

737

QUICK STUDY GUIDE




B O R E D A V I A T O R S T U D E N T



TAKEOFF BRIEFING	
1	Bugs set L'autopilote est à gauche Airspeed 45 et 350 Wings Level no flags bille centrée Altimètre 29.95 Set et 120 pieds (FO crosschecks 29.95 et 120 pieds) Stand-by Altimètre 29.92 Set FRA 1100 pieds HSI heading 060 ESIS heading 060 Stand-by compass 060 Hdg Bug Set sur la piste 060 et la course 044 (correspond au FPL) VSI zero No Flags Nav Source Primary (VOR/FMS) SET CROSSCHECK
2	Ça va être mon décollage à 119 000 livres Rated Thrust ou Reduced Thrust à 22°C (MT47) sur la piste 06 L Flaps 5 Bleeds ON (OFF) EAI (Eng Anti Ice) ON(OFF) EPR / 20 N1 95 (200) .
3	Les vitesses sont V1 147, VR 152, V2 156, V Target 170 (V2 + 15) et VZF 210 (zero flaps) .
4	Tu m'annonces Thrust Set 80 kts V1 et Rotate .
5	Toute malfunction avant V1 je call REJECT ou CONTINUE .
6	Si je Reject je vais couper les Thrust Levers Désengager l'auto-Throttle Maximum Braking Monter les Speed Brake Maximum Reverse Thrust jusqu'à l'arrêt Parking Brake Set. De ton côté ? <i>Je vais m'assurer que les Speed Brakes sont à UP et que nous avons deux bons reverser. Je vais appeler 60Kts, sortir les Flaps à 40 (pour l'évacuation au besoin) et appeler l'ATC.</i>
7	Si jamais on a une panne après V1 on continue. À 400' on engage le mode HEADING , on confirme la malfunction et effectue la drill appropriée.
8	*Au-dessus de FRA (1100 pieds) Set Speed _____ (210 ou 220 kts) et remonte les flaps en séquence. On va accélérer jusqu'à la Flaps Up maneuvering speed, et remonter les flaps en séquence.
9	*Lorsque les Flaps sont Up No Light Engage LVL CHG Confirm MCP Speed (Speed 210 ou 220) SET MCT Je vais continuer la montée à la vitesse de manœuvre des Flaps et je vais te demander Set MCT
9	Par la suite se sera WHERE TO __, QRH, ATC (infos) et TESTRA .
10	Pour ce qui est du départ Montréal deux...
11	Noise abatement (NADP 1 ou 2).
12	Single Engine procedure .
13	Emergency Return .
14	Radio SETUP (Com/Nav/FMS/Setting).
15	THREAT (feuille).
16	Des questions ?



APPROACH BRIEFING Build Bug and Brief

1-STAR Briefing Plate FMS	<ul style="list-style-type: none"> Confirm the STAR name, runway and effective to date. Review any STAR information or restrictions. Check all altitude crossing restrictions and speeds. Clearance page, read the STAR procedure. In the Flight Plan page, read the altitude restrictions.
2-Approach Plate Briefing	<ul style="list-style-type: none"> This will be a ___ (type) to Runway ___ at ___(airport) Minimum Safe Altitudes _____ft LOC/ILS frequency is _____ Final APRCH/CRS _____° Fix crossing altitude Min _____ft <div style="text-align: right; margin-top: 10px;">  </div>
3-STANDARD CALLS	<ul style="list-style-type: none"> "100 ABOVE" minimums and "MINIMUM, RUNWAY IN SIGHT or NO CONTACT". I will call "CONTINUE" or "GO-AROUND, SET GO-AROUND THRUST".
4-Missed Approach Briefing (first flight per day)	<ul style="list-style-type: none"> I will call "GO-AROUND, SET GO-AROUND THRUST" and verify that thrust increases and adjust as required. "FLAPS 15" or "FLAPS _____" At positive rate: "GEAR UP, SET MISSED APPROACH ALTITUDE" At 400' "ENGAGE HDG" or "LNAV" "AUTOTHROTTLE ARM" "Tune radios"
5- FMS Performance	Weight Flaps Speeds Use of reversers
6-Landing Briefing	<ul style="list-style-type: none"> Runway environment, Length, width, condition, Landing distance Expected exit, taxiway, hotspots.
7-Threats and Error Management	MEL / NOTAMS / Fuel for Holding and diversion to Alternate.



DÉMARRAGE MOTEUR

Start	Je start le moteur numéro 2 GRD engaged N2 Live 20% N1 Live Oil pressure 25% Fuel On Timing Fuel Flow EGT en dedans de 10 s N2 46 Starter Release N2 60 Moteurs stables.
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DÉCOLLAGE NORMAL

1	Set TAKEOFF THRUST "N1 TO/GA" THRUST SET
2	80 KNOTS CHECK
3	V1 / ROTATE
4	POSITIVE RATE GEAR UP
5	400' "ENGAGE HDG" (OR LNAV) "HDG SELECT"
6	FRA "SET CLIMB THRUST" "N1"
7	"ENGAGE LVL CHANGE" "M C P SPEED"
8	"SET SPEED 220" SPEED 220 SET
9	"FLAPS 1" FLAPS 1 GREEN LIGHT
10	"FLAPS UP" FLAPS UP NO LIGHTS
11	"AFTER TAKEOFF CHECKLIST" AFTER TAKEOFF CHECKLIST COMPLETE

"N1 TO/GA"
"HDG SELECT"
"N1"
"MCP SPEED"
"COMMAND A or B"
"ALT ACQ"
"MCP SPD"
"ALT HOLD"

4000 FOR 5000
11 000 FT SET
HDG 320 SET

DESCENTE ET ATERRISSAGE

Approaching Top of descent DESCENT CHECKLIST	DESCENT CHECKLIST COMPLETED
At transition level or FL180 APPROACH CHECKLIST	APPROACH CHECKLIST COMPLETED
FLAPS 1 (tu diminues ta vitesse à 190 kts)	FLAPS 1 GREEN LIGHT
FLAPS 5 (tu diminues ta vitesse à 170 Kts)	FLAPS 5 GREEN LIGHT
GEAR DOWN, FLAPS 15, LANDING CHECKLIST TO THE FLAPS FLAPS 25	HOLDING AT FLAPS
FLAPS 30 (ou 40) COMPLETE THE LANDING CHECKLIST	FLAPS ?
30 (40) GREEN LIGHT	LANDING CHECKLIST COMPLETED
CHECK	ONE HUNDRED ABOVE MINIMUM, RUNWAY IN SIGHT MINIMUM, NO CONTACT
CONTINUE (GO-AROUND, SET GO-AROUND THRUST)	



GO AROUND	
PF	PM
"GO AROUND SET GO AROUND THRUST FLAPS 15"	"POSITIVE RATE"
"GEAR UP SET MISSED APPROACH ALTITUDE"	"MISSED APPROACH ALTITUDE 3000' SET"
Above 400 feet AAE ENGAGE HDG "HDG SELECT"	Appuyer sur HDG SEL
Autothrottle ARM "N1"	Engage Autothrottle
TUNE RADIOS	
At FRA Call: ENGAGE LVL CHANGE SET SPEED 210 (220) "M C P SPEED"	
FLAPS 5	FLAPS 5 GREEN LIGHT
FLAPS 1	FLAPS 1 GREEN LIGHT
FLAPS UP	FLAPS UP NO LIGHTS
AFTER TAKEOFF CHECKLIST	AFTER TAKEOFF CHECKLIST COMPLETE
SPEED 250 SET	ADVISE ATC
GO AROUND ENGINE FAILURE	
GO AROUND SET GO AROUND THRUST FLAPS 15	POSITIVE RATE
"GEAR UP SET MISSED APPROACH ALTITUDE"	"MISSED APPROACH ALTITUDE 3000' SET"
Above 400 feet AAE "ENGAGE HDG" (OR LNAV) "HDG SELECT"	ENGINE FIRE or ENGINE FAILURE
"IDENTIFY"	Vital
"Advise ATC"	Call PAN PAN PAN PAN PAN PAN TLR...
At Flap Retraction Altitude, call: "SET SPEED 210 (220)"	"SPEED 210 (220) SET"
"Flaps 1"	"Flaps 1 GREEN LIGHTS"
"Flaps UP"	"Flaps Up No Light"
LEVEL CHANGE, Confirm MCP SPEED 210 (OU 220) "MCP SPEED"	
"SET MAX CONTINUOUS THRUST"	
Engage autopilot in CMD "COMMAND A or B"	
F/A (Quick Call) + Where to + Emergency Action Guidelines	

ENGINE FIRE #__
ENGINE FAILURE #__
ENGINE SEVERE DAMAGE #__



REJECTED TAKEOFF

Captain will call "REJECT" to initiate the Rejected Takeoff Procedure

PIC	SIC
<p>ACTION <i>Je vais couper les Thrust Levers</i> Désengager l'auto-Throttle <i>Maximum Braking</i> <i>Monter les Speed Brake</i> <i>Maximum Reverse Thrust jusqu'à l'arrêt</i> <i>Parking Brake Set.</i></p>	<p>ACTION <i>Je vais m'assurer que les Speed Brakes sont à UP et que nous avons deux bons reverser. Appeler 60Kts, sortir les Flaps à 40 (pour l'évacuation au besoin) et appeler l'ATC.</i></p>
	SPEED BRAKE UP or NO SPEED BRAKE REVERSER NORMAL or NO REVERSER
<p>Bring aircraft to a complete STOP and set the parking brake.</p>	<p style="color: red; font-weight: bold;">60 KTS FLAPS 40 + ATC</p> <p>"Inuit ____, Rejecting Takeoff Runway ____, Standby" (If RTO is due to a known fire and/or smoke or an imminent danger: "MAYDAY, MAYDAY, MAYDAY, Inuit ____, Rejecting Takeoff Runway ____, Send the Emergency Equipment, Standby" or advise of the nature of the problem).</p>
<p>State over the PA:</p> <p>"Remain Seated, Remain Seated, Remain Seated".</p>	

"IDENTIFY " DETERMINE NATURE of EMERGENCY

If Indication of Fire and/or Smoke	If Malfunction (Engine Failure)	If another reason
<p>PIC Call for FIRE DRILL 🔥 and/or checklist</p> <ul style="list-style-type: none"> APU Fire Drill 🧑 (8.3) Engine Fire on the Ground Checklist (BC 0.1) Overheat 🔥 Cargo Fire Checklist (8.24) <p>PIC CALL ATC INFO MAYDAY</p>	<p>PIC Call for DRILL 🧑 if Engine Severe Damage</p> <ul style="list-style-type: none"> ATC FA Where To <u>Stay on the RWY</u> QRH ENGINE FAILURE or SHUTDOWN CHECKLIST (7.15) 	<p style="text-align: center; font-weight: bold;">NOTHING</p> <ul style="list-style-type: none"> ATC FA Where To <u>Stay on the RWY</u>

ASSESS THE SITUATION "EVACUATION ???"

<p style="color: red; font-weight: bold;">EVACUATION 🔥 (BC 0.2)</p> <p>Call for "Evacuation Checklist" (done by SIC)</p> <p style="text-align: center;">Séquence d'action</p>	<p style="color: green; font-weight: bold;">NO EVACUATION 😎</p> <p style="text-align: center;">Séquence d'action</p> <p style="text-align: center; color: red; font-weight: bold;">*PI 37 Brake Cooling*</p>
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TAKEOFF ENGINE FAILURE	
Call: "Engine Fire" or "Engine Failure"	
PF	PM
	At VR, call: "ROTATE" (Climb at V2)
	"Positive rate"
"Gear Up"	
Above 400 feet AAE "ENGAGE HDG" (OR LNAV) " HDG SELECT "	
"IDENTIFY"	VITAL
PAN PAN PAN PAN PAN PAN HDG ... STBY At Flap Retraction Altitude call: "SET SPEED 210 (220)"	"SPEED 210 (220) SET"
"Flaps 1"	"Flaps 1 GREEN LIGHTS"
"Flaps UP"	"Flaps Up No Light"
	Engage LVL CHG "MCP SPEED" Confirm MCP Speed 210 (220) Set Max Continuous Thrust
Engage autopilot in CMD "COMMAND A or B"	
	Where To Direct the PM to obtain appropriate information and clearance from ATC and determine the next course of action.
QRH Call for the: ENGINE FIRE, SEVERE DAMAGE, OR SEPARATION CHECKLIST (8.4) or the ENGINE FAILURE OR SHUTDOWN CHECKLIST (7.15) as appropriate.	
	ATC INFO Direct the PM to give Informations of the situation (#Pax...)
TESTRA / PA / Dispatch	
Checklist Normal QRH or Checklist *If proceeding to alternate call for the After T/O checklist *If returning for Landing continue in the QRH the One Engine inop LDG Checklist + Deferred Items (7.27)	
Build Bug and Brief / Briefing	
Descent / Approach checklist and GO !	

ENGINE FIRE #__


ENGINE FAILURE #__

ENGINE SEVERE DAMAGE #__



Pilot Flying	Pilot Monitoring
	Disengage the Autothrottle
"CONFIRMED"	"THRUST LEVER #___CONFIRM" "CLOSED"
"CONFIRMED"	"ENGINE START LEVER #___CONFIRM" "CUTOFF".
"CONFIRMED"	"ENGINE FIRE SWITCH #___CONFIRM". "PULLED" "BOTTLE DISCHARGED" "TIMING"



Emergency Action Guidelines 	
1	Fly the aircraft
2	Engine Fire or Engine Failure
3	Positive Rate Gear Up
4	400 pieds ENGAGE HDG
5	IDENTIFY
6	If need VITAL (Engine Fire or Engine Severe Damage or Separation Drill)
7	The PM will call " PAN PAN, PAN PAN, PAN PAN, Inuit ____ , Emergency in Progress, Standby " " Maintaining Heading ____° for Performance Requirements ". Use, " MAYDAY, MAYDAY, MAYDAY " for any Urgency that becomes an obvious Emergency, e.g., an engine fire.
8	Set Speed 210 (220) et Flaps Up en séquence
9	Engage LVL CHG Confirm MCP Speed Set Max Continuous Thrust
10	Autopilot ON CMD
11	The PM will advise the Flight Attendant with the button (3 chime) and state: " We have an emergency, remain seated, we will call you back within 15 minutes ".
12	Where To (obtain informations and clearance from ATC)
13	QRH (Checklist) Engine Fire, Severe damage, or separation checklist or Engine Failure or Shutdown checklist ----- Stop to Deferred Items -----
14	ATC info (Type of Emergency, the Number of Souls On Board, Current Fuel On Board and the Location of any carried Dangerous Goods.
15	TESTRA PA DISPATCH
16	Checklist Normal (QRH) – After Takeoff Checklist or – One Engine Inoperative Landing Checklist Deferred Items until landing Checklist
17	Build Bug Brief Complete Landing Checklist (QRH) when Gear down et Go!



Emergency Action Guidelines 🌍 « FAST »

1	VITAL
2	ATC F/A
3	MCT
4	Where To
5	QRH Hold Deferred Items -----
6	ATC INFO
7	TESTRA / PA / Dispatch
8	Checklist Normal (QRH or checklist)
9	Briefing et Go!
10	Descent / Approach checklist *QRH LORS D'UNE URGENCE*



CHECKLISTS importantes 🙌

ENGINE FAILURE or SHUTDOWN CHECKLIST (7.15)

One Engine INOP landing checklist 🙌 (7.27)

ENGINE FIRE or ENGINE SEVERE DAMAGE or SEPARATION CHECKLIST 🔥 😞 (8.4)

SMOKE FIRE OR FUME Checklist 🧢 (8.19)

CARGO FIRE CHECKLIST 🔥 (8.24)

✅ One Engine Inoperative Landing Flaps 15 (PI.28)

📄 Brake Cooling 😞 (PI.37)

🚒 ENGINE FIRE on the GROUND CHECKLIST (BC 0.1)

🚒 EVACUATION (BC 0.2)

ENGINE OVERHEAT (8.7)

RUNAWAY STABILIZER (9.3)

AIRSPEED UNRELIABLE (10.3)

DRILLS 🧑

ENGINE FIRE **DRILL**

ENGINE SEVERE DAMAGE **DRILL**

ENGINE SEPARATION **DRILL**

(--- IMPOSSIBLE DE LE FAIRE DANS LE SIMULATEUR)

APU FIRE **DRILL**

EMERGENCY DESCENT **DRILL**

RAPID DEPRESSURIZATION **DRILL**



ENGINE OVERHEAT **DRILL**

ENGINE LIMIT OR SURGE OR STALL **DRILL**

LOSS OF THRUST ON BOTH ENGINES **DRILL**



PRÉPARATION DE VOL

1	Faire la STAND-UP Checklist (PF) et le Walk Around (PM).
2	Faire notre Flow  commandant et copilote
3	Effectuer le Briefing de décollage 
4	Faire le Flow (Fuel, Fasten Belts) et compléter le Before Start Checklist jusqu'à la ligne.
5	Lorsque nous avons l'appel de la Cabin, appeler les équipes au sol pour savoir s'ils sont prêts pour le Push-Back : (Ground Crew êtes-vous prêt pour le Push-Back ?).
6	Lorsqu'ils sont prêts, faire un PA : "Flight attendants, prepare for departure" .
7	Confirmer que les Pumps Hyd A sont fermés et faire le Before Start Checklist Below the Line .
8	Appeler le tablier pour le push Back.
9	Appeler le ground crew "Nose Gear depressurized, Parking Brake release, ready for Push-Back at your discretion, Nose South West" .
10	Lorsque le Push Back est terminé: "Parking Brake Set Cleared to Disconnect the TowBar, Show me the By pass Pin" .
11	Start les moteurs et après : "Two stable starts, cleared to disconnect, revert to hand signal" .
12	Appeler Flaps 5 et Before Taxi Checklist Faire le flow (7) et s'assurer d'avoir de la pression avant de tester les contrôles de vol.
13	Le commandant ouvre la taxi light et test les freins.



Flap Extension Schedule

Current Flap Position	At Speed (knots) a* / b* / c*	Select Flaps	Command Speed for Selected Flaps a* / b* / c*
Up	210 - 220 - 230	1	190 - 200 - 210
1	190 - 200 - 210	5	180 - 190 - 200
5	180 - 190 - 200	10	170 - 180 - 190
10	170 - 180 - 190	15	150 - 160 - 170
15	150 - 160 - 170	25	140 - 150 - 160
25	140 - 150 - 160	30 or 40	(VREF30 or VREF40) + wind additives

a* = At and below 117,000 lbs/53,070 kgs

b* = Above 117,000 lbs/53,070 kgs and up to 138,500 lbs/62,823 kgs

c* = Above 138,500 lbs/62,823 kgs



LES FLAPS 🤨

POUR EXTEND :

EN BAS DE **210** ÇA PRENDS DES FLAPS 🦴 !

SI TU RESTES À **210** GARDE LES FLAPS À ZÉRO !

210 FLAPS 1 (en descente)

190 FLAPS 5

170 GEAR DOWN **FLAPS 15** LANDING CHECK TO THE FLAPS

160 | FLAPS 25 | 150

FLAPS 30 (40) | V TARGET (orange)

POUR RETRACT :

Tu utilises **V2 + 15 (V Target)** et après c'est le Speed Block

FLAPS 5 | 180 KTS

Flaps 1 | 200 KTS

Flaps UP | 220 kts



QUICK REVISION	
STAND-UP CHECKLIST By the PF	
COCKPIT CHECK FLOW 8 STEPS PIC 5 STEPS SIC	TOUJOURS FLAPS 15 LDG SUR UN MOTEUR 🚗
If Pushback Hydraulic System A pumps (both) OFF Taxi	Follow line 20 Kt Speed 10 Kts Max in turn Not ride Brakes LORSQUE TU ES DANS LE QRH LORS D'UNE URGENCE, TU RESTE DANS LE QRH JUSQU'À LA FIN (LA CHECKLIST NORMALE N'EXISTE PLUS). La checklist One Eng Inop est inclus.
NADP 1 VS NADP 2 NADP1 pour tourner en route plus rapidement (comme un décollage de CYPX RWY 01 pour aller vers CYGL)	Avant d'ouvrir le CROSSFEED de Fuel, tu dois remettre tes pompes à ON . 🚗
FLWS 9	EN BAS DE 210 ÇA PREND DES FLAPS 🦴
RESET FD après l'approche « Localiser » AU MINIMUM LORSQUE LA PISTE EST EN VUE TU DOIS DÉSENGAGER L'AUTOPILOTE ET L'AUTO THROTTLE	ATTENTION CAR LES BOUTONS DE HDG ET ALT SONT TRÈS PRÈS (MCP)
ATTENTION DE PARLER DANS LES THREATS DE BRIEFING SUR UN MOTEUR QUE NOUS N'AVONS PAS D'AUTO-THROTTLE ET D'APPELER L'ATC POUR LA PROCÉDURE TLR.	SÉQUENCE WHERE TO ... PRENDRE LES INFOS SEULEMENT POUR PLAN DE MATCH ! 🗺️✍️
LORSQUE NOUS APPROCHONS DE LA GATE NE PAS OUBLIER DE METTRE L'APU AVANT DE FERMER LES MOTEURS 😞	Tu maintien V Target sur l'approche et tu peux diminuer jusqu'à VREF sur l'atterrissage mais pas la Gust juste l'atterrissage.
AUTOTHROTTLE JE NE LE TRUST PAS !! 🦴	
Lors de l'approche briefing, ne pas oublier l'appel stabilisé qui est à 500'	
Problème de Flaps au décollage ne pas dépasser 210 knots	Attention de ne pas laisser le sélecteur sur batterie lorsque le batterie Master est fermé car c'est sur le Bat Bus et ça vide la batterie.
Problème de Gear au décollage avec le 737-200 tu ne dois pas dépasser 180 Kts (ski)	



- 0 Miscellaneous**
- 1 Airplane General, Emergency
Equipment, Doors, Windows**
- 2 Air Systems**
- 3 Anti-Ice, Rain**
- 4 Automatic Flight**
- 5 Communications**
- 6 Electrical**
- 7 Engines, APU**
- 8 Fire Protection**
- 9 Flight Controls**
- 10 Flight Instruments, Displays**
- 11 Flight Management, Navigation**
- 12 Fuel**
- 13 Hydraulics**
- 14 Landing Gear**
- 15 Warning Systems**



Quick Study Guide B737

REJECTED T/O	SOP	
ABORTED ENGINE START	7.3	
ENGINE OVERHEAT	8.7	
ENGINE FIRE OR ENGINE SEVERE DAMAGE OR SEPARATION	8.4	
DRIFTDOWN	SOP	
APU FIRE	8.3	
CARGO FIRE	8.24	
RAPID DEPRESSURISATION / EMERGENCY DESCENT	2.3 & 0.3	
ENGINE LIMIT OR SURGE OR STALL	7.4	
ENGINE OVERHEAT	8.7	
ENGINE TAILPIPE FIRE	8.8	
LOSS OF THRUST ON BOTH ENGINES	7.8	
FUSELAGE FIRE ALL CARGO	8.10	
FUSELAGE FIRE COMBI	8.17	
SMOKE / FIRE / FUMES	8.19	
ALL FLAPS UP LANDING	9.10	
TRAILING EDGE FLAP ASYMMETRY	9.30	
TRAILING EDGE FLAP DISAGREE	9.34	
TRAILING EDGE FLAPS UP LANDING	9.40	
RUNAWAY STABILIZER	9.3	
AIRSPED UNRELIABLE	10.3	
MANUAL REVERSION OR LOSS OF SYSTEM A AND B	13.13	
MANUAL GEAR EXTENSION	14.22	
UNCOMMANDED RUDDER / YAW OR ROLL	9.6	