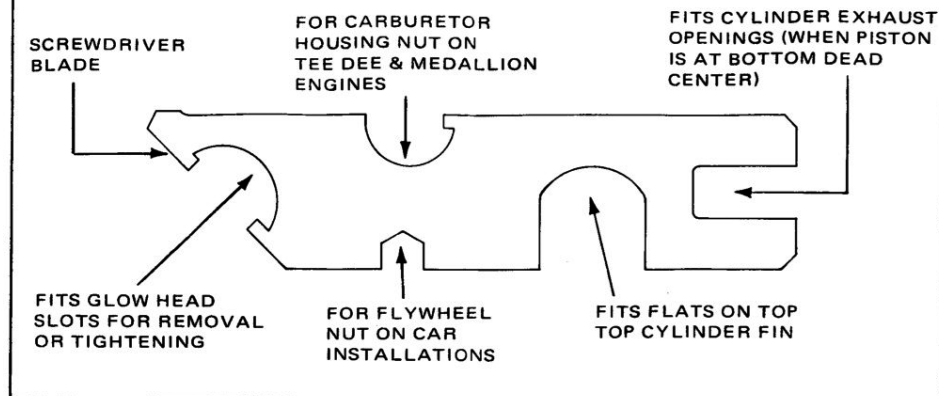


HOW TO USE YOUR COX WRENCH



LIMITED WARRANTY

Your Cox Engine (except glow head) is guaranteed against defects in material and workmanship for a period of ninety (90) days from the date of purchase. Glow heads are not guaranteed because of their delicate nature. THIS IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS.

The entire engine must be returned to factory for replacement or service under this guarantee. Include \$1.00 to cover cost of handling and return postage.

In requesting warranty service the date of purchase and dealer's name and address must be included with your request.

FACTORY REPAIR SERVICE

Minor repairs, examinations, or adjustments — \$2.50 plus parts. Complete overhaul (guaranteed new engine performance) — \$6.50, including parts. On all C.O.D. shipments, purchaser pays postage and C.O.D. fees.

PARTS ORDERS

Purchase parts from your dealer. If not available order direct from factory. No C.O.D.'s please. Send remittance with your order. On orders less than \$2.00 add 50% handling charge. California residents, enclose applicable state sales tax.

Price and design of parts subject to change without notice.

CAT. NO.	DESCRIPTION	LIST PRICE EACH
1702	Glow head & gasket (6/cd.)	1.25
309	Needle valve & spring	1.00
1299	Overhaul kit (reed, retainer, gasket, screw set, prop screw & venturi gasket)	1.25
1465	Cylinder, piston & rod	3.50
379	Crankcase, crankshaft & drive plate	3.50
1764	Tank front & back, tube spring & venturi gasket	4.25
1774	Spinner set (spinner prop screw)	.75



COX HOBBIES

a division of LEISURE DYNAMICS, INC.
1525 East Warner Avenue
Santa Ana, California 92702

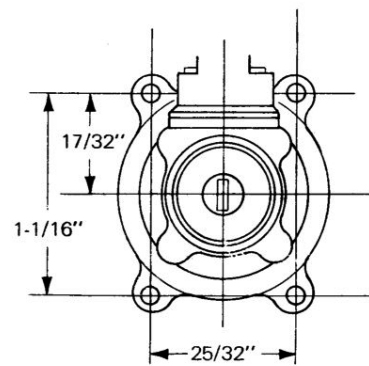
CARE AND OPERATION OF YOUR



Most QRC engines will develop full power within a few minutes of running time. Some may take 10-15 minutes. Even these will develop sufficient power for average flying almost immediately.

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 template to drill mounting holes.

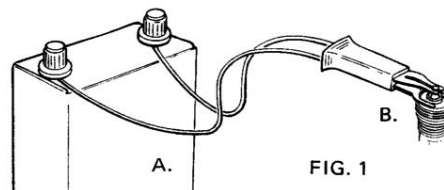


TEMPLATE FOR MOUNTING ENGINE

2. For best results use a Cox 6" diameter x 3" pitch propeller (Cat. No. 244). If you prefer a wood propeller it must be balanced. This is very essential for good performance.

3. Place propeller on the shaft with the flat side of the blades toward engine and lock securely with the propeller screw.

4. Procure a 1½ volt Cox dry cell battery, or equivalent, and connect it with 2 flexible insulated wires to the glow plug clip as shown in the diagram A and B — Fig. 1. Do not use a battery with higher voltage. If you do, the plug will burn out. Be sure the battery is a good one. Your hobby dealer sells batteries and glow plug clips. The Cox glow plug clip (Cat. No. 755-6) with plastic grip and wires attached is recommended and requires no soldering.



STARTING AND RUNNING YOUR ENGINE

1. Study instructions then follow through without delay to avoid flooding. A flooded engine will not start easily.

2. Close needle valve (don't force or tighten) then open 2½ turns.

3. Use Cox Glow Fuel. Fill through filler tube on top of tank till fuel overflows other tube. Use neoprene or plastic hose and attach to filler spout in top of Cox Glow Fuel can. Never use a squeeze bulb or other pressure source.

4. Rotate muffler spring until opening on muffler housing is exposed. Rotate prop until piston closes off exhaust ports. Hold airplane VERTICALLY and place 4 or 5 drops of fuel at cylinder exhaust ports. Flip prop over 3 or 4 times.

5. Connect 1½ volt battery to glow head. Place end of spring starter over prop. Hold prop tip with thumb and first finger. Wind prop backwards ONE turn — then release. If engine runs for a short time and stops remove battery clip, prime it again as per Section No. 4, and re-attach battery clip. When engine start it will be running quite slowly. Screw needle valve clockwise to lean mixture and increase RPM.

6. After engine is running and will hold top RPM rotate muffler spring to completely cover exhaust opening. Disconnect glow head clip and make final adjustment on needle valve for maximum RPM.

TIPS ON RUNNING YOUR QRC .049 ENGINE

The QRC engine, when new, runs somewhat hotter than a non-muffled engine. To help compensate for this, all QRC engines are shipped with three head gaskets in order to lower the compression ratio during break-in runs. After your engine is broken in and will hold peak R.P.M. for a full tank full, without sagging, these may be removed one at a time until just one remains.

In cool weather additional power can be obtained by using Cox Racing Fuel (red can). But when the temperature is above 60 degrees best performance will be achieved with regular Cox Glow Fuel (blue can).

It is possible to start the QRC .049 with the muffler spring completely covering the exhaust area. However, you will have to open it to prime the engine. After priming, close it and start in the normal manner. When engine is hot, it will start with muffler spring in closed position WITHOUT priming.

The QRC .049 engine will run backwards as well as forward. This is characteristic of a reed valve engine and does not denote a faulty engine. Reed valving is used because it contributes to easy starting. Should the engine start backwards, simply close the needle valve to stop it, then open the needle valve 2½ turns and restart.

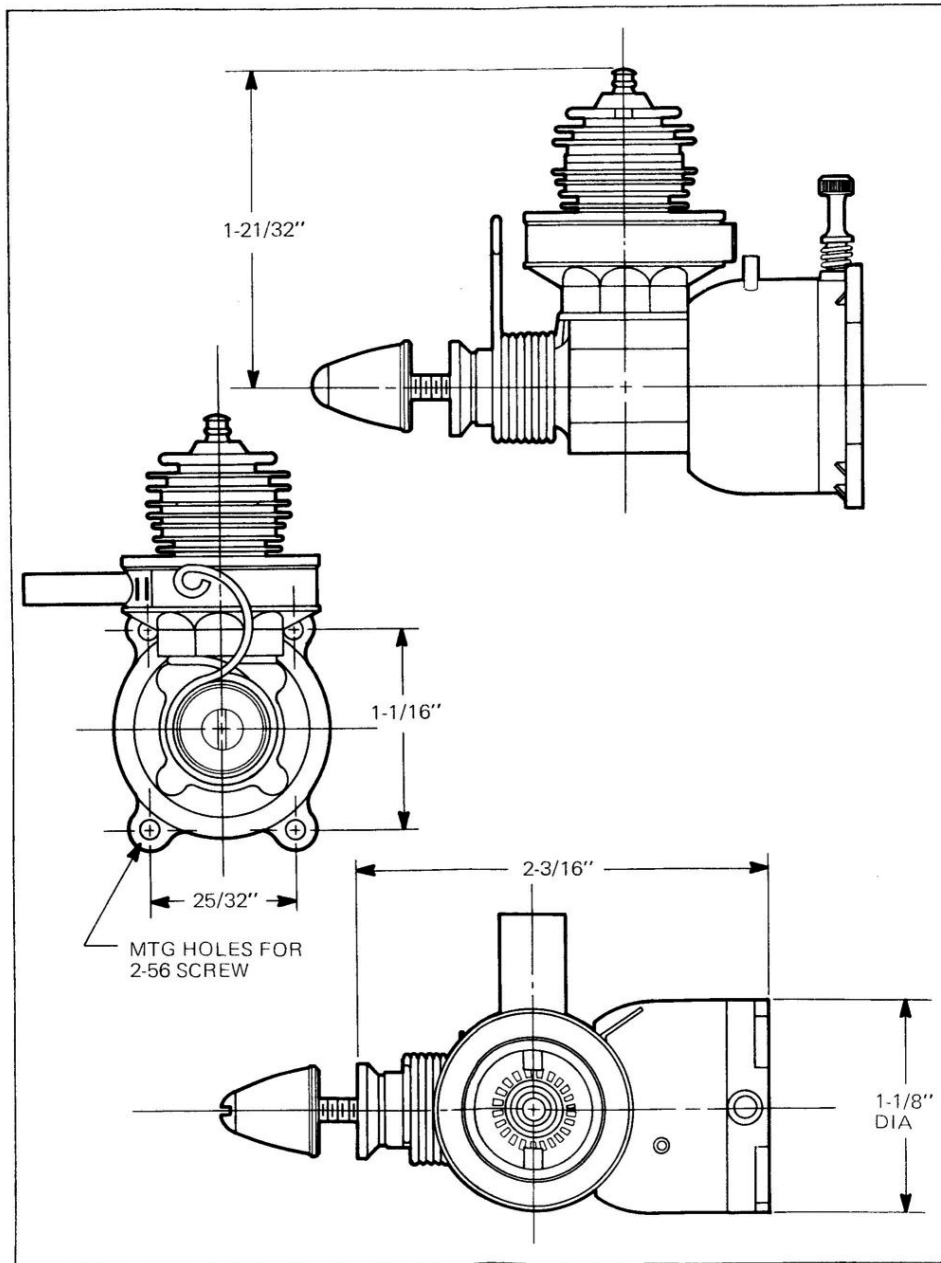
Never put plane away with fuel in tank (run

engine until tank is empty). Fuel left in tank will become thick and clog engine, fuel line, or tank. If engine is clogged, priming and starting may be required as many as ten times before fuel will flow properly. If fuel will not flow, remove needle valve. Using a pressure nozzle or a piece of small hose, blow into the needle valve hole to force out congealed castor oil left from previous running. If engine remains clogged and will not run, either disassemble and clean or return it for

factory repair (see back page).

Never leave fuel continuously exposed to air or sun as it will evaporate and thicken and cannot be used

The end of the fuel pick-up hose that is inside the fuel tank should be positioned to the bottom of the tank. If the hose is not in this position, it cannot pick up all the fuel in the tank and the engine will stop prematurely.



TROUBLE SHOOTING CHART

TROUBLE	PROBABLE CAUSE	REMEDY
WILL NOT START – ACTS LIKE BATTERY WASN'T ATTACHED TO GLOW HEAD.	Poor battery connection	Check connections of wires to battery and check to be sure clip is firmly and correctly attached to glow head.
	Weak or dead battery	A good battery should test 1½ volts or connect battery to a glow head that is known to be good. If glow head filament does not glow bright orange - replace battery.
	Burned out glow head	With a battery that tests 1½ volts connected to glow head, check for bright orange reflection on top of piston seen through exhaust port. If no glow appears, replace glow head.
	Engine wasn't primed	Squirt a few drops of fuel through exhaust port and onto side of piston then continue with starting procedure.
	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.
ENGINE POPS AND/OR "KICKS" – WON'T START.	Loose propeller screw	Tighten propeller screw.
ENGINE STIFF, PROPELLER TURNS HARD OR "KICKS"	Engine flooded, too much fuel in cylinder	Close needle-valve completely. Leave battery attached and turn propeller (without priming) until short starting "burst" occurs. Then open needle-valve 2½ turns, prime and start again.
SHORT RUNNING "BURST" (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 Glow Head	Tighten Glow Head with wrench supplied.