

11450.2A Reference Section(s)	RCDR Topic	RCDR Number
2-4.2.1(f), 2-7.1(t), and 2-7.4(f)	Allowance for cast aluminum thruster housings on brakes	22-053 23-003

QUESTION

Q1: Commercially available brake thrusters are manufactured using cast aluminum housings. Each of the major brake manufacturers use thrusters manufactured by EMG. There are several versions of EMG thrusters, but each of the thrusters have cast aluminum housings. In the event of a thruster housing failure, the brakes are designed to immediately set with no loss of braking torque. The ability to release the brake may be lost, but the brake will fail-safe and will prevent the load from dropping. This is true for thrusters with either internal or external springs. Are brake thrusters with cast aluminum thruster housings acceptable for General Purpose Service, Special Purpose Service, and ordnance handling applications?

ANSWER

A1: Based on the lack of commercially available thruster housings that meet the material requirements of 11450.2A Sections 2-4.2.1(f), 2-7.1(t), and 2-7.4(f) and the determination that thruster housing failure will not result in loss of brake torque, the use of cast aluminum thruster housings is approved.