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Request for Interpretation - Response
February 10, 2014

Request for Interpretation (RFI) dated March 28, 2013, relating to Section 10.2.14, Hydrostatic (or Pneumatic) Strength Test, of ANSI/ALI-ALCTV:2011, Automotive Lifts - Safety Requirements for Construction, Testing and Validation (Technical Issue #TI-13-003)

This document comprises the official response of the Automotive Lift Institute, Inc. (ALI) to the "Request for Interpretation" relating to the requirements of ANSI/ALI ALCTV, Standard for Automotive Lifts – Safety Requirements for Construction, Testing and Validation (2011 Edition), as submitted on March 28, 2013.

Request 1: When hydrostatic testing hydraulic (or pneumatic) cylinders, should the hydrostatic test pressure be equal to three (3) times the maximum operating pressure measured in the OPERATION TEST AND/OR THE LATERAL SYNCHRONIZER TEST?

Response 1: YES

Request 2: When hydrostatic testing hydraulic (or pneumatic) cylinders is it permissible to employ a test fixture that enhances the hoop strength or longitudinal strength of the cylinder during the testing process?

Response 2: NO

Request 3: When hydrostatic testing hydraulic (or pneumatic) cylinders is it permissible to employ an auxiliary power source?

Response 3: YES

Request 4: When hydrostatic testing hydraulic (or pneumatic) cylinders and plunger seal leakage is such that the hydrostatic test pressure cannot be maintained for the required one (1) minute, is it permissible to plug the dry side breather and provide pressurized fluid on the dry side of the piston?

Response 4: NO

Request 5: When hydrostatic testing hydraulic (or pneumatic) cylinders and plunger seal leakage is such that the hydrostatic test pressure cannot be maintained for the required one (1) minute, is it permissible to make a "design change" to the plunger seals to reduce leakage to a manageable amount?

Response 5: YES

Request 6: When hydrostatic testing hydraulic (or pneumatic) cylinders and plunger seal leakage is such that the hydrostatic test pressure cannot be maintained for the required one (1) minute, is it permissible to use an auxiliary power source with a discharge flow rate higher than that of the intended fluid supply system?

Response 6: NO

Request 7: If the cylinder has an internal stop, should the stop be in place to define the extended position for push cylinders and retracted position for pull cylinders?

Response 7: YES

Request 8: If the cylinder has an external stop, should the stop be tested in conjunction with the hydrostatic strength test (with the cylinder located either in the lift or in an appropriate test fixture)?

Response 8: YES

Request 9: When hydrostatic testing hydraulic (or pneumatic) cylinders, should the hydrostatic pressure be applied to the volume that is contained on the wet side of the piston when the plunger is in the fully extended position for push cylinders and fully retracted position for pull cylinders?

Response 9: YES

Request 10: When hydrostatic testing hydraulic (or pneumatic) pull cylinders is it required to restrain the plunger short of full retraction to test the rod to piston connection (with the cylinder located either in the lift or in an appropriate test fixture)?

Response 10: YES

Request 11: When hydrostatic testing hydraulic (or pneumatic) pull cylinders when the plunger is short of full retraction to test the rod to piston connection (with the cylinder located either in the lift or in an appropriate test fixture), is the rod to anchor connection required to restrain the load with no permanent deformation?

Response 11: NO

Request 12: When hydrostatic testing hydraulic (or pneumatic) cylinders employed in hinged lifts, should the hydrostatic pressure be applied to the volume that is contained on the wet side of the piston when the plunger is in the position where the maximum operating pressure is observed during the OPERATION TEST AND/OR THE LATERAL SYNCHRONIZER TEST?

Response 12: NOT REQUIRED