

447 UL-1V : 39.6 HP @ 6300
447 UL-2V : 41.6 HP @ 6500

2 Cylinder / 2 Stroke Piston Ported, fan cooled, electronic single-ignition, exhaust system, carburetor, rewind starter

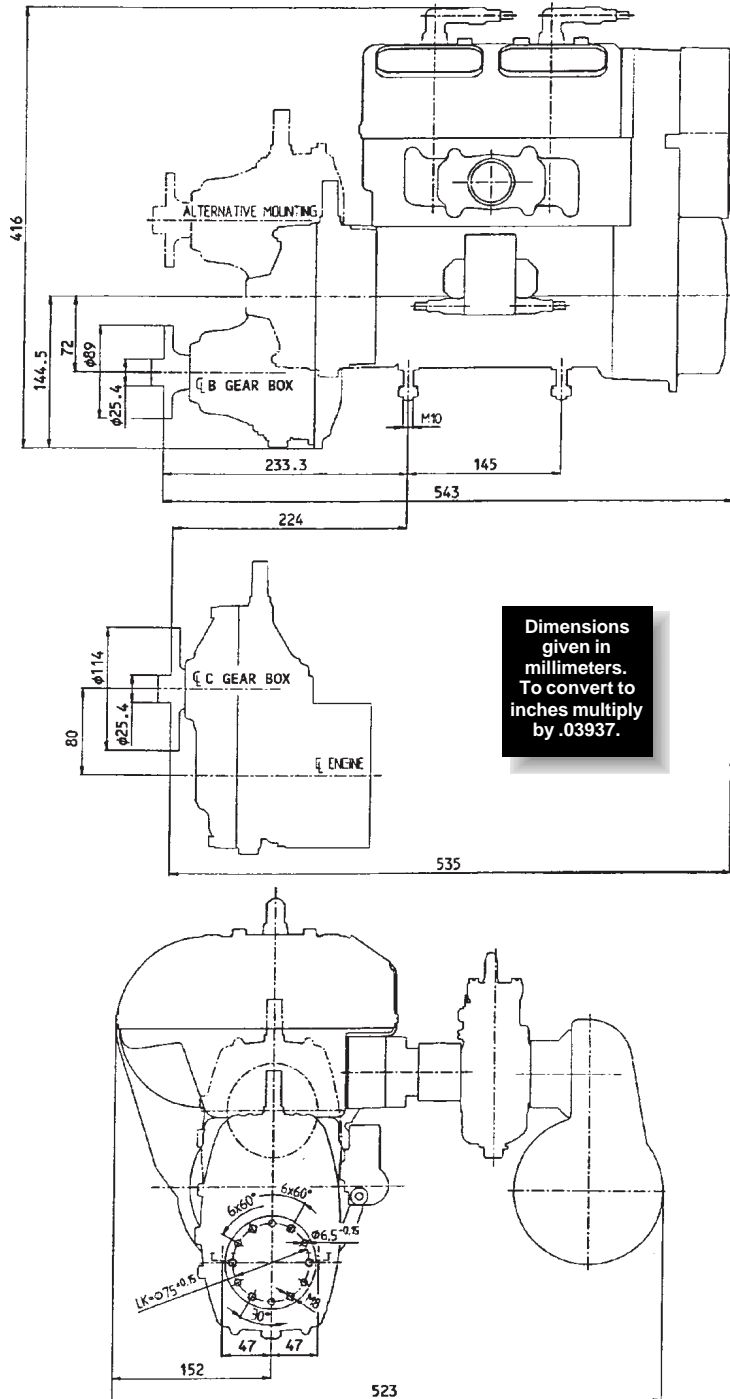
Bore/Stroke: 67.5/61mm
Displacement: 436.5
Torque: 447 UL-1V - 32.5
 447 UL-2V - 34.7
Compression Ratio: th: 9.6
Ignition: DUCATI CDI Flywheel Magneto Generator, 155W, 12V
Generator: 15 W DC, 13.5 V
Carburetor: 36mm Bing Double Float Carburetor with hand lever or cable choke
Starter: Rewind or Electric
Cooling: Free Air or Fan Cooled
Lubrication: 2 stroke oil in fuel — mixing ratio - 50:1
Fuel: Premium unleaded NOT BELOW MON 88 OR RON 90 (octane rating)

WEIGHTS			
ITEM	LBS	ITEM	LBS
Engine	59.1	E Gearbox	24.7
1 Carb	2.0	Generator, 230 W DC	2.4
Exhaust System	10.8	1V/Intake Silencer 1V	1.8
2 Air Cleaners	0.7	2V/Intake Silencer 1V	2.4
Electric Starter	7.7	After Muffler	3.5
B Gearbox	9.9	Instrument FLYdat	1.1
C Gearbox	17.6		

Rotax 447 CDI - 40 HP

999-667...Info Pak...\$10.00

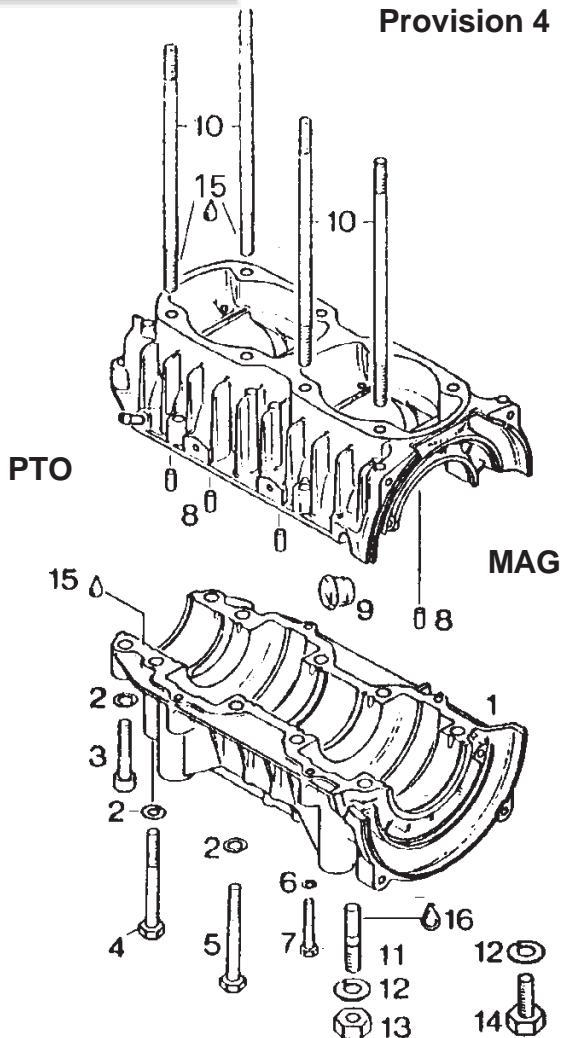
Refundable with purchase of engine



377 & 447

Crankcase

Provision 4

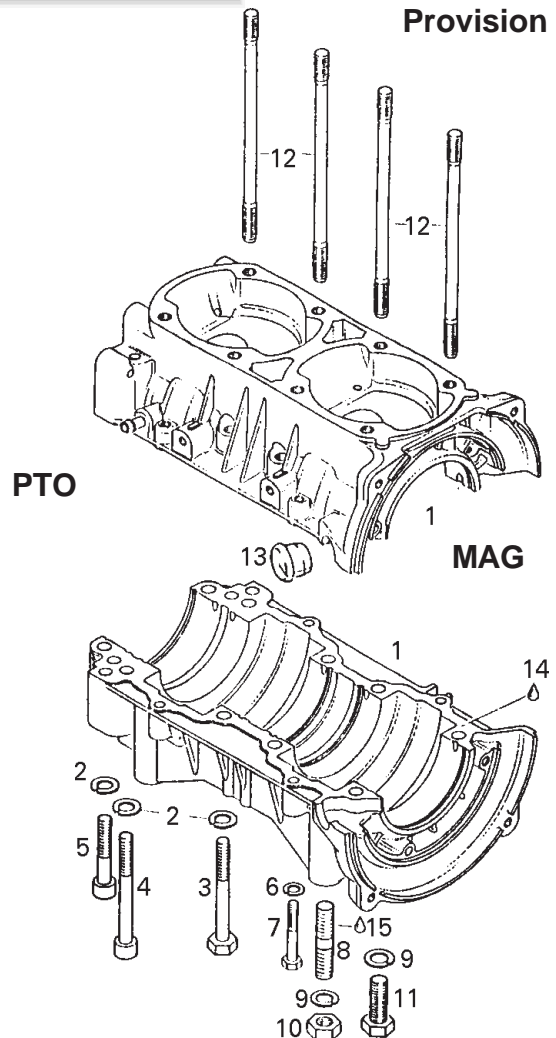


Torque 10 mm studs to 105" lbs.
Torque 10 mm bolts or nuts to 335" lbs

Rotax 447

Crankcase

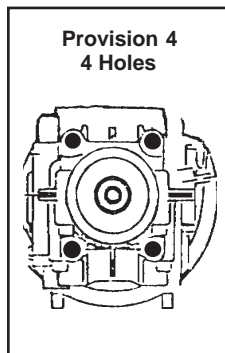
Provision 8



Torque 10 mm studs to 105" lbs.
Torque 10 mm bolts or nuts to 335" lbs

**ROTAX 377 - ALL PROVISION 4
ROTAX 447 - SERIAL #3793687 & DOWN**

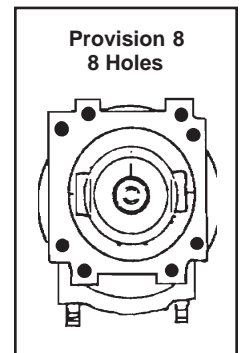
NO	PART #	DESCRIPTION	QTY
1-7	996-286	CRANKCASE ASSY	1
2	945-752	LOCK WASHER A8	10
3	841-561	ALLEN SCREW M8x45	2
4	841-831	ALLEN SCREW M8x75	2
5	841-201	HEX. SCREW M8x70	6
6	945-751	LOCK WASHER A6	4
7	240-631	HEX. SCREW M6X40	4
8	960-951	RUBBER PLUG	4
9	930-285	CABLE GROMMET 20.5	1
10	841-149	STUD M8x167	8
11	940-190	STUD M10x29/20	4
	840-290	STUD M10X18/18	4
	941-670	STUD M10X70/20	4
12	945-753	LOCKWASHER A10	4
13	242-091	HEX NUT M10	4
14	940-326	HEX SCREW M10X30	4
15	899-784	USE H4350, Gasket Eliminator	
16	899-785	USE H4310, LOCTITE 221	10 CC



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ROTAX 447 - SERIAL #3793688 & UP

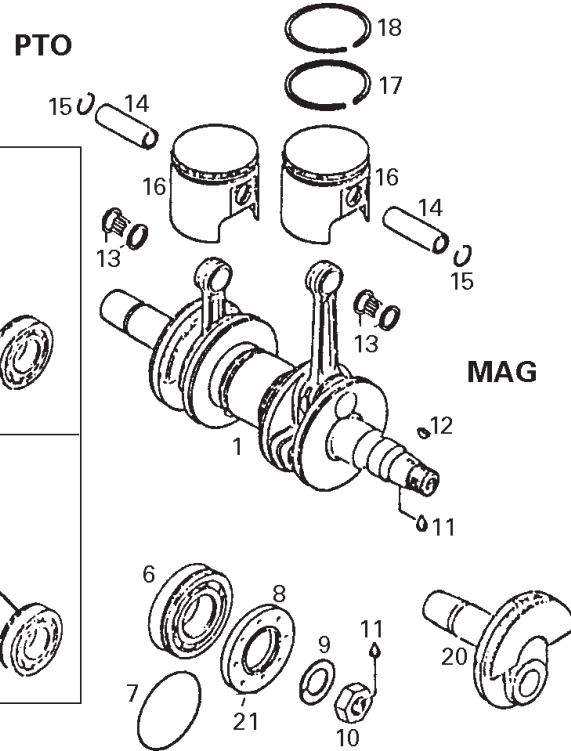
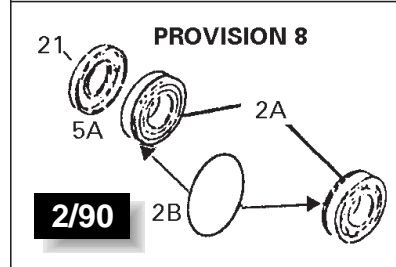
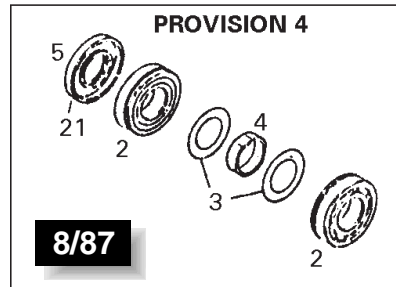
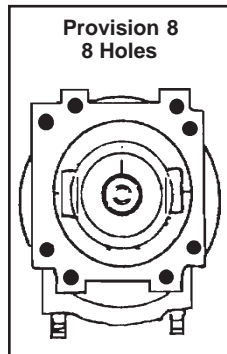
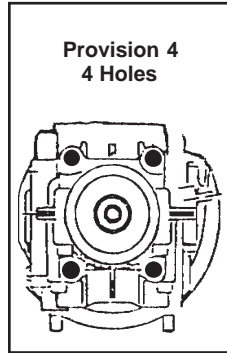
NO	PART #	DESCRIPTION	QTY
1-7	996-286	CRANKCASE ASSY	1
2	945-752	LOCK WASHER A8	10
3	841-201	HEX. SCREW M8x70	6
4	841-831	ALLEN SCREW M8x75	2
5	841-561	ALLEN SCREW M8x45	2
6	945-751	LOCK WASHER A6	4
7	240-631	HEX. SCREW M6X40	4
8	940-190	STUD M10x29/20	4
	840-290	STUD M10x18/18	4
	941-670	STUD M10x70/20	4
9	945-753	LOCK WASHER A10	4
10	242-091	HEX. NUT M10	4
11	940-326	HEX. SCREW M10x30	4
12	841-149	STUD M8x167	8
13	930-285	CABLE GROMMET 20.5	1
14	899-784	USE H4350, GASKET ELIMINATOR	
15	899-785	USE H4310, LOCTITE 221	10 CC



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377 & 447

Crankshaft, Piston



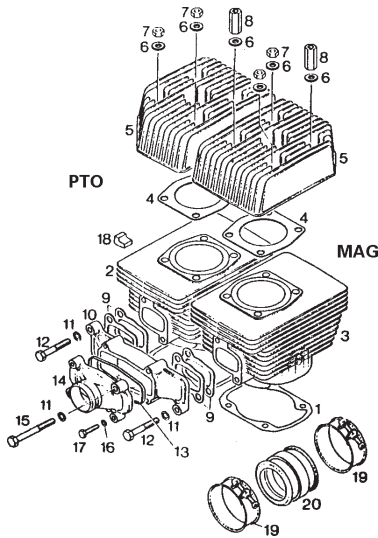
The AUS ► on the top of the piston means that the arrow points TO the exhaust side of the engine.

NO	PART #	DESCRIPTION	QTY
1	995-321	CRANKSHAFT ASSY	1
		BEFORE #3793688	
	996-333	CRANKSHAFT ASSY	1
		AFTER #3793688	
2	832-209	BALL BEARING, 6206, PROV-4	2
2A	832-231	BALL BEARING, 6207, PROV-8	2
2B	830-355	O-RING 49,2-1.8 PROV-8	2
3	827-715	SHIM, 30,4/51/1 PROV-4	2
4	847-395	STOP TUBE, BALL BRNG CGE	1
		PROV-4	
5	830-748	OIL SEAL, PTO SIDE	1
		30X62X7/7,5	
		PROV-4	
5A	831-950	OIL SEAL, PTO SIDE	1
		35X72X7/8,5	
		PROV-8	
6	832-231	BALL BEARING, 6207	1
7	830-355	O-RING 49, 2-1.8	1
8	831-950	OIL SEAL, MAG SIDE	1
		30X72X7/8,5	
9	945-759	LOCK WASHER A22	1
10	842-230	HEX NUT, M22X1,5	1
11	899-786	USE H4320, LOCTITE 242	10 ml
12	246-050	WOODRUFF KEY, 3X3,7	1
13	832-325	CAGELESS 31X.655 IN LONG	2
14	916-260	GUDGEON PIN 18 (377)	2
	916-136	GUDGEON PIN 18 (447)	
15	945-735	CIRCLIP, GUDGEON 18	4

16-18	994-975	PISTON ASSY W/2 RINGS	2
		62.0 MM STANDARD (377)	
	886-050	PISTON ASSY W/2 RINGS	2
		67.5 MM STANDARD (447)	
	994-971	PISTON ASSY W/2 RINGS	2
		62.25 MM 1ST OVERSIZE (377)	
	886-051	PISTON ASSY W/2 RINGS	2
		67,75 MM, 1ST OVERSIZE (447)	
	994-977	PISTON ASSY W/2 RINGS	2
		62,5 MM, 2ND OVERSIZE (377)	
17	915-890	RECTANGULAR RING 62,0 MM	2
		STANDARD (377)	
	915-960	RECTANGULAR RING 67,5 MM	2
		STANDARD (447)	
	915-891	RECTANGULAR RING 62,25 MM	2
		1ST OVERSIZE (377)	
	915-961	RECTANGULAR RING 67,75 MM	2
		1ST OVERSIZE (447)	
	915-892	RECTANGULAR RING 62,5 MM	1
		2ND OVERSIZE (377)	
18	215-210	SEMI-TRAPEZE RING 62,0 MM	2
		STANDARD (377)	
	915-845	SEMI-TRAPEZE RING 67,5 MM	2
		STANDARD (447)	
	215-211	SEMI-TRAPEZE RING 62,25 MM	2
		1ST OVERSIZE (377)	
	915-846	SEMI-TRAPEZE RING 67,75 MM	2
		1ST OVERSIZE (447)	
	215-212	SEMI-TRAPEZE RING 62,5 MM	2
		2ND OVERSIZE (377)	
20	919-824	CRANK HALF, PTO SIDE	1
21	297-433	USE H4372, CORNING GN PASTE	

**Cylinder Intake
Manifold - Fan Cooled
or Free Air**

377 & 447

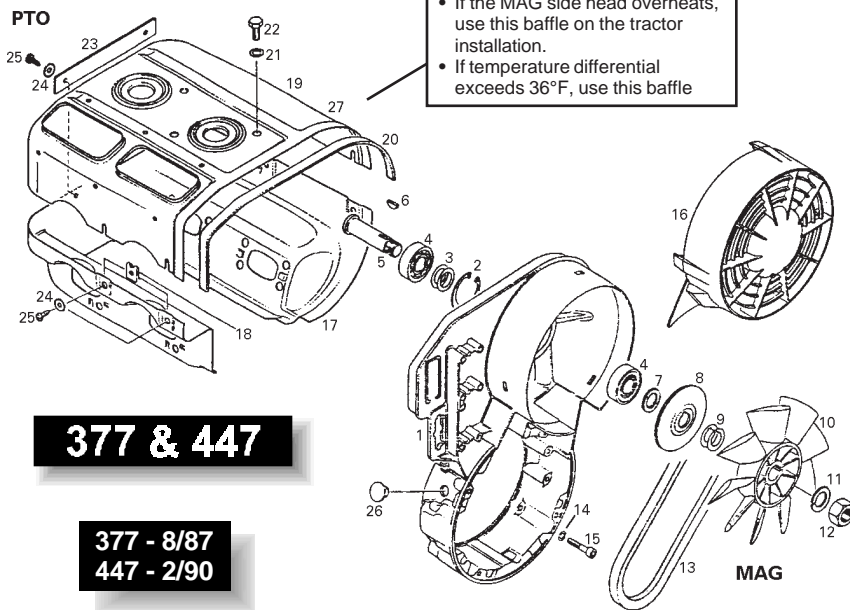


**377 - 8/87
447 - 2/90**

NO	PART #	DESCRIPTION	QTY
1	850-100	GASKET, CYL FLANGE, 377	2
	931-781	GASKET, CYL FLANGE, 447	2
2	823-796	CYLINDER w/SLEEVE PTO, 377	1
	823-898	CYLINDER w/SLEEVE PTO, 447	1
3	823-805	CYLINDER w/SLEEVE MAG, 377	1
	823-907	CYLINDER w/SLEEVE MAG, 447	1
4	850-131	GASKET, CYLINDER HEAD, 377	2
	850-136	GASKET, CYLINDER HEAD, 447	2
5	823-820	CYLINDER HEAD, 377	2
	823-827	CYLINDER HEAD, 447	2
6	250-311	WASHER 8.4, 377	8
	847-470	CONE SLEEVE, 447	8
7	242-201	HEX NUT M8	5
8	242-660	DISTANCE NUT M8x33, 377	3
	842-010	DISTANCE NUT M8x27.5, 447	3
9	831-866	GASKET, INTAKE MANIFOLD	4
10	867-430	INTAKE MANIFOLD	1
11	945-752	LOCK WASHER A8	4
12	940-616	HEX SCREW M8x40	2
13	850-190	RUBBER RING 78x1.5x3.5	1
14	867-445	INTAKE COVER	1
15	841-311	HEX SCREW M8x75	2
16	945-751	LOCK WASHER A6	2
17	240-036	HEX SCREW M6x25	2
18	860-060	SUPPORT DAMPER	1
19	951-510	HOSE CLAMP B52	2
20	867-484	RUBBER SOCKET	1

The arrow imprinted on the socket should point towards the engine.

Fan Housing, Cylinder Cowls, Fan V-Belt



- If the MAG side head overheats, use this baffle on the tractor installation.
- If temperature differential exceeds 36°F, use this baffle

377 & 447

**377 - 8/87
447 - 2/90**

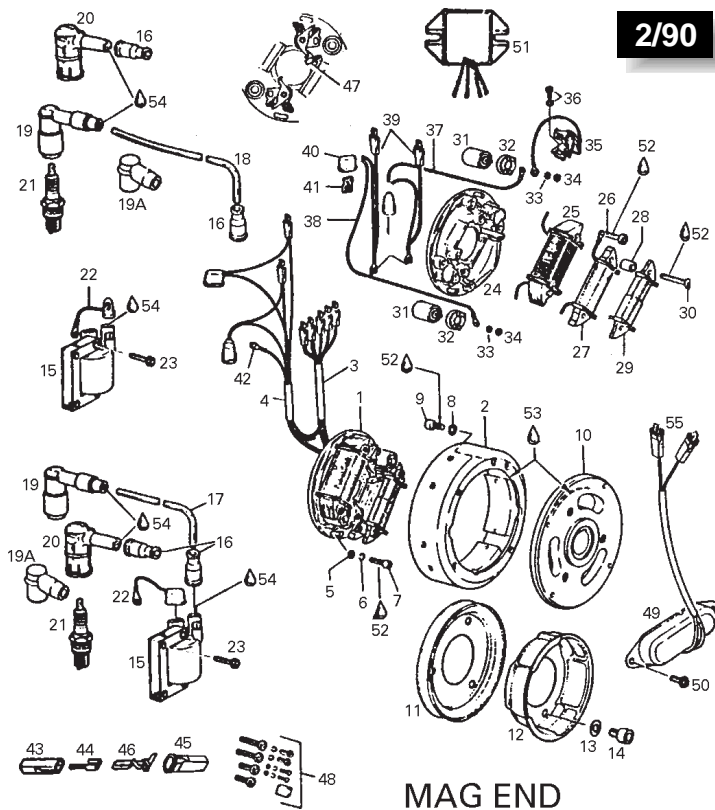
NO	PART #	DESCRIPTION	QTY
1	912-998	FAN HOUSING - PT IGN	1
	(SUITABLE FOR MES STARTER)		
	912-992	FAN HOUSING - PT IGN	1
	(NOT SUITABLE FOR MES STARTER)		
	912-996	FAN HOUSING - DUCATI IGN	1
	(NOT SUITABLE FOR MES STARTER)		
	912-997	FAN HOUSING - DUCATI IGN	1
	(SUITABLE FOR MES STARTER IN POSITION 93 OR 183 DEGR.)		
2	945-880	LOCKING RING 40x1.75	1
3	244-585	SHIM 17.5/24/1.0	2
4	832-160	BALL BEARING 6203	2
5	937-940	FAN SHAFT	1
6	246-011	WOODRUFF KEY 3x5	1
7	827-650	DISTANCE SLEEVE 17x3/28/2.8	1
8	980-495	PULLEY HALF	1
9	827-080	SHIM 17.5/27/0.5	4
	827-082	SHIM 17.5/27/0.2	
10	866-295	FAN	1
11	945-756	LOCK WASHER A16	1
12	942-285	HEX NUT M16x1.5	1
13	980-436	V-BELT 10x6x590	1
14	945-751	LOCK WASHER A6	4
15	840-880	ALLEN SCREW M6x30	4
16	975-740	FAN COVER	1
17	910-054	CYLINDER COWL, LWR, HALF STEEL, USE WITH 912-027	1
	910-058	CYLINDER COWL, LWR, HALF ALUM, USE WITH 912-028	1
18	842-390	SPRING NUT V4.8	6
19	912-027	CYL COWL, Upper, Steel w/ Baffle	1
	This part is used with 910-054 LOWER COWL & two 850-113 EXHAUST GASKETS. 912-027 is not interchangeable with 910-041 because the carb side screw slots have been repositioned. It can be used with all the 377/447 ROTAX serial numbers.		
	912-028 CYL COWL, Upper, Alum w/baffle		
	This part is used with 910-058 LOWER COWL. 912-258 is not interchangeable with 910-043 because the carb side screw slots have been repositioned. It can be used with all 377/447 ROTAX serial numbers.		
20	960-962	SEALING STRIP 440mm	1
21	945-752	LOCK WASHER A8	3
22	940-581	HEX SCREW M8x16	1
23	951-140	REINFORCEMENT	1
24	845-270	WASHER 4.9/15.5/0.8	6
25	841-495	SCREW B4.8x16	6
26	960-270	PLUG	1
27	975-780	BAFFLE RETROFITABLE, STEEL	1



When adjusting or replacing the fan belt the fan must first be removed. To make this job easier use a fan wrench. See page 124 for the Rotax fan wrench, part # 876-357.

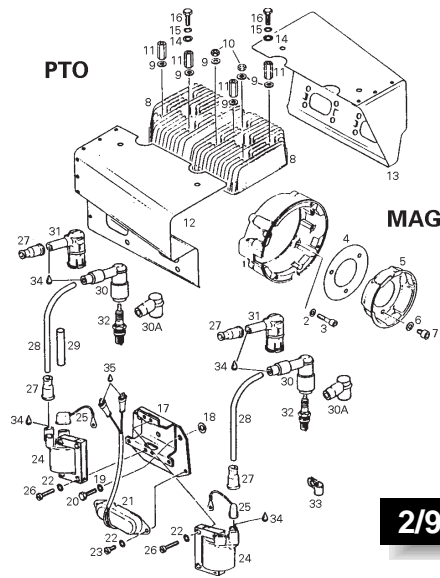
Ignition Housing - Fan Cooled

2/90



Ignition Housing - Free Air

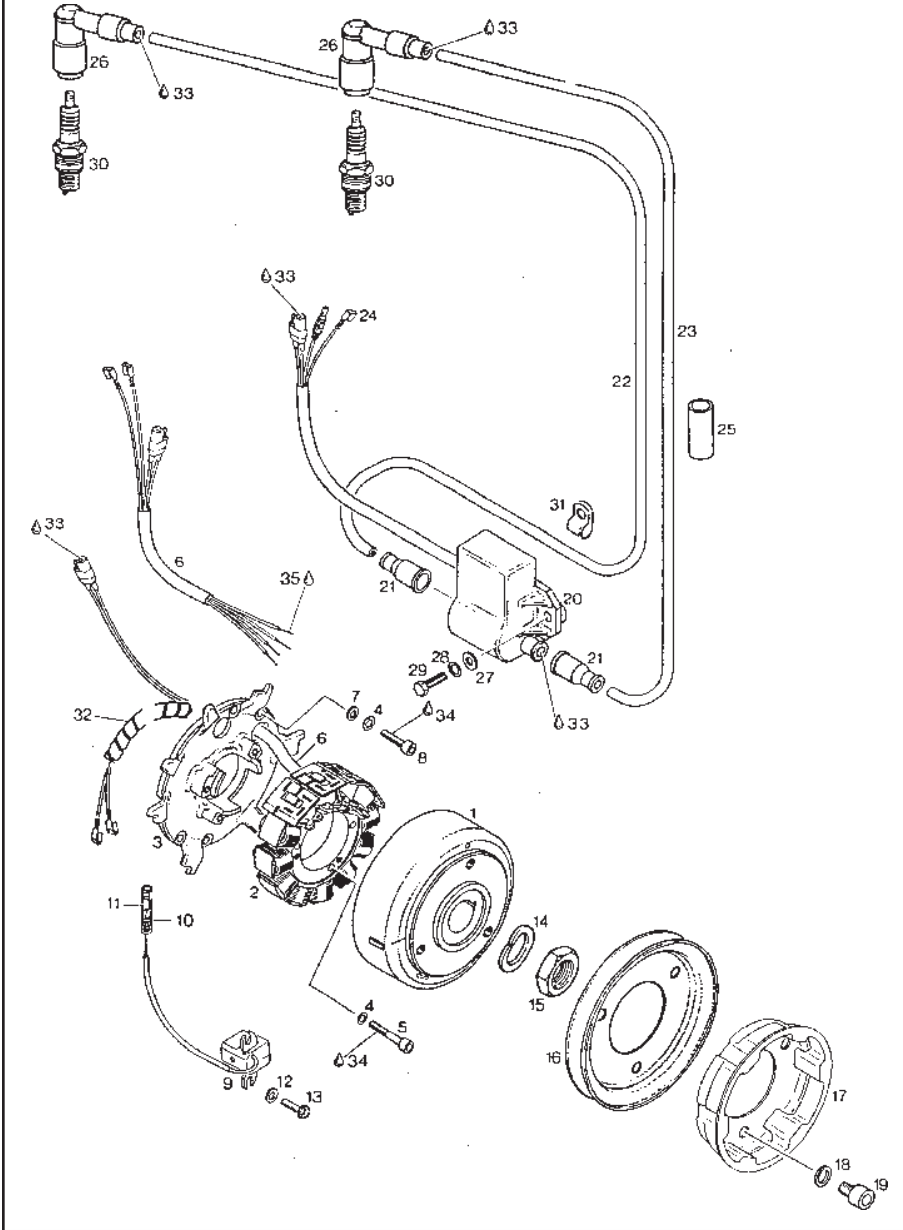
2/90



Free Air Engines Require a Shroud or Cowl

NO	PART #	DESCRIPTION	QTY
1-4	994-807	MAGNETO GENERATOR, 12V 140W	1
1	993-725	ARMATURE PLATE ASSY	1
2	993-500	MAGNETO RING	1
3	960-203	PROTECTION HOSE, 90MM	1
4	260-437	PROTECTION HOSE, 150MM	1
5	827-800	WASHER, 5,5	2
6	945-750	LOCK WASHER, A5	2
7	840-515	CYL. SCREW W. INT. HEX	2
8	945-751	LOCK WASHER A6	4
9	840-370	CYL. SCREW, M6X11,5	4
10	866-320	MAGNETO HOUSING	1
11	980-485	V-BELT PULLEY	1
12	852-320	STARTING PULLEY	1
13	845-310	LOCK WASHER, VHZ8	3
14	841-520	CYL. SCREW, M8X12	3
15	984-555	IGNITION COIL	2
16	960-550	PROTECTION CAP	1
17	964-015	IGNITION CABLE, PTO SIDE 265 MM	1
18	964-180	IGNITION CABLE, MAG SIDE 200 MM	1
19	866-705	SPARK PLUG PRO, RESTORED, MAGENTA	2
19A	865-205	SPARK PLUG PRO, NON-RESTORED, BLACK	2
20	983-409	RESTORED CAP	2
21	897-050	USE H5105, SPARK PLUGS	2
22	864-271	MASS CABLE ASSY	2
23	841-550	TAPTITE SCREW M5X22 POINTS	7
	941-250	TAPTITE SCREW M6X20 CDI	7
24	865-980	ARMATURE PLATE	1
25	865-812	LIGHTING COIL 110 W	1
26	840-970	CYL SCREW, M5X28	2
27	865-750	GENERATOR COIL	1
28	847-240	DISTANCE SLEEVE, 5.4/10/11	2
29	865-822	LIGHTING COIL 30 W	1
30	241-415	CYL SCREW M5X32	2
31-34	964-219	CONDENSER SET	2
		Use Loctite 609 on the sides of the condenser then press into place	
35	983-343	CONTACT BREAKER SET	2
36	241-215	COMBINED SCREW, M4X10	1
37	864-970	GEN. CABLE ASSY MAG 520-80MM	1
38	864-769	GEN. CABLE ASSY PTO 620-80MM	1
39	864-611	SHORTING CABLE ASSY, BLK 485 MM	2
40	960-590	RUBBER CAP	2
41	864-261	FASTON CONNECTOR, 6.3X0.8	2
42	964-054	FASTON CONNECTOR, M5	2
43	960-719	PROTECTION CAP	7
44	864-010	FASTON CONNECTOR, 6.3X0.8	7
45	960-970	PROTECTION CAP	7
46	866-300	FASTON CONNECTOR, 6.3X0.8	7
47	265-815	LUBRICATING WICK	1
48	964-212	PARTS SET	1
49	866-572	IGNITION DAMPING BOX	1
50	841-680	TAPTITE SCREW, M5X8	2
51	866-080	RECTIFIER REGULATOR	1
52	899-786	USE H4320, LOCTITE 242	
53	899-788	USE H4340, LOCTITE 609	
54	897-330	USE H4382, BP ENERGREASE	
55	297-386	SILASTIC 732	
2	945-751	LOCK WASHER A6	4
3	840-880	CYL. SCREW M6 x 30	4
4	827-285	WASHER 55/107	1
5	852-320	STARTING PULLEY	1
6	845-310	LOCK WASHER VHZ8	3
7	841-520	CYLINDER SCREW M8x12	2
8	823-820	CYLINDER HEAD (377)	2
	823-827	CYLINDER HEAD (447)	2
9	250-311	WASHER 8.4 (377)	8
	847-470	CONE SLEEVE (447)	8
	242-201	HEX NUT M8	4
11	242-660	DISTANCE NUT M8 x 33	4
12-13	999-721	PLANS FOR SHROUD	1
14	250-311	WASHER 8.4	4
15	945-752	LOCK WASHER A8	4
16	940-581	HEX SCREW M8 x 16	4
17	951-285	MOUNTING PLATE	1
18	244-211	WASHER 6.4	2
19	945-751	LOCK WASHER A6	2
20	240-911	HEX SCREW M6 x 14	2
21	866-572	IGNITION DAMPING BOX	1
22	945-750	LOCK WASHER A5	8
23	940-991	CYLINDER SCREW M5x6	2
24	984-555	IGNITION COIL	2
25	864-271	MASS CABLE ASSY	2
26	840-351	CYLINDER SCREW M5x20	6
27	960-550	PROTECTION CAP	2
28	864-695	IGNITION CABLE 360mm	2
29	830-962	PROTECTION HOSE 12x16x40	1
30	866-705	S.P. PRO. Restored, Magenta	2
30A	865-205	S.P. PRO. NON-Restored, Black	2
31	983-409	RESTORED CAP	2
32	897-050	USE H5105, SPARK PLUGS	2
33	853-415	IGNITION CABLE CLAMP	1
34	897-330	USE H4382, BP ENERGREASE	
35	297-386	SILASTIC 732	

Ducati Magneto Generator 12V 150W, Electronic Box, Starting Pulley

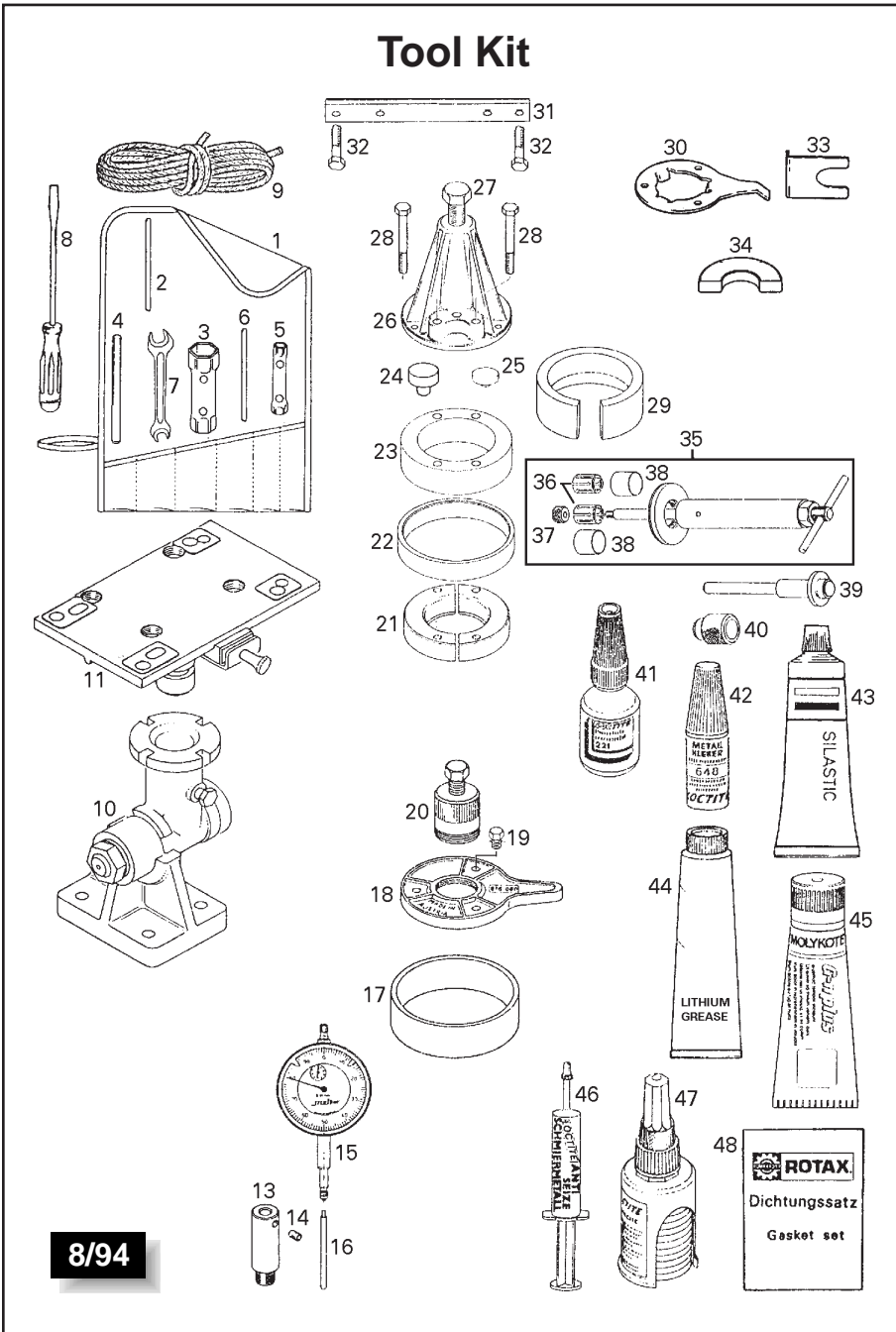


Ducati - Electric Box Only:

USE 965-423, 965-424
w/ WIRES: USE 965-426
w/ CAPS: USE 965-426

NO	PART #	DESCRIPTION	QTY
1-2	996 833	MAGNETO Generator P12W150	1
1	996 821	MAGNETO Flywheel P12W150	1
2	996 846	COIL KIT P15W150	1
3	966 207	STATOR PLATE	1
4	945 750	LOCK WASHER A5	5
5	940 880	ALLEN SCREW M5x30	3
		TORQUE 6 NM (55 IN.LB.)	
6	965 463	HARNESS ASSY. P12W150	1
		REMOVE SURPLUS WIRING	
7	927 571	WASHER 5.3	2
8	840 515	ALLEN SCREW M5x18	2
		TORQUE 6 NM (55 IN.LB.)	
9-11	965 760	PICKUP ASSY.	1
10	964 072	INSULATION SHEATH	1
11	964 067	FASTON CONNECTOR 3.96	1
12	827 800	WASHER A 5.5	2
13	941 925	TAPTITE SCREW M5x16	2
		TORQUE 6 NM (55 IN.LB.)	
14	945 759	LOCK WASHER 22	1
15	842 230	HEX. NUT M22x1.5	1
		TORQUE 90 NM (800 IN.LB.)	
16	980 485	V-BELT PULLEY	1
17	852 412	STARTING PULLEY	1
18	845 310	LOCK WASHER VHZ 8	3
19	841 520	ALLEN SCREW M8x12	3
20-26	965 421	ELECTRONIC BOX ASSY.	1
20-26	966 320	ELECTRONIC BOX ASSY.	1
		FOR FREE AIR COOLED	
21	960 550	PROTECTION CAP	2
22	965 522	IGNITION CABLE 730mm	1
22	864 296	IGNITION CABLE 560mm	1
		FOR FREE AIR COOLED	
23	864 071	IGNITION CABLE 500mm	1
23	864 296	IGNITION CABLE 560mm	1
		FOR FREE AIR COOLED	
24	864 010	FASTON CONNECTOR 6.3x0.8	1
25	830 962	PROTECTION HOSE 12x16x40	1
26	866 705	SUPPRESSED SPARK PLUG CONNECTOR	2
27	244 211	WASHER 6.4	2
28	945 751	LOCK WASHER A6	2
29	940 561	HEX.SCREW M6x20	2
		TORQUE 6 NM (55 IN.LB.)	
30	897-050	SPARK PLUG 14mm	2
		ON A COLD ENGINE: TORQUE TO 27 NM (240 IN.LB.)	
31	853-415	CABLE CLAMP FOR FREE AIR	1
32	966-062	SPIRAL HOSE 70mm	1
33	897-330	LITHIUM-BASE GREASE	
34	899-785	USE H4310, LOCTITE 222	

Tool Kit



8/94

#	PART#	DESCRIPTION	QTY
1-9	877-352	REPAIR TOOLS	1
1	876-195	TOOL BAG	1
2	876-640	CRANKSHAFT FIXATION BOLT	1
3	876-210	SOCKET WRENCH 21x26mm	1
4	977-420	BOLT 8x130-10	1
5	876-227	SOCKET WRENCH 10x13mm	1
6	977-425	BOLT 6x130	1
7	276-065	FORK WRENCH 10x13mm	1
9	876-200	SCREW DRIVER	1
10	852-091	STARTER ROPE 5.5x2110mm	1
10-11	876-740	TRESTLE ASSY.	1
11	876-746	MOUNTING PLATE w/ DETENT	1
13	876-940	GAUGE ADAPTER	1
14	841-771	SET SCREW M6x8	1
15	876-950	PRECISION DIAL GAUGE	1
16	876-945	GAUGE PIN	1
17	876-920	CENTERING RING	1
		for stator plate	
18	876-080	PULLER PLATE	1
		to hold the mag flywheel	
19	940-591	HEX SCREW M8x20	3
20	876-065	PULLER M42x1.5 ASSY	1
		for mag flywheel	
21	977-475	RING HALF for ball bearing 6207	2
		crankshaft pto side	
22	977-490	RING for rign halves	1
23	876-569	DISTANCE RING 72/105/28	1
		for puller	
24	876-552	PROTECTION MUSHROOM	2
		for crankshaft pto side	
25	876-557	PROTECTION MUSHROOM	1
		for crankshaft mag side	
26-27	876-298	PULLER ASSY for ball bearings	1
27	940-755	HEX SCREW M16x1.5x150	1
28	841-201	HEX SCREW M8x70	4
29	876-975	PISTON RING SPANNER 67.5 mm	1
		to mount piston in cylinder	
30	876-357	FAN HOLDER to hold fan	1
31	876-171	CYLINDER ALIGNING TOOL	1
		for cylinder intake flange	
32	240-275	HEX SCREW M8x25	2
33	876-620	DISTANCE GAUGE for Prov 4	1
		for crankshaft bearing pto side	
34	876-822	DISTANCE GAUGE for Prov 8	1
		for crankshaft bearing pto side	
35	877-091	Piston Pin Extractor Assy. (for	1
		piston pin 18mm)	
36	877-040	EXPANSION SLEEVE	2
37	877-155	EXTRACTING NUT ASSY	1
38	877-180	LOCATING SLEEVE	2
39-40	877-015	CIRCLIP Installation tool Assy.	1
		for fitting piston pin circlip 18mm	
39	877-020	CIRCLIP INSTALLATION SLEEVE .	1
40	877-010	CIRCLIP INSTALLATION PUSHER	1
41	899-785	USE H4310, LOCTITE 221	10 cc
42	899-788	USE H4340, LOCTITE 648	5 gr
43	297-386	SILASTIC 732 RTV	100 gr
44	897-330	LITHIUM BASE GREASE	250 gr
45	297-433	USE H4372, MOLYKOTE GN ...	50 gr
46	297-431	USE H4360, LOCTITE	
		ANTI SEIZE 76710	10 gr
47	899-784	USE H4350, LOCTITE 574	50 cc
48	994-869	GASKET SET	1

Do-It-Yourself Videos

If you want to work on your own engine you should check out LEAF's exclusive do-it-yourself videos. We offer: Rotax Rebuild Videos; Radiator Installation Videos; Gearbox Removal & Installation Videos; Electric Starter Installation Videos; and our Operator's & Preventative Maintenance Videos. See "Videos" in the index for a complete listing.