

## TECHNICAL BULLETIN

# TORQUE REQUIREMENTS OF SOCKET HEAD CAP SCREWS ON RETAINING COLLARS OF SHANK TYPE COUPLINGS

## 1. RECOMMENDATION

All cap screw torques shall be checked at least annually and should be done **prior** to any service pressure testing.

## 2. RATIONAL

If not torqued properly the collar loosens and may allow hose to slip under the collar when pressurized to its maximum service test pressure. An unnoticeable amount of slippage can cause damage to the inside liner and results in seepage or drops near the end of the hose.

## 3. ACTION

If cap screws are discovered to be below the prescribed torque values listed in *table 1* (next page) they shall be torqued gradually and in an alternating pattern until reaching the set value. Maintaining equal gap spacing between the segments throughout the tightening process will ensure the collar segments are properly positioned and hose is securely attached to the coupling.

**SUGGESTION:** The use of a factory-set, slip-release torque wrench that disengages when reaching the set value prevents overtightening of the cap screws and ensures a consistent and repeatable force.

## REFERENCE

Extract from NFPA-1962 Edition 2018, Standard for the Care, Use, Inspection, Service Testing and Replacement of Fire Hose, Couplings and Fire Hose Nozzles and Appliances.

Chapter 7 Care and Inspection of Couplings and Gaskets

7.1 Couplings.

7.1.1 Couplings shall be kept in serviceable condition.

7.1.10.3 The socket head cap screws on shank-type coupling **shall be torqued** to the manufacturer's specified tolerance.

7.1.13 The socket head cap screws on shank-type coupling **shall be checked at least annually** to ensure that they are torqued to the manufacturer's specified tolerance and shall be replaced at any sign of wear.

**WARNING:** Neglecting to check torques annually can lead to hose damage and in worse cases, the complete release of the collar resulting in hose being forcibly ejected from the coupling which may cause significant harm to personnel.

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(CONTINUED)

TABLE 1

Cap Screw Torque Specifications for Niedner Large Diameter Hose with STORZ Couplings

HOSE DIAMETER	BRAND	COLLAR CONSTRUCTION	TORQUE VALUE
12" (305mm)	TAIGA™ TEMPESTOR™	4 segments with cap screws and nuts	42 ft·lbf (57 N·m)
12" (305mm)	TAIGA™ TEMPESTOR™	3 segments with cap screws and nuts	50 ft·lbf (68 N·m)
8" (203mm)	TEMPESTOR™	4 segments with cap screws	50 ft·lbf (68 N·m)
7.25" (184mm)	Double 5™	4 segments with cap screws	50 ft·lbf (68 N·m)
6" (152mm)	TAIGA™ TIDALWAVE™	3 segments with cap screws	50 ft·lbf (68 N·m)
5" (127mm)	SUPPLYLINE™	3 segments with cap screws	50 ft·lbf (68 N·m)
4" (102mm)	SUPPLYLINE™	3 segments with cap screws	50 ft·lbf (68 N·m)