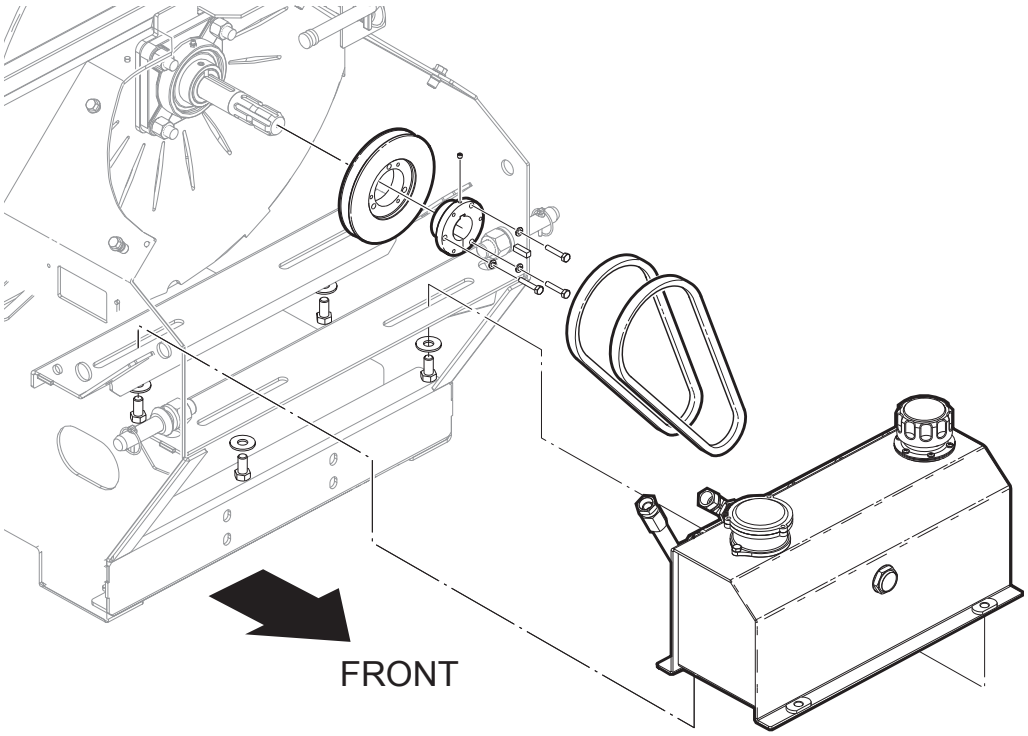
INSTALLATION INSTRUCTIONS

C3540 PTO-Driven Power Pack
BX52R, BX52RI; BX72R, BX72RI



Part Number: Z97839

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WALLENSTEIN

Safety

1. Safety Alert Symbol

This Safety Alert Symbol means:

ATTENTION! BE ALERT!

YOUR SAFETY IS INVOLVED!

The **Safety Alert Symbol** identifies important safety messages on the machine and in this instruction. This symbol means be alert to the possibility of personal injury or death. Follow instructions provided.

2. Signal Words

The signal words **DANGER**, **WARNING** and **CAUTION** determine the seriousness level of the warning messages in this manual. The appropriate signal word for each message in this manual has been selected using the following guidelines:

DANGER –

Indicates an imminently hazardous situation that, if not avoided, **will** result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

WARNING –

Indicates a potentially hazardous situation that, if not avoided, **could** result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

CAUTION –

Indicates a potentially hazardous situation that, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices.

IMPORTANT – To avoid confusing equipment protection with personal safety messages, a signal word IMPORTANT indicates a situation that if not avoided, could result in damage to the machine.

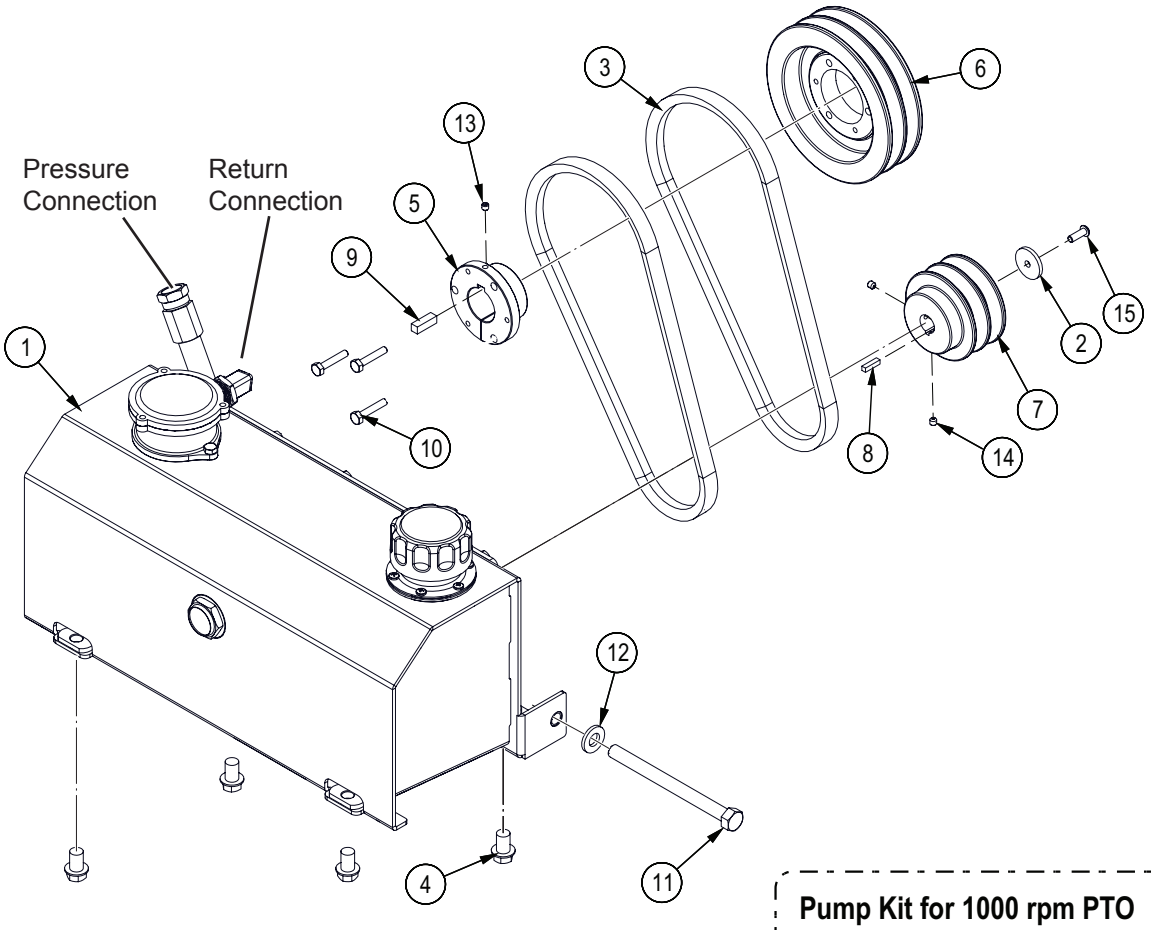
NOTE: (plus text) – indicates an additional explanation for an element of information.

3. Equipment Operation

⚠ WARNING!

Avoid the risk of personal injury or machine damage!
Read the operator's manual before using this equipment. Carefully read all safety messages in the manual and follow all safety signs on the machine.

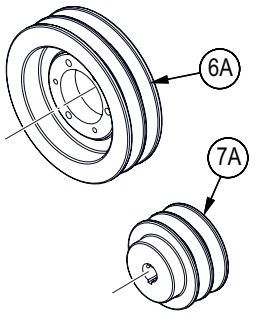
Parts Breakdown



Pump Kit for 540 rpm PTO

Item No.	Part No.	Description	Qty
1	1081A105	Hydraulic Power Pack	1
2	1081L106	Washer, Trap	1
3	Z41155	Single Belt, B30	2
4	Z76154	Flange Bolt, 1/2NC x 3/4"	4
5	Z41505	Hub, SDS x 1-3/8"	1
6	Z41710	Double Sheave, 2B62 x SDS	1
7	Z41906	Double Pulley, 2MB35 x 3/4"	1
8	Z46524	Key, 3/16" x 3/16" x 3/4"	1
9	Z46542	Key, 5/16" x 5/16" x 1"	1
10	Z71113	Hex Bolt, 1/4NC x 1-3/8"	3
11	Z71591	Hex Bolt, 1/2NC x 6" Full Threads	1
12	Z73151	SAE Washer, 1/2"	1
13	Z74111	Set Screw, 1/4NC x 1/4"	1
14	Z74112	Set Screw, 1/4NF x 1/4"	2
15	Z75342	BHCS, 1/4NF x 3/4"	1

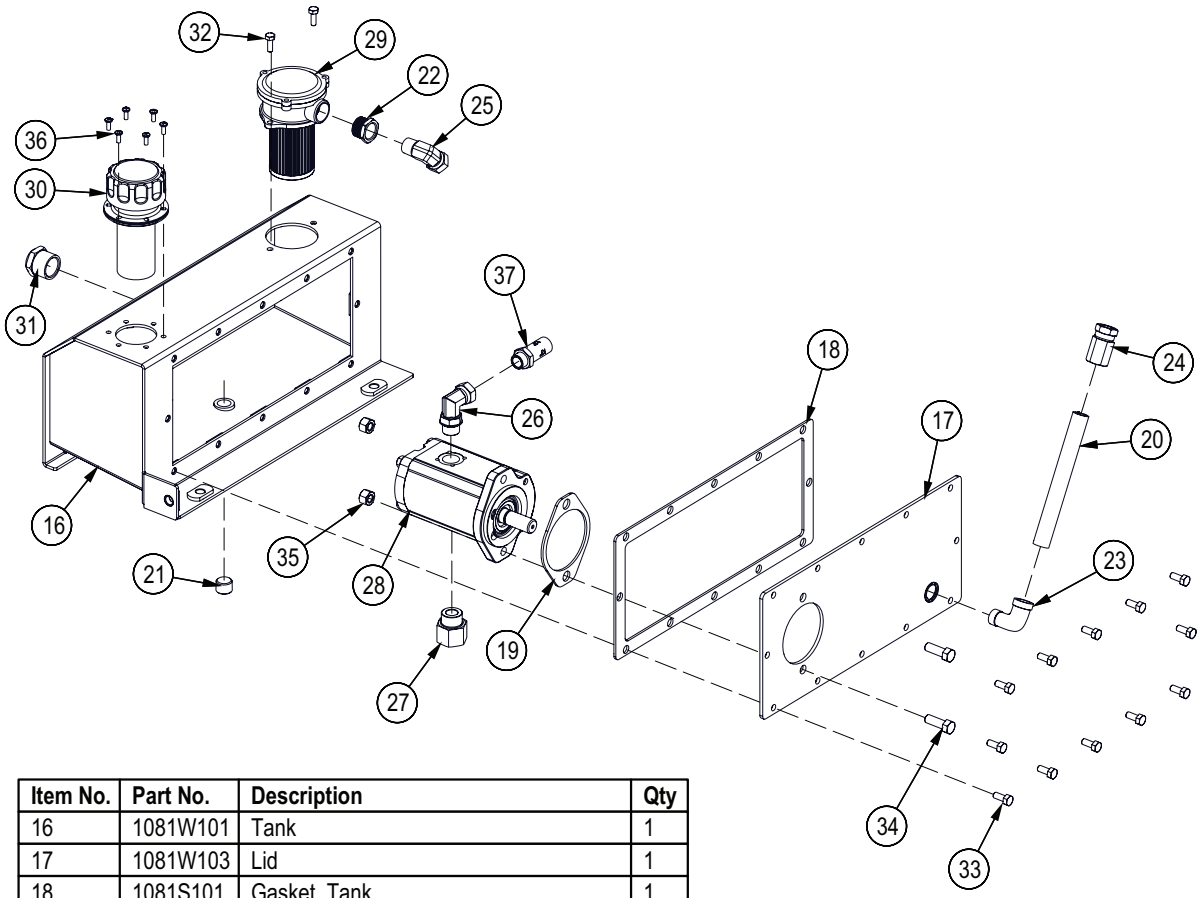
Pump Kit for 1000 rpm PTO



P/N 1081A106, includes items 6A, 7A.
Replace item 6 with 6A.
Replace item 7 with 7A.
Use with existing belts and hardware.

Item No.	Part No.	Description
6A	Z41711	Double Sheave, 2B46 x SDS
7A	Z41907	Double Pulley, 2MB48 x 3/4"

Fig. 1 – C3540 PTO-Driven Power Pack



Item No.	Part No.	Description	Qty
16	1081W101	Tank	1
17	1081W103	Lid	1
18	1081S101	Gasket, Tank	1
19	1081S102	Gasket, Pump	1
20	Z51111	Pipe Nipple, MP08 x 7"	1
21	Z51192	Socket Plug, MP 08	1
22	Z51221	Straight, MP x FP 1208	1
23	Z51272	Elbow 90, MP x FP 0808	1
24	Z51321	Straight, FP x FPX 0808	1
25	Z51331	Elbow 90, MP x FPX 0808	1
26	Z51384	Elbow 90, MORB x FPX 1008	1
27	Z51741	Straight, MORB x FP 1212	1
28	Z53101	Outrigger Gear Pump, Series 2 x 1.01CIR	1
29	Z55201	Tank Mounted Return Filter, FP12	1
30	Z55401	Filler Breather Cap x 400um	1
31	Z55901	Site Glass, MP16	1
32	Z71107	Hex Bolt, 1/4NC x 3/4"	2
33	Z71207	Hex Bolt, 5/16NC x 3/4"	12
34	Z71412	Hex Bolt, 7/16NC x 1-1/4"	2
35	Z72241	Hex Lock Nut, 7/16NC	2
36	Z78303	Machine Screw, #10NF x 1/2"	6
37	Z52301	1/2" Hose, MP08 x MP08 x 13"	1

Fig. 2–Hydraulic Power Pack Parts

Preparation

The **C3540 PTO-Driven Power Pack** is required when using the Wallenstein BX52R and BX72R chippers on tractors that do not have a remote hydraulic circuit. The system is installed in the front side of the lower chipper housing and powered by the tractor's power take off.

The purpose of this instruction is to explain how to install the power pack and connect it to the chipper.

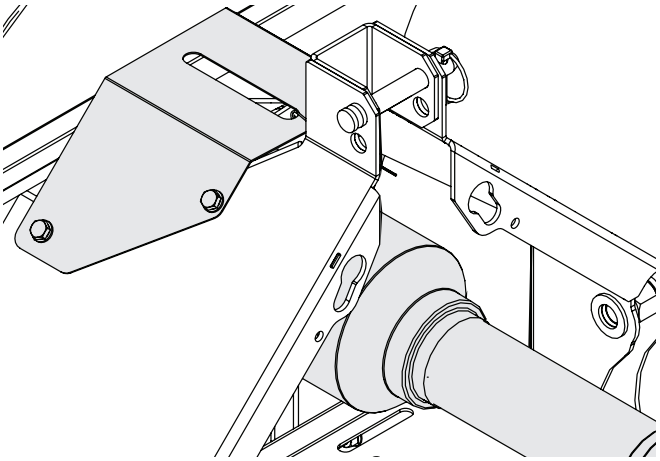
IMPORTANT! This power pack uses Dexron® III ATF in the hydraulic circuit. The reservoir must be filled before start-up.

Tools Required

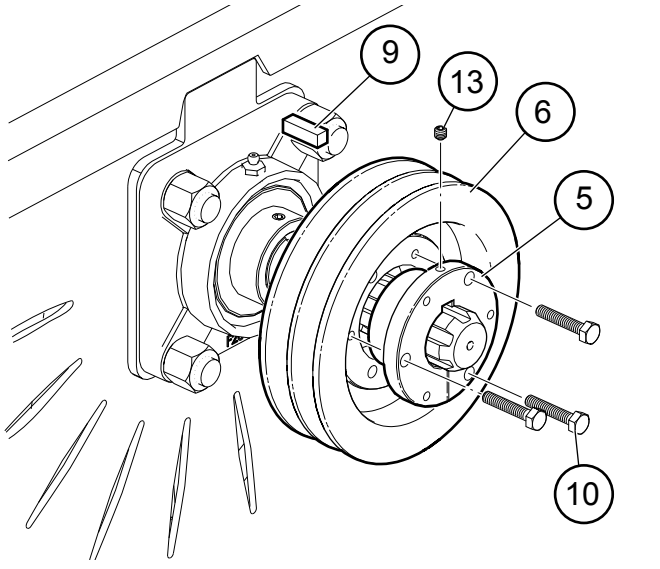
- Basic shop tools
- Wrenches / sockets for 5/16", 1/4", 7/16" and 1/2" NC fasteners
- Torque wrench

Procedure

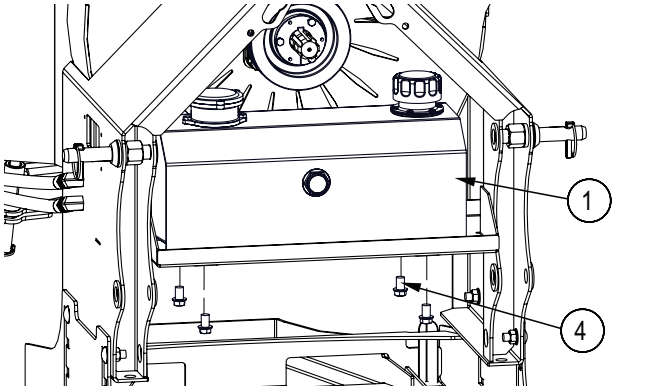
1. Remove PTO shaft and guard from the chipper.



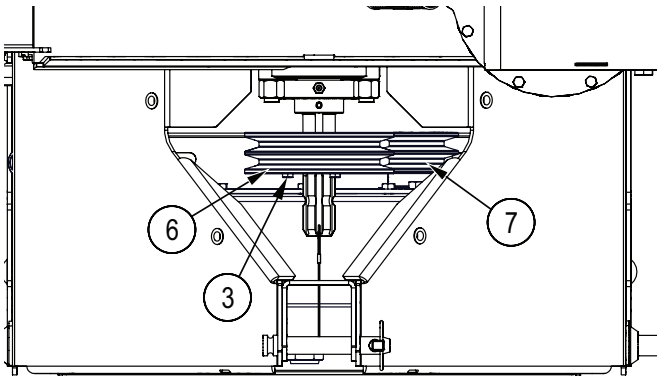
2. Install (**Z41710**) Double Sheave (6) on main rotor shaft of chipper with (**Z46542**) 5/16" x 5/16" X 1" Key (9) and (**Z41505**) Hub (5).
3. Install the three (**Z71113**) 1/4 NC x 1-3/8" bolts (10) through hub (5) into double sheave (6). Install (**Z74112**) Set Screw (13). Do not tighten at this time.



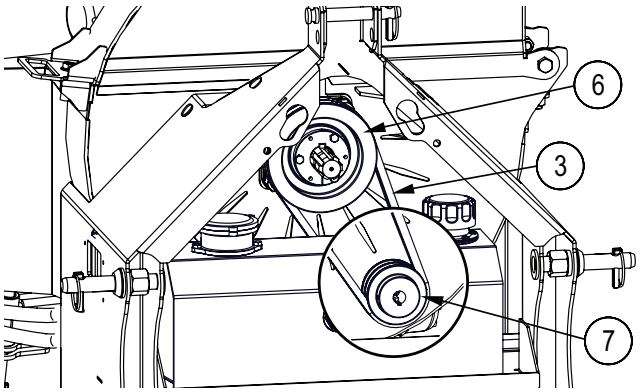
4. Install (**1081A105**) Hydraulic Power Pack (1) in the front side of the chipper using four (**Z76154**) 1/2 NC x 3/4" flange bolts (4). Hand-tighten only.



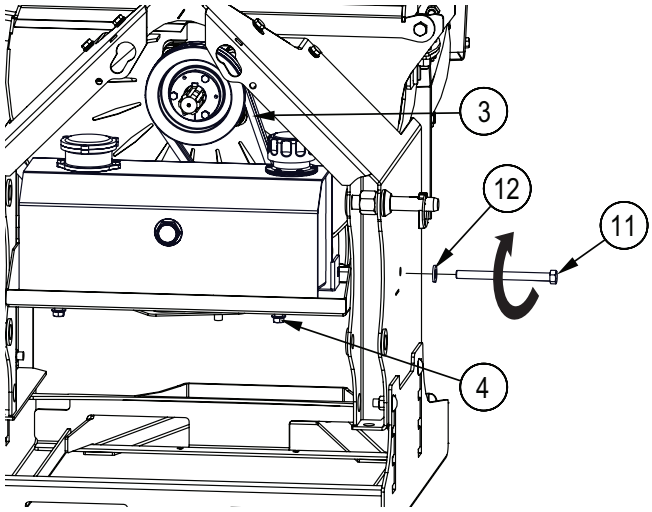
5. Align (**Z41710**) Double Sheave (6) with pump double pulley (7). Tighten the three (**Z71113**) 1/4 NC x 1-3/8" bolts (3). Tighten set screw.



6. Install the two (**Z41155**) Drive Belts (3) onto (**Z41710**) Double Sheave (6) and pump double pulley (7).

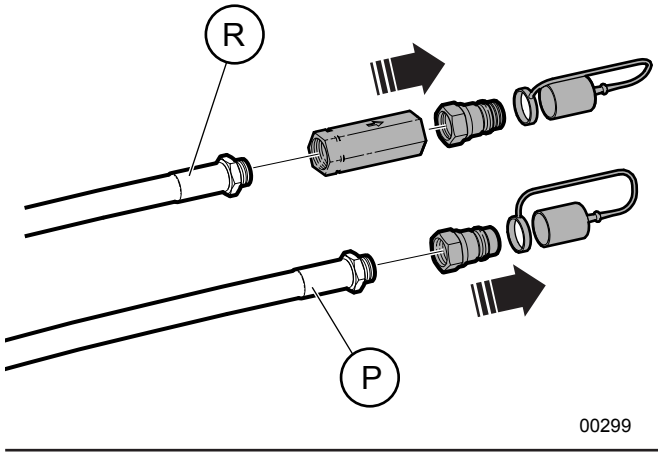


7. Install (**Z71591**) 1/2 NC x 6" Hex Bolt (11) with (**Z73151**) 1/2" SAE Washer through lower chipper frame and into hydraulic tank. Turn the bolt to tension belts.
8. Push on the drive belt by hand to check its deflection. **Correct belt deflection is 1/4"–3/8" (6 mm–10 mm)**. Double-check belt alignment.
9. With the belts properly tensioned, tighten the (**Z76154**) Flange Bolts (4) on the bottom of the tank.

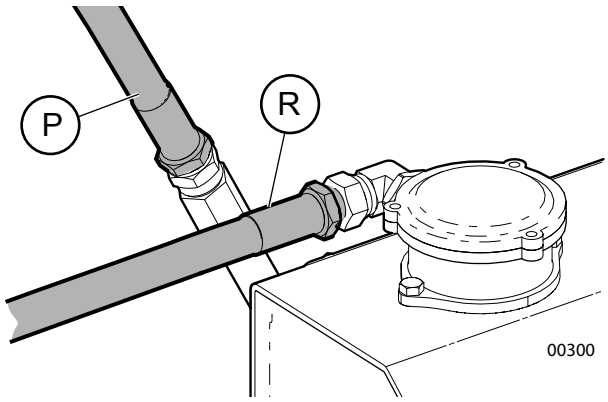


4. Hydraulic Connections

1. Remove the hose caps and the quick-connect ends from the pressure (P) and return (R) lines on the chipper.



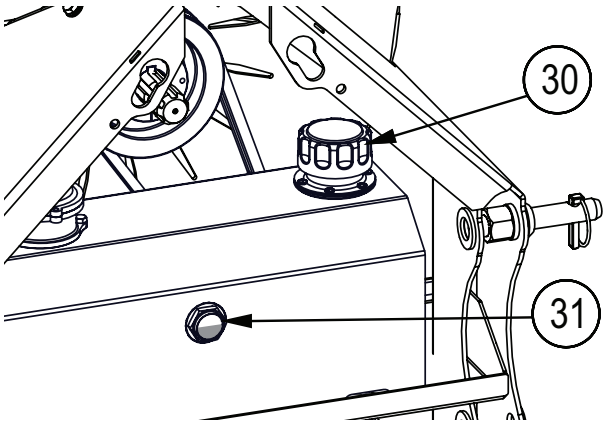
2. Connect the return line (R) to the return connection on the top of the reservoir. The return line has a one-way check valve.
3. Connect the pressure line (P) to the pressure connection.



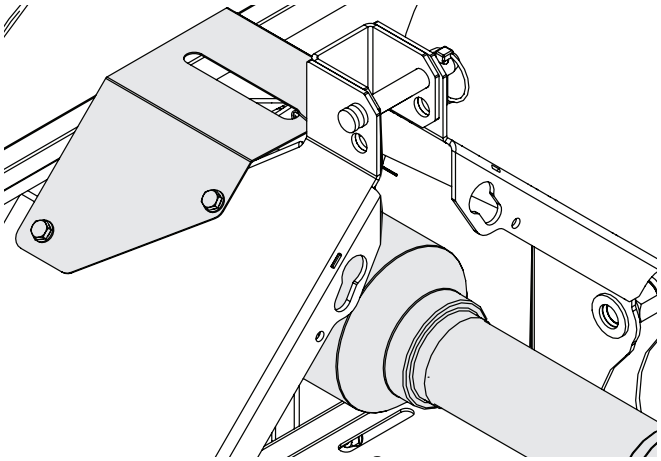
5. Add Oil to Tank

The hydraulic system uses Dexron® III ATF.

1. Clean the area around filler cap (30) and remove it.
2. Add oil until the level half fills the sight glass (31) window. Install filler cap and wipe up any spilled oil.



3. Install PTO shaft and guard.



6. Start-up

⚠ WARNING!

Hydraulic oil under pressure can penetrate the skin or eyes causing serious injury.

- **Tighten all connections before applying pressure.**
- **Search for leaks with a piece of cardboard or wood, not a hand. Take care to protect hands and body from high-pressure fluids. Wear a face shield or goggles for eye protection.**
- **If an accident occurs, see a doctor familiar with this type of injury immediately.**

W040

1. Fill the reservoir with oil. Start the tractor PTO to drive the chipper for a few minutes to charge the circuit. Actuate the feed controls (if equipped)
2. Stop the chipper and allow the system to settle before rechecking the oil level.
3. Top up the oil level as required. The level should just cover the sight glass window with the chipper parked on level ground.

IMPORTANT! Do not operate machine if oil level is not visible in the sight glass. Damage to the pump and other components can occur.

Do not overfill the tank past the sight glass window.

IMPORTANT! Bleed all air from the hydraulic circuit before putting the chipper to work.

Air trapped in the system can cause erratic operation and lead to component damage.

Verify the oil level by checking the sight glass on the front of the tank. The level should be just covering the glass.

Always check oil level after changing filters or servicing hydraulic components.

Bolt Torque Specifications

Checking Bolt Torque

The tables shown give correct torque values for various bolts and capscrews. Tighten all bolts to the torque values specified in the table, unless indicated otherwise. Check tightness of bolts periodically.

IMPORTANT! If replacing hardware, use fasteners of the same grade.

IMPORTANT! Torque figures indicated in the table are for non-greased or non-oiled threads. Do not grease or oil threads unless indicated otherwise. When using a thread locker, increase torque values by 5%.

NOTE: Bolt grades are identified by their head markings.

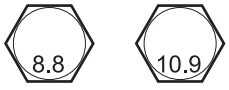
Imperial Bolt Torque Specifications

Bolt Diameter	Torque Value					
	SAE Gr. 2		SAE Gr. 5		SAE Gr. 8	
	lbf•ft	N•m	lbf•ft	N•m	lbf•ft	N•m
1/4"	6	8	9	12	12	17
5/16"	10	13	19	25	27	36
3/8"	20	27	33	45	45	63
7/16"	30	41	53	72	75	100
1/2"	45	61	80	110	115	155
9/16"	60	95	115	155	165	220
5/8"	95	128	160	215	220	305
3/4"	165	225	290	390	400	540
7/8"	170	230	420	570	650	880
1"	225	345	630	850	970	1320

SAE Gr. 2 SAE Gr. 5 SAE Gr. 8

Metric Bolt Torque Specifications

Bolt Diameter	Torque Value			
	Gr. 8.8		Gr. 10.9	
	lbf•ft	N•m	lbf•ft	N•m
M3	0.4	0.5	1.3	1.8
M4	2.2	3	3.3	4.5
M6	7	10	11	15
M8	18	25	26	35
M10	37	50	52	70
M12	66	90	92	125
M16	166	225	229	310
M20	321	435	450	610
M30	1,103	1 495	1,550	2 100
M36	1,917	2 600	2,700	3 675



Hydraulic Fitting Torque

Tightening Flare Type Tube Fittings

4. Check flare and flare seat for defects that might cause leakage.
5. Align tube with fitting before tightening.
6. Hand-tighten swivel nut until snug.
7. To prevent twisting the tube, use two wrenches. Place one wrench on the connector body and tighten the swivel nut with the second. Torque to values shown.

If a torque wrench is not available, use the FFFT (Flats From Finger Tight) method.

Hydraulic Fitting Torque					
Tube Size OD	**Hex Size Across Flats**	**Torque value**		**Flats From Finger Tight**	
Inches	Inches	lbf•ft	N•m	Flats	Turns
3/16	7/16	6	8	2	1/6
1/4	9/16	11–12	15–17	2	1/6
5/16	5/8	14–16	19–22	2	1/6
3/8	11/16	20–22	27–30	1-1/4	1/6
1/2	7/8	44–48	59–65	1	1/6
5/8	1	50–58	68–79	1	1/6
3/4	1-1/4	79–88	107–119	1	1/8
1	1-5/8	117–125	158–170	1	1/8

Values shown are for non-lubricated connections.

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