



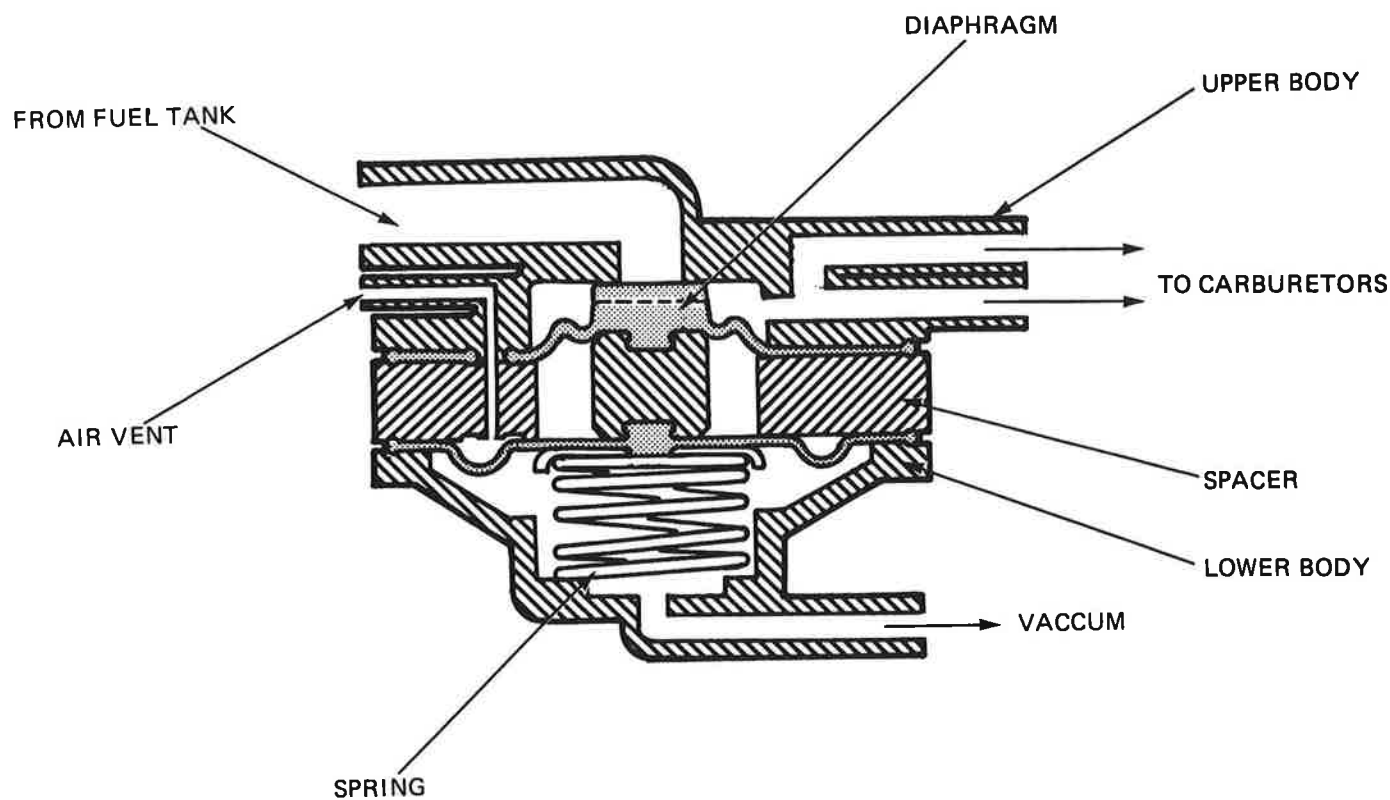
FUEL LINE DIAPHRAGM

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.

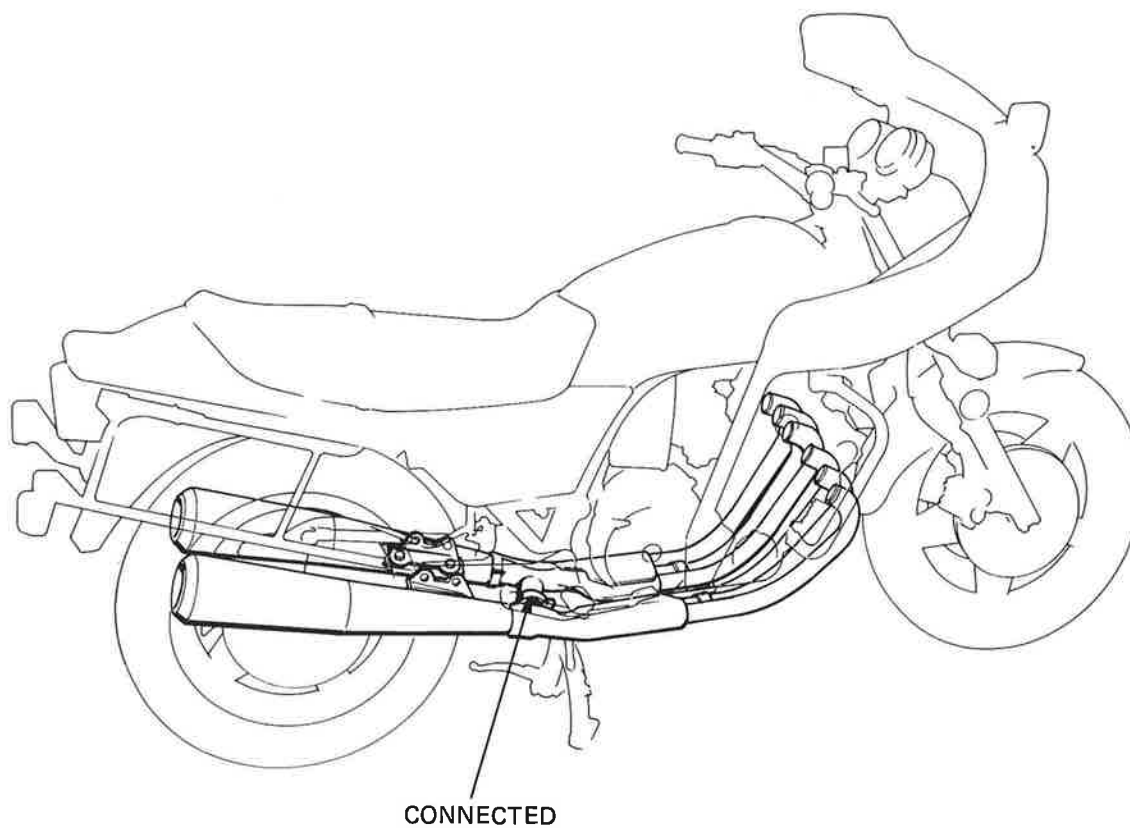
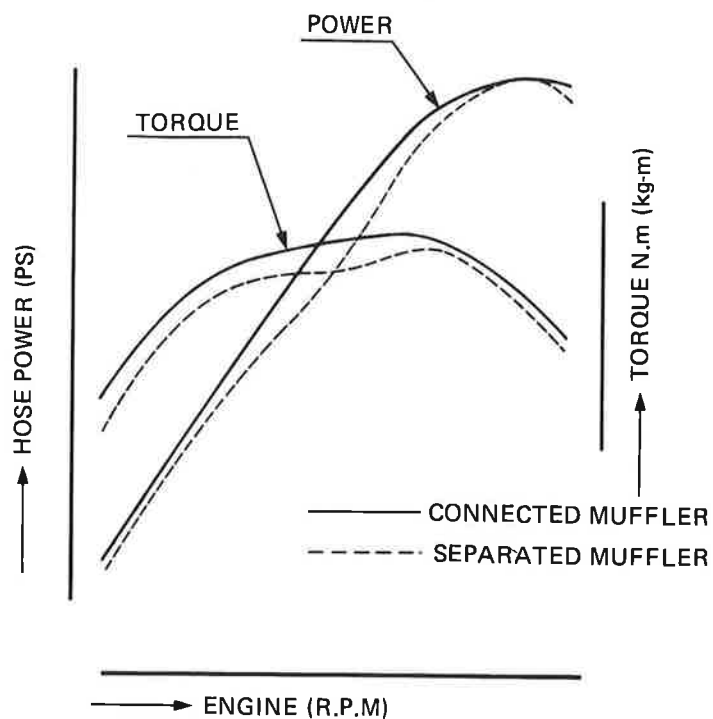
When the engine is stopped, the diaphragm is pushed back against the fuel outlet to block the fuel flow.





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

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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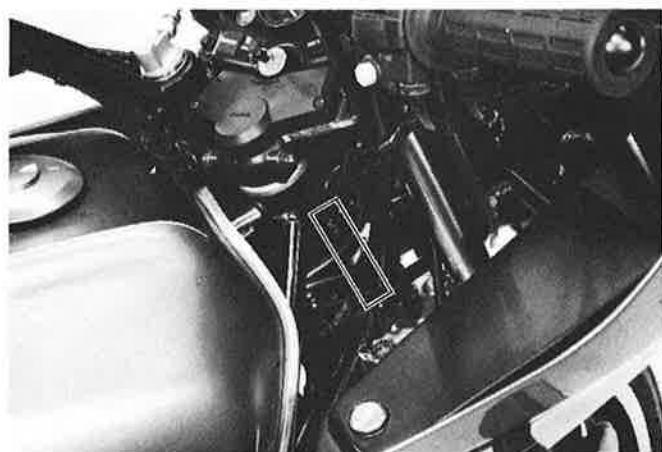
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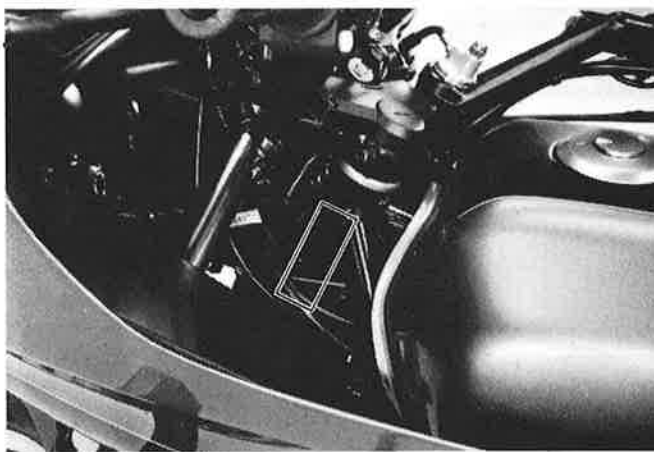
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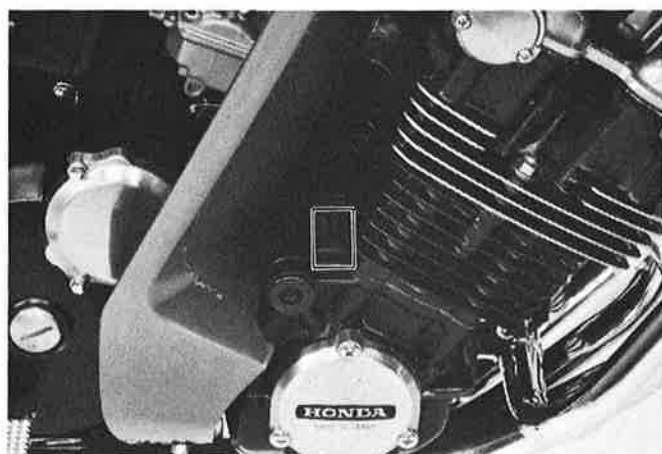
MODEL IDENTIFICATION



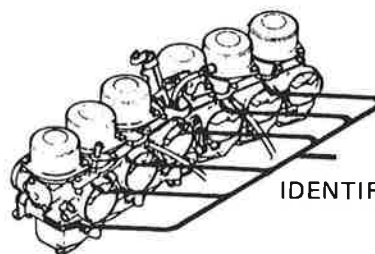
The frame serial number is stamped on the right side of the steering head.



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)
ENGINE	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°
ENGINE	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	Transistorized																	
	Ignition timing “F” mark	10° BTDC static																	
	Full advance	41° BTDC at 8,000 rpm																	
	Firing order	1—5—3—6—2—4																	
NEW	Starting system	Electric starter																	
	Alternator	Three phase Alternator 350 W/5,000 rpm																	
	Battery capacity	12V — 18AH																	
	Spark plug	<table><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><td>ND</td><td>NGK</td><td>ND</td><td>NGK</td><td>ND</td><td>NGK</td></tr><tr><td>X22ESR -U</td><td>DR7ES</td><td>X24ESR -U</td><td>DR8ES -L</td><td>X27ESR -U</td><td>DR8ES</td></tr></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
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 3,4W, 2 cp SAE NO. 57 3,4W, 2 cp SAE NO. 57 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
				EVERY	800 mi. (1,300 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)	
EMISSION RELATED ITEMS	* FUEL LINES				I	I	I	I	I	I	Page 3-4
	* FUEL STRAINER			C	C	C	C	C	C	C	Page 22-6
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	* CARBURETOR CHOKE				I	I	I	I	I	I	Page 3-10
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	** WHEELS			I	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.

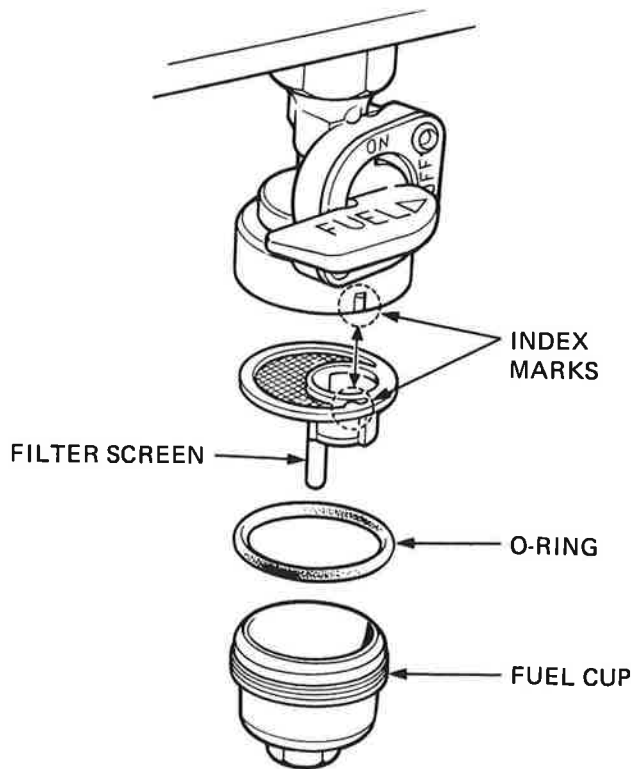
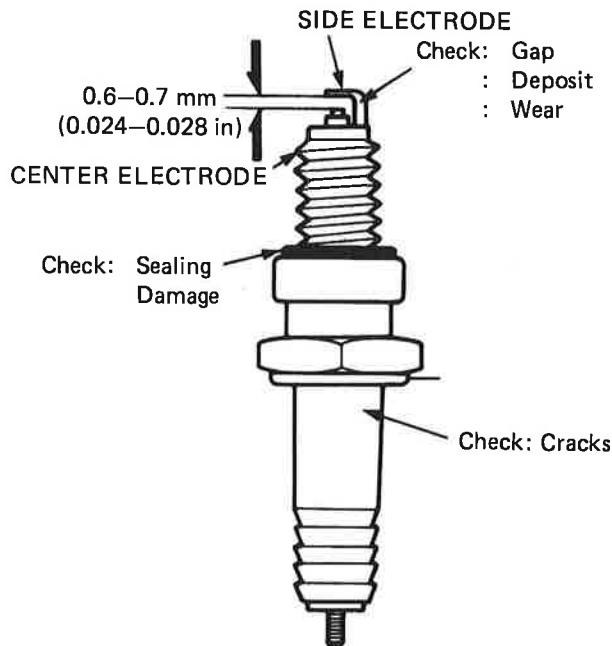
Reinstall the fuel cup, making sure the new O-ring is in place. Hand tighten the cup and then torque it to specification.

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.

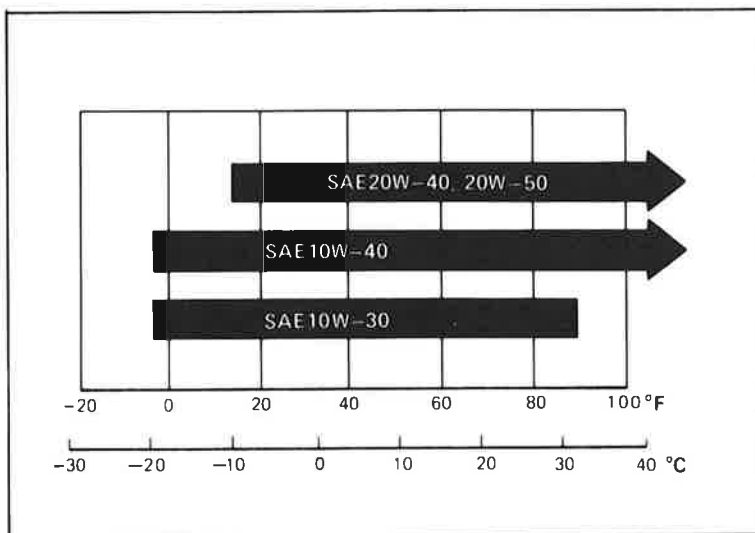




ENGINE OIL

Recommended oil:

- 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.

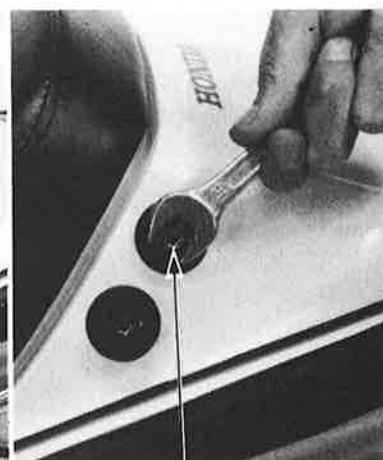
Remove the grab rail.

Remove the grab rail lock nuts.

Remove the seat nuts and pull the seat backwards to remove it.



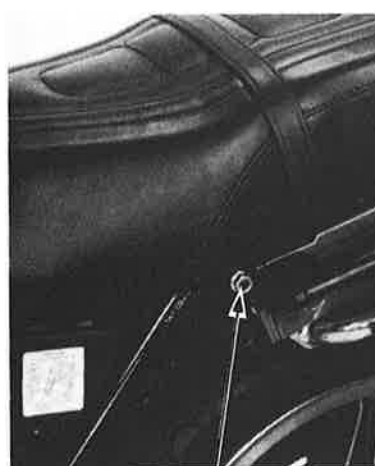
SOCKET BOLT



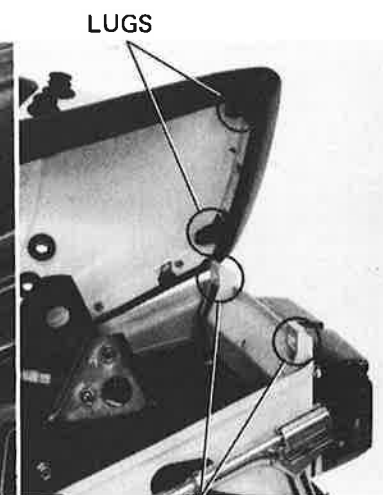
LOCK NUTS

When reinstalling the seat, align the grooves with the lugs and push the seat firmly into place.

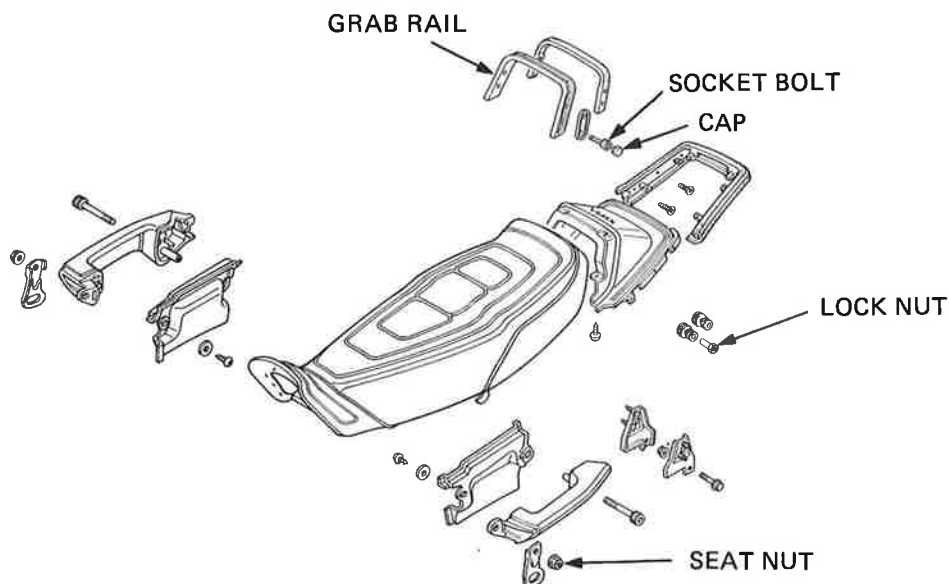
Reinstall the locknuts, the grab rail and the socket bolts and caps. Lift the seat to make sure the latches are secure.



SEAT NUT



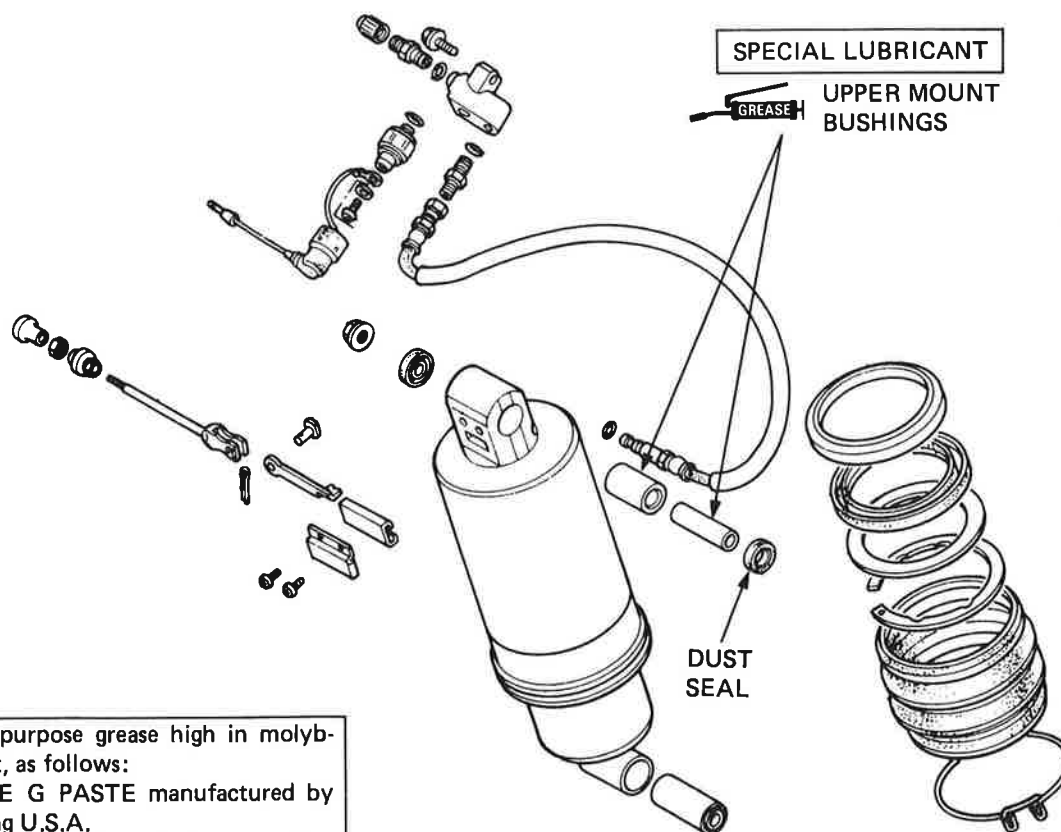
GROOVES





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