Engine Run Up Facilities - Engine Mode Lookup Table

% POWER	MODE	REMARK	Takeoff %	Climbout %	Approach %	Idle %
7%	4	IDLE	0%	0%	0%	100%
30%	1	APPROACH	0%	0%	100%	0%
50%	11	APPROACH+CLIMBOUT	0%	36%	64%	0%
60%	12	APPROACH+CLIMBOUT	0%	55%	45%	0%
70%	13	APPROACH+CLIMBOUT	0%	73%	27%	0%
80%	14	APPROACH+CLIMBOUT	0%	91%	9%	0%
85%	2	CLIMBOUT	0%	100%	0%	0%
90%	21	CLIMBOUT+TAKEOFF	33%	67%	0%	0%
100%	3	TAKEOFF	100%	0%	0%	0%
Max	3	TAKEOFF	100%	0%	0%	0%
Others	3	TAKEOFF	100%	0%	0%	0%

Note:

[1]   In accordance with ICAO Exhaust Database, power setting for Takeoff, Climbout, Approach and Idle are 100%, 85%, 30% and 7% respectively.

[2]   Emission for takeoff mode is adopted when power setting = 100%, Max or Others

[3]   Emission for climbout mode is adopted when power setting = 85%

[4]   Emission for approach mode is adopted when power setting = 30%

[5]   Emission for idle mode is adopted when power setting = 7% or less

[6]   For power setting between 30% and 85%, emission is calculated from the weighted average between the two modes at Climbout and Approach.

For example, if the power setting is 50%, the weighted average emission Ew is calculated as follows: $E_w = E_a \times (85-50)/(85-30) + E_c \times (50-30)/(85-30)$, where E_c and E_a are pollutant emissions for Climbout and Approach modes respectively taken from EDMS for the respective aircraft and engine type.

[7]   For power setting between 85% and 100%, emission is calculated from the weighted average between the two modes at Takeoff and Climbout.

For example, if the power setting is 90%, the weighted average emission Ew is calculated as follows: $E_w = E_c \times (100-90)/(100-85) + E_t \times (90-85)/(100-85)$, where E_c and E_t are pollutant emissions for Climbout and Takeoff modes respectively taken from EDMS for the respective aircraft and engine type.