

TECHNICAL BULLETIN

SC1 & SC2 Splice Coupler

July 2024

CABLE SEATING DEPTH

An issue that may arise with inexperienced or inattentive technicians during the installation of the SC1/SC2 Splice Coupler is the failure to fully seat the cable within the wedges. A common mistake is that the installer pushes the cable partially into the wedges, this can give the false impression that the cable is fully seated because the cable “feels tight” when hand pressure is applied. However, the cable will slip from the wedges during tensioning of the tendon.

Minimum Cable Installation Depth

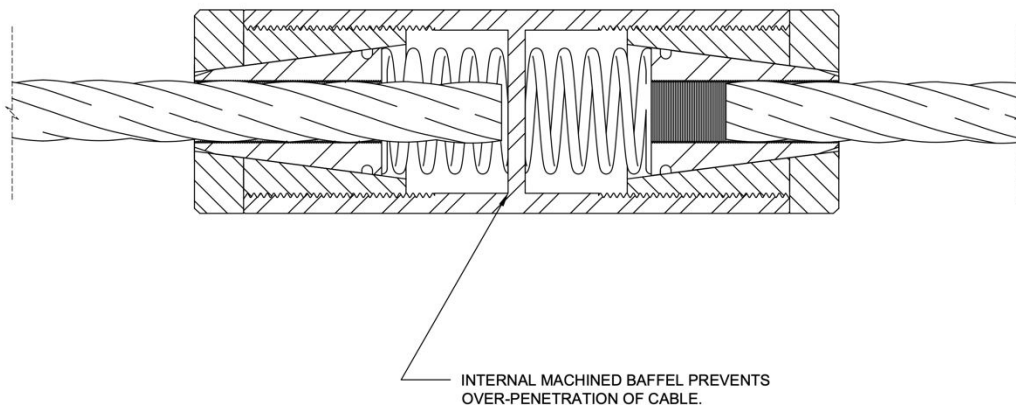
One of the SC1/SC2 Splice Coupler design features is that it is machined with two individual wedge chambers on each side of the splice that are separated by a solid steel internal baffle. That means it’s physically impossible for the technician to over-penetrate the cable into the opposite side wedges and cause them to become displaced. Therefore, it is recommended that the cable be installed a minimum depth of 2.25” as measured from the face of the splice end cap.

CORRECT

CABLE IS FULLY INSTALLED, WHICH ALLOWS THE WEDGES TO FULLY ENGAGE. MINIMUM ENGAGEMENT LENGTH IS 2-1/4" FROM SPLICE FACE TO CABLE TIP.

INCORRECT

CABLE IS ONLY PARTIALLY INSTALLED IN THE WEDGES. WILL FEEL HAND TIGHT, BUT SLIPS DURING TENSIONING.



For additional Technical Support

Please email us at info@PT-Prod.com with any additional questions.

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SPLICE COUPLER PLACEMENT DURING INSTALLATION

An issue that can affect both experienced and inexperienced installers during the repair of unbonded tendons is related to the placement of splice couplers in a way that places high bending stress on the hardware. These parts are designed to handle high tension loads that run in an in-line unidirectional manner through the part, and when subjected to off-center excentric tension loads, it can result in a sudden and catastrophic failure of the splice coupler.

Placement within a lateral tendon sweep

This problem occurs during the repair of tendons that have ruptured from a slab as the result of insufficient hairpin reinforcement. Some installers find it tempting to make the repair within the existing damaged area of the slab, where the tendons are making a lateral directional change. It is strongly recommended to avoid the installation of splices within an area of lateral tendon displacement, instead they should be located in areas where the tendons have returned to a straight configuration.



Insufficient clearance around the splice coupler

This issue can develop when splices are installed in a location that causes an out of alignment condition because the splice is prevented from remaining straight due to a hardened obstacle, such as embedded rebar or concrete. During tensioning, the obstacle can cause a high bending stress to develop within the splice coupler, resulting in failure of the hardware. Care should be given to either removing the obstacle or relocating the splice to a location where it can remain in a straight and flat configuration.



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