

11450.2A Reference Section(s)	RCDR Topic	RCDR Number
2-3.2.1(d) 2-3.2.1(f)	Allowance for commercially available travel truck assemblies with pinions of last reduction open gear sets that are not crowned nor manufactured with gear tolerances of A8 or better per AGMA 2015.	23-051

QUESTION

Q1: Commercially available pre-engineered travel truck assemblies for trolley and bridge travel drives frequently have final reduction open gear sets. The pinions of these open gears do not have crowned teeth and the gear tolerances are either not clearly specified by the OEM or specified to a level less than the required A8 or better per AGMA 2015. The intent of the pinion gear tooth crowning is to ensure adequate gear mesh should the relative angles between the pinion and bull gear change during loading. Are commercially available pre-engineered travel truck assemblies without crowned pinon teeth and with gear quality less than A8 per AGMA 2015, allowed for use in trolley and bridge travel functions for under running and top running bridge cranes, jib cranes, gantry cranes, and monorail cranes?

ANSWER

A1: The referenced requirements are geared towards hoist drives (and rotate drives of portal and floating cranes) and specifically custom designed drives. Not meeting these two requirements will have no effect on the safety, reliability, or durability of commercial, pre-engineered trolley and bridge drives. Based on the above, and the lack of commercially available pre-engineered travel truck assemblies that meet the design requirements of 11450.2A Sections 2-3.2.1(d) and 2-3.2.1(f), the use of commercially available pre-engineered travel drive assemblies with open pinion teeth of last stage gear sets which are not crowned or provided with gear tolerances less than A8 are approved for the trolley and bridge drive functions on bridge, jib, gantry, and monorail cranes.