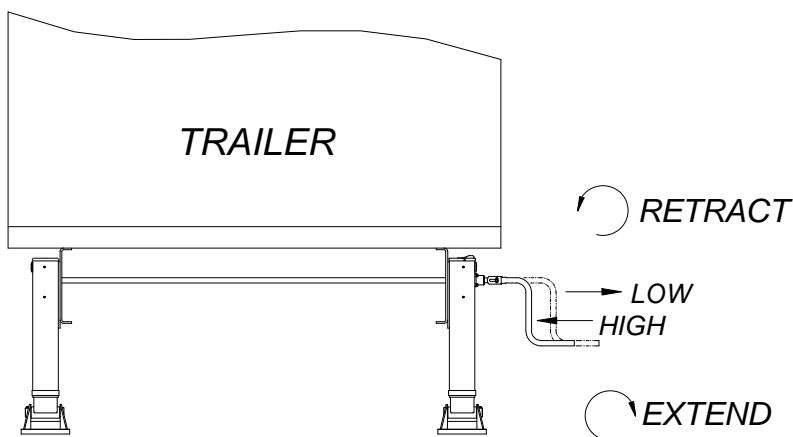




WARNING: Before attempting to operate the landing gear, you must read and understand the following procedures:

- Perform all procedures in lighted area clear of obstacles and other personnel.
- Always grip the crank handle securely with both hands.
- Maintain proper footing at all times.
- Never attempt to shift the landing gear while under load.
- Lifting and lowering of the trailer must always be done in LOW GEAR.
- DO NOT ATTEMPT TO LIFT OR LOWER TRAILER WITH LANDING GEAR IN HIGH GEAR, AS SERIOUS PERSONAL INJURY COULD OCCUR.
- Always secure the crank handle when not in use.

OPERATING INSTRUCTIONS



- Push crank handle **in** for **high** gear.
- Pull crank handle **out** for **low** gear.
- Turn crank:
Counterclockwise - Retract
Clockwise - Extend

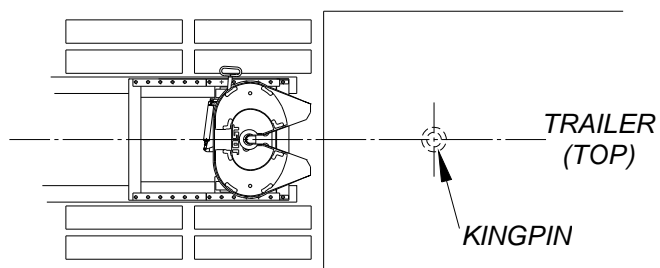
FIGURE 1

Note: Both inside and outside mounts crank the same.

COUPLING PROCEDURES

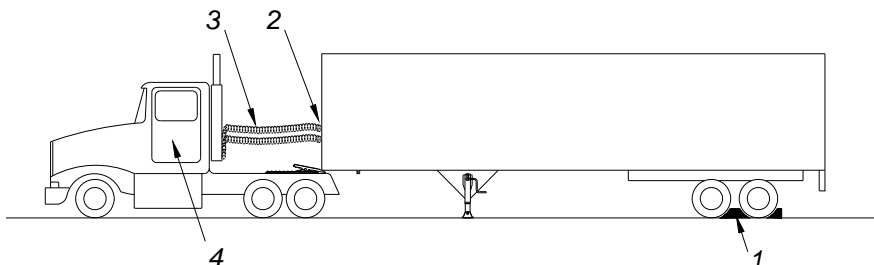
STEP 1

Inflate tractor air suspension and back up **close** to the trailer centering the kingpin with the throat of the fifth wheel and **STOP!** **DO NOT ATTEMPT TO COUPLE UNTIL STEPS 2 THROUGH 4 ARE COMPLETED.**



STEP 2

1. Chock trailer wheels.
2. Connect brake lines and light cord.
3. Support slack in lines to prevent interference.
4. Set trailer brakes.



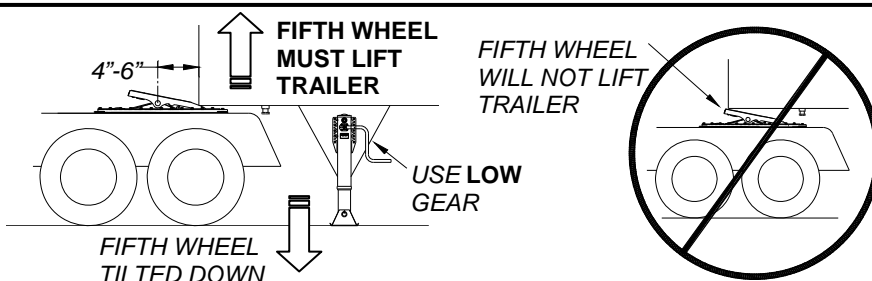
STEP 3

Make sure that the landing gear is in low gear (see figure 1) and engage crank handle.



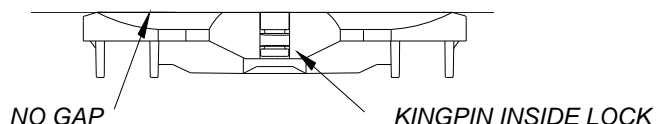
STEP 4

Adjust trailer height so that the fifth wheel will lift the trailer.



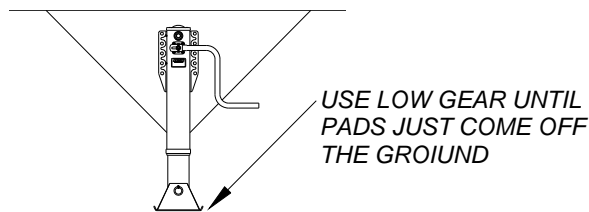
STEP 5

Couple and verify that there is no gap between fifth wheel and trailer and that the kingpin is inside the lock.



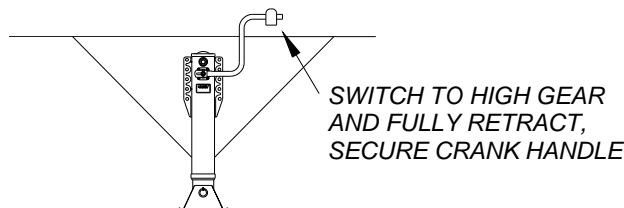
STEP 6

While still in low gear, retract landing gear until pads just come off the ground.



STEP 7

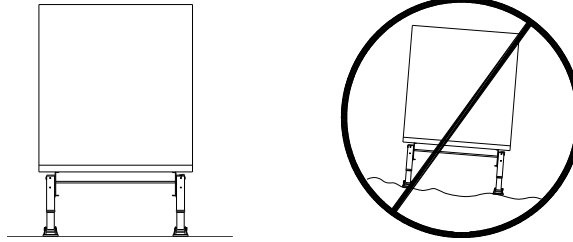
Switch to high gear and fully retract, secure crank handle.



UNCOUPLING PROCEDURES

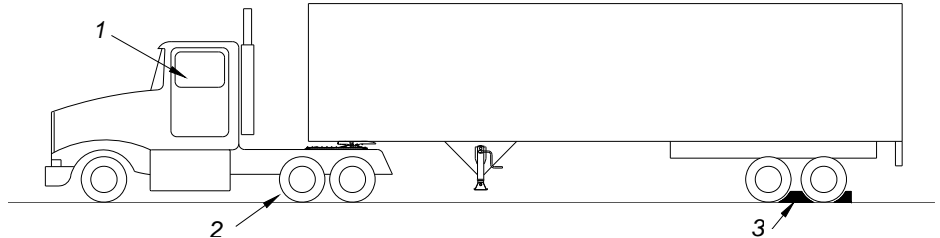
STEP 1

Position the tractor and trailer on level ground, clear of persons and obstacles.



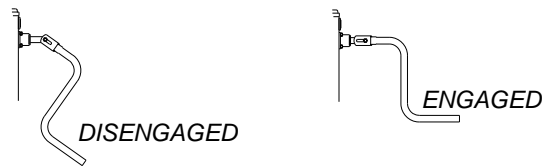
STEP 2

1. Set trailer brakes. Slowly back tractor tightly against trailer.
2. Set tractor brakes.
3. Chock trailer wheels.



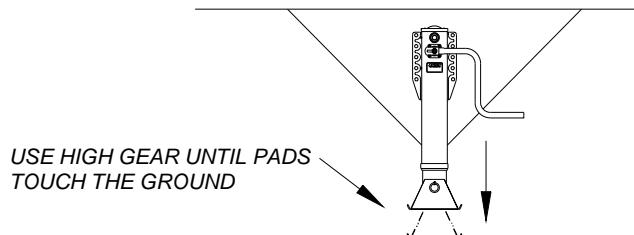
STEP 3

Shift landing gear to high gear (see figure 1) and engage crank handle.



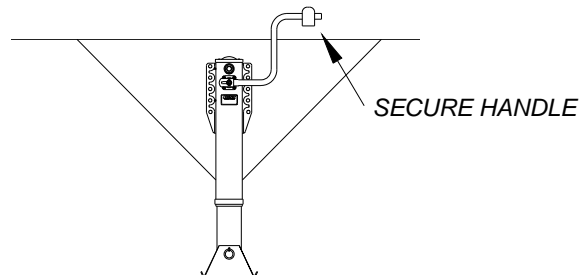
STEP 4

Extend landing gear until pads just touch the ground.



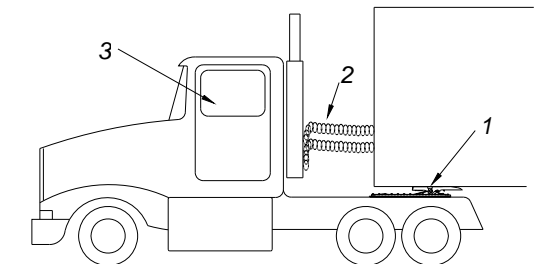
STEP 5

Switch to low gear and crank an additional 4-8 turns minimum.
Secure crank handle



STEP 6

1. Pull fifth wheel release handle.
2. Disconnect air lines and light cord.
3. Release tractor brakes and slowly drive away from trailer.



MAINTENANCE PROCEDURES

These procedures must be performed, as needed depending upon application but at least every 3 months.

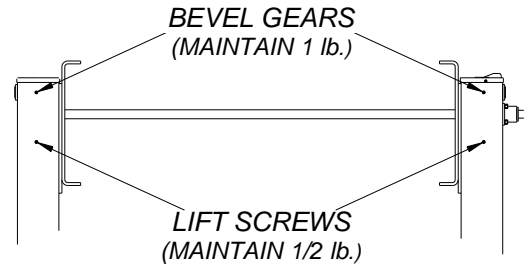
Lubricate at least every 3 months and more frequently in applications where the landing gear are exposed to excessive moisture (liquid salt water spray), dust, or if they are not used for extended periods. Lubricate with the trailer securely coupled to a tractor (see Coupling Procedures on Page 2).

Employ a lubricant compatible with the original type of grease used:

Standard – Lithium base 1-2% Moly EP-2

Low temperature – Arctic-grade, all weather white grease

Warning: Do not use any lubricants containing Teflon



INSTRUCTIONS:

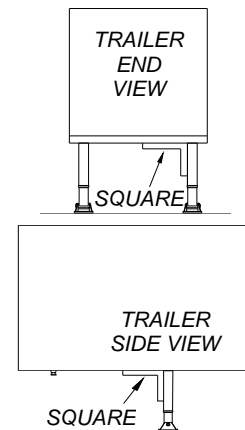
1. Fully retract the landing gear, then using high gear extend 6-8 turns.
2. Lubricate through the grease fittings as shown.
3. Extend and retract the landing gear to apply grease to the entire length of the screw.

INSPECT HARDWARE:

- Tighten or replace mounting bolts as necessary.
- Inspect the mounting bracket for cracks or other signs of damage.
- Repair or replace any broken or damaged parts of the landing gear assembly or mounting structure.
- Inspect the crank handle bolt and lock nut. Tighten or replace as necessary (the crank handle bolt must be loose enough to allow free engagement).
- Cross shaft connection bolts and lock nuts should be secure, but allow side-to-side play in the cross shaft.
- Check for proper crank shaft engagement in both high and low gear.
- Landing gear with excessive play should be rebuilt or replaced.

INSPECT ALIGNMENT:

Using a square, check that both landing gear legs are square with the trailer and parallel with each other as shown. Bent or damaged legs are an indication of possible damage to the lift screw, lift nut or other internal components and should be replaced.



TROUBLE-SHOOTING POINTS

Problem	Cause	Correction
Hard to crank landing gear	<ol style="list-style-type: none"> 1. Turning crank in wrong direction. 2. Attempting to raise or lower trailer in high gear. 3. Legs are already fully extended or retracted. 4. Cross shaft binding: <ul style="list-style-type: none"> - over-tightened bolts. - cross shaft bent or too long. 5. Mis-aligned landing gear legs. 6. Lack of grease. 7. Damaged lift screw or lift nut. 8. Interference between powder metal bushing and trailer mounting surface. 	<ol style="list-style-type: none"> 1. See figure 1 on page 1 for proper crank handle rotation. 2. Shift to low gear (see figure 1). DO NOT ATTEMPT TO LIFT OR LOWER IN HIGH GEAR. 3. Turn crank in opposite direction to retract or extend. 4. Inspect cross shaft bolts. Back off bolts to allow lateral (side-to-side) movement of cross shaft. Use self-locking type nuts only. 5. Legs must be parallel and extend and retract evenly. Remove cross shaft; adjust landing gear legs to same height. 6. Grease landing gear as directed above (Maintenance Procedures). 7. Check landing gear for signs of impact (accident) damage. Disconnect cross shaft and crank legs individually to determine which leg is damaged. Replace damaged leg. 8. Hole in trailer mounting surface may need to be enlarged.
Shaft turns but legs do not operate	<ol style="list-style-type: none"> 1. Broken shaft or shaft bolt. 2. Broken pinion gear or bevel gear or gear pins. 	<ol style="list-style-type: none"> 1. Replace broken bolt(s) and shaft as needed. 2. Replace broken gear(s) or pin.
Shaft does not turn	<ol style="list-style-type: none"> 1. Broken gear teeth. 2. Damaged lift screw. 3. Seized lift screw or nut 4. Bent inner or outer leg tube. 	<ol style="list-style-type: none"> 1. Replace broken gear(s). 2. Replace inner leg or entire landing gear leg. 3. Replace inner leg or entire landing gear leg. 4. Replace bent inner leg or outer leg, or entire landing gear leg.
Crank shaft skips when cranking	<ol style="list-style-type: none"> 1. Broken gear teeth. 	<ol style="list-style-type: none"> 1. Replace broken gear(s).

REPAIR PROCEDURES

The item numbers mentioned in the following section refer to the spare parts list located on page 8.

Do not attempt to do the following repairs with the legs on the trailer. Please remove the legs before continuing.

Two Speed Leg Disassembly

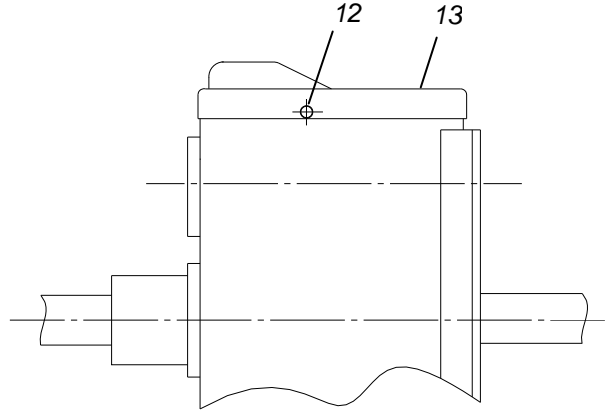
STEP 1

Remove (2) cover screws (item 12).

Lift off cover (item 13).

Important: The cover is sealed to the upper housing with a silicone sealant. Use Dow Corning #700 or equivalent when replacing the cover.

Remove the grease before continuing.

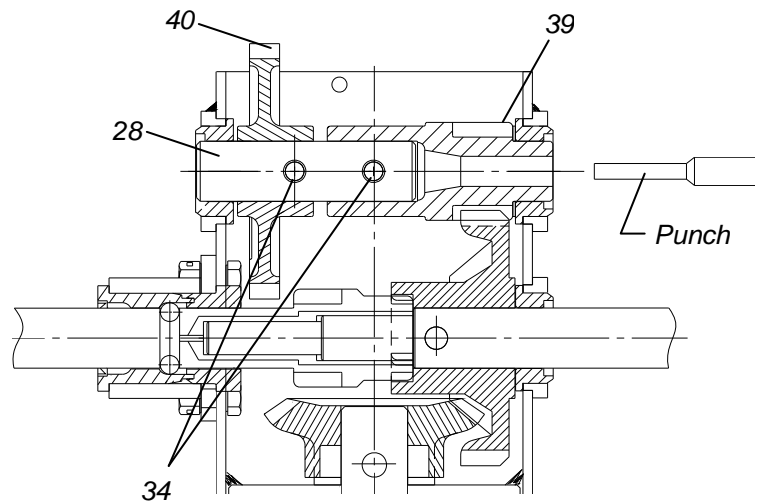


STEP 2

Drive (2) spiral pins (item 34) from the Output Spur Gear (item 39) and from the Input Gear (item 40).

Then drive out the Output Shaft (item 28) by placing a punch thru the hole in item 39.

Now, both the Output Shaft (item 28) and the Output Spur Gear (item 39) can be removed.

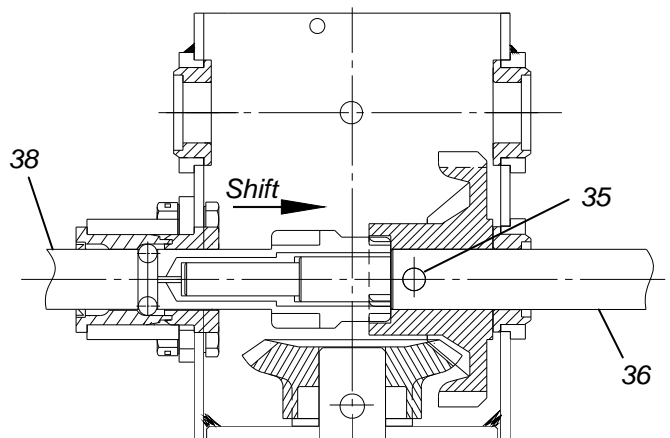


STEP 3

Remove the Cap Plug in outer housing exposing the ½ dia. access hole*.

Shift the Input Gear Shaft (item 38) to the high gear position. Drive out the roll pin (item 35) using the ½ dia. access hole.

Remove the Output Cluster Shaft (item 36).



REPAIR PROCEDURES

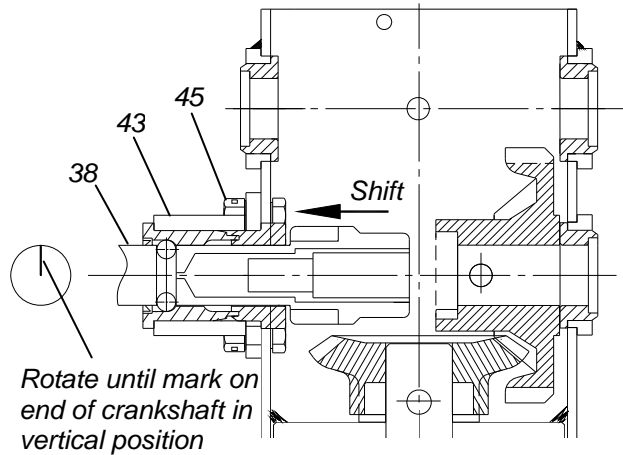
Two Speed Leg Disassembly con't

STEP 4

Shift the Input Gear Shaft (item 38) to the low gear position. Rotate until mark on the end is in the vertical position.

Remove (4) 5/16 locknuts (item 45) from Shift Housing (item 43).

Remove the Input Gear Shaft (item 38) and the Shift Housing (item 43) as one unit.

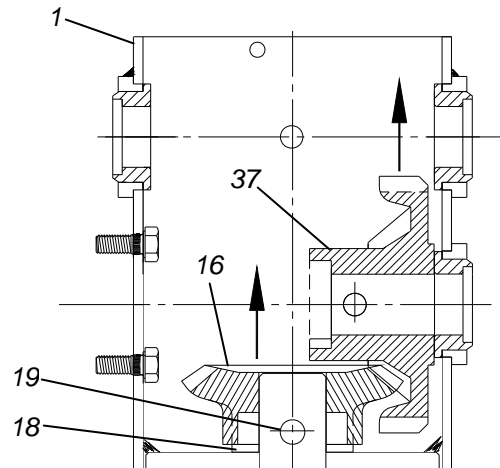


STEP 5

Remove Output Cluster Gear (Item 37) and Bevel Gear (item 16) by lifting upwards on both parts at the same time.

Remove the Groove Pin (item 19) and Thrust Washer (item 18).

Now the Outer Housing (item 1) can be lifted off from the inner leg assembly.

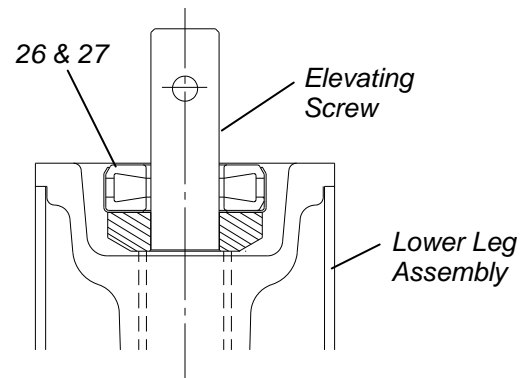


STEP 6

Remove the Thrust Bearing (item 26) and Collar (item 27).

Attention: Thrust Bearing must be exchanged complete with collar. New thrust bearing must be packed with grease before assembly.

*Advice: If Elevating Screw shows signs of wear, replace the Lower Leg Assembly before mounting. Make sure Elevating Screw and Nut are sufficiently greased. If grease is required, coat the entire surface of the screw with a minimum of 4oz. (112 Grams) of 1-2% Moly grease.

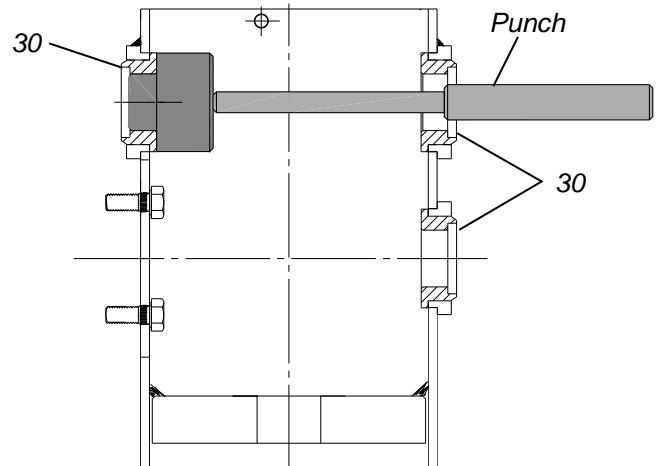
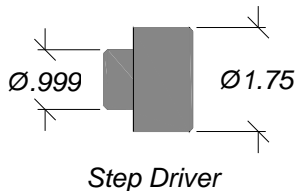


REPAIR PROCEDURES

Two Speed Leg Disassembly con't

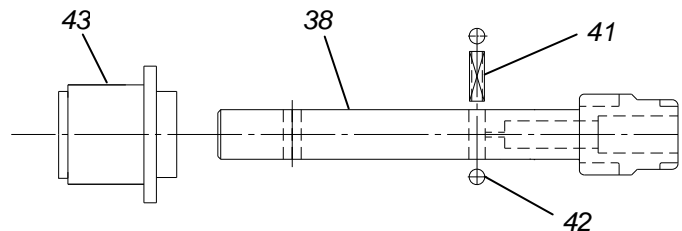
STEP 7

If Bushings (item 30) are worn they must be replaced. Use part #A10255 (item 30) for both single and two-speed Outer Housings. Install bushings with a step driver and punch (see diagram).



Input Gear Shaft & Shift Housing Sub-Assembly

Apply a thin film of Lithium grease to the inside of the Shift Housing (item 43). Reassemble by compressing (2) Detent Balls (item 42) and Detent Spring (item 41) into hole in Input Gear Shaft (item 38). Then slide Shift Housing (item 43) onto the shaft, capturing the Detent Balls and Spring.



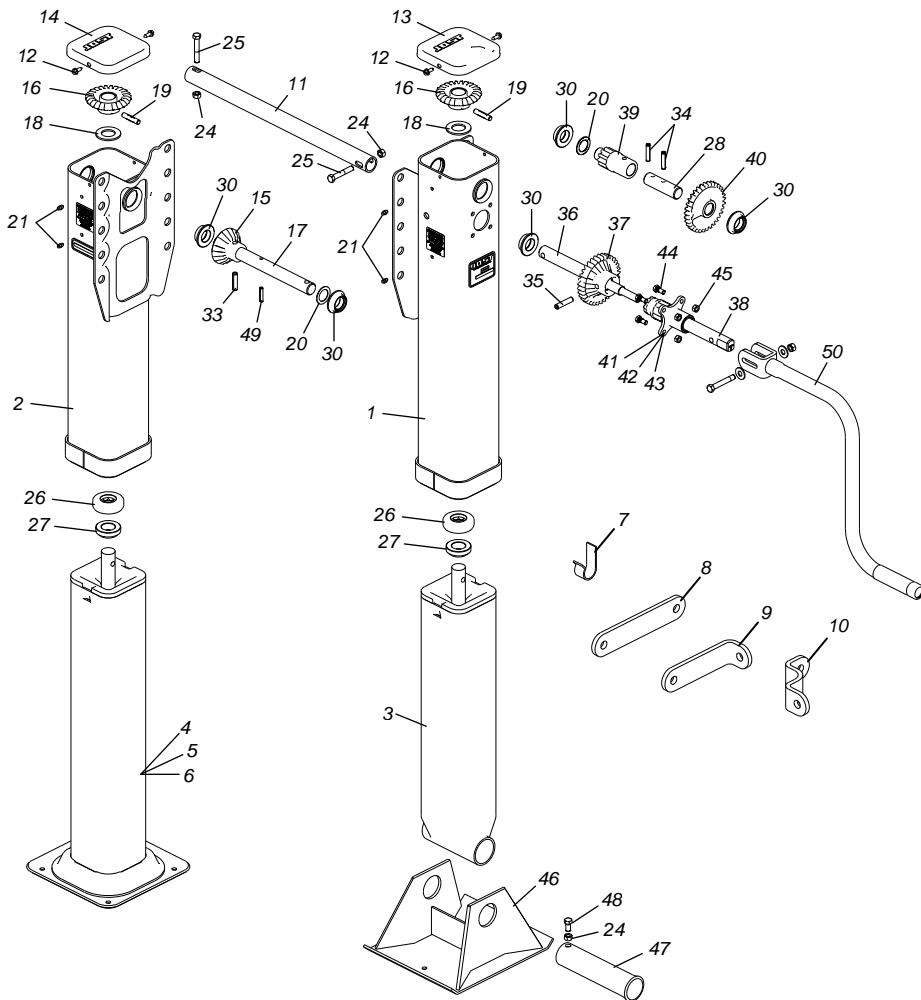
Parts List

Standard Assemblies

Item	Description		Outside Mount (A400)			Inside Mount (A401)		
			14" Travel	17" Travel	19" Travel	14" Travel	17" Travel	19" Travel
1	Upper Housing	Two-Speed	D10201.1	D10201.2	D10201.3	D10298.1	D10298.2	D10298.3
2	Upper Housing	One-Speed	D10116.1	D10116.2	D10116.3	D10299.1	D10299.2	D10299.3
3	Lower Leg Assembly	Standard	C10140.1	C10140.2	C10140.3	C10140.1	C10140.2	C10140.3
4	Lower Leg Assembly	10" x 10" Cushion	C10146.1	C10146.2	C10146.3	C10146.1	C10146.2	C10146.3
5	Lower Leg Assembly	10" x 12" Cushion	C10254.1	C10254.2	C10245.3	C10254.1	C10254.2	C10245.3
6	Lower Leg Assembly	Low Profile Cushion	C10580.1	C10580.2	C10580.3	C10580.1	C10580.2	C10580.3

Magnum Assemblies

Item	Description		Outside Mount (A440)			Inside Mount (A441)		
			14" Travel	17" Travel	19" Travel	14" Travel	17" Travel	19" Travel
1	Upper Housing	Two-Speed	D10201.1	D10201.2	D10201.3	D10298.1	D10298.2	D10298.3
2	Upper Housing	One-Speed	D10116.1	D10116.2	D10116.3	D10299.1	D10299.2	D10299.3
3	Lower Leg Assembly	Standard	C10140.10	C10140.20	C10140.30	C10140.10	C10140.20	C10140.30
4	Lower Leg Assembly	10" x 10" Cushion	C10146.10	C10146.20	C10146.30	C10146.10	C10146.20	C10146.30
5	Lower Leg Assembly	10" x 12" Cushion	C10254.10	C10254.20	C10245.30	C10254.10	C10254.20	C10245.30
6	Lower Leg Assembly	Low Profile Cushion	C10580.10	C10580.20	C10580.30	C10580.10	C10580.20	C10580.30



Individual Components

Item	Description	Qty	Part No.
7	Crank Hanger	1	B10261
8	Brace Lug - Flat	2	C10262
9	Brace Lug - 90°	2	C10263
10	Brace Lug - W Standard	2	C10108
11	Cross Shaft	1	B10066
12	Cover Screw	4	A10059.1
13	Cover - Two-Speed	1	C10217
14	Cover - One-Speed	1	C10259
15	Pinion Gear - One-Speed	1	C10177
16	Bevel Gear	2	C10155
17	Pinion Shaft - One-Speed	1	B10130
18	Thrust Washer	2	A10102
19	Grooved Pin	2	A10052.3
20	Spacer Washer	2	A10218
21	Grease Fitting	4	A10040
24	Self Locking Nut	4	A10038.7
25	Cross Shaft Bolt - 3/8 x 2" Gr 5	2	A10037.1
26	Thrust Bearing	2	A10033
27	Collar	2	A10101
28	Output Shaft	1	A10212
30	Bushing (Standard)	5	A10255
30	Bushing and Seals (Magnum)	5	A10727
33	Roll Pin - 3/8 x 1 1/2"	1	A10054.3
34	Spiral Pin	2	A10260.1
35	Roll Pin - 3/8 x 1 1/4"	1	A10054.7
36	Output Cluster Shaft	1	B10236
37	Output Cluster Gear	1	C10234
38	Input Gear Shaft	1	C10233
39	Output Spur Gear	1	C10078
40	Input Spur Gear	1	C10085
41	Detent Spring	1	A10049
42	Detent Ball	2	A10048
43	Shift Housing	1	B10229
44	Shift Housing Bolt	4	A10230
45	Self Locking Nut	4	A10038
46	Shoe - 10" x 10" x 4 1/2" Standard	2	C10035
	Shoe - 10" x 10" x 2"	2	C10135
	Shoe - 10" x 12" x 4 1/2"	2	C10256
	Shoe - 10" x 12" x 2"	2	C10257
47	Shoe Axle	2	B10036
48	Hex Head Bolt	2	A10037.3
49	Roll Pin 1/4" x 1 1/4"	1	A10054.6
50	Standard Crank with Hardware	1	C10592.2

Shift Housing Assembly

Includes Items 41, 42 & 43 above
Part Number - B10229S

Input Gear & Shift Housing Assembly

Includes Items 38, 41, 42 & 43 above
Part Number - B10285