PowerClimber®	Service Instruction SI-083	Post Shore Fastening Instructions

Application table

Application:	704099-1 Post Shore System Kit
Reason:	Additional training required for: • operation of powder actuated tools and • application of powder actuated fasteners
Frequency	**As Needed**
Priority:	**High**

PIN DESCRIPTIONS AND CROSS REFERENCES

SafeWorks P/N	Ramset P/N	Description
704373-1	1510	PIN;DRIVE;1.25"
704373-2	1512	PIN;DRIVE;1.5"
704373-3	1514	PIN;DRIVE;2"
704373-4	1516	PIN;DRIVE;2.5"
704373-5	1524	PIN;DRIVE;3"
704374-1	1510SD	PIN;DRIVE;W/WSHR;1.25"
704374-2	1512SD	PIN;DRIVE;W/WSHR;1.5"
704374-3	1514SD	PIN;DRIVE;W/WSHR;2"
704374-4	1516SDC	PIN;DRIVE;W/WSHR;2.5"
704374-5	1524SDP	PIN;DRIVE;W/WSHR;3"

Background

Applications that use the 704099-1 Post Shore System Kit require the use of powder actuated fasteners to secure the front and rear beam retainers as well as the post shore base.

Subpart E of 29 CFR 1926 requires that “Only employees who have been trained in the operation of the particular tool in use shall be allowed to operate a powder-actuated tool.”

Correct and effective application of powder actuated fasteners requires knowledge of the jobsite conditions. Applications of powder actuated fasteners must meet all local building codes and must be approved prior to use by an on-site qualified personnel familiar with the jobsite conditions and the use of powder actuated fasteners.

Solution

Training for the use of powder actuated fasteners is available at http://www.ramset.com/ramtest/a001_begin.html or in person through ITW Ramset. Local Fastenal dealers (http://www.fastenal.com/web/home.ex) can supply Ramset tools and fasteners. They also maintain a stock of commonly used fasteners.

The Ramset SA270 .27 calibers Powder Actuated Strip Tool (SafeWorks P/N 704371-1) is recommended for most applications.

Details on the installation of the beam retainers and post shores can be found on the product labels. The top level assembly drawing (704099) is enclosed.

To verify that the Post Shore System is appropriate for the intended structure, perform the following procedure steps and submit a work plan to the end-user contractor or general contractor for the building's structural engineer of record to verify and approve. Power Climber is not responsible for verifying that the structure can withstand the impact of the Post Shore System – this is the responsibility of the building's structural engineer.

Procedure

PROJECT PLANNING AND APPROVALS

RESPONSIBILITY	OBJECTIVE	TASK	RESULTS	NEXT STEP
Dealer	Plan placement of equipment with Customer	1. Obtain structural floor plans for each level where system is to be installed 2. Layout placement of all beams to scale.	*(provide enough detail for qualified structural person to determine if there will be interference with re-bar or post-tensioning system)*	Prepare Work Plan and submit to Customer to provide to the Structural Engineer of Record
Dealer	Prepare Work Plan for Review and Approval	Put together submittal package consisting of: 1. Beam layout plan 2. Fastener data and approvals Anticipated reaction loads (see label 702547 below)		
Structural Engineer	Selection of Fasteners and placement	For each location determine from structural plans: 1. Slab thickness in locations where pins are to be installed must be at least 3 times the actual pin penetration. 2. Type of concrete (stone aggregate or lightweight) 3. Minimum concrete cured strength 4. Distance from slab edge(s) to fastener location(s) (must be a minimum of 3")	1. Loading specifications require a minimum of 1" complete penetration of the fastener. 2. Typically 1 ¼" pins (Ramset P/N 1510; 1510SD w/washer) are adequate for the rear retainer and post shore base plate. 3. Typically 1 ½" pins (Ramset P/N 1512; 1512SD w/washer) are adequate for the front retainer 4. Use longer pins as needed if the beam must be raised up to clear obstructions. 5. Maximum available pin length is 3"; pin must be long enough to achieve 1" of complete penetration into the slab. 6. See table below for SafeWorks part numbers for different pin lengths.	

<table>
<tr><th>RESPONSIBILITY</th><th>OBJECTIVE</th><th>TASK</th><th colspan="3">RESULTS</th><th>NEXT STEP</th></tr>
<tr><td>Structural Engineer of Record</td><td>Approval of work plan</td><td>Structural Engineer has qualified work and materials are approved for use</td><td colspan="3">(reduced risk of fastener failure or building damage due to use of incorrect fasteners or contact with PT system by review of submittal by a qualified person)</td><td>Begin Work</td></tr>
<tr><td rowspan="6">Dealer or Customer</td><td rowspan="6">Installation</td><td rowspan="6">1. Center punch test with pin to determine if concrete is suitable
2. Start with lower power loads, work upwards to achieve complete penetration
3. Install front (702541-1) and rear retainer (702536-1) with beam (8-0217-X) in place
4. Install post shore assembly 702584-1)</td><td colspan="3">Powder loads available for the SA270 tool are:</td><td rowspan="6">Release installed equipment over to customer</td></tr>
<tr><td>Power Level and color</td><td>Ramset P/N</td><td>SafeWorks P/N</td></tr>
<tr><td>2 Brown</td><td>2RS27</td><td>704372-1</td></tr>
<tr><td>3 Green</td><td>3RS27</td><td>704372-2</td></tr>
<tr><td>4 Yellow</td><td>4RS27</td><td>704372-3</td></tr>
<tr><td>5 Red</td><td>5RS27</td><td>704372-4</td></tr>
</table>

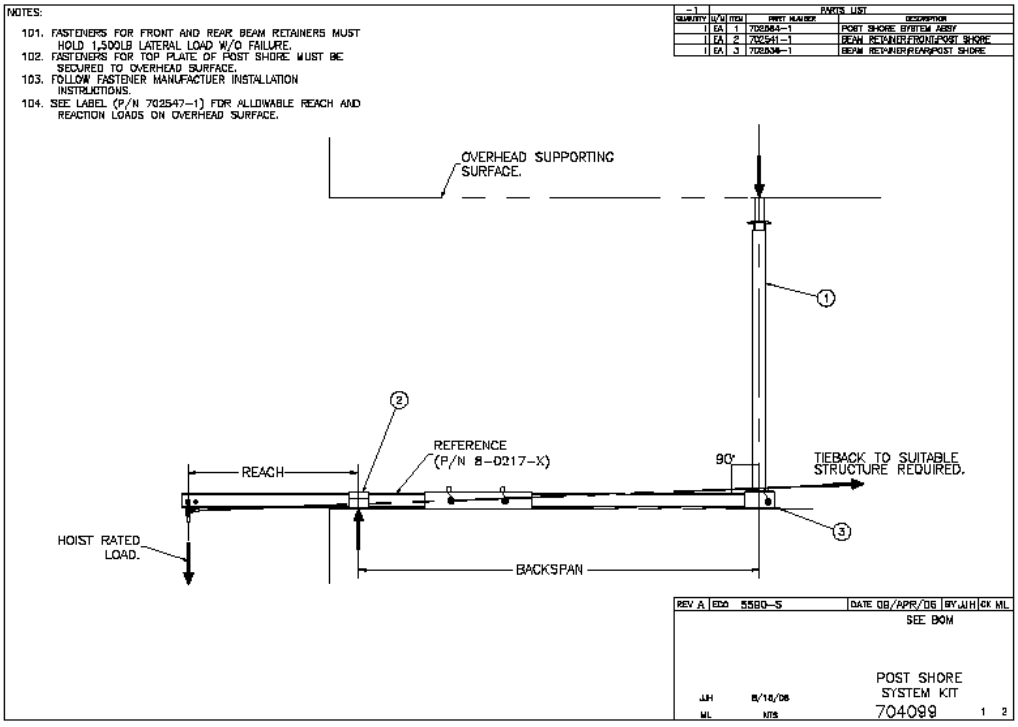
5x5 OUTRIGGER BEAM REAR SHORING REACTION LOADS

HOIST RATED LOAD (LBS)	REACH (INCHES) 74"	66"	60"	54"	48"	42"	36"	30"	24"	18"	OUTRIGGER LENGTH (FEET)
750	2000	1650	1450	1250	1050	900	750	600	450	350	16'
	1200	1050	950	800	700	650	500	400	350	250	22'
	1100	950	850	750	650	550	450	400	300	250	25'
1000	UN-SAFE	2200	1900	1650	1400	1200	1000	800	600	450	16'
		1400	1250	1050	950	800	650	550	450	300	22'
		1250	1100	950	850	700	600	500	400	300	25'
1250	UN-SAFE	UN-SAFE	UN-SAFE	2050	1750	1450	1200	1000	750	550	16'
				1350	1150	1000	850	700	550	400	22'
				1200	1050	900	750	600	500	350	25'
1500	UN-SAFE	UN-SAFE	UN-SAFE	UN-SAFE	2100	1750	1450	1150	900	650	16'
					1400	1200	1000	800	650	450	22'
					1250	1050	900	750	600	450	25'

LOAD IN POUNDS

- LOADS SHOWN ARE IN POUNDS
- SUPPORTING STRUCTURE MUST HOLD LOADS LISTED WITHOUT FAILURE.
- THIS PRODUCT TO BE USED ONLY WITH 5X5 H-BEAM OUTRIGGER P/N 8-0217-X PRODUCED BY SAFEWORKS, LLC.

702547-1/A



As with all Service Instructions, if you are unsure about anything contained in this document, contact Power Climber Product Support at 800-560-2546 or at CustomerService@SafeWorks.Com