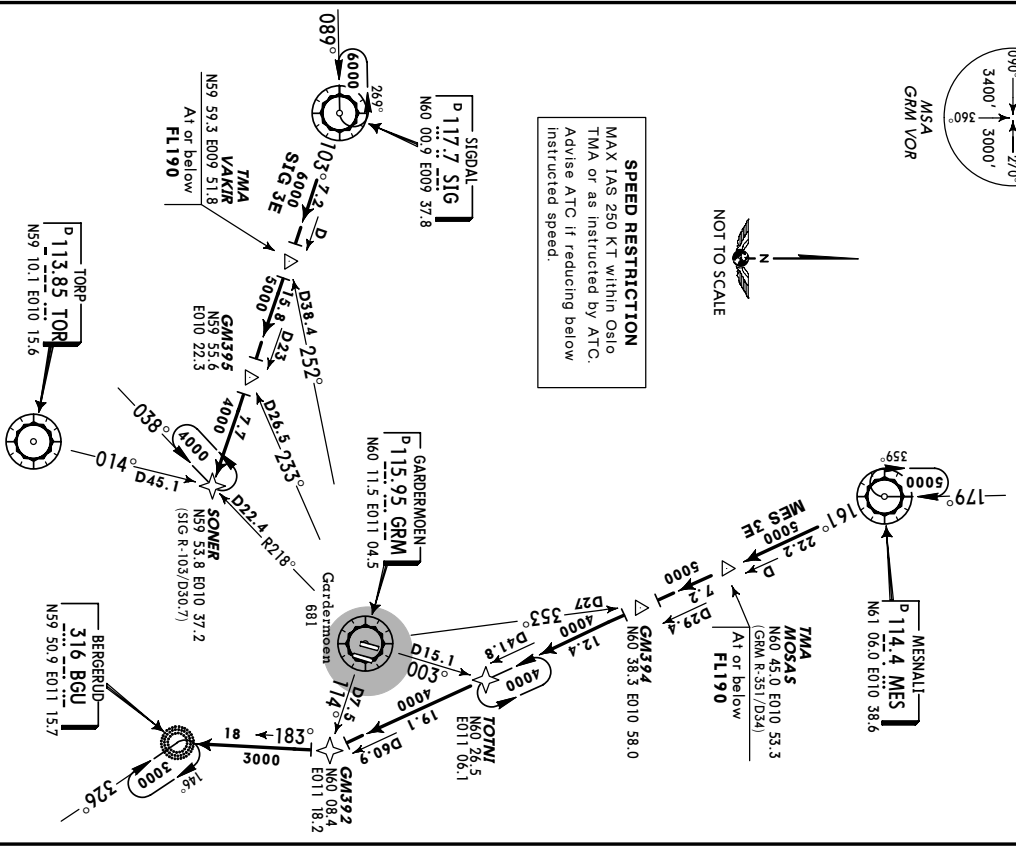


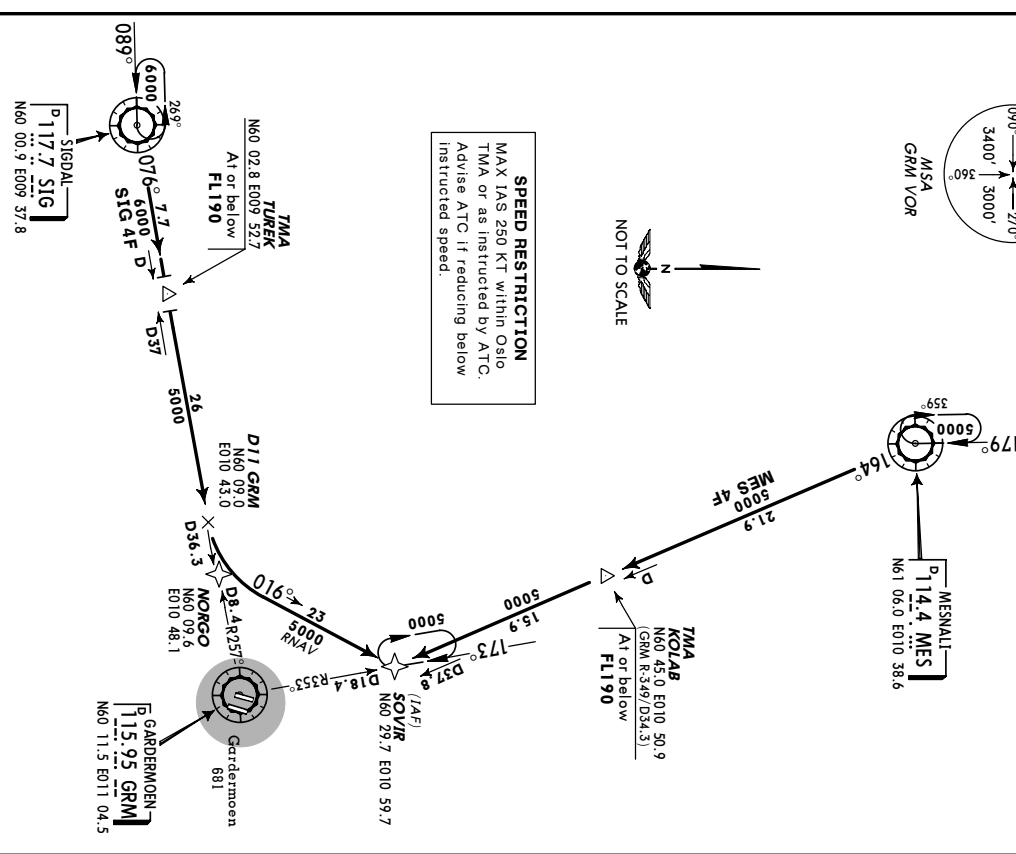
**JEPPESEN** 12 JUL 02 **(10-2)** **STAR**  
**OSLO, NORWAY**  
**GARDERMOEN**  
**RNAV (VOR/DME)**  
**ATIS 126.12**  
**TRANS LEVEL: BY ATC**  
**TRANS ALT: 7000**

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



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

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



**STAR**

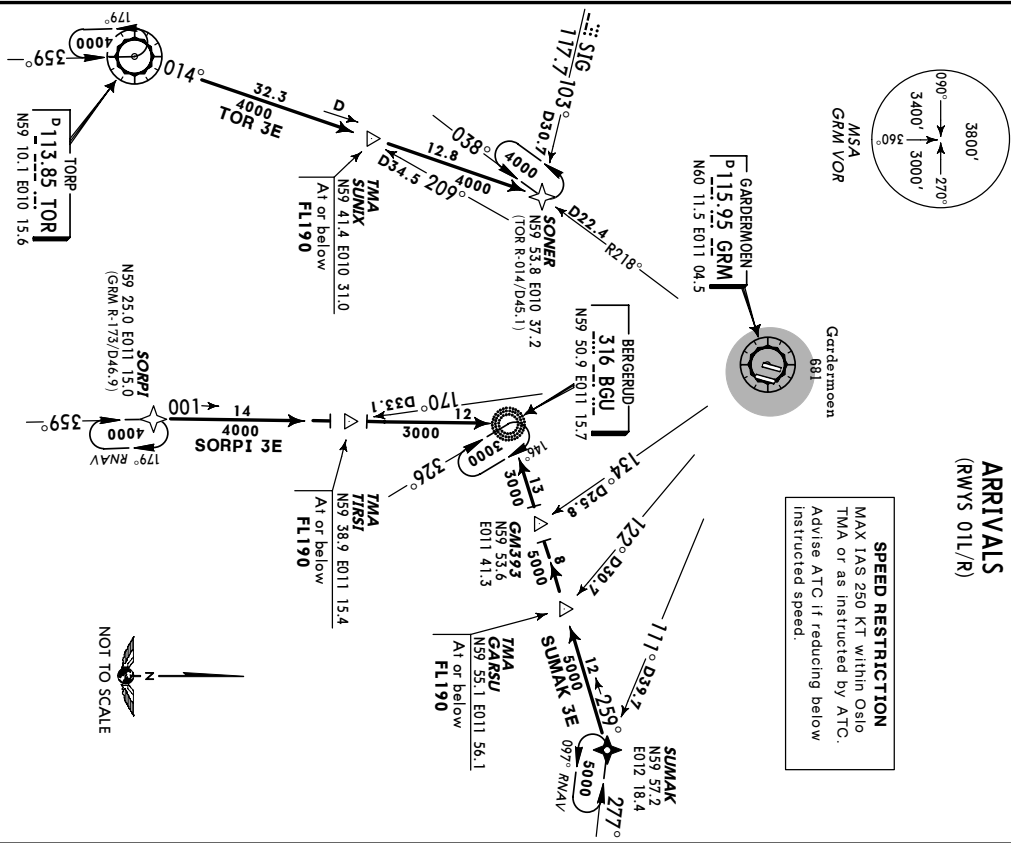
**OSLO, NORWAY**  
GARDERMØEN

RNAV (VOR/DME)

(10-2B)

ATIS **126.12**  
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
<b>SORPI 3E</b>	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 <b>FL190</b> .
<b>SUMAK 3E</b>	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 <b>FL190</b> .
<b>TOR 3E</b>	Intercept TOR R-014 via Sunix Int to Soner Int. RNAV: TOR VORDME - SUNIX - SONER.	Cross Sunix Int at or below <b>FL190</b> .

Expect radar vectoring for sequencing to final.  
CHANGES: STAR, SORPI 3E & SUMAK 3E routing text revised. © JEPPESEN SANDERSON, INC., 1998, 2002. ALL RIGHTS RESERVED.

**STAR**

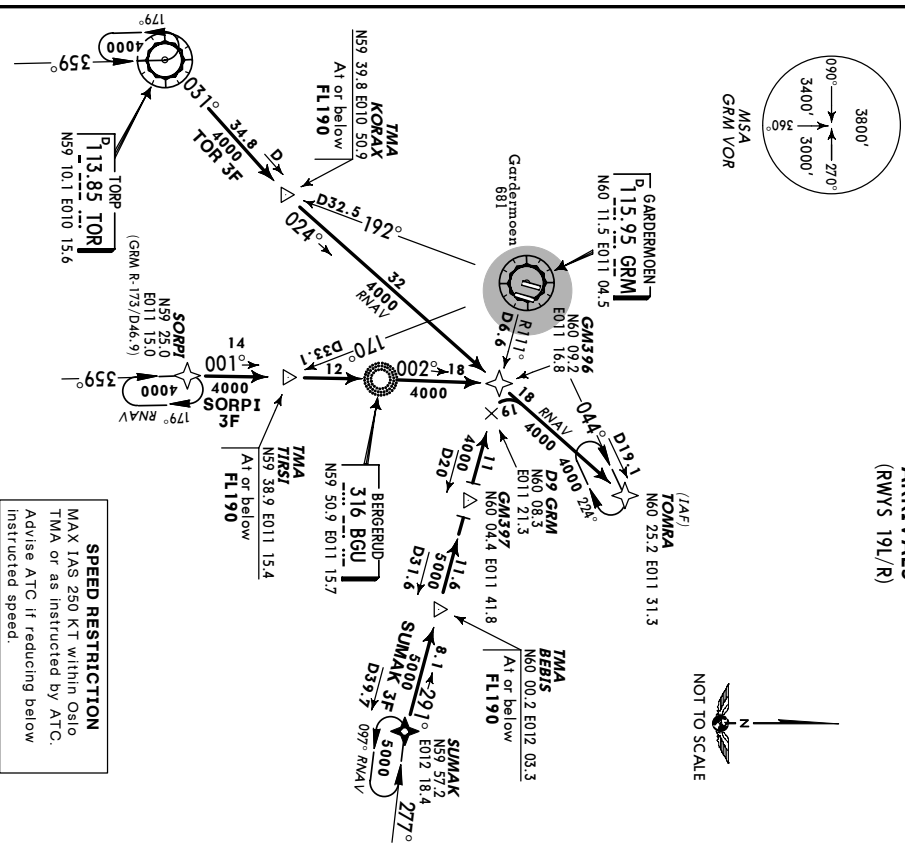
**OSLO, NORWAY**  
GARDERMØEN

RNAV (VOR/DME)

(10-2C)

ATIS **126.12**  
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
<b>SORPI 3F</b>	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 <b>FL190</b> .
<b>SUMAK 3F</b>	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 <b>FL190</b> .
<b>TOR 3F</b>	Intercept TOR R-031 to Korax Int, 024° track to Tomra Int. (RNAV equipment required after Korax Int). RNAV: TOR VORDME - KORAX - GM396 - TOMRA.	Cross Korax Int at or below <b>FL190</b> .

Expect radar vectoring for sequencing to final.  
CHANGES: Routing text revised. © JEPPESEN SANDERSON, INC., 1998, 2002. ALL RIGHTS RESERVED.

**JEPPESEN** 11 JAN 02 **(10-3)** **EFF 24 Jan**  
 \* OSLO Approach (R) **119.97** (East) **120.45** (West)  
 TRANS LEVEL: BY ATC  
 TRANS ALT: 7000

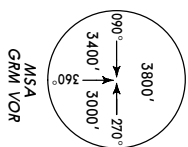
**OSLO, NORWAY**  
**GARDERMOEN**

**SID**

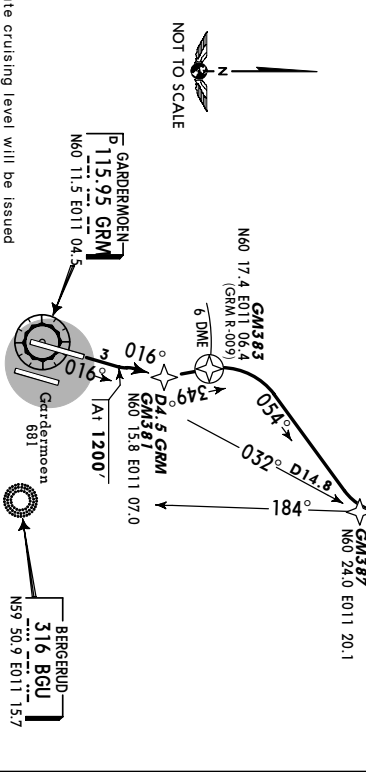
**TOMBO FOUR ALFA (TOMBO 4A) [TOMB4A]**  
**TORGA FOUR ALFA (TORGA 4A) [TORG4A]**

**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



**SPEED RESTRICTION**  
 MAX IAS 220 KT to GRM 6 DME,  
 thereafter by Oslo Approach.



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

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

**TAKE-OFF/ROUTING**  
 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 - TOMBO.

**CLIMB INSTRUCTION**  
 Climb to 7000'.

**JEPPESEN** 11 JAN 02 **(10-3A)** **EFF 24 Jan**  
 \* OSLO Approach (R) **119.97** (East) **120.45** (West)  
 TRANS LEVEL: BY ATC  
 TRANS ALT: 7000

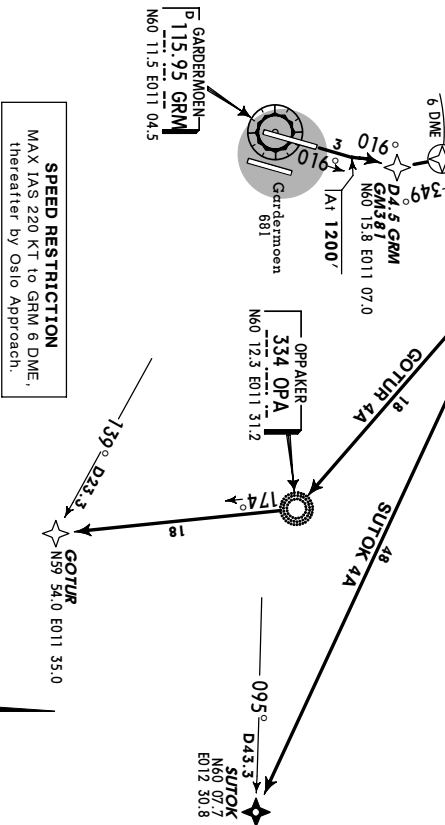
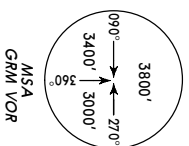
**OSLO, NORWAY**  
**GARDERMOEN**

**SID**

**GOTUR FOUR ALFA (GOTUR 4A) [GOTU4A]**  
**SUTOK FOUR ALFA (SUTOK 4A) [SUTO4A]**

**DEPARTURES**

(RWY 01L)  
 TO EAST



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

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

**TAKE-OFF**  
 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'+).

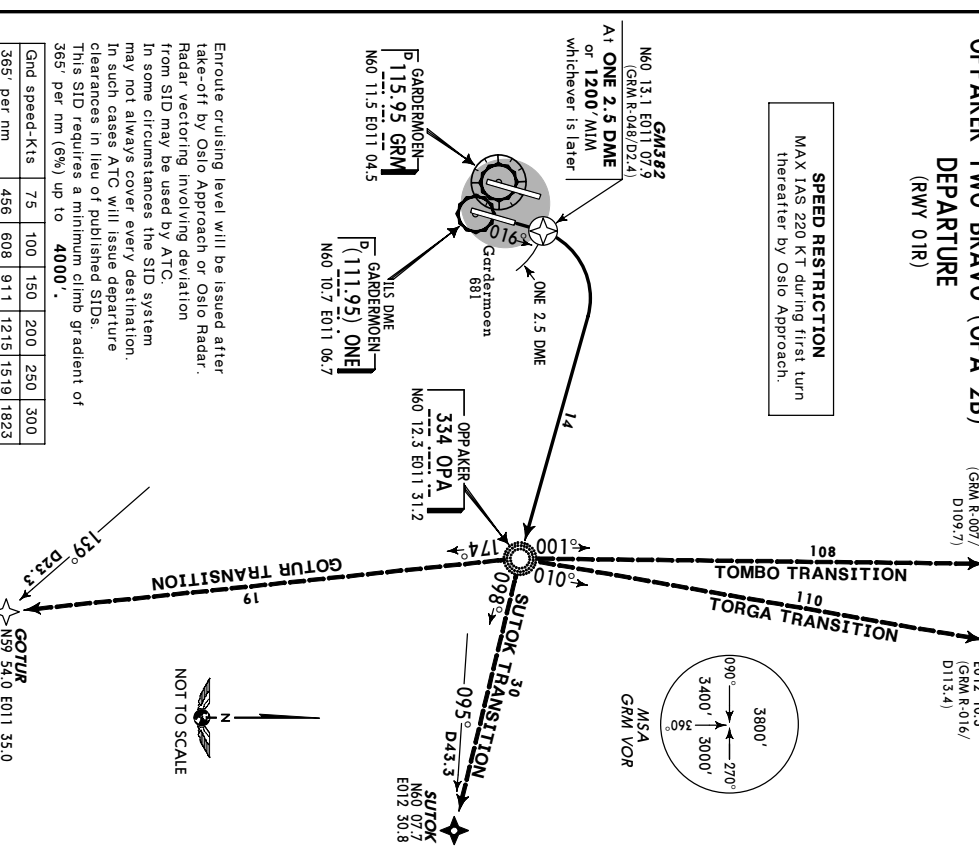
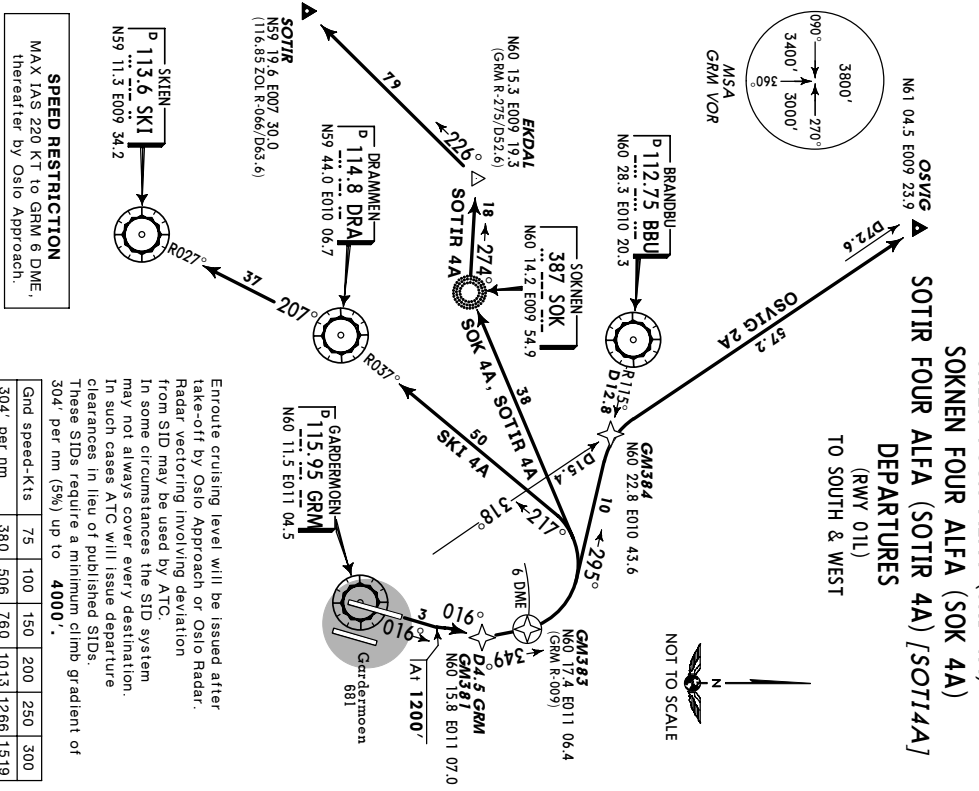
**ROUTING**  
 To OPA NDB, 174° bearing to Gotur Int.  
**GOTUR 4A**  
**FMS/RNAV:** OPA NDB - GOTUR.  
**SUTOK 4A**  
**FMS/RNAV:** SUTOK.

Normally not to be used between 2300-0630LT.

**CLIMB INSTRUCTION**  
 Climb to 7000'.

**JEPPESSEN** 11 JAN 02 (10-3B) **EFF 24 Jan** **OSLO, NORWAY**  
 \* OSLO Approach (R) **119.97** (East) **120.45** (West)  
 TRANS LEVEL: BY ATC  
 TRANS ALT: 7000

**JEPPESSEN** 11 JAN 02 (10-3C) **EFF 24 Jan** **OSLO, NORWAY**  
 \* OSLO Approach (R) **119.97** (East) **120.45** (West)  
 TRANS LEVEL: BY ATC  
 TRANS ALT: 7000



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'.

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. This SID requires a minimum climb gradient of 365' per nm (6%) up to 4000'.

SID	TAKE-OFF	CLIMB INSTRUCTION
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: GMS381 - GMS383		Climb to 7000'.
<b>OSVIG 2A</b>	Intercept BBU R-115 inbound, intercept GRM R-318 to OSVIG Int.	
<b>SKI 4A</b>	Intercept DRA R-037 inbound to DRA VORDME, then to SKI VORDME.	
<b>SOK 4A</b>	To SOK NDB.	
<b>SOTIR 4A</b>	To SOK NDB, 274° bearing to Ekdal Int, then to Sotir Int.	
<b>FMS/RNAV:</b>	SOK NDB - EKDAL - SOTIR.	

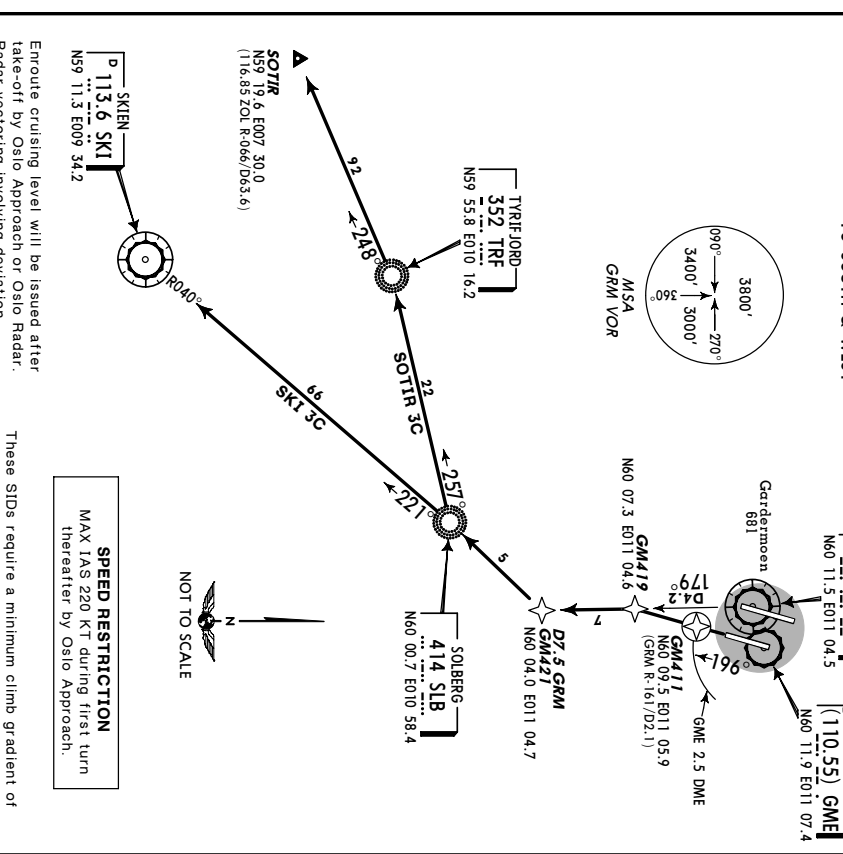
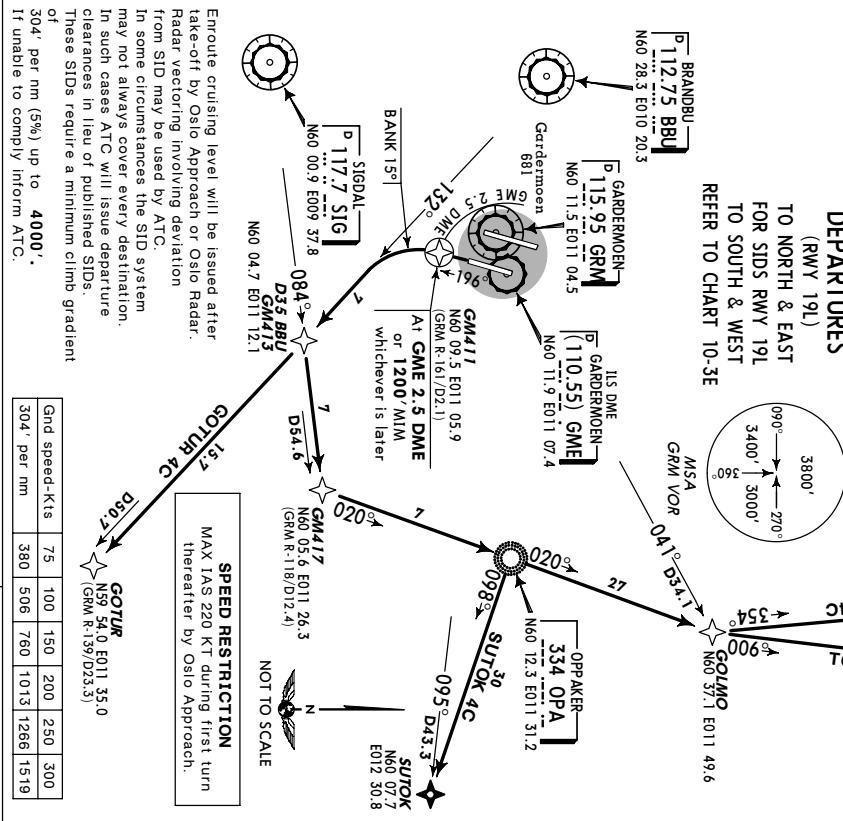
SID	TAKE-OFF/ROUTING	CLIMB INSTRUCTION
Climb on 016° track to ONE 2.5 DME or later, turn RIGHT to OPA NDB. FMS/RNAV: GMS382 - OPA NDB.		Climb to 4000'.
<b>GOTUR</b>	174° bearing to Gotur Int.	
<b>SUTOK</b>	098° bearing to Sutok Int.	
<b>TOMBO</b>	001° bearing to Tombo Int.	
<b>TORGA</b>	010° bearing to Torga Int.	
<b>FMS/RNAV:</b>	TORGA.	

**OSLO, NORWAY**  
**GARDERMØEN**  
 \* OSLO Approach (R) **119.97** (East) **120.45** (West)  
 TRANS LEVEL: BY ATC  
 TRANS ALT: 7000

**OSLO, NORWAY**  
**GARDERMØEN**  
 \* OSLO Approach (R) **119.97** (East) **120.45** (West)  
 TRANS LEVEL: BY ATC  
 TRANS ALT: 7000

**GOTUR FOUR CHARLIE (GOTUR 4C) [GOTU4C]**  
**SUTOK FOUR CHARLIE (SUTOK 4C) [SUTO4C]**  
**TOMBO FOUR CHARLIE (TOMBO 4C) [TOMB4C]**  
**TORGA FOUR CHARLIE (TORGA 4C) [TORG4C]**  
**DEPARTURES**  
 (RWY 19L)  
 TO NORTH & EAST  
 FOR SIDS RWY 19L  
 TO SOUTH & WEST  
 REFER TO CHART 10-3E

**SKIEN THREE CHARLIE (SKI 3C)**  
**SOTIR THREE CHARLIE (SOTIR 3C) [SOTI3C]**  
**DEPARTURES**  
 (RWY 19L)  
 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. These SIDs require a minimum climb gradient of 304' per nm (5%) up to 4000'. If unable to comply inform ATC.**

SID	TAKE-OFF	CLIMB INSTRUCTION
<b>GOTUR 4C</b>	To Gotur Int. <b>FMS/RNAV: GOTUR.</b>	Climb to 7000'.
<b>SUTOK 4C</b>	To D35 BBU, turn LEFT, intercept SIG R-084, intercept 020° bearing to OPA NDB, 098° bearing to Sutok Int. <b>FMS/RNAV: GM417 - OPA NDB - SUTOK.</b>	Climb to 7000'.
<b>TOMBO 4C</b>	To D35 BBU, turn LEFT, intercept SIG R-084, intercept 020° bearing to OPA NDB, continue on 020° bearing to Tombo Int. <b>FMS/RNAV: GM417 - OPA NDB - GOLMO - TOMBO.</b>	Climb to 7000'.
<b>TORGA 4C</b>	To D35 BBU, turn LEFT, intercept SIG R-084, intercept 020° bearing to OPA NDB, continue on 020° bearing to Torga Int. <b>FMS/RNAV: GM417 - OPA NDB - GOLMO - TORGA.</b>	Climb to 7000'.

**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'. If unable to comply inform ATC.**

SID	TAKE-OFF/ROUTING	CLIMB INSTRUCTION
<b>SKI 3C</b>	On 196° track, intercept GRM R-179 to D7.5 GRM, turn RIGHT to SLB NDB, 221° bearing (SKI R-040 In-bound) to SKI VOR/DME. <b>FMS/RNAV: GM411 - GM419 - SLB NDB - SKI VOR/DME.</b>	Climb to 7000'.
<b>SOTIR 3C</b>	On 196° track, intercept GRM R-179 to D7.5 GRM, turn RIGHT to SLB NDB, 257° bearing to TRF NDB, 248° bearing to Sotir Int. <b>FMS/RNAV: GM411 - GM419 - SLB NDB - TRF NDB - SOTIR.</b>	Climb to 7000'.



**JEPPESSEN**

11 FEB 00

**10-4**

**NOISE**  
**OSLO, NORWAY**  
GARDEMOEN

**NOISE ABATEMENT PROCEDURES**

**GENERAL**

All aircraft activities on ground and in air at Oslo Gardemoen airport are subject to the provisions stated below. The aim of this regulation is to minimize noise exposure and maintain capacity and safe aircraft operation.

Operators with jet aircraft not complying with ICAO Annex 16 Chapter 3 are only allowed between 0800LT-1600LT

Between 0000LT-0600LT the maximum noise level shall not exceed 78 PNdB outside aircraft noise zone 2. In the same period operations with aircraft with noise certification exceeding 88 PNdB at departure are not permitted. Under special circumstances, exemptions may be granted.

The limitations above do not apply to delayed scheduled passenger aircraft which are allowed to land and take-off later than scheduled. Nor do the limitations apply to aircraft arriving for technical overhaul or maintenance.

Ambulance flights and flights engaged in search, firefighting and rescue operations are permitted at any time.

Independent from the limitations above, landing is permitted at any time when, in opinion of the pilot in command, flight to another airport is inadvisable for safety reasons. The pilot in command shall report to CAA Norway the reasons for such landings.

Oslo Gardemoen airport is open all time (H24), and may be used as alternate AD.

**PREFERENTIAL RUNWAY SYSTEM**

Runways 01R and 19R are preferential runways for landings. Runways 01L and 19L are preferential runways for take-offs. This preference may, when capacity demand requires, be deviated from, preferably by aircraft with noise certification equal to or below 85 PNdB. Take-offs from runway 19R are permitted for westbound and northwestbound SIDs turning westbound after take-off, when traffic situation allows or when operational reasons require so. As far as weather and traffic conditions permit, landings between 2300-0630LT shall be executed on runway 19R, take-offs between 2300-0630LT shall be executed on runway 01L.

**ARRIVALS**

Aircraft with MTOW more than 5700kg shall be established on the extended centerline at 2500' MIM before continuing descent for landing.

All aircraft not complying with noise certification equal to or below 85 PNdB shall be established on the extended centerline not later than 7.6nm before runway threshold to the south and not later than 7nm before runway threshold to the north.

Between 2300-0630LT all aircraft shall be established on the extended centerline not later than 10.8nm before runway threshold.

Aircraft with a MTOW in excess of 5700kg making a visual approach, shall follow a descent path from 2500' MIM which ensures at least the same height above ground as if the ILS glide path has been followed.

**DEPARTURES**

All aircraft must follow the initial climb-out procedures as laid down in the SIDs (between 2300-0630LT, when weather and operational conditions permit up to the noise critical altitudes stated below), aircraft with MTOW more than 5700kg up to the noise critical altitudes stated below.

Aircraft with MTOW more than 5700kg shall climb at least to 3700' with speed, power and flap settings in accordance to ICAO DOC 8168, VOL 1.

Noise critical altitude for jet aircraft with noise certification in excess of 88 PNdB at departure is 5000'. For jet aircraft having lower noise certification levels, the noise critical altitude is 4000'.

When air traffic capacity allows, a noise critical altitude of 5000' will be applied to all jet aircraft.

In the period between 2300-0630LT the noise critical altitude is 7000' for jet aircraft and 3000' for all other aircraft.

cont'd

**JEPPESSEN**

11 FEB 00

**10-4A**

**NOISE**  
**OSLO, NORWAY**  
GARDEMOEN

**NOISE ABATEMENT PROCEDURES**

For helicopter and propeller driven aircraft with MTOW more than 5700kg the noise critical altitude is 1700'.

Above the noise critical altitude aircraft may deviate from planned SID. With due regard to efficient traffic regulation, the said climb-out procedures shall be followed also above noise critical altitude.

**REVERSE THRUST**

Reverse thrust other than idle shall not be used between 2300-0630LT except for safety reasons.

**RUN-UP TESTS**

After maintenance, engine testing applying more than idle thrust must take place in a special noise dampening site, following instructions issued by the C.A.A.

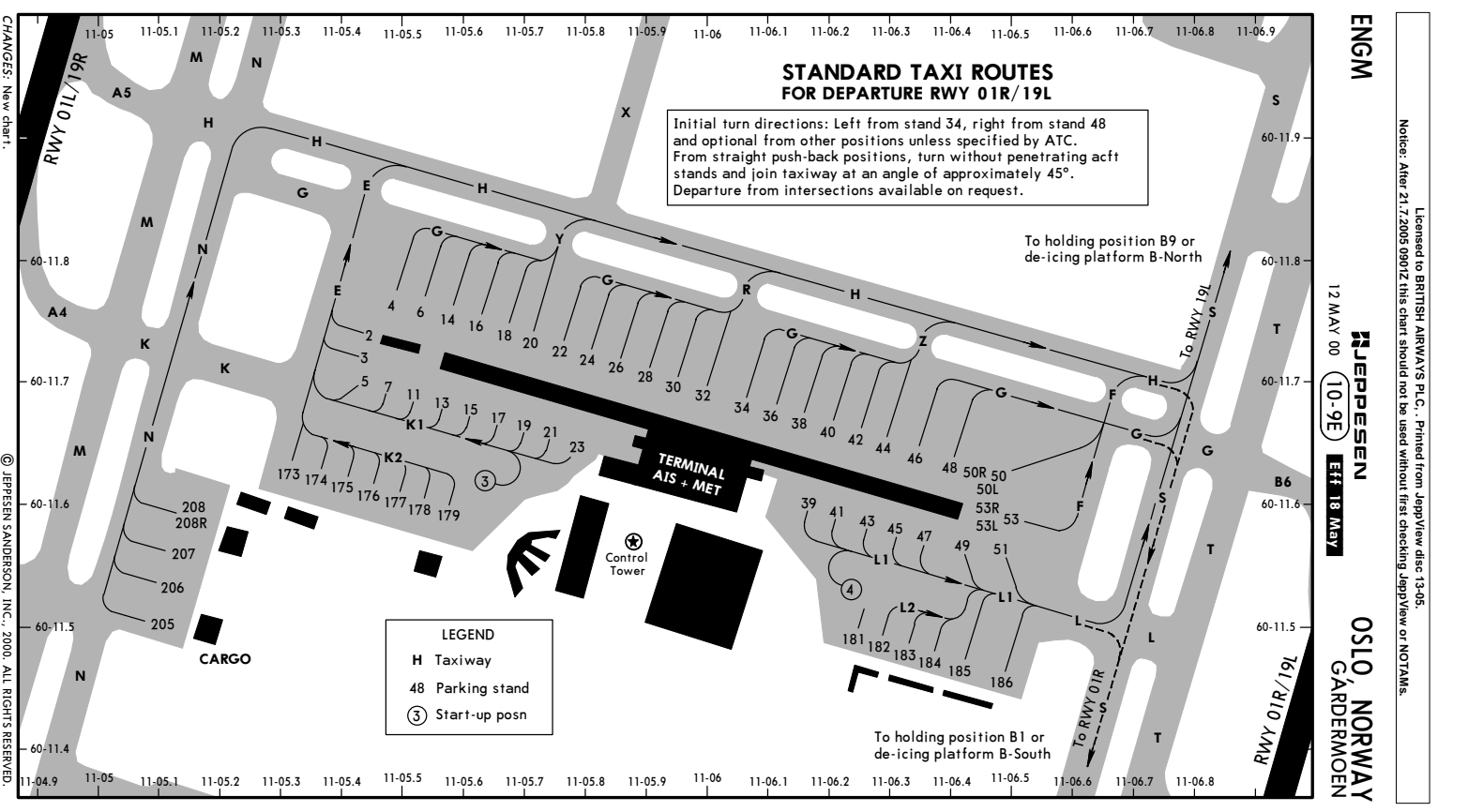
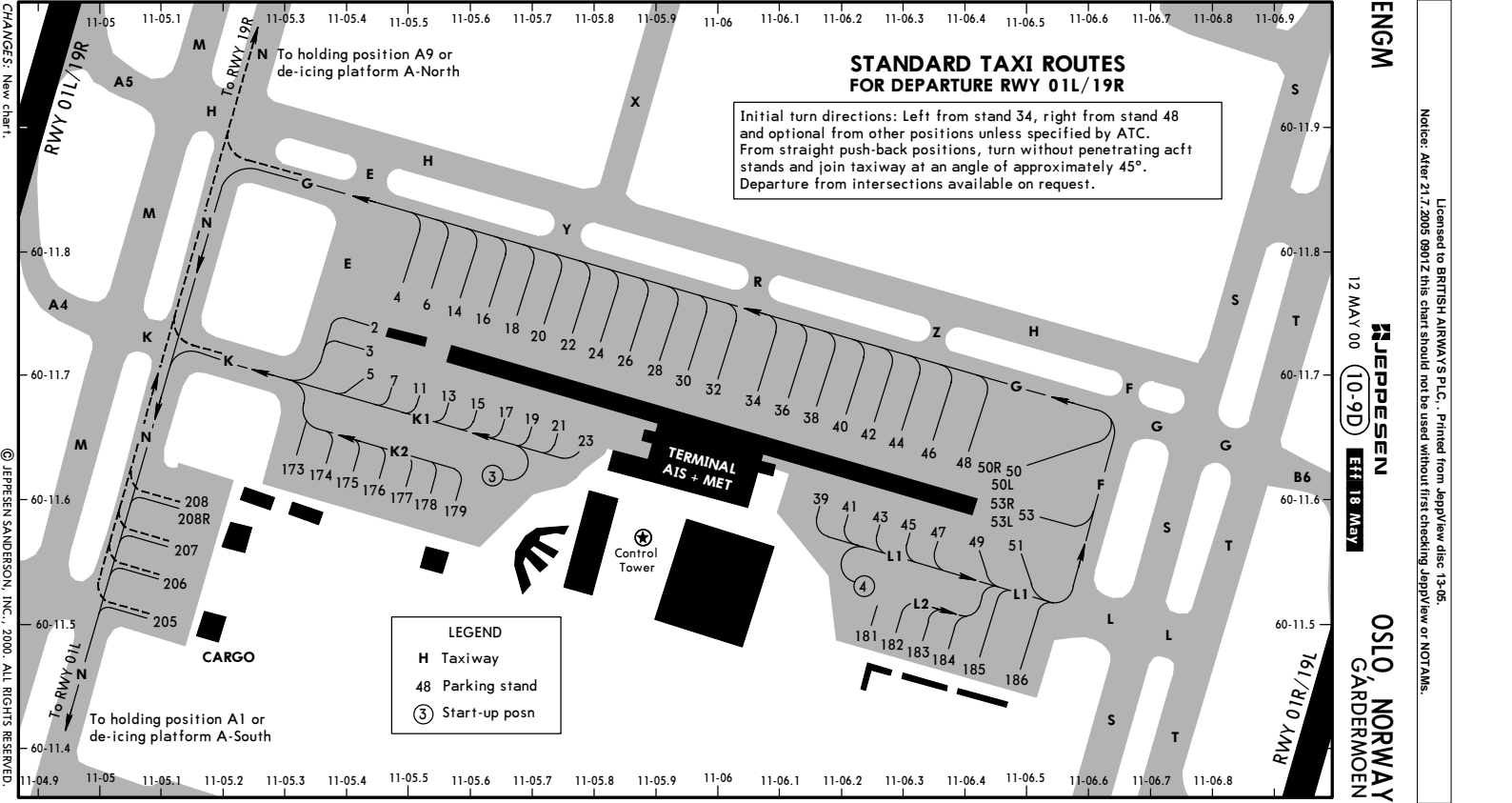
**AUXILIARY POWER UNIT (APU)**

The use of APUs shall not exceed 5 minutes after arrival or 5 minutes before departure to/from parking stand.



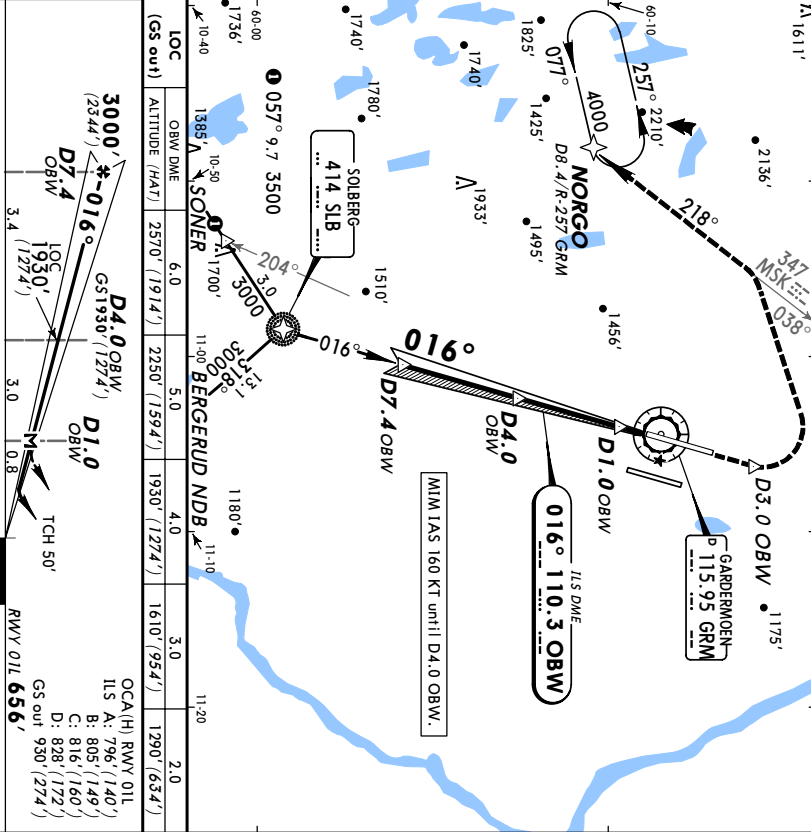






**ENGM**  
**GARDERMØEN**  
 11 JAN 02 (11-1) **JEPPesen** **ETD 24 Jan**  
**OSLO, NORWAY**  
**ILS RWY 01L**

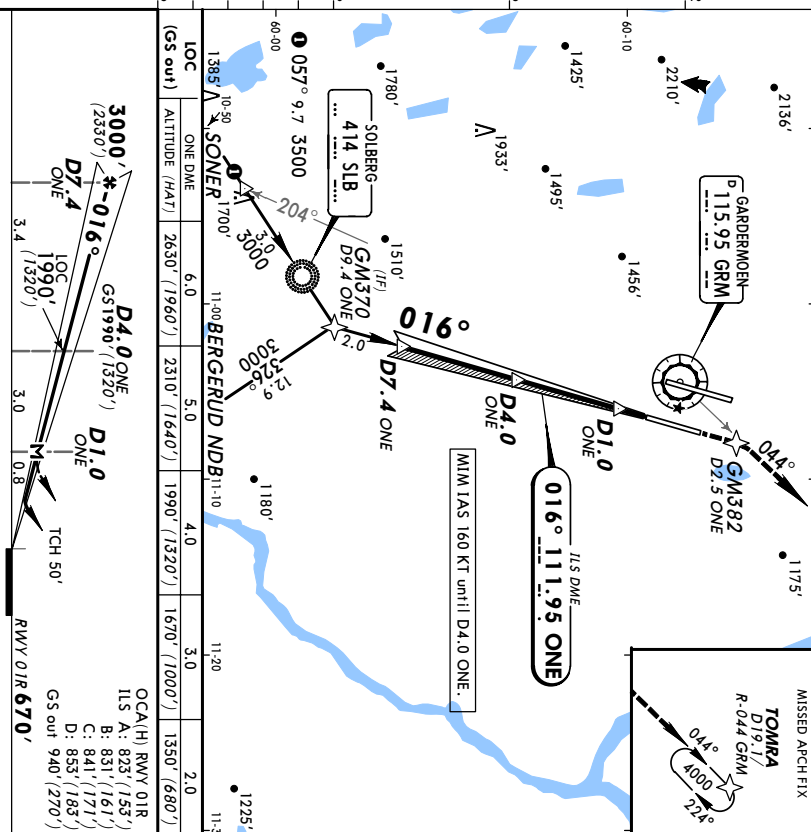
ATIS <b>126.12</b>		*GARDERMØEN Approach East <b>119.97</b> West <b>120.45</b>	
GARDERMØEN Tower 0530-2200		*Ground East <b>119.97</b> West <b>120.45</b>	
West Incl Rwy 01L/19L	East Incl Rwy 01R/19L	All Sector 118.3	
<b>118.3</b>	<b>120.1</b>		
Final LOC OBW		GS DA.0 OBW	ILS DA(H) Rwy Elev 681'
<b>110.3</b>	<b>016°</b>	<b>1930'</b> (1274')	<b>856'</b> (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.		MISSED APCH: Climb on track 016° to minimum 1200'. At GMS382/D2.5 ONE after DME turn RIGHT to Intercept R-044 GRM climbing to 3000'. On passing D10.0 GRM climb to 4000' to TOMRA and hold.	
Alt Set: Hpa Rwy Elev: 24 Hpa		Trans level: By ATC Trans alt: 7000' (6344')	
MSA GRM VOR		MSA GRM VOR	



Gnd speed-Kts		70	90	100	120	140	160
ILS GS 3.00° or		377	485	539	647	755	862
LOC Desc Grad 5.2%							
MAP at D1.0 OBW							
JAR-OPS STRAIGHT-IN LANDING RWY 01L		LOC (GS out)					
ILS		Not authorized East of rwy 01L/19R					
DA(H) <b>856'</b> (200')		MDA(H) <b>930'</b> (274')					
FULL		AIS out					
A		Max Kts		MDA(H) <b>1090'</b> (409')			
B	RVR 550m	RVR 1500m		RVR 1500m			
C	RVR 1000m	RVR 800m		RVR 1600m			
D		RVR 1200m		RVR 1800m			
		RVR 1800m		RVR 2400m			
		RVR 1800m		RVR 3600m			

**ENGM**  
**GARDERMØEN**  
 11 JAN 02 (11-2) **JEPPesen** **ETD 24 Jan**  
**OSLO, NORWAY**  
**ILS RWY 01R**

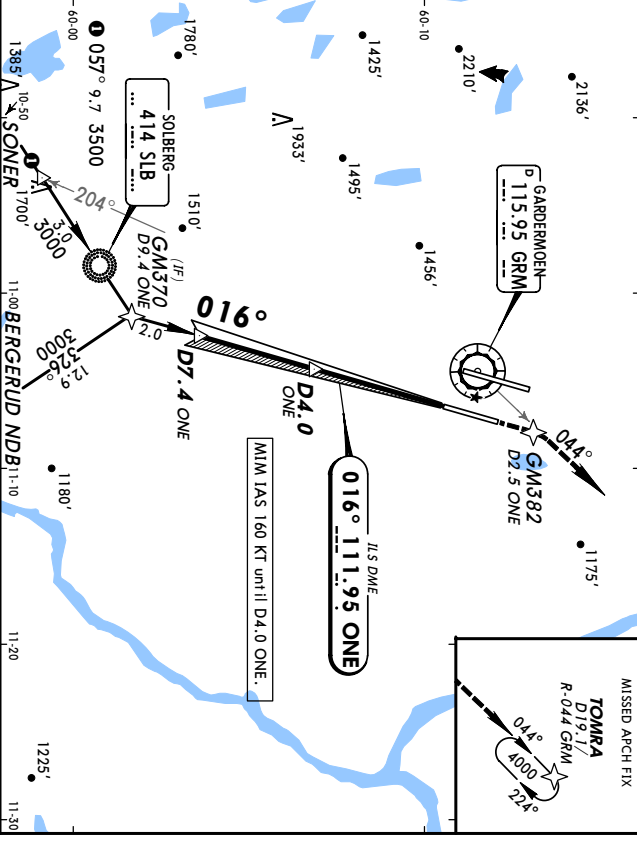
ATIS <b>126.12</b>		*GARDERMØEN Approach East <b>119.97</b> West <b>120.45</b>	
GARDERMØEN Tower 0530-2200		*Ground East <b>119.97</b> West <b>120.45</b>	
West Incl Rwy 01L/19R	East Incl Rwy 01R/19L	All Sector 118.3	
<b>118.3</b>	<b>120.1</b>		
Final LOC ONE		GS DA.0 ONE	ILS DA(H) Rwy Elev 681'
<b>111.95</b>	<b>016°</b>	<b>1990'</b> (1320')	<b>870'</b> (200')
MISSED APCH: Climb on track 016° to minimum 1200'. At GMS382/D2.5 ONE after DME turn RIGHT to Intercept R-044 GRM climbing to 3000'. On passing D10.0 GRM climb to 4000' to TOMRA and hold.		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.	
Alt Set: Hpa Rwy Elev: 24 Hpa		Trans level: By ATC Trans alt: 7000' (6350')	
MSA GRM VOR		MSA GRM VOR	



Gnd speed-Kts		70	90	100	120	140	160
ILS GS 3.00° or		377	485	539	647	755	862
LOC Desc Grad 5.2%							
MAP at D1.0 ONE							
JAR-OPS STRAIGHT-IN LANDING RWY 01R		LOC (GS out)					
ILS		Not authorized West of rwy 01R/19L					
DA(H) <b>870'</b> (200')		MDA(H) <b>940'</b> (270')					
FULL		AIS out					
A		Max Kts		MDA(H) <b>1290'</b> (609')			
B	RVR 550m	RVR 1500m		RVR 1500m			
C	RVR 1000m	RVR 800m		RVR 1600m			
D		RVR 1200m		RVR 1800m			
		RVR 1800m		RVR 2400m			
		RVR 1800m		RVR 3600m			

**ENGM GARDERMOEN** 11 JAN 02 (1-2A) **JEPPESSEN EFF 24 Jan** **CAT II ILS RWY 01R** OSLO, NORWAY ILS RWY 01R

ATIS 126.12		*GARDERMOEN Tower		*GARDERMOEN Approach	
GARDERMOEN Tower		East 119.97		West 120.45	
0530-2200		All 2200-0530		*Ground	
West Incl Rwy 01L/19L 118.3		East Incl Rwy 01R/19L 120.1		Sector 118.3	
LOC ONE	Final Appch Crs	GS D4.0 ONE	DA(H) 770'(100')	RA 102'	APt Elev 681'
111.95	016°	1990'(1320')	121.92	121.67	121.72
<b>MISSED APCH:</b> 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 D10.0 GRM climb to 4000' to TOMRA and hold.					
Alt Set: hPa Rwy Elev: 24 hPa Trans level: By ATIS Trans alt: 7000' (6350') Special Aircrew & Aircraft Certification Required.					

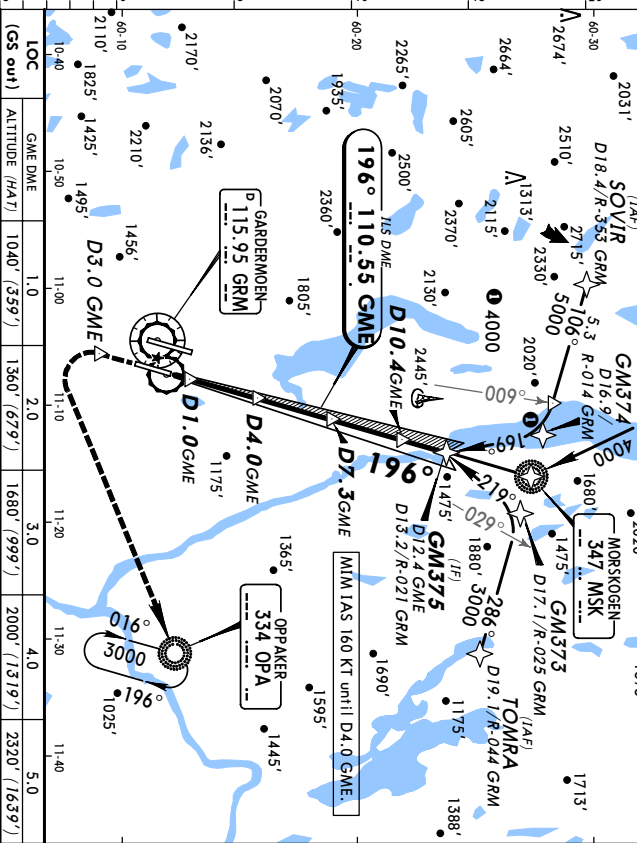


Gnd speed-Kts		70	90	100	120	140	160	HAIS		1200'	on 016°
ILS GS 3.00° or		377	485	539	647	755	862	PAPI			
LOC Desc Grad 5.2%											
MAP at D1.0 GME											

**JAR-OPS** STRAIGHT-IN LANDING RWY 01R  
 CAT II ILS  
 ABCD  
**RA 102'**  
 DA(H) **770'(100')**  
 RVR **300m**  
 Operators applying U.S. Specs: CAT III authorization required below RVR 350m.  
 CHANGES: Approach frequency. Missed approach. Bearings. © JEPPESSEN SANDERSON, INC., 2001, 2002. ALL RIGHTS RESERVED.

**ENGM GARDERMOEN** 11 JAN 02 (1-3) **JEPPESSEN EFF 24 Jan** **CAT II ILS RWY 19L** OSLO, NORWAY ILS RWY 19L

ATIS 126.12		*GARDERMOEN Tower		*GARDERMOEN Approach	
GARDERMOEN Tower		East 119.97		West 120.45	
0530-2200		All 2200-0530		*Ground	
West Incl Rwy 01L/19R 118.3		East Incl Rwy 01R/19L 120.1		Sector 118.3	
LOC GME	Final Appch Crs	GS D4.0 GME	DA(H) 881'(200')	ILS	APt Elev 681'
110.55	196°	2000'(1319')	121.92	121.67	121.72
<b>MISSED APCH:</b> Climb on track 196° to D3.0 GME after DME, then turn LEFT to OPA NDB climbing to 3000' and hold.					
Alt Set: hPa Rwy Elev: 25 hPa Trans level: By ATIS Trans alt: 7000' (6319') MSA GRM VOR					



Gnd speed-Kts		70	90	100	120	140	160	HAIS		1200'	on 196°
ILS GS 3.00° or		377	485	539	647	755	862	PAPI			
LOC Desc Grad 5.2%											
MAP at D1.0 GME											

**JAR-OPS** STRAIGHT-IN LANDING RWY 19L  
 LOC (GS out)  
 CIRCLE-TO-LAND  
 Not authorized  
 West of rwy 01R/19L  
 DA(H) **881'(200')** MDA(H) **1020'(339')**  
 FULL ALS out  

A	RVR 900m	RVR 1500m	135	1290'(609')	1500m
B	RVR 1000m	RVR 1800m	180	1290'(609')	1600m
C	RVR 550m	RVR 1000m	180	1380'(699')	2400m
D	RVR 1400m	RVR 2000m	205	1570'(889')	3600m

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

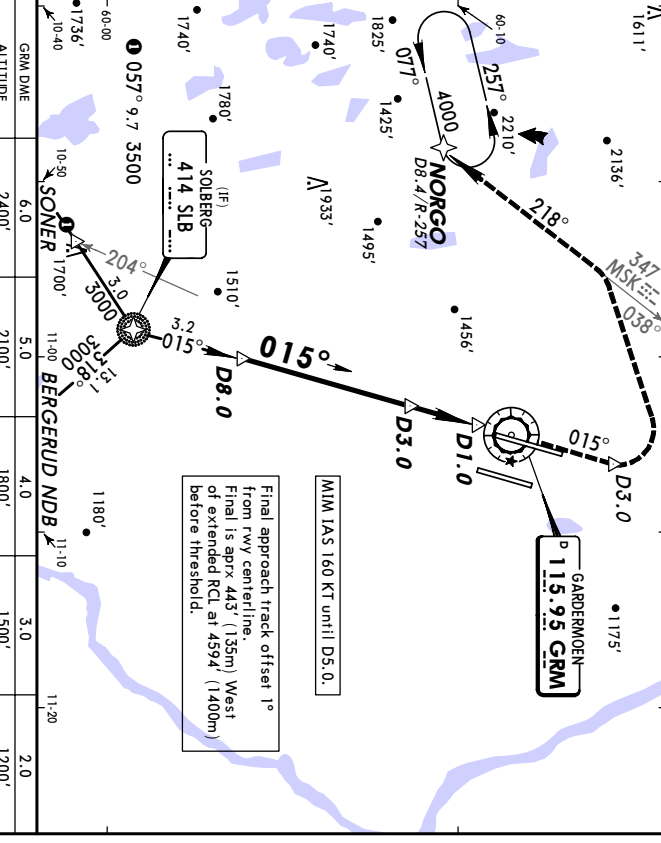
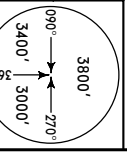


**ENGM/OSL**  
**GARDERMØEN**  
 18 JUL 03 (3-1)  
**OSLO, NORWAY**  
**VOR DME Rwy 01L**

ATIS	126.12	*GARDERMØEN Tower	All	2200-0530	*GARDERMØEN Approach	East	119.97	West	120.45
West Incl	0530-2200	East Incl	120.1	Sections	118.3	*Ground	121.92	121.67	121.72
Rwy 01L/19R	118.3	Rwy 01R/19L	120.1						
<b>VOR</b>	<b>Final</b>	<b>Minimum A/H</b>	<b>MDA(H)</b>	<b>Apch Elev</b>	<b>881'</b>				
<b>GRM</b>	<b>Apch Crs</b>	<b>D8.0</b>	<b>Refer to Minimums</b>	<b>RWY</b>	<b>656'</b>				
<b>115.95</b>	<b>015°</b>	<b>3000' (2344')</b>							

**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 NORGØ to 4000' and hold.

Alt Set: hPa Rwy Elev: 24 Hpa Trans level: By ATC Trans alt: 7000' MSA GRM VOR



GRM DME	6.0	5.0	4.0	3.0	2.0
ALTITUDE	2400'	2100'	1800'	1500'	1200'

GRD speed-Kts	70	90	100	120	140	160
Descent Grad	5.0%	354	456	506	608	709
MAP at D1.0						810

JAR-OPS	STRAIGHT-IN LANDING RWY 01L	CIRCLE-TO-LAND
MDA(H)	A: 1000 (344') C: 1050 (394')	Not authorized
B:	1020 (364') D: 1070 (414')	East of rwy 01L/19R

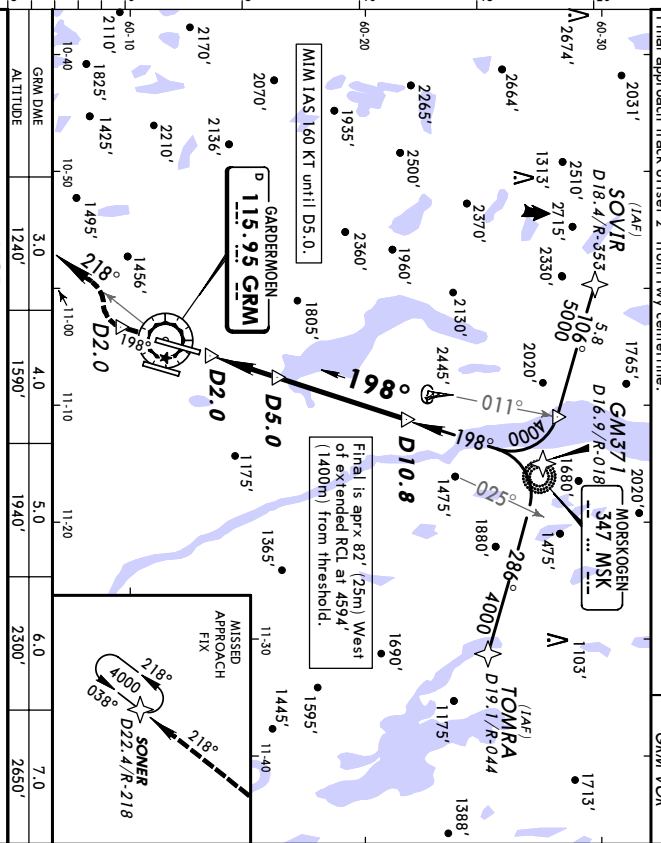
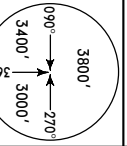
Max Kts	MDA(H)	VIS
100	1090 (409')	1500m
135	1190 (509')	1600m
180	2040 (1359')	2400m
205	2250 (1569')	3600m

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

ATIS	126.12	*GARDERMØEN Tower	All	2200-0530	*GARDERMØEN Approach	East	119.97	West	120.45
West Incl	0530-2200	East Incl	120.1	Sections	118.3	*Ground	121.92	121.67	121.72
Rwy 01L/19R	118.3	Rwy 01R/19L	120.1						
<b>VOR</b>	<b>Final</b>	<b>Minimum A/H</b>	<b>MDA(H)</b>	<b>Apch Elev</b>	<b>881'</b>				
<b>GRM</b>	<b>Apch Crs</b>	<b>D10.8</b>	<b>Refer to Minimums</b>	<b>RWY</b>	<b>675'</b>				
<b>115.95</b>	<b>198°</b>	<b>4000' (3325')</b>							

**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



GRM DME	3.0	4.0	5.0	6.0	7.0
ALTITUDE	1240'	1590'	1940'	2300'	2650'

GRD speed-Kts	70	90	100	120	140	160
Descent Grad	5.8%	411	529	587	705	822
MAP at D2.0						940

JAR-OPS	STRAIGHT-IN LANDING RWY 19R	CIRCLE-TO-LAND
MDA(H)	A: 1060 (385')	Not authorized
B:	1090 (409')	East of rwy 01L/19R

Max Kts	MDA(H)	VIS
100	1090 (409')	1500m
135	1190 (509')	1600m
180	2040 (1359')	2400m
205	2250 (1569')	3600m

