



# SERVICE DATA

## TRIMMER/BRUSHCUTTER SRM-3805 SRM-4605

### 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.

For further information to service these models, please refer to ECHO SERVICE MANUAL Ord. No. 402-21.

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Reference No. **10-37A-00**

**ISSUED: 199807**



**KIORITZ CORPORATION**

## 1 SERVICE INFORMATION

## 1-1 Specifications

Model		SRM-3805 (L)	SRM-3805 (U)	SRM-4605(L)	SRM-4605(U)	
Dimensions	Length*	mm(in)	1820 (71.7)	1820 (71.7)	1820 (71.7)	1820 (71.7)
	Width	mm(in)	360 (14.2)	720 (28.3)	360 (14.2)	720 (28.3)
	Height	mm(in)	350 (13.8)	455 (17.9)	350 (13.8)	455 (17.9)
Dry weight**		kg(lb)	8.1 (17.9)	8.7 (19.2)	8.1 (17.9)	8.7 (19.2)
Engine	Type	KIORITZ, air-cooled, two-stroke, single cylinder				
	Rotation	Counterclockwise as viewed from the output end				
	Displacement	cm <sup>3</sup> (in <sup>3</sup> )	37.4 (2.284)		45.7 (2.790)	
	Bore	mm(in)	38.0 (1.496)		42.0 (1.654)	
	Stroke	mm(in)	33.0 (1.299)		33.0 (1.299)	
	Compression ratio		6.3		6.6	
Carburetor	Type	Diaphragm, horizontal-draught with primer		without primer		
	Model	WALBRO WT-297		WALBRO WT-120B		
	Venturi size-Throttle bore	mm(in)	11.11 - 15.85 (0.437 - 0.624)		12.7 - 15.85 (1/2 - 0.624)	
Ignition	Type	Capacitor discharge ignition system in a single integrated piece				
	Spark plug	Champion RCJ-7Y				
Starter	Type	Automatic rewind				
	Rope diameter x length	mm(in)	3.8 x 950 (0.15 x 37.4)			
Fuel	Type	Premixed two-stroke fuel (Refer to Operator's manual.)				
	Tank capacity	cm <sup>3</sup> (U.S.fl.oz.)	950 (32.1)			
Clutch	Type	Centrifugal, 2-shoe pivot				
Handle	Type	Front	Crescent loop	U-shaped	Crescent loop	U-shaped
		Rear	Integrated control grip	---	Integrated control grip	---
Drive shaft	Type	Solid				
	Diameter - Length	mm(in)	8 - 1590 (0.31 - 62.6)			
	Housing (Main pipe)	OD - ID mm(in)	28 - 24.0 (1.10 - 0.94)			
		Length mm(in)	1530 (60.2)			
Gear case	Reduction ratio	1.33				
	Gear tooth	Spiral bevel gear				
	Lubrication	Lithium based grease				
Cutter	Type	Nylon line cutter, 8-tooth blade***, 80-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	Counterclockwise as viewed from top				

OD: Outer diameter.

ID: Inner diameter.

\*Without shoulder harness and cutter head.

\*\*With standard cutter head.

\*\*\*Install and use U-shaped handle when operating with steel blade.



## 1-3 Torque limits

Descriptions		Size	kgf•cm	in•lbf
Starter system	Pawl carrier	M 8	80 - 100	70 - 85
	Pawl carrier nut	M 8	160 - 200	140 - 175
	Starter center post	M 5 *	25 - 35	22 - 30
	Starter case	M 4	35 - 50	30 - 45
Ignition system	Magneto rotor (Flywheel)	M10	350 - 400	300 - 350
	Ignition coil (CDI module)	M 5	30 - 50	26 - 45
	Fan cover	M 5	70 - 110	60 - 95
	Spark plug	M14	130 - 170	110 - 150
Fuel system	Carburetor insulator	M 5	40 - 55	35 - 50
	Carburetor (SRM-3805)	M 5	30 - 45	25 - 40
	(SRM-4605)	M 5	35 - 45	30 - 40
	Throttle cable nut	M 6	25 - 35	22 - 30
	Fuel tank bracket , Stand	M 5	30 - 45	26 - 40
Clutch	Clutch shoe	M 8 *	160 - 200	140 - 175
	Clutch drum case	M 5	70 - 100	60 - 95
Engine	Crankcase	M 5	70 - 110	60 - 95
	Cylinder	M 5	70 - 110	60 - 95
	Cylinder cover	M 5	30 - 45	26 - 40
	Top guard	M 5	30 - 45	26 - 40
	Muffler	M 5	60 - 100	52 - 85
	Muffler bracket	M 5	30 - 45	25 - 40
	Muffler cover (with starter case)	M 4	14 - 28	12 - 24
Others	Blade fastening nut	LM10	280 - 320	245 - 280
Regular bolt, nut, and screw		M 3	6 - 10	5 - 9
		M 4	15 - 25	13 - 22
		M 5	25 - 45	22 - 40
		M 6	45 - 75	40 - 65
		M 8	110 - 150	95 - 130
		M10	210 - 300	180 - 270

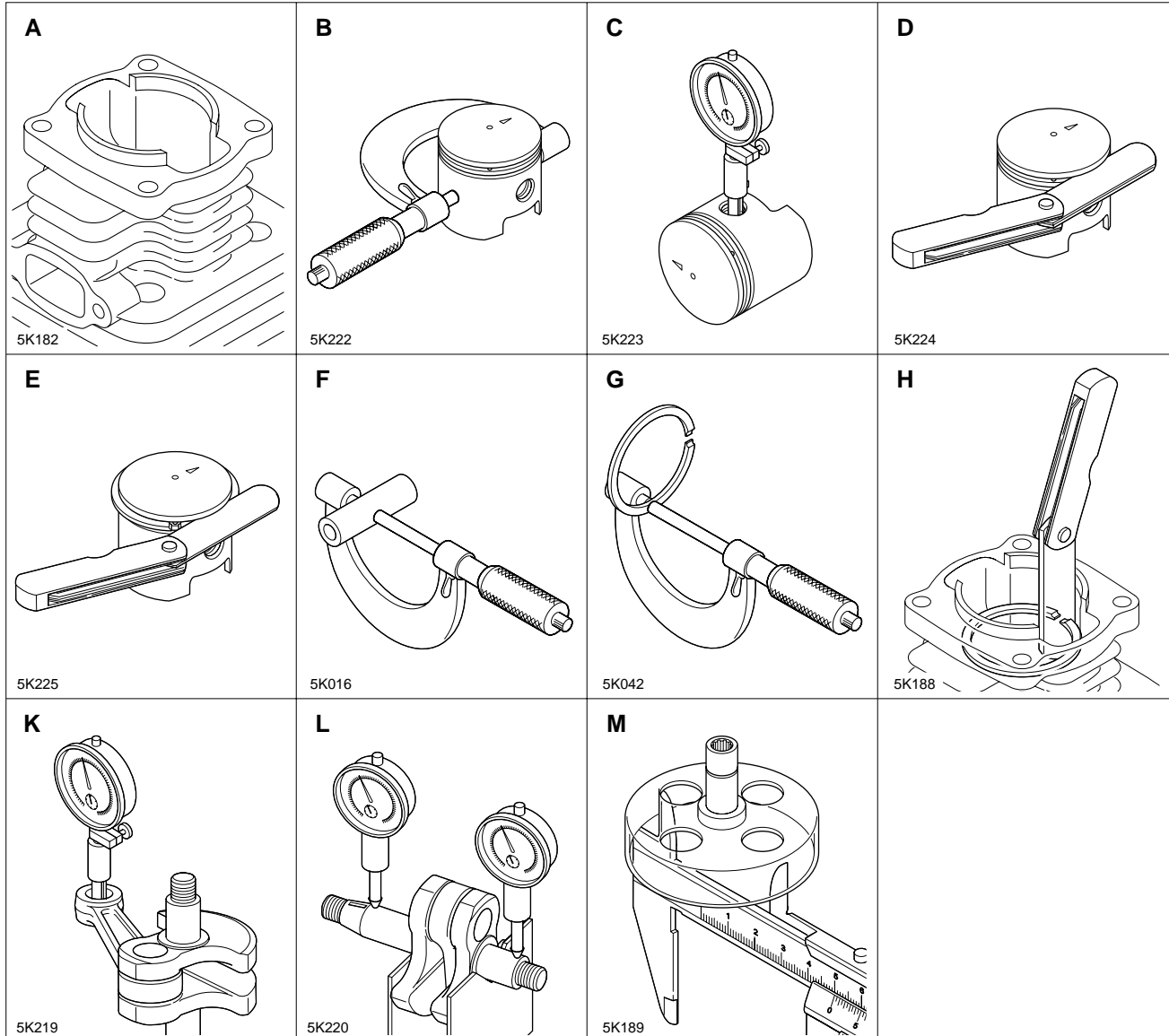
LM: Left-hand thread.

\* Apply thread locking sealant. (See below.)

## 1-4 Special repairing materials

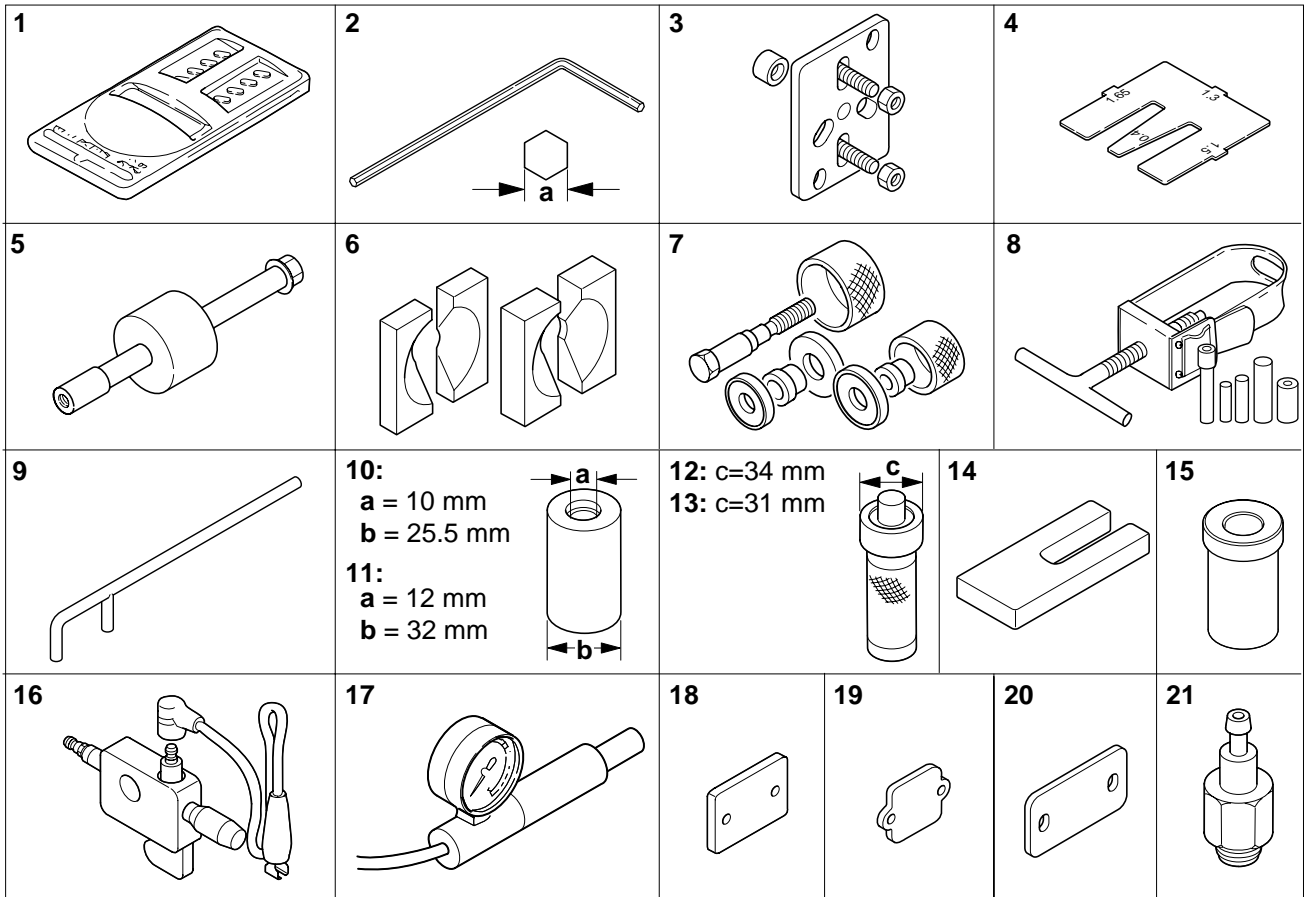
Material	Location	Remarks
Grease	Gear case	Lithium based grease
	Rewind spring	
	Starter center post	
Thread locking sealant	Starter center post screw	Loctite #222, ThreeBond #1342, or equivalent
	Clutch shoe	

1-5 Service limits



			mm(in)	
Description			SRM-3805	SRM-4605
A	Cylinder bore		When plating is worn and aluminum can be seen	
B	Piston outer diameter	Min.	37.90 (1.492)	41.90 (1.65)
C	Piston pin bore	Max.	10.025 (0.3947)	10.025 (0.3947)
D	Piston ring groove	Max.	1.3 (0.051)	1.3 (0.051)
E	Piston ring side clearance	1st Max.	0.15 (0.006)	0.15 (0.006)
		2nd Max.	0.1 (0.004)	0.1 (0.004)
F	Piston pin outer diameter	Min.	9.98 (0.3929)	9.98 (0.3929)
G	Piston ring width	Min.	1.15 (0.045)	1.15 (0.045)
H	Piston ring end gap	Max.	0.5 (0.02)	0.5 (0.02)
K	Connecting rod small end bore	Max.	14.025 (0.5522)	14.025 (0.5522)
L	Crankshaft runout	Max.	0.05 (0.002)	0.05 (0.002)
M	Clutch drum bore	Max.	79.0 (3.11)	79.0 (3.11)

## 1-6 Special tools



Key	Part Number	Description	Used for:
1		Tachometer	Measuring engine speed to adjust carburetor
2	895610-79920	L-hex. wrench(4 mm)	Removing and installing hex. socket bolt (M5)
3	897563-19830	Metering lever gauge	Measuring metering lever height on carburetor
4	897501-03938	Puller	Removing flywheel
5	897603-23030	PTO shaft puller	Removing PTO shaft
6	897701-06030	Bearing wedge	Removing ball bearings remaining on crankshaft
7	897701-14732	Bearing tool	Removing and installing crankcase / clutch drum bearing
8	897702-30131	Piston pin tool	Removing and installing piston pin (Use 8 mm dia. adapter)
9	897712-04630	2-pin wrench	Removing and installing pawl carrier
10	897714-22830	Oil seal tool	Installing drive gear assembly into gear case
11	897714-24330	Oil seal tool	Installing drive gear ball bearings Installing PTO shaft ball bearing Installing crankcase oil seal (starter side)
12	897718-02830	Bearing tool	Installing crankcase ball bearings (clutch side)
13	897718-03930	Bearing tool	Installing crankcase ball bearings (starter side)
14	897719-02830	Piston holder	Making piston steady to remove and install piston and rings
15	897726-16130	Oil seal tool	Installing crankcase oil seal (clutch side)
16	897800-79931	Spark tester	Checking ignition system
17	897803-30130	Pressure tester	Testing carburetor and crankcase leakages
18	897826-16131	Pressure plug	Plugging intake port to test crankcase and cylinder leakages
19	897827-16131	Pressure plate	Plugging intake port to test crankcase and cylinder leakages
20	897831-16131	Pressure plug	Plugging exhaust port to test crankcase and cylinder leakages
21	897835-16131	Pressure connector	Testing crankcase and cylinder leakages

2 SERVICE HINT

2-1 Gear case construction

