



INSTALLATION INSTRUCTIONS

PART NUMBER	154-8510
PART DESCRIPTION	MACHINE LIFT ASSIST
REV DATE	6/20/2014
MACHINE MODELS	ALL MACHINES EQUIPPED WITH PROPER HARDWARE



Basic knowledge of the operation of the lane machine

TOOLS NEEDED:



TECHNICAL NOTE

Please thoroughly read the instructions prior to performing the installation of this assembly.

To avoid any potential problems, if at any time during the process you have a question, stop and contact our Tech Support department at the numbers listed below.

Please visit our growing library of videos to see if these instructions are available!



www.youtube.com/user/KegelBowling81



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Rev. 3.14

This Machine Lift Assist unit was designed to safely assist the operator when lifting or lowering a lane machine. This unit should be used any time the machine needs to be moved to or from the operating and transport positions.

It is **VERY IMPORTANT** that every bowling center hire a qualified contractor when installing this unit. **KEGEL** is not responsible for any injury or damage resulting from the mounting of this device. Sellers and manufacturers only obligation shall be to repair or replace a product proved to be defective after examination by **KEGEL**. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use this product.

Before operating, user shall determine the suitability of the product for its intended use, and user assumes all risk and liability whatsoever in connection therewith.

SELLER AND MANUFACTURER DISCLAIM ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS OR OTHER IMPLIED OR EXPRESS WARRANTIES OF ANY KIND.

The contractor and/or the bowling center assume ALL liability with respect to the mounting and proper maintenance of the Machine Lift Assist. The installer should use great care when locating wall studs to properly secure the unit.

The following guidelines are provided as the 'suggested' fasteners for attaching the Machine Lift to a wall. It is the responsibility of the bowling center to hire a "qualified contractor" to install and properly secure the Machine Lift in a suitable location.

INSTALLATION

When possible, we recommend that you drill all the way through your wall and use long pieces of ¼" all-thread to mount the system. Use large support plates on the opposite side to sandwich the wall and secure the Machine Lift.



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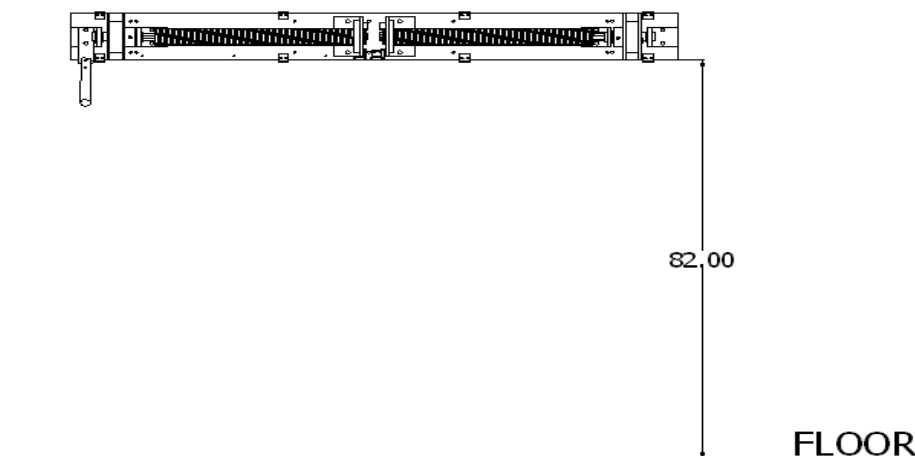


Wood Studs – Use ¼" Wood Lag Screws attached directly to the studs with a minimum penetration of 1-1/2" into the stud. For example, if the drywall is 5/8", then the minimum length should be 2-1/4". Provide a minimum of 8 anchors to secure the lift.

Steel Studs – Use ¼" Toggle Bolts and drill the mounting holes so they are located in the center of a stud. Provide a minimum of 8 anchors to secure the lift.

Cement Block – Use ¼" Toggle Bolts if you drill into the hollow part of the block. If you drill into the solid portion of the block then use ¼" Tapcon fasteners with a minimum embedment of 1-1/4" into the grouted block. This does not include any stucco or finish that the wall may have. When using either Toggle Bolts or Tapcons always provide a minimum of 8 anchors to secure the lift.

The below drawing shows the proper measurement of 82" (208.28 cm) from the floor to the bottom of the mounting plate where the Machine Lift attaches to the wall.



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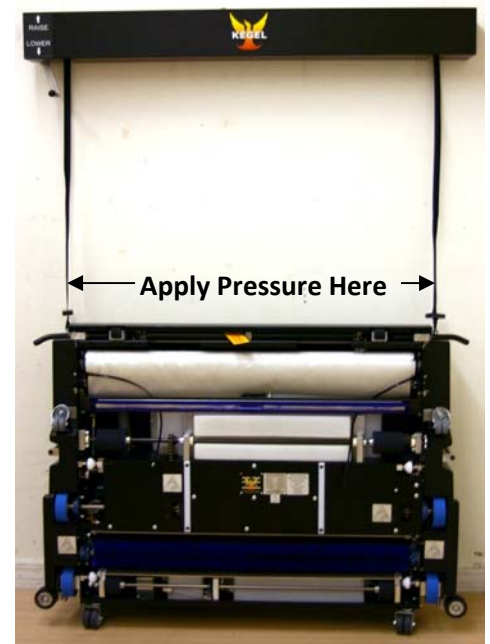


OPERATION

Lowering the Lane Machine to the Operating Position:

1. Roll the machine under the Machine Lift Assist so the lid is against the wall.
2. Place the handle in the **LOWER** position, according to the sticker on lift.
3. Pull the straps down one at a time and connect the carabiner (snap hook) to the lane machine eyebolts (you will hear a clicking sound as the straps are pulled down while the handle is in the Lower position).
4. Use your foot to apply pressure to the bottom of the machine while using the handle on the top to lower the machine down to the floor. Carefully step back as you lower the machine and hold on to the machine until it is resting on the floor.
5. To remove the straps, apply pressure to them by pushing on one side at a time. Push on the strap about half way between the machine and the Lift until they click a few more times. This will relieve the tension on the straps.
6. Unhook the straps from the lane machine and leave them hanging against wall until you are ready to lift your lane machine again.

NEVER FLIP THE HANDLE TO THE RAISED POSITION WHEN STRAPS ARE NOT HOOKED TO THE LANE MACHINE!



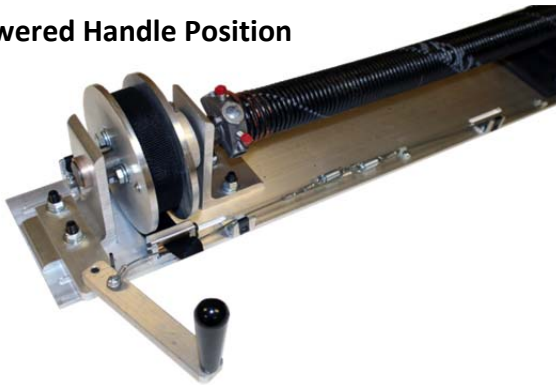
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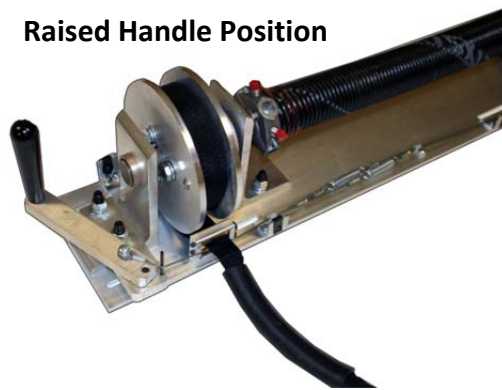
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Lowered Handle Position



Raised Handle Position



Raising the Lane Machine to the Transport Position:

1. Position the machine under the lift and hook the straps to the machine lift eyebolts. Make sure the machine transport casters are against the wall.

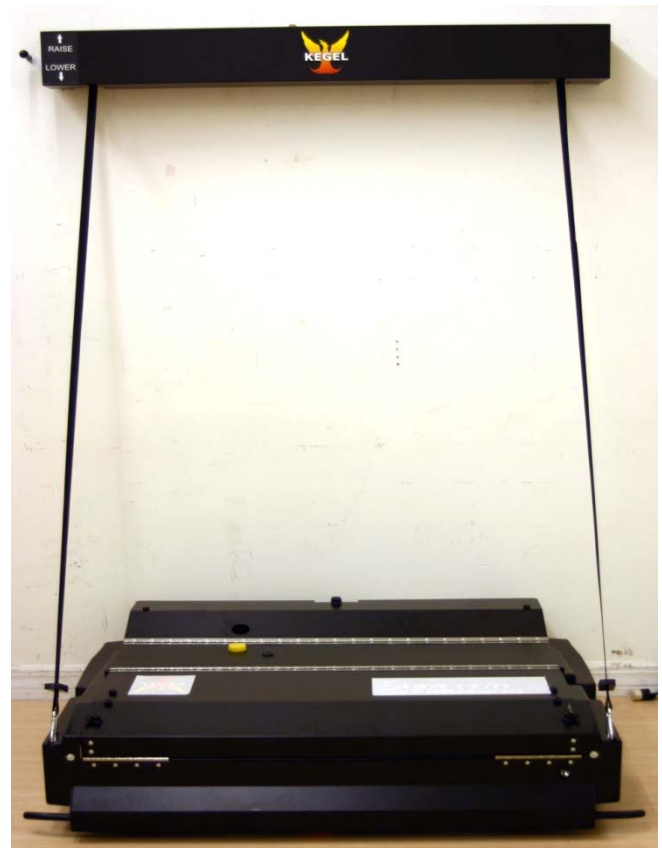
2. Flip the handle on the Machine Lift to the **RAISE** position and push on the straps (one at a time) about half way between the machine and the Lift. The brakes will unlatch to place tension on the straps.

3. Carefully lift the lane machine up until it is in the transport position.

4. Flip the handle back to the **LOWER** position and pull on the straps until there is enough slack to unhook them from the lane machine.

5. When finished, flip the handle back to the **RAISE** position.

6. Pull on one strap at a time until the brake releases and hold on to the strap. Allow the strap to retract slowly up towards the Machine Lift.



DUE TO THE TENSION ON THE STRAPS, YOU WILL NEED TO HOLD ON TO THE STRAPS FIRMLY UNTIL THEY ARE ROLLED UP! FAILING TO DO SO MAY CAUSE PREMATURE WEARING OF THE SUPPORT STRAPS!



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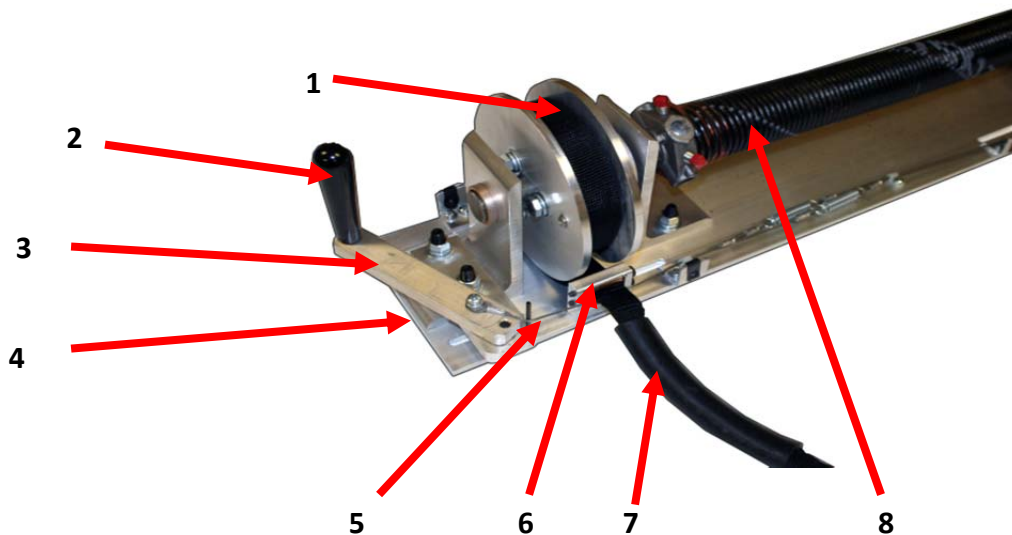
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After the device has been installed, carefully inspect that all instructions have been followed and that the device is firmly in place.

Thorough inspections are recommended and should be performed periodically to insure that the device is in good working condition.

To do this, carefully remove the cover and inspect the straps, springs and all moving parts. Replace any worn straps or springs. While the cover is off, insure that all fasteners are tight by taking a wrench tightening each piece of hardware under the cover.



- | | | |
|----|----------|---|
| 1. | 154-8519 | STRAP REPLACEMENT KIT |
| 2. | 154-0550 | PHENOLIC HANDLE |
| 3. | 154-6560 | HANDLE ARM |
| 4. | 154-6559 | HANDLE ARM MOUNTING PLATE |
| 5. | 154-8517 | HANDLE ARM CABLE ASSEMBLY |
| 6. | 154-6568 | ROLLER FAIRLEAD MOUNT |
| 7. | 154-0555 | RUBBER HOSE FOR STRAP (SOLD BY THE INCH 6") |
| 8. | 154-0553 | LEFT HAND TORSION SPRING |
| 9. | 154-0554 | RIGHT HAND TORSION SPRING |



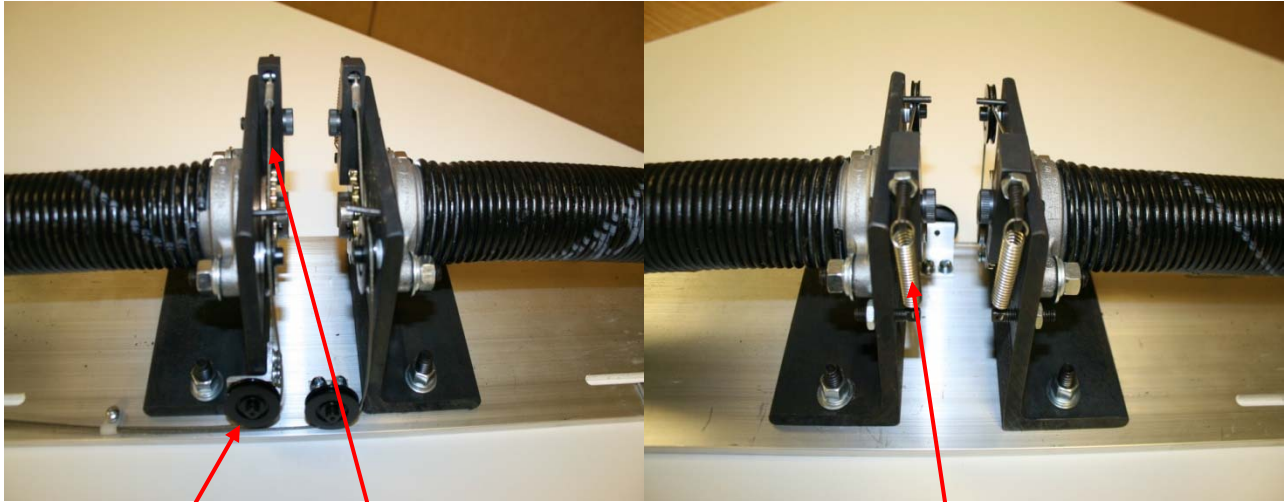
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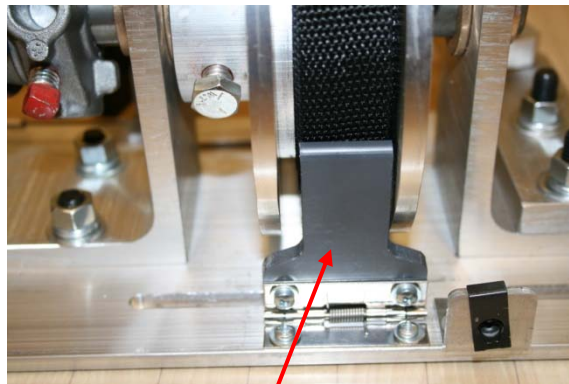


1

2

3

1. 154-9502 PULLEY – WIRE ROPE (1/16 DIAMETER)
2. 154-8515 RATCHET LATCH ASSEMBLY
3. 153-2550 RATCHET ASSEMBLY TENSION SPRING



4

4. 154-6567 STRAP TENSIONER



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COMPLETE PARTS LIST

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>UOM</u>
153-2001	FLAT WASHER - #6	EACH
153-2002	FLAT WASHER - #8	EACH
153-2003	FLAT WASHER - #10	EACH
153-2006	FLAT WASHER - 3/8	EACH
153-2013	LOCK WASHER - #10	EACH
153-2016	LOCK WASHER - 3/8	EACH
153-2018	LOCKNUT - 6-32 (NYLOK)	EACH
153-2019	LOCKNUT - 8-32 (NYLOK)	EACH
153-2025	HEX NUT - 3/8-16	EACH
153-2035	BLIND RIVET WASHER - 3/16	EACH
153-2037	ROLL PIN - 1/8 X 1-3/4	EACH
153-2038	ROLL PIN - 1/8 X 1	EACH
153-2038A	ROLL PIN - 1/8 X 1-1/4	EACH
153-2042	1/16 INCH LOOP SLEEVE	EACH
153-2066	HHCS - 3/8-16 X 1	EACH
153-2081	MS PHILLIPS - 6-32 X 1/2	EACH
153-2086A	MS PHILLIPS - 8-32 X 3/8	EACH
153-2087	MS PHILLIPS - 8-32 X 3/4	EACH
153-2301	MS PHILLIPS - 10-24 X 5/8	EACH
153-2304	JAM NUT - 1/4-20	EACH
153-2405	HHCS - 3/8-16 X 2-3/4	EACH
153-2511	SPRING NUT - 8-32	EACH
153-2515	SHOULDER BOLT - 3/8 X 1/2 (5/16-18)	EACH
153-2550	RATCHET LATCH EXTENSION SPRING	EACH
153-2551	CONNECTING CABLE EXTENSION SPRING	EACH
153-2552	SPRING CONNECTOR - 1/4-20 X 1-1/4	EACH
153-2553	SHOULDER BOLT - 3/16 X 3/8 (8-32 THREAD)	EACH
153-2554	SHOULDER BOLT - 3/16 X 1/4 (8-32 THREAD)	EACH
153-2555	FHSS - 3/8-16 X 2	EACH
153-2556	SPRING SNAP - 1/2 SNAP OPENING - 5/8 EYE	EACH
153-2557	MS PHILLIPS - 8-32 X 2-1/4	EACH
153-2719A	SPACER DUSTER SWITCH 3/8 OD #10 SCREW	EACH
153-2805	FHSS - 3/8-16 X 1-1/4	EACH
153-2805A	FHSS - 3/8-16 X 1-1/2	EACH
153-2931	ROLL PIN 1/8 X 1/2	EACH
153-2936	SHIM - 3/8 X .032 LENGTHENING SHIM	EACH
153-2943	SPRING HINGE	EACH
153-2968	SCREW - 1/4-20 X 3/4 FHSH	EACH
153-2990	HEX SOCKET HEAD SHOULDER - 1/4 X 1-1/2	EACH
153-9030	PLAIN BUSHING (1/4 X 3/8 X 1/2)	EACH
153-9031	PLAIN BUSHING (1/4 X 3/8 X 3/4)	EACH
154-0550	HANDLE - PHENOLIC SMOOTH TAPERED	EACH
154-0551	RATCHET TIE DOWN WINCH	EACH



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154-0552	MACHINE LIFTING STRAP	EACH
154-0554	TORSION SPRING - RH	EACH
154-0555	RUBBER TUBING FOR STRAP (12" FOR BOTH)	INCH
154-6550	WALL MOUNT PLATE	EACH
154-6551	MACHINE LIFT COVER	EACH
154-6552	TORSION SPRING SUPPORT SHAFT	EACH
154-6553	SUPPORT SHAFT MOUNT ANGLE - OUTER	EACH
154-6558	STRAP PULLEY MOUNT HUB	EACH
154-6559	HANDLE MOUNT PLATE	EACH
154-6560	HANDLE ARM	EACH
154-6561	RATCHET LATCH (PAWL)	EACH
154-6568	ROLLER FAIR LEAD MOUNT	EACH
154-6827	MACHINE LIFT COVER MOUNT ANGLE	EACH
154-6567	STRAP TENSIONER	EACH
154-8511	STRAP PULLEY ASSEMBLY	EACH
154-8512	SUPPORT SHAFT OUTER MOUNT ANGLE ASSEMBLY	EACH
154-8513	SHAFT INNER MOUNT ANGLE ASSEMBLY - LEFT	EACH
154-8514	SHAFT INNER MOUNT ANGLE ASSEMBLY - RIGHT	EACH
154-8515	RATCHET LATCH ASSEMBLY	EACH
154-8516	RATCHET LATCH CABLE ASSEMBLY	EACH
154-8517	HANDLE ARM CABLE ASSEMBLY	EACH
154-8519	STRAP REPLACEMENT KIT - MACHINE LIFT	EACH
154-9502	PULLEY - WIRE ROPE (1/16 ROPE DIAMETER)	EACH



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PREVENTIVE MAINTENANCE

*The below inspections are merely suggested intervals to insure that proper function of the lift is maintained. It is up to the end user to thoroughly inspect all aspects of this device even if not suggested below.

The below items should be checked on a weekly basis

	Week 1	Week 2	Week 3	Week 4
Inspect straps thoroughly while extended				

Remove the cover for the below quarterly inspections

	Q1	Q2	Q3
Inspect ALL bolts for tightness			
Inspect the springs for wear			
Inspect all pulleys for wear			



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