

**Smokejumper
Aircraft
Accessory
Drawings
&
STC's**

CELL BALL
INFORMATION FORM

SMOKEJUMPER AIRCRAFT ACCESSORIES

General Information

Technical Support:

Full-size copies of MTDC smokejumping aircraft accessory drawings, and technical information about these designs, can be obtained from:

USDA Forest Service
Missoula Technology & Development Center
Atten: Dave Pierce
Bldg #1, Fort Missoula
Missoula, Montana 59801

406-329-3927

NOTE: THE REDUCED-SIZE DRAWINGS CONTAINED IN THIS BOOK ARE NOT INTENDED FOR USE BY FABRICATION PERSONNEL. FULL SIZE DRAWINGS MUST BE PROVIDED FOR FABRICATION PURPOSES. THIS IS BECAUSE SOME DIMENSIONS ARE NOT READABLE IN THE REDUCED-SIZE DRAWINGS AND BECAUSE SOME DRAWINGS CONTAIN PATTERNS THAT REQUIRE FULL-SIZE PRINTS. ALSO, PROVIDING FABRICATORS WITH FULL-SIZE DRAWINGS WILL INSURE THAT THE MOST CURRENT DRAWING REVISION IS USED.

Anchor Strength Requirements:

Strength Requirements for smokejumping static-line anchor installations have been established by the Smokejumper Aircraft Screening and Evaluation Board (SASEB). SASEB is an interagency group with membership representing the USDA Forest Service, USDI Bureau of Land Management (BLM), and the USDI Office of Aircraft Services (OAS).

These strength requirements anticipate worst-case loads in smokejumping operations. Primary and secondary anchor designs are certified using the Federal Aviation Administration (FAA) Supplemental Type Certificate (STC) process. The USDA Forest Service Missoula Technology and Development Center (MTDC) is the repository for the drawings, STC's, and for the engineering documentation that supports these designs.

Primary Anchors. Primary anchors are used to attach personnel parachute static-lines for intentional jumping.

A 2,000 pound STC is required. A safety factor is provided by using a 3,000 pound design strength. Primary anchors are intended to be adequately strong to take a smokejumper entow.

Secondary Anchors. Depending on the specific aircraft, secondary anchors may have one or more uses. These include: (1) attachment of personnel parachute static-lines during an emergency exit,

(2) attachment of cargo static-lines, and (3) attachment of a spotter or cargo droppers tether pigtail. A 750 pound STC is required. A safety factor is provided by using an 1,125 pound design strength. Secondary anchors are intended to be adequately strong to: (1) withstand anticipated mis-route loads during an emergency exit, (2) exceed the strength of the "weak-link" incorporated into all smokejumper cargo parachute static-lines (and BLM ram-air drogue static-lines), and (3) withstand maximum spotter or cargo dropper tether loads.

Requirements for Other Smokejumping Accessories:

MTDC engineers use appropriate strength and design requirements for handrails, jump steps, floor platforms, etc. However, these accessories are not certified using the FAA STC process. These accessories are installed in smokejumping aircraft using the FAA 337 Field Approval process.

Safe Operational Use of Smokejumping Accessories.

Safe use of smokejumping accessories controlled by MTDC drawings depends upon limiting their use to the specific applications for which they were designed. For example, anchor cables are located in each smokejumper aircraft to provide safe deployment of specific smokejumping personnel or cargo parachutes past the horizontal stabilizer. Typically this is accomplished by locating the anchor such that when a static-line D-bag assembly is attached to the anchor and stretched aft, the D-bag is positioned underneath the horizontal stabilizer between the forward edge of the stabilizer and the elevator hinge. The use of parachutes with, for example, a different length static-line may be unsafe. Hookup and drop procedures for each smokejumper aircraft are established to insure that the various anchor designs are used as they were intended.