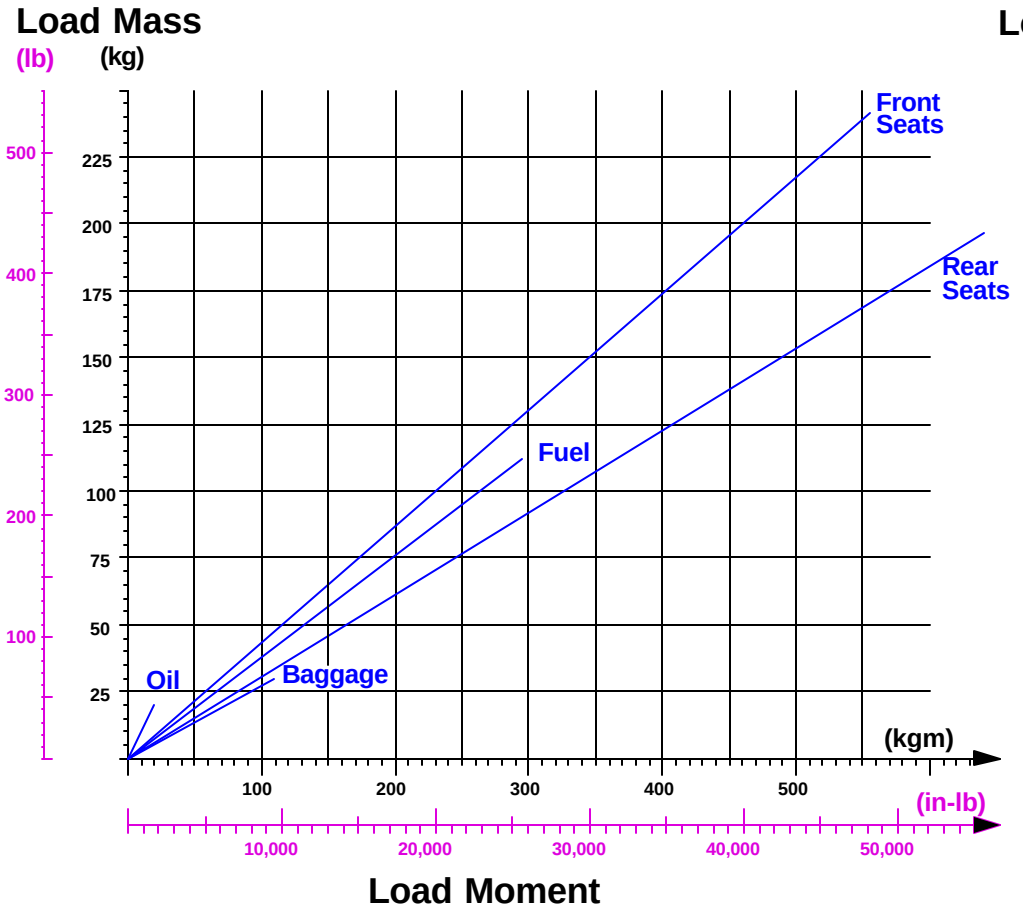
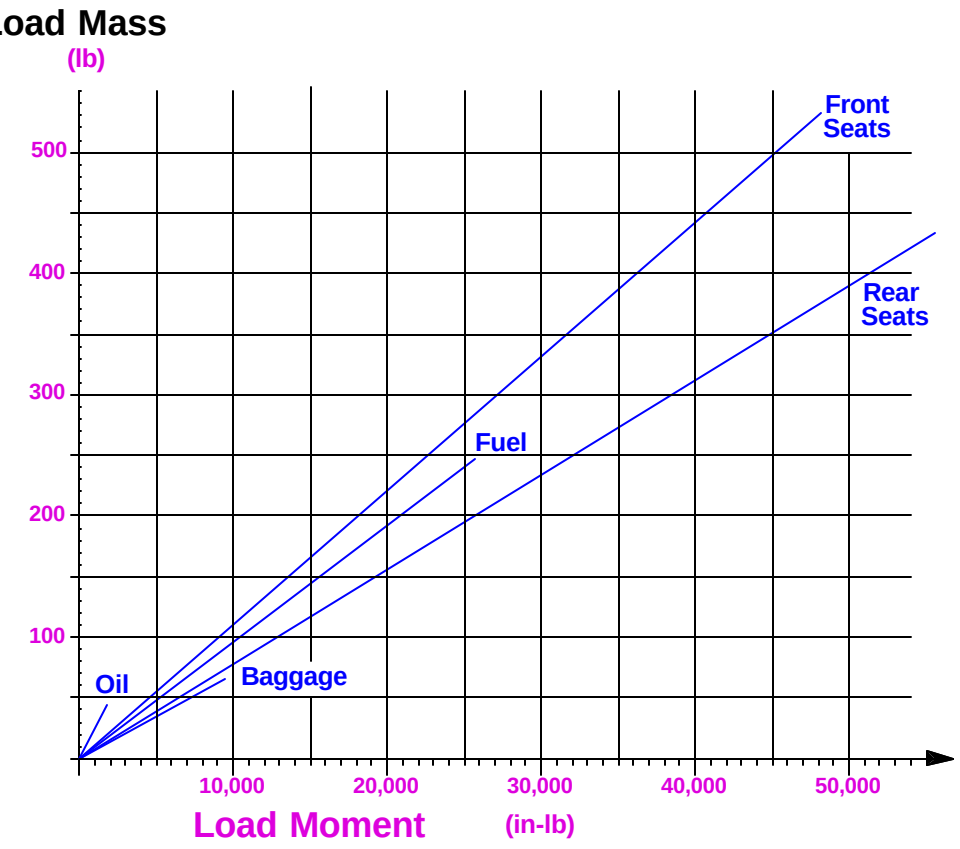
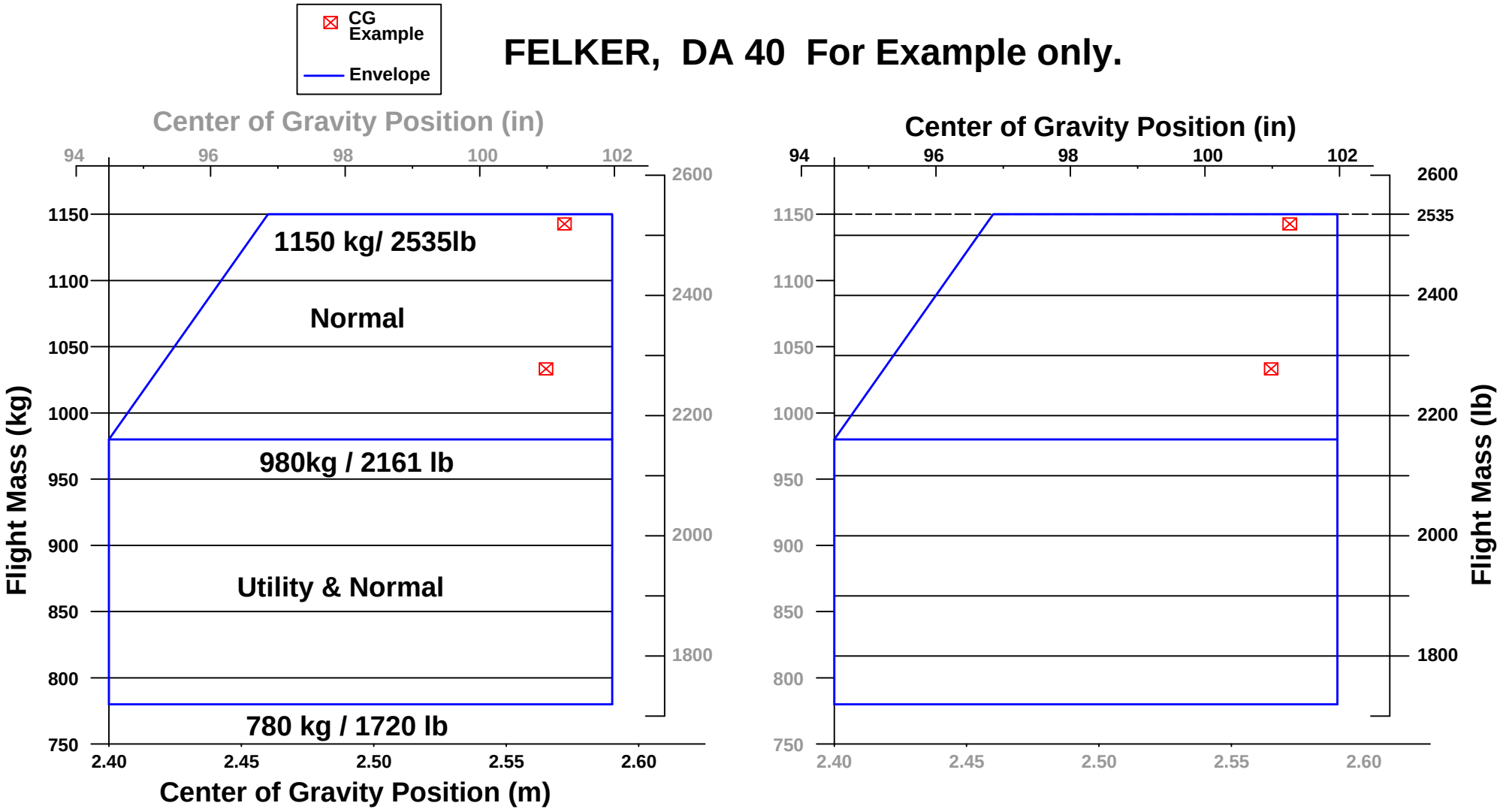
CALCULATION OF LOADING CONDITION		DA 40 (Example)						DA 40 (N138DS)	
		Mass (kg)	Moment (kgm)	Arm (m)	Mass (lb)	Moment (in-lb)	Arm (in)	Mass (lb)	Moment (in-lb)
1	Empty mass (from Mass and Balance Report)	735	1820		**1620**	**158,000**		**1700**	**163,295**
2	Oil not added.	-1.7	-1.7	1	**-3.7**	**-146**	**39.4**	**--**	**--**
3	Front seats	150	345	2.3	**331**	**29,999**	**90.6**		
4	Rear seats	150	487.5	3.25	**331**	**42,368**	**128**		
5	Baggage	0	0	3.65	**0**	**0**	**143.7**		
6	Total mass and total moment with empty fuel tanks. (**Total of 1 - 5**)	1033.3	2650.8		**2278.3**	**230,211**			
7	On-board usable fuel. (0.72 kg/liter) (6.01 lb/US gal) 40.2 Gal	109.4	287	2.63	**242**	**25,047**	**103.5**	**242**	**25,047**
8	**Total** mass and total moment with full fuel tanks. (**Total 6 plus 7**)	1142.7	2938.5		**2520.3**	**255,258**			
9	The total moments from rows 6 and 8 (2650.8 and 2938.5 kgm) (230,211 and 255,258 in-lb) must be divided by the related total mass (1033.3 and 1142.7 kg respectively) (2278.3 and 2520.3 lb) and then located in Diagram 'PERMISSIBLE CENTER OF GRAVITY RANGE'. As in the example above, CG positions (2.565 m and 2.572m respectively) (101.04 and 101.28 in) and masses fall into the permitted area, this loading condition is allowable.								

LOADING DIAGRAM, Diamond Star DA 40, Example only. FELKER

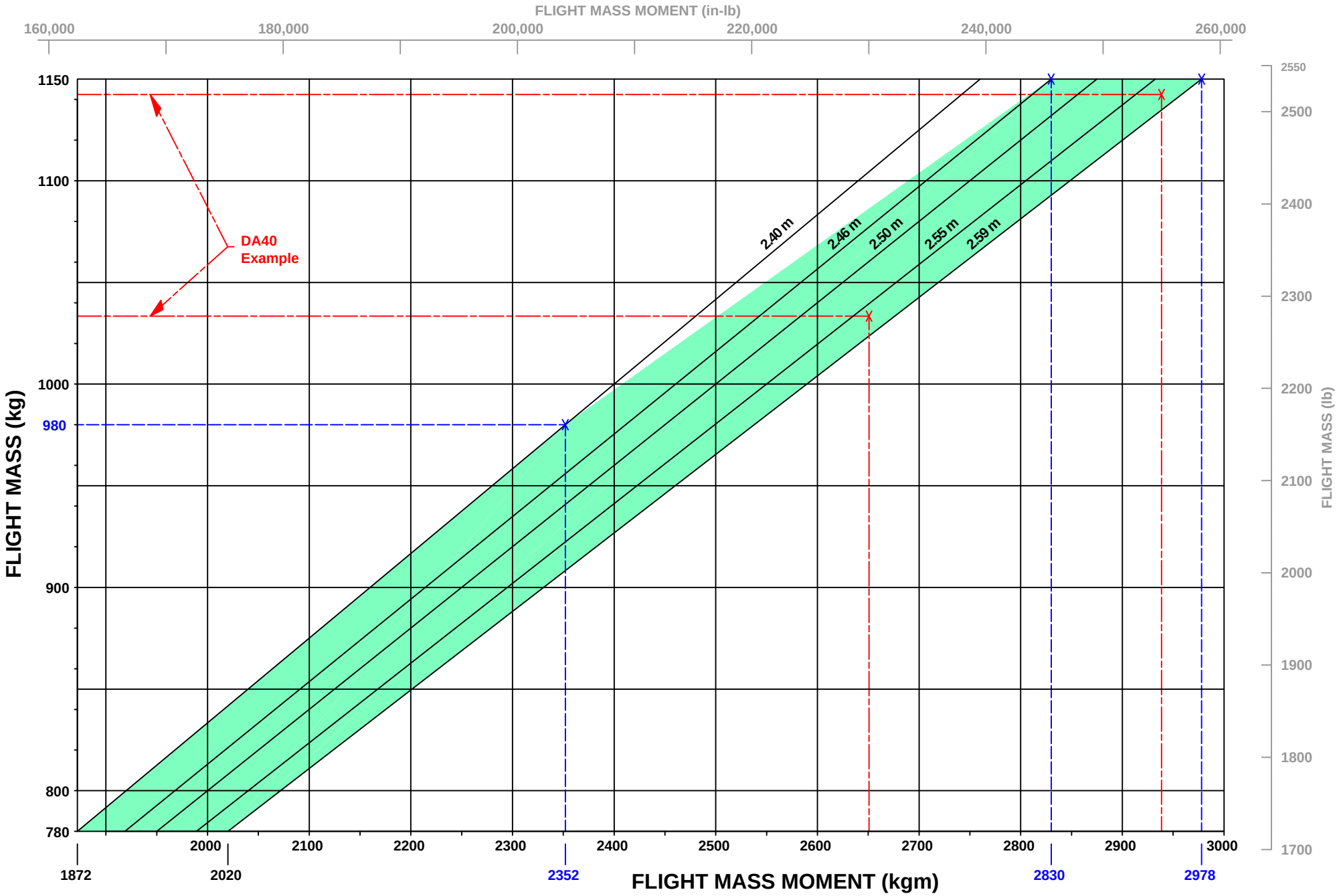




FELKER, DA 40 For Example only.



FELKER, Diamond Star DA40-180, Permissible Moment Range, Example only.



FELKER, Diamond Star DA40-180, Permissible Moment Range, Example only.