



# SERVICE DATA

## POWER BLOWER

### ECHO: PB-580

(Serial number : P45637000001 - P45637999999)

(Serial number : P50238000001 - P50238999999)

(Serial number : P55140000001 - P55140999999)

### shindaiwa: EB600RT

(Serial number : P46537000001 - P46537999999)

(Serial number : P50338000001 - P50338999999)

#### 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.

#### CONTENTS

1 SERVICE INFORMATION.....	2
1-1 Specifications .....	2
1-2 Technical data .....	3
1-3 Torque limits.....	4
1-4 Special repairing materials .....	4
1-5 Service limits.....	5
1-6 Special tools.....	6

Reference No. **21-58G-03**

**REVISED: 202212**

ISSUED: 201605



## 1 SERVICE INFORMATION

## 1-1 Specifications

Dimensions*	Length	mm(in)	379 (14.9)
	Width	mm(in)	478 (18.8)
	Height	mm(in)	459 (18.1)
Dry weight**		kg(lb)	10.3 (22.7)
Engine	Type	YAMABIKO, air-cooled, 2-stroke, single cylinder	
	Rotation	Counterclockwise as viewed from the output end	
	Displacement	cm <sup>3</sup> (in <sup>3</sup> )	58.2 (3.551)
	Bore	mm(in)	46.0 (1.811)
	Stroke	mm(in)	35.0 (1.378)
	Compression ratio	6.9	
Carburetor	Type	Diaphragm, horizontal-draft with purge bulb	
	Model	Walbro WTA-35	
	Venturi size-Throttle bore	mm(in)	11.11 - 15.85 (0.437 - 0.624)
Ignition	Type	CDI (Capacitor discharge ignition) system	
	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 1,000 (0.15 x 45.3)
Fuel* <sup>1</sup>	Type* <sup>2</sup>	Mixed two-stroke fuel	
	Mixture ratio	50 : 1 (2 %)	
	Gasoline	Minimum 89 octane unleaded	
	Two-stroke air cooled engine oil	ISO-L-EGD (ISO/CD13738), JASO FC/FD	
	Tank capacity	Full tank capacity: 1.84 (62.2) Usable capacity: 1.75 (59.2)	
		L (U.S.fl.oz.)	
Throttle	Type	Tube-mounted with throttle setting device	
Blower	Fan type	Centrifugal	
	Max. air volume (with pipes)	m <sup>3</sup> /h ( ft <sup>3</sup> /h)	882 (31148)
	Max. air velocity (with pipes)	m/s (mph)	96.4 (216)
	Discharge Inner diameter	mm(in)	62 (2.44)

\* Without blower pipes    \*\* With blower pipes

\*<sup>1</sup> Refer to Operator's manual.    \*<sup>2</sup> Premixed alkylate fuel for 2-stroke can be used

**1-2 Technical data**

Engine			
Compression pressure	MPa (kgf/cm <sup>2</sup> ) (psi)		0.97 (9.8) (140)
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	MΩ		2.55 - 2.95
Pole shoe air gaps	mm (in)		0.3 - 0.4 (0.012 - 0.016)
Ignition timing	at 3,000 r/min	°BTDC	29
	at 7,000 r/min	°BTDC	29
Carburetor			
Test Pressure, minimum	MPa (kgf/cm <sup>2</sup> ) (psi)		0.05 (0.5) (7.0)
Metering lever height	mm(in)		1.65 (0.06) lower than diaphragm seat
Tool to adjust mixture needles			Screwdriver 2.5 mm P/N X603-000050 D-shaped tool (S) P/N X645-000022 (Carb. adjustment tool P/N Y089-000094)
Carburetor adjustment			
1) Initial setting			
H mixture needle	turn out		2 3/4
L mixture needle	turn out		3
Throttle adjust screw	turn in* <sup>1</sup>		3 7/8
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	2,700
5) Find WOT maximum speed			Adjust H mixture needle to maximum WOT speed
6) WOT setting		r/min	Turn H mixture needle CCW to reduce WOT speed by: 20-40
7) Verify final engine speed with standard equipment			Idle: 2,500 - 2,900
		r/min	WOT: 6,500 - 6,800

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

\*<sup>1</sup> Set Throttle adjust screw to the point that its tip just contacts throttle plate before initial setting.

## 1-3 Torque limits

Descriptions		Size	kgf•cm	N•m	in•lbf
Starter system	Starter pulley	M8	80 - 100	8 - 10	70 - 90
	Starter case	M5*	40 - 60	4 - 6	35 - 50
Ignition system	Ignition coil	M4	40 - 60	4 - 6	35 - 50
	Flywheel	M10	200 - 240	20 - 24	175 - 210
	Spark plug	M14	130 - 170	13 - 17	113 - 150
Fuel system	Carburetor	M5	30 - 45	3 - 4.5	25 - 40
	Intake insulator	M5*	50 - 70	5 - 7	45 - 60
	Fuel tank	M5*	20 - 40	2 - 4	18 - 35
Engine	Crankcase	M5**	70 - 110	7 - 11	60 - 95
	Cylinder	M5**	70 - 110	7 - 11	60 - 95
	Dust cover	M5*	20 - 40	2 - 4	18 - 35
	Engine mount	M5*	50 - 70	5 - 7	45 - 60
	Engine plate	M3	10 - 20	1 - 2	9 - 18
	Engine cover	M5	30 - 40	3 - 4	25 - 35
	Muffler	M5	80 - 100	8 - 10	70 - 90
		M6	120 - 170	12 - 17	105 - 150
Cushion	M5*	50 - 70	5 - 7	45 - 60	
Others	Outer fancase	M5*	35 - 45	3.5 - 4.5	30 - 40
	Fan	M5*	70 - 100	7 - 10	60 - 90
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	

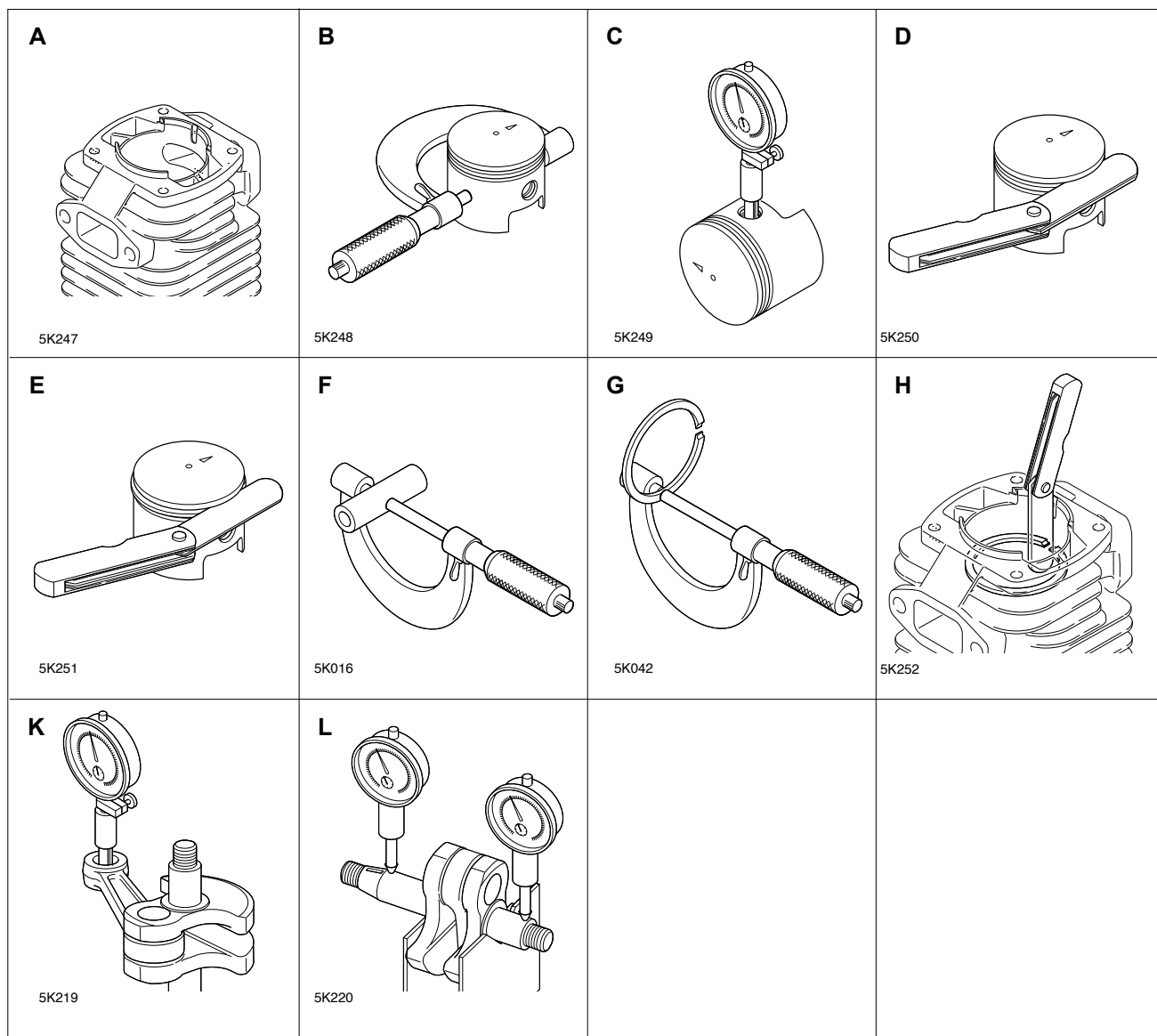
\* Apply thread locking sealant (See below)

\*\* The torque differences among four bolts should not exceed 20 kgf•cm (2N•m, 17in•lbf) on one cylinder or crank-case.

## 1-4 Special repairing materials

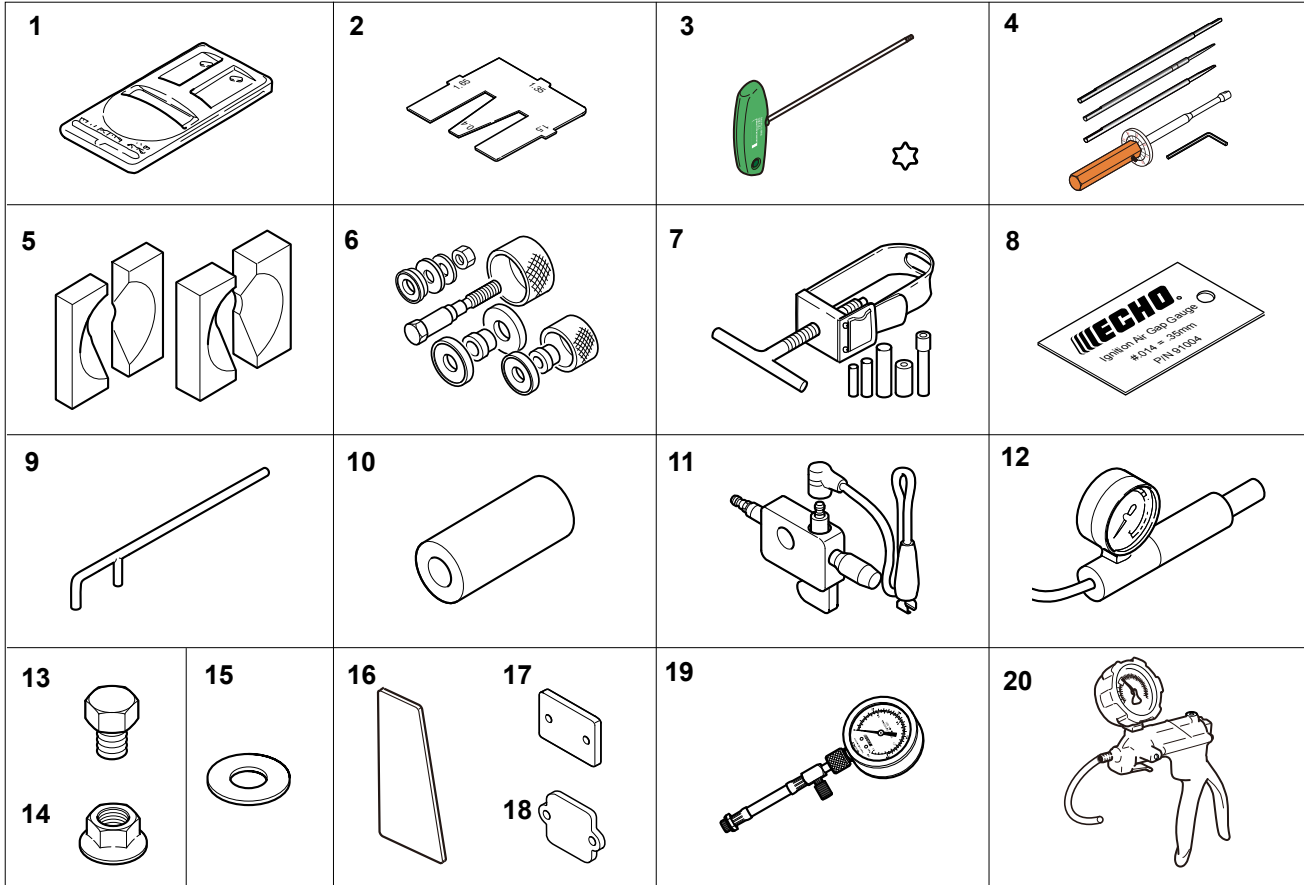
Material	Location	Remarks
Grease	Rewind spring	EPNOC AP2 (Lithium based grease) P/N X695-000060
	Starter center post	
Thread locking sealant	Starter case	Loctite #222, ThreeBond #1342 or equivalent
	Fuel tank	
	Intake insulator	
	Outer fancase	
	Cushion	
	Fan	
	Engine mount	
Dust cover		

1-5 Service limits



Description		mm (in)
A	Cylinder bore	When plating is worn and aluminium can be seen
B	Piston outer diameter	Min. 45.90 (1.807)
C	Piston pin bore	Max. 10.035 (0.3951)
D	Piston ring groove	1 st Max. 1.3 (0.051)
		2 st Max. 1.3 (0.051)
E	Piston ring side clearance	Max. 0.15 (0.006)
F	Piston pin outer diameter	Min. 9.98 (0.3929)
G	Piston ring width	Min. 1.15 (0.045)
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. 0.02 (0.001)

### 1-6 Special tools



Key	Part Number	Description	Reference
1	897802-33330	Tachometer PET-1000R	Measuring engine speed to adjust Carburetor
2	897563-19830	Metering lever gauge	Measuring metering lever height on Carburetor
3	X602-000340	Torx wrench (T27)	Removing and installing bolt
4	Y089-000094	Carburetor adjustment tool	Adjusting Carburetor
5	897701-02830	Bearing wedge	Removing ball bearings on crankshaft
6	897701-14732	Bearing tool	Removing and installing ball bearings on crankcase
7	897702-30131	Piston pin tool	Removing and installing piston pin
8	91004	Module air gap gauge	Adjusting pole shoe air gaps
9	897712-04630	2-pin wrench	Removing and installing pawl carrier
10	897726-16431	Oil seal tool	Installing crankcase oil seals
11	897800-79931	Spark tester	Checking ignition system
12	897803-30133	Pressure tester	Checking Carburetor and crankcase leakages
13	900100-08008	Bolt	Removing magneto rotor (flywheel)
14	V265-000200	Flange nut	Removing magneto rotor (flywheel)
15	363018-00310	Washer	Installing crankcase oil seal (starter side)
16	91041	Pressure rubber plug	Plugging exhaust port to test crankcase / cylinder leakages
17	897826-16131	Pressure rubber plug	Plugging intake port to test crankcase / cylinder leakages
18	897827-16131	Pressure plate	Plugging intake port to test crankcase / cylinder leakages
19	91037	Compression gauge	Measuring cylinder compression
20	91149	Pressure / vacuum tester	Testing crankcase / cylinder leakages