

ANNEX

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Appendix I

Database for aircraft source — NPD data

Helicopter Noise and Performance Data Set 2

Data is provided for three helicopter classes, based on maximum take-off mass:

1. Light helicopter (LHEL) MTOM < 3 000 kg
2. Medium helicopter (MHEL) 3 000 kg < MTOM < 6 000 kg
3. Heavy helicopter (THEL) MTOM > 6 000 kg

Default arrival and departure flight profiles are provided as fixed point profiles. Default departure flight profiles assume climb to a level flight altitude of 1 000 ft (305 m) for each helicopter class. Where the level flight portion on departure or arrival differs locally from these values, it is recommended that the default profiles are adapted to reflect local circumstances.

TABLE I-23

Helicopter Data Set 2 Description Table

ACFT ID	ICP Type	Engines	NTM	Prop	Weight Class	Category	MTOM (lb)	Max Land Dist (ft)	Max Sea Level Static Thrust (lb)	Noise Chapter	NPD ID	ICP Parameters	Approach Class ID	Departure Class ID	Operational Directivity Identifier
LHEL	Helicopter with MTOM ≤ 1 t	1	0	Prop	0	Helicopter	0	0	100	0	LHEL	SHP (% of Max Static Thrust)	215	112	Prop
MHEL	Helicopter with MTOM 1-3 t	1-3	0	Prop	0	Helicopter	0	0	100	0	MHEL	SHP (% of Max Static Thrust)	215	112	Prop
THEL	Helicopter with MTOM 3-5 t	3-5	0	Prop	0	Helicopter	0	0	100	0	THEL	SHP (% of Max Static Thrust)	215	112	Prop

TABLE I-24

Helicopter Data Set 2 Departure Profiles

ACFT ID	ICP Type	Profile ID	Stage Length	Point Number	Distance (ft)	Altitude (ft)	TAS (kt)	Corrected Net	ICP_MODE
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								Thrust (%)	
LHEL	D	DEFAULT	1	0	0	1	50	X	
LHEL	D	DEFAULT	2	10	0	3	50	X	
LHEL	D	DEFAULT	3	20	16	5	50	X	
LHEL	D	DEFAULT	4	102	16	5	60	D	
LHEL	D	DEFAULT	5	561	30	50	60	D	
LHEL	D	DEFAULT	6	2 297	515	70	60	D	
LHEL	D	DEFAULT	7	4 032	1 001	90	70	D	
LHEL	D	DEFAULT	8	7 014	1 001	100	70	D	
LHEL	D	DEFAULT	9	10 000	1 001	110	70	D	
MHEL	D	DEFAULT	1	0	0	1	50	D	
MHEL	D	DEFAULT	2	10	0	2	50	D	
MHEL	D	DEFAULT	3	20	16	3	50	D	
MHEL	D	DEFAULT	4	102	16	30	50	D	
MHEL	D	DEFAULT	5	561	30	60	50	D	
MHEL	D	DEFAULT	6	4 032	1 001	65	75	D	
MHEL	D	DEFAULT	7	6 785	1 001	100	75	D	
MHEL	D	DEFAULT	8	10 000	1 001	126	75	D	
THEL	D	DEFAULT	1	0	0	1	100	X	
THEL	D	DEFAULT	2	10	0	2	100	X	
THEL	D	DEFAULT	3	20	16	3	50	D	
THEL	D	DEFAULT	4	102	16	30	50	D	
THEL	D	DEFAULT	5	1 001	151	60	50	D	
THEL	D	DEFAULT	5	4 679	1 000	65	75	D	
THEL	D	DEFAULT	5	6 681	1 000	83	75	D	
THEL	D	DEFAULT	5	8 679	1 000	100	75	D	
THEL	D	DEFAULT	5	13 679	1 000	113	75	D	
THEL	D	DEFAULT	5	18 679	1 000	126	75	D	

TABLE I-25

Helicopter Data Set 2 Arrival Profiles

ACFT_ID	Op Type	Profile ID	Stage Length	Point Number	Distance (ft)	Altitude (ft)	TAS (kt)	Corrected Net Thrust (%)	OP_MODE
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LHEL	D	DEFAULT	3	- 50 003	1 000	115	70	X
LHEL	D	DEFAULT	4	- 9 332	1 000	113	70	X
LHEL	D	DEFAULT	5	- 6 340	686	110	80	A
LHEL	D	DEFAULT	6	- 4 029	443	95	80	A
LHEL	D	DEFAULT	7	- 1 686	197	80	80	A
LHEL	D	DEFAULT	8	- 843	108	60	80	A
LHEL	D	DEFAULT	9	0	20	5	80	A
LHEL	D	DEFAULT	9	102	0	3	80	A
LHEL	D	DEFAULT	9	121	0	1	80	A
MHEL	D	DEFAULT	2	- 40 229	1 000	135	75	X
MHEL	D	DEFAULT	3	- 36 322	1 000	123	75	X
MHEL	D	DEFAULT	4	- 32 411	1 000	112	75	X
MHEL	D	DEFAULT	5	- 28 504	1 000	100	75	X
MHEL	D	DEFAULT	6	- 22 145	1 000	90	75	X
MHEL	D	DEFAULT	7	- 15 784	1 000	80	75	X
MHEL	D	DEFAULT	8	- 9 426	1 000	70	75	X
MHEL	D	DEFAULT	8	- 5 153	551	60	60	A
MHEL	D	DEFAULT	8	- 750	89	50	60	A
MHEL	D	DEFAULT	8	- 62	16	20	60	A
MHEL	D	DEFAULT	8	0	10	5	60	A
MHEL	D	DEFAULT	8	102	0	2	60	A
MHEL	D	DEFAULT	8	121	0	1	60	A
MHEL	D	DEFAULT	8	- 40 229	1 000	135	75	X
MHEL	D	DEFAULT	8	- 36 322	1 000	123	75	X
MHEL	D	DEFAULT	8	- 32 411	1 000	112	75	X
MHEL	D	DEFAULT	8	- 28 504	1 000	100	75	X

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MHEL	D	DEFAULT	8	- 22 145	1 000	90	75	X
MHEL	D	DEFAULT	8	- 15 784	1 000	80	75	X
MHEL	D	DEFAULT	8	- 9 426	1 000	70	75	X
MHEL	D	DEFAULT	8	- 5 153	551	60	60	A
MHEL	D	DEFAULT	8	- 750	89	50	60	A
MHEL	D	DEFAULT	8	- 62	16	20	60	A
MHEL	D	DEFAULT	8	0	10	5	60	A
MHEL	D	DEFAULT	8	102	0	2	60	A
MHEL	D	DEFAULT	8	121	0	1	60	A

TABLE I-26

Noise Characteristic data for Helicopter Data Set 2

NOISE_ID	THRSET_TYP	MODEL_TYP	SPECT_APP	SPECT_DEP	SPECT_AFB
LHEL	P	I	215	109	0
MHEL	P	I	215	109	0
THEL	P	I	215	109	0

TABLE I-27

Noise Power Distance (NPD) data for three helicopter classes

NPD Identifiers	Noise Power	Op Mode	L	L_400ft	L_630ft	L_1000ft	L_2000ft	L_4000ft	L_6300ft	L_10000ft	L_60000ft	L_25000ft
LHEL MAX	80	A	84,6	79,1	75,7	71,6	65,8	60,1	56	48,8	41,6	34,4
LHEL MAX	70	X	88,4	82,9	79,5	75,6	70,3	65	61,6	55,4	49,2	43
LHEL MAX	60	D	83,6	78,2	75,1	70,3	66,5	61,7	58,9	53,3	47,7	42,1
LHEL MAX	50	S	91,7	85,3	81,5	76,5	69,4	61,5	56,5	49,6	42,7	35,8
LHEL SEL	80	A	90,5	87,1	84,9	82,1	77,6	72,1	67,9	62,4	56,9	51,4
LHEL SEL	70	X	90,4	87	84,7	81,9	77,5	72	68,1	62,9	57,7	52,5
LHEL SEL	60	D	85,9	82,5	80,4	77,7	73,4	68,4	64,6	59,6	54,6	49,6
LHEL SEL	50	S	85,9	82,5	80,4	77,7	73,4	68,4	64,6	59,6	54,6	49,6
MHEL MAX	50	D	91,8	85,2	80,6	75,7	67,5	58,1	51,2	42,6	34	25,4
MHEL MAX	60	A	90,2	83,9	80	75,3	68,4	60,9	55,8	49,5	43,2	36,9
MHEL MAX	75	X	92,4	86	82	77,2	70	62,3	57,1	50,8	44,5	38,2
MHEL SEL	50	D	91,2	87,2	84,8	80,8	75	68,1	63,7	57,6	51,5	45,4
MHEL SEL	60	A	94,2	90,1	88,1	84,7	80	74,7	71,3	66	60,7	55,4

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MHEL	SEL	75	X	89,3	85,3	82,8	78,9	73,1	66,6	62,6	57	51,4	45,8
THEL	MAX	50	D	91,2	85,2	81,7	76,3	68,8	60,4	54,9	46	37,1	28,2
THEL	MAX	60	A	90	84,1	80,7	75,5	68,5	60,6	55,3	48	40,7	33,4
THEL	MAX	75	X	92,4	86,4	82,9	77,5	70,1	61,6	55,7	48,1	40,5	32,9
THEL	MAX	100	S	100,2	93,8	90,3	84,9	77,5	69,3	64,3	56,5	48,7	40,9
THEL	SEL	50	D	92,8	89,3	87,4	84	79,2	73,5	69,6	63,7	57,8	51,9
THEL	SEL	60	A	91,6	88,2	86,4	83,2	78,8	73,7	70	64,7	59,4	54,1
THEL	SEL	75	X	94	90,5	88,6	85,2	80,5	74,7	70,4	64,8	59,2	53,6
THEL	SEL	100	S	92,8	89,3	87,4	84	79,2	73,5	69,6	63,7	57,8	51,9