



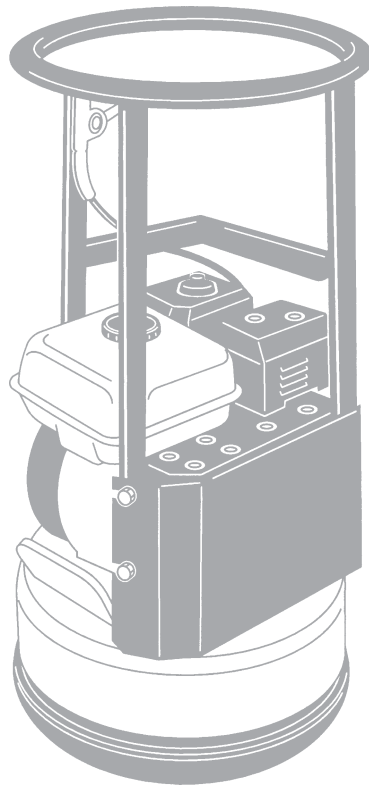
Forward Moving Vibrating Plate KMR 11

Operation & Maintenance IKMR11EN3, September 2002

Engine:
Honda GX160

These instructions apply from PIN (S/N):
KMR 11 PIN (S/N) *19000506*

KEEP THIS MANUAL
AVAILABLE FOR
FUTURE USE



The Tremix KMR 11 Vibratory Plate Compactor features a unique round base that allows flush compaction next to posts, pillars, guardrails, manholes, drainage inlets and foundations. The design of the KMR 11 makes it easy to manoeuvre around obstacles.

Confined areas and corners are easily handled by turning the steering wheel and compacting your way back out. Its convenient steering wheel, not only optimizes operator's comfort when manoeuvring in confined spaces, but also easy lifting from trenches, trucks and trailers. An extra lifting handle is fitted on the engine plate, therefore allowing balanced movements when lifting the machine.

The plate is designed for operation in well ventilated spaces, as all combustion engine machines.

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WARNING SYMBOLS



WARNING Indicates danger or hazardous procedure that could result in serious or fatal personal injury if the warning is ignored.



CAUTION Indicates danger or hazardous procedure that could result in damage to machine or property if the warning is ignored.

SAFETY INSTRUCTIONS



The safety instructions are included in this manual and must be studied by the operator. Always follow the safety rules and keep the manual available for future use.



Read through the entire manual before starting any maintenance operations.



Ensure good ventilation (air extraction) if the engine is run indoors.

GENERAL

It is important that the machine is maintained correctly to ensure proper function. It should be kept clean so that any leakage, loose bolts and loose connections can be discovered in time.

Make a habit of inspecting the machine every day before starting up by checking all round it to detect any sign of leakage or other faults.



SPARE A THOUGHT FOR THE ENVIRONMENT!
Do not let oil, fuel and other environmentally hazardous substances contaminate the environment. Always dispose of used filters, drained oil and any remaining fuel properly.

This manual contains instructions for periodic attention which should normally be carried out by the operator.

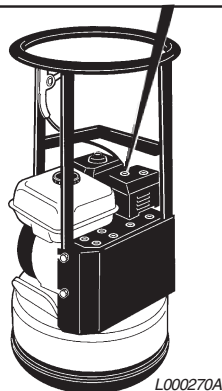


There are additional instructions relating to the engine, for which the manufacturer's instructions are detailed in the engine manual.

MACHINE PLATE

Fill in all data below, when delivering and commissioning the machine.

TREMIX®		CE	
Tremix			
Box 504, SE-371 23 Karlskrona Sweden			
Type	Operating mass kg	Rated power kW	Year of Mfg
Product Identification Number			385136SE



.....
Engine Model

.....
Engine Number

SAFETY INSTRUCTIONS (FOR ALL LIGHT PRODUCTS)

Symbols

The signal words WARNING and CAUTION used in the safety instructions have the following meanings:



WARNING: Indicates danger or hazardous procedure that could lead to serious or mortal injury if the warning is neglected.



CAUTION: Indicates danger or hazardous procedure that could lead to machine or property damage if the warning is neglected.

Important rules for your safety



The machine must not be modified without the prior consent of the manufacturer. Use only original parts. Use only the accessories recommended by Tremix. If modifications not approved by Tremix are carried out, these could result in serious injury to yourself or other personnel.

- These recommendations are based on international safety standards.
- You must also observe any local safety regulations which may be in force. Read all instructions carefully before operating the machine. Keep the instructions in a safe place.
- Signs and stickers giving important information about safety and maintenance are supplied with every machine. Make sure that they are always legible. The ordering numbers for new stickers can be found in the spare parts list.
- Use of the machine and its accessories is restricted to the applications specified in the product literature.
- For reasons of product safety, the machine must not be modified in any way.
- Replace damaged parts immediately. Replace all wear parts in good time.

Be alert

Always pay attention to what you are doing, and use your common sense. Do not use the machine if you are tired or under the influence of drugs, alcohol or other substances which can affect your vision, reaction ability or judgement.

Safety equipment



Long exposure to loud noise without ear protectors can cause permanent damage to hearing.



Long exposure to vibrations can damage the hands, fingers and wrists. Do not use the machine if you experience discomfort, cramp or pain. Consult a doctor before resuming work with the machine.

Always use approved safety equipment. The operator, and people in the immediate vicinity of the working area, must wear:

- Safety helmet
- Safety goggles
- Ear protectors
- Dust mask in dusty environments
- High-visibility clothing
- Protective gloves
- Protective shoes

Avoid wearing loosely fitting clothing that might get caught in the machine. If you have long hair, cover it with a hair net. Vibrations from hand-held machines are transmitted into the hands via the handles of the machine. Tremix machines feature a handle design that absorbs a large part of the machine vibrations. The vibrations are not eliminated entirely, but it is possible to use the machines for longer periods of time without the risk of injury.

Be alert to acoustic signals from other machines in the working area.

Working area

Do not use the machine near flammable material or in explosive environments. Sparks can be emitted from the exhaust pipe, and these can ignite flammable material. When you take a pause or have finished working with the machine, do not park it on or near flammable materials. The exhaust pipe can get very hot during operation, and can cause certain material to ignite. Make sure that there are no other personnel inside the working area while the machine is in use. Keep the worksite clean and free of extraneous objects. Store the machine in a safe place, out of unauthorized's reach, preferably in a locked container.

SAFETY INSTRUCTIONS (FOR ALL LIGHT PRODUCTS)

Filling with fuel (Gasoline/diesel)



Petrol has an extremely low flash-point and can be explosive in certain situations. Do not smoke. Make sure that worksite ventilation is good.

Keep away from all hot or spark-generating objects when handling fuel. Wait until the machine has cooled before filling the tank. Fill the tank at least 3 metres away from where you intend to use the machine. Avoid spilling petrol, diesel or oil on the ground. Protect your hands from contact with petrol, diesel and oil.

Open the tank cap slowly to release any overpressure that might exist in the tank. Do not overfill the tank. Inspect the machine for fuel leakage regularly.

Do not use a machine that is leaking fuel.

Starting the machine



Before starting read instruction book and make your self familiar with the machine and make sure that:

- All handles are free from grease, oil and dirt.
- The machine does not show any obvious faults.
- All protective devices are securely fastened in their places.
- All control levers in "neutral" position.

Start the machine according to the instruction-book.

Operation



Keep your feet well clear of the machine.



Do not operate the machine in poorly ventilated spaces. There is a risk of carbon monoxide poisoning.

Use the machine only for the purpose for which it is intended. Make sure you know how to stop the machine quickly in the event of an emergency situation.



Always take extreme care when driving the machine on slopes. Always drive straight up and down on slopes. Do not exceed the maximum gradability of the machine according to the instruction book. Stay clear of machine when operating on a slope or in a trench.

Do not touch the engine, the exhaust pipe or the eccentric element of the machine. They gets very hot during operation and can cause burn injuries.

Do not touch V-belts or rotating parts during operation.

Parking

Park the machine on ground as level and firm as possible. Before leaving machine:

- Apply the parking brake.
- Shut off the engine and pull the ignition key out.

Loading/Unloading



Never remain under or in the immediate vicinity of the machine when it is lifted by a crane. Only use marked lifting points. Always make sure that all lifting devices are dimensioned for the weight of the products.

Maintenance

Maintenance work must only be carried out by skilled personnel. Keep unauthorized persons away from the machine. Do not carry out maintenance work while the machine is moving or the engine is running.

SAFETY INSTRUCTIONS (FOR ALL LIGHT PRODUCTS)

Working with the hydraulic system

Regular maintenance of the hydraulic system is important. Minor damage or a split hose or coupling can have devastating consequences. Bear in mind that the hydraulic hoses are made of rubber and can deteriorate with age, which can result in splitting. In all cases of uncertainty with regard to durability or wear, replace the hoses with new original hoses from Tremix.

Working with battery

The battery contains poisonous and corrosive sulphuric acid. Wear protective glasses and avoid getting acid on your skin, clothes or on the machines. If you get sulphuric acid on yourself, rinse the skin with water. If you get acid in your eyes, rinse them with water for at least 15 minutes and seek immediate medical treatment. The gas that is emitted by the battery is explosive. When fitting or replacing a battery, always take care so that you do not short-circuit the battery poles.

Repair

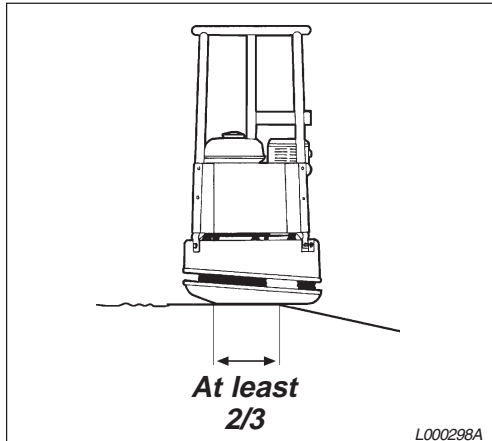
Never use a machine that is damaged. Qualified repair work requires trained personnel, please contact your nearest authorized workshop.

Extinguishing fires

If there is a fire in or on the machine, it is best to use an ABE-class fire extinguisher. However, a BE-class CO₂ extinguisher is also suitable.

SAFETY WHEN DRIVING

Driving near an edge



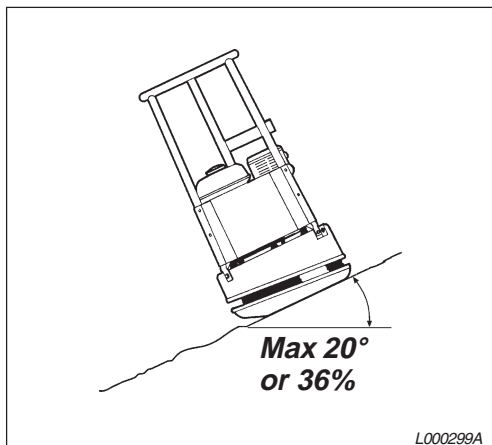
Machine location when operating on edges

When driving near an edge, at least two thirds of the plate must be on firm solid ground.



If the machine tips over, switch off the engine before attempting to lift the machine.

Slopes



Tipping angle on side slopes/slopes

Make sure that the work site is safe. Wet and loose earth reduces manoeuvrability especially on sloping ground. Always observe particular caution on sloping and uneven terrain.



Where possible, avoid all driving across a slope. Instead, drive up and down on sloping ground.

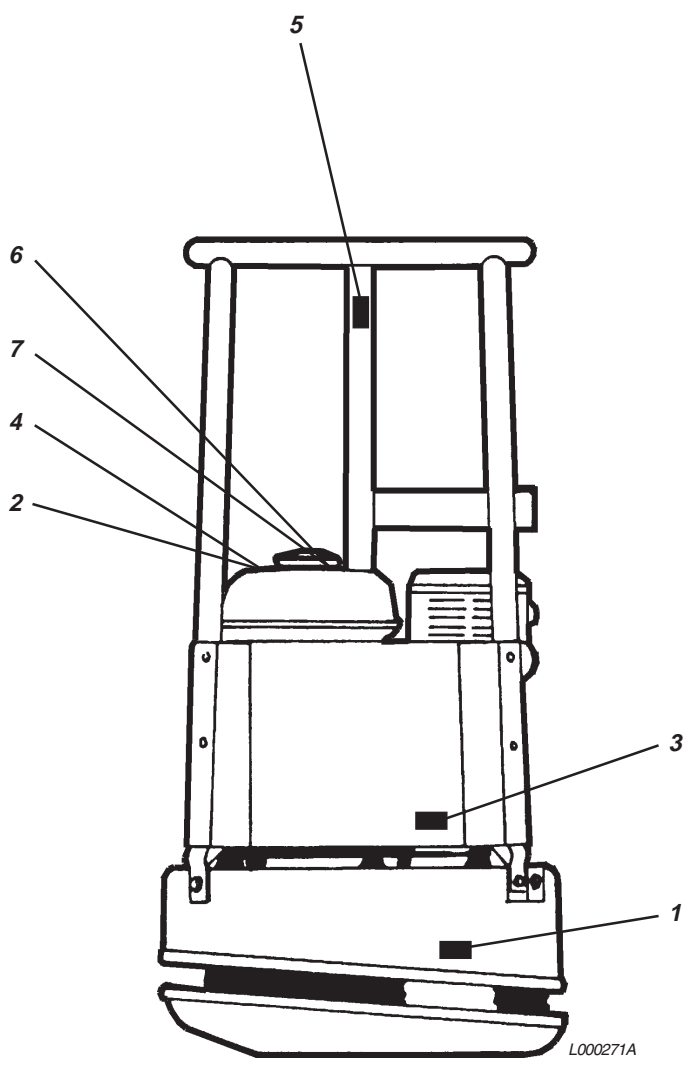
Never work on slopes that are greater than the capability of the machine. Maximum slope of the machine in operation is 20° (depending on condition of the ground).

The tilting angle is measured on a hard, level surface with the machine stationary. Vibration switched OFF and all tanks full. Remember that loose ground, vibration switched ON, and driving speed can all cause the machine to topple even on a smaller slope than specified here.

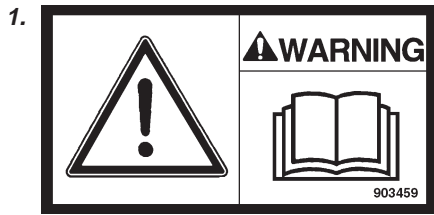


Never leave the machine unattended with the engine running.

SAFETY DECALS, LOCATION/DESCRIPTION



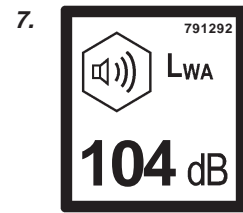
SAFETY DECALS, LOCATION/DESCRIPTION



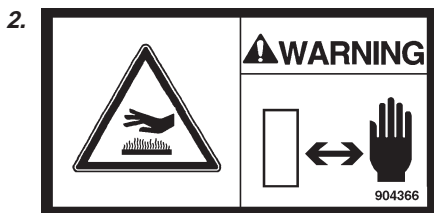
The operator must read the safety manual, and the operation and maintenance instructions before using the machine.



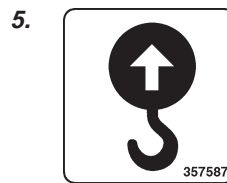
Petrol



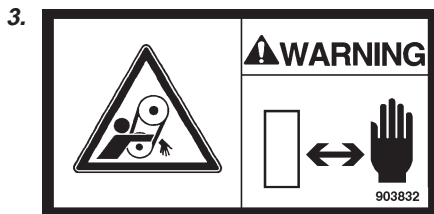
Guaranteed Sound Power level



Warning - hot surfaces in the engine compartment. Do not touch.



Lifting point



Warning, hand and arm entanglement. Never reach into the hazardous area.



Use ear protectors

FUEL AND LUBRICANTS



ENGINE OIL

Använd SAE 15W/40
Shell Universal Engine Oil TX15W-40 or equivalent
Volume: 0,6 l (0.63 qts)



FUEL

Use ordinary grade petrol (unleaded)
Volym: 3,6 l (3.80 qts)



Stop the engine before refilling the fuel tank. Never refuel near an open flame or sparks, which could start a fire. Don't smoke. Use pure fuel and clean filling equipment. Take care not to spill fuel.

Service parts P/N

	Honda GX160
Engine air filter element	23 93 23
Tändstift	23 95 65
V-belt	28 45 37

TECHNICAL DATA

KMR 11

Weight

Net weight, kg (lbs)	96 (212)
Operating weight EN500, kg (lbs)	99 (218)

Compaction data

Vibr. frequency, Hz	75
Vibr. frequency, vpm	5400
Centrifugal force, kN (lbf)	16 ()
Amplitude, mm (in)	1,7 (0.06)

Operating data

Speed of travel, m/min (feet/min)	22
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Volumes

Fuel tank, lit. (qts)	3,6 (3.80)
Crank case, lit. (qts)	0,6 (0.63)

Engine

Model	Honda GX160 4-stroke Manuell start
Output, kW (hp)	4,1 (5,5)
Engine speed, rpm	3600

Noise and Vibrations

Noise level	Sound pressure level at the operator's ear according to ISO 6394:
L_{pA} dB (A) =	90
	Sound power level according to ISO 3744:
L_{wA} dB (A) =	104
Vibration values	Hand - arm vibration values according to ISO 5349:
a m/s ² =	2,5

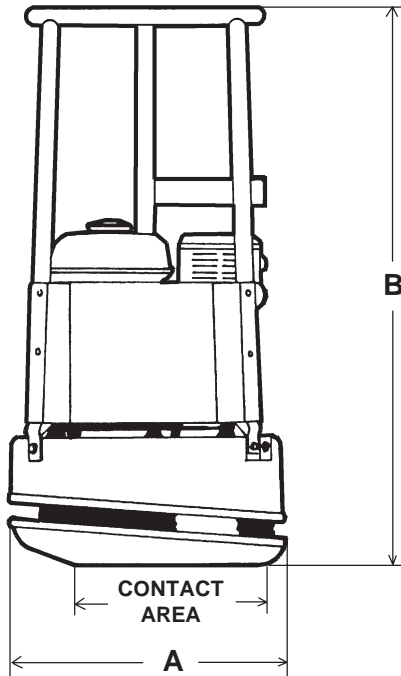
The above noise level and vibration values were determined at normal engine speed with vibration on. The machine was placed on an elastic base.

During operation these values may differ because of the actual operational conditions.

Noise level according to EU directive 2000/14/EC for EU equipped machine, on macadam course with vibration switched ON:

Measured sound power level, L_{wA} , dB(A) =	103
Guaranteed sound power level, L_{wA} , dB(A) =	104

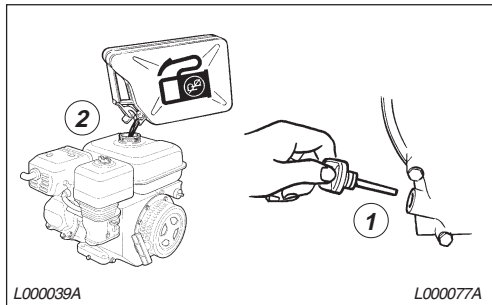
TECHNICAL DATA – DIMENSIONS



	KMR 11	
A mm (inch)	450	(17.7)
B mm (inch)	920	(36.2)
Contact area, m² (sq feet)	0,088	(0.95)

OPERATION

Before start



Follow the general safety precautions. Check that daily maintenance has been carried out.

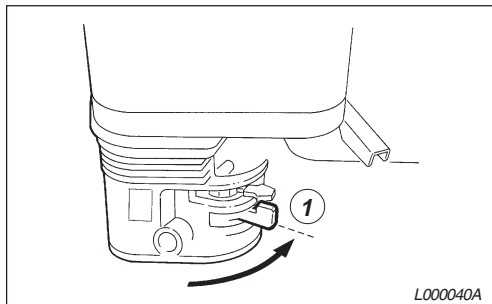
We also recommend that you read the instruction manual for the engine which was delivered with the machine.

1. Check the oil level in the engine.
Oil volume 0,6 l (0.63 qts).
2. Fill the engine (cold engine) fuel tank with fuel.
Tank volume 3,6 l (3.80 qts).
3. Check that all operating controls are working.
4. Ensure that there are no oil leaks and that all screw joints are tightened.

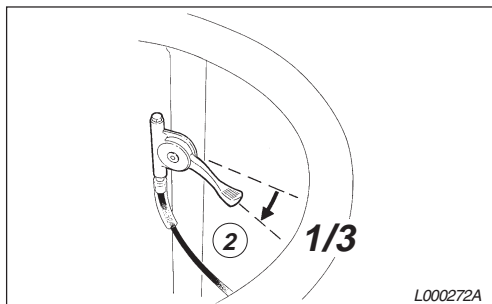


On new machines the engine oil must be changed after 20 working hours.

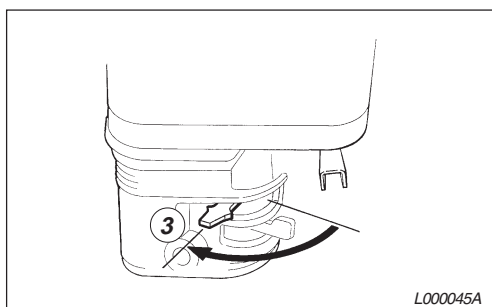
Starting the engine



1. Open the fuel cock.

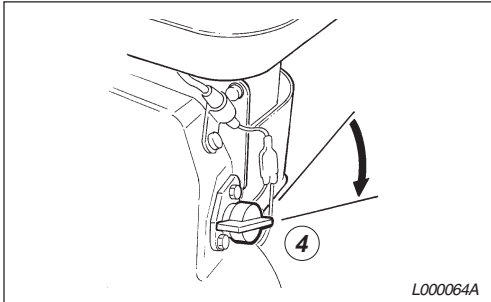


2. Put the throttle lever to middle position.

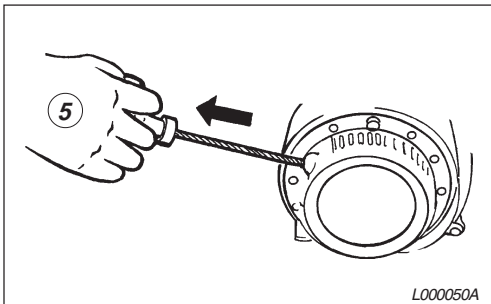


3. Close the choke fully if the engine is cold; close it halfway or let it be fully open if the engine is warm or the ambient temperature is high.

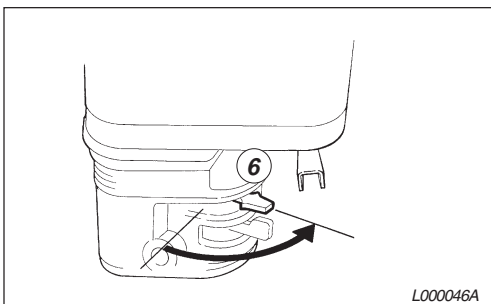
OPERATION



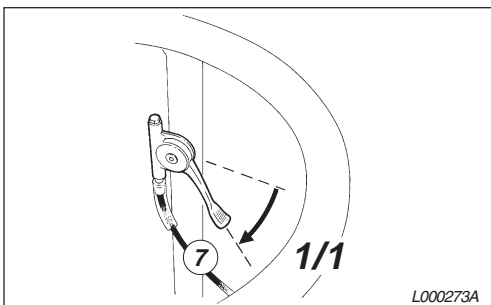
4. Turn the engine switch to the I position.



5. Pull slowly on the starter handle (4) until you feel it engage, then let the handle return a short distance and pull sharply to start the engine. Do not allow the starter grip to snap back against the engine. Return it gently to prevent damages to the starter.



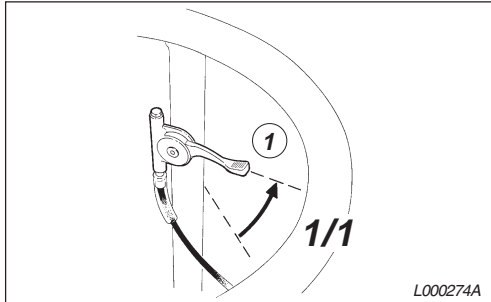
6. Open up the choke gradually until it is fully open.



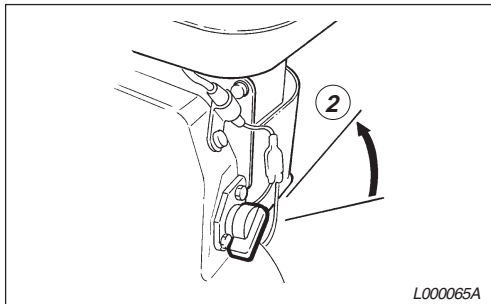
7. Let the engine run on idle for a few minutes before running it at full capacity.

OPERATION

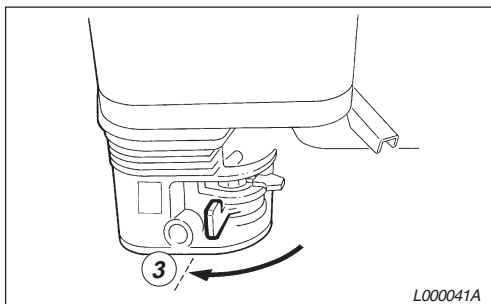
Stopping the engine



1. Put the throttle in idling mode. Allow the engine to idle for a few minutes to cool down.



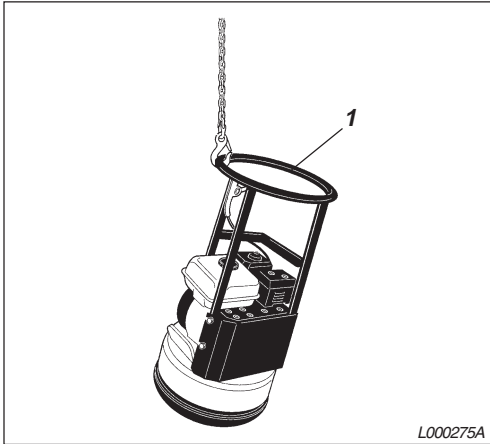
2. Turn the engine switch to the **O** position.



3. Close the fuel cock.

LIFTING, SALVAGING AND TRANSPORTATION

Lifting/Salvaging



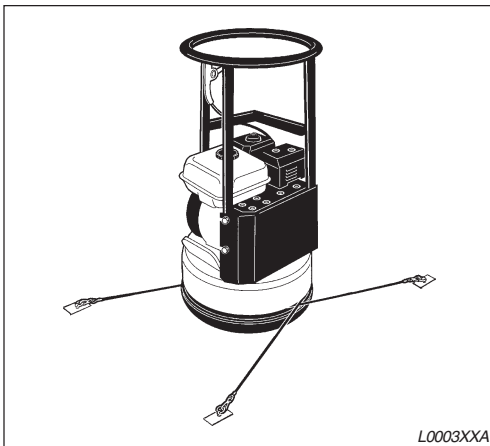
Keep well clear of the hoisted machine.



All lifting devices must be dimensioned in order to fulfill all regulations. Before lifting check that ramming shoe is correctly attached and not damaged. Before lifting, make sure that the rubber elements between the handle bracket and the machine are intact.

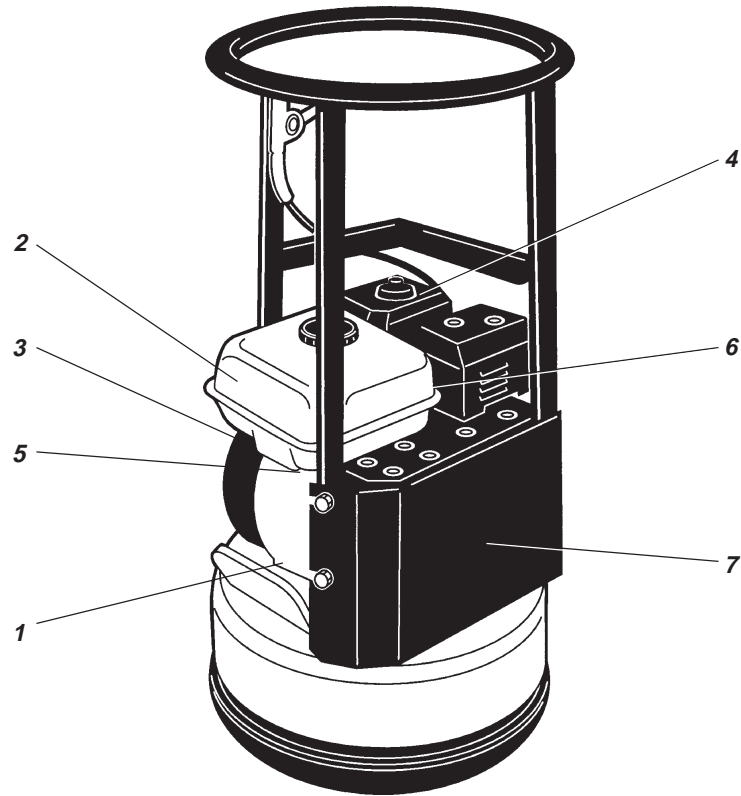
The weight is noted on the machine data plate; see the "Machine data plate" section.

Transportation



Always secure the machine firmly during all transportation. Place lashing band in a U shape around the bottom plate and secure both front and rear.

MAINTENANCE – SERVICE POINTS



L000270A

- | | |
|----------------------|--------------------------|
| 1. Engine oil | 5. Engine cooling system |
| 2. Fuel tank | 6. Spark plug |
| 3. Fuel filter | 7. V-belt |
| 4. Engine Air filter | |

Every 10 hours of operation (daily)

Item in fig.	Maintenance	see page	Comments
1	Check the oil level in the engine	19	
2	Fill the fuel tank	19	
5	Check the engine cooling system	19	
4	Check the air filter on the engine	19	
	Check for oil leaks in the machine	19	
	Check that all screw joints are tightened	19	
	Keep the machine clean	19	

MAINTENANCE – SERVICE POINTS

After the first 20 hours of operation

Item in fig.	Maintenance	see page	Comments
4	Check and clean/change the air filter on the engine	20	
1	Change engine oil	21	

Every 100 hours of operation

Item in fig.	Maintenance	see page	Comments
1	Change engine oil	21	
6	Check and clean the spark plug	21	
4	Check air filter element on the engine	21	
3	Check and clean the fuel filter and the fuel tank	22	
7	Check the V-belt	22	

Every 300 hours of operation (once every year)

Item in fig.	Maintenance	see page	Comments
	Clean and adjust the carburettor*	23	Service only by authorized personnel
5	Clean the cooling flanges on the engine	23	Service only by authorized personnel
4	Change air filter element on the engine	23	Service only by authorized personnel

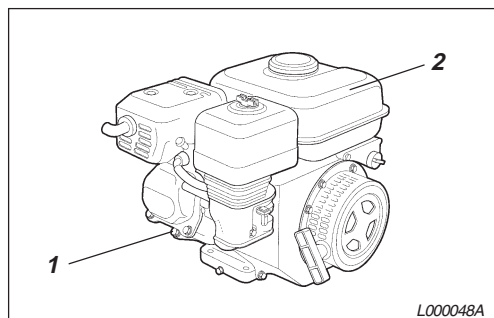
Every 1000 hours of operation (once every year)

Item in fig.	Maintenance	see page	Comments
	Adjust the valve clearance on the engine*		Service only by authorized personnel

* = These items should be serviced by an authorized Tremix or Honda dealer, unless the owner has the proper tools and is mechanically proficient.

MAINTENANCE – EVERY 10 HOURS OF OPERATION

Diesel engine – Check oil level



Engine

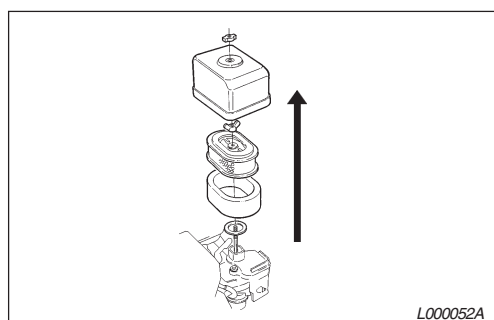
1. Oil dipstick
2. Fuel tank

Check the oil level in the engine.

Fill the tank with fuel.

Check the engine cooling system.

Air cleaner – Checking/Cleaning

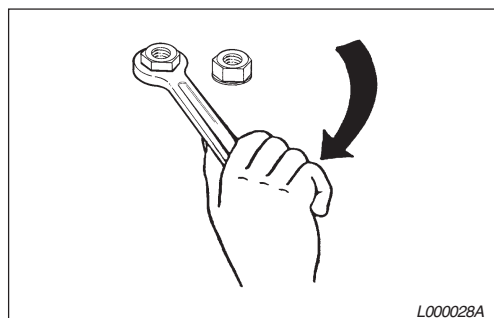


Air cleaner

Check the air filter on the engine.

Check for oil leaks in the machine.

Bolted joints – Check



Control tighten bolts

Check and, where necessary, tighten screws and nuts.

Washing (high pressure)



Washing the machine

Keep the machine clean.



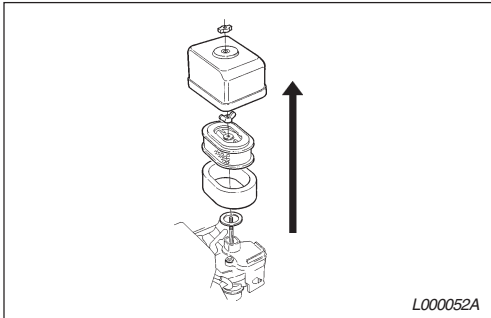
Never aim a water jet directly at the cap of the fuel tank or hydraulic reservoir. This is especially important when using a high-pressure jet.

Do not spray water directly on electric components or the instrument panel. Put a plastic bag over the filler cap of the fuel tank and secure with a rubber band. This will prevent water from entering the venting hole in the filler cap. This could otherwise cause operational disturbance, for example, a clogged filter.

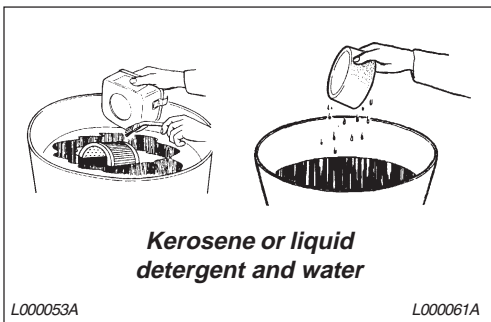
MAINTENANCE – AFTER THE FIRST 20 HOURS OF OPERATION

Air cleaner – Checking/Cleaning

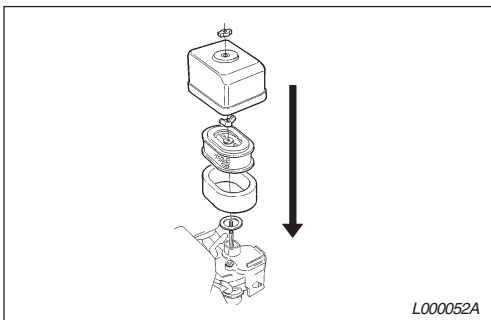
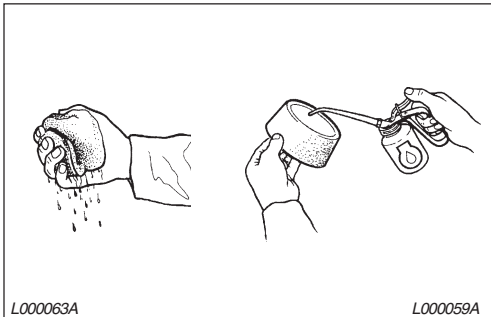
Check and clean/change the air filter on the engine.



Air cleaner – Cleaning

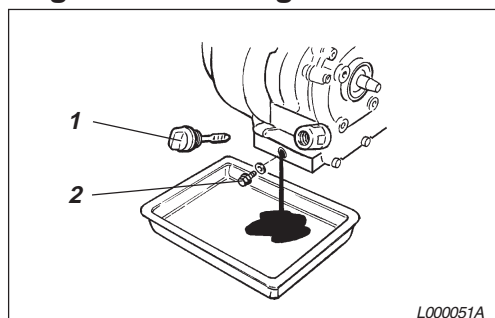


Air cleaner – Cleaning



MAINTENANCE – EVERY 100 HOURS OF OPERATION

Engine – Oil change



Engine

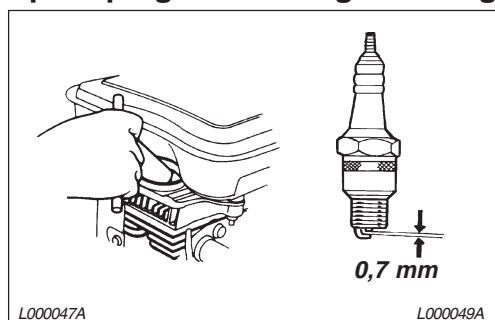
1. Oil dipstick
2. Drain plug

Change engine oil.



Save the oil in a can and dispose of it properly.

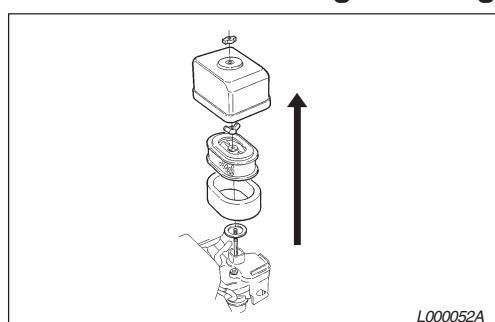
Spark plug – Checking/Cleaning



Spark plug

Check and clean the spark plug.

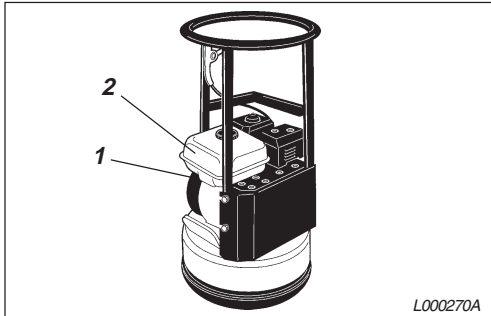
Air cleaner – Checking/Cleaning



Check and clean/change the air filter on the engine.

MAINTENANCE – EVERY 100 HOURS OF OPERATION

Fuel tank/filter – Cleaning



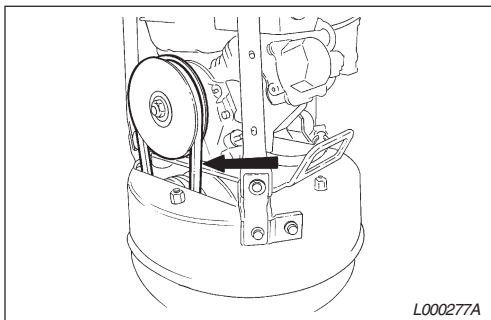
Engine

1. Fuel filter
2. Fuel tank

Check and clean the fuel filter and the fuel tank.

Adjust the valve clearance on the engine.

V-belt – Checking



V-belt

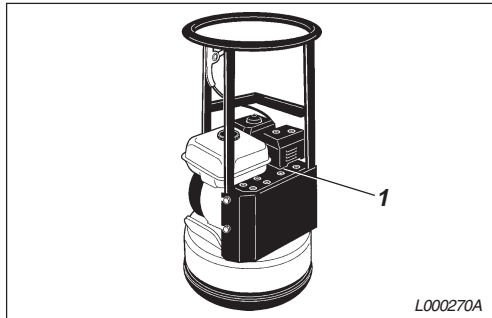
1. Remove the protective cover and inspect the V belt.
2. To adjust belt tension, loosen the four engine-plate bolts and slide it into position.
3. Tighten the bolts and replace the protective cover.



Never run the machine without the protective cover over the V belt.

MAINTENANCE – EVERY 300 HOURS OF OPERATION

Cooling flanges – Cleaning



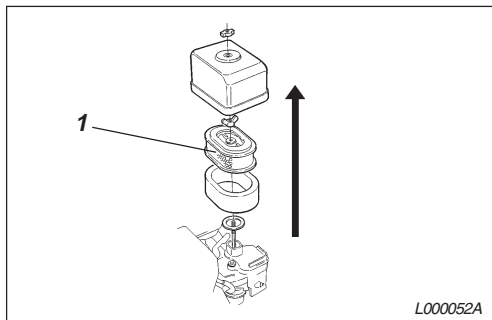
Engine

1. Cooling flanges

1. Clean and adjust the carburettor*.
2. Clean the cooling flanges on the engine.

* These items should be service by an authorized Tremix or Honda dealer, unless the owner has the proper tools and is mechanically proficient.

Air filter – Changing



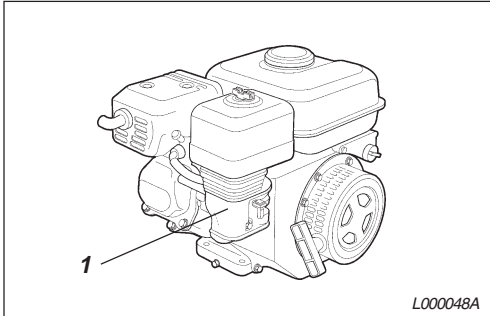
Air cleaner

1. Air filter

3. Change air filter element (1) on the engine.

MAINTENANCE – EVERY 1000 HOURS OF OPERATION

Valve clearance – Adjusting



Engine

1. Carburettor

1. Adjust the valve clearance on the engine*.

* These items should be service by an authorized Tremix or Honda dealer, unless the owner has the proper tools and is mechanically proficient.

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