

PARTS LIST NO. 564

FOR ROTAX ENGINE

TYPE 504 E-MIL



EDITION 1986

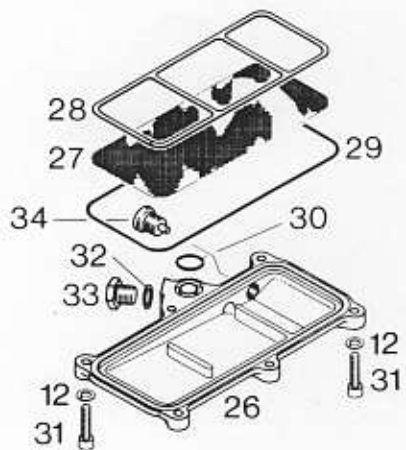
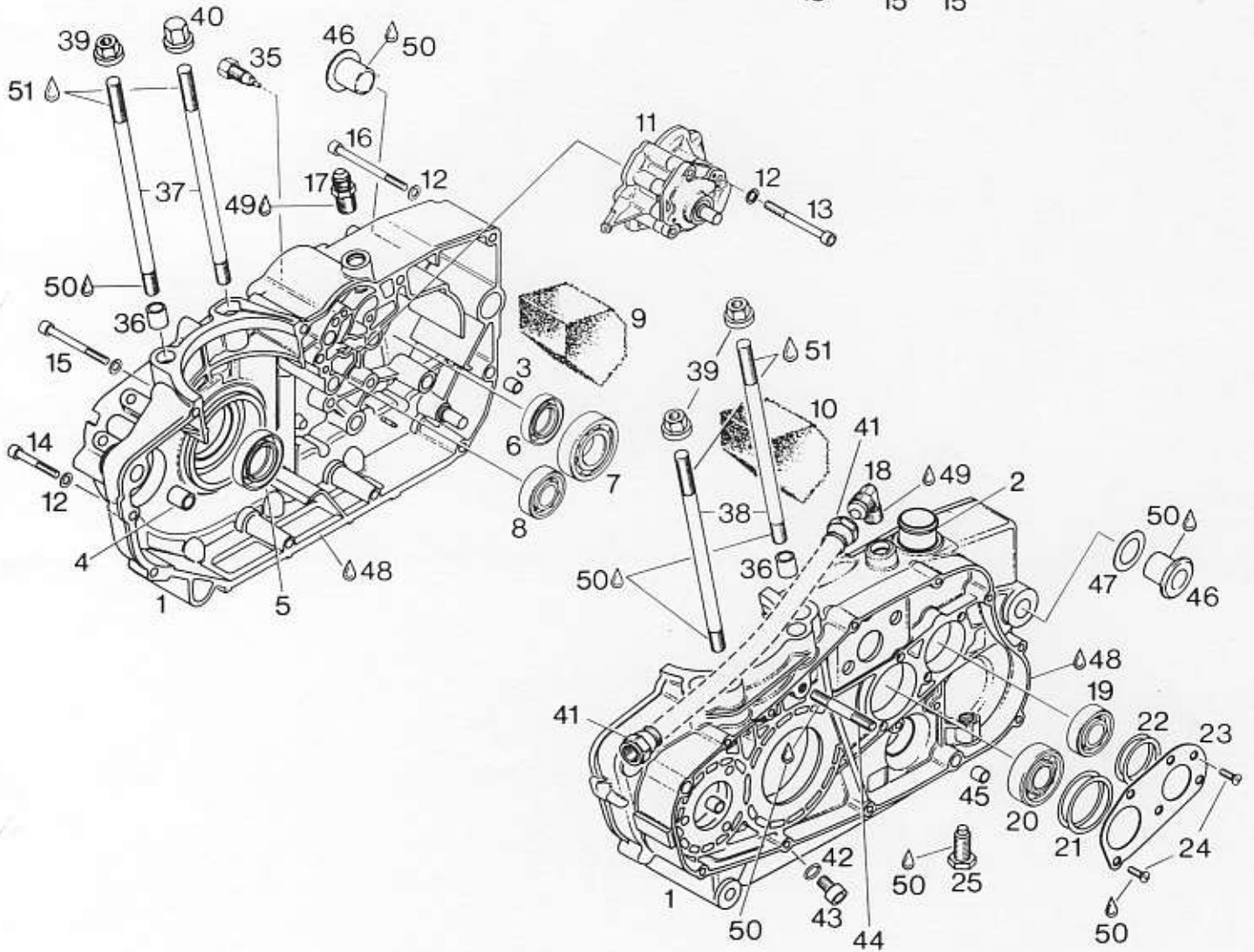
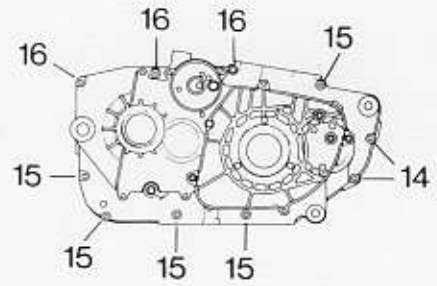


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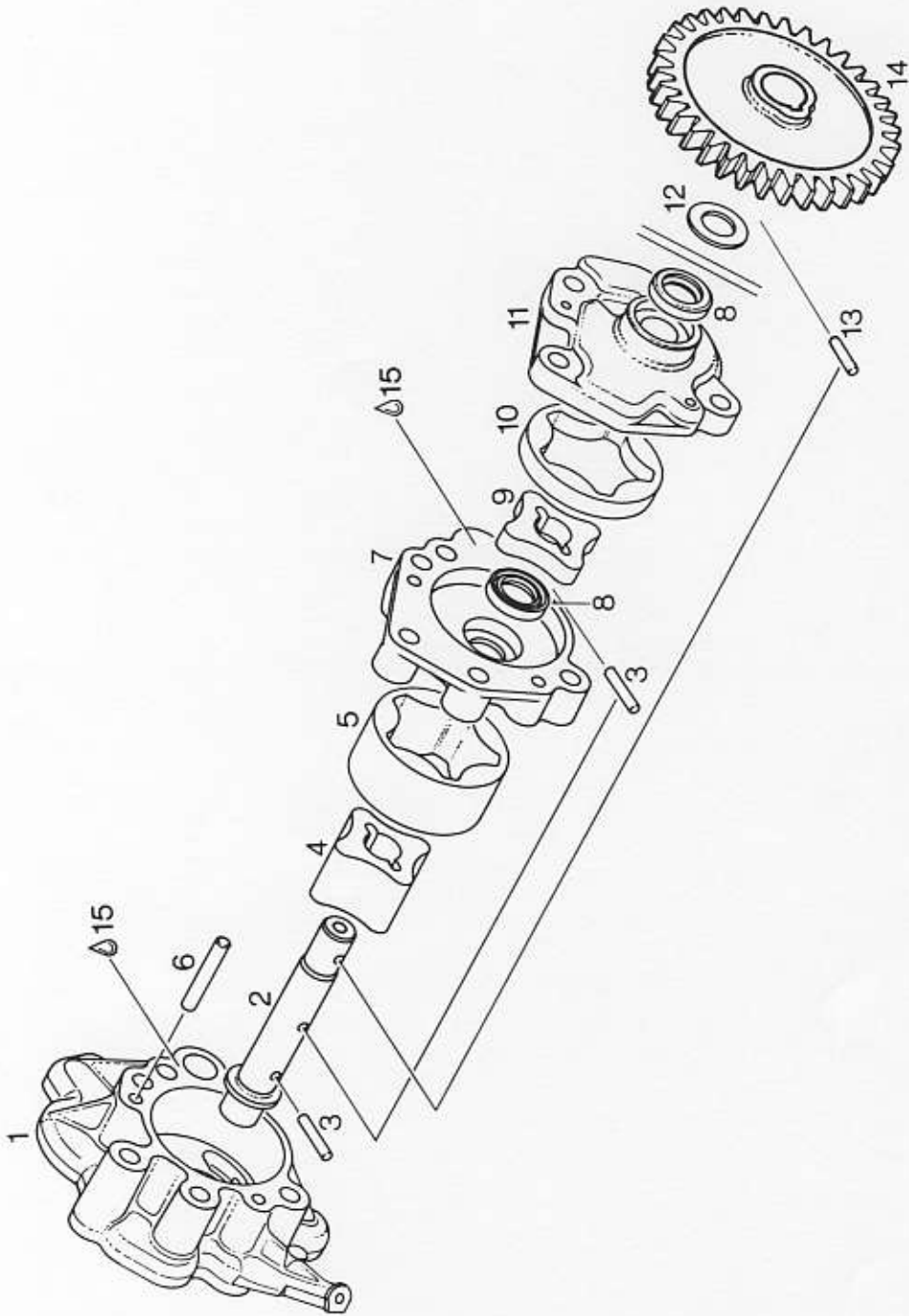


CRANKCASE

ILL. NO.	PART NO.	DESCRIPTION	QTY.
1 - 4	293 186	CRANKCASE ASSY.....	1
2	224 240	VENT SOCKET.....	1
3	229 140	DOWEL 9,8X10.....	1
4	229 160	DOWEL 13,8X15.....	1
5	850 055	OIL SEAL 30X47X7/7,5..... FOR CRANKSHAFT, MAGNETO SIDE	1
6	230 395	OIL SEAL 25X40X7..... FOR MAIN SHAFT	1
	232 092	BALL BEARING 205 / 25-52-15..... FOR MAINSHAFT, P.T.O. SIDE	1
8	232 850	BALL BEARING 6203E TVH /17-40-12..... FOR CLUTCH SHAFT, P.T.O. SIDE	1
9	256 200	OIL SEPARATOR FOAM..... MAGNETO SIDE	1
10	256 205	OIL SEPARATOR FOAM..... CLUTCH SIDE	1
11	 OIL PUMP ASSY., ONLY SINGLE PARTS ARE AVAILABLE, SEE CHAPTER OIL PUMP.	1
12	945 751	LOCK WASHER A6.....	19
13	240 370	CYL.-SCREW M6X60.....	3
14	241 816	CYL.SCREW M6X40.....	2
15	240 371	CYL.SCREW M6X60.....	5
16	241 871	CYL.SCREW M6X70.....	3
17	256 210	NIPPLE, STRAIGHT.....	1
18	256 220	ANGULAR NIPPLE.....	1
19	932 032	BALL BEARING 6203 TVH / 17-40-12..... FOR MAIN SHAFT, CLUTCH SIDE	1
20	932 430	BALL BEARING 6204..... FOR CLUTCH SHAFT, CLUTCH SIDE	1
21	227 610	SHIM 40/46,5/0,5.....	AS REQ
1	227 611	SHIM 40/46,5/0,3.....	AS REQ

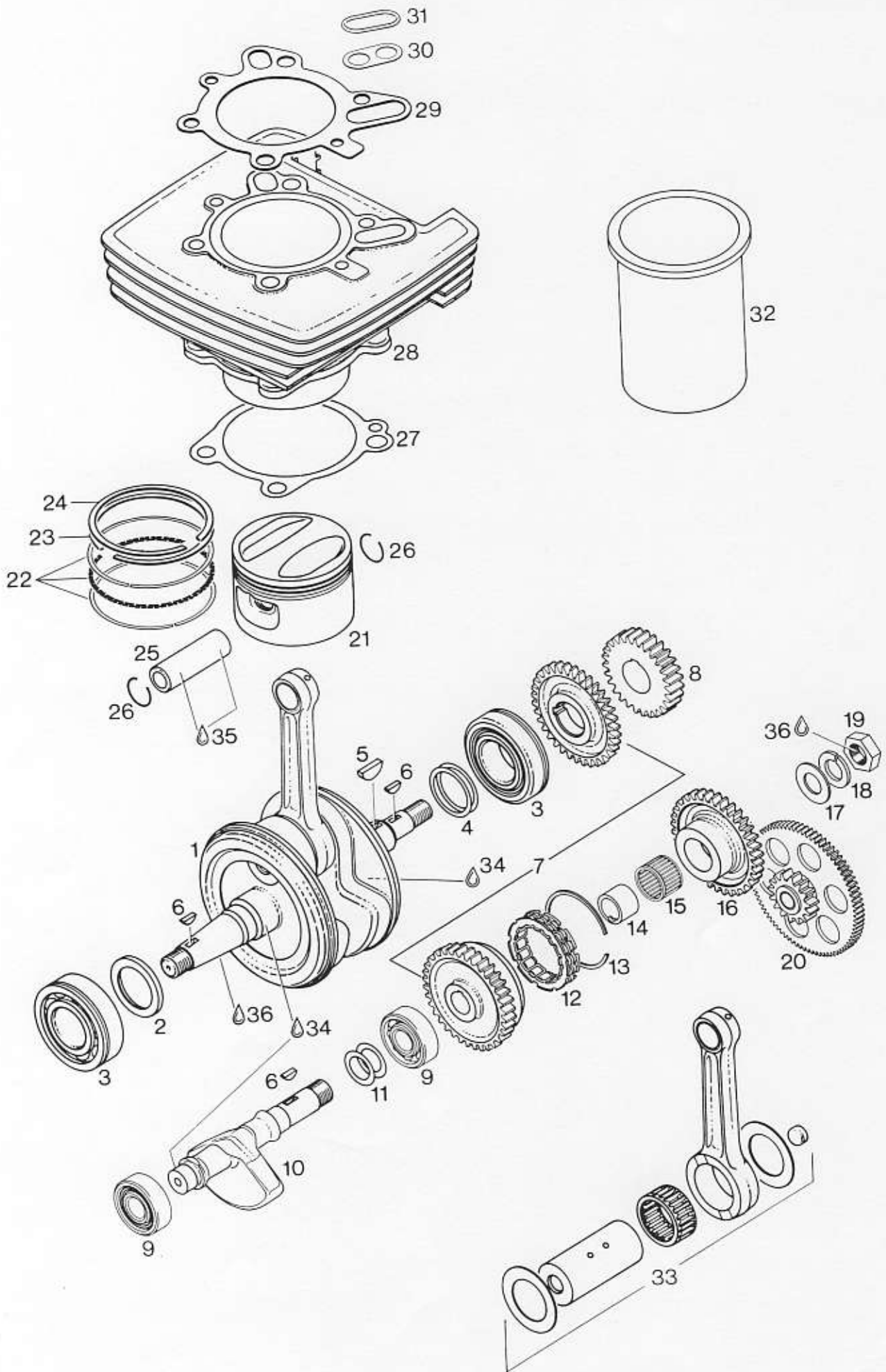
ILL. NO.	PART NO.	DESCRIPTION	QTY.
1	227 612	SHIM 40/46,5/0,1.....	AS REQ
22	227 520	SHIM 34/39,5/0,5.....	AS REQ
22	227 521	SHIM 34/39,5/0,3.....	AS REQ
22	227 522	SHIM 34/39,5/0,1.....	AS REQ
23	227 110	RETAINING PLATE.....	1
24	940 315	COUNTER-SUNK SCREW M5X12.....	4
25	241 777	HEX. SCREW M12..... KICK STARTER STOP	1
26	212 595	SIEVE COVER.....	1
27	256 160	OIL SIEVE.....	1
8	230 840	GASKET.....	1
29	831 762	O-RING 145-2,5.....	1
30	230 880	O-RING 13,3-2,4.....	1
31	840 861	CYL.SCREW M6X25.....	6
32	250 010	GASKET RING C12X18.....	1
33	241 401	HEX.SCREW M12X12.....	1
34	241 781	MAGNETIC DRAIN PLUG M12X1,5.....	1
35	241 850	CONTACT SCREW M10 ASSY.....	1
36	229 160	DOWEL 13,8X15.....	2
7	240 440	STUD M10X197..... MAGNETO SIDE	2
38	240 430	STUD M10X185..... CLUTCH SIDE	2
39	242 690	NUT M10.....	3
40	242 695	CAP NUT M10.....	1
41	256 250	NIPPLE ASSY..... WITHOUT OIL LINE	2
42	950 141	GASKET RING C8X14.....	1
43	841 521	CYL.SCREW M8X12.....	1
44	940 370	STUD M8X61/15.....	1
5	229 140	DOWEL 9,8X10.....	2
46	247 320	SLEEVE.....	2

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
7	246 150	SHIM 16,3/25,8/0,3.....	AS REQ
47	246 151	SHIM 16,3/25,8/0,5.....	AS REQ
48	899 784	LOCTITE 574 ORANGE 50 CC. SEALING.....	AS REQ
49	899 788	LOCTITE 648 GREEN 6 CC. SECURING.....	AS REQ
50	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	AS REQ
51	297 433	MOLYKOTE GN 100 G., SLIDE PASTE.....	AS REQ



OIL PUMP

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1	212 567	PUMP HOUSING ASSY.....	1
2	237 645	PUMP SHAFT.....	1
3	232 980	NEEDLE ROLLER A3X15,8 G 3.....	2
4	256 130	INNER ROTOR.....	1
5	256 140	OUTER ROTOR.....	1
6	232 970	NEEDLE ROLLER 4X25,8 G3.....	2
7	212 570	PUMP HOUSING.....	1
3	230 870	OIL SEAL B 11X17X4.....	2
9	256 110	INNER ROTOR.....	1
10	256 120	OUTER ROTOR.....	1
11	212 580	PUMP COVER.....	1
12	827 590	WASHER 10,1/17/1.....	AS REQ
13	232 200	NEEDLE ROLLER B 3X12,8 G5.....	1
14	235 775	PUMP GEAR 27 T.....	1
15	899 784	LOCTITE 574 ORANGE 50 CC. SEALING.....	AS REQ

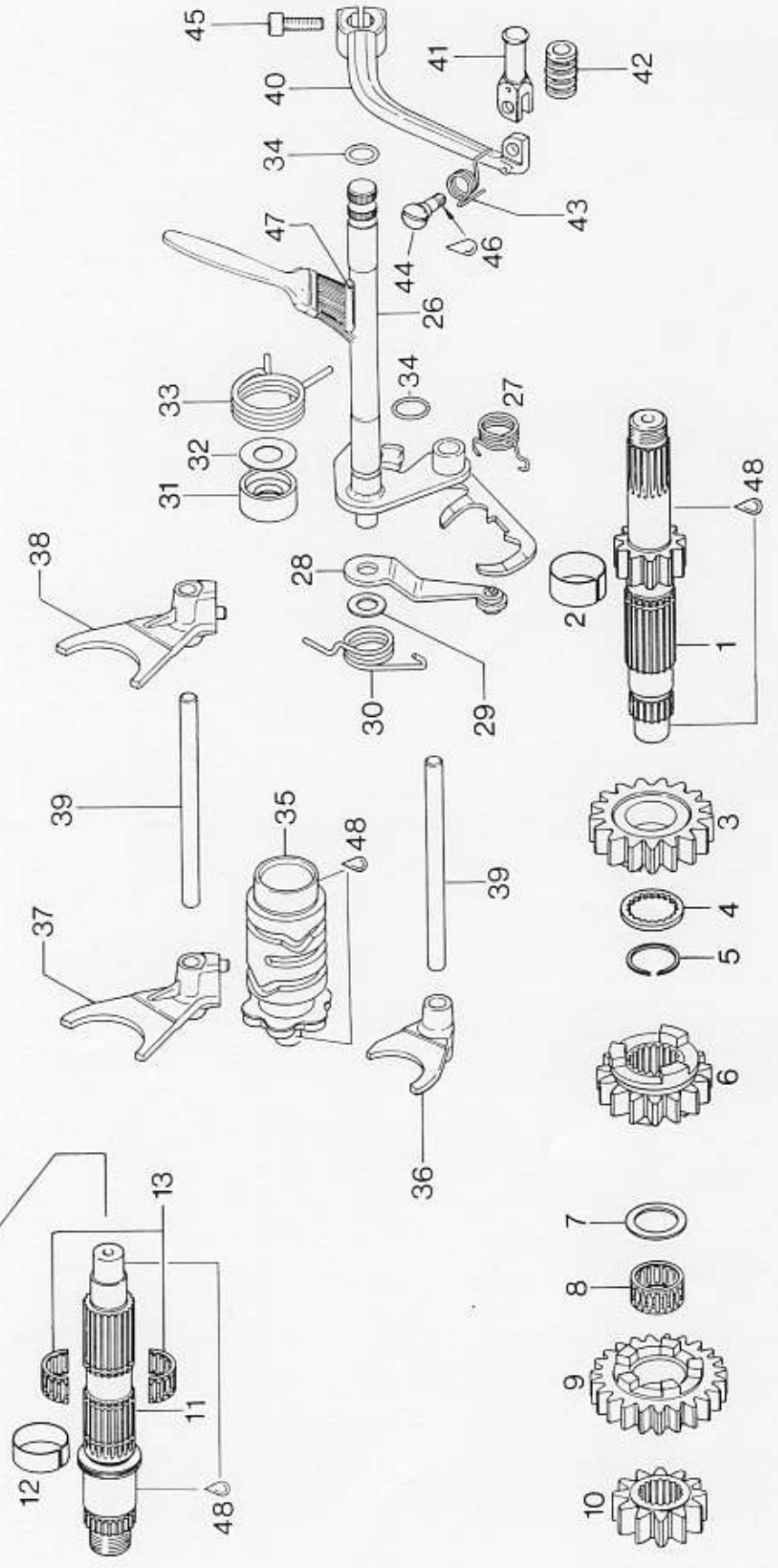
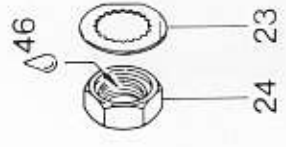
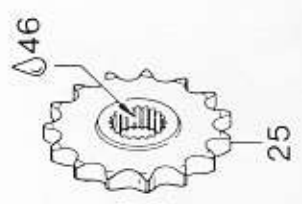
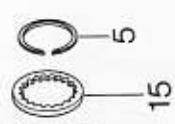
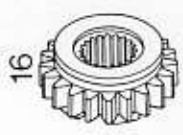
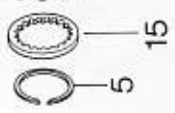
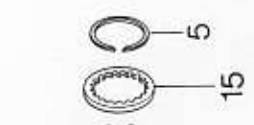
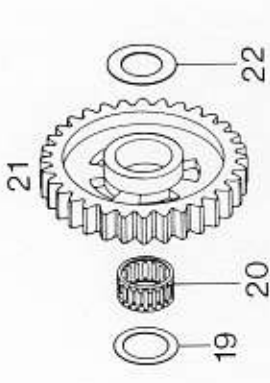


CRANKSHAFT, BALANCER DRIVE, CYLINDER
ELECTRIC STARTER DRIVE

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.

1	293 471	CRANKSHAFT ASSY.....	1
2	247 390	DISTANCE RING 35,2/50/4.....	1
3	832 235	BALL BEARING 6207.....	2
4	927 400	SHIM 35,4/43/0,1.....	AS REQ
4	927 401	SHIM 35,4/43/0,2.....	AS REQ
5	946 015	WOODRUFF KEY 6X9.....	1
6	246 570	WOODRUFF KEY 4X5.....	3
7	293 457	BALANCER DRIVE ASSY..... REPLACE ONLY BOTH GEARS TOGETHER	1
8	293 490	DRIVE GEAR WITH CLUTCH DRUM ASSY..... REPLACE ONLY DRIVE GEAR WITH CLUTCH DRUM ASSY.	1
9	932 095	BALL BEARING 6304 E.....	2
10	237 880	COUNTER SHAFT.....	1
11	944 461	SHIM 20,5/30/0,3.....	AS REQ
11	944 462	SHIM 20,5/30/0,5.....	AS REQ
11	944 465	SHIM 20,5/30/0,15.....	AS REQ
12	259 070	FREE WHEELING 45,665X62,332X13.....	1
13	245 620	SNAPRING 62.....	1
14	232 165	BUSHING.....	1
15	232 890	NEEDLE BEARING 25X29X17.....	1
16	234 350	FREE WHEEL GEAR 37 T.....	1
17	227 230	THRUST WASHER 18,2/34/2.....	1
18	945 757	LOCK WASHER 18.....	1
19	242 790	HEX. NUT M18X1,5.....	1
20	234 055	IDLE WHEEL ASSY.....	1
21 - 24	292 755	PISTON ASSY. 89,0 MM..... STANDARD	1

ILL. NO.	PART NO.	DESCRIPTION	QTY.
1 - 24	292 756	PISTON ASSY. 89,25 MM..... 1ST OVERSIZE	1
22	215 330	OIL STRAINER RING 89/81,5X3..... STANDARD	1
22	215 331	OIL STRAINER RING 89,25/81,75X3..... 1ST OVERSIZE	1
23	215 410	TAPERED COMPRESSION RING 89 MM..... STANDARD	1
23	215 411	TAPERED COMPRESSION RING 89,25MM..... 1ST.OVERSIZE	1
24	215 310	RECTANGULAR CHROM-RING 89 MM..... CHROM PLATED, STANDARD	1
24	215 311	RECTANGULAR CHROM-RING 89,25 MM..... CHROM PLATED, 1ST OVERSIZE	1
25	216 115	PISTON PIN 22X15X55.....	1
26	245 430	CIRCLIP 22.....	2
27	230 820	GASKET.....	1
28	223 029	CYLINDER WITH SLEEVE ASSY.....	1
29	230 832	GASKET.....	1
30	251 950	O-RING BRACE.....	1
31	230 020	O-RING 32-2.....	1
32	213 280	CYLINDER SLEEVE.....	1
3	293 394	CRANKSHAFT REPAIR KIT.....	1
34	297 431	LOCTITE ANTI-SEIZE 10 G.....	AS REQ
35	297 433	MOLYKOTE GN 100 G.,SLIDE PASTE.....	AS REQ
36	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	AS REQ



TRANSMISSION

ILL. NO.	PART NO.	DESCRIPTION	QTY.
1 - 24	281 120	TRANSMISSION ASSY.....	1
1	237 710	CLUTCH SHAFT 11 T.....	1
2	233 510	BSUHING 22,8X24X11,7..... CLUTCH SHAFT	1
3	235 620	GEAR 17 T..... 4TH SPEED, CLUTCH SHAFT	1
4	227 080	THRUST WASHER 22/27,5/2,3..... CLUTCH SHAFT	1
5	245 340	SNAPRING 24.....	4
6	235 603	GEAR 15 T..... 3RD SPEED, CLUTCH SHAFT	1
7	227 445	THRUST WASHER 21,2/27,5/1..... CLUTCH SHAFT	1
8	232 805	NEEDLE BEARING K 21X25X13..... CLUTCH SHAFT	1
9	235 665	GEAR 23 T..... 5TH SPEED, CLUTCH SHAFT	1
10	235 641	GEAR 12 T..... 2ND SPEED, CLUTCH SHAFT	1
11	237 720	MAIN SHAFT.....	1
12	233 500	BUSHING 23,8X25X9,8..... MAIN SHAFT	1
13	232 800	NEEDLE BEARING K 21X25X13..... MAIN SHAFT	1
14	235 653	GEAR 24 T..... 2ND SPEED, MAIN SHAFT	1
15	227 465	THRUST WASHER 22/30/2,6..... MAIN SHAFT	3
16	235 113	GEAR 21 T..... 5TH SPEED, MAIN SHAFT	1
17	235 610	GEAR 21 T..... 3RD SPEED, MAIN SHAFT	1
18	235 633	GEAR 19 T..... 4TH SPEED, MAIN SHAFT	1

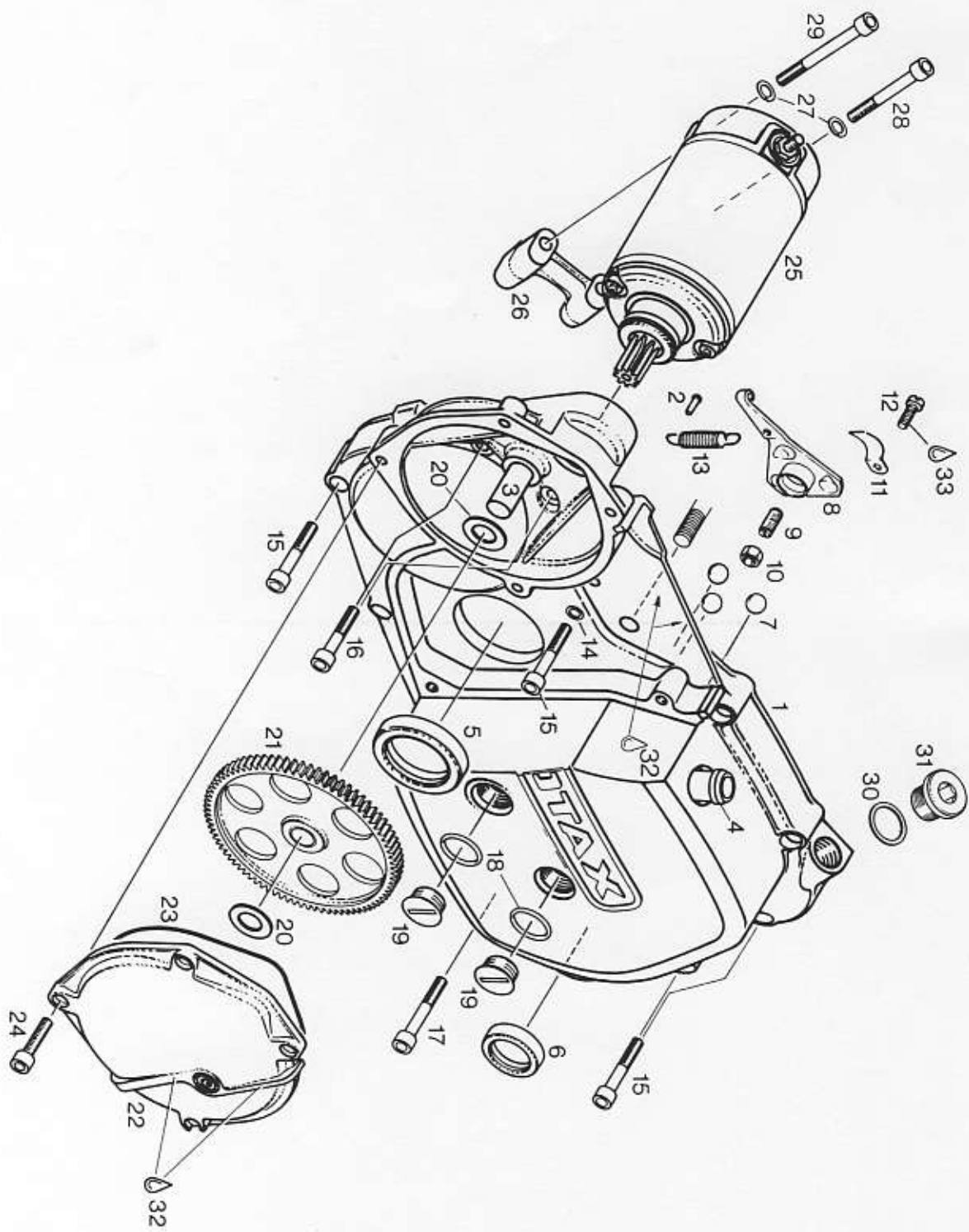
ILL. NO.	PART NO.	DESCRIPTION	QTY.
7	944 468	THRUST WASHER 20,5/30/1..... MAIN SHAFT	1
20	232 790	NEEDLE BEARING K 20X24X12..... MAIN SHAFT	1
21	235 523	GEAR 32 T..... 1ST SPEED, MAIN SHAFT	1
22	227 430	THRUST WASHER 17,2/30/1..... MAIN SHAFT	1
23	245 390	WASHER NA24..... MAIN SHAFT LOCKING	1
24	242 650	HEX. NUT M20X1,5..... MAIN SHAFT	1
25	236 023	SPROCKET 17 T..... THIS PART IS MOUNTED AS STANDARD	1
25	236 021	SPROCKET 15 T.....	1
25	236 020	SPROCKET 14 T.....	1
25	236 022	SPROCKET 16 T.....	1
25	236 024	SPROCKET 18 T.....	1
26	237 636	SHIFT SHAFT WITH PAWL ASSY.....	1
27	239 830	SPRING.....	1
28	248 925	LEVER ASSY.....	1
29	827 590	WASHER 10,1/17/1.....	1
30	239 820	INDEX SPRING.....	1
31	247 570	DISTANCE SLEEVE.....	1
32	946 870	WASHER 14,5/22,5/1.....	1
33	239 640	SPRING.....	1
34	430 110	O-RING 10-2,7.....	2
35	258 797	SHIFT DRUM ASSY.....	1
36	258 775	FORK ASSY..... SHIFTING 4TH - 5TH GEAR	1
37	258 765	FORK ASSY..... SHIFTING 2ND GEAR	1
38	258 755	FORK ASSY..... SHIFTING 1ST - 3RD GEAR	1
39	258 780	PIN.....	2

ILL. NO.	PART NO.	DESCRIPTION	QTY.
J - 44	248 919	SHIFT LEVER ASSY.....	1
40	248 913	SHIFT LEVER.....	1
41	248 905	FOLDING LEVER.....	1
42	260 545	RUBBER.....	1
43	239 770	SPRING.....	1
44	240 145	BEARING SCREW M6X19.....	1
45	241 930	CYL.SCREW M6X20.....	1
46	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	AS REQ
47	 BP-ENERGREASE LS3	AS REQ
8	297 431	LOCTITE ANTI-SEIZE 10 G.....	AS REQ

CLUTCH, KICK START

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1	227 600	THRUST WASHER 20,2/35/3.....	2
2	232 700	INNER RACE.....	1
3	232 650	NEEDLE BEARING 25X29X10.....	2
4	293 490	DRIVE GEAR WITH CLUTCH DRUM ASSY..... REPLACE ONLY DRIVE GEAR WITH CLUTCH DRUM ASSY.	1
5	259 880	INNER PRSSURE-PLATE.....	1
6	259 900	FRICTION PLATE 2,5 MM.....	8
7	259 915	PLATE 1,5 MM.....	7
8	259 870	CLUTCH HUB.....	1
9	245 320	WASHER NA20.....	1
10	242 605	HEX. NUT M18X1,5.....	1
11	239 625	SPRING..... CHANGE SPRINGS ONLY SETWISE	6
12 - 13	259 897	PLATE ASSY.....	1
12	259 892	PLATE.....	1
13	232 180	THRUST BEARING 8X20X8,5.....	1
14	945 750	LOCK WASHER A5.....	6
15	241 770	HEX-SCREW M5X25.....	6
16	235 767	GEAR 26 T. ASSY.....	1
17	237 621	KICK START SHAFT.....	1
18	944 468	THRUST WASHER 20,5/30/1.....	2
19	945 660	SNAPRING 20X1,2 DIN 471.....	1
20	239 761	SPRING.....	1
21	293 620	RATCHET GEAR ASSY..... (REPLACE BOTH GEARS TOGETHER)	1
22	227 880	THRUST WASHER 22,2/25,5/1.....	1
23	* 247 600	DISTANCE SLEEVE 22,2/30/19.....	1
24	927 475	THRUST WASHER 22,5/30/0,5.....	1
24	927 475	THRUST WASHER 22,5/30/0,5.....	AS REQ

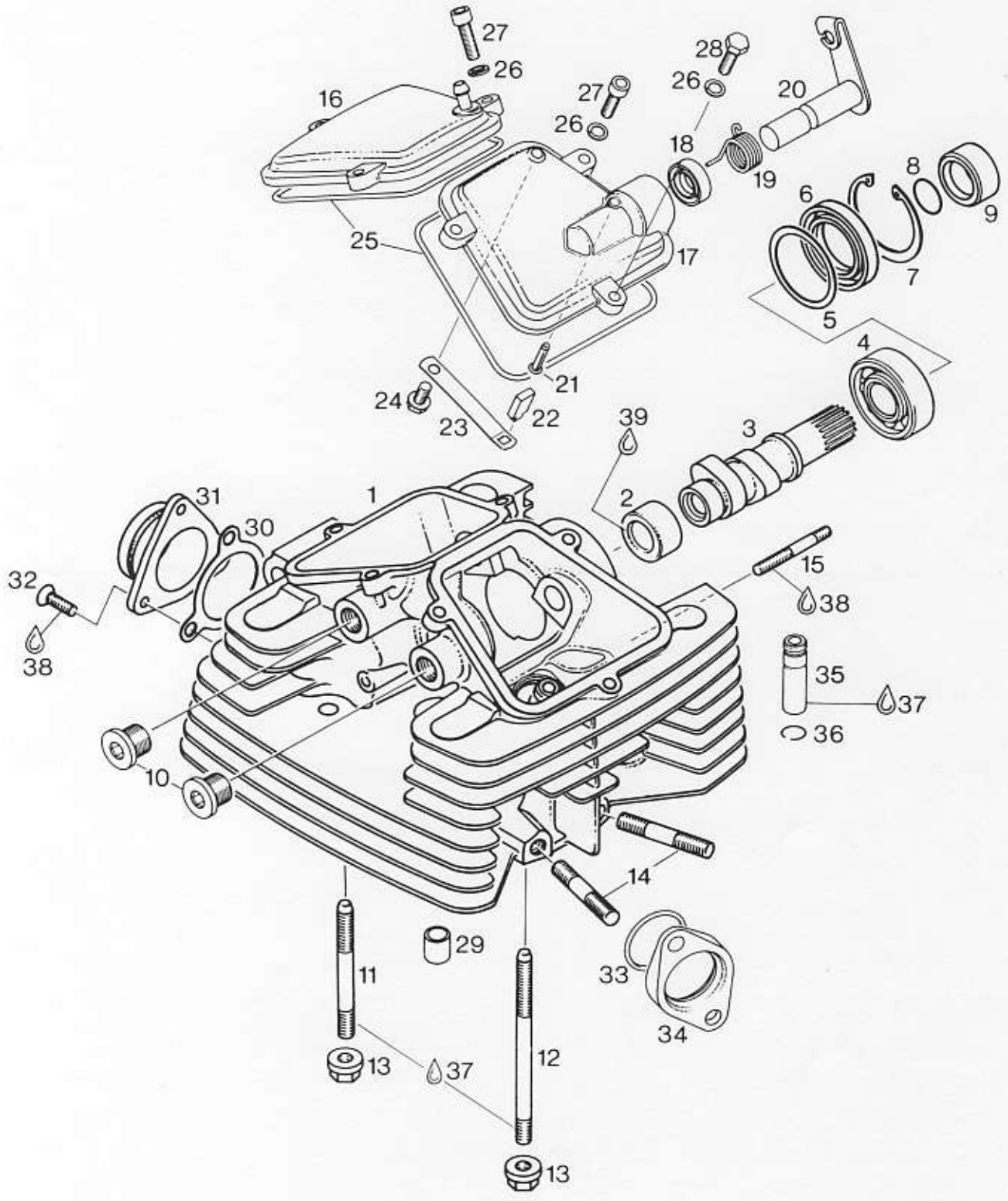
ILL. NO.	PART NO.	DESCRIPTION	QTY.
5	245 350	CIRCLIP 19,5X1.....	1
26 - 30	248 064	KICK START LEVER ASSY.....	1
26	248 059	KICK START LEVER.....	1
27	248 959	KICK START HUB.....	1
28	239 537	SPRING 4,1, D1, 25 L8.....	1
29	232 440	BALL 7/32 III DIN 5401.....	1
30	229 210	DOWEL TUBE 6X20.....	1
31	260 210	RUBBER SLEEVE.....	1
32	840 991	CYL. SCREW M8X30.....	1
33	259 852	CLUTCH DRUM.....	1
34	243 340	RIVET 5X12 DIN 661.....	8
35	297 431	LOCTITE ANTI-SEIZE 10 G.....	AS REQ
36	899 788	LOCTITE 648 GREEN 6 CC. SECURING.....	AS REQ



CLUTCH COVER, ELECTRIC STARTER

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1	210 168	CLUTCH COVER ASSY.....	1
2	949 030	DRIVE PIN 3X8.....	1
3	229 230	JOURNAL BOLT.....	1
4	224 230	CLUTCH CABLE TUBE.....	1
5	930 715	OIL SEAL 35X47X7.....	1
6	831 260	OIL SEAL 22X32X7.....	1
7	232 150	BALL 12 MM.....	3
3	259 945	CAM ASSY.....	1
9	240 310	SCREW M8X19,5.....	1
10	942 670	HEX. NUT M8.....	1
11	239 901	SPRING.....	1
12	241 090	CYL. SCREW M5X8 DIN 84.....	1
13	239 635	SPRING.....	1
14	830 890	GASKET RING 6,2/8,9/1.....	1
15	241 811	CYL. SCREW M6X35.....	9
16	840 880	CYL. SCREW M6X30.....	2
17	241 816	CYL. SCREW M6X40.....	1
18	230 400	O-RING 18-1,5.....	2
19	241 800	PLUG SCREW M18X1,5.....	2
20	827 261	THRUST WASHER 12,5/21,5/1.....	2
21	234 055	IDLE WHEEL ASSY.....	1
22	212 960	COVER.....	1
23	230 310	O-RING 114-2.....	1
24	840 511	CYL. SCREW M5X16.....	4
25	293 155	E-STARTER ASSY.....	1
26	251 910	DISTANCE BLOCK.....	1
7	945 751	LOCK WASHER A6.....	2

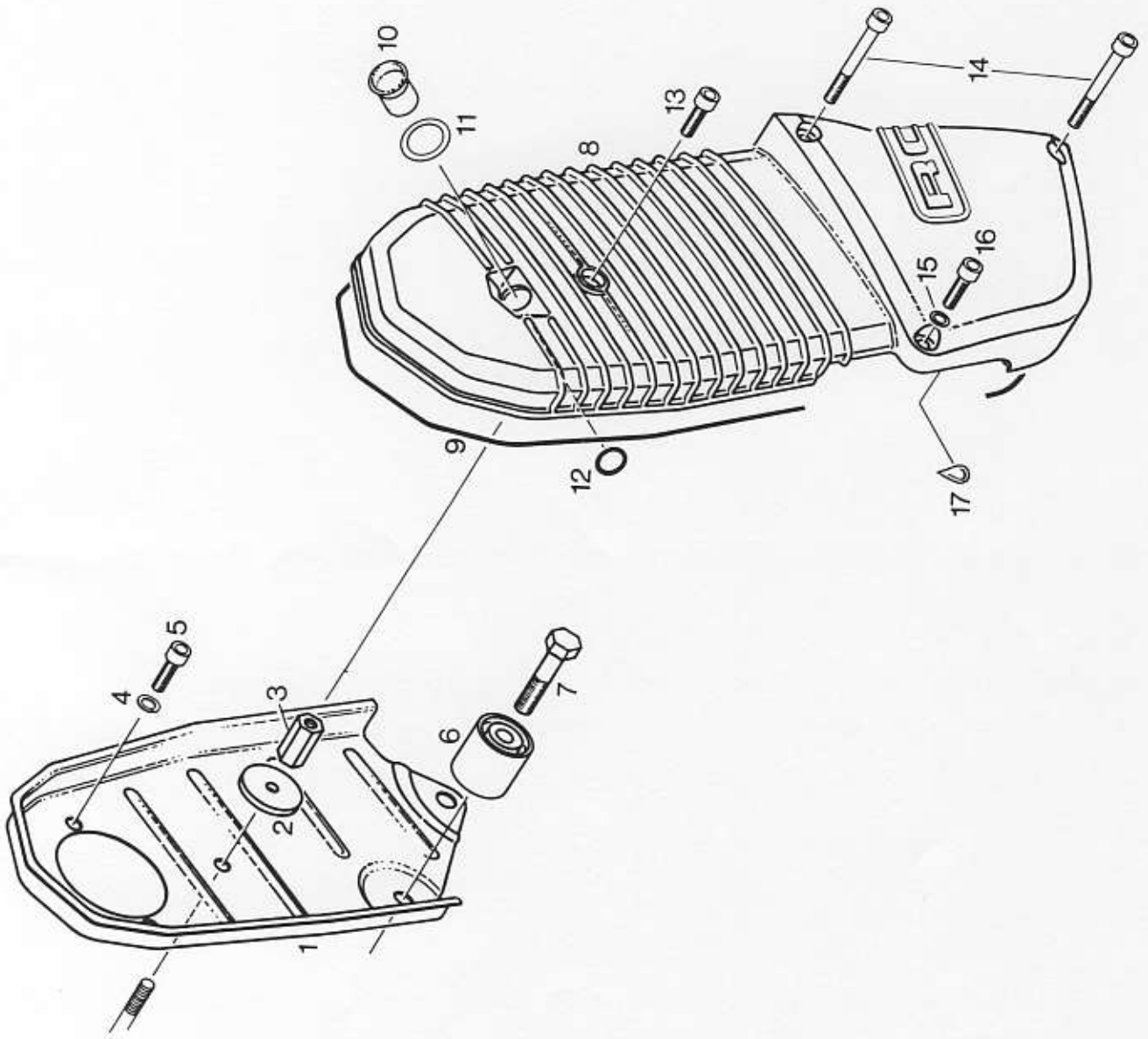
ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
	241 821	CYL. SCREW M6X45.....	1
29	240 331	CYL. SCREW M6X55.....	1
30	230 905	GASKET RING A16X20.....	1
31	240 230	PLUG SCREW M16X1,5.....	1
32	297 386	SILASTIC 732 RTV / 100 G.....	AS REQ
33	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	AS REQ



CYLINDER HEAD, CAM SHAFT, VALVE COVER

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1	223 175	CYLINDER HEAD ASSY.....	1
2	232 920	NEEDLE BUSHING 22X28X12.....	1
3	237 665	CAM SHAFT 225/240 DEGREES.....	1
4	932 432	BALL BEARING 6204 / 20-47-14.....	1
5	927 222	RETAINING SHIM 38/46,8/1,0.....	1
6	850 055	OIL SEAL 30X47X7/7,5.....	1
7	945 690	LOCKING RING 47X1,75.....	1
8	230 400	O-RING 18-1,5.....	1
9	247 420	DISTANCE SLEEVE 20/30/13.....	1
10	240 230	PLUG SCREW M16X1,5.....	2
11	240 415	STUD M8X94.....	1
12	240 420	STUD M8X119.....	1
13	242 700	NUT M8.....	2
14	240 360	STUD M8X58.....	4
15	940 000	STUD M6X40/11.....	1
16	212 545	VALVE COVER ASSY.....	1
17	212 550	VALVE COVER.....	1
18	230 690	OIL SEAL 14X24X7.....	1
19	239 800	SPRING, DECOMPRESSOR.....	1
20	237 655	DECOMPRESSION SHAFT ASSY.....	1
21	229 170	GROOVE PIN 4X20.....	1
22	231 010	PLATE, DECOMPRESSOR.....	1
23	239 790	FLAT SPRING, DECOMPRESSOR.....	1
24	240 385	TAPTITE-SCREW M6X12.....	1
25	230 860	O-RING 107-2,5.....	2
26	945 751	LOCK WASHER A6.....	6
27	241 930	CYL.SCREW M6X20.....	5

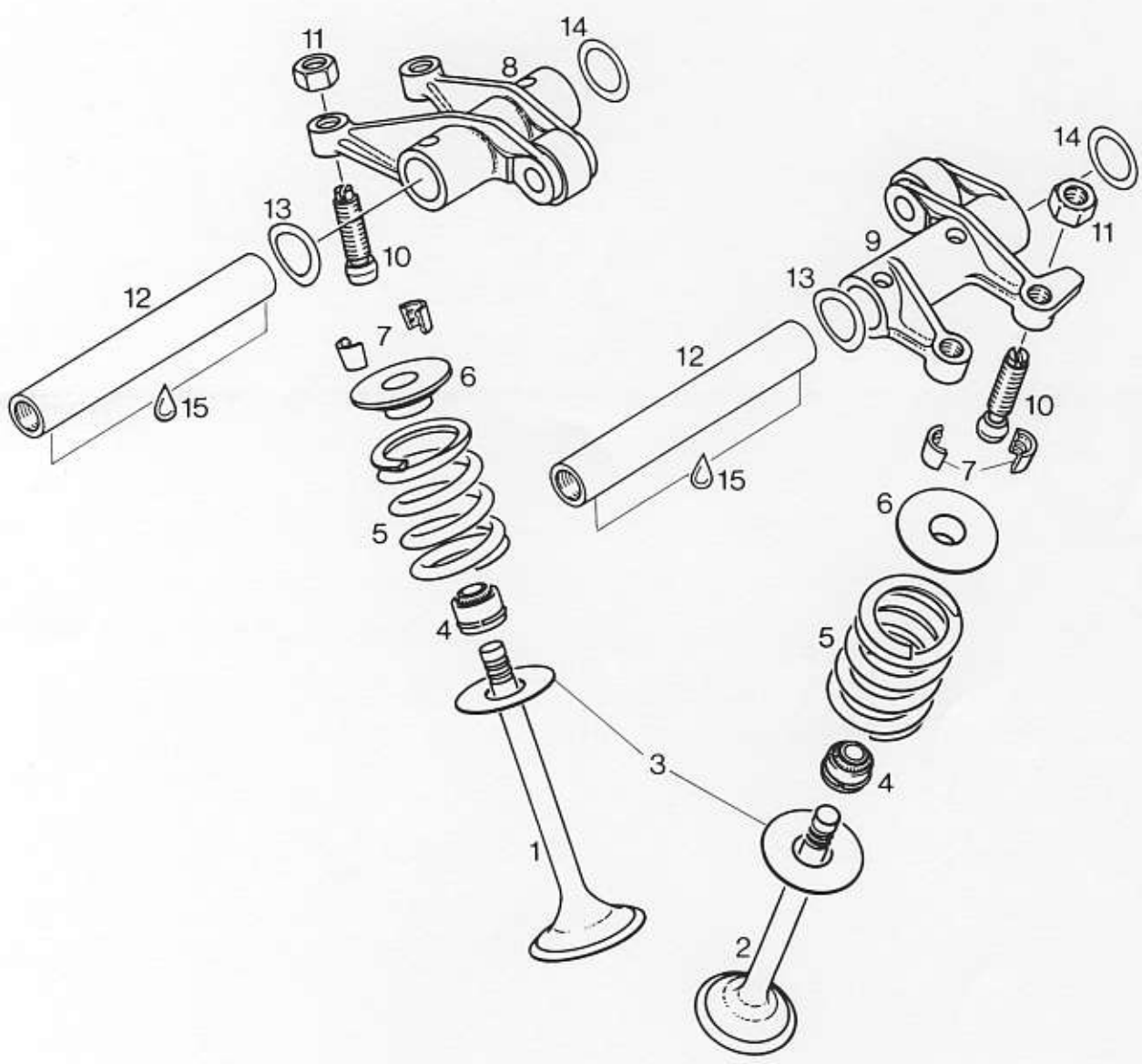
ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
3	940 561	HEX. SCREW M6 X 20.....	1
29	229 160	DOWEL 13,8X15.....	2
30	230 010	GASKET.....	1
31	267 857	INTAKE FLANGE.....	1
32	941 041	COUNTER SUNK SCREW M6X16.....	3
33	230 080	COPPER GASKET RING 26X32.....	2
34	273 851	EXHAUST FLANGE.....	2
35	253 117	VALVE GUIDE..... FOR INLET REPAIR	2
35	253 116	VALVE GUIDE..... FOR OUTLET REPAIR	2
36	245 440	CIRCLIP 12.....	4
37	297 433	MOLYKOTE GN 100 G.,SLIDE PASTE.....	AS REQ
38	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	AS REQ
39	297 386	SILASTIC 732 RTV / 100 G.....	AS REQ



TIMING BELT HOUSING, TIMING BELT COVER

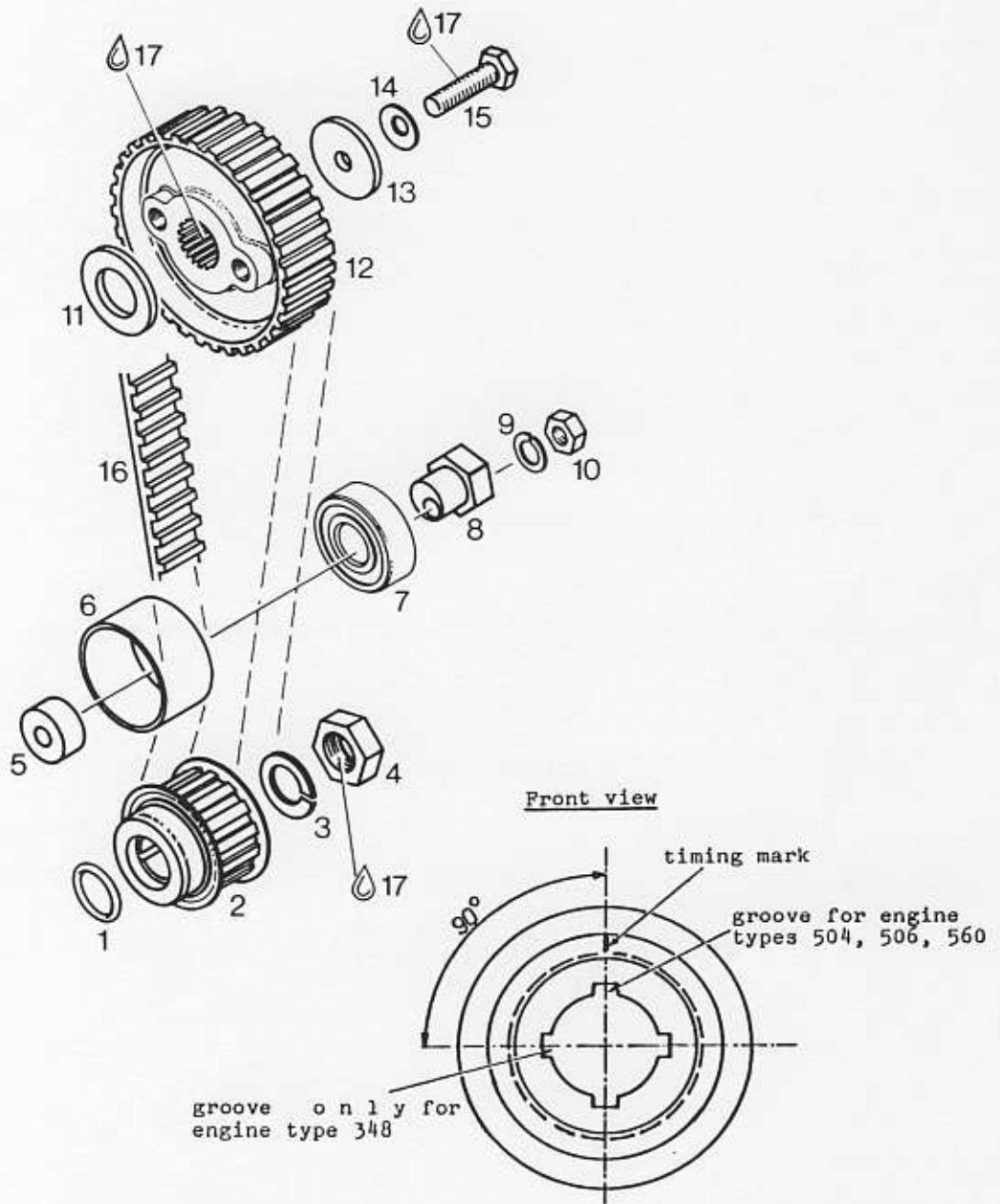
ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.

1	212 527	TIMING BELT HOUSING.....	1
2	227 920	WASHER 6,4/30/3.....	1
3	242 680	DISTANCE NUT M6X22.....	1
4	945 751	LOCK WASHER A6.....	2
5	241 930	CYL.SCREW M6X20.....	2
6	232 130	GUIDE PULLEY 28X27X30.....	1
7	240 280	HEX. SCREW M8X50.....	1
8	212 955	TIMING BELT COVER.....	1
9	230 852	O-RING 2,5X820.....	1
10	260 550	LENS.....	1
11	250 090	GASKET RING 14/19/0,5.....	1
12	430 020	O-RING 9,3-2,4.....	1
13	241 930	CYL.SCREW M6X20.....	1
14	241 761	CYL. SCREW M6X50.....	2
15	830 890	GASKET RING 6,2/8,9/1.....	1
16	840 401	CYL. SCREW M6X22.....	1
17	297 386	SILASTIC 732 RTV / 100 G.....	AS REQ



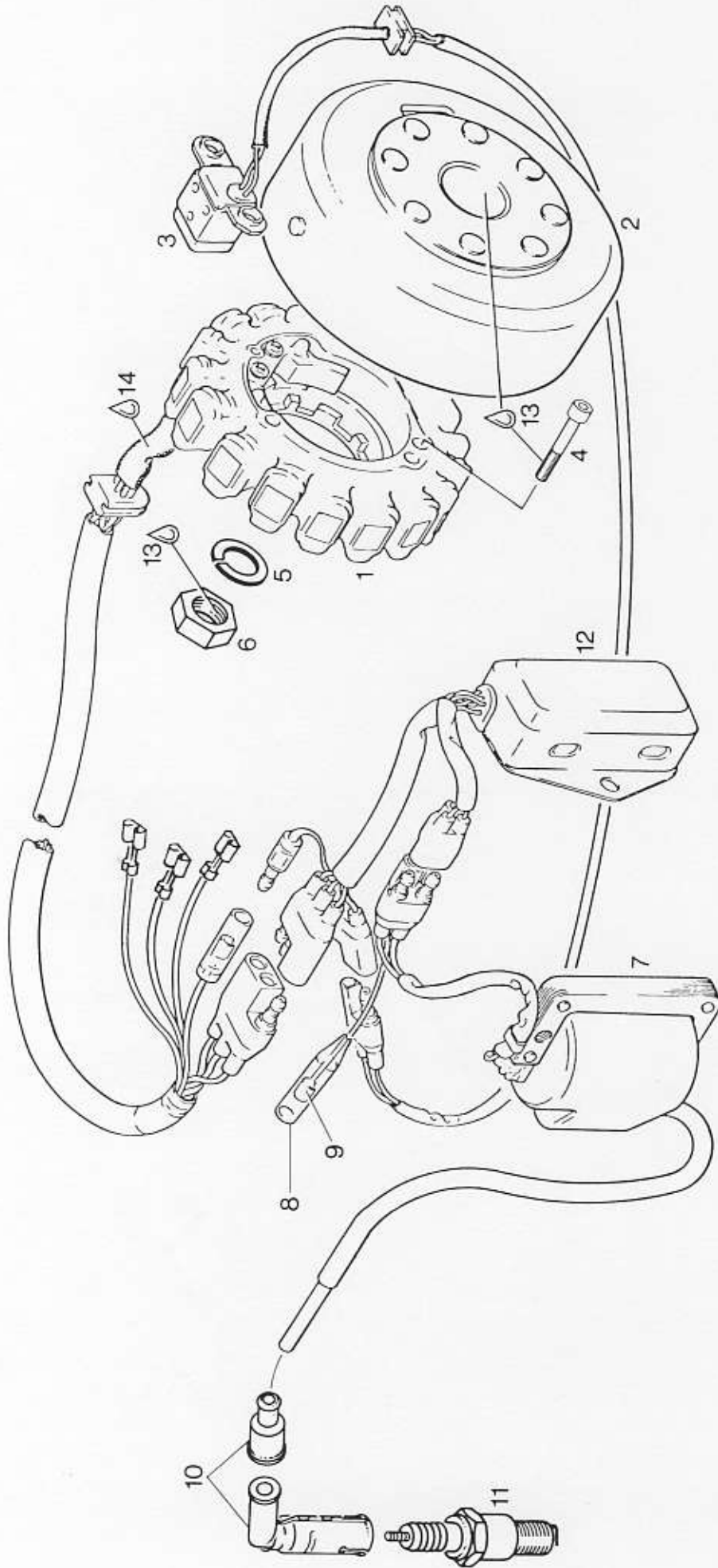
VALVES, ROCKER ARM, ADJUSTMENT SCREW

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1	253 070	INTAKE VALVE 34 MM.....	2
2	253 080	EXHAUST VALVE 30 MM.....	2
3	227 980	SHIM 12,2/29,5/1.....	4
4	230 810	VALVE SEAL.....	4
5	239 780	VALVE SPRING.....	4
6	253 101	VALVE SPRING RETAINER.....	4
7	253 090	KEY HALF.....	8
3	253 315	ROCKER ARM ASSY. INLET.....	1
9	253 345	ROCKER ARM ASSY. OUTLET.....	1
10	240 205	ADJUSTMENT SCREW ASSY. M7.....	4
11	242 590	HEX. NUT M7.....	4
12	253 050	ROCKER ARM SHAFT.....	2
13	227 950	SPRING WASHER 14,3/20/0,5.....	2
14	227 955	THRUST WASHER 14,3/20/0,5.....	2
15	297 433	MOLYKOTE GN 100 G.,SLIDE PASTE.....	AS REQ



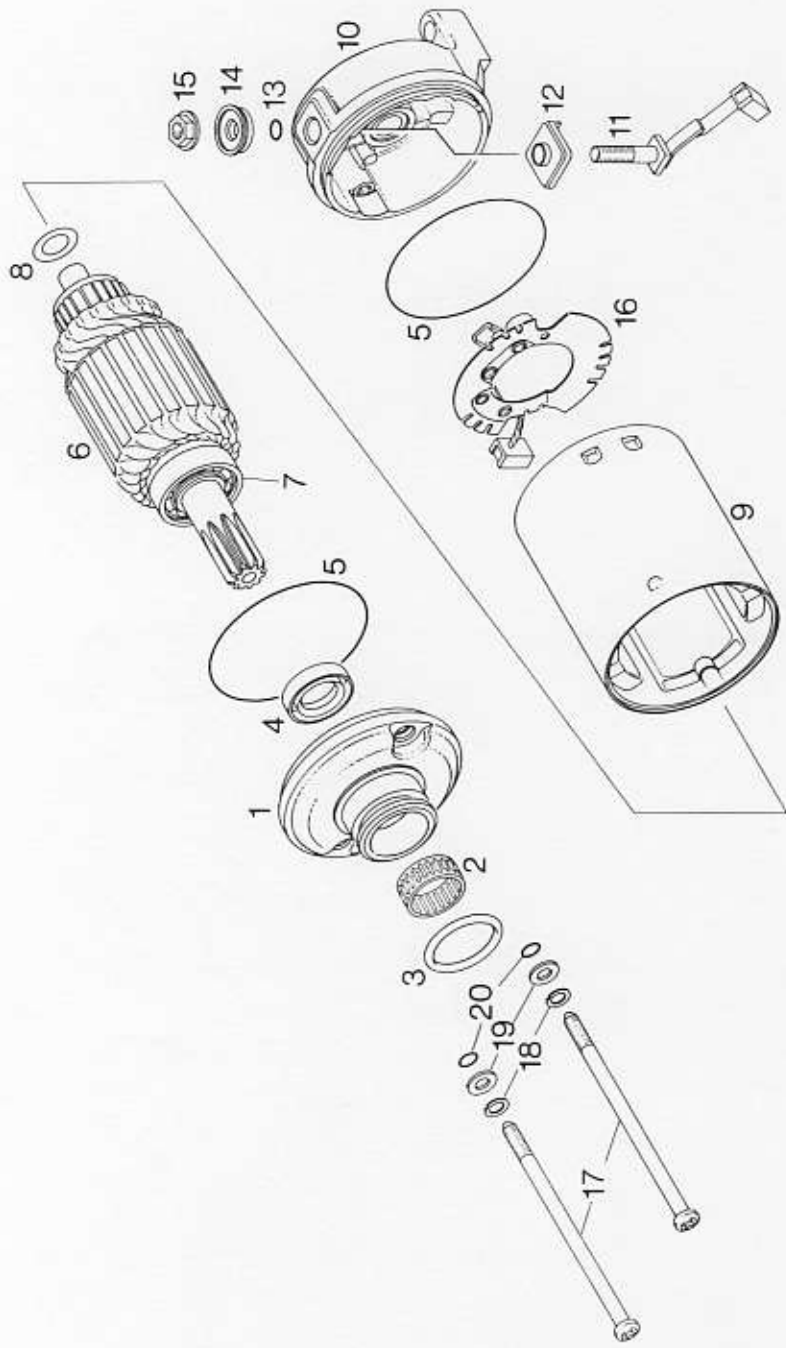
CAM SHAFT DRIVE

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1	230 890	O-RING 17-2,5.....	1
2	253 017	TIMING PULLEY ASSY. 15T.....	1
3	945 756	LOCK WASHER 16.....	1
4	242 710	HEX. NUT M16X1,5.....	1
5	247 430	DISTANCE SLEEVE 8,4/24/11.....	1
6	280 030	GUIDE PULLEY.....	1
7	932 037	BALL BEARING 6203, 17-40-12.....	1
8	280 020	TENSIONER EXCENTER.....	1
9	945 752	LOCK-WASHER A8.....	1
10	242 200	HEX. NUT M8.....	1
11	227 600	THRUST WASHER 20,2/35/3.....	1
12	253 022	TIMING PULLEY 30 T.....	1
13	227 930	WASHER 8,4/32/3.....	1
14	245 460	SPRING WASHER 8.....	1
15	940 485	HEX. SCREW M8X30.....	1
16	280 010	TIMING BELT 9,525X19X86.....	1
17	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	AS REQ



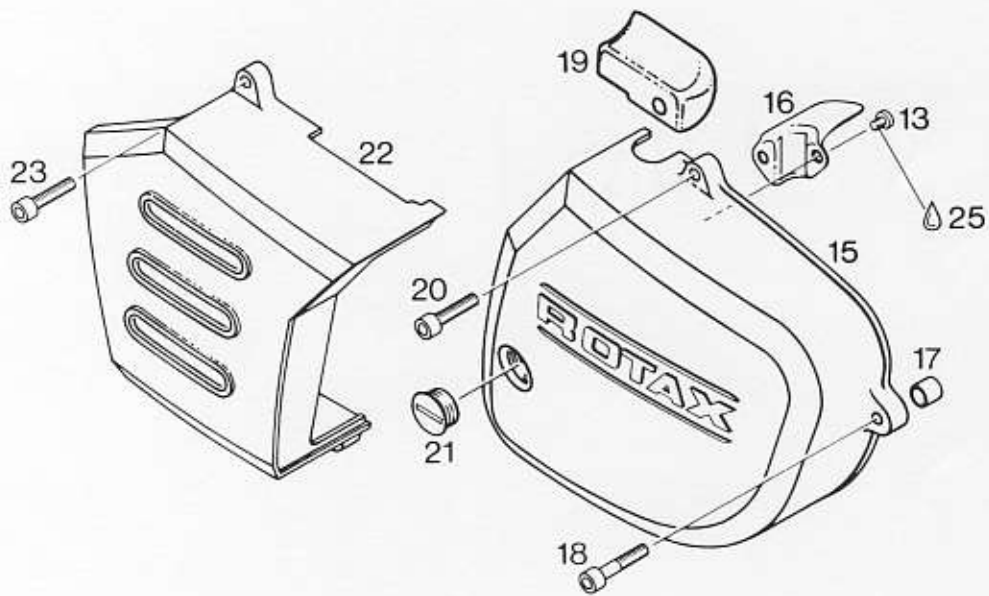
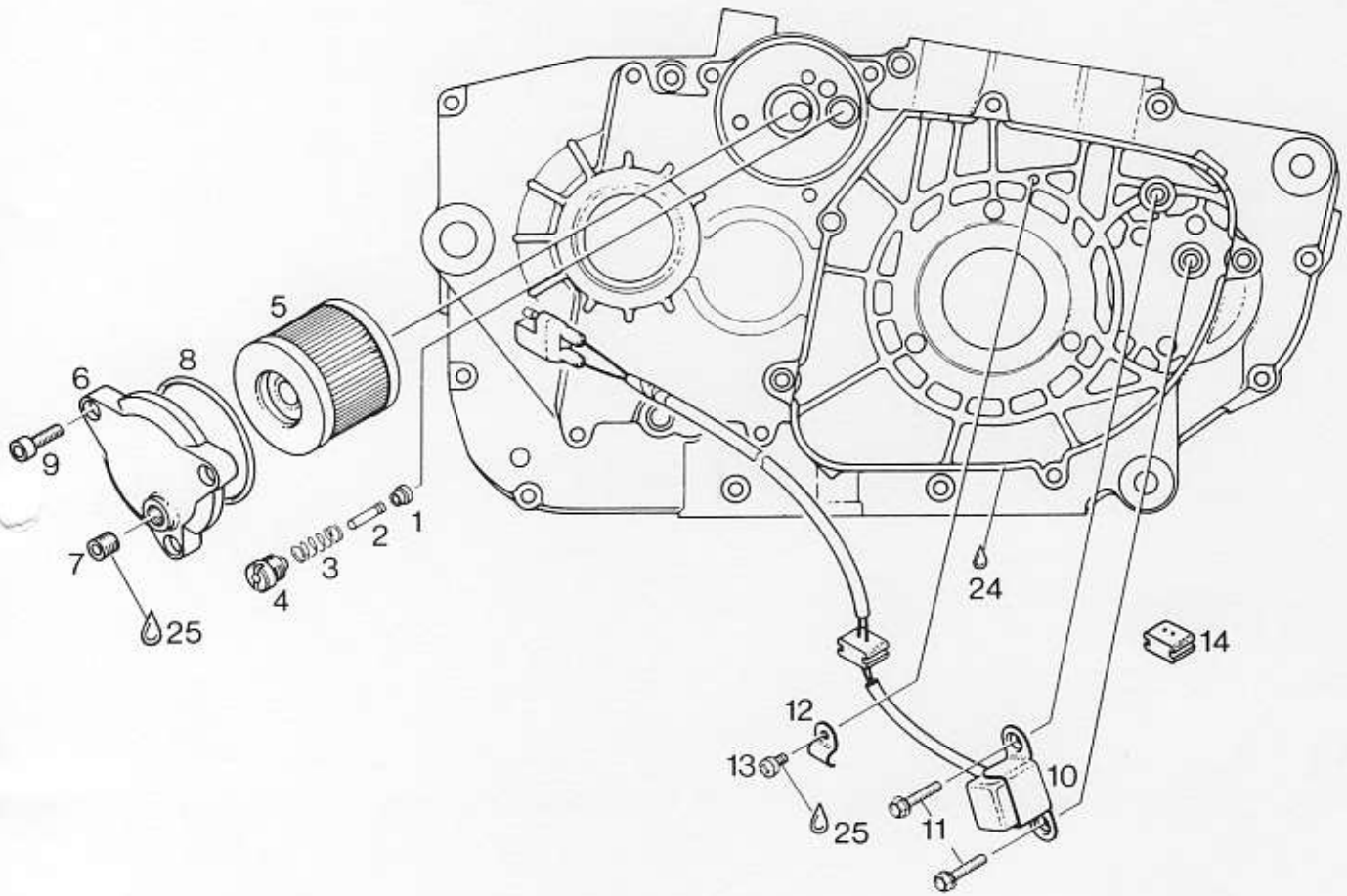
IGNITION UNIT

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1 - 3	293 123	MAGNETO GENERATOR 12V 190W.....	1
1 - 2	293 128	STATOR ASSY. W. MAGNETO FLYWHEEL..... STATOR AND MAGNETO FLYWHEEL MUST BE EXCHANGED ONLY TOGETHER	1
3	264 750	TRIGGER COIL ASSY..... FOR START IGNITION	1
4	241 816	CYL. SCREW M6X40.....	3
5	945 757	LOCK WASHER 18.....	1
6	942 220	HEX. NUT M18X1,5.....	1
7 - 10	264 737	IGNITION COIL ASSY.....	1
8	964 070	PROTECTION CAP.....	1
9	964 067	FASTON CONNECTOR 3,96.....	1
10	264 861	SHIELDED SPARK PLUG PROTECTOR.....	1
11	297 540	SPARK PLUG 12 NGK D8EA.....	1
12	264 740	AMPLIFIER-BOX.....	1
13	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	AS REQ
14	297 386	SILASTIC 732 RTV / 100 G.....	AS REQ



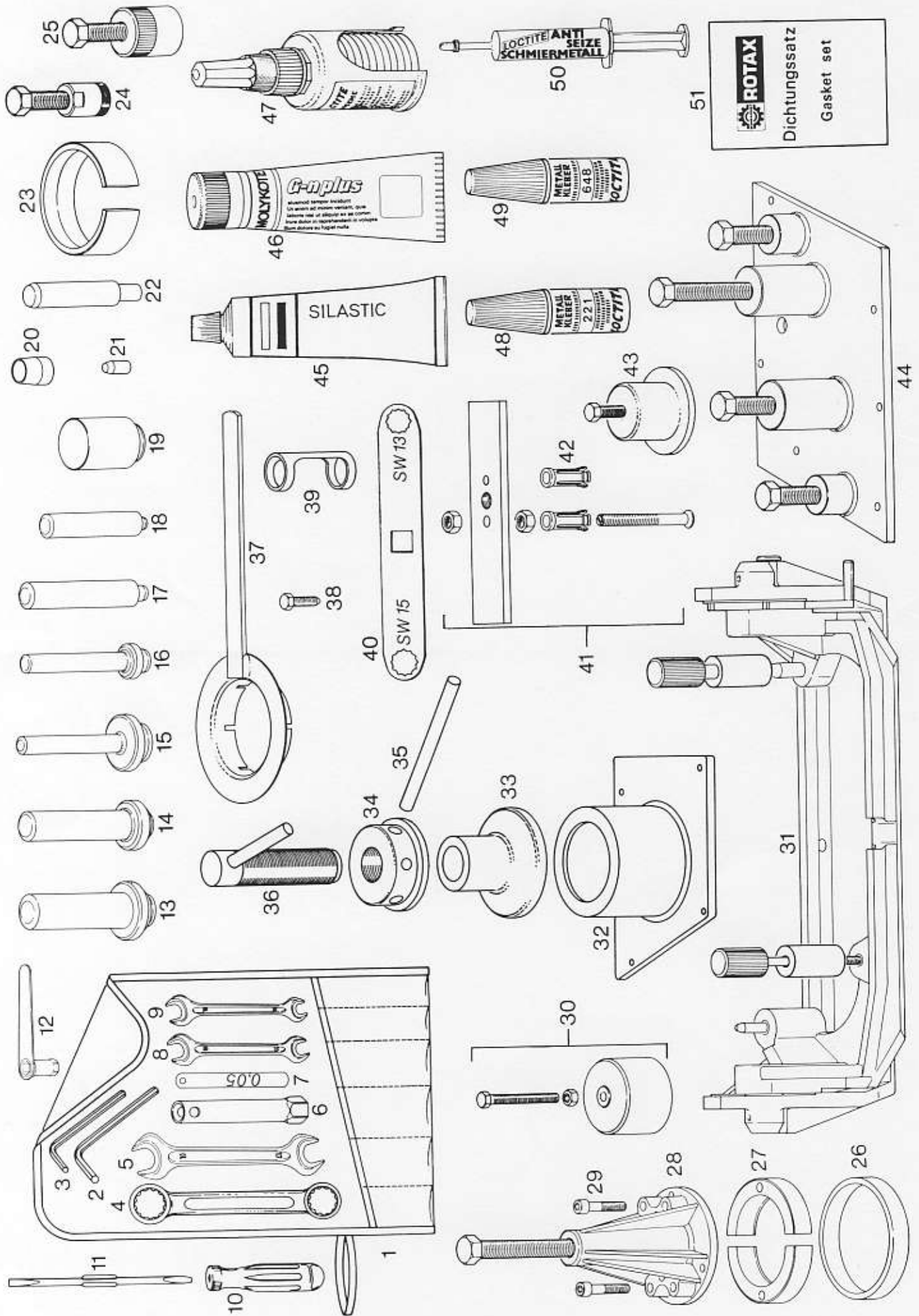
ELECTRIC STARTER PARTS

ILL. NO.	PART NO.	DESCRIPTION	QTY.
1	264 135	SUPPORT.....	1
2	232 250	NEEDLE BEARING 15X21X12.....	1
3	250 140	O-RING 25-3.....	1
4	250 130	OIL SEAL 15X24X5.....	1
5	850 500	O-RING 62-1,5.....	2
6	264 140	ROTOR ASSY.....	1
7	232 260	BALL BEARING 6002.....	1
8	827 600	SHIM.....	AS REQ
9	264 150	YOKE ASSY.....	1
10	264 170	ROTOR SUPPORT ASSY.....	1
11	264 180	CARBON BRUSH ASSY.....	1
12	260 810	ISOLATING BUSHING.....	1
13	230 530	O-RING 6-1,7.....	1
14	260 800	ISOLATING BUSHING.....	1
15	242 780	COMBINED NUT M6.....	1
16	264 160	CARBON BRUSH HOLDER ASSY.....	1
17	241 130	CYLINDER SCREW M5X113.....	2
18	945 750	LOCK WASHER A5.....	2
19	827 660	WASHER 5,3/10/1,5.....	2
20	850 510	O-RING 4,7-1,4.....	2



VALVE, OIL FILTER ELEMENT, IGNITION COVER

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1	260 570	PRESSURE RETAINING VALVE.....	1
2	256 150	GUIDE PIN.....	1
3	239 815	SPRING.....	1
4	256 170	GUIDE PIN SCREW.....	1
5	256 180	OIL FILTER ELEMENT.....	1
6	212 620	OIL FILTER COVER.....	1
7	240 480	PLUG SCREW 1/8-27NPT.....	1
8	230 920	O-RING 60-2,5.....	1
9	241 930	CYL.SCREW M6X20.....	3
10	264 750	TRIGGER COIL ASSY.....	1
11	240 580	TAPTITE SCREW M6X16.....	2
12	251 890	CABLE CLAMP.....	1
13	240 195	TAPTITE-SCREW M4X8.....	3
14	260 760	RUBBER PLUG.....	1
15	212 515	IGNITION COVER.....	1
16	251 880	CABLE HOLDER, INNER.....	1
17	229 140	DOWEL 9,8X10.....	2
18	840 880	CYL. SCREW M6X30.....	2
19	251 885	CABLE HOLDER, OUTER.....	1
20	840 861	CYL.SCREW M6X25.....	2
21	241 800	PLUG SCREW M18X1,5.....	1
22	212 610	CHAIN COVER.....	1
23	840 861	CYL.SCREW M6X25.....	3
24	297 386	SILASTIC 732 RTV / 100 G.....	AS REQ
25	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	AS REQ



REPAIR TOOLS, GASKET SET

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
1 - 12	277 993	OWNERS TOOL KIT.....	1
1	876 195	TOOL BAG.....	1
2	277 810	ALLEN HEAD KEY 6.....	1
3	876 360	ALLEN HEAD KEY 5.....	1
4	277 825	RING WRENCH 22X24.....	1
5	276 090	FORK WRENCH 17X19.....	1
6	276 280	SPARK PLUG WRENCH 18.....	1
7	276 295	VALVE CLEARANCE FEELER GAGE 0,05.....	1
8	876 230	FORK WRENCH 11X13.....	1
9	276 065	FORK WRENCH 10/13 MM.....	1
10	277 840	GRIP FOR SCREW DRIVER.....	1
11	277 830	SCREW-DRIVER BALDE-FLAT.....	1
12	276 040	WRENCH 11MM.....	1
13	876 660	INSERTION JIG ASSY..... FOR OIL SEAL 850 055, CRANKSHAFT MAGNETO SIDE	1
14	277 861	INSERTION JIG ASSY..... FOR OIL SEAL 230 395, MAIN SHAFT	1
15	276 322	INSERTION JIG ASSY..... FOR OIL SEAL 930 715, CRANKSHAFT CLUTCH SIDE	1
16	276 330	INSERTION JIG ASSY..... FOR OIL SEAL 831 260, KICK START SHAFT	1
17	276 250	INSERTION JIG..... FOR OIL SEAL 230 690, DECOMPRESSION SHAFT	1
18	276 340	INSERTION JIG..... FOR OIL SEAL 230 870, OIL PUMP SHAFT	1
19	276 310	INSERTION JIG..... FOR OIL SEAL 850 055, CAM SHAFT	1
20	277 970	GUIDE SLEEVE..... FOR OIL SEAL, MAIN SHAFT	1
21	276 450	GUIDE SLEEVE..... FOR OIL SEAL, OIL PUMP SHAFT	1

ILL. NO.	PART NO.	DESCRIPTION	QTY.
?	276 300	GUIDE BOLT..... FOR PISTON PIN	1
23	276 350	PISTON RING SPANNER..... TO MOUNT PISTON IN CYLINDER	1
24	276 445	PULLER ASSY..... FOR TIMING PULLEY	1
25	277 807	PULLER ASSY. M35X1,5..... FOR FLYWHEEL	1
26	977 492	RING.....	1
27	977 472	RINGHALF.....	2
28	876 296	PULLER ASSY.....	1
29	840 681	CYL. SCREW_M8X40.....	2
30	276 400	PULLER ASSY.....	1
31	277 917	TRESTLE ASSY.....	1
32	276 535	PULLER PLATE ASSY..... CRANKSHAFT DISASSEMBLY	1
33	276 560	PULLER BELL.....	1
34	276 550	PULLER RING.....	1
35	276 155	BOLT 12X250 FOR PULLER RING.....	1
36	276 127	PULL-IN SPINDLE M18X1,5 ASSY.....	1
37	276 825	CLUTCH HUB LOCKING TOOL ASSY.....	1
38	241 965	LOCATING BOLT M8X30.....	1
39	276 470	VALVE SPRING, PUSH INSERT.....	1
40	277 070	RING WRENCH 13/15..... FOR CYLINDER HEAD NUT	1
41	276 360	PULLER ASSY..... FOR BEARINGS, CLUTCH SHAFT AND BALANCER SHAFT	1
42	276 375	EXTRACTOR SLEEVE..... FOR BEARING 6304	1
43	277 087	PULLER ASSY..... FOR BALANCER GEAR	1
44	276 435	PULLER PLATE ASSY..... CRANKCASE DISASSEMBLY	1
45	297 386	SILASTIC 732 RTV / 100 G.....	1
46	297 433	MOLYKOTE GN 100 G.,SLIDE PASTE.....	1

ILL. NO.	PART NO.	D E S C R I P T I O N	QTY.
7	899 784	LOCTITE 574 ORANGE 50 CC. SEALING.....	1
48	899 785	LOCTITE 221 VIOLET 10 CC. SECUR.....	1
49	899 788	LOCTITE 648 GREEN 6 CC. SECURING.....	1
50	297 431	LOCTITE ANTI-SEIZE 10 G.....	1
51	292 741	GASKET SET.....	1

Andover Norton RTX Limited

<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
210.095	IGNITION COVER - GREY NO LOGO		F9	152.20	210.095
210.496	USE 210 857 + 841.685			0.00	210.496
210.542	BELT COVER - LOWER 604		F9	79.85	210.542
210.547	NLA - TIMING BELT COVER - UPPER - BLACK			0.00	210.547
210.549	TIMING BELT COVER - UPPER - SILVER		F9	93.24	210.549
210.857	CLUTCH COVER ASSY. - 'E'		F9	240.80	210.857
211.237	CLUTCH COVER - SILVER PAINT - 'E'		E9	240.80	211.237
212.515	IGNITION COVER		F9	168.23	212.515
212.522	NO LONGER AVAILABLE			0.00	212.522
212.527	TIMING BELT HOUSING - STEEL		F9	31.28	212.527
212.528	TIMING BELT COVER - STEEL - 604-E		F9	31.28	212.528
212.534	TIMING BELT COVER (E)		E9	144.68	212.534
212.539	USE 212.534 + 224.045			0.00	212.539
212.542	VALVE COVER ASSY (was 212.543)		F9	42.12	212.542
212.543	NLA - (USE 212.542)			0.00	212.543
212.546	VALVE COVER ASSY - INTAKE		F9	42.12	212.546
212.550	(USE 212.555) - (DECOMPRESSOR)		F9	60.07	212.550
212.555	NLA - VALVE COVER - DECOMPRESSOR			0.00	212.555
212.567	USE 212.569			0.00	212.567
212.569	SUCT. PUMP H/ING 16mm(605)(MZ)		F9	73.14	212.569
212.570	PRESSURE PUMP HOUSING		F9	46.71	212.570
212.572	PRESSURE PUMP HOUSING		F9	48.37	212.572
212.580	OIL PUMP COVER		F9	43.78	212.580
212.595	SUMP PLATE (4T - BLACK)		F9	70.68	212.595
212.597	NLA - SUMP PLATE (4T - SILVER)			0.00	212.597
212.610	SPROCKET COVER 604E		F9	44.12	212.610
212.620	USE 212.621			0.00	212.620
212.621	OIL FILTER COVER - REPLACES 212.620 (GREY)		F9	25.25	212.621
212.955	BELT COVER 348		F9	176.38	212.955
212.957	BELT COVER - 504 (MATCHLESS)		NETT	123.67	212.957
212.960	STARTER COVER - BLACK		F9	40.94	212.960
212.961	STARTER COVER - SILVER		F9	40.94	212.961
213.280	NO LONGER AVAILABLE			0.00	213.280
213.285	NO LONGER AVAILABLE			0.00	213.285
213.560	NLA - LINER - 560			0.00	213.560
213.753	NLA - 94mm CYLINDER GILNISIL			0.00	213.753
215.310	(USE 215.570)			0.00	215.310
215.316	89.25mm PISTON RING CHROME-TOP		F9	71.24	215.316
215.330	89.00mm PISTON RING OIL		F9	18.68	215.330
215.331	89.25mm OIL CONTROL RING		F9	19.03	215.331
215.400	79.50mm OIL CONTROL RING		F9	18.98	215.400
215.410	89.00mm RING-SILVER-TAPER(2nd)		F9	12.61	215.410
215.411	89.25mm RING-SILVER-TAPER(2nd)		F9	12.90	215.411
215.412	NLA - 89.50 2nd RING			0.00	215.412
215.420	79.50mm TAPERED 2nd RING 348		F9	11.70	215.420
215.430	USE 215.580 (94.00mm PISTON RING TOP (560C))			0.00	215.430
215.431	(USE 215 581)			0.00	215.431
215.440	94.00mm TAPER 2nd RING 560C/N		F9	11.66	215.440
215.441	NLA - 94.25mm TAPERED 2ND RING(560C)			0.00	215.441
215.450	94.00mm OIL CONTROL RING 560N		F9	15.06	215.450
215.451	94.25mm PISTON RING-OIL-(560C)		F9	15.06	215.451
215.510	94.00mm PISTON RING (560C OIL)		F9	21.68	215.510
215.570	89.00mm RING-TOP-BLACK- CHROME		F9	37.98	215.570
215.580	94.00mm TOP PISTON RING 560N (Was 215.430)		F9	42.12	215.580
215.581	94.25mm PISTON RING-TOP-(560C)		F9	36.39	215.581
215.590	79.50mm RECTANGULAR TOP RING		F9	22.37	215.590
215.640	PISTON RING - MIDDLE (604/605)		F9	23.93	215.640
215.650	PISTON RING - TOP (604/605)		F9	60.42	215.650

Andover Norton RTX Limited

<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
215.660	PISTON RING - OIL (604/605)		F9	35.85	215.660
216.115	GUDGEON PIN - 22mm 4T 54.8mm		F9	17.47	216.115
216.170	GUDGEON PIN 22x69mm 4T		F9	22.47	216.170
216.175	GUDGEON PIN 22x65.00mm		F9	20.43	216.175
216.195	PISTON PIN 22x13/18x71.8mm		F9	35.65	216.195
223.161	CYLINDER - 348 Mil - 79.50mm - BLACK		F9	276.52	223.161
223.162	CYLINDER - 348 ATK - 79.50mm - SILVER		F9	276.52	223.162
223.299	CYLINDER HEAD ASSY - 348 Mil		F9	824.50	223.299
223.474	'E' CYLINDER - BLACK - PLATED		F9	400.88	223.474
223.477	'E' - CYLINDER - SILVER		F9	468.12	223.477
223.705	CYLINDER (604) 97.00mm		F9	609.54	223.705
223.805	A=97.00-97.01 B=97.012-97.024			0.00	223.805
224.045	DIFFUSER TUBE (212.534)		F9	1.09	224.045
224.230	CLUTCH CABLE TUBE - 4-STROKE		F9	5.58	224.230
227.080	THRUST WASHER 22/27.5/2.3		F9	4.10	227.080
227.110	RETAINING PLATE		F9	8.21	227.110
227.230	THRUSTWASHER 18.2/34/2mm		F9	2.14	227.230
227.430	WASHER 17x30x1mm		F9	0.90	227.430
227.445	THRUST WASHER 21.2/27.5/1		F9	1.13	227.445
227.465	SPLINED WASHER 22x30x2.6mm		F9	2.59	227.465
227.520	SHIM 0.50mm		F9	1.00	227.520
227.521	SHIM 0.3mm		F9	0.90	227.521
227.522	SHIM 0.1mm		F9	0.90	227.522
227.560	FIBRE SHIM - SHIFT DRUM 4T		F9	1.78	227.560
227.600	THRUST WASHER 20.2x35x3mm(257)		F9	4.36	227.600
227.610	SHIM 0.50mm		F9	1.05	227.610
227.611	SHIM 0.30mm		F9	1.05	227.611
227.612	SHIM 0.10mm		F9	1.05	227.612
227.880	THRUST WASHER 22.2x25.5x1mm		F9	1.00	227.880
227.920	WASHER 6.4x30x3mm - NLA		F9	1.52	227.920
227.930	WASHER 8.4/32/3mm		F9	3.16	227.930
227.950	WASHER - 'WAVEY' - CAMSHAFT		F9	1.52	227.950
227.955	THRUST WASHER - CAMSHAFT		F9	1.00	227.955
227.980	THRUST WASHER 12.2x29.5x1mm		F9	1.05	227.980
228.185	KICKSTART RATCHET		F9	43.78	228.185
229.140	DOWEL 9.8x10mm		F9	1.66	229.140
229.160	DOWEL 13.8x		F9	2.70	229.160
229.170	GROOVED PIN		F9	0.33	229.170
229.210	ROLL PIN (248.985/959 HUB)		F9	0.60	229.210
229.230	JOURNAL BOLT		F9	7.14	229.230
229.260	ROLL PIN 5x24mm KICKSTART		F9	0.50	229.260
230.010	NLA - GASKET INLET - 4-STROKE Mil			0.00	230.010
230.011	INLET GASKET		F9	2.00	230.011
230.015	(USE 230.016)			0.00	230.015
230.016	INTAKE PORT GASKET (230.015)		F9	2.08	230.016
230.020	'O' RING 32-2mm		F9	3.54	230.020
230.068	BASE GASKET - 185		F9	0.77	230.068
230.080	EXHAUST GASKET RING		F9	1.30	230.080
230.110	NLA - O RING			0.00	230.110
230.130	OIL SEAL 40x52x8		F9	16.55	230.130
230.137	OIL SEAL 40x52x7		F9	22.37	230.137
230.140	(ONLY AVAILABLE FROM T.MURPHY)			0.00	230.140
230.195	USE 230.196			0.00	230.195
230.196	OIL SEAL 10x26x7 (EX 230.195)		F9	8.29	230.196
230.250	POWER VALVE GASKET		F9	1.79	230.250
230.260	'O' RING (PV)		F9	1.44	230.260
230.310	'O' RING 114x2 DIN 3771		F9	4.44	230.310
230.355	KICKSTART OIL SEAL 20x28x6mm		F9	6.96	230.355

Andover Norton RTX Limited

<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
230.365	HEAD SHIM (174)		F9	1.71	230.365
230.395	OIL SEAL 25X40X7		F9	8.82	230.395
230.400	'O' RING 18-1.5mm		F9	1.00	230.400
230.405	'O' RING 18x1.5mm		F9	2.76	230.405
230.415	GASKET RING A 6x10		F9	0.49	230.415
230.421	(USE 230.425)			0.00	230.421
230.425	OIL SEAL 28x38x7mm		F9	8.08	230.425
230.451	'O' RING 13x1.5mm		F9	1.40	230.451
230.461	'O' RING (R/L)		F9	1.05	230.461
230.477	NO LONGER AVAILABLE - O-RING			0.00	230.477
230.530	'O' RING 6-1.7mm		F9	1.00	230.530
230.552	BASE GASKET		F9	1.66	230.552
230.565	SHIM - CYLINDER HEAD 244LC/AC		F9	3.43	230.565
230.660	(USE 230.661)			0.00	230.660
230.661	GASKET - EXHAUST - 2 bolt		F9	3.30	230.661
230.690	OIL SEAL 14x24x7mm		F9	8.44	230.690
230.705	'O' RING 82-2mm 237/267TL		F9	5.04	230.705
230.740	HEAD SHIM		F9	2.35	230.740
230.760	'O' RING 38-2		F9	2.12	230.760
230.770	HEAD SHIM - 72-76mm		F9	3.58	230.770
230.775	HEAD SHIM (70)		F9	3.58	230.775
230.810	STEM SEAL		F9	3.60	230.810
230.820	0.70mm BASE GASKET - 348/504/506		F9	2.57	230.820
230.825	0.50mm BASE GASKET - 348/560/604		F9	3.11	230.825
230.826	(USE 230.825)			0.00	230.826
230.829	BASE GASKET - 604		F9	5.33	230.829
230.830	HEAD GASKET (504FT)		F9	16.85	230.830
230.832	HEAD GASKET 504/506		F9	16.85	230.832
230.835	HEAD GASKET 348		F9	40.85	230.835
230.837	HEAD GASKET 560		F9	16.85	230.837
230.839	HEAD GASKET 604		F9	18.34	230.839
230.840	GASKET - 4T SUMP		F9	5.20	230.840
230.851	JOINT STRIP 933-2.5mm		F9	4.03	230.851
230.852	O-RING 2.5x820mm BELT-COVER		F9	3.68	230.852
230.854	'O' RING 292-2.5		F9	1.71	230.854
230.856	NLA - (JOINTING STRIP 2.5mm X 475mm)			0.00	230.856
230.860	'O' RING - CAM COVER 107-2.5		F9	6.60	230.860
230.870	OIL SEAL O/P 4T		F9	4.97	230.870
230.880	'O' RING 13.3x2.4mm		F9	2.52	230.880
230.890	'O' RING 17.2x2.5		F9	1.25	230.890
230.900	NLA - (GASKET RING 16.3mm)			0.00	230.900
230.905	GASKET RING - FIBRE 16x20		F9	0.37	230.905
230.910	'O' RING 34-2 (256 CL)		F9	4.28	230.910
230.920	'O' RING (O/F 4T) 60X2.5mm		F9	2.48	230.920
231.010	PLATE - DECOMPRESSOR		F9	7.15	231.010
232.092	NLA - (BEARING 205 R20.30)			0.00	232.092
232.130	GUIDE PULLEY		F9	60.88	232.130
232.150	BALL 12mm		F9	0.60	232.150
232.165	BUSHING		F9	17.28	232.165
232.180	CLUTCH THRUST BEARING		F9	17.73	232.180
232.200	NLA - (B 3 x12.8mm G5 NEEDLE ROLLER			0.00	232.200
232.240	BEARING NJ205E TVP C3 25-52-15		F9	55.79	232.240
232.250	NEEDLE BEARING 15x21x12mm		F9	11.55	232.250
232.260	BEARING (6002 Z 15/32/0mm)		F9	10.56	232.260
232.400	6001 C3 BEARING		F9	10.24	232.400
232.440	7/32 BALL BEARING		F9	0.20	232.440
232.490	ROLLER BRG. 207 E C3 35/72/17 - 605		F9	70.75	232.490
232.650	(USE 232.652)			0.00	232.650

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
232.652	NEEDLE CAGE 25x29x10 TN		F9	8.21	232.652
232.700	INNER RACE - CLUTCH		F9	15.87	232.700
232.790	(USE 232 795)			0.00	232.790
232.795	NEEDLE CAGE 20x24x12 (2 HALVES		F9	8.84	232.795
232.800	BEARING		F9	9.45	232.800
232.805	BEARING - NEEDLE 21x25x13		F9	9.26	232.805
232.890	BEARING - NEEDLE - 25x29x17mm		F9	16.48	232.890
232.920	NEEDLE BUSHING - CAM		F9	9.88	232.920
232.970	PIN - NEEDLE - 4x25.8mm		F9	0.65	232.970
232.980	PIN - NEEDLE - 3x15.8mm		F9	0.46	232.980
233.500	MAINSHAFT BUSH		F9	12.27	233.500
233.510	BUSH - CLUTCH SHAFT 22.8/24/11		F9	12.27	233.510
233.550	NLA - (BUSH - 36x38x3.5mm)			0.00	233.550
234.052	USE 234 053			0.00	234.052
234.053	IDLE GEAR - 81T/15T E-START		F9	145.36	234.053
234.353	FREE-WHEEL GEAR 37T (234.350)		F9	79.89	234.353
235.113	21T - SLIDING - (5SP/4T)		F9	69.71	235.113
235.207	KICKSTART IDLER GEAR		F9	54.29	235.207
235.215	GEAR - KICKSTART DRIVE		F9	65.84	235.215
235.473	nla - 31T - GEAR - FREE			0.00	235.473
235.527	GEAR- FREE 32T (1) 5SP		F9	76.09	235.527
235.603	GEAR - SLIDING 15T (3)(5sp 4T)		F9	83.51	235.603
235.610	GEAR FREE 21T (3)		F9	75.87	235.610
235.620	GEAR - FREE 17T (4) (5SP/4T)		F9	68.66	235.620
235.632	GEAR - SLIDING 19T (4) (5-SP)		F9	88.01	235.632
235.633	19T GEAR - SLIDING - 4th - (5SP/4T)		F9	84.94	235.633
235.644	GEAR - FIXED - 12T		F9	45.16	235.644
235.646	GEAR - FIXED - 13T		F9	48.61	235.646
235.654	24T GEAR - FREE - 2nd		F9	74.34	235.654
235.658	23T GEAR - FREE		F9	71.24	235.658
235.665	23T GEAR - FREE - 5 (with 235.110) 244/504 ONLY		F9	70.09	235.665
235.667	23T GEAR - FREE - 5sp (235.112 - 21T) 560 +		F9	74.68	235.667
235.767	KICKSTART IDLER GEAR		F9	55.32	235.767
235.775	USE 235.777 + 932.840			0.00	235.775
235.777	GEAR - PUMP 27T(+932.840)		F9	25.14	235.777
236.019-	NLA- 13T SPROCK 2xSH (520) 560/604			0.00	236.019-
236.020	NLA - 14T SPROCK 2xSH (520) 560/604			0.00	236.020
236.021	15T SPROCKET 2xSH (520) 348/604		F9	31.15	236.021
236.022	16T SPROCK 2xSH (520) 560/604		F9	31.96	236.022
236.023	17T SPROCK 2xSH (520) 560/604		F9	33.39	236.023
236.024	18T SPROCK 2xSH (520) 504/604		F9	35.48	236.024
236.025	NLA - 19T SPROCK 2xSH (520) 560/604			0.00	236.025
236.026	20T SPROCK 2xSH (520) 560/604		F9	38.70	236.026
236.029	NLA - (13T SPROCKET)			0.00	236.029
236.040	14T SPROCKET - 520 - FLAT - 24mm SPLINE		F9	38.25	236.040
236.042	(USE 236.022)			0.00	236.042
236.986	(NO LONGER AVAILABLE)			0.00	236.986
236.992	15T SPROCKET 530		F9	31.15	236.992
236.996	19T SPROCKET - (530) MATCHLESS		F9	24.99	236.996
236.997	20T SPROCKET (530) MATCHLESS		F9	24.99	236.997
236.998	21T SPROCKET (530) MATCHLESS		F9	24.99	236.998
237.428	KICKSTART SHAFT		F9	80.59	237.428
237.612	BALANCE SHAFT - NON-E/START		F9	83.51	237.612
237.621	KICKSTART SHAFT		F9	105.36	237.621
237.636	SHAFT - GEAR C/A PAWL 4-T		F9	82.82	237.636
237.645	USE 237.647			0.00	237.645
237.647	OIL PUMP SHAFT		F9	31.37	237.647
237.655	SHAFT - DECOMPRESSOR		F9	38.70	237.655

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
237.660	NLA - CAMSHAFT - 348 GS			0.00	237.660
237.665	CAMSHAFT 225/240 deg		F9	134.18	237.665
237.667	NLA - CAMSHAFT - 348 ENDURO		F9	112.86	237.667
237.670	CAMSHAFT - 504 MX 560 (237.865)		F9	134.18	237.670
237.675	CAM 285/297deg. (504FT)		F9	134.18	237.675
237.700	NLA - CAM - 220 506 ENDURO		F9	134.18	237.700
237.712	SHAFT - CLUTCH 11T		F9	125.08	237.712
237.715	13T CLUTCH SHAFT - 5 SPEED		F9	151.60	237.715
237.720	MAINSHAFT - (486) + 4T		F9	126.25	237.720
237.840	NLA - DRIVE SHAFT - RPM			0.00	237.840
237.860	CAM '292 (504-506FT & 604FT)		F9	153.50	237.860
237.865	(USE 237.670)			0.00	237.865
237.880	SHAFT - BALANCE - E/START		F9	92.96	237.880
237.885	BALANCE SHAFT - 348		F9	96.73	237.885
239.010	SPRING 5.3x1.4x17.20mm		F9	1.57	239.010
239.535	SPRING - KICKSTART L-13mm		F9	1.30	239.535
239.537	SPRING - KICKSTART L=-8mm		F9	0.76	239.537
239.620	CLUTCH SPRING (169-N) 36.7		F9	1.79	239.620
239.625	CLUTCH SPRING (212-N) 34.1mm		F9	2.24	239.625
239.640	GEARCHANGE SPRING		F9	3.16	239.640
239.741	CLUTCH SPRING (255-N) 38mm (Repl. 239.742)		F9	2.48	239.741
239.745	CLUTCH SPRING (298-N) 39mm		F9	2.69	239.745
239.761	(USE 239.762)			0.00	239.761
239.762	KICKSTART SPRING		F9	3.86	239.762
239.770	G/C PEDAL SPRING		F9	1.66	239.770
239.780	VALVE SPRING 348/504		F9	7.40	239.780
239.790	FLAT SPRING - DECOMPRESSOR		F9	3.68	239.790
239.800	SPRING - DECOMPRESSOR		F9	2.95	239.800
239.815	COMP SPRING 7x0.5x13mm 348-604		F9	0.57	239.815
239.830	SPRING - PAWL		F9	2.66	239.830
239.882	NLA - THROTTLE SPRING - 8532			0.00	239.882
239.905	(USE 239.907)			0.00	239.905
239.907	LEAF SPRING (239.905)		F9	3.80	239.907
240.195	TAPTITE SCREW - M4x8		F9	0.19	240.195
240.205	VALVE ADJUSTING SCREW 4T - M7 - 242.591		F9	7.55	240.205
240.230	PLUG SCREW M16x1.5mm		F9	3.87	240.230
240.281	M8x50mm HEX SCREW		F9	0.67	240.281
240.310	ADJ SCREW - M8x19.5mm		F9	2.57	240.310
240.317	ADJ SCREW - M8x25mm		F9	2.99	240.317
240.331	M6x55 ALLEN SCREW		F9	0.56	240.331
240.360	(USE 240.362)			0.00	240.360
240.362	STUD - EXHAUST M8x58mm		F9	2.00	240.362
240.365	STUD M8x50mm		F9	2.00	240.365
240.370	NLA - (ALLEN SCREW M6x60)			0.00	240.370
240.371	USE 240 372			0.00	240.371
240.372	ALLEN SCREW M6x60mm		F9	0.61	240.372
240.385	TAPTITE SCREW M6x12mm		F9	0.56	240.385
240.415	STUD M8x94mm		F9	3.73	240.415
240.420	STUD M8x119		F9	4.03	240.420
240.430	USE 240.435			0.00	240.430
240.435	STUD M10x184		F9	16.17	240.435
240.440	USE 240 445			0.00	240.440
240.445	STUD M10x197		F9	12.42	240.445
240.480	PLUG - 1/8thx27 NPT		F9	1.95	240.480
240.580	TAPTITE SCREW M6x16mm		F9	0.56	240.580
241.070	BANJO BOLT		F9	9.38	241.070
241.130	NO LONGER AVAILABLE (CYL SCREW M5x113mm)			0.00	241.130
241.401	SUMP PLUG M12x12mm		F9	1.78	241.401

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
241.761	CYL SCREW M6x50mm DIN 912		F9	0.56	241.761
241.777	SCREW - KICKSTART STOP		F9	9.11	241.777
241.781	USE 241.782			0.00	241.781
241.782	DRAIN PLUG		F9	8.51	241.782
241.795	SCREW - GRUB M4x6mm		F9	0.56	241.795
241.800	INSPECTION CAP - BLACK		F9	1.71	241.800
241.811	CYL SCREW M6x35mm DIN 912		F9	0.37	241.811
241.816	CYL SCREW M6x40mm DIN 912		F9	0.49	241.816
241.821	CYL SCREW M6x45mm DIN 912		F9	0.49	241.821
241.850	NLA - (CONTACT SCREW M10 CPL)			0.00	241.850
241.852	USE 241 856			0.00	241.852
241.856	CONTACT SCREW M10		F9	19.48	241.856
241.871	CYL SCREW M6x70mm DIN 912		F9	0.67	241.871
241.905	NLA - (PLUG SCREW - M10x10)			0.00	241.905
241.965	TDC LOCKING BOLT - M8x30mm		F9	3.87	241.965
242.206	NUT M8		F9	0.35	242.206
242.590	USE 242.591			0.00	242.590
242.591	M7 NUT		F9	0.35	242.591
242.605	NUT M18x1.5mm		F9	3.73	242.605
242.650	NUT M20x1.5		F9	4.40	242.650
242.680	NO LONGER AVAILABLE (DISTANCE NUT M6x22)			0.00	242.680
242.690	(USE 242.851)			0.00	242.690
242.695	M10 COLLAR CAP NUT - CYL HEAD		F9	4.79	242.695
242.700	COLLAR NUT M8		F9	2.67	242.700
242.710	CRANKNUT M16x1.5mm		F9	1.71	242.710
242.780	COMBINED NUT M6		F9	1.40	242.780
242.790	HEX NUT M18x1.5mm		F9	4.44	242.790
242.851	M10 HEX NUT (242.690)		F9	1.18	242.851
243.340	RIVET - CLUTCH DRUM		F9	0.20	243.340
243.360	NLA - (Rivet 5 x 25)			0.00	243.360
244.211	WASHER 6.4mm		F9	0.17	244.211
245.320	LOCKTAB NA20 (17 spline)		F9	1.78	245.320
245.340	SNAPRING - 24 (!) GEARSHAFTS		F9	0.90	245.340
245.350	CIRCLIP 19.5x1mm		F9	0.34	245.350
245.390	USE 245.391 (LOCKTAB NA24 - 22 spline)			0.00	245.390
245.391	LOCKTAB - NA24 - PLATED - 22 Spline		F9	1.88	245.391
245.430	(USE 245.431)			0.00	245.430
245.431	CIRCLIP - PISTON - 22mm 4T		F9	0.33	245.431
245.440	CIRCLIP 12 (VALVE GUIDE) 4T		F9	0.17	245.440
245.460	WASHER - FLAT SPRING CAM -4T		F9	0.20	245.460
245.555	CIRCLIP - WATERPUMP 26x1.2mm		F9	1.07	245.555
245.560	CIRCLIP 24x1.2mm - NLA		F9	0.69	245.560
245.620	SNAP-RING 62mm(ELECTRIC START)		F9	1.67	245.620
245.720	FRICITION WASHER VS18		F9	1.34	245.720
246.015	KEY 3x5mm (246.011)		F9	1.14	246.015
246.150	NLA - 0.30mm SHIM			0.00	246.150
246.151	NLA - 0.50mm SHIM			0.00	246.151
246.570	KEY 4x5mm PRIMARY		F9	0.90	246.570
247.320	BUSHING SLEEVE		F9	9.33	247.320
247.390	DISTANCE RING 35.2/50/4mm		F9	7.19	247.390
247.420	DISTANCE SLEEVE 20/30/13mm		F9	11.53	247.420
247.430	SPACER 8.4x24x11mm		F9	3.43	247.430
247.480	NLA - SPACER (KEYED) 28/46/11mm			0.00	247.480
247.570	NLA - SPACER			0.00	247.570
247.600	SPACER 22.2/30/19		F9	6.60	247.600
247.680	NLA - SLEEVE - GUIDE 3.5mm			0.00	247.680
247.740	TIMING BELT COVER SLEEVE (BOLT 840.801)		F9	3.25	247.740
247.750	NLA - COVER DISTANCE BUSH			0.00	247.750

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
247.810	SPACER 19.2x28X11mm (USE WITH 293.572)		F9	5.73	247.810
248.060	(USE 248.064)			0.00	248.060
248.064	KICKSTART LEVER ASSY (USE 248.180)		F9	79.40	248.064
248.159	(USE 248.895)			0.00	248.159
248.180	(E) KICKSTART 4T CURVED (ATK)		F9	124.90	248.180
248.197	K-S HUB 10mm (229.260 PIN) BLK		F9	68.44	248.197
248.210	PEDAL - GEAR black - 104mm Ctrs. (12x14)		F9	37.98	248.210
248.260	NLA - GEAR LEVER 4 STROKE			0.00	248.260
248.261	NO LONGER AVAILABLE			0.00	248.261
248.809	KICKSTART HUB (CRCLIP TYPE)CHR		F9	48.50	248.809
248.895	KICKSTART ASSY (248.159)		F9	99.97	248.895
248.917	(USE 248.919)			0.00	248.917
248.919	GEAR LEVER 4T - 135mm Ctrs. Curved - Black		F9	66.43	248.919
248.925	INDEX LEVER 10.1mm - WITH ROLLER		F9	12.67	248.925
248.955	HUB K/START 4T CHROME 229.210		F9	48.50	248.955
248.959	HUB - K/START BLACK 4T 229.210		F9	74.65	248.959
250.010	GASKET RING - C12x18mm		F9	0.60	250.010
250.030	NLA - GASKET			0.00	250.030
250.050	'O' RING (R/L) (257)		F9	1.59	250.050
250.070	NLA - GASKET			0.00	250.070
250.080	OIL SEAL 10x21x5		F9	8.29	250.080
250.090	(USE 250.091)			0.00	250.090
250.091	GASKET RING 14/19/0.5mm		F9	0.58	250.091
250.130	'O' RING - STARTER		F9	8.21	250.130
250.140	'O' RING 24.4x3.1mm		F9	2.57	250.140
250.230	(USE 250.231)			0.00	250.230
250.231	GASKET - POWERVALVE (123/257)		F9	2.21	250.231
250.290	'O' RING (1) 4T-HEAD		F9	2.28	250.290
250.300	'O' RING 23.4-3.53		F9	3.52	250.300
250.311	WASHER		F9	0.19	250.311
250.320	'O' RING 31.34x3.53-N		F9	3.81	250.320
250.360	'O' RING 35.2-5.7mm		F9	2.09	250.360
250.370	GASKET - OIL PUMP 4T		F9	3.43	250.370
250.380	(USE 250.381)			0.00	250.380
250.381	CLUTCH COVER GASKET		F9	7.52	250.381
250.390	(USE 250.391)			0.00	250.390
250.391	GASKET - ALTERNATOR COVER		F9	5.99	250.391
250.400	'O' RING 12x3.5mm		F9	1.14	250.400
250.430	'O' RING (2) 4T-HEAD		F9	3.14	250.430
250.440	SEALING RING 8 x18x1.5mm		F9	0.90	250.440
250.455	OIL SEAL - G/CH 12x22x7 (257)		F9	6.83	250.455
250.460	O RING 11-2.7 FPM 70-80 SHORE		F9	2.14	250.460
250.481	O-RING 524x3.5mm		F9	2.85	250.481
250.521	REED BLOCK GASKET 122 > 273		F9	3.18	250.521
250.691	WATERPUMP GASKET (250.690)		F9	2.97	250.691
250.710	'O' RING CLUTCH COVER 257/267		F9	7.33	250.710
250.750	'O' RING HEAD - 129x2.5		F9	6.76	250.750
250.802	No Longer Available			0.00	250.802
250.820	GASKET - CRANKCASE (257)		F9	4.34	250.820
250.840	NLA - GASKET			0.00	250.840
250.842	NLA - GASKET			0.00	250.842
250.960	NLA - GASKET			0.00	250.960
251.880	CABLE HOLDER - INNER		F9	3.58	251.880
251.885	NLA - CABLE HOLDER (MZ)			0.00	251.885
251.888	CABLE HOLDER - OUTER		F9	6.80	251.888
251.890	CABLE CLAMP		F9	1.66	251.890
251.910	SMALL-STARTER DISTANCE BLOCK		F9	18.72	251.910
251.915	LARGE-STARTER DISTANCE BLOCK		F9	28.67	251.915

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	<u>Code</u>	<u>Price</u>	<u>Part No.</u>
251.950	'O' RING BRACE 4-STROKE		F9	4.25	251.950
253.017	TIMING PULLEY 15T (BOTTOM)		F9	81.76	253.017
253.023	(USE 253.025)			0.00	253.023
253.025	PULLEY - CAM-SHAFT 30T		F9	53.87	253.025
253.039	(USE 253.315)			0.00	253.039
253.049	(USE 253.345)			0.00	253.049
253.050	ROCKER SHAFT 4-T		F9	12.90	253.050
253.070	INTAKE VALVE (4071) 34mm		F9	30.34	253.070
253.075	IN-VALVE (560/604) (4100) 36mm		F9	34.33	253.075
253.080	EX-VALVE (504/604) (4072) 30mm		F9	68.06	253.080
253.090	VALVE COLLET 4T		F9	1.71	253.090
253.101	VALVE SPRING RETAINER		F9	7.71	253.101
253.116	VALVE GUIDE - EXHAUST		F9	10.06	253.116
253.117	VALVE GUIDE - INLET		F9	10.06	253.117
253.160	30mm INTAKE VALVE - 348		F9	44.72	253.160
253.170	27mm EXHAUST VALVE - 348 - T-T 4084		F9	68.06	253.170
253.305	ROCKER ARM - INTAKE		F9	94.26	253.305
253.315	ROCKER ARM - INLET		F9	96.73	253.315
253.335	ROCKER ARM ASSY - EXHAUST		F9	94.26	253.335
253.345	ROCKER ARM - EXHAUST		F9	96.73	253.345
256.110	USE 256.115			0.00	256.110
256.115	INNER & OUTER ROTOR ASSY 6mm		F9	32.78	256.115
256.117	INNER & OUTER ROTOR ASSY 8mm		F9	38.46	256.117
256.120	USE 256.115			0.00	256.120
256.130	USE 256.135			0.00	256.130
256.135	INNER & OUTER ROTOR ASSY 18mm		F9	43.40	256.135
256.137	INNER & OUTER ROTOR ASSY 16mm		F9	41.62	256.137
256.140	USE 256.135			0.00	256.140
256.150	GUIDE PIN - PRESSURE VALVE 4-T		F9	1.53	256.150
256.160	OIL STRAINER - FOUR-STROKE		F9	4.46	256.160
256.170	SCREW - GUIDE PIN RV		F9	3.83	256.170
256.180	(USE 256.185)			0.00	256.180
256.185	OIL FILTER 51mm (0.13mm MESH) - RB-X305		F9	6.99	256.185
256.200	OIL SEPARATOR FOAM - MAG SIDE		F9	4.56	256.200
256.205	OIL SEPARATOR FOAM - CLU SIDE		F9	3.96	256.205
256.250	OIL PIPE UNION - FEMALE		F9	15.49	256.250
258.755	SELECTOR FORK		F9	50.53	258.755
258.765	SELECTOR FORK 2nd 5sp		F9	54.72	258.765
258.775	SELECTOR FORK		F9	50.53	258.775
258.780	GUIDE PIN		F9	10.67	258.780
258.797	SHIFT DRUM ASSY - 4T		F9	115.51	258.797
259.010	NLA - 2.00mm SINTER PLATE			0.00	259.010
259.020	(USE 294.110 KIT)			0.00	259.020
259.062	NLA - HUB - CLUTCH - 242/282TL			0.00	259.062
259.064	CLUTCH HUB 128/256 (92>)		F9	43.40	259.064
259.065	CLUTCH HUB 123/257 (WET + 064)		F9	48.37	259.065
259.075	SPRAG CLUTCH		F9	139.35	259.075
259.130	RETAINING PLATE (LESS BEARING)		F9	33.04	259.130
259.130CP	RETAINING PLATE + BEARING/HUB		F9	39.95	259.130CP
259.140	THRUST HUB 257/605		F9	10.43	259.140
259.185	CLUTCH RELEASE CAM (30deg)		F9	24.65	259.185
259.270	NLA - RETAINING PLATE - CLIMBER			0.00	259.270
259.300	USE 259 301			0.00	259.300
259.301	THRUST MUSHROOM (259 300)		F9	22.73	259.301
259.312	FRICTION PLATE (259.310)		F9	30.92	259.312
259.360	NLA			0.00	259.360
259.480	SPRAG HOUSING (120-150)		F9	82.02	259.480
259.490	(REPLACED BY 259.495)			0.00	259.490

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
259.495	SPRAG CLUTCH (WAS 259.490)		F9	138.98	259.495
259.545	CLUTCH HUB		F9	51.67	259.545
259.547	NLA - CLUTCH HUB 124 ETC			0.00	259.547
259.548	CLUTCH HUB 256/128 1986		F9	43.30	259.548
259.550	(NO LONGER AVAILABLE)			0.00	259.550
259.552	ALUMINIUM PLATE 1.5mm		F9	7.91	259.552
259.555	NLA - PLAIN PLATE 1.5mm (M10)			0.00	259.555
259.556	PLAIN PLATE (HARD)1.5mm M17		F9	8.33	259.556
259.558	PLAIN PLATE 1.00mm (HARD) M18		F9	8.33	259.558
259.560	(USE 259.563)			0.00	259.560
259.563	FRICITION PLATE 3.5mm - ROTAX - (M3)		F9	11.57	259.563
259.566	3.0mm (USE 259.053)			0.00	259.566
259.570	INNER PRESSURE PLATE (6 POSTS)		F9	33.75	259.570
259.597	BEARING C/W PLATE		F9	26.42	259.597
259.645	USE (259.646)			0.00	259.645
259.646	116mm CLUTCH DRUM (SMALL)		F9	49.78	259.646
259.790	CLUTCH RELEASE CAM (STD)		F9	33.27	259.790
259.810	NLA - SINTER PLATE 3.5mm (M5)		F9	25.58	259.810
259.852	(USE 259.854)			0.00	259.852
259.854	132mm CLUTCH DRUM (LARGE)		F9	56.16	259.854
259.874	HUB - CLUTCH - LARGE - (5mm) (257-604)		F9	88.49	259.874
259.876	CLUTCH HUB 257 - LARGE - 2.5mm		F9	69.71	259.876
259.878	HUB - CLUTCH + 259.915 - LARGE (257)		F9	70.20	259.878
259.879	CLUTCH HUB - LARGE - 604		F9	80.59	259.879
259.880	USE 259.885			0.00	259.880
259.885	INNER P/PLATE - 22.5mm Posts (504 > 560)		F9	45.16	259.885
259.889	INNER P/PLATE - 23.1mm Posts (Bevelled) (257 & 604)		F9	45.16	259.889
259.897	PLATE and BRG ASSY		F9	33.49	259.897
259.900	(USE 259.905)			0.00	259.900
259.905	2.6mm CLUTCH PLATE (LARGE) (M41)		F9	12.77	259.905
259.905-	2.6mm FIBRE PLATE M41 132mm		F9	6.09	259.905-
259.910	1.00mm PLAIN PLATE - STEEL		F9	4.64	259.910
259.911	1.00mm PLAIN - NITRIDED		F9	9.43	259.911
259.912	1.00mm PLAIN PLATE - STEEL		F9	6.26	259.912
259.913	CLUTCH PLATE - STEEL 1.25mm (M40)		F9	7.06	259.913
259.913-	1.25mm STEEL PLATE (M40) 132mm		F	0.00	259.913-
259.915	(USE 259.916)			0.00	259.915
259.916	PL PLATE 1.5mm 166M36(259.915) (M36)		F9	7.53	259.916
259.916-	1.5mm STEEL PLATE 166M36 - 132mm		F	0.00	259.916-
259.945	(USE 259.180) (30 deg)			0.00	259.945
259.980	(use 259.985)			0.00	259.980
259.985	(use 259.986)			0.00	259.985
259.986	CLUTCH DRUM (259.985)		F9	271.76	259.986
259.986-	(USE 259.450)			0.00	259.986-
260.210	KICKSTART RUBBER		F9	3.54	260.210
260.545	G/C PEDAL RUBBER		F9	2.91	260.545
260.550	LENS (+ 430.020 & 250.091)		F9	7.24	260.550
260.570	PRESSURE RETAINING VALVE 4-T		F9	2.44	260.570
260.760	CABLE APERTURE PLUG		F9	2.89	260.760
260.800	ISOLATING BUSHING		F9	2.99	260.800
260.810	CONNECTOR SHEATH		F9	3.48	260.810
260.900	COVER PROFILE RUBBER		F9	12.56	260.900
260.910	RUBBER DAMPER (4T BELT COVER)		F9	5.33	260.910
264.035	USE 294.357			0.00	264.035
264.135	SUPPORT (CONFIG WITH 232 250)		F9	98.78	264.135
264.140	NLA - ROTOR ASSY			0.00	264.140
264.145	NO LONGER AVAILABLE			0.00	264.145
264.150	STATOR YOKE ASSY		F9	153.14	264.150

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	<u>Code</u>	<u>Price</u>	<u>Part No.</u>
264.170	ROTOR SUPPORT ASSY		F9	68.06	264.170
264.180	CARBON BRUSH ASSY (+866.890)		F9	18.19	264.180
264.182	CARBONBRUSH ASSY (+)(294.357)		F9	36.58	264.182
264.730	NLA - IGNITION COIL			0.00	264.730
264.735	NLA - IGNITION COIL ASSY			0.00	264.735
264.736	IGNITION COIL CW LEAD & CAP		F9	119.16	264.736
264.737	NLA - IGNITION COIL ASSY			0.00	264.737
264.740	(USE 264.745) (070000 0780 4T)			0.00	264.740
264.745	AMPLIFIER BOX - 070000 0781 4T		F9	212.93	264.745
264.750	TRIGGER COIL 4T		F9	106.30	264.750
264.861	SPARKPLUG CONNECTOR - SHEILDED		F9	31.37	264.861
264.870	RECTIFIER/REGULATOR		F9	116.34	264.870
267.857	CARB FLANGE 42mm OD (19.5 depth) - (504 MIL)		F9	22.19	267.857
267.900	NLA - IN-FLANGE - ID 40 x 24.00mm 560/604			0.00	267.900
267.905	IN-FLANGE - ID 40 x 21.50mm 560/604		F9	26.92	267.905
267.930	INTAKE SOCKET 48.5mm x 49.5mm		F9	24.19	267.930
273.851	EXHAUST FLANGE		F9	21.12	273.851
276.040	USE 276.041			0.00	276.040
276.041	CLUTCH ADJ'T SPANNER (276.040)		F9	5.12	276.041
276.065	OPEN ENDED SPANNER 10 / 13mm		F9	3.16	276.065
276.090	NLA - OPEN ENDED SPANNER 17 / 19MM			0.00	276.090
276.127	PULL-IN SPINDLE M18x1.5		F9	97.82	276.127
276.155	HANDGRIP 12x250		F9	7.06	276.155
276.250	NLA - INSERTION JIG - 230.690			0.00	276.250
276.280	PLUG SPANNER - 18 (4-STROKE)		F9	5.21	276.280
276.295	0.05mm FEELER GAUGE		F9	1.95	276.295
276.300	NLA - GUIDE BOLT			0.00	276.300
276.310	NLA - INSERTION JIG (850.055)			0.00	276.310
276.315	NLA - INSERTION JIG - CAM NEEDLE BRG (232.920)			0.00	276.315
276.322	NLA - INSERTION JIG - 930.715			0.00	276.322
276.330	NLA - INSERTATION JIG - 831.260			0.00	276.330
276.340	NLA - INSERTION JIG - 230.870			0.00	276.340
276.350	NLA - 89mm PISTON RING SPANNER (504-506)			0.00	276.350
276.360	NLA - BEARING EXTRACTOR (932.032)			0.00	276.360
276.370	EXTRACTOR FOR 6203 (932.032)		F9	46.17	276.370
276.375	NO LONGER AVAILABLE FROM ROTAX			0.00	276.375
276.380	M10 EXTRACTOR BOLT		F9	49.83	276.380
276.390	SUPPORT PLATE		F9	20.51	276.390
276.400	USE 276 405			0.00	276.400
276.405	NLA - CAMSHAFT EXTRACTOR TOOL		F9	22.74	276.405
276.436	PULLER PLATE - C/CASE HALVES		F9	222.66	276.436
276.445	M30x1.5 EXTRACTOR LOWER PULLEY		F9	31.74	276.445
276.450	NLA - GUIDE SLEEVE - OIL PUMP SHAFT			0.00	276.450
276.470	NLA - VALVE SPRING MOUNTING DEVICE			0.00	276.470
276.535	PULLER PLATE FOR CRANKSHAFT FOR 4-T		F9	149.75	276.535
276.550	PULLER RING		F9	79.05	276.550
276.560	PULLER BELL		F9	117.63	276.560
276.720	NLA - PISTON RING SPANNER 79.5mm			0.00	276.720
276.825	CLUTCH LOCKING TOOL (LARGE)		F9	43.07	276.825
276.855	PRESSURE NIPPLE ASSY		F9	27.03	276.855
276.880	Valve Spring Spanner Assy		F9	28.79	276.880
276.990	Spring Spanner Lever		F9	12.10	276.990
277.070	HEAD SPANNER 4 STROKE 13/15mm		F9	31.03	277.070
277.087	PULLER FOR BALANCE GEAR (4T)		F9	36.10	277.087
277.180	NLA - BEARING PULLER SET			0.00	277.180
277.290	USE 277.291			0.00	277.290
277.291	CIRCLIP PLIERS ZGS2			0.00	277.291
277.340	SCREWDRIVER INSERT		F9	0.85	277.340

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
277.807	M35x1.5mm EXTRACTOR (BOSCH)		F9	31.02	277.807
277.825	RING SPANNER 22 / 24mm		F9	14.38	277.825
277.837	NO LONGER AVAILABLE			0.00	277.837
277.845	USE 277.847 (HANDLE & BLADE)			0.00	277.845
277.847	SCREWDRIVER HANDLE & BLADE		F9	4.47	277.847
277.861	NLA - INSERTION JIG - 230.395			0.00	277.861
277.887	CLUTCH LOCKING TOOL		F9	15.72	277.887
277.917	USE 277.919			0.00	277.917
277.919	NLA - TRESTLE ASSY			0.00	277.919
277.970	MAINSHAFT SEAL GUIDESLEEVE		F9	11.33	277.970
280.010	(USE 280.015)			0.00	280.010
280.015	TIMING BELT 4-STROKE		F9	19.95	280.015
280.020	TENSIONER ECCENTRIC - CAMBELT		F9	12.76	280.020
280.030	GUIDE PULLEY (FOR 932.037)		F9	8.61	280.030
281.068	NLA - TRANSMISSION SET - 5 SPEED			0.00	281.068
292.041	87.25mm PISTON ASSY			0.00	292.041
292.182	(USE 292.134)			0.00	292.182
292.425	(USE 292.990)			0.00	292.425
292.426	(USE 292.996)			0.00	292.426
292.445	(USE 292.435) - 79.40mm STROKE			0.00	292.445
292.449	NLA - CON ROD KIT			0.00	292.449
292.742	USE 293 223 + 230.832			0.00	292.742
292.755	(USE 294.020)			0.00	292.755
292.756	(USE 294.021)			0.00	292.756
292.765	NLA - 348 PISTON FOR C-IRON SLEEVE			0.00	292.765
292.766	NLA - 348 PISTON FOR C-IRON SLEEVE			0.00	292.766
292.965	(USE 293.270)			0.00	292.965
292.990	NO LONGER AVAILABLE			0.00	292.990
292.991	(USE 292.996)			0.00	292.991
292.992	89.50mm PISTON 'SLIPPER-SKIRT' (216.115 PIN)		E9	149.50	292.992
292.993	NLA			0.00	292.993
292.996	89.25mm PISTON (+216.175) HI		E9	149.50	292.996
293.024	ROD KIT 504 ex mil		F9	159.86	293.024
293.123	GENERATOR UNIT 12v 190w 4T		F9	764.73	293.123
293.128	NLA - STATOR - ROTOR & Trig Coil 4T			0.00	293.128
293.151	4T STARTER (ND 128000-0820)		F9	304.73	293.151
293.223	GASKET SET - FULL		F9	170.30	293.223
293.225	NLA - GASKET SET - TOP - 605			0.00	293.225
293.227	GASKET SET - TOP		F9	66.85	293.227
293.254	NLA - GASKET SET - FULL 560E			0.00	293.254
293.270	(USE 294.245)			0.00	293.270
293.271	(USE 294.246)			0.00	293.271
293.320	NO LONGER AVAILABLE - ROTAX			0.00	293.320
293.394	E - CON ROD KIT (504-605)		F9	224.61	293.394
293.432	NLA - CRANKSHAFT 79.40mm STROKE			0.00	293.432
293.435	E - CRANKSHAFT (WAS 292.445)		F9	601.05	293.435
293.458	BALANCE DRIVE ASSY - 'E'		F9	199.95	293.458
293.471	CRANKSHAFT 77.40mm STROKE		F9	438.83	293.471
293.485	PRIMARY DRIVE ASSY - CUSH-DRIVE- 560 TUAREC		F9	228.60	293.485
293.490	PRIMARY DRIVE ASSY		F9	253.51	293.490
293.570	BALANCE DRIVE ASSY - (NON-E/START)		F9	149.01	293.570
293.572	BALANCE DRIVE ASSY - K-START VERSION		F9	157.80	293.572
293.575	(USE 293.578)			0.00	293.575
293.578	BALANCE DRIVE ASSY (293 575/9)		F9	360.75	293.578
293.620	RATCHET GEAR/START GEAR (PAIR)		F9	110.40	293.620
293.798	CRANKCASE - BLACK - 348/504 HD/ & 560 ATK		F9	899.94	293.798
293.875	NLA - 348 PISTON-SMALL VALVE RECESS - ATK			0.00	293.875
293.910	NLA - 604FT PISTON 96.685mm R-WOOD			0.00	293.910

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
294.020	PISTON 89.00mm STD 504 (216.115 PIN)		F9	138.92	294.020
294.021	NLA - PISTON 89.25mm - TRY - W-4768MO8925			0.00	294.021
294.040	USE 294.045			0.00	294.040
294.045	CRANKSHAFT - 70.4mm		F9	626.74	294.045
294.049	CON ROD KIT (348 Mil ONLY) - 'E'		F9	224.61	294.049
294.074	CRANKSHAFT - 79.40mm STROKE - 504		F9	626.74	294.074
294.075	(USE 294.077)			0.00	294.075
294.077	CRANKSHAFT - 81.00mm STROKE - 560/604		F9	652.75	294.077
294.245	94.00mm PISTON (560)		F9	328.81	294.245
294.246	PISTON 94.25 1st O/S (560)		F9	345.72	294.246
294.354	REPAIR KIT - ELECTRIC STARTER		F9	127.47	294.354
294.357	(USE 294.358) DENSO128000-8840			0.00	294.357
294.358	4T STARTER (ND 228000-7460) 'E'		F9	344.06	294.358
294.665	96.99mm PISTON (604/5)		F9	389.91	294.665
294.665B	97.00mm PISTON (604/605)		F9	389.91	294.665B
295.245	79.50/79.51mm PISTON 348 Mil & ATK		F9	141.60	295.245
295.300	USE 293 223			0.00	295.300
295.301	NLA - GASKET SET - CYLINDER 348 - GILNISIL		F9	0.00	295.301
295.439	CRANKCASE 604		F9	899.94	295.439
297.386	SILASTIC SEALANT 90g RTV		F9	20.04	297.386
297.431	(USE 297.434)			0.00	297.431
297.433	MOLYKOTE G-N 50gr SLIDE PASTE		F9	25.59	297.433
297.434	LOCTITE ANTI-SEIZE (297.431)		F9	11.70	297.434
297.445	CLUTCH CABLE O=125 I=137mm		F9	43.56	297.445
297.530	CLUTCH CABLE 4T O=1250 I=1370mm		F9	23.25	297.530
297.535	CLUTCH CABLE 4T O=960 I=1080mm		F9	31.96	297.535
297.537	NLA - CLUTCH CABLE - 1083mm			0.00	297.537
297.540	SPARK PLUG		F9	7.34	297.540
299.040	REPAIR MANUAL (348/504/560)		F9	18.61	299.040
430.020	'O' RING 9,3x2,4		F9	1.98	430.020
430.110	'O' RING 10x2.7mm		F9	1.44	430.110
430.200	O-RING 6.4x1.8		F9	1.63	430.200
430.205	O RING 6.4x1.8		F9	1.78	430.205
430.585	OILSEAL 15x24x7		F9	10.72	430.585
650.040	WASHER - FIBRE 12.2x20x1mm		F9	0.26	650.040
665.010	SHIELDED SPARK PLUG CAP		F9	14.28	665.010
827.261	THRUSTWASHER 12.5x21.5x1mm		F9	1.09	827.261
827.600	SHIM		F9	1.72	827.600
827.660	NLA - WASHER 5.3/10/1.5mm			0.00	827.660
831.260	OIL SEAL - KICKSTART 4-STROKE - 22x32x7		F9	9.34	831.260
831.762	'O' RING (4T SUMP) 145-2.5		F9	10.09	831.762
832.235	BEARING 6207 E THN C3 - 35-72-17		F9	34.70	832.235
840.511	M5x16 ALLEN SCREW		F9	0.30	840.511
840.681	SCREW M8*40		F9	0.62	840.681
840.861	CYL SCREW M6x25mm DIN 912		F9	0.34	840.861
840.880	CYL SCREW M6x30mm DIN 912		F9	0.37	840.880
840.991	ALLEN SCREW M8x30mm		F9	0.50	840.991
841.685	TAPTITE SCREW M5x10		F9	0.37	841.685
841.700	HEX SCREW M10x60mm		F9	0.92	841.700
850.055	OIL SEAL 30x47x7		F9	11.84	850.055
850.500	'O' RING 62-1.5mm		F9	4.10	850.500
850.510	O-RING 4.7X1.4mm		F9	1.98	850.510
854.106	38mm INLET VALVE - 605 - T106/194		F9	83.32	854.106
854.110	32mm EXHAUST VALVE (605) T11024		F9	128.35	854.110
866.667	NLA - IGNITION COIL - 2810 - 605			46.77	866.667
866.890	CARBON BRUSH-PLATE (+264.180)		F9	27.84	866.890
867.481	INLET RUBBER STRAIGHT > 40x43mm		F9	16.26	867.481
867.484	CARB ADAPTOR STRAIGHT > 42x43mm		F9	16.26	867.484

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<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
867.486	(USE 867.488 + 951.510 CLAMP)			0.00	867.486
867.489	CARB ADAPTER 30deg BEND 43x42m		F9	31.03	867.489
876.197	TOOL BAG (876.195)		F9	4.85	876.197
876.660	NLA - INSERTION JIG - 850.055			0.00	876.660
877.012	CIRCLIP INSTALL PUSHER - 22mm		F9	32.67	877.012
877.017	NLA - CIRCLIP INSTALLATION TOOL - 22mm			0.00	877.017
877.022	CIRCLIP INSTALL SLEEVE		F9	40.48	877.022
899.784	LOCTITE 547 ORANGE		F9	51.77	899.784
899.785	LOCTITE 221 VIOLET 10cc		F9	11.42	899.785
916.186	GUDGEON PIN 18x11x58.7mm		F9	19.09	916.186
916.187	GUDGEON PIN 18x11/15x58.7mm		F9	25.49	916.187
927.222	SHIM - 38 x 48 x 0.02mm		F9	1.11	927.222
927.400	SHIM 35.4/43/0.1mm		F9	0.88	927.400
927.401	SHIM 0.02mm		F9	0.88	927.401
927.475	THRUSTWASHER 22.5x30.5x0.5mm		F9	1.02	927.475
927.571	WASHER 5.3mm		F9	0.14	927.571
927.945	WASHER 6,2/12/1		F9	0.56	927.945
930.265	OIL SEAL 20x35x7mm		F9	14.66	930.265
930.675	OIL SEAL 25x38x7mm		F9	9.76	930.675
930.715	OIL SEAL 35x47x7		F9	11.84	930.715
932.033	BEARING - 6203 TNH C3 17-40-12		F9	12.38	932.033
932.037	BEARING - 6203 2RS1/CNH/HT32		F9	41.76	932.037
932.095	BEARING 6304 E TNH C3		F9	24.19	932.095
932.430	BEARING 6204 TN9 C3		F9	12.84	932.430
932.432	BEARING 6204 C3		F9	13.17	932.432
932.815	BEARING 6303 ETN9 C3		F9	17.13	932.815
932.840	PIN - (235.777)		F9	0.48	932.840
940.000	STUD M6x40mm		F9	2.28	940.000
940.370	STUD M8x61x15mm BELT TENSIONER (240.240)		F9	2.28	940.370
940.485	(USE 940.487)			0.00	940.485
940.487	HEX SCREW M8x30mm DIN 933		F9	0.57	940.487
940.511	NLA - SCREW M5x16 (940.510)		F9	0.18	940.511
940.561	SCREW M6x20mm		F9	0.20	940.561
940.755	EXTRACTOR SCREW		F9	14.27	940.755
941.041	SCREW CSK M6x16mm (4T INLET)		F9	0.26	941.041
942.220	NUT M18x1.5		F9	3.64	942.220
942.670	USE 942.671			0.00	942.670
944.461	SHIM 0.3mm-20.5/30mm		F9	0.58	944.461
944.462	SHIM 0.5mm-20.5/30mm		F9	0.58	944.462
944.465	SHIM 0.15mm-20.5/30mm		F9	0.58	944.465
944.468	THRUSTWASHER 1.0mm-20.5/30mm		F9	0.76	944.468
945.635	CIRCLIP - PISTON		F9	0.26	945.635
945.660	CIRCLIP 20x1.2mm		F9	0.33	945.660
945.690	CIRCLIP 47mm x 1.75mm		F9	1.30	945.690
945.710	RETAINING RING 5mm		F9	0.15	945.710
945.735	CIRCLIP - G/PIN 18mm		F9	0.33	945.735
945.750	SPRING WASHER A5		F9	0.12	945.750
945.751	M6 (A6) LOCKWASHER		F9	0.14	945.751
945.752	LOCKWASHER A8		F9	0.14	945.752
946.015	WOODRUFF KEY 6x9mm (4T-CRANK)		F9	2.12	946.015
946.870	WASHER 14.5/22.5/1mm		F9	0.56	946.870
949.030	NLA - PIN 3x8mm			0.00	949.030
950.140	USE 950.141			0.00	950.140
950.141	GASKET - COPPER RING		F9	0.42	950.141
951.510	HOSE CLAMP 52mm		F9	3.88	951.510
956.162	NLA - OIL PRESSURE SWITCH 4-T (MZ)			0.00	956.162
956.165	OIL PRESSURE SWITCH 4-T		F9	29.85	956.165
964.070	INSULATION SHEATH - 4T		F9	0.81	964.070

Andover Norton RTX Limited

<u>Part No.</u>	<u>Description</u>	<u>E & O E</u>	Code	<u>Price</u>	<u>Part No.</u>
977.477	RING HALF - 6207-E		F9	38.70	977.477
977.490	RING (277.892&977.475 257-232)		F9	37.93	977.490
992.817	(USE 992.819)			0.00	992.817
992.819	STARTER RELAY (ND182800-1950)		F9	98.62	992.819
994.861	GASKET SET			69.03	994.861
DO-8596	PHM38 R90S MOUNTING SLEEVE		0	3.95	DO-8596
DO-CONE-F	CONE FILTER FOR PHF-34/36 - 'E'		E	17.52	DO-CONE-F
DO-PHBE-34	34mm PHBE CARBURETTOR		0	89.65	DO-PHBE-34
DO-PHF-34	34mm GS CARBURETTOR WITH PUMP 'E'		E	159.59	DO-PHF-34
DO-PHF-36	36mm DS CARBURETTOR WITH PUMP 'E'		E	159.59	DO-PHF-36
DO-PHM-40-ZS1	40mm PHM CARBURETTOR			169.78	DO-PHM-40-ZS1
ND-IX24	IX24 IRIIDIUM SPARK PLUG(NGK 8)			10.20	ND-IX24
W-4768MO8900	89.00mm WISECO PISTON ASSY - 504			133.08	W-4768MO8900
W-4768MO8925	89.25mm WISECO PISTON ASSY - 504		NETT	133.08	W-4768MO8925
W-4768MO8950	89.50mm WISECO PISTON ASSY - 504		NETT	133.08	W-4768MO8950
W-4768MO8950-CI	CLEARANCE 0.13mm - (0.005")			0.00	W-4768MO8950-CI
W-4768MO8950-GIL	CLEARANCE 0.088mm - (0.0035")			0.00	W-4768MO8950-GIL
W-4768MO9100	91.00mm WISECO PISTON ASSY 12:1 - 504		NETT	163.86	W-4768MO9100



BOMBARDIER-ROTAX GMBH
MOTORENFABRIK

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Postanschrift: Bombardier-Rotax GmbH, Postfach 5, A-4623 Gunskirchen, Austria

Db. 361 E

T E C H N I C A L D A T A

ROTAX ENGINE TYPE 504 MIL, exec. 35.504.09

Description:	Single cylinder 4-stroke motorcycle engine, air-cooled, single overhead cam shaft, timing belt drive, with integrated 5-speed transmission, with balance shaft
Bore, mm:	89,0 mm
Stroke, mm:	77,4 mm
Displacement, c.c.:	481,3
Compression ratio:	8,2
Cylinder:	light alloy cylinder with cast-iron sleeve
Cylinder/piston clearance:	0,04 - 0,06 mm
Piston:	light metal, solid skirt, cast
Piston ring:	1 compression ring (chrome plated) 1 tapered compression ring 1 oil strainer ring assy.
Cylinder head:	monoblock design, 4 valves, forked inlet port, 2 separate exhaust ports
Valve train:	timing belt, break-proof design, cam shaft on ball bearing, rocker arm with rollers
Intake valve:	2 x 34 mm
Exhaust valve:	2 x 30 mm
Valve gap/cold engine:	0,05 mm, intake and exhaust
Cam shaft:	outlet 225 degrees, inlet 240 degrees
Valve stroke:	7,8 mm / 7,87 mm
Valve timing:	inlet opens 4 degrees BTDC inlet closes 56 degrees ABDC outlet opens 36,5 degrees BBDC outlet closes 8,5 degrees ATDC
Ignition unit:	Capacitor discharge ignition, fully electronic, with timing advance
Ignition timing:	idling 3 degrees BTDC full load 29 degrees BTDC at 7000 rpm continuous variable timing from 2000 rpm

Generator output: 3-phase A.C. flywheel generator 12V 190W

Spark plug: 12 mm NGK D8 E-A

Electrode gap: 0,7 mm

Carburetor: AMAL 30 mm dia.

Fuel: Regular gasoline RON 91 -

Engine lubrication: dry sump lubrication, oil HD 30W-50

Transmission lubricat.: splash lubrication

Oil pump: double trochoid pump

Clutch: multi-plate clutch in oil bath

Primary drive: straight tooth spur gearing 32/76 = 2,375

Transmission: integrated 5-speed transmission, constant mesh, with dogs

Transmission ratios: $i_{prim} = 32/76 = 2,375$

1st speed = $32/11 = 2,909$

2nd speed = $24/12 = 2,0$

3rd speed = $21/15 = 1,4$

4th speed = $19/17 = 1,118$

5th speed = $21/23 = 0,913$

total ratio ($i_{prim} \times i_{speed}$)

1st speed: 6,909

2nd speed: 4,75

3rd speed: 3,325

4th speed: 2,654

5th speed: 2,168

other ratios optional

Sprocket: 17 teeth, 5/8 x 1/4

Gear shifting: left-hand shifting, neutral between 1st and 2nd gear

Starter: kick-starter, optional electric starter

Starting aid: valve lifter

Performance: 28 HP at approx. 6000 rpm

Max. torque: 36 Nm at 5000 rpm

Max. recommended rpm: 7500 rpm

Intake silencer: sample 504 MIL

Exhaust system: sample 504 MIL

Weight: approx. 43 kg (with electric starter 46 kg)



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POSTANSCHRIFT:
 BOMBARDIER-ROTAX GMBH, POSTFACH 5, A-4623 GUNSKIRCHEN

ROTAX 4-STROKE ENGINES

GENERAL

Single cylinder- motorcycle-engine, air-cooled,
 with integrated 5-speed gear-box
 dry sump lubrication
 Single overhead camshaft, 4 valves, roofshaped combustion
 chamber,
 camshaft drive with toothbelt,
 C.D. ignition unit, electronic, with automatic spark
 advance, with 3-phase generator 12V 190W,
 can be supplied with or without balance shaft.

Main data

	<u>Type 348</u>	<u>Type 504</u>	<u>Type 504</u> <u>Flat-Track</u>	<u>Type 506</u>	<u>Type 560</u>
Bore	79,5	89	89	89	94
Stroke	70,4	79,4	79,4	81	81
Displacement c.c.	349	494	494	504	562
Compression ratio	9,6	9,2	10,5	9,8	9,6

Valve timing

- 2 -

4-valve roof shape combustion chamber with central spark plug, the combustion chamber is collision free, so that the engine is safe against overrevolutions and belt-breaking (except from cam shaft 237 675, 237 860 and 237 865). Roller valve rockers.

Inlet valve: 2 x Ø 34 (2 x Ø 36 for engine type 560 and 604)
 Outlet valve: 2 x Ø 30

Valve gap with cold engine: outlet and inlet 0,05 mm

	<u>outlet</u>	<u>inlet</u>
<u>348 GS</u> NW 237 660 225 °	opens 42,5 ° BBDC closes 2,5 ° ATDC stroke 5,82 (7,9 valve stroke)	opens 2,5 ° BTDC closes 42,5 ° ABDC stroke 5,82 (7,9 valve stroke)
<i>350 MIL</i> { <u>348 End</u> NW 237 667 229 °	opens 46 ° BBDC closes 3 ° ATDC stroke 5,85 (7,9 valve stroke)	opens 3 ° BTDC closes 46 ° ABDC stroke 5,85 (7,9 valve stroke)
<u>506 Regularita</u> NW 237 660 225 °	opens 36,5 ° BBDC closes 8,5 ° ATDC stroke 5,82 (7,9 valve stroke)	opens 3,5 ° ATDC closes 48,5 ° ABDC stroke 5,82 (7,9 valve stroke)
<i>504 MIL</i> { <u>506</u> NW 237 665 AV 225 °/EV 240 °	opens 36,5 ° BBDC closes 8,5 ° ATDC stroke 5,82 (7,87 valve stroke)	opens 4 ° BTDC closes 56 ° ABDC stroke 5,77 (7,8 valve stroke)
<u>506 Enduro</u> NW 237 700 AV 220 °/EV 240 °	opens 36 ° BBDC closes 4 ° ATDC stroke 4,82 (6,51 valve stroke)	opens 5 ° BTDC closes 55 ° ABDC stroke 4,08 (5,5 valve stroke)
<u>506 GS/504 MX/560</u> NW 237 670 261 °	opens 60,5 ° BBDC closes 20,5 ° ATDC stroke 6,57 (8,9 valve stroke)	opens 13,5 ° BTDC closes 67,5 ° ABDC stroke 6,57 (8,9 valve stroke)
<u>504 Flat Track</u> NW 237 675 AV 285 °/EV 297 °	opens 74,5 ° BBDC closes 30,5 ° ATDC stroke 7,06 (9,56 valve stroke)	opens 45,5 ° BTDC closes 71,5 ° ABDC stroke 7,12 (9,65 valve stroke)
<u>506 - 560</u> NW 237 800 249 °	opens 55 ° BBDC closes 14 ° ATDC stroke 6,87 (9,3 valve stroke)	opens 12 ° BTDC closes 57 ° ABDC stroke 6,87 (9,3 valve stroke)
<u>560</u> NW 237 805 248 °	opens 54 ° BBDC closes 14 ° ATDC stroke 7,12 (9,64 valve stroke)	opens 12 ° BTDC closes 56 ° ABDC stroke 7,12 (9,64 valve stroke)
<u>504 - 560 FT</u> NW 237 860 292 °	opens 72 ° BBDC closes 40 ° ATDC stroke 7,79 (10,55 valve stroke)	opens 44 ° BTDC closes 68 ° ABDC stroke 7,79 (10,55 valve stroke)
<u>560 - 604 GS/MC</u> NW 237 865 269 °	opens 65 ° BBDC closes 24 ° ATDC stroke 7,14 (9,67 valve stroke)	opens 20 ° BTDC closes 69 ° ABDC stroke 7,14 (9,67 valve stroke)

Lubrication

The engine is designed for dry sump lubrication.

The oil is circulated by a double trochoid pump (pressure and scavenging pump). In the main circuit after the pump there is a paper oil-filter with integrated bypass-valve which opens when the filter is blocked. For fine cleaning there is a centrifugal separator in the crankshaft.

The paper filter is accessible by unscrewing the oil filter cover, which is in the magneto side crankcase half.

Pump capacity: approx. 5 litres/min. at $n_M = 8000$ 1/min

Oil pressure

At warm engine (dry sump temperature approx. 80°C) 0,5 bar pressure at $n_M = 5000$ 1/min, measured at the connecting nipple NPT 1/8" on the oil filter cover.

Oil quality

Castrol GTX2 15W/50 HD or similar high quality brand oil.

Oil to be changed every 2.500 km

Oil filter to be changed every 2.500 km

Cleaning of the centrifugal separator in the crankshaft at every engine revision.

Gear-box

Gear ratios

$$i_{\text{prim}} = 76 / 32 = 2,375$$

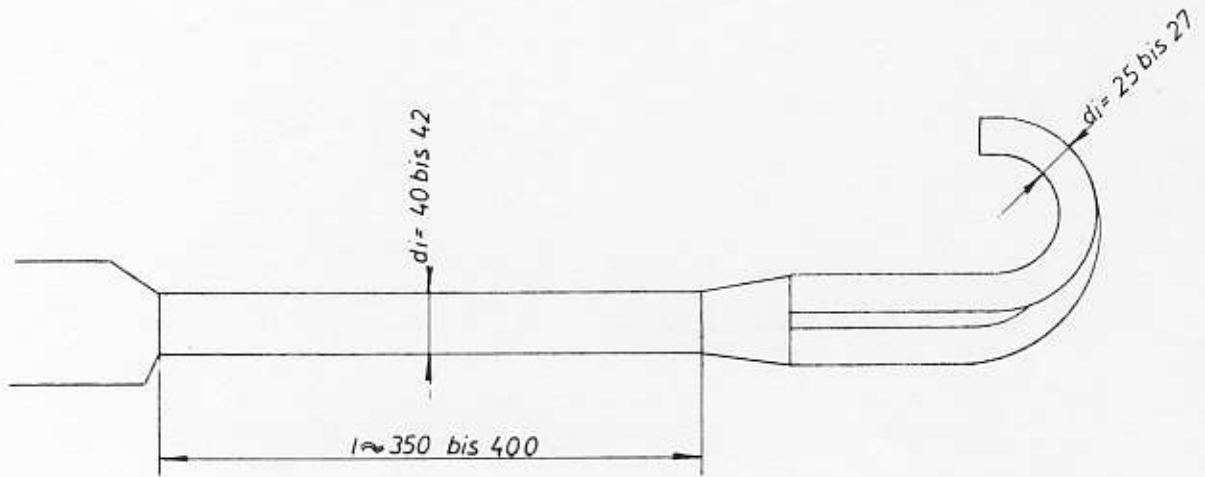
1st speed	32 / 11 =	2,909
2nd speed	24 / 12 =	2,0
3rd speed	21 / 15 =	1,4
4th speed	19 / 17 =	1,117
5th speed	21 / 23 =	0,913

$$\text{total gear ratios} = i_{\text{prim}} \cdot i_{\text{gear}}$$

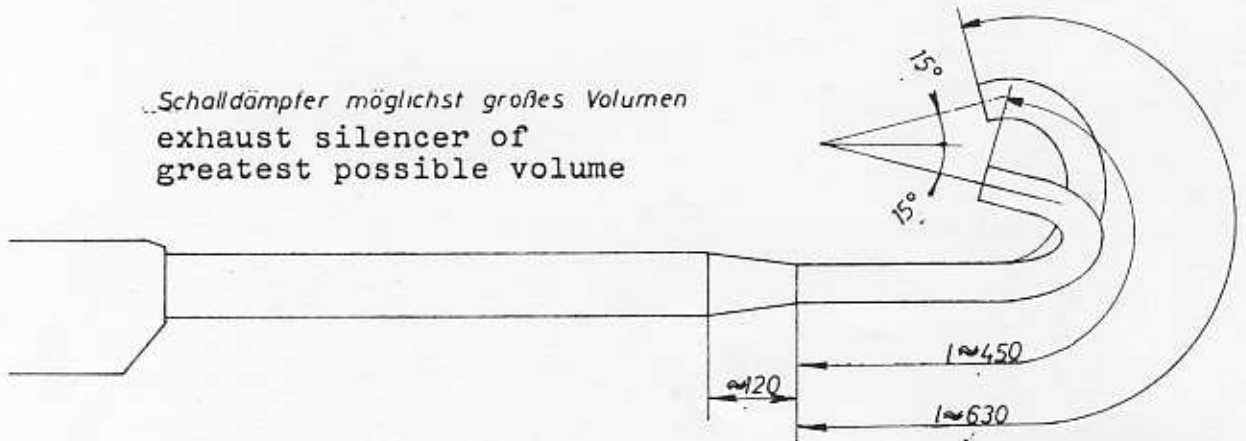
1st	6,909
2nd	4,75
3rd	3,325
4th	2,653
5th	2,168

Vorschlag für Auspuffsystem Rotax 348/506

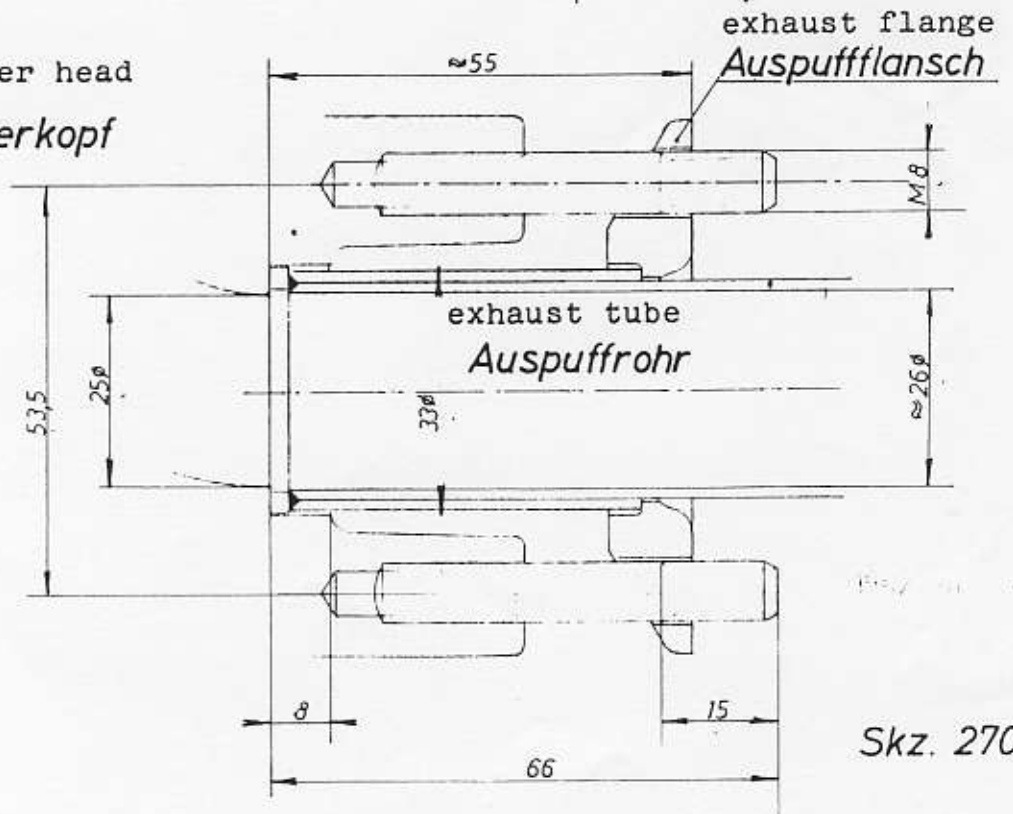
SUGGESTION FOR EXHAUST SYSTEM
FOR ROTAX-4-STROKE ENGINES 348/506



Schalldämpfer möglichst großes Volumen
exhaust silencer of
greatest possible volume



cylinder head
Zylinderkopf



Skz. 270

SUGGESTIONS FOR ENGINE INSTALLATION IN THE FRAME

Oil system

For cooling reasons and because of the reduced space requirement the main tubes of the frame should be used as oil tank. When making the frame, care has to be taken to remove carefully all welding drops, residues of corrosion protection oil and metal chips from the tubes.

Scheme: see drawing, appendix no. 1

The oil line leading to the pressure pump is connected on top of the clutch side crankcase half and usually gets connected with the oil tank in the frame by a nipple and a tube installed between the timing belt housing and the cylinder base.

To avoid that foreign material damages the oil pump, a metallic filter element has to be placed in the frame outlet. This filter should be dimensioned so that sufficient flow is guaranteed also in winter.

The oil return line from the scavenging pump is connected at the magneto side crankcase half. It is useful to connect the flexible oil tube to a steel tube fixed on the frame. This oil line should be arranged in the oil tank so that the oil outlet is above the oil level and the oil return flow can be seen through the oil filler socket in order to check the circulation.

The oil tank is vented through a tube connected to the engine (nipple on valve cover) to prevent oil loss in case of braking or if the motorcycle falls down.

The crankcase (and the oil tank) are then vented through the big vent opening at the rear of the crankcase via an oil separator box into the carburetor.

The oil separator box is preferably mounted at the front side of the airbox and should not have any small section areas (height H min. 20 mm). Separated oil should be able to flow back freely into the engine.

The execution of the airbox depends on the noise requirements. The minimum size should be 3 litres.

Oil tank capacity

When deciding on the dimensions of the oil system, the following facts have to be taken into consideration:

- About 1 litre oil is accumulated in the dry sump at high r.p.m., in particular when driving the motorcycle uphill.
- Oil consumption (difference between minimum and maximum oil level) is 1 litre (interval of oil level inspection every 1000 km)
- plus a minimum of 1 litre of disposable oil quantity in the oil tank, where the oil tank in the frame has to be dimensioned so that the remaining oil quantity of 1 litre guarantees the oil circulation at all possible inclined positions of the motorcycle (uphill - downhill). (If this is not the case, the oil quantity has to be increased until the oil supply for the engine is sufficiently guaranteed.)
- gives 3 litres minimum capacity.

The oil level in the tank should be checked and adjusted as follows:

Run the engine until warm, after some minutes of idle at standstill of the motorcycle refill oil up to the maximum mark at the oil dipstick or inspection glass.

Ventilation of the lubricating system

Necessary after the first installation of the engine or after disconnecting of the oil pump suction tube from the engine (nipple at clutch-side crankcase half).

1. Connect oil tube to engine and oil tank.
2. Fill approx. 1,5 litres of oil into the oil tank.
3. Unscrew oil filter cover on magneto side (right) crankcase half (3 int. hex. screws M6) and remove oil filter.
4. Remove pressure valve situated in the oil filter housing with a screwdriver together with the rubber plug.
5. Pull decompression lever and crank the engine with the kick start lever until oil comes out of the hole of the pressure valve.
6. Reassemble the pressure valve complete, the oil filter and the cover with the sealing ring.

Airfilter

K & N filter with foam pre-separator or a similar filter.

Starting the engine

It is considerably easier to start the engine if the crankshaft is in the correct position before operating the kick-starter.

The decompression lever facilitates the positioning of the crankshaft to start position and the starting of the engine by pushing the motorcycle.

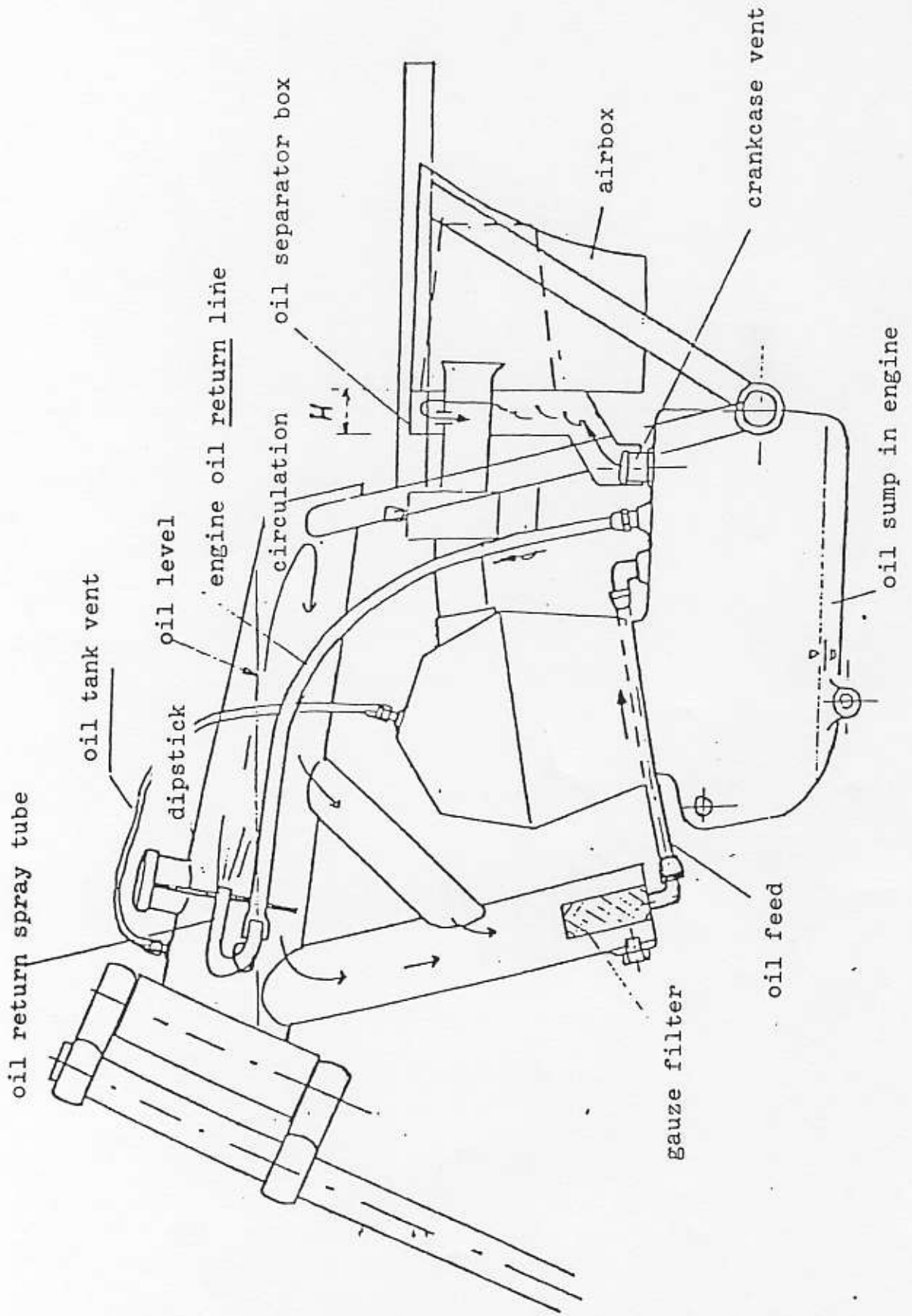
There is a window in the timing drive cover and a colour mark at the camshaft to indicate the starting position.

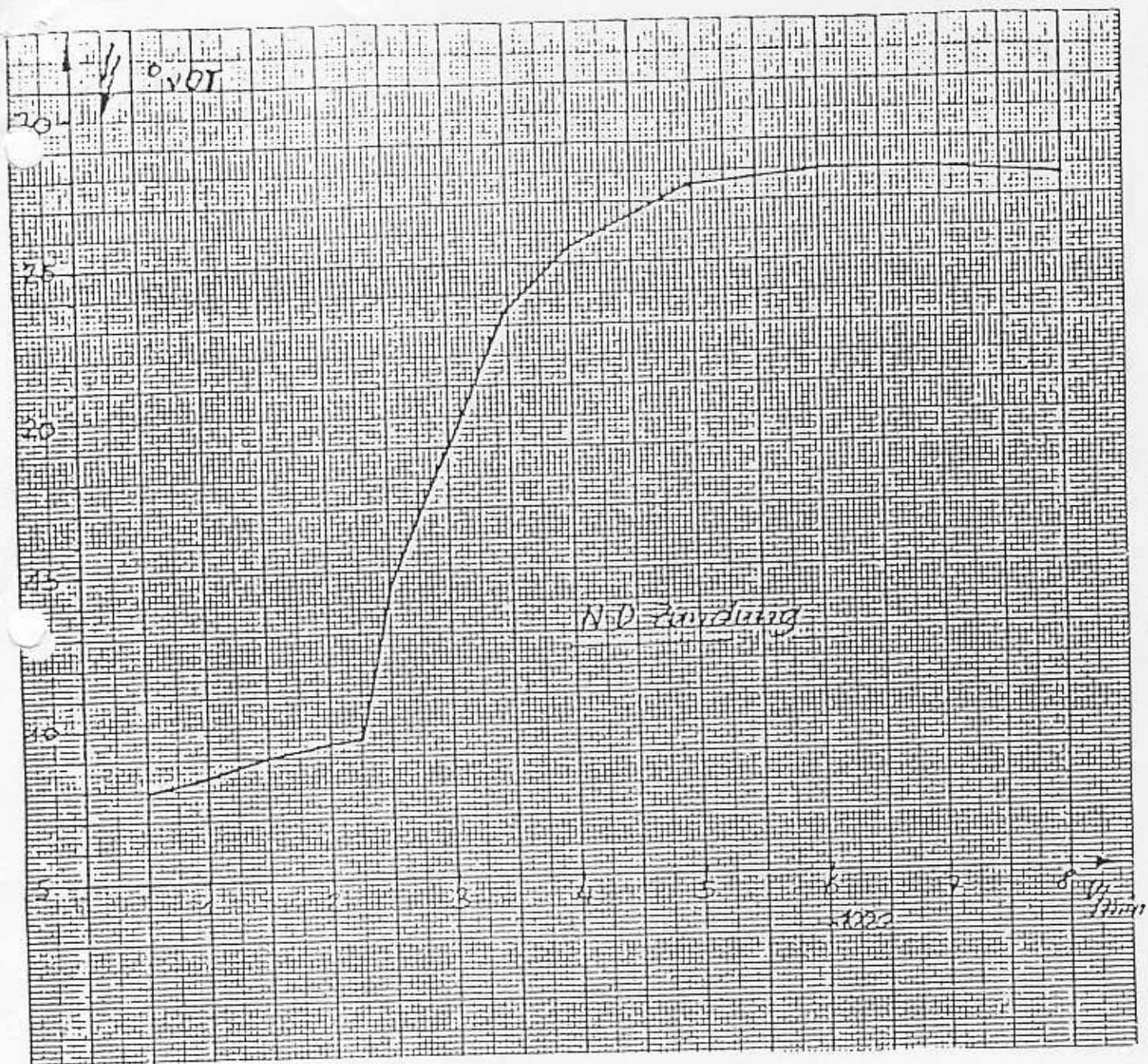
Starting procedure

- Crank the engine through with the kick start lever until the colour mark can be seen in the window. For this the decompressor can be used.
- Release the decompressor, bring the kick start lever back into the highest position (returns by spring force).
- Start the engine by a vigorous kick. To start a cold engine it is necessary to actuate the choke.

3 appendices

ROTAX 4-STROKE ENGINES - INSTALLATION IN FRAME





Nippondenso ignition unit