Bulkhead Locknut Assembly

A bulkhead fitting allows one to connect tube or hose through a panel. This panel, often referred to as bulkhead, may be a structural element of the equipment, or an additional plate which is joined to the equipment, to facilitate convenient routing of hose and tube. Bulkhead fittings are also used as a transition point in a hydraulic system, such as connection of tube lines to hose lines or to a quick disconnect coupling.

The following steps are recommended for the proper assembly of the locknut for Triple-Lok, Ferulok and Seal-Lok bulkhead fittings.

1. Drill a pilot hole to dimension W + 0.015" (where W is shown in Tables T27 and T28).
2. Insert the bulkhead end of the fitting (without the locknut assembled) through the bulkhead opening and attach the locknut to the bulkhead end.
3. Finger tighten the locknut and wrench tighten further to the recommended torque shown in Table T27 for Seal-Lok fittings or Table T28 for Triple-Lok and Ferulok fittings.

TUBE FITTING PART #	THREAD SIZE UN/UNF	W*	ASSEMBLY TORQUE +10% - 0		
			in.-lb.	ft.-lb.	N-m
4 WLNL	9/16-18	0.56	180	15	20
6 WLNL	11/16-16	0.69	300	25	34
8 WLNL	13/16-16	0.81	—	55	75
10 WLNL	1-14	1.00	—	85	115
12 WLNL	1 3/16-12	1.19	—	135	180
14 WLNL	1 5/16-12	1.31	—	170	230
16 WLNL	1 7/16-12	1.44	—	200	270
20 WLNL	1 11/16-12	1.69	—	245	330
24 WLNL	2-12	2.00		270	365

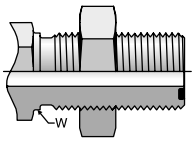
* Recommended clearance hole is W + 0.015"

Table T27 – Torque for Seal-Lok Bulkhead Fittings

TUBE FITTING PART #	THREAD SIZE UN/UNF	W*	ASSEMBLY TORQUE (+10 - 0)		
			in.-lb.	ft-lb	N-m
3 WLN	3/8-24	0.38	100	—	11
4 WLN	7/16-20	0.44	155	13	18
5 WLN	1/2-18	0.50	250	20	28
6 WLN	9/16-18	0.56	300	25	35
8 WLN	3/4-16	0.75	600	50	65
10 WLN	7/8-14	0.88		85	115
12 WLN	1 1/16-12	1.06		135	180
14 WLN	1 3/16-12	1.19		170	230
16 WLN	1 5/16-12	1.31		200	270
20 WLN	1 5/8-12	1.63		245	330
24 WLN	1 7/8-12	1.88		270	365
32 WLN	2 1/2-12	2.50		310	420

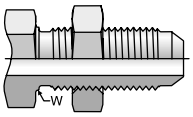
* Recommended clearance hole is W + 0.015"

Table T28 – Torque for Triple-Lok and Ferulok Bulkhead Fittings



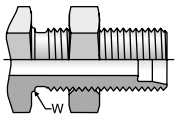
Seal-Lok Bulkhead Assembly

See page A9 for maximum bulkhead thickness.



Triple-Lok Straight Bulkhead

See page C13 for maximum bulkhead thickness.



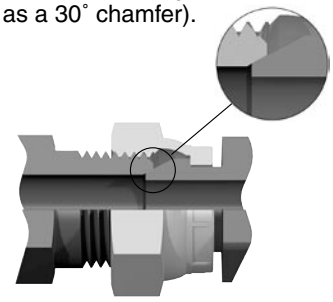
Ferulok Straight Bulkhead

See page D7 for maximum bulkhead thickness.

Pipe Swivel Assembly (NPSM)

Unlike traditional pipe thread, these connections seal on the nose of the swivel end. The nose has a 60° inclusive angle that mates against a chamfer of the same angle on the male pipe thread end (also known as a 30˚ chamfer).

Fig. T51A - Illustration showing how swivel adapters seal on mating chamfer in male pipe thread end (Also Fig. H2.)



NPSM Pipe Swivels **Fig. T51A**

NPSM Pipe swivels, also known as Parker 07 Adapters, must connect with a male NPT/NPTF pipe thread with a 30˚ machined seat per SAE J514.

NPSM Size in.	Steel Assembly TORQUE (+10% - 0%)		
	in.-lb.	ft.-lb.	F.F.F.T.
1/8	106	9	1.0 - 1.5
1/4	156	13	1.0 - 1.5
3/8	192	16	1.0 - 1.5
1/2	396	33	1.0 - 1.5
3/4	580	48	2.0 - 2.5
1	1140	95	2.0 - 2.5
1 1/4	1420	118	2.0 - 2.5
1 1/2	2840	237	2.0 - 2.5
2	3720	310	2.0 - 2.5

Table T29 – NPSM Pipe Swivel Torques

Steps:

1. Finger tight
2. Wrench tighten to torque specs in Table (T29)

Dimensions and pressures for reference only, subject to change.