

**Appendix 3**

Director's Notices



## DIRECTOR'S NOTICE

<b>Subject:</b>	<b>Restrictions on the use of APU's and GPU's at Stansted</b>	<b>DN/</b>	<b>12/03</b>
<b>Date of Issue</b>	<b>27<sup>th</sup> March 2003</b>		

It is the responsibility of all employers to ensure that relevant DN's are brought to the attention of their staff. However, individuals remain responsible for their own actions and those who are in any doubt should consult their Supervisor or Manager.

### **THIS NOTICE COMES INTO FORCE ON 10/04/03**

#### **1. INTRODUCTION**

##### **1.1 Environmental considerations**

- 1.1.1 Stansted Airport Limited (STAL) has a statutory duty to protect the surrounding community from noise generated by aircraft operations and equipment on the ground. It is therefore incumbent on all agencies to adhere to the policies and procedures outlined in this Notice.
- 1.1.2 Operators are required to minimise aircraft noise and related emissions by limiting the use of 'Auxiliary Power Units' (APU's), and Ground Power Units (GPU's) whilst on stand, in accordance with the restrictions outlined in this Notice. Environmentally friendly Fixed Electrical Ground Power (FEGP) is provided on all permanent south side stands at Stansted.
- 1.1.3 Operators attention is also drawn to guidance contained within HSE document (HSG 209) 'Aircraft Turnround', relating specifically to the minimisation of the use of APU's and GPU's by aircraft on the ground. This document can be obtained from the HSE at <http://www.hsebooks.co.uk>.
- 1.1.4 Further guidance and advice on best practice in relation to the minimisation of APU's and GPU's is contained within the revised CAA document 'CAP 642 Airside Safety Management', in particular, Chapter 2, Section 11, Page 29 'Noise', available from the CAA website at <http://www.caa.co.uk/publications/publicationdetails.asp?id=139>

##### **1.2 Scope**

- 1.2.1 This Notice sets out the circumstances under which GPU's and APU's may be run and details the restrictions on use. It should be read in conjunction with the current DN 'Aircraft Fixed Electrical Ground Power System' that details the operating procedures for the FEGP at Stansted.

## 2. Definitions

### 2.1 For the purpose of this Notice the following terms are defined:

**Ground Power Unit (GPU)** – Diesel powered mobile generator for providing aircraft power on stand

**Auxiliary Power Unit (APU)** – Internal aircraft engine, usually tail-mounted, for powering aircraft systems including hydraulics & air for engine start and cabin conditioning.

**Fixed Electrical Ground Power (FEGP)** – Ground based system of electrical power on all permanent south side stands capable of providing electricity for aircraft systems at 115/200volts 400HZ. Separate transformers are available for aircraft requiring 28volts.

### 2.2 All times referred to in this notice are LOCAL.

## 3. Use of Auxiliary Power Units and Ground Power Units

### 3.1 Procedures for the use of APU's at Stansted Airport

3.1.1 The APU is not to be used as a substitute where FEGP is adequately provided and serviceable.

3.1.2 Except in emergency or non-availability of FEGP **no** APU's shall be operated between the hours of 2330-0600 hrs, local time, on aircraft stands other than immediately prior to 'push-back and start', or on arrival whilst awaiting connection of FEGP, unless prior permission has been received from Airfield Operations on ext. 2478.

3.1.3 For departing aircraft (06:00 – 23:30) the APU is **not** to be started until 10 minutes prior to 'push-back and start'. Exceptions may apply as indicated in 3.1.5.

3.1.4 For arriving aircraft, the handling agent should connect FEGP immediately. The main engines, and APU if started, should then be shut down. **The APU is not to be used unless the stand that the aircraft is parking on is not equipped with FEGP or the FEGP is unserviceable.** Exceptions may apply as indicated in 3.1.5.

3.1.5 The restrictions described in 3.1.3 and 3.1.4 will be relaxed where:

- i) The outside air temperature (as promulgated by ATC) is below +5 ° C or above +20° C.
- ii) FEGP is unserviceable or not installed on the stand.
- iii) Systems that cannot be powered by FEGP require to be powered up for **maintenance purposes**, subject to prior permission being obtained from Airfield Operations on ext 2478.
- iv) An aircraft has to be positioned on a stand equipped with FEGP, in such a manner as to make use of the FEGP system impractical (typically small cargo aircraft parked side-on or nose-out on stand).

- v) An aircraft type is not compatible with the Fixed Electrical Ground Power system at Stansted, or has a temporary technical fault preventing the use of FEGP (verification of this may be required by STAL)
- vi) An aircraft has night-stopped at Stansted (minimum ground time of 2hrs) and is operating its first departure of the day; here APU's can be run for a **maximum of 45mins** before departure subject to prior permission, where necessary, as described in 3.1.2
- vii) Where the Captain of an aircraft believes that genuine hardship to passengers will result unless the APU is run, then he/she may do so provided that Airfield Operations are contacted **before** starting on 01279 662478/2585 (2478/2585 on internal phone system), (this may be done at the Captain's request by the Handling Agent). Airfield Operations will record the details for monitoring purposes and STAL may request to see a copy of the flight voyage report or other supporting evidence for the decision to run the APU. Examples where it is anticipated that this may happen include:
  - 1) Slot delays
  - 2) Wide-spread ATC disruption
  - 3) Aircraft that divert into Stansted
  - 4) Ground equipment failure
  - 5) Technical Delay

3.1.9 APU Restrictions are summarised in a matrix in Appendix A

### **3.2 Use of GPU's, Air Start Equipment and Air Conditioning Units**

3.2.1 The use of Air Start units, Ground Power Units, Air Conditioning units or any other items of ground servicing equipment which does not conform to current EU standards for noise suppression (85 decibels dBA at 7 metres) is prohibited on any apron area at Stansted.

#### **3.2.2 Ground Power Units must not be used at Stansted when there is serviceable FEGP available on stand.**

**3.2.3 Where FEGP is faulty it must be reported on 5555 immediately – failure to do this will be considered as non-compliance with this Notice (see 5.1.1.).**

3.2.4 Airfield Operations will monitor the use of Ground Power Units and random emissions tests will be carried out. Equipment failing to meet current standards will be required to be removed from the airside area of the Airport.

## 4. Monitoring

- 4.1.1 Airfield Operations will take records of any operator appearing to be contravening the provisions of this Notice.
- 4.1.2 Operators found to be using GPU's or APU's outside of the conditions described above will be required to meet with STAL to discuss their contravention of this notice and the Airports' 'Conditions of Use'.

## 5. Fault Reporting

- 5.1.1 Where FEGP is found to be unserviceable it must be reported immediately to the STAL Engineering department on the Airport Fault line (5555). It is incumbent on operators/users to report any fault with the FEGP system and not assume that the fault has already been reported. This should be done on each occasion that a unit is found to be unserviceable unless it has clearly been marked as 'out of service' by STAL Engineering department. **Operator's failing to report a faulty FEGP unit will not be able to claim exemption as described above.**
- 5.1.2 Airfield Operations will circulate a daily list of any FEGP units that are out of service to the handling agents on the warnround.

## 6. Cancellation

- 6.1.1 This Notice supersedes Director's Notice 38/01, which should now be destroyed.
- 6.1.2 Any questions concerning the contents of the Instruction should be addressed to the Operations Business Manager on ext. 2588 or the Operations Environment Manager on ext. 3524.



**Dave Powell**  
**For and on Behalf of the Operations Director**

## Appendix A

### APU RESTRICTIONS MATRIX

Scenario	06:01 – 23:29	23:30 – 06:00
APU required for maintenance	Notify Airfield OPS 2478	Notify Airfield OPS 2478
APU Required for Cabin conditioning / engine start – normal turnaround	Permitted at STD – 10mins, <u>NO Notification required</u>	Permitted only immediately prior to push and start. <u>NO Notification required</u>
APU Required for Cabin conditioning / engine start – first departure after night stop (at least 2hrs)	Permitted at STD – 45, <u>NO Notification required</u>	Notify Airfield OPS 2478
Air Temp above +20°C or below +5°C	Permitted, <u>NO Notification required</u>	Notify Airfield OPS 2478
FEGP Not Installed	Permitted, <u>NO Notification required</u>	Notify Airfield OPS 2478
FEGP U/S	Notify Airfield OPS 2478	Notify Airfield OPS 2478
Captain believes APU running necessary to avoid passenger hardship.	Notify Airfield OPS 2478	Notify Airfield OPS 2478
Aircraft not compatible with FEGP	Permitted, <u>NO Notification required</u>	Notify Airfield OPS 2478
FEGP Cannot be used due aircraft parking position	Permitted, <u>NO Notification required</u>	Notify Airfield OPS 2478
APU Required for any other reason	Notify Airfield OPS 2478	Notify Airfield OPS 2478

FEGP Faults: tel.5555

Airfield Operations: 01279 66(2478)/(2585)

## DIRECTOR'S NOTICE

<b>Subject:</b>	<b>Control of Ground Noise</b>	<b>DN</b>	<b>02/05</b>
<b>Date of Issue</b>	<b>05.01.05</b>		

It is the responsibility of all employers to ensure that relevant DN's are brought to the attention of their staff. However, individuals remain responsible for their own actions and those who are in any doubt should consult their Supervisor or Manager.

### This Director's Notice specifically relates to:

- **Fixed wing aircraft engine running for test & maintenance purposes.**

Separate procedures apply to Helicopter engine runs and the current Director's Notice entitled 'Restrictions on the use of APU's and GPU's at Stansted', covers requirements for the use of Fixed Electrical Ground Power (FEGP), Ground Power Units, (GPU's) and aircraft Auxiliary Power Units (APU's).

### 1.0 CONTEXT

#### 1.1 Legal Considerations

As part of the planning consent to grow Stansted Airport to 25 million passengers per annum, Stansted Airport Limited, (STAL), is legally obliged by Uttlesford District Council, (UDC), to:

- Construct a second ground run pen and ensure it is operational by 30<sup>th</sup> September 2004.
- Use all reasonable endeavours to ensure that ground running of aircraft engines, for the purposes of testing, is carried out within the ground run facilities except in exceptional circumstances including cases of necessity.

#### 1.2 Environmental Considerations

STAL has a statutory duty to protect the surrounding community from noise generated by aircraft operations and equipment on the ground. It is therefore incumbent on all operators to adhere to the policies and procedures outlined in this Notice.

To ensure that the environmental impact of aircraft related noise on the local community is kept to a minimum, aircraft operators with maintenance commitments at the airport are expected to plan their schedule to avoid the need for ground running of engines at night or in the early morning and late evening. Night for these purposes is defined as the period between 2300-0700 hours local time.

### 1.3 Scope

1.3.1 This Notice sets out procedures for the control of engine ground running for maintenance purposes. The intent of this Notice is to allow for a safe and efficient operation which keeps adverse noise impacts as low as reasonably practicable.

### 1.4 Definitions

1.4.1 For the purpose of this Notice the following terms are defined:

Term	Definition
"Engine running"	the operation of jet or propeller engines for maintenance or test purposes.
Ground idle power	as defined by the manufacturer; engines idling with the throttles not advanced
Part power	as defined by the manufacturer; the minimum throttle advance required to trim the engines to produce the same power at a given throttle setting.
High power	any throttle setting above the part power setting
"Start-stop" engine run	a very short engine check, undertaken at ground idle power only and being of no more than 3 minutes duration. Normally undertaken to check for oil leaks.
"Muffled"	refers to use of the engine running pens adjacent to the Diamond Hangar
"Un-muffled"	Other Airside locations

## 2.0 CONDITIONS APPLYING FOR GROUND ENGINE RUNNING BY AIRCRAFT FOR MAINTENANCE PURPOSES

### 2.1 General Policy

2.1.1 STAL Airside Operations have complete and final approval over the location, times, duration and type of engine running permitted. They will also monitor and record all engine running activities on the airport in compliance with procedures laid out in this Notice.

2.1.2 **All engine runs defined in section 1.4, except "Start-Stop" must take place in the ground run pens** adjacent to the Diamond Hangar, which are currently managed by FLS apart from exceptional circumstances which are defined as:

- The ground run pen is currently occupied and any protracted delay will result in **significant** hardship to passengers, goods or cargo.
- The ground run pen is closed due to maintenance.

- 2.1.3 Operators are expected to plan all maintenance to occur within the permitted periods. Approval for runs outside these periods, particularly during the night period (2300-0700 local time), is likely to be extremely limited. A formal written request must be made to the Operations Duty Manager, (ODM) who must then give prior approval, in writing, before the run can take place.
- 2.1.4 No engine runs will be permitted on the Compass Base without the specific written permission from the ODM. If the Compass Base is used a 50% surcharge will be levied on top of the maximum rate defined in Section 2.2.1.
- 2.1.5 If an Operator fails to adhere to this general policy they will be subject to a fine of up to £2,500. This penalty is agreed under the Airport Byelaws, Section 4(1) Aircraft engine running. The byelaws are applied by STAL under Sections 63 and 64 of the Airports Act 1996 and Section 37 of the Criminal Justice Act 1982.

## **2.2 Charge for Ground Running**

- 2.2.1 The current charging regime for the existing ground run pen will be expanded to cover the new facility. With effect 1<sup>st</sup> January 2005 the associated charges for use of the pen will be £225 per engine run. This charge will be reviewed annually.

## **2.3 Conditions applying for Chapter 3 aircraft and Propeller Aircraft**

- 2.3.1 These are stated clearly in Table 1 as attached to this Notice.

## **2.4 Conditions applying for Chapter 2 aircraft, aircraft hush kitted to meet Chapter 3 standards, or those engines with bypass ratio $\leq 2$**

- 2.4.1 These are stated clearly in Table 2 as attached to this Notice

## **3.0 PROCEDURE TO REQUEST PERMISSION TO GROUND RUN ENGINES**

### **3.1 Notification procedures for aircraft engines which have not required modification to comply with the Chapter 3 (or better) noise certification standard.**

- 3.1.1 For all engine runs of fixed wing aircraft with the exception of start-stop runs:

- (1) Operators must contact the Shift Leader at FLS Stansted Line to confirm acceptance of the fees and agree access to the ground run pen for the time they require. FLS may be contacted on 07850 361592 (24hrs).
- (2) The "Engine Run Request" form (as attached to this Notice) must be completed and faxed to STAL Airside Operations prior to the run commencing detailing the time slot agreed with FLS.
- (3) The Airside Operations Duty Officer will then either confirm or refuse permission by faxing the form (if necessary with amended details or additional restrictions) back to the Aircraft Engineers concerned.
- (4) Once approval has been given the engine run must be carried out within 1 hour of the approved start time given on the form.
- (5) Prior to engine start-up, Air Traffic Control, (ATC), must be informed and a radiotelephony, (R/T), watch on the appropriate frequency must be maintained for the period of the engine run. ATC must be advised when the run has been completed.
- (6) On completion of the run the Aircraft Engineers **must** fax the form back to STAL Airside Operations, having completed the lower section closing the run. **Future runs may be refused until completed documentation is provided.**

### **3.2 Notification procedures for Chapter 2 and aircraft hush kitted to meet Chapter 3 noise standards.**

3.2.1 These are the same as those for non-hush kitted Chapter 3 aircraft, however, the ODM will only approve the run for up to a maximum of two hours. Requests for runs over 2 hours are extremely unlikely to be approved. In addition, as these runs are very disruptive to the local community, they will be closely monitored.

### **3.3 For start-stop engine runs:**

**All requests for start-stop engine runs must be made to STAL Airside Operations on ext. 2478 - a form is not required.** Permission must also be sought from ATC prior to such a run starting. STAL Airside Operations will log all such requests for monitoring purposes.

### **3.4 Completion of application to run forms**

3.4.1 It is the responsibility of Companies undertaking engine ground running to keep the completed approval form on file for a period of one year for the purposes of audit by STAL on behalf of UDC.

3.4.2 STAL provides the completed forms to UDC on both an ad-hoc and formal audit basis. Those companies which, without good reason, fail to complete section C of the form, will be denied permission to undertake further runs until outstanding completed documentation is received (even in the event of a run being cancelled).

## **4.0 GENERAL SAFETY PRECAUTIONS FOR ENGINE GROUND RUNNING**

### **4.1 General policy**

4.1.1 Operators are responsible for ensuring that appropriate environmental and safety procedures are adopted during engine running, whether in maintenance areas or other approved locations. These procedures should cover all aspects of the ground running operation and the safety of all personnel involved.

4.1.2 Unless specifically cleared by STAL Airside Operations, no ground running may take place with the tails of the aircraft pointing toward the runway, taxiways or airside roads and aircraft must be positioned in such a way that engine running will not harm persons or cause damage to buildings, aircraft, vehicles or equipment in the vicinity.

4.1.3 No aircraft may be ground run on operational stands, except for "Start-Stop" procedures.

4.1.4 When ground run bays are being used, it is the responsibility of the airline supervising engineer to ensure that the aircraft is correctly positioned.

4.1.5 All ground support equipment must be removed away from the proximity of the aircraft and placed at a safe distance.

4.1.6 All operators must ensure they have appropriate airside insurance and employer's liability insurance in place.

4.1.7 The aircraft anti-collision lights must be switched on during the entire period of the engine run.

4.1.8 High mounted tail engines have special safety considerations in terms of the greater distance behind the aircraft that may be subjected to jet blast and account must be taken of this increased hazard.

4.1.9 On all occasions, a safety person is to be positioned in sight of the flight deck and close to the aircraft to ensure that the area is kept clear during the engine run. He will

communicate by hand signal or light signal at night, or by R/T with the flight deck to ensure that the engine(s) are shut-down if persons or vehicles move into the danger area in front of, behind or in the vicinity of a live engine.

**5.0 CANCELLATION**

5.1.1 This Notice supersedes Director's Notice 63/04 and all others concerning ground engine running.

5.1.2 Any questions concerning the contents of the Notice should be addressed to the STAL Airside Sustainability Manager, Tel: (01279) 663524.

A handwritten signature in black ink, appearing to read 'D. Powell', with a stylized flourish at the end.

**Dave Powell**  
**For and on Behalf of the Operations Director**

**Table 1: Conditions for the ground running of Chapter 3 engines (non hushkitted and with BPR >2) and Propeller Aircraft**

General requirements: No more than 1 engine to be run at approved power setting. If other engines are required to provide balancing force, these are to be run at lowest possible power

FLS Ground Run Pen to be used apart from exceptional circumstances

All times local. **Times close to start/finish of the night period to be avoided if at all possible**

Type of run	Permitted periods (local time)	Remarks/Conditions	Location
1. Start stop	0700hrs to 2300hrs	<u>Not more than 3minutes duration</u> and only with approval of Airside Operations.	As approved by Operations
2. Ground Idle	0700hrs to 2300hrs	Subject to approval by Operations.	<b>Ground Run Pen</b>
3. Part power	0700hrs to 2300hrs	Subject to approval by Operations.	<b>Ground Run Pen</b>
4 (a) High power	0700hrs to 2300hrs	Subject to approval by Operations. Early morning and late evening runs to be avoided if at all possible.	<b>Ground Run Pen</b>
4 (b) High power	Outside of daily hours as specified in 4 (a) above.	<b>Exceptionally</b> subject to approval by Operations Duty Manager. A full written report by the Operator/Engineer will be required to explain circumstances and this may be subject of follow up investigation.	<b>Ground Run Pen</b>

**Table 2: Conditions for the ground running of Chapter 2 engines, engines hushkitted to meet Chapter 3 or those with a bypass ratio of  $\leq 2$**

Telephone numbers:                   STAL Airside Operations                   01279 66 2478  
   FLS Shift Leader Stansted Line           07850 361592

General requirements:               Subject to approval and monitoring by the ODM. Times close to start/finish of the night period to be avoided if at all possible. No more than 1 engine to be run at approved power setting. If other engines are required to provide balancing force, these are to be run at lowest possible power

Engine Ground Run Pens to be used apart from exceptional circumstances

All times are local. **Times close to start/finish of the night period to be avoided if at all possible**

Type of run	Permitted periods (local time)	Remarks/Conditions	Location
1. Start stop	0700hrs to 2200hrs	<u>Not more than 3minutes</u> duration and only with approval of Airside Operations.	As approved by Operations
2. Ground Idle	0700hrs to 2200hrs	Subject to approval by Operations.	<b>Ground Run Pen</b>
3. Part power	0700hrs to 2200hrs	Subject to approval by Operations Duty Manager for 2hrs only. Re-application required to run beyond 2hrs. Early morning and late evening runs to be avoided if at all possible	<b>Ground Run Pen</b>
4a High power	0700hrs to 2200hrs Mondays to Friday evenings	Subject to approval by Operations Duty Manager for 2hrs only. . Re-application required to run beyond 2hrs. Early morning and late evening runs to be avoided if at all possible.	<b>Ground Run Pen</b>
	0700hrs to 2100hrs Saturday 0900hrs to 2100hrs Sundays and Bank Holidays	"	<b>Ground Run Pen</b>
4b High power	Outside of daily hours as specified in 4a above.	<b>Exceptionally</b> subject to approval by Operations Duty Manager. A full written report by the Operator/Engineers will be required to explain circumstances and this may be subject of follow up investigation.	<b>Ground Run Pen</b>

London  
**BAA Stansted**  **ENGINE RUN REQUEST** (Form effective Sept. 04)

**SECTION A - REQUEST - Fax to Airfield Operations - 01279 66 2952**

<b>ENGINEERING COMPANY:</b>		Date/Time request
<b>Contact name (BLOCKS)</b>	<b>Fax No:</b>	<b>Tel No:</b>
<b>Aircraft type:</b>	<b>Regn:</b>	<b>Airline:</b>
<b>No. of engines to be run:</b>	<b>Bypass Ratio:</b>	<b>Type of engines:</b>
<b>Date for run</b>	<b>Requested start time:</b> <small>Run must commence within 1 hour of requested start time</small>	<b>Requested duration required:</b>
<b>Times agreed with FLS for use of Ground Running Pen:</b>		<b>Power settings required, including duration at each setting:</b>

Written requests for Ground Runs unable to take place at the Ground Running pen must be submitted to the Ops Duty Manager, such requested will only be granted in exceptional circumstances, DN 63/04 refers.

**SECTION B - APPROVAL by Airfield Operations Duty Officer or Operation Duty Manager, dependent on type of run.**

<b>Authorised Start Time:</b> <small>(Run must commence within 1 hour of this time)</small>	<b>Authorised Power Settings:</b>	
<b>Approved by Ops Duty Officer or Ops Duty Manager</b>		
<b>Name</b>	<b>Sign</b>	<b>Date / Time</b>
<b>Ground Run must be carried under the condition outlined in DN 63/04</b>		
<b>Additional restrictions</b>		

**SECTION C :- CONFIRMATION OF RUN - Engineer **MUST** send completed Form back to Airfield Ops to **CLOSE THE RUN** on (01279) 66 2952 including if run is cancelled.**

**ATC MUST BE CALLED ON VHF 121X72 OR 123X8 PRIOR TO START OF RUN.**

**FAILURE TO COMPLETE THIS SECTION OR INDICATE CANCELLATION OF RUN REQUEST MAY RESULT IN FURTHER RUNS BEING DELAYED**

**OR REFUSED. THE ENGINEER SUPERVISING THE RUN MAY BE HELD RESPONSIBLE FOR THIS.**

<b>Actual start time:</b>	<b>Actual completion time:</b>
<b>Location of engine run; east or west Ground Running Pen.</b>	<b>Power settings used:</b>
<b>Weather at time of run (Wind speed and direction etc.)</b>	