List of pages in this Trip Kit

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Airport Information For ENGM
Terminal Charts For ENGM
Revision Letter For Cycle 15-2020
Change Notices
Notebook
General Information

Location: OSLO NOR
ICAO/IATA: ENGM / OSL
Lat/Long: N60° 12.2', E011° 05.0'
Elevation: 681 ft

Airport Use: Public
Daylight Savings: Observed
UTC Conversion: -1:00 = UTC
Magnetic Variation: 3.0° 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
Beacon: Yes
Traffic Pattern Altitude: 1709 ft (1028 ft AGL)

Sunrise: 0236 Z
Sunset: 2009 Z

Runway Information

Runway: 01L
Length x Width: 11814 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 656 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 01R
Length x Width: 9682 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 670 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 19L
Length x Width: 9682 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 681 ft
Lighting: Edge, ALS, Centerline, TDZ

Runway: 19R
Length x Width: 11814 ft x 148 ft
Surface Type: asphalt
TDZ-Elev: 675 ft
Lighting: Edge, ALS, Centerline, TDZ
Communication Information

ATIS: 127.150 Departure Service
ATIS: 126.125 Arrival Service
Gardermoen Tower: 118.300
Gardermoen Tower: 118.700 Secondary
Gardermoen Tower: 120.100
Gardermoen Tower: 123.325 Secondary
Gardermoen Ground: 121.605
Gardermoen Ground: 121.730
Gardermoen Ground: 121.905
Gardermoen De-Icing Ramp/Taxi: 121.850
Gardermoen Clearance Delivery: 121.680
Gardermoen Clearance Delivery: 121.930
Oslo Approach: 118.475 RCO
Oslo Approach: 120.450 RCO
Oslo Direct (Approach Control Radar): 119.975 Secondary RCO
Oslo Direct (Approach Control Radar): 136.400 RCO
Oslo Radar: 128.900 RCO
1. GENERAL

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 weather conditions require the use of ILS CAT II/III, RWY 01R may be used for arrivals.

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.

1.2.5. AUXILIARY POWER UNIT (APU)
Between 2230-0630LT 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 +20° 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 are prompted by ATC, normally when RVR is less than 1000m or ceiling is less than 300’. LVP will normally be in operation when RVR is less than 550m and ceiling less than 200’. The stop bars at the RWY holding points will then be in use.

Surface movement radar is normally available to ATC.

Pilots are to delay the call “RWY vacated” until the ACFT has completely passed 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:

<table>
<thead>
<tr>
<th>RWY entry</th>
<th>01L</th>
<th>01R</th>
<th>19L</th>
<th>19R</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1, A2, A4, A5, C1</td>
<td>B1, B2</td>
<td>B6, B7, B8, B9</td>
<td>A5, A6, A7, A9, C3, C1</td>
<td></td>
</tr>
<tr>
<td>A5, A6, A7, A9, C1, C3</td>
<td>B6, B7, B8, B9</td>
<td>B1, B2, B3, B4, B5</td>
<td>A5, A4, A2, A1, C3, C1</td>
<td></td>
</tr>
<tr>
<td>C3 to A7 and vice versa, C2 to A6 and vice versa, C1 to A4 and vice versa (published Hot Spot)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>C3 to A7 and vice versa, C2 to A6 and vice versa, C1 to A4 and vice versa (published Hot Spot)</td>
<td></td>
</tr>
</tbody>
</table>

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. SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM

1.4.1. OPERATION OF MODE S TRANSPONDERS WHEN ACFT IS ON THE GROUND

ACFT operators intending to use Oslo (Gardermoen) APT shall ensure that the Mode S transponder is able to operate when the ACFT is on the ground.

Pilots shall select AUTO mode and assigned Mode A code.

If AUTO mode is not available, select ON (e.g. XPDR) and assigned Mode A code:
- From the request for push-back or taxi, whichever is earlier;
- After landing, until the ACFT is parked;
- When parked, set Mode A code 2000 before selecting OFF or STBY.

Pilots of ACFT equipped with a Mode S transponder with an ACFT ident function, shall set the ACFT ident from the request for push-back or taxi, whichever is earlier.

The ACFT ident to be used shall be the ICAO-defined format as specified in item 7 of the ICAO flight plan.

To ensure that the performance of systems based on SSR frequencies (including airborne TCAS units and SSR radars) is not comprised, TCAS should not be selected before receiving the clearance to line-up. It should be turned off after vacating the RWY.

ACFT not equipped with Mode S transponder shall select Mode A/C and the assigned Mode A code. If no code has been assigned, select Mode A/C and a non-discrete code according to Norway AIP ENR 1.6, section 2.1.2. letter C.
1.5. **RWY OPERATIONS**

1.5.1. **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 I3I 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.

1.6. **TAXI PROCEDURES**
For Wing Span Restrictions refer to 10-9 charts.

1.7. **PARKING INFORMATION**
Nose-in guidance at ACFT terminal stands, except stands 2, 3 and 7.

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. Stands 11, 13, 15, 16 and 39 equipped with visual docking guidance system SAFE-DOCK T2. All other terminal stands equipped with visual docking guidance system SAFE DOCK T1.

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

1.8. **OPERATIONS WITH LARGE ACFT (CODE F) AND AN-225**
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/from stand 80:

1.8.1. **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 stand 80, 171L, 201L, 203L.
- A380 towbar is available at the APT.
- All taxiing from de-icing area A-North RWY 01L will be via TWYs N, A7 and M.
- Operator shall secure for arrangements with own equipment.
- A380 operator is responsible for contracting handling company before using the APT.
1.8.2. **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.

1.8.3. **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 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.

1.8.4. **AN-225 OPERATIONS**
- Prior approval required.
- RWY 01L/19R will normally be used for landing and take-off.
- 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 de-icing area A-North.
- All taxing from de-icing area A-North to RWY 01L will be via TWY N, A7 and M.
- TWY N is not to be used between southern and northern entrance to de-icing area A-North.
- Operator shall secure for arrangements with own equipment.
- Operator is responsible for contracting handling company before using the APT.

1.9. **OTHER INFORMATION**
Birds.
2. ARRIVAL

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. 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.
A380 MAX weight 560t on TWY P and TWY V between TWY D and NOLAC/SOMBI.

2.3. OTHER INFORMATION

2.3.1. 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.
3. DEPARTURE

3.1. NOISE ABATEMENT PROCEDURES

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

3.2. DE-ICING
De-icing of ACFT may only be performed on the dedicated platforms.
On first contact report to Delivery, if the ACFT needs de-icing. ATC will forward the request to the de-icing coordinator unless instructed by GARDERMOEN Ground when ACFT is approaching the de-icing platform.
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.
De-icing stand is assigned by the de-icing coordinator. Use full call sign when in contact with the de-icing coordinator.
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.
Listening watch on last assigned ATC frequency is to be maintained during de-icing. Pilots are requested to maintain listening watch on the de-icing coordinator frequency until the ACFT is leaving the de-icing platform. Request for taxi instructions shall be forwarded to ATC. Specify RTF callsign and de-icing stand on which the ACFT is parked.

3.2.1. DE-ICING FOR LARGE ACFT (CODE F) AND AN-225
- 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.

3.3. START-UP AND PUSH-BACK

3.3.1. 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 Delivery will transfer ACFT is ready for start-up/push-back to GARDERMOEN Ground according to TSAT.
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.
3. DEPARTURE

ACFT parked at the following stands will be pushed as follows:
- Stand 15, ACFT will be pushed to start-up position 52 facing East.
- Stands 36, 38 and 61, 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.
- Stand 39, ACFT will be pushed to start-up position 4 facing West.
- Stand 40, code D and E ACFT will be pushed to start-up position 20 facing South or position 15 facing West as instructed by Ground control.
- Stands 46 and 48, code C and D ACFT will be pushed to start-up position 15 facing West or position 16 facing East as instructed by Ground control.
- Stand 46R, code D and E 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 48, code E ACFT will be pushed to start-up position 15 or 17 facing West or position 16 or 18 facing East as instructed by Ground control.
- Stand 49, code A, B and 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 facing East.
- Stand 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.
- 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, E and F 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 facing East.
- Stand 189, 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.

Optional push-back available after coordination with GARDERMOEN Ground:
- Stand 40, ACFT will be pushed to start-up position 20 facing South or position 15 facing West as instructed by Ground control.
- Stands 40, 46R and 48, ACFT code D and E will be pushed to start-up position 19 facing East.
- Stand 41, ACFT will be pushed to start-up position 4 facing West.
- Stands 43 and 45, ACFT will be pushed to start-up position 10 facing East.
- Stand 49, code D and E ACFT will be pushed to start-up position 7 or 8 facing East as instructed by Ground control.
- Stands 171 and 172, ACFT will be pushed to start-up position 53 facing West.
- Stands 173 thru 176, ACFT will be pushed to start-up position 51 facing West.
- Stands 177 and 178, ACFT will be pushed to start-up position 52 facing East.
- Stands 181 thru 184, ACFT will be pushed to start-up position 5 facing East.
- Stands 185 thru 187, ACFT will be pushed to start-up position 6 facing East.
- Stand 188, code D and E ACFT will be pushed to start-up position 8 facing East.

Initial turn left after push-back:
- On stands 44, 60, 69, 73, 80 for code C, 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.

Note: Push-back from stands 2, 3, 7, 93, 95 and 96 only available after incorrect positioning of ACFT during towing/parking in coordination with ATC.

To avoid blast at stands when turning out from start-up position to TWY, as little power as possible shall be used.
3.3.2. 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.
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.

3.3.3. 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.

3.4. APT COLLABORATIVE DECISION MAKING
3.4.1. TARGET OFF BLOCK TIME (TOBT)
Verified by ground handling company at the latest 30 minutes before planned TOBT, and 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. TOBT updates are necessary to ensure foreseeable departure times, and as means for ATC to issue the correct TSAT.

3.4.2. 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 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.
3.5. OTHER INFORMATION

3.5.1. 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.
Clearance limit is VALPU holding. Merging point is VALPU.

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.

General restrictions & speed restrictions revised.

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

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

Clearance limit is VALPU holding. Merging point is VALPU.

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.

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5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

Clearance limit is VALPU holding. Merging point is VALPU.

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.

General restrictions & speed restrictions revised.
Clearance limit is BAVAD holding. 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.

General restrictions & speed restrictions revised.

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

| 126.125 | 681 |
| Apt Elev |  |

**ADOI 3M [ADOP3M]**

**RWYS 19L/R RNAV ARRIVAL**

**SPEED:** MAX 250 KT UNLESS OTHERWISE INSTRUCTED

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**Merging point is BAVAD.**

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.
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.
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.

SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

Clearance limit is BAVAD holding

Merging point is BAVAD.
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.

General restrictions & speed restrictions revised.

CHANGES: General restrictions & speed restrictions revised.
General restrictions & speed restrictions revised.
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.
Clearance limit is TITLA holding.

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.

SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED

MAX 220 KT

Routing:
INREX (K250-), IXUMA (K250-), GM418 (K220-; FL110), GM419 (K220-), GM420 (K220-), GM421 (K220-; FL110), TITLA (K220-; 5000+).

Max 220 KT

Max 250 KT

Max 250 KT

Max 250 KT

Max 250 KT
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.
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.

Clearance limit is TITLA holding.

Merging point is TITLA.

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

LUNIP 4M [LUNI4M]
RWYS 19L/R RNAV ARRIVAL
SPEED: MAX 250 KT UNLESS OTHERWISE INSTRUCTED

NOT TO SCALE

ALT SET: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

Alt Set: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

NOT TO SCALE

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

Alt Set: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

Alt Set: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

Alt Set: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

Alt Set: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

Alt Set: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

Alt Set: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

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

Alt Set: hPa Trans level: By ATC

1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.
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.

General restrictions & speed restrictions revised.

Clearance limit is VALPU holding.

Merging point is VALPU.
**RIPAM 4M [RIPA4M]**

**RWYS 19L/R RNAV ARRIVAL**

**SPEED:** MAX 250 KT UNLESS OTHERWISE INSTRUCTED

**Clearance limit is BAVAD holding.**

**Merging point is BAVAD.**

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.

**Alt Set:** hPa
**Trans level:** By ATC
1. RNAV 1 (GNSS or DME/DME).
2. Class A GNSS shall not be used.
3. Surveillance service shall be available.
4. Loss of RNAV 1 capability, request vectoring.
5. Vectoring may be used for sequencing.
6. Descend as cleared by ATC.

**MAX 250 KT**

**SPEED:**

- MAX 250 KT UNLESS OTHERWISE INSTRUCTED
- MAX 220 KT
- MAX 220 KT
- MAX 220 KT
- MAX 220 KT
- MAX 220 KT
- MAX 220 KT
- MAX 220 KT
- MAX 220 KT
- MAX 220 KT

**CHANGES:**

- RWYS 19L/R RNAV ARRIVAL
- Merging point is BAVAD.
- RIPA4M [RIPA4M]
- Class A GNSS shall not be used.
- Surveillance service shall be available.
- Loss of RNAV 1 capability, request vectoring.
- Vectoring may be used for sequencing.
- Descend as cleared by ATC.
NOT TO SCALE

1. RNAV 1
2. Class A GNSS shall not be used.
3. Radar service shall be available.
4. Due to simultaneous parallel departures, change to
   OSLO Approach frequency shall always be initiated
   by GARDERMOEN Tower.
5. Non RNAV 1-equipped ACFT: at first contact
   with GARDERMOEN Delivery state "Unable RNAV 1".
   Omnidirectional departure available.
6. Enroute cruising level will be issued after
   take-off by OSLO Approach or NORWAY Control.

ATLAP 5A [ATLASA]
EVTOG 5A [EVTOSA]

RWY 01L RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE INSTRUCTED

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.

ATLAP 5A
On 013° track to GM436, to GM437, to GM439, to GM614, to ATLAP.

EVTOG 5A
On 013° track to GM436, to GM437, to GM446, to GM614, to EVTOG.
1. RNAV 1. Surveillance service shall be available.
2. Due to simultaneous parallel departures, change to OSLO Approach shall always be initiated by GARDERMOEN Tower.
3. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'.
4. Omnidirectional departure available.
5. Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.
6. NADP-1 to be used during climb-out.

**ATLAP 9B [ATLA9B]**

**EWTOG 9B [EVT09B]**

RWY 01R RNAV DEPARTURES

- **SPEED:** Max 250 KT below FL100 after GM441
- Max 230 KT after GM450, to EVTOG.
- Max 205 KT before GM450

**ROUTEING**

- Initial climb clearance to 7000', expect further climb by OSLO Approach.
- Max 230 KT up to GM445, to EVTOG.
- Maintained last assigned level for two minutes, then climb to the cruising level stated in FPL.

**Gnd speed-KT**

- 75 100 150 200 250 300
- MAX 205 KT before GM450, to EVTOG.
- MAX 230 KT after GM441, to EVTOG.
- MAX 205 KT after GM441, to EVTOG.
- MAX 230 KT after GM441, to EVTOG.

**CONTOUR INTERVALS**

- 5000
- 3000

**SPEED:**

- Max 250 KT below FL100 after GM441
- Max 230 KT after GM450, to EVTOG.
- Max 205 KT before GM450

**ROUTEING**

- Initial climb clearance to 7000', expect further climb by OSLO Approach.
- Max 230 KT up to GM445, to EVTOG.
- Maintained last assigned level for two minutes, then climb to the cruising level stated in FPL.

**Gnd speed-KT**

- 75 100 150 200 250 300
- MAX 205 KT before GM450, to EVTOG.
- MAX 230 KT after GM441, to EVTOG.
- MAX 205 KT after GM441, to EVTOG.
- MAX 230 KT after GM441, to EVTOG.

**CONTOUR INTERVALS**

- 5000
- 3000
TRANSP. TUTT: 7000
1. RNAV 1
2. Class A GNSS shall not be used.
3. RADAR service shall be available.
4. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
5. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'. Omnidirectional departure available.
6. Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.

ATLAP 3C [ATL3C]
EVTOG 3C [EVTO3C]
RWY 19L RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE INSTRUCTED

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

<table>
<thead>
<tr>
<th>Gnd speed-KT</th>
<th>75</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>401 per NM</td>
<td>501</td>
<td>668</td>
<td>1003</td>
<td>1337</td>
<td>1671</td>
<td>2005</td>
</tr>
</tbody>
</table>

If unable to comply inform ATC.

Initial climb clearance 7000, EXPECT further climb by OSLO Approach.
ATLAP 7D [ATLA7D]  EVTOG 7D [EVTO7D]  RWY 19R RNAV DEPARTURES

SPEED MAX 230 KT UNLESS OTHERWISE INSTRUCTED

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

Climb on 193° track, intercept 242° track to GM442, to GM616, to GM619, to GM448, to ATLAP.

Climb on 193° track, intercept 242° track to GM442, to GM616, to GM717, to EVTOG.

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

Maximum distance from extended RWY CL to GM442 is less than the average flight path.

Maintain last assigned level for two minutes, then climb to the cruising level stated in FPL. After last cleared and acknowledged heading, then proceed via the most direct route to join the cleared SID or route and climb to the cruising level stated in FPL.

Initial climb clearance for ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading 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.

If unable to comply inform ATC.

ACFT under RADAR vectoring shall continue on last cleared and acknowledged heading 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.

NOTE: After 06 Aug 2020, 0000Z, this chart may no longer be valid.
MASEV 4A (MASE4A)
RIBBE 1A (RIBE1A)
RWY 01L RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE INSTRUCTED

These SIDs require a minimum climb gradient of 316 per NM (5.2%) up to 5000.

Gnd speed-KT

316 per NM

If unable to comply inform ATC.

Initial climb clearance 7000, EXPECT for their climb by OSLO Approach.

ROUTE
MASEV 4A
On 013° track to GM436, to GM437, to NIDIM, to MASEV.

RIBBE 1A
On 013° track to GM436, to GM437, to GM438, to PEMUS, to NUVSA, to RIBBE.

Max 250 KT

Trans alt: 7000
1. RNAV 1
2. Class A GNSS shall not be used.
3. RADAR service shall be available.
4. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
5. Non RNAV 1 equipped ACFs at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'.
6. Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.

ENGM/OSL
GARDERMOEN

NOT TO SCALE

OSLO Approach
118.475
Apt Elev
681

Gnd speed-KT

316 per NM (5.2%) up to 5000.

If unable to comply inform ATC.

Initial climb clearance 7000, EXPECT for their climb by OSLO Approach.

ROUTE
MASEV 4A
On 013° track to GM436, to GM437, to NIDIM, to MASEV.

RIBBE 1A
On 013° track to GM436, to GM437, to GM438, to PEMUS, to NUVSA, to RIBBE.
MASEV 6B [MASE6B]

RIBBE 6B [RIBBE6B]

RWY 01R RNAV DEPARTURES

SPEED: MAX 250 KT BELOW FL100 AFTER GM440

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.

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 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.

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

OSLO Approach
118.475

Apt Elev
681

NOT TO SCALE

GND SPEED KT
70
100
150
200
250
300

GND BKE
60
30
60
30

MAX 205 KT
1100

MAX 230 KT
1100

MINIMUM
Bank 20°

3900

GM440 RIBBE 6B
GM508 RIBBE 6B
GM506 LULIL
GM504 LILBA
GM617 NOHUG
MASEV 6B

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 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.

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

<table>
<thead>
<tr>
<th>SID</th>
<th>ROUTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>MASEV 6B</td>
<td>Climb on 013° track to 1100, turn RIGHT, direct to GM440, to GM506, to GM504, to GM617, to MASEV.</td>
</tr>
<tr>
<td>RIBBE 6B</td>
<td>Climb on 013° track to 1100, turn RIGHT, direct to GM440, to GM506, to LULIL, to LILBA, to NOHUG, to RIBBE.</td>
</tr>
</tbody>
</table>

24 JAN 20
10-3E

NOT TO SCALE

Printed from JeppView for Windows 5.3.0.0 on 23 Jul 2020; Terminal chart data cycle 15-2020; Notice: After 06 Aug 2020, 0000Z, this chart may no longer be valid.
Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.

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.

Initial climb clearance further climb by OSLO Approach.

WARNING: 401 per NM. The crew must monitor the first turn to ensure it is not initiated below 1100.

Initial climb clearance further climb by OSLO Approach.

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.

Maintain last assigned level for two minutes. Then climb to the cruising level stated in FPL on last cleared and acknowledged heading and level for two minutes and then proceed via the most direct route to join the cleared SID or route and 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. 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.

WARNING: 401 per NM. The crew must monitor the first turn to ensure it is not initiated below 1100.

Initial climb clearance further climb by OSLO Approach.

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.

Maintain last assigned level for two minutes. Then climb to the cruising level stated in FPL on last cleared and acknowledged heading and level for two minutes and then proceed via the most direct route to join the cleared SID or route and 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.

WARNING: 401 per NM. The crew must monitor the first turn to ensure it is not initiated below 1100.

Initial climb clearance further climb by OSLO Approach.

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.

Maintain last assigned level for two minutes. Then climb to the cruising level stated in FPL on last cleared and acknowledged heading and level for two minutes and then proceed via the most direct route to join the cleared SID or route and 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.

WARNING: 401 per NM. The crew must monitor the first turn to ensure it is not initiated below 1100.

Initial climb clearance further climb by OSLO Approach.

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.

Maintain last assigned level for two minutes. Then climb to the cruising level stated in FPL on last cleared and acknowledged heading and level for two minutes and then proceed via the most direct route to join the cleared SID or route and 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.

WARNING: 401 per NM. The crew must monitor the first turn to ensure it is not initiated below 1100.

Initial climb clearance further climb by OSLO Approach.

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.

Maintain last assigned level for two minutes. Then climb to the cruising level stated in FPL on last cleared and acknowledged heading and level for two minutes and then proceed via the most direct route to join the cleared SID or route and 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.

WARNING: 401 per NM. The crew must monitor the first turn to ensure it is not initiated below 1100.

Initial climb clearance further climb by OSLO Approach.

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.

Maintain last assigned level for two minutes. Then climb to the cruising level stated in FPL on last cleared and acknowledged heading and level for two minutes and then proceed via the most direct route to join the cleared SID or route and 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.
1. RNAV 1
2. Class A GNSS shall not be used.
3. RADAR service shall be available.
4. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
5. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state ‘Unable RNAV 1’. Omnidirectional departure available.
6. Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.

**WARNING**

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

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

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

Ground 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.

**CHANGE:** RNAV SID RIBBE 1B renumbered 6B.
OSLO Approach

OKSAT 4A [OKSA4A]
VIPPA 1A [VIPA1A]

RWY 01L RNAV DEPARTURES
SPEED: MAX 250 KT BELOW FL100 UNLESS OTHERWISE INSTRUCTED

1. RNAV 1
2. Class A GNSS shall not be used.
3. RADAR service shall be available.
4. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
5. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'.
6. Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.

Trans alt: 7000

118.475

VIPP 4A
OKSAT 4A

NOT TO SCALE
NOT TO SCALE

GM436
GM439
GM437
NIDIM

1.9

GM436
GM437
GM439
NIDIM

MAX 230 KT

GM614
TOP

NANON

OKAKI

OKSAT

3900

013^ track to GM436, to GM437, to GM439, to GM614, to NANON, to TOR, to VIPPA.

OKSA4A [OKSA4A]
75 100 150 200 250 300
316 per NM 395 527 790 1053 1317 1580

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

CSV PRINTED FROM JEPPESEN FOR WINDOWS 5.3.0.0 ON 23 JUL 2020; TERMINAL CHART DATA CYCLE 15-2020; NOTICE: AFTER 06 AUG 2020, 0000Z, THIS CHART MAY NO LONGER BE VALID
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.

Climb on 013° track to 1100, turn RIGHT, direct to GM440, to GM441, to KUBUB, to VIRRE, to VIPPA.

OKSAT 6B: AFTER GM440

MAX 230 KT

VIRRE

NOT TO SCALE

24 JAN 20

MINIMUM Bank 20°
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.

If unable to comply inform ATC.

These SIDs require a minimum climb gradient of 451 per NM (6.6%) up to 5000.

On 193° track to GM604, to GM444, to GM612, to GM613, to GM449, to TUMGU, to ERLUM, to ENEPO, to OKSAT.

**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.

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 451 per NM (6.6%) up to 5000.

<table>
<thead>
<tr>
<th>Gnd speed (KT)</th>
<th>75</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
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<tbody>
<tr>
<td>451 per NM</td>
<td>501</td>
<td>668</td>
<td>1003</td>
<td>1337</td>
<td>1671</td>
<td>2005</td>
</tr>
</tbody>
</table>

If unable to comply inform ATC.

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

**SID ROUTING**

**OKSAT 2C**

On 193° track to GM604, to GM444, to GM612, to GM613, to GM449, to TUMGU, to ERLUM, to ENEPO, to OKSAT.

**VIPPA 1C**

On 193° track to GM604, to KUBUB, to VRRE, to VIPPA.
1. RNAV 1
2. Class A GNSS shall not be used.
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. Segments labelled 'ASAP' shall be followed as a matter of priority.
6. Enroute cruising level will be issued after take-off by OSLO Approach.

**WARNING**

- Initial climb clearance to OSLO Approach.
- Aircraft 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.
- Enroute cruising level will be issued after take-off by OSLO Approach.

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

**NOTE:**

- All altitudes are given in feet AGL.
- GROUND SPEED - KT
- CLIMB - MAX 230 KT
- SPEED UNLESS OTHERWISE INSTRUCTED

**DATA Cycles:**

- 19 Jul 2017
- 20 Jul 2017
- 21 Jul 2017
- 22 Jul 2017
- 23 Jul 2017
- 24 Jul 2017
- 25 Jul 2017
- 26 Jul 2017
- 27 Jul 2017
- 28 Jul 2017
- 29 Jul 2017
- 30 Jul 2017

**NOT TO SCALE**

- OKSAT 6D
- VIPPA 6D

**ROUTE:**

- OSLO Approach
- GM442
- GM603
- VEMIN
- GM507
- GM608
- OKAKI
- OKSAT

**FREQUENCY:**

- 120.450

**SPEED:**

- MAX 230 KT BELOW FL100
- UNLESS OTHERWISE INSTRUCTED

**NOTICES:**

- RWY 19R RNAV DEPARTURES
- ROUTING
- If unable to comply inform ATC.
- These SIDs require a minimum climb gradient of 401 per NM (6.6%) up to 5000.
- climb on 193º track, 242º track to GM442, to GM603, to VEMIN, to GM507, to GM608, to OKAKI, to OKSAT.

**SPEED LIMITS:**

- MAX 250 KT BELOW FL100

**GND SPEED - KT:**

- 401 per NM

**WARNING:**

- OKSAT 6D
- VIPPA 6D

**RADIO:**

- VHF
- 120.450

**AIRWAYS:**

- OSLO Approach
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**Translation**: 

1. RNAV 1
2. Class A GNSS shall not be used.
3. RADAR service shall be available.
4. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
5. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'.
6. Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.

**VEMIN 5A [VEMISA]**

**RWY 01L RNAV PROP DEPARTURE**

ATLAP, EVTOG, VIPPA

**RNAV TRANSITIONS**

**SPEEDS**: MAX 250 KT BELOW FL100 UNLESS OTHERWISE INSTRUCTED

**Availability; tracks updated; VEMIN RNAV SID renumbered; TOR transition replaced by VIPPA.**

**Printing**: Printed from JeppView for Windows 5.3.0.0 on 23 Jul 2020; Terminal chart data cycle 15-2020; Notice: After 06 Aug 2020, 0000Z, this chart may no longer be valid.

---

**Chapters**

1. RNAV 1
2. Class A GNSS shall not be used.
3. RADAR service shall be available.
4. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
5. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state 'Unable RNAV 1'.
6. Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.

**VEMIN 5A [VEMISA]**

**RWY 01L RNAV PROP DEPARTURE**

ATLAP, EVTOG, VIPPA

**RNAV TRANSITIONS**

**SPEEDS**: MAX 250 KT BELOW FL100 UNLESS OTHERWISE INSTRUCTED

**Availability; tracks updated; VEMIN RNAV SID renumbered; TOR transition replaced by VIPPA.**

**Printing**: Printed from JeppView for Windows 5.3.0.0 on 23 Jul 2020; Terminal chart data cycle 15-2020; Notice: After 06 Aug 2020, 0000Z, this chart may no longer be valid.
1. RNAV 1
2. Class A GNSS shall not be used.
3. RADAR service shall be available.
4. Due to simultaneous parallel departures, change to OSLO Approach frequency shall always be initiated by GARDERMOEN Tower.
5. Non RNAV 1 equipped ACFT: at first contact with GARDERMOEN Delivery state ‘Unable RNAV 1’. Omnidirectional departure available.
6. Enroute cruising level will be issued after take-off by OSLO Approach or NORWAY Control.

**ROUTEING**
Climb on 193° track to 1700, turn RIGHT direct to VEMIN.

**TRANSITION**
- **ATLAP**: From VEMIN to GM619, to GM448, to ATLAP.
- **EVTUG**: From VEMIN to GM619, to GM717, to EVTUG.
- **RIBBE**: From VEMIN to GM443, to PEMUS, to NUVSA, to RIBBE.
- **VIPPA**: From VEMIN to GM607, to NANON, to TOR, to VIPPA.

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

Grid 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.

**NOT TO SCALE**
- **EVTOG**, **RIBBE**, **ATLAP**, **EVTUG**, **RIBBE**, **VIPPA**

**Availability; tracks VEMIN RNAV SID renumbered; NUVSA & VIPPA transitions replaced by RIBBE & VIPPA.**

**EXCEPTIONS**
- Class B RNAV 1 GNSS shall not be used.
- RADAR 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 NORWAY Control.

**ROUTEING**
Climb on 193° track to 1700, turn LEFT direct to VEMIN.

**TRANSITION**
- **ATLAP**: From VEMIN to GM619, to GM448, to ATLAP.
- **EVTUG**: From VEMIN to GM619, to GM717, to EVTUG.
- **RIBBE**: From VEMIN to GM443, to PEMUS, to NUVSA, to RIBBE.
- **VIPPA**: From VEMIN to GM607, to NANON, to TOR, to VIPPA.

**NOT TO SCALE**
- **EVTOG**, **RIBBE**, **ATLAP**, **EVTUG**, **RIBBE**, **VIPPA**

**Availability; tracks VEMIN RNAV SID renumbered; NUVSA & VIPPA transitions replaced by RIBBE & VIPPA.**

**EXCEPTIONS**
- Class B RNAV 1 GNSS shall not be used.
- RADAR 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 NORWAY Control.

**ROUTEING**
Climb on 193° track to 1700, turn RIGHT direct to VEMIN.

**TRANSITION**
- **ATLAP**: From VEMIN to GM619, to GM448, to ATLAP.
- **EVTUG**: From VEMIN to GM619, to GM717, to EVTUG.
- **RIBBE**: From VEMIN to GM443, to PEMUS, to NUVSA, to RIBBE.
- **VIPPA**: From VEMIN to GM607, to NANON, to TOR, to VIPPA.
If unable to comply inform ATC.

To 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.

Routing:
- Climb on 193° track to 1700, turn LEFT direct to VIBUK.

Transition:
- MASEV: From VIBUK to GM508, to GM422, to MASEV.
- OKSAT: From VIBUK to GM449, to TUMGU, to ERLUM, to ENEPO, to OKSAT.
- RIBBE: From VIBUK to NIDIM, to LILBA, to NOHUG, to RIBBE.

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

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

Challenges:
- RNAV 1 Availability; VIBUK RNAV SID renumbered; NUVSA transition replaced by RIBBE.
- Class A GNSS shall not be used.
- RADAR 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 NORWAY Control.

Max 250 KT below FL100.

SPEED: UNLESS OTHERWISE INSTRUCTED
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 19 L/R
Sector 207°-337°: 425 per NM (7.0%) in order to stay within controlled airspace.
Sector 337°-207°: 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 | 780 | 1063 | 1417 | 1771 | 2125
610 per NM | 763 | 1017 | 1525 | 2033 | 2542 | 3050

If unable to comply inform ATC.

Initial climb clearance 4000

OMNIDIRECTIONAL PROP DEPARTURES

These departures require minimum climb gradients of

Sector 207°-337°: 425 per NM (7.0%) in order to stay within controlled airspace.
Sector 337°-207°: 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.

<table>
<thead>
<tr>
<th>RWY</th>
<th>ROUTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>01L</td>
<td>Climb on 013° track, EXPECT further clearance from ATC. Minimum turn altitude 2000.</td>
</tr>
<tr>
<td>01R</td>
<td>Climb on 013° track, EXPECT further clearance from ATC. Minimum turn altitude 1100 (Minimum Bank 20°; MAX 205 KT during turn).</td>
</tr>
<tr>
<td>19L/R</td>
<td>Climb on 193° track, EXPECT further clearance from ATC. Minimum turn altitude 2000.</td>
</tr>
</tbody>
</table>

CHANGES: None.
18 JUN - 06 SEP 2020:

18 JUN - 27 JUN 2020
1. TWY A1 and TWY N between TWY A1 and TWY N5 closed.

18 JUN - 07 JUL 2020
2. TWY J between TWY S and TWY Z, including TWYs J1 and J2 closed.

28 AUG - 06 SEP 2020
3. TWY B2 and TWY T between TWYs B2 and B3 closed.

TEMPORARY CONSTRUCTION WORKS
REFER ALSO TO LATEST NOTAMS

LEGEND
- Limit of Ground/Tower competence
- RUNWAY INCURSION
- HOT SPOTS
- See 10-9A for description.

CHANGES: Construction work rescheduled. Construction work on TWYs A1 and N.

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### ADDITIONAL RUNWAY INFORMATION

<table>
<thead>
<tr>
<th>RWY</th>
<th>Usable Lengths</th>
<th>TAKE-OFF</th>
<th>WIDTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>01L</td>
<td>HIRL (60m) HIALS-II CL (15m) SFL TDZ</td>
<td>RVR 11,811’ 3600m</td>
<td>148’ 45m</td>
</tr>
<tr>
<td>01R</td>
<td>HIRL (60m) HIALS-II CL (15m) SFL TDZ</td>
<td>RVR 9678’ 2950m</td>
<td>148’ 45m</td>
</tr>
</tbody>
</table>

1. Runway grooved.
2. PAPI-L (3.0°)
3. TAKE-OFF RUN AVAILABLE (Advise ATC once transferred to Tower, if intersection dep is acceptable/requested.)

#### RWY 01L:
- From rwy head 11,811’ (3600m)
- From rwy head 11,811’ (3600m)

#### RWY 01R:
- From rwy head 9678’ (2950m)
- From rwy head 9678’ (2950m)

### RUNWAY INCURSION HOT SPOTS

(For information only, not to be construed as ATC instructions.)

- **HST** Angled Twy. Difficult to see traffic on final.
- **HS2** Installed Twy CL lights on C1 and A4 will indicate direction to the Rwy CL. Caution must be exercised when instructed to cross Rwy from C1 to Twy A4 and vice versa due lack of visual aids.
- **HST** Twy V leading directly to a Rwy intersection. Caution must be exercised when approaching the holding point A6.
- **HS4** Angled Twy. Difficult to see traffic on Rwy 01L.

### Standard

<table>
<thead>
<tr>
<th>Low Visibility Take-off</th>
</tr>
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<tbody>
<tr>
<td><strong>A</strong> HIRL, CL &amp; RL &amp; CL</td>
</tr>
<tr>
<td><strong>B</strong></td>
</tr>
<tr>
<td><strong>C</strong> RVR 125m</td>
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<tr>
<td><strong>D</strong></td>
</tr>
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**CHANGES:** Usable lengths.
### INS COORDINATES

<table>
<thead>
<tr>
<th>STAND No.</th>
<th>COORDINATES</th>
<th>ELEV</th>
<th>STAND No.</th>
<th>COORDINATES</th>
<th>ELEV</th>
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<tbody>
<tr>
<td>2</td>
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<td>673</td>
<td>317 thru 319</td>
<td>N60 12.0 E011 04.6</td>
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<tr>
<td>3, 7</td>
<td>N60 11.7 E011 05.4</td>
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<td>312 thru 314</td>
<td>N60 11.9 E011 04.6</td>
<td>663</td>
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<td>315</td>
<td>N60 12.0 E011 04.6</td>
<td>663</td>
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<td>316</td>
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<td>664</td>
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### MIL INS COORDINATES

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<th>STAND No.</th>
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<tr>
<td>M1 thru M3</td>
<td>N60 12.6 E011 05.9</td>
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<tr>
<td>M5, M6</td>
<td>N60 12.5 E011 05.8</td>
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<tr>
<td>M7, M8</td>
<td>N60 12.5 E011 05.9</td>
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<td>M9</td>
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<td>M20</td>
<td>N60 13.2 E011 06.2</td>
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### STRAIGHT-IN RWY

<table>
<thead>
<tr>
<th>RWY</th>
<th>CAT</th>
<th>ILS</th>
<th>LOC</th>
<th>RNAV (LPV) Z</th>
<th>RNAV (LNAV/VNAV) Z</th>
<th>RNAV (RNP) X</th>
<th>RNAV (RNP) W</th>
<th>VOR</th>
<th>DA(H) / MDA(H)</th>
<th>RVR (ALS/ALS out)</th>
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<tbody>
<tr>
<td>01L</td>
<td>CAT 2 ILs</td>
<td>755' (100')</td>
<td>885' (200')</td>
<td>960' (305')</td>
<td>855' (200')</td>
<td>1240' (585')</td>
<td>978' (323')</td>
<td>1084' (429')</td>
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<tr>
<td></td>
<td>ILS</td>
<td>855' (200')</td>
<td>1000' (345')</td>
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<td>600m / 1000m</td>
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<td>800m / 1000m</td>
<td>600m / 1000m</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>RNAV (LPV) Z</td>
<td>855' (200')</td>
<td>1240' (585')</td>
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<td>600m / 1000m</td>
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<tr>
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<td>RNAV (LNAV/VNAV) Z</td>
<td>1000' (345')</td>
<td>1250' (560')</td>
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<td></td>
<td>RNAV (RNP) X</td>
<td>978' (323')</td>
<td>1062' (392')</td>
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<td>600m / 1000m</td>
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<tr>
<td></td>
<td>RNAV (RNP) W</td>
<td>945' (275')</td>
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<td>600m / 1000m</td>
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<td>781' (100')</td>
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<td>600m / 1000m</td>
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1. Missed apch climb gradient mim 5.0%.
2. Missed apch climb gradient mim 2.5%.
3. Missed apch climb gradient mim 3.1%.

### CIRCLE-TO-LAND

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<thead>
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<th>VIS</th>
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<tr>
<td>1280' (599')</td>
<td>1000m</td>
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1. Rwy 01L/19R: Not authorized East of rwy 01L/19R.
2. Rwy 01R/19L: Not authorized West of rwy 01R/19L.

### TAKE-OFF RWY 01L, 01R, 19L, 19R

<table>
<thead>
<tr>
<th>RL/FATO LTS, RCLM &amp; RVR info</th>
<th>RL/FATO LTS &amp; RCLM</th>
<th>Unit/unmarked defined RWY/FATO</th>
<th>Nil Facilities DAY</th>
<th>Nil Facilities NIGHT</th>
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<tr>
<td>150m</td>
<td>200m</td>
<td>200m</td>
<td>250m</td>
<td>800m</td>
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1. Without Low Visibility Take-off approval 400m are stipulated.
2. Or rejected take-off distance whichever is the greater.
MISSED APCH: Climb on 013° to 5000'. Expect vectoring by OSLO APP.

MISSED APCH WITH LOST COMM: Continue climb on 013° 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'

ENGM/OSL

ILS or LOC Rwy 01L

OSLO, NORWAY

GARDERMOEN

LOC

OBW

110.3

Final

Aph Crs

013°

XIKLA

DA(H)

013° 110.3 OBW

Apt Elev 681'

Rwy 655'

DME required.

MIM 160 KT until D4.0 OBW.

RNAV transitions: RNAV 1.

Standard.
MISSED APCH: Climb on 013° to 5000’. Expect vectoring by OSLO APP. MISSED APCH WITH LOST COMM: Continue climb on 013° 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’
1. DME required. 2. Special Aircrew & Aircraft Certification required. 3. RNAV transitions: RNAV 1.
**OSLO Approach**

- **Circling at D2.5 ONE, then turn RIGHT and proceed onto 049° to 4000'.** Expect vectoring by OSLO APP.

- **MISSAPCH WITH LOST COMM:** Climb on 049° to 4000'. At D20.0 ONE turn RIGHT direct to VOR for a new apch.

**Minimums**

- **MISSED APCH:**
  - Climb on 013° to D2.5 ONE, then turn RIGHT and proceed onto 049° to 4000'.
  - **Expect vectoring by OSLO APP.**

- **MISSAPCH WITH LOST COMM:** Climb on 049° to 4000'. At D20.0 ONE turn RIGHT direct to VOR for a new apch.

**Alt Set:** hPa

**Rwy Elev:** 24 hPa

**Trans level:** By ATC

**Trans alt:** 7000'

**Alt Set:** hPa

**Ground speed-Kts**

- 70
- 90
- 100
- 120
- 140
- 160

**ILS or LOC Rwy 01R**

- **LOC (GS out)**
  - **XEMEN**
    - **D8.9 ONE**
    - **D4.0 ONE [48LO4]**
    - **D1.0 ONE [ML01R]**
  - **DME required.**
  - **MIM 160 KT until D4.0 ONE.**
  - **RNAV transitions:** RNAV 1.

**CDFA**

- Not authorized West of rwy 01R/19L

**\

**Standard L**

- **STRAIGHT-IN LANDING RWWY 01R**

**PANS-OPS**

- RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.

**CHANGES:** Topo improvement.
MISSED APCH: Climb on 013° to D2.5 ONE, then turn RIGHT and proceed onto 049° to 4000'. Expect vectoring by OSLO APP.

MISSED APCH WITH LOST COMM: Climb on 049° to 4000'. At D20.0 ONE turn RIGHT direct to VOR for a new apch.

1. DME required. 2. Special Aircrew & Aircraft Certification Required. 3. RNAV transitions: RNAV 1. 4. MIM 160 KT until D4.0 ONE.
**Missed Approach**: Climb on 193° to D3.0 GME. Turn LEFT to 103°. Climb to 3000'.
At D13.0 GME climb to 5000'. Expect vectoring by OSLO APP.

**Missed Approach with Lost Comm**: Continue on 103° to 5000'. At D20.0 GME turn LEFT direct to VOR for a new approach.

**Alt Set**: hPa

**Rwy Elev**: 25 hPa

**Trans level**: By ATC

**Trans alt**: 7000’

**RNAV transitions**: RNAV 1.

MIM 160 KT until D4.0 GME.

Refer to Missed Apch above

**Minimums**

- **193°**
- **3500’**

**CDFA**

- **3900’**
- **3400’**
- **2700’**
- **283’**

**193°**

**110.55 GME**

**ILS GS** or **Standard**

- **121.905**
- **121.605**

**East incl Rwy 01L/19R**

- **118.3**
- **120.1**

**West incl Rwy 01L/19R**

- **120.1**
- **121.605**

**GARDERMOEN Tower**

Alt Set: hPa

**Rwy Elev**: 25 hPa

**Trans level**: By ATC

**Trans alt**: 7000’

**RNAV transitions**: RNAV 1.
GARDERMOEN Tower

118.3

West incl Rwy 01L/19R

120.1

East incl Rwy 01R/19L

East 118.475

West 120.450

GS

3.00°

GS

372 478 531 637 743 849

HIALS-II

PAPI

Refer to

Missed Apch above

CHANGES: Topo improvement.
2. Special Aircrew & Aircraft Certification Required.

1. DME required.
2. Special Aircrew & Aircraft Certification Required.
3. RNAV transitions: RNAV 1.

**Missed Apch:** Climb on 193° to D2.5 GSW, then turn RIGHT onto 224°. Climb to 5000'. Expect vectoring by OSLO APP.

**Missed Apch with Lost Comm:** Continue on 224°. Climb to 5000'. At D20.0 GSW turn RIGHT direct to VOR for a new apch.

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

---

**Table:**

<table>
<thead>
<tr>
<th>LOC</th>
<th>Final Apcr Crs</th>
<th>XINLO</th>
<th>3500' (2825')</th>
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<tbody>
<tr>
<td>GSW</td>
<td>111.3</td>
<td>193°</td>
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</table>

**GARDERMOEN Tower**

**ENGM/OSL**

**OSLO, NORWAY**

**GARDERMOEN Tower**

**BRIEFING STRIP**

**CAB 4 NO Rwy 19R**

**CAT II/III ILS Rwy 19R**

**CAT II/III ILS & II ILS**

**Refer to Minimums**

**ALT SET: hPa**

**Rwy Elev: 24 hPa**

**Trans Level: By ATC**

**Trans Alt: 7000'**

---

**Topo Improvement:**

**CHANGES:**

Topo improvement.
**ENGM/OSL**

**GARDERMOEN**

**DN**

- **D-ATIS Arrival**
  - **Ground**
    - East: 120.1
    - West: 121.05
  - **Tower**
    - East incl Rwy 01L/19R: 120.1
    - West incl Rwy 01R/19L: 121.05

**OSLO, NORWAY**

**RNAV (GNSS) Z Rwy 01L**

**BRIEFING STRIP**

- **Ch 42340 E01P**
- **XIKLA**
- **GM918**
- **Rwy 01L**
- **Rwy 01R**
- **Rwy 19L**
- **Rwy 19R**

**EGNOS**

- **Ch 42340 E01P**
- **GM918**
- **XIKLA**

**GLIDE PATH ANGLE**

- **LNAV**
- **LPV CAT I**
- **DA(H)**
- **MAD A(H)**
- **CIRCLING TO LAND**

**GROUND SPEED - KT**

- 70
- 90
- 100
- 120
- 140
- 160

**GLIDE PATH ANGLE**

- **5.0°**

**PAN OPS**

- RVR 750m
- RVR 1200m
- RVR 1300m
- RVR 1800m

**CDFA**

- **1200' (585')**

**DA (H)**

- **855' (200')**

**LNAV/VNAV**

- **1240' (585')**

**DA (H)**

- **1000' (345')**
- **1030' (375')**

**CIRCLING TO LAND**

- Not authorized East of rwy 01L/19R

**CHANGES:**

- Topo improvement.


Printed from JeppView for Windows 5.3.0.0 on 23 Jul 2020; Terminal chart data cycle 15-2020; Notice: After 06 Aug 2020, 0000Z, this chart may no longer be valid.
**ENGM/OSL**

**GARDERMOEN**

**D-ATIS Arrival**

- **West incl Rwy 01L/19R:** 118.3
- **East incl Rwy 01R/19L:** 120.1

**EGNOS**

- **Ch 88805 E01A**
  - **Final Apc Crs:** 013°
  - **XEMEN:** 3500' (2830')

**GARDERMOEN Tower**

- **XEMEN:** 3500' (2830')

**West**

- **118.475**

**Ground**

- **121.605**

**East**

- **121.905**

**OSLO Approach**

- **West incl Rwy 01L/19R:** 120.450

**EGM/OSL**

**3 APR 20**

**A**

- **RVR 750m**
- **RVR 1200m**

**B**

- **RVR 550m**

**C**

- **RVR 800m**
- **RVR 1500m**

**D**

- **RVR 900m**
- **RVR 1600m**

**RVR 1500m when a Flight Director or Autopilot or HUD to DA is not used.**

**With TDZ & CL & HUD: RVR 650m.**

**With TDZ & CL & HUD: RVR 700m.**

**CHANGES:** Topo improvement.

**OSLO Approach**

- **West incl Rwy 01L/19R:** 120.450

**ENGM/OSL**


**REFERENCES:**

- **EGNOS Ch 88805 E01A**
- **ENGM/OSL JEPPESEN**
MISSED APCH: Climb to GM908. Turn LEFT to GM941 on course 103°, 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.

ALT Set: hPa  Rwy Elev: 25 hPa  Trans level: By ATC  Trans alt: 7000'

The Visual Segment Surface is penetrated by obstables close to the threshold.

OSLO, NORWAY

126.125
118.475
120.1
120.450
121.605
121.905

EGNOS Ch 97983 E19P

OSPAD

Max 200 KT

GM9~8

Mandatory 220 KT

PAPI

LPV/LNAV/VNAV: MAP at DA

EN(R)-108

PANS OPS

Rwy Elev 681'

STRAIGHT-IN LANDING RWY 19L

A: 1000(319') C: 1030(349')
B: 1010(329') D: 1150(469')

CDFA DA(MDA)

DA(MDA) 1230(549')

RVR 550m

A: 750m C: 1400m
B: 800m D: 1500m

RVR 800m

RVR 900m

RVR 1500m

RVR 1600m

RVR 2200m

RVR 1800m

RVR 2400m

RVR 3000m

RVR 750m when a Flight Director or Autopilot or HUD to DA is not used.

CHANGES: Topo improvement.
MISSED APCH: Climb to GM995. Turn RIGHT to GM996 on course 224°, 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: 24 hPa
Trans level: By ATC
Trans alt: 7000'

HIALS-II
PAPI

3.00°

193°

GM995

Mandatory 220 KT

Rwy 19R

TCH 49°

GARDERMOEN

115.95 GRM

D-ATIS Arrival
126.125

East incl Rwy 01R/19L

118.3

West incl Rwy 01L/19R

120.1

OSLO Approach
118.475

West 120.450

GARDERMOEN Tower

121.605

Ground

121.905

RNAV

Final Apch Crs

193°

XINLO

3500' (2825')

LNAV/VNAV DA (H)
Refer to Minimums

Apt Elev 681'

Rwy 675'

RNAV (GNSS) Z Rwy 19R

5000'. Expect vectoring.

At GM996 turn RIGHT direct to GRM VOR for a new apch.

The Visual Segment Surface is penetrated by obstacles close to the threshold.

MIA 160 KT until 4.0 NM to RW19R.
Baro-VNAV not authorized below -26°C.
VPA exceeds 3.5° above 50°C.

The Visual Segment Surface is penetrated by obstacles close to the threshold.
**BRIEFING STRIP**

**Oslo, Norway**

**Gardermoen**

**Rwy 01L**

---

**Final Apch Crs:** 013°

**Apt Elev:** 681'

**Trans alt:** 7000'

**Trans level:** By ATC

---

**Missed Apch:** Climb to 5000' to GM918. Expect vectoring by Oslo APP.

**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:** By ATC

**Trans alt:** 7000'

---

**Special aircrew and acft certification required.**

**RNP less than 1.0 required in initial approach.**

**RF required.**

---

**Baro-VNAV not authorized below -29°C.**

**VPA exceeds 3.5° above 50°C.**
**BRIEFING STRIP**

Rwy 01R

**Final Apc Crs** 013°

**Ground Speed-Kts**
- 70
- 90
- 100
- 120
- 140
- 160

**Final Apc Crs** 013°

**Ground Speed-Kts**
- 70
- 90
- 100
- 120
- 140
- 160

**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'

---

**Maps and Diagrams**

- **GM556**
  - MANDATORY
  - 180 KT
  - **Rwy 670'**

- **GM555**
  - **MIM 160 KT until 4.0 NM to RW01R.**
  - Baro-VNAV not authorized below -27°C.
  - VPA exceeds 3.5° above 50°C.

- **GM917**
  - RUVR 1500m
  - Refer to Minimums

- **NIDIM**
  - Special aircrew and act certification required.
  - RF required.

- **NW01R**
  - TCH 50°
  - Rwy 670'

---

**CHANGES:**
- Topo improvement.
- Special aircrew and act certification required.

---

**PANS OPS**

- With TDZ, CL and HUD: RVR 600m.
- With TDZ, CL and HUD: RVR 700m.

---

**Baro-VNAV:**

- Not authorized West of rwy 01R/19L.
**OSLO Approach**

**ENGMOEN VOR Rwy 19R**

**Briefing Strip**

- **Misled Apch:** Climb on R-014 inbound to VOR. Continue climb on R-194 to D1.1, then turn right to 250°, intercept and proceed R-220. Climb to 5000'. Expect vectoring by OSLO APP. At D20.0 turn right direct to VOR for new instrument approach.

**Gardermoen Tower**

- **MSA GRM VOR**

**CHANGES:** Topo improvement.

---

**D-ATIS Arrival**

- **Gardermoen Tower**

**OSLO Approach**

- **GRM**

**Final Apch Crs**

- **D10.8**

**DA/MDA(A)(H)**

- **4000' (3325')**

- **1060' (385')**

**Apt Elev**

- **681'**

**Rwy Elev**

- **675'**

**Alt Set: hPa**

- **Rwy Elev: 24 hPa**

**Trans Level:**

- **By ATC**

**Trans Alt:**

- **7000'**

**Alt Set: hPa**

- **Rwy Elev: 24 hPa**

**Trans Level:**

- **By ATC**

**Trans Alt:**

- **7000'**

---

**MAP at D2.0**

- **115.95 GRM**

---

**Standard**

- **SRA**

- **D-ATIS Arrival**

- **D-ATIS Departure**

- **Ground Speed-Kts**

- **Descent Angle**

- **MAP at D2.0**

- **Standard**

- **CIRCUIT-TO-LAND**

---

**CDFA**

- **DA/MDA(A)**

- **1060' (385')**

---

**Max Kts**

- **1280' (599')**

- **1280' (599')**

- **2040' (1359')**

- **2250' (1569')**

---

**VIS**

- **1500m**

- **1600m**

- **2400m**

- **3600m**

---

**PANS OPS**

- **RVR 1100m**

- **RVR 1800m**

---

**PRINTED FROM JEPPESEN FOR WINDOWS 5.3.0.0 ON 23 JUL 2020; TERMINAL CHART DATA CYCLE 15-2020; NOTICE: AFTER 06 AUG 2020, 0000Z, THIS CHART MAY NO LONGER BE VALID**
Angled TWY. Difficult to see traffic on final.

Install TWY LIGTs on C1 and A4 indicate direction to the RWY CL. Caution must be exercised when instructed to cross RWY from C1 to A4 and vice versa due to lack of visual aids.

TWY V leading directly to a RWY intersection. Caution must be exercised when approaching the holding point A6.

Angled TWY. Difficult to see traffic on RWY 01L.

**RWY Incursion Hotspots**

**Table:**

<table>
<thead>
<tr>
<th>RWY</th>
<th>TWY</th>
<th>TORA (m)</th>
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<tbody>
<tr>
<td>01L</td>
<td>A2</td>
<td>3469</td>
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<tr>
<td></td>
<td>A3</td>
<td>2696</td>
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<tr>
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<td>A4</td>
<td>2297</td>
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<td>C1</td>
<td>2144</td>
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<tr>
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<td>B4</td>
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<td>B5</td>
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<td>2410</td>
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**Legends:**

- Boundary of jurisdiction
- L ORANGE
- L CENTER
- L BLUE
- Terminal
- Works

**Intersection Take-Off**

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</table>
Marshalling service is provided for parking stands 311-329 as necessary. Parking on stands 320-329 limited for ACFT with special permissions.

Fuelling only permitted on stands 315, 316, 320-329 and 330-334. No fuelling on stands 336 & 337.
General
For all VFR flights within CTR Gardermoen, the carriage of SSR transponder is mandatory.
A complete FPL shall be submitted prior to flight.
School/training flights are not permitted.

For all flights, the allocation of DEP & ARR times is compulsory.
ETD/ETA shall be notified to the scheduling coordinator at least 3 hr prior to the planned times.
Concentration of birds on and in vicinity of AD.
Avoid overflying Atomic Reactor NE of KJELLER AD.
Operation of RPAS/drones is prohibited within 5 KM of all RWY THR.

Procedures for VFR flights within Gardermoen CTR
1. VFR transits through CTR Gardermoen should be avoided.
2. ATC clearance shall be obtained from TWR.
3. Two-way radio communication shall be established before flight takes place within CTR.
4. Suspension of VFR flights may be expected under limited visibility or low ceiling.

Special VFR flight, VFR night and transit flight in Gardermoen CTR is generally not permitted. ATC may, under certain circumstances, grant permission for such flights, based on prior approval.

To avoid conflicts with traffic using the parallel RWYs, the following procedures apply, unless otherwise instructed by ATC:
- Traffic using RWY 01R and RWY 19R shall make all turns associated with TKOF and LDG to the right;
- the airspace between the parallel RWYs, including between the extended edge lines, must not be penetrated during approach or departure;
- permission for crossing overhead the RWYs or extended centrelines can not be expected.

ARR VFR flight shall establish two-way radio communication with Gardermoen TWR not later than passing RÅSJØEN or VORMSUND.

DEP VFR flights shall request start up from GARDERMOEN DELIVERY.

Standard turn direction after DEP is towards NANNESTAD when RWY 01L/19R is used, and towards NORDKISA when RWY 01R/19L is used.

After TKOF traffic shall commence turn to the cleared position/direction at 1200', 1700' for ACFT having MTOW of more than 5.7t.

SAR services and ACFT on a police or MIL mission are exempted from the provisions regarding Special VFR, VFR night and transit flights; but shall at all times adhere to the instructions and clearances given by ATC.

Taxiing/Parking
Light ACFT will be parked at the apron in the GA area and/or as instructed.
HEL parking and ground manoeuvring, including hovertaxiing, are normally permitted west of RWY 01L/19R only.

COM Failure
- Squawk 7600,
- leave the CTR & proceed to another AD,
- if the pilot consider flying to a different AD to be unsafe, proceed via shown VFR REPs, without crossing overhead the AD or extended RCL, to a position 2 NM E or W of AD,
- watch TWR for light signals,
- if possible, call TWR on TEL (+47) 64 81 30 62.
Descent from 2500' at or above ILS GS/PAPI on slope signal. Aircraft shall be established on final approach track at MIM 2500', unless otherwise instructed by ATC.
**Chart changes since cycle 14-2020**

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

<table>
<thead>
<tr>
<th>ACT</th>
<th>PROCEDURE IDENT</th>
<th>INDEX</th>
<th>REV DATE</th>
<th>EFF DATE</th>
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OSLO, (GARDERMOEN - ENGM)
TERMINAL CHART CHANGE NOTICES

Chart Change Notices for Airport ENGM

Type: Terminal
Effectivity: Temporary
Begin Date: 20200618
End Date: 20200906

Construction works on airport (based on SUP 008-20). Refer to temp chart 10-8C and latest NOTAMs.

Type: Terminal (VFR)
Effectivity: Temporary
Begin Date: Immediately
End Date: Until Further Notice

Until APRX MAR 2021 construction work at AD will take place. The exact times for start and completion of work will be announced via NOTAM and/or ATIS.

Chart Change Notices for Country NOR

Type: Gen Tmnl (VFR)
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

EFF 03 MAR 16 VOR/DME 'BBU' permanently withdrawn.

Type: Gen Tmnl (VFR)
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

EFF 18 JUN 20 FIS freq NORWAY CONTROL 127.900 withdrawn.

Type: Gen Tmnl (VFR)
Effectivity: Permanent
Begin Date: Immediately
End Date: No end date

The en-route services in Norway FIR changed their spoken call sign to 'NORWAY CONTROL'.