

LOOK OUT



Beware of Failure on 4 Pipe Exhaust Systems

Dick Kreidel - A note on 4 - tube exhaust systems: I designed and built 3 of these patterned after Mike Melvill's. I have one with over 600 hours on it, Sid Stiber has one with over 300 hours on it, and Sam Kreidel has a third with 170 hours on his IO-360. None of these systems has had any failure. Mike's, Doug Shane's (Scaled EZ driver), and our 3 all have Brock ball joints in each pipe. I'm convinced that these are essential unless you use the Sport Flight "spring" type of connector to decouple the vibration. I have seen several other type systems that work OK for a while and then fail, sometimes **through the prop !!**

Even Dave Ronnenberg had one of these fail on his Berkut at Oshkosh this year! Unfortunately, I don't know of any one that builds these exhaust systems with the ball joints. I can attest that the work required to build one of these systems with the ball joints is not a trivial task. The angles for the cuts and miters to keep it inside the cowl mold lines are tough to work out.

Maybe somebody will offer such a setup. Perhaps Hal Hunt can be persuaded to offer the ball joints as an option. I would consider the ball joint option mandatory, however.

Editor note: Dick speaks with a great deal of experience. His Long-EZ has over 1,670 hours on it and has been flying since July of 1983. He was founder of Long-EZ Squadron #1 in 1981 and has seen lots of EZs. If he says a vibration de-coupling joint is needed to prevent failure, I believe it.

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Propeller Blade Protractor

I just received a propeller protractor from Warp Drive, maker of composite 2, 3, and 4 blade ground adjustable pitch props. This protractor unit was developed by Warp Drive to check blade angle of variable pitch propellers while installed on the airplane. It could also be used to check blade angles on fixed pitch propellers.

Are you having excessive vibration with your prop and think your prop is in balance? Perhaps your blades don't have the same angles at all stations. Consistent pitch from blade to blade is imperative for smooth performance. This unit makes it possible to take a survey of the blade angles on your prop like a pro.

My brother had a prop on his Cassutt that he thought was OK except for a little vibration. He checked the blade angles and found that some stations had up to a 5 degree difference from one blade to another. Your prop might be a victim of this also.

If you wish to borrow this protractor send me a note and I'll send it right out. Please keep the loan time to a week and you'll be responsible for postage both ways.

Tool collectors who must have their own to caress and fondle may call Warp Drive free at 1-800-833-9357. Before you pay your \$35 you might wish to try this one out, however.

They also have an interesting looking stainless steel leading edge kit to be applied to "just about any propeller". The cost is \$7 per blade.

Great Quotes

"As soon as the stewardess serves the coffee, the airliner encounters turbulence"

Roger's Law

Explanation of Roger's Law:

Serving coffee on aircraft causes turbulence.

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