

**STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENT 1075  
LOAD DEFLECTION TEST PROCEDURES  
FOR U-CHANNEL SIGN POSTS**

**April 19, 2002**

**1075.01      Description**  
**1075.02      Procedure**

**1075.01      Description** This Supplement outlines the procedures for performing the load deflection test for U-channel posts.

**1075.02      Procedure**

1. Assemble paired posts with 3/8- inch (10 mm) diameter SAE J429 Grade 8 bolts on 4-inch (100 mm) spacings starting 2-inches (50 mm) from one end. Drill for bolt assembly as required and torque bolts to 150 inch-pounds (17 N\*m).
2. Load posts as horizontal beams resting on 1 ½-inch (38 mm) diameter non-restricting supports 6 feet 10 inches (2.1 m) apart. Load back to back posts with the axis of the bolts parallel to the direction of the applied bending load. Load single U-channel posts with the flanges in tension.
3. Divide the total bending load into two equal loads 3 feet (0.9 m) apart. Apply load vertically centered between the supports. The maximum rate of the testing machine cross-head movement is ½-inch (13 mm) per minute. Measure deflection at the load application points. Deflection is not to exceed 0.55 inches (14 mm) under the following total applied loads:

SPECIMEN CONFIGURATION	TOTAL BENDING LOAD	
	Pounds	(N)
Single No. 1 Post	60	(270)
Single No. 2 Post	400	(1780)
Single No. 3 Post	800	(3560)
Two No. 2 Posts Paired	1000	(4450)
Two No. 3 Posts Paired	3000	(13 340)

4. The permanent set after the load has been removed for one minute is not to exceed 0.10 inch (2.5 mm).