

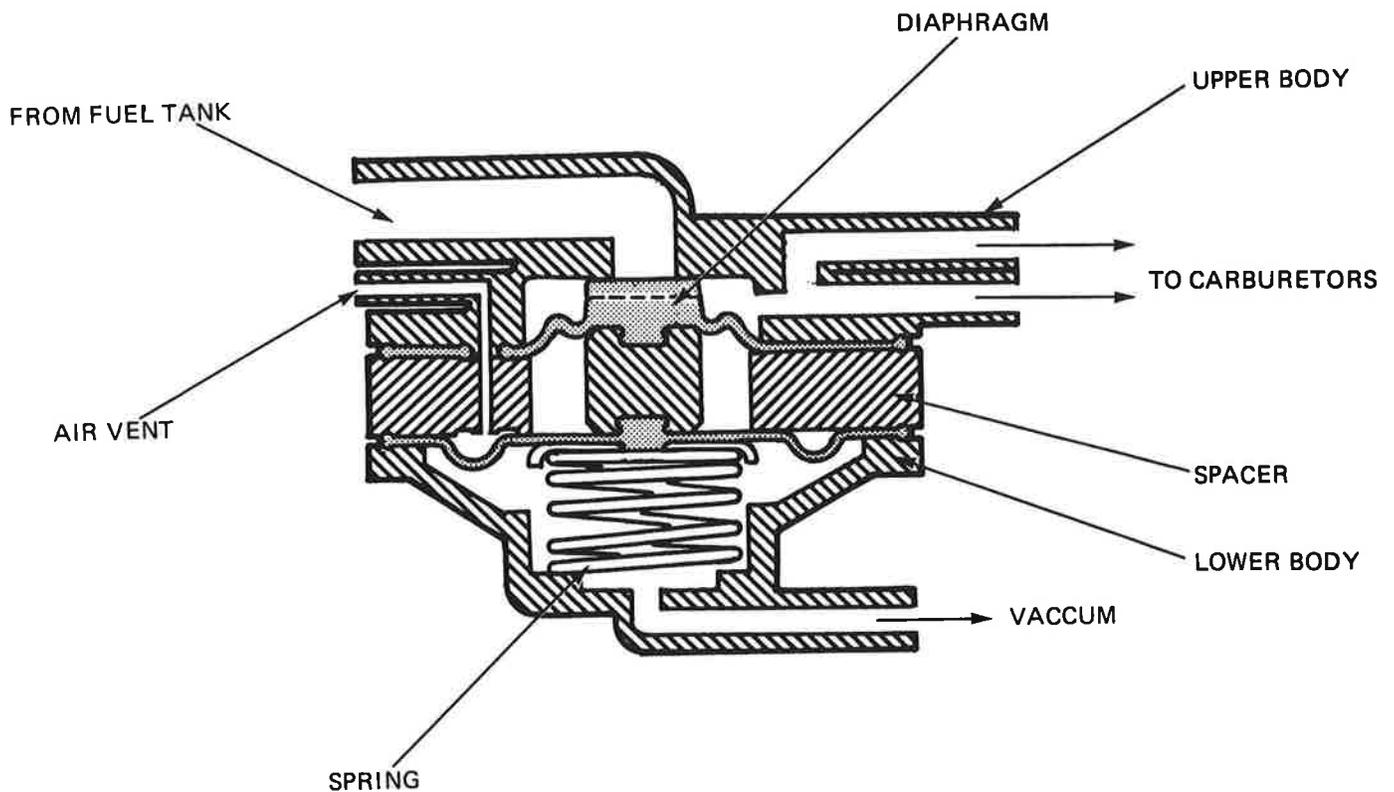
FUEL LINE DIAPHRAGM

The fuel line diaphragm depends upon a negative crankcase pressure and a spring loaded diaphragm, allowing fuel to flow from fuel tank to the carburetor to the engine only when the engine is operating.

With the engine off the diaphragm is held against the fuel outlet within the diaphragm body; no fuel can flow through the fuel tank to the carburetor.

As the engine is cranked, negative vacuum pressure pulls the diaphragm down against diaphragm spring tension. This opens the fuel outlet allowing fuel to flow to the carburetor.

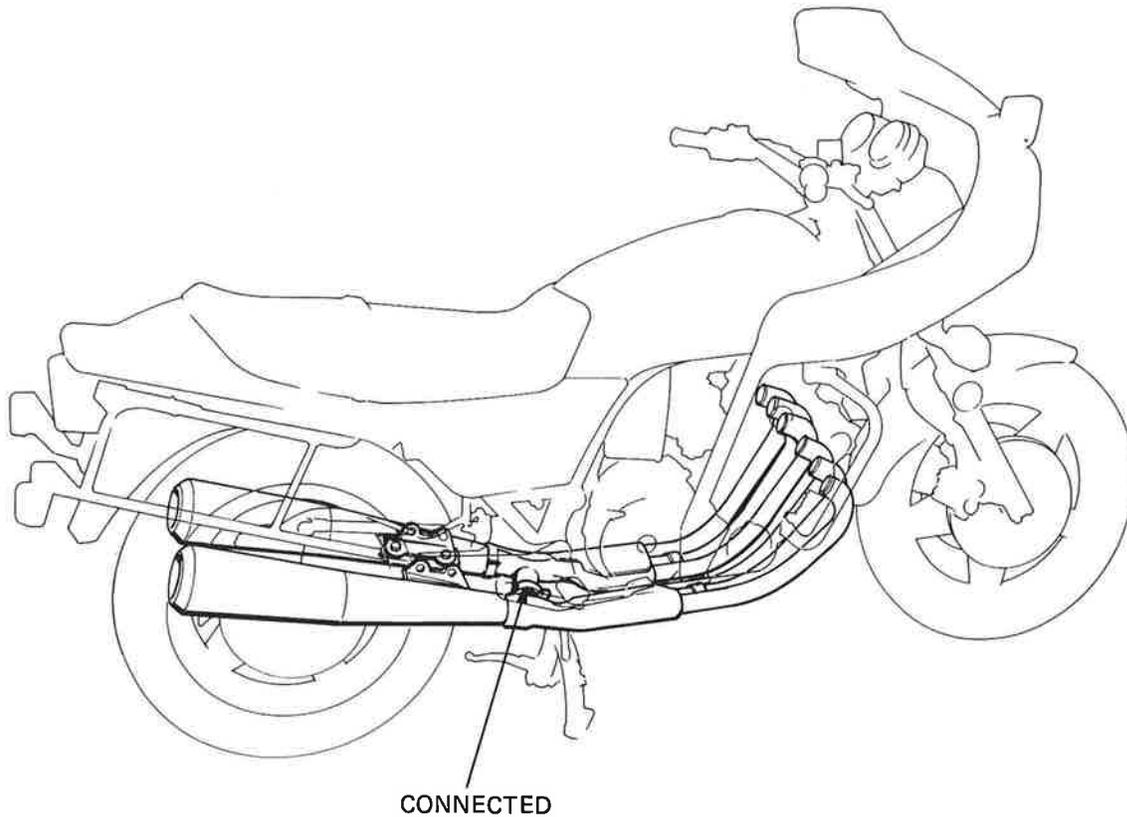
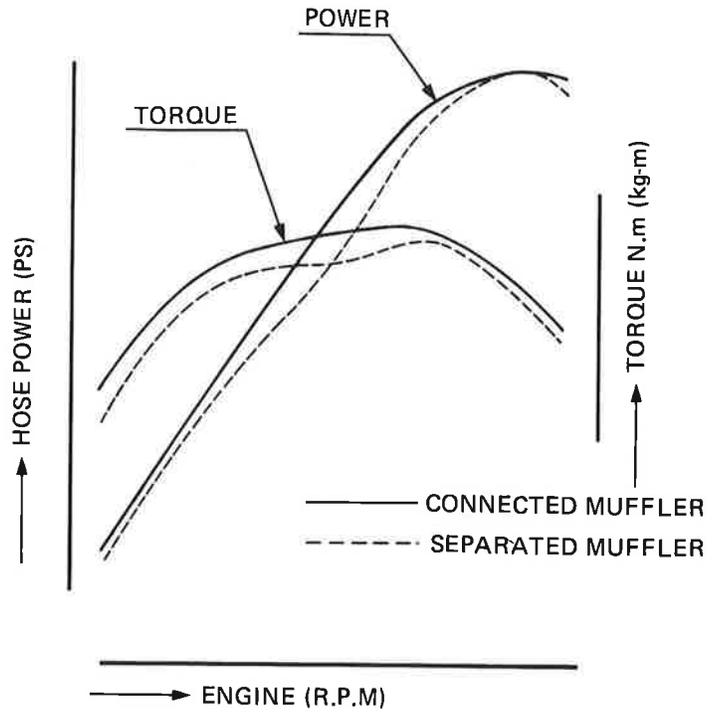
When the engine is stopped, the diaphragm is pushed back against the fuel outlet to block the fuel flow.





EXHAUST MUFFLERS

The right and left mufflers are internally connected to give a desired acoustic properties and still offer low resistance to gas flow for more output per liter of fuel consumed.





ENGINE DOES NOT START OR IS HARD TO START

1. Check fuel flow to carburetor

REACHING CARBURETOR

2. Perform spark test

GOOD SPARK

3. TEST CYLINDER COMPRESSION

COMPRESSION NORMAL

4. Start by following normal procedure

ENGINE DOES NOT FIRE

5. Remove and inspect spark plug

NOT REACHING CARBURETOR

- (1) Fuel tank empty
- (2) Clogged fuel tube or fuel filter
- (3) Vacuum not reaching fuel line diaphragm
- (4) Faulty fuel line diaphragm
- (5) Sticking float valve
- (6) Clogged fuel tank cap breather hole

WEAK OR NO SPARK

- (1) Faulty spark plugs
- (2) Fouled spark plugs
- (4) Faulty spark unit
- (4) Broken or shorted high tension wires
- (5) Faulty alternator
- (6) Broken or shorted ignition coil
- (7) Faulty ignition switch
- (8) Faulty pulse generator

LOW COMPRESSION

- (1) Low battery charge
- (2) Improper valve clearance
- (3) Valve stuck open
- (4) Worn cylinder and piston rings
- (5) Damaged cylinder head gasket
- (6) Seized valve
- (7) Improper valve timing

ENGINE FIRES BUT STOPS

- (1) Improper choke operation
- (2) Carburetor incorrectly adjusted
- (3) Manifold leaking
- (4) Improper ignition timing (Spark unit or pulse generator)
- (5) Incorrect fast idle
- (6) Fuel contaminated

WET PLUG

- (1) Carburetor flooded
- (2) Choke closed
- (3) Throttle valve open
- (4) Air cleaner dirty



ENGINE LACKS POWER

1. Raise wheels off ground and spin by hand
WHEEL SPINS FREELY
2. Check tire pressure
PRESSURE NORMAL
3. Accelerator rapid from low to second
ENGINE SPEED LOWERED WHEN CLUTCH IS RELEASED
4. Accelerate lightly
ENGINE SPEED INCREASE
5. Check ignition timing
CORRECT
6. Check valve clearance
CORRECT
7. Test cylinder compression
NORMAL
8. Check carburetor for clogging
NOT CLOGGED
9. Remove spark plug
NOT FOULED OR DISCOLORED
10. Check oil level and condition
CORRECT
11. Remove cylinder head cover and inspect lubrication
VALVE TRAIN LUBRICATED PROPERLY
12. Check for engine overheating
NOT OVERHEATING
13. Accelerate or run at high speed
ENGINE DOES NOT KNOCK

POSSIBLE CAUSE

- WHEELS DO NOT SPIN FREELY → (1) Brake dragging
(2) Worn or damaged wheel bearing
(3) Wheel bearing needs lubrication
(4) Drive chain too tight
- PRESSURE LOW → (1) Punctured tire
(2) Faulty tire valve
- ENGINE SPEED CHANGED WHEN CLUTCH IS RELEASED → (1) Clutch slipping
(2) Worn clutch disc/plate
(3) Warped clutch disc/plate
- ENGINE SPEED DOES NOT INCREASE → (1) Carburetor choke closed
(2) Clogged air cleaner
(3) Restricted fuel flow vent
(4) Clogged fuel tank cap
(5) Vacuum not reaching fuel line diaphragm
(6) Fuel line diaphragm faulty
(7) Clogged muffler
- INCORRECT → (1) Faulty spark unit
(2) Faulty pulse generator
(3) Faulty ignition advancer
- INCORRECT → (1) Improper valve adjustment
(2) Worn valve seat
- TOO LOW → (1) Valve stuck open
(2) Worn cylinder and piston rings
(3) Leaking head gasket
(4) Improper valve timing
- CLOGGED → (1) Carburetor not serviced frequently enough
- FOULED OR DISCOLORED → (1) Plugs not serviced frequently enough
(2) Spark plug with incorrect heat range
- INCORRECT → (1) Oil level too high
(2) Oil level too low
(3) Contaminated oil
- VALVE TRAIN NOT LUBRICATED PROPERLY → (1) Clogged oil passage
(2) Clogged oil control orifice
- OVERHEATING → (1) Excessive carbon build-up in combustion chamber
(2) Use of poor quality fuel
(3) Clutch slipping
(4) Fuel-air mixture too lean
- ENGINE KNOCKS → (1) Worn piston and cylinder
(2) Fuel-air mixture too lean
(3) Wrong type of fuel
(4) Excessive carbon build-up in combustion chamber
(5) Ignition timing too advanced (Faulty spark unit or advancer)



POOR PERFORMANCE AT LOW AND IDLE SPEEDS

| | | POSSIBLE CAUSE |
|--|----------------------------|--|
| 1. Check ignition timing and valve clearance | INCORRECT | (1) Improper valve clearance (2) Improper ignition timing (Faulty spark unit or spark advancer) |
| CORRECT | | |
| 2. Check carburetor pilot screw adjustment | INCORRECT | See Fuel System Section |
| CORRECT | | |
| 3. Check for leaking manifold | LEAKING | (1) Deteriorated insulator O-ring (2) Loose carburetor |
| NO LEAK | | |
| 4. Perform spark test | WEAK OR INTERMITTENT SPARK | (1) Faulty, carbon or wet fouled spark plug (2) Faulty spark unit (3) Alternator faulty (4) Faulty ignition coil (5) Faulty spark advancer |
| GOOD SPARK | | |

POOR PERFORMANCE AT HIGH SPEED

| | | |
|--|----------------------|---|
| 1. Check ignition timing and valve clearance | INCORRECT | (1) Improper valve clearance (2) Faulty spark unit (3) Faulty pulse generator (4) Faulty spark advancer |
| CORRECT | | |
| 2. Disconnect fuel tube | FUEL FLOW RESTRICTED | (1) Lack of fuel in tank (2) Clogged fuel line (3) Clogged fuel tank breather hole (4) Clogged fuel valve (5) Vacuum not reaching fuel line diaphragm (6) Fuel line diaphragm faulty |
| FUEL FLOWS FREELY | | |
| 3. Remove carburetor and check for clogged jet | CLOGGED | (1) Clean |
| NO CLOGGING | | |
| 4. Check valve timing | INCORRECT | (1) Cam sprocket not installed properly |
| CORRECT | | |
| 5. Check valve spring tension | WEAK | (1) Faulty spring |
| NOT WEAKENED | | |

POOR HANDLING → Check tire and suspension pressure

| | | |
|--|--|--|
| 1. If steering is heavy | | (1) Steering top thread nut too tight (2) Damaged steering head bearings |
| 2. If either wheel is wobbling | | (1) Excessive wheel bearing play (2) Distorted rim (3) Improperly installed wheel hub (4) Swing arm pivot bushing excessively worn (5) Distorted frame (6) Improper drive chain tension or adjustment |
| 3. If the motorcycle pulls to one side | | (1) Improperly adjusted shock absorber (2) Front and rear wheels not aligned (3) Bent front fork (4) Bent swing arm |

MEMO

INTRODUCTION

This Addendum contains information for the 1982 CBX. Refer to the base shop manual for service information not included in this addendum.

ALL INFORMATION, ILLUSTRATIONS, DIRECTIONS AND SPECIFICATIONS INCLUDED IN THIS PUBLICATION ARE BASED ON THE LATEST PRODUCT INFORMATION AVAILABLE AT THE TIME OF APPROVAL FOR PRINTING. HONDA MOTOR CO., LTD. RESERVES THE RIGHT TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE AND WITHOUT INCURRING ANY OBLIGATION WHATEVER.

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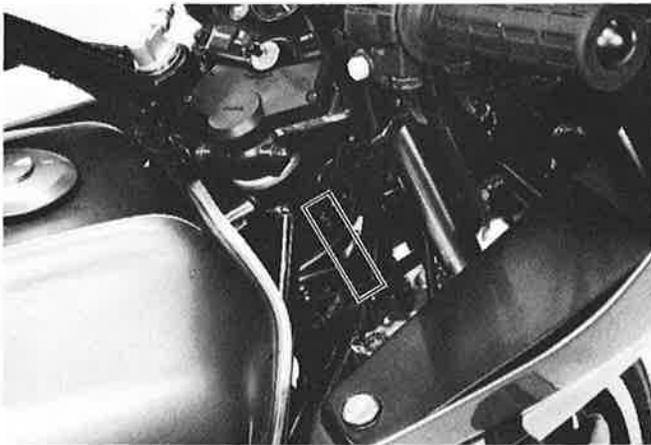
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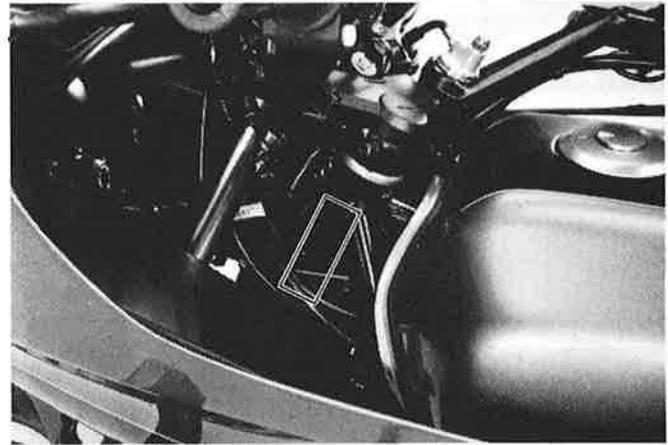
| | |
|--------------------------------|-------|
| I. SPECIFICATIONS | 22- 2 |
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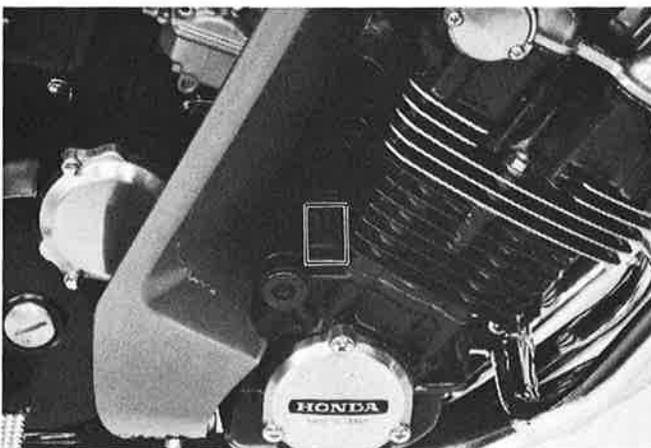
MODEL IDENTIFICATION



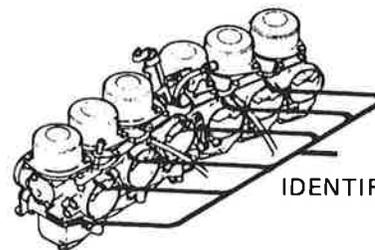
The frame serial number is stamped on the right side of the steering head.



The vehicle identification number (VIN) is on the left side of the steering head.



The engine serial number is stamped on the top of the crankcase.



IDENTIFICATION NUMBER

8422-08

The carburetor identification number is on the left of the carburetor body.



I. SPECIFICATIONS

| ITEM | | | |
|------------------------------|---|---|---|
| DIMENSIONS | Overall length | 2365 mm (93.1 in) | |
| | Overall width | 780 mm (30.7 in) | |
| | Overall height | 1360 mm (53.5 in) | |
| | Wheelbase | 1535 mm (60.4 in) | |
| | Seat height | 810 mm (31.9 in) | |
| | Foot peg height | 335 mm (13.2 in) | |
| | Ground clearance | 155 mm (6.1 in) | |
| | Dry weight | 287 kg (633 lb) | |
| FRAME | Type | Diamond | |
| | Front suspension, travel | Telescopic air forks 160 mm (6.3 in) | |
| | Rear suspension, travel | Swingarm 105 mm (4.1 in) | |
| | Front tire size | 3.50V19 (4PR) | |
| | Rear tire size | 130/90V18 | |
| | Cold tire pressures | Up to 90 kg (200 lbs) load | Front : 250 kPa (2.5 kg/cm ² , 36 psi) Rear : 250 kPa (2.5 kg/cm ² , 36 psi) |
| | | Up to vehicle capacity load | Front : 250 kPa (2.5 kg/cm ² , 36 psi) Rear : 290 kPa (2.9 kg/cm ² , 41 psi) |
| | F. brake, lining swept area | Double disc brake, 22 cm ² x 4 (3.4 sqin x 4) | |
| | R. brake, lining swept area | Single disc brake, 22 cm ² x 2 (3.4 sqin x 2) | |
| | Fuel capacity | 22.0 liters (5.8 US gal) | |
| Fuel reserve capacity | 3.0 liters (0.8 US gal) | | |
| Caster angle | 62°30' | | |
| Trail | 120 mm (4.7 in) | | |
| Front fork oil capacity | 345 cc (11.7 ozs) | | |
| Front fork air pressure | 70 ± 20 kPa (0.7 ± 0.2 kg/cm ² , 10 ± 3 psi) | | |
| Rear suspension oil capacity | 618 cc (20.9 ozs) at disassembly | | |
| Rear suspension air pressure | 200–400 kPa (2.0–4.0 kg/cm ² , 28–57 psi) | | |
| ENGINE | Type | Air cooled 4-stroke | |
| | Cylinder arrangement | Vertical parallel six | |
| | Bore and stroke | 64.5 x 53.4 mm (2.54 x 2.10 in) | |
| | Displacement | 1047 cc (63.89 cu in) | |
| | Compression ratio | 9.3 : 1 | |
| | Valve train | Chain driven DOHC 4 valve/cylinder | |
| | Maximum horsepower | 100 BHP/9,000 rpm | |
| | Maximum torque | 8.5 kg-m (60.8 ft-lb)/7,500 rpm | |
| | Oil capacity | 5.5 liters (5.8 US qt) after disassembly 4.0 liters (4.2 US qt) after draining | |
| | Lubrication system | Wet sump dual pump with oil cooler | |
| | Air filtration | Paper | |
| | Cylinder compression | 12.0 ± 1.0 kg/cm ² (170 ± 14 psi) | |
| | Intake valve | Opens 5° (BTDC) at 1 mm lift, 78° (BTDC) at 0 lift Closes 35° (ABDC) at 1 mm lift, 110° (ABDC) at 0 lift | |
| | Exhaust valve | Opens 40° (BBDC) at 1 mm lift, 94° (BBDC) at 0 lift Closes 5° (ATDC) at 1 mm lift, 71° (ATDC) at 0 lift | |
| | Valve overlap | 149° | |
| | Valve clearance (Cold) | IN: } 0.06–0.13 mm (0.002–0.005 in) EX: } | |
| | Engine weight | 108 kg (238.1 lb) | |
| | Idle speed | 900 ± 100 rpm | |



| ITEM | | | | | | | | | | | | | | | | | | | | |
|--|---|--|--|--------------------------------------|----------|--|--------------------------------------|--|----|-----|----|-----|----|-----|--------------|-------|--------------|-------------|--------------|-------|
| CARBURETION | Carburetor type Identification number Pilot screw Float level | VB 28 mm (1.1 in) venturi bore VB64A Refer to page 4-28 15.5 mm (0.61 in) | | | | | | | | | | | | | | | | | | |
| DRIVE TRAIN | Clutch Transmission Primary reduction Gear ratio I Gear ratio II Gear ratio III Gear ratio IV Gear ratio V Final reduction Gear shift pattern | Wet, multi-plate 5-speed constant-mesh 2.269 2.438 1.750 1.391 1.200 1.037 2.333 (18/42) Left foot operated return system 1-N-2-3-4-5 | | | | | | | | | | | | | | | | | | |
| ELECTRICAL | Ignition Ignition timing "F" mark Full advance Firing order Starting system Alternator Battery capacity Spark plug NEW | Transistorized 10° BTDC static 41° BTDC at 8,000 rpm 1-5-3-6-2-4 Electric starter Three phase Alternator 350 W/5,000 rpm 12V - 18AH <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th colspan="2">For cold climate below 5°C, 41°F</th> <th colspan="2">Standard</th> <th colspan="2">For extended high speed riding</th> </tr> <tr> <th>ND</th> <th>NGK</th> <th>ND</th> <th>NGK</th> <th>ND</th> <th>NGK</th> </tr> </thead> <tbody> <tr> <td>X22ESR -U</td> <td>DR7ES</td> <td>X24ESR -U</td> <td>DR8ES -L</td> <td>X27ESR -U</td> <td>DR8ES</td> </tr> </tbody> </table> | For cold climate below 5°C, 41°F | | Standard | | For extended high speed riding | | ND | NGK | ND | NGK | ND | NGK | X22ESR -U | DR7ES | X24ESR -U | DR8ES -L | X27ESR -U | DR8ES |
| For cold climate below 5°C, 41°F | | Standard | | For extended high speed riding | | | | | | | | | | | | | | | | |
| ND | NGK | ND | NGK | ND | NGK | | | | | | | | | | | | | | | |
| X22ESR -U | DR7ES | X24ESR -U | DR8ES -L | X27ESR -U | DR8ES | | | | | | | | | | | | | | | |
| | Spark plug gap | 0.6-0.7 mm (0.024-0.028 in); | | | | | | | | | | | | | | | | | | |
| LIGHTS | Headlight (high/low beam) Tail/stoplight Turn signal Front Rear Speedometer light Tachometer light Neutral indicator Turn signal indicator High beam indicator Rear suspension air pressure warning light Running light | 60/55W H4 BULB (Philips 12342/99, or equivalent) 8/27W, 3/32 cp SAE NO. 1157 8/23W, 3/32 cp SAE NO. 1034 23W, 32 cp SAE NO. 1073 3,4W, 2 cp SAE NO. 57 3,4W, 2 cp SAE NO. 57 8W, 3 cp SAE NO. 1034 | | | | | | | | | | | | | | | | | | |



II. MAINTENANCE SCHEDULE

Perform the PRE-RIDE INSPECTION in the Owner's Manual at each scheduled maintenance.

I: INSPECT AND CLEAN, ADJUST, LUBRICATE, OR REPLACE IF NECESSARY.

C: CLEAN A: ADJUST

R: REPLACE L: LUBRICATE

| ITEM | FREQUENCY | WHICHEVER COMES FIRST | ODOMETER READING (NOTE 3) | | | | | | Refer to |
|--------------------------|-----------|-----------------------|-----------------------------|-------------------------|--------------------------|---------------------------|---------------------------|---------------------------|---------------------|
| | | | 600 mi. (1,000 km) | 4,000 mi. (6,400 km) | 8,000 mi. (12,800 km) | 12,000 mi. (19,200 km) | 16,000 mi. (25,600 km) | 20,000 mi. (32,000 km) | |
| * FUEL LINES | | EVERY | I | I | I | I | I | I | Page 3-4 |
| * FUEL STRAINER | | | C | C | C | C | C | C | Page 22-6 |
| * THROTTLE OPERATION | | | I | I | I | I | I | I | Page 3-7 |
| * CARBURETOR CHOKE | | | | I | I | I | I | I | Page 3-10 |
| AIR CLEANER | | NOTE 1 | | | R | | R | | Page 3-3 |
| CRANKCASE BREATHER | | NOTE 2 | | C | C | C | C | C | Page 3-4 |
| SPARK PLUGS | | | | R | R | R | R | R | Page 22-6 |
| * VALVE CLEARANCE | | | I | I | I | I | I | I | Page 3-11 |
| * IGNITION TIMING | | | I | I | I | I | I | I | Page 3-5 |
| ENGINE OIL | | YEAR | R | R | R | R | R | R | Page 2-2, 3-8, 22-6 |
| ENGINE OIL FILTER | | YEAR | R | R | R | R | R | R | Page 2-2 |
| * ENGINE OIL SCREEN | | | | | | C | | | Page 2-3 |
| * CAM CHAIN TENSION | | | A | A | A | A | A | A | Page 3-15 |
| * CARBURETOR-SYNCHRONIZE | | | I | I | I | I | I | I | Page 3-8 |
| * CARBURETOR-IDLE SPEED | | | I | I | I | I | I | I | Page 3-10 |
| DRIVE CHAIN | | | I, L EVERY 300 mi. (500 km) | | | | | | Pages 2-5, 3-17 |
| BATTERY | | MONTH | I | I | I | I | I | I | Page 3-18 |
| BRAKE FLUID | | MONTH I 2 YEARS *R | I | I | I | *R | I | I | Page 3-18 |
| BRAKE PAD WEAR | | | | I | I | I | I | I | Page 3-19 |
| BRAKE SYSTEM | | | I | I | I | I | I | I | Page 3-19 |
| * BRAKE LIGHT SWITCH | | | I | I | I | I | I | I | Page 3-20 |
| * HEADLIGHT AIM | | | I | I | I | I | I | I | Page 3-20 |
| CLUTCH | | | I | I | I | I | I | I | Page 3-22 |
| SIDE STAND | | | | I | I | I | I | I | Page 3-23 |
| * SUSPENSION | | | I | I | I | I | I | I | Page 3-24 |
| * NUTS, BOLTS, FASTENERS | | | I | I | I | I | I | I | Page 3-25 |
| ** WHEELS | | | I | I | I | I | I | I | Page 3-25 |
| ** STEERING HEAD BEARING | | | I | | I | | I | | Page 3-25 |

NEW

NEW

NEW

* SHOULD BE SERVICED BY AN AUTHORIZED HONDA DEALER, UNLESS THE OWNER HAS PROPER TOOLS AND SERVICE DATA AND IS MECHANICALLY QUALIFIED.

** IN THE INTEREST OF SAFETY, WE RECOMMEND THESE ITEMS BE SERVICED ONLY BY AN AUTHORIZED HONDA DEALER.

NOTES: 1. SERVICE MORE FREQUENTLY WHEN RIDING IN DUSTY AREAS.
2. SERVICE MORE FREQUENTLY WHEN RIDING IN RAIN OR AT FULL THROTTLE (USA ONLY).
3. FOR HIGHER ODOMETER READINGS, REPEAT AT THE FREQUENCY INTERVAL ESTABLISHED HERE.

III. MAINTENANCE

SPARK PLUGS

RECOMMENDED SPARK PLUG

| | | | | | | |
|-----|-----------------------------------|-------|----------|---------|---------------------------------|-------|
| NEW | For cold climate below 5°C (41°F) | | Standard | | For extending high speed riding | |
| | ND | NGK | ND | NGK | ND | NGK |
| | X22ESR-U | DR7ES | X24ESR-U | DR8ES-L | X27ESR-U | DR8ES |

Disconnect the spark plug caps.
Clean any dirt from around the spark plug bases.
Remove and discard the spark plugs.

Measure the new spark plug gaps using a wire-type feeler gauge.

SPARK PLUG GAP: 0.6–0.7 mm (0.024–0.028 in)

Adjust by bending the side electrode carefully.

With the plug washer attached, thread the new spark plugs in by hand to prevent cross-threading.

Tighten the spark plugs another 1/2 turn with a spark plug wrench to compress the plug washer.

Reinstall the spark plug caps.

CAUTION

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

FUEL STRAINER

Turn the fuel valve OFF.
Remove the fuel cup, O-ring and filter screen, draining the gasoline into a suitable container.

WARNING

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

Wash the cup and filter screen in clean non-flammable or high flash point solvent.

Reinstall the screen securely, aligning the index marks on the fuel valve body and filter screen.

Install a new O-ring into the fuel valve body.

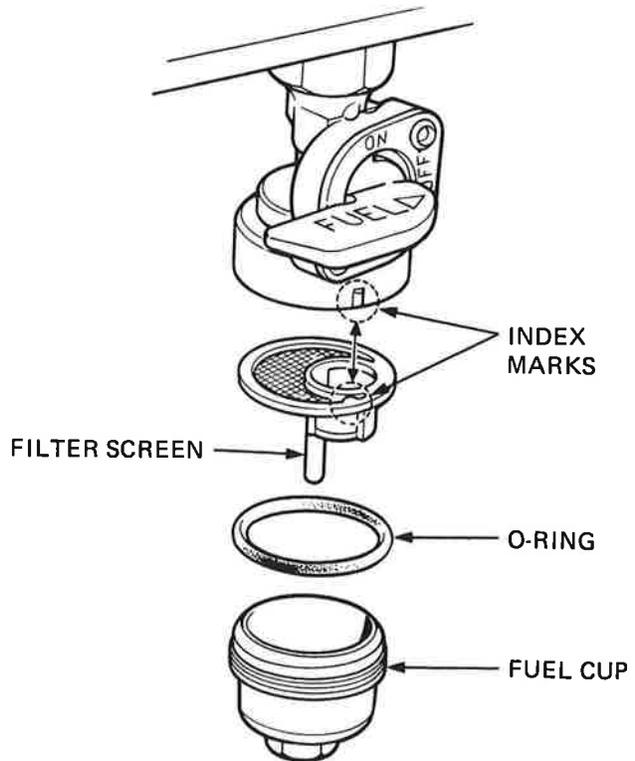
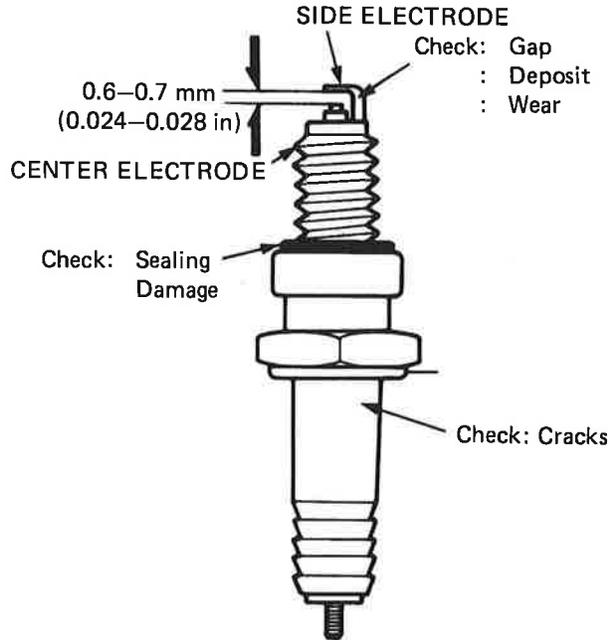
Reinstall the fuel cup, making sure the new O-ring is in place. Hand tighten the cup and then torque it to specification.

TORQUE: 3–5 N·m (0.3–0.5 kg·m, 2–4 ft·lb)

NOTE

Do not overtighten the fuel cup.

After installing, turn the fuel valve ON and check that there are no fuel leaks.



NEW

NEW

NEW

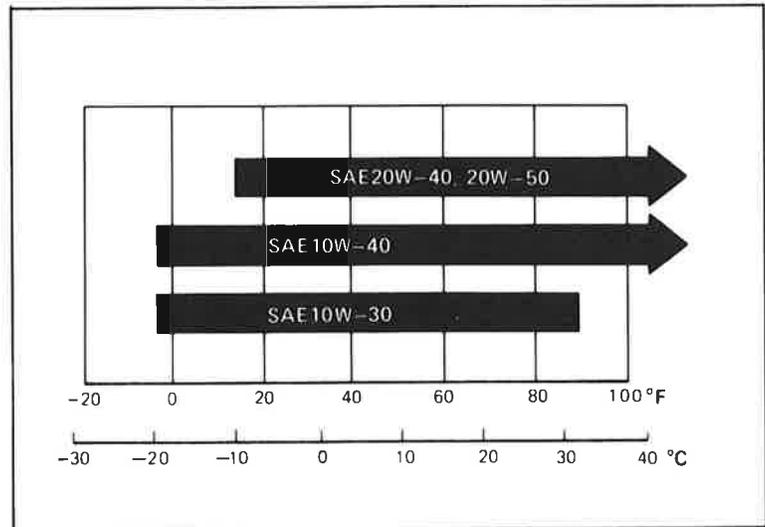


ENGINE OIL

Recommended oil:

NEW

- Use HONDA 4-STROKE OIL or equivalent.
- API service classification – SE or SF.
- Viscosity – SAE 10W-40.
- Other oil viscosities may be used when the average temperature in your riding area is within the indicated range.

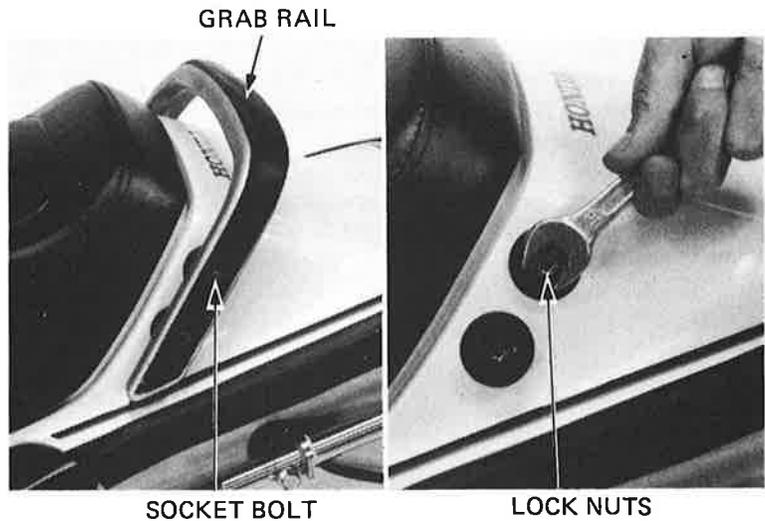




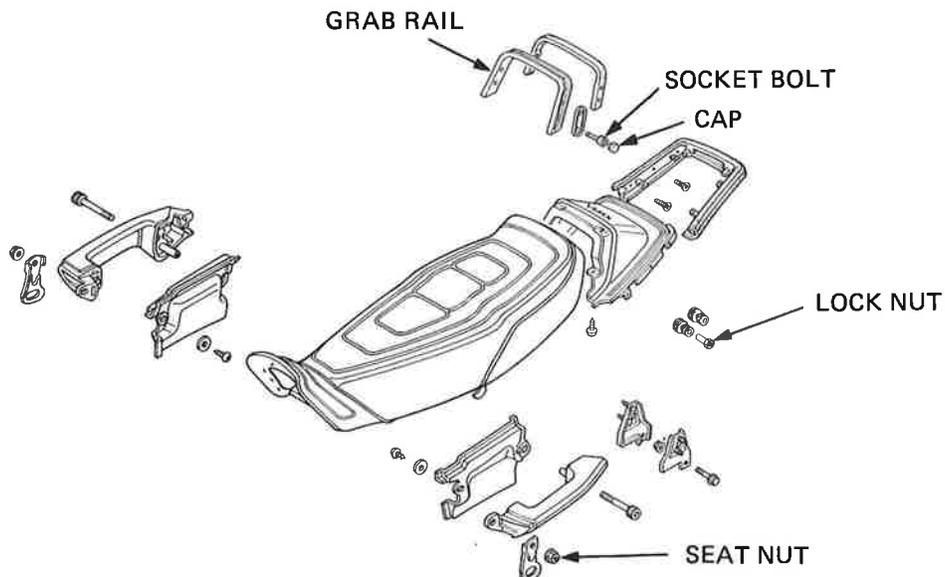
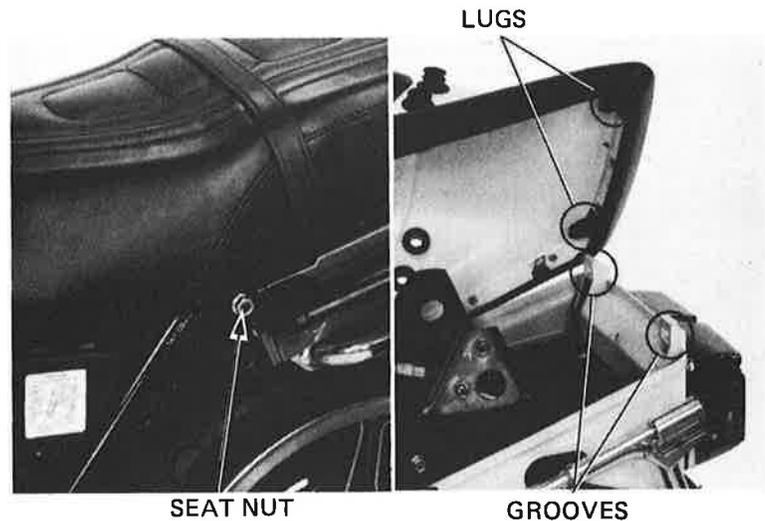
VI. FRAME

SEAT REMOVAL

Remove the socket bolt caps.
 Remove the four socket bolts from the grab rail.
 Remove the grab rail.
 Remove the grab rail lock nuts.
 Remove the seat nuts and pull the seat backwards to remove it.



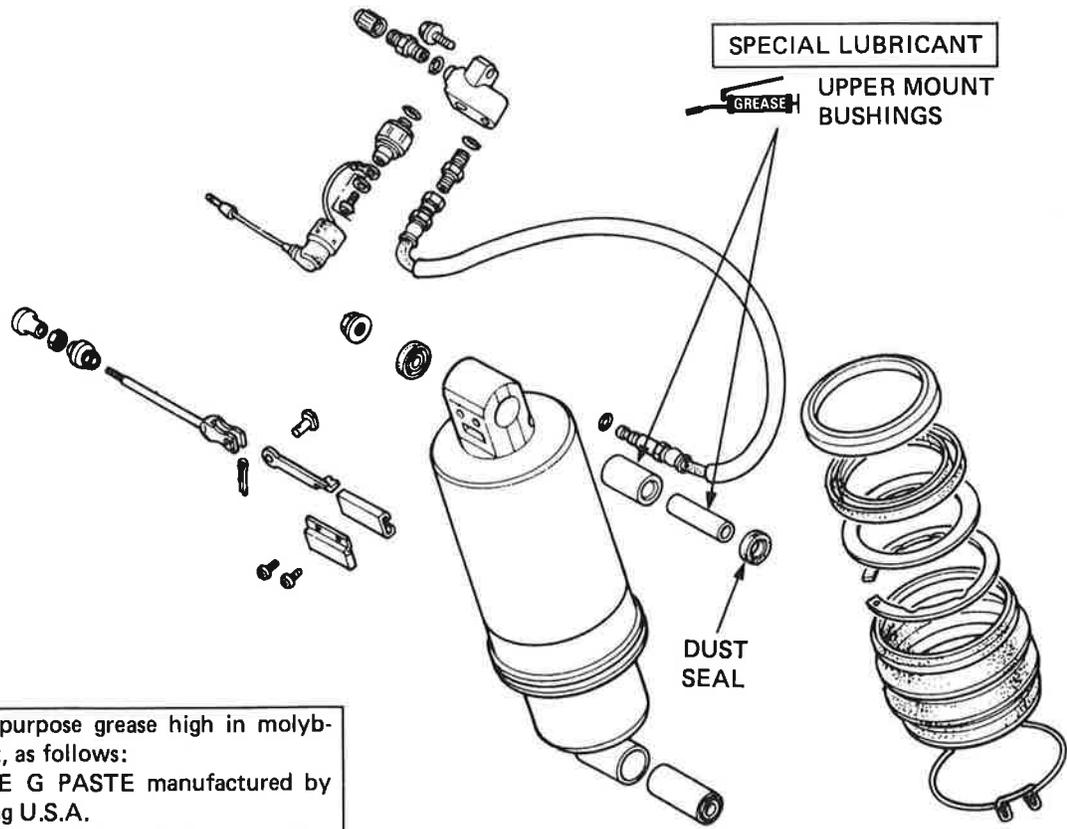
When reinstalling the seat, align the grooves with the lugs and push the seat firmly into place.
 Reinstall the locknuts, the grab rail and the socket bolts and caps. Lift the seat to make sure the latches are secure.





REAR SUSPENSION

SHOCK ABSORBER ASSEMBLY



NOTE

- Apply a multipurpose grease high in molybdenum content, as follows:
- MOLYKOTE G PASTE manufactured by Dow Corning U.S.A.
 - Other lubricants of equivalent quality.



MEMO