

BREAK-A-WAY LIFTING MAGNET TEST STAND

MAG-MATE®

Break-a-way test of a lift magnet determines the current lift capacity of the magnet. The outcome of the test allows the operator/owner of the lift to know if the magnet meets the rated lift capacity as designed by the manufacturer. Ropes, slings and chains can be visually inspected to see damage that would require the product be taken out of service. With magnets, internal damage to the magnetic material is not evident by simply looking at the product. There are three situations that can lead to loss of magnetic strength. Blows, dropping, or banging on the magnet can cause fractures in the magnet, high heat if the magnet is exposed to temperatures above its capabilities and/or exposure to electrical fields, like generators or welding ground circuits can all result in loss of magnetism. Breakaway testing will prove the magnet is performing at the intended Working Load Limit.

Visual Inspection

- Inspect the lifting lug for stress fractures, cracks or bending.
- Inspect the release lever for stresses or bends.
- Inspect the sides of the magnet for any contusions caused by a blow.
- Inspect the magnetic surface for rust, gouges, embedded objects or other imperfections to the lifting surface.
- Inspect for any discoloration for the magnet surface and epoxy.

Testing Process

- Remove any loose or embedded objects from the lifting surface.
- Remove any loose debris from the test plate surface.
- Place magnet on center of APPROVED test plate surface.
- Attach load cell to the lifting lug of the magnet.
- Clear number readout on the digital weight indicator.
- Engage the 2 axis hydraulic pump to begin the testing.
- Perform 5 separate tests, discard the "highest" & "lowest", average the remaining tests to determine the Break-A-Way Value.

Repair or Replace

- Replace any part of the lift magnet that did not pass the Visual Inspection.
- Replace the lift magnet if it does not meet the manufacturer's stated lifting value.
- Repair the lifting surface of the magnet to improve test value.

Documentation

- Record break-a-way Value on the BREAK-A-WAY CERTIFICATE.
- Retain certificate in safety coordinator's files.
- Schedule the next break-a-way test date for each lift magnet.



INDUSTRIAL MAGNETICS, INC.

1385 M-75 South • Boyne City, MI 49712 • P: 888.582.0822 • F: 231.582.2704 • WWW.MAGNETICS.COM

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