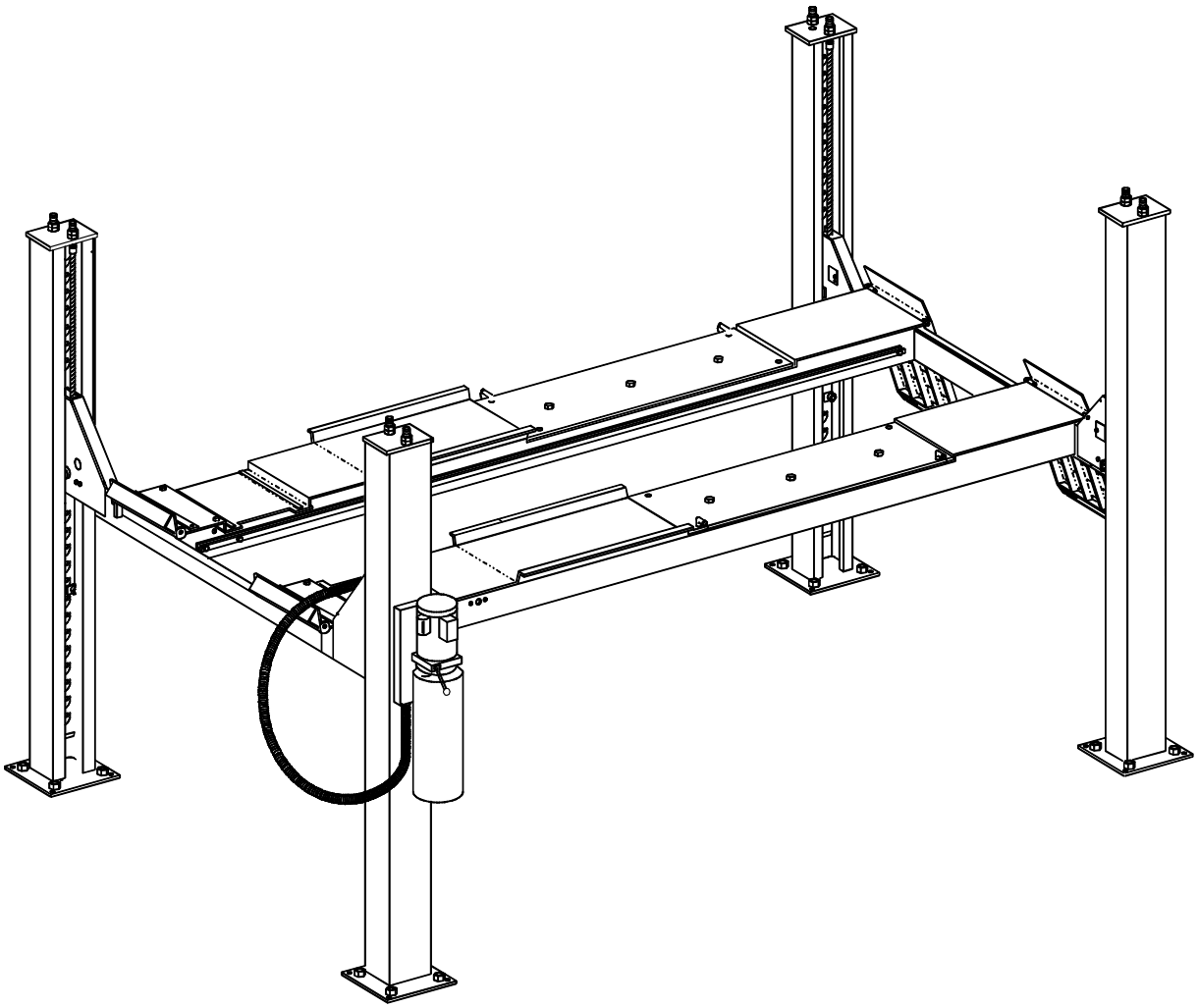
Form 3521T, 04-00
Supersedes 3521T, 06-99

OPERATION INSTRUCTIONS

MODEL L401 & L404

Four-Post Lift



HUNTER Engineering Company

Contents

1. For Your Safety

1.1 Introduction

DANGER, WARNING, CAUTION, SAFETY INSTRUCTIONS, and other decals have been attached to the equipment for your information and your safety.

Please read and follow these decal instructions to prevent equipment damage and/or personal injury.

If any decal shown in this manual has been removed, is missing, or cannot be read completely for any reason, contact your local service representative for a replacement decal(s).

Or call:

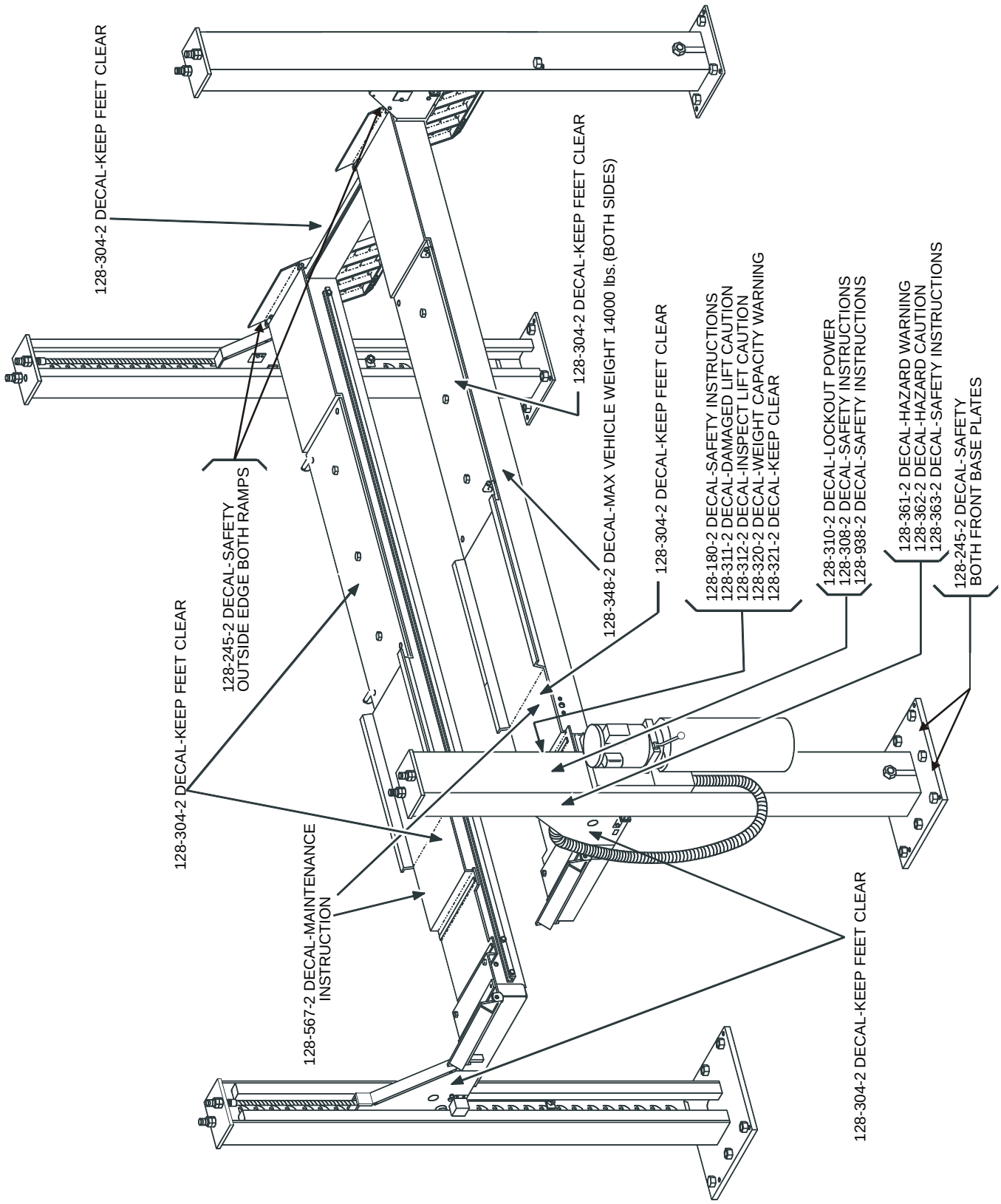
Hunter Engineering Company at 1-800-448-6848.

A new warning label kit, 20-1157-1 for the L401, or 20-1158-1 for the L404, may be ordered free of charge. The kit will contain all the decals described in the figures below, please verify which model of lift rack before ordering the decal kit.

Decal List

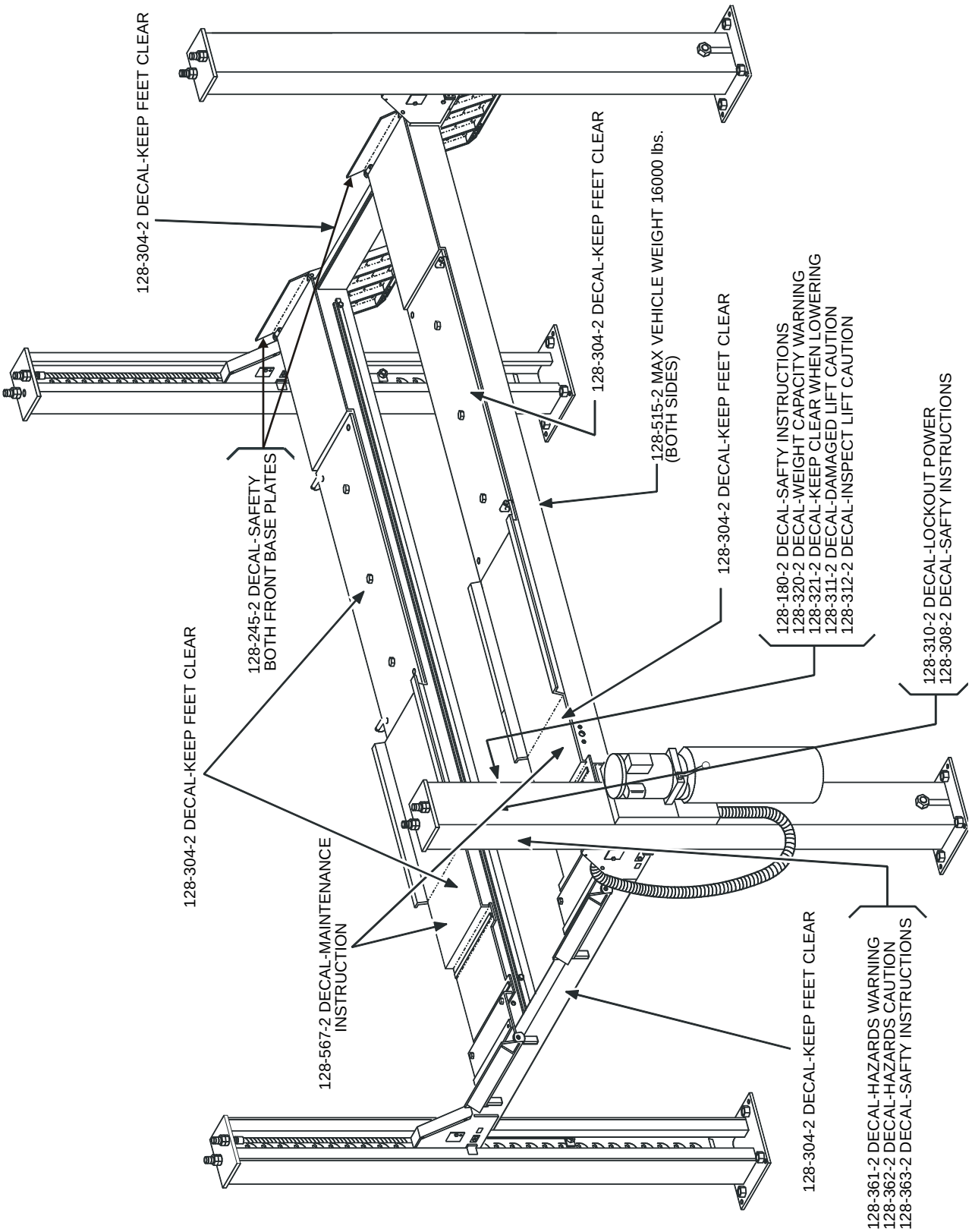
L401		L404	
128-348-2	Max Vehicle Weight	128-515-2	Max Vehicle Weight 16,000 lb.
128-180-2	Safety Instructions	128-180-2	Safety Instructions
128-245-2	Safety Decal	128-245-2	Safety Decal
128-304-2	Keep Feet Clear, Caution	128-304-2	Keep Feet Clear, Caution
128-308-2	Safety Instructions	128-308-2	Safety Instructions
128-310-2	Lockout Power, Danger	128-310-2	Lockout Power, Danger
128-311-2	Damaged Lift, Caution	128-311-2	Damaged Lift, Caution
128-312-2	Inspect Lift, Caution	128-312-2	Inspect Lift, Caution
128-320-2	Weight Capacity, Warning	128-320-2	Weight Capacity, Warning
128-321-2	Keep Clear When Lowering	128-321-2	Keep Clear When Lowering
128-361-2	Hazards Warning	128-348-2	Max Vehicle Weight 14,000 lb.
128-362-2	Hazards Caution	128-361-2	Hazards Warning
128-363-2	Safety Instructions	128-362-2	Hazards Caution
128-567-2	Caustic Cleaners	128-363-2	Safety Instructions
128-938-2	Safety Instructions	128-567-2	Caustic Cleaners

Model L401



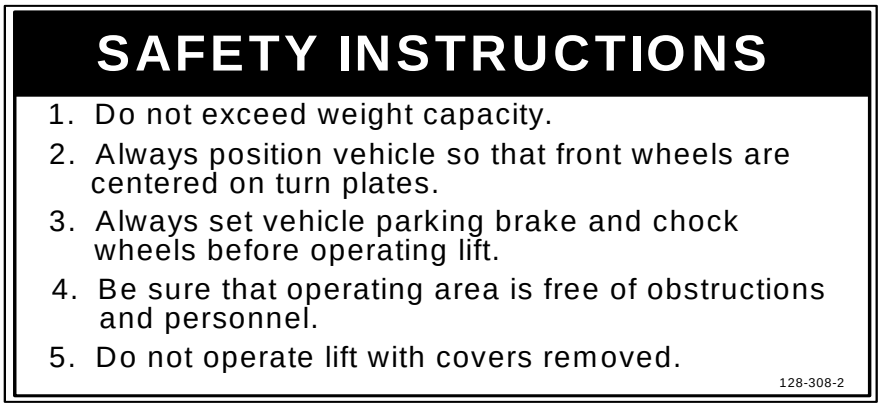
L401 Warning / Operation Label Placement Diagram

Model L404



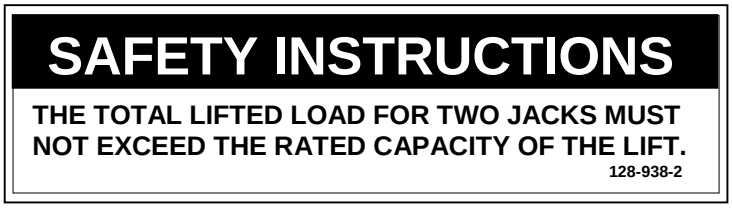
L404 Warning/Operation Label Placement Diagram

Safety Instructions

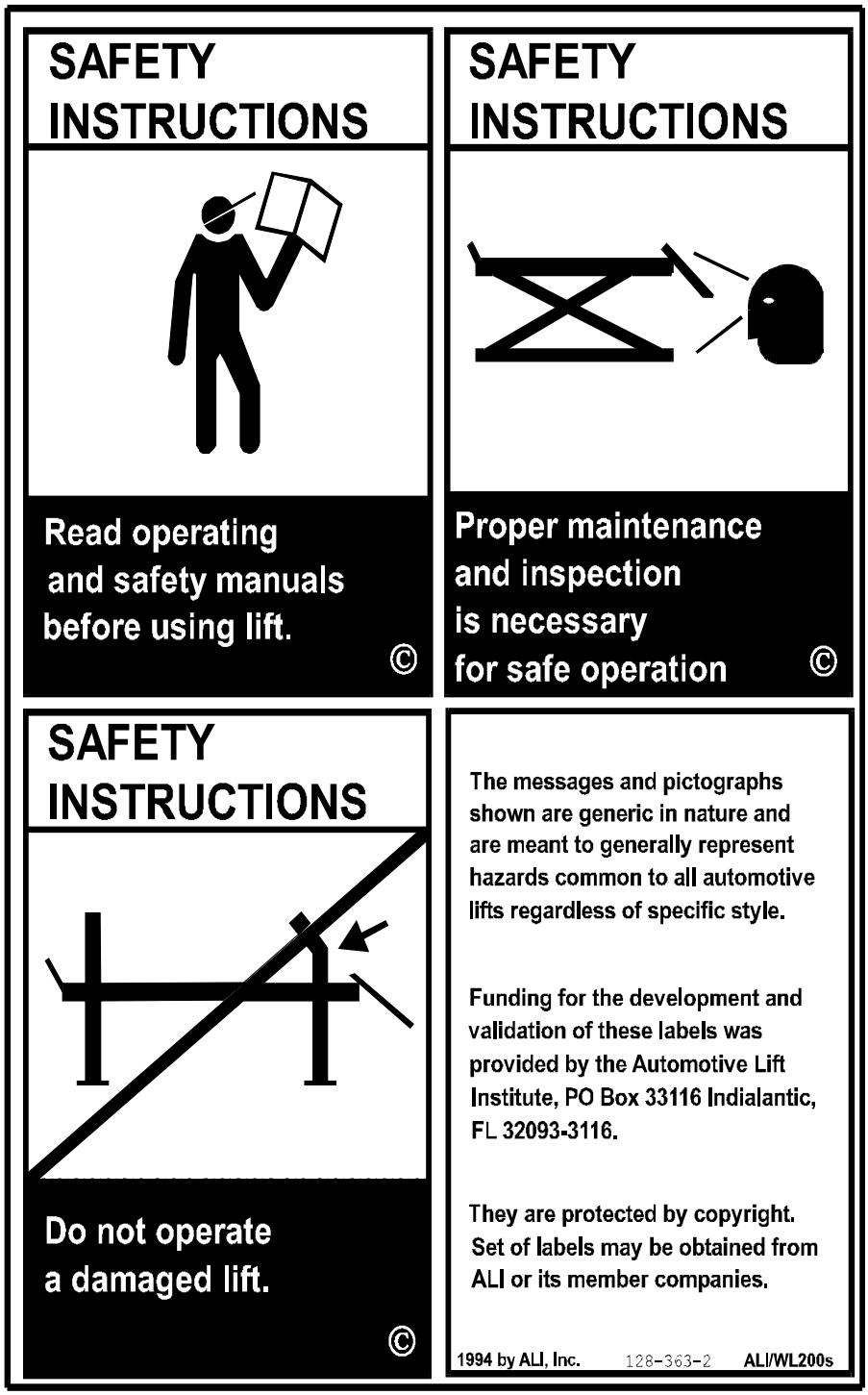


128-308-2

128-180-2



128-938-2


SAFETY INSTRUCTIONS
Read operating and safety manuals before using lift.
©
SAFETY INSTRUCTIONS
Proper maintenance and inspection is necessary for safe operation
©
SAFETY INSTRUCTIONS
Do not operate a damaged lift.
©
The messages and pictographs shown are generic in nature and are meant to generally represent hazards common to all automotive lifts regardless of specific style.
Funding for the development and validation of these labels was provided by the Automotive Lift Institute, PO Box 33116 Indialantic, FL 32093-3116.
They are protected by copyright. Set of labels may be obtained from ALI or its member companies.
1994 by ALI, Inc. 128-363-2 ALI/WL200s

128-363-2

Dangers

128-310-2

Warnings

128-320-2

128-321-2


WARNING
Clear area if vehicle
Is in danger of falling.
WARNING
Remain clear of lift
When raising or
Lowering vehicle.
WARNING
Keep clear
Of pinch points
When lift is moving.
WARNING
Keep feet
Clear of lift
While lowering.
WARNING
Do not overide
self-closing
Lift controls.
WARNING
Chock wheel
To prevent
Vehicle movement.
The messages and pictograms shown are generic in nature and areneant
To generally represent hazards common to all automotive lifts regardless of
Specific style.
Funding for the development and validation of these labels was provided by
The Automotive Lift Institute, PO Box 33116 Indialantic, FL. 32093-3116.
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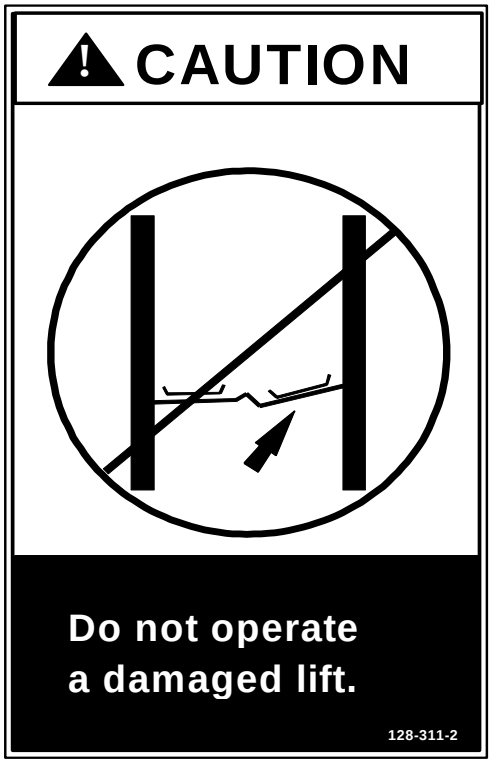
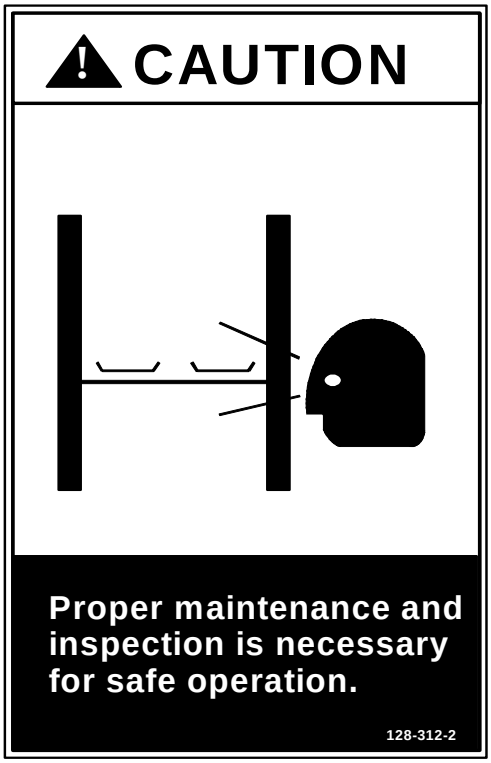
Its member companies.
1994 by ALI, Inc.
128-361-2
ALI/WL200w

128-361-2

Cautions

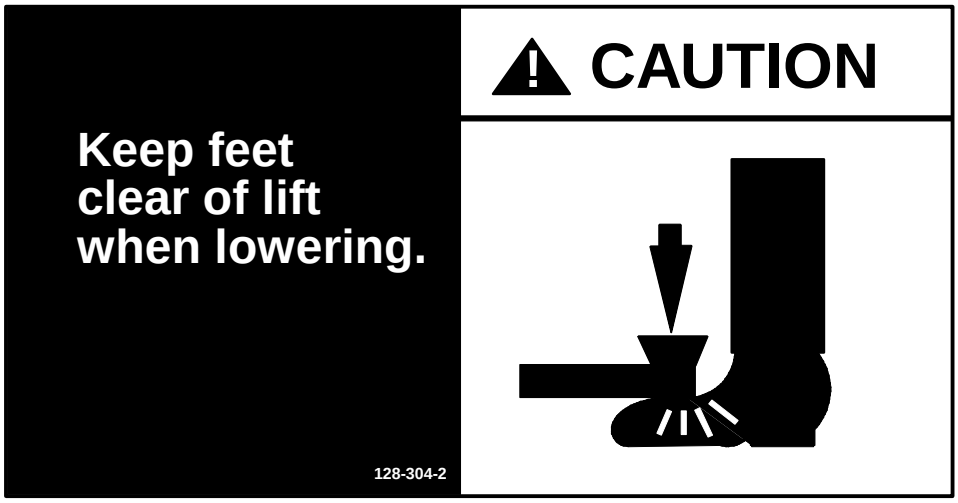


128-311-2

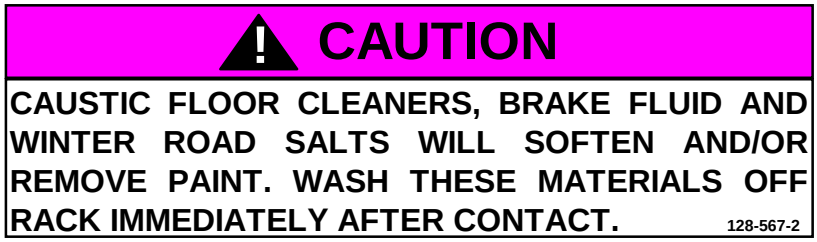


128-312-2

128-362-2

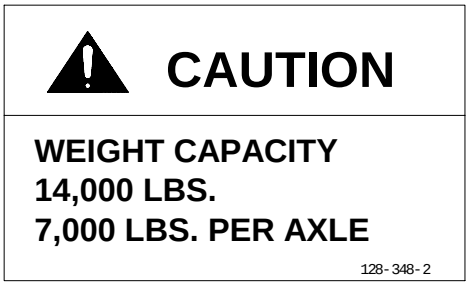


128-304-2

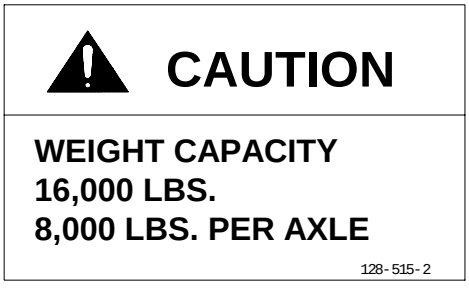


128-567-2

Weight Limits



L401: 128-348-2



L404: 128-515-2

2. Specifications

2.1 Lift Capabilities

Specifications	L401		L404
Maximum Load Capacity:	14,000 lb. (6363 kg)		16,000 lb. (7272 kg)
Maximum Lifting Height:	70 inches (1778 mm)		70 inches (1778 mm)
Alignment Height:	30 inches (762 mm)		30 inches (762 mm)
Overall Height:	93 inches (2362 mm)		93 inches (2362 mm)
Tread Width:			
Minimum Inside Tires:	40 inches (1016 mm)		40 inches (1016 mm)
Maximum Outside Tires:	85 inches (2159 mm)		85 inches (2159 mm)
Lifting Speed:	64 seconds		64 seconds
Lowering Speed:	40 seconds		40 seconds
Motor:	3 HP, 60 Hz,		3 HP, 60 Hz,
	208-230 VAC		208-230 VAC
Electrical Requirements:	208-230 VAC		208-230 VAC
	1 phase, 60 Hz, 20A		1 phase, 60 Hz, 22A
Maximum Wheelbase:		W/Extensions:	
General Service:	186 inches (4724 mm)	224 inches (5690 mm)	186 inches (4724 mm)
2-Wheel Alignment:	170 inches (4318 mm)	208 inches (5283 mm)	170 inches (4318 mm)
4-Wheel Alignment:	138 inches (3505 mm)	176 inches (4470 mm)	138 inches (3505 mm)
Minimum Wheelbase:			
4-Wheel Alignment:	88 inches (2235 mm)		88 inches (2235 mm)

3. Getting Started

3.1 Operator Responsibilities

Read and thoroughly familiarize yourself with these instructions before operating the lift.

The operator shall operate the automotive lift only after proper instruction or trained as outlined below (see Operator Training).

The operator shall use all applicable safety features provided on the automotive lift, and operate the lift in accordance with the instructions furnished with the lift.

The operator of the lift shall be responsible for maintaining the cleanliness and orderliness of the lift and its surroundings so the lift may be safely operated in accordance with the instructional and safety materials furnished with the lift.

The lift owner or employer shall take all appropriate steps to follow the recommended inspection procedures, but in no event shall the lift operator fail to inspect or take notice of the procedures in the tables in Section Five. All procedures shall be completed within the time frame noted in the table.

3.2 Operator Qualifications

To avoid personal injury, only qualified personnel with a clear understanding of lift operations should be allowed to operate and perform maintenance on this equipment.

The operator must be capable of reading and understanding all of the provided instructions and the Automotive Lift Institute publication, “Lifting It Right”, “Safety Tips”, and “Warning Labels.”

If inspection of the equipment results in components requiring replacement, contact your factory **Authorized Service Representative.** Call 1-800-448-6848 for the phone number of your local **Authorized Service Representative.**

3.3 Operator Training

The owner or employer shall ensure that operators of automotive lifts are instructed in the safe use of the lift using all of the provided instructions and the Automotive Lift Institute publication: “Lifting It Right,” “Safety Tips,” and “Warning Labels.”

The owner or employer shall display these materials in a conspicuous location in the lift area.

The owner or employer shall appropriately document operating training.

A Maintenance/Training documentation form has been provided in the Appendix.

4. Detailed Operation Instructions

4.1 Preparation

Lift Operation Safety Rules

Read and familiarize yourself with these instructions before operating lift.

Do not try to operate an improperly functioning lift.

Do not attempt to use a lift for any purposes other than lifting vehicles.

Properly chock vehicle before operating lift.

Make sure lift is clear of personnel and obstructions before operating. Do not operate a lift with anyone on or under the lift structure.

Watch lift and vehicle when operating.

Do not operate a lift with anyone in the vehicle.

Press “LOWER” lever to engage the lock latches before working on the vehicle.

Do not operate the vehicle while it is raised on the lift.

Do not operate a lift if the vehicle to be lifted is supported by auxiliary devices.

Do not install or use any unauthorized lifting devices or accessories.

Perform regular maintenance in accordance with instructions in Section Five.

NOTE:	It is advisable to use a second person as a “spotter” to give visual assistance to the driver when approaching and driving onto and off the runways.

⚠**CAUTION:**	For safety, proper chocking of vehicle wheels is very important to prevent the vehicle from rolling while positioned on elevated runways.

4.2 Chocking Procedure

Read and thoroughly familiarize yourself with these instructions before operating the lift.

Adjust the turning angle gauges (with lock pins installed) to match the tread width of the vehicle.

Drive the vehicle onto the rack, place the transmission in PARK, and SET the emergency brake.

Place a wheel chock, 22-442-2, at the front and rear of the left rear wheel.

LEFT REAR WHEEL SHOWN

Leave the wheel chocks in place while elevating the lift, performing service operations on the vehicle, and while lowering the lift.

After lowering the lift, remove the wheel chocks from the front and rear of the left rear tire before moving the vehicle.

4.3 Lift Operation

Raising the Lift

Check the lift and immediate area for obstructions.

Check that the turning angle gauge and runway slip plate lock pins are installed.

Press and hold “RAISE” button.

The pump will begin to operate, raising the lift.

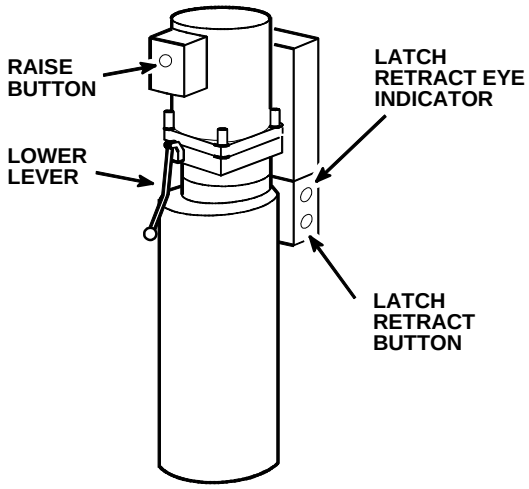
NOTE:	To place the lift at alignment height, raise the runways so the striped decal on the front of the runway is just above the striped decal on the right front post.

Release “RAISE” button when lift reaches desired height.

The pump will shut off and the lift will stop.

Wait at least 3 seconds after releasing “LATCH RETRACT” button then press and hold “LOWER” lever until lift lowers and all four corners are at the same level.

If one or more corners of the runways continue to descend after another corner has stopped, release the “LOWER” lever. Press and hold “RAISE” button to raise the lift slightly higher. Wait 3 seconds after releasing “RAISE” button then press and hold “LOWER” lever.



Power Unit

Lowering the Lift

Remove all obstacles from under rack and runways.

Make sure vehicle is resting firmly on runways with chocks in front of and behind left rear wheel.

Check that the turning angle gauge and runway slip plate lock pins are installed.

Press “RAISE” button to raise runways removing load from the lock latches.

Press and hold “LATCH RETRACT” button. Check that indicator turns green.

Continue to hold “LATCH RETRACT” button and press and hold “LOWER” lever.

> If lift is being lowered to a different working height, release the “LOWER” lever and “LATCH RETRACT” button when at the new height. Wait at least 3 seconds after releasing “LATCH RETRACT” button then depress and hold “LOWER” lever until lift lowers and all four corners are at the same level.
>
> If one or more corners of the runways continue to descend after another corner has stopped, release the “LOWER” lever. Press and hold “RAISE” button to raise the lift slightly higher. Wait 3 seconds after releasing “RAISE” button then press and hold “LOWER” lever.

Completely lower lift.

Release “LOWER” lever and “LATCH RETRACT” button. Check that the indicator turns black.

Remove wheel chocks.

Carefully drive the vehicle off runways.

5. Regular Maintenance

5.1 Corrosion

> ⚠ **CAUTION:** Wire ropes are a high wear item and must be inspected regularly to prevent failure. They MUST be replaced at the first sign of any symptoms listed below. The complete set MUST be replaced every 20,000 cycles or every six years unless earlier replacement is indicated by the required service inspections (see the maintenance schedule following).

The best preventive maintenance against wire rope corrosion is to keep the wire ropes well lubricated. The oil prevents moisture from entering into the wire rope strands. Once salt and moisture have penetrated into the core of the wire rope they are very difficult to displace and corrosion will begin immediately. The best method to prevent early replacement of wire ropes is to keep them well oiled.

The following are specific signs to look for when inspecting wire ropes for corrosion:

- More than surface rust on exterior of the wire rope is unacceptable. In other words, if you can't remove the rust easily with a wire brush, it's too deep and the wire rope should be replaced.
- Any pitting of the wire rope indicates unacceptable amounts of corrosion. The wire rope should be replaced.
- Loss of flexibility of the wire rope is unacceptable. This can be checked with the lift raised and set on the locks. If found, the wire rope should be replaced.
- If any wires are broken, the wire rope should be replaced.
- Any "necking" or reduction in cross sectional area of the wire rope indicates a problem and the wire rope should be replaced.

> NOTE: If an area of the wire rope has no lubricant on its surface, the wire rope is rust bound and should be replaced. Once the wire rope has lost oil protection, moisture has already entered the core and is nearly impossible to remove.

5.2 Maintenance Schedule

MAINTENANCE SCHEDULE	PERFORM THE FOLLOWING MAINTENANCE
Daily	Check that the operating procedures, safety tips and generic safety material are accessible to the operator. Check that all safety warning labels are accessible and readable. Take notice of the rated load capacity of the lift. Check for proper operation of the lift controls. Check auxiliary locks at all four posts for free rotation and ensure they properly line up with lock ladder. Check the air lock at all four posts for free movement and ensure they are properly lined up with the lock ladder. **KEEP LOCK AREA CLEAN AND FREE OF DEBRIS AT ALL TIMES**. Check the hydraulic cylinder, power unit, hydraulic lines and fittings, air lines and fittings, and air cylinders for leaks. Any leak must be repaired immediately. Check the floor near the base of each post for cracks or loose concrete around the lag bolts. If any flaws are found, stop using the lift immediately. This is an indication of an unsafe condition and the concrete will have to be replaced. Check for unusual noises, sudden movements, erratic operation or evidence of chips or filings during use. Check all four lifting wire ropes for damage or wear. If any signs of severe corrosion, broken or damaged strands, wire rope elongation, reduced cable diameter, or any other changes in appearance as compared to a normal wire rope are found, the lift must be taken out of service and the wire rope(s) must be replaced prior to further use. Fully lower the lift and check the portion of the wire ropes running vertically inside each post. Pay close attention to the portion of the wire rope that enters the threaded stud at the top of each post. Broken strands indicate signs of fatigue and if found the wire rope(s) must be replaced prior to further use. Raise the runway just enough for observation and set on the mechanical locks. Inspect the wire ropes by looking through cutouts in the bottom of the runways. **Note: Use a trouble light for better visibility.** Raise the runways to several intermediate locations and set on the mechanical locks. Inspect the wire ropes by looking through cutouts in the bottom of the runways, and inside the inspection door on the rear beam. **Note: Use a trouble light for better visibility.** Fully raise the runways and set on mechanical locks. Inspect the wire ropes by looking through cutouts in the bottom of the runways, and inside the inspection door inside the rear beam. **Note: Use a trouble light for better visibility.** Check all sheaves for wear or damage. Look for cracks, worn surfaces, or abnormal play or looseness as they rotate around mounting shafts. Check that all sheave mounting shaft retaining bolts are tight. Check for any fluid loss from the hydraulic system. **NOTE: When adding hydraulic fluid, the lift MUST be lowered completely.**

MAINTENANCE SCHEDULE	PERFORM THE FOLLOWING MAINTENANCE
Weekly	Check the turning angle gauges and rear slip plates for smooth and easy operation. Clean by blowing out with clean, dry compressed air. Disassembly is not required. DO NOT lubricate turning angle plates or slip plates. **(CAUTION: Always wear eye protection when using compressed air).** Check anchor bolts on each post for tightness. Torque to 100-110 ft-lb. Check and lubricate rear ramp pivots with SAE 30 oil.
Monthly	Check wire ropes for damage and lubricate with a thin oil (SAE 5W-30). **Note: Do not use used motor oils. They contain contaminants that will break down factory applied lubricants. Also, do not use oils containing a solvent base (solvent cutback oils). They also will break down factory applied lubricants. Replace wire ropes immediately if any signs of wire rope damage is found.** Inspect entire lift for loose, damaged, or broken bolts. Replace as necessary. Check columns and runways for corrosion. Corrosive agents, solvents, and road salts can greatly reduce the life of the lift in a very short period of time. If these types of agents are spilled or splashed onto the lift, immediately rinse area thoroughly with water. If they come in contact with the wire ropes, wash the wire ropes immediately with water and re-lubricate with a thin oil. Check the power unit reservoir oil level. Add oil if necessary (use Dexron III ATF). **NOTE: Oil must be checked and filled when the lift is in its fully lowered position.** Remove air breather cap and oil full level screw located at the top of the reservoir. Fill reservoir with oil until the oil begins to drip from full level screw hole. Replace air breather cap and oil full level screw. If the oil level is found to be low, determine the source of the oil loss and repair immediately. **Notes about corrosion:** The best preventive maintenance against wire rope corrosion is to keep the wire ropes well lubricated. The oil prevents moisture from entering into the wire rope strands. Once salt and moisture have penetrated into the core of the wire rope it is very difficult to displace and corrosion will begin immediately.

MAINTENANCE SCHEDULE	PERFORM THE FOLLOWING MAINTENANCE
Annually	The entire lift should be inspected yearly (more frequently for severe use applications) by your factory authorized service representative.
Every Two Years	Change hydraulic fluid. Use 4 gallons (15 liters) of Dexron II or III transmission fluid. **NOTE: Oil must be filled when the lift is in its fully lowered position.** Drain fluid from reservoir by removing magnetic plug on front of reservoir **with the lift lowered completely.** Clean any metal particles that may be on the plug before replacing.

NOTE:	The suggested maintenance above is for normal working conditions. Equipment exposed to unusually dirty or harsh corrosive conditions such as heavy winter road salt may require more frequent maintenance and service.

If any of the conditions described above are observed before, during, or after operation of the lift, the operator shall stop using the lift and report the condition to the supervisor, employer or owner. The lift shall not be used until the cause of the problem has been determined and the appropriate repairs have been made by qualified automotive lift personnel.

6. Troubleshooting

6.1 Troubleshooting Chart

PROBLEM	POSSIBLE CAUSE	SOLUTION
Lift does not operate.	Circuit breaker or fuse blown in shop power panel.	Locate shop power panel and restore power. If overload repeats due to lift operation, contact factory service representative.
	Hydraulic system malfunction.	Contact factory service representative.
"Raise" button depressed, motor runs but lift will not rise to full height.	Low hydraulic fluid reservoir.	Lower lift, check hydraulic fluid level, and fill. Determine reason for low hydraulic fluid level.
	Overhead obstruction to vehicle.	Lower lift and remove obstruction.
	Voltage supply low.	Contact factory service representative.
	Hydraulic system malfunction.	Contact factory service representative.
"Raise" button depressed, motor runs, lift does not move.	Vehicle is beyond 14,000 lb. (L401) or 16,000 lb. (L404) capacity.	Do not attempt to raise vehicles in excess of lift capacities.
	Electrical/Hydraulic control malfunction.	Contact factory service representative.
Runways continue to rise after "Raise" button is released.	Electrical control malfunction.	Turn circuit breaker "Off" at shop power panel. Contact factory service representative.
"Latch Retract" button pressed, indicator does not change to green.	One or more lock latches still engaged on the lock ladder.	Raise lift more before pressing "Latch Retract" button.
	Air control malfunction.	Check air supply and hoses.
	Indicator broken.	Contact factory service representative.
	Leak in the air circuit.	Check air circuit and repair any leaks. Contact factory service representative.

Troubleshooting (continued)

PROBLEM	POSSIBLE CAUSE	SOLUTION
"Lower" sequence started, lift raises, does not lower.	One or more lock latches still engaged on the lock ladder. Air control malfunction. Velocity fuse tripped. Electrical/Hydraulic control malfunction.	Raise lift more before pressing "Latch Retract" button. Check air supply and hoses. Contact factory service representative. Contact factory service representative.
Lift continues to descend after "Lower" lever is released.	2-way valve ("Lower" lever) stuck open.	Operate "Lower" lever again. Contact factory service representative.
"Latch Retract" button released, indicator does not black.	"Latch Retract" button stuck.	Contact factory service representative.

Appendix

Maintenance and Training Documentation

A thorough record of each maintenance/training procedure must be prepared by the owner/employer. Use the following documentation sheet.

> NOTE: Make several copies of this documentation sheet before beginning entries are made.

Type of Maintenance/ Training	Date Performed	Performed By (Initials)	Type of Maintenance/ Training	Date Performed	Performed By (Initials)

HUNTER RESEARCH AND TRAINING CENTER

HUNTER . . . dedicated to service excellence through professional training

HUNTER TRAINING - Hunter operates the most advanced, up-to-date Training Center in the industry today.

The courses have been designed to meet the needs of new and experienced technicians who want to increase their mechanical and diagnostic capabilities. The low student-teacher ratio (average 7 to 1) and the emphasis on “hands-on” training (80% time in shop) create an excellent learning environment.

Highlights of the Hunter Training Center include:

- ❑ An instruction staff with over 100 years of shop, field, and teaching experience.
- ❑ Fully-equipped service bays.
- ❑ Classrooms equipped with modern teaching aids.
- ❑ The most up-to-date wheel alignment, balancing service and brake equipment on the market today

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Alignment Fundamentals - This course is designed to instruct the inexperienced individual in fundamental four wheel alignment theory, instrumentation operation and common adjustment methods found on domestic and imported passenger cars and light trucks. It also includes an overview of suspension and steering systems with instruction in proper inspection procedures.

Duration: Four 8 hour days (32 hrs)

Alignment Diagnostics - This course is designed for an "experienced" alignment technician with at least one year of "hands on" alignment experience and a fundamental knowledge of alignment geometry and equipment operations. Instruction covers in-depth aligner operation, OEM and aftermarket adjustment schemes and detailed alignment related diagnostic procedures.

Duration: Two 8 hour days (16 hrs)

Heavy Duty Truck Alignment - This course is designed to instruct the experienced individual in multi-axle alignment theory for class 7 and 8 vehicles. Alignment instrumentation operation and common adjustment methods found on road tractors and trailers. It also includes an overview of steering, suspension identification and inspection procedures.

Duration: Four to four and one-half 8 hour days (32-36hrs)

Rolling Smooth - This course is designed to instruct the technician in vibration theory, vibration sources, balancing theory, balancing accessories, Centering Check™ RoadForce-Measurement™, MatchMaker™ and fundamental hardware and software operation of our vibration control equipment. Additional information on how to correctly diagnose assemblies that are beyond user selected guidelines.

Duration: One 8 hour day (8 hrs) unless otherwise specified

Advanced Tire And Wheel Service - This course is designed to provide information and train advanced tire changing procedures. Proper identification and service of "runflat/self-supporting" tire systems combined with low tire pressure sensors, low profile tire mounting and demounting and difficult OEM/custom wheel combinations are covered in detail.

Duration: One 8 hour day (8 hrs) unless otherwise specified

For further information about other classes offered or to schedule into a class, simply call the Hunter Research and Training Center at 1-800-448-6848.