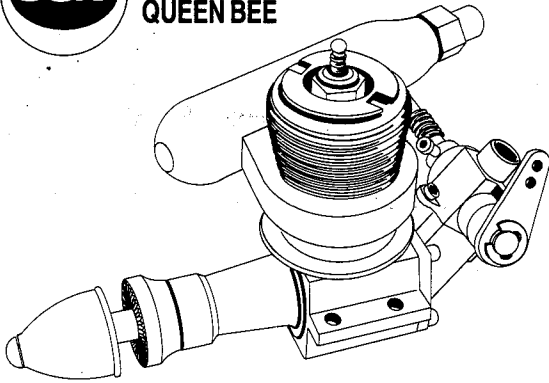


CARE AND OPERATION OF YOUR



.074
QUEEN BEE



Keep your QUEEN BEE immaculately clean, use COX SUPER POWER 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 flight. A break-in period in the ordinary sense is not necessary; in fact, a slow, easy break-in is not desirable. Most of these engines will develop full power within one minute of running time.

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. Thirty minutes running time will add a few RPM for peak contest operation.

Remember—your QUEEN BEE engine is designed to perform its best at high speeds. Let it wind up. Do not use oversized props.

PREPARATION

Be sure you have starting equipment (not provided). You will need a 1½ volt battery, a Glow Plug clip, fuel and a filler hose.

These items are all available in the COX 400 or 880 Accessory kits.

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 the dimensions in the Specifications Chart to locate the mounting holes.
2. Install Propeller (with the flat side of the blades toward engine) and Spinner and secure in place with the propeller screw. Make sure screw is tight!

CAUTION: Use only nylon (glass filled) or wooden propellers.

3. Route the Fuel Tank outlet hose to the engine and connect it to the fuel inlet fitting on the carburetor.

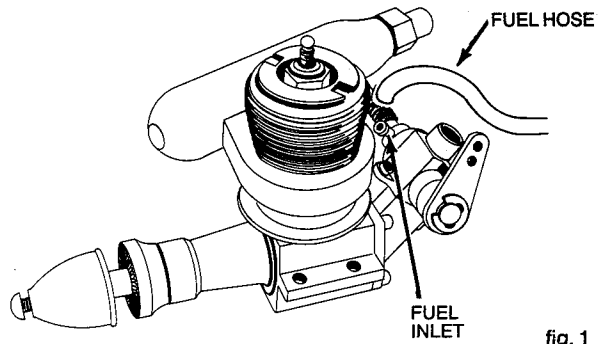


fig. 1

NOTE: When installing the Fuel Tank in your plane remember the best results will be obtained by mounting the tank close to the engine and with the average fuel level .25 to .50 in (6 to 13 mm) below the needle valve.

4. Attach Glow Head Clip wires to the battery.

CAUTION: Use a COX 1½ volt (or equivalent) Starting Battery only! Do not use a higher voltage battery. If a higher voltage battery is used, the Glow Plug will burn out.

STARTING THE ENGINE

No matter how experienced you are with small engines, you will have more success with this engine if you follow the directions exactly as listed and perform each operation in the exact order given.

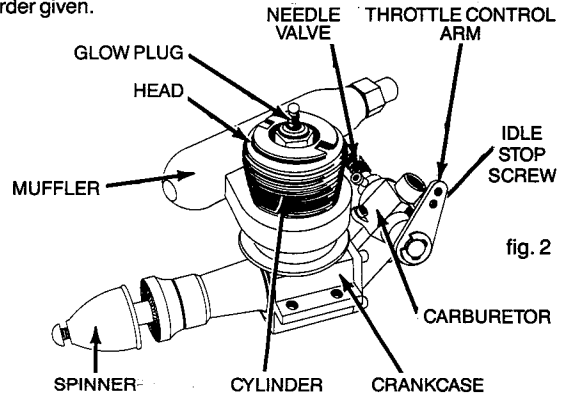


fig. 2

1. Close the carburetor needle valve, by turning it clockwise until it stops. Do not force it.

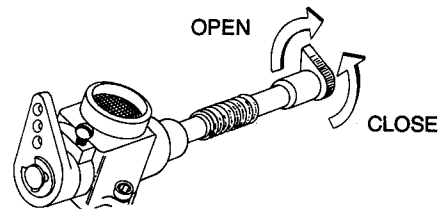


fig. 3

2. Open the needle valve (counter clockwise) 3 turns.

3. Fill the Fuel Tank.

If the fuel level in the tank is higher than the carburetor, fuel will be run through the tube to the engine.

If the fuel level in the tank is lower than the carburetor the fuel will have to be drawn to the engine. Put your finger over the air intake and flip the prop through compression until the fuel hose is full. Use a clear plastic fuel line so this can be checked visually.

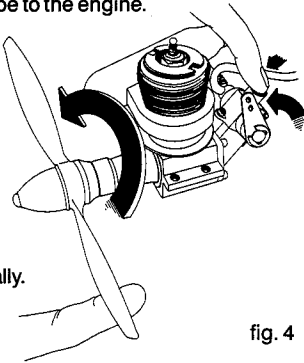


fig. 4

4. Make sure the throttle is in the fully open position.

5. Prime the engine by squirting a few drops of fuel into the air intake.

6. Attach Glow Plug Clip to Glow Plug.

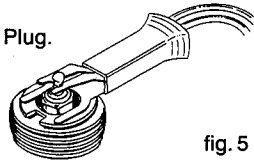


fig. 5

7. Flip the prop over (counter-clockwise). To start the engine, the propeller must be flipped vigorously. If engine fails to start, repeat steps 4, 5, 6 & 7.

If the engine still won't start, then refer to Engine Trouble Shooting chart.

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 about 1 minute.

Remove the Glow Plug Clip.

9. After approximately 1 minute slowly close the needle valve (clockwise) until engine runs at top RPM, then open the needle valve (counter-clockwise) 1/8 turn.

10. After running the first tankful of fuel through the engine, tighten the Head. Periodically check it for tightness during flying sessions.

ADJUSTING THE IDLE SPEED

The low-speed idle of your QUEEN BEE has been preset at the factory to an average idle speed position. This idle speed position is maintained by means of an adjustable stop-screw. See fig. 6.

Although the preset idle position is adequate for most applications you may wish to fine tune the low-speed idle to your particular requirements.

NOTE: The low-speed idle position of the QUEEN BEE should be set with throttle linkage disengaged.

To change idle speed push throttle control arm forward about half way open. Turn the idle stop-screw clockwise (faster) or counter-clockwise (slower), return throttle control arm to idle position. Continue this adjustment procedure until desired idle speed is achieved.

THROTTLE RE-POSITIONING

The carburetor of your QUEEN BEE has been designed so that it can be mounted to allow throttle actuation from either side of the engine. Should you wish to change the throttle actuation from the left side (as positioned at the factory) to the right; remove the two Allen capscrews holding the carburetor to the base. Remove carburetor, turn it 180 degrees, insert it back in the base, replace and tighten Allen capscrews.

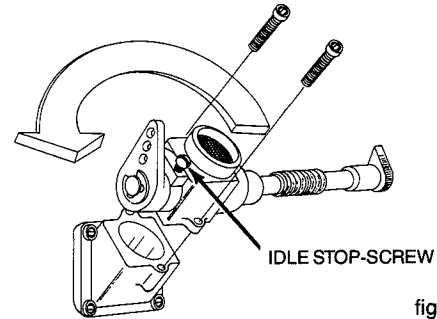


fig. 6

With the carburetor reversed the throttle control arm may have to be repositioned. To reposition the control arm:

1. Remove snap ring.
2. Pull control arm from barrel.
3. Replace the control arm, aligning it with the "flats" on the barrel nearest the desired position.
4. Replace snap ring.

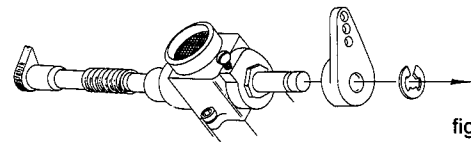


fig. 7

CAUTION: Note, that when you rotate the carburetor 180° the throttle direction will be reversed. That is, the high-speed (open) position of the throttle control arm will be towards the rear of the engine, opposite of step 4 in the starting instructions.

SPEEDS

The following speeds are typical of engines selected at random and run under average conditions.

PROPELLER	RPM
6" x 3P (152 x 76 mm)	17800
7" x 3.5P (178 x 89 mm)	13500

CARE INSTRUCTIONS

Because this engine runs very cool at idle, always run the engine at full speed for one or two minutes before shutting down. If the engine is shut down in the cool condition water condensation from the exhaust may cause the cylinder walls to rust. In addition, squirt a few drops of good quality lightweight oil (e.g. SAE 10, 3-in-1) in the carburetor venturi and flip the prop over several times.

- To further insure the performance and longevity of your QUEEN BEE a periodic cleaning is recommended. After several runs disassemble the engine and clean the components in fuel. Next, oil each of the components with a good quality light-weight oil and reassemble the engine. Keep the engine clean by wrapping it with a cloth during storage.
- If the engine gets dirt in it due to a crash, or otherwise, do not run it until it has been thoroughly cleaned. Take it apart, wash it, oil it, and reassemble.
- If, after a few runs, the engine seems to have tightened up, it is not defective. Do not return it to the factory. A new engine will sometimes tighten up, especially after a slow run.

This tightness is caused by shellac-like deposit on the Piston and Cylinder wall. To clean: remove the Cylinder Head and Cylinder, and scour the inside wall of the Cylinder using a bit of fine #000 or #0000 steel wool. Likewise clean the outer surface of the Piston.

Wash engine components thoroughly in fuel and reassemble. The engine will then turn over freely and run properly.

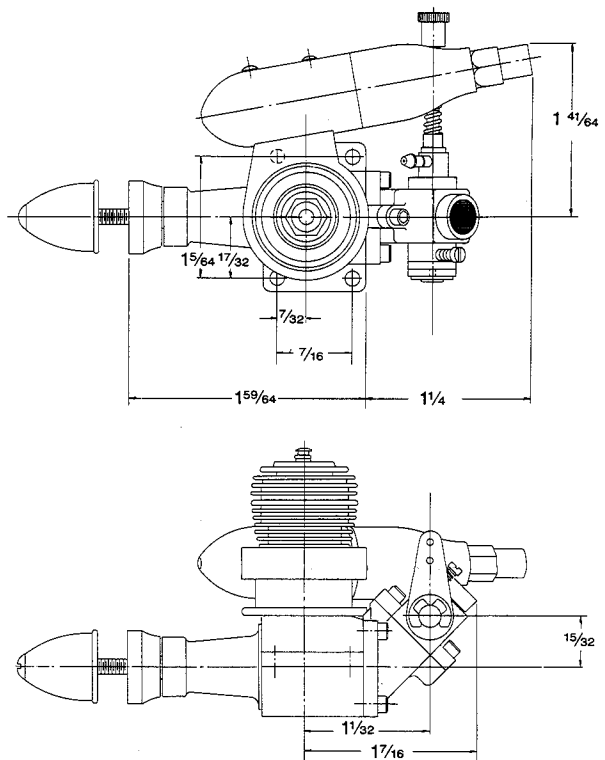
CAUTION: Never use sandpaper, emery cloth, scrapers, or abrasives of any kind to clean engine parts. Such will ruin the cylinder. Fine steel wool will not harm the bore.

Certain kinds of weather, especially warm humid (sticky) weather will cause excessive shellacking in a new cylinder. There is no known way to eliminate this nuisance, and the smoother the fit the more susceptible are the engine components to this condition.

- When removing the Glow Plug, allow the engine to cool first. The Glow Plug will loosen easier.

SPECIFICATIONS CHART

Weight: 3.986 oz. (113 grams)
 Bore: .463" in. (11.8 mm)
 Stroke: .439" in. (11.2 mm)
 Displacement: .07391 cu. in (1.21 cc)



TROUBLE SHOOTING

TROUBLE	POSSIBLE CAUSE	REMEDY
WILL NOT START—ACTS LIKE BATTERY WASN'T ATTACHED TO GLOW PLUG	Poor battery connection.	Check connections of wires to battery and check it to be sure clip is firmly and correctly attached to Glow Plug.
	Weak or dead battery	A good battery should test 1½ volts, or test battery by connecting it to a Glow Plug that is known to be good. If the filament does not glow bright orange, replace battery.
	Burned out Glow Plug	Remove Glow Plug. With a battery that tests 1½ volts attached to Glow Plug check for bright orange glow. If no glow appears, replace Glow Plug.
	Engine wasn't primed	Squirt a few drops of fuel on the intake screen then continue with starting procedure.
ENGINE POPS AND/OR "KICKS", WON'T START	Engine flooded, too much fuel in cylinder	Close needle valve 1 full turn and start again without priming), 4 or 5 starts may be required to clear engine.
	Loose propeller screw	Tighten propeller screw.
SHORT RUNNING "BURSTS" (BRIEF START, THEN STOP)	Engine not getting enough fuel (mixture too lean or tank empty)	Check tank fuel level-refill if necessary; or open needle valve another ½ turn, prime and start again. It may be necessary to repeat this procedure 3 or 4 times, opening the needle valve ½ turn each time.
ROUGH SOUNDING; ENGINE SLUGGISH, WEAK POWER	Loose head or glow plug.	Tighten Head or glow plug with wrench supplied with engine.

WARRANTY

This engine is guaranteed against defects in materials and workmanship for 90 days from date of purchase. Glow Plugs are NOT WARRANTED because they require periodic replacement. Should your engine require warranty service, please contact our Customer Service Department. Do not take engine back to your hobby dealer.

FACTORY REPAIR SERVICE

Minor repair, examination, or adjustments - \$4.00 plus parts.
Complete overhaul, new engine performance guaranteed: \$30.00 This price includes 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 thru Friday.

We have listed those items which are most likely to require replacement during the life of this product. We have also included an exploded assembly drawing which identifies all replacement items available.

ENGINE REPLACEMENT PARTS

REF NO.	CAT. NO.	DESCRIPTION	PRICE
1	3703	Cylinder Head & Gasket	3.50
2	3775	Cylinder, Piston & Rod	12.95
3	3779	Crankcase, crankshaft & drive plate assembly	21.90
4	3711	Reed Assembly	3.65
5	3724	Carburetor Body Complete	16.65
6	3709	Needle Valve Assembly	1.60
7	3767	Muffler Assembly	12.00
8	3702	Glow Plug & Gasket	4.00
9	249	Propeller 6" x 3P	1.55
10	3718	Spinner & Prop Screw	1.95
-	3762	Overhaul Kit (reed Valve, retainer, gaskets and screws)	2.15
ACCESSORIES			
-	22131	Glow Head / Cylinder Wrench	2.45
-	7556	Glow Plug Clip with Wires	1.90
-	400	Basic Starting Kit	12.25
-	3785	Engine Mount	5.80

Prices subject to change without notice.

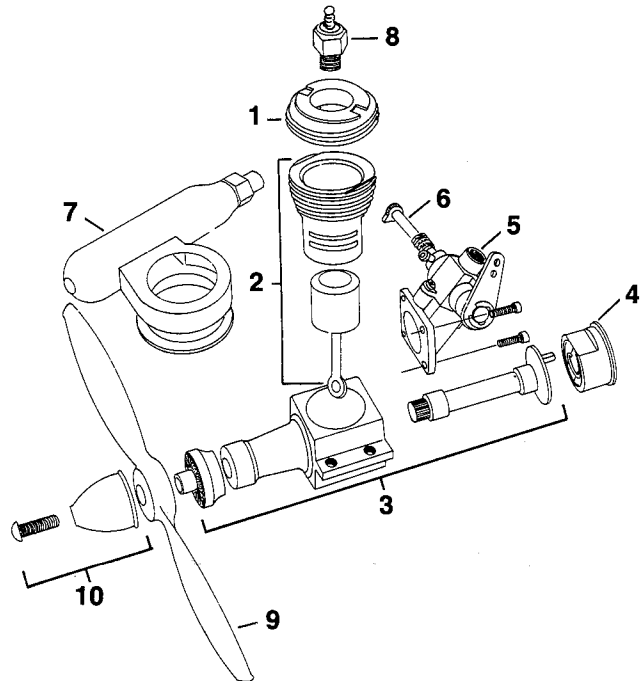
©1994, COX PRODUCTS, INC. Litho in U.S.A. R2-5/94
PART NO. 3701310

ORDERING INSTRUCTIONS

You may order parts from Cox by telephone or mail. Orders may be charged to your Visa or Mastercard. For credit card order give the following information: name, card number and expiration date. For other orders please send a check or money order made payable to Cox Products for the full amount including the following postage and handling

TOTAL PARTS COST	POSTAGE & HANDLING
Orders from	
\$0.01 to \$5.00	\$1.00
5.01 to 10.00	2.50
10.01 to 20.00	3.50
20.01 to 30.00	5.00
30.01 to 40.00	6.00
40.01 up	7.00

All international orders \$5.00 additional.
CA residents only add state sales tax.
No C.O.D. orders accepted. Telephone orders by Visa or Mastercard only.



FOR QUESTIONS REGARDING YOUR COX PRODUCTS
CALL THE COX COURTESY LINE TOLL FREE 800/451-0339



Cox Customer Service Department
350 West Rincon Street
Corona, CA 91720
Open 8:00 AM until 4:30 PM Pacific Time
Monday through Friday
800/451-0339