

Keep With Operator's Manual

HYDRAULIC KIT

NEW HOLLAND 756C BACKHOE

NEW HOLLAND TC18 (SN UD33666 and above), TC21D (SN UF33357 and above), TC21DA, TC24D & TC24DA TRACTORS

GENERAL INFORMATION

Hydraulic kit can be installed on tractor using tools ordinarily available. Tractor must be equipped with loader or 702C front blade to operate backhoe.

Apply thread sealant or teflon tape to all pipe thread fittings.



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.*
- *Make sure hoses are secure and will not rub on ground or tires.*

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

INSTALLING HYDRAULIC KIT (Figures 1 & 2)

1. Connect 3/8 x 108 hose (2) to inlet port on backhoe valve. Route hose down and along inside surface of right side subframe channel. Connect 1/2 x 63 hose (1) to tank port on backhoe valve.
2. Install dust cap (9) and male quick coupler (7) to end of 1/2 x 63 hose (1). Remove pipe plug from right side trumpet housing at rear of tractor.
3. Install 90° elbow (12) into orifice in trumpet housing. Install adapter fitting (13), dust plug (10) and female coupling (5) to 90° elbow (12).

NOTE: Installation of 90° fitting (12) is easier with right rear tire removed. Orient fittings to align hose (when coupled) to be parallel to three-point lift arm to avoid contact.

4. Remove cover from tractor remote valve and remove steel oil line from power beyond port of valve and power beyond port "N" on hydraulic manifold.
5. Attach 16" hose (4) onto 90° fitting at power port of tractor loader valve. Attach 3/8" female coupler (6) to hose (4). Make sure hose clears valve cover and reinstall valve cover.

6. Install 45° fitting adapter (14) onto 45° fitting in "N" port of tractor hydraulic manifold. Install 3/8" x 20" hose (3) to manifold. Attach dust cap (11) and male coupler (8) to opposite end of 3/8" x 20" hose (3). Route hose (3) along tractor engine block. Attach hose (3) to oil line leading to tractor pump using one tie strap (15).

7. Couple 3/8 x 16 hose (4) from tractor remote valve to 3/8 x 30 hose (3) from tractor hydraulic manifold.



WARNING: To prevent possible damage to tractor hydraulic system, these hoses must be coupled if tractor is operated without backhoe.

8. Secure hose (1) to underside of backhoe foot rests using tie straps (17).

MOUNTING BACKHOE TO TRACTOR

1. Back tractor slowly toward backhoe, parallel to subframe assembly, until hoses can be connected to tractor.



WARNING: To prevent possible damage to hoses and backhoe valve, always shut off tractor engine when coupling or uncoupling hoses from backhoe. Make sure connections are complete at couplers.

2. Raise tractor three-point lift arms to level position. Three-point hitch is disabled after attaching backhoe.
3. Connect backhoe tank hose (1) to tractor tank port. Disconnect hose (3) from hose (4), then connect backhoe pressure hose (2) to hose (4)(from tractor remote valve power beyond port).
4. Using backhoe controls, extend bucket and lower stabilizers to provide a base for raising subframe. Using backhoe controls, raise subframe to proper height to connect to tractor.
5. Slowly back tractor until subframe is engaged in mounting bracket and mounting ears.

NOTE: Check to be sure hoses are not pinched between tractor and subframe.

Connect subframe to mounting ears using pins provided in subframe kit.

6. After backhoe has been mounted to tractor, check all hydraulic connections. Slowly cycle backhoe cylinders several times to purge air from hydraulic system. Retract cylinders and shut off engine. Replenish tractor hydraulic system

DISCONNECTING BACKHOE FROM TRACTOR

1. Use backhoe stabilizers and dipper to remove pressure from backhoe subframe. Remove pins securing backhoe subframe.
2. Move tractor forward to allow subframe to clear front and rear mountings. Using stabilizer and dipper controls, allow backhoe subframe to lower to ground. Shut off tractor and actuate backhoe valve to relieve any trapped pressure.

3. Uncouple backhoe tank hose (1) from tractor. Uncouple backhoe pressure hose (2) from tractor remote valve power beyond hose (4).
4. Connect tractor remote valve power beyond hose (4) to hose (3) coming from tractor manifold.



WARNING: To prevent possible damage to tractor hydraulic system, these hoses must be coupled if tractor is operated without backhoe.

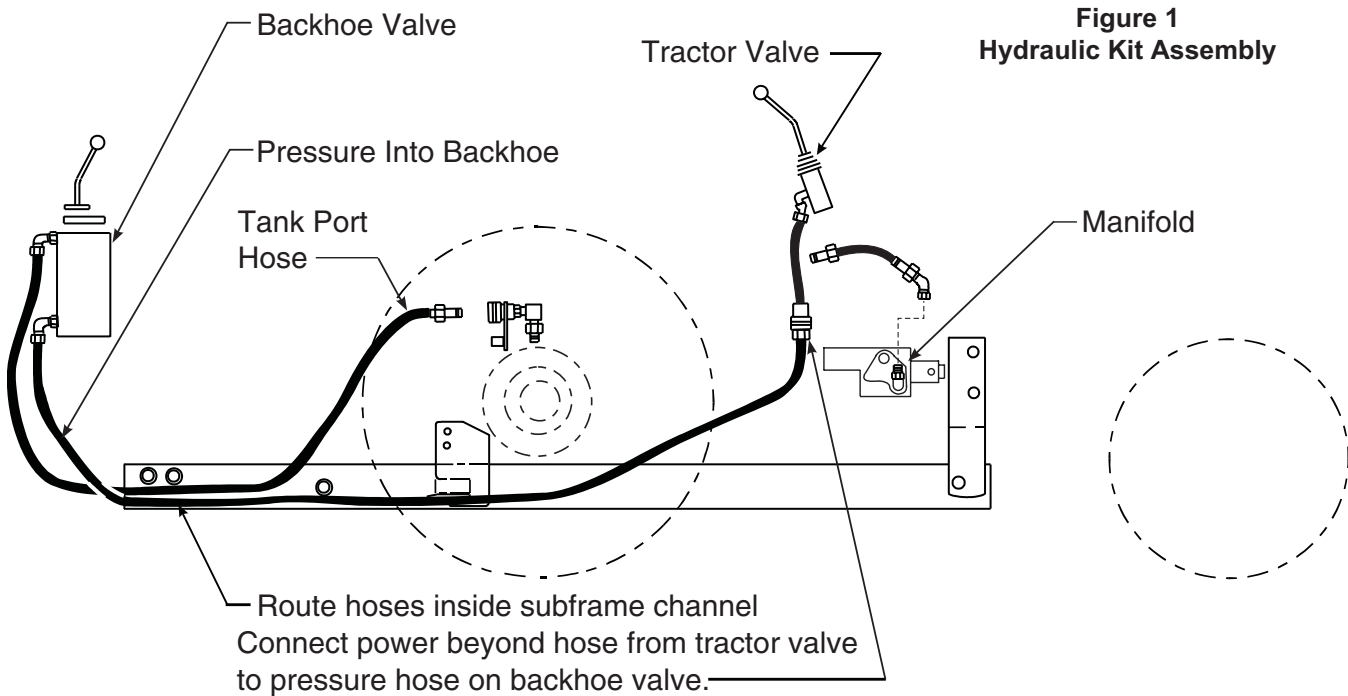
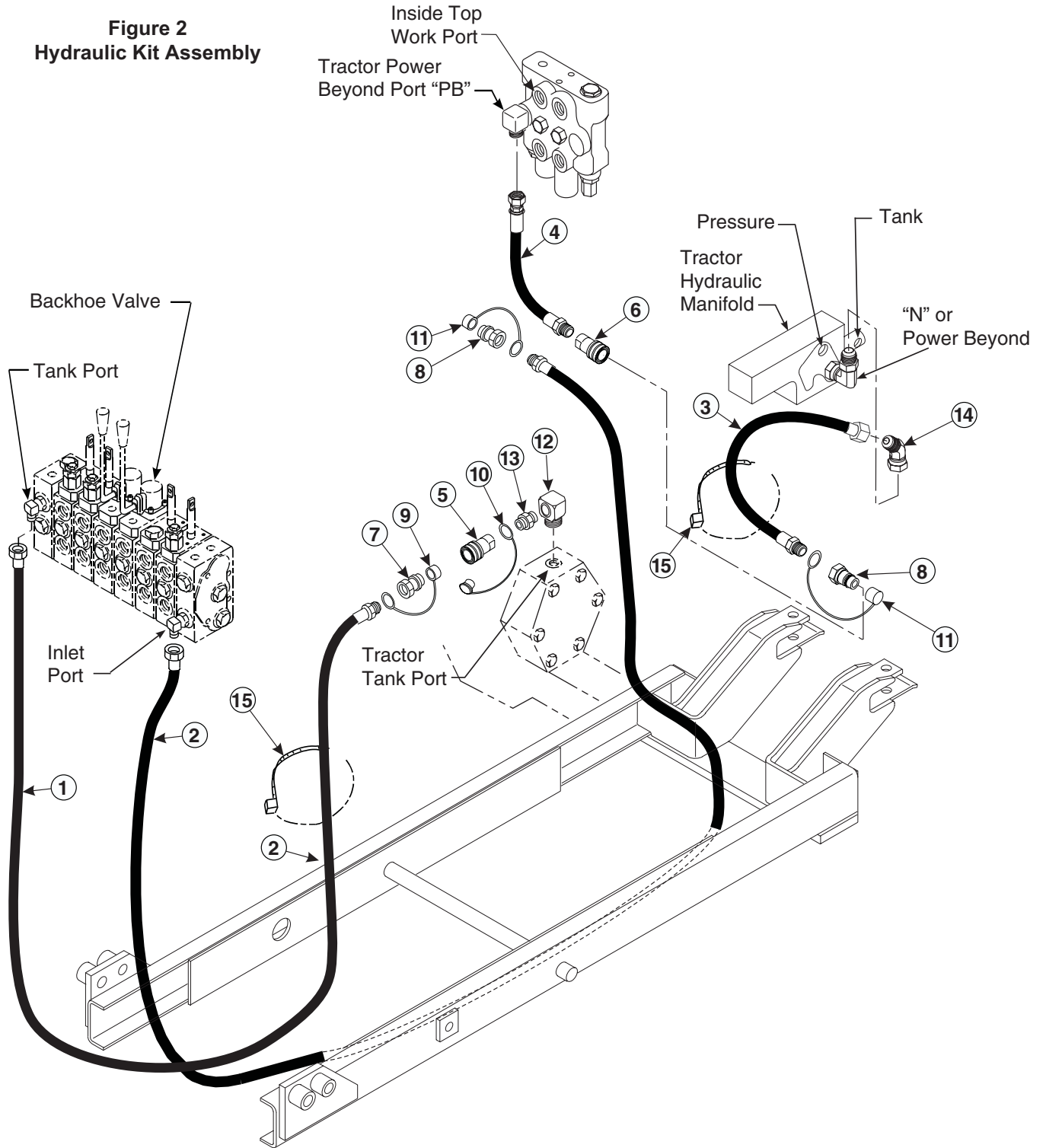


Figure 1
Hydraulic Kit Assembly

ITEM	PART NO.	NH PART NO.	DESCRIPTION	QTY.
1	41053-8	SML410538	HOSE, 1/2" x 63"	1
2	36336-15	SML3633615	HOSE, 3/8" x 108"	1
3	36336-17	SML3633617	HOSE, 3/8" x 20"	1
4	36336-16	SML3633616	HOSE, 3/8" x 16"	1
5	6147-8	SML61478	QUICK COUPLER, Female, 1/2"	1
6	6147-4	86583553	QUICK COUPLER, Female, 3/8"	1
7	6137-6	SML61376	QUICK COUPLER, Male, 1/2"	1
8	6137-4	86583622	QUICK COUPLER, Male, 3/8"	2
9	4838-3	SML48383	DUST CAP, 1/2", Red	1
10	4838-4	SML48384	DUST PLUG, 1/2", Red	1
11	4838-5	SML48385	DUST CAP, 3/8", Red	2
12	7669	88791	FITTING, 3/8" x 3/8", 90°	1
13	44982-2	SML449822	FITTING, Adapter, 1/2-14 x 3/8-18	1
14	38226-2	SML382262	FITTING, Elbow, 3/4-16 x 3/4-16, 45°	1
15	8137-6	SML81376	TIE STRAP, 5/16 x 11	4

Figure 2
Hydraulic Kit Assembly



GENERAL TORQUE SPECIFICATIONS

USE THE FOLLOWING TORQUES WHEN SPECIAL TORQUES ARE NOT GIVEN

Standard American and Metric Cap Screws

AMERICAN STANDARD CAP SCREWS									METRIC CAP SCREWS								
SAE Grade	5				8				Metric Class	8.8				10.9			
Typ. Head Markings									Typ. Head Markings								
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	247	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									
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									

NOTE: These values apply to fasteners as received from supplier, dry or when lubricated with normal engine oil. They do not apply if special graphite or moly sulphide greases or other extreme lubricants are used.

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

O-Ring Face Seal Tube/ Hose Swivel Nut

Metric Tube O.D. (mm)	Dash Size	Thread Size (in.)	Swivel Nut Hex Size (in.)	Swivel Nut Torque	
				N·m	lb _r ·ft
5	-3	--	--	--	--
6	-4	9/16 - 18	11/16	16	12
8	-5	--	--	--	--
10	-6	11/16 - 16	13/16	24	18
12	-8	13/16 - 16	15/16	50	37
16	-10	1 - 14	1-1/8	69	51
20	-12	1-3/16 - 12	1-3/8	102	75
22	-14	1-3/16 - 12	--	102	75
25	-16	1-7/16 - 12	1-5/8	142	105
32	-20	1-11/16 - 12	1-7/8	190	140
38	-24	2 - 12	2-1/4	217	160
50.8	-32	--	--	--	--

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