

STEEL PIPE ADAPTERS

CONFORMANCE

- SAE J514 for hex nipples, expanders, elbows, tees and crosses.
- SAE J514, J530 and J531 for bushings and plugs.
- Temperature Range: -65°F to +400°F

MATERIALS

- Steel- SAE 12L14 carbon steel trivalent zinc plated or bright silver finish.

STYLES

- Barstock
- Forged
- Chamfered - male ends have an internal 30-degree chamfer to mate with NPSM female swivel union connections. Many pipe fittings do not have this chamfer, as it is not required per SAE J514 standard.

Caution: Although most pipe fittings have sufficient structural integrity to support the weight of many components, consult our technical support department for guidance in selection of parts for this purpose

WORKING PRESSURES

The following table lists the recommended working pressures for steel NPTF hydraulic pipe fittings manufactured in accordance with SAE standard J514. Many factors such as number of threads engaged, impulsing, vibration, mechanical shock, removal and reassembly, thermal expansion and contraction may affect the integrity of the fitting or fitting connection. For these reasons, the recommended working pressures are actually lower than the capacity of the fittings. SAE recommends sufficient testing to be conducted to assure that performance levels will be safe and satisfactory, especially if installed in systems operating at elevated pressures or in severe conditions.

SAE J514 NPTF PIPE WORKING PRESSURES

Dash Size	NPTF Thread Size	4 TO 1 Minimum Burst PSI
-1	1/16-27	5000
-2	1/8-27	5000
-4	1/4-18	5000
-6	3/8-18	4000
-8	1/2-14	3000
-12	3/4-14	2500
-16	1-11 1/2	2000
-20	1-1/4-11-1/2	1150
-24	1-1/2-11-1/2	1000
-32	2-11-1/2	750

NPTF DRY SEAL PIPE ASSEMBLY INSTRUCTIONS

- Step 1.** Inspect port and fitting to ensure that both are free of contaminants and excessive burrs and nicks.
- Step 2.** Apply a stripe of an anaerobic liquid pipe sealant around the male threads leaving the first two threads uncovered. If no liquid sealant is available, wrap Teflon tape 1 1/2 to 2 turns in a clockwise direction, viewed from the pipe end, leaving the first two threads uncovered. **Caution: Teflon tape and some pipe sealants are destructive to hydraulic components. Always use extreme caution and follow manufacturers recommendations for proper application of any sealant in order to prevent contamination**
- Step 3.** Screw finger tight into the port.
- Step 4.** Wrench tighten the fitting to the correct turns past finger tight position. (See following table) When installing elbows or tees, consider final orientation position as to not exceed the recommended TPFT
- Caution: Never back off an installed pipe fitting to achieve proper alignment. Loosening installed pipe fittings will corrupt the seal and contribute to leakage and failure.**

Dash Size	NPTF Thread Size	Turns Past Finger Tight
-1	1/16-27	2.0 - 3.0
-2	1/8-27	2.0 - 3.0
-4	1/4-18	2.0 - 3.0
-6	3/8-18	2.0 - 3.0
-8	1/2-14	2.0 - 3.0
-12	3/4-14	2.0 - 3.0
-16	1-11 1/2	1.5 - 2.5
-20	1-1/4-11-1/2	1.5 - 2.5
-24	1-1/2-11-1/2	1.5 - 2.5
-32	2-11-1/2	1.5 - 2.5

Torque installation of pipe fittings is not a recommended practice. Thread taper and quality, different port and fitting materials, plating thickness and types, varying threads sealants, orientation, and other factors reduce the reliability of a torqued connection. If torque installation is required, refer to the following table for suggested torque values.

Dash Size	NPTF Thread Size	Torque Foot/LBS
-2	1/8-27	12
-4	1/4-18	25
-6	3/8-18	40
-8	1/2-14	54
-12	3/4-14	78
-16	1-11-1/2	112
-20	1-1/4-11-1/2	154
-24	1-1/2-11-1/2	211
-32	2-11-1/2	300

See STRAIGHT THREAD O-RING FITTING SECTION for assembly instructions and torque values for