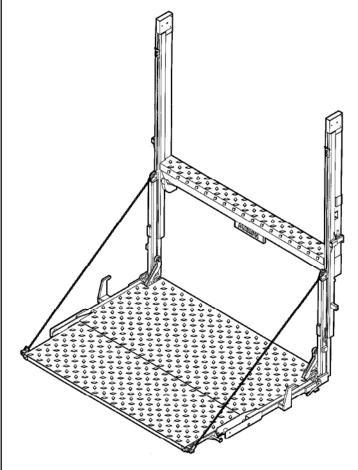
M-90-03 REV. E JAN. 2000

MAXON MAINTENANCE MANUAL



RC-2B RC-3B RC-4B RC-5B RC-6B RC-6K

11921 Slauson Avenue. Santa Fe Springs, CA. 90670 (800) 227-4116

MAXON®



11921 Slauson Ave. Santa Fe Springs, CA. 90670

CUSTOMER SERVICE:

(562) 464-0099

(800) 227-4116

FAX: (888) 771-7713

TECHNICAL SERVICE:

(800) 8-MAXTEK (862-9835)

NOTE: Check with Customer Service Department for updated versions of Manuals on an annual basis.

WARRANTY POLICY & PROCEDURE

NEW LIFTGATE WARRANTY

Term of Warranty: 2 Years from Date of In-Service

Type of Warranty: Full Parts and Labor

MAXON agrees to replace any components which are found to be defective during the first 2 years of service, and will reimburse for labor based on MAXON's Liftgate Warranty Flat Rate Labor Schedule. (Call MAXON Customer Service for a copy).

All claims for warranty must be received within 30 Days of the repair date, and include the following information:

- 1. Liftgate Model Number
- 2. Liftgate Serial Number
- 3. Description of Problem
- 4. Corrective Action Taken, and Date of Repair.
- Parts used for Repair, Including MAXON Part Number(s).
- 6. MAXON R.G.A. # and/or Authorization # if applicable (see below).
- 7. Person contacted at MAXON if applicable.

PURCHASE PART WARRANTY

Term of Warranty: 1 Year from Date of Purchase Type of Warranty: Part Replacement and Replacement Labor.

MAXON will guarantee all returned genuine replacement parts upon receipt, and inspection of parts and invoice. All Warranty repairs must be performed by an authorized MAXON warranty station.

For major repairs, MAXON's Warranty Department must be notified, and an "Authorization Number" received. Major repairs would generally be considered repairs made to the structural assembly of the liftgate and/or repairs not outlined in the MAXON Liftgate Waranty Flat Rate Schedule.

Major components (i.e. hydraulic pumps, cylinders, valves, or failed structural parts) must be returned, freight pre-paid, prior to the claim being processed. To ensure timely processing of these warranty claims, an R.G.A. (Returned Goods Authorization) number must be obtained from MAXON's Warranty Department prior to the return of any defective part. Defective Parts must be returned within 60 days of the claim date for consideration to:

Warranty Dapartment, MAXON Lift Corp. 5920 Alameda St., Huntington Park, CA. 90255

MAXON's warranty policy does not include the reimbursement for travel time; towing; vehicle rental; service calls; fabrication of parts which are available from MAXON; oil; defects due to misuse or abuse; loss of income due to downtime.

MAXON's Flat Rate Labor Schedule times takes into consideration time required for diagnosis of problem.

Warranty and Technical Information is available by calling MAXON's Customer Service Department.

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WARNING

- 1. Read the **Maintenance Manual** and understand it thoroughly before any maintenance of this unit is done.
- Read the YELLOW urgent warning decal on the side of the vehicle close to the unit before operating.
- 3. If decals are dirty, clean them. If decals are defaced or missing, replace them. **Free replace-ments** are available from the manufacturer. See information at the end of the Warnings
- 4. Be aware that the safety and location of other people or objects should be considered before operation of this unit. Stand to one side of platform while operating this unit. Do not stand in a position that would put you in the path of any moving vehicles around you.
- 5. Do not stand under, or have any foreign object under the Platform when lowering. **Be sure** that the lowering of the Platform and/or Flipover will miss your feet!
- Keep fingers, hands, arms, legs, and feet clear of moving parts when operating this unit.
- If during your maintenance procedure, it becomes necessary to ride the platform, keep your feet and any foreign objects clear of the rear edge of the platform. Otherwise your feet or the foreign objects could become trapped between the edge of the platform and the vehicle bed.
- 8. Inspect all Roll Pins monthly, to insure that they are not broken. Replace if broken.
- Inspect all hydraulic hoses and fittings annually. Check for cracks and deterioration, and replace if necessary.
- 10. **Disconnect battery** when replacing parts or servicing.
- 11. Do not allow children to ride, play with, or operate this unit.
- 12. In the event of an emergency while operating the unit, release the toggle switch and the unit will stop immediately.
- 13. A properly installed Lift should operate smoothly and the only noise during the operation of this unit should be from the Pump Unit during the raising of the Platform. Any scraping, grating or audible indications of rough operation will need investigating. The cause will need resolving before any further deterioration of performance occurs.
- 14. Use only **Maxon Authorized Parts** for replacement. Replacement parts should be ordered from:

MAXON LIFT CORP. Parts Department 11921 Slauson Ave., Santa Fe Springs, Ca. 90670 Phone: (800) 227-4116

TROUBLE SHOOTING, CAM CLOSER

FAULT	CAUSE	REMEDY
PLATFORM WILL NOT RISE OR REACH FLOOR OF VEHICLE	1. BATTERY FLAT	RE-CHARGE BATTERY
	2. (TRACTOR/TRAILER VEHICLE ONLY) ELECTRICAL COUPING TO TRACTOR NOT CONNECTED	CONNECT COUPLIN
	3. INSUFFICIENT OIL IN THE PUMP RESERVOIR	FILL RESERVOIR SEE DECAL ON PUMP.
	4. WIRE ROPE INCORRECTLY ADJUSTED	ADJUST WIRE ROPE.
PLATFORM WILL NOT LOWER	1. BATERY FLAT (VOLTALGE AT SOLENOID LOW)	RE-CHARGE BATTERY
	2. (TRACTOR/TRAILER VEHICLES ONLY ELECTRICAL COUPLING TO TRACTOR NOT CONNECTED	CONNECT COUPLING
	3. EMERGENCY BRAKE LOCK-UP	RELEASE EMERGENCY BRAKE
PLATFORM DOES NOT RISE SMMOTHLY	1. TOO MUCH PUMP PRESSURE	CHECK PRESSURE
	2. INSUFFIECIENT OIL IN THE PUMP RESERVOIR	FILL RESERVOIR
	3. AIR LOCK IN HYDRAULIC SYSTEM	OPERATE RAISE CONTROL ON THE SWITCH A FEW SECONDS AT TOP OF PLATFORM STROKE. REPEAT TWO MORE TIMES, PAUSEING BETWEEN OPERATIONS FOR ONE MINUTE WIHT PLATFORM ON GROUND.
	4. UNDUE MECHANICAL WEAR OR LACK OF LUBRICATION OF LIFT	LUBRICATE OR REPLACE WORN PARTS
PLATFORM CREEPS DOWN UNDER NO LOAD CONDITION	1. HYDRAULIC LEAK	OPERATE RAISE CONTROL ON THE SWITCH AT TOP OF PLATFORM STROKE FOR A FEW SECONDS.
	2. CYLINDER SEAL FAILING	REPLACE CYLINDER SEALS.
	3. DIRT UNDER VALVE IN HYDRAULIC PUMP	CLEAN THE VALVE
PLATFORM WILL ONLY DESCEND SLOWLY	1. FLOW CONTROL VALVE ADJUSTMENT	ADJUST FLOW CONTRL VALVE
	2. INSUFFICINET MAINTENANCE AND LUBRICATION	CARRY OUT MAINTENANCE AND LUBRICATION PROCEDURE
	3. UNDUE WEAR OF MECHANICAL COMPONENTS	CHECK OUT MAINTENANCE AND LUBRICATION PROCEDURE
	4. DIRT IN THE VALVE	CLEAN THE VALVE
CAN NOT ENGAGE THE P/F RETENTION CHAIN	1. P/F DOES NOT CLOSE ENOUGH TO ALLOW RETENTION CHAIN TO BE ENGAGED.	ADJUST CAM FOLLOWER

TROUBLE SHOOTING, CAM CLOSER (Cont'd.)

FAULT	CAUSE	REMEDY
PLATFORM WILL ONLY DESCEND SLOWLY (CONT'D)	4. INCORRECT OIL IN SYSTEM. * SEE FOOTNOTE BELOW	OIL SHOULD BE ISO Grade 32 Hydraulic or ATF Transmission Oil. We would prefer ISO Grade 32 Oil
	5. RESTRICTED HYDRAULIC LINE	CHECK HOSE FOR WXTERNAL DAMAGE OR "PINCHING"
PLATFORM TILTED	1. INCORRECT WIRE ROPE ADJUSTMENT	ADJUST WIRE ROPE.
	2. WIRE ROPE SUPPORTING LOW SIDE OF PLATFORM DISLODGED FROM IT'S NORMAL LAY	CHECK THAT WIRE ROPE IS CORRECTLY SEATED IN THE GROOVES OF THE SHEAVES OVER WHICH THE WIRE ROPE PASSES
	3. PASSAGE OF WIRE ROPES, RUNNERS OR PLATFORM OBSTRUCTED	CHECK FREEDOM OF ALL MOVING PARTS ASSOCIATED WITH WIRE ROPE SYSTEM
UNIT WILL NOT LIFT RATED LOAD	1. RELIEF VALVE SETTING TOO LOW	ADJUST RELIEF VALVE SETTING
	2. HYDRAULIC PUMP WORN	CHANGE WORN PARTS OR COMPLETE PUMPM. SEE PUMP BREAKDOWN ILLUSTRATIONS
PLATFORM NOT LEVEL	1. 2 PC PLATFORM CHAINS TOO LONG	SHORTEN CHAINS
PUMP WILL NOT OPERATE	1. BATTERY FLAT	RE-CHARGE BATTERY
	2. (TRACTOR/TRAILER VEHICLE ONLY) ELECTRICAL COUPLING TO TRAILER NOT CONNECTED	CONNECT COUPLING
	3. ELECTRICAL WIRING TO PUMP BROKEN OR CORRODED	CHECK WIRING TO PUMP
	4. REMOTE CONTROL SWITCH WIRING BROKEN	CHECK WIRING TO REMOTE CONTROL SWITCHES.
	5. SOLENOID SWITCH ON PUMP FAULTY	CHECK SOLENOID SWITCH.

* COLD WEATHER OPERATION

OIL SPECIFICATIONS:

Grade ISO-(32) Gravity, API - 29.5 Degrees Pour Point, F- (-54 Degrees)

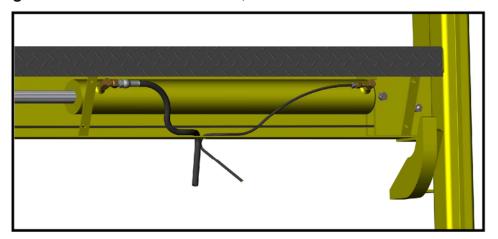
VISCOSITY:

@ 40 Degrees C - 31.2 cSt @100 Degrees C - 6.2 cSt VISCOSITY INDEX - 154 VI Flash Point, F - 325 Degrees

GENERAL MAINTENANCE

REPLACE CYLINDER SEALS

To check for cylinder seal leakage the cover will need to be removed from the main frame assembly. The platform should be operated up and down several times. *NOTE:* Small amounts of "sepage" is normal, but if large a amount of oil is gushing from the Breather or Rod, it is considered a leak.



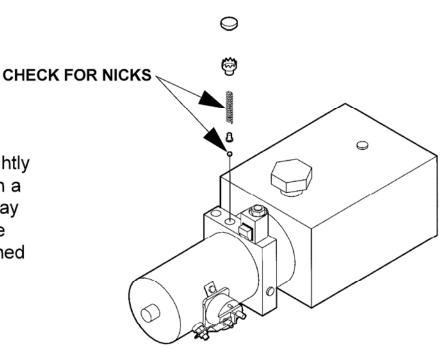
If there is a leak, the cylinder seals should be replaced. Seal kits are available from MAXON Industries Inc.

Pro Seal kit Part Number see Unit Parts Breakdown drawing for YOUR unit in this manual.

To replace the seals the cylinder will need to be removed from the main frame assembly and dismantled on a work bench. For removal of cylinder see Cylinder Replacement Page.

CLEAN VALVE

Check valve could be slightly open. Slight adjustment in a CLOCKWISE direction may cure problem. If not, valve should be removed, cleaned and inspected.



PUMP PRESSURE ADJUST SETTING

Lower the Platform to the ground to relieve any pressure on the hoses. Remove the existing hose and swivel assembly from Port "B" (3/8 NPT). Install a **0-3000 PSI Gauge** (Item 1), to port "B".

Remove the Valve Cap (Item 2), from the Pump Block (Item 3). Using the Raise/Lower Switch on the Curb side of the vehicle, raise the unit and check the gauge reading. Adjust the relief valve to a pressure setting of **2750 PSI**.

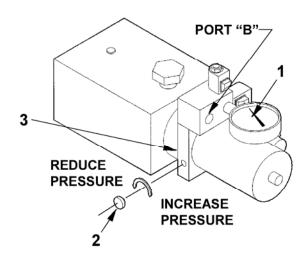


FIGURE 1

Activate the Raise/Lower Switch several times to verify that the pressure shown on the gauge will remain at the proper setting. (Ref. Fig. 1)

WARNING

Setting the pressure higher than recommended could enable the lift to raise loads in excess of it's rated capacity.

If the unit does not maintain the pressure reading, it may be necessary to remove and inspect the relief valve components. (**Ref. Fig. 2**)

Check for nicks or cuts on the Spring (Item 4), and Ball (Item 5). Replace any damaged parts before reassembling the unit.

Upon reassembly, you will have to seat the Ball by inserting a 3/16" diameter rod through the spring and tapping the Ball against the seat with a hammer.

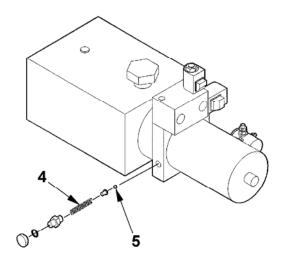
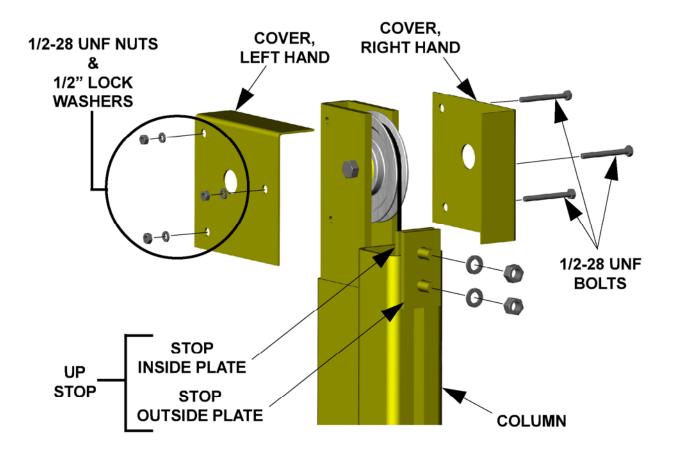


FIGURE 2

RELEASING EMERGENCY BRAKE

IN THE EVENT THE RAILIFT WILL NOT LOWER, IT MAY BE NECESSARY TO RELEASE THE EMERGENCY BRAKE ASSEMBLY.

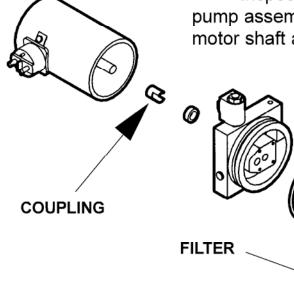
- 1. REMOVE THE UPPER SHEAVE COVERS ON THE SIDE WHICH IS NOT LOWERING.
- 2. REMOVE THE UP-STOP AT THE TOP OF COLUMN.
- 3. BEING CAREFUL NOT TO RAISE THE GATE MORE THAN 1-1/2", ACTI-VATE THE RAISE SWITCH. THIS WILL RETRACT THE EMERGENCY BRAKE CAM AND ALLOW THE PLATFORM TO BE LOWERED. LOWER GATE APPROXIMATELY 12".
- **4.** REPLACE UP-STOP TO ITS ORIGINAL POSITION. CYCLE RAILIFT SEVERAL TIMES TO INSURE IT OPERATES PROPERLY. REPLACE SHEAVE COVERS.



PUMP-SHAFT, COUPLING AND FILTER

Drain and remove reservoir. Check filter. If Filter is clean, a worn pump is indicated. Change pump assembly. For replacement parts see PUMP BREAKDOWN DRAWING.

Inspect coupling for wear. When installing pump assembly, make sure coupling is installed to motor shaft and pump shaft is installed to coupling.



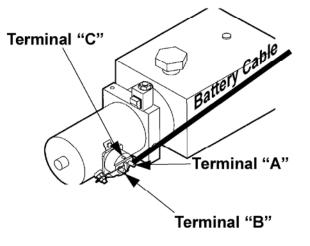
CHECK SOLENOID SWITCH

Verify that power is being supplied to the Solenoid Terminal "A". Recharge the battery if less than 12 volts.

Touch a jumper wire to terminals "A" & "C". If motor runs, check Switch, Switch connections, and White wire. Correct the connections or replace the Switch.

Touch heavy jumper cables to terminals "A" & "B".

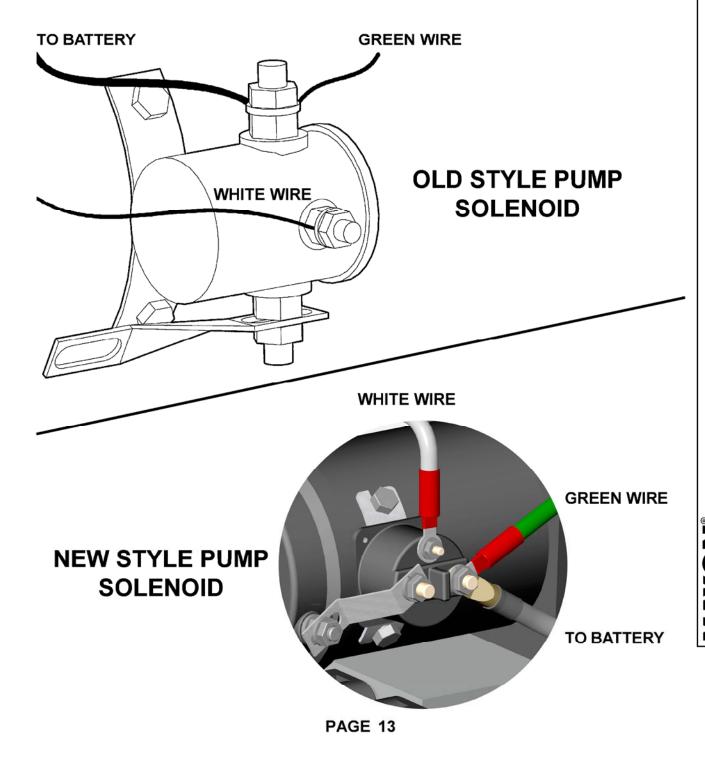
- a. If motor runs, replace the motor solenoid.
- b. If motor does <u>not</u> run, repair or replace the pump motor.



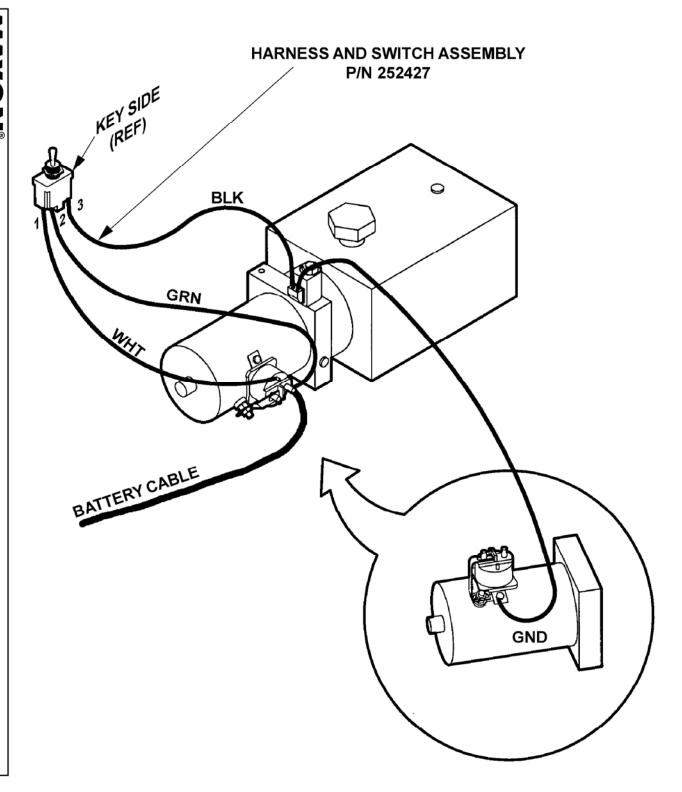
WIRING TO PUMP MOTOR

THE WIRING ON THE PUMP SOLENOID SWITCH THRU TO THE TRUCK SOLENOID (OR BATTERY) SHOULD BE CHECKED EVERY MONTH.

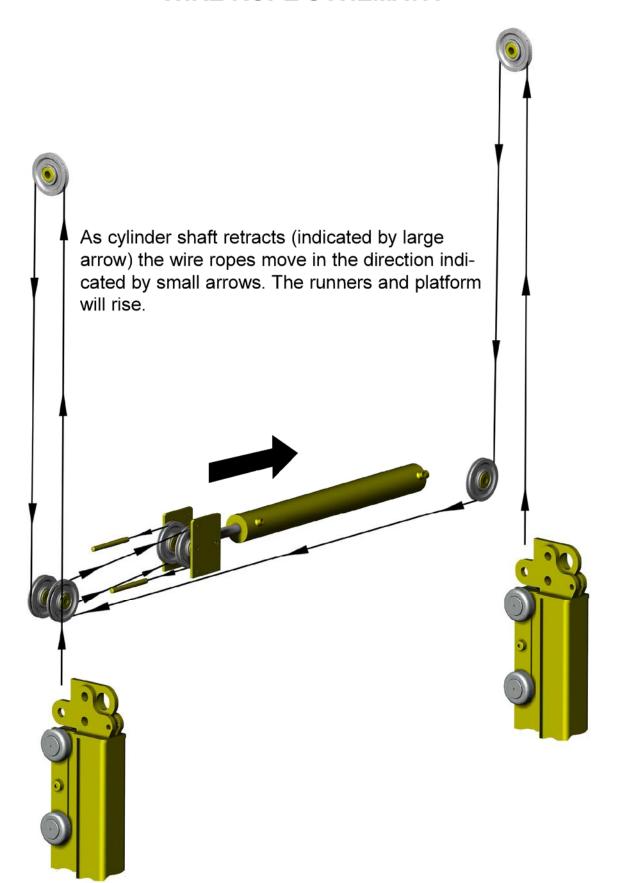
CABLE ENDS SHOULD BE CLEAN AND TIGHT. A LARGE AMOUNT OF GATE MALFUNCTION IS CAUSED BY LOOSE CABLE CONNECTIONS AND CORRODED CABLE CONNECTIONS.



ELECTRICAL SCHEMATIC (CAM TYPE)



WIRE ROPE SCHEMATIC



WIRE ROPE MAINTENANCE

The most important assemblies in your unit are the wire ropes. These <u>must</u> be checked **every three months** for broken wires and for lack of lubrication, particularly in those areas where the wire ropes pass around the sheaves during the up & down movement of the platform.

Remove the covers from the tops of the column assemblies and from the main frame. Clean the wire rope area first, then make a visual check.

WARNING! DO NOT CHECK WIRE ROPES WITH FINGERS OR WHILE UNIT IS OPERATING.

It will be necessary to run the platform through several cycles of operation (stopping the unit frequently), to enable you to inspect the required areas of wire rope. The wire rope (wire rope), is composed of several strands of individual wires, **See Figure 1**. Fatigue breaks occur in individual wires, (the breaks being square and usually in the crown of the strands). See **Figure 2**

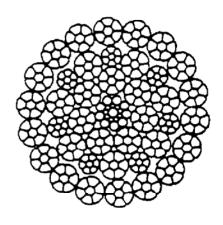


Figure 1



Figure 2

The wire rope comes from the factory internally lubricated, however, if during your inspection the wires look dry, then greasing with automobile type grease can prolong the life of the wire rope.

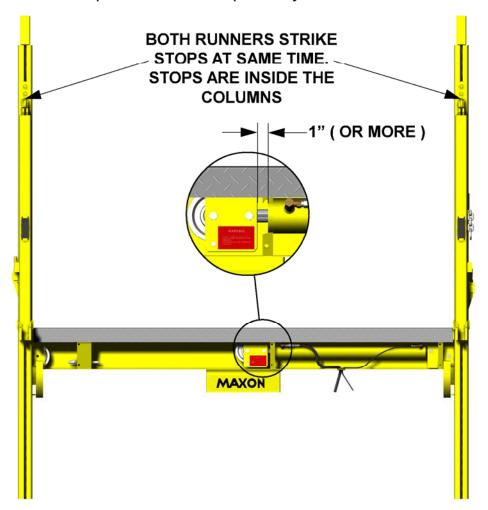
If 6 or more wires are broken in any 2-1/2" length of wire rope, the wire rope must be replaced. **See Wire Rope Replacement.** Note: The "WARN-ING" plate attached to the R.H. end of the Main Frame Cover gives explicit information regarding broken wires.

WIRE ROPE ADJUSTMENT

Under normal operating conditions (using the unit to it's rated capacity) the wire ropes should not require adjustment at the 3 month inspection period. However, it is suggested that the unit be CHECKED at this time, anyway.

Remove the cover from the main frame assembly.

Using the curb side remote control switch, raise the platform. Watch the tops of the runners, right and left hand side of the unit. BOTH runners should strike the stops in the column assemblies at the same time. Release the switch toggle. In the main frame assembly check the amount of rod extending from the cylinder barrel. There should be 1" (or more) showing. Under these conditions the wire ropes DO NOT require adjustment.



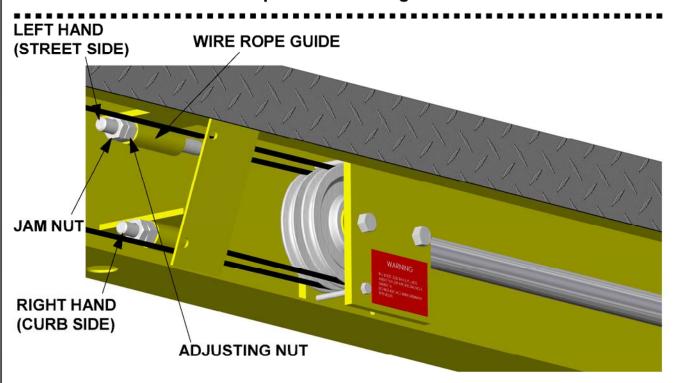
If one runner strikes the stop and the other does not, indicates that the wire rope has stretched on the runner which does not strike the stop, or the cylinder rod has bottomed out in the barrel. Measure the gap between runner and stop. Adjust per instructions on the next page.

WIRE ROPE ADJUSTMENT (Cont'd.)

If the LEFT HAND runner is not touching the stop then the LEFT HAND wire rope will require adjustment.

If the RIGHT HAND runner is not touching the stop the RIGHT HAND wire rope will require adjustment. Proceed as described below.

Lower platform to the ground.



NOTE! LEFT HAND WIRE ROPE ADJUSTMENT IS ILLUSTRATED.

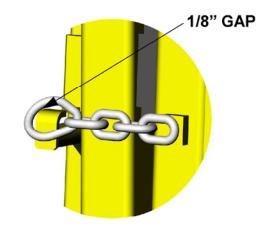
If the *right hand* wire rope was the one to be adjusted the procedure is the same, except the *lower wire rope fitting*, (RH side), would be the one to adjust.

Loosen the jam nut. With a wrench, screw adjusting nut in a clockwise direction to pull wire rope fitting thru the guide. If the gap between runner and stop was 3/8" (for example) then adjust nut against guide until 3/8" of wire rope fitting has been pulled thru the guide.

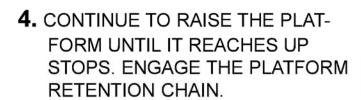
It may not be possible to obtain the correct adjustment the first time. Operate the unit and check the runners. If both runners touch the stops at he same time and 1" of cylinder rod shows from the barrel, the adjustment is correct. If not, lower platform to ground and adjust accordingly on adjusting nut. Operate unit and re-check. When adjustment is correct, tighten jam nut.

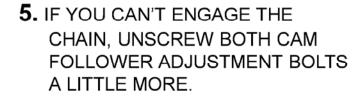
CAM FOLLOWER ADJUSTMENT

ADJUSTMENT OF THE CAM FOLLOWER MUST BE DONE BY THE FOLLOWING STEPS:

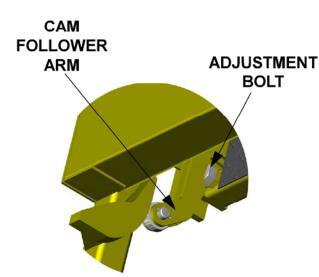


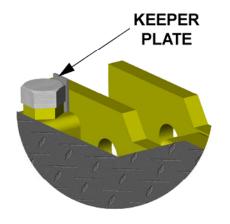
- 1. ROTATE THE PLATFORM CLOSER HANDLE CLOCKWISE UNTIL THE CAM FOLLOWERS ARE AGAINST ADJUSTMENT BOLTS.
- 2. RAISE THE PLATFORM TILL ONE OF THE CAM FOLLOWER ARMS IS TOUCHING THE ADJUSTMENT BOLT.
- **3.** UNSCREW THE OPPOSITE SIDE ADJUSTMENT BOLT UNTIL IT TOUCHES THE CAM FOLLOWER ARM.





- **6.** REPEAT STEP 4 AND 5 UNTIL THE CHAIN IS ENGAGED.
- 7. OPEN THE PLATFORM AND BEND THE KEEPER PLATE AGAINST THE FLAT EDGE OF THE BOLTS.





NOTE: THE CAM FOLLOWER SHOULD NOT BE ADJUSTED TO THE POINT WHERE THE CHAIN ENGAGES LOOSELY. 1/8" GAP FROM CHAIN TO PIN IS SUFFICIENT.

3 MONTH MAINTENANCE SCHEDULE

- 1. CHECK THE HOSE FOR CRACKING AND LEAKS.
- **2.** CHECK THE ELECTRICAL WIRING FOR CONTINUITY AND THE WIRE ROPE ENDS FOR CORROSION.
- **3.** VISUALLY CHECK THE COMPLETE UNIT FOR EXCESSIVE WEAR, WORN PARTS, REFORMED OR BROKEN STRUCTURES OR BROKEN WELDS. FOR PARTS REPLACEMENTS SEE BREAKDOWN DRAWING FOR YOUR UNIT IN SECTION 4 OF THIS MANUAL.
- **4.** CHECK ALL BOLTS FOR TIGHTNESS.
- 5. CHECK THAT ALL WARNING DECALS ARE IN PLACE AND READABLE.
- **6.** CHECK THAT ALL ROLL PINS ARE PROPERLY INSTALLED. REPLACE IF NECESSARY.
- 7. GREASE ALL AREAS THAT CREASE FITTING IS PROVIDED.
- 8. INSPECT THE WIRE ROPE.
- 9. DO NOT PUT EXCESSIVE AMOUNTS OF GREASE INTO THE COL-UMN. IT CAUSES THE ROLLER TO SLIDE RATHER THAN ROLL.

* COLD WEATHER OPERATION

OIL SPECIFICATIONS:

Grade ISO-(32) Gravity, API - 29.5 Degrees Pour Point, F- (-54 Degrees)

VISCOSITY:

@ 40 Degrees C - 31.2 cSt @100 Degrees C - 6.2 cSt VISCOSITY INDEX - 154 VI Flash Point, F - 325 Degrees

PARTS REPLACEMENT

WIRE ROPE REMOVAL

Determine which wire rope needs replacing. **NOTE!** Both wire ropes will usually wear out at the same time, therefore <u>WE RECOMMEND</u> that both wire ropes be changed at the same time.

The following instructions cover changing BOTH wire ropes. If only one wire rope is changed, use the appropriate sections for that wire rope.

NOTE: Be sure to save all parts that you remove as they are to be reused when the unit is reassembled.

1. Lower Platform to ground. Remove two bolts from the Runner Lug and the Cable Link Adapter.

REMOVE TWO BOLTS

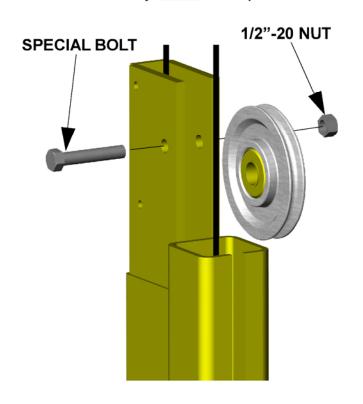
COLUMN

RUNNER LUG

RUNNER

2. Remove the sheave covers from top of column. Before removing the 3/8" bolts COVER, holding the stop plates to the **RIGHT HAND** column, wedge a screwdriver underneath the plates. Loosen COVER, or remove bolts and lock **LEFT HAND** washers and ease stop plates out of the column. 1/2-28 UNF NUTS 1/2" LOCK **WASHERS** 1/2-28 UNF STOP **BOLTS INSIDE PLATE** UP **STOP** STOP COLUMN OUTSIDE PLATE

3. Remove the sheaves from the tops of the Column assemblies. Check the bolts for wear in the area where the sheave has been rotating. If the bolts are worn, they <u>must</u> be replaced.



WARNING!

THESE ARE SPECIAL BOLTS AND COMMON STOCK BOLTS CAN NOT BE SUBSTITUTED. ORDER THESE BOLTS BY THE PART NUMBER. FOR RC-2000 UNITS P N 202438. FOR RC-3000/4000 UNITS USE P/N 202465. FOR RC-5000/6000 USE P/N 202465.

4. Check the sheaves to see if they have been badly nicked or chipped in the areas where the cable lays. If they need replacing, see the parts breakdown for your unit to obtain the correct part number.

NOTE!

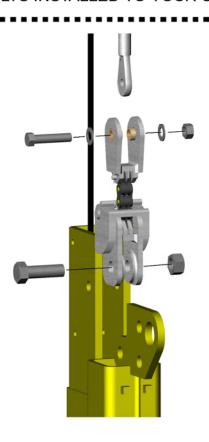
THE ABOVE WARNING AND CHECKS APPLY TO ALL SHEAVE AND SHEAVE BOLTS INSTALLED TO YOUR UNIT.

5. With the stops removed, the brake assembly can be pulled out of the Column. The wire rope end fitting can now be removed from the upper portion of the brake assembly.

NOTE!

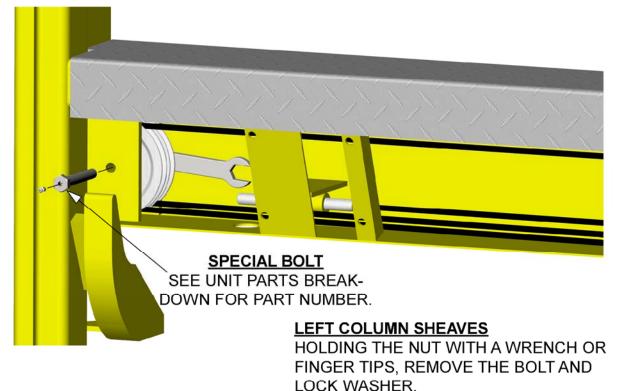
IT IS NOT NECESSARY TO REMOVE THE LOWER BOLT FROM THE BRAKE ASSEMBLY UNLESS BRAKE IS BEING REPLACED.

The wire rope can hang out over the top of the Column assembly.

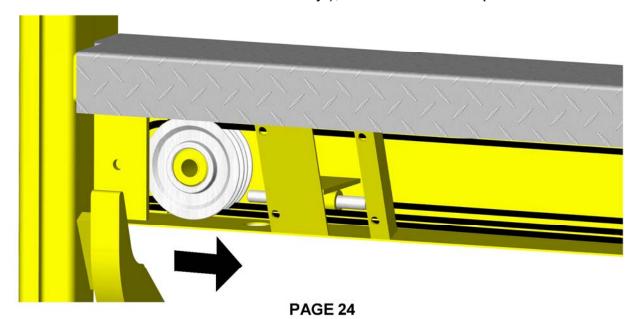


WIRE ROPE REMOVAL (Cont'd.)

6. Remove main frame cover. If BOTH wire ropes are to be removed, ALL FIVE SHEAVES will need to be removed from inside the main frame assembly. The left column sheaves, the two cylinder sheaves and the right column sheave. Inspect sheaves for excessive wear and groves. Replace if needed.

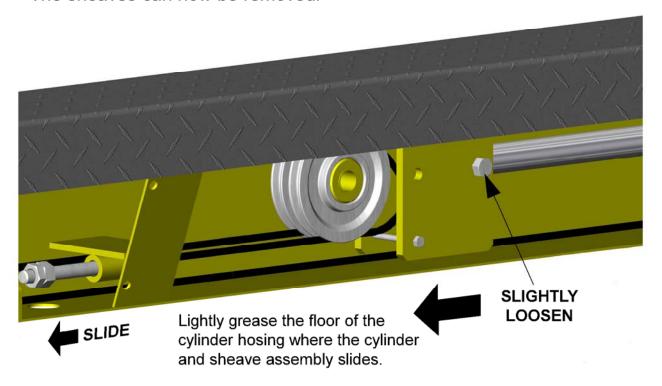


7. Remove both sheaves and spacer washers, (washers located between the sheaves for the RC-2 and RC-3 only.), from the anchor plates.

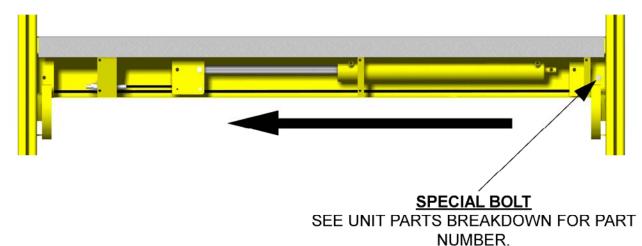


WIRE ROPE REMOVAL (Cont'd.)

8. In the same manner shown for the left column sheaves, remove the bolt and lock washer holding the sheaves in the cylinder anchor plates. (Special bolt. See breakdown drawing for part number.) Pull the sheaves out of the anchor plates. At the same time slide the wire rope end fitting to the left. The sheaves can now be removed.

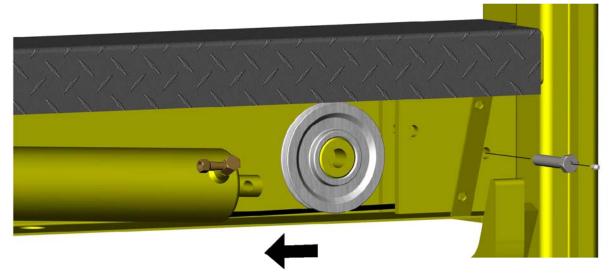


9. To obtain access to the Right Column sheave, remove the bolt holding the butt end of the cylinder in the anchor plates. Slide the complete cylinder assembly to the left.

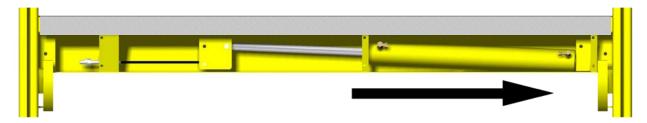


WIRE ROPE REMOVAL (Cont'd.)

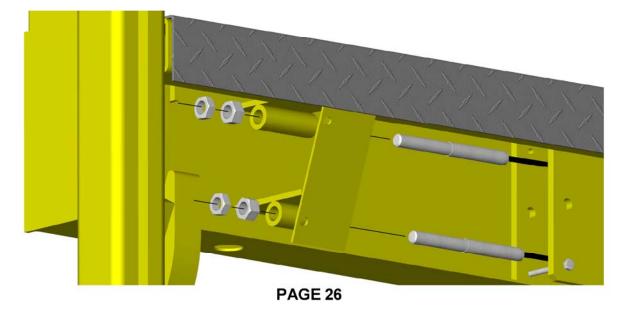
10. The sheave bolt can now be removed in similar manner to the other sheave bolts. Slide the sheave out of the anchor plates.



11. Slide the complete cylinder assembly to the right.



12. Remove the nuts from both wire rope end fittings. Pull the wire rope end fittings out of the tubes. From the top of each Column assembly, pull the wire ropes up and out of the unit.

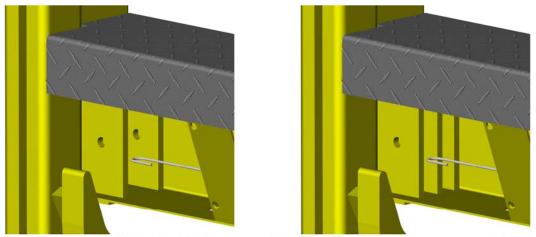


WIRE ROPE REPLACEMENT

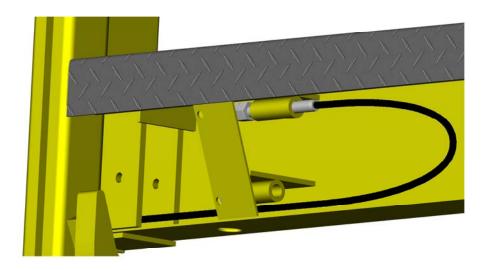
1. Install the left hand wire rope first. This is the shortest of the two wire ropes. Insert the wire rope end fitting (threaded end) down into the cable enclosure.

CABLE ENCLOSURE

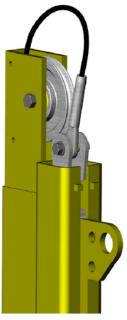
2. When the wire rope end reaches the bottom of the column, use a length of bent wire to fish the wire rope out into the main frame assembly.



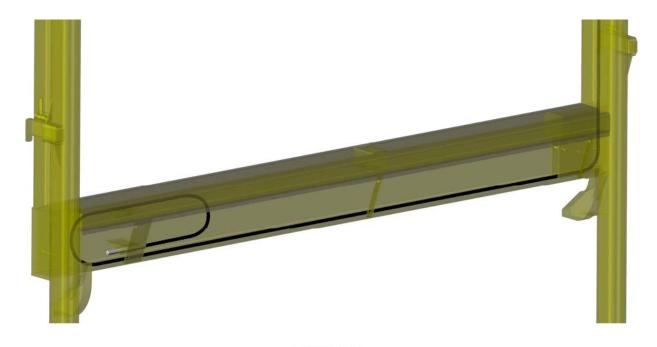
3. Pull approximately 3 feet of wire rope into the main frame assembly. Insert the threaded end of the wire rope into the top tube of the wire rope end retainer assembly. Install one nut to the wire rope end.



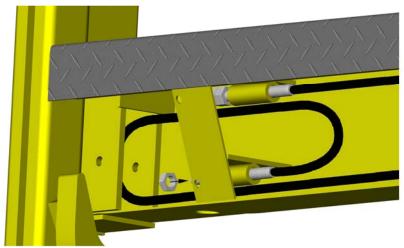
4. Install the sheave to the top of the left Column Assembly. Install the wire rope fitting to the Runner Links.



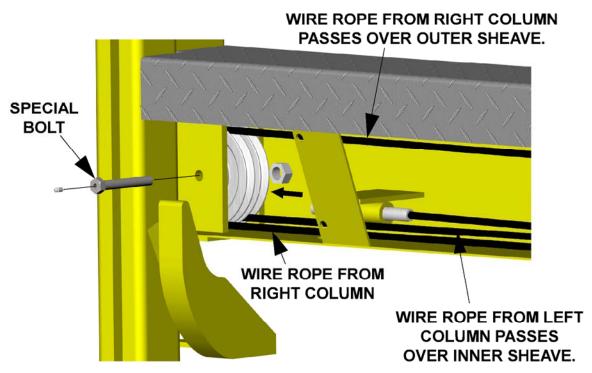
5. For the longer wire rope installation on the right hand column, use the same procedure that you used for the left hand column. Approximately 11 to 12 feet of wire rope will need to be pulled into the main frame assembly. To give a clearer picture, the illustration shows what will be the final lay of the right hand wire rope.



6. Insert the threaded end of the wire rope into the bottom tube of the wire rope end retainer assembly. Install one nut to the wire rope ends.

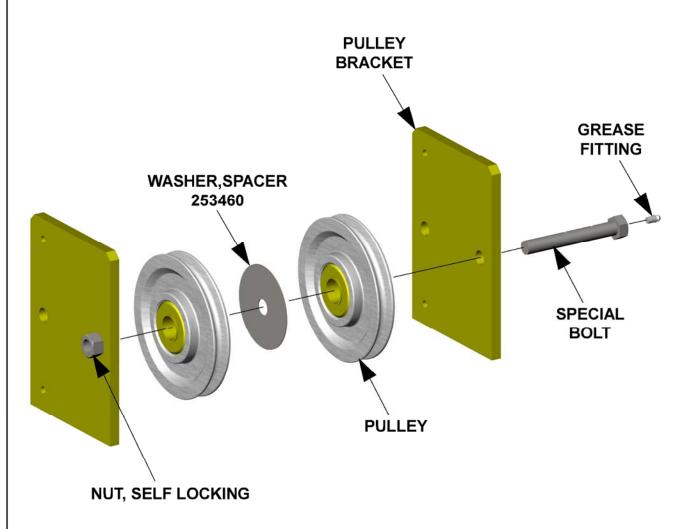


- **7.** Repeat the same procedure for the right side pulley that you used for the left side.
- 8. Install the 2 left column sheaves inside the main frame assembly. Be sure the wire ropes are seated in the grooves of the sheaves. To start the nut on the bolt hold the nut between the fingers and insert behind the sheave anchor plate. Finish tightening nut with a wrench. NOTE: THE LOCK WASHER IS UNDER THE HEAD OF THE BOLT.



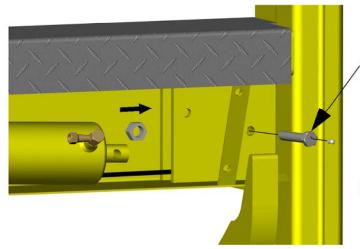
NOTE: For RC-2 & RC-3 Pulley Assemblies, see next page.

PULLEY ASSY FOR RC-2/3 ON CYL. ROD END AND LOWER LEFT HAND PULLEY BRACKET



9. Move cylinder assembly to the left. Install the right column sheave. Be sure the wire rope is seated in the groove. The sheave is installed in the identical manner as the left column sheave.

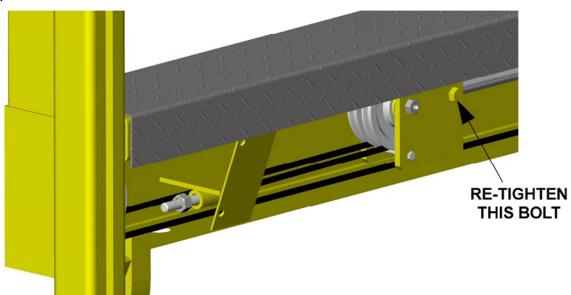
SPECIAL



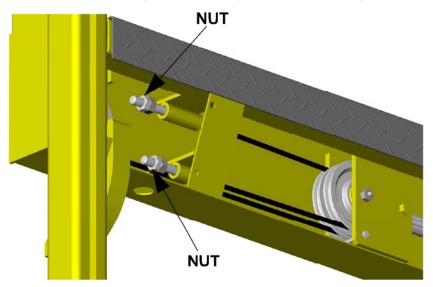
SPECIAL BOLT
SEE UNIT PARTS BREAKDOWN
FOR PART NUMBER

BOLT

- 10. Install the butt end of the cylinder to the right hand anchor plate. This bolt is identical to the right hand sheave bolt. IT IS A SPECIAL BOLT. NO SUBSTITUTION ALLOWED.
- 11. Install the two cylinder anchor plate sheaves. Be sure that <u>BOTH</u> wire ropes are seated in the grooves. The sheave bolt IS A SPECIAL BOLT. NO SUBSTITUTION ALLOWED.
- **12.** The right and left hand runners can now be un-clamped and lowered down the column assemblies. This will take up most of the slack in the wire rope.

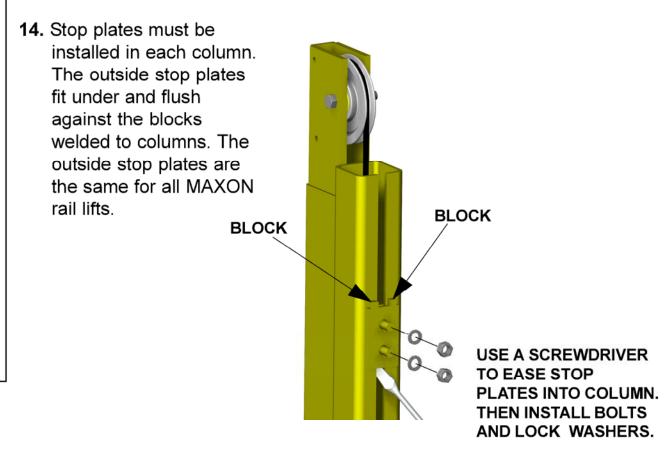


13. Install the remaining two nuts to the cable end fittings. Run the nuts down on the cable fittings to take up the remaining slack.



WARNING

CHECK THAT <u>ALL BOLTS</u> ARE TIGHT BEFORE OPERATING UNIT.

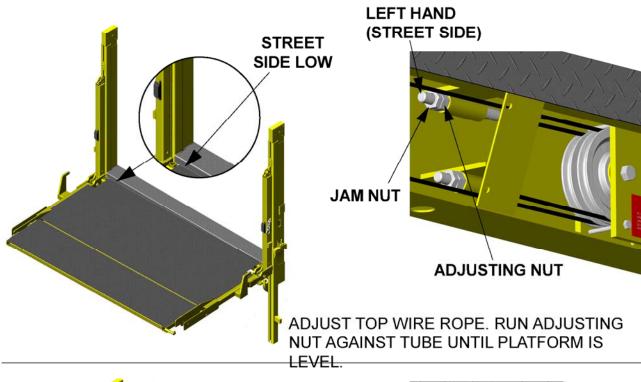


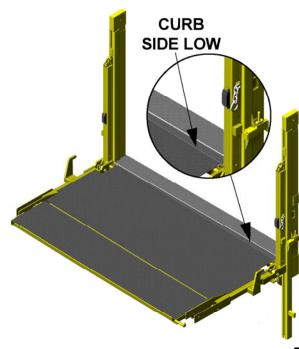
ADJUSTING NEW WIRE ROPES

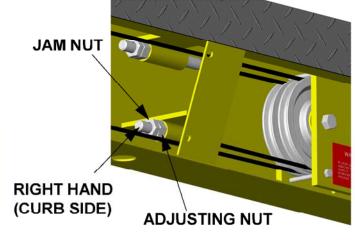
Using curb side control switch raise platform until it is almost on a level with the top surface of the main frame assembly.

DO NOT ALLOW RUNNERS TO HIT STOPS.

Release toggle switch, Check that the platform is level. If it is not level the required wire rope will need to be adjusted to bring platform level. See illustrations below. Platform can be lowered to make the adjustment.







ADJUST BOTTOM WIRE ROPE. RUN ADJUSTING NUT AGAINST TUBE UNTIL PLATFORM IS LEVEL.

ADJUSTING NEW WIRE ROPES (Cont'd.)

- 1. USING CURB SIDE SWITCH, RAISE PLATFORM UNTIL TOPS OF RUNNERS ARE ABOUT 1/4" FROM THE STOPS IN THE COLUMN ASSEMBLIES. RELEASE TOGGLE SWITCH. **DO NOT ALLOW TOPS OF THE RUNNERS TO HIT STOPS. THERE MUST BE A GAP.**
- 2. CHECK THE AMOUNT OF CYLINDER SHAFT EXTENDING FROM THE BAR-REL. THERE SHOULD BE 1-1/8" (MIN). IF YOU DO NOT HAVE THIS DIMEN-SION "BOTH WIRE ROPES WILL REQUIRED ADJUSTING EQUALLY TO GIVE THIS DIMENSION".
- 3. RUN PLATFORM UP TO MAIN FRAME ASSEMBLY AND CHECK THAT PLATFORM IS STILL LEVEL. ADJUST APPROPRIATELY IF NECESSARY.

THE OBJECT OF THE NEXT ADJUSTMENT IS TO ALLOW THE CURB SIDE RUNNER TO HIT THE STOP 1/2" BEFORE THE STREET SIDE RUNNER. THIS ADJUSTMENT IS MADE ON THE "LOWER" WIRE ROPE FITTING (RIGHT HAND, CURB SIDE WIRE ROPE).

- 4. TIGHTEN THE ADJUSTING NUT AGAINST THE TUBE APPROXIMATELY 6-8 TURNS. RAISE PLATFORM. AS SOON AS THE CURB SIDE RUNNER TOUCHES THE STOP RELEASE THE SWITCH. CHECK THE DISTANCE BETWEEN THE TOP OF THE STREET SIDE RUNNER AND THE STREET SIDE STOP. IF THE MEASUREMENT IS 1/2" THE ADJUSTMENT IS CORRECT. IF IT IS NOT. LOWER THE PLATFORM AND ADJUST THE "LOWER" WIRE ROPE AGAIN. RAISE PLATFORM AND RELEASE SWITCH WHEN CURB SIDE RUNNER TOUCHES THE STOP. CHECK MEASUREMENT BETWEEN TOP OF STREET SIDE RUNNER AND ITS STOP. THIS ADJUSTMENT WILL PROBABLY HAVE TO BE MADE TWO OR THREE TIMES TO OBTAIN THE 1/2" DIMENSION.
- **5.** WHEN ADJUSTMENT IS CORRECT, LOWER PLATFORM AND <u>TIGHTEN</u> <u>STOP</u> <u>PLATE AND JAM NUT AGAINST ADJUSTING NUT ON BOTH WIRE ROPE FITTINGS</u>.

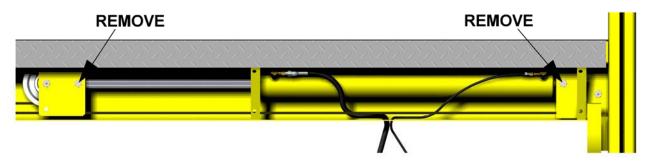
NOTE!

WITH THIS ADJUSTMENT THE PLATFORM MAY TEND TO RIDE SLIGHTLY OUT OF LEVEL. THIS IS TEMPORARY. AFTER UNIT HAS BEEN IN OPERATION WITH LOADS ON PLATFORM, THIS WILL CORRECT ITSELF.

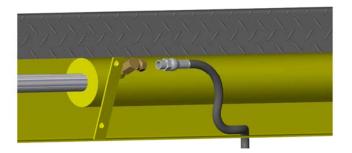
- REPLACE ALL COVERS. APPLY A LOAD (APPROXIMATELY 500 LBS) EVENLY DISTRIBUTED ON PLATFORM.
- 7. CYCLE LOAD UP AND DOWN ABOUT 20 TIMES. THIS WILL SEAT THE WIRE ROPES.
- 8. ADJUST IS NOW COMPLETE AND THE UNIT IS READY FOR USE.

CYLINDER REPLACEMENT

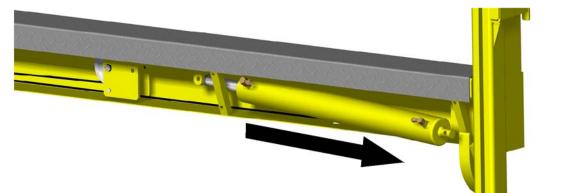
1. LOWER PLATFORM TO GROUND. REMOVE COVER FROM MAIN FRAME ASSEMBLY. REMOVE THE CYLINDER BOLTS FROM THE SHEAVE ANCHOR PLATES. **NOTE!** THESE ARE "SPECIAL BOLTS" NO SUBSTITUTION IS ALLOWED. LOWER THE CYLINDER ONTO THE MAIN FRAME.



- 2. USING THE CURB SIDE REMOTE CONTROL MOVE TOGGLE SWITCH TO "RAISE" POSITION TO RETRACT THE CYLINDER SHAFT INTO THE BARREL. RELEASE SWITCH WHEN THE SHAFT IS APPROXIMATELY HALF WAY RETRACTED.
- 3. REMOVE THE HOSE FROM THE CYLINDER.



4. THE CYLINDER CAN NOW BE REMOVED FROM THE MAIN FRAME ASSEMBLY.



5. Cylinder replacement is the reverse of the removal instructions. **WARNING:** CHECK THAT ALL BOLTS ARE TIGHT.