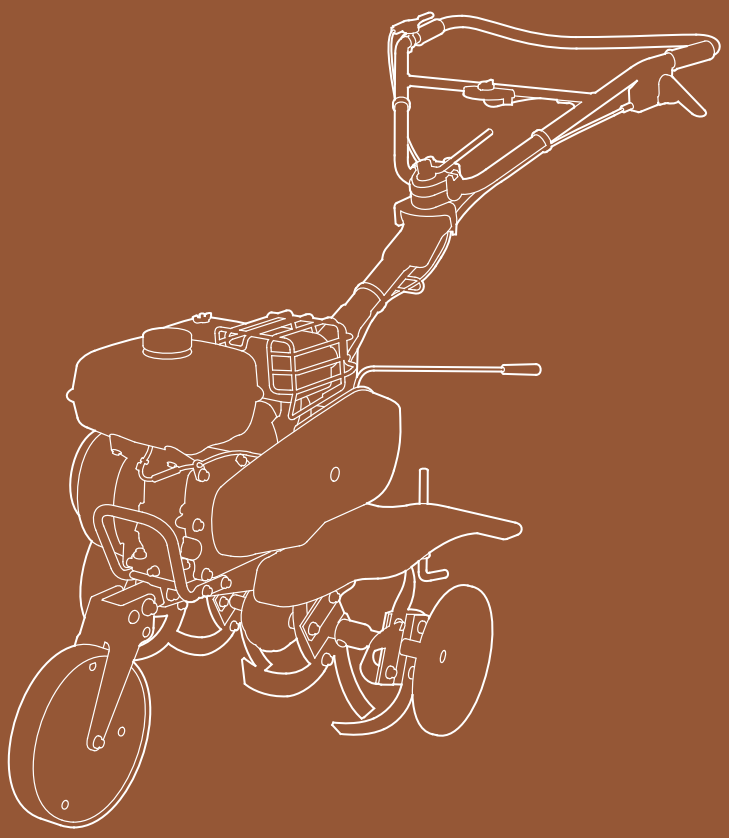
HONDA
POWER PRODUCTS

TILLER

FE500·F501



ECOLOGY CONSCIOUS TECHNOLOGY

OWNER'S MANUAL
MANUEL DE L'UTILISATEUR
BEDIENUNGSANLEITUNG
MANUAL DE EXPLICACIONES
MANUALE DELL'UTENTE

Honda F501·FE500

OWNER'S MANUAL

The ''e-SPEC'' mark symbolizes environmentally responsible technologies applied to Honda power equipment, which contains our wish to ''preserve nature for generations to come.''

Thank you for purchasing a Honda tiller.

This manual covers operation and maintenance of the F501 and FE500 tillers.

All information in this publication is based on the latest product information available at the time of printing.
Honda Motor Co., Ltd. reserves the right to make changes at any time without notice and without incurring any obligation.

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This manual is considered a permanent part of the tiller and it must stay with the tiller if resold.

Pay special attention to statements preceded by the following words:

⚠WARNING **Indicates a strong possibility of severe personal injuly or death if instructions are not followed.**

CAUTION: Indicates a possibility of personal injury or equipment damage if instructions are not followed.

NOTE: Gives helpful information.

If a problem should arise, or if you have any questions about your tiller, consult an authorized Honda tiller dealer.

⚠WARNING

The Honda tiller is designed to give safe and dependable service if operated according to instructions. Read and understand the Owner's Manual before operating the tiller. Failure to do so could result in personal injuly or equipment damage.

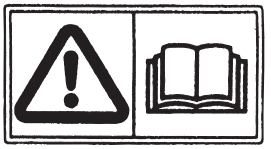
- The illustration may vary according to the type.

CONTENTS

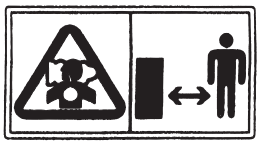
⚠WARNING

To ensure safe operation—

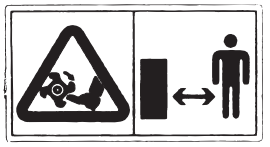
For your safety and the safety of others, pay special attention to these precautions:



- **Honda tiller is designed to give safe and dependable service if operated according to instructions.**
  Read and understand the Owner's Manual before operating the tiller. Failure to do so could result in personal injury or equipment damage.



- **Exhaust gas contains poisonous carbon monoxide.**
  Never run the tiller in an enclosed area.
  Be sure to provide adequate ventilation.
  When installed in ventilated protection are to be observed.



- **The rotating tines are sharp and they turn at high speed. Accidental contact can cause serious injury.**
  - **Keep your hands and feet away from the tines while engine is running.**
  - **Stop the engine and disengage the tines clutch before inspection or maintenance of tines.**
  - **Disconnect the spark plug cap to prevent any possibility of accidental starting. Wear heavy gloves to protect your hands from the tines when cleaning the tines or when inspecting or replacing the tines.**

Operator responsibility

- Keep the tiller in good operating condition. Operating a tiller in poor or questionable condition could result in serious injury.
- Be sure all safety devices are in working order and warning labels are in place. These items are installed for your safety.
- Be sure the safety covers (tine covers, fan cover and recoil starter cover) are in places.
- Know how to stop the engine and tines quickly in case of emergency. Understand the use of all controls.
- Keep a firm hold on the handlebars. They may tend to lift during clutch engagement.

⚠WARNING

To ensure safe operation—

Operator responsibility

- Read the owner's manual carefully. Be familiar with the controls and their proper use of the tiller.
- Use the tiller for the purpose it is intended that is, cultivating the soil. Any other use could be dangerous or damage the equipment, especially never use it to cultivate soil containing rocks, stones, wires and any other hard materials.
- Never allow children or people unfamiliar with this owner's manual to use the tiller. Local regulations may restrict the age of the operator.
- Before each use, visually inspect the tiller including parts for any wear, damage and looseness. If necessary, replace the damaged parts as an assembly.
- Keep in mind that the owner or user is responsible for accidents or damage, occurring to other people or their property.
  In the event of hire use, be sure that operational explanations are given in the presence of the user.
- Keep your hands and feet away from the tines while the engine is running.
- Allowing anyone to operate this tiller without proper instruction may result in injury.
- Wear sturdy, full-coverage footwear. Operating this tiller barefoot or with open toe shoes or sandals increases your risk of injury.
- Dress sensibly. Loose clothing may get caught in moving parts, increasing your risk of injury.
- Be alert. Operating this tiller when you are tired, ill or under the influence of alcohol or drugs may result in serious injury.
- Keep all persons and pets away from the tilling area.
- Be sure drag bar is in place and properly adjusted.
- Do not change the engine governor settings or overspeed the engine.
- Start the engine carefully according to the instructions in this manual, keeping your feet away from the tines.
- When starting the engine, keep your feet away from the tines.
- Avoid operating the tiller at night or in a bad weather of poor visibility, because there is much possibility of accident.
- Walk, never run during operation.
- When taking backward steps during operation, pay special attention to people and obstacles behind the operator.
- Before transporting or hoisting the tiller, make sure that the engine is stopped.

⚠WARNING

To ensure safe operation—

Operator responsibility

- Stop the engine in the following cases:
  —Whenever you leave the tiller unattended.
  —Before refueling
- When stopping the engine, move the throttle lever to the LOW position, then turn the engine switch OFF. If the fuel valve is equipped on the tiller, be sure to turn the fuel valve OFF.
- Keep all nuts, bolts and screws tight to be sure the tiller is in safe working condition. Regular maintenance is an essential aid to user's safety and retaining a high level of performance.
- Never store the tiller with gasoline in the tank inside a building where fumes may reach an open flame, spark or high temperature source.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire hazard, keep the tiller especially the engine, muffler, the gasoline storage area as well, free of grass, leaves, or excessive grease.
  Do not leave containers of vegetable matters in or near a building.
- If the fuel tank has to be drained, this should be done outdoors, with a cold engine.
- Replace the worn or damaged parts for safety.

Child safety

- Keep children indoors and supervised at all times when any outdoor power equipment is being used nearby. Young children move quickly and are attracted especially to the tiller and the tilling activity.
- Never assume children will remain where you last saw them. Be alert and turn the tiller off if children enter the area.
- Children should never be allowed to operate the tiller, even under adult supervision.

Thrown object hazard

Objects hit by the rotating tines can be thrown from the tiller with great force, and may cause serious injury.

- Before tilling, clear the tilling area of sticks, large stones, wire, glass, etc. Till only in daylight.
- Always inspect the tiller for damage after striking a foreign object. Repair or replace any damaged parts before continuous use.
- Pieces thrown from worn or damaged tines can cause serious injury. Always inspect the tines before using the tiller.

⚠WARNING

To ensure safe operation—

Fire and burn hazard

Gasoline is extremely flammable, and gasoline vapor can explode. Use extreme care when handling gasoline. Keep gasoline out of reach of children.

- Add fuel before starting the engine. Never remove the cap of the fuel tank or add gasoline while the engine is running or when the engine is hot.
- Refuel in a well-ventilated area with the engine stopped.
- Refuel outdoors only and do not smoke while refueling or handling fuel.
- Allow the engine to cool before refueling. Fuel vapor or spilled fuel may ignite.
- The engine and exhaust system become very hot during operation and remain hot for a while after stopping. Contact with hot engine components can cause burn injuries and can ignite some materials.
- Avoid touching a hot engine or exhaust system.
- Allow the engine to cool before performing maintenance or storing the tiller indoors.
- Tighten all fuel tanks and container caps securely.
- Store fuel in containers specifically designed for this purpose.
- If gasoline is spilled, do not attempt to start the engine but move the tiller away from the area of spillage and avoid creating any source of ignition until gasoline vapors have dissipated.

⚠WARNING

To ensure safe operation—

Carbon monoxide poisoning hazard

Exhaust contains poisonous carbon monoxide, a colorless and odorless gas. Breathing exhaust can cause loss of consciousness and may lead to death.

- If you run the engine in an area that is confined or even partially enclosed, the air you breathe could contain a dangerous amount of exhaust gas. To keep exhaust gas from building up, provide adequate ventilation.
- Replace faulty muffler.
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.

Operation on slope

- When tilling on slopes, keep the fuel tank less than half full to minimize fuel spillage.
- Till across the slope (at equally spaced intervals) rather than up and down it.
- Be very careful when changing the direction of the tiller on a slope.
- Do not use the tiller on a slope of more than 10°.

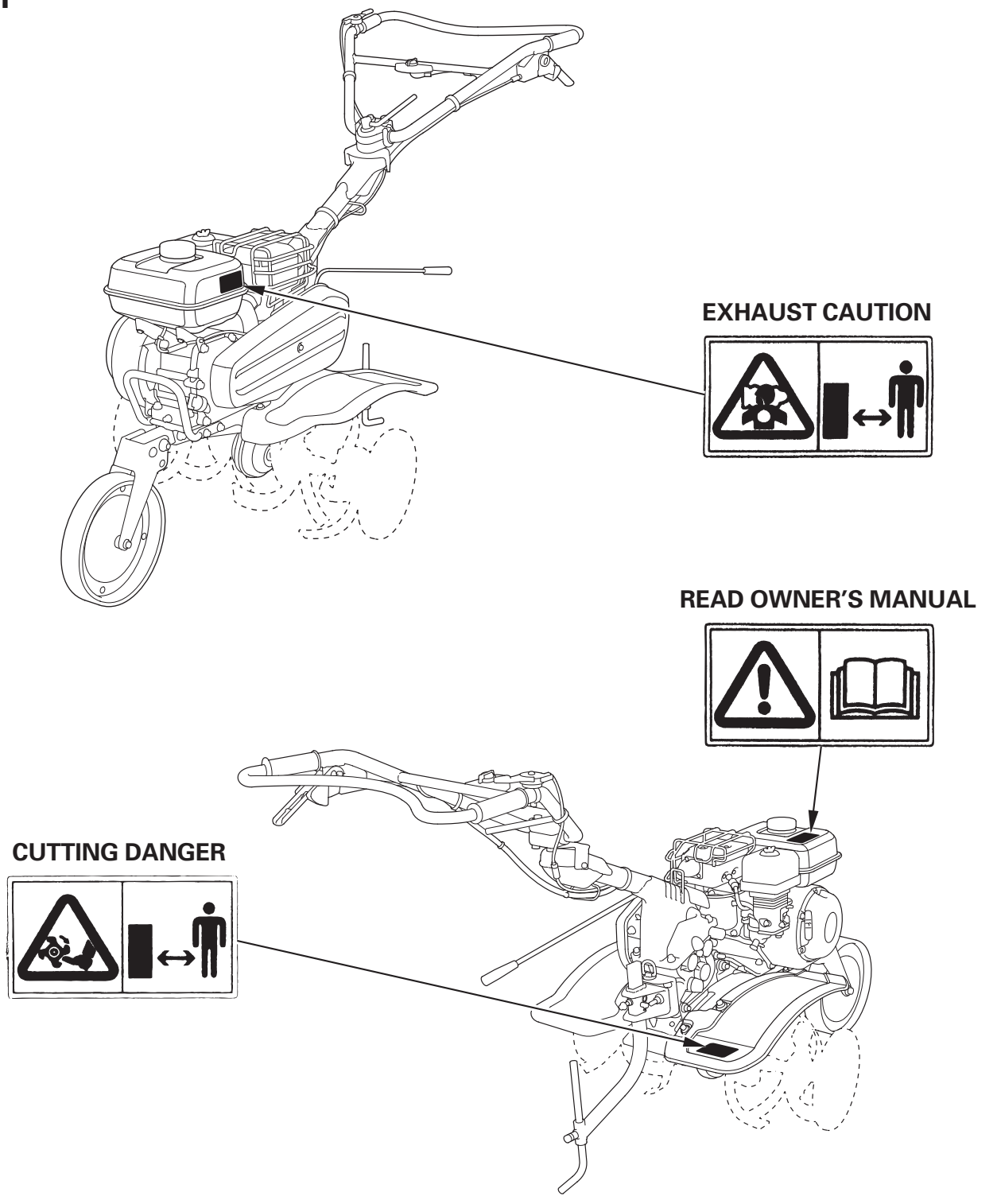
The maximum safe grade angle shown is for reference purpose only and should be determined according to the type of the tool. Before starting the engine, check that the tiller is not damaged and in good condition. For your safety and safety of others, exercise extreme care when using the tiller on up or down hill.

2. SAFETY LABEL LOCATIONS

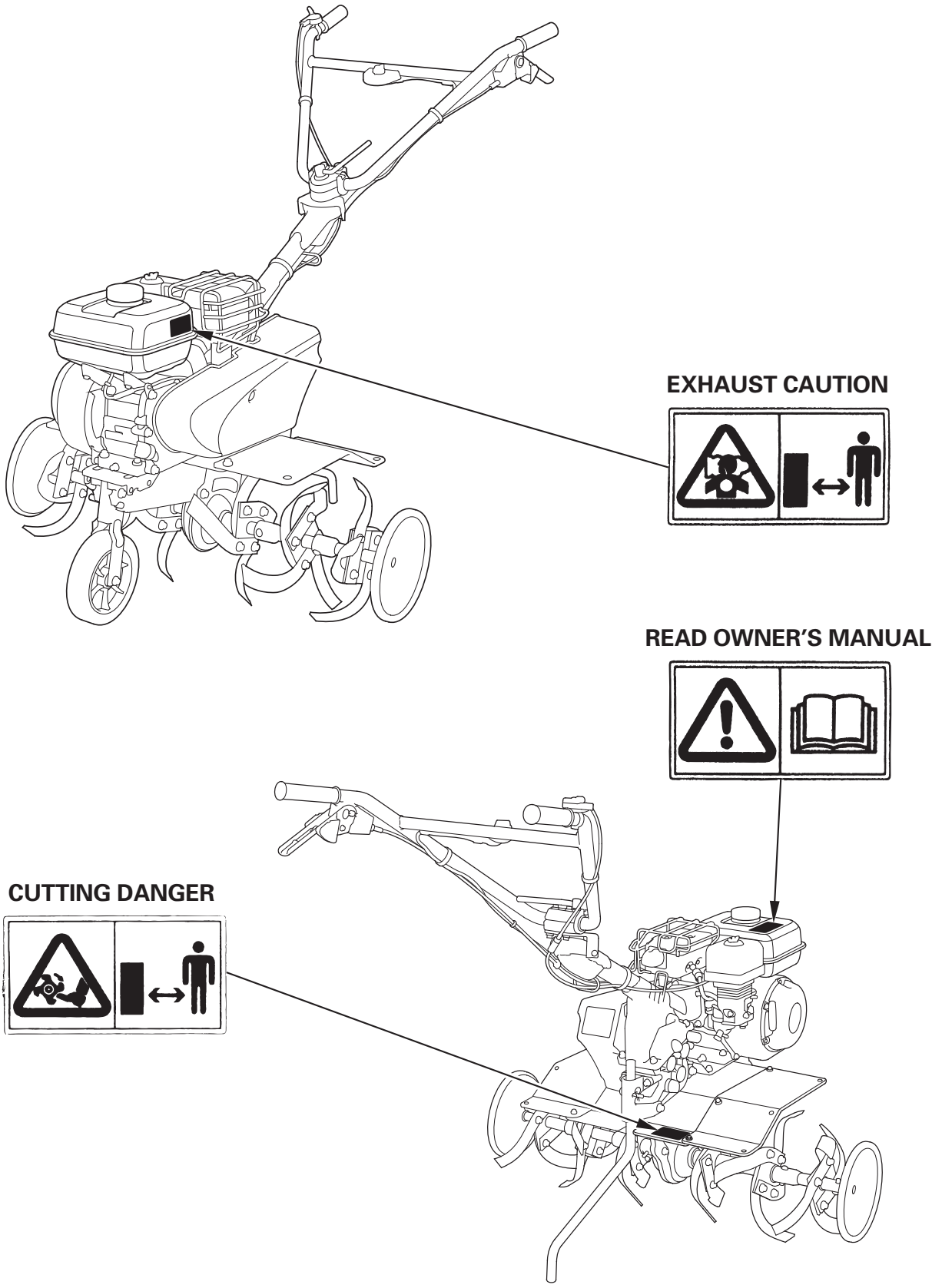
These labels warn you of potential hazards that can cause serious injury. Read the labels and safety notes and precautions described in this manual carefully.

If a label comes off or becomes hard to read, contact your Honda dealer for a replacement.

F501



FE500



CE mark location

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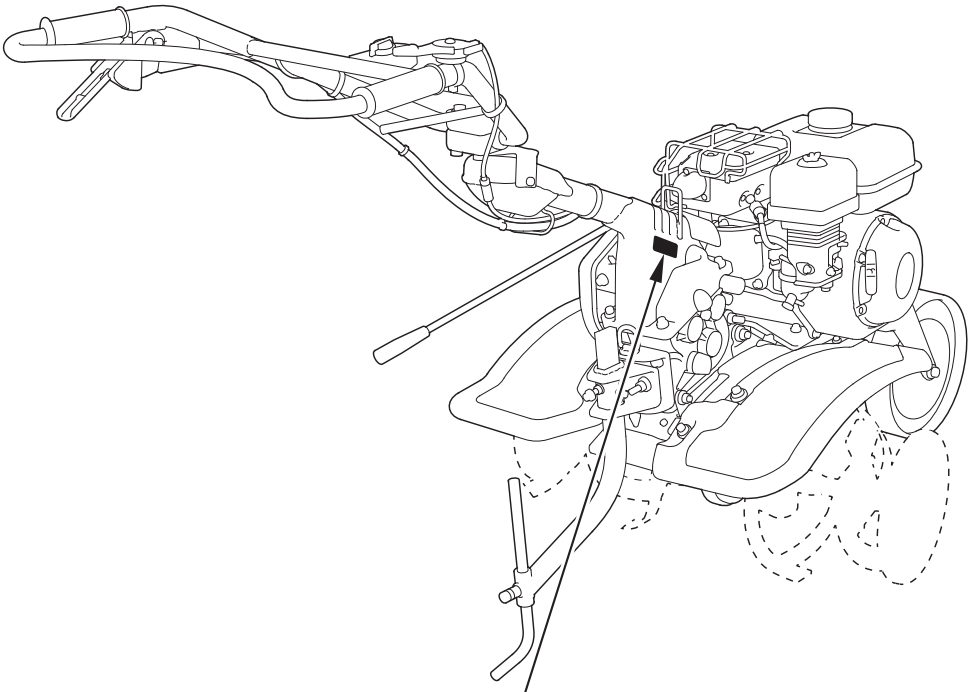

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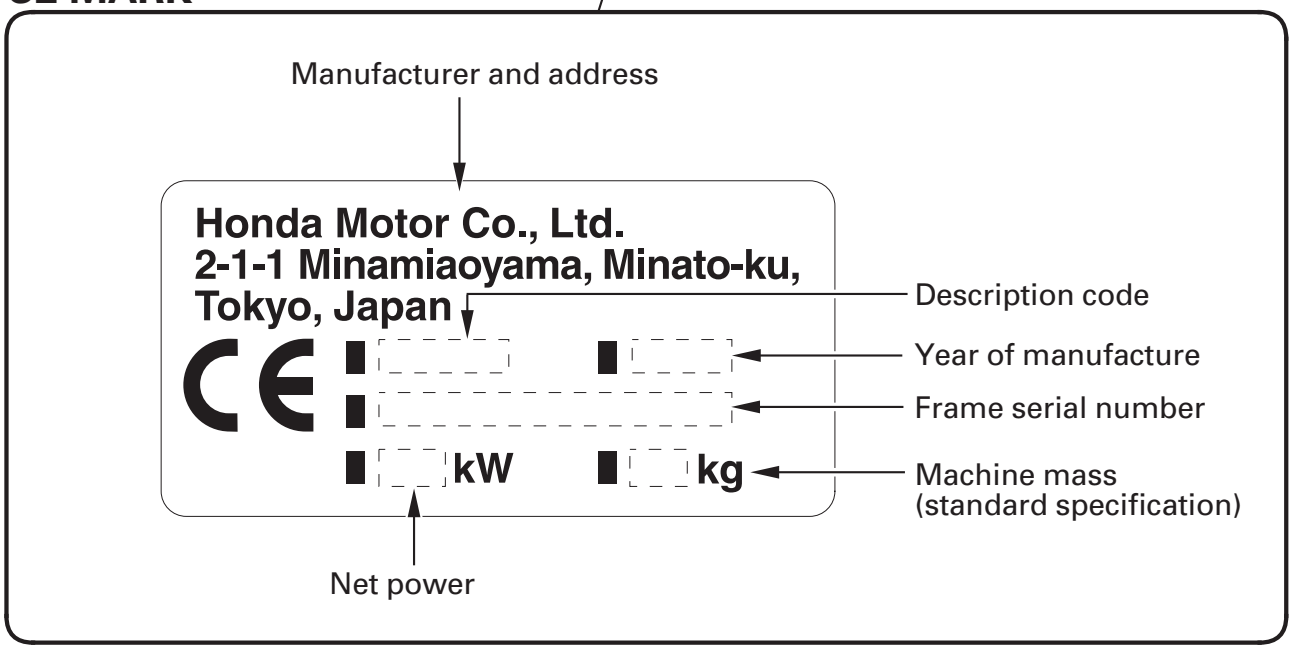

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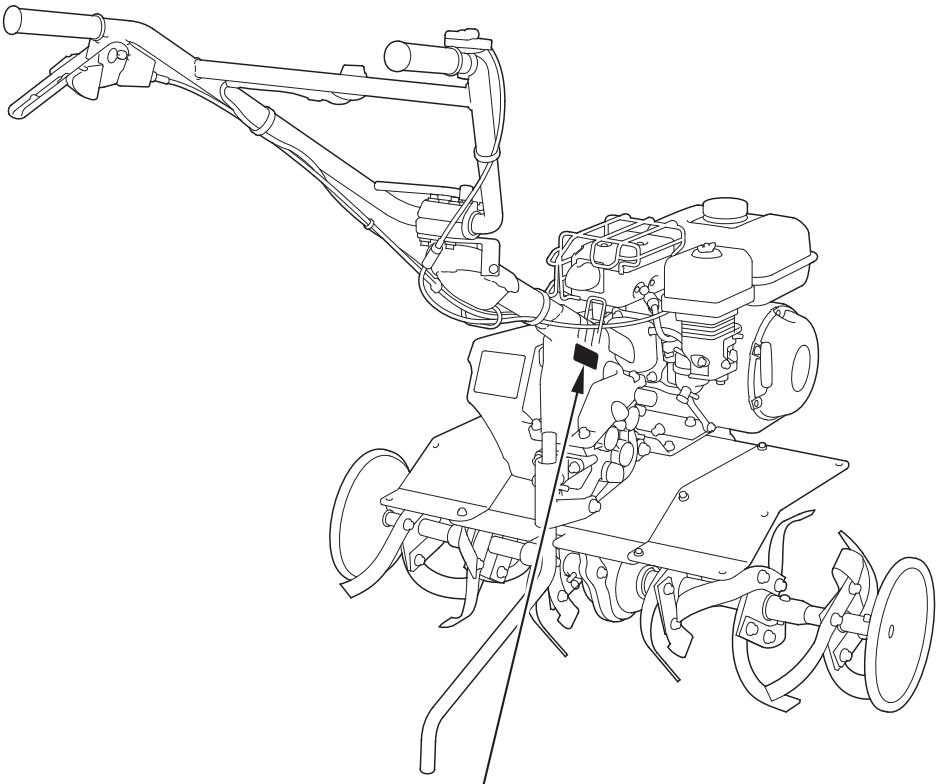

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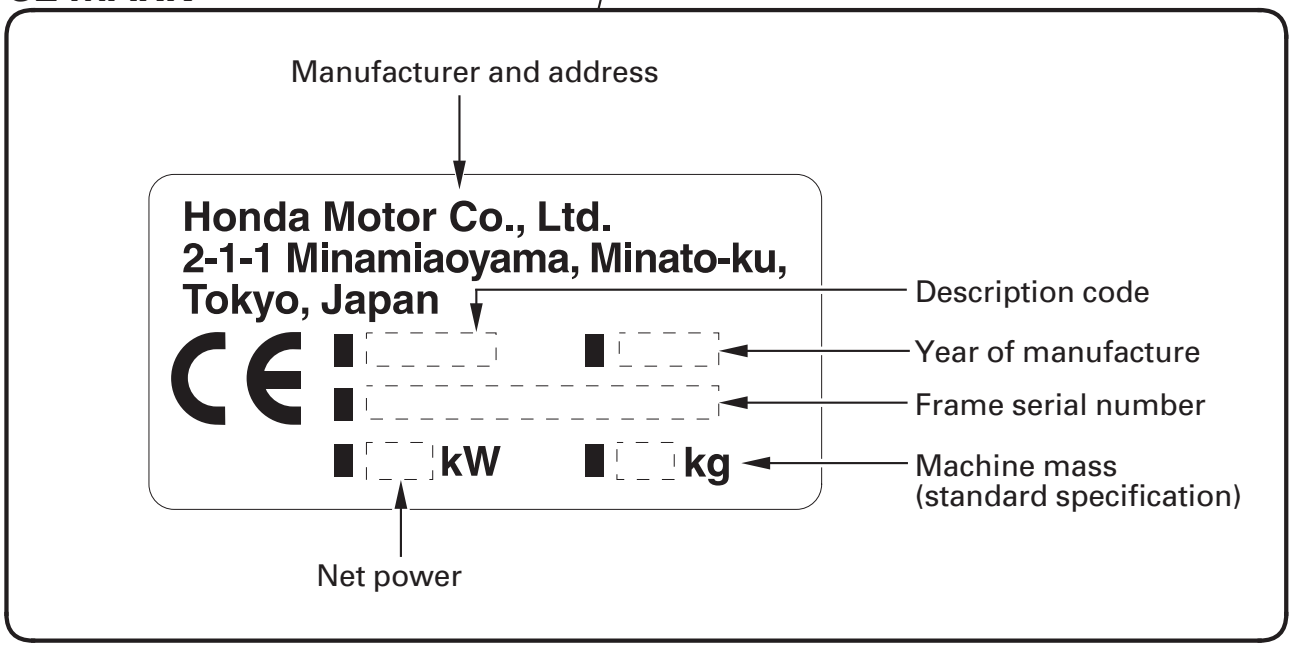

3. COMPONENT IDENTIFICATION

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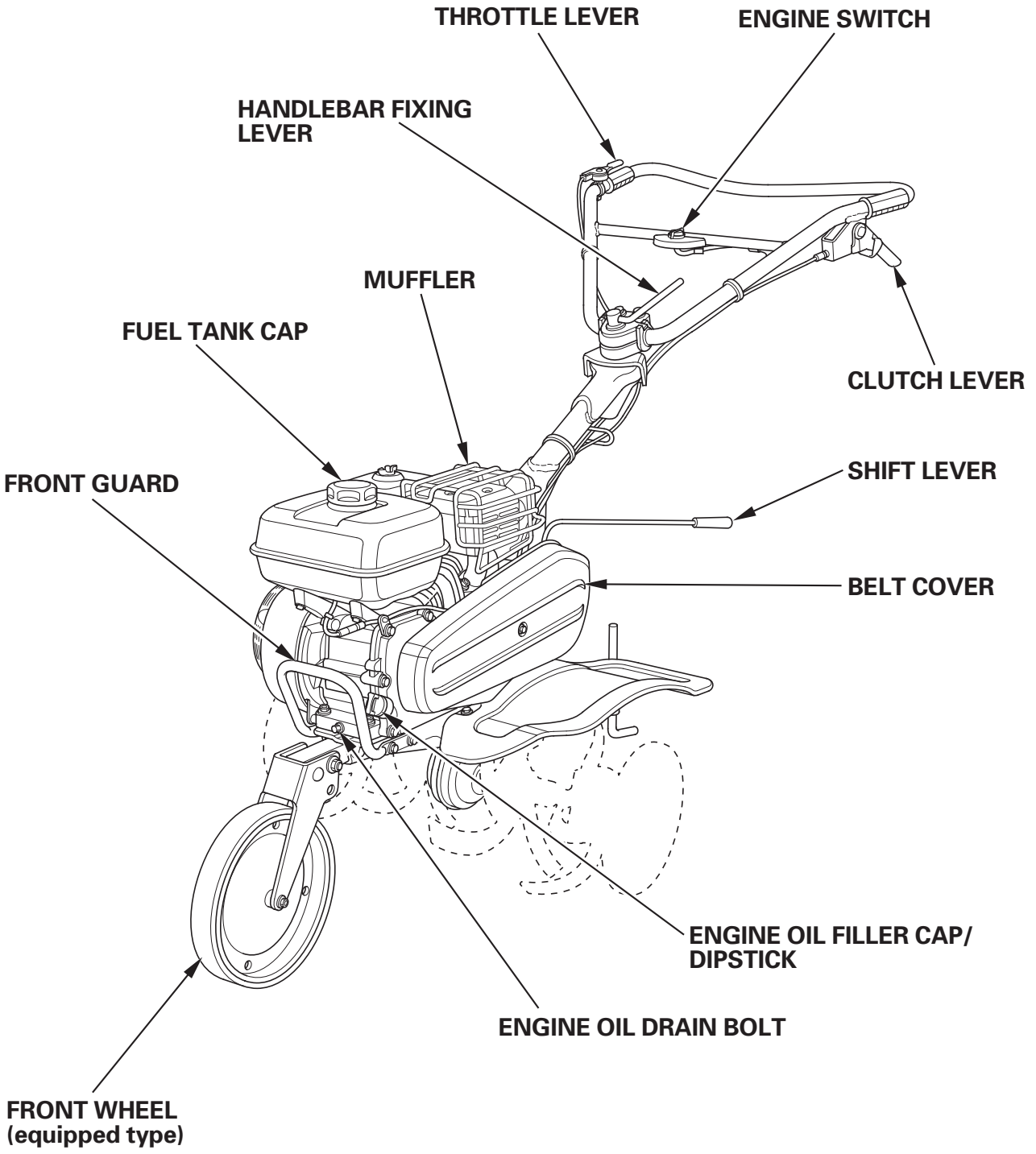
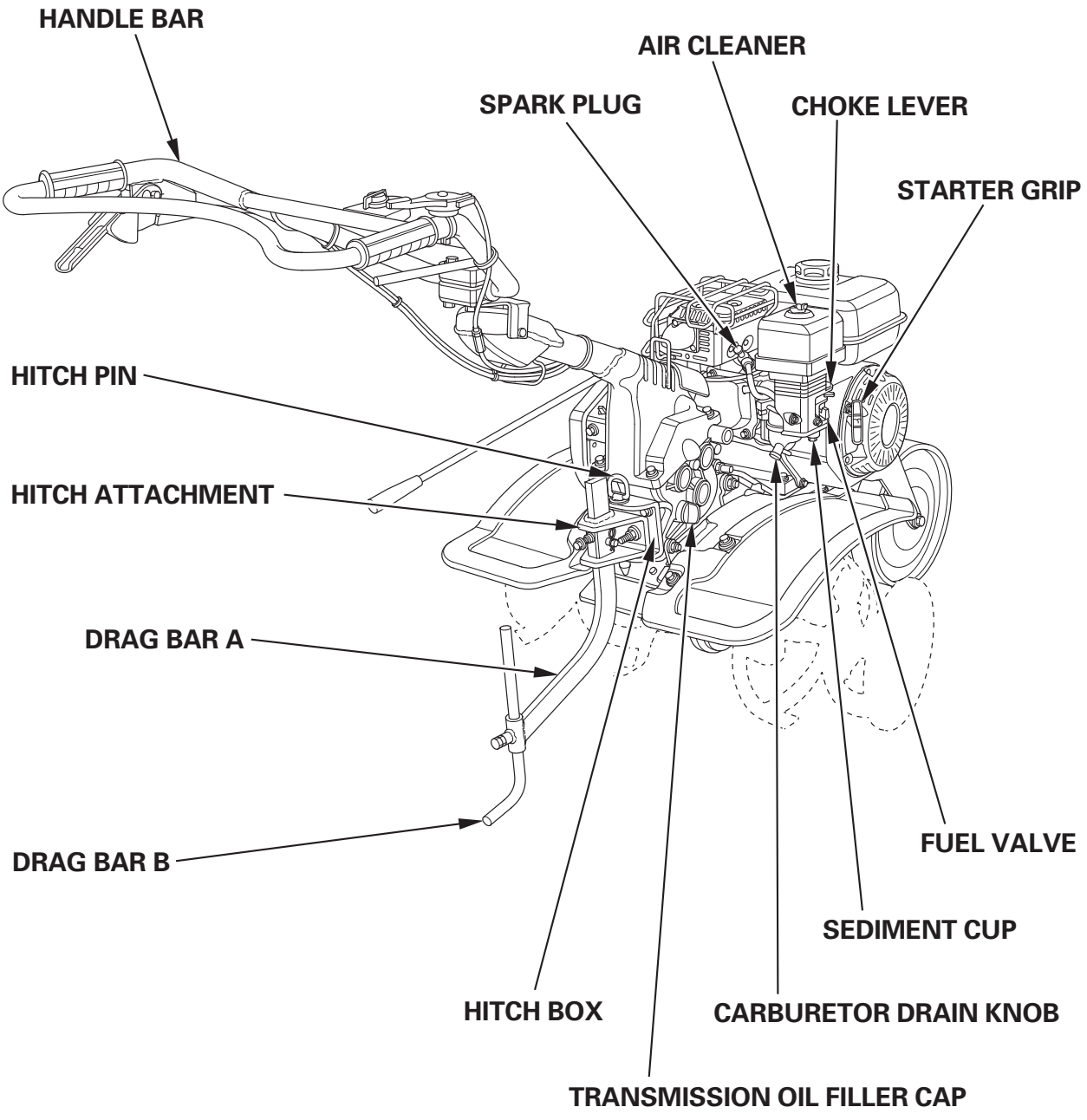
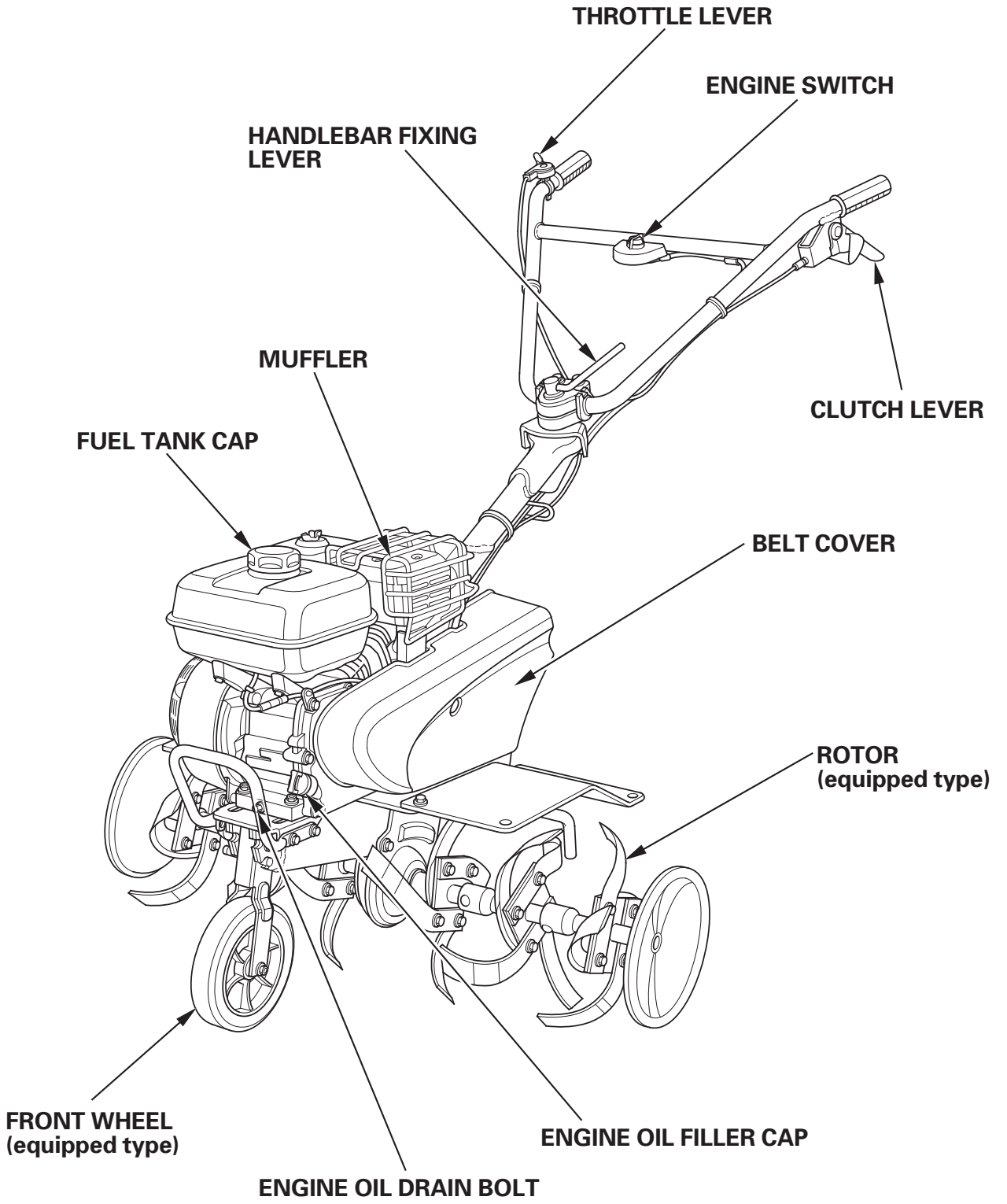


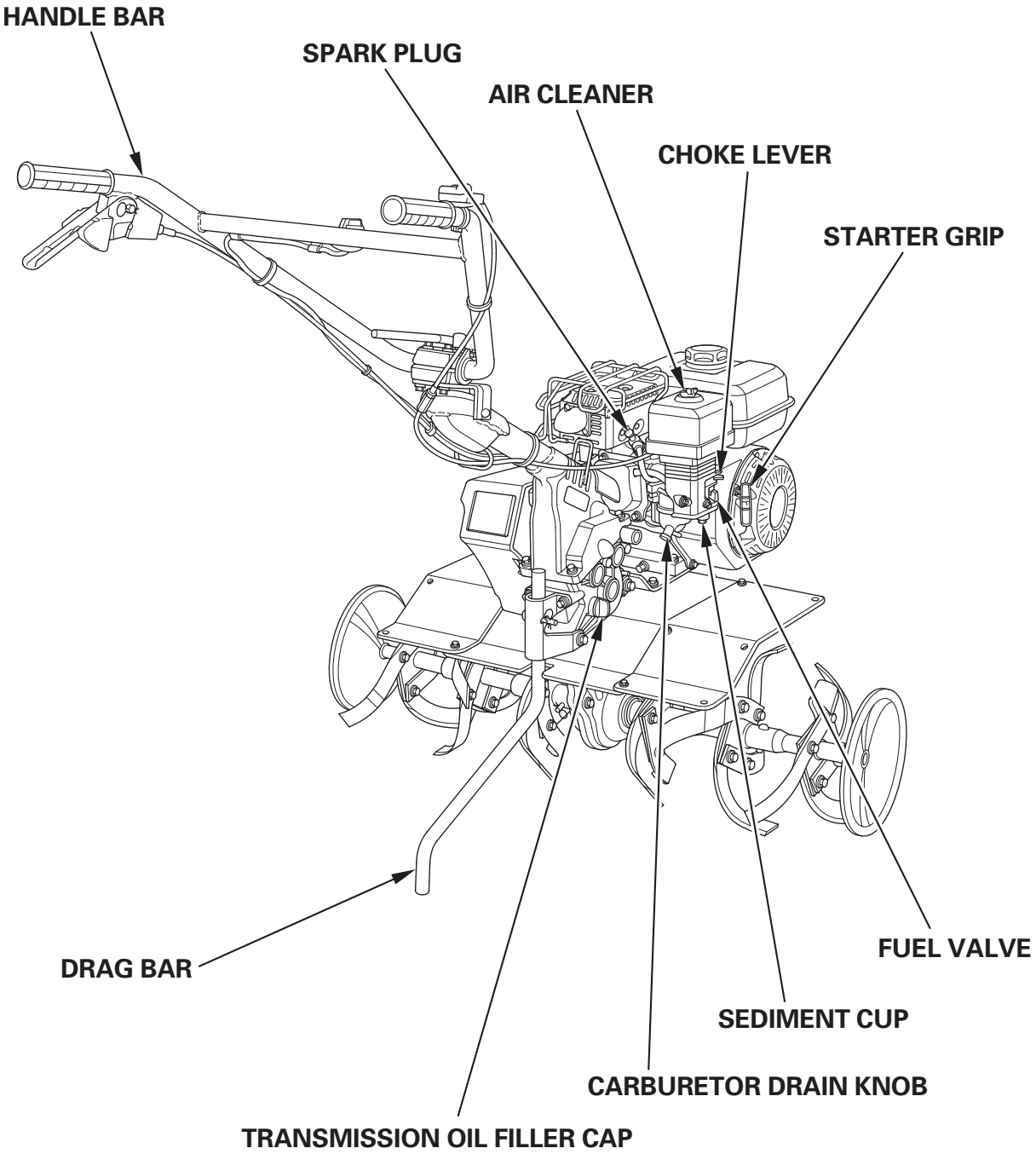


Record the frame serial number in the space below. You will need this number when ordering parts.

Frame serial number:_____

FE500


THROTTLE LEVER
ENGINE SWITCH
HANDLEBAR FIXING LEVER
MUFFLER
CLUTCH LEVER
FUEL TANK CAP
BELT COVER
ROTOR (equipped type)
FRONT WHEEL (equipped type)
ENGINE OIL FILLER CAP
ENGINE OIL DRAIN BOLT



Record the frame serial number in the space below. You will need this number when ordering parts.

Frame serial number:_____

4. PRE-OPERATION CHECK

⚠WARNING

Place the tiller on a firm level surface and hold the tiller level (i.e. with the rotary tines, front wheel (if equipped) and drag bar (see page 17)). Stop the engine before starting service of the tiller. Servicing the tiller on an unstable surface of the ground or without stopping the engine can cause injury and/or equipment damage.

Daily inspection and service of tiller is essential for safe and reliable operation. Perform the following check before operation.

1. Tiller outside

Aren't the fuel and engine oil leaking?
Isn't there any flammable material (dust, straw, etc.) around the engine?

2. Control lever function

Does the lever operate smoothly?

3. Wiring and cables

Isn't the insulation of each wire and cable torn or cut?
Is there any wire or cable pinched by the neighboring parts?

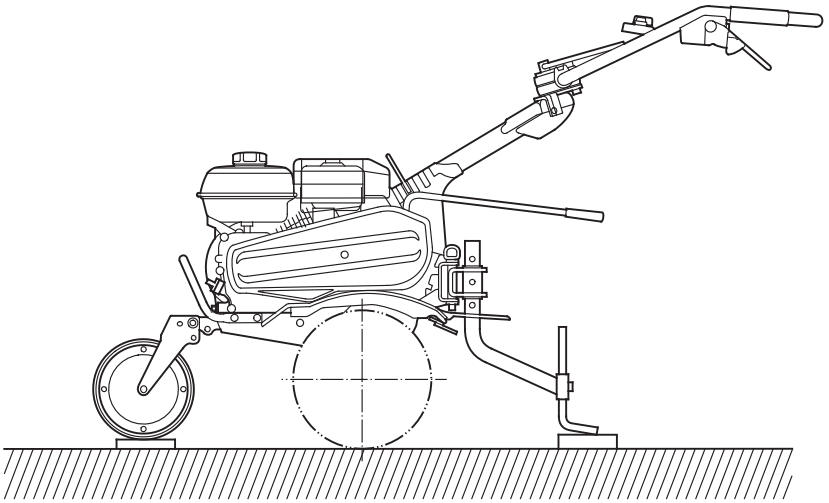
4. Engine operation

- Start the engine. Is there any abnormal sound from the engine? (See pages 24 through 26 for starting procedure.)
- Does the engine stop securely by operating the engine switch? (See pages 37 and 38 for stopping procedure.)
- If you notice any other abnormal symptoms, consult with your authorized Honda dealer promptly.

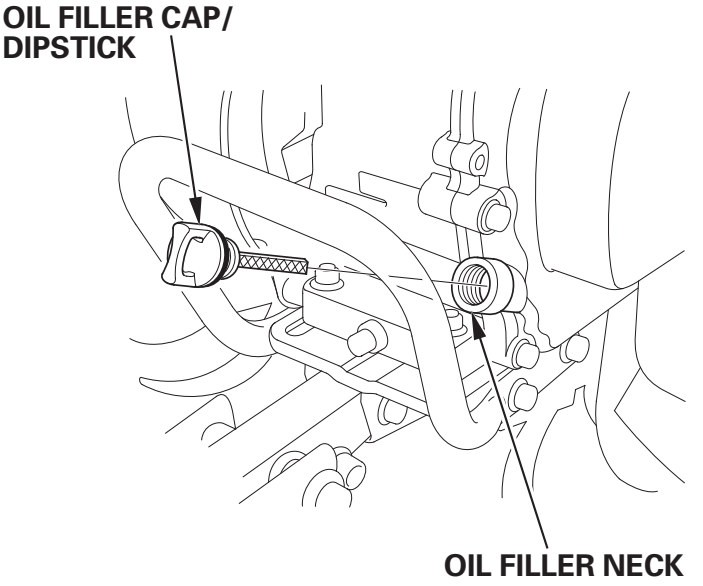
5. Engine oil

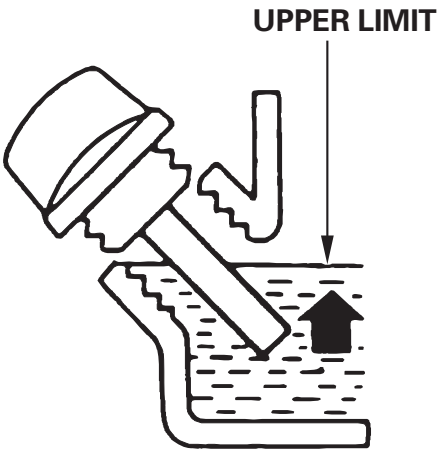
CAUTION:
Running the engine with insufficient oil can cause serious engine damage.

1. Place the tiller on the level surface and hold the tiller level by placing wooden blocks under the front wheel (if equipped) and drag bar as shown.



2. Remove the oil filler cap and wipe the dipstick clean.
3. Insert the dipstick into the oil filler neck, but do not screw it in.



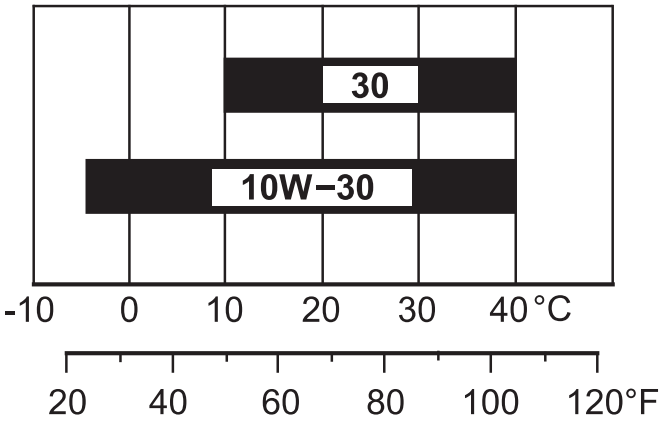


4. If the level is low, fill to the top of the oil filler neck with the recommended oil.

Recommended oil
Use 4-stroke motor oil that meets or exceeds the requirements for API service classification SE or later (or equivalent). Always check the API service label on the oil container to be sure it includes the letters SE or later (or equivalent).

CAUTION:
Using nondetergent oil or 2-stroke engine oil will shorten the engine's service life.

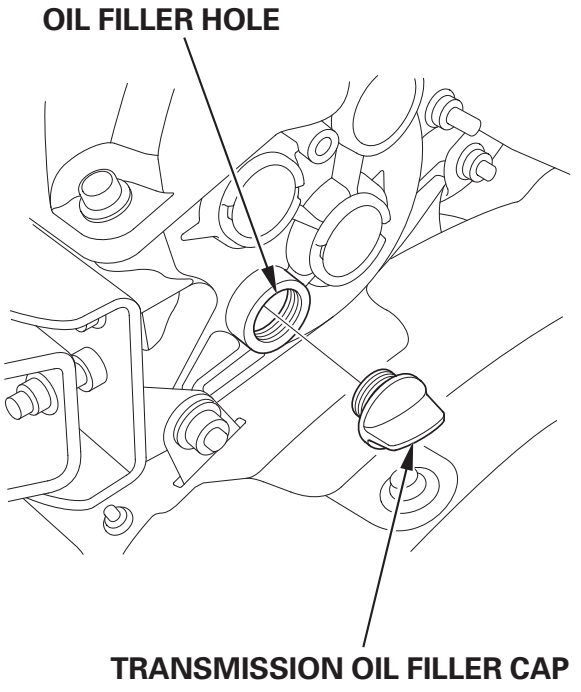
SAE 10W-30 is recommended for general use. Other viscosities shown in the chart may be used when the average temperature in your area is within the indicated range.

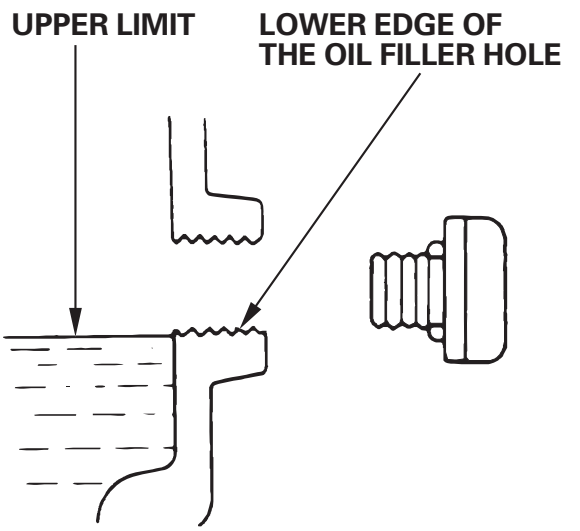


AMBIENT TEMPERATURE

6. Transmission gear oil

Place the tiller on a level surface and remove the oil filler cap.
The oil should be level with the lower edge of the oil filler hole.
Add high quality engine oil if the level is low.

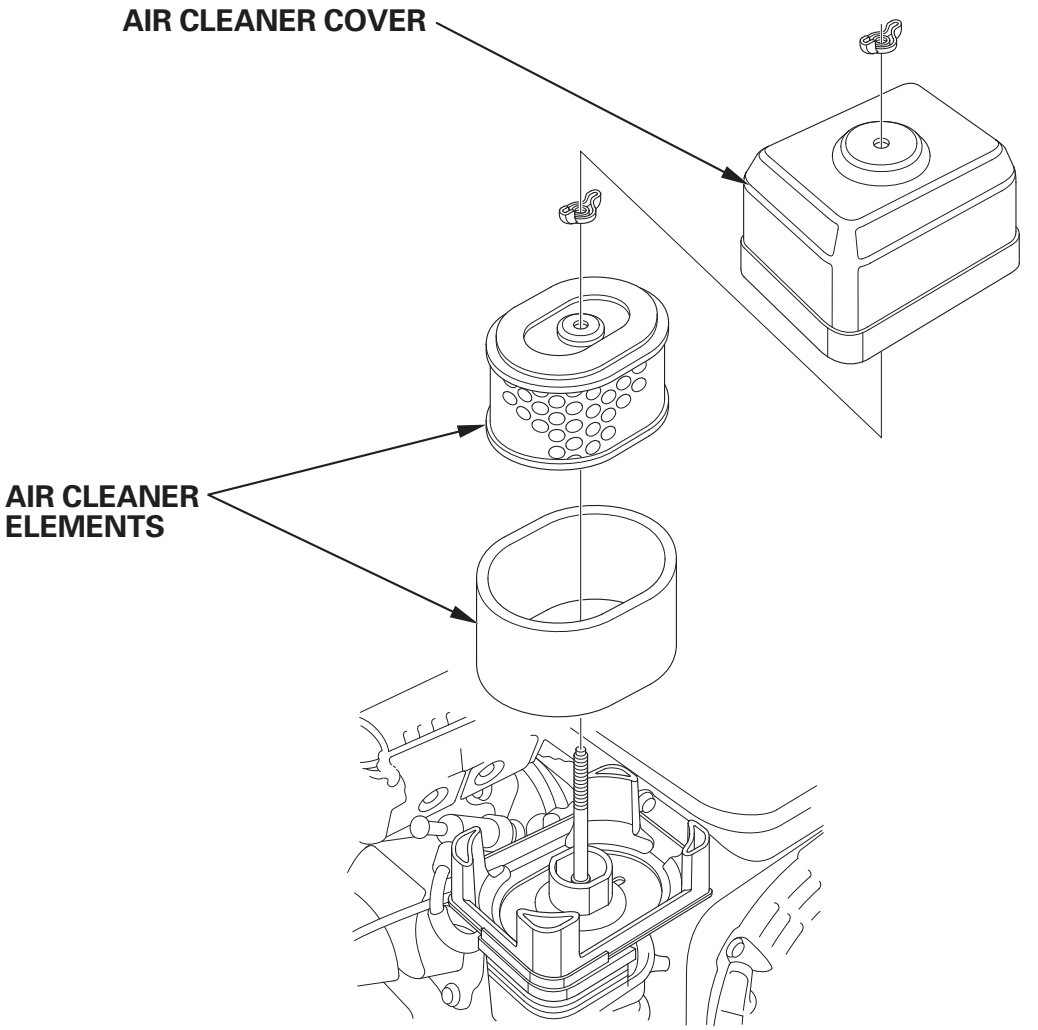




7. Air cleaner

CAUTION:
Never run the engine without the air cleaner. Rapid engine wear will result.

Remove the air cleaner cover.
Check the air cleaner elements for dirt or obstruction. Clean if necessary (see page 42).

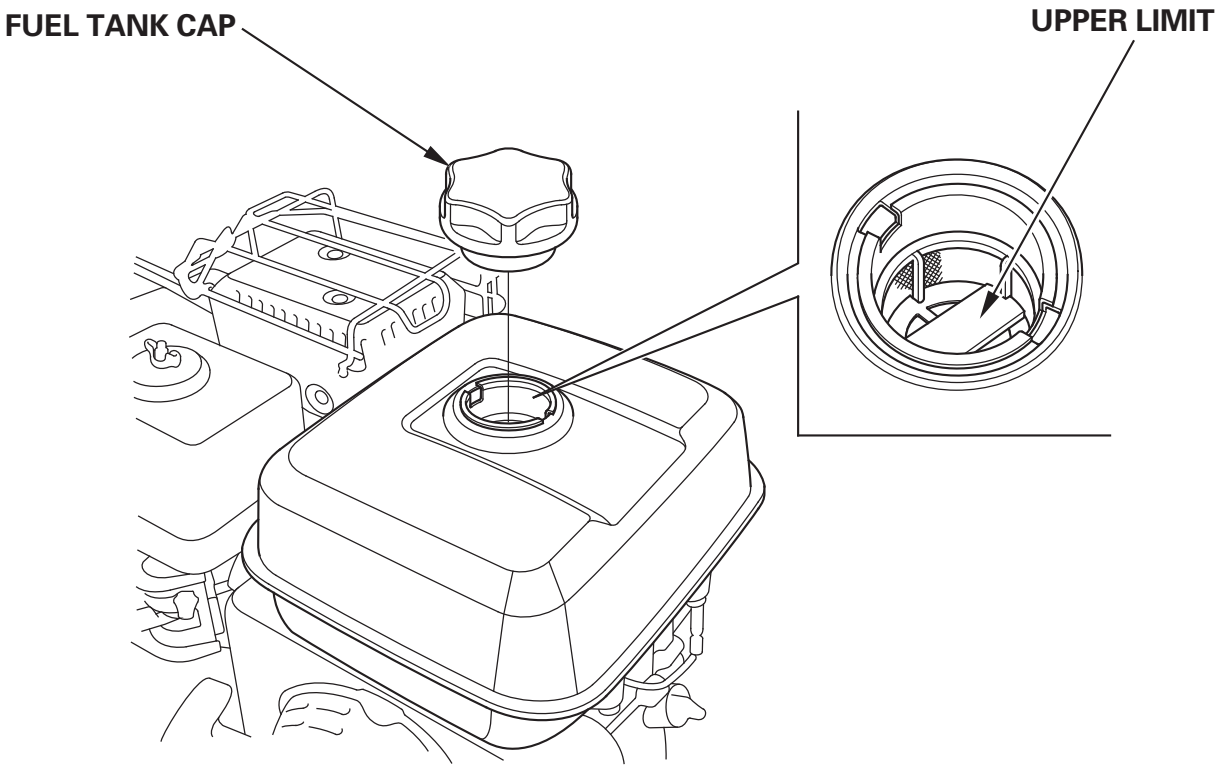


8. Fuel

Check the fuel level, and refill the tank if the fuel level is low.
Use automotive unleaded gasoline with a Research Octane Number of 91 or higher (a Pump Octane Number of 86 or higher).
Never use stale or contaminated gasoline or an oil/gasoline mixture.
Avoid getting dirt or water in the fuel tank.

⚠WARNING

- **Gasoline is extremely flammable and is explosive under certain conditions.**
- **Refuel in a well-ventilated area with the engine stopped. Do not smoke or allow flames or sparks in the area where the engine is refueled or where gasoline is stored.**
- **Do not overfill the fuel tank (there should be no fuel in the filler neck). After refueling, make sure the tank cap is closed properly and securely.**
- **Be careful not to spill fuel when refueling. Spilled fuel or fuel vapor may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.**
- **Avoid repeated or prolonged contact with skin or breathing of vapor. KEEP OUT OF REACH OF CHILDREN.**



NOTE:
Gasoline spoils very quickly depending on factors such as light exposure, temperature and time.
In worst cases, gasoline can be contaminated within 30 days.
Using contaminated gasoline can seriously damage the engine (carburetor clogged, valve stuck).
Such damage due to spoiled fuel is disallowed from coverage by the warranty.
To avoid this please strictly follow these recommendations:

- Only use specified gasoline (see page 21).
- Use fresh and clean gasoline.
- To slow deterioration, keep gasoline in a certified fuel container.
- If long storage (more than 30 days) is foreseen, drain fuel tank and carburetor (see page 47).

Gasolines containing alcohol

If you decide to use a gasoline containing alcohol (gasohol), be sure it's octane rating is at least as high as that recommended by Honda. There are two types of ''gasohol'': one containing ethanol, and the other containing methanol.
Do not use gasohol that contains more than 10% ethanol. Do not use gasoline containing methanol (methyl or wood alcohol) that does not also contain cosolvents and corrosion inhibitors for methanol.
Never use gasoline containing more than 5% methanol, even if it has cosolvents and corrosion inhibitors.

NOTE:

- Fuel system damage or engine performance problems resulting from the use of gasoline that contains alcohol is not covered under the warranty.
  Honda cannot endorse the use of gasoline containing methanol since evidence of its suitability is as yet incomplete.
- Before buying gasoline from an unfamiliar station, first determine if the gasoline contains alcohol; if it does, find out the type and percentage of alcohol used.
  If you notice any undesirable operating symptoms while using a gasoline that contains alcohol, or one that you think contains alcohol, switch to a gasoline that you know does not contain alcohol.

9. Tools and Attachments

To install a tool or attachment on the tiller, follow the instructions furnished with the tool or attachment. Ask your Honda dealer for advice if you encouter any problem or difficulty in installing a tool or attachment.

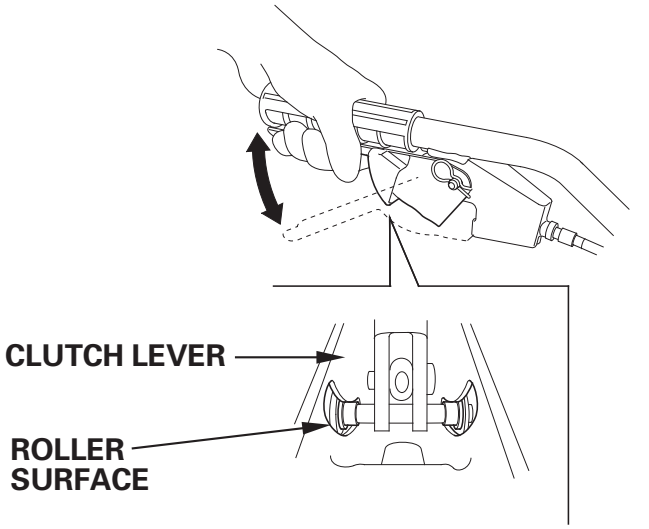
10.Clutch lever operation (check and cleaning)

- Check that the clutch lever operates smoothly.
- Check that there are no foreign objects (such as sand, soil, twigs, etc.) on the roller surface.

If the clutch lever roller does not move smoothly or if it is dirty, clean the clutch lever and roller (see page 25).

NOTE:
Do not apply any oil or cleaner liquid to the clutch lever roller.

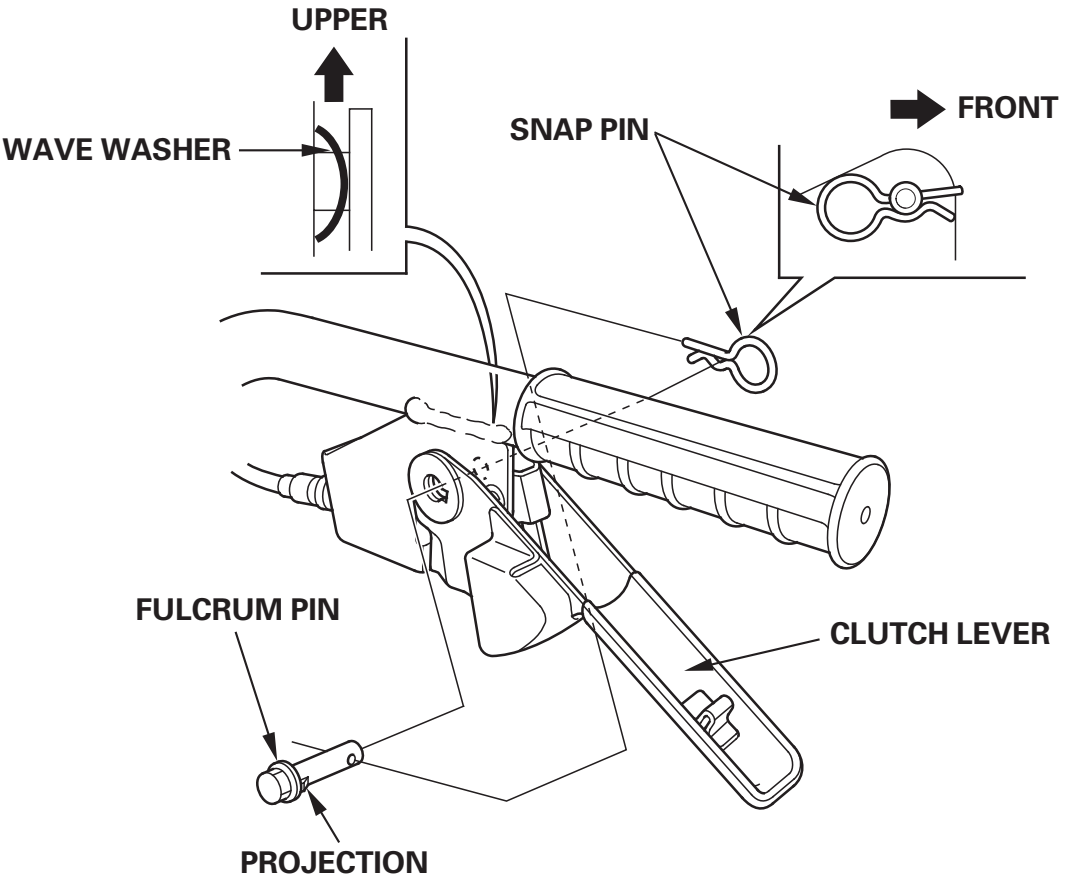
Oil or cleaner liquid will attract dirt and foreign objects.



To clean the clutch lever roller, disassemble the clutch lever (see page 25).

NOTE:
Be aware of the wave washer coming off when you disassemble the clutch lever. The wave washer is located in between the clutch lever and the clutch lever holder stay.

1. Pull off the snap pin from the lever fulcrum pin.
2. By holding the clutch lever, pull out the lever fulcrum pin.
   Detach the clutch lever and the wave washer.
3. Remove any dirt or foreign objects.
   Wipe off and clean the roller surface of the clutch lever.
4. Set the inside and upper side direction of the wave washer as shown in the illustration.
   With the wave washer set in this position, attach the clutch lever and slide in the lever fulcrum pin.
5. Align the projection on the lever fulcrum pin to the groove on the side of the clutch lever hole and then set the snap pin in the direction shown in the illustration.

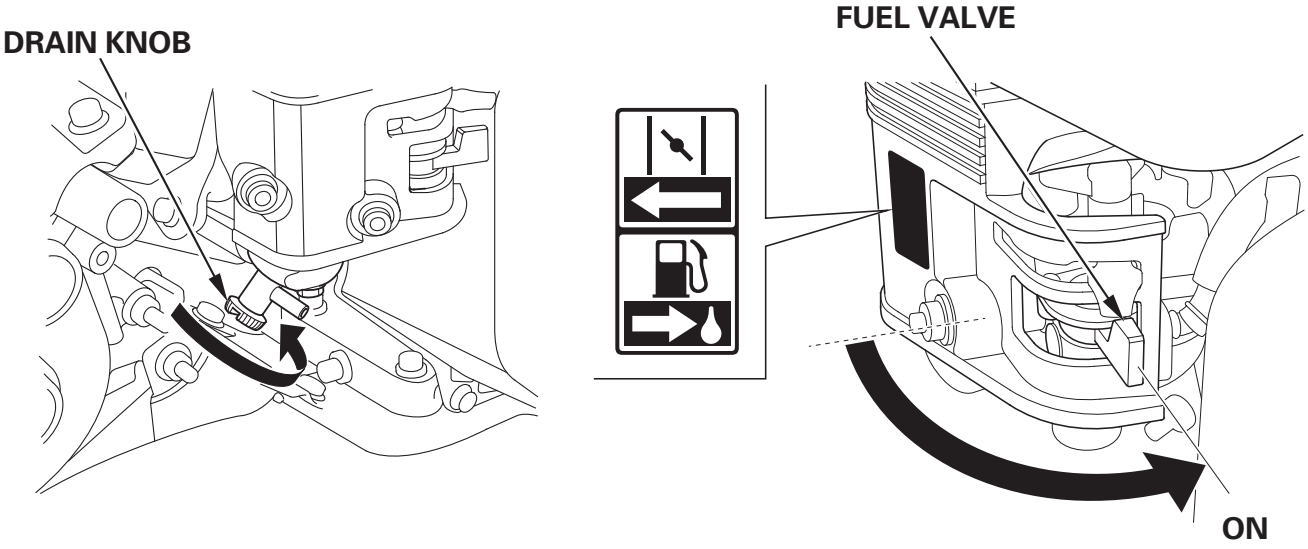


6. Check the clutch lever for smooth operation.
   If the clutch lever does not operate smoothly, ask your dealer or service shop for maintenance.

5. STARTING THE ENGINE

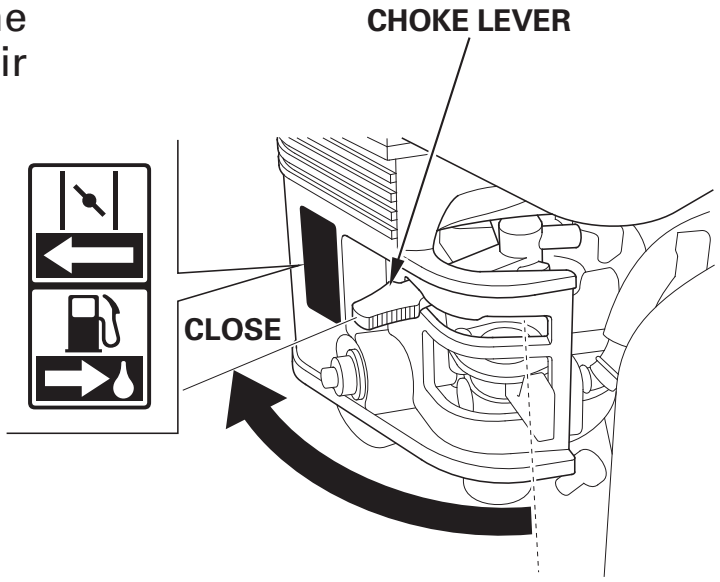
CAUTION:
Be sure the clutch is disengaged and the shift lever (except FE500) is in the neutral position to prevent sudden uncontrolled movement when the engine starts.
The clutch is engaged by pulling in the clutch lever and disengaged by releasing the lever.

1. Turn the fuel valve ON.
   Check for tighteness of drain knob.

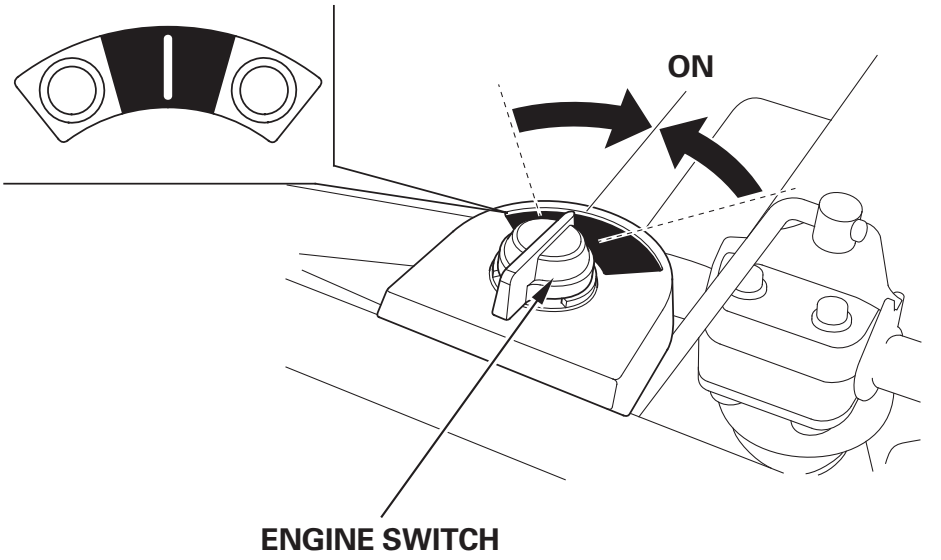


2. Close the choke lever.

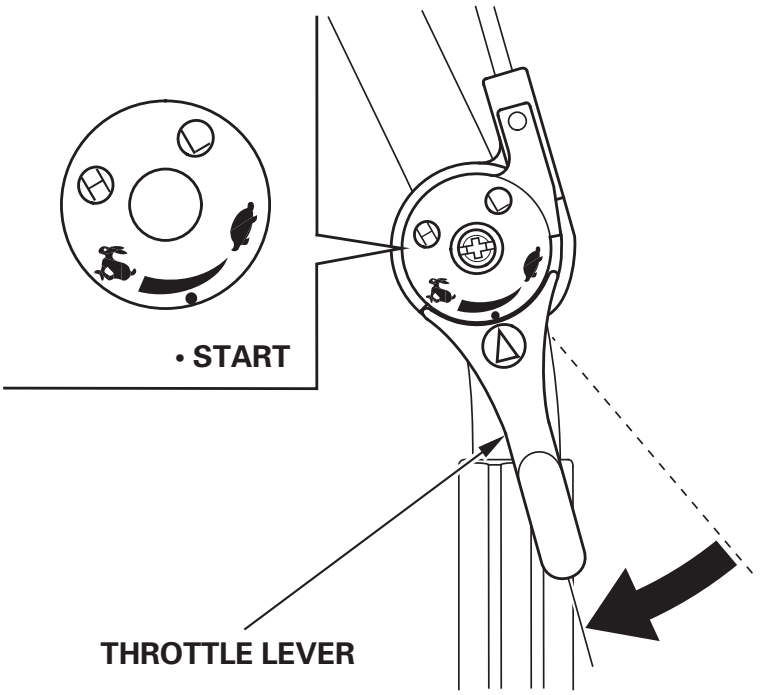
   NOTE:
   Do not use the choke if the engine is warm or the air temperature is high.



3. Turn the engine switch ON.



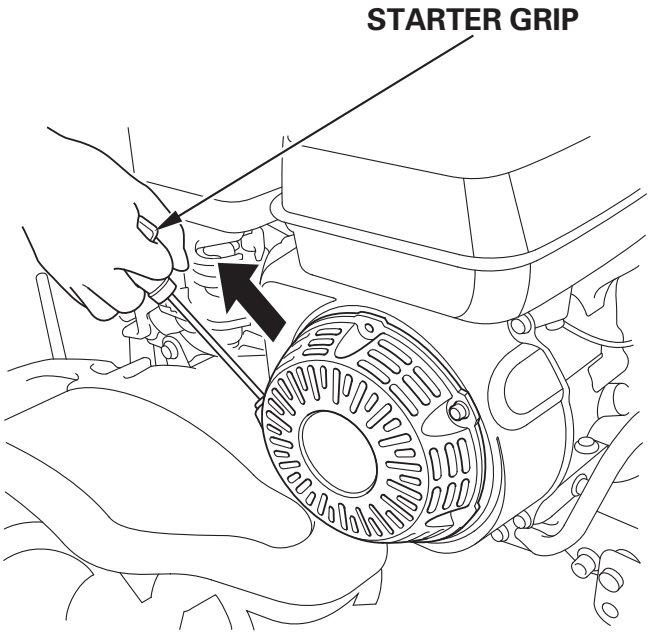
4. Align the mark "△" on the throttle lever with the mark "○" (START position) as shown.



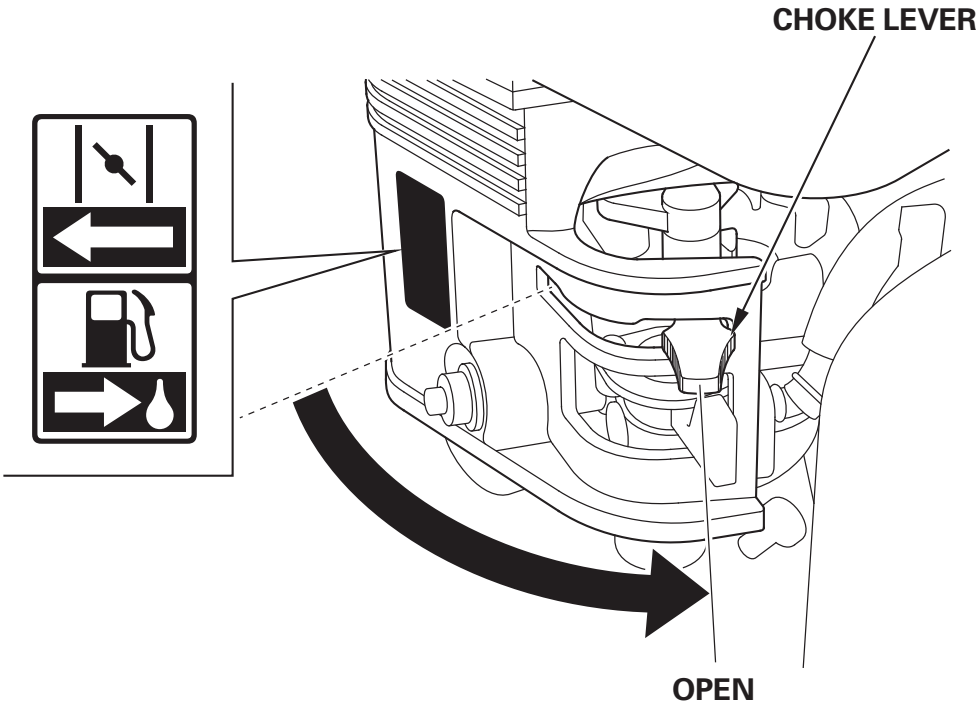
5. Pull the starter grip lightly until resistance is felt, then pull the starter grip briskly toward the arrow mark as shown.

   Hold the handle with your left hand and start the engine by pulling out the starter grip.

   CAUTION:
   Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.



6. As the engine warms up, gradually open the choke.



Carburetor Modification for High Altitude Operation

At high altitude, the standard carburetor air-fuel mixture will be too rich. Performance will decrease, and fuel consumption will increase. A very rich mixture will also foul the spark plug and cause hard starting. Operation at an altitude that differs from that at which this engine was certified, for extended periods of time, may increase emissions.

High altitude performance can be improved by specific modifications to the carburetor. If you always operate your tiller at altitudes above 1,500 meters (5,000 feet), have your servicing dealer perform this carburetor modification. This engine, when operated at high altitude with the carburetor modifications for high altitude use, will meet each emission standard throughout its useful life.

Even with carburetor modification, engine horsepower will decrease about 3.5% for each 300-meter (1,000-foot) increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

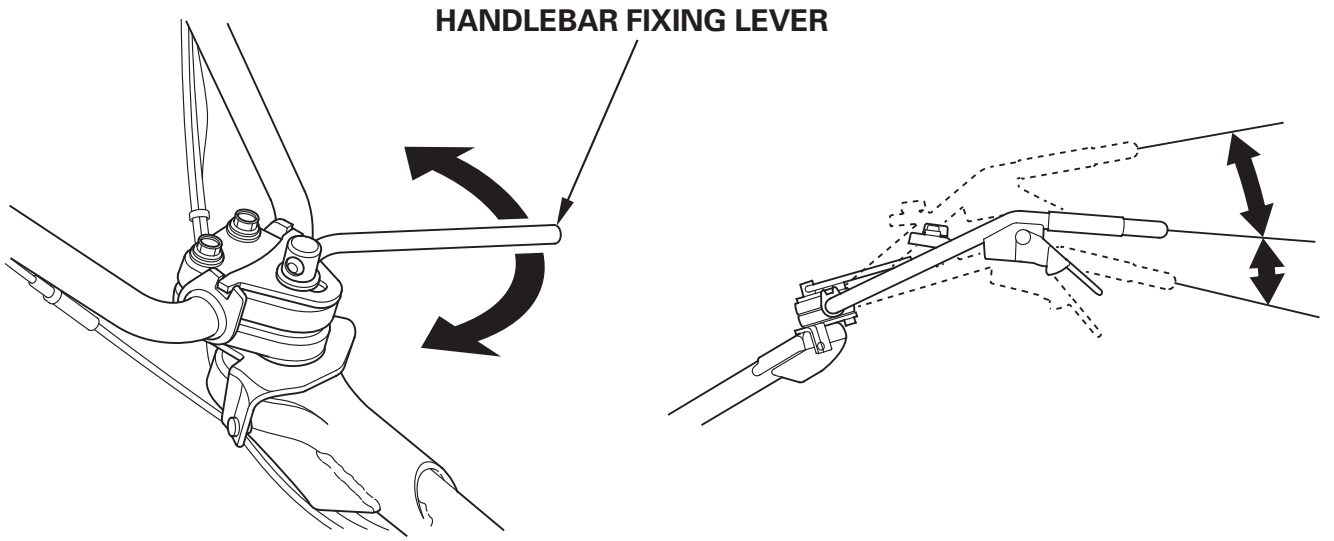
CAUTION:
When the carburetor has been modified for high altitude operation, the air-fuel mixture will be too lean for low altitude use. Operation at altitudes below 1,500 meters (5,000 feet) with a modified carburetor may cause the engine to overheat and result in serious engine damage. For use at low altitudes, have your servicing dealer return the carburetor to original factory specification.

6. TILLER OPERATION

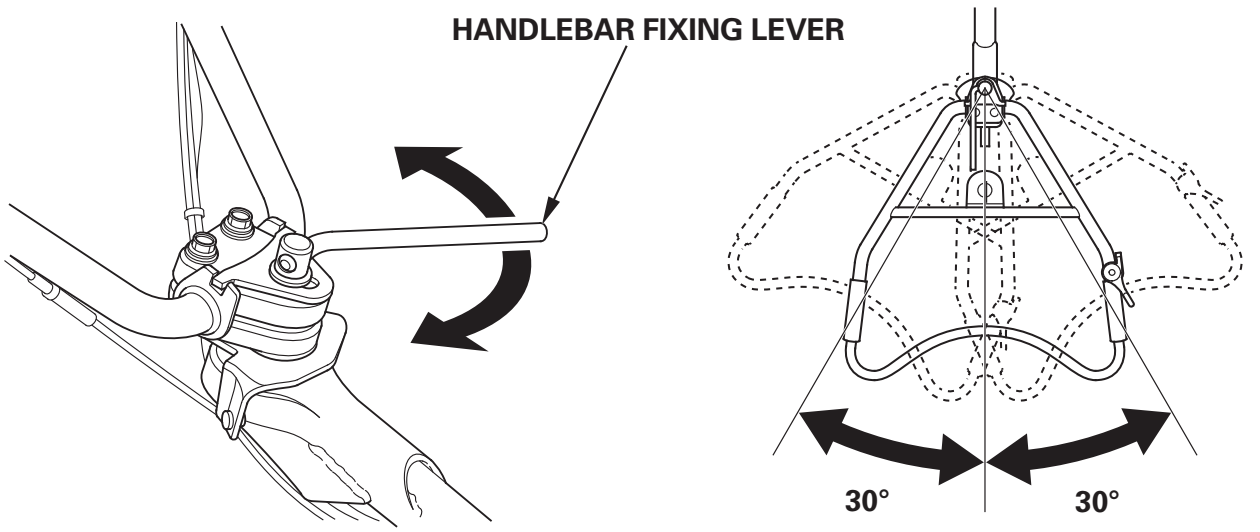
1. Handlebar position adjustment

CAUTION:
Before adjusting the handlebar, place the tiller on the firm level ground to prevent the handle from collapsing accidentally.

To adjust the handlebar height, loosen the handlebar fixing lever, move the handlebar to a desired position and tighten the lever.



If the handlebar angle adjustment is needed, loosen the handlebar fixing lever, move the handlebar to a required position and tighten the lever.
The handlebar can swing within the sweep of 30° from the center to the right and left each.

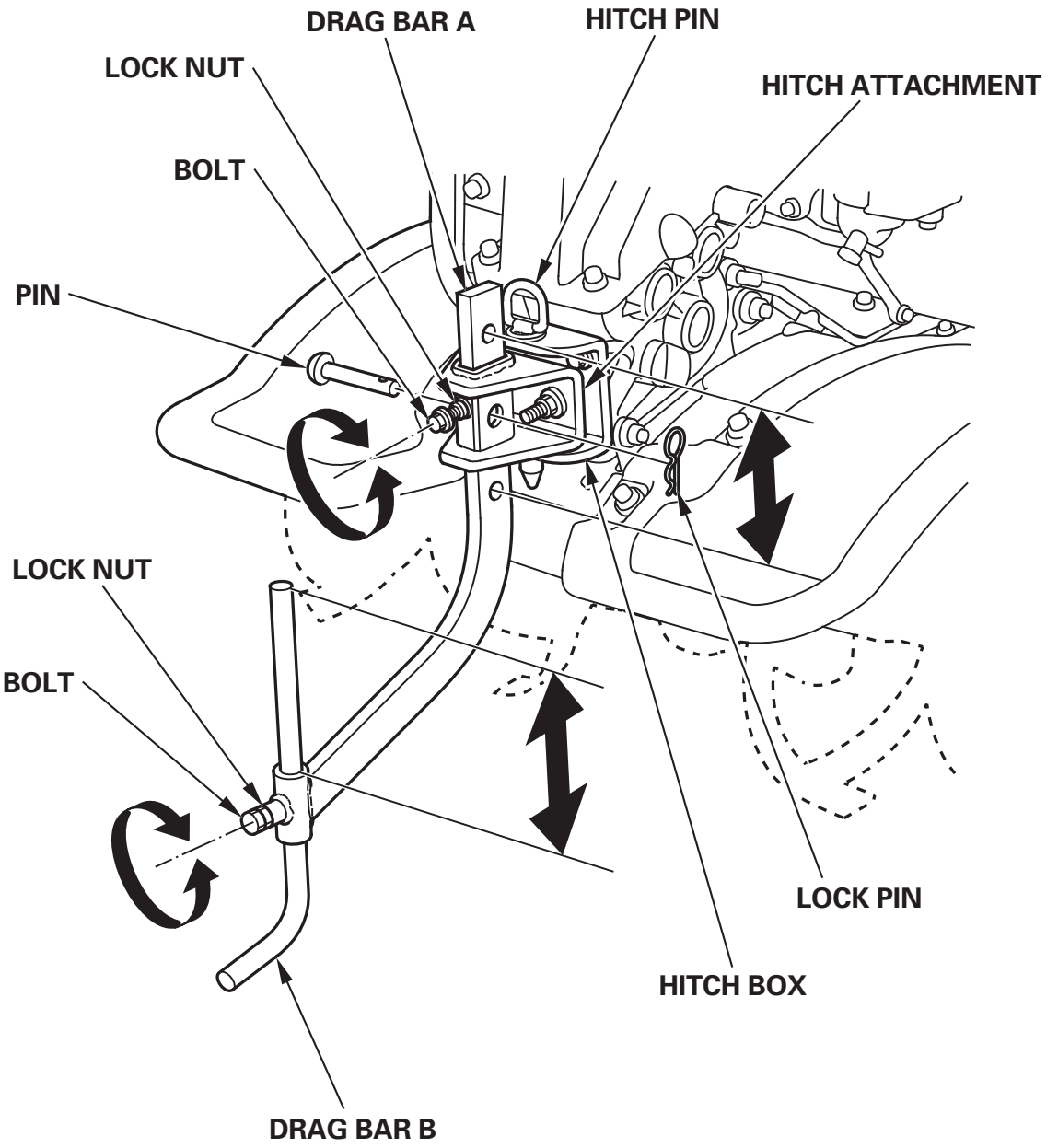


2. Tilling depth adjustment

- **F501**

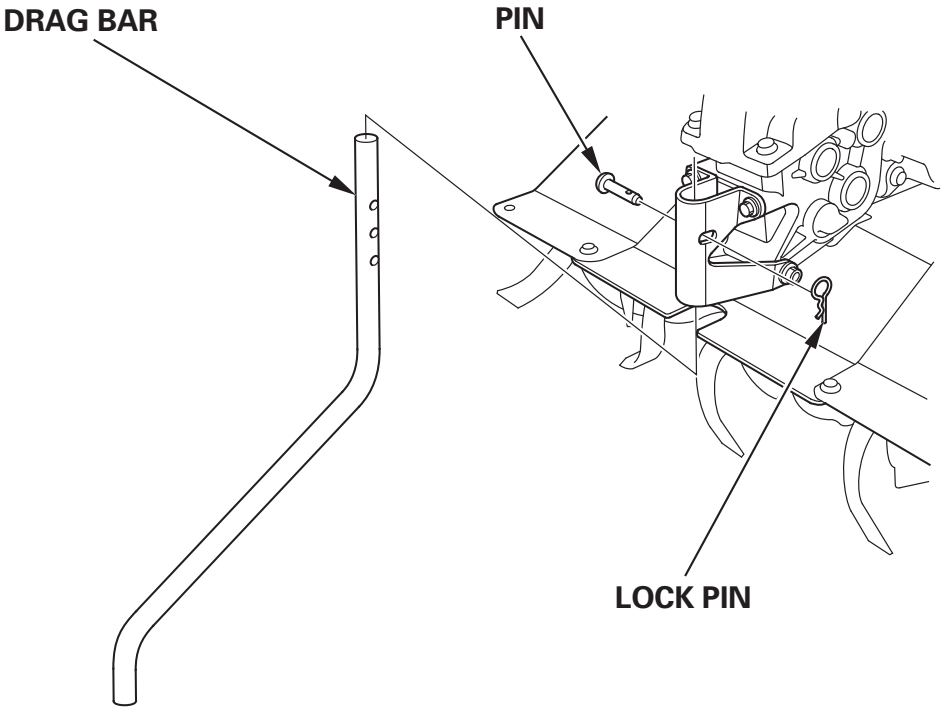
Install the hitch attachment in the hitch box with a hitch pin.
The tilling depth adjustment can be made as follows:

Remove the lock pin and pin, loosen the lock nuts and bolts securing the drag bars A and B, and slid the drag bars up or down as necessary. After adjustment, tighten the bolts and lock nuts securely.



- **FE500**

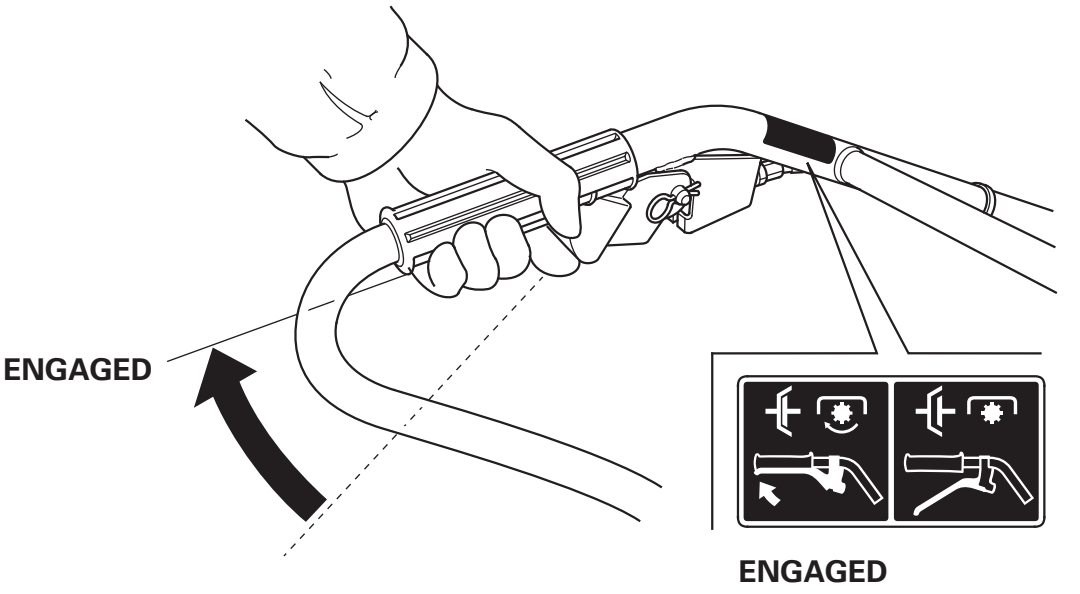
The tilling depth adjustment can be made by removing the pin and lock pin and sliding the drag bar up or down as necessary.

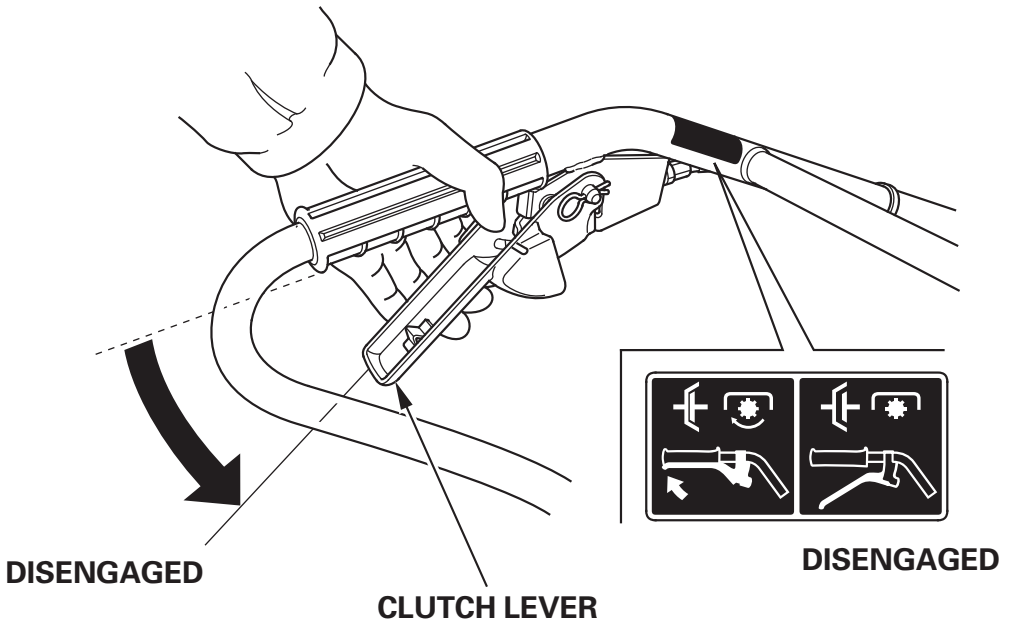


3. Clutch operation

The clutch engages and disengages the power from the engine to the transmission.
When the clutch lever is squeezed, the clutch is engaged and power is transmitted to the tool.
When the lever is released, the clutch is disengaged and power is not transmitted to the tool.

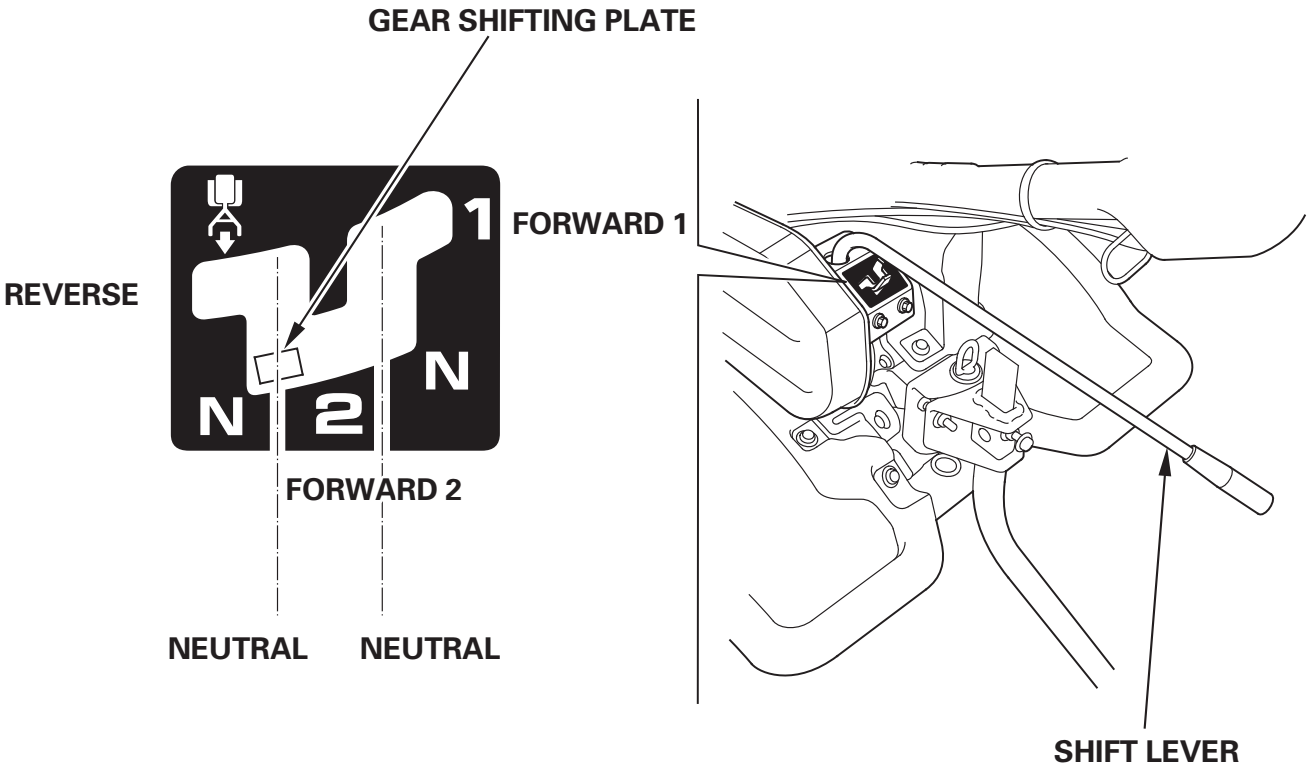
CAUTION:
Reduce engine rpm before operating main clutch operation.





4. Gear selection (F501 only)

The transmission can be shifted into two forward speeds and one reverse speed.
The shift lever should be operated in accordance with the attached gear shifting plate.



Gear shifting

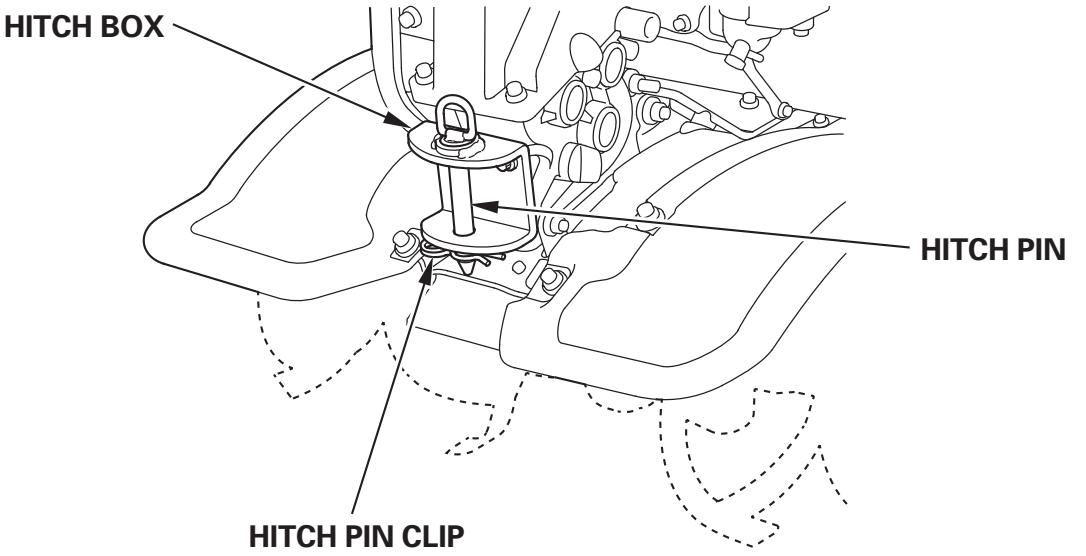
1. Return the throttle lever to the extreme right.
2. Release the clutch lever to disengage the clutch.
3. Move the shift lever to the desired gear position.

   NOTE:
   If the shift lever will not engage the desired gear, squeeze the clutch lever and move the tiller slightly to reposition the gears.

4. Squeeze the clutch lever to engage the clutch.

5. Use of the hitch box (F501 only)

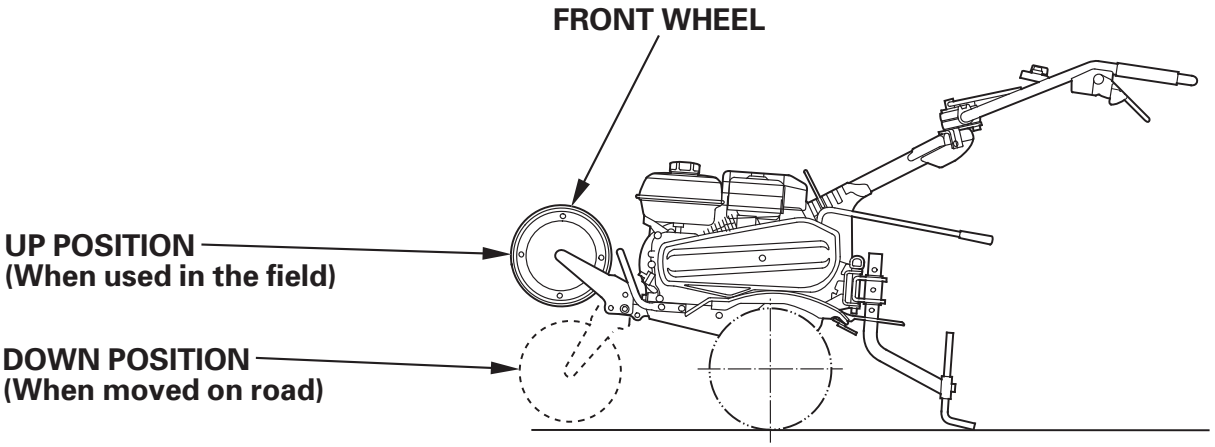
Install the hitch attachment in the hitch box with a hitch pin. (Hitch pin clip snaps into relief in hitch pin to retain pin.)



6. Front wheel (Equipped type)

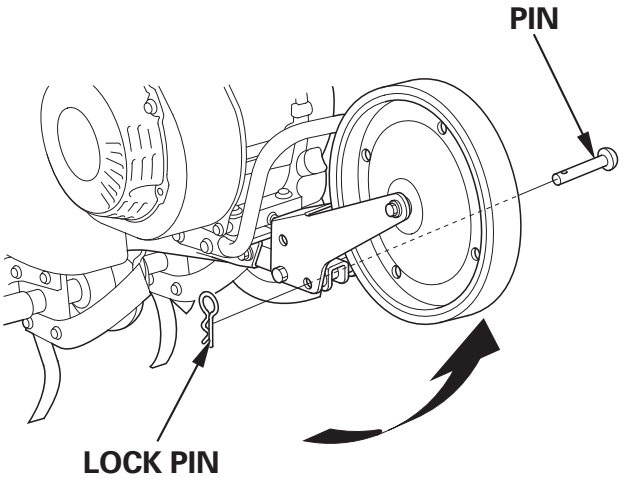
Use a front wheel to move the tiller on road. Lift the handlebars up and ground the front wheel.

When the tiller is used in the field, move the wheel up.



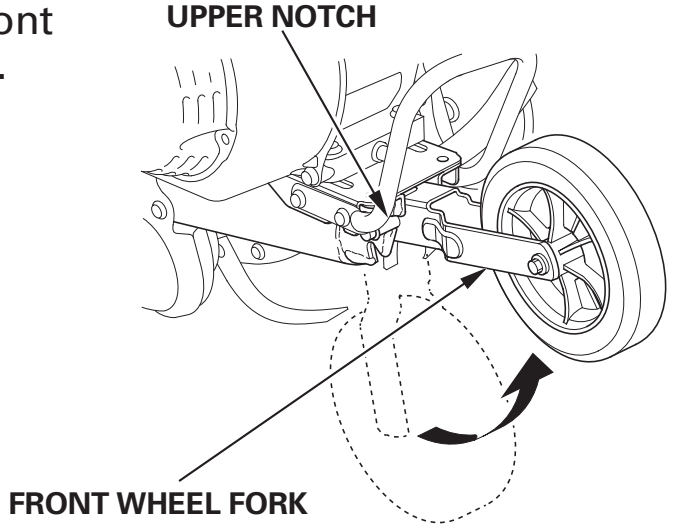
• **F501**

Move the front wheel up by replacing the pin.



• **FE500**

Move the front wheel up by shifting the pivot at the front wheel fork into the upper notch.

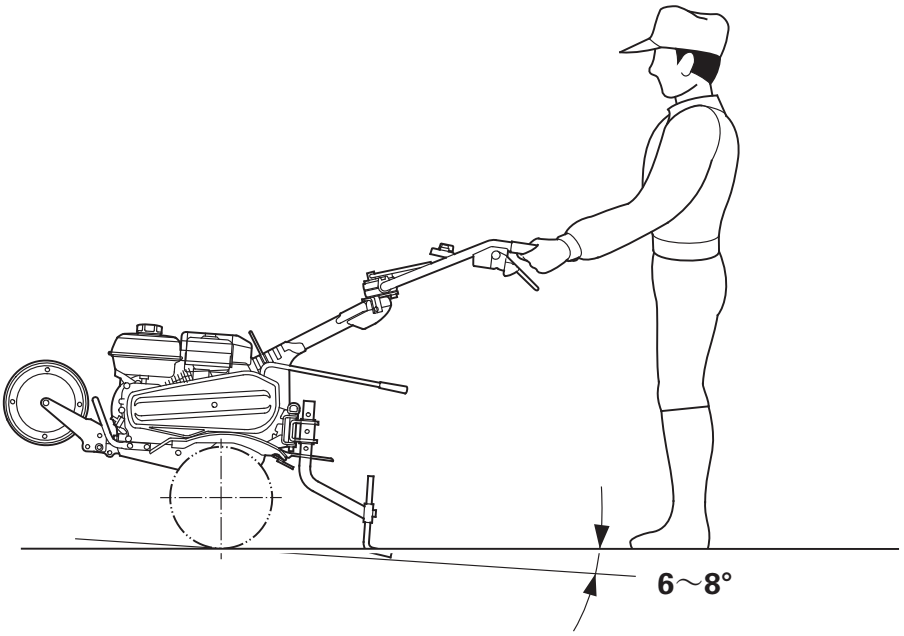


7. Handling tips

- If the tiller tends to move forward rapidly, push down on the handlebars to allow the drag bar to penetrate the soil and slow the forward motion on the tiller. Continue to press down until the tiller tines have dug to a desired depth that allows easy tiller handling.
- If the tines dig in but the tiller will not move forward, ease up on the handlebars and move the handlebars from side-to-side. If the tiller still digs in but will not move forward, raise the drag bar up a hole.
- When turning, push down on the handlebars to bring the tiller's weight to the rear; this will make turning easier.

8. Normal operating angle

Lower the handle slightly so the front of the machine is raised about 6 ～ 8°.



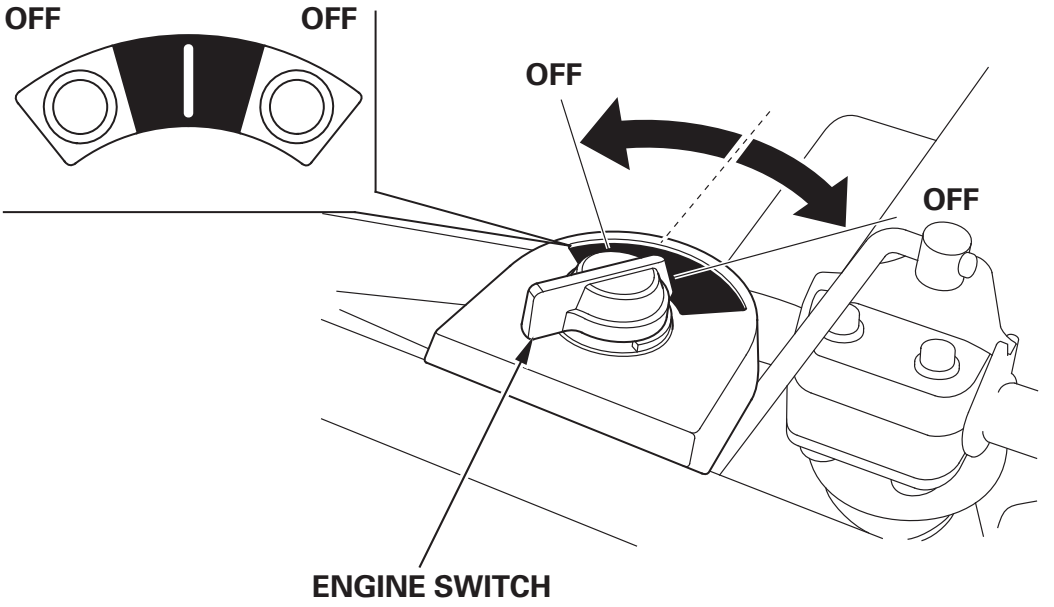
To get the maximum advantage from the tiller, try to hold the machine at the angle shown while you are tilling the ground:

CAUTION:

- **Do not use the tiller with a rotor whose diameter is in excess of 325 mm (12.8 in).**
- **Operating the tiller on grades could cause the tiller to tip over.**
- **Allowing any one to operate this tiller without proper instruction may result in injury.**
- **Wear sturdy, full coverage footgear. Operating this tiller with bare feet, or with open toe shoes or sandals increases your risk of injury.**
- **Do not use the tiller in the night.**
- **When the rotor is clogged with mud, pebbles etc., immediately stop the engine and clean the rotor in a safe place. Be sure to wear heavy gloves when cleaning the rotor.**
  To prevent damage, check the tiller for any signs of damage or other faults each time the tiller is used after it has been operated last.

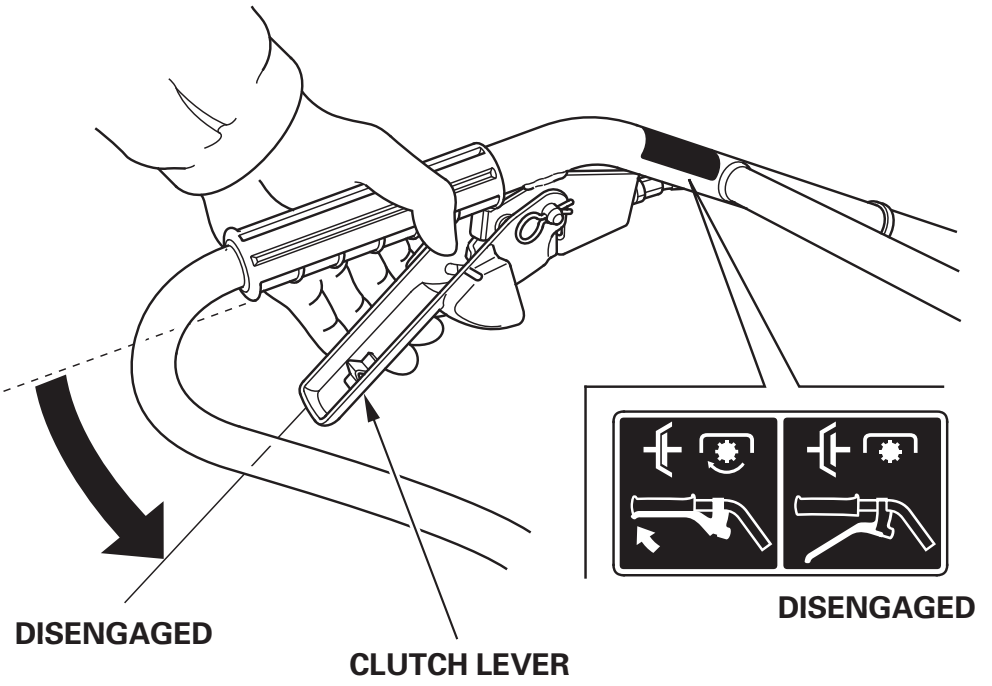
In an emergency:

- Turn the engine switch OFF.

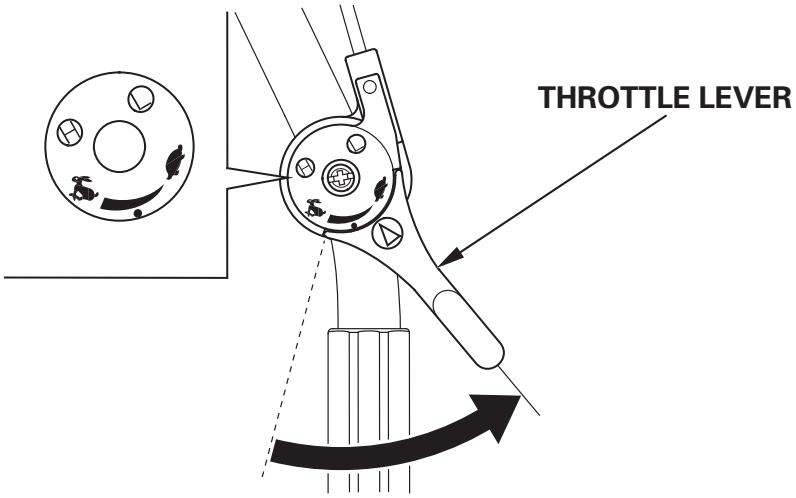


In normal use:

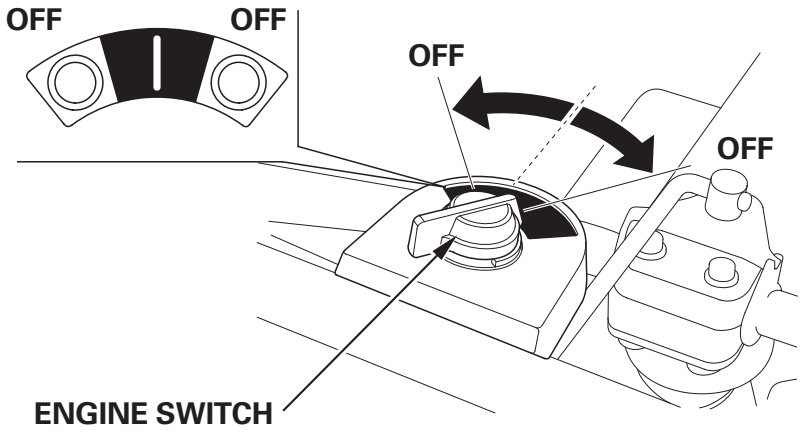
1. Release the clutch lever to DISENGAGED position and shift lever is in neutral position.



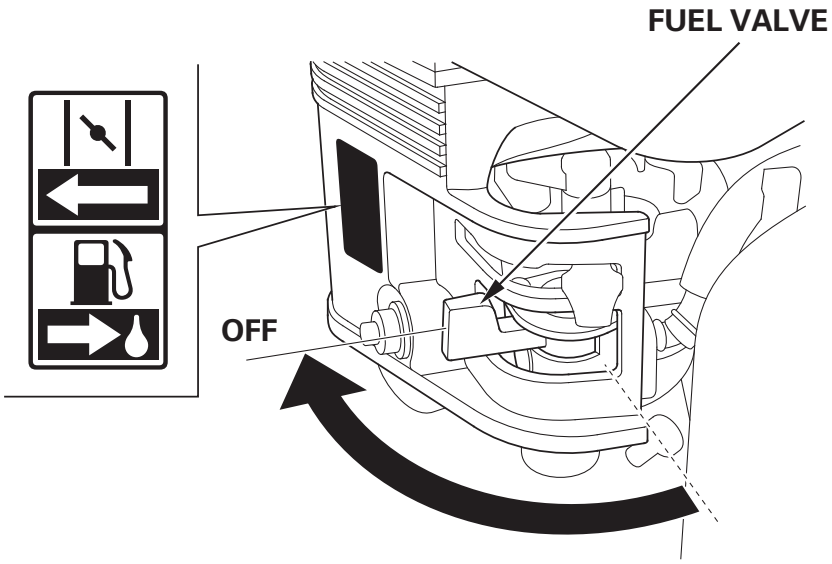
2. Move the throttle lever fully to the right.



3. Turn the engine switch OFF.



4. Turn the fuel valve to the OFF position.



The purpose of the maintenance schedule is to keep the tiller in the best operating condition. Inspect or service as scheduled in the table below.

⚠WARNING

Shut off the engine before performing any maintenance. Exhaust contains poisonous carbon monoxide gas; Exposures cause loss of consciousness and may lead to death. If the engine must be run, make sure the area is well ventilated.

CAUTION:

Use only genuine Honda parts or their equivalent for maintenance or repair. Replacement parts which are not of equivalent quality may damage the tiller.

Maintenance schedule

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first. / ITEM		Each use	First month or 20 hrs	Before operation	Every 3 months or 50 hrs	Every 6 months or 100 hrs	Every year or 300 hrs
Engine oil	Check level	○					
	Change		○	○ (1)		○	
Transmission oil	Check level		○	○			○
Air cleaner	Check	○					
	Clean				○ (2)		
	Replace						○
Tiller outside	Check	○					
Throttle lever function	Check	○					
Bolts and Nuts tightness	Check	○					
Wiring and cables	Check	○					

NOTE: Replace paper element type only.

(1) Check time, exchange time vary in the use condition. Exchange it a little early when there is damage.

(2) Service more frequently when used in dusty areas.

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

Maintenance schedule

ITEM		REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first.	Each use	First month or 20 hrs	Before operation	Every 3 months or 50 hrs	Every 6 months or 100 hrs	Every year or 300 hrs
Engine Operation	Check		○					
Sediment cup	Clean						○	
Spark plug	Check-adjust						○	
	Replace							○
Grease application	Check level				○			
Drive belt	Check-adjust			○ (4) (5)			○ (4) (5)	
Throttle cable	Check-adjust							○
Clutch cable	Check-adjust			○ (4)			○ (4)	
Idle speed	Check-adjust							○ (4)
Valve Clearance	Check-adjust							○ (4)
Combustion chamber	Clean	After every 500hrs (3) (4)						
Fuel tank & filter	Clean						○ (4)	
Fuel tube	Check	Every 2 years (Replace if necessary) (4)						

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

(4) These items should be serviced by your servicing dealer, unless you have the proper tools and are mechanically proficient. Refer to Honda shop manual for service procedures.

(5) Check that there is no crack and abnormal wear-out in the belt, and replace if it is abnormal.

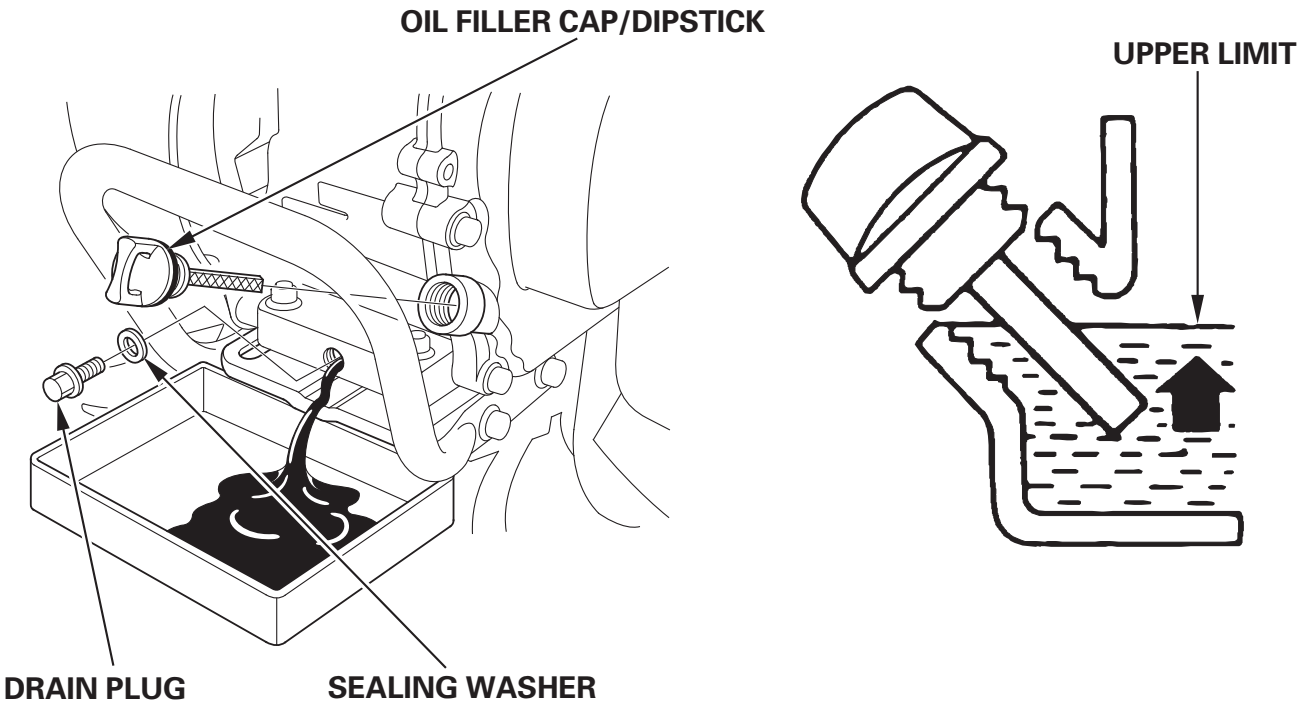
(6) Apply grease to the pin part of the clutch lever fulcrum and so on for prevention of rust when you keep it for a long time. (4)

1. Changing oil

Change the oil when the engine is warm to assure rapid and complete draining.

1. Remove the oil filler cap and drain plug to drain the oil.
2. Reinstall the drain plug and tighten it securely.
3. Refill with the recommended oil (see page 18) and check the oil level.
4. Reinstall the oil filler cap/dipstick.

Oil capacity: 0.58 ℓ (0.61 US qt , 0.51 Imp qt)



Wash your hands with soap and water after handling used oil.

NOTE:
Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local service station for reclamation. Do not throw it in the trash or pour it on the ground.

2. Air cleaner service

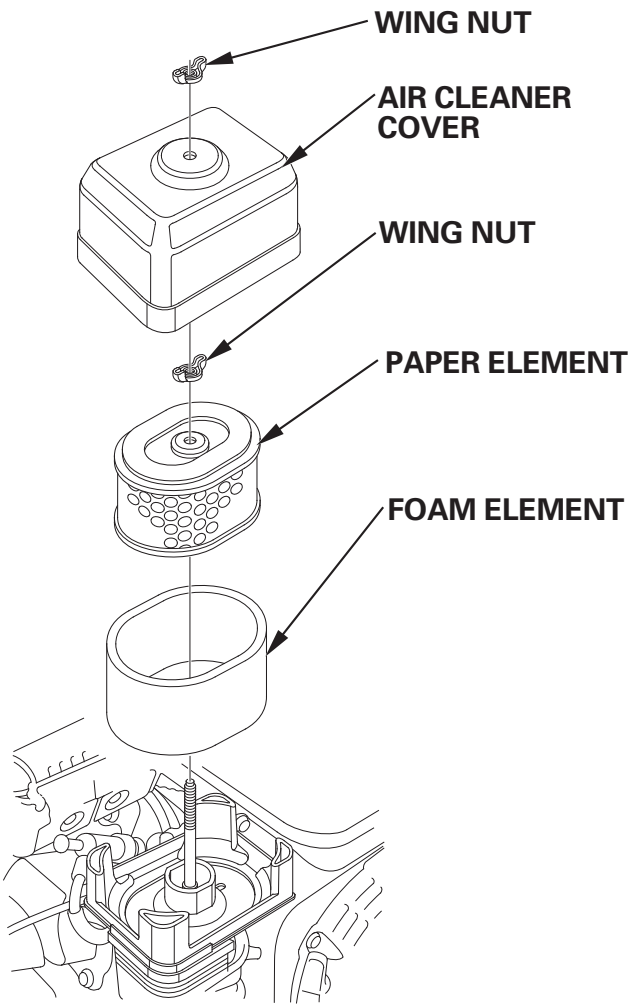
A dirty air cleaner will restrict air flow to the carburetor. To prevent carburetor malfunction, service the air cleaner regularly. Service more frequently when operating the engine in extremely dusty areas.

⚠WARNING

Never use gasoline or low flash point solvents for cleaning the air cleaner element. A fire or explosion could result.

CAUTION:
Never run the engine without the air cleaner. Rapid engine wear will result.

1. Remove the wing nut and the air cleaner cover. Remove the elements and separate them. Carefully check both elements for holes or tears and replace if damaged.
2. Foam element: Clean in warm soapy water, rinse and allow to dry thoroughly. Or clean in high flash-point solvent and allow to dry. Dip the element in clean engine oil and squeeze out all the excess. The engine will smoke during initial start-up if too much oil is left in the foam.
3. Paper element: Tap the element lightly several times on a hard surface to remove excess dirt, or blow compressed air through the filter from the inside out. Never try to brush the dirt off; brushing will force dirt into the fibers. Replace the paper element if it is excessively dirty.

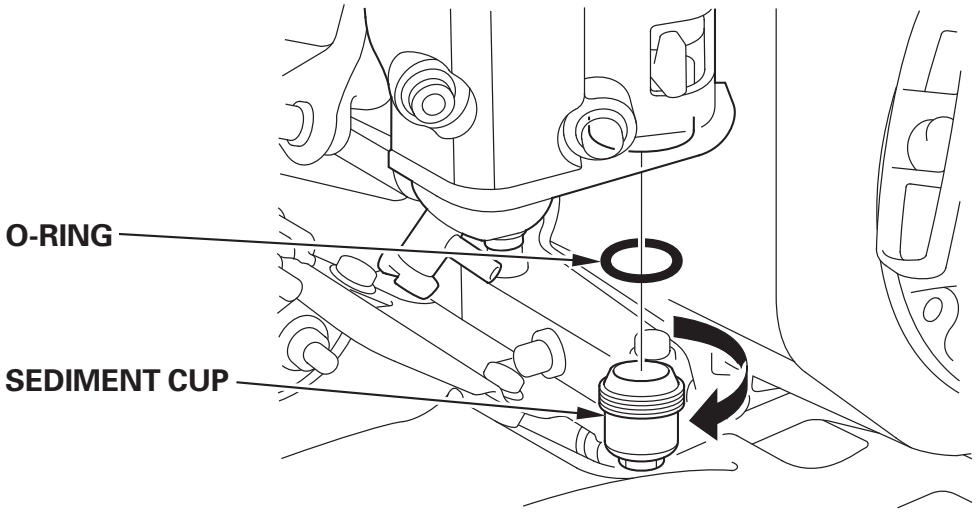


3. Sediment cup cleaning

⚠WARNING

Gasoline is extremely flammable and is explosive under certain conditions. Do not smoke or allow flames or sparks in the area.

Turn the fuel valve to the OFF position and remove the sediment cup and the O-ring.
Wash the sediment cup in solvent, dry it thoroughly.
Place the O-ring in the fuel valve, and install the sediment cup. Tighten the sediment cup securely.
Turn the fuel valve ON and check for leaks.



4. Spark plug service

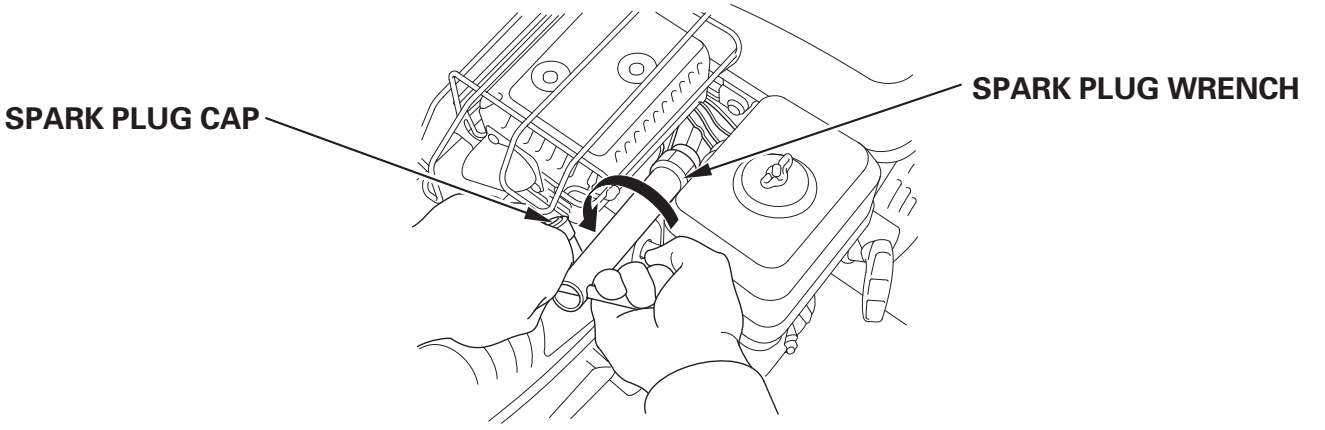
Recommended spark plug: BPR5ES (NGK)
W16EPR-U (DENSO)

To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

1. Remove the spark plug cap.
   Use the spark plug wrench to remove the spark plug.

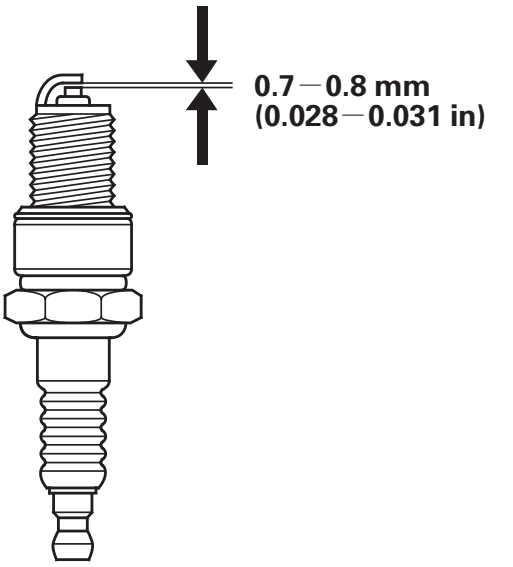
⚠WARNING

If the engine has been running, the muffler will be very hot. Be careful not to touch the muffler.

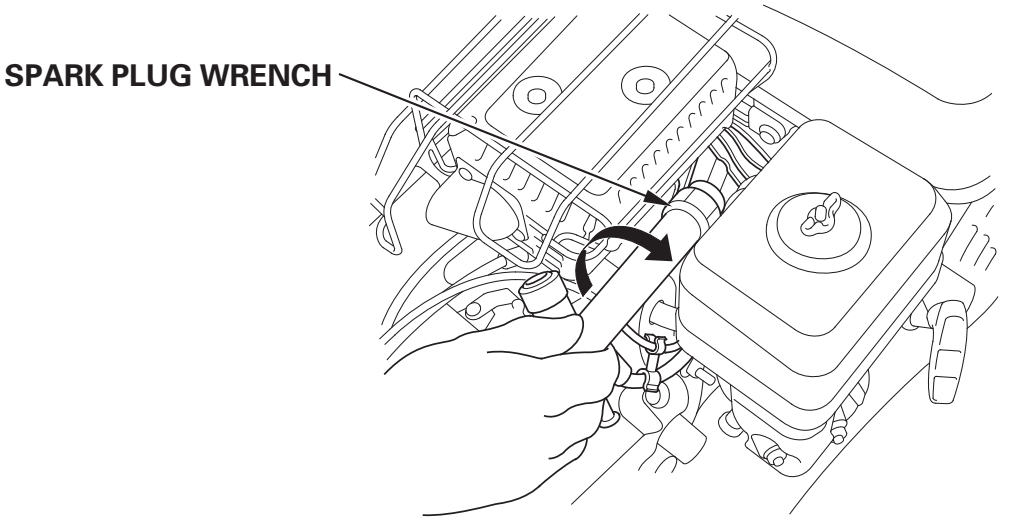


2. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.

3. Measure the plug gap with a feeler gauge.
   Correct as necessary by bending the side electrode.
   The gap should be:
   0.7—0.8 mm (0.028—0.031 in)



4. Check that the spark plug washer is in good condition and thread the spark plug in by hand to prevent cross-threading.



5. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.

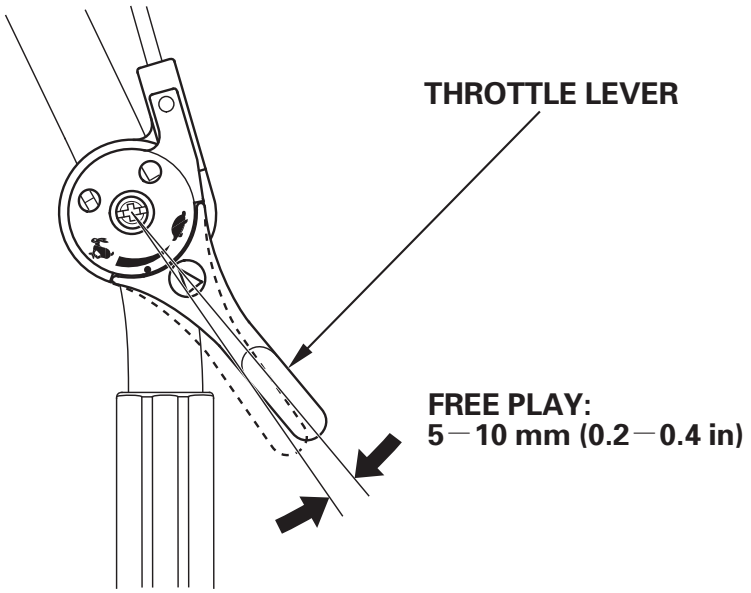
NOTE:
After seating it by hand, tighten a new spark plug 1/2 turn with the wrench to compress the washer. If you are reusing a plug, it should only take 1/8—1/4 turn.

CAUTION:
The spark plug must be securely tightened. An improperly tightened plug can become very hot and possibly damage the engine.
Never use a spark plug with an improper heat range.

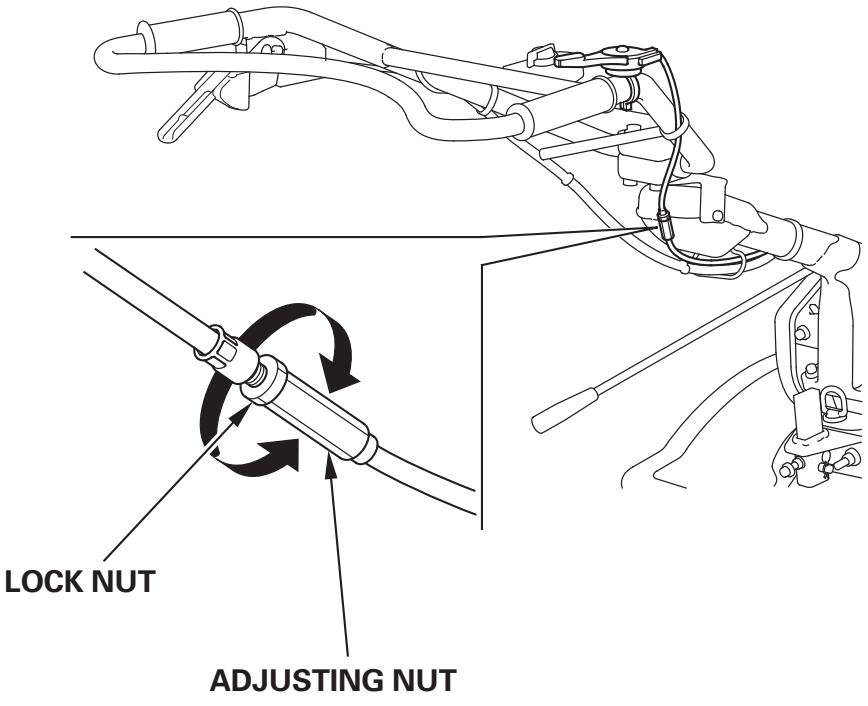
5. Throttle cable adjustment

Measure the free play at the lever tip.

Free play: 5—10 mm (0.2—0.4 in)



If the free play is incorrect, loosen the lock nut and turn the adjusting bolt in or out as required.



⚠WARNING

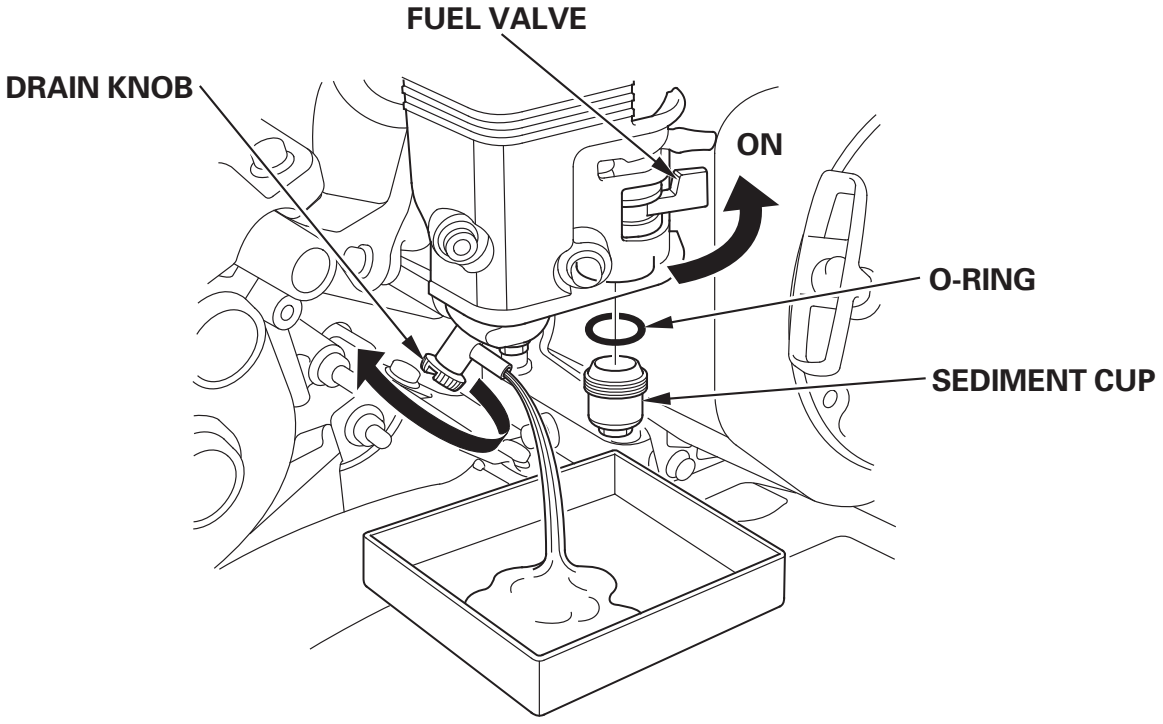
When transporting the tiller, turn the fuel valve OFF and keep the tiller level to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

Before storing the unit for an extended period:
1. Be sure the storage area is free of excessive humidity and dust.
2. Drain the fuel:

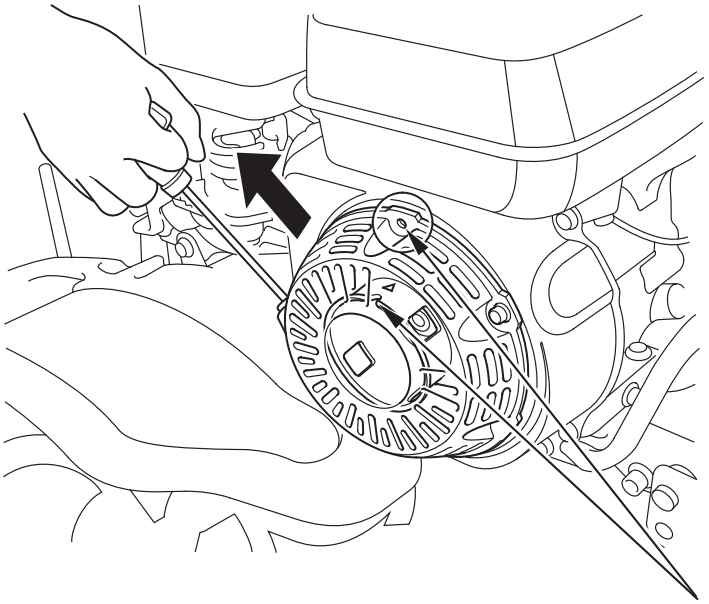
⚠WARNING

Gasoline is flammable and explosive under certain conditions. Do not smoke or allow flames or sparks near the equipment while draining fuel.

a. With the fuel valve turned OFF, remove and empty the fuel sediment cup.
b. Turn the fuel valve ON and drain the gasoline in the fuel tank into a suitable container.
c. Reinstall the sediment cup and tighten securely.
d. Drain the carburetor by loosening the drain knob. Drain the gasoline into a suitable container.

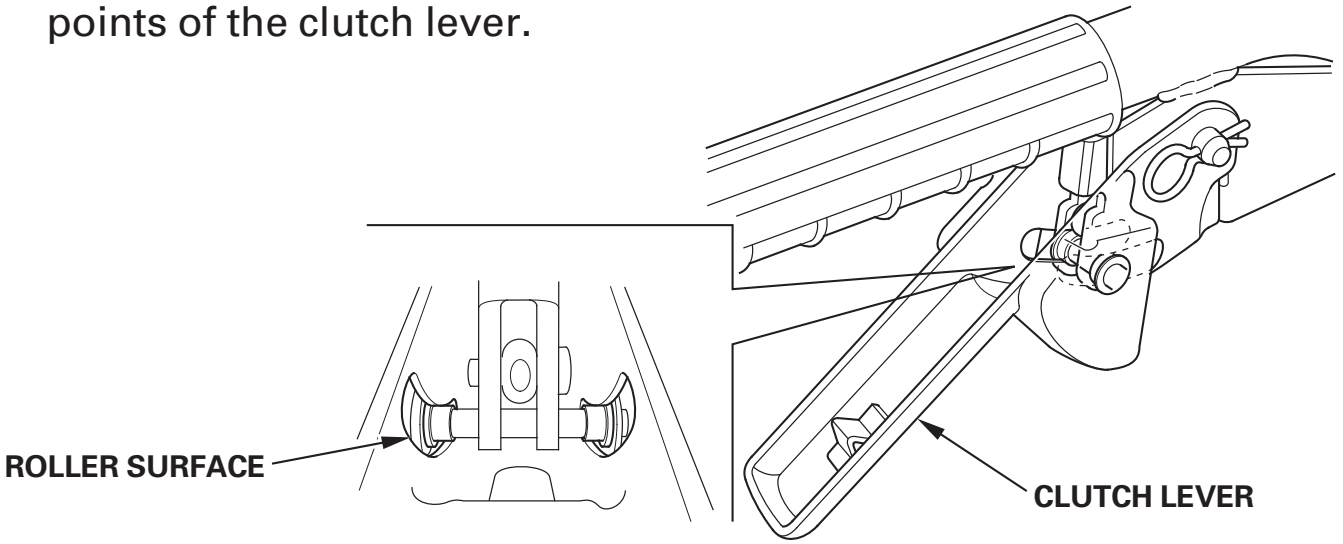


3. Pull the starter grip until resistance is felt. Continue pulling until the notch on the starter pulley aligns with the hole on the recoil starter (see illustration below).
   At this point, the intake and exhaust valves are closed, and this will help to the engine from internal corrosion.



Align the notch on the starter pulley with the hole at the top of the recoil starter.

4. Change engine oil.
5. Apply oil or grease to the pivot points of the clutch lever.



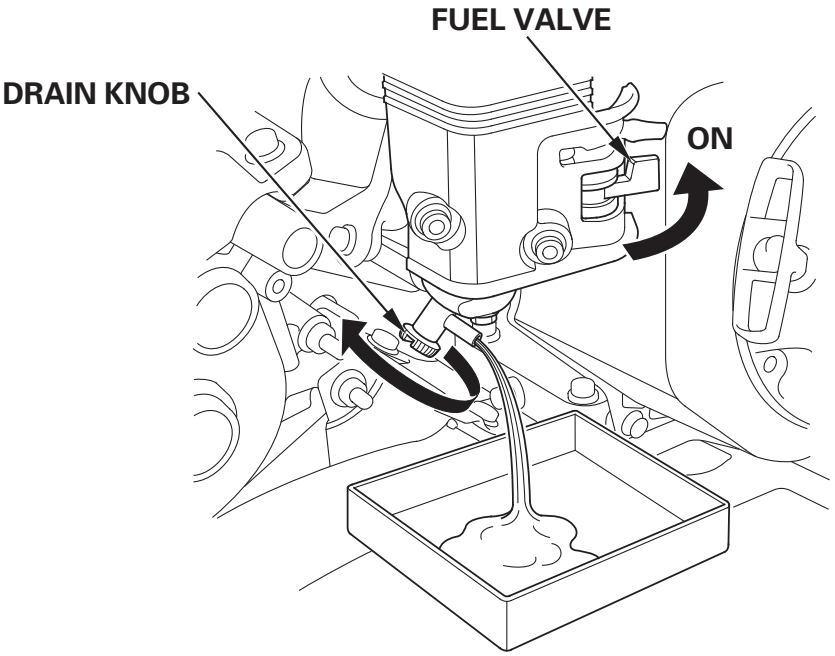
6. Cover tiller with plastic sheet.

Do not place the tiller with the handlebars on the ground. It will cause the oil entering the cylinder or fuel will spill over.

When the engine will not start:
1. Is there enough fuel?
2. Is the fuel valve on?
3. Is the engine switch on?
4. Is gasoline reaching the carburetor?
   To check, loosen the drain knob with the fuel valve on. Fuel should flow out freely. Retighten drain knob.

⚠WARNING

If any fuel is spilled, make sure the area is dry before starting the engine. Spilled fuel or fuel vapor may ignite.



5. Is the spark plug in good condition?

   Remove and inspect the spark plug. Clean, readjust gap and dry the spark plug. Replace it if necessary.

6. If the engine still does not start, take the tiller to an authorized Honda dealer.

11. SPECIFICATIONS

Model	F501-GE	F501-HE
Power equipment description code	FZAZ	

Dimensions and weight

Model	F501-GE	F501-HE
Length	1,600 mm (63.0 in)	1,385 mm (54.5 in)
Width	610 mm (24.0 in)	
Height	980 mm (38.6 in)	
Dry mass [weight]	49 kg (108 lbs)	46 kg (101 lbs)

Engine

Model	GX160K1J
Type	4-stroke, 1-cylinder, OHV, forced air cooled
Displacement	163 cm^3 (9.9 cu-in)
Bore × Stroke	68.0 × 45.0 mm (2.68 × 1.77 in)
Ignition system	Transistor magneto
Spark plug	BPR5ES (NGK) , W16EPR-U (DENSO)
Oil capacity	0.58 ℓ (0.61 US qt , 0.51 Imp qt)
Fuel tank capacity	2.4 ℓ (0.63 US gal , 0.53 Imp gal)

Drive train

Model	F501-GE	F501-HE
Clutch	Belt tension type	
Transmission	Forward 2 reverse 1	
Transmission oil capacity	0.95 ℓ (1.00 US qt , 0.84 Imp qt)	

Noise and vibration

Model	F501-GE	F501-HE
Sound pressure level (L_{PA})Tested by EN709	83 dB (A) at 3,230 rpm	
Vibration Tested by EN709	3.8 m/s^2 at 3,800 rpm	

NOTE:Specifications are subject to change without notice.

Model	FE500-EI	FE500-EIT
Power equipment description code	FARJ	

Dimensions and weight

Model	FE500-EI	FE500-EIT
Length	1,460 mm (57.5 in)	1,460 mm (57.5 in)
Width	925 mm (36.4 in)	600 mm (23.6 in)
Height	990 mm (39.0 in)	
Dry mass [weight]	54 kg (119 lbs)	41 kg (90 lbs)

Engine

Model	GX160K1J
Type	4-stroke, 1-cylinder, OHV, forced air cooled
Displacement	163 cm^3 (9.9 cu-in)
Bore × Stroke	68.0 × 45.0 mm (2.68 × 1.77 in)
Ignition system	Transistor magneto
Spark plug	BPR5ES (NGK) , W16EPR-U (DENSO)
Oil capacity	0.58 ℓ (0.61 US qt , 0.51 Imp qt)
Fuel tank capacity	2.4 ℓ (0.63 US gal , 0.53 Imp gal)

Drive train

Model	FE500-EI	FE500-EIT
Clutch	Belt tension type	
Transmission	Forward 1	
Transmission oil capacity	0.95 ℓ (1.00 US qt , 0.84 Imp qt)	

Noise and vibration

Model	FE500-EI	FE500-EIT
Sound pressure level (L_{PA})Tested by EN709	83 dB (A) at 3,230 rpm	
Vibration Tested by EN709	12.0 m/s^2 at 3,800 rpm	

NOTE:Specifications are subject to change without notice.

12. MAJOR Honda DISTRIBUTOR ADDRESSES

For further information, please contact Honda Customer Information Centre at the following address or telephone number:

AUSTRIA

Honda Motor Europe (North)
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OY Brandt AB.
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