

# JIC 37° Fitting Guide

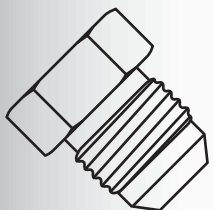
JIC 37° Thread Identification & Torque			
Fitting Size	Dash Size	Thread Size	Torque ft/lbs
JIC 2	-02	5/16-24	6-7
JIC 3	-03	3/8-24	6-9
JIC 4	-04	7/16-20	9-12
JIC 5	-05	1/2-20	14-15
JIC 6	-06	9/16-18	18-20
JIC 8	-08	3/4-16	27-39
JIC 10	-10	7/8-14	36-63
JIC 12	-12	1 1/16-12	65-88
JIC 14	-14	1 3/16-12	75-103
JIC 16	-16	1 5/16-12	85-113
JIC 20	-20	1 7/8-12	115-133
JIC 24	-24	1 7/8-12	125-167
JIC 32	-32	2 1/2-12	190-258

**TORQUE VALUES:** The minimum torque values listed are to provide a benchmark that give optimum results for leak free connections. Actual torque values should be based on individual application.

JIC 37° flare fittings seal with metal to metal contact between the flared nose of the fitting and the flared tube face in the female connection.

Leaks can result from vibration, thermal cycling and from loads being supported by the connection (i.e. using the fitting in the connection to support mechanical loads).

Whenever possible, we highly recommend using SAE O-ring or JIC fittings. Both of these provide a highly reliable, reusable connection. Since these fittings don't rely on mechanical deformation to create a seal, the risk of a broken fitting or port is virtually eliminated.



## Recommended 37° Flared Fitting Assembly Instructions

- STEP 1:** Inspect for possible contamination or damage from shipping or handling. Sealing surface should be smooth. Annular tool marks of 100uin concentric with thread are permissible.
- STEP 2:** Lubricate the threads and the entire surface of the cone with hydraulic fluid or a light lubricant.
- STEP 3:** Align mating components for hand connection and turn flare nut until sealing surfaces make full contact.
- STEP 4:** Torque nut to the values shown in the table on the left hand side of this page. If a wrench pad is provided next to nut, place a second wrench on pad to prevent flare from rotating while being torqued.
- STEP 5:** When torquing nut onto a straight flared fitting, it may be necessary to also place a wrench on the flared fitting wrench pad to prevent it from turning during assembly.

## Wet Torque

Wet torquing is the practice of using your systems hydraulic fluid to lubricate the threads and o-ring of the fittings before installation. Due to differences in materials, plating types and thickness, and thread quality of different components, the coefficient of friction varies greatly on any given assembly. Lubrication not only produces a more consistent coefficient of friction, it increases clamping force on sealing area with less torque on threads. Over tightening causes threads to yield, deform, and therefore lose their ability to maintain an adequate load or clamping force on the seating area. Extended operation and severe conditions cause further yielding which results in leaks. To not wet torque is to compromise consistency and quality for convenience.

## Alternate Assembly Method

- STEP 1:** If torque method not possible, follow steps 1-3 above, then proceed to the steps below.
- STEP 2:** Lightly wrench tighten the nut until there is firm resistance.
- STEP 3:** Place a wrench on wrench pad next to nut as near the 6 o'clock position as possible.
- STEP 4:** Place second wrench on nut as near the 3 o'clock position as possible.
- STEP 5:** Turn nut clockwise to no less than the 4 o'clock position, but no more than the 6 o'clock position. Required rotation generally decreases as size increases.



# Thread Size Chart (Male)

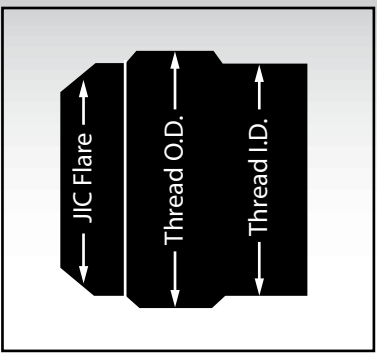
For most accurate sizing results when printing, change the page scaling setting to 'None'.

## NPT / BSPT / BSPP

2" -32	1 1/2" -24	1 1/4" -20	1" -16	3/8" -6	1/4" -4	1/8" -2
				3/4" -12	1/2" -8	

## JIC 37° / SAE O-Ring

2" -32	1 1/2" -24	1 1/4" -20	1" -16	7/8" -14	3/4" -12	1/2" -8	5/16" -5	1/4" -4
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## ORFS (O-Ring Face Seal)

1 1/2" -24	1 1/4" -20	1" -16	3/4" -12	5/8" -10	1/2" -8	3/8" -6	1/4" -4
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