

Specifications

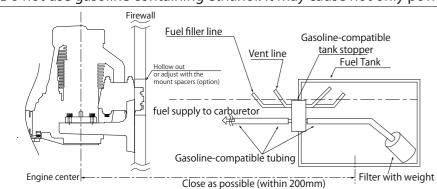
Φ40.0mm Main body : 1,260g / Μυ 19"x10"~ 21"x8"	Stroke uffler : 90g / Igi		Disp. RPM Range	40.2cc		Application		4-stroke glo	ow 200 class	
, ,	uffler : 90g / Ig	nition : 100g	RPM Range	4 000 0 0						
10"v10"-, 21"v0"		_	in winarige	Approx. 1,800-8, 0)00rpm	Max on gro	und	Approx. 6,5	500-7,500rpm	
19 810 ~ 21 80	Plug	CM-6	Battery for ignition	on system	Voltage	ge:6-12V, greater than 1,000mA (2-3S Li-Po or 5S NiMH)				
Engine mount setHexagonal wrenchAnti-loosening nutIgnition system(w/se	1set 1set 1pc nsor) 1set	SpannerCarburet	for tappet adjusti or adjustment ba	ng lock nut		1pc	 Muff 	ler set	1pc 1set 1pc	
					5]	Mount spacer [G40-169]Digital tachometer [G17-167]				
	Engine mount set Hexagonal wrench Anti-loosening nut Ignition system(w/se Filter with weight [G	Engine mount set 1set Hexagonal wrench 1set Anti-loosening nut 1pc	Engine mount set 1set	Engine mount set 1set Hexagonal wrench 1set Spanner for tappet adjusting Carburetor adjustment bares Ignition system(w/sensor) 1set Filter with weight [G36-154] Limit gauge (0.1t) for tappet solution tappet adjusting Carburetor adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube for Gasoline Carburetor Adjustment bares Spark plug[CM-6](Attached Durable tube fo	Engine mount set Hexagonal wrench Anti-loosening nut Ignition system(w/sensor) Filter with weight [G36-154] 1set Limit gauge (0.1t) for tappet adjustment Spanner for tappet adjusting lock nut Carburetor adjustment bar Spark plug[CM-6](Attached to the engine) Durable tube for Gasoline (1m) [G36-15.	Engine mount set Hexagonal wrench Anti-loosening nut Ignition system(w/sensor) Filter with weight [G36-154] Limit gauge (0.1t) for tappet adjustment Spanner for tappet adjusting lock nut Carburetor adjustment bar Spark plug[CM-6](Attached to the engine) Durable tube for Gasoline (1m) [G36-155]	Engine mount set 1set Hexagonal wrench 1set Anti-loosening nut 1pc Ignition system(w/sensor) 1set Filter with weight [G36-154] Limit gauge (0.1t) for tappet adjustment 1pc Spanner for tappet adjusting lock nut 1pc Carburetor adjustment bar 1pc Spark plug[CM-6](Attached to the engine) 1pc Durable tube for Gasoline (1m) [G36-155] Mount s	Engine mount set 1set Limit gauge (0.1t) for tappet adjustment 1pc · Plug Hexagonal wrench 1set · Spanner for tappet adjusting lock nut 1pc · Muff · Carburetor adjustment bar 1pc · Chole Ignition system(w/sensor) 1set · Spark plug[CM-6](Attached to the engine) · Prilter with weight [G36-154] · Durable tube for Gasoline (1m) [G36-155] · Mount spacer	Engine mount set 1set - Limit gauge (0.1t) for tappet adjustment - Spanner for tappet adjusting lock nut - Spanner for tappet adjusting lock nut - Spanner for tappet adjusting lock nut - Carburetor adjustment bar - Spark plug[CM-6](Attached to the engine) - Filter with weight [G36-154] - Limit gauge (0.1t) for tappet adjustment - Spanner for tappet adjustment - Carburetor adjustment bar - Spark plug[CM-6](Attached to the engine) - Durable tube for Gasoline (1m) [G36-155] - Mount spacer [G40-169]	

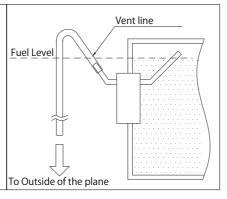
1. Fuel

●The fuel is mixture of regular gasoline and high-quality 2-stroke engine oil.

FG-40 Instruction Manual

- [Example of oil recommendation]
- Klotz KL-200 Original Techniplate
- Deluxe Materials PowerModel 2T-S etc.
- lacktriangle Be sure to use the mixture "gasoline: oil =15~20: 1" by volume ratio. (Ex. 1000ml of gasoline should be mixed with more than 50ml of oil).
- ●During the break in process, use 15:1 mixed fuel to ensure the best lubrication for initial running.
- Any damage caused by the fuel used, in which the oil ratio is lower than 20:1 ratio, is not warranted.
- Do not use gasoline containing ethanol. It may cause not only power loss but also corrosion inside the engine.



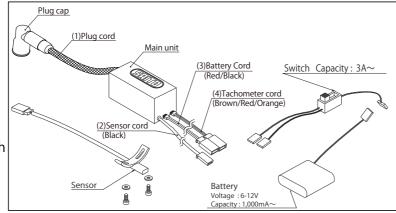


2. Ignition

- Ignition arrangement- Place the main unit as far from other electrical devices as possible.
- (1) Plug cord (meshed high tension cord)
- Insert the plug cap of the plug cord deeply into the plug attached to the cylinder to make sure it will not come off. (2) Sensor cord
- Connect with the cord from the sensor attached to the engine.
- (3) Battery cord (black / red cord)
- Use a fully charged battery that has adequate spec. (6-12V. more than 1000mA is recommended). Between the battery and main unit, make sure to set a heavy duty switch whose capacity is higher than 3A.
- (4)Tachometer cord
- Connect the digital tachometer (Option). Otherwise the connector is normally vacant.

3. Method of choke (No need when you use starter)

- ●In advance, make a thin hole on the cowling to insert the choke bar / slow needle adjustment bar.
- ●During choking, be sure to turn off the switch of the ignition system.
- As shown in the fig, pass the choke bar (with M3.5 thread on its tip) through the hole on the cowling. Then turn the bar to insert into the M3.5 internal thread at the center of the throttle lever.
- ●Pull the choke bar and fix it with a clip or clamp with full throttle as shown in the fig so that it may not go back to the previous position.
- Grasp the prop by hand and turn it in the direction of normal operation (CCW) for several times, until the carburetor generates hissing-like sound. After hearing this sound for about 5 times, quickly flick the prop approximately 10 times.
- ●After that, remove the choke bar. After that, power on the ignition system and flick the prop quickly to start the engine. If the engine doesn't start, repeat the choking procedure.



Throttle lever M3.5 thread for Choke bar Choke bar Throttle valve Slow needle Temporary fixed by clip

4. Break-in MOST IMPORTANT!!

- Prop-recommendation: a well balanced Mejzlik 20"x 8" carbon-made prop for break in.
- •Use 15:1 fuel:oil ratio for break in.
- •Never make the fuel mixture lean during break in. It could cause seizure even during idling or running at low-speed.
- Before starting the engine, open the main needle Approx. 3 turns and the slow needle Approx. 5 turns **CCW** each from full close.
- •Start the engine (using a starter is recommended for safety).
- •Run for about 5 seconds at low speed to warm up.
- Open throttle gradually up to full open, in the meantime turn the main needle CCW. Continue to turn the main needle CCW until the RPM declines (to approx 4,000rpm), keeping the throttle fully opened.
- ●If RPM doesn't drop, turn the slow needle CCW to make mixture much richer.
- •Run in this very rich condition for 2 tanks.

5. Needle reference position (Set After Break-in)

- ●Main needle: Approx.2~2.5 turns from fully close
- •Slow needle: Approx.4.5~5 turns from fully close (Then throttle should be fully closed)
- Actually the best condition of the needle varies depending on the prop, temperature, humidity and so on. Please adjust based on the engine performance during flight.

6. Tappet adjustment

The valve clearance should be checked and adjusted after Break-in and every after 2 hours while the engine is cold. Before adjusting tappet gaps, tighten the screws around cylinders etc.

1. Remove the spark plug the cylinder. Then turn the prop CCW by hand to place the piston at TDC of

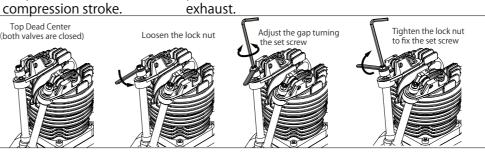
2. Loosen the lock nut and and rocker arm covers from adjust the gap by hexagonal wrench until you get the correct gap (below pic) for both of intake &

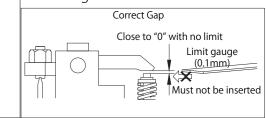
3. Once the gap is set, tighten the lock nut and attach the plug and covers.

Slow needle

4. Turn the prop by hand to check if the compression is enough. If the gap is less than 0, the valve is always opened sightly and lose compression. Then adjust again.

Main needle

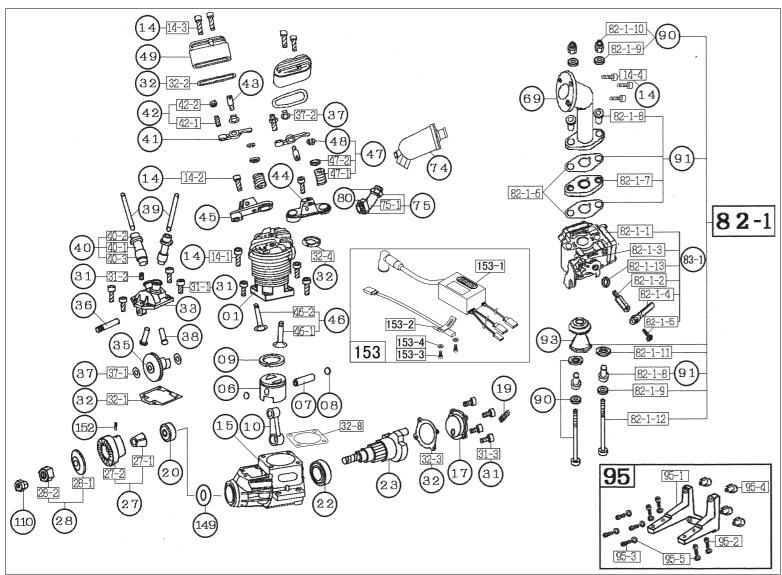


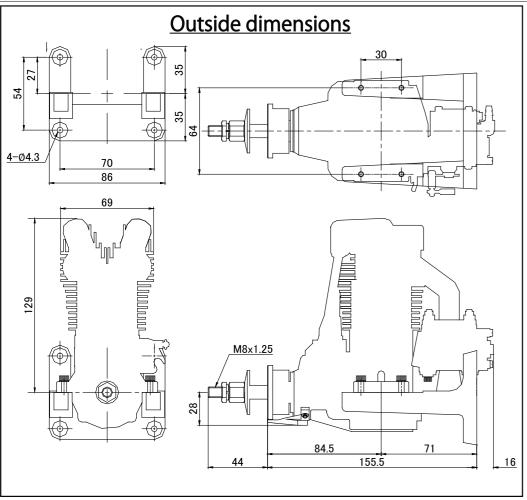


- As the fuel contains oil, the exhaust will produce some residue on the airplane.
- •Use reliable and well balanced prop, otherwise it can cause abnormal vibration and may result in serious accident.
- •During operation, the screws all over the engine can be loosen by heat expansion of metal. Tighten them up
- ●When the exhaust valve gets dull by carbon or sludge especially in cold atmosphere, remove the rocker cover and apply some anti-rust spray to the exhaust valve to help the valve to move smoothly.
- ●All responsibilities for the use of the engine, and other obligations and responsibilities based on laws, regulations, etc. are borne by the purchaser and the user, and SAITO SEISAKUSHO CO., LTD. is exempt from any responsibilities. Warrantv:
- ●If there is any deficiency from the factory concerning manufacture, please consult the shop or distributor you purchased from, so that our company will repair them with responsibility. Any failure or trouble caused by unnecessary disassembly, modification, or other uses than those provided in the instruction manual is not subject to the warranty.

All specifications and models are subject to change without notice.

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FG-40 Parts List

Qty

2ea.

1set

2ea.

1set

1set

1set

1set

1set

1set

FG-40 Parts List										
No.	ltem	Qty	No.	ltem						
01	Cylinder	1		Rocker arm screw & Nut						
06	Piston	1	42	42-1,42-2						
07	Piston pin	1	43	Rocker arm pin						
08	Piston pin retainer	2	44	Rocker arm bracket (left)						
09	Piston ring	1	45	Rocker arm bracket (right)						
10	Connecting rod	1		Valve set (In & Ex)						
14	Cylinder screw set	1 .	46	46-1,-2						
	14-1,-2,-3,-4	1set		Valve spring & Keeper & Retainer						
15	Crankcase	1	47	47-1,-2,48						
17	Rear cover (Back plate)	1	48	Valve retainer						
19	Breather nipple	1	49	Rocker arm cover						
20	Front ball bearing	1	69	Intake manifold (Intake pipe)						
22	Rear ball bearing	1	74	Muffler						
23	Crankshaft	1		Muffler manifold set						
27	Taper collet & Drive flange	1	75 80	75-1,80						
	27-1,-2	1ea.		Muffler nut						
28	Prop washer & Nut	100	82-1	Carburetor complete						
	28-1,-2	1ea.	02.1	Carburetor body assembly						
31	Crankcase screw set	1cot	83-1	82-1-1,-1-2,-1-3,-1-4,-1-5,-1-13						
	31-1,-2,-3	1set		Carburetor screw & spring set						
32	Engine gasket set	1set	90	82-1-9,-1-10,-1-11,-1-12						
	32-1,-2,-3,-4,-8	1361	01	Carburetor gasket set						
33	Cam gear housing	1	91	82-1-6,-1-7,-1-8,						
35	Cam gear	1	93	Intake velocity stack (air funnel)						
36	Cam gear shaft	1	9 5	Engine mount set						
37	Steel washer set	1set	93	95-1,-2,-3,-4,-5						
38	Tappet	1	96	Tool set						
39	Pushrod	1	110	Anti loosening nut						
40	Pushrod cover & Rubber seal	2ea.	149	Oil slinger						
	40-1,-2,-3	Zea.	152	Screw-pin (For drive flange setting)						
41	Rocker arm	1	153	Electronic ignition system						
			133	153-1,-2,-3,-4,-5						