

FACTORY REPAIR SERVICE

Minor repair, examinations, or adjustments - \$4.00 plus parts. Complete overhaul, new engine performance guaranteed: .09 - 26.10; .049 - \$22.25. These prices include parts.

CUSTOMER SERVICE

For any questions or service regarding any Cox products please contact our Customer Service Department at 1-800-451-0339. Customer Service hours are from 8:00 a.m. to 4:30 p.m. Pacific Time, Monday through Friday.

REPLACEMENT PARTS

	2601 MEDALLION .09 W/THROTTLE MUFFLER		2601 MEDALLION .049 W/THROTTLE MUFFLER	
	CAT. NO.	LIST PRICE	CAT. NO.	LIST PRICE
Glow Head & Gasket	2302	4.00	325	3.00
Needle Valve & Spring	2309	1.55	2309	1.55
Cylinder, Piston & Rod	2368	15.55	2468	13.50
Carburetor Body	2324	2.80	2424	2.45
Crankcase, Crankshaft, Carb. Body, Retainer Nut, Drive Plate, Crankcase Cover, & Th. Washer	2379	22.00	2479	18.00
Spray Bar, Ret. N.V. Spring	2389	2.20	2389	2.20
Prop & Screw	2319	.90	1718	1.10
Wrench	22131	1.25	1530	1.10
Muffler/Throttle Assembly	20497	10.50	20467	5.55
Piston/Rod Reset Tool	2196	7.50	1796	7.50

Order Parts by Catalog Number

Prices subject to change without notice.

SPEEDS

The following speeds are typical of engines selected at random and run under average conditions using Cox Super Power fuel.

	MEDALLION .049 RPM	MEDALLION .09 RPM
5" Dia. x 3P	18,700	
5" Dia. x 4P	16,000	
5 1/5" Dia. x 4P	15,200	
6" Dia. x 3P	15,000	
6" Dia. x 4P	12,600	16,000
6" Dia. x 5P	15,200	15,200
7" Dia. x 3P	15,200	15,000
7" Dia. x 3 1/2 P	11,400	11,400
8" Dia. x 3P		10,800

COX HOBBIES INC.

350 W. Rincon St., Corona, CA 91720
COX HOBBIES, INC., 1992

Litho in U.S.A.

2257

has been provided and the rotary valve regulates the pressure.
The hole in the pressure fitting on this engine is already started, but the hole will have to be drilled through the crankcase at this point before you can run on pressure. To rig for pressure observe the following steps:

1. Remove the back cover, cylinder, piston and rod assembly, venturi and needle valve assembly.
2. Rotate crankshaft until the port opening in the shaft points towards the pressure fitting on the right side of the red plastic carburetor body.
3. Continue drilling the hole already started in the pressure fitting through the crankcase. Use a #60 drill (.040 diameter), nothing larger.
4. Rotate crankshaft to deburr the drilled hole.
5. Flush crankcase and shaft thoroughly with methanol or fuel to remove all metal particles.
6. Lubricate shaft with light weight oil and reassemble engine.

The fuel tank must be air tight in order for the engine to operate properly on pressure. Be sure the tubing that connects the pressure fitting on the engine to the tank is also air tight. If the engine does not run smoothly air is getting into the pressure system. Check it thoroughly.

(G) TO REMOVE CARBURETOR BODY FROM AN ENGINE:

1. Remove backplate, cylinder and piston-rod assembly.
2. Remove spinner and engage prop screw approximately 3 or 4 threads in crankshaft.
3. With rear of crankcase on a hard smooth surface, tap prop screw with hammer until thrust washer disengages from crankshaft.
4. Unscrew carburetor retaining nut and slip carburetor body off.
5. To reassemble engine, reverse above procedure. To repress thrust washer onto crankshaft, put thrust washer face down on smooth flat surface. Obtain a short length of wood dowel of a size that will fit into the intake hole of crankshaft. Tap dowel with hammer until thrust washer is fully seated on crankshaft. Make sure engine is clean before reassembly.

(G) TO "RESET" PISTON/ROD ASSEMBLY

After 4 to 5 hours running time the piston/rod assembly of the engine may loosen up slightly. This condition is easily corrected by "resetting" the rod in the piston using the Cox Piston/Rod Reset Tool & Holder which may be purchased from Your Hobby dealer. #1796 for the .049 and #2196 for the .09 engine.

WARRANTY

This engine is guaranteed against defects in materials and workmanship for 30 days from date of purchase. Glow heads are never guaranteed because of their delicate nature. No other guarantee is made or implied. If engine is returned to the factory within warranty, include \$2.00 to cover cost of handling and return postage.

Do not take engine back to your dealer.

CARE AND OPERATION OF YOUR



THESE ENGINES ARE OUTSTANDING FOR SPORT FLYING.

Keep it immaculately clean, use Cox glow fuel or racing fuel and it will maintain its winning characteristics for a long time.

This engine is precisely fitted at the factory for immediate easy starting and immediate flight. A break-in period in the ordinary sense is not necessary for flight. Most of these engines will develop full power within one minute of running time, but a few, those which are slightly on the tight side, may not develop full power under one hour. Even these will develop sufficient power for average flying almost immediately. The only break-in required is very rich (slow) running for the first 60 seconds after starting the first time. After 60 seconds it should be ready to go. 30 minutes running time will add a few RPM for peak contest operation.

Elimination of break-in is not attained through loose or sloppy fitting, but through very precise fitting, together with super fine wearing surfaces.

Remember - your Medallion engine is much happier at high speeds. Let it wind up. Do not use over size props.

(A) PREPARATION FOR RUNNING

1. Mount the engine in the plane, or if you want to give it some running first, mount it on a suitable mount. Do not hold the engine directly in a vise. Use Fig. 1 or Fig. 2 as a template to drill mounting holes.
2. Place propeller on the shaft with the flat side of the blades toward engine and lock securely with the propeller screw.
3. Obtain a fuel tank from your local hobby dealer and connect the tank outlet to the carburetor fuel inlet nozzle. Best results will be obtained by mounting the tank close to the engine and with the average fuel level at the same height as the carburetor needle valve.
4. Obtain a 1 1/2 volt Cox dry cell battery or equivalent, and connect it with 2 flexible insulated wires to the glow plug clip. Recommended is the purchase of the Cox #400 Starter kit which includes battery, glow plug clip, Super Power Fuel, filler hose, and engine wrench. Do not use a higher voltage battery. If you do, the plug will burn out. Most Hobby dealers sell the Cox #400 Kit and glow plug clips.

(B) STARTING THE MEDALLION ENGINE

No matter how expert you are with small engines you will have better luck with these engines if you follow directions exactly as listed and do each operation in the exact order given.

1. Pull the muffler spring away from the rim of the throttle sleeve far enough to verify that the throttle is in the "fast" or "high" position. (Fig. 3) By observing the opening in the throttle ring with respect to the exhaust ports. (Fig. 5) The proper positioning for slow speed will have to be determined by trial and error. (Fig. 6)

2. Close the carburetor needle valve. Fig. 1 or Fig. 2 by turning it clockwise until it stops. Do not force it.
3. Fill the tank with Cox fuel.

4. Open the needle valve (counter clockwise) exactly 5 turns.

5. If the fuel level in the tank is lower than the carburetor needle valve choking may be required. Put your finger over the air intake of the engine and pull the prop through compression until the fuel hose is full. Use a clear plastic fuel line so this can be checked visually. If the tank is mounted so the fuel level is higher than the carburetor the hose will fill itself when the needle valve is opened. This could result in flooding.

6. Connect the battery by snapping the clip on the glow head.

7. Squirt a few drops of fuel into the exhaust ports (Fig. 5) and immediately flip the propeller over counter clockwise. For quick starting, the propeller must be flipped vigorously. The engine should start instantly if it has been primed with the correct amount of fuel in the exhaust port.

8. When the engine starts it will be running very rich and slow. The first time the engine is started let it continue to run rich for a period of 60 seconds. After approximately 60 seconds, slowly close the needle valve clockwise to the best running position and remove the battery glow plug clip. Subsequent starts may be adjusted to best running position immediately.

9. If starting is delayed for any reason, close needle valve, otherwise engine will become flooded. This precaution is only necessary if the tank is mounted so the fuel level is higher than the carburetor.

(C) THROTTLE ADJUSTMENT

If it should be necessary to adjust the throttle control ring in order to make the throttle operate correctly, it can be easily moved by slipping the end of a screw driver in between the ears of the control ring and then turning the sleeve as required. Do not use force to turn the ring. If the sleeve does not move easily, spread the ears on the control ring slightly by prying gently with the screwdriver. Take care not to bend the control ring.

(D) FAILURE TO START

1. If the engine coughs and spits a bit of fuel spray from the exhaust it is too rich. Close the needle valve and continue cranking until engine starts and runs briefly. Open the needle valve again and crank it over. It should start immediately. Blow into the exhaust ports between flips will help clear the excess fuel out of the glow plug.

2. If it starts up with lots of power and dies immediately it is too lean. Open the needle valve a half turn, prime the engine, and restart it again. If the trouble persists and the tank is lower than the carburetor try choking again as in Section B, Par. 5. If the engine hasn't been run for some time it is possible that thick

FULL SCALE VIEWS OF THE MEDALLION .049

FOR INSTALLATION INFORMATION

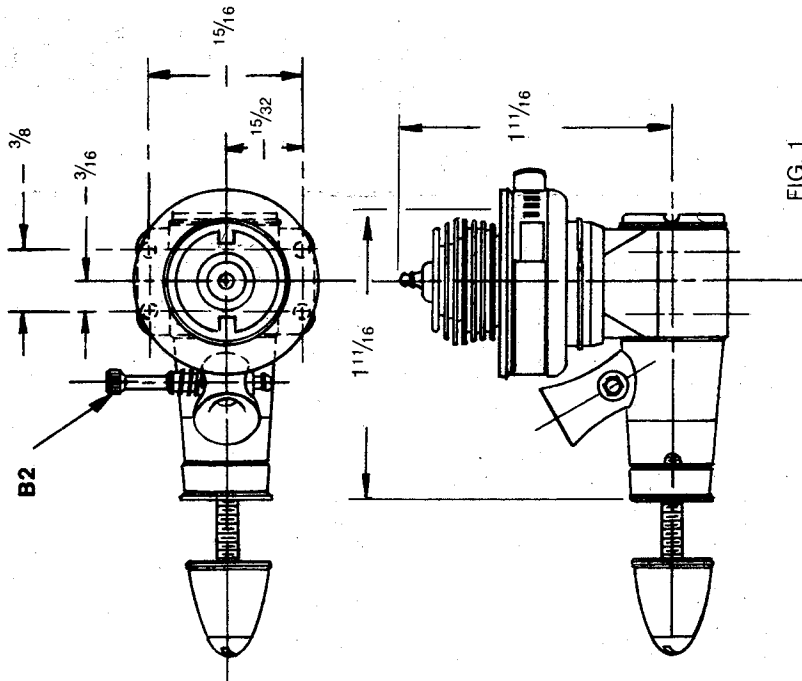


FIG. 1

castor oil is clogging the jets. Choking will clear this out.

3. If the engine still persists in above action, it is possible that the spray jet is stopped up. If this condition exists it will be necessary to remove the spray bar and clean the jet with a fine wire. Instructions for removing the Spray Bar are covered in Section E, paragraph 8.

4. If the engine refuses to fire at all, unscrew glow plug and connect to the clip. If the little coil inside does not get red hot, it is either burnt out or the battery is dead, or the connections are made incorrectly. Replace the battery or the plug, or, recheck the connections. Glow plugs are never guaranteed. Do not return the engine to the factory for a burnt out glow plug. Buy one from your dealer or contact our Customer Service Department.

5. If you are not using Cox fuel, try it for best results. **Never use gasoline or gasoline type fuels.**

(E) OPERATING TIPS AND ENGINE CARE

1. The glow plug is built right into the head in one unit. When the plug burns out, simply replace the entire head.

2. After the last run, oil the engine with a light oil, such as 3 in 1 and wrap it with cloth or otherwise protect it from dust and dirt.

3. If the engine gets dirt in it through crack-up or otherwise, do not run it until it is thoroughly cleaned. **Carefully take it apart**, clean it, oil it, and reassemble.

4. Certain kinds of weather, especially warm humid (sticky) weather will sometimes cause excessive shel-lacking in a new cylinder. There is no known way to eliminate this nuisance and the smoother the fit the more susceptible is the engine to this trouble.

5. If the engine gets tight it is not frozen up. Do not send to factory. A new engine will sometimes tighten up

FULL SCALE VIEWS OF THE MEDALLION .09

FOR INSTALLATION INFORMATION

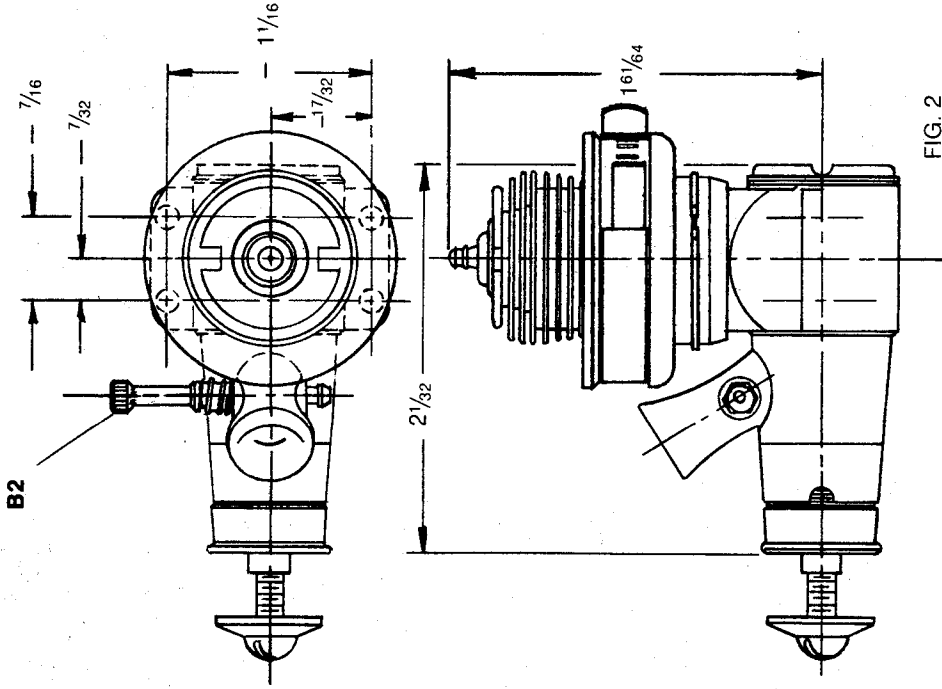


FIG. 2

a few times, especially after a lean run. This is likely to happen, and will sometimes occur to an engine that is properly fitted. Do not run it too lean. The tightness or slowing down is caused by a shellac-like deposit on the cylinder wall. Remove the head. **Remove the cylinder** and scour the inside wall very lightly with a bit of fine #000 or #0000 steel wool. Clean, oil, and replace. The engine will then turn over freely and run properly. **Never** use sandpaper, emery cloth, scrapers or abrasives of any kind. Such methods will ruin the cylinder. Fine steel wool will not harm the bore.

6. Do not over tighten the head. Snug it up very carefully. Allow the engine to cool before removing head so it will loosen more easily. Too much pressure

SPECIFICATIONS

	MEDALLION .049	MEDALLION .09
Weight	1.9 oz.	3.38 oz.
Bore	.406"	.497"
Stroke	.386"	.471"
Displacement	.049 cu. in. .818 cc.	.091 cu. in. 1.497 cc.



FIG. 3



FIG. 4



FIG. 5



FIG. 6

against the exhaust ports to hold the cylinder from turning may force the cylinder out of round or even turn a burr into the bore. A new cylinder is usually required to remedy such damage.

7. To remove the glow head from a hot engine - pour a little fuel slowly over the glow head to reduce the head temperature. Do not run it over the cylinder. The head will then release easily. A hot cylinder head will stick and forced removal may damage the cylinder.

8. If desired, the Carburetor Spray Bar may be removed and repositioned so that the Needle Valve is on the opposite side of the engine. To remove the Spray Bar first, remove the Needle Valve and Needle Valve Spring. Remove the small Retainer Ring which locks the Spray Bar into the plastic Carburetor Body. Reposition the Spray Bar from the opposite side and replace Retainer Ring, Needle Valve Spring, and Needle Valve. When replacing the Spray Bar, make certain the fuel jet hole points downward (towards the Crankshaft) in the venturi.

(F) PRESSURIZING

Pressurizing is very critical when taken directly off the crankcase. On this engine a pressurizing method