

Range calculations for Spirit-Wing modified Lear 25 aircraft

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

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