HONDA

Power

Equipment

Owner's Manual

Power Carrier
HP400

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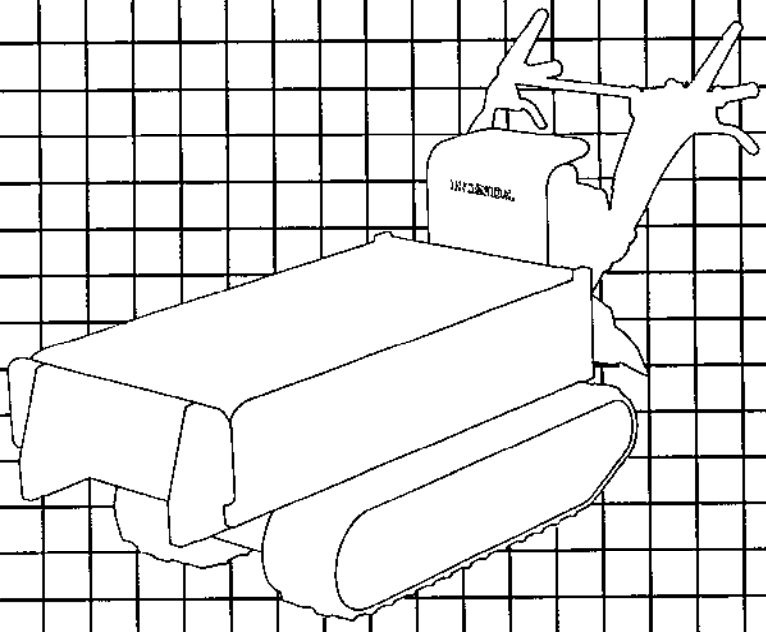

Thank you for purchasing a Honda power carrier. We want to help you get the best results from your new power carrier and to operate it safely. This manual contains the information on how to do that; please read it carefully.

This owner's manual describes the operation and maintenance of the HP400 power carrier. All information in this publication is based on the latest product information available at the time of printing.

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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.

Safety Messages

Your safety and the safety of others is very important. We have provided important safety messages in this manual and on the power carrier. Please read these messages carefully.

A safety message alerts you to potential hazards that could hurt you or others. Each safety message is preceded by a safety alert symbol ⚠ and one of three words: DANGER, WARNING, or CAUTION.

These mean:

⚠DANGER You WILL be KILLED or SERIOUSLY HURT if you don't follow instructions.

⚠WARNING You CAN be KILLED or SERIOUSLY HURT if you don't follow instructions.

⚠CAUTION You CAN be HURT if you don't follow instructions.

Each message tells you what the hazard is, what can happen, and what you can do to avoid or reduce injury.

Damage Prevention Messages

You will also see other important messages that are preceded by the word NOTICE.

This word means:

NOTICE Your power carrier or other property could be damaged if you don't follow instructions.

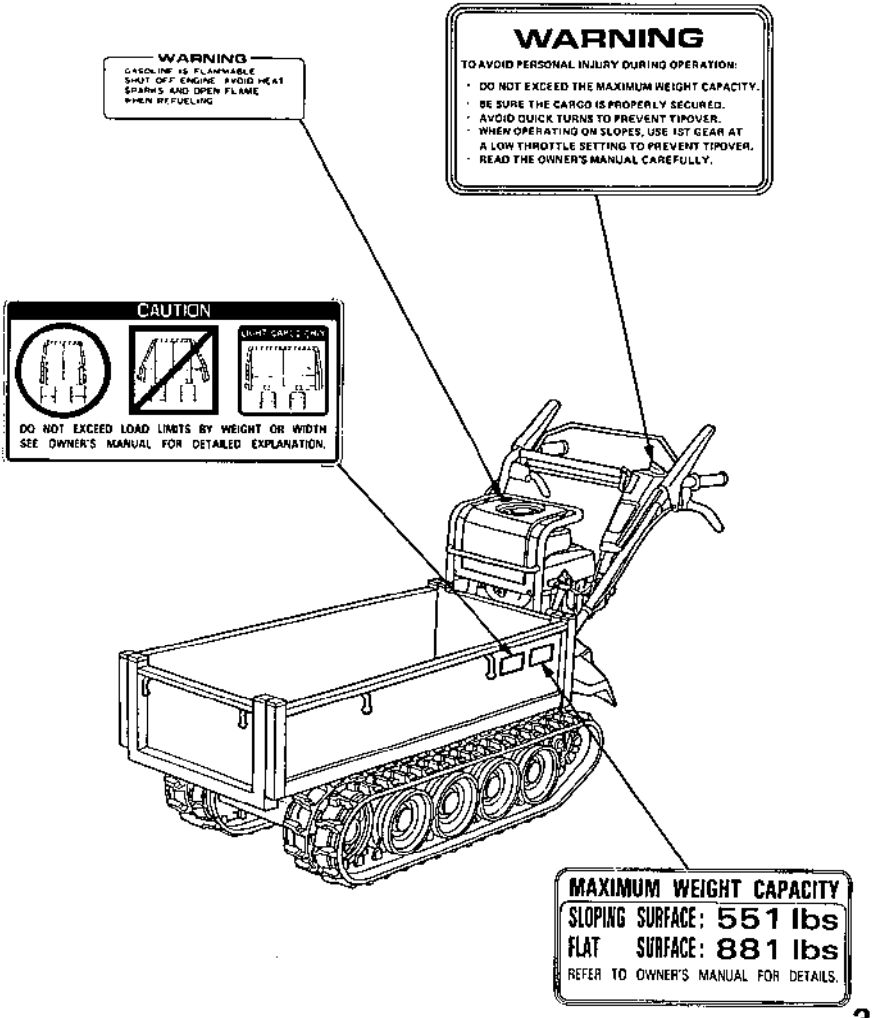
The purpose of these messages is to help prevent damage to your power carrier other property, or the environment.

CONTENTS

SAFETY LABEL LOCATIONS

The labels shown here contain important safety information. Please read them carefully.

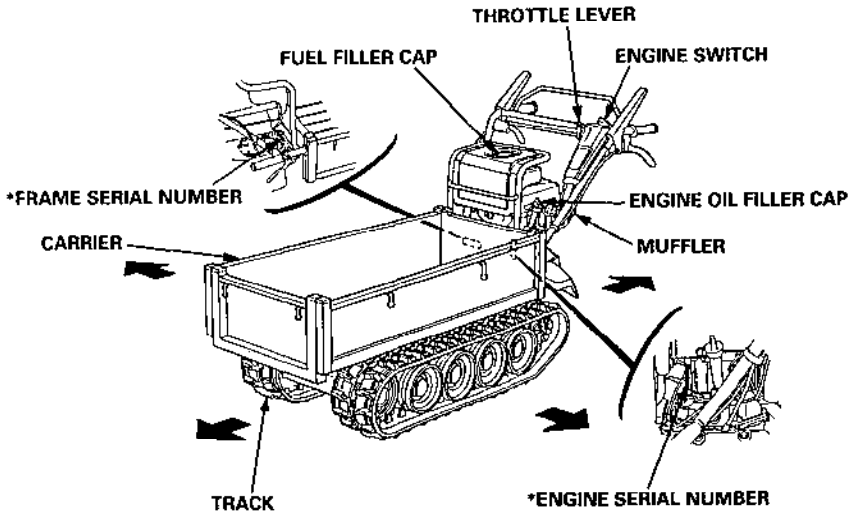
These labels are considered permanent parts of your power carrier, so if a label comes off or becomes hard to read, contact your authorized Honda power carrier dealer for a replacement.

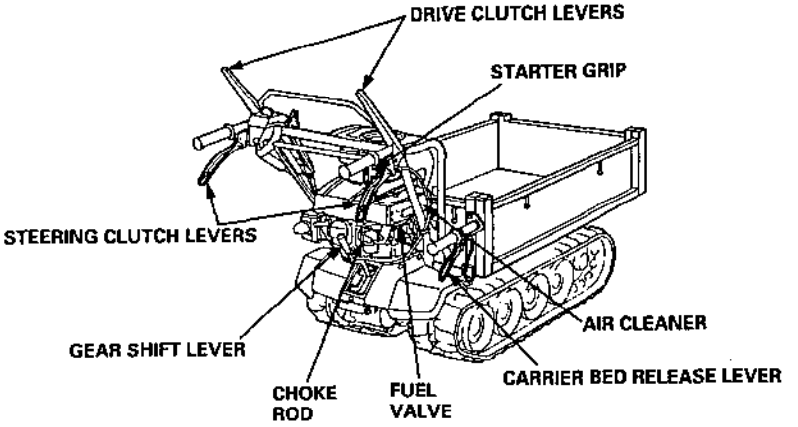


IMPORTANT SAFETY INFORMATION

Most accidents with power carriers can be prevented if you follow all instructions in this manual and on the power carrier. The most common hazards are discussed below, along with the best way to protect yourself and others.

- Honda power carriers are 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.
- 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 no 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 29. 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 gear and walking backward, there is 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.
- Gasoline is extremely flammable and is explosive under certain conditions. Allow the engine to cool before refueling. 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 tank 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 storing it indoors.





*Record the frame and engine serial numbers for your reference. Refer to the serial numbers when ordering parts, and when making technical or warranty inquiries (see page 56).

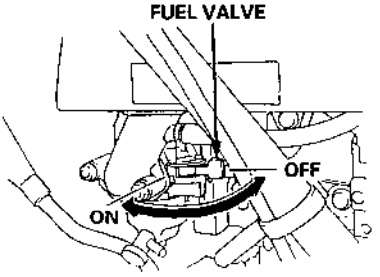
Frame serial number: _____

Engine serial number: _____

3. CONTROLS

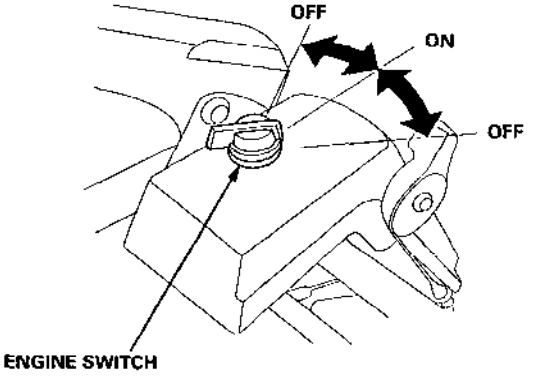
Fuel Valve

The fuel valve opens and closes the fuel line leading from the fuel tank to the carburetor. Make sure that the valve is positioned exactly at either the ON or OFF position. When the power carrier is not in use, always leave the fuel valve in the OFF position to reduce the possibility of fuel leakage.

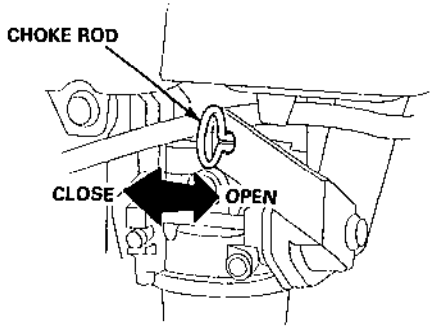


Engine Switch

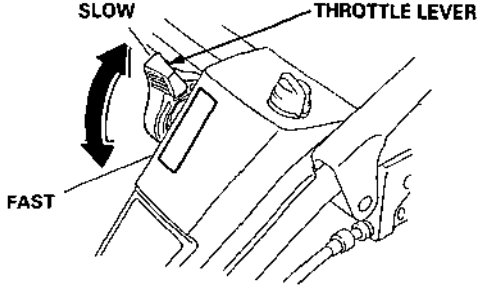
The engine switch controls the electrical circuit for the spark plug ignition system and must be turned to the ON position to enable the engine to start and run. The engine will stop when the engine switch is turned to the OFF position. When the power carrier is not in use always leave the engine switch in the OFF position to prevent accidental starting.



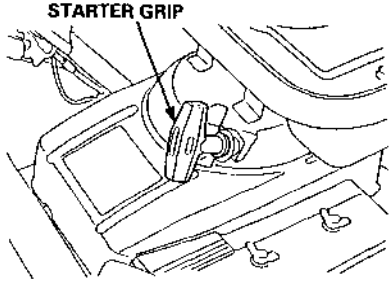
Choke Rod
The choke rod opens and closes the choke valve in the carburetor.
The CLOSE position enriches the fuel mixture for starting a cold engine.
The OPEN position provides the correct fuel mixture for operation after starting and for restarting a warm engine.



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

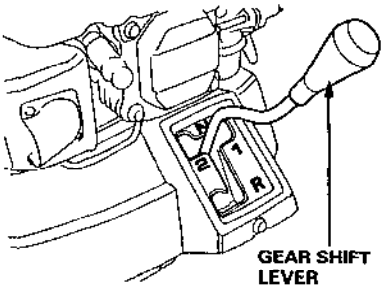


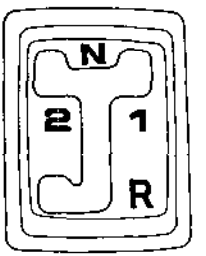
Starter Grip
Pull this grip to start the engine.
See page 24 for starting procedures.



Gear Shift Lever

Use the gear shift lever to select drive speed or direction. Shift gears with the engine running and the drive clutch levers released.

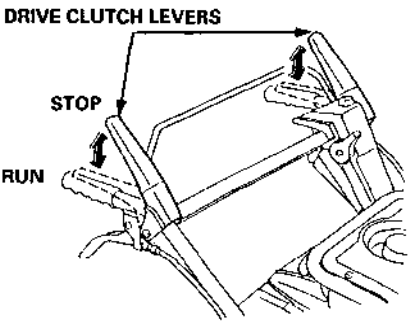




N: NEUTRAL
1: LOW SPEED
2: HIGH SPEED
R: REVERSE

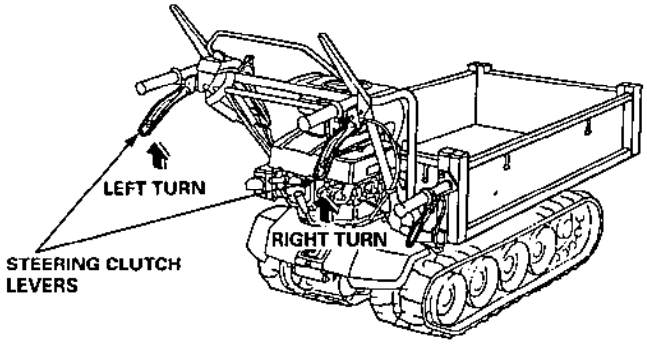
Drive Clutch Levers

Use the drive clutch levers to propel or stop the power carrier. The two levers are connected and move simultaneously. When the levers are held down against the handlebars, this releases the brake and engages the drive: the power carrier will move if the transmission is in gear. When the levers are released, this disengages the drive and applies the brake: the power carrier will stop.



Steering Clutch Levers

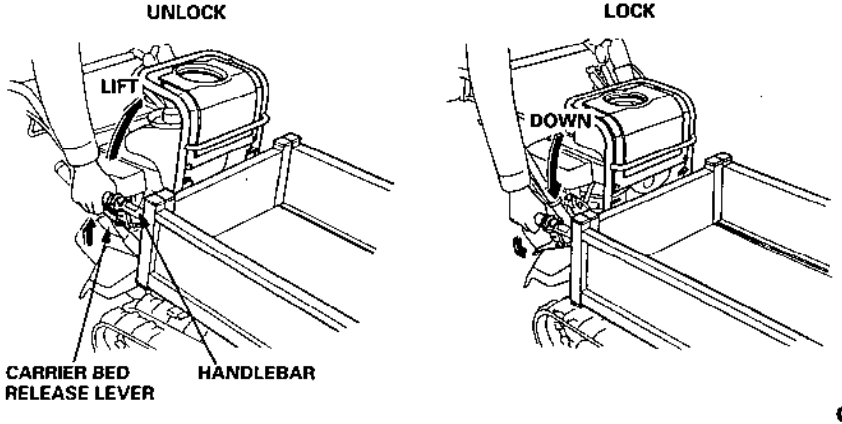
Use the steering clutch levers to steer the power carrier. Pull up the right lever to steer right. Pull up the left lever to steer left.



Carrier Bed Release Lever

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.



4. PRE-OPERATION CHECK

Fuel

Refueling

Fuel tank capacity: 1.6 ℓ (1.68 US gal, 1.41 Imp gal)

Check the fuel level, and refill the tank if the fuel level is low.

⚠ WARNING

Gasoline is highly flammable and explosive.

You can be burned or seriously injured when handling fuel.

- **Stop the engine and keep heat, sparks, and flames away.**
- **Handle fuel only outdoors.**
- **Wipe up spills immediately.**

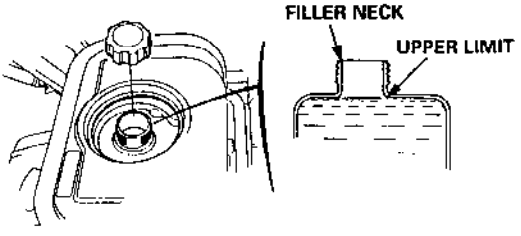
Refuel in a well-ventilated area before starting the engine. If the engine has been running, allow it to cool. Refuel carefully to avoid spilling fuel. Do not overfill: there should be no fuel in the filler neck. After refueling, tighten the fuel tank cap securely.

Never refuel the power carrier inside a building where gasoline fumes may reach flames or sparks. Keep gasoline away from appliance pilot lights, barbeques, electric appliances, power tools, etc.

Spilled fuel is not only a fire hazard, it causes environmental damage. Wipe up spills immediately.

NOTICE

Fuel can damage paint and plastic. Be careful not to spill fuel when filling your fuel tank. Damage caused by spilled fuel is not covered under warranty.



Fuel Recommendations

Use unleaded gasoline with a pump octane rating of 86 or higher.

This engine is designed to operate on unleaded gasoline. Unleaded gasoline produces fewer engine and spark plug deposits and extends exhaust system life.

Never use stale or contaminated gasoline or an oil/gasoline mixture. Avoid getting dirt or water in the fuel tank.

Occasionally you may hear a light "spark knock" or "pinging" (metallic rapping noise) while operating under heavy loads. This is no cause for concern.

If spark knock or pinging occurs at a steady engine speed, under normal load, change brands of gasoline. If spark knock or pinging persists, see an authorized Honda servicing dealer.

NOTICE

Running the engine with persistent spark knock or pinging can cause engine damage.

Running the engine with persistent spark knock or pinging is misuse, and the Distributor's Limited Warranty does not cover parts damaged by misuse.

Oxygenated Fuels

Some conventional gasolines are being blended with alcohol or an ether compound. These gasolines are collectively referred to as oxygenated fuels. To meet clean air standards, some areas of the United States and Canada use oxygenated fuels to help reduce emissions.

If you use an oxygenated fuel, be sure it is unleaded and meets the minimum octane rating requirement.

Before using an oxygenated fuel, try to confirm the fuel's contents. Some states/provinces require this information to be posted on the pump.

The following are the EPA-approved percentages of oxygenates:

ETHANOL — (ethyl or grain alcohol) 10% by volume
You may use gasoline containing up to 10% ethanol by volume. Gasoline containing ethanol may be marketed under the name "Gasohol".

MTBE — (Methyl Tertiary Butyl Ether) 15% by volume
You may use gasoline containing up to 15% MTBE by volume.

METHANOL — (methyl or wood alcohol) 5% by volume
You may use gasoline containing up to 5% methanol by volume, as long as it also contains cosolvents and corrosion inhibitors to protect the fuel system. Gasoline containing more than 5% methanol by volume may cause starting and/or performance problems. It may also damage metal, rubber, and plastic parts of your fuel system.

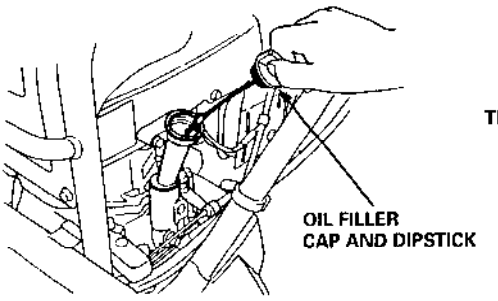
If you notice any undesirable operating symptoms, try another service station, or switch to another brand of gasoline.

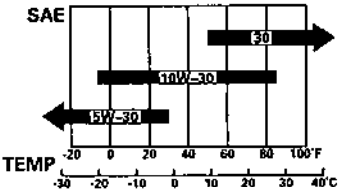
Fuel system damage or performance problems resulting from the use of an oxygenated fuel containing more than the percentages of oxygenates mentioned above are not covered under warranty.

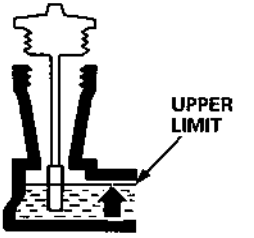
Engine Oil

Inspection:
With the power carrier on a level surface, remove the oil filler cap and wipe the dipstick clean. Insert the dipstick into the filler neck, but do not screw it in. Remove the dipstick and check the oil level.

If the level is low, fill to the upper limit mark with the recommended oil.







Oil capacity: 0.60 ℓ (0.63 US qt, 0.53 Imp qt)

Recommended oil
Use 4-stroke motor oil that meets or exceeds the requirements for API service classification SF or SG. Always check the API SERVICE label on the oil container to be sure it includes the letters SF or SG.

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.

NOTICE

- **Using nondetergent oil can shorten the engine's service life, and using 2-stroke oil can damage the engine.**
- **Running the engine with a low oil level can cause engine damage.**

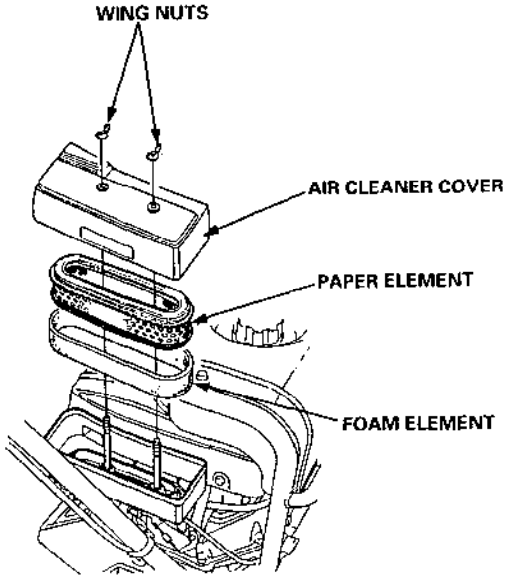
Air Cleaner

1. Remove the two wing nuts to remove the air cleaner cover.

2. Remove and inspect the air cleaner elements. If the elements are dirty, follow the cleaning procedure described on page 40.

3. Reinstall the air cleaner elements, cover and wing nuts. Securely tighten the wing nuts.

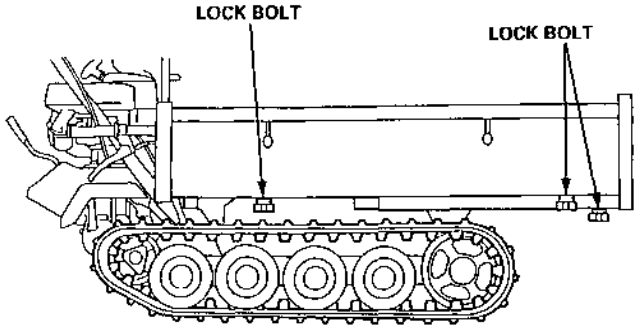
NOTICE **Never run engine without the air cleaner. Rapid engine wear will result from contaminants, such as dust and dirt, being drawn through the carburetor, into the engine.**



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.

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

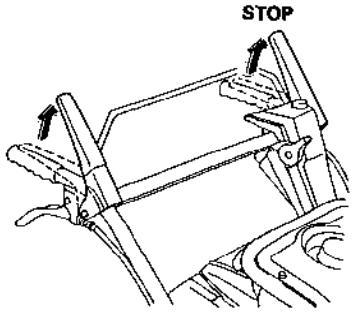


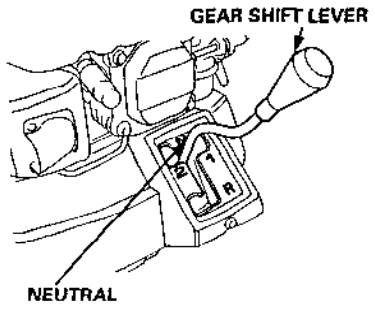
5. STARTING THE ENGINE

⚠ WARNING

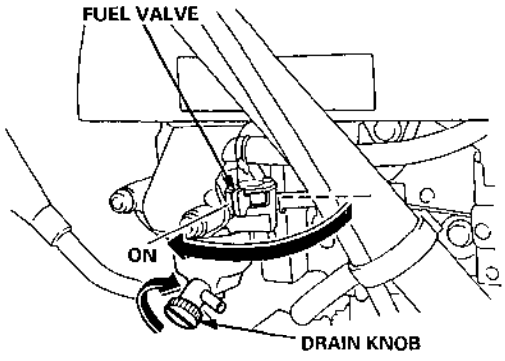
Never run the engine in an enclosed or confined area. Exhaust contains poisonous carbon monoxide gas; exposure can cause loss of consciousness and may lead to death.

1. Check that the gear shift lever is in the NEUTRAL position. Allow the drive clutch levers to remain in the STOP position.

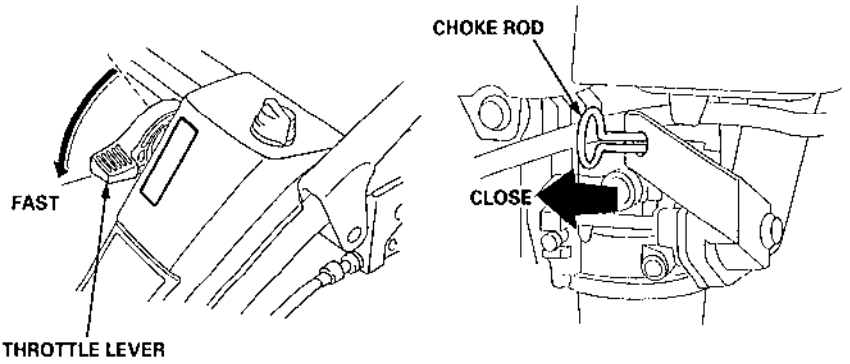




2. Turn the fuel valve to the ON position.
   Be sure the drain knob is tightened.

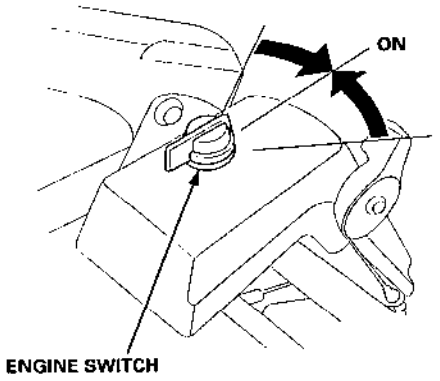


3. When the engine is cold, move the throttle lever to the FAST position and move the choke rod to the CLOSE position.

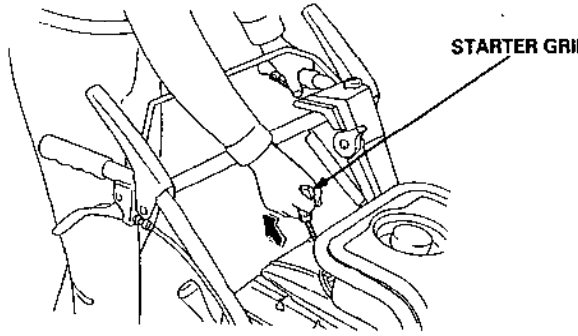


NOTE: If restarting a warm engine, the choke will not be needed. Restart a warm engine with the throttle lever in the SLOW position and choke rod in the OPEN position.

4. Turn the engine switch to the ON position.



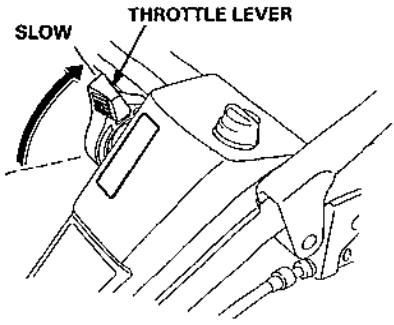
5. Pull the starter grip lightly until you feel resistance, then pull briskly.

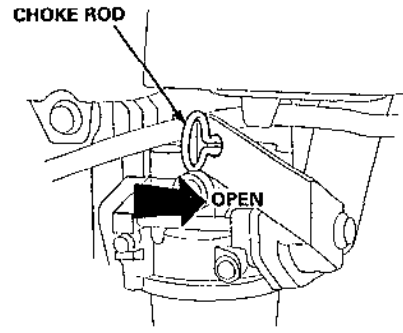


NOTICE

- **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 rod has been pulled to the CLOSE position, gradually move the choke rod to the OPEN position and move the throttle lever to the SLOW position as the engine warms up.

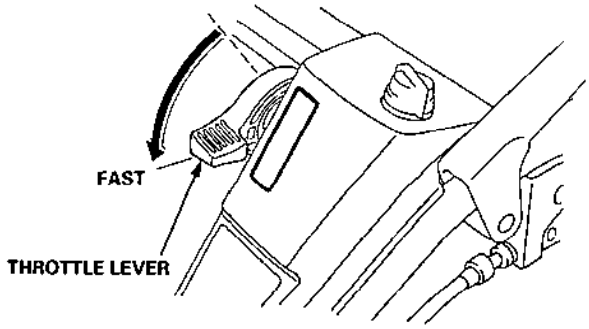




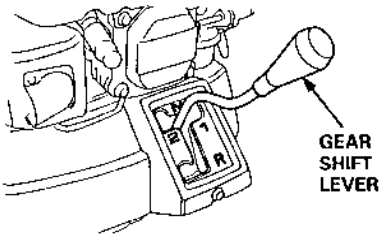
1. Start the engine according to the procedures described on page 16.

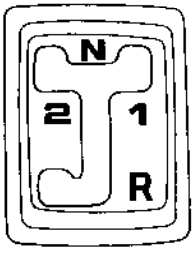
   Before operating this equipment you should read and understand the Safety information on page 4.

2. Move the throttle lever to the FAST position for normal operation.



3. Move the gear shift lever to the desired position.





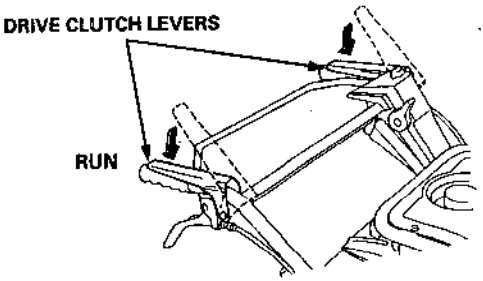
N: NEUTRAL
1: LOW SPEED
2: HIGH SPEED
R: REVERSE

⚠WARNING

- **To avoid loss of control, descend steep slopes in low (1) gear, using SLOW throttle position.**
- **Do not shift gears while the power carrier is moving.**

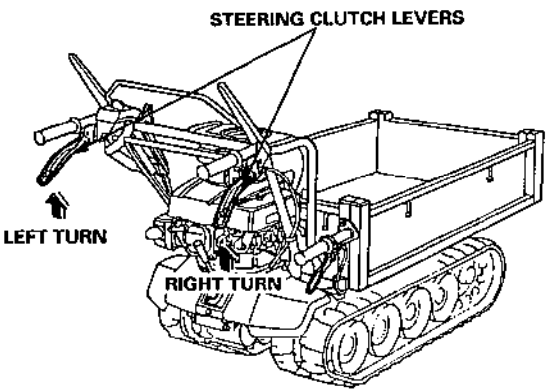
NOTICE **Always shift gears with the engine running and the drive clutch levers released.**

4. Squeeze the drive clutch levers down against the handlebars smoothly and quickly. The power carrier will now start to move.



If the engine stalls on a slope, release the drive clutch levers 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.



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

High Altitude Operation

At high altitude, the standard 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.

High altitude performance can be improved by specific modifications to the carburetor. If you always operate your power carrier at altitudes above 6,000 feet (1,800 meters), have your servicing dealer perform this carburetor modification.

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

NOTICE

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 6,000 feet (1,800 meters) 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.

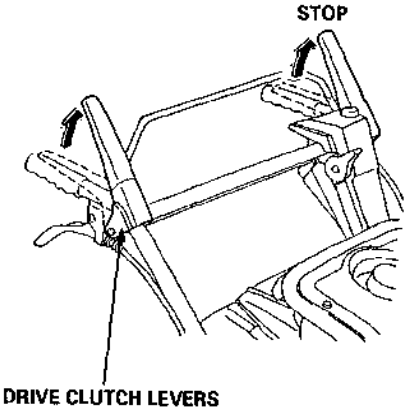
7. STOPPING THE ENGINE

In an emergency:

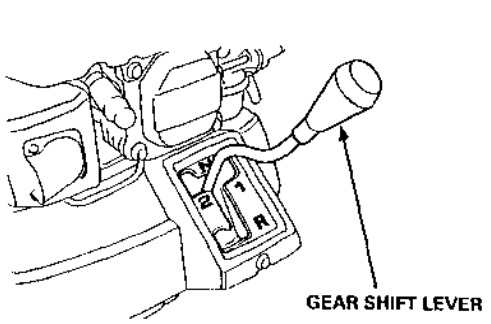
1. To stop the engine in an emergency, turn the engine switch to the OFF position.

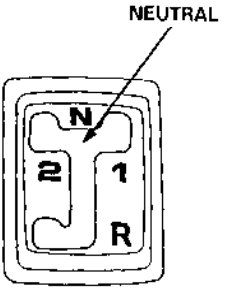
In normal use:

1. Release the drive clutch levers to disengage the drive and apply the brake.

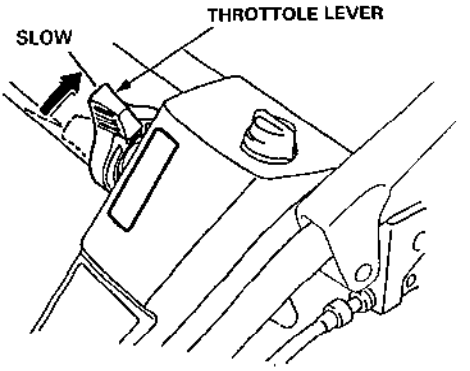


2. Move the gear shift lever to the NEUTRAL position.

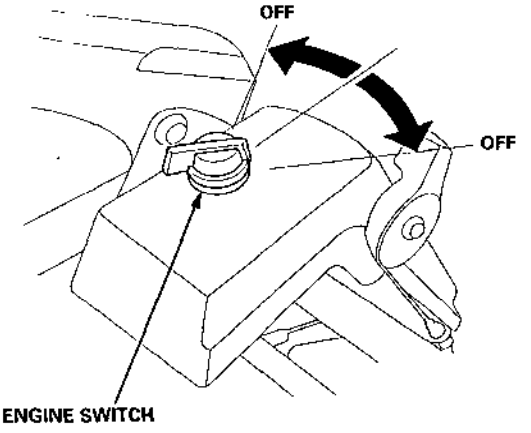




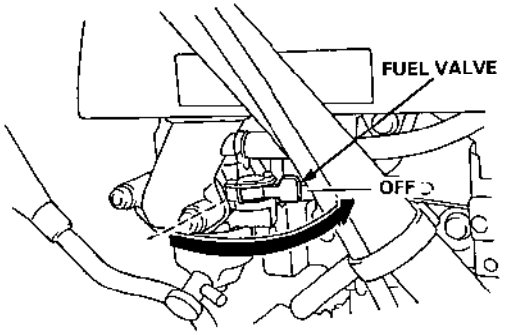
3. Move the throttle lever to the SLOW position.



4. Turn the engine switch to either OFF position.



5. Turn the fuel valve to the OFF position.



Load Carrying Safety

To avoid accidents or overturning:

- Observe the load limits described on page 29.
- 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 (1) 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 any slopes greater than 15°.

Tie-Down Hooks

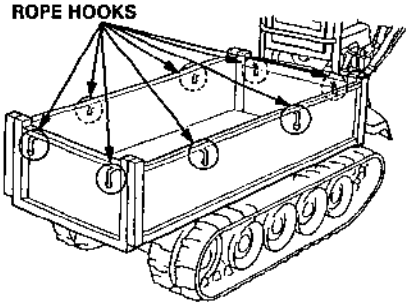
⚠ CAUTION

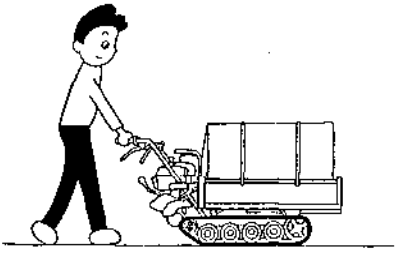
When loading objects onto the carrier, be sure to adhere to the regulated loading weight, proper loading methods and tilt angle. Failure to heed these regulations will not only exert an adverse effect on the engine and frame but will also create a hazard that the load may collapse or topple over.

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

NOTICE

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





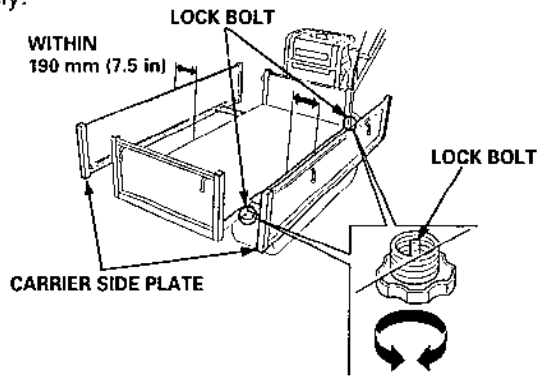
NOTICE

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.

Carrier Side Plate and Carrier Front Plate

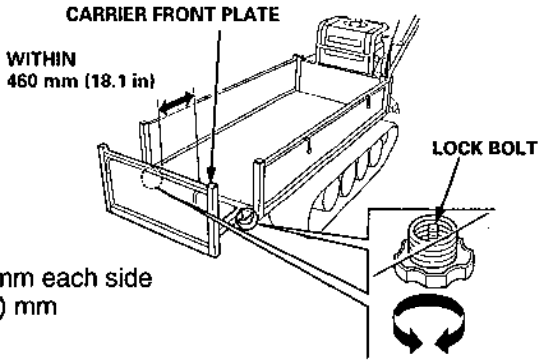
Side plates

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 7.5 in) 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 (7.5 in) mm each side
Front plate: 460 (18.1 in) mm

NOTICE

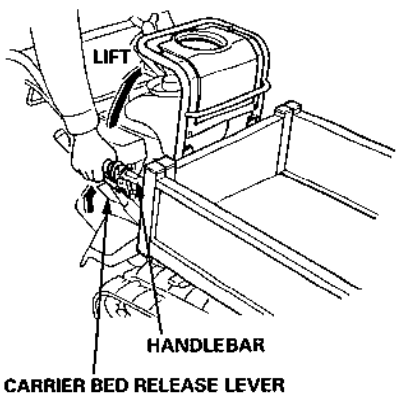
- **If the unit is used with the plates extended beyond the above dimensions, the carrier plates may come off, resulting in loss of the load.**
- **Use of the unit with the side plates extended and the front plate pulled out is limited to light loads transported over flat terrain.**

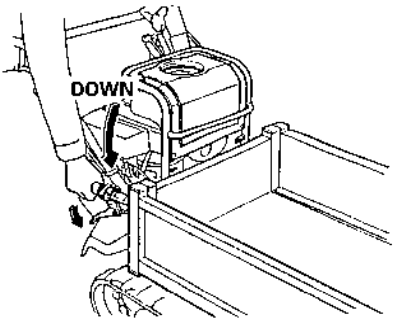
Dumping Loads

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

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.





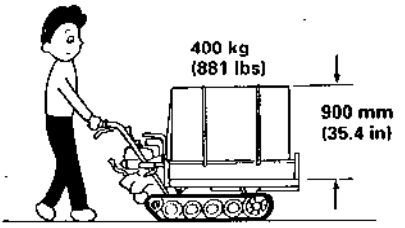
⚠ WARNING Before operating the power carrier, check that the carrier bed is locked. If the carrier bed is not locked, it may tilt while going downhill and accidentally dump the load, which may cause personal injury and property or equipment damage.

Load Carrying Capacity

⚠ WARNING

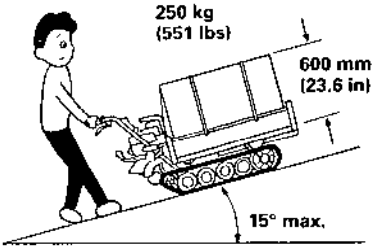
To avoid personal injury and property or equipment damage due to overturning, do not carry loads on any slopes greater than 15°. Observe the following safe loading and operating limits:

- For operation on lever ground –
  Maximum load:
  400 kg (881 lbs)
  Maximum load height:
  900 mm (35.4 in)

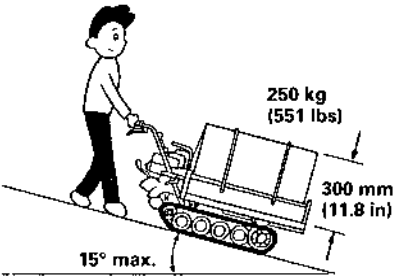


- For operation on slopes –
  Maximum load:
  250 kg (551 lbs)
  Maximum load height:
  600 mm (23.6 in) upward
  300 mm (11.8 in) downward
  Maximum slope:
  15° upward/15° downward

Slope with gradient of under 15°

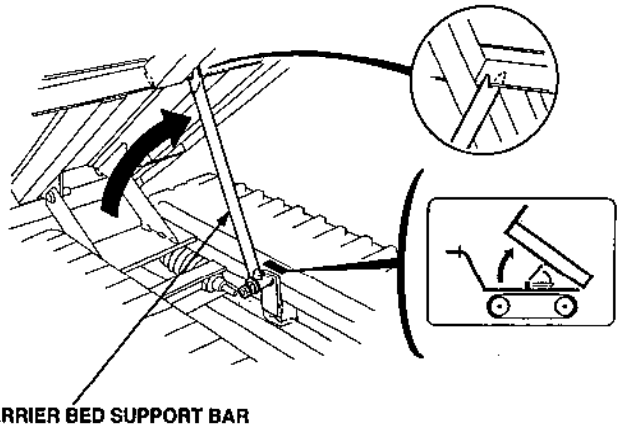


Slope with gradient of under 15°



Carrier Bed Support Bar

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



CARRIER BED SUPPORT BAR

⚠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 and cause personal injury or equipment damage.

The Importance of Maintenance

Good maintenance is essential for safe, economical, and trouble-free operation. It will also help reduce air pollution.

To help you properly care for your power carrier, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures using basic hand tools. Other service tasks that are more difficult, or require special tools, are best handled by professionals and are normally performed by a Honda technician or other qualified mechanic.

The maintenance schedule applies to normal operating conditions. If you operate your power carrier under unusual conditions, consult your servicing dealer for recommendations applicable to your individual needs and use.

⚠WARNING

Improper maintenance, or failure to correct a problem before operation, can cause a malfunction in which you can be seriously hurt or killed.

Always follow the inspection and maintenance recommendations and schedules in this owner's manual.

Maintenance Safety

Some of the most important safety precautions follow. However, we cannot warn you of every conceivable hazard that can arise in performing maintenance. Only you can decide whether or not you should perform a given task.

⚠ WARNING

Failure to properly follow maintenance instructions and precautions can cause you to be seriously hurt or killed.

Always follow the procedures and precautions in the owner's manual.

Safety precautions

- Make sure the engine is off before you begin any maintenance or repairs. This will eliminate several potential hazards:

  — **Carbon monoxide poisoning from engine exhaust.**
  Be sure there is adequate ventilation whenever you operate the engine.

  — **Burns from hot parts.**
  Let the engine and exhaust system cool before touching.

  — **Injury from moving parts.**
  Do not run the engine unless instructed to do so.

- Read the instructions before you begin, and make sure you have the tools and skills requred.

- To reduce the possibility of fire or explosion, be careful when working around gasoline. Use only a nonflammable solvent, not gasoline, to clean parts. Keep cigarettes, sparks, and flames away from all fuel-related parts.

Remember that your servicing dealer knows your power carrier best and is fully equipped to maintain and repair it.

To ensure the best quality and reliability, use only new, genuine Honda parts or their equivalents for repair or replacement.

Proper Maintenance is the Owner's Responsibility

Replacement parts

Honda recommends only the use of new, genuine Honda parts or their equivalent. The use of other replacement parts which are not of equivalent quality may damage the power carrier.

Maintenance

Follow the maintenance schedule on page 34. Remember that this schedule is based on the assumption that your machine will be used for its designed purpose. Sustained high-load or high-temperature operation, or use in unusually wet conditions, will require more frequent service.

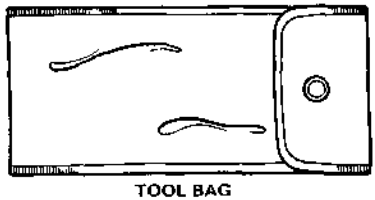
Maintenance Schedule

ITEM \ REGULAR SERVICE PERIOD — Perform at every indicated month or operating hour interval, whichever comes first.		EACH USE	FIRST MONTH OR 50 HRS	EVERY 3 MONTHS OR 50 HRS	EVERY 6 MONTHS OR 100 HRS	EVERY YEAR OR 300 HRS
Engine oil	Check level	O				
	Change		O		O	
Air cleaner	Check	O				
	Clean			O (1)		
Tracks	Check	O				
	Adjust		O			O
Drive clutch cable	Check-Adjust		O		O	
Steering clutch cable	Check-Adjust		O		O	
Brake cable	Check-Adjust		O		O	
Spark plug	Check-Clean				O	
Spark arrester (optional part)	Clean				O	
Carrier bed release cable	Check-Adjust				O	
Throttle control cable	Check-Adjust					O(2)
Brake shoe	Check				O	
	Change					O(2)
Clutch shoe	Change					O(2)
Clutch oil	Check					O
Transmission oil	Check					O
Grease application						O
Valve clearance	Check-Adjust					O(2)
Fuel tank and strainer	Clean					O(2)
Fuel line	Check (Replace if necessary)	Every 2 years (2)				

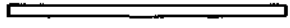
NOTE: (1) Service more frequently when used in dusty areas.
(2) These items should be serviced by an authorized Honda dealer, unless the owner has the proper tools and is mechanically proficient. See the Honda Shop Manual.

Tool Kit

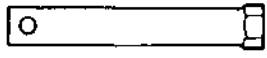
The tools supplied with the carrier are necessary for performing some periodic maintenance, simple adjustments and repairs. Always keep the tool kit with the carrier.



TOOL BAG



SPARK PLUG WRENCH HANDLE



SPARK PLUG WRENCH

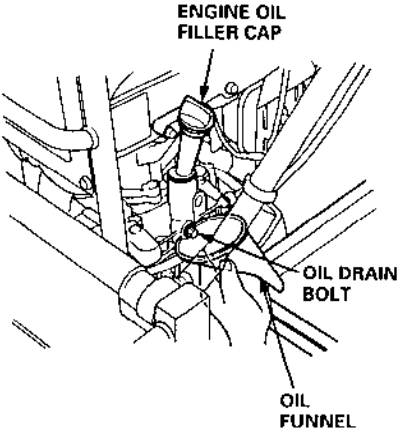
OIL FUNNEL

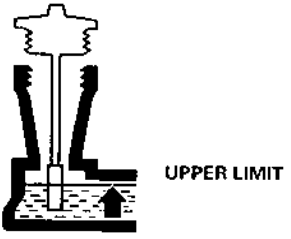
Engine Oil Change

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

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 oil drain bolt securely.
4. Fill the crankcase with the recommended oil (see page 13) and check the level.
5. After refilling, tighten the cap securely.

Oil capacity: 0.60 ℓ (0.63 US qt, 0.53 Imp qt)





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

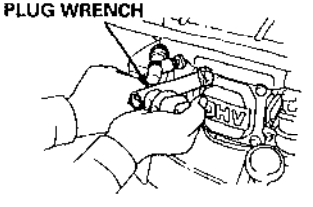
NOTE:
Please dispose of used motor oil in a manner that is compatible with the environment. We suggest you take it in a sealed container to your local recycling center or service station for reclamation. Do not throw it in the trash, pour it on the ground, or down the drain.

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

1. Remove the spark plug cap.

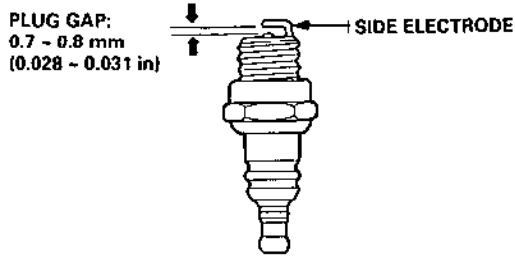


2. Clean any dirt from around the spark plug base.

3. Use the wrench supplied in the tool kit to remove the spark plug.

4. Inspect the spark plug. Discard it if the electrodes are worn or if the insulator is cracked or chipped. If it is to be reused, clean the electrode and insulator with a wire brush.

5. Measure the plug gap with a feeler gauge.
   Correct as necessary by bending the side electrode.
   The gap should be:
   0.70 — 0.80 mm (0.028 — 0.031 in)



6. Make sure that the spark plug washer is in good condition, and thread the spark plug in by hand to prevent cross-threading.

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

NOTE:
If installing a new spark plug, tighten 1/2 turn after the spark plug seats to compress the washer. If reinstalling a used spark plug, tighten 1/8 to 1/4 turn after the spark plug seats.

NOTICE

- **Use only the recommended spark plug or equivalent. Spark plug which have an improper heat range may cause engine damage.**

- **The spark plug must be securely tightened. An improperly tightened spark plug can become very hot and may damage the engine.**

Air Cleaner Service

A dirty air filter will restrict air flow to the carburetor, reducing engine performance. If you operate the power carrier in very dusty areas, clean the air filter more often than specified in the Maintenance Schedule.

NOTICE

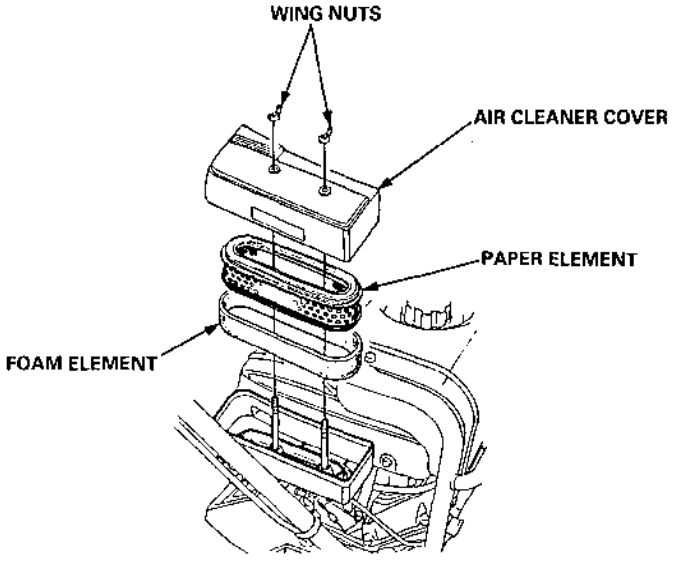
Operating the engine without an air filter, or with a damaged air filter, will allow dirt to enter the engine, causing rapid engine wear. This type of damage is not covered by the Distributor's Limited Warranty.

Removal

1. Unscrew the wing nuts and remove the air cleaner cover.

2. Remove both air filter elements.

3. Separate both air filter elements and carefully check them for holes or tears and replace as necessary.

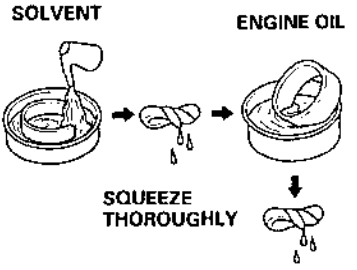


Cleaning

1. Paper element: Tap the element lightly several times on a hard surface to remove excess dirt, or blow compressed air [not exceeding 270 kPa (30 psi)] through the filter element from the inside out. Never try to brush the dirt off; brushing will force dirt into the paper fibers. Replace the paper element if it is excessively dirty or damaged.

2. Foam element cleaning: Wash the element in a solution of household detergent and warm water, then rinse thoroughly, or wash in nonflammable solvent.

3. Allow the element to dry thoroughly. Soak the element in clean engine oil and squeeze out the excess oil.



NOTICE

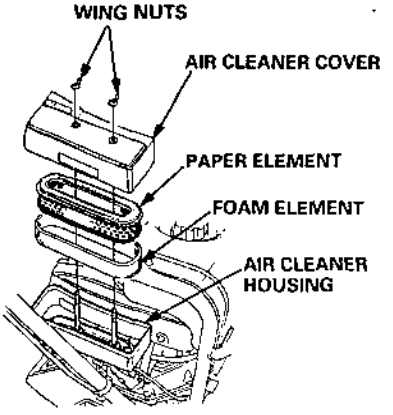
Excess oil will restrict air flow through the foam filter element and may transfer to the paper filter element, soaking and clogging it.

Installation

1. Wipe dirt from the inside of the air cleaner housing and cover. Be careful to prevent dirt from entering the air duct that leads to the carburetor.

2. Install the foam element over the paper element, and install the assembled air filter.

3. Install the air cleaner cover, and secure with the wing nuts.

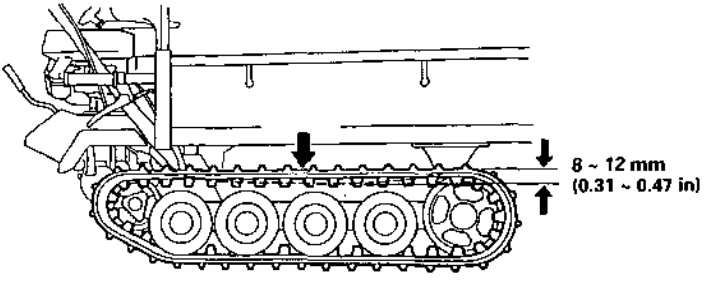


Adjusting the Track Tension

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

Inspection

Check that the track deflection is between 8~12 mm (0.31~0.47 in) when a force (about 10 kg, 22.1 lb) is applied to the middle of the tracks.



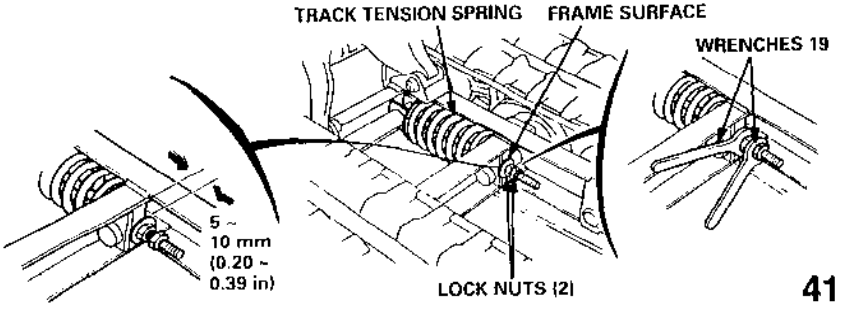
Track adjustment

1. Tip up the carrier.
   Loosen the two lock nuts until there is space between the nuts and the frame.

2. Tighten the inner lock nut by hand until clearance between the lock nut and frame is 5~10 mm (0.20~0.39 in).

3. Hold the inner lock nut and tighten the other lock nut against it securely.

NOTE: Use the two 19 mm wrenches as illustrated.



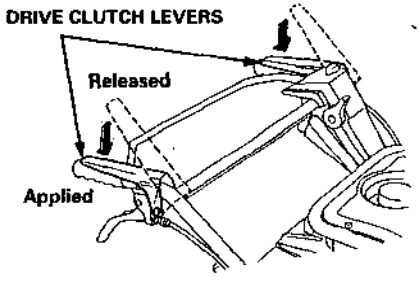
Adjusting the Drive Clutch Cable

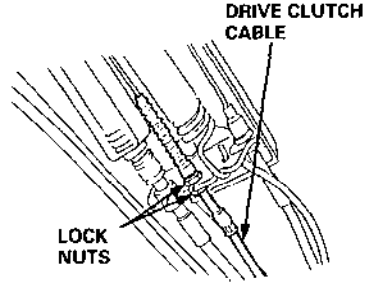
The clutch will slip and the power carrier may not move unless the drive clutch cable is adjusted properly.

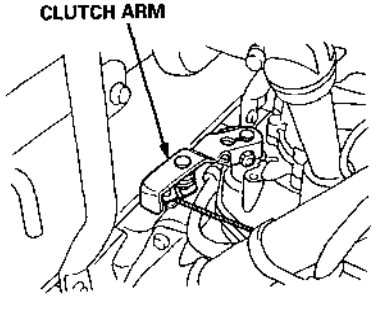
1. Measure and record the distance between the clutch arm and cable holder with the drive clutch levers at their released position (STOP). Next, measure the same distance again with the levers at their applied position (DRIVE).
   The distance in the applied position should be 1~2 mm (0.04~0.08 in) more than in the released position.

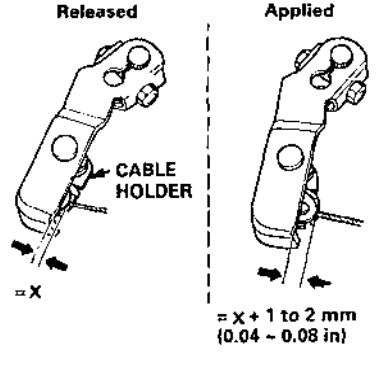
2. To adjust, loosen the lock nuts and while repeatedly applying and releasing the drive clutch levers, adjust so the change in distance of the cable holder to the clutch arm is 1~2 mm (0.04~0.08 in).

3. After adjustment, tighten the lock nuts.







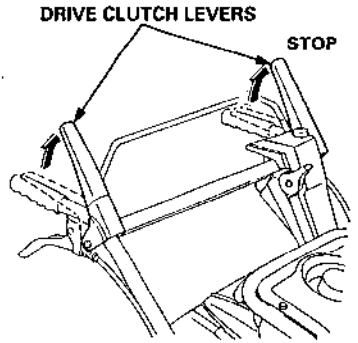


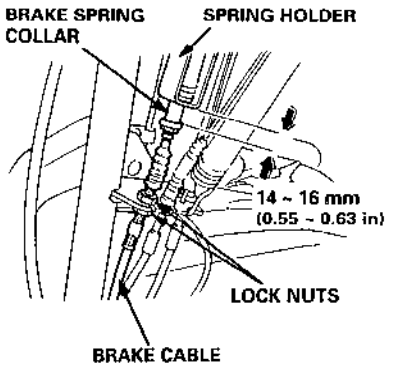
Adjusting the Brake Cable

1. Check whether the brake spring collar is 14 ~16 mm (0.55~0.63 in) from the spring holder when the drive clutch levers are at their released (STOP) position.

2. To adjust, loosen the lock nuts with the levers still at the stop position, and adjust the cable to the specified value.

3. After adjustment, tighten the lock nuts.

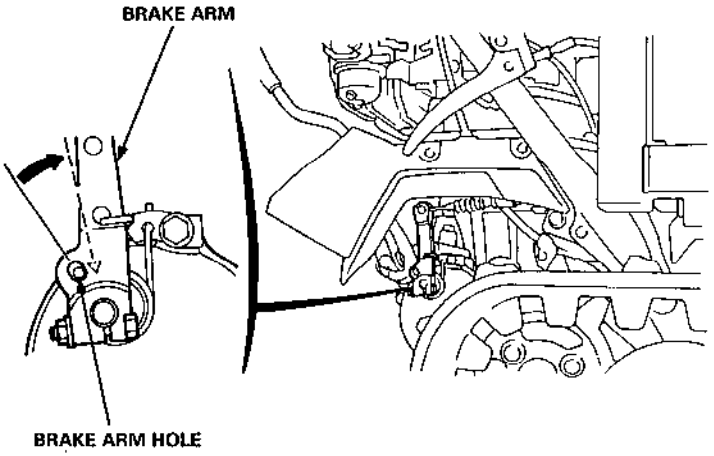




Checking Brake Wear

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

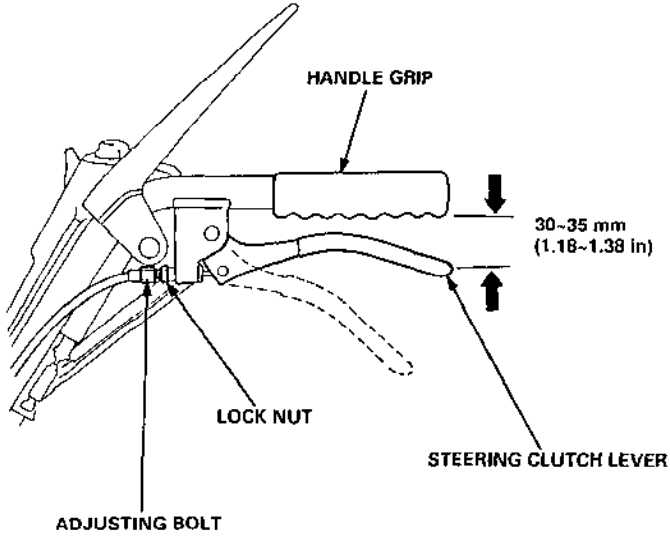
Brake shoe wear is OK if you cannot see the "Δ" mark through the brake arm hole, when the drive clutch lever is in its released position (STOP). However, if you can see any part of the ("Δ") mark, the brake has worn past its service limit; contact your authorized Honda dealer.



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 30~35 mm (1.18~1.38 in).
3. To adjust, loosen the lock nut with the lever gripped, and turn the adjusting bolt to get the specified clearance.
4. After the adjustment, tighten the lock nut.

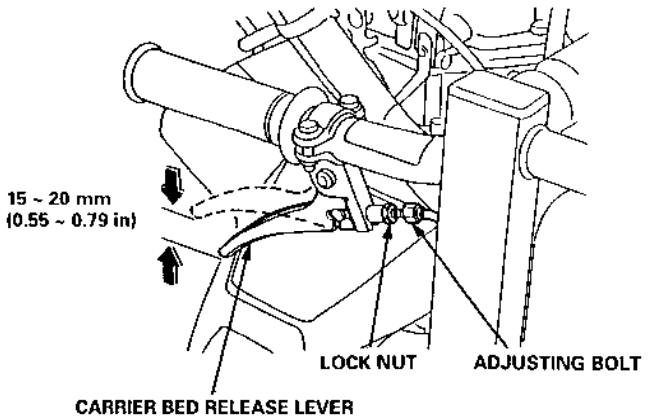


Adjusting the Dumping Lock Cable

1. With the carrier locked, check whether the play at the end of the carrier bed release lever is 15~20 mm (0.55~0.79 in).

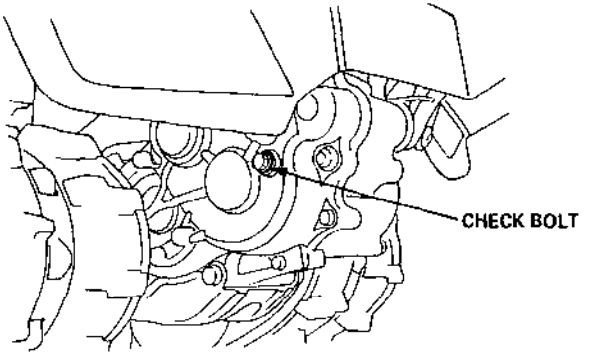
2. To adjust, loosen the lock nut and turn the adjusting bolt to set the specified distance.

3. After adjustment, tighten the lock nut.



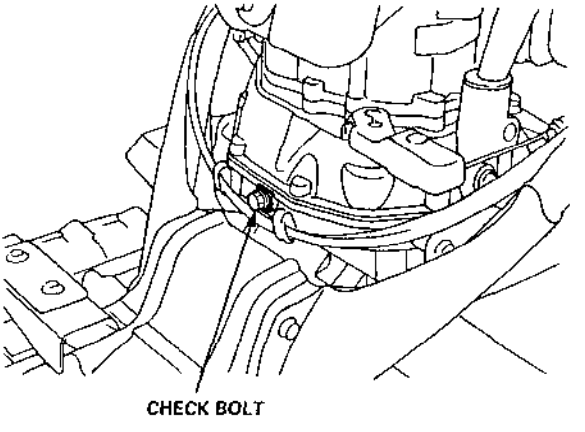
Checking the Transmission Oil

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 13.



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 13.



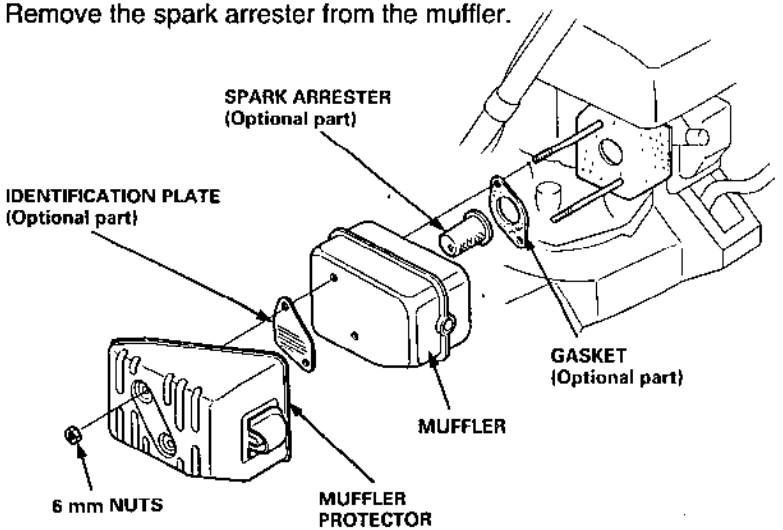
Spark Arrester Service (Optional part)

Your engine is not factory-equipped with a spark arrester. In some areas, it is illegal to operate an engine without a spark arrester. Check local laws and regulations. A spark arrester is available from authorized Honda servicing dealers.

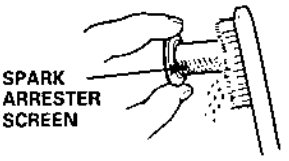
The spark arrester must be serviced every 100 hours to keep it functioning as designed.

If the engine has been running, the muffler will be very hot. Allow the muffler to cool before servicing the spark arrester.

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

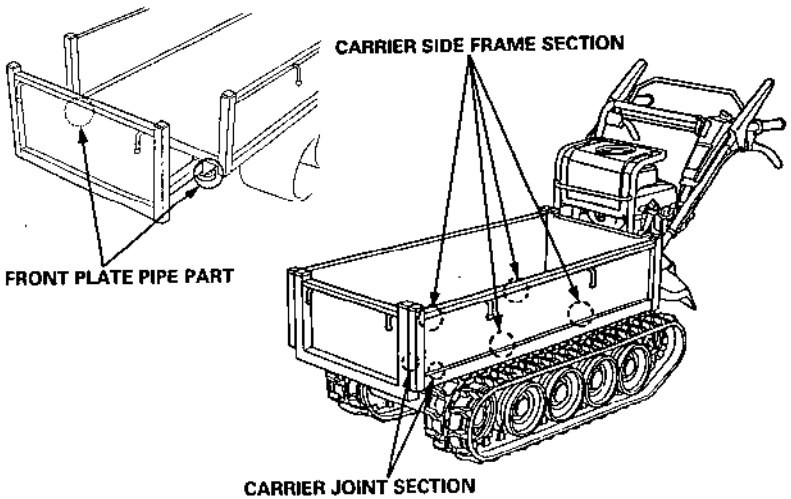


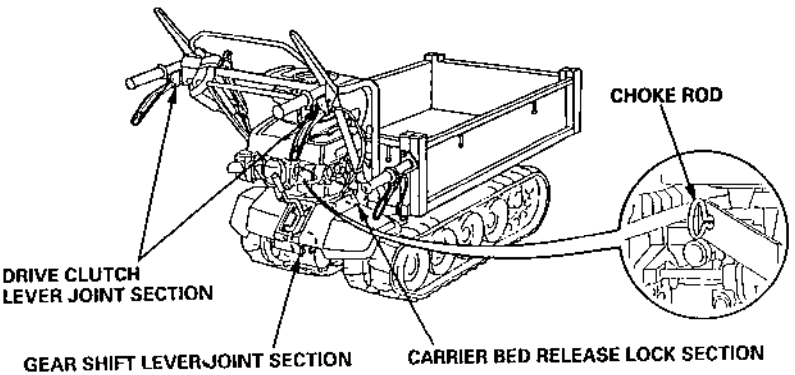
3. Use a brush to remove carbon deposits from the spark arrester screen. Be careful not to damage the spark arrester screen.
4. Inspect the spark arrester for breaks and holes. Replace it if necessary.
5. Install the spark arrester and the muffler in the reverse order of disassembly.



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 22).

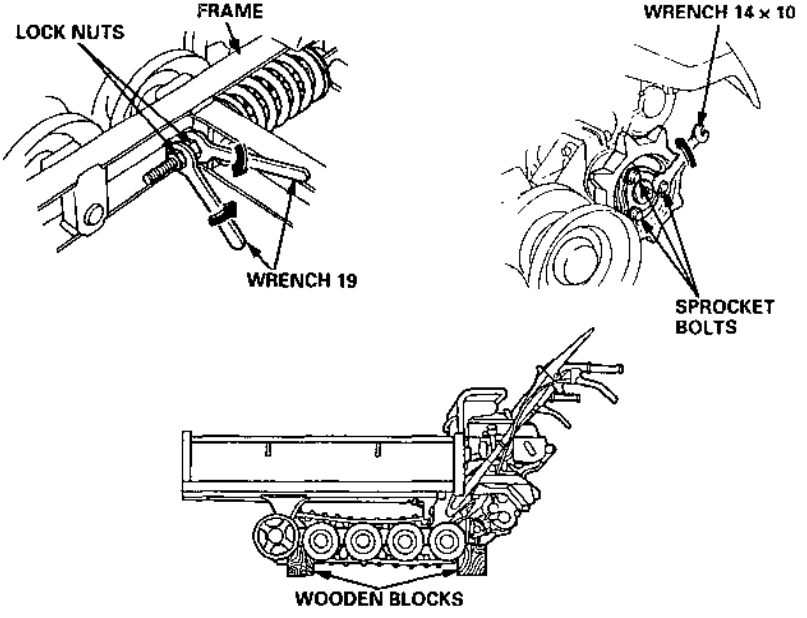
2. Remove any load in the carrier, by hand. Do not empty it by dumping the carrier.

3. Move the power carrier to a flat surface and support on wood blocks in two locations (so the wheels are off the ground). Dump the carrier.

NOTICE **A carrier with a disengaged track will fall over if the carrier is dumped, unless first secured with wood 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 sprocket bolts.

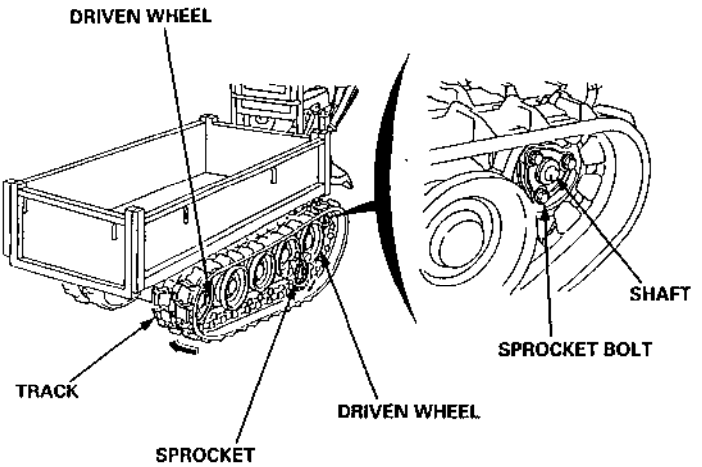


6. Remove the sprocket.

7. Place the track over the driven wheel, and engage the sprocket with the track teeth.

8. Push the sprocket and track toward the rear, then slide the sprocket onto the sprocket shaft.

9. Install and tighten the sprocket bolts securely.



10. Remove the wooden blocks and make sure the power carrier is level. Then adjust track tension.

NOTICE

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

10. TRANSPORTING/STORAGE

If the engine has been running, allow it to cool for at least 15 minutes before loading the power carrier on the transport vehicle or placing it in storage. A hot engine and exhaust system can burn you and can ignite some materials.

Turn the fuel valve to the OFF position, and transport or store the power carrier in a level position. This will prevent carburetor flooding and reduce the possibility of fuel leakage.

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

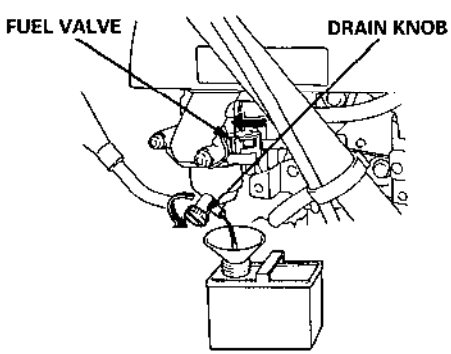
Gasoline is highly flammable and explosive.

You can be burned or seriously injured when handling fuel.

- **Stop the engine and keep heat, sparks, and flames away.**
- **Handle fuel only outdoors.**
- **Wipe up spills immediately.**

a. Turn the fuel valve ON.

b. Loosen the carburetor drain knob, and drain the gosoline into a suitable container. After draining, retighten the drain knob and turn the fuel valve OFF.



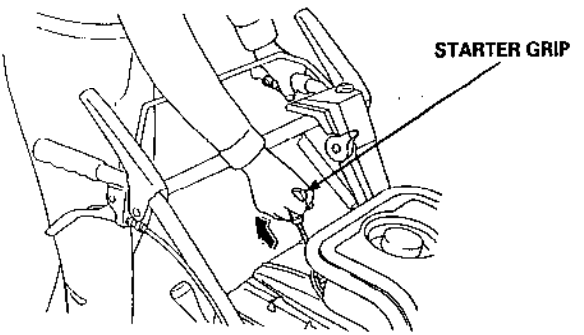
3. Change the engine oil (see page 36 for details).

4. Clean the air cleaner (see page 40 for details).

5. Clean the power carrier and inspect all parts to make sure they are securely tightened. Lubricate the points noted on page 49.

NOTE: If the carrier will be stored for more than three months, remove the spark plug, pour a tablespoon (5~10cc) of clean engine oil into the cylinder. Pull the starter rope slowly two or three times to distribute the oil. Reinstall the spark plug.

6. Pull the starter grip until resistance is felt. This closes the valves and protects the engine from internal corrosion.



7. With the engine and exhaust system cool, cover the power carrier to keep out dust. A hot engine and exhaust system can ignite or melt some materials. Do not use sheet plastic as a dust cover. A nonporous cover will trap moisture around the power carrier, promoting rust and corrosion.

11. 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.

- Is there sufficient fuel?
- Is there sufficient engine oil?
- Is there a spark at the spark plug?

a. Remove the spark plug cap. Clean any dirt from around the spark pulg base, then remove the spark plug.

b. Install the spark plug in the plug cap.

c. Turn the engine switch on.

d. Ground the side electrode at any engine ground and crank the engine to see if sparks jump across the gap.

⚠ WARNING

Gasoline is highly flammable and explosive.

If ignited, gasoline can burn you severely.

- **Be sure there is no spilled fuel near the engine.**
- **Place the spark plug away from the spark plug hole.**

e. If there are no sparks, replace the plug. If sparks occur, install the spark plug, and try to start the engine according to the instructions.

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

- Is the drive clutch cable adjusted (page 42)?
- Are the steering clutch cables adjusted (page 45)?
- Is the brake cable properly adjusted (page 43)?
- Are the tracks adjusted to proper tension (page 41)?

Type	Honda power carrier HP400 K3 (BA)
Power product discription code	NAA

Engine	GXV120
Engine type	4-stroke, overhead valve, 1 cylinder
Displacement	118 cm³ (7.2 cu in)
Bore and stroke	60 × 42 mm (2.4 × 1.7 in)
Ignition timing	25° BTDC
Ignition system	Transistorized magneto ignition
Engine oil capacity	0.6 ℓ (0.63 US gal, 0.53 Imp gal)
Fuel tank capacity	1.6 ℓ (1.68 US gal, 1.41 Imp gal)
Spark plug	BPR4ES (NGK) W14ERR-U (DENSO)

FRAME

Overall length		1900 mm (74.8 in)
Overall width		635 mm (24.9 in)
Overall height		1055 mm (41.5 in)
Dry weight		178 kg (392 lbs)
Unloaded operating weight		181 kg (399 lbs)
No. of gears		2 forward gears, 1 reverse gear
Traveling 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 capacity	Level ground	400 kg (881 lb)
	Sloping ground	250 kg (551 lb)
Clutch oil capacity		0.8 ℓ (0.84 US qt, 0.71 Imp qt)
Transmission oil capacity		2.0 ℓ (0.21 US qt, 1.76 Imp qt)
Track width × length		180 mm × 2220 mm (7.1 × 87.4 in)

NOTE: Specifications are subject to change without notice.

13. WARRANTY SERVICE INFORMATION

Honda power equipment dealership personnel are trained professionals. They should be able to answer any question you may have. If you encounter a problem that your dealer does not solve to your satisfaction, please discuss it with the dealership's management. The Service Manager or General Manager can help. Almost all problems are solved in this way.

If you are dissatisfied with the decision made by the dealership's management, contact the Honda Power Equipment Customer Relations Office. You can write to:

American Honda Motor Co., Inc
Power Equipment Division
Customer Relations Office
4475 River Green Parkway
Duluth, Georgia 30136-9420

Or telephone: (770)497-6400

When you write or call, please give us this information:

- Model and serial number
- Name of dealer who sold the power carrier to you
- Name and address of dealer who services your power carrier
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem

Current customer service contact information:

United States, Puerto Rico, and U.S. Virgin Islands:

Honda Power Equipment dealership personnel are trained professionals. They should be able to answer any question you may have. If you encounter a problem that your dealer does not solve to your satisfaction, please discuss it with the dealership's management. The Service Manager or General Manager can help. Almost all problems are solved in this way.

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American Honda Motor Co., Inc.
Power Equipment Division
Customer Relations Office
4900 Marconi Drive
Alpharetta, GA 30005-8847

Or telephone: (770) 497-6400 M-F, 8:30 am - 7:00 pm EST

When you write or call, please provide the following information:

- Model and serial numbers
- Name of the dealer who sold the Honda power equipment to you
- Name and address of the dealer who services your equipment
- Date of purchase
- Your name, address, and telephone number
- A detailed description of the problem

14. INDEX

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