

OPERATION MANUAL



Mikasa SERIES
MODEL MVC88VTH
MODEL MVC88VTHW
ONE-WAY PLATE COMPACTOR
**(HONDA GX160UT2QMX2/GX160UT2QMXC/
GX160UT2QCM GASOLINE ENGINES)**

Revision #10 (06/09/20)

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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

PROPOSITION 65 WARNING



**MVC88VTH/MVC88VTHW
Plate Compactor**

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NOTICE

Specifications and part numbers are subject to change without notice.

SAFETY INFORMATION


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




SAFETY MESSAGES

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


SAFETY SYMBOLS

 **DANGER**

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

 **WARNING**

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








 **CAUTION**

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

NOTICE

Addresses practices not related to personal injury.

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

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


SAFETY INFORMATION

GENERAL SAFETY

CAUTION

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



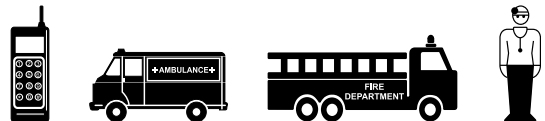
- **NEVER** operate this equipment when not feeling well due to fatigue, illness or when under medication. 
- **NEVER** operate this equipment under the influence of drugs or alcohol.



- **ALWAYS** check the equipment for loosened threads or bolts before starting.
- **DO NOT** use the equipment for any purpose other than its intended purposes or applications.
- **ALWAYS** clear the work area of any debris, tools, etc. that would constitute a hazard while the equipment is in operation.

NOTICE

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



SAFETY INFORMATION

COMPACTOR SAFETY

DANGER

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



WARNING

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

CAUTION

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

NOTICE

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

ENGINE SAFETY

DANGER

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



WARNING

- **DO NOT** place hands or fingers inside engine compartment when engine is running.
- **NEVER** operate the engine with heat shields or guards removed.
- Keep fingers, hands hair and clothing away from all moving parts to prevent injury.



CAUTION

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



NOTICE

- **NEVER** run engine without an air filter or with a dirty air filter. Severe engine damage may occur. Service air filter frequently to prevent engine malfunction.
- **NEVER** tamper with the factory settings of the engine or engine governor. Damage to the engine or equipment can result if operating in speed ranges above the maximum allowable.
- **NEVER** tip the engine to extreme angles during lifting as it may cause oil to gravitate into the cylinder head, making the engine start difficult.

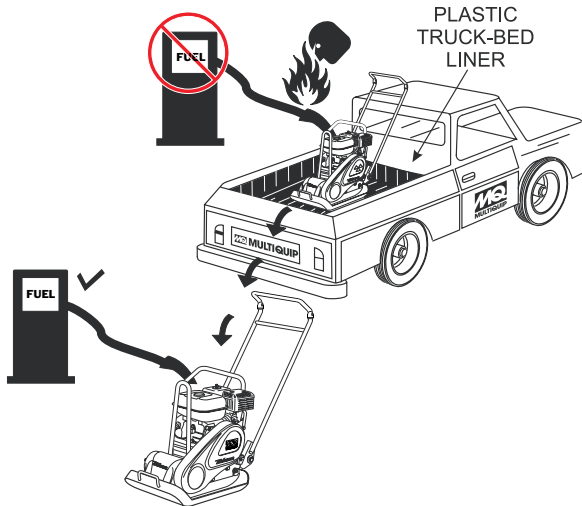


SAFETY INFORMATION

FUEL SAFETY

DANGER

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



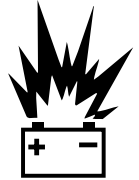
- **DO NOT** start the engine near spilled fuel or combustible fluids. Diesel fuel is extremely flammable and its vapors can cause an explosion if ignited.
- **ALWAYS** refuel in a well-ventilated area, away from sparks and open flames.
- **ALWAYS** use extreme caution when working with **flammable**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



BATTERY SAFETY (ELECTRIC START ONLY)

DANGER

- **DO NOT** drop the battery. There is a possibility that the battery will explode.
- **DO NOT** expose the battery to open flames, sparks, cigarettes, etc. The battery contains combustible gases and liquids. If these gases and liquids come into contact with a flame or spark, an explosion could occur.



WARNING

- **ALWAYS** wear safety glasses when handling the battery to avoid eye irritation. The battery contains acids that can cause injury to the eyes and skin.
- Use well-insulated gloves when picking up the battery.
- **ALWAYS** keep the battery charged. If the battery is not charged, combustible gas will build up.
- **DO NOT** charge battery if frozen. Battery can explode. When frozen, warm the battery to at least 61°F (16°C).
- **ALWAYS** recharge the battery in a well-ventilated environment to avoid the risk of a dangerous concentration of combustible gases.
- If the battery liquid (dilute sulfuric acid) comes into contact with **clothing or skin**, rinse skin or clothing immediately with plenty of water.
- If the battery liquid (dilute sulfuric acid) comes into contact with **eyes**, rinse eyes immediately with plenty of water and contact the nearest doctor or hospital to seek medical attention.



CAUTION

- **ALWAYS** disconnect the **NEGATIVE** battery terminal before performing service on the equipment.
- **ALWAYS** keep battery cables in good working condition. Repair or replace all worn cables.

SAFETY INFORMATION

TRANSPORTING SAFETY

CAUTION

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

NOTICE

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

ENVIRONMENTAL SAFETY/DECOMMISSIONING

NOTICE

Decommissioning is a controlled process used to safely retire a piece of equipment that is no longer serviceable. If the equipment poses an unacceptable and unrepairable safety risk due to wear or damage or is no longer cost effective to maintain (beyond life-cycle reliability) and is to be decommissioned (demolition and dismantlement), be sure to follow rules below.

- DO NOT pour waste or oil directly onto the ground, down a drain or into any water source.
- Contact your country's Department of Public Works or recycling agency in your area and arrange for proper disposal of any electrical components, waste or oil associated with this equipment.



- When the life cycle of this equipment is over, remove battery and bring to appropriate facility for lead reclamation. Use safety precautions when handling batteries that contain sulfuric acid.

- When the life cycle of this equipment is over, it is recommended that the trowel frame and all other metal parts be sent to a recycling center.

Metal recycling involves the collection of metal from discarded products and its transformation into raw materials to use in manufacturing a new product.

Recyclers and manufacturers alike promote the process of recycling metal. Using a metal recycling center promotes energy cost savings.

EMISSIONS INFORMATION

NOTICE

The gasoline engine used in this equipment has been designed to reduce harmful levels of carbon monoxide (CO), hydrocarbons (HC) and nitrogen oxides (NOx) contained in gasoline exhaust emissions.

This engine has been certified to meet US EPA Evaporative emissions requirements in the installed configuration.

Attempting to modify or make adjustments to the engine emission system by unauthorized personnel without proper training could damage the equipment or create an unsafe condition.

Additionally, modifying the fuel system may adversely affect evaporative emissions, resulting in fines or other penalties.

Emission Control Label

The emission control label is an integral part of the emission system and is strictly controlled by regulation(s).

The label must remain with the engine for its entire life.

If a replacement emission label is needed, please contact your authorized engine distributor.

SPECIFICATIONS

Table 1. MVC88VTH/VTHW Plate Compactor Specifications	
Centrifugal Force	3,372 lbs. (1,530 kg)
Vibration Frequency	6,000 vpm (60 Hz)
Traveling Speed	82 ft/min (25 m/min)
Plate Size (L x W)	19.7 x 20.7 in (.500 x .525 mm)
Max. Area of Compaction (no extensions)	8,100 sq. ft./hr (752 sq. m/hr)
Operating Weight MVC88VTH	207 lbs. (95 kg.)
Operating Weight MVC88VTHW	229 lbs. (104 kg.)
Water Tank Capacity	13.7 qt (13.0 liters)
Anti-Vibration Handle	Yes
Lubricating Oil in Vibration Case	6.7 fl. oz. (200 cc)

Table 2. Engine Specifications			
Engine Make	HONDA		
Engine Model	GX160UT2QMX2	GX160UT2QMXC	GX160UT2QCM
Engine Type	Air-cooled 4 stroke, Single Cylinder, OHV, Horizontal Shaft Gasoline Engine		
Cylinder Bore X Stroke	2.7 in. x 1.8 in. (68 mm x 45 mm)		
Displacement	163 cc (9.9 cu-in)		
Maximum Output	4.8 HP (3.6 kW) @ 3600 RPM		
Fuel Tank Capacity	Approx. .825 U.S. gallons (3.1 liters)		
Fuel Type	Unleaded 86 Octane or Higher		
Oil Capacity	.61 qts (0.58 liters)		
Air Cleaner	Dual Filter Element	Cyclone Dual Filter Element	
Starting Method	Recoil Start		
Dry Net Weight Recoil/Electric	33 lbs (15 Kg.)		
Dimensions (L x W x H)	12.2 x 14.3 x 13.6 in (312 x 362 x 346 mm)		

NOISE AND VIBRATION EMISSIONS

Table 3. Noise and Vibration Emissions

Measured Sound Power Level in dB(A)	104
Guaranteed Sound Power Level in dB(A)	105
Guaranteed Sound Pressure Level at Operator Station in dB(A)	94
Hand-Arm Vibration in m/s ²	2.1

NOTES:

1. *Products are tested for sound pressure level in accordance with European Directives 2000/14/EC and 2005/88/EC, relating to Noise Emission in the Environment by equipment for use outdoors.*
2. *Products are tested for hand/arm vibration (HAV) level in accordance with European Directives 2002/44/EC and EN500-4 and ISO 5349-1:2001, ISO 5349-2:2001.*

DIMENSIONS

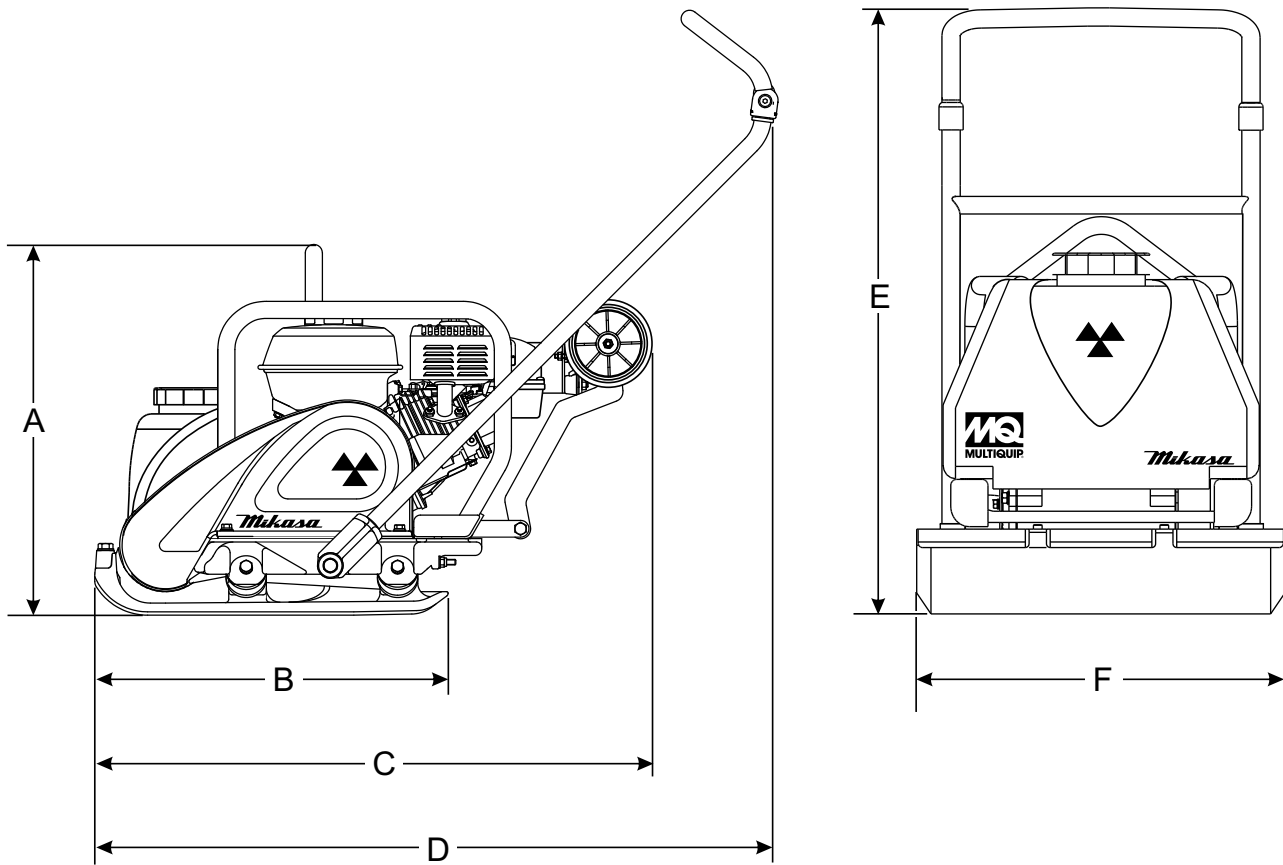


Figure 1. Dimensions

Table 4. Dimensions	
REF. DES	IN. (MM)
A	21.9 (557)
B	20.6 (525)
C	32.6 (830)
D	37.4(950)
E	41.3 (1050)
F	19.7 (500)

DEFINITION OF PLATE COMPACTOR

The Mikasa MVC88VTH/VTHW is a walk behind, plate compactor designed for the compaction of sand, mixed soils and asphalt. This plate compactor is a powerful compacting tool capable of applying a tremendous force in consecutive high frequency vibrations to a soil surface. Its applications include compacting for road, embankments and reservoirs as well as backfilling for gas pipelines, water pipelines and cable installation work.

VIBRATORY PLATES

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

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

FREQUENCY/SPEED

The compactor's vibrating plate produces a vibration frequency of 6,000 VPM (vibrations per minute). The travel speed of the compactor is approximately 82 ft/minute (25 meters/minute).

ENGINE

These plate compactors are equipped with Honda GX160 series air cooled, 4-cycle gasoline engines. Reference Table 2 for complete specifications. The engine drives an eccentric weight at a high speed to develop a compaction force.

In addition this engine is equipped with an **oil alert** system that will automatically stop the engine before the engine falls below safe engine oil operating limits. Always be sure to check the engine oil level prior to starting the engine.

CONTROLS

Before starting the plate compactor identify and understand the function of **all** the controls and components.

COMPACTOR COMPONENTS

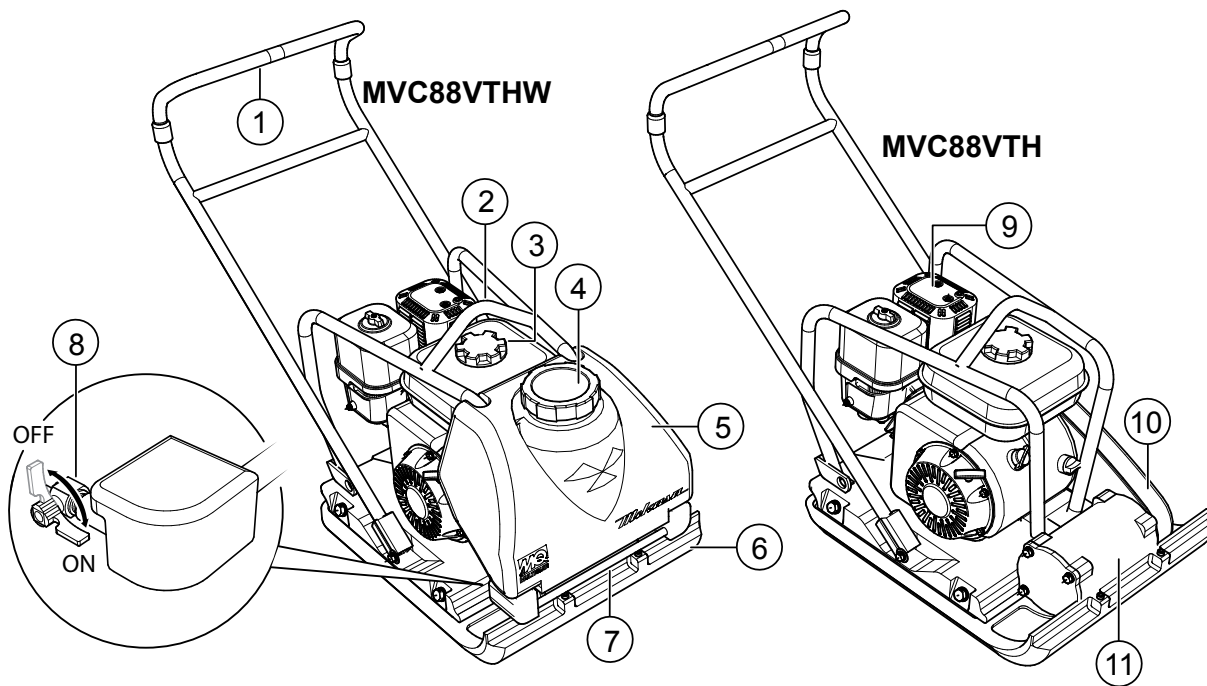


Figure 2. Plate Compactor Components

Figure 2 shows the location of the basic controls and components of the MVC88VTH/VTHW Plate Compactor. The function of each control is described below:

1. **Handle Bar** – When operating the compactor use this handle bar to maneuver the compactor.
2. **Lifting Bale** – When lifting of the compactor is required either by forklift, crane etc., tie rope or chain around this lifting point.
3. **Fuel Tank Cap** – Remove this cap to add fuel. Use only unleaded fuel with an octane rating of 86 or higher
4. **Water Tank Cap (VTHW Only)** – Remove this cap to add water to the water tank.
5. **Water Tank (VTHW only)** – Holds 13.7 quarts of water (removable, no tools required).
6. **Vibrating Plate** – A flat, open plate made of durable cast iron construction used in the compacting of soil.
7. **Water Tube-Sprinkler (VTHW Only)** – Supplies water to the soil via a splash plate.
8. **Water Shut-Off Valve (VTHW Only)** – Turn this valve downward to let water flow from the water tank to the water tube.
9. **Engine** – These plate compactors use a Honda GX160, 4.8 HP, air-cooled 4 stroke gasoline engine. Refer to the Honda owner's manual for more detailed engine information and related topics.
10. **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 exists that your hand may get caught between the V-belt and clutch, causing serious injury and bodily harm.
11. **Eccentric Housing** – Encloses the eccentric, gears and counter weights.

COMPACTOR COMPONENTS

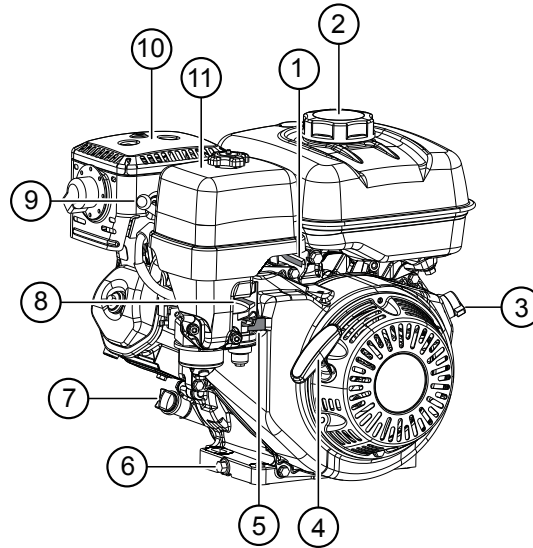


Figure 3. Engine Controls and Components

INITIAL SERVICING

The engine (Figure 3) must be checked for proper lubrication and filled with fuel prior to operation. Refer to the manufacturer's engine manual for instructions and details of operation and servicing.

1. **Throttle Lever** – Used to adjust engine RPM speed. For normal operation this lever should always be placed in the **RUN** position.
2. **Fuel Filler Cap/Fuel Tank** – Remove this cap to add unleaded gasoline to the fuel tank. Fill with unleaded gasoline. Refer to Table 2 for fuel tank capacity. Make sure cap is tightened securely. **DO NOT** over fill. For additional information refer to Honda engine owner's manual.

DANGER



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

3. **Engine ON/OFF Switch** – **ON** position permits engine starting, **OFF** position stops engine operation.
4. **Recoil Starter (Pull Rope)** – Manual-starting method. Pull the starter grip until resistance is felt, then pull briskly and smoothly.
5. **Fuel Valve Lever** – **OPEN** to let fuel flow, **CLOSE** to stop the flow of fuel.
6. **Oil Drain Plug** – Remove this plug to remove oil from the engine's crankcase.
7. **Dipstick/Oil Filler Cap** – Remove this cap to determine if the engine oil is low. Add oil through this filler port as recommended in (Table 5).
8. **Choke Lever** – Used in the starting of a cold engine, or in cold weather conditions. The choke enriches the fuel mixture.
9. **Spark Plug** – Provides spark to the ignition system. Set spark plug gap according to engine manufacturer's instructions. Clean spark plug once a week.
10. **Muffler** – Used to reduce noise and emissions. **NEVER** touch when **hot!**
11. **Air Cleaner** – Prevents dirt and other debris from entering the fuel system. Remove wing-nut on top of air filter cover to gain access to filter element. In addition your unit may be equipped with a cyclone type air cleaner. Reference the maintenance section in this manual for servicing.

Before Starting

1. Read all safety instructions at the beginning of manual.
2. Clean the compactor, removing dirt and dust, particularly the engine cooling air inlet, carburetor and air cleaner.
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 carburetor for external dirt and dust. Clean with dry compressed air.
5. Check fastening nuts and bolts for tightness.

Engine Oil Check

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 4) and wipe clean.

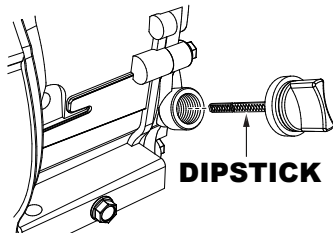


Figure 4. Engine Oil Dipstick Removal

3. Insert and remove the dipstick without screwing it into the filler neck. Check the oil level shown on the dipstick.
4. If the oil level is low (Figure 5), fill to the edge of the oil filler hole with the recommended oil type as listed in Table 5. Reference Table 2 for maximum engine oil capacity.

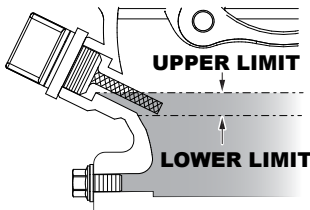


Figure 5. Engine Oil Dipstick (Oil Level)

Table 5. Oil Type		
Season	Temperature	Oil Type
Summer	25°C or Higher	SAE 10W-30
Spring/Fall	25°C~10°C	SAE 10W-30/20
Winter	0°C or Lower	SAE 10W-10

DANGER



EXPLOSIVE FUEL!

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

Fuel Check

1. Visually inspect (Figure 6) to see if fuel level is low. If fuel is low, replenish with unleaded fuel.

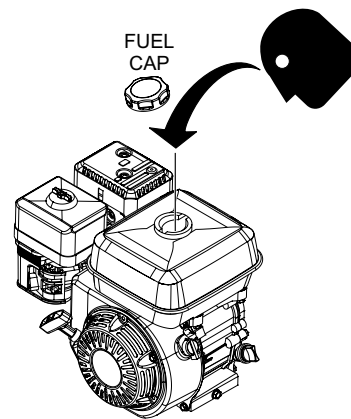


Figure 6. Fuel Check

2. When refueling, be sure to use a strainer for filtration. **DO NOT** top-off fuel. Wipe up any spilled fuel immediately.

Water Tank (Option)

If your unit is equipped with a water tank (Figure 7) and your applications requires water, fill water tank.

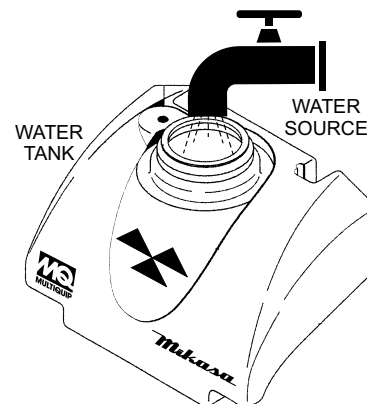


Figure 7. Water Tank Filling

V-BELT

V-Belt Cover Removal

To inspect the V-belt, remove the three bolts that secure the belt cover to the frame as shown in Figure 8.

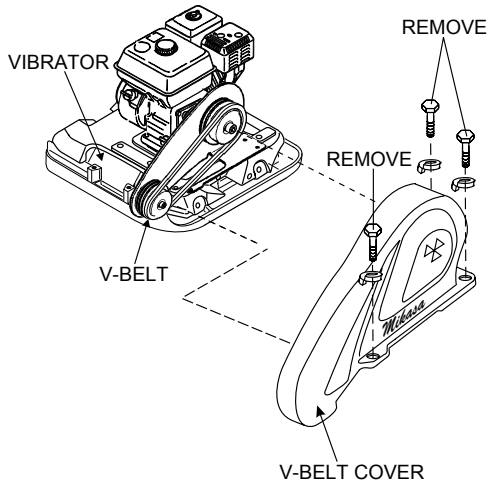


Figure 8. V-Belt Cover Removal

V-Belt Inspection

Visually examine the V-belt (Figure 9) and determine if it is full of tiny cracks, frayed, has pieces of rubber missing, is peeling or otherwise damaged.

Also, examine the belt and determine if it is **oil soaked** or **"glazed"** (hard shiny appearance on the sides of the belt). Either of these two conditions can cause the belt to run hot, which can weaken it and increase the danger of it breaking.

If the V-belt exhibits any of the referenced wear conditions replace the V-belt immediately.

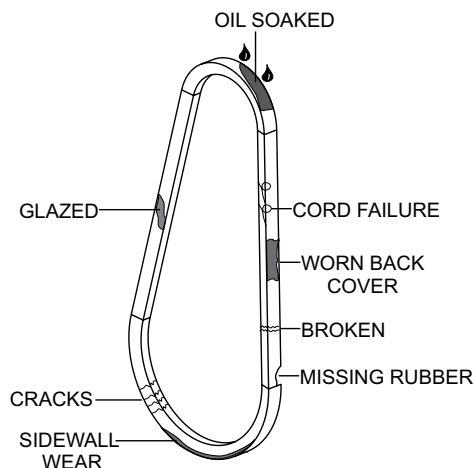


Figure 9. Drive Belt Inspection

V-Belt Tension

The V-belt tension is proper if the V-belt bends 10 to 15 mm (Figure 10) when depressed with finger at midway between the clutch and vibrator pulleys.

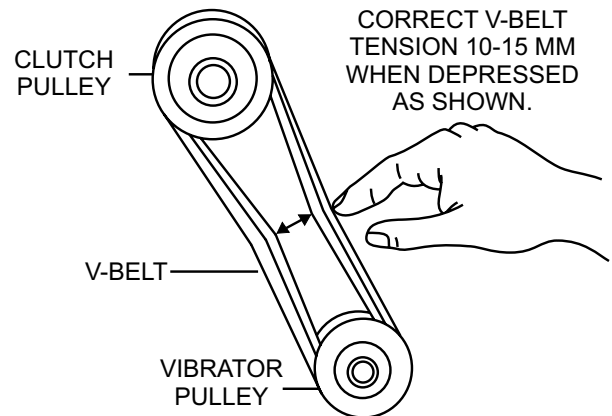


Figure 10. V-Belt Tension

Vibrator Oil Check

1. Place the plate compactor horizontally on a flat surface. Make sure the compactor is level when checking the oil in the vibrator assembly.
2. Check vibrator oil level by removing the oil plug (vibrator oil gauge) as shown in Figure 11. The oil level should be up to the oil plug.
3. The vibrator holds approximately 6.7 oz. (200 cc). **IMPORTANT**, if oil is required, replace using only SAE 10W-30 motor oil.

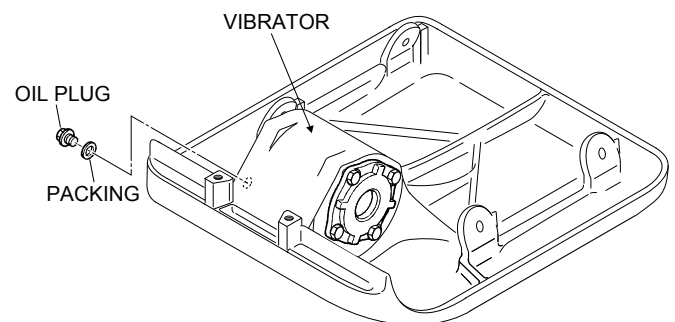


Figure 11. Vibrator Oil Check

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.

STARTING THE ENGINE

1. Place the engine fuel valve lever (Figure 12) to the “ON” position.

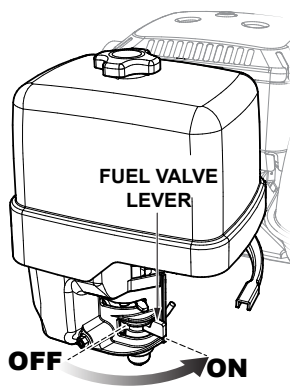


Figure 12. Engine Fuel Valve Lever (ON Position)

2. Move the throttle lever (Figure 13) away from the **SLOW** position, about 1/3 of the way toward the **FAST** position.

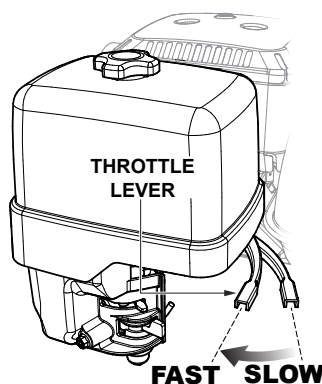


Figure 13. Throttle Lever (1/3 Start Position)

3. Place the choke lever in the **OPEN** position (Figure 14) if starting a warm engine, or if the ambient temperature is warm.

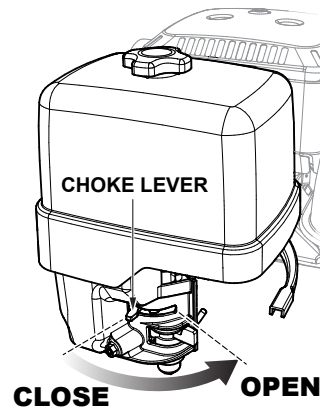


Figure 14. Engine Choke Lever (Open)

4. Place the choke lever (Figure 15) in the “**CLOSED**” position if starting a cold engine.

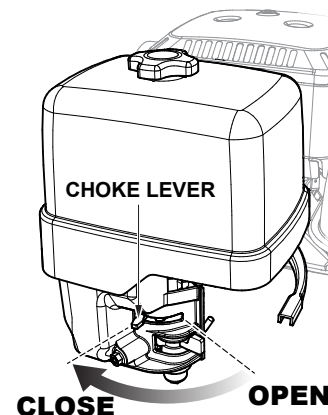


Figure 15. Choke Lever (Closed)

NOTICE

The **CLOSED** position of the choke lever enriches the fuel mixture for starting a **COLD** engine. The **OPEN** position provides the correct fuel mixture for normal operation after starting, and for restarting a warm engine.

- Place the engine ON/OFF switch (Figure 16) in the "ON" position.

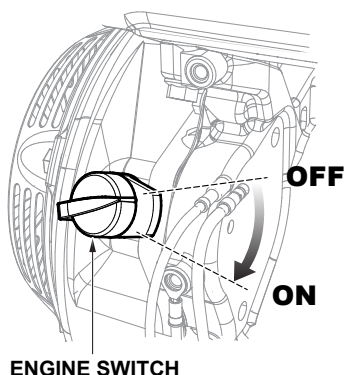


Figure 16. Engine ON/OFF Switch (ON Position)

- Grasp the starter grip (Figure 17) and slowly pull it out. The resistance becomes the hardest at a certain position, corresponding the compression point. Rewind the rope a little from that point and pull out sharply.

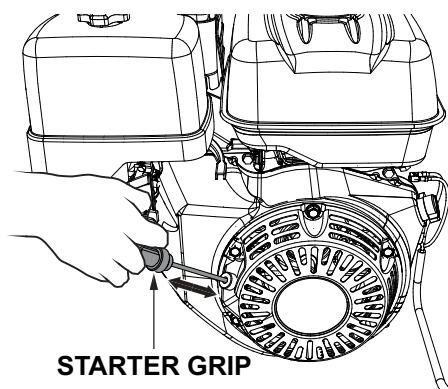


Figure 17. Starter Grip

NOTICE

DO NOT pull the starter rope all the way to the end
DO NOT release the starter rope after pulling. Allow it to rewind as soon as possible.

- When engine starts, release the starter grip and allow the rope to recoil.
- If the choke lever was moved to the "CLOSED" position to start the engine, gradually move it to the "OPEN" position (Figure 18) as the engine warms up. If the engine has not started repeat steps 1 through 6.

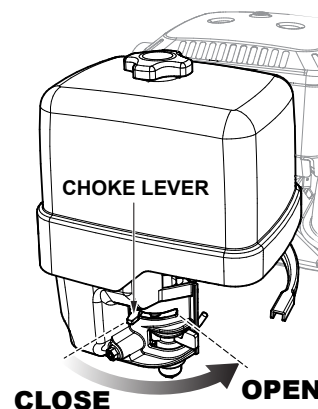


Figure 18. Choke Lever (Open)

- Before the compactor is placed in to operation, run the engine for several minutes. Check for fuel leaks, and noises that would associate with a lose component.
- If the sprinkling of water is required, place water valve (Figure 19) in the ON position.

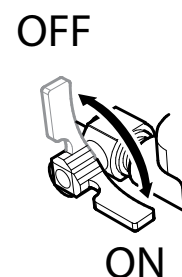


Figure 19. Water Valve (ON)

- To begin compacting, place the throttle lever (Figure 20) in the "FAST" (RUN) position.

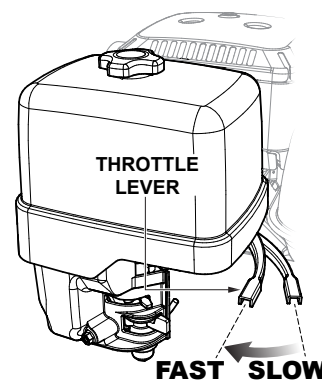


Figure 20. Throttle Lever (Fast/Run Position)

OPERATION

CAUTION



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

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

NOTICE

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

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

NOTICE

NEVER stop the engine suddenly while working at high speeds.

5. Compactor traveling speed may drop on soils which contain clay, however there may be cases where traveling speed drops because the compaction plate does not leave the ground surface easily due to the composition of the soil. To rectify this problem do the following:
 - Check the bottom plate to see if clay or equivalent material has been lodge in the plate mechanism. If so, wash with water and remove.
 - Remember the compactor does not work as efficiently on clay or soils that have a high moisture content level.
 - If the soil has a high moisture level, dry soil to appropriate moisture content level or carry out compaction twice.

STOPPING THE ENGINE

Normal Shutdown

1. Move the throttle lever to the "**SLOW**" (IDLE) position (Figure 21) and run the engine for three minutes at low speed.

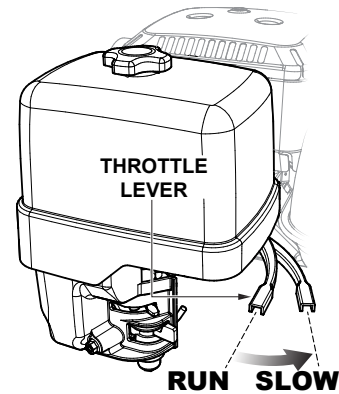


Figure 21. Throttle Lever (Slow/Idle Position)

2. Place the engine ON/OFF switch (Figure 22) in the "**OFF**" position.

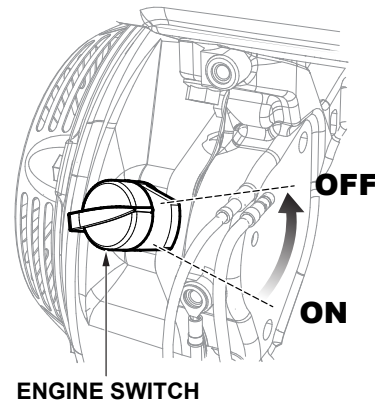


Figure 22. Engine ON/OFF Switch (OFF Position)

3. Place the fuel shut-off lever (Figure 23) in the "OFF" position.

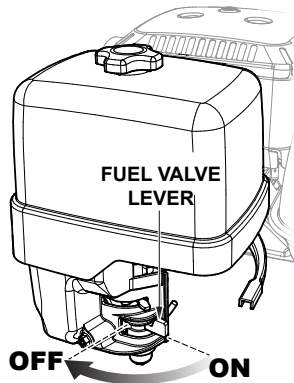


Figure 23. Fuel Valve Lever (OFF)

4. If applicable place water valve (Figure 19) in the **OFF** position.

Emergency Shutdown

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

Compactor Storage

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

- Drain the fuel tank completely, or add STA-BIL to the fuel.
- Run the engine until the gasoline in the carburetor is completely consumed.
- Completely drain the oil from the crankcase and refill with fresh oil.
- Remove the spark plug, pour 2 or 3 cc of SAE 30 oil into the cylinder and crank slowly to distribute the oil.
- Slowly rotate the engine a few times with the starter rope and install a new plug.
- Pull out the starter rope slowly and stop at the compression point.
- Clean all external parts of the plate compactor with a cloth.
- Cover the plate compactor and store in a clean, dry place.

MAINTENANCE

General maintenance practices are crucial to the performance and longevity of your compactor. This equipment requires routine cleaning, inspection and lubrication. Reference Table 6 and Table 7 for scheduled engine and compactor maintenance.

The following procedures, devoted to maintenance, can prevent serious compactor damage or malfunctioning.

NOTICE

Reference **HONDA** engine manual supplied with your compactor for more detailed engine maintenance and troubleshooting.

CAUTION

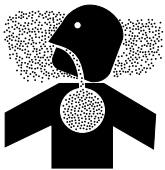


ALWAYS allow the engine to cool before servicing. **NEVER** attempt any maintenance work on a hot engine.

CAUTION

ALWAYS disconnect the spark plug wire from the spark plug and secure away from the engine before performing maintenance or adjustments on the machine.

WARNING



Some maintenance operations may require the engine to be run. Ensure that the maintenance area is well ventilated. Gasoline engine exhaust contains poisonous carbon monoxide gas that can cause unconsciousness and may result in **DEATH**.

General Cleanliness

Clean the compactor daily. Remove all dust and debris buildup (mud, clay etc.). If the compactor is steam-cleaned, ensure that lubrication is accomplished **AFTER** steam cleaning.

NOTICE

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

NOTICE

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

Inspection and Maintenance Service Tables

To make sure your plate compactor is always in good working condition before using, carry out the maintenance inspection in accordance with Table 6 and Table 7.

Engine Maintenance

Perform engine maintenance as listed in Table 6.

Table 6. Engine Maintenance Schedule							
Description (3)	Operation	Before	First Month or 10 hrs	Every 3 Months or 25 hrs	Every 6 Months or 50 hrs	Every Year or 100 hrs	Every 2 Years or 200 hrs
Engine Oil	CHECK	X					
	CHANGE		X				
Air Cleaner	CHECK	X					
	CHANGE			X (1)			
All Nuts and Bolts	Re-tighten If Necessary	X					
Spark Plug	CHECK-CLEAN				X		
	REPLACE						X
Cooling Fins	CHECK				X		
Spark Arrester	CLEAN					X	
Fuel Tank	CLEAN					X	
Fuel Filter	CHECK					X	
Idle Speed	CHECK-ADJUST					X (2)	
Valve Clearance	CHECK-ADJUST						X (2)
Fuel lines	CHECK	Every 2 years (replace if necessary) (2)					

1. Service more frequently when used in **DUSTY** areas.
2. These items should be serviced by your service dealer, unless you have the proper tools and are mechanically proficient. Refer to the **HONDA** Shop Manual for service procedures.
3. For commercial use, log hours of operation to determine proper maintenance intervals.

Machine Inspection

Perform machine inspection as listed in Table 7.

Table 7. Machine Inspection		
Interval	Check	Solution
Daily Before Starting	Machine	Clean if necessary.
	Fuel Tank For Leaks	Repair fuel leaks.
	Fuel System for Leaks	Repair fuel leaks.
	Engine Oil	Add oil if necessary.
	Vibrator Oil	Add oil if necessary.
	Air Cleaner Element	Clean/Replace
	Cyclone Pre-Cleaner	Clean
	Guard Frame	Inspect/deformations
Every 20 Hours	Shock Absorber	Replace if damaged.
	Engine Oil	Replace only after first 20 hrs.
Every 100	Engine Oil	Change
	Air Cleaner Element	Clean/Replace
	Vibrator Oil	Check oil level. Check for leaks.
Every 200 hours	V-Belt	Inspect, replace if damaged or worn.
	Clutch	Inspect, replace if not working properly.
	Engine Bolts	Replace bolts if deformed or elongated.
Every 300 hours	Vibrator Oil	Change
	Fuel Filter	Change
Every 2 years	Fuel Lines	Replace


Tightening Torque

Reference Table 8 below (Tightening Torque), for retightening of nuts and bolts.

Table 8. Tightening Torque (in. kg/cm Diameter)								
Material	6mm	8mm	10mm	12mm	14mm	16mm	18mm	20mm
4T	70	150	300	500	750	1,100	1,400	2,000
6-8T	100	250	500	800	1,300	2,000	2,700	3,800
11T	150	400	800	1,200	2,000	2,900	4,200	5,600
*	100 (6mm) 300 ~ 350 (8mm) 650 ~ 700 (10mm)							
**	In case counter-part is of aluminum							
Bolt threads used with this machine are all right handed								
Material and quality of material is marked on each bolt, and screw.								


Engine Air Cleaner

! DANGER



DO NOT use gasoline or low flash point solvents for cleaning the air cleaner. The possibility exists of fire or explosion which can cause damage to the equipment and severe bodily harm or even **DEATH!**

! CAUTION



Wear protective equipment such as approved safety glasses or face shields and dust masks or respirators when cleaning air filters with compressed air.

Dual Filter Element Type

The Honda GX160UT2QMX2 engine is equipped with a replaceable, high-density paper air cleaner element. See (Figure 24) for air cleaner components.

1. Remove the air cleaner cover and foam filter element.
2. Tap the paper filter element several times on a hard surface to remove dirt, or blow compressed air not exceeding 30 psi (207 kPa, 2.1 kgf/cm²) through the filter element from the inside out. **NEVER** brush off dirt. Brushing will force dirt into the fibers. Replace the paper filter element if it is excessively dirty.

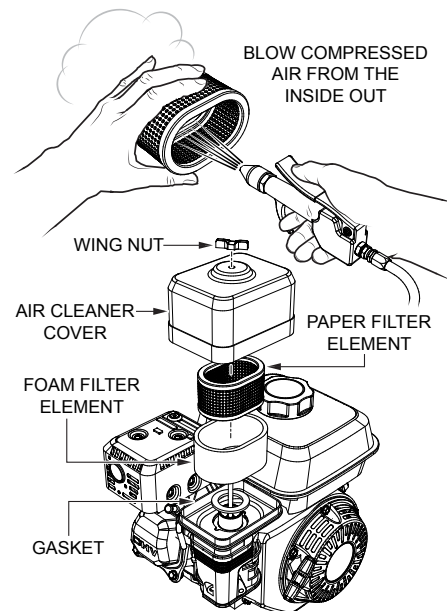


Figure 24. Engine Air Filter (Dual)

- Clean foam element in warm, soapy water or nonflammable solvent. Rinse and dry thoroughly. Dip the element in clean engine oil and completely squeeze out the excess oil from the element before installing.

Cyclone Dual Filter Element Type 1

NOTICE

When reinstalling cyclone housing, be sure that the air intake tab fits properly into the groove in the pre-cleaner cap. Also make sure air guide is properly aligned before inserting into pre-cleaner cap.

The Honda GX160UT2QMXC engine is equipped with a replaceable, high-density paper air cleaner element. See (Figure 25) for air cleaner components.

- Follow steps 1 through 3 as outlined in the "Dual Element" section.
- Next, remove the pan head screws (3) that secure the cyclone housing to the pre-cleaner cap.
- Remove the cyclone housing and wash the components with water.
- Thoroughly dry housing and associated components and reassemble.

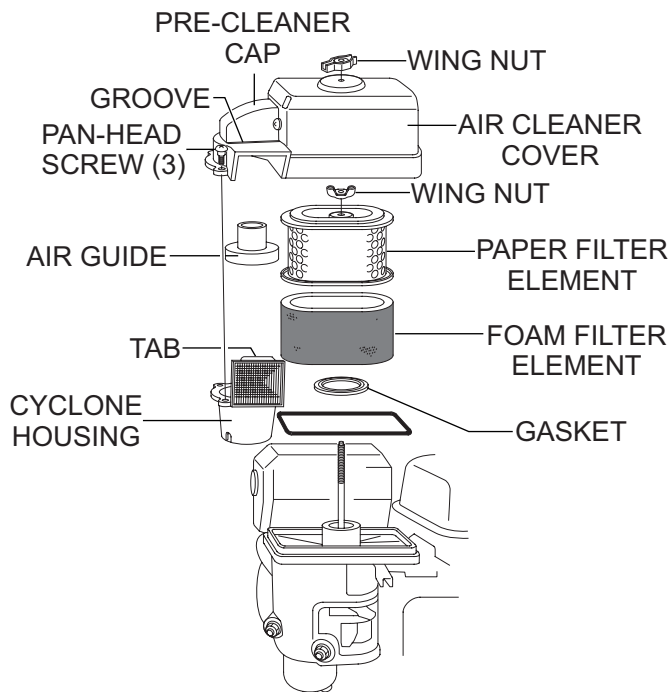


Figure 25. Engine Air Filter (Cyclone Type1)

Cyclone Dual Filter Element Type 2

The Honda GX160UT2QCM engine is equipped with a replaceable, high-density paper air cleaner element. See (Figure 26) for air cleaner components.

- Follow steps 1 through 3 as outlined in the "Dual Filter Element" section.

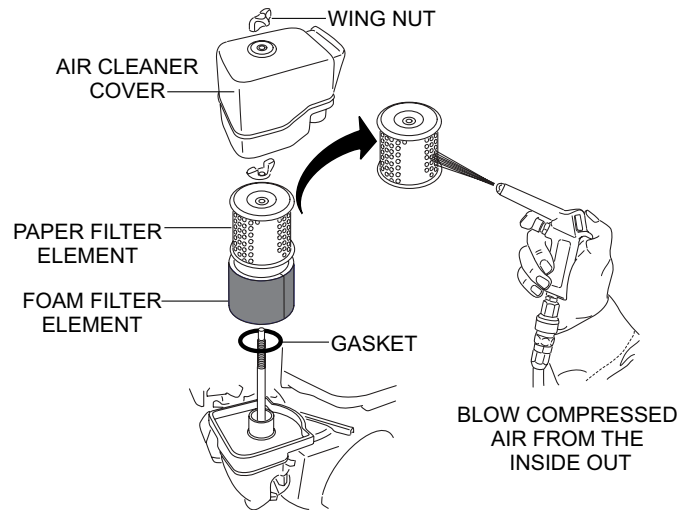


Figure 26. Engine Air Filter (Cyclone Type 2)

- Blow compressed air through the air cleaner cover as shown in. Clean inside of air filter cover with warm, soapy water or nonflammable solvent. Rinse and dry thoroughly.

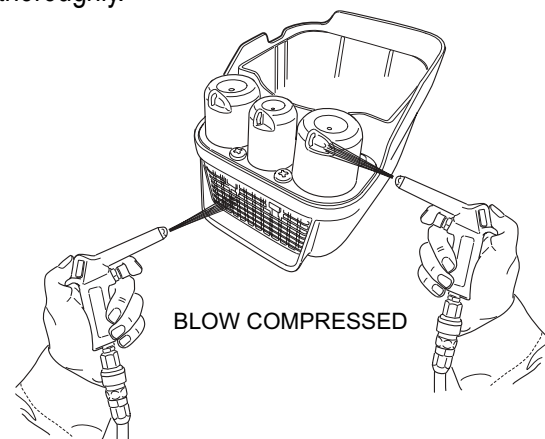


Figure 27. Engine Air Filter Cover

NOTICE

Operating the engine with loose or damaged air cleaner components could allow unfiltered air into the engine causing premature wear and failure.

Engine Oil

1. Drain the engine oil when the oil is warm as shown in (Figure 28).

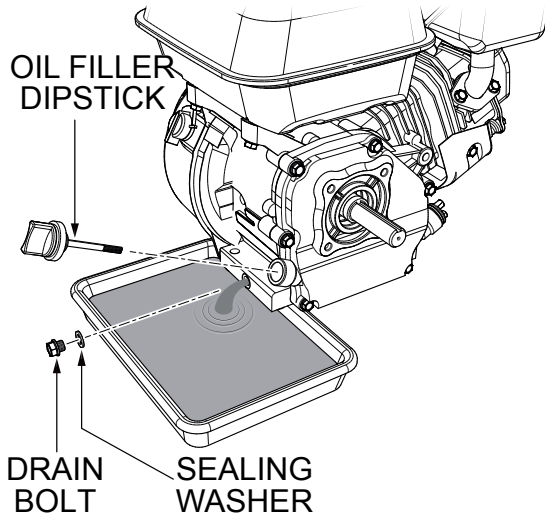


Figure 28. Draining Engine Oil

2. Remove the oil drain bolt and sealing washer and allow the oil to drain into a suitable container.
3. Replace engine oil with recommended type oil as listed in Table 5. For engine oil capacity, see Table 2 (Engine Specifications). **DO NOT** overfill.
4. Reinstall drain bolt with sealing washer and tighten securely.

SPARK PLUG

NOTICE

NEVER use a spark plug of incorrect heat range.

1. Remove and clean spark plug (Figure 29) with a wire brush if it is to be reused. Discard spark plug if the insulator is cracked or chipped.
2. Using a feeler gauge adjust spark plug gap to 0.028 ~0.031 inch (0.7~0.8 mm).
3. Thread spark plug into cylinder hole by hand to prevent cross-threading, then tighten securely.

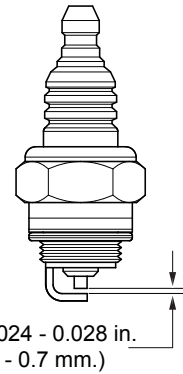


Figure 29. Spark Plug Gap

V-BELT

Visually examine the V-belt (Figure 30) and determine if it is full of tiny cracks, frayed, has pieces of rubber missing, is peeling or otherwise damaged.

Also, examine the belt and determine if it is **oil soaked** or "**glazed**" (hard shiny appearance on the sides of the belt). Either of these two conditions can cause the belt to run hot, which can weaken it and increase the danger of it breaking.

If the V-belt exhibits any of the above wear conditions replace the V-belt immediately.

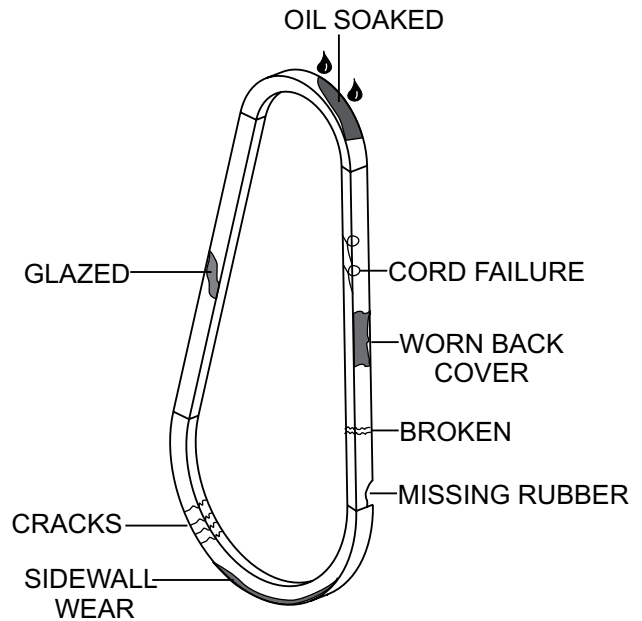


Figure 30. V-Belt Inspection

SPARK ARRESTER CLEANING

Clean the spark arrester every 6 months or 100 hours.

1. Remove the 4 mm screw (3) from the exhaust deflector, then remove the deflector. See (Figure 31).
2. Remove the 5 mm screw (4) from the muffler protector, then remove the muffler protector.
3. Remove the 4 mm screw from the spark arrester, then remove the spark arrester.

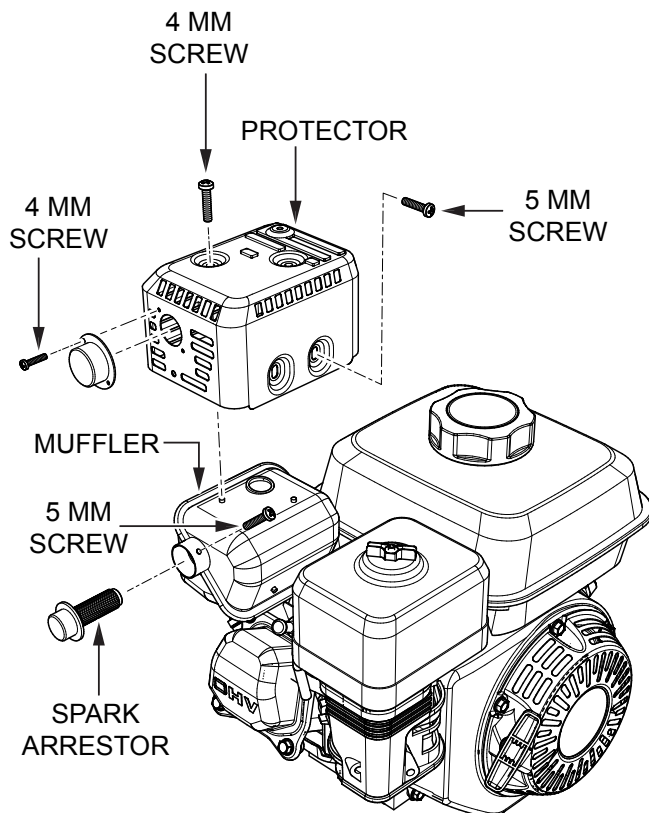


Figure 31. Spark Arrester Removal

4. Carefully remove carbon deposits from the spark arrester screen (Figure 32) with a wire brush.

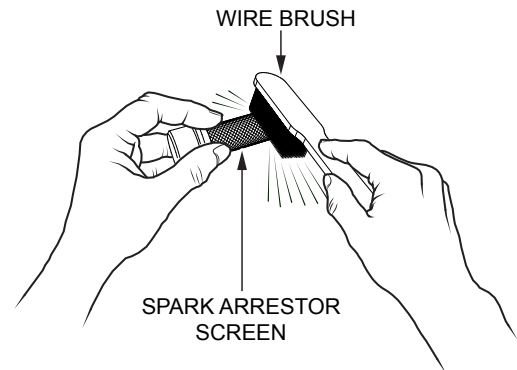


Figure 32. Cleaning The Spark Arrester

5. If the spark arrester is damaged and has breaks or holes, replace with a new one.
6. Reinstall the spark arrester and muffler protector in reverse order of disassembly.

OPERATION MANUAL

HERE'S HOW TO GET HELP

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

UNITED STATES

Multiquip Inc.

(310) 537- 3700
6141 Katella Avenue Suite 200
Cypress, CA 90630
E-MAIL: mq@multiquip.com
WEBSITE: www.multiquip.com

CANADA

Multiquip

(450) 625-2244
4110 Industriel Boul.
Laval, Quebec, Canada H7L 6V3
E-MAIL: infocanada@multiquip.com

UNITED KINGDOM

Multiquip (UK) Limited Head Office

0161 339 2223
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