

### GLOW PLUG

Select the most appropriate glow plug from those designed specifically for R/C operation. The selection of glow plug greatly affects the maximum engine output and low flying stability. If rpm's decrease or stop when the booster cord is removed, replace the plug.

### INSTALLATION

1. Connect the engine to the tank as shown in fig.1. Since high pressure is applied to the tank, tighten all connections carefully. Care must be taken to prevent pressure leakage due to undertightening of the check valve or by kinking the fuel lines.
2. Use a fuel filter in the fuel line. We recommend the YS filter.
3. Match the direction of the check valve arrow to fig.1.

### START-UP

1. Remove the tube (B) from the filter, remove tube (A) from the check valve, then fill the tank. (Caution; If tank is filled, remove tube (A) first; then tube (B). Fuel will eject if tube (B) is removed first while the tank is pressurized.)
2. Open the needle valve three turns from the fully closed position.
3. Open the throttle fully and slowly turn the propeller ten turns. This primes the system by pressurizing the tank and feeding fuel to the carburetor.

4. Pour several drops of fuel into the carburetor.
5. Close the throttle approximately 25% and connect the glow plug cord.
6. Start the engine.

### BREAK-IN

To maximize engine performance and increase durability, use this break-in procedure;

1. Use the same size or smaller propeller as you intend to use in flying.
2. Use any good quality 2 stroke fuel, which includes synthetic or castor oil additives.
3. During the break-in operation, open the throttle fully.
4. Rotate the propeller two or three turns, operating the needle valve as far as needed without stopping. Then rotate the needle valve 1/2 turns back from peak position and run for 30 minutes.
5. Mount the engine and fly it ten times at a speed 1,000rpm lower than peak rpm. This concludes the break-in procedure. It is advisable to keep the needle valve open a bit more than necessary so as to keep the moving parts lubricated, even after the break-in period.

### HIGH SPEED ADJUSTMENT

1. Adjustment of high speed is done by the carburetor needle valve. When the needle valve is turned clockwise, the mixture is leaner. When it is turned counterclock-

wise, the mixture is richer.

2. When the engine is started, open the throttle gradually. Next, find the peak position (high rpm) by adjusting the needle valve. Set the rpm slightly less than peak (the needle should be turned 30-45 degrees to the left of peak position). The engine may stop if the throttle is opened to full immediately after start-up. Wait until the engine temperature rises and then open the throttle slowly.
3. For flying, it is advisable to use a slightly richer mixture setting. By using a richer mixture, the engine temperature is maintained and rpm stability improves.

### LOW SPEED ADJUSTMENT

Carburetor adjustment for low speed is factory pre-set. No adjustment is required until after the break-in period. After break-in use this procedure if necessary.

1. Adjustment of low speed revolution is done by the diaphragm/regulator valve screw. When the diaphragm is turned clockwise, the mixture is leaned. When it is turned counterclockwise the mixture is richened. (For reference: The engine is assembled with the head of the diaphragm valve screw flush with the regulator body. Adjustments should be made in 1/8 to 1/4 turn increments.)
2. The diaphragm valve can be set after the high speed needle valve has been set. Close the throttle gradually; then fully open the throttle just before the engine stops. The adjustment condition is satisfactory at low speed if revolution is smooth at this time. Set the number of idling revolutions by throttle barrel limit screw. If the throttle is quickly opened and the mixture is too rich, turn the diaphragm adjustment screw clockwise 1/8 to 1/4 turn at a time to achieve smooth throttle response. If the mixture is too rich it is possible to stop the engine (flooding) when the throttle is opened.
3. When the revolution is stabilized, close the throttle further and repeat the above adjustment to idle evenly at 2,500rpm or less.

### PROPELLER AND MUFFLER SELECTION

The YS engine is designed for use with a tuned pipe. The intermediate length between the muffler and exhaust adaptor depends mainly on the propeller size and the type of fuel. Generally, when the diameter and pitch of the propeller increase, the intermediate (header) length should increase as well. It must also be increase with lower nitro content fuel blends.

### DIAPHRAGM AND CHECK VALVE DISASSEMBLY

Diaphragm;

1. Remove the adjustment screw of the valve, and then remove the inside valve and spring.
2. Clean the inside with alcohol or appropriate cleaner. Reassemble.
3. Screw in the valve adjustment screw until flush with the diaphragm body. Refer to "LOW SPEED ADJUSTMENT".

Check valve;

1. Open the valve by rotating the body counterclockwise.
2. Reassemble the check valve carefully.

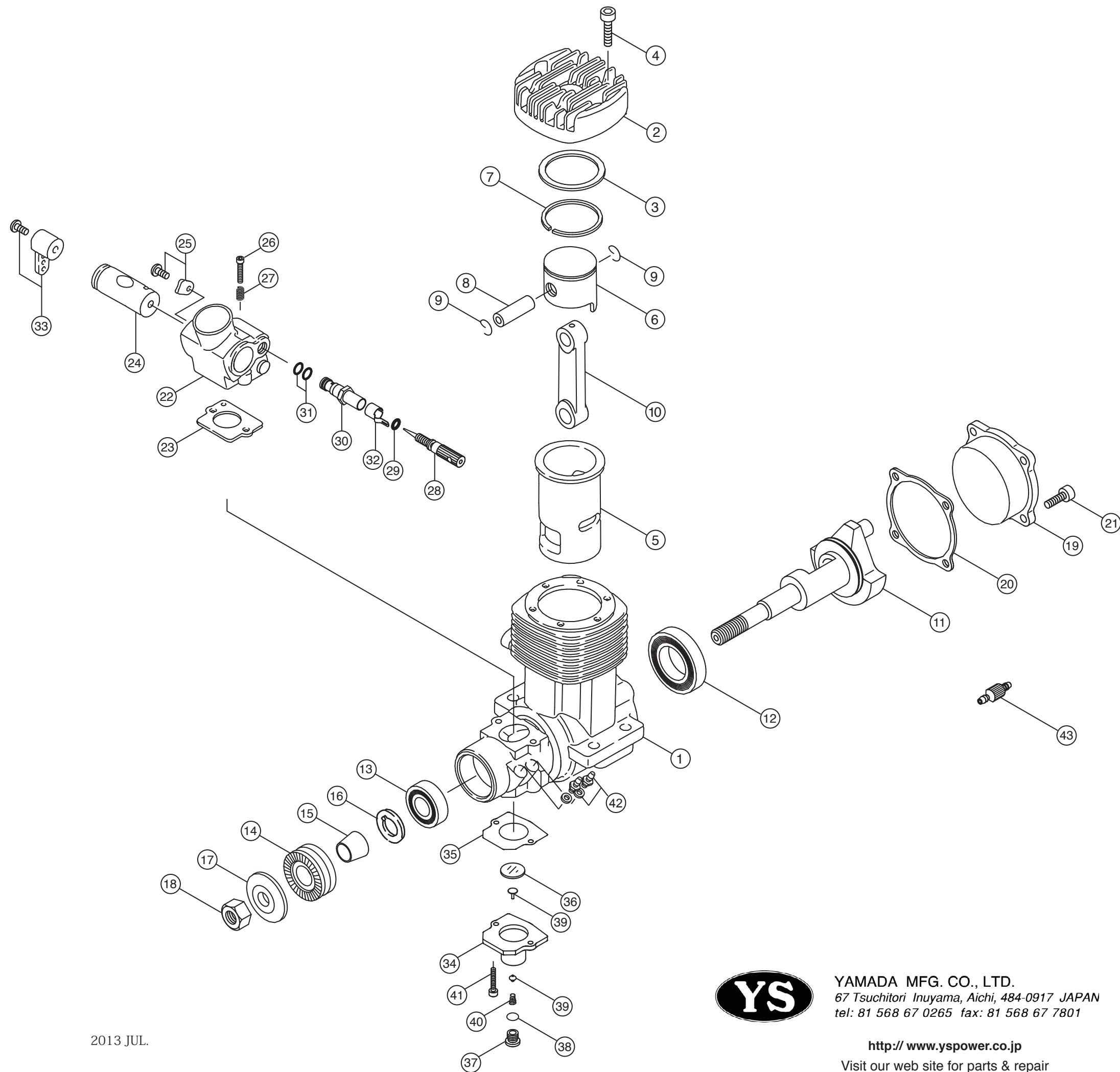
### IMPORTANT!

Silicone rubber is used in many parts of the YS engine. Use only glow fuel or methanol for cleaning. Gasoline and other volatile solutions will damage the silicone if used.

### Warranty

We strictly inspect each process of production from parts to final assemble for keep good quality. If a performance deteriorates or part fails due to a manufacturing error under normal usage will repair no charge with in 1 year starting from the date of purchase. Warranty will not cover normal wear. Even with in 1 year warranty term, improper disassemble or assemble, under improper usage, any modification will avoid this warranty and there will be normal charge for parts and labors.

NO.	ITEM NO.	NAME	QTY
1	R6401	Crankcase (rear)	1
2	R6402	Cylinder head	1
3	S7103	Cylinder head gasket	1
4	R6104	Cylinder head screws	6
	R6405S	Liner & piston set (rear)	
5	R6405	Liner	1
6	R6406	Piston (rear)	1
7	S7107	Piston ring	1
8	R6407	Wrist pin	1
9	S5208	Wrist pin retainer	2
10	S7110	Con rod	1
11	R6410	Crankshaft	1
12	R6112	Rear bearing	1
13	R6211	Front bearing	1
14	F9323	Drive washer	1
15	F9324	Drive washer reatiner	1
16	R6115	Drive washer spacer	1
17	R6116	Prop washer	1
18	R6217	Prop nut	1
19	R6118	Back plate	1
20	R6119	Back plate gasket	1
21	R6120	Back plate screws	4
	R6421A	Carburetor assembly	
22	R6421	Throttle body	1
23	R6122	Throttle body gasket	1
24	R6423	Throttle barrel	1
25	R6124	Throttle barrel retainer	1
26	F1258	Throttle stop screw	1
27	R6126	Throttle stop spring	1
	F1545S	Needle valve assembly	
28	F1545	Needle valve	1
29	F1546	Needle valve O ring	1
30	F1555	Needle valve socket	1
31	F1556	Needle valve socket O-rings	2
32	F1257	Needle valve detent	1
33	F1260S	Throttle arm set	1
	R6133A	Regulator assembly	
34	R6133	Regulator body	1
35	R6134	Regulator gasket	1
36	F1247	Diaphram	1
37	F1245	Regulator adjusting screw	1
38	F1246	Regulator adjusting screw O-ring	1
39	R6138	Plunger	1
40	F1249	Plunger spring	1
41	R6140	Regulator screws	2
42	R6141	Fuel nipples	2
	R6142S	Gasket set	3
	R6443S	O-ring set	4
43	F1272	Check valve	1



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