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TRANS LEVEL: BY ATC TRANS ALT: 7000' ATIS 126.12 12 JUL 02 MESNALI THREE ECHO (MES 3E) RNAV (VORDME) OSLO, NORWAY

STAR

GARDERMOEN

SIGDAL THREE ECHO (SIG 3E) **ARRIVALS**

(RWYS 01L/R)

3400′

3800'

MSA GRM VOR

2000 N61 06.0 E010 38. 114.4 MES MESNALI—

At or below **FL190**

TMA MOSA S N60 45.0 E010 53.3 (GRM R-351/D34)

NOT TO SCALE

₩ 670 **GM394** N60 38.3 E010 58.0

SPEED RESTRICTION

MAX IAS 250 KT within Oslo
TMA or as instructed by ATC.

instructed speed.

Advise ATC if reducing below

P115.95 GRM **TOTNI** N60 26.5 E011 06.1

SIGDAL D 117.7 SIG N60 00,9 E009 37.8

<u>026.5.733°</u> N60 11.5 E011 04.5 N59 53.8 E010 37.2 (SIG R-103/D30.7) 681 316 BGU N59 50.9 E011 15.7 BERGERU ~ GM392 ~ N60 08.4 E011 18.2 3000

TMA
VAKIR
N59 59.3 E009 51.8/

GM395 N59 55.6 E010 22.3

5000 023

At or below FL190

0890

Expect radar vectoring for sequencing to final Intercept MES R-161 via Mosas Int and Totni Int, at GRM R-114 turn RIGHT to BGU NDB.
RNAV: MES VORDME - MOSAS - GM394 - TOTNI -N59 10.1 E010 15.6 ROUTING $\widehat{}$

Cross Mosas Int at or below **FL190.**

ALTITUDE

Intercept SIG R-103 via Vakir Int to Soner Int.

RNAV: SIG VORDME - VAKIR - GM395 - SONER. © JEPPESEN SANDERSON, INC., 1998, 2002. ALL RIGHTS RESERVED. Cross Vakir Int at or below **FL190.**

CHANGES: See other side.

SIG 3E

MES 3E STAR

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STAR

TRANS LEVEL: BY ATC TRANS ALT: 7000' Expect radar vectoring for sequencing to final.

STAR ROU ATIS 126.12 SIG 4F MES 4F SIGDAL 117.7 SIG N60 00.9 E009 37.8 TMA TUREK N60 02.8 E009 52.7 3400′ SPEED RESTRICTION
MAX IAS 250 KT within Oslo
TMA or as instructed by ATC.
Advise ATC if reducing below
instructed speed. At or below **FL190** MSA GRM VOR 3800' Intercept SIG R-076 via Turek Int to D11 GRM, turn LEFT, 016° track to Sovir Int (RNAV equipment required Intercept MES R-164 via Kolab Int to Sovir Int. RNAV: MES VORDME - KOLAB - SOVIR. 6000 D SIG 4F 12 JUL 02 NOT TO SCALE (10-2A MESNALI FOUR FOXTROT SIGDAL FOUR FOXTROT (SIG 4F) RNAV (VORDME) . 69Σ (RWYS 19L/R) ARRIVALS D36.3 D114.4 MES N61 06.0 E010 38.6 **NORGO** N60 09.6 E010 48.1 D8.4 R257 KOLAB N60 45.0 E010 50.9 (GRM R-349/D34.3) At or below FL190 (MES 4F) 8, 150 OSLO, NORWAY 810 Cross Turek Int at or below **FL190.** Cross Kolab Int at or below **FL190. SOVIR** N60 29.7 E010 59.7 GARDERMOEN 115.95 GRM N60 11.5 E011 04.5 GARDERMOEN ALTITUDE Gardermoen 681

CHANGES: STAR SIG 4F routing text revised.

RNAV: SIG VORDME - TUREK - NORGO - SOVIR.

lfter Norgo Int)

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THANGES: STARS SORPI 3E & SUMAK 3E rouring text revised.

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CHANGES: Routing text revised.

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 $\left|\frac{\frac{-3}{117.7}SIG}{117.7}103^{\circ}_{7}\right|$ TRANS LEVEL: BY ATC TRANS ALT: 7000' ATIS Expect radar vectoring for sequencing to final SUMAK 3E (0007 SORPI 3E TOR 3E 126.12 TOR 3E 3400′ P 113.85 TOR N59 10.1 E010 15.6 MSA GRM VOR 3800' 034.5 209 3000' P115.95 GRM N60 11.5 E011 04.5 Intercept 259° bearing via Garsu Int to BGU NDB (RNAV equipment required for Sumak Int holding).

RNAV: SUMAK - GARSU - GM393 - BGU NDB. Intercept 001° bearing via Tirsi Int to BGU NDB (RNAV equipment required for Sorpi Int holding).

RNAV: SORPI - TIRSI - BGU NDB. TMA SUNIX N59 41.4 E010 31.0 intercept TOR R-014 via Sunix Int to Soner Int. At or below **FL190** GARDERMOEN SONER N59 53.8 E010 37.2 (TOR R-014/D45.1) 12 JUL 02 **SORPI** N59 25.0 E011 15.0 (GRM R-173/D46.9) SUMAK THREE ECHO (SUMAK 3E)[SUMA3E] SORPI THREE ECHO (SORPI 3E)[SORP3E] N59 50.9 Gardermoei 316 BGU BERGERUD RNAV (VORDME) ROUTING FORP THREE ECHO (TOR 3E) 001 0007 SORPI 3E ARRIVALS (RWYS 01L/R) At or below FL190 TIRSI 459 38.9 E011 15.4 i ded U Advise ATC if reducing below instructed speed. TMA or as instructed by ATC MAX IAS 250 KT within Oslo SPEED RESTRICTION TMA GARSU N59 55.1 E011 56.1 NOT TO SCALE At or below OSLO, NORWAY Cross Sunix Int at or below **FL190.** Cross Garsu Int at or below **FL190.** Cross Tirsi Int at or below **FL190.** 3E GARDERMOEN ALTITUDE 097° RNA V **SUMAK** N59 57.2 E012 18.4

TRANS LEVEL: BY ATC TRANS ALT: 7000' Expect radar vectoring for sequencing to final ATIS 126.12 (0007 KORA) N59 39.8 E010 50. SUMAK 3F SORPI 3F 뎦 STAR At or below **FL190** 3400′ MSA GRM VOR 3800 113.85 TOR N59 10.1 E010 15.6 3000 Gardermoen 681 turn RIGHT, 024° track to Tomra Int (RNAV equipment required for Sumak Int holding & after D9 GRM).

RNAV: SUMAK - BEBIS - GM397 - GM396 - TOMRA. Intercept GRM R-111 inbound via Bebis Int to D9 GRM 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 6M396).

RNAV: SORPI - TIRSI - BGU NDB - GM396 - TOMRA. RNAV: TOR VORDME - KORAX - GM396 - TOMRA Intercept TOR R-031 to Korax Int, 024° track to Tomra Int (RNAV equipment required after Korax Int GARDERMOEN 115.95 GRM TORP N60 11.5 E011 04. \triangleright SUMAK THREE FOXTROT (SUMAK 3F) SUMA 3F] SORPI THREE FOXTROT (SORPI 3F)[SORP3F] TORP THREE FOXTROT (TOR 3F) RNAV (VORDME) ROUTING -₀6⊊⊊ 0007 4000 VANA °971 TIRSI N59 38.9 E011 15.4 At or below FL190 (RWYS 19L/R) N59 50.9 E011 15.7 **D9 GRM** N60 08.3 E011 21.3 **ARRIVALS 1** 316 BGU (IAF) **TOMRA** N60 25.2 E011 31.3 BERGERUD-SPEED RESTRICTION
MAX IAS 250 KT within Oslo
TMA or as instructed by ATC instructed speed. Advise ATC if reducing below TMA BEBIS N60 00.2 E012 03.3 At or below FL190 Cross Korax Int at or below **FL190.** Cross Bebis Int at or below **FL190.** Cross Tirsi Int at or below **FL190.** NOT TO SCALE GARDERMOEN ALTITUDE

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STAR

STAR

OSLO, NORWA

C T A

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JEPPESEN 11 JAN 02

(10-3) Eff 24 Jan

OSLO, NORWAY

SID

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SID

TORGA 4A TOMBO 4A TRANS LEVEL: BY ATC TRANS ALT: 7000' * OSLO Approach (R) 119.97 (East) 120.45 (West) clearances in lieu of published SIDs. may not always cover every destination Radar vectoring involving deviation from SID may be used by ATC. In such cases ATC will issue departure In some circumstances the SID system Oslo Radar. after take-off by Oslo Approach or Enroute cruising level will be issued TOMBO FOUR ALFA (TOMBO 4A) [TOMB4A] TORGA FOUR ALFA (TORGA 4A) [TORG4A] NOT TO SCALE SPEED RESTRICTION

MAX IAS 220 KT to GRM 6 DME, thereafter by Oslo Approach. 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 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. FOR SIDS RWY 01L TO SOUTH & WEST 3400′ FOR SIDS RWY OIL TO EAST REFER TO CHART 10-3B REFER TO CHART 10-3A Torga Int MSA GRM VOR GARDERMOEN 115.95 GRM 3800′ 390 **DEPARTURES** 3000′ TO NORTH (RWY 01L) TAKE-OFF/ROUTING GM383 N60 17.4 E011 06.4 (GRM R-009) 6 DME If unable to comply inform ATC. 304' per nm These SIDs require a minimum climb gradient of 304' per nm (5%) up to 4000^{\prime} . Gnd speed-Kts | 75 | 100 | 150 ,67£ N62 00.0 E011 33.8 ▲ Gardermoen 681 *D4.5 GRM * GM381 N60 15.8 E011 07.0 At 1200' 380 506 760 1013 1266 1519 0043 D109.7 **CM 387** N60 24.0 E011 20.1 TOMBO 4A , **GM389** N60 42.8 E011 22.7 TORGA CLIMB INSTRUCTION 316 BGU 316 BGU N59 50.9 E011 15.7 D113.4 Climb to 7000'. 200 250 300 TORGA N62 00.0 E012 10.3 GARDERMOEN

CHANGES: SIDs renumbered; Approach frequency

FMS/RNAV: GM381 - GM383 - GM387 - GM389 - TORGA

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"HANGES: SIDs renumbered; Approach frequency

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GARDERMOEN— 115.95 GRM 115.95 GRM N60 11.5 E011 04.5 TRANS LEVEL: BY ATC TRANS ALT: 7000' 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, GOTUR 4A Normally not to be used between 2300-0630LT SUTOK 4A FMS/RNAV: GM381 - GM383 (4000'+) * OSLO Approach (R) 119.97 (East) 120.45 (West) Enroute cruising level will be issued after take-off by Oslo Approach or may not always cover every destination In such cases ATC will issue departure Radar vectoring involving deviation from SID may be used by ATC. JEPPESEN clearances in lieu of published SIDs. In some circumstances the SID system Oslo Radar 6 DME R To OPA NDB, 174° bearing to Gotur Int FMS/RNAV: OPA NDB - GOTUR. Intercept BBU R-107 to Sutok Int FMS/RNAV: SUTOK. SPEED RESTRICTION

MAX IAS 220 KT to GRM 6 DME, thereafter by Oslo Approach. 016 BRANDBU 112.75 BBU N60 28.3 E010 20.3 11 JAN 02 At 1200' ò (10-3A) Eff 24 Jan GOTUR FOUR ALFA (GOTUR 4A) [GOTU4A] SUTOK FOUR ALFA (SUTOK 4A) *[SUTO4A]* **GM383** N60 17.4 E011 06.4 (GRM R-009) At GRM 6 DME or 4000' whichever is later N60 12.3 E011 31. 334 OPA if unable to comply inform ATC. These SIDs require a minimum climb gradient of 304' per nm (5%) up to 4000'. 304' per nm Gnd speed-Kts ROUTING **DEP ARTURES** (RWY 01L) TO EAST **GOTUR** N59 54.0 E011 35.0 75 380 100 150 506 Climb to 7000'. 3400′ CLIMB INSTRUCTION 760 MSA GRM VOR OSLO, NORWAY 3800′ *****_**★**—270 ٥92ء NOT TO SCALE -095° D43.7 3000' 1013 200 | 250 | 300 GARDERMOEN 1266 1519 SUTOK N60 07.7 E012 30.8

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SID

TRANS LEVEL: BY ATC TRANS ALT: 7000' 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. OSVIG 2A * OSLO Approach (R) 119.97 (East) 120.45 (West) JEPPESEN 11 JAN 02 SOK 4A SKI 4A **SOTIR** N59 19.6 E007 30.0 (116.85 ZOL R-066/D63.6) ^D 113.6 SKI EKDAL N60 15.3 E009 19.3 (GRM R-275/D52.6) 3400′ N59 11.3 E009 34.2 SPEED RESTRICTION

MAX IAS 220 KT to GRM 6 DME, thereafter by Oslo Approach. **GRM VOR** 3800′ OSVIG ▲ N61 04.5 E009 23.9 3000 To SOK NDB, 274° bearing to Ekdal Int, then to Sotir Int. **FMS/RNAV:** SOK NDB - EKDAL - SOTIR. FMS/RNAV: Intercept DRA R-037 inbound to DRA VORDME, then to SKI VORDME FMS/RNAV: DRA VORDME - SKI VORDME. Intercept BBU R-115 inbound, intercept GRM R-318 to Osvig Int. FMS/RNAV: GM384 - OSVIG. D DRAMMEN 114.8 DRA N59 44.0 E010 06.7 BRANDBU 112.75 BBU N60 28.3 E010 20.3 D SOTIR 4A 18 **←** 274° SOK NDB N60 14.2 E009 54. AKE-OFF SOKNEN— (10-3B)OSVIG TWO ALFA (OSVIG 2A) [OSVI2A] SOTIR FOUR ALFA (SOTIR 4A) [SOTI4A] િ Eff 24 Jan SOKNEN FOUR ALFA (SOK 4A) SKIEN FOUR ALFA (SKI 4A) clearances in lieu of published SIDs may not always cover every destination In some circumstances the SID system Radar vectoring involving deviation from SID may be used by ATC. If unable to comply inform ATC. 304' per nm (5%) up to These SIDs require a minimum climb gradient of In such cases ATC will issue departure take-off by Oslo Approach or Oslo Radar Enroute cruising level will be issued after 304' per nm Gnd speed-Kts GARDERMOEN 115.95 GRM N60 11.5 E011 04.5 ROUTING TO SOUTH & WEST **GM384** N60 22.8 E010 43.6 **DEP ARTURES** (RWY 01L) 75 380 506 100 150 4000'. Climb to 7000'. **CLIMB INSTRUCTION** 760 OSLO, NORWAY **GM383** N60 17.4 E011 06.4 (GRM R-009) NOT TO SCALE *D4.5 GRM GM381 N60 15.8 E011 07.0 1013 1266 200 250 300 At 1200' GARDERMOEN 1519

> TRANS LEVEL: BY ATC TRANS ALT: 7000' At ONE 2.5 DME * OSLO Approach (R) 119.97 (East) 120.45 (West) whichever is later OPPAKER TWO BRAVO GM382 N60 13.1 E011 07.9 (GRM R-048/D2.4) 1200'MIM Licensed to BRITISH AIRWAYS PLC, . Printed from JeppView disc 23-06.
>
> Notice: After 7.12.2006 0901Z this chart should not be used without first checking JeppView or NOTAMs **SPEED RESTRICTION**MAX IAS 220 KT during first turn thereafter by Oslo Approach. **DEPARTURE** (RWY 01R) 11 JAN 02 Gardermoen 681 ONE 2.5 DME (10-3C) Eff 24 Jan (OPA 2B OPPAKER: 70MBO N62 00.0 E011 33.8 (GRM R-007/ D109.7) 108 OMBO TRANSITION TORGA TRANSITION TORGA N62 00.0 E012 10.3 (GRM R-016/ OSLO, NORWA D113.4) 3400′ -095° D43.3 MSA GRM VOR 3800′ GARDERMOEN 3000' SID

CHANGES: SID renumbered; Approach frequency **FMS/RNAV:** TORGA. © JEPPESEN SANDERSON, INC., 1998, 2002. ALL RIGHTS RESERVED

TRANSITION

SUTOK

TOMBO

FMS/RNAV: TOMBO. 098° bearing to Sutok Int. FMS/RNAV: SUTOK. **FMS/RNAV:** GOTUR. Climb on 016° track to ONE 2.5 DME or later, turn RIGHT to OPA NDB.

FMS/RNAV: GM382 - OPA NDB.

If unable to comply inform ATC

AKE-OFF/ROUTING

1200' MIM, whichever is

Climb to 4000'. CLIMB INSTRUCTION

ROUTING

365' per nm

456 608 911

N59 54.0 E011 35.0

100 150

250 300

Gnd speed-Kts

Enroute cruising level will be issued after take-off by Oslo Approach or Oslo Radar.

NOITIZNAAT AUTOD

NOT TO SCALE

N60 11.5 E011 04.5 115.95 GRM

GARDERMOEN

[0] (111.95) ONE

334 OPA N60 12.3 E011 31.

N60 07.7 E012 30.8

N60 10.7 E011 06.7

Radar vectoring involving deviation from SID may be used by ATC.

clearances in lieu of published SIDs In such cases ATC will issue departure may not always cover every destination In some circumstances the SID system

This SID requires a minimum climb gradient of

365′ pernm (6%) up to **4000′**.

CHANGES: SIDs renumbered; Approach frequency

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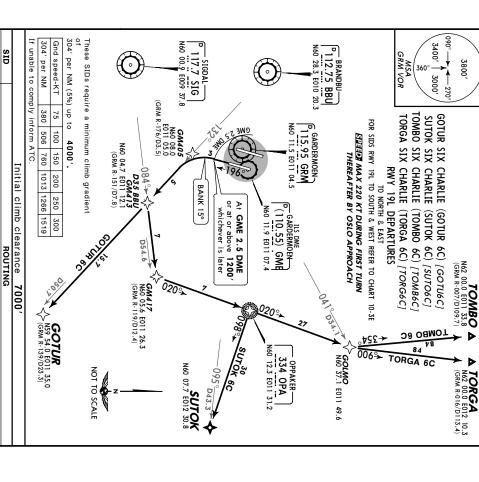
ENGM/OSL GARDERMOEN 17 NOV 06 NaSaddar 1 (10-3D)Eff 23 Nov OSLO, NORWAY

119.97 120.45 * OSLO Approach West

Apt Elev 681'

level will be issued after take-off by OSLO Approach or OSLO Trans level: By ATC Trans alt: 7000'

Radar. 2. 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 SID



CHANGES: SIDs renumbered; GM411 replaced by GM405 TORGA 6C Climb on 196° track to GME 2.5 DME or at or above 1200', whichever is later 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 TORGA. © JEPPESEN SANDERSON, INC., 2006. ALL RIGHTS RESERVED.

Climb on 196° track to GME 2.5 DME or at or above 1200', whichever is later, turn LEFT, intercept BBU A-132 to D35 BBU, turn LGT, intercept SQC bearing to GOLMO, then to TOMBO.

FMS/RNAV: GM405 - GM413 - GM417 - OPA - GOLMO - TOMBO.

SUTOK 6C

гомво 6С

GOTUR 6C

Climb on 196° track to GME 2.5 DME or at or above turn LEFT, intercept BBU R-132 to GOTUR.

FMS/RNAV: GM405 - GM413 - GOTUR.

1200', whichever is later,

Climb on 196° track to GME 2.5 DME or at or above 1200′, whichever is later, turn LEFT, intercept BBU R-132 to D35 BBU, turn LEFT, intercept SIG R-084, in-

ercept 020° bearing to OPA, 098° bearing to SUTOK:
SUBSIDER SUBSID

SUTOK

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ENGM/OSL GARDERMOEN 17 NOV 06

119.97

120.45

West

Apt Elev 681'

* OSLO Approach

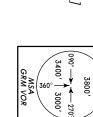
NaSaddar #

(10-3E) Eff 23 Nov

OSLO, NORWAY SID

Enroute cruising

SOTIR FIVE CHARLIE (SOTIR 5C) SKIEN FIVE CHARLIE (SKI 5C) **RWY 19L DEPARTURES** TO SOUTH & WEST Trans level: By ATC Trans alt: 7000' 1. Enroute cruising level will be issued after take-off by OSLO Approach or OSLO Radar. 2. 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. [SOTI5C]



STATE MAX 220 KT DURING FIRST TURN
THEREAFTER BY OSLO APPROACH

N59 19.6 E007 30.0 (116.85 ZOL R-066/D63.6) N59 11.3 E009 34. ^b 113.6 SKI 352 TRF 352. TRF N59 55.8 E010 16.2 NOT TO SCALE Initial climb clearance 115.95 GRM 304' per NM (5%) up to 4000'. These SIDs require a minimum climb gradient 304' per NM Gnd speed-KT unable to comply inform ATC. GM419 N60 07.3 E011 04.6 ROUTING
 75
 100
 150
 200
 250
 300

 380
 506
 760
 1013
 1266
 1519
 414 SLB | N60 00.7 E010 58.4 > D7.5 GRM GM421 N60 04.0 E011 04.7 SOLBERG -GM405 N60 08.0 E011 05.0 (GRM R-176/D3.5) 11.5 DME GARDERMOEN— (110.55) GME N60 11.9 E011 07.4

SOTIR

- SKIEN-

bearing to TRF, 248° bearing to SOTIR. FMS/RNAV: GM405 - GM419 - GM421 - SLB - TRF - SOTIR.	SOLIE SC	SCITE 5C Climb on 196° track, intercept GRM R-1/9 to D7.5 GRM, turn RIGHT to SLB, 257°
FMS/RNAV: GM405 - GM419 - GM421 - SLB - TRF - SOTIR.		bearing to TRF, 248° bearing to SOTIR.
		FMS/RNAV: GM405 - GM419 - GM421 - SLB - TRF - SOTIR.

Climb on 196° track, intercept GRM R-179 to D7.5 GRM, turn RIGHT to SLB, 221° bearing (SKI R-040 inbound) to SKI.

FMS/RNAV: GM405 - GM419 - GM421 - SLB - SKI.

SKI 5C SID

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TRANS LEVEL: BY ATC TRANS ALT: 7000' * OSLO Approach (R) 119.97 (East) 120.45 (West) JEPPESEN 11 JAN 02 ONIO TRANSITA TOMBO N62 00.0 E011 33.8 (GRM R-007/D109.7) BRANDBU FIVE DELTA (BBU 5D) TORGA N62 00.0 E012 10.3 ▲ (GRM R-016/D113.4) TO NORTH & EAST FOR SIDS RWY 19R TO SOUTH & WEST REFER TO CHART 10-3G DEPARTURE (RWY 19R) OSLO, NORWAY 3800' GARDERMOEN SID

3400′ 390 3000

3400' 3000'

٥92ء

3800′

N59 55.

N60 03.1 E010 46.6

SPEED RESTRICTION

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

352 TRF

At GSW 2 DME or 1200' MIM whichever is later

TYRIFJORD— 8 E010 16.2

MSA GRM VOR

TRANSITION

NOT TO SCALE

MSA GRM VOR

D. 1633

112.75 BBU

N60 28.3 E010 20.3

7070

GARDERMOEN—

D(111.3) GSW N60 12.8 E011 05.3

GARDERMOEN 115.95 GRM N60 11.5 E011 04.5

Gardermoen 681

GM412 N60 10.9 E011 04.3 (GRM R-187/D0.6)

MAX IAS 220 KT during first turn thereafter by Oslo Approach. SPEED RESTRICTION At GSW 2 DME or 1200' MIM whichever is later

GM422 N60 08.0 E010 54.6

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

Gnd speed-Kts | 75 | 100 | 150 | 200 | 250 | 300

If unable to comply inform ATC

Climb to 7000'.

TAKE-OFF/ROUTING 1200' MIM, whichever is later,

244° track, intercept BBU R-140 inbound to BBU VORDME. GM412 or 1200', whichever is later - GM422 -

turn RIGHT, 2 FMS/RNAV:

TRANSITION

BBU VORDME

SUTOK TOMBO

Intercept BBU R-107 to Sutok Int. FMS/RNAV: SUTOK.

ROUTING

Climb on 196° track to GSW 2 DME or turn RIGHT, 244° track, intercept BBU

may not always cover every destination. In such cases ATC will issue departure clearances in lieu of published SIDs.

Radar vectoring involving deviation from SID may be used by ATC. Enroute cruising level will be issued after take-off by Oslo Approach or Oslo Radar.

In some circumstances the SID system

CLIMB INSTRUCTION

Sec The grad Sec

Climb on runway track to 1500' MIM, then depart omnidirectional. 127 823 519

TRANS LEVEL: BY ATC TRANS ALT: 7000' * OSLO Approach (R) 119.97 (East) 120.45 (West) JEPPESEN TYRIFJORD FOUR DELTA (TRF 4D) SOKNEN SIX DELTA (SOK 6D) TO SOUTH & WEST **DEPARTURES** (RWY 19R) 11 JAN 02 N60 14.2 E009 54. -- SOKNEN---(10-3G) Eff 24 Jan GM422 N60 08.0 E010 54.6 <u>D8.5</u> 275°_ Gardermoen 681 GARDERMOEN 115.95 GRM N60 11.5 E011 04. 04.5 OSLO, NORWAY GM4 12 N60 10.9 E011 04.3 (GRM R-187/D0.6) GARDERMOEN GSW GARDERMOEN 12.8 E011 05.

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Radar vectoring involving deviation from SID may be used by ATC. Enroute cruising level will be issued after take-off by Oslo Approach or Oslo Radar.

NOT TO SCALE

0

D 113.6 SKI N59 11.3 E009 34.2

N59 25.0 E011 15.0

<u>8.690</u>0191

In such cases ATC will issue departure In some circumstances the SID system may not always cover every destination.

SOK 6D | Climb on 196° track to GSW 2 DME or

SID

clearances in lieu of published SIDs

These SIDs require a minimum climb gradient of 304' per nm (5%) up to 4000'. OSLOB N59 05.7 E011 49.4

TAKE-OFF/ROUTING If unable to comply inform ATC. CLIMB IN-STRUCTION

1200' MIM, whichever is later,

Climb to

					ROUTING Climb on ringway track to 1500' MIM then depart omidirectional	ROUTING	1500' MIM	track to	Climb on runw
1266	1013 1266 15	760	506	380	304' per nm	(0.3)	700		up to 4000 '
1519	911 1215 1519 18	911	608	456	365' per nm	(5%)	304' per nm	., 19L/R:	Rwys 0
1772	709 1063 1418 1772 21	1063	709	532	425' per nm				Sector 339°-209°
250 30	200	150	100	75	Gnd speed-Kts	(7%).	425' per nm (7%).	avs:	All runways:
		→		_		_		9	gradients of Sector 209°-339°:
							nimum climb	es require mir	These departures require minimum climb
					/R, 19L/R)	(RWYS 01L/R, 19L/R)			
			S	SE.	OMNIDIRECTIONAL DEPARTURES	RECTION	OMNIDI		
					206° bearing (SKI R-025 inbound) to SKI VORDME. FMS/RNAV: SKI VORDME.	5 inbound) to DME.	206° bearing (SKI R-025 inb FMS/RNAV: SKI VORDME.	206° bearin FMS/RNA\	SKIEN
						SLOB.	FMS/RNAV: SORPI - OSLOB	FMS/RNA	
					Int.	Int to Oslob	136° bearing via Sorpi Int to Oslob Int.	136° bearin	OSLOB
					ROUTING				TRANSITION
	-	ω.	ND A	6 - TF	FMS/RNAV: GM412 or 1200', whichever is later - GM416 - TRF NDB)', whicheve	412 or 120	S/RNAV: GM	FM
Climb to	<u> </u>	ter,	is lat	hever	1200' MIM, whichever is later,		ick to GSW	Climb on 196° track to GSW 2 DME or	TRF 4D Clir
			:		5		SOK NDB.	SOI	
		'	1414	9	ENS/RNAV: GMA12 or 1900' whichever is later - GMA22 - GMA14 -)' whicheve	A12 or 1201	R-275 to SOK NDB	₩2
7000'.	7		GRM	rcept	turn RIGHT, 244° track, intercept BBU R-140 inbound, intercept GRM	cept BBU R-	track, inter	RIGHT, 244°	turr

CHANGES: SIDs renumbered; Approach frequency

CHANGES: SID renumbered; Approach frequency.

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

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ENGM/OSL Apt Elev 681', N60 12.2 E011 05.0 - 60-11 - 60-12 60-10 60-13 GA TERMINA AIS + MET Feet 11-04 SEE 10-9B Light acft long term parking area FOR STANDS ON DE-ICING AREAS SEE 10-9C. Licensed to BRITISH AIRWAYS PLC, . Printed from JeppView disc 23-06.

Notice: After 7.12.2006 0901Z this chart should not be used without first checking JeppView or NOTAMs. GA AREA 656' ,8₁ 4 HANGARS .92 121.67 121.72 11-05 De-icing area A-South 7.7 7.89 16 SEP 05 (10-9) Eff 29 Sep Nasaddar De-icing area B-South 0530-2200 | West incl Rwy 01L/19R 118.3 | East incl Rwy 01L/19L120.1 Manna I nama A 11-06 TERMINAL AIS + MET De-icing area B-North В3 В4 7 SITE ENGINE 9678 727' 2950m 11-07 Trees up to 9 7740' 1 11-07 OSLO, 681' VAR 0° GARDERMOEN (g) 732' NORWAY 2200-0530 All Sectors 1 18. 60-12 -60-11 -11-08 11-08

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ENGM/OSL

Masadar

OSLO, NORWAY

16 SEP 05 (10-9A) Eff 29 Sep

GARDERMOEN

		3
GENERAL		
Rwys 01R and 19R are approved for CAT II/III operations, special aircrew & acft certification required.	ial aircrew & acft certification require	á.

o	∩ 🖽 🕨			٦ A		01R		01L	z,
150m	125m	HIRL, CL & mult. RVR req	Approved Operators	JAR-OPS	Ø TAKE-OFI <u>RWY 01R:</u> Fi	19L	① TAKE-OFI	19R HIRL (60m) HIALS CL	RWY
200m	150m	RL, CL & mult. RVR req	LVP must		②TAKE-OFF RUN AVAILABLE RWY 01R: From rwy head twy 83 int twy 84 int twy 85 int	HIRL (60m) HIALS CL (15m) SFL TDZ PAP1-L(3.0°) HIRL (60m) HIALS CL (15m) SFL PAP1-L(3.0°)	OTAKE-OFF RUN AVAILABLE RWY OIL: From rwy head 1 twy A2 int 1 twy A3 int 1 twy A4 int 1 twy C1 int 1 twy A5 int 1 twy C2 int 1		
250m	200m	RL & CL	LVP must be in Force	TAKE	9678' (2950m) 7982' (2433m) 6463' (1970m) 4797' (1462m)	8.0°)	11,811' (3600m) 11,811' (3469m) 18,85' (2646m) 18,85' (2697m) 7536' (2297m) 7034' (2114m) 6325' (1928m) 5079' (1548m) 5079' (1548m)	(15m) SFL PAPI-L(3.0°) (15m) SFL TDZ PAPI-L(3.0°)	ADDITIONAL RUNV
300m	250m	RCLM (DAY only) or RL	_ N	TAKE-OFF	RWY 19L: From rwy head twy 88 ii twy 87 ii twy 86 ii	RVR RVR	RWY 19R: From rwy head twy A7 twy C3 twy C3 twy C4 twy C2 I	RVR RVR	ADDITIONAL RUNWAY INFORMATION L LANDING Threshold
	400m	RCLM (DAY only) or RL			wy head 9678' twy B8 int 9265' twy B7 int 7907' twy B6 int 6644'	8734' 2662m 8625' 2629m	wy head 11,811' truy A7' int 8294' truy C3 int 8294' truy A6 int 6808' truy C2 int 6808'	10,819' <i>3298m</i> 10,737' <i>3273m</i>	SABLE LENGTHS BEYOND ————————————————————————————————————
	500m	NIL (DAY only)	_		(2950m) (2824m) (2410m) (2025m)	0	(3600m) (2528m) (2528m) (2075m) (2075m)	•	TAKE-OFF
	² m	IL only)				148' 45m		148' 45m	WIDTH

LOW VISIBILITY PROCEDURE

GENERAL

Pilots will be informed when low visibility procedures are in operation via ATIS or RTF. Pilots will be informed when low visibility procedures are cancelled via RTF.

- Low visibility procedures are prompted by ATC, normally when RVR is less than 1000m or ceiling is less than 300°. Low visibility procedure will normally be in operation when RVR is less than 600m and ceiling less than 200°.
- 3. Surface movement radar is normally available to ATC.
- Pilots are to delay the call "runway vacated" until the acft has completely passed the end of the green/yellow colour coded taxiway centerline lights.
- 5. During visibility condition 3 (RVR less than 400m), entries/exits are available as tollowing:

	RWY	01L	01R	19L	19R
	RWY entry	A1 only	B1 only	B9 only	A9 only
	RWY exit	Α9	B6, B7 or B9	B1	A5, A4 or A1
<u> </u>	wy liahts on otl	ner entries/exit	Twy lights on other entries/exits will be switched off.	ed off.	

6. In visibility condition 3 (RVR less than 400m) selected stopbars are operated at intermediate holding positions.

CHANGES: Note. Usable lengths. LVP

CHANGES: Taxiways

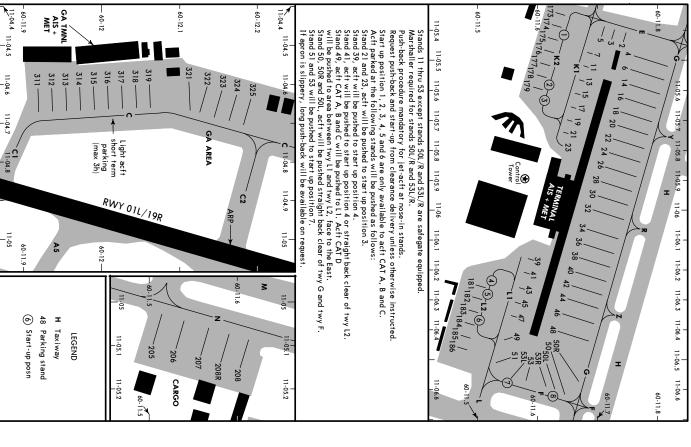
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ENGM/OSL 2 MAY 03 (10-9B) Eff 15 May Nasadar 1 OSLO, NORWAY GARDERMOEN



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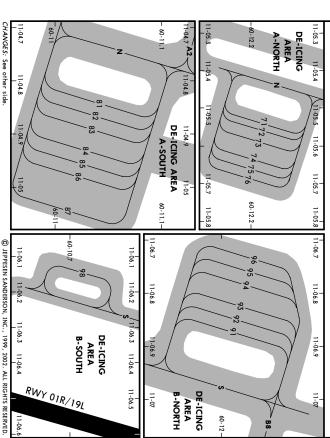
ENGM/OSL

2 MAY 03 (10-9C) EHF 15 May Masaddar

OSLO, NORWAY GARDERMOEN

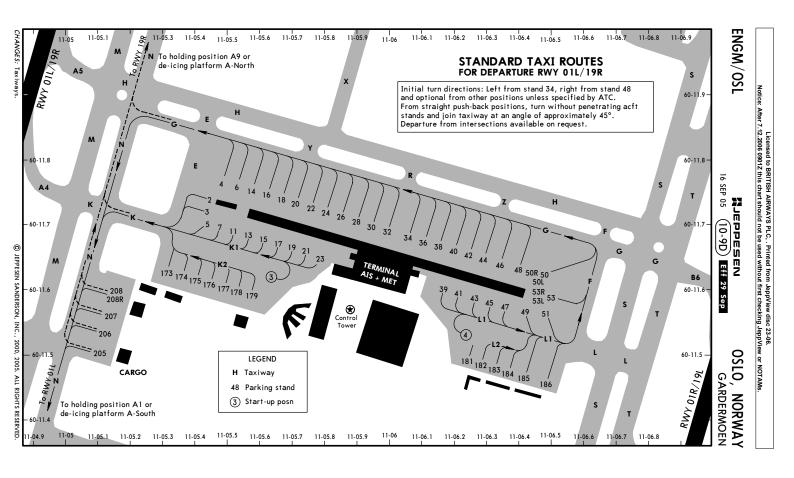
	SNI		COORDINATES		
STAND No.	COORDINATES	ELEV	STAND No.	COORDINATE	ES ELEV
2,3	11.7 E011	672 673	174 175	11.6	05.3
\ 01 .	N60 11.7 E011 05.4	672	176	N60 11.6 E01	1 05.4 671
7, 11	11.7 E011	673	179	11.6	05.6
13 thru 16	11.7 E011 05	673	181	11.5	1 06.2
	11.7 E011 05	673	182, 183	11.5	1 06.3
23, 24, 26	11.7 E011	673 673	· .	л <u>С</u>	1 06.4
32, 34	N60 11.7 E011 06.0	673	205	N60 11.5 E01	1 05.1 666
36, 38	11.7 E011	673 673	206, 207	11.6	1 05.2
40	11.7 E011	673	208R	1.6	1 05.2
41, 42 43 thru 47	N60 11.6 E011 06.2 N60 11.6 E011 06.3	673 673	311 312 thru 314	N60 11.9 E01 N60 11.9 E01	
48, 49	11.6 E011	673	315	12.0	04.6
50L 50	11.6 E011	673	317 thru 319	12.0	04.6
50R 51	N60 11.6 E011 06.5 N60 11.6 E011 06.5	673 672	321 322, 323	N60 12.1 E01 N60 12.1 E01	1 04.5 663 1 04.6 665
53, 53L/R	11.6 E011	673	324	12.2	04.6
173	N60 11.6 E011 05.3	668	325	N60 12.2 E01	1 04.6 666
	DE	-ICINC	DE-ICING AREAS		

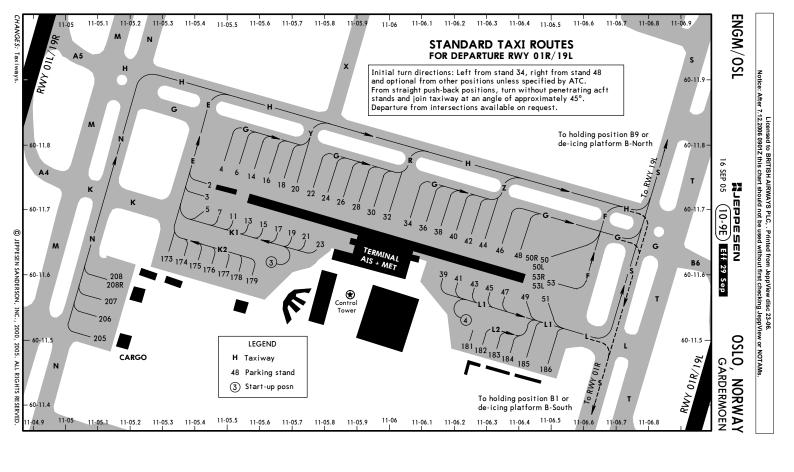
After de-icing do not move acft until acft callsign and the phrase "Equipment removed" is received from GARDERMOEN De-icing 131.97 and "all clear signal" (thumbs up) is given by ground crew and taxi instructions are received from ATC.



CHANGES: Note

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MIEDDESEN

,01SO

NORWAY

PANS OPS 4

□ ∩ □ ENGM GARDERMOEN 7X 1611' Gnd speed-Kts
ILS GS 3.00° or
LOC Desc Grad 5.2% •1740′ 1736′ 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 NORGO climbing to 4000' and hold. 10-40 Alt Set: hPa West incl Rwy 01L/19R 118.3 (GS out) AR-OPS 110.3 M80 201 RVR 550m **①** 057° 9.7 3500 ULL ALS out 3000/*-016° ALTITUDE (HAT) GARDERMOEN Tower 0530-2200 8.3 East incl 8.3 Rwy 01R/19L 120.1 STRAIGHT-IN LANDING RWY 0 1L

LOC (GS out) NORGO D8.4/R-257 GRM Rwy Elev: 24 hPa Final Apch Crs **016**° RVR 1000m 414 SLB 377 70 90 100 120 140 160 1933′ 1495′ 485 2570' (1914') 2250' (1594') 1930' (1274') 1700′ D4.0 OBW G51930'(1274') D1.0 OBW 539 GS ILS D4.0 OBW DA(H) 1930' (1274') 856' (200') RVR 1200m RVR 800m 647 1456′ 11 JAN 02 (11-1) MDA(H) **930′** (274′) All Sectors 118.3 Trans level: By ATC 0160 755 862 BÈRGERUD NDB **D7.4**08W RVR 1800m RVR 1500m RVR 1600m D1.008W Eff 24 Jan D3.0 OBW .1175' MIM IAS 160 KT until D4.0 OBW. 1180′● Max 100 205 135 016° 110.3 OBW Trans alt: 7000' (6344 TCH 50' GARDERMOEN 115.95 GRM 121.92 121.67 121.72 *GARDERMOEN Approach 2040' (1359') Apt Elev 681' 2250' (1569') 1190′ *(509′)* 1090' (409') RWY 656' PAPI -1610' (954') East of rwy 01L/19R *Ground RWY 011 656' CIRCLE-TO-LAND Not authorized west 120.45 OCA(H) RWY 01L ILS A: 796'(140') B: 805'(149') C: 816'(160') D: 828'(172') GS out 930'(274') 1800' on 016° 3400' MSA GRM VOR 1290' (634') Rwy 01 3600m 3800′ 2400m 1600m 1500m VIS. 3000′

CHANGES: Approach frequency. Missed approach. Bearings

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Notice: After 7.12.2006 0901Z this chart should not be used without first checking JeppView or NOTAMs 11 JAN 02 (11-2) Eff 24 Jan Masaddark OSLO, NORWAY
ILS Rwy 01R

PANS	. 000								5			0			5			,10								
PAINS	OF 3		Т			>			 	\vdash					19		-				_		1	STRIP **		າ ດ
)	RVR 550m		_ 	DA(H) 8	_ I	Gnd speed-Kts ILS GS 3.00° or LOC Desc Grad 5.2% MAP at D1.0 ONE		3000 [™] (2330′) ∠ D	(GS out) ALTITL	35'\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	① 057° 9.7 30	414	1780' SOL		Å ^{1933′}	1425′	60-10	2210'		2136'	Alt Set: hPa	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 D10.0 GRM climb to 4000′ to TOMRA and hold.	ONE 111.95	<u>~</u>		GARDERMOEN
	RVR 1000m		ALS out	1'(200	STRAIGHT-IN LANDING RWY 01R	70 90 377 485	3.4 (1)	7.4 7.4 7.4	ONE DME ALTITUDE (HAT) 2630'	SONER 1700'	3500	B	J .		33'	495'	·-	[!	GARDERMOEN- 115.95 GRN		Rwy Elev: 24 hPa	llimb on track turn RIGHT t 0.0 GRM climk	Final Apch Crs 016°	222	126.12	
RVR 1200m		RVR 800m			NDING RWY 011	100 120 140 539 647 755		D4.0 ONE GS1990' (1320')	2630' <i>(1960')</i> 2310	11-00 .6	00°E/	D9.4 ONE	370 O	160			1456'		GRM	-	┨.	016° to mini o intercept R o to 4000′ to	D4.0 ONE 1990' (1320')	<u></u>		1 2 2 2 2 2
RVR 1800m	RVR 1600m	RVR 1500m	ALS out	0'(270')	(GS out)	862	3.0 0.8	//	5.0 2310' (<i>1640'</i>) 1	אם אם איי			D7.4 ONE	MIM IAS	D4.0 ONE	DI: 0			\$\sqrt{GM382} D2.5 ONE	Oggo.	Trans level: By ATC	mum 1200'. -044 GRM c TOMRA and	DA(H) 870'(200')			
205	180	135	K To	<u> </u> 	\dashv		//	`	990	-10	• 1180'			SAI		[2]			502	1	l_	₽ ii ≯	S (H)	1		
55	ő	<i>5</i> i <i>c</i>	7 5	<u>×</u>			∥`	\	10		_					ြိ			₹%		an.	id bin	9')	l 	East	
1570' (889')	1380′ (699′)	1290 (609')	MDA (H)	West of rwy 01R/19L	CIRCLE-TO-LAND	PAPI	RWY 01R 670'	, TCH 50,	4.0 1990' (<i>1320'</i>) 1670' (<i>1000'</i>)	11-20				160 KT until D4.0 ONE		111.95 ONE	T			1175'	Trans alt: 7000' (6330')	M382/D2.5 ig to 3000'.	Apt Elev 681' RWY 670 '	*Ground 21.92 121.67	*GARDERMOEN Approach 119.97 West	
3600m	2400m	1500m 1600m	VIS	y 01R/19L)-LAND	1200′ on 016°	670′	OCA(H) RWY 01R ILS A: 823'(153') B: 831'(161') C: 841'(171') D: 853'(183') GS out 940'(270')	2.0 0') 1350' (680')	11-30						4		04 400C 334	R-044 GRM	MISSED APCH FIX TOMRA	MSA GRM VOR	3400' 3000'	3800'	121.72	oach est 120.45	ILO KWY OIK

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NORWAY

PANS OPS 4 BRIEFING STRIP ™ ENGM GARDERMOEN ■ Operators applying U.S. Specs: CAT III authorization required below RVR 350m. 1780′ 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 D10.0 GRM climb to 4000' to TOMRA and hold. Gnd speed-Kts 70 90 100 120 140 160 GS 3.00° 377 485 539 647 755 862 Alt Set: hPa Rwy Elev: 24 hPa Trans level: By ATC Special Aircrew & Aircraft Certification Required. West incl Rwy 01L/19R 118.3 **0** 057° 9.7 3500 JAR-OPS 1425′ 111.95 ONE 70C Λ^{1933′} 414 SLB GARDERMOEN Tower 0530-2200 8.3 East incl 8.3 Rwy 01R/19L 120.1 ONER 1700' Final Apch Crs **016**° 7016° 115.95 GRM 1510′ • GM370 1456′ GS D4.0 ONE 1990' (1320') **D4.0** ONE GS 1990' (1320') 0160 11 JAN 02 (11-2A) Eff 24 Jan CAT II ILS RWY 01R 1-00 BERGERUD NDB 11-10 STRAIGHT-IN LANDING RWY 01R 2200-0530 All Sectors 118.3 Nasaddar 1 RA 102' DA(H) 770'(100') **D7.4** ONE RVR 300m CAT II ILS ABCD SGM382 D2.5 ONE © JEPPESEN SANDERSON, INC., 2001, 2002. ALL RIGHTS RESERVED. MIM IAS 160 KT until D4.0 ONE. • 1180′ 016° 111.95 ONE Trans alt: 7000' (6330' TCH 50' *GARDERMOEN Approach 121.92 121.67 121.72 1175′ Apt Elev 681' RWY 670' PAPI RWY 01R 670' 11-20 OSLO, west 120.45 OCA(H) RWY 01R A: 720'(50') B: 730'(60') C: 742'(72') D: 754'(84') 1200° MISSED APCH FIX R-044 GRM TOMRA DIST 3400' MSA GRM VOR 1225′ -9-3000′ 016°

CHANGES: Approach frequency. Missed approach. Bearings.

CHANGES: Approach frequency. Missed approach. Bearings.

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ILS Rwy 19L

	OPS	_										5		ь.	0		15			10			15		20				BRII	FING	STRIP TM	`	٦.
D	C RVR 550m		A POLE	DA(H) 88	JAR-OPS ST	νĒ.	ILS GS 3.00° or	Gnd speed-Kts	GS out 1020'(339')		820 828	(GS out) ALTITU	10-40	2110' 1825' 1425'	•60-10 •2210'	2170'	2136′	2070'	•	1935'	2265'•	•	2664'	2674' 2510	•	2031'	Alt Set: hPa R	MISSED APCH: CI	110.55		05: West incl Rwy 01L/19R 1 18.		GARUERMOEN
	RVR 1000m		ALS OUT		STRAIGHT-IN LANDING RWY 19L LOC (G		377 485	70 90	TCH 50'			GME DME 1040'	10-50	1495	0′ 1456′			G GARDERN	2360	%	_ ns D/	•2370′	2115	N ¹³¹³ , 2330′	D18.4/R-353 GRM	SOVIA (IAF)	Rwy Elev: 25 hPa	Climb on track o OPA NDB clim	196°	Final Apch Crs	GARDERMOEN Tower 0530-2200 3.3 East incl 8.3 Rwy 01R/19L 120.1	126.12	
RVR 1400m	RVR 1000m		RVR 900m	MDA(H)1020'(339')	NDING RWY 19L LOC (GS		647	120 1	30	GME		1.0 1040′ <i>(359′)</i> 136	11-00	O GME			/ GRM	OEN	1805'	5 GME	DIO	2130' 2445'	Q 4000	2020	1060	ME:	Trans level: By	196° າbing	2000' (1319')		200-0530 20.1 Sectors 118.		
RVR 2000m	RVR 1800m	RVR 1500m	ALS OUT	NS 201	S out)		862	160	2000		D4.0 GME GS 2000' (1319')	2.0 1360' <i>(679')</i> 16	11-10	\		D1.0 GME	1175'	D4.0 GME		M. D7. 3	196	0	-009 -009	2	6.9/ 6 1680	44		3ME and	88	ILS DA(H)	18.3		
205	180	135	K†s_	Жа×		1			SA-NE	¥/-¢	\	3. 80'	11-20	7	Ì			17		3 GME	DI	1475'	0200		Ŷ	• 2	Trar	after hold.	00,	*		East	П
1570' _(889')	1380′ (699′)	1290' (609')	1290, (200,)		CIRCLE-TO-LAND Not authorized		a .	HIALS	ے ۔۔۔≥ ۔۔۔≥		196°-#	3.0 1680' (999') 2000' (1319')	11-30	(3	0160	O		334 OPA		MIM IAS 160 KT	5.2/R-021 GRM 1690'		3000 D19.	1475 GM373 D17.1/R-025 GRM	347 MSK	2020'	Trans alt: 7000′ (6319′)	r DME, then	RWY 681'	Apt Elev 681'	*Ground 121.92 121.67	*GARDE	
3600m	2400m	1600m	1500m	01R/19L	rized -		GME on 196°	7 0	E D12.4 GME D13.2/R-021 GRM	3000'(2319')	4000 (3319) via SOVIR & MESNALI VOR	5.0 ') 2320' (1639')	11-40	/ 1025	, 70			1445′	1595′	til D4.0 GME.		1175 1388′	1/R-044 GR	(IAF)	1713'		MSA GRM VOR	∕ 400′)%: → 300	090°—•,•—270°	2000,	121.72	st 120.45	ILO KWY 17L

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Nasaddar 1

OSLO,

NORWAY

ENGM

PANS OPS 4 1.2674 OCA(H) RWY 19R ILS A: 822'(147') B: 831'(156') C: 844'(169') D: 858'(183') GS out 1010'(335') GARDERMOEN 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 ILS GS 3.00° or 3nd speed-Kts Alt Set: hPa Rwy 01L/19R 1 10-40 RWY 19R 675 11.3 esw 200 1825′ 2070 DA(H) 875'(200') 18.3 SOVIR D18.4/R-353 GRM 2136′ Rwy Elev: 25 hPa STRAIGHT-IN RVR 1000m Final Apch Crs East incl Rwy 01R/19L120.1 377 (HAT) 196° ALS out 115.95 GRM 485 990′ D13.8/R-01 ANDING RWY 19R 1805′ 539 100 | 120 | 140 | 160 GS D4.0 GSW 1950' (1275') ... RVR 1000m RVR 1400m RVR 900m 647 ида (H) 1010'(335') Trans level: By ATC 11 JAN 02 (11-4) 2200-0530 All Sectors 118.3 GM412 D2.0 GSW LOC (GS out) GM376 755 862 3.0 D1. OGSW 11-10 D4. OGSW RVR 2000m RVR 1500m (635') RVR 1800m \D10.0GSW 875' (200') GM377 00 2020' D18.1/ R-014 6 1475 1175′ PAPI DA(H)Eff 24 Jan 1630' (955') 2 1880' 205 ×e.× MIM IAS 160 KT until D4.0 GSW. 8 11-20 Trans alt: 7000' (6325' *GARDERMOEN Approach 119.97 1960-# 121.92 121.67 121.72 196° GM379 D16.9/N1 R-021 GRM 1365′ 2250' (1569') Apt Elev 681' 2040' (1359') 1190′ 1090' (409') D10.0 RWY 675' GM412 whichever 1500 1950′ East of rwy 01L/19R *Ground (509') CIRCLE-TO-LAND MISSED APCH FIX 11-30 Not authorized **∑**1103′ MORSKOGEN-TOMRA D19.1/R-044 GRM •1673′ 1690′ (1275') GM378 D12.4 GSW D13.8/ R-016 GRM • 1595′ 1445′ N D22.4/ e R-218 GRM 3400 120.45 4000' (3325') 2270' (1595' Rwy 19R 3800′ 2400m 3600m 1600m GRM VOR 1500m VIS 1713′ 3000′ 1388

CHANGES: Approach frequency. Missed approach. Bearings

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AGROPH Meet 124 Jan 02 (11-4A)

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PANS OPS 4 OCA(H) RWY 19R A: 725'(50') B: 735'(60') C: 748'(73') D: 761'(86') - 60-20 2674 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. ■Operators applying U.S. Ops Specs: CAT III authorization required below RVR 350m. West incl Rwy 01L/19R 118.3 JAR-OPS RWY 19R 675' speed-Kts 11.3 000 001 1825′ Aircrew & Acft Certification Required 2605' 3.00° 2136' SOVIR D18.4/R-353 GRN Rwy Elev: 25 hPa GARDERMOEN Tower 0-2200 East incl Ewy 01R/19L120.1 196° Final Apch Crs GARDERMOEN 115.95 GRM 196° 2360 485 111.3 GSW 1805′ 539 100 1950′(1275′) D4.0 GSW 647 120 Trans level: By ATC STRAIGHT-IN LANDING RWY 19R All Sectors 118.3 D2.0 GSW GS 755 MESNALI DA(H) 775'(100', **D4.0** GSW GS 1950' (1275' **RA 100**′ RVR 300m 862 11-10 CAT II ILS D4. OGSW ABCD D10.0GSW 6 1475 1175 V QR 2020' -PAPI MIM IAS 160 KT until D4.0 GSW GM377 0' R-016 GRM D18.7 GSW Trans alt: 7000' *(6325'* 1880′ 196% GM379 D16.9/N1103' R-021 GRM 121.92 121.67 1365 Apt Elev 681' RWY 675' GM412 whichever MISSED APCH FIX 11-30 MORSKOGEN—347 MSK D19.1/R-044 GRM ·1690′ •1673′ **GM378** D12.4 GSW D13.8/ R-016 GRM • 1595′ 121.72 3400′ later 4000′ R-218 GRM GRM VOR MSA .09£ 1713′ 3000′ 1500 1388

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OSLO

NORWAY

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PANS OPS 4 BRIEFING STRIP T ENGM/OSL GARDERMOEN •1736′ 1740′ 1611′ to D3.0 to minimum 1800'. Climbing turn LEFT to intercept and proceed on 218° from MSK NDB to NORGO to 4000' and hold. Descent Grad Gnd speed-Kts 10-40 MISSED APCH: Climb on R-195 inbound to VOR. Continue climb on R-015 West incl Rwy 01L/19R 1 Alt Set: hPa 1740′ 115.95 **0** 057° 9.7 3500 ALTITUDE GRM GRM GRM DME MDA(H) 3000′ ***-**015°. RVR 1400m RVR 1000m RVR 900m 18.3 GARDERMOEN Tower 0530-2200 8.3 East incl 8.3 Rwy 01R/19L120.1 A: 1000 '(344') C: 1050 '(394') B: 1020 '(364') D: 1070 '(414') 2136 STRAIGHT-IN LANDING RWY 01L **NORGO** D8.4/R-257 354 414 SLB N¹933′ Final Apch Crs 015° 2400' 5.0 456 90 1495′ 100 120 140 160 506 608 709 810 1700 3000' (2344') Minimum Alt 1500 120 140 18 JUL 03 (13-1) 2200-0530 All Sectors 118.3 D8.0 1456 D3.0 2100' 015 RVR 2000m RVR 1800m RVR 1500m D8.0 BERGERUD NDB MDA (H)
Refer to
Minimums D1.0 D1.0 Final approach track offset 1° from rwy centerline. Final is aprx 443' (135m) West of extended RCL at 4594' (1400m) before threshold. D3.0 1800 MIM IAS 160 KT until D5.0. 1180′ 205 100 Kax 21.92 121.67 VOR *GARDERMOEN Approach Apt Elev 681' 2250' (1569') 1090' (409') 2040' (1359') 115.95 GRM 1190′ Trans alt: 7000 GARDERMOEN-RWY 656' VOR DME Rwy 01 •1175′ East of rwy 01L/19R RWY 011 656' (509') CIRCLE-TO-LAND 1500 Not authorized 121.72 MSA GRM VOR 3400′ 120.45 Refer to Missed Apch above 3800′ 2400m 3600m 1600m 1500m VIS 1200' 3000′

CHANGES: See other side.

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CHANGES: MDA(H)

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PANS OPS 4 ENGM/OSL GARDERMOEN A 2674' 2110′ • 2170' to D2.0 to minimum 1500'. Climbing turn RIGHT to intercept and proceed on R-218 to SONER to 4000' and hold. Descent Gradient Gnd speed-Kts MISSED APCH: Climb on R-018 inbound to VOR. Continue climb on R-198 West incl Rwy 01L/19R 1 18.3 AR-OPS IAP at D2.0 It Set: hPa Kwy Elev: 25 hPa Irar nal approach track offset 2° from rwy centerline. MIM IAS 160 KT until D5.0. 115.95 GRM GRM 1825 2070' 2031 ATIS
126.12
0530.200
Rest incl
120.12
0530.200
The string incl
120.1 Se
Final M: RVR 1400m RVR 1000m RVR 900m 2136′ RWY 19R **675**′ 5.8% 411 STRAIGHT-IN LANDING RWY 19R SOVIR D18.4/R-353√> 2510' 198° мда(н)1060′(385′ 115.95 GRM GARDERMOEN-90 529 ğ 4000' (3325') 1060' (385')
 100
 120
 140
 160

 587
 705
 822
 940
 11-00 Minimum Alt 1805 18 JUL 03 (13-2) 2200-0530 All Sectors 118.3 D10.8 1765' NaSaddar N RVR 2000m RVR 1800m RVR 1500m 590 ALS out frans level: By ATC D16.9/R-018 11-10 D5.0 GM371 D10.8 Final is aprx 82' (25m) West of extended RCL at 4594' 1175′ 1400m) from threshold. MDA(H)2020' D5.0 5.0 1940' Max Kts 205 11-20 1880′ 1940′ 1365′ 121.92 121.67 *GARDERMOEN Approach Apt Elev 681' 2250' (1569') 1090' (409') 1190' (509') 2040' (1359') Trans alt: 7000 RWY 675' MDA(H) VOR DME MISSED APPROACH FIX East of rwy 01L/19R CIRCLE-TO-LAND Not authorized PAPI 1690 6.0 2300 1103 198°-# 4000′ > D19.1/R-04 • 1595′ 1445 D10.8 3400′ 120.45 Refer to Missed Apch above Rwy NORWAY 3800′ 3600m 2400m 1600m 1500m 1713′ 3000′ 1388′ 19R

