

MAIN LANDING GEAR - ADJUSTMENT/TEST

1. General

- A. Correct main wheel alignment is important for maintaining tire wear within acceptable limits, and should be checked whenever excessive or abnormal wear is noted on tires.
- B. To correct alignment problems, special shims are utilized which change wheel camber. These shims are used in conjunction with Figure 501 and Figure 502 to produce correct camber under various airplane weights. These values are the sum of the values shown in the chart. Positive values will produce positive camber or toe-in. Negative values will produce negative camber or toe-out. Measurements are taken on wheel flange.

2. Wheel Toe-In Check

- A. Check Procedures (Refer to Figure 501).
 - (1) Ensure airplane is sitting on a level surface.
 - (2) Ensure tires are properly inflated. Refer to Chapter 12, Tires - Servicing.
 - (3) Place main gear wheels on aluminum plates approximately 18.0 inches square. The plates should be resting on greased aluminum plates of the same dimension.
 - (4) Establish airplane centerline on floor surface by dropping plumb bob line from center of forward jack point (located on forward nose gear drag link spring support) and from center of tail tiedown bracket (located on lower side of aft tail cone). Chalk a line on floor between two plumb bob points.
 - (5) Using intersecting arc method, establish second line perpendicular to airplane centerline just forward of main gear tires and chalk line.
 - (6) Using squares, wood blocks and long straightedge as shown in Figure 501, set up straightedge parallel to second chalk line just below level of axle nut.
 - (7) Carefully roll airplane forward until tires just touch straightedge.
 - (8) Place two marks on wheel flanges just below wheel nut level eleven inches apart.
 - (9) Place carpenter's square against straightedge, just outboard of wheel flange marks, and determine dimensions X and Y. Toe-in (for one wheel) is the difference between the two dimensions (i.e. Y-X). Compare this dimension with the chart on Figure 501, Sheet 3.
 - (10) If toe-in dimension is not within specified tolerance, determine from charts on Figure 501 which shim (or shim combination and shim orientation) will establish specified tolerance.

3. Wheel Camber Check

- A. Wheel camber is measured by reading a protractor level held vertically against the outboard flanges of the wheel. Refer to Figure 501, Sheet 3 for camber check procedures and Figure 502 for a weight versus camber chart.

Figure 501 : Sheet 1 : Main Wheel Alignment

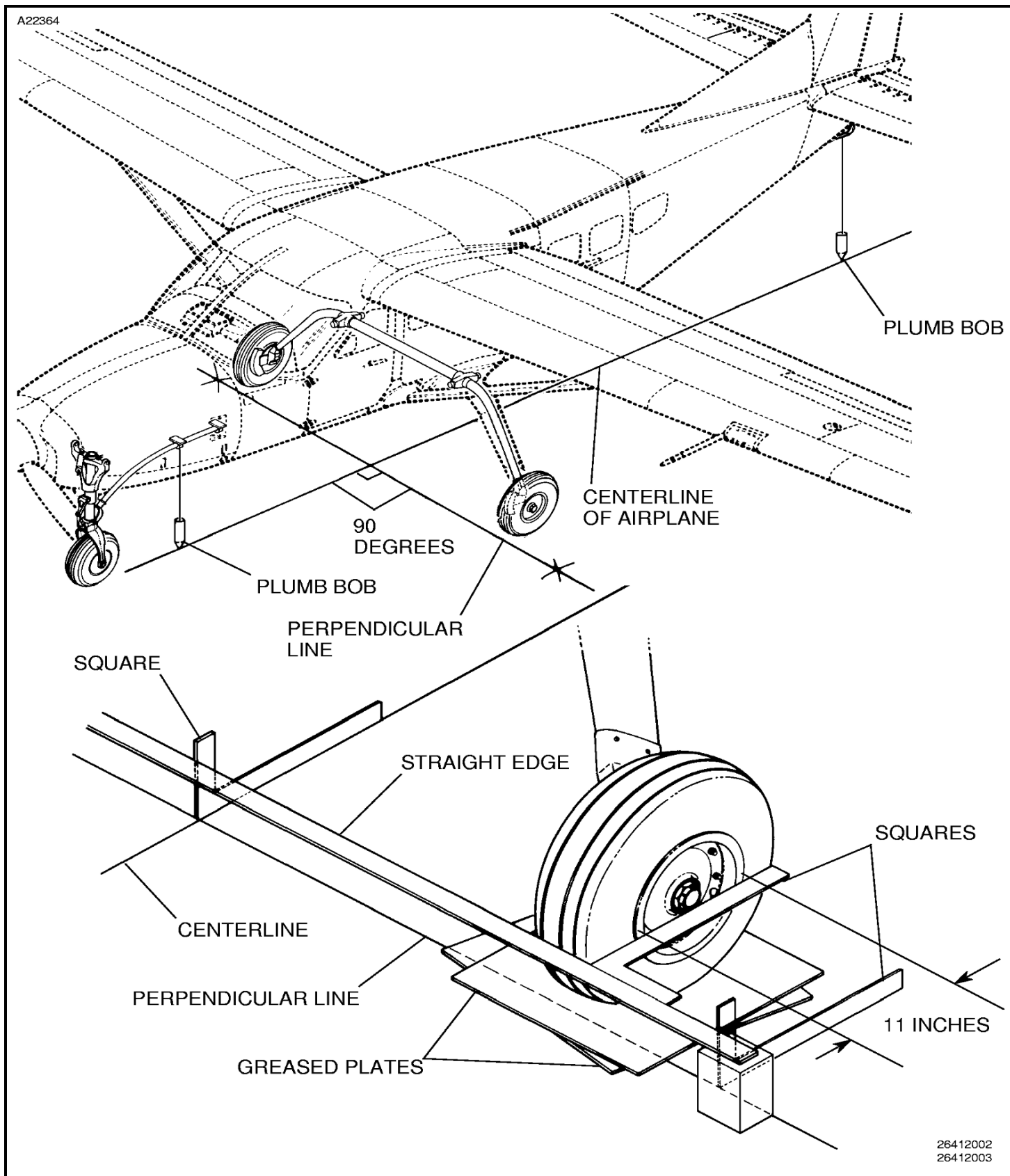


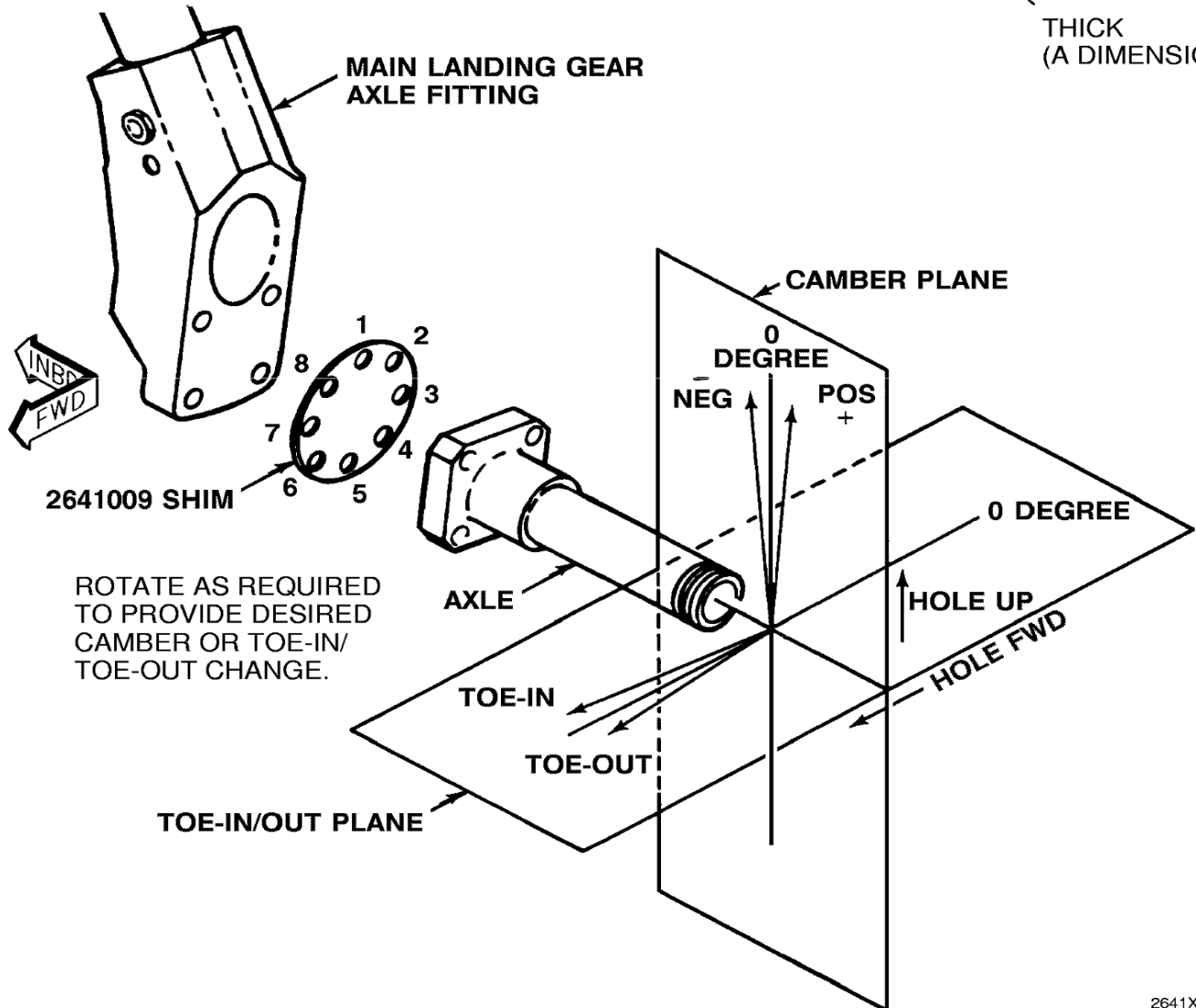
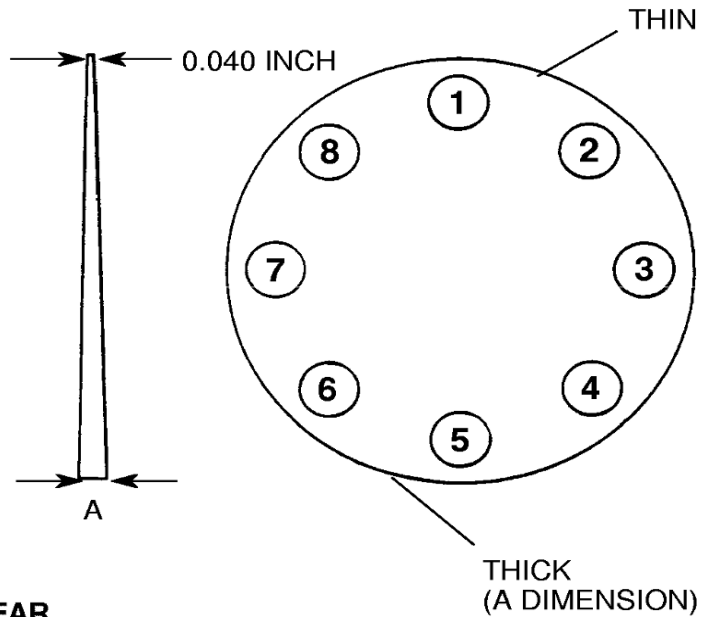
Figure 501 : Sheet 2 : Main Wheel Alignment

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NOTE: MAXIMUM COMBINED SHIM THICKNESS NOT TO EXCEED 0.375 INCH AT THICKEST POINT.

PART NO. 2641009 SHIM

DASH NO.	A DIM
-1	0.106 INCH
-2	0.173 INCH
-3	0.240 INCH



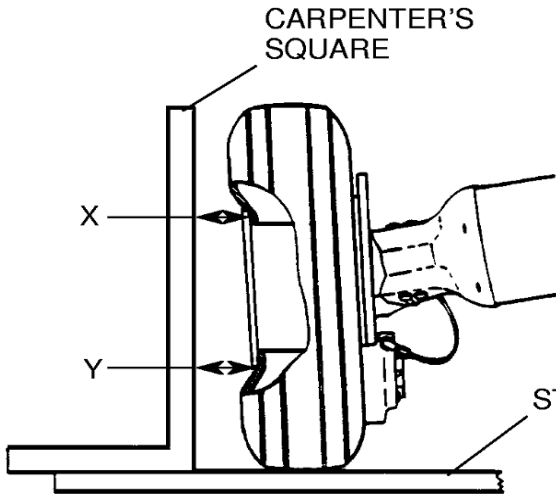
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Figure 501 : Sheet 3 : Main Wheel Alignment

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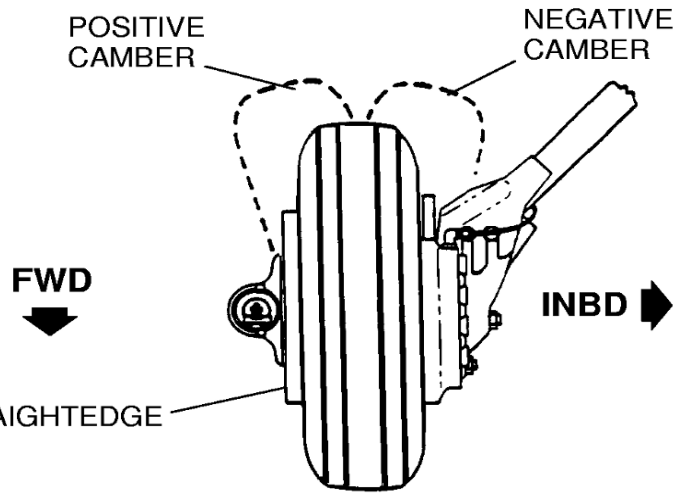
TOP VIEW OF TOE-IN CHECK

MEASURE DIMENSIONS "X" AND "Y".
 TOE-IN IS DIFFERENCE BETWEEN X AND Y. (I.E. Y-X)



FRONT VIEW OF CAMBER CHECK

MEASURE CAMBER BY READING PROTRACTOR LEVEL HELD VERTICALLY AGAINST OUTBOARD FLANGES OF WHEEL.

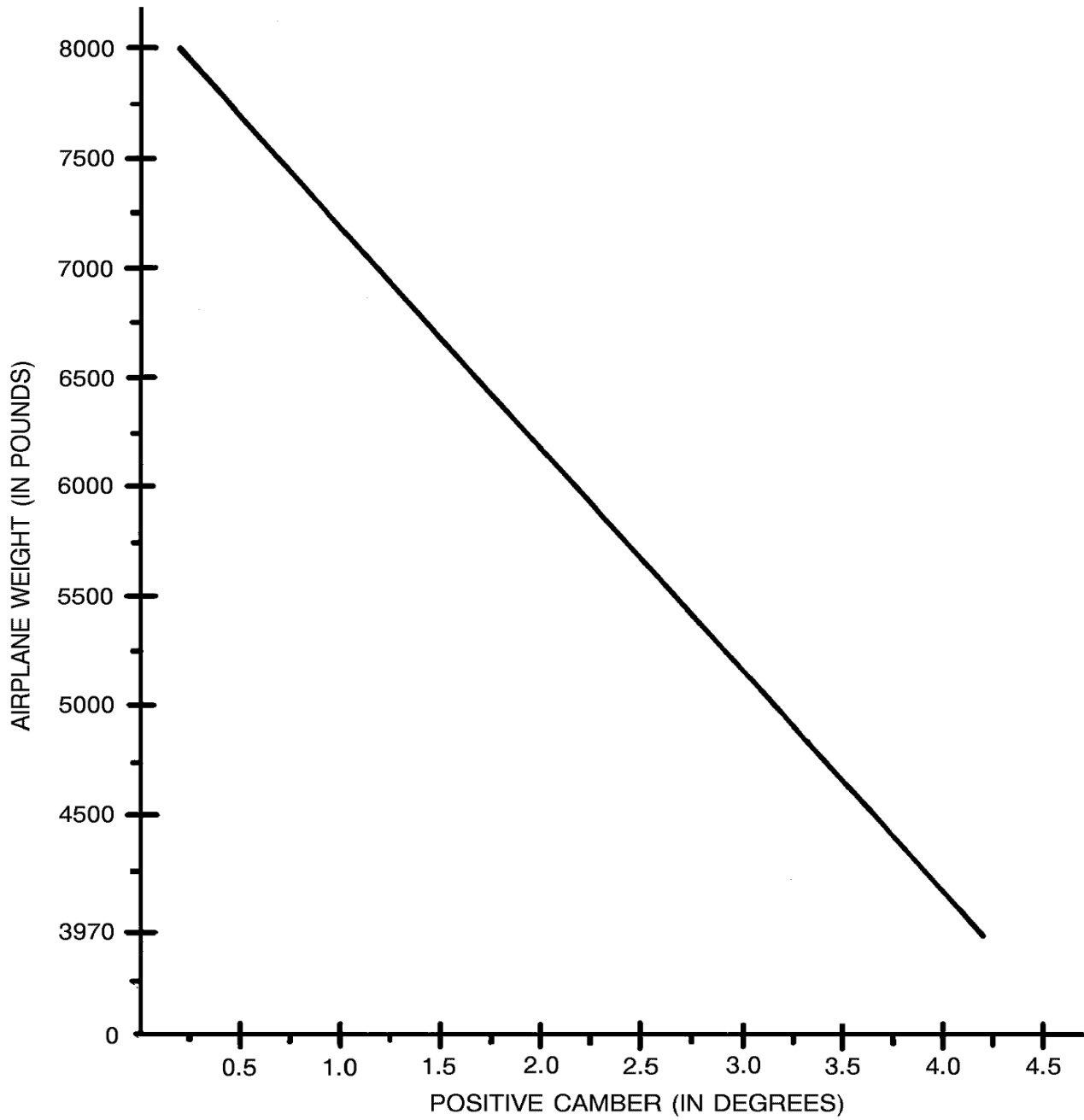


HOLE POSITION		-1 SHIM		-2 SHIM		-3 SHIM	
UP	FWD	CAMBER (DEGREES)	TOE (INCHES)	CAMBER (DEGREES)	TOE (INCHES)	CAMBER (DEGREES)	TOE (INCHES)
1	3	-1.00	0.00	-2.00	0.00	-3.00	0.00
1	7	-1.00	0.00	-2.00	0.00	-3.00	0.00
2	4	-0.75	-0.144	-1.50	-0.288	-2.00	-0.384
2	8	-0.75	+0.144	-1.50	-0.288	-2.00	-0.384
3	5	0.00	-0.192	0.00	-0.384	0.00	-0.576
3	1	0.00	+0.192	0.00	+0.384	0.00	+0.576
4	6	+0.75	-0.144	+1.50	-0.288	+2.00	-0.384
4	2	+0.75	+0.144	+1.50	+0.288	+2.00	+0.384
5	7	+1.00	0.00	+2.00	0.00	+3.00	0.00
5	3	+1.00	0.00	+2.00	0.00	+3.00	0.00
6	8	+0.75	+0.144	+1.50	+0.288	+2.00	+0.384
6	4	+0.75	-0.144	+1.50	-0.288	-2.00	-0.384
7	1	0.00	+0.192	0.00	+0.384	0.00	+0.576
7	5	0.00	-0.192	0.00	-0.384	0.00	-0.576
8	2	-0.75	+0.144	-1.50	+0.288	-2.00	+0.384
8	6	-0.75	-0.144	-1.50	-0.288	-2.00	-0.384

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Figure 502 : Sheet 1 : Weight Versus Camber Chart

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NOTE: CAMBER TOLERANCE IS +1.00 OR -1.00 DEGREE.

RECOMMENDED TOE-IN SPECIFICATION IS 0.00 TO 0.10 INCH FOR EACH WHEEL AT ALL AIRPLANE WEIGHTS.

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