

Installation Instructions



Ace PTO Sprayer Pump

Used with:

- 3P300
- TA500
- TS750 and TS1000



When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

General Information

These instructions explain how to install the Ace pump. The pump is driven off the tractor PTO and pressurizes sprayer contents for application.

These instructions apply to:

507-077A	PUMP 3PT ACE 540 HIGH VOLUME
507-078A	PUMP 3PT ACE 1000 HIGH VOLUME
507-083A	PUMP TS ACE150 DRIVE SHAFT
507-084A	PUMP TS ACE 1000 1 3/8 DR SHFT

Manual Update

Refer to the sprayer operator's manual for detailed information on safely operating, adjusting, troubleshooting and maintaining the Ace pump. Refer to the parts manual for part identification.

- 3P300 Operator's Manual500-103M
- 3P300 Parts Manual500-062P

- TA500 Operator's Manual500-102M
- TA500 Parts Manual500-061P
- TS750 and TS1000 Operator's Manual500-104M
- TS750 and TS1000 Parts Manual500-071P

Before You Start

Beginning on page 3 are detailed listings of parts included in the Ace pump packages. Use these lists to inventory parts received.

Definitions

NOTE: Useful information related to the preceding topic.

IMPORTANT: A crucial point of information related to the preceding topic. For safe and correct operation, read and follow the directions provided before continuing.

Assembly Instructions

TS750 and TS1000 Pump Assembly

Refer to Figure 1

1. Mount ball hitch (1) on sprayer. Use 1-by-9 1/2-inch bolt, washers and nuts through top hole to mount hitch and safety chain (2). Use 1-by-8-inch bolt, washers and nuts through lower hole.
2. Bolt hitch plate (3) to tractor drawbar (4). Use 3/4-inch bolts and flange nuts through backup plate (5) and hitch plate as shown. Use 1-by-5-inch bolt and flange nut through drawbar and hitch plate. Position flat washers on all bolts as shown.
3. Secure hitch pin (6) to hitch plate with flat washer and nylon-insert nut (7).
4. To hitch sprayer to tractor, slide hitch pin through ball swivel and secure with flat washer and wire lock pin.

IMPORTANT: Use ball hitch shown in Figure 1 in conjunction with PTO pump. Failure to use ball-hitch with PTO pump will cause equipment damage and warranty will be voided.

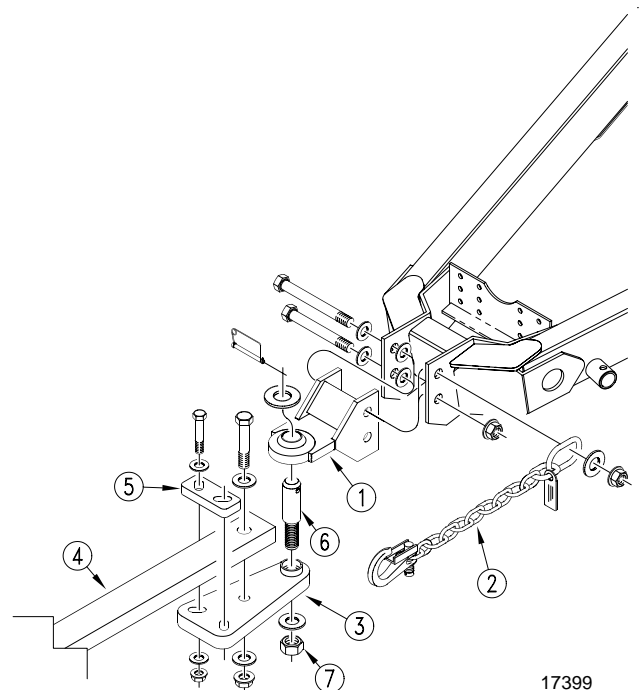
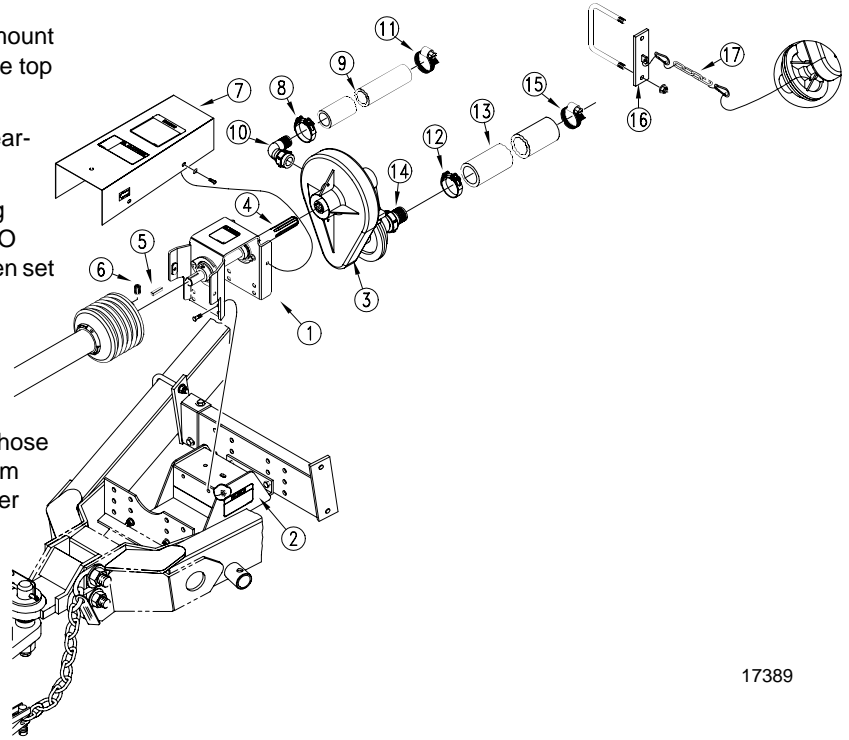


Figure 1
TS Hitch Assembly

17399

Refer to Figure 2

5. Assemble driveline-bearing mount (1) on pump mount (2) using 3/8-by-1-inch bolts and flange nuts. Use top holes of bearing mount.
 6. Mount pump (3) onto output shaft of driveline-bearing mount (4). Tighten lock collar on pump.
 7. Install key (5) into input shaft of driveline-bearing mount and thread set screws (6) into yoke of PTO shaft. Mount PTO shaft onto input shaft and tighten set screws.
 8. Install driveline shield (7) onto driveline-bearing mount using 5/16-inch flange bolts and flat washers.
 9. Use smaller t-bolt clamp (8) to secure 1 1/2-inch hose (9) to elbow outlet (10) on pump. Use smaller worm clamp (11) to secure other end of hose to Whirlfilter on sprayer.
 10. Use larger t-bolt clamp (12) to secure 2-inch hose (13) to pump inlet (14). Use larger worm clamp (15) to secure other end of hose to adaptor on four-way cross under sprayer.
- NOTE: If sprayer is equipped with a flush-and-rinse system, secure pump inlet hose to fitting below three-way valve on sprayer. Replace elbow (830-134C) with straight fitting (830-095C).
11. Assemble pump-chain mount (16) onto right tube of tongue opposite pump and secure with 1/2-inch u-bolt and flange nuts. Attach chain (17) between pump and mount as shown and adjust mount accordingly.
 12. Tighten all hardware and clamps. Refer to operator's manual for operating instructions.



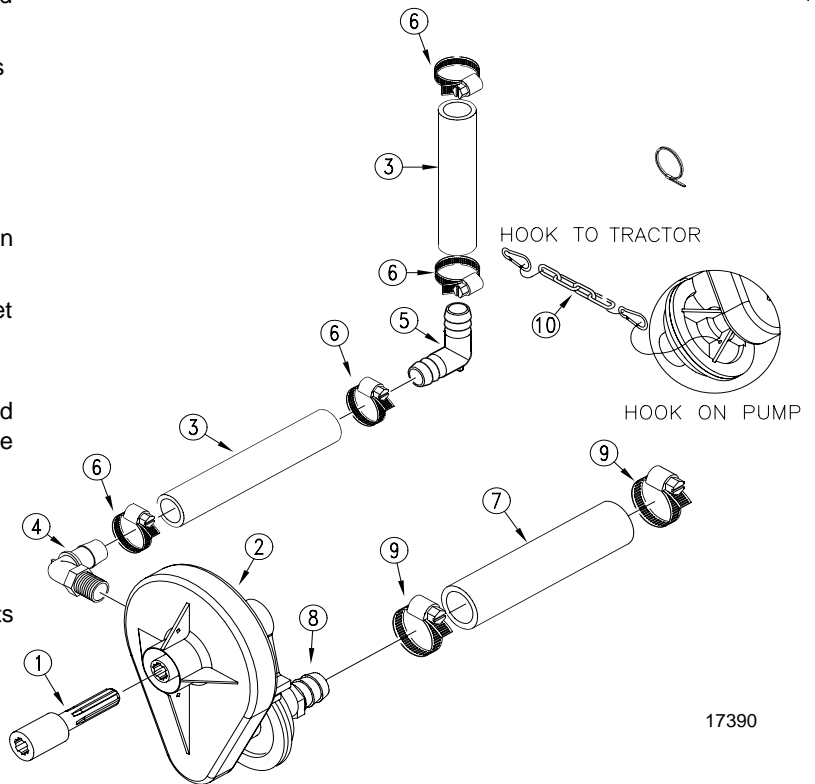
17389

Figure 2
TS750 and TS1000 Pump Assembly

TA500 and 3P300 Assembly

Refer to Figure 3

1. Install PTO extension (1) on tractor PTO shaft. Tighten extension set screws.
2. Mount pump (2) on PTO extension. Tighten pump set screws.
3. Use 1-inch hose (3) to connect pump outlet (4) and Whirlfilter. If necessary, cut hose into two sections and connect with 1-inch elbow (5) to avoid hose kinks. Use worm clamps (6) to secure hoses to fittings.
4. Use 1 1/2-inch hose (7) to connect pump inlet (8) and sump valve under sprayer tank. Use worm clamps (9) to secure hose.
5. Turn PTO shaft by hand to make sure that pump and its hardware do not interfere with PTO guards.
6. Hook chain (10) on pump pulley as shown. Anchor other end of chain on a secure location on tractor.
7. Secure hoses to sprayer using cable ties provided. Secure hoses so they are not kinked, caught or damaged during sprayer operation.



17390

Figure 3
TA500 and 3P300 Assembly

507-077A Pump 3PT Ace 540 High Volume

Your kit includes:

Qty.	Part No.	Part Description
1	507-096M	MANUAL INSTALL, ACE PUMPS
4	800-082C	CABLE TIE .31 X 21.5 6DIA 120LB
4	800-123C	CLAMP WRM DRV #16 SS (.68-1.5)
2	800-124C	CLAMP WRM DRV #24 SS (1.06-2)
1	826-148C	PTO EXTENSION 3 540 RPM
1	830-094C	AD 1 1/2MNPT X 1 1/2HB POLYPROP
1	830-104C	EL 1HB POLYPROP
1	830-129C	EL 1 1/4MNPT X 1HB POLYPROP
1	831-010C	ACE CENTRIFUGAL - PTO 540
2	890-235C	CHAIN LINK SNAP 1/4 PLT
7	990-079R	HOSE 1 1/2ID EPDM SUCTION
4	990-082R	HOSE 1 ID 200PSI EPDM
2	990-086R	CHAIN 2/0 STRAIGHT LINK PLT

507-078A Pump 3PT Ace 1000 High Volume

Your kit includes:

Qty.	Part No.	Part Description
1	507-096M	MANUAL INSTALL, ACE PUMPS
4	800-082C	CABLE TIE .31 X 21.5 6DIA 120LB
4	800-123C	CLAMP WRM DRV #16 SS (.68-1.5)
2	800-124C	CLAMP WRM DRV #24 SS (1.06-2)
1	826-149C	PTO EXTENSION 3 1000 RPM
1	830-094C	AD 1 1/2MNPT X 1 1/2HB POLYPROP
1	830-104C	EL 1HB POLYPROP
1	830-129C	EL 1 1/4MNPT X 1HB POLYPROP
1	831-011C	ACE CENTRIFUGAL - PTO 1000
2	890-235C	CHAIN LINK SNAP 1/4 PLT
7	990-079R	HOSE 1 1/2ID EPDM SUCTION
4	990-082R	HOSE 1 ID 200PSI EPDM
2	990-086R	CHAIN 2/0 STRAIGHT LINK PLT

4 PTO Sprayer Pump

507-083A Pump TS Ace 150 540 Drive Shaft

Your kit includes:

Qty.	Part No.	Part Description
1	161-104D	5/16 SQ CR X 1 1/2 LONG
1	500-077H	HITCH - BALL
1	500-078H	BALL HITCH PLATE WELDMENT
1	500-087D	BALL HITCH BACKUP PLATE
1	500-088D	PIN - BALL HITCH
1	507-017D	SHIELD - TA DRIVELINE 540 RPM
1	507-041D	CHAIN - PUMP MOUNT
1	507-086K	TS DRIVELINE BRG MNT ASSY
1	507-088H	BRACKET - TS PUMP CHAIN MOUNT
1	507-096M	MANUAL INSTALL, ACE PUMPS
2	800-125C	CLAMP WRM DRV#28 SS(1.31-2
2	800-144C	CLAMP WRM DRV #40 SS (2.06
1	800-207C	CLAMP T-BOLT STRAP (2.18-2
1	800-208C	CLAMP T-BOLT STRAP (1.81-2
2	801-023C	SCREW SET SH 3/8-16X3/8
4	802-017C	HHCS 3/8-16X1 GR5
2	802-069C	HHCS 3/4-10X5 GR5
1	802-235C	HHCS 1-8X5 GR5
4	802-387C	HFS 5/16-18X3/4 GR5
4	803-068C	NUT HEX FLANGE 3/8-16 PLT
1	803-081C	NUT HEX 1 1/4-7 NYLON INSERT
6	803-193C	NUT HEX FLANGE 1/2-13 GR G
1	803-206C	NUT HEX FLANGED 1-8 PLT
2	803-214C	NUT HEX FLANGE 3/4-10 GR5
4	804-024C	WASHER FLAT 3/4 USS PLT
2	804-028C	WASHER FLAT 1 USS PLT
1	804-035C	WASHER FLAT 1 1/4 USS PLT
4	804-036C	WASHER FLAT 5/16 SAE PLT
1	804-114C	WASHER FLAT 1 3/4HARD ASTM
1	805-178C	PIN WIRE SNAP LOCK 3/8 X
1	806-067C	U-BOLT 1/2-13 X 6 1/32 X 4
1	818-142C	DECAL DANGER PTO DRIVELINE
1	818-349C	DECAL GREASE 10 HRS LH
1	818-464C	DECAL DRVLNE ATTACH SPECS
1	826-238C	PTO 540 2200 X 27.95 NO CL
1	830-095C	AD 2MNPT X 2HB POLYPROP
1	830-131C	EL 1 1/4MNPT X 1 1/2HB POLYPROP
1	830-304C	1 1/2 MNPT X 2HB
1	831-010C	ACE CENTRIFUGAL - PTO 540
2	890-235C	CHAIN LINK SNAP 1/4 PLT
6	990-124R	HOSE 2 ID EPDM SUCTION
2	990-181R	HOSE 1 1/2 ID 150PSI EPDM

507-084A Pump TS Ace 150 1000 1-3/8 Drive Shaft

Your kit includes:

Qty.	Part No.	Part Description
1	161-104D	S2 B 1.0000 EA 5/16 SQ CR X 1 1/2 LONG
1	500-077H	S2 M 1.0000 EA HITCH - BALL
1	500-078H	S2 M 1.0000 EA BALL HITCH PLATE WELDMENT
1	500-087D	S2 M 1.0000 EA BALL HITCH BACKUP PLATE
1	500-088D	S2 M 1.0000 EA PIN - BALL HITCH
1	507-018D	S2 M 1.0000 EA SHIELD - TA DRIVELINE 1000 RPM
1	507-041D	S2 M 1.0000 EA CHAIN - PUMP MOUNT
1	507-087K	S2 M 1.0000 EA TS DRIVELINE BRG MNT ASSY 1
1	507-088H	S2 M 1.0000 EA BRACKET - TS PUMP CHAIN MOUNT
1	507-096M	S2 M 1.0000 EA MANUAL INSTALL, ACE PUMPS
1	800-125C	S2 B 2.0000 EA CLAMP WRM DRV#28 SS(1.31-2.
1	800-144C	S2 B 2.0000 EA CLAMP WRM DRV #40 SS (2.06-
1	800-207C	S2 B 1.0000 EA CLAMP T-BOLT STRAP (2.18-2.
1	800-208C	S2 B 1.0000 EA CLAMP T-BOLT STRAP (1.81-2.
1	801-023C	S2 B 2.0000 EA SCREW SET SH 3/8-16X3/8
1	802-017C	S2 B 4.0000 EA HHCS 3/8-16X1 GR5
1	802-069C	S2 B 2.0000 EA HHCS 3/4-10X5 GR5
1	802-235C	S2 B 1.0000 EA HHCS 1-8X5 GR5
1	802-387C	S2 B 4.0000 EA HFS 5/16-18X3/4 GR5
1	803-068C	S2 M 4.0000 EA NUT HEX FLANGE 3/8-16 PLT
1	803-081C	S2 B 1.0000 EA NUT HEX 1 1/4-7 NYLON INSERT
1	803-193C	S2 B 6.0000 EA NUT HEX FLANGE 1/2-13 GR G
1	803-206C	S2 B 1.0000 EA NUT HEX FLANGED 1-8 PLT
1	803-214C	S2 B 2.0000 EA NUT HEX FLANGE 3/4-10 GR5 P
1	804-024C	S2 B 4.0000 EA WASHER FLAT 3/4 USS PLT
1	804-028C	S2 B 2.0000 EA WASHER FLAT 1 USS PLT
1	804-035C	S2 B 1.0000 EA WASHER FLAT 1 1/4 USS PLT
1	804-036C	S2 B 4.0000 EA WASHER FLAT 5/16 SAE PLT
1	804-114C	S2 B 1.0000 EA WASHER FLAT 1 3/4HARD ASTMF
1	805-178C	S2 B 1.0000 EA PIN WIRE SNAP LOCK 3/8 X
1	806-067C	S2 B 1.0000 EA U-BOLT 1/2-13 X 6 1/32 X 4
1	818-142C	S2 B 1.0000 EA DECAL DANGER PTO DRIVELINE
1	818-349C	S2 B 1.0000 EA DECAL GREASE 10 HRS LH
1	818-465C	S2 B 1.0000 EA DECAL DRVLNE ATTACH SPECS 1
1	826-239C	S2 B 1.0000 EA PTO 1000 2200X 29.92 NO CLU
1	830-095C	S2 B 1.0000 EA AD 2MNPT X 2HB POLYPROP
1	830-131C	S2 B 1.0000 EA EL 1 1/4MNPT X 1 1/2HB POLYPROP
1	830-304C	S2 B 1.0000 EA 1 1/2 MNPT X 2HB
1	831-011C	S2 B 1.0000 EA ACE CENTRIFUGAL - PTO 1000
1	890-235C	S2 B 2.0000 EA CHAIN LINK SNAP 1/4 PLT
1	990-124R	S2 B 6.8330 FT HOSE 2 ID EPDM SUCTION
1	990-181R	S2 B 2.4160 FT HOSE 1 1/2 ID 150PSI EPDM

Great Plains Manufacturing, Inc.

Corporate Office: P.O. Box 5060
Salina, Kansas 67402-5060 USA
