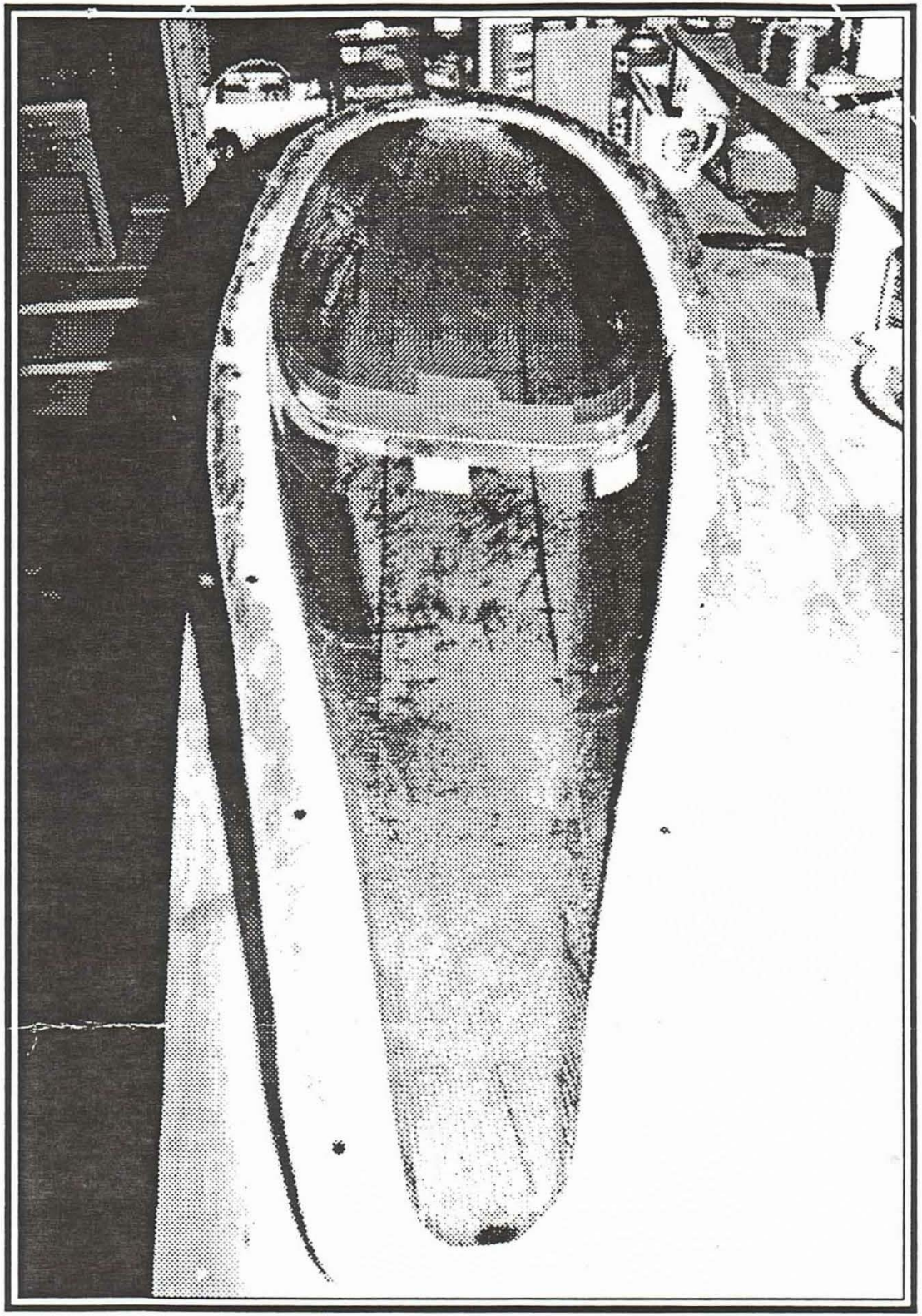
**Black Wheel Pants?**

Norm Howell borrowed my wheel pant mold last summer and tried his hand at carbon fiber layups. As typical with Norm, refinements were made to the basic manufacturing process.

He has enclosed some hi-temp mold wax and polyvinyl alcohol to help other builders. The proper use is to clean the old PVA out of the mold with alcohol or acetone, then wax the mold a couple times. Just before you lay up the pant, brush a thin layer of PVA in the mold and let it dry....only takes a few minutes. Then lay up the part. When it has cured you can pop it out without all that "tuggin and cursin".

He planned ahead where the screws are going to be and laid up the flange over prepositioned 10 ply carbon reinforcements. This way he doesn't have to cut out the flange later, plus he can rivet the nutplates to the flange so that they may be replaced if one strips out. The carbon wheel pants turned out to weigh about 2/3 of what the glass pants weigh.

*Editor note: The regular glass wheel pants that I made weigh 6 pounds, complete with all hardware, mounting brackets, paint, and axle nuts.*



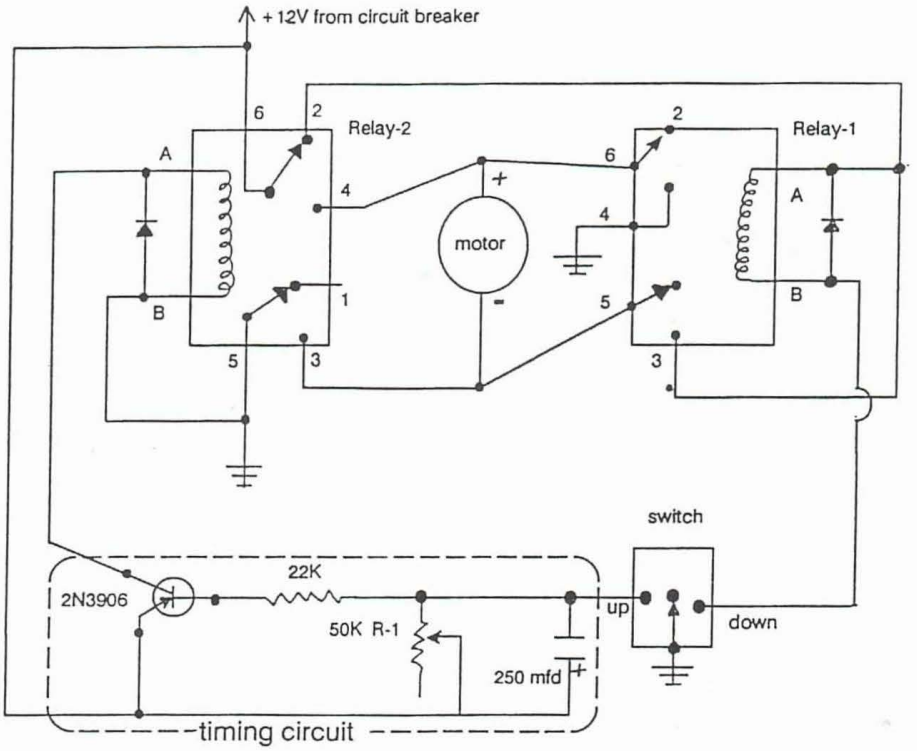
## Speed Brake Actuator Circuit

*Ron Verderame (CA)* - The following schematic runs the landing brake on Jay Greene's Long-EZ. It uses a small switch that can be mounted on the throttle like in the A-4. The actuator draws 6 amps so a relay had to be included to carry the current. The speed brake can be extended incrementally and retracted with just one touch of the switch.

The throttle mounted switch is a SPDT momentary with center off. The actuator is the Warner Electric Electrak-1. The relays are general purpose ones rated at 10 amps. (Potter and Brumfield K10P11D15 12) When the switch is pressed down relay-1 is activated and the speed brake moves down as long as the switch is held. When the switch is pressed in the opposite direction it triggers the timing circuit activating relay-2. Relay-2 stays on for a time set by the timing circuit. I measured the time to deploy the brake fully and adjusted R-1 to keep the relay on for one second longer. When you move the switch up momentarily the timing circuit is triggered and relay -2 turns on retracting the brake. The speed brake stops automatically because of internal limit switches.

Note the current which activates relay-1 is routed through relay-2. This is done to lock out the down relay when the timing circuit is holding the up relay on. This prevents accidental activation of both relays at once blowing the breaker. The time relay-2 stays on can be adjusted with R-1. You need to play with the adjustment to get the delay you need.

## Speed Brake Control Circuit




## Engine n Stuff For Sale

Attitude gyro IFR-85, fresh factory overhaul $350. David Clark headset 10-40 like new $175, Great American prop 62 x 62 SAE #1 with crush plate $250, Brock 6" prop extension SAE #1 $200, Lycoming O-235-L2C 450 SNEW, 250 STOH, has log book, currently running great on my Long-EZ, no carb or starter. $6500 OBO

Ron Verderame
310-568-0800 (9-5 PST)
310-374-2061

This is your last issue.
Its time to renew.

## Wanted

3" or 4" #2 SAE prop extension for O-235, remote oil filter, strobe and position lights, encoder for King transponder, cowling and inlet, seats, carb heat box, spare front tire and tube.

### Lycoming O-235 and Mount

O-235 C2C, Bendix mags, carb, and mount. 1900 hours TT (last 300 not logged) Cylinders Cermichromed at 1700 hours. Asking $1600 and I pay shipping to the west coast. You pay shipping from there.

A. B. Hughes
158 Haulani
Pukalani, HI 96768
(808) 572-8864

## Landing Brake Adjustment

If your landing brake blows shut at too low an airspeed you can adjust that by simply sanding away at the floor mounted stop. The farther forward the slot is, the more air speed force is needed to force the arm over center and close the brake. Be careful as you approach the desired speed because a few thousandths of an inch can make several knots difference in the brake closing speed.

## Transponder Antenna

*Jim Voss (TX)* - You don't have to have your transponder antenna sticking out if you don't want it to. I put mine way up front in the nose. The antenna sticks down in a hole through the inside skin and foam but doesn't go through the outside skin. The antenna radiates through the fiberglass skin very well. I have had no problems with ATC losing my replies. It also passed an IFR check with flying colors.

## Landing Brake Adjustment

causing the caliper casting to crush. This will result in the brake lining faces not being parallel when brake force is applied. The pads will wear unevenly and will initially have less surface in contact with the disc, thereby reducing brake performance.

---

## Replace That Aeroquip 601 Fuel Hose!

*Leo Dringoli (IL)* - Attention all you non-believers (like me) who are ignoring the reports that Aeroquip 601 hose is deteriorating from AV-Gas! *(see October 93 p. 9)*

I thought that a gradually deteriorating hose would begin to slowly drip fuel and give a warning that replacement was necessary. **NOT SO!!** In the time of one flight, on Long-EZ N85LD, the hose went from leak free to a failure that produced a pencil lead size stream of fuel that squirted 9 inches onto a cylinder base.

I became aware of the problem at shutdown when I noticed the fuel pressure near zero at idle. The electric pump brought the pressure into the green arc. After shut down, I noticed a small fuel spot on the concrete under the cowl. I turned on the electric pump and saw a steady stream of fuel flowing out of the cowl.

After removing the cowl I observed fuel squirting from the 601 flex line between the electric pump and the mechanical pump. With the electric pump off, the mechanical pump sucked air in through the line rupture causing a low gage reading. When the electric pump was turned on the line was pressurized and instantly spouted a stream of gasoline.

Upon removal and inspection of the bad line, the interior rubber lining showed no signs of fatigue, cracking, or brittleness in the area of the leak. The outer braid was not broken so as to puncture the line.

The line had 5 years and 300 hours on it and was received from Aeroquip during the 1987 recall/exchange AD program.

I replaced both flexible lines with Aeroquip Teflon lines having similar stainless steel braid. The new lines are slightly smaller in OD and are slightly less flexible than the 601 hose.

He further stated that tire inflation should occur in a safety cage in case of tire or wheel explosion.

Many brake pads do not reach the service life they should because they are not conditioned properly. Further more, I learned that the conditioning process may have to be redone during normal brake use. Believe it or not, **light braking is not necessarily good for the brake pads.**

The conditioning procedure is spelled out in PRM no. 13A. It states:
1. Taxi aircraft for 1500' with the engine at 1,700 RPM applying brake pedal force as needed to develop a 5-10 mph taxi speed.

2. Allow brakes to cool for 10-15 minutes.

3. Apply brakes and check to see if high throttle static run up may be held with normal pedal force. If so, conditioning is completed.

4. *If static run up cannot be held,* repeat 1 through 3 as needed to successfully hold.

This conditioning procedure will generate sufficient heat to create a thin layer of glazed material at the lining friction surface. Normal brake usage should generate enough heat to maintain the glaze throughout the life of the lining.

Light brake usage can cause the glaze to wear off, resulting in reduced brake performance. In such cases, the lining may be conditioned again following the instructions set forth in this PRM.

Look at your worn brake linings. They should show even wear. If the lining cross section is wedge shaped, outer edge of the lining is considerably thinner than the inner edge, then you may have a damaged caliper.

It seems the two bolts holding the caliper together can be over torqued causing the caliper casting to crush. This will result in the brake lining faces not being parallel when brake force is applied. The pads will wear unevenly and will initially have less surface in contact with the disc, thereby reducing brake performance.

---

## Replace That Aeroquip 601 Fuel Hose!

*Leo Dringoli (IL)* - Attention all you non-believers (like me) who are ignoring the reports that Aeroquip 601 hose is deteriorating from AV-Gas! *(see October 93 p. 9)*

I thought that a gradually deteriorating hose would begin to slowly drip fuel and give a warning that replacement was necessary. **NOT SO!!** In the time of one flight, on Long-EZ N85LD, the hose went from leak free to a failure that produced a pencil *lead size stream of fuel that squirted* 9 inches onto a cylinder base.

I became aware of the problem at shutdown when I noticed the fuel pressure near zero at idle. The elec-

---

**Camping in**

*John Bennetto (ONT)* - While campin
The most often asked questions were:
does it go? and the new one - **How di**

## Portable EZ Tire Changer

*Tom Coughlin (CA)* - Over the years of changing EZ tires I've tried several different ways of breaking down a tire. First came the screwdrivers which scratched my magnesium wheels then the woodworking clamp which did a great job but was very cumbersome. I put up with that until the trip to Guadalajara, Mexico. We had ten EZs giving rides and ended up with several flat tires. I discovered the need for a portable, light weight, easy to store bead breaker that worked. From that need came the idea for the ***"The Bead Buster"*** TM.

I found the vulcanizing patch kit a must after a trip back from Oshkosh. I'd been at 10,500' for over three hours when I decided to stop at Bullhead City/Laughlin. It promised a good cheap lunch, a bit of gambling, and still would permit me to be back in Santa Monica before 5 PM.

I had not planned my let down very well and found myself high and hot on final. The ambient temperature was 123 degrees with the asphalt somewhere near 150 degrees. The Long-EZ quit flying just before I was ready. The hard landing allowed about a 100 yard roll before the right tire blew.

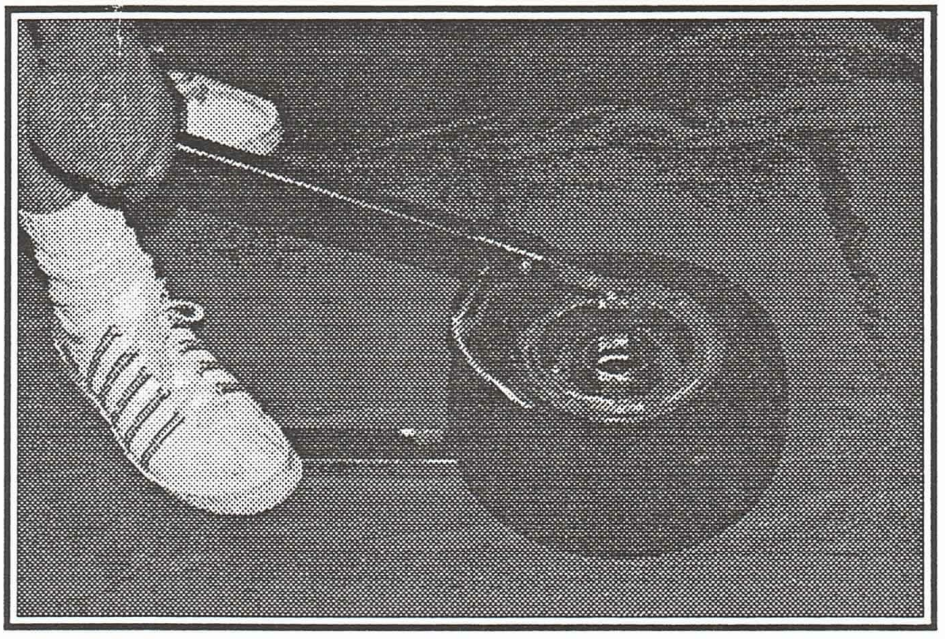
The local FBO truck and three guys arrived by the time I had the wheel pant off and was attacking the problem. One of the guys seemed to be the owner or manager of the FBO. With a very large screwdriver in hand, his body language told me he really didn't want to work on an experimental. He ask if I wanted to fill out a work order. I diplomatically declined his offer but asked if I could use his air. My request was granted. With that I whipped out my***"Bead Buster"*** TM and my ever present, since Mexico, spare tire. I had no tube, however, as I had loaned it to someone and had forgotten to replace it.

After we found some partial air conditioning, the FBO guy suggested that I get a patch kit from the local auto parts store and repair my old tube. I tried three stores before deciding to settle for a cold patch kit as a vulcanizing patch kit was not to be found.

I got the assembly back on the airplane, forgot about the food and gambling, by this time I smelled like a goat anyway, and taxied out. As I approached the departure end of the runway the patch let go. I thought, "Oh great! Here we go again." This time the fire department maintenance man/off road motorcycle rider came to my rescue. Guess what he had in his tool box. You got it, a vulcanizing patch kit.

With the help of "***Bead Buster***", we popped the tire off the rim again and had the wheel back on the airplane in less than 30 minutes. The actual time to break the bead was about 15 seconds per side. After that experience you will not find me and the airplane in the same place without "***Bead Buster***".

I am offering the kit, consisting of: a canvas pouch, tire lube, cad plated fulcrum lever and base, vulcanizing patch kit and the all important heat treated shoe for $75 plus shipping. Freight will be COD. This is just in time for Christmas. A great gift idea for any homebuilder.



- - - - -please sign and return a copy with original signature - - -

**Tom Coughlin, 10958 National #1 Los Angeles, CA 90064**

_____ ***"The Bead Buster"*** kit (s) $75

_____ or , for you metal working types, a heat treated tire shoe. $45

***"The Bead Buster"*** has been carefully designed and tested and we use quality materials, we have no control over its use and, therefore, there are no warranties, either expressed or implied, including warranties of merchantability. Tom Coughlin will not be liable for incidental or consequental damages.

Signature _____ Date _____

Name (please print) _____

Address _____

City _____ State _____ Zip _____

Phone # (_____) _____ address must be UPS deliverable.

## EZRG

*Steve Drybread (CA)* - After six years the EZRG made its first flight in July of 1995. Retractable gear development was responsible for about three years of the overall project. The system is primarily based on Swing's well proven Velocity RG system with retrofit design by Scott Swing and myself.

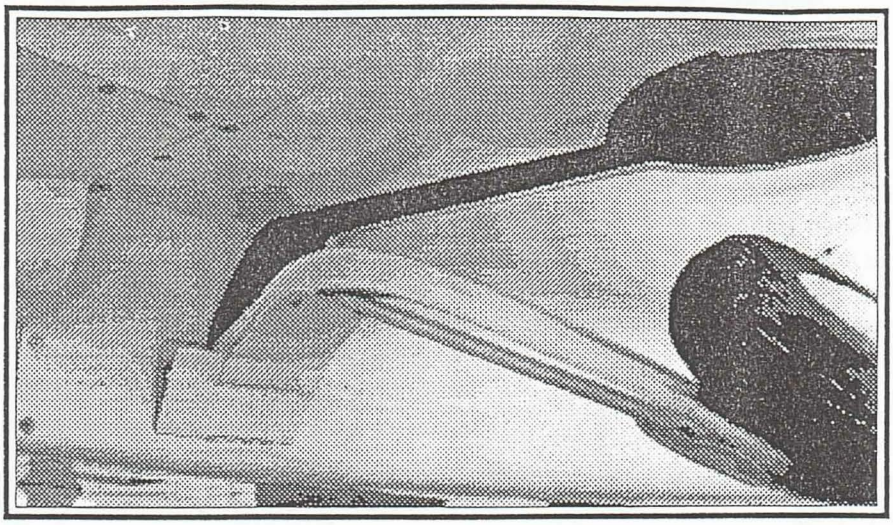
The main gear retract system was designed to be a retrofit for the Long-EZ. Some of the special features that set this system apart from other retractable systems are: the original fixed gear extrusions are used for mounting the new gear legs, the total weight gain is only fifteen pounds, the entire system fits behind and under the back seat resulting in no loss of room, and lastly, the system uses 5:00 X 5 tires which sacrifice only five gallons of fuel per side.

Performance increase will vary with each airframe but should be worth at least 10 kts over a clean fixed gear installation and even more over an average installation.

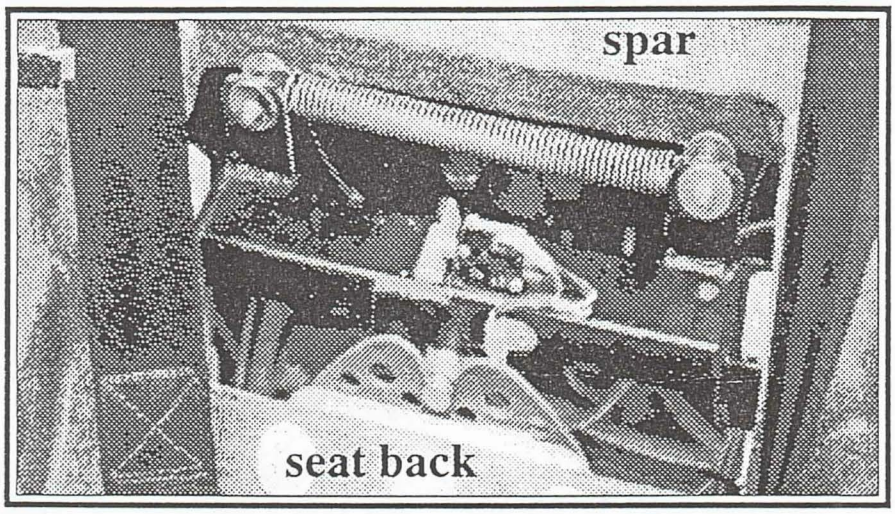
Current performance on the EZRG: Top speed @ 5700 MSL = 237 mph TAS. Cruise @ 10,000' and 2550 RPM = 180 kts TAS. Solo climb, 2,000 fpm @ 130 kts. Max gear speed + 140 kts (has been demonstrated @ 190 kts. High altitude performance = 500 fpm climb to 18,000 and 180 kt cruise at 2650 RPM burning 5.2 gph.

Retrofit kits are available and include main gear legs, gear doors, gear wells, all mechanical components, hydraulic pump, cylinder, fairings and hardware. Kits are made for Long-EZ or Cozy III. Approximate cost is $2500. For more information contact :

Steve Drybread
827 Skysail Ave.
Carlsbad, CA 92009
(619) 431-5562



EZ-RG main gear in transit shows much planning




The conversion takes a minimum of inside space from the passenger. The seat back is merely tilted forward.

### Fly Your Canard Around Mexico Free

*Bill Oertel (CA)* - Arnold Senterfitt, founder of Baja Bush Pilots, is trying to find someone with a Cozy, Velocity, Long-EZ, or similar aircraft who would be willing to fly a circuit of Mexico on a photographic mission. He is willing to pay expenses for the trip. It would be a fabulous opportunity for anyone who has the time. Contact:

Arnold Senterfitt
Baja Bush Pilots
P.O.Box 34280
San Diego, CA 92163-4280
(619) 297-5587

### Lower CHT

*Frank Nowak (MA)* - I removed the normal large spinner and installed the tiny domed one. Doing that and removing the rear upper cowl stiffener dropped CHT by almost 50 degrees. I found no speed difference, however.

### Weld Tech Engine Mounts

Don Mize reported that Weld Tech Aero is back in the engine mount manufacturing business. Their new price for an EZ dynafocal mount is $375.

1925 Terminal Drive
Richland, WA 99352-4924

## Electric Nose Lift

*Vance Atkinson (TX)* - I thought this project would take a week, but you know how that goes. The Cozy seems to get heavier and heavier each year, or my back is getting weaker. I decided to put in an electric nose lift mechanism. There is one already on the market for commercial consumption sold by Bill Oertel in Palmdale, CA, 909-734-7569. It costs $1000-$1200 and is ready made. Since I'm basically a masochist at heart I thought I'd try and make my own. Here's how it went.

Parts Required:

Gear Actuator - about $180: Thompson Saginaw order from local bearing or electric motor shop, PN 781190.

Shock or Spring - about $20 order from Danley Die Co, PN 9-3216-26 800-243-2659 Spring slider Mechanism from Tom Ellis 812-867-2275.

Electrical stuff, relays, wiring, switches, etc. about $50.
1/4" thick bracket to hold gear actuator - about $30 for material.

As usual, this is more work as a retrofit than incorporating it during the original building process. Fitting the actuator in goes pretty smoothly if you don't have anything in the center of your instrument panel. I had a stack of radios so had to look closely at the clearance between the top of the nose wheel cover and the bottom of what ever hangs lowest under the panel. You can adjust the angle of the bracket that holds the actuator by moving the set of gearbox mounting holes holes in the aluminum bracket very slightly to accommodate any angle you want.

The next concern is an emergency extension of the unit. **THERE IS NO PROVISION FOR ONE!** You can go along with that or do what I did. Take the actuator apart (don't ya love tearing brand new stuff apart?) and weld a like diameter, 3" extension stud on to the existing shaft. Don't forget to drill out the top cover to accommodate your new stud. After looking at the unit torn apart, I suspect there will be no failures of the actuator in my lifetime. The relays and switches are another matter, however. You can now hook a 1/4" drive universal and extension to that shaft so you can ratchet the gear down in case of panic. The end of the shaft comes out behind the instrument panel and I just plug in the ratchet which I keep in a side pocket.

Lastly, the matter of the foot! Yes, the foot. The little device that sticks out from the nose gear strut about 10" down from the strut pivot point. Bad enough it attaches out there but it also sticks out about 5" or so. Really **UGLY!** I made mine short, an inch and a half high, and attached it to the plate that clamps the nose wheel assembly to the fiberglass strut. When the gear is extended you don't even see it as it becomes part of the nose gear swivel mechanism. With gear retracted it looks like a small exotic antenna.

The pivot point for attaching the actuator to the nose strut remains stock. I have gear doors and they work the same as before with the addition of a small notch in each door half for the foot.

### *SOME THINGS I'VE FOUND OUT*

If you built the nose gear box, as I did, and you bought the gears from Brock, you would think that assembly would be square. Well mine's not and I suspect a lot of them are not. Therefore, when installing the aluminum brackets you should butter them with flox before bolting them on to the NG 30s. Make sure they are parallel and true for the actuator. Don't use much flox here. 1/8" is plenty, squeezing that down to half when bolted together. Cure before torquing bolts. Don't forget to sand dull the contact area where the NG-30s bolt to the aluminum bracket.

The up lock switches are no problem to mount. Mine are just forward of the nose wheel cover. The down lock switch was a real head scratcher. I finally attached a piece of semi stiff music wire, 8" long, to a pivot point just above where the actuator attaches to the nose strut. This rod goes into the nose box cavity and bumps up against the down lock switch and activates the down/stop relay. It is not a good looking aircraft installation but it gets you to testing.

You can not find switches rated for the amp load of this motor so you must use two relays to activate the system, like production aircraft do. I used two small Potter-Brumfield 30 amp relays from Chief Auto parts at $12 each. Due to close tollerance of the down lock system rod and switch, you will taxi along hitting bumps and hear the actuator start to cycle occasionally as strut flex causes it to come off the switch.

If, for some reason, the up or down lock switches fail, the actuator has an overriding clutch mechanism. This engages at both ends of the travel limits. It is useful in that it is a backup for up or down limits for the gear. If the actualtor goes into the safety clutch override it will not damage your airframe or nose gear as it extends to its limits. The electric system takes three times as long to extend as the stock manual system. I can always tell when the gear is in transit because of a very faint "whine" in the headset. Also, when the actuator goes into clutch limits you definitely feel and hear that mode. My particular light presentation for gear status is amber arrow pointing up for "GEAR UP", a red arrow pointing both directions for "GEAR IN TRANSIT", and finally a green arrow pointing down for "GEAR DOWN". You need something like this 3 light system because an un-noticed stuck relay, with the motor drawing current, could ruin your whole day or airplane.

When assembling the spring I used a piece of wood with the actuator bolted to it on one end and the spring on the other. A simple engagement of the motor compressed the spring so I could bolt it together. Preload on the spring is around 300 lbs.

The foot is made of 1/8" stainless

FOOT !

ATTACHES TO NG 15

SIDE VIEW

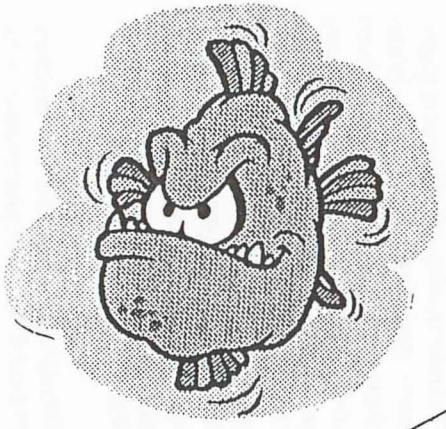
GRIND TO SHAPE

1.5"

MOTOR FITS INSIDE OF STRAPS

1/4" THICK 2024 T3 STOCK

ATTACH TO OUTSIDE OF NG 30's



ABOUT 3"

UNIVERSAL JOINT

1/4" RATCHET EXTENSION

THOMPSON SAGINAW PN 782190

POSITION OF DOWNLOCK SW.

TO DOWN LOCK SWITCH

NOSE WHEEL COVER

INST PANEL

POSITION OF UP LOCK SW.

SPRING + SLIDER MECH.
CALL TOM ELLIS 812-867-2275

ELECTRICAL

RELAY

+12V

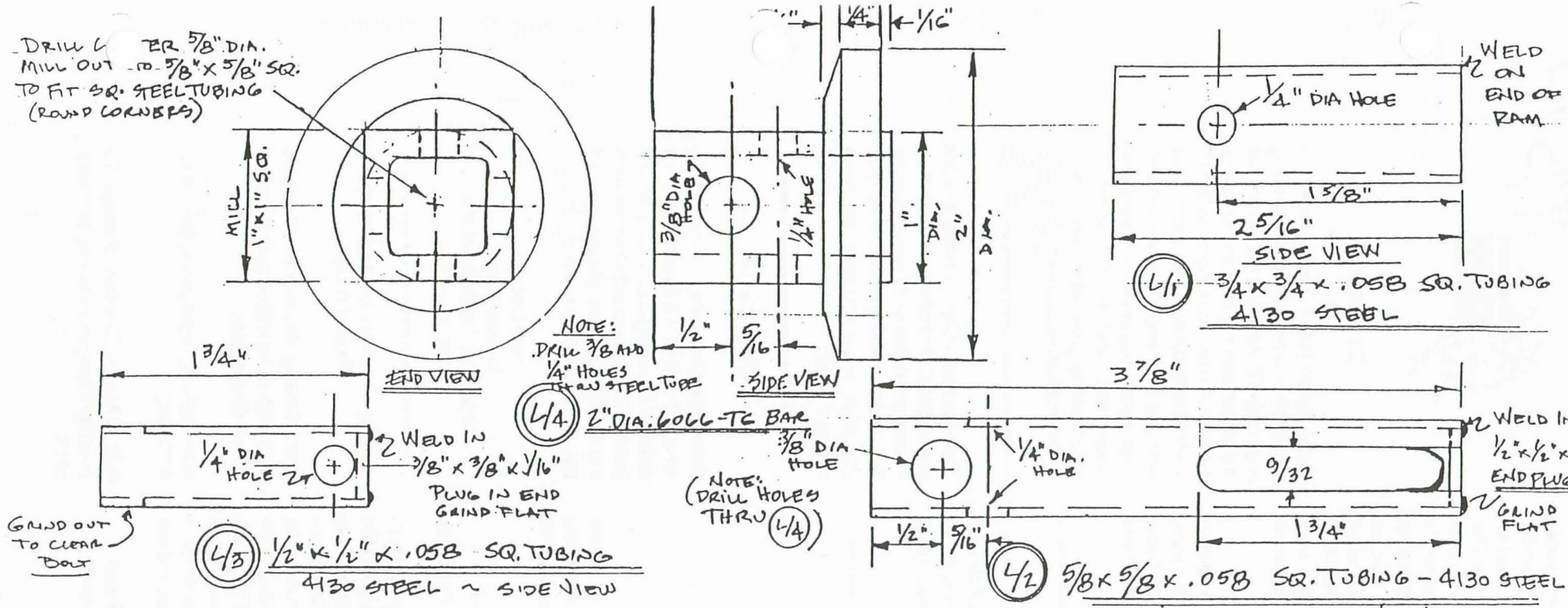
MOTOR

RELAY

+12V

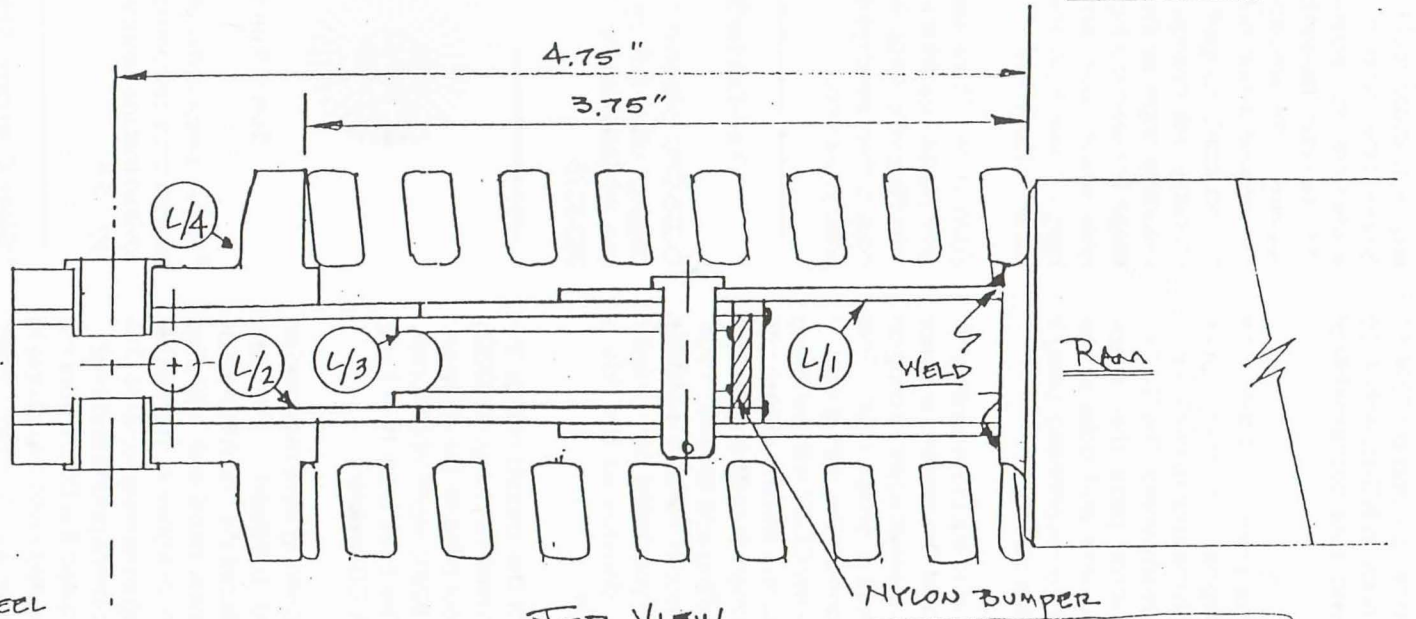
DN. LIMIT SW.

UP LIMIT SW.




## PARTS LIST

L/1 - 3/4 x 3/4 x .058 - 4130 STEEL SQ. TUBE
L/2 - 5/8 x 5/8 x .058 - 4130 STEEL SQ. TUBE
L/3 - 1/2 x 1/2 x .058 - 4130 STEEL SQ. TUBE
L/4 - 2" DIA - 6066 T6 ALUM. BAR
CLEVIS PIN - MS 20392-3C25 (1/4 x 25/32)
FLANGE BEARINGS - 5/16 x 3/8 NOMINAL
#FFB56-3 .3140 ID/.3770 OD. x 3/8" L.
FLANGE 1/2" DIA x 3/64
SPRING - DANLEY # 9-321L-26
(2" O.D. x 1" ID x 4")
1-800-243-2659 ORD DEPT.
BOLT - AN4-12A
NUT - MS 21042-4
PLUGS - 1/2 x 1/2 x 1/16 & 3/8 x 3/8" x 1/16 STEEL
BUMPER - 1/2" x 1/2" x 1/16" NYLON




TOP VIEW
FULL SIZE

PURUS BRGS
3000 AIRPORT FWY
PO BOX 7705
F.W TX 76111
831 4581
PN 7821190
TEMP STAINING
FIG. 9

REV. 1

steel. Replace your present 2024-T3 plate that bolts to NG-15 with 4130 steel and weld "foot" to the middle of it.

The actuator attaches at the same point the original spring does. I put a bolt through the strut to make sure it doesn't slide anywhere. The COZY 4 uses a thicker plate that wraps around the strut and bolts to the spring and I'd recommend using it instead of the stock unit.

You will have to cut the mounting nib off the end of the electric actuator and weld a piece of square tubing on it if you want a shock strut. That tubing becomes the spring end. I have flown my COZY with no spring attached to the electric retract unit and found there is quite a difference in feel of taxiing and take-off! I suspect you would have to **carefully** watch what you taxied over to avoid nose gear damage as the ride is **QUITE** stiff!!

Removal of the canard makes this installation relatively easy. My COZY gained about 8 lbs on the swap and lost about $2000 worth of chiropractic bills. The 8 lbs does help if you have an aft CG problem.

Relays and wiring were mounted on the canard bulkhead. The gear switch replaced the crank handle on the instrument panel with a 20 amp circuit breaker above it. The first set of mounting arms weighed 3 lbs. The second set only a pound and a half. I have not raised the COZY from the kneeling position with two people in the front seat as I feel the 3-place nose fork is not designed for that kind of load. It has been reported that a COZY 3 in CA broke its nose fork trying to lift two front seat males. I have lifted one person and full fuel repeatedly with no noticeable effects.

My aluminum arms are fancier than the plain old piece of quarter inch strap. Mine are tapered with numerous lightening holes. You can make this actuator mounting stuff without any high dollar tools. The spacer blocks at the end of the arms can be made from .75" material instead of .74. They don't have to be fancy. The spacing of the actuator trunions to the original 4 bolt hole pattern is perfect, don't change it. You can and probably will change the bracket mounting angle as the motor must nestle between the top of the nose gear wheel cover and what ever hangs down from the instrument panel. **Have fun!**

*Editor note: There wasn't room to print the full size drawing of the trunions/brackets. If you want a full size copy of them send me a SASE. I will send you a copy.*

---

**Vari-Eze for Sale**

O-235-C2C powered Vari-Eze with baggage pods, built by Vance Atkinson. $11,000 Call Phil Chase: (916) 363-5375.

---

**Sun n' Fun 96**

For you people who plan to attend next spring's celebration of flight be advised that the dates will be April 14 - 20, 1996.

---

**"Glass Overcast" Shirts For Sale**

*Rob Martinson (CO)* - Light blue T-shirts with many Ezes and a Defiant in formation. A dark blue circular logo with: Oshkosh 95 - Glass Overcast - 20 years of EZs is lettered over the left breast. The same printing is on both the front and back of the shirt. The shirts are $15 each or two for $28 plus postage for one or two shirts. I will have the shirts at Jackpot and will bring any left to Oshkosh.

Contact: Rob Martinson
(303) 670-0799.

## Soft Brakes?

*Vance Atkinson (TX)* - When I first started flying the Cozy, brake pads were cheap so I changed them every year. Then the price went up and now I change them only when necessary, usually 2 - 2.5 years between changes.

A couple years ago I noticed I was having to push the pedal further to get the same stopping power results. Examination of the brake pads and system showed nothing amiss including at least 50% brake pad left. A year later I was changing pads even though they didn't warrant it. This would get me back some of the pedal I lost. In short time I was back to pushing my foot through the floor again and only 10% wear on the pads. Pumping did help some. So I reasoned we must have air in the system! More purging. Brakes were a little better, but still not right.

Finally after putting in new brake pads, bleeding the system for the umpteenth time and still having sagging brakes I jerked out the master brake cylinders. What a glorious feeling when you tear something apart to find all matters of crud and corroding parts. *YES!* We hit the jackpot! There was a nice deposit of water in one cylinder, a good supply of mud or dirt (that's what it looked like) in both and a fair amount of crud evenly distributed between both.

It cost me 5 bucks for new O rings (4 each cylinder) about 2 hours of disassembly, cleaning, honing, and reassembly plus 30 minutes to repump up the system with DOT-5 silicon based fluid.

VIOLA! you guessed it! They work as brand new now. It is amazing what a little preventive maintenance can do. As far as when to overhaul your cylinders, I don't know. Based on mine I'd say around 600 hours or 5 or 6 years.

These units are very simple and take no time to overhaul. The 5606 fluid or the DOT 5 fluid has an affinity for moisture so I suspect that our planes, parked nose down in the rain, will grab some water when your nose fills from the normal leaks.

If you are not getting braking like you should, check'em. It could make a difference!

---

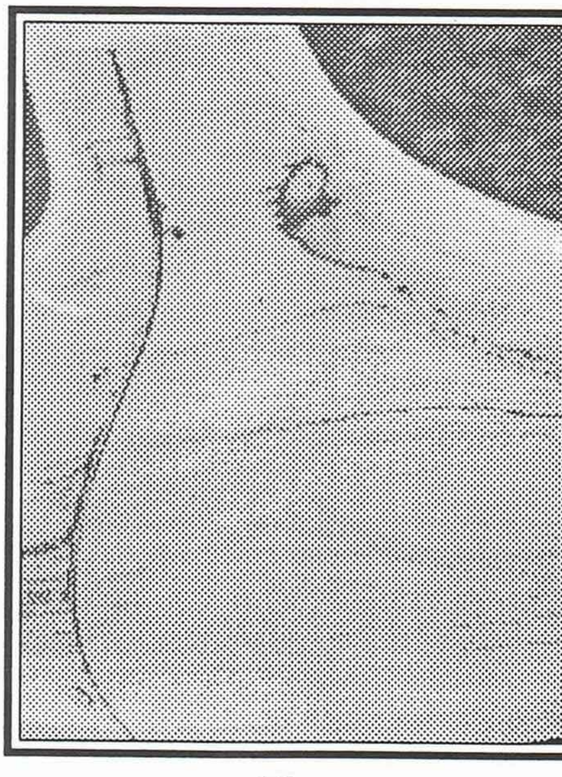
### NEF EZs at Outdoor Wedding

*Frank Nowak (MA)* - While Dianne, the most beautiful bride in the world, came down the aisle, the Northeast EZ Flyers airplanes waited at Newport State airport.

At an appropriate moment during the ceremony, Bett Midler's "The Wind Beneath My Wings" was played on a tape recorder. There was not a dry eye in the crowd as the EZs made a beautiful low pass with smoke on, just as Bett reached the most poignant moment of the song, "THANK YOU, THANK YOU, THANK YOU!"

That's what she sang then and that's what we are saying now: THANK YOU PAUL & BARB, BILL & LINDA, BOB & DOT, and DON. We will never forget that perfect moment in our lives which has been enriched by our fellow EZ friends.

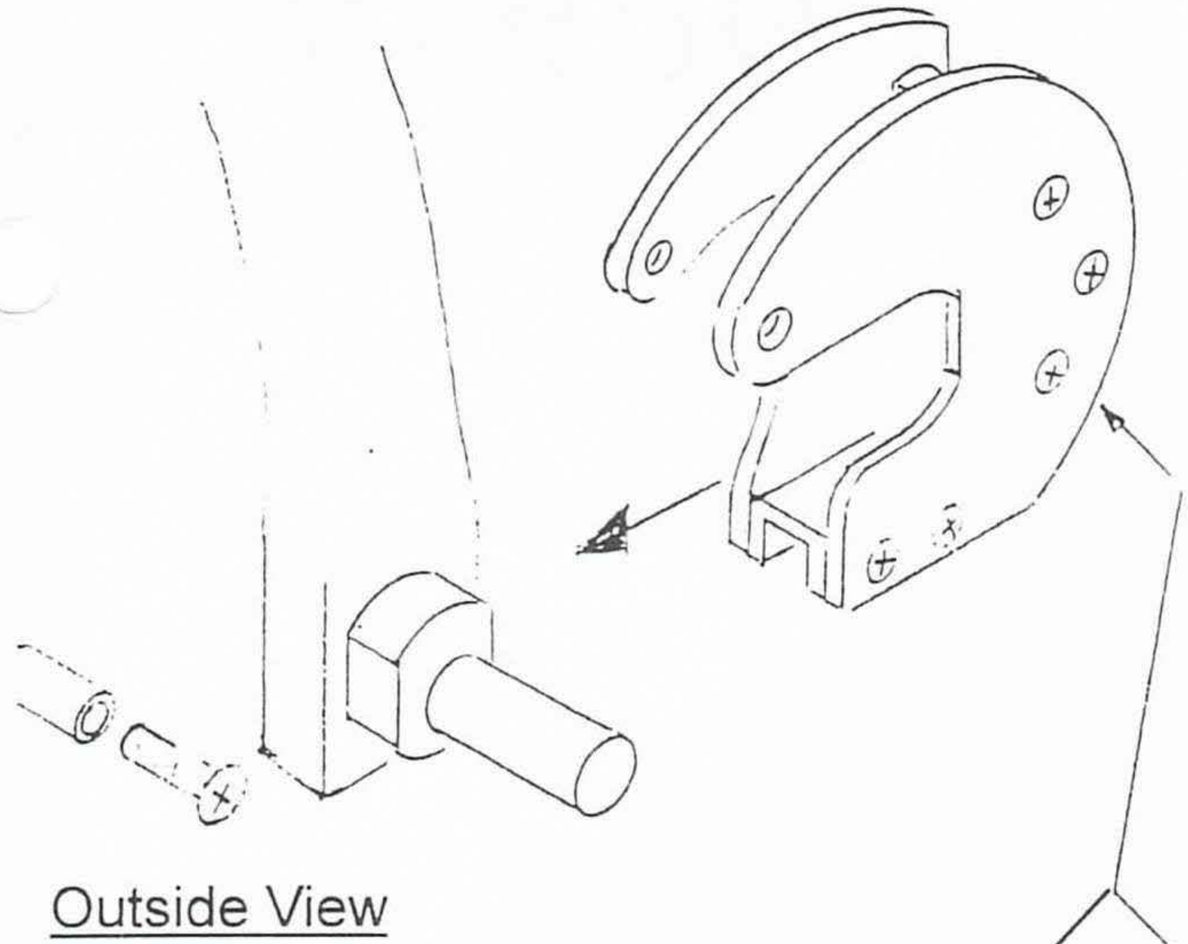
---



## Brake Heat Shield

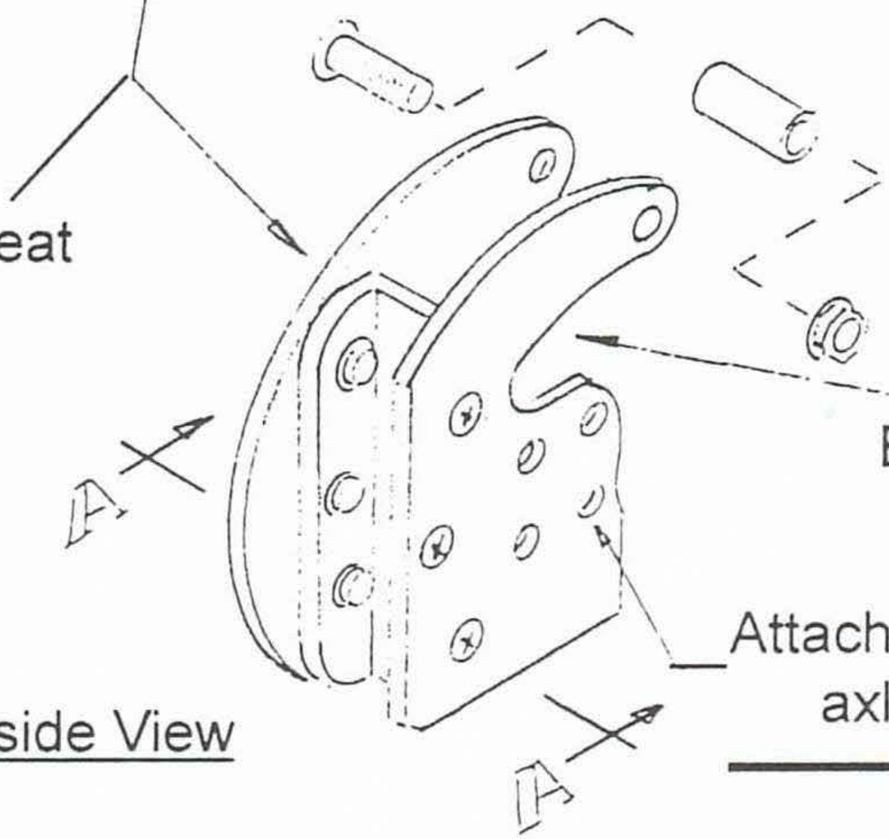
*Ken Merker - (IL)* While, looking through back issues I saw strong recommendations to mount heat deflectors between the axle and gear leg. I should have ordered the back issues one week earlier. No sooner had the epoxy between the gear and the axle flanges set and I found out about the deflectors.

I removed the axle bolts but could not get the axles free of the gear strut. So, I built a sleeve type deflector that could be installed without removing the axle. I don't see any problem with it other than being a lot more work and a little heavier. But then looking at the probability of my airplane laying sideways on a bent gear and me saying , "but it only weighs 1200 pounds, not 1201", it's worth it.



Outside View

.125 thick aluminum heat shield

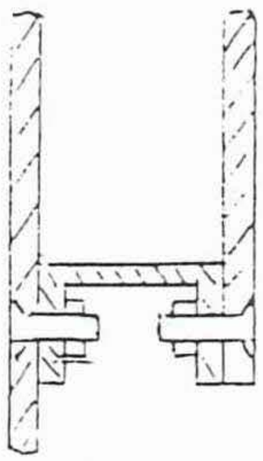



Brake line clearances

Attach to landing gear with axle mounting bolts

Inside View

Section A-A



### Wanted

Vacuum regulator needed. Bruce Hughes - (808) 572-8864, email: