

# Thread Identification Guide

NPTF & JIC



## Technical Information

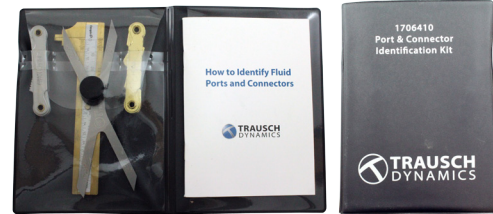
### Adapter Sizing Chart

NPTF, BSPT and BSPP measure 1/4" larger than their actual size. For example, a 1/4" NPTF, BSPT or BSPP will actually measure 1/2" on the O. D. of the threads. JIC, SAE O-ring & Flat Face threads measure as listed below. The first number listed is the size of thread, the second number is the threads per inch.

Size	NPTF (Pipe)	JIC (37°)	SAE (O-Ring)	Face Seal (Flat Face)	BSPP (Parallel)	BSPT (Tapered)
-2	1/8 - 27	5/16 - 24	5/16 - 24	-	1/8 - 28	1/8 - 28
-3	-	3/8 - 24	3/8 - 24	-	-	-
-4	1/4 - 18	7/16 - 20	7/16 - 20	9/16 - 18	1/4 - 19	1/4 - 19
-5	-	1/2 - 20	1/2 - 20	-	-	-
-6	3/8 - 18	9/16 - 18	9/16 - 18	11/16 - 16	3/8 - 19	3/8 - 19
-8	1/2 - 14	3/4 - 16	3/4 - 16	13/16 - 16	1/2 - 14	1/2 - 14
-10	-	7/8 - 14	7/8 - 14	1 - 14	-	-
-12	3/4 - 14	1-1/16 - 12	1-1/16 - 12	13/16 - 12	3/4 - 14	3/4 - 14
-14	-	1-3/16 - 12	1-3/16 - 12	15/16 - 12	-	-
-16	1 - 11-1/2	1-5/16 - 12	1-5/16 - 12	17/16 - 12	1 - 11	1 - 11
-20	1-1/4 - 11-1/2	1-5/8 - 12	1-5/8 - 12	1 11/16 - 12	1-1/4 - 11	1-1/4 - 11
-24	1-1/2 - 11-1/2	1-7/8 - 12	1-7/8 - 12	2 - 12	1-1/2 - 11	1-1/2 - 11
-32	2 - 11-1/2	2-1/2 - 12	2-1/2 - 12	2 1/2 - 12	2 - 11	2 - 11

### Thread Sizing Kit

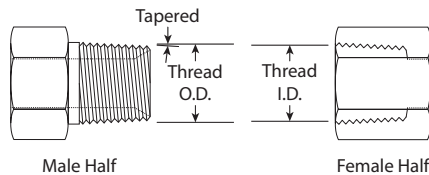
Allows the user to properly identify threads of all hydraulic types. This handy kit includes a fractional thread pitch gauge, a metric thread pitch gauge, inside & outside caliper (inches and millimeters), a seat angle gauge (24 degree/30 degree/37 degree/45 degree), 27-page fluid ports & connections identification guid. A carrying case is standard for easy and convenient storage.



Stock Number	Ship Wt.
1706410	1

### NPTF (National Pipe Thread Fuel)

Commonly referred to as "pipe" threads, this connection is still widely used in fluid power systems, even though it is not recommended by the National Fluid Power Association (NFPA) for use in hydraulic applications. The thread is tapered and the seal takes place by deformation of the threads. NPTF threads differ from NPT threads in that NPT threads are designed for mechanical or low-pressure air or fluid applications. Visually, the two look identical. However, the thread forms are different. Mating a NPT threads with NPTF threads will most likely produce a connection what will leak. All of our hydraulic fittings and adapters are NPTF threads. A thread sealant is recommended for all NPTF fittings and adapters.

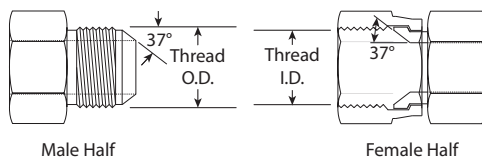


NPTF Thread Measuring Tip: Measure the thread diameter and subtract one quarter inch to find the nominal thread size.

Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D.	Female Thread I.D.
1/8	02	1/8 - 27	12/32 (0.41)	3/8 (0.38)
1/4	04	1/4 - 18	17/32 (0.54)	1/2 (0.49)
3/8	06	3/8 - 18	11/16 (0.68)	5/8 (0.63)
1/2	08	1/2 - 14	27/32 (0.84)	25/32 (0.77)
3/4	12	3/4 - 14	1 1/16 (1.05)	1 (0.98)
1	16	1 - 11 1/2	1 5/16 (1.32)	1 1/4 (1.24)
1 1/4	20	1 1/4 - 11 1/2	1 21/32 (1.66)	1 19/32 (1.58)
1 1/2	24	1 1/2 - 11 1/2	1 29/32 (1.90)	1 13/16 (1.82)
2	32	2 - 11 1/2	2 3/8 (2.38)	2 5/16 (2.30)

### JIC 37° Flare (SAE J514)

The 37° JIC (Joint Industrial Council) is a reliable, straight thread, single-flare design that is used across the world. It is very popular in many applications and environments because it's compact and easy to assemble. It also features high holding power with low torque requirements. The 37° JIC connection consists of three pieces: the nut, the sleeve, and the fitting in a range of sizes from 1/8" up to 2". The sleeve not only absorbs vibration, but acts as a support to the flare during assembly and helps reduce the risk of twisting the tube. Since the 37° JIC is a metal-to-metal seal, it can be connected and reconnected multiple times.



Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D.	Female Thread I.D.
1/8	02	5/16 - 24	5/16 (.31)	9/32 (.27)
3/16	03	3/8 - 24	3/8 (.38)	11/32 (.34)
1/4	04	7/16 - 20	7/16 (.44)	13/32 (.39)
5/16	05	1/2 - 20	1/2 (.50)	15/32 (.45)
3/8	06	9/16 - 18	9/16 (.56)	17/32 (.51)
1/2	08	3/4 - 16	3/4 (.75)	11/16 (.69)
5/8	10	7/8 - 14	7/8 (.88)	13/16 (.81)
3/4	12	1 1/16 - 12	1 1/16 (1.06)	1 (.98)
7/8	14	1 3/16 - 12	1 3/16 (1.19)	1 1/8 (1.10)
1	16	1 5/16 - 12	1 5/16 (1.31)	1 1/4 (1.23)
1 1/4	20	1 5/8 - 12	1 5/8 (1.63)	1 9/16 (1.54)
1 1/2	24	1 7/8 - 12	1 7/8 (1.88)	1 13/16 (1.79)
2	32	2-1/2 - 12	2-1/2 (2.50)	2 7/16 (2.42)

