



## INTRODUCTION

This Honda Shop Manual addendum contains information for the 1980 CX500 DELUXE and CX500 CUSTOM.

Refer to the base Shop Manual for service procedures and data 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. NO PART OF THIS PUBLICATION MAY BE REPRODUCED WITHOUT WRITTEN PERMISSION.

HONDA MOTOR CO., LTD.  
Service Publications Office

## TABLE OF CONTENTS

1. GENERAL INFORMATION .....	23- 2
SPECIFICATIONS .....	23- 2
MAINTENANCE SCHEDULE .....	23- 4
CABLE & HARNESS ROUTING ....	23- 5
2. LUBRICATION .....	23- 6
ENGINE OIL LUBRICATION .....	23- 6
CABLE LUBRICATION .....	23- 6
3. INSPECTION AND ADJUSTMENT ..	23- 6
SPARK PLUG .....	23- 6
4. FUEL SYSTEM .....	23- 7
CARBURETOR SPECIFICATIONS ..	23- 7
SEPARATION AND ASSEMBLY ...	23- 7
ACCELERATOR PUMP	
INSPECTION .....	23- 8
ACCELERATOR PUMP	
ADJUSTMENT .....	23- 8
PILOT SCREW REMOVAL/ INSTALLATION .....	23- 9
PILOT SCREW ADJUSTMENT .....	23- 9
IDLE LIMITER INSTALLATION ...	23-10
5. WIRING DIAGRAM .....	23-11



# 1. GENERAL INFORMATION

## SPECIFICATIONS

ITEM			SPECIFICATIONS	
			CX500 DELUXE	CX500 CUSTOM
DIMENSIONS	Overall length		2,185 mm (86.0 in)	2,150 mm (84.6 in)
	Overall width		865 mm (34.1 in)	875 mm (34.4 in)
	Overall height		1,165 mm (45.9 in)	1,170 mm (46.1 in)
	Wheelbase		1,455 mm (57.3 in)	1,455 mm (57.3 in)
	Seat height		800 mm (31.5 in)	790 mm (31.1 in)
	Foot peg height		335 mm (13.2 in)	325 mm (12.8 in)
	Ground clearance		145 mm ( 5.7 in)	145 mm ( 5.7 in)
	Dry weight		205 kg (452 lb)	202 kg (445 lb)
FRAME	Type		Diamond	
	Front suspension, travel		Telescopic fork, 139.5 mm (5.5 in)	
	Rear suspension, travel		Swingarm, 85 mm (3.3 in)	
	Front tire size		3.50S19-4PR	
	Rear tire size		130/90-16 67S	
	Cold tire pressures	Up to 90 kg (200 lbs) load	Front Rear	2.0 kg/cm <sup>2</sup> (28 psi) 2.0 kg/cm <sup>2</sup> (28 psi)
		Up to vehicle capacity load	Front Rear	2.0 kg/cm <sup>2</sup> (28 psi) 2.25kg/cm <sup>2</sup> (32 psi)
	Front brake, lining swept area		Disc brake, 600 cm <sup>2</sup> (93.0 sq in)	
	Rear brake, lining swept area		Internal expanding shoes, 201 cm <sup>2</sup> (31.2 sq in)	
ENGINE	Fuel capacity		17 liters (4.5 US gal) 3.5 liters (0.9 US gal)	11 liters (2.9 US gal) 2.5 liters (0.7 US gal)
	Caster angle		63° 15'	
	Trail		105 mm (3.9 in)	
	Front fork oil capacity		135 cc (4.7 ozs) After assembly	
	Type		Liquid cooled 4-stroke OHV	
	Cylinder arrangement		2 cylinder transverse V	
	Bore and stroke		78 x 52 mm (3.07 x 2.04 in)	
	Displacement		496 cc (30.3 cu in)	
	Compression ratio		10 : 1	
	Valve train		Silent chain driven camshaft and push rod	
	Oil capacity		3.0 liters (3.2 US qt)	
	Lubrication system		Forced pressure and wet sump	
	Cooling system capacity		2.0 liters (0.52 US gal)	
	Air filtration		Paper	
	Cylinder compression		12 kg/cm <sup>2</sup> (171 psi)	
	Intake valve	Opens	6° BTDC (at 1 mm lift), 79° BTDC (at 0 lift)	
		Closes	46° ABDC (at 1 mm lift), 123° ABDC (at 0 lift)	
	Exhaust	Opens	46° BBDC (at 1 mm lift), 114° BBDC (at 0 lift)	
		Closes	6° ATDC (at 1 mm lift), 85° ATDC (at 0 lift)	
	Valve clearance		IN: 0.08 mm (0.003 in) EX: 0.10 mm (0.004 in)	
	Engine weight		65 kg (143.3 lb)	
	Idle speed		1,100 ± 100 rpm	



ITEM		SPECIFICATIONS						
		CX500 DELUXE			CX500 CUSTOM			
CARBURETION	Carburetor type		CV 34 mm (1.3 in)					
	Identification number		VB28A			VB25A		
	Pilot screw Float level		See page 23—9 15.5 ± 1 mm (0.61 ± 0.04 in)					
DRIVE TRAIN	Clutch		Wet, multi-plate					
	Transmission		5-speed, constant-mesh					
	Primary reduction		2.242					
	Gear ratio I		2.733					
	Gear ratio II		1.850					
	Gear ratio III		1.416					
	Gear ratio IV		1.148					
	Gear ratio V		0.931					
	Final reduction Gear shift pattern		3.091 (11/34) Left foot operated return system 1-N-2-3-4-5					
ELECTRICAL	Ignition		CDI					
	Ignition timing “F” mark		15° BTDC/1,100 ± 100 rpm					
	Full advance		37° ± 3° BTDC					
	RPM from “F” to full advance		1,750—6,000 rpm					
	Starting system		Starting motor only					
	Generator		Three phase A.C. generator 170W/5,000 rpm					
	Battery capacity		12V—14AH					
	Spark plug							



## MAINTENANCE SCHEDULE DELUXE AND CUSTOM

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

R: REPLACE

A: ADJUST

L: LUBRICATE

FREQUENCY		WHICHEVER COMES FIRST ↓	ODOMETER READING [NOTE 3]								REFER TO
			600 mi. (1,000 km)	3,750 mi. (6,000 km)	7,500 mi. (12,000 km)	11,250 mi. (18,000 km)	15,000 mi. (24,000 km)	18,750 mi. (30,000 km)	22,500 mi. (36,000 km)		
ITEM		EVERY									
EMISSION RELATED ITEMS	* FUEL LINES				I		I		I	Page 3— 3	
	* THROTTLE OPERATION		I		I		I		I	Page 3— 5	
	* CARBURETOR-CHOKE				I		I		I	Page 3— 6	
	AIR CLEANER	NOTE 1		C	R	C	R	C	R	Page 3— 2	
	CRANKCASE BREATHER	NOTE 2		C	C	C	C	C	C	Page 3— 3	
	SPARK PLUGS			R	R	R	R	R	R	Page 23— 6	
	* VALVE CLEARANCE		I	I	I		I		I	Page 3— 4	
	ENGINE OIL	YEAR	R		R		R		R	Page 2— 2 23— 6	
	ENGINE OIL FILTER	YEAR	R		R		R		R	Page 2— 2	
	* CAM CHAIN TENSION		A	A	A	A	A	A	A	Page 3— 5	
	* CARBURETOR-SYNCHRONIZE		I		I		I		I	Page 3— 7	
	* CARBURETOR-IDLE SPEED		I	I	I	I	I	I	I	Page 3— 6	
	* RADIATOR COOLANT				I		I		R	Page 3— 8 9— 3	
	* RADIATOR CORE				I		I		I	Page 3— 8	
NON-EMISSION RELATED ITEMS	* COOLING SYSTEM, HOSES & CONNECTIONS		I		I		I		I	Page 3— 8	
	* DRIVE SHAFT JOINT				L		L		L	Page 2— 3	
	* FINAL DRIVE LUBRICANT				I		I		R	Page 2— 3	
	BATTERY	MONTH	I	I	I	I	I	I	I	Page 3— 9	
	BRAKE FLUID ( FRONT )	MONTH 2 YEARS *R	I	I	I	I	I	I	*R	Page 3— 9	
	BRAKE SHOE/PAD WEAR			I	I	I	I	I	I	Page 3—11	
	BRAKE SYSTEM (REAR)		I		I		I		I	Page 3—11	
	* BRAKE LIGHT SWITCH		I		I		I		I	Page 3—12	
	* HEADLIGHT AIM		I		I		I		I	Page 3—13	
	CLUTCH		I	I	I	I	I	I	I	Page 3—13	
	SIDE STAND				I		I		I	Page 3—14	
	* SUSPENSION		I		I		I		I	Page 3—14	
	* NUTS, BOLTS, FASTENERS		I		I		I		I	Page 3—15	
	** WHEELS		I		I		I		I	Page 3—15	
** STEERING HEAD BEARING		I		I		I		I	Page 3—15		

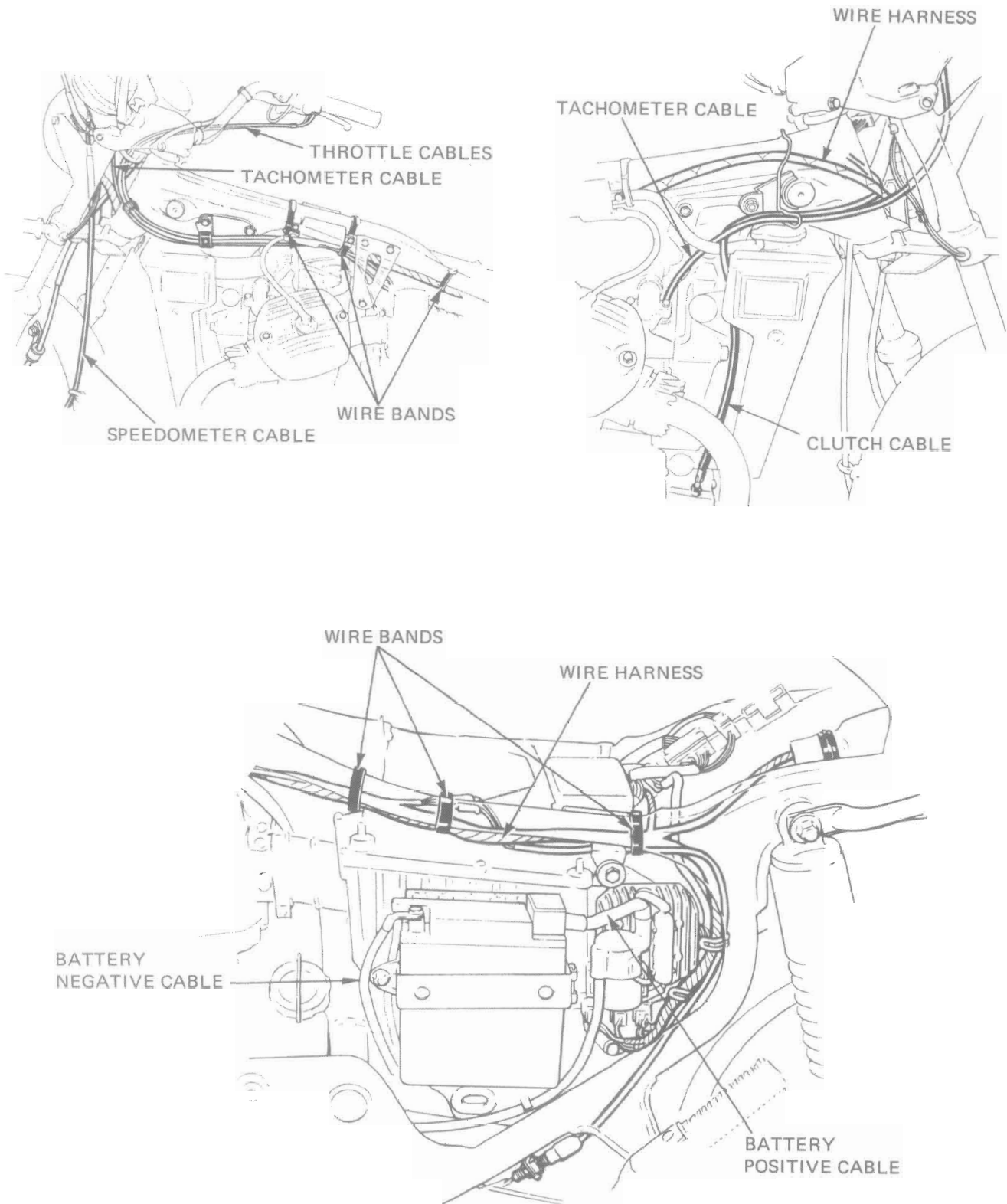
\* SHOULD BE SERVICED BY AN AUTHORIZED HONDA DEALER, UNLESS THE OWNER HAS PROPER TOOLS AND SERVICE DATA AND IS MECHANICALLY QUALIFIED.

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

NOTE: 1. Service more frequently when riding in dusty areas.  
 2. Service more frequently when riding in rain or at full throttle, or after being washed or overturned.  
 3. For higher odometer readings, repeat at the frequency interval established here.



## CABLE & HARNESS ROUTING





## 2. LUBRICATION

### ENGINE OIL RECOMMENDATION

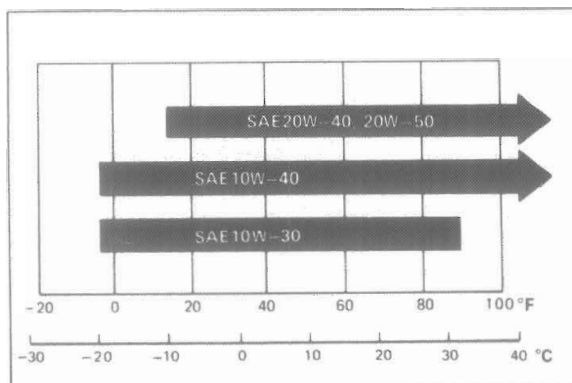
Use HONDA 4-STROKE OIL or equivalent.

API SERVICE CLASSIFICATION: SE

VISCOSITY: SAE 10W-40

Other viscosities shown in the chart may be used when the average temperature in your riding area is within the indicated range

### OIL VISCOSITIES



## CABLE LUBRICATION

Lubricate the clutch, choke and throttle cables with a commercially available cable lubricant to prevent premature wear and corrosion.

## 3. INSPECTION AND ADJUSTMENT

### SPARK PLUG

Disconnect the spark plug caps.

Clean any dirt from around the spark plug base.

Remove and discard the spark plugs.

Check the new spark plug gaps with a wire type feeler gauge.

If adjustment is necessary, bend the side electrode carefully.

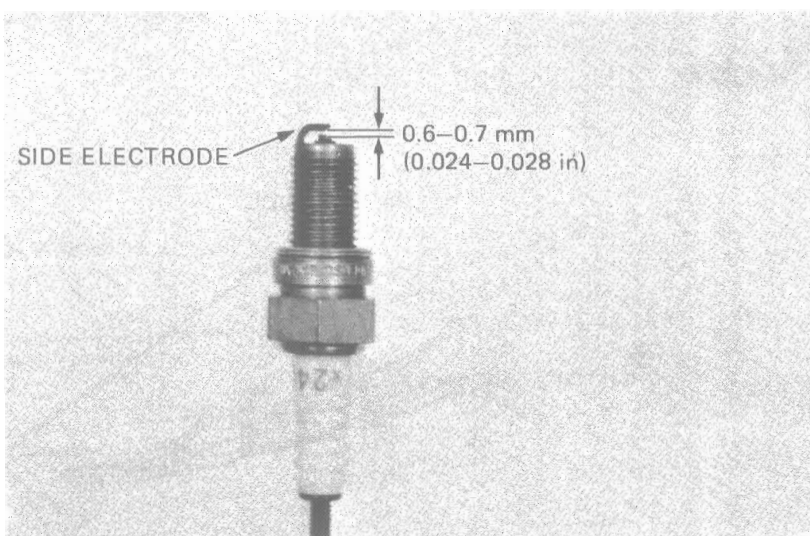
#### SPARK PLUG GAP:

0.6-0.7 mm (0.024-0.028 in)

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

Tighten the spark plugs 1/2 turn with a spark plug wrench.

Install the spark plug caps.



#### RECOMMENDED SPARK PLUG:

	For cold climate below 5°C (41°F)		Standard		For extended high speed riding	
USA model	ND	NGK	ND	NGK	ND	NGK
	X22ES-U	D7EA	X24ES-U	D8EA	X27ES-U	D9EA
Canadian model	X22ESR-U	DR7ES	X24ESR-U	DR8ES-L	X27ESR-U	DR8ES



## 4. FUEL SYSTEM

### GENERAL INFORMATION

- The CX500 carburetor bore size has been changed to 34 mm (1.3 in).
- An accelerator pump circuit has been added.
- See Caution and Note under Pilot Screw Removal and Pilot Screw Adjustment (Page 23-10).

### CARBURETOR SPECIFICATIONS

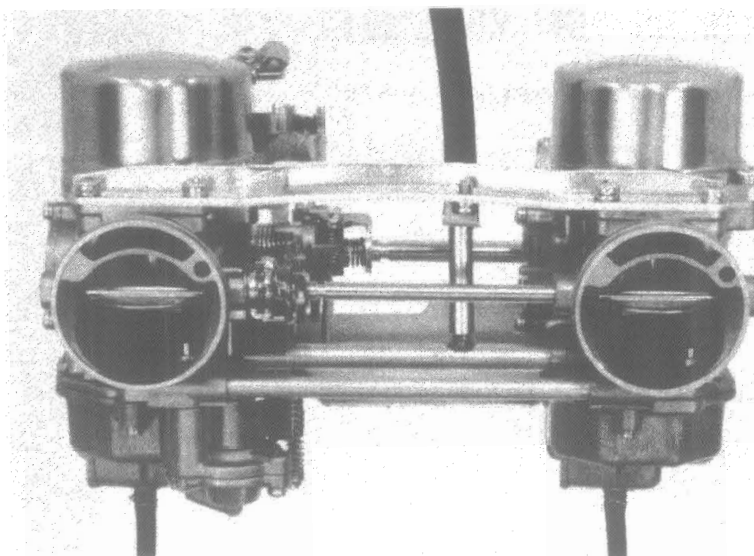
	CX500 DELUXE	CX500 CUSTOM
Identification mark	VB28A	VB25A
Idle speed	1,100 $\pm$ 100 rpm	←
Fast idle speed	1,000 – 1,500 rpm	←
Float level	15.5 $\pm$ 1 mm	←
Pilot screw	See page 23-9	←
Bore	34 mm	←
Main jet	Primary #78 Secondary #115	←

### CARBURETOR SEPARATION

Remove the carburetors (Page 4-2).  
Separate the carburetors (Page 4-3), noting that the accelerator pump joint pipe must be removed.

### ASSEMBLY

Install a new O-ring on each end of the accelerator pump and fuel joint pipes.  
Assemble the right and left carburetors noting the compression spring location.  
Install the front and rear stays.  
Refer to page 4-9 for carburetor installation.



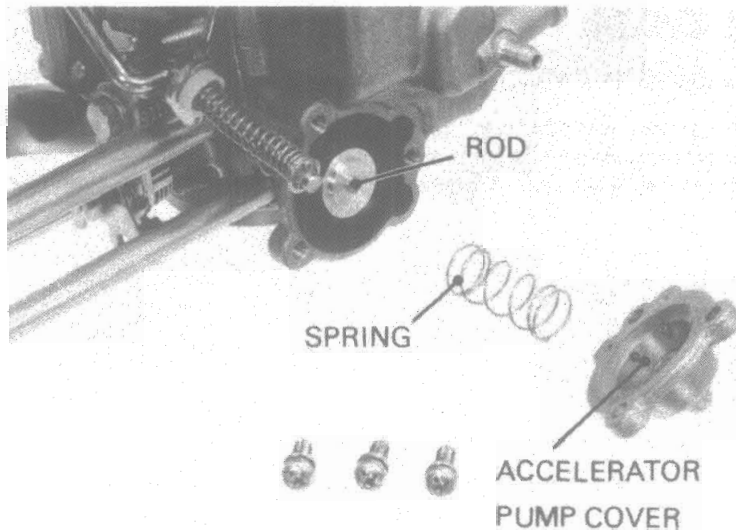




## ACCELERATOR PUMP INSPECTION

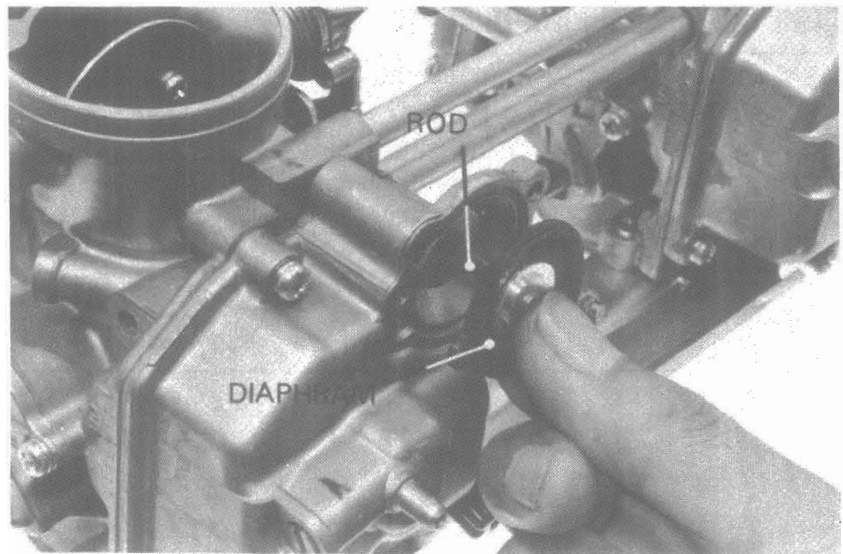
Remove the accelerator pump by unscrewing the setting screw.

Remove the accelerator pump cover and spring.



Remove the diaphragm.  
 Inspect the diaphragm for cracks and brittleness.  
 Replace if necessary.  
 Be sure the accelerator rod is not bent.

Assemble the accelerator pump in the reverse order of disassembly.



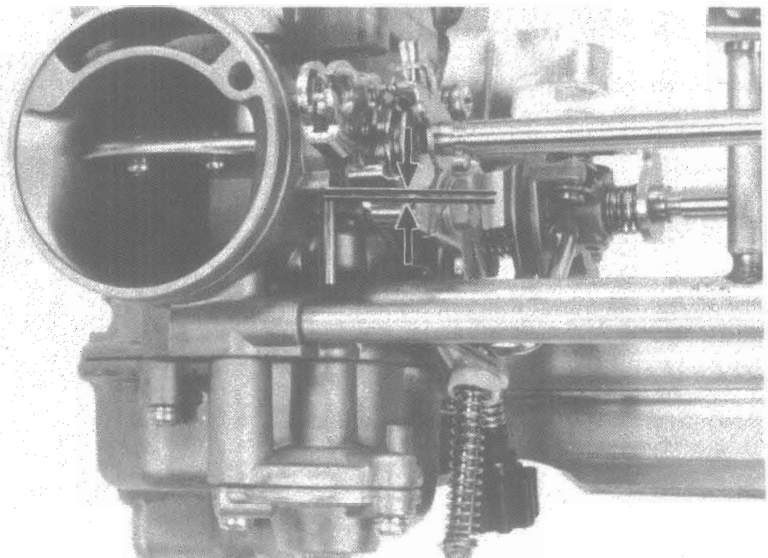
## ACCELERATOR PUMP ADJUSTMENT

Loosen the throttle stop screw, so the throttle valve is closed.

Measure the clearance between the accelerator pump rod and the adjusting arm with the throttle valve closed.

**CLEARANCE:** 0.1–0.3 mm  
 (0.004–0.012 in)

Adjust by bending the adjusting arm.







Measure the clearance between the adjusting arm and stopper on the carburetor.

**CLEARANCE:** 3.1–3.3 mm (0.12–0.13 in)

Adjust by bending the adjusting arm.

## PILOT SCREW REMOVAL/ INSTALLATION

### NOTE

The pilot screws are factory pre-set and should not be removed unless the carburetors are overhauled.

### CAUTION

*Any forcible attempt to remove the pilot screw limiter caps will cause screw breakage.*

Remove the carburetors (page 4-2).  
Remove the float chamber (page 4-6).

Turn the pilot screw in and carefully count the number of turns before it seats lightly. Make a note of this to use as a reference when reinstalling the pilot screws.

### CAUTION

*Damage to the pilot screw seat will occur if the pilot screw is tightened against the seat.*

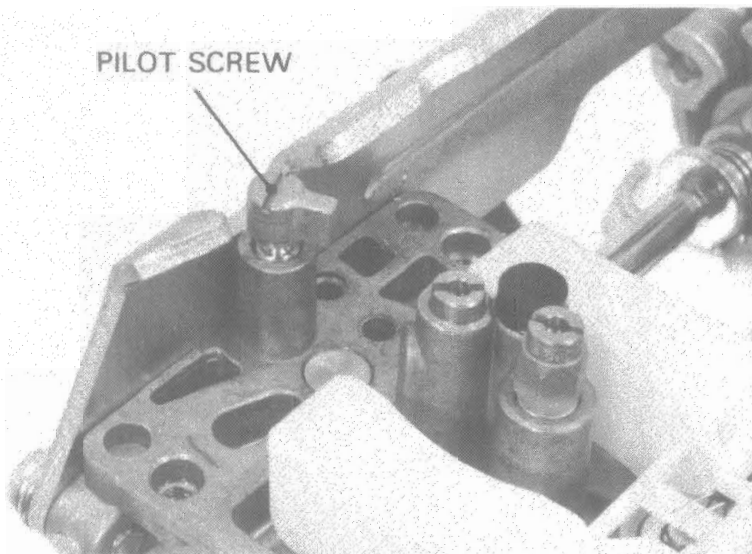
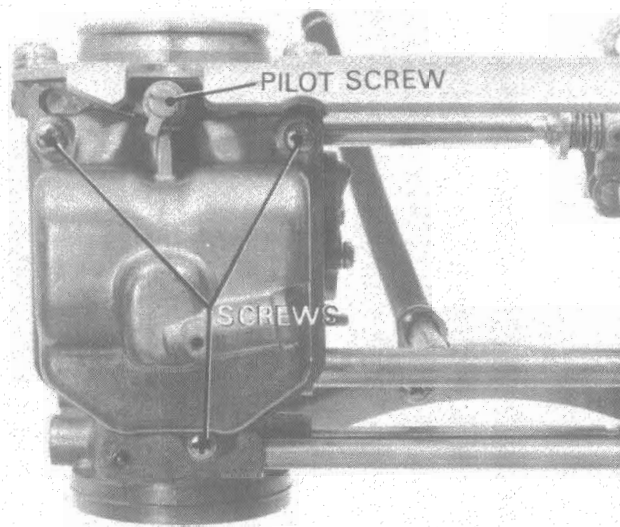
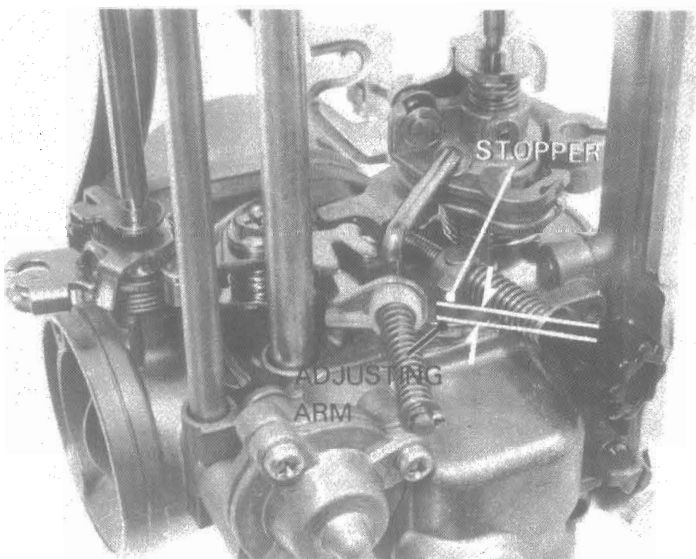
Remove the pilot screw.  
Inspect the pilot screw for wear and replace if necessary.  
Install the pilot screw and turn it to the original position, as noted during removal. Perform pilot screw adjustment if a new pilot screw is installed. (See below)

### NOTE

Do not install limiter caps on new pilot screws until after adjustment has been made (See page 23-11).

## PILOT SCREW ADJUSTMENT

Adjust the pilot screws (page 4-10), using 1-3/4 turns as the pilot screw initial opening.



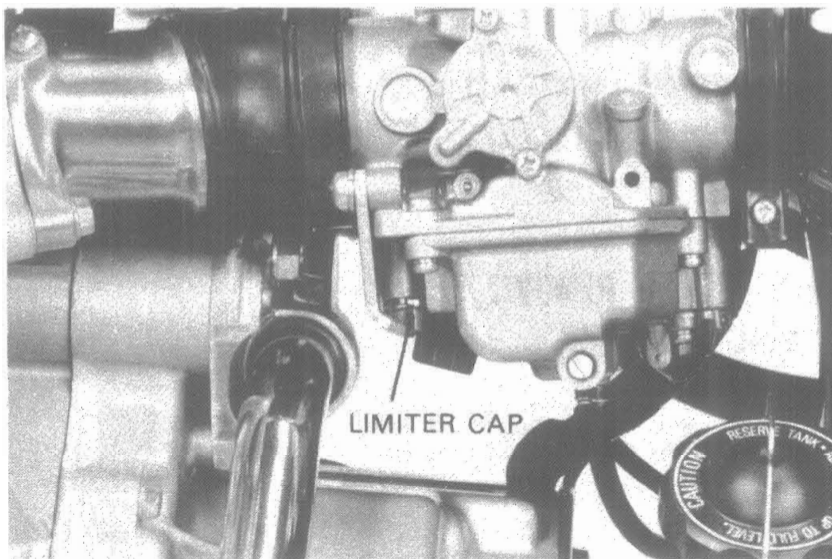


## IDLE LIMITER INSTALLATION

After adjustment, cement the limiter caps over the pilot screws, using LOCTITE® #601 or equivalent. The limiter cap should be placed against its stop, preventing further adjustment that would enrich the fuel mixture (limiter cap position permits clockwise rotation and prevents counterclockwise rotation).

### NOTE

- Do not turn the pilot screws when installing the limiter caps.
- Pilot screw limiter caps must be installed. They prevent misadjustment that could cause poor performance and increase exhaust emissions.

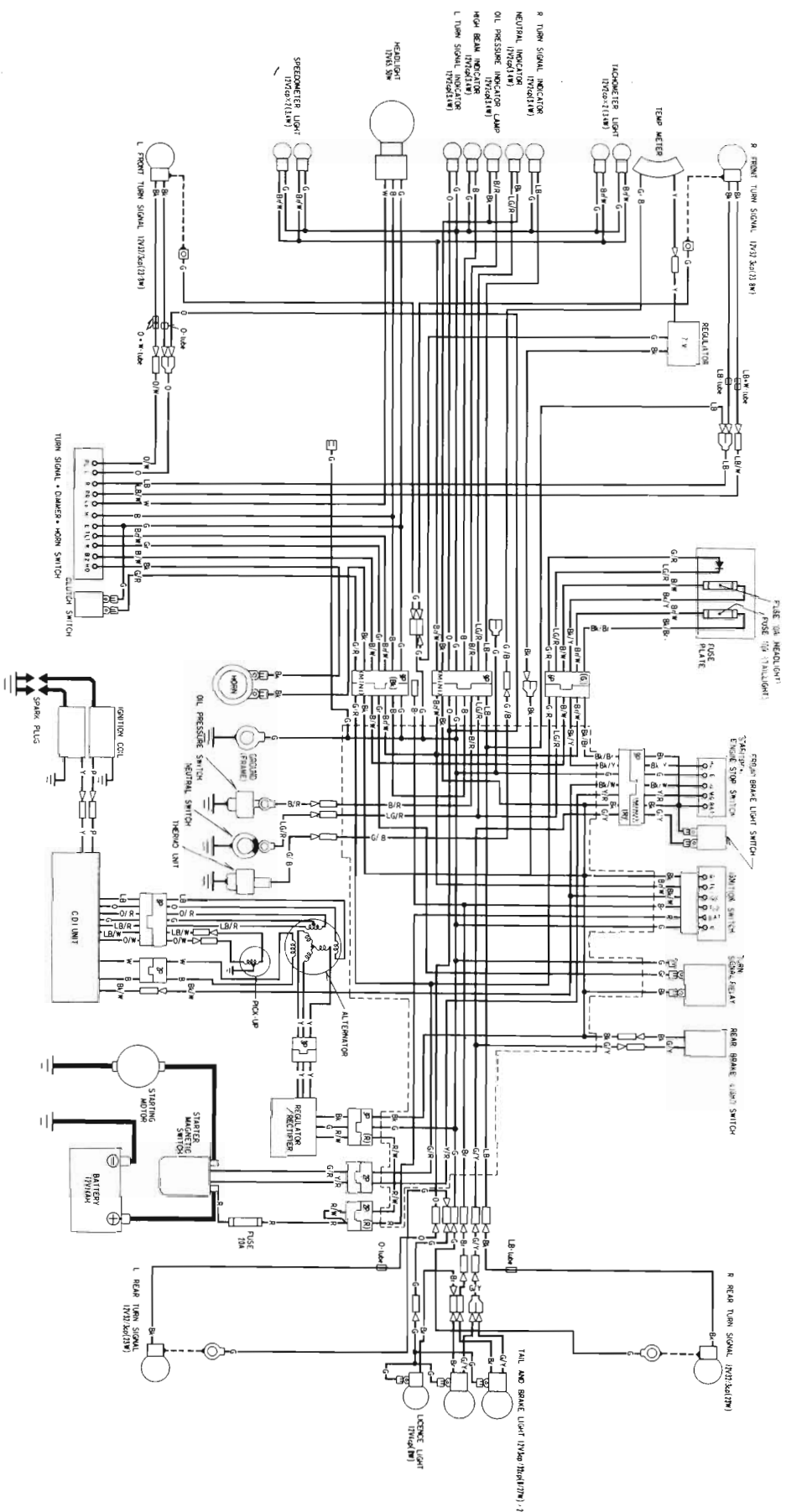




CX500

'80 ADDENDUM

## 5. WIRING DIAGRAM CX500 DELUXE



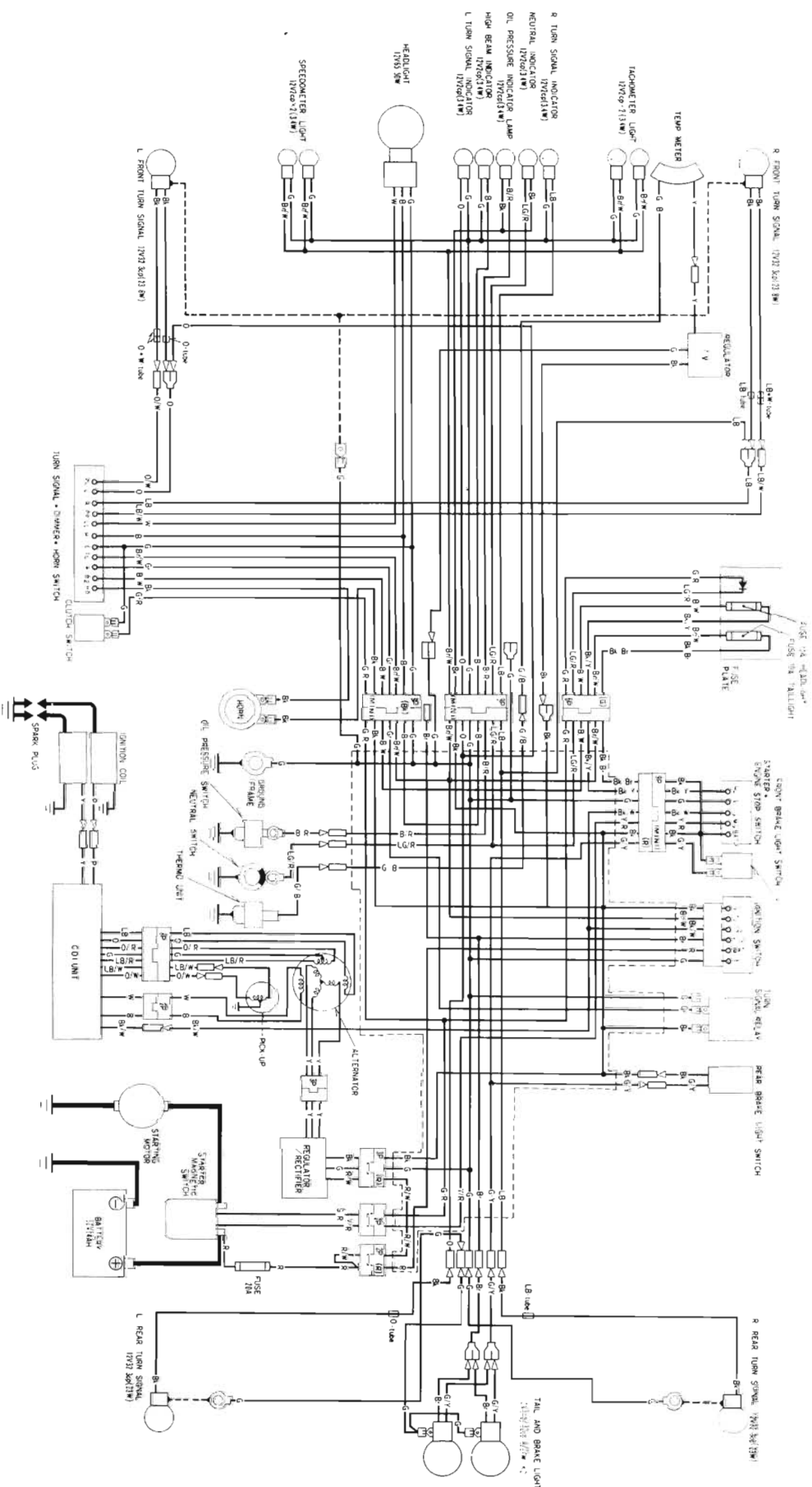
IGNITION SWITCH CONTINUITY			
IGNITION SWITCH POSITION	LOCK	ON	OFF
IGNITION			
STARTER			
STOP			











STARTER-ENGINE STOP SWITCH CONTINUITY			
ENGINE STOP SWITCH POSITION	STARTER SWITCH	STOP SWITCH	STOP SWITCH
STARTER			
STOP			

TURN SIGNAL, DIMMER, HORN SWITCH CONTINUITY			
DIMMER SWITCH POSITION	HORN SWITCH	TURN SIGNAL SWITCH	TURN SIGNAL SWITCH
DIMMER			
HORN			

WIRE COLOR CODE			
Letter	Color	Letter	Color
B	Brown	Y	Yellow
W	White	G	Green
LC	Light Green	LB	Light Blue
R	Red	P	Pink
G	Green		

0030Z-470-6700



		IGNITION SWITCH CONTINUITY					
		E	IG2	BAT	GI	TL1	TL2
OFF							
ON							
P							
LOCK							

ENGINE STOP SWITCH		STARTER SWITCH		CONTINUITY
IG	E	WAG	BAT2	HL
OFF	ON		ON	ON
ON		ON		
OFF	ON			

UPPER SIGNAL, DOWNER • DOWN, SM TOU										UPPER SIGNAL, SM TOU	
DOWNER SM TOU				DOWN SM TOU				UPPER SIGNAL, SM TOU			
82	U	W	Q	E	W	Q	E	T <sub>U</sub>	PR	P <sub>U</sub>	
LO	○	○	FREE		R	○	○				
N	○	○	BS*		N	○	○				
W	○	○			U	○	○				

0.	B-Gain	Y	Yarn
Bk	B-Gain	B	Blue
N	Wash	G	Grey
LG	Light Green	LB	Light Blue
R	Red	O	Orange
G	Green	P	Pink

0030Z-449-7700