

INFINITY Aerospace

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March 22, 1996

Terry Schubert, Editor
Central States Association
9283 Lindbergh Blvd.
Olmsted, OH 44138-2407

Hi Terry,

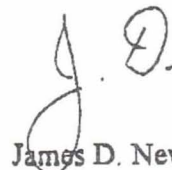
Enclosed is the letter I called you about on March 15th. I hope and believe there is space for this letter to be published in it's entirety, or it will lose it's informative value and purpose.

As I mentioned on the phone, I will be very happy to pay any additional expenses incurred to put these three pages into the newsletter. Just let me know.

If you have any questions, please call.

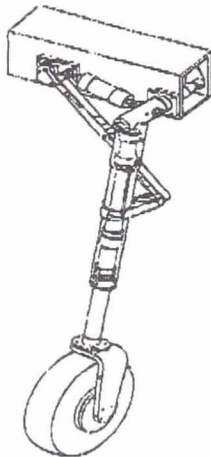
Thank you again very much for your support.

Infinity's Forever,



James D. Newman, President
LCDR F-14 USNR

EAA Member
EAA Technical Counselor
EAA Flight Advisor
AOPA Member
Test Pilot



Remember, there are 3 kinds of aircraft: Infinity's, Fighters and Targets. There are 3 kinds of aircraft: Infinity's, Fighters and Targets. Remember, there are 3 kinds of aircraft: Infinity's, Fighters and Targets.

James J. Foster
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Phone: (847) 998-1892
March 12, 1996

Central States Association
C/O Terry Schubert
9283 Lindbergh Boulevard
Olmsted Falls, Ohio 44138-2407

Dear Terry;

Enjoyed, as always, the January issue of the newsletter. I'd like to comment on the article by David Orr on gear retract systems.

I was disappointed by the comments regarding J.D. Newman. There is no place for repeating hearsay and conjecture in an article weighing the merits of RG systems (if anywhere). Unsubstantiated statements that undermine the entrepreneurs in our sport do us all a disservice. We should encourage new designs and then let the market decide if the developer correctly interpreted its desires.

J.D. Newman's Infinity 1 has taken a lot longer to develop than anticipated. He has been hampered by the same thing that causes many of us problems - cash flow. He is however, dedicated to the project. The molds are essentially done and a kit built prototype aircraft will be flying soon.

The Infinity Aerospace landing gear is a rigorously engineered, elegantly designed, and beautifully executed product. Loads on the spar have been evaluated with the conclusion that aerodynamic loads far exceed those of the gear.

"Don't change my plane" is a common refrain of designers. Part of that may be concern over liability; I'm sure much is ego. I'm certain the real message of a designer's "dis-endorsement" is often, "Gee, why didn't I think of that?". It would probably have been a bigger surprise if E-racer and Cozy recommended the gear. Those people might remember that the biggest opponent of design modifications was Burt Rutan.

Let's work toward elevating the science, and art of the canard pusher designs. Criticism is fine, but keep it constructive and fair.

Regards,

Jim Foster



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March 22, 1996

Terry Schubert, Editor
 Central States Association
 9283 Lindbergh Blvd.
 Olmsted, OH 44138-2407

Hi Terry,

I think it is about time we squelched the few self appointed experts, criticasters, rumor mongers, malevolent, mendacious, polytroom people, and their followers out there, who don't bother to call us for the facts, who have an ax to grind with us for whatever reason and intentionally attempt to confuse the public concerning our Retractable Main Landing Gear, our other products, our business, myself; and correct other historical events.

I apologize if this letter may come across a little blunt and on the long side, but we are tired of the misinformation floating around out there and wish to un-confuse people, therefore the following:

Concerning Mr. Dave Orr, Esquire's (of whom I barely know), letter in the Jan '96 CSA newsletter, I thought his discussion was supposed to be about EZ Retracts?

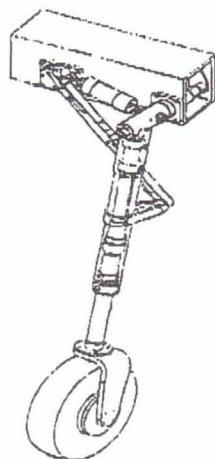
In 1982, I originally wanted a Long-EZ, but at 6' 6" and 245 lbs., I didn't fit very well. So, I became particularly interested in building upon Mr. Rutan's concept and developing an original, fast, heavy hauler tandem canard with tricycle oleo strut retracts that would fit people my size. Anyway . . . from 1984 to 1987 I was a member of the Santa Monica EZ group. During that time frame, I sometimes stood up, like any other builder, and talked about retracts, my *Infinity 1*, and how to make an *Infinity 1* type, larger fuselage for anyone's Long-EZ. I stopped the latter because of all the design problems of lengthening the Long-EZ fuselage without changing a few things. To Mr. Orr, and anyone else, who feels like I lectured them, I apologize. I didn't intend to lecture and I'm sorry my comments or presence threatened anyone.

In the editorial section of his article, Mr. Orr states, "Newman's prototype was built by another builder and leased back to Newman. He crashed the prototype, en route to OSH and then, I'm told, sued the owner for not supplying the aircraft for the full year as contracted. I understand the owner/builder decided to not fight the suit." This statement is not accurate and he should not have published this.

The incident

In June of '90, a Long-EZ owner/builder, who had been trying to sell his HSI/O-320 powered aircraft for over 3 years, approached us about giving him an excellent deal on our main retracts. If we did, he would let us use the aircraft for 7 months, or 200 hours, for air show exhibits. He knew the retracts would increase the resale value of his aircraft and hoped we could sell it for him at an air show.

We knew this arrangement would bolster our landing gear sales. So, we provided the space, and many good people assisted him in installing our prototype main retracts, free of charge. He said he already had liability insurance, but required me to purchase a non-owners policy of \$50,000 hull/\$1M liability. In that we had already



invested over \$15,000.00 in our prototype retracts, we agreed to purchase a non-owner policy. I learned the hard way that this type of policy did not afford me any coverage for the worth of the gear.

On our way to Oshkosh '90 in his aircraft, the Long-EZ-RG aircraft developed a massive fuel leak in the left fuel tank, forcing me to execute a night dead-stick landing on a two lane state highway just west of Omaha (we found out later the aircraft was poorly built internally which probably caused the fuel leak). We missed two sets of power lines, going over one and under the other, sight unseen (lucky). I did see a yellow flashing light hanging in the center of the intersection which we managed to clear. We landed nicely on the highway.

Just before touchdown, a car had pulled out in front of us traveling in the same direction we were landing. I landed, and had just enough control and time to move a few inches to the left so as to not hit her car from behind with the fuselage nose. The right main mount did hit the center rear of her car causing us to slide into a shallow ditch and hit a road side pole cutting off the left strake and badly damaging the airplane.

Patty was badly injured when the road sign at the top of the pole sliced horizontally through the cockpit canopy, narrowly missing my neck gashing through the headrest, hitting her in the head above her left temple just forward of the hairline. It peeled off her scalp down to the skull in a large 14" long 'C' shape above her left ear 6" wide. Blood was all over her. She still has nerve damage and problems to this day from her terrible injuries.

At our expense, we trailered the aircraft home. We found out upon our return that the owner not only did not have the insurance required in our agreement, but furthermore, he had not had insurance on his aircraft for over 3 years.

The owner filed a claim and collected not only \$50,000 for an aircraft he couldn't sell for \$29,500 during the previous 3 years, but also the insurance company gave him the aircraft for salvage. He did very well in parting it out. Deciding he didn't want to use the money to live up to his contract with us, stating he only wanted \$40,000 for the aircraft and feeling we should not suffer total financial ruin from the loss of our \$15,000 prototype main retracts and from lost sales, he offered us \$10,000 plus whatever he could sell the wrecked airplane for. This agreement was also witnessed by several people.

In Oct. of '90, after storing his aircraft for 3 months and delivering his aircraft to his home both free of charge, we went to his house to pick up a check for the money he promised. He didn't give us a check. His wife stated, "maybe he changed his mind."

We didn't know what to do - we were at a total loss. We waited 11+ months for him to live up to his agreement. We truly hated the thought of filing a lawsuit for we hate lawsuits and the lawyers that support them, probably worse than Burt does, and didn't want all the stigma that goes through the un-informed onlooker's minds. Maybe we received bad legal advice to file a lawsuit, but it was obvious we had a clear cut case. So, we followed legal counsel's guidance and filed a suit for breach of contract. Anyone would have under these circumstances.

The owner, now defendant, and his lawyer, tried to confuse the issues by saying that 'I ran out of gas' and that 'I poured fuel down the leading edge of the left fuel strake after we got back to melt away the leading edge foam to make it look like a fuel leak.' During arbitration, even his own expert witness said I didn't run out of fuel. As anyone can see, none of this had anything to do with his breach of contract.

When confronted with photos and news videos of the aircraft in the ditch at the accident scene, from which anyone could clearly see where the fuel leaked through the leading edge of the strake, the testimony from the FAA that the owner told them it was a fuel leak, and the facts uncovered about the owner and the falsified airworthiness of the aircraft that would curl your hair, he settled out of court for "it was not in his best interest" to try and defend his untenable position. We are still owed \$16,500. Patty was offered a token \$1000 for her injuries by the owner - she was insulted and did not accept.

Infinity I development

Mr. Orr states, "Newman keeps talking about a prototype Infinity plane." Again, I thought his article was about EZ Retracts? But now that he's brought it up, thank you for asking.

He's right, it has been a long time coming - way too long. Some of you may not know this (I sure have learned the hard way), but it takes a tremendous amount of support, time, patience and MONEY to get a new design and company off the ground. Look how long it takes most builders just to build their airplanes with plans and vendors sourced out! I'm just a poor Iowa boy, nor do I have inherited wealth or rich relatives, nor am I smart enough to marry money.

Therefore, between active and reserve Navy duty including 2 cruises and over 2 years flying off carriers, divorcing my wife, deaths and poor health in my immediate family, odd jobs to keep the business doors open, developing stick grips, landing gear, and other of INFINITY's products for homebuilders and having to respond to obtuse letters and people - I've been extremely busy.

The Infinity I is a totally new canard aircraft, not another, but certainly inspired, Long-EZ derivative. The wings, winglets, and canard airfoils are totally changed, the fuselage has been enlarged, the gear is a totally retractable oleo strut tricycle gear with nose wheel steering and it is a Quick Build kit, along with many other differences. It's like trying to explain to someone all the

dissimilarities between similarly configured aircraft, such as Beechcraft's, Piper's, and Mooney's; or the various biplanes.

My goal is to cruise 250+ MPH, carry two people my size wearing my Navy helmet, have tricycle oleo strut retracts with nose wheel steering, bring my golf clubs, fly 3 to 4 hours and get 20+ mpg. We hope to cruise 285+ MPH with a 210 HP, TIO-360 Lyc. at 85% power and 10,000'. But, if not, and it only goes 250 to 260+ MPH, that will be just fine.

I believe in making more than one prototype. The final prototype should fly soon. The tooling for the kits is in work. The Flight Manual and Pilot Operating Handbook are nearing completion, and the Builders Manuals are well on their way. Many orders have been placed. Much more is happening that I don't wish to divulge in this forum.

Retractable Main Gear Installations

Mr. Orr states, "Both E-Racer and Cozy designers have told their builders not to put the gear at the ends of the spar." Neither Mr. Dickey nor Mr. Puffer have firsthand technical or scientific knowledge of our retract system or installation, nor have they examined the retracts in my presence. The only canard aircraft designer and engineer outside of my company that have examined our retracts and installation are Mr. Burt Rutan and Mr. Mike Melvill.

In May 1992, Mr. Nat Puffer, owner of Co-Z Development Corp., called up, immediately going into 'what am I doing cutting up the side of "his" aircraft, cutting through the structural longerons weakening the center section spar and engine mount in the fuselage, cutting the spar in half and re-routing the ailerons to push-pull cables?'. I told him we do none of these things and that our gear pivots on the center section spar towards the fuselage (as do most aircraft). He wouldn't listen and thus repeated his accusations about 6 times. I finally realized and stated to him that he must have me confused with Shirl Dickey. He then slowed down, listened to me, and asked how my gear worked. After listening to me for a few minutes, he stated that our 'retracts would work fine on the Cosy III since it is just a widened front seat Long-EZ'.

He then tried to tell me that it would never work on a Cozy MK-IV for, "The Cozy MK-IV is a totally different airplane." I told him I had examined the MK-IV plans and obviously concluded that our retracts fit just fine. He said I needed to buy a set of "his plans" and build a MK-IV to put my retracts on (I have bought a set of plans, I just didn't buy my Long-EZ plans from him). I sent him some photos of the installation. He stated in a return letter, "It is very clever and you are to be commended!", but he still insisted that I would have to buy a set of "his" plans and build "his" airplane to install the retracts in to prove out the system.

As to building an aircraft, the retracts have been thoroughly tested on Long-EZ and other canard aircraft such as the Cosy and AeroCanard (an improved Cozy MK-IV) to the satisfaction of the FAA. To use his own logic, if Mr. Puffer has a problem with our retracts, or any other product, he should buy a set of retracts and install them on an aircraft to prove his opinions before saying or publishing his slanderous, malicious false statements. Third party manufacturers make tires, batteries, starters, alternators, etc. without buying the car. We have done and proven our homework over and over.

Putting our retracts on this aircraft would greatly enhance the utility, desirability, and marketability of this aircraft, without going into all the enhancements detailed in our info pack and video.

Since the first MK-IV flew, according to AeroCad, Mr. Puffer has made many plans and parts changes to his MK-IV that he certainly has not tested; i.e. - the fuselage has been widened 2", the nose, landing gear, cowling, empty weight, etc., have all changed. Fortunately, the FAA gives us the right to experiment with our experimental aircraft for education and recreation because builders are the manufacturers. Do what you think is right for you.

Also in his newsletter, Mr. Puffer reasoned that if someone is 'prone' to forgetting things that they should not put main retracts on their aircraft. Let's get something perfectly clear - these aircraft are already complex retractable aircraft whether the mains retract or not. To accept forgetting the nose wheel as 'less damaging' is incomprehensible.

Forgetting to put the gear down is like forgetting to put your pants on. There is a training problem here - not following checklists, picking a point in the approach to always check the gear, etc. To accept the adage of 'those who have and those who will', and not install main retracts after all the benefits that have been presented (see info pack), is insane. A builder could easily put in a \$20 pressure switch into the pitot static system, similar to what is in the Piper Arrow, to automatically lower the gear when both airspeed and manifold pressure drop below a specified level (your insurance would be cheaper, too). The obvious, final, mind boggling, 'Oh My God', question is this - if someone is 'prone' to forgetting things, one has to ask - what in the Sam hill is this individual doing driving a car let alone flying an aircraft?

Speaking of insurance, we had a builder not quite complete the installation of his retractable main landing gear per instructions and had the right main gear collapse on his third landing. A positive note - the wing, center section spar and strakes were NOT damaged, but we already knew that would be the case in such an event.

In their preliminary investigation, the investigator for the insurance company mistakenly called Mr. Puffer assuming this first customer built AeroCanard with our retracts was Mr. Puffer's Cozy MK-IV with Mr. Puffer's main retracts. When he published his newsletter, he twisted the facts and said that the insurance company will not insure our retracts on any aircraft. This is not accurate.

What the insurance company investigator actually said (I called him) was that they will not insure THIS builder until their investigation is completed to ensure there is not a design deficiency. It was pointed out that the builder, and 2 of his helpers, forgot a safety roll pin. He also admitted to not pre-flighting or post-flighting, either of which would have prevented the collapse.

We provided the investigator with a detailed engineering analysis, at their request, and the builder satisfied the investigator with his installation. The investigator repeatedly stated that this is one of the best retractable gear he has seen on homebuilts. He kept saying how 'substantial' the gear is and recommended to the insurance company to continue insuring our gear.

Now this builder's plane, with our gear, is insured again and flying just fine after minor repairs. In fact, it has over 50 hours and 200+ landings in the last few months, and flying really fast! The builder is extremely happy. It will be at Sun 'N Fun '96 and will be featured on the front cover of the May '96 (Sun 'N Fun) issue of the AeroTrader.

Now with regard to Mr. Shirilan Dickey, in February 1993, he published his first company newsletter in over 3 years. While slamming his own blessed stand-in newsletter writer and customer in this newsletter, he maliciously slandered my company and our retracts with totally unfounded and untrue statements. He did so without any firsthand knowledge, or even having ever seen the *Infinity I* or the Retractable Main Landing Gear System.

We do not market our retracts for the E-Racer - never have - because the center section spar is half the width of the Long-EZ and is not long enough to accommodate our retracts. We, also, do not market the retracts for the Velocity or the Berkut because of similar differences in their spars to the E-Racer spar from the spars that our gear is designed for.

This maligned now ex-blessed stand-in newsletter writer and ex-E-Racer customer had ordered a set of our retracts 9 months before this incident with Mr. Dickey. We canceled his order well before Mr. Dickey's newsletter when we found out he was building an E-Racer, had already installed the center section spar per plans, and didn't want to remove and make another spar to the Long-EZ box specifications and lengthen it. He didn't want to wait for delivery and we didn't like the installation he was planning, so the cancellation was mutual. The last I knew the plane was in storage.

Mr. Dickey was contacted in May of '93 and asked to provide any firsthand technical and/or scientific proof as to the accuracy of his allegations and furnish this documentation to us, or to write a complete retraction to all parties in receipt of his newsletter, and to write an apology to us. He boasted to people at air shows, while slandering us, that we would not take any action - that we were bluffing. He would not respond to our letters. He goaded us for months through anyone who would listen. Legal counsel recommended that the only way we were going to get his attention was to file a lawsuit. As stated before, we hate lawsuits, but saw no other way.

Mr. Dickey avoided the process server and missed court dates for months. He finally wrote us a distorted and deranged letter in June of '94 denying all, but also stated 'I have no doubts about its strength or safety' of our retracts. He concluded this bizarre letter by conceding that his newsletter 'may have affected our reputation and our product', and that he would write an apology. Months rolled by with him still running from the process server, distressing the judge numerous times and continuing to miss court dates, but still no apology was forthcoming. He continued with his disparaging remarks to all who would listen.

A respectable opinion and some help

In March of '94, at Mr. Burt Rutan's invitation, one of my retract customers flew his Long-EZ-RG to Mojave to meet with Burt and myself so Burt could look over the retract installation before Oshkosh. Burt, Mike Melvill, myself and several others crawled around the aircraft for about 45 minutes, asking and my answering several questions. Burt and Mike said they really liked the retracts and the installation. Burt pointed out that this installation was very similar to his prototype Starship, which I did not know. Then Burt gave us a wonderful private hour and a half tour of his 'skunk works' including his beautiful Boomerang - what a treat!

Now I must make this perfectly clear: just because Burt and Mike examined our retracts and the installation, doesn't mean they can, or will ever, officially approve our retract installation, or any other kind of modification. We all know Burt's policy about ANY changes from the his plans whatsoever (we can thank the legal system for this), so no use asking. Each builder is the manufacturer of HIS aircraft and must decide for himself what changes or improvements HE will make to HIS aircraft. Just simply follow the designer's wishes and call the aircraft something else.

In January '95, Burt Rutan made a very nice gesture and contacted us by letter, offering to mediate the dispute we had with Mr. Dickey. He stated that 'As I understand it, Dickey may have inappropriately criticized your engineering work in his newsletter. If true, I don't agree that he should have done this'. He, also, stated 'I think I can reverse the negative publicity that you may have received due to Dickey's publication'.

'On our behalf', Mr. Rutan stated he 'will assure that Shiril Dickey prints a retraction and apology in his next publication', and that 'this statement will be sent to every party who has received the newsletter that offended us'. I wrote him back thanking him for agreeing with our position and that his support was greatly appreciated.

Also in January '95, within one week of winning our case by default, Mr. Dickey realized he had put himself in dire straits and woke up. Despite having falsified to the courts under oath about not being a resident of Arizona, along with many other inconsistencies, he started corresponding to the courts, warding off the inevitable.

While waiting for this retraction to be published, Mr. Dickey sent us another letter, more bizarre than the first one. This threatening letter was a great disservice to Mr. Rutan and our industry for it alleged Mr. Rutan and others had joined with Mr. Dickey in an outline of a huge conspiracy that he had conjured up to destroy us and put us out of business. This threatening letter of criminal intent by Mr. Dickey, and allegedly, Mr. Rutan and others alluded to in this letter was absolutely amazing!

We don't believe for a minute, as evidenced above, that Mr. Rutan would ever get tangled up with the likes of Mr. Dickey in anything, let alone something this obviously criminal. We showed this letter to a few of our friends and had lawyers coming out of the woodwork wanting to take Mr. Rutan down. They viewed him as deep pockets, whether he was in bed with Mr. Dickey or not. We told these lawyers to get lost.

Finally, it became 'infinitely' clear to Mr. Dickey that he was in trouble. He agreed that those who received his malicious, slanderous newsletter #17 should receive the following apology and retraction. Then, he conveniently had a computer problem and allegedly lost his mailing list, but said he sent the following out to most of them. So, in case anyone missed the Spring of '95 mailing by Burt on both our behalves, you should have received the following from Shir! Dickey that Burt helped write:

To *INFINITY Aerospace* and Mr. James D. Newman:

"In my newsletter #17 dated February 1993, I inappropriately speculated about the origins of the Retractable Landing Gear System sold by James D. Newman of *INFINITY Aerospace, Inc.* I was wrong in doing that. I should merely have said that, like many other things, this product is one which I have not tested, and have not personally evaluated for its value or its safety as applied to the E-Racer. It was wrong of me to imply that this product was improperly engineered. I am using this newsletter to retract my comments and to apologize to Mr. Newman and *INFINITY Aerospace, Inc.* Shir! Dickey"

In conclusion, this whole thing with Mr. Dickey was incredibly stupid and entirely avoidable. If Mr. Dickey had done what he said he would do in the first place, none of this would have happened. More significantly, if Mr. Dickey had learned the facts by contacting us before writing his newsletter, he wouldn't have brought all this down on himself. He still owes us \$5000.

Safety

Concerning off-field landings on unprepared surfaces or water landings, all professional and all good pilots finding themselves in a forced landing situation 20 feet off the ground know to leave the gear up. Particularly if they don't know the surface condition, the gear will remain up. Our gear comes down immediately, so the pilot can drop the gear quickly if finding himself over a good surface. If needing to extend a stable glide to reach a smooth surface this can be accomplished with our gear by delaying gear extension.

Aircraft with fixed main gear and a retractable nose wheel must lower the nose wheel for any off-field forced landing on unprepared surfaces, or water landings, in the hope of not flipping the aircraft. So the only option for the retractable nose wheel pilot is whether or not to extend the glide.

Mr. Orr again erred in comparing the O-2's poorly designed, Vietnam era landing gear maintenance problems of an aircraft used in combat conditions with modern landing gear of today. This is simply illogical. Mr. Orr further erred in stating, "I would have my gear down or coming down just as I discovered I couldn't clear the wires." He should probably re-evaluate his emergency procedures.

Research, Design, Testing and Evaluation (RDT & E) of the *Infinity I* Retractable Main Landing Gear (see info pack)

Beginning in 1982 between Navy cruises, I began looking at all the ways to retract the main gear for the *Infinity I*, AND make it retrofitable to Long-EZ canard aircraft as an after market item. After examining all the pros and cons of all the possibilities, the analysis always came back to the conclusion that a hydraulically operated oleo strut mounted on the spar, like most all other aircraft, was the logical answer. And since, as everyone knows, all the canards are derivatives of the Long-EZ, our retracts will fit them quite nicely. Especially the Cosy, Cozy MK-IV and AeroCanard.

As stated earlier, our retracts can be installed on the Velocity, E-Racer and Berkut, but one would have to change the center section spar back to a box spar. Also on the E-Racer, the spar needs to be lengthened and the strake will need to be enlarged like the Cozy MK-IV's. *Infinity I* main retracts do not fit the Defiant or Vari-EZE.

So, let's first briefly talk about positioning our main oleo strut retracts on the front face of the center section spar. They are cantilevered through to pick up the two wing bolts, similar to the prototype Beech Starship. As most know, the center section

box spar is one of the major structures of our canard, or any, aircraft. It handles all bending and most of the torquing loads of the wings in flight. The strakes pick up the rest.

Even though the wings have been load tested to 50.03% more torque to the center section spar than the landing gear ever would impose, the center section spar is easily strengthened more, whether it is a new construction or in a flying aircraft. This is done to accommodate the gear installation by simply putting another 'C' spar and a crush plate in from the end of the center section spar. This takes about 6 hours per each end of the spar for retrofits, or adds about 2 hours each end for new construction.

The pre-molded drop-in wheel wells provided act as a 'C' spar through the strake. To finish off the installation, a bulkhead is put into the end of the strakes which makes the strakes a 'D' spar (this is a question Burt asked to make sure was done when he looked at the installation). So the strakes and center section spar are stronger than original design and construction.

A 2000 lb. landing aircraft executing a three point level landing has a landing vector of 12°. Our retracts are raked forward slightly (about 10.5°) for several reasons (the gear fits perfectly as if the spar and strake were originally designed for this type of gear installation). The gear basically sees a vertical landing - no torquing. If the aircraft flares a little, the raked forward struts may torque forward somewhat on touchdown but the spin-up loads of the tire, the oleo strut compression and the torque of the swept wing from lift, negate the slight forward torque of the struts during a level landing nose wheel clear, or even a worst case scenario of a nose high/tail down landing. Bottom line - little or no torque.

The design and analysis has been verified by three independent companies (over \$47,000 has gone into the design, engineering, prototyping and testing of this main retract system alone). To prove the analysis and the strength of the installation, the gear, the center section spar and the strakes, among other tests, we conducted a worst case scenario drop test of a 2200 lb. canard aircraft per FAR Part 23.

The tested aircraft was drop tested multiple times (increasing height an inch at a time) until reaching the maximum height per FAR Part 23, with the tanks full of water (which is approx. 2.4 lbs. per gallon more downward torque/vertical load component than fuel!) and the struts had only 60 PSI of air (normally it would be 100 PSI). This maximum height represents approximately a 600 foot per minute (FPM), extremely hard carrier-type landing, and exceeded 15° angle of attack! No damage occurred.

For those concerned with the effect of hard landings on the center section spar and strakes, one would have to land a lot harder than this test to damage the center section spar &/or the strakes. If you are, you are out of control/crashing and have much bigger problems to worry about than worrying if the center section spar and strakes will be damaged. Beechcraft puts their main landing gear on the spar, as do most other aircraft manufacturers. NOTE: A NASA study reports that the average landing of any aircraft, including airliners, is 180 FPM. This is what non-aviator airline passengers consider as a hard landing.

Conclusions

Certainly people are entitled to their opinions, but they can be very dangerous if written with a false air of expertise. Everyone can call himself an expert on any subject you care to mention. Please don't waste your time with just anyone for an 'independent view' of the different full retract systems, or any other product, on the market who just wants to show you their opinion.

Their opinion is based on ignorance. Ignorance is a breeding ground for prejudice. This prejudice is against anything that is not their idea. Any time a man forms an opinion that is not based on facts, then he is a fool.

Therefore, go to someone who knows what they are talking about by contacting the manufacturers yourself and find out the facts. If you need more, ask for their customer's phone number. My customers love to talk about their retracts, stick grips and other products. We have 4 sets of gear flying now, 28 more being installed this year, and hundreds forthcoming. You have a brain, use it.

There are over 700,000 pilots in the USA. The FAA and the government, almost daily, are trying to abolish General Aviation. This in-bickering amongst ourselves just gives the lawyers, politicians and bureaucrats more ammo to regulate us and, God forbid, to shut General Aviation down! We have to support each other.

The purpose of any newsletter is to be factual when disseminating ideas, builder support, talk about accidents so all can learn from other's mistakes, and to talk about fun trips. Not for gossip. Let's keep it that way, or we will surely kill our hobby.

If anyone of your readers has any questions, please feel free to call us. Thank you in advance, Terry, for publishing this document in its entirety. Our HomePage is: http://ourworld.compuserve.com/homepages/INFINITY_Aerospace

Infinity's Forever,

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