

Boeing Material Recommendations For Airports – Planning for an Aircraft Recovery -

Fortunately, most airports never have to participate in the recovery of a large commercial airplane, one in which the airplane may be off the runway, buried in mud with broken landing gear or worse. For most airports around the world it is typically the responsibility of the airplane operator to conduct the recovery. However, since the airport is typically involved in supporting the recovery operation and given that most airports have only a single runway to support flight operations, it is in the airport's best interest to expedite the recovery and return the airport to normal flight operations.

The operators of Boeing aircraft (including Douglas and McDonnell-Douglas models) are provided an Airplane Recovery Document (ARD) for each model type of Boeing airplane they operate. The ARD provides methods for recovering an airplane in a safe and efficient manner and other critical information, such as maximum allowable loads for lifting, tethering, and transporting the airplane. The airplane operator will often work with special teams from Boeing Commercial Aviation Services (CAS) and Boeing Airplane on Ground (AOG) to plan and execute the recovery operation. It should be noted that the Airplane Recovery Document V contain proprietary data, and are available only to operators of Boeing airplanes.

Boeing, however, realizes that airports may desire W R S U H S D U H I R U V X S S R U W L Q J D S U H F R Y H U \ R S H U D W L R Q as part of their normal emergency planning efforts. Attached is a list of general purpose equipment and materials (consumables) that have been extracted from the Boeing ARD V, which airports may wish to have available to support an airplane recovery. Some of the equipment/materials may already be in inventory. Other equipment is typically available from local sources on an "as-needed" basis. It is possible that an airport could use I H Z H U items or items with smaller capacities. Airports can also use different equipment or substitute equipment if it is necessary.

Additional questions concerning this issue can be directed to any of the following Boeing groups:

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| NO. | ITEM | QUANTITY |
|-----|--|-------------------------------------|
| 19 | Tethering Cable, or 3 in. (7.6 cm) diameter rope, 20 ton (18 metric ton) capacity 80 ft (24 m) length, with splice eyes and thimbles | 8 |
| 20 | Ratchet Chain Hoist, 3 ton (2.7 metric ton) capacity | 8 |
| 21 | Ground Anchor, 10 ton (9 metric ton) capacity | 8 |
| 22 | On-Site Communication Equipment, Portable radios, interphone headsets, or mobile phones | 5 |
| 23 | Railroad Ties | Up to 1500 |
| 24 | Crushed Rock, 1.5 in. (3.8 cm) | 30 cubic yards (23 cubic meters) |
| 25 | Pit Run Gravel | 50 cubic yards (38 cubic meters) |
| 26 | Planking, Steel or Aluminum, 2 in. x 8 in. x 8 ft (5 x 20 x 244 cm) OR Equivalent Epoxy Filament Cloth Ground Cover | 500 |
| 27 | Mobile Crane, 12 ton (10.8 metric ton) capacity. Height 28 ft (8.53 m) Reach 10 ft (3 m) for airplane component lifting, including engines | 1 |
| 28 | Bulldozers, Bucket Loaders, etc., For Excavation | As Necessary |
| 29 | Winching Vehicles, Forklifts, Flat-bed Trucks, etc., For Tethering, Moving, Loading, Unloading | As Necessary |
| 30 | Ladders, At least 24ft (7.3m) extension | 2 |
| 31 | Miscellaneous Tools: Shovels, picks, crowbars, sledge-hammers, hoes, chainsaws, hammers, nails, handsaws, small hydraulic jacks, shackles, etc., | As Necessary |
| 32 | Ballast, Sand bags, cement blocks, scrap iron, drums filled with water, etc. | 3000 LB (1360 Kg) |
| 33 | Trailers or Workshop Tent | As Necessary |
| 34 | Quick-Set Concrete | As Necessary |
| 35 | Large Mobile Cranes, For airplane wing and body lifting | As Necessary |
| 36 | Used Rubber Tires | 30 |
| 37 | Grounding Rod, Coppertone-coated steel with 60 ft (18 m) cables and clips | 10 ft (3 m) |

NO.

ITEM