

Installation Guide 1 - LCS™ Certification

Applies To: All Systems

Box Part Number: B-067967-**

<p>LCS™ GEO. M. MARTIN</p> <p>MARTIN</p> <p>1250-67TH STREET EMERYVILLE, CA 94608 TEL: (510) 652-2200 FAX: (510) 652-6447</p>	GEO. M. MARTIN CERTIFIED INSTALLATION OF LOAD CHANGE SAFETY™ SYSTEM FOR:		
	SERIAL NUMBER _____	VOLUME _____	DATE _____
	MODEL SIZE _____	ELECTRICAL _____	AWPS _____
	AT THE FOLLOWING LOCATION:		
	COMPANY NAME _____	DATE _____	
	STREET ADDRESS 1 _____	STREET ADDRESS 2 _____	
	CITY, STATE, ZIP _____		
	PHONE _____	FAX _____	
	CONTACT NAME _____	TITLE _____	
	CONTACT SIGNATURE _____	EMAIL _____	
<p>BY SIGNING BELOW, I CERTIFY THAT ALL TESTS AND VISUAL VERIFICATIONS INCLUDED IN THIS FORM WERE PERFORMED BY ME, I FURTHER AFFIRM THAT ALL VALIDATION TESTS WERE SUCCESSFULLY COMPLETED.</p>			
GEO. M. MARTIN AUTHORIZED SIGNATURE _____		DATE _____	
GEO. M. MARTIN AUTHORIZED PRINTED _____			
<p>IMPORTANT: A CERTIFICATION FORM IS REQUIRED FOR EACH STACKER.</p>			

Figure 1 – Certification Form

Date: _____	Stacker
	Serial #: _____

**GEO. M. MARTIN CERTIFIED INSTALLATION
OF LOAD CHANGE SAFETY™ SYSTEM FOR:**

STACKER SERIAL NUMBER _____ LCS™ SERIAL NUMBER _____ DATE _____

MODEL/SIZE _____ ELECTRICAL DRAWING _____ PROGRAM VERSION _____

AT THE FOLLOWING LOCATION:

COMPANY NAME _____ DATE _____

STREET ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____ FAX _____

CONTACT NAME _____ TITLE _____

CONTACT SIGNATURE _____ EMAIL _____

BY SIGNING BELOW, I CERTIFY THAT ALL TESTS AND VISUAL VERIFICATIONS INCLUDED IN THIS FORM WERE PERFORMED BY ME. I FURTHER AFFIRM THAT ALL VALIDATION TESTS WERE SUCCESSFULLY COMPLETED.

GEO. M. MARTIN AUTHORIZED SIGNATURE _____ DATE _____

GEO. M. MARTIN AUTHORIZED PRINTED _____

IMPORTANT: RELOCATION OR SUBSTANTIAL MODIFICATION TO A MACHINE
OR LIGHT GUARD LAYOUT REQUIRES RE-CERTIFICATION.

LCS™
GEO. M. MARTIN



1250-67TH STREET
EMERYVILLE, CA 94608
TEL: (510) 652-2200
FAX: (510) 652-6447

Date: _____	Stacker
	Serial #: _____

LCS™ Installation Certification Instructions

Perform each test as noted below, check the PASS box if the test is successful. All PASS boxes must be checked in order to certify the installation. If you have to correct a problem that may be related to a test already performed, re-test those items. Certain sections may not apply due to configuration options. Check the APPLIES box for those sections that do apply. Some items within a section may Not Apply. Check N/A for these items.

Physical Test

Section	Test	Description	Results
#1		Power Up & Fault Checkout This test section applies to ALL LCS Systems	<input checked="" type="checkbox"/> APPLIES
		Turn on MAIN power to stacker and START the stacker.	
	1.A	When the main power of the stacker is first applied, the MESSAGE LED should flash a 3 digit code (program version).	CODE <input type="checkbox"/> PASS
	1.B	Examine LCS LED display and confirm that the SYSTEM FAULT LED is OFF	<input type="checkbox"/> PASS
	1.C	Examine LCS LED display and confirm that the LIGHT GUARD FAULT LED is OFF	<input type="checkbox"/> PASS
	1.D	Examine LCS LED display and confirm that the MESSAGE LED is NOT flashing	<input type="checkbox"/> PASS
	1.E	Examine No-Blue-No-You Light on Boom and confirm that it is ON	<input type="checkbox"/> PASS
	1.F	Examine No-Blue-No-You Light on Drive Side of stacker and confirm that it is ON	<input type="checkbox"/> PASS
#2		Status Indicator LED Checkout This test section applies to ALL LCS Systems	<input checked="" type="checkbox"/> APPLIES
		Turn on MAIN power to stacker and START the stacker.	
	2.A.1	<u>Operator In Position Status LED:</u> Confirm that the LED goes ON when sensor is blocked and OFF when sensor is clear	<input type="checkbox"/> PASS
	2.A.2	Confirm the range of the sensor by making sure that a background item or a person standing beyond 30" - 36" distance does not turn on LED.	<input type="checkbox"/> PASS
	2.B	<u>Boom In Position Status LED:</u> Confirm that the LED goes ON when boom is in position closest to discharge end of stacker and OFF when boom is moved no more than 12 inches from hard stop point.	<input type="checkbox"/> PASS
	2.C	<u>Light Guard Top Beam Status LED:</u> Confirm that the LED goes ON when the Light Guard Top Beam is clear of obstructions and OFF when blocked. NOTE: If a LCS-MANUAL (no Light Guard), confirm that this LED is ON all the time.	<input type="checkbox"/> PASS
	2.D	<u>Light Guard Bottom Beam Status LED:</u> Confirm that the LED goes ON when the Light Guard Bottom Beam is clear of obstructions and OFF when blocked. NOTE: If a LCS-MANUAL (no Light Guard), confirm that this LED is ON all the time	<input type="checkbox"/> PASS

Date: _____	Stacker
	Serial #: _____

#3	Self Testing LED Checkout This test section applies to ALL LCS Systems		<input checked="" type="checkbox"/> APPLIES
	3.A	<u>Deck Down Enable Button:</u>	
	3.A.1	Hold deck down enable button and power on the machine. Press LCS Reset button for 5 seconds to force new self-test. Self-test DECK DOWN ENABLED LED should stay OFF. When you release the button, the LED should turn ON.	<input type="checkbox"/> PASS
	3.B	<u>Operator Position Sensor:</u>	
	3.B.1	Block the operator position sensor located at the bottom of the boom. Press LCS Reset button for 5 seconds to force new self-test. Self-test OPERATOR POSITION SENSOR LED should be OFF. When you clear the sensor, the LED should turn ON.	<input type="checkbox"/> PASS
	3.C	<u>Light Guard:</u>	
	3.C.1	Block the Light Guard Top Beam only (see Status LED's). Press LCS Reset button for 5 seconds to force new self-test. Self-test LIGHT GUARD LED should be OFF. Clear the obstruction of the Light Guard Top Beam. Self-test LIGHT GUARD LED should be ON. <i>NOTE: If LCS-MANUAL (no Light Guard), confirm that this LED is ON all the time.</i>	<input type="checkbox"/> PASS
	3.C.2	Block the Light Guard Bottom Beam only (see Status LED's). Press LCS Reset button for 5 seconds to force new self-test. Self-test LIGHT GUARD LED should be OFF. Clear the obstruction of the Light Guard Bottom Beam. Self-test LIGHT GUARD LED should be ON. <i>NOTE: If LCS-MANUAL (no Light Guard), confirm that this LED is ON all the time.</i>	<input type="checkbox"/> PASS
	3.D	<u>Boom Position Sensor:</u>	
	3.D.1	Move boom to Boom-In-Position location (see Status LED) Press LCS Reset button for 5 seconds to force new self-test. Self-test BOOM POSITION SENSOR LED should be OFF.	<input type="checkbox"/> PASS
	3.D.2	Move boom away from Boom-In-Position location and then back to Boom-In-Position location (see Status LED) Self-test BOOM POSITION SENSOR LED should be ON.	<input type="checkbox"/> PASS
	3.E	<u>LCS Safety Valves:</u>	
	3.E.1	Fully close the needle valve on both LCS Safety Valves. Press LCS Reset button for 5 seconds to force new self-test. Self-test LCS Safety Valves LED should be OFF.	<input type="checkbox"/> PASS
	3.E.2	Jog the stacker deck to the full up position using the JOG UP button. <u>Without</u> pressing Deck Down Enable, hold the JOG DOWN button attempting to jog down the stacker. The deck should not lower. Confirm that the LED stays OFF and then after 10 seconds, the LED should turn ON.	<input type="checkbox"/> PASS
	3.E.3	Apply LOTO to the system, close operator side LCS Valve. Open the needle valve on the drive side LCS Safety Valve 5 turns. Turn on MAIN power to stacker and START the stacker. Attempt to pass the LCS Safety Valve test as described above. Confirm that the drive side sags down off the limit switch and the test does not pass.	<input type="checkbox"/> PASS
	3.E.4	Apply LOTO to the system, close drive side LCS Valve. Open the needle valve on the operator side LCS Safety Valve 5 turns. Turn on MAIN power to stacker and START the stacker. Attempt to pass the LCS Safety Valve test as described above. Confirm that the drive side sags down off the limit switch and the test does not pass.	<input type="checkbox"/> PASS

Date: _____	Stacker
	Serial #: _____

#4	Manual Function Tests This test section applies to ALL LCS Systems		<input checked="" type="checkbox"/> APPLIES
		For this section of testing, block the Light Guard Perimeter (if it exists) Power up stacker and complete all Self-Tests Move the boom to Boom-In-Position location. Stand in front of boom so Operator-In-Position is active.	
	4.A.1	<u>Deck Down Enable & Deck Jogging – Manual</u> The No-Blue-No-You light should be ON Move boom to BOOM IN POSITION location (STATUS LED ON) Press the Deck Down Enable button. The No-Blue-No-You light should turn OFF and the LCS Danger Light should turn ON.	<input type="checkbox"/> PASS
	4.A.2	Release the Deck Down Enable button, the No-Blue-No-You light should turn ON and the LCS Danger Light should turn OFF.	<input type="checkbox"/> PASS
	4.A.3	<u>Without</u> pressing the Deck Down Enabled button, try jogging the stacker deck down. Confirm that the deck does NOT move.	<input type="checkbox"/> PASS
	4.A.4	<u>While</u> pressing the Deck Down Enabled button, try jogging the stacker deck down. Confirm that the deck does move.	<input type="checkbox"/> PASS
	4.B.1	<u>Boom In Position</u> The No-Blue-No-You light should be ON Stand in front of boom so Operator-In-Position is active. Move boom out of BOOM IN POSITION location (STATUS LED OFF) Press the Deck Down Enable button. The No-Blue-No-You light should stay ON.	<input type="checkbox"/> PASS
	4.B.2	<u>Operator In Position</u> The No-Blue-No-You light should be ON Move the boom to Boom-In-Position location. Make sure the Operator In Position Sensor is not blocked (stand away from front of boom - STATUS LED OFF). Press the Deck Down Enable button, the No-Blue-No-You light should stay ON.	<input type="checkbox"/> PASS

Stacker
Date: _____ Serial #: _____

		<u>Deck Down Enable & Accumulator – Manual</u> This section applies only to RDC & Press Stackers with Sheet Accumulators	<input type="checkbox"/> APPLIES
		For this testing section, block the Light Guard Perimeter (if it exists) Power up stacker and complete all Self-Tests Move the boom to Boom-In-Position location. Stand in front of boom so Operator-In-Position is active.	
	4.C.1	<u>Without</u> pressing the Deck Down Enabled button, try jogging the accumulator OUT (EXTEND). Confirm that the accumulator does NOT move.	<input type="checkbox"/> PASS
	4.C.2	<u>While</u> pressing the Deck Down Enabled button, try jogging the accumulator OUT (EXTEND). Confirm that the accumulator does move.	<input type="checkbox"/> PASS
	4.C.3	<u>Without</u> pressing the Deck Down Enabled button, try jogging the accumulator IN (RETRACT). Confirm that the accumulator does NOT move.	<input type="checkbox"/> PASS
	4.C.4	<u>While</u> pressing the Deck Down Enabled button, try jogging the accumulator IN (RETRACT). Confirm that the accumulator does move.	<input type="checkbox"/> PASS
		<u>Rack Accumulator Bleed Off Valve</u> This only applies to machines with Air Powered Rack Style Accumulators	<input type="checkbox"/> APPLIES
	4.D.1	Extend the Rack Accumulator, push and pull on accumulator to confirm that there is no air pressure on cylinder shortly after motion is completed.	<input type="checkbox"/> PASS
#5		<u>Cycle Functional Testing – RDC (accumulator)</u> This section applies only to RDC & Press Stackers with Sheet Accumulators	<input type="checkbox"/> APPLIES
	5.A	<u>Manual Discharge Load Change Cycle - Normal</u> Run the machine in manual mode (non-Auto) and confirm the following during the Load Change Cycle:	
	5.A.1	Hold the Deck Down Enable button when Accumulator tries to extend automatically. Confirm that the accumulator does extend properly.	<input type="checkbox"/> PASS
	5.A.2	Press the Auto Down button while holding in Deck Down Enable button. Confirm that the deck automatically moves the full distance to where the bottom limit is set	<input type="checkbox"/> PASS
	5.A.3	While holding Deck Down Enable button, once the deck gets to the bottom position, confirm that the accumulator retracts automatically.	<input type="checkbox"/> PASS
	5.B	<u>Manual Discharge Load Change Cycle – Safety Check</u> Still running the machine in manual mode (non-Auto) and confirm the following:	
	5.B.1	Press the Auto Down button while holding Deck Down Enable button. Confirm that the deck does begin to descend.	<input type="checkbox"/> PASS
	5.B.2	Press the Auto Down button while holding in Deck Down Enable button. Release the Deck Down Enable button about halfway down. Confirm that the deck stops quickly after the Deck Down Enable button is released.	<input type="checkbox"/> PASS

Stacker
Date: _____ Serial #: _____

#6	Auto-Halt Functional Testing: This section applies only to RDC & Press Stackers with Accumulators Optional – Depending on Existing Control System		<input type="checkbox"/> APPLIES
6.A	While stacker is running an order, make sure LCS is in No-Blue-No-You state (Hydraulic Lock) Set the Feed Interrupt Timer to a minimum of 2 seconds to be able to see the load change gap. Do NOT press the Deck Down Enable button during the Load Change cycle		
6.A.1	Confirm that BEEPER goes on shortly after the last sheet for the stack is fed at pre-feeder	<input type="checkbox"/> PASS	
6.A.2	Confirm that Feed Interrupt is automatically generated.	<input type="checkbox"/> PASS	
6.A.3	Confirm that the deck belts stop before the last sheet enters the hopper.	<input type="checkbox"/> PASS	
6.A.4	Confirm that a message is being flashed at the message light	<input type="checkbox"/> PASS	
6.A.5	Press and hold the Deck Down Enable button. Confirm that the belts automatically start back up	<input type="checkbox"/> PASS	
6.A.6	Confirm that the Feed Interrupt is automatically released, sheets begin feeding and the Load Change Cycle completes.	<input type="checkbox"/> PASS	

Date: _____	Stacker
	Serial #: _____

#7	Light Guard Checkout: This section applies only to LCS-Light Guard Systems. Start Stacker and make sure all self-tests are completed.		<input type="checkbox"/> APPLIES
7.A.1	<u>Light Guard Perimeter – Light Beams</u> Clear all obstructions from the Light Guard Perimeter. Confirm photo eye signal strength/alignment using recommended alignment procedure (Refer to Doc_000448, Installation Guide – Light Guard Beam Adjustment)	<input type="checkbox"/> PASS	
7.A.2	Confirm that the STATUS LED for LIGHT GUARD: TOP BEAM is ON Confirm that the STATUS LED for LIGHT GUARD: BOTTOM BEAM is ON	<input type="checkbox"/> PASS	
7.A.3	Press and release the Deck Down Enable button. Confirm that the LCS Danger light turns ON Confirm that the LCS No-Blue-No-You light turns OFF	<input type="checkbox"/> PASS	
7.A.4	Break the TOP BEAM only Confirm that the LCS No-Blue-No-You light turns ON	<input type="checkbox"/> PASS	
7.A.5	Press and release the Deck Down Enable button. Confirm that the LCS Danger light turns ON Confirm that the LCS No-Blue-No-You light turns OFF	<input type="checkbox"/> PASS	
7.A.6	Break the BOTTOM BEAM only Confirm that the LCS No-Blue-No-You light turns ON	<input type="checkbox"/> PASS	
7.A.7	Press and release the Deck Down Enable button. Start jogging the stacker down While jogging, break either beam Confirm that the deck stopped moving down	<input type="checkbox"/> PASS	
7.A.8	Press and release the Deck Down Enable button. Confirm that the LCS No-Blue-No-You light goes OFF Shake the boom to simulate normal machine vibration. Confirm that the LCS No-Blue-No-You stays OFF	<input type="checkbox"/> PASS	
7.B	<u>Back Stop Travel Limits</u> Confirm that the Back Stop Travel Limits are installed, to make sure the backstop is unable to extend beyond the required dimension in the layout drawing.	<input type="checkbox"/> PASS	
7.C	<u>Light Guard Perimeter - Layout</u> Confirm that the Light Guard Perimeter is installed per specification on Geo. M. Martin drawing B-9000xx-xx, where xx-xx is the serial number of the Stacker. Every dimension does not have to be exactly correct (10% inaccuracy is OK) but the general configuration should be correct.	<input type="checkbox"/> PASS	
7.D.1	Move the Back Stop to its full out position. Measure the distance and note the shortest distance from a pinch point between the deck manifold and the Light Guard Perimeter.	Distance <hr/> <input type="checkbox"/> PASS	
7.D.2	Move the Back Stop to its full out position. Measure the distance and note the shortest distance from a pinch point between the Back Stop and the Light Guard Perimeter.	Distance <hr/> <input type="checkbox"/> PASS	

Stacker
Date: _____ Serial #: _____

#8		Deck Lock Out Test: This section applies only to machines equipped with the Deck-Lock-Out-Device Start Stacker and make sure all self-tests are completed.	<input type="checkbox"/> APPLIES
	8.A	Confirm that the Deck-Lock-Out Device works properly	<input type="checkbox"/> PASS
	8.B	Confirm that the new Deck-Lock-Out Device instructions are posted	<input type="checkbox"/> PASS
#9		LCS PCB Fuse Connector This section applies only to machines with a retrofitted BOOM	<input type="checkbox"/> APPLIES
	9.A	Confirm that the LCS PCB Fuse Connector has been installed properly base on Doc_000792 information	<input type="checkbox"/> PASS
#10		Labeling: This section of test applies to ALL LCS Systems	<input checked="" type="checkbox"/> APPLIES
	10.A	Refer to Doc_000410, LCS Labeling Confirm that the labels appropriate for the stacker configuration are installed properly	<input type="checkbox"/> PASS
#11		Pictures: This section of test applies to ALL LCS Systems	<input checked="" type="checkbox"/> APPLIES
		A full set of digital pictures needs to be taken and supplied to the factory. The minimum requirements are identified below (more is better):	
	11.A.1	Far Back View shot, looking back at stacker from Operator Side	<input type="checkbox"/> PASS
	11.A.2	Far Back View shot, looking back at stacker from Drive Side	<input type="checkbox"/> PASS
	11.A.3	View of LCS Operator Interface (either Boom Buddy or Retrofit Boom)	<input type="checkbox"/> PASS
	11.A.4	View of inside of LCS Control Panel	<input type="checkbox"/> PASS
	11.A.5	View of inside of Existing Control Panel	<input type="checkbox"/> PASS
	11.A.6	View of installed LCS Valve on Stacker Cylinder, Operator Side	<input type="checkbox"/> PASS
	11.A.7	View of installed LCS Valve on Stacker Cylinder, Drive Side	<input type="checkbox"/> PASS
	11.A.8	View of installed LCS Valves for Scissor Lift (typically mounted on the stacker base)	<input type="checkbox"/> PASS <input type="checkbox"/> N/A
	11.A.9	View of installed Boom In Position Switch	<input type="checkbox"/> PASS
	11.A.10	View of ZFI Drive Side Guarding	<input type="checkbox"/> PASS <input type="checkbox"/> N/A
	11.A.11	View of ZFI Operator Side Guarding	<input type="checkbox"/> PASS <input type="checkbox"/> N/A
	11.A.12	Air powered sheet accumulator bleed of valve	<input type="checkbox"/> PASS <input type="checkbox"/> N/A
	11.A.13	Far Back & Close Up shots showing all of the Light Guard Perimeter	<input type="checkbox"/> PASS <input type="checkbox"/> N/A

Date: _____	Stacker
	Serial #: _____

#11	Final Checks: This test section applies to ALL LCS Systems		<input checked="" type="checkbox"/> APPLIES
	11.A	Make sure work area is clean	<input type="checkbox"/> PASS
	11.B	Make sure panels are clean and wire way covers installed	<input type="checkbox"/> PASS
	11.C	Place LCS prints in LCS panel	<input type="checkbox"/> PASS
	11.D	Replace any guards removed	<input type="checkbox"/> PASS
	11.E	Identify and report to plant any missing guards that should be ordered	<input type="checkbox"/> PASS
	11.F.1	Advise supervisor on duty of the status of LCS installation, and names of operator and maintenance personnel trained. Name of Supervisor: _____	<input type="checkbox"/> PASS
	11.F.2	Operator on duty at time of completion trained in LCS use Name of Operator: _____	<input type="checkbox"/> PASS
	11.F.3	Maintenance personnel on duty at time of completion trained Name of Maintenance Person: _____	<input type="checkbox"/> PASS
	11.F.4	Provide proper plant personnel with new Stacker Manual Name of Employee: _____	<input type="checkbox"/> PASS
	11.G	Confirm Zero Energy State label displayed. (See Doc_000440, Appendix – Stacker Zero Energy State Labeling)	<input type="checkbox"/> PASS
	11.H.1	Confirm Lockable main electrical disconnect available for plant to implement LOTO	<input type="checkbox"/> YES <input type="checkbox"/> NO
	11.H.2	If Lockable main electrical disconnect does NOT exist, confirm that written instructions to correct this problem were given to the proper plant personnel. Name of Employee: _____	<input type="checkbox"/> PASS
	11.I.1	Confirm Lockable main air disconnect available for plant to implement LOTO	<input type="checkbox"/> YES <input type="checkbox"/> NO
	11.I.2	If Lockable main air disconnect does NOT exist, confirm that written instructions to correct this problem were given to the proper plant personnel Name of Employee: _____	<input type="checkbox"/> PASS

Once all tests have been successfully completed. Sign the Martin Certification form located on Page 1.

Date: _____	Stacker
	Serial #: _____

Geo. Martin Certification Report

1. Date/Time technician requested to be on site

Date: _____ Time: _____

2. Full Set of Electrical Drawings provided No _____ Yes _____

3. LCS Certification Package provided and intact No _____ Yes _____

Certification Items Missing: _____

4. Date/Time machine taken off line for certification

5. All Pre-Installation and Rough-in Installation check lists complete.
No _____ Yes _____

Items Missing/Needing Correction:

_____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____

6. All Safe Distance dimensions correct per LCS Layout Drawing
No _____ Yes _____

Layout Correction Items:

_____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____
 _____ S.T. _____ O.T. _____

Note: No Additional training beyond the 4-hour certification window is included in the LCS system. Additional LCS training is charged at standard service rates.

Certification Time: S.T. _____ O.T. _____ H.T. _____

Additional Training: S.T. _____ O.T. _____ H.T. _____

Additional Training authorized by:

Name: _____ Title: _____

Date: _____	Stacker
	Serial #: _____