2022 Owner's Manual

CRF450X



Models sold in and used in California:
The removal or modification of evaporative emissions-related parts on this OHRV is illegal. Violators may be subject to civil and/or criminal penalties as provided under California and federal law.

HONDA

This manual should be considered a permanent part of the vehicle and should remain with the vehicle when it is resold.

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The vehicle pictured in this owner's manual may not match your actual vehicle.

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IMPORTANT NOTICE

FOR RECREATIONAL OFF-ROAD OR COMPETITION USE ONLY

This vehicle is designed and manufactured for recreational off-road use or competition only and is covered by a noise control warranty. It does not conform to federal motor vehicle safety standards or US EPA On Highway Exhaust Emission regulations, and operation on public streets, roads, or highways is illegal. The vehicle is equipped with a USDA qualified spark arrester. If you need to cross a paved or public road, get off and walk your vehicle across. Obey local laws and regulations.

It conforms to US EPA and California emission regulations for off-road motorcycles.

Do not modify any emission-related items except for competition use. Any emission-related modifications should be restored to standard factory specifications before resuming recreational off-road use.

NO PASSENGERS

This vehicle is designed and constructed as an operator-only model. The motorcycle load limit and seating configuration do not safely permit the carrying of a passenger.

Welcome

Congratulations on your purchase of a new Honda vehicle. Your selection of a Honda makes you part of a worldwide family of satisfied customers who appreciate Honda's reputation for building quality into every product.

Your vehicle was designed as a recreational motorcycle for off-road use by one rider only.

To ensure your safety and riding pleasure:

- Read this owner's manual and competition handbook carefully.
- Follow all recommendations and procedures contained in this owner's manual and competition handbook.
- Pay close attention to safety messages contained in this owner's manual, competition handbook, and on the vehicle.

To protect your investment, we urge you to take responsibility for keeping your vehicle well-serviced and maintained. Also, observe the break-in guidelines and always perform the pre-ride inspection and other periodic checks in this manual.

When service is required, remember that your Honda dealer knows your vehicle best. If you have the required mechanical "know-how" and tools, you can purchase an official Honda Service Manual to help you perform many maintenance and repair tasks. ➔P. 92

Read the warranty information thoroughly so that you understand the warranty coverage and are aware of your rights and responsibilities. ➔P. 93

You may also want to visit our website at www.powersports.honda.com.
Happy riding!

A Few Words About Safety

Your safety, and the safety of others, is very important. Operating this vehicle safely is an important responsibility.
To help you make informed decisions about safety, we have provided operating procedures and other information on safety labels in this owner's manual and competition handbook. This information alerts you to potential hazards that could hurt you or others.
Of course, it is not practical or possible to warn you about all hazards associated with operating or maintaining a vehicle. You must use your own good judgment.

You will find important safety information in a variety of forms, including:

- Safety labels on the vehicle
- Safety Messages preceded by a safety alert symbol ⚠ and one of three signal words: DANGER, WARNING, or CAUTION. These signal words 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.

Other important information is provided under the following titles:

NOTICE Information to help you avoid damage to your vehicle, other property, or the environment.

Contents

Vehicle Safety P. 2

Operation Guide P. 14

Maintenance P. 36

Troubleshooting P. 65

Information P. 75

Specifications P. 97

Vehicle Safety

This section contains important information for safe riding of your vehicle.
Please read this section carefully.

Safety Guidelines ..... P. 3
Safety Labels ..... P. 7
Safety Precautions ..... P. 8
Riding Precautions ..... P. 9
Accessories & Modifications ..... P. 12
Loading ..... P. 13

Safety Guidelines

Follow these guidelines to enhance your safety:

- Perform all routine and regular inspections specified in this owner's manual and competition handbook.
- Stop the engine and keep sparks and flames away before filling the fuel tank.
- Do not run the engine in enclosed or partly enclosed areas. Carbon monoxide in exhaust gases is toxic and can kill you.

Always Wear a Helmet

It's a proven fact: helmets and protective apparel significantly reduce the number and severity of head and other injuries. So always wear an approved helmet and protective apparel. ➔P. 8

Before Riding

Make sure that you are physically fit, mentally focused and free of alcohol and drugs. Check that you are wearing an approved helmet and protective apparel.

Take Time to Learn & Practice

Developing off-road riding skill is a gradual step-by step process. Start by practicing at low speeds in a safe area and slowly build your skills.

Ask your dealer if there are off-road riding groups in your area where you can learn from experienced riders. Also be sure to read Tips & Practice Guide for the Off-Highway Motorcyclist that came with your new vehicle.

Be Alert for Off-road Hazards

The terrain can be present a variety of challenges when you ride off-road.

Continually "read" the terrain for unexpected turns, drop-offs, rocks, ruts and other hazards. Always keep your speed low enough to allow time to see and react to hazards.

Ride within Your Limits

Never ride beyond your personal abilities or faster than conditions warrant. Fatigue and inattention can impair your ability to use good judgment and ride safely.

Never Carry a Passenger

There are no handholds, seat, or footrests to carry a passenger.

Don't Drink or Use Drugs and Ride

Alcohol or drugs and riding don't mix. Even one alcoholic drink can reduce your ability to respond to changing conditions, and your reaction time gets worse with every additional drink. The same is true for drug use. Don't drink or use and ride, and don't let your friends do it either.

Keep Your Honda in Safe Condition

It's important to keep your vehicle properly maintained and in safe riding condition. Having a breakdown can be difficult, especially if you are stranded off-road far from your base. Inspect your vehicle before every ride and perform all recommended maintenance. Follow the loading guidelines (P. 13), and do not modify your vehicle or install accessories that would make your vehicle unsafe (P. 12).

If You are Involved in a Crash

Personal safety is your first priority after a crash. If you or anyone else has been injured, take time to assess the severity of the injuries and whether it is safe to continue riding. If you cannot ride safely, send someone for help. Do not ride if you will risk further injury.

If you decide that you are capable of riding safely, first evaluate the condition of your vehicle. If the engine is still running, turn it off and look it over carefully; inspect it for fluid leaks, check the tightness of critical nuts and bolts, and secure such parts as the handlebar, control levers, brakes, and wheels.
If there is minor damage, or you are unsure about possible damage but decide to try riding the vehicle back to your base, ride slowly and cautiously.

Lithium-Ion (Li-Ion) Battery

If you smell an unusual odor coming from the lithium-ion (li-ion) battery, park your vehicle in a safe place outside and away from flammable objects, then stop the engine. Have your vehicle inspected by your dealer immediately.

Continued

Carbon Monoxide Hazard

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

If you run the engine in confined or even partly enclosed area, the air you breathe could contain a dangerous amount of carbon monoxide.
Never run your vehicle inside a garage or other enclosure.

⚠WARNING

Running the engine of your vehicle while in an enclosed or even partially enclosed area can cause a rapid build-up of toxic carbon monoxide gas.

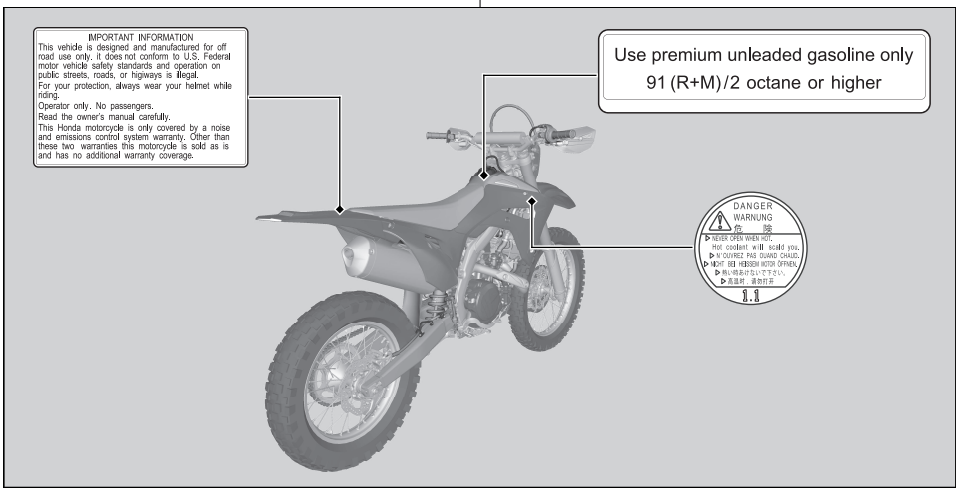
Breathing this colorless, odorless gas can quickly cause unconsciousness and lead to death.

Only run your vehicle's engine when it is located in a well ventilated area outdoors.

Safety Labels

Safety and information labels on your vehicle provide important safety information and may warn you of potential hazards that could cause serious injury. Read these labels carefully and don't remove them.

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



Safety Precautions

Protective Apparel

Make sure that you are wearing an approved helmet, eye protection, and other appropriate riding gear.

Helmet

Should be safety-standard certified, high-visibility, and the correct size for your head.

- Must fit comfortably but securely, with the chin strap fastened.
- Approved eye protection
- Face shield with unobstructed field of vision or other approved eye protection

Look for a DOT (Department of Transportation) certification label on any helmet you buy.

⚠WARNING

Not wearing a helmet increases the chance of serious injury or death in a crash.

Make sure that you always wear an approved helmet, eye protection, and protective apparel.

Protective Gear

We recommend that you wear sturdy boots, gloves, and other protective gear. The exhaust system becomes very hot during operation, and it remains hot after operation. Never touch any part of the hot exhaust system. Wear clothing that fully covers your legs.

Do not wear loose clothing which could catch on the control levers, kickstarter, footpegs, drive chain, or wheels.

Riding Precautions

Break-in Period

During the first operating day or 15 miles (25 km) of running, follow these guidelines to ensure your vehicle's future reliability and performance.

- Avoid full-throttle starts and rapid acceleration.
- Avoid hard braking and rapid down-shifts.
- Ride conservatively.

This same procedure should be followed each time when:

- Piston is replaced
- Piston rings are replaced
- Cylinder is replaced
- Crankshaft or crank bearings are replaced

Brakes

To slow or stop, apply the front brake lever and rear brake pedal smoothly, while downshifting to match your speed. Gradually increase braking as you feel the brakes slowing your speed. To prevent stalling the engine, pull the clutch lever in before coming to a complete stop. For support, put your left foot down first, then your right foot when you are through using the rear brake pedal.

For maximum braking, close the throttle and firmly apply the front brake lever and rear brake pedal controls.

Applying the brakes too hard may cause the wheels to lock and slide, reducing control of your vehicle. If this happens, release the brake controls, steer straight ahead until you regain control, then reapply the brakes more gently.

Continued

Generally, reduce your speed or complete braking before beginning a turn. Avoid braking or closing the throttle quickly while turning. Either action may cause one or both wheels to slip. Any wheel slip will reduce your control of your vehicle.

When riding in wet or raining conditions, or on loose surfaces, the ability to maneuver and stop will be reduced. All of your actions should be smooth under these conditions. Rapid acceleration, braking, or turning may cause loss of control. For your safety, exercise extreme caution when braking, accelerating, or turning.

When descending a long, steep grade, use engine compression braking by downshifting, with intermittent use of both brakes.

When you brake to a stop, pull the clutch lever in before stopping completely to prevent stalling the engine. For support, put your left foot on the ground first, then your right foot when you have finished braking.

Parking

- Park on a firm, level surface.
- If you must park on a slight incline or loose surface, park so that the vehicle cannot move or fall over.
- Make sure that high-temperature parts cannot come into contact with flammable materials.
- Do not touch the engine, muffler, brakes and other high-temperature parts until they cool down.

Parking with the Side Stand

1. Stop the engine.
2. Push the side stand down.
3. Slowly lean the vehicle to the left until its weight rests on the side stand.

4. Turn the handlebar fully to the left.
▶ Turning the handlebar to the right reduces stability and may cause the vehicle to fall.

Post-ride Inspection

When you return home after riding, thoroughly clean your vehicle and remove any dirt, mud, brush, rocks or other objects you may have picked up along the way.

After cleaning, carefully inspect your vehicle for leaks or damage.

Be sure to lubricate the drive chain to prevent rusting.

Refueling and Fuel Guidelines

Follow these guidelines to protect the engine and fuel system:

- Use only unleaded gasoline.
- Use recommended octane number. Using lower octane gasoline will result in decreased engine performance.
- Do not use fuels containing a high concentration of alcohol. ➔ P. 91
- Do not use stale or contaminated gasoline or an oil/gasoline mixture.
- Avoid getting dirt or water in the fuel tank.

Accessories & Modifications

We strongly advise that you do not add any accessories that were not specifically designed or approved for your vehicle by Honda or make modifications to your vehicle from its original design. Doing so can make it unsafe. Modifying your vehicle may also void your warranty and make your vehicle illegal to operate on public roads. Before deciding to install accessories on your vehicle, be certain the modification is safe and legal.

⚠WARNING

Improper accessories or modifications can cause a crash in which you can be seriously hurt or killed.

Follow all instructions in this owner's manual regarding accessories and modifications.

Do not pull a trailer with or attach a sidecar to your vehicle. Your vehicle was not designed for these attachments, and their use can seriously impair your vehicle's handling.

Do not attempt to modify the vehicle to carry a passenger. The subframe was not designed to carry the additional weight of a passenger.

Loading

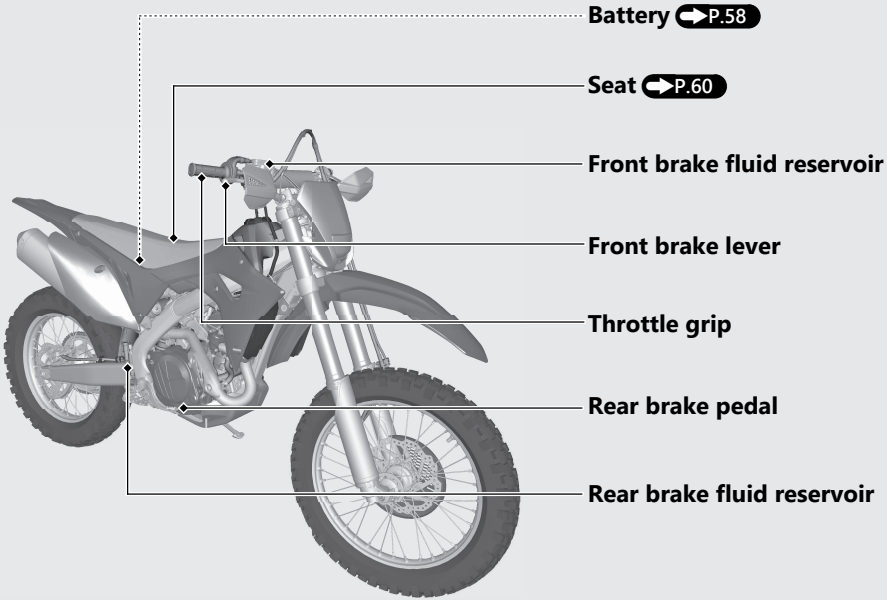
We recommended that you do not carry any cargo on this vehicle. However, if you decide to carry cargo, ride at reduced speeds and follow these common sense guidelines:

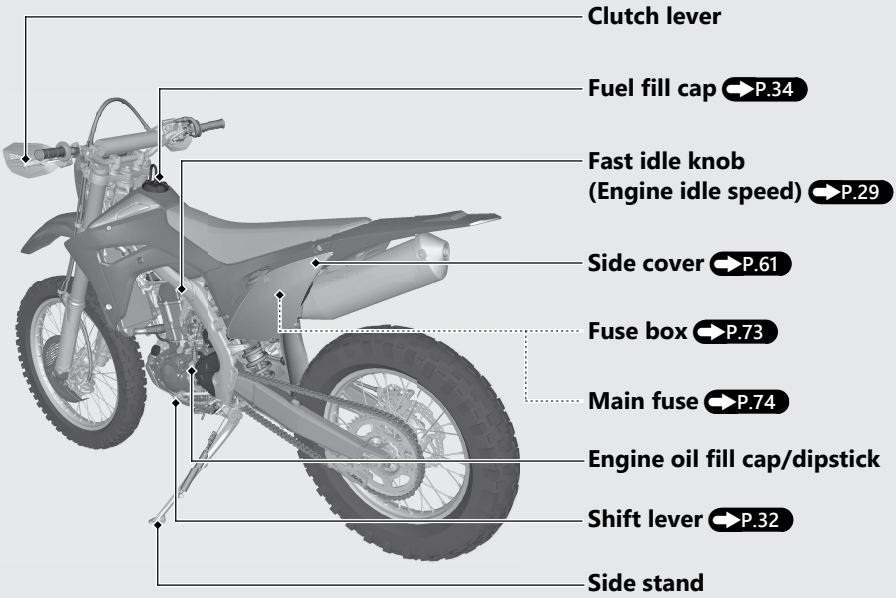
- Never carry a passenger. Your vehicle was not designed to carry a passenger.
- Carrying extra weight affects your vehicle's handling, braking and stability.
  Always ride at a safe speed for the load you are carrying.
- Avoid carrying an excessive load.
- Tie all luggage securely, evenly balanced and close to the center of the vehicle.
- Do not place objects near the lights or the muffler.
- Keep cargo small and lightweight. Make sure it cannot easily be caught on brush or other objects and that it does not interfere with your ability to shift position to maintain balance and stability.

⚠WARNING

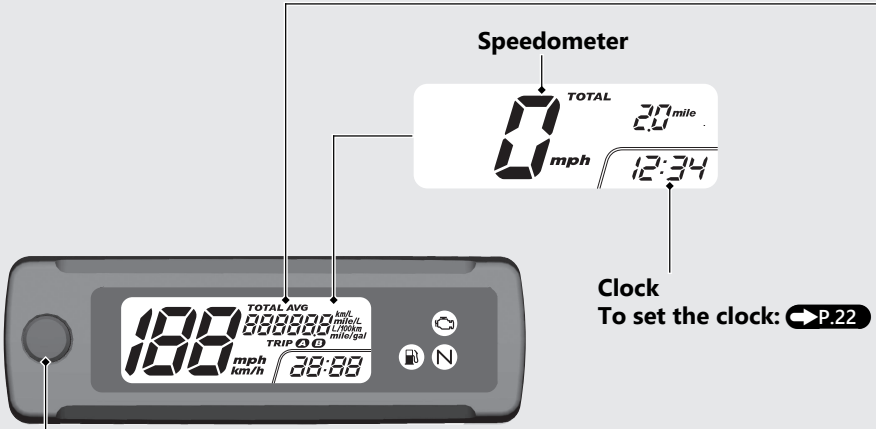
Overloading, improper loading or carrying a passenger can cause a crash and you can be seriously hurt or killed. Follow all loading guidelines in this manual.

Parts Location




Clutch lever
Fuel fill cap P.34
Fast idle knob
(Engine idle speed) P.29
Side cover P.61
Fuse box P.73
Main fuse P.74
Engine oil fill cap/dipstick
Shift lever P.32
Side stand

Instruments



Display Check

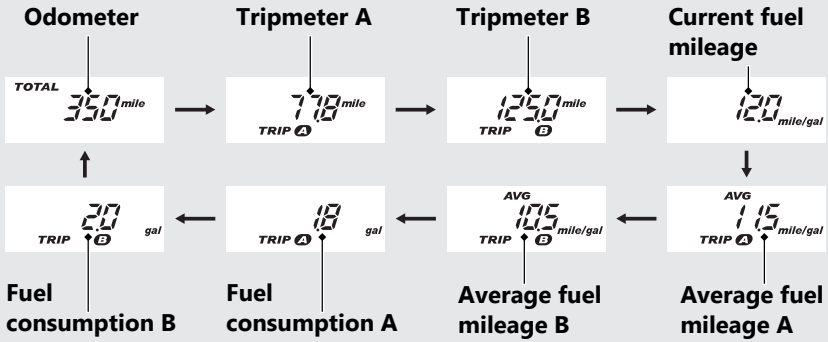
When starting the engine, all the mode and digital segments will show. If any part of these displays does not come on when it should, have your dealer check for problems

Odometer [TOTAL], tripmeter [TRIP A/B], current fuel mileage, average fuel mileage A [TRIP A AVG], average fuel mileage B [TRIP B AVG], fuel consumption A and fuel consumption B

To select the odometer, tripmeter A/B, current fuel mileage, average fuel mileage A/B or fuel consumption A/B, press the SEL button.

To reset the tripmeter, average fuel mileage and fuel consumption P.20

To set the display P.22



Instruments *(Continued)*

Odometer [TOTAL]

Total distance ridden.
When "------" is displayed, go to your dealer for service.

Tripmeter [TRIP A/B]

Distance ridden since tripmeter A or tripmeter B respectively were reset.
When "-----.-" is displayed, go to your dealer for service.
To reset the tripmeter: P.20

Current fuel mileage

Displays the current or instant fuel mileage.
Display range:
0.0 to 199.9 mile/gal.
0.0 to 99.9 L/100km (km/L).

- When your speed is less than 4 mph (6 km/h): "---.-" or "--.-" is displayed.

When "---.-" or "--.-" is displayed except for the above-mentioned case, go to your dealer for service.

Average fuel mileage [AVG]

Displays the average fuel mileage since the selected tripmeter was reset.
The average fuel mileage will be calculated based on value displayed on the tripmeter (A or B) selected.
Display range:
0.0 to 199.9 mile/gal.
0.0 to 99.9 L/100km (km/L).

When "----" or "--.-" is displayed, go to your dealer for service.

To reset the average fuel mileage
P.20

Fuel Consumption

Displays the tripmeter fuel consumption since the tripmeter was reset.
The fuel consumption will be calculated based on value displayed on the tripmeter (A or B) selected.
Display range: 0.0 to 299.9 gal (L)

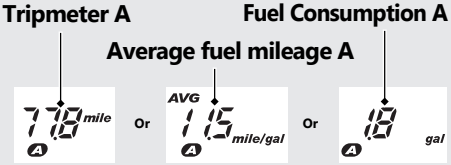
When "----" is displayed, go to your dealer for service.

To reset the fuel consumption: P.20

Instruments *(Continued)*

To Reset the Tripmeter [TRIP A/B], Average Fuel Mileage [AVG] and Fuel Consumption

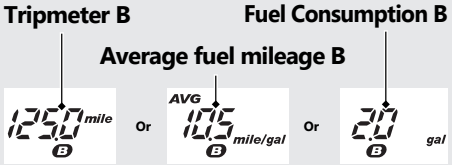
To reset tripmeter A, fuel consumption (based on tripmeter A) and average fuel mileage (based on tripmeter A) together, press and hold the SEL button with the tripmeter A, fuel consumption (based on tripmeter A) or average fuel mileage (based on tripmeter A) displayed.



When they are reset, reset display appears at each indication.



To reset tripmeter B, fuel consumption (based on tripmeter B) and average fuel mileage (based on tripmeter B) together, press and hold the SEL button with the tripmeter B, fuel consumption (based on tripmeter B) or average fuel mileage (based on tripmeter B) displayed.



When they are reset, reset display appears at each indication.



Instruments *(Continued)*

Display Setting

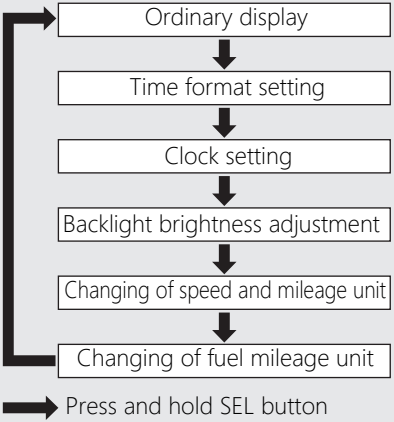
Press and hold the SEL button while the odometer or current fuel mileage is displayed. The display will change to the setting mode.

The following items can be changed sequentially:

- Time format setting
- Clock setting
- Backlight brightness adjustment
- Changing of speed and mileage unit
- Changing of fuel mileage unit

To return to the ordinary display:

- Stop the engine and then restart the engine.
  ▶ The established setting is maintained.
- Wait 30 seconds.
  ▶ The established setting is maintained.



1. Time format setting:

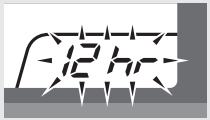
You can switch the time format between 12 hour format or 24 hour format.

1. Start the engine.
2. Press the SEL button to select the odometer or current fuel mileage. P.17

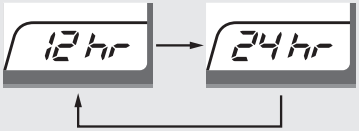
Odometer: **Current fuel mileage:**



3. Press and hold the SEL button until the current time format starts flashing.



4. Press the SEL button to select "12 hr" or "24 hr".

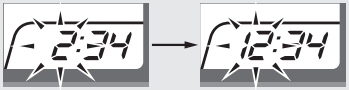


5. Press and hold the SEL button. The time format is set, and then the display moves to the clock setting.

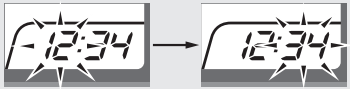
Instruments *(Continued)*

2. Clock setting:

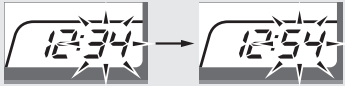
1. Press the SEL button until the desired hour is displayed.



2. Press and hold the SEL button. The minute digits start flashing.



3. Press the SEL button until the desired minute is displayed.

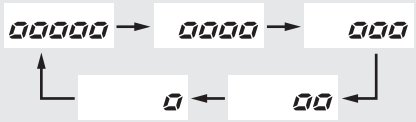


4. Press and hold the SEL button. The clock is set, and then the display moves to the backlight brightness adjustment.

3. Backlight brightness adjustment

You can adjust the brightness to one of five levels.

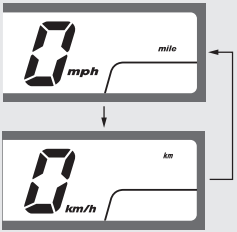
1. Press the SEL button. The brightness is switched.



2. Press and hold the SEL button. The backlight is set, and then the display moves to change the speed and mileage unit.

4. Changing of speed and mileage unit

1. Press the SEL button to select either “mph” and “mile” or “km/h” and “km”.



2. When selecting the “mph” and “mile”

   Press and hold the SEL button. The speed and mileage unit is set, and then the display will return to the ordinary display.

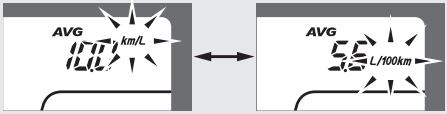
   When selecting the “km/h” and “km”

   Press and hold the SEL button. The speed and mileage unit is set, and then the display moves to change the fuel mileage unit.

Instruments *(Continued)*

4. Changing of fuel mileage unit

1. Press the SEL button to switch between "km/L" or "L/100km".



2. Press and hold the SEL button. The fuel mileage unit is set, and then the display will return to the ordinary display.

Indicators

If one of these indicators does not come on when it should, have your dealer check for problems.

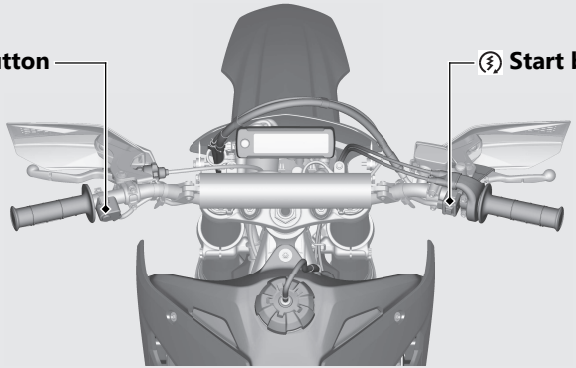
PGM-FI malfunction indicator lamp (MIL)
Comes on briefly when the engine is started.
If it comes on while engine is running: P.67



Fuel reserve indicator
Comes on when there is only reserve fuel left in the fuel tank. Remaining fuel when low fuel indicator comes on: 0.58 US gal (2.2 L)

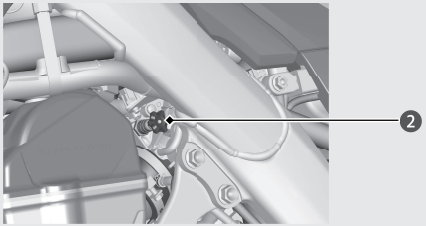
Neutral indicator
Comes on when the transmission is in Neutral.

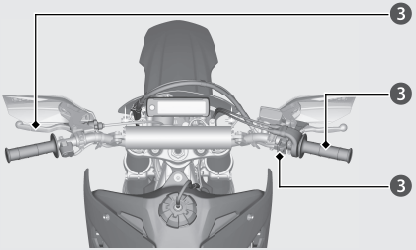
Switches



Starting the Engine

Start your engine using the following procedure.





To restart a warm engine, follow the procedure for "Warm Engine Starting".

NOTICE

- If the engine does not start within 5 seconds, wait 10 seconds before trying to start the engine again to recover battery voltage.
- Extended fast idling and revving the engine can damage the engine and the exhaust system.
- Snapping the throttle or fast idling for more than about 5 minutes may cause exhaust pipe discoloration.

Starting the Engine *(Continued)*

Cold Engine Starting

1. Shift the transmission to neutral.
2. If the temperature is 50 °F (10 °C) or below, pull the fast idle knob fully out.
3. With the throttle closed, pull the clutch lever all the way in and depress the start button.
4. About a minute after the engine starts, push the fast idle knob back all the way to fully OFF. If idling is unstable, open the throttle slightly.

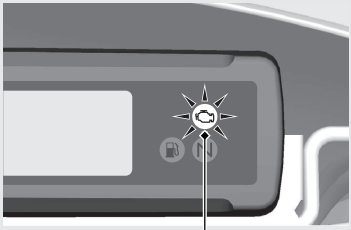
Warm Engine Starting

① Shift the transmission into neutral.
② Pull the clutch lever and depress the start button. (Do not open the throttle.)

Starting the engine excessively charged with fuel by throttle blipping or other reasons

① Shift the transmission into neutral.
② With the throttle fully opened, pull the clutch and depress the start button for 5 seconds to discharge excessive fuel from the engine.
③ Pull the clutch lever and depress the start button. Do not open the throttle.

When starting the engine, the PGM-FI malfunction indicator lamp (MIL) (amber) will stay on for 2 seconds, then go off. If the PGM-FI malfunction indicator lamp (MIL) does not come on or go off when it should, have your dealer check it for problems.

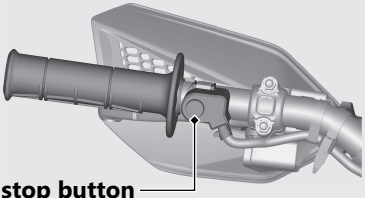


PGM-FI malfunction indicator lamp (MIL) (amber)

When you stop the engine

Normal Engine Stop

1. Shift the transmission into neutral.
2. Push and hold the engine stop button until the engine stops completely.



Engine stop button

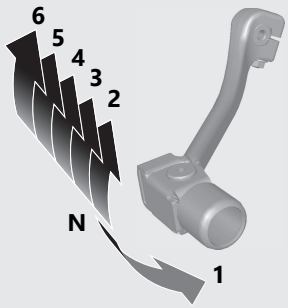
Emergency Engine Stop

To stop the engine in an emergency, push and hold the engine stop button.

If Engine Will Not Start P.66

Shifting Gears

Your vehicle transmission has 6 forward gears in a one-down, five-up shift pattern.



To start riding after the engine has been warmed and the side stand raised:

1. Close the throttle and pull the front brake lever in.
2. Pull the clutch lever all the way in.
3. Depress the shift lever from neutral down to first gear.
4. Release the front brake lever. Gradually open the throttle while you slowly release the clutch lever. If the engine rpm (speed) is too low when you release the clutch lever, the engine will stall. If the engine rpm (speed) is too high or you release the clutch lever too quickly, your vehicle may lurch forward.
5. When you attain a moderate speed, close the throttle, pull the clutch lever in, and raise the shift lever. After shifting, release the clutch lever and apply the throttle.
6. To continue shifting up to each higher gear, repeat step 5.
7. To shift down to a lower gear, close the throttle, pull the clutch lever in, and depress the shift lever. After shifting, release the clutch lever and apply the throttle.

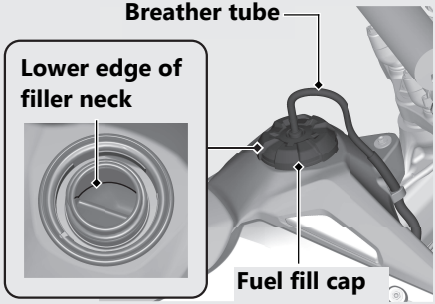
Remember to close the throttle and pull the clutch lever in completely before shifting.

Learning when to shift gears comes with experience. Upshift to a higher gear or reduce throttle before engine rpm (speed) gets too high.
Downshift to a lower gear before you feel the engine laboring (lugging) at low rpm.

NOTICE
Downshifting can help slow your vehicle, especially on downhills. However, downshifting when engine rpm is too high can cause engine damage.

NOTICE
Improper shifting can damage the engine, transmission, and drive train. Also, coasting or towing the vehicle for long distances with the engine off can damage the transmission.

Refueling



Be careful not to damage the fuel pump while filling the fuel tank.
Do not fill with fuel above the lower edge of the filler neck.

Fuel type: Unleaded gasoline only
Recommended fuel octane number: Pump Octane Number (PON) 91 or higher.
Tank capacity: 2.01 US gal (7.6 L)

Refueling and Fuel Guidelines P.11

Opening the Fuel Fill Cap

If mud is on the fuel fill cap and fuel tank top shelter at time of refueling, remove the mud before refueling.

Turn the fuel fill cap counterclockwise and remove it.

NOTICE

Equivalent or modified parts must comply with applicable Air Resource Board (ARB) evaporative emission control regulations. Non-compliance may result in civil litigation or criminal prosecution.

The fuel cap may not be disassembled. When replacing, consult with a dealer and replace with a Honda genuine fuel cap or one that complies with Air Resource Board (ARB) evaporative emission control regulations.

Closing the Fuel Fill Cap

After refueling, turn the fuel fill cap clockwise until it clicks.

- ▶ If the breather tube is twisted, turn the rotary joint to correct.
- ▶ If you replace the fuel fill cap, use a Honda Genuine replacement part or equivalent.

⚠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 flame away.
- Handle fuel only outdoors.
- Wipe up spills immediately.

Maintenance

Please read “Importance of Maintenance”, “Maintenance Fundamentals” and Competition Handbook carefully before attempting any maintenance. Refer to Competition Handbook for service data.

Importance of Maintenance ..... P. 37
Maintenance Schedule ..... P. 39
Maintenance Record ..... P. 47
Maintenance Fundamentals ..... P. 48
Removing & Installing Body Components .. P. 58
Battery ..... P. 58
Seat ..... P. 60
Left Side Cover ..... P. 61
Spark Arrester ..... P. 62

Importance of Maintenance

Keeping your vehicle well-maintained is absolutely essential to your safety and to protect your investment, obtain maximum performance, avoid breakdowns, and reduce air pollution. Maintenance is the owner's responsibility. Be sure to inspect your vehicle before each ride and perform the periodic checks specified in the Maintenance Schedule. ➔P. 39

⚠WARNING

Improperly maintaining your vehicle or failing to correct a problem before you ride can cause a crash in which you can be seriously hurt or killed.

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

For information about the exhaust emission and noise emission requirements of the U.S. Environmental Protection Agency (EPA), and the California Air Resources Board (CARB). ➔P. 87

Maintenance, replacement or repair of the emission control devices and systems may be performed by any vehicle repair establishment or individual using parts that are "certified" to EPA standards.

Maintenance Safety

Always read the maintenance instructions before you begin each task and make sure that you have the tools, parts, and skills required. 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.

Follow these guidelines when performing maintenance.

- Stop the engine.
- Place your vehicle on a firm, level surface using the side stand, an optional workstand or a maintenance stand to provide support.
- Allow the engine, muffler, brakes, and other high-temperature parts to cool before servicing as you can get burned.
- Run the engine only when instructed, and do so in a well-ventilated area.

Maintenance Schedule

To maintain the safety and reliability of your vehicle, regular inspection and service is required as shown in the Maintenance Schedules – Regular OFF ROAD Use (non-competition) and Competition Use – that follows.

The Maintenance Schedule lists items that can be performed with basic mechanical skills and hand tools. Procedures for these items are provided in Competition Handbook. The Maintenance Schedule also includes items that involve more extensive procedures and may require special training, tools, and equipment. Therefore, we recommend that you have your dealer perform these tasks unless you have advanced mechanical skills and the required tools. Procedures for items in this schedule are provided in an official Honda Service Manual available for purchase from your dealer. ➔P. 92

Service intervals in the maintenance schedule for competition use are expressed in terms of motos and riding hours. To avoid overlooking required service, we urge you to develop a convenient way to record the number of motos and/or hours you ride.

If you do not feel capable of performing a given task or need assistance, remember that your Honda dealer knows your vehicle best and is fully equipped to maintain and repair it. If you decide to do your own maintenance, use only Honda Genuine Parts or their equivalents for repair or replacement to ensure the best quality and reliability.

Make sure whoever performs the scheduled maintenance completes the maintenance record. Retain all service documents. If you sell your vehicle, these service documents should be transferred with the vehicle to the new owner.

MAINTENANCE SCHEDULE - REGULAR OFF-ROAD USE (NON-COMPETITION)

Perform the Pre-ride Inspection (➡ P. 48) at each scheduled maintenance period.

Items \ Frequency		Whichever Comes First ⇨		Initial Maintenance	Regular Maintenance Interval			
			mi	100	600	1200	1800	2400
			km	150	1000	2000	3000	4000
		Note	Month	1	6	12	18	24
🔧	Fuel Line					I		I
✂	Fuel Pump Filter						R	
🔧	Throttle Operation					I		I
	Air Cleaner	(NOTE 1) (NOTE 3)			C	C	C	C
	Crankcase Breather				I	I	I	I
	Spark Plug				I	I	I	I
🔧	Valve Clearance			I	I	I	I	I
	Engine Oil			R	R	R	R	R
	Engine Oil Filter			R	R	R	R	R

Maintenance Level

🔧 : Intermediate. We recommend service by your dealer, unless you have the necessary tools and are mechanically skilled.
Procedures are provided in an official Honda Service Manual (➡ P. 92).

✂ : Technical. In the interest of safety, have your vehicle serviced by your dealer.

Maintenance Legend

I : Inspect (clean, adjust, lubricate, or replace, if necessary)
L : Lubricate
R : Replace
C : Clean

Items \ Frequency		Whichever Comes First ⇨		Initial Maintenance	Regular Maintenance Interval			
			mi	100	600	1200	1800	2400
			km	150	1000	2000	3000	4000
		Note	Month	1	6	12	18	24
	Decompressor System			I	I	I	I	I
	Engine Idle Speed			I	I	I	I	I
	Radiator Coolant	(NOTE 2)				I		R
	Cooling System			I	I	I	I	I
	Secondary Air Supply System					I		I
	Evaporative Emission Control System							I
	Drive Chain	(NOTE 1)		I L	Every 300 mi (500 km) or 3 months : I L			
	Drive Chain Slider				I	I	I	I
	Brake Fluid	(NOTE 2)			I	I	I	I
	Brake Pads Wear				I	I	I	I
	Brake System			I	I	I	I	I

Continued

Items \ Frequency		Whichever Comes First ⇨		Initial Maintenance	Regular Maintenance Interval			
			mi	100	600	1200	1800	2400
			km	150	1000	2000	3000	4000
		Note	Month	1	6	12	18	24
	Headlight Aim					I		I
	Clutch System			I	I	I	I	I
	Side Stand					I		I
	Suspension					I		I
	Spark Arrester			Every 1,000 mi (1,600 km) or every 100 operating hours : C				
	Nuts, Bolts, Fasteners			I		I		I
	Wheels/Tires			I	I	I	I	I
	Steering Head Bearings			I		I		I

Notes: 1 : Service more frequently when ridden in wet or dusty conditions.
2 : Replace every 2 years. Replacement requires mechanical skill.
3 : Replace every 3 years.

MAINTENANCE SCHEDULE – COMPETITION USE

All items should be checked before each off-road event. See your dealer unless you are mechanically qualified and have the proper tools.

Damage from Competition use is not covered by the Distributor's Limited Warranty on your Honda.

Perform the Pre-ride Inspection (P. 48) at each scheduled maintenance period.

Items \ Frequency	NOTE	Each race or about 3.5 hours	Every 2 races or about 7.5 hours	Every 4 races or about 15.0 hours	Every 6 races or about 22.5 hours	Every 8 races or about 30.0 hours
Fuel Line	(NOTE 6)	I				R
Fuel Pump Filter	(NOTE 6)					R
Throttle Operation		I				
Air Cleaner	(NOTE 1) (NOTE 7)	C				
Crankcase Breather		I				
Spark Plug		I				
Valve Clearance/Decompressor System	(NOTE 4)			I		

WE RECOMMEND THESE ITEMS BE SERVICED BY REFERRING TO THE OFFICIAL HONDA SERVICE MANUAL.

This maintenance schedule is based upon average riding condition. Machines subjected to severe use require more frequent servicing.

Maintenance Legend

I : Inspect (clean, adjust, lubricate, or replace, if necessary)
L : Lubricate
R : Replace
C : Clean

Continued

Items \ Frequency	NOTE	Each race or about 3.5 hours	Every 2 races or about 7.5 hours	Every 4 races or about 15.0 hours	Every 6 races or about 22.5 hours	Every 8 races or about 30.0 hours
Engine Oil	(NOTE 3)	I		R		
Engine Oil Filter	(NOTE 3)			R		
Engine Idle Speed		I				
Piston and Piston Rings				R		
Piston Pin				R		
Radiator Coolant	(NOTE 2)	I				
Cooling System		I				
Drive Chain		I L	R			
Drive Chain Slider		I				
Drive Chain Roller		I				
Drive Sprocket		I				
Driven Sprocket		I				
Brake Fluid	(NOTE 2)	I				
Brake Pads Wear		I				
Brake System		I				

Items \ Frequency	NOTE	Each race or about 3.5 hours	Every 2 races or about 7.5 hours	Every 4 races or about 15.0 hours	Every 6 races or about 22.5 hours	Every 8 races or about 30.0 hours
Clutch System		I				
Control Cables		I L				
Exhaust Pipe/Muffler		I				
Suspension		I				
Swingarm/Shock Linkage			L			
Fork Oil					R	
Nuts, Bolts, Fasteners		I				
Wheels/Tires		I				
Steering Head Bearings					I	

Notes: 1 : Clean after every moto for dusty riding condition.
2 : Replace every 2 years. Replacement requires mechanical skill.
3 : Replace after the first break-in ride.
4 : Inspect after the first break-in ride.
5 : Replace the engine oil, if the clutch discs and plates are replaced.
6 : Replace every year.
7 : Replace 3 years.

Continued

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Maintenance Record

Keeping an accurate maintenance record will help ensure that your vehicle is properly maintained. Retain detailed receipts to verify the maintenance was performed. If the vehicle is sold, these receipts should be transferred with the vehicle to the new owner. Make sure whoever performs the maintenance completes this record. All scheduled maintenance, including the 100 mile (150 km) or 1 month initial maintenance, is considered a normal owner operating cost and will be charged for by your dealer. Use the space under Notes to record anything you want to remind yourself about or mention to your dealer.

Miles (km) or Month	Odometer	Date	Performed By:	Notes
100 (150) or 1				
600 (1,000) or 4				
1,200 (2,000) or 8				
1,800 (3,000) or 12				
2,400 (4,000) or 16				
3,000 (5,000) or 20				
3,600 (6,000) or 24				
4,200 (7,000) or 28				
4,800 (8,000) or 32				
5,400 (9,000) or 36				
6,000 (10,000) or 40				
6,600 (11,000) or 44				
7,200 (12,000) or 48				
7,800 (13,000) or 52				

Pre-ride Inspection

To ensure safety, it is your responsibility to perform a pre-ride inspection and make sure that any problem you find is corrected. A pre-ride inspection is a must, not only for safety, but because having a breakdown, or even a flat tire, can be a major inconvenience.

Refer to the Competition Handbook for procedures.

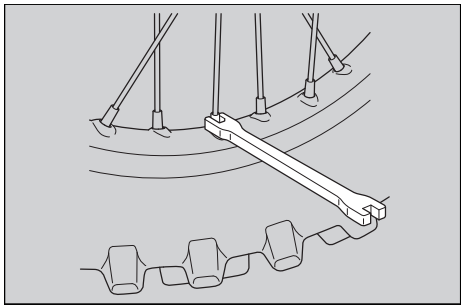
Check the following before each ride:

- Engine oil level
- Fuel line for condition
- Coolant for proper level
- Cooling system and hoses for condition
- Spark plug for proper heat range, carbon fouling and spark plug wire terminal for looseness
- Air cleaner for condition and contamination
- Clutch lever freeplay
- Breather drain for cleaning
- Steering head bearing and related parts for condition
- Throttle operation
- Tires for damage or improper inflation pressure
- Spokes for looseness
- Rim locks for looseness
- Front and rear suspension for proper operation
- Front and rear brakes, check operation
- Drive chain for correct slack and adequate lubrication
- Drive chain sliders and drive chain rollers for damage or wear
- Exhaust pipe/Muffler for looseness
- Every possible part for looseness (such as cylinder head bolts, engine mounting bolts/nuts, axle nuts, handlebar holder bolts, fork bridge pinch bolts, drive chain adjuster, lock nuts, drive chain roller bolt/nut, wire harness connectors)
- PGM-FI malfunction indicator lamp (MIL) operation

Between Motos & Practice Maintenance

After practice or between motos you have a chance to make additional checks and adjustments.

- Clean accumulated dirt from under the fenders and off the wheels, suspension components, handgrips, controls, and footpegs. A stiff, nylon parts cleaning brush works well.
- Check tire air pressure.
- Check spoke tension, and make sure the rim locks are secure.

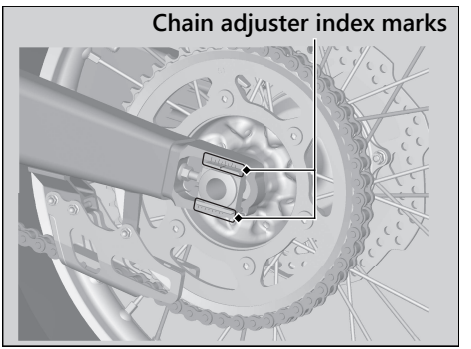


- Check to make sure the sprocket bolts and nuts are secure.
- Clean the sides of the drive chain with a stiff, nylon parts-cleaning brush. Lubricate and adjust the chain as necessary.

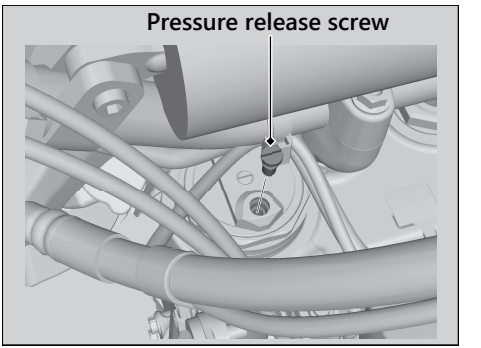
Do not perform maintenance while engine is running. Injury to your fingers or hands may result.

- After adjustment, check that the chain adjuster index marks are in the same position on each side. This will ensure that the rear wheel is in proper alignment and allow maximum performance from the rear disc brake.

Maintaining proper wheel alignment will also extend brake pad lifespan.



- Suspend the front wheel above the ground and use the pressure release screws to release the built-up pressure in the forks. This pressure is caused by normal fork action while riding.



After Competition Maintenance

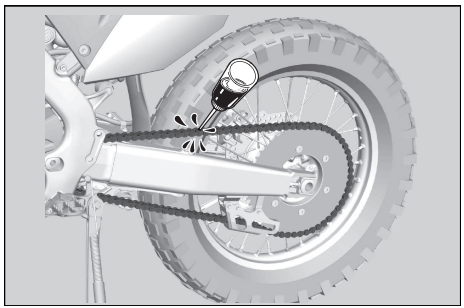
It is important to the long term performance of your vehicle to practice a consistent maintenance program. Right after the event is a good time to begin your next maintenance cycle.

After Moto Lubrication

Apply a light coating of rust-inhibiting oil to the drive sprocket and any steel portions of the chassis or engine where the paint has worn away.
This will prevent rusting of the exposed metal. Apply rust-inhibiting oil more heavily if the event was particularly wet or muddy. Take care to avoid spraying any oil near the brake pads or the brake discs.

Take care to prevent catching your fingers between the chain and sprocket.

Remove the drive chain, clean and lubricate it. Be sure the chain is wiped clean and is dry before lubricating the chain.



Routine Cleaning

If your vehicle is only slightly dirty, it is best to clean it by hand with the aid of a stiff bristled nylon brush and some clean rags.

Take care to prevent catching your fingers between the chain and sprocket.

A variety of reasonably priced cleaning brushes are available from variety, drug, food, and hardware stores. Some of these brushes are extremely useful in removing dirt from the many tight contours of the metal pieces of your vehicle.
Avoid using stiff, abrasive brushes on the plastic or rubber parts.

If your vehicle was exposed to sea air or salt water, rinse it as soon as possible after the event, dry it, and apply a spray lubricant to all metal parts.

If you decide to wash your vehicle or use cleaners, refer to "Caring for Your Vehicle".
➔P. 77

Replacing Parts

Always use Honda Genuine Parts or their equivalents to ensure reliability and safety.

⚠WARNING

Installing non-Honda parts may make your vehicle unsafe and cause a crash in which you can be seriously hurt or killed.

Always use Honda Genuine Parts or equivalents that have been designed and approved for your vehicle.

Lithium-Ion (Li-Ion) Battery

Your vehicle has a lithium-ion (li-ion) battery. Clean the battery terminals if they become dirty or corroded.

NOTICE
An improperly disposed of battery can be harmful to the environment and human health. Always confirm local regulations for proper battery disposal instruction.

What to do in an emergency

If any of the following occurs, immediately see your doctor.

- Electrolyte splashes into your eyes:
  ▶ Wash your eyes repeatedly with cool water for at 15 minutes. Using water under pressure can damage your eyes.
- Electrolyte splashes onto your skin:
  ▶ Remove affected clothing and wash your skin thoroughly using water.
- Electrolyte splashes into your mouth
  ▶ Rinse mouth thoroughly with water, and do not swallow.

⚠WARNING

The battery contains flammable organic solvent as electrolyte.

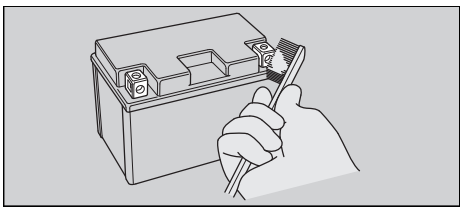
You can be burned or seriously injured if the battery is handled improperly.

- Keep the battery away from heat, sparks, and flame.
- Keep the battery out of the reach of children.
- Do not disassemble or modify the battery or battery terminals.
- Do not short-circuit the battery with metal tools or other metal objects.
- Do not subject the battery to impacts.

Continued

Cleaning the Battery Terminals

1. Remove the battery. ➡ P. 58
2. If the terminals are starting to corrode and are coated with a white substance, wash with warm water and wipe clean.
3. If the terminals are heavily corroded, clean and polish the terminals with a wire brush or sandpaper. Wear safety glasses.



4. After cleaning, reinstall the battery.

The battery has a limited life span. Consult your dealer about when you should replace the battery. Always replace the battery with another lithium-ion (li-ion) battery of the same type.

Charging

If you use electrical accessories that drain the battery or you do not ride frequently, we recommend that you charge the battery every 30 days using a charger recommended by your lithium-ion (li-ion) battery manufacturer. Contact your dealer before charging the battery.

Make sure the battery terminals are disconnected before charging the battery.

NOTICE

Only use a charger recommended by your lithium-ion (li-ion) battery manufacturer. Using a battery charger that is not recommended can cause permanent damage to your battery.

NOTICE

Improper charging can damage the battery. If you can't charge the battery or it appears unable to hold a charge, contact your dealer.

NOTICE
Do not jump-start, as this can damage your vehicle's electrical system and battery.
Bump starting is not recommended.

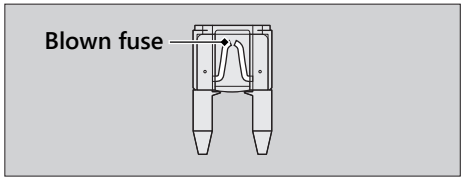
NOTICE
Installing non-Honda electrical accessories can overload the electrical system, discharging the battery and possibly damaging the system.

Fuses

Fuses protect the electrical circuits on your vehicle. If something electrical on your vehicle stops working, check for and replace any blown fuses. P. 73

Inspecting and Replacing Fuses

Turn the engine off to remove and inspect the fuses. If a fuse is blown, replace with a fuse of the same rating. For fuse ratings, see "Specifications." P. 98



NOTICE
Replacing a fuse with one that has a higher rating greatly increases the chance of damage to the electrical system.

If a fuse fails repeatedly, you likely have an electrical fault. Have your vehicle inspected by your dealer.

Tires (Inspecting/Replacing)

Checking the Air Pressure

Visually inspect your tires and use an air pressure gauge to measure the air pressure before each ride.

Always check air pressure when your tires are cold.

If you decide to adjust the tire pressure for a particular off-road riding condition, make changes a little at a time.

Inspecting for Damage

Inspect the tires for cuts, slits, or cracks that exposes fabric or cords, or nails or other foreign objects embedded in the side of the tire or the tread. Also inspect for any unusual bumps or bulges in the side walls of the tires.

Inspecting for Abnormal Wear

Inspect the tires for signs of abnormal wear on the contact surface.

Inspecting Rims and Valve Stems

Inspect the rims for damage and loose spokes. Also inspect the valve stems for their positions. A tilted valve stem indicates the tube is slipping inside the tire or the tire is slipping on the rim. See your dealer.

⚠WARNING

Riding on tires that are excessively worn or improperly inflated can cause a crash in which you can be seriously hurt or killed.

Follow all instructions in this owner's manual regarding tire inflation and maintenance.

Have your tires replaced by your dealer.
For recommended tires, air pressure, see "Specifications." ➡ P. 97
Follow these guidelines whenever you replace tires.

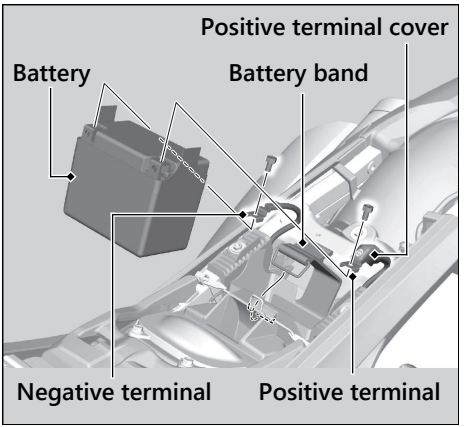
- Use the recommended tires or equivalents of the same size, construction, speed rating, and load range.
- Remember to replace the inner tube whenever you replace a tire. The old tube will probably be stretched, and it could fail if installed in a new tire.
- If a tube is punctured or damaged, you should replace it as soon as possible. A repaired tube may not have the same reliability as a new one, and it may fail while you are riding.
  Use a replacement tube equivalent to the original.

⚠WARNING

Installing improper tires on your vehicle can adversely affect handling and stability, and can cause a crash in which you can be seriously hurt or killed.

Always use the size and type of tires recommended in this owner's manual.

Battery



Removal

1. Remove the seat. ➡ P. 60
2. Remove the battery band.
3. Disconnect the negative ⊖ terminal from the battery.
4. Remove the positive terminal cover.
5. Disconnect the positive ⊕ terminal from the battery.
6. Remove the battery, taking care not to drop the terminal nuts.

Installation

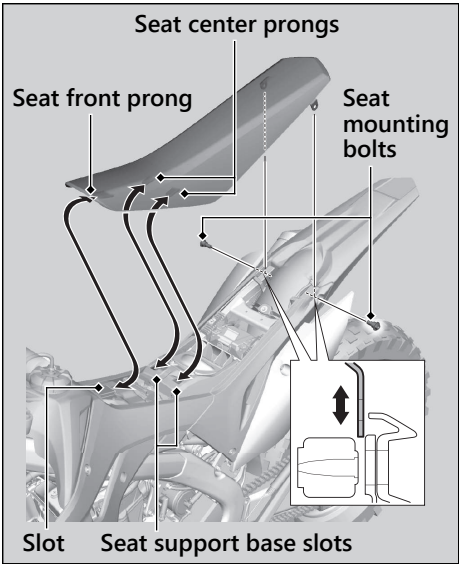
1. Install the parts in the reverse order of removal. Always connect the positive ⊕ terminal first. Make sure that bolts and nuts are tight.
2. Tighten the positive ⊕ terminal bolt and negative ⊖ terminal bolt to the specified torque:

Torque: 1.5 lbf·ft (2 N·m, 0.2 kgf·m)

3. Install the battery band and seat.

Make sure the clock information is correct after the battery is reconnected. ➡P. 22
For proper handling of the battery, see
"Maintenance Fundamentals." ➡P. 53
"Battery Goes Dead." ➡P. 68

Seat



Removal

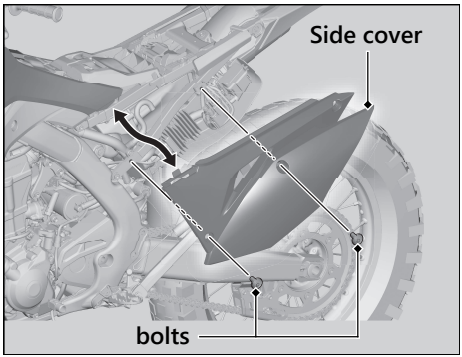
1. Remove the seat mounting bolts.
2. Remove the seat by pulling it backward.

Installation

1. Install the seat while aligning the seat front prong with the slot of the fuel tank and seat center prongs with the seat support base slots.
2. Install and tighten the seat mounting bolts to the specified torque:

Torque: 19 lbf·ft (26 N·m, 2.7 kgf·m)

Left Side Cover



Removal

1. Remove the seat. P. 60
2. Remove the left side cover by removing the bolts.

Installation

1. Install the left side cover, and then tighten the bolts to the specified torque:

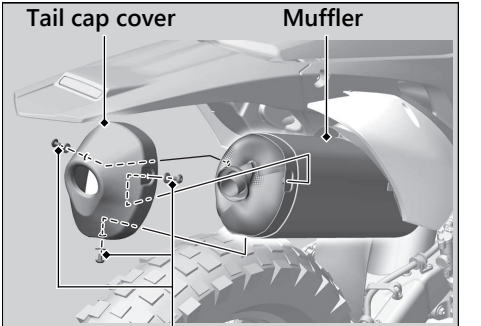
Torque: 7 lbf·ft (10 N·m, 1.0 kgf·m)

2. Install the seat. P. 60

Cleaning the Spark Arrester

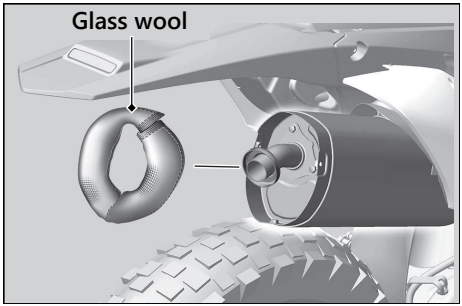
The spark arrester must be serviced every 1,000 mi (1,600 km) of running or 100 operating hours to maintain its efficiency.

Regular servicing prevents carbon buildup (which can diminish engine performance) and also complies with USDA regulations for regular maintenance to assure proper function. The spark arrester prevents random sparks from the combustion process in your engine from reaching the environment.

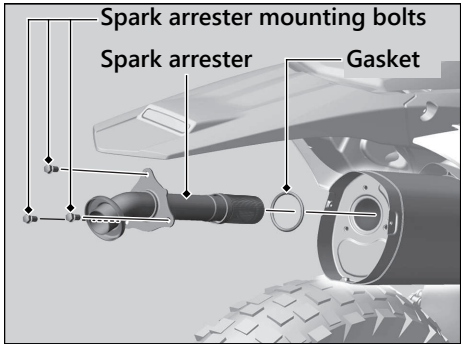


Tail cap cover bolts/Washers

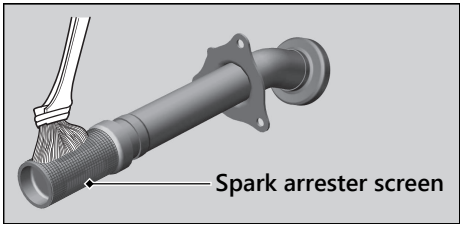
1. Allow the engine and muffler to cool.
2. Remove the tail cap cover bolts, washers and tail cap cover from the muffler.



3. Remove the glass wool.

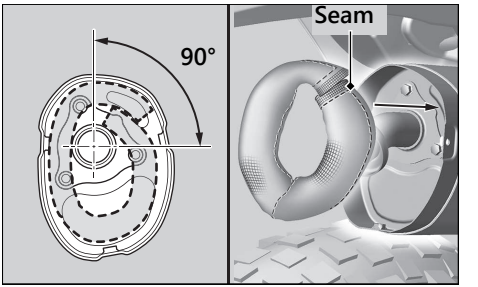


4. Remove the spark arrester mounting bolts, spark arrester and gasket from the muffler.



5. Use a brush to remove carbon deposits from the spark arrester screen. Be careful to avoid damaging the spark arrester screen. The spark arrester must be free of breaks and holes. Replace, if necessary. Check the gasket. Replace, if necessary.
6. Install a new gasket and the spark arrester in the muffler and tighten the spark arrester mounting bolts to the specified torque:

Torque: 6.6 lbf·ft (9 N·m, 0.9 kgf·m)



7. Check the glass wool. Replace, if necessary. Install the glass wool with its seam side facing the muffler and start winding the glass wool from the position as shown.
8. Install the tail cap cover, washers and tighten the tail cap cover bolts to the specified torque:

Torque: 3.9 lbf·ft (5.25 N·m, 0.5 kgf·m)

Troubleshooting

Engine Will Not Start ..... P. 66
Warning Indicators On or Flashing ..... P. 67
PGM-FI (Programmed Fuel Injection) Malfunction Indicator Lamp (MIL) ..... P. 67
Electrical Trouble ..... P. 68
Battery Goes Dead ..... P. 68
Burned-out Light Bulb ..... P. 69
Blown Fuse ..... P. 73

Starter Motor Operates But Engine Does Not Start

Check the following items:

- Check the correct engine starting sequence. ➔P. 29
- Check that there is gasoline in the fuel tank.
- Check if the PGM-FI malfunction indicator lamp (MIL) is on.

Starter Motor Does Not Operate

Check the following items:

- Check the correct engine starting sequence. ➔P. 29
- Check for a blown fuse. ➔P. 73
- Check for a loose battery connection (➔P. 58) or battery terminal corrosion (➔P. 54).
- Check the condition of the battery. ➔P. 68

If the problem continues, have your vehicle inspected by your dealer as soon as possible or refer to an official Honda Service Manual available for purchase from your dealer. ➔P. 92

PGM-FI (Programmed Fuel Injection) Malfunction Indicator Lamp (MIL)

If the indicator comes on while riding, you may have a serious problem with the PGM-FI system. Reduce speed and have your vehicle inspected by your dealer as soon as possible or refer to an official Honda Service Manual available for purchase from your dealer.
P. 92

Battery Goes Dead

Battery charging is needed.
A battery charger recommended by your lithium-ion (li-ion) battery manufacturer is needed for battery charging.

Contact your dealer before charging the battery.

Remove the battery from the vehicle before charging.

NOTICE
Only use a charger recommended by your lithium-ion (li-ion) battery manufacturer. Using a battery charger that is not recommended can cause permanent damage to your battery.

If the battery does not recover after recharging, contact your dealer.

NOTICE
Do not jump-start, as this can damage your vehicle's electrical system and battery.
Bump starting is not recommended.

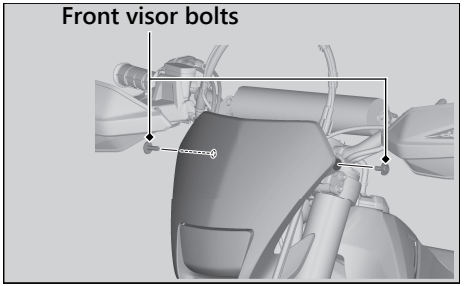
Check the battery voltage using a digital multimeter with the cable connected.
Below 1V: The battery has failed; replace the battery.
Between 1V and 8V: The battery may have failed; charge the battery and then recheck.
If you can't charge the battery or it appears unable to hold a charge, see your dealer.

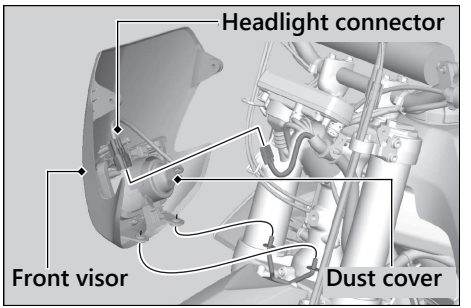
Burned-out Light Bulb

Follow the procedure below to replace a burned-out light bulb.
Allow the bulb to cool before replacing it.
Do not use bulbs other than those specified.
Check the replacement bulb for correct operation before riding.

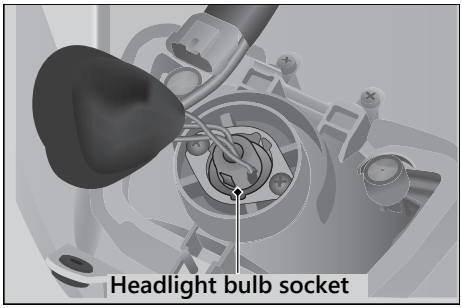
For the light bulb wattage, see "Specifications." P. 98

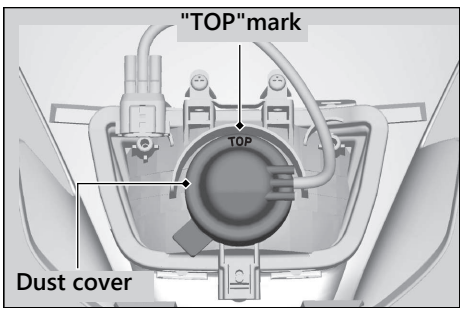
Headlight





1. Remove the front visor bolts.
2. Pull out the front visor and disconnect the headlight connector.





3. Pull back the dust cover.
4. Push and turn the socket counterclockwise, then pull it out.
5. Pull out the bulb without turning it.
6. Install a new bulb and parts in the reverse order of removal.
   ▶ Install the dust cover with its "TOP" mark facing up.

Do not touch the glass surface with your fingers. If you touch the bulb with your bare hands, clean it with a cloth moistened with isopropyl (rubbing) alcohol.

Continued

Taillight

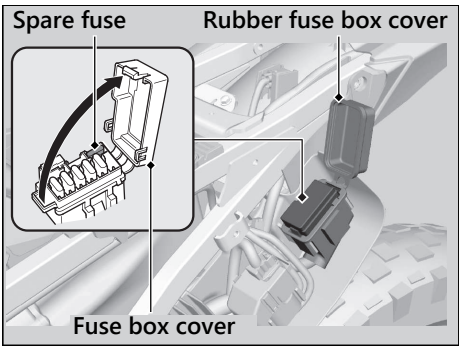
The taillight uses several LEDs.
If there is an LED which is not turned on, see your dealer for servicing.

This model is equipped with an electric starter and battery for easy engine starting. There is a possibility of damage to the lighting system if the battery is carelessly removed.

Blown Fuse

Before handling fuses, see "Inspecting and Replacing Fuses." ➡ P. 55

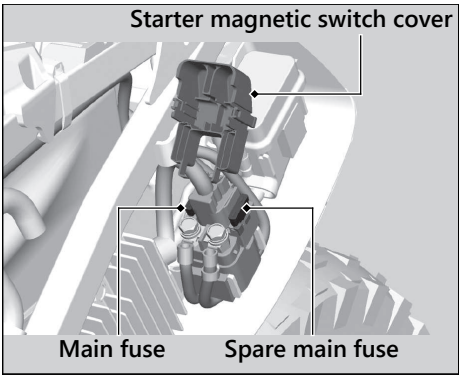
Fuse Box Fuses



1. To prevent an accidental short circuit, stop the engine.
2. Remove the seat. ➡ P. 60
3. Remove the left side cover. ➡ P. 61
4. Open the rubber fuse box cover and fuse box cover.
5. Pull out the fuses one by one to check for a blown fuse. Always replace a blown fuse with a spare fuse of the same rating.
6. Close the fuse box cover and rubber fuse box cover.
7. Reinstall parts in the reverse order of removal.

Continued

Main Fuse



1. To prevent an accidental short circuit, stop the engine.
2. Remove the seat. P. 60
3. Remove the left side cover. P. 61
4. Remove the start magnetic switch cover.
5. Pull out the main fuse to check for a blown fuse. Always replace a blown fuse with a spare main fuse.
6. Close the start magnetic switch cover.
7. Reinstall parts in the reverse order of removal.

NOTICE

If a fuse fails repeatedly, you likely have an electrical problem. Have your vehicle inspected by your dealer.

Information

Instruments, Controls, & Other Features..... P. 76
Caring for Your Vehicle..... P. 77
Storing Your Vehicle..... P. 82
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Vehicle Identification Number..... P. 86
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Oxygenated Fuels..... P. 91
Authorized Manuals ..... P. 92
Warranty Coverage and Service ..... P. 93
Honda Contacts ..... P. 95

Instruments, Controls, & Other Features

Odometer

The display locks at 999,999 when the read-out exceeds 999,999.

Tripmeter

The tripmeters return to 0.0 when each read-out exceeds 9,999.9.

Ignition Cut-off System

A banking (lean angle) sensor automatically stops the engine and fuel pump if the vehicle falls over.

Caring for Your Vehicle

Frequent cleaning and polishing is important to ensure the life of your Honda. A clean vehicle makes it easier to spot potential problems. While you're cleaning, be sure to look for damage, wear, and gasoline or oil leaks.

Washing

Allow the engine, muffler, brakes, and other high-temperature parts to cool before washing.

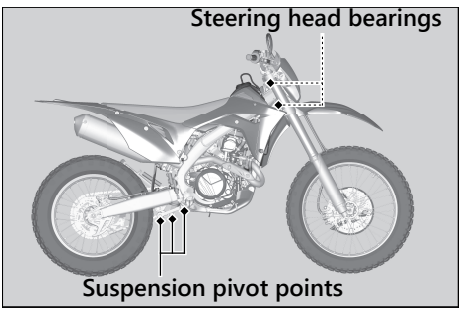
1. Rinse your vehicle thoroughly using a low pressure garden hose to remove loose dirt.
2. If necessary, use a sponge or a soft towel with mild cleaner to remove road grime.
   - ▶ Clean the plastic components with extra care to avoid scratching them.
     Avoid directing water into the air cleaner, muffler, and electrical parts.
   - ▶ Do not use steel wool to clean the frame as it could damage or discolor the frame surface. Muffler stain remover (Scotch Brite Hand Pad #7447-maroon) is for removing stains on the non-coated aluminum frame only.
3. Thoroughly rinse your vehicle with plenty of clean water and dry with a soft, clean cloth.
4. After the vehicle dries, lubricate any moving parts.
   - ▶ Make sure that no lubricant spills onto the brakes or tires. Brake discs, pads, drum or shoes contaminated with oil will suffer greatly reduced braking effectiveness and can lead to a crash.
5. Lubricate the drive chain immediately after washing and drying the vehicle.
6. Apply a coat of wax to prevent corrosion.
   - ▶ Avoid products that contain harsh detergents or chemical solvents. These can damage the metal, paint, and plastic on your vehicle.
     Keep the wax clear of the tires and brakes.
   - ▶ If your vehicle has any matte painted parts, do not apply a coat of wax to the matte painted surface.

Continued

Washing Precautions

Follow these guidelines when washing:

- Do not use high-pressure washers:
  - ▶ High-pressure water cleaners can damage moving parts and electrical parts, rendering them inoperable.
  - ▶ Water in the air intake can be drawn into the throttle body and/or enter the air cleaner.
  - ▶ If you use a high pressure washer, avoid spraying the following areas:
    - brake master cylinders
    - drive chain
    - electrical circuit
    - engine stop button
    - muffler outlet
    - steering head bearings
    - suspension pivot points
    - throttle body
    - under fuel tank
    - under seat



- Do not direct water at the muffler:
  - ▶ Water in the muffler can prevent starting and causes rust in the muffler.
- Dry the brakes:
  - ▶ Water adversely affects braking effectiveness. After washing, apply the brakes intermittently at low speed to help dry them.
- Do not direct water at the air cleaner:
  - ▶ Water in the air cleaner can prevent the engine from starting.
- Do not direct water near the headlight:
  - ▶ The headlight's inside lens may fog temporarily after washing or while riding in the rain. This does not impact the headlight function.
  - ▶ Any condensation inside the headlight should dissipate after a few minutes of running the engine with the headlight(s) on.
    However, if you see a large amount of water or ice accumulated inside the lens(es), have your vehicle inspected by your dealer.
- Do not use wax or polishing compounds on matte painted surfaces:
  - ▶ Use a soft cloth or sponge, plenty of water, and a mild detergent to clean matte painted surfaces. Dry with a soft clean cloth.

Aluminum Frame Maintenance

Aluminum corrodes when it comes in contact with dust, mud and road salt.

To remove stains, use Scotch Brite Hand Pad #7447 (maroon) or an equivalent. Wet the pad and polish the surface using strokes parallel to the length of the frame.
Clean the frame using a wet sponge and a mild detergent, then rinse well with clean water. Dry the frame with a soft clean cloth, using strokes parallel to the length of the frame.

NOTICE
Do not use steel wool to clean the frame as it could damage or discolor the frame surface. Scotch Brite Hand Pad #7447-maroon is for removing stains on the non-coated aluminum frame only.

Titanium Fuel Tank Maintenance

The fuel tank is made of titanium material.
To remove mud or dust, use a sponge or soft cloth and a stainless steel kitchen detergent, then rinse well with clean water.
After washing, rinse with plenty of water and dry with a clean cloth.

Exhaust Pipe and Muffler

The exhaust pipe and muffler are stainless steel but may become stained by mud or dust.

To remove mud or dust, use a wet sponge and a liquid kitchen abrasive, then rinse well with clean water. Dry with chamois or a soft towel.

If necessary, remove heat stains by using a commercially available fine texture compound. Then, rinse by the same manner as removing mud or dust.

NOTICE

Even though the exhaust is made of stainless steel, it can become stained. Remove all marks and blemishes as soon as they are noticed.

Storing Your Vehicle

If you won't be riding for an extended period, follow these guidelines:

- Wash your vehicle.
- Drain the coolant.
- Lubricate the drive chain.
- Place your vehicle on an optional workstand or equivalent to raise both tires off the ground.
- Relieve the fuel pressure and drain the fuel from the fuel tank into an approved gasoline container.
- Remove the battery (P. 58) to prevent discharge. Fully charge the battery and then place it in a shaded, well-ventilated area.
  ▶ If you leave the battery in place, disconnect the negative ⊖ terminal to prevent discharge.
- Stuff a rag into the muffler outlet. Then, tie a plastic bag over the end of the muffler to prevent moisture from entering.
- Store your vehicle in an unheated area, free of dampness, away from sunlight, with a minimum of daily temperature variation.
- Cover your vehicle with a porous material. Avoid using plastic or similar non-breathing, coated materials that restrict air flow and allow heat and moisture to accumulate.

To remove your vehicle from storage, follow these guidelines:

- Uncover and clean your vehicle.
- Change the engine oil if more than 4 months have passed since the start of storage.
- Uncover the end of the muffler and remove the rag from the muffler outlet.
- Fill the fuel tank with the recommended fuel. ➡P. 34
- Charge the battery as required. ➡P. 53 Install the battery.
- Pour a fresh recommended coolant mixture slowly into the radiator fill hole up to the filler neck.
- Increase the fuel pressure.
- Perform all maintenance checks. ➡P. 48

Transporting Your Vehicle

If your vehicle needs to be transported, it should be carried on a motorcycle trailer or a flatbed truck or trailer that has a loading ramp or lifting platform, and motorcycle tie-down straps. Never try to tow your vehicle with a wheel or wheels on the ground.

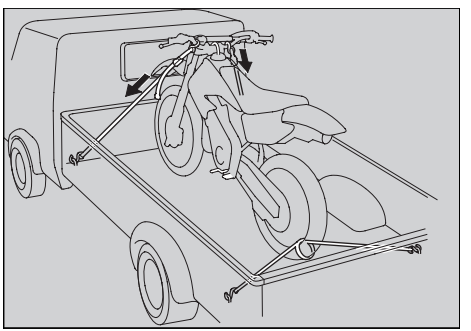
NOTICE

Towing your vehicle with a wheel or wheels on the ground can cause serious damage to the transmission.

Continued

If you use a truck or motorcycle trailer to transport your vehicle, we recommend that you follow these guidelines:

- Use a loading ramp.
- Relieve the fuel pressure and drain the fuel from the fuel tank into an approved gasoline container.
- Secure the vehicle in an upright position, using motorcycle tie-down straps. Avoid using rope, which can loosen and allow the vehicle to fall over.



To secure your vehicle, brace the front wheel against the front of the truck bed or trailer rail. Attach the lower ends of two straps to the tiedown hooks on truck bed or trailer rail. Attach the upper ends of the straps to the handlebar (one on the right side, the other on the left), close to the fork.

Check that the tie-down straps do not contact any control cables or electrical wiring.

Tighten both straps until the front suspension is compressed about half-way. Too much pressure is unnecessary and could damage the fork seals.

Use another tie-down strap to keep the rear of the vehicle from moving.

We recommend that you do not transport your vehicle on its side. This can damage the vehicle, and leaking gasoline could be a hazard.

You & the Environment

Owning and riding a vehicle can be enjoyable, but you must do your part to protect the environment.

Choose Sensible Cleaners

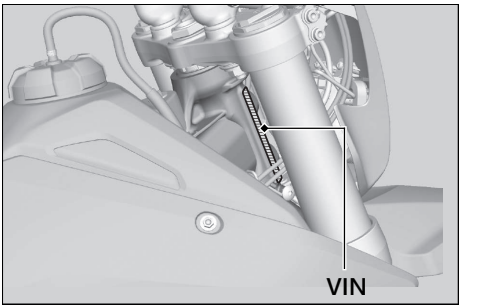
Use a biodegradable detergent when you wash your vehicle. Avoid aerosol spray cleaners that contain chlorofluorocarbons (CFCs) which damage the atmosphere's protective ozone layer.

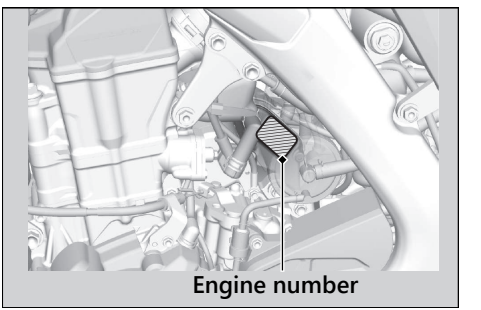
Recycle Wastes

Put oil and other toxic wastes in approved containers and take them to a recycling center. Call your local or state office of public works or environmental services to find a recycling center in your area and to get instructions on how to dispose of non-recyclable wastes. Do not place used engine oil in the trash or pour it down a drain or on the ground. Used oil, gasoline, coolant, and cleaning solvents contain poisons that can hurt refuse workers and contaminate drinking water, lakes, rivers, and oceans.

Vehicle Identification Number

The VIN and engine serial number uniquely identify your vehicle and are required in order to register your vehicle. They may also be required when ordering replacement parts. You should record these numbers and keep them in a safe place.





Emission Control Systems

Your vehicle engine emits combustion byproducts, including carbon monoxide (CO), oxides of nitrogen (NOx), and hydrocarbons (HC). Gasoline evaporation also emits hydrocarbons. Controlling the production of NOx, CO, and HC is important for the environment.

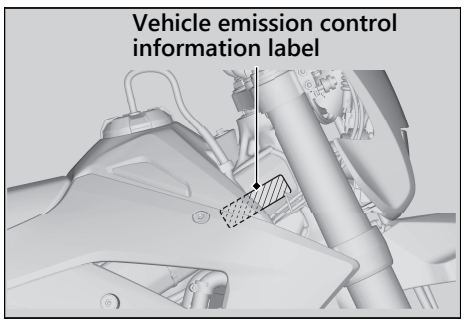
Exhaust Emission Requirements

The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) require that your vehicle comply with applicable exhaust, crankcase, and fuel permeation emission standards during its useful life, when operated and maintained according to the instructions provided.

CARB also requires that your vehicle comply with applicable evaporative emission requirements during its useful life, when operated and maintained according to the instructions provided.

Compliance with the terms of the Distributor's Warranties for Honda Motorcycle Emission Control Systems is necessary in order to maintain a valid emissions system warranty.

The vehicle emission control information label is attached to the right side of the frame.



Continued

Noise Emission Requirements

The EPA also requires that vehicles built after January 1,1983 comply with applicable noise emission standards for one year or 1,865 miles (3,000 km) after the time of sale to the ultimate purchaser, the time operated and maintained according to the instructions provided.

Exhaust Emission Control System

The exhaust emission control system includes the following components that should not need adjustment, although periodic inspection by your dealer is recommended.

PGM-FI System

The PGM-FI system has four subsystems: Air Intake, Engine Control, Fuel Control, and Exhaust Control. The Engine Control Module (ECM) uses various sensors to determine how much air is going into the engine. It then controls how much fuel is injected under all operating conditions.

Ignition Timing Control System

The ignition timing control system adjusts the ignition timing to reduce the amount of HC, CO, and NOx produced.

Secondary Air Injection System

The exhaust emission control system consists of a secondary air injection system. The secondary air injection system introduces filtered air into the exhaust gases in the exhaust port. The secondary air injection system helps improve emission control performance. No adjustments to this system should be made, although periodic inspection of the components is recommended.

Evaporative Emission Control System

50 STATE (meets California)

An evaporative emissions control system uses a canister filled with charcoal to adsorb fuel vapor from the fuel tank while the engine is off. The vapor is drawn into the engine and burned while riding.

Models sold in and used in California: An add-on or modified part must be compliant with applicable ARB evaporative emission control standards. A violation of this requirement is punishable by civil and/or criminal punishment.

Crankcase Emissions Control System

The engine is equipped with a closed crankcase system to prevent discharging crankcase emissions into the atmosphere. Blow-by gas is returned to the combustion chamber through the crankcase oil separator, air cleaner and throttle body.

Fuel Permeation Emission Control

This vehicle complies with the Fuel Permeation Emission Control regulations of the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB). The fuel tank, fuel hoses, and fuel vapor charge hoses used on this vehicle incorporate fuel permeation control technologies.

Tampering with the fuel tank, fuel hoses, or fuel vapor charge hoses to reduce or defeat the effectiveness of the fuel permeation technologies is prohibited by federal regulations.

Noise Emission Control System

TAMPERING WITH THE NOISE CONTROL SYSTEM IS PROHIBITED:

U. S. federal law prohibits the following acts or the causing thereof: (1) The removal or rendering inoperative by any person, other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use; or (2) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Continued

AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE FOLLOWING ACTS:

- Removal of, or puncturing the muffler, baffles, header pipes or any other component which conducts exhaust gases.
- Removal of, or puncturing of any part of the intake system.
- Lack of proper maintenance.
- Removing or disabling any emissions compliance component, or replacing any compliance component with a noncompliant component.

Problems that May Affect Vehicle Emissions

If you are aware of any of the following symptoms, have the vehicle inspected and repaired by your dealer.

1. Hard starting or stalling after starting.
2. Rough idle.
3. Misfiring or backfiring during acceleration.
4. After-burning (backfiring).
5. Poor performance (driveability:) and poor fuel economy.

Federal regulations prohibit removing or disabling a device or element of design that may affect your engine's emission performance unless your vehicle will be used exclusively in competition. If you modify your engine for use in sanctioned competition events, you must deface or destroy the emission control information label.

If you loan, sell, or give your competition modified vehicle to someone else, according to applicable law, you must inform the new owner/operator in writing that the vehicle is to be used for competition only.

Oxygenated Fuels

Some conventional fuels blended with alcohol or an ether compound are available in some locales to help reduce emissions to meet clean air standards. These gasolines are collectively referred to as oxygenated fuels. If you plan to use oxygenated fuel, check that it is unleaded and meets the minimum octane rating and blend requirement.

The following fuel blends have been approved for use in your vehicle:

- Ethanol (ethyl alcohol) up to 10% by volume.
  ▶ Gasoline containing ethanol may be marketed under the name Gasohol.
- Do not use gasoline containing methanol (methyl alcohol).

If you accidentally fill your fuel tank with an oxygenated fuel containing higher percentages, you may experience performance problems. To resolve the problem, have your dealer drain the fuel tank and replace with the correct fuel. Fuel system or performance problems resulting from the use of an oxygenated fuel containing higher percentages are not covered by your warranty.

NOTICE

Improper use of oxygenated fuels can damage metal, rubber, and plastic parts of your fuel system.
Oxygenated fuel can also damage paint.
Damage caused by spilled fuel is not covered by warranty.

If you notice any undesirable operating symptoms or performance problems, try a different brand of gasoline.

Authorized Manuals

The Service Manual used by your authorized dealer is available from your Honda dealer or Helm, Inc.

Also available, but not necessary to service your model, is the Honda Common Service Manual, which explains basic service information for various systems on Honda motorcycles, scooters, ATV, and SxS.
The Winter Storage Guide in conjunction with the Owner's Manual and Service Manual can help you prepare your Honda motorcycle, scooter, ATV, and SxS for winter storage.

These Honda manuals are written for the professional technician. However, if you possess the proper tools, observe the safety standards, and are mechanically capable, you should find them easy to use.
Special Honda tools are necessary for some procedures.

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(1-888-292-5393)
(NOTE: For Credit Card Orders Only)
Monday - Friday 8:00 AM - 6:00 PM EST

Description
2022 CRF450X Service Manual
Common Service Manual (61CSM00)
Winter Storage Guide (S9507)
2022 CRF450X Owner's Manual
2022 CRF450X Competition Handbook

Warranty Coverage and Service

Coverage

- Emission Control System Warranty
- Noise Control Warranty

Your new Honda is covered by certain warranties as described in the Honda Motorcycle Warranties Booklet that was provided to you by your Honda dealer.
Please read this booklet and be aware of the responsibilities, restrictions, and exclusions which apply.
Please also keep your Honda owner's card with your Warranties Booklet.

It is important to realize that your warranty for your Honda applies to defects in material or factory workmanship. Your warranty coverage does not apply to normal wear or deterioration associated with using the vehicle.

Your warranty coverage will not be voided if you choose to perform your own maintenance. However, you should have the proper tools and service information and be mechanically qualified.
Failures that occur due directly to improper maintenance or lack of maintenance are not covered.

You can extend almost all of your warranty coverage through the HondaCare® Protection Plan. For more information, see your Honda dealer.

Service

Please remember that recommended maintenance interval servicing is not included in your warranty coverage. Additionally, your warranty does not apply to the normal wear of items (such as brakes, tires etc.).

If you believe you have a problem with your Honda, call the service department of your Honda dealer. Make an appointment for an inspection and diagnosis. Remember, as the owner of the vehicle, you will be asked to authorize that inspection. Your dealer will give you the results of the inspection. If the problem is covered under warranty, your dealer will perform the warranty repairs for you.

If you have questions about warranty coverage or the nature of the repair, it is best to talk to the Service Manager of your Honda dealer.

Sometimes, in spite of the best intentions of all concerned, a misunderstanding may occur. If you aren't satisfied with your dealer's handling of the situation, we suggest you discuss your problem with the appropriate member of the dealership's management team. If the problem has already been reviewed with the Service Manager, Parts Manager, Sales Manager, etc., contact the Owner of the dealership or his designated representative.

Honda Contacts

American Honda Motor Co., Inc.

If you wish to contact Honda directly to comment on your experiences with your vehicle or with your dealer, please send your comments using one of the following methods:

POST MAIL

Powersports Customer Relations
American Honda Motor Co., Inc.
P.O. Box 2200, Torrance, CA 90509-2200
Mailstop: 100-4W-5F

PHONE

Telephone: (866) 784-1870

ONLINE CUSTOMER SERVICE

Website: *https://powersports.honda.com/contact-us*

Please include the following information in your letter:

- Name, address, and telephone number
- Product model, year, and VIN
- Date of purchase
- Dealer name and address

We will likely ask your Honda dealer to respond, or possibly acknowledge your comments directly.

Your Honda Dealer

The service department of your Honda dealer offers trained personnel to perform regular maintenance and unexpected repairs. It has the latest available service information from Honda and also handles warranty inspections and repairs.

The parts department offers Honda Genuine Parts, Pro Honda products and Honda Accessories that provide the same quality that went into your vehicle.

The sales department offers the HondaCare® Protection Plan to extend almost all of your warranty coverage.

Your Honda dealer can also supply information about riding events and information about safety training available in your local area.

Specifications

Dimension

Overall length	86.4 in (2,195 mm)
Overall width	33.3 in (845 mm)
Overall height	50.2 in (1,275 mm)
Wheelbase	59.1 in (1,500 mm)
Seat height	37.9 in (963 mm)
Footpeg height	16.4 in (417 mm)
Minimum ground clearance	13.0 in (330 mm)
Caster angle	27° 36'
Trail length	5.6 in (143 mm)

Frame

Tire size	Front	80/100-21 51M
	Rear	110/100-18 64M
Tire type	Bias-ply, tube	
Recommended tire	Front	DUNLOP MX52F
	Rear	DUNLOP MX52
Tire pressure (cold)	Front	22 psi (150 kPa, 1.50 kgf/cm^2)
	Rear	22 psi (150 kPa, 1.50 kgf/cm^2)
Fuel	unleaded gasoline, pump octane number of 91 or higher	
Fuel tank capacity		2.01 US gal (7.6 L)

Engine

Bore x stroke	3.78 x 2.44 in (96.0 x 62.1 mm)	
Displacement	27.4 cu-in (449 cm^3)	
Compression ratio	12.0 : 1	
Valve clearance (cold)	Intake	0.004 ± 0.001 in (0.11 ± 0.03 mm)
	Exhaust	0.011 ± 0.001 in (0.28 ± 0.03 mm)
Recommended engine oil	API Service Classification SG or higher except oils labeled as energy conserving or resource conserving on the circular API service label, SAE 10W-30, JASO T 903 standard MA, Pro Honda GN4 4-stroke oil (USA & Canada) or Honda 4-stroke oil, or an equivalent motorcycle oil	
Engine oil capacity	After draining	1.16 US qt (1.10 L)
	After draining and oil filter change	1.22 US qt (1.15 L)
	After disassembly	1.53 US qt (1.45 L)
Idle speed	1,800 ± 100 rpm	

Cooling system

Cooling capacity	After draining	1.20 US qt (1.14 L)
	After disassembly	1.31 US qt (1.24 L)

Drive train

Primary reduction		2.357
Gear ratio	1st	2.357
	2nd	1.705
	3rd	1.300
	4th	1.090
	5th	0.916
	6th	0.793
Final reduction		3.923
Gear shift pattern	Left foot-operated return system 1-N-2-3-4-5-6	

Electrical

Battery	HY93-C lithium-ion (li-ion) 12 V-4.5 Ah (20 HR)	
Spark plug	(standard)	SILMAR9A-9S (NGK)
	(for extended high speed riding)	SILMAR10A-9S (NGK)
Spark plug gap	(non-adjustable)	0.031 - 0.035 in (0.80 - 0.90 mm)

Lights

Headlight	12 V-35 W
Taillight	LED

Fuses

Main fuse	20 A
Other fuse	10 A

Torque specifications

Battery terminal bolt	1.5 lbf·ft (2 N·m, 0.2 kgf·m)
Seat mounting bolt	19 lbf·ft (26 N·m, 2.7 kgf·m)
Side cover bolt	7 lbf·ft (10 N·m, 1.0 kgf·m)
Spark arrester mounting bolt	6.6 lbf·ft (9 N·m, 0.9 kgf·m)
Tail cap cover bolt	3.9 lbf·ft (5.25 N·m, 0.5 kgf·m)

Information Record

VIN	
Engine No.	
Color Label & Code	
Owner's Name	
Address	
City/State	
Phone	
Dealer's Name	
Address	
City/State	
Phone	
Service Manager	

California Proposition 65 Warning

⚠**WARNING:** Operating, servicing and maintaining a passenger vehicle or off-highway motor vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle. For more information go to www.P65Warnings.ca.gov/passenger-vehicle.

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