

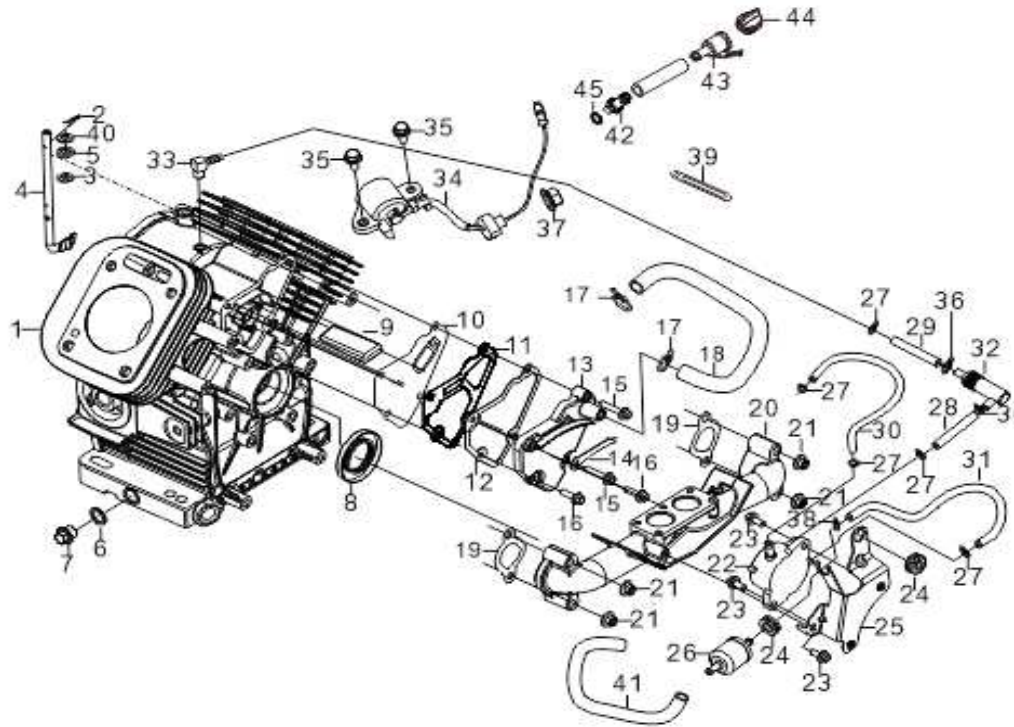
1-0263 Engine 670cc Electric Start

For parts Call 888-279-9274

VENDOR:	RATO
MODEL:	R-670 GEN
DATE:	5/15/24
DRAWN BY:	JAY REITTINGER

DATE:	DESCRIPTION:	BY:

FIG.1 CRANKCASE/GOVERNOR GEAR ASSEMBLY

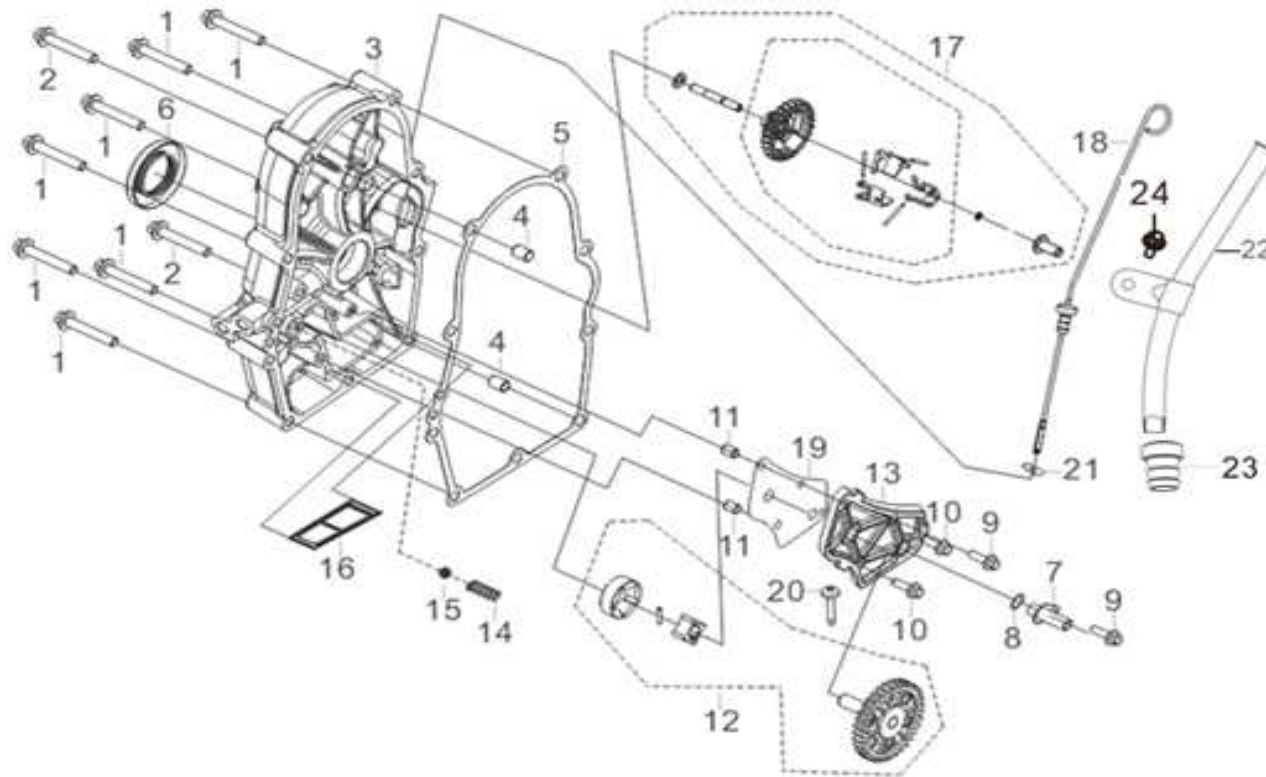


Ref #	Description	Qty	MiTM	RATO
1-1	Crankcase Subassembly.	1	45-1115	11310-Z120313-00A0
1-2	Cotter Pin	1	45-0328	90501-Z010110-00A0
1-3	Flat Washer	1	45-1086	90408-V010110-0000
1-4	Arm, Governor	1	45-1116	16061-Z120110-00A0
1-5	Seal, Oil	1	45-1087	90682-Z130220-00A0
1-6	Flat Washer	1	45-0326	90412-Z080110-00A0
1-7	Bolt, Drain Plug	1	45-0236	11007-Z080110-00A0
1-8	Seal, Oil	1	45-1088	90682-Z130120-00A0
1-9	Strainer, Breath Groove	1	45-1117	11331-Z1X0110-0000
1-10	Stop Engine Piece Subassembly	1	45-0955	11320-Z120120-00A0
1-11	Gasket, Breath Groove	1	45-0957	11332-Z130130-00A0
1-12	Gasket, Breath Groove	1	45-0956	11332-Z120120-00A0

FIG.1 CRANKCASE/GOVERNOR GEAR ASSEMBLY CONTINUED

Ref #	Description	Qty	MiTM	RATO
1-13	Plate, Breath Groove Cover	1	45-0958	11333-Z120120-00A0
1-14	Tension Disc	1	45-1058	54066-Z130110-00A0
1-15	Bolt	2	45-1118	90007-0632-A1A0
1-16	Bolt	2	45-0742	90007-0620-A1A0
1-17	Pipe Clamp	2	45-1078	90685-Z130210-00A0
1-18	Tube, Breather	1	45-1024	17004-Z120110-00A0
1-19	Gasket, Inlet	2	45-1089	17002-Z130120-00A0
1-20	Tube, Intake	1	45-0975	12510-Z130120-00A0
1-21	Hexagon Nut With Flange	4	45-0436	90305-0800-31A0
1-22	Pump Assy, Gasoline	1	45-1119	16300-Z120110-00A0
1-23	Bolt	3	45-0734	90007-0616-A1A0
1-24	Sleeve, Gasoline Pump Rubber	2	45-1018	16302-Z130120-0000
1-25	Support, Gasoline Pump	1	45-1120	16301-Z120110-0000
1-26	Strainer, Fuel	1	45-1020	16510-Z120111-00M0
1-27	Pipe Clamp	5	45-1076	90685-1000-Z4A0
1-28	Negative Pressure Pipe	1	45-0952	11017-Z120410-00A0
1-29	Negative Pressure Pipe	1	45-0953	11017-Z120510-00A0
1-30	Tube, Fuel	1	45-1080	90686-Z120210-00M0
1-31	Tube, Fuel	1	45-1150	90686-Z120410-00M0
1-32	Separator, Gas And Oil	1	45-1006	16030-Z120210-00A0
1-33	Mouth, Negative Pressure	1	45-0972	12502-Z130130-00A0
1-34	Sensor, Engine Oil	1	45-1090	37060-Z010310-0000
1-35	Bolt	2	45-0742	90007-0620-A1A0
1-36	Pipe Clamp	2	45-1077	90685-Z120110-00A0
1-37	Hexagon Nut With Flange	1	45-0789	90305-Z010210-01A0
1-38	Pipe Clamp	1	80-0653	90685-D095-0EA0
1-39	Wire Clip	1	45-0335	90684-Z010310-00A0
1-40	Washer, Flat	1	45-1071	90406-0800-E1A0
1-41	Hose, Fuel Steam Rubber	1	45-1023	16804-Z120110-00A0
1-42	Joint, Fuel Tube	1	45-1121	90689-Z120110-00A0
1-43	Joint, Fuel Tube	1	45-1122	90689-Z190230-02A0
1-44	Plug Subassembly, Engine Oil	1	45-1123	15030-Z010130-Q5A0

FIG.2 CRANKCASE COVER SUBASSEMBLY

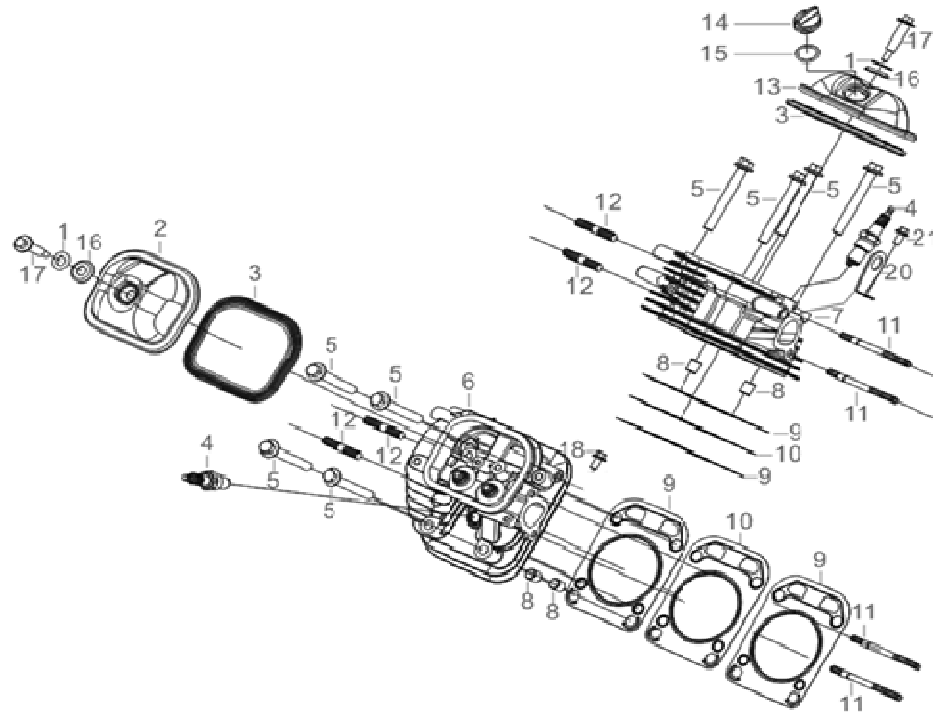


Ref #	Description	Qty	MiTM	RATO
2-1	Hexagon Socket Flange Face Bolt	7	80-0687	90001-0850-11A0
2-2	Hexagon Socket Flange Face Bolt	2	45-1061	90001-0855-11A0
2-3	Crankcase Cover Subassembly	1	45-1124	11410-Z120512-0000
2-4	Position Pin - Type A	2	45-0602	90502-1014-00A0
2-5	Gasket, Crankcase	1	45-0951	11001-Z130120-00A0
2-6	Seal, Oil	1	45-1088	90682-Z130120-00A0
2-7	Tube, Suction Oil	1	45-0993	15111HZ120110-00A0
2-8	O-Type Rubber Seal Ring	1	45-1082	90692-Z120210-0000

FIG.2 CRANKCASE COVER SUBASSEMBLY CONTINUED

Ref #	Description	Qty	MiTM	RATO
2-9	Bolt	1	45-0742	90007-0620-A1A0
2-10	Bolt	2	45-0666	90007-0628-A1A0
2-11	Position Pin - Type A	2	45-0922	90502-0810-00A0
2-12	Pump Assy, Oil	1	45-0992	15100-Z130110-00A0
2-13	Cover, Oil Pump	1	45-0994	15141-Z120210-00A0
2-14	Spring, Pressure Relief Valve	1	45-0996	15161-Z130310-00A0
2-15	Ball, Steel	1	45-1073	90543-9500-00A0
2-16	Strainer, Oil	1	45-0998	15211-Z120120-0000
2-17	Gear Assy, Governor	1	45-1019	16400-Z130210-00A0
2-18	Dipstick Subassembly, Oil	1	45-0988	15010-Z120320-Q9A0
2-19	Oil Pump Seal Gasket	1	45-0995	15142-Z120310-00A0
2-20	Bolt	1	45-1066	90104-0520-51A0
2-22	Tube, Fueling	1	45-0990	15020-Z120110-01A0
2-23	Oil Dipstick Seal Plug	1	45-0989	15014-Z120111-0000
2-24	Bolt	1	45-0316	90001-0616-01A0

FIG.3 SPARK PLUG,CYLINDER HEAD SUBASSEMBLY

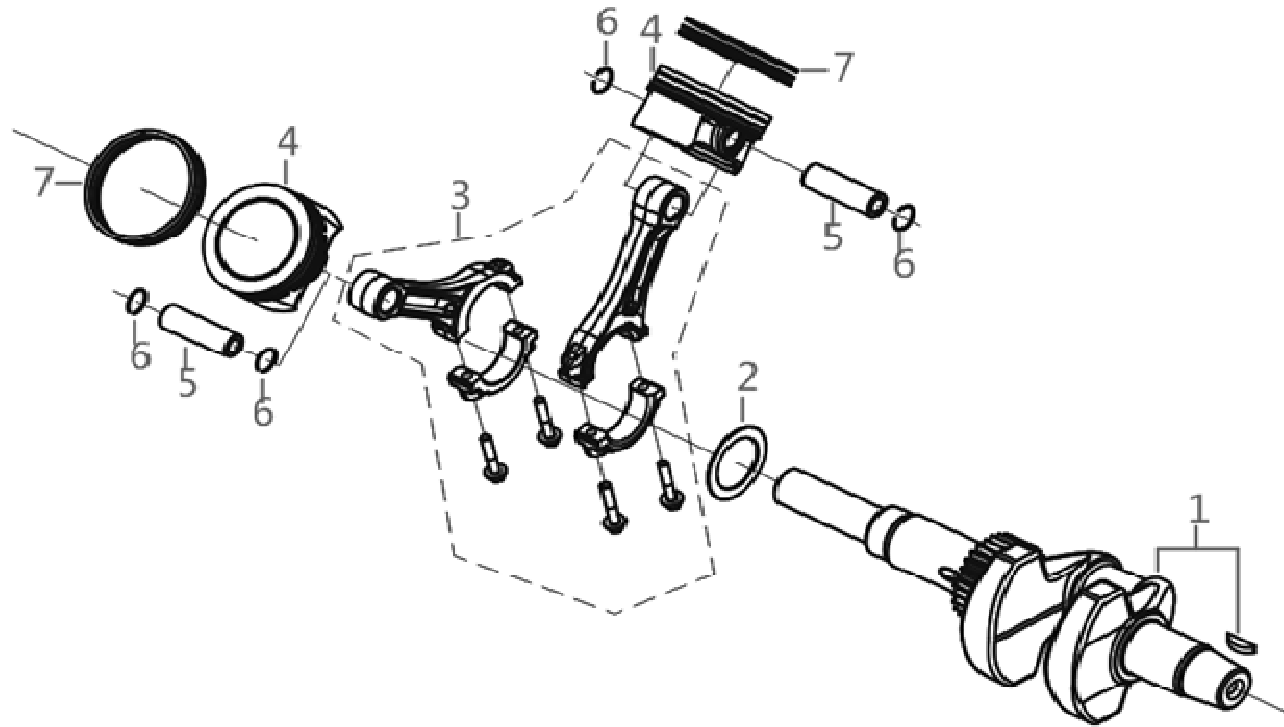


Ref #	Description	Qty	MiTM	RATO
3-1	CYLINDER HEAD COVER SEAL BOLT ASSY	2	45-0962	12034-Z120110-0000
3-2	Cover, Cylinder Head	1	45-0969	12411-Z130110-0000
3-3	Cylinder Head Cover Gasket	2	45-0960	12004-Z130110-00A0
3-4	Plug, Spark	2	45-1047	30010-Z120110-00A0
3-5	Cylinder Head Bolt	8	45-0239	12003-Z080110-00A0
3-6	Head Subassembly, Cylinder	1	45-0967	12140-Z130510-00A0
3-7	Head Subassembly, Right Cylinder	1	45-0968	12210-Z130510-00A0
3-8	Position Pin	4	45-0330	90502-1220-00A0
3-9	Gasket, Cylinder Head	4	45-0965	12131-Z130120-00A0
3-10	Core Veneer	2	45-0966	12134-Z130110-00A0
3-11	Stud Bolt	4	45-1068	90204-0845-A1A0
3-12	Stud Bolt	4	45-0468	90203-Z010110-0000

FIG.3 SPARK PLUG,CYLINDER HEAD SUBASSEMBLY CONTINUED

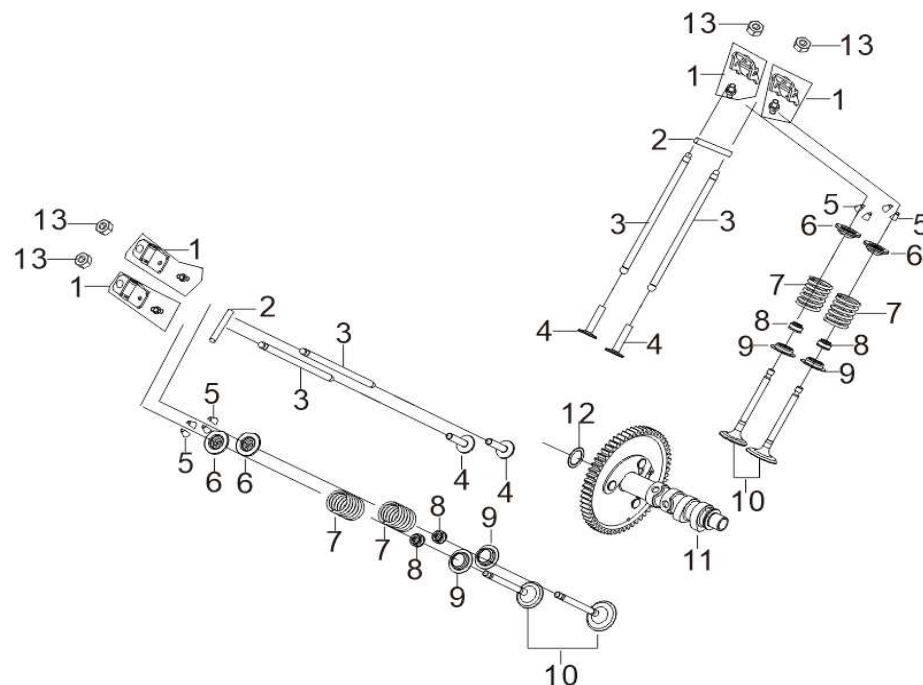
Ref #	Description	Qty	MiTM	RATO
3-13	Cover, Cylinder Head	1	45-0970	12411-Z130210-0000
3-14	Plug, Engine Oil	1	45-0991	15031-Z120110-Q5A0
3-15	Ring, Seal	1	45-1074	90681-Z080210-0000
3-16	CYLINDER HEAD COVER SEAL BOLT ASSY	2	45-0962	12034-Z120110-0000
3-17	Cylinder Head Cover Bolt	2	45-1092	12032-Z130210-00A0
3-18	Bolt	1	80-0478	90001-0816-01A0
3-20	Lug	1	45-0961	12008-Z130110-00A0
3-21	Hexagonal Flange Shoulder Bolt	1	45-1064	90013-Z130210-00A0

FIG.4 CRANKSHAFT CONNECTING ROD



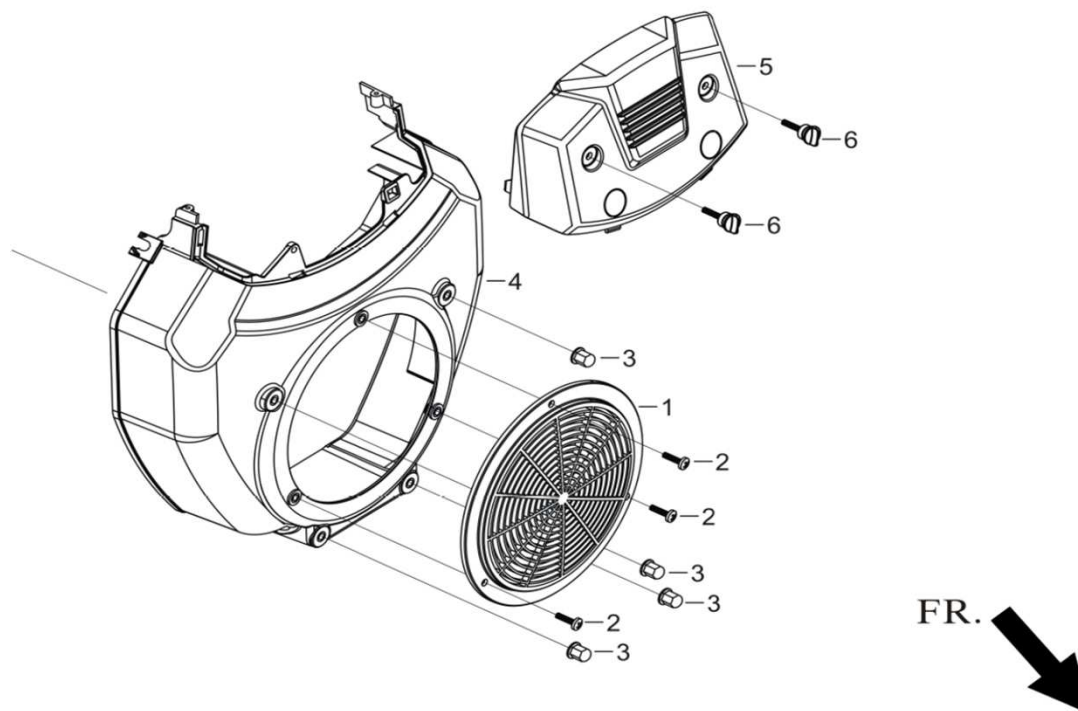
Ref #	Description	Qty	MiTM	RATO
4-1	Crankshaft Assy.	1	45-1125	13300-Z120812-0000
4-2	Thrust Washer	1	45-1126	13306-ZCB0110-00A0
4-3	Connecting Rod	2	45-1127	13010-ZCB0110-00A0
4-4	Piston	2	45-0977	13111-Z120110-00A0
4-5	Pin, Piston	2	45-1093	13121-Z130110-00A0
4-6	Clip, Piston Pin	4	45-1094	13122-Z130110-00A0
4-7	Ring Assy, Piston	2	45-0978	13200-Z120110-00A0

FIG.5 TRAIN VALVE / CAMSHAFT SUBASSEMBLY



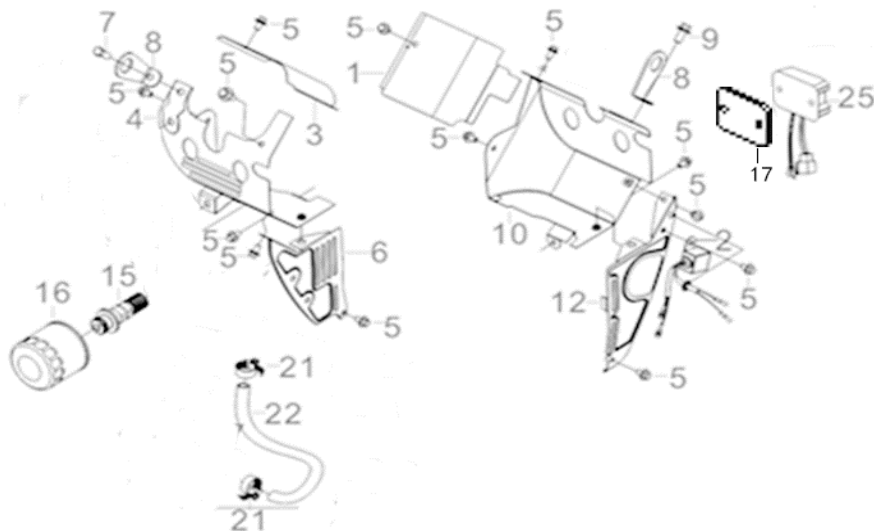
Ref #	Description	Qty	MiTM	RATO
5-1	Valve Rocker Subassembly	4	45-1128	14310-Z120110-00A0
5-2	Shaft, Valve Rocker	2	45-0987	14330-Z130310-00A0
5-3	Lifter Subassembly, Valve	4	45-1095	14070-Z130210-00A0
5-4	Tappet, Valve	4	45-1096	14081-Z130110-00A0
5-5	Clamp, Valve Lock	8	45-0963	12109-Z400110-00A0
5-6	Seat, Valve Spring	4	45-1097	12112-Z400110-00A0
5-7	Spring, Valve	4	45-1098	12103-Z130110-00A0
5-8	Guide, Seal	4	45-0242	12101-Z080110-00A0
5-9	Retainer, Valve Spring	4	45-1099	12105-Z130110-00A0
5-10	Valves Set	2	45-1129	12110-Z130311-00A9
5-11	Camshaft Assy.	1	45-1130	14200-Z130211-00A0
5-12	Washer, Camshaft	1	45-0985	14215-Z130110-00A0
5-13	Nut, Valve Lock	4	45-1100	14312-Z240110-00A0

FIG.6 OUTER HOUSING



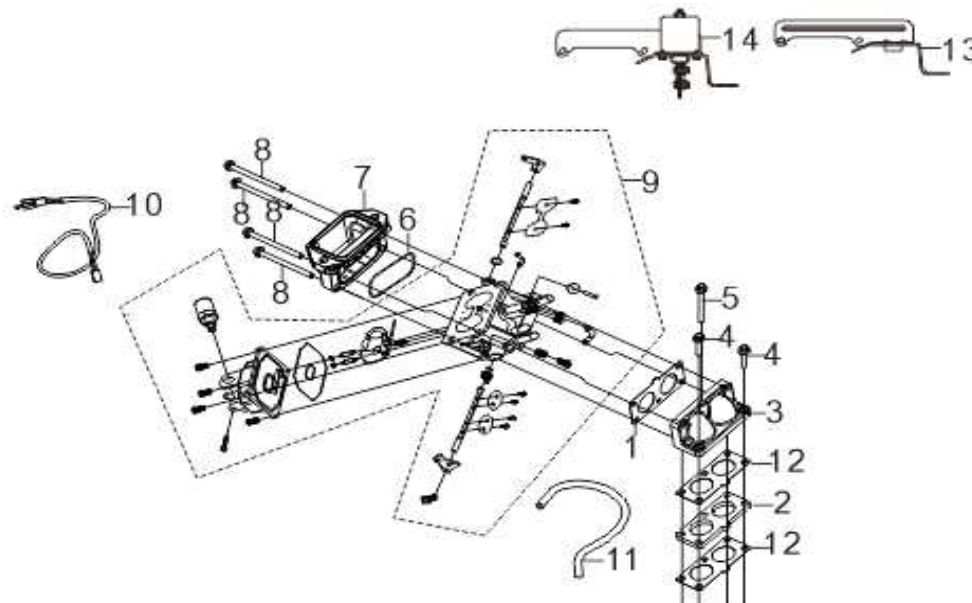
Ref #	Description	Qty	MiTM	RATO
6-1	Shroud Shield	1	45-1131	30028-Z120110-Q2A0
6-2	Cross-Recessed Pan Head Screw	3	45-1065	90103-0508-A1A0
6-3	Nut	4	45-1070	90314-Z130210-00A0
6-4	Shroud Assy.	1	45-1132	19330-Z120110-Q2A0
6-5	AIR CLEANER FRONT COVER	1	45-1133	19303HZ120111-Q2A0
6-6	Handle Subassembly, Lock	2	45-1043	24540-Z130110-00A0

FIG.7 SHROUD



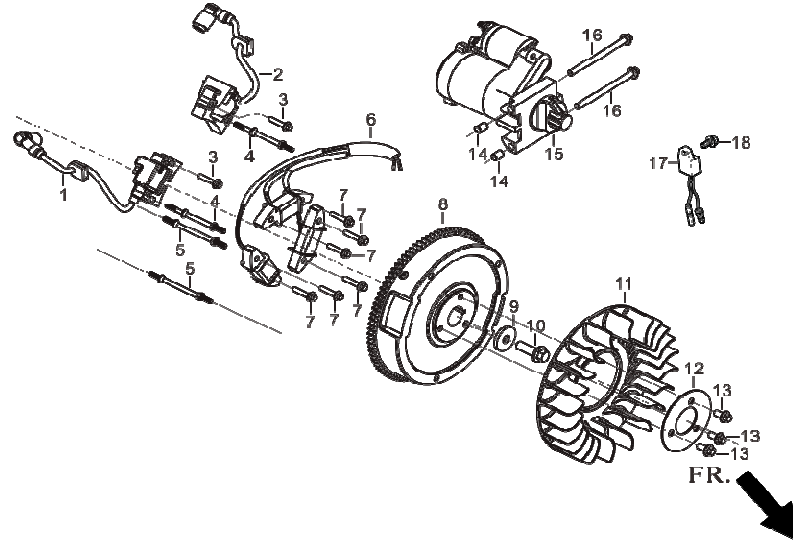
Ref #	Description	Qty	MiTM	RATO
7-1	Shroud 2, Cylinder Body	1	45-1035	19305-Z130110-00A0
7-2	Conductor, Unilateralism	1	45-1046	30003-Z130110-0000
7-3	Cylinder Body Shroud	1	45-1134	19304-Z120110-0000
7-4	Lower Shield	1	45-1135	19340HZ120210-0000
7-5	Hexagon Socket Flange Face Bolt	13	45-0533	90001-0610-01A0
7-6	Body Left Shield	1	45-1038	19308-Z130120-00A0
7-7	Bolt, Hexagonal Flange Shoulder	1	45-1064	90013-Z130210-00A0
7-8	Lug	2	45-0961	12008-Z130110-00A0
7-9	Bolt, Hexagonal Flange Shoulder	1	45-1064	90013-Z130210-00A0
7-10	Lower Right Shield	1	45-1037	19307-Z120110-01A0
7-12	Body Right Shield	1	45-1039	19309-Z130130-00A0
7-15	TUBE, OIL FILTER ADAPTER	1	45-1136	15208-Z130120-00A0
7-16	Oil Filter	1	45-1137	15220-Z120110-00A0
7-17	Voltage Regulator Heat-Proof Pad	1	45-1151	30052-Z120110-00A0
7-20	Hexagon Socket Flange Face Bolt	2	45-0742	90007-0620-A1A0
7-21	Pipe Clamp	4	45-1101	90685-D180-0EA0
7-22	HOSE - OIL COOLER	1	45-1138	19111-Z120231-00A0
7-25	Voltage Regulator	1	45-1139	30060-Z120120-0000

FIG.8 CARBURETOR ASSEMBLY



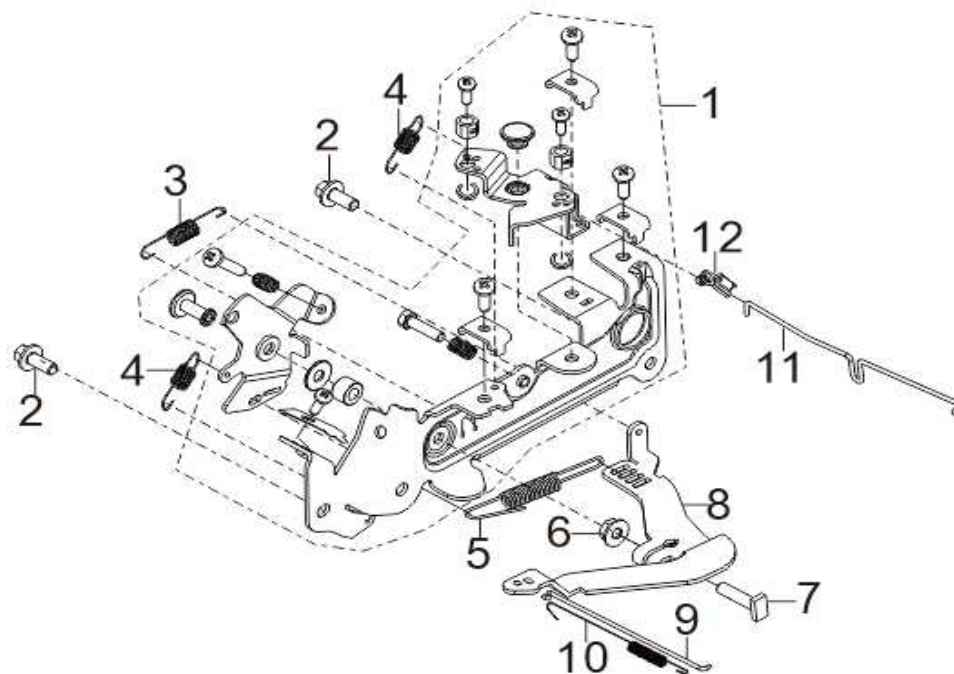
Ref #	Description	Qty	MiTM	RATO
8-1	Carburetor Seal Gasket	1	45-1001	16001-Z130110-00A0
8-2	Gasket, Carburetor Insulator	1	45-1003	16002-Z130120-00A0
8-3	Joint, Intake Tube	1	45-0971	12501-Z120120-00A0
8-4	Hexagon Socket Flange Face Bolt	2	45-0915	90007-0630-A1A0
8-5	Hexagon Socket Flange Face Bolt	1	45-1063	90007-0665-A1A0
8-6	O-Type Rubber Seal Ring	1	45-1083	90692-Z120310-0000
8-7	Tube, Air Cleaner Connecting	1	45-1026	17112HZ120130-00A1
8-8	Hexagon Socket Flange Face Bolt	4	45-1060	90001-0695-01A0
8-9	Carburetor Assy.	1	45-1140	16100-Z120810-00M0
8-10	Solenoid Valve Ac Line	1	45-1141	35665-Z120310-00A0
8-11	Tube, Fuel	1	45-1079	90686-Z030310-00M1
8-12	Carburetor Seal Gasket	2	45-1002	16001-Z130210-00A0
8-13	Mounting Bracket	1	45-1142	51124-Z120110-0000
8-14	Idle Control Solenoid Valve	1	45-1143	35180-Z120110-0000
8-15	Cathode Wire	1	45-1144	31114HY4D0110-0000

FIG.9 FLYWHEEL / IMPELLER / STARTER PULLEY / IGNITION COIL



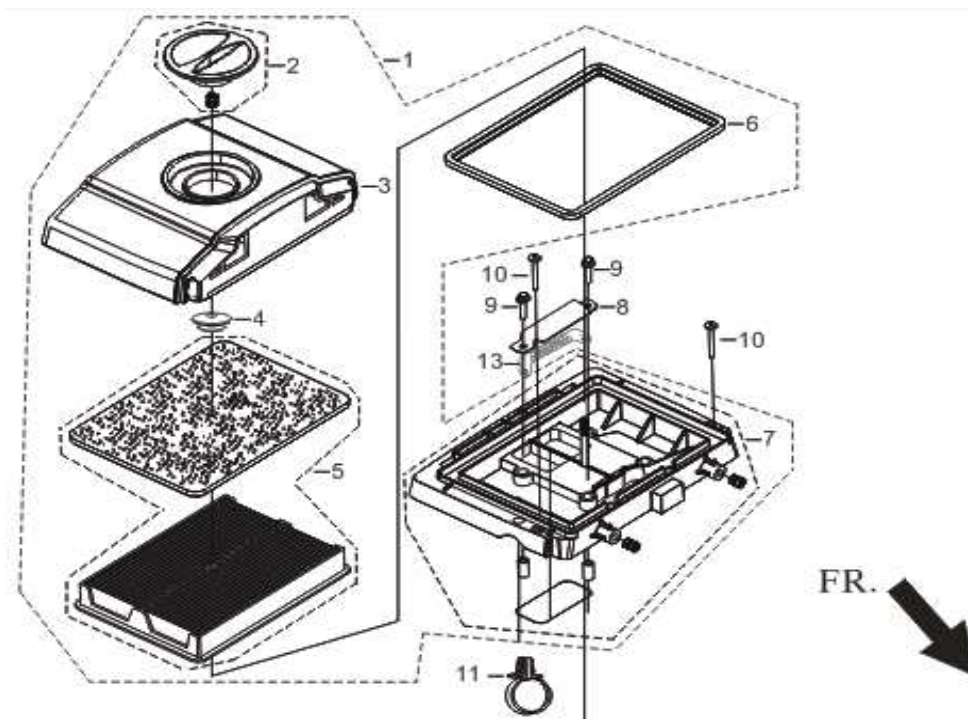
Ref #	Description	Qty	MiTM	RATO
9-1	Coil, Ignition	1	45-1054	30400-Z130310-0000
9-2	Coil, Ignition	1	45-1055	30400-Z130410-0000
9-3	Hexagon Socket Flange Face Bolt	2	45-0915	90007-0630-A1A0
9-4	Double Head Support Bolt	2	45-1044	28001-Z130110-00A0
9-5	Double Head Support Bolt	2	45-1045	28001-Z130210-00A0
9-6	Charge Coil Subassembly	1	45-1145	30140-Z120110-0000
9-7	Bolt	6	80-0480	90007-0635-A1A0
9-8	Flywheel Assy.	1	45-0981	13500-Z120120-00A0
9-9	Washer, Flat	1	45-1072	90407-Z130120-0000
9-10	Bolt, Flywheel	1	45-0982	13502-Z130110-00A0
9-11	Impeller	1	45-1042	19352-Z130110-00A0
9-12	Tray, Impeller Setting	1	45-0983	13515-Z130110-0000
9-13	Hexagon Socket Flange Face Bolt	3	45-0788	90001-0816-01A0
9-14	Position Pin - Type A	2	45-0602	90502-1014-00A0
9-15	Starting Motor Assembly	1	45-1051	30300-Z130121-0000
9-16	Hexagon Socket Flange Face Bolt	2	45-1062	90001-08B0-01A0
9-17	Oil Protector	1	45-1146	37050-Z130111-0000
9-18	Bolt	1	45-0533	90001-0610-01A0

FIG.10 THROTTLE CONTROL ASSEMBLY



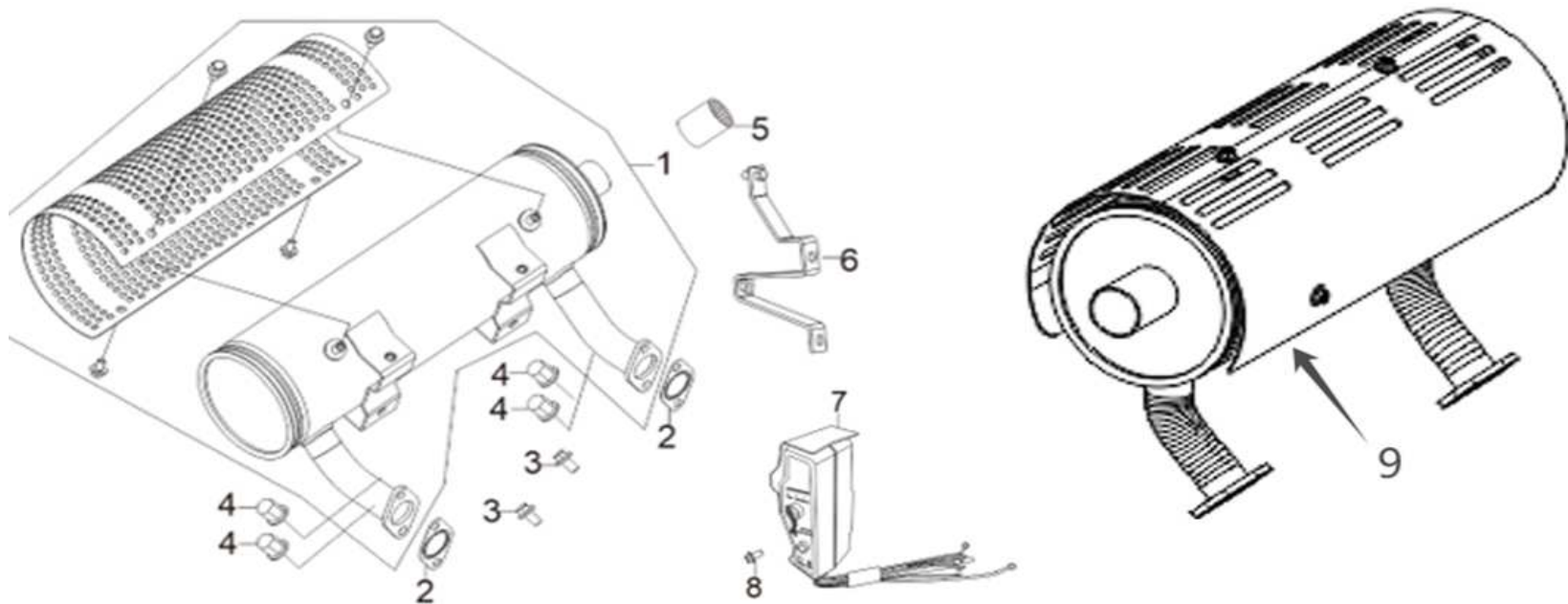
Ref #	Description	Qty	MiTM	RATO
10-1	Throttle Control Assy	1	45-1104	16520-Z120510-00A0
10-2	Bolt	2	45-0734	90007-0616-A1A0
10-3	Spring, Governor	1	45-1010	16063-Z130210-00A0
10-4	Spring, Choke Return	2	45-1015	16236-Z130210-00A0
10-5	Governor Spring	1	45-1147	16063-Z120510-0000
10-6	Hexagon Nut With Flange	1	45-0324	90305-0600-31A0
10-7	Bolt, Governor Support	1	45-0282	16072-Z010110-00A0
10-8	Governor Bracket	1	45-1148	16070-Z120110-0000
10-9	Rod, Governor	1	45-1009	16062-Z120110-00A0
10-10	Spring, Throttle Valve Returning	1	45-1005	16012-Z120210-00A0
10-11	Choke Pull Rod	1	45-1014	16123-Z120120-00A0
10-12	Clip, Choke Rod	1	45-1004	16011-Z130120-00A0

FIG.11 AIR CLEANER



Ref #	Description	Qty	MiTM	RATO
11-1	Air Cleaner	1	45-1025	17100-Z120110-00A0
11-8	Cover, Intake Tube	1	45-0973	12503-Z120110-0000
11-9	Bolt	2	45-0915	90007-0630-A1A0
11-10	Pan Head Self-Tapping Screw	2	45-1067	90107-4225-51A0
11-11	Collar	1	45-1085	90740-Z130120-00A0
11-13	Cover, Intake Tube	1	45-0974	12503-Z120210-0000

FIG.12 MULLER ASSEMBLY



Ref #	Description	Qty	MITM	RATO
12-1	Muffler Assy.	1	45-1027	18100-Z120310-00A2
12-2	Exhaust Outlet Gasket	2	45-0435	18001-Z190110-00A0
12-3	Bolt	2	45-0788	90001-0816-01A0
12-4	Nut	4	45-1069	90314-Z130120-00A0
12-5	Collector, Spark	1	45-1029	18250-Z120110-00A0
12-6	Support Subassembly, Control Box	1	45-1053	30360-Z120110-00A1
12-7	Starting Control Box	1	45-1052	30350-Z120320-0000
12-8	Bolt	1	80-0481	90007-0612-A1A0
12-9	LEFT HAND EXHAUST MUFFLER ASSY.	1	45-1028	18100-Z120510-00A0
-	ENGINE STARTING KEY	2	45-1149	35302-Z160110-0000