

# Appendix 3

## Proof Test Instructions For Concrete Anchors (CAN 1925B.3.5)

State of California

Office of Statewide Health Planning and Development

### TEST VALUES

Hardrock or Lightweight Concrete

<u>Anchor</u> Dia. (in.)	<u>Wedge</u>		<u>Sleeve</u>		<u>Shell</u>	
	Load (lbs)	Torque (ft-lbs)	Load (lbs)	Torque (ft-lbs)	Load (lbs)	Torque (ft-lbs)
1/4	800	10	400	4	1000	--
5/16	--	--	400	4	1400	--
3/8	1100	25	700	10	1800	--
1/2	2000	50	900	20	2700	--
5/8	2300	80	1100	45	3700	--
3/4	3700	150	1400	90	5400	--
1	5800	250	--	--	--	--

**Notes**

1. Anchor diameter refers to the thread size for the Wedge & Shell categories and to the anchor outside diameter for the Sleeve category.
2. Apply proof test loads to Wedge & Sleeve anchors without removing the nut if possible. If not, remove nut and install a threaded coupler to the same tightness as the original nut using a torque wrench and apply load.
3. For Sleeve/Shell internally threaded categories, verify that the anchor is not prevented from withdrawing by a baseplate or other fixtures. If restraint is found, loosen and shim or remove fixture(s) prior to testing.
4. Reaction loads from test fixtures may be applied close to the anchor being tested, provided the anchor is not restrained from withdrawing by the fixture(s).
5. Shell type anchors should be tested as follows:
  - a. Visually inspect 25% for full expansion as evidenced by the location of the expansion plug in the anchor body. Plug location of a fully expanded anchor should be as recommended by the manufacturer, or, in the absence of such recommendation, as determined on the job site following the manufacturer's installation instructions. At least 5% of the anchors shall be proof loaded as indicated in the table above, but not less than three anchors per day for each different person or crew installing anchors, or;
  - b. Test 50% of the installed anchors per Section 1925B.3.5.
6. Test equipment (including torque wrenches) is to be calibrated by an approved testing laboratory in accordance with standard recognized procedures.
7. Torque test values for Shell type anchors can occur on a case-by-case basis when test procedures are submitted and approved by the enforcement agency.
8. The following criteria apply for the acceptance of installed anchors:
 

Hydraulic Ram Method: The anchor should have no observable movement at the applicable test load. For wedge and sleeve type anchors, a practical way to determine observable movement is that the washer under the nut becomes loose.

Torque Wrench Method: The applicable test torque must be reached within the following limits;  
 Wedge or Sleeve type: One-half (1/2) turn of the nut.  
 One-quarter (1/4) turn of the nut for 3/8 inch sleeve anchor only.
9. Testing should occur a minimum of 24 hours after installation of the subject anchors.
10. If the manufacturer's recommended installation torque is less than the test torque noted in the table, the manufacturer's recommended installation torque should be used in lieu of the tabulated values.
11. All tests shall be performed in the presence of the Inspector of Record.



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Date:	Page No.	Sheet Number:
6 - 2 - 06	146	___ of ___

