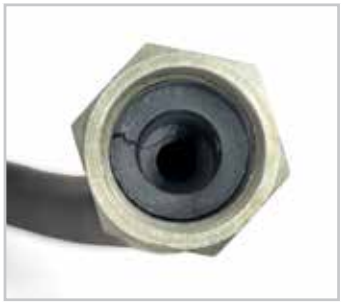
JIC INSTALLATION PROCEDURES

TORQUE INSTALLATION PROCEDURE

1. Visually inspect components prior to assembly – verify free of nicks, dirt, rust or foreign particles.
2. Carefully assemble mating part onto fitting to avoid damage to the flare and nose of fitting.
3. Tighten **Swivel Nut** until it is “wrench snug.”
4. Always use a standard wrench on the **Backup Hex** to prevent the hose assembly from twisting.
5. Use a torque wrench to tighten **Swivel Nut** according to the torque chart below.
6. Mark the fitting as a visual reference it has been torqued.



JIC SEAT CRACKS

JIC seat cracks can be caused by over-torquing. Use a torque wrench and follow recommended installation procedures. JIC seat cracks can also be caused by excessive vibration or shock loading. Change the hose routing to reduce side load on the fitting.

TORQUE RECOMMENDATIONS FOR 37° & 45° COUPLINGS AND ADAPTERS (MACHINED OR FLARED)

SIZE		STEEL				BRASS			
		FT. - LBS		NEWTON - METERS		FT. - LBS		NEWTON - METERS	
DASH	FRACTIONAL (IN.)	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
2	1/8"	6	7	8	10	4	5	5	7
3	1/5"	8	10	11	14	5	7	7	9
4	1/4"	11	14	15	19	7	9	10	12
5	1/3"	14	18	19	24	9	11	12	15
6	3/8"	18	22	24	30	11	14	16	20
8	1/2"	36	45	49	61	23	29	32	40
10	5/8"	57	71	77	96	37	46	50	63
12	3/4"	79	99	107	134	51	64	70	87
14	7/8"	94	117	127	159	61	76	83	103
16	1"	108	135	147	184	70	88	96	119
20	1-1/4"	127	158	172	215	82	103	112	140
24	1-1/2"	158	198	215	269	103	129	140	175
32	2"	245	306	332	415	159	199	216	270

NOTES:

1. The previous chart provides the SAE J2593 (FEB2015) minimum and maximum torque recommendations for steel JIC couplings. The brass values were calculated using 65% of the steel recommendation as a starting point.
2. Values listed in SAE J514 are for qualification testing only and should not be used as the basis for setting up torque values for a production environment.
3. The minimum torque value should create a leak-proof seal under most conditions. Applying torque values greater than the maximum recommendation could distort or crack the fitting.
4. All torque recommendations are based on dry threads. If oil or thread sealant is used, the maximum recommended torque values could be decreased by as much as 25%.
5. Make sure the hose does not twist on the adapter when tightening the Swivel Nut. Twisting can shorten hose life.
6. Make sure the coupling does not spin on the adapter when tightening the Swivel Nut. Scarring the flared sealing surfaces can cause leaks.
7. For straight couplings, use a torque wrench on the Swivel Nut and a standard wrench on the Backup Hex. For bent couplings, use a torque wrench on the Swivel Nut and hold the ferrule with your hand to prevent rotation.
8. When using a crowsfoot attachment with a torque wrench, adjustments must be made to the torque readings to prevent over-tightening.

ALTERNATIVE: FLAT METHOD INSTALLATION PROCEDURE

The proper tightening of SAE 37° series hose line nuts can be done when torque wrenches are not available using the following procedure:

FIGURE A
Mark a line along the **Swivel Nut** and adapter before torquing.

FIGURE B
Movement of mark shows amount which the **Swivel Nut** was tightened, (one flat is shown in the example below).

1. Visually inspect components prior to assembly – verify free of nicks, dirt, rust or foreign particles.
2. Carefully assemble mating part onto fitting to avoid damage to the flare & nose of fitting.
3. Tighten **Swivel Nut** until it is "wrench snug."
4. With a permanent marker, mark a line lengthwise on the **Swivel Nut** extending onto the adapter (Figure A).
5. Always use a standard wrench on the **Backup Hex** to prevent the hose assembly from twisting.
6. Wrench tighten the **Swivel Nut** the number of flats shown in the torque table below for appropriate dash size (Figure B).

TORQUE RECOMMENDATIONS	
DASH SIZE	FLATS
4-JIC	1.5 – 1.75
6-JIC	1 – 1.5
8-JIC	1.5 – 1.75
10-JIC	1 – 1.5
12-JIC	1 – 1.5
16-JIC	0.75 – 1
20-JIC	0.75 – 1
24-JIC	0.75 – 1
32-JIC	0.75 – 1