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*344.00.01(D) - Noise Compatibility - Engine Run-Up Noise Management*

# 344.00.01(D) - Noise Compatibility - Engine Run-Up Noise Management

To establish procedures for conducting aircraft engine run-ups for maintenance purposes at Tampa International Airport (TPA).

## Aviation Authority Operating Directive

300 Operations - Noise Compatibility

Effective: 10/06/03

D344.00.01: Engine Run-Up Noise Management

Revised: 04/11/18

09/02/20

04/20/22

**PURPOSE:** To establish procedures for tenants or aircraft operators to reserve the Ground Run-Up Enclosure (GRE) using the AeroCloud reservation tool and the process for conducting aircraft engine run-ups for maintenance purposes at Tampa International Airport (Airport).

**GENERAL:** Ground run-ups are routine aircraft engine maintenance tests performed as a check to ensure safe and reliable operation of the aircraft

engine, as required by Federal Aviation Regulations and aircraft engine manufacturers. In an effort to reduce noise impacts upon communities in the vicinity of the Airport, formal procedures for ground run-ups have been established, including the use of the GRE.

Run-ups may be either suppressed or unsuppressed. Suppressed run-ups are those maintenance engine run-ups conducted within the GRE. Unsuppressed run-ups are those maintenance run-ups conducted outside the GRE. The GRE is described in detail in Attachments B and E.

In order to ensure the safe and orderly utilization of the GRE, tenants or aircraft operators are expected to reserve the GRE through the AeroCloud reservation tool that is operated by the Authority and monitored by Airport Operations. Exceptions may granted due to operational considerations whereby reservations may be taken by phone at the discretion of the Airport Operations Manager (AOM).

## **PROCEDURES:**

### **A. Reserving the GRE:**

1. The primary way to reserve the GRE is by utilizing the AeroCloud reservation tool. To arrange a GRE request:
  - a. Use the AeroCloud gate/hardstand reservation feature (all steps are the same as a normal reservation). See diagram below.
  - b. Use **Airline code in Title** i.e. XP GRE Use

- c. Choose the approximate time window i.e. 0700-0730
- d. Choose the resource: GRE Request

- A.
1. Alternate GRE reservations may be scheduled by calling Airport Operations through the Airport Operations Center (AOC) at (813) 870-8770. When calling, provide the following information:
    - a. Company/organization name
    - b. Aircraft type
    - c. Planned start time of run-up
    - d. Estimated duration of run-up
    - e. Maximum power setting to be used during the test
    - f. Contact name and number
  2. All tenants requesting to reserve the GRE must comply with the following guidelines:
    - a. All operations must be conducted in compliance with Authority Rules and Regulations, security badging requirements, GOM, and Authority Operating Directive D343.00.01, Engine Run-Up Noise Management.
    - b. Only one Group III aircraft or above may occupy the GRE at a time.
    - c. Up to two GA aircraft may occupy the GRE at the same time.
  3. Airport Operations will inform the requestor if the GRE is occupied or vacant at the time of their call. If the GRE is vacant, approval will be granted. If the GRE is occupied, Airport Operations will inform the caller when the GRE is expected to be available and will notify the caller when the GRE is available for their run-up.

4. All users of the GRE must contact Airport Operations by calling the AOC at (813) 870-8770 if they have not cleared the GRE by the time stated in the GRE use request. This notification assists all users in efficient scheduling of the GRE.

#### A. Location:

All Commercial type jet aircraft are required to use the GRE. All other general aviation turbojets are required to utilize the GRE during the hours of 2200(L) to 0700(L). GRE use is recommended for all other types of aircraft. Due to size restrictions, aircraft with wingspans greater than 214 feet are prohibited from utilizing the GRE.

Engine run-ups that do not exceed idle power may be performed at the aircraft's parking location when these run-ups do not present a hazard to persons or property. Maintenance on aircraft within the GRE will be limited to minor adjustments that will not affect use of the GRE by others nor create environmental concerns. All equipment and tools must be removed from the GRE at the completion of each run-up.

#### 1. Operating Hours

The GRE is available for use 24 hours a day. Use will be on a first-come, first-served basis. Since use of the GRE is on a first-come, first-served basis, aircraft operators should exercise good planning to ensure that they have

sufficient time to complete all required run-ups before returning an aircraft to service.

## B. Suppressed Run-ups:

### 1. Priority for Use

Airport Operations will assign use of the GRE on a first-come, first-served basis. In the event that two or more users request use of the GRE for the same time, use of the GRE will be assigned based on consideration of departure time and aircraft type, respectively. At all times, air carrier type turbojets will have priority over other aircraft.

### 2. Aircraft Ingress into the GRE

#### a. Wingspan 125 feet or less

At the aircraft operator's discretion, aircraft with a wingspan of 125 feet or less may power into the GRE using no more than breakaway thrust. These power-in aircraft may enter from either the right or left side of the GRE. Taxi lead-in lines and turn-around markings are provided as visual references for proper positioning. Aircraft should initiate a minimum-radius turn with the nose wheel within

the 10' x 3' Turn Position Indicator box. The minimum-radius turn should be maintained until the aircraft has completed a 180-degree turn and is parallel to the GRE centerline.

Aircraft following this procedure will have a minimum wingtip clearance of 25' to the sidewall and 35' to the jet blast deflector. No assurance is given that reference markings will be visible under all lighting and weather conditions. Wingtip and tail clearances from GRE walls and the rear blast deflector are strictly under the control of the individual operating the aircraft. Proper positioning of the aircraft requires that any turn around must be fully completed so that the aircraft is parallel with the GRE centerline before conducting high-power run-ups.

b. Wingspan 125 to 214 feet

Any aircraft with a wingspan between 125 feet and 214 feet must be backed into the GRE with a tug. Airport Operations must be contacted for an escort if an aircraft will be towed to the GRE via active taxiways.

c. Wingspan greater than 214 feet

Any aircraft with a wingspan greater than 214 feet is too large to use the GRE. Run-ups will be conducted in accordance with procedures for conducting unsuppressed run-ups established by Airport Operations. Airport Operations must be contacted for approval before conducting an unsuppressed run-up.

### 3. Wing Walkers

GRE users are encouraged to use wing walkers when positioning aircraft within the GRE to prevent damage and to assure the aircraft is correctly positioned within the GRE. The use of wing walkers is at the discretion of the individual user.

### 4. Taxiway Access

All aircraft will access the GRE via Taxiway "E". The Federal Aviation Administration Air Traffic Control Tower (FAA ATCT) must be contacted for clearance before any aircraft or vehicles are operated on any movement area. All taxi-qualified mechanics that taxi aircraft must also have Movement Area Training (MAT) endorsement on their ID Badge, issued by Operations.

Proper communications between the aircraft, tow tractor, and the FAA ATCT must be maintained at all times during the taxi/tow operation.

## 5. GRE User Responsibilities

The GRE users are responsible for the following items:

- a. Inspecting the GRE for foreign object debris (FOD) and removal of such FOD beforebefore conducting a run-up, as well as insuring that the GRE is FOD-free upon completion of the run-up.
- b. Performing engine run-ups in accordance with airframe and engine manufacturer's guidelines.
- c. Closely monitoring engine operation and discontinuing any test if any condition exists preventing successful engine operation in order to prevent damage to the aircraft or GRE.



- d. Maintaining radio contact with the FAA ATCT during run-up activities to quickly communicate any emergency that may arise during run-up activity.
  
- e. Ensuring that all aircraft operators using the GRE are familiar with this Operating Directive.
  
- f. Chocking the landing gear for high power engine runs, as required by the GRE users company/airline/operator policies and procedures and/or aircraft manufacturer recommendations.

## 6. Aircraft Orientation

All jet aircraft will be positioned with the aircraft nose facing straight out of the GRE, due south, and on or parallel to the GRE centerline before beginning a high-power run-up. Propeller aircraft may be oriented nose-in to the GRE as appropriate to achieve better acoustical or aerodynamic performance. Under no circumstances should any run-up be performed with the blast pointed toward the sidewalls of the GRE, as it is not designed to withstand these forces.

As shown in Attachment B, two lines parallel to the face of the blast deflector have been painted on the pavement to identify the appropriate clearance distance from the rear blast deflector. The aircraft shall be positioned so that no portion of the aircraft extends aft past the "No Tails Closer Line", which is located 35 feet ahead of the jet blast deflector leading edge. The discharge nozzle of any engine which will be operated during the test must be forward of the "No Nozzle Closer Line", which is located 60 feet ahead of the blast deflector leading edge. Aircraft should be positioned as far into the GRE as practical to achieve maximum acoustical attenuation.

Operators will position aircraft within the GRE based on two basic principles. In normal wind conditions, aircraft should be taxied into the GRE so that the side of the aircraft with the engine to be tested will be closer to the GRE sidewall. For example, a B737 that is going to test its #1 engine will taxi in on the left lead-in line and make a right turn to position the aircraft with the #1 engine closer to the East wall. Placing the test engine nearer the wall will maximize acoustical attenuation.

When crosswinds are present, placing the aircraft closer to the upwind wall may allow run-ups to be conducted in a wider range of wind conditions. As operators gain experience conducting run-ups inside the GRE, they will develop their own preferences for this lateral placement.

## 7. Wind and Weather Conditions

Attachment A includes predicted aerodynamic usability wind roses for various aircraft types. These are general guidelines defining the wind direction and speed parameters during which the GRE can be used. These parameters will vary with the type of aircraft, engine position, and the power settings used for the engine testing. An illuminated sign displaying the wind speed and direction is attached to the east wall of the GRE for easy visibility from the aircraft cockpit.

The operator should closely monitor engine operating readings and abort the test if readings exceed engine manufacture's limits, if variances in readings indicate unsteady engine operation, or if any indications suggest continued operation might endanger people or property. If the operator still needs to continue the run-up operation, it is recommended that the operator wait until conditions improve so that the run-up can be safely completed. If this is not possible, procedures must be followed as specified in Section D, Unsuppressed Run-Ups, below.

## 8. Duration of Use

Users should be mindful that others may be waiting to use the GRE. Airport Operations will generally allow no more than one hour for each run-up. If an aircraft departs the GRE for any reason except in a cooperative effort to allow another user to complete a more time-critical run-up, that run-up operation is considered to be complete. The user must contact Airport Operations before each operation, even if it is for the same aircraft being run-up later that same day.

## 9. Aircraft Egress from the GRE

Following engine testing within the GRE, all aircraft may power out, using minimum power necessary. Operators shall contact FAA ATCT before entering the taxiway.

## 10. Facility Lighting

Security low-level lighting is provided within the GRE. The lights are on a photocell and remain on during hours of darkness. Operational lighting is provided within the GRE for use during all run-up operations.

## 11. GRE Damage

Damage to the GRE must be reported to the AOC at (813) 870-8770 immediately. Representatives from Airport Operations, Airport Police, and Maintenance may examine the damage and make a determination whether or not the damage is of a nature that would preclude continued use of the GRE. At the discretion of Airport Operations, the GRE will be taken out of service until necessary repairs are made and the appropriate inspections are completed. Notification of the unavailability of the GRE will be electronically distributed via e-mail to all users.

In addition, if the damage was discovered by a user of the GRE, the Maintenance Ground Run-up Area Damage Report Form as found in Attachment C must be completed and emailed to Airfield Operations at [airfieldops@tampaairport.com](mailto:airfieldops@tampaairport.com).

## 12. Equipment / Vehicle Parking

Any equipment or vehicles that accompany an aircraft should be parked close to the GRE control room on an area outside the GRE walls in such a manner as not to obstruct the taxiway/apron. Work stands, tow tractors or other ground support equipment may not be stored at the GRE.

### 13. User Risk and Liability Disclaimer

The Authority disclaims any and all warranties, expressed or implied, with respect to the GRE or its use, including but not limited, to the implied warranty of merchantability and fitness for a particular purpose. Each user of the GRE uses it at the user's own risk and is responsible for monitoring all wind and weather conditions, as described herein, to avoid risk of damage or injury to person or property. Improper use of the GRE or use during inappropriate weather conditions has been known to cause unreliable engine operation, up to and including compressor stalls.

By using the GRE, user assumes any and all risk of personal or property loss, damage, or injury of any kind

and user shall make no claim or action against the Authority for any loss, damage, or injury, including any claim for loss of use, arising out of user's use of the GRE. In no event will the Authority be liable for any special, consequential, indirect, punitive, or incidental damages, including but not limited to, loss of revenue or profits, arising out of or in connection with the use of the GRE or inability to use the GRE.

User is responsible for any and all damage or destruction of the GRE caused by user. Nothing in this Operating Directive may be construed to supersede the recommendations of the aircraft manufacturer or of the aircraft operations manual regarding the safe operation of the aircraft.

#### C. Unsuppressed Run-Ups:

##### 1. Conditions

There may be times when adverse wind or other conditions exist that may prevent a reliable test of engine performance using the GRE, or the GRE is not available due to use or being out of service. Under such conditions, an unsuppressed run-up may be conducted outside the GRE. Unsuppressed run-ups must be conducted in accordance with requirements set forth in this Section and at locations designated by the Authority.

## 2. Hours

### a. 2200(L)-0700(L)

During the hours of 2200(L) to 0700(L), all air carrier turbojets and general aviation turbojets with wingspans up to 214 feet must conduct maintenance run-ups above idle power in the GRE, consistent with the engine manufacturer's and aircraft operator's specifications. Unsuppressed run-ups of commercial type carrier aircraft between the hours of 2200(L) to 0700(L) are prohibited, except under extreme circumstances. Any commercial type carrier aircraft operator wishing to perform an unsuppressed run-up during these times must contact Airport Operations by calling the AOC at (813) 870-8770 to explain the situation and request approval. Approval may be granted only during extreme circumstances, which do not include occupation of the GRE by another user.

In the event that use of the GRE is not possible, an alternate location for an unsuppressed engine run-up may be assigned at the discretion of Airport Operations and the FAA ATCT. Alternate locations will be used only when the GRE is out of service due to maintenance or repair, when weather conditions preclude its use, or when other extreme circumstances exist.



b. 0700(L)-2200(L)

Aircraft operators are encouraged to use the GRE at all times for all run-ups above idle power. Run-ups by commercial type carrier aircraft are mandatory during the hours of 0700(L)-2200(L). Other aircraft types are not required to use the GRE during the hours of 0700(L) to 2200(L). Operators of general aviation turbojets must contact Airport Operations by calling the AOC at (813) 870-8770 for approval of unsuppressed run-ups during the hours of 0700(L) to 2200(L). Operators of other aircraft types are not required to contact Airport Operations for approval of unsuppressed run-ups during these hours.

3. Locations

The following locations may be utilized for unsuppressed run-ups, pending coordination with FAA ATCT.

- a. Taxiway "E", north of the Maintenance Run-Up Area.
- b. Extreme south end of taxilane "F".
- c. Other locations that do not present a hazard to persons or property.

APPROVED: Michael Stephens  
04/20/22

DATE:

## ATTACHMENT A

### USABILITY WIND ROSES

- B. A 300
  - E. A 310
  - E. A 319/320/321
  - E. B 717
  - E. B 727-200
  - E. B 737-200
  - E. B 737-300/400/500++
  - E. B 747
  - E. B 757-200
  - E. B 767
  - E. B 777
  - E. CORPORATE JET/CRJ
  - E. DC8
  - E. DC8-R
  - E. DC9
  - E. DC10/MD11
  - E. MD88
  - E. TURBOPROP
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