

STANDARD DEPARTURE CHART -INSTRUMENT

RJAA / NARITA INTL

RNAV SID

BORLO TWO DEPARTURE

RNAV1

Note 1) DME/DME/IRU or GNSS required.

※The aircraft equipped with only DME/DME/IRU must be able to update its position without delay at the starting point of take-off rolling.

2) RADAR service required.

Critical DME

RWY16R:TLD DER – 1.3NM FM DER

RWY16L:TLD DER – 3.4NM FM DER

DME GAP

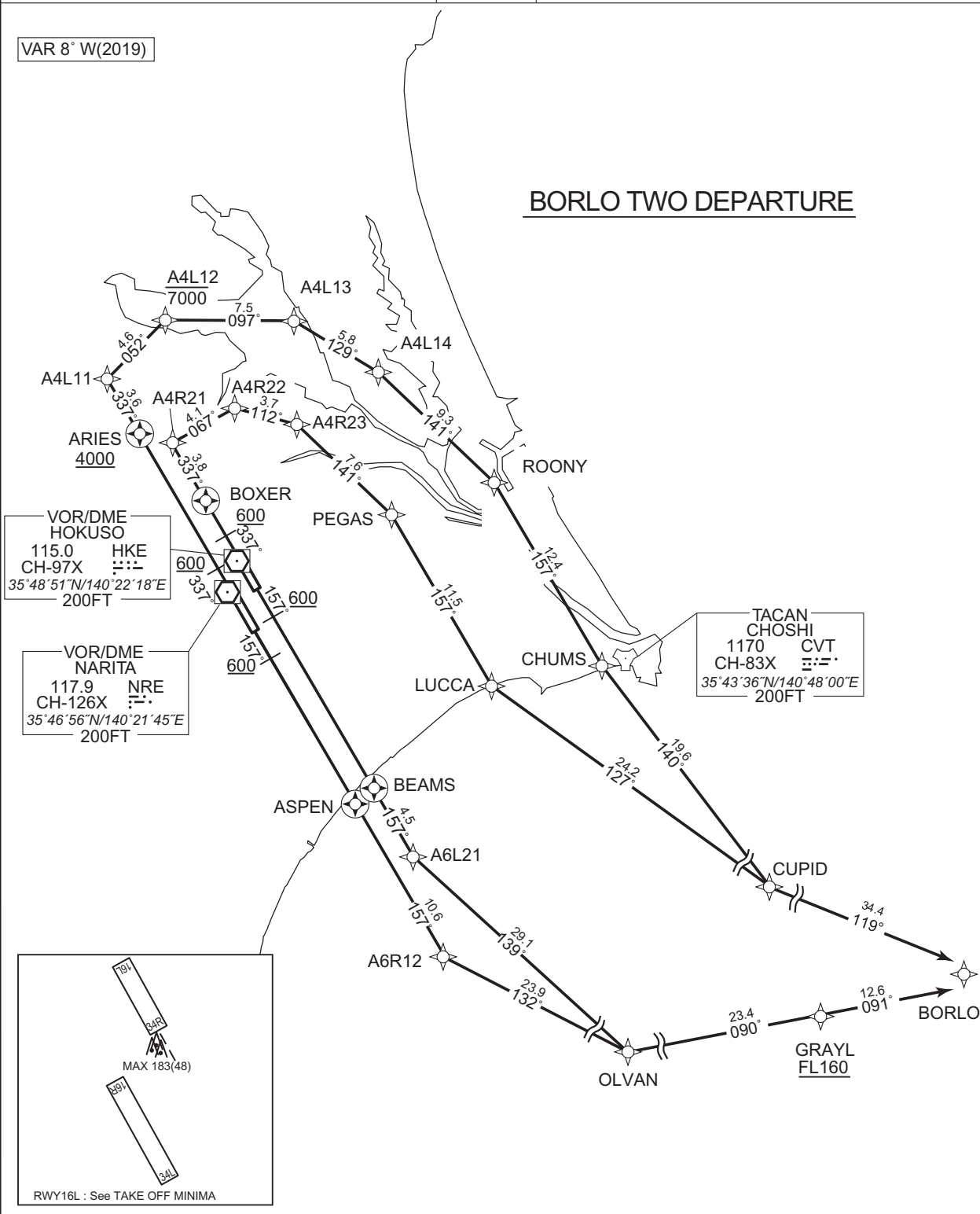
RWY34L :DER – 1.3NM FM DER

Inappropriate
NavAids

See AD1.1.6.10.3.Inappropriate NAVAIDs for RNAV1

VAR 8° W(2019)

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CHANGE : ALT Restriction on A4R23. PROC renamed.

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RWY16R : Climb on HDG 157° at or above 600FT, direct to ASPEN, to A6R12, to OLVAN, to GRAYL at or above FL160, to BORLO.

RWY16L : Climb on HDG 157° at or above 600FT, direct to BEAMS, to A6L21, to OLVAN, to GRAYL at or above FL160, to BORLO.

RWY34L : Climb on HDG 337° at or above 600FT, direct to ARIES at or above 4000FT, to A4L11, to A4L12 at or below 7000FT, to A4L13, to A4L14, to ROONY, to CHUMS, to CUPID, to BORLO.

RWY34R : Climb on HDG 337° at or above 600FT, direct to BOXER, to A4R21, to A4R22, to A4R23, to PEGAS, to LUCCA, to CUPID, to BORLO.

RWY16R *MUST be used for database coding.

Serial Number	Path Descriptor*	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	157 (149.6)	-7.5	—	—	+600	—	—	RNAV1
002	DF	ASPEN	Y	—	-7.5	—	—	—	—	—	RNAV1
003	TF	A6R12	—	157 (149.7)	-7.5	10.6	—	—	—	—	RNAV1
004	TF	OLVAN	—	132 (124.2)	-7.5	23.9	—	—	—	—	RNAV1
005	TF	GRAYL	—	090 (082.9)	-7.5	23.4	—	+FL160	—	—	RNAV1
006	TF	BORLO	—	091 (083.2)	-7.5	12.6	—	—	—	—	RNAV1

RWY16L *MUST be used for database coding.

Serial Number	Path Descriptor*	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	157 (149.6)	-7.5	—	—	+600	—	—	RNAV1
002	DF	BEAMS	Y	—	-7.5	—	—	—	—	—	RNAV1
003	TF	A6L21	—	157 (149.7)	-7.5	4.5	—	—	—	—	RNAV1
004	TF	OLVAN	—	139 (131.8)	-7.5	29.1	—	—	—	—	RNAV1
005	TF	GRAYL	—	090 (082.9)	-7.5	23.4	—	+FL160	—	—	RNAV1
006	TF	BORLO	—	091 (083.2)	-7.5	12.6	—	—	—	—	RNAV1

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RWY34L *MUST be used for database coding.

Serial Number	Path Descriptor*	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	337 (329.6)	-7.5	—	—	+600	—	—	RNAV1
002	DF	ARIES	Y	—	-7.5	—	—	+4000	—	—	RNAV1
003	TF	A4L11	—	337 (329.5)	-7.5	3.6	—	—	—	—	RNAV1
004	TF	A4L12	—	052 (044.3)	-7.5	4.6	—	-7000	—	—	RNAV1
005	TF	A4L13	—	097 (089.4)	-7.5	7.5	—	—	—	—	RNAV1
006	TF	A4L14	—	129 (121.2)	-7.5	5.8	—	—	—	—	RNAV1
007	TF	ROONY	—	141 (133.2)	-7.5	9.3	—	—	—	—	RNAV1
008	TF	CHUMS	—	157 (149.7)	-7.5	12.4	—	—	—	—	RNAV1
009	TF	CUPID	—	140 (132.0)	-7.5	19.6	—	—	—	—	RNAV1
010	TF	BORLO	—	119 (111.9)	-7.5	34.4	—	—	—	—	RNAV1

RWY34R *MUST be used for database coding.

Serial Number	Path Descriptor*	Waypoint Identifier	Fly Over	Course °M(°T)	Magnetic Variation	Distance (NM)	Turn Direction	Altitude (FT)	Speed (KIAS)	Vertical Angle	Navigation Specification
001	VA	—	—	337 (329.6)	-7.5	—	—	+600	—	—	RNAV1
002	DF	BOXER	Y	—	-7.5	—	—	—	—	—	RNAV1
003	TF	A4R21	—	337 (329.6)	-7.5	3.8	—	—	—	—	RNAV1
004	TF	A4R22	—	067 (059.3)	-7.5	4.1	—	—	—	—	RNAV1
005	TF	A4R23	—	112 (104.6)	-7.5	3.7	—	—	—	—	RNAV1
006	TF	PEGAS	—	141 (133.4)	-7.5	7.6	—	—	—	—	RNAV1
007	TF	LUCCA	—	157 (149.6)	-7.5	11.5	—	—	—	—	RNAV1
008	TF	CUPID	—	127 (119.8)	-7.5	24.2	—	—	—	—	RNAV1
009	TF	BORLO	—	119 (111.9)	-7.5	34.4	—	—	—	—	RNAV1

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Waypoint Coordinates

Waypoint Identifier	Coordinates	Waypoint Identifier	Coordinates
A4L11	355915.6N / 1401249.1E	BEAMS	353533.0N / 1403153.1E
A4L12	360232.6N / 1401646.8E	BORLO	351633.8N / 1414455.6E
A4L13	360236.7N / 1402559.7E	BOXER	355213.0N / 1401951.6E
A4L14	355937.8N / 1403205.0E	CHUMS	354237.0N / 1404806.0E
A4R21	355529.4N / 1401729.2E	CUPID	352930.3N / 1410557.3E
A4R22	355734.5N / 1402150.1E	GRAYL	351504.8N / 1412938.0E
A4R23	355638.8N / 1402614.7E	LUCCA	354132.8N / 1404011.4E
A6L21	353137.9N / 1403441.9E	OLVAN	351214.1N / 1410111.3E
A6R12	352543.5N / 1403700.7E	PEGAS	355126.3N / 1403302.1E
ARIES	355607.4N / 1401505.9E	ROONY	355317.4N / 1404024.4E
ASPEN	353451.0N / 1403028.1E		

CHANGE : New PROC