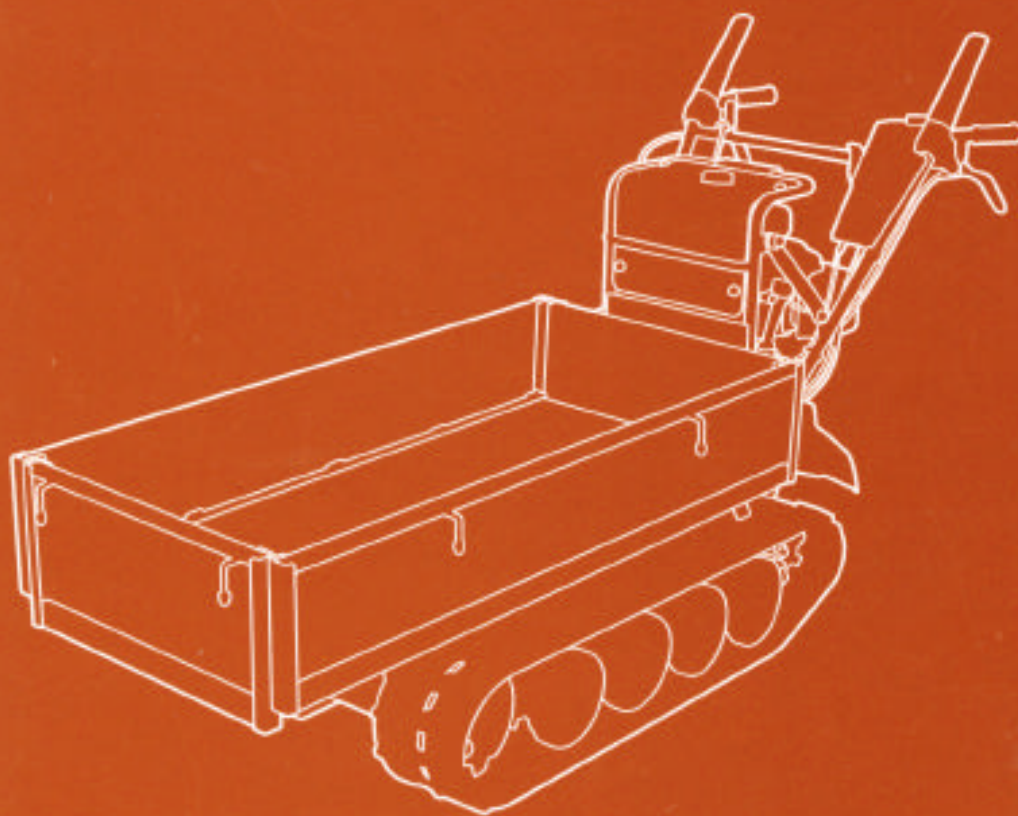


POWER CARRIER

HP350·HP450



OWNER'S MANUAL

Honda HP350-HP450

OWNER'S MANUAL



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Thank you for purchasing a Honda POWER CARRIER.

This manual covers the operation and maintenance of the Honda POWER CARRIER: HP350, HP450

All information in this publication is based on the latest production 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 should be considered a permanent part of the power carrier and should remain with it if it is resold.

Pay special attention to statements preceded by the following words:

⚠ WARNING Indicates a strong possibility of severe personal injury 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 the power carrier, consult an authorized Honda dealer.

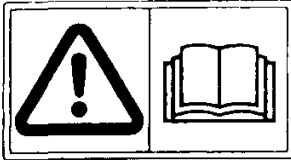
⚠ WARNING

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

1. SAFETY INSTRUCTIONS

▲ WARNING

To ensure safe operation —



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

- Always make a pre-operation inspection (page 15) before you start the engine. You may prevent an accident or equipment damage.
- Keep children and pets away from the area of operation to avoid possible injury from contact with the power carrier.
- To avoid accidents or loss of control, do not ride on the power carrier; walk behind, and hold both handlebars firmly. Do not allow others to ride on the power carrier as passengers.
- Watch for obstacles while operating the power carrier. Do not use the power carrier when visibility is poor. Under conditions of poor visibility, there is a greater risk of striking an obstacle.
- To avoid accidents or overturning, observe the load limits described on page 34 .
Be sure the load is secure and does not protrude from the power carrier or block visibility.
- To avoid overturning, be careful when changing the direction of the power carrier while operating it on slopes, and do not operate the power carrier on upward slopes greater than 15° or downward slopes greater than 15° .
- When operating the power carrier in reverse and walking backward, there is a greater risk of slipping or tripping. Be especially careful when backing up.
- Know how to stop the power carrier quickly, and understand the operation of all controls. Never permit anyone to operate the power carrier without proper instruction.
- Never use this unit for nighttime work.

▲WARNING To ensure safe operation —

- 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 refueling area or where gasoline is stored.
- Do not overfill the fuel tank. After refueling, make sure the fuel filler cap is closed properly and securely.
- Be careful not to spill fuel when refueling. Fuel vapor or spilled fuel may ignite. If any fuel is spilled, make sure the area is dry before starting the engine.
- Never run the engine in an enclosed or confined area. Exhaust contains poisonous carbon monoxide gas; exposure may cause loss of consciousness and may lead to death.
- The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. To avoid severe burns or fire hazards, let the engine cool before transporting the power carrier or starting it indoors.

2. SAFETY LABEL LOCATIONS

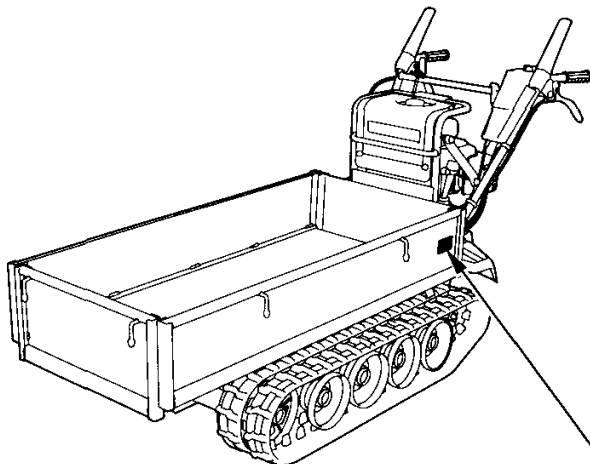
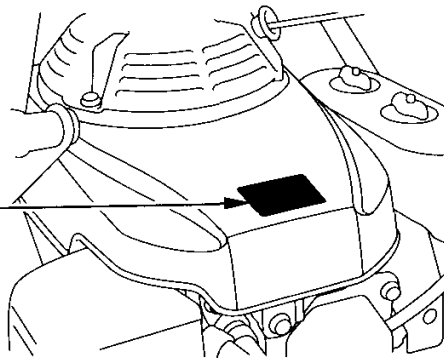
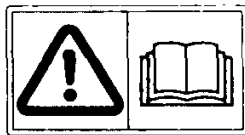
SAFETY LABEL LOCATIONS

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

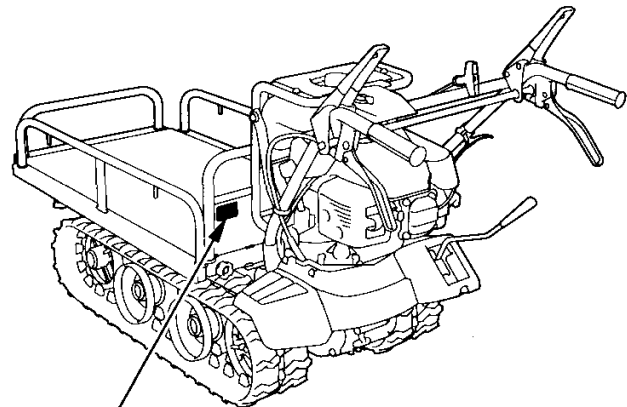
If a label comes off or becomes hard to read, contact your Honda dealer for a replacement.

[BE1 AND CE1 types]

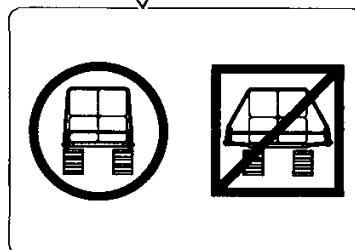
READ OWNER'S MANUAL



(BE1 type)



(CE1 type)



CARRIER CAUTION

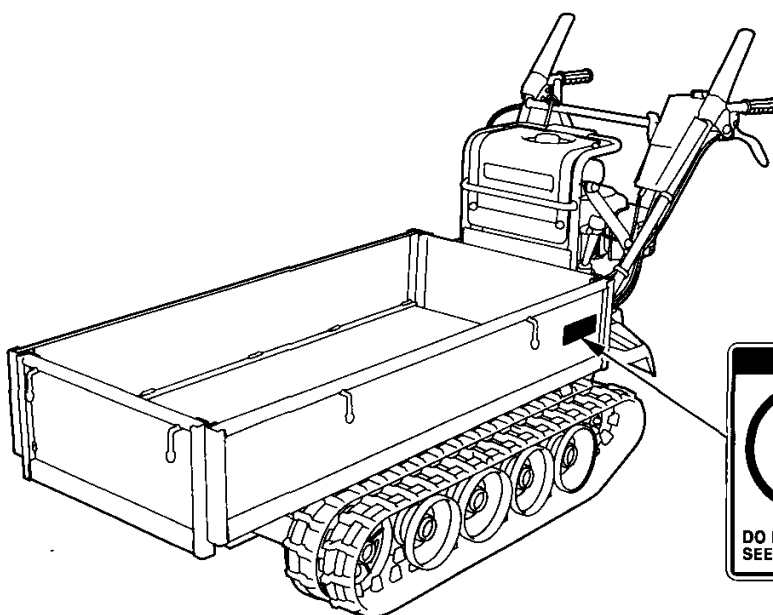
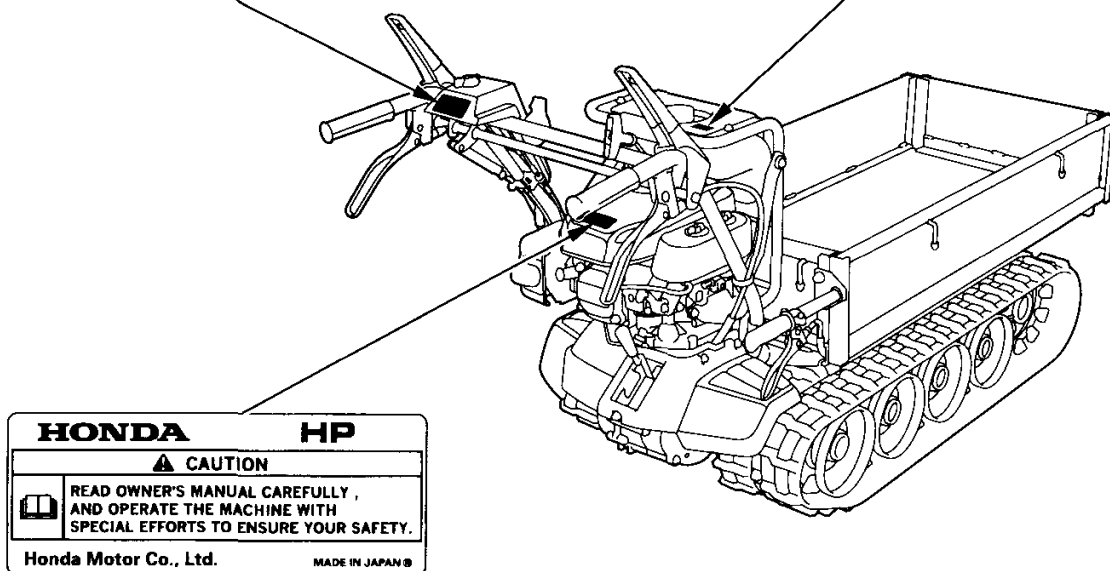
[U type]

WARNING

- TO AVOID PERSONAL INJURY DURING OPERATION:
- DO NOT EXCEED THE MAXIMUM WEIGHT CAPACITY.
 - BE SURE THE CARGO IS PROPERLY SECURED.
 - AVOID QUICK TURNS TO PREVENT TIPOVER.
 - WHEN OPERATING ON SLOPES, USE 1ST GEAR AT A LOW THROTTLE SETTING TO PREVENT TIPOVER.
 - READ THE OWNER'S MANUAL CAREFULLY.

WARNING

GASOLINE IS FLAMMABLE.
SHUT OFF ENGINE, AVOID HEAT,
SPARKS AND OPEN FLAME
WHEN REFUELING.



CAUTION

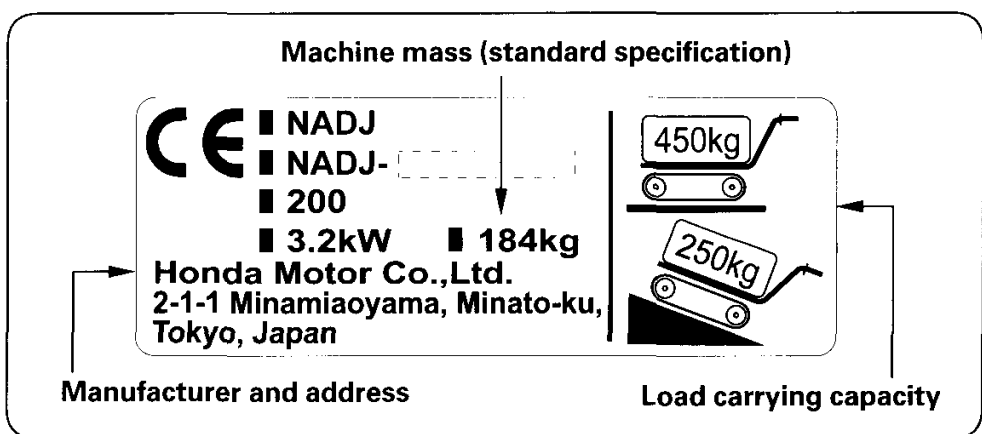
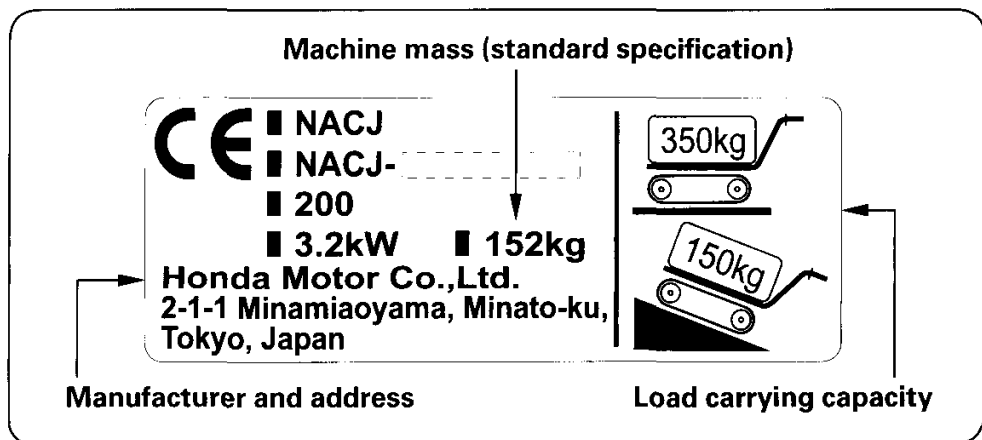


DO NOT EXCEED LOAD LIMITS BY WEIGHT OR WIDTH.
SEE OWNER'S MANUAL FOR DETAILED EXPLANATION.

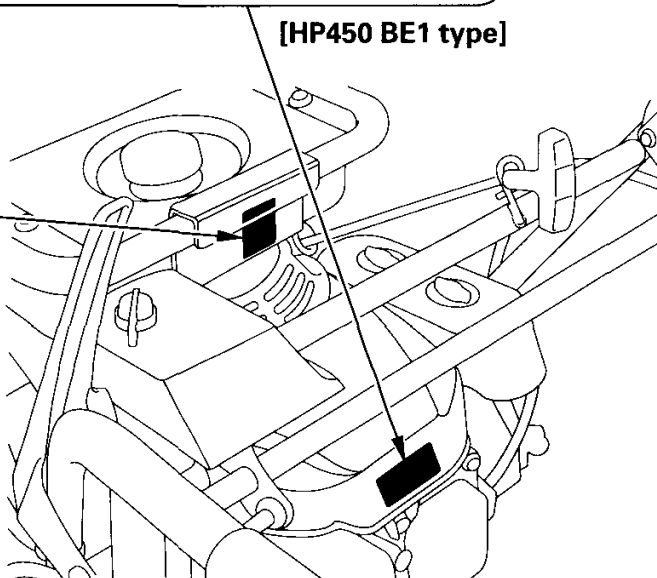
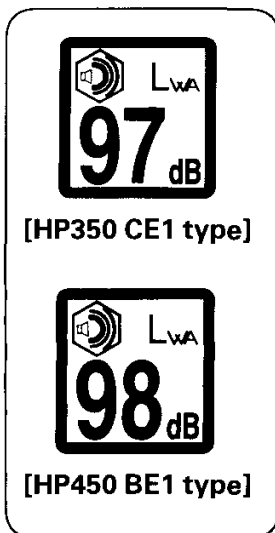
CE mark and noise label locations

[BE1 and CE1 types]

CE MARK

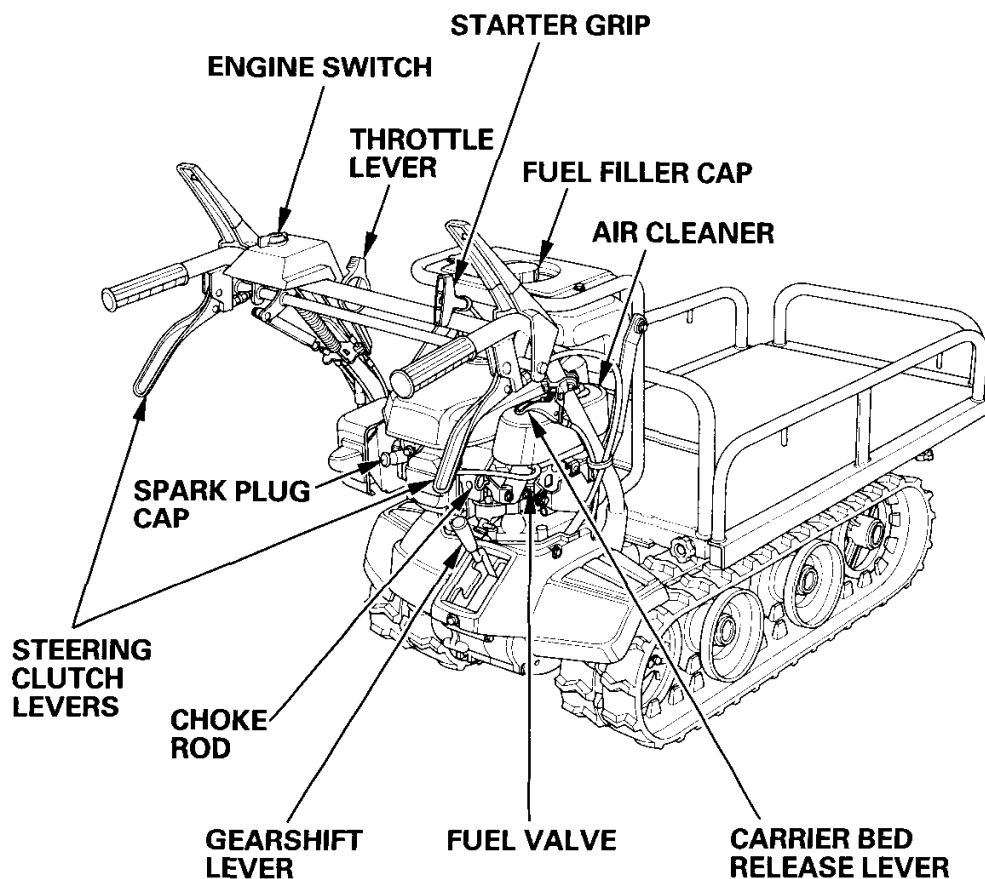
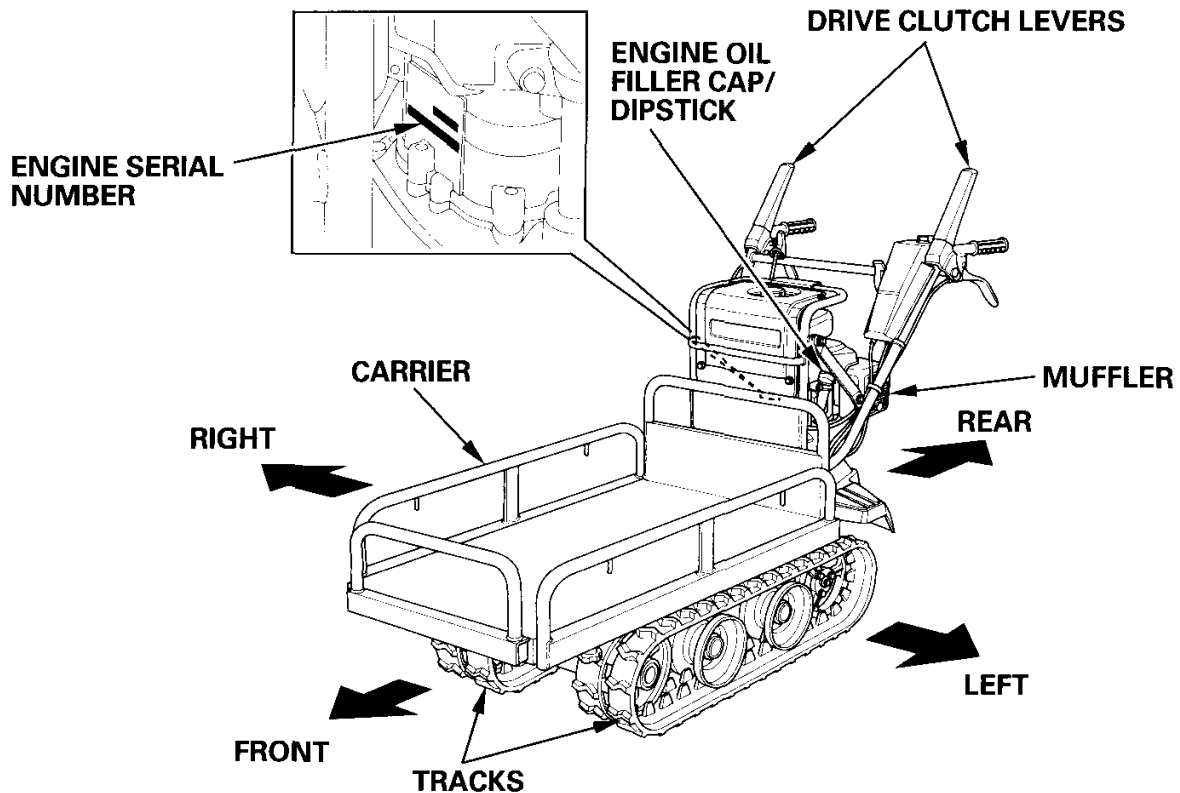


NOISE LABEL

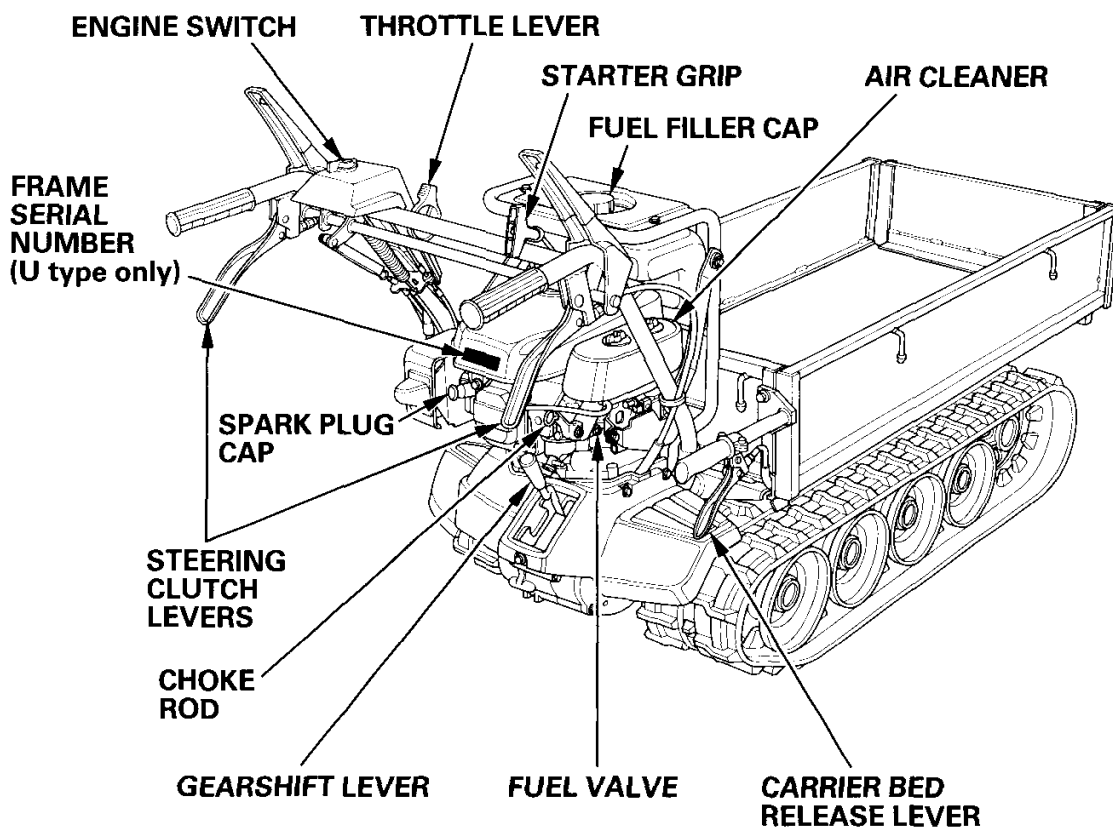
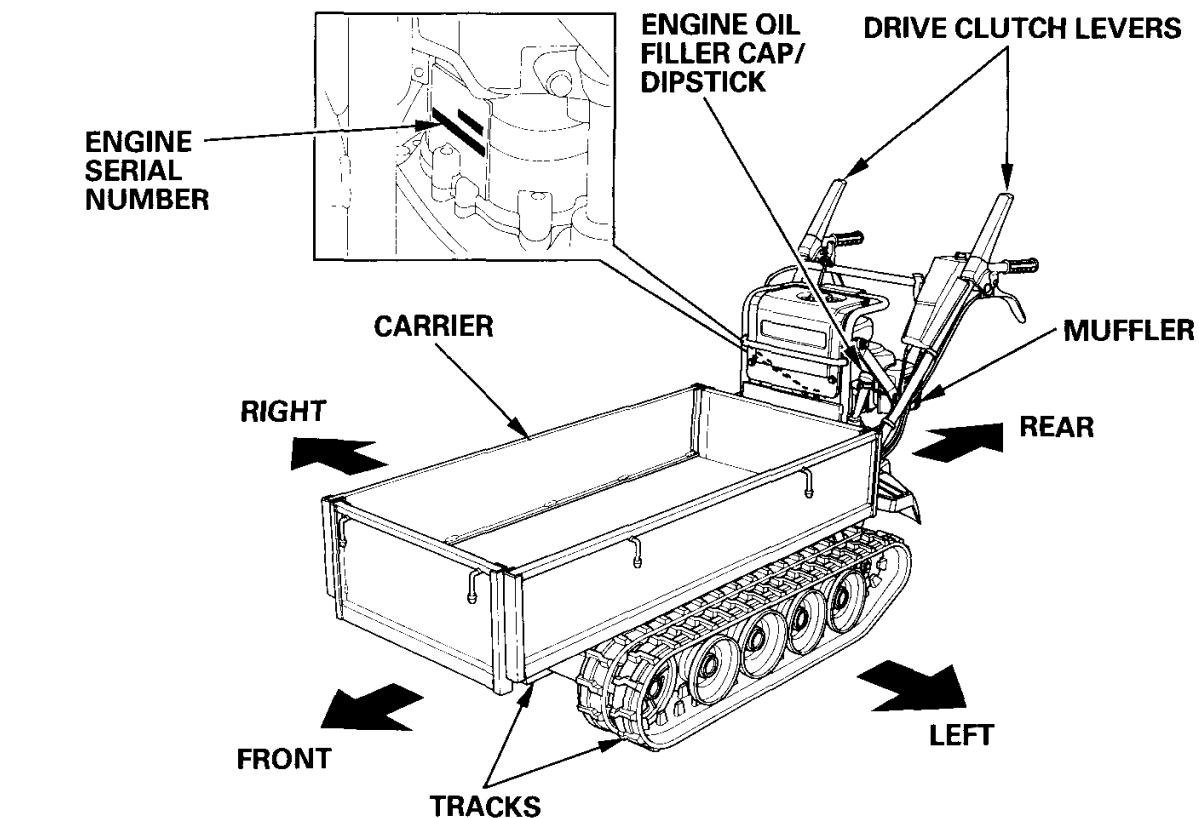


3. COMPONENT IDENTIFICATION

[HP350 CE1 type]



[HP450 BE1 and U types]



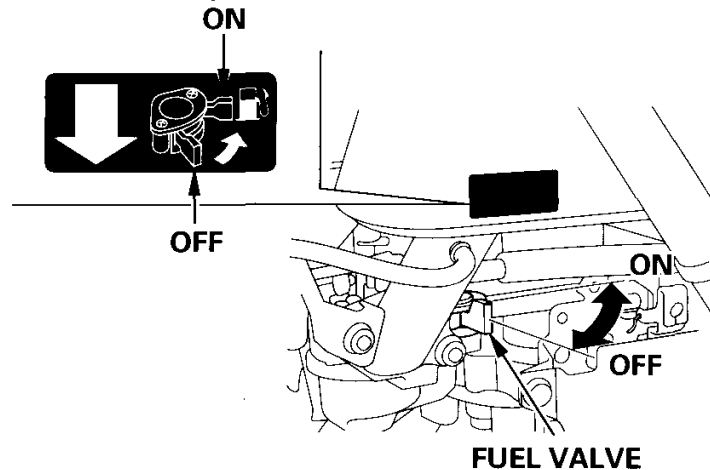
4. CONTROLS

Fuel valve

The fuel valve opens and closes the fuel passage to the carburetor. Turn the fuel valve to the ON position before starting the engine and to the OFF position when the engine is stopped.

⚠ WARNING

When the power carrier is not in use, always leave the fuel valve in the OFF position to reduce the possibility of fuel leakage. Gasoline is extremely flammable and is explosive under certain conditions. Fuel vapor or spilled fuel may ignite.

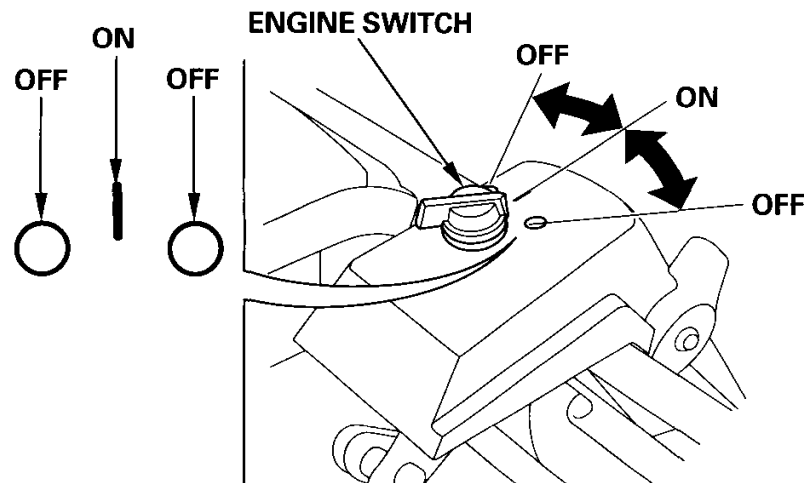


Engine switch

The engine switch controls the electrical circuit for the spark plug ignition system and must be turned to the ON position to enable the engine to start and run. The engine will stop when the engine switch is turned to the OFF position.

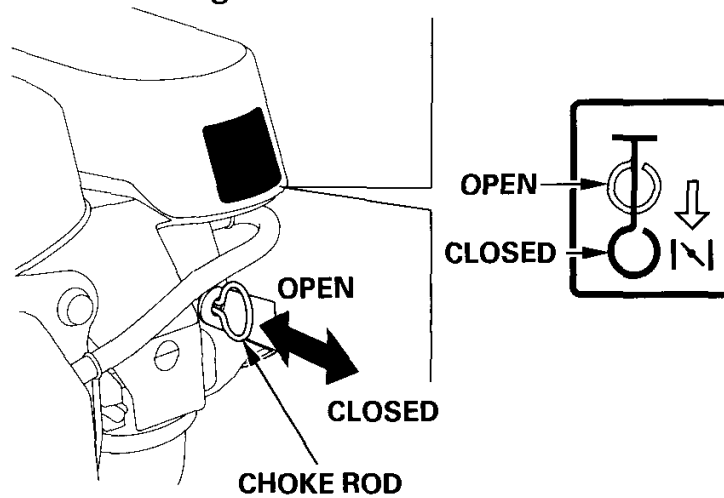
⚠ WARNING

When the power carrier is not in use always leave the engine switch in the OFF position to prevent accidental starting.



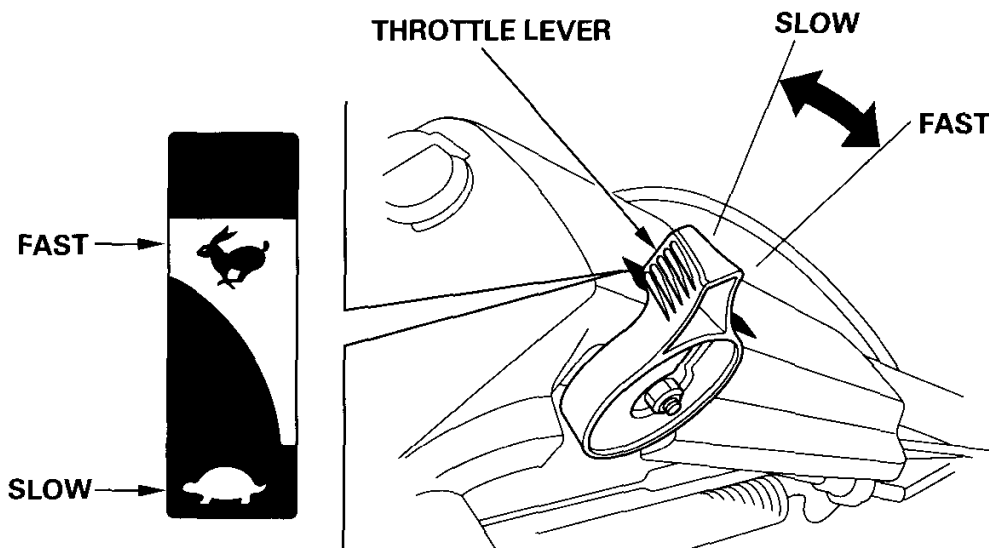
Choke rod

Close the choke when the engine is cold or difficult to start.



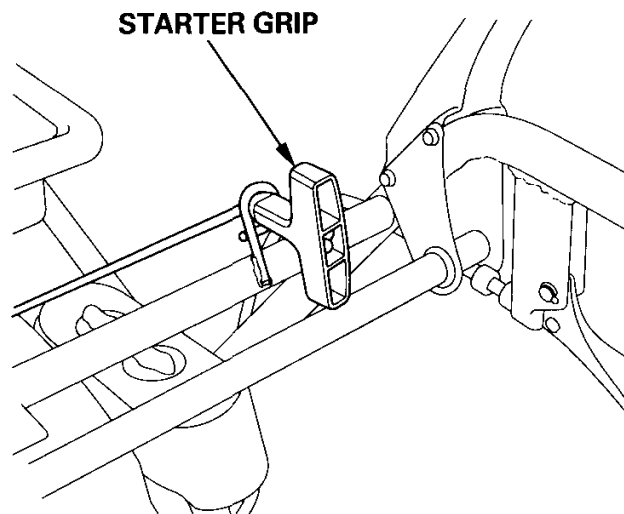
Throttle lever

Use the throttle lever to select engine speed. In normal operation, use the FAST position.



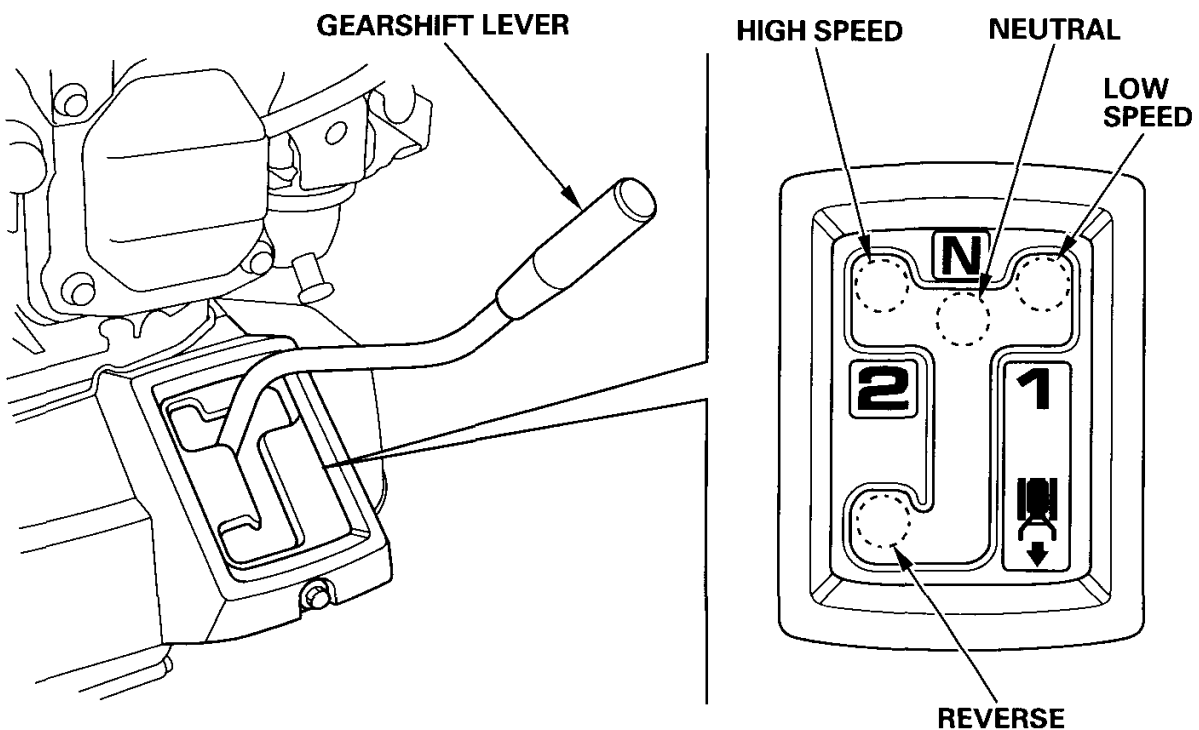
Starter grip

Pull the starter grip to operate the recoil starter.



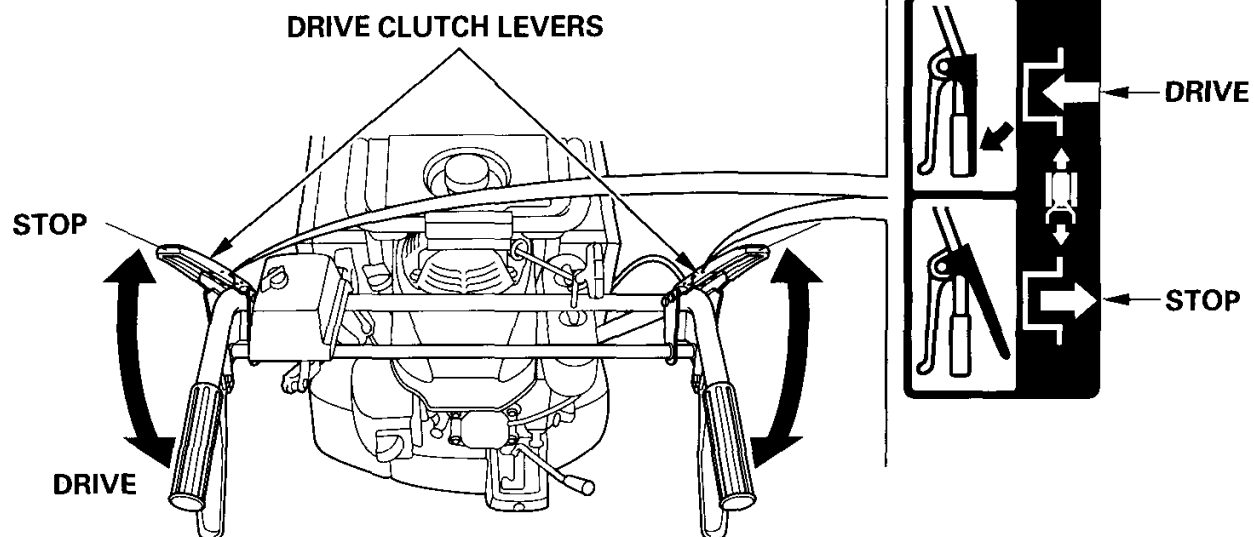
Gearshift lever

Use this lever to move the power carrier forward or backward. There are 2 forward gears, one reverse gear and a NEUTRAL position.



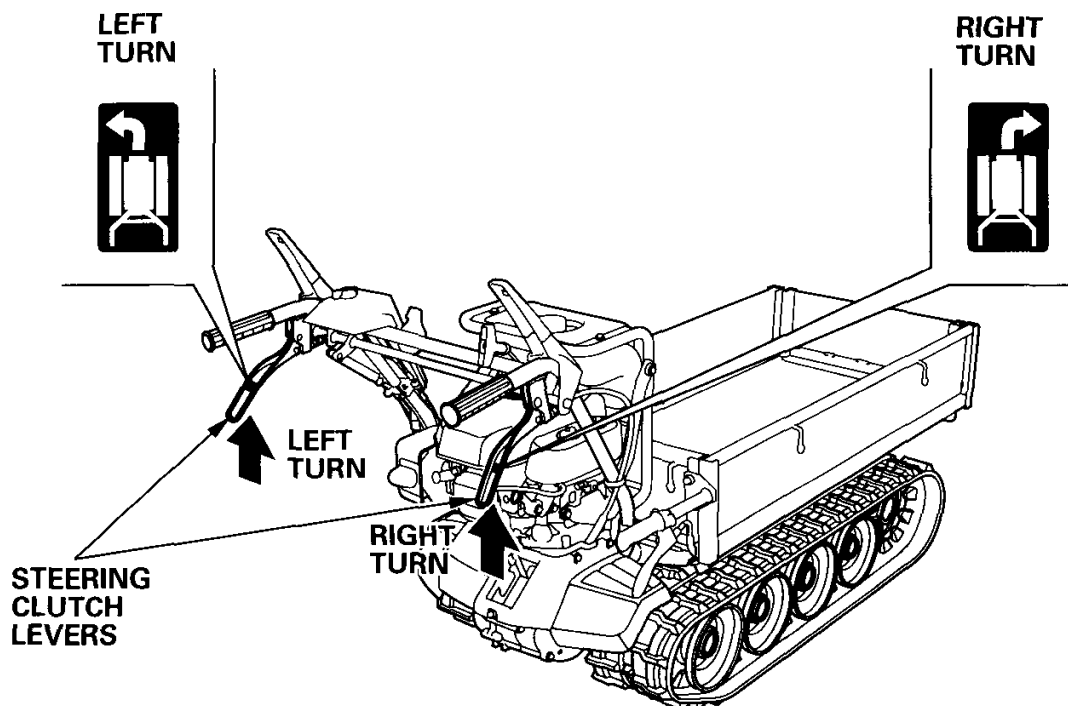
Drive clutch levers

When this lever is squeezed, the power carrier travels; When it is released, the clutch cuts out, the brake is actuated and the power carrier stops.



Steering clutch levers

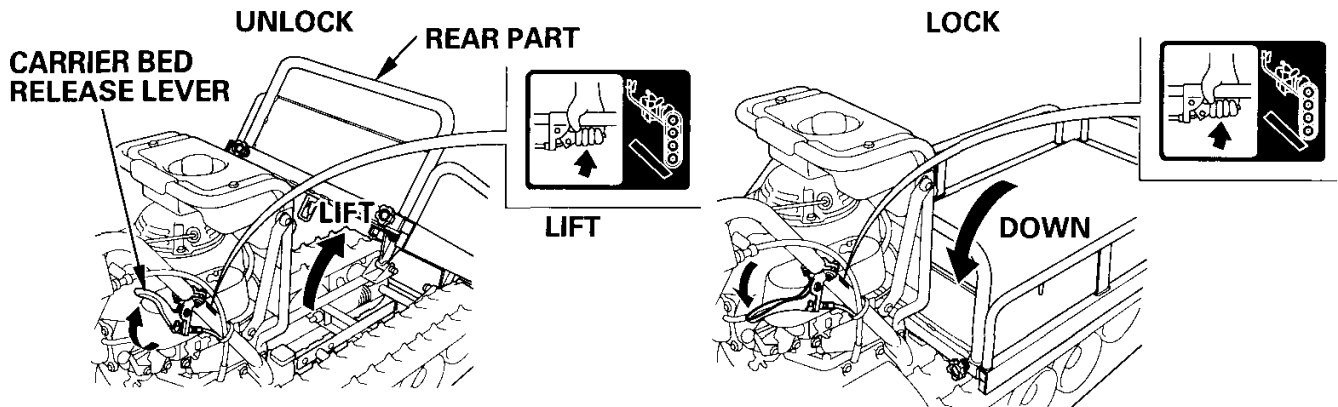
Use the steering clutch levers to steer the power carrier. Pull up the right lever to steer right. Pull up the left lever to steer left.



Carrier bed release lever

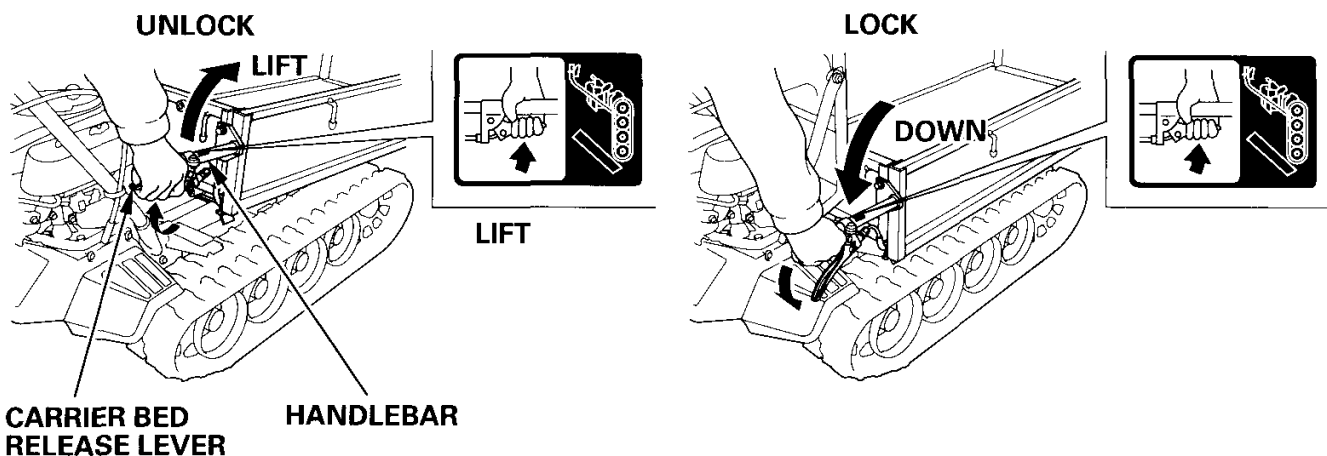
[CE1 type]

Pull the release lever to unlock the carrier bed when you wish to tilt the bed for dumping a load. With the carrier bed unlocked, tilt it by lifting the rear part. To lock the carrier bed again, push down firmly on the rear part.



[BE1 and U types]

Pull the release lever to unlock the carrier bed when you wish to tilt the bed for dumping a load. With the carrier bed unlocked, tilt it by lifting the handlebar. To lock the carrier bed again, push down firmly on the handlebar.



⚠ WARNING

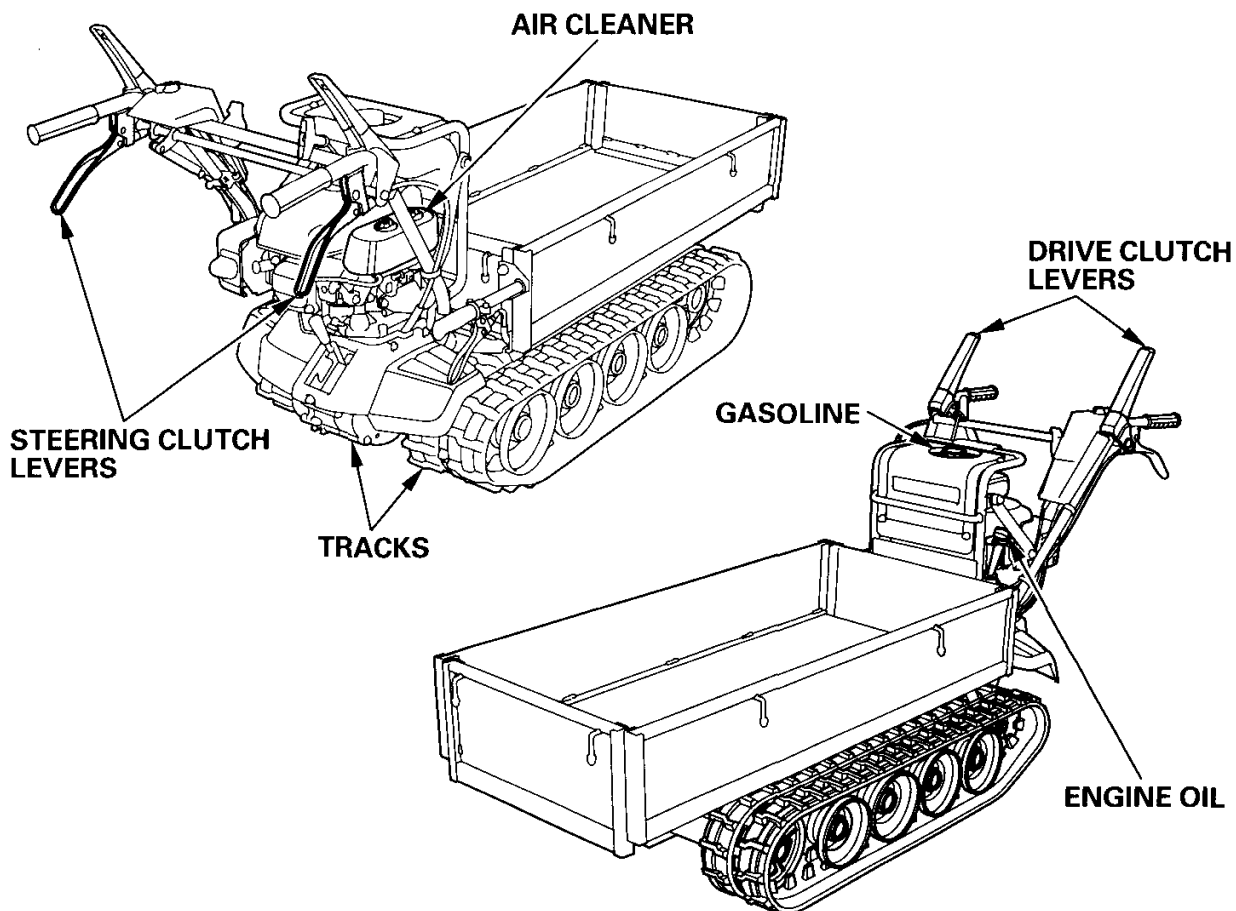
Before operating the power carrier check that the carrier bed is locked. If the carrier bed is not locked, it may tilt while going downhill and accidentally dump the load, which may cause personal injury and property or equipment damage.

5. PRE-OPERATION CHECK

Pre-operation checks

Pre-operation inspection and maintenance work should be conducted to assure proper operation and maximum service life. Do not neglect this work.

- Cleaning of parts..... Check that dirt and debris have not collected on the muffler, carburetor, control parts and tracks.
 - Tightening of parts Check for looseness and play.
 - Gasoline..... Check for insufficient or contaminated fuel.
 - Engine oil..... Check for low oil level or leakage.
 - Air cleaner..... Check for dirt.
 - Drive clutch lever Check its operation.
 - Steering clutch levers..... Check their operation.
 - Tracks..... Check for tautness, slack or damage.
- If any other problem or malfunction is detected, contact your authorized Honda dealer.



Fuel

Refill the tank until the level as specified if the fuel level is low.

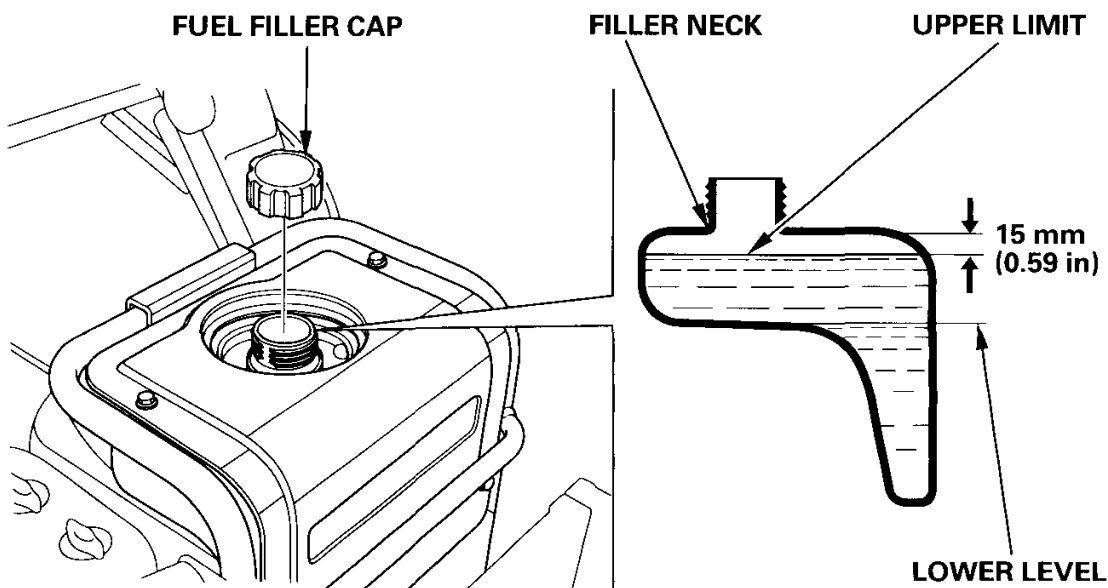
Do not fill the fuel tank completely. Fill tank to approximately 15 mm (0.59 in) below the filler neck of the fuel tank to allow for fuel expansion. It may be necessary to lower the fuel level depending on operating conditions.

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. After refueling, make sure the fuel filler 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 (clogged carburetor, stuck valve).

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 16).
- 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 61).

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.

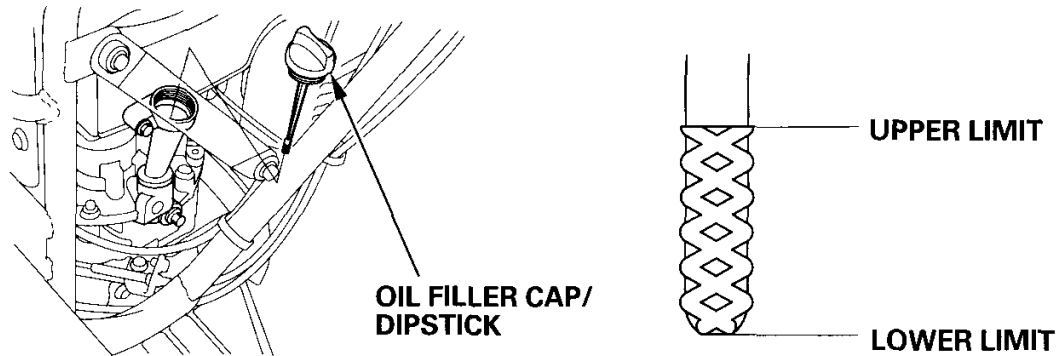
NOTE:

- 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.

Engine oil

The engine oil level must be checked with the power carrier parked on a level surface.

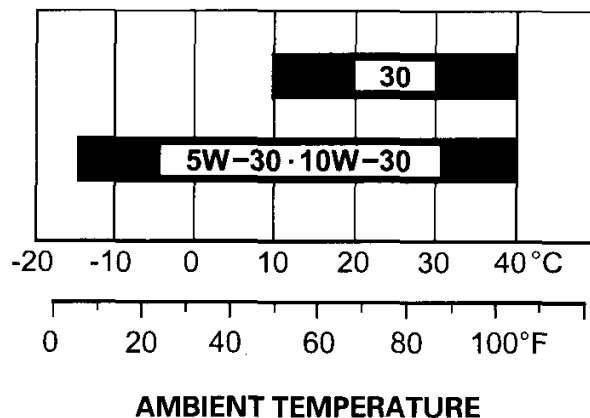
1. Remove the oil filler cap, and wipe the dipstick clean.
2. Insert the dipstick into the filler neck, but do not screw it in.
3. Remove the dipstick and check the oil level. If the oil level is near or below the end of the dipstick, fill to the upper limit mark with the recommended oil.



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).

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.



CAUTION:

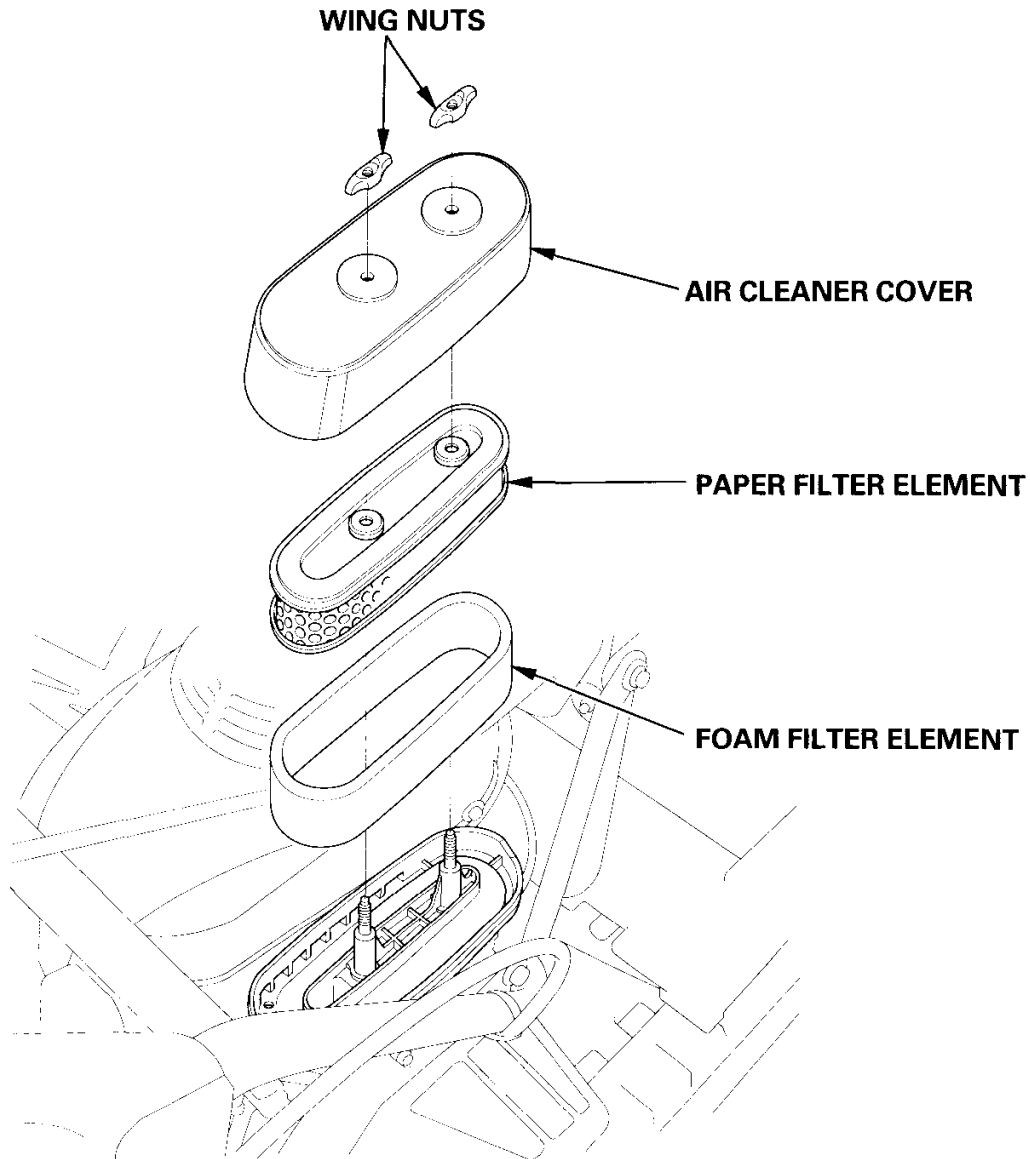
- Engine oil is a major factor affecting engine performance and service life. Non-detergent oil and 2-stroke engine oil are not recommended.
- Running the engine with insufficient oil can cause serious engine damage.

Air cleaner

1. Remove the two wing nuts to remove the air cleaner cover.
2. Remove and inspect the air filter elements.
If the elements are dirty, follow the cleaning procedure described on page 48.
3. Reinstall the air filter elements, cover and wing nuts. Securely tighten the wing nuts.

CAUTION:

Never run the engine without the air filter elements. Rapid engine wear will result from contaminants, such as dust and dirt, being drawn through the carburetor, into the engine.



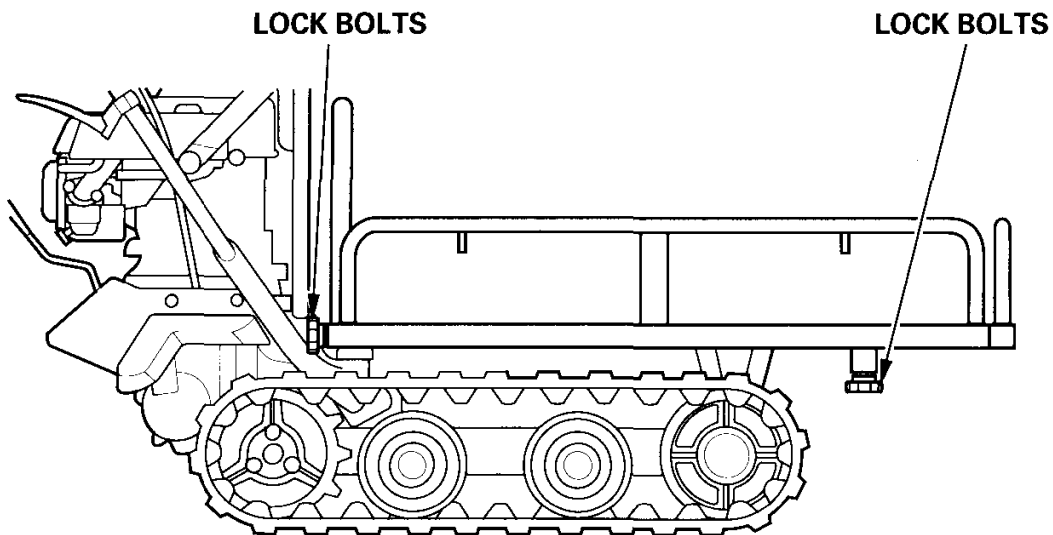
Carrier extension pipe lock bolts

Check the carrier extension pipe lock bolts and make sure they are not loose. If they are loose, tighten them securely by hand.

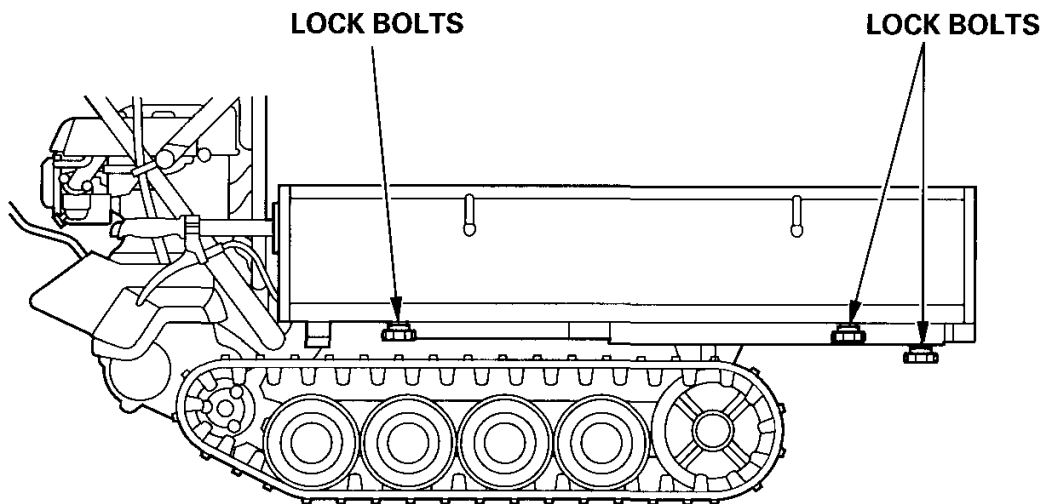
⚠ WARNING

If the lock bolts are loose, the carrier side plates may come off while a load is being transported, resulting in destruction of the load.

[CE1 type]



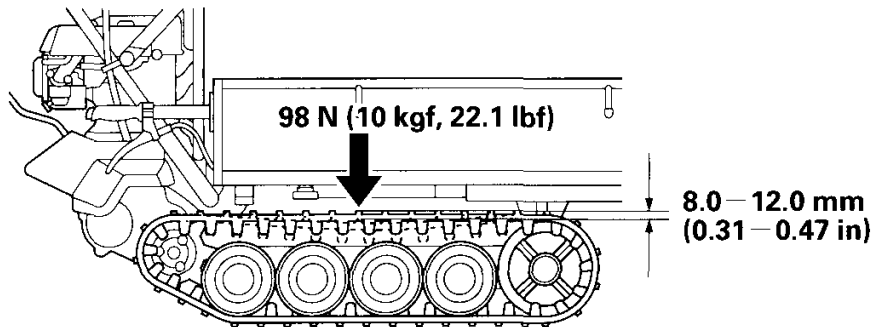
[BE1 and U types]



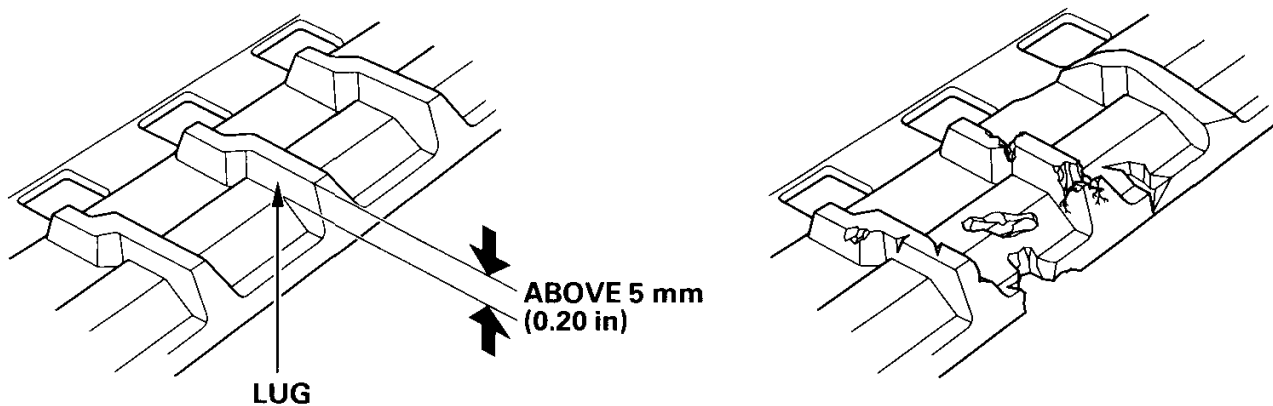
Tracks

If the tracks are not properly taut, they may slip off the wheels or their service life may be markedly reduced.

1. When a force <about 98 N (10 kgf, 22.1 lbf)> is applied to the middle of the tracks, check that the slackness is between:
8.0 – 12.0 mm (0.31 – 0.47 in)



2. If the tracks are not the correct slackness value, follow the adjusting procedure described on page 49.
3. Check the lug height onto the track.
Lug height: above 5 mm (0.20 in)
4. Check the tracks if they have excessive cracks, wear and tear.

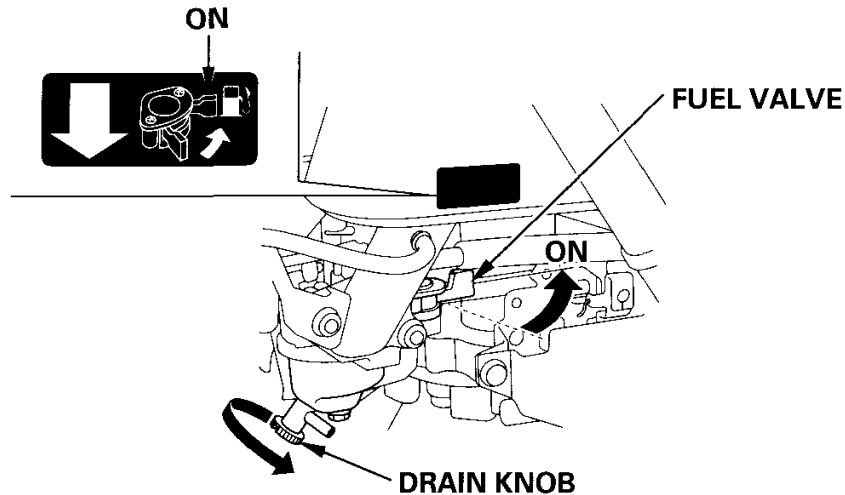


5. If they have excessive cracks, wear and tear, it is time to consult your authorized Honda dealer.

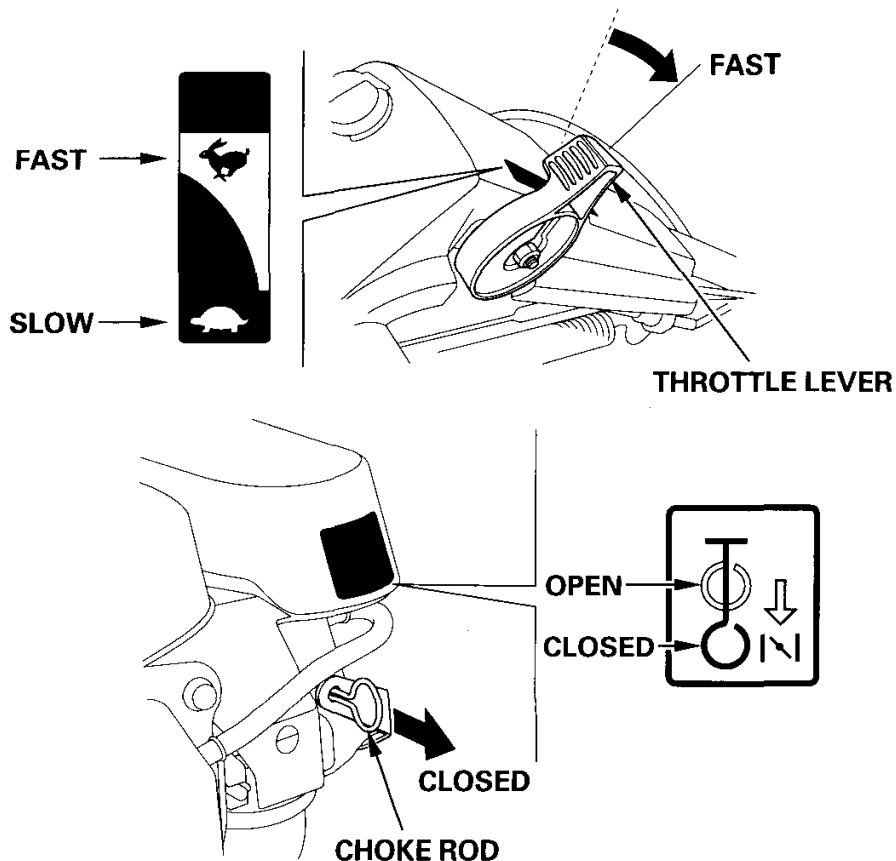
6. STARTING THE ENGINE

(Once you have familiarized yourself with the procedure for stopping the engine, before start the engine).

1. Set the fuel valve to the ON position. Check for tightness of drain knob.



2. When the engine is cold, move the throttle lever to the FAST position and move the choke rod to the CLOSED position.

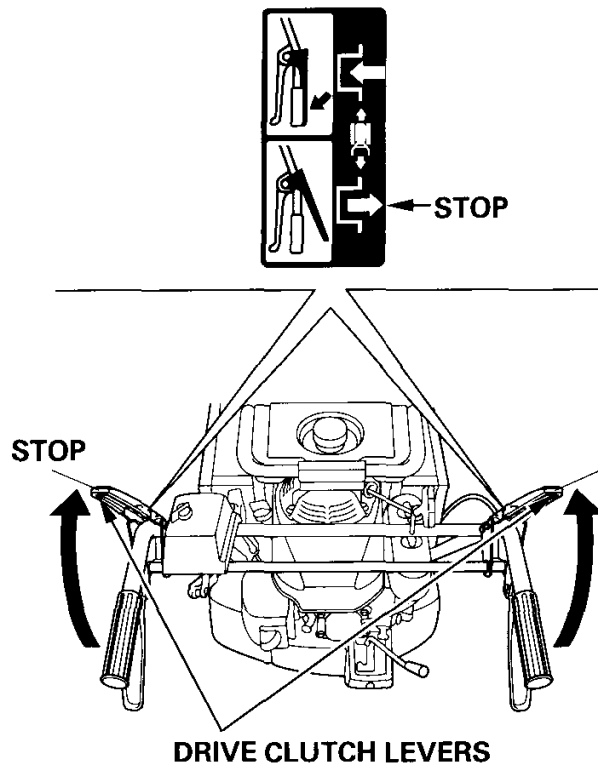


NOTE:

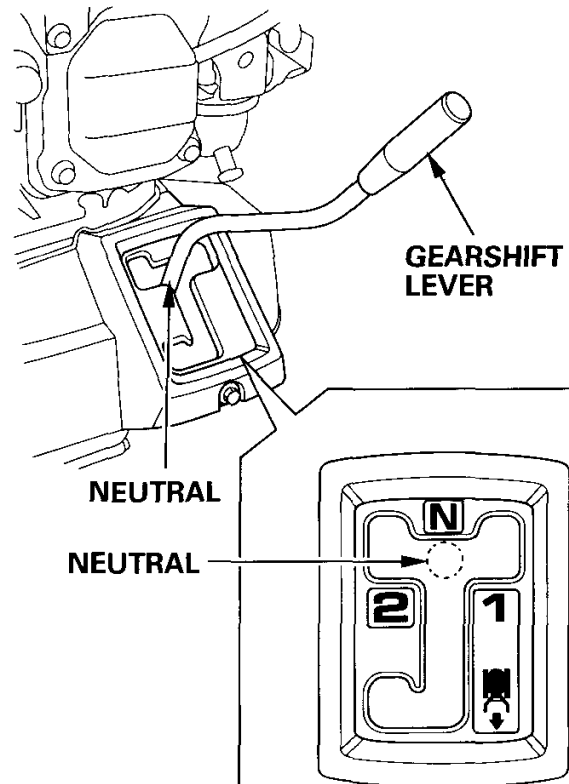
If restarting a warm engine, the choke will not be needed. Restart a warm engine with the throttle lever in the SLOW position and choke rod in the OPEN position.

3. Check that the drive clutch lever is at the STOP position and that the gearshift lever is at the NEUTRAL position.

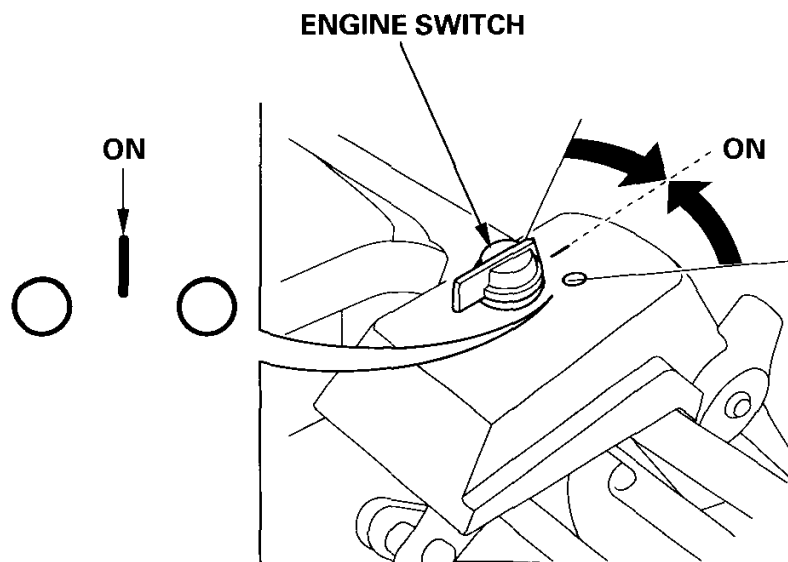
Drive clutch lever at STOP



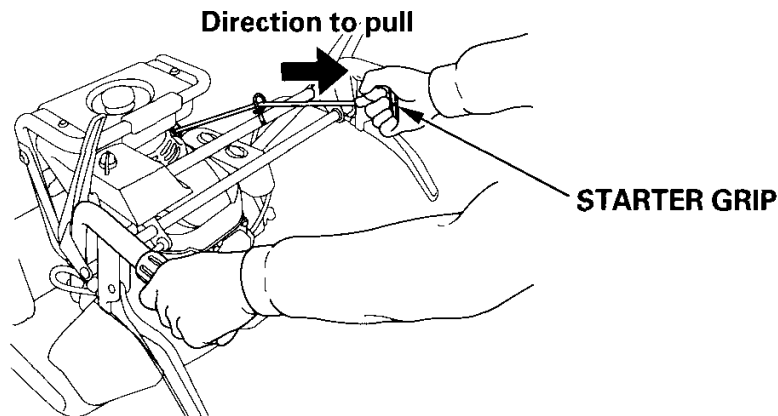
Gearshift lever at NEUTRAL



4. Turn the engine switch to the ON position.



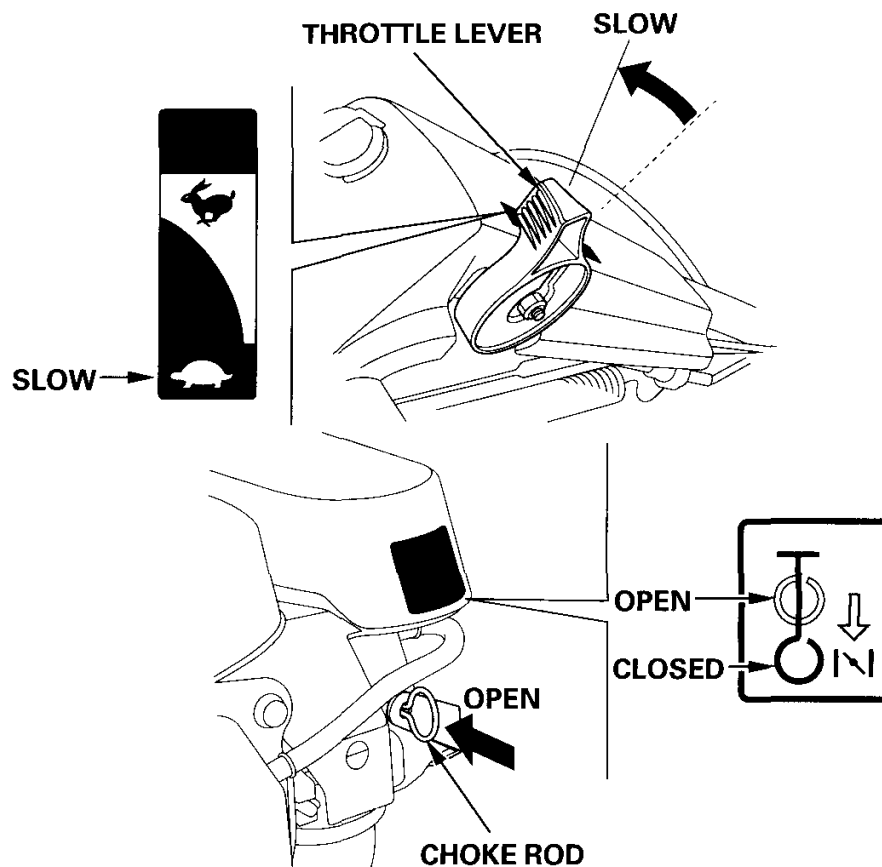
5. Pull the starter grip lightly until you feel resistance, then pull briskly in the direction of the arrow as shown below.



CAUTION:

- Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.
- Do not pull the starter grip while the engine is running, as that may damage the starter.

6. Let the engine warm up for several minutes. If the choke has been pulled to the CLOSED position, gradually move the choke rod to the OPEN position and move the throttle lever to the SLOW position as the engine warms up.



● 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 power carrier at altitudes above 1,500 meters (5,000 feet), have your authorized Honda 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:

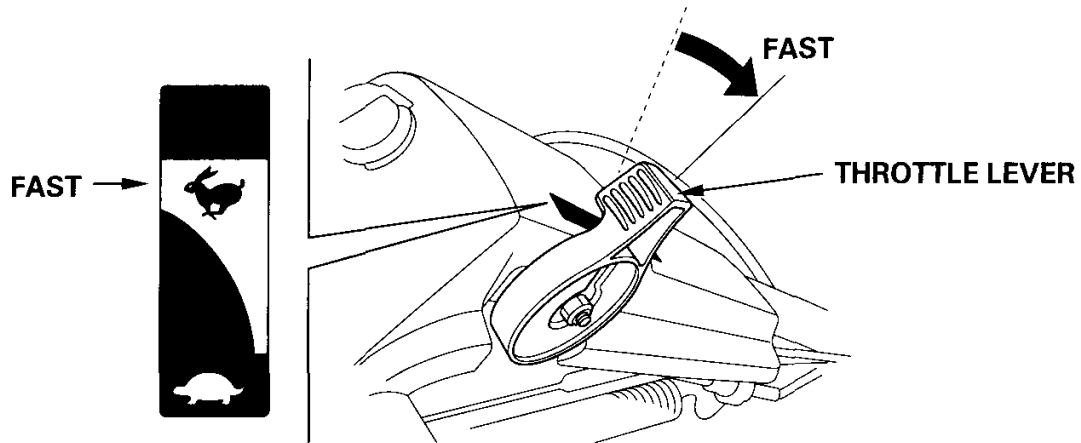
When the carburetor has been modified for high altitude operation, the air-fuel mixture will be too lean for low altitude use. Operation at altitudes below 1,500 meters (5,000 feet) with a modified carburetor may cause the engine to overheat and result in serious engine damage. For use at low altitudes,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

7. OPERATION

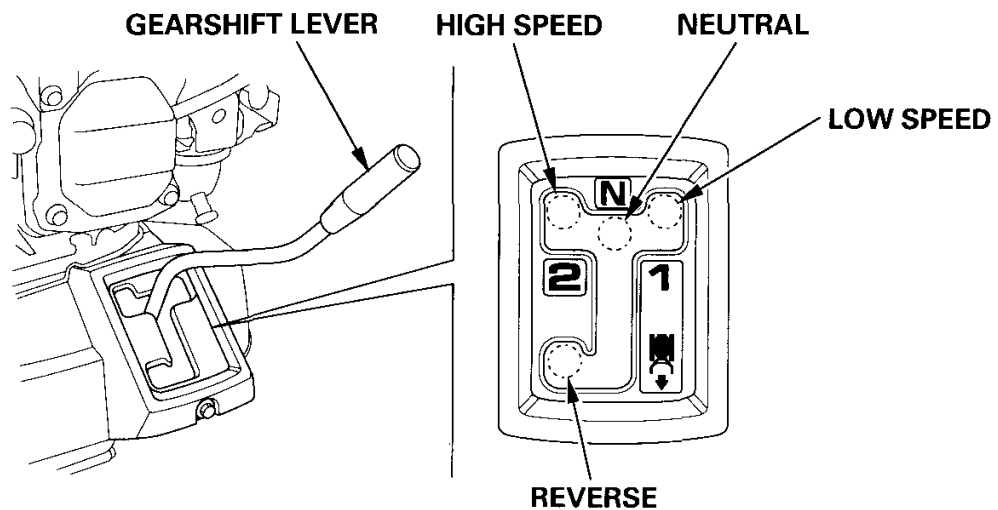
CAUTION:

Before starting work, check the operation of the brakes.

1. Start the engine as instructed on page 22 .
2. Move the throttle lever to the FAST position.



3. Move the gearshift lever to the desired position.



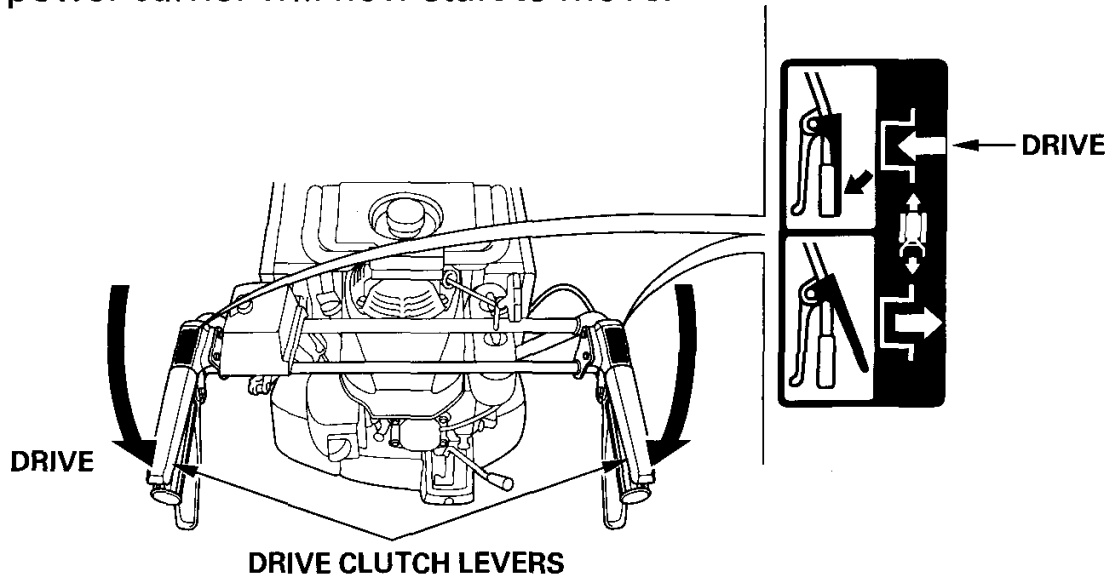
⚠ WARNING

- To avoid loss of control, descend steep slopes in LOW SPEED gear, using SLOW throttle position.
- Do not shift gears while the power carrier is moving.

CAUTION:

Always shift gears with the engine running and the drive clutch levers released.

4. Engage the drive clutch;
Squeeze the drive clutch lever promptly.
The power carrier will now start to move.



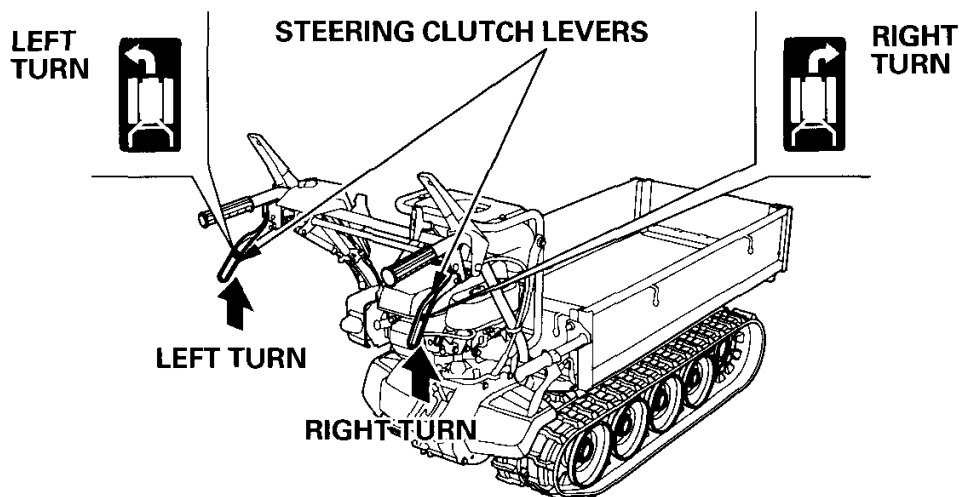
NOTE:

The engine may stall if the drive clutch lever is operated slowly.

⚠ WARNING

If the engine stalls on a slope, release the drive clutch leveres immediately to stop the power carrier and avoid loss of control.

5. Use the steering clutch levers to steer the power carrier. Pull up the right lever to steer right. Pull up the left lever to steer left.



⚠ WARNING

The turning action is abrupt. Be sure that loads are properly secured. Exercise special care when steering on a slope.

8. CARRYING LOADS

Load carrying safety

⚠ WARNING

To avoid accidents or overturning:

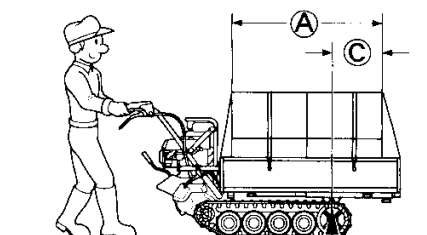
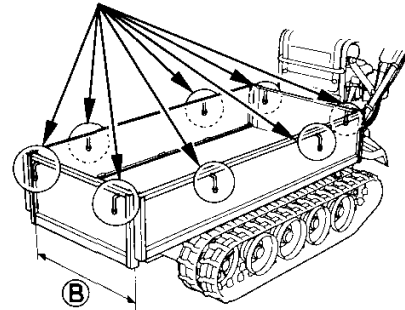
- Observe the load limits described on page 34 .
- Do not stack the load so that the power carrier becomes top-heavy and unstable.
- Carry only lightweight loads when the carrier side rails are extended.
- Do not allow the load to protrude from the power carrier or block visibility.
- Secure the load to the tie-down hooks with strong ropes or straps.
- Before operating the power carrier, check that the carrier bed is locked.
- When operating the power carrier on ground that is soft or uneven, reduce speed and exercise extra care.
- Use low gear and SLOW throttle position when descending steep slopes. Never descend slopes in reverse gear.
- Exercise extra care when starting, stopping, or changing the direction of the power carrier while operating it on slopes.
- Do not carry loads on upward slopes greater than 15° or downward slopes greater than 15°.
- When carrying a heavy load, give special consideration to the balance of the unit, making sure the load is even and not leaning. If the load is leaning, the unit may overturn during take-off, while stopping, or when travelling on a bad road, resulting in serious injury.

Recommended carrier for CEEN type

Inside dimensions of the carrier

Ⓐ	Length	Maximum 1,110 mm (43.7 in)
Ⓑ	Width	Maximum 780 mm (30.7 in)
Ⓒ	Overhang	Maximum 370 mm (14.6 in)
Ⓓ	Load carrying	Maximum 450 kg (992 lbs)

ROPE HOOKS



BRACKET

Tie-down hooks

CAUTION:

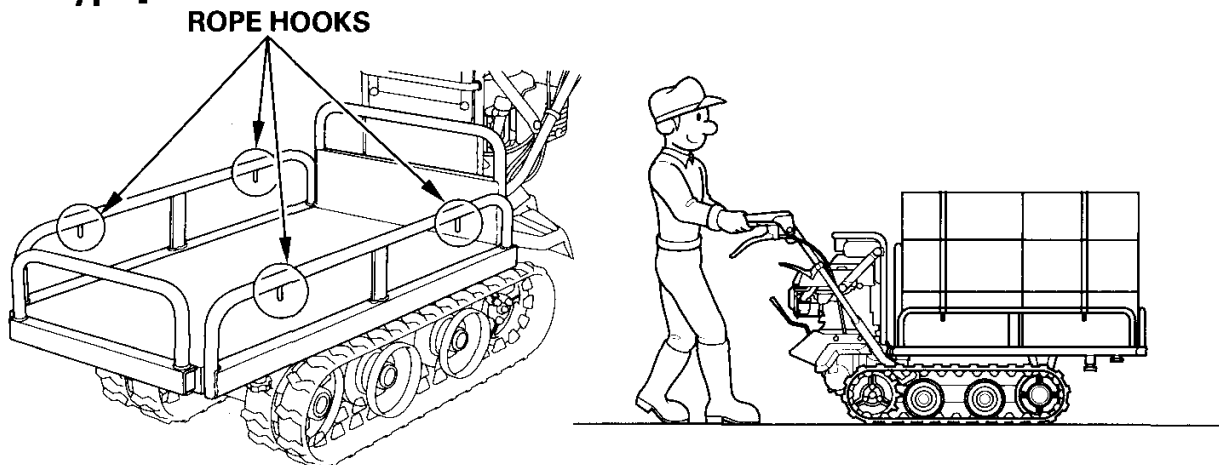
When loading objects onto the carrier, be sure to adhere to the regulated loading weight, proper loading methods and tilt angle. Failure to heed these regulations will not only exert an adverse effect on the engine and frame but will also pose extreme danger from the load collapsing or toppling over.

Secure the load in the carrier bed with strong ropes or straps attached to the tie-down hooks.

CAUTION:

Do not attach ropes or straps to locations other than the tie-down hooks.

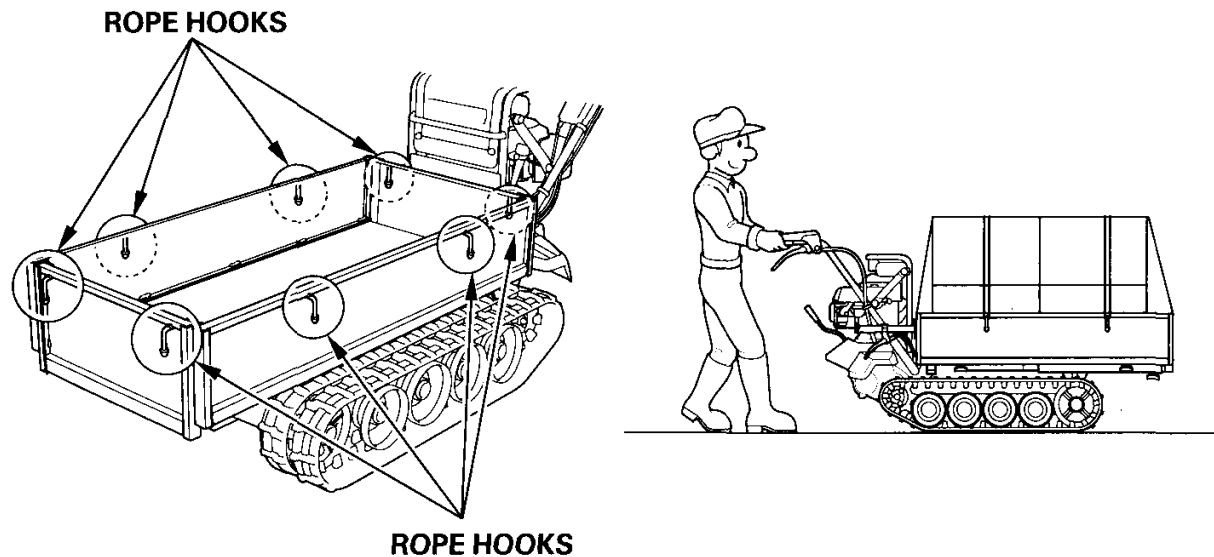
[CE1 type]



CAUTION:

When tying down a load with the carrier extended, make sure the width of the carrier conforms to the width of the load.

[BE1 and U types]



CAUTION:

When tying down a load with the carrier extended, make sure the width of the carrier conforms to the width of the load. Caution is especially required when a rope is tied to the rear plate of the carrier, since deformation of the rear plate may occur.

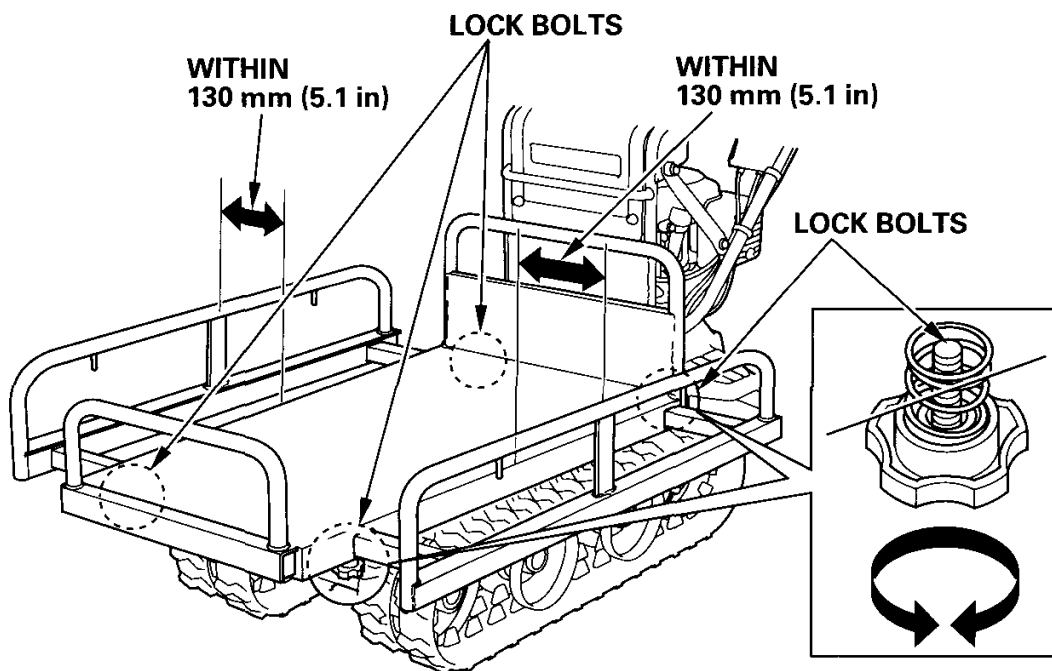
[CE1 type]

Using the guard pipe

The guard pipe can be expanded by 130 mm (5.1 in) to the left and right. Normally, however, it is used at the standard position. Use this pipe for loading bulky lightweight objects.

Expanding the guard pipe

- Loosen the 4 lock bolts at the left and right, pull out the guard pipe crosswise in accordance with the loaded objects. Then tighten up the lock bolts securely.
- When expanding the guard pipe, expand both at the left and right sides equally within 130 mm (5.1 in).



CAUTION:

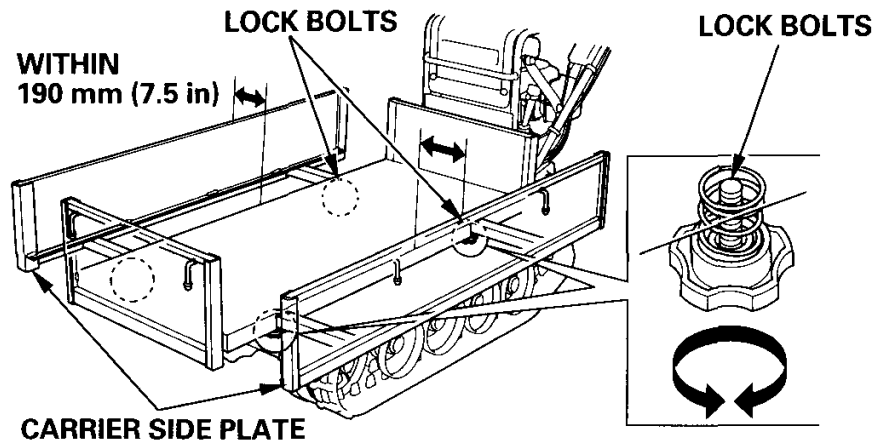
Load only lightweight objects on the carrier when the guard pipe is to be expanded for use.

[BE1 and U types]

Using the carrier side plate and carrier front plate

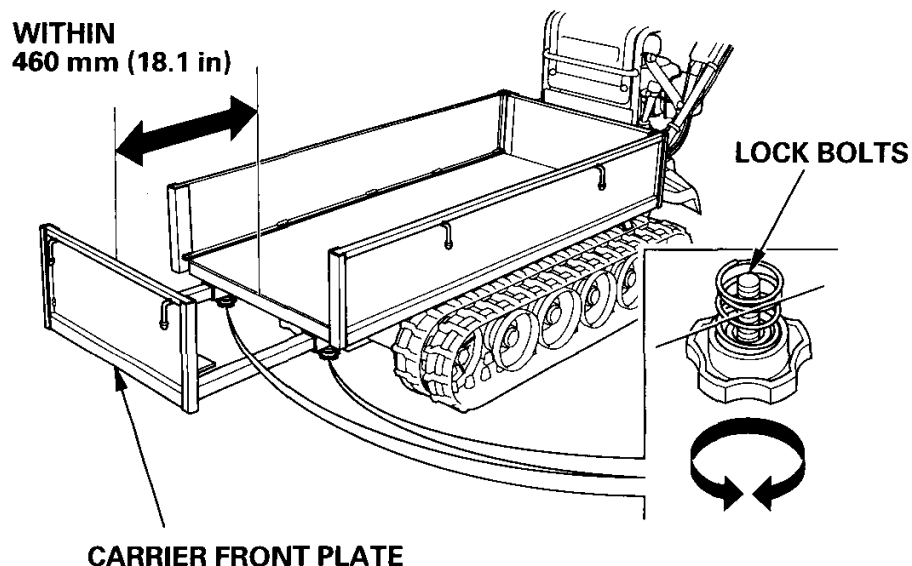
• Side plates

Loosen the 4 lock bolts on the left and right sides, and pull out the carrier side plates in a horizontal direction so that the left and right sides are even (within 190 mm) and the load is centered. After pulling out the side plates, tighten the lock bolts securely.



• Front plate

Loosen the 2 lock bolts and pull out the front plate to suit the length of the load. After pulling out the front plate, tighten the lock bolts securely.



Maximum extension:

Side plate: 190 mm each side

Front plate: 460 mm

CAUTION:

- If the unit is used with the plates extended beyond the above dimensions, the carrier plates may come off, resulting in destruction of the load.
- Use of the unit with the side plates extended and the front plate pulled out is limited to light loads transported over flat terrain.

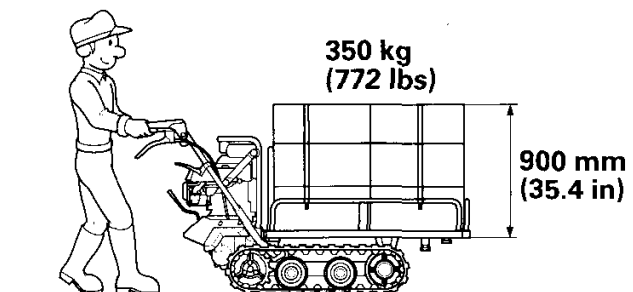
Load carrying capacity

▲WARNING

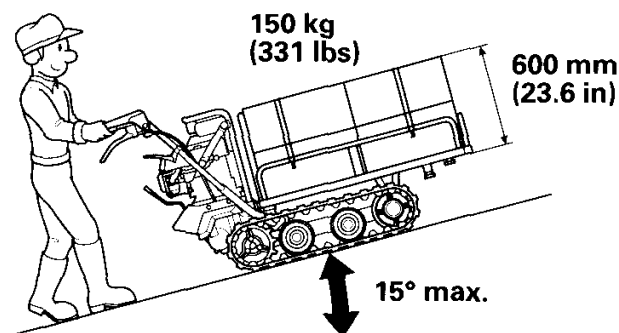
To avoid personal injury and property or equipment damage due to overturning, do not carry loads on upward slopes greater than 15° or downward slopes greater than 15°. Observe the following safe loading and operating limits:

[CE1 type]

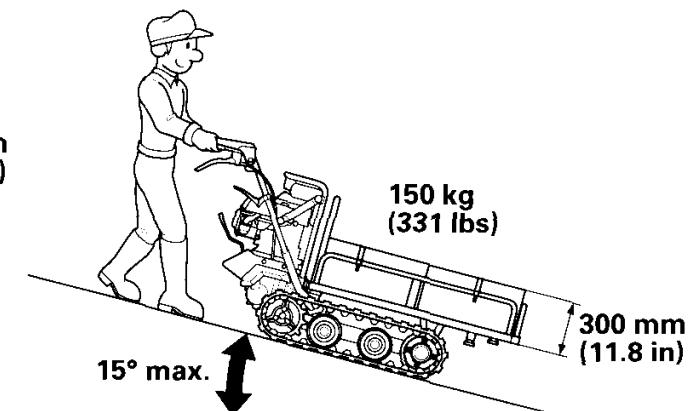
- For operation on level ground —
Maximum load:
350 kg (772 lbs)
Maximum load height:
900 mm (35.4 in)
- For operation on slopes —
Maximum load:
150 kg (331 lbs)
Maximum load height:
600 mm (23.6 in) upward
300 mm (11.8 in) downward
Maximum slope:
15° upward/15° downward



Slope with gradient of under 15°

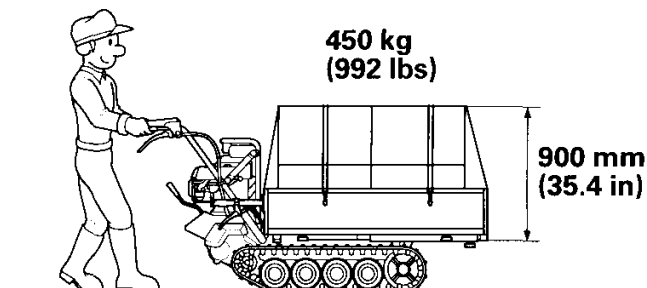


Slope with gradient of under 15°



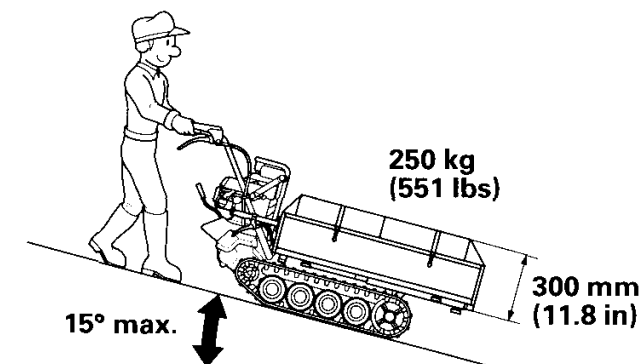
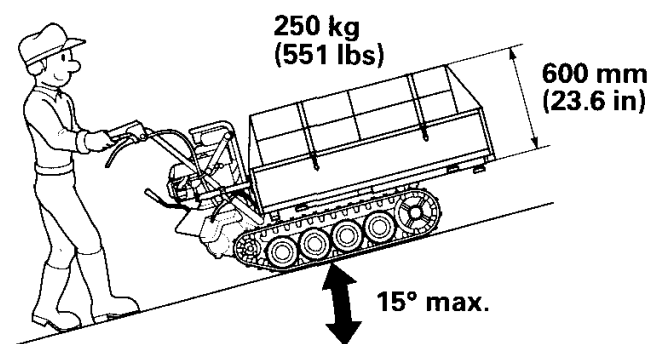
[BE1 and U types]

- For operation on level ground —
Maximum load:
450 kg (992 lbs)
Maximum load height:
900 mm (35.4 in)
- For operation on slopes —
Maximum load:
250 kg (551 lbs)
Maximum load height:
600 mm (23.6 in) upward
300 mm (11.8 in) downward
Maximum slope:
15° upward/15° downward



Slope with gradient of under 15°

Slope with gradient of under 15°



Using the power carrier on slopes

Driving:

1. Always drive the power carrier in first gear.
2. If the ground is unstable, reduce the speed and tread carefully when proceeding with the work at hand.
3. When going downhill, reduce the engine speed and use the engine brake.
4. Special care is needed for advancing and stopping the power carrier on slopes.
5. Avoid changing gear and making U-turns on steep slopes.

Loading:

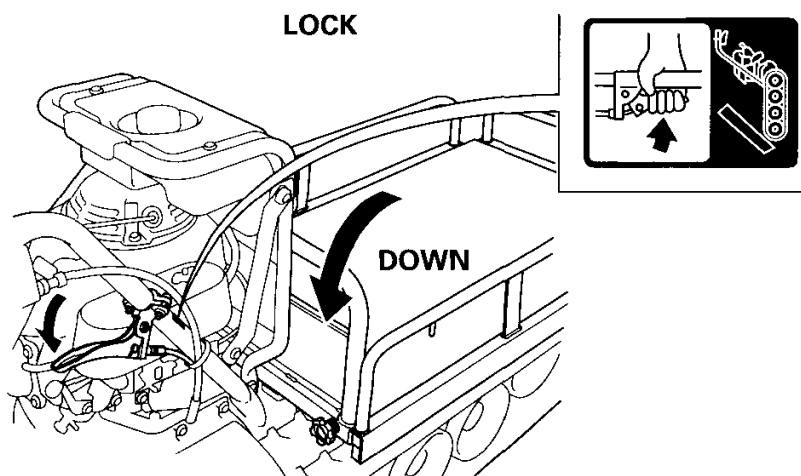
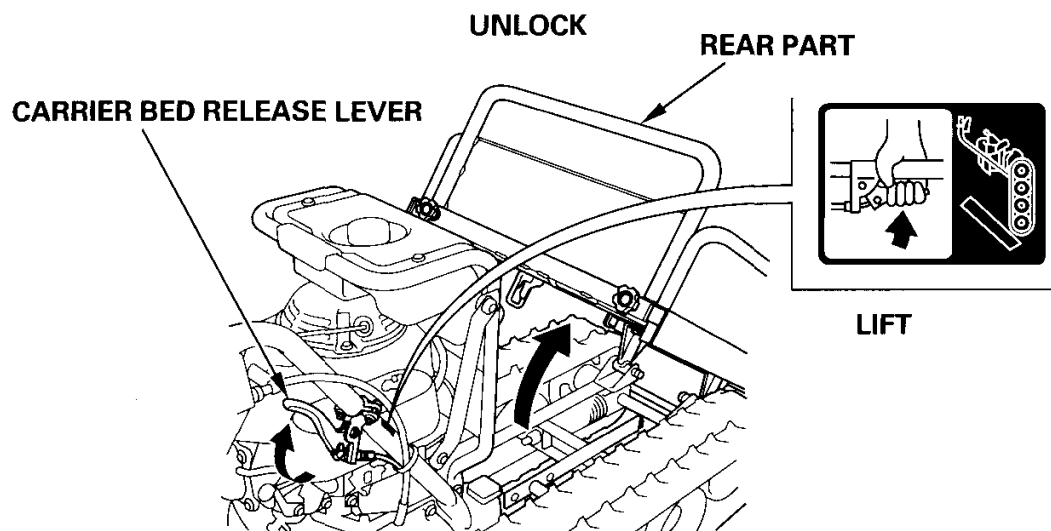
1. A load will be less stable on a slope and so it should be secured with rope.
2. The power carrier may be less stable depending on the condition of the road surface. In such cases, keep the load to the minimum.
3. Visibility in the forward direction is impaired on slopes and so keep the height of the load to minimum.

Dumping loads

Dump loads with the power carrier stopped and the drive clutch levers released.

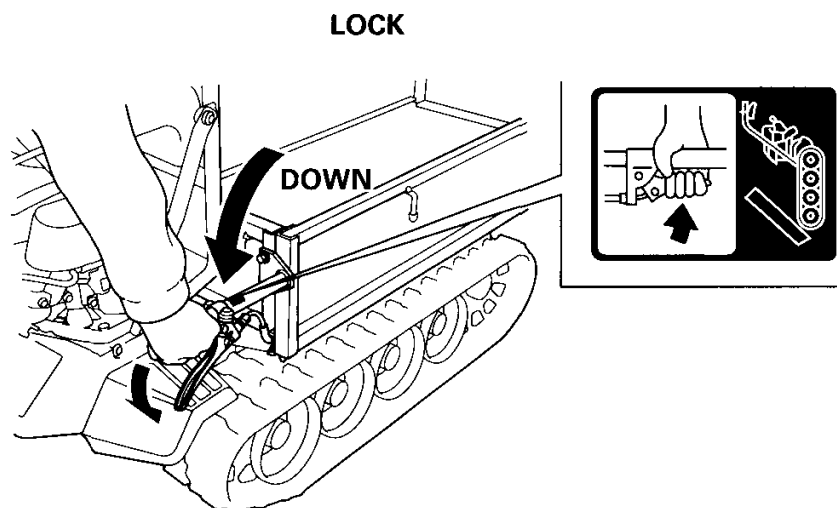
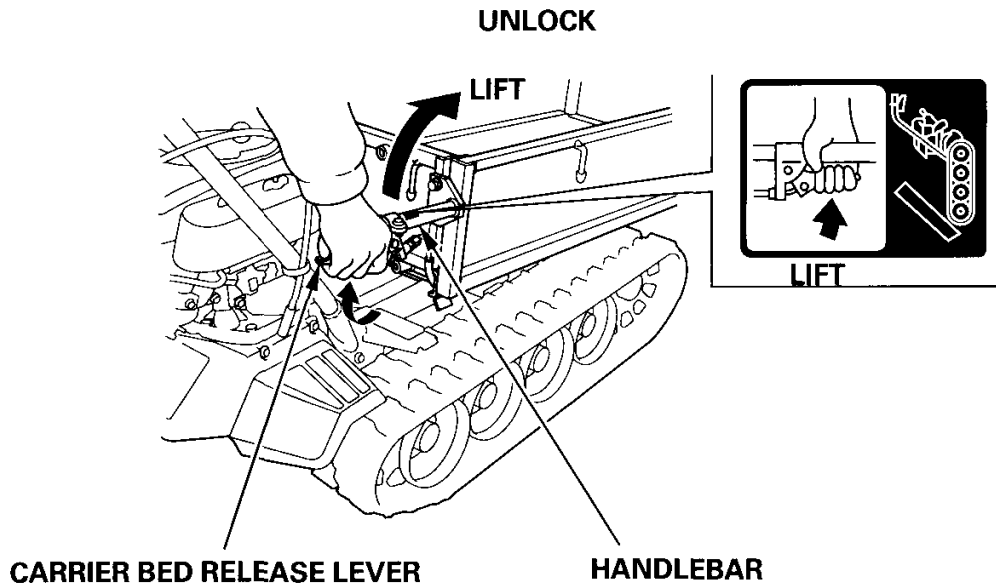
[CE1 type]

1. Pull the carrier bed release lever, and tilt the carrier bed by lifting the rear part.
2. To return the rear part to its original position, lower the carrier as it is, push down forcefully on the rear part and lock it into position.



[BE1 and U types]

1. Pull the carrier bed release lever, and tilt the carrier bed by lifting the handlebar.
2. After dumping the load, push down firmly on the handlebar to lock the carrier bed in the normal position.



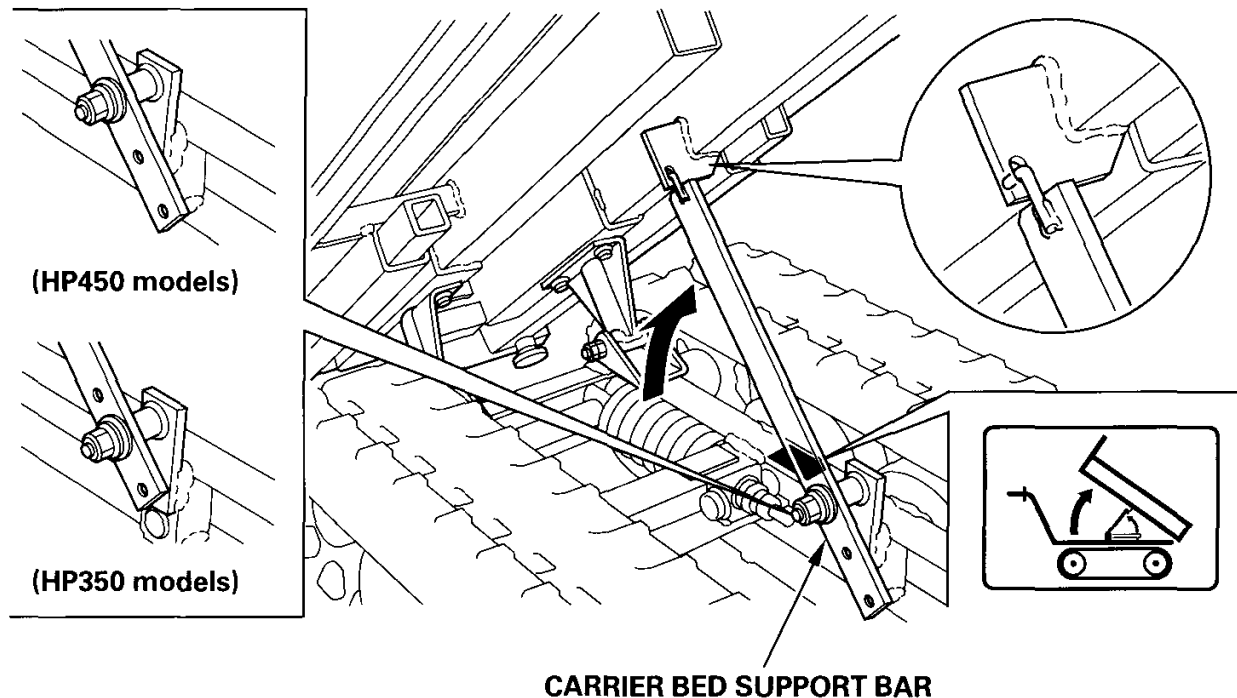
⚠ WARNING

Before operating the power carrier check that the carrier bed is locked. If the carrier bed is not locked, it may tilt while going downhill and accidentally dump the load, which may cause personal injury and property or equipment damage.

Carrier bed support bar

For servicing the power carrier, lift the carrier bed and keep it tilted by setting the carrier bed support bar.

Installing hole position



▲WARNING

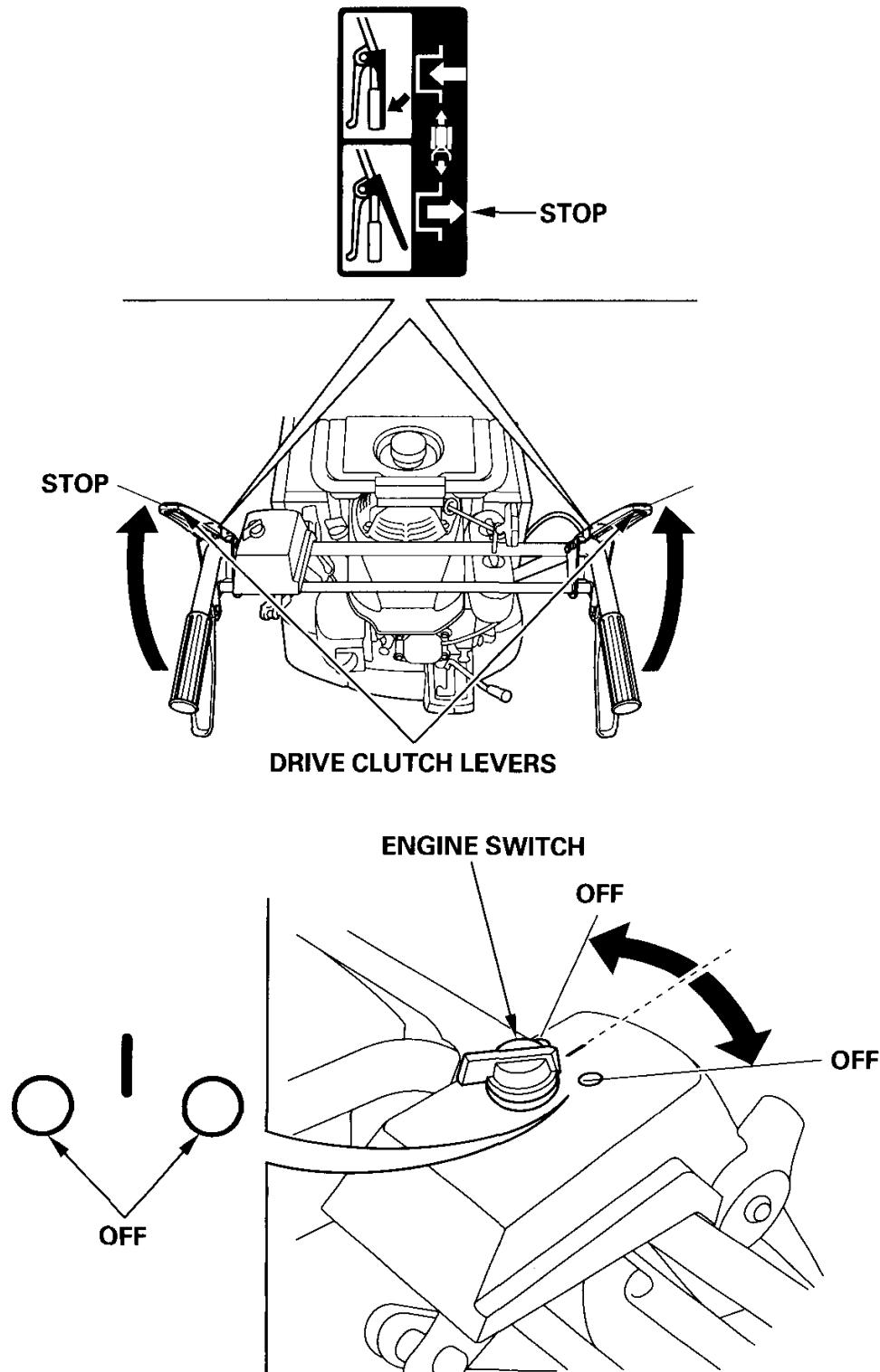
Before servicing the power carrier, make sure that the carrier bed is securely supported. If the carrier bed is not securely supported, it may fall down and cause personal injury or equipment damage.

9. STOPPING THE ENGINE

- In an emergency ;

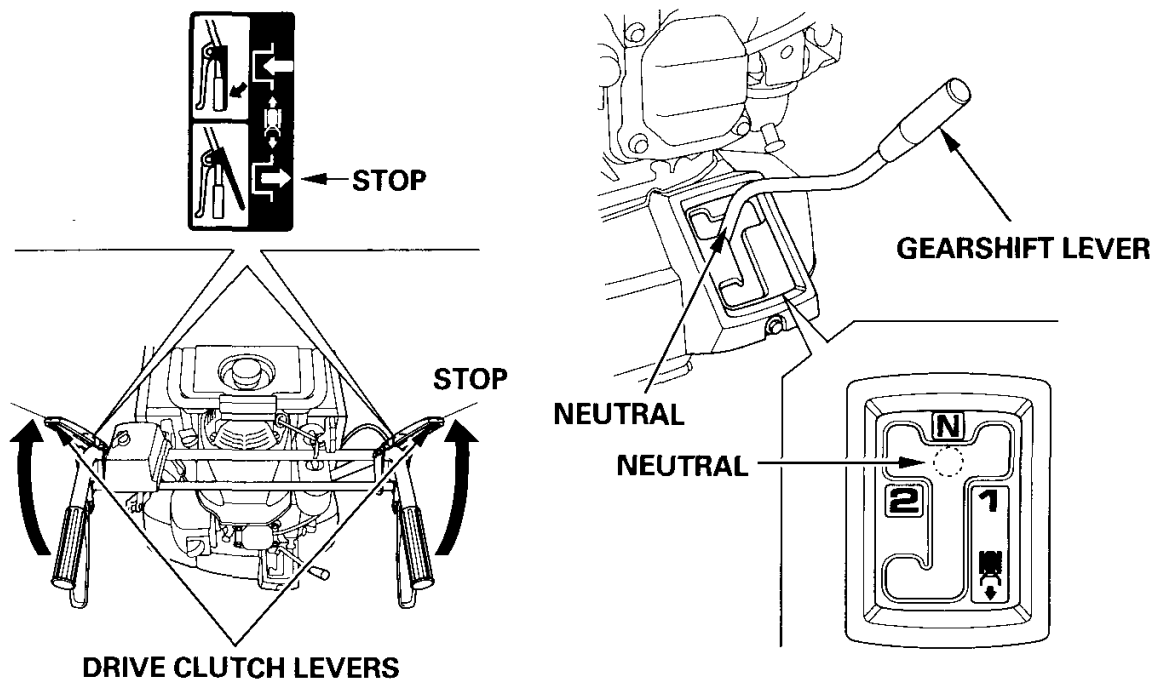
Release the drive clutch lever to the STOP position and the power carrier stops.

Turn the engine switch to either OFF position.

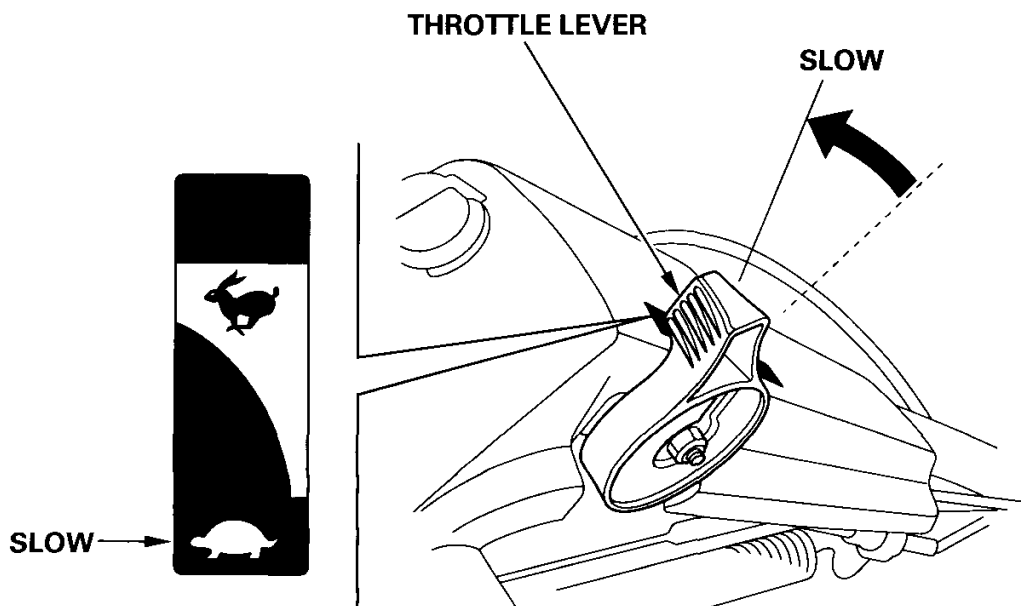


- **In normal use;**

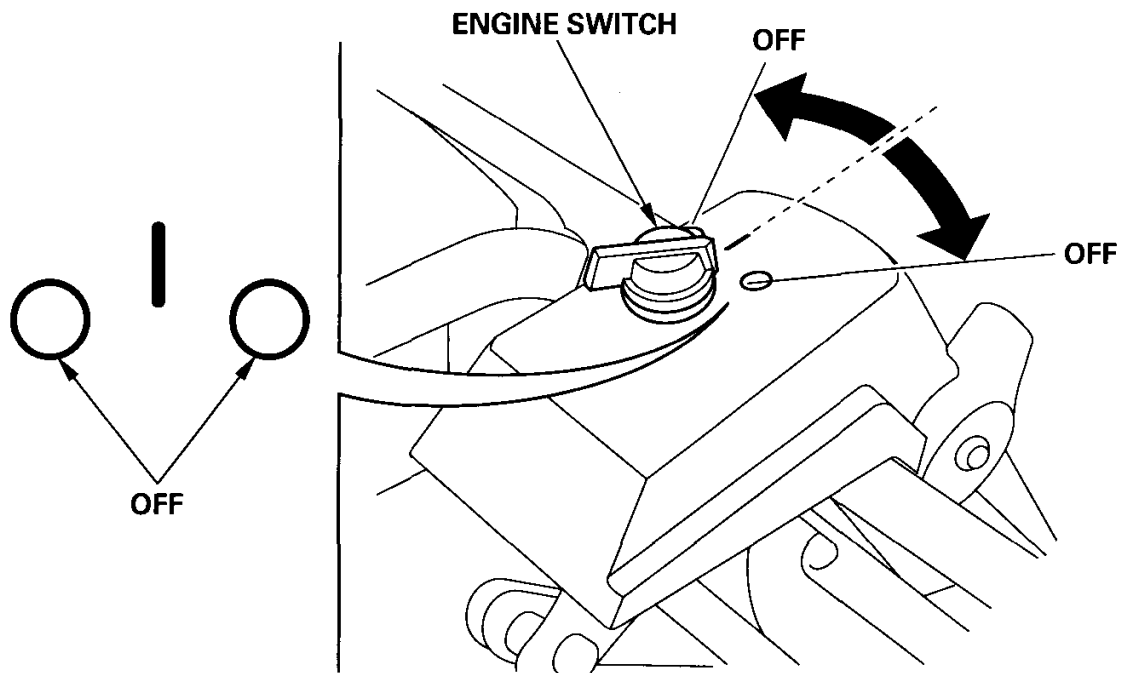
1. Release the drive clutch lever to the **STOP** position and set the gearshift lever to the **NEUTRAL** position.



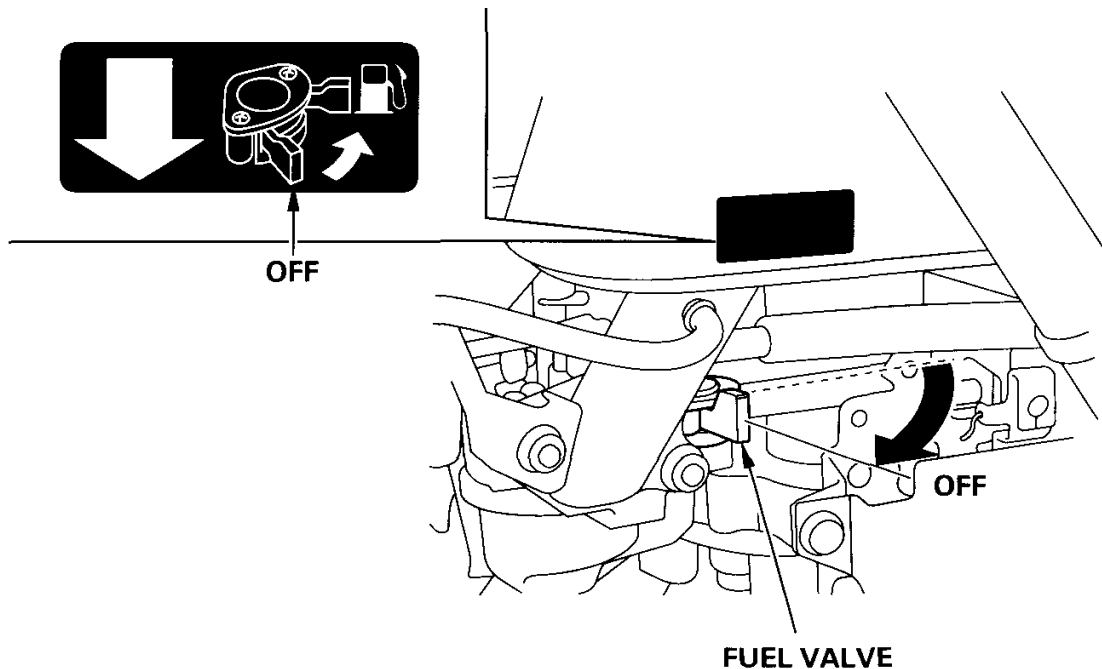
2. Move the throttle lever to the **SLOW** position.



3. Turn the engine switch to either OFF position.



4. Turn the fuel valve to the OFF position.



10. MAINTENANCE

Periodic maintenance and adjustment is necessary to keep the power carrier in good operating condition. Service and inspect according to the maintenance schedule.

⚠ WARNING

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

CAUTION:

Use genuine Honda parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the engine.

Maintenance schedule

Your power carrier should be serviced regularly to assure maximum service life.

REGULAR SERVICE PERIOD (3) Perform at every indicated month or operating hour interval, whichever comes first.		Each use	First month or 20 hrs	Every 3 months or 50 hrs	Every 6 months or 100 hrs	Every year or 200 hrs
ITEM						
Engine oil	Check level	○				
	Change		○		○	
Air cleaner	Check	○				
	Clean			○ (1)		
	Replace					○ (*)
Tracks	Check	○				
	Adjust		○			○
Drive clutch cable	Check-adjust		○		○	
Steering clutch cable	Check-adjust		○		○	
Brake cable	Check-adjust		○		○	
Spark plug	Check-adjust				○	
	Replace					○
Spark arrester (Applicable type)	Clean				○	
Carrier bed release cable	Check-adjust				○	
Throttle control cable	Check-adjust					○ (2)
Brake shoe	Check				○	
	Change					○ (2)
Transmission oil	Check					○
Grease application	Check					○
Idle speed	Check-adjust					○ (2)
Valve clearance	Check-adjust					○ (2)
Combustion chamber	Clean	After every 250 hrs (2)				
Fuel tank and filter	Clean					○ (2)
Fuel tube	Check	Every 2 years (Replace if necessary) (2)				

(*) Replace paper element type only.

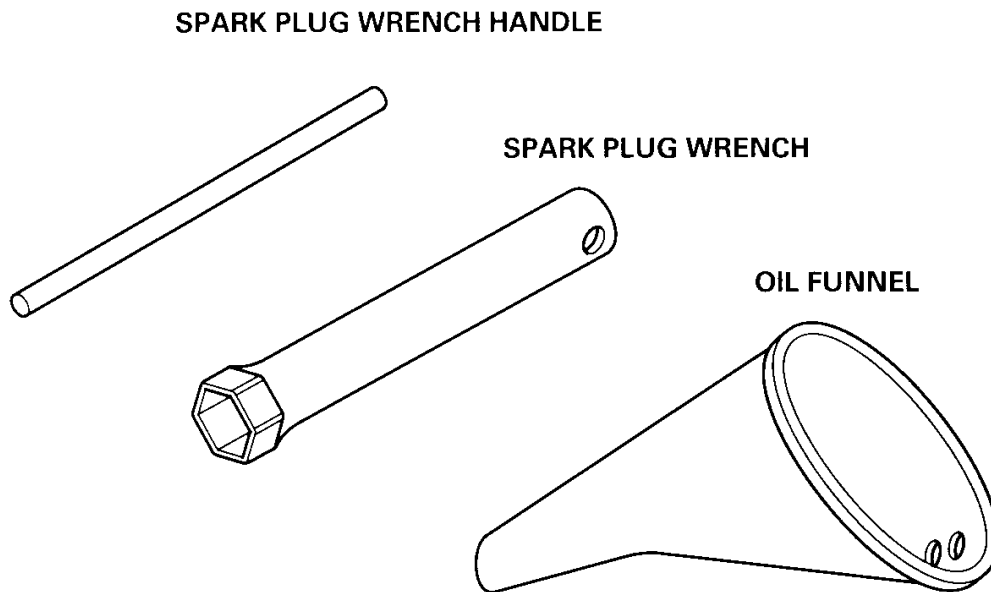
(1) Service more frequently when used in dusty areas.

(2) 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.

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

Tools

The tools supplied with the carrier are necessary for performing some periodic maintenance, simple adjustments and repairs. Always keep the tool kit with the carrier.



Engine oil change

NOTE:

Drain the oil while the engine is still warm to assure rapid and complete draining.

Dirty engine oil markedly shortens the service life of the sliding and rotating parts. Adhere strictly to the change period and oil capacity.

Changing the oil

1. Remove the engine oil filler cap and loosen the oil drain bolt.
2. Set the oil funnel as shown, remove the oil drain bolt and drain the oil into a suitable container.
3. Once the oil has been drained, tighten the washer and oil drain bolt securely.
4. Fill with new recommended engine oil (see page 18) until it reaches the upper limit on the filler cap/dipstick.
5. After replenishment, tighten the cap securely.

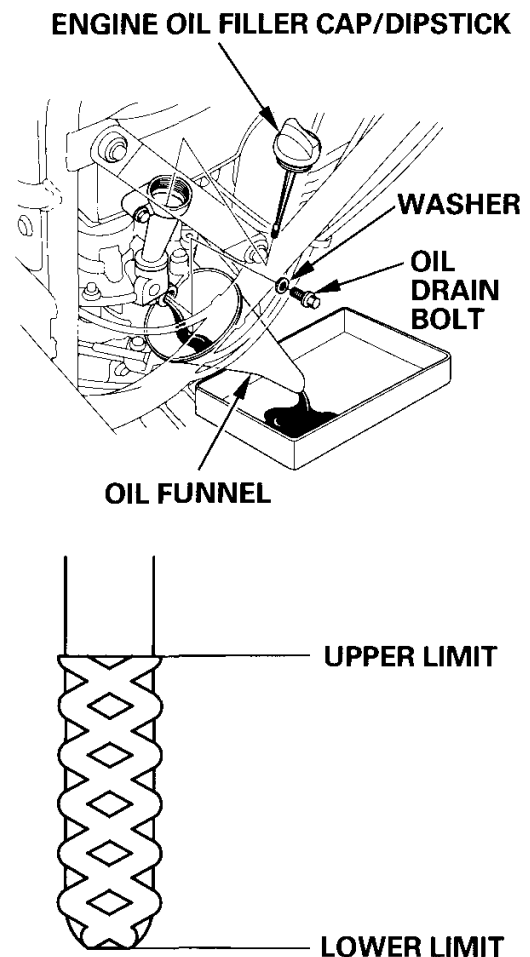
Oil capacity:

0.65 ℓ (0.69 US qt , 0.57 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.



Spark plug service

Recommended spark plug:

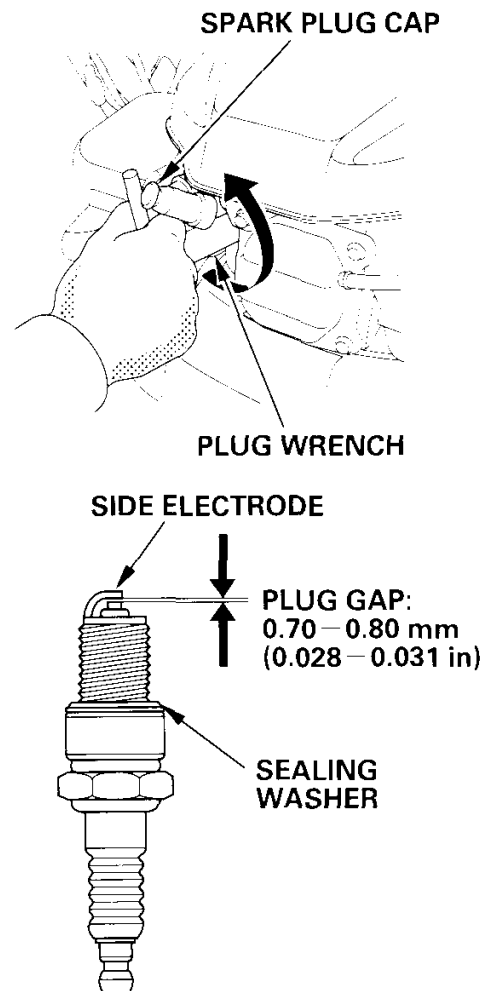
BPR4ES (NGK),
W14EPR-U (DENSO)

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

⚠WARNING

The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot.

1. Remove the spark plug cap.
2. Clean any dirt from around the spark plug base.
3. Use a spark plug wrench to remove the spark plug.
4. Visually inspect the spark plug. Discard it if there is apparent wear or if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.
5. Measure the plug gap with a feeler gauge.
Correct as necessary by carefully bending the side electrode.
The gap should be:
0.70–0.80 mm (0.028–0.031 in)



CAUTION:

- The spark plug must be securely tightened. An improperly tightened spark plug can become very hot and may damage the engine.
- Use only the recommended spark plug or equivalent. Spark plugs which have an improper heat range may cause engine damage.

Servicing the air cleaner

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 power carrier in extremely dusty areas. Clean once a day or every 10 hours when the power carrier is used in a dusty environment.

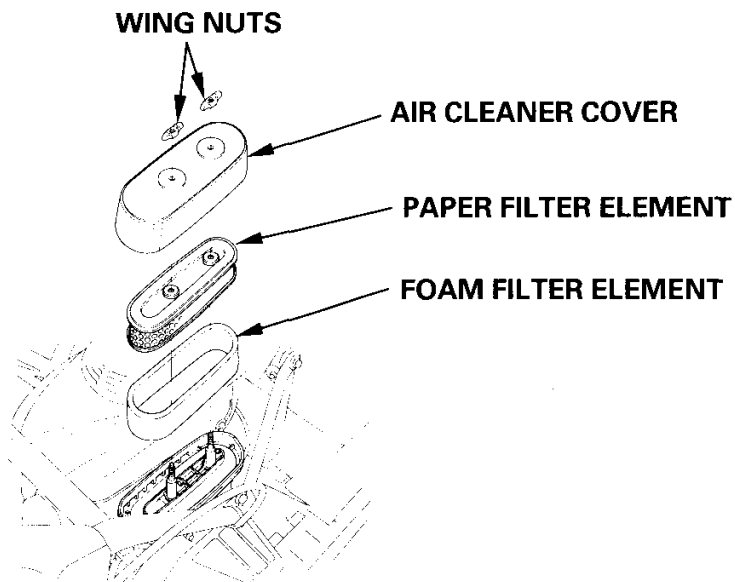
⚠ WARNING

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

CAUTION:

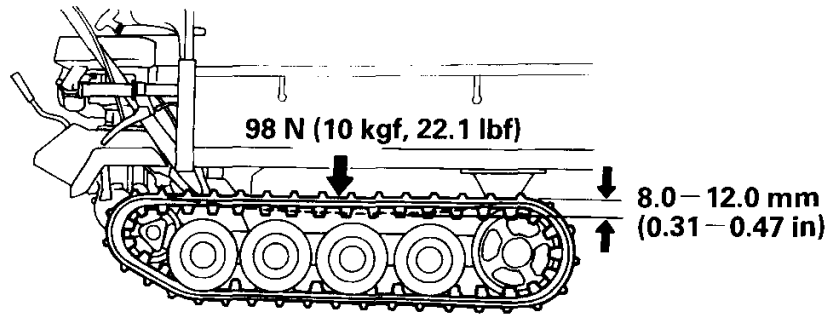
Never run the engine without the air filter elements. Rapid engine wear will result from contaminants, such as dust and dirt, being drawn through the carburetor, into the engine.

1. Remove the wing nuts and the air cleaner cover. Remove the filter elements and separate them. Carefully check both filter elements for holes or tears and replace if damaged.
2. Foam filter 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 filter 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.



Adjusting the track tautness

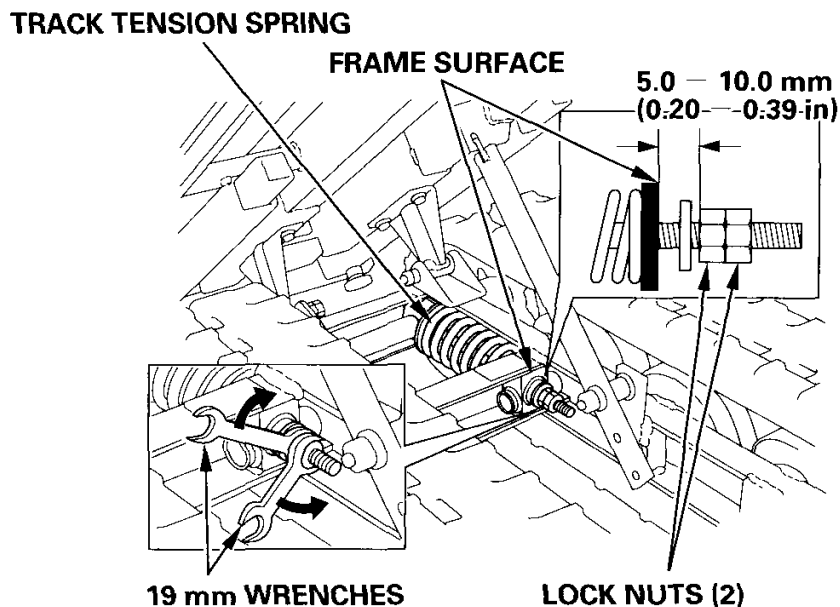
1. When a force <about 98 N (10 kgf, 22.1 lbf)> is applied to the middle of the tracks, check that the slackness is between:
8.0–12.0 mm (0.31–0.47 in)



2. Tip up the carrier.
Loosen the two lock nuts until there is space between the nuts and the frame.
3. Tighten the inner lock nut by hand until clearance between the lock nut and frame is:
5.0–10.0 mm (0.20–0.39 in)
4. Hold the inner lock nut and tighten the other lock nut against it securely.

NOTE:

Use the two 19 mm wrenches furnished with the power carrier as illustrated.



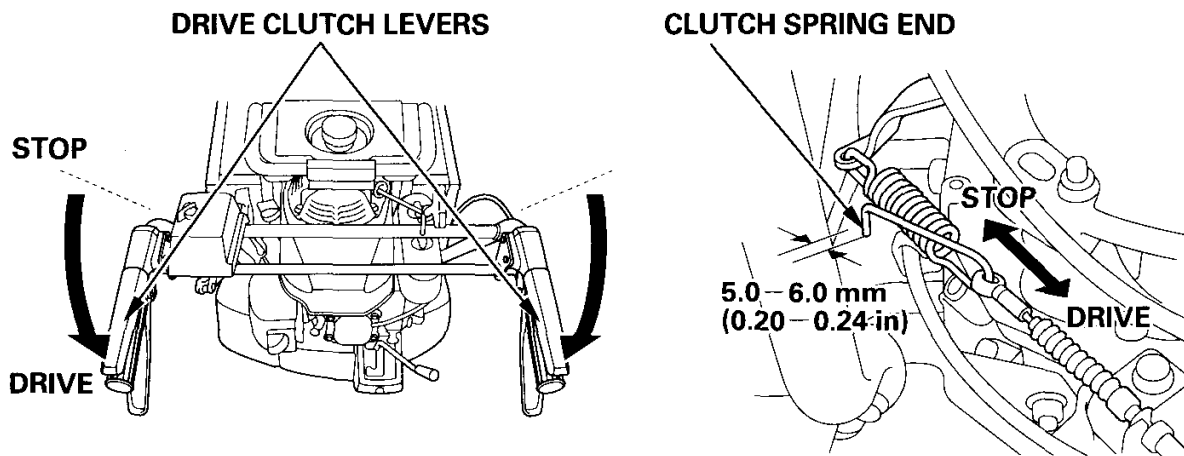
Adjusting the drive clutch cable

The clutch will slip and the power carrier may not move unless the drive clutch cable is adjusted properly.

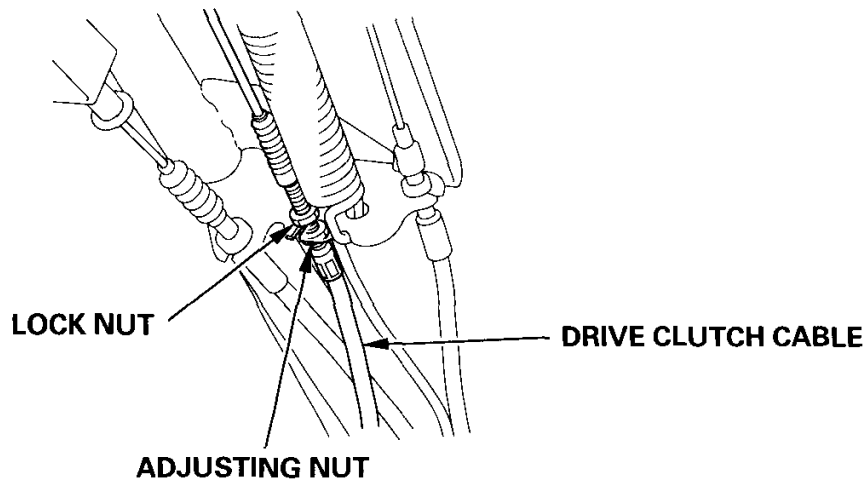
1. Release (at the STOP position) and squeeze the drive clutch lever to the DRIVE position, and check the extension value of the clutch spring at the end of the longer spring hook as shown.

Extension value should be:

5.0 – 6.0 mm (0.20 – 0.24 in)



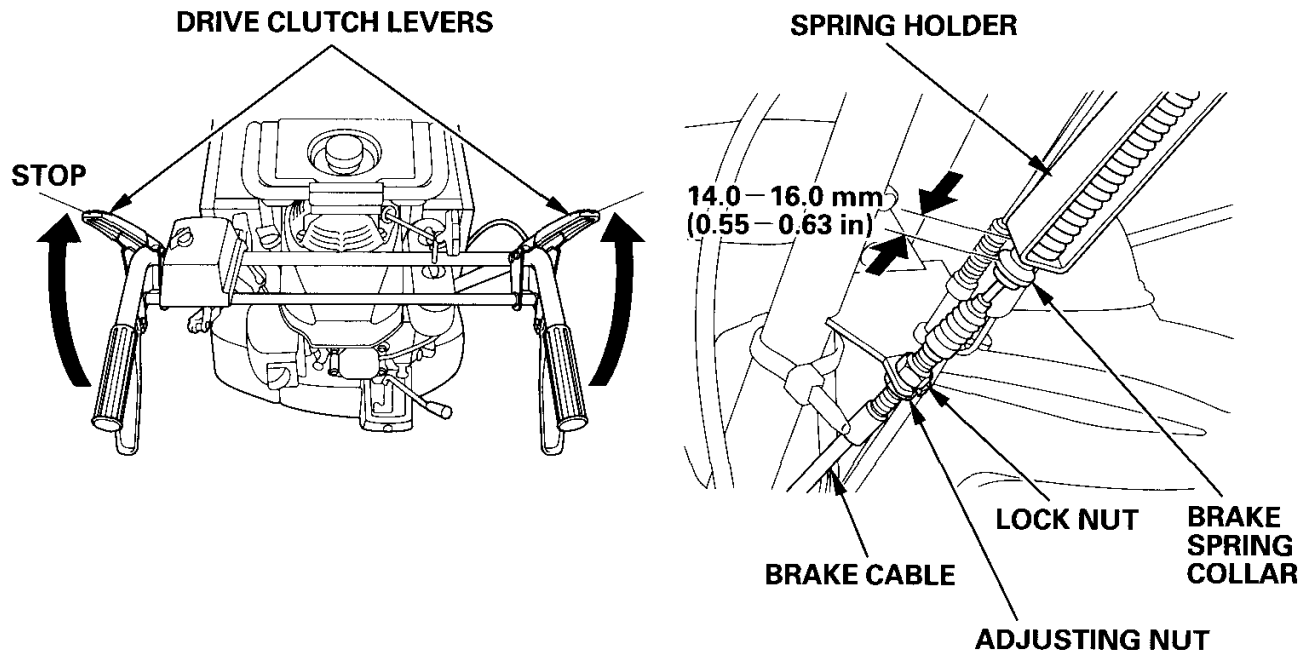
2. If adjustment is necessary, set the drive clutch lever to the DRIVE position.
3. Loosen the lock nut and turn the adjusting nut to obtain the correct extension value of the clutch spring.
4. After adjustment, tighten the lock nut securely.



Adjusting the drive clutch cable

The brake will not function effectively unless the brake cable is adjusted properly.

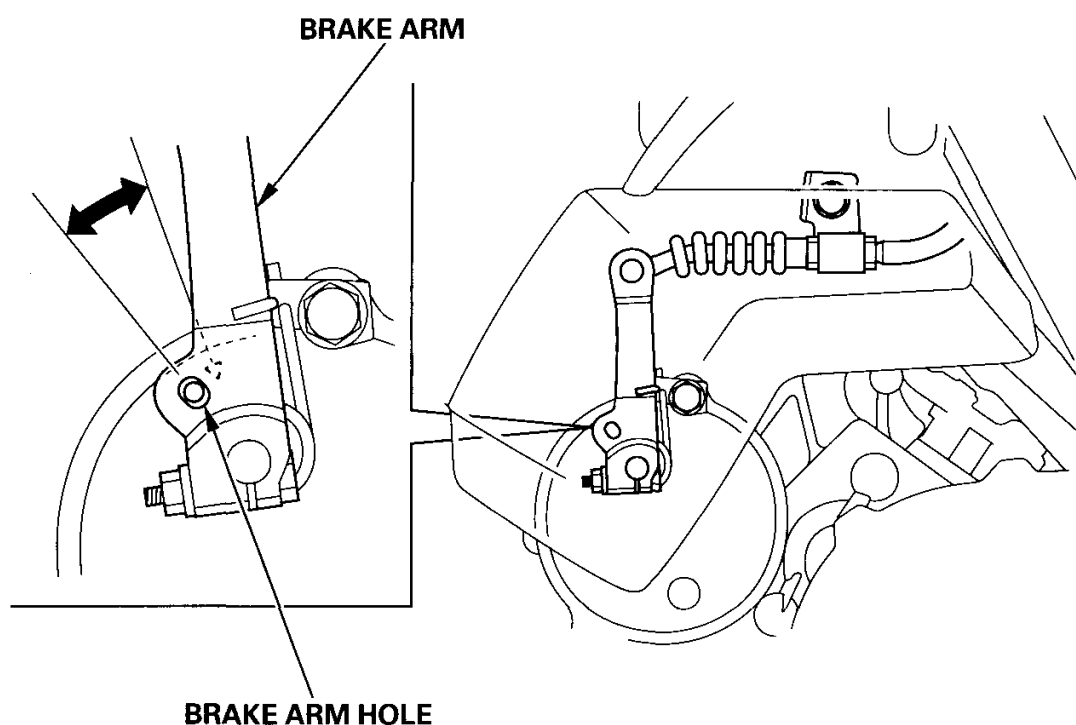
1. When the drive clutch levers are at their released (STOP) position, check whether the brake spring collar from the spring holder is:
14.0 – 16.0 mm (0.55 – 0.63 in)
2. To adjust, loosen the lock nut with the levers still at the stop position, then turn the adjusting nut and set the distance to the prescribed value.
3. After the adjustment, tighten up the lock nuts.



Checking brake wear

Check the brake shoe wear indication only after the brake cable has been properly adjusted.

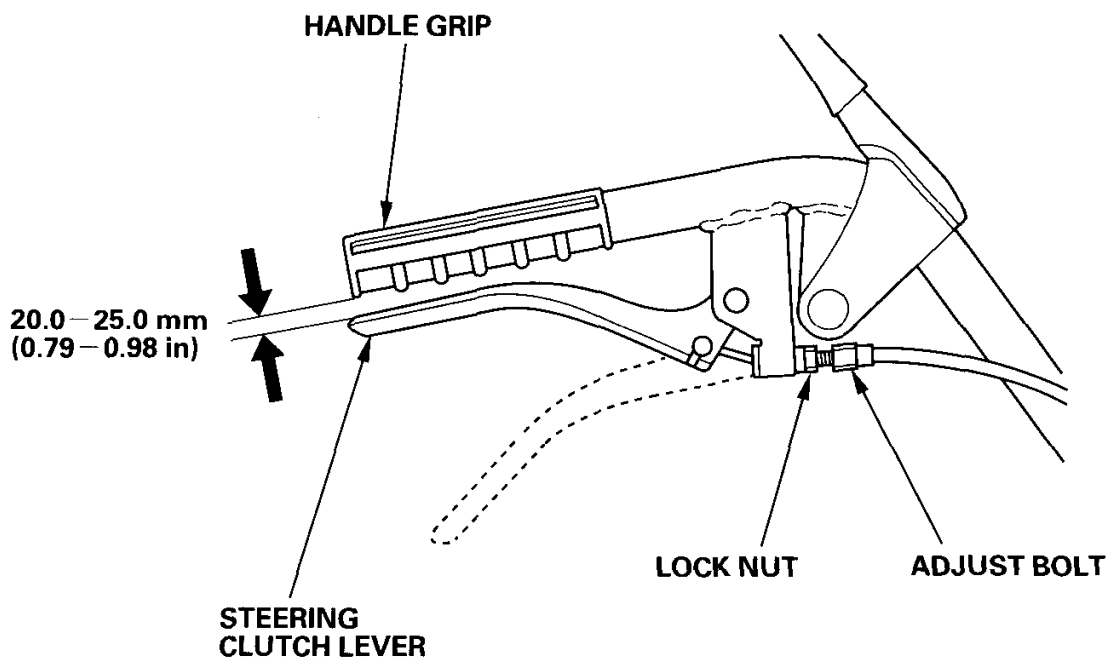
Brake shoe is OK if you cannot see the "△" mark through the brake arm hole, when the drive clutch lever is in its released position (STOP). However, if you can see any part of the "△" mark, the brake has worn past its service limit; contact your authorized Honda dealer.



Adjusting the steering clutch cable

Steering control will be impaired unless both steering clutch cables are adjusted properly.

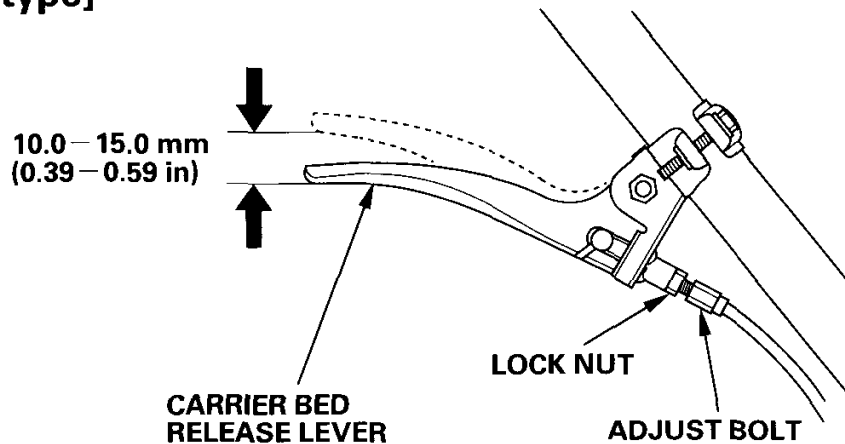
1. With the engine off, rock the power carrier forward and backward to find the position at which each lever can be pulled closest to the handle grip.
2. With each steering clutch lever fully gripped, check whether the clearance between the tip of the lever and the handle grip is:
20.0 – 25.0 mm (0.79 – 0.98 in)
3. To adjust, loosen the lock nut with the lever gripped and turn the adjust bolt to get the prescribed clearance.
4. After the adjustment, tighten up the lock nut.



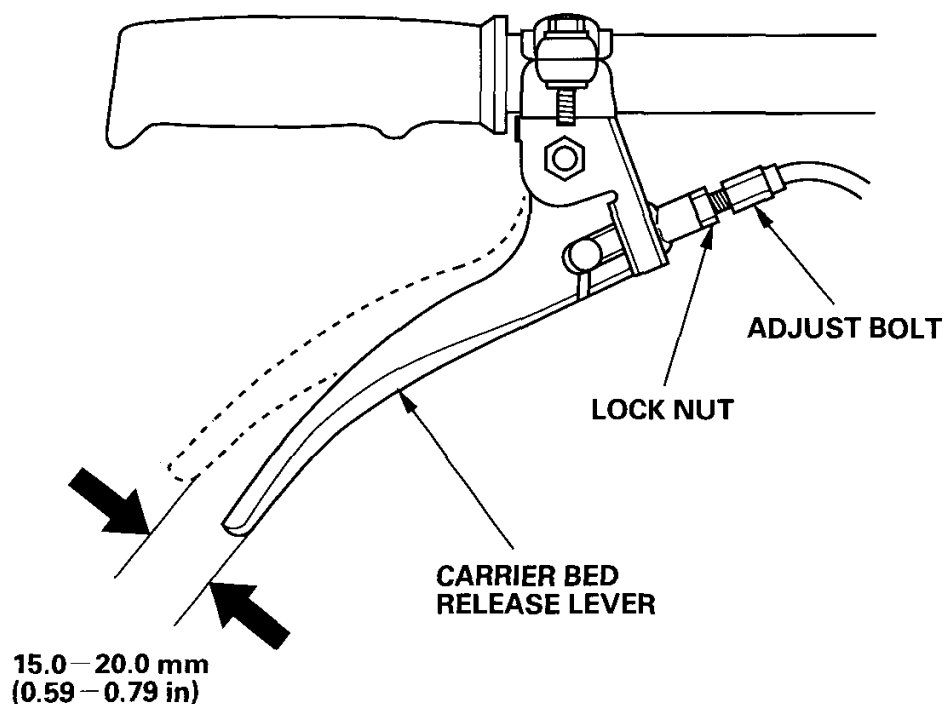
Adjusting the dumping lock cable

1. With the carrier locked, check whether the play at the end of the carrier bed release lever is:
CE1 type: 10.0–15.0 mm (0.39–0.59 in)
BE1 and U types: 15.0–20.0 mm (0.59–0.79 in)
2. To adjust, loosen the lock nut and turn the adjust bolt to set the prescribed distance.
3. After the adjustment, tighten up the lock nut.

[CE1 type]

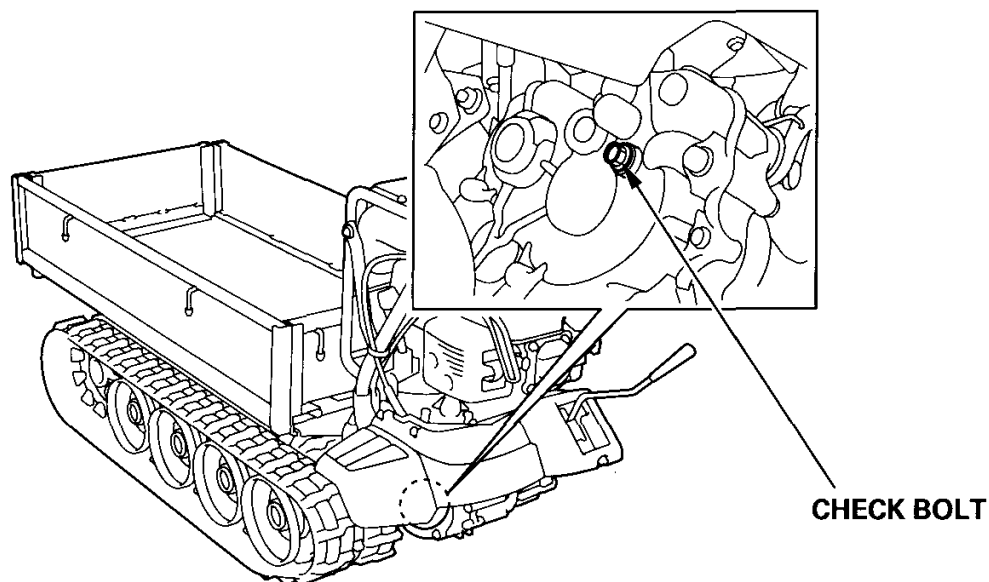


[BE1 and U types]



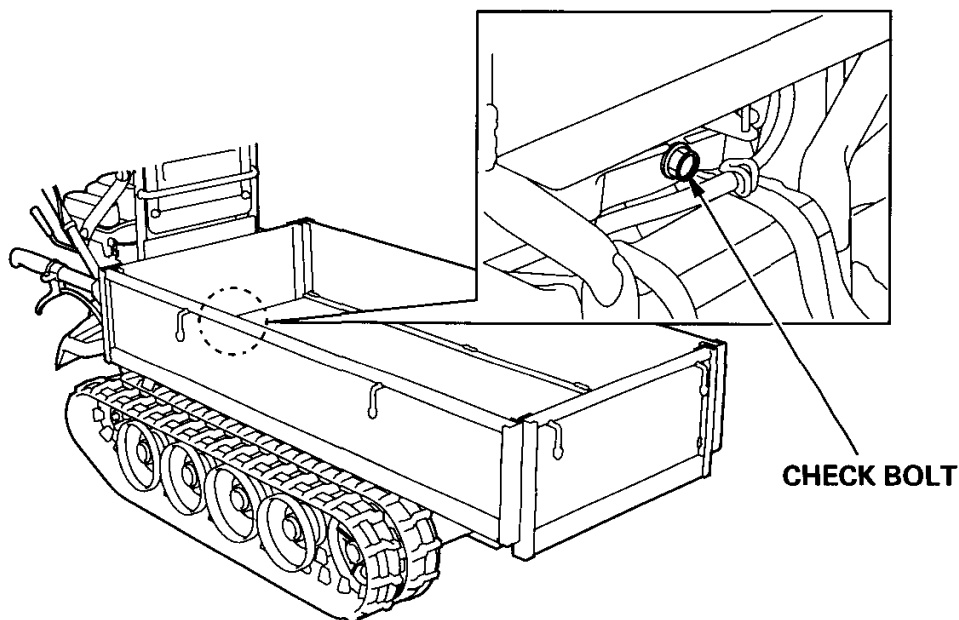
Checking the transmission oil

Remove the check bolt and check that the oil is up to the lower edge of the check bolt hole. If it is low, refill with engine oil of the classification recommended on page 18 .



Checking the clutch oil

Remove the check bolt and check that the oil is up to the lower edge of the check bolt hole. If it is low, refill with engine oil of the classification recommended on page 18 .



Spark arrester maintenance (Applicable type)

⚠ WARNING

The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Allow it to cool before proceeding.

CAUTION:

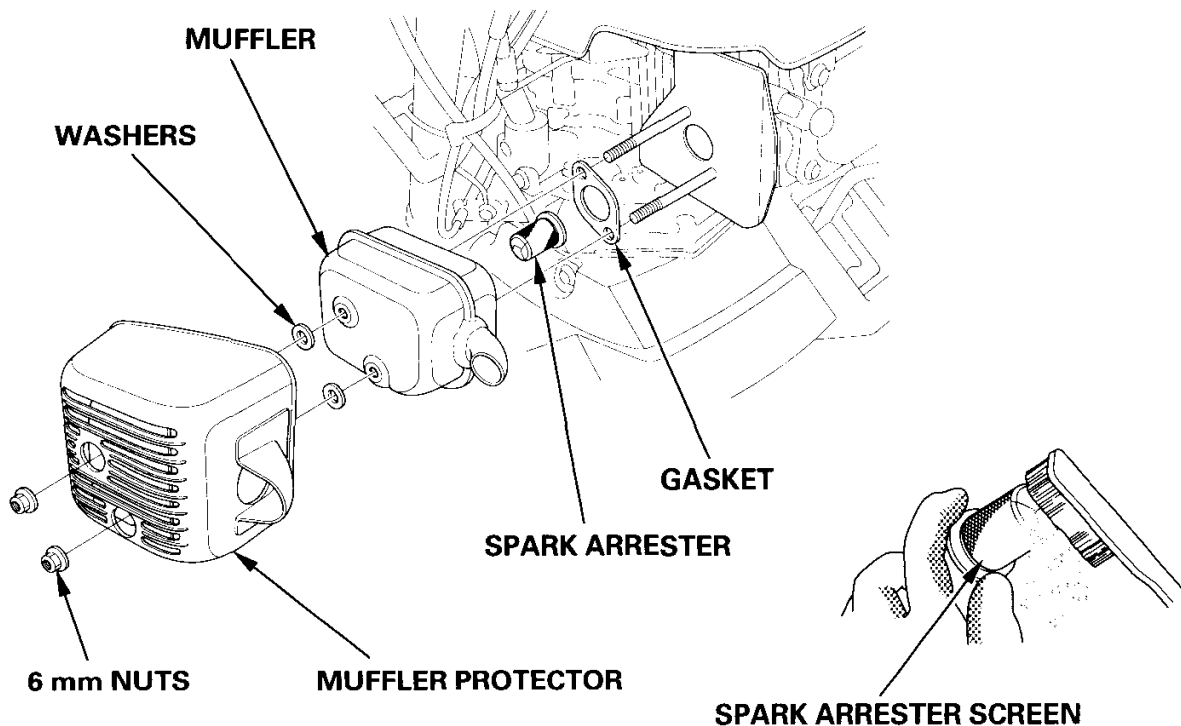
The spark arrester must be serviced every 100 hours to maintain its efficiency.

1. Remove the two 6 mm nuts and remove the muffler protector, muffler and gasket.
2. Remove the spark arrester from the muffler.

CAUTION:

Be careful not to damage the spark arrester screen.

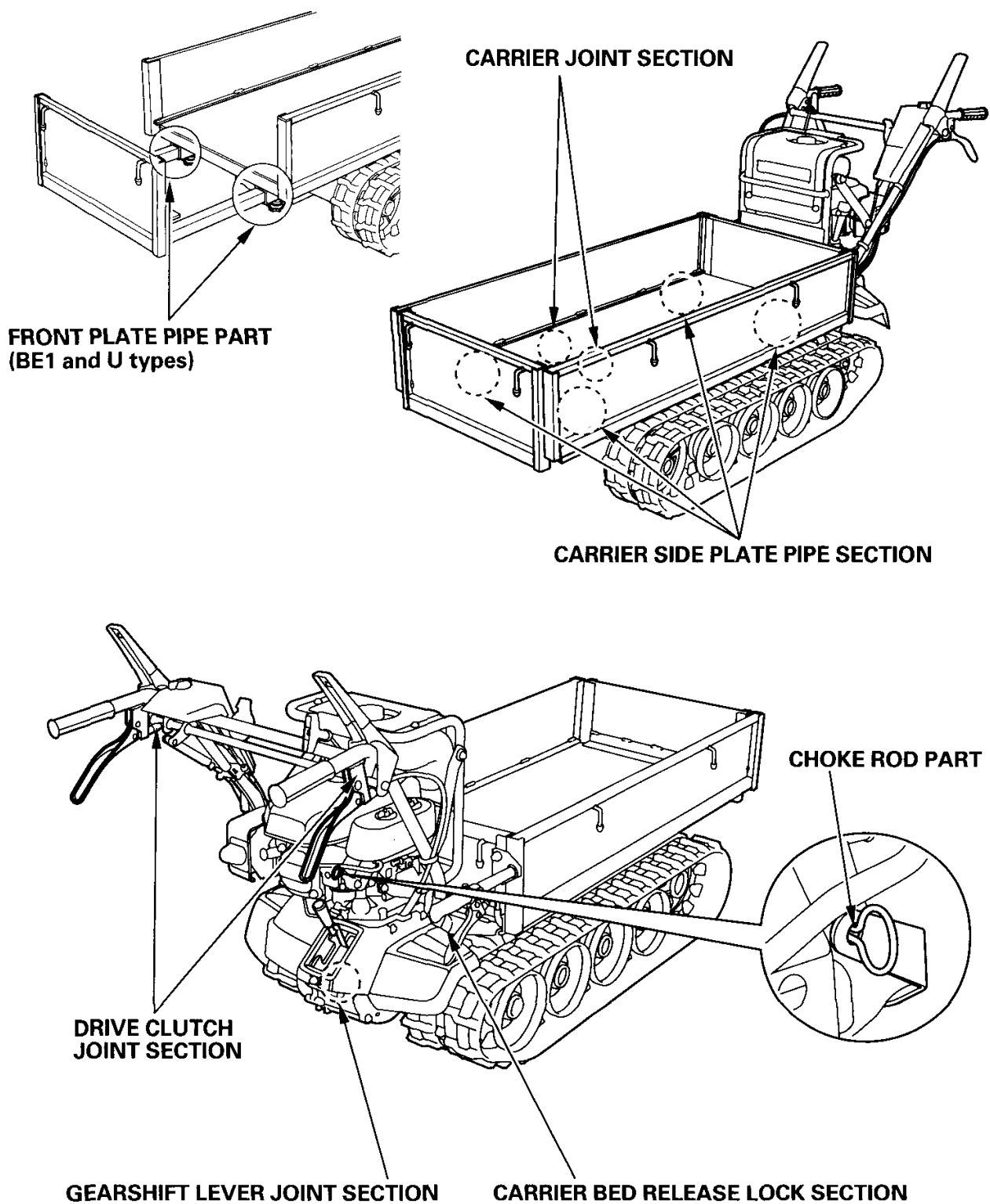
3. Check for carbon deposits around the exhaust port and the spark arrester, and clean if necessary.
4. Install the spark arrester in the muffler.
5. Install the gasket, muffler and muffler protector, then tighten the two 6 mm nuts securely.



Lubrication

Grease the points noted below, at least once a year or after any time you have washed the carrier.

Recommended grease: SAE multipurpose grease.



Temporary installation of a disengaged track

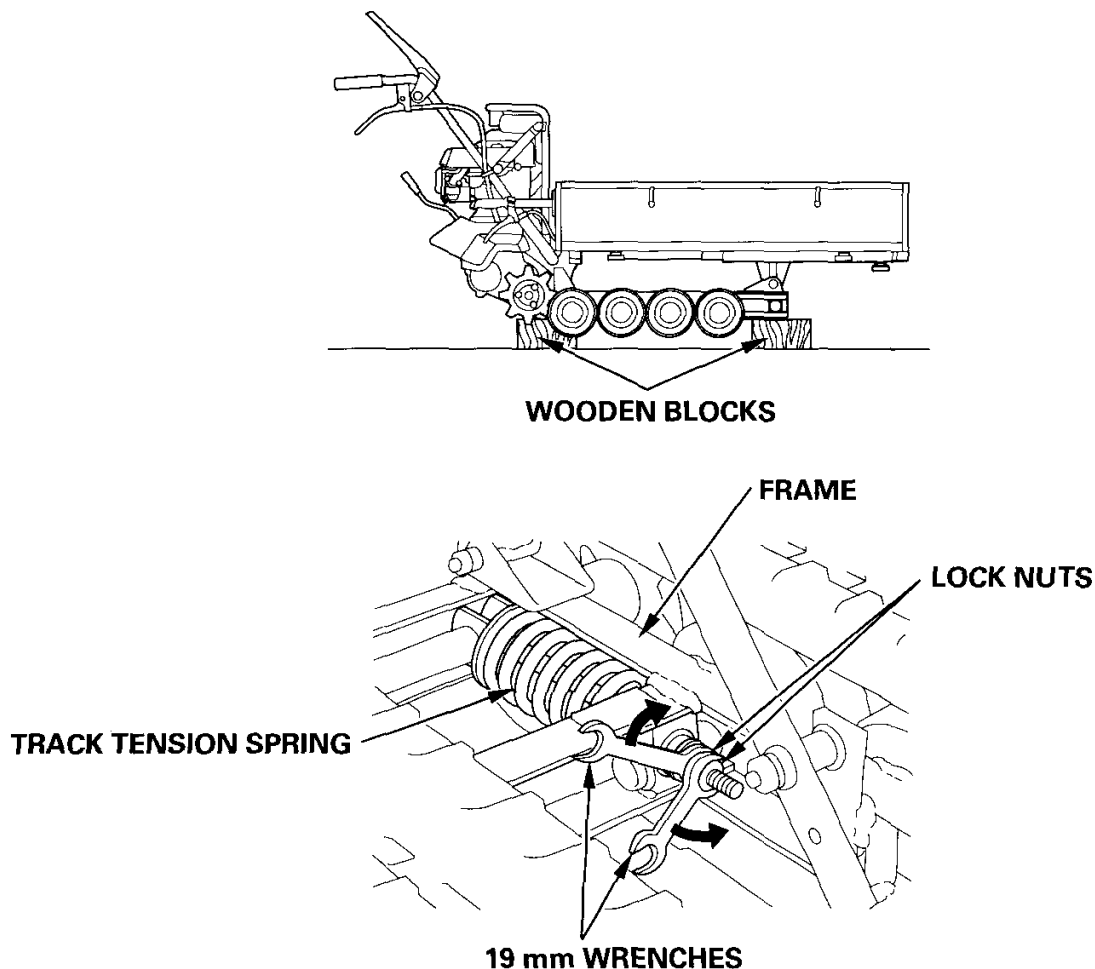
In the unlikely event that a track slips off the sprockets during operation, proceed with the following:

1. Stop the engine (refer to page 40).
2. Remove any load in the carrier, by hand. Do not empty it by dumping the carrier.
3. Move the power carrier to a flat surface and support on wooden blocks in two locations (so the wheels are off the ground). Dump the carrier.

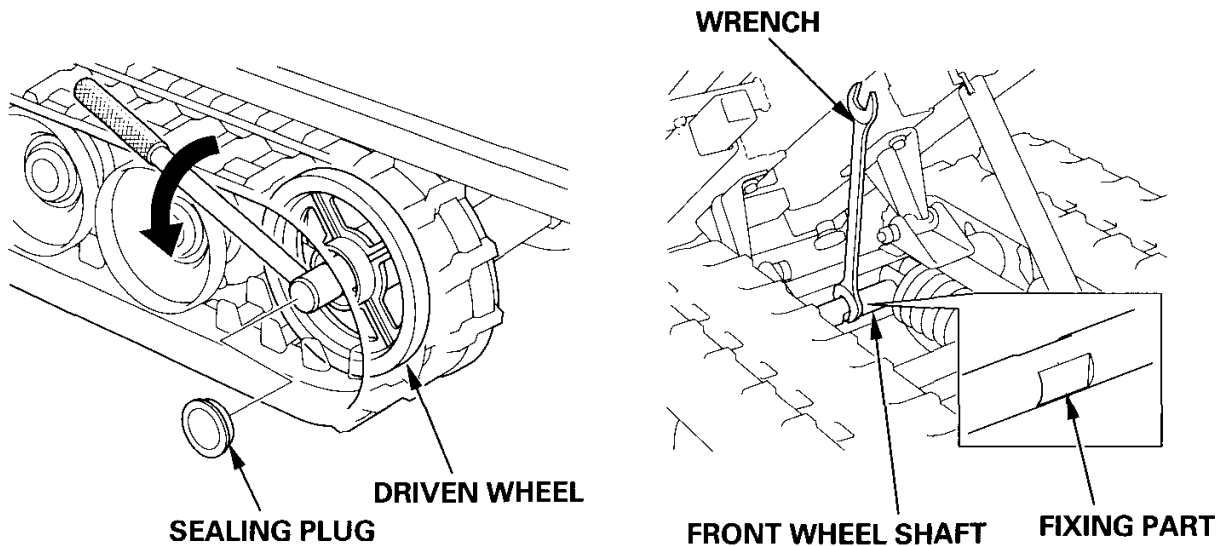
CAUTION:

A carrier with a disengaged track will fall over if the carrier is dumped, unless first secured with wooden blocks.

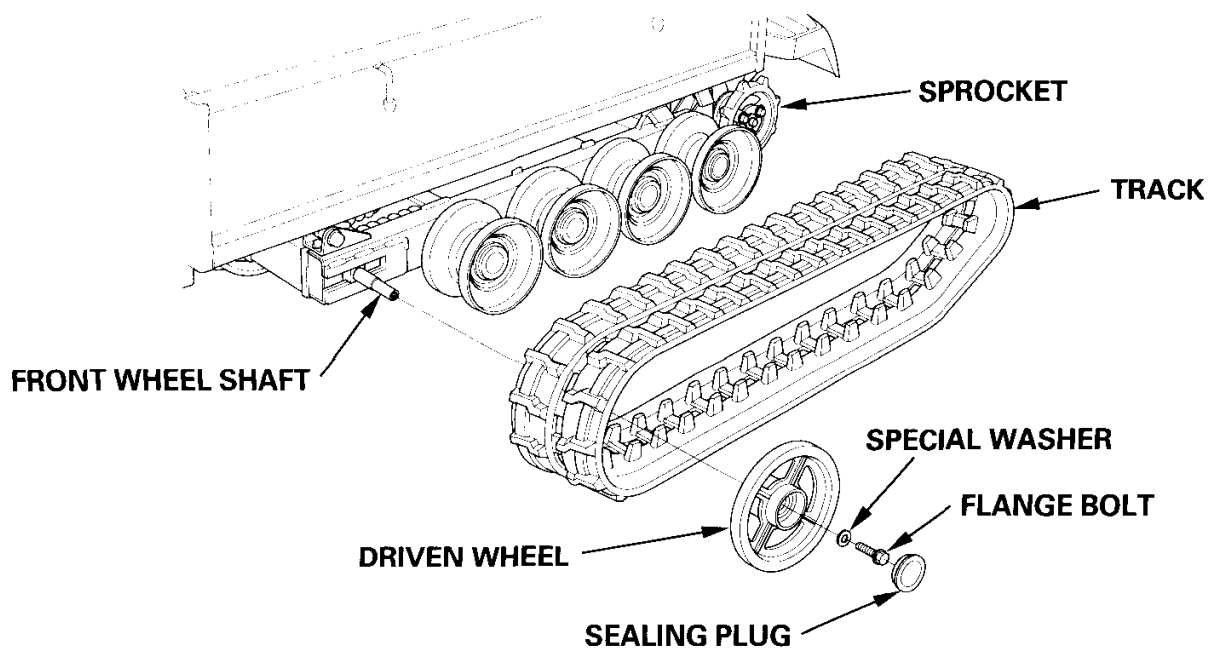
4. Loosen the track tension lock nuts and tighten up the inner nut as far as it will go. (This is done in order to facilitate the mounting of the track.)



5. Remove the sealing plug.
6. Fix the front wheel shaft with a wrench to prevent turning, then remove the flange bolt and special washer.
7. Remove the driven wheel.
8. Place the track, then engage the sprocket and driven wheel with the track teeth.



9. Check that the gearshift lever is at the NEUTRAL position.
10. Push the driven wheel and track toward the front, then slide the driven wheel onto the front wheel shaft.
11. Install and tighten the special washer and flange bolt securely.
12. Install the sealing plug securely.



13. Remove the wooden blocks and make sure the power carrier is level. Then adjust the track tautness. (For details, refer to page 49).

CAUTION:

- **Special care should be exercised when mounting the tracks.**
- **Do not tip the carrier onto its side; oil and gasoline may spill out.**
- **After following the above temporary procedure, have the power carrier inspected by your authorized Honda dealer as soon as possible.**

11. TRANSPORTING/STORAGE

When transporting or storing the power carrier, make sure the engine switch is in the OFF position and the spark plug cap is disconnected to prevent accidental engine start up.

▲WARNING

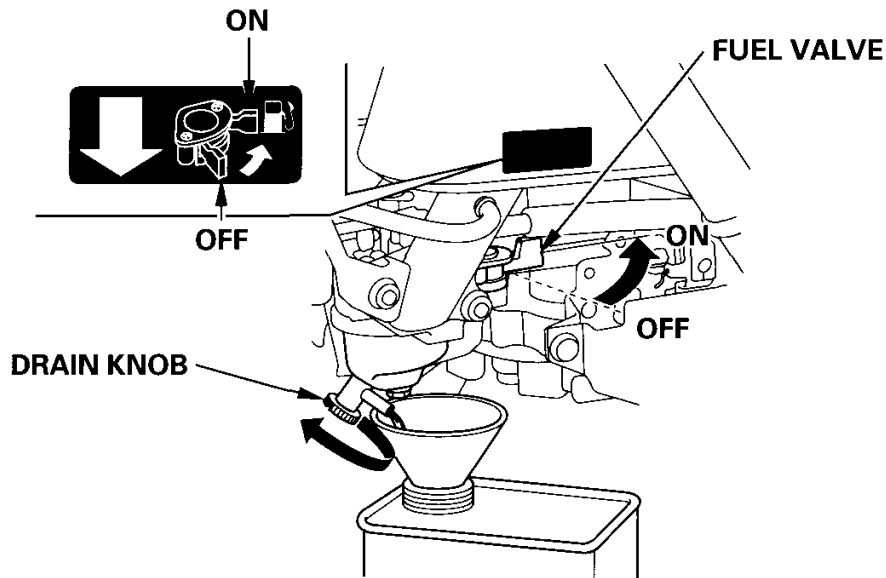
- To avoid severe burns or fire hazards, let the engine cool before transporting the power carrier or storing it indoors.
- When transporting the power carrier, turn the fuel valve to the OFF position, and keep the engine level to prevent fuel spillage. Spilled fuel or fuel vapor may ignite.

1. Draining off the gasoline.

▲WARNING

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

- a. Turn the fuel valve ON, loosen the drain knob and drain the gasoline in the fuel tank into a suitable container.



- b. Retighten the drain knob and set the fuel valve to the OFF position.

⚠ WARNING

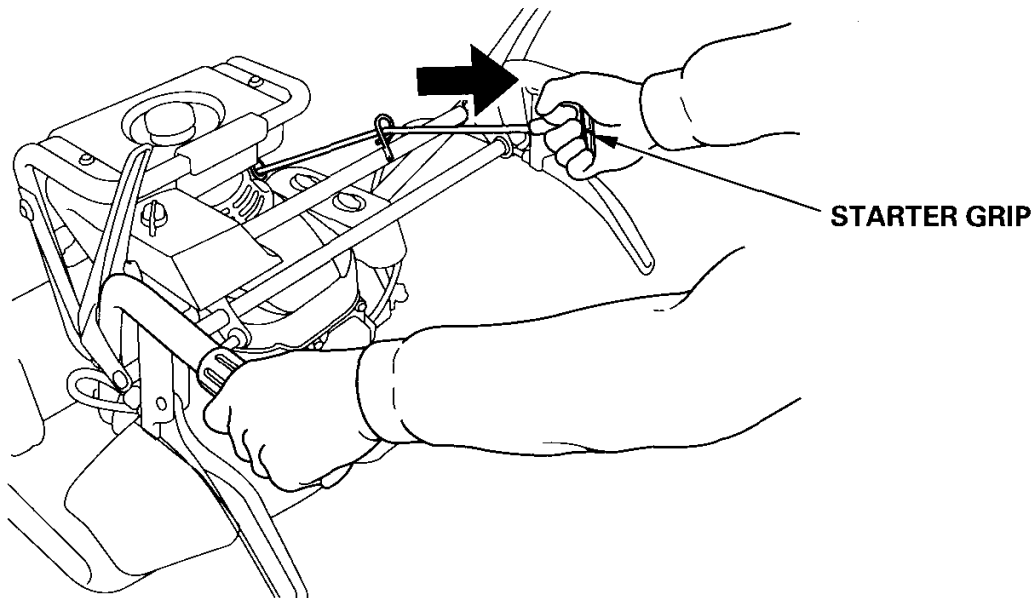
- **Keep all sparks and open flames away when draining the fuel.**
- **Perform the operation in a well-ventilated location.**
- **Dispose of the drained off fuel properly.**

2. Change the engine oil (see page 46 for details).
3. Clean the air cleaner (see page 48 for details).
4. Clean the power carrier and inspect all parts to make sure they are securely tightened. Lubricate the points noted on page 57.

NOTE:

If the carrier will be stored for more than three months, remove the spark plug, pour one tablespoon of clean engine oil into the plug hole and reinstall the spark plug securely.

5. Pull the starter grip until you feel slight resistance.



6. Place a cover over the power carrier or store it in a well-ventilated enclosed location.

CAUTION:

When storing the power carrier, first allow the engine exhaust system to cool off completely and then place the power carrier far from any combustible products.

12. TROUBLESHOOTING

To assure maximum service life from your carrier, don't disassemble it unnecessarily. If the following basic troubleshooting does not get you and your carrier back to work, it is time to consult your authorized Honda dealer.

Check the following points if the engine does not start.

1. Is there enough fuel?
2. Is the fuel valve on?
3. 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

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

4. Is the engine switch on?
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. Have you followed the starting method as described on page 22 ?
 - If the engine still does not start, take the carrier to an authorized Honda dealer.

Check the following if the engine runs but the carrier does not operate properly:

- Is the drive clutch cable adjusted (page 50)?
- Are the steering clutch cables adjusted (page 53)?
- Is the brake cable properly adjusted (page 51)?
- Are the tracks adjusted to proper tautness (page 49)?

Wait for a few minutes and then check again.

Repair work

Contact your authorized Honda dealer.

13. SPECIFICATIONS

Model	Honda power carrier HP350
Power product description code	NACJ

Engine

Model	GXV160 H2
Type	4-stroke, overhead valve, 1 cylinder
Displacement	163 cm ³ (9.9 cu-in)
Bore × stroke	68.0 × 45.0 mm (2.7 × 1.8 in)
Ignition timing	20° BTDC
Ignition system	Transistorized magneto ignition
Engine oil capacity	0.65 ℓ (0.69 US qt , 0.57 Imp qt)
Fuel tank capacity	1.4 ℓ (0.37 US gal , 0.31 Imp gal)
Spark plug	BPR4ES (NGK), W14EPR-U (DENSO)

Frame

Type		CE1
Item		
Overall length		1,720 mm (67.7 in)
Overall width		635 mm (25.0 in)
Overall height		1,015 mm (40.0 in)
Dry mass [weight]		149 kg (328 lbs)
Fully supplied mass [weight]		152 kg (335 lbs)
No. of gears		2 forward gears, 1 reverse gear
Travelling speed		1.4 km/h (0.9 mile/h) in 1st gear, 3.5 km/h (2.2 mile/h) in 2nd gear, 1.3 km/h (0.8 mile/h) in reverse
Maximum load carrying capacity	Level ground	350 kg (772 lbs)
	Sloping ground	150 kg (331 lbs)
Clutch oil capacity		0.80 ℓ (0.85 US qt , 0.70 Imp qt)
Transmission oil capacity		2.0 ℓ (2.1 US qt , 1.8 Imp qt)
Track width × length		160 mm × 2,040 mm (6.3 × 80.3 in)

Noise and Vibration

Sound pressure level (LpA) Tested by prEN474-6	87 dB
Guaranteed sound power level (LWA) Tested by 2000/14/EC	97 dB
Vibration Tested by EN1033	16 m/S ²

NOTE:

Specifications are subject to change without notice due to improvements.

Model	Honda power carrier HP450
Power product description code	NADJ

Engine

Model	GXV160 H2
Type	4-stroke, overhead valve, 1 cylinder
Displacement	163 cm ³ (9.9 cu-in)
Bore × stroke	68.0 × 45.0 mm (2.7 × 1.8 in)
Ignition timing	20° BTDC
Ignition system	Transistorized magneto ignition
Engine oil capacity	0.65 ℓ (0.69 US qt , 0.57 Imp qt)
Fuel tank capacity	1.4 ℓ (0.37 US gal , 0.31 Imp gal)
Spark plug	BPR4ES (NGK) , W14EPR-U (DENSO)

Frame

Type		BE1	U	CEEN
Item				
Overall length		1,900 mm (74.8 in)		1,610 mm (63.4 in)
Overall width		635 mm (25.0 in)		615 mm (24.2 in)
Overall height		1,055 mm (41.5 in)		1,055 mm (41.5 in)
Dry mass [weight]		181 kg (399 lbs)		130 kg (287 lbs)
Fully supplied mass [weight]		184 kg (406 lbs)		133 kg (293 lbs)
No. of gears		2 forward gears, 1 reverse gear		
Travelling speed		1.4 km/h (0.9 mile/h) in 1st gear, 3.5 km/h (2.2 mile/h) in 2nd gear, 1.3 km/h (0.8 mile/h) in reverse		
Maximum load carrying capacity	Level ground	450 kg (992 lbs)		
	Sloping ground	250 kg (551 lbs)		
Clutch oil capacity		0.80 ℓ (0.85 US qt , 0.70 Imp qt)		
Transmission oil capacity		2.0 ℓ (2.1 US qt , 1.8 Imp qt)		
Track width × length		180 mm × 2,220 mm (7.1 × 87.4 in)		

Noise and Vibration

Type	BE1
Sound pressure level (LpA) Tested by prEN474-6	88 dB
Guaranteed sound power level (LWA) Tested by 2000/14/EC	98 dB
Vibration Tested by EN1033	18.8 m/S ²

NOTE:

Specifications are subject to change without notice due to improvements.

14. MAJOR Honda DISTRIBUTOR ADDRESSES

For European

NAME OF FIRM (COMPANY)	ADDRESS	TEL: FAX:
Honda (U.K.) Limited	470 London Road, Slough, Berkshire, SL38QY, United Kingdom	Tel: 01753-590-590 Fax: 01753-590-000
Honda Europe Power Equipment S.A.	Pole 45 Rue des Chataignaiers 451410 Ormes France	Tel: 2-38-65-06-00 Fax: 2-38-65-06-02
Honda Motor Europe (North) GmbH.	Sprendlinger, Landstraße 166 D-63069 Offenbach/Main Germany	Tel: 069-83-09-0 Fax: 069-83-09-519
Honda Belgium H.V.	Wijngaardveld 1, 9300 Aalst Belgium	Tel: 053-725-111 Fax: 053-725-100
Honda Italia Industriale S.P.A.	Via della Cecchignola,5/7 00143 ROMA	Tel: 06-54928-1 Fax: 06-54928-400
Honda (Suisse) S.A.	Route des Moulières 10 Case Postale Ch 1214 Vernier-Geneve, Switzerland	Tel: 022-341-22-00 Fax: 022-341-09-72
Honda Nederland B.V.	Nikkelstraat 17 2984 AM Ridderkerk Netherlands	Tel: 0180-491777 Fax: 0180-491889
Honda Austria G.M.B.H.	Honda Strasse 1 A-2351 Wiener Neudorf Austria	Tel: 223-66-900 Fax: 223-66-4130
Honda Power Equipment Sweden A.B.	Ostmästargränd 8 Stockholm-Årsta Sweden	Tel: 08-602-24-60 Fax: 08-722-36-27
Honda Produtos De Força, Portugal, S.A.	Lugar da Abrunheira S. Pedro de Penaferrim 2710 Sintra, Portugal	Tel:351-1-9150374 Fax:351-1-9111021
Berema A/S	Berghagan 5, Langhus Box 454, 1401 Ski Norway	Tel: 64-86-05-00 Fax: 64-86-05-49

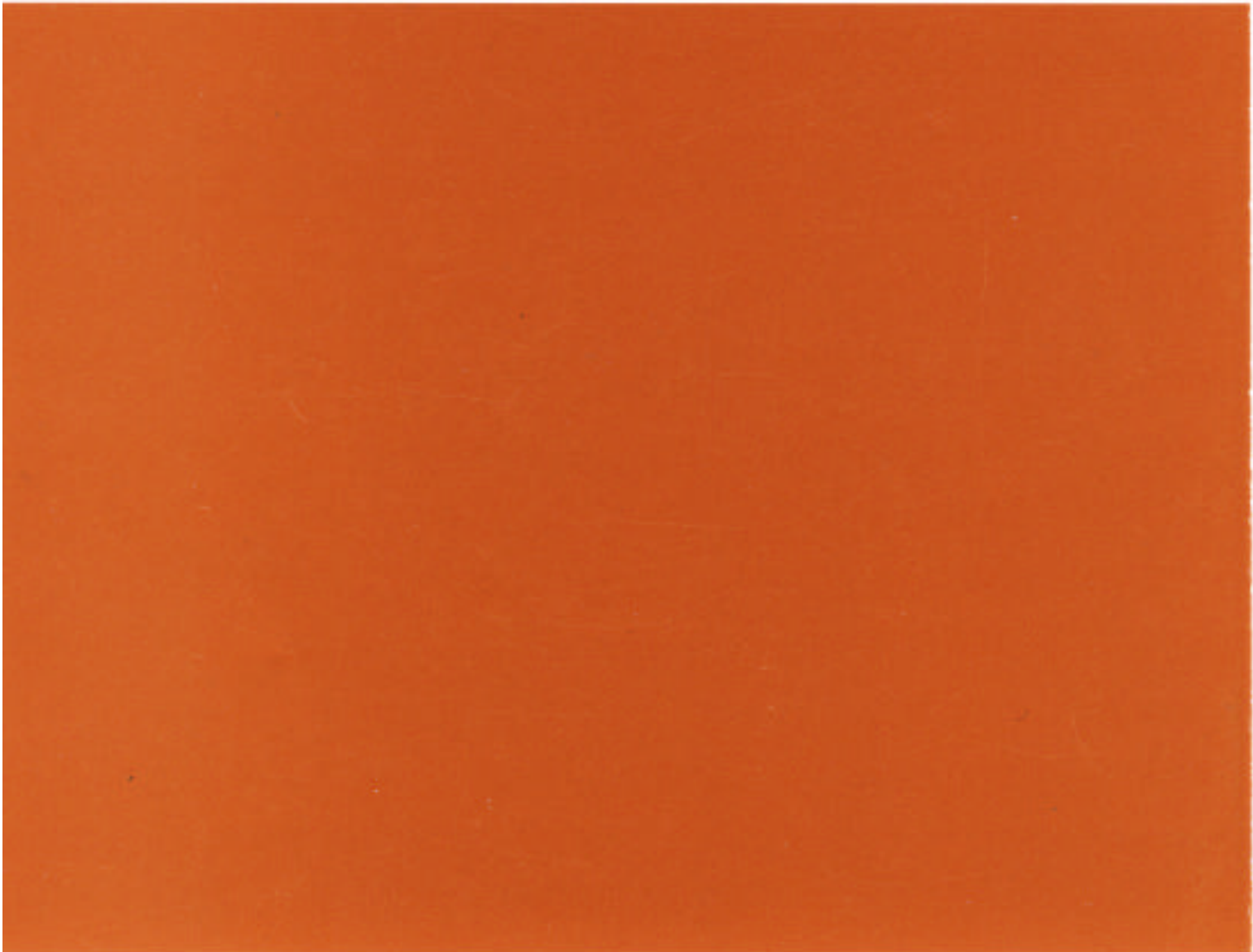
For European (continued)

NAME OF FIRM (COMPANY)	ADDRESS	TEL: FAX:
OY Brandt AB	Tuupakantie 4 SF-01740, Vantaa Finland	Tel: 90-895-501 Fax: 90-878-5276
TIMA PRODUCTS A/S	Tårnfalkevej 16, Postboks 511 DK 2650 Hvidovre Denmark	Tel: 31-49-17-00 Fax: 36-77-16-30
Greens	Polig. Industrial Congost 08530, La Garriga (Barcelona), Spain	Tel: 93-871-84-50 Fax: 93-871-81-80
Automocion Canarias S.A. (AUCASA)	Apartado, de Correos, num 206 Santa Cruz de Tenerife Canary Island	Tel: 922-61-13-50 Fax: 922-61-13-44
The Associated Motors Company Ltd.	148, Rue D'Argens, Msida Malta	Tel: 356-333001 Fax: 356-340473
Two Wheels Ltd.	Crosslands Business Park, Ballymount Road, Dublin 12, Ireland	Tel: 4602111 Fax: 4566539
General Automotive Co., S.A.	P.O. Box 1200, 101 73 Athens Greece	Tel: 346-5321 Fax: 346-7329
BG Technik s.r.o	Radlická 117/520 158 01 Praha 5 Czech Republic	Tel: 2-5694 573 Fax: 2-5694 571
Aries Power Equipment Ltd.	01-493 Warszawa, ul Wroclawska 25a Poland	Tel: 22-685 17 06 Fax: 22-685 16 03
MO.TOR.PEDO Ltd.	1134 Budapest, Dózsa Gy.út 61-63 Hungary	Tel: 1-4652080 Fax: 1-4652081

For Australian

NAME OF FIRM (COMPANY)	ADDRESS	TEL: FAX:
Honda Australia Motorcycle and Power Equipment Pty. Ltd.	1954-1956 Hume Highway Campbellfield Victoria 3061	Tel: (03) 9270 1111 Fax: (03) 9270 1133

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