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# Reducing the vertical load of the aircraft when traveling over rough runways by running characteristics of depreciation landing gear

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*In the article we show that to provide safe operation of aircrafts with wheeled undercarriage in the areas with poorly developed infrastructure in difficult-to-access regions, which have no prepared runways, it is necessary to decrease essentially the level of dynamic load of the airplane during take-off and landing. Preliminary calculations indicate, that the load of the plane during takes-off and landing could be essentially decreased by means of control changing of undercarriage characteristics. When these characteristics control oscillation of the airplane with back feed by trim angle or by vertical acceleration, then dynamic load could be 5 or 10...30 percent, respectively, down depending on runway roughness profile. This effect could be achieved by undercarriage damping characteristics control. Control of elasticity is inefficient because of control means delay.*

**Keywords:** aircraft, runway, shock absorption, undercarriage, control, take-off, landing, safety, dynamic load, acceleration.

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