LIFTY BOARD™

PATENT PENDING

SAVE TIME.

SAVE MONEY.

SAVE LIVES.

LIFTY BOARD™ USER MANUAL

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USER MANUAL CONTENT

THE DEVICE – USER'S MANUAL

LIFTY BOARD™ device is a highly engineered tool intended to aid the utility field in the repair and maintenance work on low-voltage distribution equipment and lines. It allows linemen **TO COLLECT AND CARRY ALL 3 WIRES** associated with open wire secondary **AT THE SAME TIME.** This cuts the number of steps required and **REDUCES THE PHYSCIAL EFFORT** required by workforce members. **LIFTY BOARD™** device also **MINIMIZES DIRECT CONTACT WITH LIVE WIRES. LIFTY BOARD™** device has been tested by Powertech Labs Inc. for both mechanical and electrical strength, and has a considerable margin – over what is required for safety factors of 3:1.

- **Di Electrically TESTED** to withstand 6,000 volts. This is **over 6 times the maximum hazard of 1000 volts.** Safety factor of 3:1.
- Can be used in temperatures as low as **-20 degrees C**
- Product Tested By Powertech Labs to **hold and carry 591 pounds per hook.** Safety factor of 3:1. See weight and conductor length capabilities table on page 4

OPTIONS

- **Can be available in a 4 slot option**
- **Can be available in 10" spacing in between slots for larger conductor spacing**

MAILING ADDRESS
#105-1385 West 8th Ave, Vancouver BC V6H 3V9 | WEB// www.LIFTYBOARD.com | E// info@LIFTYBOARD.com

CONTACT
PH// 604.603.9028 | TOLL FREE// 1.877.233.4752 | FAX// 1.877.237.0153

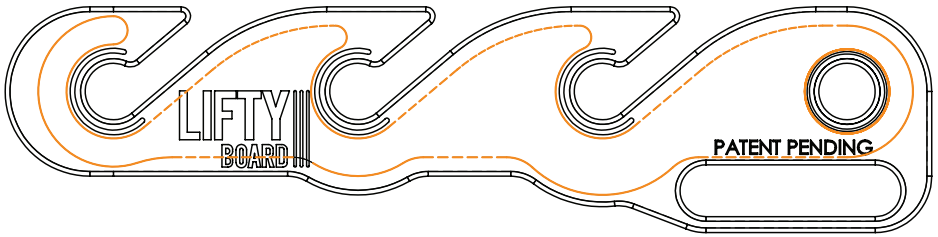
HOW IS LIFTY BOARD™ DEVICE MADE?

LIFTY BOARD™ device is manufactured using cast polyurethane with a fully insulated steel insert.

Cast polyurethanes are elastomers and are created by the reaction of a prepolymer which contains reactive isocyanate groups and a curative which contains hydroxyl or amine groups. In their simplest form, these two components, the prepolymer and curative are the only chemicals in the mix. The mixture is then poured into a heated mold where the components react to form a solid elastomeric piece. The polyurethane is molded around the steel insert. This is what gives LIFTY BOARD™ device its tensile strength.

Each LIFTY BOARD™ device is built with steel inserts in order to maintain a strong safe working load for holding and carrying conductors. The steel also helps to maintain strength in low temperatures. In order to maintain a safe buffer between the steel inserts and the urethane, we have placed safety ridges around all slots and holes. As soon as the device wears down to the safety rings, it is important to discontinue use and replace the LIFTY BOARD™ device immediately. The lifetime of the board will depend on use. We project that the boards should last an average span of 30 years. Again, this will depend on handling and usage.

Illustration below shows the positioning of the steel insert, insulated with an injected poly urethane.



Quanta Technology reviewed various test results performed by Powertech Labs Inc. on LIFTY BOARD™ device. The device has substantial mechanical and electrical strength margins over what will be needed to perform the jobs listed above, and other possible applications, safely and dependably.

LIFTY BOARD™ DEVICE INSPECTION

Crew member should inspect their LIFTY BOARD™ device before every use.

The crew member should look out for the following:

1. Safety rings. Has the polyurethane worn down to the warning rings?
2. Deterioration of the polyurethane; especially around the warning rings and slots
3. Chips or dents on or in the board
4. Abnormal bends or twists that affect intended use
5. Damage to the winch hole
6. If you see any steel protruding out of the board
7. Loose or shaky steel insert
8. Broken handle

If a crew member notices any of the above, you should discontinue use and replace their LIFTY BOARD™ immediately.

HOW TO CLEAN LIFTY BOARD™ DEVICE

Cleaned with any household cleaner….**avoid any solvent-based cleaners.**

HOW TO STORE LIFTY BOARD™ DEVICE

Store away from extreme temperatures and keep out of direct sunlight for long term storage.

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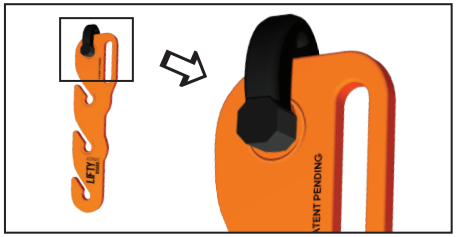
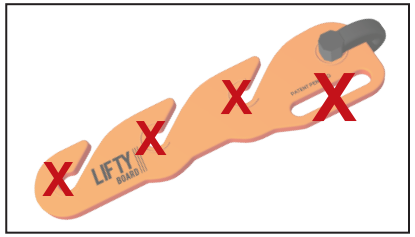
HOW TO USE LIFTY BOARD™ DEVICE

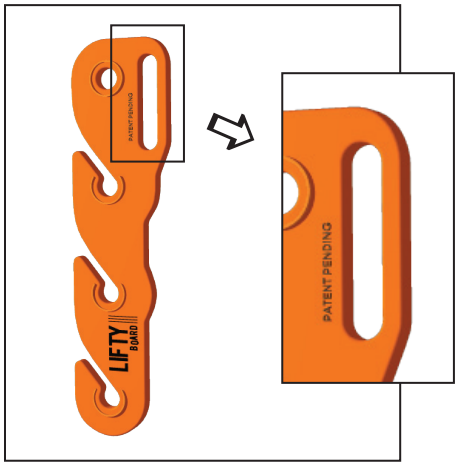
WHERE TO PUT THE SHACKLE



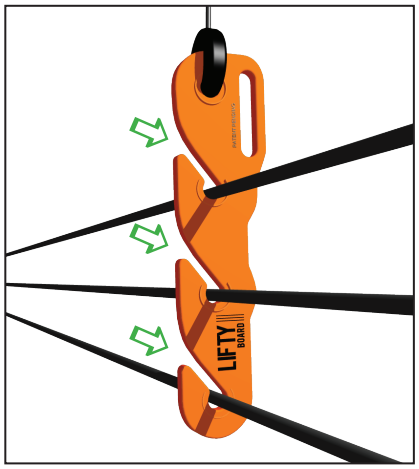
WHERE NOT TO PUT THE SHACKLE



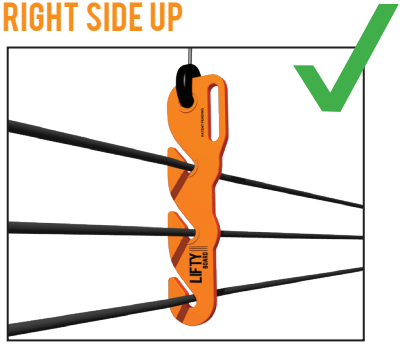
WHERE TO CARRY (THE HANDLE)



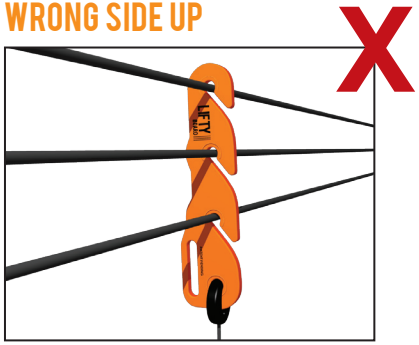
WHERE THE WIRES GO



RIGHT SIDE UP



WRONG SIDE UP



WEIGHT AND CONDUCTOR LENGTH CAPABILITIES

LIFTY BOARD™ device Conductor Capabilities

Using a safety factor of 3:1 LIFTY BOARD™ device can support 591 pounds per hook.

Permitted LIFTY BOARD™ device Use for Bare Copper and Wire Cable

Wire Size	Stranding	Weight/1000 ft	Length Capability of LIFTY BOARD™
8	7	51	11,569
6	7	81	7,284
4	7	128.9	4,577
3	7	162.5	3,631
2	7	204.9	2,879
1	7	258.4	2,283
1/0	7	326.1	1,809
2/0	7	410.9	1,436
3/0	7	518.1	1,139
4/0	7	653.3	903
250	19	771.9	764
300	19	926.2	637
350	19	1080.6	546

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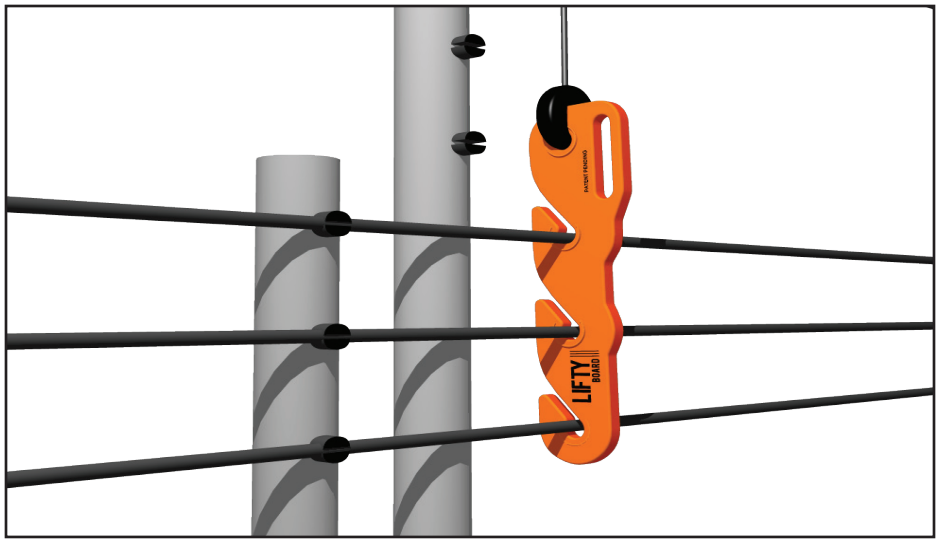
WEIGHT AND CONDUCTOR LENGTH CAPABILITIES CONTINUED...

Permitted LIFTY BOARD™ device Use for Covered Line Wire

Codeword	(Equiv Size)	Weight/1000 ft	Length Capability of LIFTY BOARD™
Hornbean	4	60	9,833
Linden	2	99	5,960
Oilnut	1/0	159	3,711
Waterash	2/0	195	3,026
Shellbark	3/0	240	2,458
Planetree	4/0	297	1,987
Apple	6	31	19,032
Plum	6	56	10,536
Pear	4	47	12,553
Apricot	4	51	11,569
Cherry	2	78	7,564
Peach	2	84	7,024
Nectarine	1	104	5,673
Quince	1/0	136	4,338
Orange	2/0	167	3,533
Fig	3/0	205	2,878
Olive	4/0	253	2,332
Pomegranate	4/0	247	2,393

LIFTY BOARD™ DEVICE IN APPLICATION

LIFTY BOARD device is **designed to hold three or four utility electrical wires AT THE SAME TIME** while crew members perform the necessary work. By supporting the wires and holding them in place, LIFTY BOARD™ device leads to **more efficient and safer replacement** of poles by literally doing the heavy lifting and holding. Currently some linemen tie rope around the conductors which is an inefficient use of time as the lineman must manually tie and untie the rope. It also leads to inconsistent measures from an implementation standpoint and puts the lineman at risk by being closely exposed to live wires. LIFTY BOARD™ device, on the other hand, allows the lineman to maintain distance from the live wires. **This cuts time and increases safety measures.**

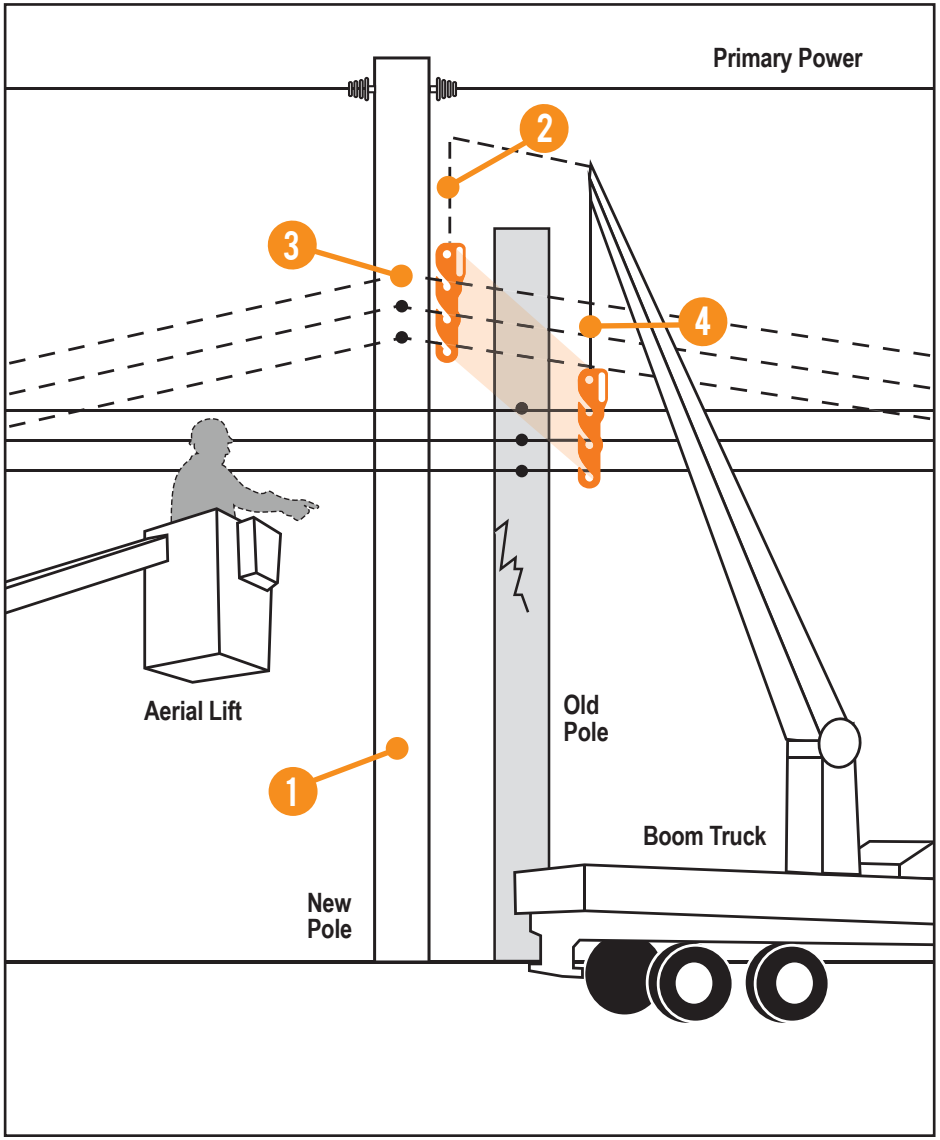


LIFTY BOARD™ device is especially useful under storm restoration when timing and efficiency is crucial. Regulators and customers often evaluate how a utility performs under emergency situations. Labour costs are high. Power is out. Customers are unsatisfied. This is when LIFTY BOARD™ device can repair broken poles efficiently, safely and get power back to the customer.

The device is a single-piece set of hooks with a fully insulated steel insert that provides a substantially strong safe working load with regard to load capability as well as being able to withstand cold temperatures. LIFTY BOARD™ device provides the following benefits:

1 POLE REPLACEMENTS

LIFTY BOARD™ device can be used to hold and raise all 3 or 4 lines while replacing an old pole with a new one. **LIFTY BOARD™ device will save a minimum of 10 minutes per pole replacement.** See below for an overview of how LIFTY BOARD™ device works when replacing poles.



STEP 1

New utility pole is planted in the ground next to or in front of old pole. Primary power has already been connected to the new pole. The open wire secondary is attached to the clevises on the old pole. **LIFTY BOARD™ device is raised from the winch line which is attached to the boom truck.**

STEP 2

LIFTY BOARD™ device slots the 3 conductors into its 3 corresponding slots. The boom truck raises the conductors to maintain tension. **The lineman can now disconnect the open wire secondary while LIFTY BOARD™ device holds the conductors in place.** The old pole can be cut and removed from the area. This frees up space for the lineman to manoeuvre around the new pole. **LIFTY BOARD™ device holds all 3 conductors at the same time.**

STEP 3

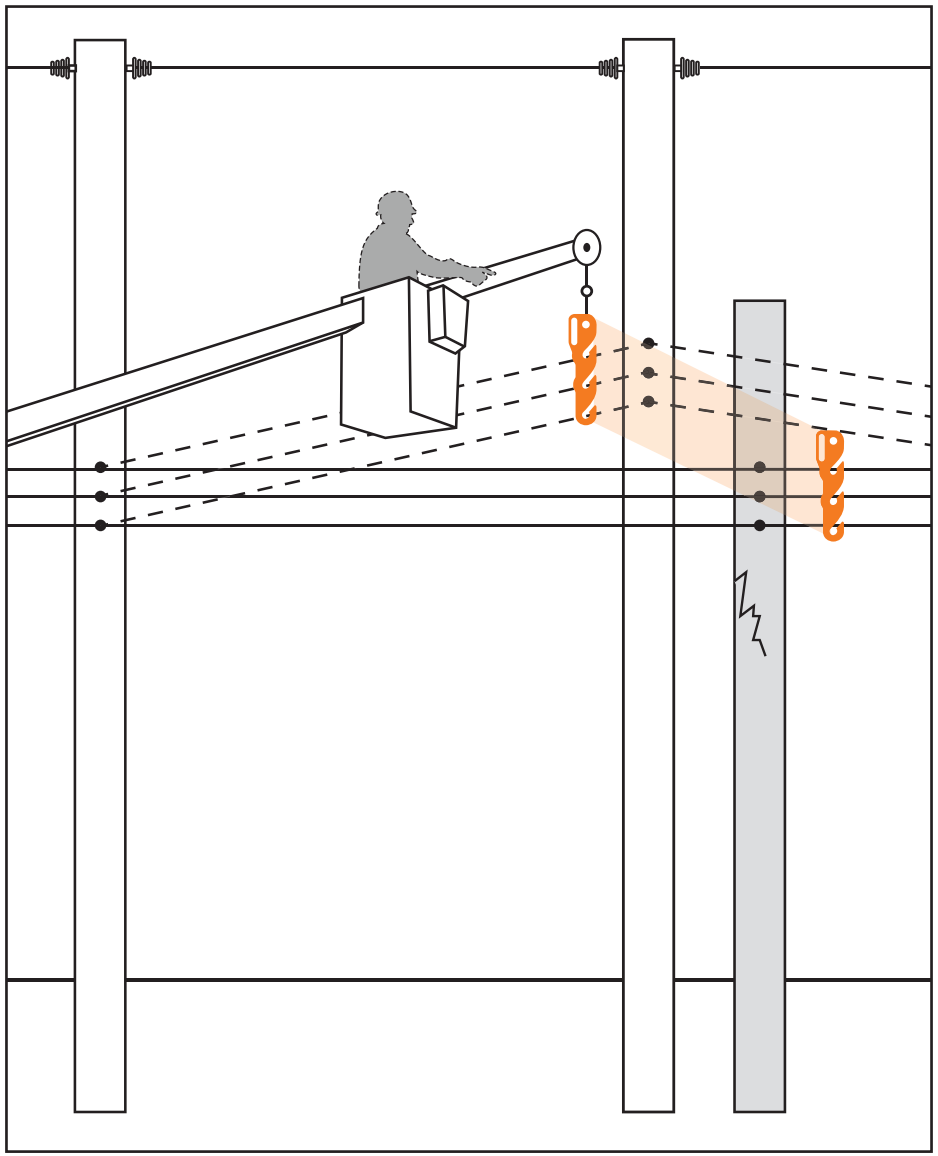
LIFTY BOARD™ device is raised up to the new position on the new utility pole. The lineman connects the open wire secondary to the clevises on the new pole. Without LIFTY BOARD™ device, the lineman would have to disconnect and carry each conductor individually.

STEP 4

Unhook LIFTY BOARD™ device from the conductors and the job is complete. LIFTY BOARD™ device not only **reduces the amount of time it takes** to perform this particular task, but it is much **safer.** LIFTY BOARD™ device **minimizes direct contact with live wires** carrying secondary distribution (240 volts). It also **reduces heavy strain** on your lineman.

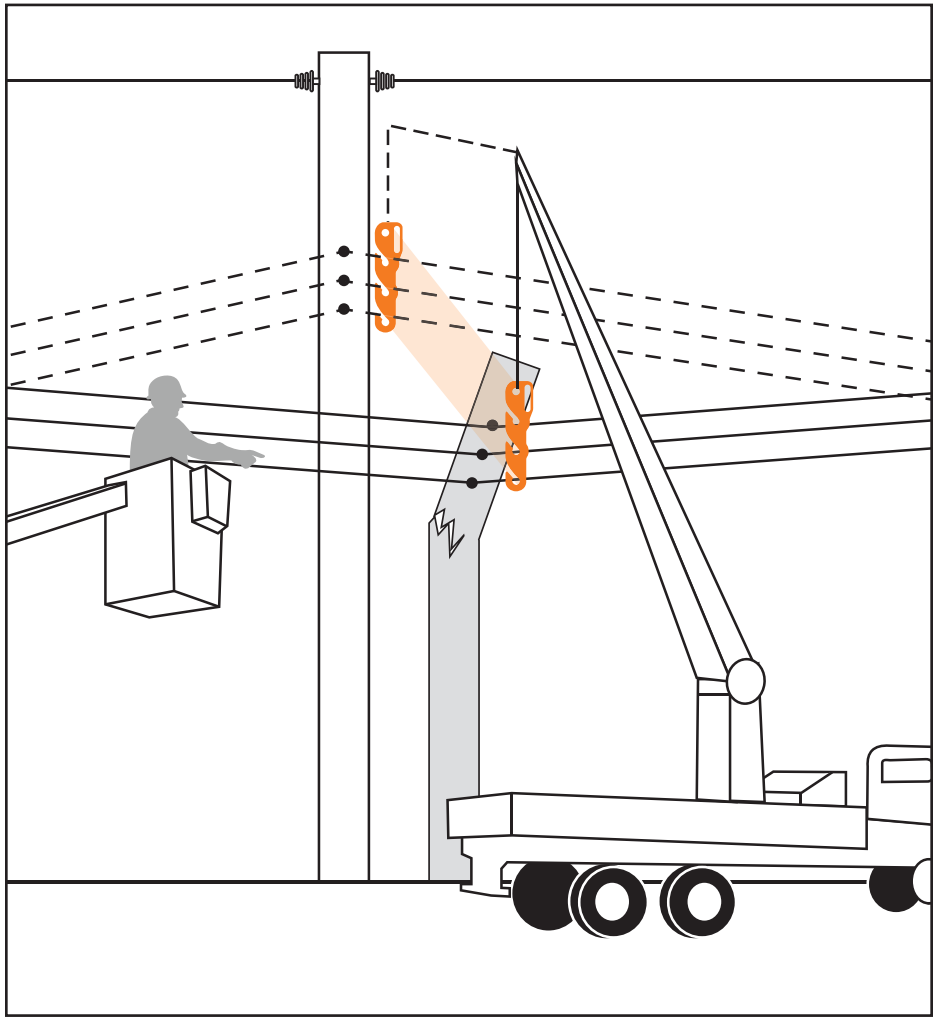
USING THE JIB OFF THE BUCKET

Alternatively, you could also attach LIFTY BOARD™ device to the jib off from the bucket. See illustration below:



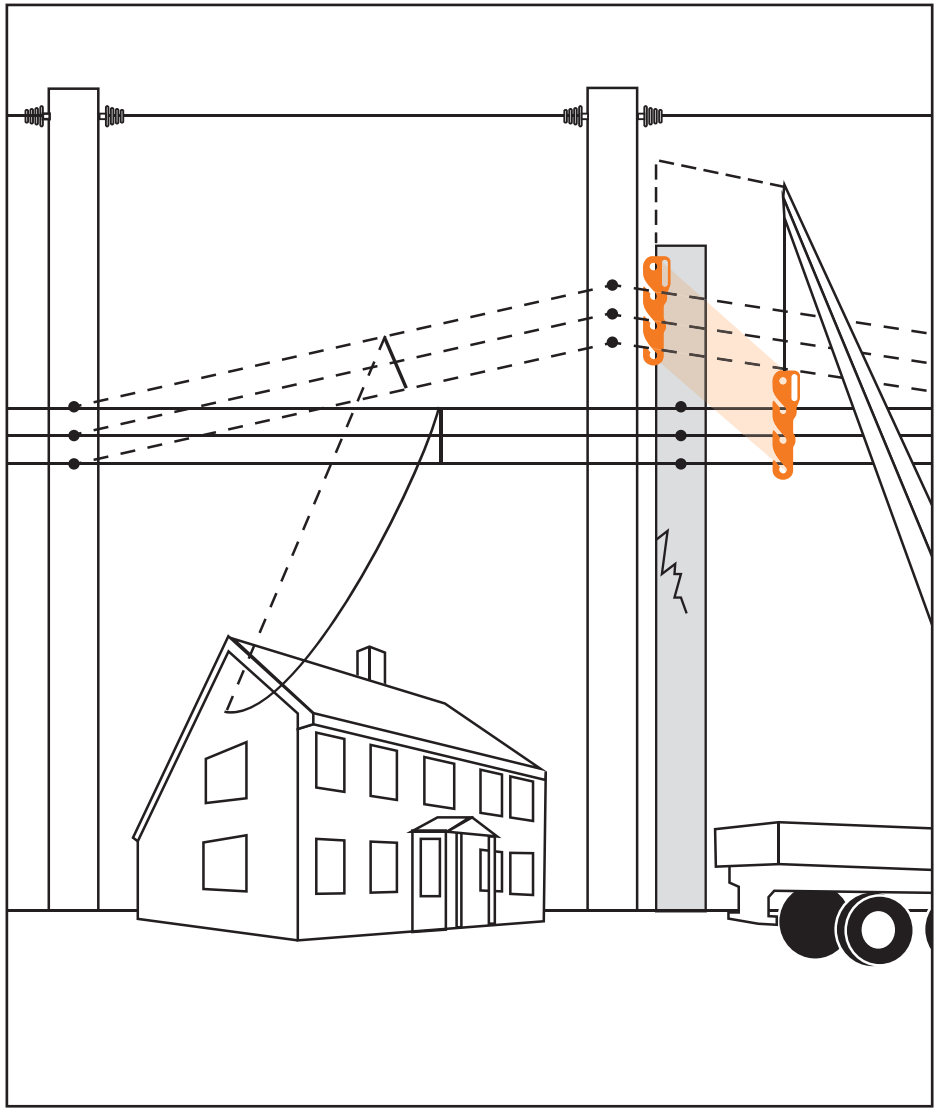
2 STORM RESTORATION

LIFTY BOARD™ device is especially useful during storm restoration and other natural disasters when timing and efficiency is crucial. Regulators and customers often evaluate how a utility performs under emergency situations. Labor costs are high. Power is out. Customers are unsatisfied. This is when LIFTY BOARD™ device can repair broken poles efficiently, safely and get power back to the customer.



3 LINE REPAIRS AND MAINTENANCE

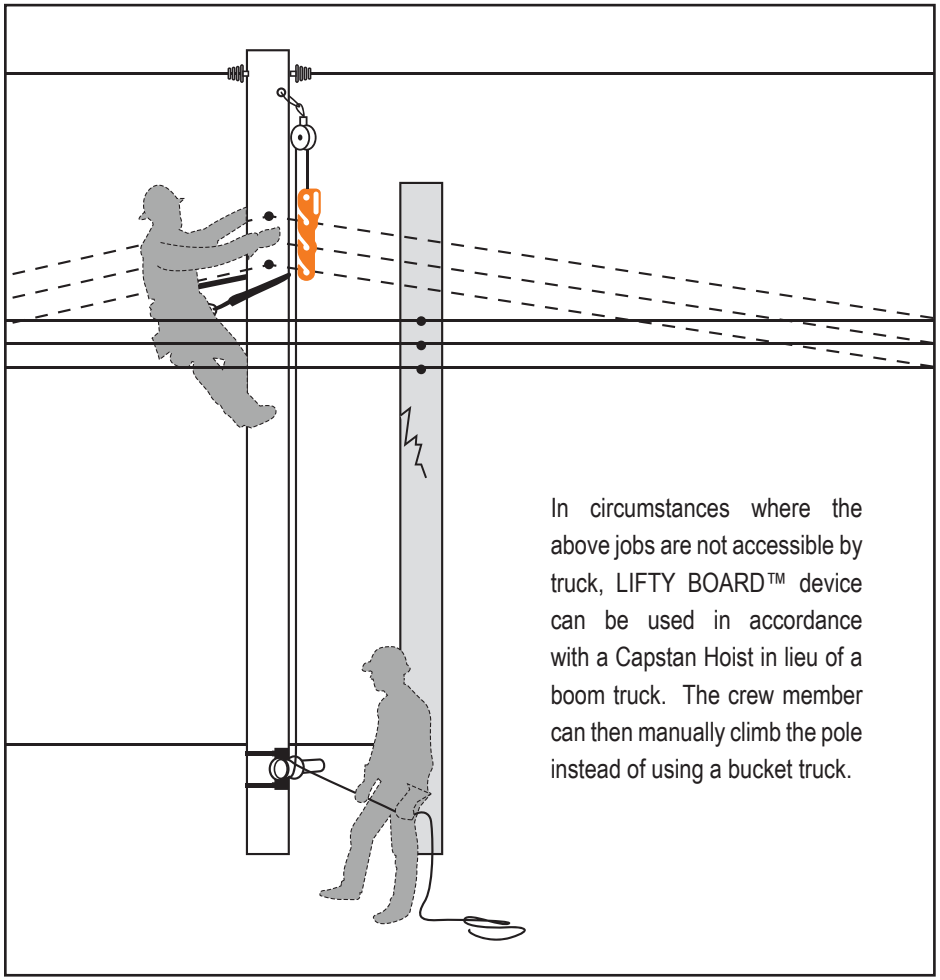
LIFTY BOARD™ device can be positioned and used to carry the weight of an already installed line so that brackets, fittings, and equipment that were supporting its weight can be inspected, removed, and replaced as needed. **It can carry the mid span AND the open wire as a unit, without service interruptions; this keeps the mid span brackets in tact.**



4 AGING INFRASTRUCTURE

Many utilities in North America are seeing increasing failure rates and operating problems on their systems due to aging infrastructures: significant portions of their electric facilities and equipment are worn out and must be replaced in the near future.

5 MAINTENANCE WHEN AREA IS NOT ACCESSIBLE BY TRUCK



In circumstances where the above jobs are not accessible by truck, LIFTY BOARD™ device can be used in accordance with a Capstan Hoist in lieu of a boom truck. The crew member can then manually climb the pole instead of using a bucket truck.

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