

**Procedure 3.040A****MAIN LANDING GEAR BRACKET INSTALLATION**

In this procedure...

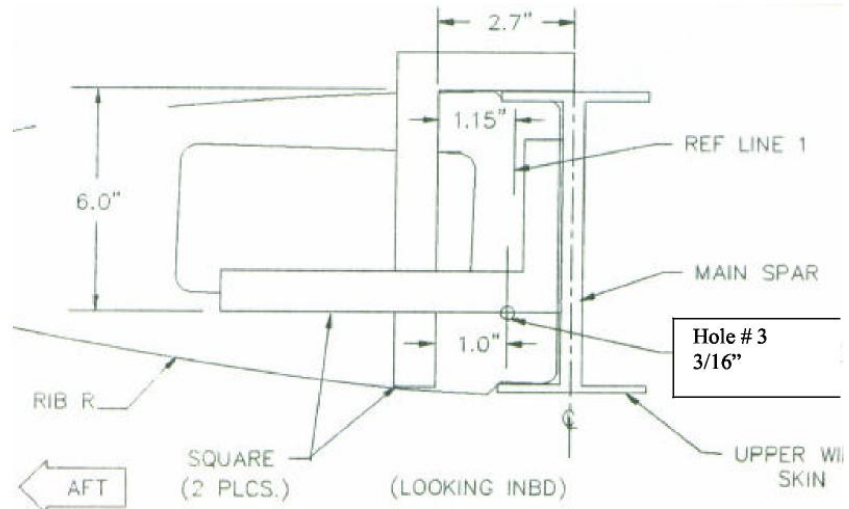
The main Landing Gear brackets will be installed in Ribs R (BL 36.00)  
and J (BL 23.50) aft inboard

**For this procedure, the following parts will be required.**

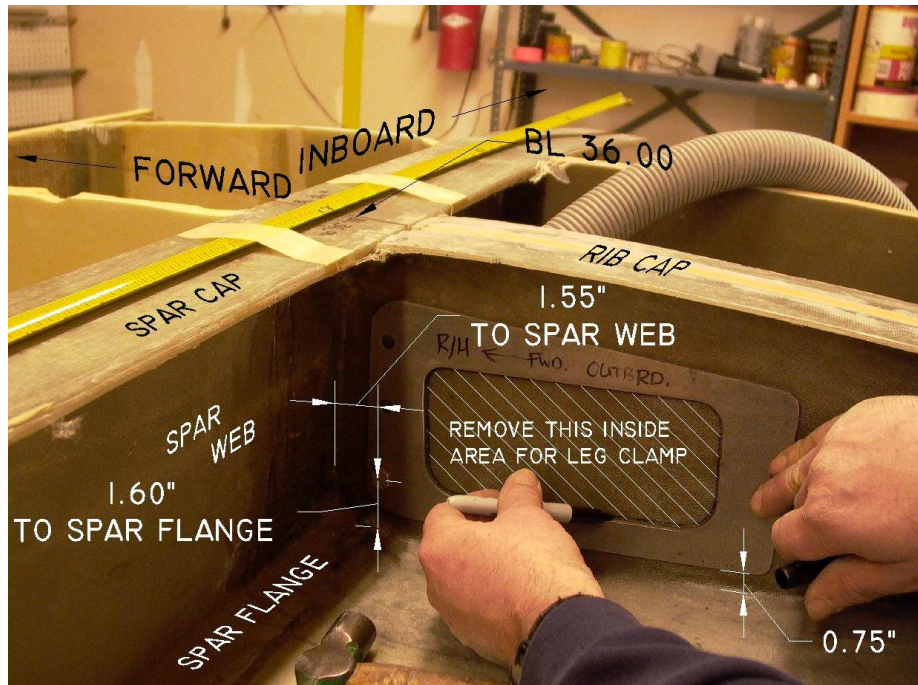
<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
111-14-001	Inboard-Picture Window Backing Plate	2
111-14-001-01	Bracket Outboard RF	1
111-14-001-02	Bracket Outboard RR	1
111-14-001-03	Bracket Outboard LF	1
111-14-001-04	Bracket Outboard LR	1
111-14-001-05	Outboard-Picture Window Backing Plate	2
111-14-002	Clamp Main Landing Gear	2
111-14-002-01	Pin Main Gear Clamp	4
111-14-003	Pressure Plate Main Gear	2
111-14-003-01	Pressure Plate Pad	2
111-14-005	Bracket, Inboard LG Leg	2
111-14-006	Bracket, Inboard LG Rib	2
115-13-021L	Main Landing Gear Leg Left	1
115-13-021R	Main Landing Gear Leg Right	1
111-24-072	Flap Actuator Bracket	1
111-14-002-02	Bolt, Main Landing Gear Pressure Plate	6
AN6-20A	Bolt	10
AN365-624	Nut	10
AN960-616	Washer	20
AN4-16A	Bolt	4
AN4-18A	Bolt	4
AN365-428	Nut	18
AN960-416	Washer	16
AN6-10A	Bolt	7
AN365-624	Nut	8
AN960-616	Washer	16
AN8-16	Bolt	2
AN310-8	Nut	2
AN960-8	Washer	4
MS24665-283	Cotter Pin	2
AN6-34A	Bolt	1
AN3-13A	Bolt	1
AN365-1032	Nut	1
AN960-10	Washer	1

**Step 1. LOCATE AND DRILL MOUNT HOLES.**

Using the illustration to the right, determine the location of hole # 3 on Rib R.  
 Drill a 3/16" hole making sure the drill is perpendicular to the rib.  
 Ream the hole to 3/8".



**Fig. 40.1 Locating Pilot Hole Left Hand Wing**



**Fig. 40.2 Optional method of locating main gear bracket pilot hole. Locate, mark, and drill #30 pilot hole. Backdrill 3/8".**

### **Step 2. POSITIONING AND CUT OUT OF “PICTURE FRAME” ACCESS HOLE IN RIB R, MAIN GEAR RIB BL 36.00**

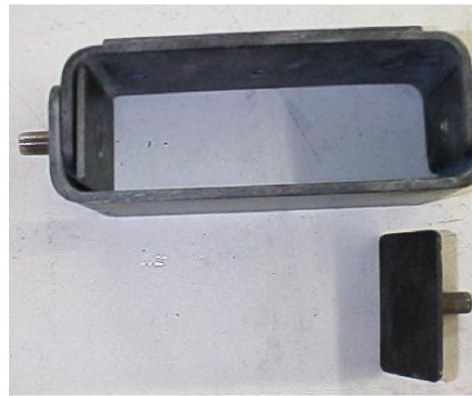
**A.** After hole is drilled (Step 1), install outboard backing plate with (1) bolt. Position against outboard rib face (Rib R) and with lower-aft edge of plate at 0.75” from wing skin surface, as shown in Fig. 40.2, clamp in place and outline cutout around inside edge of frame.

**B.** Remove frame plate and hole saw, grind, and/or sand area laid out for clamp & bracket (angles) installation access. Be sure not to remove too much rib material to marked line until proper fit of clamp has been established. Final trim and some addition removal of material may be necessary to facilitate Step 4- locating clamp.

### **Step 3. ASSEMBLE MAIN LANDING GEAR CLAMP.**

Insert the Main Landing Gear Clamp Pins into the clamp bushings from the inside facing out. These pins will be held into position by the main landing gear. Slip the Outboard brackets onto the pins.

These brackets are stamped RF (Right Front), RR (Right Rear) LF (Left Front) and LR (Left Rear). Make sure you orient the brackets with the correct wing. The Pressure Plate and 7/16 Jam bolts will be installed later.



**Fig. 40.3**

### **Step 4. POSITION AND ATTACH OUTBOARD CLAMP TO RIB R.**

**A.** Insert a bolt through the # 3 hole in Rib R and attach the outboard mounting bracket. Hold the clamp assembly against Rib R. Using an inclinometer position the clamp assembly at a 5° forward slant. Use a “C” Clamp to hold in position, and drill the remaining four holes. Bolt into position. (**Note: Make sure wing saddle jig is still level. Make sure brackets are tight against the clamp assembly so that no endplay is present when brackets are bolted to rib.**)



**Fig. 40.4**

**B.** Once frame is clamped at a 5° forward slant, back drill (2) forward (3/8") bolt locations and temporarily install bolts, nuts, and washers.

**C.** While still clamped, at rear angle, with inclinometer still at 5°, drift-punch or spot-drill (2) rear angle attach holes through angle to outboard plate to make a drill start. Remove plate and drill marked, rear plate, 3/8" hole locations also.

**D.** Re-install outboard plate, front and rear angles, and bolts, only. Now with (1) bolt partially installed at rear angle location, install inboard picture window frame, starting with forward hole locations (3) places.

\*Some back drilling may be necessary if holes are not drilled square and level through rib. \*

**E.** Temporarily install nuts and snug-up plates and forward angle in position with rear angle and gear leg clamp at 5° and in position. Drift punch (center punch (2) rear hole locations to inboard plate. Remove inboard picture frame plate again and drill 3/8" holes through plate.

**F.** Deburr holes in plates. Now reinstall complete outboard main gear clamp assembly as shown Figs. 40.5 and 40.6.



**Fig. 40.5**

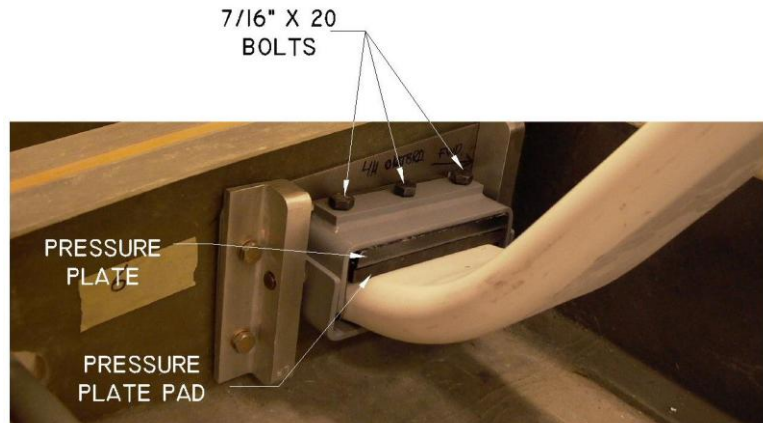


**Fig. 40.6**



**Step 5. INSERT MAIN GEAR LEG IN CLAMP.**

Use contact cement and glue the pressure plate pad to the face of the pressure plate. (Opposite the flanged side.) Place the pressure plate into the clamp. Slip the main gear leg into the clamp from the outboard side. Make sure conduit for the brake line is on the aft side of the leg. Slip the leg through the clamp until the inboard end is flush with Rib J. (A small amount of dish soap will help allow the gear leg to slide on the pressure plate pad.)

**Fig. 40.7****Step 6. ATTACH INBOARD LANDING GEAR BRACKETS, RIB J.**

**A.** Position the inboard bracket so that the rib plate is clamped, securely to rib and stationary at this time. Now alignment can begin.

**Fig. 40.8**

**B.** Hang a plumb bob off of forward flat face of axle mount location (Fig. 40.5). Gear leg should be  $90^\circ$  on the flat face where plumb bob hangs down to spar cap area. The point of the plumb bob should be 4.20" from the centerline of the spar cap. (Fig. 40.6) Inboard bracket should be 4.80" from centerline of spar cap to the forward edge of the bracket (Fig. 40.7 ), and the gear leg 3.00" from wing skin. Clamp in place and re-check all alignment issues.

- 1) Plumb bob to centerline of spar cap - 4.20".
- 2) Inboard bracket forward edge to centerline of spar cap - 4.80".
- 3) Gear leg clamp at  $5^\circ$  position as done earlier. Draw outline with marker at inboard rib & inboard gear leg. (Fig. 40.8 and 40.9)



**Fig. 40.5**



**Fig. 40.6**



Fig. 40.7



Fig. 40.8



Fig. 40.9



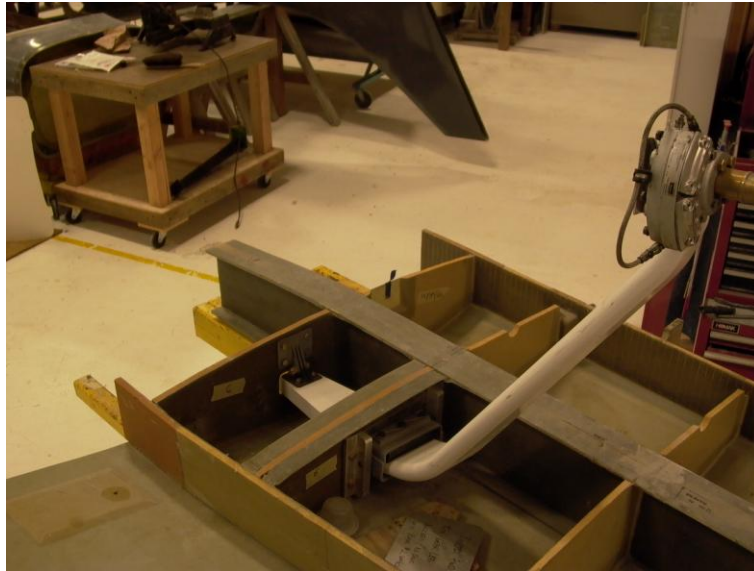
Fig. 40.10

**C.** Remove inboard bracket clamp and move gear leg to access inboard rib cut out area. Cutout inside marked area. (Fig. 40.10)

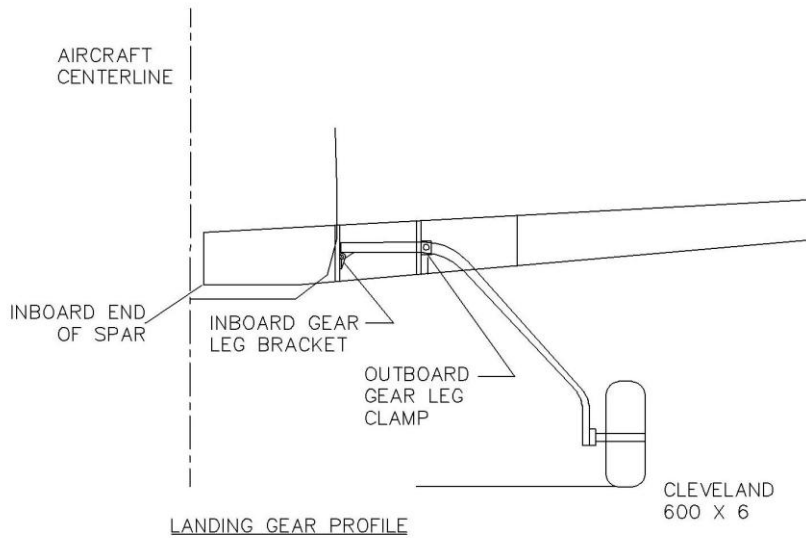
**D.** Re-install leg bolts and reposition to proper alignment. Clamp bracket to rib so it contacts the rib flat and securely at all corners. Drill 3/8" holes (4) places and install bolts, nuts, and washers. Tighten and re-check all dimensions for alignment.

**E.** Remove landing gear leg. To be re-installed after wing closure.





**Fig. 40.11**



**Fig. 40.12**

**Done!! Your main gear leg bracket is now installed.**

**Note: This procedure is the same for both landing gear leg brackets.**