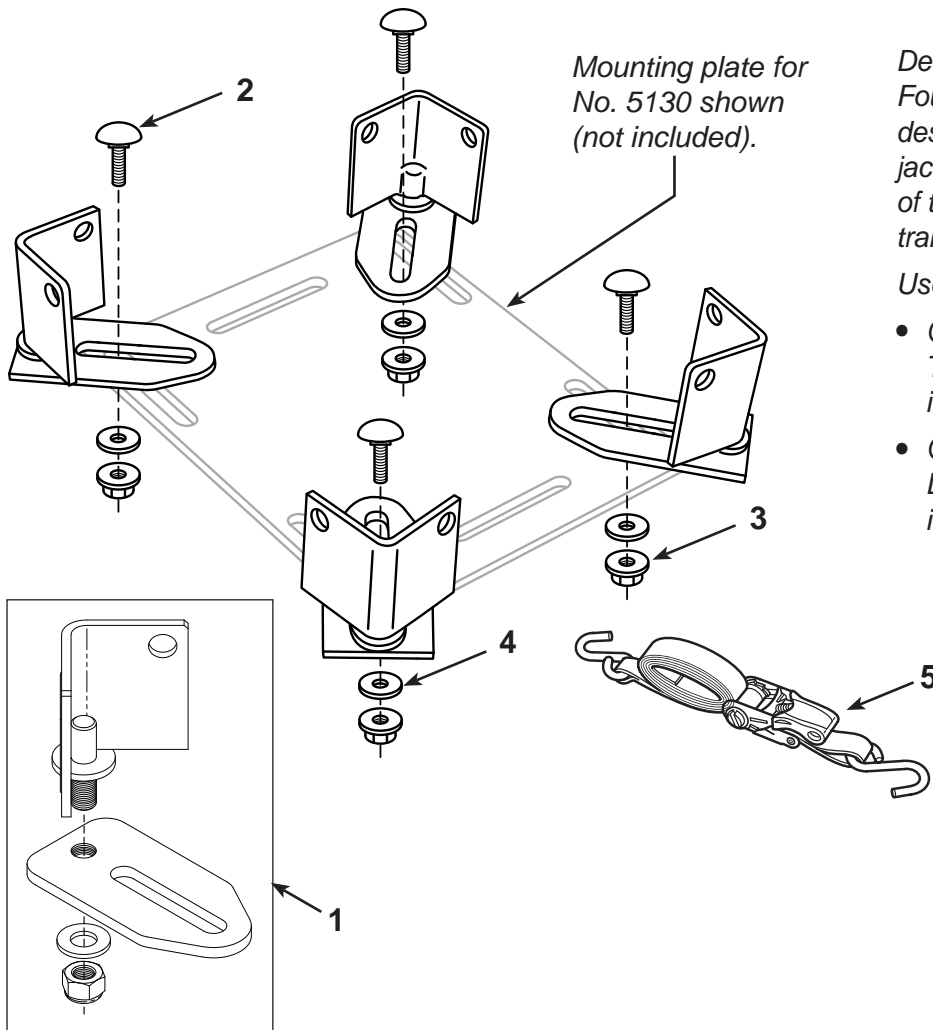


Light-Duty Transmission Adapters

Maximum Capacity: 454 kg (1000 lbs.)



Description:

Four universal mounting adapters designed to be used on a transmission jack mounting plate for the purpose of transporting and repairing vehicle transmissions.

Use with:

- OTC No. 5019A, 5078, or 1522A Transmission Jack for removal and installation of differential assemblies.
- OTC No. 5130 DriveMaster™ Driveline Lift for removal and installation of driveline components.

Parts List

Item No.	Part No.	No. Req'd	Description
1	561947	1	Transmission Adapter Assembly (consists of adapter, flat washer, hex nut)

Repair Kit No. 569966

Item No.	Qty.	Description
2	4	Carriage Bolt — 1/2-13 x 30.48 mm (1.25 in.)
3	4	Flange Nut — 1/2-13 thread
4	4	Washer — plain, type "A"
5	1	Ratchet Strap — 4 ft. (122 cm)

Parts List & Operating Instructions

Explanation of Safety Signal Words

The safety signal word designates the degree or level of hazard seriousness.



DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION: Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

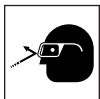
Safety Precautions



CAUTION: To prevent personal injury and/ or property damage,



- Study, understand, and follow all safety precautions and operating instructions before using these transmission adapters. If the operator cannot read instructions, operating instructions and safety precautions must be read and discussed in the operator's native language.



- Only qualified operators may install, operate, adjust, maintain, clean, repair, inspect, or transport these transmission adapters.
- Wear eye protection that meets ANSI Z87.1 and OSHA standards.
- Do not exceed the rated capacity of these transmission adapters as stated in this document and on the warning decal.



- These adapters are designed to work together in a group of four. Using fewer than four adapters in a setup could result in personal injury caused by the load tipping or falling.
- Do not use these transmission adapters for anything other than their intended purpose.
- Use the ratchet strap included to secure the load to the transmission jack.
- No alteration shall be made to this product.
- Inspect the condition of the transmission adapters before each use; do not use if damaged, altered, or in poor condition.
- Use only those repair parts called out in the parts list in this document. Items found in the parts list have been carefully tested and selected by OTC.

Operating Instructions

1. Install the transmission adapters on the transmission jack mounting plate using the carriage bolts, washers, and flange nuts provided. Hand tighten the flange nuts. See Figure 1.
2. Raise the arm of the jack up to the transmission.
3. Adjust the transmission adapters as needed to fit the transmission. Tighten the flange nuts.
4. Use ratchet strap to secure the transmission to the transmission jack as shown in Figure 2. Attach the hooks on the end of the ratchet strap to the slots provided in the mounting plate, the top holes in the transmission adapters, or other suitable locations.

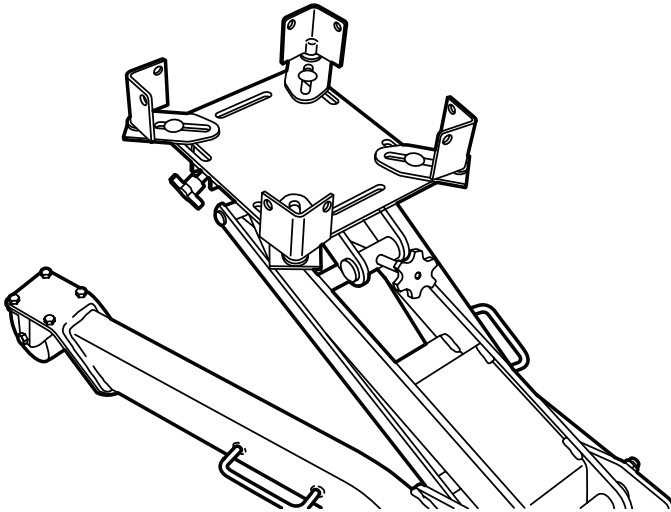


Figure 1

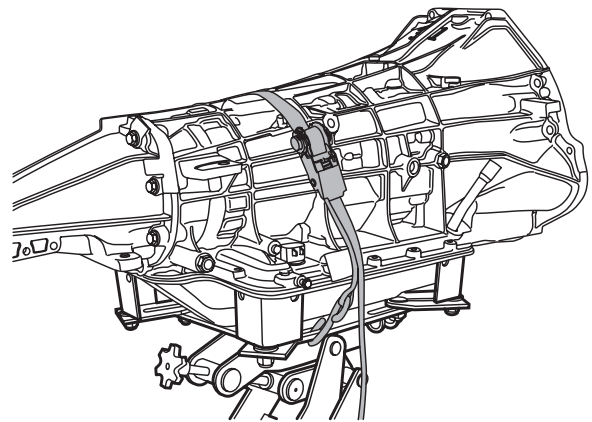


Figure 2

Inspection and Maintenance

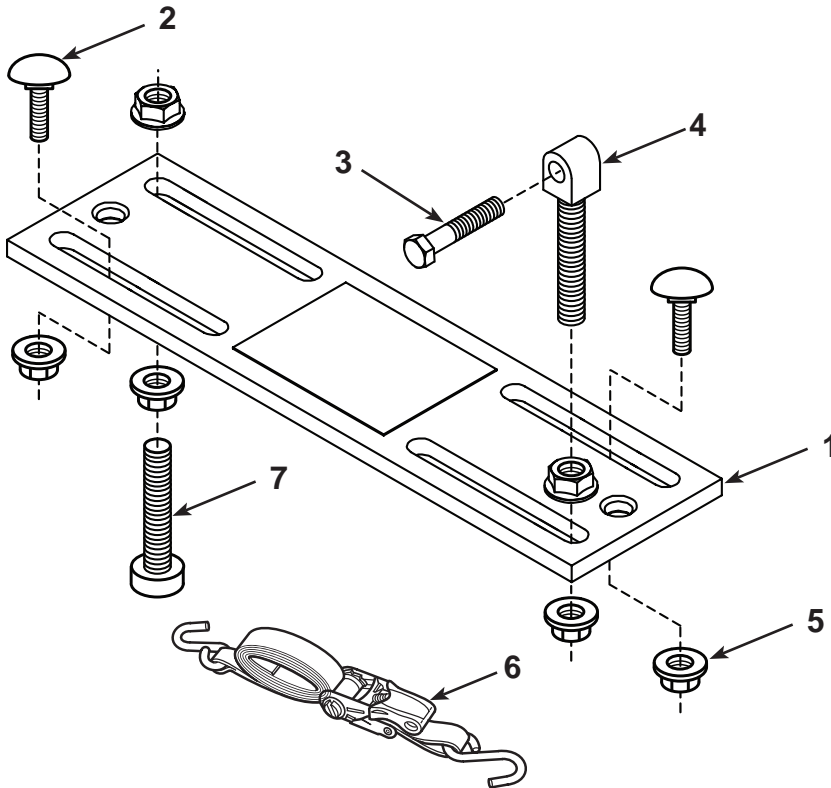


CAUTION: To prevent personal injury,

- Only qualified personnel shall perform inspections and repairs to these transmission adapters.
- Before each use, an approved inspector must inspect the transmission adapters for bends, cracks, dents, elongated holes, or missing hardware. If damage is found, discontinue use.
- Use only those repair parts called out in the parts list in this document. Items found in the parts list have been carefully tested and selected by OTC.

Auxiliary Box Adapter

Maximum Capacity: 227 kg (500 lbs.)



Description:

Mounting adapter designed to be used on a transmission jack mounting plate for the purpose of removing and installing the transmission housing auxiliary box.

Use with:

- OTC No. 5019A, 5078, or 1522A Transmission Jack for removal and installation of differential assemblies.
- OTC No. 5130 DriveMaster™ Driveline Lift for removal and installation of driveline components.

Parts List

Item No.	Part No.	No. Req'd	Description
1	569968	1	Plate Assembly (consists of plate & decal)

Repair Kit No. 569967

Item No.	Qty.	Description
2	2	Carriage Bolt — 1/2-13 x 30.48 mm (1.25 in.)
3	1	Hex Head Screw — 3/8-16 x 50.8 mm (2 in.)
4	1	Stud — .500-13 x 101.6 mm (4 in.)
5	6	Flange Nut — 1/2-13 thread
6	1	Ratchet Strap — 122 cm (4 ft.)
7	1	Support Screw — 95.25 mm (3.75 in.)

Parts List & Operating Instructions

Explanation of Safety Signal Words

The safety signal word designates the degree or level of hazard seriousness.



DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION: Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Safety Precautions



CAUTION: To prevent personal injury and/ or property damage,



- Study, understand, and follow all safety precautions and operating instructions before using the auxiliary box adapter. If the operator cannot read instructions, operating instructions and safety precautions must be read and discussed in the operator's native language.

- Only qualified operators may install, operate, adjust, maintain, clean, repair, inspect, or transport this auxiliary box adapter.



- Wear eye protection that meets ANSI Z87.1 and OSHA standards.
- Do not exceed the rated capacity of this auxiliary box adapter as stated in this document and on the warning decal.



- Do not use this auxiliary box adapter for anything other than their intended purpose.
- Use the ratchet strap included to secure the load to the transmission jack.
- No alteration shall be made to this product.
- Inspect the condition of the auxiliary box adapter before each use; do not use if damaged, altered, or in poor condition.
- Use only those repair parts called out in the parts list in this document. Items found in the parts list have been carefully tested and selected by OTC.

Operating Instructions

1. Install the auxiliary box adapter on the transmission jack mounting plate using the carriage bolts and flange nuts provided. Tighten the flange nuts. See Figure 1.
2. Plan the placement of the support screw and stud to fit your application. Figure 1 shows the support screw and the stud assembled to the adapter plate in one of several possible arrangements.
3. Assemble both the support screw and the stud to the plate with one flange nut above the plate and one flange nut below the plate. The flat side of each flange nut must rest against the plate.
4. Thread the lower flange nut on the stud all the way to the bottom of the threads. This allows room for adjustment.
5. Remove a bolt from the front of the transmission auxiliary box.
6. Move the jack under the transmission, aligning the stud with the hole where the bolt was removed in the auxiliary box. Insert the bolt through the stud and into the auxiliary box. See Figure 2.

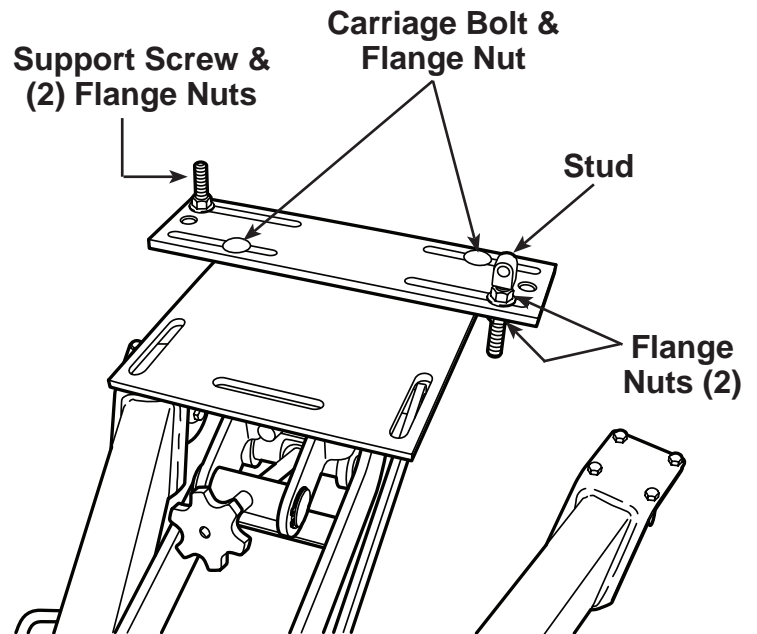


Figure 1

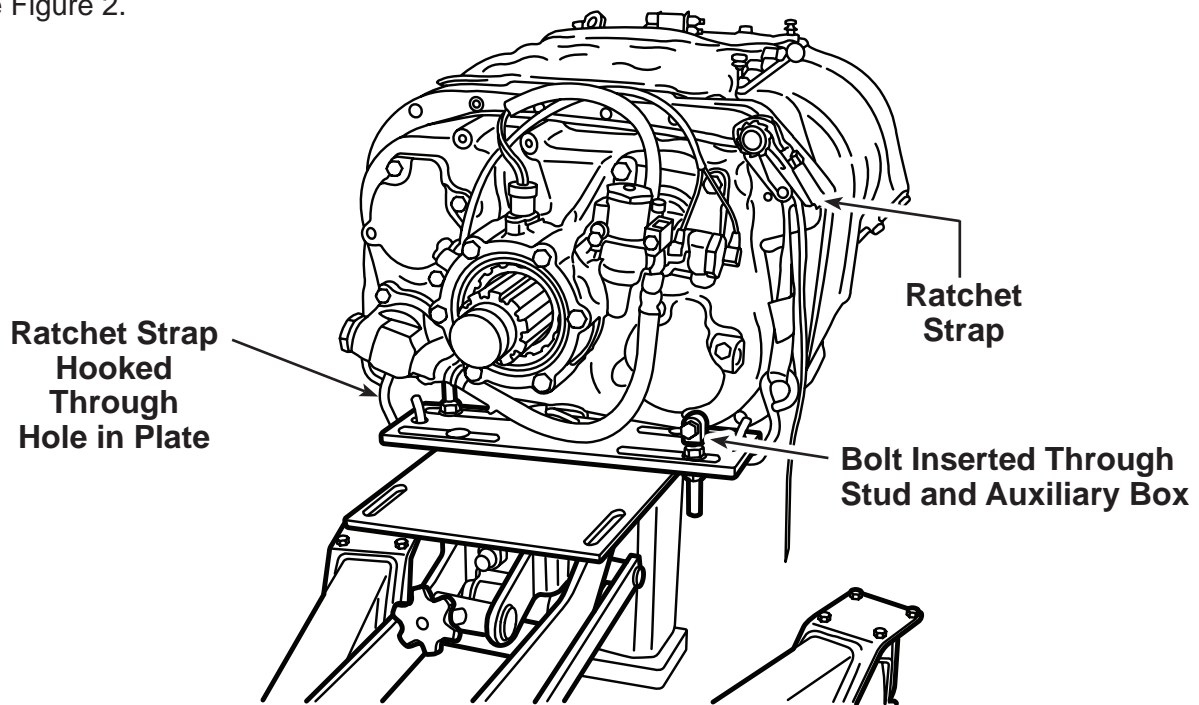
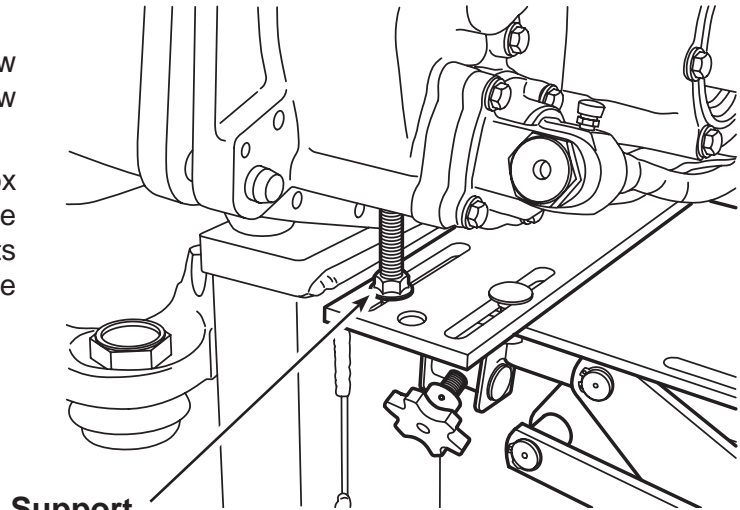


Figure 2

Parts List & Operating Instructions

Operating Instructions contd.

7. Thread the upper flange nut on the support screw to the bottom of the threads until the support screw touches the housing. See Figure 3.
8. Install the ratchet strap to secure the auxiliary box to the transmission jack. See Figure 2. Attach the hooks on the end of the ratchet strap to the slots provided in the mounting plate or other suitable locations.



Support
Screw

Figure 3

Inspection and Maintenance



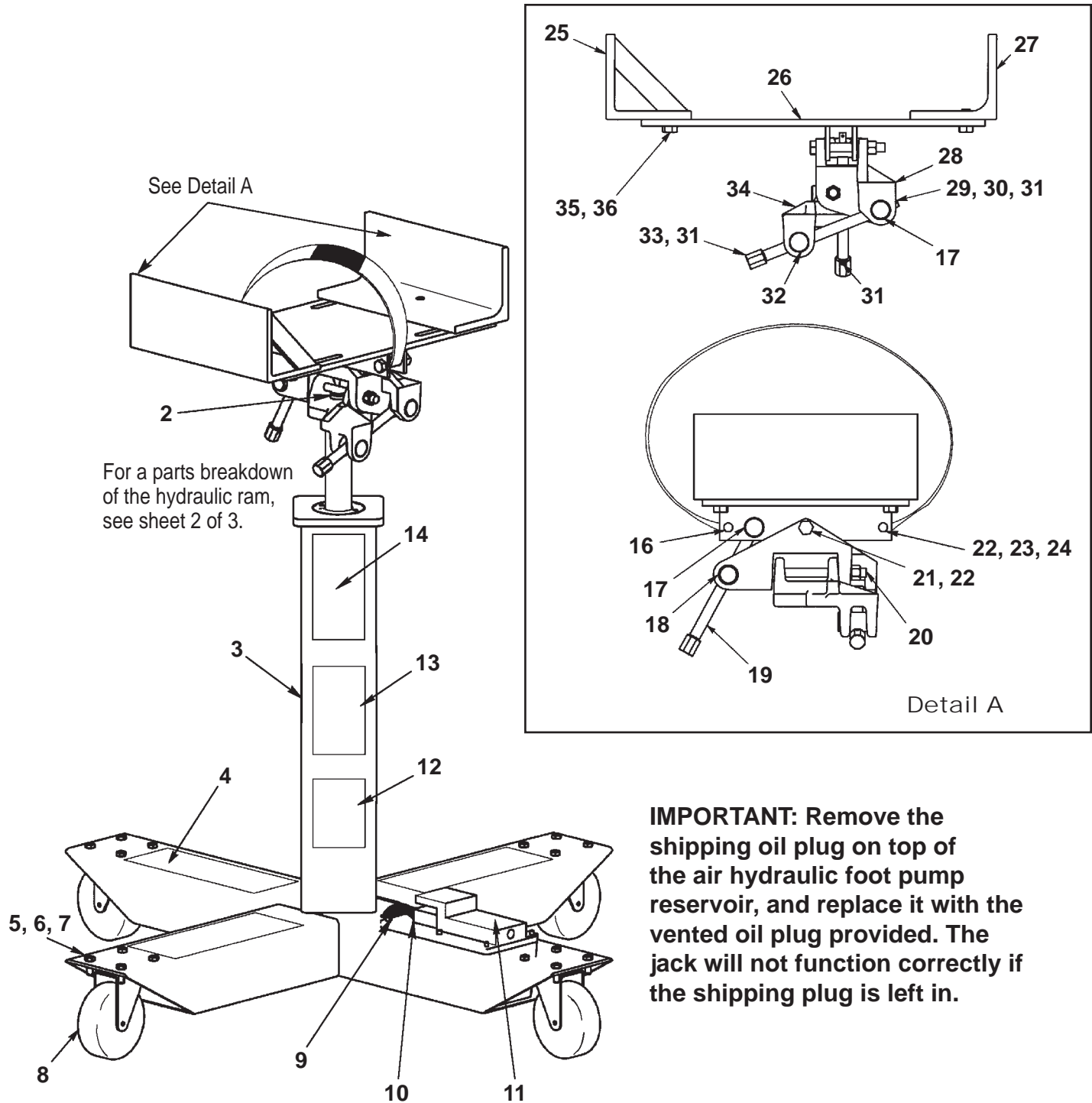
CAUTION: To prevent personal injury,

- Only qualified personnel shall perform inspections and repairs to this auxiliary box adapter.
- Before each use, an approved inspector must inspect the auxiliary box adapter for bends, cracks, dents, elongated holes, or missing hardware. If damage is found, discontinue use.
- Use only those repair parts called out in the parts list in this document. Items found in the parts list have been carefully tested and selected by OTC.

High Lift Transmission Jack

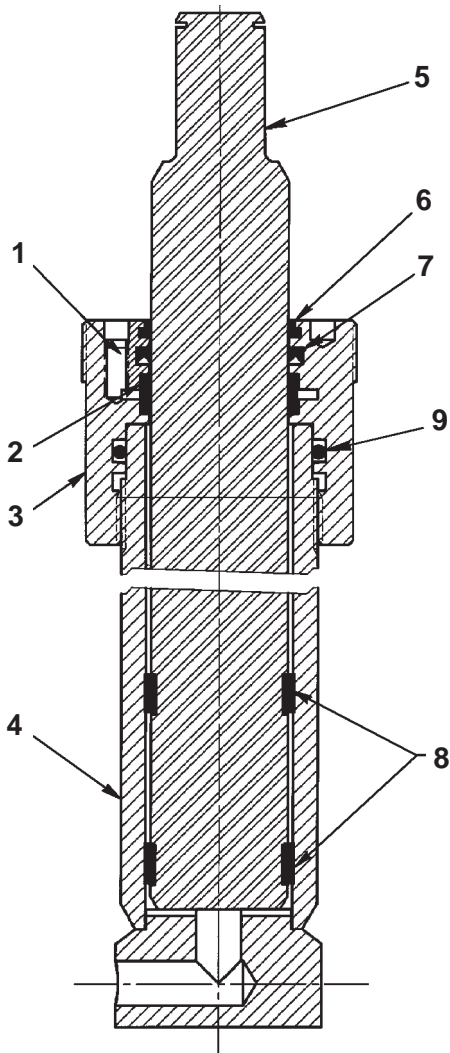
Max. Capacity: 2,000 lbs. at 100-140 psi air

Application: Installation and removal of truck and automobile transmissions



Parts List & Operating Instructions

Item No.	Part No.	No. Req'd	Description
1	12365	4	External Retaining Ring
2	11903	1	Retaining Ring
3	54626	1	Main Base Assembly
4	19802	3	Abrasive Roll
5	10559	16	Hex Hd. Cap Screw
6	10257	16	Washer (<i>for 5/16" bolt</i>)
7	10201	16	Hex Nut (<i>5/16-18</i>)
8	16002	4	Caster
9	314726	1	Hydraulic Hose (<i>30 in.</i>)
10	11628	1	Straight Fitting
11	66226	1	Air Hydraulic Foot Pump
12	46963	1	Decal
13	314743	1	Warning Decal
14	223514	1	Decal
16	15997	1	Cotterless Hitch Pin
17	222237	2	Pivot Shaft
18	222238	1	Pivot Shaft
19	314152	2	Threaded Rod
20	222239	1	Hex Hd. Cap Screw
21	10093	1	Hex Hd. Cap Screw
22	15013	3	Hex Locknut (<i>1/2-13</i>)
23	314748	1	Strap
24	10089	1	Hex Hd. Cap Screw
25	314733	1	Front Support Bracket
26	314734	1	Mounting Plate
27	314730	1	Back Support Bracket
28	440400	1	Pivot Linkage Assembly
29	222235	2	Slotted Hex Nut
30	214021	4	Thrust Bearing Washer
31	10895	4	Roll Pin
32	222236	1	Pivot Shaft
33	314735	2	Handle
34	314154	1	Pivot
35	12004	3	Washer (<i>for 1/2" bolt</i>)
36	10079	3	Hex Hd. Cap Screw



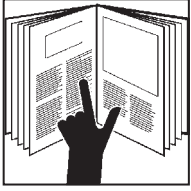
Cylinder Assembly

Item No.	Part No.	No. Req'd	Description
1	*15130	1	Plug
2	*223492	1	Wear Ring (2" O.D.)
3	63340	1	Packing Gland
4	314728	1	Displacement Cylinder
5	440685	1	Cylinder Rod
6	*19591	1	Rod Wiper
7	*223490	1	U-cup Seal
8	*223491	2	Wear Ring (1.875" O.D.)
9	*14848	1	O-ring

Items marked with an asterisk (*) are included in Seal Repair Kit No. 300717.

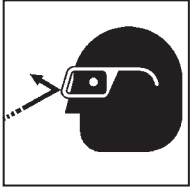
Parts List & Operating Instructions

Safety Precautions



Caution: To prevent personal injury and damage to equipment,

- Read, understand, and follow all safety precautions and operating instructions.
- Wear eye protection that meets the requirements of ANSI Z87.1 and OSHA.
- A load must never exceed the rated lifting capacity of the jack.
- Do not lift or support the vehicle with this jack. Place support stands under the vehicle before starting repairs.
- Use the jack on a hard, level surface.
- Center the load on the jack saddle. Off-center loads can damage the seals in the ram and cause jack failure.
- Never move the jack with a load any higher off the ground than necessary. Slowly and carefully move the jack around corners because the load could tip. Stay clear of a lifted load.
- Lower the jack slowly and carefully while watching the position of the load.
- Do not modify the jack or use adapters unless approved or supplied by OTC.
- Use only anti-wear hydraulic jack oil with a 215 SUS viscosity rating at 100° F. The use of alcohol, hydraulic brake fluid, or transmission oil could damage seals and result in jack failure.



This guide cannot cover every situation, so always do the job with safety first.

Setup Instructions

(Item numbers refer to the parts list.)

1. Remove transmission jack from the pallet. Attach casters (Item No. 8) using hardware (5, 6, & 7) provided.
2. The transmission support brackets (25 & 27) fit Allison 500 and 600 Series transmissions.
 - A. Use fasteners (35 & 36) to loosely assemble the brackets to the mounting plate. See Detail A.
 - B. Adjust the brackets to fit the transmission pan so the load is centered on the jack.
 - C. Tighten the fasteners assembled in Step A above.
3. **Remove the shipping plug from the air hydraulic foot pump.** Replace the shipping plug with the vented plug provided.
4. The reservoir tube is shipped filled with hydraulic oil. Before using the jack for the first time, press the release pedal to open the release valve, and operate the foot pump eight full strokes to distribute the oil.

Operating Instructions

1. Refer to vehicle's service manual and use the recommended service procedure for removal of the component.
2. Position the jack under the vehicle.
3. Raise the jack by operating the foot pump until the saddle touches the component.
4. Adjust the support brackets to fit the component.
5. Use the tilt crank to align the saddle with the component.
6. Finish raising the jack to the component. Secure the strap assembly around the component.

Maintenance

1. Use only anti-wear hydraulic jack oil. The use of alcohol, hydraulic brake fluid, or transmission oil could damage the seals in the cylinder and result in jack failure.
2. Check the oil level periodically: lower the jack to its lowest position; remove the filler plug; add hydraulic oil (215 SUS viscosity at 100° F) until the oil level is within 1/2" of the filler hole; install the filler plug.
3. Lubricate the foot pump pivot points as needed with SAE 30 motor oil to prevent premature wear.

CAUTION: The greatest single cause of failure in hydraulic units is dirt. Keep the jack clean and well lubricated to prevent foreign matter from entering the hydraulic system.

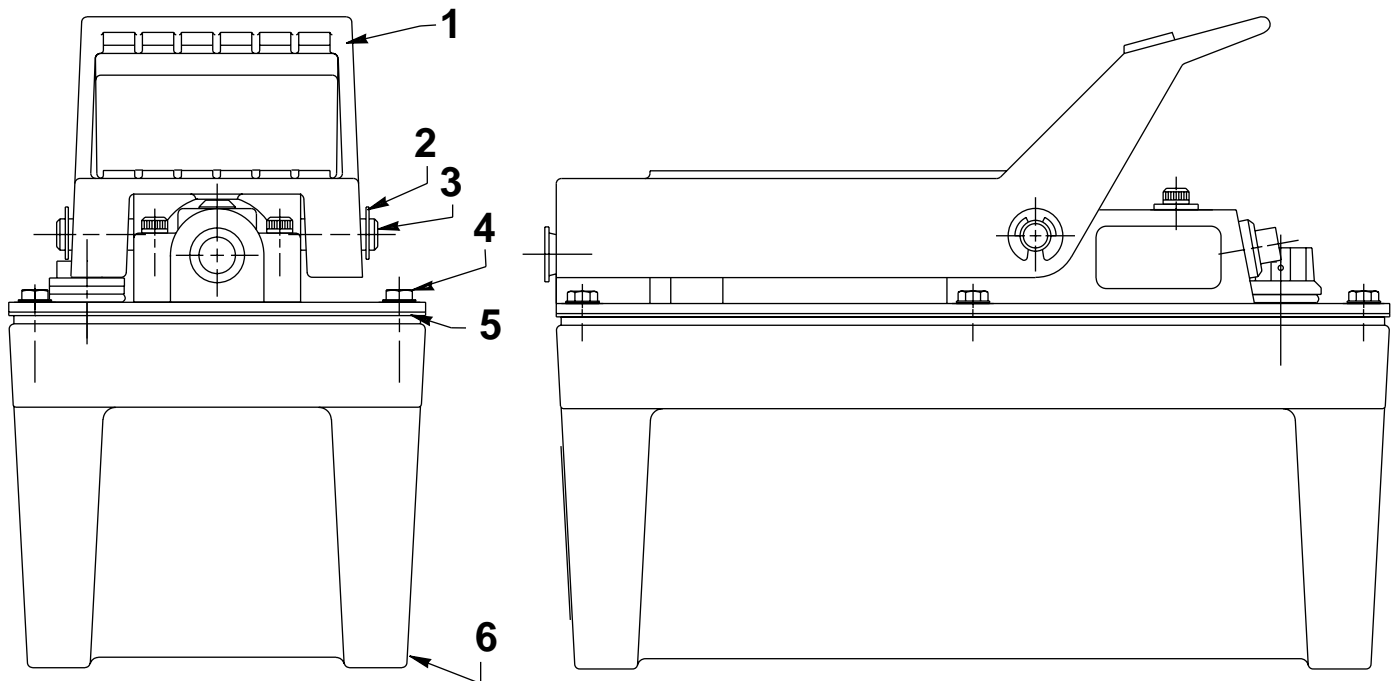
Bleeding Air from the Jack

1. Retract the jack to its lowest position, and loosen the vented oil plug threaded into the top plate of the foot pump reservoir.
2. Remove the plug (No. 15130, Item No. 1 in the cylinder assembly parts list) from the top of the packing gland (No. 63340, Item No. 3).
3. Operate the foot pump until the main cylinder is full of oil.
4. Install the plug removed in Step 2.
5. Retract the jack to its lowest position.
6. Fill the foot pump reservoir with hydraulic jack oil (215 SUS viscosity rating at 100° F) to the correct fluid level (1/2" from the top).
7. Install the vented oil plug on the foot pump, and inspect for leaks.

Troubleshooting Guide

Repair procedures must be performed in a dirt-free environment by qualified personnel who are familiar with this equipment.

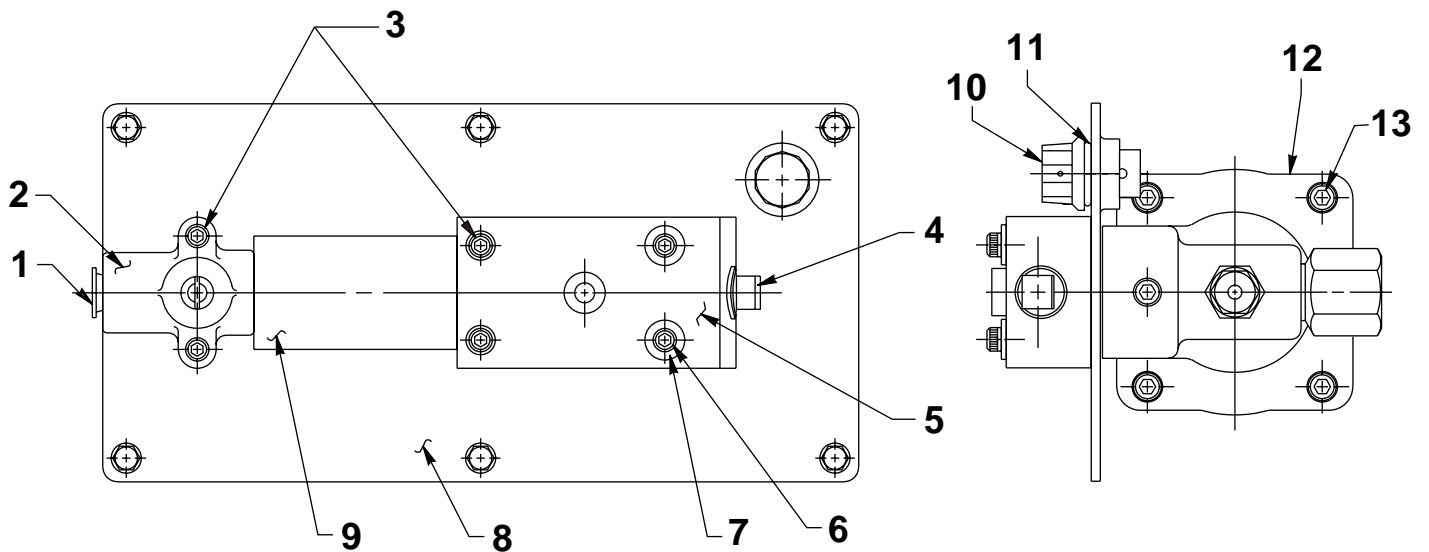
Trouble	Cause	Solution
Unit fails to extend or extends partially	1. Low fluid level	1. Fill to correct fluid level.
Incomplete or spongy cylinder response when foot pedal is pumped	1. Low fluid level 2. Air in system	1. Fill to correct fluid level. 2. Follow instructions to bleed air from system.
Abnormal leakage through unit breather	1. Low fluid level	1. Fill to correct fluid level.
Unit fails to extend when foot pedal is pumped	1. Release valve malfunction 2. Contamination 3. Cylinder packing failure	1. Pump foot pedal with release valve open. 2. Disassemble and clean unit. 3. Install repair kit.
Cylinder creeps	1. Load exceeds maximum lifting capacity 2. Release valve is leaking	1. Reduce load. 2. Flush release valve by pumping foot pedal with release valve open.
Cylinder doesn't retract when release pedal is activated	1. Cylinder is binding	1. Disassemble unit; replace defective parts.
Cylinder doesn't extend	1. Contamination 2. Bad packing	1. Disassemble and clean unit. 2. Install repair kit.
Cylinder extends when foot pedal is pressed, and retracts as foot pedal retracts	1. Release valve malfunction 2. Contamination	1. Flush release valve by pumping foot pedal with release valve open. 2. Disassemble and clean unit.

**MODEL G
AIR HYDRAULIC PUMP**

Item No.	Part No.	No. Req'd	Description
1	41322	1	Foot Pedal
2	*11032	2	Retaining Ring (.30 X .35)
3	28386	1	Pin
4	211060	6	Screw (9-15 X 1" ; Torque to 25/35 in. lbs.)
5	*33853	1	Reservoir Gasket
6	61243	1	Reservoir

Part numbers marked with an asterisk (*) are contained in Repair Kit #300957.

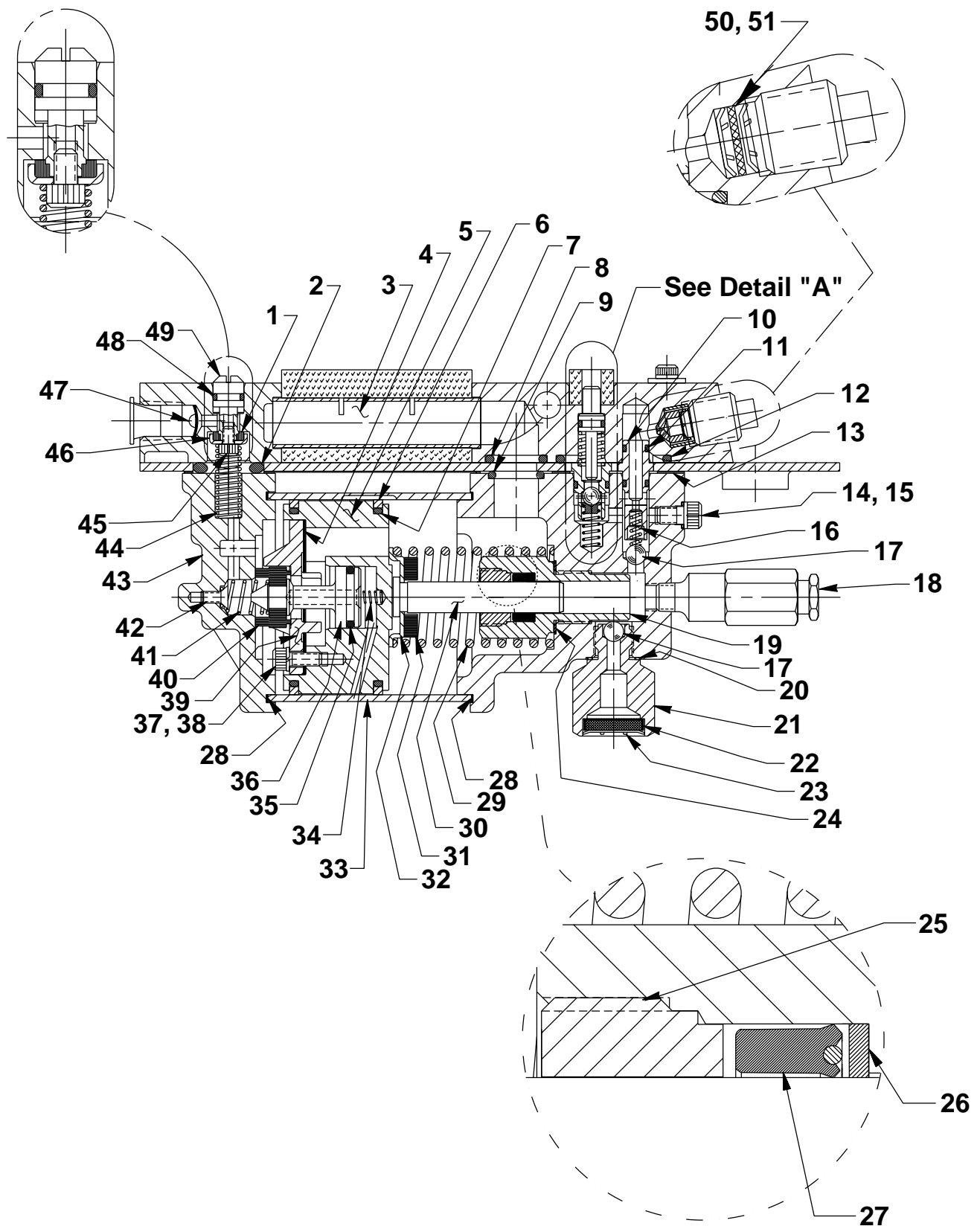
TOP & END VIEWS



Item No.	Part No.	No. Req'd	Description
1	14794	1	Plastic Cap
2	37199	1	Air Intake Valve Body
3	11151	4	Cap Screw (10-24 X 1-1/4"; Torque to 50/60 in. lbs.)
4	11127	1	Pressure Plug (3/8 NPTF)
5	58563	1	Release Valve Body
6	11435	2	Soc. Hd. Cap Screw (10-24 X 1-3/4"; Torque to 50/60 in. lbs.)
7	11089	2	Washer (#10 bolt)
8	420965BK2	1	Cover Plate
9	*29992	1	Foam Tube
10	251689	1	Breather/Filler Cap
11	*10273	1	O-ring (.81 X .62)
12	64767	1	Pump Body
13	17428	4	Soc. Hd. Cap Screw (1/4-20 X 3-1/2"; Torque to 85/95 in. lbs. oiled. Note: Cross torque in increments of 30 in. lbs.)

Part numbers marked with an asterisk (*) are contained in Repair Kit #300957.

BASIC PUMP ASSEMBLY

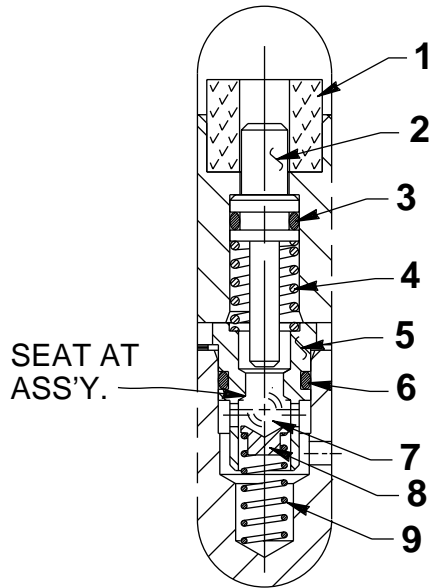


Item No.	Part No.	No. Req'd	Description	Item No.	Part No.	No. Req'd	Description
1	*28182	1	Air Valve Poppet	27	*253095	1	U-cup
2	*251717	1	O-ring (1.0 X .62)	28	*17429	2	Backup Washer (2.94 X 2.75)
3	28387	1	Muffler	29	*13938	1	Compression Spring (1.45 O.D. X 4.4)
4	*28239	1	Gasket	30	28400	1	Piston (7/16")
5	52390	1	Piston Body	31	202613	1	Bumper
6	*14265	2	Piston Ring (2.77 X 2.54)	32	211082	1	Spring Guide
7	*251835	2	O-ring (2-1/2" X 2-5/16" X 3/32 Nitrile)	33	37434	1	Air Cylinder (Note: Locate groove on upper half (top) of pump with chamfered tube end towards rear head as shown.)
8	*10276	1	O-ring (1.0 X .75)	34	*12692	1	Compression Spring (.18 O.D. X 1.70)
9	*10272	1	O-ring (.75 X .56)	35	*211052	1	O-ring (.90 X .70)
10	34378	1	Check Valve Body	36	305475	1	Exhaust Valve Stem
11	*12522	2	O-ring (.37 X .25; Urethane)	37	*10241	3	Lockwasher (.33 X .20)
12	*11841	1	O-ring (1.62 X 1.37)	38	211054	3	Screw (10-24 X 1/2; Torque to 50/55 in. lbs.)
13	*351021	1	Cover Plate Gasket	39	33822	1	Piston End Plate
14	*10442	1	Copper Washer (.37 X .25)	40	*28183	1	Piston Poppet
15	10002	1	Screw (1/4-20 X 3/8; Torque to 90/110 in. lbs.)	41	*205679	1	Compression Spring (.49 O.D. X .92)
16	*10445	1	Compression Spring (.16 O.D. X .72)	42	*205674	1	Screw (8-32 UNC X 3/8; Torque to 12/18 in. lbs.)
17	*10423	2	Steel Ball (9/32 Dia.)	43	51480	1	Rear Head
18	21278-10	1	Relief Valve (Set at 900/1,000 PSI; Apply loctite 592 [Power Team #905516] or equiv. & torque to 150/170 in. lbs.)	44	12691	1	Compression Spring (.36 O.D. X 1.5)
19	421642	1	Piston Cylinder (Torque to 90/100 ft. lbs. oiled.)	45	13936	1	Screw (8-32 X 1/4)
20	*10261	1	Copper Washer (.75 X .60)	46	28198	1	Seal Guide
21	48010	1	Filter Adapter (Torque to 40/50 ft. lbs. oiled.)	47	*216296	1	Filter Disc
22	214578	1	Filter	48	*10267	1	O-ring (.43 X .31)
23	214586	1	Retaining Ring	49	33841	1	Actuator Button
24	*10263	1	Copper Washer (1.0 X .77)	50	*11088	2	Internal Retaining Ring (.31 x .010)
25	*351662	1	Retainer (See "INSTRUCTIONS FOR RETAINER REPLACEMENT" on sheet 3 of 3.)	51	*250638	1	Oil Filter Disk
26	*12488	1	Backup Washer				

Part numbers marked with an asterisk (*) are contained in Repair Kit #300957.

Note: Shaded areas reflect last revision(s) made to this form.

Detail "A-1"



Item No.	Part No.	No. Req'd	Description
1	*206504	1	Foam Tube
2	29365	1	Release Valve Button
3	*10266	1	O-ring (.37 X .25)
4	*13944	1	Compression Spring (.36 O.D. X .50)
5	34377	1	Poppet Retainer
6	*15279	1	O-ring (.50 X .37)
7	*10375	1	Ball (1/4")
8	25685	1	Ball Retainer
9	*14624	1	Spring (.25 O.D. X .75)

Part numbers marked with an asterisk (*) are contained in Repair Kit #300957.

INSTRUCTIONS FOR RETAINER REPLACEMENT

Your pump's retainer has two stake marks in the seam between the retainer and the cylinder nut.

1. For replacement of this retainer, the stake marks must be removed. Using a 1/8" or larger diameter drill bit, remove the existing stakes by drilling a short distance into the stake marks. Remove the retainer.
2. Install the new retainer into the cylinder nut and torque to 80/100 in. lbs.
3. To lock retainer into place, use a center punch positioned in the seam between the retainer and the cylinder nut and stake the new retainer in two places approximately 180° apart.

NOTE: Do not stake in the old stake marks.

