

Keep With Operator's Manual

**HOSE KIT
2410 LOADER
NEW HOLLAND TN, TNA, TND AND TNDA TRACTORS WITH
NEW HOLLAND MID MOUNTED VALVE**

MODEL	2WD	4WD	LESS CAB	WITH CAB
TN55, TN60A, TN65, TN70, TN70A, TN75, TN75A	X	X	X	
TN55D, TN60DA, TN65D, TN70D, TN70DA, TN75D, TN75DA	X	X		X

GENERAL INFORMATION

Hose and fitting kit can be installed using tools ordinarily available. Move control lever in each direction to relieve pressure in tractor hydraulic system. Shut off engine and engage brakes during installation.

Install loader mounting brackets onto tractor before installing hose and fitting kit. Refer to instructions provided with loader mounting kit.



WARNING: Escaping hydraulic fluid under pressure can penetrate skin causing serious injury.

- DO NOT use your hands to check for leaks. Use a piece of cardboard or paper to search for leaks.
- Stop engine and relieve pressure before connecting or disconnecting lines.
- Tighten all connections before starting engine or pressurizing lines.

If any fluid is injected into skin, obtain medical attention immediately or gangrene may result.

NOTE: Apply sealant only to all tapered threads unless coupled with swivel adapters. When using teflon tape, wrap tape clockwise (as viewed from end) and wrap only twice. Keep sealant away from first two threads of tapered end to prevent contamination of hydraulic fluid. Do not use sealant on o-ring or flare adapter threads.

NOTE: Because this hose and fitting kit is used on a variety of tractor models, it is important to pay attention to section headings in these instructions to follow only instructions that apply to your tractor model. Due to differences in how hoses and fittings are used, you will have extra unused parts when installation is complete.

- **TN and TNA series tractors** will have two unused 3/4 JIC male x 18-1.5 metric male straight adapter fittings (2), and two unused 3/4 JIC female x 3/4 SAE male straight adapter fittings (13) remaining after installation.
- **TND and TNDA series tractors** will have two unused 3/4 SAE male x 18-1.5 metric male straight adapter fittings (1) remaining after installation.

PREPARING TRACTOR MID MOUNTED REMOTE VALVE FOR INSTALLATION OF FITTINGS & COUPLINGS (Figures 1 & 2)

To install fittings and couplings into tractor mid mounted remote valve, you will need to find the valve and remove four flow bolts and two spreader port castings.

Mid mounted remote valve is located under tractor cab or operator platform near right-side steps and looks similar to the following illustration before spreader port castings are removed.

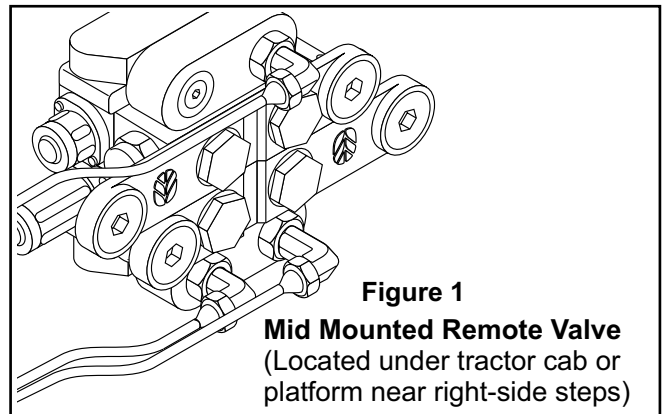


Figure 1
Mid Mounted Remote Valve
(Located under tractor cab or platform near right-side steps)

Remove two spreader port castings by removing four flow bolts, which secure them to mid mounted remote valve, as shown in the following illustration.

NOTE: Each spreader port casting is attached to mid mounted remote valve by two flow bolts.

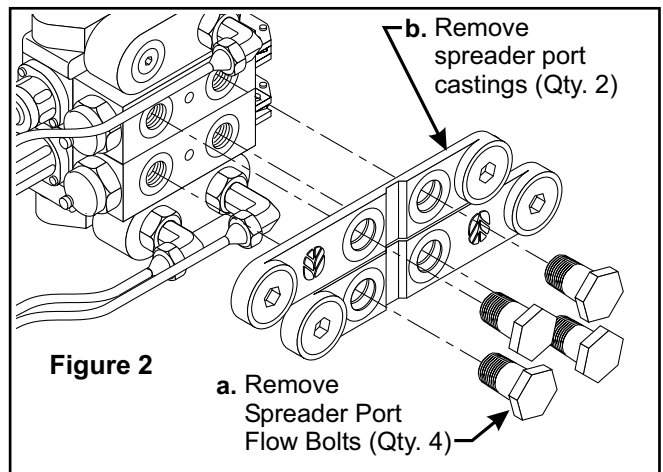


Figure 2

a. Remove Spreader Port Flow Bolts (Qty. 4)

b. Remove spreader port castings (Qty. 2)

**TN and TNA SERIES TRACTORS ONLY
INSTALLING FITTINGS ONTO MID MOUNTED
REMOTE VALVE (Figures 3 & 4)**

NOTE: Instructions in this section are for TN and TNA series tractors only. For TND and TNDA series tractors, refer to sections on pages 3 and 4, specifically for TND and TNDA series tractors.

NOTE: To allow adequate wrench clearance to tighten fittings and couplings, it is important to assemble and tighten items in sequence as follows.

1. Install and tighten 18mm-1.5 metric male x 3/4-16 SAE o-ring male straight adapter fittings (1) into three female quick couplers (4).

NOTE: Thread sizes at each end of adapter (1) are similar. Be sure to install 3/4-16 SAE o-ring end (with o-ring, but without washer) of adapter into female quick coupler.

Slide ring of one dust plug, red (8), blue (9), and yellow (10) over each male adapter fitting (1) assembled to female quick couplers (4).

2. Install and tighten assembled female quick couplers (4) with straight adapter fittings (1) and red, yellow, and blue dust plugs (8, 9 & 10) into two rear ports and upper front port of mid mounted remote valve, installing quick couplers (4) in the following sequence.

- 1—Upper rear, tilt cylinder rod (TCR), port, red (8).
- 2—Lower rear, lift cylinder rod (LCR), port, yellow (10).
- 3—Upper front, tilt cylinder base (TCB), port, blue (9).

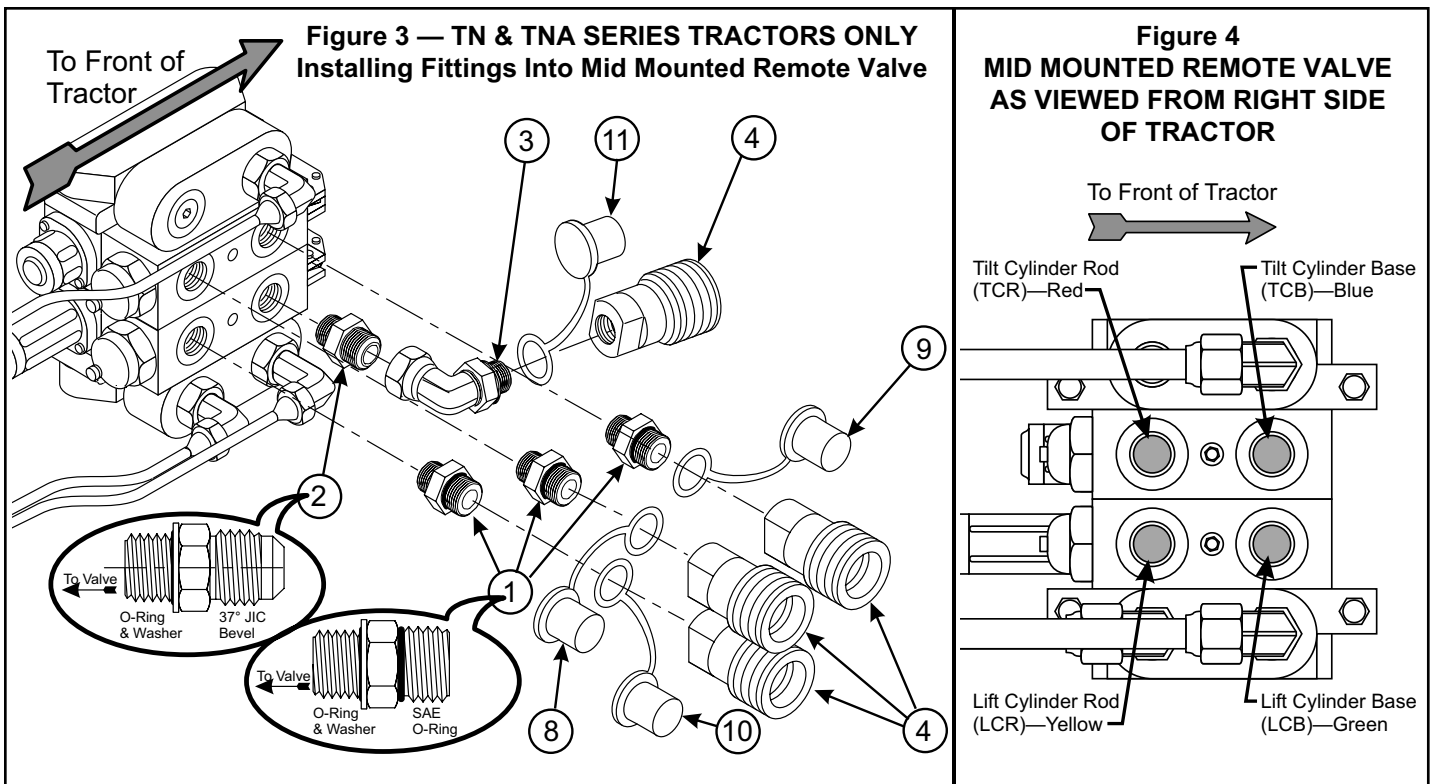
3. Install and tighten 18mm-1.5 metric male x 3/4-16 JIC male straight adapter (2) into lower front, lift cylinder base (LCB), port of mid mounted remote valve.

NOTE: Thread sizes at each end of adapter (2) are similar. Be sure to install 18mm-1.5 metric end (with o-ring and washer) of adapter into valve port.

4. Install and tighten 90° 3/4-16 JIC female x 3/4-16 SAE o-ring male elbow (3) onto 18mm-1.5 metric male x 3/4-16 JIC male straight adapter fitting (2) in lower front port of valve.

NOTE: Install and tighten 90° 3/4-16 JIC female x 3/4-16 o-ring male elbow fitting (3) so it will direct quick coupler (4) for lower front port of valve toward front of tractor and slightly (5°-10°) downward.

Slide ring of green dust plug (11) over elbow fitting (3) installed in lower front port of mid mounted remote valve and install and tighten remaining female quick coupler (4) onto elbow fitting (3).



**TND and TNDA SERIES TRACTORS ONLY
INSTALLING FITTINGS ONTO MID MOUNTED
REMOTE VALVE (Figures 5 & 6)**

NOTE: Instructions in this section are for TND and TNDA series tractors only. For TN & TNA series tractors, refer to sections on pages 2 & 4, specifically for TN & TNA series tractors.

NOTE: To allow adequate wrench clearance to tighten fittings and couplings, it is important to assemble and tighten items in sequence as follows.

1. Install and tighten one 18mm-1.5 metric male x 3/4-16 JIC male straight adapter fitting (2) into upper rear port of tractor mid mounted remote valve, install and tighten one 18mm-1.5 metric male x 3/4-16 JIC male straight adapter fitting (2) into lower rear port of valve, install and tighten one 18mm-1.5 metric male x 3/4-16 SAE o-ring male straight adapter fitting (1) into upper front port of valve, and install and tighten 18mm-1.5 metric male x 3/4-16 JIC male straight adapter fitting (2) into lower front port of tractor valve.

NOTE: Be sure to install 18mm-1.5 metric thread end (with washer) of straight adapter (1 & 2) into ports of tractor mid mounted remote valve.

2. Install and tighten one female quick coupler (4), onto one 3/4-16 JIC female x 3/4-16 SAE o-ring male straight adapter fitting (13), using red dust plug (8) to color-code quick coupler. Install and tighten another female quick coupler (4) onto remaining 3/4-16 JIC female x 3/4-16 SAE o-ring male straight adapter fitting (13), using yellow dust plug (10) to color-code quick coupler. Install and tighten quick-coupler/female-fitting sub-assembly (4 & 13) identified by red dust plug (8) onto male straight adapter fitting (2) in upper rear port, and install and tighten quick-coupler/female-fitting (4 & 13) sub-assembly identified by yellow dust plug (10) onto male straight adapter fitting (2) in lower rear port.
3. Install and tighten one female quick coupler (4) and blue dust plug (9) onto 18mm-1.5 metric male x 3/4-16 SAE o-ring male straight adapter fitting (1) in upper front port of valve.
4. Install and tighten 90° 3/4-16 JIC female x 3/4-16 o-ring male elbow (3), remaining female quick coupler (4) and green dust plug (11) onto fitting (2) installed in lower front port of mid mounted remote valve.

NOTE: Install and tighten 90° 3/4-16 JIC female x 3/4-16 o-ring male elbow fitting (3) to direct quick coupler (4) for lower front port of valve toward front of tractor and slightly (5°-10°) downward.

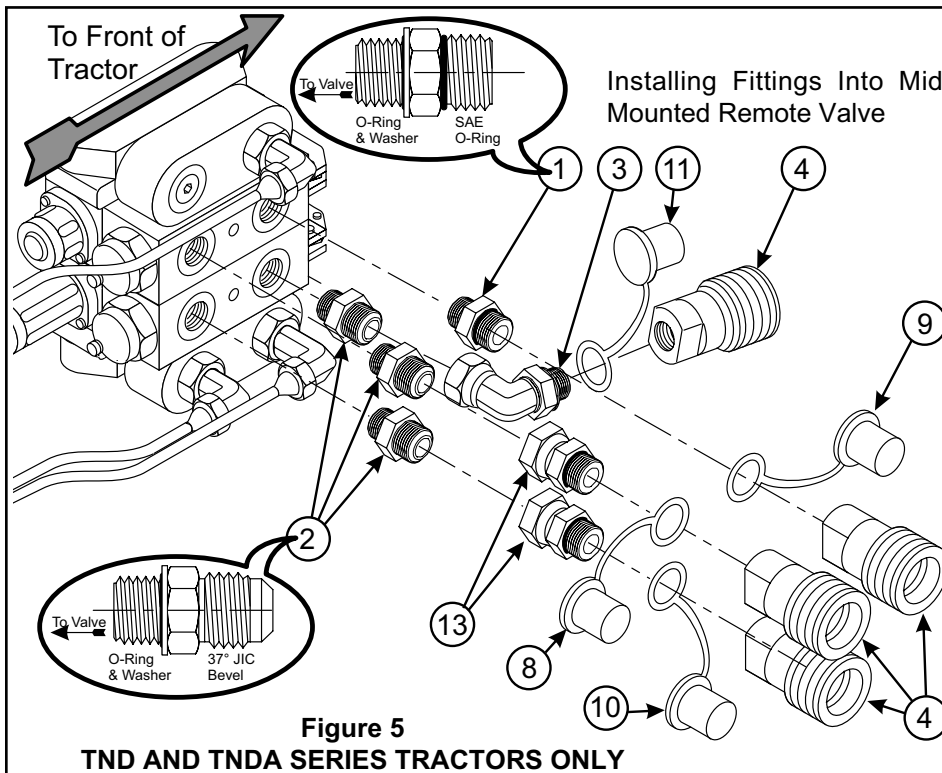


Figure 5

TND AND TNDA SERIES TRACTORS ONLY

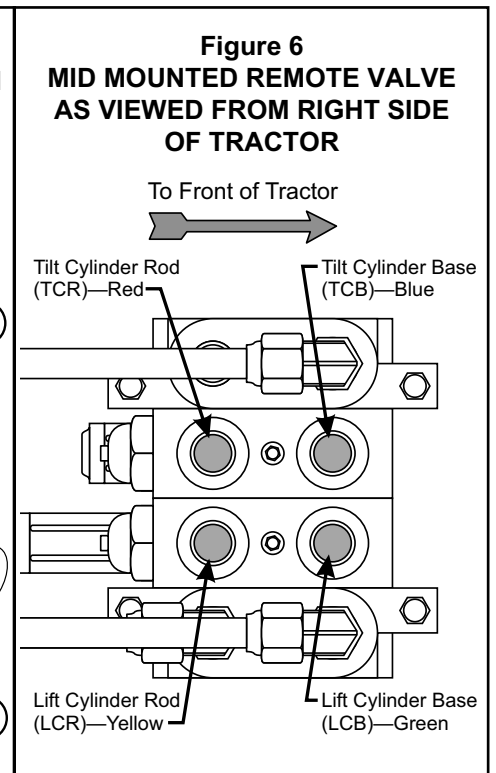


Figure 6

**MID MOUNTED REMOTE VALVE
AS VIEWED FROM RIGHT SIDE
OF TRACTOR**

TN, TNA, TND & TNDA SERIES TRACTORS HOSE & FITTING INSTALLATION (Figure 7)

1. Install four 3/8 x 70" hoses (5) to steel oil lines on loader as shown.
2. Slide one nylon sleeve (6) over each boom oil line hose (5). Slide sleeve (6) so end is as close to boom oil lines as possible, covering all hose crimps.
3. Install 90° elbows (12) onto male ends of boom oil line hoses (5).
4. Install male quick couplers (19) and dust caps (14, 15, 16 & 17) onto 90° elbows (12).

NOTE: Important to attach dust caps (14, 15, 16 & 17) to hoses in sequence shown in figure 7.

5. Use adjustable straps (7) to secure nylon sleeves (6) to hoses and to secure hoses together and away from moving parts.

Mount loader onto loader mounting brackets according to instructions provided with loader mounting kit, connecting male quick couplers for lift and tilt cylinder function to corresponding female quick couplers.

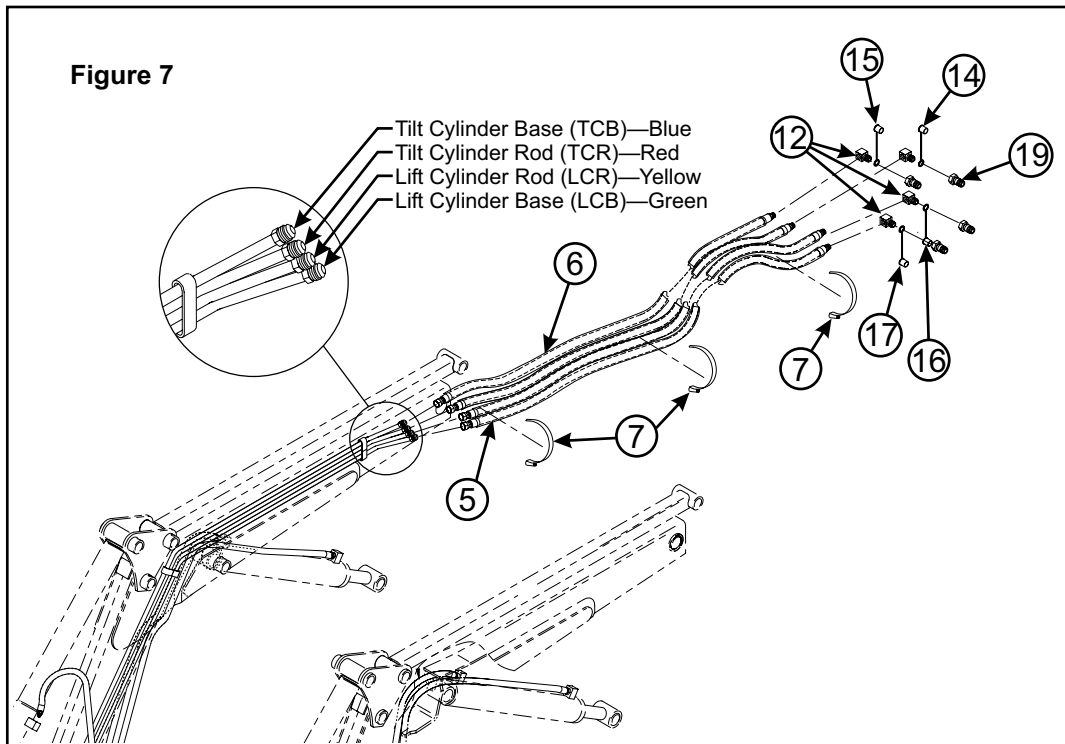
NOTE: Route hoses behind tractor step.

NOTE: Make sure color coding corresponds between dust caps and plugs for each hose and valve coupling.

WHEN ALL PLUMBING IS COMPLETED

After all plumbing has been completed and fittings securely tightened, start engine and slowly cycle lift and tilt cylinders several times to purge air out of hydraulic system. Retract cylinders and shut off tractor engine. Check hydraulic fluid level in tractor and replenish hydraulic fluid as necessary. Refer to tractor owners manual for proper fluid type.

NOTE: When cycling loader, pulling back on joystick control lever should raise loader and pulling lever toward you should roll bucket or attachment back. If direction for either control lever is reversed, switch corresponding male quick couplers at mid mounted remote valve. Also correct color coding.



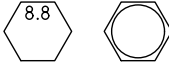
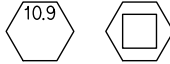


PARTS LIST - HOSE KIT

Item	SMC No.	Description	Qty.
1	51374-1	FITTING, Adapter, Straight, 3/4-16 SAE male x 18-1.5 Metric male	3
2	41173-2	FITTING, Adapter, Straight, 3/4-16 JIC male x 18-1.5 Metric male	3
3	44277-4	FITTING, Elbow, 90°, 3/4-16 O-ring to 3/4-16 JIC	1
4	6147-10	COUPLER, Quick, Female, 1/2" (3/4-16 SAE)	4
5	46487-4	HOSE, 3/8 x 70"	4
6	34853-69	SLEEVE, Nylon Hose, 1-1/4 I.D. x 76"	4
7	8137-3	STRAP, Adjustable, 1/2 x 20"	4
8	4838-4	DUST PLUG, Red	1
9	4838-12	DUST PLUG, Blue	1
10	4838-13	DUST PLUG, Yellow	1
11	4838-14	DUST PLUG, Green	1
12	23487-2	FITTING, Elbow, 90°, "Street," 1/2-14 NPT x 1/2-14 NPT	4
13	42062-1	FITTING, Adapter, Straight, 3/4-16 JIC female x 3/4-16 SAE male	2
14	4838-3	DUST CAP, Red	1
15	4838-8	DUST CAP, Blue	1
16	4838-9	DUST CAP, Yellow	1
17	4838-10	DUST CAP, Green	1
18	7438-1	STRAP, Tarp	1
19	6137-6	COUPLER, Quick, Male, 1/2-14	4

GENERAL TORQUE SPECIFICATIONS

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

AMERICAN STANDARD CAP SCREWS									METRIC CAP SCREWS								
SAE Grade	5				8				Metric Class	8.8				10.9			
Typical Grade ID Markings on Head									Typical Grade ID Markings on Head								
Cap Screw	TORQUE				TORQUE				Cap Screw	TORQUE				TORQUE			
Size	FT-LBS		N-m		FT-LBS		N-m		Size	FT-LBS		N-m		FT-LBS		N-m	
Inches	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	Millimeters	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1/4-20	6.25	7.25	8.5	10	8.25	9.5	11	13	M6 x 1.00	6	8	8	11	9	11	12	15
1/4-28	8	9	11	12	10.5	12	14	16	M8 x 1.25	16	20	21.5	27	23	27	31	36.5
5/16-18	14	15	19	20	18.5	20	25	27	M10 x 1.50	29	35	39	47	42	52	57	70
5/16-24	17.5	19	23	26	23	25	31	34	M12 x 1.75	52	62	70	84	75	91	102	123
3/8-16	26	28	35	38	35	37	47.5	50	M14 x 2.00	85	103	115	139	120	146	163	198
3/8-24	31	34	42	46	41	45	55.5	61	M16 x 2.50	130	158	176	214	176	216	238	293
7/16-14	41	45	55.5	61	55	60	74.5	81	M18 x 2.50	172	210	233	284	240	294	325	398
7/16-20	51	55	69	74.5	68	75	92	102	M20 x 2.50	274	301	335	408	343	426	465	577
1/2-13	65	72	88	97.5	86	96	116	130	M22 x 2.50	332	404	450	547	472	576	639	780
1/2-20	76	84	103	114	102	112	138	152	M24 x 3.00	423	517	573	700	599	732	812	992
9/16-12	95	105	129	142	127	140	172	190	M27 x 3.00	637	779	863	1055	898	1098	1217	1488
9/16-18	111	123	150	167	148	164	200	222	M30 x 3.00	872	1066	1181	1444	1224	1496	1658	2027
5/8-11	126	139	171	188	168	185	228	251	<p>NOTE: These values apply to fasteners as received from the supplier, dry or when lubricated with normal engine oil. They do not apply if special graphite or molydisulphide greases or other extreme pressure lubricants are used.</p>								
5/8-18	152	168	206	228	203	224	275	304									
3/4-10	238	262	322	355	318	350	431	474									
3/4-16	274	305	371	409	365	402	495	544									
7/8-9	350	386	474	523	466	515	631	698									
7/8-14	407	448	551	607	543	597	736	809									
1-8	537	592	728	802	716	790	970	1070									
1-14	670	740	908	1003	894	987	1211	1337									

Torque Specifications for 37° JIC Fittings

Size	Thread Size	Assembly Torque		Tube Connection F.F.F.T.	Swivel Nut or Hose Connection F.F.F.T.
		in.·lb.	ft.·lb.		
-4	7/16-20	140 ± 10	12 ± 1	2	2
-5	1/2-20	180 ± 15	15 ± 1	2	2
-6	9/16-18	250 ± 15	21 ± 1	1 1/2	1 1/4
-8	3/4-16	550 ± 25	45 ± 5	1 1/2	1
-12	1 1/16-12	1000 ± 50	85 ± 5	1 1/4	1
-16	1 5/16-12	1450 ± 50	120 ± 5	1	1
-20	1 5/8-12	2000 ± 100	170 ± 10	1	1
-24	1 7/8-12	2400 ± 150	200 ± 15	1	1
-32	2 1/2-12	3200 ± 200	270 ± 20	1	1

Torque Specifications for SAE O-Ring Fittings

Size	Swivel Nut or Hose	Assembly Torque		F.F.F.T.
		in.·lb.	ft.·lb.	
2	5/16-24	90 ± 5	7.5 ± 0.5	1 ± .25
3	3/8-24	170 ± 10	14 ± 1	1 ± .25
4	7/16-20	220 ± 15	18 ± 1	1 ± .25
5	1/2-20	260 ± 15	22 ± 1	1 ± .25
6	9/16-18	320 ± 20	27 ± 2	1.5 ± .25
8	3/4-16	570 ± 25	48 ± 2	1.5 ± .25
10	7/8-14	1060 ± 50	90 ± 5	1.5 ± .25
12	1 1/16-12	1300 ± 50	110 ± 5	1.5 ± .25
14	1 3/16-12	1750 ± 75	145 ± 6	1.5 ± .25
16	1 5/16-12	1920 ± 125	160 ± 6	1.5 ± .25
20	1 5/8-12	2700 ± 150	225 ± 12	1.5 ± .25
24	1 7/8-12	3000 ± 150	250 ± 12	1.5 ± .25
32	2 1/2-12	3900 ± 200	325 ± 15	1.5 ± .25

INSTALLATION INSTRUCTIONS