Comparison of Single Pilot Jets

Manufacturer	SpiritJet™	Cessna Citation Mustang	Cessna Citation CJ2+	Beechcraft Premier 1A	Cessna Citation CJ1+	Eclipse Aviation
Model	LR-25	CE-510	CE-525A	Model 390	CE-525	EA 500
Limits						
Mmo	0.81	0.63	0.737	0.8	0.71	0.64
Trans. Alt. FL/Vmo	FL 240/320	FL 271/250	FL 271/250	FL 280/320	FL 305/263	FL 200/285
PSI	9.4	8.3	8.9	8.4	8.5	8.3
Airport Performance						
TOFL (SL. elev ISA temp)	4,885	3,110	3,360	3,792	3,250	2,342
TOFL (5,000 @ 25°C)	7,965	6,510	5,180	6,888	5,890	4,160
Hot/High Weight Limit	12,800	8,645	12,500	12,500	10,700	5,893
Hot/High NBAA IFR Range	1,323	1,028	1,570	1,178	1,136	1,015
V2@SL. ISA MTOW	126	97	116	118	111	102
Vref w/4 Pax NBAA IFR Res	106	88	101	112	101	89
Lnd Dist w/4 Pax NBAA IFR Res	2,550	2,126	2,648	2,997	2,635	2,668
Climb						
Time to Climb/Altitude	28/FL 370	20/FL 370	15/FL 370	17/FL 370	21/FL 370	24/FL 370
FAR25 Engine Out Rate (fpm)	500	530	611	586	596	533
FAR25 Engine Out Gradient (ft/nm)	300	328	316	298	322	314
Ceilings (ft)						
Certificated	41,000	41,000	45,000	41,000	41,000	41,000
Alt-Engine Service	41,000	41,000	45,000	41,000	41,000	41,000
Engine Out Service	20,350	26,900	23,800	28,000	21,200	25,000
Sea-Level Cabin	25,700	21,280	23,586	21,400	22,027	21,500
Long Range Cruise						
TAS	420	319	356	369	324	329
Fuel Flow	860	497	587	662	536	335
Altitude	FL 400	FL 390	FL 450	FL 410	FL 410	FL 410
Specific Range	0.49	0.642	0.606	0.557	0.604	0.982
High Speed Cruise						
TAS	482	339	413	451	383	370
Fuel Flow	1,250	609	1,096	1,202	858	471
Altitude	FL 320	FL 350	FL 350	FL 330	FL 350	FL 310
Specific Range	0.386	0.557	0.337	0.375	0.446	0.786

Comparison of Single Pilot Jets

Manufacturer	SpiritJet ™	Cessna Citation Mustang	Cessna Citation CJ2+	Beechcraft Premier 1A	Cessna Citation CJ1+	Eclipse Aviation
Model	LR-25	CE-510	CE-525A	Model 390	CE-525	EA 500
B&CA Equipped Price	***$2,300,000**	**$2,766,000**	**$6,370,000**	**$6,208,600**	**$4,755,000**	**$2,352,925**
Characteristics						
Seating	1+6/7	1+5/5	1+8/9	1+6/7	1+7/7	1+4/5
Wing Loading	59	41.2	47.4	50.6	44.6	41
Power Loading	2.92	2.96	2.51	2.72	2.72	3.33
Noise:TO/Sideline/APR	78/88/92	73.9/85/86	75.5/85/86	78.3/87.9/92.0	73.5/85.2/88.5	NA/NA/NA
Dimensions (ft)						
External Length	48	41	48	46	43	34
Height	12.3	13.4	14	15.3	13.8	11
Span	35.6	43.2	49.8	44.5	46.9	37.9
Internal Length: OA/Net	12	9.8/9.8	13.6/13.6	13.5/11.2	11.0/11.0	7.5/5.2
Height	4.3	4.5	4.8	5.4	4.8	4.2
Width: Max Floor	4.9	4.6/3.1	4.8/3.1	5.5/3.7	4.8/3.1	4.7/3.0
Baggage						
Internal Cu. ft/lb	40/500	Jun-98	0/0	23/210	0/0	16/260
External Cu. ft/lb	---------	57/620	65/1,000	54/550	45/725	NA/NA
Power						
Engines	2 WM INTL	2 P&WC	2 WM INTL	2 WM INTL	2 WM INTL	2 P&WC
	FJ44-2C	PW615F	FJ44-3A-24	FJ44-2A	FJ44-1AP	PW610F
Output (lb ea)/Flat Rating	2,400/ISA+13°C	1,460/ISA+10°C	2,490/ISA+7°C	2,300/ISA+13°C	1,965/ISA+7°C	900/ISA+10°C
Inspection Interval	3,500t	3,500t	4,000t	3,500t	3,500t	3,500t
Weights						
Max Ramp	14,100	8,730	12,625	12,590	10,800	6,029
Max Takeoff	14,000	8,645	12,500	12,500	10,700	5,995
Max Landing	13,300	8,000	11,525	11,600	9,900	5,600
Zero Fuel	11,420	6,750c	9,700c	10,000c	8,400c	4,922c
BOW	8,350	5,550	7,970	8,550	7,060	3,829
Max Payload	2,800	1,200	1,730	1,450	1,340	1,093
Useful Payload	5,750	3,180	4,655	4,040	3,740	2,200
Executive Payload	1,200	1,000	1,600	1,200	1,400	800
Max Fuel	4,750	2,580	3,930	3,760	3,220	1,686

Comparison of Single Pilot Jets

Manufacturer	SpiritJet ™	Cessna Citation Mustang	Cessna Citation CJ2+	Beechcraft Premier 1A	Cessna Citation CJ1+	Eclipse Aviation
Model	LR-25	CE-510	CE-525A	Model 390	CE-525	EA 500
Alt. Airport Range	200	100	100	100	100	100
Max Payload (w/avail fuel)						
Nautical Miles	1,049	725	995	787	779	503
Average Speed	396	295	368	390	343	300
Trip Fuel	2,450	1,311	2,075	1,824	1,675	670
Specific Range/Altitude	0.43/FL 390	0.553/FL 410	0.480/FL 450	0.431/FL 410	0.465/FL 410	0.751/FL 410
Max Fuel (w/avail payload)						
Nautical Miles	1,828	1,167	1,613	1,360	1,300	1,125
Average Speed	417	306	379	408	354	308
Trip Fuel	4,127	1,959	3,157	2,934	2,569	1,255
Specific Range/Altitude	0.44/FL 400	0.596/FL 410	0.511/FL 450	0.464/FL 410	0.506/FL 410	0.896/FL 410
Four PAX (w/avail fuel)						
Nautical Miles	1,828	1,007	1,547	1,131	1,114	833
Average Speed	417	Oct-00	378	402	351	309
Trip Fuel	4,127	1,726	3,043	2,493	2,250	984
Specific Range/Altitude	0.44/FL 400	0.583/FL 410	0.508/FL 450	0.454/FL 410	0.495/FL 410	0.847/FL 410
Ferry						
Nautical Miles	1,880	1,217	1,653	1,347	1,338	1,175
Average Speed	424	316	386	410	359	309
Trip Fuel	4,127	1,979	3,185	2,893	2,598	1,301
Specific Range/Altitude	0.46/FL 400	0.615/FL 410	0.519/FL 450	0.466/FL 410	0.515/FL 410	0.903/FL 410

Comparison of Single Pilot Jets - NBAA IFR Missions (4PAX)

Manufacturer	SpiritJet™	Cessna Citation Mustang	Cessna Citation CJ2+	Beechcraft Premier 1A	Cessna Citation CJ1+	Eclipse Aviation
Model	LR-25	CE-510	CE-525A	Model 390	CE-525	EA 500
300nm						
Runway	2,962	2,453	2,459	2,937	2,606	2,100
Flight Time	0+49	1+00	0+49	0+48	0+53	0+59
Fuel Used	990	669	898	898	850	510
Specific Range/Altitude	0.30/FL 320	0.448/FL 370	0.334/FL 370	0.334/FL 370	0.353/FL 350	0.588/FL 350
600nm						
Runway	3,070	2,650	2,666	3,202	2,723	2,316
Flight Time	1+31	1+56	1+35	1+33	1+41	1+48
Fuel Used	1,486	1,132	1,459	1,432	1,375	885
Specific Range/Altitude	0.40/FL 400	0.530/FL 390	0.411/FL 410	0.419/FL 410	0.436/FL 390	0.678/FL 350
1,000nm						
Runway	3,420	3,120	2,967	3,642	3,115	2,342
Flight Time	2+24	3+19	2+37	2+30	2+51	3+15
Fuel Used	2,291	1,715	2,160	2,229	2,042	1,140
Specific Range/Altitude	0.44/FL 400	0.583/FL 410	0.463/FL 430	0.449/FL 410	0.490/FL 410	0.877/FL 370
Certification Basis						
	FAR 25 - 2008 Ammendment 108	FAR 23 - 2006	FAR 23 2000/05	FAR 23 A5 2 2001	FAR 23 1992/00/05	FAR 23 - 2006 FAR 23 runway performance; 1,000nm mission flown w/3 pax. Certain data preliminary. V50 used in lieu of V2 speed.

Comparison of Single Pilot Jets - Value Analysis

In order to accurately compare the differing attributes of various aircraft it is necessary to utilize value indexes for various operating conditions in which the aircraft will be operated. Two methods must be utilized to reflect the "Best Value".

The first method is in the cost of operation vs the capability of the plane regarding the speed and range of the aircraft.

Manufacturer	SpiritJet ™	Cessna Citation Mustang	Cessna Citation CJ2+	Beechcraft Premier 1A	Cessna Citation CJ1+	Eclipse Aviation	Sierra	Sierra
Model	LR-25	CE-510	CE-525A	Model 390	CE-525	EA 500	Super II	Eagle II
Cost per NM of flight	**$2.19**	1.85	1.92	2.02	2.05	1.33	2.21	2.04
Initial cost of acquisition	***$2,300,00**	2,766,000	6,370,000	6,208,600	4,755,000	2,352,975	3,450,000	2,950,000
**Range of Aircraft-4 PAX	**1,928**	1,007	1,559	1,131	1,138	690	1,775	1,550
Long Range Cruise Speed	**420**	319	356	369	324	341	365	360
Speed vs Cost of Flight Index	192	172	186	183	158	**256**	166	176
Range vs Cost of Flight Index	**881**	543	813	560	555	517	805	760
Combined Speed and Range Index	**369,877**	173,350	289,399	206,671	179,860	176,360	293,806	273,467

The second method of comparison is the initial cost vs high speed cruise and range.

High Speed Cruise	**482**	339	413	451	383	370	420	390
Initial Cost vs High Speed Cruise	**2**	1	1	1	1	2	1.22	1.32
Initial Cost vs Range of Aircraft	**8.38**	3.64	2.45	1.82	2.39	2.93	5.14	5.25
Speed & Range vs Initial Cost	**4,040**	1,234	1,011	822	917	1,085	2,160.87	2,049.15

When combining both initial cost indexes and operating costs we have the following:

Total Cost vs Speed Index	**109**	71	35	40	51	62	74	75
Total Cost vs Range Index	**95**	67	30	33	43	57	64	69

Bold numbers represent the highest scores

* Includes $300,000.00 hull value plus the cost of modification and upgrades

** 4-200lb PAX/100 NM Alternate