

# RT50YB50-3.8Q Single Impeller High Pressure Pump

## Product Information



The RATCO RT50YB50-3.8Q 7hp high pressure pump is ideal for irrigation, fire security, fish pools, orchard water supply, house cleaning and long distance and high pressure water supply. Has a rugged full frame for protection.

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

## Features

- Transistorised ignition for reliable starting.
- Cast iron cylinder liner ensures consistent performance and durability.
- Rugged full frame protection.
- Powerful 7hp RATCO engine.

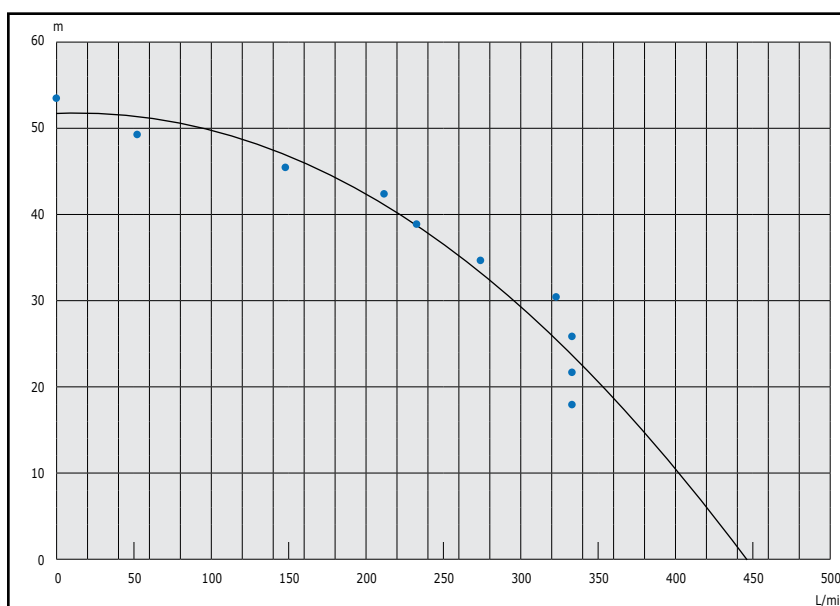


## SPECIFICATIONS

### RT50YB50-3.8Q

<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" high lift pump
<b>Suction port diameter</b>	50mm (2")
<b>Discharge port diameter</b>	1.5" / 1" / 1"
<b>Suction head lift</b>	7m
<b>Total head lift</b>	50m
<b>Discharge capacity</b>	30m <sup>3</sup> /h / 500 litres per minute
<b>Dimensions (L x W x H mm)</b>	500 x 395 x 446
<b>Net weight</b>	29.5kg

## Performance Curve

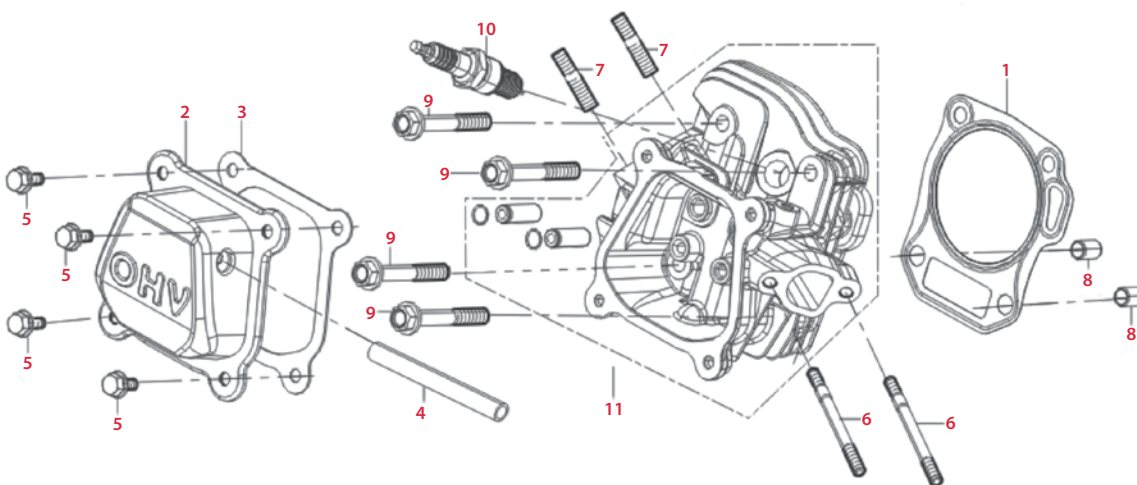


Unload Speed	Loading Speed	Suction Head Lift	Discharge Capacity (m <sup>3</sup> /h)	Discharge Capacity (L/min)	Total Head Lift (M)	Test Envir. Temp (C°)	Humidity at Outlet	Pressure at Outlet
3840	3400	9.4	20	333.33	17.81	14.5	100	163.1
			20	333.33	21.56	14.5	100	197.5
			20	333.33	25.81	14.5	100	236.4
			19.3	321.67	30.19	14.5	100	276.5
			16.5	275.00	34.41	14.5	100	315.2
			14	233.33	38.83	14.5	100	355.6
			12.7	211.67	42.18	14.5	100	386.3
			8.9	148.33	45.38	14.5	100	415.6
			3.1	51.67	49.26	14.5	100	451.2
			0	0.00	53.36	14.5	100	488.7

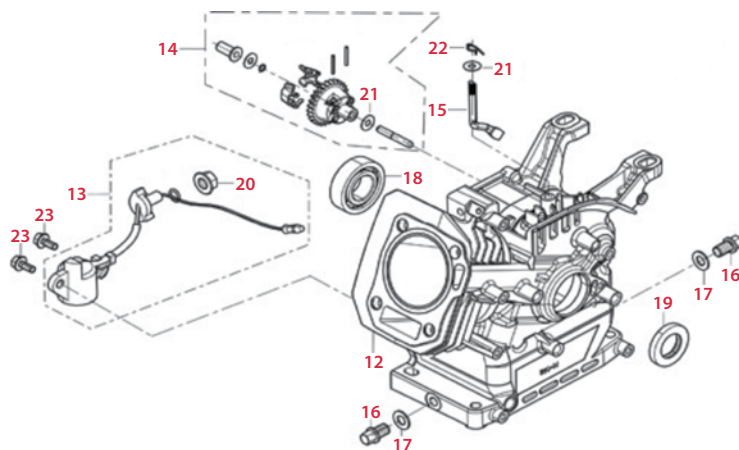
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Item	JAK Max Part No.	RATO Part No.	Description
<b>Cylinder Head Subassembly &amp; Spark Plug (below)</b>			
1	JMRT1001	12131-Z950110-0000	Cylinder head gasket
2	NS	12410-Z010220-H300	Cylinder head cover subassembly
3	JMRT1002	12004-Z010110-0000	Cylinder head cover gasket
4	NS	17004-Z050210-0000	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	JMRT1003	30010-Z010110-0000	Spark plug
11	NS	12140-Z040610-0000	Cylinder head subassembly



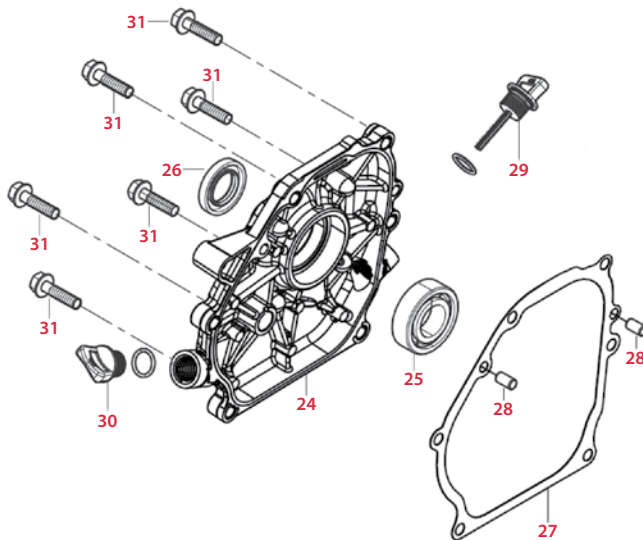
Item	JAK Max Part No.	RATO Part No.	Description
<b>Crankcase &amp; Governor Gear Assembly (right)</b>			
12	NS	11310-Z141220-0000	Crankcase assembly
13	JMRT1004	37060-Z010120-0000	Engine oil sensor
14	NS	16400-Z010110-0000	Governor gear assembly
15	NS	16061-Z010110-0000	Governor arm
16	NS	11007-Z010110-0000	Drain plug bolt
17	NS	90408-Z010110-0000	Washer
18	JMRT1008	90548-0205-CL	Bearing
19	JMRT1005	90682-Z300110-0000	Seal, oil
20	NS	90305-Z010210-01	Nut
21	NS	90408-Z010210-0000	Governor gear washer
22	NS	90501-Z010110-0000	Pin
23	NS	90001-0614-01	Bolt



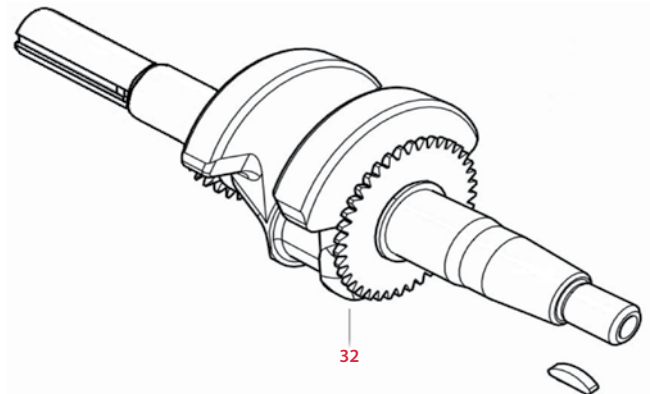
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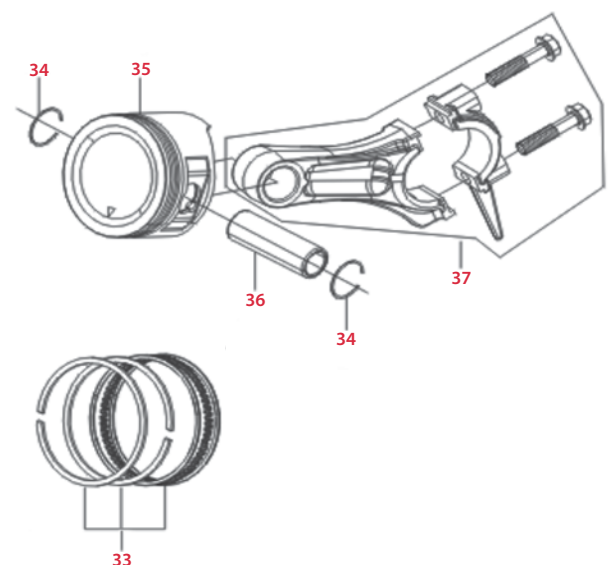
Item	JAK Max Part No.	RATO Part No.	Description
<b>Crankcase Cover Subassembly (below left)</b>			
24	NS	11411-Z010310-0000	Crankcase cover
25	JMRT1008	90548-0205-CL	Bearing
26	JMRT1005	90682-Z300110-0000	Oil seal
27	JMRT1006	11001-Z440110-0000	Crankcase gasket
28	NS	90502-0812-00	Pin
29	JMRT1007	15010-Z010130-Q500	Oil dipstick subassembly
30	NS	15030-Z010130-Q500	Engine oil plug subassembly
31	NS	90001-0832-01	Bolt



Item	JAK Max Part No.	RATO Part No.	Description
<b>Crankshaft (below right)</b>			
32	JMRT1010	13300-Z140330-0000	Crankshaft assembly



Item	JAK Max Part No.	RATO Part No.	Description
<b>Oil Ring Set &amp; Crankshaft Connecting Rod (right)</b>			
33	JMRT1011	13200-Z140210-0099	Piston ring set
34	JMRT1012	13122-Z010110-0000	Piston pin clip
35	JMRT1013	13111-Z140220-0099	Piston
36	JMRT1014	13121-Z010110-0000	Piston pin
37	JMRT1016	13010-Z440210-0099	Connecting rod



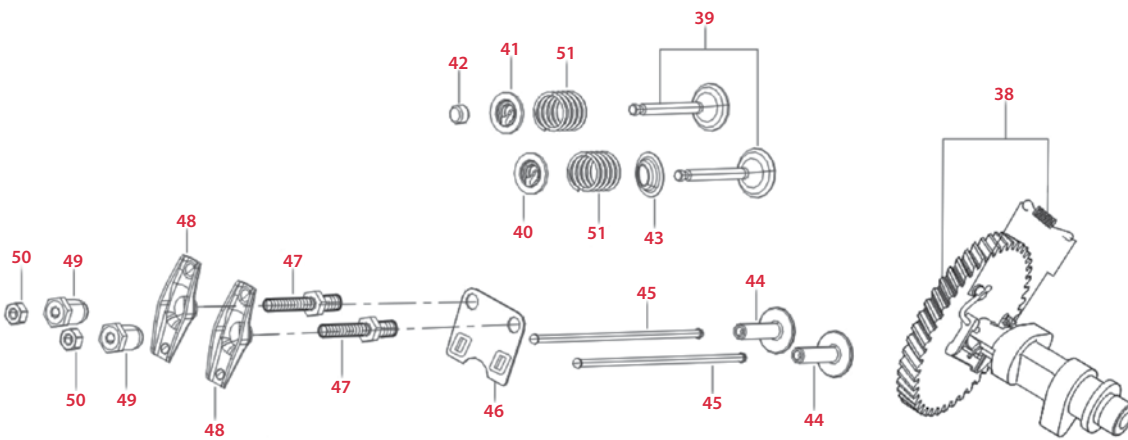
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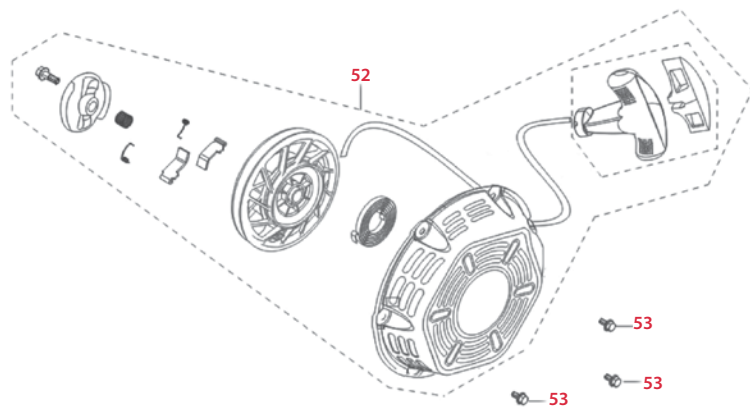
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Item	JAK Max Part No.	RATO Part No.	Description
<b>Valve Train &amp; Camshaft Subassembly (below)</b>			
38	JMRT1017	14200-Z300210-0000	Camshaft assembly
39	JMRT1018	12110-Z010110-0000	Valve set
40	NS	12112-Z010110-0000	Valve spring seat
41	JMRT1020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

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



Item	JAK Max Part No.	RATO Part No.	Description
<b>Starter Recoil (right)</b>			
52	JMRT1032	28200-Z300110-Y100	Starter Recoil assembly
53	NS	90001-0608-01	Bolt

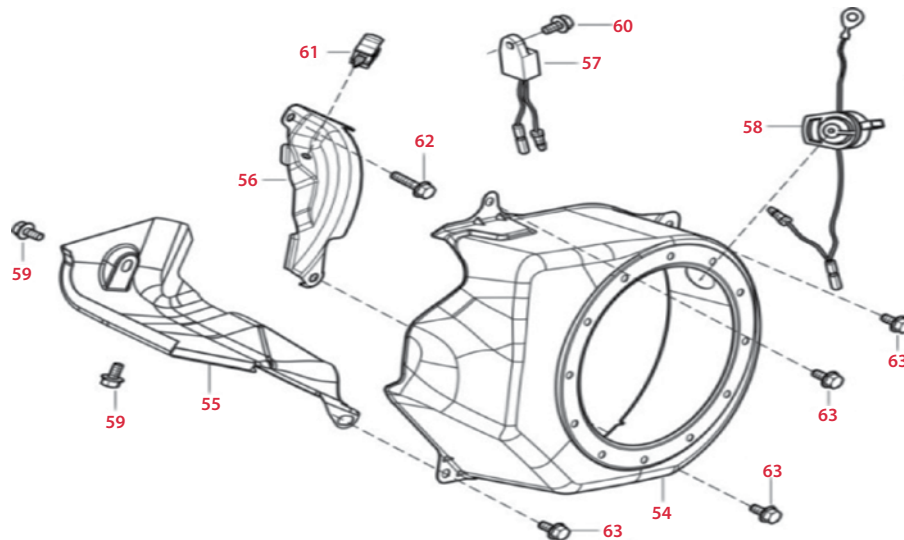


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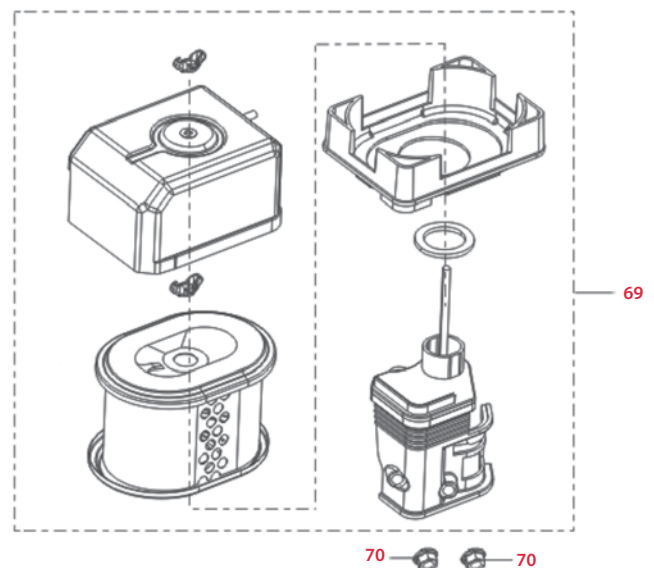
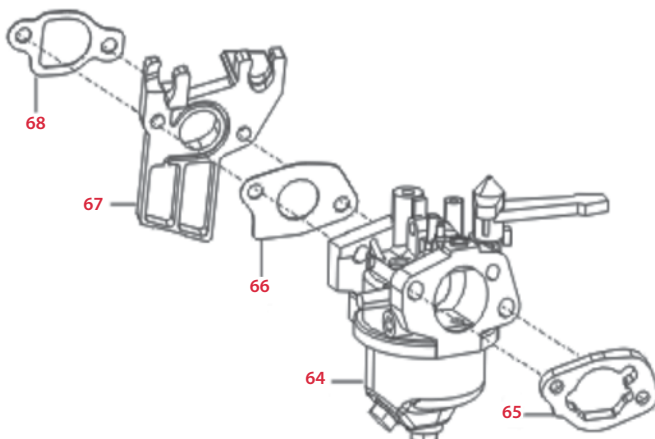
Item	JAK Max Part No.	RATO Part No.	Description
<b>Shroud &amp; Lower Shield (below)</b>			
54	NS	28110-Z010410-Y100	Shroud
55	NS	19304-Z010710-0000	Cylinder body shroud
56	NS	19340-Z010510-0000	Lower shield
57	NS	37050-Z010210-0000	Oil protector
58	JMRT1034	35540-Z060140-QG00	Stop engine switch subassembly

Item	JAK Max Part No.	RATO Part No.	Description
<b>Shroud &amp; Lower Shield - continued (below)</b>			
59	NS	90001-0610-01	Bolt
60	NS	90001-0610-01	Bolt
61	NS	90740-Z010110-0000	Collar
62	NS	90001-0616-01	Bolt
63	NS	90001-0612-01	Bolt



Item	JAK Max Part No.	RATO Part No.	Description
<b>Carburettor Assembly (below left)</b>			
64	JMRT1035	16100-Z040610-0000	Carburettor assembly
65	JMRT1037	17001-Z010210-0000	Air cleaner gasket
66	JMRT1038	16001-Z010110-0000	Carburettor gasket
67	JMRT1039	16003-Z010110-0000	Carburettor insulator plate
68	JMRT1040	16002-Z010110-0000	Carburettor insulator gasket

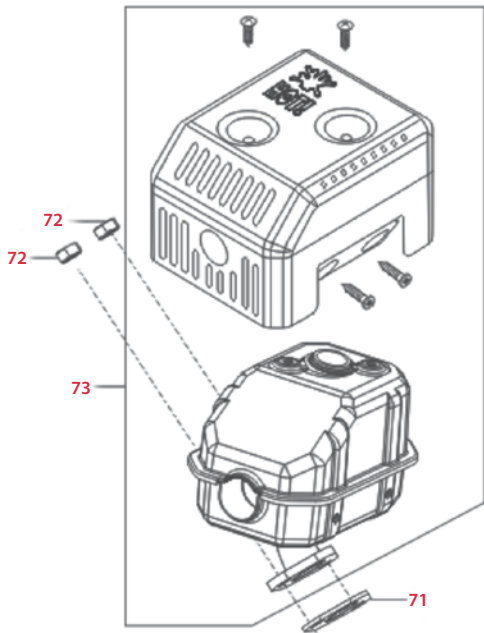
Item	JAK Max Part No.	RATO Part No.	Description
<b>Air Cleaner (below right)</b>			
69	JMRT1371	17100-Z010210-0000	Air cleaner
70	NS	90305-0600-31	Nut



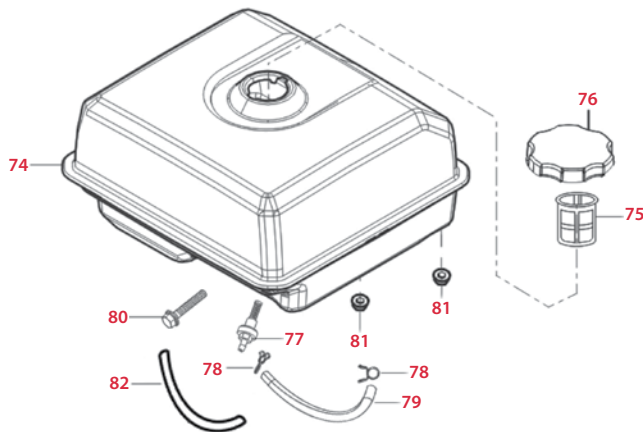
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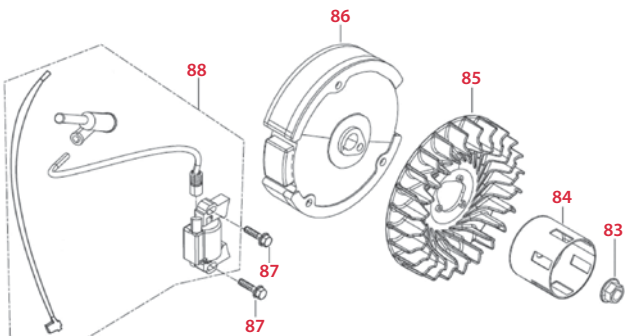
Item	JAK Max Part No.	RATO Part No.	Description
<b>Muffler Assembly (below left)</b>			
71	JMRT1045	18001-Z010110-0000	Exhaust outlet gasket
72	NS	90303-0800-31	Nut
73	JMRT1372	18100-Z010710-H300	Muffler assembly



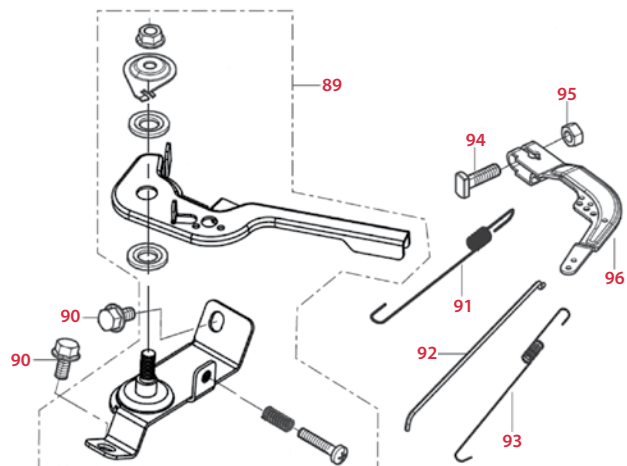
Item	JAK Max Part No.	RATO Part No.	Description
<b>Fuel Tank Assembly (below right)</b>			
74	NS	16620-Z440120-Y100	Fuel tank
75	JMRT1375	16652-Z010610-0000	Fuel strainer
76	JMRT1386	16730-Z010820-QB00	Fuel tank cover
77	JMRT1049	16680-Z010110-0000	Fuel tank oil outlet subassembly
78	NS	90740-Z010210-0000	Clamp
79	NS	90686-Z010510-0000	Fuel tube
80	NS	90001-0630-01	Bolt
81	NS	90305-0600-31	Nut
82	NS	30431-Z010110-0000	Rubber jacket



Item	JAK Max Part No.	RATO Part No.	Description
<b>Flywheel, Impeller, Starter Pulley &amp; Ignition Coil (below)</b>			
83	NS	13501-Z010110-0000	Nut
84	JMRT1051	28002-Z300110-0000	Starter cup
85	NS	19352-Z010110-0000	Impeller
86	NS	13510-Z010110-0000	Flywheel subassembly
87	NS	90001-0625-01	Bolt
88	JMRT1052	30400-Z440110-0100	Ignition coil



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



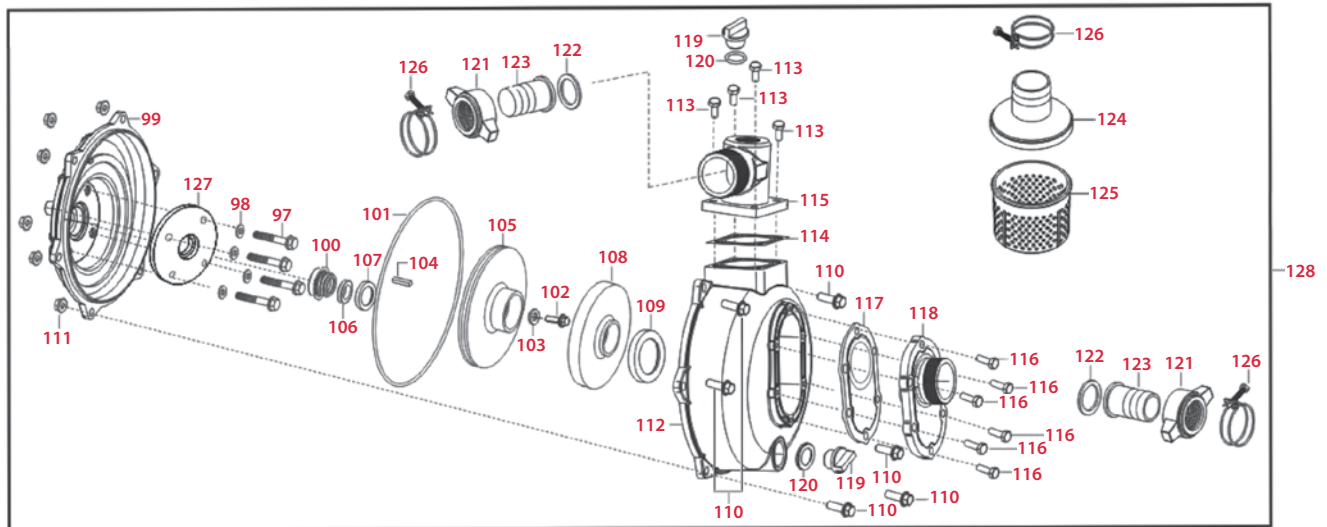
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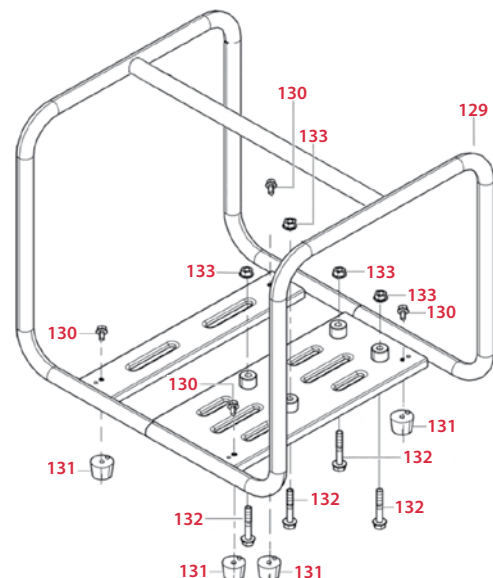
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Item	JAK Max Part No.	RATO Part No.	Description
<b>Pump Assembly (below)</b>			
97	NS	90001-V070210-0000	Bolt
98	JMRT1081	90409-V070210-0000	Gasket
99	JMRT1082	70118-V070410-0000	Water pump joint
100	JMRT1083	70300-V130210-0000	Mechanism seal assembly
101	JMRT1084	70119-V070410-0000	Water pump joint cushion
102	NS	90001-V070110-0000	Bolt
103	NS	90409-V070210-0000	Gasket
104	NS	90522-V130110-0000	Key
105	JMRT1085	70102-V070410-0000	Water pump impeller
106	JMRT1086	70309-V130210-0000	Porcelain seal
107	JMRT1087	70125-V130210-0000	Impeller seal ring
108	JMRT1088	70103-V070410-0000	Whorl case
109	JMRT1089	70104-V070410-0000	Whorl case sealing ring
110	NS	90001-1035-01	Bolt
111	NS	90327-1000-31	Nut
112	JMRT1090	70105-V070410-0000	Pump body

Item	JAK Max Part No.	RATO Part No.	Description
<b>Pump Assembly - continued (below)</b>			
113	NS	90001-0822-01	Bolt
114	JMRT1091	70109-V070410-0000	Outlet gasket
115	JMRT1092	70108-V070510-0000	Water outlet
116	NS	90001-0822-01	Bolt
117	JMRT1093	70115-V070210-0000	Inlet water gasket
118	JMRT1094	70116-V070510-0000	Water inlet
119	JMRT1095	70107-V070310-0000	Thread plug
120	NS	70122-V070310-0000	Screw plug washer
121	JMRT1096	70111-V070210-0000	Hose joint
122	JMRT1097	70131-V070210-0000	Hose joint seal ring
123	JMRT1098	70112-V070210-0000	Hose interface
124	JMRT1099	70113-V010110-0000	Filter cover
125	JMRT1100	70114-V070210-0000	Filter
126	JMRT1101	70400-V070210-0000	Hose hoop subassembly
127	NS	90795-V070210-0000	
128	JMRT1102	70100-V071010-0K00	Water pump assembly complete



Item	JAK Max Part No.	RATO Part No.	Description
<b>Engine Frame Assembly (right)</b>			
129	JMRT1103	51100-V020110-H7L0	Engine frame assembly
130	NS	90001-0610-01	Bolt
131	JMRT1105	51014HY450110-0000	Engine frame shock absorption seat
132	NS	90001-0850-01	Bolt
133	NS	90327-0800-31	Nut



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