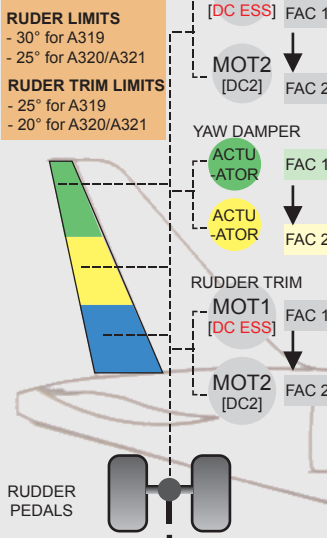


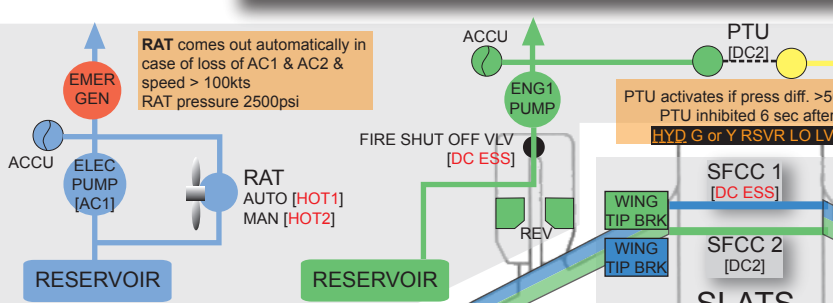
# RUDDER



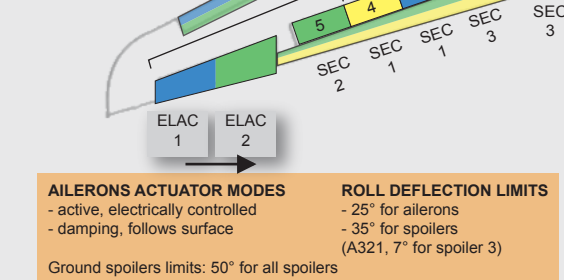
- RUDDER LIMITS**  
-30° for A319  
-25° for A320/A321
- RUDDER TRIM LIMITS**  
-25° for A319  
-20° for A320/A321

- BRAKE ACCU**  
7 full brakes application or at least 12 hrs prk brk
- BRAKE TEMPERATURE**  
-T/O MAX 300°C  
maintenance action if  
- (TEMP diff on same gear > 150°C) and  
(1 BRK >600°C or <60°C)  
- diff avg TEMP L-R 200°C  
- TEMP > 900°C (A319/A320)  
- TEMP > 800°C (A321)
- TIRE DEFLATED**  
1 tire -> 7kts in turn  
2 on same -> 3kts & NWS 30°
- AUTOBRAKE**  
LO : 4s delay, 1.7m/s2  
MED: 2s delay, 3m/s2  
MAX: max pressure  
DECEL light if 80% of rate

# BRAKES



# AILERONS SPOILERS



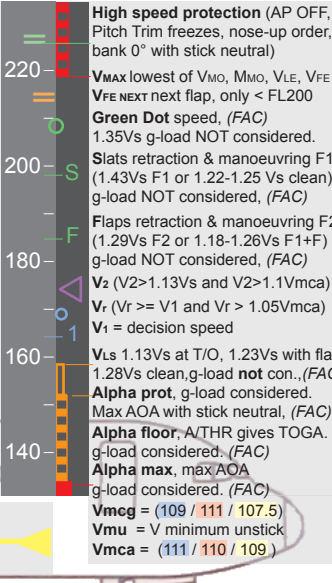
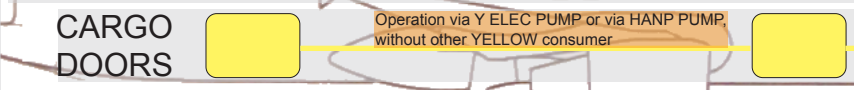
# ELECTRICAL SUPPLY FLIGHT CONTROL COMPUTERS

ELAC 1	MAIN DC ESS	STBY HOT1
ELAC 2	DC2	HOT2
SEC 1	DC ESS	HOT1
SEC 2	DC2	
SEC 3	DC2	
FAC 1	AC ESS	DC SHED
FAC 2	AC2	DC2
FCDC 1	DC SHED	
FCDC 2	DC2	

BUS in red are available in ELEC EMER config

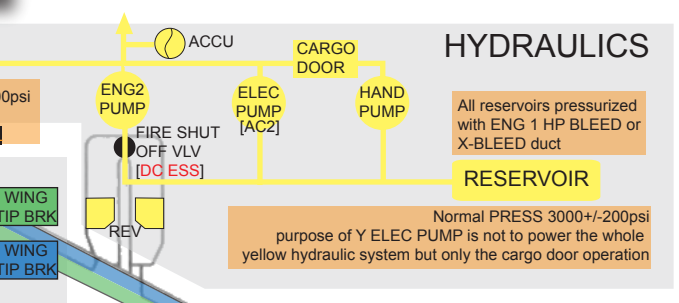
# FLT CONTROL LAWS

	PITCH	ROLL	PROTECTIONS
<b>GND</b>	Direct deflection	Direct deflection	+2.5g / -1g (clean) +2.0g / 0g (not clean) <b>NORMAL</b>
<b>FLT</b>	Load factor demand Auto pitch Trim	Roll rate	Pitch FLAPS 0-3: 30°, FULL: 25° ANU, any: 15° AND High α, Vα prot, Vα floor, Vα max High speed bank 45°/0° (stick 0) Low energy warning Flaps 2,3 or FULL 100ft - 2000ft Bank 67°/33° (stick 0), 45° if AOA or 40° if hi spd PROT Side slip blue if eng failure
<b>FLARE</b>	Pitch attitude demand 50ft pitch to 2° AND in 8s		Same as Normal except: X no Pitch attitude High α: LOST if VS1g computation failure If reduced protections available: Low speed, nose down demand 5-10kts, Stall warning High speed, light nose up demand
<b>GEAR DN</b>	Direct control <b>USE MAN PITCH TRIM</b>	Roll direct Yaw alternate only damping +-5° No turn coord.	No protection Overspeed & Stall warning <b>F/CTL DIRECT LAW</b>
	same as Normal	Roll direct Yaw alternate only damping +-5° No turn coord.	<b>F/CTL ALTN LAW</b>
		Roll direct Yaw mechanical	<b>MECHANICAL BACK-UP</b>

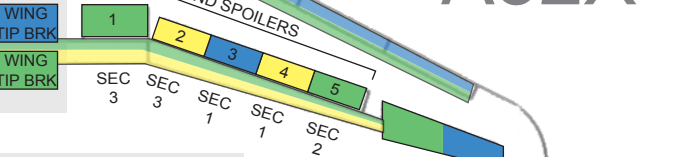


- GEAR LIMITS**  
- retraction 220kts  
- extension 250kts  
- gravity ext 200kts  
- max alt ext 25'000ft  
- extended 280/M.67  
- gear down flight 235/M.60  
- tyre speed 195kts
- TAXI SPEED**  
max 20kts in turn if GW>76t (A320/A321)

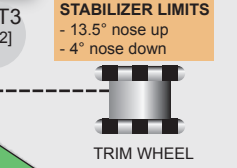
# LANDING GEAR & NWS



# HYDRAULICS



# STABILIZER TRIM



**FLAPS extension / max speed**

[slats]	A319	A320	A321
1 [18°]		0°/230	
1+F [18°]		10°/215	
2 [22°]	15°/200	15°/200	14°/215
3 [22°]	20°/185	20°/185	21°/195
Full [27°]	40°/177	35°/177	25°/190

No Flaps/Slats above 20'000ft  
Flaps of A321 are double-slotted

- ELEVATOR ACTUATOR MODES**  
- active, electrically controlled  
- damping, follows surface  
- centering, hydraulically maintained in neutral if both jacks not electrically controlled
- ELEVATOR DEFLECTION LIMITS**  
- 30° nose up  
- 15° nose down

