GFS - Emission Indices and Fuel Flow Rates

Mode	Aircraft	No. of Engine	Engine Name	Engine Used For Calculation	EDMS / FOCA Emission Index (g/kg of fuel)						Fuel Flow (kg/s)	Fuel Sulphur Content (%)
					CO	HC[4]	VOC	NO_x	SO_2	PM_{10} [5]		
Approach	Eurocopter EC 155	2	Arrial 2C2	Arrial 2C2	8.2610	6.6460	N/A	5.9600	1.3274	0.1843	0.0337	0.068
	Bombardier Challenger 605	2	GE-CF 34-3B	GE-CF 34-3B	1.8800	0.1300	N/A	6.6300	1.3274	0.0746	0.1160	0.068
	Eurocopter Super Puma [2]	2	Makila 1A2	Makila 1A1	4.8240	3.9380	N/A	7.8470	1.3274	0.2271	0.0530	0.068
	Diamond DA42BG [3]	2	Austro Engine A300	TAE-125-01 Centurion 1.7	16.0600	N/A	3.2900	26.9600	1.3274	0.0400	0.0025	0.068
Taxi-out	Eurocopter EC 155	2	Arrial 2C2	Arrial 2C2	54.0180	41.3140	N/A	2.2810	1.3274	0.1210	0.0160	0.068
	Bombardier Challenger 605	2	GE-CF 34-3B	GE-CF 34-3B	47.5900	4.6900	N/A	3.7200	1.3274	0.1012	0.0489	0.068
	Eurocopter Super Puma [2]	2	Makila 1A2	Makila 1A1	30.9310	24.0140	N/A	3.0340	1.3274	0.1309	0.0238	0.068
	Diamond DA42BG [3]	2	Austro Engine A300	TAE-125-01 Centurion 1.7	24.8000	N/A	9.7800	16.9100	1.3274	0.0500	0.0003	0.068
Taxi-in	Eurocopter EC 155	2	Arrial 2C2	Arrial 2C2	78.4770	59.4190	N/A	1.8850	1.3274	0.1167	0.0137	0.068
	Bombardier Challenger 605	2	GE-CF 34-3B	GE-CF 34-3B	47.5900	4.6900	N/A	3.7200	1.3274	0.1012	0.0489	0.068
	Eurocopter Super Puma [2]	2	Makila 1A2	Makila 1A1	37.8690	29.2410	N/A	2.7360	1.3274	0.1267	0.0221	0.068
	Diamond DA42BG [3]	2	Austro Engine A300	TAE-125-01 Centurion 1.7	24.8000	N/A	9.7800	16.9100	1.3274	0.0500	0.0003	0.068
Takeoff	Eurocopter EC 155	2	Arrial 2C2	Arrial 2C2	3.7190	3.0570	N/A	8.9650	1.3274	0.2538	0.0542	0.068
	Bombardier Challenger 605	2	GE-CF 34-3B	GE-CF 34-3B	<0.0001	0.0600	N/A	11.2800	1.3274	0.1456	0.3991	0.068
	Eurocopter Super Puma [2]	2	Makila 1A2	Makila 1A1	2.1600	1.8020	N/A	11.8360	1.3274	0.3206	0.0789	0.068
	Diamond DA42BG [3]	2	Austro Engine A300	TAE-125-01 Centurion 1.7	7.5100	N/A	1.0500	20.0100	1.3274	0.1000	0.0064	0.068
Climb out (Aircraft) / Cruise (Helicopter)[1]	Eurocopter EC 155 (Cruising)	2	Arrial 2C2	Arrial 2C2	3.7190	3.0570	N/A	8.9650	1.3274	0.2538	0.0542	0.068
	Bombardier Challenger 605 (Climbout)	2	GE-CF 34-3B	GE-CF 34-3B	<0.0001	0.0500	N/A	9.6800	1.3274	0.0962	0.3288	0.068
	Eurocopter Super Puma [2] (Cruising)	2	Makila 1A2	Makila 1A1	2.1600	1.8020	N/A	11.8360	1.3274	0.3206	0.0789	0.068
	Diamond DA42BG [3] (Climbout)	2	Austro Engine A300	TAE-125-01 Centurion 1.7	6.6500	N/A	1.2500	22.7800	1.3274	0.0700	0.0051	0.068

Note:

[1] No emission indices for cruising mode are available from FOCA. Since power setting of take-off and cruising (95% and 90%) is similar, the emission indices of take-off is adopted for cruising for conservative analysis.

[2] No emission indices and fuel flow rate for Makila 1A2 Engine is available.

The emission index for Eurocopter Super Puma is made reference to Makila 1A1 Engine since they have similar engine power and both engines are commonly used for Eurocopter Super Puma.

[3] No emission indices and fuel flow rate for Austro Engine A300 is available.

The emission index for Diamond DA42BG is made reference to TAE-125-01 Centurion 1.7 since they have similar engine power and both engines are commonly used for Diamond DA42BG.

[4] VOC/HC Emission Conversion Factor is 1.15

[5] PM_{10}(RSP)/$PM_{2.5}$(FSP) Emission Conversion Factor is 1.00