

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

June 28, 2017

David S. Graziosi President, Chief Financial Officer, and Treasurer Allison Transmission Holdings, Inc. One Allison Way Indianapolis, IN 46222

Re: Allison Transmission Holdings, Inc.

Form 10-K for Fiscal Year Ended December 31, 2016

Filed February 24, 2017

File No. 001-35456

Dear Mr. Graziosi:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Notes to Consolidated Financial Statements

Note 2. Summary of Significant Accounting Policies, page 57

Goodwill and Other Intangible Assets, page 59

1. You disclose goodwill is tested for impairment at the reporting unit level, which is the same as your one operating and reportable segment. Please clarify for us if you aggregate multiple components into your reporting unit. If so, tell us the components you have aggregated and provide us with your analysis that supports aggregation is appropriate pursuant to ASC 350-20-35-35.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff. David S. Graziosi Allison Transmission Holdings, Inc. June 28, 2017 Page 2

You may contact Amy Geddes at 202-551-3304 or Doug Jones at 202-551-3309 if you have questions regarding comments on the financial statements and related matters. Please contact me at 202-551-3380 with any other questions.

Sincerely,

/s/ Lyn Shenk

Lyn Shenk Branch Chief Office of Transportation and Leisure