



**WESTERN
OREGON
CONTROL
LINE
FLYERS**

THE WOLF CALL

July - December 2021

**ACADEMY OF MODEL AERONAUTICS
CHARTER CLUB #3464**

Upcoming Area Events

January 1st

Portland Fun Fly

The "WOLF CALL" is the newsletter for the Western Oregon Control Line Flyers. WOLF members fly at the Bill Riegel Model Airpark facility at the Salem Airport.

WOLF membership is not required to utilize the facility, but fliers should be A.M.A. members. If you are not a WOLF club member, please consider joining us to help support control line model aviation activity in our area.

WOLF CLUB OFFICERS:

President: Craig Bartlett

Vice-President: Dean Singleton

Secretary-Treasurer: Mike Hazel

Safety Officer: John Thompson

Newsletter: Mike Hazel

For the latest Northwest Control Line news go to:
flyinglines.org

Miscellaneous Ramblings from Ye Olde Editor

"Greetings All! Here is another overdue newsletter for you to enjoy."

The above is lifted from the last issue that came out in June. Looks like I have now set a new record in being overdue. Where did the time go? Did I fall into a time warp or some weird thing?

A number of events have transpired since the last issue, but instead of printing really old news here, I would encourage you to visit the flyinglines website. I suspect most of you already have in seeking out contest results and news, etc.

The Oregon Flying Fun series returns for 2022! A flyer is included in this issue, along with any other relevant event dates.

Please give a hearty WOLF welcome to Gary Weems, who recently joined our club. Gary hails from the Hwy 99W community of Monroe, and is also an active flier with the Eugene Propspinnners club. Welcome Gary!

Well we are just about done with 2021, which means club dues are due for 2022. A form is included in this issue for renewals if you care to use it. Otherwise, just please report any changes to the membership department, thanks!

We will most likely try and get an AGM (annual general meeting) for sometime in January, most likely towards to the end of the month. A notice will go out right away when that is settled.

In the meantime, following are a few purloined pages from other publications for your perusal. See you in Portland!

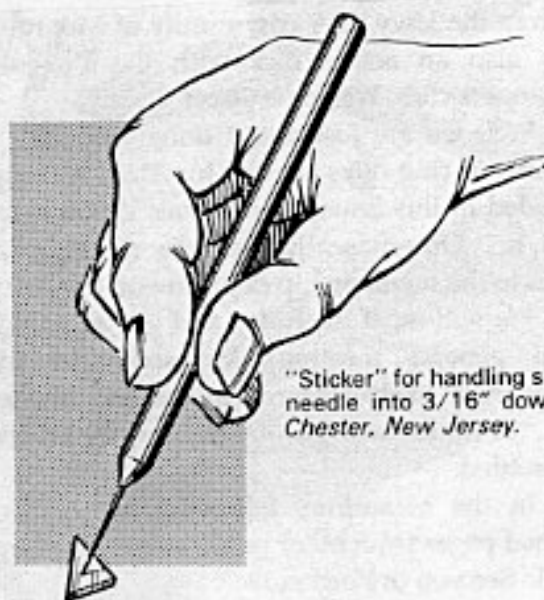
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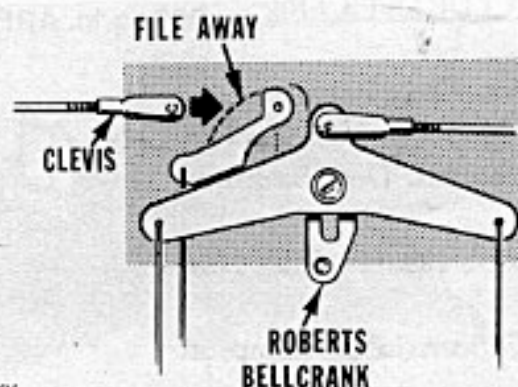
WOLF / Northwest Control Line Calendar 2022

January 1	Oregon Flying Fun #1, Delta Park, Portland
January ??	WOLF Annual General Meeting (details tentative)
February 5	Oregon Flying Fun #2, Roseburg
March 5	Oregon Flying Fun #3, Salem
March 19	McMinnville Aircraft Modelers Swap Meet, McMinnville
April 22 - 24	NW Fireballs Jim Walker Meet, Portland (details tentative)
April 30	Oregon Flying Fun #4, Eugene
May 27 - 29	Northwest Control Line Regionals, Roseburg
July 17 - 22	AMA Control Line Nationals, Muncie, Indiana

For details and confirmations go to flyinglines.org "where the action is" section



"Sticker" for handling small parts. Epoxy needle into 3/16" dowel. *George Polk, Chester, New Jersey.*



Filing away Roberts throttle crank allows adjustable clevis on throttle rod without hang-ups on crank. (Throttle arm needs little strength.) *Joe DeMarco, Oceanport, New Jersey.*

Northwest Fireballs, Western Oregon Control-Line Flyers, Eugene Prop Spinners and
Roseburg area CL fliers present ...

Oregon Flying Fun!

Four control-line fun-fly events

Everyone invited — No entry fee! 10 a.m.-3 p.m.

If the weather is bad, go to the alternate site listed for "hangar flying" socialization!
(Check the listed cell number for last-minute updates.)

Saturday, Jan. 1 at East Delta Park, Portland

Lunch provided, plus coffee and doughnuts

Bad weather: Shari's at Delta Park, 9730 N. Whitaker Road; cell 503-894-4443

Info: Northwest Fireballs, Don Curry, 503-894-4443

Saturday, Feb. 5 at Church on the Rise, Roseburg

Bad weather: Elmer's restaurant at I-5 Exit 125; cell 541-537-0061

Info: Dave Shrum, 541-672-8893

Saturday, March 5 at Bill Riegel Model Airpark, Salem

Bad weather: Flight Deck restaurant, 1 block south of the flying field; cell 503-871-1057

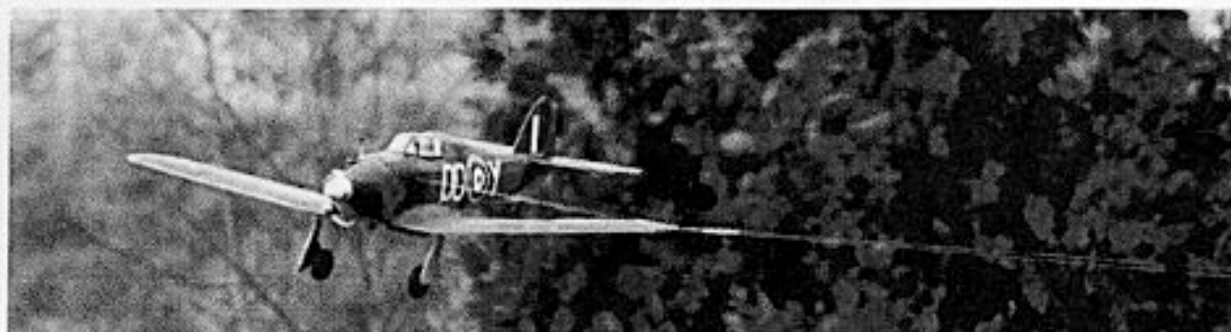
Info: WOLF: Mike Hazel, 503-871-1057

Saturday, April 30 at Can Do Ranch, Junction City

Bad weather: Elmer's, 1036 Valley River Way, Eugene; cell 541-554-8848

Info: Eugene Prop Spinners, John Thompson, 541-689-5553

- Bring any and all airplanes ... do any kind of flying! • Every flight is an entry in the "flying raffle." • Flying raffle prizes will be awarded after a drawing
- Come to *all four* fun-flies and support *four* great Oregon CL flying groups!
Academy of Model Aeronautics membership required



Directions to flying sites:

Portland

The flying site is in the northwest corner of East Delta Park. Take the Marine Drive exit from Interstate 5 and follow the signs to Delta Park.

Roseburg

Church on the Rise is at 3500 N.E. Diamond Lake Blvd. Turn into the church driveway, drive past the church up the hill behind the recreation center building.

Salem

Bill Riegel Model Airpark is at the Salem Airport. Take Interstate 5 Exit 253, head west on Mission Street Southeast and turn left on 25th St. S.E.; the flying field is at the airport terminal on the left.

Eugene

Can Do Ranch is on Milliron Road, which intersects Highway 99 between Eugene and Junction City. Head west on Milliron Road from the Highway 99 stoplight; the flying field is the third driveway on the left.

Here's some holiday frivolity!

The following piece was written by Bob Cheney of the Minneapolis Piston Poppers.

AIRPLANE CHRISTMAS

'Twas the night before Christmas and
all through the shop,
Not a spinner was spinning not even a
prop.

The planes were all hung by their tails
with care,

In hopes that another model would
soon be there.

The pilots were all safe and snug in
their beds,

While thoughts of flying danced in
their heads.

When all of a sudden there arose such a
chatter,

I jumped from my bed to see what was
the matter

I flew to the window and threw up the
sash.

OH! WHAT A SIGHT! As I saw him
landing on the grass,

There he was jolly old St Nick in a
Legacy made from balsa sticks.

In the cockpit sat Santa with his beard
of white,

While the reindeer flew in behind him
with a sleigh filled just right.

He brought models and motors of
every size,

He even had control-lines coiled up by
their sides.

He had tools and gadgets of every kind
just what a modeler always wants to
find.

As he roared away later that night,
I heard him say as he was passing
through the Christmas lights.

Have fun flying again and again with
family and with friends.

And here's some more.....

The Cox 12 Days of Christmas

On the first day of Christmas

My true love gave to me,

A Sportsman in a pear tree.

(To make a long story short:)

[Verse 12]

On the 12th day of Christmas my true
love sent to me

12 Venoms screaming

11 Conquests piping

10 Spooks a-needling

Nine Medallions rev'ing

Eight Tee Dees racing

Seven Black Widows singing

Six Surestarts flying

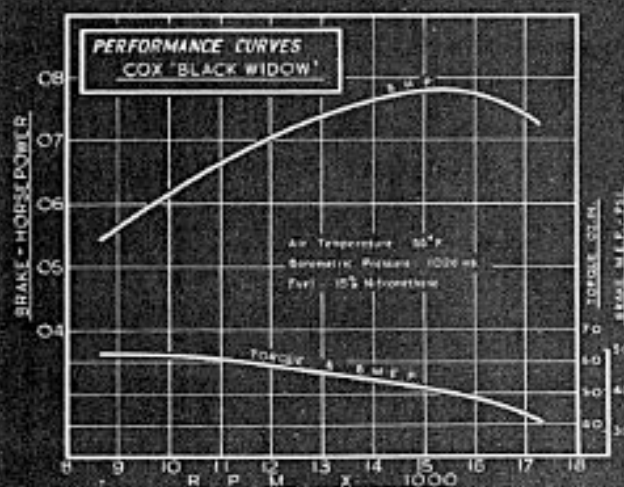
Five Golden Bees

Four Strato Bugs

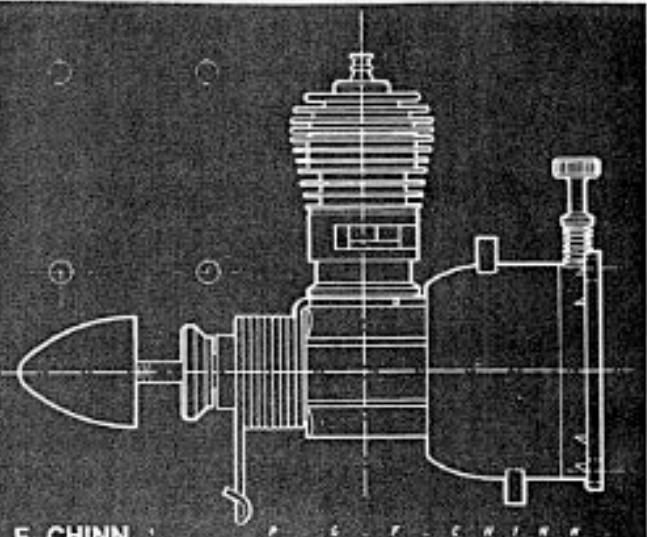
Three Pee Wees

Two RR1's, and

A Sportsman in a pear tree

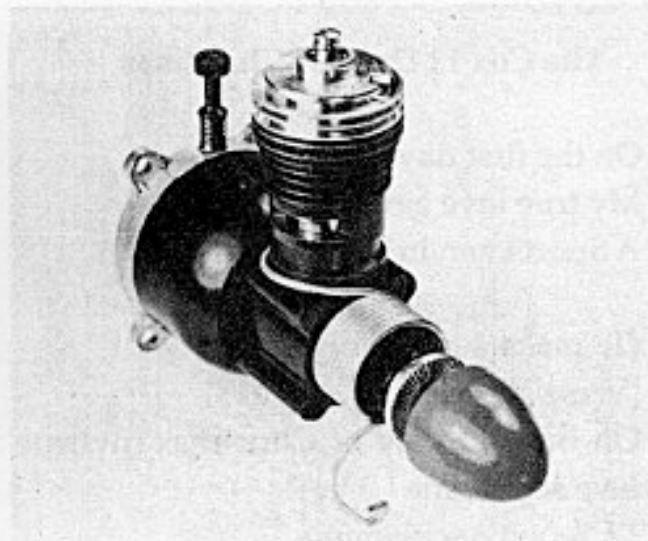


BY PETER G. F. CHINN

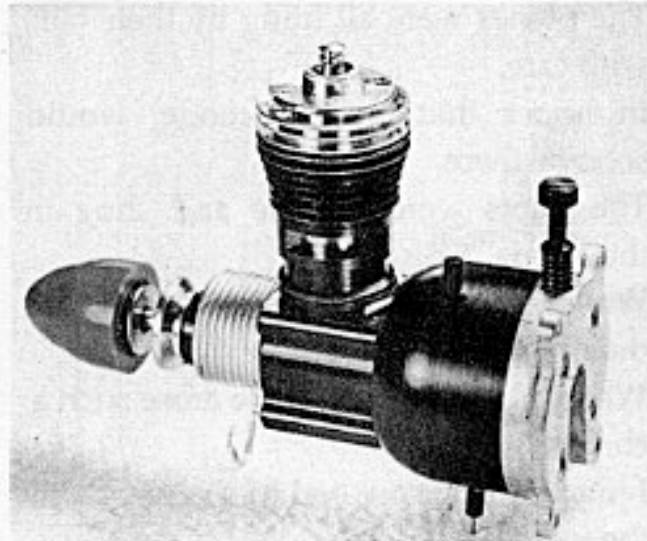


ENGINE REVIEW I

Cox "Black Widow"



Both ingenuity of design and precision in manufacture have long been hallmarks of Cox engines and these qualities are still evident in this latest model.



The large fuel tank, pictured above, has full length ventfilter tubes and is particularly suitable for both Stunt and Combat Control Line flying.

Run-down on the latest and most powerful variant of a motor that has been produced in larger number than any model engine anywhere in the world.

• Today, any newcomer to the model aircraft scene visiting a Radio Control club flying field might well suppose that all model engines are either .40's or .60's. In fact, the most popular motor in terms of actual number manufactured is the tiny Half-A .049 cu.in. size.

It is a safe bet that more 049's have been produced during the past twenty years than all other sizes added together. Admittedly, a large proportion of the many thousands of 049's manufactured every week go straight into plastic ready-built models produced for the toy market, but these little power plants are, nonetheless, real model engines and some are made to very high standards of precision.

Unquestionably, the world's leader in the production of really small engines is the L. M. Cox Manufacturing Company, Inc. of

Santa Ana, California. This firm, started in a small way by Leroy M. Cox, thirty years ago, first caught the attention of model airplane enthusiasts in 1952-53 after the introduction of the original Space-Bug and



Design is based on Cox Bee series; has twin-by-pass cylinder for extra power; black case and tank.

Thermal-Hopper 049 engines. These motors stood head and shoulders above their contemporaries for performance, originality of design and quality of construction. They were very easy to start and much more powerful than any other motor of similar displacement. They employed such unusual (at the time) design features as reed-valve induction, twin diametrically-opposed exhaust ports with twin opposed internal bypass flutes, peripheral jet carburetors with built-in air intake filters, a ball-and-socket piston/conrod joint, and a screw-in replaceable cylinder-head with integral glow filament.

During the sixties, the Cox company began producing their Tee-Dee range of high-performance rotary-valve engines, including the powerful Tee-Dee .15 (now dis-

(Continued on page 74)

Engine Review I

(Continued from page 20)

continued). .09 and .049 (still the most powerful motors in their displacement classes) and the minute Tee-Dee .010, the smallest factory-built internal-combustion engine ever made weighing less than half an ounce. In addition, small R/C and sport type Cox engines have been available in the shape of the Cox Medallion series shaft-valve motors of .049, .09 and .15 cu.in. displacement. Most of these have been dealt with in past M.A.N. "Engine Review" articles.

The mainstay of Cox production for many years, however, has been the Babe Bee 049 reed-valve engine and its derivatives, including the Golden Bee, the QZ and the Black Widow, the latest addition to the series.

The Black Widow, while not as powerful as the more expensive Tee-Dee 049 rotary-valve contest engine, is the top performer in the reed-valve 049 group, and it is this motor that has been chosen for our present report.

Outwardly, the point that most readily distinguishes the Black Widow from the Babe Bee and Golden Bee is the black finish of its crankcase and fuel tank, replacing the natural aluminum color of the Babe Bee and gold anodized finish of the Golden Bee. However, the real differences go deeper than this.

First, the crankcase nose has been changed. Instead of tapering in a curve to a smaller outside diameter at the front end, its o.d. (0.40 in.) is the same over its entire length. Second, the Black Widow reverts to the standard Cox No. 1 type cylinder with twin bypass flutes and twin full-depth exhaust ports. The ports in this cylinder are basically the same as those featured in the earlier Cox high-performance 049's and later used (with modified bypass flutes) by the Tee-Dee. The Bee and Medallion 049's, by contrast, use a single bypass (No. 2) cylinder, while the QZ cylinder (No. 6) has shallower exhaust ports to eliminate the sub-piston supplementary air induction period and enable a muffler to be used. The glowhead, on the other hand, is the standard hemispherical sport pattern used by the Bee engines, as distinct from the high-performance trumpet pattern made for the Tee-Dee and also standardized on the QZ.

In most other respects, the design and construction of the Black Widow follow that of the Bee engines. The crankshaft is of hardened steel with a machined-in crescent counterbalance and a 7/64 in. diameter crankpin. It is relieved in the center to form two separate journals, fore and aft, of 7/32 in. o.d., which are highly finished and run directly in the crankcase material. The bearing has a shallow, longitudinal oil groove to ensure that adequate lubrication reaches the front end.

Ahead of the bearing, the shaft terminates in a short knurled length onto which the machined aluminum prop driver is pressed and is drilled and tapped for a separate prop stud. This has a 5-40 UNC thread at each end, the outer end being fitted with a special aluminum nut which, in addition to retaining the prop, serves as a mounting hub for a soft plastic push-on safety spinner.

Rather than the now more common arrangement of a cast-iron piston running in a hard-surfaced cylinder, the Black Widow, like other Cox engines, uses the reverse procedure of a case-hardened steel piston and non-hardened steel cylinder. Only the outer surface of the piston skirt for Control Line Sport or Stunt should be about right.

As supplied, the Black Widow is set up for C/L use, since the fuel pick-up is located (by means of a thin, wood strip) on the right side of the tank in order to match the effects of centrifugal force when the model is flying a normal counter-clockwise C/L circuit or performing aerobatics. If used for other than C/L, therefore, it will usually be more appropriate to relocate the fuel pick-up to a lower position in the tank.

The maximum power output recorded with the Black Widow was close to .08 bhp which is very good for what is basically a sport type .049 running on 15 percent nitro. The engine was at its best when turning at speeds around its peak output revolutions—i.e., 15,000 to 16,000 rpm—and ran very evenly with no loss of revs as it warmed up. If loaded for lower speeds, it was a little less steady but it still had plenty of pulling power, as the torque curve indicates, and we can envisage a situation where this could be very useful: for ex-

ample, our motor turned a 7 x 3 Top Flite wood at just over 12,000 and this could be a useful combination for an R/C glider power-pod.

A normal hand-start was usually obtained without trouble but, for consistency, we found it best to use the starter spring. A fuel prime through the exhaust port was essential for cold starting, and unless the engine was being immediately re-started hot, priming was also found helpful when the engine was still warm.

The Black Widow is not suitable for use with the Cox muffler, and a better choice of engine, where noisy models are unwelcome or prohibited, would therefore be the Cox QZ (Quiet Zone) 049. This comes complete with Cox muffler for which it was especially designed. The Black Widow, however, has a substantial edge in power over all other current reed-valve Cox 049's and is the obvious choice for the open spaces. It is a welcome addition to the range.

Summary of Data

Type: Single-cylinder opposed-port two-stroke cycle with reed-valve induction, plain bearings and integral fuel tank.

Checked Weight: 2.26 oz.

Displacement: .04997 cu.in. or 0.8189 c.c.

Bore: 0.406 in.

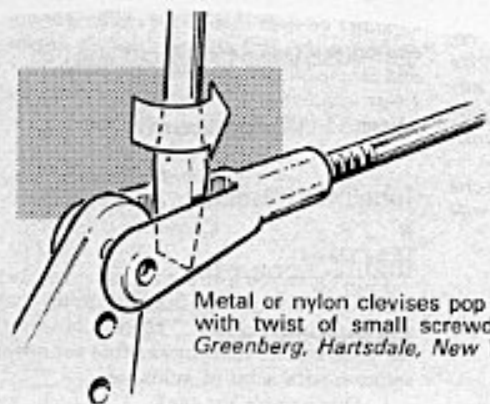
Stroke: 0.386 in.

Stroke/Bore Ratio: 0.951:1

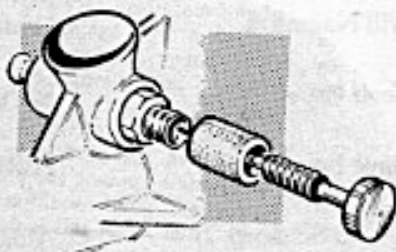
Specific Output (as tested): 1.56 bhp/cu.in.

Power/Weight Ratio (as tested): 0.55 bhp/lb.

Manufacturer: L. M. Cox Manufacturing Co., Inc., 1505 East Warner Avenue, Santa Ana, California 92705.



Metal or nylon clevises pop open easily with twist of small screwdriver. Mark Greenberg, Hartsdale, New York.



Short piece of surgical rubber fuel tube is excellent substitute for that lost needle-valve spring. Robert Veach, Chicago, Illinois.



Neat soldering iron rest from coat hanger wire and tin lid. Stan Bidowski, Winnipeg, Manitoba.

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Please notify the editor of any changes!



**WESTERN
OREGON
CONTROL
LINE
FLYERS**

WOLF
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WOLF MEMBERSHIP FORM 2022 (NEW OR RENEWAL)

Membership Categories:	Adult	\$25 year
	Youth	\$5 year
	Family	\$40 year

Name (s)

D.O.B.

A.M.A. Number

Mailing Address:

Phone Number:

E-Mail:

