

B Ae 146

Checklist & Procedures for MS Flight Simulator

by PH-BKO (v1.2)

NOTES

This checklist / procedure manual is for flight simulator use only. This document is based on the Just Flight 146 Professional MSFS manual with added information of original checklists.

(CPT)	Captain Panel
(CP)	Centre Panel
(FO)	First Officer Panel
(CC)	Centre Console
(OH)	Overhead Panel
(LSP)	Left Side Panel (CPT)
(RSP)	Right Side Panel (FO)
(TMS)	Thrust Modulation System Panel
(GS)	Glare Shield
abcdefg	Most important for a quick start
abcdefg	Gameplay / EFB / UI

SPECIFICATIONS / LIMITATIONS

Variant	-100	-200	-300
Max. Takeoff Weight (KG)	38.102	42.184	44.184
Max. Landing Weight (KG)	35.153	36.741	37.648
Service Ceiling (ft)		35.000	
Range (max. payload) (NM)	935	1.176	1.090
Takeoff Roll (ft)	4.000	4.950	4.950
Landing Distance (ft)	3.630	3.760	4.030

PREFLIGHT FLOWS

FLIGHT DECK SAFETY INSPECTION

Weather radar (CC)	OFF
Tilt (CC)	+15°
Transponder (CC)	STBY
Airbrake (CC)	IN
Flaps (CC)	UP
Landing gear lever (CP)	DOWN

ESTABLISHING EXTERNAL & APU POWER

BATT 1 & 2 (OH)	ON
Volt / Amp Meter (OH)	CHECK 24V+
Navigation Lights (OH)	HI INT
No Smoking Signs (OH)	AUTO
Cabin Emergency Lighting (OH)	ARM
Brake Selector (CC)	YEL
Yaw Damp Master 1 & 2 (OH)	ON
AP MSTR (OH)	ON
Avionics Master 1 & 2 (OH)	ON
Anti-Skid (OH)	ON
YEL & GRN Lift Spoilers (OH)	ON
Bus-Tie AC & DC (OH)	AUTO
STBY INV & GEN (OH)	ARM
Galley Switch (OH)	ON (GALLEY)
GEN 1 & 4 (OH)	OFF/RESET
APU GEN (OH)	ON

L INNER Fuel Pump (OH)	ON
APU Master Switch (OH)	START

Monitor APU RPM & TGT rise.

APU AIR (OH)	ON
PACK 1 or 2 (OH)	ON

Use pack 1 on an "odd" day and pack 2 on an "even" day.

INITIAL PREFLIGHT PROCEDURE

Cockpit Lights	AS REQ.
MWS Control (CP)	PUSH

Verify MWS annunciators illuminated + audible chimes.

MWS Control (CP)	PULL
Ground Tests (OH)	PERFORM

Set to the middle position (not illuminated).

DC PUMP (OH)	ON
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Check for a rise in YELLOW system hydraulic pressure.

DC PUMP (OH)	OFF
AC PUMP (OH)	ON

Check for a rise in YELLOW system hydraulic pressure.

PTU (OH)	ON
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Check for a rise in GREEN system hydraulic pressure.

AC PUMP (OH)	OFF
PTU (OH)	OFF

Engine Anti-Ice 1 – 4 (OH)	ON
Flight Deck Emergency Lighting (OH)	ARM
YD 1 & 2 (CC)	PRESS

Confirm YD 1 & YD 2 annunciators illuminated

Oxygen Main Valve (RSP)	OPEN
FO Oxygen Regulator (RSP)	TEST SUPPLY

Doors (EFB)	OPEN
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Airstairs (EFB)	EXTEND
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Weights & Fuel (EFB)	SETUP
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Parking Brake (CC)	SET
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YELLOW Brake Pressure (OH)	CHECK 2.500PSI+
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Less? Turn **ON** the DC PUMP until sufficient pressure is reached.

Thrust levers (CC)	FUEL OFF
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Hydraulics (OH)	VERIFY OFF
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CTR Tank Transfer (OH)	AUTO
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Press. Mode Selector (OH)	AUTO
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Press. Disch. Valves (OH)	NORMAL
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Press. Alt (OH)	SET CRZ LVL
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Ice Detect (OH)	ON
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Fuel Qty (CP)	VERIFY
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Fasten Belts (OH)	ON
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Flight Data Recorder Date (RSP)	SET TODAY
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Flight Data Recorder Leg (RSP)	1
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ATC/FID (CC)	PRESS (FID)
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Flight Number (CC)	ENTER
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ATC/FID (CC)	PRESS (ATC)
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PREFLIGHT FLOWS (CONTINUED)

TAKEOFF PERFORMANCE CALCULATIONS

PWR (TMS)	PRESS (ON)
TEST (TMS)	PRESS (PERFORM)
Verify test complete.	
TREF (TMS)	SET OAT
TO (TMS)	PRESS (ARM)
TGT (TMS)	SET CLB TEMP
N1 Bug (CP)*	SET TMS VALUE
TGT Bug (CP)*	SET TMS VALUE
Takeoff Speeds (CP)	VERIFY
ASI Reference Speeds (CPT)*	SET

* Can be done automatically by clicking on the flipchart. V-speeds are based on current flap position or flaps 18 if current flaps 0.

PWR (TMS)	OFF
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NAVIGATION INSTRUMENTS AND RADIOS

Flight Director Bars (GS)	ON
VHF NAV 1 Radio ON (GS)	PRESS (ON)
VHF NAV 1 Radio DME (GS)	ON
Navigational Radios (GS)	SET AS REQ.
Navigational Courses (GS)	SET AS REQ.
HDG (GS)	SET INITIAL HDG
HDG (GS)	PRESS (ARM)
ALT (GS)	SET INITIAL ALT
ALT ARM (GS)	PRESS
RMI / DBI (CPT)	SET AS REQ.
HSI Source (CP)	SET AS REQ.
VHF COMM 1 & 2 (CC)	ON
VHF COMM 1 & 2 (CC)	SET AS REQ.

PREFLIGHT CHECKLIST

Mobile Phone	OFF
Ext / Int Checks	COMPLETE, COVERS & PINS STOWED
Brakes	YELLOW & PARK, PRESSURE CHECKED
Hydraulics	ALL OFF
Fuel Panel	CHECKED / SET
Pressurization	SET
Ice Detect	ON
Lights and Notices	SET
Air Conditioning	SET / CHECKED
Fasten Belts	ON
Fuel	CHECKED / TOTAL __ KGS / MIN. __ KGS
Speeds / N1	CHECKED / BUGGED
IRS / FMS	POSN RESET
Briefing	COMPLETE
Ship's Papers	COMPLETE
Flight Deck Door	CLOSED & LOCKED

ENGINE START

BEFORE START

AC Pump (OH)	ON
Airstairs (EFB)	RETRACT
Doors (EFB)	CLOSE
AC Pump (OH)	OFF
Beacon Lights (OH)	ON
APU Air (OH)	OFF
Packs 1 & 2 (OH)	OFF
Fuel Pumps 1 – 4 (OH)	ON
START PWR (OH)	NORM
START MASTER (OH)	ON

BEFORE START CHECKLIST

Beacon	ON
Packs & APU Air	OFF
Engine Anti-Ice	ON
AC Pump	OFF
Start Power	AS REQ.
Start Master	ON

ENGINE START

Chocks (EFB)	REMOVE
Pushback	PERFORM AS REQ.

Start Selector (OH)	ENG 4
Engine Start Switch (OH)	START (HOLD 1 SEC)
Verify ENG IGN A & B ON + STARTER OPERATING lights illuminate.	
N1, TGT, N2 (CP)	MONITOR
Thrust Lever Eng. 4 (CC)	FUEL ON
At around 10% N2. Confirm fuel flow and N1, TGT N2 rising. Repeat for engines 3, 2, 1 when stabilized.	

Start Selector (OH)	OFF
START MASTER (OH)	OFF
Engine Anti Ice (OH)	AS REQ.
GEN 1 & 4 (OH)	ON
APU AIR (OH)	ON
Packs 1 & 2 (OH)	ON
Brake Fans (OH)	AUTO
Eng. 2 & 3 Hydraulic Pumps (OH)	ON
Confirm 3.000 PSI in both systems.	
AC Pump (OH)	ON
PTU (OH)	ON
Heaters (OH)	ON
PWR (TMS)	PRESS (ON)
Transponder Mode (CC)	TA

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ENGINE START (CONTINUED)

AFTER START CHECKLIST

Start Power	NORMAL
Start Select & Master	OFF
Engine Anti-Ice	AS REQ.
Generators	ON
Brake Fans	AUTO
Hydraulics	ON & CHECKED
Heaters	ON
APU & Engine Air	AS REQ.
Packs	ON
Doors & Windows	CLOSED
Chocks & Ground Equipment	CLEAR

TAXI

BEFORE TAXI CONFIGURATION

Flaps (CC)	18
Taxi Lights (OH)	ON
Rudder trim (CC)	CENTER
Aileron trim (CC)	CENTER
Elevator trim (CC)	WITHIN GREEN BAND

Clicking the CG% SMC box on the EFB sets the correct trim for takeoff.

CONFIG CHECK (CC)	PRESS & HOLD
Config is correct when no horn audible.	
CONT IGN A & B (OH)	AS REQ.
When standing water present on runway or heavy precipitation in the area.	

BEFORE TAKEOFF CHECKLIST

Brakes	YELLOW / GREEN CHECKED – YELLOW
Flaps	SET ___ & CHECKED
Flight Instruments	CHECKED, QNH ___
Trims	3-WAY SET FOR TAKEOFF
Config	CHECKED
Seats & Harnesses	LOCKED & SECURED
NAV Aids	SET AS CLEARED
T/O Briefing	REVIEWED
Speeds / N1	CHECKED
Continuous Ignition	AS REQ.

BEFORE TAKEOFF

Cabin Call (OH)	PRESS
Cabin Secured slider (CC)	SECURE FOR TAKEOFF
This happens automatically after confirmation.	
Landing Lights (OH)	ON
Strobe Lights (OH)	ON
Flight Controls	CHECK
TMS	VERIFY
TMS On, TO mode engaged, N1 REF shown.	
MWS	VERIFY
Captions extinguished, except appropriate green captions.	
GA Mode (CPT)	ARM
Press the small red button on the yoke.	

BELOW THE LINE

Cabin	SECURE & WARNED
Controls	CHECKED FULL & FREE
MWS	CHECKED
Transponder	ON
Radar / Terrain Display	INOP
Auto-Throttle	NOT INSTALLED
Lights / Strobes	ON

TAKEOFF & CLIMB

TAKEOFF ROLL

Brakes	HOLD
Thrust Levers (CC)	55% N1
Engines (CP)	VERIFY STABLE
Thrust Levers (CC)	N1 REF
Brakes	RELEASE

INITIAL CLIMB

Gear (CP)	UP
Flaps (CC)	RETRACT
When climbing through VFTO speed and 1.500 ft AGL.	
Autopilot (CC/GS)	ENGAGE AS REQ.
The AP is armed on the centre console, not on the glareshield	
Engine Air 1 – 4 (OH)	ON
APU Air (OH)	OFF
SYNC (TMS)	PRESS
MSTR (TMS)	SELECT 1
Select engine 1 as MSTR engine, the TMS will adjust engines 2, 3 and 4 to match the MSTR engine thrust.	
AC Pump (OH)	OFF
PTU (OH)	OFF
APU Master (OH)	STOP
Cabin Call (OH)	PRESS

AFTER TAKEOFF CHECKLIST

Gear	UP, LIGHTS OUT
Flaps	UP
Engine Air	ON
APU Air	OFF
TRP	CLIMB ___

PASSING 10.000 FT

Landing Lights (OH)	OFF
Fasten Seatbelts (OH)	OFF

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CRUISE & DESCENT

REACHING CRUISE LEVEL

Thrust Levers (CC)	REDUCE
TGT (TMS)	SET AS REQ.
TGT Mode (TMS)	ENGAGE
TGT mode can be used to hold a TGT value (600C – 700C seems good depending on weight).	

DESCENT PREPARATIONS

Rad Alt Decision Height (CPT)	SET
Cabin Altitude Target (OH)	SET FIELD ELEV.
VREF speed (CP)	VERIFY

DESCENT CHECKLIST

Pressurization	CHECKED / SET
Briefing / Terrain Display	COMPLETE / INOP
Landing Data	CHECKED / SET
Landing Flap Switch 24/33	SET
Seats & Harnesses	LOCKED & SECURED

DESCENT

DESC Mode (TMS)	ENGAGE
PTU (OH)	ON

APPROACH & LANDING

INITIAL APPROACH (PASSING 10.000 FT)

Landing Lights (OH)	ON
Fasten Belts (OH)	ON
Navigational Radios (GS)	SET AS REQ.
Navigational Courses (GS)	SET AS REQ.
APU Master Switch (OH)	START AS REQ.
Monitor APU RPM & TGT rise.	

APPROACH CHECKLIST

Altimeters	QNH ___ & X-CHECKED
Fasten Belts	ON
APU	AS BRIEFED
Fuel Panel	SET

APPROACH

Cabin Call (OH)	PRESS
Cabin Secured slider (CC)	SECURE FOR LANDING
This happens automatically after confirmation.	
Flaps (CC)	18
AC Pump (OH)	AUTO
APU Air (OH)	ON
Engine Air (OH)	OFF
Brakes (OH)	YEL

FINAL APPROACH

Gear (CP)	DOWN
Flaps (CC)	SET AS REQ.
ASI Reference Speeds (CPT)	SET
Can be done automatically by clicking on the flipchart.	
Airspeed	REDUCE (VREF + 10)

LANDING CHECKLIST

Altimeters	QNH ___ & X-CHECKED
Gear	DOWN, 3 GREENS
Brakes	YELLOW & CHECKED
NWS Steering	CENTERED
Lights	ON / AS REQ.
APU Air	OFF / AS REQ.
Engine Air	OFF / AS REQ.
Cabin	SECURE & WARNED
Flaps	SET FOR LANDING
Air Switching	AS REQ.

AFTER LANDING

Landing Lights (OH)	OFF
Taxi Lights (OH)	ON
Strobe Lights (OH)	OFF
TMS PWR (TMS)	OFF
Transponder (CC)	STBY
CONT IGN A & B (OH)	OFF

AFTER LANDING CHECKLIST

Auto-Throttle	NOT INSTALLED
Air Brakes & Lift Spoilers	IN
Flaps	UP
Radar / Transponder	INOP & STANDBY
APU	AS REQ.
APU Air	AS REQ.
Engine Air	AS REQ.
Engine Anti-Ice & Ignition	AS REQ.

LIMITATIONS

Maximum Operating Speed (VMO)	295 KIAS
Maximum Operating Mach Number	M 0.70
Landing Gear Operating Speed (VLO/VLE)	205 KIAS
Maneuvering Speed (VA)	220 KIAS (FL. UP) 175 KIAS (FL. 18)
Flaps UP max speed (En-route / normal hold)	VMO
Flaps 18 max speed (TO / APP)	210 KIAS
Flaps 18 max speed (Low speed hold)	175 KIAS
Flaps 24 max speed (TO / APP / CLB)	180 KIAS
Flaps 30 max speed (TO)	170 KIAS
Flaps 33 max speed (LND)	145 KIAS

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SHUTDOWN & SECURE

PARKING

Taxi Lights (OH)	OFF
Parking Brake (CC)	SET
Chocks (EFB)	SET
MWS GRND OP (CP)	PULL
Hydraulic Pumps (OH)	OFF
Gen 1 – 4 (OH)	OFF/RESET
Thrust Levers (CC)	FUEL OFF
Fasten Belts (OH)	OFF
Fuel Pumps (except L INNER) (OH)	OFF
Heaters (OH)	OFF
Ice Detection (OH)	OFF
Beacon Light (OH)	OFF
Doors	OPEN
Airstairs	EXTEND

SHUTDOWN CHECKLIST

Brakes	YELLOW & PARK
Hydraulics	ALL OFF
Gen 1 & 4	OFF / RESET
Thrust Levers	FUEL OFF
Fasten Belts	OFF
Taxi Lights	OFF
Brake Fans	AS REQ.
Fuel Pumps	OFF
Engine Anti-Ice	OFF
Heaters	OFF
Ice-Detect	OFF
Beacon	OFF
Mobile Phone	AS REQ.
Flight Deck Door	UNLOCKED

SECURING THE AIRCRAFT

Yaw Damper Master 1 & 2 (OH)	OFF
AP Master (OH)	OFF
Avionics Master A & B (OH)	OFF
Brake Fans (OH)	OFF
Anti-Skid (OH)	OFF
YEL & GRN Lift Spoilers (OH)	OFF
Cabin Emergency Lights (OH)	OFF
Pack 1 & 2 (OH)	OFF
Flight Deck Fan (OH)	OFF
Cabin Fan (OH)	OFF
APU Air (OH)	OFF
APU OVSPD (OH)	PRESS AND HOLD
Fuel Pumps (OH)	OFF
Galley Switch (OH)	SHED
Exterior Lighting (OH)	OFF
Emergency Lighting (OH)	OFF
Interior Lighting (OH)	OFF
BATT 1 & 2 (OH)	OFF

SECURE CHECKLIST

Avionics	OFF
Oxygen Main Valve	OFF
Master Switches	OFF
Anti-Skid & Lift Spoilers	OFF
Cabin / Cockpit Emergency Lights	OFF
Packs	OFF
APU Air	OFF
APU	TESTED OVERSPEED
Lights	AS REQ.
Battery	OFF