

**Destination Airport Analysis Program.** The program is an allowance in the regulations to use a greater percentage of the runway for landing than would otherwise be allowed (80% with DAAP vs. 60% without). Only part 135 certificate holders that are designated as “Eligible On-Demand” operators; and authorized part 91, subpart K program managers may use DAAP. It is recognition that these operations have the systems and processes in place to assess airports and conditions that are suitable for the increased regulatory landing distance. DAAP is an enabling aspect of the regulations not a limiting aspect.

**References:**

The applicable regulations are:

14 CFR 135.385 – Large transport category airplanes: Turbine engine powered: Landing limitations: Destination airports

14 CFR 135.387 Large transport category airplanes: Turbine engine powered: Landing limitations: Alternate airports

14 CFR 91.1037 Large transport category airplanes: Turbine engine powered: Limitations:

**Destination and Alternate Airports**

The regulations specify the minimum runway lengths for operations at the destination and alternate airports. All three regulations require that an aircraft be able to stop within 60% of the effective runway length unless a DAAP is approved for use. DAAP allows for this requirement to be modified allowing flight operations using up to 80% of the effective runway length.

**“Effective Runway Length”**

In most cases, including runways served by instrument approaches, the effective runway length for landing is the distance from the point on the approach end of the runway to the rollout end of the runway. In other words, the entire paved surface of the runway. In some cases however, when obstructions exist in the approach path during the airport survey, a displaced threshold is installed to ensure the appropriate obstacle clearance for aircraft on approach. The displaced threshold reduces the effective runway length to the distance between the displacement and the rollout end of the runway. This is demonstrated in the following diagram. For runways served by an Instrument Landing System (ILS) approach, it is important that the “distance beyond glide-slope” and runway length values are not confused. These distances are not interchangeable and use of the “distance beyond the glide-slope” value will unnecessarily restrict operations.

**Landing Distance Compared Against the Effective Runway Length?**

This distance is provided by the manufacturer in the aircraft flight manual (AFM). This number is predicated on the aircraft crossing the approach end of the runway at a defined altitude and speed, and is the distance to bring the aircraft to a complete stop.

The AFM distance includes the runway used while airborne from the end of the runway until touchdown. If the AFM landing distance is less than 60% or 80% (as applicable) of the effective runway length for landing, this specific DAAP condition has been satisfied.

## **Background**

Prior to February 17, 2005, flights were operated in accordance with part 91 or 135 with the vast majority being operated in accordance with part 91. Any flight operated in accordance with part 91 was not subject to the 60% limitation, however all part 135 flights were. The simple fact is that only a very small number of flights were conducted under part 135 so this limitation did not affect many flights and was not very visible. Due to a rule change, effective February 17, 2005, all owner flights are required to be operated in accordance with part 91, subpart K or part 135. Since the changeover, all flights are now subject to the 60% limitation unless a DAAP is approved and used. This has resulted in the use of DAAP so as to not unnecessarily restrict flight operations.

## **Conditions to use DAAP**

There are 22 conditions that must be satisfied to use DAAP at the time of release. They can be found in the Flight Operations Manual (FOM) section 2.4.7 c).

Flights can be released up to four (4) hours prior to the scheduled departure. This includes flights using DAAP. Of the 22 conditions governing DAAP use, there are several that are dependant on the actual prevailing conditions at the airport at the time of operation (i.e. when the airplane arrives). For that reason, an actual or forecast change in the weather or airport conditions may result in the release being invalid since all 22 conditions are no longer satisfied.

While it can be said in such cases that the flight cannot operate because DAAP is not satisfied, it is inaccurate to say that DAAP is preventing the flight from occurring.

As with any flight, the Pilot in Command (PIC) must evaluate actual weather conditions at the destination airport while enroute and prior to landing. In addition, there are several DAAP unique conditions that must be re-verified and satisfied just prior to arrival or the PIC cannot allow the aircraft to land.

## **What DAAP Items Required to be Re-Verified in Flight?**

The DAAP unique items required to be re-checked in flight are limited but are often difficult to predict and include the following:

- Runway conditions (contaminants)
- Aircraft residual ice contamination
- Braking action
- Drag device operational status (flaps, air brakes etc.)
- Wind components (tailwind and crosswind)

## **Examples:**

An aircraft that is released in accordance with the conditions of DAAP, that experiences a failure of the airbrakes/spoilers enroute, would not be eligible to land at an airport under the provisions of DAAP.

An aircraft that is released in accordance with the conditions of DAAP would not be eligible to land at an airport under the provisions of DAAP if upon arrival at the airport the braking action is reported as "Poor".

An aircraft that is released in accordance with the conditions of DAAP would not be eligible to land at an airport under the provisions of DAAP if upon arrival, the prevailing wind was in excess of the tailwind or crosswind limitations specified in FOM 2.4.9.

## Changing Conditions

14 CFR 135.385 and 14 CFR 91.1037 prohibit the release and takeoff of a flight at a weight that would not be in compliance with landing weight limitations (addressed in FOM 2.4.7 LANDING) and the requirement to use only 60% or 80% of the effective runway length restrictions.

*Note: It is very important to understand that the 60% or 80% requirements are planning requirements only.*

If conditions change enroute, provided the DAAP specific items are satisfied, you may still land at the destination or alternate airport provided the runway required does not exceed the effective runway available. This is true even if the runway required exceeds the 60% or 80% (as applicable) requirement as applicable to the operation. In all cases, the DAAP specific items must be satisfied both at the time of release and just prior to landing.

DAAP is never required to be used. However, the runway length available for landing and/or the aircraft's performance capabilities may restrict operations at some airports without the use of DAAP.

## DAAP CHECKLIST

There are 22 items in the DAAP checklist to review/comply with in order to use DAAP landing distance criteria. A few of the checklist items include:

- PIC or SIC must have at least 75 hours of flight time in aircraft type
- Aircraft operated within prescribed operating weight IAW AFM
- Landing distance computed IAW AFM (including runway environmental conditions, aircraft configuration and runway slope)
- Performance data must be verified Flight Dispatch
- Current weather report from an FAA or NWS approved source
- Runway must be dry. If wet, a minimum of 15% over the landing distance is required
- Operations with other runway Contaminates such as snow (loose or compact) or ice are Prohibited
- Only Braking Action reported as Good or Better
- If the SIC has less than 100 hours of flight time as SIC in the specific aircraft type, the designated PIC must make the landing
- Following components operational and not deferred (MEL'd)
  - Anti-Skid
  - Wing Flaps
  - Thrust Reversers
  - Speed Brakes
- Tailwind within AFM limits. If a tailwind is reported, it must be considered. (max. 10 Knots)
- Maximum of 15 knots crosswind (90 degrees from the runway)
- Standard Runway Markings IAW AIM
- Standard Runway Lighting (sunset to sunrise)
- VASI or Electronic Glide Slope (min 2.5 angle / max 3.5 angle) for operations sunset to sunrise