



SERVICE DATA

DUSTER/MIST BLOWER

ECHO: MB-5810

(Serial number : 38000001 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 and directions in this SERVICE DATA are based on the latest product information available at the time of publication.

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Reference No. **20-58D-00**
ISSUED : 201908



1 SERVICE INFORMATION

1-1 Specifications

Dimensions*	Length	mm (in)	394 (15.5)
	Width	mm (in)	444 (17.5) <12L>
			479 (18.9) <20L>
Height	mm (in)	680 (26.8) <12L>	
		744 (29.3) <20L>	
Dry weight**	kg (lb)	12.7 (28.0) <12L>	
		13.1 (28.9) <20L>	
Engine	Type	YAMABIKO, air-cooled, two-stroke, single cylinder	
	Rotation	Counterclockwise as viewed from the output end	
	Displacement	cm ³ (in ³)	58.2 (3.551)
	Bore	mm (in)	46.0 (1.811)
	Stroke	mm (in)	35.0 (1.378)
	Compression ratio	6.4	
Carburetor	Type	Diaphragm, horizontal-draft, with purge bulb	
	Model	Walbro WYK-377	
	Venturi size-Throttle bore	mm (in)	13.5 - 15.0 (0.531 - 0.591)
Ignition	Type	CDI (Capacitor discharge ignition) system, Digital magneto	
	Spark plug	NGK BPMR8Y	
Exhaust	Muffler type	Spark arrester muffler with catalyst	
Starter	Type	Automatic rewind	
	Rope diameter x length	mm (in)	3.8 x 1,400 (0.15 x 55.1)
Fuel* ¹	Type* ²	Mixed two-stroke fuel	
	Mixture ratio	50 : 1 (2 %)	
	Gasoline	Minimum 89 octane petrol	
	Two-stroke air cooled engine oil	ISO-L-EGD (ISO/CD13738), JASO FC/FD	
	Tank capacity	L (U.S.fl.oz.)	Full tank capacity: 2.00 (67.6) Usable capacity: 1.97 (66.6)
Chemical tank capacity	L (Imp.gal.)	Full tank capacity: 14.1 (3.1) <12L> / 24.3 (5.3) <20L> Usable capacity: 12 (2.6) <12L> / 20 (4.4) <20L>	
Blower	Fan type	Centrifugal, single stage	
	Max. air volume (with pipes)	m ³ /min (cfm)	11.1 (392)
	Max. air velocity (with pipes)	m/s (mph)	96.3 (215)
	Discharge ID* ³	mm (in)	55 (2.17)
Misting maximum discharge	liter/min (gal/min)	5.2 (1.37)	

*Without blower pipes **With blower pipes

*¹ Refer to Operator's manual

*² Premixed alkylate fuel for 2-stroke can be used.

*³ Inner diameter

1-2 Technical data

Engine			
Compression pressure	MPa (kgf/cm ²) (psi)	0.79 (8.1) (115)	
Ignition system			
Spark plug gap	mm(in)	0.6 - 0.7 (0.024 - 0.028)	
Spark test	Tester gap w/ spark plug	mm(in)	4.0 (0.16)
	Tester gap w/o spark plug	mm(in)	6.0 (0.24)
Secondary coil resistance	kΩ	1.2 - 1.6	
Pole shoe air gaps	mm(in)	0.3 - 0.4 (0.012 - 0.016)	
Ignition timing	at 3,000 r/min	°BTDC	32
	at 7,000 r/min	°BTDC	28
Carburetor			
Test Pressure, minimum	MPa (kgf/cm ²) (psi)	0.05 (0.5) (7.0)	
Metering lever height	mm(in)	1.5 (0.06) lower than diaphragm seat	
Limiting cap / plug		Limiting plug P/N A259-000000	
Tool to adjust mixture needles		2.5 mm Screwdriver P/N X603-000050 (Carb. adjustment tool P/N Y089-000095)	
Carburetor adjustment			
1) Initial setting			
H mixture needle	turn out	3 1/2	
L mixture needle	turn out	6 3/4	
Throttle adjust screw	turn out* ¹	10 1/8	
Engine warm-up	Idle - WOT : Total	sec.	10 - 180 : 190
2) Find idle maximum speed			Adjust L mixture needle to maximum idle speed
3) Set idle maximum speed w/ TAS		r/min	3,200
4) Set idle speed by turning L mixture needle CCW		r/min	2,600
5) Find WOT maximum speed			Adjust H mixture needle to maximum WOT speed
6) WOT setting		r/min	Turn H mixture needle CCW to decrease WOT speed by : 40
7) Verify final engine speed with standard equipment			Idle: 2,300 - 2,900 WOT: 7,800<

BTDC: Before top dead center **WOT:** Wide open throttle **CCW:** Counterclockwise **TAS:** Throttle adjust screw

*¹ Turn TAS clockwise until its head touches boss. Then turn TAS counterclockwise.

1-3 Torque limits

Descriptions		Size	kgf•cm	N•m	in•lbf
Starter system	Starter pulley	M10	130 - 180	13 - 18	110 - 157
	Starter case	M4	15 - 25	1.5 - 2.5	13 - 22
Ignition system	Magneto rotor (Flywheel)	M10	245 - 350	24.5 - 35	213 - 305
	Ignition coil	M5	25 - 45	2.5 - 4.5	22 - 40
	Spark plug	M14	130 - 170	13 - 17	110 - 150
Fuel system	Carburetor	M5	25 - 45	2.5 - 4.5	22 - 40
	Intake insulator	M5	50 - 70	5 - 7	45 - 60
	Fuel tank with Band	M5*	30 - 40	3 - 4	26 - 35
Engine	Crankcase	M5	70 - 110	7 - 11	60 - 95
	Cylinder	M5	70 - 110	7 - 11	60 - 95
	Cylinder cover	M5	25 - 45	2.5 - 4.5	22 - 40
	Engine mount	M5	50 - 70	5 - 7	45 - 60
	Engine cover	M5	25 - 45	2.5 - 4.5	22 - 40
	Muffler	M6	130 - 170	13 - 17	113 - 150
	Muffler stay	M5	80 - 100	8 - 10	70 - 87
	Dust cover	M5	20 - 40	2 - 4	17 - 35
Others	Fan case	M5 [†]	20 - 40	2 - 4	17 - 35
	Blower fan	M5*	40 - 60	4 - 6	32 - 50
	Blower grid	M5 [†]	20 - 40	2 - 4	17 - 35
	Cushion	M6*	20 - 40	2 - 4	17 - 35
	Backpack harness	M5	15 - 25	1.5 - 2.5	13 - 22
Regular bolt, nut and screw		M3	6 - 10	0.6 - 1	5 - 9
		M4	15 - 25	1.5 - 2.5	13 - 22
		M5	25 - 45	2.5 - 4.5	22 - 40
		M6	45 - 75	4.5 - 7.5	40 - 65
		M8	110 - 150	11 - 15	95 - 130

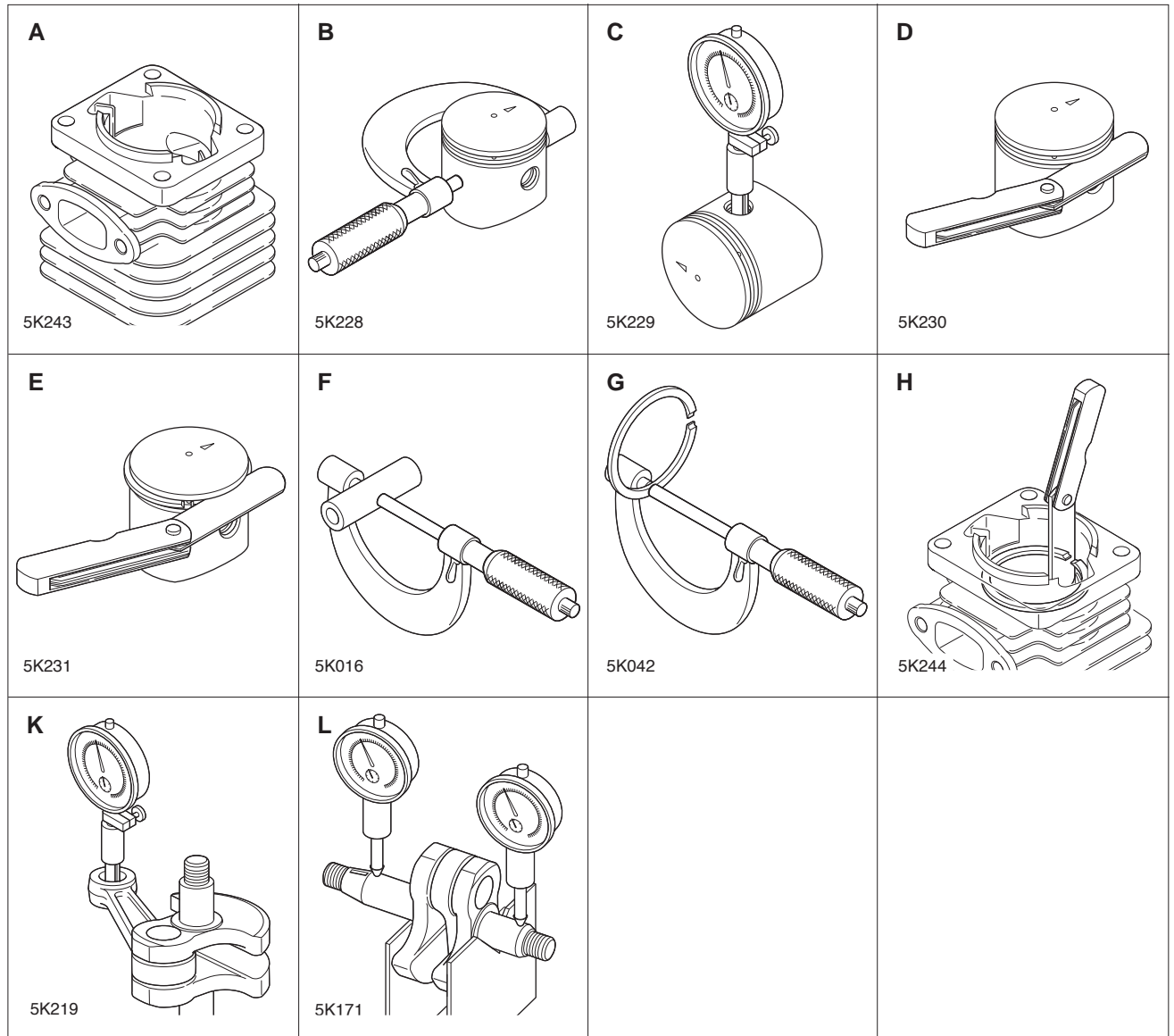
* Apply thread locking sealant (See below).

[†] Tapping screw

1-4 Special repairing materials

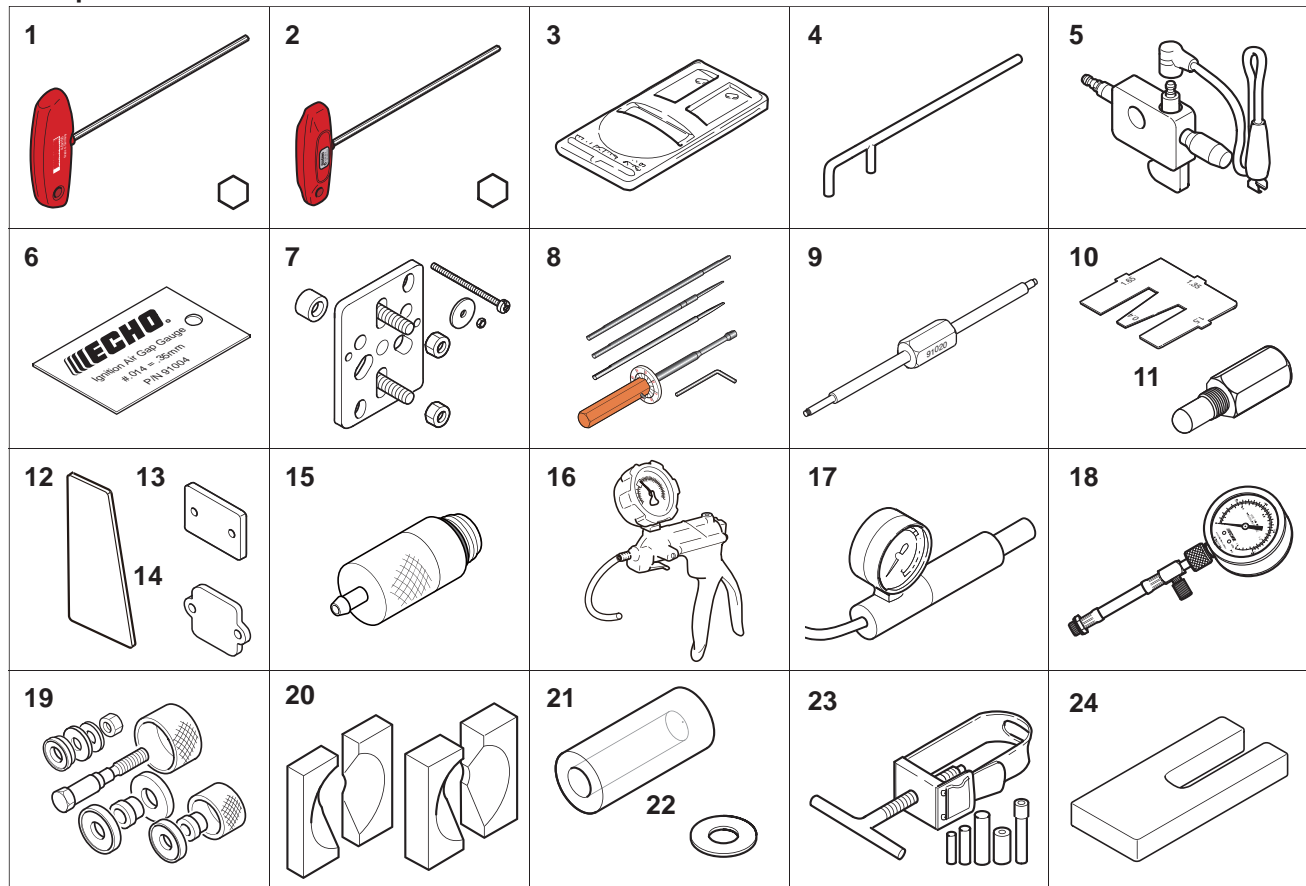
Material	Location	Remarks
Grease	Oil seal inner lips	EPNOC AP2 (Lithium based grease) P/N X695-000060
	Rewind spring	
	Starter center post	
Thread locking sealant	Fuel tank with Band	ThreeBond #1342J or equivalent
	Blower fan	
	Cushion	

1-5 Service limits



Description		mm (in)	
A	Cylinder bore	When plating is worn and aluminum can be seen	
B	Piston outer diameter	Min.	45.90 (1.807)
C	Piston pin bore	Max.	10.025 (0.3947)
D	Piston ring groove	Max.	1.6 (0.063)
E	Piston ring side clearance	Max.	0.15 (0.006)
F	Piston pin outer diameter	Min.	14.97 (0.5894)
G	Piston ring width	Min.	1.45 (0.057)
H	Piston ring end gap	Max.	0.6 (0.02)
K	Con-rod small end bore	Max.	14.025 (0.5522)
L	Crankshaft runout	Max.	0.01 (0.0004)

1-6 Special tools



Key	Part Number	Description	Reference
1	X602-000360	T-hex. wrench 4mm	Removing and installing hex. head bolt (M5)
2	X602-000230	T-hex. wrench 5mm	Removing and installing hex. head bolt (M6)
3	897802-33330	Tachometer PET-1000	Measuring engine speed to adjust carburetor
4	897712-04630	2-pin wrench	Removing and installing pawl carrier
5	897800-79931	Spark tester	Checking ignition system
6	91004	Module air gap gauge	Adjusting pole shoe air gaps
7	Y089-000111	Puller	Removing magneto rotor (flywheel) and crankcase
8	Y089-000095	Carburetor adjustment tool	Adjusting carburetor
9	91020	Limiter plug tool	Removing and installing limiter plug
10	897563-19830	Metering lever gauge	Measuring metering lever height on carburetor
11	X644-000020	Piston stopper	Locking crankshaft rotation
12	91041	Pressure rubber plug	Plugging exhaust port to test crankcase/cylinder leakages
13	897826-16131	Pressure rubber plug	Plugging intake port to test crankcase/cylinder leakages
14	897827-16131	Pressure plate	Plugging intake port to test crankcase/cylinder leakages
15	A131-000150	Pressure connector	Testing crankcase and cylinder leakage
16	91149	Pressure / vacuum tester	Testing crankcase / cylinder leakages
17	897803-30133	Pressure tester	Testing carburetor and crankcase leakage
18	91037	Compression gauge	Measuring cylinder compression
19	897701-14732	Bearing tool	Removing and installing ball bearings on crankcase
20	897701-02830	Bearing wedge	Removing ball bearings on crankshaft
21	897726-16431	Oil seal tool	Installing crankcase oil seal
22	363018-00310	Washer	Installing crankcase oil seal
23	897702-30131	Piston pin tool	Removing and installing piston pin
24	897719-02830	Piston holder	Making piston steady to remove and