SERVICE DATA

TRIMMER/BRUSHCUTTER

SRM-2655SI

(Serial number : 36000001 and after)

INTRODUCTION

We are constantly working on technical improvement of our products. For this reason, technical data, equipment and design are subject to change without notice. All specifications, illustrations and directions in this SERVICE DATA are based on the latest products information available at the time of publication.
ECHO SERVICE MANUAL Ord. 402-24 (Model : SRM-2655) contains lots of information for servicing this model.

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Reference No. **10-25G-01**
REVISED: 200502
ISSUED: 200410

KIORITZ CORPORATION

1 SERVICE INFORMATION

1-1 Specifications

Model			SRM-2655SI(L)	SRM-2655SI(U)
Dimensions	Length*	mm(in)	1785 (70.3)	1790 (70.5)
	Width	mm(in)	360 (14.2)	690 (27.2)
	Height	mm(in)	350 (13.8)	460 (18.1)
Dry weight**		kg(lb)	5.9 (13.0)	6.5 (14.3)
Engine	Type		KIORITZ, air-cooled, two-stroke, single cylinder	
	Rotation		Anticlockwise as viewed from the output end	
	Displacement	$cm^3(in^3)$	25.4 (1.550)	
	Bore	mm(in)	34.0 (1.339)	
	Stroke	mm(in)	28.0 (1.102)	
	Compression ratio		6.3	
Carburettor	Type		Rotary valve type: Diaphragm, horizontal-draught, with primer (purge bulb)	
	Model		Walbro WYJ-192A	
	Venturi size-Throttle bore	mm(in)	10.5 - 10.5 (0.41 - 0.41)	
Ignition	Type		TCI (Transistor controlled ignition) system in a single integrated piece	
	Spark plug		BPMR7A	
Starter	Type		*i* - start	
	Rope diameter x length	mm(in)	3.0 x 920 (0.12 x 36.22)	
Fuel	Type		Premixed two-stroke fuel	
	Mixture ratio		50 : 1 (2 %)	
	Petrol		Minimum 89 octane petrol (RON)	
	Two-stroke air cooled engine oil		ISO-L-EGD (ISO/CD13738), JASO FC	
	Tank capacity	L (U.S.fl.oz.)	0.64 (21.6)	
Clutch	Type		Centrifugal, 2 - shoe pivot	
Handle	Type	Front	Crescent loop w/cushion grip	U-shaped / U-shaped
		Rear	Integrated control grip w/cushion	- - - / - - -
Drive shaft	Type		Solid	
	Diameter - Length	mm(in)	7 - 1540 (0.28 - 60.6)	
	Housing OD -ID	mm(in)	25 - 22 (0.98 -0.87)	
	(Main pipe) Length	mm(in)	1500 (59.1)	
Gear case	Reduction ratio		1.36	
	Gear tooth		Spiral bevel gear	
	Lubrication		Lithium based grease	
Cutter	Type		Nylon line cutter, 3-tooth blade†, Others	
	Pilot diameter	mm(in)	25.4 (1.0)	
	Fastener type, size	mm	Left-hand thread nut, M10 x 1.25 pitch	
	Cutting rotation		Anticlockwise as viewed from top	

OD: Outer diameter. ID: Inner diameter.
* Without shoulder harness and cutter head. ** With standard cutter head, without shoulder harness.
† Install and use U-shaped handle when operating with steel blade.

1-2 Technical data

Engine		
Idling speed	r/min	2400 - 3000
Operating speed	r/min	7000
Wide open throttle speed*	r/min	8500 - 10000
Clutch engagement speed	r/min	3100 - 3700
Compression pressure	MPa (kgf/cm^2) (psi)	0.98 (9.8) (138)
Ignition system		
Spark plug gap	mm (in)	0.6 - 0.7 (0.024 - 0.028)
Minimum secondary voltage at 1000 r/min	kV	17
Secondary coil resistance	kΩ	12 - 13
Pole shoe air gaps	mm(in)	0.3 - 0.4 (0.012 - 0.016)
Ignition timing at 1000 r/min	°BTDC	25
Carburettor		
Main jet		#37
Idle adjust screw initial setting	turn in**	2 1/2
Idle mixture needle initial setting	turn in***	13 1/2
Test pressure, minimum	MPa (kgf/cm^2) (psi)	0.05 (0.5) (7.0)
Metering lever height	mm (in)	1.5 (0.059) lower than diaphragm seat

BTDC: Before top dead centre.

* With two line nylon line head.

** Set idle adjust screw to contact throttle plate before initial setting.

*** Screw in idle mixture needle from initial thread engagement (at the point that the clicking sound is heard).

1-3 Torque limits

Descriptions			Size	kgf•cm	N•m	in•lbf
Starter system	Pawl carrier		M 8	90 - 120	9 - 12	80 - 100
	Starter case		M 4*	14 - 28	1.4 - 2.8	12 - 24
Ignition system	Magneto rotor (Flywheel)		M 8	160 - 200	16 - 20	140 - 175
	Ignition coil		M 5	40 - 60	4 - 6	35 - 52
	Fan cover		M 5	30 - 45	3.0 - 4.5	25 - 40
	Spark plug		M 14	150 - 170	15 - 17	130 - 150
Fuel system	Carburettor insulator		M 5	50 - 70	5 - 7	45 - 60
	Carburettor		M 5	30 - 45	3.0 - 4.5	25 - 40
	Fuel tank		M 5	30 - 45	3.0 - 4.5	25 - 40
	Stand	Starter side	M 5	20 - 30	2 - 3	17 - 26
		Fan cover side	M 5	30 - 45	3.0 - 4.5	25 - 40
Clutch	Clutch shoe		M 6	70 - 110	7 - 11	60 - 95
Engine	Crankcase		M 5	70 - 110	7 - 11	60 - 95
	Cylinder		M 5	70 - 110	7 - 11	60 - 95
	Top guard		M 5*	30 - 45	3.0 - 4.5	25 - 40
	Muffler		M 5	60 - 100	6 - 10	52 - 85
	Muffler cover		M 5*	14 - 28	1.4 - 2.8	12 - 24
Others	Blade fastening nut		LM 10	280 - 320	28 - 32	245 - 280
Regular bolt, nut, and screw			M 3	6 - 10	0.6 - 1.0	5 - 9
			M 4	15 - 25	1.5 - 2.5	13 - 22
			M 5	25 - 45	2.5 - 4.5	22 - 40
			M 6	45 - 75	4.5 - 7.5	40 - 65
			M 8	110 - 150	11 - 15	95 - 130
			M 10	210 - 300	21 - 30	180 - 260

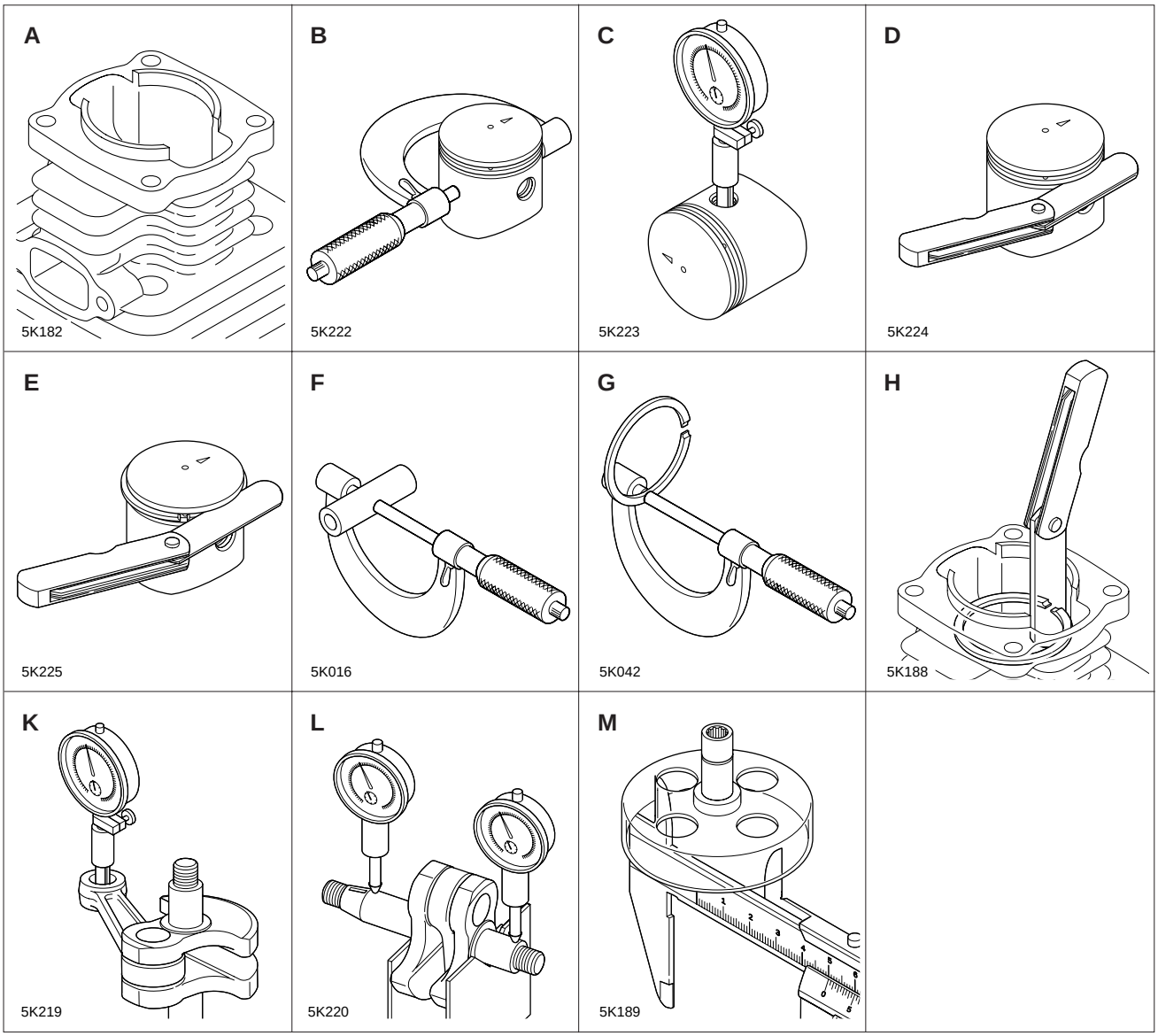
LM: Left hand thread.

* Apply thread locking sealant. (See below)

1-4 Special repairing materials

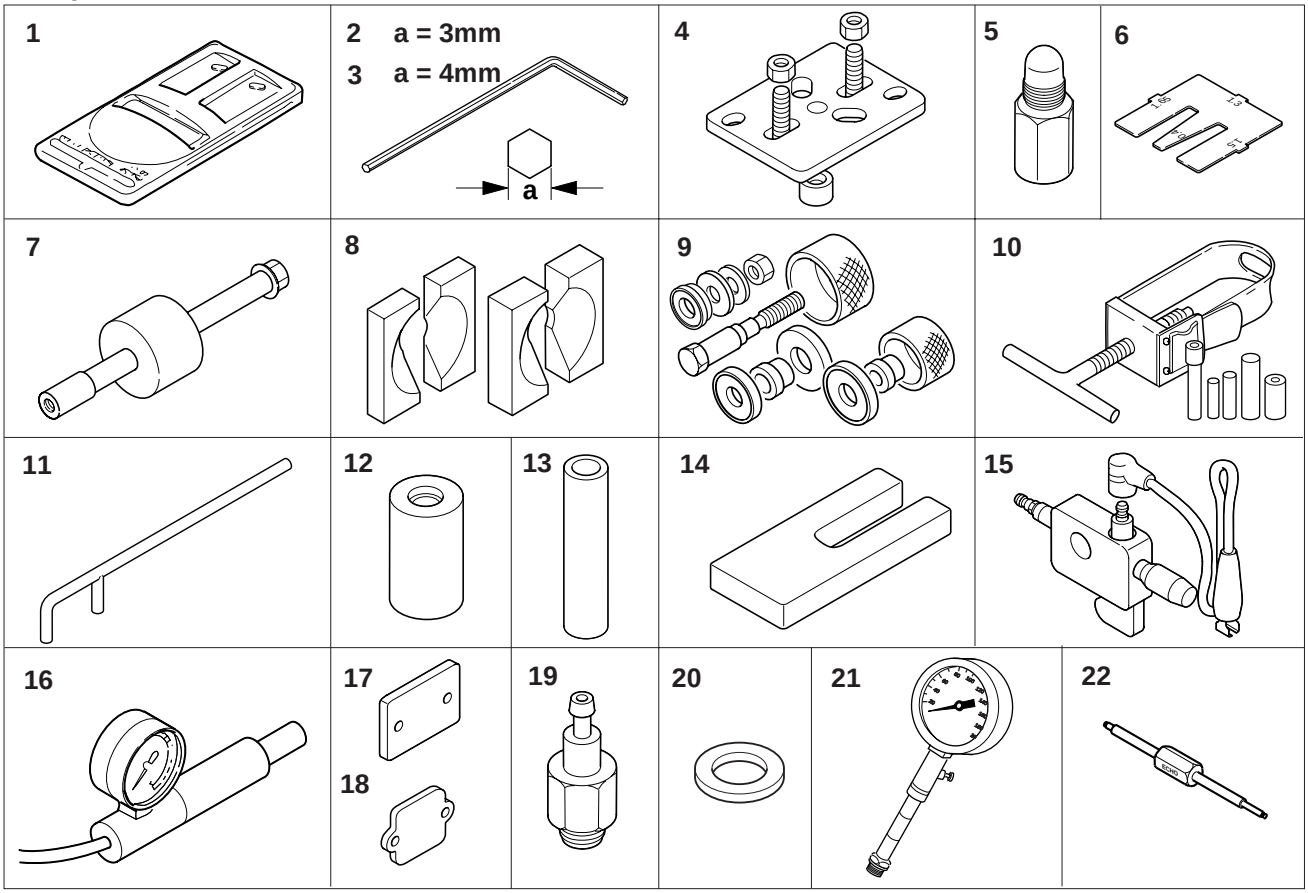
Material	Location	Remarks
Thread locking sealant	Muffler cover	Loctite #242, ThreeBond 1324 or equivalent
	Starter case	Loctite #222, ThreeBond 1342 or equivalent
	Top guard	
Grease	Gear case	Lithium based grease
	Rewind spring	
	Starter drum center hole	

1-5 Service limits



	Description		mm (in)
A	Cylinder bore		When plating is worn and aluminium can be seen
B	Piston outer diameter	Min.	33.91 (1.335)
C	Piston pin bore	Max.	8.030 (0.3161)
D	Piston ring groove	Max.	1.6 (0.063)
E	Piston ring side clearance	Max.	0.1 (0.004)
F	Piston pin outer diameter	Min.	9.980 (0.3929)
G	Piston ring width	Min.	1.45 (0.057)
H	Piston ring end gap	Max.	0.5 (0.02)
K	Con-rod small end bore	Max.	11.025 (0.4341)
L	Crankshaft runout	Max.	0.05 (0.002)
M	Clutch drum bore	Max.	55.5 (2.19)

1-6 Special tools



Key	Part Number	Description	Used for:
1	897801-33330	Tachometer PET-1000	Measuring engine speed
2	895612-79920	L-hex wrench (3 mm)	Removing and installing hex. socket bolts (M4)
3	895610-79920	L-hex wrench (4 mm)	Removing and installing hex. socket bolts (M5)
4	897501-03938	Puller	Removing flywheel
5	897537-12930	Piston stopper	Locking crankshaft rotation
6	897563-19830	Metering lever gauge	Measuring metering lever height on carburettor
7	897603-23030	PTO shaft puller	Removing driven (PTO) shaft
8	897701-06030	Bearing wedge	Removing ball bearings on crankshaft
9	897701-14732	Bearing tool	Removing and installing crankcase ball bearings
10	897702-30131	Piston pin tool	Removing and installing piston pin (Use 8 mm dia. adapter.)
11	897712-04630	2-pin wrench	Removing and installing pawl carrier
12	897714-24330	Oil seal tool	Installing crankcase oil seals
13	897726-09130	Oil seal tool	Removing clutch drum and installing clutch drum ball bearing
14	897719-02830	Piston holder	Making piston steady to remove and install piston and rings
15	897800-79931	Spark tester	Checking ignition system
16	897803-30132	Pressure tester	Checking carburettor and crankcase leakages
17	897826-16131	Pressure rubber plug	Plugging intake port to test crankcase and cylinder leakages
18	897827-16131	Pressure plate	Plugging intake port to test crankcase and cylinder leakages
19	897835-16131	Pressure connector	Checking crankcase and cylinder leakages
20	900600-00012	Washer	Installing drive gear
21	91007	Compression gauge	Measuring cylinder compression
22	91020	2 way limiter cap tool	Removing and installing plug

2 EMISSION ADJUSTMENT GUIDE

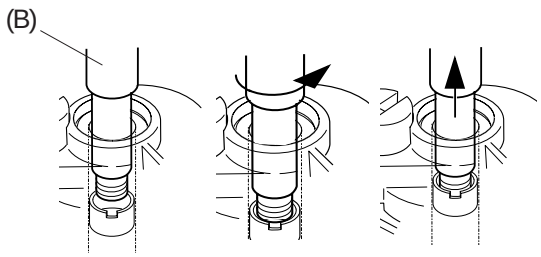
2-1 General adjusting rules

Before starting the unit for adjustment, check the following items.

1. The correct spark plug must be clean and properly gapped.
2. The air filter element must be clean and properly installed.
3. The muffler exhaust port must be clear of carbon.
4. The fuel lines, tank vent and fuel filter are in good condition and clear of debris.
5. The fuel is fresh (> 89 octane : RON) and properly mixed at 50 : 1 with “ISO L-EGD” 2 stroke oil.
6. Two line nylon line head with properly cut lines must be installed for proper engine loading.

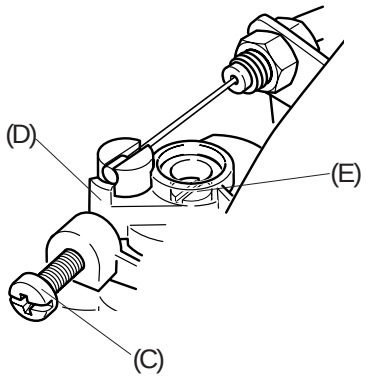
2-2 Presetting idle adjust screw and idle mixture needle

1. Remove the plug from idle mixture needle hole (A) using 2 way limiter cap tool(B) (91020) as shown.



NOTE : When plug is damaged and left in the hole, use needle or pin-shaped object to scrape.

2. Turn idle adjust screw (C) anticlockwise until its tip just touches throttle plate (D). Then turn it in clockwise 2 1/2 turns.



3. Turn idle mixture needle (E) anticlockwise to fully come out until clicking sound is heard. Then turn it clockwise 13 1/2 turns.

2-3 Adjusting carburettor

1. Start engine and warm it up well for about 3 - 5 minutes with cycle of 50 seconds WOT (Wide Open Throttle) and 10 seconds at idling.

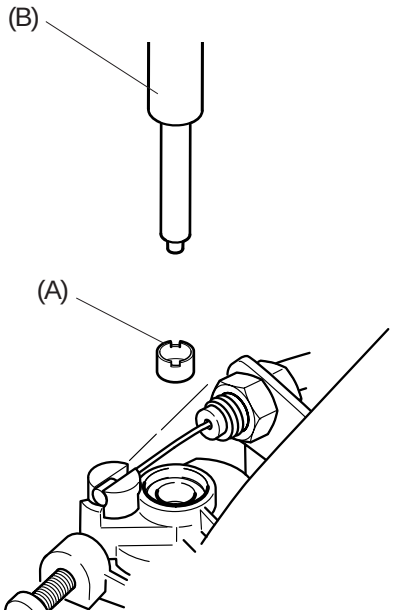
2. Adjust idle mixture needle and obtain maximum idle speed with 2.5 mm blade screw driver.

3. Set idle speed 3,500 r/min by turning idle adjust screw.

4. Turn idle mixture needle anticlockwise to reduce idle speed 800 r/min to set idle speed 2,700 r/min.

NOTE : Engine speed must be allowed to stabilize a minimum of 20 seconds after each adjustment of idle mixture needle to assure accurate tachometer readings.

5. Check WOT engine speed. WOT engine speed should be more than 8,500 r/min.



6. After adjusting carburettor, insert and secure plug (A) deep in the needle hole per the directive. 2 way limiter cap tool (B) is useful to insert the plug.

7. Start engine again and make it sure engine runs in the range of 2,400 to 3,000 r/min at idling and the range of 8,500 to 10,000 r/min at WOT. Also make it sure cutting device would not turn at engine idle speed and suitable acceleration.