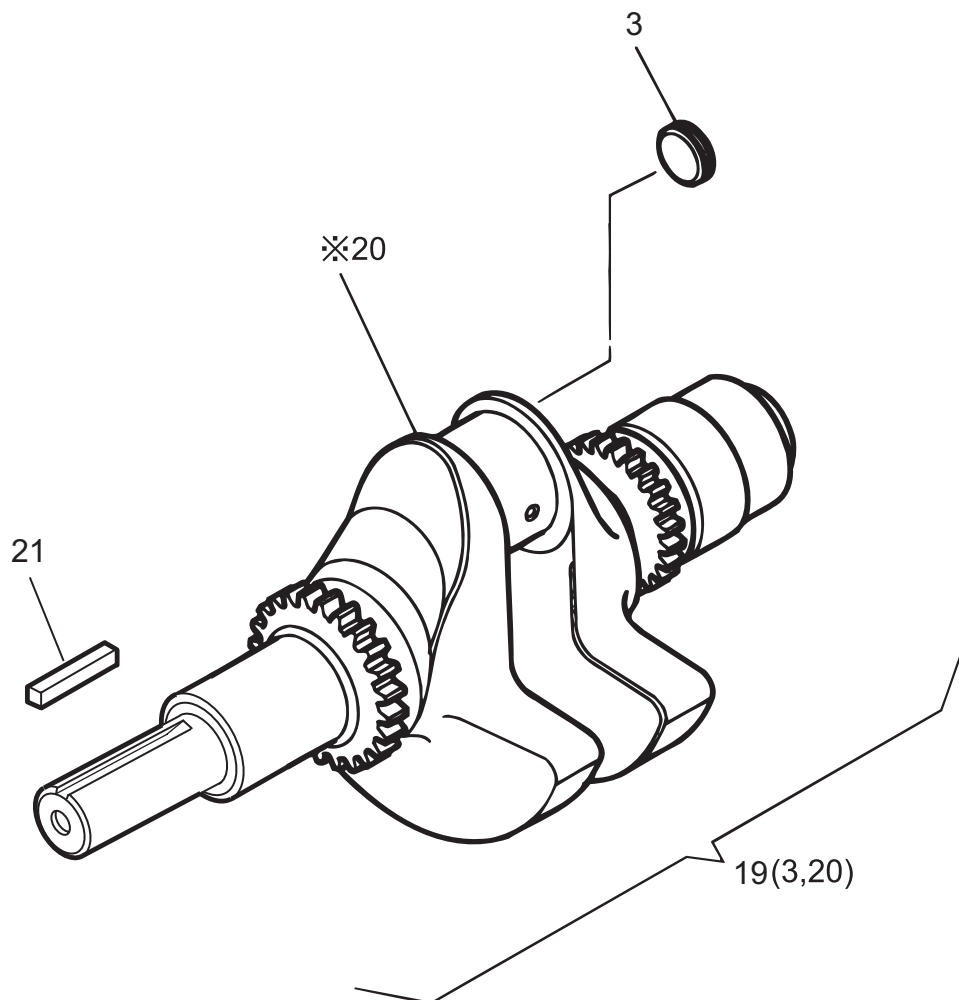
ROBIN D1B40T92040 — CRANKCASE ASSY.

CRANKCASE ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	50223300	LOCTITE221 50ML	1	
H	50282501	SILICON 30ML	1	
1	01679100	CRANKCASE ASSY	1	INCLUDES ITEMS W/ #
2#		CRANKCASE	1	NOT SOLD SEPARATELY
3#		PLUG	1	NOT SOLD SEPARATELY
4#	04141600	COVER SHEET	1	
5#	40002600	BLIND RIVET3.2	1	
6#	01336400	COVER SHEET (SIDE)	4	
7#	50502801	CYL.PIN M6X24	1	
8#	50440300	O-RING 8X1.5	1	
9#	50249102	CYL.PIN M6X24	1	
10#	50062400	JOINT A10X13.5	1	
11#	50062300	CLOS.SCREW M10X1	1	
12#		PLUG	1	NOT SOLD SEPARATELY
13#	40022300	O-RING 8X2	1	
14	50479000	OIL SEAL 45X60X8	1	
15	04144401	GRUB SCREW	1	
16	01342800	DIPSTICK ASSY	1	INCLUDES ITEMS W/ \$
17\$	04125000	SEALING RING	1	
18\$		DIPSTICK	1	NOT SOLD SEPARATELY
19	50208500	SPRING WASHER 8	1	
20	04219500	ALLEN SCREW M8X40	1	
21	04144701	ENGINE BRACKET	1	
22	04141500	TUBE F.OIL FILTER	8	
23	01542702	OIL SUCTION FILTER ASSY	8	INCLUDES ITEMS W/ %
24	50373100	DRAIN PLG.MAGNT.M22	4	
25	50001600	JOINT A22X27	1	
26	05036900	HOSE CLIP	2	
27	04163000	T-PIECE	1	
29	50478900	GROOV.BALLBEAR.6310	1	
30	04133800	PLATE	3	
31	50564200	ALLEN SCREW M6X18	6	
32	01555800	COVER	1	
33	03568701	OIL SUPPLEMENT PLUG	1	
35%		FILTER, OIL SUCTION	1	NOT SOLD SEPARATELY
36%	50475901	O-RING 20X4	1	
37%	05148200	PLATE SPRING	2	
38%	50170700	ALLEN SCREW M6X16	1	

ROBIN D1B40T92040 — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.



※ Part not available separately

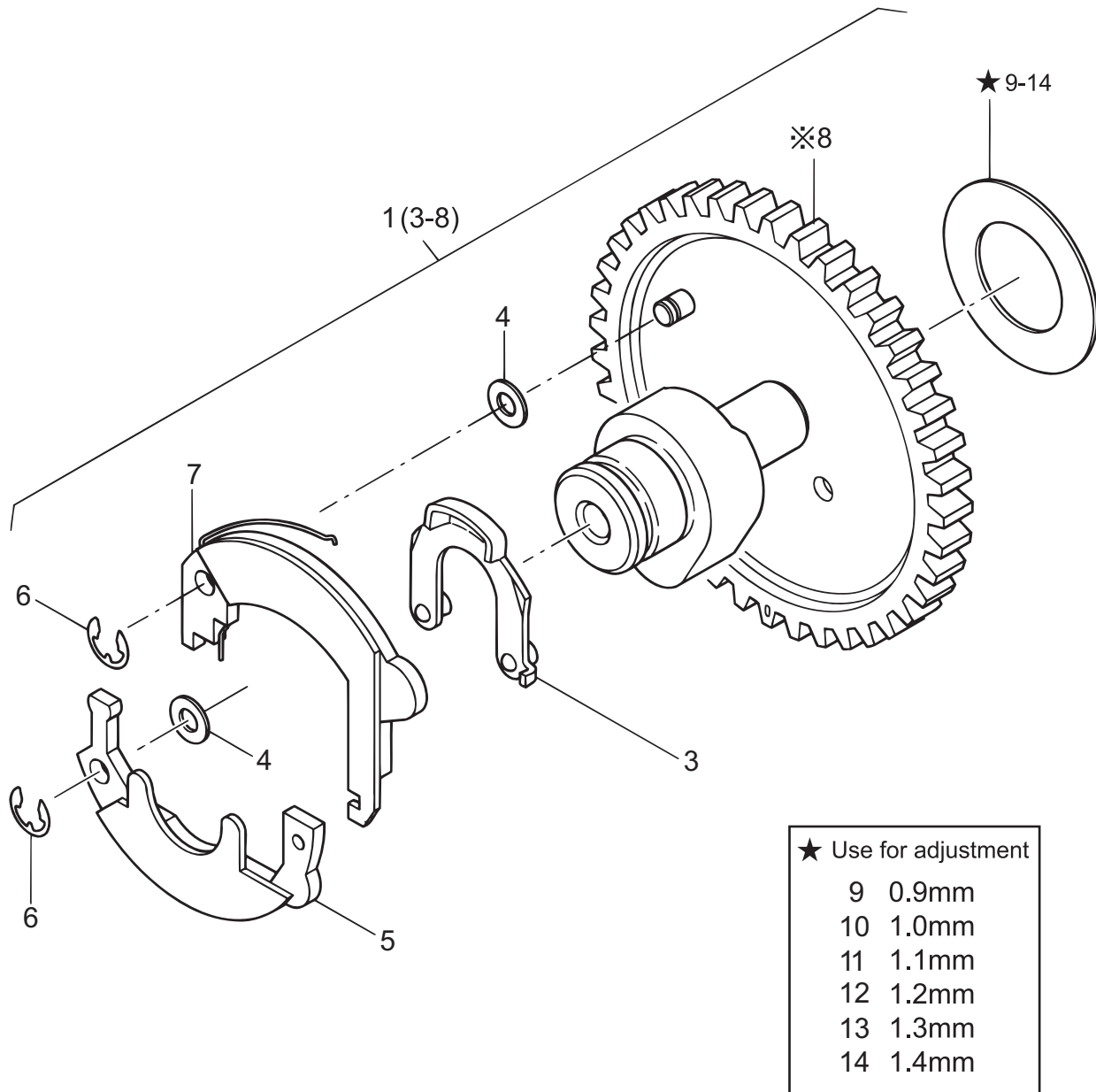
ROBIN D1B40T92040 — CRANKSHAFT ASSY.

CRANKSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
3#	50529700	COVER 14	1	
19	01896200	CRANKSHAFT ASSY	1	INCLUDES ITEMS W/ #
20#		CRANKSHAFT	1	NOT SOLD SEPARATELY
21	05306100	KEY 7X7X35	1	

ROBIN D1B40T92040 — CAMSHAFT ASSY.

CAMSHAFT ASSY.



※ Parts not available separately

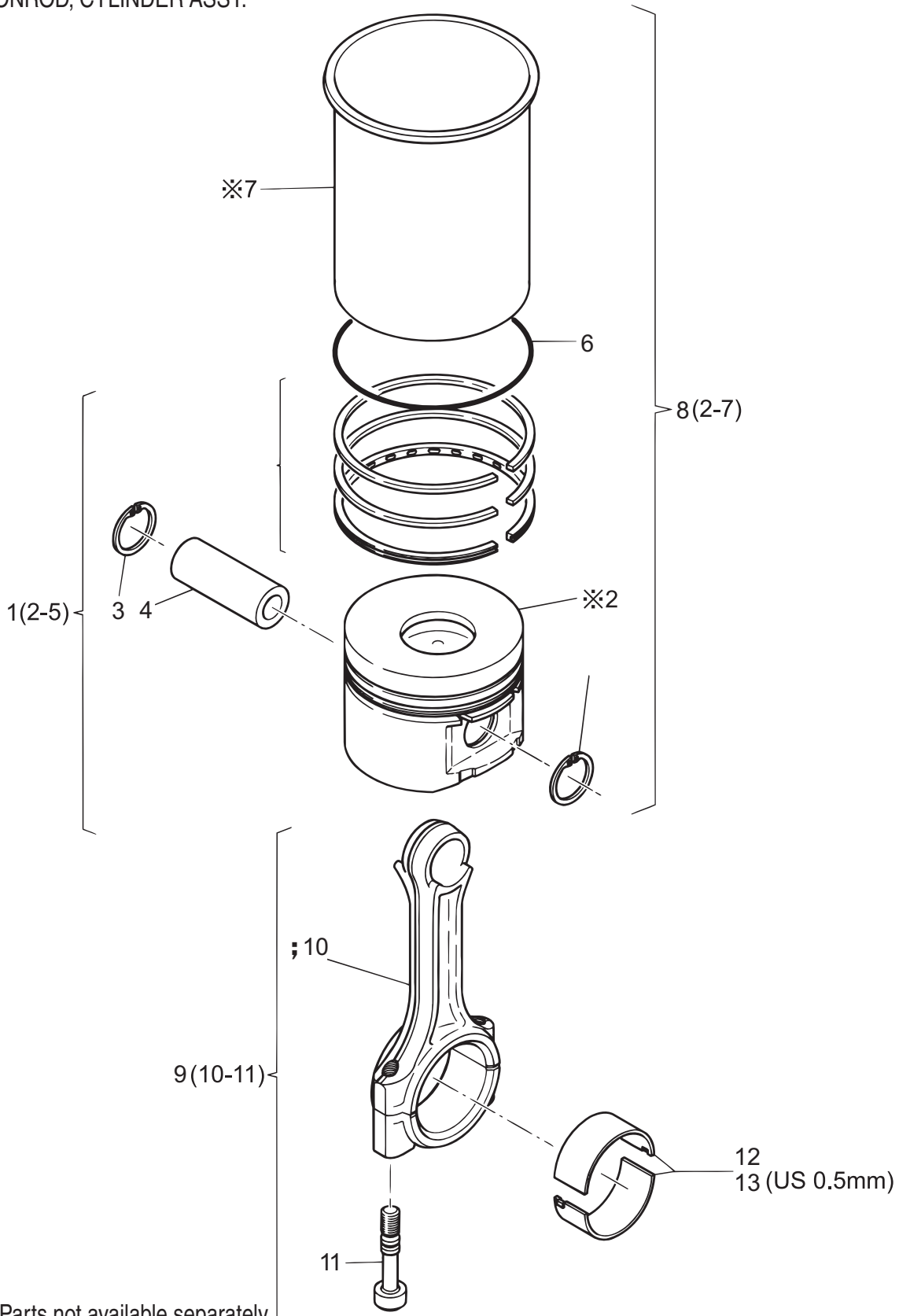
ROBIN D1B40T92040 — CAMSHAFT ASSY.

CAMSHAFT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01345003	CAMSHAFT ASSY.	1	INCLUDES ITEMS W/ #
3#	01326401	CAMLEVER	1	
4#	50123200	SHIM 5X10X0.5	2	
5#	01326600	FLYWEIGHT	1	
6#	50255300	LOCKING WASHER 3.2	2	
7#	01326501	F.WEIGHT HAND-ST.	1	
8#		CAMSHAFT	1	NOT SOLD SEPARATELY
9	04121700	SHIM 23X38X0.9	1	
10	04112100	SHIM 23X38X1.0	1	
11	04112200	SHIM 23X38X1.1	1	
12	04112300	SHIM 23X38X1.2	1	
13	04125100	SHIM 23X38X1.3	1	
14	04125200	SHIM 23X38X1.4	1	

ROBIN D1B40T92040 — PISTON, CONROD, CYLINDER ASSY.

PISTON, CONROD, CYLINDER ASSY.



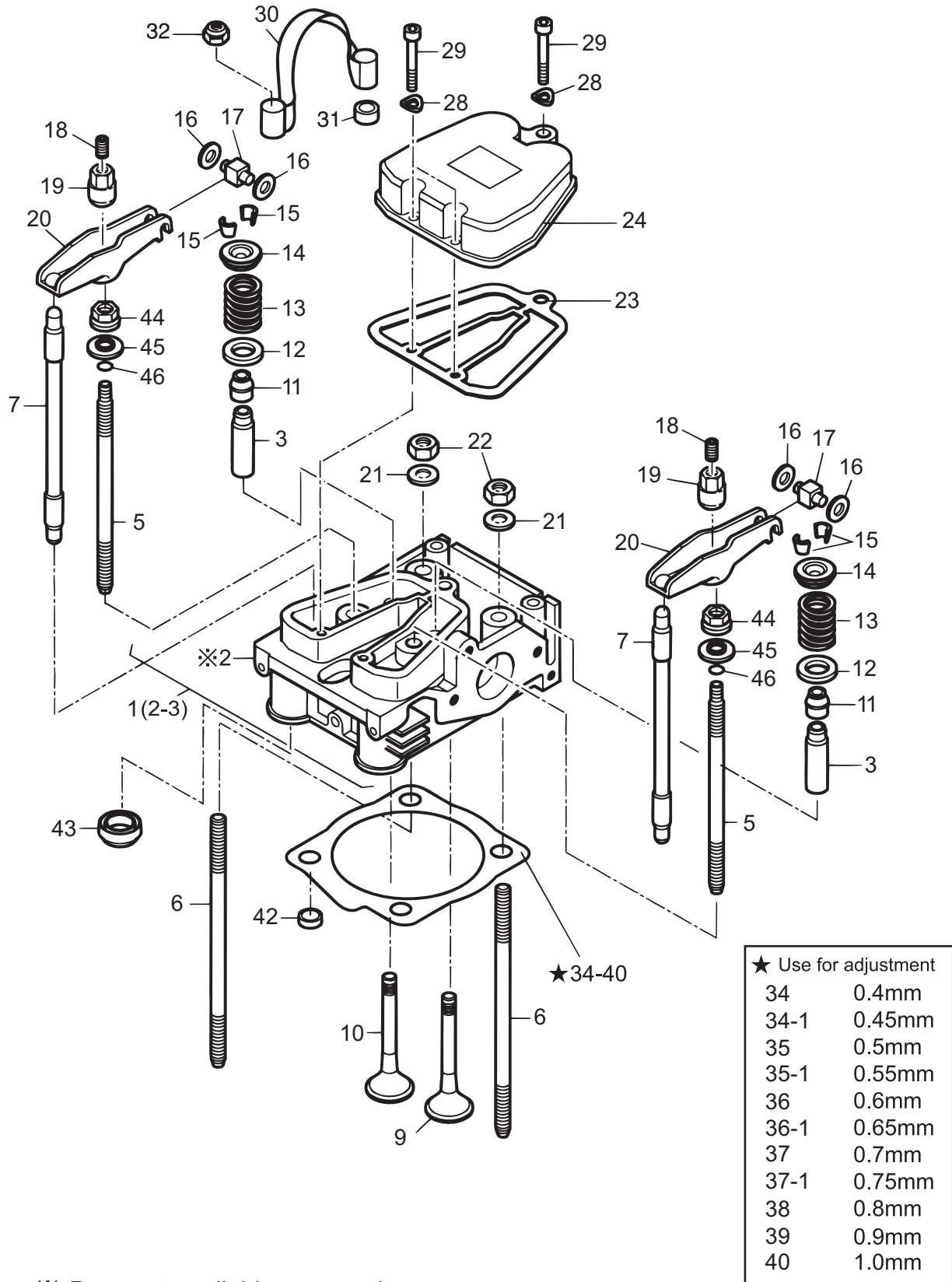
ROBIN D1B40T92040 — PISTON, CONROD, CYLINDER ASSY.

PISTON, CONROD, CYLINDER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01374810	PISTON ASSY 88 EPA2	1	INCLUDES ITEMS W/ %
2#%		PISTON	1	NOT SOLD SEPARATELY
3#%	50482300	CIRCLIP 22X1	2	
4#%	50527100	GUDGEON PIN	1	
5#%	01374701	PISTON RING SET 88	1	
6#	50479301	O-RING 93 X 1.5	1	
7#		CYLINDER	1	NOT SOLD SEPARATELY
8	01679610	CYLINDER W/ PISTON ASSY	1	INCLUDES ITEMS W/ #
9	01343500	CONROD ASSY	1	INCLUDES ITEMS W/ \$
10\$		CONROD	1	NOT SOLD SEPARATELY
11\$	04100500	CONROD SCREW	2	
12	01679800	BIG END BEARING	1	
13	01692700	BIG END BEAR.US0.5	1	

ROBIN D1B40T92040 — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.



ROBIN D1B40T92040 — CYLINDER HEAD ASSY.

CYLINDER HEAD ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01850900	CYLINDER HEAD ASSY EPA2	1	INCLUDES ITEMS W/ #
2#		CYLINDER HEAD	1	NOT SOLD SEPARATELY
3#	05209700	VALVE GUIDE	2	
5	05159600	STUD CYL.HEAD	2	
6	05159700	STUD CYL.HEAD	2	
7	01374000	PUSHROD	2	
9	05145100	VALVE INLET	1	
10	05145200	VALVE EXHAUST	1	
11	50425800	STEM SEAL CAP	2	
12	04147100	WASHER	2	
13	04146900	VALVE SPRING	2	
14	04147000	SPRING PLATE	2	
15	50425700	COLLET	2	
16	05240700	SUPP.DISC 6X12X1.35	4	
17	05091101	SLIDER	2	
18	50513100	GRUB SCREW M8X10	2	
19	05054700	NUT F.ROCKERARM	2	
20	05146701	ROCKER	2	
21	05099300	WASHER 10.1X24X3	2	
22	50396600	HEXAGON NUT M 10	2	
23	05156401	GASKET CYL.HEAD	1	
24	05146501	COVER F.CYL.HEAD	1	
28	50081200	SPRING WASHER A 6	3	
29	50374900	ALLEN SCREW M 6X35	3	
30	04117701	LIFTING STRAP	1	
31	04126100	PROTECTION HOSE	2	
32	40028600	HEX.NUT M10	2	
34	05158903	GASKET F.CYL.HEAD 0.4	1	
34-1	04248400	GASKET F.CYL.H. 0.45	1	
35	04248500	GASKET F.CYL.H. 0.55	1	
35-1	04248500	GASKET F.CYL.H. 0.55	1	
36	05159103	GASKET F.CYL.HEAD 0.6	1	
36-1	04248600	GASKET F.CYL.H. 0.65	1	
37	05159203	GASKET F.CYL.HEAD 0.7	1	
37-1	04248700	GASKET F.CYL.H. 0.75	1	
38	05159303	GASKET F.CYL.HEAD 0.8	1	
39	05159403	GASKET F.CYL.HEAD 0.9	1	
40	05159503	GASKET F.CYL.HEAD 1.0	1	
42	04174500	CENTR.BUSH	2	
43	04106500	SEALING RING TIM.COV.	2	
44	03171800	COLLAR NUT	2	
45	04243700	DISC 8.1X12X2.0	2	
46	50563900	O-RING 10X2.5	2	

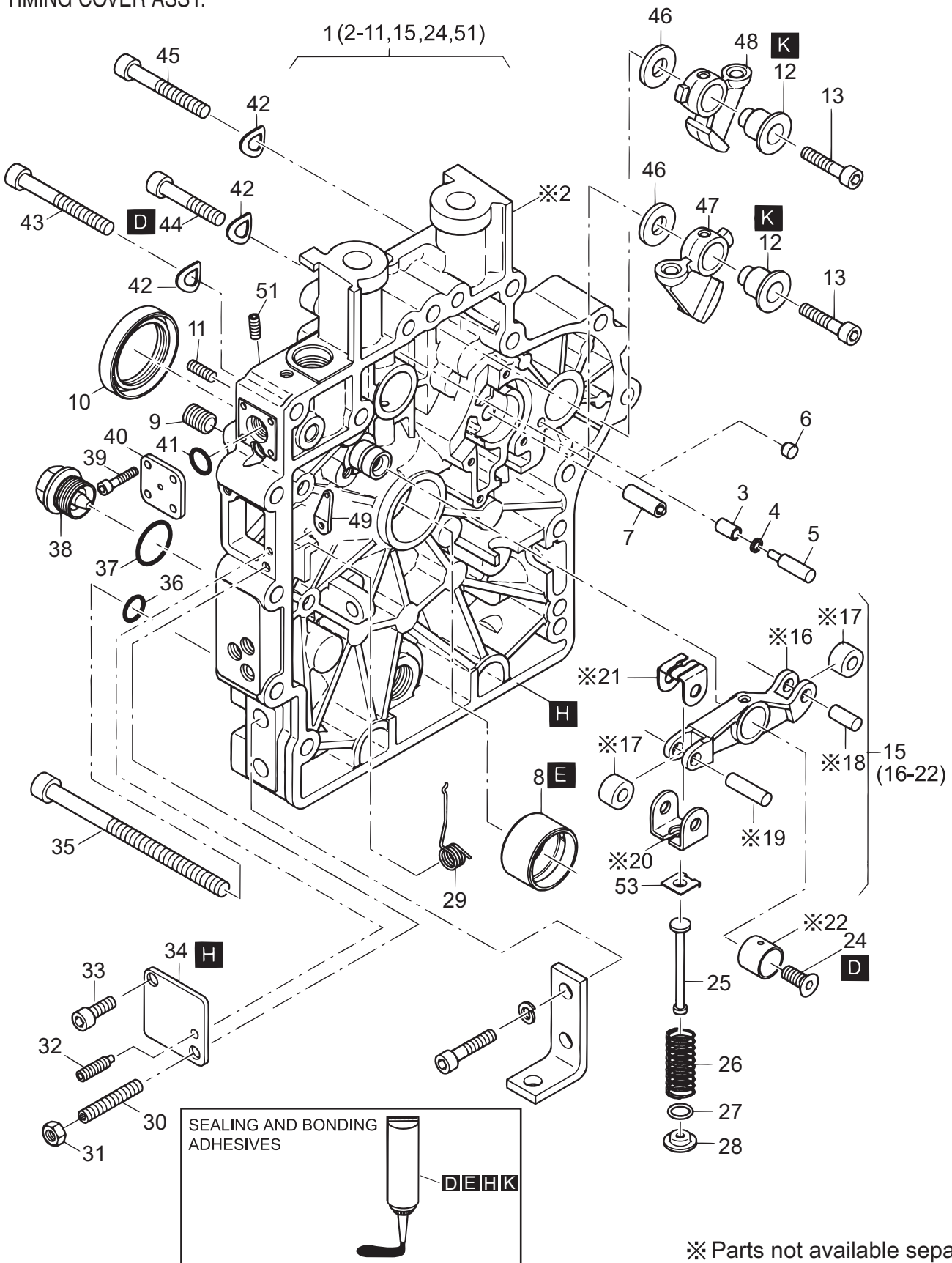
ROBIN D1B40T92040 — OIL PUMP AND GOVERNOR ASSY.

OIL PUMP AND GOVERNOR ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	50223300	LOCTITE221 50ML	1	
H	50282501	SILICON 30ML	1	
M	50485100	SCHLEIF PASTE 80G	1	
1	01344510	OILPUMP CP. ASSY	1	INCLUDES ITEMS W/ #
2#		OIL PUMP	1	NOT SOLD SEPARATELY
3#	04210910	CIRCLIP	1	
4#		GEAR, OIL PUMP	1	NOT SOLD SEPARATELY
5#		HOUSING, OIL PUMP	1	NOT SOLD SEPARATELY
6	05078110	COVER, OIL PUMP	1	
7	05097100	RETAINING STRAP	1	
8	50447900	BALL 3.5 MM G100	1	
9	50429400	ALLEN SCREW M5X12	4	
10	05097300	FLAT SPRING 0.4	1	
11	01346000	TUBE OIL SUCTION	1	
12	04153400	FISHPLATE	1	
13	40002600	BLINDRIVET3.2	2	
14	05078600	SHAFT	1	
15	50434800	CIRCLIP 1.9	2	
16	01345901	LEVER	1	
17	50422400	SHIM 8X14X1	2	
18	01365200	GOVERNOR LEVER	1	
19	50125800	DISC 8X14X0.5	1	
20	05130910	GOVERNOR SPRING	1	
21	05130800	STOP	1	
22	05079800	INTERMEDIATE PLATE	1	
23	50465300	ALLEN SCREW M3X8	2	
24	50435000	ALLEN SCREW M3X12	2	
25	05148600	STOP SPRING	1	
26	05078900	GOV. SPRING 0.3	1	
27	05131600	GOV. SPRING 0.2	1	
31	50092700	CIRCLIP 7	1	
32	05079301	SHAFT	1	
34	50563400	TENSION SPRING	1	
35	40022401	O-RING 8X2 GRAY	1	
36	05151700	PLUG	1	
37	50488700	PRESSURE SPRING	1	
38	50475700	GRUB SCREW M10X10	4	
39	05178810	ECCENTRIC SCREW	1	
40	05178400	PLATE	1	
41	50492300	FILL.HEAD SCREW M5X12	1	
42	50216300	WASHER 5.3	2	
43	50492200	ALL.SCR. M5X25	1	
44	05178500	STOP	2	
45	50422700	SQUARE NUT M5	1	
46	05079611	CENTRIFUGAL WEIGHT	2	
47	05160211	CENTRIFUGAL WEIGHT	1	
48	05078502	GOVERNOR SLEEVE	1	
49	50057900	CYL.PIN 4 M6X8	1	

ROBIN D1B40T92040 — TIMING COVER ASSY.

TIMING COVER ASSY.



ROBIN D1B40T92040 — TIMING COVER ASSY.

TIMING COVER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	50223300	LOCTITE221 50ML	1	
E	50223400	LOCTITE648 10ML	1	
H	50282501	SILICON 30ML	1	
K	50342601	HOCHTEMP.FETT 400G	1	
1	01894200	TIMING COVER CP. ASSY	1	INCLUDES ITEMS W/ #
2#		TIMING COVER	1	NOT SOLD SEPARATELY
3#	04185800	CLOSING PLUG	1	
4#	50464100	O-RING 2X1	1	
5#	04185700	CLOSING PLUG 4X15	1	
6#	04168600	PLUG 4.3	1	
7#	01344600	BOLT F.GOV.HOUSING	1	
8#	04148800	MAIN BEARING	1	
9#	50530600	GRUB SCREW M8X10	4	
10#	50479500	OIL SEAL 35X47X7	1	
11#	50400600	GRUB SCREW M 5X10	2	
12	03794201	CAM FOLLOW SP.	2	
13	50469900	ALLEN SCREW M6X30	2	
15#	01346710	ROCKER LEVER ASSY	1	INCLUDES ITEMS W/ \$
16\$		ROCKER LEVER	1	NOT SOLD SEPARATELY
17\$		BUSHING, ROCKER LEVER	1	NOT SOLD SEPARATELY
18\$		PIN, ROCKER LEVER	1	NOT SOLD SEPARATELY
19\$		PIN, ROCKER LEVER	1	NOT SOLD SEPARATELY
20\$		CLAMP, ROCKER LEVER	1	NOT SOLD SEPARATELY
21\$		CLAMP, ROCKER LEVER	1	NOT SOLD SEPARATELY
22\$		SPINDLE	1	NOT SOLD SEPARATELY
24#	50561800	CTR.SUNK SCREW M6X40	1	
25	04094700	DRAW ROD	1	
26	04095700	PRESSURE SPRING	1	

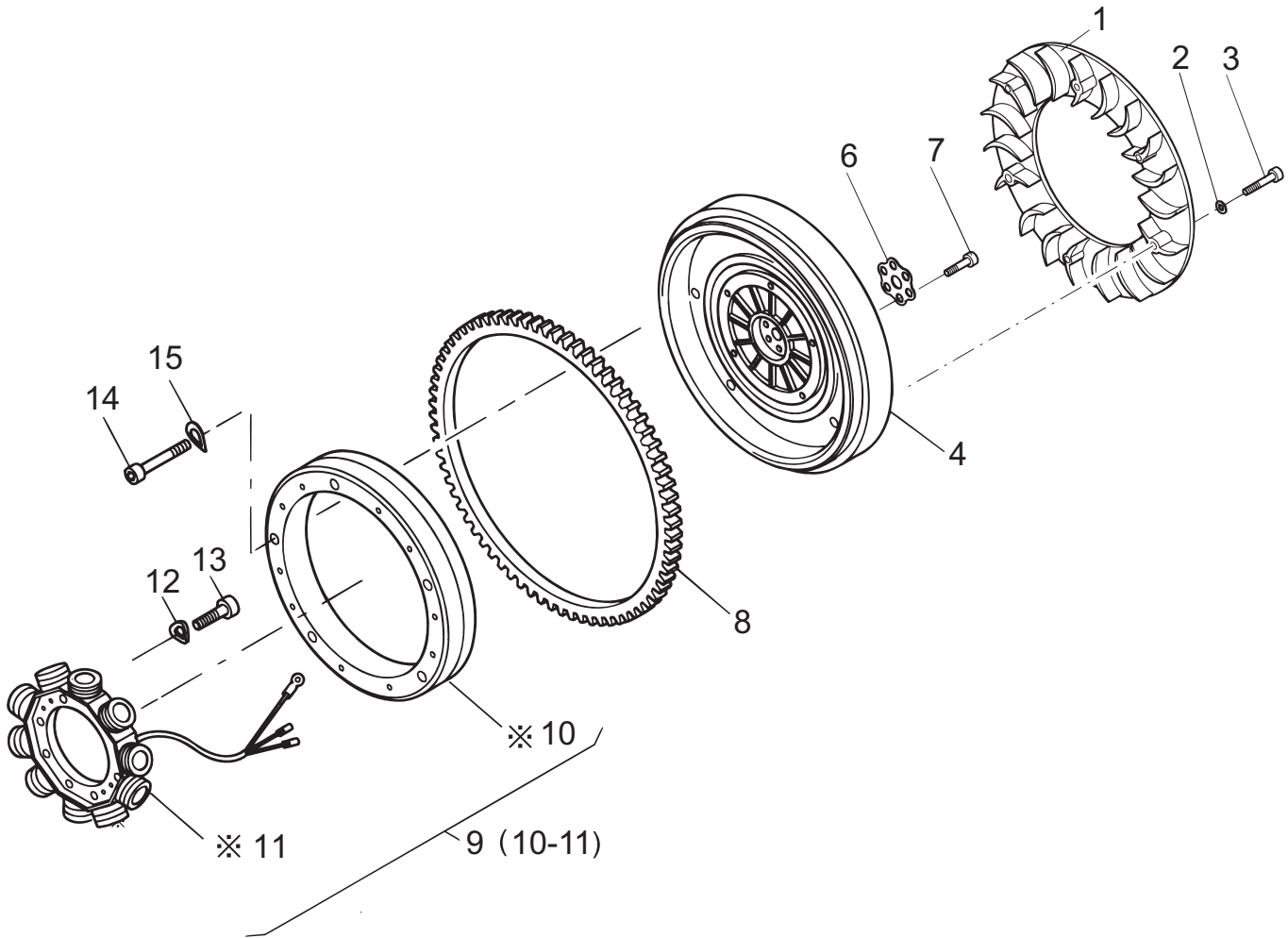
ROBIN D1B40T92040 — TIMING COVER ASSY. (CONTINUED)

TIMING COVER ASSY. (CONTINUED)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
27	04133900	DISC 10.7X19X0.5	1	
28	04094802	CUP	1	
29	05095210	SPRING F.GOVERNOR	1	
30	50499300	GRUB SCREW M6X35	1	
31	50144400	HEXAGON NUT M6	1	
32	50499400	GRUB SCREW M4X25	1	
33	50384200	ALLEN SCREW M6X12	1	
34	04095210	COVER	1	
35	50463000	ALLEN SCREW M8X130	2	
36	50162900	JOINT A8X14	2	
37	50459100	JOINT A22X27	1	
38	50373100	DRAIN PLG.MAGNT.M22	1	
39	50397100	ALLEN SCREW M4X10	4	
40	01351700	COVER	1	
41	50329000	O-RING 9.5X2.5	1	
42	50095100	SPRING WASHER A8	15	
43	50288800	ALLEN SCREW M8X55	11	
44	50177500	ALLEN SCREW M8X40	2	
45	50392900	ALLEN SCREW M8X50	2	
46	03794100	WASHER	2	
47	04146600	CAM FOLLOWER	1	
48	04146000	CAM FOLLOWER	1	
49	05127100	LEVER	1	
51#	50262400	THREADED PIN M6X10	1	
53	04189500	CUP	1	

ROBIN D1B40T92040 — BLOWER AND FLYWHEEL ASSY.

BLOWER, FLYWHEEL ASSY.



※ Parts not available separately

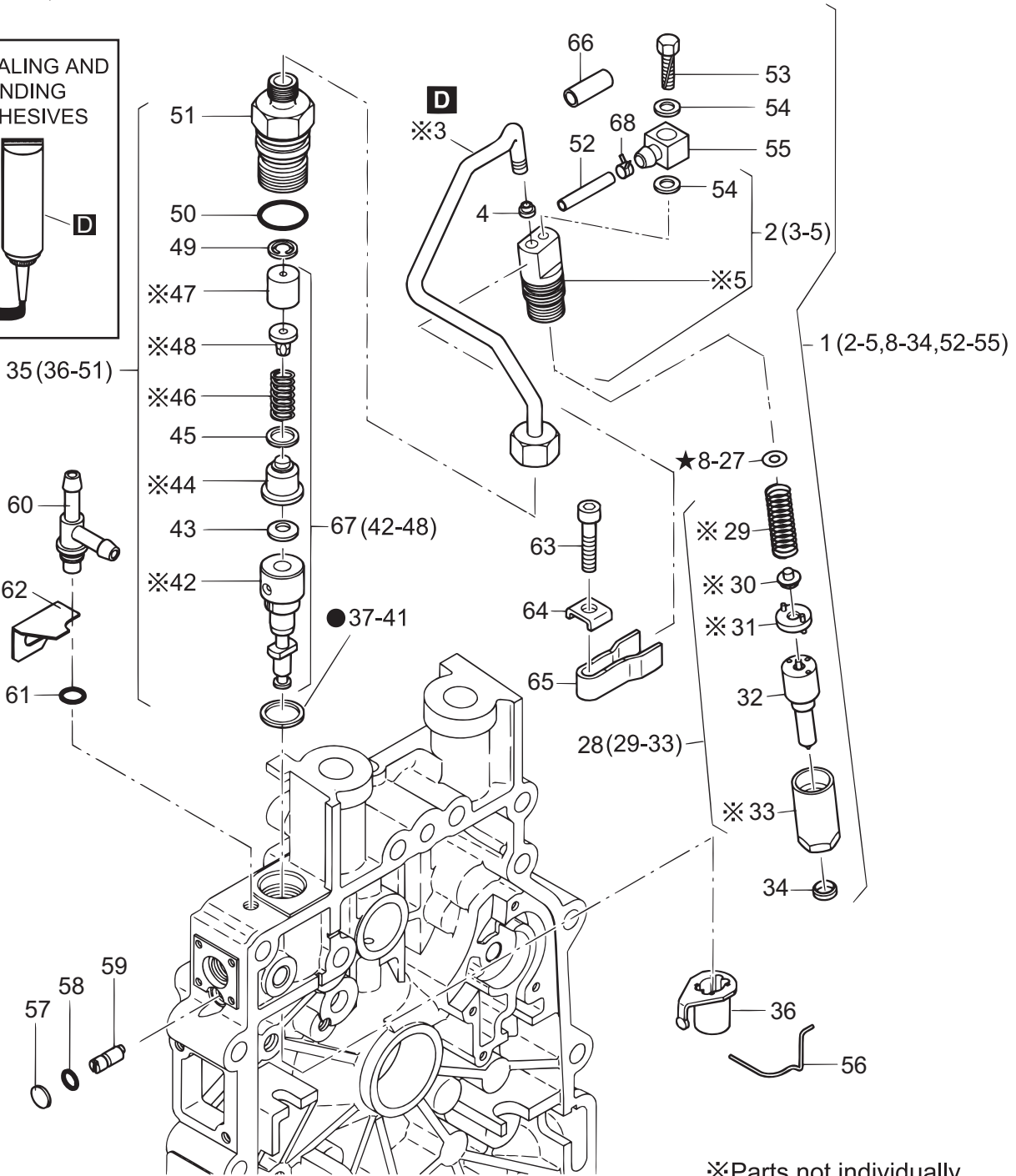
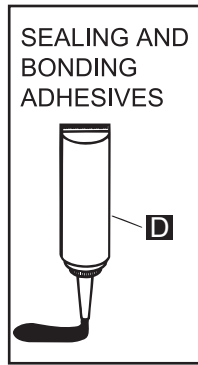
ROBIN D1B40T92040 — BLOWER AND FLYWHEEL ASSY.

BLOWER, FLYWHEEL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	04205800	BLOWER RING	1	
2	50003400	SPRING WASHER A4	6	
3	50327300	ALLEN SCREW M4X20	6	
4	04161502	FLYWHEEL	1	
6	04155101	PLATE	1	
7	50502501	ALLEN SCREW M8X35	6	
8	04151100	GEAR RING	1	
9	50495100	ALTERNATOR ASSY 12V 200W	1	INCLUDES ITEMS W/ #
10#		FLYWHEEL COVER	1	NOT SOLD SEPARATELY
11#		ALTERNATOR	1	NOT SOLD SEPARATELY
12	50081900	SPRING WASHER A5	4	
13	50547000	ALLEN SCREW M5X25	4	
14	50236600	ALLEN SCREW M6X25	5	
15	50081200	SPRING WASHER A6	5	

ROBIN D1B40T92040 — INJECTION EQUIPMENT ASSY.

INJECTION EQUIPMENT ASSY.



※Parts not individually

● Use for adjustment

37	0.2mm
38	0.3mm
39	0.4mm
40	0.5mm
41	0.6mm

★ Use for adjustment

8	1.00mm	13	1.24mm	18	1.50mm	23	1.74mm
9	1.04mm	14	1.30mm	19	1.54mm	24	1.80mm
10	1.10mm	15	1.34mm	20	1.60mm	25	1.84mm
11	1.14mm	16	1.40mm	21	1.64mm	26	1.90mm
12	1.20mm	17	1.44mm	22	1.70mm	27	1.94mm

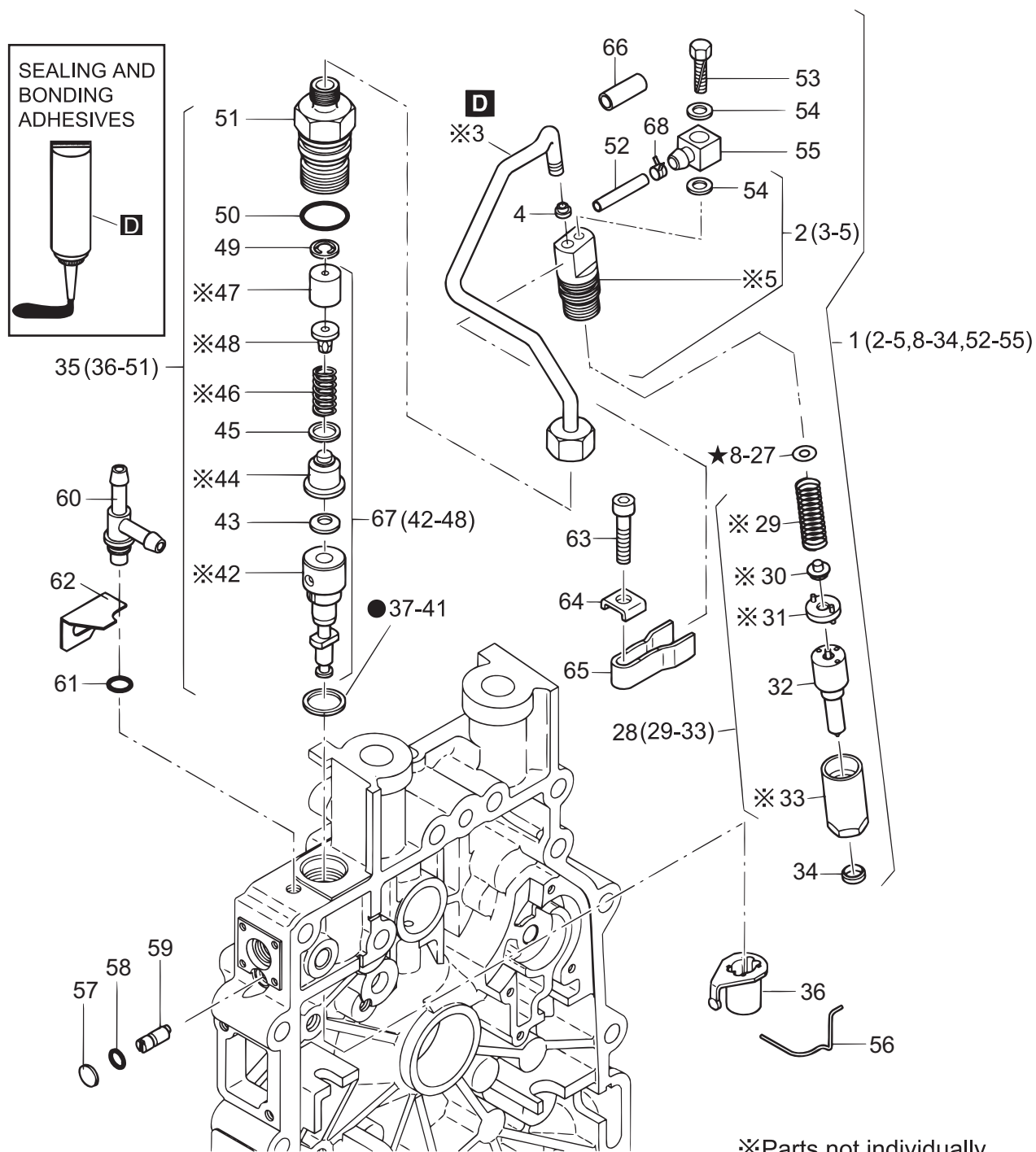
ROBIN D1B40T92040 — INJECTION EQUIPMENT ASSY.

INJECTION EQUIPMENT ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	50223300	LOCTITE221 50ML	1	
1	01389700	INJECTOR CPL.	1	INCLUDES ITEMS W/ %
2%	01680600	NOZZLE HOLD.+PIPE	1	INCLUDES ITEM W/ &
3%&		PIPE	1	NOT SOLD SEPARATELY
4%&	05070601	SEALING CONE	1	
5%&		NIPPLE BODY	1	NOT SOLD SEPARATELY
8%	50436400	SHIM 1.0	1	
9%	50436500	SHIM 1.04	1	
10%	50436600	SHIM 1.10	1	
11%	50436700	SHIM 1.14	1	
12%	50436800	SHIM 1.20	1	
13%	50436900	SHIM 1.24	1	
14%	50437000	SHIM 1.30	1	
15%	50437100	SHIM 1.34	1	
16%	50437200	SHIM 1.40	1	
17%	50437300	SHIM 1.44	1	
18%	50437400	SHIM 1.50	1	
19%	50437500	SHIM 1.54	1	
20%	50437600	SHIM 1.60	1	
21%	50437700	SHIM 1.64	1	
22%	50437800	SHIM 1.70	1	
23%	50437900	SHIM 1.74	1	
24%	50438000	SHIM 1.80	1	
25%	50438100	SHIM 1.84	1	
26%	50438200	SHIM 1.90	1	
27%	50438300	SHIM 1.94	1	
28%	01389900	PARTS SET NOZZLE ASSY EPA	1	INCLUDES ITEMS W/ \$
29\$%		SPRING	1	NOT SOLD SEPARATELY
30\$%		SPRING WASHER	1	NOT SOLD SEPARATELY
31\$%		PLATE	1	NOT SOLD SEPARATELY
32\$%	50566600	NOZZLE	1	
33\$%		BODY	1	NOT SOLD SEPARATELY

ROBIN D1B40T92040 — INJECTION EQUIPMENT ASSY.

INJECTION EQUIPMENT ASSY.



● Use for adjustment

37	0.2mm
38	0.3mm
39	0.4mm
40	0.5mm
41	0.6mm

★ Use for adjustment

8	1.00mm	13	1.24mm	18	1.50mm	23	1.74mm
9	1.04mm	14	1.30mm	19	1.54mm	24	1.80mm
10	1.10mm	15	1.34mm	20	1.60mm	25	1.84mm
11	1.14mm	16	1.40mm	21	1.64mm	26	1.90mm
12	1.20mm	17	1.44mm	22	1.70mm	27	1.94mm

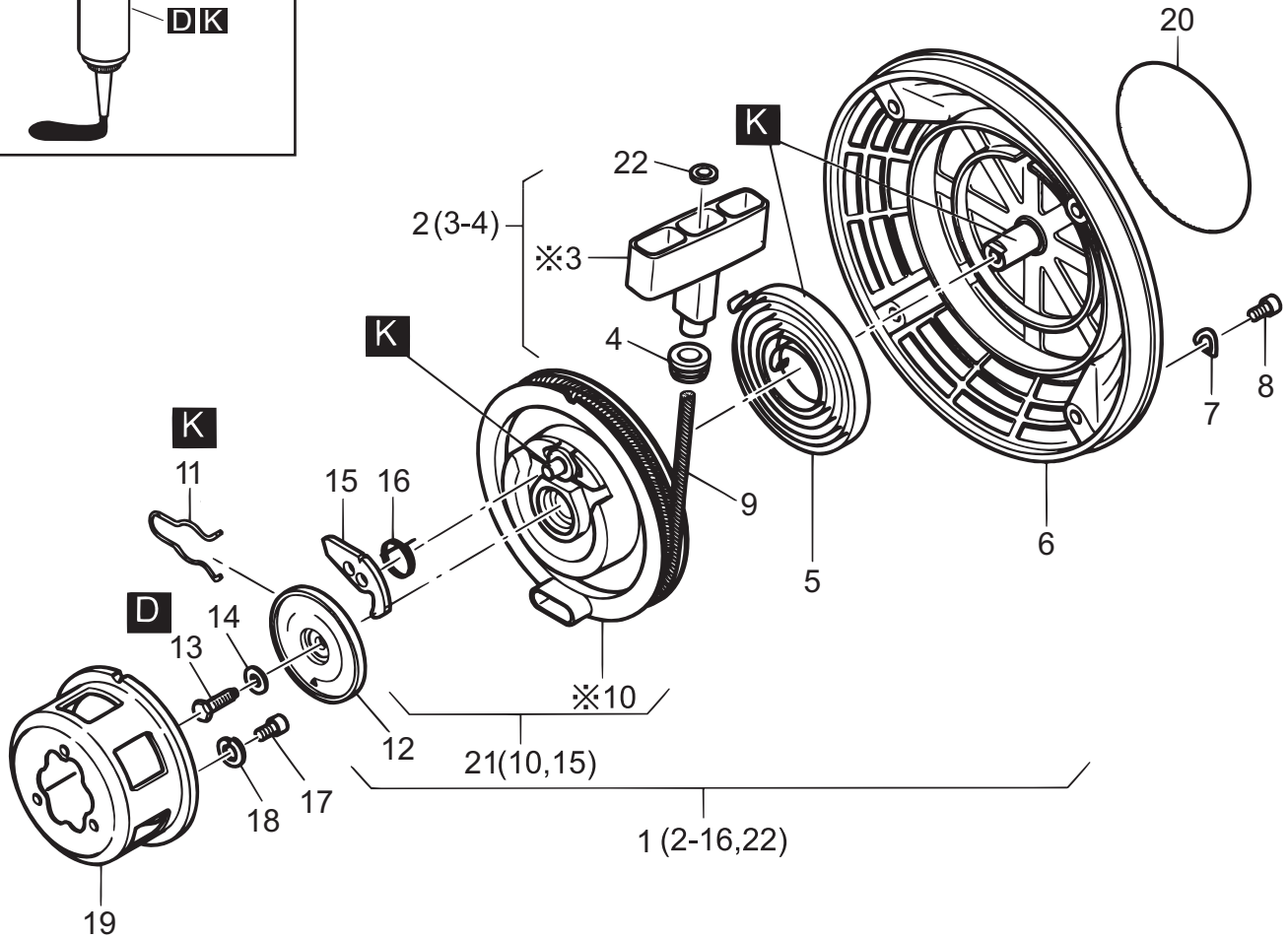
ROBIN D1B40T92040 — INJECTION EQUIPMENT ASSY. (CONTINUED)

INJECTION EQUIPMENT ASSY. (CONTINUED)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
34%	05070500	JOINT WASH.F.INJECT	1	
35	01680810	FUEL INJECTOR PUMP CP	1	INCLUDES ITEMS W/ @
36@	01330801	CONTROL SLEEVE	1	
37@	04096300	SHIM 14X18X0.2	1	
38@	04096400	SHIM 14X18X0.3	1	
39@	04096500	SHIM 14X18X0.4	1	
40@	04096600	SHIM 14X18X0.5	1	
41@	04096700	SHIM 14X18X0.6	1	
42#@		VALVE, FUEL INJECTOR PUMP	1	NOT SOLD SEPARATELY
43#@	04165200	CON.SPR.WASHER 8	1	
44#@		BODY, FUEL INJECTOR PUMP	1	NOT SOLD SEPARATELY
45#@	50476900	JOINT WASHER	1	
46#@		SPRING, FUEL INJECTOR PUMP	1	NOT SOLD SEPARATELY
47#@		VALVE, FUEL INJECTOR PUMP	1	NOT SOLD SEPARATELY
48#@		BODY, FUEL	1	NOT SOLD SEPARATELY
49@	05180800	VALVE PLATE	1	
50@	50489200	O-RING 17X2	1	
51@	05181100	DELIV.VALVE HOLDER	1	
52%	05215000	HOSE 2.5X195	1	
53%	50464500	HEXSCREW A M4X16	1	
54%	50110800	JOINT A4X8	2	
55%	05129000	CONNECTING NIPPLE	1	
56	04161800	HOLDING SPRING	1	
57	50476000	DISC 8	1	
58	50330100	O-RING 4X1.2	1	
59	04097710	ECCENTRIC PIN	1	
60	01756800	NIPPLE	1	
61	50154300	O-RING 7.5X10.5X1.5	1	
62	05183100	SUPPORT	1	
63	50323900	ALL.SCR. M6X30	1	
64	05089300	RETAINING YOKE	1	
65	05056700	FORK F. INJECTOR	1	
66	05267900	INSUL.HOSE 120MM	1	
67	01828510	F. INJ.PUMP BODY	1	INCLUDES ITEMS W/ #
68	50577900	CLAMP 0.5X6.0XA6.0	1	

ROBIN D1B40T92040 — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.



※ Not available separately

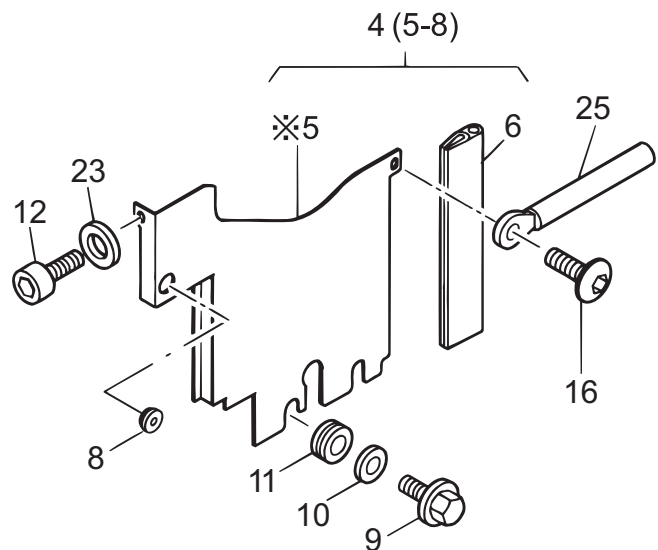
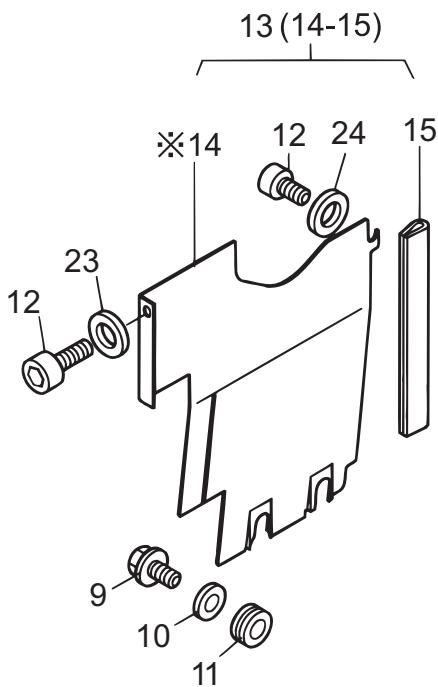
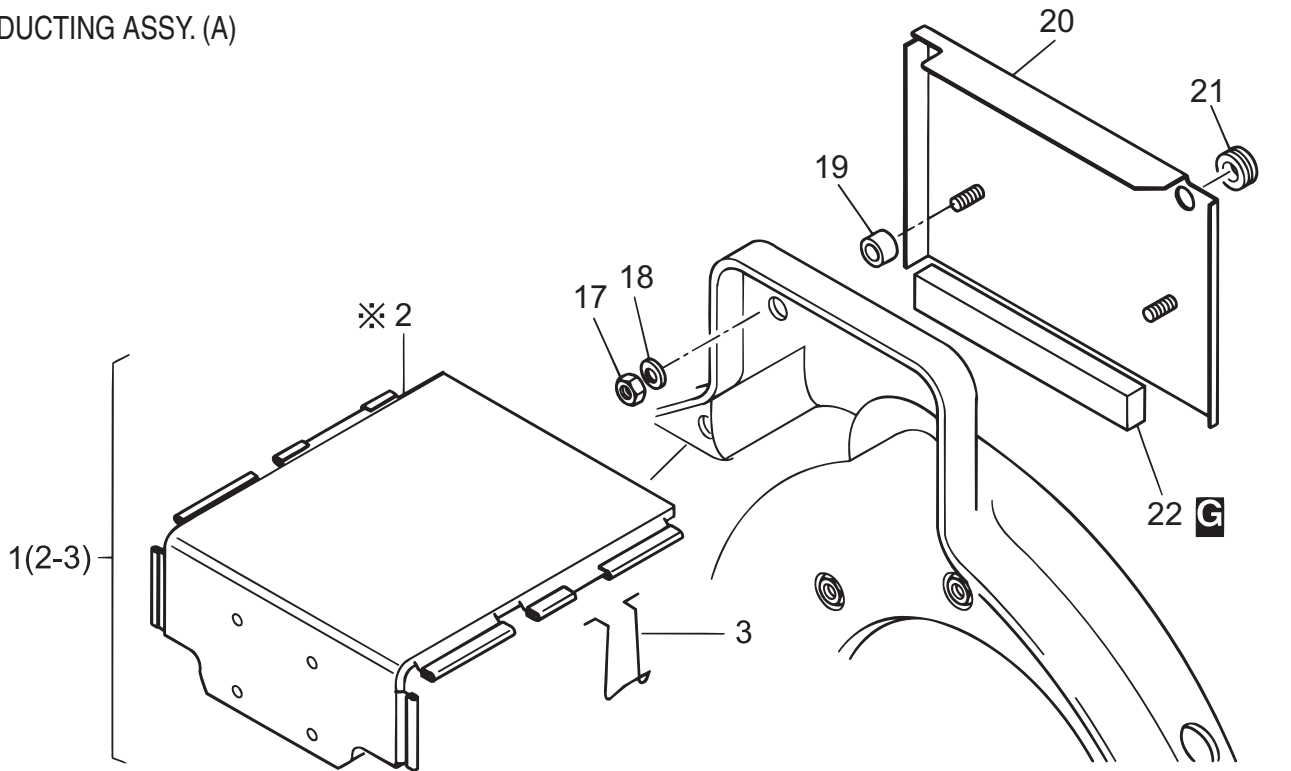
ROBIN D1B40T92040 — RECOIL STARTER ASSY.

RECOIL STARTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	50223300	LOCTITE221 50ML	1	
K	50342601	HOCHTEMP.FETT 400G	1	
1	01851900	RECOIL-STARTER	1	INCLUDES ITEMS W/ %
2%	01497800	HANDLE ASSY.	1	INCLUDES ITEMS W/ #
3%#		HANDLE	1	NOT SOLD SEPARATELY
4%#	03665200	RUBBER SLEEVE	1	
5%	05045201	RETURN SPRING	1	
6%	01569300	HOUSING F.R.START	1	
7%	50081200	SPRING WASHER A6	4	
8%	50062700	ALLEN SCREW M6X10	4	
9%	05088901	ROPE F.R.START	1	
10%\$		ROPE PULLEY	1	NOT SOLD SEPARATELY
11%	05044901	BRAKE SPRING	1	
12%	05045001	BRAKE DISC	1	
13%	50146300	HEX SCREW M6X18	1	
14%	50390701	CON.SPR.WASHER 6	1	
15%\$	05044800	RATCHET	1	
16%	05061300	RETURN SPRING	1	
17	50062700	ALLEN SCREW M6X10	3	
18	50170900	SPRING WASHER 6	3	
19	04155000	DRIVING SLEEVE	1	
20	05298100	STICKER LABEL	1	
21	01548800	ROPE PULLEY	1	INCLUDES ITEM W/ \$
22%	50514600	WASHER 5.3	1	

ROBIN D1B40T92040 — AIR DUCTING ASSY. (A)

AIR DUCTING ASSY. (A)



※ Parts not available separately

ROBIN D1B40T92040 — AIR DUCTING ASSY. (A)

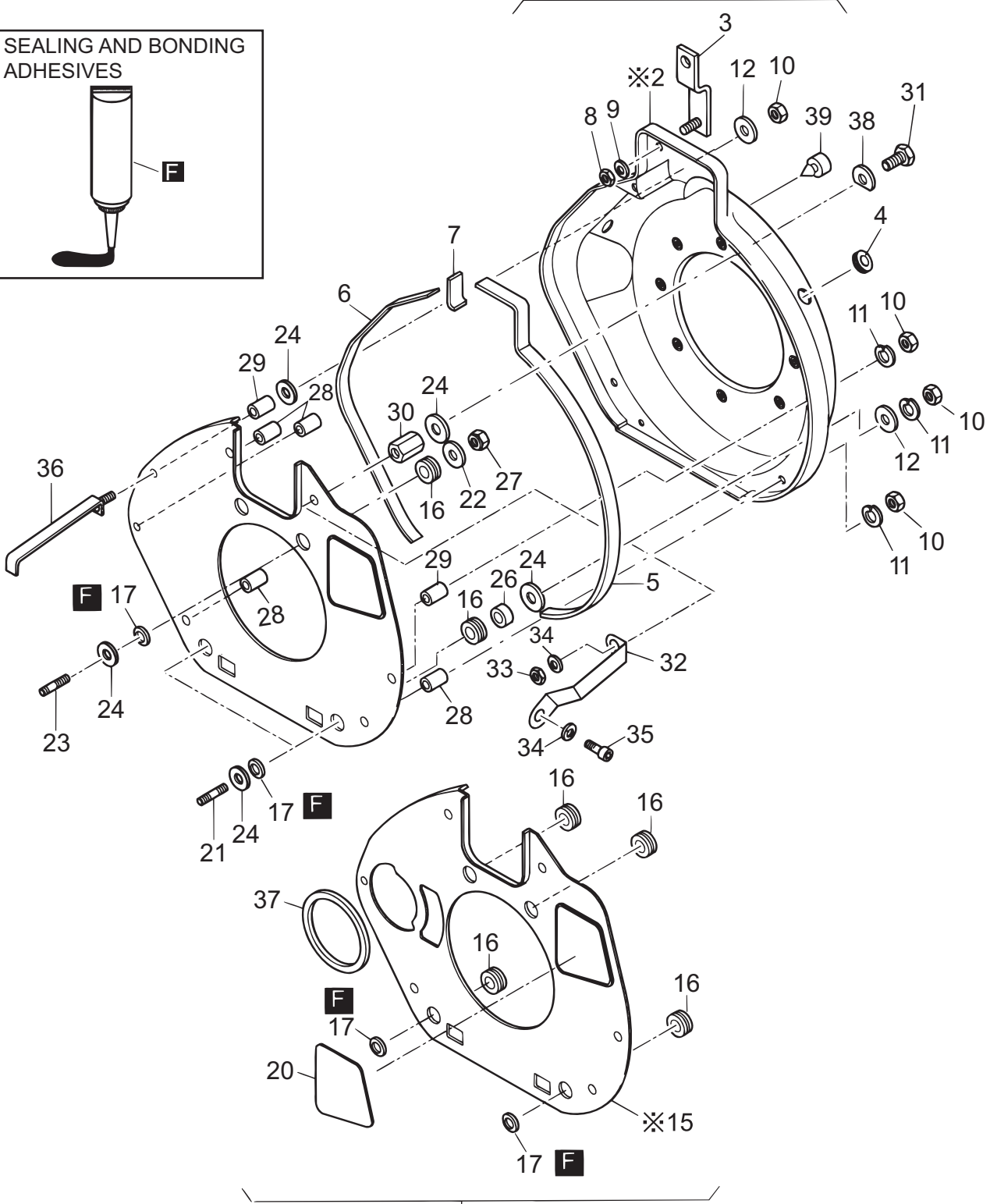
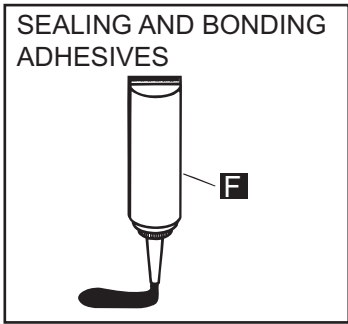
AIR DUCTING ASSY. (A)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
G	50256501	LOCTITE IS407 20G	1	
1	01853100	HOOD ASSY	1	INCLUDES ITEM W/ #
2#		HOOD	1	NOT SOLD SEPARATELY
3#	05152100	SPRING CLIP	1	
4	01345400	COOLING AIR DUCT ASSY	1	INCLUDES ITEM W/ \$
5\$		AIR DUCT	1	NOT SOLD SEPARATELY
6\$	04144200	SEALING STRIP119MM	1	
8\$	50334800	RUBBER SLEEVE	1	
9	50445401	FILL.HEAD SCREW M4X10	4	
10	50441600	WASHER 4.3	4	
11	50163801	RUBBER SLEEVE	4	
12	50528100	ALLEN SCREW M6X16	3	
13	01345300	COOLING AIR DUCT ASSY	1	INCLUDES ITEMS W/ %
14%		AIR DUCT	1	NOT SOLD SEPARATELY
15%	04144200	SEALING STRIP119MM	1	
16	50495000	SCREW M6X12	1	
17	50144400	HEXAGON NUT M6	2	
18	50170900	SPRING WASHER 6	2	
19	03354600	SPACER BUSH	2	
20	01698200	COVER	1	
21	50334800	RUBBER SLEEVE	1	
22	03577200	SEALING STRIP	1	
23	50144500	FLAT WASHER 6.4	2	
24	04060600	WASHER 6.4X16X1.5	1	
25	05001200	CLIP	1	

ROBIN D1B40T92040 — AIR DUCTING ASSY. (B)

AIR DUCTING ASSY. (B)

1 (2,4-7,39)



13 (15-17,20)
14 (15-17,20,37)

※ Parts not available separately

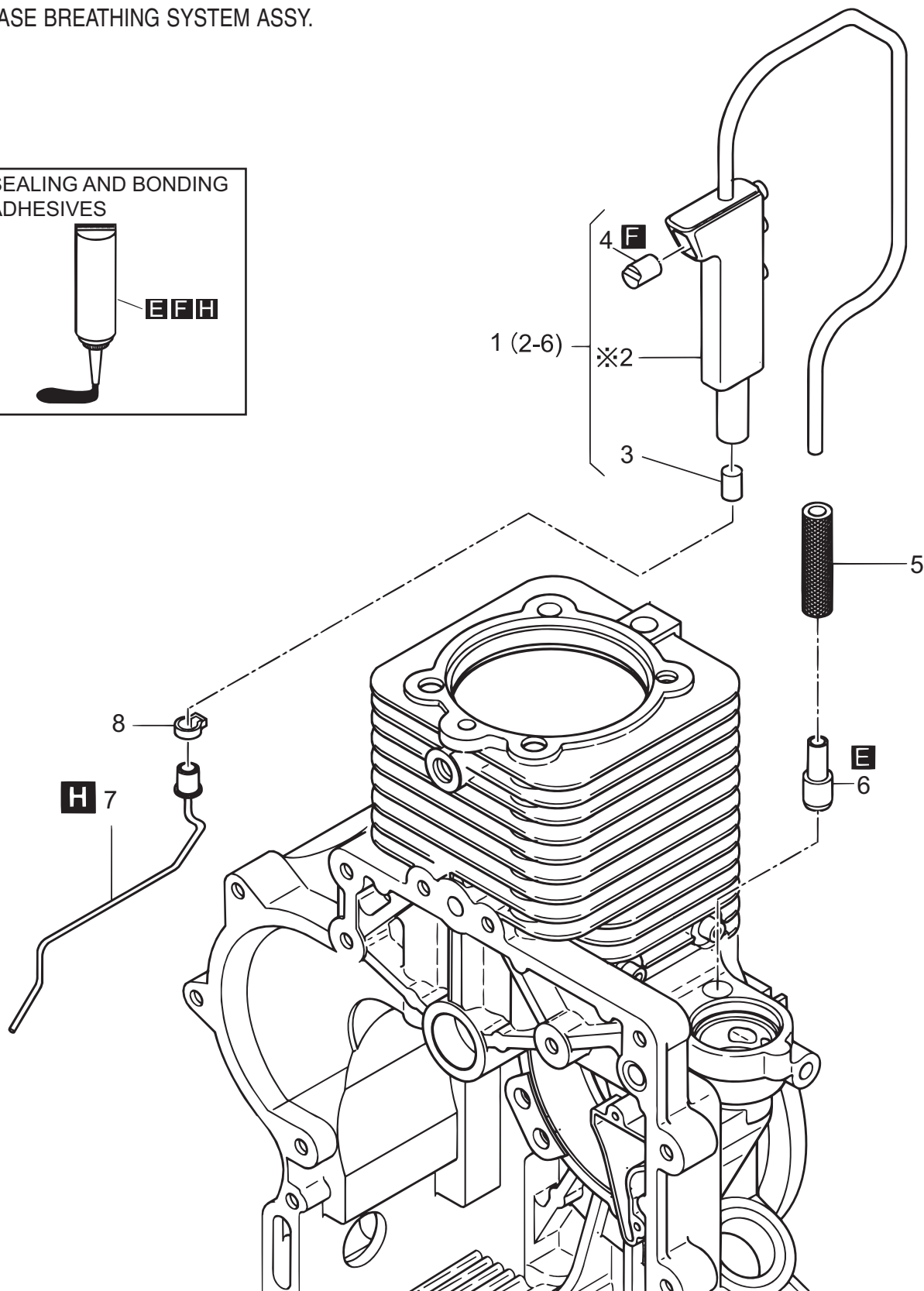
ROBIN D1B40T92040 — AIR DUCTING ASSY. (B)

AIR DUCTING ASSY. (B)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
F	50223800	TECHNICOLL8058 0.75KG	1	
1	01831300	BLOWER DUCTING ASSY	1	INCLUDES ITEMS W/ #
2#		BLOWER DUCTING	1	NOT SOLD SEPARATELY
3	01331300	SUPPORT	2	
4#	50453300	RUBBER SLEEVE	1	
5#	05189400	SEALING STRIP 655MM	1	
6#	05189300	SEALING STRIP	1	
7#	05227000	SEALING STRIP 54MM	1	
8	50144400	HEXAGON NUT M6	2	
9	50170900	SPRING WASHER 6	2	
10	50144400	HEXAGON NUT M6	7	
11	50170900	SPRING WASHER 6	8	
12	50120000	DISC A6.4	3	
13	01661900	PARTING SHEET ASSY	1	INCLUDES ITEMS W/ \$
14	01347600	PARTING SHEET ASSY E-ST.NO FT	1	INCLUDES ITEMS W/ %
15\$%		PARTING SHEET	1	NOT SOLD SEPARATELY
16\$%	01378300	SPACER BUSH	4	
17\$%	03575500	RUBBER SEAL RING	4	
20\$%	04215200	CLOSING COVER	1	
21	50458100	STUD M6 X45	2	
22	50114300	DISC 6.4	2	
23	50464401	STUD M6FO X35	2	
24	04042000	WASHER 6.5X22.5X1	7	
26	05188600	SPACER BUSH 7X12X7	2	
27	50328300	HEXAGON NUT VM6	2	
28	04139000	SPAC.TUBE 6.5X12X18	4	
29	04098400	SPAC.TUBE 7X12X16.3	2	
30	05184000	HEXAGON NUT M6X17	1	
31	50026400	HEXSCREW M6X35	1	
32	01669400	SUPPORT	1	
33	50144400	HEXAGON NUT M6	1	
34	50170900	SPRING WASHER 6	2	
35	50170700	ALLEN SCREW M6X16	1	
36	01683300	SUPPORT	1	
37%	04099500	SEALING RING	1	
38	05140900	WASHER	1	
39#	50392610	RUBBER BUSH	1	

ROBIN D1B40T92040 — CRANKCASE BREATHING SYSTEM ASSY.

CRANKCASE BREATHING SYSTEM ASSY.



\times Parts not available separately

ROBIN D1B40T92040 — CRANKCASE BREATHING SYSTEM ASSY.

AIR DUCTING ASSY. (B)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
E	50223400	LOCTITE648 10ML	1	
F	50223800	TECHNICOLL8058 0.75KG	1	
H	50282501	SILICON 30ML	1	
1	01885800	CRANKCASE BREATHER CP	1	INCLUDES ITEMS W/ #
2#		OIL SEPARATOR	1	NOT SOLD SEPARATELY
3#	05102900	FILTER BREATHING SYSTEM	1	
4#	05098100	PLUG	1	
5#	05197200	FUEL PIPE LW 7X35	1	
6#	05196000	NIPPLE	1	
7	01626900	SUCTION PIPE	1	
8	50456800	CLAMP	1	

ROBIN D1B40T92040 — FUEL TANK ASSY.

FUEL TANK ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
D	50223300	LOCTITE221 50ML	1	
1	01853200	FUEL TANK ASSY 5L F.SEP.	1	INCLUDES ITEMS W/ #
2#	01535302	CAP F. FUEL TANK	1	
3#	01635210	FUEL FILTER ASSY.	1	INCLUDES ITEMS W/ \$
4#\$		FUEL FILTER	1	NOT SOLD SEPARATELY
5#\$		SPACER	1	NOT SOLD SEPARATELY
6#\$	50440901	RUBBER SLEEVE	2	
7#	05189001	CONNECTING NIPPLE	1	
8#	01628900	ROPE	1	
9#	50500800	CIRCLIP 8	1	
10#	05160700	FUEL HOSE 3.5X340	1	
11#	50399801	CLAMP 11.3	1	
12#	05084010	CONNECTING NIPPLE	1	
13#	01534900	FUEL VENT. VALVE	1	
14#		FUEL TANK	1	NOT SOLD SEPARATELY
15#	50440800	RUBBER SLEEVE	2	
16#	05130400	RUBBER SLEEVE	1	
17#	05184400	CONNECTING NIPPLE	1	
18#	05189700	BREATHER HOSE	1	
19%	05289300	FUEL HOSE 5.0X50	1	
20%	05175601	HOSE NIPPLE T	1	
21	05215000	HOSE 2.5X195	1	
22%	03664210	HOSE 5X130	1	
23%	01534601	FUEL VENTG. VALVE	1	
24%	05214800	FUEL HOSE 4.5X40	1	
25%	05284010	FUEL HOSE 3.5X160	1	
26	05190900	TUBE	1	
27	50120000	DISC A 6.4	4	
28	01331300	SUPPORT	2	
29	05110010	DISC 7.1X17.9X2	10	
30	40028400	HEX NUT M 8	2	
31	50148100	FLAT WASHER 8.4	2	
32	05109810	DISC 8.2X22X2	4	
33	01655800	INSULATING TUBE	2	INCLUDES ITEMS W/ &
34&		INSULATING SLEEVE	1	NOT SOLD SEPARATELY
35&		RUBBER SHELL	1	NOT SOLD SEPARATELY
36	05170110	SUPPORT	1	
37	50231900	STUD M8X25	2	
38	01557000	HEXSCREW M6X16	4	
39	50170900	SPRING WASHER 6	2	
40	50144000	HEXSCREW M8X40	2	
41	50120000	DISC A6.4	4	
42	50170900	SPRING WASHER 6	4	
43	50170700	ALLEN SCREW M6X16	4	
44	04118800	DISC 6.5X13X4.8	2	
45	04042000	WASHER 6.5X22.5X1	2	

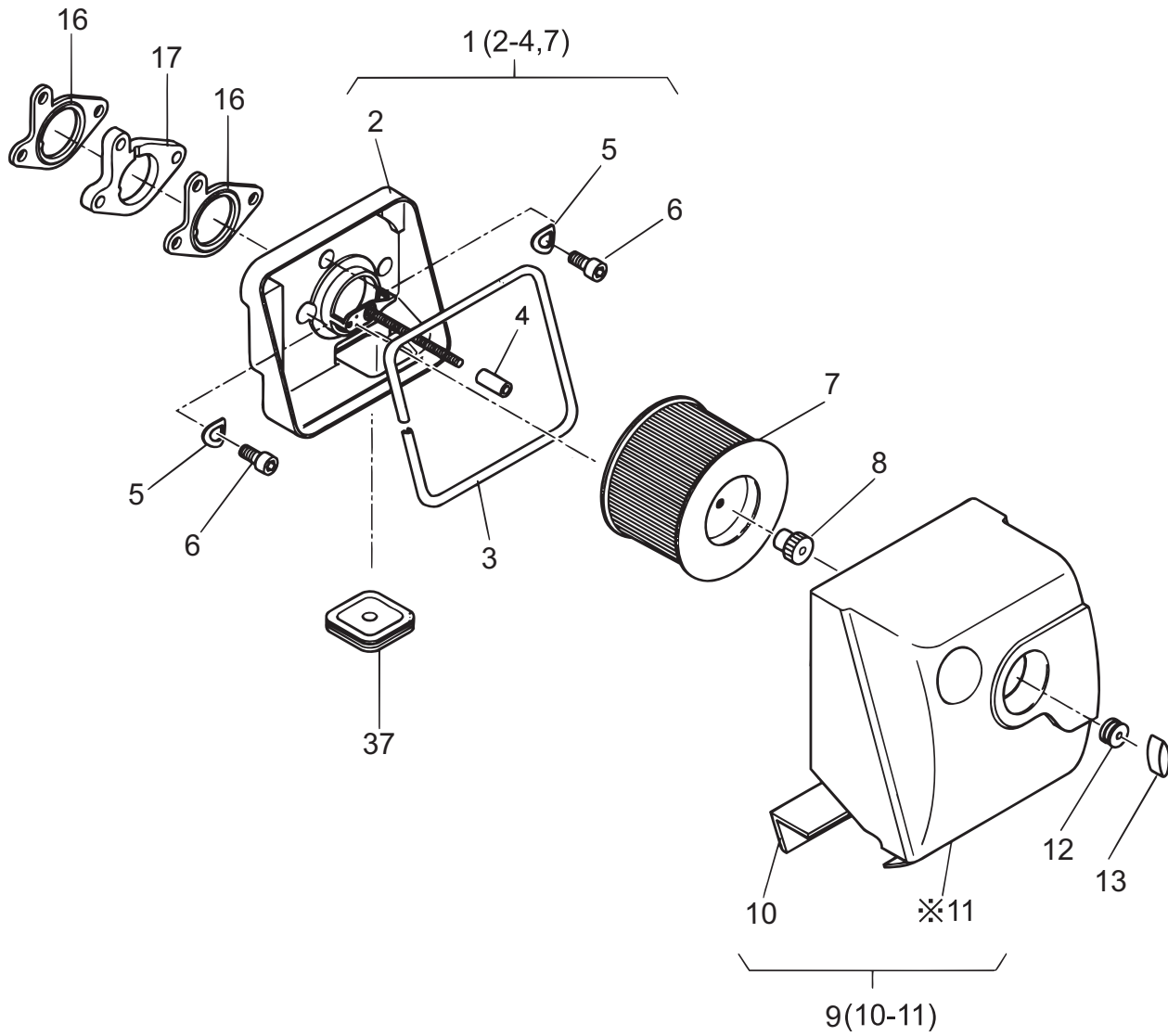
ROBIN D1B40T92040 — FUEL TANK ASSY. (CONTINUED)

FUEL TANK ASSY. (CONTINUED)

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
46	50453300	RUBBER SLEEVE	1	
47	05213010	FUEL HOSE 7X25	1	
48%	50441100	HOSE CLIP	2	
49%	00805502	VENT VALVE	1	
50%	05301200	NIPPLE	1	
51%	03663710	FUEL HOSE 5.0/50	1	
52%	50399801	CLAMP 11.3	6	
60%	50539200	FUEL FILT. EXT. MOUNT	1	
61%	50441600	WASHER 4.3	2	
62%	50446900	ALLEN SCREW M4X16	2	
63%	05279500	SUPPORT	1	
64%	50501600	HEX NUT M 4	2	
65%	03663610	FUEL HOSE 5X330	1	
66%	03663610	FUEL HOSE 5X330	1	
67%	50570900	CLAMP 12.8	5	
68%	05289300	FUEL HOSE 5.0X50	1	
69%	05122701	HOSE NIPPLE T	1	
70%	03663710	FUEL HOSE 5.0/50	1	
71%	40021500	SEAL WIRE 0.5-0.3	1	
72%	40021400	LEAD SEAL 8 MM	1	
74%	05285400	SUPPORT	1	
75%	50556600	RUBBER SLEEVE	2	
76	50358400	STRAP	2	
77#	05235601	STICKER,DIESEL FUEL	1	
78%	01756800	NIPPLE	1	
79%	50154300	O-RING 7.5X10.5X1.5	1	
80	01778520	FUEL FILTER CP. ASSY.....	1	INCLUDES ITEMS W/ %
81	05235700	CONNECTING NIPPLE	1	
82	50313100	JOINT A 6X10	1	
83	03613600	VENT SCREW M6	1	

ROBIN D1B40T92040 — AIR FILTER ASSY.

AIR FILTER ASSY.



※ Part not available separately

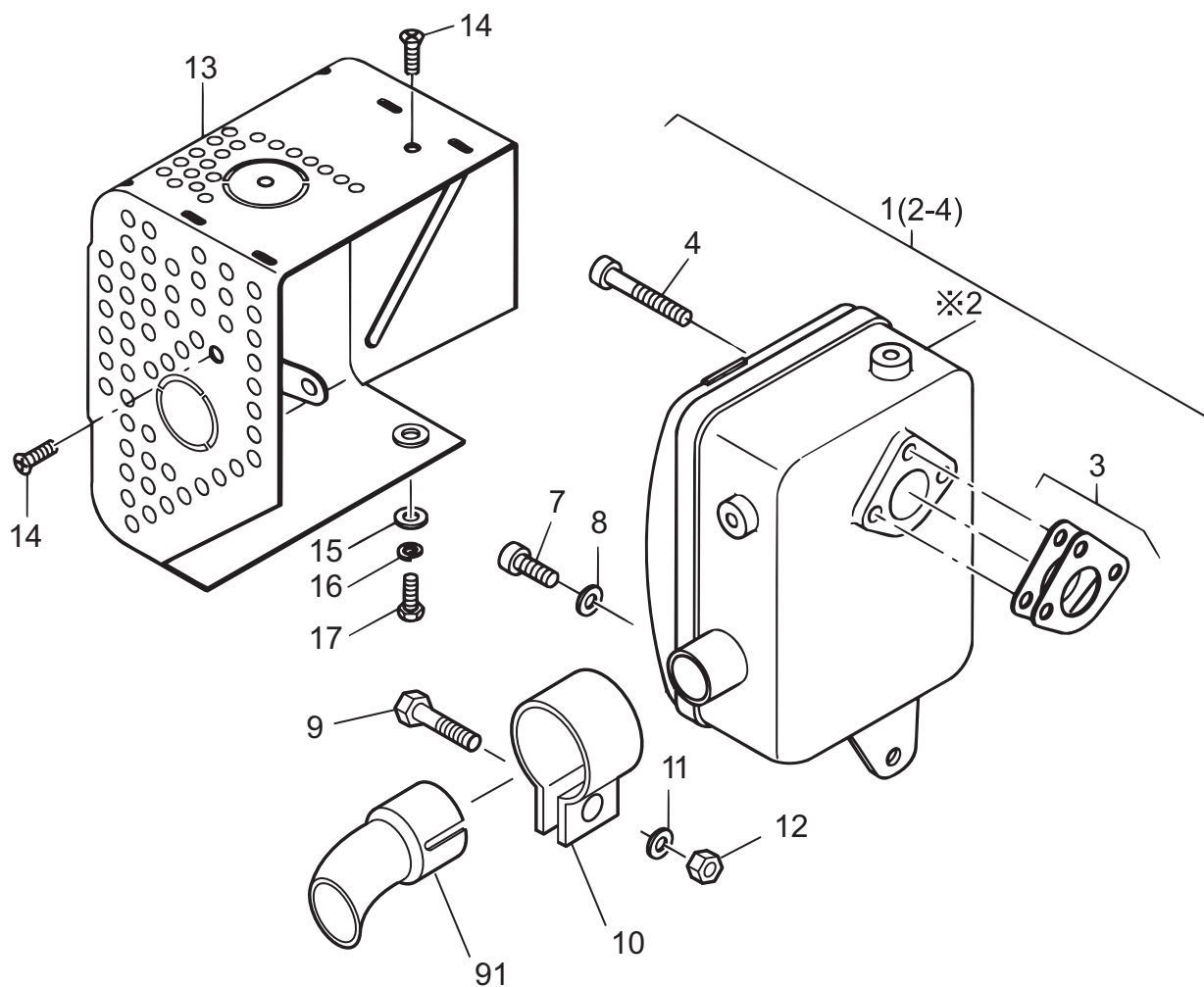
ROBIN D1B40T92040 — AIR FILTER ASSY.

AIR FILTER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01637410	AIR FILTER HOUSING ASSY	1	INCLUDES ITEMS W/ #
2#		AIR FILTER HOUSING	1	NOT AVAILABLE SEPARATELY
3#	05167700	SEALING STRIP 665MM	1	
4#	05166200	RUBBER SHELL 32MM	1	
5	50095100	SPRING WASHER A8	3	
6	50171500	ALLEN SCREW M 8X 25	3	
7#	50484100	AIR FILTER ELEMENT	1	
8	50454300	KNURLED NUT M6	1	
9	01637300	COVER ASSY, AIR FILTER	1	INCLUDES ITEMS W/ \$
10\$	05158000	SEALING STRIP	1	
11\$		COVER, AIR FILTER	1	NOT AVAILABLE SEPARATELY
12	50435800	RUBBER SLEEVE	1	
13	50452200	WING NUT M6	1	
16	05149900	GASKET AIR FILTER	2	
17	05149800	INSULATING FLANGE	1	
37	04215300	CLOSING COVER	1	

ROBIN D1B40T92040 — EXHAUST SILENCER ASSY.

EXHAUST SILENCER ASSY.



※ PARTS NOT AVAILABLE SEPARATELY

ROBIN D1B40T92040 — EXHAUST SILENCER ASSY.

EXHAUST SILENCER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	01872500	EXHAUST SILENCER ASSY	1	INCLUDES ITEMS W/ #
2#		EXHAUST SILENCER	1	NOT SOLD SEPARATELY
3#	01732701	GASKET MUFFLER	1	
4#	50403900	ALLEN SCREW M8X25	3	
7	50474200	ALLEN SCREW M6X16	1	
8	50114300	DISC 6.4	1	
9	00380000	HEX SCREW M8X50	1	
10	03740900	PIPE CLIP	1	
11	50148100	FLAT WASHER 8.4	1	
12	40028400	HEX NUT M8	1	
13	01629000	PROTECT.GUARD EXHAUST	1	
14	50422500	CTR. SUNK SCREW M6X12	2	
15	50114300	DISC 6.4	1	
16	50170900	SPRING WASHER 6	1	
17	50177100	HEX SCREW M6X16	1	
91	465459660	EXHAUST PIPE	1	

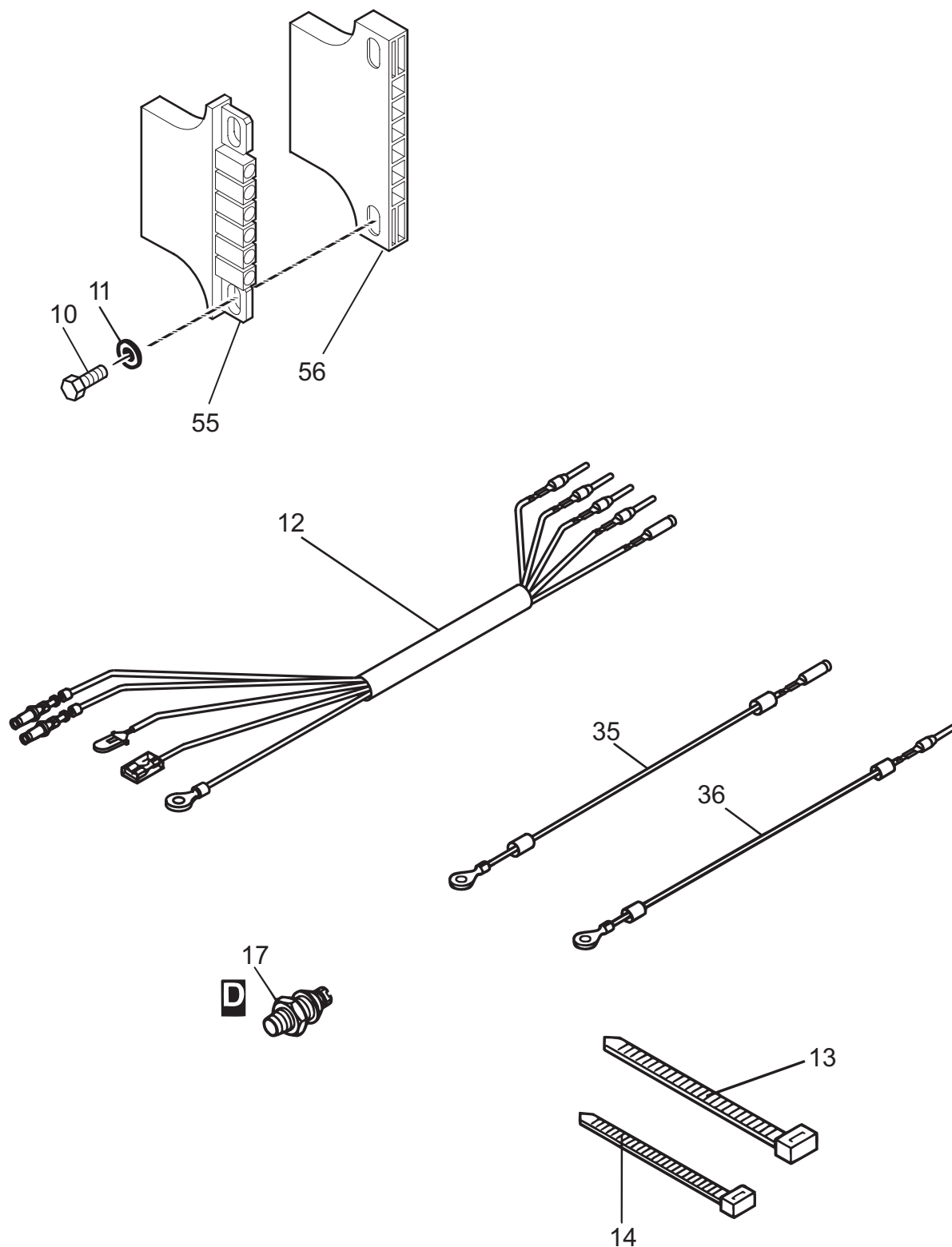
ROBIN D1B40T92040 — STARTER, ALTERNATOR ASSY.

EXHAUST SILENCER ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	50402300	ALLEN SCREW M6X70	2	
2	50170900	SPRING WASHER 6	4	
3	50144500	FLAT WASHER 6.4	3	
4	04099100	RETAINING BRACKET	1	
5	50483500	EL.STARTER12V 1.0KW	1	
16	50165400	ALLEN SCREW M8X16	2	
17	50148100	FLAT WASHER 8.4	6	
18	05100701	TENS.REGULATOR 12V	1	
19	01663000	SUPPORT	1	
20	05182912	SUPPORT	1	
21	50144400	HEXAGON NUT M6	2	
22	50439500	STRAP 2.6X200	3	
23	50344700	HEXAGON NUT M8	1	
24	50025400	HEXSCREW M6X10	1	
25	50120000	DISC A6.4	2	
26	03714100	SPACER BUSH	1	
27	50095100	SPRING WASHER A8	1	
28	50392900	ALLEN SCREW M8X50	1	
29	50402100	PLUG SLEEVE HOUSING	1	

ROBIN D1B40T92040 — ELECTRIC EQUIPMENT, WIRING ASSY.

ELECTRIC EQUIPMENT, WIRING ASSY.



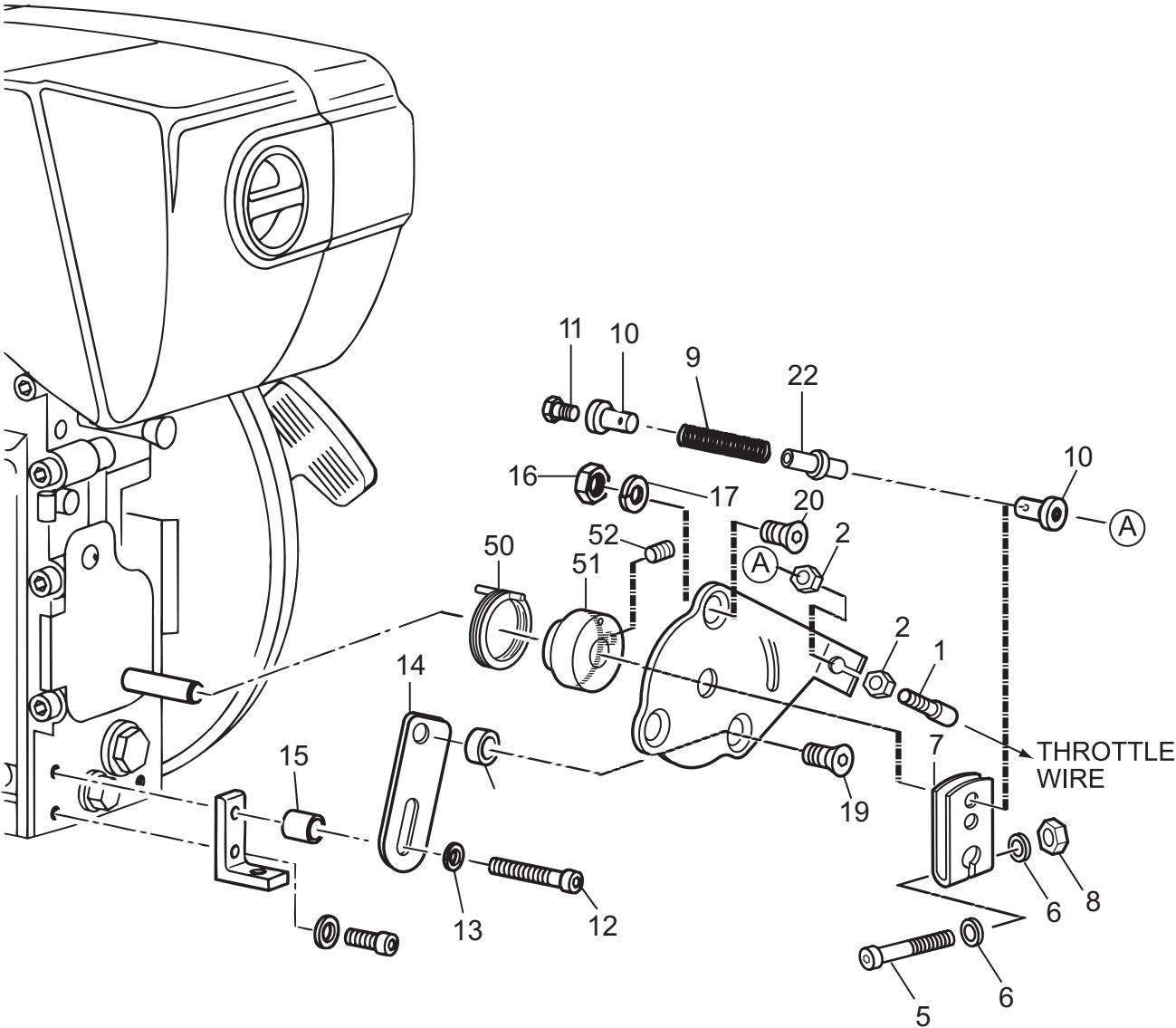
ROBIN D1B40T92040 — ELECTRIC EQUIPMENT, WIRING ASSY.

ELECTRIC EQUIPMENT, WIRING ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
10	001220620	BOLT 6X20 T	2	
11	50144500	FLAT WASHER 6.4	2	
12	01667001	WIRE HARNESS	1	
13	50167400	STRAP	1	
14	50439500	STRAP 2.6X200	4	
17	50469100	OIL PRESSURE SWITCH	1	
35	01574300	ELECTRIC WIRE/350MM	1	
36	01715300	ELECTRIC WIRE/430MM	1	
55	50373700	PLUG SLEEVE HOUSING	1	
56	50373600	PIN TERM.HOUS.6WAY	1	

ROBIN D1B40T92040 — SPEED CONTROL ASSY.

SPEED CONTROL ASSY.



ROBIN D1B40T92040 — SPEED CONTROL ASSY.

SOEED CONTROL ASSY.

<u>NO.</u>	<u>PART NO.</u>	<u>PART NAME</u>	<u>QTY.</u>	<u>REMARKS</u>
1	05141200	ADJUSTING SCREW	1	
2	020406040	NUT M6, H=4.2	2	
5	50511900	ALLEN SCREW M 5X30	1	
6	50216300	WASHER 5.3	2	
7	05117700	LEVER	1	
8	50094300	HEXAGON NUT M5	1	
9	50484600	PRESSURE SPRING	1	
10	50483100	CABLE CLAMP 2.2MM	2	
11	50025000	HEX SCREW M 4X10	1	
12	50342400	ALLEN SCREW M 8X50	1	
13	50148100	FLAT WASHER 8.4	1	
14	05189600	PLATE	1	
15	03599600	SPACER BUSH	1	
16	50328300	HEXAGON NUT VM6	1	
17	50208500	SPRING WASHER 8	1	
19	50423900	CTR.SUNK SCREW M6X20	1	
20	50380800	CTR.SUNK SCREW M6X10	1	
21	03292900	SPACER TUBE	1	
22	05165000	GUIDE BUSH	1	
50	05179100	SPRING	1	
51	05179000	BUSH	1	
52	50400600	GRUB SCREW M5X10	1	

TERMS AND CONDITIONS OF SALE — PARTS

PAYMENT TERMS

Terms of payment for parts are net 30 days.

FREIGHT POLICY

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

MINIMUM ORDER

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

RETURNED GOODS POLICY

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

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

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

PRICING AND REBATES

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

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

SPECIAL EXPEDITING SERVICE

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

LIMITATIONS OF SELLER'S LIABILITY

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

LIMITATION OF WARRANTIES

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

Effective: February 22, 2006

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

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

UNITED STATES

Multiquip Corporate Office

18910 Wilmington Ave. 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

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