



**HONDA**  
**CB250RS-DX**  
**CL250S**

# **WORKSHOP MANUAL CB250RS-DX CL250S**

## **IMPORTANT SAFETY NOTICE**

**WARNING**

*Indicates a possibility of personal injury or loss of life if instructions are not followed.*

**CAUTION**

*Indicates a possibility of equipment damage if instructions are not followed*

Detailed descriptions of standard workshop procedures, safety principles and service operations are not included. It is important to note that this manual contains some warnings and cautions against some specific service methods which could cause **PERSONAL INJURY** to service personnel or could damage a vehicle or render it unsafe. Please understand that those warnings could not cover all conceivable ways in which service, whether or not recommended by Honda might be done or of the possible hazardous consequences of each conceivable way, nor could Honda investigate all such ways. Anyone using service procedures or tools, whether or not recommended by Honda *must satisfy himself thoroughly* that neither personal safety nor vehicle safety will be jeopardized by the service methods or tools selected.



## INTRODUCTION

This addendum contains information for the CB250RS-DX, CL250S.

Refer to the base Shop Manual CB250-RS SHOP MANUAL (No. 6647100) for service procedures and data not included in this addendum.

## TABLE OF CONTENTS

<b>1. GENERAL INFORMATION</b> .....	21-1	<b>9. GEARSHIFT LINKAGE</b> .....	21-39
Service information .....	21-1	Gearshift linkage disassembly .....	21-39
Model identification .....	21-1	Gearshift linkage assembly .....	21-40
Specifications .....	21-2	Super low cable adjustment .....	21-42
Torque values .....	21-6	<b>10. CRANKCASE</b> .....	21-43
Wiring diagram .....	21-8	Disassembly .....	21-43
Cable & harness routing .....	21-14	Assembly .....	21-44
Maintenance schedule .....	21-17	<b>11. BALANCER</b> .....	21-45
<b>2. LUBRICATION</b> .....	21-19	Balancer removal .....	21-45
Service information .....	21-19	Balancer installation .....	21-45
<b>3. INSPECTION AND ADJUSTMENT</b> .....	21-20	<b>12. TRANSMISSION</b> .....	21-49
Carburetor idle speed .....	21-20	Disassembly .....	21-49
Clutch .....	21-20	Assembly .....	21-49
Drive chain .....	21-21	<b>13. FRONT WHEEL/STEERING/SUSPENSION</b> .....	21-50
Front brake .....	21-22	Instruments .....	21-51
Fuel strainer .....	21-23	Front wheel .....	21-52
<b>4. FUEL SYSTEM</b> .....	21-24	Front brake .....	21-53
<b>5. ENGINE REMOVAL/INSTALLATION</b> .....	21-25	Front fork .....	21-57
Engine removal .....	21-25	<b>14. REAR WHEEL/BRAKE/SUSPENSION</b> .....	21-58
Engine installation .....	21-30	Rear wheel .....	21-59
<b>6. CYLINDER HEAD/VALVES</b> .....	21-31	Rear brake pedal .....	21-62
<b>7. CLUTCH/OIL PUMP</b> .....	21-32	<b>15. STARTER MOTOR</b> .....	21-63
<b>8. A.C. GENERATOR</b> .....	21-33	Trouble shooting .....	21-64
Left crankcase cover removal .....	21-33	Starter magnetic switch .....	21-68
A.C. generator rotor removal .....	21-35		
A.C. generator rotor installation .....	21-35		
Left crankcase cover assembly .....	21-36		

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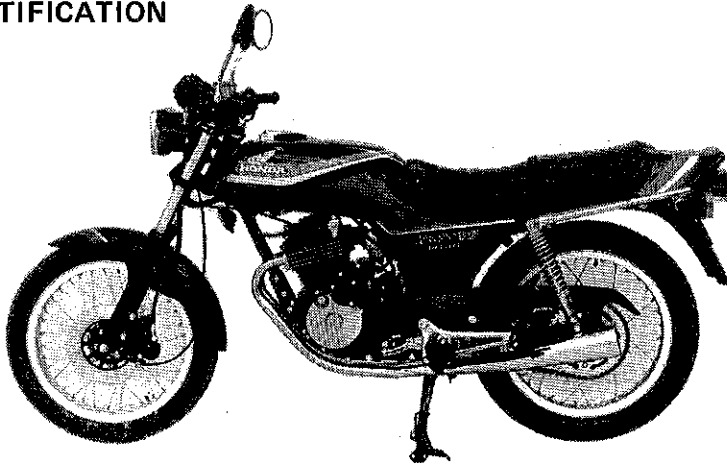
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CB250RS-DX  
CL250S

# GENERAL INFORMATION 1.

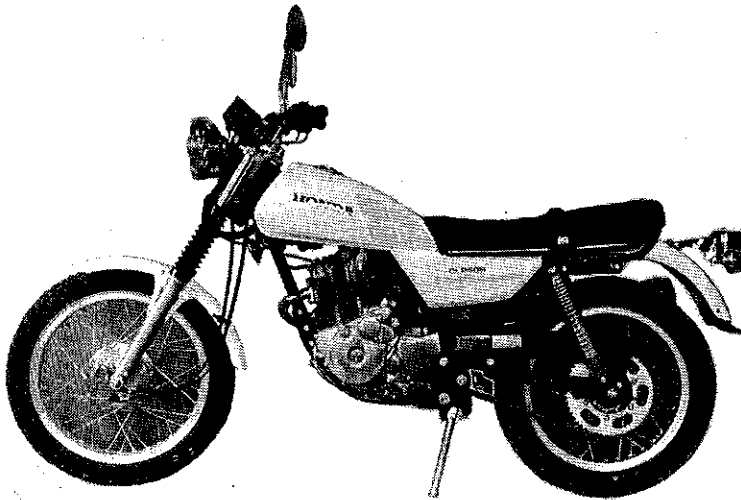
## 1. SERVICE INFORMATION

MODEL IDENTIFICATION	21-1
SPECIFICATION	21-2
TORQUE VALUES	21-6
WIRING DIAGRAM	21-8
CABLE & HARNESS ROUTING	21-14
MAINTENANCE SCHEDULE	21-17

### MODEL IDENTIFICATION



(1) Photo: CB250RS-DX E Type



(2) Photo: CL250S E Type

### BEGINNINGS WITH F NO:

CB250RS-DXc : MC02-4000005 ~  
CB250RSc : MC02-2100001 ~  
CL250Sc : MD04-2000002 ~



**SPECIFICATIONS (CB250RS-DX)**

ITEM		AREA (TYPE)	
DIMENSIONS	Overall length	2,070 mm (81.5 in) 2,130 mm (83.9 in)	
	Overall width	730 mm (28.7 in)	
	Overall height	1,060 mm (41.7 in)	
	Wheelbase	1,350 mm (53.1 in)	
	Seat height	770 mm (30.3 in)	
	Ground clearance	160 mm ( 6.3 in)	
	Dry weight	131 kg (289 lb)	
FRAME	Type	Diamond frame	
	Front suspension, travel	Telescopic 140.0 mm (5.5 in)	
	Rear suspension, travel	Swingarm 81.2 mm (3.2 in)	
	Front tire size	3.00S18-4PR	
	Rear tire size	4.10S18-4PR	
	Tires pressures (cold)		
	Driver, Front	175 kPa (1,75 kg/cm <sup>2</sup> , 24 psi)	
	Rear	225 kPa (2,25 kg/cm <sup>2</sup> , 32 psi)	
	Driver and one passenger, Front	175 kPa (1,75 kg/cm <sup>2</sup> , 24 psi)	
	Rear	250 kPa (2,50 kg/cm <sup>2</sup> , 36 psi)	
	Front brake, swept area	Single disc brake, 478 cm <sup>2</sup> (74 sq in)	
	Rear brake, swept area	Internal expanding shoes, 176 cm <sup>2</sup> (27 sq in)	
	Fuel capacity	13.0 l (3.4 US gal, 2.9 Imp gal)	
Fuel reserve capacity	3.0 l (0.8 US gal 0.67 Imp gal)		
Caster	63°30'		
Trail	85 mm (3.3 in)		
Front fork oil capacity	158 cm <sup>3</sup> (5.3 US ozs, 4.4 Imp ozs)		
ENGINE	Type	Gasoline, air-cooled 4-stroke OHC	
	Cylinder arrangement	Single cylinder inclined 15°	
	Bore x stroke	74.0 x 57.8 mm (2.91 x 2.28 in)	
	Displacement	72.5 x 57.8 mm (2.85 x 2.28 in)	E, GI, GII, ED, SW, SA
		248 cm <sup>3</sup> (15.1 cu in)	F
	Compression ratio	239 cm <sup>3</sup> (14.6 cu in)	E, GI, GII, ED, SW, SA
		9.5 : 1	F
	Valve train	OHC chain drive 4-valve	
	Maximum horsepower	19 kW (26 PS)/8,500 min <sup>-1</sup> (rpm)	E, GI, ED, SW, SA
		18.5 kW (25.1 PS)/8,500 min <sup>-1</sup> (rpm)	F
	Maximum torque	12.5 kW (17 PS)/7,000 min <sup>-1</sup> (rpm)	GII
		22 N·m (2.24 kg-m, 16.2 ft-lb)/7,000 min <sup>-1</sup> (rpm)	E, GI, ED, SW, SA
		21.5 N·m (2.2 kg-m, 15.9 ft-lb)/7,500 min <sup>-1</sup> (rpm)	F
19 N·m (1.94 kg-m, 13.7 ft-lb)/4,000 min <sup>-1</sup> (rpm)		GII	
Oil capacity	2.0 l (2.1 US qt, 1.8 Imp qt)		
Lubrication system	Forced pressure and wet sump		
Air filtration system	Oiled polyurethane foam		
Cylinder compression	1,372.9 ± 245.2 kPa (14.0 ± 2.5 kg/cm <sup>2</sup> , (199 ± 35.6 psi)		
Intake valve	Opens	10° (B.T.D.C.) at 64° (B.T.D.C.) at	
	Closes	1 mm lift 0 lift	
		40° (A.B.D.C.) 106° (A.B.D.C.)	



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**CB250RS-DX**  
**CL250S**

ITEM		AREA (TYPE)		
ENGINE	Exhaust valve	Opens Closes 40° (B.B.D.C.) 91° (B.B.D.C.) 10° (A.T.D.C.) 73° (A.T.D.C.) Intake 0.05 mm (0.002 in) Exhaust 0.10 mm (0.004 in) 37 kg		
	Valve clearance			
	Weight			
CARBURETION	Type	Piston valve type		
	Identification number	PD70A		
	Main jet	#122		
	Pilot screw initial opening	1-3/4		
	Float level	14.5 mm (0.57 in)		
	Idle speed	1,200 ± 100 min <sup>-1</sup> (1,200 ± 100 rpm)		
DRIVE TRAIN	Clutch	Wet multi-plate type		
	Transmission	5-speed constant mesh		
	Primary reduction	2.464 : 1 (69/28)		
	Gear ratio I	2.800 : 1 (42/15)		
	Gear ratio II	1.850 : 1 (37/20)		
	Gear ratio III	1.375 : 1 (33/24)		
	Gear ratio IV	1.111 : 1 (30/27)		
	Gear ratio V	0.931 : 1 (27/29)		
	Final reduction	3.142 : 1 (44/14)		
	Gearshift pattern	Left foot operated return system, 1-N-2-3-4-5		
Drive chain	DID520 DS			
ELECTRICAL	Ignition	CDI		
	Ignition timing	15° BTDC at 1,200 min <sup>-1</sup> (rpm) (F mark)		
	Initial Full advance	37 ± 2° BTDC at 3,450 min <sup>-1</sup> (rpm)		
	Starting system	Starter motor		
	Alternator	0.17 kW/5,000 min (rpm)		
	Battery capacity	12V-9AH		
	Spark plug			
		For cold climate (Below 5°C, 41°F)	Standard	For extended high speed driving
		NGK ND	NGK ND	NGK ND
		DR8ES-L X24ESR-U	DR8ES X27ESR-U	
	E, F, GI, GII, ED, SW, SA			
	Spark plug gap	0.6-0.7 mm (0.024-0.028 in.)		
	Fuse	15A (Main), 7A (Headlight, Taillight)		
LIGHTS	Headlight (High/Low beam)	60/55W		
	Tail/Stoplight	5/21W		
		8/23W		
	Turn signal (Front/Rear)	21/21W		
		23/23W		
	Speedometer	3.4W		
	Tachometer	3.4W		
	Neutral indicator	3.4W		
	Turn signal indicator	3.4W		
	High beam indicator	3.4W		
Position	4W			
		3.4W		
		E, F, GI, GII, ED, SW, SA		





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**CB250RS-DX**  
**CL250S**

ITEM		AREA (TYPE)																
ENGINE	Exhaust valve Valve clearance Weight OPEN CLOSES	35° (BBDC) at 1 mm lift 83° (BBDC) at 0 lift 5° (ATDC) at 1 mm lift 65° (ATDC) at 0 lift Intake 0.05 mm (0.002 in) Exhaust 0.10 mm (0.004 in) 40 kg (88 lb)																
CARBURETION	Type Identification number Main jet Pilot screw initial opening Float level Idle speed	Piston valve type PD10C #105 2-1/8 12.5 mm 1200 ± 100 rpm																
DRIVE TRAIN	Clutch Transmission Primary reduction Gear ratio SL Gear ratio I Gear ratio II Gear ratio III Gear ratio IV Gear ratio V Final reduction Gearshift pattern Drive chain	Wet multi plate type 6-speed constant mesh 2,464 : 1 (69/28) 3,667 : 1 (44/12) 2,353 : 1 (40/17) 1,591 : 1 (35/22) 1,240 : 1 (31/25) 1,000 : 1 (28/28) 0,839 (26/31) 3,643 (51/14) Left foot operated return system SL-1-N-2-3-4-5 DID 520V, RK520SM																
ELECTRICAL	Ignition Ignition timing Initial Full advance Starting system Alternator Battery capacity Spark plug Spark plug gap Fuse	CDI 10°/1,200 rpm 36°/3,500 rpm Electric starter A.C Generator 12V-9AH <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2">Standard</th> <th colspan="2">For extended high speed driving</th> </tr> <tr> <th>NGK</th> <th>ND</th> <th>NGK</th> <th>ND</th> </tr> </thead> <tbody> <tr> <td>DR8ES-L</td> <td>X24ESR-U</td> <td>DR-8ES</td> <td>X27ESR-U</td> </tr> <tr> <td>D8EA</td> <td>X24ES-U</td> <td>D9EA</td> <td>X27ES-U</td> </tr> </tbody> </table> 0.6-0.7 mm 15A (Main) 7A (Headlight, Taillight)	Standard		For extended high speed driving		NGK	ND	NGK	ND	DR8ES-L	X24ESR-U	DR-8ES	X27ESR-U	D8EA	X24ES-U	D9EA	X27ES-U
Standard		For extended high speed driving																
NGK	ND	NGK	ND															
DR8ES-L	X24ESR-U	DR-8ES	X27ESR-U															
D8EA	X24ES-U	D9EA	X27ES-U															
LIGHTS	Headlight (High/Low beam) Tail/Stoplight Turn signal (Front/Rear) Speedometer Tachometer Neutral indicator Turn signal indicator High beam indicator Position	60/55W 5/21W 8/23W 21/21W 23/23W 3.4W 3.4W 3.4W 3.4W 3.4W 4W 3.4W																
		E, G, B U E, G, B U G, B, E U																



## SPECIAL TOOL

CARBURATOR PILOT SCREW WRENCH 07908-4730000  
 FLYWHEEL HOLDER 07925-4730000

## TORQUE VALUES

### • ENGINE

No.	TIGHTENING POINTS	Q'TY	THREAD DIA (mm)	TORQUE N·m (kg·m, ft·lb)
1	Bearing set plate	2	6	9-13 (0.9-1.3, 7-9)
2	Oil pump set plate	2	6	8-12 (0.8-1.2, 6-9)
3	Upper crankcase	8	6	10-14 (1.0-1.4, 7-10)
4	Upper crankcase	1	8	20-26 (2.0-2.6, 14-19)
5	Lower crankcase	4	8	22-28 (2.2-2.8, 16-20)
6	Lower crankcase	5	6	10-14 (1.0-1.4, 7-10)
7	Balancer chain guide (CB250RS-DX)	2	6	8-12 (0.8-1.2, 6-9)
8	Balancer holder flange	1	8	20-26 (2.0-2.6, 14-19)
9	Cam chain tensioner	3	6	8-12 (0.8-1.2, 6-9)
10	Spark advancer	1	18	45-60 (4.5-6.0, 33-43)
11	Clutch center locknut	1	18	45-60 (4.5-6.0, 33-43)
12	Clutch lifte plate	4	6	8-12 (0.8-1.2, 6-9)
13	Right crankcase cover	13	6	8-12 (0.8-1.2, 6-9)
14	A.C generator flywheel	1	12	100-120 (10.0-12.0, 72-87)
15	Left crankcase cover	14	6	8-12 (0.8-1.2, 6-9)
16	Cylinder	2	6	8-12 (0.8-1.2, 6-9)
17	Cylinder head bolt	4	8	30-36 (3.0-3.6, 22-26)
18	Cylinder head nut	2	8	22-28 (2.2-2.8, 16-20)
19	Cam sprocket	2	7	17-23 (1.7-2.3, 12-17)
20	Tappet adjuster locknut	4	5	8-12 (0.8-1.2, 6-9)
21	A.C generator stator	3	6	8-12 (0.8-1.2, 6-9)
22	Cylinder head cover	10	6	10-14 (1.0-1.4, 7-10)
	Cylinder head cover (Copper washer)	3	6	10-12 (1.0-1.2, 7-9)
23	Tappet hole cap	4	6	8-12 (0.8-1.2, 6-9)
24	Carburator insulator band	1	5	3-5 (0.3-0.5, 2-4)
25	Carburator insulator	2	6	8-12 (0.8-1.2, 6-9)
26	Spark plug	1	12	15-20 (1.5-2.0, 11-14)
27	A.C generator pulser coil	2	6	8-12 (0.8-1.2, 6-9)
28	Drain plug	1	12	20-30 (2.0-3.0, 14-22)
29	A.C generator cord clamp	1	6	8-12 (0.8-1.2, 6-9)
30	Breather plate	3	6	8-12 (0.8-1.2, 6-9)
31	Shift drum stopper	1	6	10-14 (1.0-1.4, 7-10)
32	Gear shift cam (CB250RS-DX)	1	6	10-14 (1.0-1.4, 7-10)
33	Gear shift cam (CL250S)	1	6	13-17 (1.3-1.7, 9-12)
34	Drive sprocket	2	6	8-12 (0.8-1.2, 6-9)
35	Tachometer gear box	1	6	8-12 (0.8-1.2, 6-9)
36	L. Rear cover	2	6	8-12 (0.8-1.2, 6-9)



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**CB250RS-DX**  
**CL250S**

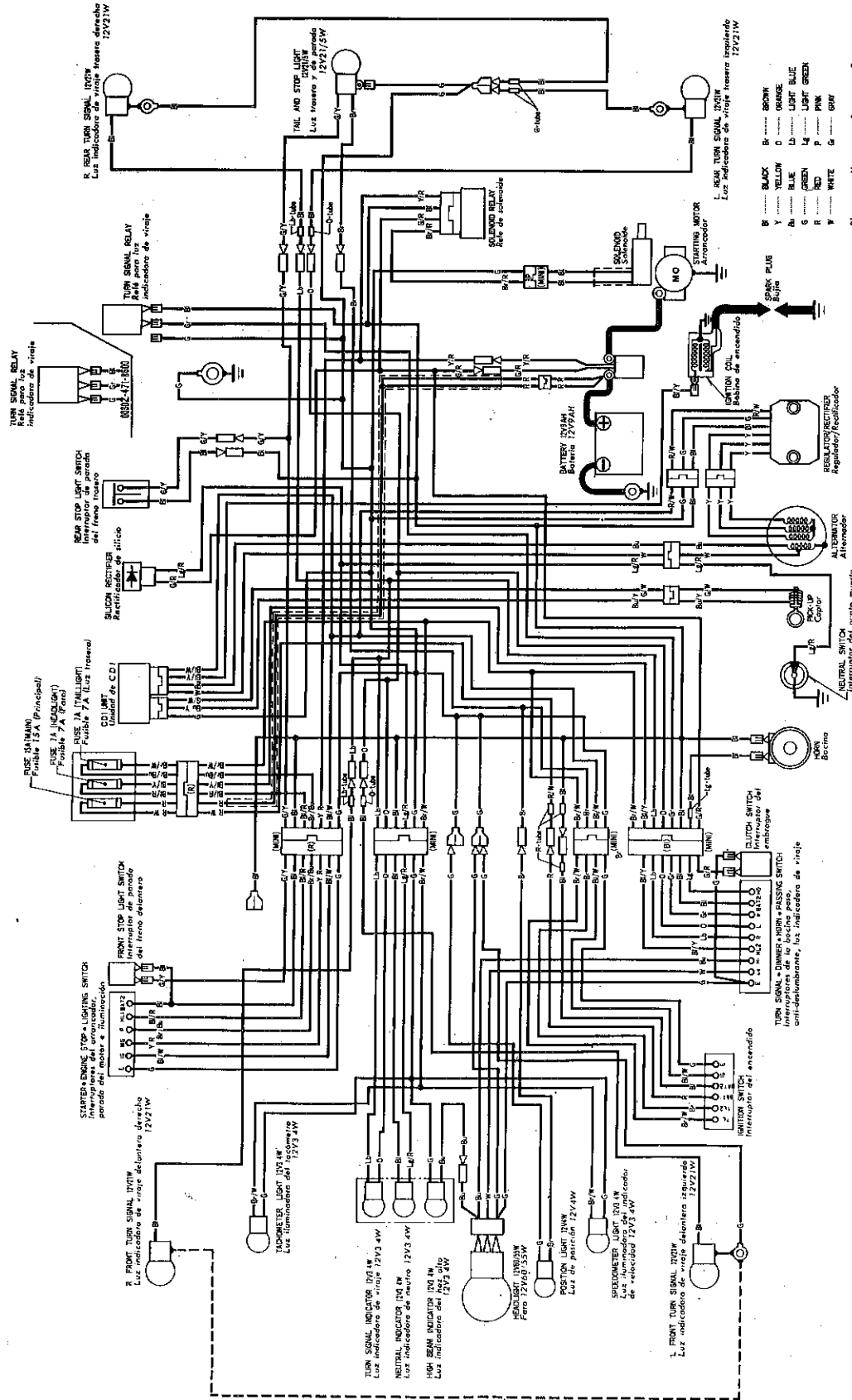
• FRAME

No.	TIGHTENING POINTS	Q'TY	THREAD DIA (mm)	TORQUE N·m (kg-m, ft-lb)
1	Steering stem nut	1	24	90-120 (9.0-12.0, 65-87)
2	Front fork top bridge	2	7	9-13 (0.9-1.3, 6.5-9.4)
3	Steering lock	2	6	8-14 (0.8-1.4, 6-10)
4	Handlebar upper holder	4	8	18-30 (1.8-3.0, 13-22)
5	Front fork top bridge	2	8	18-25 (1.8-2.5, 13-18)
6	Front axle nut	1	14	50-80 (5.0-8.0, 36-58)
7	Front axle holder nut	2	8	18-25 (1.8-2.5, 13-18)
8	Engine hanger bolt	5	10	45-70 (4.5-7.0, 33-51)
9	Engine hanger bolt	4	8	20-35 (2.0-3.5, 14-25)
10	Rear axle nut	1	16	80-100 (8.0-10.0, 58-72)
11	Final driven sprocket	5	10	29-35 (2.9-3.5, 21-25)
12	Rear brake torque link	2	8	18-25 (1.8-2.5, 13-18)
13	Rear shock absorber	4	10	30-40 (3.0-4.0, 22-29)
14	Foot peg	2	10	50-70 (5.0-7.0, 36-51)
15	Gearshift arm	1	6	8-14 (0.8-1.4, 6-10)
16	Swingarm pivot bolt	1	14	60-80 (6.0-8.0, 43-58)
17	Rear brake pedal	1	8	18-25 (1.8-2.5, 13-18)
18	Front brake disc (CB250RS-DX)	5	8	27-38 (2.7-3.8, 20-27)
19	Caliper (CB250RS-DX)	4	10	30-45 (3.0-4.5, 22-33)
20	Fuel tank	1	8	15-25 (1.5-2.5, 11-18)
21	Front brake arm (CL250S)	1	6	8-12 (0.8-1.2, 6-9)
22	Rear brake arm	1	6	10-14 (1.0-1.4, 7-10)
23	Front fork bolt	2	27	15-30 (1.5-3.0, 11-22)
24	Front fork socket bolt	2	8	15-25 (1.5-2.5, 11-18)
25	Fuel cock lock nut	1	-	25-30 (2.5-3.0, 18-22)
26	Fuel cock cup	1	-	3-5 (0.3-0.5, 2.2-3.6)

Torque specifications listed above are important tightening points. Others should be torqued to standard torque below.

• STANDARD TORQUES

TYPE	TORQUE N·m (kg-m, ft-lb)	TYPE	TORQUE N·m (kg-m, ft-lb)
5 mm bolt, nut	4.5-6.0 (0.45-0.6, 3.3-4.3)	5 mm screw	3.5-5 (0.35-0.5, 2.5-3.6)
6 mm bolt, nut	8-12 (0.8-1.2, 6-9)	6 mm screw	7-11 (0.7-1.1, 5-8)
8 mm bolt, nut	18-25 (1.8-2.5, 13-18)	6 mm flange bolt, nut	10-14 (1.0-1.4, 7-10)
10 mm bolt, nut	30-40 (3.0-4.0, 22-29)	8 mm flange bolt, nut	20-30 (2.0-3.0, 17-22)
12 mm bolt, nut	50-60 (5.0-6.0, 36-43)	10 mm flange bolt, nut	30-40 (3.0-4.0, 22-29)



- Color Code Legend:
- B ..... BLACK
  - Y ..... YELLOW
  - Bl ..... BLUE
  - G ..... GREEN
  - R ..... RED
  - W ..... WHITE
  - Br ..... Brown
  - Am ..... Amarelo
  - Az ..... Azul
  - Ve ..... Verde
  - R ..... Rojo
  - Blanco
  - Gr ..... Gris
  - Ar ..... Anaranjado
  - LS ..... Lila claro
  - Vg ..... Verde claro
  - R ..... Rojo
  - P ..... Pardo
  - Gr ..... Gris

0030Z-471-8500 (E, F, ED, SW)  
8600 (G)

SWITCH CONTINUED

IGNITION SWITCH

BATT	BATT2	TL	TL2	LS	E
OFF	OFF	OFF	OFF	OFF	OFF
ON	ON	ON	ON	ON	ON
P	P	P	P	P	P

STARTER SWITCH

BATT	BATT2	NC	NO	E
OFF	OFF	OFF	OFF	OFF
ON	ON	ON	ON	ON
P	P	P	P	P

LIGHTING SWITCH

BATT2	NC	NO	E
OFF	OFF	OFF	OFF
ON	ON	ON	ON
P	P	P	P

SIGNAL SWITCH

BATT2	NC	NO	E
OFF	OFF	OFF	OFF
ON	ON	ON	ON
P	P	P	P

TURN SIGNAL SWITCH

R	L	OFF	ON
OFF	OFF	OFF	OFF
ON	ON	ON	ON
P	P	P	P

STOP SWITCH

BATT2	NC	NO	E
OFF	OFF	OFF	OFF
ON	ON	ON	ON
P	P	P	P

HORN SWITCH

BATT2	NC	NO	E
OFF	OFF	OFF	OFF
ON	ON	ON	ON
P	P	P	P

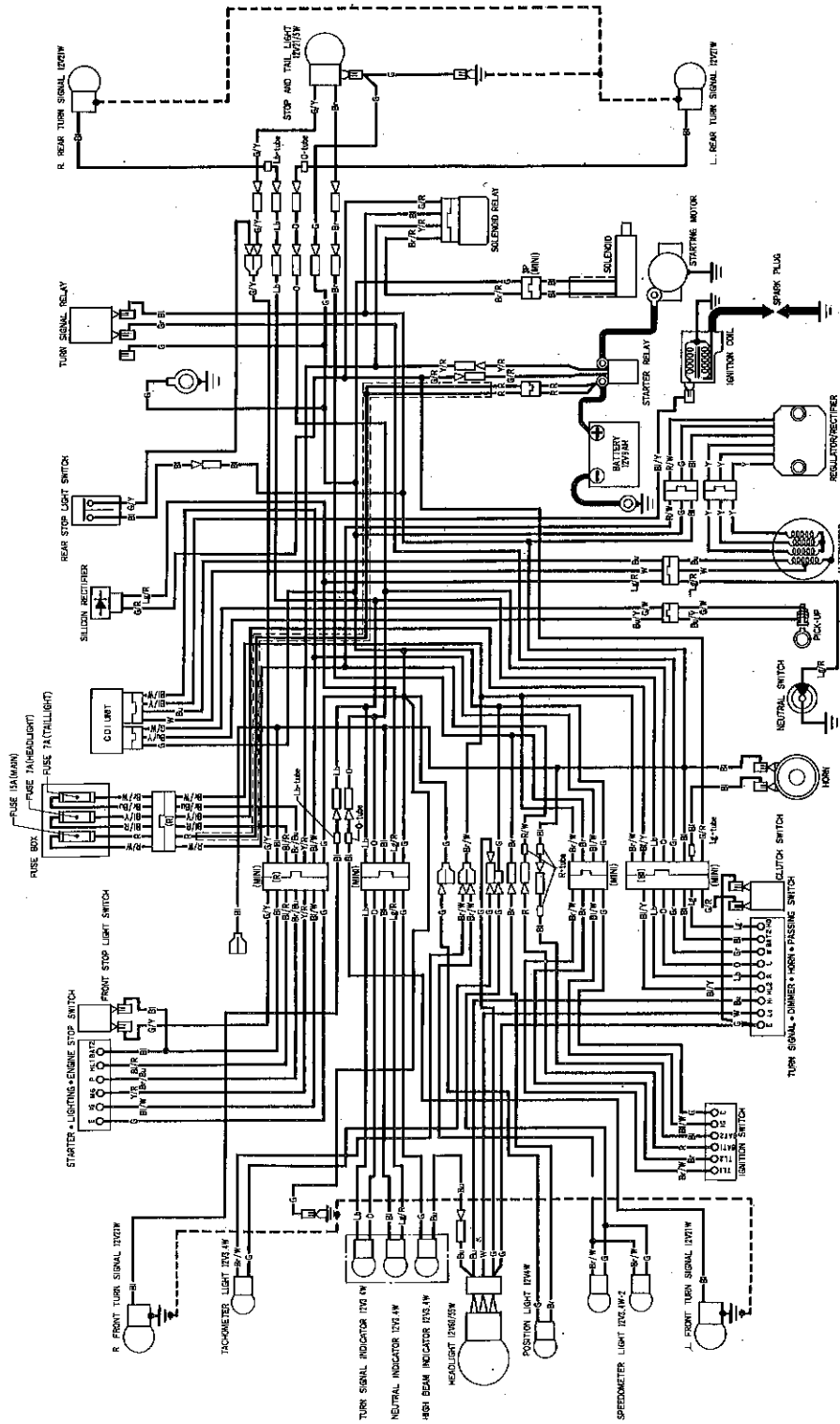
PASSING SWITCH

BATT2	NC	NO	E
OFF	OFF	OFF	OFF
ON	ON	ON	ON
P	P	P	P



# HONDA CB250RS-DX CL250S

(CL250S)



WIRE COLOR CODE  
 B BLACK  
 Y YELLOW  
 BL BLUE  
 BR BROWN  
 G GREEN  
 P PINK  
 W WHITE  
 R RED  
 L LIGHT BLUE  
 LB LIGHT BROWN  
 P PINK  
 GR GRAY

**SWITCH CONTINUITY**

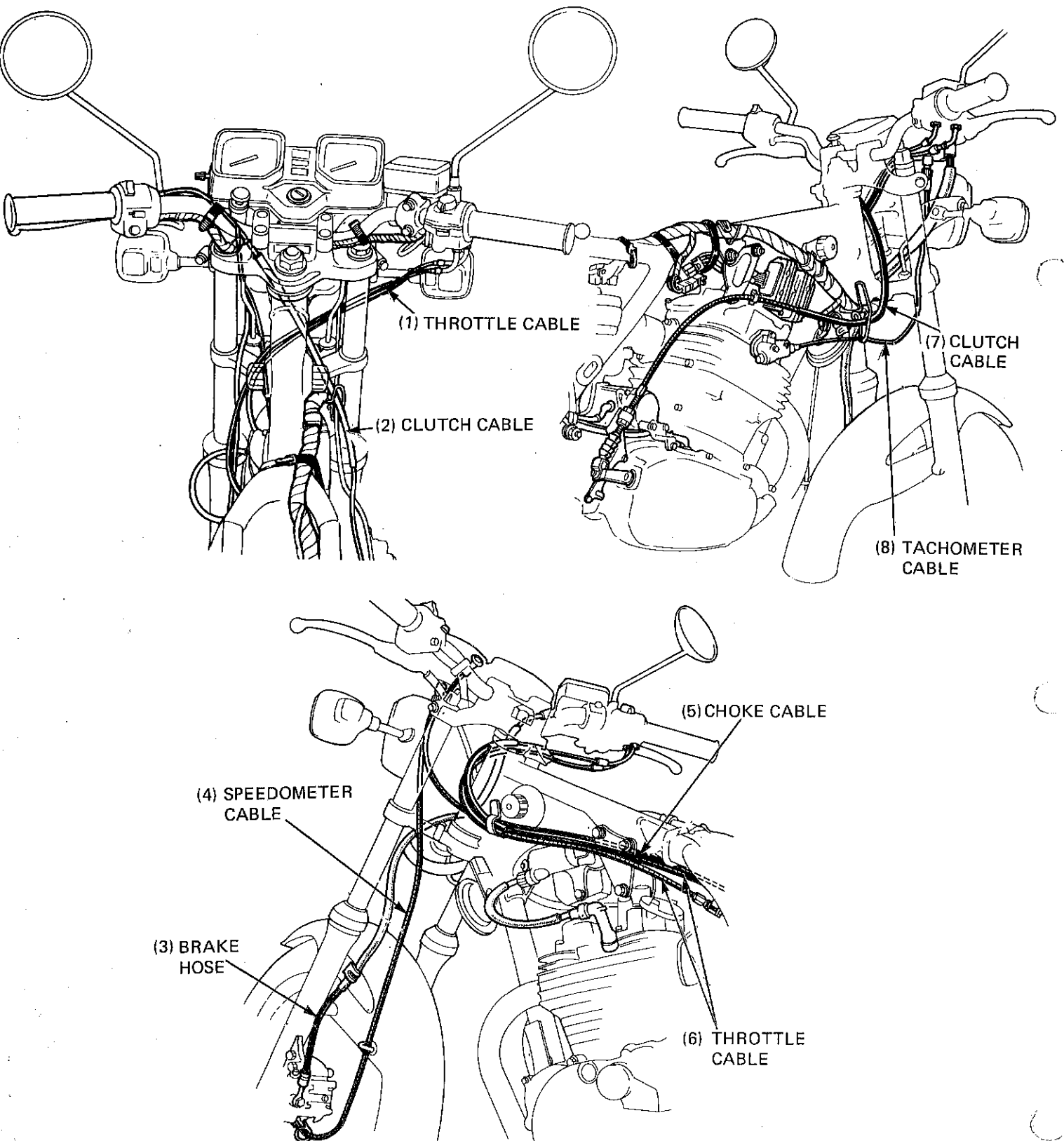
IGNITION SWITCH	STARTER SWITCH	LIGHTING SWITCH	ENGINE STOP SWITCH	TURN SIGNAL SWITCH	DIMMER SWITCH	HORN SWITCH	PASSING SWITCH
BATT	BAT2	HL	HL	W	L	HL	HL
OFF	OFF	OFF	OFF	R	L	HL	HL
ON	PUSH	HL	OFF	N	L	HL	HL
P			OFF	L	L	HL	HL

0030Z-473-6500-E



**CABLE & HARNESS ROUTING**

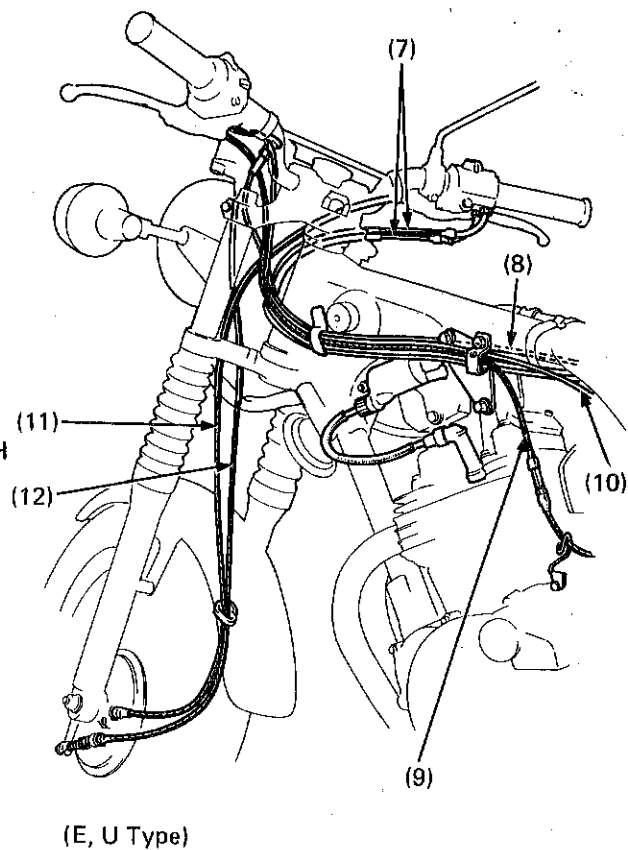
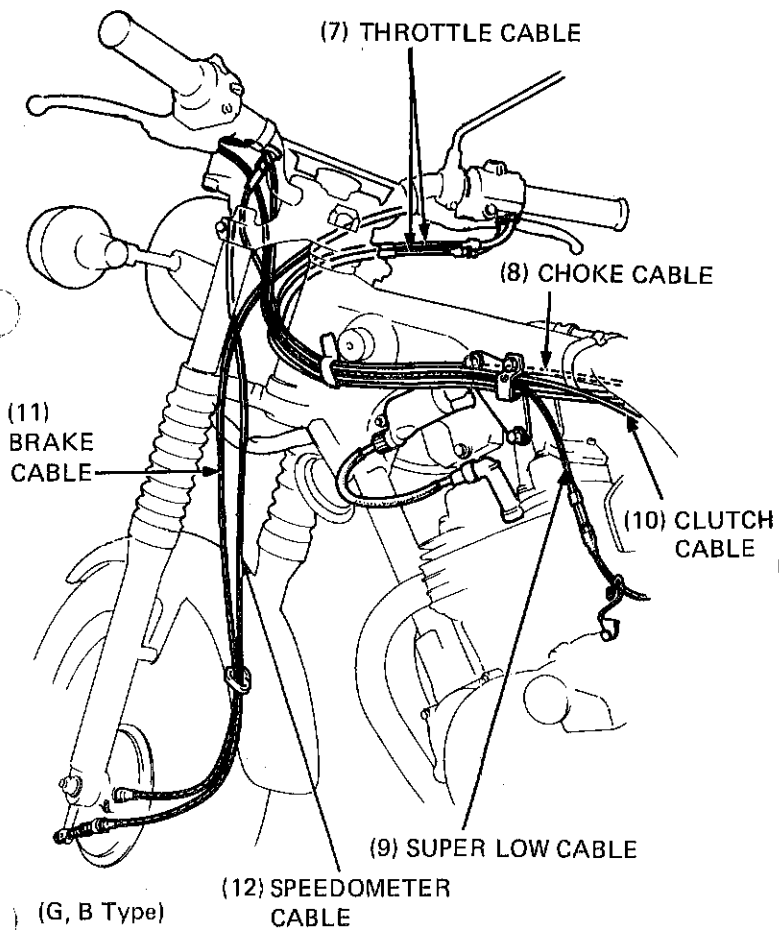
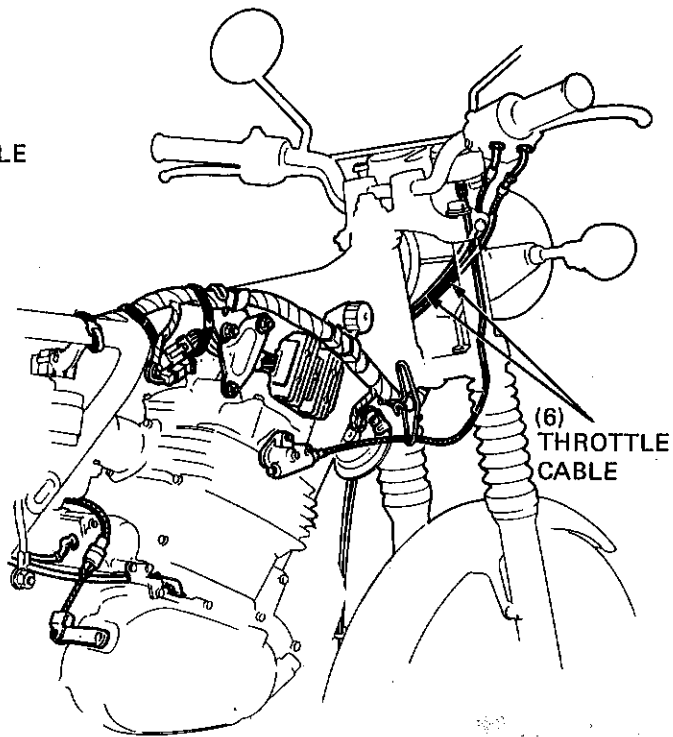
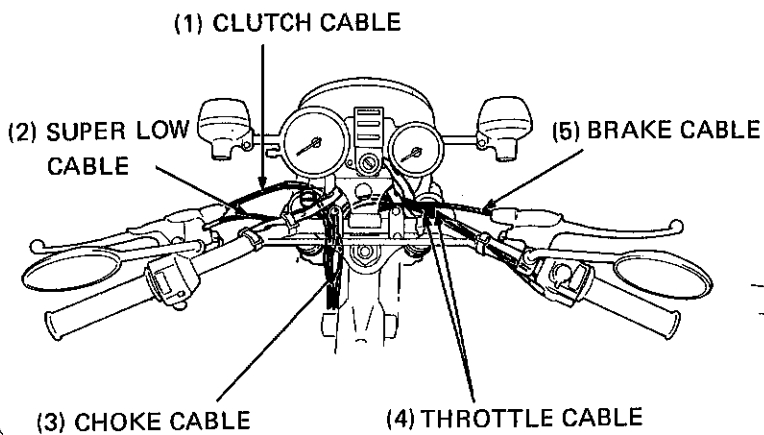
- CABLES (CB250RS-DX)

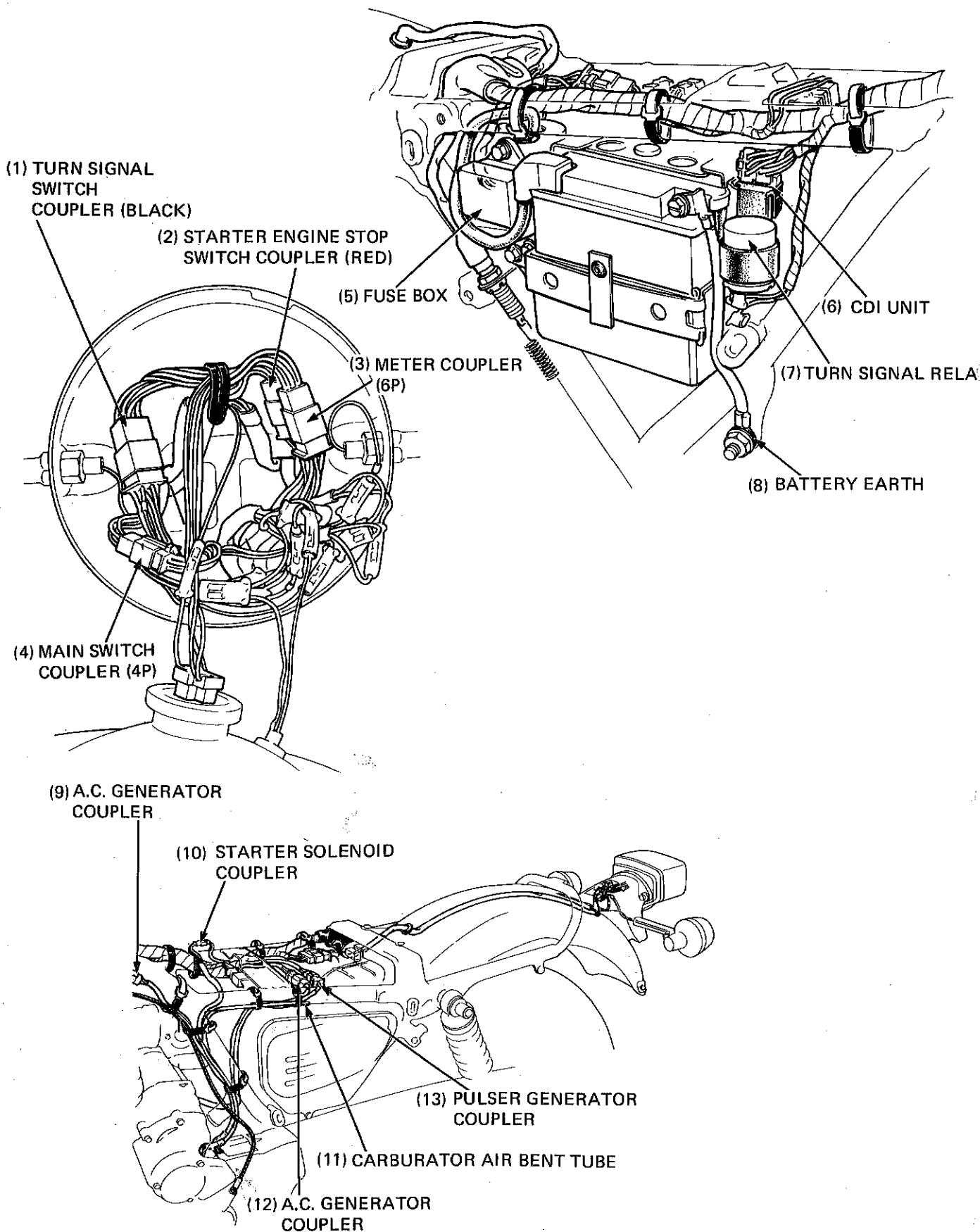




**HONDA**  
**CB250RS-DX**  
**CL250S**

• (CL250S)







**HONDA**  
**CB250RS-DX**  
**CL250S**

## MAINTENANCE SCHEDULE (CB250RS-DX)

	(1)	(2)				(33)
		1,000 km (600 miles)	6,000 km (3,600 miles)	12,000 km (7,200 miles)	18,000 km (10,800 miles)	
(3)	*	R	(31)			2-3
* (4)				C		2-4
(5)	(29)		C	C	C	3-3
* (6)			I	I	I	3-4
* (7)		C	C	C	C	
(8)			I	R	I	3-4
* (9)		I	I	I	I	3-5
* (10)		I	I	I	I	3-6
* (11)		I	I	I	I	3-8
* (12)		I	I	I	I	3-9
* (13)			I	I	I	3-9
** (14)				A		3-6
(15)	(30)	(32)				3-11
(16)	**	I	I	I	I	3-13
(17)	***	I	I	I	I	3-13
* (18)					R	3-13
(19)			I	I	I	3-14 3-15
(20)		I	I	I	I	3-14
* (21)		I	I	I	I	3-15
* (22)		I	I	I	I	3-15
(23)		I	I	I	I	3-16
(24)			I	I	I	3-17
* (25)		I	I	I	I	3-17
* (26)		I	I	I	I	3-18
** (27)		I	I	I	I	3-18
** (28)		I		I		3-18

Perform the Pre-ride Inspection in the Owner's Manual at each scheduled maintenance period.

(1) WHICHEVER COMES FIRST  
 (2) ODOMETER READING  
 For higher odometer readings, repeat at the frequency interval established here.

- (3) ENGINE OIL
- (4) ENGINE OIL FILTER SCREEN
- (5) AIR CLEANER
- (6) FUEL LINE
- (7) FUEL STRAINER
- (8) SPARK PLUG
- (9) VALVE CLEARANCE
- (10) STARTER DECOMPRESSOR (CB250RS)
- (11) THROTTLE OPERATION
- (12) CARBURETOR IDLE SPEED
- (13) CARBURETOR CHOKE/FAST IDLE
- (14) BALANCER CHAIN TENSION
- (15) DRIVE CHAIN
- (16) BATTERY ELECTROLYTE
- (17) BRAKE FLUID LEVEL
- (18) BRAKE FLUID
- (19) BRAKE SHOES/PADS
- (20) BRAKE FREE PLAY
- (21) BRAKE LIGHT SWITCH
- (22) HEADLIGHT AIM
- (23) CLUTCH FREE PLAY
- (24) SIDE STAND
- (25) SUSPENSION
- (26) NUTS, BOLTS, FASTENERS
- (27) WHEELS/SPOKES
- (28) STEERING HEAD BEARING
- (29) More frequent service may be required when riding in dusty areas.
- (30) Initial service period: 300 km (180 miles)
- (31) Replace every 3,000 km (1,800 miles)
- (32) Inspect every 1,000 km (600 miles)
- (33) Refer to page

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

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

\* Every year

\*\* Every month

\*\*\* Every 2 years

I - Inspect and clean, adjust, lubricate or replace if necessary.

R - Replace

C - Clean

A - Adjust



**MAINTENANCE SCHEDULE (CL250S)**

	(1)	(2)				(30)
		1,000 km (600 miles)	6,000 km (3,600 miles)	12,000 km (7,200 miles)	18,000 km (10,800 miles)	
(3)	*	R	(28)			2-3
* (4)				C		2-4
(5)	(26)		C	C	C	3-3
* (6)			I	I	I	3-4
(7)		C	C	C	C	
(8)			I	R	I	3-4
* (9)		I	I	I	I	3-5
* (10)		I	I	I	I	3-8
* (11)		I	I	I	I	3-9
* (12)			I	I	I	3-9
** (13)				A		3-6
(14)	(27)	(29)				3-11
(15)	**	I	I	I	I	3-13
(16)			I	I	I	3-14
(17)		I	I	I	I	3-14
* (18)		I	I	I	I	3-15
* (19)		I	I	I	I	3-15
(20)		I	I	I	I	3-16
(21)			I	I	I	3-17
* (22)		I	I	I	I	3-17
* (23)		I	I	I	I	3-18
** (24)		I	I	I	I	3-18
** (25)		I		I		3-18

Perform the Pre-ride Inspection in the Owner's Manual at each scheduled maintenance period.

- (1) WHICHEVER COMES FIRST
- (2) ODOMETER READING  
For higher odometer readings, repeat at the frequency interval established here.
- (3) ENGINE OIL
- (4) ENGINE OIL FILTER SCREEN
- (5) AIR CLEANER
- (6) FUEL LINE
- (7) FUEL STRAINER
- (8) SPARK PLUG
- (9) VALVE CLEARANCE
- (10) THROTTLE OPERATION
- (11) CARBURETOR IDLE SPEED
- (12) CARBURETOR CHOKE/FAST IDLE
- (13) BALANCER CHAIN TENSION
- (14) DRIVE CHAIN
- (15) BATTERY ELECTROLYTE
- (16) BRAKE SHOES
- (17) BRAKE FREE PLAY
- (18) BRAKE LIGHT SWITCH
- (19) HEADLIGHT AIM
- (20) CLUTCH FREE PLAY
- (21) SIDE STAND
- (22) SUSPENSION
- (23) NUTS, BOLTS, FASTENERS
- (24) WHEELS/SPOKES
- (25) STEERING HEAD BEARING
- (26) More frequent service may be required when riding in dusty areas.
- (27) Initial service period: 300 km (180 miles)
- (28) Replace every 3,000 km (1,800 miles)
- (29) Inspect every 1,000 km (600 miles)
- (30) Refer to page

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

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

\* Every year  
 \*\* Every month  
 \*\*\* Every 2 years  
 I - Inspect and clean, adjust, lubricate or replace if necessary.

R - Replace  
 C - Clean  
 A - Adjust



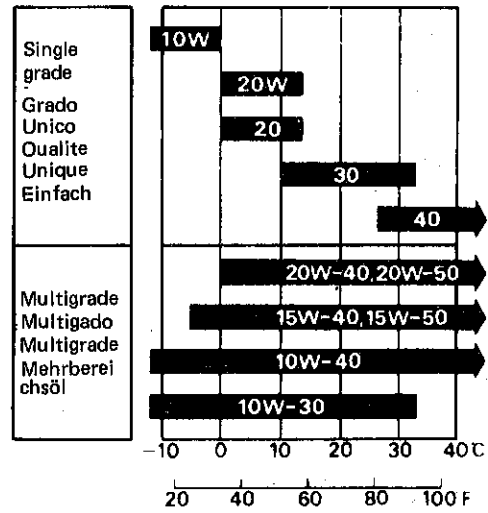
**HONDA**  
CB250RS-DX  
CL250S

# LUBRICATION 2.

## SERVICE INFORMATION

### • SPECIFICATIONS

Recommended oil: API service classification-  
SE or SF General, all tem-  
perature 10W-40 Alter-  
nate



# 3. INSPECTION AND ADJUSTMENT



**HONDA**  
CB250RS-DX  
CL250S

## CARBURETOR IDLE SPEED

### NOTE

Check the idle speed after all other maintenance items have been performed.

Warm up the engine.  
Shift the transmission into neutral.

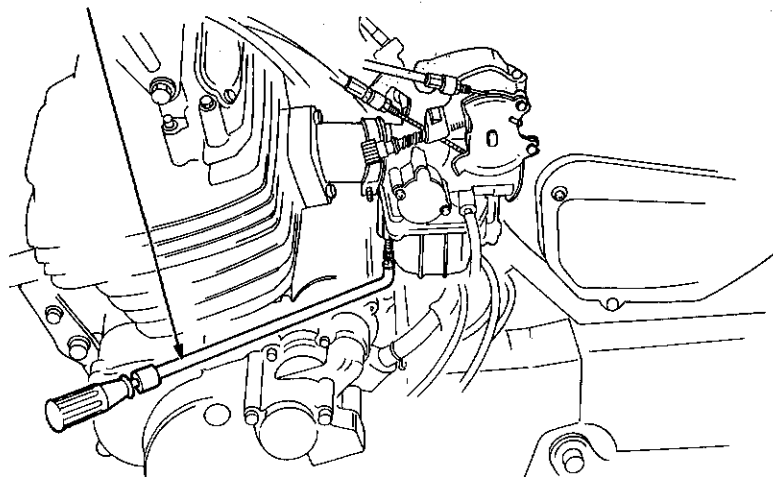
### NOTE

The engine must be warm for accurate idle speed adjustment. Stop and go driving for ten minutes is sufficient.

Support the vehicle in an upright position. Turn the throttle stop screw as required to obtain specified idle speed.

**IDLE SPEED:  $1,200 \pm 100 \text{ min}^{-1}$  (rpm)**

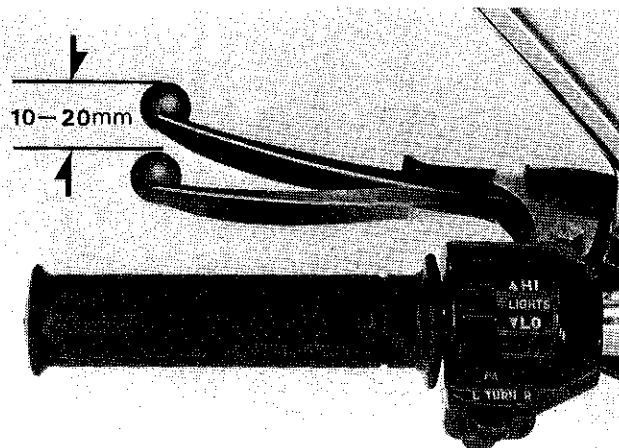
(1) PILOT SCREW WRENCH No. 07908-4730000



## CLUTCH

Measure the clutch free play at the lever end.

**FREE PLAY: 10–20 mm (3/8–3/4 in)**

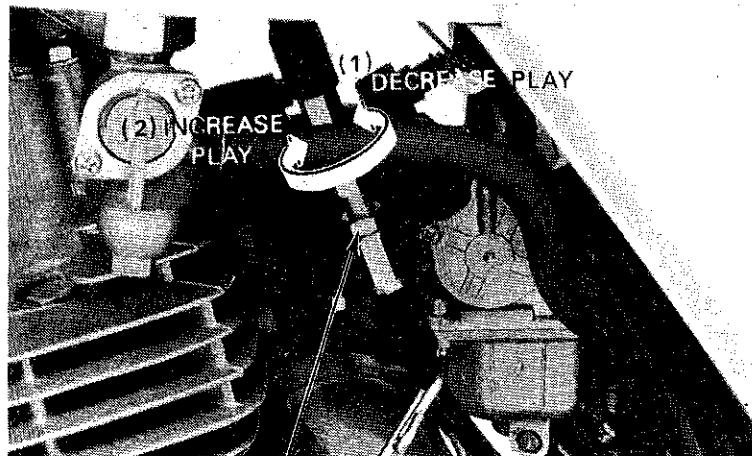


Major adjustments are made with the lower adjuster.

Loosen the lock nut and turn the adjuster.

Tighten the lock nut.

Check clutch operation.



(3) LOCK NUT



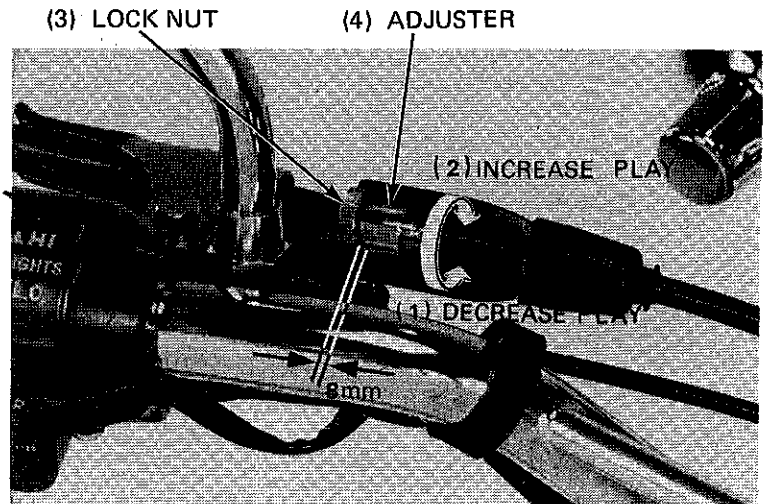
Minor adjustments are made with the upper adjuster.

Loosen the lock nut and turn the adjuster. Retighten the lock nut and reinstall the rubber protector.

**NOTE**

Do not expose the adjusting bolt threads more than 8 mm (5/16 in).

If adjustment cannot be made with the clutch lever adjusting bolt, screw the adjusting bolt all the way in. Adjustment must be made at the clutch housing.



## DRIVE CHAIN

Place the vehicle on its center stand (Side stand: CL250S) and shift the transmission into neutral.

Inspect drive chain free play midway between the sprockets on the lower chain run.

**FREE PLAY: 15–25 mm (5/8–1 in)**

Remove the cotter pin and loosen the rear axle nut.

Loosen the lock nuts and turn the adjusting bolts until the correct drive chain slack is obtained.

**NOTE**

Align the index marks of the adjusters with the same side scales on the swingarm.

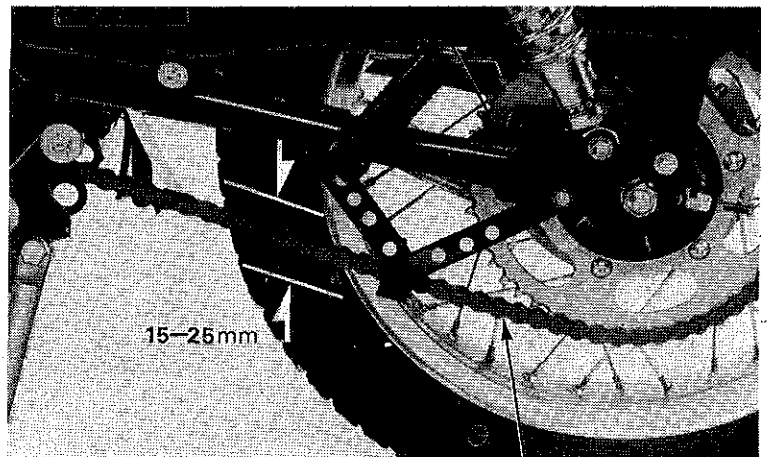
Tighten the axle nut and install a new cotter pin into the axle nut and axle. Spread the ends of the cotter pin.

**TORQUE: 8.0–10.0 kg-m ( 58 – 72 ft-lb)**

Tighten the lock nuts. Lubricate the drive chain with SAE No. 80 or 90 gear oil.

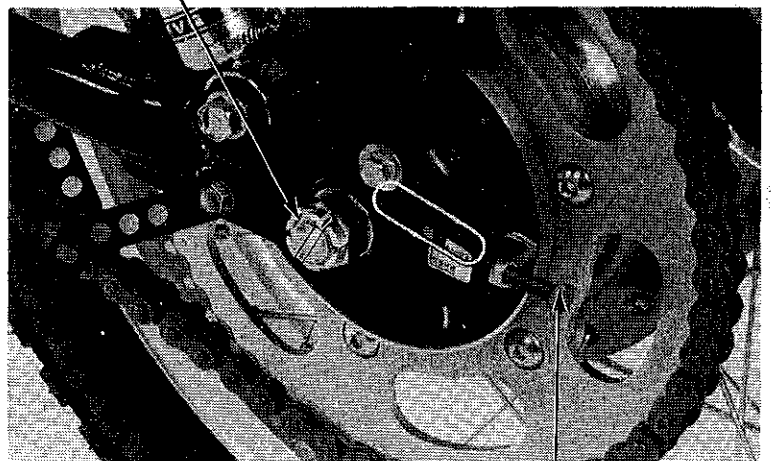
**NOTE**

- Clean the chain with kerosene. Wipe dry and lubricate only with SAE No. 80 or gear oil. Do not clean with a steam cleaner.
- Do not use commercial chain lubricants which may contain solvents and could damage the rubber O-rings.



(1) DRIVE CHAIN

(1) AXLE NUT

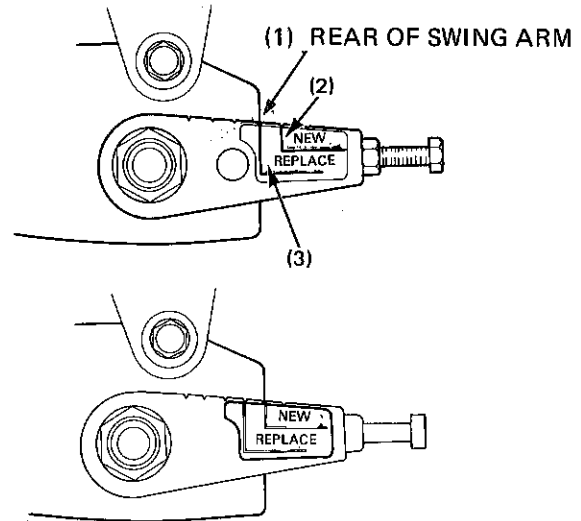


(2) ADJUST BOLT



Replace the drive chain with a new one if the end of the swingarm aligns with the furthest limit of adjustment indicated on the label.

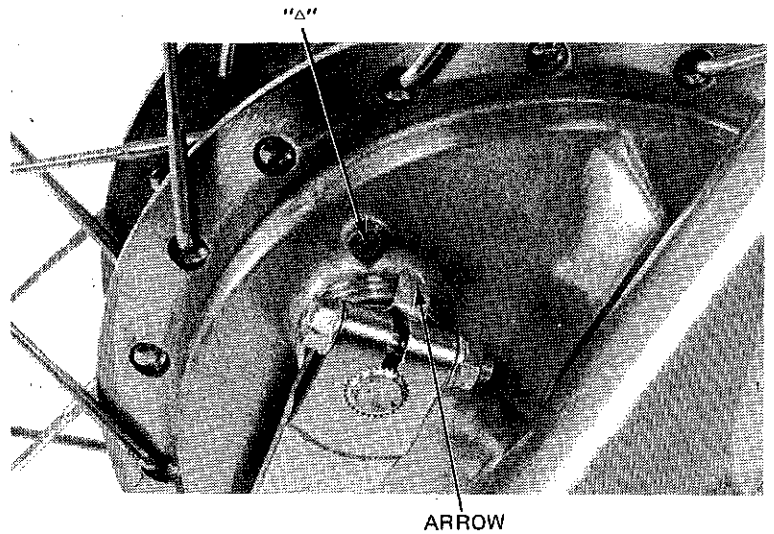
After installing a new drive chain, attach a new label on each side with the initial line of adjustment alignment with the end of the swingarm as shown.



## FRONT BRAKE (CL250S)

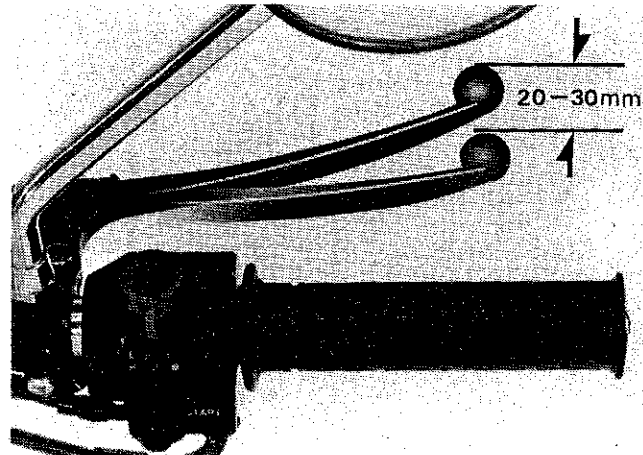
### ● BRAKE SHOE WEAR

Replace the brake shoes if the arrow on the indicator plate aligns with the "△" on the brake panel when the brake is applied.



### ● FRONT BRAKE ADJUSTMENT

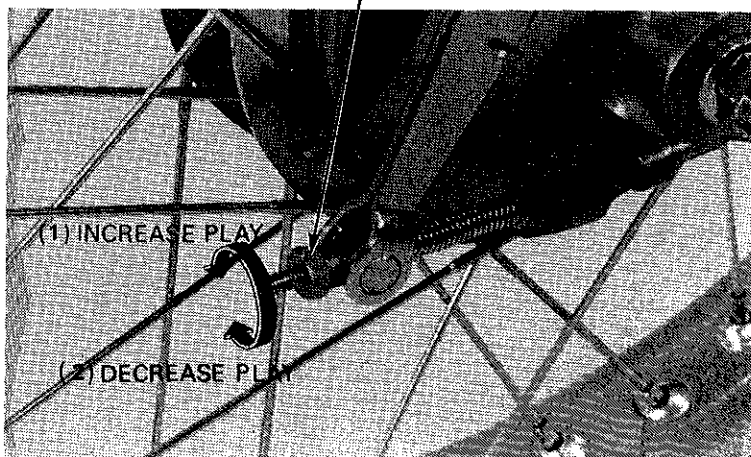
Free play, measured at the tip of the brake lever, should be maintained between 20–30 mm (0.8 – 1.2 in).





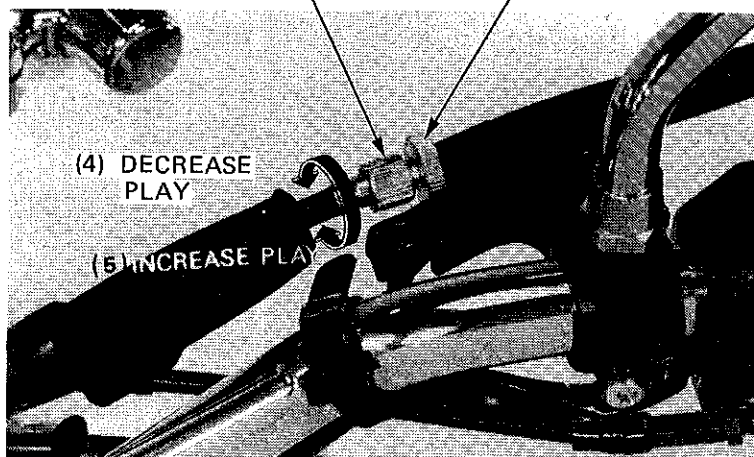
Major adjustments are performed with the lower adjuster.

(3) ADJUSTER



Perform minor adjustments with the adjuster at the brake lever. Loosen lock nut and turn adjuster.

(6) ADJUSTER (7) LOCK NUT



## FUEL FILTER STRAINER CLEANING

- Remove the seat.
- Turn the fuel valve OFF and disconnect the fuel line.
- Remove the fuel tank.
- Drain fuel from the fuel tank.

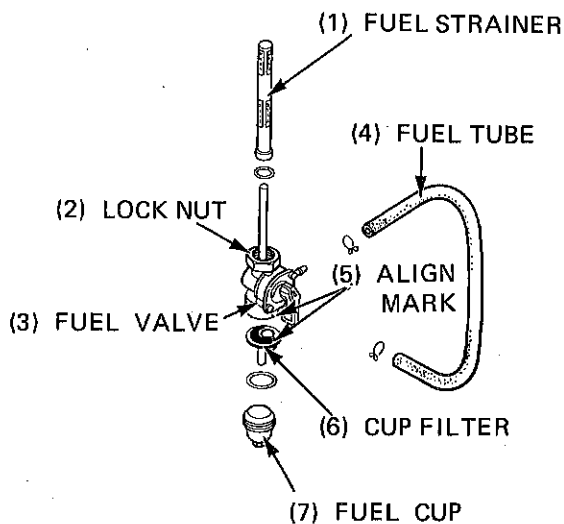
### WARNING

*Gasoline is extremely flammable and is even explosive under certain conditions. Whenever servicing the fuel filter, be sure the engine is stopped and there are no lighted cigarettes or flames nearby.*

- Remove the fuel valve cup and cup filter.
- Clean the fuel valve, fuel valve cup, cup filter and fuel strainer.

### NOTE

- Install the fuel cup on the fuel valve with the mark aligned with the mark on the fuel valve.
- After assembling, check that there is no fuel leak.
- Do not overtighten the lock nut and fuel cup.

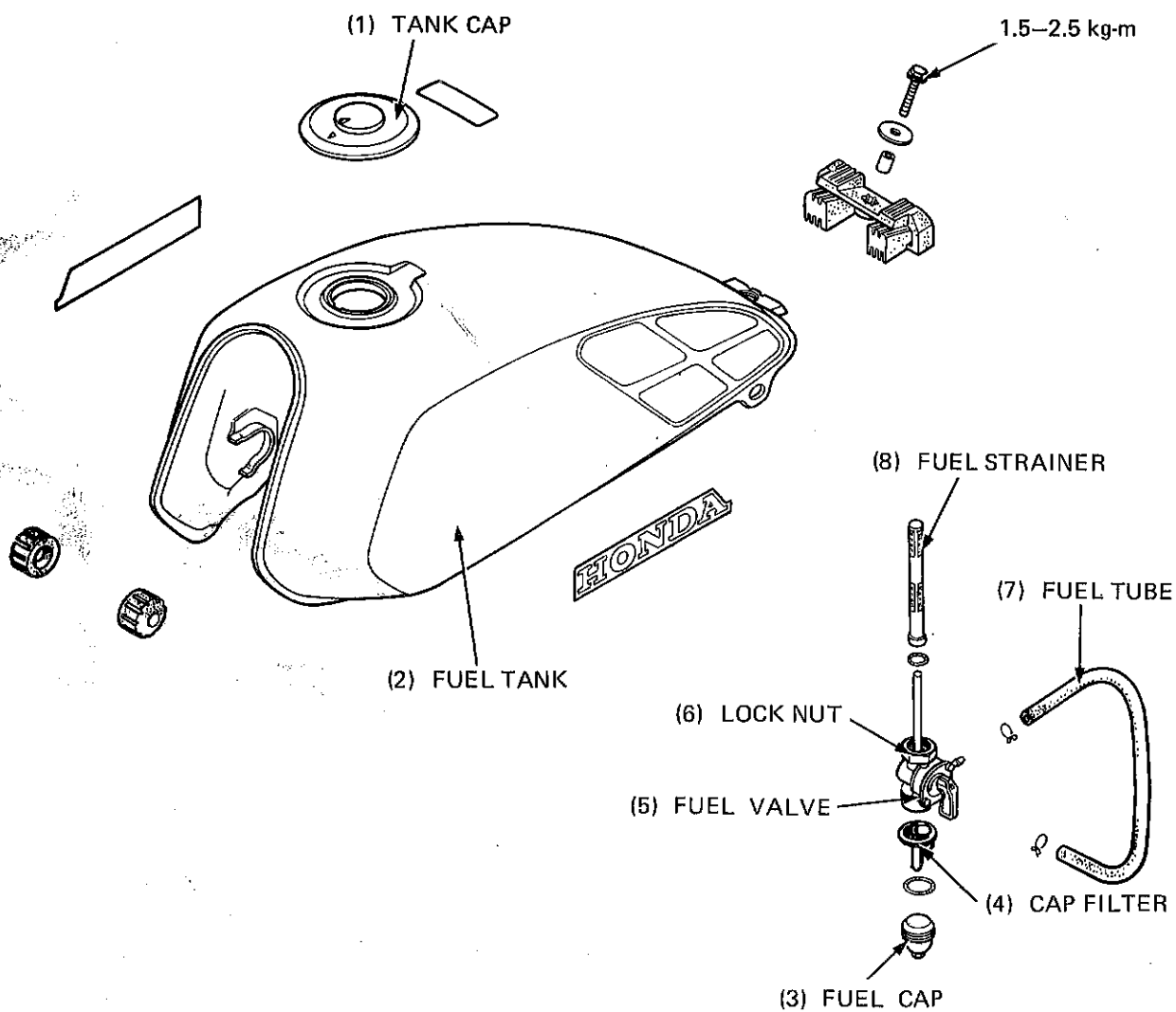


# 4. FUEL SYSTEM



**HONDA**  
CB250RS-DX  
CL250S

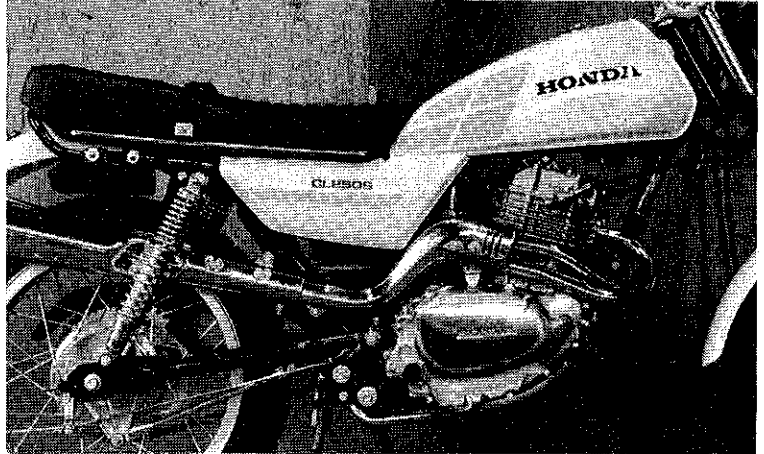
## FUEL TANK (CL250S)





## ENGINE REMOVAL (CL250S)

Drain oil from the engine. ✓  
Remove the seat and fuel tank.  
Remove the left and right side covers.

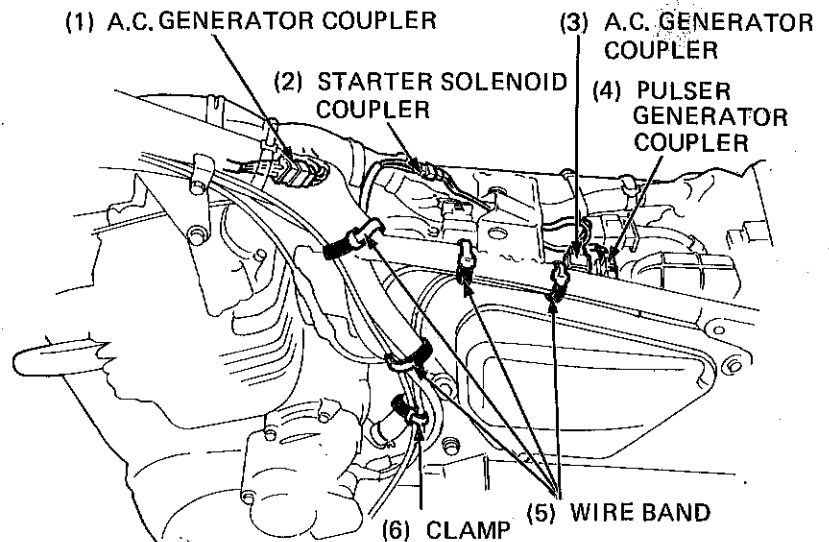


Remove spark plug cap.

(1) SPARK PLUG CAP



Remove the wire band and clamp.  
Disconnect the A.C generator coupler.  
Disconnect the pulser generator coupler.  
Disconnect the starter solenoid wire coupler.





Remove the drive sprocket cover, remove the super low cable-end from arm and remove cable from cover.

(1) SUPER LOW CABLE

(3) CABLE END



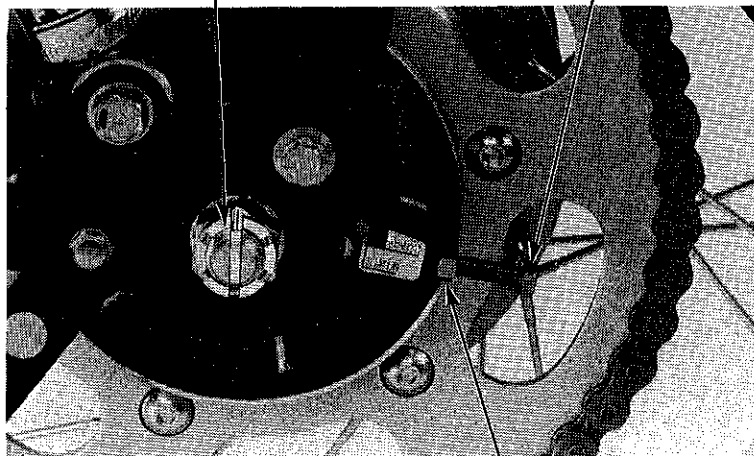
(2) L. CRANKCASE REAR COVER

(4) NEUTRAL SWITCH COLLOR

Loosen the lock nut and bolt of rear axle nut and chain adjuster bolt.

(1) AXLE NUT

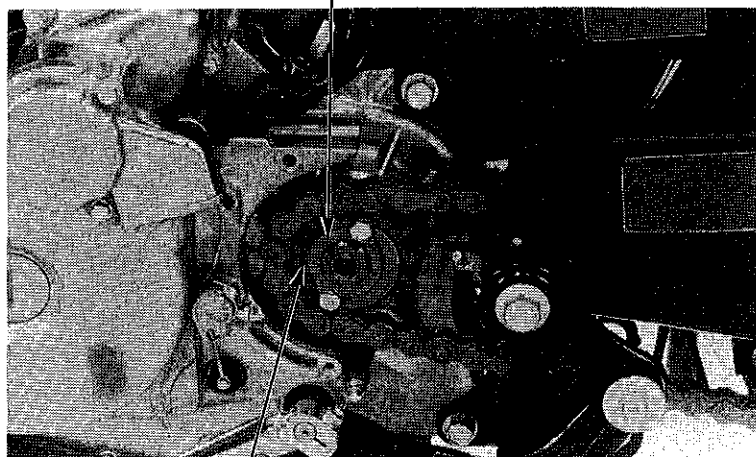
(3) ADJUST BOLT



(2) LOCK NUT

Remove the drive sprocket.

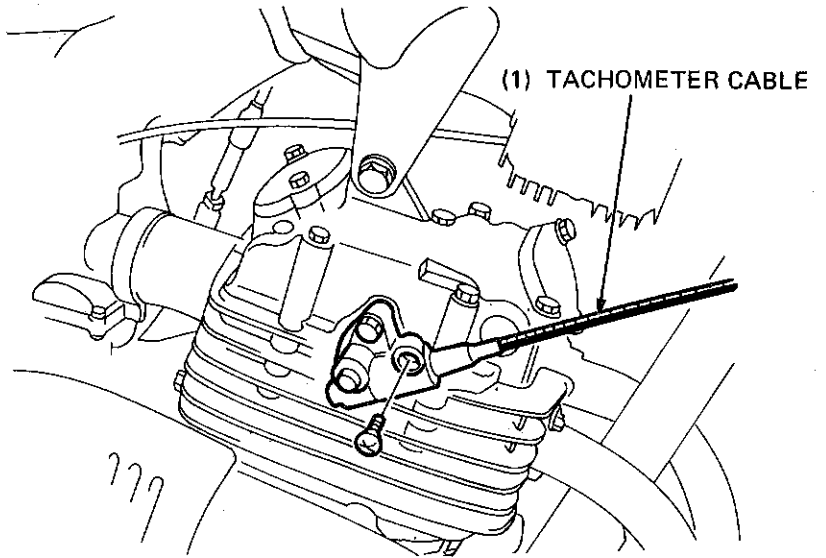
(2) FIXING PLATE



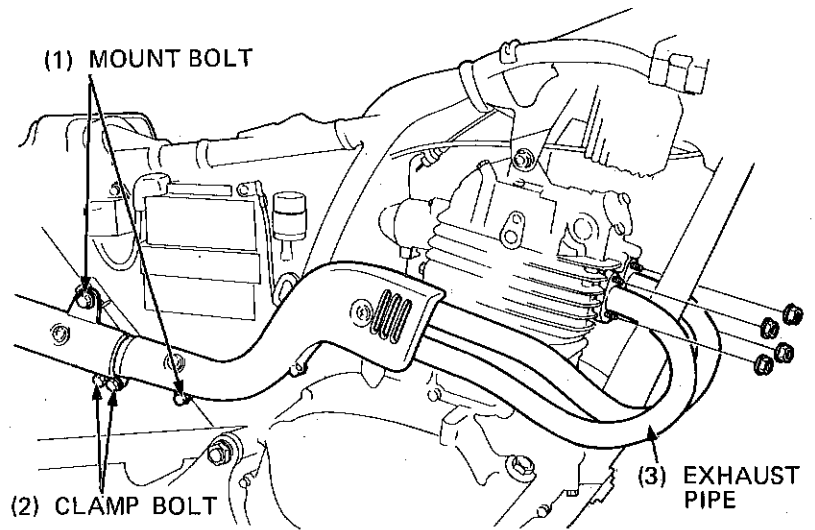
(1) DRIVE SPROCKET



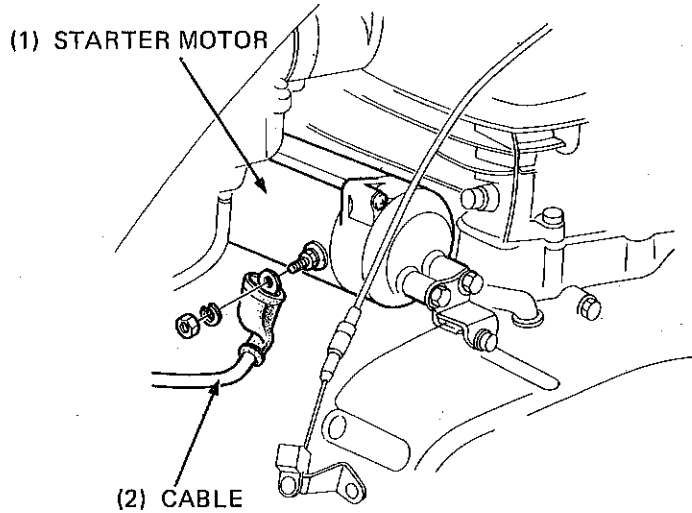
Remove the tachometer cable.



Loosen the muffler mount bolt, exhaust pipe clamp bolt and remove the joint nut and exhaust pipe.

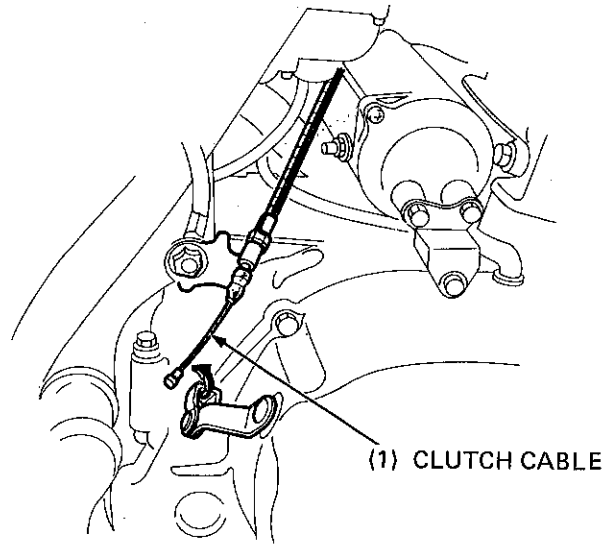


Remove the starter motor cable from the motor.

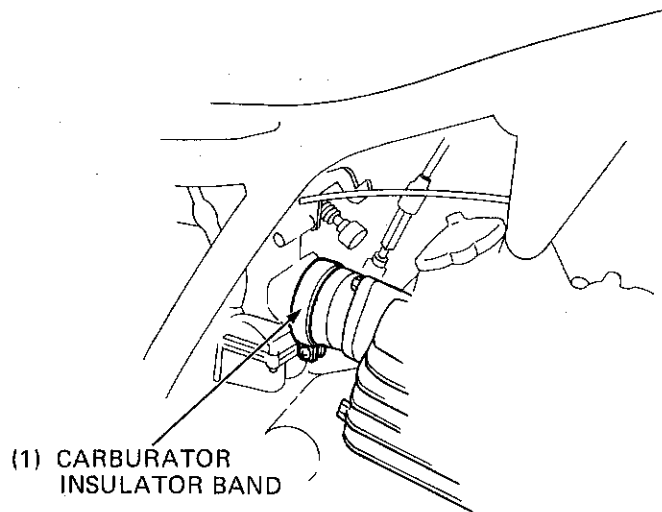




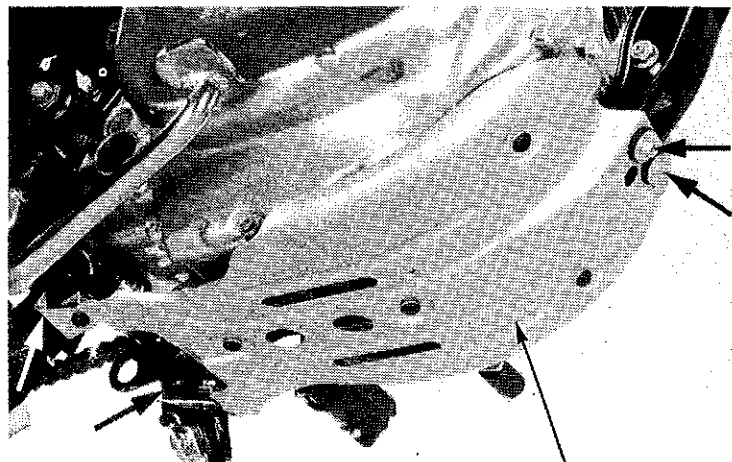
Disconnect the clutch cable.



Loosen the carburetor insulator band.



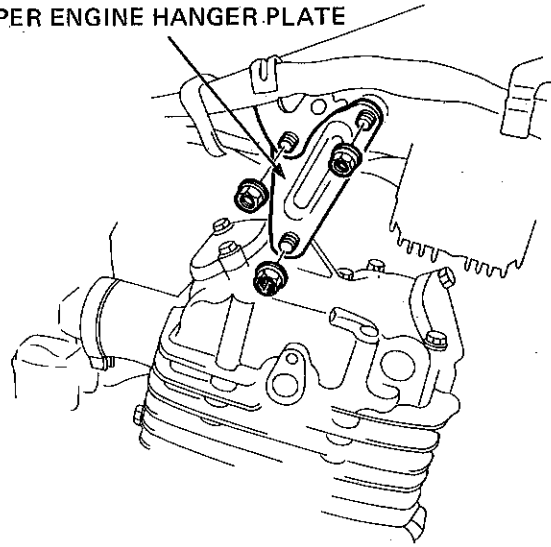
Remove the engine skid plate.



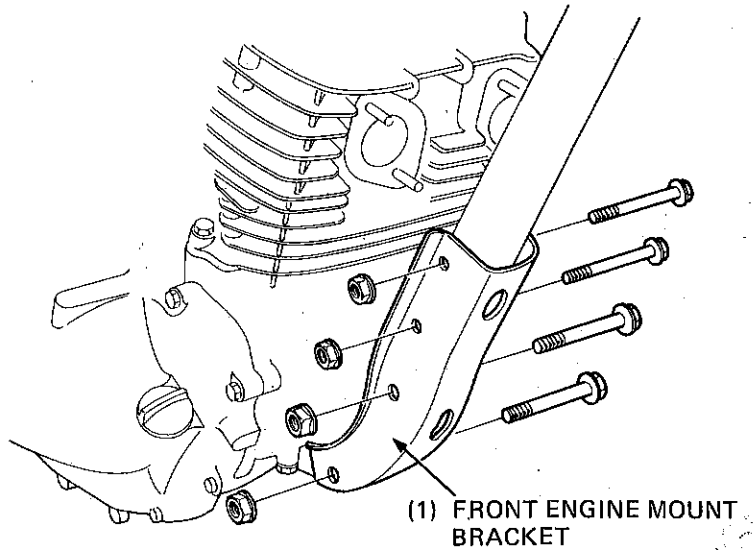


Support the engine by the jack.  
Remove the upper engine hanger plate.

(1) UPPER ENGINE HANGER PLATE



Remove the front engine mount bracket.

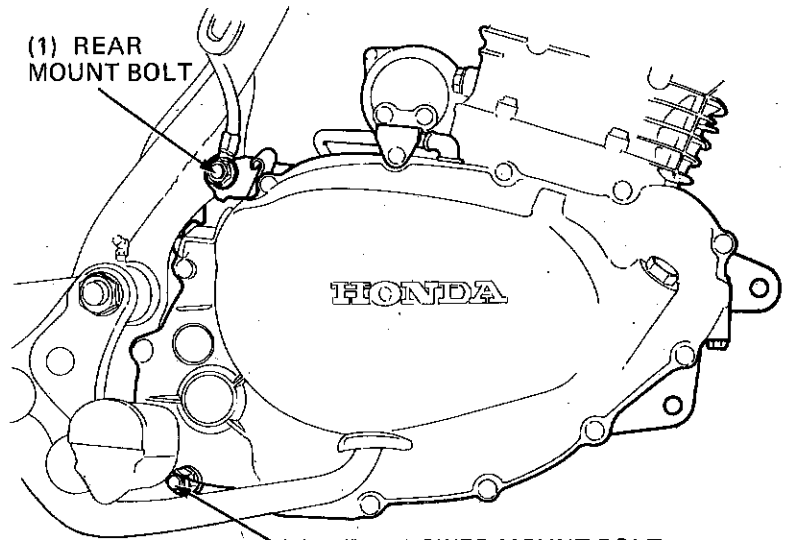


Remove the rear lower mount bolt, rear mount bolt.  
Remove the engine.

**NOTE**

Remove the engine exercising care to avoid damaging the bolt threads, wire harness and frame.

(1) REAR MOUNT BOLT



(2) REAR LOWER MOUNT BOLT



## ENGINE INSTALLATION (CL250S)

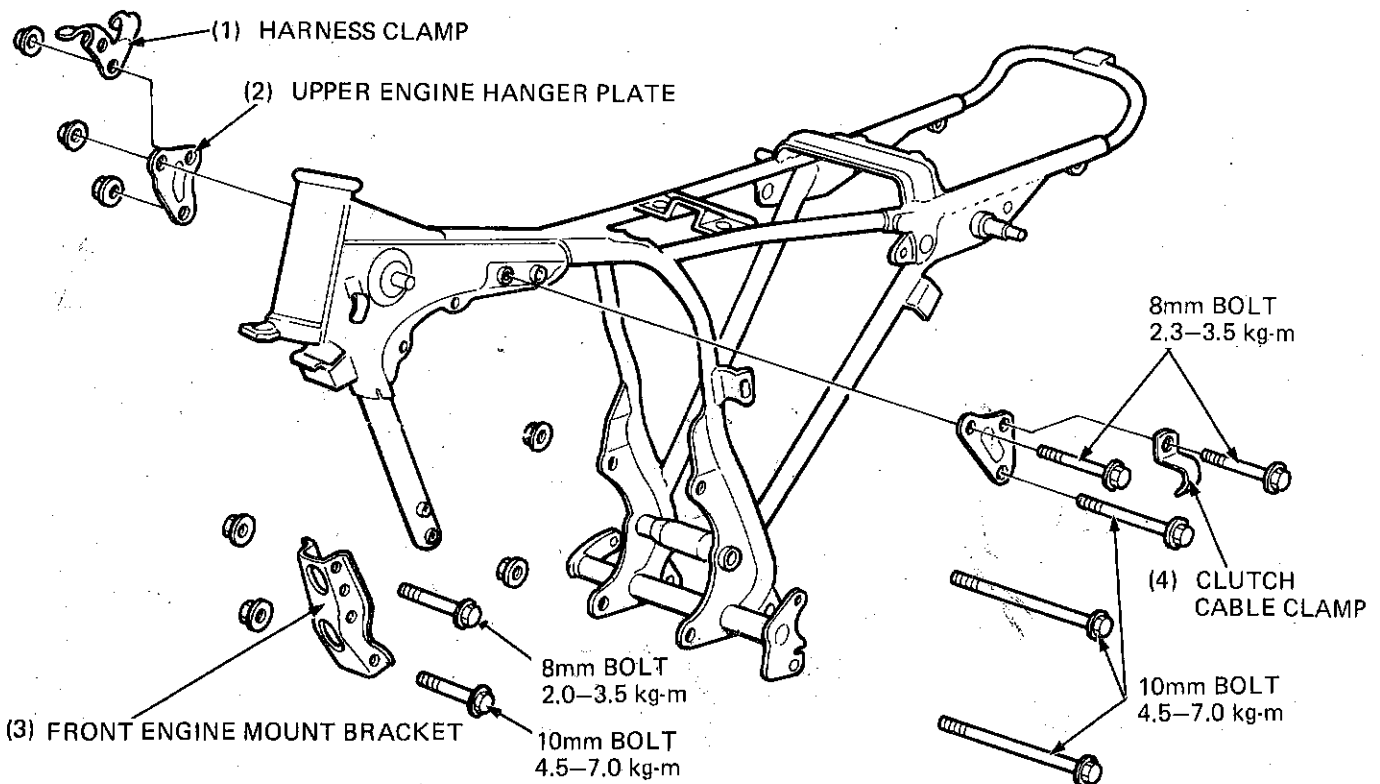
The installation sequence is essentially the reverse of removal.

### NOTE

- Install the engine hanger bolts as shown in the illustration.
- After temporarily tightening the bolts, torque them.
- Route all wire harnesses and cables properly (Page 21-14)
- Be sure the exhaust pipe gaskets are not damaged or leaking.

Perform the following inspections and adjustments:

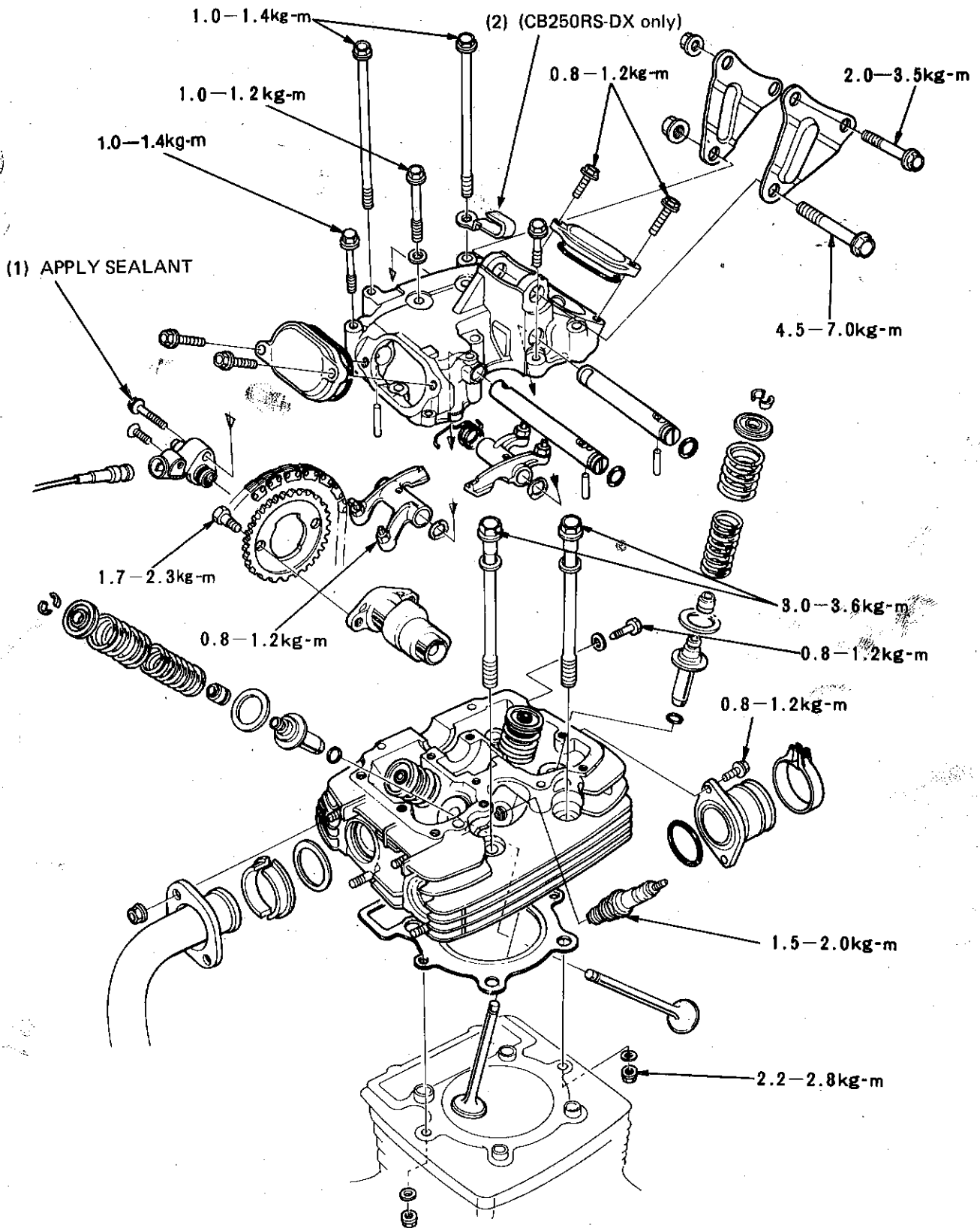
- Engine oil
- Throttle grip free play
- Clutch lever free play (Page 21-20)
- Rear brake pedal free play
- Drive chain (Page 21-21)
- Check all electrical equipment.
- Super low cable (Page 21-42)





**HONDA**  
CB250RS-DX  
CL250S

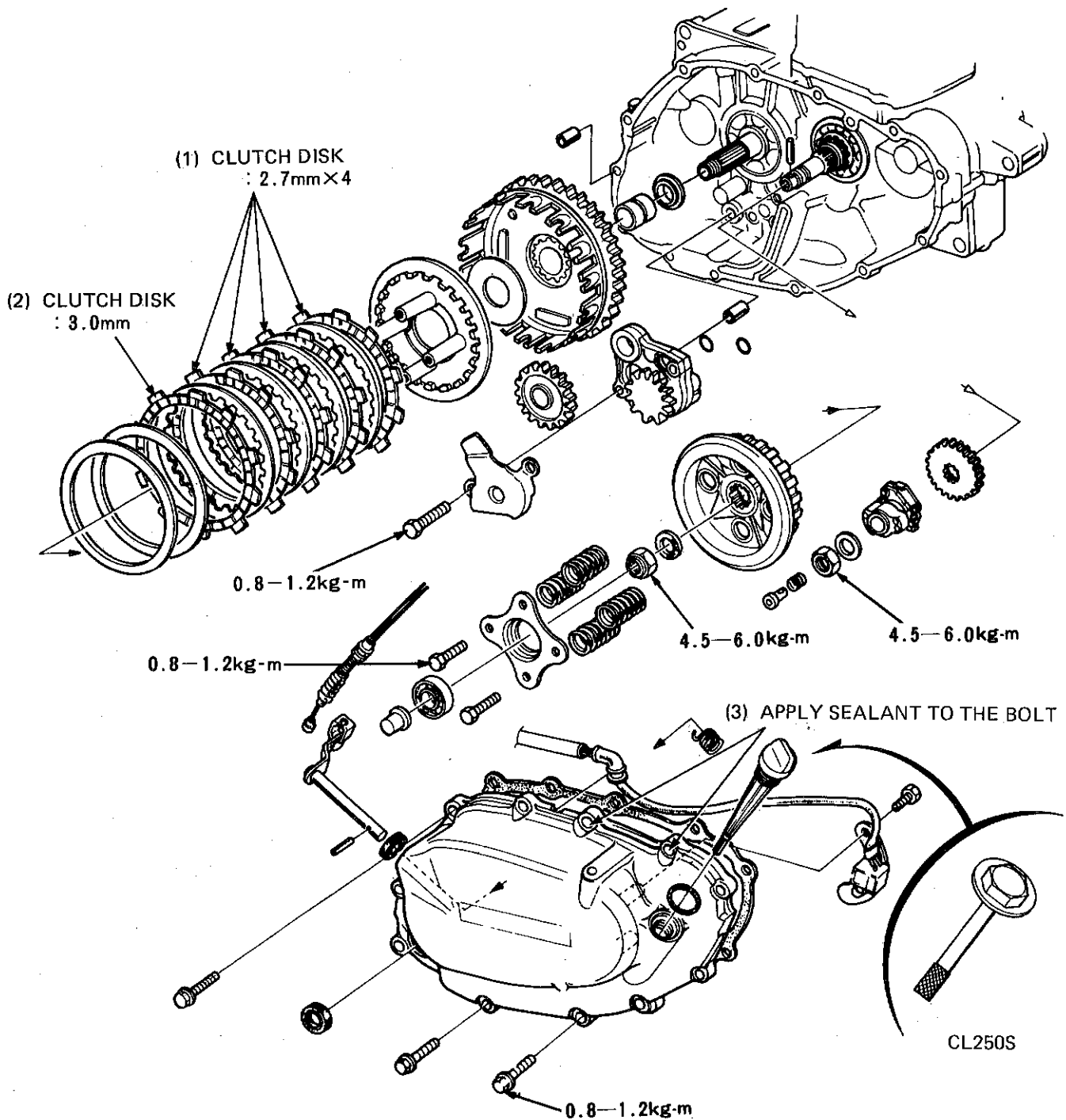
# CYLINDER HEAD/ VALVES 6.



# 7. CLUTCH/OIL PUMP



**HONDA**  
CB250RS-DX  
CL250S





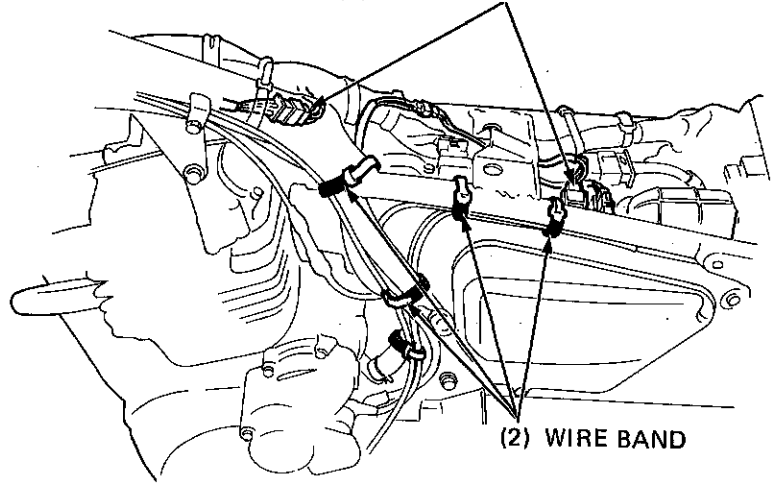
**HONDA**  
**CB250RS-DX**  
**CL250S**

# A.C. GENERATOR 8.

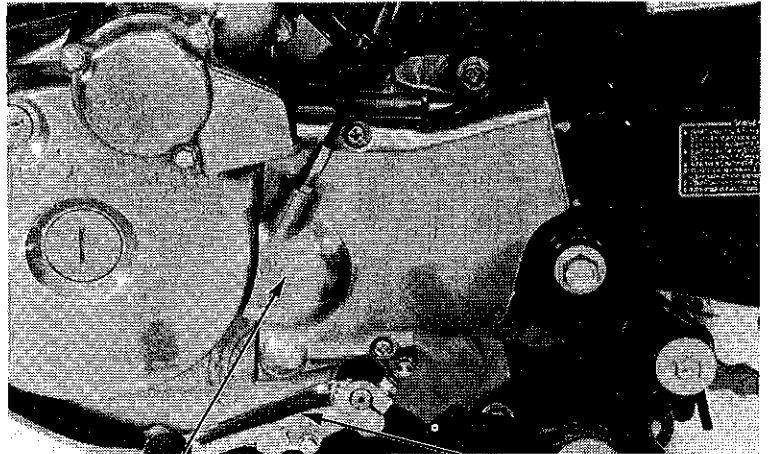
## LEFT CRANKCASE COVER REMOVAL

Remove the seat and fuel tank, and Side cover.  
 Remove the wire bands.  
 Disconnect the A.C. generator wire couplers.  
 Drain oil from the engine.

(1) AC GENERATOR COUPLER



Remove the change pedal (CL250S).  
 Remove the gearshift arm (CB250RS-DX) and remove the drive sprocket cover.



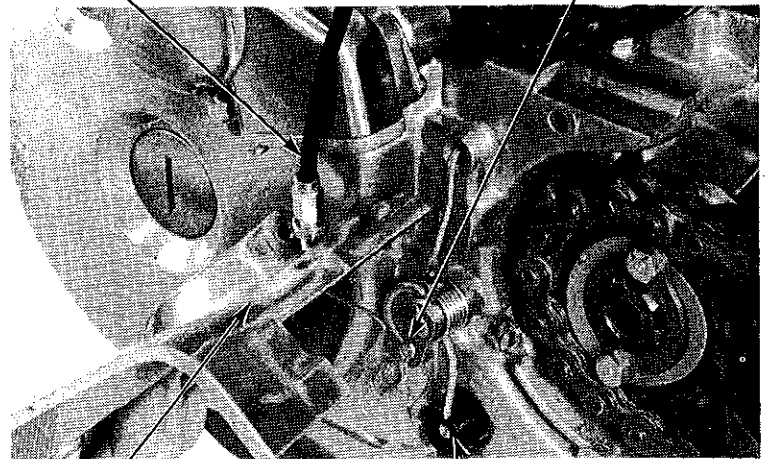
(1) L. CRANKCASE REAR COVER

(2) CHANGE PEDAL

Disconnect the super-low cable and disconnect the cable from the sprocket cover. (CL250S)  
 Remove the engine skid plate.

(1) SUPER LOW CABLE

(2) CABLE END

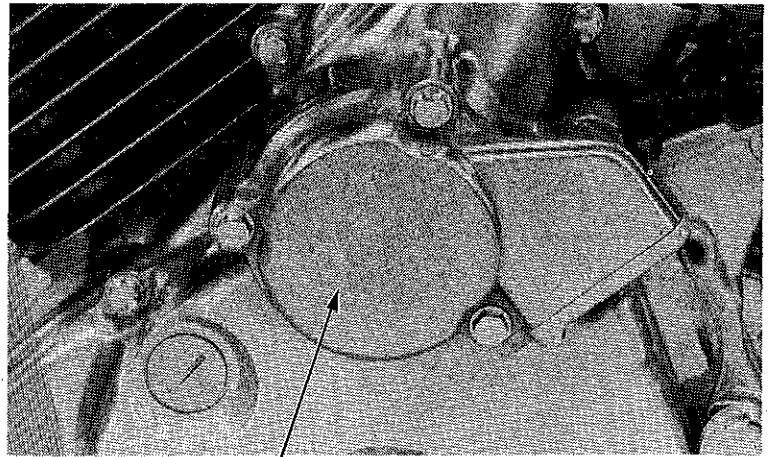


(3) L. CRANK CASE REAR COVER

(4) NEUTRAL SWITCH COLLOR



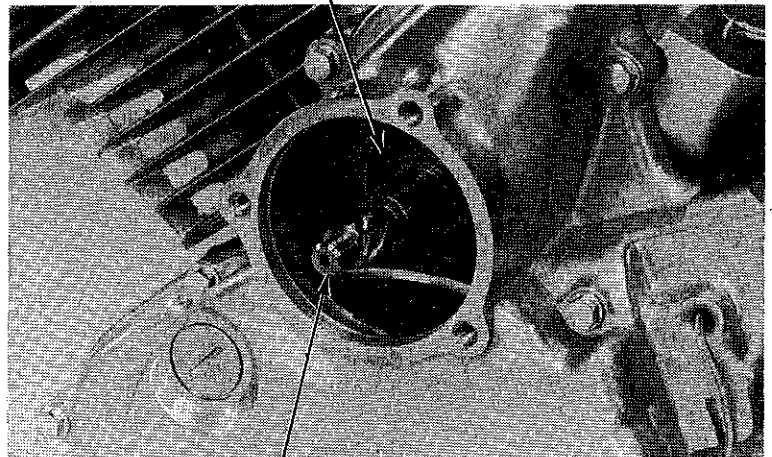
Remove the starter cover, starter pinion and return spring.



(1) STARTER COVER

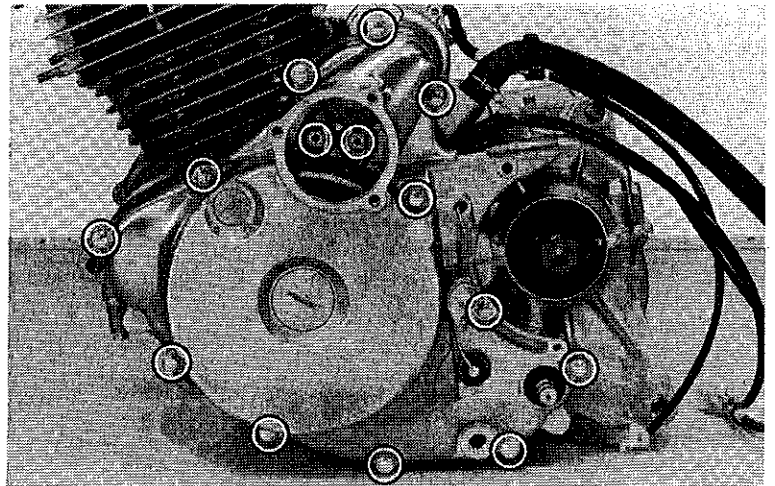
Remove the starter drive shaft and remove the starter drive gear.

(1) STARTER DRIVE GEAR



(2) STARTER DRIVE SHAFT

Remove the left crank-case cover.

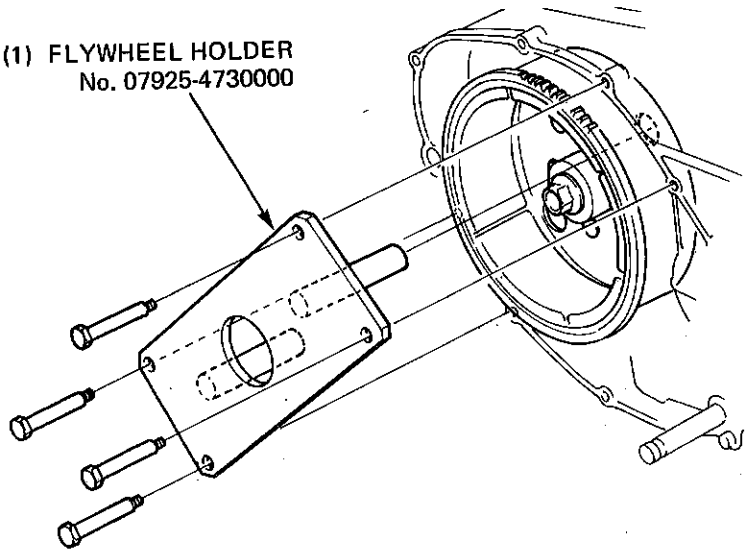




## A.C. GENERATOR ROTOR REMOVAL

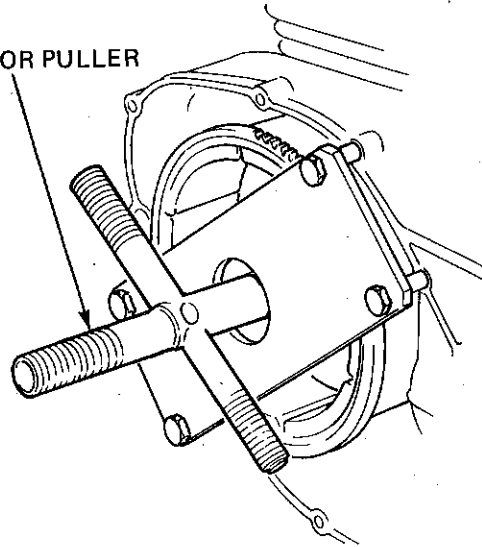
Install the wheel-holder to the flywheel.  
Remove the rotor bolt.

(1) FLYWHEEL HOLDER  
No. 07925-4730000



Remove the A.C. generator rotor by using the rotor puller.

(1) ROTOR PULLER



## A.C. GENERATOR ROTOR INSTALLATION

Install the rotor.

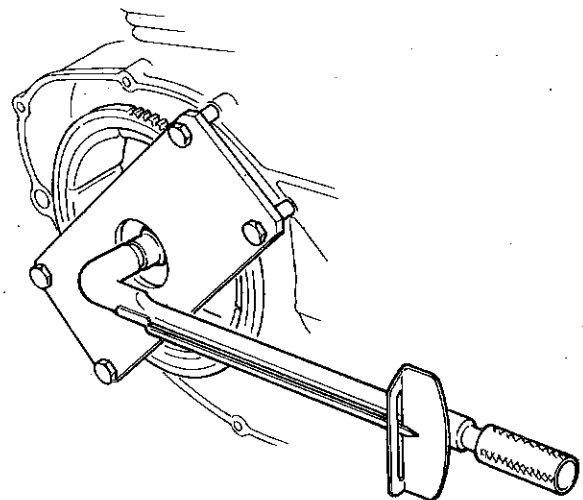
### NOTE

Align the keyway in the rotor with the woodruff key in the crankshaft.

Install the rotor bolt.  
Install the flywheel holder and tighten the bolt

**TORQUE: 10.0–12.0 kg-m**

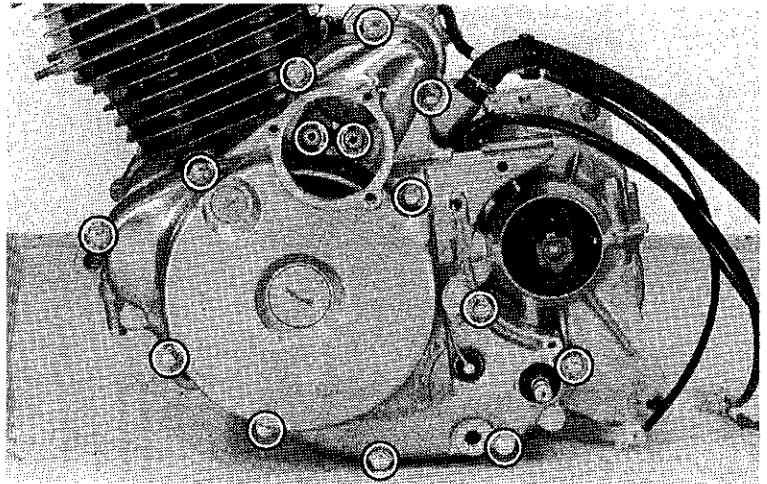
Remove the flywheel holder.





## LEFT CRANKCASE COVER ASSEMBLY

Install the two dowel pins and gasket.  
Install the left crankcase cover.

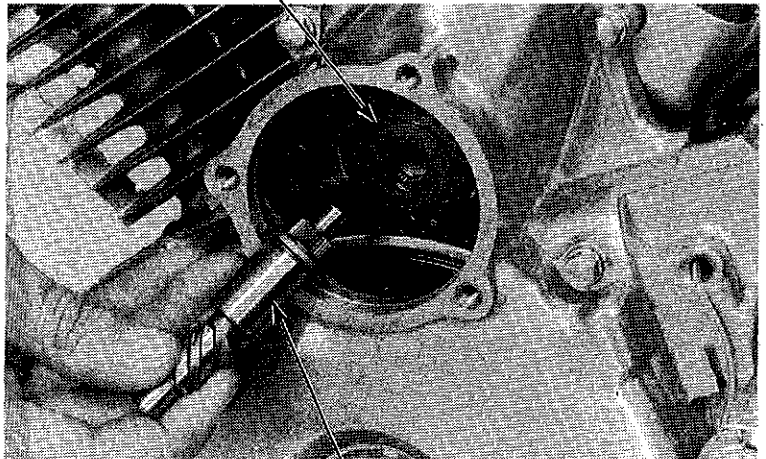


Install the starter drive gear and insert the drive shaft through the gear.

### NOTE

Lubricate the shaft journal and helical splines with molybdenum disulfide grease.

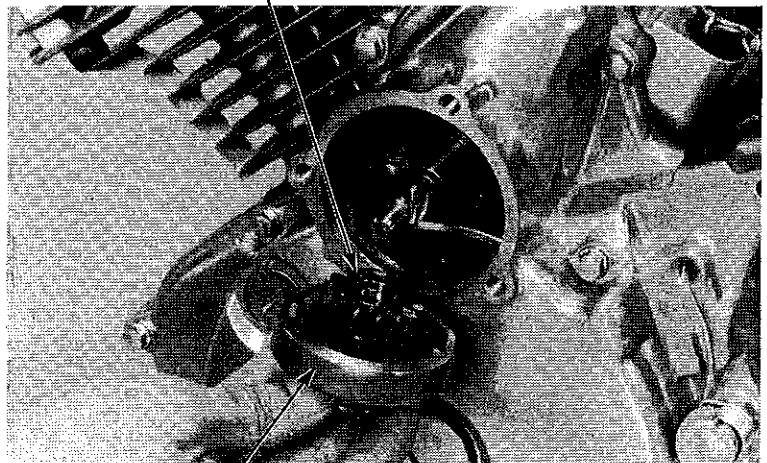
(1) DRIVE GEAR



(2) STARTER DRIVE SHAFT

Install the spring on the starter pinion.  
Press the starter pinion onto the drive shaft.

(1) SPRING



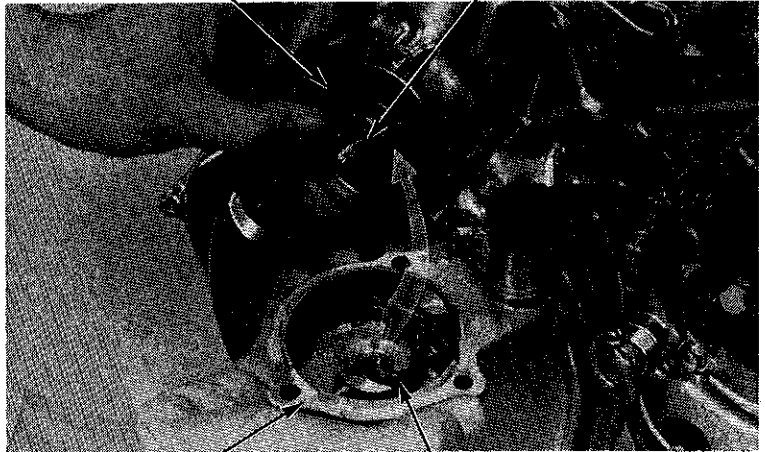
(2) STARTER PINION



**HONDA**  
**CB250RS-DX**  
**CL250S**

With the starter pinion held in by hand, install the starter cover, aligning the pinion shifter with the groove in the pinion.

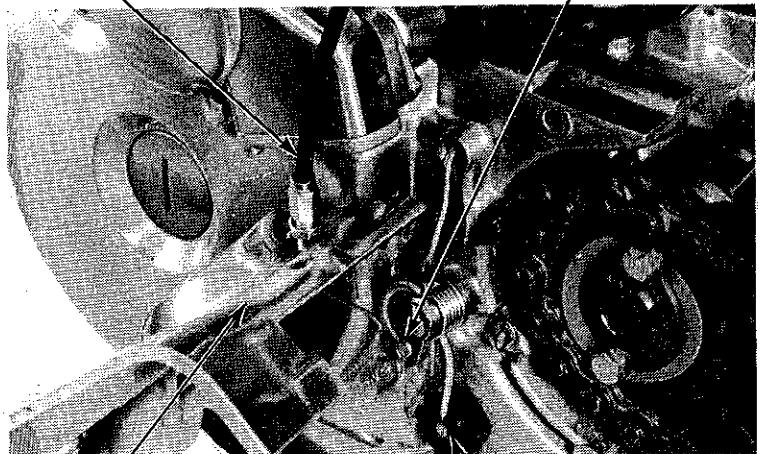
(3) STARTER PINION (4) THRUST WASHER



(1) STARTER COVER (2) PINION SHIFTER

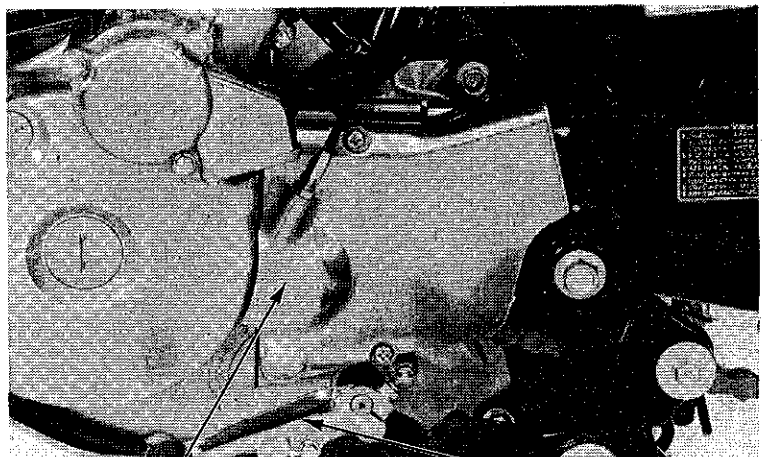
Connect the super low cable to the drive sprocket cover; connect the other end to the arm (CL250S only).  
Install the neutral switch collar.

(1) SUPER LOW CABLE (2) CABLE END



(3) L. CRANK CASE REAR COVER (4) NEUTRAL SWITCH COLLOR

Install the left rear cover.  
Install the gearshift pedal (gearshaft arm for CB 250RS DX).  
Install the skid plate.

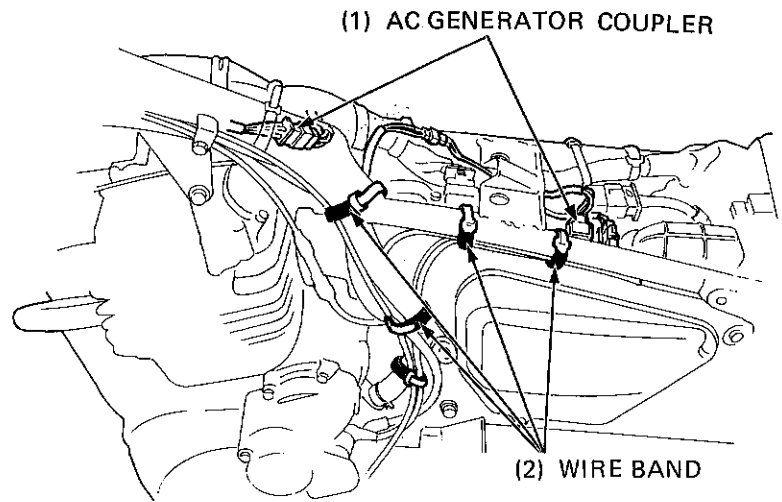


(1) L. CRANKCASE REAR COVER (2) CHANGE PEDAL



**HONDA**  
**CB250RS-DX**  
**CL250S**

Connect the A.C. generator wire coupler, and install the wire bands.  
Install the seat, side covers, the fuel tank.  
Adjust the super low cable.





**HONDA**  
CB250RS-DX  
CL250S

# GEARSHIFT LINKAGE 9.

## GEARSHIFT LINKAGE DISASSEMBLY. (CL250S)

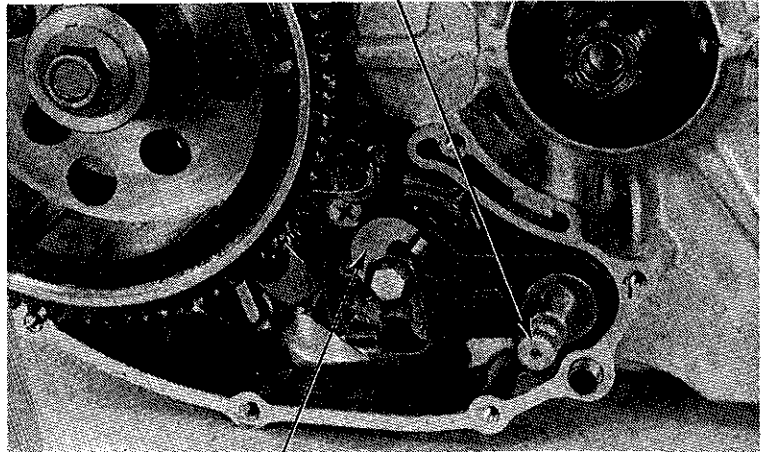
Remove the left crankcase cover.  
Remove the gearshift cam bolt and remove the  
neutral switch rotor.

### NOTE

Avoid distorting the neutral switch rotor.

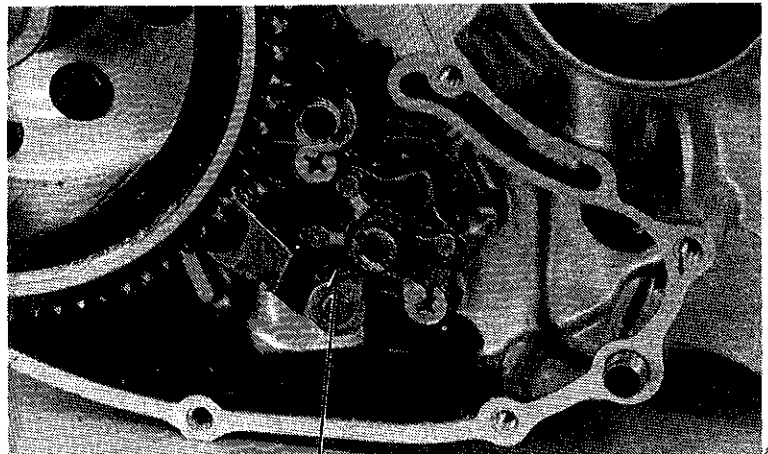
Remove the gearshift spindle.

(2) GEAR SHIFT SPINDLE



(1) NEUTRAL SWITCH ROTOR

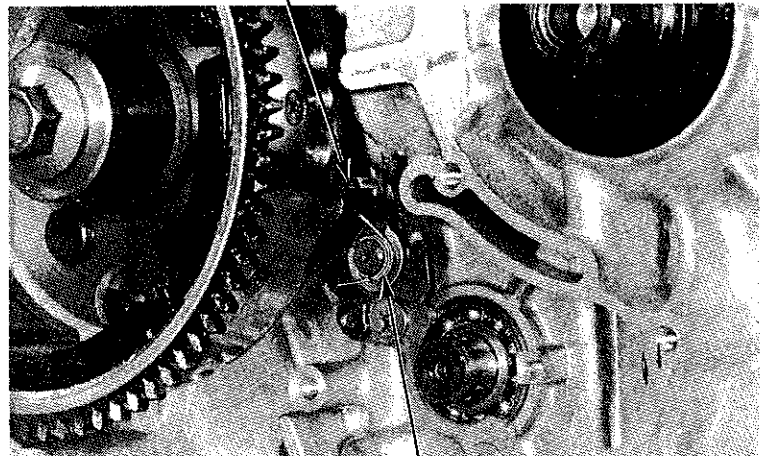
Remove the gearshift cam.



(1) GEAR SHIFT CAM

Remove the stopper arm.  
Remove the drum cam and the dowell pin.  
Remove the E clip, SL stopper and the spring.

(1) SL STOPPER



(2) E CLIP

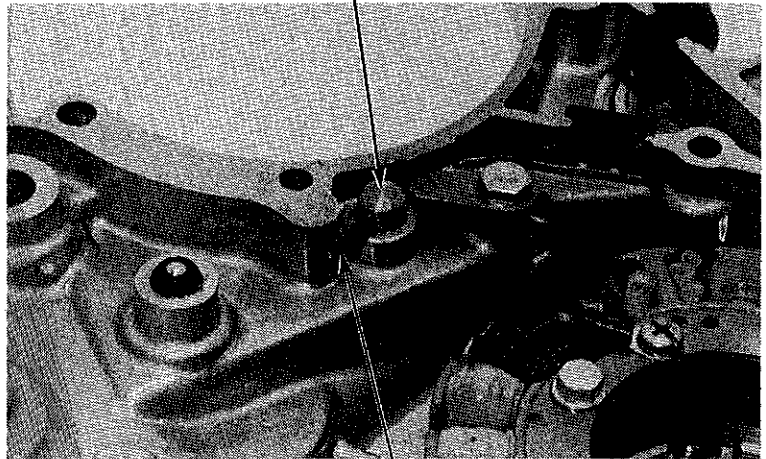


Remove the spring pin from the SL release arm shaft of L crankcase cover.

**NOTE**

Install the spring pin with the ends facing as shown.

(1) RELEASE ARM SHAFT



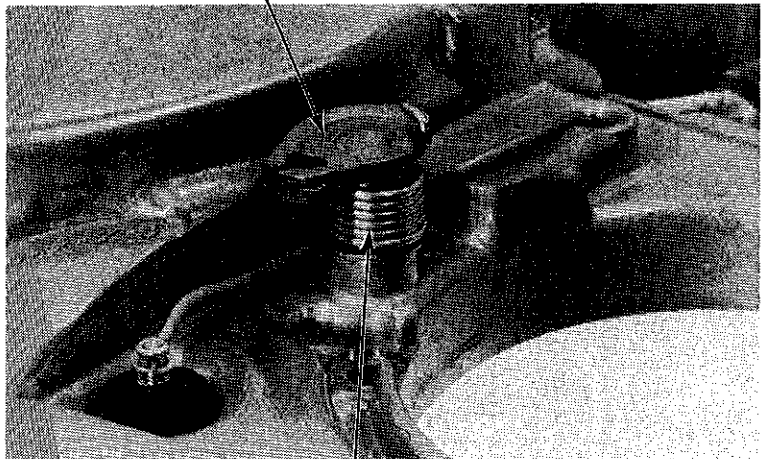
(2) SPRING PIN

Remove the SL release arm and spring.

**NOTE**

Route the neutral switch wire as shown.

(1) SL RELEASE ARM

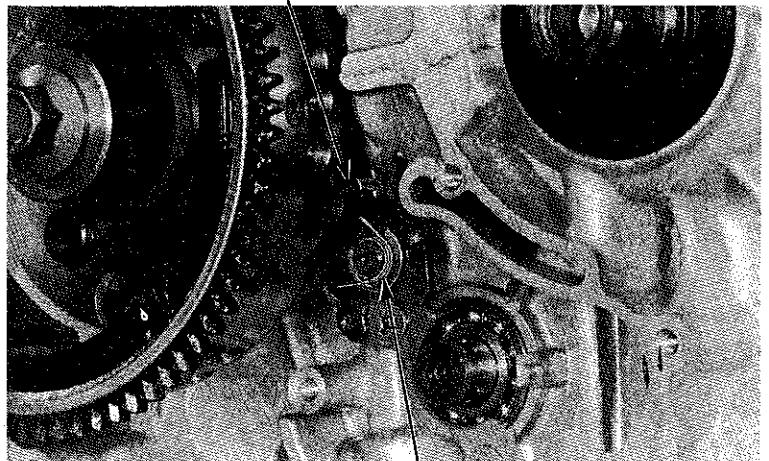


(2) SPRING

**ASSEMBLY (CL250S)**

Secure the SL stopper with the E-clip.  
Install the spring.

(1) SL STOPPER

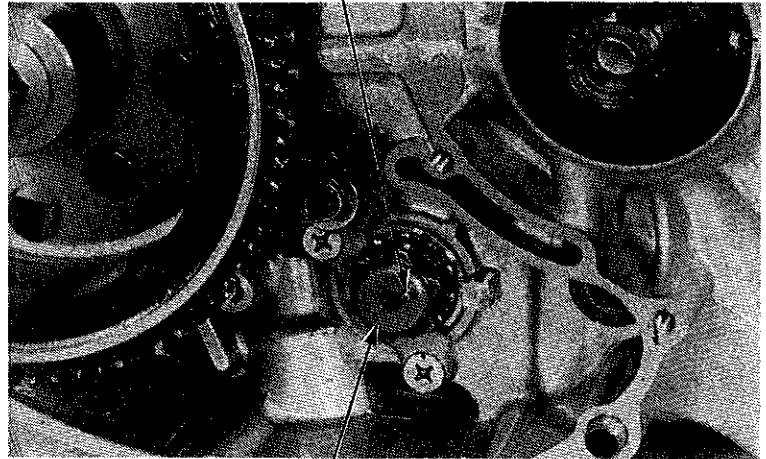


(2) E CLIP



Install the drum cam and dowell pin.

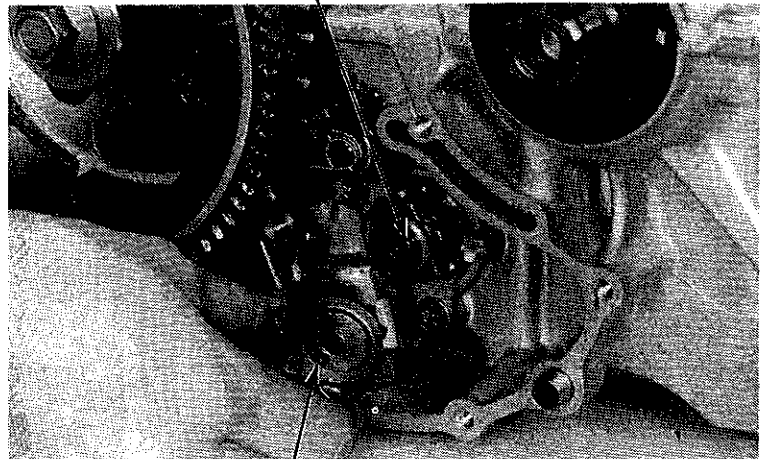
(1) DOWELL PIN



(2) DRUM CAM

Install the gearshift cam aligning with the dowell pin.

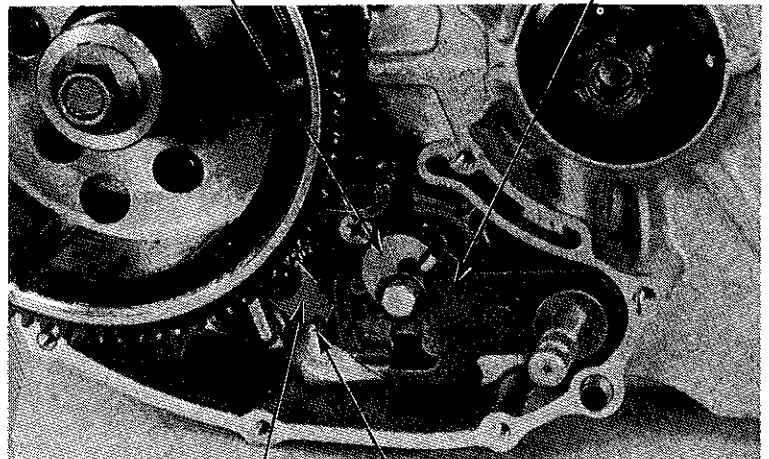
(1) DOWELL PIN



(2) GEAR SHIFT CAM

Install the stopper arm and spring.  
Install the gearshift spindle.  
Install the neutral switch rotor aligning with the gearshift cam groove and secure with the attaching bolt.  
Install the left crankcase cover

(1) NEUTRAL SWITCH ROTOR (2) GEAR SHIFT SPINDLE

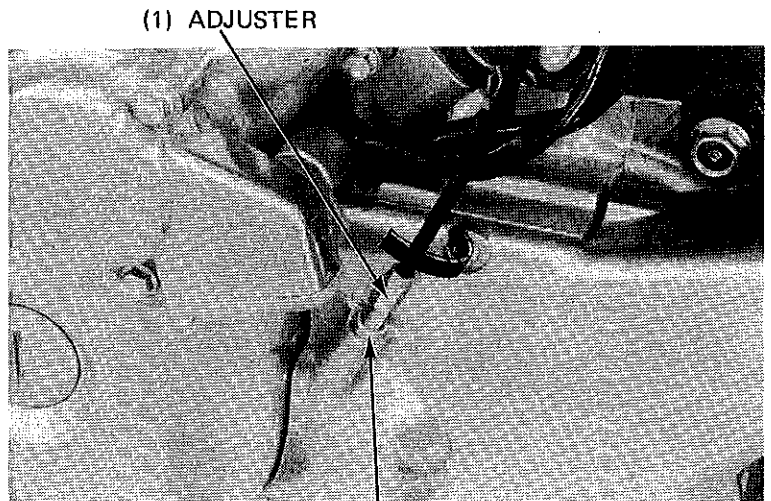


(3) STOPPER ARM (4) SPRING



## **SUPER LOW CABLE ADJUSTMENT (CL250S)**

Loosen the lock nut.  
Turn the adjuster until there is no play in the  
SL lever.  
Tighten the lock nut.



(2) LOCK NUT



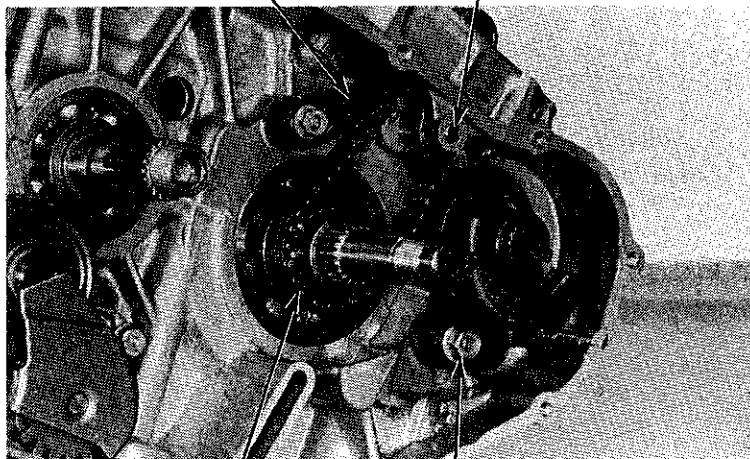
# CRANKCASE 10.

## DISASSEMBLY (CL250S)

Remove the following parts before separating the crankcase.

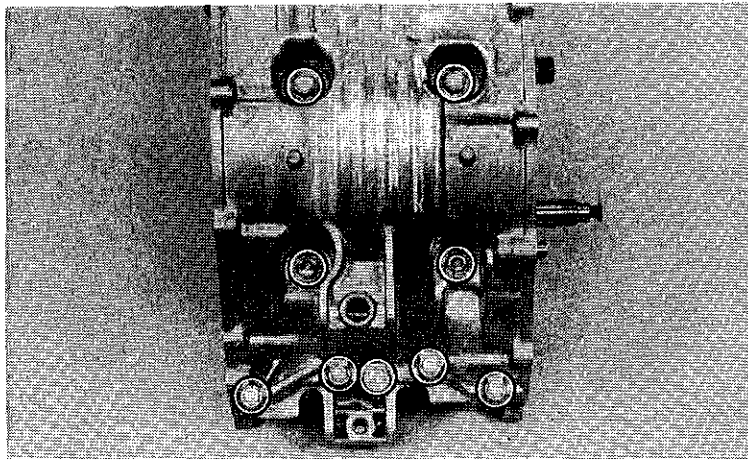
- ENGINE REMOVAL
- CYLINDER HEAD
- CYLINDER/PISTON
- CLUTCH/OIL PUMP
- A.C. GENERATOR
- STARTING MOTOR
- OIL PIPE

(1) CAM CHAIN TENSIONER (2) OIL PIPE

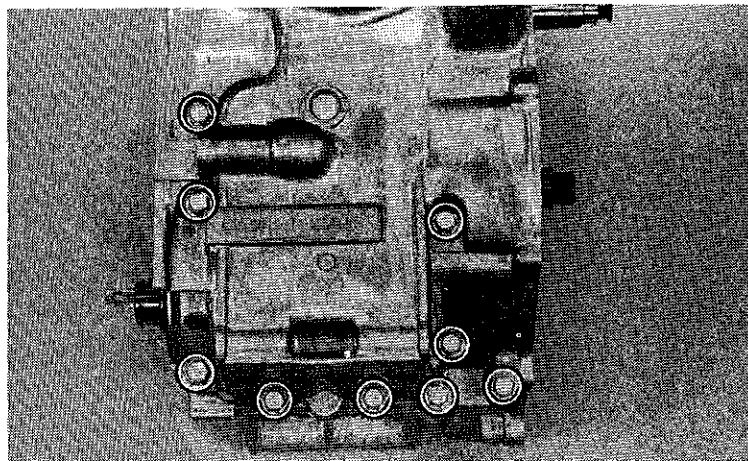


(3) CAM CHAIN (4) LOCK BOLT

Replace the engine upside down and remove the case attaching bolts as shown.



Remove the case attaching bolts from the opposite side.  
Separate the right and left case halves.





## ASSEMBLY (CL250S)

### Assembly (CL250S)

Clean the crankcase mating surfaces thoroughly.

Apply liquid packing to the mating surfaces.

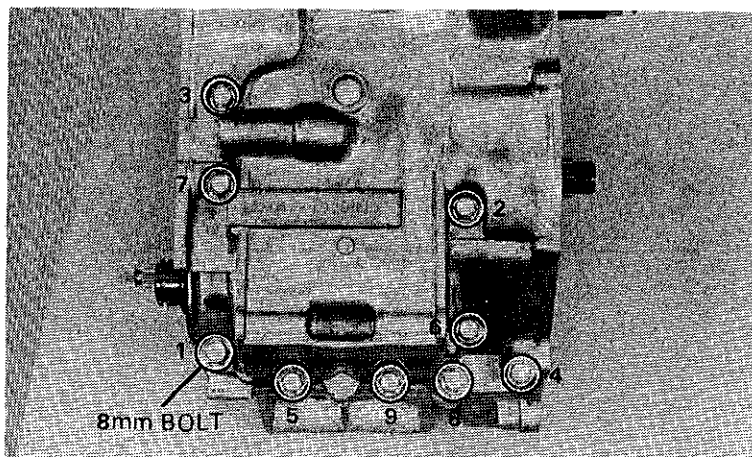
Install the two dowel pins.

Adjust the balancer timing (Page 21-47)

Install the upper crankcase on the lower crankcase.

Install the crankcase attaching bolts and tighten to the specified torque.

**TORQUE:** 6 mm bolt 1.0–1.4 kg-m  
(7–10 ft-lb)  
8 mm bolt 2.0–2.6 kg-m  
(16–20 ft-lb)

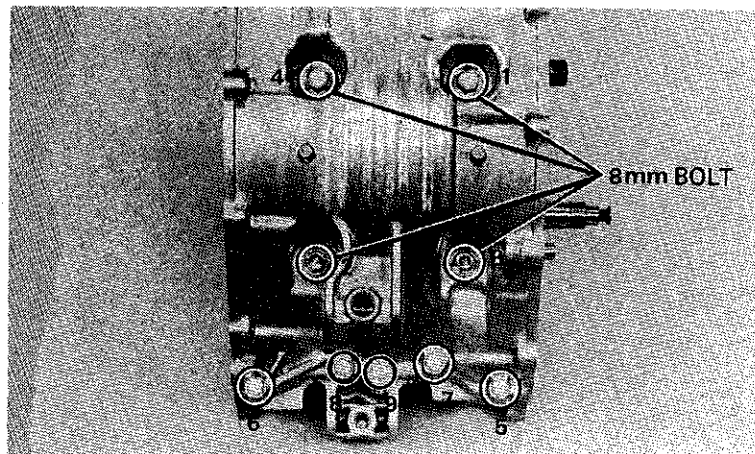


### NOTE

Tighten the bolts in 2–3 steps and in the sequence shown.

Replace the crankcase upside down and tighten the bolts shown.

**TORQUES:** 6 mm bolt 1.0–1.4 kg-m  
(7–10 ft-lb)  
8 mm bolt 2.2–2.8 kg-m  
(16–20 ft-lb)



### NOTE

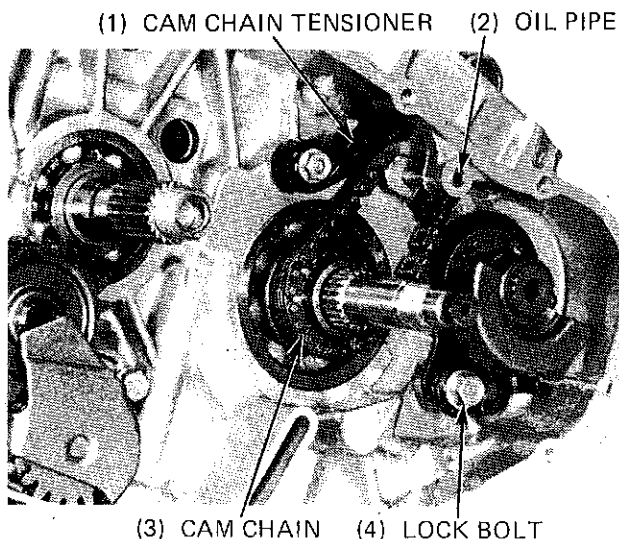
Tighten the bolts in 2–3 steps and in the sequence shown.

Install the cam chain.  
Install the oil pipe.

### NOTE

Check that the oil pipe is open.

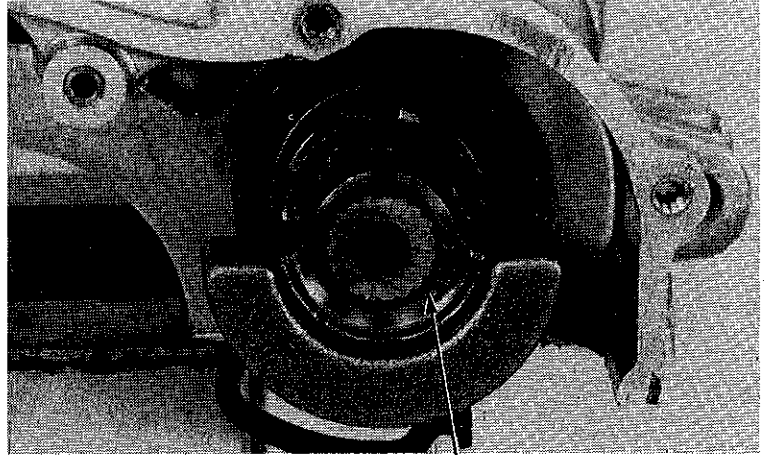
Install the cam chain tensioner.  
Install the balancer holder lock bolt.





## BALANCER REMOVAL (CL250S)

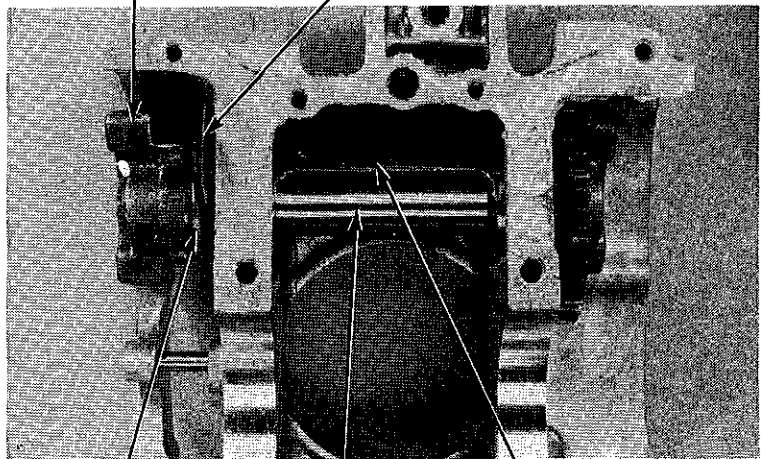
Separate the crankcase.  
 Remove the snap ring.



(1) SNAP RING

Remove the balancerweight, balancer shaft and the balancershaft holder.  
 Remove the snap ring and remove the balancer holder flange.

(1) BALANCER WEIGHT (2) HOLDER FLANGE



(3) SNAP RING (4) BALANCER SHAFT  
 (5) BALANCER SHAFT HOLDER

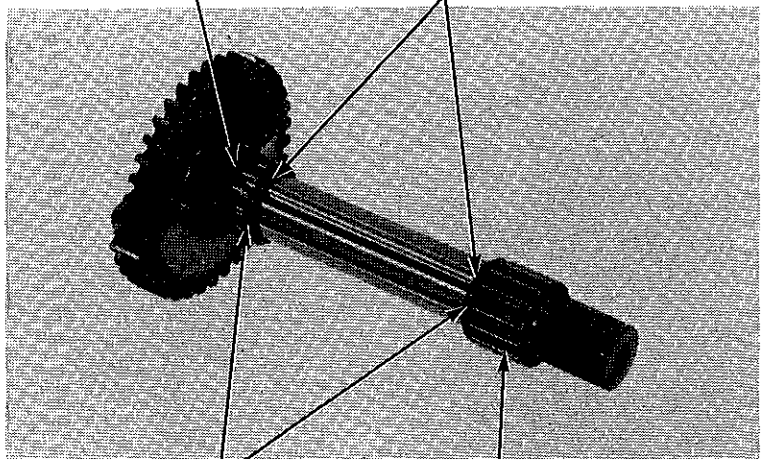
## BALANCER INSTALLATION (CL250S)

Install the thrust washer, needle bearing and the snap ring to the balancer shaft.

**NOTE**

Install the circlip with the wide end facing outward.

(1) NEEDLE BEARING (20x26x17) (2) SNAP RING



(3) THRUST WASHER (4) NEEDLE BEARING (20x26x20)

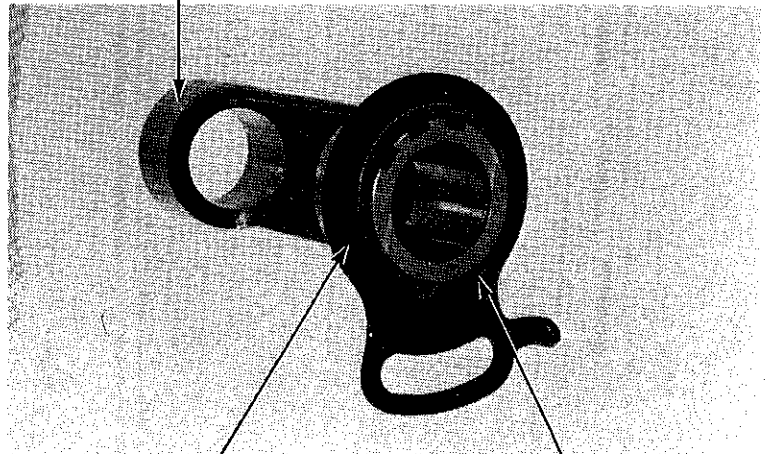


Install the balancer holder flange, snap-ring to the balancer shaft holder.

**NOTE**

Install the circlip with the wide end facing outward.

(1) BALANCER SHAFT HOLDER

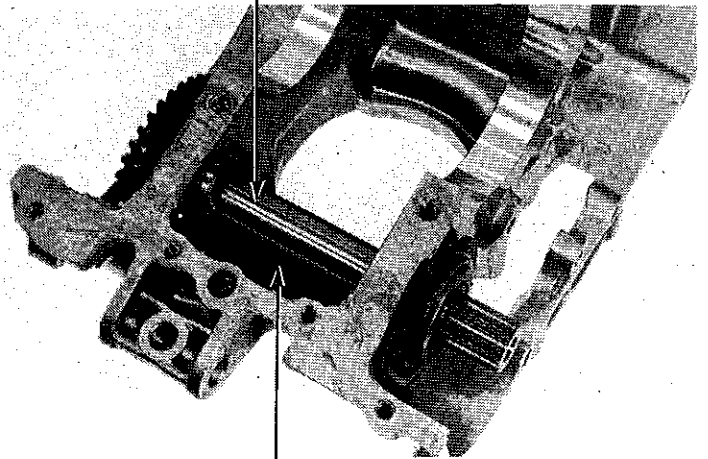


(2) BALANCER HOLDER FLANGE

(3) SNAP RING

Install the balancer shaft holder to the upper crankcase.  
Install the balancer shaft.

(1) BALANCER SHAFT



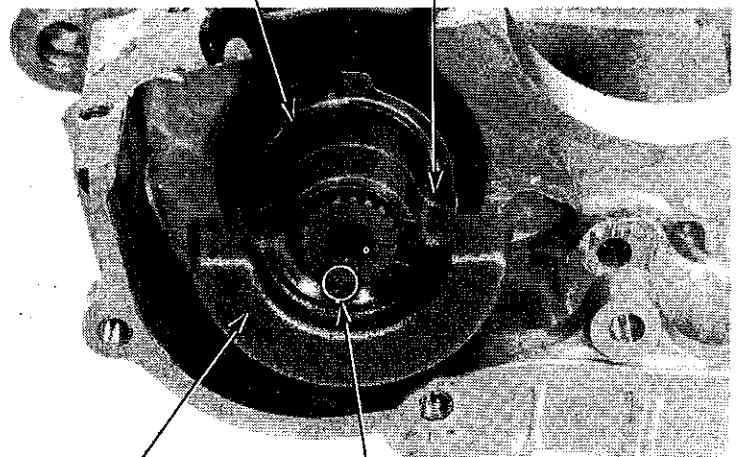
(2) BALANCER SHAFT HOLDER

Install the washer and balancer weight aligning the punch mark on the weight with the punch mark on the shaft.  
Install the snap ring.

**NOTE**

Install the circlip with the wide end facing outward.

(1) WASHER (2) SNAP RING



(3) BALANCER WEIGHT

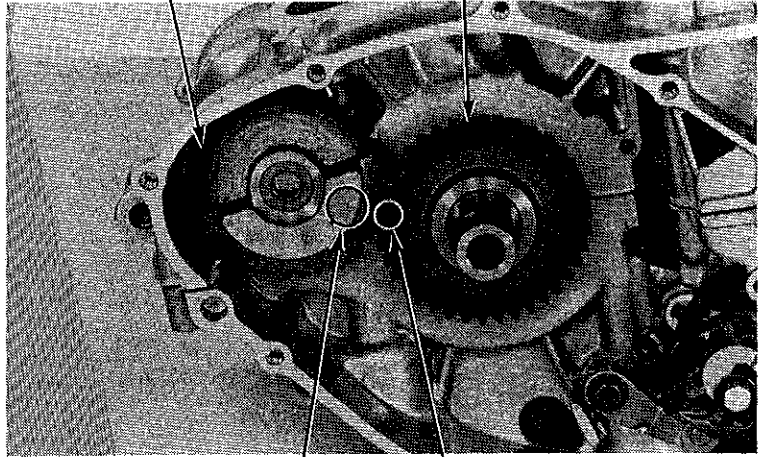
(4) PUNCH MARK



**HONDA**  
**CB250RS-DX**  
**CL250S**

Lower the upper crankcase onto the lower crankcase aligning the aligning mark on the balancer gear with the punch mark on the crankshaft gear.

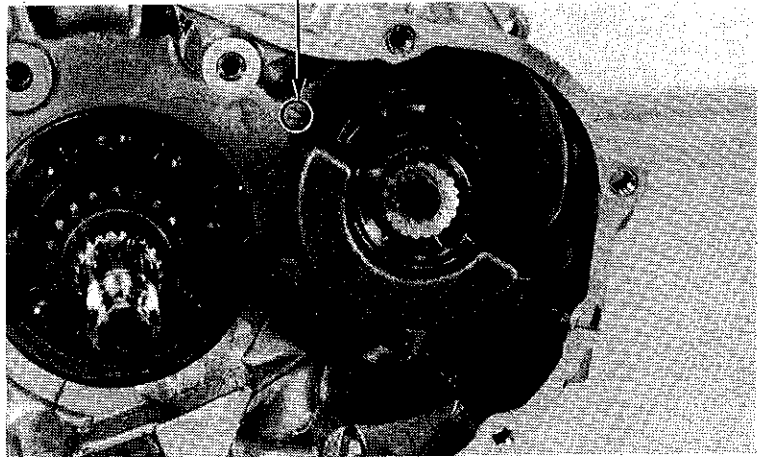
(1) BALANCER GEAR (2) CRANKSHAFT GEAR



(3) ALIGN MARK (4) PUNCH MARK

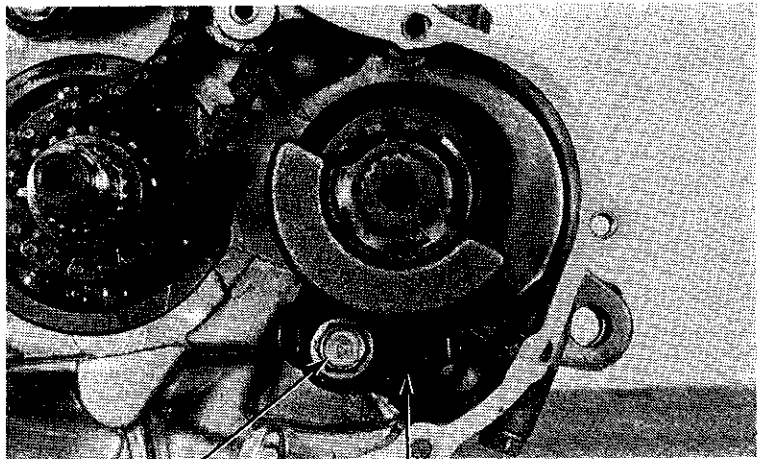
Bring the crankshaft in TDC. Make sure that the edge of the balancer aligns with the index mark on the crankcase as shown. Tighten the crankcase halves together (Page 21-44).

(1) ALIGN MARK



**BALANCER GEAR BACKLASH ADJUSTMENT**

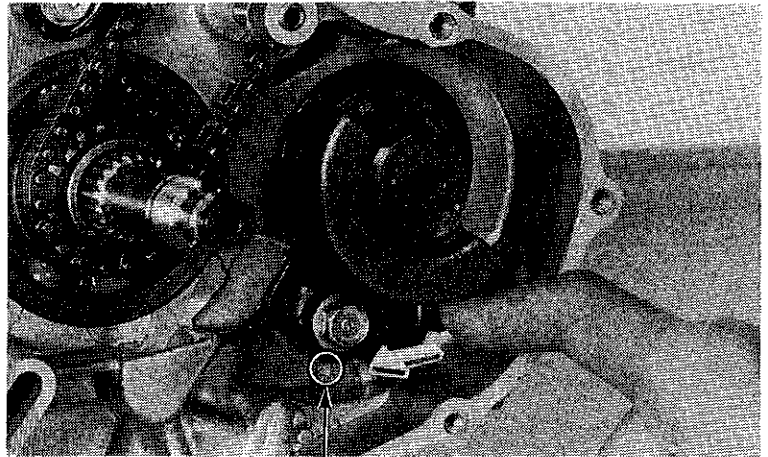
Loosen the balancer holder lock bolt.



(1) LOCK BOLT (2) BALANCER HOLDER FLANGE



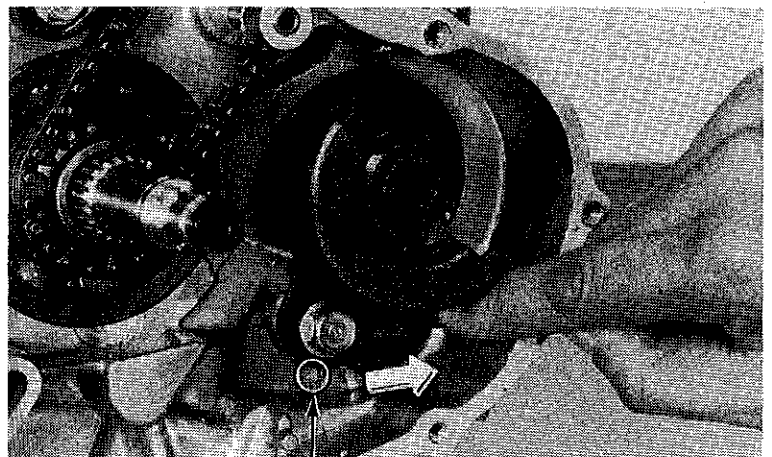
Rotate the balancer holder flange counter-clockwise by hand until the balancer gear is in light contact with the crankshaft gear.



(1) ALIGN MARK

Turn the balancer holder flange back 1.5–2 graduations on the crankcase, and tighten the lock nut.

**TORQUE: 2.0–2.6 kg-m (14–19 ft-lb)**



(1) ALIGN MARK

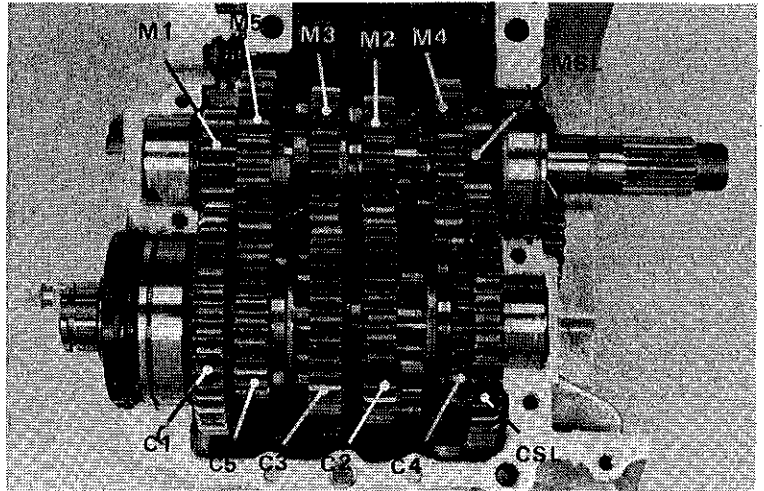


**HONDA**  
CB250RS-DX  
CL250S

# TRANSMISSION 12.

## DISASSEMBLY (CL250S)

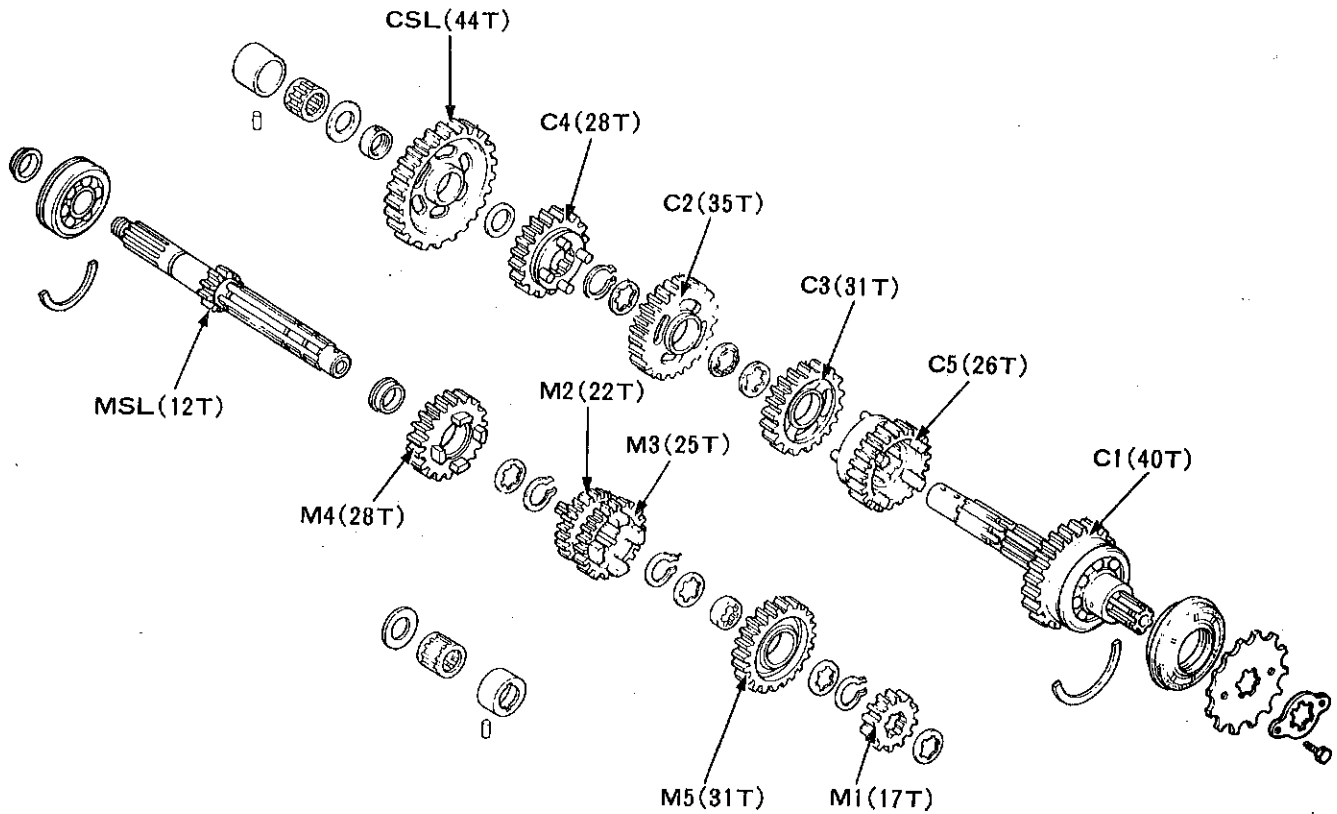
- Remove the gearshift linkage.
- Remove the clutch and flywheel.
- Remove the upper crankcase, mainshaft and countershaft.
- Disassemble the mainshaft and countershaft.



## TRANSMISSION ASSEMBLY (CL250S)

### NOTE

Coat each gear with engine oil before assembling.

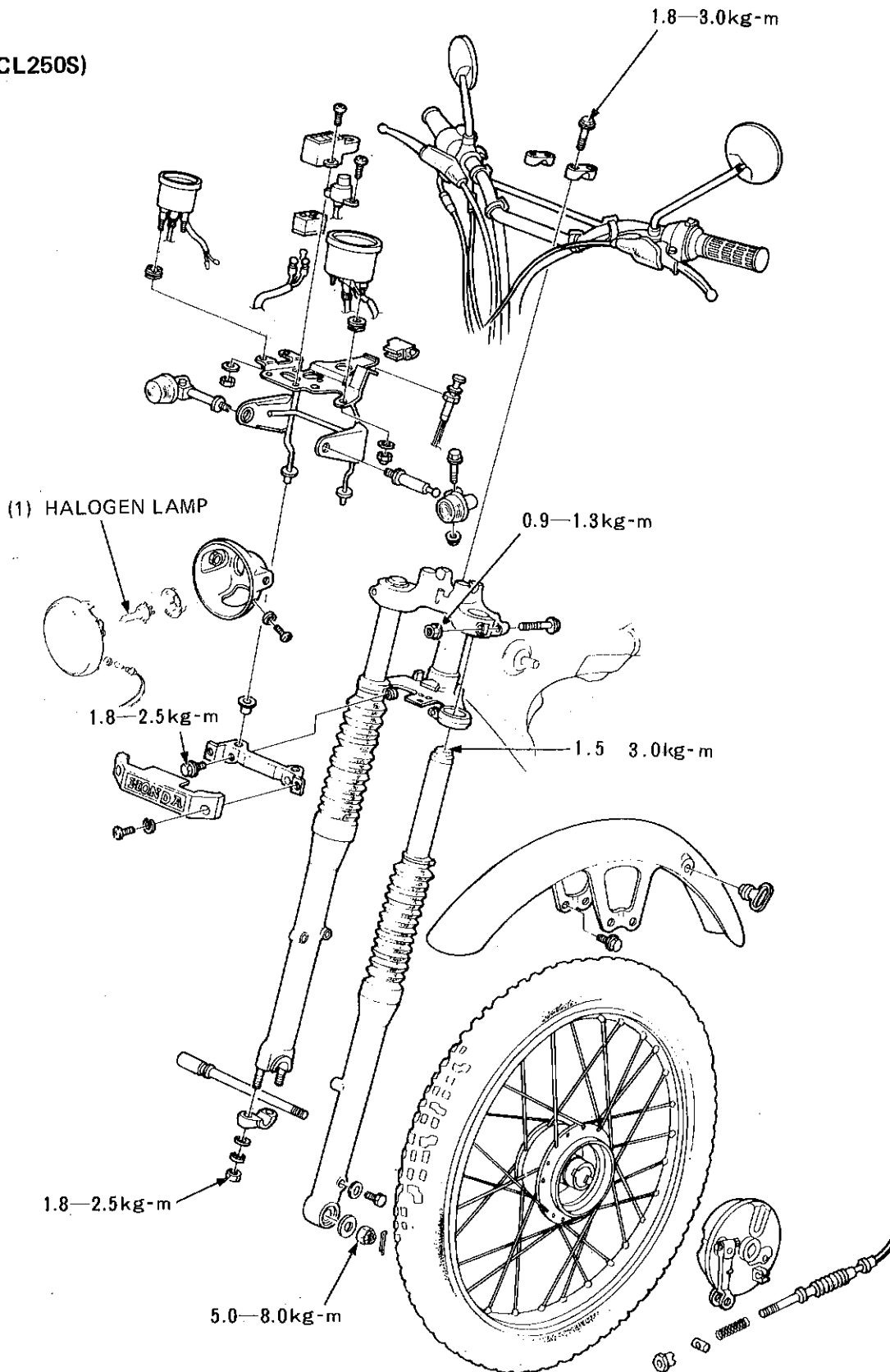


# 13. FRONT WHEEL/ STEERING/SUSPENSION



**HONDA**  
CB250RS-DX  
CL250S

(CL250S)

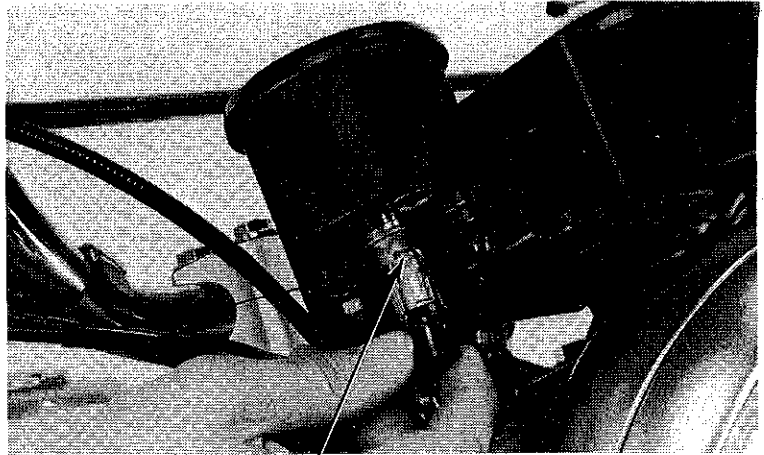




## INSTRUMENTS (CL250S)

### METER ILLUMINATION BULB REPLACEMENT

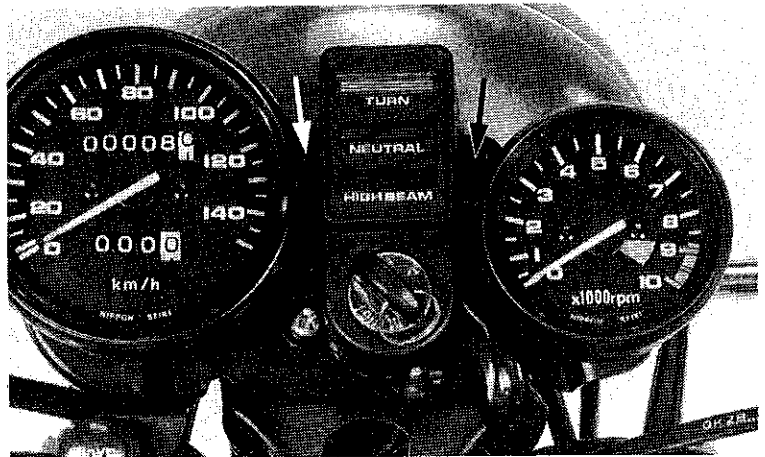
Remove the bulb socket from the meter, and replace the bulb.



(1) BULB

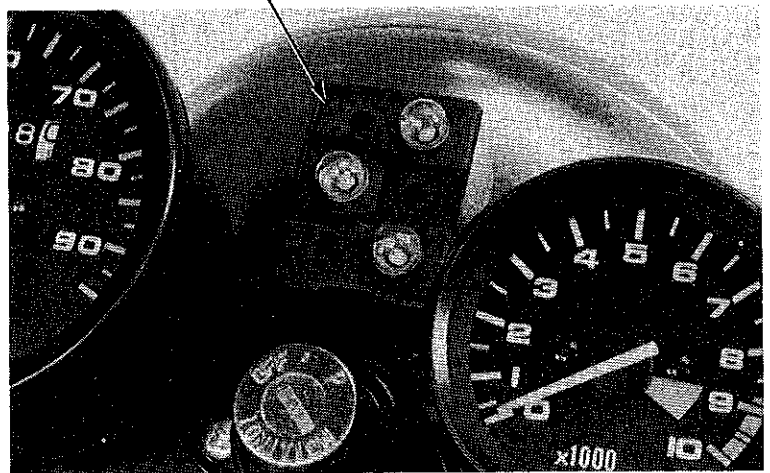
### INDICATOR BULB REPLACEMENT

Remove the indicator.



Remove the bulb holder.  
Remove the bulb from the socket, and replace.

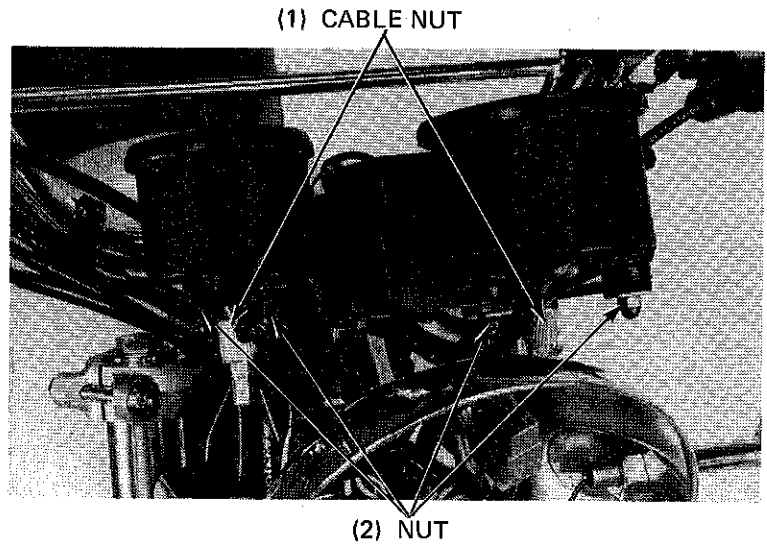
(1) BULB HOLDER





### ● CLUSTER REMOVAL

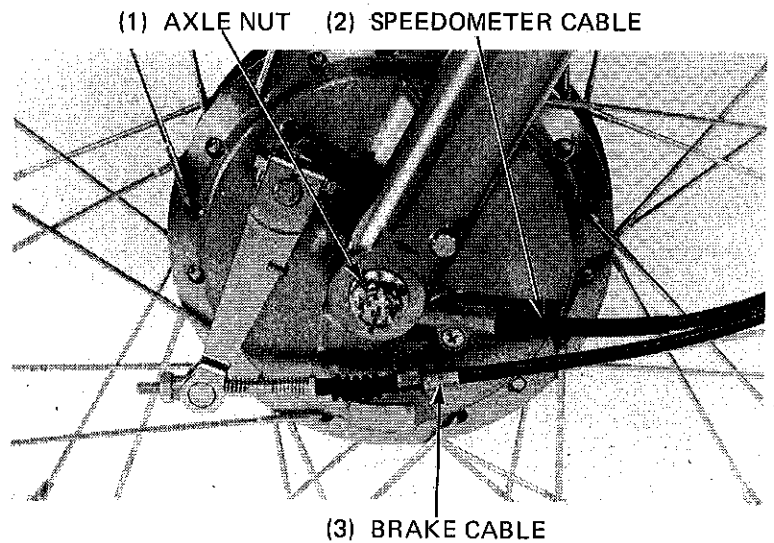
Remove the headlight.  
Disconnect the wires at the couplers and connectors.  
Disconnect the speedometer and tachometer cables.



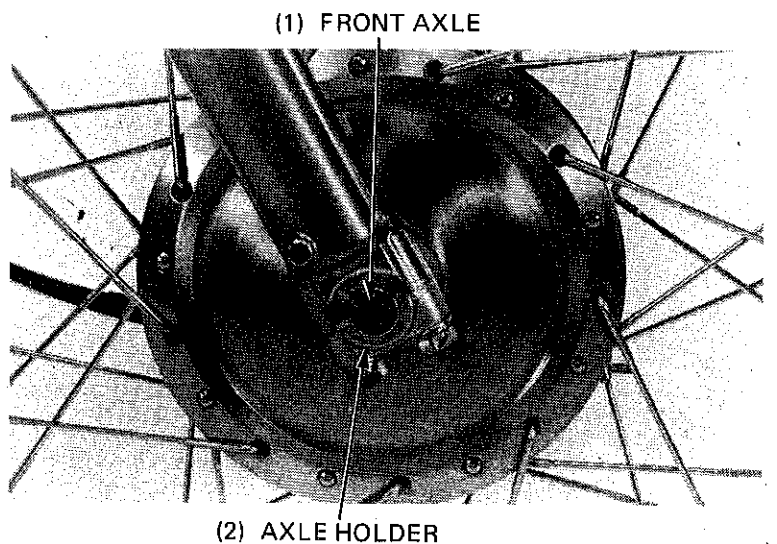
### FRONT WHEEL (CL250S)

#### ● FRONT WHEEL REMOVAL

Disconnect the speedometer from the speedometer gearbox.  
Disconnect the front brake cable from the brake arm; remove the cable from the cable holder on the brake panel.  
Remove the cotter pin and axle nut.



Remove the front axle holder.  
With the front wheel raised off the ground, remove the front axle.  
Remove the front wheel.





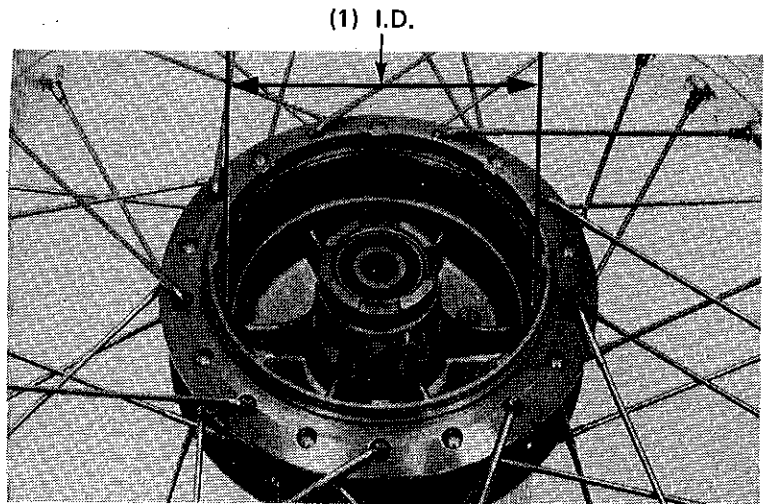
**HONDA**  
**CB250RS-DX**  
**CL250S**

## FRONT BRAKE (CL250S)

### BRAKE DRUM INSPECTION

Remove the brake drum from the front wheel.  
Inspect the brake drum I.D.

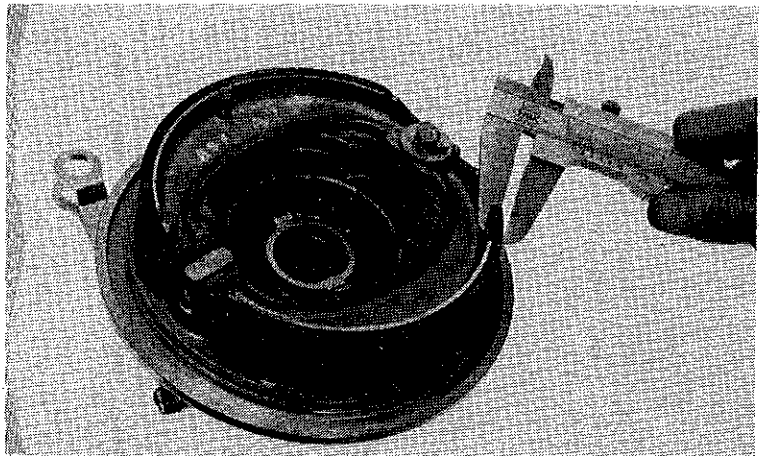
**SERVICE LIMIT: 141 mm**



### BRAKE LINING INSPECTION

Measure the brake lining thickness.

**SERVICE LIMIT: 2 mm**

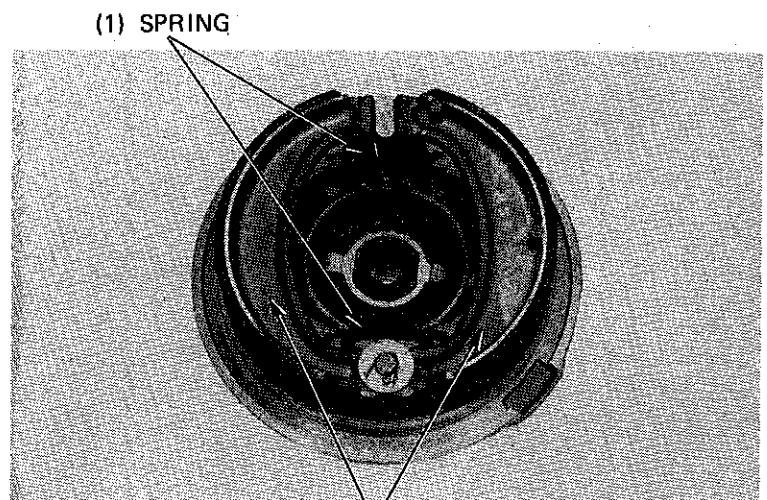


### BRAKE SHOE REPLACEMENT

Remove the brake arm.  
Remove the brake shoe.  
Apply grease to the sliding surface of the brake cam.  
Install the brake shoes and shoe springs.

**WARNING**

*Contaminated brake linings reduce stopping power. Keep grease off the linings.*





Install the brake arm spring.  
Install the wear indicator plate.

**NOTE**

Align the indicator plate inner tab with the cutout of the brake cam.

Install the brake arm.

**NOTE**

Align the punch marks.

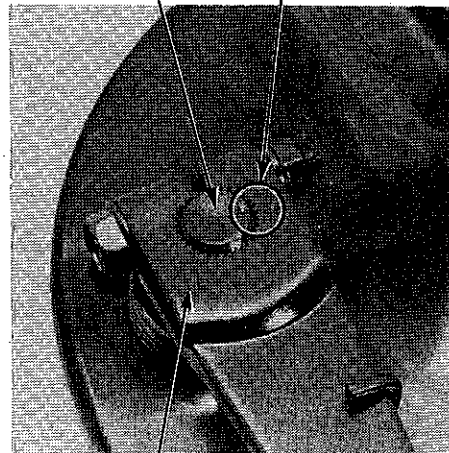
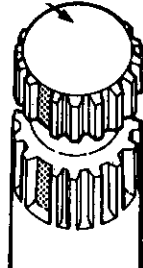
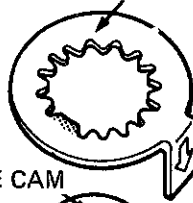
**TORQUE: 0.8–1.2 kg-m**

(1) INDICATOR PLATE

(3) BRAKE CAM

(4) PUNCH MARK

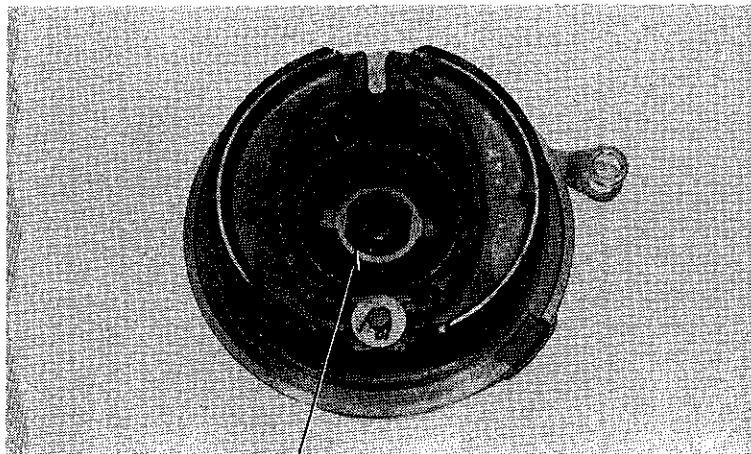
(2) BRAKE CAM



(5) BRAKE ARM

**SPEEDOMETER GEAR REPLACEMENT**

Remove the speedometer drive gear, and washer.  
Remove the speedometer pinion gear.



(1) SPEEDOMETER DRIVE GEAR

Install the speedometer pinion.  
Apply grease.

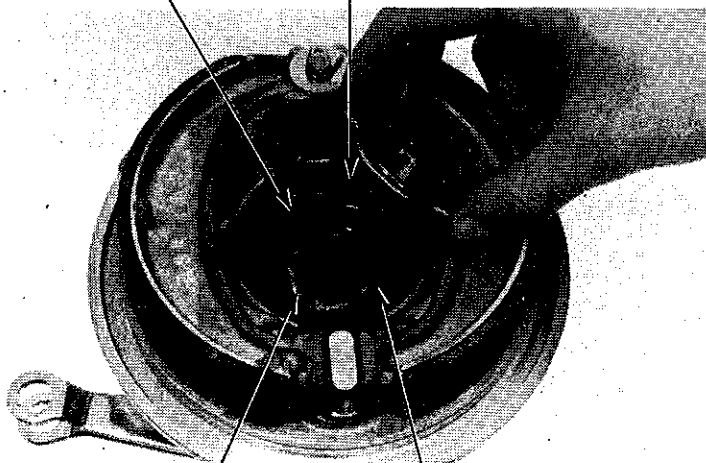
**WARNING**

Keep grease off the linings.

Install the washer and the speedometer drive gear.

(1) PINION

(2) DRIVE GEAR

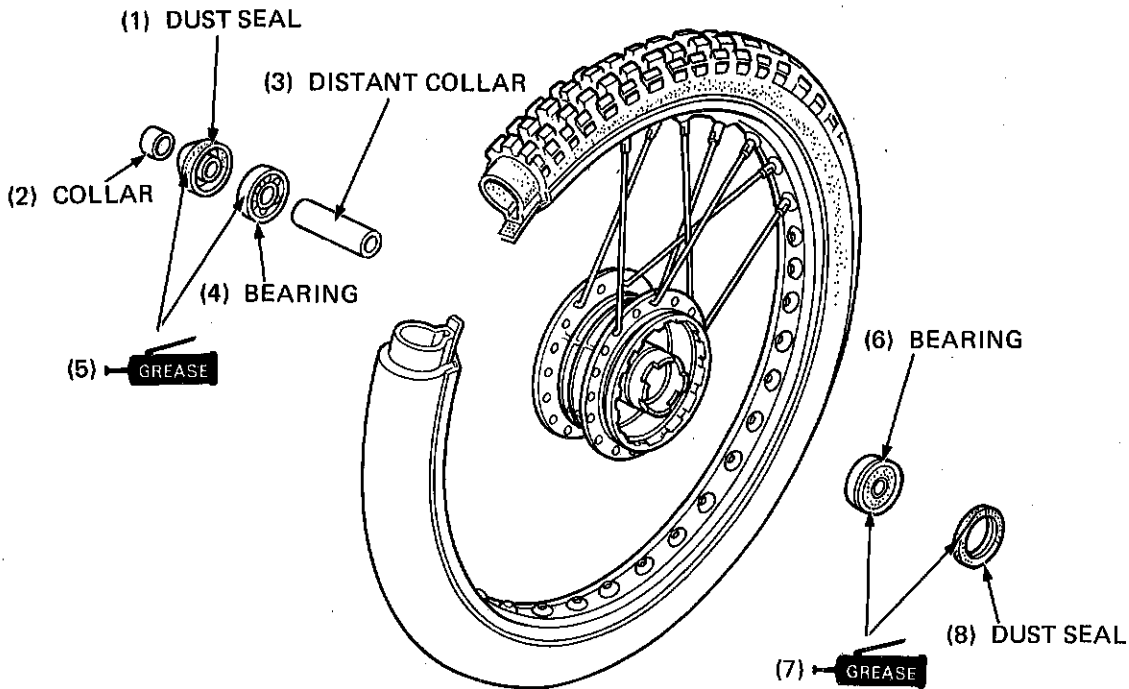


(3) WASHER

(4) GREASE



● FRONT WHEEL DISASSEMBLY (CL250S)



● FRONT WHEEL ASSEMBLY

Pack all bearing cavities with grease.  
 Drive in the left bearing.  
 Install the distance collar.  
 Drive in the right bearing.

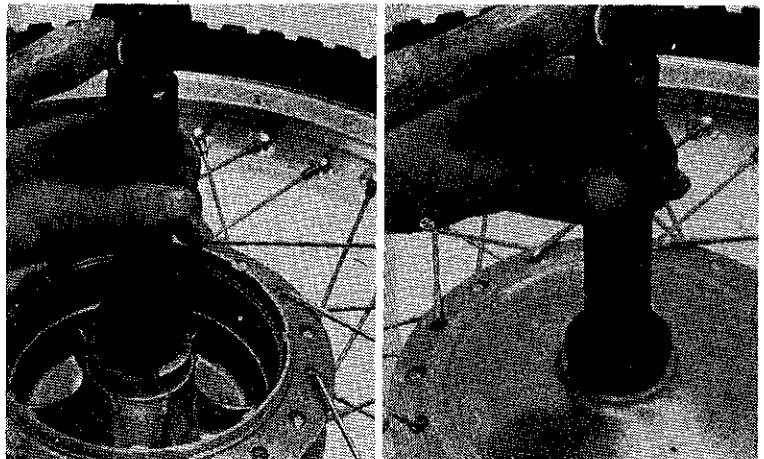
NOTE

Install the bearings with the sealed end toward the outside. Be sure to drive the bearing squarely.

**WARNING**

● Keep grease off the brake drum.

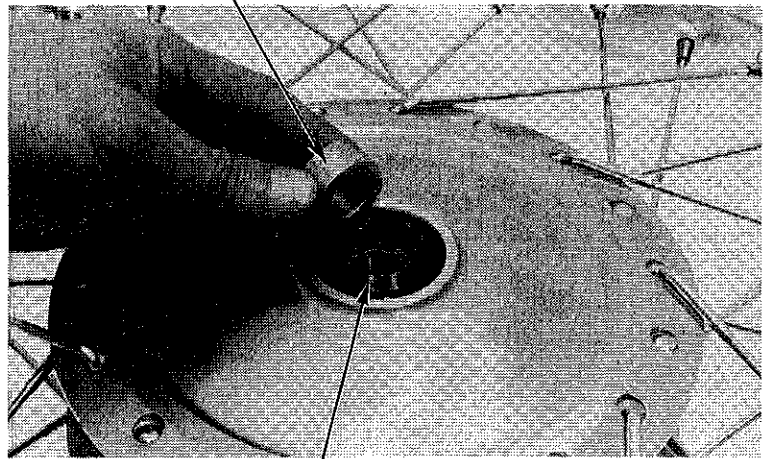
- (1) BEARING DRIVER OUTER (42 x 47 mm)
- (2) DRIVER PILOT 15 mm
- (3) BEARING DRIVER HANDLE OUTER (A)





Install the dust seal and the right side collar.

(1) COLLAR



(2) DUST SEAL

## FRONT WHEEL INSTALLATION

### Front Wheel Installation

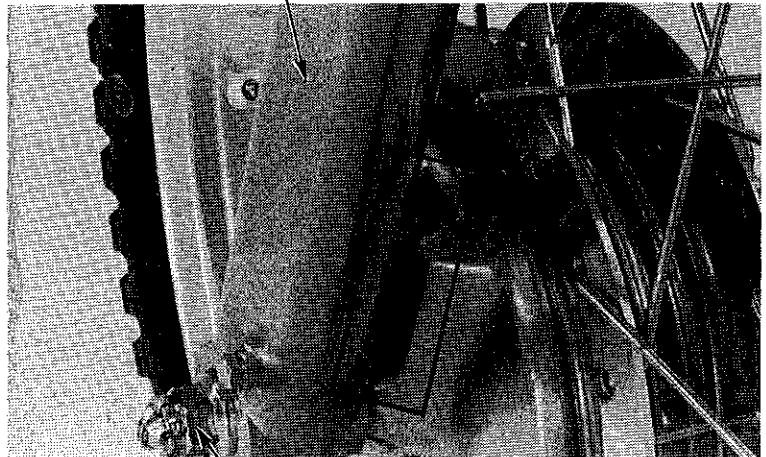
Position the front wheel between the fork legs aligning the tab on the left fork leg with the groove in the brake panel.

Insert the front axle from the right side. Install the axle nut on the end of the axle and tighten to the specified torque.

**TORQUE: 5.0–8.0 kg-m (36–58 ft-lb)**

Install the cotter pin and spread the ends.

(1) LEFT FORK



(2) AXLE NUT

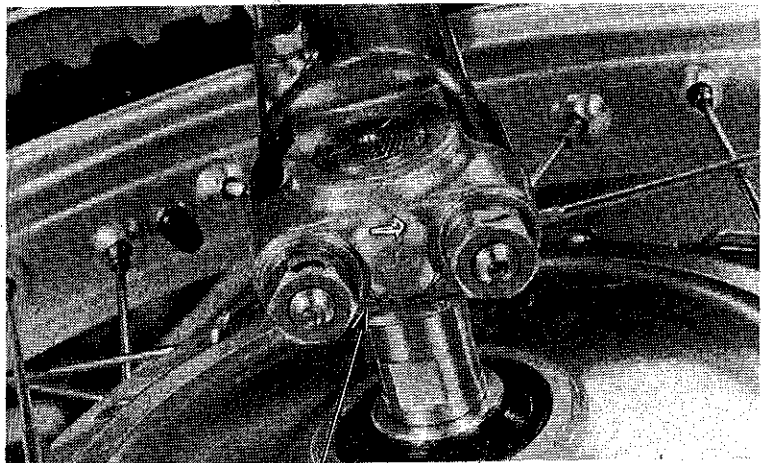
Position the axle holder on the front end with the arrow mark facing the front.

Tighten the forward nut to be specified torque first.

**TORQUE: 18–25 N-m**  
**(1.8–2.5 kg-m, 13–18 ft-lb)**

### NOTE

Support the weight of the front wheel with the handlebar straight ahead.



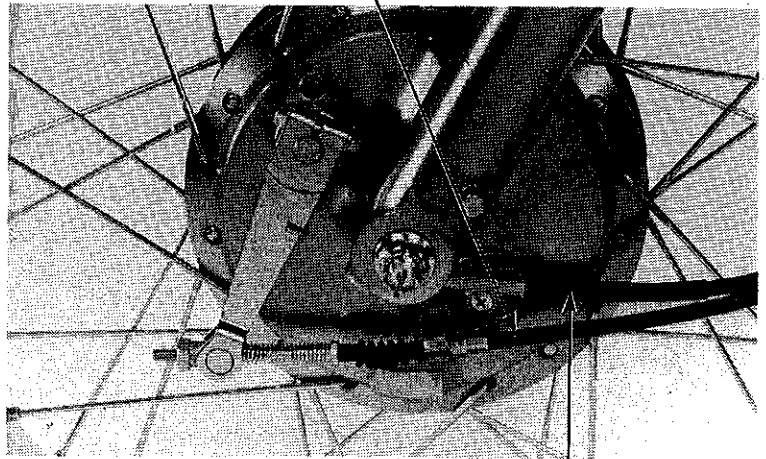
(1) AXLE HOLDER



**HONDA**  
**CB250RS-DX**  
**CL250S**

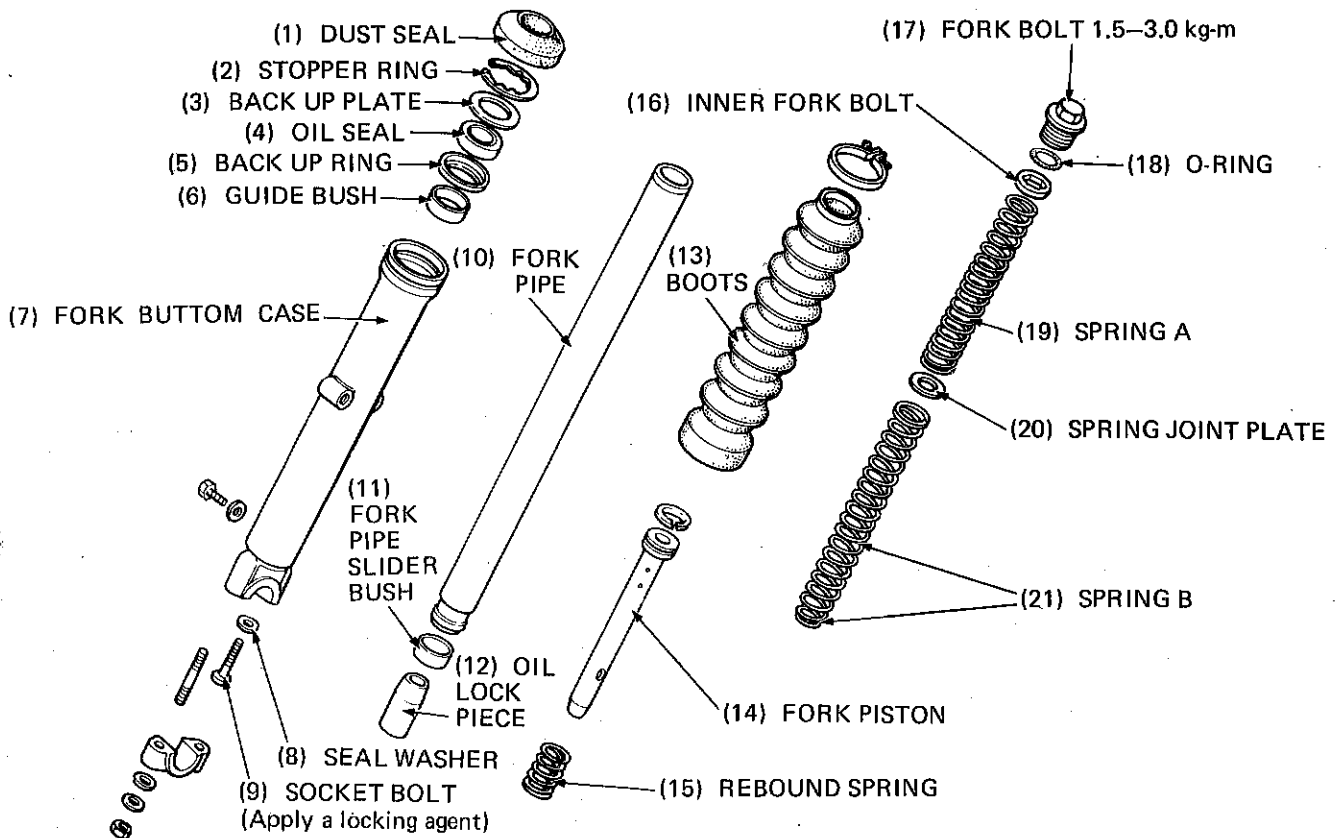
Connect the speedometer to the speedometer gearbox.  
Connect the front brake cable to the brake arm.  
Adjust the brake (Page 21-22).  
With the front brake applied, pump the front fork up and down several times to see if it operates smoothly.  
If the fork does not move up and down smoothly, check the axle holder for proper installation.

(1) BRAKE CABLE



(2) SPEEDOMETER CABLE

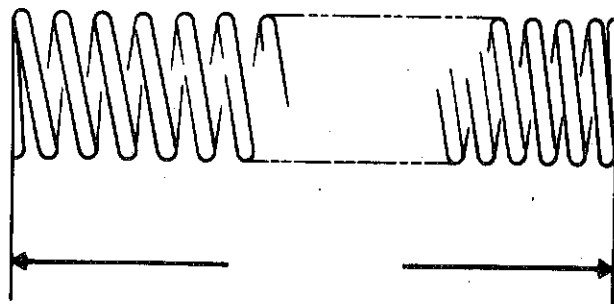
**FRONT FORK (CL250S)**



FRONT FORK SPRING  
FREE LENGTH INSPECTION

SERVICE LIMIT:  
CL250S:  
SPRING : A 269 mm  
SPRING : B 316 mm

FORK OIL (AFTER DISASSEMBLY)  
185 ± 2.5 cc

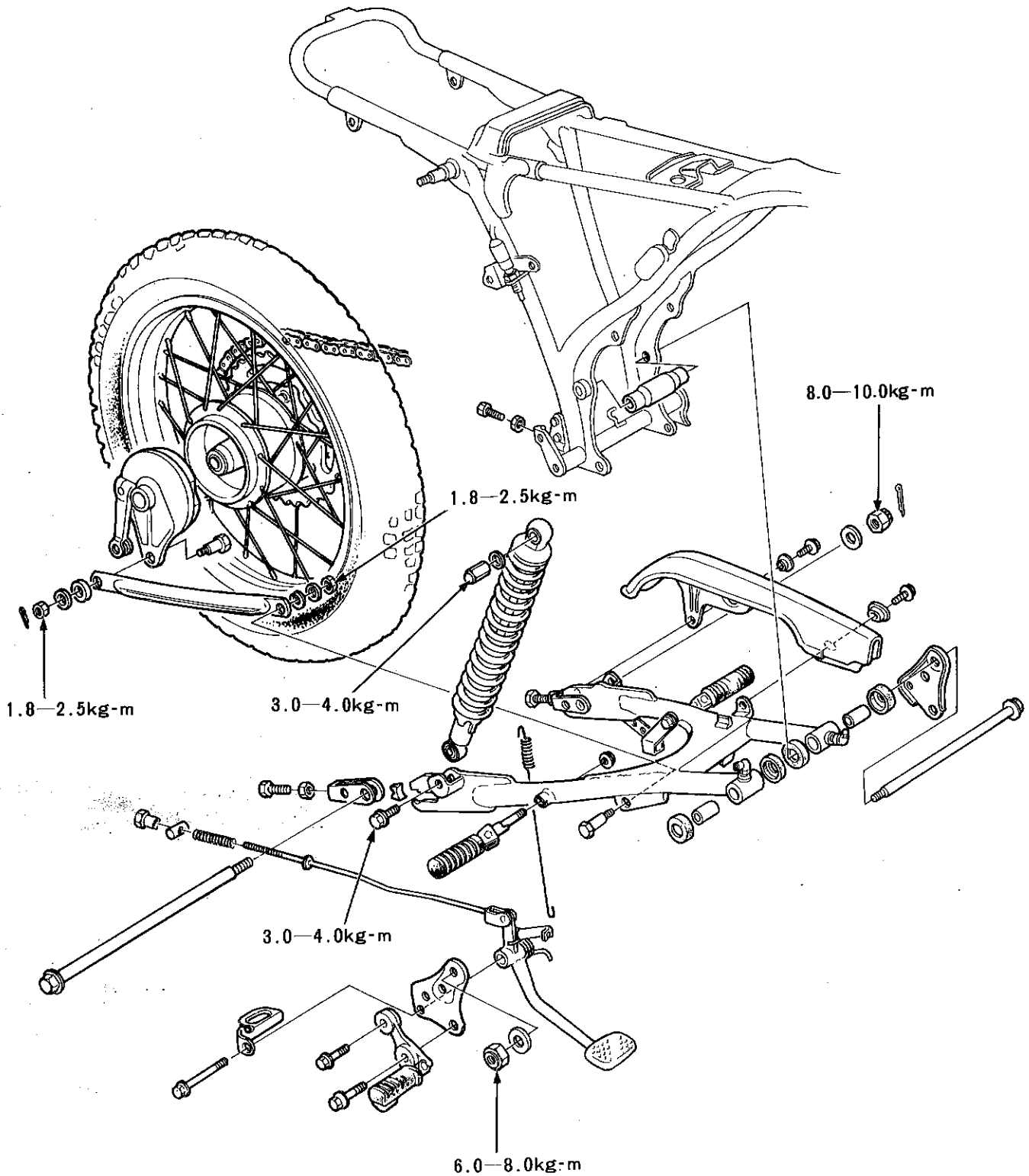


# 14. REAR WHEEL/BRAKE/ SUSPENSION



**HONDA**  
CB250RS-DX  
CL250S

(CL250S)





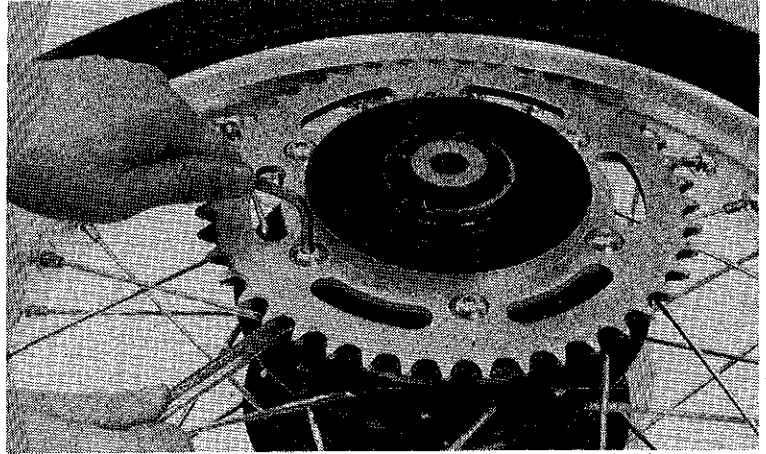
## REAR WHEEL (CL250S)

### DRIVEN SPROCKET REPLACEMENT

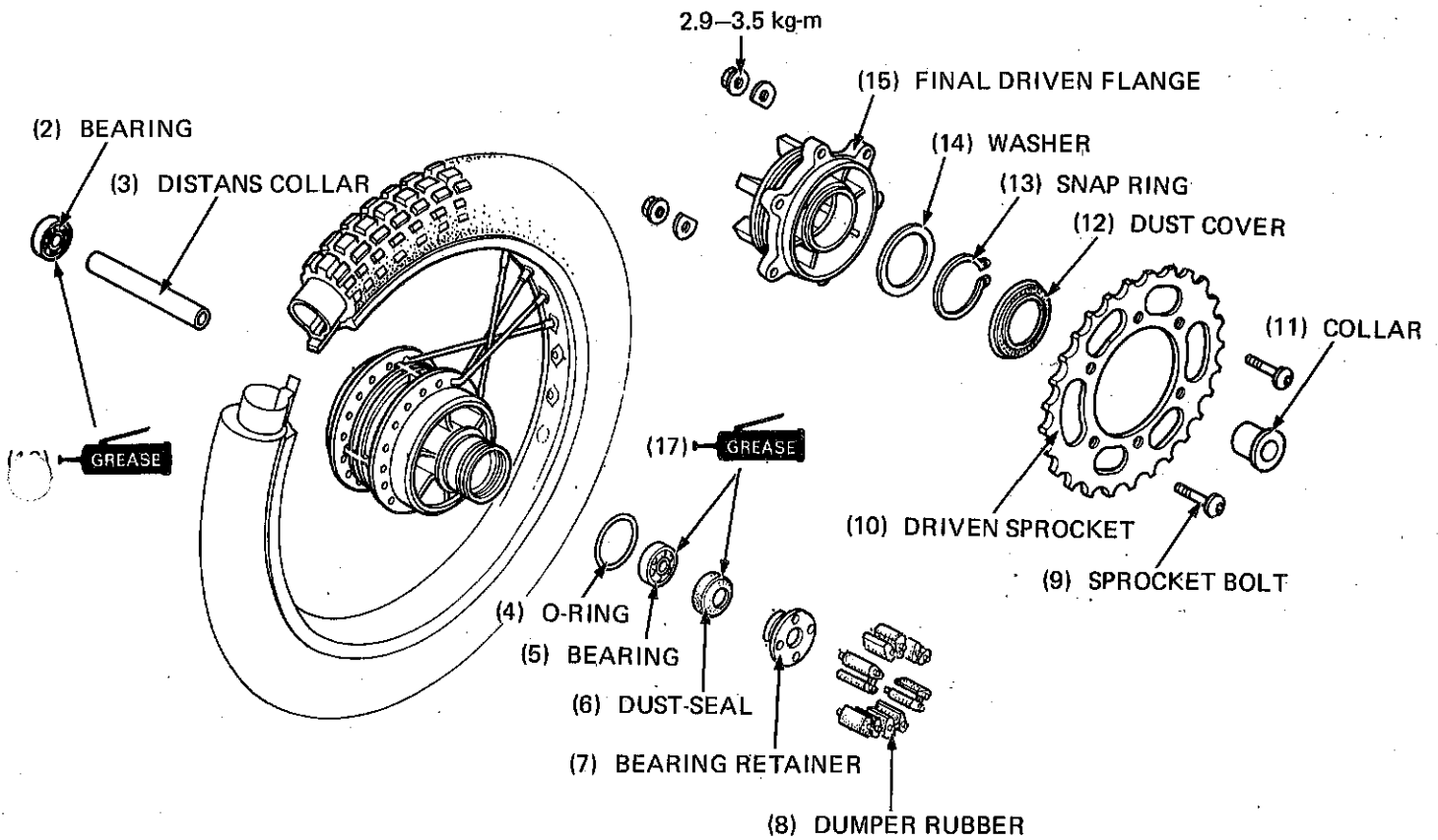
Remove the driven sprocket.  
Install the new sprocket.  
TORQUE: 2.9–3.5 kg-m

#### NOTE

Lubricate the bolts with clean engine oil before installation.



#### (1) REAR WHEEL DISASSEMBLY

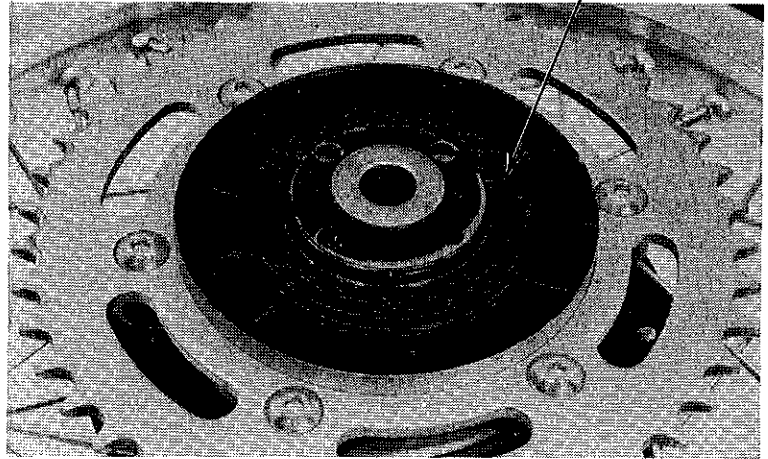




## DUMPER RUBBER REPLACEMENT

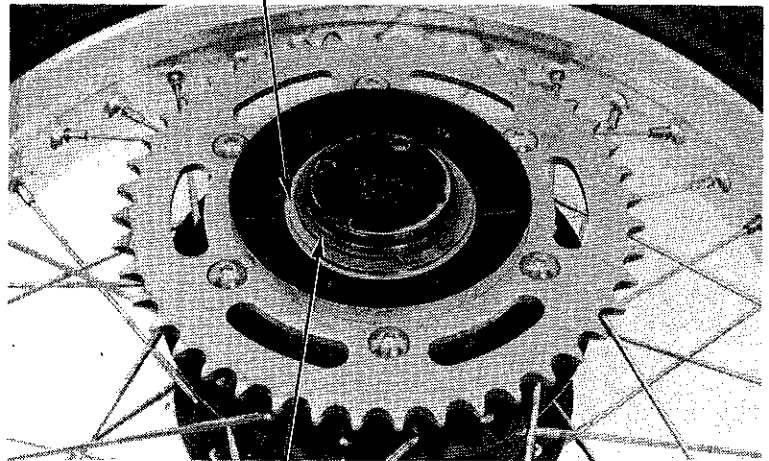
Remove the dust cover.

(1) DUST COVER



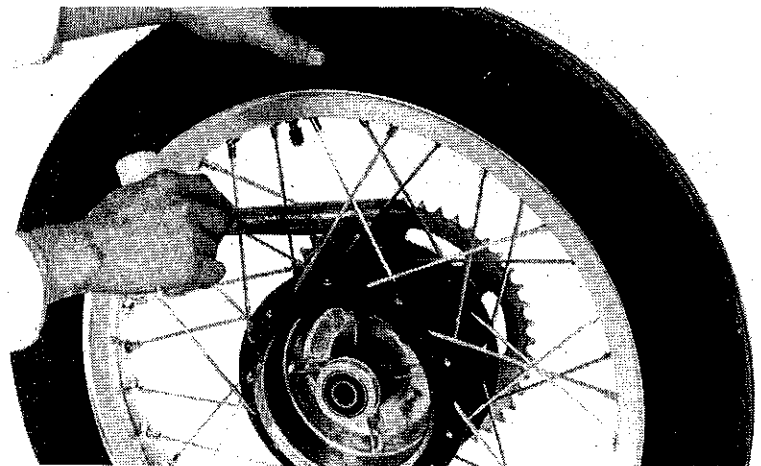
Remove the snap ring and washer.

(1) WASHER



(2) SNAP RING

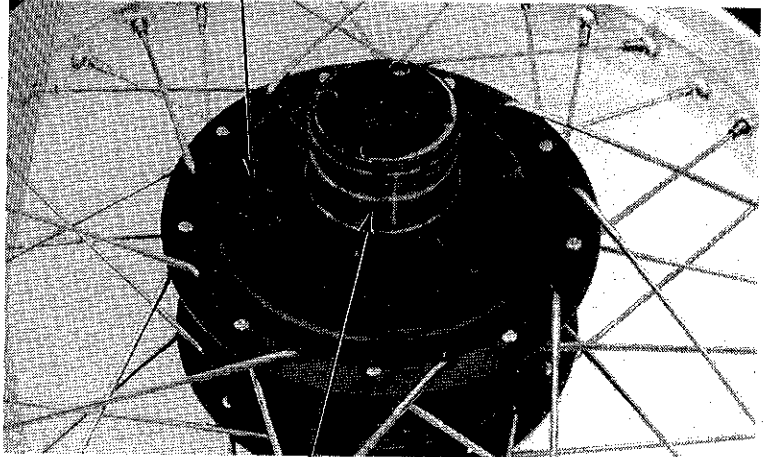
Remove the final driven flange by pushing on the drive sprocket with the handle of a hammer as shown.





Inspect the dumper rubber, and if there is worn, replace it.  
Remove the O-ring and replace it new.

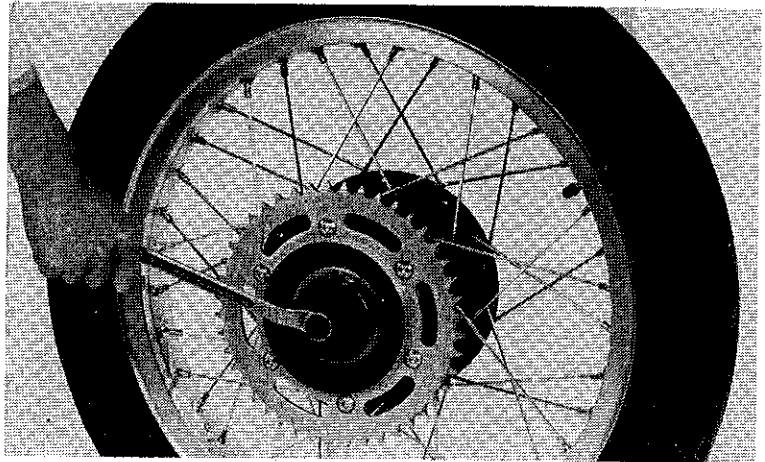
(1) DUMPER RUBBER



(2) O-RING

● **WHEEL BEARING REPLACEMENT**

Remove the bearing retainer.  
Remove the bearing and distant collar.

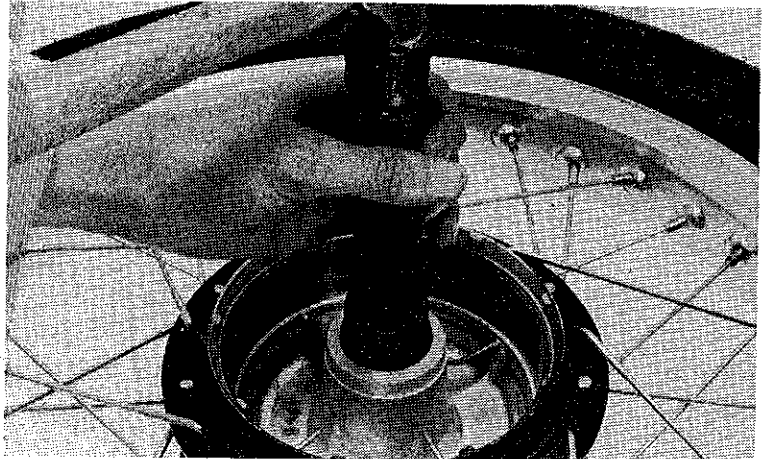


- (1) BEARING DRIVER HANDLE OUTER
- (2) BEARING DRIVE OUTER (37x40mm)
- (3) DRIVER PILOT 17mm

Pack cavities of the bearings with grease.  
Drive the right bearing in with the special tools as shown. Insert the distance collar.

**NOTE**

Install the bearing with the sealed end facing the outside. Do not tilt the bearings while driving.



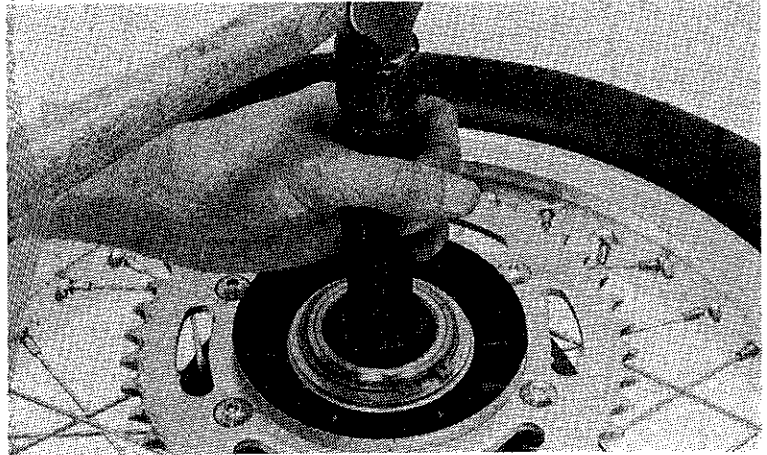


Install the left bearing.

**NOTE**

Install the bearing with the sealed end facing the outside. Do not tilt the bearing while driving.

- (1) DRIVER HANDLE OUTER A  
(2) DRIVER OUTER 42x47mm (3) DRIVER PILOT (17mm)



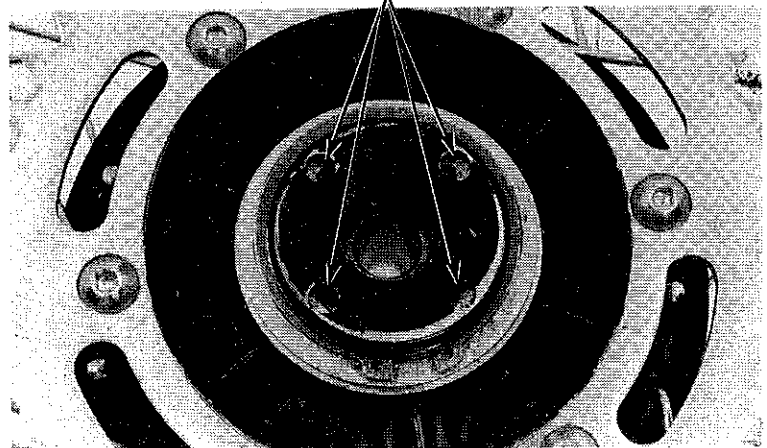
Tighten the bearing retainer.

**NOTE**

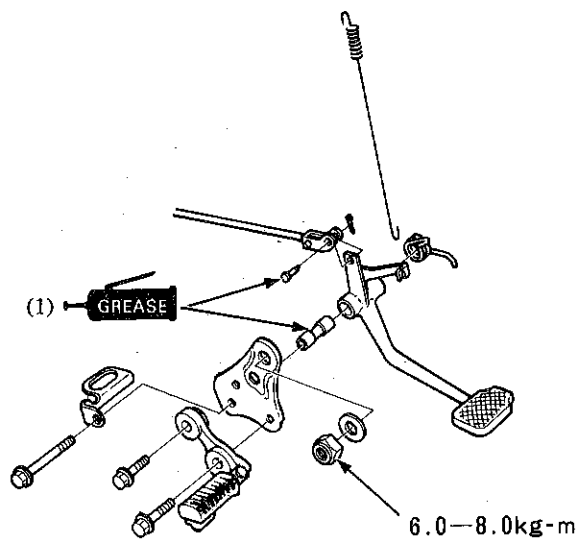
Replace the retainer with a new one if the threads are damaged.

Stake the retainer at four places as shown.

- (1) STAKE



## REAR BRAKE PEDAL (CL250S)







## TROUBLESHOOTING

### Starter Motor Will Not Turn:

- Dead battery
- Defective ignition switch
- Defective starter switch
- Defective neutral switch
- Defective starter magnetic switch
- Loose or disconnected wire or cable
- Neutral diode open
- Defective clutch switch

### Starter Motor Turns Engine Slowly:

- Low battery
- Excessive resistance in circuit
- Binding in starter motor.

### Starter Motor Turns, But Engine Does Not Turn:

- Defective starter clutch
- Defective starter motor gears
- Defective starter motor or idle gear

### Starter Motor and Engine Turn, But Engine Does Not Start:

- Defective ignition system
- Engine problems

## STARTER MOTOR

### • REMOVAL

#### **WARNING**

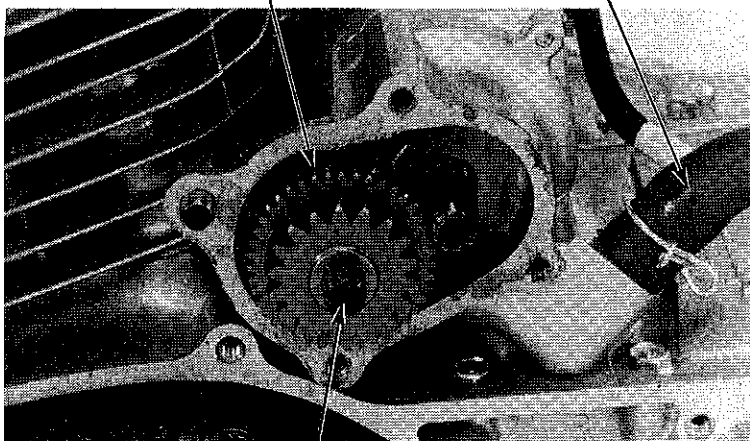
*With the ignition switch OFF, remove the negative cable at the battery before servicing the starter motor.*

Remove left crankcase cover.

Remove starter reduction gear, Shaft. Disconnect breather tube.

(1) REDUCTION GEAR

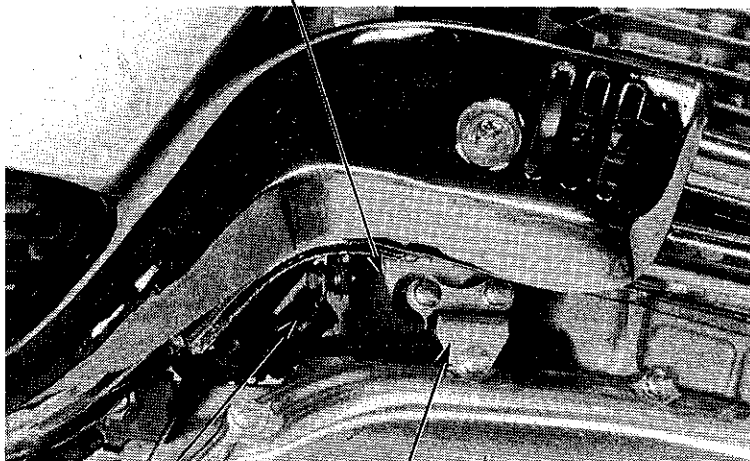
(2) BREATHER TUBE



(3) SHAFT

Remove the starter motor bracket. Disconnect the starter motor cable, and remove the starter motor.

(1) STARTER MOTOR



(2) STARTER CABLE

(3) STARTER MOTOR BRACKET



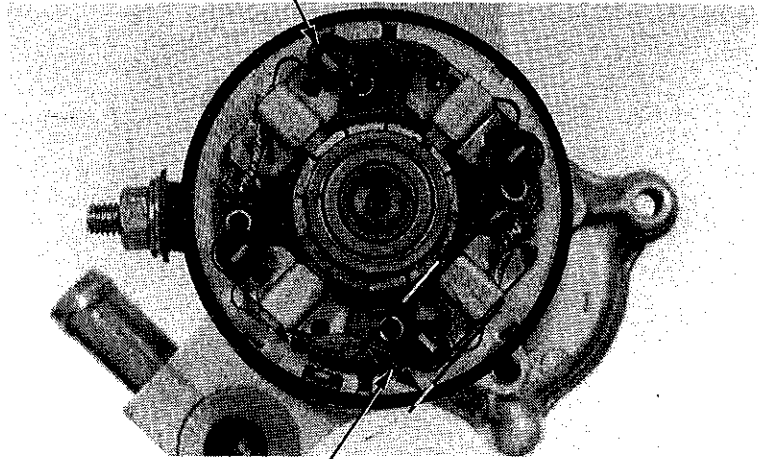
**HONDA**  
**CB250RS-DX**  
**CL250S**

### ● BRUSH INSPECTION

Remove the starter motor case screws.  
Inspect the brushes: measure brush length,  
Measure brush spring tension with a spring  
scale.

**SERVICE LIMITS:** 6.5 mm  
Brush length: 13 mm  
Brush spring tension: 400 g ± 60 g

(1) BRUSH SPRING



(2) BRUSH LENGTH

### ● COMMUTATOR INSPECTION

Remove the case.

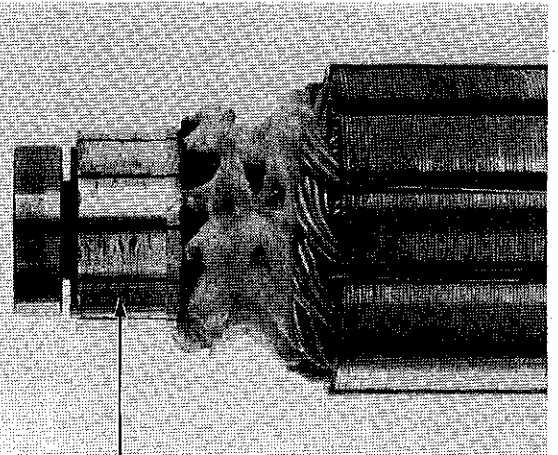
#### NOTE

Record the location and number of the  
thrust washers.

Check the commutator for discoloration. If two  
or more segments are discolored, armature coil  
is shorted. Replace the armature with a new  
one.

#### NOTE

Do not recondition the commutator with  
emery cloth or sandpaper.

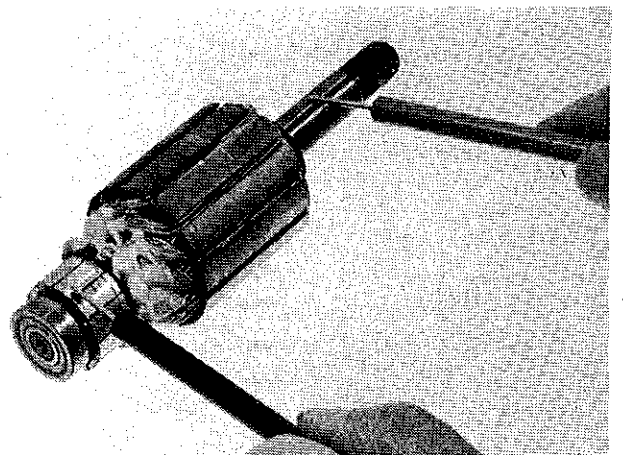


(1) COMMUTATOR

Check for continuity between each segment of  
commutator, and commutator and armature  
shaft.

The armature is normal if there exists continui-  
ty between each segment of commutator, and  
no continuity between the commutator and  
armature shaft.

- (1) COMMUTATOR BARS PAIRS CON-  
TINUITY: NORMAL
- (2) COMMUTATOR BARS ARMATURE  
SHAFT  
NO CONTINUITY: NORMAL



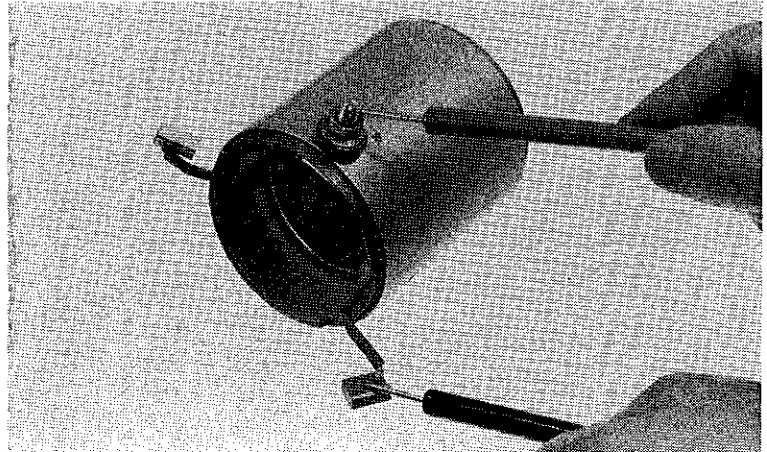


### ● FIELD COIL INSPECTION

Check for continuity from the cable terminal to the motor case and from the cable terminal to the brush wire.

Replace the starter motor if the field coil is not continuous or if it is shorted to the motor case.

- (1) CABLE TERMINAL – MOTOR CASE  
NO CONTINUITY: NORMAL
- (2) CABLE TERMINAL – BRUSH WIRE  
CONTINUITY: NORMAL



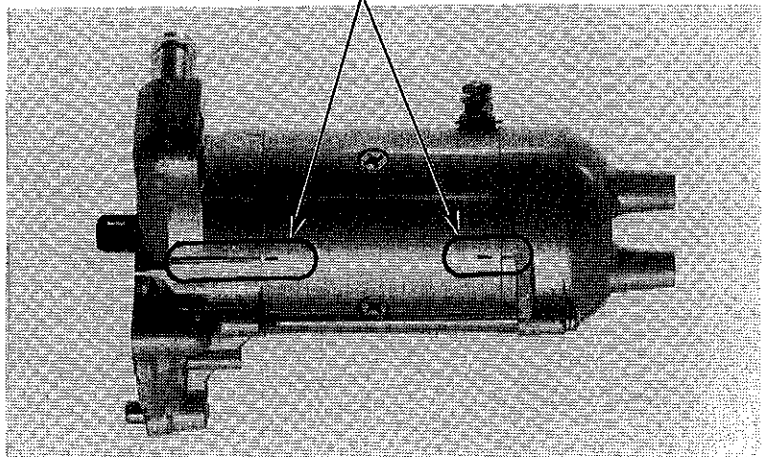
### ● ASSEMBLY/INSTALLATION

Assemble the starter motor.

#### NOTE

Align the mark on the case to the mark on the cover.

(1) ALIGN MARK



### ● INSTALLATION

Install the rubber packing to the breather hole. Install the starter motor on the engine. Connect the starter motor cable.

(1) RUBBER PACKING





Install the reduction gear and shaft.  
 Connect the breather tube.  
 Install the left crankcase cover.

**NOTE**

Check the reduction gear for proper backlash. Reinstall the starter to adjust backlash.

● **STARTER SOLENOID INSPECTION**

Remove the end cover of the starter cover.

Check the solenoid for proper operation by connecting the positive cable of a battery to the red wire terminal, and negative cable to the green wire. The solenoid is correct if it clicks when the cables are connected.

With the solenoid energized, pull the pinion shifter out. Check the lock cam for wear if the pinion is pushed in by hand easily.

● **STARTER SOLENOID REPLACEMENT**

Remove the solenoid by removing the clip pin and screw.

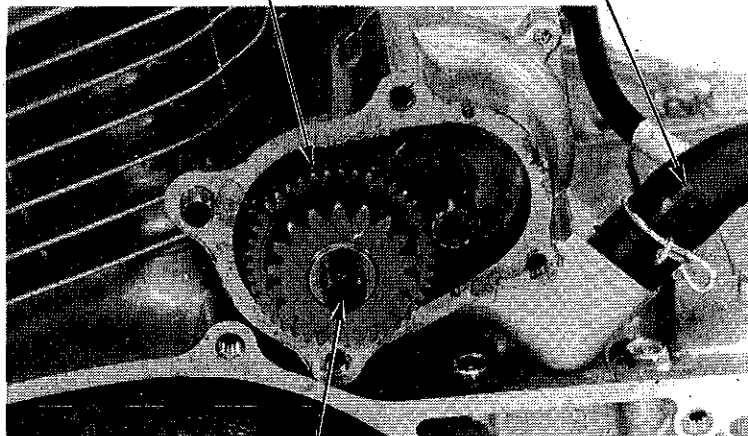
Install the O-ring in the groove in the starter cover and install a new solenoid using the chamfered end as a guide.

**NOTE**

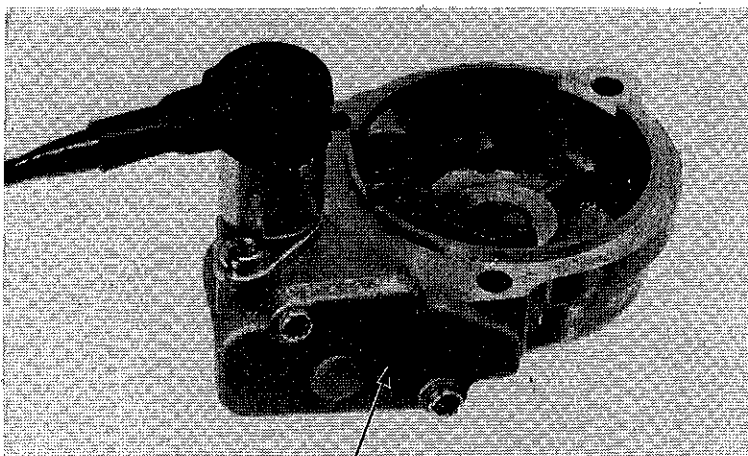
Make sure that the O-ring is not dispo-  
 sitioned.

Install the screw and clip pin.

(1) REDUCTION GEAR (2) BREATHER TUBE

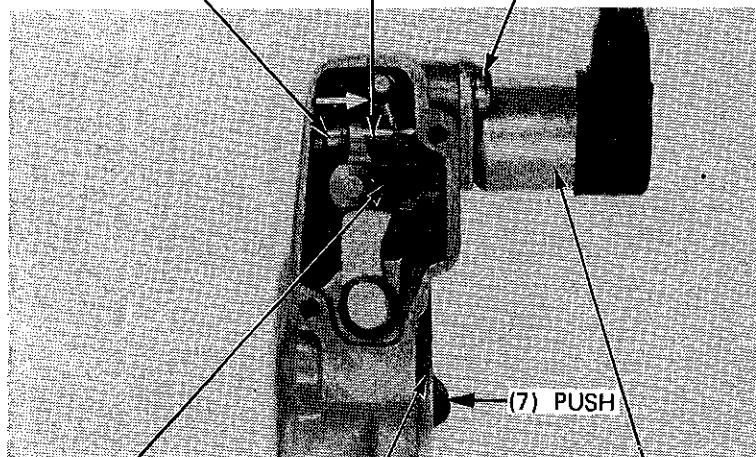


(3) SHAFT



(1) COVER

(1) CLIP PIN (2) SHAFT (3) SCREW



(4) LOCK CAM (5) STARTER PINION SHIFTER  
 (6) STARTER SOLENOID



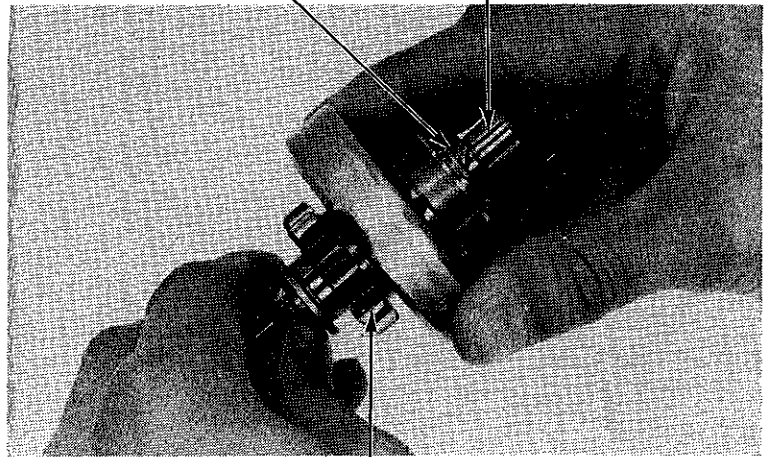
### ● STARTER PINION INSPECTION

Check the pinion for smooth movement on the drive shaft helical splines.

#### NOTE

Make sure that the return spring is installed properly.

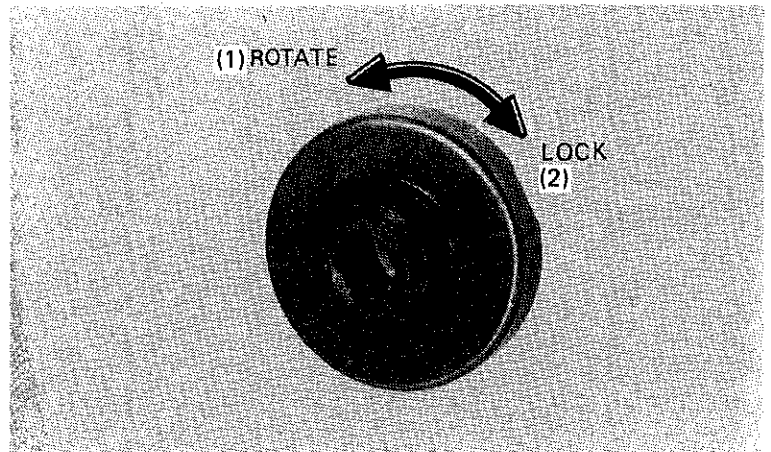
(1) HELICAL SPLINE (2) DRIVE SHAFT



(3) STARTER PINION

Check the overrunning clutch for operation. Replace the clutch with a new one if it does not rotate in either direction or rotates in both directions.

(1) ROTATE

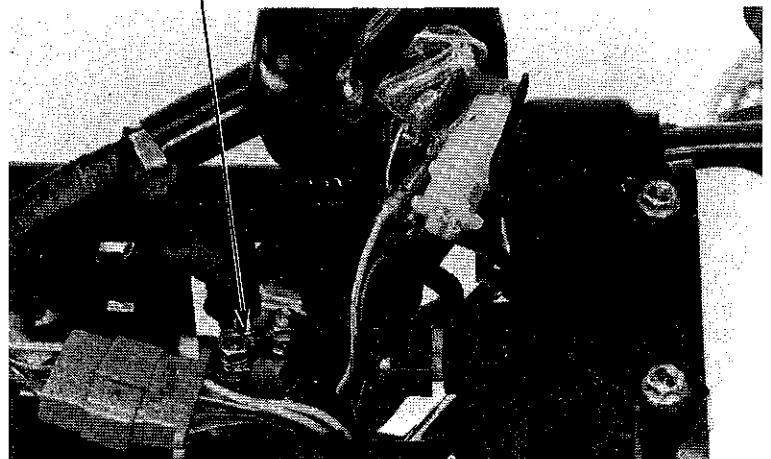


LOCK  
(2)

### Starter Magnetic Switch

With the ignition switch ON, listen for 'click' by pressing the starter button. The primary coil is normal if 'click' is heard.

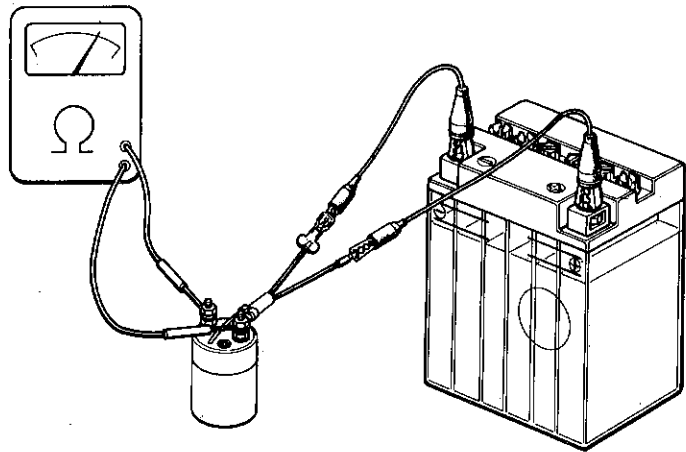
(1) STARTER MAGNETIC SWITCH





**HONDA**  
**CB250RS-DX**  
**CL250S**

Connect a fully charged 12V battery to the primary coil. Check for continuity between the secondary terminals. Replace the switch with a new one if there is no continuity.



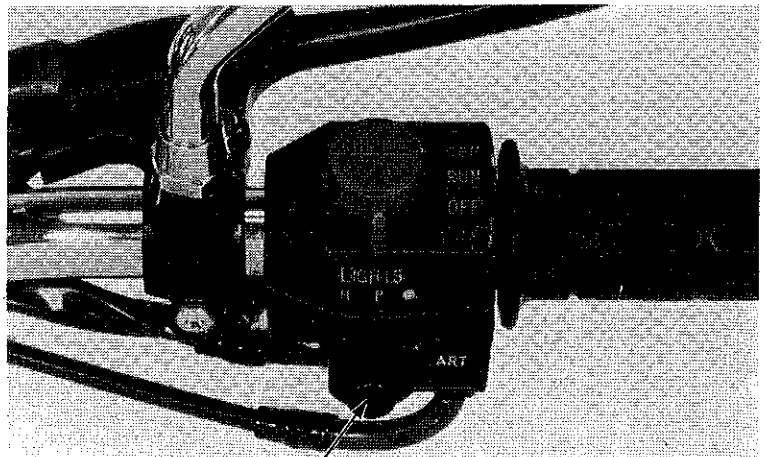
## Starter Switch

Remove the headlight.

Check for continuity between the black and yellow/red wire terminals of the right handlebar switch. There should exist continuity only when the starter button is depressed.

Starter switch

WIRE	BLACK	YELLOW/ RED
FREE		
PUSH		

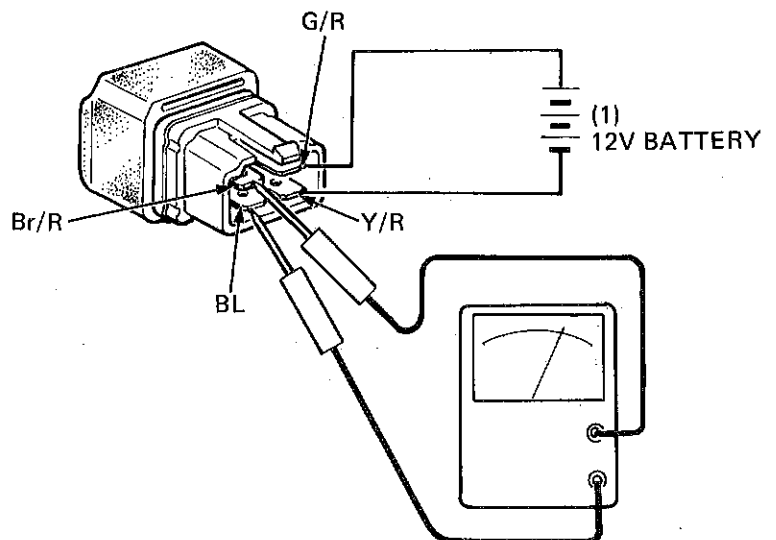


(1) STARTER BUTTON

## Starter Solenoid Relay

Connect a fully charged 12V battery between the green/red and yellow/red wire terminals. The relay is normal if there is continuity between the brown/red and black wire terminals.

G/R ..... GREEN/RED  
Br/R ..... BROWN/RED  
BL ..... BLACK  
Y/R ..... YELLOW/RED





**HONDA**  
**CB250RS-DX**  
**CL250S**

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**MEMO**