

# RT50ZB28-3.6Q Clean Water Pump



## Product Information

The RATO RT50ZB28-3.6Q clean water pump (2" standard transfer pump) features a unique design and is manufactured for general water pumping applications with high delivery rates. Features a tough aluminium housing and corrosion resistant e-coated rugged full frame with anti-vibration mounts.

All RATO products are covered by our 12 month/500 hour warranty.

## Features

- OHV 7hp engine technology by RATO.
- Cast iron volute and impeller with a silicon carbide seal.
- Complete accessories available.
- Scroll case is located by positioning pin for more reliable use.
- Anti-winding ring, so clear water pump has the function of dust water pump.
- Separated shock pad design for the support base, to minimize shock.

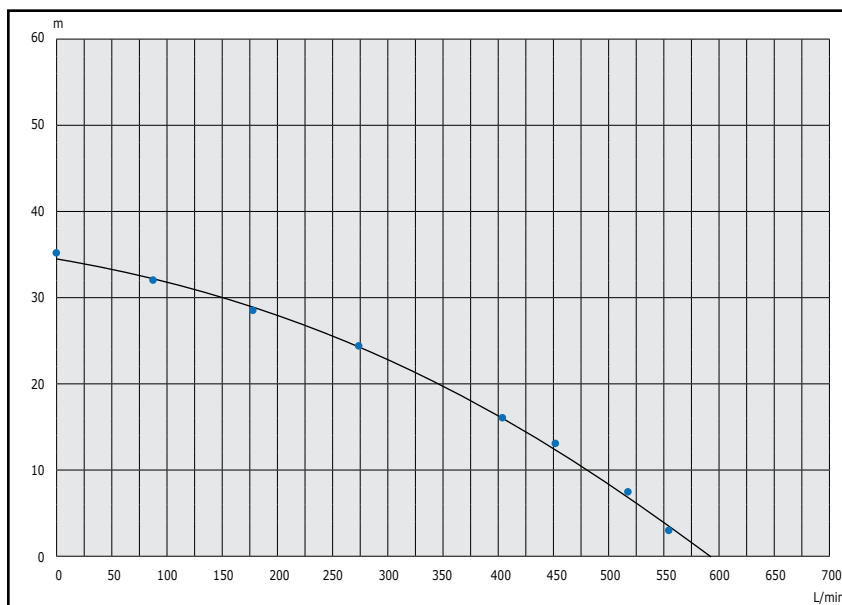


## SPECIFICATIONS

### RT50ZB28-3.6Q

<b>Engine model</b>	R210 / 7hp
<b>Engine type</b>	Single cylinder, 4 stroke, OHV
<b>Starting system</b>	Recoil start
<b>Bore x stroke</b>	70 x 55mm
<b>Displacement</b>	212ml
<b>Compression ratio</b>	9 : 1
<b>Net power</b>	4.4kw / 3600rpm
<b>Fuel consumption</b>	≤395 (g/kw-h)
<b>Net torque</b>	12N.m / 2500rpm
<b>Pump set</b>	2" clean pump
<b>Suction port diameter</b>	50mm (2")
<b>Discharge port diameter</b>	50mm (2")
<b>Suction head lift</b>	8m
<b>Total head lift</b>	28m
<b>Discharge capacity</b>	36m <sup>3</sup> /h / 600 litres per minute
<b>Dimensions (L x W x H mm)</b>	477 x 395 x 410
<b>Net weight</b>	23.5kg

## Performance Curve



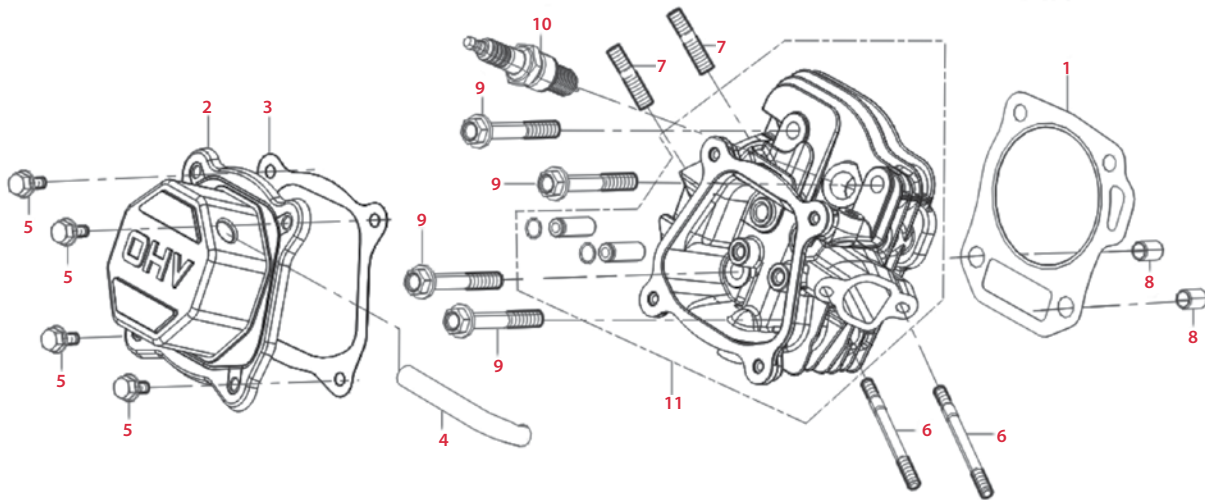
Unload Speed	Loading Speed	Suction Head Lift	Discharge Capacity (m <sup>3</sup> /h)	Discharge Capacity (L/min)	Total Head Lift (M)	Test Envir. Temp (C°)	Humidity at Outlet	Pressure at Outlet
	3400	8.1	33.2	553.33	2.91	18.5	65	20.1
/	/		31	516.67	7.32	18.5	65	62.1
/	/		27.1	451.67	12.94	18.5	65	105.5
/	/		24.2	403.33	16.09	18.5	65	136.9
3800	/		20.3	338.33	20.62	18.5	65	170
/	/		16.4	273.33	24.09	18.5	65	207.5
/	/		10.7	178.33	28.26	18.5	65	247.8
/	/		5.3	88.33	31.93	18.5	65	280.8
/	/		0	0.00	35.01	18.5	65	305.6

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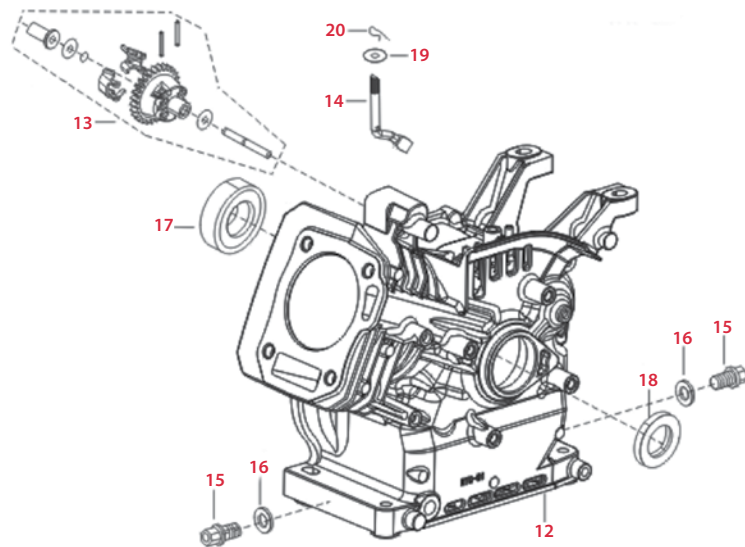
\*NS - Not Stocked by JAK Max however available from RATC. Special order only, 3 month lead time.

Item	JAK Max Part No.	RATO Part No.	Description
<b>Cylinder Head Subassembly &amp; Spark Plug (below)</b>			
1	JMRT1101	12131-Z040110-0000	Cylinder head gasket
2	NS	12410-Z440110-0099	Cylinder head cover subassembly
3	NS	12004-Z440110-0000	Cylinder head cover gasket
4	NS	17004-Z010310-0000	Breather tube
5	NS	90001-0612-01	Bolt
6	NS	90204-Z010310-0000	Stud

Item	JAK Max Part No.	RATO Part No.	Description
<b>Cylinder Head Subassembly &amp; Spark Plug - continued (below)</b>			
7	NS	90203-Z010110-0000	Stud
8	NS	90502-1014-00	Pin
9	NS	12003-Z010110-0000	Cylinder head bolt
10	JMRT1107	30010-Z010210-0000	Spark plug
11	NS	12140-Z040610-0000	Cylinder head subassembly



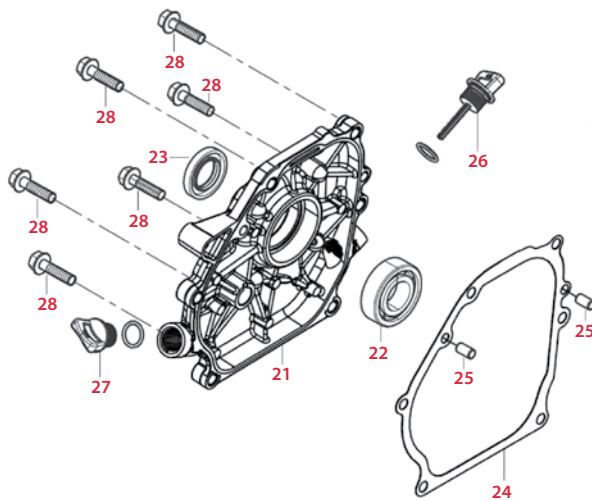
Item	JAK Max Part No.	RATO Part No.	Description
<b>Crankcase &amp; Governor Gear Assembly (right)</b>			
12	NS	11310-Z300710-0000	Crankcase assembly
13	NS	16400-Z010110-0000	Governor gear assembly
14	NS	16061-Z010110-0000	Governor arm
15	NS	11007-Z010110-0000	Drain plug bolt
16	NS	90408-Z010110-0000	Washer
17	JMRT1008	90548-0205-CL	Bearing
18	JMRT1005	90682-Z300110-0000	Oil seal
19	NS	90408-Z010210-0000	Governor gear washer
20	NS	90501-Z010110-0000	Pin



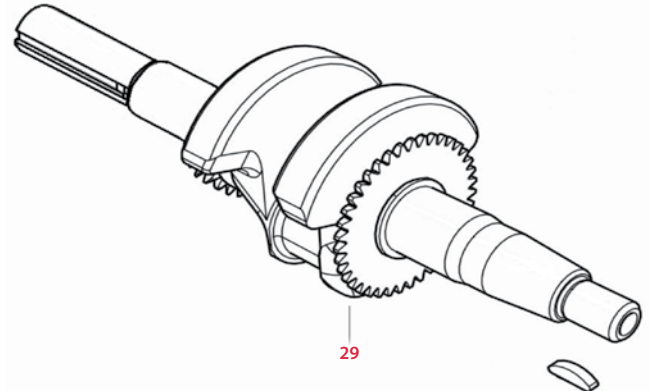
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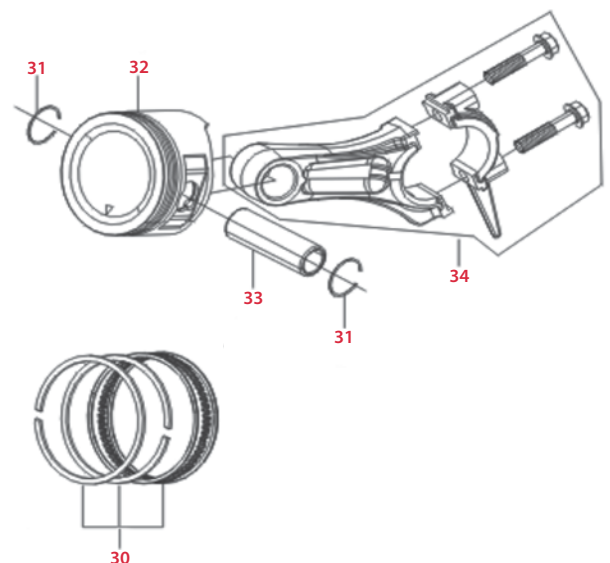
Item	JAK Max Part No.	RATO Part No.	Description
<b>Crankcase Cover Subassembly (below left)</b>			
21	NS	11411-Z010310-0000	Crankcase cover
22	JMRT1008	90548-0205-CL	Bearing
23	JMRT1005	90682-Z300110-0000	Oil seal
24	JMRT1006	11001-Z010120-0000	Crankcase gasket
25	NS	90502-0812-00	Pin
26	JMRT1007	15010-Z010120-Q500	Oil dipstick subassembly
27	NS	15030-Z010120-Q500	Engine oil plug subassembly
28	NS	90001-0832-01	Bolt



Item	JAK Max Part No.	RATO Part No.	Description
<b>Crankshaft (below right)</b>			
29	JMRT1010	13300-Z040210-0000	Crankshaft assembly



Item	JAK Max Part No.	RATO Part No.	Description
<b>Oil Ring Set &amp; Crankshaft Connecting Rod (right)</b>			
30	JMRT1011	13200-Z300110-0000	Piston ring set
31	JMRT1012	13122-Z010110-0000	Piston pin clip
32	JMRT1013	13111-Z300110-0000	Piston
33	JMRT1014	13121-Z010110-0000	Piston pin
34	JMRT1016	13010-Z360110-0000	Connecting rod

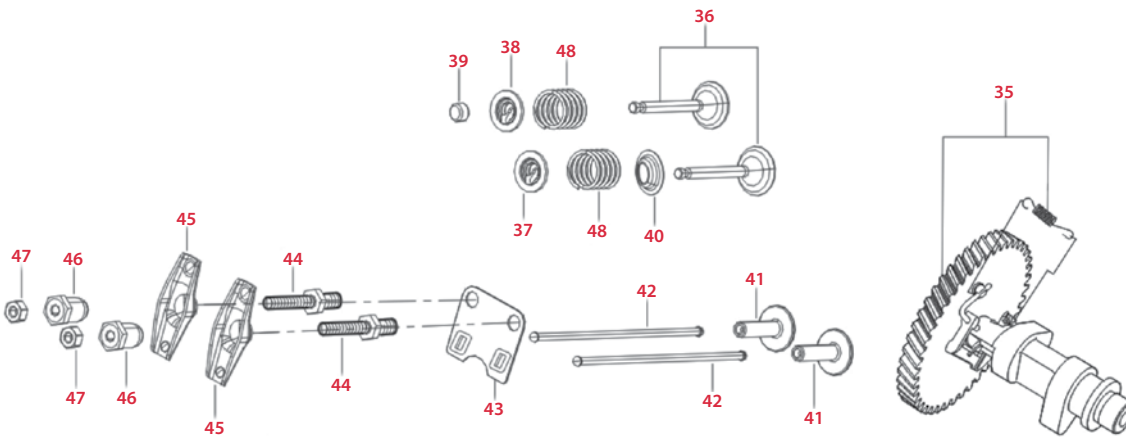


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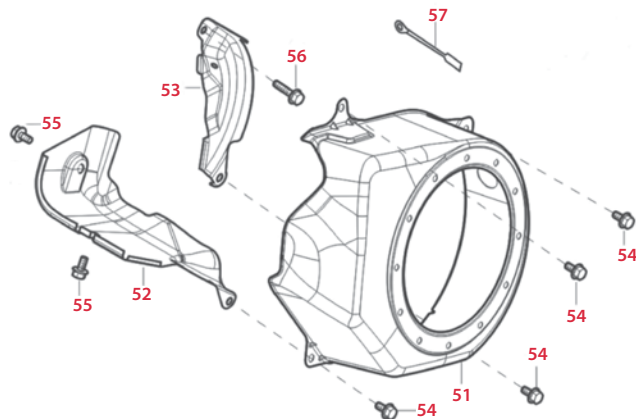
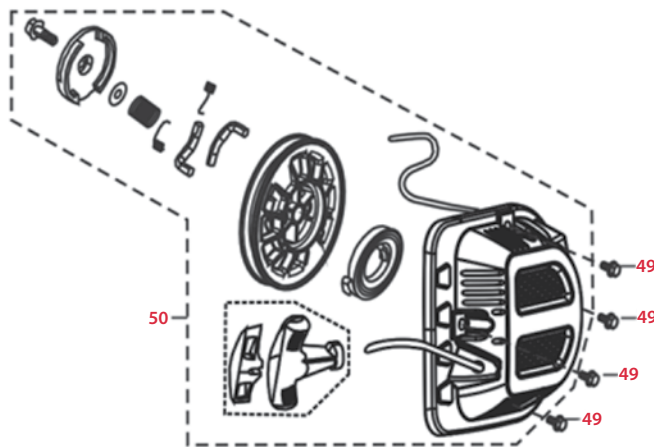
Item	JAK Max Part No.	RATO Part No.	Description
<b>Valve Train &amp; Camshaft Subassembly (below)</b>			
35	JMRT1017	14200-Z300210-0000	Camshaft assembly
36	JMRT1018	12110-Z010110-0000	Valve set
37	NS	12112-Z010110-0000	Valve spring seat
38	JMRT1020	12107-Z010110-0000	Exhaust valve retainer
39	JMRT1021	12104-Z010110-0000	Valve rotator
40	JMRT1022	12101-Z810210-0000	Seal guide
41	JMRT1023	14081-Z040110-0000	Valve tappet

Item	JAK Max Part No.	RATO Part No.	Description
<b>Valve Train &amp; Camshaft Subassembly - continued (below)</b>			
42	JMRT1024	14071-Z010110-0000	Valve lifter
43	JMRT1025	14090-Z010110-0000	Lifter stopper plate subassembly
44	JMRT1026	14313-Z010110-0000	Valve adjusting bolt
45	JMRT1027	14311-Z010110-0000	Valve rocker
46	JMRT1028	14314-Z010110-0000	Valve adjusting nut
47	JMRT1029	14312-Z010110-0000	Valve lock nut
48	JMRT1030	12103-Z010110-0000	Valve spring



Item	JAK Max Part No.	RATO Part No.	Description
<b>Starter Recoil (below left)</b>			
49	NS	90001-0612-01	Bolt
50	JMRT1031	28200-Z010320-Q200	Starter Recoil assembly

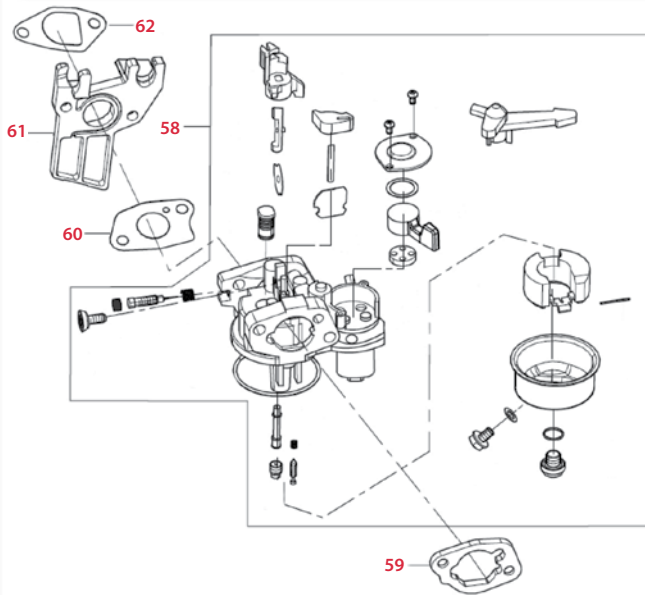
Item	JAK Max Part No.	RATO Part No.	Description
<b>Shroud &amp; Lower Shield (below right)</b>			
51	NS	28110-Z010410-Y100	Shroud
52	NS	19304-Z010410-0000	Cylinder body shroud
53	NS	19340-Z010120-0000	Lower shield
54	NS	90001-0612-01	Bolt
55	NS	90001-0610-01	Bolt
56	NS	90001-0616-01	Bolt
57	NS	30009-Z010110-0000	



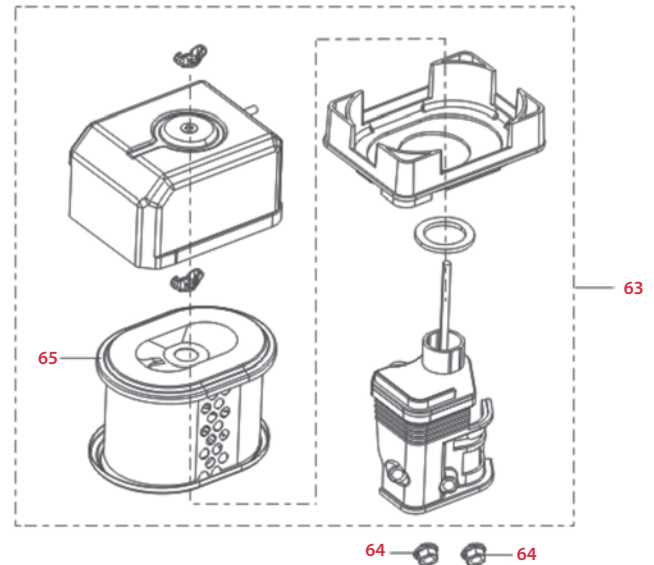
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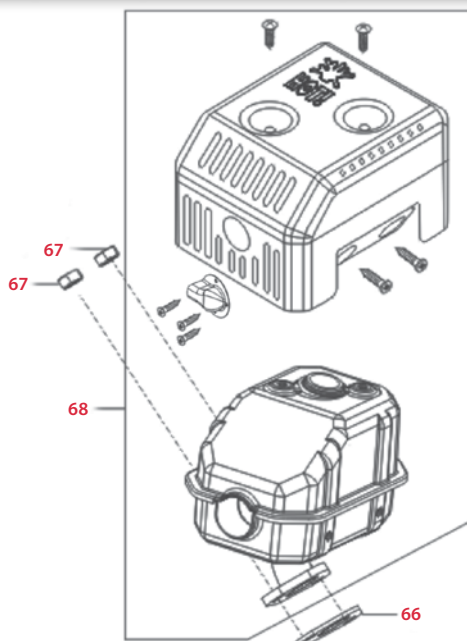
Item	JAK Max Part No.	RATO Part No.	Description
<b>Carburettor Assembly (below left)</b>			
58	JMRT1035	16100-Z040210-0000	Carburettor assembly
59	JMRT1037	17001-Z010210-0000	Air cleaner gasket
60	JMRT1038	16001-Z300110-0000	Carburettor gasket
61	JMRT1039	16003-Z010110-0000	Carburettor insulator plate
62	JMRT1040	16002-Z300110-0000	Carburettor insulator gasket



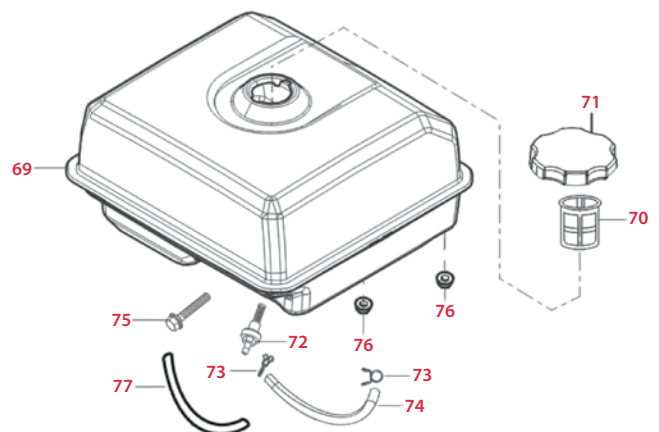
Item	JAK Max Part No.	RATO Part No.	Description
<b>Air Cleaner (below right)</b>			
63	JMRT1371	17100-Z010210-0000	Air cleaner complete
64	NS	90305-0600-31	Nut
65	JMRT1042	17150-Z010110-0000	Air cleaner element



Item	JAK Max Part No.	RATO Part No.	Description
<b>Muffler Assembly (below left)</b>			
66	JMRT1045	18001-Z300110-0000	Exhaust outlet gasket
67	NS	90303-0800-31	Nut
68	JMRT1043	18100-Z010710-H300	Muffler assembly



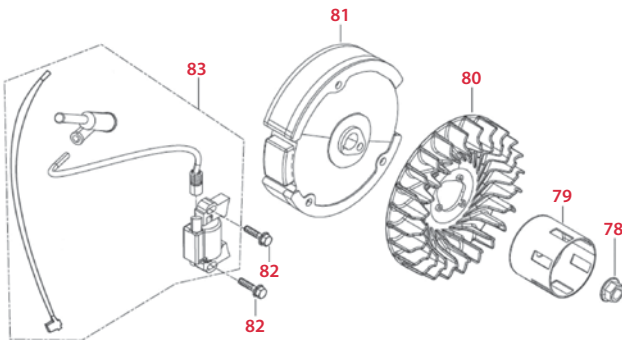
Item	JAK Max Part No.	RATO Part No.	Description
<b>Fuel Tank Assembly (below right)</b>			
69	JMRT1046	16620-Z440120-Y100	Fuel tank
70	JMRT1047	16652-Z010610-0000	Fuel strainer
71	JMRT1048	16730-Z300120-0000	Fuel tank cover
72	JMRT1049	16680-Z010110-0000	Fuel tank oil outlet subassembly
73	NS	90740-Z010210-0000	Clamp
74	NS	90686-Z010510-0000	Fuel tube
75	NS	90007-0630-A1	Bolt
76	NS	90305-0600-31	Nut
77	NS	30431-Z010110-0000	Rubber jacket



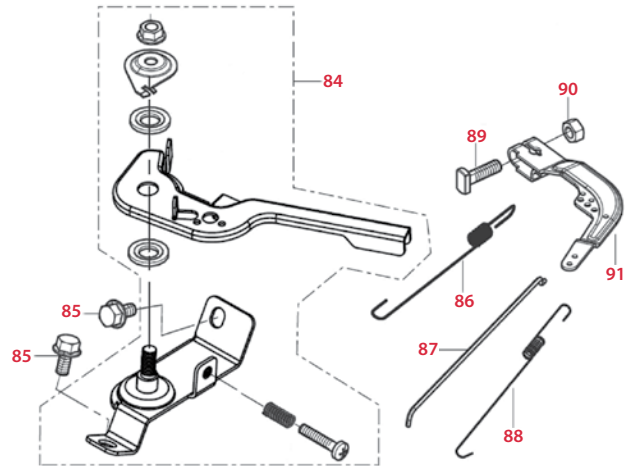
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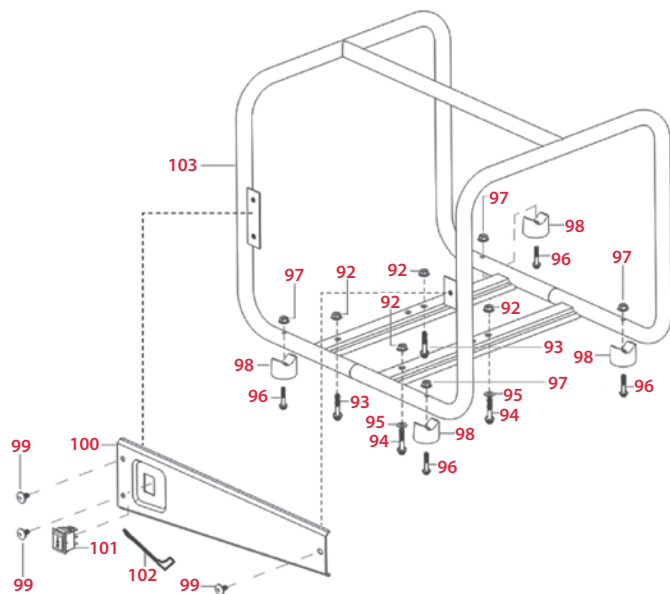
Item	JAK Max Part No.	RATO Part No.	Description
<b>Flywheel, Impeller, Starter Pulley &amp; Ignition Coil (below)</b>			
78	NS	13501-Z010110-0000	Flywheel nut
79	JMRT1051	28002-Z300210-0000	Starter cup
80	NS	19352-Z010310-0000	Impeller
81	NS	13510-Z010110-0000	Flywheel subassembly
82	NS	90001-0625-01	Bolt
83	JMRT1052	30400-Z010210-0000	Ignition coil



Item	JAK Max Part No.	RATO Part No.	Description
<b>Throttle Control Assembly (below right)</b>			
84	NS	16520-Z010230-0000	Throttle control assembly
85	NS	90001-0610-01	Bolt
86	JMRT1053	16063-Z010110-0000	Governor spring
87	NS	16062-Z010110-0000	Governor rod
88	JMRT1054	16012-Z010110-0000	Spring, throttle valve returning
89	NS	16072-Z010110-0000	Governor support bolt
90	NS	90305-0600-31	Nut
91	NS	16070-Z010110-0000	Governor support subassembly



Item	JAK Max Part No.	RATO Part No.	Description
<b>Engine Frame Assembly (right)</b>			
92	NS	90327-0800-31	Nut
93	NS	90001-0835-01	Bolt
94	NS	90001-0825-01	Bolt
95	NS	90406-0800-E1	Washer
96	NS	90001-0635-01	Bolt
97	NS	90305-0600-31	Nut
98	JMRT1166	51014HX090120-0000	Engine frame shock absorption seat
99	NS	90111-Y460110-0000	Bolt
100	NS	51025-V330110-H700	Decorative frame
101	NS	35160-Y450110-QG00	Switch subassembly
102	NS	35541-V330210-0000	Stop engine wire
103	JMRT1164	51100-V330210-H7L0	Engine frame assembly



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Item	JAK Max Part No.	RATCO Part No.	Description
<b>Pump Assembly (below)</b>			
104	NS	90001-0820-51	Bolt
105	JMRT1122	70108-V330110-0000	Water outlet
106	JMRT1123	70109-V330110-0000	Outlet gasket
107	JMRT1124	70105-V330110-0000	Pump body
108	NS	90001-0820-51	Bolt
109	NS	90001-0825-01	Bolt
110	NS	90001-V020110-0000	Bolt
111	NS	90409-V260110-0000	Washer
112	JMRT1125	70118-V330110-0000	Water pump joint
113	NS	90522-V010110-0000	Key
114	NS	90001-V070110-0000	Bolt
115	JMRT1126	70119-V330110-0000	Water pump joint cushion
116	NS	90505-0618-00	Pin
117	JMRT1127	70102-V330110-0000	Water pump impeller
118	JMRT1128	70103-V330110-0000	Whorl case

Item	JAK Max Part No.	RATCO Part No.	Description
<b>Pump Assembly - continued (below)</b>			
119	JMRT1129	70104-V330110-0000	Whorl case sealing ring
120	JMRT1151	70300-V260210-0000	Mechanical seal assembly
121	JMRT1152	70309-V260210-0000	Porcelain seal
122	JMRT1153	70125-V260210-0000	Washer
123	NS	70122-V260110-0000	Screw plug washer
124	JMRT1154	70107-V330110-0000	Thread plug
125	JMRT1134	70115-V330110-0000	Inlet water gasket
126	JMRT1135	70116-V330110-0000	Water inlet
127	JMRT1136	70131-V330110-0000	Hose joint seal ring
128	JMRT1137	70111-V260310-0000	Hose joint
129	JMRT1138	70112-V260310-0000	Hose interface
130	JMRT1139	70400-V260110-0000	Hose hoop assembly
131	JMRT1140	70113-V260110-0000	Filter cover
132	JMRT1141	70114-V260110-0000	Filter
133	JMRT1142	70100-V330710-0K00	Water pump assembly

