



Notes:

1. Dimensions in mm (inches)
2. Dashed lines indicate position with brake tubing fully deflected

S12.16 High temperature conditioning and adhesion test.

S12.16.1 Apparatus. A tension testing machine that conforms to the requirements of American Society for Testing and Materials (ASTM) Standard Practices for Force Verification of Testing Machines, Designation E4-99. The machine shall have one movable and one fixed jaw suitable for clamping small sections of plastic air brake tubing material. The machine produces a chart or has a recording device providing displacement as one coordinate and tensile force as the other.

S12.16.2 Preparation.

(a) Subject the tubing to the bending and temperature conditioning tests specified in S12.9 (a) through (e).

(b) Cut a test specimen of 1 inch in length from a section of tubing that was subjected to bending in (a).

(c) Cut the specimen longitudinally along its entire length so that one wall of the tubing is completely cut through. Along one edge of the specimen resulting from this cut, use a sharp knife and cut the tubing at the interface of the inner and outer layers until two flaps of material are created that are large enough to be clamped in the tension testing machine. One flap consists of material from the inner layer and one flap consists of material from the outer layer.

(d) Mount the specimen in the tension testing machine by clamping one flap in each jaw. Apply a tensile force of 25 pounds to the flaps of the specimen in a period of 5 seconds and maintain this

force for the duration of the test. The specimen is permitted to separate a small amount until the inner and outer layer interface becomes fully engaged and a continuous line of reinforcing braid is not present at the layer interface. The layers of the specimen shall not separate thereafter.

S12.17 High temperature conditioning and collapse resistance test.

(a) **Apparatus.** A holding device with two vertical pins, the distance between which can be adjusted by moving one or both pins. The bottoms of the pins are attached to the device and remain in a horizontal plane. The diameter of the pins is approximately the same as the inside diameter of the size of tubing to be tested, and is 1 inch in length.