which provides the specific criteria used for cut testing and level performance rating and for comparing the effectiveness of powered rescue tools intended to cut or shear. This is shown in Figure 2-1, Cut Testing and Level Performance Rating Required by NFPA 1936.16

The testing parameters represented by the criteria in Table 8.13.1 of NFPA 1936 are based on cutting five specific types of materials (round bar, flat bar, round pipe, square tube, and angle iron) and nine distinctly separate performance levels that account for the size and weight of the materials being cut. Those parameters provide a consistent baseline for testing, although the genesis of the criteria in this table is not clear.

Since problems are being reported in the field with the effectiveness of these cutting tools on modern passenger motor vehicles (and one of the primary motivations for this study), there are obvious questions on the need to consider updating Table 8.13.1 of NFPA 1936 and/or adding additional categories that will more realistically qualify the performance of the tools. Ultimately the purchasers and users of this equipment need a practical and credible method of evaluation. They need a test method that clarifies the performance levels with what fire fighters expect to encounter in the field in response to emergencies involving new-model passenger vehicles equipped with high-strength steels.

![Figure 2-1: Cut Testing and Level Performance Rating Required by NFPA 1936](Table 8.13.1 of NFPA 1936, Standard on Powered Rescue Tools)

The NFPA 1936 standard is based on providing performance-oriented criteria and attempts to avoid prescriptive requirements that could inadvertently restrict the development of improved technology and marketplace competition, without maintaining or enhancing the level of safety. An example would be the specific design of rescue tool cutting blades. NFPA 1936 provides basic information to measure their expected performance, but it does not provide detailed