

Lockheed F-104 Starfighter

- F-104A
- F-104A (Late)
- F-104B
- F-104B (Late)
- F-104C
- F-104C (ATA Refueling)
- F-104D
- F-104D (ATA Refueling)

F-104A Starfighter								
Power APs/DPs: ○								
AB 3.5 3.5 3.0 5.0 M 2.0 2.0 1.5 2.0 N 0.0 0.0 0.0 1.0 I 1.0 1.0 1.0 0.0 SPBR 1.0 1.0 2.0 —								
Cruise Spd. CL: 6.0 Restr. Arcs: — Climb Spd.: 4.5 Blind Arcs: 30– Visibility: 5 Internal Fuel: 290 Size: +0 AtA Refuel: No Vulnerability: +0 Ejection Seat: Std								
Smoker in military power (SMP).								

Speeds and Ceilings					Climb Capabilities				
Alt.	Conf.	CL	1/2	DT	Dive Speed	CL AB Oth	1/2 AB Oth	DT AB Oth	
Alt.	Conf.	CL Band	1/2 Ceil.	DT	Dive Speed	CL AB Oth	1/2 AB Oth	DT AB Oth	
EH+	46+	6.0 – 13.5	6.0 – 11.0	—	13.5	3.0 1.0	1.0 0.5	— —	EH+
VH	36–45	4.5 – 13.5	4.5 – 11.0	4.5 – 10.0	13.5	4.0 1.0	2.0 0.5	1.0 0.5	VH
HI	26–35	3.5 – 13.0	4.0 – 11.5	4.0 – 10.0	13.5	5.0 2.0	3.0 1.0	2.0 0.5	HI
MH	17–25	3.0 – 12.0	3.5 – 9.5	3.5 – 9.0	12.0	6.0 2.0	4.0 1.0	2.0 1.0	MH
ML	8–16	2.5 – 10.5	2.5 – 8.5	3.0 – 8.0	10.5	7.0 2.0	5.0 2.0	3.0 1.0	ML
LO	0–7	2.5 – 9.0	2.5 – 7.5	2.5 – 7.0	9.0	7.0 3.0	5.0 2.0	3.0 1.0	LO

Radar: ASG-14 ECCM: 0 Arcs: 180+ Search: 60–12 Track: 30–10 Lock-On: 6	ECM: IFF RWR: — DDS: — DJM: — AJM: — BJM: —	Weapon Stations Diagram:							
Guns: 20 mm M61A1 Vulcan To Hit: 7/5/3 Ammunition: 3.5 Gunsight: TT+0/HT+1/BT+2 Ranging: RE AtA/AtG: 6/8*	Technology: IRSTS-A	Load Point Limits: CL : < 3 1/2: < 6 Weight Limit: 7,800 DT : ≥ 6							
Bomb System: Manual		Station Limit Allowed Loads 1 and 4 1,300 IRM FT 2 and 3 1,500 FT							
Notes: 1. 2. Good supersonic maneuverability (GSSM). Low transonic drag (LTD). Rapid acceleration (RA). Rapid power response (RPR). 3. Before 1958, F-104As has downward ejecting seats. No ejections allowed unless aircraft is at least 2 levels above terrain.		Load Notes: 1. Stations 1 and 4 may only carry IRMs or 165 gal (600L) FTs. 2. Stations 2 and 3 may only carry 200 gal (700L) FTs. 3. May only use AIM-9B through AIM-9P IRMs.							
		VPs: 15/10/5/3							v3 0000000 0000-00-00T00:00:00

F-104A Starfighter (Late)										Crew: Pilot
Power APs/DPs: ○										Maneuver DPs:
AB 4.0 3.5 3.5 6.0 M 2.5 2.5 2.5 2.0 N 0.0 0.0 0.0 1.0 I 1.0 1.0 1.0 0.0 SPBR 1.0 1.0 2.0 —										LR/DR 1.5 VR 0.5
Cruise Spd. CL: 6.0 Restr. Arcs: — Climb Spd.: 4.5 Blind Arcs: 30– Visibility: 5 Internal Fuel: 290 Size: +0 AtA Refuel: No Vulnerability: +0 Ejection Seat: Std										Turn DPs: CL 1/2 DT TT 1.5 1.5 1.5 HT 2.0 2.0 2.0 BT 2.5 — — ET — — —
Smoker in military power (SMP).										
Speeds and Ceilings						Climb Capabilities				
Alt. Band	Conf. Ceil.	CL 63	1/2 58	DT 50	Dive Speed	CL AB Oth	1/2 AB Oth	DT AB Oth		
EH+	46+	6.0 – 13.5	6.0 – 11.0	—	13.5	3.0 1.0	1.0 0.5	— —	EH+	
VH	36–45	4.5 – 13.5	4.5 – 11.0	4.5 – 10.0	13.5	4.0 1.0	2.0 0.5	1.0 0.5	VH	
HI	26–35	3.5 – 13.0	4.0 – 11.5	4.0 – 10.0	13.5	5.0 2.0	3.0 1.0	2.0 0.5	HI	
MH	17–25	3.0 – 12.0	3.5 – 9.5	3.5 – 9.0	12.0	6.0 2.0	4.0 1.0	2.0 1.0	MH	
ML	8–16	2.5 – 10.5	2.5 – 8.5	3.0 – 8.0	10.5	7.0 2.0	5.0 2.0	3.0 1.0	ML	
LO	0–7	2.5 – 9.0	2.5 – 7.5	2.5 – 7.0	9.0	7.0 3.0	5.0 2.0	3.0 1.0	LO	
Radar: ASG-14 ECCM: 0 Arcs: 180+ Search: 60–12 Track: 30–10 Lock-On: 6			ECM: IFF RWR: — DDS: — DJM: — AJM: — BJM: —	Weapon Stations Diagram:						
Guns: 20 mm M61A1 Vulcan To Hit: 7/5/3 Ammunition: 3.5 Gunsight: TT+0/HT+1/BT+2 Ranging: RE AtA/AtG: 6/8*			Technology: IRSTS-A	Load Point Limits: CL : < 3 1/2: < 6 Weight Limit: 7,800 DT : ≥ 6						
Bomb System: Manual				Station Limit Allowed Loads 1 and 4 1,300 IRM FT 2 and 3 1,500 FT						
Notes: 1. 2. Good supersonic maneuverability (GSSM). Low transonic drag (LTD). Rapid acceleration (RA). Rapid power response (RPR).										
VPs: 18/12/6/3										v3 0000000 0000-00-00T00:00:00

F-104B Starfighter										Crew: Pilot and Observer									
										Maneuver DPs:									
					LR/DR		1.5												
					VR		0.5												
										Turn DPs:									
					CL		1/2		DT										
					TT		1.5		1.5		1.5								
					HT		2.0		2.0		2.0								
					BT		2.5		—		—								
					ET		—		—		—								
Smoker in military power (SMP).																			
Speeds and Ceilings																			
Alt. Band	Conf. Ceil.	CL 59	1/2 52	DT 44	Dive Speed	CL AB Oth	1/2 AB Oth	DT AB Oth											
EH+	46+	6.0 – 13.5	6.0 – 11.0	—	13.5	3.0 1.0	1.0 0.5	— —	EH+										
VH	36–45	4.5 – 13.5	4.5 – 11.0	4.5 – 10.0	13.5	4.0 1.0	2.0 0.5	1.0 0.5	VH										
HI	26–35	3.5 – 13.0	4.0 – 11.5	4.0 – 10.0	13.5	5.0 2.0	3.0 1.0	2.0 0.5	HI										
MH	17–25	3.0 – 12.0	3.5 – 9.5	3.5 – 9.0	12.0	6.0 2.0	4.0 1.0	2.0 1.0	MH										
ML	8–16	2.5 – 10.5	2.5 – 8.5	3.0 – 8.0	10.5	7.0 2.0	5.0 2.0	3.0 1.0	ML										
LO	0–7	2.5 – 9.0	2.5 – 7.5	2.5 – 7.0	9.0	7.0 3.0	5.0 2.0	3.0 1.0	LO										
Radar: ASG-14				ECM:	IFF	Weapon Stations Diagram:													
ECCM:	0			RWR:	—														
Arcs:	180+			DDS:	—														
Search:	60–12			DJM:	—														
Track:	30–10			AJM:	—														
Lock-On:	6			BJM:	—														
Guns: —				Technology:		Load Point Limits:													
To Hit:	—			None		CL : < 3													
Ammunition:	—					1/2: < 6													
Gunsight:	TT+0/HT+1/BT+2					Weight Limit: 7,800 DT : ≥ 6													
Ranging:	RE					Station Limit Allowed Loads													
AtA/AtG:	—					1 and 4 1,300 IRM FT													
Bomb System: Manual						2 and 3 1,500 FT													
Notes:																			
1.																			
2. Good supersonic maneuverability (GSSM). Low transonic drag (LTD). Rapid acceleration (RA). Rapid power response (RPR).																			
VPs: 16/11/5/3										v3 0000000 0000-00-00T00:00:00									

F-104B Starfighter (Late)										Crew: Pilot and Observer	
Power APs/DPs: ○										Maneuver DPs:	
AB 4.0 3.5 3.5 6.0 M 2.5 2.5 2.5 2.0 N 0.0 0.0 0.0 1.0 I 1.0 1.0 1.0 0.0 SPBR 1.0 1.0 2.0 —										LR/DR 1.5 VR 0.5	
Smoker in military power (SMP).					Cruise Spd. CL: 6.0 Restr. Arcs: — Climb Spd.: 4.5 Blind Arcs: 30– Visibility: 5 Internal Fuel: 230 Size: +0 AtA Refuel: No Vulnerability: +0 Ejection Seat: Std					Turn DPs:	
					CL 1/2 DT TT 1.5 1.5 1.5 HT 2.0 2.0 2.0 BT 2.5 — — ET — — —						
Speeds and Ceilings											
Alt. Band	Conf. Ceil.	CL 63	1/2 58	DT 50	Dive Speed	CL AB Oth	1/2 AB Oth	DT AB Oth			
EH+	46+	6.0 – 13.5	6.0 – 11.0	—	13.5	3.0 1.0	1.0 0.5	— —	EH+		
VH	36–45	4.5 – 13.5	4.5 – 11.0	4.5 – 10.0	13.5	4.0 1.0	2.0 0.5	1.0 0.5	VH		
HI	26–35	3.5 – 13.0	4.0 – 11.5	4.0 – 10.0	13.5	5.0 2.0	3.0 1.0	2.0 0.5	HI		
MH	17–25	3.0 – 12.0	3.5 – 9.5	3.5 – 9.0	12.0	6.0 2.0	4.0 1.0	2.0 1.0	MH		
ML	8–16	2.5 – 10.5	2.5 – 8.5	3.0 – 8.0	10.5	7.0 2.0	5.0 2.0	3.0 1.0	ML		
LO	0–7	2.5 – 9.0	2.5 – 7.5	2.5 – 7.0	9.0	7.0 3.0	5.0 2.0	3.0 1.0	LO		
Radar: ASG-14 ECCM: 0 Arcs: 180+ Search: 60–12 Track: 30–10 Lock-On: 6				ECM: IFF RWR: — DDS: — DJM: — AJM: — BJM: —	Weapon Stations Diagram:						
Guns: — To Hit: — Ammunition: — Gunsight: TT+0/HT+1/BT+2 Ranging: RE AtA/AtG: —				Technology: None	Load Point Limits: CL : < 3 1/2: < 6 Weight Limit: 7,800 DT : ≥ 6						
Bomb System: Manual					Station 1 and 4 2 and 3	Limit 1,300 1,500	Allowed Loads IRM FT FT				
Notes: 1. 2. Good supersonic maneuverability (GSSM). Low transonic drag (LTD). Rapid acceleration (RA). Rapid power response (RPR).											
VPs: 18/12/6/3										v3 0000000 0000-00-00T00:00:00	

F-104C Starfighter								
Power APs/DPs: ○								
CL 1/2 DT Fuel								
AB	3.5	3.5	3.0	5.0				
M	2.0	2.0	1.5	2.0				
N	0.0	0.0	0.0	1.0				
I	1.0	1.0	1.0	0.0				
SPBR	1.0	1.0	2.0	—				
Smoker in military power (SMP).								
Cruise Spd. CL: 6.0 Restr. Arcs: —								
Climb Spd.: 4.5 Blind Arcs: 30–								
Visibility: 5 Internal Fuel: 290								
Size: +0 AtA Refuel: No								
Vulnerability: +0 Ejection Seat: Std								

Speeds and Ceilings					Climb Capabilities				
Alt.	Conf.	CL	1/2	DT	Dive Speed	CL AB Oth	1/2 AB Oth	DT AB Oth	
Alt.	Band	Ceil.	59	52	44	CL AB Oth	1/2 AB Oth	DT AB Oth	
EH+	46+	6.0 – 13.5	6.0 – 11.0	—	13.5	3.0 1.0	1.0 0.5	— —	EH+
VH	36–45	4.5 – 13.5	4.5 – 11.0	4.5 – 10.0	13.5	4.0 1.0	2.0 0.5	1.0 0.5	VH
HI	26–35	3.5 – 13.0	4.0 – 11.5	4.0 – 10.0	13.5	5.0 2.0	3.0 1.0	2.0 0.5	HI
MH	17–25	3.0 – 12.0	3.5 – 9.5	3.5 – 9.0	12.0	6.0 2.0	4.0 1.0	2.0 1.0	MH
ML	8–16	2.5 – 10.5	2.5 – 8.5	3.0 – 8.0	10.5	7.0 2.0	5.0 2.0	3.0 1.0	ML
LO	0–7	2.5 – 9.0	2.5 – 7.5	2.5 – 7.0	9.0	7.0 3.0	5.0 2.0	3.0 1.0	LO

Radar: ASG-14	ECM: IFF	Weapon Stations Diagram:								
ECCM: 0	RWR: —									
Arcs: 180+	DDS: —									
Search: 60–12	DJM: —									
Track: 30–10	AJM: —									
Lock-On: 6	BJM: —									
Guns: 20 mm M61A1 Vulcan	Technology: IRSTS-A	Load Point Limits: CL : < 3 1/2: < 6								
To Hit: 7/5/3		Weight Limit: 7,800 DT : ≥ 6								
Ammunition: 3.5		Station	Limit	Allowed Loads						
Gunsight: TT+0/HT+1/BT+2		1 and 5	1,300	IRM FT						
Ranging: RE		2 and 4	1,500	BB RP FT						
AtA/AtG: 6/8*		3	2,200	BB Nuc. BB MDR						
Bomb System: Manual		Load Notes:								
Notes:		1. Stations 1 and 4 may only carry IRMs or 165 gal (600L) FTs. 2. Good supersonic maneuverability (GSSM). Low transonic drag (LTD). Rapid acceleration (RA). Rapid power response (RPR).								
		3. Station 3 may carry a BB, Mark 28 nuclear bomb (weight 2100 and load 3.0), or an MDR with two IRMs. 4. May only use AIM-9B through AIM-9P IRMs.								
		VPs: 16/11/5/3							v3 0000000 0000-00-00T00:00:00	

F-104C Starfighter (ATA Refueling)						Crew: Pilot		
						Maneuver DPs:		
Power APs/DPs: ○					LR/DR	1.5		
					VR	0.5		
CL	1/2	DT	Fuel		Turn DPs:			
AB	3.5	3.5	3.0	5.0	CL	1/2	DT	
M	2.0	2.0	1.5	2.0	TT	1.5	1.5	1.5
N	0.0	0.0	0.0	1.0	HT	2.0	2.0	2.0
I	1.0	1.0	1.0	0.0	BT	2.5	—	—
SPBR	1.0	1.0	2.0	—	ET	—	—	—
Smoker in military power (SMP).				Cruise Spd. CL: 6.0	Restr. Arcs:	—		
				Climb Spd.: 4.5	Blind Arcs:	30–		
				Visibility: 5	Internal Fuel:	290		
				Size: +0	AtA Refuel:	Yes		
				Vulnerability: +0	Ejection Seat:	Std		

Speeds and Ceilings						Climb Capabilities							
Alt. Band	Conf. Ceil.	CL 59	1/2 52	DT 44	Dive Speed	CL AB	1/2 AB	DT AB		CL Oth	1/2 Oth	DT Oth	
EH+	46+	6.0 – 11.5	6.0 – 11.0	—	13.5	3.0	1.0	1.0	0.5	—	—	EH+	
VH	36–45	4.5 – 11.5	4.5 – 11.0	4.5 – 10.0	13.5	4.0	1.0	2.0	0.5	1.0	0.5	VH	
HI	26–35	3.5 – 12.0	4.0 – 11.5	4.0 – 10.0	13.5	5.0	2.0	3.0	1.0	2.0	0.5	HI	
MH	17–25	3.0 – 12.0	3.5 – 9.5	3.5 – 9.0	12.0	6.0	2.0	4.0	1.0	2.0	1.0	MH	
ML	8–16	2.5 – 10.5	2.5 – 8.5	3.0 – 8.0	10.5	7.0	2.0	5.0	2.0	3.0	1.0	ML	
LO	0–7	2.5 – 9.0	2.5 – 7.5	2.5 – 7.0	9.0	7.0	3.0	5.0	2.0	3.0	1.0	LO	

F-104D Starfighter									Crew: Pilot and Observer	
Power APs/DPs: ○									Maneuver DPs:	
CL 1/2 DT Fuel									LR/DR 1.5	
AB 3.5 3.5 3.0 5.0									VR 0.5	
M 2.0 2.0 1.5 2.0										
N 0.0 0.0 0.0 1.0									Turn DPs:	
I 1.0 1.0 1.0 0.0									CL 1/2 DT	
SPBR 1.0 1.0 2.0 —									TT 1.5 1.5 1.5	
Smoker in military power (SMP).									HT 2.0 2.0 2.0	
									BT 2.5 — —	
									ET — — —	

F-104D Starfighter (ATA Refueling)					Crew: Pilot and Observer								
					Maneuver DPs:								
Power APs/DPs: ○					LR/DR	1.5							
AB 3.5 3.5 3.0 5.0					VR	0.5							
M 2.0 2.0 1.5 2.0					Turn DPs:								
N 0.0 0.0 0.0 1.0					CL	1/2	DT						
I 1.0 1.0 1.0 0.0					TT	1.5	1.5	1.5					
SPBR 1.0 1.0 2.0 —					HT	2.0	2.0	2.0					
Smoker in military power (SMP).					BT	2.5	—	—					
					ET	—	—	—					
Speeds and Ceilings													
Alt. Band	Conf. Ceil.	CL 59	1/2 52	DT 44	Dive Speed	CL AB Oth	1/2 AB Oth	DT AB Oth					
EH+	46+	6.0 – 11.5	6.0 – 11.0	—	13.5	3.0 1.0	1.0 0.5	— —	EH+				
VH	36–45	4.5 – 11.5	4.5 – 11.0	4.5 – 10.0	13.5	4.0 1.0	2.0 0.5	1.0 0.5	VH				
HI	26–35	3.5 – 12.0	4.0 – 11.5	4.0 – 10.0	13.5	5.0 2.0	3.0 1.0	2.0 0.5	HI				
MH	17–25	3.0 – 12.0	3.5 – 9.5	3.5 – 9.0	12.0	6.0 2.0	4.0 1.0	2.0 1.0	MH				
ML	8–16	2.5 – 10.5	2.5 – 8.5	3.0 – 8.0	10.5	7.0 2.0	5.0 2.0	3.0 1.0	ML				
LO	0–7	2.5 – 9.0	2.5 – 7.5	2.5 – 7.0	9.0	7.0 3.0	5.0 2.0	3.0 1.0	LO				
Radar: ASG-14			ECM:	IFF	Weapon Stations Diagram:								
ECCM:	0		RWR:	—									
Arcs:	180+		DDS:	—									
Search:	60–12		DJM:	—									
Track:	30–10		AJM:	—									
Lock-On:	6		BJM:	—									
Guns: —			Technology:		Load Point Limits:								
To Hit:	—		None		CL : < 3								
Ammunition:	—				1/2: < 6								
Gunsight:	TT+0/HT+1/BT+2				Weight Limit: 7,800								
Ranging:	RE				DT : ≥ 6								
AtA/AtG:	—				Station Limit Allowed Loads								
Bomb System:	Manual				1 and 5	1,300	IRM FT						
Notes:													
1. Good supersonic maneuverability (GSSM). Low transonic drag (LTD). Rapid acceleration (RA). Rapid power response (RPR).													
2. May only use AIM-9B through AIM-9P IRMs.													
3. Station 1 and 4 may only carry IRMs or 165 gal (600L) FTs.													
4. Station 2 and 3 may carry 200 gal (700L) FTs, BBs, or RPs.													
5. Station 3 may carry a BB, Mark 28 nuclear bomb (weight 2100 and load 3.0), or an MDR with two IRMs.													
6. May only use AIM-9B through AIM-9P IRMs.													
VPs: 16/11/5/3								v3 0000000 0000-00-00T00:00:00					