



A Textron Company

OPERATION SAFETY NOTICE

412-18-43

19 December 2018

TO: All owners and operators of Model 412/412EP Helicopters

SUBJECT: LARGE FORWARD CYCLIC DISPLACEMENT INDUCING VERTICAL ONE-PER-REV VIBRATION ON THE GROUND

Bell has recently investigated situations where the pilot reported a rapid buildup of one-per-rev vertical vibration associated with a large steady state forward cyclic displacement in combination with collective input while at 100/103 percent RPM with any part of the skid gear in contact with the ground. Note that this vibration mode can be encountered on all 412 models equipped with any type of landing gear.

The purpose of this OSN is to remind operators that should a rapid buildup of excessive one-per-rev vertical vibration level be experienced, the amount of forward cyclic input shall immediately be reduced and, if necessary, the collective and rotor RPM shall also be reduced to exit the vibration mode described.

Field experience and flight test data indicate that excessive degradation of the transmission mounts and friction dampers could cause the sudden increase in one-per rev vertical vibration discussed in this OSN. Minimum collective and cyclic controls friction not meeting the maintenance manual specifications may also be a contributing factor.

With the release of this OSN, a "CAUTION" will be added to all applicable Flight Manuals Section 2 describing the recommended pilot action to exit the vibration mode described in this OSN.

For any questions regarding this letter, please contact:

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Approved for public release.