FLYING THE JET CITY AIRCRAFT MD-90

The MD-90 is a fun yet challenging airplane to fly provided you understand some basic fundamentals about it. The purpose of this brief guide is to walk you through a flight in the MD-90, pointing out some key features and characteristics of the airplane that will help you to pilot it successfully.

This document is not intended for real world flight and is by no means a complete “Operations Manual” type of document, as many aspects of flying involve specific settings in the cockpit that we won’t cover here. Because users of this airplane could be using a variety of cockpit environments, we will do our best to keep descriptions as generic as possible and will omit panel-specific procedures where we can. Please note that the speeds and figures listed below are only for general reference only; your airplane may need slight adjustments to account for aircraft weight, engine thrust, and weather conditions, but overall the figures below will work in most situations.

There are a few basic things you need to remember about the MD-90 Series.

First, the airplane requires special handling on the ground. Your main landing gear are over 75 feet behind the cockpit, and those main gear are your pivot points in sharp turns. Therefore, making sharp turns such as lining up on the runway for takeoff will require some practice. Make your turns slow, as the MD-90 has a tendency to skid during turns if you are going too fast.

Second, the airplane has a relatively small wing for the size of the airplane. To help compensate for this, you may be utilizing slats and flaps earlier in your descent than you are accustomed to help maintain lift. Takeoff will also require the correct flap setting and stabilizer trim or the airplane will be difficult to get airborne.

Third, the airplane has a lot of power. As such, your climb rates will be higher than you will experience in most other airliners. Always think ahead of your airplane and keep an eye on your speed!

Lastly, because of the shape and aerodynamics of the airplane, you will find that the attitude of the airplane can change greatly during the approach phase. Due to the long fuselage, even the smallest change in attitude is very noticeable… the slower the speed and higher the weight, the higher the nose-up attitude. Make sure you are under the maximum landing weight, or you will likely have difficulty. We recommend that for your first few flights, operate with a light load and gradually work your way up as you become more familiar with the airplane.

So, are you ready? Let’s get started! Today we’ll be flying the largest, quietest, and most modern McDonnell Douglas twinjet, the MD-90-30. Our aircraft it equipped with IAE V-2525 engines, producing a more than adequate 25,000 lbs of thrust each.

PREPARATION

One of the most important parts of a successful flight is being prepared. Plan your flight, know your routing, and plan your fuel load accordingly.

COMPUTING MINIMUM DISPATCH FUEL

The following flight plan factors must be considered to determine the dispatch minimum fuel requirements:

- Flight plan fuel as calculated
- Alternate fuel as calculated
- Taxi fuel: 450 lbs for each stop
- Contingency: 650 lbs (to cover unexpected deviations)
- Reserves: 4500 lbs

The minimum fuel required for takeoff is 7,500 lbs. We have provided a fuel and flight planning quick reference chart at the end of this document to assist you with your fuel planning. The main fuel tanks in the wings should be utilized first, then the center tank.

Once in the cockpit, prepare the airplane for the flight as per your cockpit procedure and checklists. At this time, load up the fuel you'll need for your flight. When you're ready to go, switch to external view to do a quick visual check of the airplane to make sure your doors are all closed and ground service equipment is out of the way. Since you are outside the airplane, now is a good time to check the movement of your flight controls – rudder, elevators, stabilizer trim, ailerons, and spoilers should all move freely. While in external view, go ahead and get all your doors closed and stairs retracted. Switch back to cockpit view, turn on the anti-collision beacons to let the ground crew know you are ready to push, and let's get going.

PUSHBACK, STARTUP, and TAXI

Push back from the gate and go ahead and start your left (No. 1), or port engine. When it's stable, you can start the right (No. 2), or starboard engine. In the MD-90, you can start engines at the gate and power back, or start them during the pushback process, or push back, set the parking brake, and start them once pushed out away from the boarding area. You also have the option of a single engine taxi, which will reduce fuel burn on the ground at airports where there are long waits to take off. If the engines have been shut down for two hours or longer, all engines must be started at least 5 minutes prior to takeoff, otherwise no warm-up period is necessary. Whichever way you prefer, once your engine(s) are running and you are cleared to taxi, the fun begins!

Turn on your taxi lights, release the parking brake, and advance the throttles slowly until airplane moves slowly forward. At heavy weights, the airplane may take as much as 50% N1 to get moving; At lighter weights, the airplane may begin to creep forward without any additional throttle input.

Keep the nose wheel centered until the aircraft starts rolling then apply pressure to the nose wheel steering to make the desired turn. Differential power or wheel braking may be used for sharp turns but do not lock the pivot wheels as this causes premature tire wear.

Keep engines below 50% N1 / 1.2 EPR when departing the gate where possible. Once clear of the gate area, you can increase thrust to achieve a taxi speed of between 10 and 20 knots. Ground handling can vary greatly depending on weight and winds. A heavy airplane could need a steady 25-28% N1 to sustain taxi speed. Lighter aircraft, on the other hand, may not need any thrust beyond the idle setting to taxi. The more you fly the airplane and get to know the feel of it, the sooner you will become familiar with its ground handling capabilities and limitations.

After leaving the ramp, verify that your stabilizer trim and flaps are at the proper takeoff settings, and spoilers are retracted.

TAKEOFF AND CLIMBOUT

When clearance is received for takeoff, scan the annunciator panel and taxi onto the runway. Set the heading bug on the runway heading as an aid in maintaining directional control in the event an engine fails after V1.

Turn on your landing lights, and turn on your strobes at this time as well.

When beginning your takeoff roll, smoothly advance throttles to around 1.25 EPR and allow your engines to spool up a bit. Scan your engine instruments for abnormal indications. If all is OK, continue advancing the throttles until reaching takeoff EPR (See Chart). Have your takeoff power set by 60 knots.

At VR, initiate a smooth pull back on the yoke to create a 3°/sec rotation to achieve lift-off attitude in 2-3 seconds. After lift-off, continue to rotate to approximately 15-20° pitch attitude.

Minimum altitude for engaging the autopilot is 200 feet AGL, although it is common practice for pilots to hand-fly the airplane until the flaps and slats are retracted and the airplane is in a clean configuration.

With a positive rate of climb indicated on the altimeter, retract the landing gear and turn off your nose gear taxi lights. Continue the climb to 1,500 feet AGL at minimum V2+10 airspeed, not to exceed 20° pitch.

NORMAL CLIMBOUT: Passing 1,500 feet, set climb thrust and reduce climb rate in order to accelerate to 250 knots. Once at 250 knots, increase your climb rate to maintain 250 knots to 10,000 feet. Your climb rate will vary depending on the aircraft weight, engine performance, and weather. Remember to retract your flaps and slats according to the schedule in the tables below.

> **NOISE ABATEMENT CLIMBOUT:** Passing 1,500 feet, set climb thrust and continue to climb at V2+10. At 3,000 feet, reduce climb rate in order to accelerate to 250 knots. Once at 250 knots, increase your climb rate to maintain 250 knots to 10,000 feet. Your climb rate will vary depending on the aircraft weight, engine performance, and weather. Remember to retract your flaps and slats according to the schedule in the tables below.

At 10,000 feet, turn off your landing lights. Lower the climb rate to approximately 1,500 ft/min (give or take, depending on weight) and let the airplane accelerate to a climb speed of 290 knots. At 290 knots, raise the nose again and maintain a 290 knot climbout. When 290 knots equals mach .74 (around FL280), maintain a mach speed of .72 - .74 up to cruise altitude.

If you are using the autopilot to maintain your climb rate, about 1,000 feet before capturing your cruise altitude, lower the vertical speed setting in the autopilot to 500-700 ft/min. This will enable a nice, smooth altitude capture (as the ability of the simulator to capture an altitude is less than optimal in most aircraft).

<u>NOTE:</u> Because of the design limitations of the autopilot in the simulator, many self-taught virtual pilots think that climbing up to cruise altitude is as simple as setting the autothrottle, altitude, and vertical speed, then kicking back and enjoying the ride. This is NOT a realistic way to climb in an airliner! Operating a large jet requires constant monitoring of EPR or N1 fan speed, air speed, and climb rate; it's not a "Set it and forget it" type of deal. As you are learning, it's almost easier to control the airplane's climb manually than with the autopilot vertical speed settings. What you want to do is set your climb EPR and then adjust your rate of climb higher or lower in order to maintain a certain air speed. Remember that as you get higher, it takes more power to climb and maintain that airspeed... The reaction is to give it more throttle, but you need to do avoid touching the throttles and instead reduce your rate of climb, which will in turn allow you to maintain your airspeed. You may be able to climb at 3,000 ft/min at FL100 and by the time you are at FL280, your climb rate may be as little as 500 ft/min in order to maintain 290 knots and your climb EPR setting. This is perfectly normal when flying airliners. And of course, the settings you use today may not be the same as what you need tomorrow, as aircraft weight and weather impact performance greatly. That's part of the fun of flying… it's always different!

CRUISE

Do not normally exceed .76 mach during cruise. Max cruise speed is .78 mach, normal cruise speed is .76 mach, and econo cruise is .74 mach.

DESCENT

From cruise altitude, rotate the vertical speed wheel on the AP to your desired descent rate. Maintain Mach cruise speed until FL280. At FL280, adjust the descent rate to descend at idle thrust and 290 knots. Reduce your descent rate to about 1000 ft/min at 12,000 feet to start bleeding off speed as you need to be at or below 250 knots at 10,000 feet. At 10,000 feet, turn on your landing lights. Set your IAS for 250 knots. Maintain 250 knots for the remainder of your descent until advised by ATC to reduce speed.

APPROACH AND LANDING

Determine aircraft landing weight from the fuel totalizer gauge. If the totalizer is inoperative, subtract the fuel consumed by both engines from the ramp gross weight.

Be sure to extend your slats and flaps according to the schedule listed in the tables below. By 30nm from the airport, you should be at 10,000 ft and 250 knots. At 15nm, your slats and flaps should be extended as required and your airspeed should be around 210 knots. Passing 4,000 ft, start slowing to 170 knots; you should be at 170 knots at 2,000 feet, approximately 6 nm from the airport. Passing through 2,000 ft, lower the landing gear, set landing flaps, arm your ground spoilers, and slow to your target speed. At 1,000 ft, you should be approximately 3mn from the airport in full landing configuration. At 500 ft, your vertical speed should be <1500 fpm and engines should be spooled.

You should not have to touch the throttles much during the final approach phase of flight, as the added drag from the gear and flaps will slow the aircraft down gradually.

Minimum altitude for disengaging autopilot is 50 feet AGL unless in Autoland mode.

Plan to pass over the runway numbers at 50 feet AGL. At approximately 20 feet AGL, slowly reduce throttles to idle and initiate the flare. Maximum pitch attitude at touchdown is 10°. The airplane will gently settle onto the runway.

When the main gear touches down, the spoilers will extend. Pull the throttle levers immediately to the idle position while gently lowering the nose to the runway. Once the nose wheel is on the ground, reverse thrust power may be used up to 80% N1.

Upon reaching 70 knots, gradually reduce reverse thrust to reach the idle detent by 60 knots and then use manual braking to reduce to taxi speed. Leave throttles at idle until forward thrust is needed. Delay application of the wheel brakes until below 80 knots if possible.

Vacate the runway at the first available turnoff. When clear of the active runway, turn off your landing lights and turn off your strobes. Turn on your taxi lights and retract your spoilers, slats, and flaps.

Upon reaching the parking area, set the parking brake, shut down both engines, and turn off your rotating beacons.

That's the general procedure for flying the MD-90.

Most of the settings listed in this document were taken directly from official flight/aircraft documents, and only modified where necessary to compensate for shortcomings in the simulator.

MD-90 LIMITATIONS

WEIGHT LIMITATIONS:	**MD-90-30**	**MD-90-30ER**	**MD-90-30ER IGW**
Maximum Ramp Weight:	157,000 lbs	161,000 lbs	168,500 lbs
Maximum Takeoff Weight:	156,000 lbs	160,500 lbs	168,000 lbs
Maximum Landing Weight:	142,000 lbs	142,000 lbs	142,000 lbs
Maximum Zero Fuel Weight:	130,000 lbs	132,000 lbs	132,000 lbs
Operating Empty Weight:	88,171 lbs	89,059 lbs	89,059 lbs
Maximum Structural Payload:	41,829 lbs	42,941 lbs	42,941 lbs

Takeoff and landing weights may be further restricted by runway lengths and performance requirements.

FUEL REQUIREMENTS AND CAPACITIES

Minimum fuel for takeoff: 7,500 lbs
Minimum fuel for go-around: 1,000 lbs in each main tank

Fuel Capacity (density of 6.7 ppg)

- Main Tanks: 2 @ 1,383 gallons each (18,532 lbs total)
- Center Tank: 3,075 gallons (20,596 lbs)
- Fwd Auxiliary Tank (Optional): 565 gallons (3,786 lbs)
- Total: 5,840 gallons (39,128 lbs) or optionally 6,405 gallons (42,913 lbs)

AIRSPEED LIMITATIONS:

Vmo: 340 KIAS
Mmo: 0.84 Mach

FLAPS EXTEND MAX SPEEDS

Slats (Mid Position): 280 KIAS / 0.57 Mach
Slats (Fully Extended): 240 KIAS / 0.57 Mach
Flaps 0-13: 280 KIAS / 0.57 Mach
Flaps 15-20: 240 KIAS / 0.57 Mach
Flaps 21-25: 220 KIAS / 0.57 Mach
Flaps 26-30: 205 KIAS / 0.57 Mach
Flaps 31-40: 200 KIAS / 0.57 Mach

LANDING GEAR MAX OPERATING SPEEDS

Extension: 300 KIAS
Retraction: 250 KIAS

TURBULENCE PENETRATION MAX SPEED

IAS/MACH:	280 KIAS / 0.75 to .79 Mach, whichever is lower
BELOW 10,000 FT:	250 KIAS

TIRE LIMITS

Do not exceed 195 knots ground speed

MAXIMUM OPERATIONAL ALTITUDE

37,000 feet

ENGINE REVERSERS

Reverse taxiing is prohibited
In-flight reversing is prohibited

WIND COMPONENTS

Maximum 10 knots Tailwind (Runway 6,500 ft and longer)
Maximum 30 knots Crosswind (Dry Runway) or 25 knots (Wet Runway)
Maximum 15 knots Crosswind (Autoland)

SPOILERS

The speed brakes must only be used with 0° flaps. Slats can be extended or retracted.
Do not move the speed brake lever to the ground spoiler position in flight
Do not extend the gear with the speed brakes deployed
Do not arm the ground spoilers prior to gear extension

AUTOPILOT LIMITATIONS

Minimum altitude for engaging the autopilot is 200 feet AGL
Minimum altitude for disengaging the autopilot is 50 feet (VFR) or 70 feet (IFR) AGL, except for Autoland

TAKEOFF AND LANDING LIMITATIONS

Maximum Takeoff and Landing Altitude: 8,500 ft
Minimum Takeoff and Landing Altitude: -1,000 ft
Hard Landing Limits: 600 feet/min

MD-90 REFERENCE CHARTS

OPTIMUM FLIGHT LEVEL vs. STAGE LENGTH

(No Wind, Standard Temperature, Normal Cruise)
This table gives the maximum and optimum cruise flight level for a given gross weight OR the maximum and optimum gross weight for a given flight level.

GROSS WEIGHT (lbs)	100 NM	150 NM	200 NM	250 NM	300 NM	MAX INITIAL FLIGHT LEVEL
160,000	-	-	-	-	-	310
155,000	-	-	-	-	-	310
150,000	-	-	-	-	-	310
145,000	-	-	-	-	-	330
140,000	130	200	260	300	330	330
135,000	130	200	260	310	330	330
130,000	130	210	270	310	330	330
125,000	140	220	280	320	350	350
120,000	140	230	290	330	350	350
115,000	150	230	290	330	350	370
110,000	150	240	300	340	370	370
105,000	160	240	310	340	370	370
100,000	160	250	310	350	370	370

TAKEOFF EPR / N1 RPM

Due to lack of reference material, the EPR/N1 settings below are carried over from the MD-83. Should we find information for the MD-90, we will update this information accordingly.

RAT °C	-40	-30	-25	-20	-15	-10	-5	0	5	10	15	20	25	30	35	40
Sea Level	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.99	1.97	1.93	1.88
	84.3	86.0	86.9	87.8	88.7	89.5	90.4	91.2	92.1	92.9	93.7	94.5	95.2	94.8	93.4	92.1
1000 feet	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	1.97	1.93	1.88
	85.3	87.1	88.0	88.9	89.8	90.7	91.5	92.4	93.3	94.0	94.8	95.6	96.4	95.3	93.4	92.1
2000 feet	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.03	2.02	1.97	1.93	1.88
	86.5	88.3	89.2	90.1	91.0	91.9	92.8	93.6	94.6	95.3	96.1	97.0	96.9	95.3	93.4	92.1
3000 feet and Above	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.06	2.05	2.04	2.02	1.97	1.93	1.88
	88.2	90.1	91.0	91.9	92.8	93.7	94.6	95.5	96.5	97.2	97.5	97.7	97.1	95.3	93.4	92.1

MD-90 SLAT/FLAP SETTINGS

SLATS RETRACTED / FLAPS 0
SLATS MID-EXTEND / FLAPS 0
SLATS MID-EXTEND / FLAPS 11
SLATS FULL-EXTEND / FLAPS 15
SLATS FULL-EXTEND / FLAPS 28
SLATS FULL-EXTEND / FLAPS 40

TAKEOFF SPEEDS

	FLAPS 15				FLAPS 11				
WEIGHT (lbs)	V1	VR	V2	FR	V1	VR	V2	FR	SR
96,000	104	112	126	141	107	117	132	141	178
98,000	104	112	126	141	107	117	132	141	178
100,000	104	112	126	141	107	117	132	141	178
102,000	104	112	126	141	107	117	132	141	178
104,000	104	112	126	141	107	117	132	141	178
106,000	105	113	127	142	108	118	133	142	180
108,000	106	114	128	143	109	119	134	143	181
110,000	107	116	129	144	110	121	135	144	183
112,000	108	117	130	145	111	122	136	145	185
114,000	109	119	132	147	113	124	138	147	187
116,000	110	120	133	148	115	26	139	148	189
118,000	112	122	134	151	117	128	140	151	191
120,000	113	123	136	153	118	129	141	153	192
122,000	114	124	137	153	119	130	142	154	193
124,000	115	124	137	154	120	131	143	154	194
126,000	117	126	138	155	121	132	144	155	196
128,000	118	127	139	156	123	134	145	156	197
130,000	120	129	140	157	125	135	146	157	199
132,000	121	130	141	159	126	136	148	159	201
134,000	123	132	142	160	128	137	149	160	202
136,000	124	133	143	161	129	139	150	161	204
138,000	126	134	144	162	131	140	151	162	205
140,000	127	135	145	163	133	141	152	163	207
142,000	128	135	146	164	134	142	153	164	208
144,000	129	136	146	165	135	142	153	165	209
146,000	131	138	148	166	136	144	154	166	211
148,000	132	139	149	167	137	145	155	167	212
150,000	134	141	150	168	139	147	157	168	214
152,000	135	142	151	169	140	148	158	169	215
154,000	137	143	152	170	142	149	159	170	217
156,000	138	144	153	172	143	150	160	172	218
158,000	-	-	-	-	145	152	162	173	220
160,000	-	-	-	-	146	153	163	174	221

If over 100 degrees F or over 4,000 feet altitude, add +2 to V1 / VR

V1 = Take-off decision speed. Before V1, the pilot can abort take-off. After V1, the pilot MUST take off
VR = Take-off rotation speed at which the pilot pulls the flight controls to raise the nose and take off
V2 = Take-off safety speed to be reached before passing 35 ft above runway altitude
FR = Speed to begin flap retraction
SR = Speed that flaps and slats should be fully retracted

MINIMUM MANEUVERING AND LANDING SPEEDS

	MINIMUM MANEUVERING FLAP / SLAT						LANDING		LANDING	
WEIGHT (lbs)	0 RET	0 EXT	11 EXT	15 EXT	28 EXT	40 EXT	FLAPS	VREF	FLAPS	VREF
88,000	191	154	133	130	121	117	28	113	40	109
90,000	194	155	134	131	123	119	28	114	40	110
92,000	196	157	136	133	124	120	28	115	40	111
94,000	198	159	138	135	126	121	28	116	40	113
96,000	200	160	139	136	127	122	28	118	40	114
98,000	202	162	141	138	128	124	28	119	40	115
100,000	204	164	142	139	129	125	28	120	40	116
102,000	206	166	144	140	130	126	28	122	40	117
104,000	208	167	145	141	132	127	28	123	40	118
106,000	210	169	146	143	133	129	28	124	40	119
108,000	212	170	147	144	134	130	28	125	40	121
110,000	214	171	148	145	136	131	28	126	40	122
112,000	216	173	150	147	137	132	28	127	40	123
114,000	218	174	152	148	138	133	28	128	40	124
116,000	220	176	153	149	139	135	28	130	40	125
118,000	222	178	154	151	141	136	28	131	40	126
120,000	223	179	155	152	142	137	28	132	40	127
122,000	225	181	156	153	143	138	28	133	40	128
124,000	227	182	158	154	144	139	28	134	40	129
126,000	229	183	160	156	145	140	28	135	40	130
128,000	231	185	161	157	146	141	28	136	40	131
130,000	233	187	162	158	148	142	28	137	40	132
132,000	234	188	163	159	149	143	28	138	40	133
134,000	236	190	164	160	150	144	28	139	40	134
136,000	238	191	165	162	151	146	28	140	40	135
138,000	239	192	167	163	152	147	28	141	40	136
140,000	241	194	168	164	153	148	28	142	40	137
142,000	243	195	169	165	154	149	28	143	40	138
144,000	245	196	170	166	155	150	28	144	40	139
146,000	247	198	171	167	156	151	28	145	40	140
148,000	248	199	173	168	157	152	28	146	40	141
150,000	250	201	174	170	158	153	28	147	40	142
152,000	251	202	175	171	160	154	28	148	40	143
154,000	253	203	176	172	161	155	28	149	40	144
156,000	255	204	177	173	162	156	28	150	40	145
158,000	256	205	178	174	163	157	28	151	40	146
160,000	258	207	179	175	164	158	28	152	40	147

FLAPS = Recommended flaps setting for landing
VREF = Speed at which the aircraft should cross the runway threshold during landing
RET = Retracted
EXT = Extended

MD-90 CHECKLISTS

PRESTART

Master Battery Switch	On
Electrical	On
Position Lights	On
Air Conditioning System	On
Radios	On
FMS/GPS	Checked

ENGINE START

Parking Brakes	Check
Fuel Quantity	Check
Beacons	On
Doors	Check
Air Conditioning Supply	Check
Throttle Levers	Idle
Fuel Boost Pumps	Check On
Ignition	Both
Pneumatic Pressure	Check
Fuel Heat	Set
Port Engine	Start
Starboard Engine	Start

AFTER START / BEFORE TAXI

Electrical Power	Check
Electrical Bus	Check
Ignition Switch	Off
Yaw Damper	On
Air Conditioning Temperature Switches	Check
Emergency Lights / Cabin Signs	Check
Hydraulic Pressure Indicators	Check

TAXI

Flight Instruments	Check
Taxi Lights	On
Fuel Heat	As Required
Flaps and Slats	Set Takeoff
Takeoff EPR	Set
Stabilizer Trim	Check
Flight Controls	Check
Brake Temperature	Check

TAKEOFF

Landing Lights	On
Strobes	On
Ignition	Both
Ice Protection	Check
Hydraulic Booster Pumps	On
Transponder	On
Radio Altimeter	Set

CLIMB AND CRUISE

Flaps and Slats	Full Up
Taxi Lights	Off
Landing Gear	Up
Ignition	Off
Boost Pumps	As Required
Air Conditioning Shutoff	Override
Hydraulic Boost Pumps	Off
Radio Altimeter	Check
Cabin Pressurization	Set
Passing 10,000ft - Landing Lights	Off

DESCENT

Cabin Pressure	Set
EPR Bug	Set
Hydraulic Boost Pumps	On
Passing 10,000ft - Landing Lights	On

APPROACH

Hydraulic Boost Pumps	Check On
Cabin Signs	On
Altimeters	Set
Navaids	Check
Flight Instruments	Check

LANDING

Landing Gear	Down / 3 Green
Ignition	Both
Spoilers	Auto
Annunciator Panel	Check
Landing Weight and Data	Check
Hydraulic Indicators	Check
Flaps and Slats	Set
Landing Lights	On

AFTER LANDING

Hydraulic Boost Pumps	Off
Flaps and Slats	Full Up and Retract
Spoilers	Retract
Landing Lights	Off
Strobes	Off
Ignition	Off
Anti-Ice Switches	Off
Taxi Lights	On

PARKING

Parking Brake	Set
Emergency Lights / Cabin Signs	Off
Air Conditioning Supply	As Needed
Taxi Lights	Off
Beacons	Off
Engines	Off
Flight Recorders	Off

SECURE

External Lighting	Off
Air Conditioning System	Off
Radios	Off
Electrical	Off
Master Battery Switch	Off