OVERVIEW

The following technical note covers drop cable break strengths. The two key factors which influence break strength are the center conductor size and the amount of metal in the braid. The larger the center conductor the higher the break strength; similarly the more metal in the braid, the higher the break strength.

RESULTS

Since the center conductor has a much lower elongation than the braid, it is difficult to develop much braid tension before the center conductor breaks. During TFC break strength testing, the cable was wrapped around a mandrel allowing braid tension to develop thus more accurately simulating normal installation conditions (i.e., a Kellem or snubber grip). The break strength values shown in Table 1 generally follow expected results: higher break for larger center conductors and more metal in the shield.

Table 1.

Break Strength, Pounds

Braid Coverage	6 Series (AWG 18)	59 Series (AWG 20)
40%	230	155
60%/40%	300	240
60%	255	205
95%	355	305

TEST PROCEDURE

The drop cable is held in a tensile strength tester by wrapping each end of the cable around a 1.5 inch diameter mandrel and leaving 10 inches of cable between the mandrels.

The mandrels are separated 2 inches per minute while recording the separation force on a strip chart recorder.

The maximum force required to break the braid or center conductor, whichever is lower, is taken as the break strength of the cable.