

## **Northrup F-89 Scorpion**

- F-89D
- F-89H
- F-89J (Rocket-and-Fuel Pods)
- F-89J (Fuel-Only Pods)

F-89D Scorpion										Crew: Pilot and Radar Officer							
										Maneuver DPs:							
LR/DR		2.0															
VR		1.5															
Turn DPs:																	
					CL		1/2		DT								
					TT		0.5		0.5		1.0						
					HT		1.0		1.0		1.5						
					BT		1.5		1.5		1.5						
					ET		—		—		—						
Power APs/DPs: ○○					Cruise Spd. CL: 4.5					Restr. Arcs: —							
CL 1/2 DT Fuel					Climb Spd.: 3.5					Blind Arcs: 30–							
AB 1.0 1.0 1.0 6.0					Visibility: 7					Internal Fuel: 575							
M 1.0 1.0 0.5 3.0					Size: +0					AtA Refuel: No							
N 0.0 0.0 0.0 1.0					Vulnerability: +0					Ejection Seat: Std							
I 1.0 1.0 2.0 0.0																	
SPBR 1.0 2.0 2.0 —																	
If not using AB, reduce maximum speeds by 0.5.																	
Speeds and Ceilings						Climb Capabilities											
Alt. Conf.		CL		1/2		DT		Dive		CL		1/2		DT			
Band Ceil.		49		45		40		Speed		AB Oth		AB Oth		AB Oth			
EH+ 46+		3.0 – 5.0		—		—		6.0		0.50 0.25		— —		— —		EH+	
VH 36–45		3.0 – 5.5		3.0 – 5.0		3.0 – 4.5		6.0		0.50 0.25		0.50 0.25		0.50 0.25		VH	
HI 26–35		2.5 – 6.0		2.5 – 5.5		3.0 – 5.0		6.5		0.50 0.25		0.50 0.25		0.50 0.25		HI	
MH 17–25		2.5 – 6.0		2.5 – 5.5		2.5 – 5.0		6.5		1.00 0.50		1.00 0.50		1.00 0.50		MH	
ML 8–16		2.0 – 6.5		2.0 – 6.0		2.0 – 5.5		7.0		1.00 0.50		1.00 0.50		1.00 0.50		ML	
LO 0–7		1.5 – 6.5		1.5 – 6.0		2.0 – 5.5		7.0		1.00 0.50		1.00 0.50		1.00 0.50		LO	
Radar: APG-40					ECM: IFF					Weapon Stations Diagram:							
ECCM: 0					RWR: —												
Arcs: 180+					DDS: —												
Search: 100–20					DJM: —												
Track: 40–8					AJM: —												
Lock-On: 7					BJM: —												
Guns: —					Technology:					Load Point Limits: CL : < 5							
To Hit: —					CC Rocket Attack					1/2: < 9							
Ammunition: —										Weight Limit: 4,400 DT : ≥ 9							
Gunsight: TT+0/HT+1/BT+2										Station Limit Allowed Loads							
Ranging: RE										1 and 4 0							
AtA/AtG: —										2 and 3 1,600 BB FT							
Bomb System: Manual										Load Notes:							
Notes: 1. The Northrop F-89D Scorpion is an all-weather interceptor. 2. High transonic drag (HTD). 3. The E-6 fire-control system provides CC Rocket Attack technology.										1. Stations 1 and 8 are fixed wing-tip pods for rockets and fuel. Each can carry 4.5 factors of air-to-air rockets, giving a total of 9 factors with both pods. The pod fuel is included in the internal fuel.							
					VPs: 12/8/4/2					v3 0000000 0000-00-00T00:00:00							

F-89H Scorpion										Crew: Pilot and Radar Officer						
										Maneuver DPs:						
LR/DR		2.0														
VR		1.5														
Turn DPs:																
		CL	1/2	DT												
TT		0.5	0.5	1.0												
HT		1.0	1.0	1.5												
BT		1.5	1.5	1.5												
ET		—	—	—												
Power APs/DPs: ○○					Cruise Spd. CL: 4.5					Restr. Arcs: —						
CL 1/2 DT Fuel					Climb Spd.: 3.5					Blind Arcs: 30–						
AB 1.0 1.0 1.0 6.0					Visibility: 7					Internal Fuel: 575						
M 1.0 1.0 0.5 3.0					Size: +0					AtA Refuel: No						
N 0.0 0.0 0.0 1.0					Vulnerability: +0					Ejection Seat: Std						
I 1.0 1.0 2.0 0.0																
SPBR 1.0 2.0 2.0 —																
If not using AB, reduce maximum speeds by 0.5.																
Speeds and Ceilings						Climb Capabilities										
Alt.	Conf.	CL		1/2	DT	Dive	CL		1/2		DT					
Band	Ceil.	49		45	40	Speed	AB	Oth	AB	Oth	AB	Oth				
EH+	46+	3.0 – 5.0		—	—	6.0	0.50	0.25	—	—	—	—				
VH	36–45	3.0 – 5.5		3.0 – 5.0	3.0 – 4.5	6.0	0.50	0.25	0.50	0.25	0.50	0.25				
HI	26–35	2.5 – 6.0		2.5 – 5.5	3.0 – 5.0	6.5	0.50	0.25	0.50	0.25	0.50	0.25				
MH	17–25	2.5 – 6.0		2.5 – 5.5	2.5 – 5.0	6.5	1.00	0.50	1.00	0.50	1.00	0.50				
ML	8–16	2.0 – 6.5		2.0 – 6.0	2.0 – 5.5	7.0	1.00	0.50	1.00	0.50	1.00	0.50				
LO	0–7	1.5 – 6.5		1.5 – 6.0	2.0 – 5.5	7.0	1.00	0.50	1.00	0.50	1.00	0.50				
Radar:		APG-40			ECM:		IFF			Weapon Stations Diagram:						
ECCM:		1			RWR:		—									
Arcs:		180+			DDS:		—									
Search:		120–20			DJM:		—									
Track:		60–10			AJM:		—									
Lock-On:		7			BJM:		—									
Guns:		—			Technology:		Load Point Limits:			CL : < 5						
To Hit:		—			CC Rocket Attack			Weight Limit:			1/2: < 9					
Ammunition:		—						4,400			DT : ≥ 9					
Gunsight:		TT+0/HT+1/BT+2						Station			Limit			Allowed Loads		
Ranging:		RE						1 and 4			390			IRM RHM		
AtA/AtG:		—						2 and 4			1,600			BB FT		
Bomb System:		Manual						Load Notes:								
Notes: 1. 2. High transonic drag (HTD). 3. The E-9 fire-control system provides CC Rocket Attack technology.			1. Stations 1 and 4 are fixed wing-tip pods for rockets, missiles, and fuel. Each can carry 2 factors of air-to-air rockets, giving a total of 4 factors for with pods. Each can also carry three RHM/IRM. The pod fuel is included in the internal fuel.													
			2. May use GAR-1/-1D RHMs and GAR-2/-2A IRMs. Typically carries three RHMs in one pod and three IRMs in the other.													
VPs: 14/9/5/2						v3 0000000 0000-00-00T00:00:00										

<b>Radar:</b> APG-40 <b>ECCM:</b> 1 <b>Arcs:</b> 180+ <b>Search:</b> 120–20 <b>Track:</b> 60–10 <b>Lock-On:</b> 7	<b>ECM:</b> IFF <b>RWR:</b> — <b>DDS:</b> — <b>DJM:</b> — <b>AJM:</b> — <b>BJM:</b> —	<b>Weapon Stations Diagram:</b>												
<b>Guns:</b> — <b>To Hit:</b> — <b>Ammunition:</b> — <b>Gunsight:</b> TT+0/HT+1/BT+2 <b>Ranging:</b> RE <b>AtA/AtG:</b> —	<b>Technology:</b> CC Rocket Attack	<b>Load Point Limits:</b> CL : < 5 1/2: < 9 <b>Weight Limit:</b> 4,400 DT : ≥ 9												
<b>Bomb System:</b> Manual		<table border="1"> <thead> <tr> <th>Station</th> <th>Limit</th> <th>Allowed Loads</th> </tr> </thead> <tbody> <tr> <td>1 and 8</td> <td>0</td> <td></td> </tr> <tr> <td>2 and 7</td> <td>1,600</td> <td>BB FT Nuclear RK</td> </tr> <tr> <td>3–4 and 5–6</td> <td>150</td> <td>IRM</td> </tr> </tbody> </table> <b>Load Notes:</b> <ol style="list-style-type: none"> <li>Stations 1 and 8 are fixed wing-tip pods for rockets and fuel. Each can carry 4.5 factors of air-to-air rockets, giving a total of 9 factors with both pods. The pod fuel is included in the internal fuel.</li> <li>May use AIR-2A nuclear RK.</li> <li>May use GAR-2/-2A IRM.</li> </ol>	Station	Limit	Allowed Loads	1 and 8	0		2 and 7	1,600	BB FT Nuclear RK	3–4 and 5–6	150	IRM
Station	Limit	Allowed Loads												
1 and 8	0													
2 and 7	1,600	BB FT Nuclear RK												
3–4 and 5–6	150	IRM												
<b>Notes:</b> <ol style="list-style-type: none"> <li></li> <li>High transonic drag (HTD).</li> <li>The MG-12 fire-control system provides CC Rocket Attack technology.</li> </ol>		<b>VPs:</b> 15/10/5/3												
		v3 0000000 0000-00-00T00:00:00												

<b>F-89J Scorpion</b> <b>(Fuel-Only Pods)</b>										Crew: Pilot and Radar Officer						
										Maneuver DPs: LR/DR 2.0 VR 1.5						
Power APs/DPs: ○○  CL 1/2 DT Fuel AB 1.0 1.0 1.0 6.0 M 1.0 1.0 0.5 3.0 N 0.0 0.0 0.0 1.0 I 1.0 1.0 2.0 0.0 SPBR 1.0 2.0 2.0 —										Turn DPs:  CL 1/2 DT TT 0.5 0.5 1.0 HT 1.0 1.0 1.5 BT 1.5 1.5 1.5 ET — — —						
										Cruise Spd. CL: 4.5    Restr. Arcs: — Climb Spd.: 3.5    Blind Arcs: 30– Visibility: 7    Internal Fuel: 770 Size: +0    AtA Refuel: No Vulnerability: +0    Ejection Seat: Std						
										If not using AB, reduce maximum speeds by 0.5.						
Speeds and Ceilings						Climb Capabilities										
Alt. Band	Conf. Ceil.	CL 49		1/2 45		DT 40		Dive Speed		CL AB Oth		1/2 AB Oth		DT AB Oth		
EH+	46+	3.0 – 5.0		—		—		6.0		0.50 0.25		— —		— —		EH+
VH	36–45	3.0 – 5.5		3.0 – 5.0		3.0 – 4.5		6.0		0.50 0.25		0.50 0.25		0.50 0.25		VH
HI	26–35	2.5 – 6.0		2.5 – 5.5		3.0 – 5.0		6.5		0.50 0.25		0.50 0.25		0.50 0.25		HI
MH	17–25	2.5 – 6.0		2.5 – 5.5		2.5 – 5.0		6.5		1.00 0.50		1.00 0.50		1.00 0.50		MH
ML	8–16	2.0 – 6.5		2.0 – 6.0		2.0 – 5.5		7.0		1.00 0.50		1.00 0.50		1.00 0.50		ML
LO	0–7	1.5 – 6.5		1.5 – 6.0		2.0 – 5.5		7.0		1.00 0.50		1.00 0.50		1.00 0.50		LO

<b>Radar:</b> APG-40 ECCM: 1 Arcs: 180+ Search: 120–20 Track: 60–10 Lock-On: 7	<b>ECM:</b> IFF RWR: — DDS: — DJM: — AJM: — BJM: —	<b>Weapon Stations Diagram:</b>											
<b>Guns:</b> — To Hit: — Ammunition: — Gunsight: TT+0/HT+1/BT+2 Ranging: RE AtA/AtG: —	<b>Technology:</b> CC Rocket Attack												
<b>Bomb System:</b> Manual	<b>Notes:</b> 1. 2. High transonic drag (HTD). 3. The MG-12 fire-control system provides CC Rocket Attack technology.	<b>Load Point Limits:</b> CL : < 5 1/2: < 9 <b>Weight Limit:</b> 4,400 DT : ≥ 9											
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Station	Limit	Allowed Loads											
1 and 8	0												
2 and 7	1,600	BB FT Nuclear RK											
3–4 and 5–6	150	IRM RHM											
<b>VPs:</b> 15/10/5/3		v3 0000000 0000-00-00T00:00:00											