



SMART+™ HP/HDH **Hydraulic Dock Levelers** **Owners Manual**

P.O. Box 338 • Spring Hill, Tennessee 37174 • 1-800-251-3382 • fax: 931-486-0316 • www.pioneerleveler.com



WARNING

DO NOT install, operate or service product unless you have read and understand the Safety Procedures, Warnings, Installation and Operating instructions contained in this manual. Failure to do so could result in serious injury and/or death.

Safety Procedures



WARNING: Read and understand all safety practices and operating instructions Before installing, operating or servicing the dock leveler. Failure to follow the safety practices and operating instructions may result in property damage, serious bodily injury and/or death.

If you do not understand the safety procedures or the instructions, ask your supervisor to explain the safety procedures and/or teach you how to use the dock leveler.



CAUTION: The installer and/or operator **MUST** be very familiar with the operation, function and various parts of the PIONEER Pit Leveler **PRIOR** to installation and/or operation. If this is not the case, it is **IMPERATIVE** that the installer and/or operator read, and fully understand, the entire contents of this manual. **Be certain to read and understand all warning and caution statements contained in this manual prior to any installation, operation or servicing of this unit.**

- 1 Do not operate this equipment while under the influence of drugs or alcohol.
- 2 Do not stand in the driveway between the dock leveler and a truck backing in or pulling away.
- 3 Be sure the truck wheels are chocked, or the truck is held in place by a restraining device, before attempting to load or unload the truck.
- 4 Do not use the dock leveler if it looks broken or does not seem to work right. Lockout/tag out the defective equipment. Tell your supervisor immediately.
- 5 Do not operate the leveler with equipment, material or people on the platform and/or lip or in front of the leveler.
- 6 Be certain that equipment, material or people are not on the dock leveler before allowing a truck to pull out.
- 7 Keep clear of the dock leveler when it is moving. Never place your hands, arms, feet, or legs in the position where a moving dock leveler or a moving load could cause injury. **If in doubt, do not do it!**
- 8 If the dock leveler is not working properly, using the operation instructions in this manual, **do not use the dock leveler.** Contact your authorized PIONEER representative.
- 9 Never attempt to work under the dock leveler, for service or repair, without proper placement of maintenance strut.
- 10 Damage to the dock leveler, personal injury or death can result from abuse and/or negligent use of this equipment.
- 11 If you have any questions, or if a malfunction occurs which is not understood, ask your supervisor to contact your authorized PIONEER representative for assistance **PRIOR** to attempting any corrective measures.



THIS IS THE SAFETY ALERT SYMBOL. IT IS USED TO ALERT YOU TO POTENTIAL PERSONAL INJURY HAZARDS. OBEY ALL SAFETY MESSAGES THAT FOLLOW THIS SYMBOL TO AVOID POSSIBLE INJURY AND/OR DEATH.



WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SERIOUS INJURY AND/OR DEATH.



KEEP THIS MANUAL AND ALL SAFETY PROCEDURES IN A SECURE LOCATION WITH EASY ACCESS.



WARNING! READ AND UNDERSTAND THIS ENTIRE MANUAL PRIOR TO OPERATING.



WARNING! A DOCK LEVELER CAN BE A POTENTIAL THREAT TO PERSONS AND PROPERTY, IF NOT USED PROPERLY. SAFE OPERATION IS THE RESPONSIBILITY OF THE OPERATOR.



WARNING! DO NOT ENTER THE AREA IN FRONT OF OR BELOW THE DOCK LEVELER. SERIOUS PERSONAL INJURY AND/OR DEATH MAY RESULT.



WARNING! DO NOT ATTEMPT TO INSTALL, MAKE REPAIRS OR ADJUSTMENTS. ONLY A TRAINED AND AUTHORIZED SERVICE TECHNICIAN SHOULD PERFORM REPAIRS OR ADJUSTMENTS. ONLY A QUALIFIED CONTRACTOR/SUB-CONTRACTOR SHOULD PERFORM THE INSTALLATION PROCESS. CONTACT YOUR LOCAL PIONEER DEALER FOR ASSISTANCE.

**WARNING**

- **Before doing any electrical work, make certain the power is disconnected and properly tagged or locked out.**
- **All electrical work must be done by a qualified technician and must meet all applicable codes.**
- **If it is necessary to make troubleshooting checks inside the control panel with the power on, USE EXTREME CAUTION.**
- **Do Not place fingers or uninsulated tools inside the control box. Touching wires or other parts inside the control box could cause electrical shock, serious injury and/or death.**

SECTION 1**SMART+™ HP/HDH Series****INSTALLATION INSTRUCTIONS
RECEIVING AND HANDLING****RECEIVING:****WARNING**

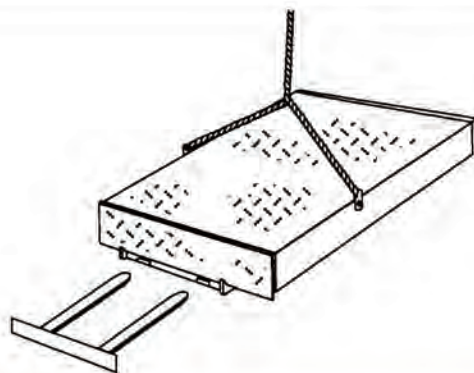
Before installing the dock leveler, read and follow the safety procedures and the operating instructions. Failure to follow the safety procedures could result in serious injury and/or death.

Check for possible damage or missing parts immediately upon receipt of unit. Note any damage on receiving papers.

Prepare any claims against carrier if necessary.

NOTE: Damage noticed after receipt must be reported to carrier within 15 days.

Notify PIONEER of any damage or missing parts.

HANDLING:

(Figure A)

Move leveler into position by using:

- chain sling inserted into side plate holes. (See Figure A) or
- fork lift, inserted in front base angle (See Figure A)

NOTE:

SMART+™ Control panel, two bumpers, and weather seals if applicable, are strapped under leveler. Handle with care to avoid damage to these components

SECTION 1**SMART+™ HP/HDH Series****INSTALLATION INSTRUCTIONS
INSTALLATION****INSTALLATION:** (Consists of 3 phases)

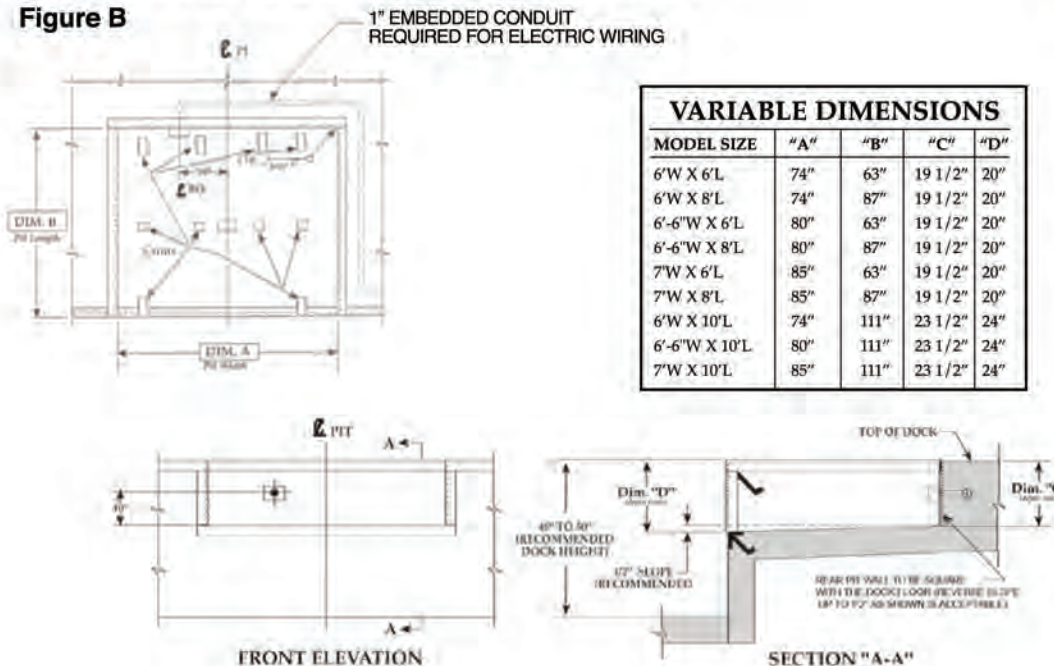
Pit preparation
Leveler Preparation
Leveler Installation



Caution: Before installing the leveler, use proper safety signs and barrirs to separate the work area from the remainder of the dock.

**WARNING**

Never allow anyone to stand on or near dock leveler when it is being lifted or placed into the pit. Failure to follow this warning can allow the dock leveler to fall, tip, or swing into people, resulting in serious injury and/or death.

PIT PREPARATION AND ELECTRICAL INSTALLATION:**Figure B**

Before welding the rear frame, cover the rear weather seal with a piece of sheet metal to prevent setting fire to the weather seals. Failure to do so may result in property damage.

1. Examine pit. Pit walls should be square and plumb. Clean all debris from pit. The floor at the rear and both sides should be level.

2. Measure pit dimensions. (See Figure B for accurate dimensions.)

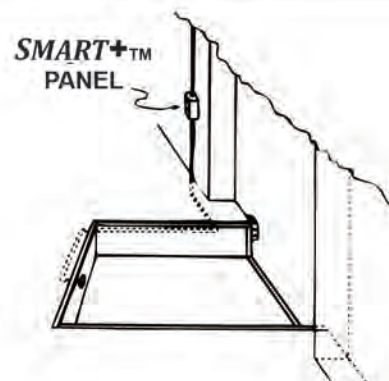
Verify that pit walls are:

- Square
- Plumb

Place shims in general locations on pit floor before lowering leveler into place in pit.

[Pit depth at shim locations (minus 19" or minus 23" on 10 ft. units) equals shims thickness.]

NOTE: Shims are to be placed directly under rear frame uprights, under base of cylinder, and under lip keepers, See Figure B, page 3. Also Figure D, page 5.

Figure C

3. Install **SMART+™** panel on wall near pit. (See Figure C)

4. Install wire leads for motor and proximity sensors per wiring diagram. (See Major Components section, pages 17, 18, 19, 20, 21, & 22.)

Wire must be installed through conduit. (Wire and Conduit to be supplied by customer.) Additional wire leads may be used to supply temporary power to leveler from **SMART+™** panel. Wires for motor must be long enough to reach mid section of leveler while in front of opening. This extra may be cut back and discarded after installation. (It is not necessary to hook up proximity sensors for this test.)

LEVELER PREPARATION

 WARNING

Fully support the lip, while working under the leveler. The lip plate could fall causing serious injury and/or death.

**CAUTION**

Route power cord clear of edges and resting surfaces so that it is not damaged during lifting and placement.

1. Position leveler directly in front of pit.
2. Cut restraining band on lip.
3. Connect temporary wire leads to proper wire grouping at motor.

 WARNING

Inadequate lifting equipment or practices can cause a load to fall unexpectedly. Make sure the lifting equipment is in good condition. Never allow anyone to stand on or near the dock leveler when it is lifted or placed into the pit. Stand clear of the dock leveler when it is placed into the pit. Failure to follow this warning can allow the dock leveler to fall, tip, or swing into people, causing serious injury and/or death.

NOTE: Unit may fail to operate correctly at this point if temporary power does not supply adequate voltage. **DO NOT** make adjustments to leveler. Provide proper voltage before attempting to operate leveler. (See Electrical Page 15 & 16)

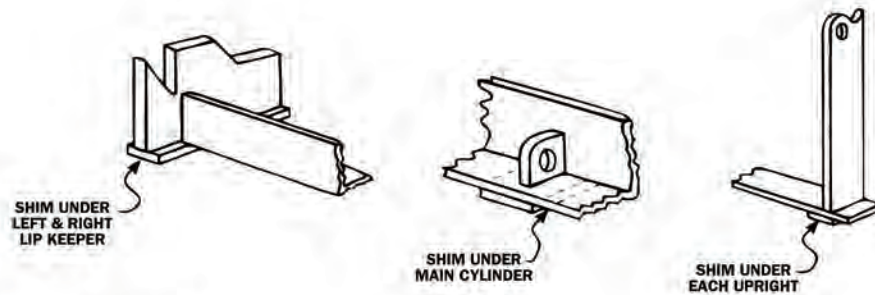
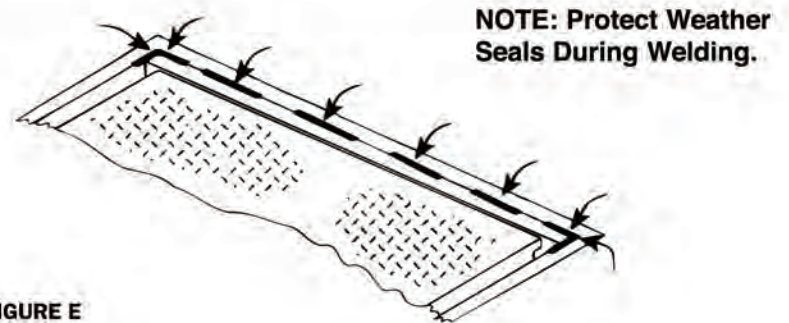
LEVELER PREPARATION

4. Check motor operation.

If unit does not raise when motor activates, rotation may be wrong. Recheck connections per wiring diagram to correct rotation.
NOTE: Do not attempt to adjust valves until contacting an authorized Pioneer Dealer or the factory.

5. Check fluid level in hydraulic reservoir. Check all hydraulic hose connections and fittings.

With leveler in raised position and maintenance strut engaged, reservoir should be half full. If necessary, fill to correct level, using Dextron II transmission fluid or aircraft hydraulic fluid

**FIGURE D****FIGURE E**

20" Lip Keeper Installation Instructions

Two separate lip keeper angles are provided with every unit that has a 20" lip. These angles are tack welded to the leveler base frame just behind the lip.

Break each one loose and set the leveler into the pit per the installation instructions in the owner's manual.

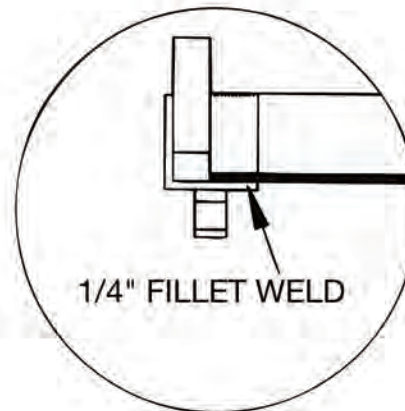
Prior to angle installation or shimming make sure that the unit is snug against the embedded curb angle at the back of the pit.

Place the lip keepers under the front base angle on either side of the unit with the top of the angle protruding out past the base 1/4" in the front and on the left for the left hand keeper and on the right for the right hand keeper. This will facilitate welding.

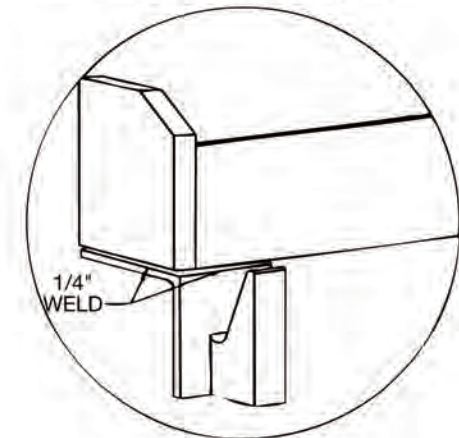
Fully weld the keeper angle to the base angle.

Proceed with shimming per the owner's manual.

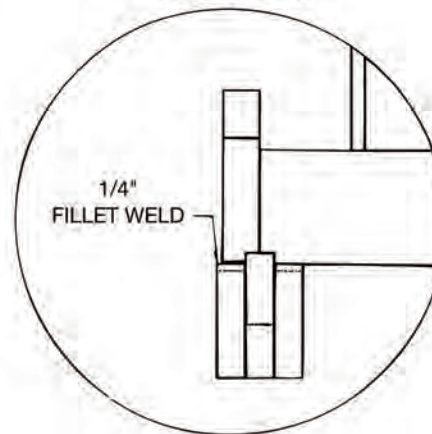
TOP VIEW



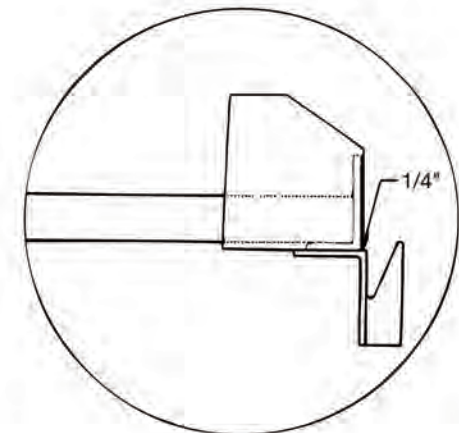
PICTORIAL VIEW



FRONT VIEW



SIDE VIEW



LEVELER INSTALLATION:

 WARNING

DO NOT work under the dock leveler, ramp, or lip unless the maintenance strut is in place and cones are on the dock blocking access to the leveler.

 WARNING

Keep fingers, hands, and head away from the lip when it is released. Fingers, hands, or head could be struck by or caught between the lip and other parts of the dock leveler causing serious injury and/or death.

 WARNING

Improper installation of anchoring devices or installation into aged or unsound concrete could result in serious injury and/or death.

**CAUTION**

Welding with the dock leveler's power connected can damage electrical components. If the dock leveler has previously been electrically connected, turn off power to SMART+™ panel and unplug all dock leveler electrical cords from receptacles in the rear pit wall before welding. Ground welder to dock leveler. Failure to do so can result in product damage.

Be certain that the rear hinge assembly is held tightly against the rear pit curb angle before welding.

**CAUTION**

If front and rear pit curb angles are not parallel DO NOT attempt to shim dock leveler supports to match pit angles. The front supports and rear frame angle must be parallel for proper operation of the dock leveler. Add or subtract shims as required.

1. Place leveler into pit opening.

Allow one inch (1") equal clearance between leveler sides and pit walls. Rear frame angle of leveler should be tight against and flush with rear curb angle for proper welding.

2. Recheck shim packs to ensure leveler is at proper height, flush with floor level, front and rear.

Shims must be placed properly under each rear frame upright, under cylinder and front lip keepers. (See Figure D, page 5 for close up view and Figure B, page 3 for shim locations.)

Skip weld rear of leveler to curb angle (weld center first, then ends) and front shims to leveler and curb angle. (See Figure E, 5.) Protect rear weather seals from weld splatter if applicable.

LEVELER INSTALLATION:

- | | |
|--|--|
| 3. Bring deck section of leveler to fully raised position. | Use temporary power, or lift slowly with fork lift under lip edge |
| 4. Place maintenance strut securely under deck. | Remove strut from hanger bracket under right hand center of deck, rotate down to vertical position, and place in cup on frame. |
| 5. Weld all shims securely in place. | |
| 6. Connect permanent power source to SMART+™ panel on wall. | |
| 7. Make permanent electrical hook up to motor. | |
| 8. Connect two (2) proximity switches through conduit to wall mounted SMART+™ panel. (See electrical diagram, page 17 thru 19). | Leveler should now be ready to operate |

! WARNING

Hydraulic pressure must be maintained on the ramp to hold it in the raised position until the maintenance strut is in place. **DO NOT WORK UNDER THE DOCKLEVELER RAMP OR LIP UNLESS MAINTENANCE STRUT IS SECURED.**

! WARNING

Keep hands, fingers and head away from the lip when the raise button is released. The lip and dock leveler are free to move downward when hydraulic pressure is removed from cylinders.

SECTION 1**SMART+™ HP/HDH Series****INSTALLATION INSTRUCTIONS
LEVELER INSTALLATION****ABOVE DOCK USE:**

- | | |
|---|---|
| 9. Close SMART+™ panel and activate leveler until lip fully extends. | Be sure icon on SMART+™ panel is set to Normal mode. |
| 10. Store maintenance strut. | Two person operation. One person holds pressure on OPERATE icon while a second person stores the maintenance strut. Do not hold pressure on OPERATE icon for more than 10 seconds. |
| 11. Allow leveler to complete cycle, descending to stored position. | Release OPERATE icon. Leveler will drift down to below dock automatically restart, rise several inches above dock while lip is closing, then turn off and store in home position. |
| 11.A Operate leveler through each of its complete cycles to check for proper operation. (See pages 10 through 13, Normal and Below Dock Operation.) | Cycles include ABOVE DOCK cycle, and BELOW DOCK cycle. |
| 12. Recheck all hydraulic hose connections and fittings. | Make sure all fittings are snug and no leaks are present. |
| 13. Install bumpers on dock face. | Securely bolt bumpers to dock face as close to pit opening as possible. Bumpers should be flush with dock floor or 48" off ground. Raised bumpers should be supported to floor from behind. |
| 14. Complete weld at rear of leveler. | Weld shall cover approximately 50% of the length of the rear angle. Ensure welds are placed directly behind frame uprights: (4 each on 6' wide models, 6 each on 7' wide models) and at ends of angle. (See Figure E, page 5) (Protect weather seals during welding). |



CAUTION: Contact your PIONEER representative or the factory if a malfunction occurs which is not understood. DO NOT attempt to correct situation without proper information and understanding, as this may damage components and void the warranty.

! WARNING

ALWAYS secure the vehicle with a vehicle restraint and wheel chocks before operating the dock leveler.

- * DO NOT operate leveler with anyone standing on or in front of leveler.
- * DO NOT lift the leveler by hand.
- * ALWAYS keep fingers, hands, feet, and head clear of all moving parts.

! WARNING

If the lip does not fall to the stored position, the dock leveler requires maintenance or adjustment. Notify your supervisor. DO NOT use dock leveler until it has been repaired. Failure to do so could result in serious injury and/or death.

! WARNING

ALWAYS be certain that the truck wheels are chocked, and that the truck is locked in place by a truck restraining device and the brakes set before loading or unloading. Visually inspect vehicle restraint to make sure it is properly engaged. Trucks pulling away unexpectedly can cause uncontrolled drop of the dock leveler, which can result in serious injury and/or death.

! WARNING

If the lip does not fully extend, do not lift by hand. Restore leveler to dock level and try again. If lip still does not fully extend, the dock leveler requires maintenance or adjustment. Notify your supervisor. DO NOT use the leveler until it has been repaired. Failure to do so could result in serious injury and/or death.

! WARNING

Visually check that the lip is supported by the truck bed or the ramp is supported by both front lip keepers before driving or walking on the ramp.

! WARNING

Before servicing the dock leveler, read and follow the Safety Practice and the operation section of this manual. Be certain, before climbing under the dock leveler, that the MAINTENANCE STRUT is SECURELY IN PLACE.

**LIP EXTENDED FOR ABOVE DOCK USE
SELECTOR SWITCH IN NORMAL MODE**

1. Press and hold the OPERATE icon on the SMART+™ panel.
2. The platform will descend with lip extended until lip rests on truck bed.
3. When truck departs, the leveler automatically recycles to stored, cross traffic position, employing the recycle proximity sensor, Figure F, and a timer in the SMART+™ panel.

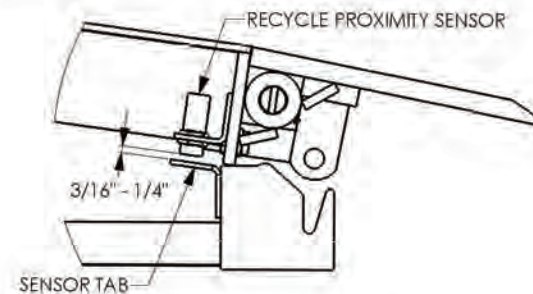
Release the icon when the platform raises and the lip fully extends.
With optional LIP OUT Icon:

1. Press and hold OPERATE icon. When lip edge is above truck floor level, also press LIP OUT icon. Platform will stop and lip will extend. Release OPERATE and LIP OUT icons simultaneously.

Note: For drawing of optional Lip Out valve, see page 25.

The leveler allows for up and down movement of truck during loading or unloading.

Figure F



Caution: Be sure to maintain clearance between proximity sensor and sensor tab as specified in Figure F. Failure to do so could result in damage to the sensor.

SECTION 2**SMART+™ HP/HDH Series****OPERATING INSTRUCTIONS
NORMAL RECYCLE PROCEDURE****RECYCLE PROCEDURE WITH TRUCK AT DOCK:**

1. Press and hold the OPERATE icon.

Hold the icon until the platform partially raises and lip is fully withdrawn from truck.

2. Release the OPERATE icon.

Leveler will descend to stored, cross traffic position.

SECTION 2**SMART+™ HP/HDH Series****OPERATING INSTRUCTIONS
BELOW DOCK OPERATION****LIP EXTENDED ONTO TRUCK FOR UNLOADING BELOW DOCK:**

1. Touch selector icon so it indicates Normal mode.

2. Press and hold the OPERATE icon.

Wait until the platform raises and the lip fully extends.

With optional LIP OUT icon, simply allow leveler to rise above floor of truck, then also touch LIP OUT icon. Deck will stop and lip will extend.

3. Release the OPERATE icon (and optional LIP OUT icon.)

4. Touch the selector icon from Normal to Below Dock mode while leveler is descending.

Leveler will settle to truck floor as low as 12" below dock to service very low trucks without recycling.

! WARNING

ALWAYS secure the truck with a vehicle restraint or wheel chocks before operating the dock leveler. **DO NOT** operate dock leveler with anyone standing on or in front of leveler. **DO NOT** drive on dock leveler or lip until it is fully extended and supported by the truck bed. **ALWAYS** keep hands and feet clear of all moving parts. **ALWAYS** re-store the leveler to its safe dock level position after servicing the truck.

SECTION 2**SMART+™ HP/HDH Series****OPERATING INSTRUCTIONS
BELOW DOCK OPERATION (CONTINUED)****LIP RETRACTED FOR END LOADS BELOW DOCK:**

1. Touch selector icon to indicate Below Dock mode.

2. Press and hold the OPERATE icon.

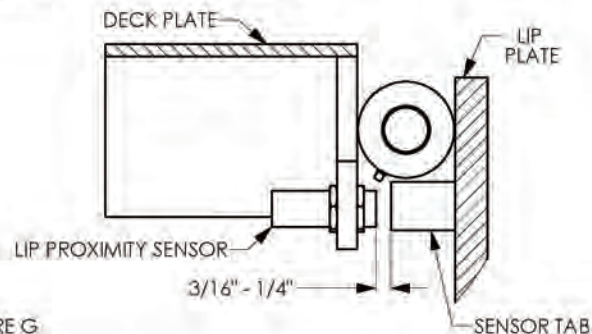


FIGURE G

Hold the icon until the platform raises and the lip partially extends.

The motor will automatically shut off when the lip is out of range of the lip tab proximity sensor. (See illustration, opposite.)

The leveler will descend to its fully lowered position with the lip between truck and dock face.

Note: The leveler will not automatically recycle in this position. (See recycle procedure.)

Caution: Be sure to maintain clearance between proximity sensor and sensor tab as specified in Figure G. Failure to do so could result in damage to the sensor.

SECTION 2**SMART+™ HP/HDH Series****OPERATING INSTRUCTIONS
BELOW DOCK RECYCLE PROCEDURE****FOR PLACING LIP ON TRUCK TO CONTINUE LOADING
OR UNLOADING**

1. Touch selector icon so it indicates NORMAL mode.
2. As leveler begins to rise, press and hold the OPERATE icon.

Leveler will automatically begin to recycle to stored position.

Allow the platform to raise and lip to fully extend, then release OPERATE icon.

Leveler will descend until lip rests on truck floor. When truck departs the unit will automatically recycle.

SECTION 2**SMART+™ HP/HDH Series****OPERATING INSTRUCTIONS
BELOW DOCK RECYCLE PROCEDURE (CONTINUED)****RETURN LEVELER TO STORED POSITION FROM BELOW DOCK:**

1. Touch selector icon to indicate Normal mode.

Leveler will automatically return to stored, cross traffic position.

Do not touch OPERATE icon.

RECYCLE PROCEDURE FROM BELOW DOCK:

1. Touch selector icon to indicate Normal mode.

(Unit does not recycle from this (dead) position when truck departs.)
If hit while extended, the lip will yield to impact.

Leveler will now return to its stored, cross traffic position automatically, before or after truck departs.

SECTION 2**SMART+™ HP/HDH Series****OPERATING INSTRUCTIONS
AUTOMATIC SAFETY STOP****AUTOMATIC SAFETY STOP**

If lip of leveler should become unsupported while a load of 1,000 pounds or greater is on the platform, the hydraulic system automatically locks the platform in position, supporting the load.

To restore the leveler to normal operation:

1. Remove the load.
2. Touch and release the OPERATE icon. Leveler should drift downward and recycle.

 WARNING

ALWAYS secure the truck with a vehicle restraint or wheel chocks before operating the dock leveler. **DO NOT** operate dock leveler with anyone standing on or in front of leveler. **DO NOT** drive on dock leveler or lip until it is fully extended and supported by the truck bed. **ALWAYS** keep hands and feet clear of all moving parts. **ALWAYS** re-store the leveler to its safe dock level position after servicing the truck.

SECTION 3**SMART+™ HP/HDH Series****MAJOR COMPONENTS**

HYDRAULIC FLUID CONTENT

Levelers are shipped filled with aircraft fluid.

ELECTRICAL
Motor:

1 HP, 15 minute duty cycle

SMART+™ Panel:

Wall mounted metal box (12" x 10" x 5 1/4"), Meets N.E.M.A. 12, hinged cover for easy access.

Proximity Sensor Controls:

Automatic Recycle Function, Below Dock Lip Control, 2 each Model 8036A, Square D

MOTOR VOLTAGE (AC)	PHASE	AMP DRAW (RUNNING)	POWER (amperage) REQUIREMENT
115	1	15.0	30
230	1	7.2	20
208-220-240	3	3.6	10
440-460-480	3	1.8	10

1 HP, 1 ph motor draws 25 amps to start motor.

To avoid voltage drop, Pioneer recommends #10 wire on short runs (45' or less) and #8 wire on long runs (72' or less). See page 16 for wire gauge chart.

Consult Code Requirements.

CAUTION: A MOTOR CAN BURN OUT FOR ANY OF THE FOLLOWING REASONS:

1. Hook up to incorrect line voltage.
2. Single phasing of polyphase motor caused by a blown fuse or loss of one leg of electrical supply.
3. Low voltage to motor due to insufficient line capacity. This is the most common with 110V, 1 ph operation.

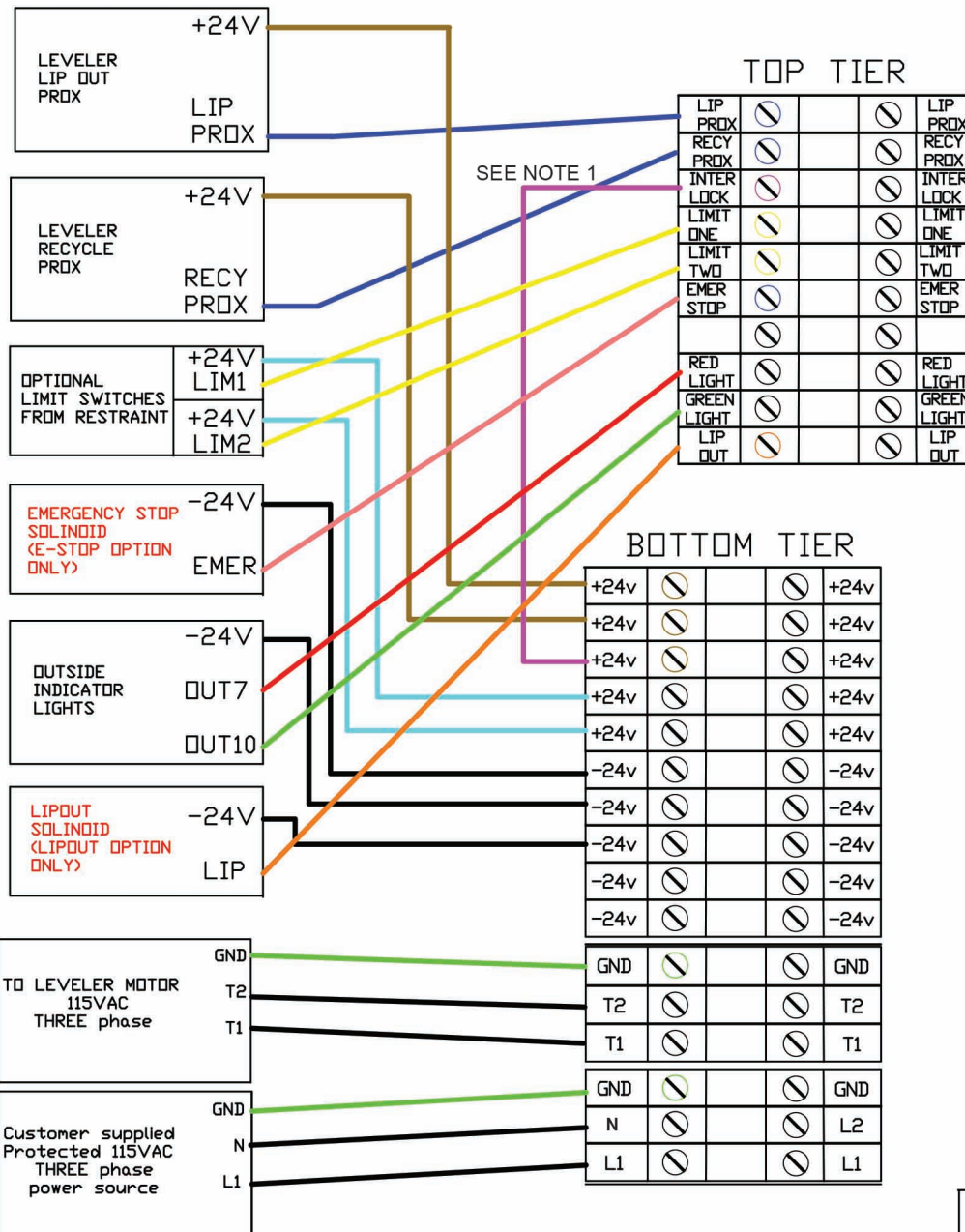
Choose the Right Gauge Wire

The correct wire gauge (size) for your project is based on the amperage, or power, required and the distance the wire travels. The chart below helps you determine what gauge wire you need. Remember, the smaller the number, the larger the wire. For example, a 6-gauge wire is larger than an 8-gauge wire.

GAUGE GUIDE FOR MAXIMUM ALLOWABLE WIRE LENGTH, 2% NOMINAL VOLTAGE DROP									
AMPS	WATTS	COPPER CONDUCTORS							
		UP TO 50'	UP TO 100'	UP TO 150'	UP TO 200'	UP TO 250'	UP TO 300'	UP TO 400'	UP TO 500'
15	1800	14 Gauge	12 Gauge	10 Gauge	6 Gauge	6 Gauge	6 Gauge	4 Gauge	4 Gauge
20	2400	12 Gauge	10 Gauge	8 Gauge	6 Gauge	6 Gauge	4 Gauge	4 Gauge	2 Gauge
30	3000	10 Gauge	8 Gauge	6 Gauge	6 Gauge	4 Gauge	4 Gauge	2 Gauge	2 Gauge
40	4800	8 Gauge	6 Gauge	4 Gauge	4 Gauge	2 Gauge	2 Gauge	1 Gauge	1/0 Gauge
50	6000	6 Gauge	6 Gauge	4 Gauge	4 Gauge	2 Gauge	1 Gauge	1/0 Gauge	2/0 Gauge

This information is provided as a general guideline only. For safe wiring practices consult the National Electric Code, local building codes and regulations, and your local building inspector. Always remember that installation of electrical wire can be hazardous and, if done improperly, can result in personal injury or property damage.

Canadian codes differ from the above charts. Check your provincial codes before completing your project



SMART+™ **HP/HDH** **115 Volt** **Single Phase**

PIONEER MANUFACTURING, INC.
 P.O. Box 338 SPRING HILL, TN. 37174
 PHONE: 800-251-3382 FAX: (931) 486-0316
LOADING DOCK EQUIPMENT

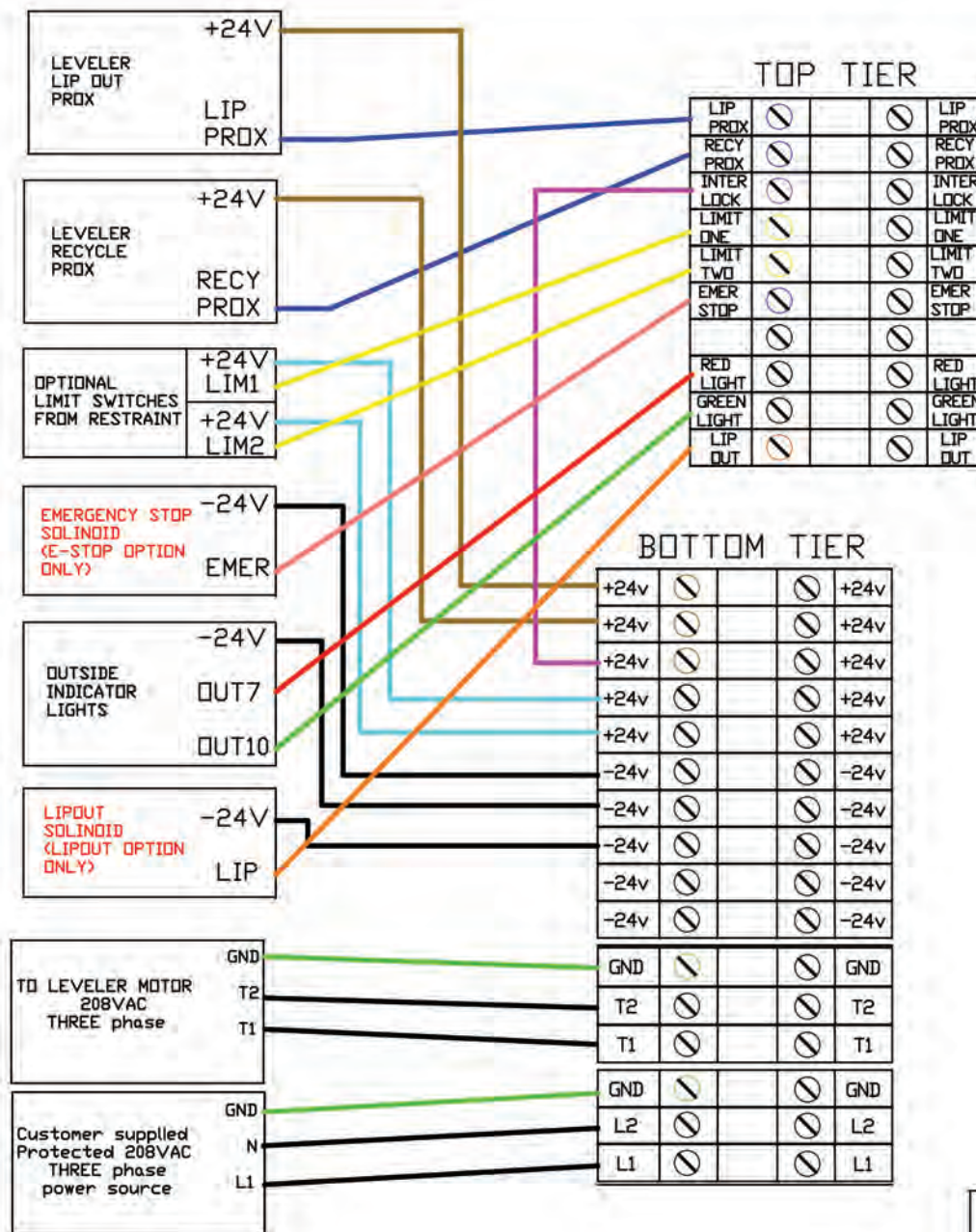
Field Wiring Diagram SMART+ HP 115vac 3 phase

PIONEER MFG.

DRAWN BY:
R. Arks

DATE:
12/4/18

DRAWING NO.:



SMART⁺™ **HP/HDH** **208 Volt** **Single Phase**

NOTE:

THIS IS A JUMPER PLACEMENT FOR THE "DOOR INTERLOCK" FUNCTION. TO UTILIZE THIS FUNCTION, REMOVE THE JUMPER FROM "INTERLOCK" TO "+24V" TERMINAL BLOCKS AND REPLACE WITH A DRY NORMALLY OPEN CONTACT THAT CLOSSES WHEN THE DOCK DOOR IS OPEN.

PIONEER MANUFACTURING, INC.
P.O. Box 338 SPRING HILL, TN. 37174
PHONE: 900-251-3382 FAX: (631) 486-0316
LOADING DOCK EQUIPMENT

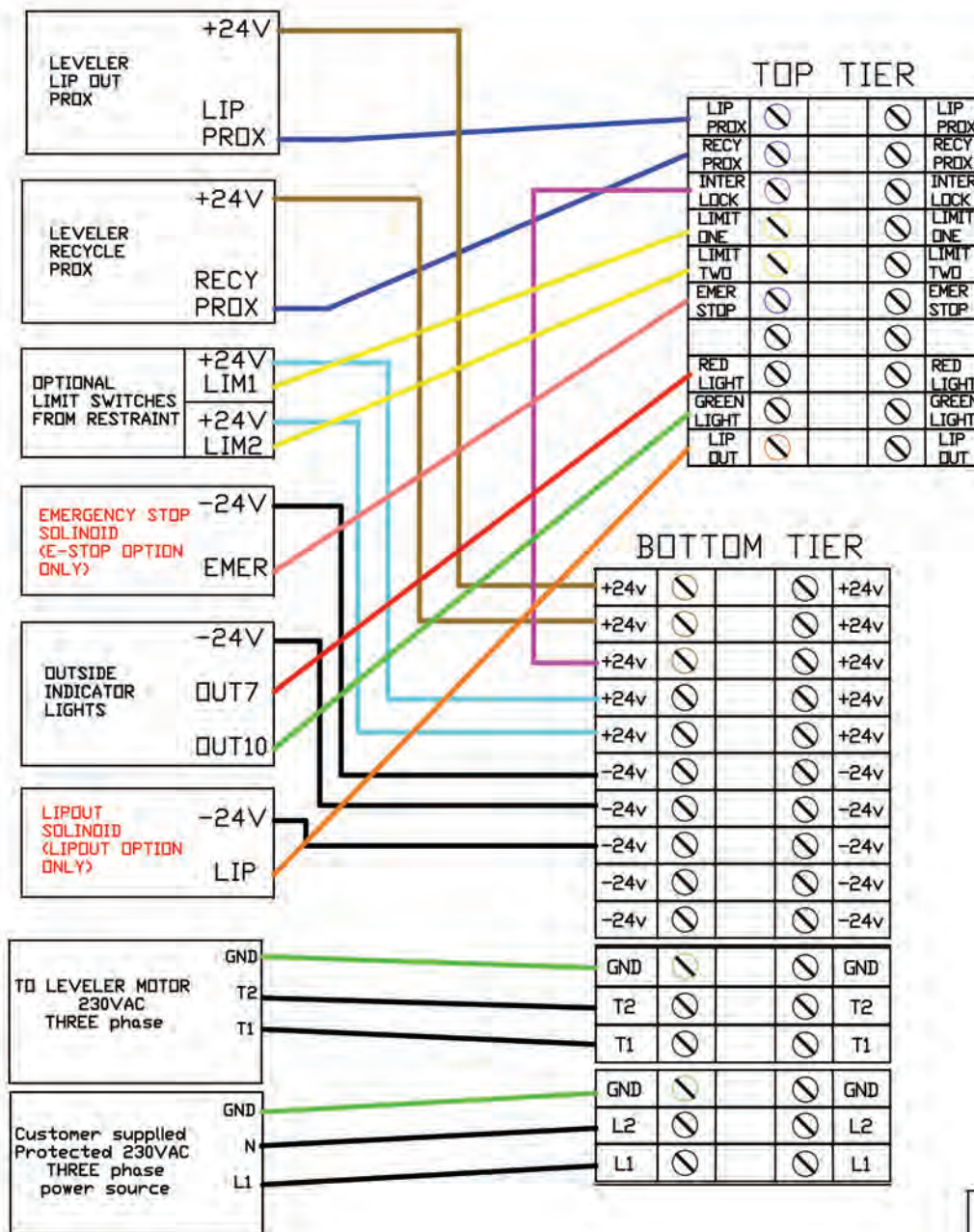
Field Wiring Diagram SMART+ HP 208vac 3 phase

PIONEER MFG.

DRAWN BY:
R. Arks

DATE:
12/4/18

DRAWING NO.:



SMART+™

**HP/HDH
230 Volt**

Single Phase

NOTE:

THIS IS A JUMPER PLACEMENT FOR THE "DOOR INTERLOCK" FUNCTION. TO UTILIZE THIS FUNCTION, REMOVE THE JUMPER FROM "INTERLOCK" TO "+24V" TERMINAL BLOCKS AND REPLACE WITH A DRY NORMALLY OPEN CONTACT THAT CLOSSES WHEN THE DOCK DOOR IS OPEN.

PIONEER MANUFACTURING, INC.
P.O. Box 338 SPRING HILL, TN. 37174
PHONE: 900-251-3382 FAX: (631) 486-0316
LOADING DOCK EQUIPMENT

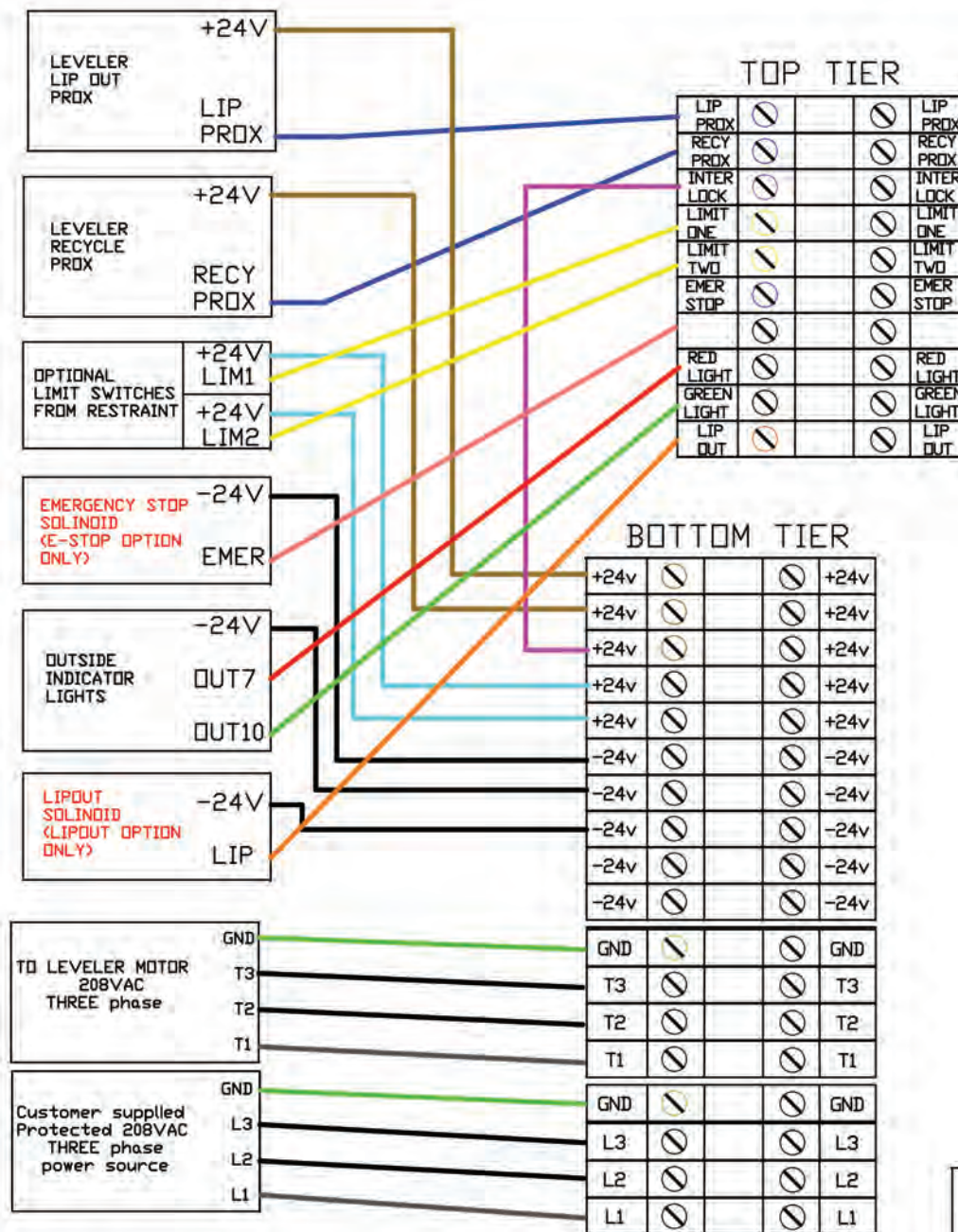
Field Wiring Diagram SMART+ HP 230vac 3 phase

PIONEER MFG.

DRAWN BY:
R. Arks

DATE:
12/4/18

DRAWING NO.:



SMART+™

HP/HDH 208 Volt

Three Phase

NOTE:

THIS IS A JUMPER PLACEMENT FOR THE "DOOR INTERLOCK" FUNCTION. TO UTILIZE THIS FUNCTION, REMOVE THE JUMPER FROM "INTERLOCK" TO "+24V" TERMINAL BLOCKS AND REPLACE WITH A DRY NORMALLY OPEN CONTACT THAT CLOSSES WHEN THE DOCK DOOR IS OPEN.

PIONEER MANUFACTURING, INC.
P.O. Box 338 SPRING HILL, TN. 37174
PHONE: 900-251-3382 FAX: (631) 486-0316
LOADING DOCK EQUIPMENT

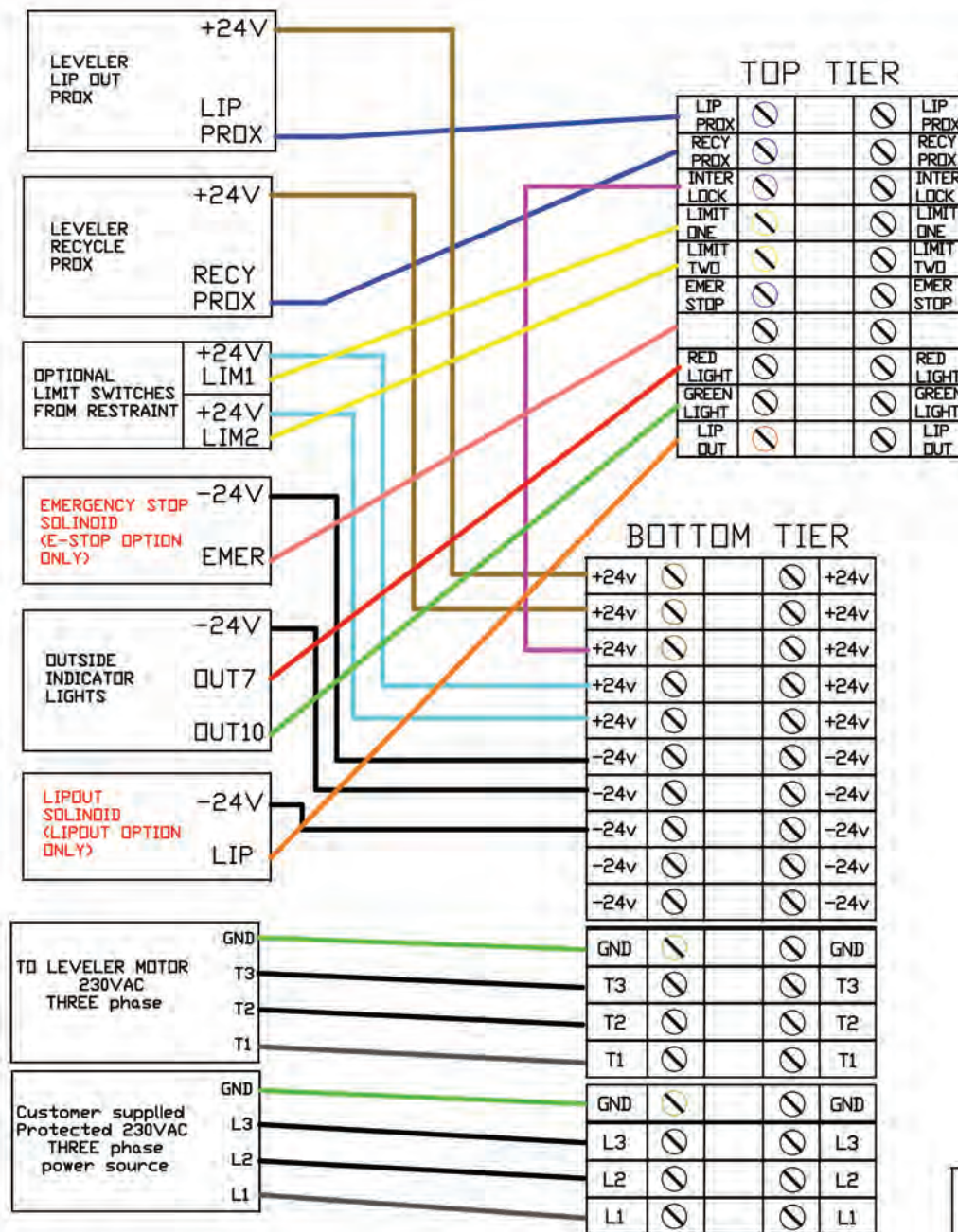
Field Wiring Diagram SMART+ HP 208vac 3 phase

PIONEER MFG.

DRAWN BY:
R. Arks

DATE:
12/4/18

DRAWING NO.:



SMART+™

HP/HDH 230 Volt

Three Phase

NOTE:

THIS IS A JUMPER PLACEMENT FOR THE "DOOR INTERLOCK" FUNCTION. TO UTILIZE THIS FUNCTION, REMOVE THE JUMPER FROM "INTERLOCK" TO "+24V" TERMINAL BLOCKS AND REPLACE WITH A DRY NORMALLY OPEN CONTACT THAT CLOSSES WHEN THE DOCK DOOR IS OPEN.

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LOADING DOCK EQUIPMENT

Field Wiring Diagram SMART+ HP 230vac 3 phase

PIONEER MFG.

DRAWN BY:
R. Arks

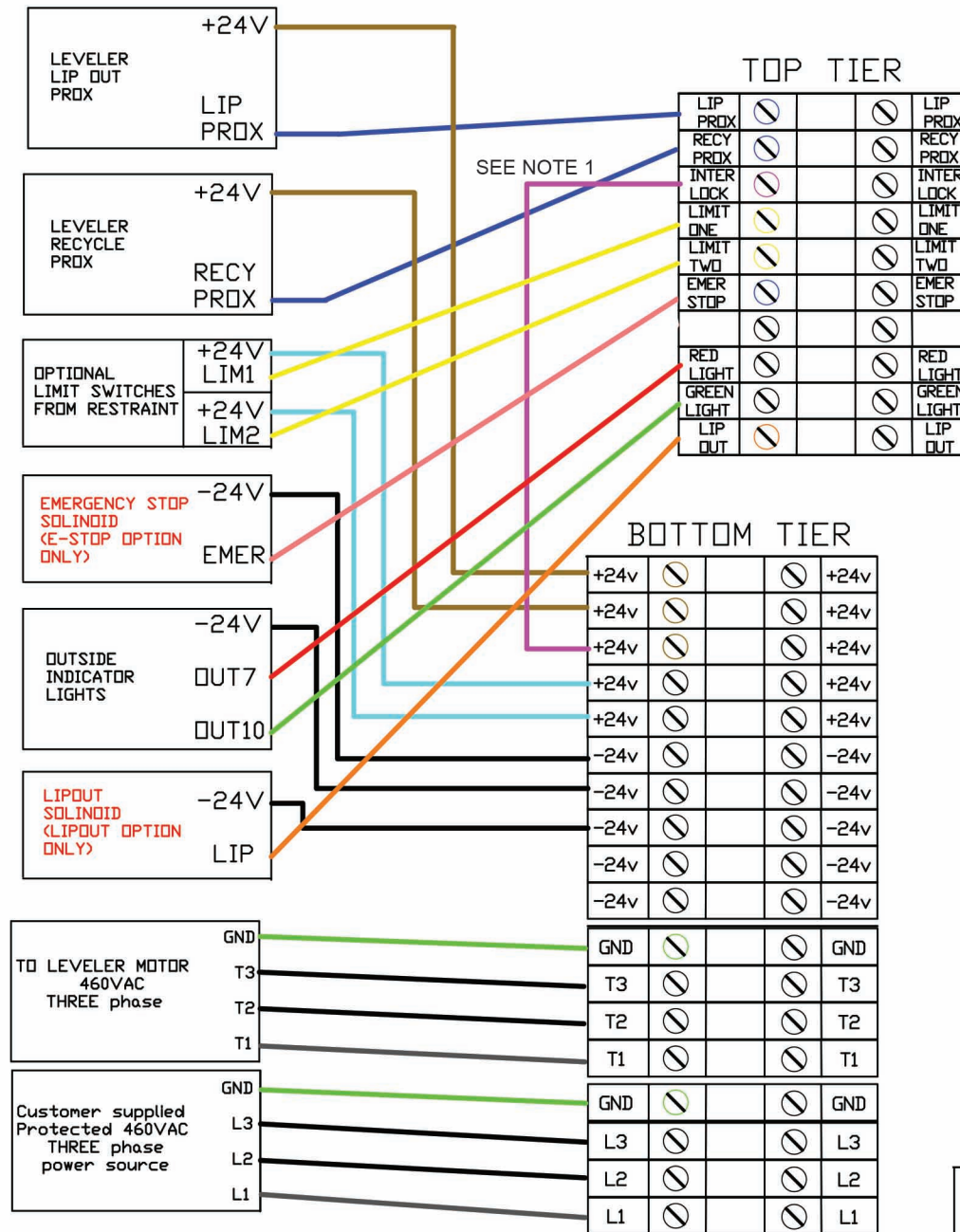
DATE:
12/4/18

DRAWING NO.:

SMART+™

HP/HDH 460 Volt

Three Phase



NOTE: 1

THIS IS A JUMPER PLACEMENT FOR THE "DOOR INTERLOCK" FUNCTION. TO UTILIZE THIS FUNCTION, REMOVE THE JUMPER FROM "INTERLOCK" TO "+24V" TERMINAL BLOCKS AND REPLACE WITH A DRY NORMALLY OPEN CONTACT THAT CLOSSES WHEN THE DOCK DOOR IS OPEN.

PIONEER MANUFACTURING, INC.
P.O. Box 338 SPRING HILL, TN. 37174
PHONE: 800-251-3382 FAX: (931) 486-0316
LOADING DOCK EQUIPMENT

Field Wiring Diagram SMART+ HP 460vac 3 phase

PIONEER MFG.

DRAWN BY:
R. Arks

DATE:
12/4/18

DRAWING NO.:

! WARNING

Read and follow the safety procedures in this manual before doing any service or repair to the dock leveler. ALWAYS SECURE LEVELER WITH MAINTENANCE STRUT BEFORE CLIMBING INTO THE DOCK LEVELER PIT OR DOING ANY MAINTENANCE OR REPAIR UNDER THE DOCK LEVELER. Failure to do so could result in serious injury and/or death.

SYMPTOM:	PROBABLE CAUSE:	CORRECTION:
RAMP WILL NOT RAISE FROM STORED POSITION: Motor not running in Normal mode when Operate button is pressed.	1. Incorrect or disconnected electrical hook-up.	1. Review wiring diagram and check connections.
	2. Blown fuses or open circuit breaker.	2. Replace bad fuses. Reset circuit breakers. Determine and correct other electrical problems.
	3. Loss of line voltage.	3. Check lines and repair if necessary.
	4. Open overload relays on motor starter in control panel.	4. Allow to cool. Push "RESET" button located in control box.
	5. Burned motor.	5. Determine cause of burn-out. Correct problem. Replace motor. (Contact factory.)

SYMPTOM:	PROBABLE CAUSE:	CORRECTION:
RAMP WILL NOT RAISE FROM STORED POSITION: Motor not running Below Dock mode when OPERATE icon is touched.	1. Lip proximity switch out of adjustment.	1. To check proximity adjustment. Place selector icon in NORMAL mode. Touch and hold OPERATE icon until unit is fully raised. Place maintenance strut in position. Touch and release OPERATE icon in short repetitions until lip closes. Refer to Figure G, Proximity sensor gap specification, page 13. Caution: Be sure to maintain clearance between proximity sensor and sensor tab as specified in Figure G. Failure to do so could result in damage to the sensor.
	2. Lip proximity switch has loose wire.	2. Reconnect wire, if loose. Check junction box under leveler and terminal strip in SMART+™ panel.

**Hydraulic valve adjustments are normal maintenance and are not covered under warranty.*

SYMPTOM:	PROBABLE CAUSE:	CORRECTION:
RAMP WILL NOT RAISE OR LIP WILL NOT EXTEND FULLY: Motor running or humming in normal mode (1 ph motor)	1. Voltage drop, probably due to insufficient line capacity, resulting in blown fuses, tripped circuit breakers or motor hum.	1. Test voltage at motor starter with motor running. Test for amperage drain. (Low voltage/high amperage indicates inadequate feed line for distance of run.) Replace feed line with adequate wire size.
(1 ph motor) (3 ph motor)	2. Wrong rotation. 2. Wrong rotation.	2. See wiring instructions on motor 2. Reverse T1 and T3 at terminal strip. (See Figure H, page 19)
(3 ph motor)	3. Motor single-phasing.	3. Check for bad fuse or loss of power in one line due to loose connections or tripped breakers or overloads.
(1 ph or 3 ph motor)	4. Load on ramp.	4. Remove the load. Ramp is not designed to lift more than its own weight.
(1 ph or 3 ph motor)	5. Low fluid.	5. Refill if needed. Check fittings and hoses and tighten if loose.
(1 ph or 3 ph motor)	6. Motor or pump physically damaged.	6. Replace.
RAMP WILL NOT AUTOMATICALLY RETURN FROM BELOW DOCK:	1. Unit is not designed to automatically return when selector icon is in BELOW Dock mode.	1. Return icon to NORMAL position. Unit will now automatically recycle and store at floor level.

SYMPTOM:	PROBABLE CAUSE:	CORRECTION:
RAMP WILL NOT LOWER AFTER BEING FULLY RAISED:	1. Physical obstruction.	1. Check and remove. (Always use maintenance strut for safety.)
	2. Safety stop in hydraulic fittings has locked up.	2. Touch and release the OPERATE icon to unlock and allow the unit to descend. If symptom persists, consult factory.
LIP SAGS WHILE UNIT IS DESCENDING TO TRUCK: OR RAMP EXPERIENCES LONG DELAY BEFORE RAISING:	1. Air in hydraulic system.	1. While unit is descending with lip extended, switch selector icon to BELOW Dock mode. When unit has reached bottom, push lip down. Now lift and drop the lip four times. Check lip sag by operating in NORMAL mode. If sag persists, consult factory.
RAMP WILL NOT RETURN AUTOMATICALLY WHEN TRUCK DEPARTS Motor not running, in Normal mode Motor humming in Normal mode	1. Recycle proximity switch out of adjustment or has loose wire. 2. Timer relay set too low. 3. Insufficient line voltage.	1. To store unit: Touch and hold the OPERATE icon until the lip closes and deck raises approx. 5" above floor. Release icon. Unit will store. To check adjustment, raise unit in NORMAL mode until lip extends. As unit is descending, switch to BELOW Dock mode. Unit will fully descend with lip extended. Refer to Figure F, proximity sensor adjustment, page 11, or reconnect wire, if loose. Caution: Be sure to maintain clearance between proximity sensor and sensor tab as specified in Figure F. Failure to do so could result in damage to the sensor. 2. Turn dial clockwise and test. 3. See system 1 at top of page 22. (Motor running or humming in Normal mode.)

ITEM NO.	DESCRIPTION
1	LIP PLATE ASSY, 16"
2	LIP HINGE PIN
3	FULL RANGE TOE GUARDS
4	DECK REAR HINGE KIT
5	PROXIMITY SENSOR, DECK RECYCLE
6	PROXIMITY SENSOR, LIP

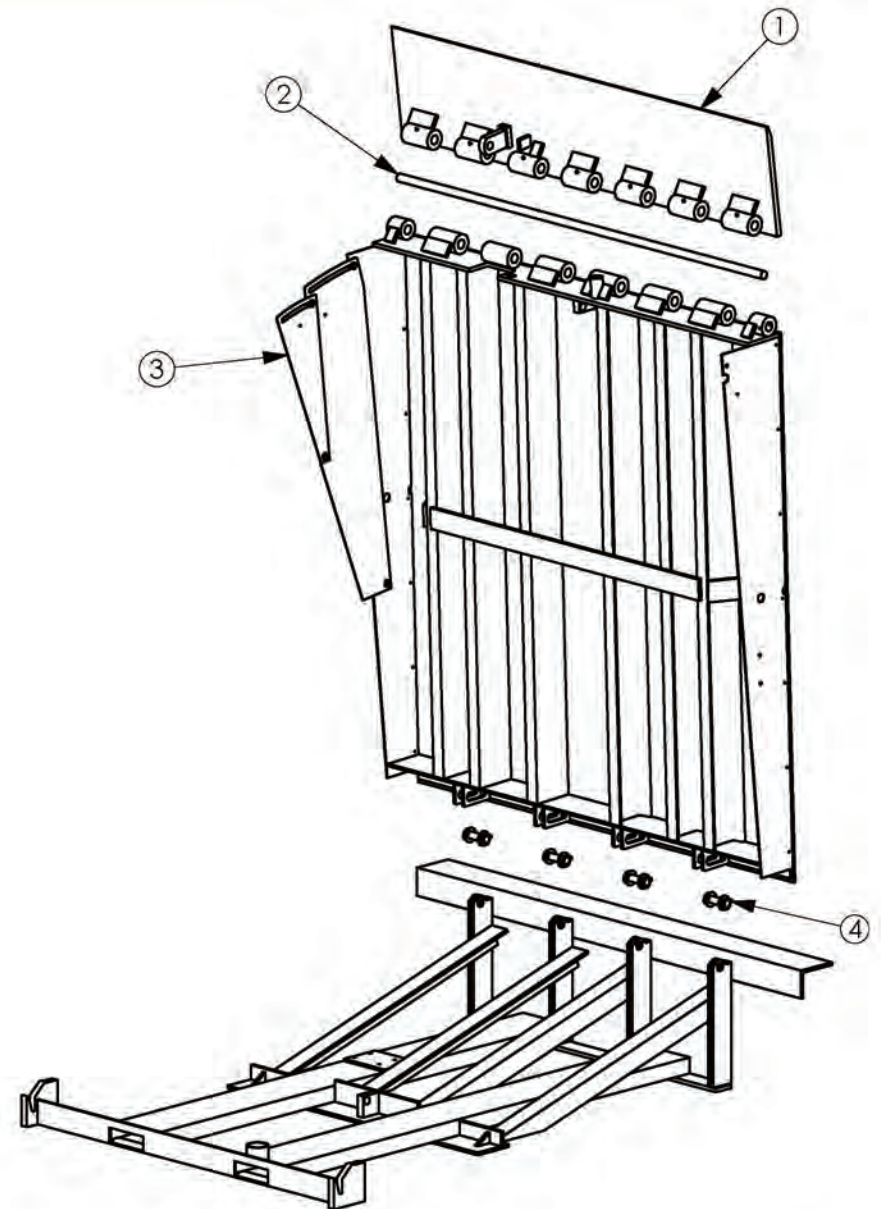
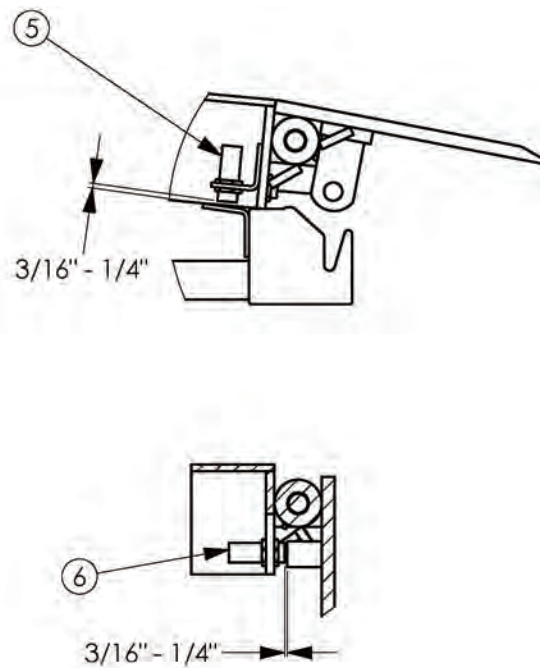


FIGURE I

ITEM	DESCRIPTION
4	Deck Cyl. W. Harness Pins & Clevis Keys
5	Pins & Keys, Deck Cylinder
6	Lip Cylinder W/Pins & Clevis Keys
7	Pins & Keys, Lip Cylinder
8	Hose Assembly, Deck Cylinder to Lip Cylinder 28"
9	Hose Assembly, Pump to Deck Cylinder 31"
	Hose Assembly, Pump to Deck Cylinder 51" (10')
10	Hose Assembly, Pump to Lip Cylinder, 43"
	Hose Assembly, Pump to Lip Cylinder 55" (10')
14	Motor & Pump Assembly

HP/HDH Series Hydraulic System

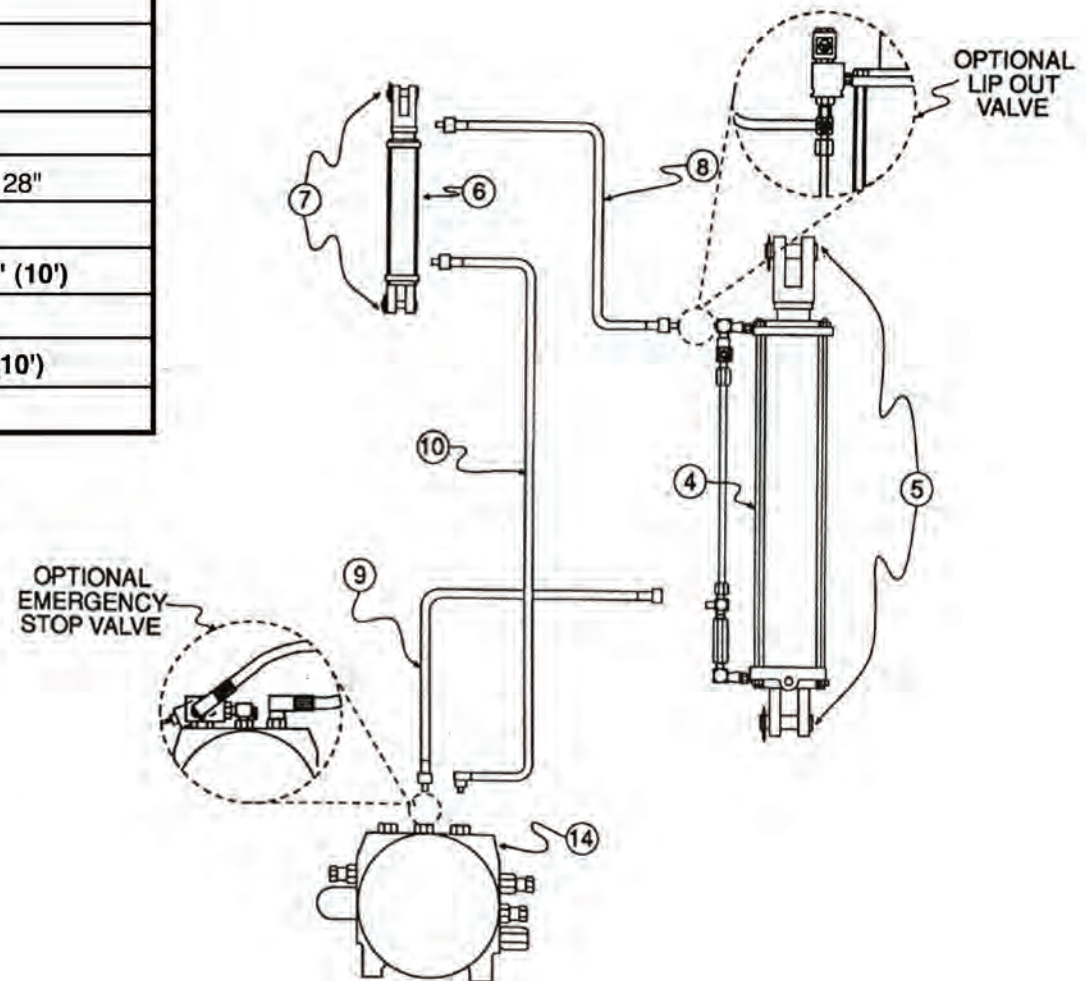


FIGURE J



Warranty Procedure

The information on the Warranty Claim Request Form must be provided with all warranty claims.

When a call is received with a warranty problem a Customer Service number (CSF ####) will be issued for that problem only and cannot be used again without prior approval. This number must be on all invoices submitted for payment and on all correspondence.

Before and after pictures of all the work performed must be supplied with each claim. If you take digital pictures, email them to connerh@pioneerleveler.com. If you use a film camera forward the film to Pioneer Dock Equipment PO Box 338 Spring Hill TN 37174, Attn: Warranty Dept.

No claim will be considered for processing without the required information.

If warranty work is approved, Pioneer's warranty policy for labor requires a formal invoice from the company performing the warranty. Pioneer must receive the labor invoice within 30 days of warranty authorization. Once the invoice is approved by Pioneer, a check will be processed and mailed to the company performing the work.

Replacement Part under Warranty

Any replacement parts will be invoiced and a credit will be given when the damaged parts are returned to Pioneer. Pioneer will determine the only exception, if the parts are not to be returned. A copy of the credit memo will be sent to your billing address. If a check payment is required, the request must be in writing. The request then has to be approved by Pioneer's accounts payable department.

Replacement parts will be sent at Pioneer's discretion either UPS ground or OTR truck. Any other request for shipments will be charged to the dealer. I.e. UPS next day- FedEx etc.

All returned parts will be issued a Return Goods Authorization Number (RGA ####). A form will be faxed to you with this number, the signed copy is to be faxed to 1-931-486-0316 or returned with the parts. The Return Authorization is only good for 30 days. **The RGA # must be listed on all returns, using the RGA form as the packing list.**

No credits will be issued without proper authorization. **No Credit will be given on non-Pioneer parts.**

A copy of the credit memo will be sent to your billing address. The credit will be given against the invoice issued for the replacement parts.

Any questions regarding Warranty or Return Authorization should be directed to Customer Service at connerh@pioneerleveler.com or 1-866-728-6195.



Warranty claim request form

The Following Information Must Be Supplied To Process Any Claim

Dealer Name: * _____

Contact Person: * _____

Pioneer Invoice Number : _____ Date Of Purchase: _____

End User Name And address:

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Product: _____

Model Number: * _____ Serial Number: * _____

Customer Complaint: *

Scope of Service Performed: *

Estimated Repair: Hours: * _____ \$ * _____

If multiple repairs list hours and \$ for each item.

Pioneer requires an invoice for all claims requiring a payment.

***Before And After Pictures Must Be Supplied With All Work Performed**

Purchase a disposable camera and send it to Pioneer along with the receipt.

***Required to process all warranty claims.**

WARRANTY

A FULL FIVE YEAR WARRANTY is standard on Pioneer *SMART+*TM HP/HDH series levelers, to include all structural members. A one year warranty covers the motor/pump assembly, cylinders and miscellaneous parts.

Pioneer accepts full responsibility for the cost of materials, labor and freight for any warranty claim during the warranty period, which begins at date of shipment. Pioneer reserves the right to either repair or replace any defective parts. A claim for breach of warranty will be honored if the product has been properly installed, maintained and operated within its rated capacity, and not damaged by abuse.

NOTE: Hydraulic valve adjustments are normal maintenance and are not covered under warranty.

PIONEER MANUFACTURING, INC. SHALL NOT BE LIABLE FOR LOSS OF USE OF ANY EQUIPMENT OR INCIDENTAL DAMAGES.

PIONEER EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES.

All Pioneer products meet or exceed Federal Occupational Safety and Health Act Standards, Commercial Standards 202-56, and American Society of Mechanical Engineers Specifications ANSI MH14.1-84.

Pioneer reserves the right to make product improvement at any time without prior notice.

Warranty Phone: 1.866.728.6195