

**MAJOR REPAIR AND ALTERATION**  
(Airframe, Powerplant, Propeller, or Appliance)

FOR FAA USE ONLY  
OFFICE IDENTIFICATION

INSTRUCTIONS: Print or type all entries. See FAR 43.9, FAR 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form.

1. AIRCRAFT	MAKE <b>CESSNA</b>	MODEL <b>A185F</b>
	SERIAL NO. <b>18502213</b>	NATIONALITY AND REGISTRATION MARK <b>N3946Q</b>
2. OWNER	NAME (As shown on registration certificate) <b>PAUL MENNEN</b>	ADDRESS (As shown on registration certificate) <b>756 CLARA DR, PALO ALTO, CA 94303</b>

3. FOR FAA USE ONLY

4. UNIT IDENTIFICATION

5. TYPE

UNIT	MAKE	MODEL	SERIAL NO.	5. TYPE	
				REPAIR	ALTERATION
AIRFRAME	..... (As described in item 1 above) .....				X
POWERPLANT					
PROPELLER					
APPLIANCE	TYPE				
	MANUFACTURER				

6. CONFORMITY STATEMENT

A. AGENCY'S NAME AND ADDRESS <b>VERN R MILLER 200 FORD RD., SP. 254 SAN JOSE, CA 95138</b>	B. KIND OF AGENCY <input checked="" type="checkbox"/> U.S. CERTIFICATED MECHANIC <input type="checkbox"/> FOREIGN CERTIFICATED MECHANIC <input type="checkbox"/> CERTIFICATED REPAIR STATION <input type="checkbox"/> MANUFACTURER	C. CERTIFICATE NO. <b>APP 1938774</b>
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D. I certify that the repair and/or alteration made to the unit(s) identified in item 4 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

DATE <b>9-26-87</b>	SIGNATURE OF AUTHORIZED INDIVIDUAL <b>Vern R Miller</b>
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7. APPROVAL FOR RETURN TO SERVICE

Pursuant to the authority given persons specified below, the unit identified in item 4 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is  APPROVED  REJECTED

BY	FAA FLT. STANDARDS INSPECTOR	MANUFACTURER	<input checked="" type="checkbox"/> INSPECTION AUTHORIZATION <input type="checkbox"/> CANADIAN DEPARTMENT OF TRANSPORT INSPECTOR OF AIRCRAFT	OTHER (Specify)
	FAA DESIGNEE	REPAIR STATION		

DATE OF APPROVAL OR REJECTION <b>9-26-87</b>	CERTIFICATE OR DESIGNATION NO. <b>1938774</b>	SIGNATURE OF AUTHORIZED INDIVIDUAL <b>Vern R Miller</b>
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## NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. DESCRIPTION OF WORK ACCOMPLISHED (If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Installed PSK 1101 main landing gear  
attach kit from P. Ponk Aviation in  
accordance with STC SA 2918 NM.  
Weight & balance revised accordingly.  
end

# Supplemental Type Certificate

**P. POKK AVIATION**

**THIS STC IS ISSUED FOR THE FOLLOWING AIRCRAFT**

Number SA2918NM  
FACTURER Cessna MODEL A185F

AIRCRAFT SERIAL NUMBER 1P502213 (N3946Q)

PART SERIAL NUMBER 514

This certificate, issued to P. Pook Aviation

certifies that the change in the type design for the following product with the limitations and conditions

therefor as specified hereon meets the airworthiness requirements of Part \* of the \*

Regulations. **ONLY ORIGINAL ISSUE RED INK STAMPED STC COPY IS VALID**

Original Product — Type Certificate Number: \*  
Make: \*  
Model: \*

\*See attached Master Eligibility List (MEL) Number SA2918NM for List of Approved Airplane Models and Applicable Airworthiness Regulations.

### Description of Type Design Change:

Attach a casting to the landing gear fuselage attach angles just above the main landing gear legs in accordance with P. Pook Aviation Installation Instructions PSK-1100, no revision, dated March 22, 1985, or later FAA approved revision.

**Limitations and Conditions:** Approval of this change in type design applies to the above model aircraft only. This approval should not be extended to aircraft of this model on which other previously approved modifications are incorporated unless it is determined that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this Certificate, SA2918NM, and Master Eligibility List, dated April 5, 1985, or later FAA approved revision, must be maintained as part of the permanent records for the modified aircraft.

*This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the*

*Federal Aviation Administration.*

Date of application: February 20, 1985

Date issued:

Date of issuance: April 5, 1985

Date amended:

By direction of the Administrator



*H. E. Waterman*  
(Signature)

Manager, Seattle Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both. This certificate may be transferred in accordance with FAR 21.47.

P PONK AVIATION

FOR

INSTALLATION OF CASTING TO THE LANDING GEAR FUSELAGE ATTACH ANGLE

Issue Date: April 5, 1985

ITEM	AIRCRAFT MAKE	AIRCRAFT MODEL	ORIGINAL TYPE CERTIFICATE NUMBER	CERTIFICATION BASIS FOR ALTERATION	FAA SEALED DRAWING/ DRAWING LIST		AFM SUPPLEMENT NUMBER/DATE	MEL AMENDMENT DATE
					NUMBER	REVISION NO. AND DATE		
1.	Cessna	170 Series	A-799	Part 03 of Civil Air Regulations & T.C.D.S. No. A-799.	PSK-1100	B 12/1/86	N/A	1/21/87
2.	Cessna	180 Series	5A6	Part 3 of Civil Air Regulations & T.C.D.S. 5A6.	PSK-1100	B 12/1/86	N/A	1/21/87
3.	Cessna	185 Series	3A24	Part 3 of Civil Air Regulations & T.C.D.S. 3A24.	PSK-1100	B 12/1/86	N/A	1/21/87

FAA Approved:

*D.L. Reagan*  
 Assistant Manager, Seattle Aircraft  
 Certification Office

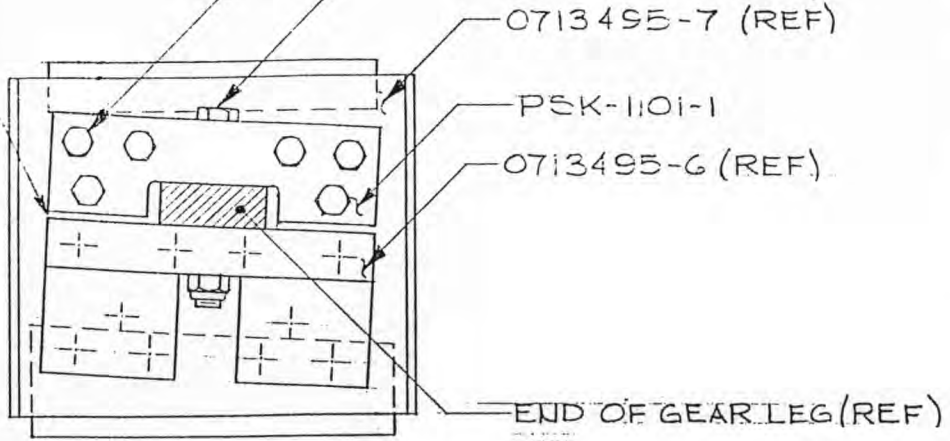
Date: January 21, 1987

REVISION	LEVEL	DATE
ADDITIONAL NOTES TOLERANCE CHANGE MINOR HOLE CHANGE	A	1-12-86
BOLT LENGTH CHANGE	B	12-1-86

AN5-15 A  
 AN960-516  
 MS21042L5 OR EQUIVALENT  
 (6 PLCS)  
 BOLT DIRECTION OPTIONAL (A)

NOTE:  
 SLIGHT GAP  
 NORMAL (A)

AN7-31 A (A)  
 AN960-716 (A)  
 MS20363-720C OR 365-720C



SEE SHT 2 FOR INSTL INSTRUCTIONS

DETAIL A  
 VIEW LKG INBD  
 (LH SHOWN - RH OPP)

DP  
 ↑  
 FWD ←

P. PONK AVIATION		
DWNR: CRB	APPROVED:	SCALE: NONE
DATE: 3/22/85	<i>St. Knapp</i>	REVISION: B
INSTL - GEAR MOD		
PSK-1100		SH: 1 OF 2

INSTALLATION INSTRUCTIONS FOR THE PSK1101-1 PART

\*\*\* IMPORTANT: READ INSTRUCTIONS THOROUGHLY PRIOR TO BEGINNING INSTALLATION. NOTE ALL CAUTIONS.

OBJECTIVE:

THE PSK1101-1 PART WILL BE ATTACHED TO THE INBOARD LANDING GEAR SUPPORT BRACKET (PN0713495-7 AND 0713495-8) OVER TOP OF THE MAIN LANDING GEAR SPRING. THIS WILL BE ACCOMPLISHED BY INSTALLATION OF A LONGER MAIN LANDING GEAR ATTACH BOLT, AND ADDITION OF (6) HOLES WITH (6) AN5-15A BOLTS AND ATTACHING HARDWARE ON EACH LANDING GEAR SUPPORT BRACKET.

PROCEDURE:

01. REMOVE FRONT SEATS AND CARPETING.
02. REMOVE FLOOR BOARD ACCESS COVERS OVER THE INBOARD MAIN LANDING GEAR SUPPORT BRACKET.
03. HOIST OR JACK THE AIRCRAFT IN ACCORDANCE WITH THE 100 SERIES SERVICE MANUAL, OR THE CESSNA SERVICE MANUAL PERTAINING TO YOUR AIRCRAFT. CAUTION: DO NOT JACK ON THE LANDING GEAR LEG. USE OPTIONAL LIFTING EYES, OR HOIST BY MEANS OF SUITABLE SLINGS, AS PER THE SERVICE MANUAL. NOTE: WE RECOMMEND LIFTING AIRCRAFT AND COMPLETION OF THE PART INSTALLATION ON ONE SIDE PRIOR TO INITIATION OF WORK ON THE OTHER SIDE.
04. REMOVE THE MAIN LANDING GEAR ATTACH BOLT (AN7-20A) WHICH PASSES THROUGH A HOLE IN THE END OF THE MAIN LANDING GEAR SPRING. CAUTION: BEFORE REMOVING BOLT, MAKE SURE THE AIRCRAFT IS FULLY SUPPORTED OFF THE GROUND. (THE TIRE MUST BE FREE TO ROTATE.)
05. PLACE THE PSK1101-1 PART OVER THE TOP OF THE MAIN LANDING GEAR SPRING WITH ARROWS POINTING DOWN, AND OUTBOARD, FOLLOWING THE DIRECTIONS PRINTED ON THE PART.
06. INSTALL THE AN7-31A MAIN LANDING GEAR ATTACH BOLT THROUGH THE FOLLOWING PARTS:
  - A. THE PSK1101-1 PART.
  - B. THE HOLE IN THE END OF THE MAIN LANDING GEAR SPRING.
  - C. THE ORIGINAL LANDING GEAR ATTACH ANGLE PN 0713495-6.
 INSTALL WASHER (OR WASHERS, AS NEEDED) AND ORIGINAL NUT (PN MS20365-720C) REMOVED IN STEP 4. (A NEW NUT WILL BE USED IN THE FINAL INSTALLATION.) TIGHTEN NUT TO 100 INCH POUNDS OR 9 FOOT POUNDS. CAUTION: DO NOT OVER TIGHTEN. THIS IS NOT THE FINAL INSTALLATION.

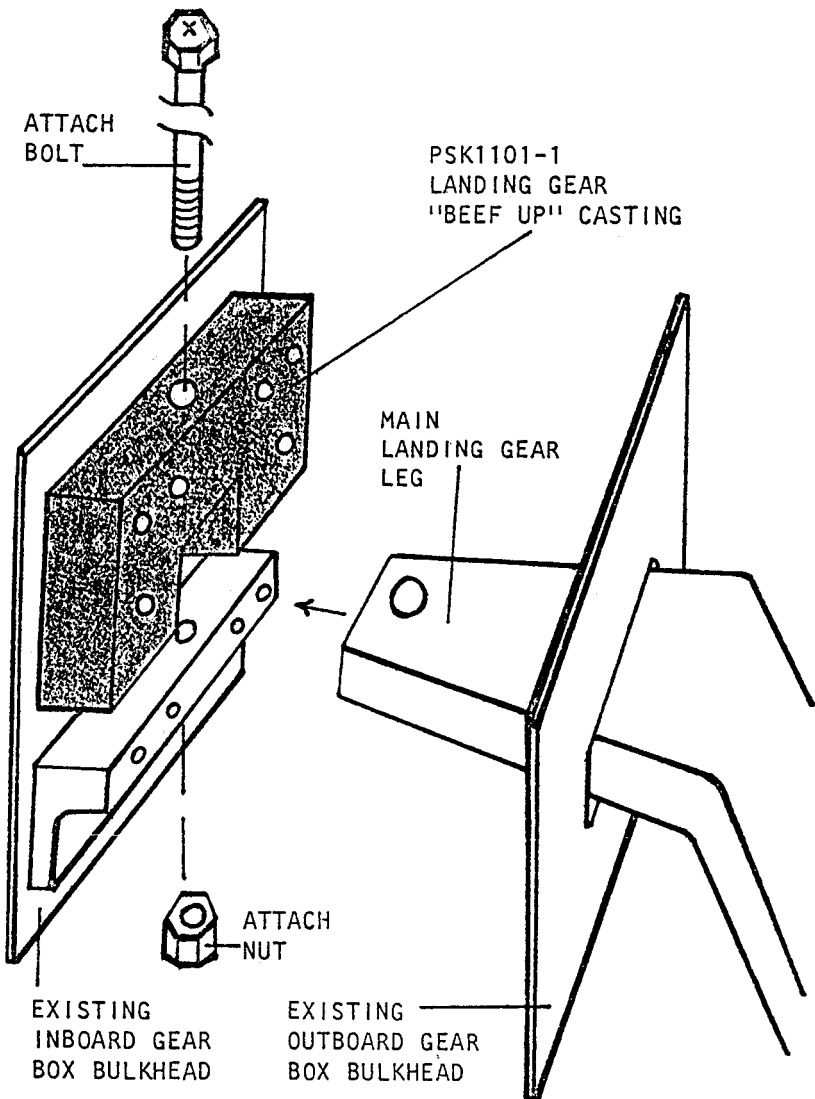
07. A DRILL BUSHING IS PROVIDED WITH THE KIT. INSERT DRILL BUSHING IN THE PSK1101-1 PART. USING A 90 DEGREE DRILL MOTOR AND A #10 DRILL BIT, DRILL ALL HOLES THAT YOU CAN WITHOUT MISALIGNMENT. THE REST OF THE HOLES WILL BE DRILLED IN STEP 8. (ON SOME MODELS IT IS POSSIBLE TO DRILL ALL HOLES AT THIS TIME.)
08. REMOVE THE NUT, BOLT AND PSK1101-1 PART PREVIOUSLY INSTALLED IN STEP 6. ENLARGE THE HOLES DRILLED IN STEP 7 BY REDRILLING UP TO 5/16". IF YOU WERE UNABLE TO DRILL ALL HOLES IN STEP 7, REMOVE THE LANDING GEAR AT THIS TIME, AND PROCEED TO STEP 9. IF YOU DRILLED ALL THE HOLES IN STEP 7, AND HAVE REDRILLED THEM UP TO 5/16", PROCEED TO STEP 11.
09. PLACE THE PSK1101-1 PART IN POSITION WITHOUT THE MAIN LANDING GEAR. TEMPORARILY INSERT AT LEAST (2) AN5-15A BOLTS IN HOLES PREVIOUSLY DRILLED AND ENLARGED. (THE AN7-31A LONG BOLT MAY BE USED TO AID ALIGNMENT.) DRILL THE REMAINING HOLES USING THE 90 DEGREE DRILL MOTOR, NUMBER 10 DRILL BIT, AND DRILL BUSHING, AS INSTRUCTED IN STEP 7.
10. REMOVE THE PSK1101-1 PART, AND ENLARGE THE HOLES (DRILLED IN STEP 9) BY REDRILLING UP TO 5/16".
11. WITH THE LANDING GEAR INSTALLED, POSITION THE PSK1101-1 PART OVER THE TOP OF THE LANDING GEAR, AND INSTALL AS PER DRAWING, USING THE AN7-31A BOLT, (6) AN5-15A BOLTS AND ASSORTED HARDWARE PROVIDED. INSTALL ALL BOLTS AND NUTS FINGER TIGHT. SNUG THE AN7-31A BOLT FIRST. TIGHTEN AND TORQUE THE AN5-15A BOLTS. TORQUE THE AN7-31A BOLT UP TO CESSNA SPECIFICATIONS AS PER CESSNA SERVICE MANUAL. A 1" ACCESS HOLE MAY BE CUT IN THE FLOORBOARD, INBOARD OF THE ATTACH CASTING, FOR EASE OF INSTALLING THE NUTS. PLUG ACCESS HOLE WITH A 1" #612 WILKIE BUTTON.
12. REPEAT STEPS 1 THROUGH 11 ON THE OPPOSITE SIDE OF AIRCRAFT.
13. (OMITTED)
14. MAKE APPROPRIATE LOG BOOK AND 337 ENTRIES. AMEND WEIGHT AND BALANCE. THE TOTAL ADDITIONAL WEIGHT IS 2.16 POUNDS AT STATION +23.5.

<b>P. PONK AVIATION</b>		
SCALE: NONE	APPROVED BY: <i>[Signature]</i>	DRAWN BY SLK
DATE: 5/22/85		REVISED 8/12/1986
<b>INSTL-GEAR MOD</b>		
<b>PSK-1100</b>		DRAWING NUMBER SHT 2 OF 2

REFERENCE DRAWING  
MAIN LANDING GEAR ATTACHMENT AREA  
CESSNA 170, 180 AND 185

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P. PONK AVIATION  
REINIG AIR PARK - 1212 NORTH MOORE ROAD  
CAMANO ISLAND, WASHINGTON 98292  
(206) 629-4812

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DESCRIPTION: (1) PSK1101 MAIN LANDING GEAR ATTACHMENT KIT

PART NUMBER: PSK1101-1 SERIAL NUMBER: \_\_\_\_\_

FOR USE ON MAKE: CESSNA

MODEL: 170, 180, AND 185 SERIES

FAR/PMA APPROVED

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PSK1101 KIT - PACKING SLIP

---	✓	STC PAPERWORK
---	✓	INSTRUCTION SHEETS
---	✓	(2) PSK1101-1 BLOCKS
---	✓	(12) AN5-15A BOLTS
---	✓	(2) AN7-31A BOLTS
---	✓	(12) MS21040-5 OR MS21042-5 NUTS
---	✓	(2) AN363-720 NUTS
---	✓	(24) AN960-516 WASHERS
---	✓	(4) AN960-716 WASHERS
---	✓	(2) 612 WILKIE BUTTONS
---	✓	(1) 5/16" DRILL BUSHING

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WE SPECIALIZE IN CESSNA 170/180/185 AIRCRAFT  
NEEDS, STRUCTURAL REPAIR, ENGINE OVERHAUL,  
COMPLETE AIRCRAFT REBUILD.  
THANK YOU FOR YOUR ORDER!

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INVOICE

AUGUST 16, 1987

INVOICE NUMBER 712

PAUL MENNEN  
SIGNOLOGY  
1750 SILACCI DRIVE  
CAMPBELL, CA. 95008

RE: C-A185F N3946Q  
SN: 18502213

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PARTS

(1) PSK1101 MAIN LANDING GEAR ATTACHMENT KIT	\$	199.50
PSK1101-1 CASTING SERIAL NUMBER 514		

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MERCHANDISE	LABOR	FREIGHT	OTHER	SUB-TOTAL
\$ 199.50	\$	\$	\$	\$ 199.50

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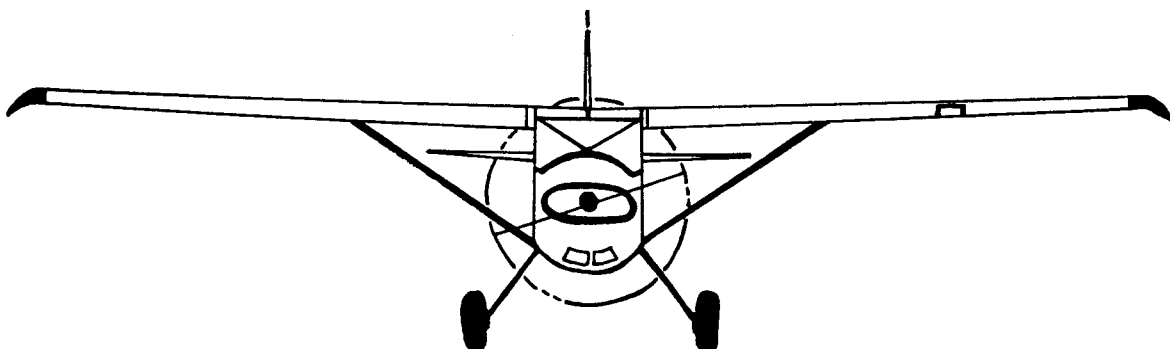
SHIPPED VIA UPS SURFACE, COD ON 8-17-87.

P. PONK AVIATION  
1212 NORTH MOORE ROAD  
CAMANO ISLAND, WA. 98292  
(206) 629-4812

SALES TAX 7.5%	+	N/A
-----		
TOTAL DUE:	\$	199.50
LESS CK#549	-	199.50
-----		
BALANCE DUE:		0

THANK YOU.

ALL ACCOUNTS ARE DUE IN FULL ON COMPLETION OF WORK AND/OR RECEIPT OF MERCHANDISE. A FINANCE CHARGE OF 1.5% PER MONTH, 18% APR, IS CHARGED ON ALL UNPAID BALANCES.



## **BEEF UP THE WEAK LINK!!**

### **PSK1101 MAIN LANDING GEAR ATTACH KIT FAA/PMA APPROVED FOR INSTALLATION ON CESSNA 170, 180 AND 185 MODELS**

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#### **PURPOSE IN DEVELOPMENT**

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P. Ponk Aviation and Air Structures are northwest firms specializing in Cessna maintenance, major airframe rebuild, & engine overhaul services.

We were involved for many years in the seasonal commercial fisheries of Alaska, using Cessna tail dragger models in our work. Through our experiences, we recognized a weakness in the landing gear and the need to strengthen this area of the aircraft.

Many Cessna tail dragger models are extensively damaged due to failure of the nut and bolt which attach the landing gear to the aircraft.

When the gear is subjected to side or shear loads, the nut is frequently stripped off the attach bolt. The gear is torn out of the aircraft, often resulting in damages to the gear box bulkheads, door post, wing, stabilizer, propeller and related areas.

**THE PSK1101 KIT WAS DEVELOPED TO REDUCE THE INCIDENCE OF LANDING GEAR FAILURE, AND TO HELP MINIMIZE DAMAGES EXPERIENCED IN UNEXPECTED ABNORMAL LANDINGS.**

## HOW IT WORKS

The PSK1101 Kit is designed to strengthen the landing gear where it attaches at the inboard gear box bulkhead.

Our castings bolt to the inboard gear box bulkhead, just above the gear leg attach point. A longer attach bolt is used which is inserted through the casting, gear leg, and the existing bulkhead attach point.

**THE FAA/PMA APPROVED KIT RELIEVES TENSION LOADS FROM THE NUT AND BOLT, TRANSFERRING THE LOAD BACK INTO THE GEAR BOX. IT INCREASES SAFETY BY DOUBLING THE SHEAR STRENGTH, AND TRIPLING THE SIDE LOADING STRENGTH OF THE LANDING GEAR.**

## INSTALLATION

The PSK1101 Kit comes complete with STC paper work, FAA/PMA approved castings, hardware, diagrams and instructions. Installation is accomplished through existing inspection access holes, using normal tools, and a right angle drill. Approximate installation time is 2.0 shop hours per gear leg.

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For additional product information, feel free to contact us, 8:00AM to 5:00PM, Monday through Friday.

## ORDER INFORMATION

To order, please send the following to:

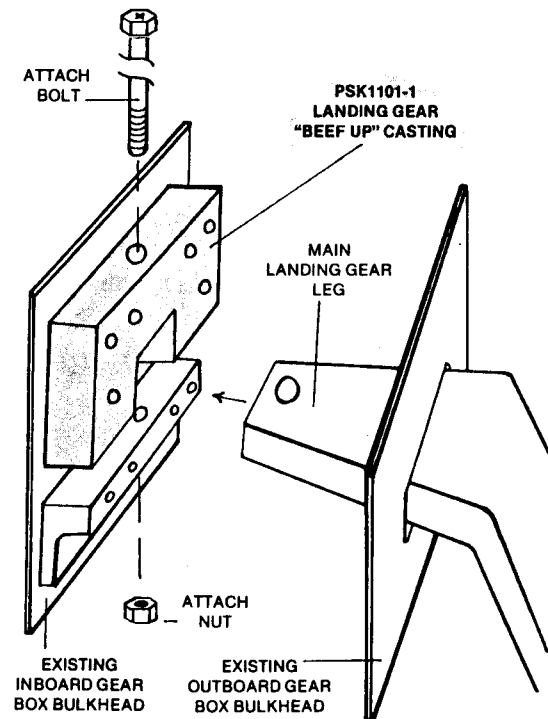
**P. Ponk Aviation**  
1212 North Moore Road  
Camano Island, WA 98292

- 1.) \$199.50 **INTRODUCTORY PRICE**  
Includes U.P.S. surface freight on prepaid continental U.S.A. orders only. (List price is \$249.95)  
7.5% **SALES TAX**  
Washington State Residents  
\$5.00 **FREIGHT** (for Alaska and Hawaii orders.)
- 2.) **SHIPPING** Name:  
Address:  
Zip Code:  
Phone:
- 3.) **AIRCRAFT** Owner's Name:  
Cessna Model Number:  
Registration Number:  
Serial Number:
- 4.) **CESSNA 170 OWNERS ONLY:**  
Is standard 170 gear installed on your aircraft?  
If not, specify gear installed:

• • • • •

Discounts are available for FBO and multiple orders. Please call for quote.

## REFERENCE DRAWING MAIN LANDING GEAR ATTACHMENT AREA CESSNA 170, 180 AND 185



**P. Ponk Aviation**  
1212 N. Moore Rd.  
Camano Is., WA 98292  
(206) 629-4812

**Air Structures**  
229 East Hazel  
Mt. Vernon, WA 98273  
(206) 435-9898