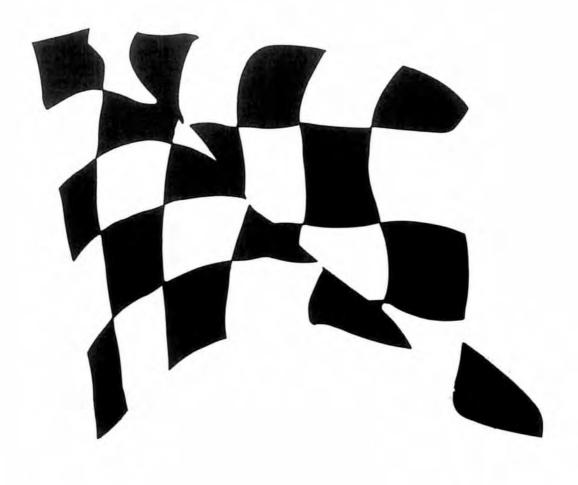




RS1000

PARTS LIST OWNER'S MANUAL



WARRANTY-

The RS 1000 engines and kits have no warranty. No waranty is also made with respect to vehicles and engines when they are powered by the engines or contain any of the kit parts.

IMPORTANT NOTICE

- These kit are intended for use in enduro and T.T. formula class 1 races. Before using, make sure that they conform to the standards or regulations established by a sanctioning body.
- Operation on public streets, roads, or highway is illegal.
- Use gasoline of high octan rating.

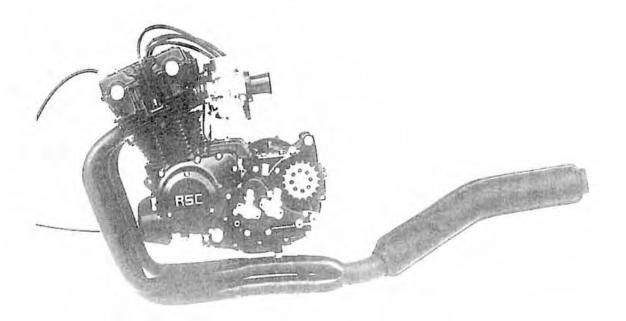
Pay special attention to statements preceded by the following words:

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.

NOTE

: Gives helpful information to make the job easier.



FOREWORD

Thank you very much for purchasing the Honda RS1000 Tune-up Kit. Based on the CB900FZ engine, this kit is a product of the finest skills and techniques available. It is a top-performing racing kit with a proven reputation of Honda dependability and quality as evidenced by the successive victories in the famous European enduro races in the past three years. A choice of three engines and others make the machine even more versatile under all conditions from enduro to super bike speed racing.

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HOW TO USE THIS MANUAL

This PARTS LIST/OWNER'S MANUAL contains information which differs from that of Honda CB900Fz, and reference is to be made to the base manual for complete information.

Find the section you want on this page, then turn to the table of contents on page 1 of that section.

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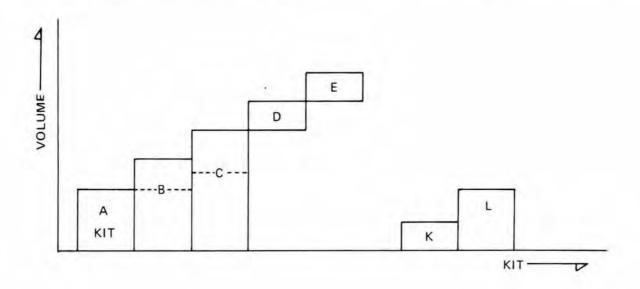
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ALL INFORMATION, ILLUSTRATIONS, DIRECTIONS AND SPECIFICATIONS INCLUDED IN THIS PUBLICATION ARE BASED ON THE LATEST PRODUCT INFORMATION AVAILABLE AT THE TIME OF APPROVAL FOR PRINTING. HONDA R.S.C. RESERVES THE RIGHT TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE AND WITHOUT INCURRING ANY OBLIGATION WHATEVER. NO PART OF THIS PUBLICATION MAY BE REPRO-DUCED WITHOUT WRITTEN PREMIS-SION.

> HONDA RACING SERVICE CENTER CORPORATION.

1. TUNE-UP KITS

The following five kits are available. They meet all the requirements for a top-performing racing kit: power, speed and dependability. They provide all big-bore enthusiusts with a choice of engines best suited to their needs.



• FEATURES

KIT A: (BORED-UP)

Featuring a total displacement of 996.5 cc, the kit is applicable to various races which limit engine size to 1,000 cc. The maximum output is 100 PS/9,500 rpm (105 PS/DIN), 105 PS/& (110 PS DIN/&).

KIT B: (KIT A + POWERED-UP)

•••••• The kit is a powered-up version of the Kit A to outperform competitors in races up to 1,000 cc. It turns out 115 PS/9,500 rpm (121 PS/DIN), 121 PS/2 (127 PS DIN/2).

KIT C: (KIT B + DRY SUMP)

•••••• The kit is designed to conform to all the regulations established for the TT Formula One Racing and for various competitions in europe named as enduro. The dry sump lubrication keeps the bearings and other moving parts of the engine well lubricated and cooled under toughest racing conditions. The maximum output is an increadibly high 125 PS/9,500 rpm (135 PS/DIN), 132 PS/l (139 PS DIN/l).

KIT D: (CLOSE RATIO MISSION GEAR + DRY CLUTCH)

----- Closed ratio transmission and dry type clutch to enhance the already outstanding features of Kits A, B and C.

KIT E: (SPEED RACE KIT)

------ Speed racing kit for use with Kits A, B and C. Allows greater banking on corners in sprint races where no lighting equipment is used.

CAUTION

Always replace the connecting rod and crankshaft bearings with those described in Page 3-26 when any of the kit parts is used.

2. GENERAL INFORMATION

SPECIFICATIONS	2–2
TORQUE VALUES	2–4
SPECIAL TOOLS	2-4
PERIODIC REPLACEMENT PARTS	2–5
SERVICE DATA	2—6
WIRING DIAGRAMS	2–7
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SPECIFICATIONS

• Specifications-Kits C and D

ENGINE	Туре	Air cooled 4-stroke			
	Cylinder arrangement	Vertical parallel four			
	Bore and stroke	67.8 x 69.0 mm (2.67 x 2.72 in)			
	Dicplacement ratio	996 cm ³ (30.8 cu in)			
	Compression ratio	11.0 : 1			
	Valve train	Chain driven D.O.H.C. 4 valve			
	Maximum horsepower	91.9 KW (125 PS)/9,500 min-1 (rpm)			
	Maximum torque	107 N·m (10.7 kg·m, 76.2 ft-lb)/7,000 min-1 (rpm)			
	Oil capacity	6 liters (6.27 US qt., 5.28 lmp. qt.)			
	Recommended oil	TOTAL BOL D'OR #40, SHELL SR #40, or its equivaler			
	Lubrication system	Dry sump			
	Intake valve Opens	35° (BTDC) at 1 mm lift			
	Closes	40° (ABDC) at 1 mm lift			
	Exhaust valve Opens	50° (BBDC) at 1 mm lift			
	Closes	25° (ATDC) at 1 mm lift			
	Valve clearance	IN : EX: } 0.15 mm (0.006 in)			
	Dry weight	84.0 kg (185 lb)			
CARBURETION	Carburetor type	VB51A, 32 mm (1.22 in) venturi bore			
	Float level	15.5 mm			
	Main jet	Pri: #0 2nd: #128			
	Main air jet	Pri: #0 2nd: Blind			
	Slow air jet	#170, #0			
	Jet needle	25D-5 stage			
	Slow jet	#42			
	Air screw	2-1/4 turn out			
	Needle jet	φ2.6 (Broach dia)			
	Air funnel	L=50 mm (1.968 in)			
ELECTRICAL	Ignition timing Full advance	36°/3,500 min-1 (rpm)			
	Starting system	Starting motor			
	Spark plug	R 2098 (NGK)			

GENERAL INFORMATION

DRIVE TRAIN	Clutch	Dry, multi-plate	
	Transmission	5-speed constant-mesh	
	Primary reduction	1.8461	
	Gear ratio I	2.0556	
	П	1.5455	
	III	1.2400	
	IV	1.0769	
	v	0.9642	
	Final reduction	2.2941	

TORQUE VALUES

ITCM	0'**	Thread Dia mm		TORQUE	
ITEM	Q'ty	Thread Dia mm	N∙m	Kg∙m	ft-lb
Cam holder	24	6	14	1.4	11
Cylinder head	12	10	36	3.6	26
Cam sprocket	4	7	16	1.6	12
Crankcase	10	8	25	2.5	18
Connecting rod	8	8	36	3.6	26
Pulser rotor	1	8	32	3.2	23
Primary drive gear	1	12	90	9.0	65
A.C. generator	1	12	70	7.0	50
Clutch center lock nut	1	16	40	4.0	29

Fasteners not listed should be tightened to standard torques listed below.

STANDARD TORQUE VALUES

Туре	TORQUE		Tuna	TORQUE			
	N⋅m	Kg-m	ft-lb	Туре	N·m	Kg-m	ft-lb
6 mm screw	7–10	0.7-1.0	5-7	6 mm flange hex bolt	10-14	1.0-1.4	7-10
6 mm hex bolt	8-12	0.8-1.2	6–9	8 mm flange hex bolt	24-30	2.4-3.0	17-22
8 mm hex bolt	18-25	1.8-2.5	13–18	10 mm flange hex bolt	34-48	3.4-4.8	24-34
10 mm hex bolt	30-40	3.0-4.0	22-29				

SPECIAL TOOLS

Tool Name	Part No.	Q'ty	Ref. page
Valve lifter holder	00001-492-RSC	1	4-9
Top gauge attachment	00004-492-RSC	1	4-8, 4-9
Meter holder	00005-492-RSC	1	4-8, 4-9

PERIODIC REPLACEMENT PARTS

ITEM FREQUENCY		REPLACE	E EVERY:
	ITEM FREQUENCY	5,000 km (3,000 mi)	10,000 km (6,000 mi)
•	PISTON	0	
•	PISTON RING, TOP	0	
•	2ND	0	
•	OIL	0	
	CAM CHAIN, A	0	
	CAM CHAIN, B	0	
•	CAM CHAIN TENSIONER, A	0	6
•	CAM CHAIN TENSIONER, B	0	
•	CAM CHAIN GUIDE	0	
•	CAM CHAIN GUIDE, B	0	
	BEARING (PRIMARY, MAIN AND COUNTERSHAFT)	0	
•	CLUTCH FRICTION DISK	0	
•	CLUTCH PLATE, B	0	
	PRIMARY CHAIN	0	
	VALVE STEM SEAL	0	
	VALVE INLET		0
	EXHAUST		0
	VALVE COTTER		0
	VALVE SPRING OUTER		0
•	INNER		0
	PRIMARY DAMPER RUBBER		0

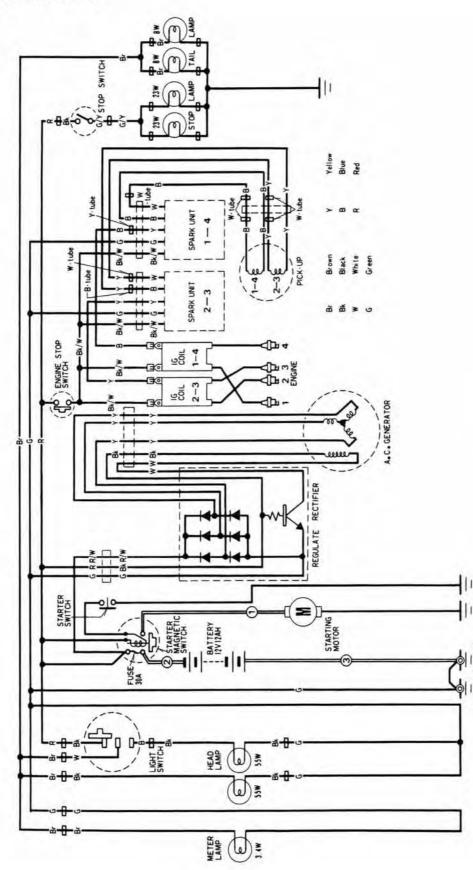
Consult service data to determine if parts are to be replaced.

SERVICE DATA

ITEM		STANDARD	SERVICE LIMIT
Cylinder I.D.		67.80-67.81 mm (2.6692-2.6697 in)	67.9 mm (2.6732 in)
Piston O.D.		67.72-67.75 mm (2.6661-2.6673 in)	67.7 mm (2.6653 in)
Piston pin hole I.D.		15.002-15.008 mm (0.5906-0.5909 in)	15.04 mm (0.5921 in)
Piston pin O.D.		14.994-15.000 mm (0.5903-0.5905 in)	14.980 mm (0.5898 in
Piston ring-to-ring groove cleara	ance TOP/SECOND	0.030-0.045 mm (0.0012-0.0018 in)	0.070 mm (0.0028 in
Piston ring end gap		0.3-0.5 mm (0.0118-0.0197 in)	0.70 mm (0.0276 in)
Valve clearance	IN./EX.	0.15 mm (0.0059 in)	0.13-0.17 mm (0.0051-0.0067 in)
Valve guide I.D.	IN./EX.	5.500-5.515 mm (0.2165-0.2171 in)	5.530 mm (0.2177 in
Valve stem O.D.	IN.	5.475-5.490 mm (0.2155-0.2164 in)	5.470 mm (0.2153 in
	EX.	5.455-5.470 mm (0.2148-0.2153 in)	5.440 mm (0.2142 in
Valve spring free length	INNER	38.44 mm (1.5134 in)	36.9 mm (1.4528 in)
	OUTER	44.84 mm (1.7654 in)	43.05 mm (1.6949 in)
Valve spring tension	INNER	20.3 ± 1.4 kg/25 mm (44.753 ± 3.086 lbs/0.9843 in)	-
	OUTER	41.96 ± 2.9 kg/28.5 mm (92.505 ± 6.393 lbs/1.1220 in)	-
Camshaft-cam holder clearance		0.05-0.15 mm (0.0020-0.0059 in)	0.25 mm (0.0098 in)
Connecting rod-crankshaft side	clearance	0.10-0.20 mm (0.0039-0.0079 in)	0.25 mm (0.0098 in)
Crankshaft-upper case side clea	rance (#2)	0.10-0.30 mm (0.0039-0.0118 in)	0.35 mm (0.0138 in)
Pulse coil-rotor clearance		0.4-0.5 mm (0.0157-0.0197 in)	0.5 mm (0.0197 in)
Connecting rod small end I.D.		15.016-15.034 mm (0.5912-0.5919 in)	15.045 mm (0.5923 in
Clutch friction disk thickness		2.692-2.708 mm (0.1060-0.1066 in)	2.45 mm (0.0965 in)
Clutch spring free length		33.6 mm (1.3228 in)	31.90 mm (1.2559 in)
Clutch spring tension		43.5 kg/23 mm (97.7 lbs/0.9055 in)	
Transmission gear backlash		0.034-0.102 mm (0.0013-0.0040 in)	0.20 mm (0.0079 in)
Crankshaft oil clearance	JOURNAL	0.030-0.040 mm (0.0012-0.0016 in)	0.050 mm (0.0020 in)
	CRANK PIN	0.035-0.045 mm (0.0014-0.0018 in)	0.055 mm (0.0022 in)
Camshaft journal oil clearance	CENTER	0.085-0.139 mm (0.0033-0.0055 in)	0.24 mm (0.0094 in)
	MIDDLE	0.062-0.109 mm (0.0024-0.0043 in)	0.21 mm (0.0083 in)
	SIDE	0.040-0.082 mm (0.0016-0.0032 in)	0.18 mm (0.0071 in)

GENERAL INFORMATION

WIRING DIAGRAMS



GROUND (FRAME)

- NOTE: $(\bar{\mathbf{U}},$ Sectional area of starting motor, battery and ground cables should
- be at least 10 \mbox{mm}^2 . Sectional area of red/white, red, green and brown main wire harness 0
 - wires should be 1.25 \mbox{mm}^2 . Sectional area of other wires should be 0.85 \mbox{mm}^2 . .

MEMO

3. PARTS LIST

RS 1000 PARTS LIST

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1. BORE UP KIT A	3-2	
2. POWER UP KIT B	3-4	
3. HIGH POWER UP KIT C	3- 8	
4. DRY CLUTCH & MISSION KIT D	3–14	
5. SPEED RACE KIT E	3–18	
6. PACKING SET K	3–20	
7. MAINTENANCE PARTS L	3–22	

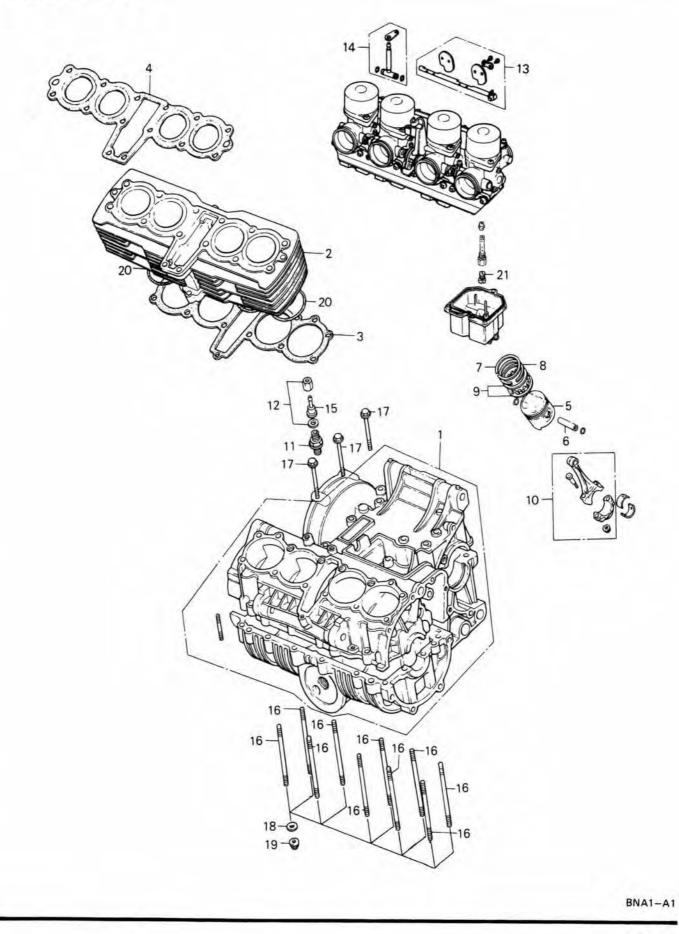
• The tune-up parts for RS 1000 engine are installed in the engine based on CB900Fz.

 This parts list indicates RS 1000 parts exclusively. All other parts not listed herein are the same as CB900Fz.

1. BORE UP KIT A

Ref. No.	Part No. Description		Reqd. No. RS 1000	Remarks
	06120-NA1-000	BORE UP KIT A	1	
1	11000-NA1-000	CRANKCASE SET	1	
2	12100-NA1-000	CYLINDER COMP. (67.8 mm)	1	
3	12193-492-000	GASKET, cylinder (0.3 t)	1	
4	12251-NA1-000	GASKET, cylinder head	1	
5	13101-493-010	PISTON (67.8 mm)	4	
•				
6	13111-493-000	PIN, piston	4	
7	13121-493-000	RING, piston top (67.8 mm)	4	
8	13131-493-000	RING, piston second (67.8 mm)	4	
9	13141-493-000	RING, piston oil (67.8 mm)	4	
10	13210-NA1-000	ROD COMP., connecting	4	
11	15921-300-970	BOLT, oil pressure	1	
12	15922-300-970	NUT, oil pressure	1	
13	16018-425-405	LINK SET B, choke	1	
14	16027-425-671	JOINT SET A, fuel	1	
15	37511-300-970	CONNECTOR, oil pressure pipe	1	
16	90036-492-010	BOLT, stud, 8 x 128.5	10	
17	90047-492-000	BOLT, flange, 7 x 80	3	
18	90442-028-000	WASHER, sealing, 8 mm	10	
19	90443-107-000	NUT, cap, 8 mm	10	
20	91304-287-000	O-RING, 69.8 × 2	4	
21	99102-393-1020	JET, secondary main, #102	4	
	99102-393-1050	JET, secondary main, #105	4	
	99102-393-1080	JET, secondary main, #108	4	

1. BORE UP KIT A



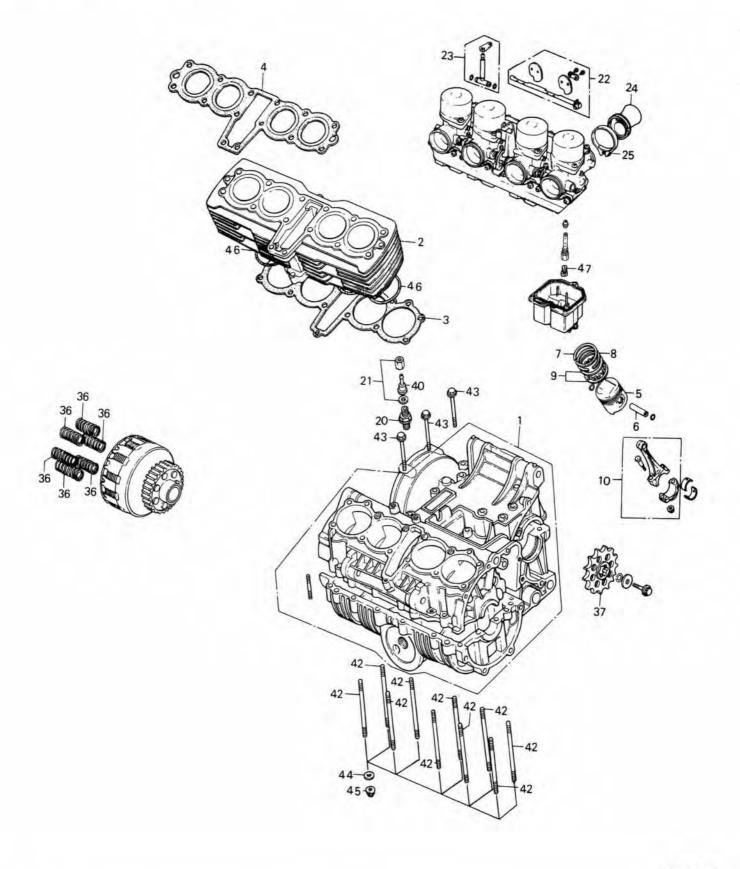
2. POWER UP KIT B

Ref. No.	Part No.	Part No. Description		Remarks (Diverted parts from other kit)
	06140-NA1-000	POWER UP KIT B	1	
1	11000-NA1-000	CRANKCASE SET	1	A
2	12100-NA1-000	CYLINDER COMP. (67.8 mm)	1	A
3	12193-492-000	GASKET, cylinder (0.3 t)	1	A
4	12251-NA1-000	GASKET, cylinder head	1	A
5	13101-493-010	PISTON (67.8 mm)	4	A
6	13111-493-000	PIN, piston	4	A
7	13121-493-000	RING, piston top (67.8 mm)	4	A
8	13131-493-000	RING, piston second (67.8 mm)	4	A
9	13141-493-000	RING, piston oil (67.8 mm)	4	A
10	13210-NA1-000	ROD COMP., connecting	4	A
11	13610-NA1-000	CHAIN, primary (1 inch)	1	
12	14100-492-000	CAMSHAFT, inlet	1	
13	14200-492-000	CAMSHAFT, exhaust	1	
14	14401-NA1-000	CHAIN A, cam	1	
15	14402-493-000	CHAIN B, cam	1	
16	14751-492-000	SPRING, valve outer	16	
17	14761-492-000	SPRING, valve inner	16	
18	14775-422-000	SEAT, outer valve spring	16	
19	14776-422-000	SEAT, inner valve spring	16	
20	15921-300-970	BOLT, oil pressure	1	Α
21	15922-300-970	NUT, oil pressure	1	A
22	16018-425-405	LINK SET B, choke	1	A
23	16027-425-671	JOINT SET A, fuel	1	A
24	16216-NA1-000	FUNNEL, air	4	
25	17256-429-000	BAND, insulator	4	

2. POWER UP KIT B

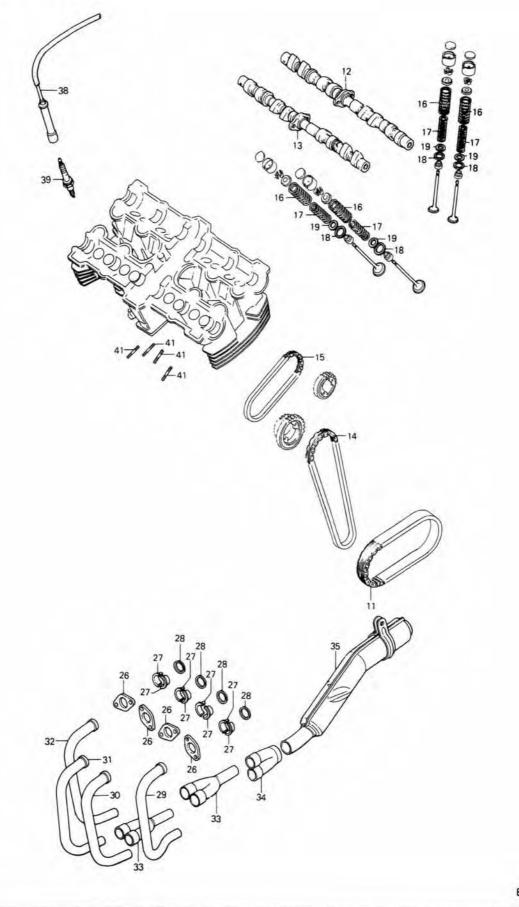
Ref. No.	Part No.	Description	Reqd. No. RS 1000	Remarks (Diverted parts from other kit)
26	18231-492-000	JOINT, exhaust pipe	4	
27	18233-425-000	COLLAR, exhaust pipe joint	8	
28	18291-254-000	GASKET, exhaust pipe	4	
29	18310-NA1-000	PIPE 1, exhaust	1	
30	18320-NA1-000	PIPE 2, exhaust	1	
31	18330-NA1-000	PIPE 3, exhaust	1	
32	18340-NA1-000	PIPE 4, exhaust	1	
33	18345-NA1-000	JOINT A, exhaust pipe	2	
34	18346-NA1-000	JOINT B, exhaust pipe	1	
35	18350-492-000	MUFFLER SET	1	
36	22401-493-000	SPRING, clutch	6	
37	23803-NA1-000	SPROCKET, drive (18T)	1	
38	30751-492-000	CORD, high tension	4	
39	31900-492-110	PLUG, spark, R2097 #11	4	
40	37511-300-970	CONNECTOR, oil pressure pipe	1	A
41	90035-425-000	BOLT, stud, 8 x 55	8	
42	90036-492-010	BOLT, stud, 8 x 128.5	10	A
43	90047-492-000	BOLT, flange, 7 x 80	3	A
44	90442-028-000	WASHER, sealing, 8 mm	10	A
45	90443-107-000	NUT, cap, 8 mm	10	A
46	91304-287-000	O-RING, 69.8 × 2	4	
47	99102-393-1250	JET, secondary main, #125	4	
	99102-393-1300	JET, secondary main, #130	4	
	99102-393-1350	JET, secondary main, #135	4	
	99102-393-1400	JET, secondary main, #140	4	

2. POWER UP KIT B (1)



BNA1-B1

2. POWER UP KIT B (2)



3. HIGH POWER UP KIT C

Ref. No.	Part No.	Description	Regd. No. RS 1000	Remarks (Diverted parts from other kit)
1	06150-NA1-000	HIGH POWER UP KIT C	1	
1	11000-NA1-000	CRANKCASE SET	1	А, В
2	11210-492-000	PAN, oil	1	
3	11351-492-000	COVER, lift side	1	
4	11643-492-000	COVER, drive chain	1	
5	12100-NA1-000	CYLINDER COMP. (67.8 mm)	1	А, В
6	12193-492-000	GASKET, cylinder (0.3 t)	1	А, В
7	12251-NA1-000	GASKET, cylinder head	1	А, В
8	13000-NA1-000	CRANKSHAFT COMP. (1-1/4 inch)	1	
9	13101-493-010	PISTON (67.8 mm)	4	А, В
10	13111-493-000	PIN, piston	4	А, В
11	13121-493-000	RING, piston top (67.8 mm)	4	А, В
12	13131-493-000	RING, piston second (67.8 mm)	4	А, В
13	13141-493-000	RING, piston oil (67.8 mm)	4	А, В
14	13210-NA1-000	ROD COMP., connecting	4	А, В
15	13610-NA1-900	CHAIN, primary (1-1/4 inch)	1	
16	14100-492-000	CAMSHAFT, inlet	1	в
17	14200-492-000	CAMSHAFT, exhaust	1	В
18	14401-NA1-000	CHAIN A, cam	1	В
19	14402-493-000	CHAIN B, cam	1	В
20	14751-492-000	SPRING, valve outer	16	В
21	14761-492-000	SPRING, valve inner	16	в
22	14775-422-000	SEAT, outer valve spring	16	В
23	14776-422-000	SEAT, inner valve spring	16	В
24	15100-492-000	BODY COMP., oil pump	1	
25	15136-492-000	GASKET, left side cover	1	
26	15150-300-000	SCREEN, oil strainer	1	
27	15153-492-000	BODY, oil screen	1	
28	15232-492-000	SPRING, relief valve	1	
	15311-492-000	BODY, oil path	1	
	15367-492-000	BODY, oil joint	2	

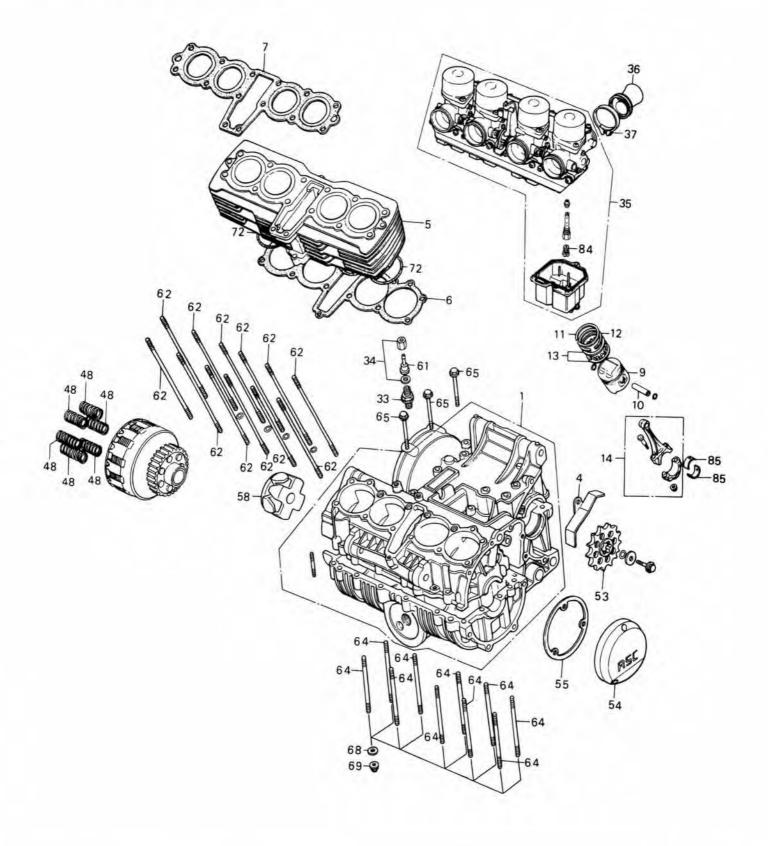
3. HIGH POWER UP KIT C

Ref. No.	Part No.	Description	Regd. No.	Remarks
			RS 1000	(Diverted parts from other kit)
31	15512-492-000	O-RING, 21 x 3	2	
32	15515-492-000	JOINT, oil hose	2	
33	15921-300-970	BOLT, oil pressure	1	А, В
34	15922-300-970	NUT, oil pressure	1	А, В
35	16100-NA1-000	CARBURETOR ASSY.	1	
36	16216-NA1-000	FUNNEL, air	4	в -
37	17256-429-000	BAND, insulator	4	В
38	18231-492-000	JOINT, exhaust pipe	4	В
39	18233-425-000	COLLAR, exhaust pipe joint	8	В
40	18291-254-000	GASKET, exhaust pipe	4	В
41	18310-492-000	PIPE 1, exhaust	1	В
42	18320-492-000	PIPE 2, exhaust	1	В
43	18330-492-000	PIPE 3, exhaust	1	В
44	18340-492-000	PIPE 4, exhaust	1	В
45	18345-NA1-000	JOINT A, exhaust pipe	2	В
46	18346-NA1-000	JOINT B, exhaust pipe	1	В
47	18350-492-000	MUFFLER SET	1	В
48	22401-493-000	SPRING, clutch	6	В
49	23112-492-300	SPROCKET, primary (1-1/4 inch)	1	
50	23160-NA1-000	BASE COMP., primary tensioner	1	
51	23175-492-000	PIPE COMP., primary tensioner	1	
52	23180-492-000	BODY COMP., tensioner valve	1	
53	23803-NA1-000	SPROCKET, drive (18T)	1	В
54	30371-NA1-000	COVER, point	1	
55	30372-NA1-000	GASKET, point cover	1	
56	30751-492-000	CORD, high tension	4	в
57	31900-492-110	PLUG, spark, R2097 #11	4	В
58	31110-492-000	ROTOR COMP.	1	
59	37240-300-970	TACHOMETER ASSY.	1	
60	37260-300-970	CABLE ASSY., tachometer	1	

3. HIGH POWER UP KIT C

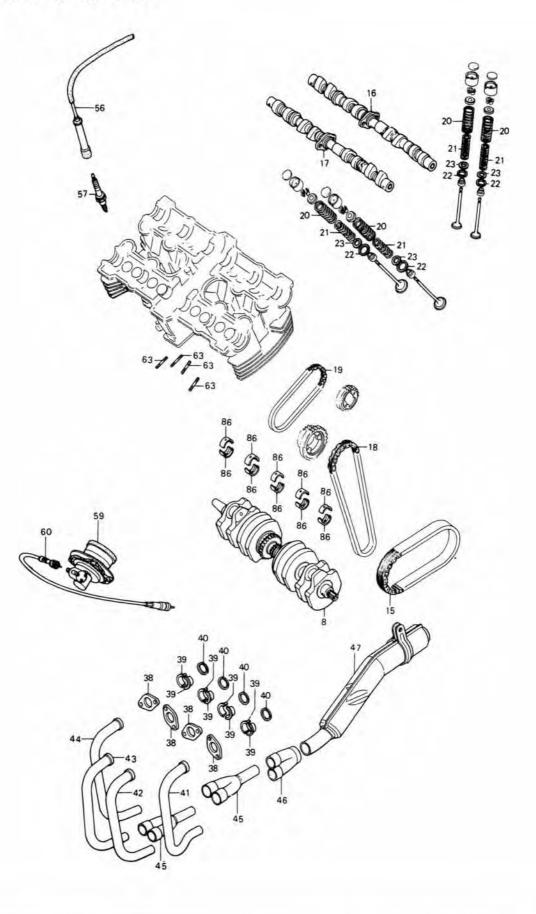
Ref. No.	Part No.	Description	Reqd. No. RS 1000	Remarks (Diverted parts from other kit)
61	37511-300-970	CONNECTOR, oil pressure pipe	1	А, В
62	90031-NA1-000	BOLT, stud, 10 mm	12	
63	90035-425-000	BOLT, stud, 8 x 55	8	
64	90036-492-010	BOLT, stud, 8 x 128.5	10	А, В
65	90047-492-000	BOLT, flange, 7 x 80	3	А, В
66	90066-492-000	BOLT, flange, 6 x 69	3	
67	90067-492-000	BOLT, flange, 6 x 76	1	
68	90442-028-000	WASHER, sealing 18 mm	10	А, В
69	90443-107-000	NUT, cap, 8 mm	10	А, В
70	90483-492-000	WASHER, 18 mm	1	
71	90702-492-000	PIN, dowel, 18 x 49	1	
72	91304-287-000	O-RING, 69.8 x 2	4	А, В
73	91304-612-000	O-RING, 20 x 1.8	1	
74	91305-492-000	O-RING, 17 x 3	2	
75	92800-12000	BOLT, drain, 12 mm	1	
76	94109-12000	WASHER, drain, 12 mm	1	
77	94301-08140	PIN A, dowel, 8 x 14	2	
78	95700-06018-00	BOLT, flange, 6 x 18	4	
79	95700-0602200	BOLT, flange, 6 x 22	14	
80	95700-06025-00	BOLT, flange, 6 x 25	1	
81	95700-06032-00	BOLT, flange, 6 x 32	5	
82	95700-06045-00	BOLT, flange, 6 x 45	6	
83	95700-06055-00	BOLT, flange, 6 x 55	2	
84	99102-393-1250	JET, secondary main, #125	4	В
	99102-393-1300	JET, secondary main, #130	4	В
	99102-393-1350	JET, secondary main, #135	4	В
	99102-393-1400	JET, secondary main, #140	4	В
85		BEARING, connecting rod	8	
86		BEARING, crankshaft	10	

3. HIGH POWER UP KIT C (1)

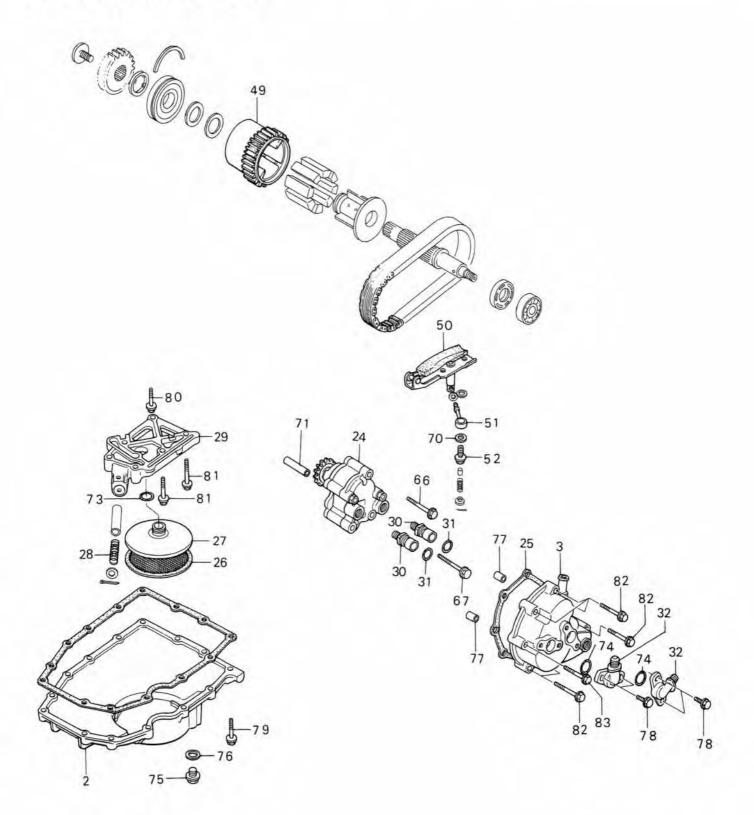


BNA1-C1

3. HIGH POWER UP KIT C (2)



3. HIGH POWER UP KIT C (3)



B492-C3

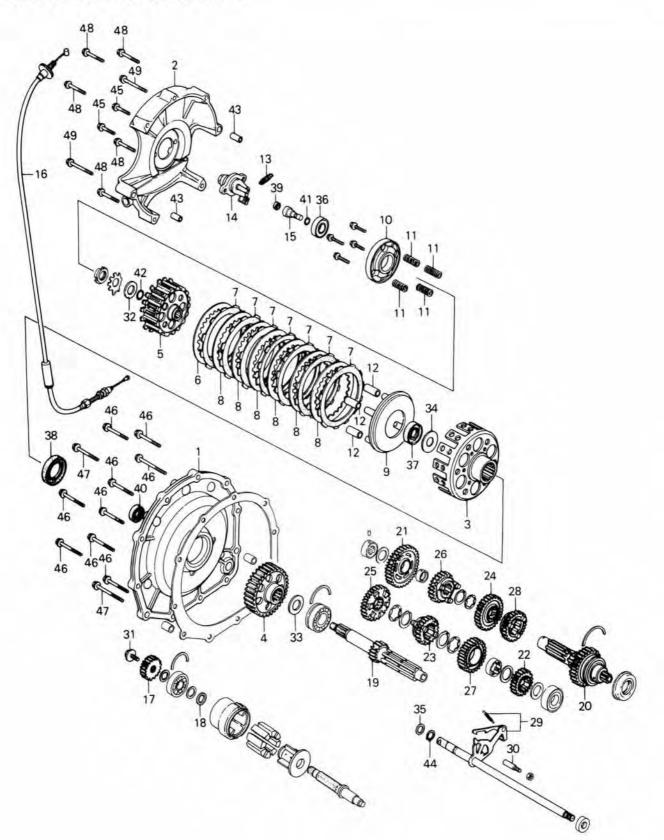
4. DRY CLUTCH & MISSION KIT D

Ref. No.	Part No.	Description	Reqd. No. RS 1000	Remarks
	06220-492-000	DRY CLUTCH & MISSION KIT D	1	
1	11342-492-010	COVER, right crankcase	1	
2	11343-492-010	COVER, clutch	1	
3	22101-492-000	OUTER, clutch	1	
4	22110-492-000	GEAR COMP., secondary driven	1	
5	22120-492-000	CENTER, clutch	1	
6	22202-492-000	PLATE A, clutch	1	
7	22203-492-000	DISK, clutch friction	7	
8	22322-492-000	PLATE B, clutch	6	
9	22350-492-000	PLATE, clutch pressure	1	
10	22360-492-020	PLATE, clutch lifter	1	
11	22401-492-000	SPRING, clutch	4	
12	22405-492-000	COLLAR, plate boss	4	
13	22815-300-000	SPRING, clutch lever	1	
14	22846-492-000	THREAD ASSY., lifter	1	
15	22847-492-010	PIECE, clutch lifter	1	
16	22870-492-010	CABLE COMP., clutch	1	
17	23103-492-000	GEAR, primary drive	1	
18	23116-492-300	COLLAR, primary sprocket	1	
19	23211-492-010	MAINSHAFT, transmission (18T)	1	
20	23220-492-010	COUNTER SHAFT, transmission (34T)	1	
21	23411-492-010	GEAR, countershaft low (37T)	1	
22	23431-492-010	GEAR, mainshaft second (22T)	1	
23	23451-492-010	GEAR, mainshaft third (25T)	1	
24	23460-492-010	GEAR COMP., countershaft third (31T)	1	
25	23470-492-010	GEAR COMP., mainshaft fourth (26T)	1	
26	23481-492-010	GEAR, countershaft fourth (28T)	1	
27	23491-492-010	GEAR, mainshaft fifth (28T)	1	
28	23501-492-010	GEAR, countershaft fifth (27T)	1	
29	24610-492-000	SPINDLE COMP., gearshift	1	
30	24652-492-000	PIN, gearshift return spring	1	

4. DRY CLUTCH & MISSION KIT D

Ref. No.	Part No.	Description	Reqd. No. RS 1000	Remarks
31	90013-492-000	BOLT, flange, 12 x 21	1	
32	90457-492-000	WASHER, thrust, 16 mm	1	
33	90458-492-000	WASHER, thrust, 25 x 38 x 2	1	
34	90459-492-000	WASHER, thrust, 30 mm	1	
35	90462-492-000	WASHER, 12.2 mm	1	
36	91009-492-020	BEARING, radial ball, 6003	1	
37	91203-492-000	OIL SEAL, 35 x 50 x 8	1	
38	91204-492-000	OIL SEAL, 46 x 65 x 8	1	
39	91206-492-010	OIL SEAL, 7 x 16 x 4	1	
40	91209-612-003	OIL SEAL, 12 x 22 x 7	1	
41	91301-283-005	O-RING, 5 x 2.4	1	
42	91302-492-000	O-RING, 15.5 x 4	1	
43	94301-08140	PIN A, dowel, 8 x 14	2	
44	94510-12000	CIR CLIP, external, 12 mm	1	
45	95700-06016-00	BOLT, flange, 6 x 16	2	
46	95700-06025-00	BOLT, flange, 6 x 25	9	
47	95700-06032-00	BOLT, flange, 6 x 32	2	
48	95700-06040-00	BOLT, flange, 6 x 40	5	
49	95700-06045-00	BOLT, flange, 6 x 45	2	

4. DRY CLUTCH & MISSION KIT D



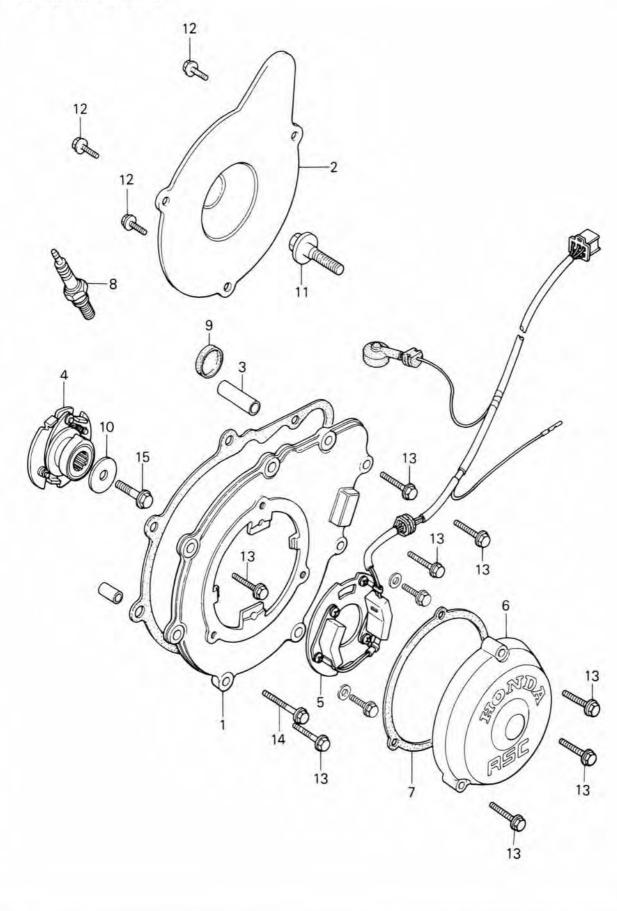
PARTS	LIST
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МЕМО

5. SPEED RACE KIT E

Ref. No.	Part No.	Description	Reqd. No. RS 1000	Remarks
	06330-NA1-000	SPEED RACE KIT E	1	
1	11341-NA1-900	COVER, left crankcase	1	
2	11631-NA1-000	COVER, dynamo	1	
3	28106-NA1-000	SHAFT, starter reduction gear	1	
4	30220-NA1-900	ADVANCER ASSY., spark	1	
5	30300-NA1-900	GENERATOR ASSY., pulse	1	
6	30371-NA1-900	COVER, point	1	
7	30372-NA1-900	GASKET, point cover	1	
8	31900-493-110	PLUG, spark, R2098 #11	4	
9	90001-493-000	PLUG, seal, 30 mm	1	
10	90001-NA1-000	WASHER, plain	1	
11	90023-425-000	BOLT, flange, 12 × 40	(1)	For timing adjust
12	95700-06014-00	BOLT, flange, 6 x 14	3	
13	95700-06025-00	BOLT, flange, 6 x 25	10	
14	95700-06040-00	BOLT, flange, 6 x 40	1	
15	95800-10025-08	BOLT, flange, 10 x 25	1	

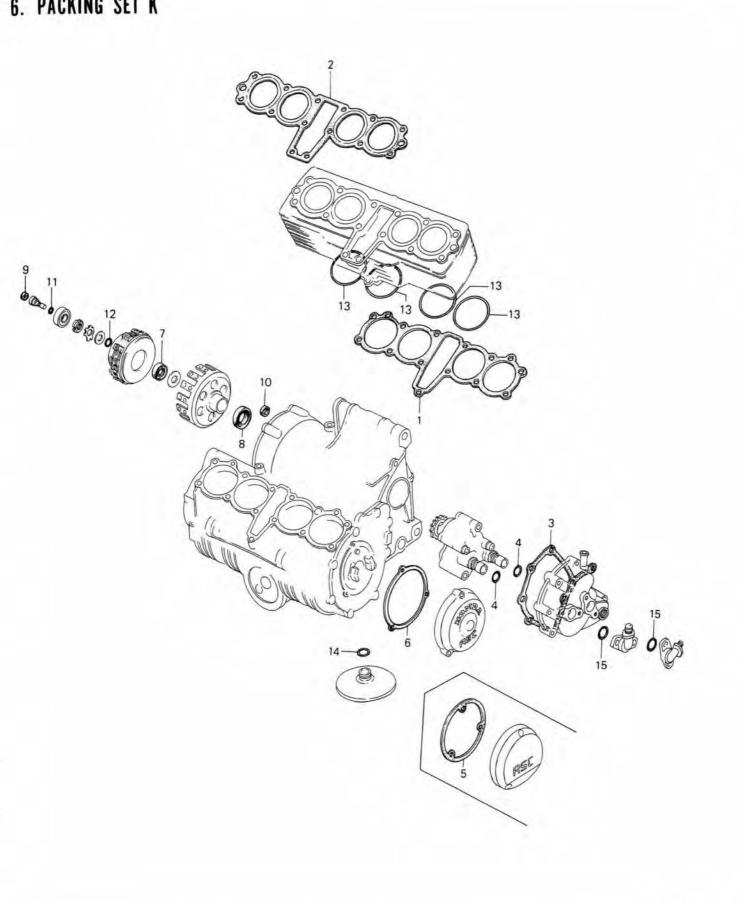
5. SPEED RACE KIT E



B492-E1

6. PACKING SET K

Ref. No.	Part No.	Description	Reqd. No. RS 1000	Remarks (Located position)
	06190-NA1-000	PACKING SET K	1	
1	12191-492-000	GASKET, cylinder (0.5 t)	1	
	12192-492-000	GASKET, cylinder (0.4 t)	1	
	12193-492-000	GASKET, cylinder (0.3 t)	1	
2	12251-NA1-000	GASKET, cylinder head	1	
3	15136-492-000	GASKET, left side cover	1	
4	15512-492-000	O-RING, 21 x 3	2	Oil hose joint
5	30372-NA1-000	GASKET, point cover	1	
6	30372-NA1-900	GASKET, point cover	1	For speed race
7	91203-492-000	OIL SEAL, 35 x 50 x 8	1	Clutch center
8	91204-492-000	OIL SEAL, 46 × 65 × 8	1	R. cover
9	91206-492-010	OIL SEAL, 7 x 16 x 4	1	Clutch lifter
10	91209-612-003	OIL SEAL, 12 × 22 × 7	1	R. cover
11	91301-283-005	O-RING, 5 x 2.4	1	Clutch lifter
12	91302-492-000	O-RING, 15.5 x 4	1	Mainshaft
13	91304-287-000	O-RING, 69.8 × 2	4	Cylinder
14	91304-612-000	O-RING, 20 x 1.8	1	Oil screen body
15	91305-492-000	O-RING, 17 x 3	2	Oil joint bolt



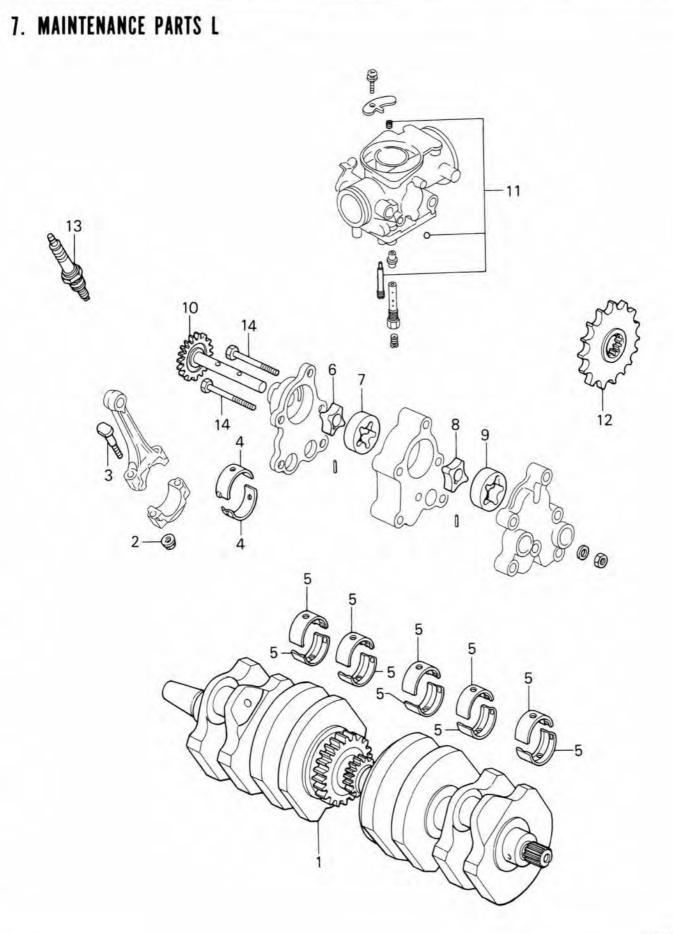
BNA1-K1

6. PACKING SET K

PARTS LIST

7. MAINTENANCE PARTS L

Ref. No.	Part No.	Description	Reqd. No. RS 1000	Remarks
		MAINTENANCE PARTS L		
1	13000-NA1-900	CRANKSHAFT (1-1/4 inch)	1	
2	13205-634-010	NUT, connecting rod	8	
3	13213-422-004	BOLT, connecting, rod	8	
4	13215-492-000	BEARING A, connecting rod	8	Red
	13216-492-000	BEARING B, connecting rod	8	Yellow
	13217-492-000	BEARING C, connecting rod	8	Green
	13218-492-000	BEARING D, connecting rod	8	Blue
	13219-492-000	BEARING E, connecting rod	8	Purple
5	13315-492-000	BEARING A, crankshaft	10	Red
	13316-492-000	BEARING B, crankshaft	10	Yellow
	13317-492-000	BEARING C, crankshaft	10	Green
	13318-492-000	BEARING D, crankshaft	10	Blue
	13319-492-000	BEARING E, crankshaft	10	Purple
6	15120-492-000	ROTOR A, inner	1	
7	15122-492-000	ROTOR A, outer	1	
8	15125-492-000	ROTOR B, inner	1	
9	15126-492-000	ROTOR B, outer	1	
10	15130-492-000	GEAR, oil pump	1	
11	16020-NA1-000	PARTS SET, carburetor revision	1	
	Comp	oonent parts		
		/ NOZZLE, main, #0	(4)	
		JET, secondary air	(4)	
		\ BALL, steel, \$\$\phi_2.3 \ldots \ldo	(4)/	
12	23802-NA1-000	SPROCKET, drive (16T)	1	
13	31900-492-120	PLUG, spark, R2097 #12	4	For endurance
	31900-493-120	PLUG, spark, R2098 #12	4	For speed
14	90065-492-000	BOLT, flange, 6 x 65	2	



BNA1-L1

МЕМО

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IGNITION TIMING	4–15
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1. CRANKCASE ASSEMBLY

BEARING SELECTION

CRANKSHAFT BEARING

Install the mainshaft and countershaft into the upper crankcase.

Install the lower crankcase and tighten them evenly in the sequence shown and in 2-3 steps.

NOTE

Apply molybdenum disulfide grease to the thread and head of the ten crankshaft stud bolts, and flange of the ten crankshaft holding nuts.

SPECIFIED TORQUES:

8 mm nuts (Crankshaft): 21-25 N·m (2.1-2.5 kg·m, 15-18 ft·lb) 8 mm bolts (Crankcase): 21-25 N·m, (2.1-2.5 kg·m, 15-18 ft·lb) 6 mm bolts: 10-14 N·m, (1.0-1.4 kg·m, 7-10 ft·lb) 10 mm bolts: 45-50 N·m, (4.5-5.0 kg·m, 33-36 ft·lb)

Measure the crankcase each journals I.D. in X and Y axis.

Measure the crankshaft each journals O.D. Subtract the crankshaft journal O.D. from the crankcase journal I.D.

Select the replacement bearings from the table which will give the correct bearing clearance.

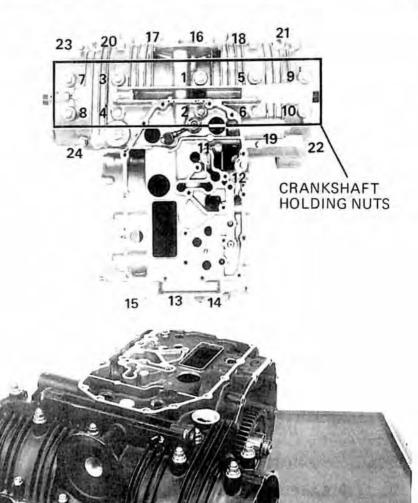
OIL CLEARANCE STANDARD SPECIFICA-

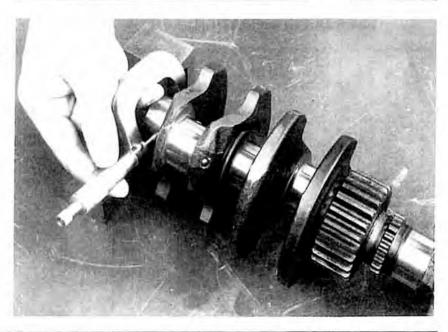
0.030-0.040 mm (0.0012-0.0016 in)

CRANKSHAFT BEARING INSERT THICK-NESS

A (Red):	1.498-1.502 mm
	(0.0590-0.0591 in)
B (Yellow):	1.494-1.498 mm
	(0.0588-0.0590 in)
C (Green):	1.490-1.494 mm
	(0.0587-0.0588 in)
D (Blue):	1.486-1.490 mm
	(0.0585-0.0587 in)
E (Purple):	1.502-1.506 mm
	(0.0591-0.0593 in)

Separate the crankcase. Install the bearings into the upper and lower crankcase.





Reinstall the crankcase and tighten the nuts and bolts to the specified torque. Measure the crankcase each journal I.D.

Subtract the crankshaft journal O.D. from the crankcase journal I.D.. If journal bearing clearance is beyond the

tolerance, select the replacement bearings.

CONNECTING ROD BEARING

Install the connecting rod bearing cap to the rod.

NOTE

Align the code on the connecting rod with the code on the cap.

Tighten the connecting rod bearing cap bolts.

TORQUE: 3.6 kg-m (26 ft-lb)

Measure the connecting rod I.D. and crank pin O.D.

Subtract the crankpin O.D. from the connecting rod I.D.

Select the replacement bearing which will give the correct crankpin bearing clearance.

OIL CLEARANCE STANDARD SPECIFI-CATION:

0.035-0.045 mm (0.0014-0.0018 in)

BEARING INSERT THICKNESS

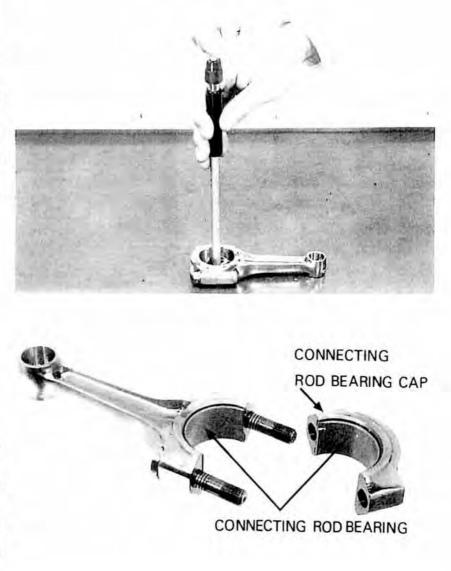
A (Red):	1.498-1.502 mm	
	(0.0590-0.0591 in)	
B (Yellow):	1.494-1.498 mm	
	(0.0588-0.0590 in)	
C (Green):	1.490-1.494 mm	
	(0.0587-0.0588 in)	
D (Blue):	1.486-1.490 mm	
	(0.0585-0.0587 in)	
E (Purple):	1.502-1.506 mm	
	(0.0591-0.0593 in)	

Remove the connecting rod bearing cap. Install the bearings into the upper and lower crankcase.

Reinstall the connecting rod bearing cap and tighten the nuts to the specified torque. Measure the connecting rod I.D. and crankpin

O.D. Subtract the crankpin O.D. from the connecting rod I.D..

If the crankpin bearing clearance is beyond the tolerance, select the replacement bearings.



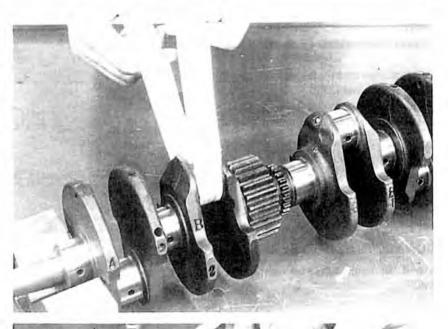
CONNECTING ROD INSTALLATION

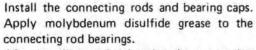
Grind the crankpins and journals with chrome oxide.

Install the crankshaft bearings into the upper and lower crankcase.

Apply molybdenum disulfide grease to the upper and lower crankshaft bearings.

Install the crankshaft with the cam chain and primary chain.

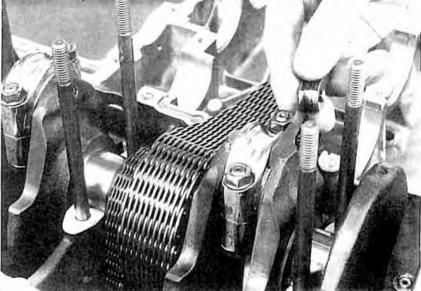




After installing and tightening the connecting rod, check that the rod moves freely without binding.

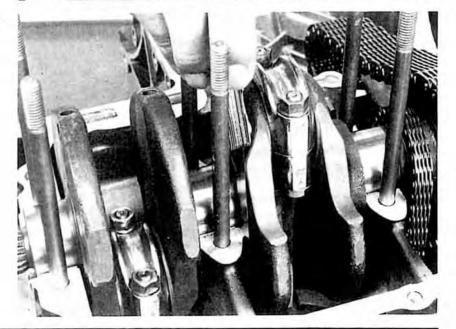
Check the connecting rod side clearance.

STANDARD SPECIFICATIONS: 0.10-0.20 mm (0.0039-0.0079 in)



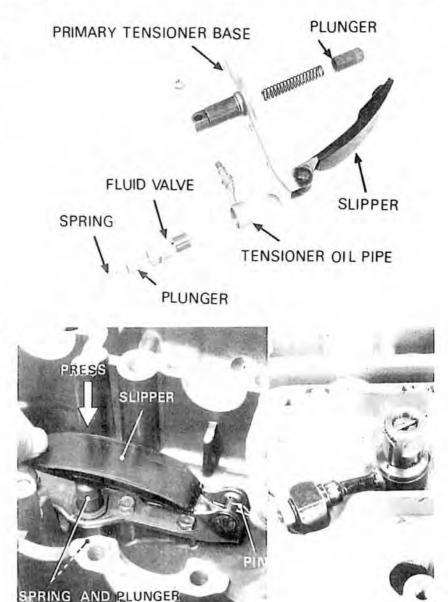
Check the crankshaft-to-upper case side clearance at No. 2 journal.

STANDARD SPECIFICATIONS: 0.10-0.30 mm (0.0039-0.0118 in)



PRIMARY CHAIN TENSIONER AND OIL STRAINER INSTALLATION

Install the slipper base into lower case. Tighten the bolts securely. Insert the spring and plunger. Press the slipper down and install the pin.



After installing the plunger, spring, washer and pin into the fluid valve, install the fluid valve assembly into the tensioner oil pipe. Tighten the nut.

TRANSMISSION AND SHIFT DRUM, SHIFT FORK INSTALLATION

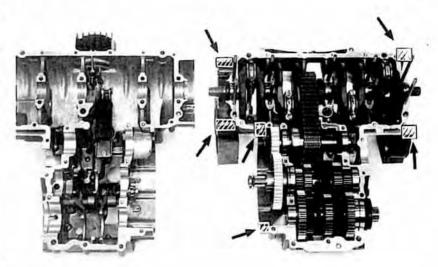
Install the primary, main and counter shaft assembly into the upper crankcase. Install the shift fork shaft, shift fork and shift

drum into the lower crankcase. Clean the crankcase mating surfaces. Apply liquid sealant to the mating surface of the lower crankcase.

CAUTION

- Do not apply sealant to the area near the crankshaft bearings.
- Do not let sealant fall into the crankcase.

For the upper crankcase, apply liquid sealant only where shown.



Assemble the crankcase halves, aligning the shift fork claws with gears. Tighten the bolts to the specified torque

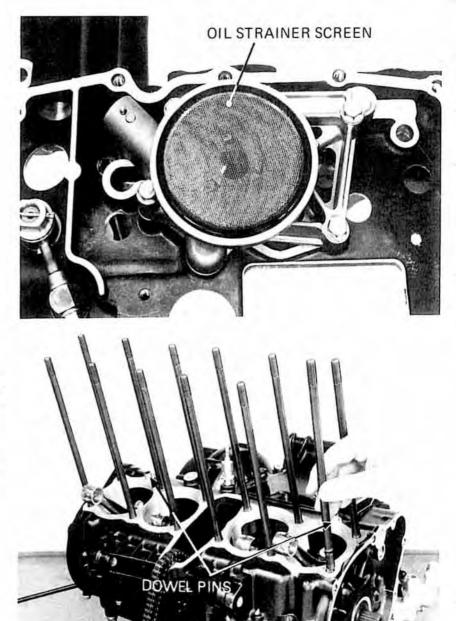
valves (see page 4-2).

NOTE

- Make sure that the plain washers are under the flange of the ten crankshaft holding nut.
- Apply molybdenum disulfide grease to the thread and head of the ten crankshaft stud bolts and flange of the ten crankshaft holding nuts.

Tighten the upper crankcase bolts to the specified torque.

Install the oil strainer into lower crankcase. Install a new gasket and the oil pan.



2. PISTON INSTALLATION

Install the piston rings. Space the piston ring end gaps 120 degrees apart.

NOTE

Do not align the gaps in the oil rings.

Install the dowel pins. Install the stud bolts.

Install the cylinder gasket

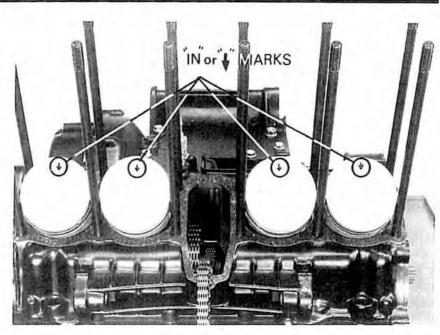
NOTE

Use a 0.3 mm gasket. If the compression is high, use 0.4 or 0.5 mm gasket.

Apply molybdenum disulfide grease to the connecting rod small ends. Install the piston, piston pins and clips.

NOTE

- Position the mark "[↑]" or "in" on the
- piston to the intake side.
- · Do not allow piston pin clips to fall
- into the crankcase.

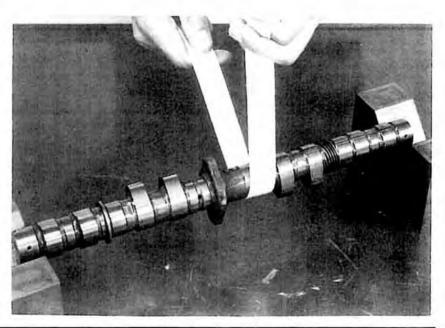


Install the cam chain tensioner. Install the cylinder and cylinder head.

For cylinder head assembly, refer to CB900Fz Shop Manual.

3. CAMSHAFT INSTALLATION

Grind each camshaft journal with chrome oxide.



Attach a cylinder gauge to the #1 cylinder spark plug hole with the special tools.

1.4	-	-	-	
ч	n	T	E	
ч	U		-	

Use Honda special CYLINDER GAUGE (P/N 07342-0010000).

Rotate the crankshaft clockwise to bring the #1, 4 cylinders at the Top Dead Center.

SPECIAL TOOLS:

Top Gauge Attachment: 00004–492–RSC Meter Holder: 00005–492–RSC

Turn both camshafts so that the punch marks on the intake and exhaust cam sprockets are flush with the cylinder head surface as shown. Make sure that the intake and exhaust cam lobes of the #1 cylinder are horizontal on the spark plug side.

After installing the camshaft, adjust the cam chain tensioner as follows:

Loosen the front cam chain tensioner lock nut.

Loosen the front cam chain tensioner bolt 1/2 turn while rotating the crankshaft clockwise. Tighten the bolt and lock nut.

Loosen the rear cam chain tensioner lock nut 1/2 turn while rotating the crankshaft clockwise.

Tighten the lock nut.

NOTE

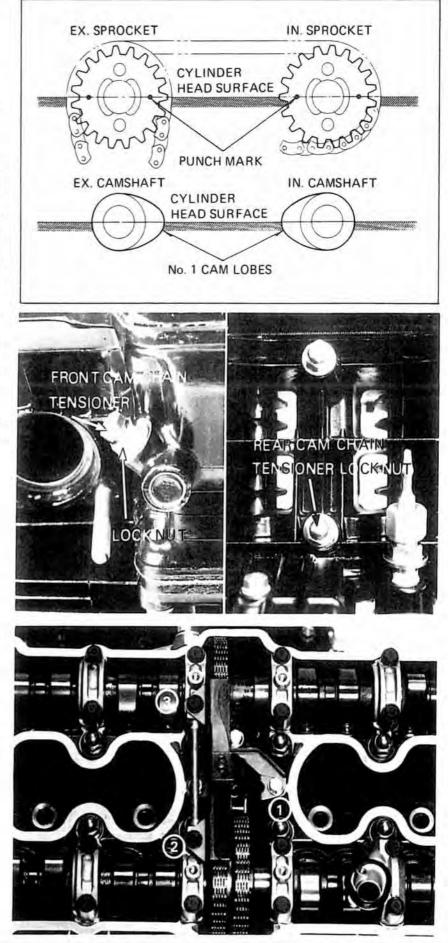
The tensioner will automatically position itself to provide the correct tension when the lock nut or bolt is loosened.

Install the exhaust cam chain guide attaching plate and oil pool caps.

Install the oil line and cam chain guide.

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

Fill the oil pockets in the head with oil so that the cam lobes are submerged. Adjust the valve clearance.



4. VALVE TIMING

Attach a cylinder gauge to the #1 or #4 cylinder spark plug hole with the special tools.

NOTE

Use Honda special CYLINDER GAUGE (P/N 07342-0010000).

Rotate the crankshaft to bring the #1, #4 piston at Top Dead Center.

Set the needle of the cylinder gauge at zero. Remove the #4 cylinder exhaust camshaft holder.

Attach the special tool.

Insert the valve lifter into hole in the tool on the exhaust side upside down.

Attach the Top Gauge Attachment to the dial gauge with the gauge hand slightly resting against the valve lifter.

TOP GAUGE ATTACHMENT

NO. 00005-492-RSC

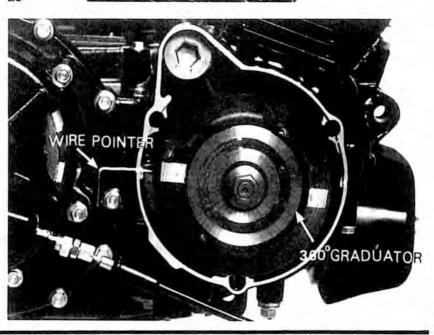
NO. 2000 - 492 - RSC

TOP GAUGE ATTACHMENT NO. 00004-492-RSC

Loosely attach a 360-degree graduator to the end of the right crankshaft as shown. Bolt a piece of wire to the crankcase where shown as a pointer.

After making sure that the #4 piston is at the Top Dead Center of the compression stroke, rotate the graduator to align the zero graduation with the wire pointer. Tighten the graduator.





Rotate the crankshaft clockwise. The needle of the indicator should register 1.15 mm when the correct timing is indicated. on the graduator just beneath the pointer.

NOTE

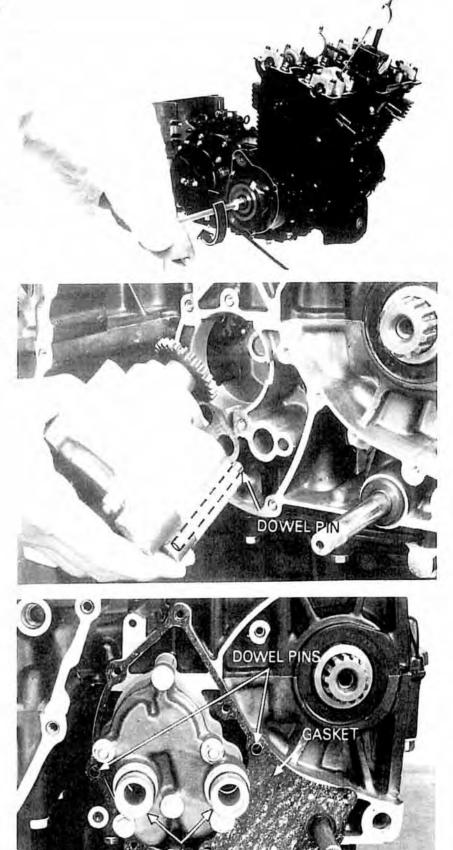
								1 mm
valve	lift	and	0.	15	mm	valve	clea	arance.

Intake valve	(Opens)	35° BTDC
	(Closes)	40° ABDC
Exhaust valve	(Opens)	50° BBDC
	(Closes)	25° ATDC

Repeat the same procedure on the intake side.

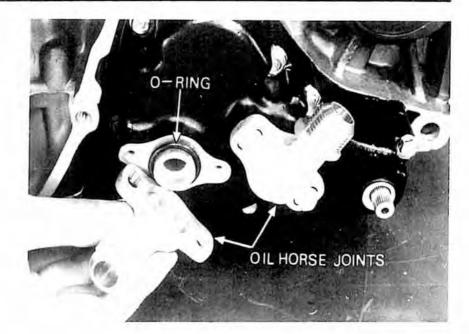
5. OIL PUMP INSTALLATION

Install the oil pump assembly, aligning the oil pump dowel pin with the crankcase dowel pin hole.

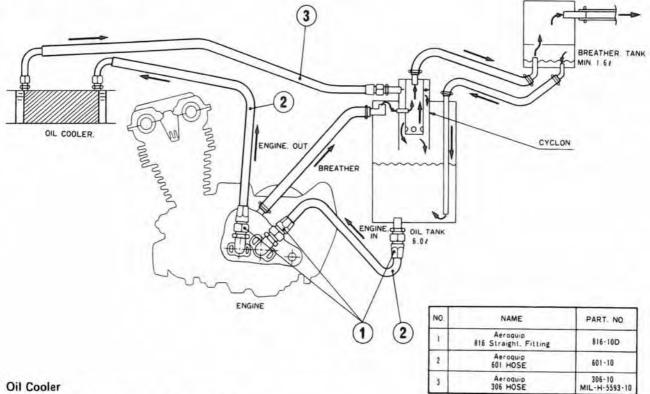


Install a new gasket and the dowel pins. Install the oil joint bolts.

Install the oil pump cover. Install the O-rings and oil horse joints.



OIL COOLING SYSTEM



· Oil Cooler

The oil cooler should at least be SERCK ARO 9809 (228.6 x 13-tube) in capacity.

NOTE

In no cases should the oil temperature be allowed to exceed 115°C.

The minimum inside diameter of each oil passage should be 12 mm.

Use oil pump joints whose thread diameter is 7/8"-14-pitch (22.2 mm x 1.84 pitch).

Oil Pressure Gauge

Use SMITH OIL PRESSURE GAUGE (6.5 kg/cm², 92.43 lb/in²).

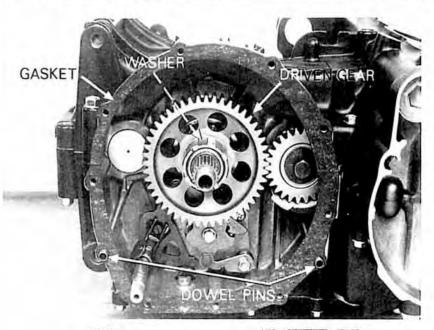
CAUTION

Stop the engine and isolate the cause immediately if the oil pressure falls below 4 kg/cm^2 (56.88 lb/in²).

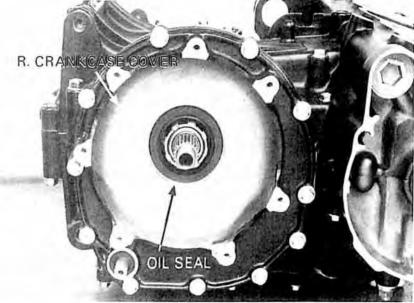
6. CLUTCH INSTALLATION

Install the washer and driven gear.

Install the dowel pins and a new gasket.



Drive the oil seal in the R. crankcase cover. Install the R. crankcase cover.



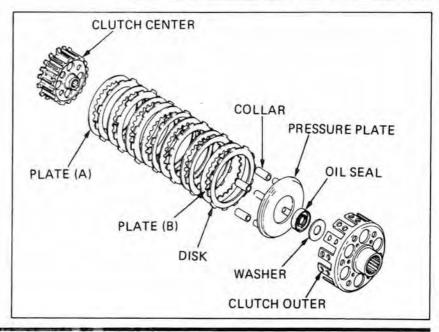
Install the following parts in the order listed. • Washer

- · Clutch outer, after driving the oil seal in.
- · Pressure plate and collar.
- Disks (7), and plates B (6) alternately.
- Plate A (1).

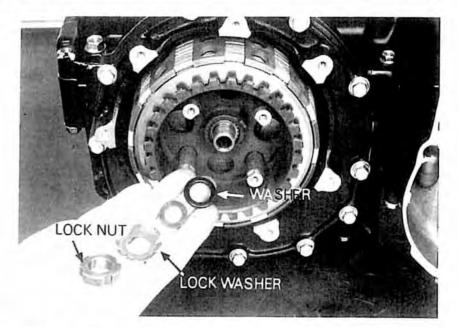
Clutch center.

CAUTION

Do not apply oil or grease to the disks and plates.

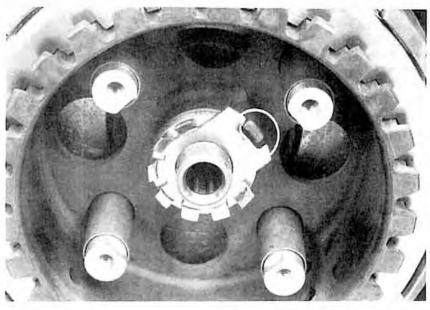


Install the O-ring and washer.



Position the lock washer as shown and install it.

Tighten the lock nut. TORQUE: 40 N·m (4.0 kg-m, 29 ft-lb) Bend the lock washer tab-up.

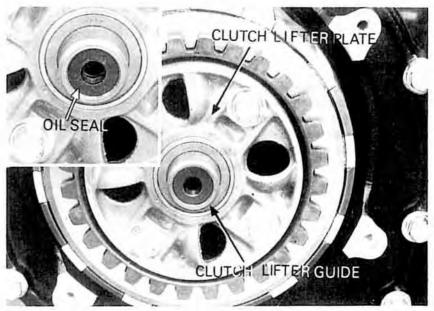


Drive the oil seal in the clutch lifter guide. Install the release bearing and clutch lifter guide into the clutch lifter plate.

NOTE

Apply grease to the inside of oil seal thoroughly.

Tighten the bolts in a criss cross patern in two or more steps.



Install the clutch lifter thread assy into the cover.

Install the clutch lever spring. Connect the clutch cable.

CLUTCH

CLUTCH CABLE

CLUTCH LEVER SPRING

Install the clutch cover. Adjust the clutch as follows.

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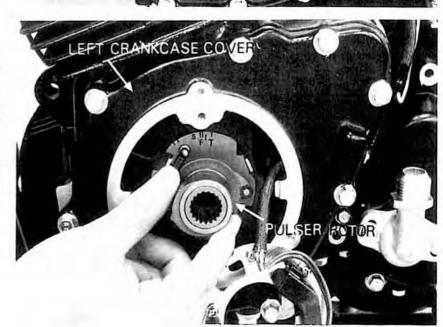
Loosen the lock nut, then turn the adjusting screw clockwise until a slight resistance is felt. From this position, loosen the clutch adjusting screw counterclockwise 1-1/2 turn, and then tighten the lock nut.

7. IGNITION TIMING

PULSE ROTOR/GENERATOR INSTAL-LATION

Attach a dial gauge to the #1 cylinder with the special tool. Bring the #1 piston at the Top Dead Center of the compression stroke. Install the left crankcase cover.

Attach the pulser rotor to the left crankshaft with the #1 and #4 "T" marks are right up on the rotor shaft.



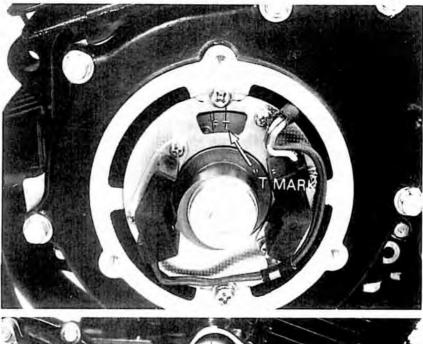
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POINT GAP

Install the pulser generator rotor with the "T" mark on the governor at the center of the window in the base plate.

Align the lug on the rotor with the lug on the generator. Tighten the screws securely. Measure the point gap.

POINT GAP: 0.4-0.5 mm (0.0157-0.0197 in)



IGNITION TIMING

Attach a graduator and wire pointer to the right crankshaft and crankcase (Page 4-9).

Place a punch mark on the pulser generator base plate in line with the "T" mark on the governor.

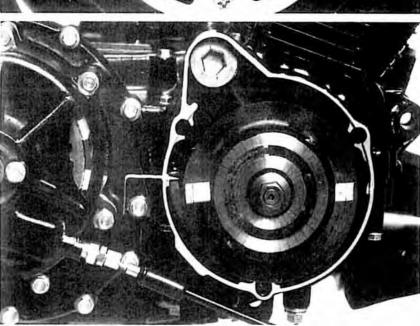
Rotate the crankshaft 7.5° counterclockwise. Check that the "F" mark is aligned with the punch mark on the base plate.

Loosen the base plate screws and align the lug on the pulser generator with the lug on the rotor. Retighten the screws.

Apply the same procedure on the #2 and #3 cylinders.

Reinstall and start the engine.

Using a stroboscopic timing light, check the ignition timing. Timing is correct if the wire pointer on the right crankcase is between 35 and 37° .



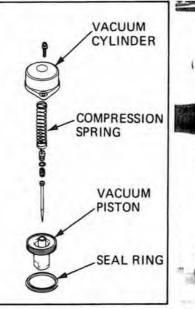
8. CARBURETOR SETTING (FOR A AND B KIT)

AIR JETS

Remove the vacuum cylinders from the carburetor bodies.

Carefully lift the vacuum pistons out with the needle and compression spring. Carefully lift the seal ring off.

Remove the air jet cover.



IR JET COVER



3.

Blind the secondary air jet in either of the following two methods:

1. Remove the secondary air jet with a screwdriver and by screwing a tapping screw as shown.

CAUTION Avoid damaging the carburetor body.

Press # 0 secondary air jet into the vaccant hole. # 0 secondary air jet: No. 16022-NAI-000

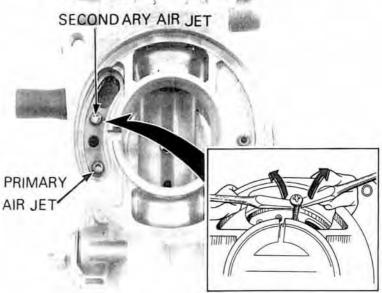
2. If the existing air jet is not removed, blind the hole by soldering. Make sure that the hole of the air jet is plugged securely.

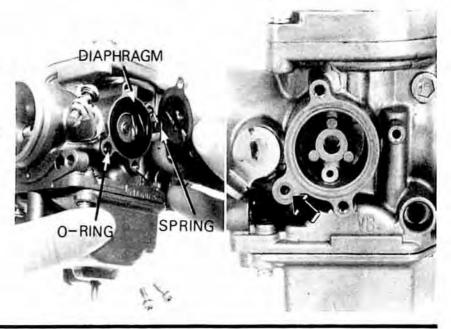
Install the removed parts in reverse order of disassembly.

AIR CUT VALVE

Remove the air cut valve cover and spring. Remove the diaphragm and O-ring. Drive a 2.3 mm steel ball into the air passage in the air cutoff value. 2.3 mm steel ball: No. 16023-NAI-000

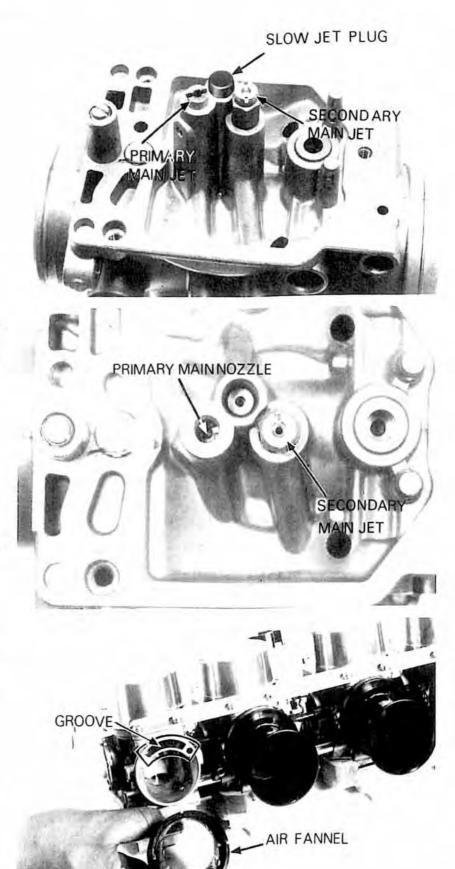
Install the removed parts in reverse order of disassembly.





MAIN JETS

Remove the float chamber body. Remove the float and flat valve. Remove the slow jet plug. Remove the primary main jet.



BOSSES

Remove the primary main nozzle. Install the # 0 primary main nozzle # 0 primary main nozzle: 16021-NAI-000 Remove the secondary main jets and install new jets as follows: KIT A: #102 (all cylinders)

KIT B: # 130 (No. 1, 4 cylinders) # 135 (No. 2, 3 cylinders)

NOTE

The main jets described should above are standard and should be changed according to the actual climatic and racing conditions.

Install the float, float valve and float chamber body.

9. AIR FANNEL INSTALLATION

Install the air fannels with the bosses aligned with the grooves in the carburetors.

10. BREAK-IN OPERATION

The crankshaft and connecting rod bearings should be broken in as follows:

- (1) 3,000 rpm ----- 100 km
- (2) 4,000 rpm ----- 50 km (3) 5,000 rpm ----- 50 km
- (4) 6,000 rpm ----- 50 km
- (5) 7,000 rpm ----- 50 km