



# Aircraft Engine Ground Run Procedure

## DOCUMENT DETAILS

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Version	Maturity	Date	Description of Change
1.0	Superseded	8 July 2017	First SOP published 2012, last reviewed 2017
2.0	Superseded	28 Sept 2021	Review the previous SOP and amend to be a Procedure.
2.1	Superseded	1 May 2022	Update the engine run areas, include restricted areas with new AWS location.
3.0	Superseded	5 September 2023	Revise Section 4, Section 6.1, Section 6.2, Section 6.3, Section 7, Section 8 and Attachment A. Remove Attachment B.
3.1	Released	19 October 2023	Revise Section Section 6.2.

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## 1 Introduction

Essendon Airport Pty Ltd (EAPL) is a federally leased Airport and under the Airports Act 1996 is required to produce an Environment Management Strategy. This Strategy is required to specify measures for controlling environmental impacts including generation of noise from ground running aircraft.

Aircraft engine ground run-ups are routine aircraft engine maintenance tests performed for short or extended periods of time generating continuous noise levels.

For all local operators using the airports facilities, the conditions set out in this procedure will apply to the ground running of aircraft engines for the purposes of maintenance, testing and minimising noise impacts to sensitive receptors. These conditions do not apply to and are not intended to limit immediate pre-flight engine checks, normal start, taxi and shutdown procedures.

Changes to the procedure may be required from time to time. Airport operators and ATC will be advised via email of impending changes and when an updated copy will be issued.

## 2 Regulatory Background

The Airports (Environment Protection) Regulations 1997 (the Regulations), give authority to matters that may impact on the environment, including the generation of noise. The Commonwealth Government has appointed an Airport Environmental Officer (AEO) to, amongst other environmental concerns, monitor noise.

Regulation 4.06 requires that operators of undertakings at airports must take all reasonable and practical measures to prevent the generation of offensive noise.

Offensive noise occurs when the noise is generated at a volume, in a way, or under a circumstance that, in the opinion of the AEO, offensively intrudes on an individual, community or commercial amenity.

The operator is the person or operator of the equipment or aircraft making the noise. The undertaking is the operation of the equipment or aircraft.

Regulation 7.03 provides for the AEO to make an environment protection order directing the operator of an undertaking to comply with a duty under Regulation 4.06 by taking a particular action to minimize the generation of offensive noise. This may include the application of a financial penalty.

Refer to permitted hours in [Section 6 – Site Restrictions](#).

## 3 Approvals for Engine Ground Runs

### 3.1 Standard Engine Ground Runs

Aircraft conducting immediate pre-flight engine checks in accordance with the aircraft manufacturer's flight manual or operator's SOP's do not require approval.

Engine checks above idle are not permitted on aprons unless authorised by EAPL.

All aircraft engine maintenance ground runs above idle must be conducted in an approved engine test area. Refer to [Attachment A](#). If an approved engine test ground run area is not suitable, or the timing of the engine ground run is outside the permitted hours, then section 3.2 Non-standard Engine Ground Runs procedure applies.

### 3.2 Non-standard Engine Ground Runs

Prior notice of four (4) hours is required for a non-standard engine ground run. EAPL will liaise with ATC about non-standard locations and timings for such engine ground runs.

To obtain approval for an engine ground run the maintenance organisation is to:

- 1) If a non-standard location for ground run engine checks is required, approval must be sought from the Airport. Contact the Airport Operations Officer (Car 1) or the Aviation Operations Manager. Approval to conduct the engine test ground run in a non-standard location, must include such details as:
  - a) Location (i.e. TWY or RWY location)
  - b) Direction facing (north, south, east or west)
  - c) Aircraft type and Rego
  - d) Start time, end time
  - e) Minutes of: Idle engine duration & high-power setting (%) level and duration
  - f) Confirm whether or not an escort from Car 1 is required
- 2) On receipt of Airport approval, call ATC to request taxi/tow approval and advise that Essendon Airport approval has been received.
- 3) On arrival at the approved site, advise ATC prior to commencing the ground running activity.

**Airport on receipt of a request, Car 1 is to:**

- 1) Check against the site requirements in this document for a suitable site for the aircraft type, time of day, wind direction and level of power setting required etc.
- 2) Request clearance from ATC in the normal manner (taxi or tow) and proceed as per ATC clearance.
- 3) Approval will only be given after consultation with ATC and be subject to traffic requirements.

## 4 Dispensations Against This Plan

This plan has been developed to satisfy Airport environmental concerns and noise strategies with regard to the existing infrastructure. The plan details the best options and dispensations will therefore not be given unless the matter under consideration represents an urgent operational requirement.

Dispensations may be granted by the Airport Operations Officer (Car 1) or the EAPL Aviation Operations Manager in liaison with the ATC Tower.

Note: Prior notification (four hours) to the Airport Operations Officer (Car 1) and approval is still required for dispensations.

## 5 Locations for Ground Running Activities

[Attachment A](#) provides site locations and restrictions.

## 6 Site Restrictions

Each site is restricted to aircraft types, time restrictions, aircraft headings and directions, as shown in the tables in [Attachment A](#).

Engine ground runs can only be undertaken during the following hours:

- Weekdays 0700 – 1800 hours
- Weekends & Public Holidays 1000 – 1800 hours

Time limits may apply to non-standard locations or where extensive ground runs are required.

### 6.1 Compass Swing Bay Restrictions

The Compass Swing Bay is used predominantly for aircraft calibration purposes but can also be used for engine runs. The proximity of the Compass Swing Bay to the weather station may impact on the readings when

the winds are from the NW quadrant. This is applicable for engine runs that are above idle during periods of winds from the NW.

Any aircraft intending to conduct engine runs when the wind is from the NW must position the aircraft to ensure there is no prop wash or jet blast between 120° and 160° magnetic or 20 degrees either side of the weather station. If this is not possible, please use one of the other engine run positions.

All helicopter operations must be conducted in the Eastern Grass Helicopter training area as defined in AIP-ERSA.

Please be aware that approval to this site for high power engine runs may be withdrawn, if the restricted area is not protected from jet blast, rotor wash or prop wash.

Please refer to Attachment A for details of the area to be protected.

## **6.2 Eastern Grass Helicopter Training Area**

The Eastern Grass is a training site contained within the area between 150m radius east of the anemometer, TWY N, the GP antenna and RWY 08/26 clear of the marked runway strip.

Emergency services helicopters also use this area. Access will need to be coordinated between the training operators and the emergency services organisations to ensure that small helicopters are not operating within this area at the same time.

Prior permission from EAPL is required for all aircraft operators using the area.

Helicopter operations need to be conducted in align with AIP-ERSA and remain outside 150m of the BOM Anemometer.

## **6.3 Runway 26 Restricted Engine Runs**

For large aircraft greater than a Challenger 600 requiring to conduct high power engine runs, the section of runway 08/26 between Taxiway Hotel and Papa can be used on request. Approval will be granted dependent on traffic and will be time limited to 30 mins. Airport Operations are required to issue a NOTAM to facilitate using this section of the runway (Refer site 5).

Any request for the use of Runway 08/26 must be provided at least 48 hours prior to the intended use of the runway.

Requests for engine runs on Runway 08/26 can be forwarded to: [airportops@ef.com.au](mailto:airportops@ef.com.au)

## **6.4 Notification and Recording of Details**

For non-standard ground runs, please send requests for approval with details of operator, aircraft type, location, start time, power setting and duration to [airportops@ef.com.au](mailto:airportops@ef.com.au)

EAPL will log the details and grant approval subject to availability. Where multiple requests are made for use of a particular site, the sites will be made available at the discretion of the Airport Operations Officer (Car 1) and/or the Aviation Operations Manager.

# **7 Damage to Facilities as a Result of Ground Running**

Aircraft operators and maintenance organisations must be aware of the impact of propeller wash, rotor wash and jet blast onto EAPL property and other facilities.

Approval to carry out a ground run requires the aircraft operator and maintenance organisation to assess the risk of possible damage to the aircraft carrying out an engine run, airport facilities or other aircraft. The cost of damages related to engine ground running activities will be borne by the aircraft operator and maintenance organisation. EAPL accepts no responsibility for loss or damage caused by engine test ground runs.

When conducting engine runs:

As a guide, exposure to jet blast, prop wash or helicopter downwash for people, objects and buildings should not be more than:

- 1) Any location that people may be exposed – **60km/h**
- 2) Ground vehicles and apron equipment – **80km/h** max
- 3) Light aeroplane parking areas – **60km/h**
- 4) Building and other structures – not exceeding **80km/h**

Aircraft types and jet blast templates can be found in aircraft manufacturers manuals.

## 8 Complaints

Airport tenants wishing to make a complaint regarding an engine ground run operation can contact the Airport Operations Officer (Car 1) on 0418 335 549 or email [airportops@ef.com.au](mailto:airportops@ef.com.au).

EAPL will review any complaints received and as a result may review current processes.

## 9 Airport Contact Details

- Airport Operations Officer (Car 1): 0418 335 549 or [airportops@ef.com.au](mailto:airportops@ef.com.au)
- EAPL Email: [aviation@ef.com.au](mailto:aviation@ef.com.au)
- Airport Operations Manager: 0448 431 477

## Attachment A – Summary of Site Locations and Restrictions

SITE	LOCATION	APPROVAL	POWER AND TIME LIMITS	SITE RESTRICTIONS
1	Compass Swing Bay	Taxi and/or tow clearance from ATC	Full power settings	Small to medium size aircraft  No prop wash or jet blast between 120° and 160° mag or 20 degrees either side of the weather station.
2	Taxiway November	Taxi and/or tow clearance from ATC  Not available if RWY 26 is in operation	Full power settings No time limit during permitted hours	Small to large size aircraft
3	Northern Run Up Bay	Taxi and/or tow clearance from ATC	Limited periods for full power settings	Small to medium size aircraft 18m max wingspan
4	Eastern Run up bay	Taxi and/or tow clearance from ATC	Limited periods for full power settings	Small to medium size aircraft
5	RWY 08/26 west of TWY P	Restricted access, approval required from Airport Ops (>48 hours)  Taxi and/or tow clearance from ATC  Not available if RWY 08/26 is in operation.	Full power settings max 30 mins	Larger corporate jets

**As a guide, please use the MTOW of the aircraft as detailed below.**

\*Small to medium size aircraft = up to jets or turbo prop aircraft to 25,000kg

\*\* Larger corporate jets = greater than 25,000kg.



