

OWNER & INSTALLATION MANUAL



SPL 10000 HYDRAULIC ASYMMETRIC TWO-POST LIFT

Serial Number:

Revision Date: 10/1/2019

Lift Manufacturer:
Nussbaum Automotive Solutions, LP
1932 Jordache Court
Gastonia, North Carolina 28052

This Lift and Guide belongs to the owner(s):

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SAVE THESE INSTRUCTIONS

LIFT PURPOSE

Nussbaum lifting systems are the result of over 35 years' experience in the automotive lifting industry. The high quality and superior concept ensures reliability, a long Lift lifetime, and a strong economic business solution for your automotive lifting needs. The SPL 10000 is a hydraulic asymmetric two-post Lift with a lifting capacity of 10,000 pounds. The Lift features a powerful 3.5hp integrated power unit and hard-chromed cylinders. The maximum load distribution is 2500 lbs per arm.

LIABILITY

To avoid unnecessary damage, injury or death, read all operating instructions carefully. Nussbaum Automotive Solutions, LP is not liable for any damages, injuries, or deaths resulting from misuse of the Lift. The user carries the risk alone.

There will be no guarantee or liability for incidents involving injuries, death, or damage to equipment if these incidents are the result of one or more of the following:

- Inappropriate use of the Lift to include: Inappropriate installation, operation, and maintenance of the Lift.
- Use of the Lift while security devices are inoperative, not working properly, or are installed incorrectly.
- Failure to follow the operating instructions regarding transport, storage, installation, initiation, operation, and maintenance of the Lift.
- Unauthorized changes to the design and operation of the Lift.
- Wrong or incorrect maintenance practice.
- Catastrophes, acts of God, or external reasons.
- Nussbaum Lifts are warranted with the use of Nussbaum original or replacement parts. Use of unauthorized parts may void the warranty. For parts, call Nussbaum Automotive Solutions at 1-704-864-2470.
- It should be recognized that any piece of equipment can be dangerous when operated improperly.

OWNER/EMPLOYER RESPONSIBILITIES

AUTOMOTIVE LIFT INSTITUTE SAFETY REQUIREMENTS FOR OPERATION, INSPECTION AND MAINTENANCE (ANSI/ALI ALOIM)

The Owner/Employer shall insure that lift operators are qualified and that they are trained in the safe use and operation of the lift: ALI/SM 93-1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirement for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts and SAE J2184, Vehicle Lifting Points for Service Garage Lifting.

The Owner/Employer shall establish procedures to periodically inspect the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall insure that the lift inspectors are qualified and that they are adequately trained in the inspection of the lift.

The Owner/Employer shall establish procedures to periodically maintain the lift in accordance with the lift manufacturer's instructions or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance; and the employer shall insure that the lift maintenance personnel are qualified and that they are adequately trained in the maintenance of the lift.

The Owner/Employer shall maintain the periodic inspection and maintenance records recommended by the manufacturer or ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirements for Operation, Inspection and Maintenance.

The Owner/Employer shall display the lift manufacturer's operating instructions; : AL;/SM 93-1, ALI Lifting it Right safety manual; ALI/ST-90 ALI Safety Tips card; ANSI/ALI ALOIM-2000, American National Standard for Automotive Lifts-Safety Requirement for Operation, Inspection and Maintenance; ALI/WL Series, ALI Uniform Warning Label Decals/Placards; and in case of frame engaging lifts, ALI/LP-GUIDE, Vehicle Lifting Points/Quick Reference Guide for Frame Engaging Lifts; in a conspicuous location in the lift area convenient to the operator.

ADDITIONAL OWNER/EMPLOYER RESPONSIBILITIES




- Shall require that Personal Protective Equipment (PPE) be used according to the appropriate regulations.
- Shall display the "Safety Regulations" and adhere to them closely.
- Shall ensure that all safety- and danger signs on and around the Lift are observed and followed!
- Shall follow the specified time intervals between the recommended inspection and maintenance procedures and tests.
- Shall use only spare parts that comply with the technical requirements specified by the manufacturer.
- Shall ensure that loose screws, nuts, and bolts are firmly tightened after maintenance.
- Shall not modify the Lift without written consent of Nussbaum Automotive Solutions, LP.
- Shall ensure that these instructions are maintained and available to all personnel that install, use or maintain the lift. This document contains important information about installation, operation, and maintenance of the automotive Lift. Any changes to the installation and or location of the automotive Lift must be documented.

LIFT OPERATOR RESPONSIBILITIES


- Shall read and understand all safety and warning instructions in the manual or affixed to the lift.
- Shall be trained to operate and use the SPL10000 Lift for its designed use.
- Shall be familiar with accident prevention and basic labor safety regulations.
- Shall not allow unauthorized personnel to operate the Lift.

INFORMATION OF WARNING

Pay close attention to the danger and important information symbols shown below. Carefully read all marked passages throughout this manual.

	<i>Danger! This sign indicates danger to life. Improper handling of the described operation may cause serious injury or death.</i>
	<i>Caution! This sign warns against possible damage to the automotive Lift or other material defects in case of improper handling.</i>
	<i>Attention! This sign indicates an important function or note.</i>

SAFETY REGULATIONS

	<i>The Safety Regulations must be observed and strictly adhered to while working with the automotive Lift. Read the safety regulations and the ANSI/ALI ALOIM manual included with the lift documentation carefully before working with the Lift!</i>
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IMPORTANT SAFETY INSTRUCTIONS – READ ALL INSTRUCTIONS

- The total weight of the lifted vehicle must not exceed 10,000 pounds.
- The automotive Lift must be in its lowest position, and the Lift Carry Arms must be swung out before a vehicle can be driven into the Lift area.
- Total load must be distributed evenly on all arms.
- The Lift must not be installed in a hazardous location or in washing bays.
- The Lift must be checked by a service technician after initial installation and after repairs or changes have been made to the Lift.
- The operating and maintenance instructions must be followed while working with the Lift.
- Pre-check low clearance or specially equipped vehicles for ample clearance to avoid damage to the vehicle and/or Lift.
- Only trained personnel are to operate the Lift.
- No one is to stand within the working area (danger area) during vehicle lifting and lowering operations.
- No one is to occupy a vehicle during any phase of Lift operation.
- No one is to climb onto the automotive Lift when in a raised position.

- The main electrical switch must be switched off and locked out or tagged out according to OSHA Regulations before maintenance or repair work is performed on the Lift.
- The operator must continue to observe the vehicle and Lift throughout the lifting or lowering operation.
- Check the center of gravity of the vehicle if heavy parts, such as the engine are removed.
- If heavy parts such as the engine must be removed, the center of gravity will change. Secure the vehicle before removing parts to avoid the possibility of the vehicle becoming insecure.
- **Read all instructions** before operating lift.
- Care must be taken as burns may occur from touching hot parts.
- Do not operate the Lift with a damaged cord or if the Lift has been damaged – until it has been examined by a qualified service person.
- To reduce the risk of fire, do not operate Lift in the vicinity of open containers of flammable liquids (gasoline).
- Adequate ventilation should be provided when working on operating internal combustion engines.
- Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
- Use only as described in this manual. Use only manufacturer’s recommended attachments.
- ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

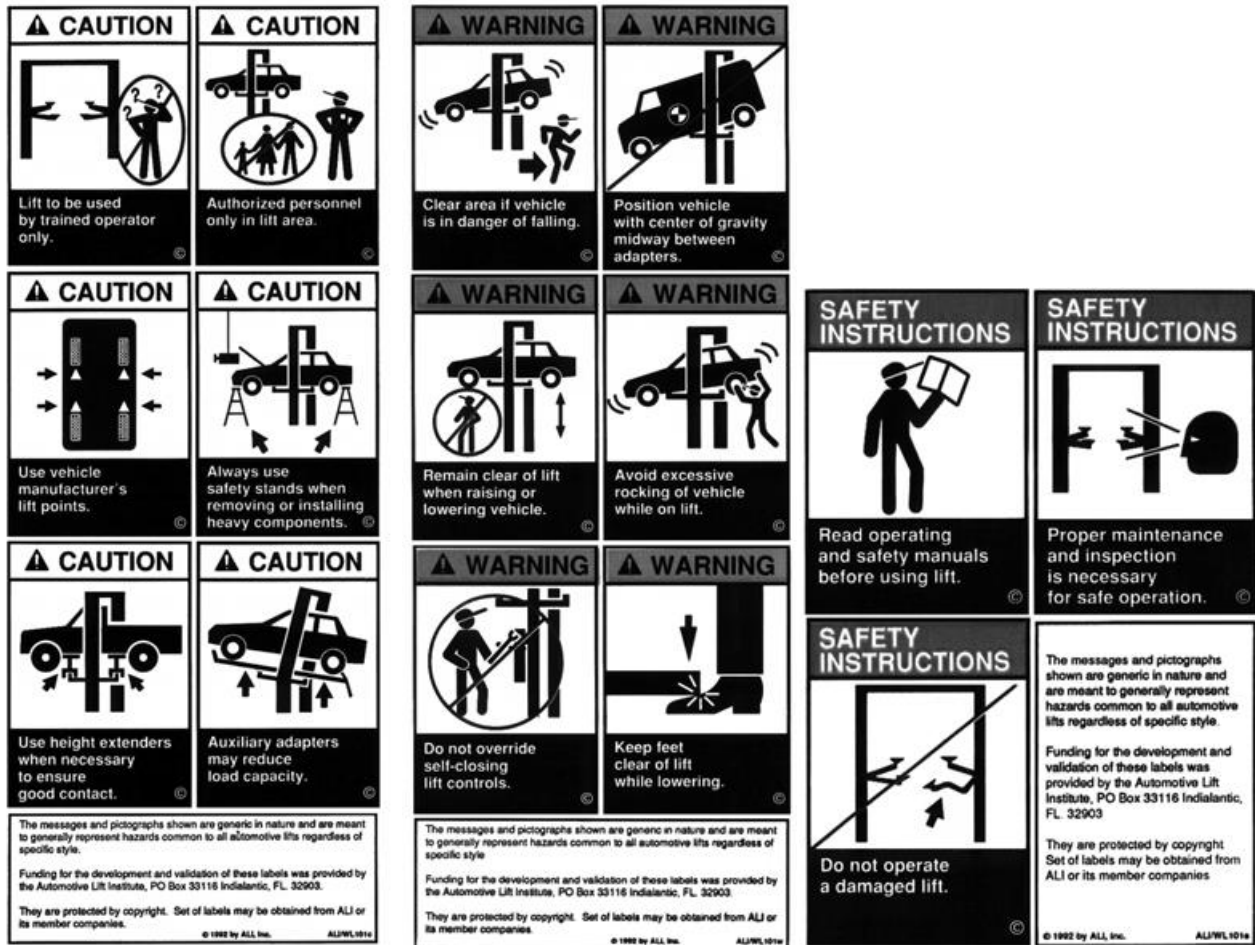
SAVE THESE INSTRUCTIONS

SAFETY DEVICES

Nussbaum has designed several safety features into each Lift to ensure safe and efficient operations under a variety of conditions. Warranties will be voided and dangerous working conditions exist if any of the listed devices are altered or disabled.

Safety device at the Lift Carry Arms	Safety device to prevent unintentional lateral arm movement.
Equalization Equalizer Cables	Safety device to prevent “out of level” lifting.
Top Limit Bar and Switch	Safety device to prevent unintentional collision with Overhead Telescope Assembly on Lift.
Raise Button	If button is not pressed, the Lift stops moving up.
Safety Ratchets	Safety device against unintentional lowering.
Hydraulic Flow Restrictors	Safety device to prevent excessive lowering speed.

SAFETY LABELS AFFIXED TO LIFT



SAFETY INSTRUCTIONS

If attachments, accessories or configuration modifying components that are located in the load path, affect operation of the lift, affect the lift electrical listing or affect intended vehicle accommodation are used on this lift and, if they are not certified for use on this lift, then the certification of this lift shall become null and void. Contact the participant for information pertaining to certified attachments, accessories or configuration modifying components.

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READ ALL LABELS AND VERIFY THAT ALL AUTHORIZED USERS FULLY UNDERSTAND THE MEANING OF EACH CAUTION / WARNING / SAFETY INSTRUCTION. DO NOT REMOVE OR DEFACE SAFETY LABELS FROM THE LIFT.

OPERATING INSTRUCTIONS



READ ALL OWNER'S MANUAL INSTRUCTIONS AND ANSI/ALI ALOIM BEFORE USING THE LIFT

TO LOAD VEHICLE

Clear **persons and objects** from Lift working area.
Pull Down the Manual Release Lever AND the Lowering Lever to lower the Lift Carry Arms to the lowest position.
Swing the **Lift Carry Arms** out.
Drive the vehicle into the middle of the Lift area.
Secure the **vehicle** from rolling, put into gear, and apply the **hand brake**.
Swing the **Lift Carry Arms** under the vehicle and position the **Lift Adapter Pads** at the Lift points specified by the vehicle-manufacturer.

Lift Adapter Pad



Lift Carry Arm

	The manufacturer's service garage Lift points may be marked on the undercarriage of the vehicle with triangle shaped markings. If the Lift points are not marked on the vehicle, refer to the vehicle manufacturer for the approved Lift points.
	The Center of Gravity must be located slightly towards the Long Lift Carry Arms.

Determine the **center of gravity**. If necessary, adjust the **Lift Adapter Pads** to assure equal contact with the **Lift Carry Arms** and the vehicle.
Check all the **danger points** of the Lift to ensure that loose objects or people are clear from Lift and working area.



Modified or specialty vehicles: Contact vehicle manufacturer to determine if vehicle can be lifted on a frame engaging Lift.

TO LIFT VEHICLE

Press and Hold the **Raise Button**.
Allow the **Lift Carry Arms** to raise up close to the underside of the vehicle without coming into contact.
Release the **Raise Button** to stop the **Lift** and check to ensure the **Arm Restraint Pins** are engaged. If the **Arm Restraint Pins** are not engaged, move the **Lift Carry Arm** to allow the **Pawl and Restraint Gear** to engage properly.



DO NOT hammer the pin into place. Damage to the restraint gear teeth will occur.

Raise Button



Once the **Arm Restraint Pins** are engaged properly, press the **Raise Button** again.

TWO POST SPL10000

Allow the **Lift Carry Arms** to connect with and lift the vehicle.
Continue raising the **vehicle** until the wheels have cleared the floor by approximately 6".
Verify that the **Arm Restraint Locks** have dropped into position.
Verify the **vehicle** is properly centered on the Lift and **all pads** are properly positioned on the manufacture approved Lift points of the vehicle.



Closely observe how the vehicle is positioned on the Lifting Pads. The vehicle may fall from the Lift if all four Lifting Pads are not in full contact with the vehicle at the manufacturer's recommended Lift points.

Raise the **vehicle** to the required working height only if vehicle is stable on the Lift.
Always observe the complete lifting and lowering process.
Engage the Manual Lock Lever and then pull down the Lowering Lever till you here a clicking noise. This would engage the locks and hold the lift at this position securely. Avoid rocking the vehicle while it is on the lift.



Use safety stands (not included) for added protection when removing or installing heavy components.

TO LIFT PICKUP TRUCKS

Special care must be taken when lifting pickup trucks or other vehicles with truck frames!

Ensure that the **frame** has not been weakened by corrosion and/or modifications.
Check the trucks **center of gravity**.
Confirm that the **truck's individual axle weights** are less than half of the total Lift allowance.

TO LOWER AND UNLOAD VEHICLE



Check all the **danger points** of the Lift to ensure that loose objects and people are clear from Lift and working area.
To disengage Lock Mechanisms, Press and Hold the **Lift Button** to raise the **Lift** slightly.
Push both the **Lock Release Lever** and the **Lower Lever** at the same time.
Lower the **Lift** to the required working height.
Always observe the complete lifting and lowering process.
Disengage the **vehicle** from the **Lift Adapter Pads** by lowering the **Lift Carry Arms** to their lowest position.
Swing the **Lift Carry Arms** out from underneath the vehicle.
Drive the **vehicle** away from the Lift area.



If the Lift Carry Arms are lowered on an obstruction, the Lift will stop. Push and Hold the "Raise" button until the object can be safely removed.

SAVE THESE INSTRUCTIONS

INSPECTION AND MAINTENANCE PLAN

	<i>Before conducting maintenance work, safety precautions must be in place to eliminate harm to people working with or around the Lift.</i>
	<i>To avoid personal injury, allow only qualified technicians to perform maintenance on the Lift.</i>

To guarantee the utmost availability and to ensure that the Lift remains functional, maintenance work contracts are organized between our clients and their local retailers.

Service must be performed at regular intervals of 3 months in accordance with service manual. Proof of maintenance records may be a prerequisite for warranty claims. The maintenance rate must be increased if the Lift is in continuous operation, in a dirty environment, or in contact with de-icing salts, sand, pebble stones, natural soil, and industrial dust of all manner, water, or constant humidity caused by insufficient ventilation. During daily operation, the Lift must be closely observed to ensure that it is functioning correctly. In the case of malfunction or fluid leak, Technical Service must be informed.

HOW OFTEN MUST THE LIFT BE CLEANED?

The schedule depends on the cleanness of the workshop and location of the Lift. The degree of the dirt may vary dependent on the season, weather conditions, and the ventilation of the workshop. The best protection for the Lift is a regular cleaning every month. Under bad conditions, it may be necessary to clean the Lift every week.

- Clean the Lift and the floor with a mild, non-abrasive detergent.
- Do not use a steam jet or power washer.
- Remove dirt with a sponge, or if necessary, a soft brush.
- Rinse away detergent with sponge.
- Do not leave any kind of liquid on the Lift.

LIFT MAINTENANCE



Before beginning any maintenance work: Locate the power supply main switch and turn off. Lockout and tag out to prevent re-energizing system during maintenance. Secure the danger area around the Lift and secure the Lift with safety stands to guards against unintentional lowering.

PART	ACTION/PRODUCT
Clean the Piston-Rod.	Use compressed air.
Check the condition of the Equalizer Cables.	If cables are damaged or show any broken strands, replace the complete cable-set. If cables are slack, readjust per the installation instructions on page 20.
Clean and lubricate all moving parts of the Lift including hinge bolts, sliding pieces, and sliding surfaces.	Use a multipurpose grease.
Check Oil Level.	Fill the tank with clean AW32 Hydraulic Fluid
Change the hydraulic oil at least once a year.	To change the oil, lower the Lift to its lowest position. Empty tank and refill with clean oil. Approximately 4 Gallons. (If ambient temperature is under 40 degrees Fahrenheit, use lower than 32 viscosity.) Dispose of used oil according to the appropriate regulations.
Check all welded joints for cracks.	If any cracks are found on the Lift, stop use immediately. Switch-off and secure the main switch (lock) and call service provider.
Check condition of Rubber-Pads on the arms.	Check for cracks or missing rubber. Replace as needed.
Check all external surfaces for damage.	If damaged, repair immediately. If repairs are not made immediately, permanent damage to the powder-coated surface may result. Repair and clean damaged areas with an abrasive paper (120 grit). Coat repaired area with a suitable paint (observe the RAL Number).
Check Zinc Surface. White rust can result from moisture laying in certain areas for long periods of time or poor ventilation. Poor ventilation can also result in rust formation. Rust may result from mechanical damage, wear, aggressive sediments (de-icing salt, liquids), or insufficient cleaning.	Repair and clean these areas with abrasive paper (240 grit). Coat repaired area with a suitable paint (observe the RAL Number).
Check all safety devices.	All Safety Devices must be in good working condition. If not, contact Technical Service.

REPLACEMENT PARTS

ONLY USE NUSSBAUM ORIGINAL EQUIPMENT PARTS TO REPAIR THE LIFT

CALL NUSSBAUM PARTS DEPARTMENT AT 1-704-864-2470

TWO POST SPL10000

Nussbaum Automotive Solutions, LP | 1932 Jordache Court, Gastonia, NC 28052 | 704.864.2470 | Email: info@nussbaum-usa.com | www.nussbaum-usa.com

TECHNICAL INFORMATION

The SPL Series are hydraulic asymmetric two post lifts with a lifting capacity of 8,000, 9,000 and 10,000 pounds. These lifts feature a powerful 3.5hp integrated power unit and covered hard-chromed cylinders, making them a precisely engineered mix between durability and appearance. With a wide range of features and options to choose from, the SPL is the perfect lift for your shop.

ACCESSORIES / OPTIONS

- Wide range of pick up pads / adapters
- XL models (SPL 10000 MXL3S) extend lifting height over 80"
- Electrical options 208/230V / 3 phase, 460/480V / 3 phase and 575/600V / 3 phase
- Optional triple-extended arms with screw up adaptors - 3S
- Optional low-profile arms with 3" clearance and screw up adapters – LP
- Optional Double-Jointed arms with 5.2" clearance and screw up adapters – DJ

Technical Data	Standard arms	Three stage arms	Low profile arms	Double-jointed arms
Lifting Capacity(lbs.)	10,000	10,000	8000	9000
Lifting Time Approx.(sec)	37	37	37	37
Low Clearance(in)	4.5"	5"	3"	5.2"
Rear arms extension(in)	39.5-59"	39.5-59"	33-54.3"	0-71.86"
Front arms extension(in)	27.25-43.5"	21.5-43.5"	23.2-34"	21.5-43.5"
Lifting Height(in)	73.5"	73.5"	73.5"	73.5"
Overall Height(in)	142.75"	142.75"	142.75"	142.75"
Inside Height(in)	139.2"	139.2"	139.2"	139.2"
Lifting Height(in)-XL	80.5"	80.5"	80.5"	80.5"
Overall Height(in)-XL	160"	160"	160"	160"
Inside Height(in)-XL	155.5"	155.5"	155.5"	155.5"
Overall width(in)	124"	124"	124"	124"
Outside column width(in)	120"	120"	120"	120"
Inside column width(in)	105"	105"	105"	105"
Drive through inside width(in)	94.75"	94.75"	94.75"	94.75"
Motor(hp)	3.5	3.5	3.5	3.5
Power Supply(V)	208/230/1 Ph(std)	208/230/1 Ph(std)	208/230/1 Ph(std)	208/230/1 Ph(std)

Load Distribution	3333 Rear arms; 1667 Front arms
Lifting Time	approximately 45 seconds
Lowering Time	Variable, operator controlled
Power Rating	3.5 HP max.

Motor Speed	3450 rpm
Pressure Relief Valve	3480 PSI
Oil Tank Capacity	4 gallons

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GENERAL VIEW

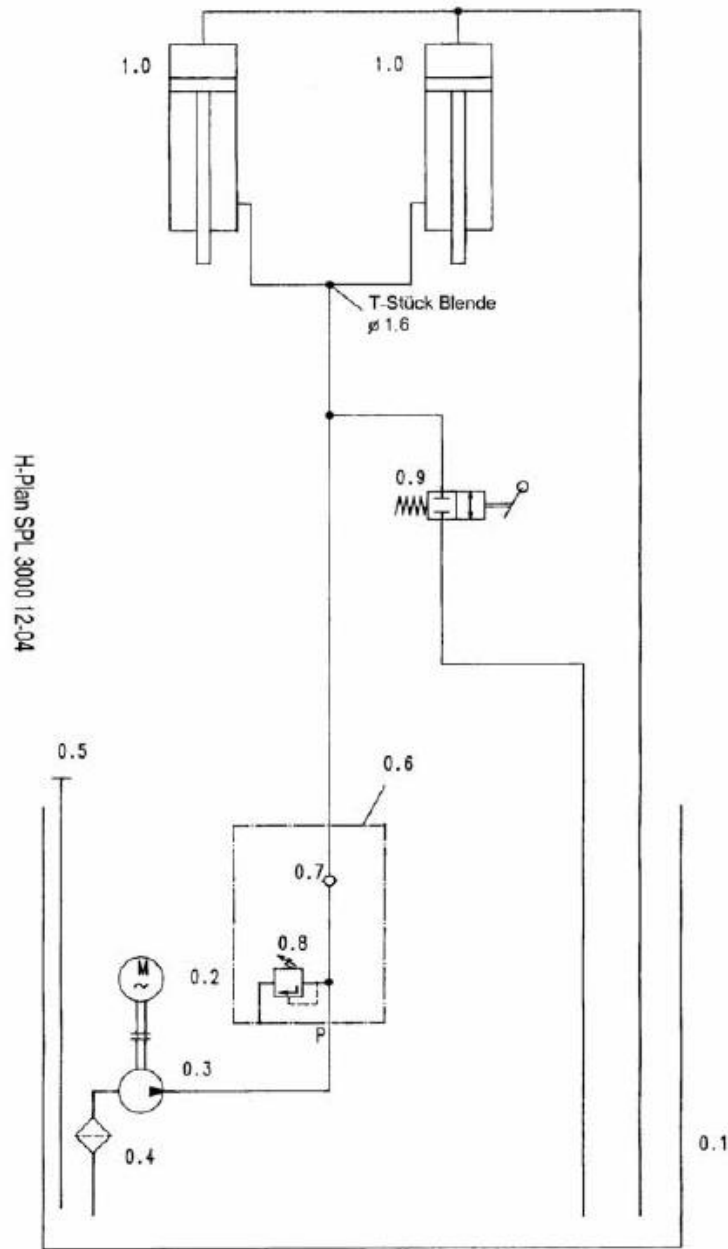
Nussbaum-BOM		1	2	3	4	5	6
Item	Type	Quantity	Part Number	Description	Material / Finish	Notes	
1	ARM LONG	1	2100SPL08001	ARM LONG	SPL10.000 / 38.5"-59" (1003-1500)		
2	ARM SHORT	1	2100SPL08020	ARM SHORT	SPL10.000 / 27"-64"-43"-72" (692-1103)		
3	LIFTING COLUMN 1	1	2100SPL05101	LIFTING COLUMN 1	SPL10.000 SHORT / -		
4	LIFTING COLUMN 2	1	2100SPL05131	LIFTING COLUMN 2	SPL10.000 SHORT / -		
5	ROPE GUIDE WELDMENT	2	2100SPL06048	ROPE GUIDE WELDMENT	ASSEMBLY / -		
6	TELESCOPE SHUT-OFF COVER	1	2100SPL05085	TELESCOPE SHUT-OFF COVER	ASSEMBLY / -		
7	TELESCOPE TRVERSE	1	2100SPL05080	TELESCOPE TRVERSE	ASSEMBLY / -		
8	TELESCOPE TUBE	1	2100SPL05080	TELESCOPE TUBE	ASSEMBLY / -		
9	SECHSSEKSCHEIBE	1	9931.1-HX0020	SECHSSEKSCHEIBE	ST. 20 / DIN 931 M30x20 8.8		
10	SECHSSEKSCHEIBE	1	970455-1	SECHSSEKSCHEIBE	- / -		
11	EXTENSION 1.6"	1	970455-2	EXTENSION 1.6"	- / -		
12	EXTENSION 3.5"	1	2100SPL08032	EXTENSION 3.5"	ASTM A36 / RD 2.559*42.92*		
13	EXTENSION 5.5"	1	2100SPL08031	EXTENSION 5.5"	ASTM A36 / RD 2.559*41.92*		
14	EXTENSION HOLDER	1	2100SPL08030	EXTENSION HOLDER	ASTM A36 / RD 2.756*46.88*		
15	HEXAGON NUT	2	2100SPL08276	HEXAGON NUT	A36 / 11ga		
16	FUNCTIONSCHRUBE	2	9921906X1029	FUNCTIONSCHRUBE	5.8 / DIN 921		
17	HEXAGON NUT	2	2100SPL05169	HEXAGON NUT	LF. C1915 PH / 16/16" HEX		
18	SCHRAUBE	10	91294029	SCHRAUBE	- / DIN 925-1.8-10.5		
19	SECHSSEKSCHEIBE	1	99894029	SECHSSEKSCHEIBE	- / DIN 905 M10 ZN		
20	STAINLESS STEEL STRANDED ROPE	1	2100SPL05168	STAINLESS STEEL STRANDED ROPE	STRANDED ROPE: 2mm 1x19 / 2mm x 6350mm		
21	T-HEAD BAR	2	2100SPL05168	T-HEAD BAR	1045CF / M16 Thread rod		
22	Z4 INDESSCHRAUBE	4	9912906X1029	Z4 INDESSCHRAUBE	DIN 912 / M5x6		
23	Z4 INDESSCHRAUBE	1	9912906X1029	Z4 INDESSCHRAUBE	8.8 / M10x25Zn DIN 912		
24	Z4 INDESSCHRAUBE	4	9912906X1029	Z4 INDESSCHRAUBE	- / DIN 912 M6x10		

SPL10.000 SHORT
 ARMS: 2100SPL08000
 TELESCOPIC - TRAVERSE

Scale:	2:25	Weight:	4687.925 lbs
Material / Finish:	SPL10.000		
Modeling:	2100SPL00004		
Sheet:	2	of:	2

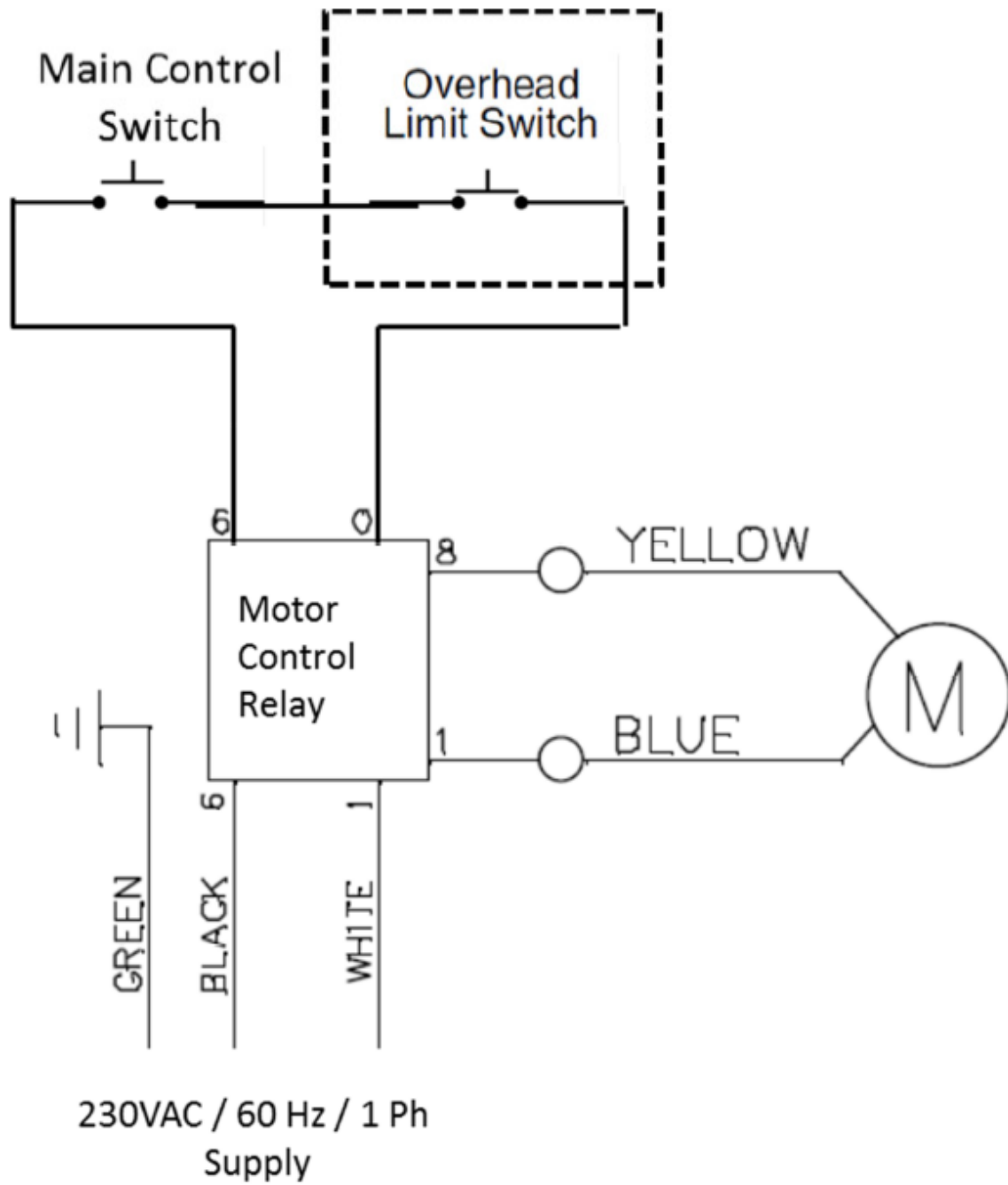
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HYDRAULIC PLAN



- | | |
|---|--|
| <p>0.1 OIL TANK</p> <p>0.2 MOTOR 3KW</p> <p>0.3 GEAR PUMP</p> <p>0.4 OIL FILTER</p> <p>0.5 OIL LEVEL GAUGE</p> <p>0.6 HYDRAULIC BLOCK</p> | <p>0.7 HOLDING VALVE</p> <p>0.8 PRESSURE RELIEF VALVE</p> <p>0.9 HOLDING VALVE</p> <p>1.0 CYLINDER</p> |
|---|--|

ELECTRIC PLAN



1. Open control panel cover
2. Unplug wire connector on terminal 0 of motor control relay
3. Connect male connector from overhead limit switch to female connector on unplugged wire
4. Connect female connector from overhead limit switch to terminal 0 of motor control relay
5. Connect supply power to the connections as shown

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TROUBLE-SHOOTING

If the Lift does not work properly, refer to the following trouble-shooting guide. If the problem cannot be resolved, call Technical Service at 704.864.2470.

PROBLEM	POTENTIAL CAUSE	REPAIR OPTIONS
Motor does not start	No power supply, or feed line is cut	Check the power supply at the facility breaker box and the power supply box.
	Motor is defective	Call technical service.
	Top Limit Switch is engaged or defective	If engaged: loosen actuator mechanism. If defective: replace switch.
Motor starts, Lift does not move	Vehicle is too heavy	Check vehicle for empty weight. Unload unnecessary weight from vehicle.
	Oil level is too low	Lower Lift and fill oil reservoir. Check for leakage. Call Technical Service if leakage is observed.
	Defective Hydraulic Valve	Check for leakage. Call Technical Service if leakage is observed.
	Gear Pump is defective	Check for leakage. Call Technical Service if leakage is observed.
	Leakage in the Hydraulic System	Check for leakage. Call Technical Service if leakage is observed.
The Lift will not lower	Lift is resting on the mechanical locks	Press the Raise Button until the locks are clear, engage the Lock Release Lever.
	An obstacle is restricting the Lift from being lowered	Press the Raise Button until the obstacle is freed. Remove the obstacle.
	Lowering valve is defective	Call Technical Service.
	Lock Release Cable is broken or defective	Call Technical Service or your manufacturing representative to purchase a new Lock Release Cable.
The Lift lowers unexpectedly	Lowering valve is defective	Call Technical Service.

REPLACEMENT PARTS

ONLY USE NUSSBAUM ORIGINAL EQUIPMENT PARTS TO REPAIR THE LIFT

CALL NUSSBAUM PARTS DEPARTMENT AT 1-704-864-2470

INSTALLATION AND INITIATION

SAFETY CHECKS

The safety check is necessary to guarantee safe operation of the Lift during use.

Safety checks should occur as follows: after installation, before initial startup, after initial startup, at least once a year, and any time modifications have been made to the Lift.



Before the installation of the Lift, secure the installation area to prevent access by unauthorized persons. It is recommended to use a crane, forklift, or scissor Lift and supports to maneuver the Lift and to avoid accidents.

PREPARE LIFT ASSEMBLY LOCATION

The installation of the Lift is performed by manufacturer trained technicians or by the manufacturer's distribution partner. The Lift owner may use their trained mechanics to install the Lift. The installation must be performed according to the following regulations:

- Use architectural plans, if available, to determine Lift location.
- Lift is intended for indoor installation only. Installation in an outdoor application is prohibited and will void the warranties of the product.
- Always consult a qualified person regarding local regulations for seismic requirements.
- Do not install Lift in hazardous locations, pit or depression areas, or washing stalls.
- Install Lift in a bay with at least 144 inches of overhead clearance for SPL10000 and 162 inches of overhead clearance for the SPL10000XL.
- Concrete must have compression strength of at least 3,500PSI and be a minimum of 4 inches thick.
- Mount on a level foundation.
- Mount on a foundation deeper than the local external frost line.
- Be sure to read the ANSI/ALI ALIS prior to installation.



SHIPPING/PARTS LIST

QUANTITY	ITEM CODES	ITEM NAMES	LOCATION?
1		Manual/Handbook	Box
2	245SPL05168	Threaded Rod – To be installed on Guide Cables if the Extension is needed for a wider width.	Box
2	232POW05169	Hex Nut –	
4	9DM1620HNZN	NutM16-2.0 Fin Hex Zinc Din934 – Pre-installed on Tension Rods.	
2	2100SPL08276	Holder for Extension –Black plate with three holes.	Box
4	245SPL08031	Extension 3.5" – Silver Rods used to fill space between the Lift Carry Arms and vehicle. Will be used with the Lift Adapter Pads.	Box
4	245SPL08032	Extension 1.5" – Silver Rods used to fill space between the Lift Carry Arms and vehicle. Will be used with the Lift Adapter Pads.	Box
4	2100SPL28217	Lift Adapter Pad – Round rubber pads to be placed in peg holes on the Lift Carry Arms to support the vehicle.	Box
1	2100SPL05127	Lock Release Lever – To be installed above Motor on the Locking Mechanism. Used to open Locks to lower the vehicle.	Box
1	9RCable3327X19GAC	Manual Latch Release Cable – Silver cable to be mounted on Locking Mechanism from Post 2 to Post 1.	Box
1	9720290	Ball Knob – Black threaded ball to be installed on end of Lowering Lever as part of the handle.	Plastic Bag
1	94515-06-06	90 Degree 3/8 Fitting – Used to connect Hydraulic Line to Motor.	Plastic Bag
4	9SRD471	Metric Snap Ring 38MM – Silver C-Clips.	Plastic Bag
4	9HHCSM08X125020Z	Hex Head Cap Screws M8x20 – Used to mount Lift Motor to th Post.	Plastic Bag
8	WM0800000ZNF000125	Flat washer M8 – Used to mount Lift Motor to Post.	Plastic Bag
4	9NUTM08125ZNH0NY0985	Locknut M8 Nylon Insert – Used to mount Lift Motor to Post.	Plastic Bag
4	9HHCSM10X150020Z	Hex Head Cap Screws M10x20 – For Overhead Telescope Assembly.	Plastic Bag
4	9SHCSM06X10010Z	Socket Head Cap Screw M6 x10 – For Extension Holder.	Plastic Bag
4	9WM1000000ZNF000125	Flat washer M10 – For Overhead Telescope Assembly.	Plastic Bag
1	2100SPL05101	Post Assembly #1 with Hydraulic System and Cables pre-installed.	Pallet
1	2100SPL05131	Post Assembly #2 with Hydraulic System and Cables pre-installed.	Pallet
2	2100SPL08801	Long Lift Carry Arms – To support the back of vehicle.	Pallet
2	2100SPL08820	Short Lift Carry Arms – To support the front of vehicle.	Pallet
4	245SPL28016	Pivot Pins – To attach the Lift Carry Arms to the Yokes.	Box
1	2100SPL05080	Overhead Telescope – Ships pre-assembled for short width assembly.	Pallet
1	AB-10679	Hydraulic Power Unit (Boxed) – To be mounted on Post 1 Motor Mounts.	Pallet

UNPACKING LIFT

Carefully remove the **Lift** from the **shipping crate**.
Verify that **all parts** match the **parts list**.

MOUNTING LIFTING COLUMNS TO FLOOR

Post 1 will have the Power Unit Mounting Bracket.

Mount **Lift Column 1** on the passenger side of the vehicle.

Determine desired location in bay for **Lift Column 1**.

Allowing ample room **for Lift width** and **Lift Column 2** to be installed. Make sure there will not be any obstructions within 6" of any post. Allow at least

Stand **Lift Column 1** in upright position.

Using holes in the Post Baseplate as a guide.

Drill Holes in concrete floor for a 5 ½" long ¾" diameter **Heavy Duty Anchor Bolt**.

The depth of the holes should be ¼" deeper than the length of the **Anchor Bolt**.



The Lift is supported only by the anchors in the floor. DO NOT install on unstable surfaces such as asphalt. Minimum 3500psi concrete thickness 4"

Clean holes with **compressed air**.

Insert eight (8) Anchor Bolts in Post 1 and tighten to the **Anchor Bolt** manufacturers' recommended torque.



If Anchors do not tighten to 150 ft-lbs. installation torque, replace concrete under each post base with a 4'x4'x8" thick 3500 PSI minimum concrete pad.

Confirm that **Mounting Baseplates** are square on centerline.

Install **Cables** before securing Lift Column 2 to the floor.

Place the Overhead Telescope Assembly on top of the Posts.

Assure **Mounting Baseplates** are level to each other.

Use **shims** and **non-shrink grout** under **unsupported areas** of each Baseplate as needed.

Confirm that **Lift Columns** are plumb.

Drill **holes** for **Lift Column 2** as described above and secure.

Fasten Lift Column 2 with eight (8) Anchor Bolts to the floor.

Remove the Overhead Telescope Assembly to install Cables.



Post 1 with Power Unit Mounting Bracket



Mounting Base Plate



Overhead Telescope Assembly

CABLE ASSEMBLY



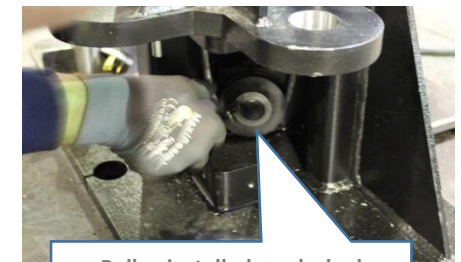
Attention: The Steel Synchronizing Equalizing Cables must never cross!

Remove Protective Hydraulic Cylinder Cover from both Posts.
Place Carriage into 1st Locking Position on both Posts.
Pull Synchronizing Equalizing Cable from the top of Post 1 (motor mount Post side) across Front Roller, and over to Post 2 Front Roller.
Pull tight **cable slack** across to **Lift Column 2**.
Repeat steps 3 and 4 for the Synchronizing Equalizing Cable from Post 2.
NOTE: Cables should not be slacked inside Posts.
Feed Synchronizing Equalizing Cable 1 into the top of Post 2, BEHIND Post 2's cable.
Pull **Synchronizing Equalizing Cable 1** all the way down to the floor.

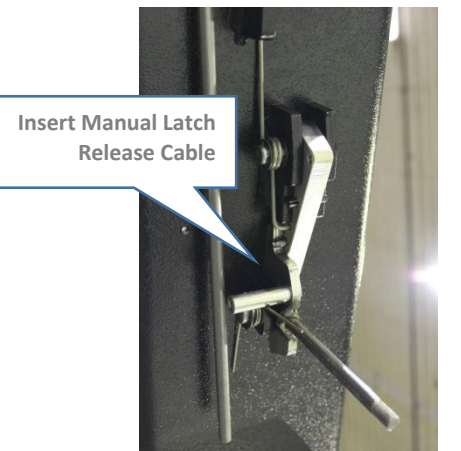
Remove **Pulley** at the bottom of each **Post**.
Loop Synchronizing Equalizing Cable 1 back up through the 2" Ratchet Ladder guides to the top hole.
Place M16 Hex Nut on the end of the Synchronizing Equalizing Cable 1.
Repeat steps 3-9 for Synchronizing Equalizing Cable 2
WARNING: Cable 2 **MUST BE FED** into Post 1 In front of cable 1.
Place **Pulley**, spacer side first, onto the **cable**.
Remount onto the **Post**.
Secure with the Thrust Washer and C-Clip.
Repeat for **Post 2**.
Remount the Overhead Telescope Assembly using 8 M10 Bolts. Make sure Cables are under the Overhead Telescope Assembly.
Install **Manual Latch Release Cable** on top of the **Overhead Telescope Assembly**, through the provided guides.
FIRST attach **Post 2 end** to the **Manual Latch Release Cable** using the pre-assembled bolt and nut.
Feed Post 1 end of Manual Latch Release Cable through the guide on the Locking Mechanism and secure with existing bolt.



Feed Synchronizing Equalizing Cable into Post 2 BEHIND the existing cable.



Pulley installed on slacked Cable at bottom of Both Posts.



Insert Manual Latch Release Cable

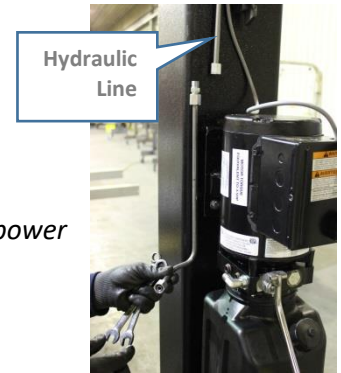
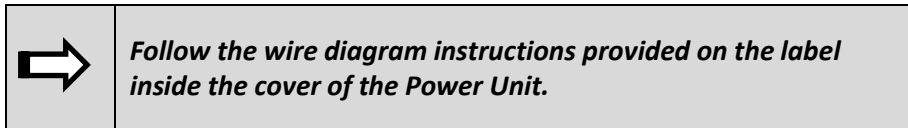
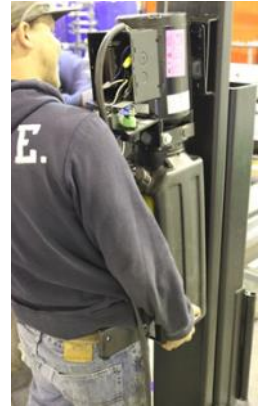
HYDRAULIC/MOTOR AND POWER CONNECTIONS

Connect the **Hydraulic Lines of the Hydraulic Cylinder** on BOTH Posts with the **Overhead Hydraulic Lines Screw Fitting**. If necessary, cut the hydraulic line to proper length.

Two installers must work together to hang the Power Unit/Lift Motor onto Lift Column 1.
Installer 1: Lift Motor to **Mounting Plate**.

Installer 2: Attach Motor in the following order: 1 screw, 1 washer, the motor mount, 1 washer, and 1 lock nut.

Connect the Hydraulic Line coming out of the Hydraulic Cylinder to the Motor with the 90-Degree double-bend Nut and Ferrule Hydraulic Line from inside the Overhead Telescope Assembly.



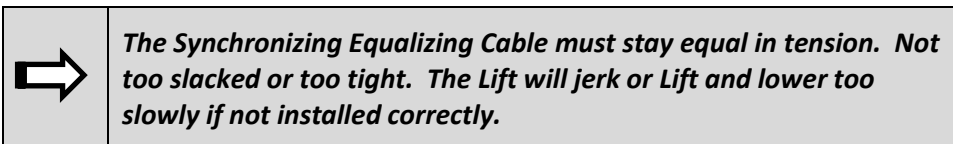
Connect the marked **Supply Cables: Top-limit Switch** (red male and female wires inside power supply box) to the Owner-provided 240V Power Cable.

Fill **Oil Tank** with 32 weight hydraulic oil (ISO 32). The Oil Tank holds approximately 4 gallons.

Turn on the **main switch**.

Push and Hold the Lift Button to Lift Carriage slightly, releasing it from the **Lock Mechanism**.

Pull Down **Manual Release Lever** and Push Down **Lowering Lever** to lower the Lift to its lowest position. Both equalizer cables must be tightened slightly. In any other case the self-locking nuts at the upper side on both carriages must be adjusted again.



OVERHEAD SAFETY SWITCH

Confirm that the Lift stops rising when the **Overhead Safety Switch Peg** is activated. **position**.



LIFT CARRY ARMS INSTALLATION

Remove Swivel Arm Pin from Yoke.

Grease Swivel Arm Pin and Holes.

Install the **two Short Lift Carry Arms** on the “motor side” of the Lift.

! *It is best to use the shortest arm length as possible while ensuring proper connection at the manufacturers designated “pick-up” points.*

For each Lift Carry Arm: Slide **Lift Carry Arm** into **Yoke** and install **Swivel Arm Pin**.

Attach the **second C-Clip** at the bottom of the **Pin** to secure into place.

Repeat with all **Lift Carry Arms**.

Raise and lower the **Lift** several times without load.

Check **Synchronizing Equalizing Cable** for proper tension by pinching the **cables** together between your fingers just below the carriage. The cables should barely touch together for proper cables tension. (Adjust the tension as needed.)

To Seat\level both Lift Carry Arms in the **Locks**, Press and Hold only the **Lift Button**.

Place the Hydraulic Cylinder Protection Cover on both Posts.

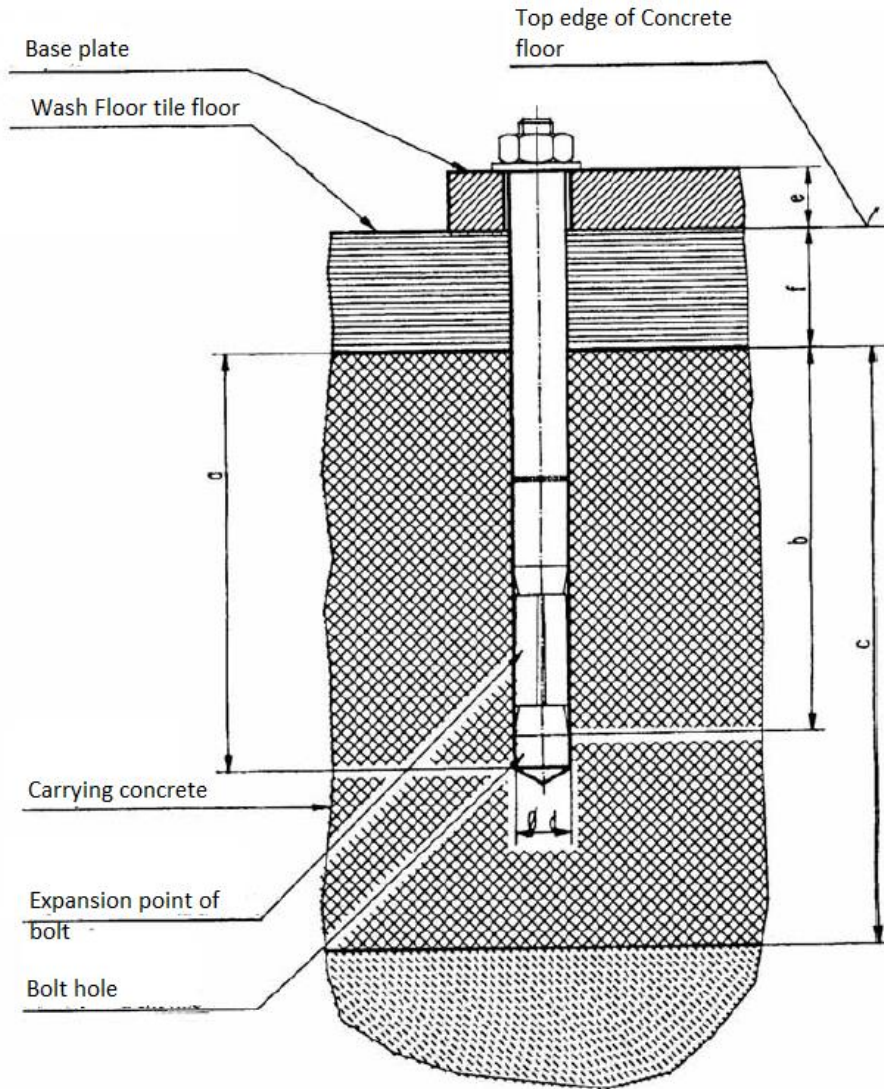
Secure with provided **Bolts**.

Place the **Overhead Telescope Cover** in place and secure.



ANCHOR BOLT RECOMMENDATIONS

CHOICE OF ANCHOR BOLT LENGTH WITHOUT FLOOR PAVEMENT OR TILE SURFACE

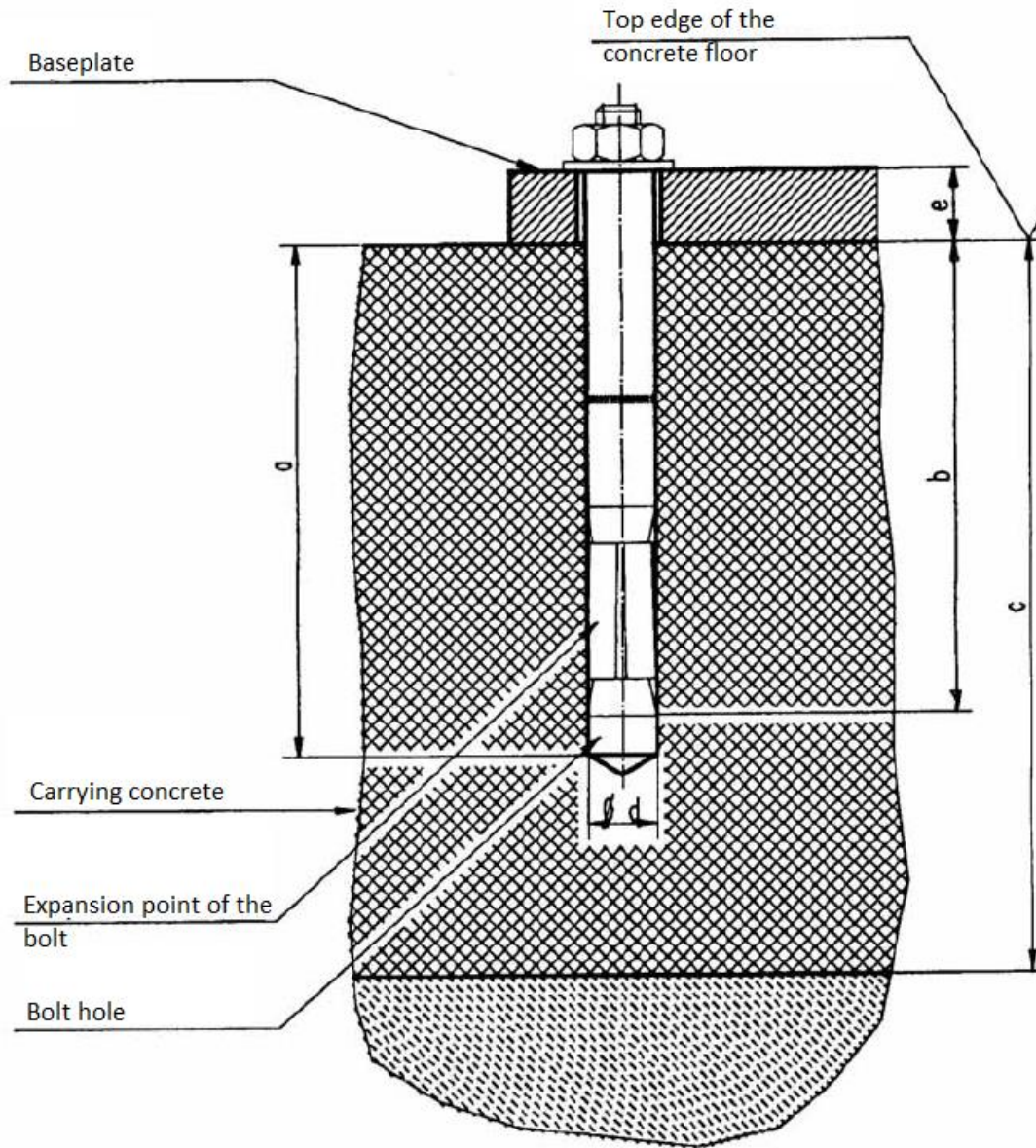


Dowel type		B20/75	B20/100
Drilling depth	a	115	140
Min. Anchorage depth	b	85	85
Thickness of concrete	c	180	180
Diameter of bore	d	20	20
Thickness of the lift-pieces	e	0-40	40-65
Number of dowels		8(12*)	8(12*)
Starting torque		According to dowel manufacturer	

*12 piece with a concrete strength of 150mm

Nussbaum Automotive Solution recommends LIEBEG safety dowels (German Anchor Bolt manufacturer) or equivalent dowels of other manufacturers who confirm to the regulations

CHOICE OF THE ANCHOR BOLT LENGTH WITH FLOOR PAVEMENT OR TILE SURFACE



Dowel type		B20/100	B20/125	B20/135	B20/175
Drilling depth	a	140	165	175	215
Min. Anchorage depth	b	85	85	85	85
Thickness of concrete	c	180	180	180	180
Diameter of bore	d	20	20	20	20
Thickness of the lift-pieces	e+f	40-65	65-90	90-100	100-140
Number of dowels		8(12*)	8(12*)	8(12*)	8(12*)
Starting torque		According to the dowel manufacturer			

*12 piece with a concrete strength of 150mm

FINAL INSTALLATION CHECKOUT INSTRUCTIONS

1. *Review* Operation Instructions on pages 8 – 9.
2. *Perform* all steps as outlined in the Operation Instructions on pages 8 – 9.
3. *Verify* all operations function properly and securely.
4. *Demonstrate the operation of the lift to the owner/operator and review correct and safe lifting procedures using the ANSI/ALI Lifting It Right booklet as a guide.*
5. *Provide the complete lift documentation package to the owner for future reference.*
6. *Complete* the Manufacturer’s Checklist below and *Review* with the Owner.
7. *Review* the terms of the warranty registration card.
8. *Complete and Return* the card along with a copy of the completed Manufacturer’s Checklist to:

Nussbaum Automotive Solutions, LP
1932 Jordache Court
Gastonia, NC 28052

Fax: 1-704-864-2476

Email: info@nussbaum-usa.com

POST-INSTALLATION CHECKOUT INSTRUCTIONS

9. *Perform* post-installation security checks at regular intervals. It is not required to return the regular security check documentation.

First security check after installation



Complete and leave in
this manual

Serial No:.....

Type of Check	In order	Error	Verification	Remark
Serial # and Model # Decal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating Instructions Decal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning Decal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Main Switch (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function of limit switch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overhead shutoff function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the arm adapters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the rubber support pads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function of the joints/stages of arms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manufacturing (deformation/ cracking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engagement of nyloc nuts (carriage + cables)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Function of the safety locks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the equalization cables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of Pulleys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the cylinder covers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the hydraulic hoses/tubes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oil level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sealing of the hydraulic system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface of the piston-rod	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the electrical wires, ground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Test: lift with vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the concrete floor (cracks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(mark where applicable, in case of verification mark in addition to the first mark!)

security check carried out:

Name, address of the competent.....

Result of the Check:

- Initiation not permitted, verification necessary
- Initiation possible, repair failures until
- No failings, Initiation possible

Signature of the expert:

Signature of the operator:

If failures must be repaired

Failures repaired at:

Signature of the operator:

(Use another form for verification!)

Regular security check after installation



Complete and leave in this manual

Serial No:.....

Type of Check	In order	Error	Verification	Remark
Serial # and Model # Decal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operating Instructions Decal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Test: lift with vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the concrete floor (cracks)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Condition of the equalization cables	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of Pulleys	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Condition of the cylinder covers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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