

Stanley Access Technologies
Quick-Reference Guide



Cart Door System
Installation Instructions
Quick-Reference Guide
204020
Rev. B, 6/13/06

Prohibition on Copying

Any unauthorized reproduction, disclosure or distribution of copies by any person of any portion of this work may be a violation of copyright law of the United States of America and other countries, could result in the awarding of statutory damages of up to \$250,000 (17 USC 504) for infringement, and may result in further civil and criminal penalties. All rights reserved.

Quick-Reference Guide

TABLE OF CONTENTS

1. PURPOSE.....	2
1.1 Discussion.....	2
1.2 Applicability	2
1.3 Features and Functions	2
2. PREREQUISITES	3
2.1 The following reference documents have been obtained:	3
3. INSTALLATION INSTRUCTIONS	4
3.1 Checking the Rough Opening.....	4
3.2 Installing the DH97 Presence Sensors on the Header Covers	4
3.3 Attaching the Jambs to the Header	5
3.4 Installing the Exterior Header and Jamb Assembly	6
3.5 Installing the Exterior Threshold.....	6
3.6 Installing the Interior Header and Jamb Assembly.....	7
3.7 Installing the Interior Threshold	7
3.8 Installing the Bottom Guides	8
3.9 Installing the Sliding Panels	9
3.10 Adjusting the Sliding Panel	11
3.11 Installing Belt Cams	11
3.12 Installing the Weatherstripping.....	12
3.13 Installing the Rotary Switches	12
3.14 Installing the Push Plates	13
3.15 Wiring the Door Assembly	13
4. TUNE-IN INSTRUCTIONS	13
4.1 Tuning In the MC521 Controller Using the Palm Pilot.....	14
4.2 Tuning In the MC521 Controller Using the Controller Pushbuttons.....	17
4.3 Final Tune-In Adjustments	19
4.4 Spare Parts List.....	20
4.5 Installing Safety Decals	20
<u>Attachments</u>	
Attachment 1, Cart Door--General Arrangement	21
Attachment 2, Cart Door Interior Header.....	23
Attachment 3, Cart Door Exterior Header	26
Attachment 4, System Wiring Diagram.....	28

1. PURPOSE

1.1 **Discussion**

This manual provides installation and operating instructions for the Stanley Cart Door system. The Cart Door system provides two single-sliding doors that open and close to facilitate the passage of carts and store carriages.

The Cart Door System uses two single-slide door packages installed back to back. Attachment 1 illustrates the general arrangement of the Cart Door System. Attachments 2 and 3 illustrate the interior and exterior headers. Attachment 4 illustrates system wiring.

The doors operate independently by push plate. With the door function switch set to Automatic, only the push plate can open the closed door. When the door is opened by the push plate, the door stays open for 25 seconds—unless the inside sensor detects the presence of a person or object. When the inside sensor detects a person or object, the 25-second delay is canceled. Both doors cannot open at the same time--when one door is open, the other door is disabled.

1.2 **Applicability**

This manual is applicable to the Stanley Cart Door System.

Instructions for installing optional accessories such as access control locks, access control consoles, key switches, door alarm contacts, and door position switches are provided in separate installation manuals.

This manual does not cover components installed/manufactured by other companies.

1.3 **Features and Functions**

1.3.1 The Cart Door System include the following features and functions:

- Separated entrance and exit paths
- Four push plates—one at each jamb on the interior, one at each jamb on the exterior
- Four MS Sedco DH97 presence sensors--two interior, two exterior
- One 2-position rotary switches (Automatic and Closed)--on the interior right
- Two sets of doorway holding beams--one set for each door
- One logic controller (for doorway holding beams)
- Two motor gearboxes (one on the interior header, one on the exterior header)
- One-point segment lock
- Weatherstrip brush kit
- Two 6" square bevel thresholds (exterior and interior)
- Two door-position switches

2. PREREQUISITES

2.1 The following reference documents have been obtained:

- Stanley Access Technologies document No. 203743, "Stanley Automatic Sliding Door Safety Decal Installation Guide" or equivalent.
- Stanley Access Technologies Manual No. 204003, "MC521 Controller Installation and Operation Manual"
- Doorway holding beam manufacturer's installation instructions

3. INSTALLATION INSTRUCTIONS

3.1 **Checking the Rough Opening**

- 3.1.1 CHECK the floor across the entire opening.
- 3.1.2 IF applicable, CHECK threshold recesses.

NOTE

Opening width should be package width plus ½ inch (¼ inch each side for shim and caulk clearance). This clearance can be as small as ⅛ inch for a tight appearance with the aluminum storefront construction.

- 3.1.3 CHECK opening width.
- 3.1.4 SWEEP floor.

3.2 **Installing the DH97 Presence Sensors on the Header Covers**

NOTE

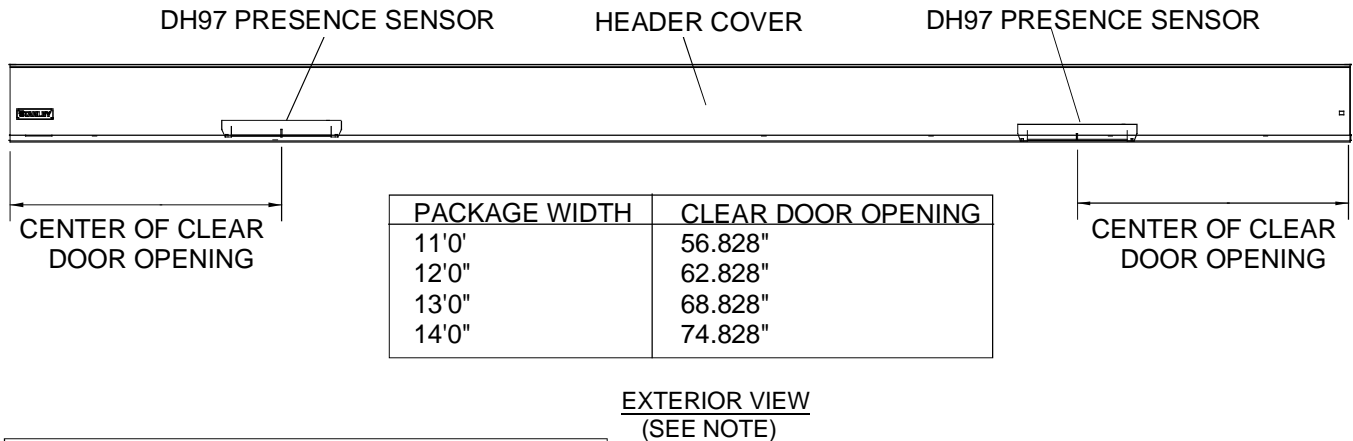
For ease of installation, the DH97 presence sensors should be installed onto the header covers *before* installing the header and jamb assemblies in the opening.

Two sensors must be installed on each header cover. No sensors mount to the back of the header since the two headers in this installation are installed back-to-back.

Each sensor comes with a mounting template.

- 3.2.1 Refer to Figure 1, and PLACE headers on a flat surface.
- 3.2.2 Using the mounting templates, INSTALL DH97 presence sensors on header covers, and ENSURE the following:
 - Each sensor is mounted in the center of its respective clear door opening. (Table 1 provides the clear door opening widths for the various door packages.)
 - Each sensor is mounted flush with the bottom of the header cover.
- 3.2.3 ROUTE sensor cables toward end cap, and ENSURE that cables do not cross the belt path.

Figure 1. Locating the DH97 Presence Sensors on the Header Covers



NOTE

TWO DH97 PRESENCE SENSORS REQUIRED ON INTERIOR AND EXTERIOR HEADER.

CD015A

NOTE

Sensor wire routing cannot be completed at this time. Since wires must be passed from the exterior header to the interior header, the headers must first be mounted in the building opening. After header installation, the exterior sensor wires can be routed through wire access holes to the interior header.

3.2.4 Refer to Section 3.3, and ATTACH jambs to the header.

3.3 Attaching the Jambs to the Header

NOTE

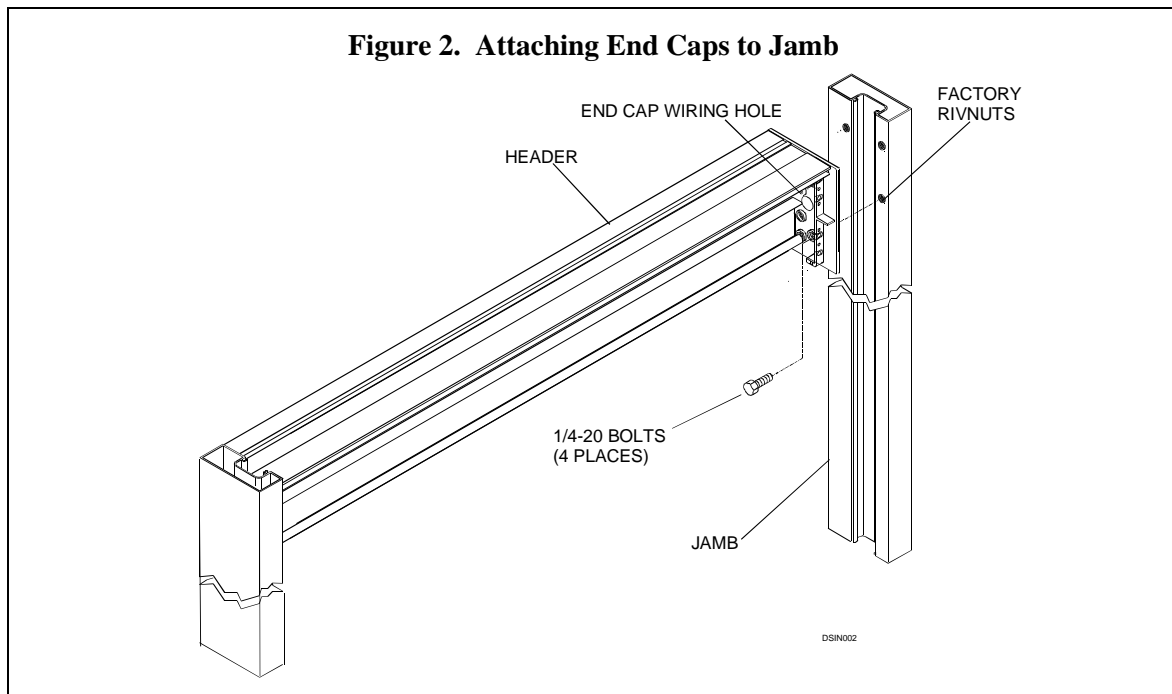
The exterior header and jamb assembly should be installed into the door opening first followed by the interior header and jamb assembly.

3.3.1 REMOVE end caps from header.

3.3.2 ROUTE the doorway holding beam/breakout beam wires through the endcap hole.

3.3.3 POSITION each end cap on its corresponding jamb.

- 3.3.4 Refer To Figure 2, and, using four ¼ -20 bolts and lockwashers, ATTACH end cap to factory-mounted rivnuts in jamb.
- 3.3.5 ATTACH jamb/end cap assemblies to header.



3.4 Installing the Exterior Header and Jamb Assembly

- 3.4.1 With the header cover facing the *exterior*, LIFT header and jamb assembly and POSITION assembly as follows:
- 3.4.2 Temporarily SECURE assembly in place as necessary to prevent header and jamb assembly from falling.
- 3.4.3 SHIM beneath jamb(s) as necessary to level header and maintain required height from highest point of finished floor.
- 3.4.4 INSPECT one jamb for plumb in vertical and horizontal planes. IF required, SHIM back of jamb.

3.5 Installing the Exterior Threshold

- 3.5.1 POSITION the threshold on the floor.
- 3.5.2 ALIGN the inside edge of the threshold with the inside edge of the jambs. MODIFY installation to ensure proper fit of the threshold.
- 3.5.3 Using the predrilled holes in threshold as a guide, DRILL holes in floor for the following fasteners as required:
- IF rough opening is concrete, DRILL a ¼" dia. hole for concrete screw, and ENSURE screw will be embedded 1½" minimum.

- IF rough opening is steel, DRILL for a #14 sheet metal screw (Note 18 GA steel minimum).
- IF rough opening is wood, DRILL for a #14 sheet metal screw, and ENSURE screw will be embedded 1½" minimum after shimming.

3.5.4 Using fasteners 5" from each end and every 18", FASTEN threshold to floor. Using shims, ENSURE the following:

- Threshold remains level.
- The bottom of the threshold is even with the bottom of the jamb.

3.6 **Installing the Interior Header and Jamb Assembly**

- 3.6.1 With the header cover facing *interior*, LIFT header and jamb assembly and POSITION tightly against the exterior header and jamb assembly.
- 3.6.2 Temporarily SECURE in place as necessary to prevent header and jamb assembly from falling.
- 3.6.3 SHIM beneath jamb(s) as necessary to level the header, maintain the required height from highest point of finished floor, and match the exterior header.
- 3.6.4 INSPECT one jamb for plumb in vertical and horizontal planes. IF required, SHIM back of jamb.
- 3.6.5 INSTALL, but do *not* tighten, fasteners securing one jamb to opening, and ENSURE jamb remains plumb.
- 3.6.6 INSPECT opposite jamb for plumb in vertical and horizontal planes. IF required, SHIM back of jamb.
- 3.6.7 Using the pre-drilled jamb holes as a guide, DRILL holes in rough opening.
- 3.6.8 INSTALL, but do *not* tighten, fasteners securing jamb to opening, and ENSURE jamb remains plumb.
- 3.6.9 Starting at the top of jamb and moving downward, SHIM jambs as necessary to ensure jambs remain level and plumb, and TIGHTEN fasteners securing jambs to opening.
- 3.6.10 As applicable, INSTALL and TIGHTEN fasteners securing header to opening, and ENSURE header remains level.
- 3.6.11 INSTALL jamb inserts.
- 3.6.12 Using three ¾" X 1½" bolts with washers on both sides, FASTEN the interior and exterior headers together. Evenly space the bolts with one in the center of the header.
- 3.6.13 DRILL ¾" wire routing holes through both headers at convenient locations such that the wire run will be efficient and short.

3.7 **Installing the Interior Threshold**

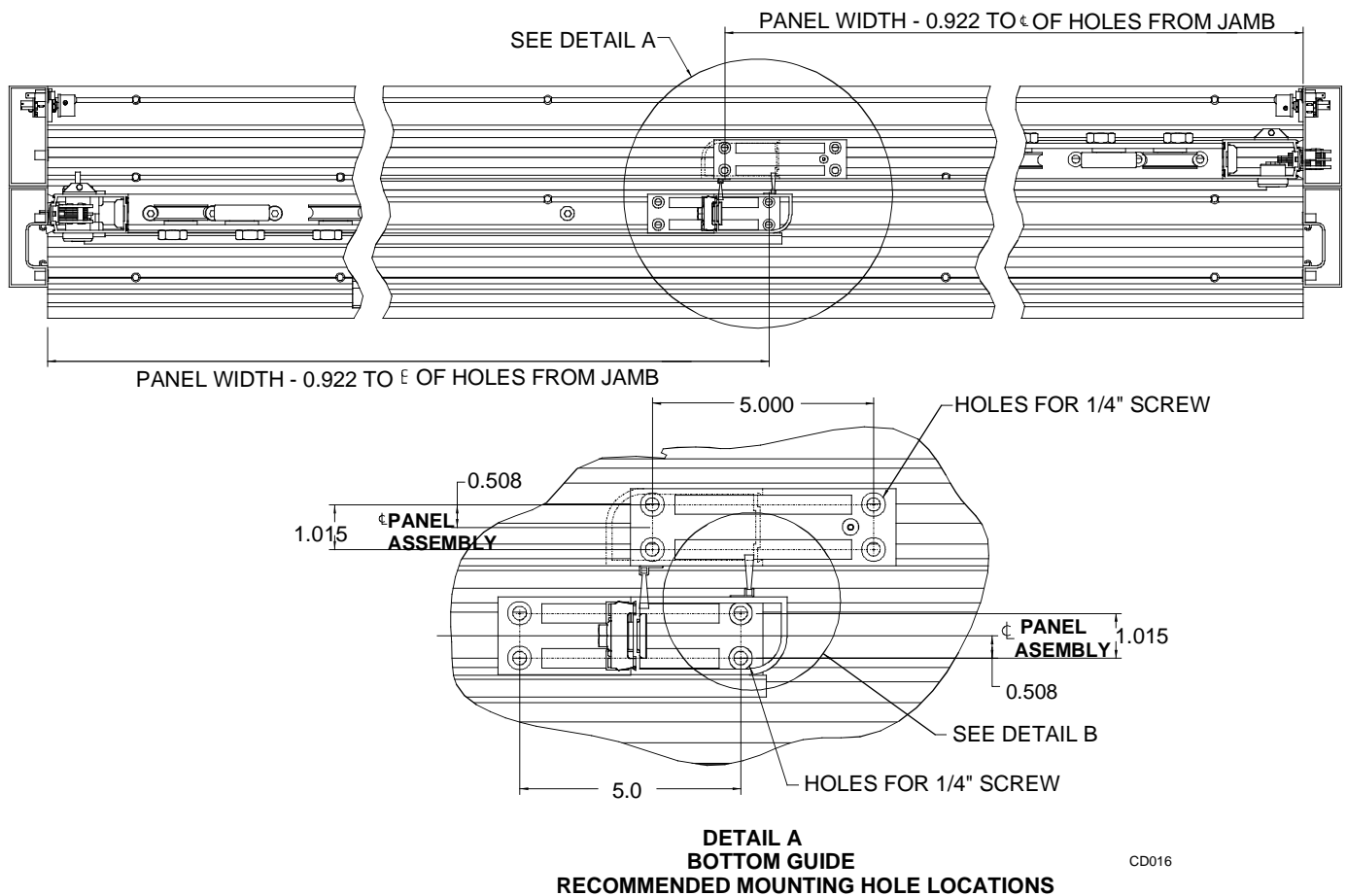
- 3.7.1 POSITION the threshold on the floor.
- 3.7.2 BUTT the threshold against the exterior threshold and ALIGN the outside edges of the two thresholds.
- 3.7.3 ENSURE that the outside edge of the threshold aligns with the outside edge of the exterior jamb. MODIFY installation to ensure proper fit of the threshold.

- 3.7.4 Using the predrilled holes in threshold as a guide, DRILL holes in floor for the following fasteners as required:
- IF rough opening is concrete, DRILL a ¼" dia. hole for concrete screw, and ENSURE screw will be embedded 1½" minimum.
 - IF rough opening is steel, DRILL for a #14 SMS (Note 18 GA steel minimum).
 - IF rough opening is wood, DRILL for a #14 sheet metal screw, and ENSURE screw will be embedded 1½" minimum.
- 3.7.5 FASTEN threshold to floor, and, using shims, ENSURE the following:
- Threshold remains level.
 - The bottom of the threshold is even with the bottom of the jamb.

3.8 Installing the Bottom Guides

- 3.8.1 Refer to Figure 3, and DETERMINE the location of the bottom guide as follows:

Figure 3. Installing the Bottom Guides



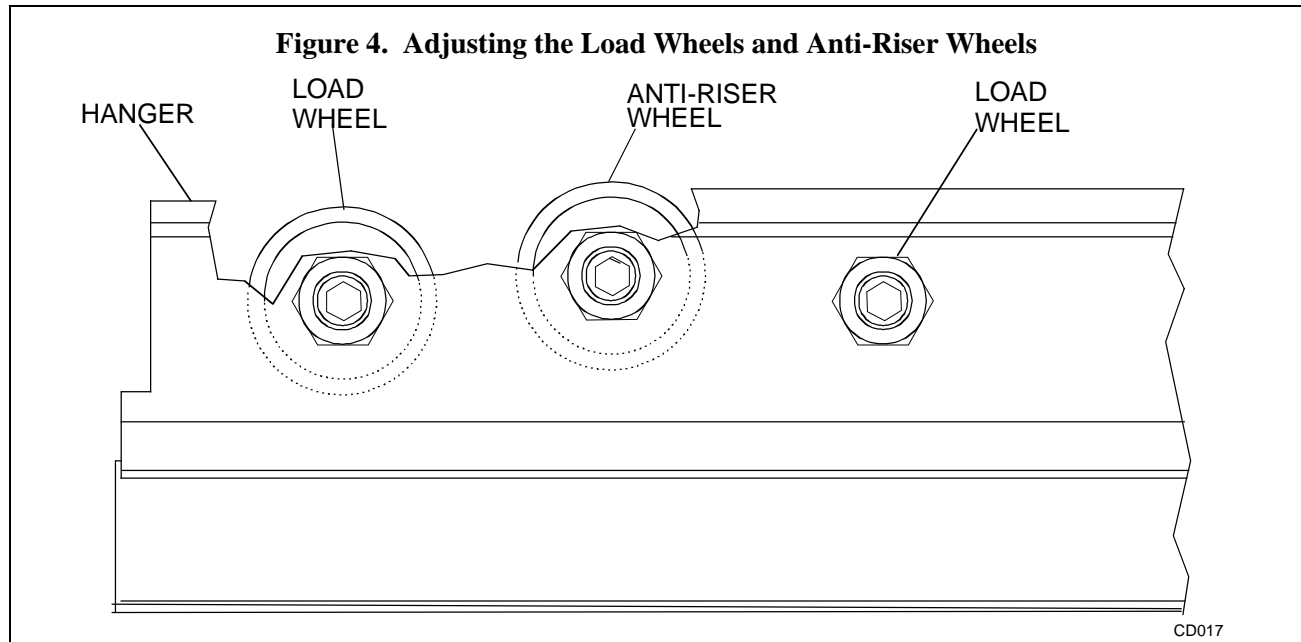
- Using a plumb bob from the header, DETERMINE the position of the sliding panel along the threshold, and MARK this location.
- MEASURE panel width and RECORD this measurement as Dimension A

204020
Rev. B, 6/13/06
8 of 28

- c. SUBTRACT 0.922" from Dimension A, and RECORD this measurement as Dimension B.
- d. From jamb, MEASURE Dimension B and MARK this location on threshold.
- 3.8.2 POSITION centerline of bottom guide mounting holes at marked location.
- 3.8.3 Using ¼" screws, FASTEN bottom guide to threshold.
- 3.8.4 REPEAT steps 3.8.1 through 3.8.3 for opposite panel.

3.9 Installing the Sliding Panels

- 3.9.1 Refer To Figure 4, and LOOSEN nuts securing four load wheels and two anti-riser wheels to hanger



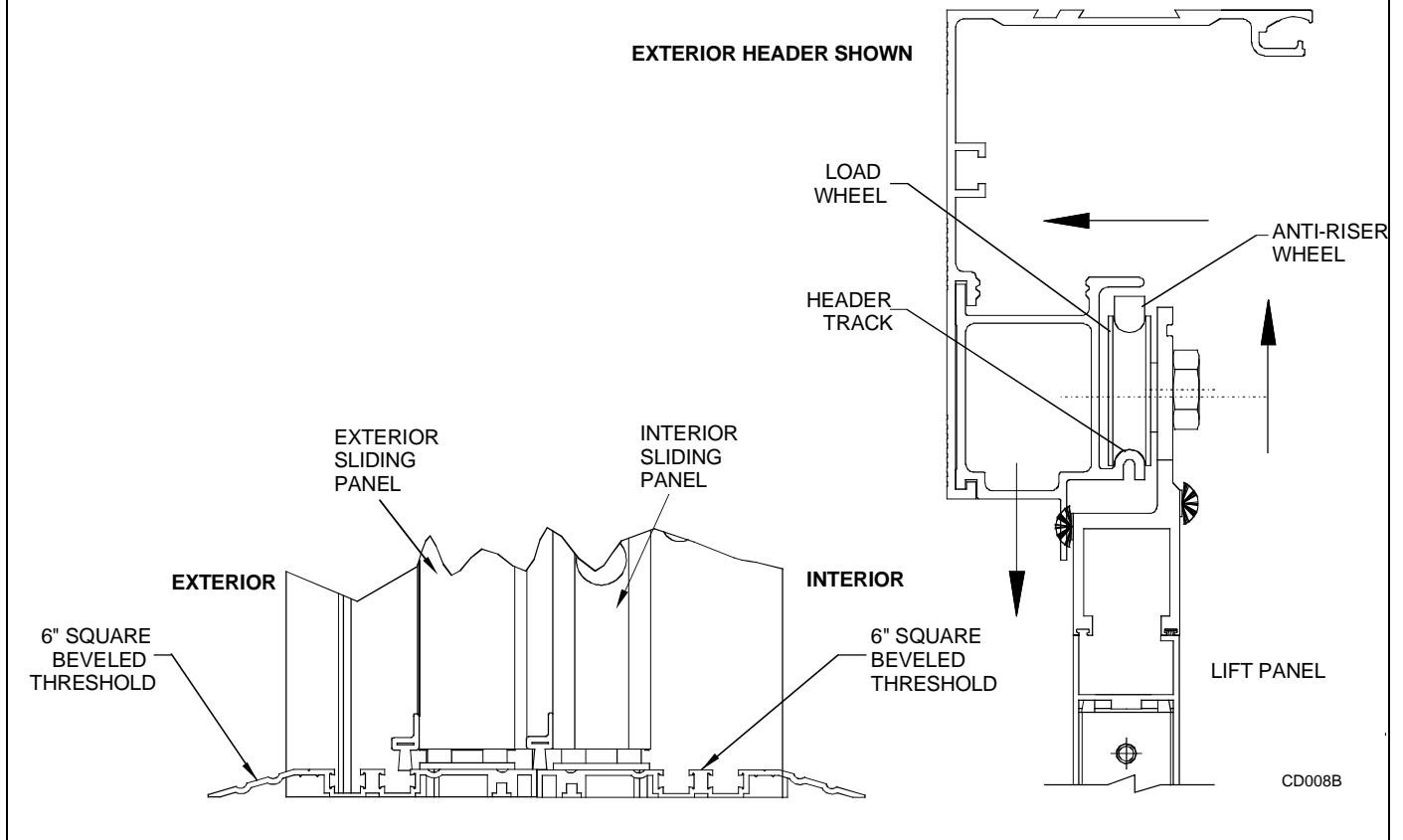
- 3.9.2 MOVE anti-riser wheels to lowest position in hanger.
- 3.9.3 Using an Allen wrench, SET load wheels to lowest position in hanger.
- 3.9.4 TIGHTEN nuts securing load wheels and anti-riser wheels to hanger.

WARNING

Whenever the door anti-riser wheels are not set, the sliding panel *could* fall off the hanger track. Use extreme caution when handling the sliding panels.

- 3.9.5 Refer to Figure 5, and HANG the sliding panel on the header track as follows:

Figure 5. Hanging the Sliding Panel on the Header Track



- a. ENSURE that the panels are oriented such that the lock cylinders are facing the exterior of the building.
 - b. POSITION the bottom rail of the sliding panel over the bottom guide.
 - c. LIFT panel up over header track, and carefully POSITION panel onto header track.
- 3.9.6 REPEAT step 3.9.5 for opposite panel.
- 3.9.7 Using two ¼" X 20 X 1" fasteners with ¼" lockwashers, FASTEN the belt brackets to the sliding panel hangers.

3.10 Adjusting the Sliding Panel

3.10.1 Refer To Figure 4, and ADJUST panel height as follows:

- a. LOOSEN nuts securing upper load wheels to hanger.

NOTE

Each load wheel is an eccentric that permits adjustment of the threshold/track-to-panel gap. The total adjustment available from the load wheels is approximately $\frac{5}{16}$ inch.

- b. Using an Allen wrench, TURN the load wheels until the following occur:
 - Threshold/track-to-panel gap is even across entire bottom of door panel.
 - The stiles of the door panels are parallel to each other and the jambs.
- c. WHEN adjustment is complete, TIGHTEN nuts securing load wheels to hanger.

NOTE

The anti-riser adjustment is performed to prevent the door panel from moving upward. The anti-riser track serves as a roller surface for the anti-riser wheels.

3.10.2 ADJUST anti-risers as follows:

- a. LOOSEN the nuts securing the anti-riser wheels to the hanger.
- b. SLIDE the anti-riser wheels upward in the hanger until there is a $\frac{1}{64}$ -to $\frac{1}{32}$ -inch gap between the top of the anti-riser wheels and the bottom of the anti-riser track.
- c. TIGHTEN the nuts securing the anti-riser wheels to the hanger.

3.11 Installing Belt Cams

3.11.1 INSTALL four metal cams onto belt and ENSURE the following:

- The cams actuate the door-position switches on the idlers and motor gearboxes at the closed-door position.
- All belt cam switches are switching on and off.

3.12 Installing the Weatherstripping

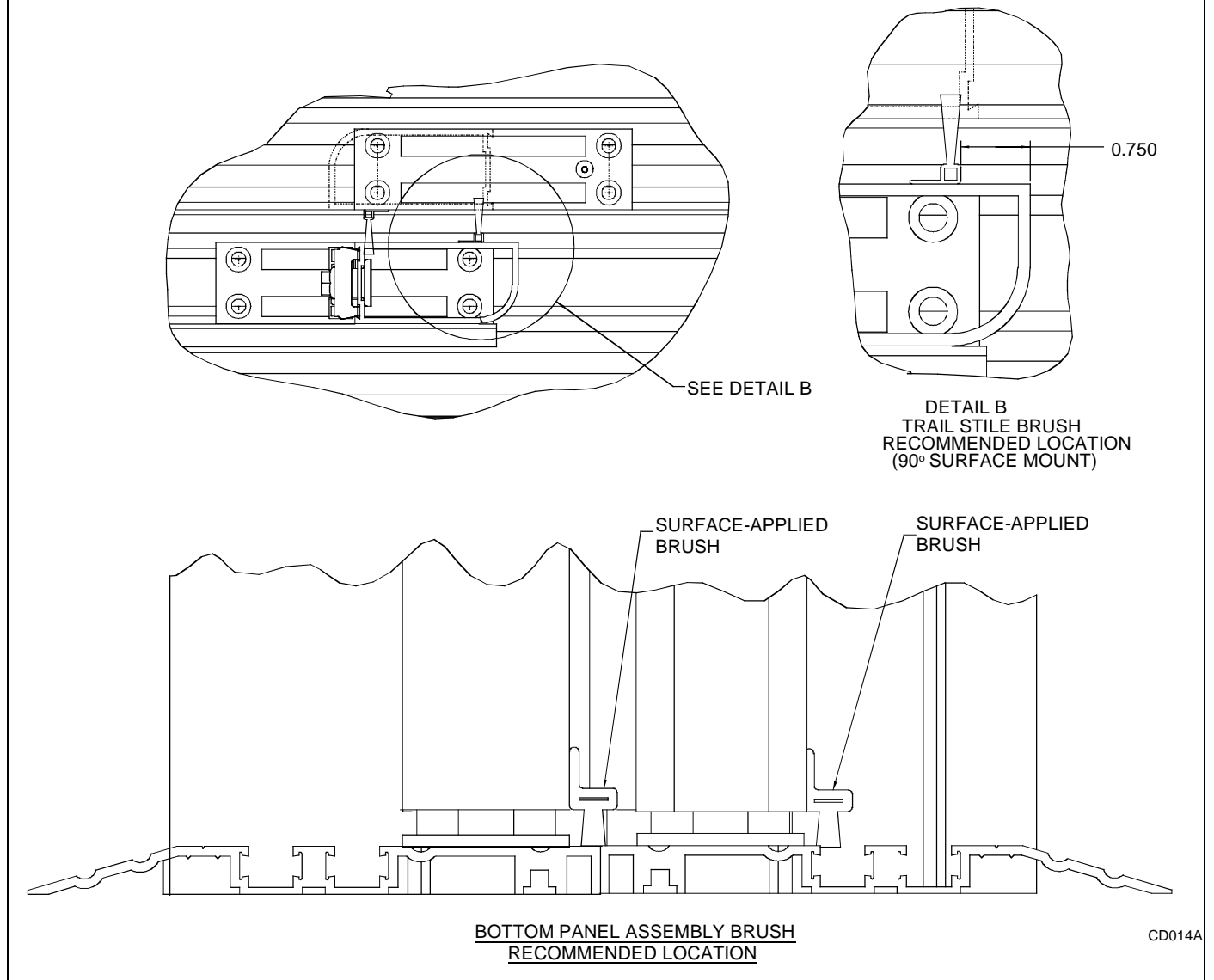
NOTE

The weatherstripping consists of two vertical brushes at the panel overlaps and two horizontal brushes at the bottom of the sliding panels.

3.12.1 Refer to Figure 6, and install two vertical brushes at the panel overlaps.

3.12.2 INSTALL two horizontal brushes at the bottom of the sliding panels.

Figure 6. Installing the Weatherstripping



3.13 Installing the Rotary Switches

3.13.1 Using supplied screws, FASTEN rotary switch onto jamb.

204020
Rev. B, 6/13/06
12 of 28

3.14 Installing the Push Plates

- 3.14.1 MEASURE 5'11" up from finished floor to centerline of push plate and MARK location.
- 3.14.2 Using supplied screws, FASTEN push plates.

3.15 Wiring the Door Assembly

NOTE

The inside safety sensor DH97 output signal is wired in series with the idler pulley door-position switch. When the door is *not* closed, the inside safety signal connects to TDM module input 1. The TDM module outputs an operate signal to TB2 – 7 and 8 and also resets the TMM 25-second delay.

- 3.15.1 Refer to Attachments 2 and 4, and CONNECT the following:

- Incoming power wiring
- Motor/gearbox wiring
- Rotary switch wiring
- Push plate wiring
- Doorway holding beam wiring
- DH97 presence sensor wiring

4. TUNE-IN INSTRUCTIONS

WARNING

The door path must be free of objects and remain clear until the First Install Sequence (FIS) is complete. During this sequence the sensors are inactive and the door has no SAFETY. To stop the door, turn power off.


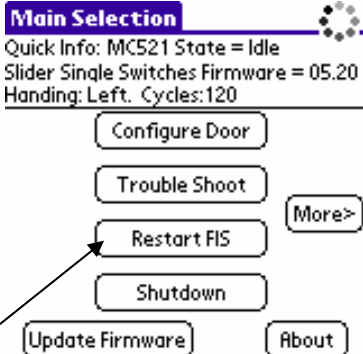
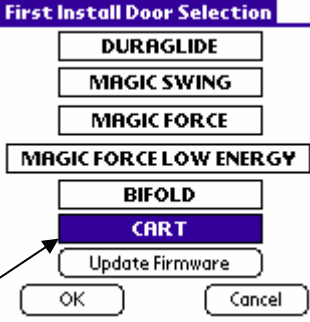
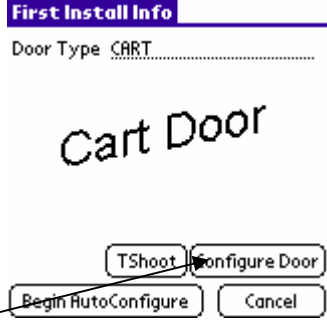
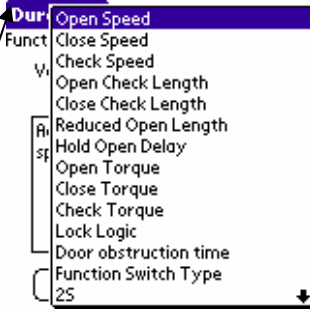

NOTE

1. The MC521 Controller can be tuned-in using a PDA or using the pushbutton switches located on the controller. Tune-in using the PDA is the preferred method.
2. During normal operation, the digital display indicates status codes. The “UP” and “DOWN” pushbutton switches can be used to enter and display data values. The user interface values are shown in Tables 2 through 4.
3. The first installation sequence (FIS) is used to perform the initial configuration. Upon completion of FIS, all setup parameters are stored in non-volatile memory. Subsequent power cycles will reload the configuration parameters that were configured during FIS.
4. Decimal points on digital display are encoder 1 signals.
5. After changing values, the values must be saved in EEPROM.

4.1 Tuning In the MC521 Controller Using the Palm Pilot

NOTE

The following steps provide instructions for tuning the MC521 controller using the Palm Pilot. MC521 application software is required. Connect Palm to MC521 controller, turn on header POWER switch, and perform the following steps.

 <p>Step 1: Select MC521 Tool Box from the list of applications.</p>	 <p>Step 2: Select Restart FIS on the Main selection menu. (FIS = First Install Sequence) Note: Firmware is the software revision. Cycles are door cycles in memory and are only accurate on revision C (5.19) and higher.</p>
 <p>Step 3: Select Cart.</p>	 <p>Step 4: If additional configuration is needed press Configure Door.</p>
 <p>Step 5: Configure additional settings and press Update after each setting has been changed. Once completed, press Cancel to go back to the Main selection menu.</p>	 <p>Step 6: Press Begin AutoConfigure</p>

Warning**!!! WARNING !!!**

The door path must be free of objects and remain free until complete.

Press OK to continue when ready.

OK

Cancel

Step 7: Press **OK**.

WARNING: During this sequence the sensors are inactive and the door has no **SAFETY**. To stop the door, turn power off.

Step 9: Door will go through a learn sequence to configure itself. The door will perform the following operations in learn mode for door 1 and repeat sequence for door 2:

- Open fully at check speed.
- Close fully at check speed.
- Open at full speed halfway and stop.
- Open fully in check speed.
- Close at close speed halfway and stop.
- Finish closing at check speed.

Turbo	TB1	TB2	TB3	TB4	TB5
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					



Cancel

Step 11: View the I/O grid to verify the sensors and inputs

Dark indicates input/output contact is closed.

Light indicates input/output contact is open.

Gray never changes.

FIS in progress

Put function switch to
AUTOMATIC
to begin auto configure
sequence.

Operate

Cancel

Step 8: Put door function switch to **Automatic** then immediately back to **Closed**.

Main Selection

Quick Info: MCS21 State = Idle
Slider Single Switches Firmware = 05.20
Handing: Left. Cycles:120

Configure Door

Trouble Shoot

Restart FIS

Shutdown

Update Firmware

About

More>

Step 10: If the door is not operating correctly select **Trouble Shoot** to enter the Trouble Shooting menu.

Main Selection

Quick Info: MCS21 State = Idle
Slider Single Switches Firmware = 05.20
Handing: Left. Cycles:120

Configure Door

Trouble Shoot

Restart FIS

Shutdown

Update Firmware

About

More>

Step 12: Press **More>** to access more functions.

More tools

Quick Info: MCS21 State = Idle
Slider Single Switches Firmware = 05.20
Handing: Left. Cycles:121

Clone Settings

Summary Listing

Cancel

Step 13: Press **Clone Settings** to pull all of the settings out of one controller and put them into another door.

Copy Door Settings

Quick Info: MCS21 State = Idle
Slider Single Switches Firmware = 05.20
Handing: Left. Cycles:122

Fetch Settings

Status: Ready to fetch settings.

Cancel

Step 14: To pull all of the settings out of one controller and put them into another door, press **Fetch Settings**.

Note: The Fetch Settings feature will only work if both doors are the same and both doors have the same software version.

Copy Door Settings

Quick Info: MCS21 State = Idle
Slider Single Switches Firmware = 05.20
Handing: Left. Cycles:122

Fetch Settings

Push Settings

Status: Ready to push settings.

Cancel

Step 15: To put the settings into another controller, plug the Palm into the other controller and press **Push Settings**.

Note: The Push Settings feature will only work if both doors are the same and both doors have the same software version.

More tools

Quick Info: MCS21 State = Idle
Slider Single Switches Firmware = 05.20
Handing: Left. Cycles:121

Clone Settings

Summary Listing

Cancel

Step 16: Press **Summary Listing** to view all current settings.

Summary

Quick Info: MCS21 State = Idle
Slider Single Switches Firmware = 05.20
Handing: Left. Cycles:122

Setting	Value
Open Speed	30
Close Speed	10
Check Speed	4
Open Check Length	11
Close Check Length	5
Reduced Open Length	50
Hold Open Delay	10
Open Torque	32

Next

Cancel

Step 17: Review the information on the summary listing.

4.2 Tuning In the MC521 Controller Using the Controller Pushbuttons

NOTE

1. To change the INDEX:
Hold ENTER switch while pressing UP or DOWN to get to desired INDEX
2. To change a VALUE:
Unlock the keypad by setting index 99 to value 01.

After the desired INDEX is selected, release ENTER and *within 2.5 seconds* press UP or DOWN to get the desired VALUE. (If the the UP or DOWN buttons are not pressed within 2.5 seconds of releasing the ENTER button, the display will change from the VALUE back to the STATUS.)
3. To display STATUS CODE:
A few seconds after the VALUE is selected, the display indicates the STATUS CODE
4. To show the INDEX and VALUE
To show the INDEX, hold ENTER. Once ENTER is released the display will show the VALUE of that INDEX.
5. Read the descriptions entirely before performing each step. Check the INDEX and VALUE after each step.
6. To store changes in permanent memory:
Cycling door open one time will store changes.
7. To lock keypad:
Lock keypad by setting index 99 to value 01 or by turning power OFF and then ON.
8. To access the door cycle counter function:
 - a. Ensure that the keypad is locked by setting index 99 to 01.
 - b. Ensure that the index is set to any index but 99.
 - c. Press the up or down key to access the door cycle counter.
 - d. The display will show “dc” followed by four pairs of digits, followed by “dc”. For example, if the door count was 12345678 cycles the door will display “dc” “12” “34” “56” “78” “dc.”

Table 1. FIS Procedure Using Pushbuttons

Step	Description	Display		
		Index	Value	Status Code
1	Set Function switch to “Closed.”			
2	Turn power on.			
3	Unlock keypad.	99	00	00
4	Restart FIS.	96	01	A0
5	Select door type: Cart Door, 12.	00	12	A0

204020
Rev. B, 6/13/06
17 of 28

Step	Description	Display		
		Index	Value	Status Code
6	Accept FIS. As soon as the VALUE is changed to 01, display will go to 20 (Open Speed value) and then to A1. (Note: 20 is the default value.) When A1 is displayed go to next step.	03	01	A1
7	WARNING: During this sequence the sensors are inactive and the door has no SAFETY. To stop the door, turn power off. Function switch: Switch to Automatic, momentarily, then CLOSED/LOCKED. Wait for the learn sequence to end. Display will show <u>A2</u> when finished.			A2
8	Lock keypad.	99	01	00
9	Final Tune in.			

Table 2. Index List

Index	Description
00-89	Settings Values, see Table 3.
90-95	Reserved.
96	Command – Restart FIS. Entering “01” will cause FIS to restart.
97	Reserved.
98	Command – Restart auto configuration. Entering “01” will cause auto configuration.
99	Command – Lock. Entering “01” will lock all value inputs except this index. This prevents inadvertent changes to input values. Values may be unlocked by entering “00” in this index.

Table 3. Settings—Motor 1

Index	Min. Value	Max. Value	Description	Defaults	
				Door 1	Door 2
00	05	35	Open speed, increment by 1.	20	20
01	05	12	Close speed, revolutions per second.	10	10
02	03	10	Check speed, revolutions per second.	04	04
03	00	99	Open check length, percent of full opening.	--	--
04	00	99	Close check length, percent of full opening.	--	--
05	00	99	Reserved	--	--
06	01	99	Reserved	00	00
07	00	01	Reserved	00	00
08	00	99	Open torque, percent of full scale.	33	33

Index	Min. Value	Max. Value	Description	Defaults	
				Door 1	Door 2
09	00	99	Close torque, percent of full scale.	22	22
10	00	99	Check torque, percent of full scale.	22	22
11	00	02	Reserved		
12	00	01	Reserved		
13	01	99	Obstruction Time Delay (.01 – 2.55 sec) Heavy and dual motor doors may require a longer obstruction time (45 on buttons or 1.0 sec. on Palm).		
14	00	60	*Open Acceleration, (larger value=faster acceleration).	20	20
15	00	60	*Open Braking, (larger value=increased braking).	20	20
16	00	60	*Close Acceleration, (larger value=faster acceleration).	20	20
17	00	60	*Close Braking, (larger value=increased braking).	20	20

* These parameters are only available on software revision C (5.19) and higher.

Note: Door must be cycled open for changes to be stored in permanent memory.

Table 4. Status Codes

Status Code	Description
00	Normal operation—All OK.
20	Both doors not closed
A0	First installation sequence (FIS).
A1	Auto-configuration sequence.
A2	Auto-configuration confirmation sequence.
A9	Invalid Door Type selected. Switch Power OFF and then ON and Restart FIS
b0	Invalid mode.
b1	Encoder error.
dc	Display door cycle counter
EE	Obstruction in Learn Mode
0b	Obstruction after Learn Mode

4.3 Final Tune-In Adjustments

- 4.3.1 Refer to ANSI A156.10, "American National Standard for Power Operated Doors," and Attachment 4 and DETERMINE ANSI and UL door operating requirements.
- 4.3.2 IF Stanguard threshold sensor is installed, refer to Stanley Access Technologies document No. 203768, "Stanguard™ Threshold Sensor Installation and Operation," and TUNE-IN Stanguard threshold sensor.

- 4.3.3 IF SU-100 motion sensor(s) are installed, refer to Stanley Access Technologies document No. 203957, "SU-100 Motion Sensor Installation and Operation," and TUNE-IN SU-100 motion sensor(s).
- 4.3.4 IF OA-203C presence sensor(s) are installed, refer to manufacturer's instructions and TUNE-IN OA-203C presence sensor(s).
- 4.3.5 To ensure that all settings have been stored in EEPROM memory, turn power OFF and then back ON. Repeat step 4.3.1.

4.4 Spare Parts List

Description	Part Number
MC521 Controller, includes 1 terminal block	313969
Harness, Holding Beam to Control Box, 24 inches	414106
Harness, Power, 18 inches	415000
Harness, Encoder Cable Adapter, 12 inches	415001
Terminal Block Plug, 10 position	714055
Palm Cable, Black (For M Series, I705, Zire 71, Tungsten C, T2, T3, W)	415044
Palm Cable, Yellow (For Tungsten E2 and X, Treo 650, Life Drive)	516864
Harness, motor, 14 feet	413362
Harness, motor, 17 feet	413362-1
Harness, line connect, 6 feet	412544
Harness, line connect, 10 feet	412545
Harness Motor Extension, 42 inches	411746
Counter, External Accessory	413787

4.4.1 SET DH97 presence sensors as follows:

- Presence timer: 60 seconds
- Pattern depth: Inside two rows; outside four rows
- Frequency: All different
- Monitor mode: Normal
- Self-monitoring: OFF

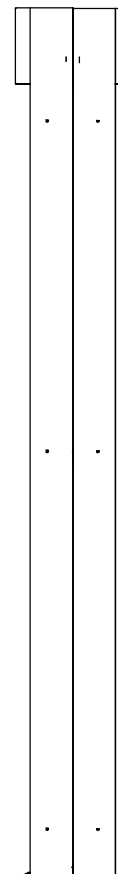
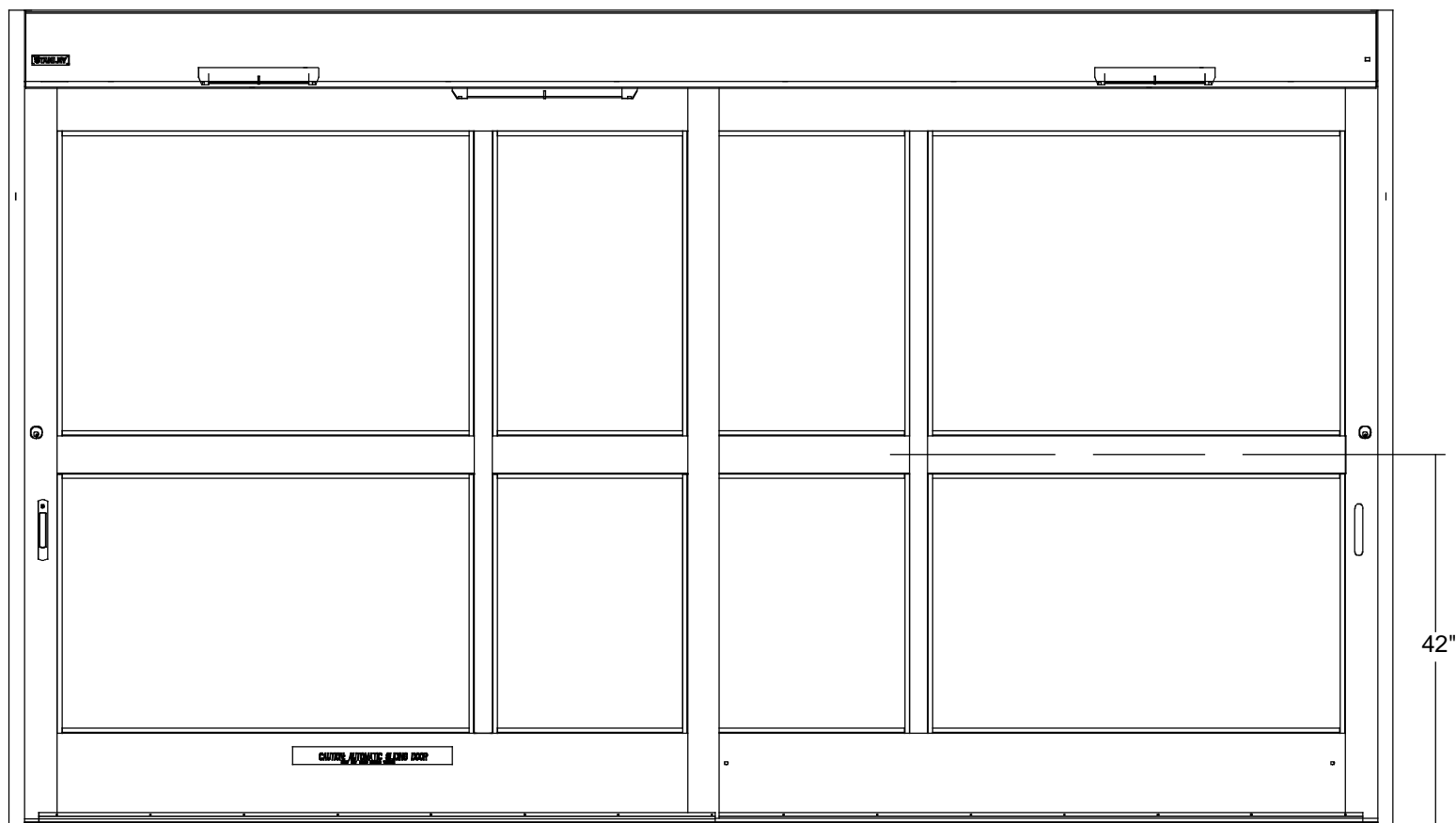
4.4.2 SET the DH97 presence sensors to ensure that they have the widest zone and the angle is closest to the face of the door.

4.5 Installing Safety Decals

- 4.5.1 Refer To Document No. 203743, "Stanley Automatic Sliding Door Safety Decal Installation Guide," (supplied with door package) and INSTALL safety decals.

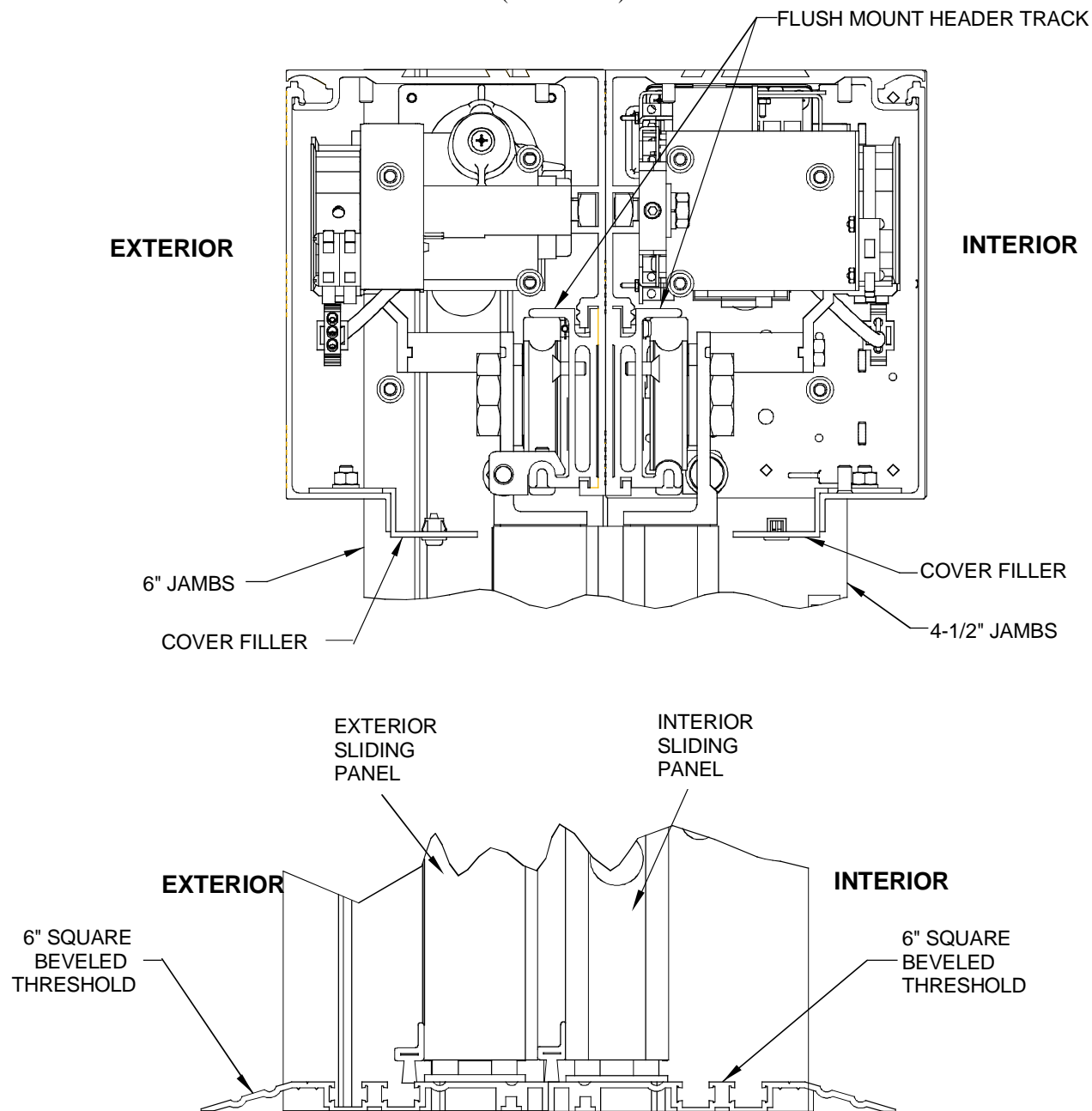
Attachment 1
Cart Door General Arrangement
(Sheet 1 of 2)

EXTERIOR VIEW



PKG WIDTH	CLEAR DOOR OPENING	"X" PANEL WIDTH	DOOR TRAVEL	MASONRY OPENING	CAULKING ALLOWANCE
11'0"	56.828"	66.172"	56.828"	11'0" 1/2"	1/4"/ SIDE
12'0"	62.828"	72.172"	62.828"	12'0" 1/2"	1/4"/ SIDE
13'0"	68.828"	78.172"	68.828"	13'0" 1/2"	1/4"/ SIDE
14'0"	74.828"	84.172"	74.828"	14'0" 1/2"	1/4"/ SIDE

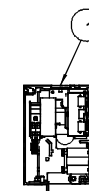
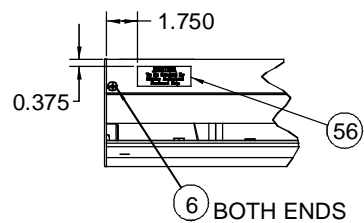
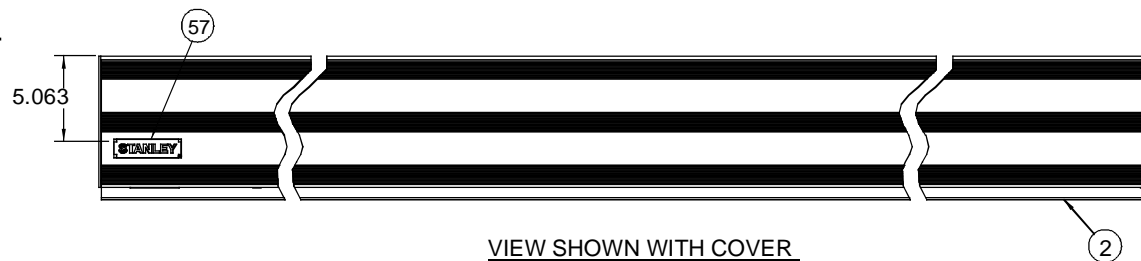
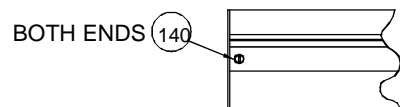
Attachment 1
Cart Door General Arrangement
 (Sheet 2 of 2)



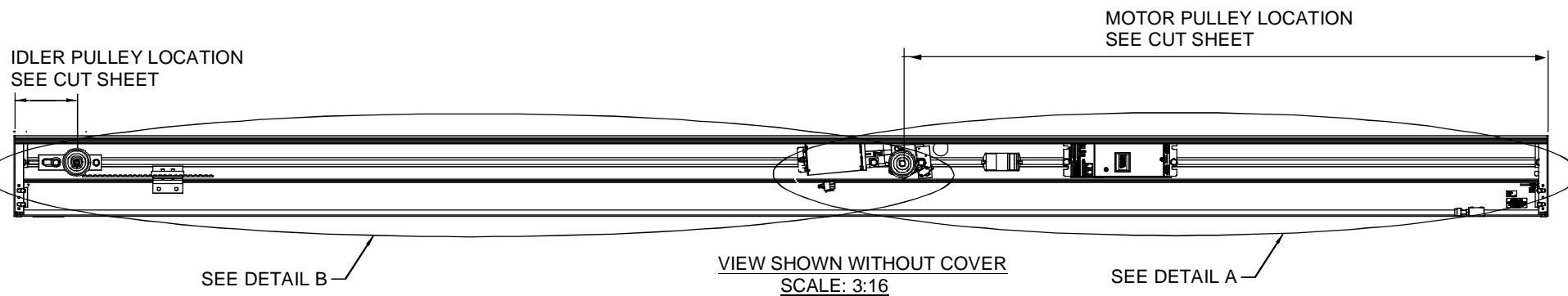
Attachment 2

Cart Door Interior Header

(Sheet 1 of 3)



VIEW SHOWN WITHOUT ENDCAP

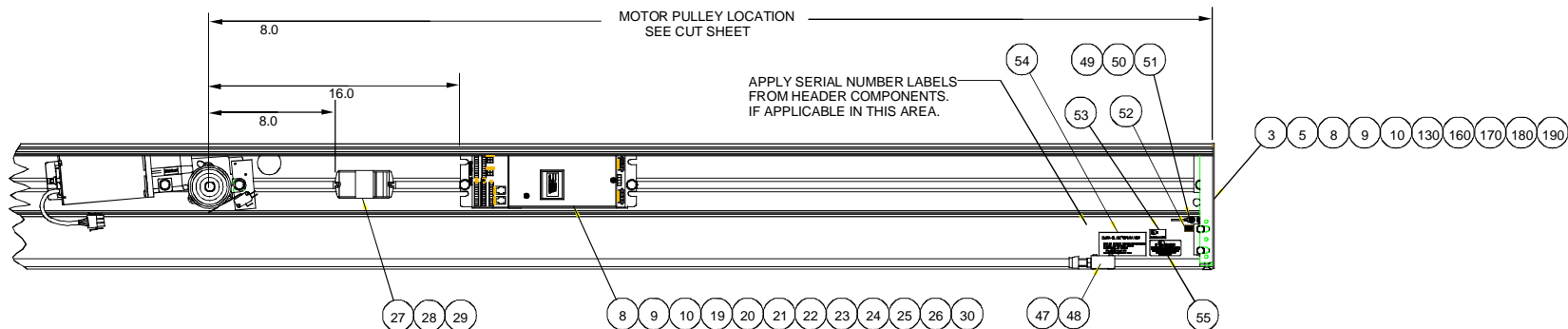


CD001_1A

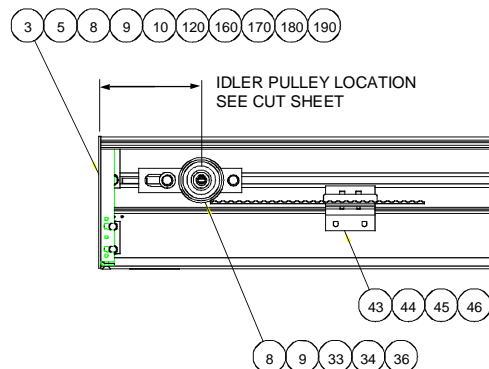
Attachment 2

Cart Door Interior Header

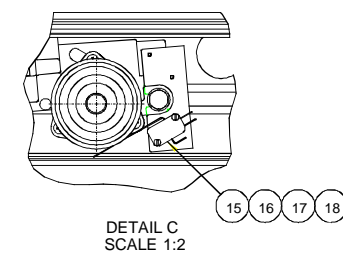
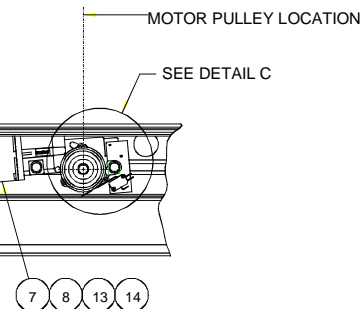
(Sheet 2 of 3)



DETAIL A
SCALE 1:4



DETAIL B
SCALE 1:4



CD001_2A

Attachment 2
Cart Door Interior Header

(Sheet 3 of 3)

Item	Part No.	Description	Item	Part No.	Description
1	157763	Header-Machining Interior	27	414009	Assy-Cable-Optex HB Controller to I/O
2	170054	Assy.-Cover	28	711949	Nut-Special-Holding Beam
3	516822-1	End Cap-Modified LH Clr.	29	515365	Holding Beam-Doorway Optex
	536822-1	End Cap-Modified LH Drk. Brz.	33	351270499	Screw, HHM – 3/8-16 x 1
	5M6822-1	End Cap-Modified LH Mill	34	711324	Bushing- Idler Adj.
4	516822-2	End Cap-Modified RH Clr.	43	411810	Bracket- Belt-Short
	536822-2	End Cap-Modified RH Drk. Brz.	44	411507	Clamp-Belt
	5M6822-2	End Cap-Modified RH Mill	45	353338499	Screw, SHM-SK 10-24 x 7/8
5	312065499	Screw, FHM-PH 1/4-20 x 5/8	46	413011-1C	Timing Belt-SS
6	312065000	Screw, FHM-PH 1/4-20 x 5/8	47	711709	Bumper Stop Assy RH
7	110055	Motor and Gearbox Assy.	48	315431499	Screw-PNH-REC-1/4-20 x 3/4
8	381102499	Nut-Sq-3/8-16	49	711527	Harness-Duraglide-Ground Wire
9	382260499	Washer-Spring Lock - 3/8 - Medium	50	322732960	Screw-T/B- PNH-REC - #8-18 x 1/2
10	351267499	Screw, HHM- 3/8 – 16- 5/8	51	382303499	Washer- #8-Extl Tooth
13	352512499	Washer – 3/8-Intl Tooth	52	526009560	Marker-Ground
14	351279499	Screw, HHM- 3/8 – 16- 3 1/4	53	712356	Label- UL- Header -Duraglide
15	316765499	Screw, RHM- PH 4-40 x 1 1/4	54	711632	Label-Control Box-Duraglide
16	414068	Bracket-Switch	55	713146	Label-UL/CUL
17	414071	Kit-Door Position Switch	56	712511	Label-Caution-“Auth Serv Only”
18	709183	Switch-Micro	57	413740	Decal- “Stanley” Logo
19	185000	Control Box Assy. MC-521	100	313742	Hardware Kit-Rotary Switch
20	415000	Harness-Power	101	970311560	Label Package-Decal
21	415001	Harness-Encoder Cable Adapter	102	414104	Switch Assy-Rotary 2 Position
23	713081	Switch-Rocker Power W/ Light	103	413180	Receiver & Transmitter-Optex
24	413733	Harness-Power- D/G-Rotary/Keysw 86”	104	200009	Foam Wrap 24” WD 2M Lin. Ft./Roll
25	413549	Harness-Switch to I/O Board	110	PG01-170066	Schematic-Cart Door
26	412544	Harness- Line Connect 6 Ft.			

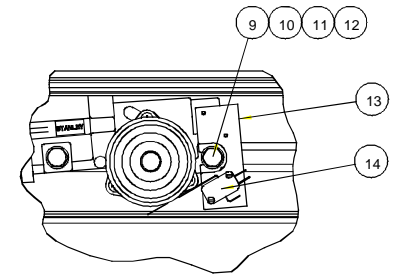
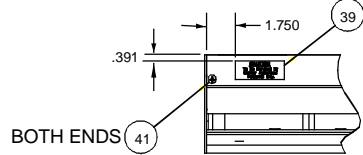
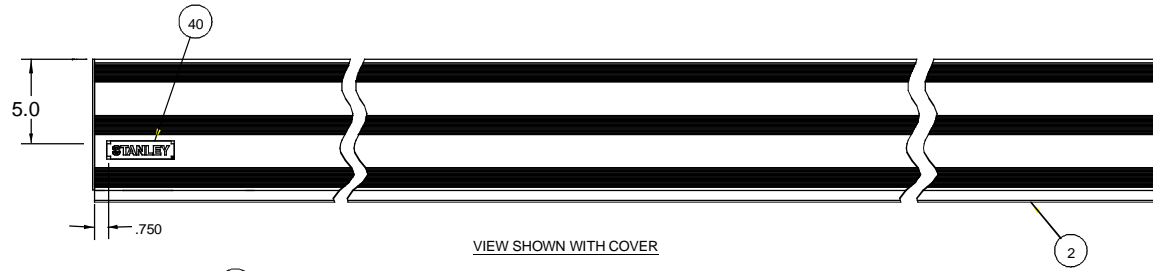
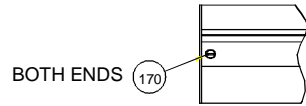
204020

Rev. B, 6/13/06

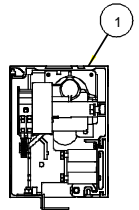
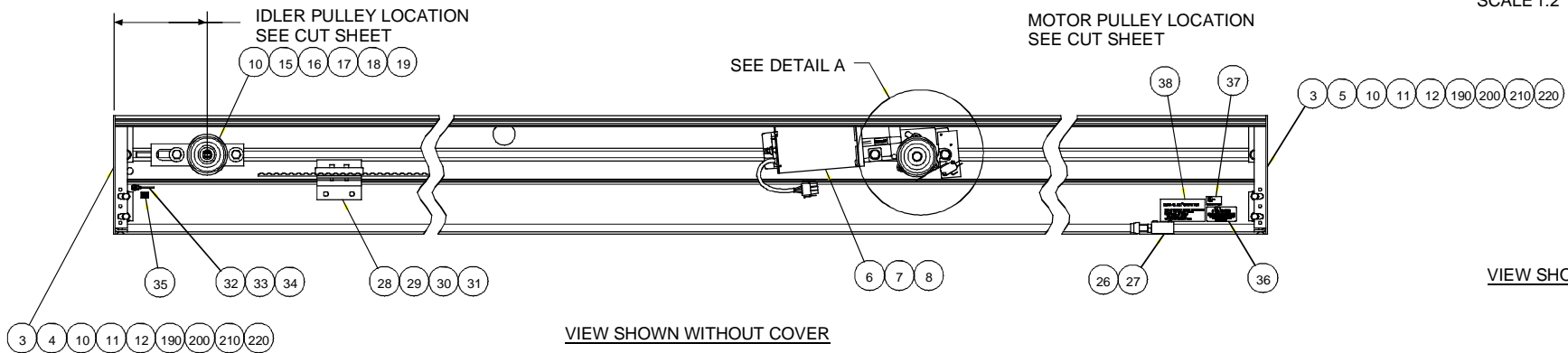
Page 25 of 28

© 2006, THE STANLEY WORKS. ALL RIGHTS RESERVED.

Attachment 3 **Cart Door Exterior Header** (Sheet 1 of 2)



DETAIL A
SCALE 1:2



VIEW SHOWN WITHOUT ENDCAP

CD002A

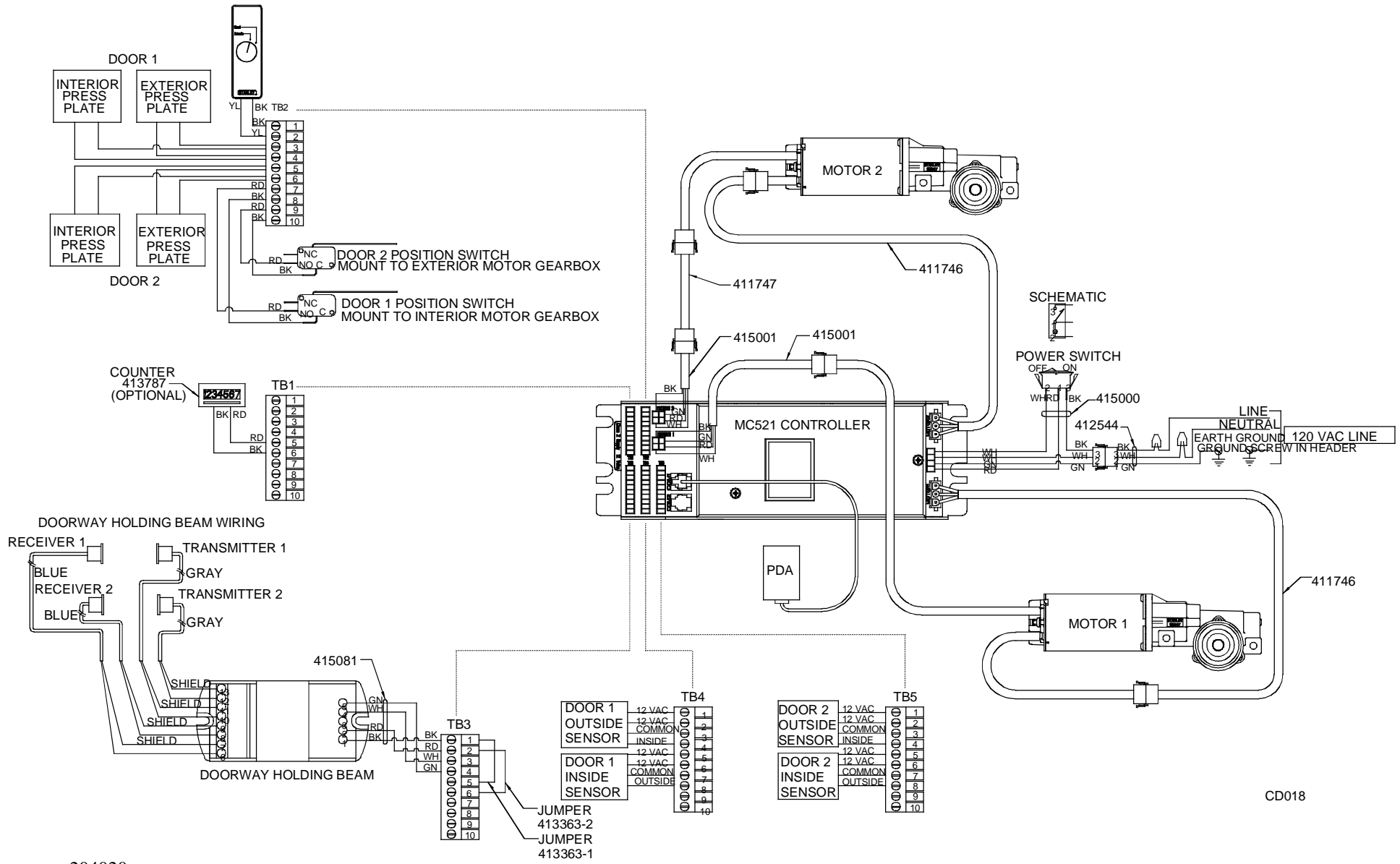
Attachment 3
Cart Door Exterior Header
(Sheet 2 of 2)

Item	Part No.	Description	Item	Part No.	Description
1	157737	Header-Machining Exterior	32	711527	Harness-Duraglide-Ground Wire
2	170054	Assy.-Cover	33	322732960	Screw-T/B-PNH-REC-#8-18 x 1/2
3	516822-1	End Cap-Modified LH Clr.	34	382303499	Washer – #8 Extl Tooth
	536822-1	End Cap-Modified LH Drk. Brz.	35	526009560	Marker-Ground
	5M6822-1	End Cap-Modified LH Mill	36	713146	Label-UL/CUL
4	516822-2	End Cap-Modified RH Clr.	37	712356	Label-UL-Header-Duraglide
	536822-2	End Cap-Modified RH Drk. Brz.	38	711632	Label-Control Box-Duraglide
	5M6822-2	End Cap-Modified RH Mill	39	712511	Label-Caution- “Auth Serv Only”
5	312065499	Screw, FHM-PH ¼-20 x 5/8	40	413740	Decal- “Stanley” Logo
6	110055	Motor and Gearbox Assy.	41	312065000	Screw, FHM-PH ¼-20 x 5/8
7	411746	Cable Assy-Extension-Motor	100	313953	Hardware Kit-Cart Door
8	411747	Cable Assy-Encoder Extension	101	313946	Kit-SS Alarm Contact
9	316765499	Screw, RHM-PH 4-40 x 1 1/4	102		
10	381102499	Nut-Sq-3/8-16	103	414071	Kit-Door Position Switch
11	382512499	Washer – 3/8-Intl Tooth	104	970311560	Label Package-Decal
12	351279499	Screw, HHM- 3/8 – 16- 3 1/4	110	516669	Sensor, Microwave Motion
13	414068	Motor Bracket	110	713869	Sensor-Wizard II ST
14	709183	Switch-Micro (On Gearbox)	110	713950	Sensor-DH97
15	515059	Idler Assy	120	712982-4	Push Plate Blank 4.5 x 1.6 WIKK
16	351270499	Screw, HHM- 3/8 – 16 x 1	120	712982-5	Push Plate-Blank Champagne
17	382260499	Washer-Spring Lock - 3/8 - Medium	130	709702	Cable 4-Conductor-22 AWG
18	351270499	Screw, HHM- 3/8 – 16 x 1	140	200009	Foam Wrap 24” WD 2M Lin. Ft/Roll
19	711324	Bushing-Idler Adj	150	PG01-170066	Schematic-Cart Door
26	711709	Bumper Stop Assy RH			
27	315431499	Screw-PNH-REC-1/4-20 x 3/4			
28	411810	Bracket-Belt-Short			
29	411507	Clamp-Belt			
30	413011-1C	Timing Belt-SS			
31	353338499	Screw, SHM-SK 10-24 x 7/8			

Attachment 4

System Wiring Diagram

(Sheet 1 of 1)



CD018

204020

Rev. B, 6/13/06

Page 28 of 28

© 2006, THE STANLEY WORKS. ALL RIGHTS RESERVED.