

## Lockheed F-80/T-33 Shooting Star

The Lockheed F-80 Shooting Star was a day fighter and fighter-bomber. It had unswept wings and a single Allison J33 centrifugal-flow jet engine. It entered service with the USAAF shortly before the end of WWII, but did not see combat until the Korean War, in which it served extensively with the USAF as a fighter and fighter bomber. Like other early jet fighters with unswept wings, it was found to have inferior performance to the MiG-15bis and was replaced by variants of the F-86 Sabre. It later served with the air forces of Brazil, Chile, Colombia, Ecuador, Peru, and Uruguay.

The P-80A was the first version to enter service and was armed with six .50 cal M2 machine guns in the nose. It was followed by the P-80B, which replaced the M2 machine guns with faster-firing M3 machine guns, used an ejection seat, and many minor improvements. The P-80C was produced in larger numbers than both previous versions. In USAF service from 1948, the P-80 was designated the F-80.

Like many early jet fighters, the F-80 suffered from short range. This was mitigated by the provision of jettisonable wing-tip fuel tanks. These stations were designed for 165 gal tanks, but these were found to be insufficient for missions over Korea from the USAF bases in Japan. A local field modification produced the 265 gal "Misawa" tank, which gave usefully greater range and loiter time, at the cost of overloading the wing-tip stations.

The F-80C was armed with six .50 cal M3 machine guns with 300 rounds per ground. A typical weapon load for F-80Cs engaged in ground-attack missions in the Korean War was two 500 lb M64 bombs or 110 gal (750 lb) napalm bombs often supplemented by four or eight HVAR rockets on the inner-wing stations. Although bombs could in theory be carried on the wing-tip stations, this does not appear to have occurred in practice. When flying from Japan, the weapon load was often limited to four HVARs rockets.

The RF-80C was an unarmed photo-reconnaissance version of the F-80C, with cameras replacing the machine guns in the nose. It was used by the USAF.

The T-33 Shooting Star (known informally as the "T-Bird") was a two-seater trainer developed from the F-80. Most T-33As were unarmed, but a number had two .50 cal M3 machine guns. The T-33A was used by the USAF, USN, RCAF, and the air forces of Bangladesh, Belgium, Bolivia, Brazil, Burma, Canada, Chile, Republic of China (Taiwan), Colombia, Cuba, Denmark, Dominican Republic, Ethiopia, Ecuador, El Salvador, France, Federal Republic of Germany, Greece, Guatemala, Honduras, Indonesia, Iran, Italy, Japan, Libya, Mexico, Netherlands, Nicaragua, Nor-

way, Pakistan, Paraguay, Peru, Philippines, Portugal, Saudi Arabia, Singapore, South Korea, Spain, Thailand, Turkey, Uruguay, and Yugoslavia. Cuban T-33As saw combat during the Bay of Pigs invasion.

The RT-33A was a photo-reconnaissance version of the T-33A developed for foreign use. The nose was replaced with one with oblique and vertical cameras and the rear cockpit was used for equipment relocated from the nose of the T-33A and for additional fuel. It was used by the air forces of Belgium, Chile, Colombia, Ethiopia, France, Greece, Italy, Iran, Netherlands, Pakistan, Portugal, Saudi Arabia, Taiwan, Turkey, Thailand, and Yugoslavia. One was also used by the USAF for Project Field Goal, clandestine reconnaissance missions over Laos in the early 1960s.

Some T-33As were converted into AT-33A light attack aircraft by adding under-wing pylons to the machine guns. The AT-33A was used as a trainer by the USAF and also by the air forces of Brazil, Burma, Dominican Republic, Ecuador, Greece, Mexico, Nicaragua, Paraguay, and Uruguay.

- F-80C
- RF-80C
- T-33A
- RT-33A
- AT-33A

### See Also

- Lockheed F-94

F-80C Shooting Star										Crew: Pilot			
										Maneuver HFPs/DPs:			
LR/DR		1.0		1.5									
VR				0.5									
Power APs/DPs: ○										Turn DPs:			
CL	1/2	DT	Fuel		CL	1/2	DT						
AB	—	—	—	—	TT	0.0	0.0	0.0					
M	1.0	1.0	1.0	1.0	HT	1.0	1.0	1.0					
N	0.0	0.0	0.0	0.5	BT	1.0	1.0	2.0					
I	1.0	1.0	1.0	0.0	ET	—	—	—					
SPBR	1.0	1.0	1.0	—									
					Cruise Spd. CL: 4.0		Restr. Arcs: —						
					Climb Spd.: 3.0		Blind Arcs: 30–						
					Visibility: 5		Internal Fuel: 135						
					Size: +0		AtA Refuel: No						
					Vulnerability: +1		Ejection Seat: Early						
Speeds and Ceilings						Climb Capabilities							
Alt. Band	Conf. Ceil.	CL 45	1/2 40	DT 35	Dive Speed	CL AB	Oth	1/2 AB	Oth	DT AB	Oth		
EH+	46+	—	—	—	—	—	—	—	—	—	—	EH+	
VH	36–45	2.5 – 4.0	2.5 – 4.0	—	6.0	—	0.5	—	0.5	—	—	VH	
HI	26–35	2.0 – 4.5	2.5 – 4.5	2.5 – 4.0	6.5	—	0.5	—	0.5	—	0.5	HI	
MH	17–25	2.0 – 5.0	2.0 – 4.5	2.5 – 4.5	6.5	—	0.5	—	0.5	—	0.5	MH	
ML	8–16	1.5 – 5.5	2.0 – 5.0	2.0 – 4.5	6.5	—	1.0	—	0.5	—	0.5	ML	
LO	0–7	1.5 – 5.5	1.5 – 5.5	2.0 – 5.0	6.5	—	1.0	—	1.0	—	0.5	LO	

<b>Radar:</b> — <b>ECCM:</b> — <b>Arcs:</b> — <b>Search:</b> — <b>Track:</b> — <b>Lock-On:</b> —	<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> Six .50 cal M3 <b>To Hit:</b> 6/3/0 <b>Ammunition:</b> 8.0 <b>Gunsight:</b> TT+0/HT+1/BT+2 <b>Ranging:</b> — <b>AtA/AtG:</b> 4/4**	<b>Technology:</b> None	<b>Load Point Limits:</b> CL : 0–3 1/2: 4–6 <b>Weight Limit:</b> 4,200 DT : 7+												
<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>1,100</td> <td>BB FT</td> </tr> <tr> <td>2 and 7</td> <td>1,100</td> <td>BB RK</td> </tr> <tr> <td>3–4 and 5–6</td> <td>280</td> <td>BB RK</td> </tr> </tbody> </table>	Station	Limit	Allowed Loads	1 and 8	1,100	BB FT	2 and 7	1,100	BB RK	3–4 and 5–6	280	BB RK
Station	Limit	Allowed Loads												
1 and 8	1,100	BB FT												
2 and 7	1,100	BB RK												
3–4 and 5–6	280	BB RK												
<b>Notes:</b> 1. The Lockheed F-80C Shooting Star is a day fighter and fighter-bomber. Prior to 1948 it was designated P-80C. 2. High transonic drag (HTD).		<b>Load Notes:</b> 1. The wing-tip stations 1 and 8 were designed to each carry a 165 gal (600L) FT with a load of 1100 when full. As an exception to the normal loading rules, they may each carry a 265 gal (1000L) FT with a load of 1800 when full, but the maximum turn rate is reduced to HT until the FTs are jettisoned. Such “Misawa” tanks were used in 1950 when operating over Korea from bases in Japan. 2. Stations 3 to 6 can each carry two HVAR RKs.												
		<b>VPs:</b> 7/5/2/1												

RF-80C Shooting Star								Crew: Pilot			
								Maneuver HFPs/DPs:			
LR/DR		1.0	1.5								
VR			0.5								
Turn DPs:											
		CL	1/2	DT							
TT		0.0	0.0	0.0							
HT		1.0	1.0	1.0							
BT		1.0	1.0	2.0							
ET		—	—	—							

Speeds and Ceilings						Climb Capabilities						
Alt. Band	Conf. Ceil.	CL 45	1/2 40	DT 35	Dive Speed	CL AB	Oth	1/2 AB	Oth	DT AB	Oth	
EH+	46+	—	—	—	—	—	—	—	—	—	—	EH+
VH	36–45	2.5 – 4.0	2.5 – 4.0	—	6.0	—	0.5	—	0.5	—	—	VH
HI	26–35	2.0 – 4.5	2.5 – 4.5	2.5 – 4.0	6.5	—	0.5	—	0.5	—	0.5	HI
MH	17–25	2.0 – 5.0	2.0 – 4.5	2.5 – 4.5	6.5	—	0.5	—	0.5	—	0.5	MH
ML	8–16	1.5 – 5.5	2.0 – 5.0	2.0 – 4.5	6.5	—	1.0	—	0.5	—	0.5	ML
LO	0–7	1.5 – 5.5	1.5 – 5.5	2.0 – 5.0	6.5	—	1.0	—	1.0	—	0.5	LO

<b>Radar:</b> — ECCM: — Arcs: — Search: — Track: — Lock-On: —	<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: — AtA/AtG: —	<b>Technology:</b> None	<b>Load Point Limits:</b> CL : 0–3 1/2: 4–6 <b>Weight Limit:</b> 4,200 DT : 7+												
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1 and 8	1,100	BB FT												
2 and 7	1,100	BB RK												
3–4 and 5–6	280	BB RK												
<b>Notes:</b> 1. The Lockheed RF-80C is a photo-reconnaissance aircraft. It is derived from the F-80C and has a nose containing cameras rather than guns. 2. High transonic drag (HTD).														
<b>VPs:</b> 7/5/2/1		v2 0000000 0000-00-00T00:00:00												

T-33A Shooting Star										Crew: Pilot and Copilot									
										Maneuver HFPs/DPs:									
LR/DR		1.0		1.5															
VR				0.5															
Power APs/DPs: ○										Turn DPs:									
CL		1/2		DT		Fuel		CL		1/2		DT							
AB		—		—		—		TT		0.0		0.0							
M		1.0		1.0		1.0		HT		1.0		1.0							
N		0.0		0.0		0.0		BT		1.0		2.0							
I		1.0		1.0		0.0		ET		—		—							
SPBR		1.0		1.0		—													
					Cruise Spd. CL: 4.0					Restr. Arcs: —									
					Climb Spd.: 3.0					Blind Arcs: 30–									
					Visibility: 5					Internal Fuel: 112									
					Size: +0					AtA Refuel: No									
					Vulnerability: +1					Ejection Seat: Early									
Speeds and Ceilings						Climb Capabilities													
Alt. Band		Conf. Ceil.		CL 45		1/2 40		DT 35		Dive Speed		CL AB Oth		1/2 AB Oth		DT AB Oth			
EH+		46+		—		—		—		—		—		—		—		EH+	
VH		36–45		2.5 – 4.0		2.5 – 4.0		—		6.0		— 0.5		— 0.5		—		VH	
HI		26–35		2.0 – 4.5		2.5 – 4.5		2.5 – 4.0		6.5		— 0.5		— 0.5		— 0.5		HI	
MH		17–25		2.0 – 5.0		2.0 – 4.5		2.5 – 4.5		6.5		— 0.5		— 0.5		— 0.5		MH	
ML		8–16		1.5 – 5.5		2.0 – 5.0		2.0 – 4.5		6.5		— 1.0		— 0.5		— 0.5		ML	
LO		0–7		1.5 – 5.5		1.5 – 5.5		2.0 – 5.0		6.5		— 1.0		— 1.0		— 0.5		LO	
Radar:				—		ECM:								Weapon Stations Diagram:					
ECCM:				—		RWR:				—									
Arcs:				—		DDS:				—									
Search:				—		DJM:				—									
Track:				—		AJM:				—									
Lock-On:				—		BJM:				—									
Guns:				Two .50 cal M3		Technology:				Load Point Limits:				CL : 0–3					
To Hit:				4/2/–		None								1/2: 4–6					
Ammunition:				8.0						Weight Limit:				4,200 DT : 7+					
Gunsight:				TT+0/HT+1/BT+2						Station				Limit					
Ranging:				—						1 and 2				1,500 FT					
AtA/AtG:				1/2**						Load Notes:									
Bomb System:				Manual						1. May use 850L FTs.									
Notes:																			
1. The Lockheed T-33A Shooting Star is a trainer developed from the F-80. The variant shown here is armed with two .50 cal machine guns, although most were unarmed. Prior to 1948, it was designated TP-80C.																			
2. High transonic drag (HTD).																			
						VPs: 5/3/2/1						v2 00000000 0000-00-00T00:00:00							

<div><div>Radar:—</div><div>ECCM:—</div><div>Arcs:—</div><div>Search:—</div><div>Track:—</div><div>Lock-On:—</div></div>	<div><div>ECM:—</div><div>RWR:—</div><div>DDS:—</div><div>DJM:—</div><div>AJM:—</div><div>BJM:—</div></div>	Weapon Stations Diagram:	
<div><div>Guns:—</div><div>To Hit:—</div><div>Ammunition:—</div><div>Gunsight:TT+0/HT+1/BT+2</div><div>Ranging:—</div><div>AtA/AtG:—</div></div>	<div><div>Technology:</div><div>None</div></div>	<div><div>Load Point Limits:</div><div>CL : 0–3</div><div>1/2: 4–6</div><div>Weight Limit:4,200</div><div>DT : 7+</div></div>	
<div><div>Bomb System:Manual</div></div>		<div><div>Station</div><div>Limit</div><div>Allowed Loads</div><div>1 and 21,500FT</div><div>Load Notes:</div><div>1. May use 850L FTs.</div></div>	
<div><div>Notes:</div><div>1. The Lockheed RT-33A Shooting Star is a photo-reconnaissance version of the T-33A trainer. It is unarmed and equipped with oblique and vertical cameras in the nose. The rear cockpit is used for equipment relocated from the nose of the T-33A and for 165 gal of additional fuel.</div><div>2. High transonic drag (HTD).</div></div>			
		<div><div>VPs: 7/5/2/1</div></div>	<div><div>v2 0000000</div><div>0000-00-00T00:00:00</div></div>

AT-33A Shooting Star										Crew: Pilot and Copilot									
										Maneuver HFPs/DPs:									
LR/DR		1.0		1.5															
VR				0.5															
Power APs/DPs:				Turn DPs:															
CL		1/2		DT		Fuel		CL		1/2		DT							
AB		—		—		—		TT		0.0		0.0							
M		1.0		1.0		1.0		HT		1.0		1.0							
N		0.0		0.0		0.0		BT		1.0		2.0							
I		1.0		1.0		1.0		ET		—		—							
SPBR		1.0		1.0		1.0													
					Cruise Spd. CL: 4.0    Restr. Arcs: —														
					Climb Spd.: 3.0    Blind Arcs: 30–														
					Visibility: 5    Internal Fuel: 112														
					Size: +0    AtA Refuel: No														
					Vulnerability: +1    Ejection Seat: Early														
Speeds and Ceilings						Climb Capabilities													
Alt. Conf.		CL		1/2		DT		Dive		CL		1/2		DT					
Band Ceil.		45		40		35		Speed		AB Oth		AB Oth		AB Oth					
EH+		46+		—		—		—		—		—		—		EH+			
VH		36–45		2.5 – 4.0		2.5 – 4.0		—		6.0		—		0.5		VH			
HI		26–35		2.0 – 4.5		2.5 – 4.5		2.5 – 4.0		6.5		—		0.5		HI			
MH		17–25		2.0 – 5.0		2.0 – 4.5		2.5 – 4.5		6.5		—		0.5		MH			
ML		8–16		1.5 – 5.5		2.0 – 5.0		2.0 – 4.5		6.5		—		1.0		ML			
LO		0–7		1.5 – 5.5		1.5 – 5.5		2.0 – 5.0		6.5		—		1.0		LO			
Radar:				—		ECM:				Weapon Stations Diagram:									
ECCM:				—		RWR:				—									
Arcs:				—		DDS:				—									
Search:				—		DJM:				—									
Track:				—		AJM:				—									
Lock-On:				—		BJM:				—									
Guns:				Two .50 cal M3		Technology:				Load Point Limits:									
To Hit:				4/2/–		None				CL : 0–3									
Ammunition:				8.0						1/2: 4–6									
Gunsight:				TT+0/HT+1/BT+2						Weight Limit: 4,200									
Ranging:				—						DT : 7+									
AtA/AtG:				1/2**						Station Limit Allowed Loads									
Bomb System:				Manual						1 and 8 1,500 BB FT									
										2 and 7 1,100 BB RK									
										3–4 and 5–6 280 BB RK									
										Load Notes:									
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