Cheatography

Peformance Cheat Sheet

by calmay7 via cheatography.com/18730/cs/1906/

Alternate Landing Area (ALA)

5%/ 1in 20

> 20X height away from end TODA

Climb Gradient

CG	RoC ÷ GS
RoC Req.	CG x GS
Vtoss	TO Chart
TAS/RoC	Max RoC Chart

Density Height

PH	Elev/Alt + [1013-QNH]x30hPa
ISA Temp	15-2x(PH÷1000)
ISA Corr.	120x(OAT-ISA Temp)
DH	PH+ISA Correction
Decl. DH	Elev + Chart correction

Fuel Calculations

FF	Time@Rate/Total DistxRate÷GS
Min Fuel Req	(FFx1.15)+FR+SU/Taxi
FF Avail.	(usable fuel@SU-FR-SU/Taxi)÷1.15
Safe Endur.	FF Available@Rate
Alternate	Add time from Dest to Altern in FF Calc
Holding	Extra item in fuel calc list

Echo: 35%PWR, 17.2gph (WX/Search Ops)

FF Avail - Transit Fuel = Hold/Search fuel

Range/ Endurance

SAR (ANMPG)	TAS ÷ Flow Rate
SGR (GNMPG)	GS ÷ Flow Rate

Establishing MTOW

Least of:	TO Limit
	Landing Limit + FF
	MZFW + FoB@TO (FFx1.1-5+FR)

Max Payload

ZFW	MTOW - FOB@TO
Payload	ZFW - (BEW + Pilot)
Max Cargo	Payload - PAX

Max Fuel

Payload	Max Cargo + PAX
ZFW	Payload + (BEW + Pilot)
FoB @ TO	MTOW - ZFW

Shifting Weight (AFT Limit)

Shift (mm)	Pres. CoG - Req. CoG
Wt. to Shift	(Pres.Wt. x Shift)÷Diff in Arms
OR	Change Moment÷Change Arms

Ballast Fuel/ Add/Sub WT (AFT)

Shift	Pres. CoG - Req CoG
Weight to Add	(Pres.Wt. x Shift) ÷ (Req CoG - Comp. Arm)

Ballast fuel is **WEIGHT** not **FF**

Add hard ballast up to MZFW then fuel

Shift Weight (FWD Limit)

Shift	Fwd Limit - Pres CoG
Wt to shift	(Pres Wt x Shift)÷Diff in arms

ECHO:

Fwd Lim. = [Pres Wt.-2360]x.27+2400

.27 = Diff in limits (mm)Ã·Diff in weights

Add/Sub Weight (FWD Limit)

Must use graph (CoG Envelope)

Plot present Wt./Index (A)

Add/Sub 100kg and Units

Plot new Wt./Index (B)

Draw line (A)-(B)

Floor Load Intensity

Pressure =	Force ÷ Area
Force =	Pressure x Area
Area =	Side 1 x Side 2

MAC

ECHO:

#mm-2190 = (A)mm

% of 1900 = ((A)÷1900)x100

ETP (CP)

Dist to ETP	Total DistxGS(H)÷2xTAS
Time ETP-A	Dist to ETPxGS(H)
Time ETP-B	[Total Dist-DistToETP]-xGS(O)

Halfway in nil wind, moves upwind

PNR

Time to PNR	[Safe Endur. x GS(H)]÷2xTAS
A - PNR	Time to PNR @ GS(O)
B - PNR	[Safe Endur.-Time to PNR]@GS(H)
@=	(Dist÷GS)x100

Greatest out in nil wind, any wind decreases dist.

AvGas

Gal-Kg x2.72

Gal-L x3.8

L-Kg x0.72

By **calmay7**

cheatography.com/calmay7/

Not published yet.

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