

July 11, 2017

VIA EDGAR

Mr. Lyn Shenk Division of Corporation Finance United States Securities and Exchange Commission 100 F Street, N.E. Washington, D.C. 20549

> 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. Shenk:

Allison Transmission Holdings, Inc. (the "Company") hereby submits the Company's response to the comment of the staff of the Division of Corporation Finance (the "Staff") of the Securities and Exchange Commission (the "Commission") set forth in your letter dated June 28, 2017 regarding the Commission's review of the Company's Annual Report on Form 10-K for fiscal year ended December 31, 2016 filed on February 24, 2017.

For the convenience of the Staff, the Staff's comment is reproduced below and is followed by the Company's response.

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.

U.S. Securities and Exchange Commission Division of Corporation Finance July 11, 2017 Page 2

Response:

The Company does not aggregate components into its reporting unit. The Company has one component that consists of a single line of business, which is the manufacture and distribution of fully-automatic transmissions. The component, or reporting unit, is the same as our operating segment and is managed by the chief operating decision maker ("CODM") at a consolidated level. Discrete financial information is not prepared at a component level below the operating segment. The CODM assesses performance and allocates resources based on the consolidated financial information.

In response to the Staff's comment, the Company will enhance its disclosure of its Goodwill and Other Intangible Assets accounting policies in its Annual Report on Form 10-K for the fiscal year ended December 31, 2017. For example, the additional disclosure, shown in italics and underlined below, would be as follows:

Goodwill and Other Intangible Assets

Goodwill represents the excess of purchase price paid over the fair value of net assets acquired. In accordance with the FASB's authoritative accounting guidance on goodwill, the Company does not amortize goodwill but rather evaluates it for impairment on an annual basis, or more often if events or circumstances change that could cause goodwill to become impaired. Goodwill is tested for impairment at the reporting unit level, which is the same as the Company's one operating and reportable segment. The Company does not aggregate any components into its reporting unit. The Company has elected to perform its annual goodwill impairment test on October 31 of every year using a multi-step impairment test. In Step 0, the Company has the option to evaluate various qualitative factors to determine the likelihood of impairment. If determined that the fair value is more likely than not less than the carrying value, then the Company is required to perform Step 1. If the Company does not elect to perform Step 0, it can voluntarily proceed directly to Step 1. In Step 1, the Company performs a quantitative analysis to compare the fair value of its reporting unit to its carrying value including goodwill. If the fair value of the reporting unit exceeds the carrying value of the net assets assigned to that unit, goodwill is not considered impaired, and the Company is not required to perform further testing. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, then the Company must perform Step 2 of the impairment test in order to determine the implied fair value of the reporting unit's goodwill. If the carrying value of the difference.

U.S. Securities and Exchange Commission Division of Corporation Finance July 11, 2017 Page 3

If you have any questions or comments, please contact me at (317) 242-6937.

Very truly yours,

/s/ David S. Graziosi

David S. Graziosi

President and Chief Financial Officer

Amy Geddes, Division of Corporation Finance
Doug Jones, Division of Corporation Finance
Lawrence E. Dewey, Chairman and Chief Executive Officer
Eric C. Scroggins, Vice President, General Counsel and Secretary