



## Overloading

As an airport manager, you are uniquely positioned to protect your airport pavements from structural failures due to overloading. If your regular inspections can identify a cause for pavement damage, you can prevent repeat offenses and stop further damage. Overloading results in alligator cracking and rutting.

Figures 1 & 2 are examples of rutting. Ruts are easiest to see on rainy pavement. Generally, trucks damage the edges and aircraft damage the center. Solutions include keeping heavy traffic off the pavement or constructing a thicker surface when replacing your pavement. Scheduling fuel deliveries when underlying soils are dry or frozen is helpful. Insisting that a highway plow not have a fully loaded sand hopper when plowing spring snows on your airport can head off one of the most common reasons for damage.



Figure 1



Figure 2



Figure 3

Figure 3 shows well-developed alligator cracking. This is an indication of regular traffic that is heavier than the pavement construction can handle. The most common place for alligator cracking is in a depression or along the pavement edge. Moisture seeping through from a puddle or off the pavement edge can lubricate the underlying gravel and soils, reducing their load-carrying capacity. Gravel placed to support the pavement does not get compacted as well at the edges, leaving it weaker. Isolated locations of alligator cracking can be sealed or patched, but more general distribution indicates a need for pavement reconstruction.

Alligator cracking and rutting are signs of structural failure of your pavement. They require immediate changes to the airport's activities and/or planning for construction of heavier duty pavements.

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