

Engine-out taxi

IFALPA acknowledges that one or two engines shut down can help to reduce noise, emissions and fuel use during taxi-in and taxi-out. However, IFALPA strongly opposes any mandatory EOT procedure due to the multiple safety, efficiency and operational factors which vary for every aircraft, airport lay-out, weather conditions, surface conditions and traffic load.

IFALPA endorses the incorporation of an approved, standardized EOT procedure into the Operations Manual, as part of the taxiing procedures, provided the relevant crew training is performed. The EOT procedure must clearly identify and address any areas of potential confusion like applicability of the MEL, responsibilities and task allocation during start up and shutdown, and criteria for when it may or may not be applied. Moreover, the Operations Manual shall clearly state that the EOT procedure is carried out at the Pilot-In-Command's discretion, after careful consideration of local and operational circumstances. Such circumstances include but are not restricted to:

- ▶ MEL items and operational/technical limitations,
- ▶ Local airport restrictions on such operations, for example taxiway/ramp surface gradients, maneuvering space, 180 degree turns and possibility of Foreign Object Damage (FOD) due to increased jet blast,
- ▶ Compliance with engine warm-up and cool down times for thermal stabilization as specified by the aircraft manufacturer,
- ▶ Weather conditions and taxiway/ramp surface status (for example slippery, wet) that may preclude the application of the procedure,
- ▶ Operating procedures related to aircraft system monitoring and checklist accomplishment, which must be consistent with a late engine start (during taxi-out) and/or an early engine shut-down (during taxi-in),
- ▶ Limitations to the environmental benefit of the procedure due to the increased thrust requirements on the operative engine(s) for ground manoeuvres.

If the Pilot-In-Command elects to carry out the EOT procedure in accordance with the above, the following factors should be taken into account:

General considerations

- ▶ Caution must be exercised when taxiing with one (for twin engine) or two engine(s) shut down, to compensate for the possible asymmetric force.
- ▶ Slow and/or tight taxi turns in the direction of the operating engine may not be possible at high gross weight.
- ▶ Aircraft system operation need to be carefully considered to ensure critical systems used for taxi remain operative, e.g. nose wheel steering, brakes, fire protection system.

Starting other engines during taxi

- ▶ An engine start procedure requires time and attention, which should not be detrimental to other taxiing duties, such as external visual scanning, systems monitoring and checklist accomplishment,
- ▶ Should any mechanical problems occur during start-up of the other engine(s), a return to gate may be required for maintenance
- ▶ There will be no fire protection from the ground staff when starting the engine(s) away from the ramp.
- ▶ There is a potential loss of braking capability and nose wheel steering, depending on system architecture.

Shutting down an engine during taxi

- ▶ Any engine shut down shall be done in accordance with SOPs and normal system configuration,
- ▶ A defined time is required before shutting down the engine(s) for thermal stabilization, depending, for example, on the use of full reverse thrust during landing.