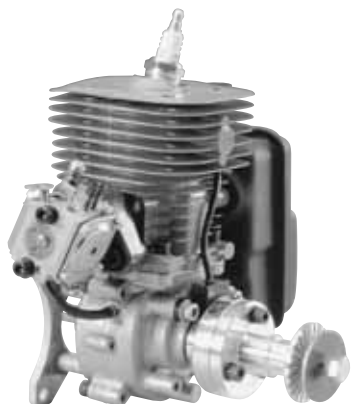


# FUJI ENGINES™

## Operator's Manual for BT-64EIS



### **SPECIFICATIONS**

<b>Displacement:</b>	63.1 cc [3.85ci]
<b>Horsepower:</b>	5.7HP / 9000 rpm
<b>Ignition Style:</b>	Electronic Ignition
<b>RPM:</b>	1200 – 9000 rpm
<b>Fuel:</b>	Mixed Gasoline
<b>Weight:</b>	Approximately 2.3kg w/ Muffler [5lb, 2oz]

**Manufactured by FUJI IMVAC INC.  
YOKOHAMA, 235-0005 JAPAN**  
**Worldwide Distributor (except Japan): Hobbico, Inc.**  
**Champaign, IL 61826 USA**  
[www.fujiengines.com](http://www.fujiengines.com)

### **SAFETY TIPS AND WARNINGS**

- Always use a balanced spinner and a balanced prop. An unbalanced spinner and prop combination will cause high levels of vibration and may cause the propeller shaft to break.
- Always use a lightweight spinner on your engine. Lightweight spinners are considered to be those with a cone wall of 1mm or less. Heavy spinners could cause the propeller shaft to break.
- Securely tighten the spinner and prop on the engine to prevent it from being thrown off the engine while running.
- Never use a prop that has hit the ground. Even though it may look good from the outside, it may be cracked on the inside which may cause it to disintegrate while in use. Do not use a nicked, cracked or split propeller.
- Keep foreign objects away from the propeller. Make sure that nothing can be "sucked in" by the propeller. Never start the engine on loose gravel or sand.
- Keep onlookers away from the running engine, especially small children.
- Do not attempt to stop the engine by throwing anything into the path of the propeller.
- Make sure the fuel line is well-secured to the engine and to the fuel tank so that it won't come off in flight.

- Do not use silicone fuel line because it will be attacked by the fuel. Use vinyl or neoprene rubber fuel line.
- Always secure the fuel line away from the cylinder head. The engine's heat can damage the fuel line.
- Never touch the engine after a run. The engine will be hot and it may burn you.
- Before transporting your model, remove all the fuel from the fuel tank and fuel lines.
- Always use high-quality oil intended for 2-stroke engines.
- Use only low octane, alcohol-free gasoline. The carburetor diaphragm will gradually deteriorate if you use gasoline with alcohol (ethanol, gasohol, etc.). You will need to replace the diaphragm in about 80 hours of operation if you use gasoline with alcohol.
- Muffler pressure to the fuel tank is not required.
- Do not install your throttle servo or kill switch servo inside the engine compartment. Doing so could cause radio interference. Install all electronic radio devices at least 305mm [12"] away from the engine. The throttle pushrod should be non-metallic.
- In case the engine is not to be used for more than a month, drain the fuel tank and remove any fuel from inside the carburetor. Do this by running the engine at idle until it quits by running out of fuel. Keeping gasoline inside the carburetor over an extended period of time will damage the diaphragm valve and clog passages inside the carburetor.
- Because the carburetor is more complicated than those used in glow engines, keep the fuel clean by using a fuel filter. Use a filter intended to be used with gasoline engines. Metal filters intended for glow engines are too coarse and will not screen out finer particles. Always filter your fuel by using an appropriate filter before putting it into the airplane's fuel tank.
- If you intend to run this engine on an engine stand, or on any other rigid mount, use rubber mounts. The crankcase and other parts of the engine may crack if you do not provide some kind of vibration absorption mechanism. A rubber mount is not necessary if the engine is mounted on a model airplane.
- Do not operate the engine in a closed room or where ventilation is not adequate.
- Gasoline is extremely flammable. Keep it away from an open flame, excessive heat or sources of sparks. Do not smoke near the engine or the fuel tank.
- This engine was designed for use in a model aircraft. Do not attempt to use it for any other purpose.
- Always install a kill switch that can be operated both manually and through the R/C transmitter.

### ***PARTS LIST***

BT-64 EIS Engine	(2) 5 x 12mm SHCS with Lock Washer
Ignition Module	(4) 5 x 22mm SHCS with Washers
50mm EIS Propeller Flange with Propeller Washer	and Lock Washers
10mm Propeller Bolt	280mm of Gas Tubing
Muffler with Muffler Gasket	Spark Plug Wrench
(2) 6 x 65mm Muffler SHCS	4mm Allen Wrench
(2) 6mm Washers	Fuji EIS Engines Decal

## ***AUTOMATIC IGNITION TIMING MODULE***

- Automatic Ignition Timing: The BT-64EIS features an electronic ignition system that advances the ignition timing as the engine rpm increases. This ensures a delayed ignition timing at low rpm for easy starts and good low-end engine performance, and advanced timing at high rpm for good high-end power.
- The ignition module is waterproof.
- The ignition module runs on any 4.8V battery. The current consumption is approximately 188 mAh.
- An optional Digital Tachometer (FJIG9920) is available to monitor rpm and ignition battery voltage.

## ***SPARK PLUG***

The recommended spark plug is a Champion RCJ-6Y or 7Y. To avoid improper operation or possible engine damage, do not use any other type of spark plugs. The plug gap should be 0.4mm to 0.6mm [0.016" to 0.024"]. If the plug gap is incorrect, adjust it with a spark plug gapping tool, wash it with gasoline and allow it to dry completely before you reinstall the plug in the engine.

**Note:** If you want to check if the spark plug works, remove the spark plug from the engine, connect it to the coil and make sure the metallic threaded end of the spark plug touches the engine. Spin the propeller rapidly through top dead center and check for a spark. This procedure only works in a dark room as there is too much light outside to see the spark.

The various spark plug manufacturers have much information on their web sites regarding spark plug performance and health. For more information, check:

***<http://www.championsparkplugs.com/sparkplug411.asp>***

## ***PROPELLER***

Always use a well-balanced, high-quality propeller.

**The recommended propellers are:**

22" x 10" High Performance Wood Prop  
22" x 10" or 22" x 12" Carbon Prop

During our tests, our Fuji BT-64EIS turned a Bolly 22" x 12" carbon prop at 7100 rpm which translates to roughly 30 lb of static thrust. The engine was new with 60 minutes of breaking in. The test conditions were: Temperature 59°F [15°C], humidity 20%, elevation at sea level. Performance may vary depending on atmospheric conditions.

## ***OIL***

Fuji Engines has developed a special oil to work with the Fuji engines. This oil is of extremely high quality and it has exceptional lubricating properties. This oil can be mixed with gasoline at much higher ratios than other engine oils which allows the engine to develop more horsepower and last longer. It is recommended that you use Fuji Engines oil with all your Fuji engines. Break-in procedures are slightly different than those when using standard oils. Please refer to the table below for oil contents. Fuji Oil bottles of different sizes are available from your Fuji Engines distributor or Hobby Shop.

- Break-in (Stage 1): 1 gallon of gasoline with 50:1 (2%) oil content ratio.
- Break-in (Stage 2): 1 gallon of gasoline with 100:1 (1%) oil content ratio.
- Normal running: In un-cowled or well-cooled installations 150:1 (0.65%) oil content ratio.
- In-cowled or not-so-good cooling installations 100:1 (1%) oil content ratio.
- Do not try to use these engine oil ratios with any other brand of oil other than the Fuji Engines oil.
- Do not use the Fuji Engines oil with any other brand of engines.
- If you have been running the engine on other oil and wish to switch to Fuji oil, follow the break-in procedure for Fuji Engines oil.

If Fuji Engines oil is not available, or if you prefer to use a different brand of oil, use the standard fuel/oil ratios as shown below. Never experiment with cheap oil or with obscure brand names. Be certain to select only high-quality oil that is intended for use in gasoline R/C model airplane engines.

- Break-in: 1 gallon of gasoline with 25:1 (4%) oil content ratio.
- Normal running: 40:1 (2.5%) oil content ratio.

## ***PREPARE THE ENGINE***

1. Check to see that all screws and bolts are tight. Check carefully for any cracks, broken or missing parts. Tighten or replace before proceeding.



2. Install the prop shaft on the flywheel using three 5mm x 22mm SHCS with lock washers and washers. Use thread locking compound on the screws.

3. Install the spark plug in the cylinder head and tighten.

4. Trial fit the muffler and muffler gasket. Use two 6mm x 65mm BHCS and washers to hold it in place.



5. Secure the ignition control module ground wire to the engine using one of the 5 x 12mm SHCS.



6. Connect the ignition control module to the pick up sensor. The connector is polarized and will only plug in one way.
7. Connect a kill switch to the ignition control module. It is recommended to install a manual switch and a servo operated switch. This can be accomplished using two receiver On/Off switches.
8. Connect the ignition module battery. Any 4.8V, 500mAh and above battery will work well for this. The approximate current consumption of the ignition switch module is 188mAh.

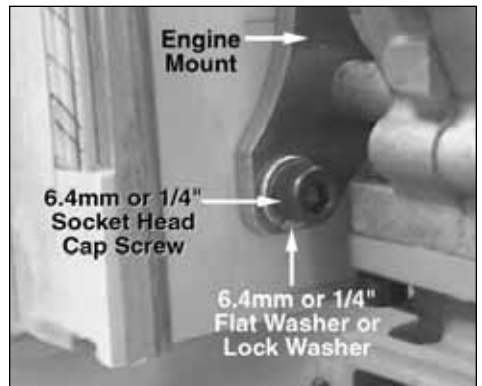
### ***INSTALLING THE FUJI BT-64EIS ON YOUR AIRPLANE***

**Note:** The Fuji BT-64EIS must be installed on a 12mm [1/2"] lite ply firewall or on a 9.5mm [3/8"] birch ply firewall. The firewall must be securely glued to the airplane. Use triangle stock and pin the firewall with hardwood dowels to reinforce the firewall glue joints. **Never** install the Fuji BT-64EIS onto a firewall thinner than specified because it may fail due to the power of the engine.

**Note:** The length of the engine from the back on the engine mount to the propeller washer is 143mm [5.6"] when using the stock (40mm [1.57"]) prop flange.

1. Use the supplied template (on the back cover of this manual) to drill the engine mounting bolt holes and the necessary clearance hole on the firewall.

2. Install the engine on the firewall using four 6.4mm x 32mm **or** 1/4" x 1-1/4" socket head cap screws, four 6mm [1/4"] flat or lock washers and four 6mm [1/4"] blind nuts. Use some thread locking compound, such as Great Planes® Pro™ Thread Locking Compound (GPMR6060), on the screws.



3. Install the fuel tank in the airframe. Use only gasoline-safe fuel lines. One line should go to the carburetor and the other is to be used as a vent. You can fill the tank by using the carburetor line as fill line if you have access to it or install a third line to be used as fill line.
4. Install a manual kill switch and a radio operated kill switch. Install the kill switch servo at least 305mm [12"] away from the engine.
5. Install the throttle servo at least 305mm [12"] away from the engine. Make sure that you get the carburetor's full range of rotation with your servo travel.
6. Install the ignition module securely in the airplane forward area. It is recommended that a thin piece of foam rubber is placed between the module and the mounting surface and that rubber bands are used to hold the module in place. 4mm screws and washers can also be used to secure it in place, but soft mounting the module is always the best choice.
7. Secure all connections with shrink tubing.
8. Cut all necessary clearance and cooling holes in the cowl.
9. Make sure the cowl is secured to the airplane and that the spinner to cowl clearance is at least 3.2mm [1/8"].

### ***BREAK IN THE ENGINE***

- The break-in procedures for your engine will vary depending on the type of engine oil you will use. Please refer to the "Oil" section for fuel/oil mixture ratios and break-in times.
- Do not adjust the high-speed needle on the carburetor to break in the engine. If you do so, carbon will accumulate in the spark plug and that will make ignition difficult.
- Do not run at full power for extended periods of time while breaking in your engine.
- Make sure that the engine has adequate cooling. While breaking in, the engine may run at slightly higher temperatures.
- If you wish to do so, you can break in your Fuji BT-64EIS while flying your airplane. Just make sure you observe all recommendations above.

### ***STARTING PROCEDURES***

There are four recommended ways to start the Fuji BT-64EIS:

#### **A. Manual Starting:**

**Note:** Use a thick glove to protect your hand while hand starting the Fuji BT-64EIS.

1. The propeller should be installed on the prop spacer so that it is comfortable for you to flip it through compression. You also need to position it in a way that when you flip the propeller, the magnets are 20° clockwise from the magnet pick up.
2. Have someone help you hold the airplane while you start the engine.
3. Make sure the ignition is OFF, close the choke on the carburetor and open the throttle slightly from the idle position.
4. Rotate the propeller slowly about 10 to 20 times (more in winter) until fuel begins to be drawn into the carburetor. Another way to prime the engine is to rotate the prop clockwise from bottom dead center to top dead center (compression) and then counterclockwise back to bottom dead center repeatedly.

5. Switch the ignition to ON.
6. Flip the propeller clockwise several times briskly.
7. After you hear some initial firing sounds, move the choke lever to the OPEN position.
8. Set the throttle to a high idle. Set the prop so that the magnets are 20° clockwise from the magnet pick up when viewed from the front.
9. Flip the prop through compression rapidly. If this is done properly, the engine will start between the first and the eighth flip of the prop. During our testing, starting took an average of 3-4 flips.
10. After starting, let the engine idle for two to three minutes. Open and close the throttle slowly until the engine runs smoothly at idle and at full throttle. Acceleration should also be smooth.
11. If your engine does not start, repeat the procedure.

## **B. Electric Starter Starting:**

1. Make sure you use a good quality, lightweight aluminum spinner.
2. Have someone help you hold the airplane while you start it.
3. Make sure the ignition is OFF, close the choke plate on the carburetor and open the throttle slightly from the idle position.
4. Use your electric starter to turn the engine over for several seconds.
5. Switch the ignition to ON and open the choke.
6. Set the throttle to high idle and use your electric starter to turn over the engine until it starts.
7. After starting, let the engine idle for two to three minutes. Open and close the throttle slowly until the engine runs smoothly at idle and at full throttle. Acceleration should also be smooth.
8. If your engine does not start, repeat the procedure.

## **C. Spring Starting:**

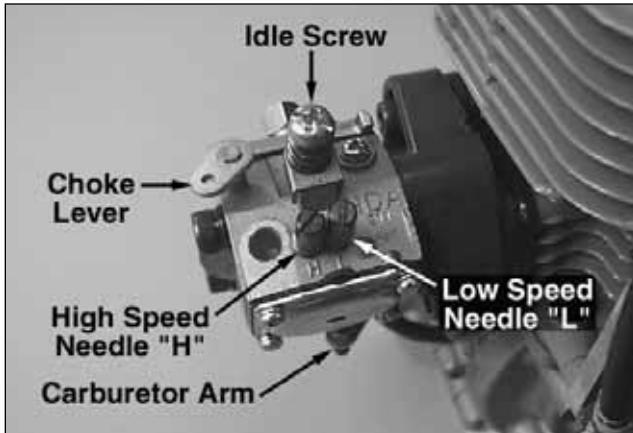
1. Have someone help you hold the airplane while you start it.
2. With the ignition OFF, close the choke plate on the carburetor and open the throttle slightly from the idle position.
3. Rotate the propeller slowly about 10 to 20 times (more in winter) until fuel begins to be drawn into the carburetor. Another way to prime the engine is to rotate the prop clockwise from bottom dead center to top dead center (compression) and then counterclockwise back to bottom dead center repeatedly.
4. Turn the ignition switch to the ON position.
5. Hold the propeller, turn it 360° clockwise (one full turn) and let it go (move hand quickly away from the propeller arc).
6. After you hear some initial firing sounds, move the choke to the OPEN position.
7. Repeat Step 5 until your engine starts.

## **D. Onboard Electric Starter Starting:**

Follow the instructions supplied with the onboard electric starter.

## ENGINE ADJUSTMENTS

- Always make high- and low-speed needle adjustments with the engine shut off. Also make sure the ignition is OFF.
- Adjust the needle marked "H" for high-speed RPM. Adjust the needle marked "L" for low-speed RPM.



### A. Normal high- and low-speed needle settings:

It is not necessary to change the needle settings if the engine runs smoothly. Normally only the "H" needle will need adjustment from time to time and only by a small amount.

**H:** Open the needle  $\frac{3}{4}$  of a turn from the closed position ( $\pm\frac{1}{4}$  of a turn in winter).

**L:** Open the needle  $1\text{-}\frac{3}{8}$  turns from the closed position ( $\pm\frac{1}{4}$  of a turn in winter).

Only adjust the high- and low-speed needle within the above range.

### B. Idle adjustment:

**Note:** Do not confuse the idle screw with the low-speed needle "L". The idle screw physically adjusts how much the carburetor valve can close. The low-speed needle "L" adjusts the gasoline to air mixture when the engine is running at low rpm. If your engine appears to work correctly except that the low rpm are not as low as you want them to be, then adjust the idle screw. If your engine behaves erratically at low rpm, then adjust the low-speed needle "L". When adjusting, turn the screw about  $\frac{1}{8}$  of a turn each time. A dirty plug will make it difficult to adjust the idle RPM. Follow the recommended procedures if any of the following happens:

#### *Problem:*

1. The engine hesitates when accelerated rapidly.
2. The RPM increases at idling.
3. The engine stops when the throttle is moved from high to low.

#### *Solution:*

Your low-speed needle "L" is too lean. Open it up about  $\frac{1}{8}$  of a turn and try again.

*Problem:*

The idle is not steady.

*Solution:*

Your low-speed needle "L" valve is too rich. Close it 1/8 of a turn and try again.

### **C. High-Speed Adjustment:**

The high-speed rpm and transition performance is adjusted with the high-speed "H" needle valve. When adjusting, turn the screw about 1/8 of a turn each time. The position of the "H" needle will vary according to air temperature and field elevation. If your engine is running smoothly, then do not adjust this needle valve. Follow the recommended procedures if any of the following happens:

*Problem:*

1. Engine stops at full throttle.
2. Engine hesitates when accelerated rapidly.
3. The engine will not come up to full RPM at full throttle.

*Solution:*

Your high-speed needle valve "H" is too lean. Open it up 1/8 of a turn and try again.

*Problem:*

1. Your engine does not reach full rpm.
2. Carbon build-ups appear consistently on your spark plug.

*Solution:*

Your needle valve "H" is too rich. Close it up 1/8 turn and try again.

#### **3-Year Limited Warranty For USA and Canada**

Fuji Engines warrants this product to be free from defects in materials and workmanship for a period of three (3) years from the date of purchase. During that period, Fuji Engines will, at its option, repair or replace without service charge any product deemed defective due to those causes. You will be required to provide proof of purchase date (receipt or invoice).

- This warranty does not cover damage caused by crash, abuse, misuse, alteration or accident. Damage caused by customer disassembly, tampering, use of substandard fuel, use of incorrect accessories (spark plug, prop, etc.) or any use of the engine for which it is not specifically intended will automatically void the warranty of the engine. If there is damage resulting from these causes within the stated warranty period, Fuji Engines will, at its option, repair or replace it for a service charge not greater than 50% of the current retail list price. Be sure to include your daytime telephone number and e-mail address in case we need to contact you about your repair.
- Under no circumstances will the purchaser be entitled to consequential or incidental damages. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.
- If you attempt to disassemble or repair this unit yourself, it may void the warranty.

For service on your Fuji Engines product, either in or out of warranty, send it post paid and insured to:

Hobby Services  
3002 N. Apollo Dr. Suite 1  
Champaign IL 61822 USA  
(217) 398-0007  
[www.hobbyservices.com](http://www.hobbyservices.com)

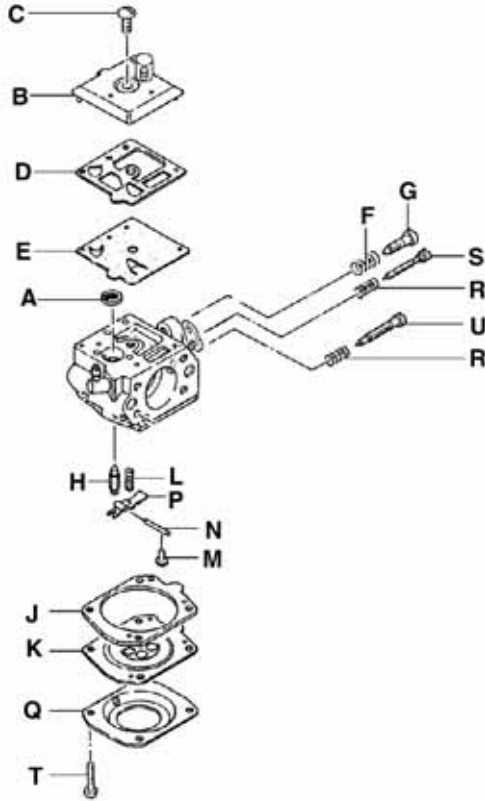
Along with your engine and proof of purchase date, please include a complete written explanation detailing the problem(s). State your name and address clearly. For repairs not covered under warranty, you must specify whether you wish the charges to be billed COD or if you wish to be notified of the charges so you can send a check.

Outside USA and Canada, contact local importer for warranty information.

## REPLACEMENT PARTS

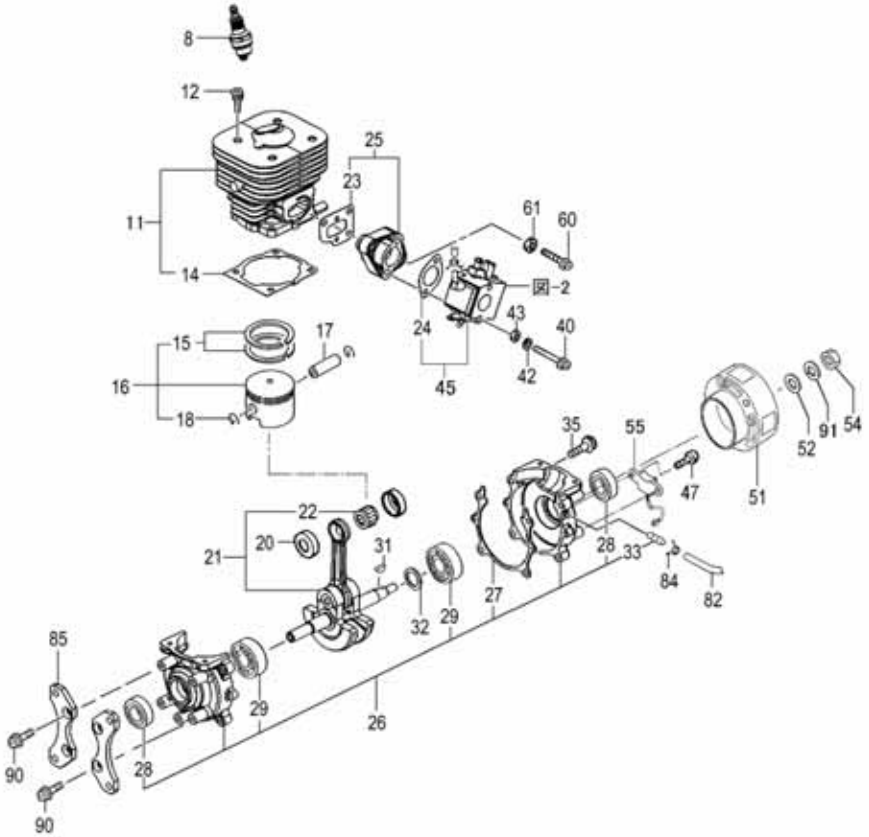
To order replacement parts for the Fuji BT-64EIS, use the order numbers in the **Replacement Parts Lists** that follow. Replacement parts are available only as listed. Replacement parts are not available from Product Support, but can be purchased from hobby shops or mail order/Internet order firms. If you need assistance locating a dealer to purchase parts, visit [www.greatplanes.com](http://www.greatplanes.com) and click on “Where to Buy.”

### CARBURETOR PARTS LIST



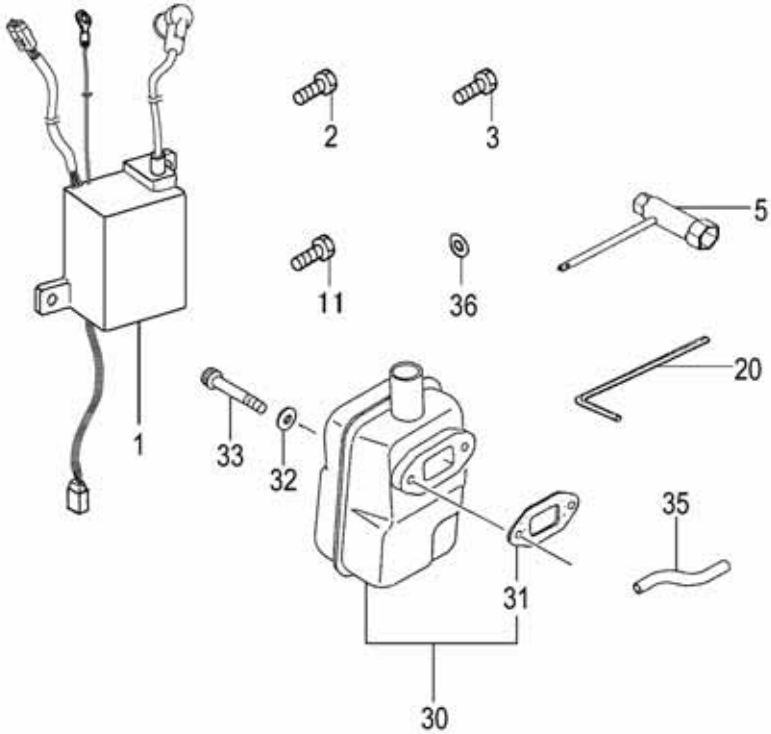
Key #	Part No.	Description	Key #	Part No.	Description
	FJIG3285	Carburetor	K	FJIG5790	Metering Diaphragm Complete
A	FJIG5460	Inlet Screen	L	FJIG7630	Valve Spring
B	FJIG6990	Pump Body Complete	M	FJIG5130	Hinge Pin Set Screw
C	FJIG7290	Set Screw	N	FJIG5100	Hinge Pin
D	FJIG7110	Pump Gasket	P	FJIG3750	Control Lever
E	FJIG7050	Pump Diaphragm	Q	FJIG4590	Diaphragm Cover
F	FJIG5280	Idle Adjust Spring	R	FJIG3000	Adjust Spring
G	FJIG5220	Idle Adjust Screw	S	FJIG5670	Low Adjust Screw
H	FJIG6240	Needle Valve	T	FJIG7200	Set Screw
J	FJIG4650	Diaphragm Gasket	U	FJIG5010	High Adjust Screw

## ENGINE PARTS LIST



Key #	Part No.	Description	
8	FJIG7470	Spark Plug RCJ-6Y	<b>32B</b> ..... FJIG7350 ..... Shim 0.2mm
11	FJIG4420	Cylinder Set	<b>32C</b> ..... FJIG7380 ..... Shim 0.3mm
12	FJIG8290	Hex Bolt 5x18/S	<b>32D</b> ..... FJIG7410 ..... Shim 0.4mm
14	FJIG4330	Cylinder Gasket	<b>33</b> ..... FJIG6900 ..... Pulse Fitting
15	FJIG6640	Piston Ring	<b>35</b> ..... FJIG8300 ..... Hex Bolt 5x20/S
16	FJIG6400	Piston Set	<b>40</b> ..... FJIG8350 ..... Hex Bolt 5x55mm
17	FJIG6460	Piston Pin	<b>42</b> ..... FJIG8605 ..... Split Washer 5mm
18	FJIG6530	Piston Pin C-Clip	<b>43</b> ..... FJIG8645 ..... Flat Washer 5mm
20	FJIG6560	Piston Pin Collar	<b>45</b> ..... FJIG3285 ..... Carburetor Complete
21	FJIG4060	Crankshaft Complete	<b>47</b> ..... FJIG8255 ..... Hex Button Screw 5x12mm
22	FJIG6190	Needle Bearing 2x8.8mm	<b>51</b> ..... FJIG1005 ..... Rotor Complete
23	FJIG5910	Inlet Manifold Gasket	<b>52</b> ..... FJIG8770 ..... Flat Washer 7mm
24	FJIG3150	Carburetor Gasket	<b>54</b> ..... FJIG4740 ..... Flywheel Nut 12mm
25	FJIG3222	Insulator Set	<b>55</b> ..... FJIG1003 ..... Sensor Unit
26	FJIG3880	Crankcase Assembly	<b>60</b> ..... FJIG8305 ..... Hex Bolt 5x22/S
27	FJIG3970	Crankcase Gasket	<b>61</b> ..... FJIG8750 ..... Flat Washer 5mm
28	FJIG6300	Oil Seal	<b>82</b> ..... FJIG4800 ..... Fuel Pipe 3x5x110mm
29	FJIG3060	Ball Bearing 6201 A2C3	<b>84</b> ..... FJIG3390 ..... Clip 5.5mm
31	FJIG7660	Woodruff Key 3x13x4.5mm	<b>85</b> ..... FJIG4660 ..... Engine Mount
32A	FJIG7320	Shim 0.1mm	<b>90</b> ..... FJIG7171 ..... Hex Screw 5x15mm
			<b>91</b> ..... FJIG8652 ..... Split Washer 7mm

## MUFFLER AND ACCESSORIES PARTS LIST

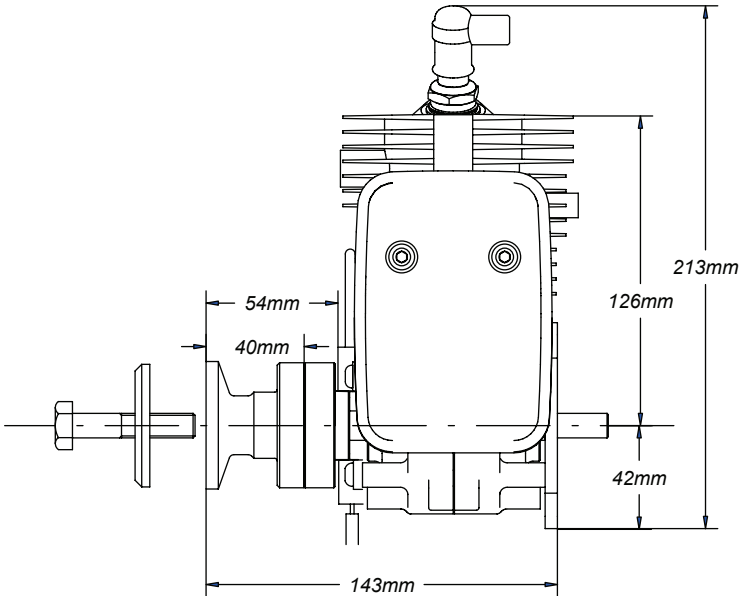
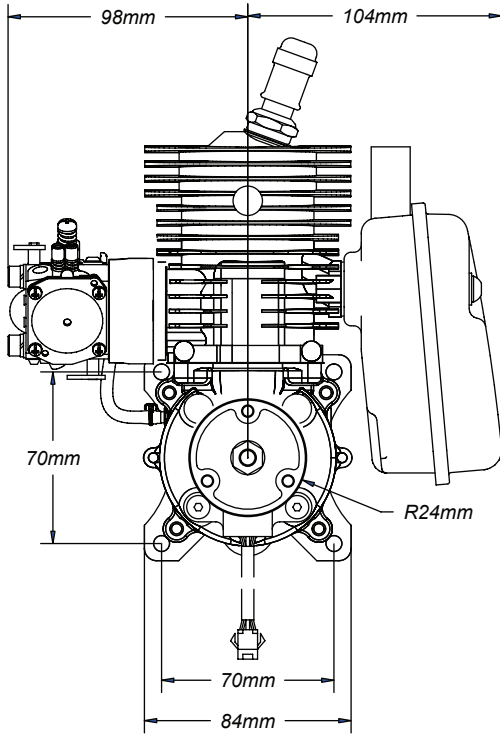


Key #	Part No.	Description	Key #	Part No.	Description
001	FJIG1001	Control Unit	030	FJIG6040	Muffler Set
002	FJIG8085	Propeller Fixing Bolt	031	FJIG5910	Muffler Gasket
003	FJIG8308	Hex Bolt 5x22/WS	032	FJIG8765	Washer 6
005	FJIG3720	Box Wrench 17x19	033	FJIG8400	Cap Screw 6x65
011	FJIG8250	Hex Bolt 5x12S	035	FJIG4830	Fuel Pipe 3x5x280
020	FJIG4920	Hex Wrench 4	036	FJIG8775	Washer 10

### OPTIONAL ACCESSORIES

- FJIG1050.....Spring Starter
- FJIG1186.....Onboard Electric Starter
- FJIG4922.....Vibration Proofing Rubber (4 pieces/set)
- FJIG7682.....Long Prop Spacer (60mm [2-3/8"])
- FJIG8082.....Spinner Bolt Tru-Turn Adapter
- FJIG9920.....Digital Tachometer
- FJIG7687.....Optional Prop Flange 40mm [1-9/16"] (Included)
- FJIG7686.....Optional Prop Flange 50mm [2"]
- FJIG7688.....Optional Prop Flange 60mm [2-3/8"]
- FJIG7689.....Optional Prop Flange 70mm [2-3/4"]

# ENGINE MEASUREMENTS



## OTHER ENGINES AVAILABLE FROM FUJI:

### **BT-50EIS Engine**

**FJIG0087**



**Displacement:** 46.5cc

**Total RPM Range:** 1200-10,000

**Output:** 5.2 hp @ 10,000 rpm

**Weight w/Muffler:** 4.5 lb (2.04kg)

**Includes:** Walbro Butterfly Carburetor, Champion RCJ6Y Spark Plug, Muffler

**Recommended Props:** 21x10 Carbon @ 7000 RPM;  
20x10 Wood @ 7000 RPM; 20x10 Carbon @ 7400 RPM

The BT-50EIS with Electronic Ignition System (EIS) has the performance features you expect from Fuji, including CNC-machined parts; Walbro™ carburetion; true chrome-plated cylinder; ball bearing supported crankshaft; dynamic balancing of the flywheel, prop hub and crankshaft; and a high-performance scale muffler. The

EIS unit adds more advantages: Using a 4.8V battery (not included), it produces more spark than conventional magneto systems – which means you need less force to start the engine. The universal battery connector can be used with any 4.8V battery pack (Futaba® batteries are recommended).

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**Displacement:** 86.0cc

**Total RPM Range:** 1100-9000

**Output:** 7.5 bhp @ 9000 RPM

**Weight w/Muffler:** 5.95 lb (2.7kg)

**Includes:** Walbro HDA186 Carb, Champion RCJ6Y Resistor Spark Plug, Muffler

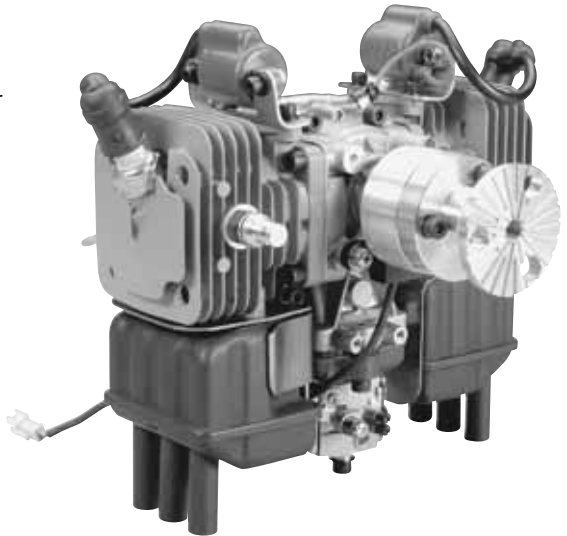
**Recommended Prop:** 24x12 Carbon @ 6400 RPM; 24x10 Carbon @ 7400 RPM

One of your biggest concerns with large-scale aircraft is weight. The BT-86EIS Twin's Electronic Ignition System (EIS) is more reliable than magneto systems and significantly reduces overall weight! That translates into better acceleration AND fuel economy. Plus, the EIS is easy to use: just plug it in to a 4.8V battery (not included) and give the prop a quick flip. Each cylinder of the BT-86EIS Twin has a

compression relief valve. A one-way overflow valve removes excess fuel buildup. The Walbro HCA186 carb features a spring-loaded control arm, plus a heat shield.

### **BT-86EIS Twin Engine**

**FJIG0089**



# ***Engine Mount Template for Fuji BT-64EIS Engine***

