

## List of pages in this Trip Kit

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Airport Information For ENGM

Terminal Charts For ENGM

Revision Letter For Cycle 07-2023

Change Notices

Notebook

## General Information

Location: OSLO NOR  
ICAO/IATA: ENGM / OSL  
Lat/Long: N60° 12.17', E011° 05.03'  
Elevation: 682 ft

Airport Use: Public  
Daylight Savings: Observed  
UTC Conversion: -1:00 = UTC  
Magnetic Variation: 4.0° E

Fuel Types: 100 Octane (LL), Jet A-1, Jet 4  
Customs: Yes  
Airport Type: IFR  
Landing Fee: No  
Control Tower: Yes  
Jet Start Unit: No  
LLWS Alert: No  
Beacon: Yes  
Traffic Pattern Altitude: 1710 ft (1028 ft AGL)

Sunrise: 0357 Z  
Sunset: 1835 Z

## Runway Information

Runway: 01L  
Length x Width: 11811 ft x 148 ft  
Surface Type: asphalt  
TDZ-Elev: 663 ft  
Lighting: Edge, ALS, Centerline, TDZ

Runway: 01R  
Length x Width: 9678 ft x 148 ft  
Surface Type: asphalt  
TDZ-Elev: 675 ft  
Lighting: Edge, ALS, Centerline, TDZ

Runway: 19L  
Length x Width: 9678 ft x 148 ft  
Surface Type: asphalt  
TDZ-Elev: 682 ft  
Lighting: Edge, ALS, Centerline, TDZ

Runway: 19R  
Length x Width: 11811 ft x 148 ft  
Surface Type: asphalt  
TDZ-Elev: 676 ft  
Lighting: Edge, ALS, Centerline, TDZ

## Communication Information

ATIS: 126.125 Arrival Service  
ATIS: 127.150 Departure Service  
Gardermoen Tower: 120.100  
Gardermoen Tower: 118.700 Secondary  
Gardermoen Tower: 118.300  
Gardermoen Tower: 123.325 Secondary  
Gardermoen Ground: 121.905  
Gardermoen Ground: 121.605  
Gardermoen Ground: 121.730  
Gardermoen Clearance Delivery: 121.680  
Gardermoen Clearance Delivery: 121.930  
Oslo Approach: 120.450 RCO  
Oslo Final Approach: 128.900 RCO  
Oslo Approach: 129.300 Secondary RCO  
Oslo Approach: 118.475 RCO  
Oslo Final Approach: 119.975 Secondary RCO  
Oslo Direct (Approach Control Radar): 119.975 Secondary RCO  
Gardermoen De-Icing Operations: 121.855  
Oslo Direct (Approach Control Radar): 136.400 RCO

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## 1. GENERAL

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### 1.1. ATIS

D-ATIS Arrival 126.125

D-ATIS Departure 127.150

### 1.2. NOISE ABATEMENT PROCEDURES

#### 1.2.1. GENERAL

This regulation applies at Oslo (Gardermoen) APT and in the airspace within Gardermoen CTR as well as within the outer limits of the Oslo TMA from ground level up to 10000' when departing from or landing at APT.

Exceptions:

- Propeller ACFT with MTOW of 5700kg or less;
- Helicopters operated according to Visual Flight Rules (VFR);
- Calibration flights;
- Ambulance flights and in-flight emergencies;
- The Norwegian Police helicopter service;
- Flights in connection with fire fighting, search and/or rescue operations;
- Missed approaches;
- Military flights.

These noise restrictions do not apply to military flights:

Departures with ACFT not complying with noise regulations of ICAO Annex 16, Vol 1.5, edition July 2008 chapter 3 are not permitted in the period 1600-0800LT. Departures with ACFT having a noise certification exceeding 88 EPNdB at departure are not permitted between 2400-0630LT.

Approach and landing with JET ACFT shall be carried out in a way that reduces noise as much as possible by using procedures for continuous descent, low power and low drag.

Visual approach is not permitted. Visual approaches are nonetheless permitted for visual step-over to a parallel RWY after joining final approach, if it is considered necessary by the air traffic services. CAA Norway may, on application, authorise visual curved approaches under RNAV guidance.

#### 1.2.2. PREFERENTIAL RWY SYSTEM

Between 2230-2400LT the following rules apply:

- For jets and propeller ACFT with MTOW exceeding 5700kg and four engines or more, RWY 01R and RWY 19R are to be used for landing and RWY 01L and 19L for departure (segregated RWY operations).
- For other traffic, RWY 01L and 19R must be used (single RWY operation), except in cases of RWY closure.

Between 2400-0630LT RWY 01L or 19R are to be used (single RWY operation). In special situations segregated RWY operation may be used when this is required for efficient traffic regulation. When the noise regulations specify that RWYs 01L and 19R are to be used, this can be deviated from, when weather conditions require the use of ILS CAT II/III.

#### 1.2.3. REVERSE THRUST

Between 2230-0630LT jet engine reversal beyond idle reverse is not permitted after landing.

#### 1.2.4. RUN-UP TESTS

All engine testing beyond idle power shall be done at the APT engine testing site. Time booking for use of the test site should be addressed to OSL Gate Allocation Office, Tel.: +47 6481 30 50.

Specific regulations apply to code F ACFT. Prior approval required from Oslo APT.

#### 1.2.5. AUXILIARY POWER UNIT (APU)

The use of APU after arrival at, or before departure from, a parking stand supplied with a ground power unit and air conditioning, must not exceed 5 minutes. This limitation does not apply when ambient air temperature at the parking stands is below -15^ Celsius or above +23^ Celsius.

## 1. GENERAL

### 1.3. LOW VISIBILITY PROCEDURES (LVPs)

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

LVPs, preparation phase, are initiated by ATC, normally when RVR is less than 1000m or ceiling is less than 300'.

LVPs, operations phase will normally be in use when RVR is less than 550m and ceiling less than 200' and/or take-off operations take place in RVR less than 400m.

Surface movement radar is normally available to ATC.

Pilots are to delay the call "RWY vacated" until the ACFT has completely passed the CAT II/III holding position, which is at the end of the green/yellow colour coded TWY centerline lights.

During visibility condition when RVR is less than 400m, RWY entries/exits are available as follows:

RWY	01L	01R	19L	19R
RWY entry	A1, A2, A4, A5, C1	B1, B2	B6, B7, B8, B9	A5, A6, A7, A9, C3, C1
RWY exit	A5, A6, A7, A9, C1, C3	B6, B7, B8, B9	B1, B2, B3, B4, B5	A5, A4, A2, A1, C3, C1
RWY crossing points	C3 to A7 and vice versa. C2 to A6 and vice versa.	Not applicable	Not applicable	C3 to A7 and vice versa. C2 to A6 and vice versa.

TWY lights on other entries/exits will be switched off.

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

### 1.4. RWY OPERATIONS

#### 1.4.1. REDUCED RWY SEPARATION

Cloud base 4500' or higher and breaking action "medium" or better.

For RWY 01L/19R and 01R/19L, between landing of an ACFT and departing of a CAT III ACFT and between departing of a CAT III ACFT and a preceding departing CAT III ACFT, minimum separation is 2400m.

Reduced RWY separation will not be used when preceding departing traffic is CAT I or II ACFT.

### 1.5. TAXI PROCEDURES

For Wing Span Restrictions refer to 10-9 charts.

The movement area on the military part of the aerodrome, including TWY U, U1, U2 and U3 may deviate from EASA requirements. Contact GARDERMOEN MIL OPS for further information about signs, marking and pavement status.

On initial contact with GARDEMOEN Delivery or GARDERMOEN Ground, inform about:

- Engine run-up requirement and duration during taxi, eg. due icing.
- Engine run-up shall only be performed on straight parts of TWYs or on RWY.
- If engine run-up requirements change, notify ATC.

Pilots are to use the minimum power necessary when maneuvering on the TWY system. This is of particular importance when maneuvering after straight push-back where jet blast can affect adjacent stands.

Use minimum power when taxiing from TWY J onto TWY S due short distance to stand 58.

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## 1. GENERAL

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### 1.6. PARKING INFORMATION

When nose-in guidance at ACFT terminal stands, except stands 2, 3 and 7 is used, pilots of black or dark nose ACFT need to exercise caution when docking, as such ACFT has increased risk of not getting detected by nose-in guidance system (A-VDGS).

GPU at stand 40 not available before bridge is connected. Consider start of APU.

Safedock T2 at stands 11, 13, 15, 16 and 39. Safedock T1 at all other terminal stands.

For taxiing of code E ACFT guidance from Follow-me car is mandatory from intermediate hold on TWY S or T onto TWY L center and to final parking position.

### 1.7. OPERATIONS WITH LARGE ACFT (CODE F)

Large ACFT is considered as code F with wingspan 213' /65m - 262' /80m.

All taxiing shall be done with Follow-me vehicles.

If "Stop" is displayed in the lightbar of the Follow-me, the pilot shall resolutely and firmly bring the ACFT to full stop. Contact ATC for further instructions.

It is not allowed to use TWY C1, C2, C3 and TWY C for entry on/exit from RWY.

Taxiing to/from stand 171L:

- TWYs H, K, M, N, P, T, V, W, Y and Z.

Taxiing to/from stand 201L or 203L:

- TWYs H, M, N, P, T, V, W, Y and Z.

Taxiing to stand 80:

- TWYs H, M, N, P, S, T, V, W, Y, Z or TWY D north of TWY D1.

Taxiing to stand 52:

- TWYs H, J1, M, N, P, S, T, V, W, Y and Z.

#### 1.7.1. A380 OPERATIONS

- RWY 01L/19R will normally be used for landing and take-off.
- MAX ACFT weight 560t on TWY V and TWY P between TWY D and NOLAC/SOMBI.
- Idle thrust shall be used on outer engines when taxiing.
- Pilots are to ensure that the ACFT remains on the TWY centerline at all times, it is recommended that judgemental steering is used at all times when maneuvering on the TWYs.
- Parking may take place at stands 52, 80, 171L, 201L, 203L.
- A380 towbar is available at the APT.
- Operator shall secure for arrangements with own equipment.
- A380 operator is responsible for contracting handling company before using the APT.

#### 1.7.2. AN-124 OPERATIONS

- RWY 01L/19R will normally be used for landing and take-off.
- RWY 01R/19L may be used if traffic permits.
- Pilots are to ensure that the ACFT remains on the TWY centerline at all times, it is recommended that judgemental steering is used at all times when maneuvering on the TWYs.
- Parking may take place at stand 201L, 203L or at military apron after prior arrangement.
- Operator shall secure for arrangements with own equipment.
- Operator is responsible for contracting handling company before using the APT.

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## 1. GENERAL

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### 1.7.3. B747-8 OPERATIONS

- RWY 01L/19R will normally be used for landing and take-off.
- RWY 01R/19L may be used if traffic permits.
- Pilots are to ensure that the ACFT remains on the TWY centerline at all times, it is recommended that judgemental steering is used at all times when maneuvering on the TWYs.
- Parking may take place at stand 52, 80, 171L, 201L, 203L or at military apron after prior arrangement.
- Operator shall secure for arrangements with own equipment.
- Operator is responsible for contracting handling company before using the APT.

### 1.8. MALFUNCTION OF STOP BAR

In case an ACFT has to cross an illuminated stop bar, the following applies:

- ATC will request a Follow-me car.
- The ACFT will be transferred to the appropriate TWR frequency.
- The pilot will be informed that a Follow-me car will arrive.
- The pilot will be requested to report the Follow-me car in sight.
- ATC will issue permission to enter the RWY.
- Requests for confirmation that the illuminated stop bar may be crossed, will be answered with "AFFIRM", not a clearance to do so.

### 1.9. OTHER INFORMATION

Birds.

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## 2. ARRIVAL

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### 2.1. CAT II/III OPERATIONS

RWYs 01L, 01R, 19L and 19R approved for CAT II/III operations, special aircrew and ACFT certification required.

### 2.2. RWY OPERATIONS

If an ACFT cannot obtain contact with GARDERMOEN Ground, the pilot should completely vacate the landing RWY and hold position until contact with GARDERMOEN Ground can be established.

The ACFT is regarded to be clear of the RWY when the whole ACFT has passed the holding point on the TWY used when vacating the RWY in use.

### 2.3. TAXI PROCEDURES

Allowances shall be made for 10 minutes taxiing time.

When exiting at A4, A5, A6, B3, B4, B6 or B7, exit speed must be adjusted to allow for a gradually increasing curvature. Excessive speed through the curve may incur a risk of TWY excursion under low friction conditions.

### 2.4. OTHER INFORMATION

#### 2.4.1. POINT MERGE SYSTEM (PMS)

STARs are based on PMS and accommodate Basic Continuous Descent Operations. ACFT on STARs can expect clearance to the Merge Point (MP) when traffic permits, allowing for a precise sequencing whilst the ACFT maintains own lateral navigation.

When cleared direct to MP and also having received an instrument approach clearance, follow the transition from MP to final as stated in the relevant IAP.

Between 0030-0600LT the shortest distance from STAR starting point to MP may be seen as the expected track to the start of the IAP. Deviation from the track may be regarded as a delaying action.

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## 3. DEPARTURE

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### 3.1. DATALINK DEPARTURE CLEARANCE (DCL)

DCL is available by SITA or ARINC.

DCL is not available for NON-RNAV 1 equipped ACFT.

The use of DCL is compulsory for ACFT with DCL capability.

Departing IFR flights are urged to use DCL when asking for clearances.

DCL is available 30 minutes before TOBT until TOBT. For flights not assigned TOBT, DCL is available 30 minutes before EOBT.

Jet ACFT receiving a PROP-SID shall verify this at first call to GARDERMOEN Ground.

When programming the FMS, pilots shall ensure that SID and RWY for departure are in accordance with received clearance.

"Revert to voice" should be expected:

- a. if clearance via DCL is not accepted within 5 minutes;
- b. in case of major delay;
- c. in case of technical failure;
- d. in case ATC, for some reason, decide to use VHF communication for clearance delivery.

When receiving "Revert to voice", clearance shall be obtained by GARDERMOEN Delivery.

A clearance received by VHF communication always overrides a clearance received by DCL.

### 3.2. ATC CLEARANCE

Departing IFR flights unable to utilize DCL shall contact GARDERMOEN Delivery to obtain ATC clearance. Calls shall be addressed to CLR East or CLR West according to stand. CLR East is operating on the responsibility area of GND East, and CLR West is operating on the responsibility area of GND West. Specify stand number at first call. ATC clearance may be requested at the earliest 30 minutes prior anticipated engine start-up (TOBT). Listening watch shall be maintained on current delivery frequency, if no instruction of frequency change has been given by GARDERMOEN Delivery.

### 3.3. APT COLLABORATIVE DECISION MAKING

#### 3.3.1. TARGET OFF BLOCK TIME (TOBT)

Verified by ground handling company at the latest 30 minutes before planned TOBT, and thereafter continuously updated until start-up request. TOBT indicates the time when the completion of all ground handling activities (except de-icing) is expected and ACFT will be ready for start-up/push-back. ACFT must report ready for start-up within the TOBT tolerance limit of { 5 minutes. TOBT updates are necessary to ensure foreseeable departure times, and as means for ATC to issue the correct TSAT.

#### 3.3.2. TARGET START-UP APPROVAL TIME (TSAT)

Set by ATC and indicates the time when clearance for start-up/push-back may be expected, to ensure correct departure sequence according to AD departure capacity. TSAT takes into account variable taxi time, de-icing (if necessary) and CTOT. TSAT is normally similar close to TOBT, but delays may occur when AD departure capacity is exceeded. The departure capacity is determined by MET conditions, de-icing capacity, RWY capacity and airspace capacity.



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### 3. DEPARTURE

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#### 3.3.3. CALCULATED TAKE-OFF TIME (CTOT)

ACFT shall be ready for take-off at the RWY holding point not later than the CTOT.

ACFT must be ready for engine start on TSAT.

TSAT accounts for time for taxiing and de-icing as necessary, so the CTOT can be met.

Pilots must inform GARDERMOEN Delivery if start-up according to TSAT is not possible. Request for a new CTOT shall be made via the airline operator or the handling agent.

ACFT waiting for CTOT, with a wish to leave the parking stand, may request "Push and hold" to GARDERMOEN Delivery. "Push and hold" implies waiting at a different location at the AD, and is subject to approval from ATC based on availability.

ACFT with CTOT that implies less than one hour delay, are encouraged to perform "Push and hold", to release the ground personnel and the stand for other ACFT.

"Push and hold" is performed in one of the following ways:

- Push-back without engine start, so the engines can be started without delay upon request from GARDERMOEN Ground, when suitable to meet the CTOT or when the stand is needed for other ACFT;
- Normal push-back and taxi to a position suitable for holding closer to the RWY;
- Normal push-back and taxi with reduced number of engines and/or engine shut-down at a holding position closer to the RWY.

#### 3.4. DE-ICING

During winter operations that require extensive de-ice activity, ACFT that do not require de-ice might be cleared to holding position A2 (01 operations) or B8 (19 operations). ATC must be informed if departure from other RWY intersections is desired.

De-icing of ACFT shall only be performed on the dedicated de-icing platforms.

On first contact report to Delivery, if the ACFT needs de-icing. ATC will forward the request to the de-icing coordinator. ACFT equipped for Datalink Departure Clearance (DCL) and requiring de-icing, must enter REQ DEICE into the REMARKS/free text field, when requesting DEP clearance via DCL.

Radio contact with the de-icing coordinator, on frequency 121.855 MHz, shall only be made when instructed by GARDERMOEN Ground and may be expected when ACFT is approaching the de-icing platform.

Listening watch on last assigned ATC frequency shall be maintained during de-icing.

Pilots are requested to maintain listening watch on the de-ice coordinator frequency until the ACFT is leaving the de-icing platform.

De-icing stand is assigned by the de-icing coordinator. Use full call sign when in contact with the de-icing coordinator.

ACFT code letter D, E and F (wingspan above 36m) is to be marshalled to stop position at assigned de-icing stand. If marshaller is not present, de-icing coordinator will inform ACFT to "hold position" until marshaller is present.

De-icing is completed when a message including the ACFT callsign, details about the de-icing and the phrase "Equipment removed" is received from the de-icing coordinator via RTF. Do not move the ACFT until "all clear signal" (thumbs up) is given from ground crew and taxi instructions are received from ATC.

Request for taxi instructions shall be forwarded to ATC. Specify both RTF callsign and de-icing stand on which the ACFT is parked.

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### 3. DEPARTURE

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#### 3.4.1. DE-ICING FOR LARGE ACFT (CODE F)

- De-icing will normally take place on de-icing area A-South when RWY 01L is used for departure.
- De-icing platform B-North will normally be used for de-icing when RWY 19L is used for departure.
- Pilot may expect de-icing at de-icing area A-North when ACFT performance does not allow departure on RWY 19L, and departure must be planned for RWY 19R.
- All taxiing from de-ice platform A-North to RWY 01L will be via TWYs N, A7 and M.

#### 3.5. START-UP AND PUSH-BACK

Request for start-up shall be made to GARDERMOEN Delivery when ACFT is ready for start-up/push-back (doors closed and tug connected) within TOBT { 5 minutes. Listening watch shall thereafter be maintained on GARDERMOEN Delivery.

GARDERMOEN Delivery sequences departing ACFT and will advise TSAT in case of delay.

GARDERMOEN Ground will issue push-back clearance.

If ACFT is not ready for push-back/start-up within TOBT { 5 minutes, TOBT must be updated by the ground handling agent and ATC will set a new TSAT.

Straight push-back to defined disconnecting positions, will be performed for code C ACFT or smaller from stands: 9 thru 13, 10 thru 22, 24, 26, 28, 60, 64, 65, 68, 69, 72, 73, 76, 77, 80, 81, 85, 89, 171 thru 178, 181 thru 187, 201 thru 204.

Push-back to defined start-up positions on TWY is mandatory from the following stands:

- Stand 15, code C ACFT will be pushed to start-up position 52 facing East.
- Stands 36, 38 and 61, code C ACFT will be pushed to start-up position 20 facing South or position 15 facing West or position 14 facing Terminal as instructed by Ground control.
- Stands 39 and 41, code C ACFT will be pushed to start-up position 4 facing West.
- Stand 40, ACFT will be pushed to start-up position 20 facing South or position 15 facing West as instructed by Ground control.
- Stands 43 and 45, code C ACFT will be pushed to start-up position 3 or 10 facing East as instructed by Ground control.
- Stands 44, 46, 46R and 48, ACFT will be pushed to start-up position 15 or 17 facing West or position 16 or 18 facing East, instructed by Ground control.
- Stand 49, code C ACFT will be pushed to start-up position 10 facing East and code D and E ACFT will be pushed to start-up position 9 on TWY L center.
- Stand 50, code C ACFT will be pushed to start-up position 16 facing East or 17 facing West as instructed by Ground control.
- Stand 51, code C ACFT will be pushed to start-up position 11 facing East and code D and E ACFT will be pushed to start-up position 8 on TWY L center.
- Stand 52, code D and E ACFT will be pushed to start-up position 16, 18 or 19 facing East or 17 facing West as instructed by Ground control.
- Stand 53, code C ACFT will be pushed to start-up position 12 facing East and code D and E ACFT will be pushed to start-up position 7 on TWY L center.
- Stand 54, code C ACFT will be pushed to start-up position 16 facing East or 17 facing West as instructed by Ground control.
- Stand 56, ACFT will be pushed to start-up position 17 facing West or position 18 or 19 facing East as instructed by Ground control.
- Stand 58, ACFT will be pushed to start-up position 19 facing East.
- Stands 76 and 80, code D and E ACFT will be pushed to start-up position 30 facing South or position 31 facing North as instructed by Ground control.

### 3. DEPARTURE

- Stands 79 and 87, code D and E ACFT will be pushed to start-up position 20 facing South or position 21 facing North as instructed by Ground control.
- Stand 171L, code D and E ACFT will be pushed to start-up position 53 facing West.
- Stand 188, code D and E ACFT will be pushed to start-up position 7 or to position 8 facing East as instructed by Ground control.
- Stand 189, code C ACFT will be pushed to start-up position 6 facing East.
- Stands 201L and 203L, code D, E and F ACFT will be pushed to start-up position 63 facing South or to position 64 facing North as instructed by Ground control.
- Stands 205 thru 208R, ACFT will be pushed to start-up position 65 facing South, position 66 facing North or position 67 facing South as instructed by Ground control.

Initial turn left after push-back:

- On stands 60, 73, 80, 81, 89, 181 and 201 for code C ACFT or smaller.

Initial turn right after push-back:

- On stands 26, 28, 65, 72, 85 and 204 for code C ACFT or smaller.

If a pilot request a different turn direction other than standard, it will affect safety distances. If such a request is received from the pilot, ATC will use the following RFT: "Caution, safety zones not assured" and the pilot will be responsible for safety distances.

Push-back from stands 93, 95 and 96 only available after incorrect positioning of ACFT during towing/parking in coordination with ATC.

To avoid blast/prob wash when turning out from disconnecting positions/start-up position on to TWY, as little engine power as possible shall be used.

#### 3.5.1. PUSH-BACK FOR CODE F ACFT

Push-back to defined start-up positions on TWY is mandatory from the following stands:

- Stand 52: ACFT will be pushed to start-up position 19 facing East.
- MARS Stand 52: ACFT shall be towed to start-up position 19 after push-back. Only one engine start allowed during push-back. Full engine start when positioned on start-up position 19.
- Stand 80: ACFT will be pushed to start-up position 31 facing North. The ACFT shall be towed to start-up position 31 after push-back. Only one engine start allowed during push-back. Full engine start when positioned on start-up position 31.
- Stand 171L: ACFT will be pushed to start-up position 53 facing West.
- Stands 201L and 203L: ACFT will be pushed to start-up position 63 facing South or to position 64 facing North as instructed by Ground control.

#### 3.6. NOISE ABATEMENT PROCEDURES

SIDs RWY 01R: NADP1 to be used during climb-out with jet ACFT.

#### 3.7. RWY OPERATIONS

##### 3.7.1. MINIMUM RWY OCCUPANCY TIME

On receipt of clearance line-up, pilots should taxi into the correct position and line-up on the RWY without delay. Line-up must be done in an angle of not more than 90° relative to CL on the active RWY.

Pilots should be able to commence the TKOF roll immediately when TKOF CLR is issued.

Pilots whom are unable to comply with these requirements shall notify ATC when transferred to GARDERMOEN Tower.

27 NOV 20 (10-2) .Eff. 3.Dec. .RNAV .STAR.

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RNAV .STAR.

D-ATIS  
126.125

Apt Elev  
681

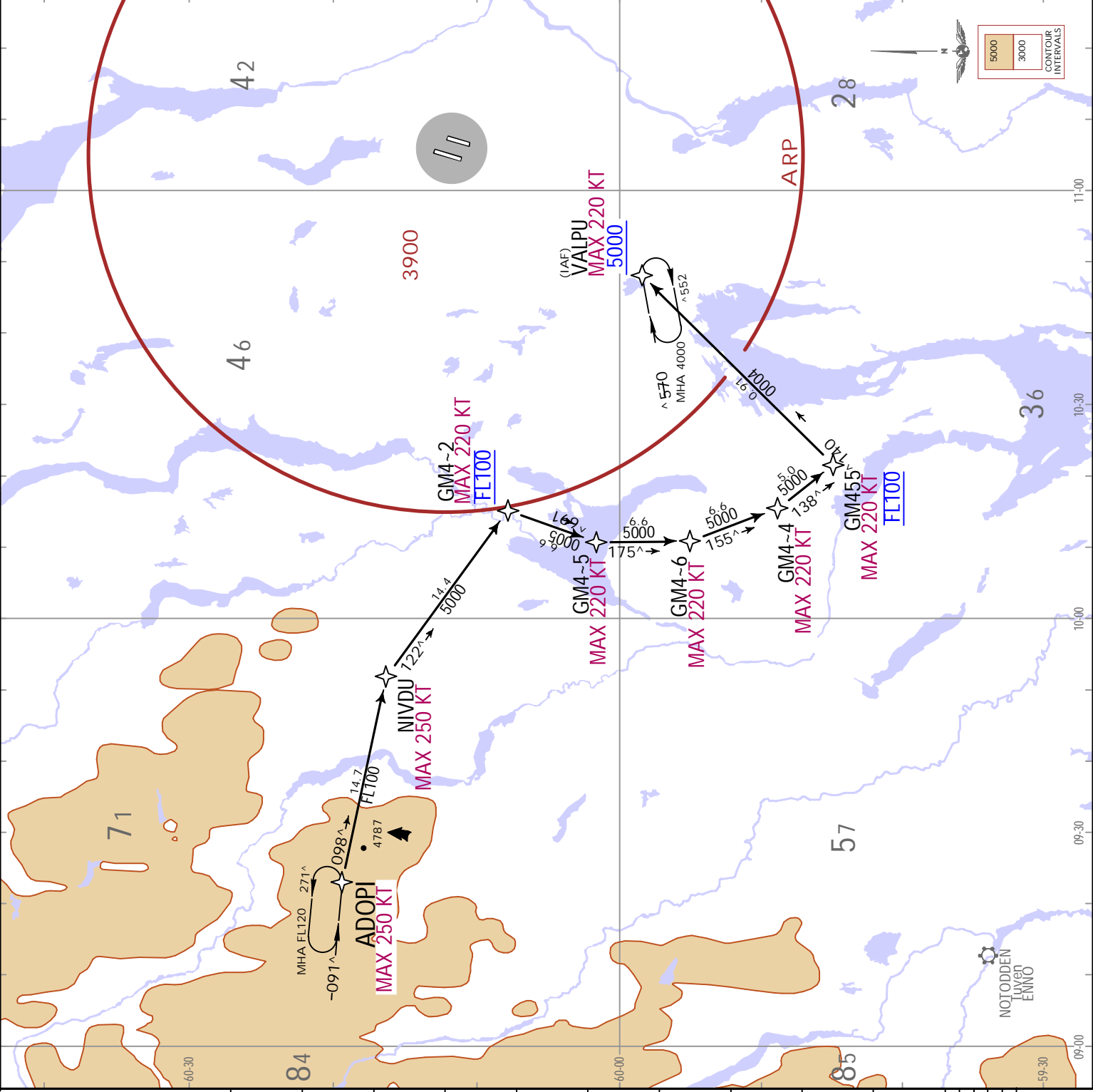
Alt Set: hPa Trans level: By ATC

1. RNAV 1.
2. Surveillance service shall be available.
3. Loss of RNAV capability, request vectoring.
4. Vectoring may be used for sequencing.
5. Descend as cleared by ATC.

**ADOPI 3L [ADOP3L]**  
**RWYS 01L/R RNAV ARRIVAL**  
**SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED**

**ADOPI (K250-) - NIVDU(K250-) - GM402 (K220-; FL100)**  
**- GM405 (K220-) - GM406 (K220-) - GM404 (K220-) - GM455 (K220-; FL100) - VALPU (K220-; 5000+).**

**ROUTING**



Clearance limit is VALPU holding.

Merging point is VALPU.

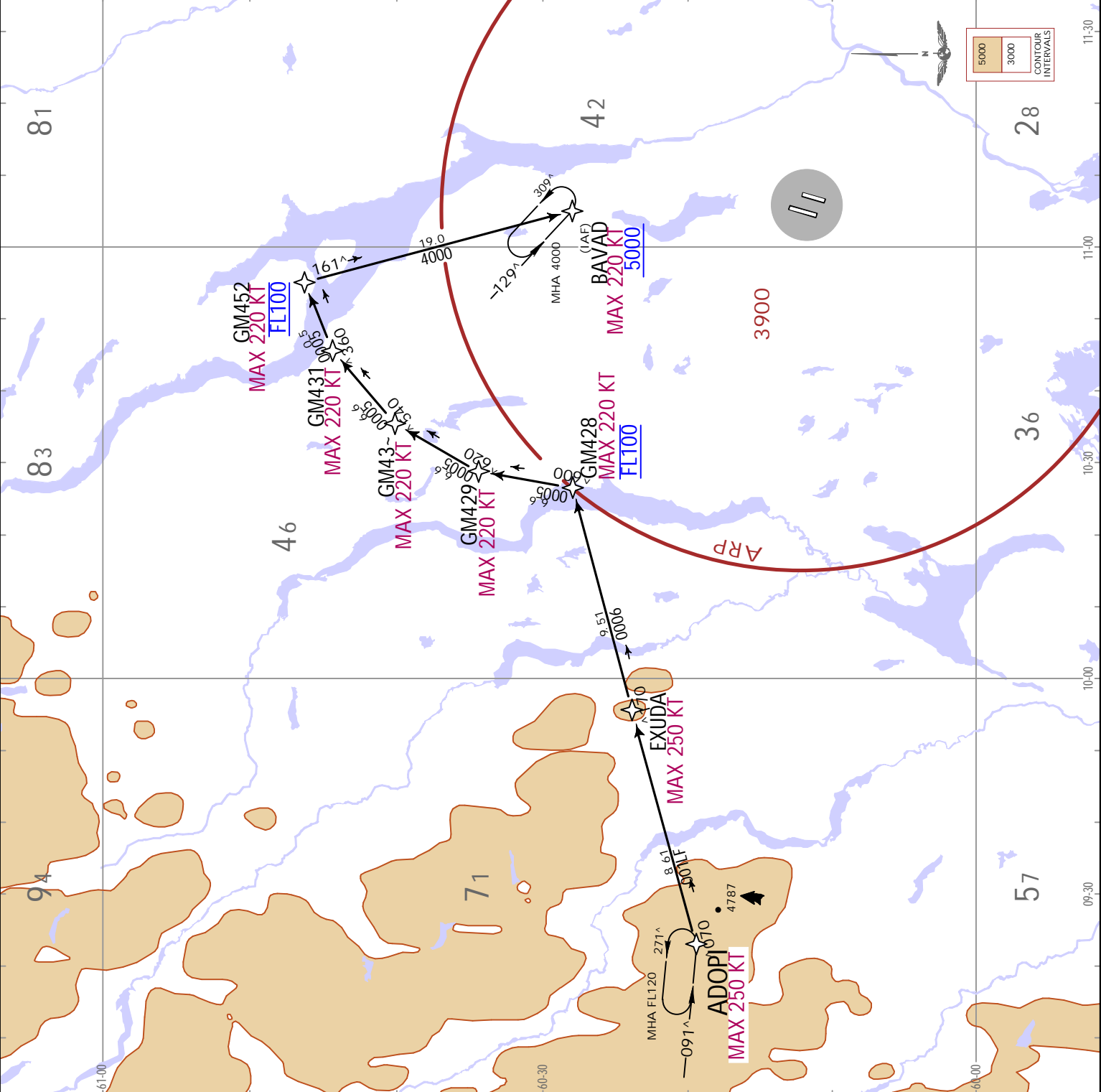
LOST COMMS  
 Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 01R without delay.

LOST COMMS  
 Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 01R without delay.

**JEPPESEN**  
 27 NOV 20 (10-2A) .Eff.3.Dec. .RNAV .STAR.

**ENGM/OSL**  
 GARDERMOEN

D-ATIS <b>126.125</b>	Apt Elev 681	Alt Set: hPa Trans level: By ATC 1. RNAV 1. 2. Surveillance service shall be available. 3. Loss of RNAV capability, request vectoring. 4. Vectoring may be used for sequencing. 5. Descend as cleared by ATC.
<b>ADOPI 3M [ADOP3M]</b> <b>RWYS 19L/R RNAV ARRIVAL</b> <b>.SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED</b>		
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Clearance limit is BAVAD holding.</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Merging point is BAVAD.</div>		
LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 19R without delay. ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS		
<b>ROUTING</b> ADOPI (K250-) - EXUDA (K250-) - GM428 (K220-) - GM428 (K220-) - GM429 (K220-) - GM430 (K220-) - GM431 (K220-) - GM452 (K220-) - BAVAD (K220-) - 5000+).		



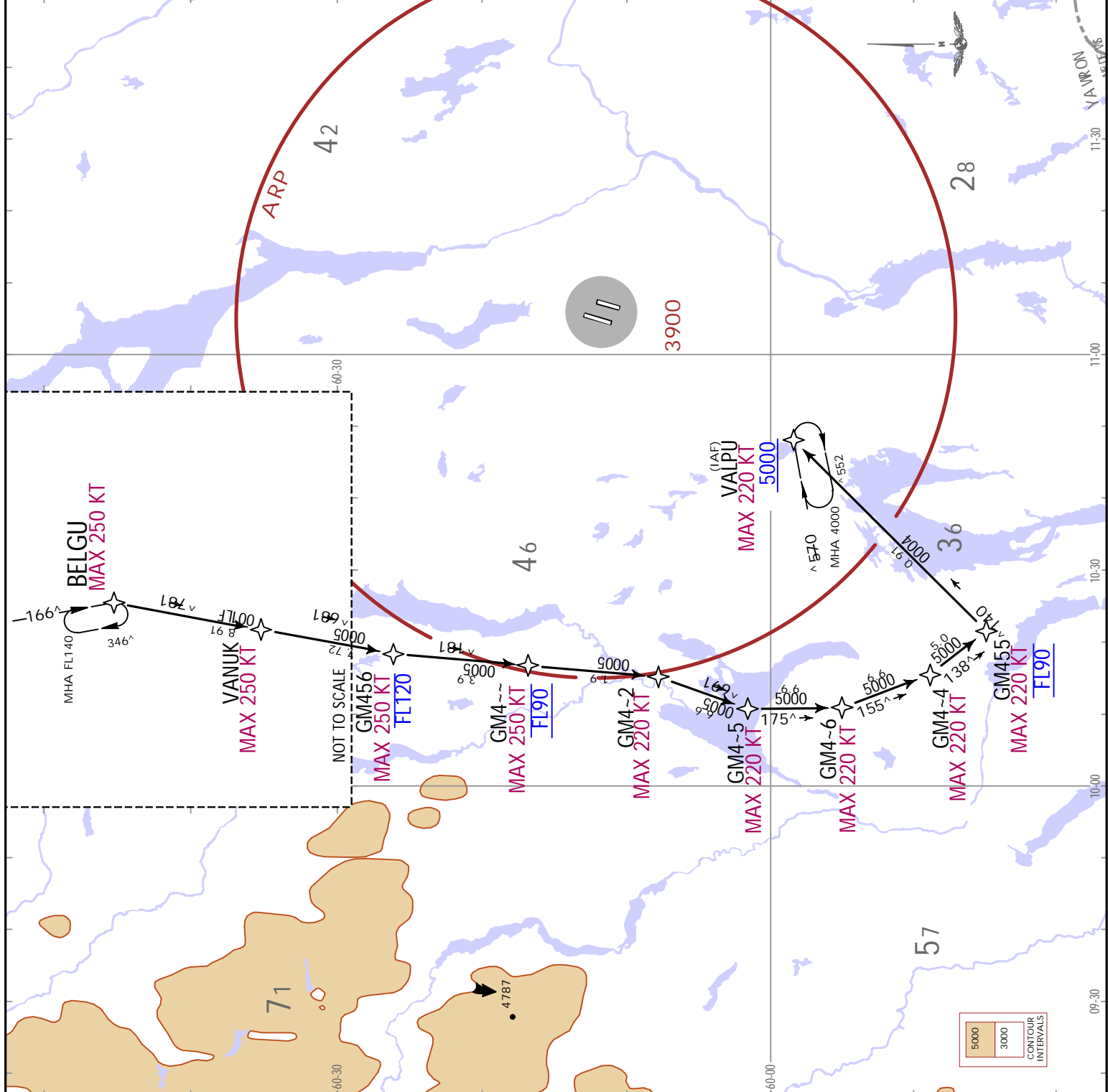
27 NOV 20 (10-2B) .Eff. 3. Dec. **JEPPESEN OSLO, NORWAY**  
**ENGM/OSL**  
**GARDERMOEN**

D-ATIS 126.125  
 Apt Elev 681

Alt Set: hPa Trans level: By ATC  
 1. RNAV 1.  
 2. Surveillance service shall be available.  
 3. Loss of RNAV capability, request vectoring.  
 4. Vectoring may be used for sequencing.  
 5. Descend as cleared by ATC.

**BELGU 3L [BELG3L]**  
**RWYS 01L/R RNAV ARRIVAL**  
**SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED**

**ROUTING**  
 BELGU (K250-) - VANUK (K250-) - GM456 (K250-);  
 FL120- - GM400 (K250-; FL90) - GM402 (K220-) -  
 GM405 (K220-) - GM406 (K220-) - GM404 (K220-) -  
 GM455 (K220-; FL90) - VALPU (K220-; 5000+).



Clearance limit is VALPU holding.

Merging point is VALPU.

LOST COMMS  
 Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 01R without delay.

D-ATIS  
 126.125

Apt Elev  
 681

- AIT Set: hPa Trans level: By ATC
1. RNAV 1.
  2. Surveillance service shall be available.
  3. Loss of RNAV capability, request vectoring.
  4. Vectoring may be used for sequencing.
  5. Descend as cleared by ATC.

**BELGU 3M [BELG3M]**  
**RWYS 19L/R RNAV ARRIVAL**  
**.SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED**

**Clearance limit is BAVAD holding.**

**Merging point is BAVAD.**

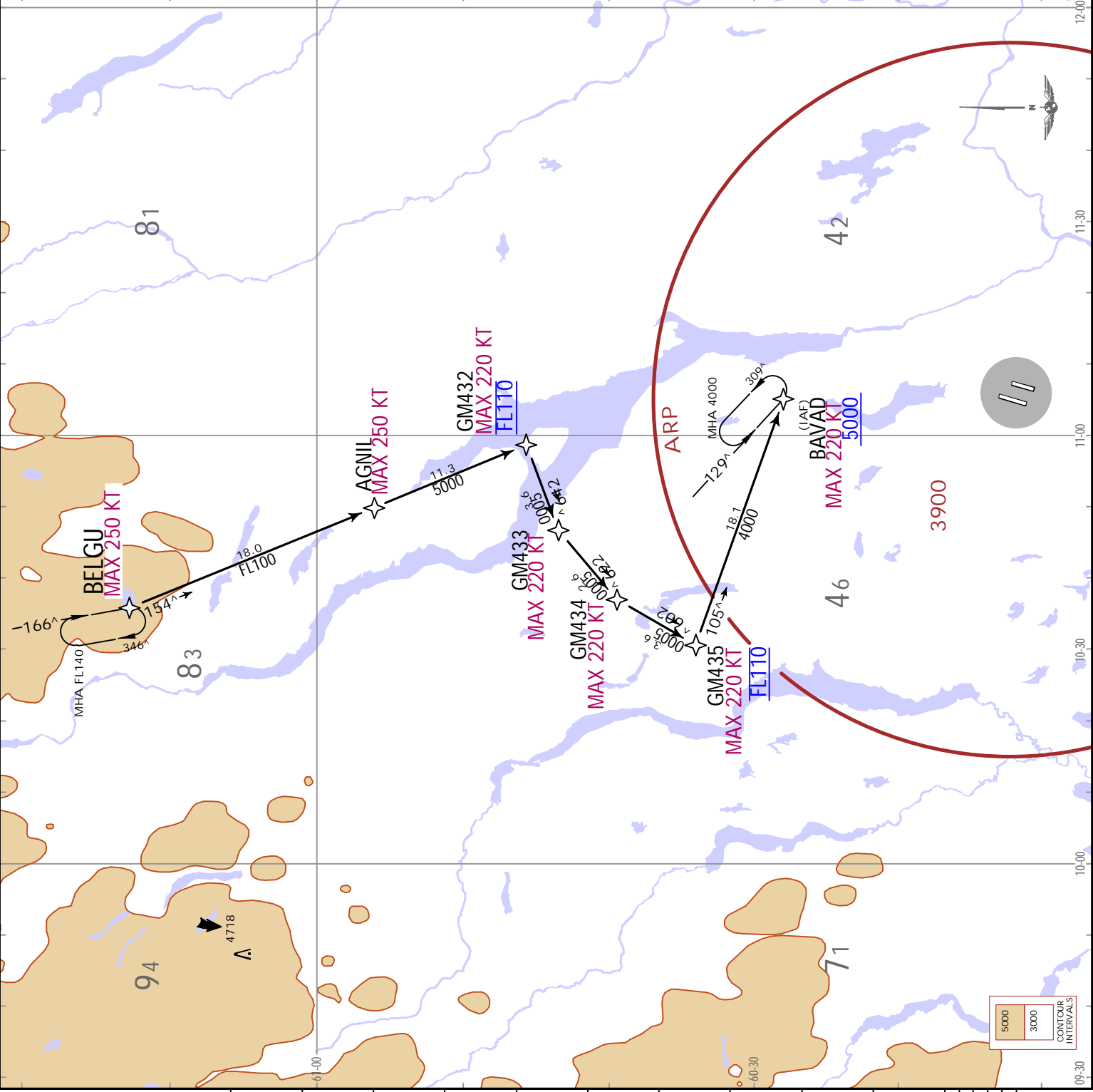
LOST COMMS  
 Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 19R without delay.

LOST COMMS  
 Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 19R without delay.

LOST COMMS  
 Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 19R without delay.

**ROUTING**

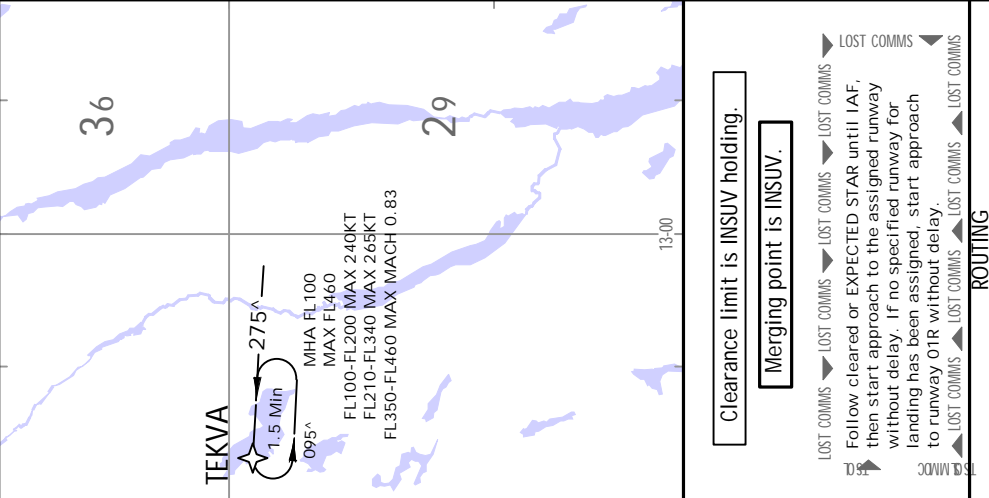
BELGU (K250-) - AGNIL (K250-) - GM432 (K220-) - FL110 - GM433 (K220-) - GM434 (K220-) - GM435 (K220-) - FL110 - BAVAD (K220-) - 5000+).



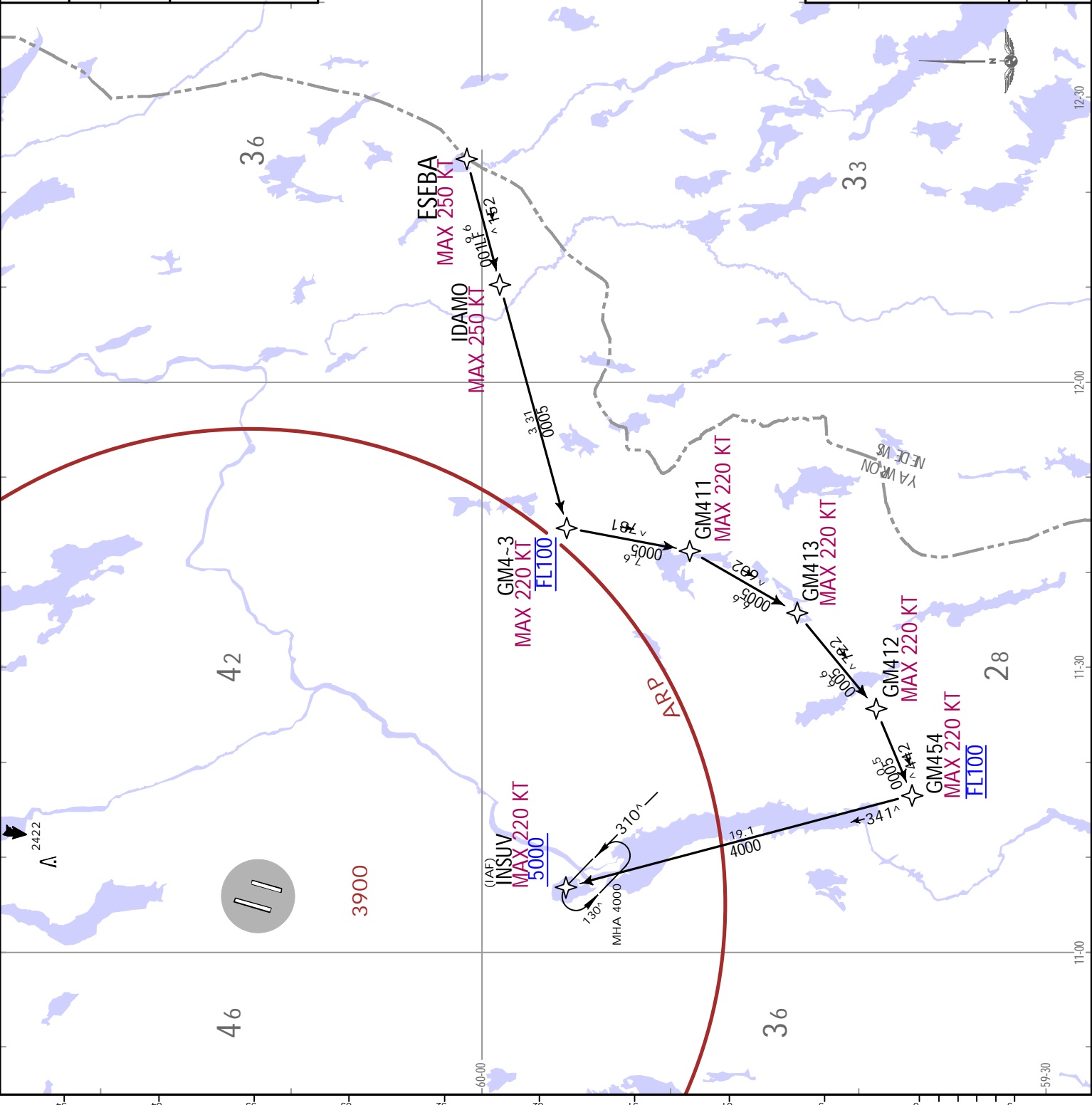
D-ATIS  
126.125  
Apt Elev  
681

Alt Set: hPa Trans level: By ATC  
1. RNAV 1.  
2. Surveillance service shall be available.  
3. Loss of RNAV capability, request vectoring.  
4. Vectoring may be used for sequencing.  
5. Descend as cleared by ATC.

**ESEBA 4L [ESEB4L]**  
**RWYS 01L/R RNAV ARRIVAL**  
**SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED**

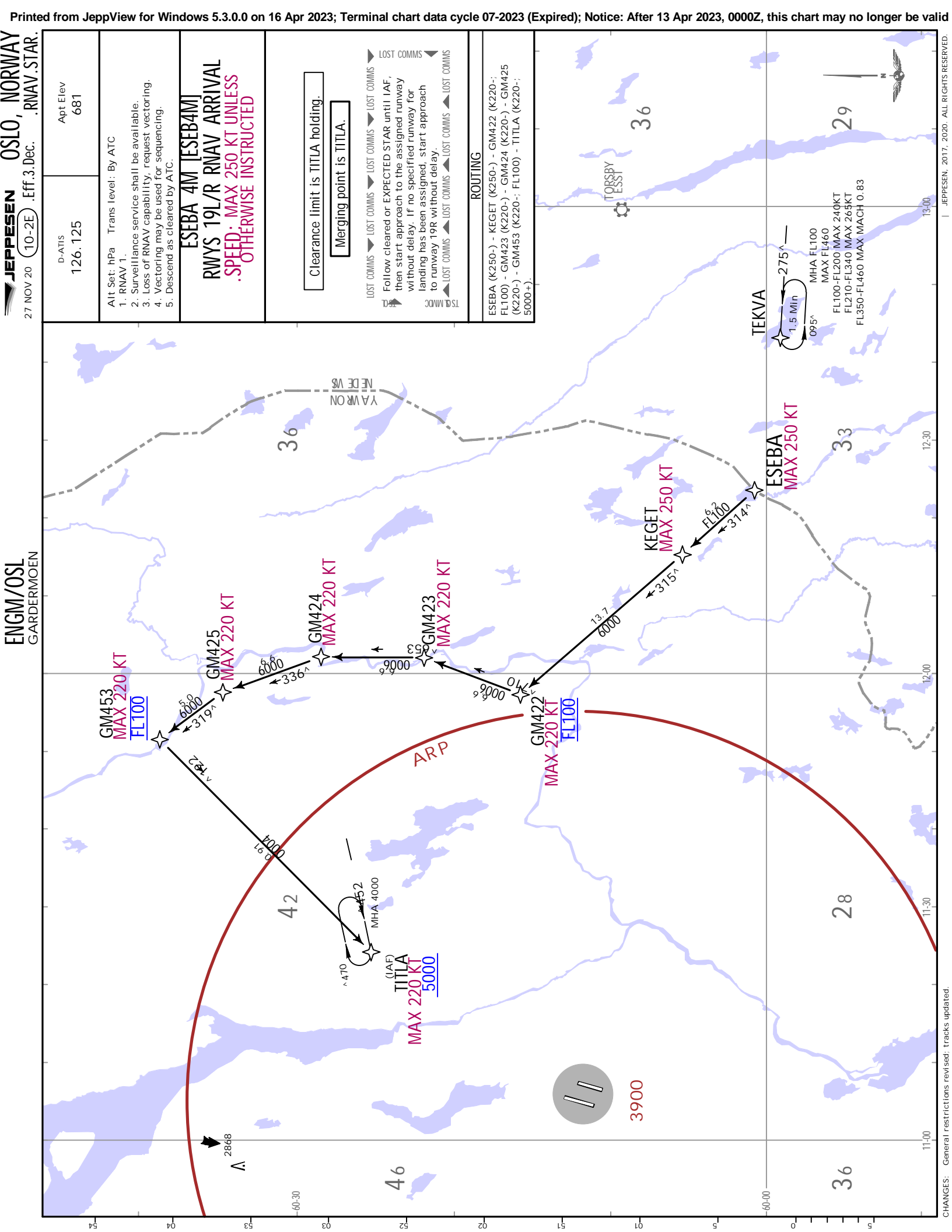


**ROUTING**  
ESEBA (K250-) - IDAMO (K250-) - GM403 (K220-);  
FL100) - GM411 (K220-) - GM413 (K220-) - GM412  
(K220-) - GM454 (K220-) - FL100) - INSUV (K220-);  
5000+).



Clearance limit is INSUV holding.  
Merging point is INSUV.  
LOST COMMS  
Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 01R without delay.  
LOST COMMS





D-ATIS  
126.125

Apt Elev  
681

AIT Set: hPa Trans level: By ATC  
1. RNAV 1.  
2. Surveillance service shall be available.  
3. Loss of RNAV capability, request vectoring.  
4. Vectoring may be used for sequencing.  
5. Descend as cleared by ATC.

**ESEBA 4M [ESEB4M]**  
**RWYS 19L/R RNAV ARRIVAL**  
**SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED**

Clearance limit is TITLA holding.  
Merging point is TITLA.

ROUTING  
ESEBA (K250-) - KEGET (K250-) - GM422 (K220-) - FL100 - GM423 (K220-) - GM424 (K220-) - GM425 (K220-) - GM453 (K220-) - FL100 - TITLA (K220-) - 5000(+).

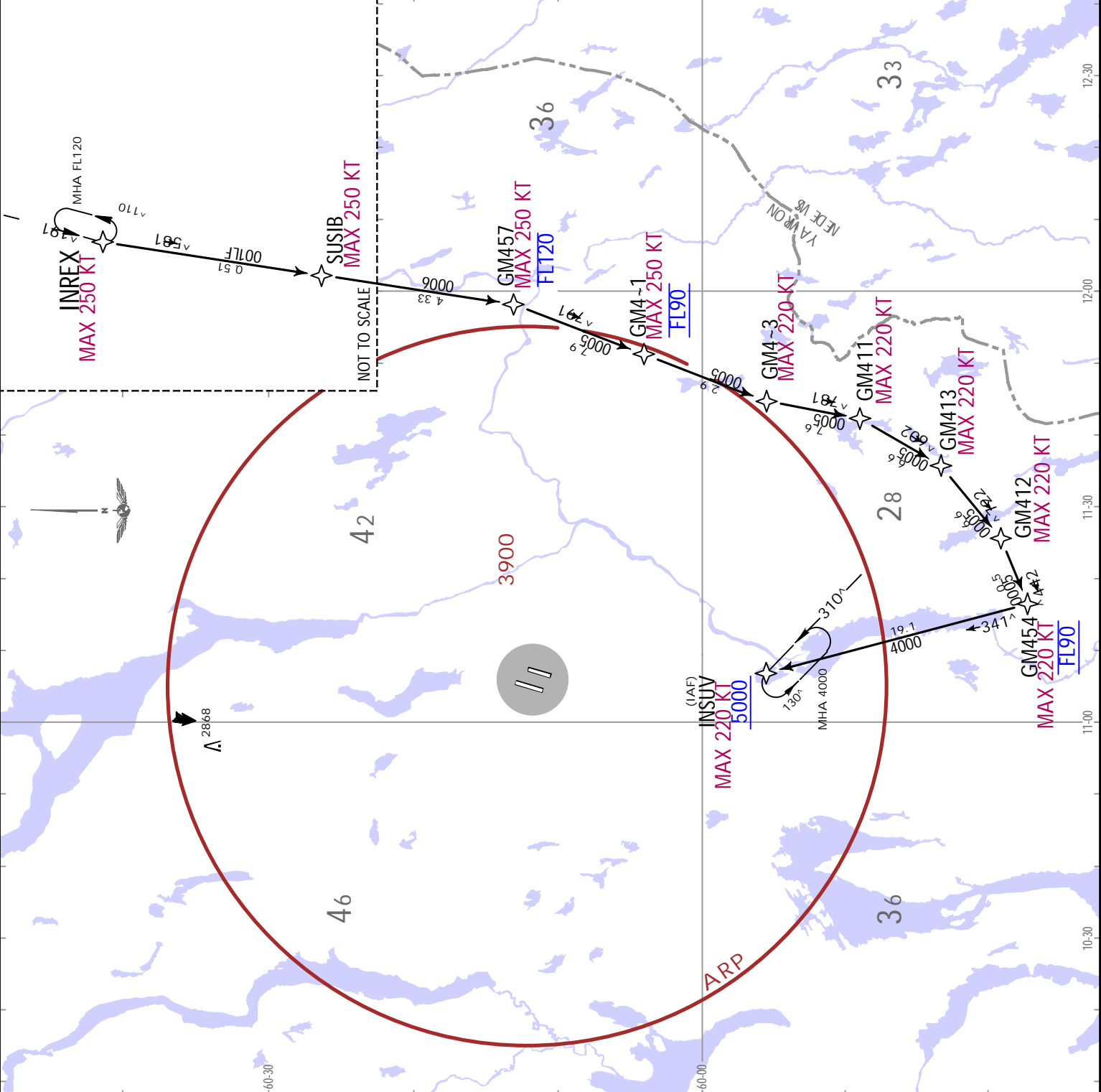
D-ATIS  
126.125  
Apt Elev  
681

Alt Set: hPa Trans level: By ATC  
1. RNAV 1.  
2. Surveillance service shall be available.  
3. Loss of RNAV capability, request vectoring.  
4. Vectoring may be used for sequencing.  
5. Descend as cleared by ATC.

**INREX 4L [INRE4L]**  
**RWYS 01L/R RNAV ARRIVAL**  
**SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED**

Clearance limit is INSUV holding.  
Merging point is INSUV.

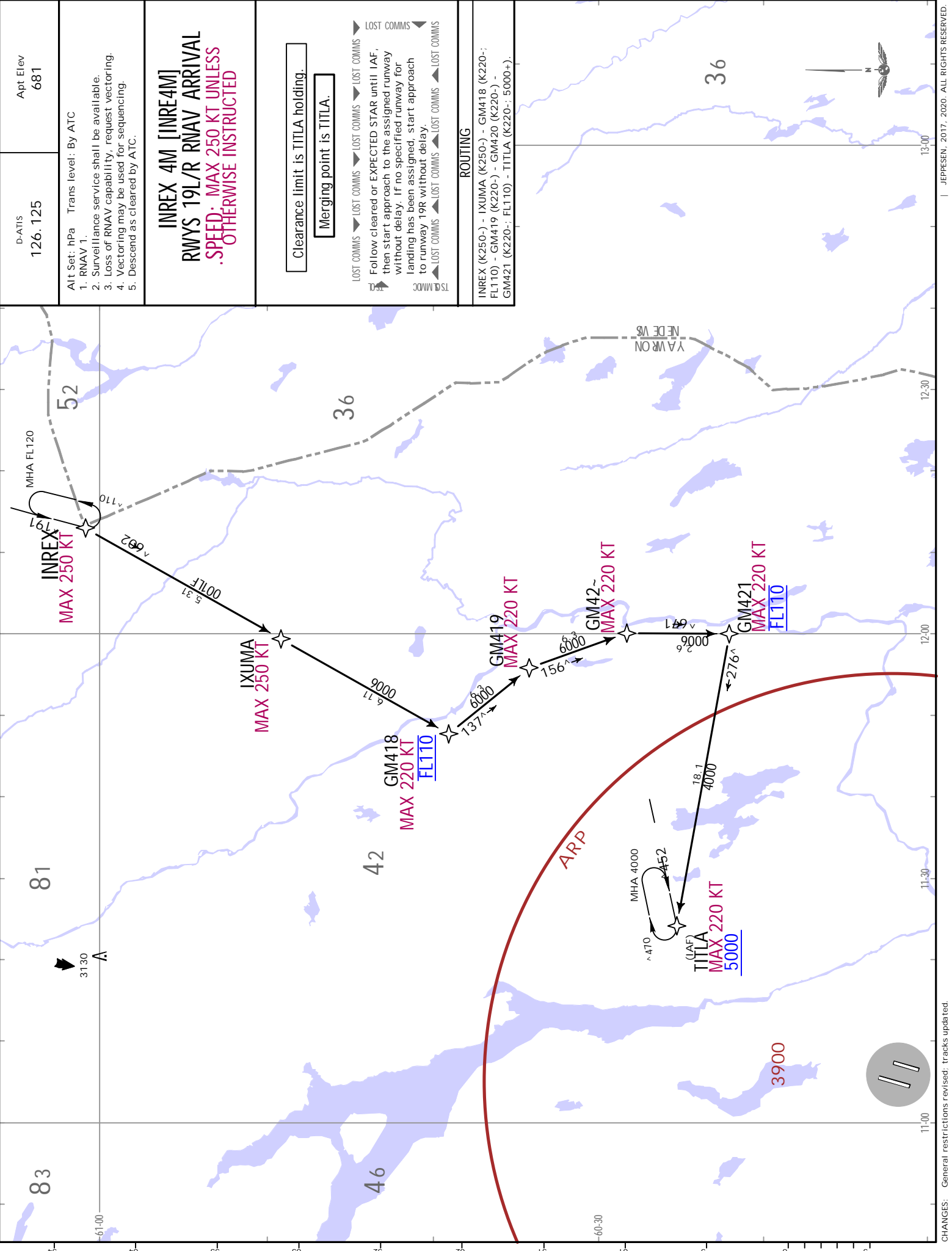
**ROUTING**  
INREX (K250-) - SUSIB (K250-) - GM457 (K250-; FL120-) - GM401 (K250-; FL90) - GM403 (K220-) - GM411 (K220-) - GM413 (K220-) - GM412 (K220-) - GM454 (K220-; FL90) - INSUV (K220-; 5000+).



**JEPESEN**  
 27 NOV 20 (10-2G) .Eff. 3.Dec. .RNAV.STAR.

**ENGM/OSL**  
 GARDERMOEN

D-ATIS 126.125	Apt Elev 681
Alt Set: hPa Trans level: By ATC	
1. RNAV 1. 2. Surveillance service shall be available. 3. Loss of RNAV capability, request vectoring. 4. Vectoring may be used for sequencing. 5. Descend as cleared by ATC.	
<b>INREX 4M [INRE4M]</b> <b>RWYS 19L/R RNAV ARRIVAL</b> <b>SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED</b>	
Clearance limit is TITLA holding. Merging point is TITLA.	
LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 19R without delay. ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲	
<b>ROUTING</b> INREX (K250-) - IXUMA (K250-) - GM418 (K220-) - FL110 - GM419 (K220-) - GM420 (K220-) - GM421 (K220-) - TITLA (K220-) - 5000-+	



**JEPPESEN OSLO, NORWAY**  
 27 NOV 20 (10-2H) . Eff. 3. Dec. . RNAV . STAR.

**ENGM/OSL**  
 GARDERMOEN

D-ATIS  
 126.125

Apt Elev  
 681

Alt Set: hPa Trans level: By ATC

1. RNAV 1.
2. Surveillance service shall be available.
3. Loss of RNAV capability, request vectoring.
4. Vectoring may be used for sequencing.
5. Descend as cleared by ATC.

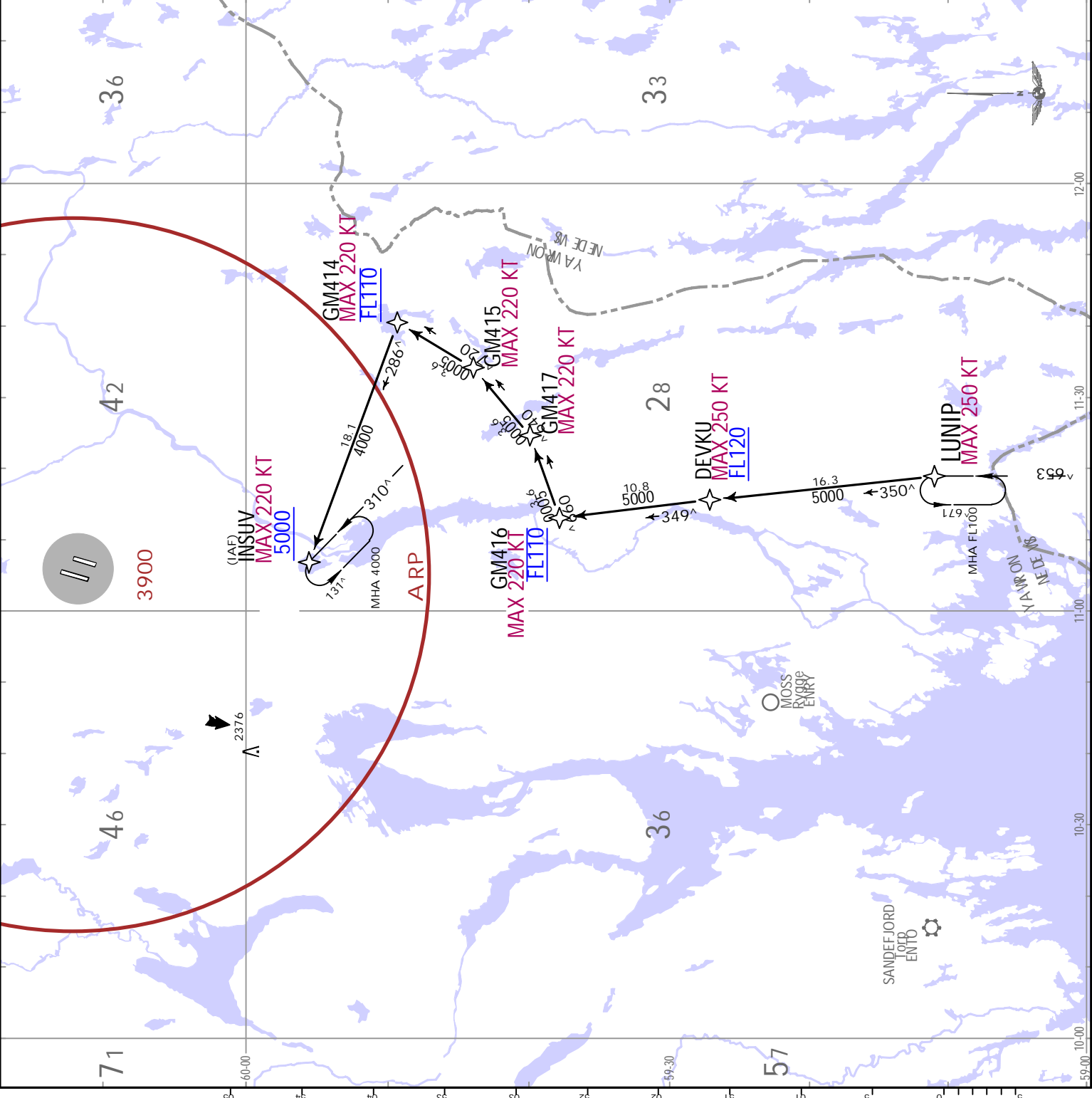
**LUNIP 4L [LUN14L]**  
**RMYS 01L/R RNAV ARRIVAL**  
**.SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED**

**ROUTING**

LUNIP (K250-) - DEVKU (K250-; FL120+) - GM416 (K220-; FL110) - GM417 (K220-) - GM415 (K220-) - GM414 (K220-; FL110) - INSUV (K220-; 5000+).

Clearance limit is INSUV holding.  
 Merging point is INSUV.

LOST COMMS  
 Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 01R without delay.



**JEPPESEN** OSLO, NORWAY  
 27 NOV 20 (10-23) .Eff. 3.Dec. .RNAV .STAR.

D-ATIS  
 126.125  
 Apt Elev  
 681

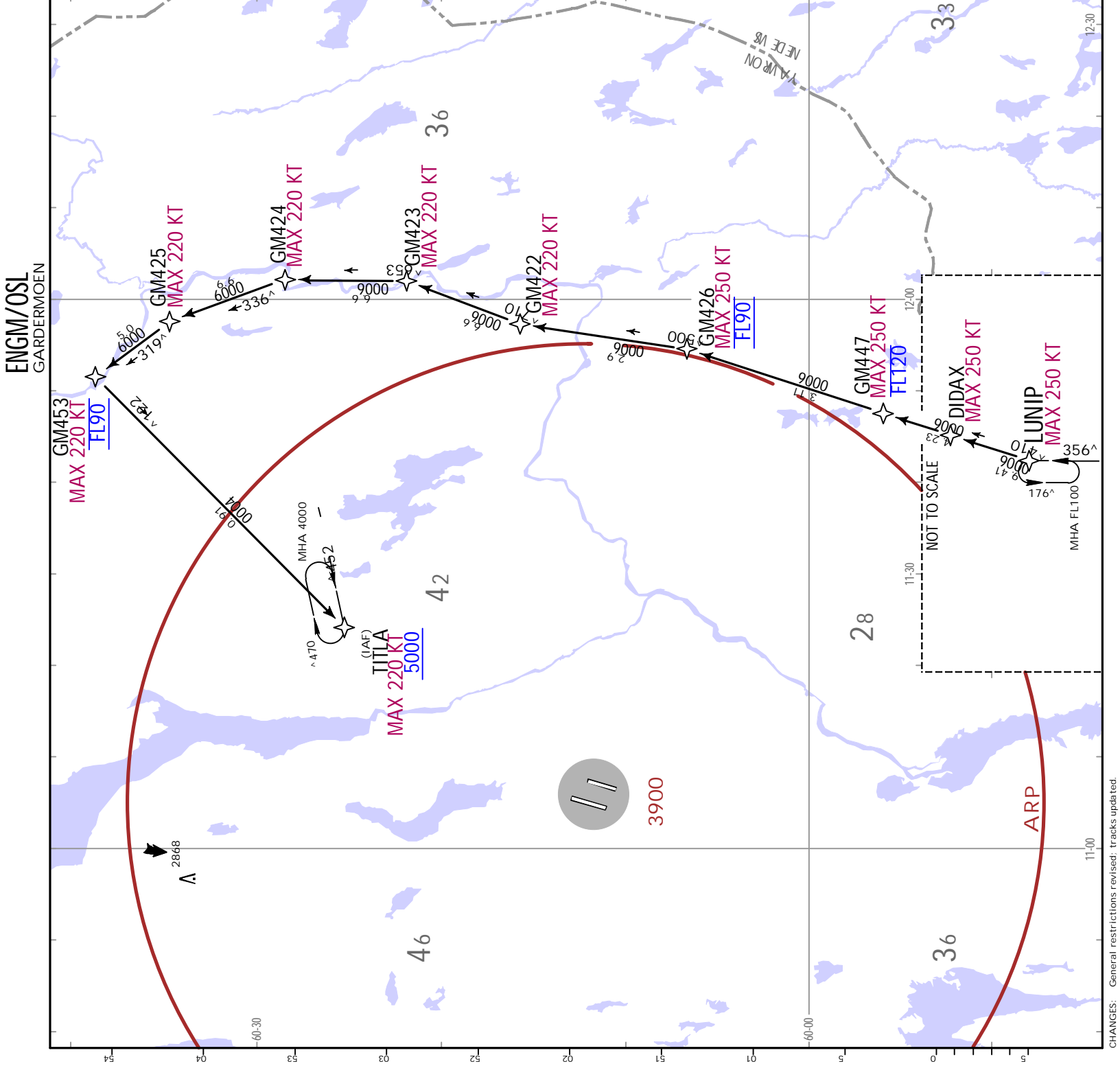
Alt Set: hPa Trans level: By ATC  
 1. RNAV 1.  
 2. Surveillance service shall be available.  
 3. Loss of RNAV capability, request vectoring.  
 4. Vectoring may be used for sequencing.  
 5. Descend as cleared by ATC.

**LUNIP 4M [LUN14M]**  
**RMYS 19L/R RNAV ARRIVAL**  
**.SPEED: MAX 250 KT UNLESS**  
**OTHERWISE INSTRUCTED**

Clearance limit is TITLA holding.  
 Merging point is TITLA.

LOST COMMS  
 Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 19R without delay.

**ROUTING**  
 LUNIP (K250-) - DIDAX (K250-) - GM447 (K250-);  
 FL120-) - GM426 (K250-; FL90) - GM422 (K220-) -  
 GM423 (K220-) - GM424 (K220-) - GM425 (K220-) -  
 GM453 (K220-; FL90) - TITLA (K220-; 5000+).



ENGM/OSL  
 GARDERMOEN

ENGM/OSL  
GARDERMOEN

JEPPESEN OSLO, NORWAY  
10-2K .Eff. 3.Dec. .RNAV.STAR.

27 NOV 20

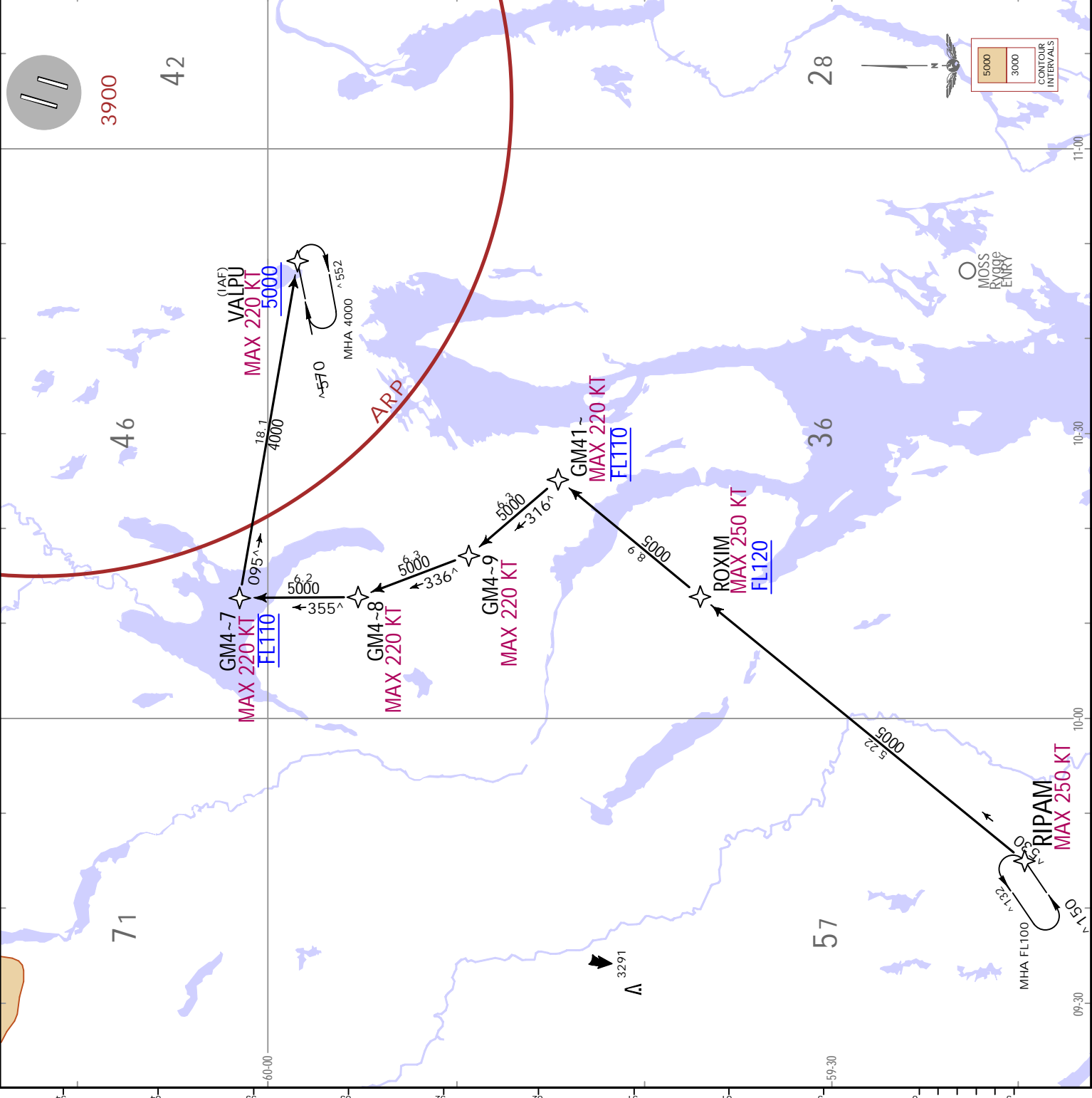
D-ATIS  
126.125

Apt Elev  
681

Alt Set: hPa Trans level: By ATC

1. RNAV 1.  
2. Surveillance service shall be available.  
3. Loss of RNAV capability, request vectoring.  
4. Vectoring may be used for sequencing.  
5. Descend as cleared by ATC.

**RIPAM 3L [RIPA3L]  
RWYS 01L/R RNAV ARRIVAL**  
SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED



Clearance limit is VALPU holding.

Merging point is VALPU.

LOST COMMS → LOST COMMS → LOST COMMS → LOST COMMS → LOST COMMS → LOST COMMS → LOST COMMS

Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 01R without delay.

LOST COMMS ← LOST COMMS ← LOST COMMS ← LOST COMMS ← LOST COMMS ← LOST COMMS ← LOST COMMS

ROUTING

RIPAM (K250-) - ROXIM (K250-; FL120+) - GM410 (K220-; FL110) - GM409 (K220-) - GM408 (K220-) - GM407 (K220-; FL110) - VALPU (K220-; 5000+).

JEPPESEN, 2017, 2020. ALL RIGHTS RESERVED.

ENGM/OSL  
GARDERMOEN

JEPPESEN OSLO, NORWAY  
10-2K .Eff. 3.Dec. .RNAV.STAR.

27 NOV 20

D-ATIS  
126.125

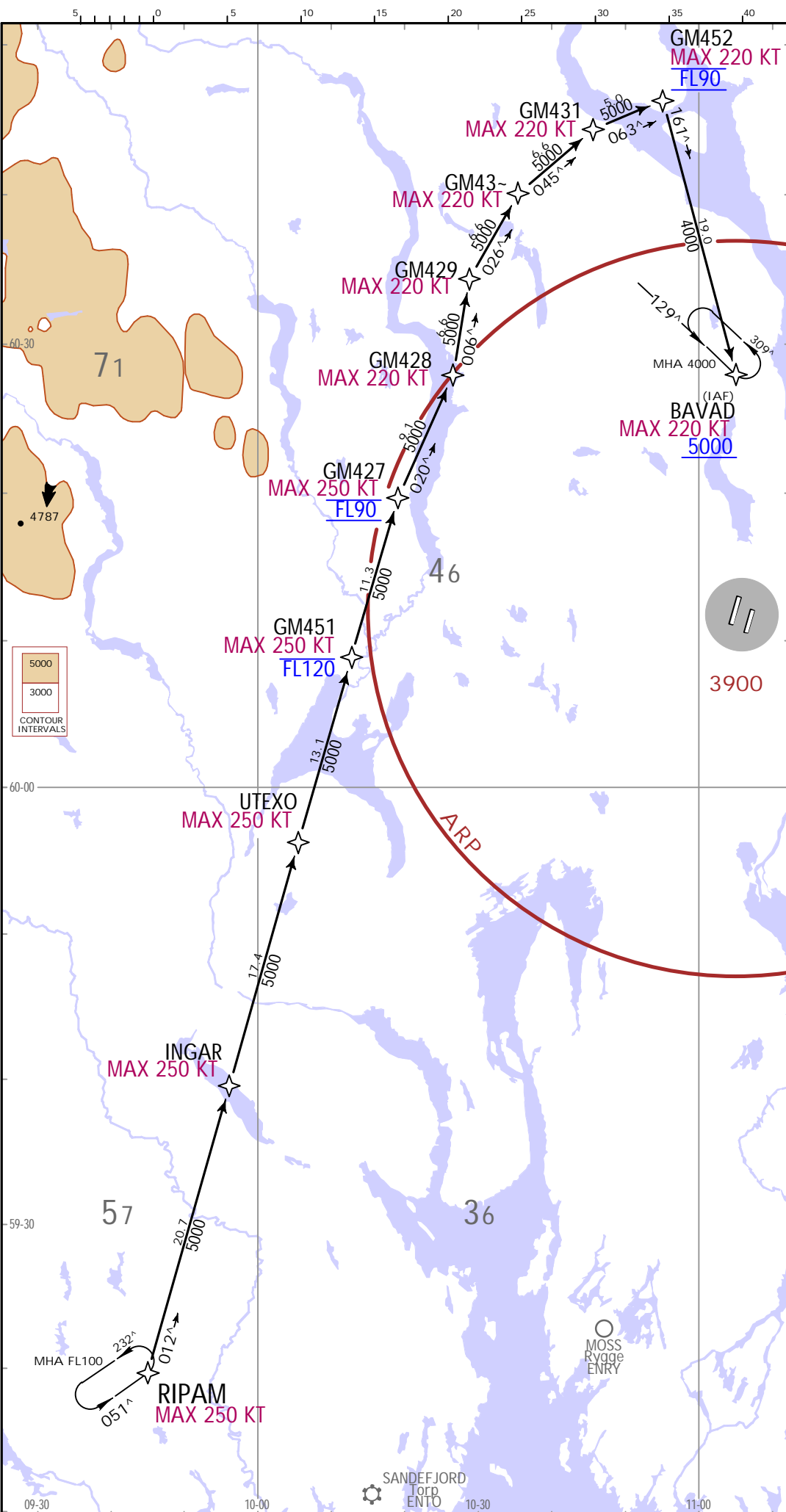
Apt Elev  
681

Alt Set: hPa Trans level: By ATC

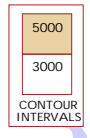
1. RNAV 1.  
2. Surveillance service shall be available.  
3. Loss of RNAV capability, request vectoring.  
4. Vectoring may be used for sequencing.  
5. Descend as cleared by ATC.

**RIPAM 3L [RIPA3L]  
RWYS 01L/R RNAV ARRIVAL**  
SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED

CHANGES: General restrictions revised; Tracks updated.



D-ATIS 126.125	Apt Elev 681
Alt Set: hPa Trans Level: By ATC 1. RNAV 1. 2. Surveillance service shall be available. 3. Loss of RNAV capability, request vectoring. 4. Vectoring may be used for sequencing. 5. Descend as cleared by ATC.	
<b>RIPAM 4M [RIPA4M]</b> <b>RWYS 19L/R RNAV ARRIVAL</b> .SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED	
Clearance limit is BAVAD holding. Merging point is BAVAD.	
LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST Follow cleared or EXPECTED STAR until IAF, then start approach to the assigned runway without delay. If no specified runway for landing has been assigned, start approach to runway 19R without delay. ▲ LOST COMMS ▲ LOST COMMS ▲ LOST COMMS ▲ LOST	
<b>ROUTING</b> RIPAM (K250-) - INGAR (K250-) - UTEXO (K250-) - GM451 (K250-; FL120-) - GM427 (K250-; FL90) - GM428 (K220-) - GM429 (K220-) - GM430 (K220-) - GM431 (K220-) - GM452 (K220-; FL90) - BAVAD (K220-; 5000+)	



**RIPAM 4M [RIPA4M]**  
**RWYS 19L/R RNAV ARRIVAL**

**JEPPESEN OSLO, NORWAY**  
 19 MAR 21 10-3 .Eff. 25.Mar.  
 .RNAV.SID.

OSLO Approach  
 120.450  
 Apt Elev  
 681

- Trans alt: 7000
1. RNAV 1
  2. Surveillance service shall be available.
  3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
  4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Onmidirectional departure available.
  5. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
  6. When being vectored or cleared for direct routing, climb gradients apply.
  7. MADP-2 is used during climb-out.

**ATLAP 5A [ATLA5A]**  
**EVT0G 5A [EVT05A]**  
**RWY 01L RNAV DEPARTURES**  
**SPEED: MAX 250 KT BELOW FL100**  
**UNLESS OTHERWISE INSTRUCTED**

LOST COMMS  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL. ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.

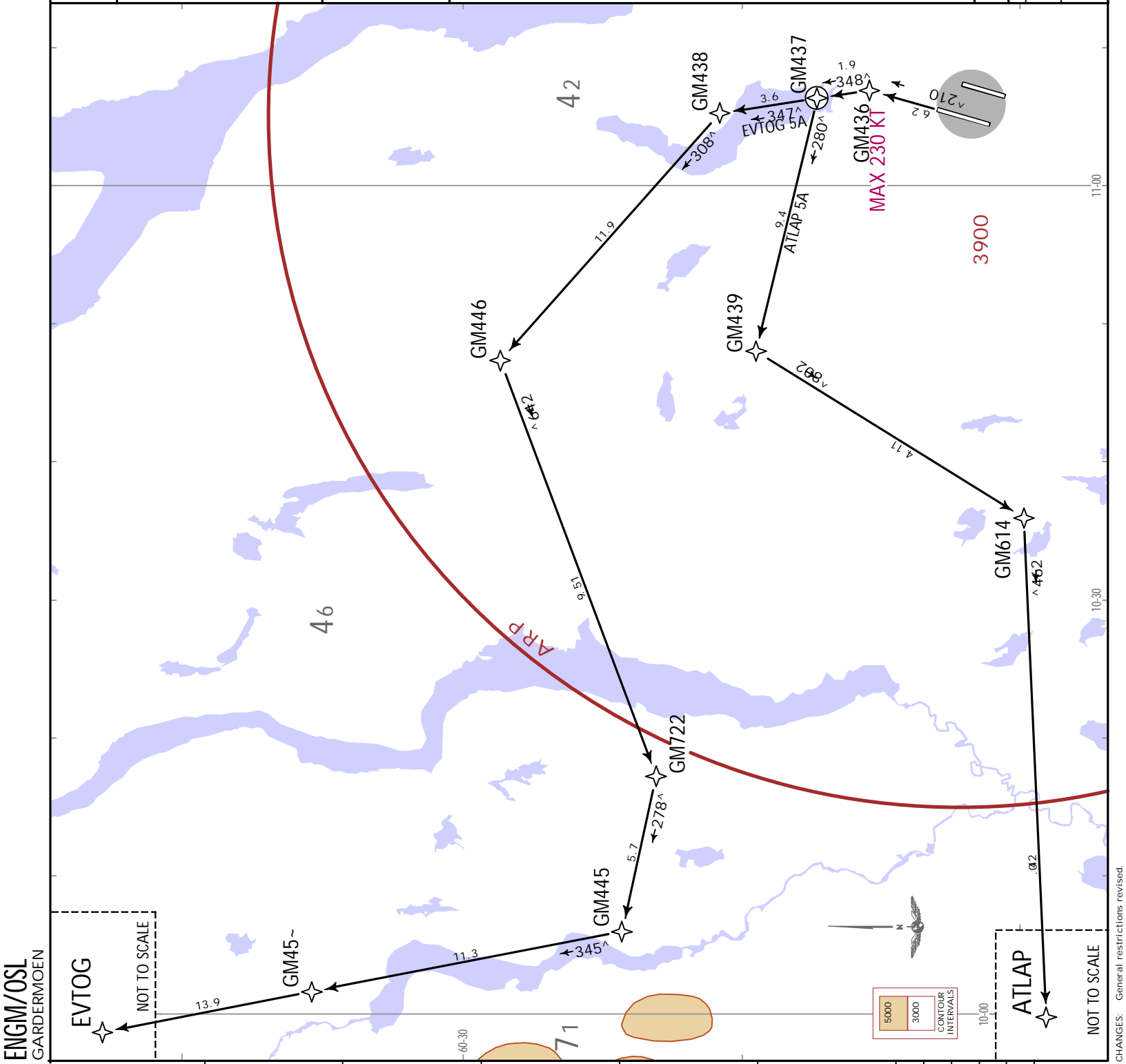
LOST COMMS  
 These SIDs require a minimum climb gradient of 31.6 per NM (5.2%) up to 5000.

Grnd speed-KT	75	100	150	200	250	300
3.16 per NM	395	527	790	1053	1317	1580

IF unable to comply inform ATC.

Initial climb clearance **7000**, EXPECT further climb by OSLO Approach.

SID	ROUTING
ATLAP 5A	On 012 <sup>^</sup> track to GM436 - GM437 - GM439 - GM614 - ATLAP.
EVT0G 5A	On 012 <sup>^</sup> track to GM436 - GM437 - GM438 - GM446 - GM722 - GM445 - GM450 - EVT0G.





OSLO Approach  
 118.475  
 Apt Elev  
 681

Trans alt: 7000

1. RNAV 1
2. Surveillance service shall be available.
3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'.
5. Omnidirectional departure available.
6. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
7. When being vectored or cleared for direct routing, climb gradients apply.
8. MADP-1 to be used during climb-out.

**ATLAP 9B [ATLA9B]**  
**EVTOG 9B [EVT09B]**  
**RWY 01R RNAV DEPARTURES**  
**SPEED: MAX 250 KT BELOW**  
**FL100 AFTER GM441**

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL.

ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

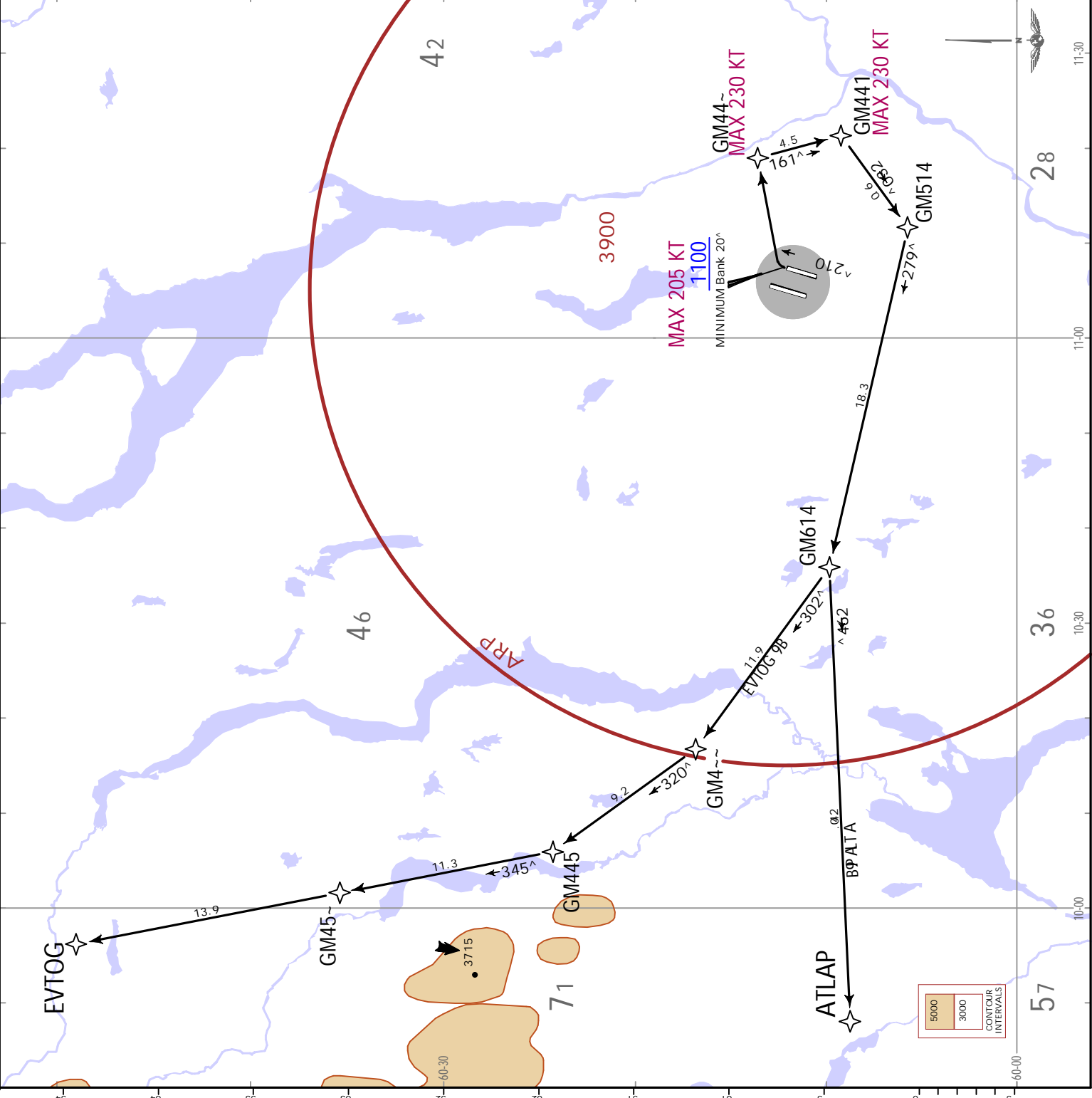
These SIDs require minimum climb gradients of  
 610 per NM (10.0%) up to 1100 due to noise abatement then  
 304 per NM (5.0%) up to 5000.

Grnd speed-KT	75	100	150	200	250	300
610 per NM	763	1017	1525	2033	2542	3050
304 per NM	380	507	760	1013	1267	1520

If unable to comply inform ATC.

Initial climb clearance 7000, EXPECT further climb by OSLO Approach.

SID	ROUTING
ATLAP 9B	Climb on 012° track to 1100 - GM440 - GM441 - GM514 - GM614 - ATAP.
EVT09B	Climb on 012° track to 1100 - GM440 - GM441 - GM514 - GM614 - GM400 - GM445 - EVT09.



**JEPPESEN**  
**ENGM/OSL NORWAY**  
**GARDERMOEN OSLO, NORWAY**  
**19 MAR 21 10-3B .Eff. 25. Mar. .RNAV.SID.**

OSLO Approach  
**120.450**  
 Apt Elev  
**681**

- Trans alt: 7000
1. RNAV 1
  2. Surveillance service shall be available.
  3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
  4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Omnidirectional departure available.
  5. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
  6. When being vectored or cleared for direct routing, climb gradients apply.
  7. NADP-2 is used during climb-out.

**ATLAP 3C [ATLA3C]**  
**EVT OG 3C [EVT03C]**  
**RWY 19L RNAV DEPARTURES**  
**SPEED: MAX 250 KT BELOW FL100**  
**UNLESS OTHERWISE INSTRUCTED**

LOST COMMS  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL.  
 ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.  
 LOST COMMS  
 LOST COMMS  
 LOST COMMS  
 LOST COMMS

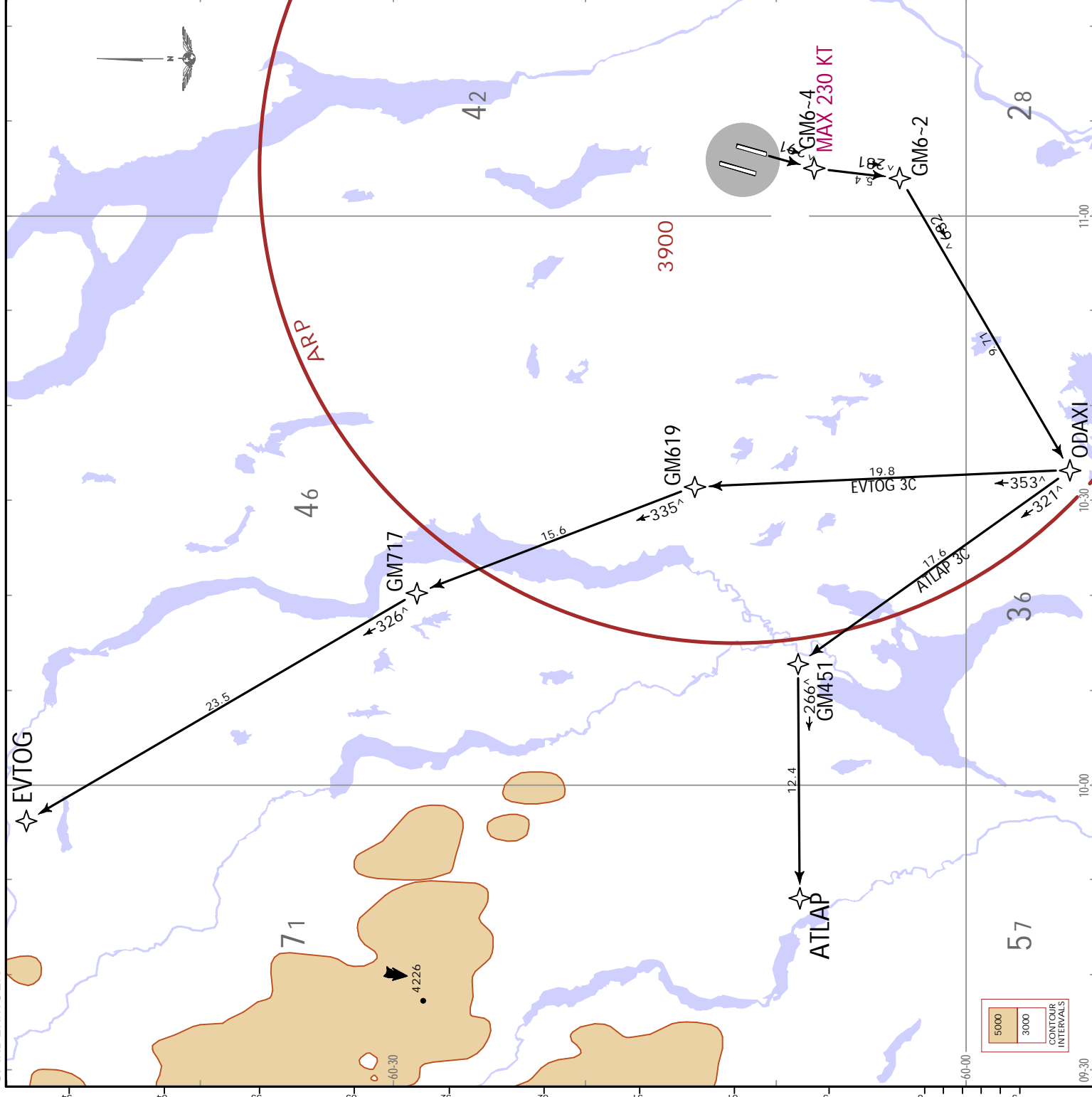
These SIDs require a minimum climb gradient of 401 per NM (6.6%) up to 5000.

Gnd speed-KT	75	100	150	200	250	300
401 per NM	501	668	1003	1337	1671	2005

If unable to comply inform ATC.

Initial climb clearance **7000**, EXPECT further climb by OSLO Approach.

SID	ROUTING
ATLAP 3C	On 192° track to GM604 - GM602 - ODAXI - GM451 - AT LAP.
EVT OG 3C	On 192° track to GM604 - GM602 - ODAXI - GM619 - GM717 - EVT OG.



**ENGM/OSL**  
**GARDERMOEN**

**JEPPESEN** **ENGM/OSL** **OSLO, NORWAY**  
GARDERMOEN  
19 MAR 21 10-30C .Eff. 25.Mar. .RNAV.SID.

OSLO Approach  
**120.450**  
Apt Elev  
**681**

Trans alt: 7000

1. RNAV 1
2. Surveillance service shall be available.
3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Onmidirectional departure available.
5. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
6. When being vectored or cleared for direct routing, climb gradients apply.
7. NADP-2 is used during climb-out.

**ATLAP 7D [ATLAD7]  
EVTOG 7D [EVTOD7]  
RWY 19R RNAV DEPARTURES**  
**.SPEED: MAX 250 KT BELOW FL100  
UNLESS OTHERWISE INSTRUCTED**

**WARNING**  
Segment distance from extended RWY CL to GM442 is less than the average flight path.

LOST COMMS  
LOST COMMS  
LOST COMMS  
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LOST COMMS  
LOST COMMS

Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL. ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.

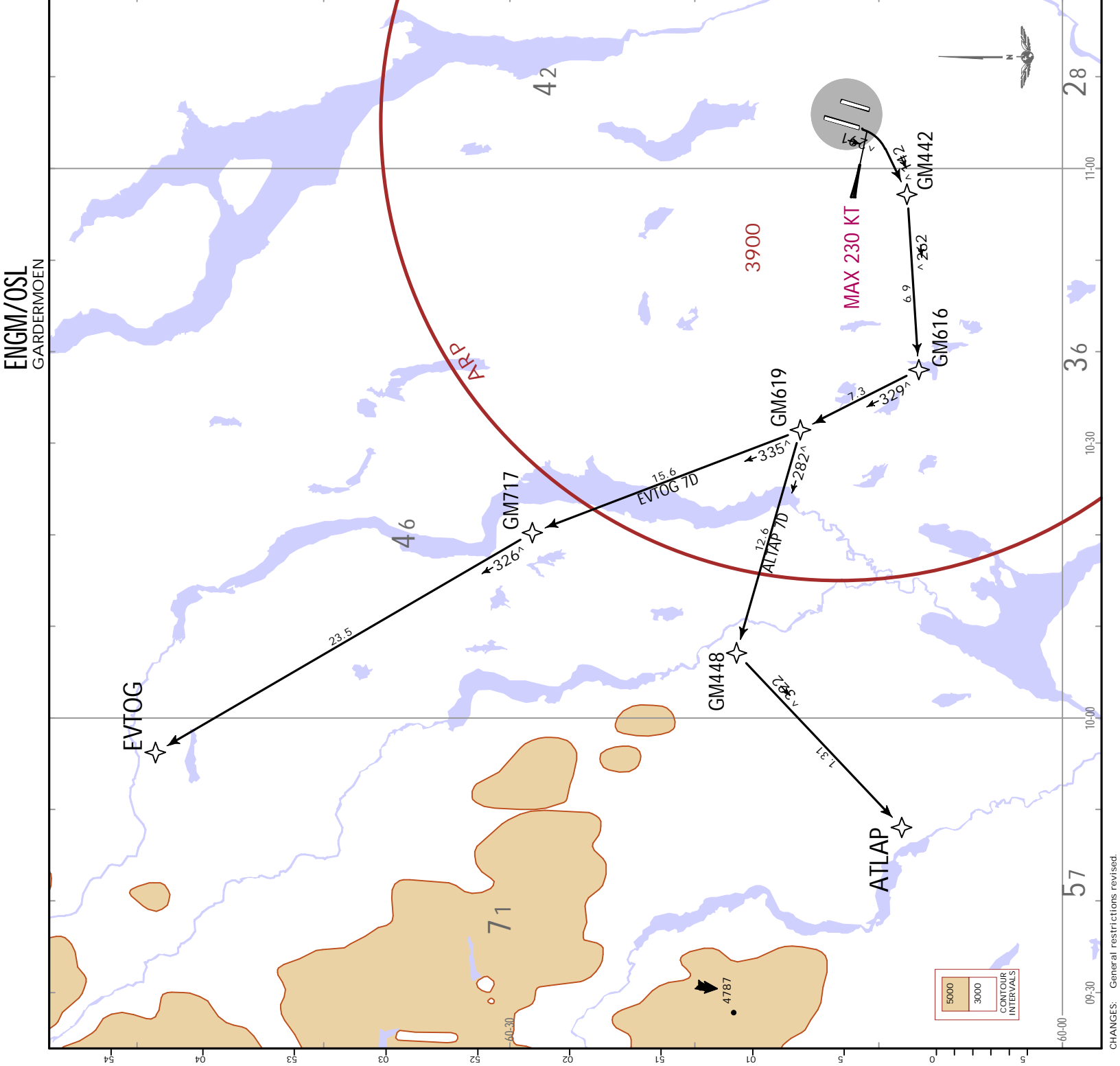
These SIDs require a minimum climb gradient of 401 per NM (6.6%) up to 5000.

Grnd speed-KT	75	100	150	200	250	300
401 per NM	501	668	1003	1337	1671	2005

If unable to comply inform ATC.

Initial climb clearance **7000**, EXPECT further climb by OSLO Approach.

**ROUTING**  
ATLAP 7D Climb on 192° track, intercept 241° track - GM442 - GM616 - GM717 - ATLAP.  
EVTOG 7D Climb on 192° track, intercept 241° track - GM442 - GM616 - GM717 - EVTOG.





OSLO Approach  
 118.475

Apt Elev  
 681

Trans alt: 7000

1. RNAV 1
2. Surveillance service shall be available.
3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Onmidirectional departure available.
5. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
6. When being vectored or cleared for direct routing, climb gradients apply.
7. INADP-1 to be used during climb-out.

**MASEV 6B [MASE6B]  
 RIBBE 6B [RIBE6B]  
 RWY 01R RNAV DEPARTURES  
 .SPEED: MAX 250 KT BELOW FL100  
 AFTER GM440**

LOST COMMS  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL.  
 ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.  
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These SIDs require minimum climb gradients of  
 610 per NM (10.0%) up to 1100 due to noise abatement, then  
 304 per NM (5.0%) up to 5000.

Gnd speed-KT	75	100	150	200	250	300
610 per NM	763	1017	1525	2033	2542	3050
304 per NM	380	507	760	1013	1267	1520

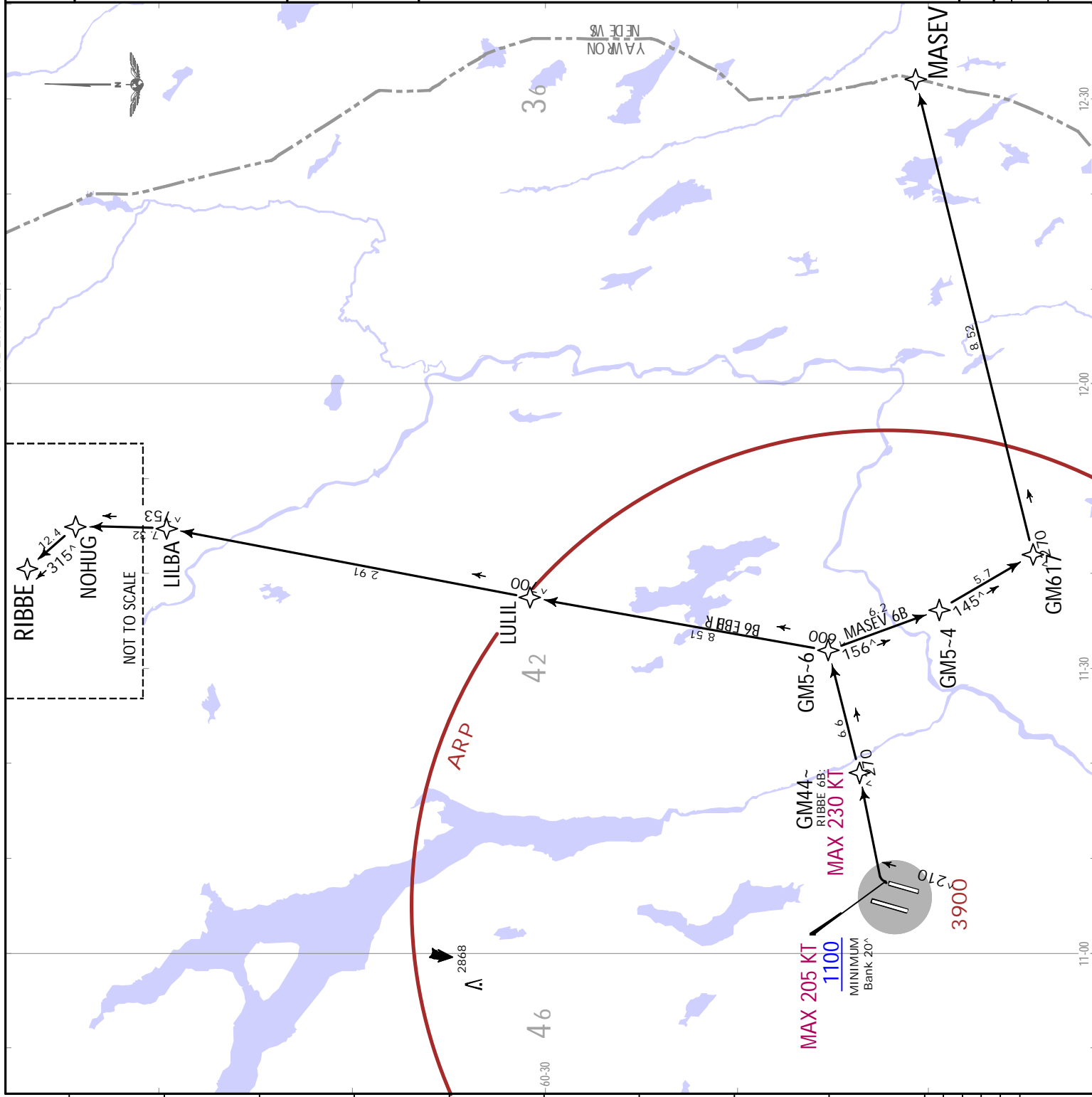
If unable to comply inform ATC.

Initial climb clearance **7000**, EXPECT further climb by OSLO Approach.

SID ROUTING

MASEV 6B  
 Climb on 012° track to 1100 - GM440 - GM506 - GM504 - GM617 - MASEV.

RIBBE 6B  
 Climb on 012° track to 1100 - GM440 - GM506 - LILIL - LILBA - NOHUG - RIBBE.



OSLO Approach  
**118.475**

Apt Elev  
**681**

Trans alt: 7000

1. RNAV 1
2. Surveillance service shall be available.
3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Onmidirectional departure available.
5. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
6. When being vectored or cleared for direct routing, climb gradients apply.
7. INADP-2 is used during climb-out.

**MASEV 5C [MASE5C]  
RIBBE 1C [RIBE1C]  
RWY 19L RNAV DEPARTURES**  
**.SPEED: MAX 250 KT BELOW FL100**  
**.UNLESS OTHERWISE INSTRUCTED**

**WARNING**

Do not comply with PANS-OPS criteria for minimum distance to first waypoint (GM604). The crew must monitor the first turn to ensure it is not initiated below 1100.

LOST COMMS → LOST COMMS → LOST COMMS → LOST COMMS → LOST COMMS  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL.  
 ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.

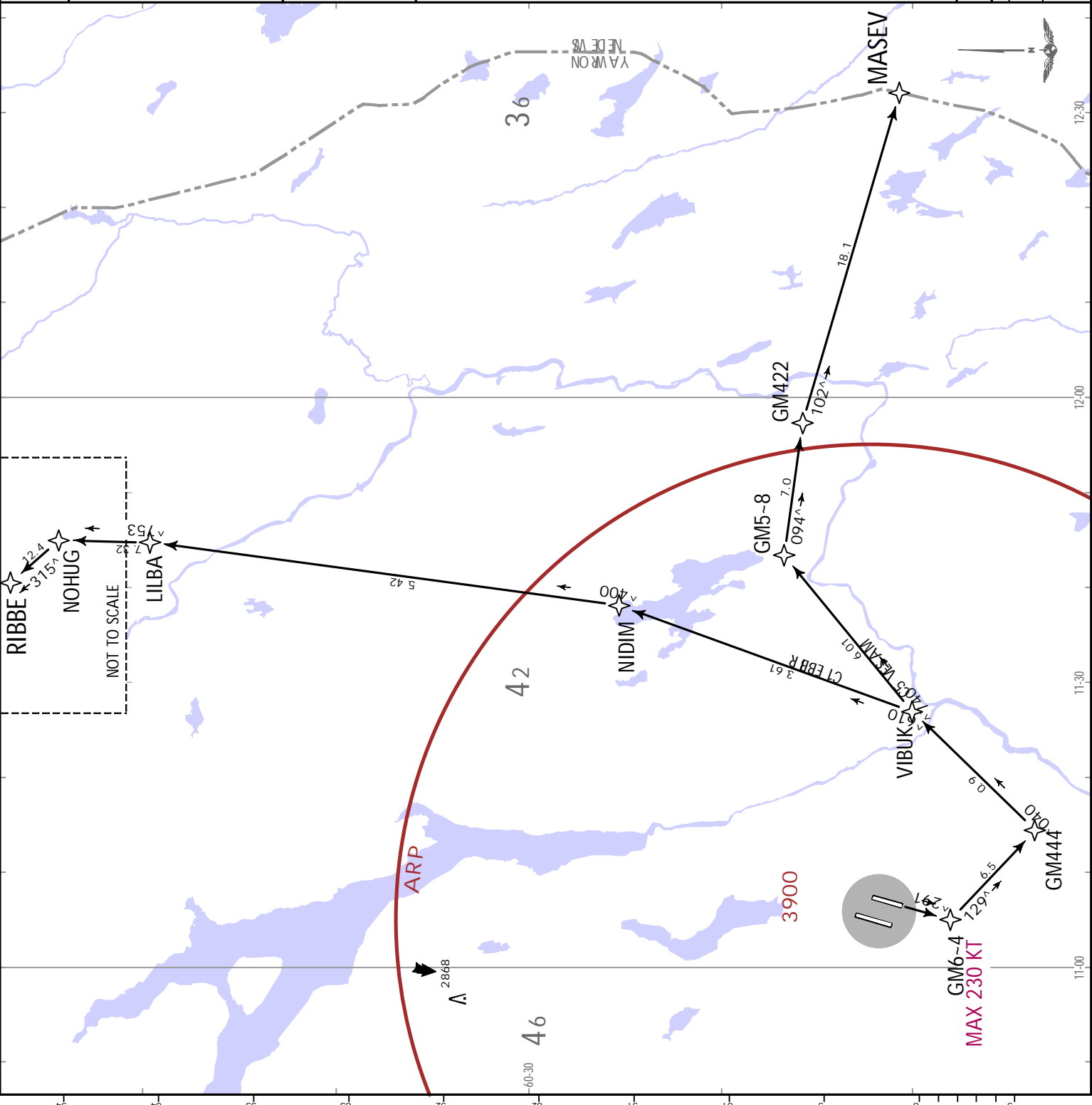
These SIDs require a minimum climb gradient of 401 per NM (6.6%) up to 5000.

Grnd speed-KT	75	100	150	200	250	300
401 per NM	501	668	1003	1337	1671	2005

If unable to comply inform ATC.

Initial climb clearance 7000, EXPECT further climb by OSLO Approach.

ROUTING	
MASEV 5C	On 192° track to GM604 - GM444 - VIBUK - GM508 - GM422 - MASEV.
RIBBE 1C	On 192° track to GM604 - GM444 - VIBUK - NIDIM - LILBA - NOHUG - RIBBE.



OSLO Approach  
 120.450  
 Apt Elev  
 681

- Trans alt: 7000
1. RNAV 1
  2. Surveillance service shall be available.
  3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
  4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Omnidirectional departure available.
  5. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
  6. When being vectored or cleared for direct routing, climb gradients apply.
  7. NADP-2 is used during climb-out.

**MASEV 6D [MASE6D]**  
**RIBBE 6D [RIBE6D]**  
**RWY 19R RNAV DEPARTURES**  
**SPEED: MAX 250 KT BELOW FL100**  
**UNLESS OTHERWISE INSTRUCTED**

**WARNING**  
 Segment distance from extended RWY CL to GM442 is less than the average flight path.

LOST COMMS  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL. ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.

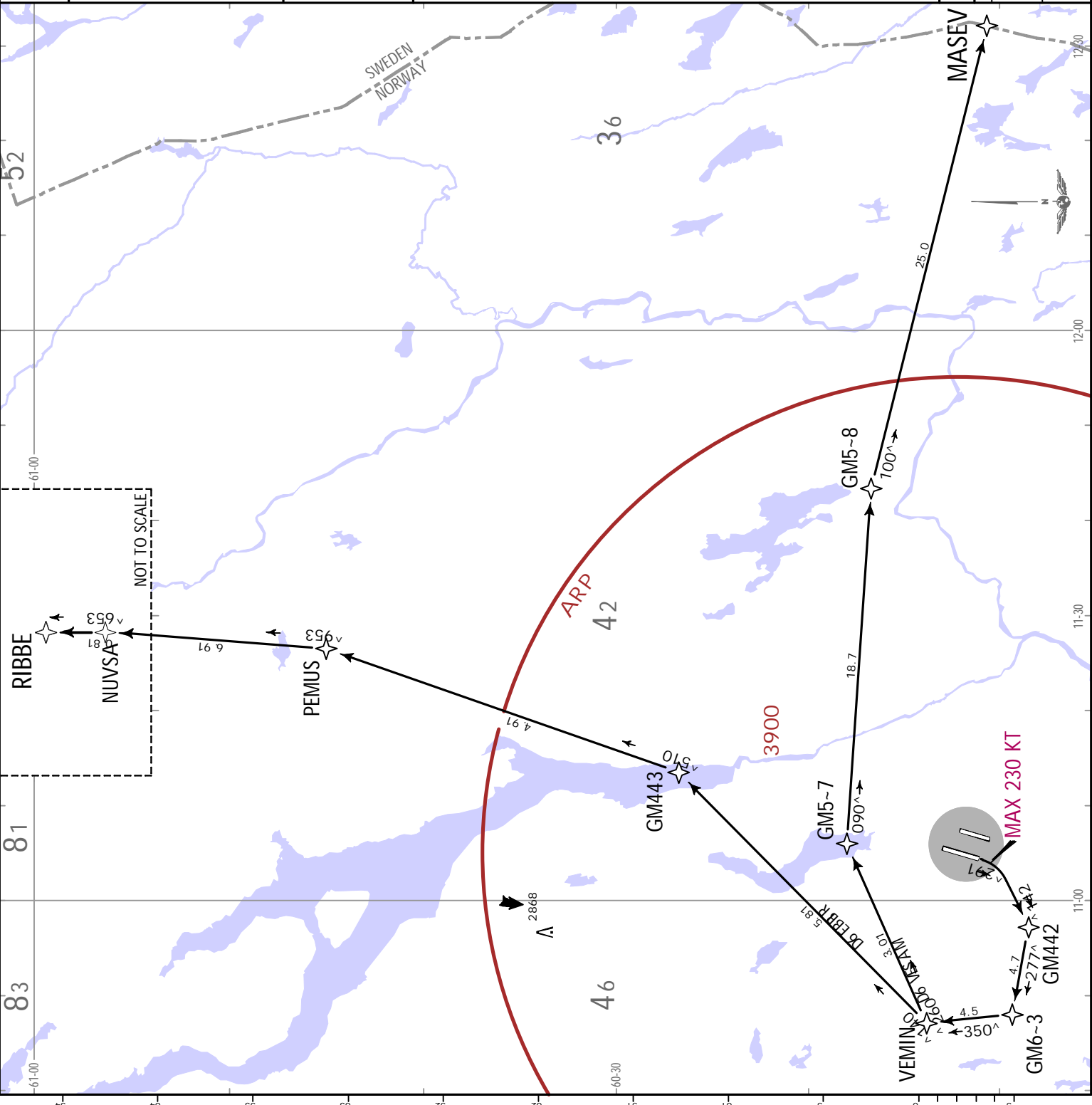
These SIDs require a minimum climb gradient of 401 per NM (6.6%) up to 5000.

Grnd speed-KT	75	100	150	200	250	300
401 per NM	501	668	1003	1337	1671	2005

If unable to comply inform ATC.

Initial climb clearance 7000, EXPECT further climb by OSLO Approach.

SID	ROUTING
MASEV 6D	Climb on 192° track, 241° track to GM442 - GM603 - VEMIN - GM507 - GM508 - MASEV.
RIBBE 6D	Climb on 192° track, 241° track to GM442 - GM603 - VEMIN - GM443 - PEMUS - NUVSA - RIBBE.



**JEPPESEN OSLO, NORWAY**  
11 JUN 21 (10-3H) . Eff. 17 Jun. . RNAV.SID.

**ENGM/OSL**  
GARDERMOEN

OSLO Approach (OKSAT 4A) 118.475 (VIPPA 1A) 120.450		Apt Elev 681
Trans alt: 7000		
1. RNAV 1		
2. Surveillance service shall be available.		
3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.		
4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Omnidirectional departure available.		
5. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.		
6. When being vectored or cleared for direct routing, climb gradients apply.		
7. INADP-2 is used during climb-out.		

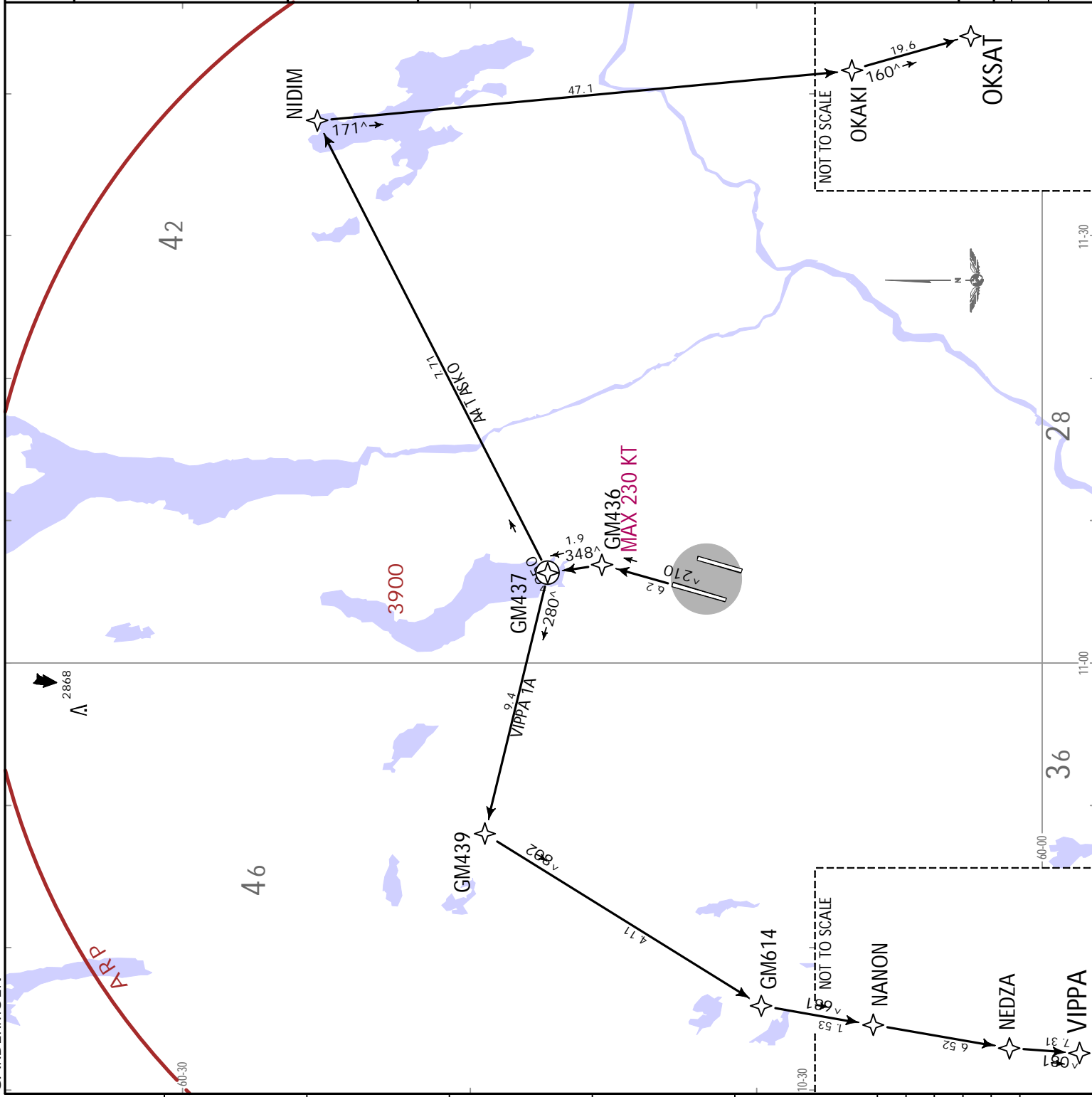
**OKSAT 4A [OKSA4A]**  
**VIPPA 1A [VIPA1A]**  
**RWY 01L RNAV DEPARTURES**  
**SPEED: MAX 250 KT BELOW FL100**  
**UNLESS OTHERWISE INSTRUCTED**

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼  
Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL.  
ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.  
LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

These SIDs require a minimum climb gradient of 316 per NM (5.2%) up to 5000.						
Gnd speed-KT	75	100	150	200	250	300
316 per NM	395	527	790	1053	1317	1580

If unable to comply inform ATC.

Initial climb clearance **7000** , EXPECT further climb by OSLO Approach.





OSLO Approach  
**118.475**  
 Apt Elev **681**

- Trans alt: 7000
- RNAV 1
  - Surveillance service shall be available.
  - Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
  - Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Omnidirectional departure available.
  - Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
  - When being vectored or cleared for direct routing, climb gradients apply.
  - NADP-1 to be used during climb-out.

**OKSAT 6B [OKSA6B]  
 VIPPA 6B [VIPA6B]**  
**RWY 01R RNAV DEPARTURES**  
**.SPEED: MAX 250 KT BELOW FL100**  
**OKSAT 6B: AFTER GM440**  
**VIPPA 6B: AFTER GM441**

LOST COMMS > LOST COMMS > LOST COMMS > LOST COMMS > LOST COMMS > LOST COMMS  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL.  
 ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.  
 LOST COMMS > LOST COMMS > LOST COMMS > LOST COMMS > LOST COMMS > LOST COMMS

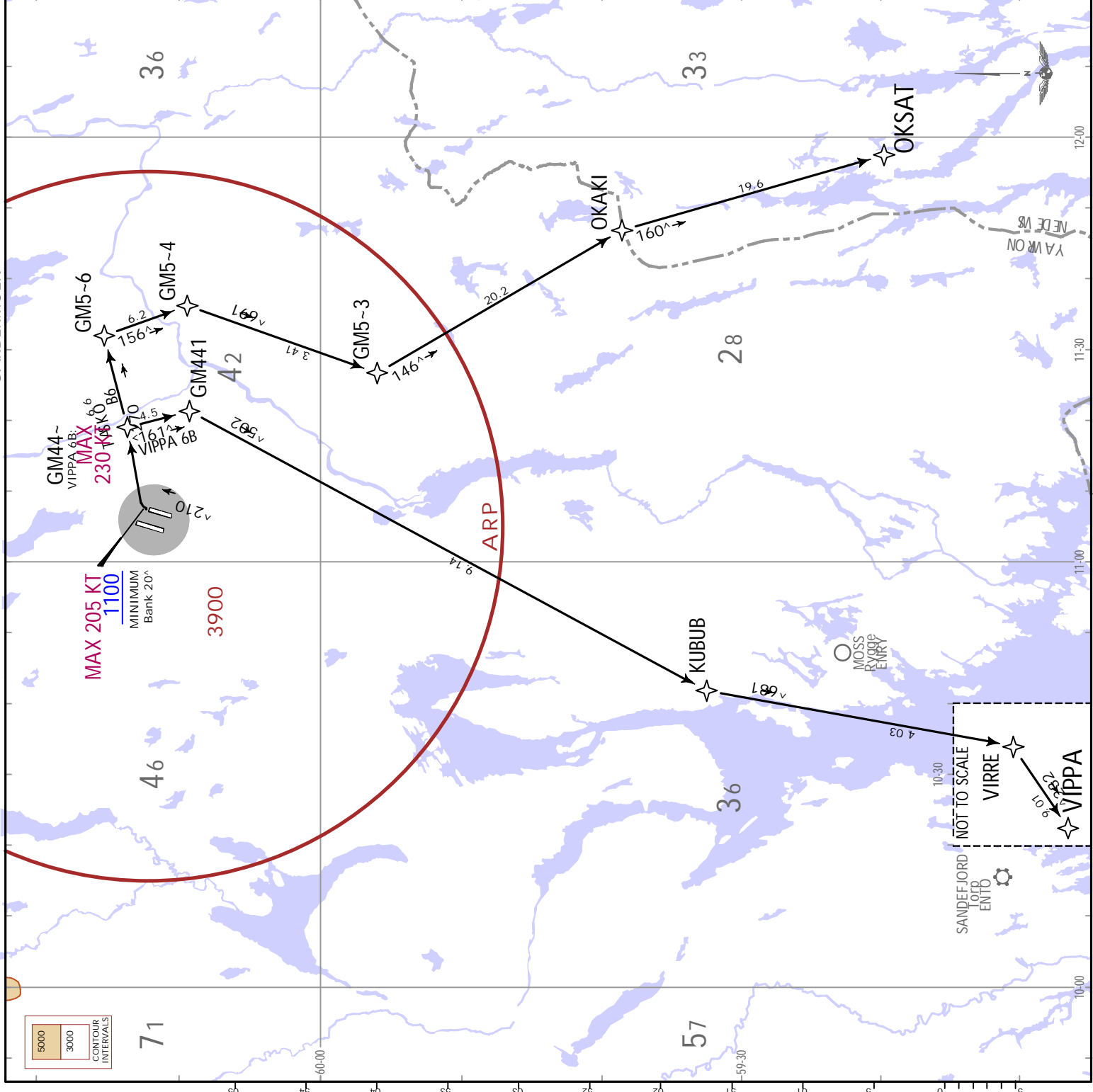
These SIDs require minimum climb gradients of 610 per NM (10.0%) up to 1100 due to noise abatement, then 304 per NM (5.0%) up to 5000.

Grd speed-KT	75	100	150	200	250	300
610 per NM	763	1017	1525	2033	2542	3050
304 per NM	380	507	760	1013	1267	1520

If unable to comply inform ATC.

Initial climb clearance **7000**, EXPECT further climb by OSLO Approach.

**SID ROUTING**  
**OKSAT 6B** Climb on 012<sup>^</sup> track to 1100 - GM440 - GM506 - GM504 - GM503 - OKAKI - OKSAT.  
**VIPPA 6B** Climb on 012<sup>^</sup> track to 1100 - GM440 - GM441 - to KUBUB - VIRRE - VIPPA.



**JEPPERSEN OSLO, NORWAY**  
 11 JUN 21 10-3K . Eff. 17 Jun. . RNAV.SID.

**OSLO Approach**  
 118.475

Apt Elev 681

Trans alt: 7000

- RNAV 1
- Surveillance service shall be available.
- Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
- Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Omnidirectional departure available.
- Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
- When being vectored or cleared for direct routing, climb gradients apply.
- NADP-2 is used during climb-out.

**OKSAT 2C [OKSA2C]  
 VIPPA 1C [VIPA1C]**

**RWY 19L RNAV DEPARTURES**  
**SPEED: MAX 250 KT BELOW FL100**  
**UNLESS OTHERWISE INSTRUCTED**

**WARNING: OKSAT 2C**

Do not comply with PANS-OPS criteria for minimum distance to first waypoint (GM604). The crew must monitor the first turn to ensure it is not initiated below 1100.

Grnd speed-KT	75	100	150	200	250	300
401 per NM	501	668	1003	1337	1671	2005

If unable to comply inform ATC.

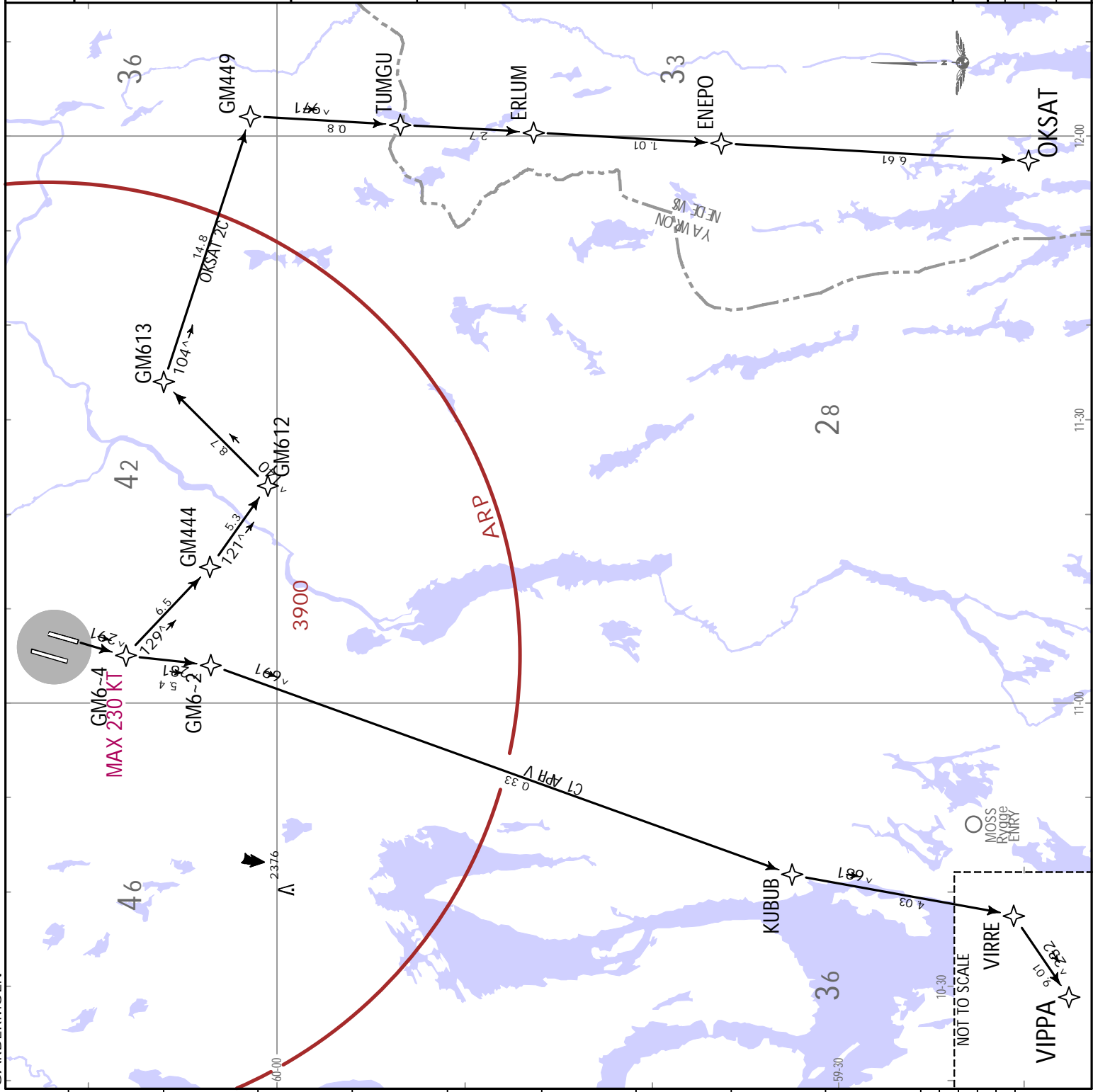
Initial climb clearance **7000**, EXPECT further climb by OSLO Approach.

SID	ROUTING
OKSAT 2C	On 192° track to GM604 - GM444 - GM612 - GM613 - GM449 - TUMGU - ERLUM - ENEPO - OKSAT.
VIPPA 1C	On 192° track to GM604 - GM602 - KUBUB - VIRRE - VIPPA.

These SIDs require a minimum climb gradient of 401 per NM (6.6%) up to 5000.

LOST COMMIS ◀ LOST COMMIS ▶ LOST COMMIS ▶ LOST COMMIS ▶ LOST COMMIS ▶

LOST COMMIS ▶ LOST COMMIS ▶ LOST COMMIS ▶ LOST COMMIS ▶ LOST COMMIS ▶





**JEPPESEN OSLO, NORWAY**  
 11 JUN 21 (10-3M) .Eff. 17 Jun. .RNAV.SID.

OSLO Approach  
 120.450  
 Apt Elev  
 681

- Trans alt: 7000
1. RNAV 1
  2. Surveillance service shall be available.
  3. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
  4. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'.
  5. Omnidirectional departure available.
  6. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
  7. When being vectored or cleared for direct routing, climb gradients apply.
  8. INADP-2 is used during climb-out.

**VEMIN 5A [VEM15A] 1**  
**RWY 01L RNAV PROP DEPARTURE**  
**ATLAP, EVTOG, VIPPA**  
**RNAV TRANSITIONS**  
**SPEED: MAX 250 KT BELOW FL100**  
**UNLESS OTHERWISE INSTRUCTED**

1 VEMIN is not available for flight planning. Use ATLAP, EVTOG or VIPPA, and a VEMIN departure will be allocated if relevant.

LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL.  
 ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.  
 LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

These SIDs require a minimum climb gradient of 304 per NM (5.0%) up to 4000.

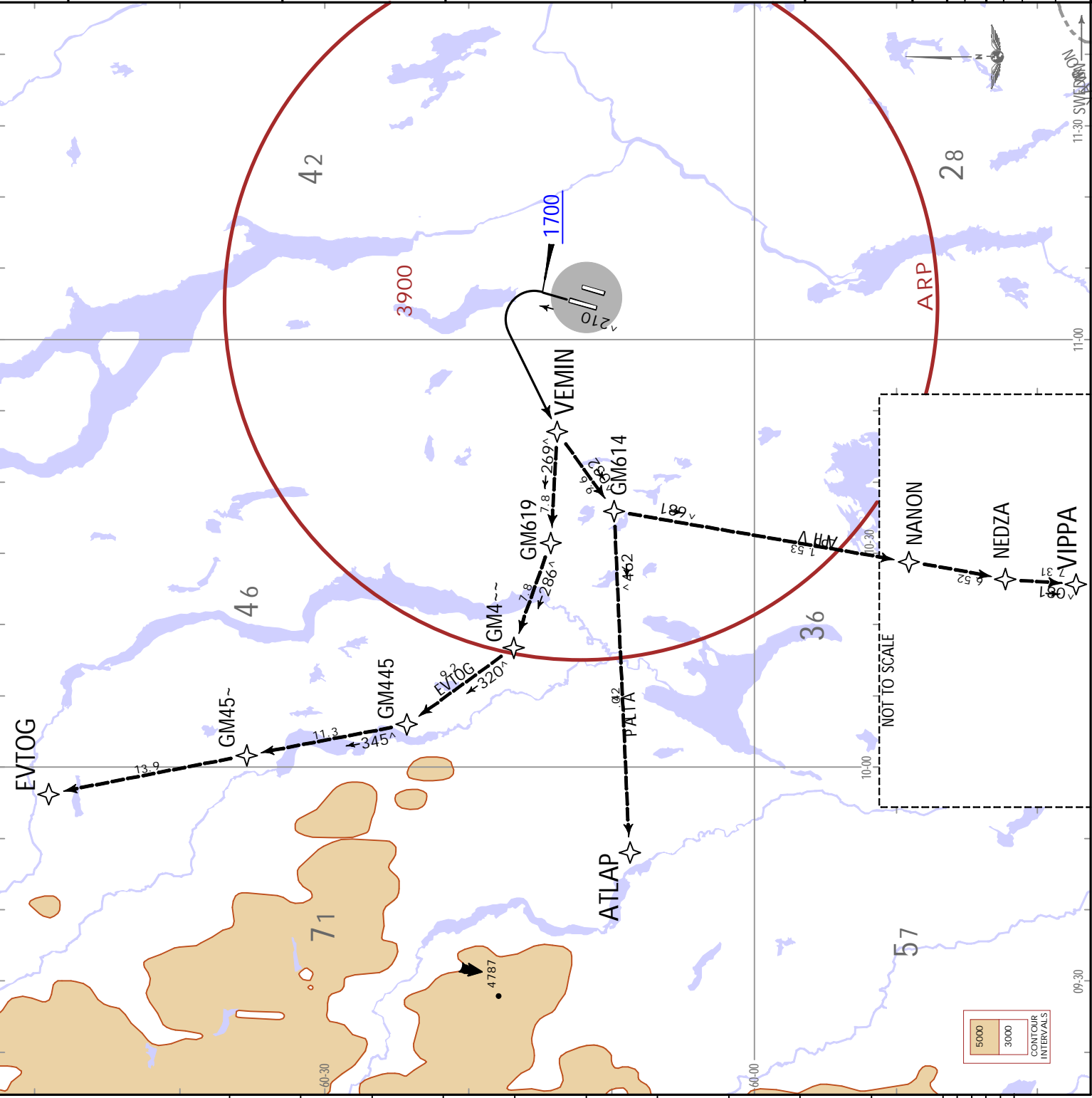
Grnd speed-KT	75	100	150	200	250	300
304 per NM	380	506	760	1013	1266	1519

If unable to comply inform ATC.  
 Initial climb clearance 4000, EXPECT further climb by OSLO Approach.

ROUTING

TRANSITION	ROUTING
ATLAP	VEMIN - GM614 - ATLAP.
EVTOG	VEMIN - GM619 - GM400 - GM445 - GM450 - EVTOG.
VIPPA	VEMIN - GM614 - NANON - NEDZA - VIPPA.

Climb on 012° track to 1700, turn LEFT direct to VEMIN.



**ENGM/OSL**  
 GARDERMOEN

OSLO Approach  
120.450

Apt Elev  
681

Trans alt: 7000

- RNAV 1
- Surveillance service shall be available.
- Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
- Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Omnidirectional departure available.
- Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.
- When being vectored or cleared for direct routing, climb gradients apply.
- NADP-2 is used during climb-out.

**VEMIN 1D [VEMI1D]1**  
**RWY 19R RNAV PROP DEPARTURE**  
**ATLAP, EVTOG, RIBBE, VIPPA**  
**RNAV TRANSITIONS**  
**.SPEED: MAX 250 KT BELOW FL100**  
**.UNLESS OTHERWISE INSTRUCTED**

1 VEMIN is not available for flight planning. Use ATLAP, EVTOG, RIBBE or VIPPA, and a VEMIN departure will be allocated if relevant.

LOST COMMS  
 VEMIN  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL.  
 ACFT under RADAR vec/VIPPAing shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.  
 LOST COMMS  
 LOST COMMS  
 LOST COMMS

These SIDs require a minimum climb gradient of 304 per NM (5.0%) up to 4000.

Gnd speed-KT	75	100	150	200	250	300
304 per NM	380	506	760	1013	1266	1519

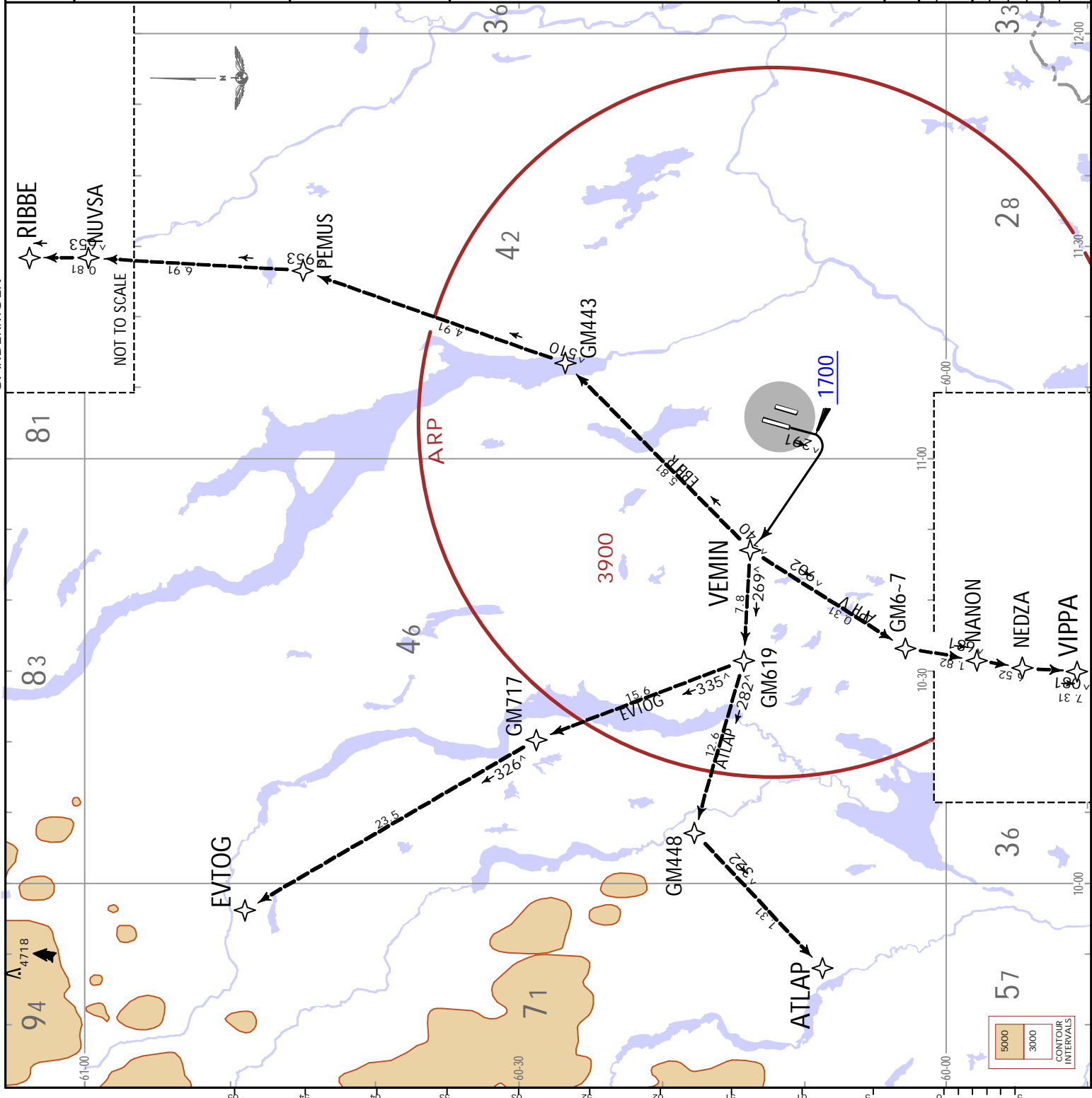
If unable to comply inform ATC.

Initial climb clearance 4000, EXPECT further climb by OSLO Approach.

ROUTING

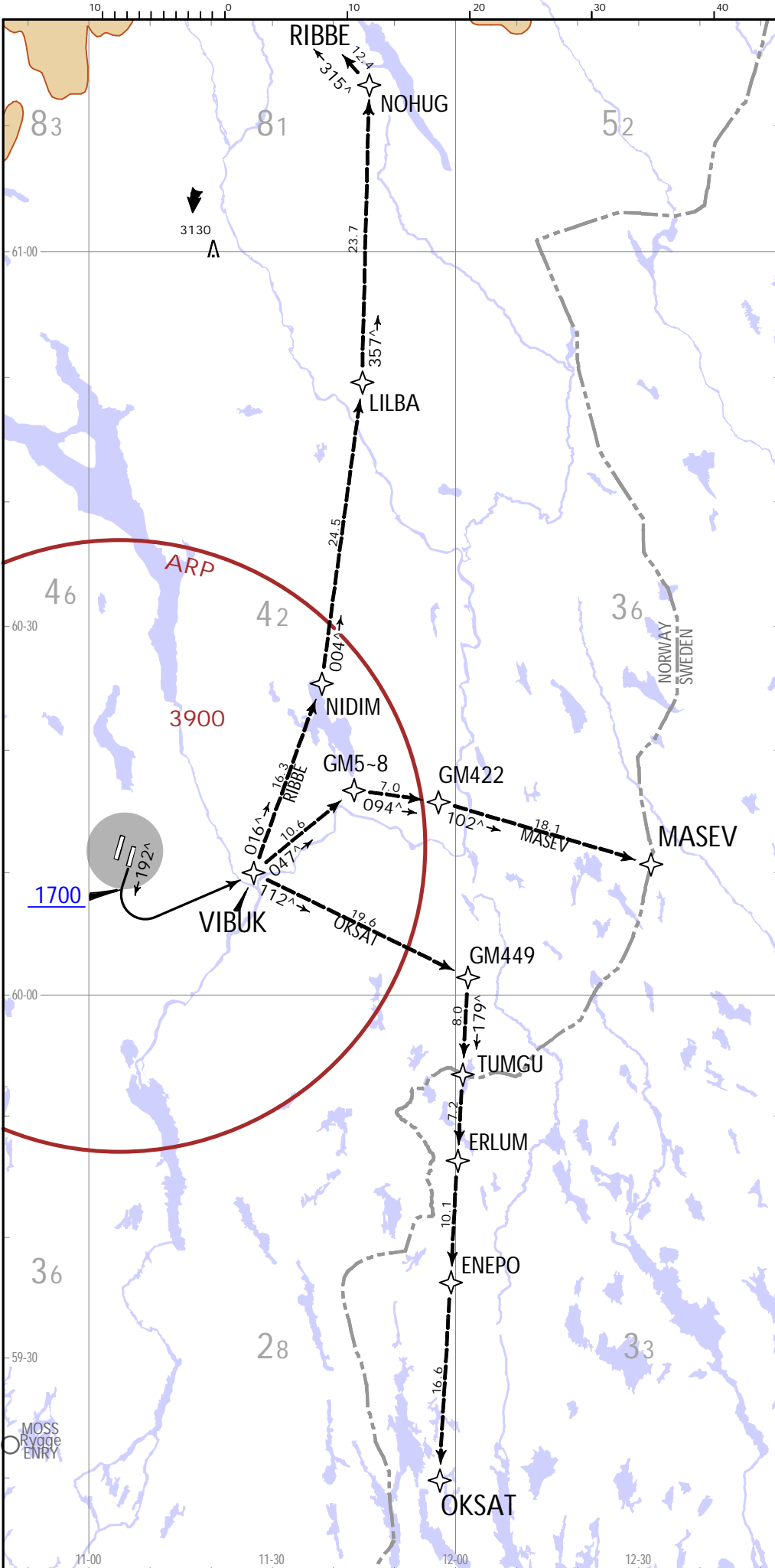
Climb on 192° track to 1700, turn RIGHT direct to VEMIN.

TRANSITION	ROUTING
ATLAP	VEMIN - GM619 - GM448 - ATLAP.
EVTOG	VEMIN - GM619 - GM717 - EVTOG.
RIBBE	VEMIN - GM443 - PEMUS - NUVSA - RIBBE.
VIPPA	VEMIN - GM607 - NANON - NEDZA - VIPPA.



CHANGES: None

ENGM/OSL  
GARDERMOEN



OSLO Approach 118.475	Apt Elev 681
Trans alt: 7000	
RNAV 1 Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Omnidirectional departure available.	
<ol style="list-style-type: none"> <li>1. Surveillance service shall be available.</li> <li>2. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.</li> <li>3. Enroute cruising level will be issued after take-off by OSLO Approach or POLARIS Control.</li> <li>4. When being vectored or cleared for direct routing, climb gradients apply.</li> <li>5. NADP-2 is used during climb-out.</li> </ol>	

**VIBUK 6C [VIBU6C]1**  
**RWY 19L RNAV PROP DEPARTURE**  
**MASEV, OKSAT, RIBBE**  
**RNAV TRANSITIONS**  
.SPEED: MAX 250 KT BELOW FL100  
UNLESS OTHERWISE INSTRUCTED

1 VIBUK is not available for flight planning. Use MASEV, OKSAT or RIBBE, and a VIBUK departure will be allocated if relevant.

▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼  
 LOST COMMS  
 Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL. ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading and level for two minutes, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.  
 ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼ LOST COMMS ▼

These SIDs require a minimum climb gradient of 304 per NM (5.0%) up to 4000.

Gnd speed-KT	75	100	150	200	250	300
304 per NM	380	506	760	1013	1266	1519

If unable to comply inform ATC.

Initial climb clearance 4000, EXPECT further climb by OSLO Approach.

**ROUTING**

Climb on 192° track to 1700, turn LEFT direct to VIBUK.

TRANSITION	ROUTING
MASEV	VIBUK - GM508 - GM422 - MASEV.
OKSAT	VIBUK - GM449 - TUMGU - ERLUM - ENEPO - OKSAT.
RIBBE	VIBUK - NIDIM - LILBA - NOHUG - RIBBE.

**VIBUK 6C [VIBU6C]1**  
**RWY 19L RNAV PROP DEPARTURE**  
**MASEV, OKSAT, RIBBE**  
**RNAV TRANSITIONS**

KARLSTAD ESOK

5000  
3000  
CONTOUR INTERVALS

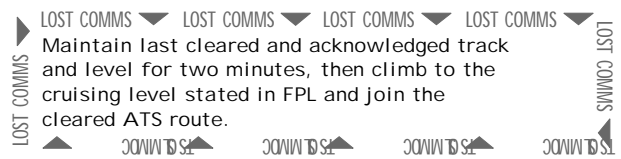
ENGM/OSL  
GARDERMOEN

JEPPESEN  
18 MAR 22 (10-30) .Eff.24.Mar.

OSLO, NORWAY  
.DEPARTURE.

Apt Elev <b>681</b>	Trans alt: 7000 1. When instructed by GARDERMOEN Tower contact OSLO Approach. 2. EXPECT RADAR vectoring by OSLO Approach to join the cleared ATS route. 3. RWY 01L, 19L/R: NADP-2 is used during climb out. RWY 01R: NADP-1 is used during climb out.
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### OMNIDIRECTIONAL DEPARTURES



These departures require minimum climb gradients of

**RWY 01L**  
304 per NM (5.0%) up to 4000.

**RWY 01R**  
610 per NM (10.0%) until 1100 due to noise abatement, thereafter  
304 per NM (5.0%) up to 4000.

**RWYS 19L/R**  
Sector 206^ - 336^: 425 per NM (7.0%) in order to stay within controlled airspace.  
Sector 336^ - 206^: 304 per NM (5.0%) up to 4000.

Gnd speed-KT	75	100	150	200	250	300
304 per NM	380	507	760	1013	1267	1520
425 per NM	531	708	1063	1417	1771	2125
610 per NM	763	1017	1525	2033	2542	3050

If unable to comply inform ATC.

#### Initial climb clearance 4000

RWY	ROUTING
01L	Climb on 012^ track, EXPECT further clearance from ATC. Minimum turn altitude 2000.
01R	Climb on 012^ track, EXPECT further clearance from ATC. Minimum turn altitude 1100 (Minimum Bank 20^; MAX 205 KT during turn).
19L	Climb on 192^ track, EXPECT further clearance from ATC. Minimum turn altitude 2000.
19R	Climb on 192^ track, EXPECT further clearance from ATC. Minimum turn altitude 1700.

### OMNIDIRECTIONAL PROP DEPARTURES

These departures require minimum climb gradients of

Sector 206^ - 336^: 425 per NM (7.0%) in order to stay within controlled airspace.  
Sector 336^ - 206^: 304 per NM (5.0%) up to 4000.

Gnd speed-KT	75	100	150	200	250	300
425 per NM	532	709	1063	1418	1772	2127
304 per NM	380	506	760	1013	1266	1519

If unable to comply inform ATC.

#### Initial climb clearance 4000 , EXPECT further climb by OSLO Approach.

RWY	ROUTING
01L	Climb on 012^ track to 1700, then start turn according to ATC clearance.
19L/R	Climb on 192^ track to 1700, then start turn according to ATC clearance.

# ENGM/QSL

Apt Elev **682**  
N60 12.2 E011 05.0

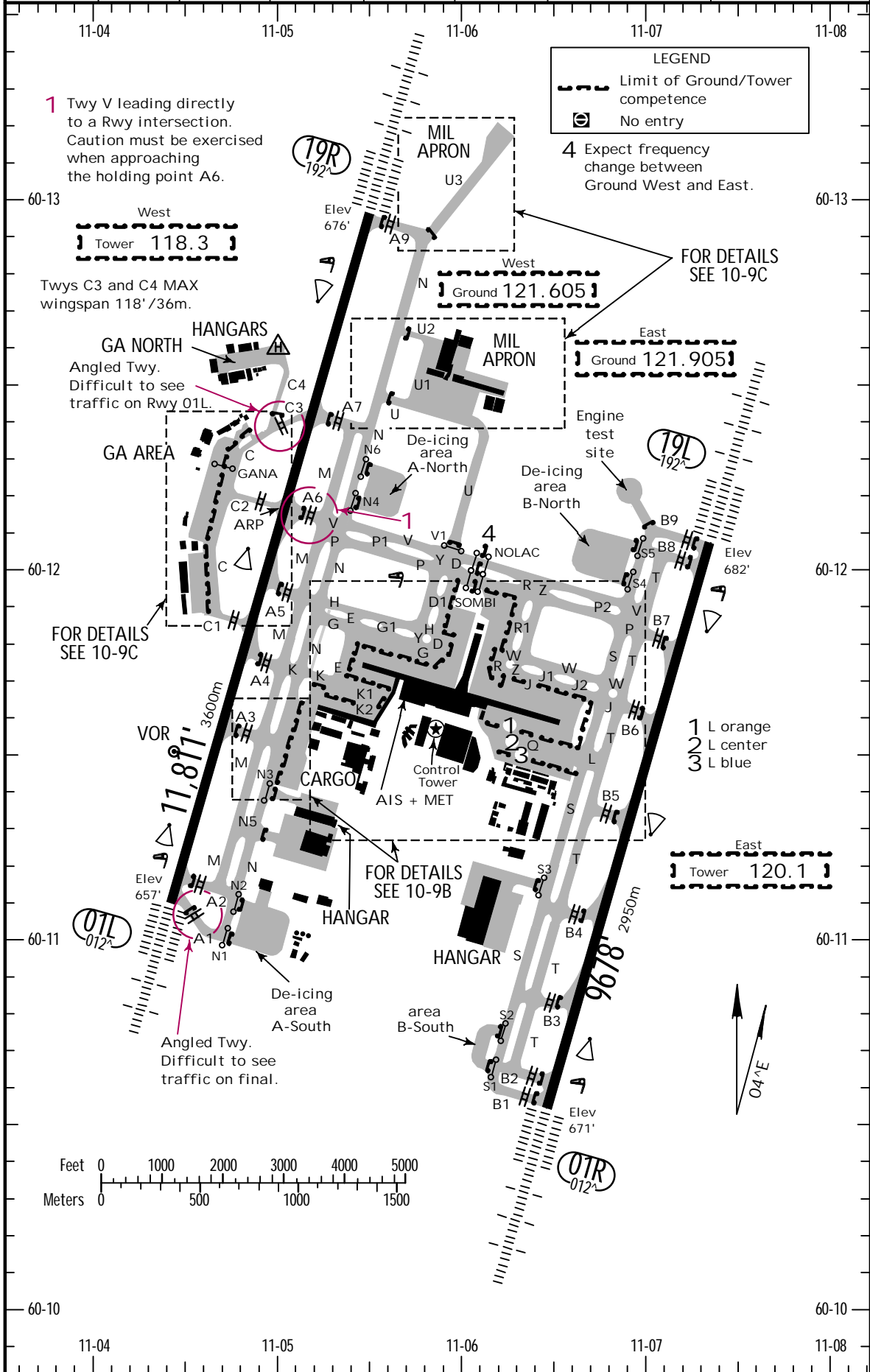


# OSLO, NORWAY

17 MAR 23 (10-9) .Eff.23.Mar.

## GARDERMOEN

D-ATIS Departure	Data comm ACARS: D-ATIS	GARDERMOEN Delivery		Ground		Tower	
127.150		West 121.680	East 121.930	West 121.605	East 121.905	West incl Rwy 01L/19R 118.3	East incl Rwy 01R/19L 120.1



1 Twy V leading directly to a Rwy intersection. Caution must be exercised when approaching the holding point A6.

LEGEND  
 - - - Limit of Ground/Tower competence  
 [No Entry Symbol] No entry

4 Expect frequency change between Ground West and East.

West  
Tower 118.3

Twys C3 and C4 MAX wingspan 118'/36m.

West  
Ground 121.605

FOR DETAILS SEE 10-9C

East  
Ground 121.905

FOR DETAILS SEE 10-9C

FOR DETAILS SEE 10-9B

- 1 L orange
- 2 L center
- 3 L blue

East  
Tower 120.1





ENGM/OSL



OSLO, NORWAY

17 MAR 23 (10-9A) .Eff.23.Mar.

GARDERMOEN

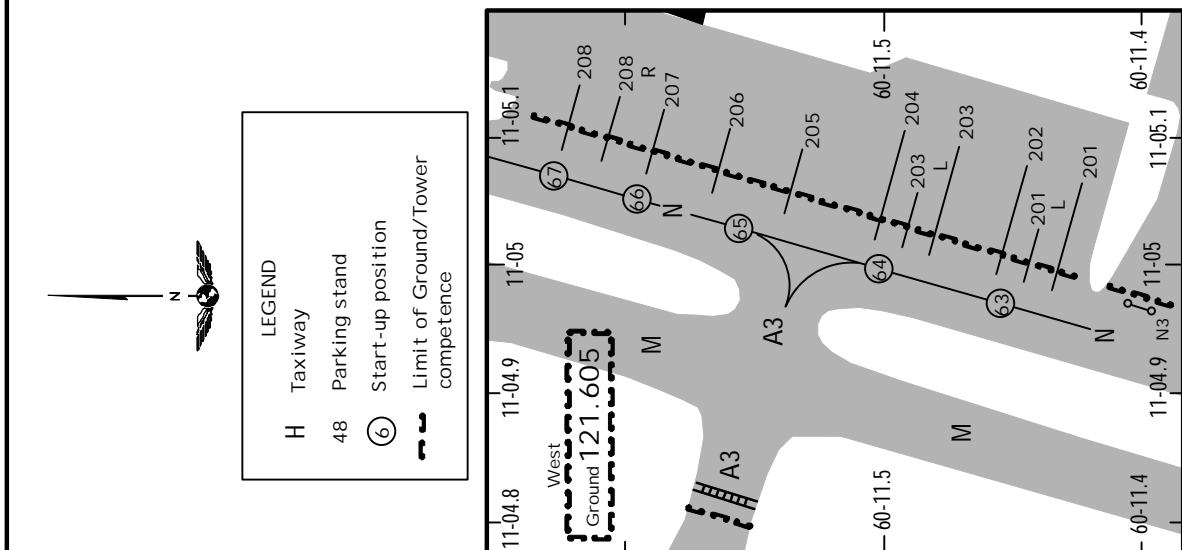
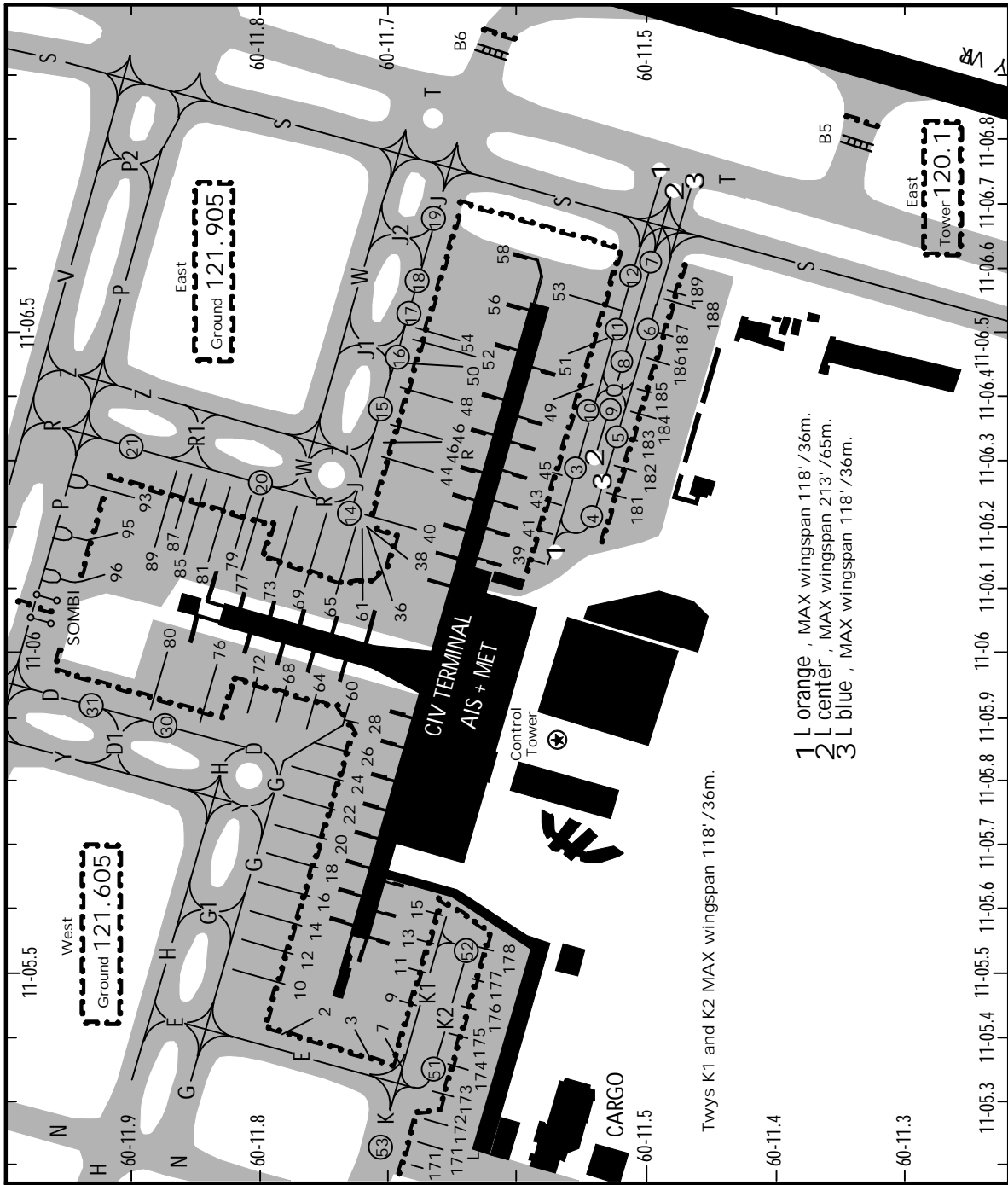
ADDITIONAL RUNWAY INFORMATION																														
RWY	HIRL (60m) HIALS-II CL (15m) SFL TDZ	RVR	USABLE LENGTHS		TAKE-OFF	WIDTH																								
			Threshold	Glide Slope																										
01L 1 19R	HIRL (60m) HIALS-II CL (15m) SFL TDZ 2	RVR		10,840' 3304m	3	148' 45m																								
<p>1 Rwy grooved.</p> <p>2 PAPI-L(3.0°)</p> <p>3 TAKE-OFF RUN AVAILABLE (Advise ATC once transferred to Tower, if intersection dep is acceptable/requested.)</p> <table border="0"> <tr> <td><u>RWY 01L:</u> From rwy head</td> <td>11,811' (3600m)</td> <td><u>RWY 19R:</u> From rwy head</td> <td>11,811' (3600m)</td> </tr> <tr> <td>twy A1 int</td> <td>11,719' (3572m)</td> <td>twy A7 int</td> <td>8425' (2568m)</td> </tr> <tr> <td>twy A2 int</td> <td>11,470' (3496m)</td> <td>twy C3 int</td> <td>8432' (2570m)</td> </tr> <tr> <td>twy A3 int</td> <td>8845' (2696m)</td> <td>twy A6 int</td> <td>6808' (2075m)</td> </tr> <tr> <td>twy A4 int</td> <td>7536' (2297m)</td> <td></td> <td></td> </tr> <tr> <td>twy C1 int</td> <td>7037' (2145m)</td> <td></td> <td></td> </tr> </table>							<u>RWY 01L:</u> From rwy head	11,811' (3600m)	<u>RWY 19R:</u> From rwy head	11,811' (3600m)	twy A1 int	11,719' (3572m)	twy A7 int	8425' (2568m)	twy A2 int	11,470' (3496m)	twy C3 int	8432' (2570m)	twy A3 int	8845' (2696m)	twy A6 int	6808' (2075m)	twy A4 int	7536' (2297m)			twy C1 int	7037' (2145m)		
<u>RWY 01L:</u> From rwy head	11,811' (3600m)	<u>RWY 19R:</u> From rwy head	11,811' (3600m)																											
twy A1 int	11,719' (3572m)	twy A7 int	8425' (2568m)																											
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twy A4 int	7536' (2297m)																													
twy C1 int	7037' (2145m)																													
01R 4 19L	HIRL (60m) HIALS-II CL (15m) SFL TDZ 5	RVR		8706' 2654m 8625' 2629m	6 7	148' 45m																								
<p>4 Rwy grooved.</p> <p>5 PAPI-L(3.0°)</p> <p>6 TAKE-OFF RUN AVAILABLE (Advise ATC once transferred to Tower, if intersection dep is acceptable/requested.)</p> <table border="0"> <tr> <td><u>RWY 01R:</u> From rwy head</td> <td>9678' (2950m)</td> <td><u>RWY 19L:</u> From rwy head</td> <td>9678' (2950m)</td> </tr> <tr> <td>twy B2 int</td> <td>9350' (2850m)</td> <td>twy B8 int</td> <td>9354' (2851m)</td> </tr> <tr> <td>twy B3 int</td> <td>7982' (2433m)</td> <td>twy B7 int</td> <td>7907' (2410m)</td> </tr> <tr> <td>twy B4 int</td> <td>6463' (1970m)</td> <td>twy B6 int</td> <td>6647' (2026m)</td> </tr> </table> <p>7 Jet ACFT and propeller ACFT with MTOW above 5700 kg and four or more propellers: Intersection dep RWY 01R not permitted from twy B3 and North of twy B3. Intersection dep RWY 19L not permitted from twy B6 and South of twy B6.</p>							<u>RWY 01R:</u> From rwy head	9678' (2950m)	<u>RWY 19L:</u> From rwy head	9678' (2950m)	twy B2 int	9350' (2850m)	twy B8 int	9354' (2851m)	twy B3 int	7982' (2433m)	twy B7 int	7907' (2410m)	twy B4 int	6463' (1970m)	twy B6 int	6647' (2026m)								
<u>RWY 01R:</u> From rwy head	9678' (2950m)	<u>RWY 19L:</u> From rwy head	9678' (2950m)																											
twy B2 int	9350' (2850m)	twy B8 int	9354' (2851m)																											
twy B3 int	7982' (2433m)	twy B7 int	7907' (2410m)																											
twy B4 int	6463' (1970m)	twy B6 int	6647' (2026m)																											

.Standard. TAKE-OFF						
Low Visibility Take-off						
	1 HIRL, CL & relevant RVR	RL, CL & relevant RVR	RL & CL	Day: RL & RCLM Night: RL or CL	Day: RL or RCLM Night: RL or CL	Adequate vis ref (Day only)
A						
B	TDZ, MID, RO	TDZ, MID, RO				
C	RVR 125m	RVR 150m	RVR 200m	RVR 300m	400m	500m
D						
1 RWY 01L, 01R, 19L, 19R: RVR 75m with approved guidance system or HUD/HUDLS.						

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JEPPESEN  
17 MAR 23 (10-9B) .Eff.23.Mar.

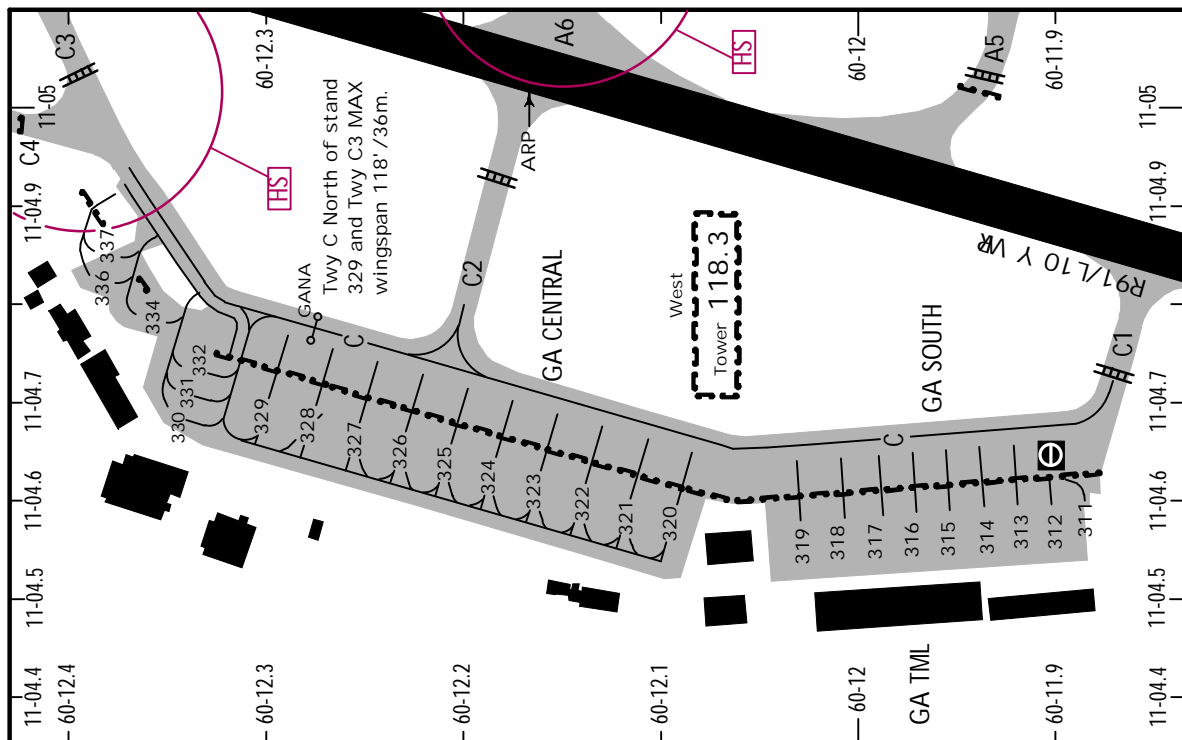
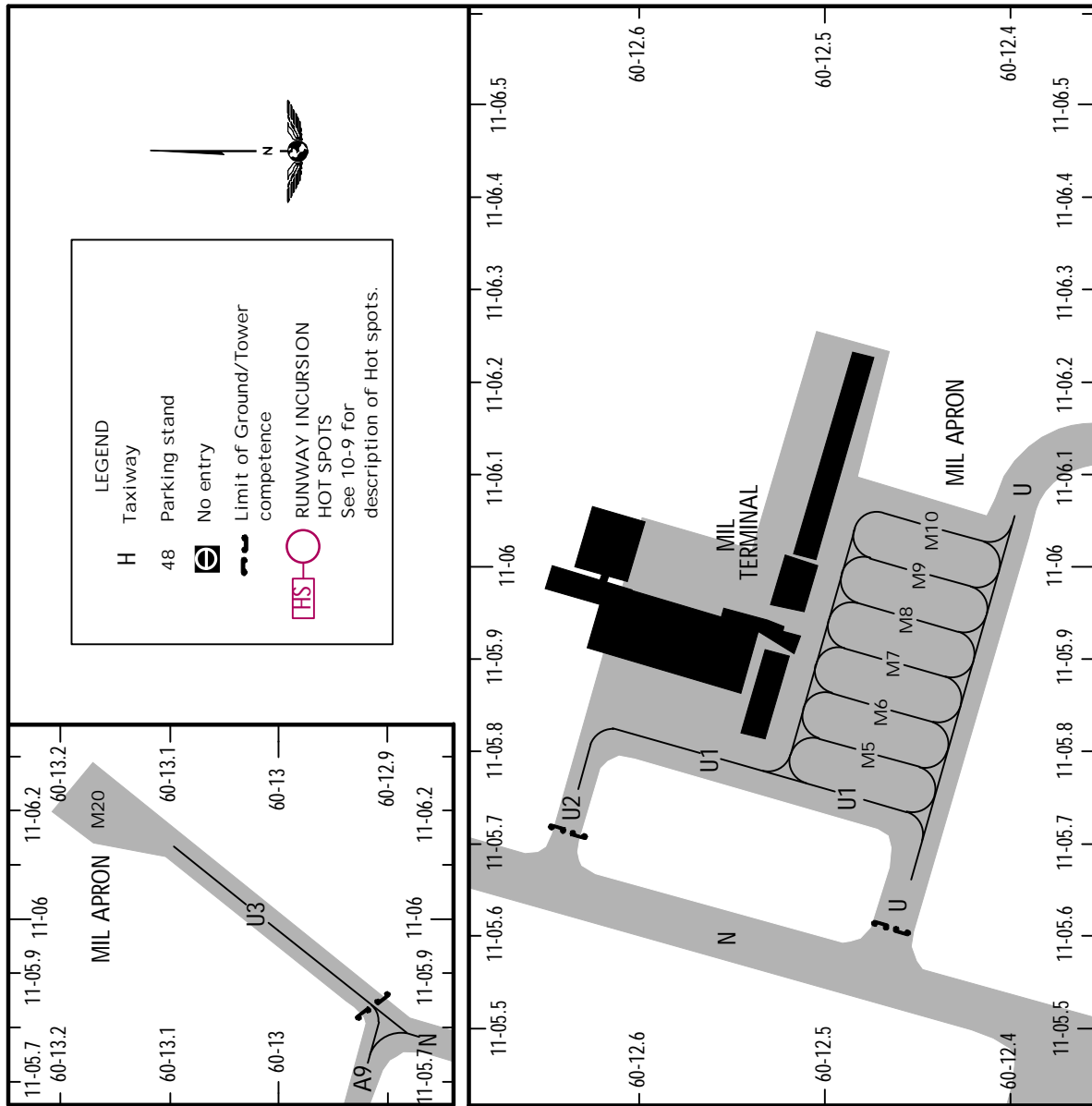
OSLO, NORWAY  
GARDERMOEN



**LEGEND**

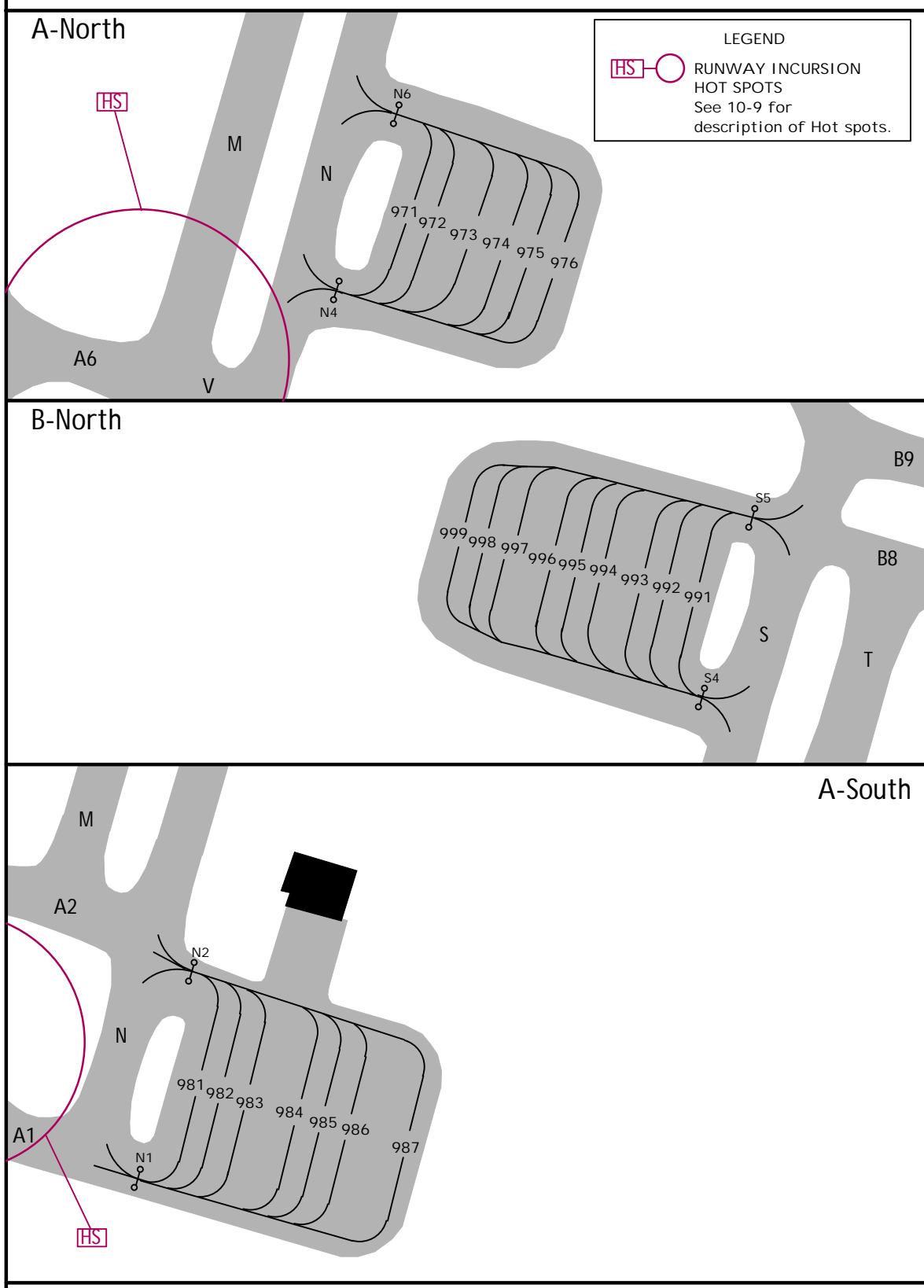
- H Taxiway
- 48 Parking stand
- ⑥ Start-up position
- - - Limit of Ground/Tower competence

- 1 L orange , MAX wingspan 118' / 36m.
- 2 L center , MAX wingspan 213' / 65m.
- 3 L blue , MAX wingspan 118' / 36m.



INS COORDINATES								
STAND No.	COORDINATES			ELEV	STAND No.	COORDINATES		ELEV
2	N60 11.8	E011 05.4	673	202	N60 11.4	E011 05.1	665	
3	N60 11.7	E011 05.4	673	203 thru 204	N60 11.5	E011 05.1	665	
7	N60 11.7	E011 05.4	674	205	N60 11.5	E011 05.1	668	
9	N60 11.7	E011 05.5	674	206	N60 11.6	E011 05.1	668	
10	N60 11.8	E011 05.5	674	207	N60 11.6	E011 05.2	668	
11	N60 11.7	E011 05.5	674	208, 208R	N60 11.6	E011 05.2	669	
12	N60 11.8	E011 05.5	674	311	N60 11.9	E011 04.6	662	
13	N60 11.7	E011 05.6	674	312 thru 314	N60 11.9	E011 04.6	663	
14 thru 16	N60 11.7	E011 05.6	674	315	N60 12.0	E011 04.6	663	
18 thru 22	N60 11.7	E011 05.7	674	316	N60 12.0	E011 04.6	664	
24, 26	N60 11.7	E011 05.8	674	317 thru 319	N60 12.0	E011 04.6	663	
28	N60 11.7	E011 05.9	674	320	N60 12.1	E011 04.6	664	
36	N60 11.7	E011 06.1	674	321, 322	N60 12.1	E011 04.6	665	
38	N60 11.7	E011 06.1	674	323, 324	N60 12.2	E011 04.6	665	
39	N60 11.6	E011 06.2	674	325	N60 12.2	E011 04.6	666	
40	N60 11.7	E011 06.2	674	326	N60 12.2	E011 04.7	666	
41	N60 11.6	E011 06.2	674	327	N60 12.3	E011 04.7	665	
43, 45, 46	N60 11.6	E011 06.3	674	328	N60 12.3	E011 04.7	666	
44	N60 11.6	E011 06.3	674	329, 330	N60 12.3	E011 04.7	667	
48, 49	N60 11.6	E011 06.4	674	331, 332	N60 12.3	E011 04.7	666	
50	N60 11.6	E011 06.4	674	334	N60 12.4	E011 04.8	666	
51, 52	N60 11.6	E011 06.5	674	336	N60 12.4	E011 04.8	668	
53	N60 11.6	E011 06.6	673	337	N60 12.4	E011 04.9	667	
54	N60 11.6	E011 06.5	673	<b>MIL INS COORDINATES</b>				
56, 58	N60 11.6	E011 06.6	674					
60	N60 11.7	E011 06.0	674	<b>STAND No.</b>	<b>COORDINATES</b>			
61, 65	N60 11.7	E011 06.1	674	M5, M6	N60 12.5	E011 05.8		
64, 68	N60 11.8	E011 06.0	674	M7, M8	N60 12.5	E011 05.9		
69, 73	N60 11.8	E011 06.1	674	M9	N60 12.5	E011 06.0		
72, 76	N60 11.8	E011 06.0	674	M10	N60 12.4	E011 06.0		
77, 79, 81	N60 11.8	E011 06.1	674	M20	N60 13.2	E011 06.2		
80	N60 11.9	E011 06.0	674					
85, 87, 89	N60 11.9	E011 06.2	674					
93	N60 11.9	E011 06.2	673					
95	N60 11.9	E011 06.2	674					
96	N60 11.9	E011 06.1	674					
171	N60 11.6	E011 05.2	668					
171L, 172	N60 11.6	E011 05.2	668					
173	N60 11.6	E011 05.3	669					
174	N60 11.6	E011 05.3	671					
175, 176	N60 11.6	E011 05.4	671					
177, 178	N60 11.6	E011 06.5	671					
181	N60 11.5	E011 06.2	671					
182, 183	N60 11.5	E011 06.3	671					
184	N60 11.5	E011 06.4	671					
185	N60 11.5	E011 06.4	671					
186, 187	N60 11.5	E011 06.5	670					
188	N60 11.4	E011 06.5	670					
189	N60 11.5	E011 06.6	670					
201, 201L	N60 11.4	E011 05.1	664					

### DE-ICING AREAS



ENGM/OSL

 **JEPPESEN**  
25 NOV 22 **10-9Y** .Eff.1.Dec.

**EASA AIR OPS**  
**OSLO, NORWAY**  
GARDERMOEN

STRAIGHT-IN RWY	DA(H) / MDA(H)	RVR (ALS/ALS out)
01L CAT 2 ILS	757' (100')	RA 100' - 300m
ILS	857' (200')	600m / 1000m
LOC	980' (323')	1000m / 1000m
RNP (LPV) Z	857' (200')	600m / 1000m
RNP (LNAV/VNAV) Z	1000' (343')	800m / 1000m
RNP (LNAV) Z	1240' (583')	1000m / 1000m
RNP W (AR) 1	983' (326')	800m / 1000m
RNP W (AR) 2	1087' (430')	800m / 1000m
RNP S (AR) 1	983' (326')	800m / 1000m
RNP S (AR) 2	1087' (430')	800m / 1000m
RNP O (AR) 1	983' (326')	800m / 1000m
RNP O (AR) 2	1087' (430')	800m / 1000m
RNP E (AR) 1	983' (326')	800m / 1000m
RNP E (AR) 2	1087' (430')	800m / 1000m
VOR	1000' (343')	1000m / 1000m
01R CAT 2 ILS	771' (100')	RA 102' - 300m
ILS	871' (200')	500m / 1000m
LOC	990' (319')	800m / 1000m
RNP (LPV) Z	871' (200')	500m / 1000m
RNP (LNAV/VNAV) Z	970' (299')	600m / 1000m
RNP (LNAV) Z	1230' (559')	1000m / 1000m
RNP W (AR) 1	955' (284')	600m / 1000m
RNP W (AR) 2	1007' (336')	750m / 1000m
RNP S (AR) 1	955' (284')	600m / 1000m
RNP S (AR) 2	1007' (336')	750m / 1000m
RNP O (AR) 1	955' (284')	600m / 1000m
RNP O (AR) 2	1007' (336')	750m / 1000m
RNP E (AR) 1	955' (284')	600m / 1000m
RNP E (AR) 2	1007' (336')	750m / 1000m
19L CAT 2 ILS	782' (100')	RA 97' - 300m
ILS	882' (200')	500m / 1000m
LOC	1030' (348')	800m / 1000m
RNP (LPV) Z	882' (200')	500m / 1000m
RNP (LNAV/VNAV) Z	1000' (318')	750m / 1000m
RNP (LNAV) Z	1230' (548')	1000m / 1000m
RNP W (AR) 1	988' (306')	750m / 1000m
RNP W (AR) 2	1033' (351')	750m / 1000m
RNP N (AR) 1	988' (306')	750m / 1000m
RNP N (AR) 2	1033' (351')	750m / 1000m
RNP E (AR) 1	988' (306')	750m / 1000m
RNP E (AR) 2	1033' (351')	750m / 1000m

1 Missed apch climb gradient MIN 5.0%.

2 Missed apch climb gradient MIN 2.5%.

ENGM/OSL

 **JEPPESSEN**  
25 NOV 22 **10-9Y1** .Eff.1.Dec.

EASA AIR OPS  
**OSLO, NORWAY**  
GARDERMOEN

STRAIGHT-IN RWY	DA(H) / MDA(H)	RVR (ALS/ALS out)
19R		
CAT 2 ILS 1	776' (100')	RA 100' - 300m
CAT 2 ILS 2	855' (179')	RA 181' - 450m
ILS 1	876' (200')	500m / 1000m
ILS 2	943' (267')	600m / 1000m
LOC	1020' (344')	800m / 1000m
RNP (LPV) Z 1	876' (200')	500m / 1000m
RNP (LPV) Z 2	941' (265')	600m / 1000m
RNP (LNAV/VNAV) Z	970' (294')	600m / 1000m
RNP (LNAV) Z	1040' (364')	800m / 1000m
RNP W (AR) 3	964' (288')	600m / 1000m
RNP W (AR) 2	1048' (372')	750m / 1000m
RNP N (AR) 3	964' (288')	600m / 1000m
RNP N (AR) 2	1048' (372')	750m / 1000m
RNP E (AR) 3	964' (288')	600m / 1000m
RNP E (AR) 2	1048' (372')	750m / 1000m
VOR	1060' (384')	800m / 1000m

- 1 Missed apch climb gradient MIN 3.1%.
- 2 Missed apch climb gradient MIN 2.5%.
- 3 Missed apch climb gradient MIN 5.0%.

CIRCLE-TO-LAND 4	MDA(H)	VIS
	1280' (598')	1000m

- 4 Rwy 01L/19R: Not authorized East of rwy 01L/19R.
- Rwy 01R/19L: Not authorized West of rwy 01R/19L.

TAKE-OFF RWY 01L, 01R, 19L, 19R			
5 LVP must be in Force			
RL or FATO lights & RCLM & RVR info	RL or FATO lights & RCLM	Nil Facilities DAY	Nil Facilities NIGHT
R150m	R200m	6 R400m	R/V800m

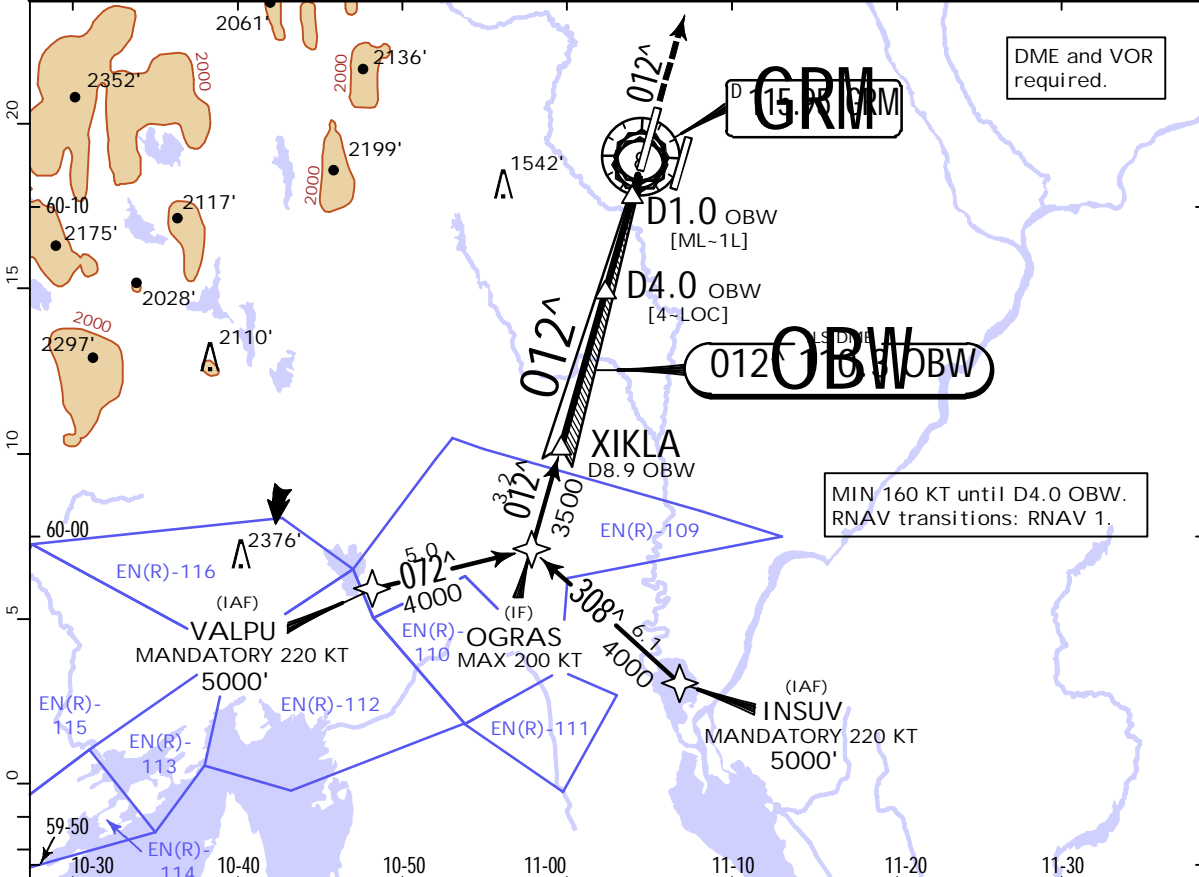
- 5 Without LVP R/V400m are stipulated.
- 6 Or rejected take-off distance whichever is the greater.

**ENGM/OSL**  
GARDERMOEN

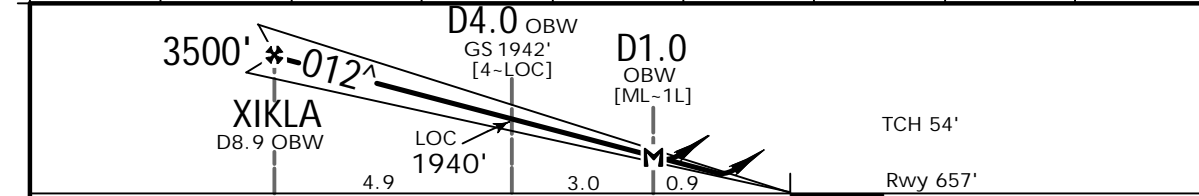
**JEPPESEN**  
25 NOV 22 (11-1) .Eff.1.Dec.

**OSLO, NORWAY**  
ILS or LOC Rwy 01L

D-ATIS Arrival <b>126.125</b>			*OSLO Approach East <b>118.475</b> West <b>120.450</b>		
GARDERMOEN Tower West incl Rwy 01L/19R <b>118.3</b>		East incl Rwy 01R/19L <b>120.1</b>		Ground West <b>121.605</b> East <b>121.905</b>	
LOC OBW <b>110.3</b>	Final Apch Crs <b>012^</b>	<b>XIKLA</b> <b>3500'</b> (2843')	ILS DA(H) <b>857'</b> (200')	Apt Elev <b>682'</b> Rwy <b>657'</b>	
MISSED APCH: Climb on track 012^ to 5000'. Expect vectoring by OSLO APP. MISSED APCH WITH LOST COMM: Continue climb on track 012^ to 5000'. At D20.0 OBW turn LEFT direct to VOR for a new apch.					
Alt Set: hPa		Rwy Elev: 24 hPa	Trans level: By ATC		Trans alt: 7000'



LOC (GS out)	OBW DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3210'	2890'	2570'	2250'	1940'	1620'	1300'



Gnd speed-Kts	70	90	100	120	140	160	HI ALS-II PAPI 
ILS GS or LOC Desc Angle	3.00^	372	478	531	637	743	
MAP at D1.0 OBW							

PANS OPS	STRAIGHT-IN LANDING Rwy 01L				CIRCLE-TO-LAND	
	ILS		LOC (GS out)		Not authorized East of rwy 01L/19R	
	DA(H) <b>857'</b> (200')		DA/MDA(H) <b>980'</b> (323')		Max Kts	
	FULL		ALS out		MDA(H) _____ VIS _____	
A				100	1280' (598')	1500m
B	RVR 750m	RVR 1200m	RVR 1100m	135	1280' (598')	1600m
C				180	1920' (1238')	2400m
D				205	2230' (1548')	3600m

CHANGES: Airport & runway elevation.

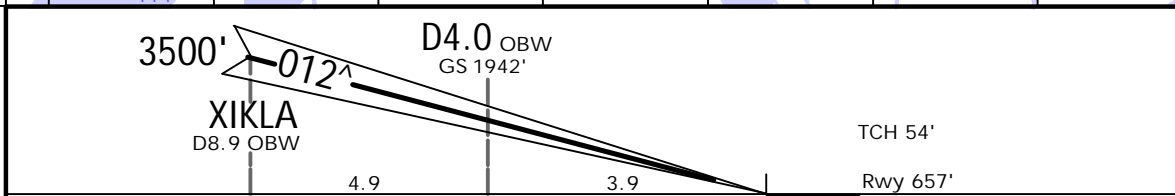
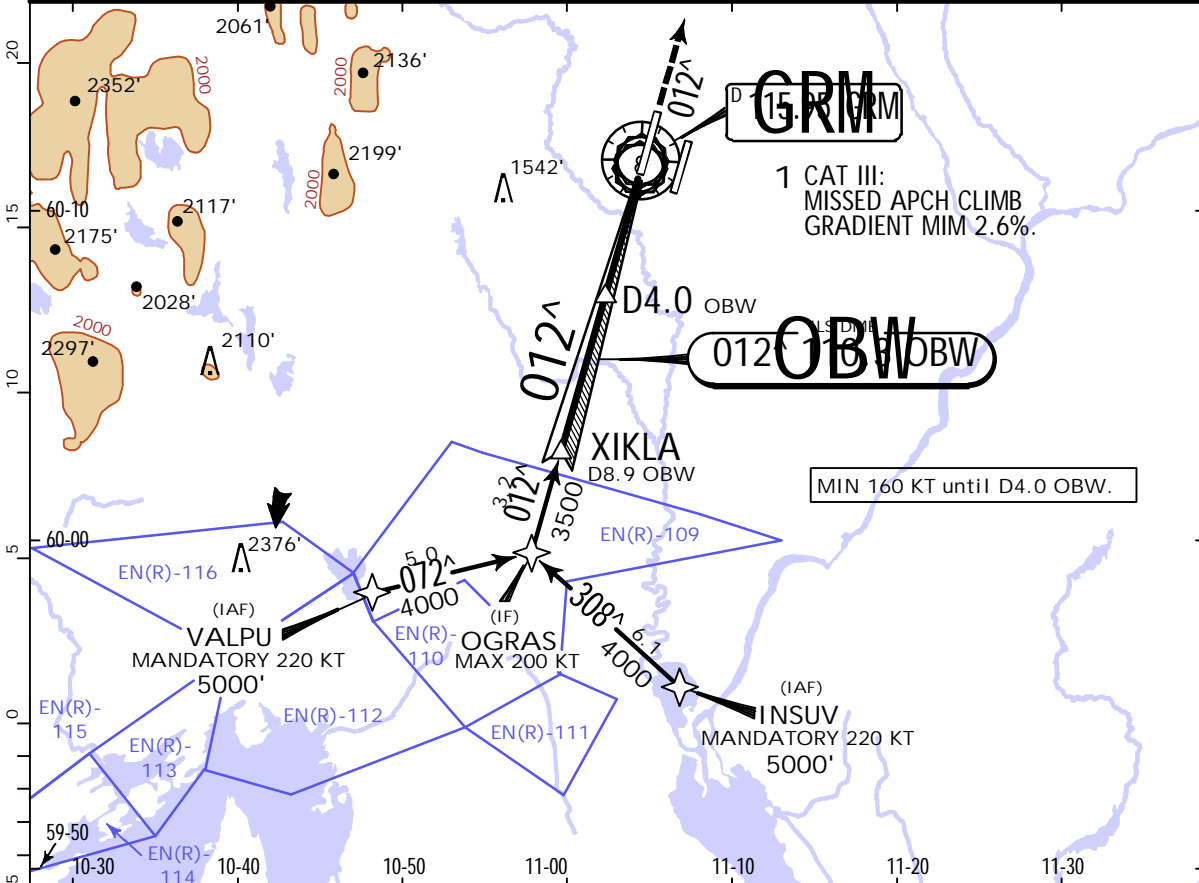


ENGM/OSL  
GARDERMOEN

JEPPESEN  
25 NOV 22  
.Eff. 1. Dec. (11-1A)

OSLO, NORWAY  
1 CAT II/III ILS Rwy 01L

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450				
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1		Ground West 121.605 East 121.905		
LOC OBW 110.3	Final Apch Crs 012^	XIKLA 3500' (2843')	CAT IIIB, IIIA & II ILS Refer to Minimums	Apt Elev 682' Rwy 657'	<p>MSA GRM VOR</p>	
MISSED APCH: Climb on track 012^ to 5000'. Expect vectoring by OSLO APP. MISSED APCH WITH LOST COMM: Continue climb on track 012^ to 5000'. At D20.0 OBW turn LEFT direct to VOR for a new apch.						
Alt Set: hPa		Rwy Elev: 24 hPa	Trans level: By ATC			Trans alt: 7000'
RNAV transitions: RNAV 1		1. DME and VOR required. 2. Special Aircrew & Aircraft Certification required.				



Gnd speed-Kts	70	90	100	120	140	160		5000' on 012^
GS	3.00^	372	478	531	637	743		

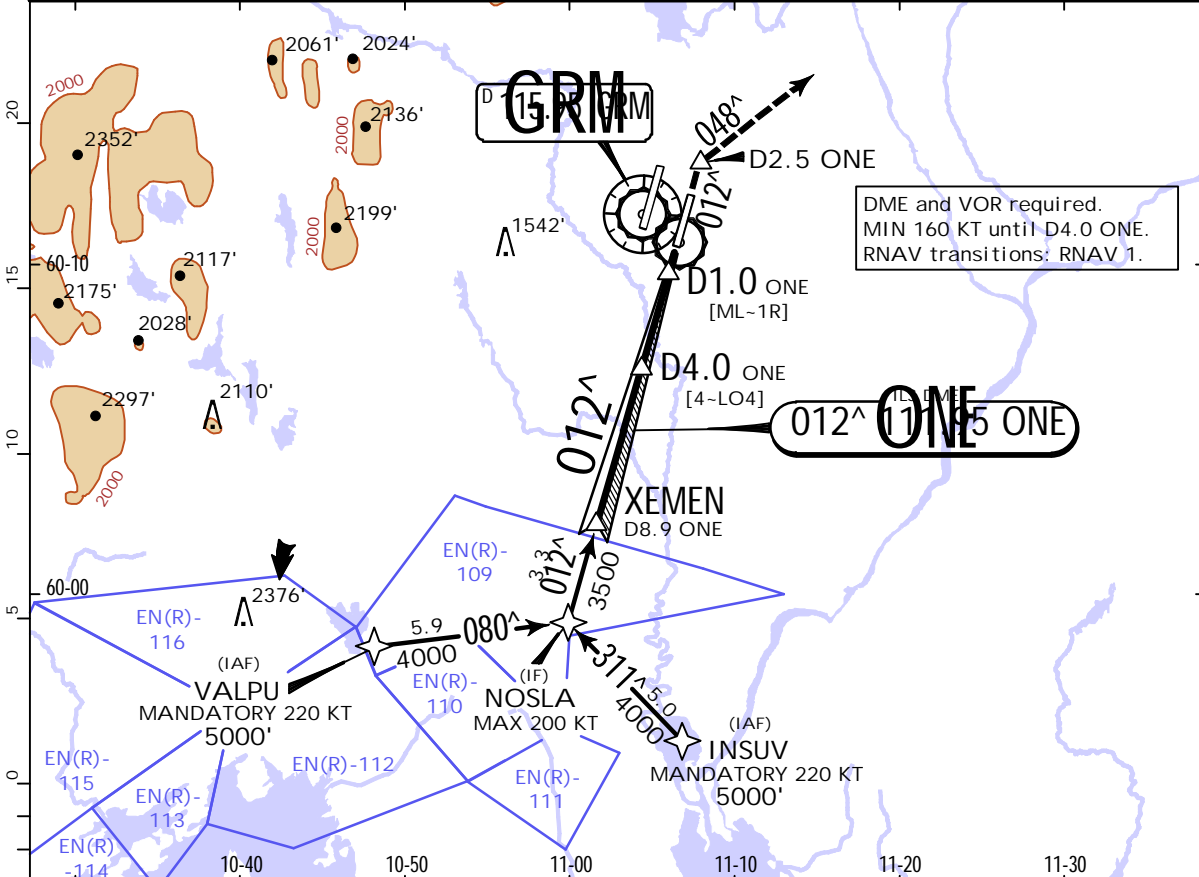
Standard STRAIGHT-IN LANDING RWY 01L			
CAT IIIB ILS Missed apch climb gradient mim 2.6%	CAT IIIA ILS Missed apch climb gradient mim 2.6%	CAT II ILS A B RA 100' DA(H) 757' (100')	C D RA 109' DA(H) 766' (109')
	DH 50'	D RA 124' DA(H) 779' (122')	
RVR 75m	RVR 200m	RVR 300m	RVR 400m

ENGM/OSL  
GARDERMOEN

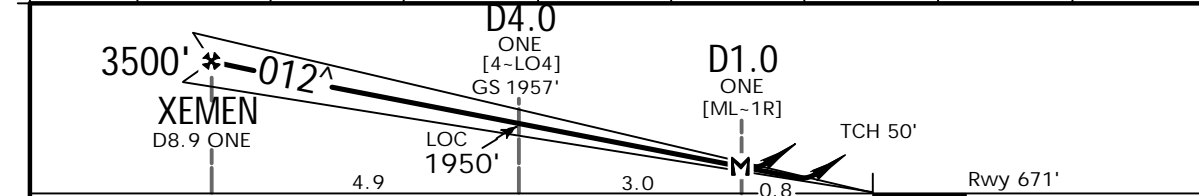
JEPPESEN  
25 NOV 22 (11-2). Eff. 1. Dec.

OSLO, NORWAY  
ILS or LOC Rwy 01R

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450			
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1		Ground West 121.605 East 121.905	
LOC ONE 111.95	Final Apch Crs 012^	XEMEN 3500' (2829')	ILS DA(H) Refer to Minimums	Apt Elev 682' Rwy 671'	
<p>MISSED APCH: Climb on track 012^ to D2.5 ONE, then turn RIGHT and proceed on track 048^ to 4000'. Expect vectoring by OSLO APP.                  MISSED APCH WITH LOST COMM: Climb on track 048^ to 4000'. At D20.0 ONE turn RIGHT direct to VOR for a new apch.</p>					
Alt Set: hPa		Rwy Elev: 24 hPa	Trans level: By ATC		Trans alt: 7000'
					MSA GRM VOR



LOC (GS out)	ONE DME	8.0	7.0	6.0	5.0	4.0	3.0	2.0
	ALTITUDE	3220'	2900'	2590'	2270'	1950'	1630'	1310'



Gnd speed-Kts	70	90	100	120	140	160		Refer to Missed Apch above
ILS GS or	372	478	531	637	743	849		
LOC Desc Angle 3.00^								

.Standard. STRAIGHT-IN LANDING RWY 01R					CIRCLE-TO-LAND	
ILS			LOC (GS out)		Not authorized West of rwy 01R/19L	
DA(H) ABC: 871' (200') D: 881' (210')			DA/MDA(H) 990' (319')			
FULL		IDZ or CL out	ALS out	ALS out	Max Kts	MDA(H) VIS
A					100	1280' (598') 1500m
B	RVR 550m	RVR 550m 1	RVR 1200m	RVR 750m	135	1280' (598') 1600m
C					180	1530' (848') 2400m
D					205	1630' (948') 3600m

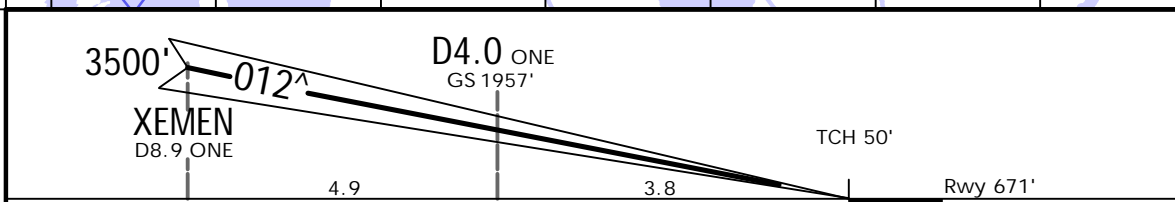
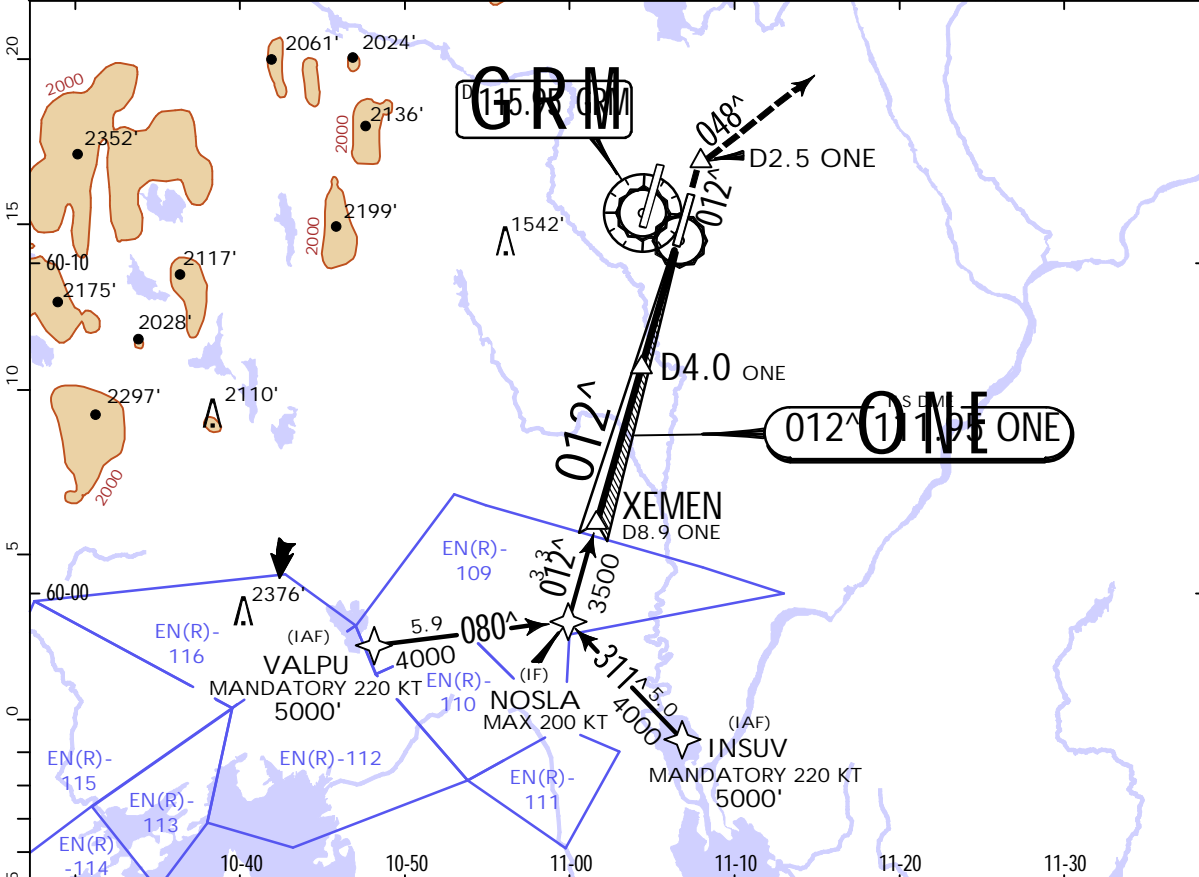
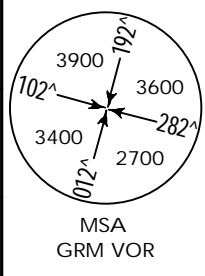
1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.  
 CHANGES: Airport & runway elevation. | JEPPESEN, 1997, 2022. ALL RIGHTS RESERVED.

ENGM/OSL  
GARDERMOEN

JEPPESEN  
25 NOV 22  
Eff. 1. Dec. 11-2A

OSLO, NORWAY  
CAT II/III ILS Rwy 01R

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1	
LOC ONE 111.95		Final Apch Crs 012^	XEMEN 3500' (2829')
CAT IIIB, IIIA & II ILS Refer to Minimums		Apt Elev 682' Rwy 671'	
<p>MISSED APCH: Climb on track 012^ to D2.5 ONE, then turn RIGHT and proceed on track 048^ to 4000'. Expect vectoring by OSLO APP.                  MISSED APCH WITH LOST COMM: Climb on track 048^ to 4000'. At D20.0 ONE turn RIGHT direct to VOR for a new apch.</p>			
Alt Set: hPa		Rwy Elev: 24 hPa	Trans level: By ATC
RNAV transitions: RNAV 1		1. Special Aircrew & Acft Certification Required. 2. DME and VOR required. 3. MIN 160 KT until D4.0 ONE.	



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI Refer to Missed Apch above
GS	3.00^	372	478	531	637	849	

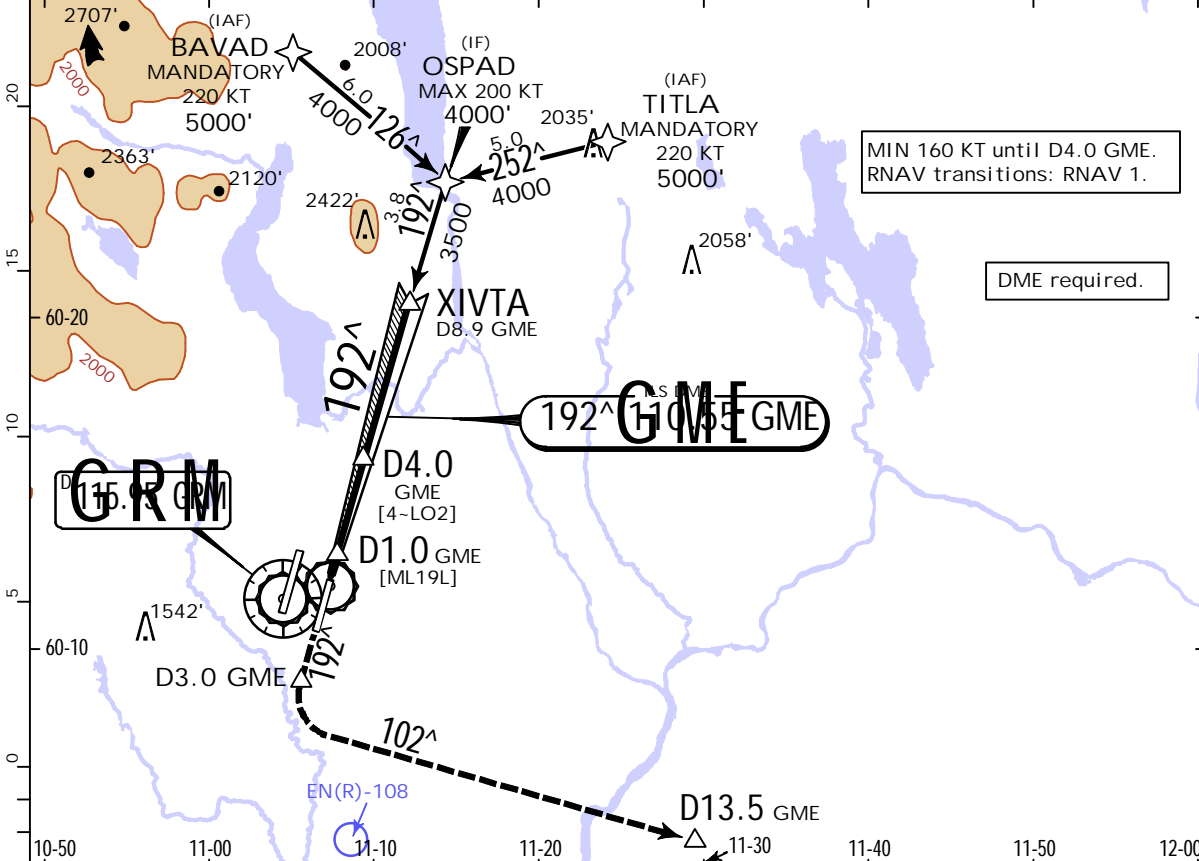
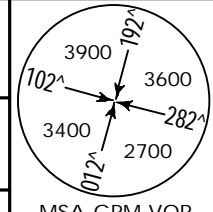
Standard. CAT IIIB ILS	STRAIGHT-IN LANDING RWY 01R CAT IIIA ILS	CAT II ILS
	DH 50'	RA 102' DA(H) 771' (100')
RVR 75m	RVR 200m	RVR 300m

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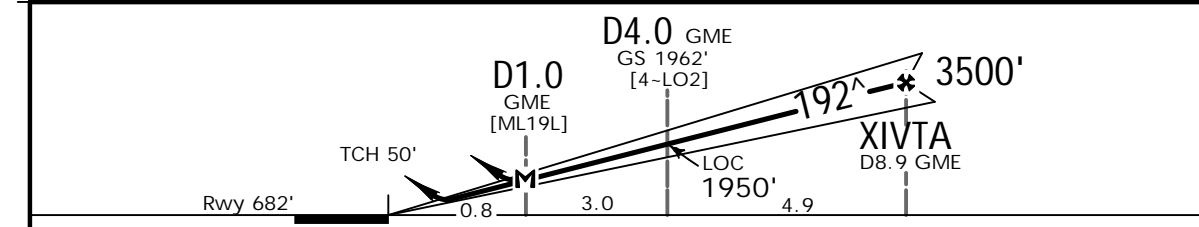
JEPPESEN  
25 NOV 22 (11-3). Eff. 1. Dec.

OSLO, NORWAY  
ILS or LOC Rwy 19L

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1	
LOC GME 110.55		Final Apch Crs 192^	
XIVTA 3500' (2818')		ILS DA(H) 882' (200')	
Apt Elev 682' Rwy 682'		Ground West 121.605 East 121.905	
<p>MISSED APCH: Climb on track 192^ to D3.0 GME. Turn LEFT to track 102^. Climb to 3000'. At D13.5 GME climb to 5000'. Expect vectoring by OSLO APP.                  MISSED APCH WITH LOST COMM: Continue on track 102^ to 5000'. At D20.0 GME turn LEFT direct to VOR for a new apch.</p>			
Alt Set: hPa		Rwy Elev: 25 hPa	
Trans level: By ATC		Trans alt: 7000'	
MSA GRM VOR			



LOC (GS out)	GME DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	1000'	1320'	1640'	1950'	2270'	2590'	2910'	3230'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI Refer to Missed Apch above
ILS GS or LOC Desc Angle	372	478	531	637	743	849	
MAP at D1.0 GME							

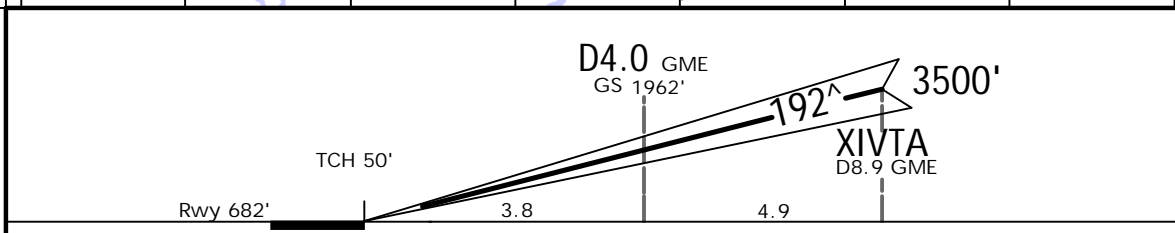
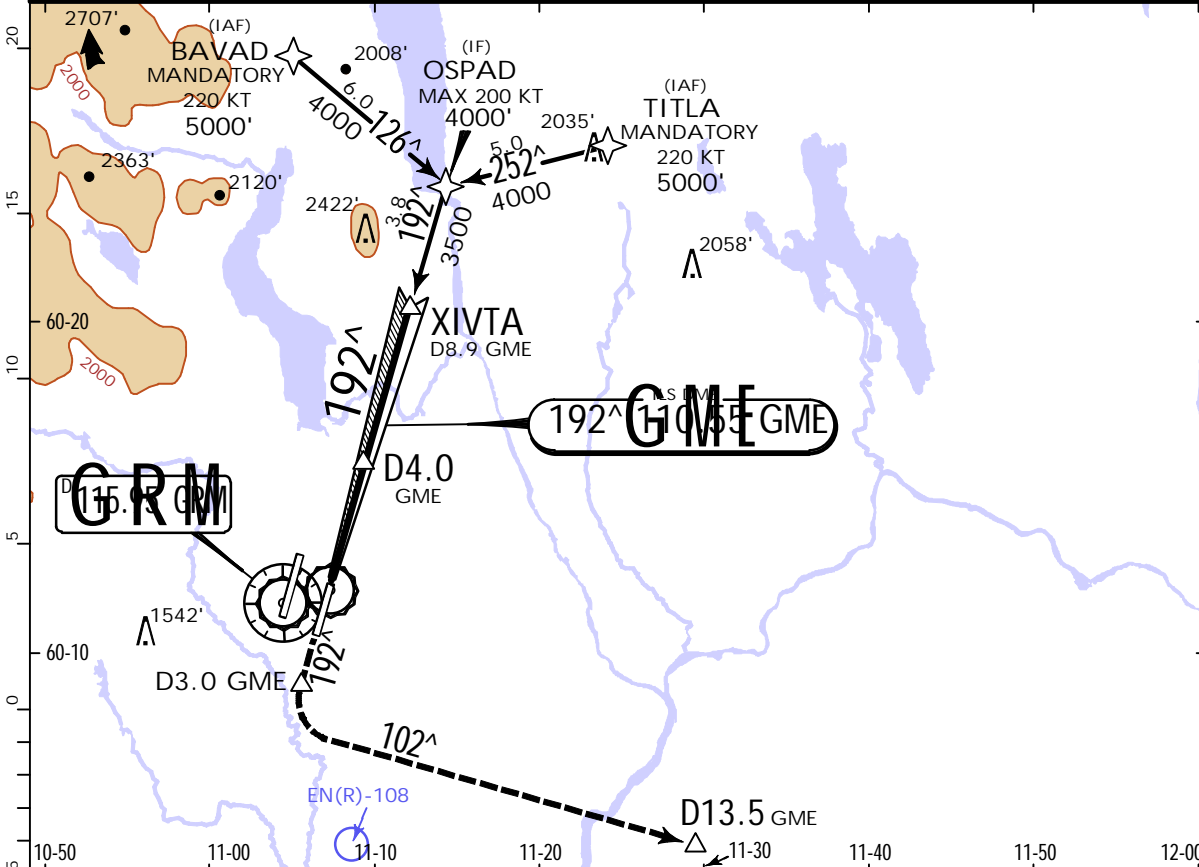
.Standard.				STRAIGHT-IN LANDING RWY 19L		CIRCLE-TO-LAND	
ILS DA(H) 882' (200')		LOC (GS out) CDEA 1030' (348')		Not authorized West of rwy 01R/19L			
FULL		IDZ or CL out		ALS out		Max Kts MDA(H) VIS	
A					RVR 1500m	100	1280' (598') 1500m
B	RVR 550m	RVR 550m 1	RVR 1200m	RVR 900m		135	1280' (598') 1600m
C					RVR 1600m	180	1530' (848') 2400m
D						205	1630' (948') 3600m
1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.							

ENGM/OSL  
GARDERMOEN

JEPPESEN  
25 NOV 22  
Eff. 1. Dec. (11-3A)

OSLO, NORWAY  
CAT II/III ILS Rwy 19L

D-ATIS Arrival 126.125			*OSLO Approach East 118.475 West 120.450			
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1		Ground West 121.605 East 121.905		
LOC GME 110.55	Final Apch Crs 192^	XIVTA 3500' (2818')	CAT IIIB, IIIA & II ILS Refer to Minimums	Apt Elev 682' Rwy 682'		
MISSED APCH: Climb on track 192^ to D3.0 GME. Turn LEFT to track 102^. Climb to 3000'. At D13.5 GME climb to 5000'. Expect vectoring by OSLO APP. MISSED APCH WITH LOST COMM: Continue on track 102^ to 5000'. At D20.0 GME turn LEFT direct to VOR for a new apch.					<p>MSA GRM VOR</p>	
Alt Set: hPa		Rwy Elev: 25 hPa	Trans level: By ATC			Trans alt: 7000'
RNAV transitions: RNAV 1		1. DME required. 2. Special Aircrew & Acft Certification Required. 3. MIN 160 KT until D4.0 GME.				



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II Refer to Missed Apch above
GS	3.00^	372	478	531	637	849	

Standard CAT IIIB ILS	STRAIGHT-IN LANDING RWY 19L CAT IIIA ILS	CAT II ILS
	DH 50'	RA 97' DA(H) 782' (100')
RVR 75m	RVR 200m	RVR 300m

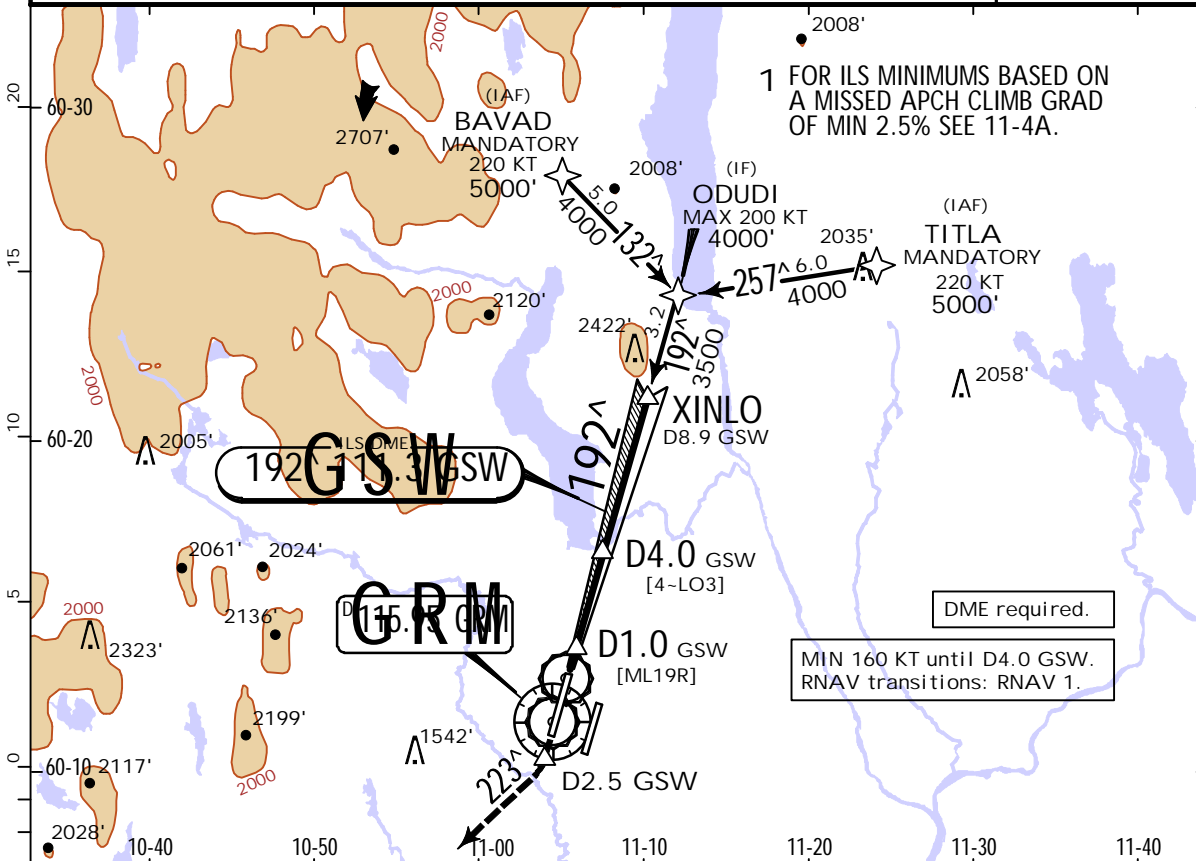
ENGM/OSL  
GARDERMOEN

JEPPESSEN

OSLO, NORWAY  
1 ILS or LOC Rwy 19R

25 NOV 22 (11-4). Eff. 1. Dec. 1

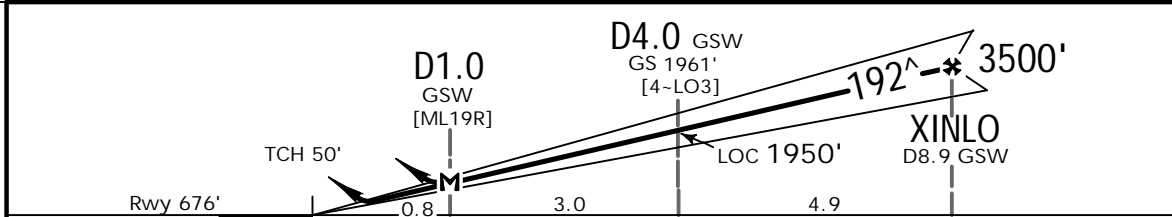
D-ATIS Arrival 126.125			*OSLO Approach East 118.475 West 120.450		
West incl Rwy 01L/19R 118.3		GARDERMOEN Tower East incl Rwy 01R/19L 120.1		Ground West 121.605 East 121.905	
LOC GSW 111.3	Final Apch Crs 192^	XINLO 3500' (2824')	ILS DA(H) 876' (200')	Apt Elev 682' Rwy 676'	
<p>MISSED APCH: Climb on rwy track 192^ to D2.5 GSW, then turn RIGHT to track 223^, Climb to 5000'. Expect vectoring by OSLO APP.                  MISSED APCH WITH LOST COMM: Continue on track 223^, Climb to 5000'. At D20.0 GSW turn RIGHT direct to VOR for a new apch.</p>					
Alt Set: hPa		Rwy Elev: 25 hPa		Trans level: By ATC	
				Trans alt: 7000'	
					MSA GRM VOR



1 FOR ILS MINIMUMS BASED ON A MISSED APCH CLIMB GRAD OF MIN 2.5% SEE 11-4A.

MIN 160 KT until D4.0 GSW. RNAV transitions: RNAV 1.

LOC (GS out)	GSW DME	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
	ALTITUDE	1000'	1320'	1630'	1950'	2270'	2590'	2910'	3230'



Gnd speed-Kts	70	90	100	120	140	160		Refer to Missed Apch above
ILS GS or LOC Desc Angle 3.00^	372	478	531	637	743	849		
MAP at D1.0 GSW								

PANS OPS	Standard. STRAIGHT-IN LANDING RWY 19R				CIRCLE-TO-LAND	
	ILS Missed apch climb gradient MIN 3.1%			LOC (GS out) CDEA		Not authorized East of rwy 01L/19R
	DA(H) 876' (200')			DA/MDA(H) 1020' (344')		
	FULL		IDZ or CL out	ALS out	ALS out	Max Kts
	A				RVR 1500m	100
B	RVR550m	RVR550m 1	RVR 1200m	RVR 900m	135	
C				RVR 1600m	180	
D					205	
1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.						

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**JEPPESEN**  
25 NOV 22 **11-4A** .Eff.1.Dec.

**OSLO, NORWAY**  
GARDERMOEN

# ILS RWY 19R MINIMUMS

BASED ON:

MISSED APCH CLIMB GRADIENT MIM 2.5%

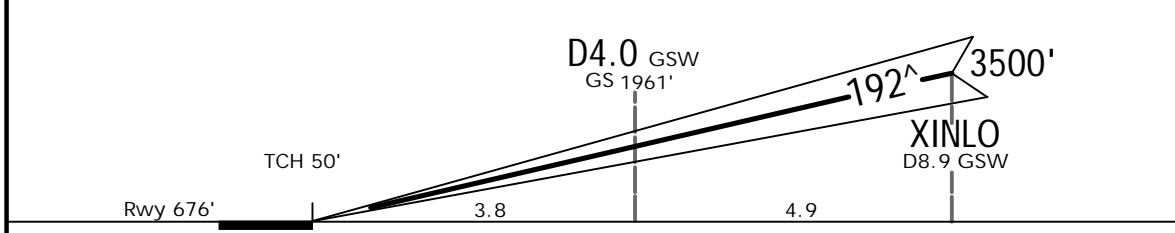
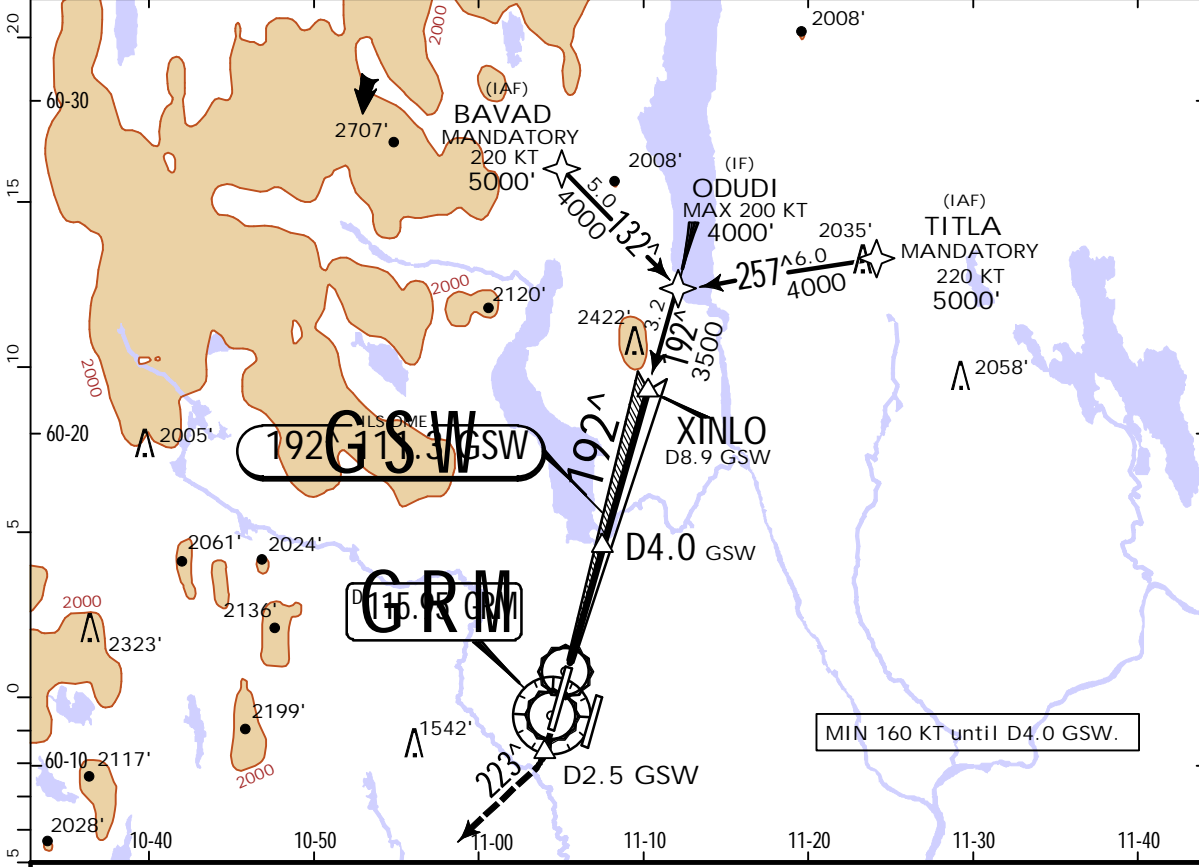
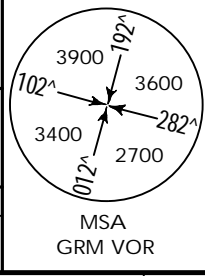
Standard.			
STRAIGHT-IN LANDING ILS			
DA(H) A: <b>943'</b> (267') C: <b>963'</b> (287') B: <b>953'</b> (277') D: <b>973'</b> (297')			
	FULL	TDZ or CL out	ALS out
A	RVR 600m	RVR 600m 1	RVR 1300m
B			
C	RVR 650m	RVR 650m 1	RVR 1400m
D			
1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.			

ENGM/OSL  
GARDERMOEN

JEPPESEN  
25 NOV 22  
.Eff. 1. Dec. (11-4B)

OSLO, NORWAY  
CAT II/III ILS Rwy 19R

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1	
LOC GSW 111.3		Final Apch Crs 192^	
XINLO 3500' (2824')		CAT IIIB, IIIA & II ILS Refer to Minimums	
Apt Elev 682'		Rwy 676'	
<p>MISSED APCH: Climb on rwy track 192^ to D2.5 GSW, then turn RIGHT to track 223^, Climb to 5000'. Expect vectoring by OSLO APP.                  MISSED APCH WITH LOST COMM: Continue on track 223^, Climb to 5000'. At D20.0 GSW turn RIGHT direct to VOR for a new apch.</p>			
Alt Set: hPa		Rwy Elev: 25 hPa	
RNAV transitions: RNAV 1		1. DME required. 2. Special Aircrew & Aircraft Certification Required.	
Trans level: By ATC		Trans alt: 7000'	



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI Refer to Missed Apch above
GS	3.00^	372	478	531	637	849	

STRAIGHT-IN LANDING RWY 19R							
.Standard. CAT IIIB ILS		CAT IIIA ILS		CAT II ILS			
Missed apch climb gradient MIN 3.2%		Missed apch climb gradient MIN 3.2%		Missed apch climb gradient MIN 3.1%		Missed apch climb gradient MIN 2.5%	
RA 100'		RA 102'		RA 181'		RA 195'	
DA(H) 776' (100')		DA(H) 778' (102')		DA(H) 855' (179')		DA(H) 871' (195')	
DH 50'		DH 50'		DH 1		DH 1	
RVR 75m		RVR 200m		RVR 300m		RVR 450m	

1 Precision approach terrain information not available for calculation of RA.  
 CHANGES: Airport & runway elevation. | JEPPESEN, 1998, 2022. ALL RIGHTS RESERVED.

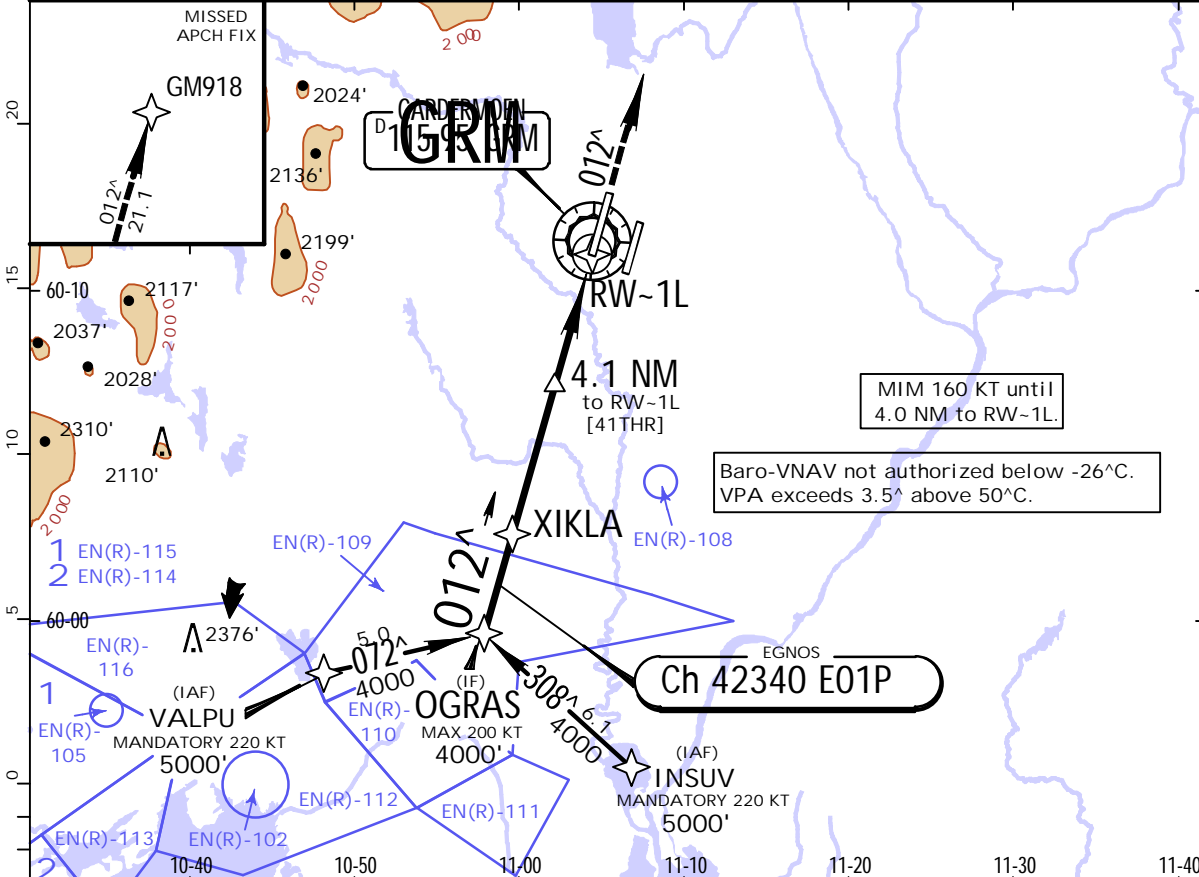


**ENGM/OSL**  
GARDERMOEN

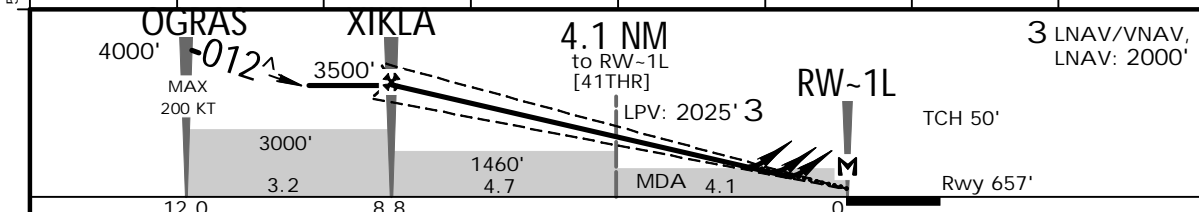
**JEPPESEN**  
25 NOV 22 (12-1).Eff.1.Dec.

**OSLO, NORWAY**  
RNP Z Rwy 01L

BRIEFING STRIP	D-ATIS Arrival <b>126.125</b>		*OSLO Approach East <b>118.475</b> West <b>120.450</b>			
	GARDERMOEN Tower West incl Rwy 01L/19R <b>118.3</b>		East incl Rwy 01R/19L <b>120.1</b>		Ground West <b>121.605</b> East <b>121.905</b>	
	EGNOS <b>Ch 42340</b> E01P	Final Apch Crs <b>012^</b>	<b>XIKLA</b> <b>3500'</b> (2843')	LPV CAT I DA(H) <b>857'</b> (200')	Apt Elev <b>682'</b> Rwy <b>657'</b>	3900  MSA ARP
	MISSED APCH: Climb to 5000' to GM918. Expect vectoring. MISSED APCH WITH LOST COMM: At GM918 turn LEFT direct to GRM VOR for a new apch.					
Alt Set: hPa		Rwy Elev: 24 hPa	Trans level: By ATC	Trans alt: 7000'	MSA ARP	



DIST to RW-1L	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3260'	2940'	2620'	2300'	1980'	1670'	1350'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	GM918 on 012^
Glide Path Angle	3.00^	372	478	531	637	743		

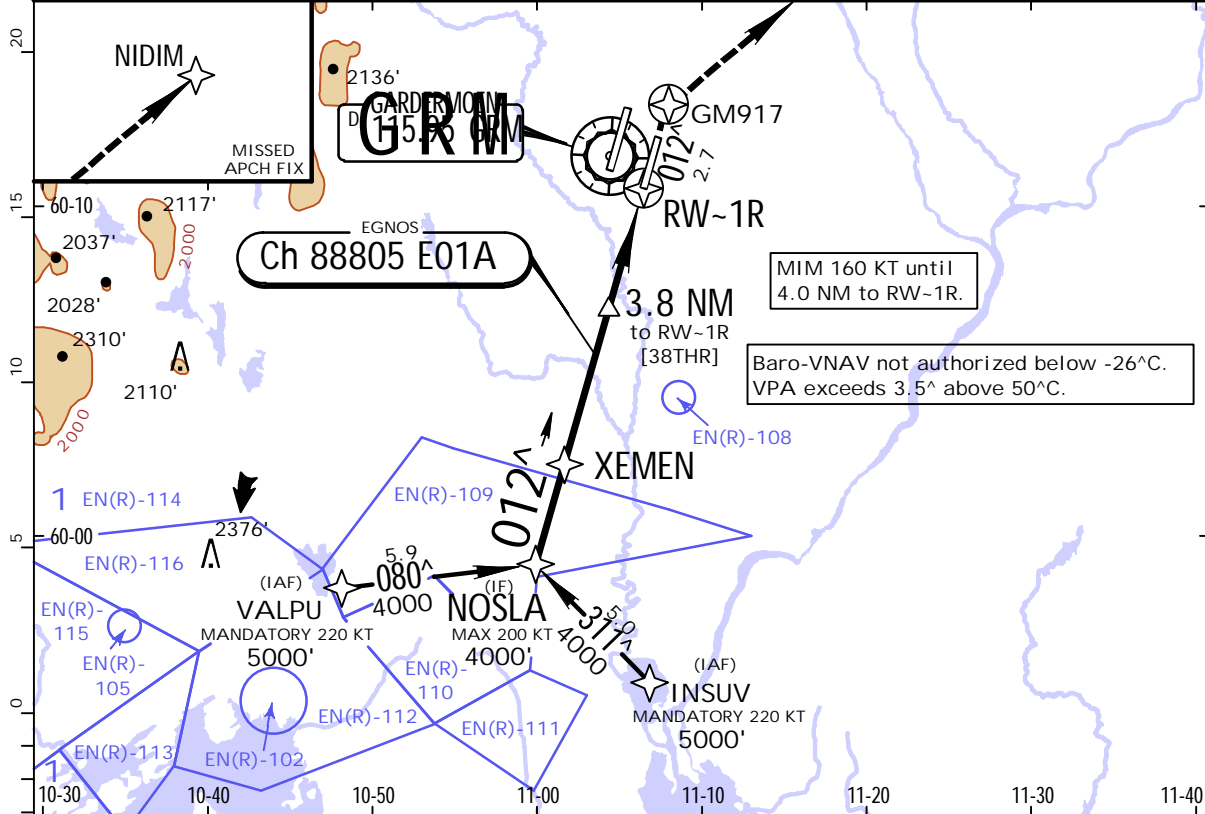
PANS OPS	Standard LPV CAT I DA(H) <b>857'</b> (200')		STRAIGHT-IN LANDING RWY 01L DA(H) LNAV/VNAV A: <b>1000'</b> (343') C: <b>1030'</b> (373') B: <b>1010'</b> (353') D: <b>1150'</b> (493')				LNAV CDFA DA/MDA(H) <b>1240'</b> (583')		CIRCLE-TO-LAND Not authorized East of rwy 01L/19R	
	ALS out		ALS out				ALS out		Max Kts	MDA(H) VIS
	A		RVR 1200m	RVR 1500m	RVR 1500m		100	1280' (598')	1500m	
	B	RVR 750m	RVR 1200m	RVR 1300m	RVR 1700m	RVR 2300m	RVR 2400m	135	1280' (598')	1600m
C			RVR 1800m	RVR 2300m			180	1920' (1238')	2400m	
D							205	2230' (1548')	3600m	

ENGM/OSL  
GARDERMOEN

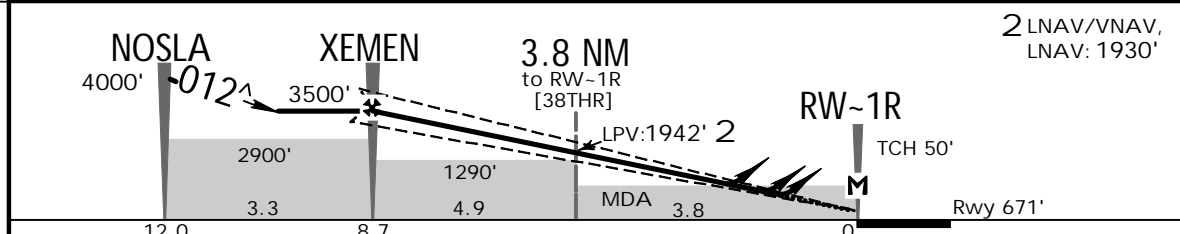
JEPPESEN  
25 NOV 22 (12-2). Eff. 1. Dec.

OSLO, NORWAY  
RNP Z Rwy 01R

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450			
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1		Ground West 121.605 East 121.905	
EGNOS Ch 88805 E01A	Final Apch Crs 012 <sup>^</sup>	XEMEN 3500' (2829')	LPV CAT I DA(H) Refer to Minimums	Apt Elev 682' Rwy 671'	3900 MSA ARP
MISSED APCH: Climb to GM917. Turn RIGHT direct to NIDIM climbing to 4000'. Expect vectoring. MISSED APCH WITH LOST COMM: At NIDIM turn RIGHT direct to GRM VOR for a new apch.					
Alt Set: hPa		Rwy Elev: 24 hPa	Trans level: By ATC		Trans alt: 7000'



DIST to RW-1R	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3270'	2950'	2640'	2320'	2000'	1680'	1360'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI GM917
Glide Path Angle 3.00 <sup>^</sup>	372	478	531	637	743	849	
MAP at RW-1R							

Standard		STRAIGHT-IN LANDING RWY 01R				CIRCLE-TO-LAND	
LPV CAT I DA(H) ABC: 871' (200') D: 881' (210')		DA(H) LNAV/VNAV A: 970' (299') B: 990' (319')		C: 1010' (339') D: 1030' (359')		Not authorized West of rwy 01R/19L	
IDZ or CL out		ALS out		ALS out		Max Kts MDA(H) VIS	
A	RVR 550m	RVR 550m 1	RVR 1200m	RVR 750m 2	RVR 1400m	RVR 1500m	100 1280'(598') 1500m
B	RVR 550m	RVR 550m 1	RVR 1200m	RVR 750m 3	RVR 1400m	RVR 1500m	135 1280'(598') 1600m
C	RVR 550m	RVR 550m 1	RVR 1200m	RVR 800m	RVR 1500m	RVR 1800m	180 1530'(848') 2400m
D	RVR 550m	RVR 550m 1	RVR 1200m	RVR 900m	RVR 1600m	RVR 1800m	205 1630'(948') 3600m

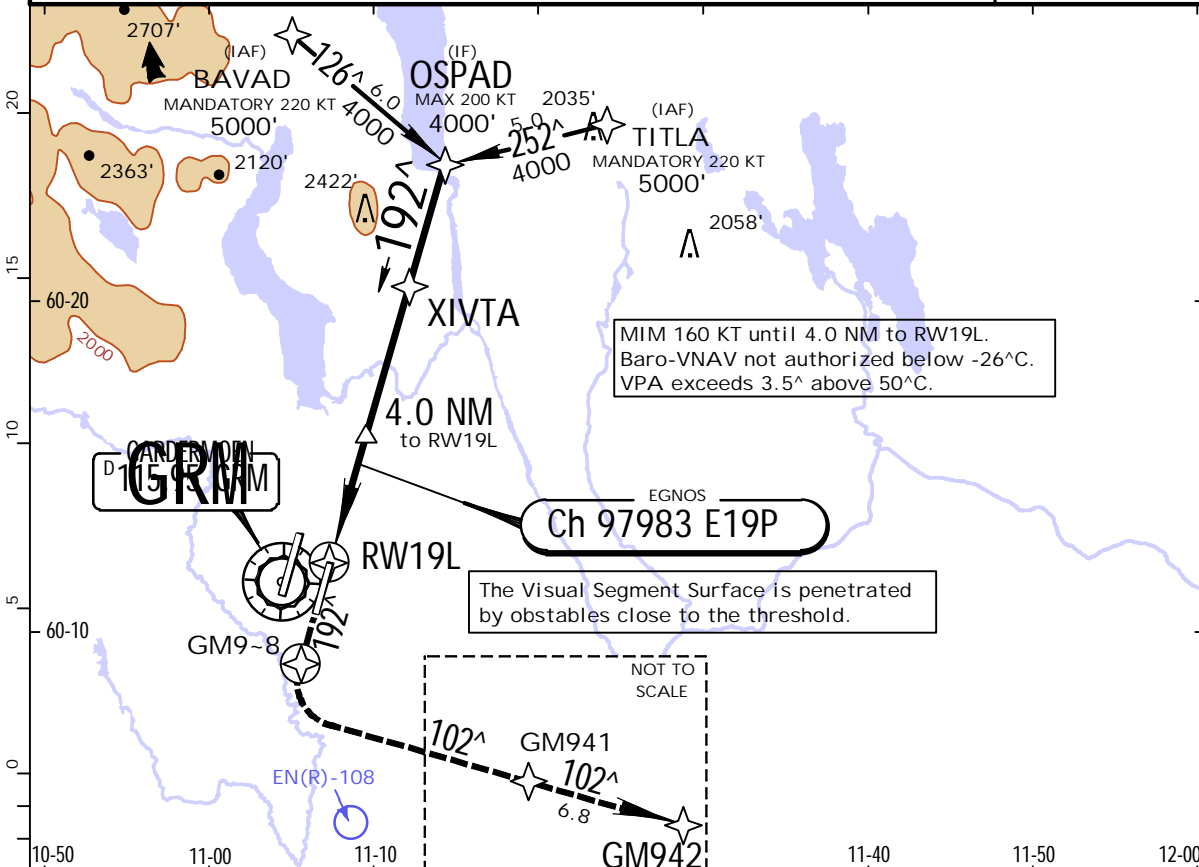
1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.  
2 With TDZ & CL & HUD: RVR 650m. 3 With TDZ & CL & HUD: RVR 700m.  
CHANGES: Airport & runway elevation. JEPPESEN, 2012, 2022. ALL RIGHTS RESERVED.

**ENGM/OSL**  
GARDERMOEN

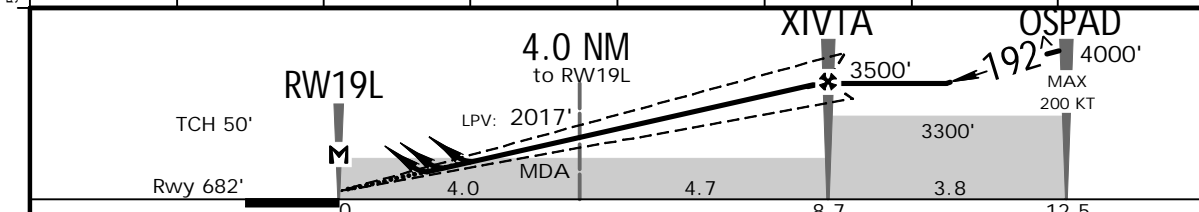
**JEPPESEN**  
25 NOV 22 (12-3). Eff. 1. Dec.

**OSLO, NORWAY**  
RNP Z Rwy 19L

BRIEFING STRIP™	D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
	GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1	
	EGNOS Ch 97983 E19P		Final Apch Crs 192^	
	XIVTA 3500' (2818')		LPV CAT I DA(H) 882' (200')	
MISSED APCH: Climb to GM9-8. Turn LEFT to GM941 on course 102^, climbing to 3000', then climb to 5000' to GM942. Expect vectoring by OSLO APP. MISSED APCH WITH LOST COMM: At GM942 turn LEFT direct to GRM VOR for a new apch.		Apt Elev 682' Rwy 682'		3900  MSA ARP
Alt Set: hPa		Rwy Elev: 25 hPa		
Trans level: By ATC		Trans alt: 7000'		



DIST to RW19L	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1370'	1690'	2010'	2330'	2650'	2970'	3280'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	GM9-8
Glide Path Angle	3.00^	372	478	531	637	743		
MAP at RW19L								

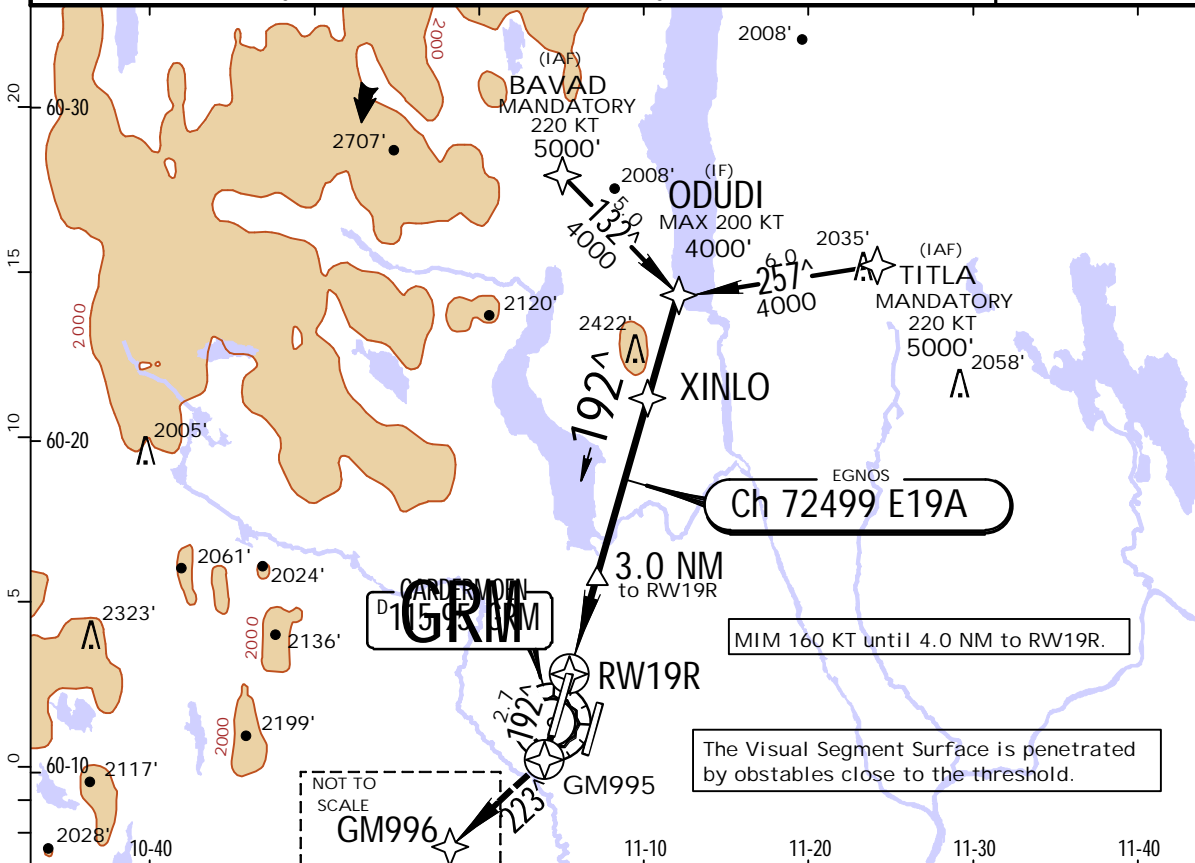
PANS OPS	Standard.		STRAIGHT-IN LANDING RWY 19L				CIRCLE-TO-LAND	
	LPV CAT I		LNAV/VNAV				Not authorized West of rwy 01R/19L	
	DA(H) 882' (200')		A: 1000' (318') B: 1010' (328')		C: 1030' (348') D: 1150' (468')		LNAV CDFDA DA/MDA(H) 1230' (548')	
	TDZ or CL out		ALS out		ALS out		Max Kts   MDA(H)   vis	
	A	RVR 550m	RVR 550m 1	RVR 1200m	RVR 750m 2	RVR 1400m	RVR 1500m	100   1280'(598')   1500m
B	RVR 550m	RVR 550m 1	RVR 1200m	RVR 800m	RVR 1500m	RVR 1500m	135   1280'(598')   1600m	
C	RVR 550m	RVR 550m 1	RVR 1200m	RVR 900m	RVR 1600m	RVR 1800m	180   1530'(848')   2400m	
D	RVR 550m	RVR 550m 1	RVR 1200m	RVR 1500m	RVR 2200m	RVR 2400m	205   1630'(948')   3600m	
1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.				2 With TDZ & CL & HUD: RVR 700m.				

ENGM/OSL  
GARDERMOEN

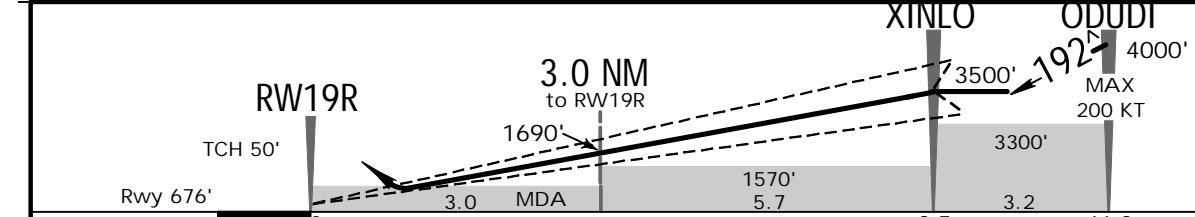
JEPPESEN  
25 NOV 22 (12-4) .Eff.1.Dec.

OSLO, NORWAY  
RNP Z Rwy 19R (LPV)

BRIEFING STRIP™	D-ATIS Arrival 126.125			*OSLO Approach East 118.475 West 120.450			
	GARDERMOEN Tower West incl Rwy 01L/19R 118.3			East incl Rwy 01R/19L 120.1			
	EGNOS Ch 72499 E19A		Final Apch Crs 192^	XINLO 3500' (2824')	LPV CAT I DA(H) 876' (200')	Apt Elev 682' Rwy 676'	3900  MSA ARP
	MISSED APCH: Climb to GM995. Turn RIGHT to GM996 on course 223^, climbing to 5000'. Expect vectoring. MISSED APCH WITH LOST COMM: At GM996 turn RIGHT direct to GRM VOR for a new apch.						
Alt Set: hPa		Rwy Elev: 25 hPa	Trans level: By ATC		Trans alt: 7000'		



DIST to RW19R	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1050'	1370'	1680'	2000'	2320'	2640'	2960'	3280'



Gnd speed-Kts	70	90	100	120	140	160	HI ALS-II PAPI GM995 on 192^
Glide Path Angle	3.00^	372	478	531	637	849	

PANS OPS	Standard. STRAIGHT-IN LANDING RWY 19R LPV CAT I						CIRCLE-TO-LAND Not authorized East of rwy 01L/19R		
	Missed apch climb gradient mim 3.1%			Missed apch climb gradient mim 2.5%					
	DA(H) 876' (200')			A: 941' (265') C: 961' (285') B: 953' (277') D: 972' (296')					
		IDZ or CL out	ALS out		IDZ or CL out	ALS out	Max Kts	MDA(H)	VIS
A						100	1280' (598')	1500m	
B	RVR 550m	RVR 550m 1	RVR 1200m	RVR 600m	RVR 600m 1	RVR 1300m	135	1280' (598')	1600m
C				RVR 650m	RVR 650m 1	RVR 1400m	180	1920' (1238')	2400m
D							205	2230' (1548')	3600m
1 RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.									

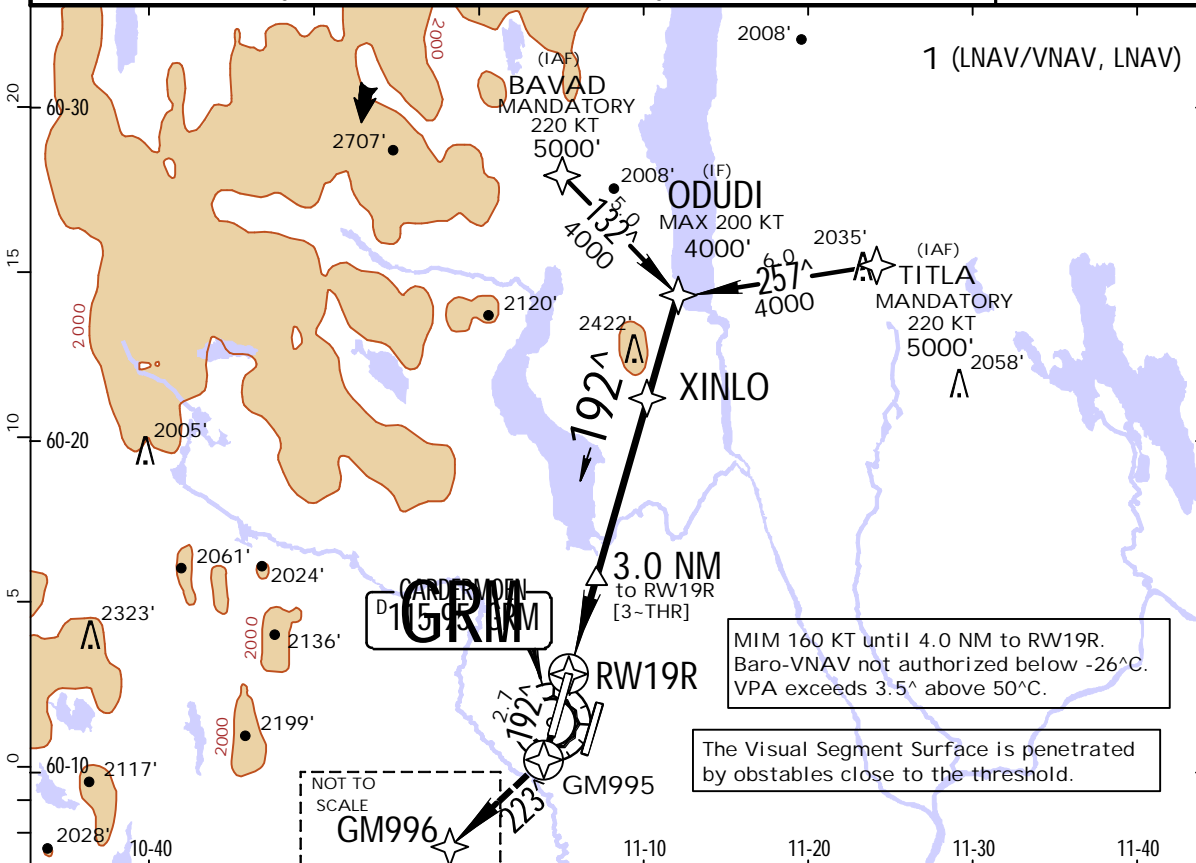
**ENGM/OSL**  
GARDERMOEN

**JEPPesen**

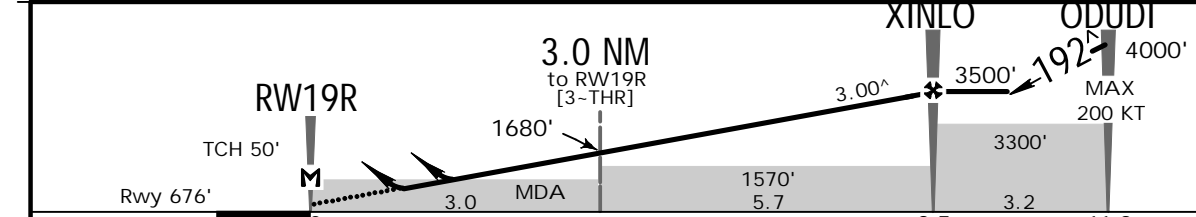
25 NOV 22 (12-4A) .Eff.1.Dec.

**OSLO, NORWAY**  
1 RNP Z Rwy 19R

D-ATIS Arrival <b>126.125</b>		*OSLO Approach East <b>118.475</b> West <b>120.450</b>			
GARDERMOEN Tower West incl Rwy 01L/19R <b>118.3</b>		East incl Rwy 01R/19L <b>120.1</b>		Ground West <b>121.605</b> East <b>121.905</b>	
RNAV	Final Apch Crs <b>192^</b>	XINLO <b>3500'</b> (2824')	LNAV/VNAV DA(H) Refer to Minimums	Apt Elev <b>682'</b> Rwy <b>676'</b>	3900 MSA ARP
MISSED APCH: Climb to GM995. Turn RIGHT to GM996 on course 223^, climbing to 5000'. Expect vectoring. MISSED APCH WITH LOST COMM: At GM996 turn RIGHT direct to GRM VOR for a new apch.					
Alt Set: hPa		Rwy Elev: 25 hPa		Trans level: By ATC	
				Trans alt: 7000'	



DIST to RW19R	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
ALTITUDE	1050'	1370'	1680'	2000'	2320'	2640'	2960'	3280'



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI GM995 on 192^
Glide Path Angle	3.00^	372	478	531	637	849	

.Standard.				STRAIGHT-IN LANDING RWY 19R				CIRCLE-TO-LAND Not authorized East of rwy 01L/19R					
LNAV/VNAV		LNAV CDFA		LNAV/VNAV		LNAV CDFA		LNAV/VNAV		LNAV CDFA			
DA(H) A:	970' (294')	C:	1000' (324')	DA(MDA)(H) A:	980' (304')	D:	1030' (354')	C:	1060' (384')	DA(MDA)(H) A:	1040' (364')	D:	1080' (404')
ALS out				ALS out				ALS out					
A	RVR 750m 1	RVR 1400m	RVR 1000m	RVR 1500m	Max Kts	MDA(H)	VIS	100	1280' (598')	1500m			
B	RVR 750m 2	RVR 1500m	RVR 1100m	RVR 1800m	135	1280' (598')	1600m	180	1920' (1238')	2400m			
C	RVR 800m	RVR 1500m	RVR 1100m	RVR 1800m	180	1920' (1238')	2400m	205	2230' (1548')	3600m			
D	RVR 900m	RVR 1600m	RVR 1200m	RVR 1900m									

1 With TDZ, CL and HUD: RVR 650m. 2 With TDZ, CL and HUD: RVR 700m.

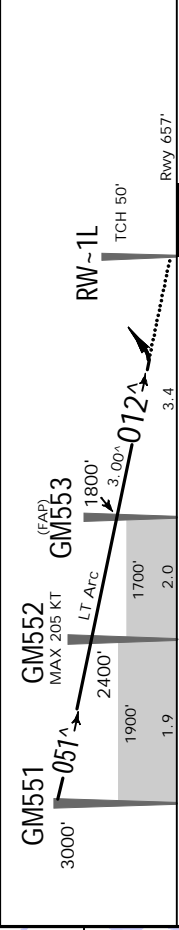
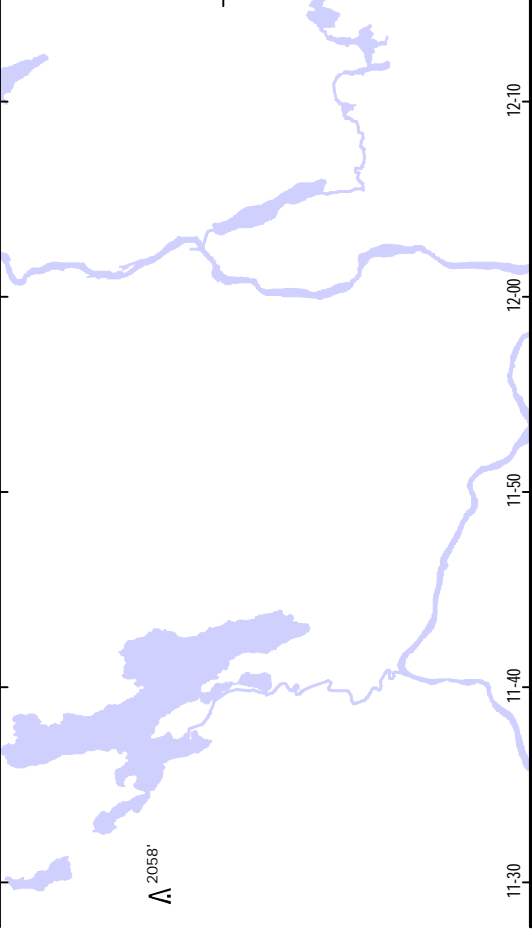
**ENGM/OSL**  
GARDERMOEN

25 NOV 22  
12-20 Eff. 1.Dec.

**OSLO, NORWAY**  
RNP W Rwy 01L (AR)

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower West Incl Rwy 01L/19R 118.3		Ground West 121.605 East 121.905	
RNAV	Final Apch.Crs 012 <sup>Δ</sup>	RNP 0.30 DA(H) 1800' (1143')	Apt Elev 682' Rwy 657'
MISSED APCH: Climb to 5000' to GM918. At GM918 turn LEFT direct to GRM for a new apch. Expect vectoring by OSLO APP.			
Alt Set: hPa		Rwy Elev: 24 hPa	
RNP AR Apch		Trans level: By ATC	
Trans alt: 7000'			

1. Authorization required.
2. RNP less than 1.0 required in intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



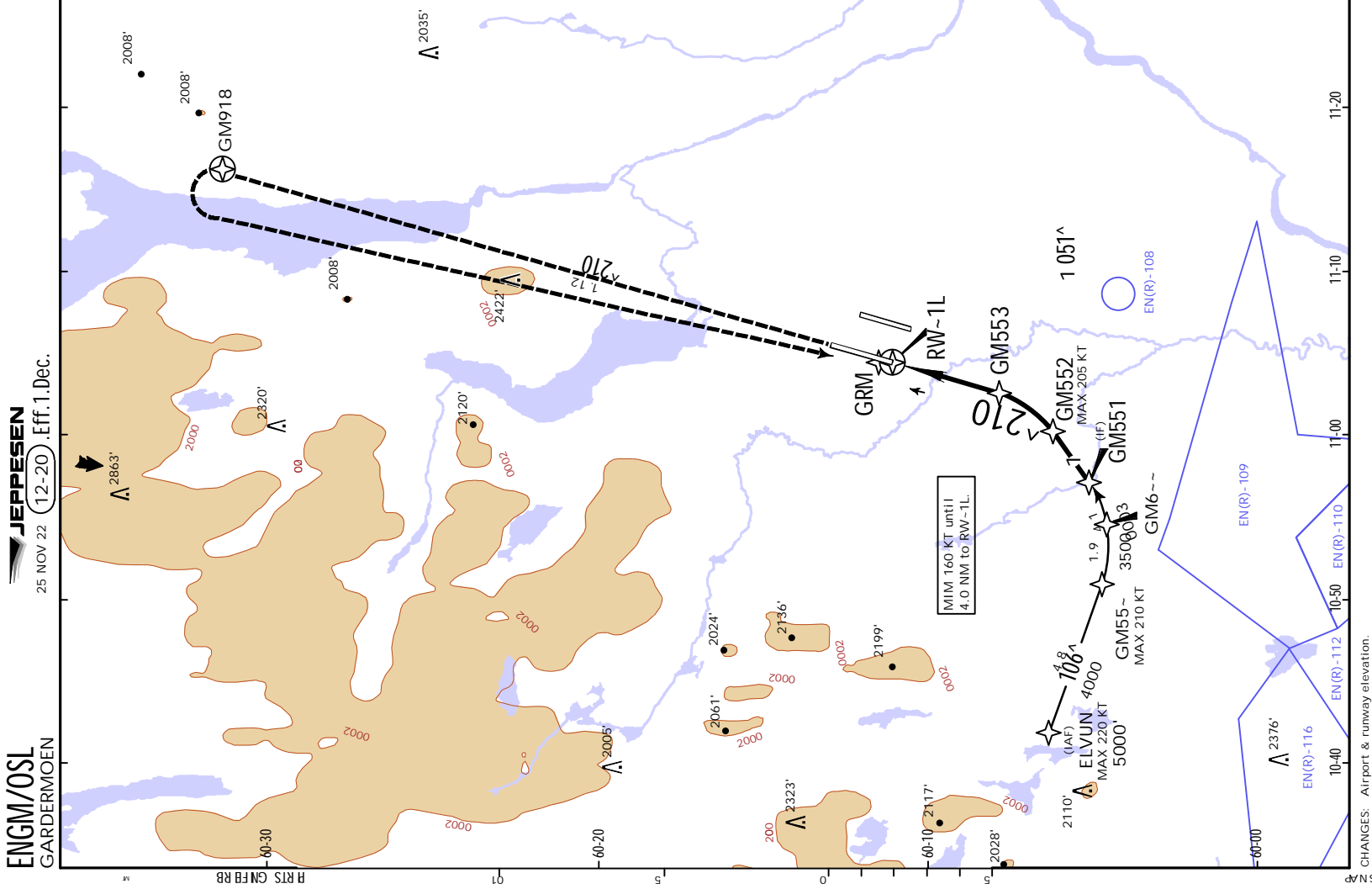
Gnd Speed-Kts		70	90	100	120	140	160
Glide Path Angle		3.00°	3.72	4.78	5.31	6.37	7.43
						849	

Standard.		STRAIGHT-IN LANDING RWY 01L	
RMP 0.30	RNP 0.30	Missed apch climb gradient mim 2.5%	
Missed apch climb gradient mim 5.0%		DA(H) A: 983' (326') C: 1032' (375')	
		DA(H) B: 1009' (352') D: 1055' (398')	
ALS OUT		ALS OUT	
A	RVR 1100m	RVR 1500m	RVR 2000m
B	RVR 1200m	RVR 1500m	RVR 2000m
C	RVR 1300m	RVR 1700m	RVR 2000m
D	RVR 1400m	RVR 1800m	RVR 2000m

Max Kts.	MDA(H)	VIS
100	1280' (598')	1500m
135	1280' (598')	1600m
180	1920' (1238')	2400m
205	2230' (1548')	3600m



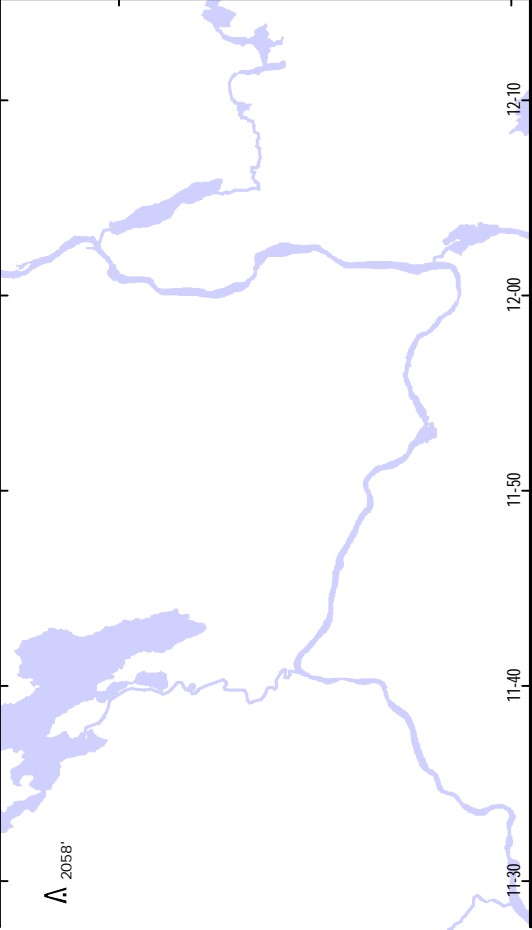
**ENGM/OSL**  
GARDERMOEN

**OSLO, NORWAY**  
RNP S Rwy 01L (AR)

25 NOV 22 (12-21). Eff. 1.Dec.

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower West Incl Rwy 01L/19R 118.3		Ground West 121.605 East 121.905	
RNAV	Final Appch Crs 012 <sup>A</sup>	RNP 0.30 DA(H) 1800' (1143')	Apt Elev 682' Rwy 657'
MISSED APCH: Climb to 5000' to GM918. At GM918 turn LEFT direct to GRM for a new apch. Expect vectoring by OSLO APP.			
Alt Set: hPa		Rwy Elev: 24 hPa	
RNP AR Apch		Trans level: By ATC	
Trans alt: 7000'		MISA ARP	

1. Authorization required.
2. RNP less than 1.0 required in intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



GM621	GM56~	GM622	GM623	GM553	RW-1L
MAX 210 KT	MAX 210 KT	MAX 205 KT	MAX 205 KT		
4200'	4200'	2800'	2600'	1800'	1800'
LT Arc	LT Arc	LT Arc	RT Arc	RT Arc	TCH 50'
3800'	3800'	3200'	3200'	3200'	
1.6	10.0	3.3	0.7	2.7	3.4
11.6	11.6	11.6	11.6	11.6	11.6
11-30	11-40	11-50	12-00	12-10	12-10

GARDERMOEN Tower		*OSLO Approach	
East Incl Rwy 01R/19L 120.1		East 118.475 West 120.450	
RNAV	Final Appch Crs 012 <sup>A</sup>	RNP 0.30 DA(H) 1800' (1143')	Apt Elev 682' Rwy 657'
MISSED APCH: Climb to 5000' to GM918. At GM918 turn LEFT direct to GRM for a new apch. Expect vectoring by OSLO APP.			
Alt Set: hPa		Rwy Elev: 24 hPa	
RNP AR Apch		Trans level: By ATC	
Trans alt: 7000'		MISA ARP	

CHANGES: Airport & runway elevation.

**OSLO, NORWAY**  
**RNP 0 Rwy 01L (AR)**

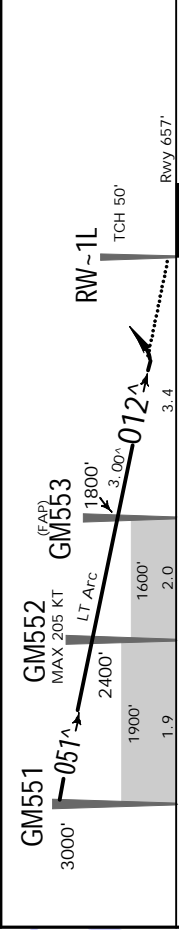
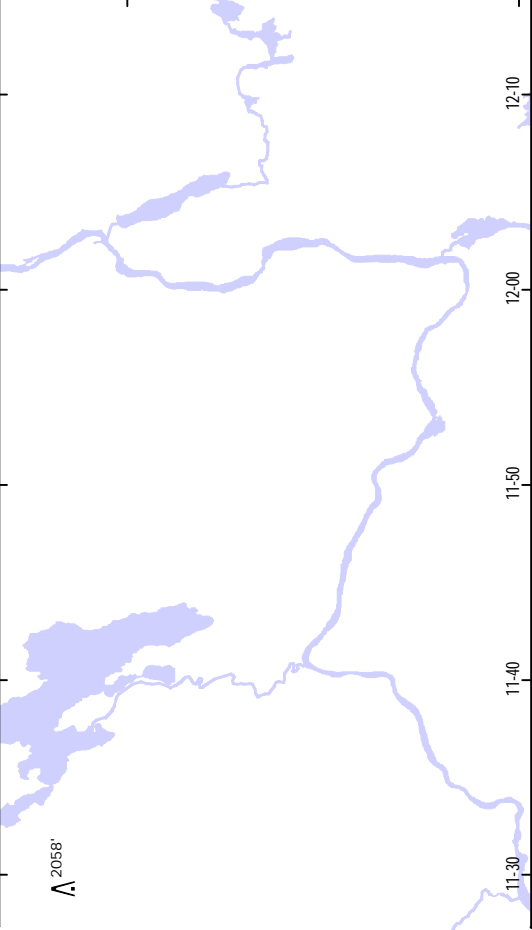
D-ATIS Arrival <b>126.125</b>		*OSLO Approach East <b>118.475</b> West <b>120.450</b>	
West Incl Rwy 01L/19R <b>118.3</b>		Ground East <b>121.905</b>	
GARDERMOEN Tower East Incl Rwy 01R/19L <b>120.1</b>		RNP 0.30 DA(H) Refer to Minimums	
RNAV Final Appch.Crs <b>012^</b>		Apt Elev <b>682'</b> Rwy <b>657'</b>	
GM553 <b>1800'</b> (1143')		MISA ARP 3900	

**MISSED APCH:** Climb to 5000' to GM918. At GM918 turn LEFT direct to GRM for a new apch. Expect vectoring by OSLO APP.

Alt Set: hPa Rwy Elev: 24 hPa Trans level: By ATC Trans alt: 7000'

RNP AR Apch

1. Authorization required.
2. RNP less than 1.0 required in intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



GM551	GM552	GM553	Rwy 657'
3000'	1600'	1800'	
1.9	2.0	3.4	
7.3	5.4	3.4	
70	90	100	140
372	478	531	637
3.00'	3.72	4.78	5.31
			743
			849

**Standard.**

STRAIGHT-IN LANDING RWY 01L

RNP 0.30		RNP 0.30	
Missed apch climb gradient min 5.0%		Missed apch climb gradient min 2.5%	
DA(H) A: <b>983'</b> (326') C: <b>1032'</b> (375')	DA(H) B: <b>1009'</b> (352') D: <b>1055'</b> (398')	DA(H) <b>1087'</b> (430')	
ALS OUT	ALS OUT	ALS OUT	
RVR 1100m	RVR 1500m	RVR 1500m	
RVR 1200m	RVR 1700m	RVR 1600m	
RVR 1300m	RVR 1800m	RVR 2000m	
RVR 1400m			

Max Kts: MDA(H): VIS

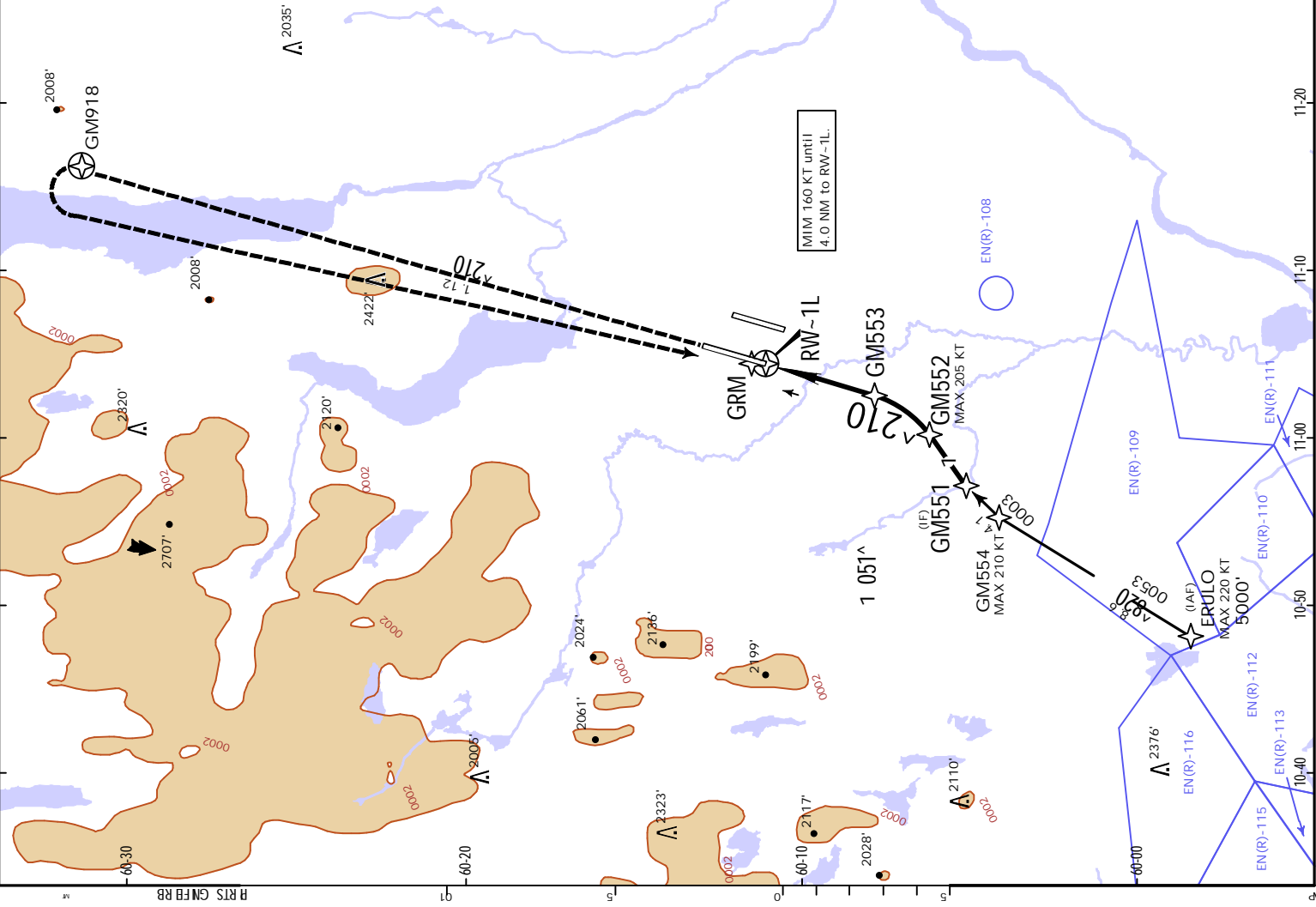
100 **1280'** (598') 1500m

135 **1280'** (598') 1600m

180 **1920'** (1238') 2400m

205 **2230'** (1548') 3600m

Not authorized East of rwy 01L/19R





**ENGM/OSL**  
GARDERMOEN

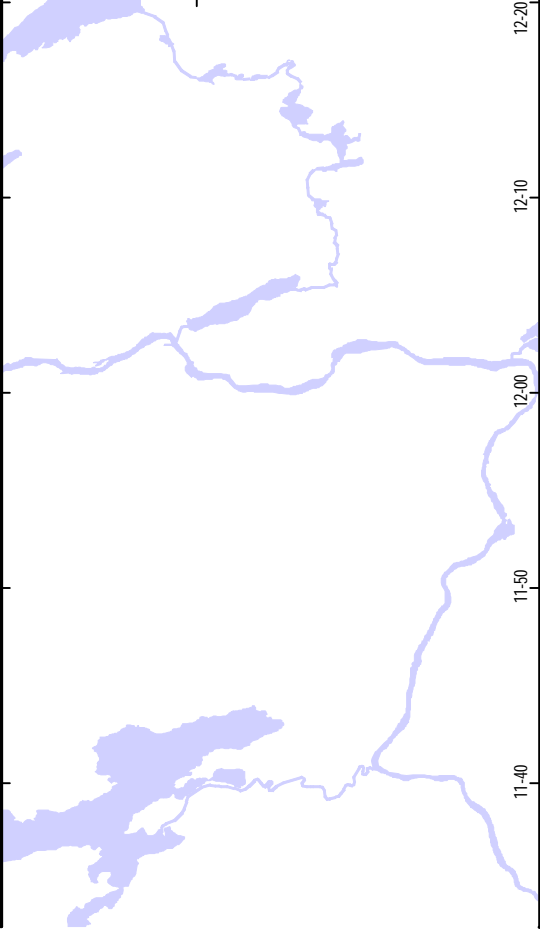
25 NOV 22 (12-23) .Eff.1.Dec. **RNP E Rwy 01L (AR)**

**JEPPESEN**

**OSLO, NORWAY**  
**RNP E Rwy 01L (AR)**

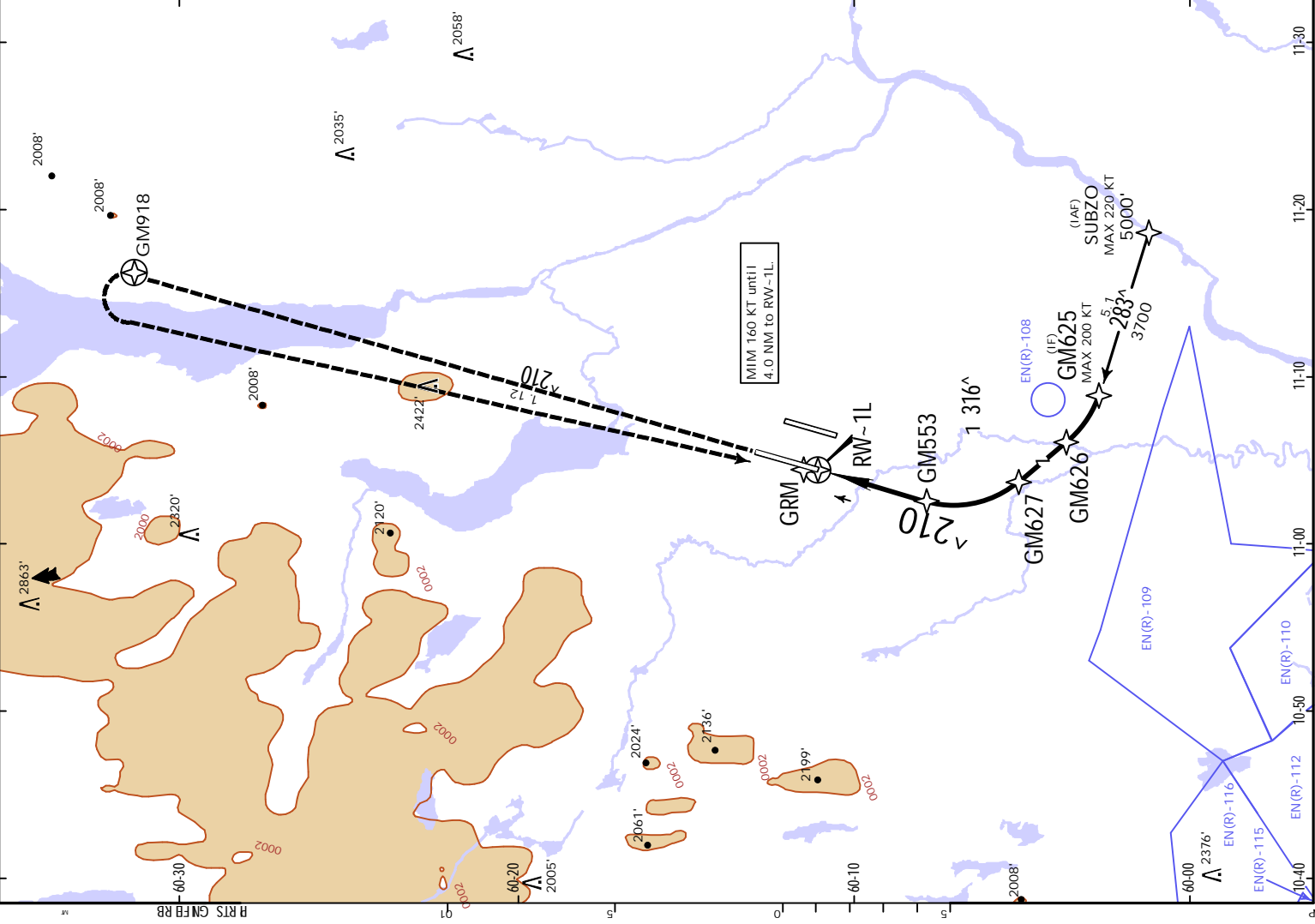
D-ATIS Arrival <b>126.125</b>		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower East incl Rwy 01R/19L 118.3		Ground West 121.605 East 121.905	
RNAV	Final Apch Crs <b>012<sup>A</sup></b>	RNP 0.30 DA(H) Refer to Minimums <b>1800<sup>A</sup></b> (1143')	Apt Elev 682' Rwy 657'
MISSED APCH: Climb to 5000' to GM918. At GM918 turn LEFT direct to GRM for a new apch. Expect vectoring by OSLO APP.			
Alt Set: hPa		Rwy Elev: 24 hPa	
RNP AR Apch		Trans level: By ATC	
RNP AR Apch		Trans alt: 7000'	

1. Authorization required.
2. RNP less than 1.0 required in intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



GM625	GM626	GM627	GM553	GM918
3700'	3200'	2700'	1800'	1800'
RT Arc	RT Arc	RT Arc	RT Arc	RT Arc
1.8	1.9	2.9	3.4	3.4
10.0	8.2	6.3	3.4	0
Gnd speed-Kts	70	90	100	120
Glide Path Angle	3.00 <sup>A</sup>	372	478	531
			637	743
			849	

STRAIGHT-IN LANDING RWY 01L		CIRCLE-TO-LAND	
RNP 0.30		RNP 0.30	
Missed apch climb gradient min 5.0%		Missed apch climb gradient min 2.5%	
DA(H) A: <b>983'</b> (326')	C: <b>1032'</b> (375')	DA(H) <b>1087'</b> (430')	
B: <b>1009'</b> (352')	D: <b>1055'</b> (398')		
A	RVR 1100m	ALS OUT	ALS OUT
B	RVR 1200m	RVR 1500m	RVR 1500m
C	RVR 1300m	RVR 1700m	RVR 2000m
D	RVR 1400m	RVR 1800m	RVR 2000m
		Max Kts	MDA(H) VTS
		100	1280' (598') 1500m
		135	1280' (598') 1600m
		180	1920' (1238') 2400m
		205	2230' (1548') 3600m



OSLO, NORWAY  
RNP W Rwy 01R (AR)

JEPPESEN  
25 NOV 22 12-24 . Eff. 1.Dec.

ENGM/OSL  
GARDERMOEN

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower East Incl Rwy 01R/19L 118.3		Ground West 121.605 East 121.905	
Final Apch Crs 012 <sup>A</sup>	RNP 0.30 DA(H) 1800' (1129')	Apt Elev 682'	Rwy 671'
MISSED APCH: Climb to GM917. Turn RIGHT direct to NIDIM, climbing to 4000'. Turn RIGHT direct to GRM for a new apch. Expect vectoring.			
Alt Set: hPa		Rwy Elev: 24 hPa	
RNP AR Apch		Trans level: By ATC	
RNP AR Apch		Trans alt: 7000'	

1. Authorization required.
2. RNP less than 1.0 required in initial and intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.

GM644 MAX 185 KT	GM558 MAX 185 KT	GM917 NIDIM
2500'	1800'	012 <sup>A</sup>
LT Arc	3.00'	3.4
1600'	2.7	3.4
6.1	3.4	3.4
70	90	100
372	478	531
657	743	849

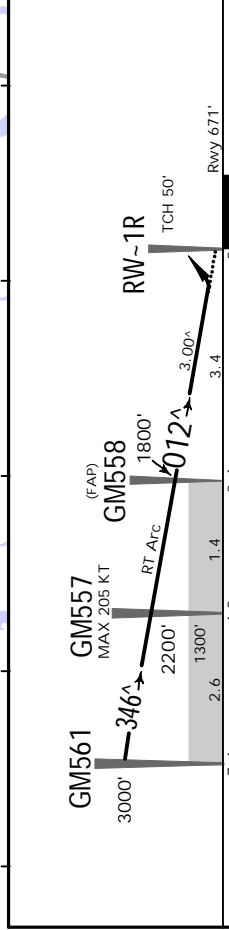
Standard.		STRAIGHT-IN LANDING RWY 01R RNP 0.30	
Missed apch climb gradient mim 5.0%		Missed apch climb gradient mim 2.5%	
A: 955' (284') C: 998' (327')	DA(H) A: 1007' (336') C: 1046' (375')	RVR 1500m	
B: 980' (309') D: 1021' (350')	B: 1027' (356') D: 1065' (394')	RVR 800m	RVR 900m
ALS OUT		RVR 1000m	RVR 1700m
ALS OUT		RVR 1100m	RVR 1800m
1 With TDZ & CL & HUD: RVR 650m.		2 With TDZ & CL & HUD: RVR 700m.	



**ENGM/OSL**  
**GARDERMOEN**  
 25 NOV 22 (12-25).Eff.1.Dec. **RNP S Rwy 01R (AR)**  
**JEPPESEN**  
**OSLO, NORWAY**

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
GARDEMOEN Tower East Incl Rwy 01R/19L 118.3		Ground West 121.605 East 121.905	
RNAV	Final Apch Crs <b>012<sup>A</sup></b>	RNP 0.30 DA(H) <b>1800'</b> (1129')	Apt Elev 682' Rwy 671'
<p><b>MISSED APCH:</b> Climb to GM917. Turn RIGHT direct to NIDIM, climbing to 4000'. Turn RIGHT direct to GRM for a new apch. Expect vectoring.</p>			
Alt Set: hPa		Rwy Elev: 24 hPa	
RNP AR Apch		Trans level: By ATC	
		Trans alt: 7000'	

1. Authorization required.
2. RNP less than 1.0 required in initial and intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



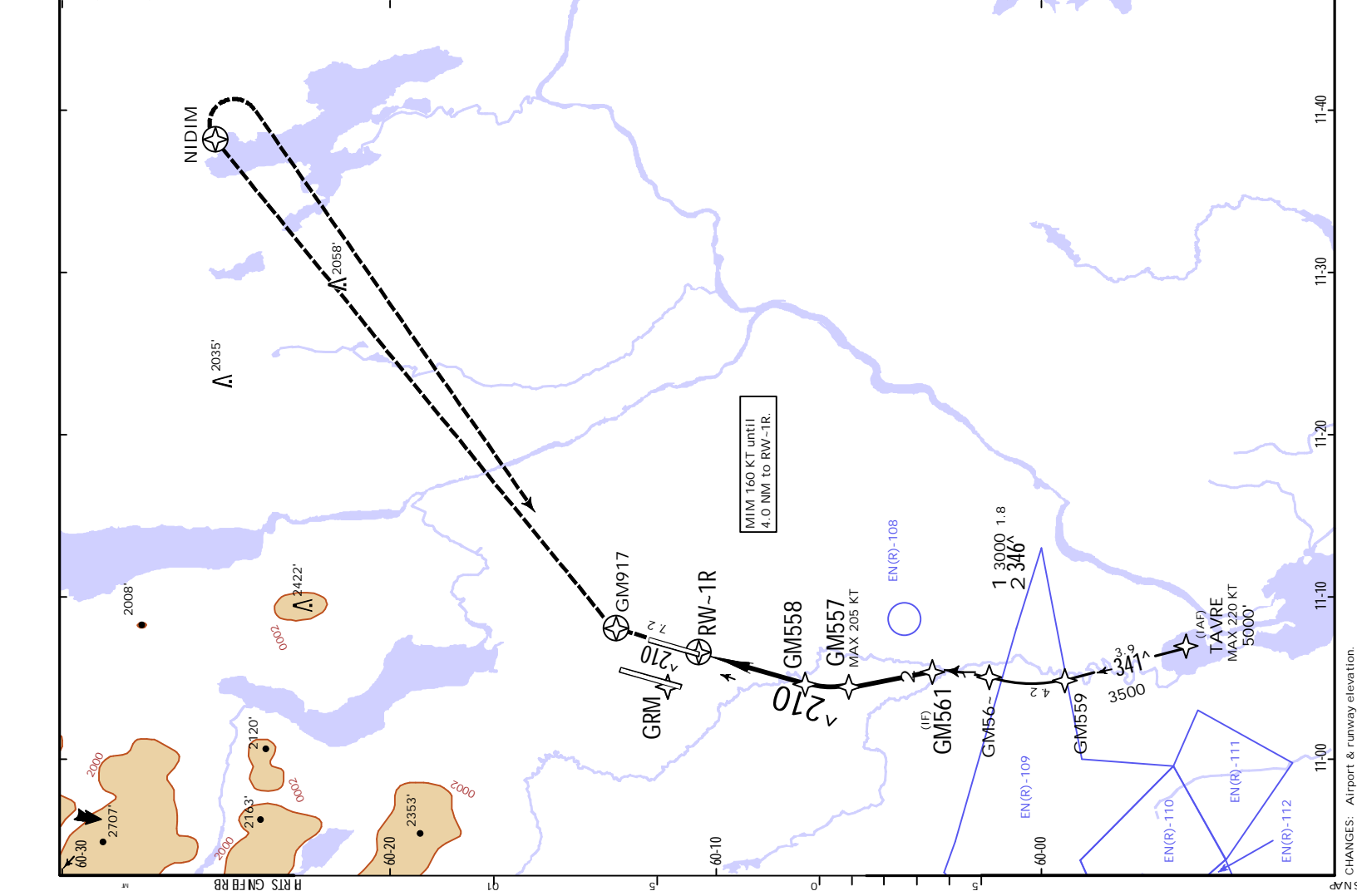
Gnd speed-Kts		70	90	100	120	140	160
Glide Path Angle		3.00°	3.72	4.78	5.31	6.37	7.43
							8.49

**Standard.**  
 STRAIGHT-IN LANDING Rwy 01R  
 RNP 0.30  
 Missed apch climb gradient min 5.0%  
 DA(H) A: 955' (284') C: 998' (327')  
 B: 980' (309') D: 1021' (350')  
 ALS OUT

A	RVR 750m 1	RVR 1400m	RVR 800m	RVR 1500m
B	RVR 750m 2	RVR 900m	RVR 1000m	RVR 1700m
C	RVR 800m	RVR 1500m	RVR 1100m	RVR 1800m
D	RVR 900m	RVR 1600m	RVR 1200m	RVR 1900m

1 With TDZ & CL & HUD: RVR 650m. 2 With TDZ & CL & HUD: RVR 700m.

**CIRCLE-TO-LAND**  
 GM917 NIDIM  
 Not authorized West of Rwy 01R/19L  
 MDA(H) VLS  
 100 1280' (598') 1500m  
 135 1280' (598') 1600m  
 180 1530' (848') 2400m  
 205 1630' (948') 3600m



ENGM/OSL  
GARDERMOEN

OSLO, NORWAY  
RNP 0 Rwy 01R (AR)

25 NOV 22 (12-26) Eff. 1. Dec.

JEPPESEN

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower East Incl Rwy 01R/19L 118.3		Ground West 121.605 East 121.905	
Final Apch Crs 012A	RNP 0.30 DA(H) 1800' (1129')	Apt Elev 682'	3900
MISA ARP			
RNP AR Apch		Trans alt: 7000'	
Alt Set: hPa		Rwy Elev: 24 hPa	
RNP AR Apch		Trans level: By ATC	

MISSED APCH: Climb to GM917. Turn RIGHT direct to NIDIM, climbing to 4000'. Turn RIGHT direct to GRM for a new apch. Expect vectoring.

1. Authorization required.  
2. RNP less than 1.0 required in initial and intermediate approach.  
3. RF required.  
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.

GM644 MAX 185 KT	GM558 (FAP)	GM917 NIDIM
2500'	1800'	270'
LT Arc	3.00°	012A
1300'	2.7	3.4
6.1	3.4	3.4
Gnd speed-Kts	70 90 100 120 140 160	HIALS-II
Glide Path Angle	3.00° 372 478 531 637 743 849	PAPI
RW-1R		GM917
TCH 50'		NIDIM
Rwy 671'		RT

STRAIGHT-IN LANDING RWY 01R		CIRCLE-TO-LAND	
RNP 0.30	RNP 0.30	Not authorized West of rwy 01R/19L	
Missed apch climb gradient: min 5.0%	Missed apch climb gradient: min 2.5%	Max Kts	MDA(H) - VIS
DA(H) A: 955' (284') C: 998' (327')	DA(H) A: 1007' (336') C: 1046' (375')	100	1280' (598') 1500m
B: 980' (309') D: 1021' (350')	B: 1027' (356') D: 1065' (394')	135	1280' (598') 1600m
ALS OUT	ALS OUT	180	1530' (848') 2400m
RVR 750m 1	RVR 800m	205	1630' (948') 3600m
RVR 750m 2	RVR 900m		
RVR 800m	RVR 1000m		
RVR 900m	RVR 1100m		
RVR 1000m	RVR 1200m		
RVR 1100m	RVR 1300m		
RVR 1200m	RVR 1400m		
RVR 1300m	RVR 1500m		
RVR 1400m	RVR 1600m		
RVR 1500m	RVR 1700m		
RVR 1600m	RVR 1800m		
RVR 1700m	RVR 1900m		
RVR 1800m	RVR 2000m		
1 With TDZ & CL & HUD: RVR 650m. 2 With TDZ & CL & HUD: RVR 700m.			



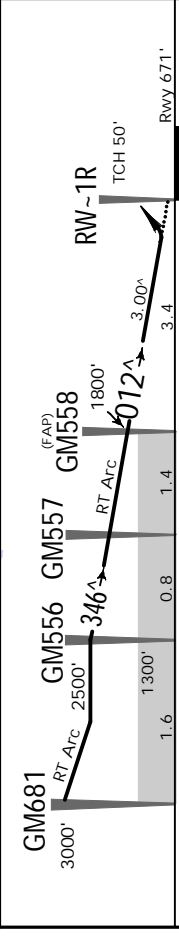
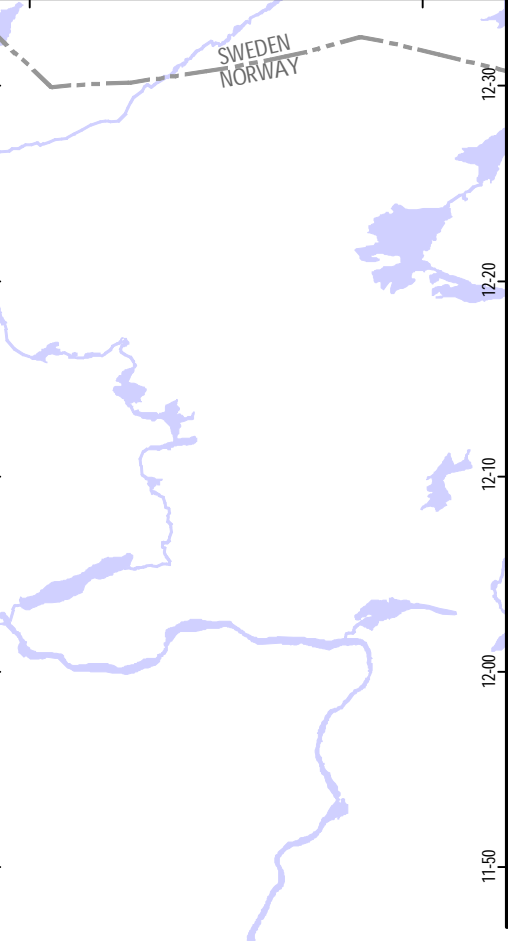
CHANGES: Airport & runway elevation.

**JEPPESEN**  
 25 NOV 22 (12-27) Eff. 1. Dec. RNP E Rwy 01R (AR)  
**ENGM/OSL**  
 GARDERMOEN

**OSLO, NORWAY**  
**RNP E Rwy 01R (AR)**

D-ATIS Arrival <b>126.125</b>		*OSL Approach East 118.475 West 120.450	
GARDERMOEN Tower East incl Rwy 01R/19L 118.3		Ground West 121.605 East 121.905	
RNAV Final Apch Cfs <b>012^</b>	RNP 0.30 DA(H) <b>1800'</b> (1129')	RNP 0.30 Apt Elev 682' Rwy 671'	
		RNP 0.30 DA(H) Minimums	
MISSED APCH: Climb to GM917. Turn RIGHT direct to NIDIM, climbing to 4000'. Turn RIGHT direct to GRM for a new apch. Expect vectoring.			
Alt Set: hPa		Rwy Elev: 24 hPa	
RNP AR Apch		Trans level: By ATC	
Trans alt: 7000'		MSA ARP	

1. Authorization required.
2. RNP less than 1.0 required in intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



GM681	3000'	RT Atc	2500'	346'	1800'	RT Atc	012^	3.00^	3.4	Rwy 671'
GM556	2500'	RT Atc	1300'	0.8	1.4	4.8	3.4	0		
GM557	160									
GM558	160									
GM917	160									
GM917 NIDIM	160									

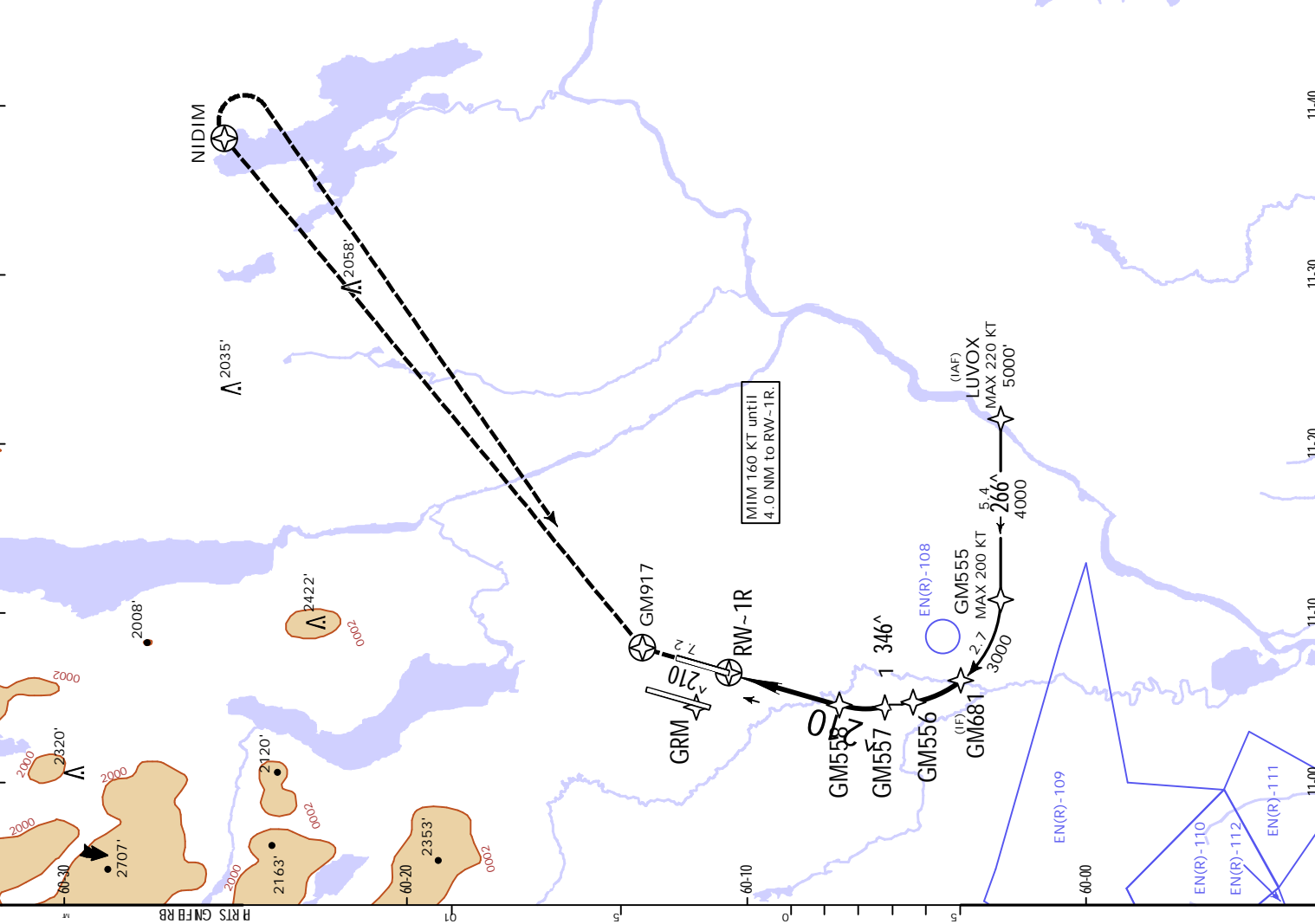
**Standard.** RNP 0.30 STRAIGHT-IN LANDING Rwy 01R RNP 0.30  
 Missed apch climb gradient mim 5.0%

DA(H)	A: 955' (284')	C: 998' (327')	A: 1007' (336')	C: 1046' (375')
	B: 980' (309')	D: 1021' (350')	B: 1027' (356')	D: 1065' (394')

Missed apch climb gradient mim 2.5%

Max Kts	100	1280' (598')	1500m
VIS	100	1280' (598')	1600m
	135	1280' (598')	2400m
	180	1530' (848')	2400m
	205	1630' (948')	3600m

1 With TDZ, CL and HUD: RVR 650m. 2 With TDZ, CL and HUD: RVR 700m.

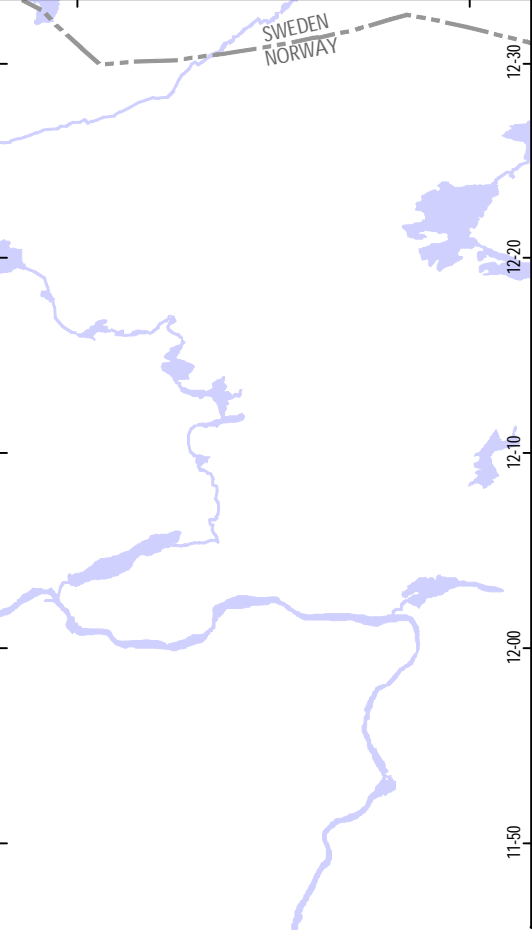


# OSLO, NORWAY RNP W Rwy 19L (AR)

ENGM/OSL  
GARDERMOEN  
25 NOV 22 (12-28) Eff. 1. Dec.  
JEPPesen

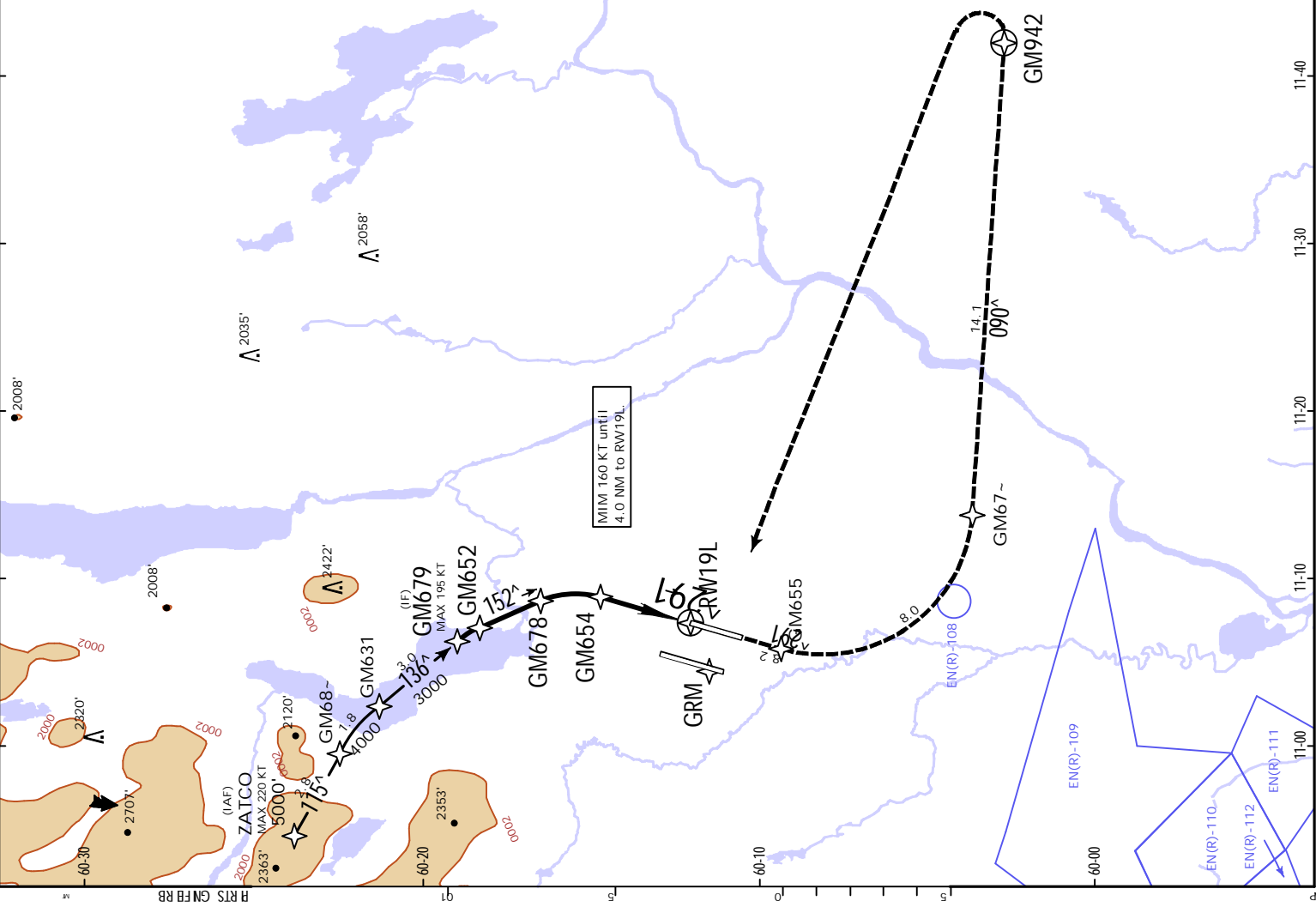
D-ATIS Arrival <b>126.125</b>		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		Ground West 121.605 East 121.905	
RNAV	Final Apch Crs <b>192</b> <sup>Δ</sup>	GM678 <b>2200'</b> (1518')	RNP 0.30 DA(H) Refer to Minimums Apt Elev 682' Rwy 682'
MISSED APCH: Climb to GM655. Turn LEFT to GM67- (MAX 250KT until GM67-), to GM942. Turn LEFT direct to GRM for a new apch climbing to 5000'. Expect vectoring.			
Alt Set: hPa		Rwy Elev: 25 hPa Trans level: By ATC	
RNP AR Apch		Trans alt: 7000'	

1. Authorization required.
2. RNP less than 1.0 required in initial and intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



RWY 19L		GM654		GM678		GM652		GM679	
TCH 50'		2200'		2200'		3000'		MAX 195 KT	
Rwy 682'		ct ATR		ct ATR		ct ATR		MAX	
0		2.8		4.6		6.6		7.4	
70		100		120		140		160	
372		478		531		637		743	
849		849		849		849		849	
HIALS-II		PAPI		PAPI		PAPI		PAPI	

Standard.		RNP 0.30		RNP 0.30	
Missed apch climb gradient mim 5.0%		Missed apch climb gradient mim 2.5%		Missed apch climb gradient mim 2.5%	
DA(H) A: 988' (306') C: 1038' (356') D: 1061' (379')		DA(H) A: 1033' (351') C: 1072' (390') D: 1091' (409')		DA(H) A: 1033' (351') C: 1072' (390') D: 1091' (409')	
ALS OUT		ALS OUT		ALS OUT	
A	RVR 750m 1	RVR 1400m	RVR 900m	RVR 1500m	RVR 1500m
B	RVR 800m	RVR 1500m	RVR 1000m	RVR 1000m	RVR 1000m
C	RVR 900m	RVR 1600m	RVR 1100m	RVR 1800m	RVR 1800m
D	RVR 1000m	RVR 1700m	RVR 1200m	RVR 1900m	RVR 1900m
1 With TDZ & CL & HUD: RVR 700m.					

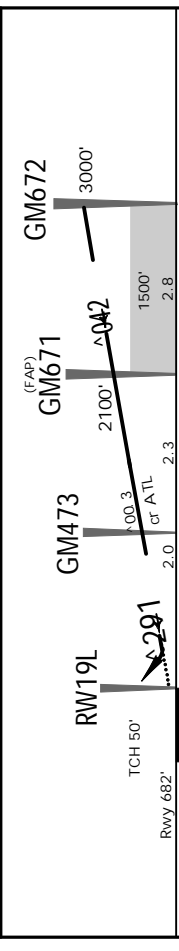
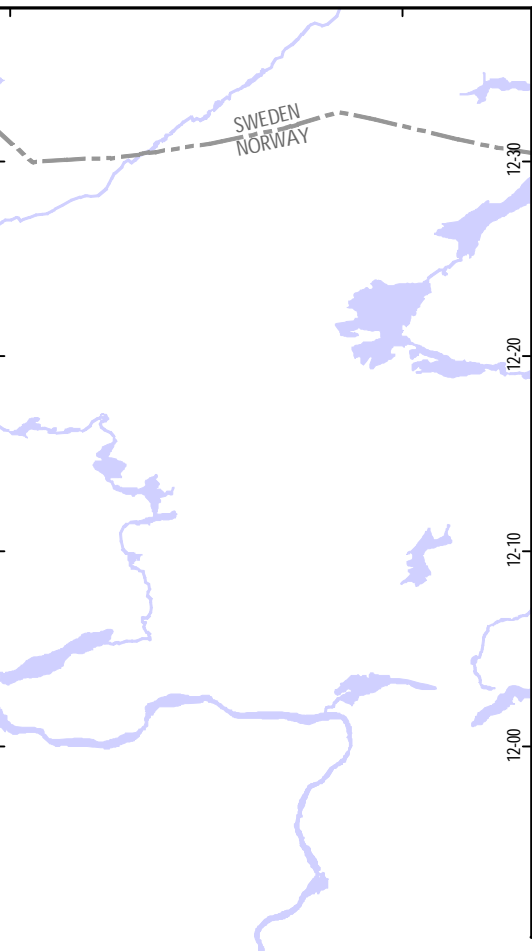


**ENGM/OSL**  
**GARDERMOEN**  
 25 NOV 22 (12-29) Eff. 1. Dec. RNP N Rwy 19L (AR)  
**JEPPESEN**

**OSLO, NORWAY**  
**Rwy 19L (AR)**

D-ATIS Arrival <b>126.125</b>		*OSLO Approach East <b>118.475</b> West <b>120.450</b>	
GARDERMOEN Tower West incl Rwy 01L/19R <b>118.3</b>		Ground West <b>121.605</b> East <b>121.905</b>	
RNAV	Final Apch Crs <b>192A</b>	GM671 <b>2100'</b> (1418')	RNP 0.30 DA(H) Minimums Rwy 682'
MISSED APCH: Climb to GM655. Turn LEFT to GM67- (MAX 250KT until GM67-), to GM942. Turn LEFT direct to GRM for a new apch climbing to 5000'. Expect vectoring.			
Alt Set: hPa		Rwy Elev: 25 hPa	
RNP AR Apch		Trans level: By ATC	
RNP AR Apch		Trans alt: 7000'	

1. Authorization required.
2. RNP less than 1.0 required in initial and intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



Grnd speed-Kts	70	90	100	120	140	160	HIALS-11	GM655	GM67	MAX
Glide Path Angle	3.00°	372	478	531	637	743	PAPI	↑	LT	
STRAIGHT-IN LANDING RWY 19L RNP 0.30 Missed apch climb gradient mim 5.0% DA(H) A: <b>988'</b> (306') C: <b>1038'</b> (356') B: <b>1015'</b> (333') D: <b>1061'</b> (379') ALS OUT										
RNP 0.30 Missed apch climb gradient mim 2.5% DA(H) A: <b>1033'</b> (351') C: <b>1072'</b> (390') B: <b>1054'</b> (372') D: <b>1091'</b> (409') ALS OUT										
A	RVR 750m	1	RVR 1400m	RVR 900m	RVR 1500m	RVR 1000m	RVR 1500m	RVR 1500m	RVR 1500m	1500m
B	RVR 800m		RVR 1500m	RVR 1000m	RVR 1000m	RVR 1000m	RVR 1000m	RVR 1000m	RVR 1000m	1600m
C	RVR 900m		RVR 1600m	RVR 1100m	RVR 1100m	RVR 1100m	RVR 1100m	RVR 1100m	RVR 1100m	2400m
D	RVR 1000m		RVR 1700m	RVR 1200m	RVR 1200m	RVR 1200m	RVR 1200m	RVR 1200m	RVR 1200m	3600m

1 With TDZ & CL & HUD: RVR 700m.  
 Not authorized West of rwy 01R/19L  
 MDA(H) VIS  
 100 1280' (598') 1500m  
 135 1280' (598') 1600m  
 180 1530' (848') 2400m  
 205 1630' (948') 3600m  
 JEPPESEN, 2021, 2022. ALL RIGHTS RESERVED.

ENGM/OSL  
GARDERMOEN



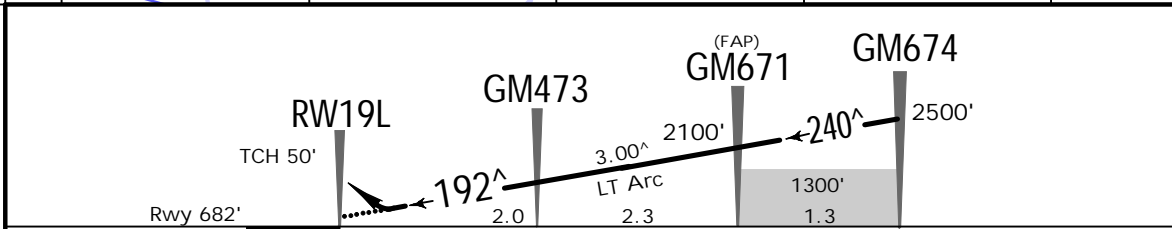
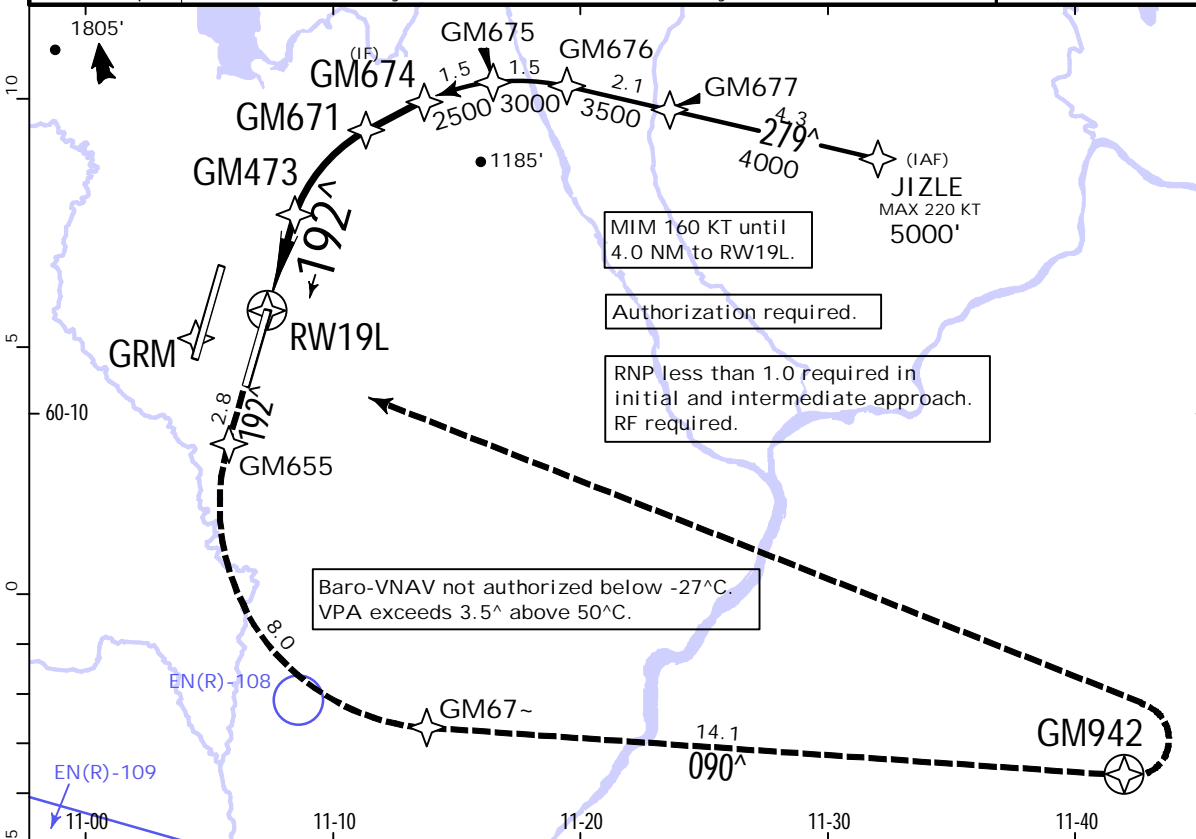
25 NOV 22

12-30

.Eff.1.Dec.

OSLO, NORWAY  
RNP E Rwy 19L (AR)

D-ATIS Arrival 126.125			*OSLO Approach East 118.475 West 120.450		
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1		Ground West 121.605 East 121.905	
RNAV	Final Apch Crs 192^	GM671 2100' (1418')	RNP 0.30 DA(H) Refer to Minimums	Apt Elev 682' Rwy 682'	3900
MISSED APCH: Climb to GM655. Turn LEFT to GM67~ (MAX 250KT until GM67~), to GM942. Turn LEFT direct to GRM for a new apch climbing to 5000'. Expect vectoring.					
RNP AR Apch	Alt Set: hPa	Rwy Elev: 25 hPa	Trans level: By ATC	Trans alt: 7000'	MSA ARP



Gnd speed-Kts	70	90	100	120	140	160	HIALS-II PAPI	GM655 ↑	GM67~ ←	250 KT MAX
Glide Path Angle	3.00^	372	478	531	637	743				

PANS OPS	Standard. RNP 0.30 STRAIGHT-IN LANDING RWY 19L		RNP 0.30 CIRCLE-TO-LAND	
	Missed apch climb gradient mim 5.0%		Missed apch climb gradient mim 2.5%	
	DA(H) A: 988' (306') C: 1038' (356') B: 1015' (333') D: 1061' (379')		DA(H) A: 1033' (351') C: 1072' (390') B: 1054' (372') D: 1091' (409')	
	ALS out		ALS out	
	A	RVR 750m 1	RVR 1400m	RVR 900m
B	RVR 800m	RVR 1500m	RVR 1000m	RVR 1500m
C	RVR 900m	RVR 1600m	RVR 1100m	RVR 1800m
D	RVR 1000m	RVR 1700m	RVR 1200m	RVR 1900m
Max Kts   MDA(H)   VIS				
100   1280' (598')   1500m				
135   1280' (598')   1600m				
180   1530' (848')   2400m				
205   1630' (948')   3600m				
1 With TDZ & CL & HUD: RVR 700m.				



JEPPESEN  
 25 NOV 22 (12-31) Eff: 1 Dec RNP W Rwy 19R (AR)  
 ENGM/OSL  
 GARDERMOEN

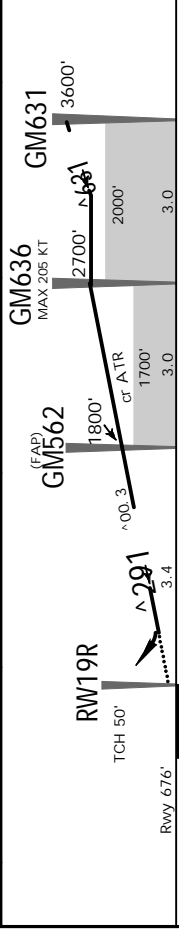
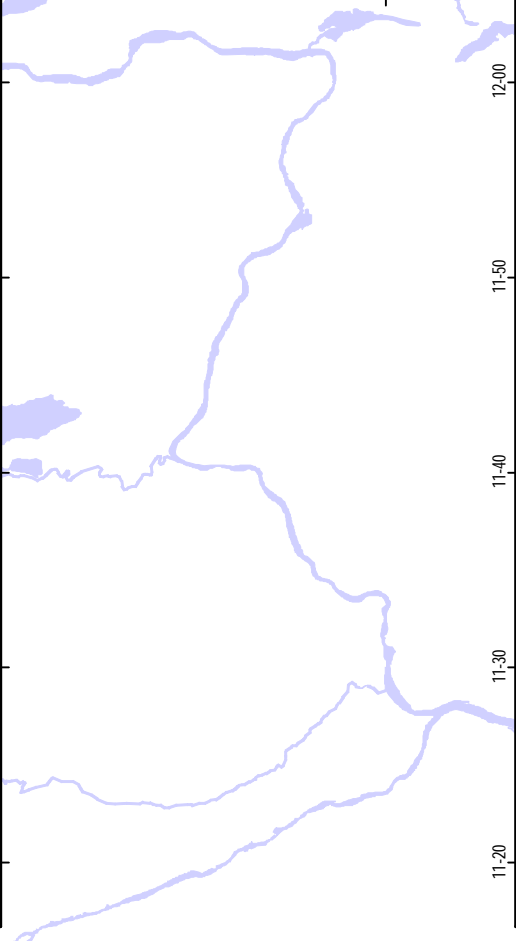
D-ATIS Arrival  
 126.125  
 \*OSLO Approach  
 East 118.475 West 120.450  
 GARDERMOEN Tower  
 East Incl Rwy 01R/19L  
 West 118.3 East 120.1  
 Ground 121.905

RNAV	Final Apch Crs <b>192</b> <sup>A</sup>	GM562 <b>1800</b> <sup>A</sup> (1124')	RNP 0.30 DA(H) Minimums Rwy 676'	Apt Elev 682' Rwy 676'	3900

MISSED APCH: Climb to GM995. Turn RIGHT on course 223<sup>A</sup> climbing to 5000' to GM996. Turn RIGHT direct to GRM for a new apch. Expect vectoring by OSLO APP.

Alt Sct: hPa Rwy Elev: 25 hPa Trans level: By ATC Trans alt: 7000'  
 RNP AR Apch

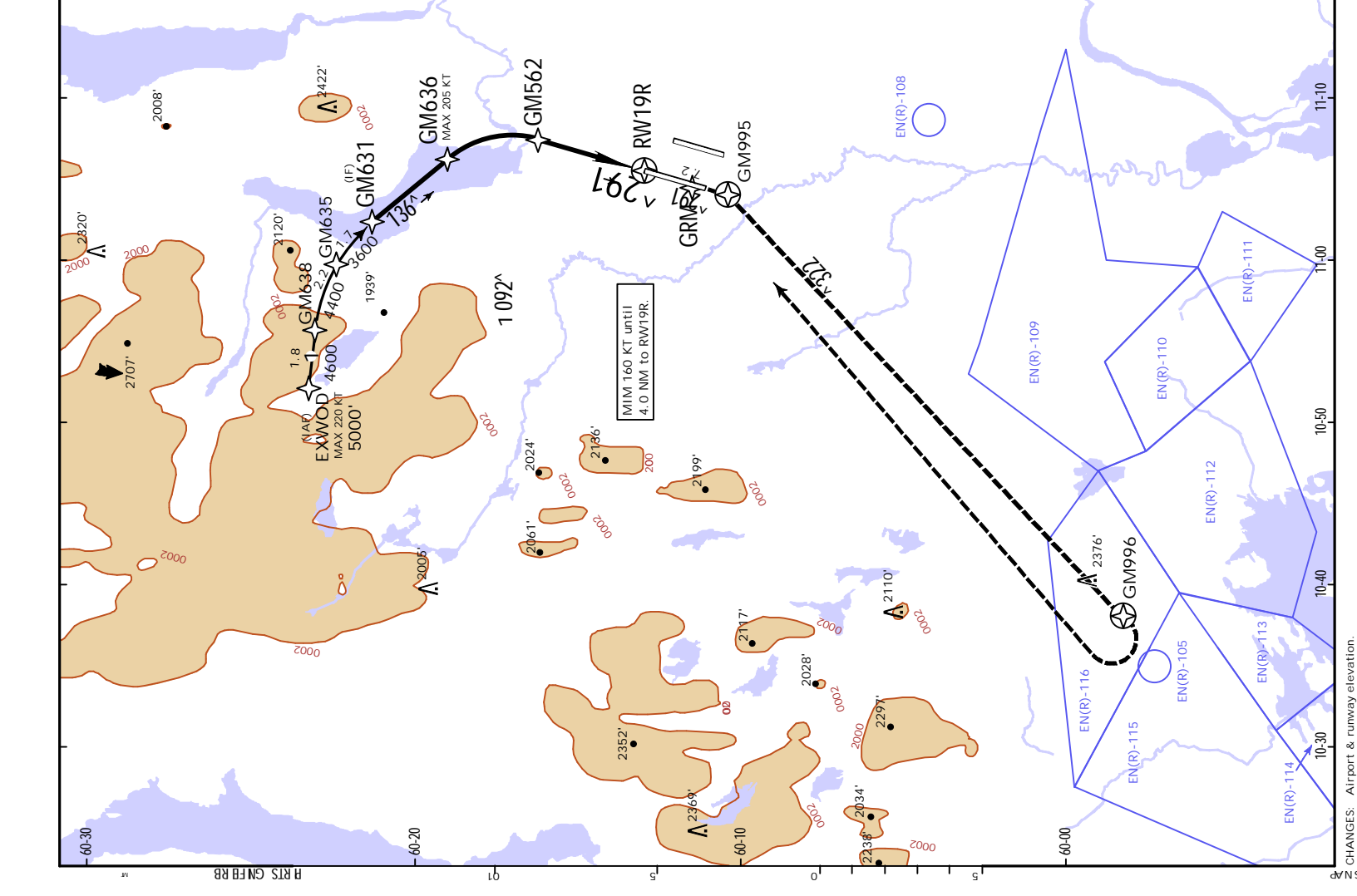
1. Authorization required.
2. RNP less than 1.0 required in intermediate approach.
3. RF required.
4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



Gnd Speed-Kts	70	90	100	120	140	160	180	200	220	240
Glide Path Angle	3.00°	3.72°	4.78°	5.31°	6.37°	7.43°	8.49°			

Standard.			CIRCLE-TO-LAND		
RNP 0.30		RNP 0.30			
Missed apch climb gradient mim 5.0%		Missed apch climb gradient mim 2.5%			
DA(H) <b>964'</b> (288')		DA(H) <b>1048'</b> (372')			
ALS out		ALS out			
RVR 750m <b>1</b>		RVR 1400m		RVR 1500m	
RVR 1000m		RVR 1700m		RVR 2400m	
RVR 1700m		RVR 2400m		RVR 3600m	
RVR 2400m		RVR 3600m		RVR 3600m	

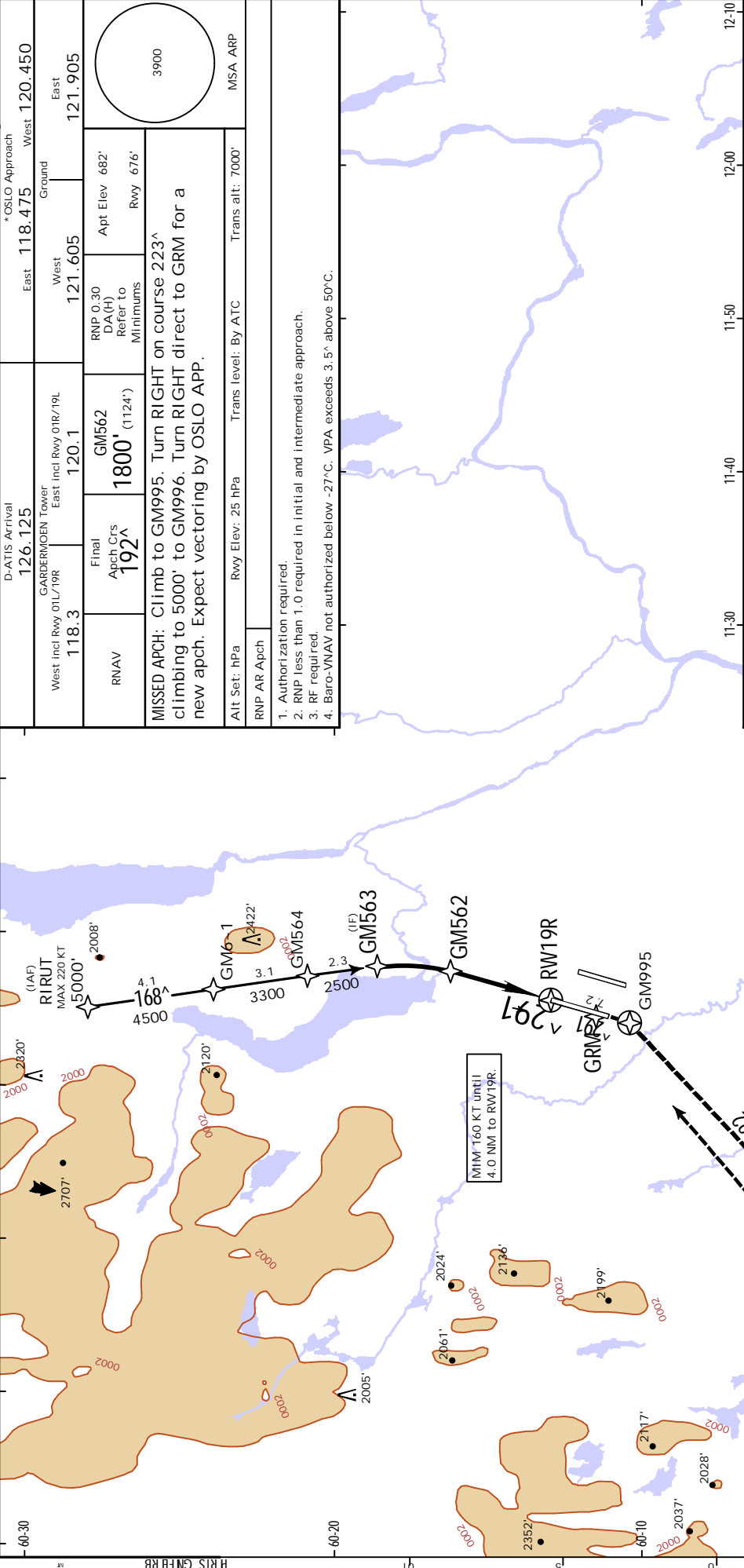
Not authorized East of rwy 01L/19R



**ENGM/OSL**  
GARDERMOEN

25 NOV 22 (12-32) Eff. 1. Dec.

**JEPPESEN**



D-ATIS Arrival <b>126.125</b>		OSLO Approach East <b>118.475</b> West <b>120.450</b>	
GARDERMOEN Tower East Incl Rwy 01R/19L <b>118.3</b>		Ground West <b>121.605</b> East <b>121.905</b>	
RNAV	Final Apch Crs <b>192</b> <sup>^</sup>	GM562 <b>1800'</b> (1124')	RNP 0.30 DA(H) Minimums Rwy 676'
<p><b>MISSED APCH:</b> Climb to GM995. Turn RIGHT on course 223<sup>^</sup> climbing to 5000'. Turn RIGHT direct to GRM for a new apch. Expect vectoring by OSLO APP.</p>			
Alt Set: hPa	Rwy Elev: 25 hPa	Trans level: By ATC Trans alt: 7000'	
<p>RNP AR Apch</p> <ol style="list-style-type: none"> <li>1. Authorization required.</li> <li>2. RNP less than 1.0 required in initial and intermediate approach.</li> <li>3. RF required.</li> <li>4. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.</li> </ol>			

RWY 19R		GM562		GM563	
TCH 50'		1800' ATR		2500'	
Rwy 676'		1500'		2.4	
0		3.4		5.8	
70		100		120	
372		478		531	
637		743		849	
160		160		160	
HIALS-II		HIALS-II		HIALS-II	
PAPI		PAPI		PAPI	
GM995		GM996		223 <sup>^</sup>	
CIRCLE-TO-LAND		CIRCLE-TO-LAND		CIRCLE-TO-LAND	
Not authorized		Not authorized		Not authorized	
East of rwy 01L/19R		East of rwy 01L/19R		East of rwy 01L/19R	

STRAIGHT-IN LANDING RWY 19R		CIRCLE-TO-LAND	
RNP 0.30	RNP 0.30	DA(H)	DA(H)
Missed apch climb gradient min 5.0%	Missed apch climb gradient min 2.5%	<b>964'</b> (288')	<b>1048'</b> (372')
ALS out	ALS out	ALS out	ALS out
RVR 1400m	RVR 1000m	RVR 1500m	RVR 1700m
RVR 750m 1	RVR 1400m	RVR 1500m	RVR 1700m
RVR 1400m	RVR 1000m	RVR 1500m	RVR 1700m
RVR 1400m	RVR 1000m	RVR 1500m	RVR 1700m
RVR 1400m	RVR 1000m	RVR 1500m	RVR 1700m

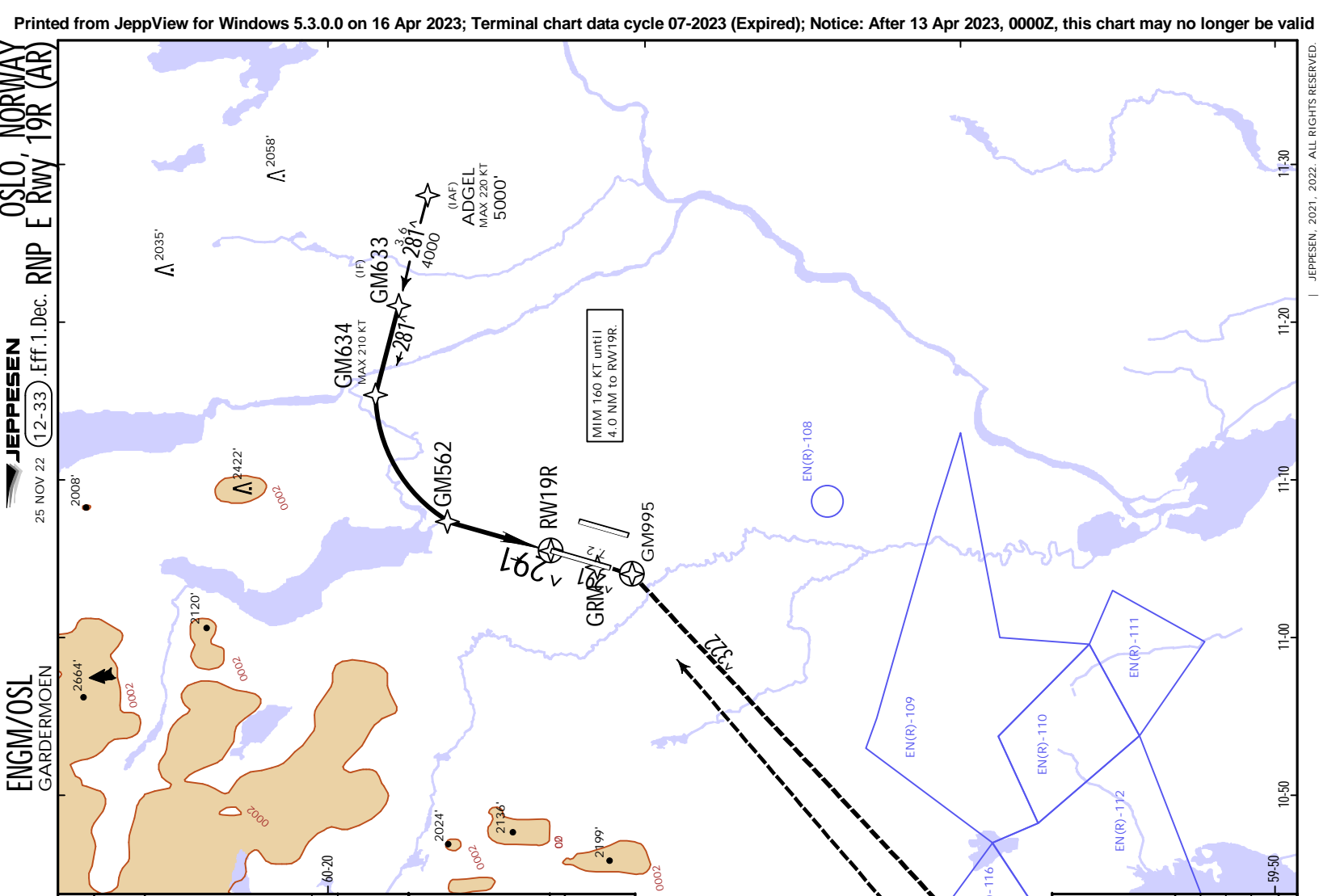
Max Kts	MDA(H)	VIS
100	1280' (598')	1500m
135	1280' (598')	1600m
180	1920' (1238')	2400m
205	2230' (1548')	3600m

1 With TDZ, CL and HUD: RVR 650m.

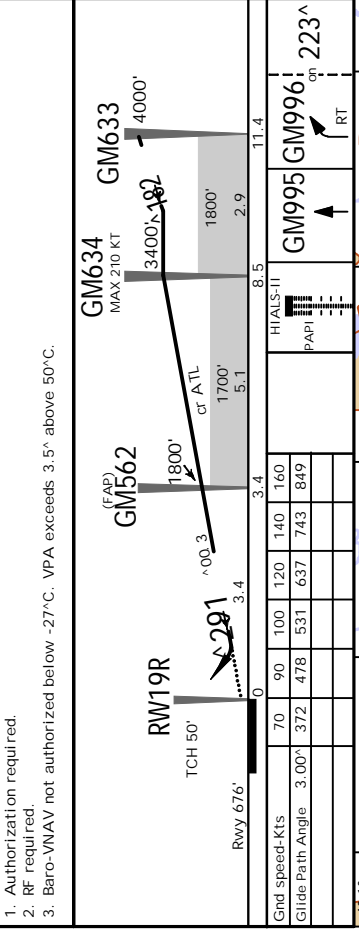
**JEPPESEN**  
25 NOV 22 (12-33) Eff. 1. Dec. RNP E Rwy 19R (AR)

**ENGM/OSL**  
GARDERMOEN



D-ATIS Arrival <b>126.125</b>		*OSLO Approach East 118.475 West 120.450	
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		Ground West 121.605 East 121.905	
Final Aptch Crs <b>192</b>	Final Aptch Crs <b>1800</b> (1124)	RNP 0.30 DA(H) Minimums	Apt Elev 682' Rwy 676'
<p><b>MISSED APCH:</b> Climb to GM995. Turn RIGHT on 223° climbing to 5000'. Turn RIGHT direct to GRM for a new apch. Expect vectoring by OSLO APP.</p>			
Alt Set: hPa		Rwy Elev: 25 hPa	
RNP AR Apch		Trans level: By ATC	
RNP AR Apch		Trans alt: 7000'	

1. Authorization required.
2. RF required.
3. Baro-VNAV not authorized below -27°C. VPA exceeds 3.5° above 50°C.



70	90	100	120	140	160	180	200	220	240
3.00	3.72	4.78	5.31	6.37	7.43	8.49	9.55	10.61	11.67
<p>GM995 GM996: 223° on RT</p>									

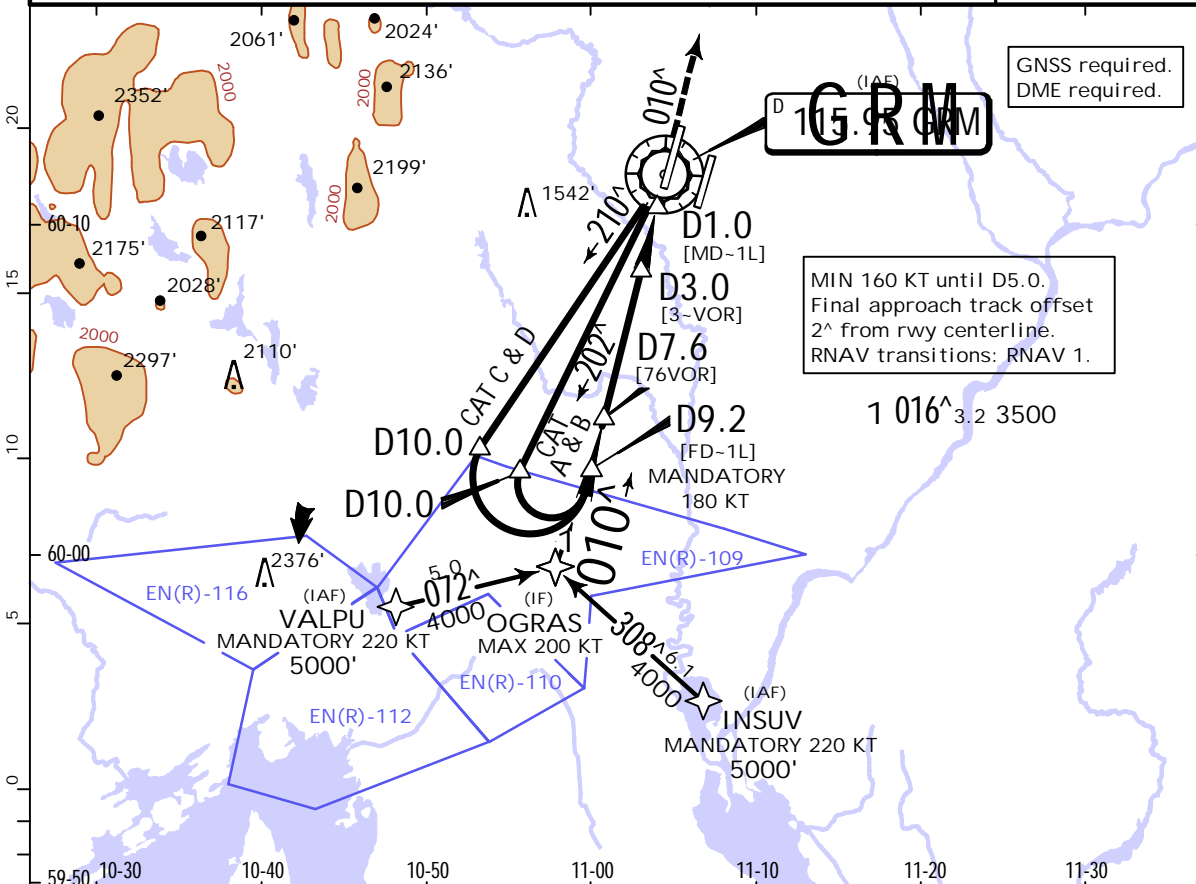
STRAIGHT-IN LANDING RWY 19R		CIRCLE-TO-LAND	
RNP 0.30	RNP 0.30	Not authorized East of rwy 01L/19R	
Missed apch climb gradient mim 5.0%		Missed apch climb gradient mim 2.5%	
DA(H) <b>964'</b> (288')	DA(H) <b>1048'</b> (372')	Max Kts	MDA(H)-VIS
ALS out	ALS out	100	1280' (598') 1500m
RVR 750m 1	RVR 1400m	135	1280' (598') 1600m
	RVR 1000m	180	1920' (1238') 2400m
	RVR 1700m	205	2230' (1548') 3600m
<p>1 With TDZ, Cl and HUD: RVR 650m.</p>			

ENGM/OSL  
GARDERMOEN

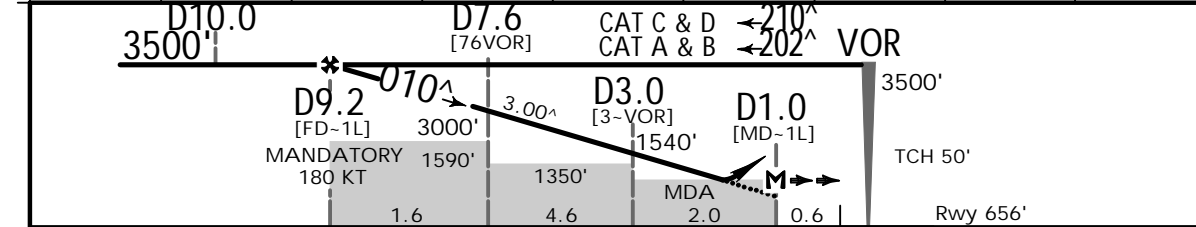
JEPPESEN  
8 APR 22 13-1

OSLO, NORWAY  
VOR Rwy 01L

D-ATIS Arrival 126.125		*OSLO Approach East 118.475 West 120.450			
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1		Ground West 121.605 East 121.905	
VOR GRM 115.95	Final Apch Crs 010 <sup>^</sup>	D9.2 3500' (2844')	DA/MDA(H) Refer to Minimums	Apt Elev 681' Rwy 656'	
MISSED APCH: Climb to VOR, then continue on R-010 to 5000'. Expect vectoring by OSLO APP. MISSED APCH WITH LOST COMM: Climb on R-010 to 5000'. At D20.0 turn LEFT direct to VOR for new instrument apch.					
Alt Set: hPa		Rwy Elev: 24 hPa	Trans level: By ATC		Trans alt: 7000'



GRM DME	9.0	8.0	7.0	6.0	5.0	4.0	3.0	2.0
ALTITUDE	3450'	3130'	2810'	2490'	2180'	1860'	1540'	1220'



Gnd speed-Kts	70	90	100	120	140	160	HIALS PAPI 5000' on GRM 115.95 R-010
Descent Angle	3.00 <sup>^</sup>	372	478	531	637	849	
MAP at D1.0							

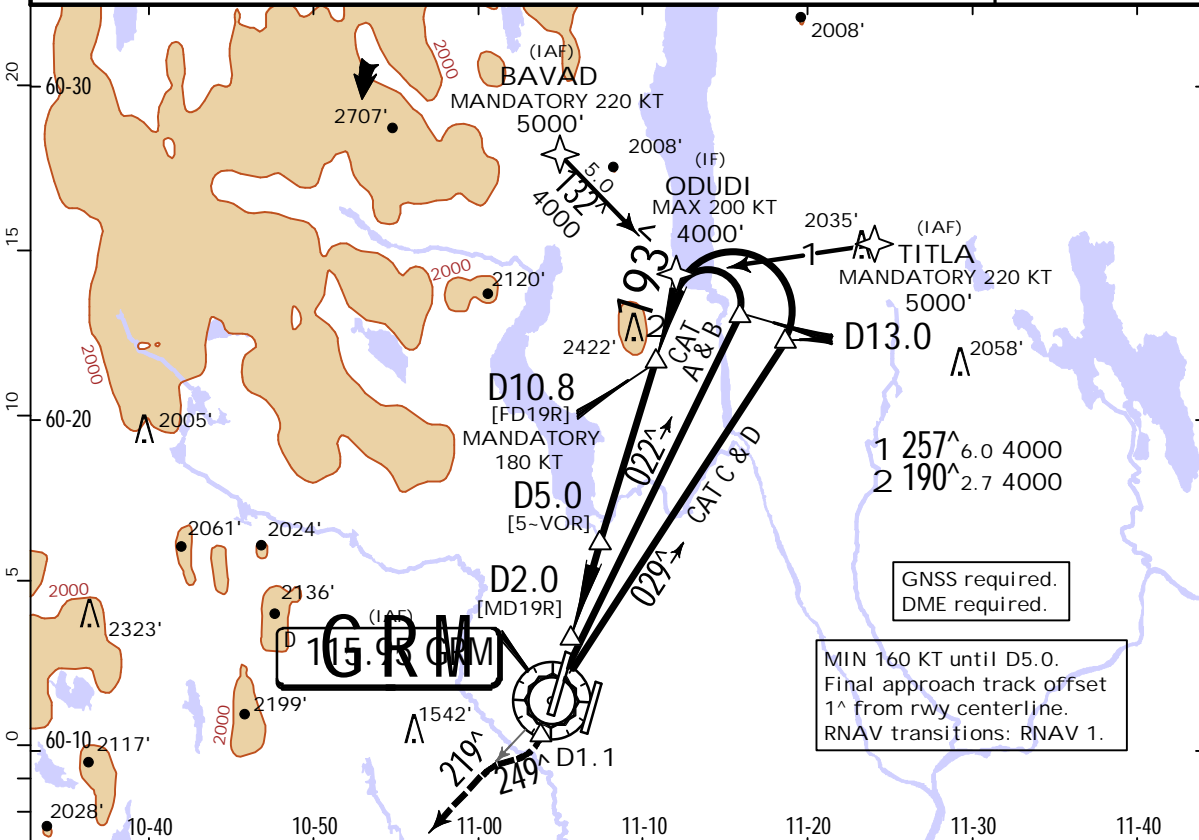
.Standard. STRAIGHT-IN LANDING RWY 01L CDFA DA/MDA(H) A: 1000' (344') C: 1040' (384') B: 1020' (364') D: 1060' (404') ALS out			CIRCLE-TO-LAND Not authorized East of rwy 01L/19R		
A	RVR 1200m	RVR 1500m	Max Kts	MDA(H)	VIS
B	RVR 1300m		100	1280' (599')	1500m
C	RVR 1400m		135	1280' (599')	1600m
D	RVR 1500m		180	2040' (1359')	2400m
			205	2250' (1569')	3600m

**ENGM/OSL**  
GARDERMOEN

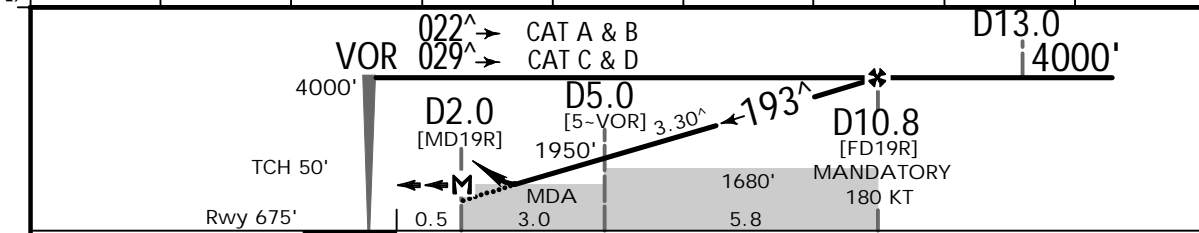
**JEPPESEN**  
8 APR 22 (13-2)

**OSLO, NORWAY**  
VOR Rwy 19R

D-ATIS Arrival 126.125			*OSLO Approach East 118.475 West 120.45		
GARDERMOEN Tower West incl Rwy 01L/19R 118.3		East incl Rwy 01R/19L 120.1		Ground West 121.605 East 121.905	
VOR GRM 115.95	Final Apch Crs 193 <sup>^</sup>	D10.8 4000' (3325')	DA/MDA(H) 1060' (385')	Apt Elev 681' Rwy 675'	
<p>MISSED APCH: Climb on R-013 inbound to VOR. Continue climb on R-193 to D1.1, then turn RIGHT to track 249<sup>^</sup>, intercept and proceed R-219. Climb to 5000'. Expect vectoring by OSLO APP.</p> <p>MISSED APCH WITH LOST COMM: Continue climb on R-219 to 5000'. At D20.0 turn RIGHT direct to VOR for new instrument apch.</p>					
Alt Set: hPa Rwy Elev: 24 hPa			Trans level: By ATC Trans alt: 7000'		



GRM DME	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0
ALTITUDE	1240'	1600'	1950'	2310'	2660'	3010'	3370'	3720'



Gnd speed-Kts	70	90	100	120	140	160		D1.1 on 115.95 R-193
Descent Angle 3.30 <sup>^</sup>	409	526	584	701	817	934		
MAP at D2.0								

.Standard. STRAIGHT-IN LANDING RWY 19R			CIRCLE-TO-LAND		
CDFA DA/MDA(H) 1060' (385')			Not authorized East of rwy 01L/19R		
ALS out			Max Kts	MDA(H)	vis
A	RVR1100m	RVR1500m	100	1280' (599')	1500m
B		RVR1800m	135	1280' (599')	1600m
C			180	2040' (1359')	2400m
D			205	2250' (1569')	3600m

ENGM/OSL

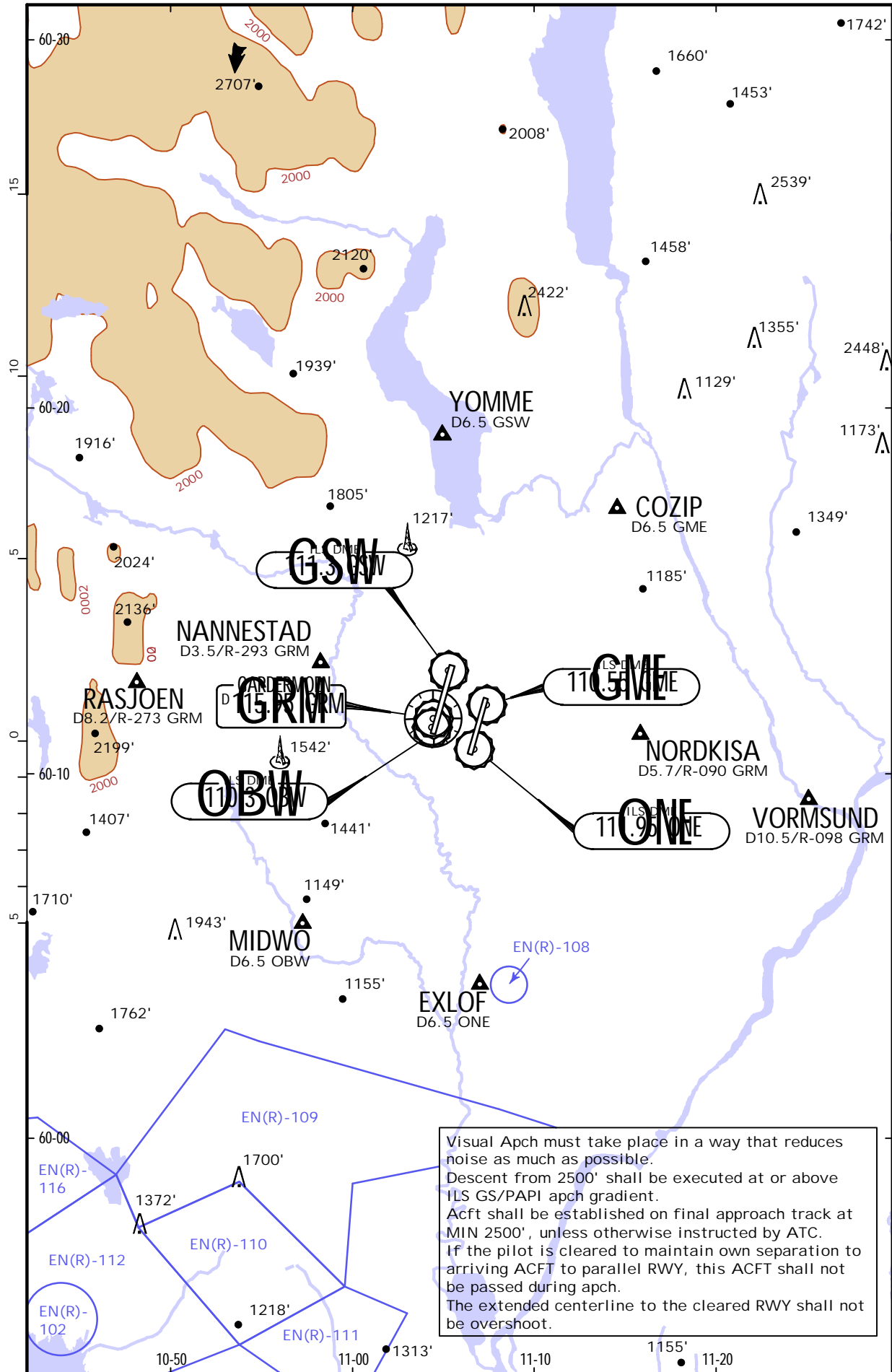


OSLO, NORWAY

17 MAR 23 (19-10) .Eff.23.Mar.

GARDERMOEN

VISUAL APPROACH PROCEDURES



Visual Apch must take place in a way that reduces noise as much as possible.  
 Descent from 2500' shall be executed at or above ILS GS/PAPI apch gradient.  
 Acft shall be established on final approach track at MIN 2500', unless otherwise instructed by ATC.  
 If the pilot is cleared to maintain own separation to arriving ACFT to parallel RWY, this ACFT shall not be passed during apch.  
 The extended centerline to the cleared RWY shall not be overshoot.

## Chart changes since cycle 06-2023

ADD = added chart, REV = revised chart, DEL = deleted chart.

ACT PROCEDURE IDENT

INDEX

REV DATE

EFF DATE

OSLO, (GARDERMOEN - ENGM)

## TERMINAL CHART CHANGE NOTICES

No Chart Change Notices for Airport ENGM