

# Range calculations for Spirit-Wing modified Lear 25 aircraft

	Time	Consumption	Distance	Hot & High Calculation	
<b>Cruise Speed</b>		420 kt			
<b>Mach. No.</b>		0.725 mach			
<b>Altitude-ft</b>		40,000 ft			
<b>Density altitude</b>		40,000 ft			
<b>temperature</b>		standard			
<b>Capacity, lb.</b>		4750 lb		3850	
<b>Taxi fuel,lb</b>		-50 lb		-50	
<b>Climb fuel, lb</b>	33 min	-693 lb	186 nm	-547.105	146.763 nm
<b>Top of climb fuel</b>		4007 lb		3252.894	
<b>Decent fuel</b>	24 min	-264 lb	110 nm	-264	110 nm
<b>Reserve fuel, climb to FL 240 (70 NM)</b>	8 min	-168 lb		-168	
<b>Reserve cruise for 97 nm (200-70-33)</b>	17 min	-226 lb		-226	
<b>Reserve for decent(33 nm)</b>	8 min	-52 lb		-52	
<b>Hold time</b>	5 min	-54 lb		-54	
<b>Cruise fuel available, lb</b>		3243 lb		2489	
<b>Fuel burn per hour, lb (860 lb/hr)</b>					
<b>Hours of cruise flight</b>	3.77 hrs		1584 nm	2.89	
<b>distance in cruise (420 nm/hr)</b>			1880 nm		1215 nm
<b>Maximum range with reserves</b>					1472 nm
<b>Flight specific range</b>		0.49 nm/lb		0.44 nm/lb	
<b>Trip fuel burn</b>		4264		3350	
<b>max. range flight time</b>	283 min 4.72 hrs			221 min 3.68 hr	
<b>NBAA IFR RANGE</b>			1880 nm		1472 nm
<b>Specific range for trip</b>			0.44 nm/lb		0.44 nm/lb
<b>Statute miles-IFR</b>			2162 sm		1693 sm

Figures based on actual test flight of 30/07/2008  
 Figures based on mid weight conditions.