NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

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Attachment 18 – Boeing Flight Crew Operations Manual [Excerpts]

OPERATIONAL FACTORS/HUMAN PERFORMANCE

DCA19MA143

Pilot Flying	Pilot Monitoring
	When established in a level flight attitude, if the center tank contains usable fuel and a center tank fuel pump switch(es) is OFF, set the center tank fuel pump switch(es) to ON again. Set the affected center tank fuel pump switch to OFF when a center tank fuel pump LOW PRESSURE light illuminates. Set both center tank fuel pump switches to OFF when a center tank fuel pump LOW PRESSURE light illuminates if the center tank is empty.
	During an ETOPS flight, additional steps must be done. See the ETOPS supplementary procedure in SP.1.
	Before the top of descent, modify the active route as needed for the arrival and approach.

Descent Procedure

YA857, YA859, YB276 - YC482, YD252, YD254 - YJ942, YJ945 - YV711 (SB Changes YC904, YC905)

Start the Descent Procedure before the airplane descends below the cruise altitude for arrival at destination.

Complete the Descent Procedure by 10,000 feet MSL.

Pilot Flying	Pilot Monitoring
	During the descent, verify the RNP as needed.

Pilot Flying	Pilot Monitoring
	Set the affected center tank fuel pump switch to OFF when a center tank fuel pump LOW PRESSURE light illuminates. Set both center tank fuel pump switches to OFF when a center tank fuel pump LOW PRESSURE light illuminates if the center tank is empty.
	If established in a level flight attitude, for an extended period of time with usable fuel in the center tank and a center tank fuel pump switch(es) is OFF, set the center tank fuel pump switch(es) to ON again. Set the affected center tank fuel pump switch to OFF when a center tank fuel pump LOW PRESSURE light illuminates. Set both center tank fuel pump switches to OFF when a center tank fuel pump LOW PRESSURE light illuminates if the center tank is empty.
	Verify that pressurization is set to landing altitude.
Review the system annunciator lights.	Recall and review the system annunciator lights.
Verify VREF on the APPROACH REF page.	Enter VREF on the APPROACH REF page.
Set the RADIO/BARO minimums as needed for the approach.	
Set or verify the navigation radios and course for the approach.	
	Check landing performance.
	Set the AUTO BRAKE select switch to the needed brake setting.
Do the approach briefing.	

Pilot Flying	Pilot Monitoring
Call “DESCENT CHECKLIST.”	Do the DESCENT checklist.

Descent Procedure [AD 2002-19-52 and AD 2002-24-51]

YA860, YD251, YD253, YJ943
(SB Changes YC904, YC905)

Start the Descent Procedure before the airplane descends below the cruise altitude for arrival at destination.

Complete the Descent Procedure by 10,000 feet MSL.

Pilot Flying	Pilot Monitoring
	During the descent, verify the RNP as needed.
	YD251, YD253 Set both center tank fuel pump switches OFF when center tank fuel quantity reaches approximately 3000 pounds. **YA860, YC904, YC905** Set both center tank fuel pump switches OFF when center tank fuel quantity reaches approximately 1400 kilograms. Do not accomplish the CONFIG non-normal checklist.
	Verify that pressurization is set to landing altitude.
Review the system annunciator lights.	Recall and review the system annunciator lights.

YA860, YC904 - YD251, YD253

Verify VREF on the APPROACH REF page.	Enter VREF on the APPROACH REF page.

Set the RADIO/BARO minimums as needed for the approach.
Set or verify the navigation radios and course for the approach.
Check landing performance.

Pilot Flying	Pilot Monitoring
	Set the AUTO BRAKE select switch to the needed brake setting.
Do the approach briefing.	
Call "DESCENT CHECKLIST."	Do the DESCENT checklist.

Descent Procedure [Alternate Method of Compliance (AMOC) to AD 2002-24-51]

YA860, YD251, YD253, YJ943
(SB Changes YC904, YC905)

Start the Descent Procedure before the airplane descends below the cruise altitude for arrival at destination.

Complete the Descent Procedure by 10,000 feet MSL.

Pilot Flying	Pilot Monitoring
	During the descent, verify the RNP as needed.
	YD251, YD253 Set one center tank fuel pump switch OFF when center tank fuel quantity reaches approximately 3000 pounds. Open the crossfeed valve to minimize fuel imbalance. **YA860, YC904, YC905** Set one center tank fuel pump switch OFF when center tank fuel quantity reaches approximately 1400 kilograms. Open the crossfeed valve to minimize fuel imbalance. Turn the remaining center tank fuel pump switch OFF without delay and close the crossfeed valve when the Master Caution and FUEL system annunciator illuminate.

Pilot Flying	Pilot Monitoring
	YD251, YD253 If established in level flight for an extended period of time prior to approach and landing with more than 2000 pounds in the center tank and the center tank fuel pump switches OFF, one center tank fuel pump switch may be turned ON again. Open the crossfeed valve to minimize fuel imbalance. **YA860, YC904, YC905** If established in level flight for an extended period of time prior to approach and landing with more than 950 kilograms in the center tank and the center tank fuel pump switches OFF, one center tank fuel pump switch may be turned ON again. Open the crossfeed valve to minimize fuel imbalance. Turn the remaining center tank fuel pump switch OFF without delay and close the crossfeed valve when the Master Caution and FUEL system annunciator illuminate.
	Verify that pressurization is set to landing altitude.
Review the system annunciator lights.	Recall and review the system annunciator lights.

YA860, YC904 - YD251, YD253

Verify VREF on the APPROACH REF page.	Enter VREF on the APPROACH REF page.

Set the RADIO/BARO minimums as needed for the approach.
Set or verify the navigation radios and course for the approach.

	Check landing performance.

Pilot Flying	Pilot Monitoring
	Set the AUTO BRAKE select switch to the needed brake setting.
Do the approach briefing.	
Call "DESCENT CHECKLIST."	Do the DESCENT checklist.

Descent Procedure [Alternate Method of Compliance (AMOC) to AD 2001-08-24 and AD 2002-24-51 for Airplanes with Master Caution System Logic Change and Automatic Shutoff]

YA860, YD251, YD253, YJ943
(SB Changes YC904, YC905)

Start the Descent Procedure before the airplane descends below the cruise altitude for arrival at destination.

Complete the Descent Procedure by 10,000 feet MSL.

Pilot Flying	Pilot Monitoring
	During the descent, verify the RNP as needed.
	Set the affected center tank fuel pump switch to OFF when a center tank fuel pump LOW PRESSURE light illuminates. Set both center tank fuel pump switches to OFF when a center tank fuel pump LOW PRESSURE light illuminates if the center tank is empty.

Pilot Flying	Pilot Monitoring
	If established in a level flight attitude, for an extended period of time with usable fuel in the center tank and a center tank fuel pump switch(es) is OFF, set the center tank fuel pump switch(es) to ON again. Set the affected center tank fuel pump switch to OFF when a center tank fuel pump LOW PRESSURE light illuminates. Set both center tank fuel pump switches to OFF when a center tank fuel pump LOW PRESSURE light illuminates if the center tank is empty.
	Verify that pressurization is set to landing altitude.
Review the system annunciator lights.	Recall and review the system annunciator lights.

YA860, YC904 - YD251, YD253

Verify VREF on the APPROACH REF page.	Enter VREF on the APPROACH REF page.

Set the RADIO/BARO minimums as needed for the approach.	
Set or verify the navigation radios and course for the approach.	
	Check landing performance.
	Set the AUTO BRAKE select switch to the needed brake setting.
Do the approach briefing.	
Call “DESCENT CHECKLIST.”	Do the DESCENT checklist.