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LOAD TESTING OF LIFTERS

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INTRODUCTION

Two lifter assemblies were submitted by Progressive Components to Element Materials Technology for load testing, to identify the tensile strength of the lifter assembly. The test compared (2) samples of equivalent sized Progressive C-Series and the DME Accualign lifter assemblies.

CONCLUSIONS

The DME Accualign lifter broke at approximately 1/3 of the load that the Progressive C-Series UniLifter was able to withstand.

			Peak Load,	
Sample Manufacturer		Specimen	lbf	Location of Failure
C-Series Lifter	Progressive Components	PRO 1A	5,325	Pulled out of Connector Legs, No Fracture
Assembly Part # CCU87		PRO 1B	5,528	Pulled out of Connector Legs, No Fracture
DMF Accualign 500	DME	DME 2A	1,210	Ball (Figure 3)
Series Part # ALA14		DME 2B	1,606	Connector Let at Ball (Figure 4)



SAMPLE IDENTIFICATION

Two samples of each lifter assembly were received, both used ½"x ½" core blades. Specimens 1A and 1B are the C-Series lifter assembly and consisted of part numbers CCU87, CGU50 and CBS50X50L8. Specimens 2A and 2B are the DME Accualign and consisted of part numbers ALS14-1900, ALA14 and ALBD-0500-0500-14-5.

TEST METHOD

Specimens were tested in tension at a speed of 0.2"/min. Typical tension test setups are presented in Figures 1 and 2.

CALIBRATED TEST EQUIPMENT

MTS Load Frame, LVDT/Actuator, Asset # MTA-041.3, Cal Date: 04/Nov/2020, Cal Due: 04/Nov/2021 MTS Load Frame, Load Cell, Asset # MTA-041.1, Cal Date: 06/Nov/2020, Cal Due: 06/Nov/2021

REVISION NOTES

Revision	Page #, Section, Description	Date
0	Original Release	5/10/2021
1	Added Expanded View in Figure 1 and Figure 2	5/11/2021



FIGURES



CCU8 Produces in

Figure 1.1. Expanded View



Figure 2. Typical DME Accualign Tension Test Setup



Figure 2.1. Expanded View



FIGURES Continued



Figure 3. Ball Failure of Specimen 2A, Part # ALA14



Figure 4. Connector Leg at Ball Failure of Specimen 2B, Part # ALA14