

M-TS-0000516**Equivalent Safety Finding****Crash Resistant Fuel System / Breakaway Coupling / Separation Load****1. APPLICABILITY**

This ESF is applicable to small rotorcraft.

1.1 AFFECTED REQUIREMENT

CS 27.952 (c) (1) (i), Amdt. 10

2. STATEMENT OF EQUIVALENT SAFETY FINDING

In lieu of direct compliance with the requirement identified in chapter 1.1, and provided that the below compensating factors are complied with, the couplings with breakaway loads below 25% of ultimate failure load of the weakest component in the fluid-carrying line are considered to be compliant with the intent of the regulation:

- to ensure separation during a crash
- to preclude unintended separation during normal aircraft operation
- to preclude unintended separation during maintenance

3. COMPENSATING FACTORS

- a) The design of the fuel tank system does not allow any relative motion between coupling and fuel cell in installed condition.
- b) The working load on the coupling expected in normal operation is more than an order of magnitude below the actual separation load of the coupling.