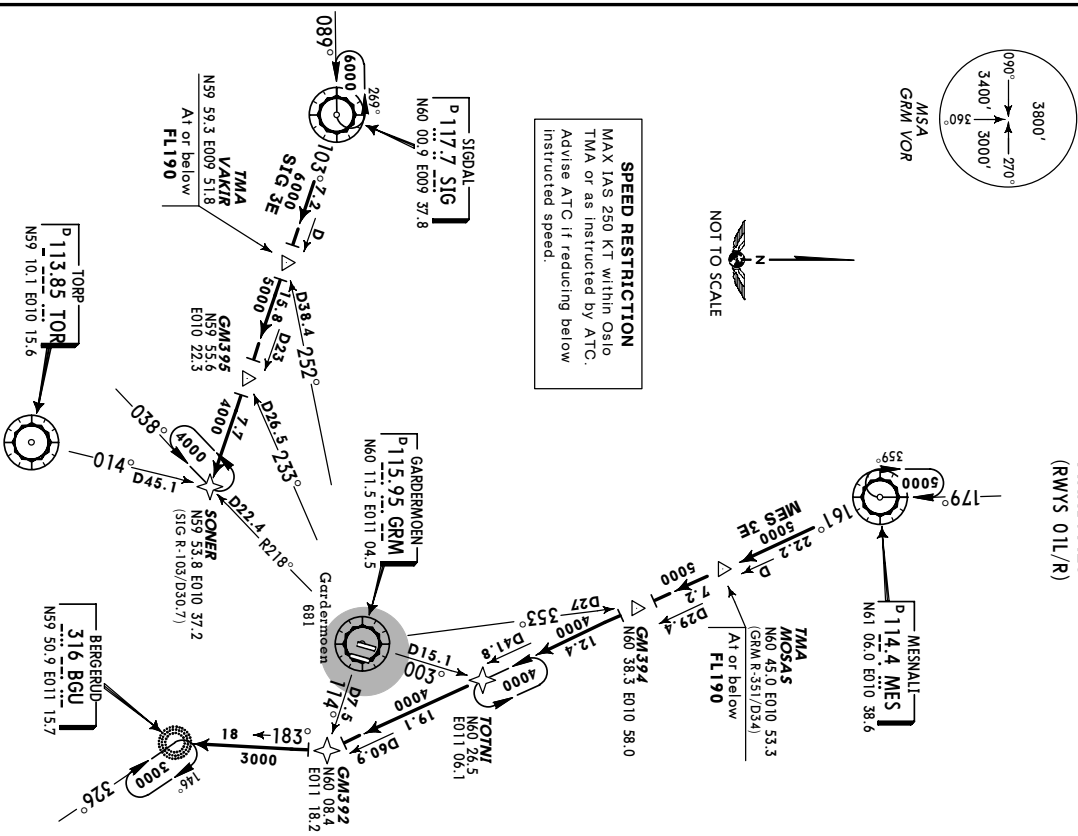


STAR

JEPPesen 12 JUL 02 **10-2**
OSLO, NORWAY
 GARDERMOEN
 RNAV (VORDME)
ATIS 126.12
 TRANS LEVEL: BY ATC
 TRANS ALT: 7000'

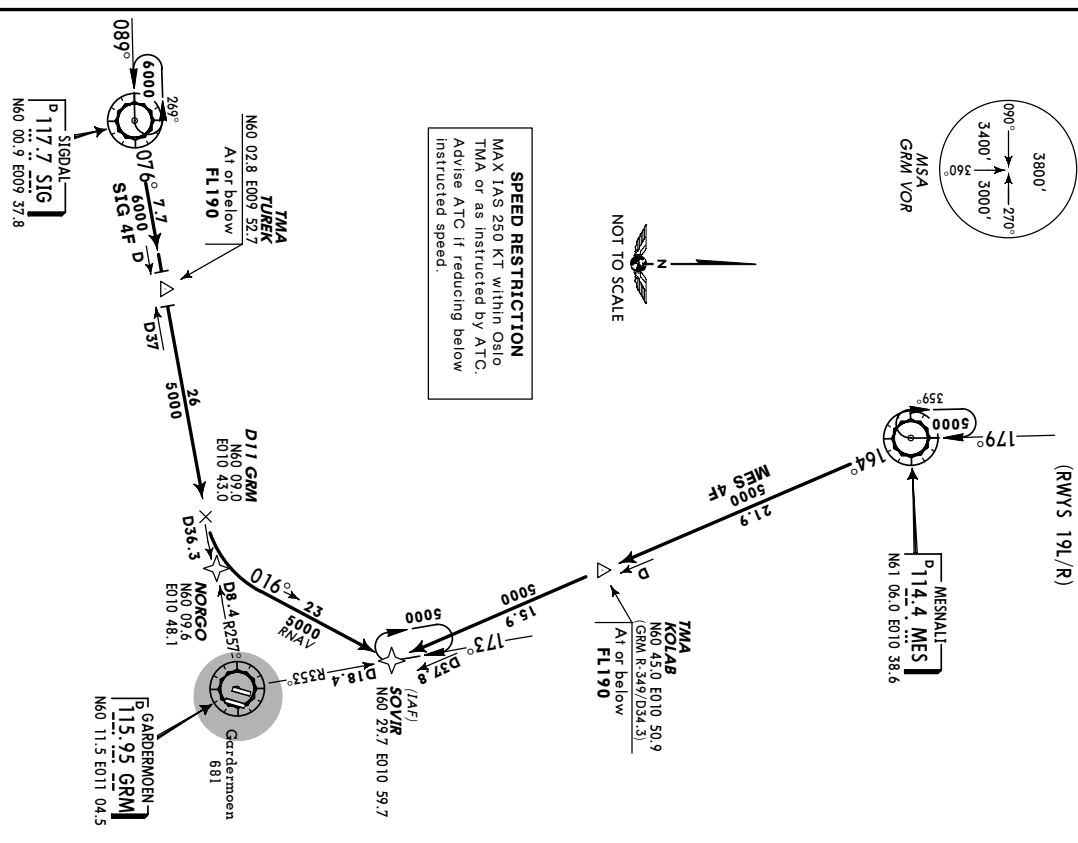
MESNALL THREE ECHO (MES 3E)
SIGDAL THREE ECHO (SIG 3E)
 ARRIVALS
 (RWYS 01L/R)



STAR

JEPPesen 12 JUL 02 **10-2A**
OSLO, NORWAY
 GARDERMOEN
 RNAV (VORDME)
ATIS 126.12
 TRANS LEVEL: BY ATC
 TRANS ALT: 7000'

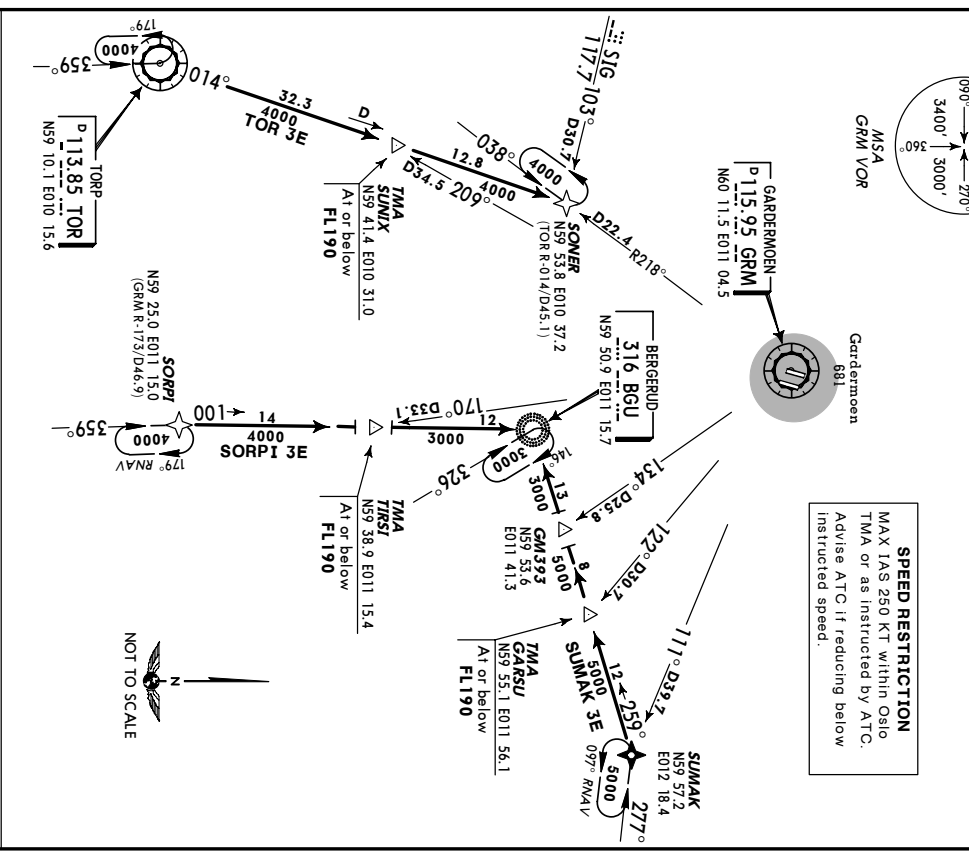
MESNALL FOUR FOXTROT (MES 4F)
SIGDAL FOUR FOXTROT (SIG 4F)
 ARRIVALS
 (RWYS 19L/R)



STAR

JEPPESSEN 12 JUL 02 **(10-2B)**
OSLO, NORWAY
GARDERMOEN
 ATIS **126.12** RNAV (VOR/DME)
 TRANS LEVEL: BY ATC
 TRANS ALT: 7000'

SORPI THREE ECHO (SORPI 3E)/SORP3E]
SUMAK THREE ECHO (SUMAK 3E)/SUMA3E]
TORP THREE ECHO (TOR 3E)
ARRIVALS
 (RWYS 01L/R)



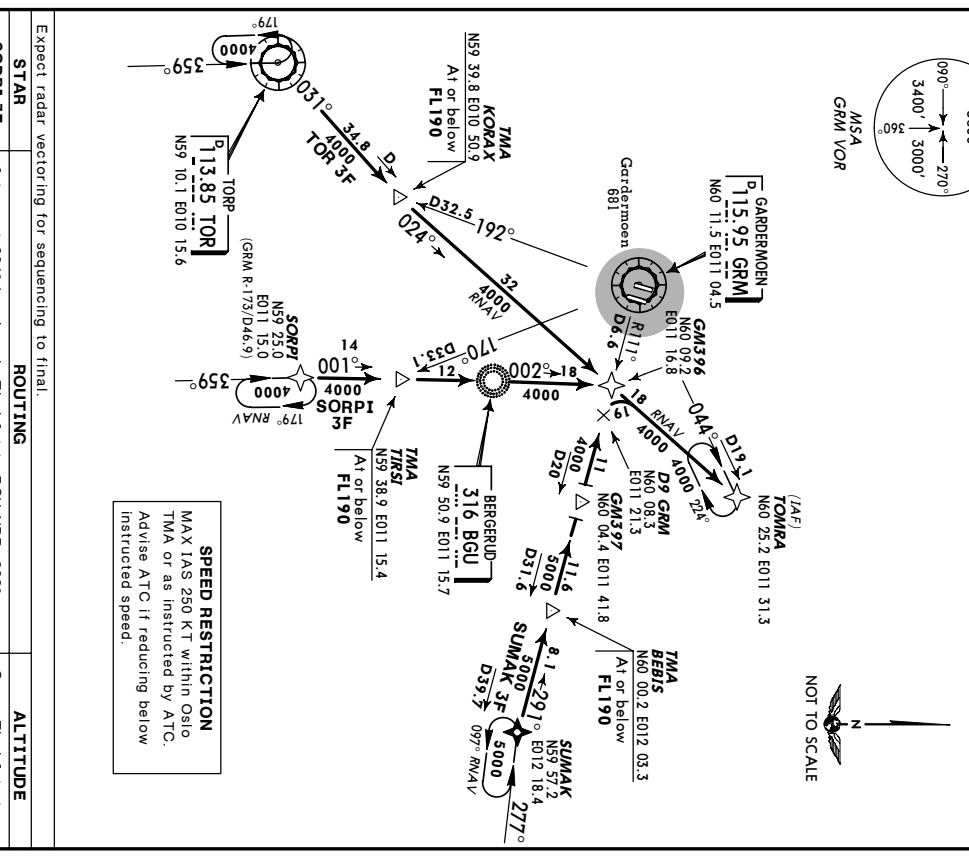
STAR	ROUTING	ALTITUDE
SORPI 3E	Intercept 001° bearing via Tirsi Int to BGU NDB (RNAV equipment required for Sorpi Int holding). RNAV: SORPI - TIRSI - BGU NDB.	Cross Tirsi Int at or below FL190.
SUMAK 3E	Intercept 259° bearing via Garsu Int to BGU NDB (RNAV equipment required for Sumak Int holding). RNAV: SUMAK - GARSU - GM393 - BGU NDB.	Cross Garsu Int at or below FL190.
TOR 3E	Intercept TOR R-014 via Sunix Int to Somer Int. RNAV: TOR VOR/DME - SUNIX - SOMER.	Cross Sunix Int at or below FL190.

CHANGES: STARs SORPI 3E & SUMAK 3E routing text revised. © JEPPESSEN SANDERSON, INC., 1998, 2002. ALL RIGHTS RESERVED.

STAR

JEPPESSEN 12 JUL 02 **(10-2C)**
OSLO, NORWAY
GARDERMOEN
 ATIS **126.12** RNAV (VOR/DME)
 TRANS LEVEL: BY ATC
 TRANS ALT: 7000'

SORPI THREE FOXTROT (SORPI 3F)/SORP3F]
SUMAK THREE FOXTROT (SUMAK 3F)/SUMA3F]
TORP THREE FOXTROT (TOR 3F)
ARRIVALS
 (RWYS 19L/R)



STAR	ROUTING	ALTITUDE
SORPI 3F	Intercept 001° bearing via Tirsi Int to BGU NDB. 002° bearing, on 024° track to Tomra Int (RNAV equipment required for Sorpi Int holding & after GM396). RNAV: SORPI - TIRSI - BGU NDB - GM396 - TOMRA.	Cross Tirsi Int at or below FL190.
SUMAK 3F	Intercept GRM R-111 inbound via Bebis Int to D9 GRM, turn RIGHT, 024° track to Tomra Int (RNAV equipment required for Sumak Int holding & after D9 GRM). RNAV: SUMAK - BEBIS - GM397 - GM396 - TOMRA.	Cross Bebis Int at or below FL190.
TOR 3F	Intercept TOR R-031 to Korax Int, 024° track to Tomra Int (RNAV equipment required after Korax Int). RNAV: TOR VOR/DME - KORAX - GM396 - TOMRA.	Cross Korax Int at or below FL190.

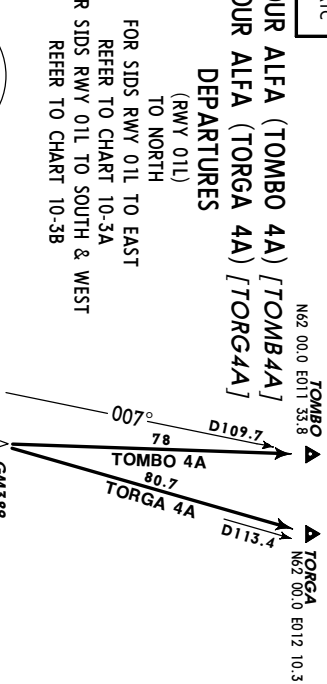
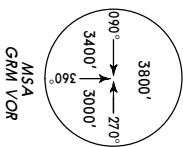
CHANGES: Routing text revised. © JEPPESSEN SANDERSON, INC., 1998, 2002. ALL RIGHTS RESERVED.

JEPPESSEN 11 JAN 02 **10-3** **Eff: 24 Jan** **SID**
 * OSLO Approach (R) **119.97** (East) **120.45** (West)
 TRANS LEVEL: BY ATC
 TRANS ALT: 7000'

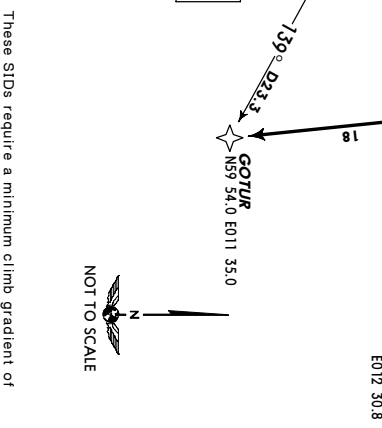
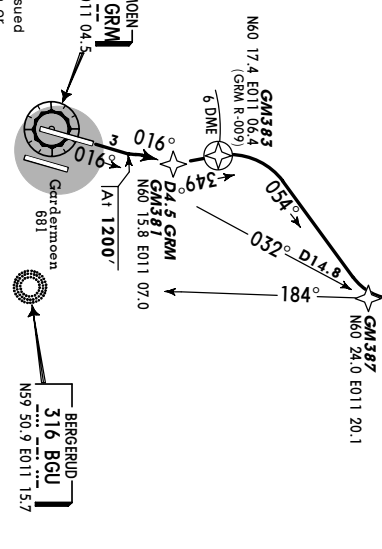
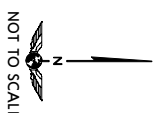
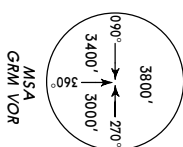
JEPPESSEN 11 JAN 02 **10-3A** **Eff: 24 Jan** **SID**
 * OSLO Approach (R) **119.97** (East) **120.45** (West)
 TRANS LEVEL: BY ATC
 TRANS ALT: 7000'

TOMBO FOUR ALFA (TOMBO 4A) [TOMB4A]
TORGA FOUR ALFA (TORGA 4A) [TORG4A]
 DEPARTURES
 (RWY 01L)
 TO NORTH
 FOR SIDS RWY 01L TO EAST
 REFER TO CHART 10-3A
 FOR SIDS RWY 01L TO SOUTH & WEST
 REFER TO CHART 10-3B

GOTUR FOUR ALFA (GOTUR 4A) [GOTU4A]
SUTOK FOUR ALFA (SUTOK 4A) [SUTO4A]
 DEPARTURES
 (RWY 01L)
 TO EAST



MSA
GRM VOR



Enroute cruising level will be issued after take-off by Oslo Approach or Oslo Radar.
 Radar vectoring involving deviation from SID may be used by ATC.
 In some circumstances the SID system may not always cover every destination. In such cases ATC will issue departure clearances in lieu of published SIDs.

Enroute cruising level will be issued after take-off by Oslo Approach or Oslo Radar.
 Radar vectoring involving deviation from SID may be used by ATC.
 In some circumstances the SID system may not always cover every destination. In such cases ATC will issue departure clearances in lieu of published SIDs.

These SIDs require a minimum climb gradient of 304' per nm (5%) up to 4000'.

Gnd speed-Kts	75	100	150	200	250	300
304' per nm	380	506	760	1013	1266	1519

These SIDs require a minimum climb gradient of 304' per nm (5%) up to 4000'.

Gnd speed-Kts	75	100	150	200	250	300
304' per nm	380	506	760	1013	1266	1519

SID
TOMBO 4A Climb on 016° track to 1200', intercept GRM R-016 to D4.5 GRM, turn LEFT, 349° track, at GRM 6 DME turn RIGHT, 054° track, intercept 004° bearing from BGU NDB to Tombo Int.
FMS/RNAV: GM381 - GM383 - GM387 - TOMBO

SID
GOTUR 4A Climb on 016° track to 1200', intercept GRM R-016 to D4.5 GRM, turn LEFT, 349° track, at GRM 6 DME or 4000', whichever is later, turn RIGHT.
FMS/RNAV: GM381 - GM383 (4000' +),

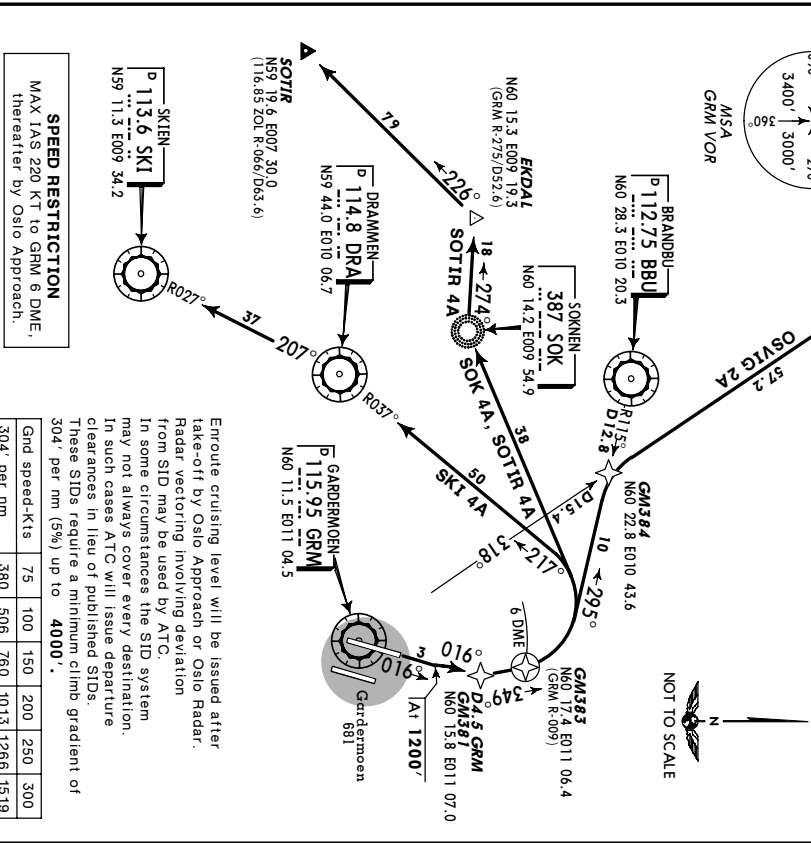
TORGA 4A Climb on 016° track to 1200', intercept GRM R-016 to D4.5 GRM, turn LEFT, 349° track, at GRM 6 DME turn RIGHT, 054° track, intercept 004° bearing from BGU NDB, intercept GRM R-016 to Torga Int.
FMS/RNAV: GM381 - GM383 - GM387 - GM389 - TORGA

SUTOK 4A To OPA NDB, 174° bearing to Gotur Int. Intercept BBU R-107 to SUTOK Int.
FMS/RNAV: SUTOK
 1 Normally not to be used between 2300-0630LT.

OSLO, NORWAY
 GARDERMOEN

* OSLO Approach (R) 119.97 (East) 120.45 (West)
 TRANS LEVEL: BY ATC
 TRANS ALT: 7000'

OSVIG TWO ALFA (OSVIG 2A) [OSV12A]
 SKIEN FOUR ALFA (SKI 4A)
 SOKNEN FOUR ALFA (SOK 4A)
 SOTIR FOUR ALFA (SOTIR 4A) [SOT14A]
 DEPARTURES
 (RWY 01L)
 TO SOUTH & WEST



TAKE-OFF

Climb on 016° track to 1200', intercept GRM R-016 to D4.5 GRM, turn LEFT, 349° track, at GRM 6 DME turn LEFT.
 FMS/RNAV: GM381 - GM383.

CLIMB INSTRUCTION

Climb to 7000'.

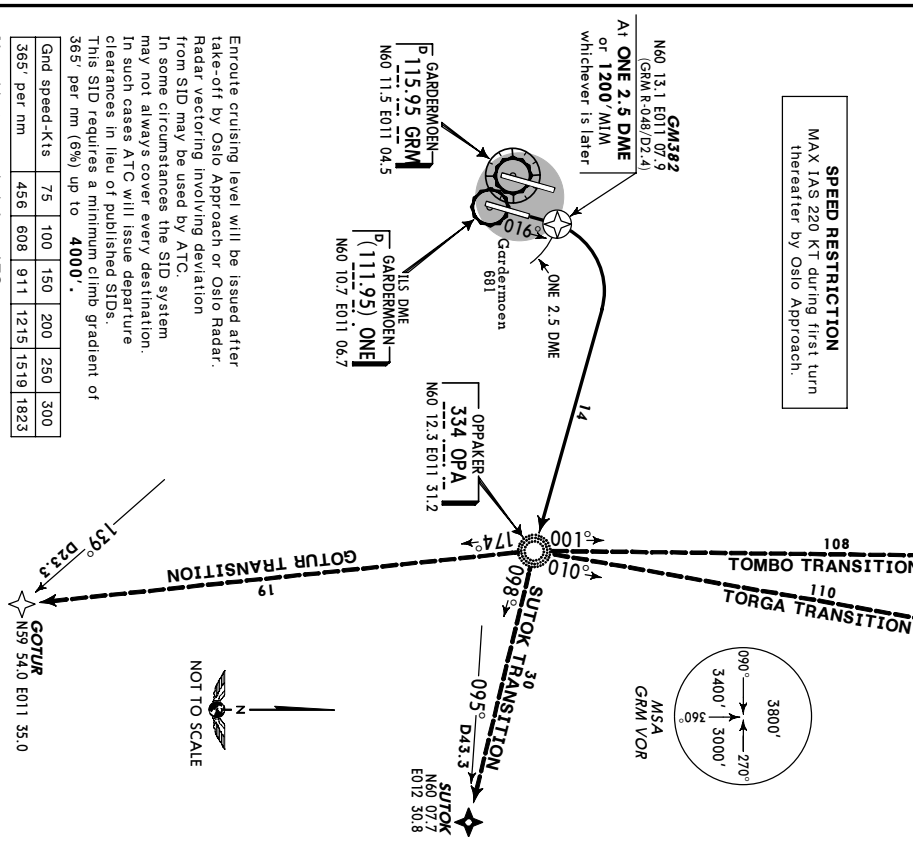
ROUTING

SID	ROUTING
OSVIG 2A	Intercept BBU R-115 inbound, intercept GRM R-318 to Osvig Int.
SKI 4A	FMS/RNAV: GM384 - OSVIG. Intercept DRA R-037 inbound to DRA VORDME, then to SKI VORDME.
SOK 4A	FMS/RNAV: DRA VORDME - SKI VORDME. To SOK NDB.
SOTIR 4A	FMS/RNAV: SOK NDB. To SOK NDB, 274° bearing to Ekdal Int, then to Sotir Int.

OSLO, NORWAY
 GARDERMOEN

* OSLO Approach (R) 119.97 (East) 120.45 (West)
 TRANS LEVEL: BY ATC
 TRANS ALT: 7000'

OPPAKER TWO BRAVO (OPA 2B)
 DEPARTURE
 (RWY 01R)



TAKE-OFF/ROUTING

Climb on 016° track to ONE 2.5 DME or 1200' MIM, whichever is later, turn RIGHT to OPA NDB.
 FMS/RNAV: GM382 - OPA NDB.

CLIMB INSTRUCTION

Climb to 4000'.

ROUTING

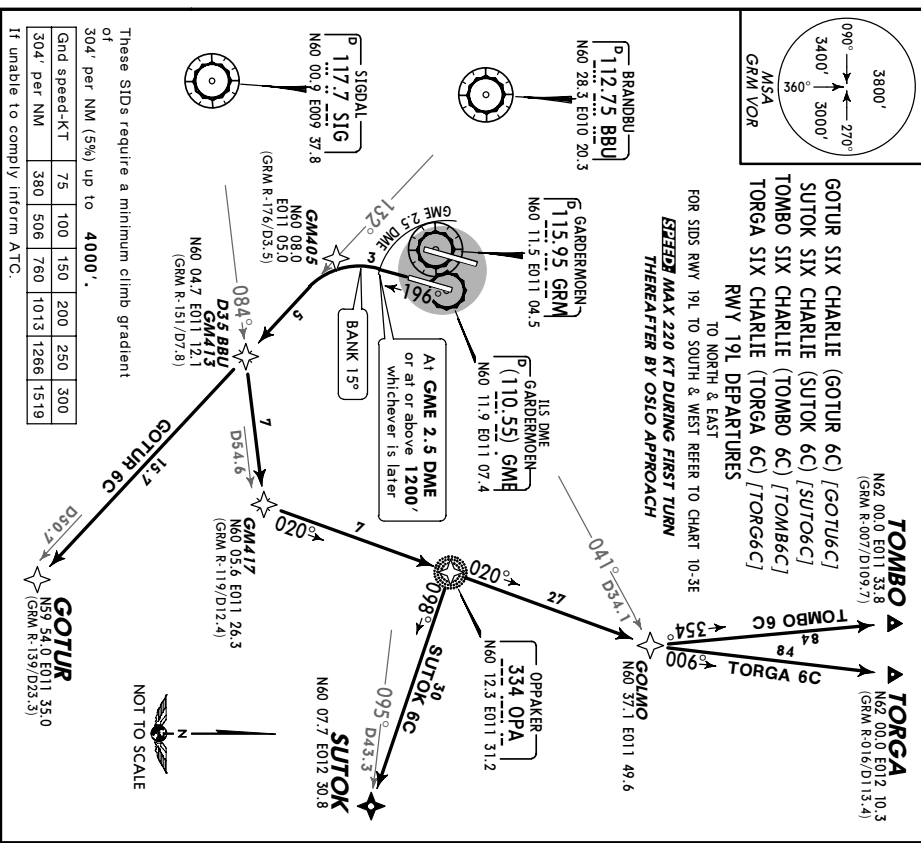
TRANSITION	ROUTING
GOTUR	174° bearing to Gotur Int.
SUTOK	FMS/RNAV: GOTUR. 098° bearing to Sutok Int.
TOMBO	FMS/RNAV: SUTOK. 001° bearing to Tombo Int.
TORGA	FMS/RNAV: TOMBO. 010° bearing to Torga Int.

ENGM/OSL
GARDERMOEN

17 NOV 06 **(10-3D)** **EFF 23 NOV**

OSLO, NORWAY
SID

* OSLO Approach East 119.97 West 120.45	Appl Elev 681'	Trans alt: By ATC Trans alt: 7000' level will be issued after take-off by OSLO Approach or OSLO Radar. 2. Radar vectoring involving deviation from SID may not be used by ATC. In some circumstances the SID system may not always cover every destination. In such cases ATC will issue departure clearances in lieu of published SIDs.
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SID	ROUTING	Initial climb clearance 7000'
GOTUR 6C	Climb on 196° track to GME 2.5 DME or at or above turn LEFT, intercept BBU R-132 to GOTUR.	1200', whichever is later.
SUTOK 6C	Climb on 196° track to GME 2.5 DME or at or above turn LEFT, intercept BBU R-132 to D35 BBU, turn LEFT, intercept SIG R-084, intercept 020° bearing to OPA, 020° bearing to GOLMO, then to TOMBO.	1200', whichever is later, intercept 020° bearing to OPA, 098° bearing to SUTOK.
TOMBO 6C	Climb on 196° track to GME 2.5 DME or at or above turn LEFT, intercept BBU R-132 to D35 BBU, turn LEFT, intercept SIG R-084, intercept 020° bearing to OPA, 020° bearing to GOLMO, then to TOMBO.	1200', whichever is later, intercept 020° bearing to OPA, 098° bearing to SUTOK.
TORGÅ 6C	Climb on 196° track to GME 2.5 DME or at or above turn LEFT, intercept BBU R-132 to D35 BBU, turn LEFT, intercept SIG R-084, intercept 020° bearing to OPA, 020° bearing to GOLMO, then to TORGÅ.	1200', whichever is later, intercept 020° bearing to OPA, 098° bearing to SUTOK.

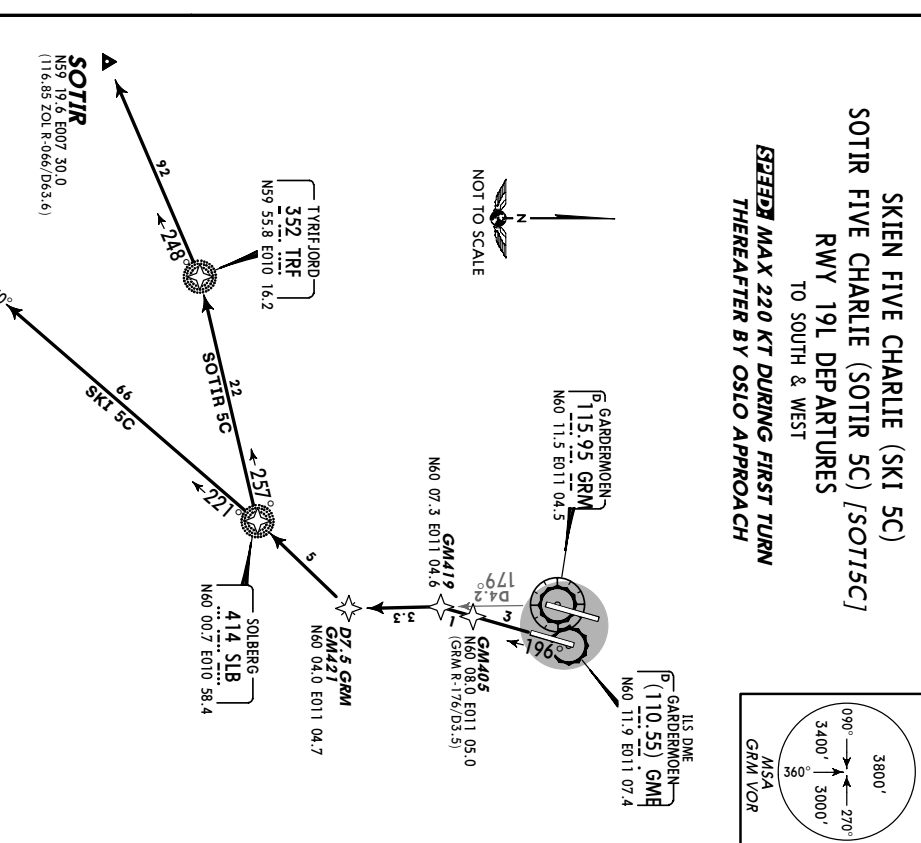
CHANGES: SIDs renumbered: GM411 replaced by GM405. © JEPPESEN SANDERSON, INC., 2006. ALL RIGHTS RESERVED.

ENGM/OSL
GARDERMOEN

17 NOV 06 **(10-3E)** **EFF 23 NOV**

OSLO, NORWAY
SID

* OSLO Approach East 119.97 West 120.45	Appl Elev 681'	Trans alt: By ATC Trans alt: 7000' level will be issued after take-off by OSLO Approach or OSLO Radar. 2. Radar vectoring involving deviation from SID may not be used by ATC. In some circumstances the SID system may not always cover every destination. In such cases ATC will issue departure clearances in lieu of published SIDs.
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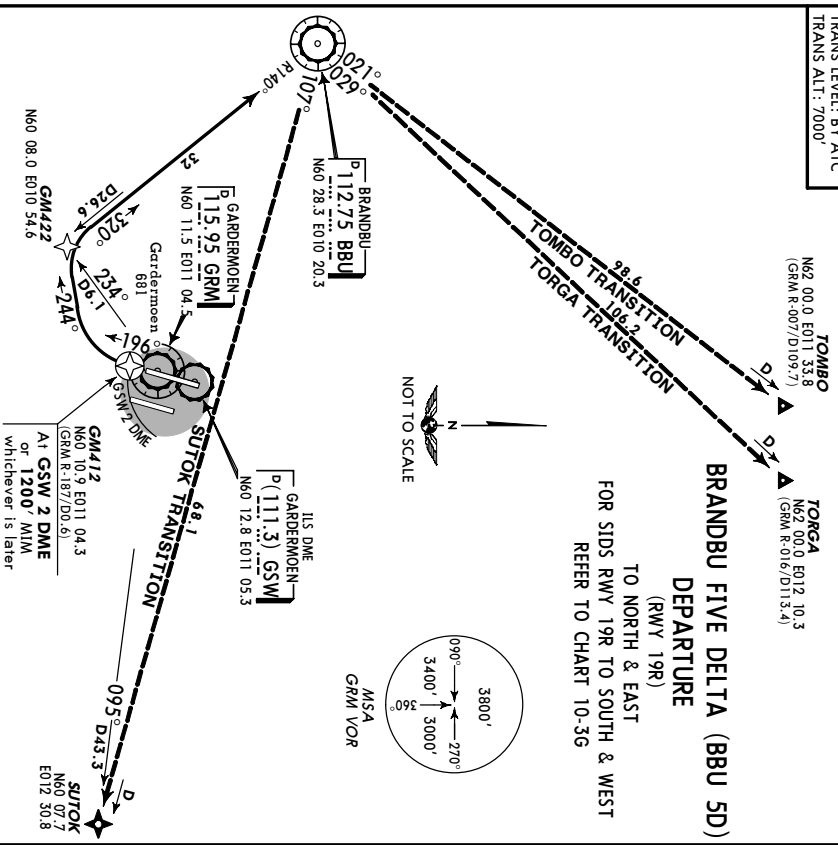
SID	ROUTING	Initial climb clearance 7000'
SKI 5C	Climb on 196° track, intercept GRM R-179 to D7.5 GRM, turn RIGHT to SLB, 221° bearing (SKI R-040 inbound) to SKI.	1200', whichever is later.
SOTIR 5C	Climb on 196° track, intercept GRM R-179 to D7.5 GRM, turn RIGHT to SLB, 257° bearing to TRF, 248° bearing to SOTIR.	1200', whichever is later, intercept 020° bearing to OPA, 098° bearing to SUTOK.

CHANGES: SIDs renumbered: GM411 replaced by GM405. © JEPPESEN SANDERSON, INC., 2006. ALL RIGHTS RESERVED.

SID

OSLO, NORWAY
GARDERMOEN

JEPPESSEN 11 JAN 02 **(10-3F)** **Eff: 24 Jan**
 * OSLO Approach (R) **119.97** (East) **120.45** (West)
 TRANS LEVEL: BY ATC
 TRANS ALT.: 7000'



BRANDBU FIVE DELTA (BBU 5D)
 DEPARTURE
 (RWY 19R)
 TO NORTH & EAST
 FOR SIDS RWY 19R TO SOUTH & WEST
 REFER TO CHART 10-3G

TOMBO
 DEPARTURE
 (RWY 19R)
 TO SOUTH & WEST

TORGA
 DEPARTURE
 (RWY 19R)
 TO SOUTH & WEST

ENROUTE CRUISING LEVEL will be issued after take-off by Oslo Approach or Oslo Radar. Radar vectoring involving deviation from SID may be used by ATC. In some circumstances the SID system may not always cover every destination. In such cases ATC will issue departure clearances in lieu of published SIDs.

TAKE-OFF/ROUTING

Climb on 196° track to GSW 2 DME or 1200' MIM, whichever is later, turn RIGHT, 244° track, intercept BBU R-140 inbound to BBU VORDME.
FMS/RNAV: GM412 or 1200', whichever is later - GM422 - BBU VORDME.

CLIMB INSTRUCTION
 Climb to 7000'.

Grid speed-Kts	75	100	150	200	250	300
304' per nm	380	506	760	1013	1266	1519

This SID requires a minimum climb gradient of 304' per nm (5%) up to 4000'.

SPEED RESTRICTION
 MAX IAS 220 KT during first turn thereafter by Oslo Approach.

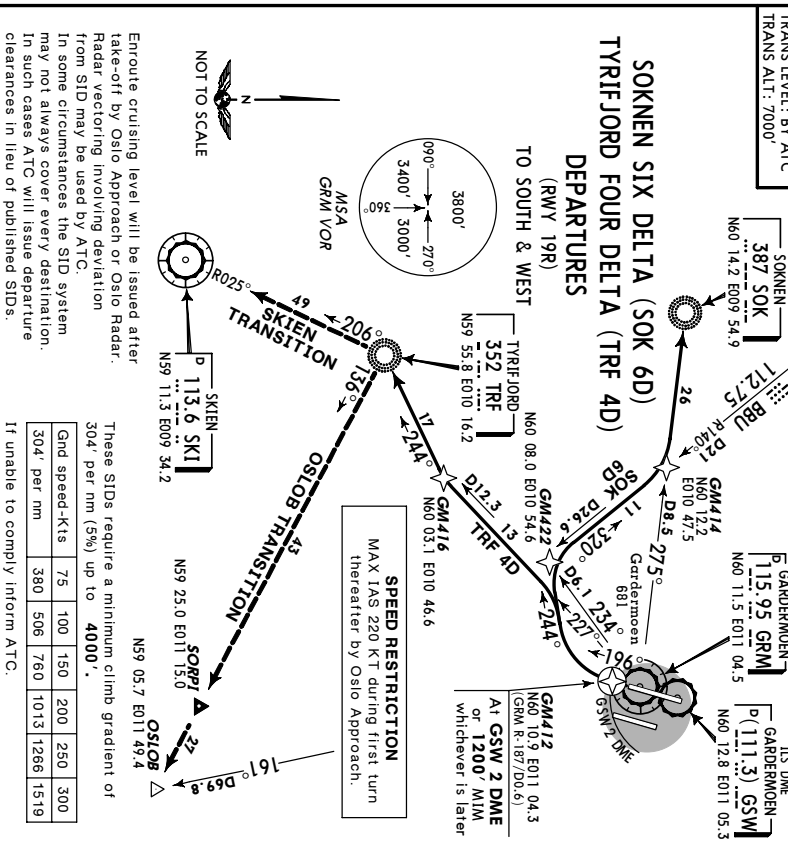
TRANSITION	ROUTING
SUTOK	Intercept BBU R-107 to SUTOK Int. FMS/RNAV: SUTOK.
TOMBO	Intercept BBU R-021 to Tombo Int. FMS/RNAV: TOMBO.
TORGA	Intercept BBU R-029 to Torga Int. FMS/RNAV: TORGA.

CHANGES: SID renumbered; Approach frequency. © JEPPESEN SANDBERSON, INC., 1998, 2002. ALL RIGHTS RESERVED.

SID

OSLO, NORWAY
GARDERMOEN

JEPPESSEN 11 JAN 02 **(10-3G)** **Eff: 24 Jan**
 * OSLO Approach (R) **119.97** (East) **120.45** (West)
 TRANS LEVEL: BY ATC
 TRANS ALT.: 7000'



SOKNEN SIX DELTA (SOK 6D)
 DEPARTURE
 (RWY 19R)
 TO SOUTH & WEST

TYRIFJORD FOUR DELTA (TRF 4D)
 DEPARTURE
 (RWY 19R)
 TO SOUTH & WEST

SKJENN
 DEPARTURE
 (RWY 19R)
 TO SOUTH & WEST

ENROUTE CRUISING LEVEL will be issued after take-off by Oslo Approach or Oslo Radar. Radar vectoring involving deviation from SID may be used by ATC. In some circumstances the SID system may not always cover every destination. In such cases ATC will issue departure clearances in lieu of published SIDs.

TAKE-OFF/ROUTING

Climb on 196° track to GSW 2 DME or 1200' MIM, whichever is later, turn RIGHT, 244° track, intercept BBU R-140 inbound, intercept GRM R-275 to SOK NDB.
FMS/RNAV: GM412 or 1200', whichever is later - GM414 - SOK NDB.

CLIMB INSTRUCTION
 Climb to 7000'.

Grid speed-Kts	75	100	150	200	250	300
304' per nm	380	506	760	1013	1266	1519

These SIDs require a minimum climb gradient of 304' per nm (5%) up to 4000'.

SPEED RESTRICTION
 MAX IAS 220 KT during first turn thereafter by Oslo Approach.

TRANSITION	ROUTING
OSLOB	136° bearing via Sorpi Int to Oslob Int. FMS/RNAV: SORPI - OSLOB.
SKJENN	206° bearing (SKI R-025 inbound) to SKI VORDME. FMS/RNAV: SKI VORDME.

OMNIDIRECTIONAL DEPARTURES
 (RWYS 01L/R, 19L/R)

Grid speed-Kts	75	100	150	200	250	300
425' per nm	532	709	1063	1418	1772	2127
365' per nm	456	608	911	1215	1519	1823
304' per nm	380	506	760	1013	1266	1519

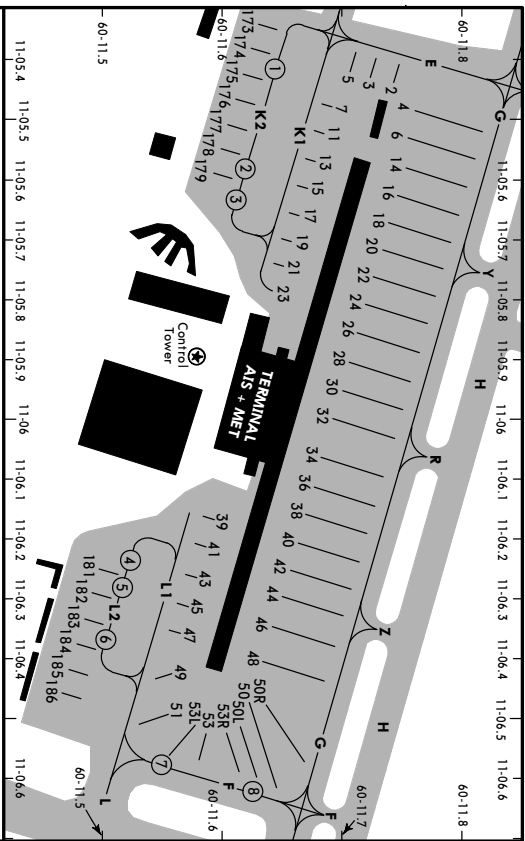
Climb on runway track to 1500' MIM, then depart omnidirectional.

CHANGES: SIDs renumbered; Approach frequency. © JEPPESEN SANDBERSON, INC., 1998, 2002. ALL RIGHTS RESERVED.

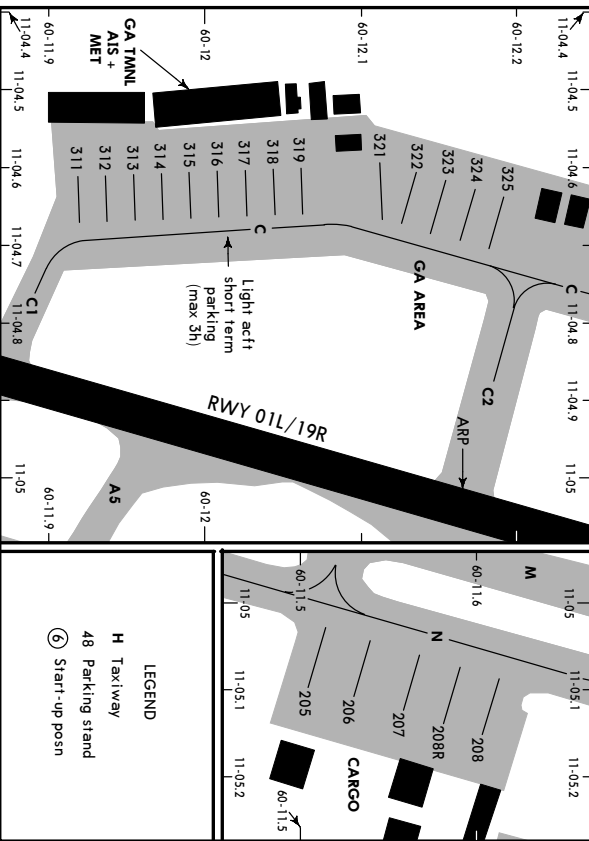
ENGM/OSL

2 MAY 03 **10-9B** EFF 15 MAY

OSLO, NORWAY
GARDERMOEN



Stands 11 thru 59 except stands 50L/R and 53L/R are safeguard equipped.
Marshaller required for stands 50L/R and 53L/R.
Push-back procedure mandatory for jet-act at nose-in stands.
Request push-back and start-up from clearance delivery unless otherwise instructed.
Start up position 1, 2, 3, 4, 5 and 6 are only available to act CAT A, B and C.
Act parked at the following stands will be pushed as follows:
Stand 21 and 23, act will be pushed to start up position 3.
Stand 39, act will be pushed to start up position 4.
Stand 41, act will be pushed to start up position 4 or straight back clear of twy L2.
Stand 49, act CAT A, B and C will be pushed to L1. Act CAT D will be pushed to area between twy L1 and twy L2, face to the East.
Stand 50, 50R and 50L, act will be pushed straight back clear of twy G and twy F.
Stand 51 and 53 will be pushed to start up position 7.
If apron is slippery, long push-back will be available on request.



CHANGES: None. © JEPPESEN SANDERSON, INC., 1999, 2003. ALL RIGHTS RESERVED.

ENGM/OSL

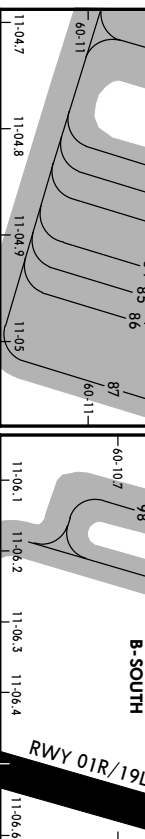
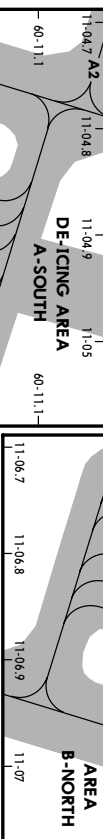
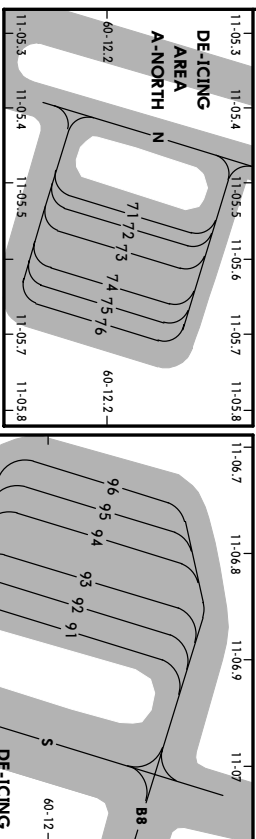
2 MAY 03 **10-9C** EFF 15 MAY

OSLO, NORWAY
GARDERMOEN

INS COORDINATES					
STAND No.	COORDINATES	ELEV	STAND No.	COORDINATES	ELEV
2, 3	N60 11.7 E011 05.4	672	174	N60 11.6 E011 05.3	670
4	N60 11.8 E011 05.5	675	175	N60 11.6 E011 05.4	670
5	N60 11.7 E011 05.4	672	176	N60 11.6 E011 05.4	671
6	N60 11.8 E011 05.5	673	177, 178	N60 11.6 E011 05.5	670
7, 11	N60 11.7 E011 05.5	673	179	N60 11.6 E011 05.6	670
13 thru 16	N60 11.7 E011 05.6	673	181	N60 11.5 E011 06.2	670
17 thru 22	N60 11.7 E011 05.7	673	182, 183	N60 11.5 E011 06.3	670
23, 24, 26	N60 11.7 E011 05.8	673	184, 185	N60 11.5 E011 06.4	670
28, 30	N60 11.7 E011 05.9	673	186	N60 11.5 E011 06.5	669
32, 34	N60 11.7 E011 06.0	673	205	N60 11.5 E011 05.1	666
36, 38	N60 11.7 E011 06.1	673	206, 207	N60 11.6 E011 05.2	666
39	N60 11.6 E011 06.2	673	208	N60 11.6 E011 05.2	667
40	N60 11.7 E011 06.2	673	208R	N60 11.6 E011 05.2	667
41, 42	N60 11.6 E011 06.2	673	311	N60 11.9 E011 04.6	662
43 thru 47	N60 11.6 E011 06.3	673	312 thru 314	N60 11.9 E011 04.6	663
48, 49	N60 11.6 E011 06.4	673	315	N60 12.0 E011 04.6	663
50	N60 11.6 E011 06.4	672	316	N60 12.0 E011 04.6	664
50L	N60 11.6 E011 06.4	673	317 thru 319	N60 12.0 E011 04.6	663
50R	N60 11.6 E011 06.5	673	321	N60 12.1 E011 04.5	663
51	N60 11.6 E011 06.5	672	322, 323	N60 12.1 E011 04.6	665
53, 53L/R	N60 11.6 E011 06.5	673	324	N60 12.2 E011 04.6	665
173	N60 11.6 E011 05.3	668	325	N60 12.2 E011 04.6	666

DE-ICING AREAS

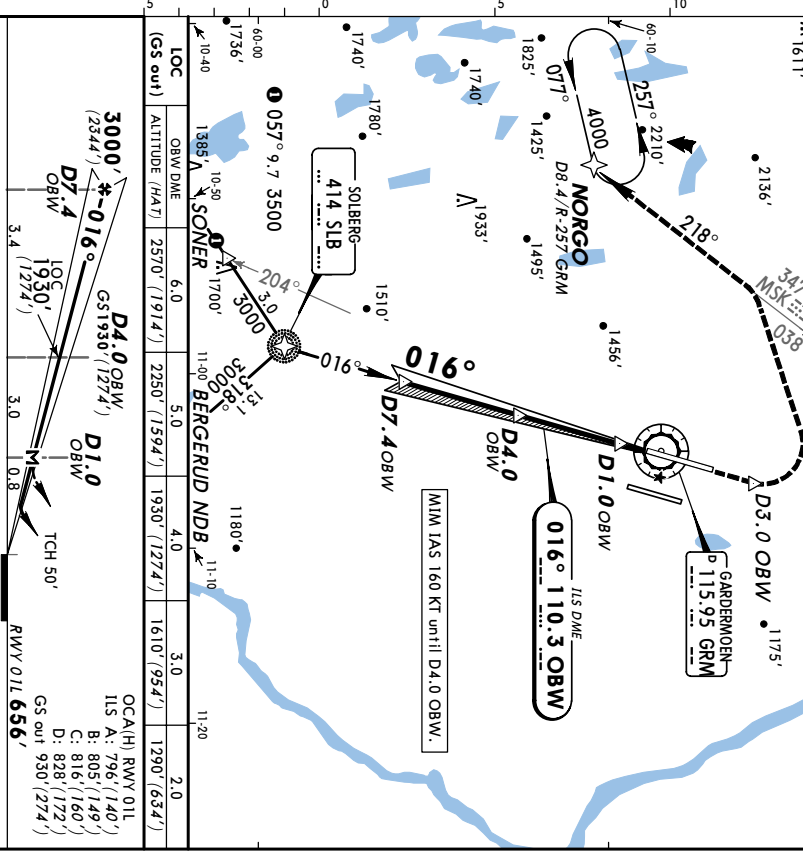
After de-icing do not move act until act call sign and the phrase "Equipment removed" is received from GARDERMOEN De-icing. "131,97" and "all clear signal" (thumbs up) is given by ground crew and taxi instructions are received from ATIS.



CHANGES: See other side. © JEPPESEN SANDERSON, INC., 1999, 2002. ALL RIGHTS RESERVED.

ENGM
GARDERMØEN
 11 JAN 02 **(1-1)** **JEPPRESEN** **EFF 24 Jan**
OSLO, NORWAY
ILS Rwy 01L

ATIS		126.12		*GARDERMØEN Approach	
GARDERMØEN Tower		2200 (0530)		*Q Ground	
West Incl	0530-2200 Incl	All Sectors	118.3	East	119.97
Rwy 01L/19R	Rwy 01R/19L	120.1	121.92	121.67	121.72
LOC	Final	GS	ILS	Apt Elev	681'
OBW	Apch Crs	D4.0 OBW	DA(H)	Rwy	656'
110.3	016°	1930' (1274')	856' (200')		
MISSED APCH: Climb on track 016° to minimum 1800'. At D3.0 OBW after DME turn LEFT (MAX IAS 185 KT) to intercept 218° from MSK NDB to NORGØ climbing to 4000' and hold. MSA GRM VOR					
Alt Ser: hPa Rwy Elev: 24 hPa Trans level: By ATC Trans alt: 7000' (6344')					

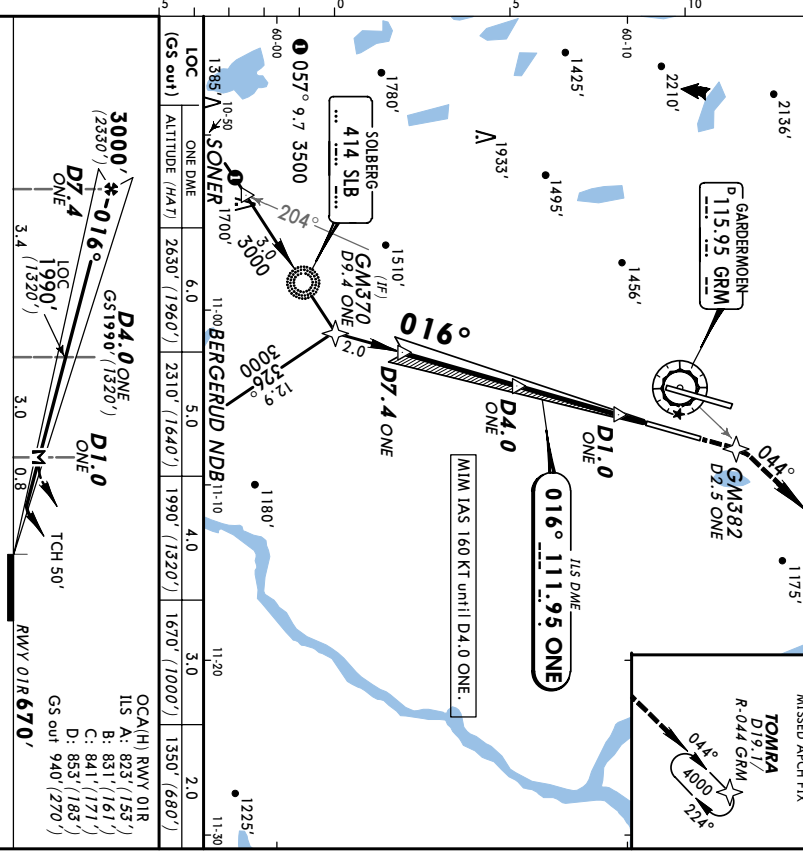


PANS OPS 4		Grid speed/Kts		70	90	100	120	140	160	HAAS	MMW
ILS GS 3.00° or LOC Desc Grad 5.2%		377	485	539	647	755	862			1800'	on 016°
MAP at D1.0 OBW		STRAIGHT-IN LANDING Rwy 01L LOC (GS out) CIRCLE-TO-LAND Not authorized East of rwy 01L/19R									
JAR OPS		FULL		AIS out		MID(H)		AIS out		V/S	
DA(H) 856' (200')		MID(H) 930' (274')		Max Kts		MID(H)		MID(H)		V/S	
A	RVR 550m	RVR 1000m		RVR 800m		RVR 1500m		RVR 1600m		RVR 2400m	
B	RVR 550m	RVR 1000m		RVR 800m		RVR 1500m		RVR 1600m		RVR 2400m	
C	RVR 550m	RVR 1000m		RVR 800m		RVR 1500m		RVR 1600m		RVR 2400m	
D	RVR 550m	RVR 1000m		RVR 800m		RVR 1500m		RVR 1600m		RVR 2400m	

CHANGES: Approach frequency. Missed approach. Bearings. © JEPPRESEN SANDERSON, INC., 1999, 2002. ALL RIGHTS RESERVED.

ENGM
GARDERMØEN
 11 JAN 02 **(1-2)** **JEPPRESEN** **EFF 24 Jan**
OSLO, NORWAY
ILS Rwy 01R

ATIS		126.12		*GARDERMØEN Approach	
GARDERMØEN Tower		2200 (0530)		*Q Ground	
West Incl	0530-2200 Incl	All Sectors	118.3	East	119.97
Rwy 01L/19R	Rwy 01R/19L	120.1	121.92	121.67	121.72
LOC	Final	GS	ILS	Apt Elev	681'
ONE	Apch Crs	D4.0 ONE	DA(H)	Rwy	670'
111.95	016°	1990' (1320')	870' (200')		
MISSED APCH: Climb on track 016° to minimum 1200'. At GM382/D2.5 ONE after DME turn RIGHT to intercept R-044 GRM climbing to 3000'. On passing D1.0 GRM climb to 4000' to TOMRA and hold. MSA GRM VOR					
Alt Ser: hPa Rwy Elev: 24 hPa Trans level: By ATC Trans alt: 7000' (6330')					

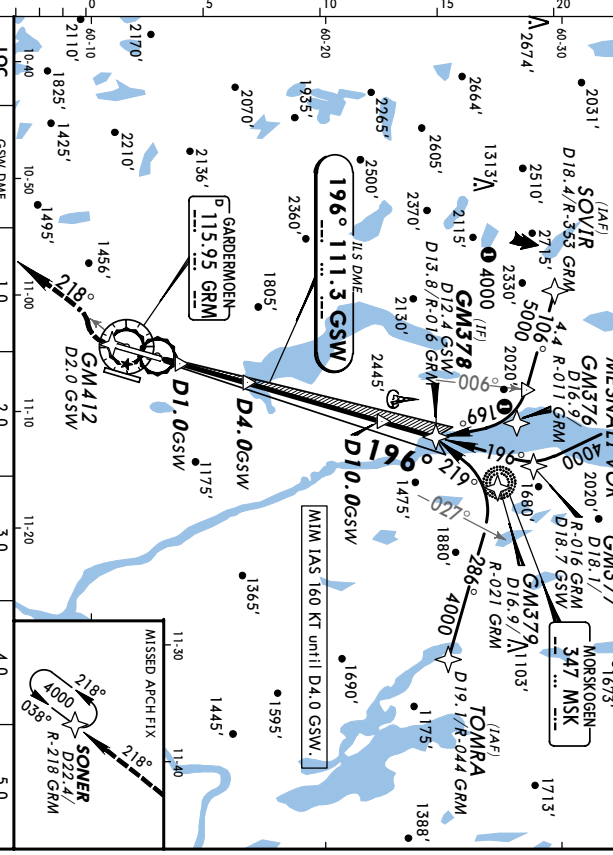


PANS OPS 4		Grid speed/Kts		70	90	100	120	140	160	HAAS	MMW
ILS GS 3.00° or LOC Desc Grad 5.2%		377	485	539	647	755	862			1200'	on 016°
MAP at D1.0 ONE		STRAIGHT-IN LANDING Rwy 01R LOC (GS out) CIRCLE-TO-LAND Not authorized West of rwy 01R/19L									
JAR OPS		FULL		AIS out		MID(H)		AIS out		V/S	
DA(H) 870' (200')		MID(H) 940' (270')		Max Kts		MID(H)		MID(H)		V/S	
A	RVR 550m	RVR 1000m		RVR 800m		RVR 1500m		RVR 1600m		RVR 2400m	
B	RVR 550m	RVR 1000m		RVR 800m		RVR 1500m		RVR 1600m		RVR 2400m	
C	RVR 550m	RVR 1000m		RVR 800m		RVR 1500m		RVR 1600m		RVR 2400m	
D	RVR 550m	RVR 1000m		RVR 800m		RVR 1500m		RVR 1600m		RVR 2400m	

CHANGES: Approach frequency. Missed approach. Bearings. © JEPPRESEN SANDERSON, INC., 1997, 2002. ALL RIGHTS RESERVED.

ENGM
GARDERMOEN
 11 JAN 02 (1-4) **JEPPRESEN** **OSLO, NORWAY**
 ILS Rwy 19R

ATIS 126.12		*GARDERMOEN Approach East 119.97 West 120.45	
GARDERMOEN Tower 0530-2200 Incl Rwy 01L/19R Rwy 01R/19L		All Sectors 118.3	
LOC GSW 111.3	Final Apch Crs 196°	GS D4.0 GSW (1275')	ILS DA(H) 875' (200') Rwy 675' (1275')
MISSED APCH: Climb on track 196° to GM412/D2.0 GSW after DME or 1500' , whichever is later. Then climbing turn RIGHT to Intercept R-218 GRM to SONER climbing to 4000' and hold.		Apt Elev 681'	
Alt Set: HPA Rwy Elev: 25 HPA Trans level: By ATIS		Trans alt: 7000' (6325')	

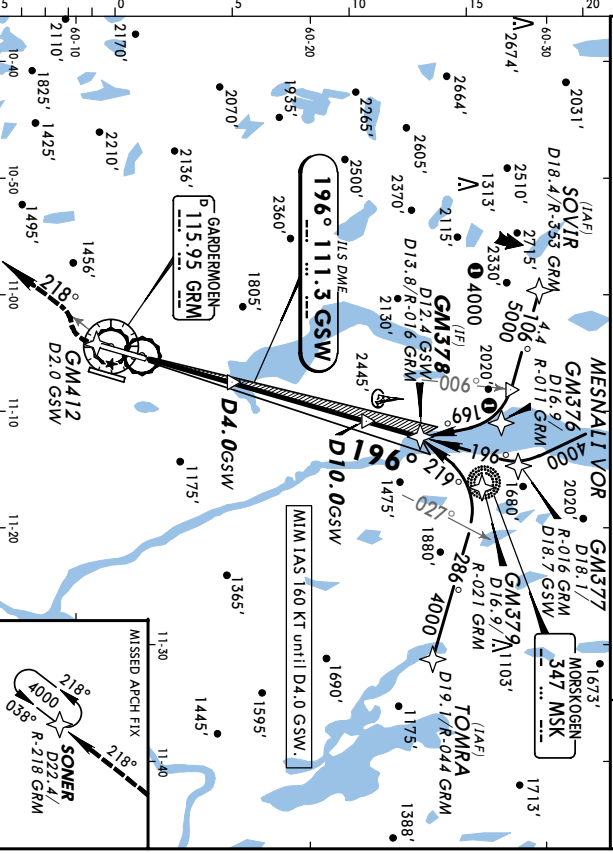


Gardermoen Tower 0530-2200 Incl Rwy 01L/19R Rwy 01R/19L		All Sectors 118.3	
LOC GSW 111.3	Final Apch Crs 196°	GS D4.0 GSW (1275')	ILS DA(H) 875' (200') Rwy 675' (1275')
MISSED APCH: Climb on track 196° to GM412/D2.0 GSW after DME or 1500' , whichever is later. Then climbing turn RIGHT to Intercept R-218 GRM to SONER climbing to 4000' and hold.		Apt Elev 681'	
Alt Set: HPA Rwy Elev: 25 HPA Trans level: By ATIS		Trans alt: 7000' (6325')	
OCA(H) Rwy 19R A: 822' (147') B: 831' (156') C: 844' (169') D: 858' (183') GS out 1010' (335')		ILS DA(H) 875' (200') MDA(H) 1010' (335')	
JAR OPS STRAIGHT-IN LANDING Rwy 19R LOC (GS out)		CIRCLE-TO-LAND Not authorized East of rwy 01L/19R	
Gnd speed-Kts 70 90 100 120 140 160		HIALS 196° GM412 whichever later	
LOC Desc Grad 5.2%		PARTIAL	
MAP at D1.0 GSW		V/S	
FULL AIS out		MID-H Max Kts 100	
RVR 550m		MID-H 1090' (409')	
RVR 1000m		V/S 1190' (509')	
RVR 1800m		1500m	
RVR 2000m		2040' (1359')	
RVR 3000m		2400m	
RVR 5600m		2250' (1569')	

PANS OPS 4
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ENGM
GARDERMOEN
 11 JAN 02 (1-4A) **JEPPRESEN** **OSLO, NORWAY**
 CAT II ILS Rwy 19R

ATIS 126.12		*GARDERMOEN Approach East 119.97 West 120.45	
GARDERMOEN Tower 0530-2200 Incl Rwy 01L/19R Rwy 01R/19L		All Sectors 118.3	
LOC GSW 111.3	Final Apch Crs 196°	GS D4.0 GSW (1275')	CAT II ILS DA(H) RA 100' Rwy 675' (1275')
MISSED APCH: Climb on track 196° to GM412/D2.0 GSW after DME or 1500' , whichever is later. Then climbing turn RIGHT to Intercept R-218 GRM to SONER climbing to 4000' and hold.		Apt Elev 681'	
Alt Set: HPA Rwy Elev: 25 HPA Trans level: By ATIS		Trans alt: 7000' (6325')	

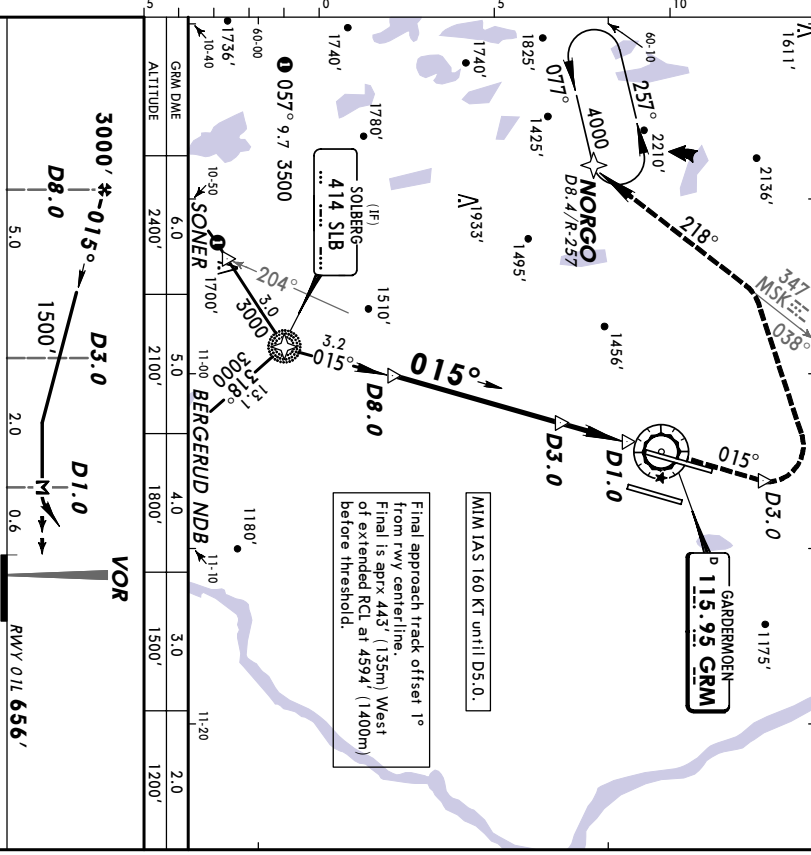


Gardermoen Tower 0530-2200 Incl Rwy 01L/19R Rwy 01R/19L		All Sectors 118.3	
LOC GSW 111.3	Final Apch Crs 196°	GS D4.0 GSW (1275')	CAT II ILS DA(H) RA 100' Rwy 675' (1275')
MISSED APCH: Climb on track 196° to GM412/D2.0 GSW after DME or 1500' , whichever is later. Then climbing turn RIGHT to Intercept R-218 GRM to SONER climbing to 4000' and hold.		Apt Elev 681'	
Alt Set: HPA Rwy Elev: 25 HPA Trans level: By ATIS		Trans alt: 7000' (6325')	
OCA(H) Rwy 19R A: 725' (50') B: 735' (60') C: 748' (73') D: 761' (86') GS out 1010' (335')		ILS DA(H) 775' (100') MID-H 1090' (409')	
JAR OPS STRAIGHT-IN LANDING Rwy 19R CAT II ILS ABCD RA 100'		CIRCLE-TO-LAND Not authorized East of rwy 01L/19R	
Gnd speed-Kts 70 90 100 120 140 160		HIALS 196° GM412 whichever later	
LOC Desc Grad 5.2%		PARTIAL	
MAP at D1.0 GSW		V/S	
FULL AIS out		MID-H Max Kts 100	
RVR 300m		MID-H 1090' (409')	
RVR 550m		V/S 1190' (509')	
RVR 1000m		1500m	
RVR 1800m		2040' (1359')	
RVR 2000m		2400m	
RVR 3000m		2250' (1569')	

PANS OPS 4
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ENGM/OSL
GARDERMOEN
 18 JUL 03 **(3-1)**
JEPPERSEN
OSLO, NORWAY
VOR DME Rwy 01L

ATIS		126.12		*GARDERMOEN Approach		East 119.97 West 120.45	
GARDERMOEN Tower		2200-0530		*Ground		121.92 121.67 121.72	
West Incl Rwy 01L/19R		118.3		All Sectors		118.3	
Rwy 01R/19L		120.1		MISSED APCH:		Climb on R-195 inbound to VOR. Continue climb on R-015 to D3.0 to minimum 1800'. Climbing turn LEFT to intercept and proceed on 218° from MSK NDB to NORGO to 4000' and hold.	
VOR GRM	Final	Minimum Alt	MDA(H)	Apt Elev	681'		
115.95	015°	3000' (2344')	D8.0	Refer to Minimums	RWY 656'		
MISSED APCH:		Climb on R-195 inbound to VOR. Continue climb on R-015 to D3.0 to minimum 1800'. Climbing turn LEFT to intercept and proceed on 218° from MSK NDB to NORGO to 4000' and hold.					
Alt Set: hPa		Rwy Elev: 24 hPa		Trans level: By ATC		Trans alt: 7000'	
MSA GRM VOR		3800'		3400'		270'	



PANS OPS 4

Grid speed-Kts	70	90	100	120	140	160	HIALS	Refer to Missed Apch above	
Descent Grad	5.0%	354	456	506	608	709	810		
MAP at D1.0								PAPER	

JAR-OPS STRAIGHT-IN LANDING Rwy 01L

MDA(H): A: 1000' (344') C: 1050' (394')
 B: 1020' (364') D: 1070' (414')

CIRCLE-TO-LAND Not authorized East of rwy 01L/19R

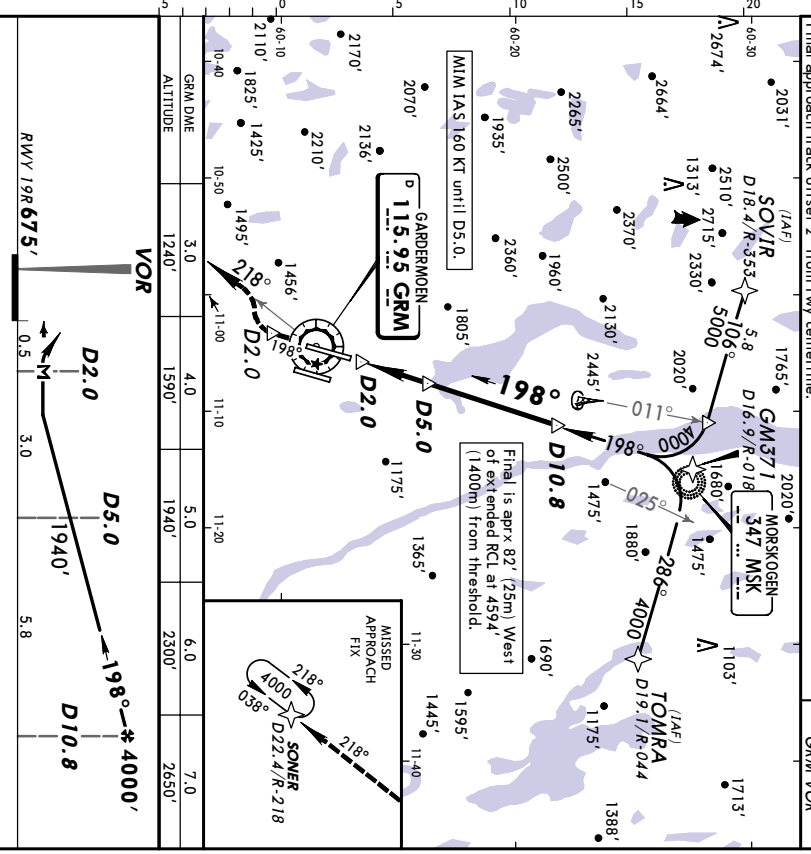
Max Kts	100	1090' (409')	1500m
ALS out	100	1190' (509')	1600m
VIS	135	2040' (1359')	2400m

RVR 900m RVR 1500m
 RVR 1000m RVR 1800m
 RVR 1400m RVR 2000m

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ENGM/OSL
GARDERMOEN
 18 JUL 03 **(3-2)**
JEPPERSEN
OSLO, NORWAY
VOR DME Rwy 19R

ATIS		126.12		*GARDERMOEN Approach		East 119.97 West 120.45	
GARDERMOEN Tower		2200-0530		*Ground		121.92 121.67 121.72	
West Incl Rwy 01L/19R		118.3		All Sectors		118.3	
Rwy 01R/19L		120.1		MISSED APCH:		Climb on R-018 inbound to VOR. Continue climb on R-198 to D2.0 to minimum 1500'. Climbing turn RIGHT to intercept and proceed on R-218 to SONER to 4000' and hold.	
VOR GRM	Final	Minimum Alt	MDA(H)	Apt Elev	681'		
115.95	198°	4000' (3325')	D10.8	Refer to Minimums	RWY 675'		
MISSED APCH:		Climb on R-018 inbound to VOR. Continue climb on R-198 to D2.0 to minimum 1500'. Climbing turn RIGHT to intercept and proceed on R-218 to SONER to 4000' and hold.					
Alt Set: hPa		Rwy Elev: 25 hPa		Trans level: By ATC		Trans alt: 7000'	
MSA GRM VOR		3800'		3400'		270'	



PANS OPS 4

Grid speed-Kts	70	90	100	120	140	160	HIALS	Refer to Missed Apch above	
Descent Gradient	5.8%	411	529	587	705	822	940		
MAP at D2.0								PAPER	

JAR-OPS STRAIGHT-IN LANDING Rwy 19R

MDA(H): A: 1060' (385')

CIRCLE-TO-LAND Not authorized East of rwy 01L/19R

Max Kts	100	1090' (409')	1500m
ALS out	100	1190' (509')	1600m
VIS	135	2040' (1359')	2400m

RVR 900m RVR 1500m
 RVR 1000m RVR 1800m
 RVR 1400m RVR 2000m

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