



Atwood Mobile Products
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November 2003

INTRODUCTION

The 2004 edition of the Atwood Hardware Service Manual is a resource created to help service technicians identify Atwood product diagnose service problems and efficiently and effectively process warranty claims.

This manual should be used in conjunction with the current Installation Operation Manual (IOM) for the product being serviced. To obtain a current IOM please contact Atwood Mobile Products at the address listed above.

Each of the manuals within this series offers a general overview of the product as well as more specific product information. For each product within the manual, you will find model identification, recommended tools and equipment, a sequence of operation, warnings, annual maintenance procedures, parts and troubleshooting guides, warranty procedures, flat rate schedules, and replacement part reference charts.

Due to the rapidly changing personal computer revolution we have placed troubleshooting information in a variety of places to make sure that the most accurate information is available. The best place to find the current information about Atwood products is our website: www.atwoodmobile.com. At our website brochures may be downloaded, trouble shooting guides reviewed and the latest information bulletins can be read. In addition all Atwood Authorized Service Centers are listed on our site, accessible via an easy-to-use search system.

Service for all Atwood products is handled out of our Rockford location. Should you have any questions regarding our products or the information contained in this manual simply dial 1-800-825-4328.

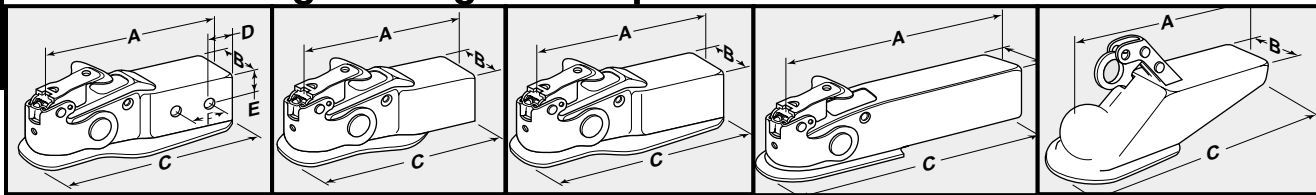
Atwood Service Department

INDEX	
1 COUPLERS	2-4
Straight Tongue & A-Frame Couplers	
Specialty Couplers & HITCH BALLS	
Yoke Style Coupler Trouble Shoot Guide & Coupler Kits	
2 BRAKES	5-11
Terminology	
Surge Brakes	
Actuators	
Foundation Brakes	
Brake Kits	
Surge Brake Trouble Shooting Guide	
3 CASTERS/FEET & SUPPORT PLATES	12
4 JACKS	13-29
Jack Replacement Kits	
A- Frame Jack	
Speciality Jack	
Jack Screw	
Square Tube Jack	
Bolt Swivel Jack	
Implement Swivel Jack	
Retaining Ring Swivel Jack	
Manual Tongue Jacks - Trouble Shooting Guide	
Stabilizer Jack	
JACKS (CONTINUED)	
Telescoping Stabilizers	
Power Jacks Trouble Shooting Guide	
Power & Marine Jacks	
Duraleg	
Remote Control EBSJ Trouble Shooting Guide	
Truck Camper Jacks	
Swing Out Bracket	
5 LEVELLEGS	30-31
6 5TH WHEEL LANDING GEAR	32-37
3:1 Gear Box Replacement	
5th Wheel Parts Breakdown	
Gear Replacement Kits	
5th Wheel Leveling System	
7 MOTORS	38
8 5TH WHEEL PIN BOXES	39
9 FOLDING HITCH BALL	40
10 GOOSENECK COUPLER SYSTEMS	41
5TH WHEEL HITCHES	
11 WARRANTY & PROCEDURES	42
12 MUST RETURN PARTS LIST	43
13 HARDWARE FLAT RATE	44

Disclaimer: The data presented in this publication is obtained from the most reliable sources, and is believed to be accurate as of the date of publication. Responsibility for typographical errors or omission of data cannot be assumed by the publishers.



Atwood Straight Tongue Couplers



80051, 80055, 80056

82311, 82315

80060

80186, 80082, 80083

80131

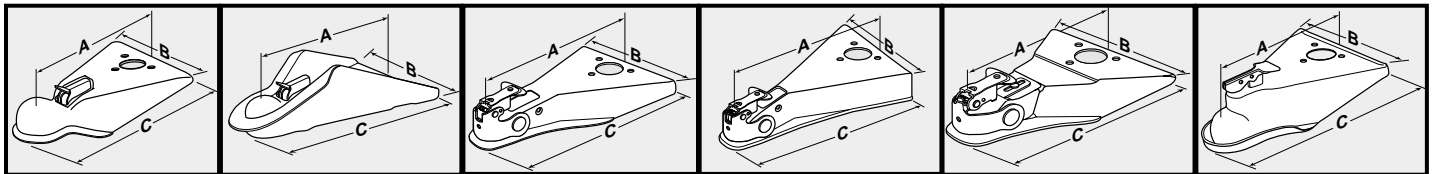
STRAIGHT TONGUE COUPLER SELECTION GUIDE

Part No.	Description	LATCH KIT	Rated Cap. lbs.	S.A.E Class	A		B*		C		D		E		F	
					in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
80051	2" ball, 3" channel, bolt-on painted	15775	3,500	2	9 3/8	238	3	76	11	279	7/8	22	3/4	19	3	76
80055	2" ball, 3" channel, bolt-on zinc-plated	15775	3,500	2	9 3/8	238	3	76	11	279	7/8	22	3/4	19	3	76
80056	2" ball, weld-between, 3" channel unpainted, zinc plated latch	15775	3,500	2	9 3/8	238	3	76	11	279	7/8	22	3/4	19	3	76
82311	2" ball, weld-between, painted	15775	3,500	2	7 5/8	194	3	76	9 1/4	235	—	—	—	—	—	—
82315	2" ball, weld-between, unpainted, zinc plated latch	15775	3,500	2	7 5/8	194	3	76	9 1/4	235	—	—	—	—	—	—
80060	2" ball, 3" channel, painted	15775	5,000	3	9 3/8	238	3	76	11	279	—	—	—	—	—	—
80082	2" ball, 2" channel, painted	15775	5,000	3	9 1/2	241	2	51	11	279	—	—	—	—	—	—
80083	2" ball, 2" channel unpainted, zinc plated latch & clamp	15775	5,000	3	9 1/2	241	2	51	11	279	—	—	—	—	—	—
80186	2" ball, 2" channel, painted	15775	6,000	3	9 1/2	241	2	51	11	279	—	—	—	—	—	—
80131	2 5/16" ball, 3" channel, painted	07532	8,500	4	12	305	3 1/8	79	14	356	—	—	—	—	—	—

* B dimension is the inside dimension relating to channel size

Atwood A-Frame Couplers

Thumb Latch Release Ball Clamp → Wrap-Around Yoke Style Latch → Classic Marvel Flip Latch Style



81911, 81912, 81915

82680**

80072, 84176, 84800

84035

80101

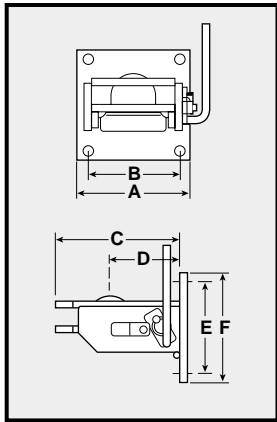
88007, 88010, 88555, 88600, 88000, 88005

A-FRAME COUPLER SELECTION GUIDE

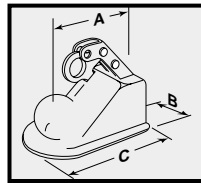
* Various aspects of design, including the latch handle design, are registered as a trademark of Atwood Industries, Inc.

Part No.	Description	LATCH KIT	Rated Capacity lbs.	Class	A		B		C	
					in.	mm	in.	mm	in.	mm
80072	2" ball, painted, weld-on, yoke style	15775	5,000	S.A.E. 3	12 3/8	314	9 1/4	235	14	356
84176	2" ball, unpainted, weld-on, yoke style zinc latch	15775	5,000	S.A.E. 3	12 3/8	314	9 1/4	235	14	356
84035	2" ball, painted, weld-on, yoke style	15775	5,000	S.A.E. 3	13 3/8	340	10 3/8	264	14 7/8	378
84800	2" ball, painted, weld-on, yoke style	15775	6,000	S.A.E. 3	12 3/8	314	9 1/4	235	14	356
88555	2" ball, painted, weld-on, thumb latch style	88051	8,000	S.A.E. 4	9 7/8	251	9 3/4	248	11 7/8	302
88600	2" ball, unpainted, weld-on, thumb-flip latch style	88051	8,000	S.A.E. 4	9 7/8	251	9 3/4	248	11 7/8	302
80101	2 5/16" ball, painted, weld-on, yoke style	15774	8,500	S.A.E. 4	12	305	10	254	14	356
88007	2 5/16" ball, painted, weld-on, flip latch style	88061	10,000	S.A.E. 4	10 7/8	276	10 3/8	264	13	330
88010	2 5/16" ball, unpainted, weld-on, flip latch style	88061	10,000	S.A.E. 4	10 7/8	276	10 3/8	264	13	330
81911	2 5/16" ball, painted, weld-on, thumb latch style	NA	10,000	S.A.E. 4	11	279	10 7/8	276	12 3/4	324
81915	2 5/16" ball, unpainted, weld-on, thumb latch style	NA	10,000	S.A.E. 4	11	279	10 7/8	276	12 3/4	324
81912	2 5/16" ball, painted, weld-on, thumb latch style	NA	13,000	S.A.E. 4	11	279	10 5/8	270	12 3/4	324
82680	2 5/16" ball, painted, weld-on, thumb latch style	NA	13,000	S.A.E. 4	11	279	10 5/8	270	13 1/8	333
88000	2" ball, OBSOLETE - OLD STYLE MARVEL	88050	** Top plate 82740 is packed with 82680 coupler. 82681 coupler is the same as 82680 except it is packed without a support plate. Top plate 22375 can also be used with 82680 or 82681 coupler if a Top Mount A-Frame Jack (5,000 lbs. max) is used in this application.							
88005	2 5/16" ball, OBSOLETE - OLD STYLE MARVEL	88060								

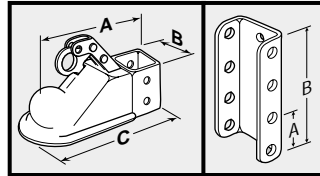
Atwood Specialty Couplers



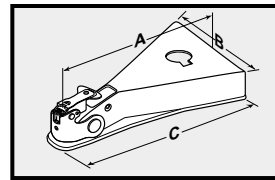
Flat Nose Coupler - 75074



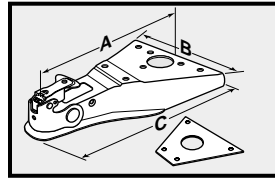
Adjustable - 80290



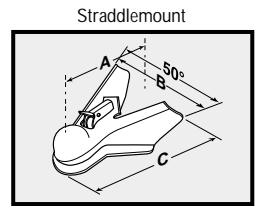
Adjustable - 80281* 80285



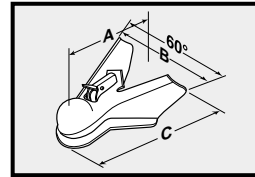
Unique - 80075



Unique - 80073



83461 — 50° Coupler
83462 — 50° Coupler
84140 — 50° Coupler
Straddlemount



83549 — 60° Coupler
83551 — 60° Coupler
84060 — 60° Coupler

SPECIALTY COUPLER SELECTION GUIDE

Part No.	Description	LATCH KIT	Rated Cap. lbs.	S.A.E. Class	A		B		C		D		E		F	
					in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
80073	2" ball, galvanized, bolt-on, yoke style	15775	5,000	3	12 ³ / ₈	314	9 ¹ / ₄	235	14	356	—	—	—	—	—	—
80075	2" ball, rack jack mount, painted, yoke style latch	15775	5,000	3	13 ³ / ₈	340	10 ³ / ₈	264	14 ⁷ / ₈	378	—	—	—	—	—	—
80285	4 hole bracket for adj. coupler	—	12,000	—	2	51	6	152	—	—	—	—	—	—	—	—
80281	2 ⁵ / ₁₆ " ball, adj. coupler w/o brkt	07532	12,000	—	7	178	3	76	9	229	—	—	—	—	—	—
80290	2 ⁵ / ₁₆ " ball, adj. coupler weld on	07532	12,000	—	7	178	3	76	9	229	—	—	—	—	—	—
75074	flat nose coupler, painted	—	25,000	—	6	152	4 ¹ / ₂	114	6 ³ / ₄	171	3 ³ / ₄	95	4 ¹ / ₂	114	6	152
Mobile home only — 2 ⁵ / ₁₆ " ball, straddlemount — thumb latch																
83461	coupler 50°, painted	NA	32,000	—	8	203	6 ⁷ / ₈	175	9 ⁷ / ₈	251	—	—	—	—	—	—
83551	coupler 60°, painted	NA	32,000	—	8	203	7 ⁷ / ₈	200	9 ⁷ / ₈	251	—	—	—	—	—	—
84140	coupler 50°, painted	NA	40,000	—	8	203	6 ⁷ / ₈	175	9 ⁷ / ₈	251	—	—	—	—	—	—
84060	coupler 60°, unpainted	NA	40,000	—	8	203	7 ⁷ / ₈	200	9 ⁷ / ₈	251	—	—	—	—	—	—
83462	coupler 50°, unpainted	NA	44,000	—	8	203	7 ⁷ / ₈	200	9 ⁷ / ₈	251	—	—	—	—	—	—
83549	coupler 60°, unpainted	NA	44,000	—	8	203	6 ⁷ / ₈	175	9 ⁷ / ₈	251	—	—	—	—	—	—

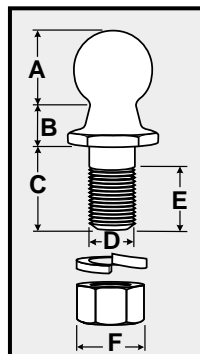
Atwood Hitch Balls

HITCH BALL SELECTION GUIDE

Part No.	Description	Rated Capacity lbs.	A		B		C		D		E		F	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
84137	2 ⁵ / ₁₆ " forged hitch ball	40,000	2 ¹ / ₈	54	1 ¹ / ₄	32	2 ¹ / ₂	64	1 ³ / ₈	35	1 ³ / ₄	45	2 ¹ / ₈	54
80212	2 ⁵ / ₁₆ " forged hitch ball	13,000	2	51	1 ¹ / ₄	32	2 ¹ / ₂	64	1 ³ / ₈	35	2	51	2 ¹ / ₈	54
80202	2" hitch ball	8,000	1 ⁹ / ₁₆	40	1 ³ / ₁₆	30	2 ¹ / ₄	57	1 ³ / ₈	35	1 ⁵ / ₈	41	2 ¹ / ₈	54
82551	2" forged hitch ball	6,000	1 ³ / ₄	45	1 ³ / ₈	35	2	51	1	25	1 ¹ / ₂	38	1 ¹ / ₂	38
80201	2" forged hitch ball	5,000	1 ³ / ₄	45	1 ³ / ₈	35	2	51	1	25	1 ¹ / ₂	38	1 ¹ / ₂	38

Each Atwood hitch ball comes complete with a lock washer and hex nut for quick, secure installation, and meets all applicable S.A.E. and D.O.T. standards.

- The hitch ball should always be checked for correct size.
- Match coupler and check for wear and roundness.
- Always replace hitch ball and coupler if components are damaged or loose.





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Yoke Style Coupler

TROUBLE SHOOTING GUIDE

Effective: 6/26/98

Guides are only intended for use on Atwood® products by service technicians who have successfully completed Atwood® training. This guide should be used in conjunction with the appropriate Instruction Manual provided with the product and any applicable Industry Standards. This is not intended to be a complete list. Please direct questions concerning service of Atwood® products to 800-825-4328 before proceeding.



WARNING

PERSONAL INJURY AND/OR PRODUCT DAMAGE

- If any of the following conditions develop, the trailer must not be used until proper corrective action is taken.

CONDITION WITH SOLUTIONS

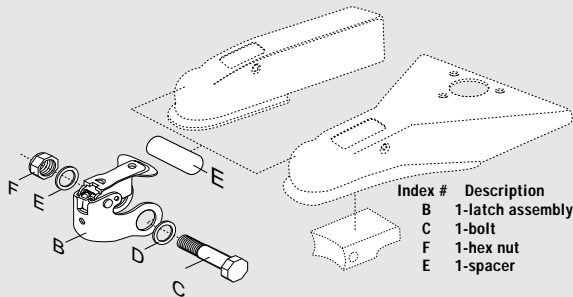
Chucking or Clatter

Lack of ball lubrication	Lubricate with conventional automotive grease or commercial lubricant made for hitch balls
Loose hitch ball	Inspect hitch ball and tighten
Hitch ball worn or too small	Replace ball
Worn ball clamp	Replace coupler
Worn ball socket	Replace coupler
Multi-piece ball	Replace with one piece ball

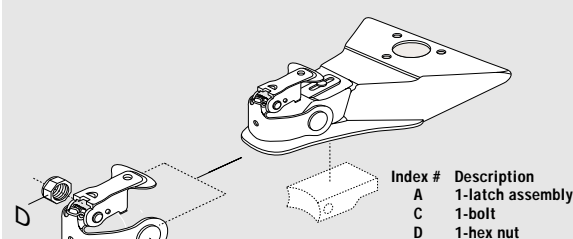
Release Handle Does Not Close Easily

Oversize ball	Check ball size
Ball not fully inserted into ball socket	Check for proper ball size. Check to see if jack is fully retracted. Insure release handle is open when inserting ball.
Broken release handle spring	Replace release handle and yoke assembly
Obstruction in ball socket	Clean ball socket
Seized ball clamp	Lubricate clamp with SAE 30 oil or replace coupler.

KIT # 15773 Latch Replacement Kit (2" Ball) - STRAIGHT TONGUE & A-FRAME



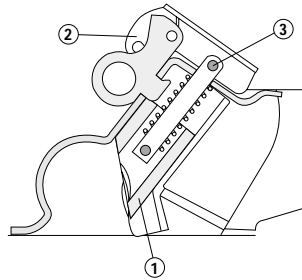
KIT # 15774 Clevis Latch Replacement Kit (2-5/16" Ball) - A-FRAME ONLY



KIT # 07532 Lock Lever & Plunger
 (not shown for coupler 80131 - 2-5/16" ball)

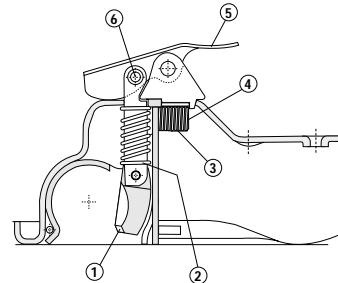
CONSUMER MAINTENANCE CHECKLIST

- **MONTHLY CLEAN AND GREASE.**
 If the ball socket or ball clamp show any signs of unusual wear or deformation, the entire coupler should be replaced. The ball clamp is not replaceable.
- **REGULARLY CHECK THE HITCH AND BALL FOR WEAR.**
 All mounting hardware on the hitch should be tight and any worn bolts, washers or nuts should be replaced. The ball should not show any signs of unusual wear or scoring. If this is present, the ball should be replaced and the coupler socket should be checked for dirt or obstructions and a film of grease applied to the socket.
- **REGULARLY OIL ALL SLIDING PARTS OF THE COUPLER WITH S.A.E. 30 OIL.**
 The primary parts this pertains to are the bolt that the ball clamp and yoke latch swivel on and the thumb latch.
- **REGULARLY INSPECT THE COUPLER WELDS.**
 Look closely for hairline cracks and if any are visible, grind the weld off and re-weld according to the instructions provided in the product IOM. If the coupler is bolted to the frame, inspect the mounting bolts. Tighten them or replace if necessary.
- **REGULARLY INSPECT THE COUPLER BODY FOR ANY CRACKS OR DEFORMITIES.**
 If any exist, do not attempt to weld the cracks or straighten the body. Replace the coupler.
- **REGULARLY CHECK THE LATCH MECHANISM MOVES FREELY.**
 If it does not, remove any obstructions. If the spring in the mechanism is damaged, replace the entire yoke latch.



COUPLER REPAIR KIT 07532

1. Plunger, link spring assembly
2. Cam and handle assembly
3. Rivet



COUPLER REPAIR KITS 88060/88050

1. Lock and shoe assembly
2. Coupler spring
5. Handle
6. Roll pin

COUPLER REPAIR KITS 88061/88051

1. Lock and shoe assembly
2. Coupler spring
3. Retainer spring
4. Spring retainer
5. Handle
6. Roll pin

Surge System Terminology

TERMINOLOGY	DEFINITION	TERMINOLOGY	DEFINITION
Backing Plate	the round thin machined plate of the foundation brake that attaches to the axle flange and to which all the brake components are attached.	Hold Down Springs	the springs that retains the shoes to the backing plate of the foundation brake.
Ball Clamp	the device in the ball socket that retains the hitch ball.	Lock-out Lever	the device on the actuator that inactivates the brake so that the trailer can be backed up.
Ball Socket	the nose casting of the actuator that receives the hitch ball.	Master Cylinder	the reservoir housed in the actuator that contains and supplies all of the brake fluid to the surge system.
Bleeder Nut	the threaded nut on the wheel cylinder casting used in bleeding the brake system.	Piston	the inside workings of the master cylinder and wheel cylinder that pump hydraulic fluid.
Bleeding Brakes	the process in which the air is purged from the hydraulic system.	Push Rod	the heavy coiled rod that engages the inlet of the master cylinder.
Boot	the protective external rubber seal of the wheel cylinder and master cylinder.	Release Handle	the thumb latching mechanism on the top of the actuator that opens and closes the ball clamp.
Brake Line	typically 3/16" steel tubing that transfers hydraulic fluid from the actuator to the foundation brakes.	Shock Absorber	the gas filled piston in the actuator that smooth out the braking motion.
Brake Shoe	the steel web and attached asbestos lining that produce the friction against the drum for braking.	Shoulder Bolt	the bolt that links the ball socket, shock absorber and push rod.
Break-away Device	the actuator device connected to the tow vehicle that immediately locks up the brake system should the tow vehicle and trailer become disconnected in transit.	Surge Brake Actuator	the entire brake housing and its components that are attached to the tongue of the trailer.
Chucking	the term used to describe the condition of a jerky braking motion.	Surge Brake System	a hydraulic self-contained system of components that require forward motion of the trailer for braking.
		Uni-Servo Brakes	indicates that there is braking only in the forward motion of trailer. The pistons on the trailer brakes face forward.
		Wheel Cylinder	the casting on the foundation brake that transfers hydraulic pressure from the master cylinder to the brake shoes.

Atwood Surge Brake Actuators

Surge Brake Actuator Selection Guide

2

Part No.	Description	Rated Capacity lbs.	Class	Tongue Load (max.)		A	B	C	D	E	F	G	H	I	J	K
82543	2" ball, painted	6,000	S.A.E. 4	900 lbs.	in.	7/8	3	1 1/8	5 1/8	11 9/16	13 3/16	6 5/8	1 11/16	1 1/16	3 1/16	4 5/8
					mm	22	76	29	130	294	335	168	43	17	78	117
83153*	2" ball, painted, zinc plated latch	6,000	S.A.E. 4	900 lbs.	in.	7/8	3	1 1/8	5 1/8	11 9/16	13 3/16	6 5/8	1 11/16	1 1/16	3 1/16	4 5/8
					mm	22	76	29	130	294	335	168	43	17	78	117
84132	2" ball, zinc plated	6,000	S.A.E. 4	900 lbs.	in.	7/8	3	1 1/8	5 1/8	11 9/16	13 3/16	6 5/8	1 11/16	1 1/16	3 1/16	4 5/8
					mm	22	76	29	130	294	335	168	43	17	78	117
84133*	2" ball, zinc plated, zinc plated latch	6,000	S.A.E. 4	900 lbs.	in.	7/8	3	1 1/8	5 1/8	11 9/16	13 3/16	6 5/8	1 11/16	1 1/16	3 1/16	4 5/8
					mm	22	76	29	130	294	335	168	43	17	78	117
88730	2" ball, zinc plated* for Disc Brakes	6,000	S.A.E. 4	900 lbs.	in.	7/8	3	1 1/8	5 1/8	11 9/16	13 3/16	6 5/8	1 11/16	1 1/16	3 1/16	4 5/8
					mm	22	76	29	130	294	335	168	43	17	78	117
88740	2" ball, painted for Disc Brakes	6,000	S.A.E. 4	900 lbs.	in.	7/8	3	1 1/8	5 1/8	11 9/16	13 3/16	6 5/8	1 11/16	1 1/16	3 1/16	4 5/8
					mm	22	76	29	130	294	335	168	43	17	78	117
83000	2" ball, painted, weld-on only	8,000	S.A.E. 4	1,000 lbs.	in.	7/8	3	1 1/8	8 1/8	14 9/16	16 3/16	6 5/8	1 11/16	—	3 1/16	4 5/8
					mm	22	76	29	206	370	411	168	43	—	78	117
83005	2" ball, painted, bolt-on	8,000	S.A.E. 4	1,000 lbs.	in.	7/8	3	1 1/8	8 1/8	14 9/16	16 3/16	6 3/4	1 13/16	1 1/16	3 1/16	4 5/8
					mm	22	76	29	206	370	411	171	46	17	78	117
83010	2" ball, zinc-plated, bolt-on	8,000	S.A.E. 4	1,000 lbs.	in.	7/8	3	1 1/8	8 1/8	14 9/16	16 3/16	6 3/4	1 13/16	1 1/16	3 1/16	4 5/8
					mm	22	76	29	206	370	411	171	46	17	78	117
80366	2" ball, zinc plated* bolt-on for disc brakes	8,000	S.A.E. 4	1,000 lbs.	in.	7/8	3	1 1/8	8 1/8	14 9/16	16 3/16	6 5/8	1 11/16	—	3 1/16	4 5/8
					mm	22	76	29	206	370	411	168	43	—	78	117
80360	2" ball, painted*, weld-on for disc brakes	8,000	S.A.E. 4	1,000 lbs.	in.	7/8	3	1 1/8	8 1/8	14 9/16	16 3/16	6 5/8	1 11/16	—	3 1/16	4 5/8
					mm	22	76	29	206	370	411	168	43	—	78	117

* Bulk pack — all others are in individual cartons. **8,000 lb. weld on actuators do not have holes for bolt attachment (weld on ONLY).

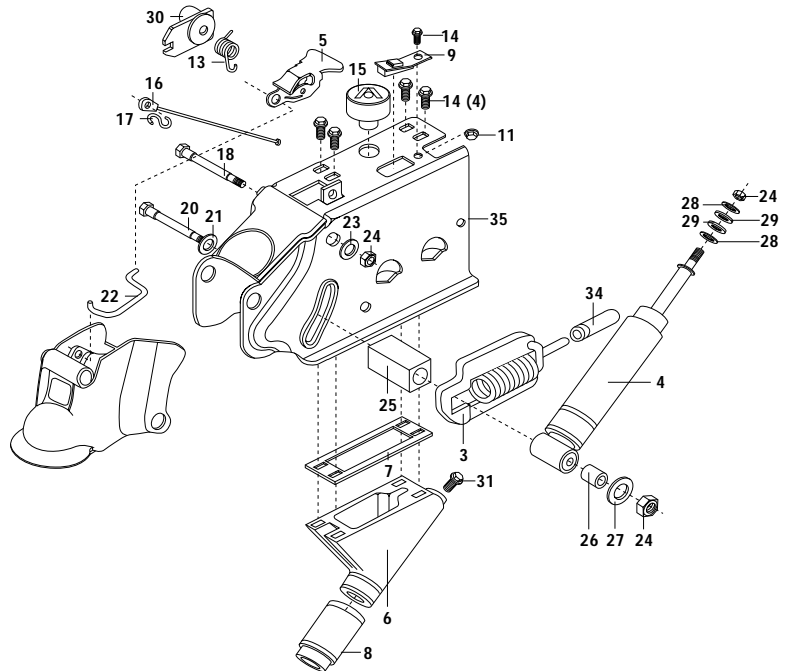
* Compatible with Kodiak® and Reliable® Disc Brake Systems

HYDRAULIC BRAKE ACTUATORS

TO ORDER: All kit available for field replacement are numbered. Parts illustrated but not numbered are not available for field replacement. Contact factory service department for further information.

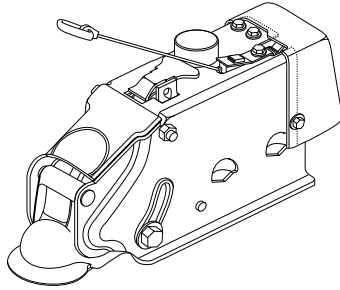
NOTE: Save all attaching hardware when disassembling.

KIT #	DESCRIPTION	REPLACEMENT KIT INCLUDES
85830	SHOCK ABSORBER	4, 24-2 EA. 28-2 EA. 29-2 EA.
87478	CAP	15
85842	SHOULDER BOLT	20, 21, 24-2 EA., 25, 26, 27
85844	RELEASE HANDLE	5, 13, 18, 22, 24-3 EA., 30
85849	STOP & SPRING ASSEMBLY	9, 11, 14, 24
85852	PUSH ROD ASSEMBLY	3, 7, 11, 14-5 EA., 16, 17, 24-2 EA., 34, 8, 9
84258	BOOT	8
80777	ORIFICE-DISC BRAKE APPLICATIONS ONLY	31
85837	MASTER CYLINDER-PUSH ROD KIT DRUM BRAKE APPLICATION	3, 6, 7, 8, 9, 11, 14-5 EA., 16, 17, 24-2 EA. 34
85841	MASTER CYLINDER DRUM BRAKE APPLICATION	6, 7, 14-4 EA. MUST ORDER 84258 SEPARATELY
85838	MASTER CYLINDER-PUSH ROD KIT DISC BRAKE APPLICATION	3, 6, 7, 8, 9, 11, 14-5 EA., 16, 17, 24-2 EA. 34, 15
85840	MASTER CYLINDER DISC BRAKE APPLICATION	6, 7, 14-4 EA. MUST ORDER 84258 SEPARATELY
80376	SOLENOID KIT	CYLINDER, GASKET, SCREW BACK UP SOLENOID ASSEMBLY
85271	6,000 LB DRUM BRAKE HOUSING KIT	7, 35
85309	6,000 LB HOUSING KIT - DISC BRAKES	7, 35



Actuator

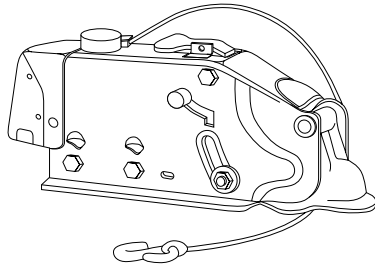
6000 & 8000 LB RATING DRUM AND DISC



- Fits 3" channel, 2" ball
- Stamped ball clamp
- High gain braking
- Painted or zinc-plated
- Serviceability
- Bolt-on or weld-on
- Simple thumb latch
- Brake lock-out lever
- Break-away cable
- Equalizer hitch compatible
- Disc actuators are available with electric back-up solenoid.

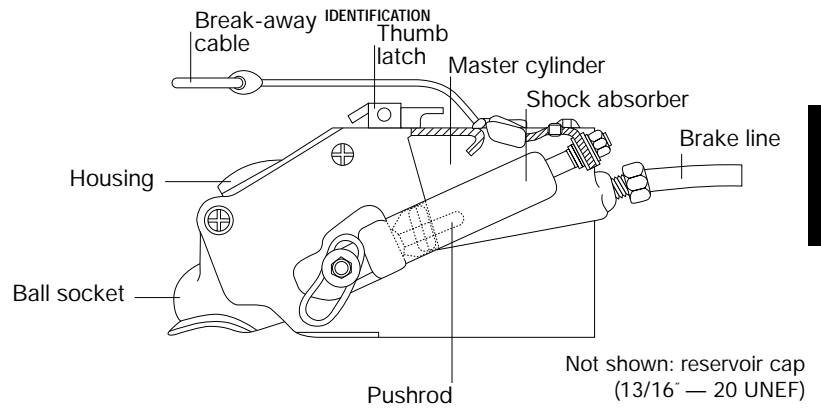
Surge Actuator

6000 LB SPECIFICATIONS



- 4 S.A.E. rating
- Stamped channel width
- 2 Ball socket size
- 900 lb static Max. tongue load
- Electro-deposited black paint or zinc plated corrosion protection
- 200 - 1200 psi (650 psi avg.) hydraulic pressure
- 20 lb Shipping weight

Brake Actuator



SEQUENCE OF OPERATION:

- Tow vehicle applies brakes
- ↓
- Ball socket pivots
- ↓
- Pushrod engages piston of master cylinder and shock absorber compresses providing some resistance
- ↓
- Master cylinder forces fluid through brake line

HIGH GAIN BRAKING

The Atwood actuator separates itself from the competition in its 'high gain' braking capability. The following information will help you understand this 'high gain' concept.

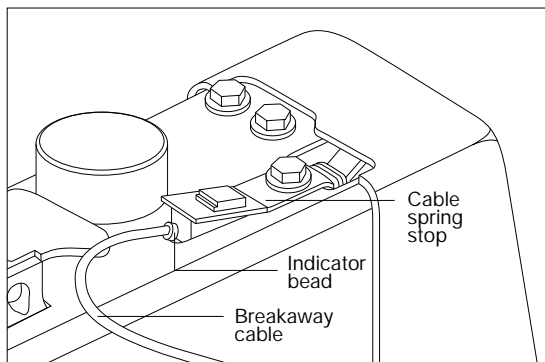
$$A = 2-1/2" \quad A \text{ divided by } C = \text{ratio} = 1.11 \text{ to } 1.00$$

$$B' \text{ to } B^2 = 2-1/4"$$

$$C = \text{movement of } B1 \text{ as ball moves backward } (B2) = 2 - 1/4"$$

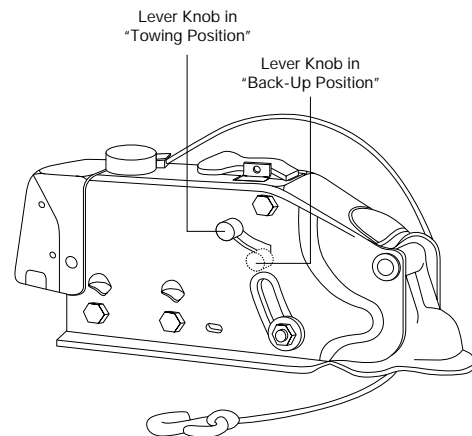
"High Gain" means that more force goes into master cylinder than applied at ball. As ball moves backwards, "C" becomes smaller and "A" stays the same. Ratio becomes larger, thus high gain in force.

Competitor actuators are linear and therefore have a 1:1 ratio.



BREAK-AWAY CABLE

- The break-away cable is not replaceable as just a cable. It is only available with the push rod attached to it.
- The cable must be attached to the tow vehicle as near to center as possible. This will ensure that the cable will properly engage if the tow vehicle and trailer should separate in transit.
- DO NOT use the cable as a parking brake.
- If breakaway cable is activated, it is important that it be positioned properly before actuator is used again. The cable should be re-inserted into the actuator so that the indicator bead on the cable rests against the cable spring stop on the top of the actuator.



LOCK OUT LEVER

- The lock-out lever cannot be added to an actuator not equipped with this device.
- NEVER alter the actuator such that the lock-out lever cannot move freely.
- The lock-out lever is non-replaceable.

Atwood Foundation Brakes

Foundation Brake Selection Guide

2

Part No.	Description	Wheel-Hub Drum Group +	A		B		Pack
			in.	mm	in.	mm	
7" BRAKES							
85740	7" x 1 ³ / ₄ " left and right hand, painted	1,800*	4 B.C.	102	3	76	Box
84181	7" x 1 ³ / ₄ " left hand, painted	1,800*	4 B.C.	102	3	76	Bulk
84186	7" x 1 ³ / ₄ " right hand, painted	1,800*	4 B.C.	102	3	76	Bulk
10" BRAKES							
85735	10" x 2 ¹ / ₄ " left and right hand, painted	3,500	4 B.C.	102	3	76	Box
83562	10" x 2 ¹ / ₄ " right hand, painted	3,500	4 B.C.	102	3	76	Bulk
83572	10" x 2 ¹ / ₄ " left hand, painted	3,500	4 B.C.	102	3	76	Bulk
84195**	10" x 2 ¹ / ₄ " left and right hand, zinc, dichromate coated	3,500	4 B.C.	102	3	76	Box
84260	10" x 2 ¹ / ₄ " left hand, zinc plated, dichromate coated	3,500	4 B.C.	102	3	76	Bulk
84265	10" x 2 ¹ / ₄ " right hand, zinc plated, dichromate coated	3,500	4 B.C.	102	3	76	Bulk
12" BRAKES							
83958	12" x 2 ¹ / ₄ " right hand, painted black	6,000	3.88 B.C.	98	—	—	Bulk
83959	12" x 2 ¹ / ₄ " left hand, painted black	6,000	3.88 B.C.	98	—	—	Bulk
83960	12" x 2 ¹ / ₄ " right hand, corrosion resistant silver	6,000	3.88 B.C.	98	—	—	Bulk
83961	12" x 2 ¹ / ₄ " left hand, corrosion resistant silver	6,000	3.88 B.C.	98	—	—	Bulk

* 2,500 lbs. axle capacity when used with an integral cast hub and drum. **Packed in retail box.

7" Brake
85740, 84181, 84186

10" Brake
85735, 83572, 84195, 84260, 84265

Single Axle Tubing Kit (for tilt frames)
Part No. 80881 15' tube
Part No. 80885 20' tube

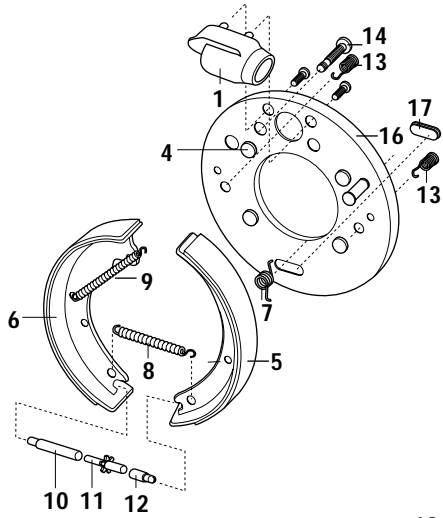
12" Brake
83958, 83959,
83960, 83961

Tandem Axle Tubing Kit
Part No. 80891 15' tube
Part No. 80884 20' tube

Note:
Part No. 80910 for trailers with torsion springs

ATWOOD UNI-SERVO BRAKES

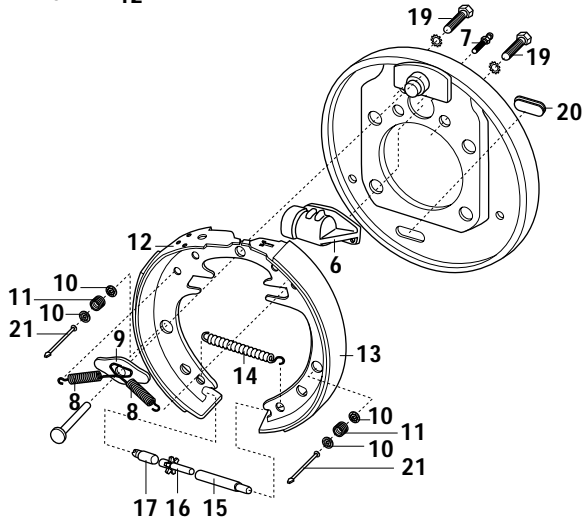
7" BRAKES



- | | | |
|-------|---|-------|
| 84210 | NEW STYLE Wheel Cylinder Kit (one axle only) | 23400 |
| 1 | (1) WHEEL CYLINDER, R.H. | 8 |
| 1A | (1) WHEEL CYLINDER, L.H. | 9 |
| 15 | (4) 5/16" - 18 x 3/4" CAP SCREW | 7 |
| 14 | (2) 5/16" - 18 FLAT HEAD SCREW | 7A |
| 19861 | Shoe & Lining Kit (one axle) | 13 |
| 5 | (2) PRIMARY SHOES WITH LINING | 17 |
| 6 | (2) SECONDARY SHOES WITH LINING | 23401 |

- | | | |
|---|----|---------------------------------|
| Spring Kit (one axle) | 8 | (2) ADJUSTING SCREW SPRINGS |
| | 9 | (2) SECONDARY RETRACTOR SPRINGS |
| | 7 | (1) TORSION SPRING R.H. |
| | 7A | (1) TORSION SPRING L.H. |
| | 13 | (4) SHOE HOLD DOWN SPRINGS |
| Dust Clip | 17 | |
| Adjusting Screw, Pivot Socket & Nut Assembly | | |
| | 10 | (1) NUT |
| | 12 | (1) PIVOT SOCKET |
| | 11 | (1) ADJUSTING SCREW |

10" BRAKES



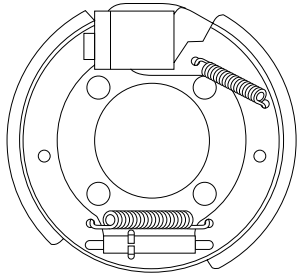
- | | | |
|-------|---|--|
| 21669 | Wheel Cylinder Replacement Kit (1 axle) | |
| 6 | (1) WHEEL CYLINDER, R.H. | |
| 6 | (1) WHEEL CYLINDER, L.H. | |
| 19 | (4) 5/16" - 8 x 1/2" MOUNTING SCREWS | |
| 19862 | Brake Shoe and Lining Kit (1 axle) | |
| 12 | (2) PRIMARY SHOES WITH LINING | |
| 13 | (2) SECONDARY SHOES WITH LINING | |
| 23385 | Brake Shoe Spring & Hold Down Kit (1 axle) | |
| 8 | (4) PRIMARY AND SECONDARY RETRACTOR SPRINGS | |

- | | |
|-------|---|
| 14 | (2) ADJUSTING SCREW SPRINGS |
| 21 | (4) SHOE HOLD DOWN PINS |
| 11 | (4) SHOE HOLD DOWN SPRINGS |
| 10 | (8) SHOE HOLD DOWN WASHERS |
| 18499 | 9 (2) Shoe Guide Plate |
| 23401 | Adjusting Screw, Pivot Socket & Nut Assembly |
| 15 & | |
| 16 | (1) NUT AND SCREW |
| 17 | (1) PIVOT SOCKET |
| 18191 | 20 (2) Dust Clip |
| 7 | (2) Bleeder Nut - not available separately |

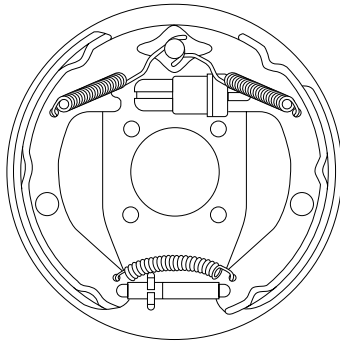


Foundation Brakes

2



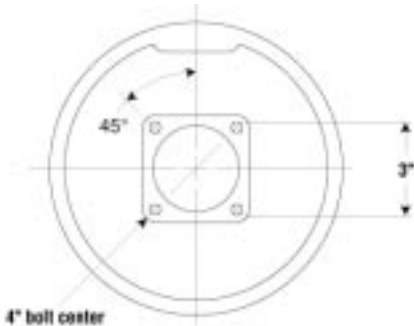
7" Foundation Brake



10" Foundation Brake

FEATURES

- These are uni-servo brakes. The piston must face forward on the trailer.
- These are not self-adjusting brakes. Brake shoes must be adjusted using a brake adjustment tool on the star wheel of the adjusting screw. This adjustment is covered later in this manual.
- All components are replaceable except the backing plate. If the backing plate is damaged, the entire brake cluster must be replaced.
- These brakes are interchangeable with the major brands of hydraulic brakes you find in the marketplace.
- Our brakes are not convertible to electric or electric over hydraulic.



SPECIFICATIONS

Axle capacity
Corrosion protection

7 INCH

1800 lbs.*
electro-deposited
black paint

10 INCH

3500 lbs.
electro-deposited
black paint or zinc-
dichromate with
stainless springs

Dimensions

7" x 1-3/4"

10" x 2-1/4"

*Rated capacity is increased to 2500 lb. axle capacity when used with an integral cast iron hub and drum.

SEQUENCE OF OPERATION:

Fluid from master cylinder enters the wheel cylinder



Piston of wheel cylinder extends and forces shoe to drum



Primary shoe engages drum

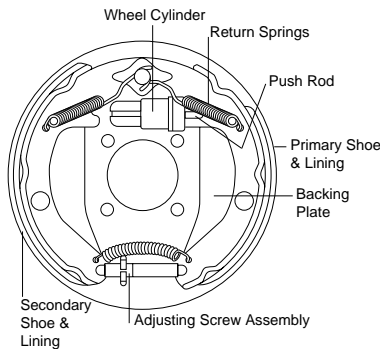


Secondary shoe engages drum

Piston should face forward on trailer axle. It is acceptable for piston to face downward but not recommended. NEVER position brake so that piston points upward.

The old wheel cylinder is not replaceable with the new style. The cut-out in the cylinder casting is different from old to new style brake. Refer to schematic on page 62.

The packing plates are not replaceable due to liability reasons. The entire brake cluster must be replaced in this situation.

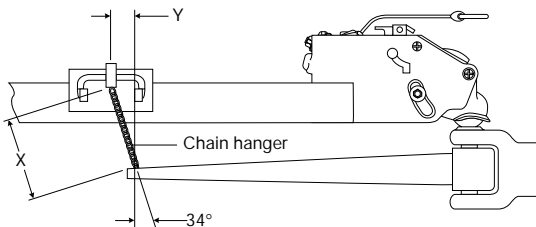


EQUALIZER HITCH & SWAY CONTROL

An equalizer hitch may be used with the surge brake actuator. However, the following criteria must be closely followed. Failure to do so may reduce or prevent trailer braking.

X" (Chain length)	Y" (Chain Hanger Mfg. location)
6-1/2"	3-5/8"
7-1/2"	4-3/16"
9"	5"
12-1/2"	5-7/8"

NOTE: There is NOT a sway control available that is compatible with the Atwood surge actuator. The sway controls that are available prevent safe and sufficient braking with our actuator.



PROPER TOWING CHECKLIST

- ✓ The brake fittings should be inspected for leaks.
- ✓ The brakes should be adjusted every 2000 miles.
- ✓ All mechanical moving parts should be lubricated.
- ✓ Inspect the breakaway cable for any kinks.
- ✓ Verify that a one-piece 2" ball is being used and that it doesn't have any chips, dirt or hairline cracks.
- ✓ The safety chains should be securely attached to the trailer and tow vehicle.
- ✓ For proper braking, the trailer should set level when attached to the tow vehicle to produce a positive tongue load.
- ✓ DOT 3 brake fluid should be used in the master cylinder and fill it from 1/2 full to 1/2" from the top of the cylinder reservoir.

Effective: 11/13/03

Guides are only intended for use on Atwood® products by service technicians who have successfully completed Atwood® training. This guide should be used in conjunction with the appropriate Instruction Manual provided with the product and any applicable Industry Standards. This is not intended to be a complete list. Please direct questions concerning service of Atwood® products to 800-825-4328 before proceeding.



WARNING

PERSONAL INJURY AND/OR PRODUCT DAMAGE

- If any of the following conditions develop, the trailer must not be used until proper corrective action is taken.

CONDITION WITH SOLUTION

Squeaking, Clatter or Chucking

Lack of hitch ball lubrication	.....	Lubricate with conventional automotive grease or commercial lubricant made for hitch balls
Binding linkage & pivots on the brake actuator	.....	Oil linkage & pivots on brake actuator
Loose hitch	.....	Inspect hitch & tighten
Actuator loose on trailer frame	.....	Inspect brake actuator & tighten
Hitch ball worn or too small	.....	Replace
Overheated brakes	.....	Replace wheel bearing
Broken brake drum(s)	.....	Replace brake drum(s) & check brake shoes
Low brake fluid level	.....	Fill & bleed brakes, per IOM instructions
Worn out shock absorber	.....	Replace
Partial application of breakaway cable	.....	Fully release breakaway cable
Brakes improperly adjusted	.....	Check brakes for adjustments per IOM
Broken brake return spring	.....	Replace return spring
Seized actuator master cylinder	.....	Replace/rebuild actuator master cylinder
Worn out brake shoes	.....	Replace brake shoes & check brake drums
Leaky wheel cylinder	.....	Replace/rebuild wheel cylinders & replace brake shoes. Clean drums & other hardware

Release Handle Does Not Close Easily

Oversized ball	.....	Check ball size
Ball not fully inserted into socket	.....	Check for proper ball size. Check to see if tongue jack is fully retracted. Hold release handle open when inserting ball.
Foreign material in actuator socket	.....	Clean and lubricate

Brake Overheating, Side Pull, Brakes Do Not Operate, Poor Brake Performance

Only one brake is applying	.....	Check brake adjustment, per IOM
Leaking wheel cylinder	.....	Check and replace wheel cylinder and bleed brakes, per IOM instructions.
Seized wheel cylinder piston	.....	Check and rebuild/replace wheel cylinder and bleed system, per IOM instructions.
Foreign material in brake unit	.....	Clean thoroughly
Low hydraulic fluid level	.....	Fill & bleed brakes, per IOM instructions
A bent shoulder bolt	.....	Replace
A bend push rod in the	.....	Replace shock absorber shock absorber
A damaged socket assembly	.....	Replace actuator
Broken/pinched brake lines	.....	Replace
Brake actuator frame damaged	.....	Replace actuator
Worn brake shoe(s)	.....	Replace brake shoe(s)

Towing Vehicle Shaking Back and Forth

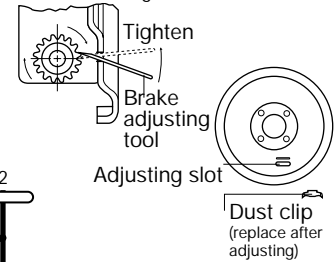
Worn vehicle suspension	.....	Replace shock absorber
Hitch not secure	.....	Tighten all bolts and nuts
Under-sized hitch ball	.....	Ball should be 2" machined/forged type

Adjusting 7" & 10" Brakes

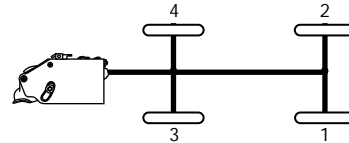
Adjusting the brakes every 2,000 miles is recommended. Raise one trailer wheel at a time, remove dust clip from adjusting slot at lower part of back

side of brake assembly and insert brake adjusting tool. To adjust a foundation brake, back shoes all the way out to the drum so there is some drag as you spin the tire. Then back off shoes the designated number of notches using a brake adjusting tool.

- 7" single axle 10 notches
- 7" tandem axle 5 notches
- 10" single axle 8/10 notches
- 10" tandem axle 4/5 notches



Bleeding the Brake System



- Bleeding the brake system at the actuator using a power bleeder or a manual rod/hitch ball bleeder.
- On single axle trailers, bleed the brake that is furthest from the main hydraulic line first. This means that you would bleed brake 3 first on a single axle trailer and brake 1 first on a dual axle trailer with brakes on both axles.
- Use DOT 3 or 4 brake fluid.
- Synthetic silicone based brake fluid is not recommended. It has low water tolerance and decreases braking performance.

Adjust the trailer brakes after the first 1,000 miles of use and at least every 2,000 miles of use thereafter. The trailer brakes should be inspected and adjusted at the beginning of each season or yearly. Wheel bearings and seals should be inspected and packed at this time.

Check: • all hydraulic fittings are secure
• fill and bleed brake system as follows:

1. Remove the master cylinder filler cap and fill the reservoir with DOT 3 or 4 automotive brake fluid.
2. Start bleeding procedures on right hand axle brake. If tandem axle trailer, bleed brakes on rear axle first.
3. At brake assembly, connect a bleeder hose to bleeder fitting on wheel cylinder and submerge free end in a container with fluid. DO NOT REUSE THIS FLUID.
4. Loosen bleeder fitting at top of brake assembly one turn.
5. Apply actuator and then tighten bleeder fitting. Return actuator to released position. Again, loosen bleeder valve one turn and apply actuator. Repeat this procedure until the fluid expelled from the bleeder hose is free of air bubbles. During this procedure, the master cylinder reservoir oil level must be maintained at no less than 1/2 full.

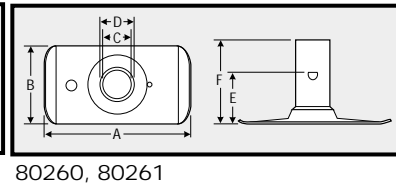
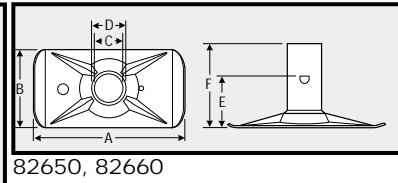
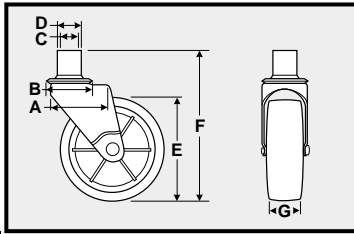
BLEEDING METHOD 1: Use power bleeder adapter. (Do not apply and release actuator when using a power bleeder.)

BLEEDING METHOD 2:

- Bar with 2" diameter hitch ball attached. Used as lever to apply and release brake actuator.
6. When no air bubbles are visible, close bleeder valve securely and remove the bleeder hose.
 7. Repeat steps 3, 4, 5 and 6 for left hand axle brake and brakes on forward axle, if tandem axle.
 8. If installation is tandem axle with brakes on both axles, repeat bleeding procedure on rear axle brakes for the second time to assure positive purging of all air in system.
 9. After bleeding has been completed, recheck fluid level in master cylinder.

IMPORTANT: DO NOT use brake fluid drained from brake system in refilling master cylinder reservoir, as such fluid may be contaminated from system.

Atwood Casters and Feet



80259, 80552, 84036

82650, 82660

80260, 80261

3

CASTERS AND FEET SELECTION GUIDE

SUPPORT CAPACITY DEFINITION: The support capacity is the maximum vertical load the jack can support.
*If jack is used with caster then the system capacity will be rated at 1,000 lb (the load carrying capacity of the caster).

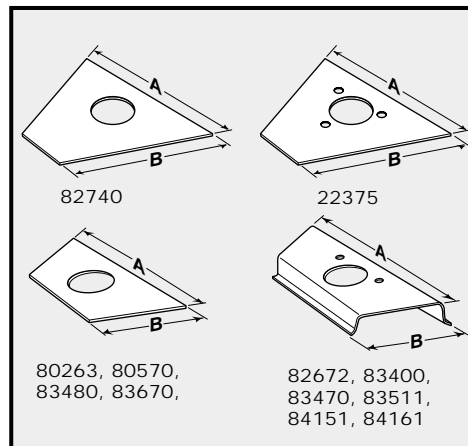
Part No.	Description	Support Capacity lbs.	Fits Jack RAM Sizes	A		B		C = I.D.		D = O.D.		E		F		G	
				in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
80203	Duraplas caster, zinc plated	1,000	1 3/4" O.D.	3 3/8	86	2	51	1 3/4	44	2	51	6	152	9	229	2	51
80259	Duraplas caster	1,000	1 3/4" O.D.	3 3/8	86	2	51	1 3/4	44	2	51	6	152	9	229	2	51
80552	Duraplas caster	1,000	2" O.D.	3 3/8	86	2	51	2	51	2 1/4	57	6	152	9	229	2	51
84036	Duraplas caster, painted, pin-on	1,000	2" O.D.	3 3/8	86	2	51	2	44	2 1/4	57	6	152	9	229	2	51
80260	Steel foot	1,000	1 3/4" O.D.	5 3/8	137	4	102	1 3/4	44	2	51	2 1/8	54	—	—	—	—
80261	Steel foot w/extension	1,000	1 3/4" O.D.	5 3/8	137	4	102	1 3/4	44	2	51	7 3/4	197	—	—	—	—
82650	Steel foot	6,000	2" O.D.	8	203	4 3/4	121	2	51	2 1/4	57	2 5/8	67	—	—	—	—
82660	Steel foot w/extension	6,000	2" O.D.	8	203	4 3/4	121	2	51	2 1/4	57	5 1/2	140	8 1/8	206	—	—
80521	Duraplas caster, OBSOLETE	1,000	1 5/8" O.D.	3 3/8	86	2	51	1 5/8	42	1 7/8	48	6	152	9	229	1 1/2	38
83300	Duraplas caster, OBSOLETE	1,000	1 5/8" O.D.	3 3/8	86	2	51	1 5/8	42	1 5/8	42	6	152	9	229	2	51
82655	Steel foot, OBSOLETE	1,000	1 5/8" O.D.	5 3/8	137	4	102	1 5/8	42	1 5/8	42	2 1/8	54	—	—	—	—
82665	Steel foot w/extension, OBSOLETE	1,000	1 5/8" O.D.	5 3/8	137	4	102	1 5/8	42	1 5/8	42	7 3/4	197	—	—	—	—

Note: When a jack is used in conjunction with a caster, the caster limits the capacity of the jack caster system to 1,000 pounds.

Atwood Support Plates

SUPPORT PLATES SELECTION GUIDE

Part No.	Description	Rated Capacity lbs.	A		B		Hole Diameter	
			in.	mm	in.	mm	in.	mm
83480	Top Support Plate	—	6	152	3 1/2	89	2.30	58
83670	Bottom Support Plate	—	8 3/4	222	3 1/2	89	2.28	58
80263	Bottom Support Plate	1,000	8 3/4	222	3 1/2	89	2.05	52
80570	Bottom Support Plate	—	8 3/4	222	3 1/2	89	2.23	57
82740	Top Support Plate	—	10 1/8	257	7 3/8	187	2.32	59
22375	Top Support Plate	5,000	10 1/8	257	7 3/8	187	2.32	59
83400	Bottom Support Plate	6,000	10 1/4	260	3 3/8	86	2.32	59
83470	Bottom Support Plate	6,000	7 3/4	197	3 3/8	86	2.32	59
83511	Bottom Support Plate	8,000	7 3/4	197	3 3/8	86	2.32	59
82672	Bottom Support Plate	8,000	10 1/4	260	3 3/8	86	2.32	59
84151	Bottom Support Plate	11,000	7 3/4	197	3 3/8	86	2.32	59
84161	Bottom Support Plate	11,000	10 1/4	260	3 3/8	86	2.32	59



Side-Wind and Top Wind Jack Features

SIDEWIND VS TOPWIND

Topwind and sidewind jacks are available. The topwind jack has the handle attached directly to the screw that protrudes through the top of the outer jack ram. The sidewind jack has a metal cap on the top of the outer jack ram. The handle comes out of the side of the top of the jack and pins to a vertical bevel gear located in the head of the jack.

FRAME ATTACHMENT

- Jacks can attach to the frame of a trailer or apparatus in a several ways.
- Jacks with no brackets can be welded directly to the frame.
- An A-frame jack with a triangular flange attached allows the jack to be bolted to an A-frame coupler (additional support plates **must** be used).
- A U-bolt jack using two U-bolts wrapped around the jack allows for more flexibility where the jack can be mounted on the trailer frame.
- Snap ring swivel jacks are used primarily in the marine market. This jack attaches to a weld-on or bolt-on receiver bracket on the trailer and the jack attaches to it. The jack is to be swiveled parallel to the ground when the trailer is in tow.
- We have a line of tubular swivel jacks that are popular with the agricultural

market. A tube welded to the trailer frame mates with a tube mounted on the jack, allowing the jack to be swiveled parallel with the ground when the implement is in tow.

TRAVEL

Travel refers to the length that the inner ram of the jack can be extended from a fully retracted to a fully extended position. The travel on the sidewind and topwind jacks range from 8" - 15".

RATED CAPACITY

All Atwood jacks are dynamically rated opposed to statically rated. Dynamic capacity refers to the working capacity or maximum load that the jack can support for castering and easy lifting of a fully loaded trailer. The static or support capacity is the maximum vertical load that the jack can support. The weight ratings of our jacks are from 500 - 11,000 lbs.

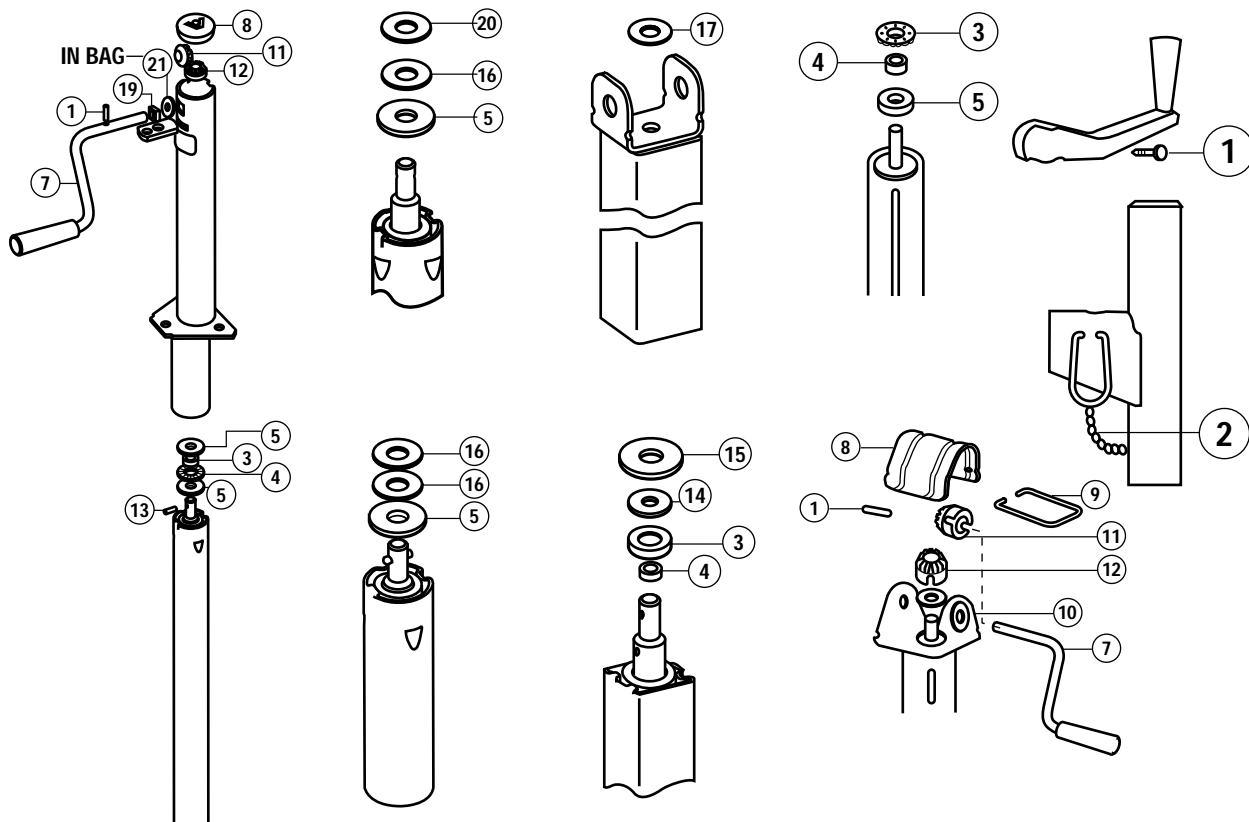
FINISH

Most of our jacks are electro-statically painted with black enamel. Therefore, it can be used as is since it exceeds the A.S.T.M. 96 hour salt spray test. This paint process provides a very good prime coat.

ACCESSORY ATTACHMENT

Both casters and feet are available for our screw jacks.

Jack Replacement Kits



4

GEAR KITS

ITEM#	DESCRIPTION	80333	81410	25524	81480	86488
11/12	Bevel Gear, 15 Tooth			2		
11	Bevel Gear, 12 Tooth	1	1		1	
12	Bevel Gear, 16 Tooth				1	1
12	Bevel Gear, 16 Tooth	1	1			
12	Bevel Gear, 12 Tooth					1
17	Washer, Thrust - Clutch	1				
1	Drive Pin 1.25 x .022	1				
13	Machine Pin .87 x .22	1				
1	Roll Pin 1.25 x .15		1	1	1	
13	Roll Pin .81 x .23		1	1	1	
1	Grove Pin 1.75 x .23					1
2	Machine Pin .75 x .21					1
NS	IOM (not shown)		1	1	1	

BEARING & THRUST WASHER KITS

ITEM#	DESCRIPTION	81415	81416	81417	81418	81419
3	Thrust Bearing		1	1		1
5	Thrust Bearing Washer	1	2	2	1	
14	Support Washer					1
15	Cap Washer					1
16	Thrust Washer				2	
17	Clutch Thrust Washer					1
4	Felt Sleeve	1	1			1

HANDLE KITS

ITEM#	DESCRIPTION	82700	25526	86489
6	Handle	1		
7	Handle		1	1
1	Rivet .88 x .24	1		
1	Roll Pin 1.25 x .15		1	
10	Metal Bushing		1	
NS	IOM (not shown)	1		

REPAIR KITS

ITEM#	DESCRIPTION	80454	80455	80465
8	Small Cap	1		
8	Large Cap		1	1
12	Bevel Gear, 12 tooth	1		
11	Bevel Gear, 12 tooth	1		
11/12	Bevel Gear, 15 tooth		2	2
7	Handle Assembly	1	1	1
18	Thrust Plate	1	1	1
4	Thrust Bearing	1		1
3	Felt Sleeve	1		1
5	Thrust Brg Washer	2	1	2
16	Plastic Brg Washer	1	1	
21	Flat Washer		1	1
20	Washer, 16 GA	1		
19	Bushing	1		
13	Plain Pin	1		
1	Drive Pin	1		
13	Roll Pin		1	1
1	Grove Pin		1	1
NS	IOM (not shown)	1	1	1

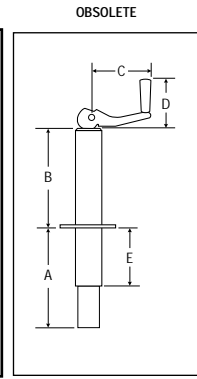
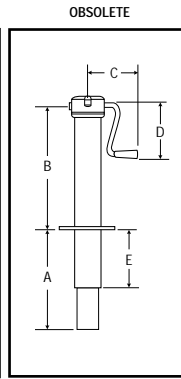
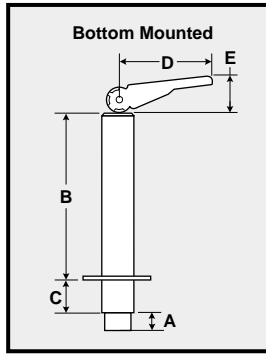
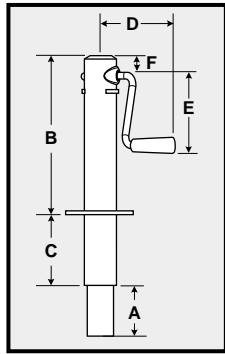
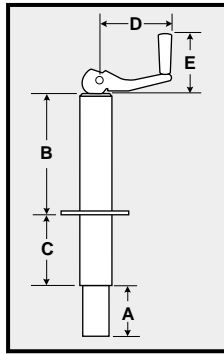
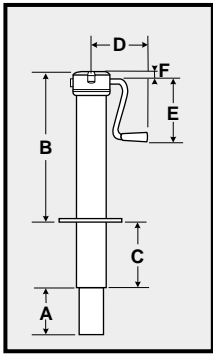
CAP KITS

ITEM#	DESCRIPTION	25525	84120	80456	80457
8	Metal Cover	1	1		
8	Plastic Cap, Large			1	
8	Plastic Cap, Small				1
9	Retaining Clip	1		1	
NS	IOM (not shown)	1	1		

MISCELLANEOUS ITEMS

ITEM#	DESCRIPTION	
2	5/8" Pin, Chain & Clip	85411
2	7/8" Pin & Chain	85719

Atwood A-Frame Jacks



84033

80009, 80016,
80022, 80156,
80391, 80401,
80402, 84034

80000, 80160,
80265, 87510

82642, 82721,
83391, 84146

80340,
80341,
81041,
84223

80250,
83270,
83275,
84155

4

A-FRAME JACK SELECTION GUIDE

Part No.	Finish	Support Capacity lbs.	WIND		A				B		C		D		E		F		Outer Diameter	
					retracted	extended														
			Top	Side	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	Inner ram	housing
84033	Paint, fast-travel for pin-on caster (c)	750		•	2.1	53	16.1	409	18.2	462	4.0	102	6.4	163	6.0	152	1.0	25	2.00	2.20
80016	Zinc Plated (c)	1,000	•		1.6	41	13.7	348	13.3	338	3.8	97	5.8	147	5.3	135	—	—	1.77	2.00
80156	Zinc Plated (c)	1,000	•		2.1	53	17.3	439	15.5	394	4.5	114	5.8	147	5.3	135	—	—	1.77	2.00
80009	Paint (c)	1,000	•		2.6	66	17.7	450	13.6	345	6.0	152	5.8	147	5.3	135	—	—	1.77	2.00
80022	Zinc Plated (c)	1,000	•		2.6	66	17.7	450	13.6	345	6.0	152	5.8	147	5.3	135	—	—	1.77	2.00
80000	Paint (c)	1,000		•	3.0	76	18.4	467	15.7	399	6.0	152	6.3	160	6.0	152	1.3	33	1.77	2.00
80160	Galvanized (c)	1,000		•	3.0	76	18.4	467	15.7	399	6.0	152	6.3	160	6.0	152	1.3	33	1.77	2.00
80265	Paint (c)	1,000		•	3.0	76	18.4	467	17.2	437	4.5	114	6.3	160	6.0	152	1.3	33	1.77	2.00
84034	Paint pin-on caster (c)	2,000*	•		2.0	51	17.1	434	16.2	411	4.0	102	5.8	147	5.3	135	—	—	2.00	2.20
80401	Paint (c)	2,000*	•		2.0	51	17.1	434	13.2	335	7.0	178	5.8	147	5.3	135	—	—	2.00	2.20
80402	Paint pin-on caster (c)	2,000*	•		2.0	51	17.1	434	13.2	335	7.0	178	5.8	147	5.3	135	—	—	2.00	2.20
87510	Paint (c)	2,000*		•	1.4	36	15.4	391	16.5	419	7.0	178	7.1	180	7.5	191	1.7	43	2.00	2.20
80391	Paint (a, d)	5,000	•		1.4	36	15.5	394	10.7	272	9.5	241	5.8	147	5.3	135	—	—	2.00	2.20
83391	Paint (a,d)	6,000	•		0.3	8	10.9	277	15.0	381	2.2	56	9.2	234	1.6	41	—	—	2.00	2.20
82642	Paint (a,d)	8,000	•		1.3	33	11.6	295	15.9	404	0.6	15	9.2	234	1.6	41	—	—	2.00	2.25
82721	Paint (a,b,d)	8,000	•		1.5	38	16.3	414	19.5	495	1.0	25	9.2	234	1.6	41	—	—	2.00	2.25
84146	Paint (a,d)	11,000	•		0.3	8	10.6	269	16.9	429	0.6	15	9.2	234	1.6	41	—	—	2.00	2.25
80250	Painted (c) OBSOLETE	1,000	•		85/8	218	233/4	603	135/8	345	63/8	162	51/4	133	6	152			15/8	17/8
80340	Painted (c) OBSOLETE	1,000		•	85/8	218	24	610	143/4	375	65/8	168	65/8	168	6	152			15/8	17/8
80341	Galvanized (c) OBSOLETE	1,000		•	85/8	218	24	610	143/4	375	65/8	168	65/8	168	6	152			15/8	17/8
81041	Painted (c) OBSOLETE	2,000*		•	91/8	232	231/8	587	141/4	361	65/8	168	65/8	168	7	178			2	21/4
83270	Zinc Plated (c) OBSOLETE	1,000	•		51/2	138	175/8	446	131/8	334	63/8	162	51/2	140	33/4	95			15/8	17/8
83271	Zinc Plated (c) OBSOLETE	1,000	•		51/2	138	175/8	446	131/8	334	63/8	162	51/2	140	61/4	159			15/8	17/8
83275	Painted (c) OBSOLETE	1,000	•		6	152	181/8	460	13	331	63/8	162	51/2	140	33/4	95			15/8	17/8
84155	Zinc Plated (c) OBSOLETE	1,000	•		61/2	163	185/8	471	121/8	309	63/8	162	51/4	133	43/4	121			15/8	17/8
84223	Painted (c) OBSOLETE	2,000		•	81/2	216	191/8	486	11	279	63/8	162	65/8	168	71/2	190			2	21/4

SUPPORT CAPACITY DEFINITION:

The support capacity is the maximum vertical load the jack can support.
 *If jack is used with caster then the system capacity will be rated at 1,000 lb (the load carrying capacity of the caster).
 (a) Designed for Mobile Home application
 (b) Double wall ram
 (c) Caster/Foot must be ordered separately
 (d) Bottom mounted jack requires special bottom mounted attachment plate.

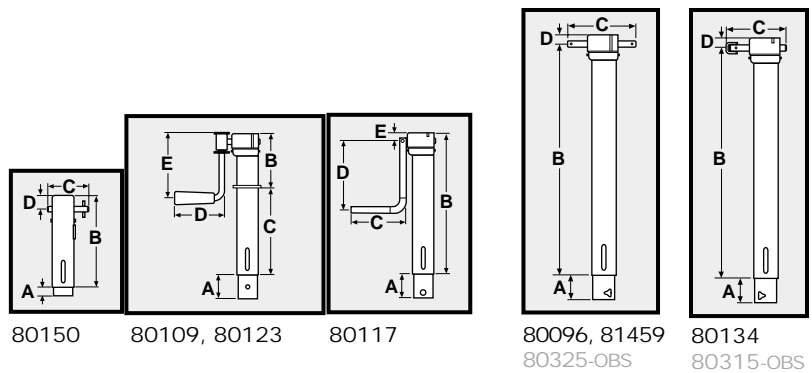
Atwood A-Frame Jacks - CONTINUED

A-FRAME JACK REPAIR KITS

Part No.	Handle	Handle & Rivet	Gear	Thrust Bearing	Repair	Cap	Caster	Short Foot	Long Foot
84033	25526	x	81410	81416	x	84120	80552	82650	82660
80016	82700	x	x	81416	x	x	80203	80260	80261
80156	82700	x	x	81416	x	x	80203	80260	80261
80009	82700	x	x	81416	x	x	80259	80260	80261
80022	82700	x	x	81416	x	x	80203	80260	80261
80000	x	x	x	x	80454	80457	80259	80260	80261
80160	x	x	x	x	80454	80457	80203	80260	80261
80265	x	x	x	x	80454	80457	80259	80260	80261
84034	82700	x	x	81416	x	x	80552	82650	82660
80401	82700	x	x	81416	x	x	80552	82650	82660
80402	82700	x	x	81416	x	x	84036	x	x
87510	x	x	x	x	80465	80456	80552	82650	82660
80391	82700	x	x	81417	x	x	80552	82650	82660
83391	N/A	85806/85656	x	81417	x	x	80552	82650	82660
82642	N/A	87139/85656	x	81417	x	x	80552	82650	82660
82721	N/A	87139/85656	x	81417	x	x	80552	82650	82660
84146	N/A	87108/85656	x	81417	x	x	80552	82650	82660
80250	82700	x	25524	81416	x	x	NLA	82655	82665
80340	25526	x	25524	81416	x	25525	NLA	82655	82665
80341	25526	x	81410	81418x2	x	25525	NLA	82655	82665
81041	25526	x	x	81416	x	84120	80552	82650	82660
83270	82700	x	x	81418	x	x	NLA	82655	82665
83271	82700	x	x	81418	x	x	NLA	82655	82665
83275	82700	x	x	81418	x	x	NLA	82655	82665
84155	82700	x	x	81418	x	x	NLA	82655	82665
84223	25526	x	81410	81418	x	84120	80552	82650	82660

4

Atwood Specialty Jacks



SPECIALTY JACK SELECTION GUIDE

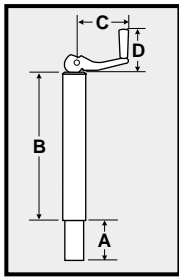
Part No.	Description	Support Capacity lbs.	Side Wind	A				B		C		D		E		Outer Diameter			
				retracted		extended		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	Inner ram	housing
				in.	mm	in.	mm												
80134	Universal drive	500	•	1.9	48	15.6	396	18.6	472	4.9	125	0.8	20	-	-	1.77	2.00		
80096	Shaft drive	1,000	•	1.9	48	15.6	396	18.6	472	5.6	142	0.8	20	-	-	1.77	2.00		
80117	Pin on handle	1,000	•	1.9	48	10.2	259	13.0	330	4.8	122	6.0	152	0.8	20	1.77	2.00		
80109	Swivel handle	1,000	•	1.9	48	9.9	251	5.98	152	7.0	178	4.7	119	6.0	152	1.77	2.00		
80123	Swivel handle	1,000	•	1.9	48	9.9	251	7.04	179	5.9	150	4.7	119	6.0	152	1.77	2.00		
80150	Shaft drive	1,000	•	0.7	18	4.9	124	8.54	217	3.6	91	1.3	33	-	-	1.77	2.00		
81459	Shaft drive	2,000	•	2.3	58	16.3	414	21.6	549	5.6	142	0.8	20	-	-	2.00	2.26		
80315	Universal drive - OBSOLETE	500	•	1.9	48	15.6	396	18.6	472	4.9	125	0.8	20	-	-	1.62	1.87		
80325	Shaft drive - OBSOLETE	1,000	•	1.9	48	15.6	396	18.6	472	5.6	142	0.8	20	-	-	1.62	1.87		

SUPPORT CAPACITY DEFINITION: The support capacity is the maximum vertical load the jack can support.

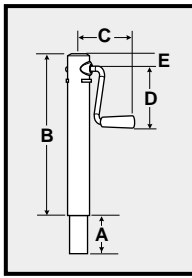
SPECIALTY JACK REPAIR KITS

Part No.	Handle & Pin	Gear	Bearing	Repair	Cap	Caster	Short Foot	Long Foot
80134	x	25524	81418	x	25525	80259	80260	80261
80096	x	25524	81418	x	25525	80259	80260	80261
80117	80317/17931	25524	81418	x	25525	x	x	x
80109	87362/17931	25524	81418	x	25525	x	x	x
80123	87362/17931	25524	81418	x	25525	x	x	x
80150	x	x	x	80455	80457	x	x	x
81459	x	81410	81518	x	84120	80552	82650	82660
80315	x	25524	81418	x	25525	NLA	82655	82665
80325	x	25524	81418	x	25525	NLA	82655	82665

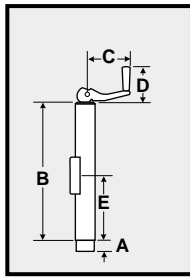
Jack Screws



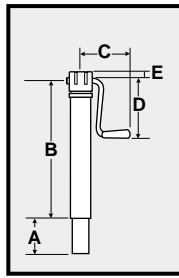
80029, 80036,
80167, 80177,
80188, 80380



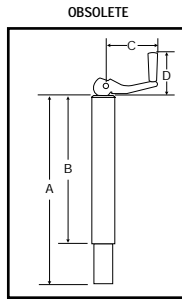
80126, 80172



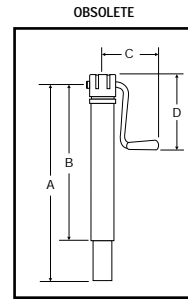
82522



81141



80220, 80230,
80239, 80240,
81310



80311, 80321

4

JACK SCREW SELECTION GUIDE

SUPPORT CAPACITY DEFINITION:

The support capacity is the maximum vertical load the jack can support.

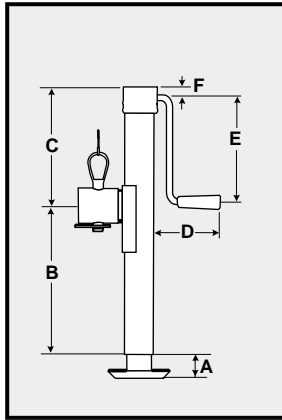
*If jack is used with caster then the system capacity will be rated at 1,000 lb (the load carrying capacity of the caster).

Part No.	Finish	Support Capacity	WIND		A				B		C		D		E		Outer Diameter			
					retracted		extended		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	Inner ram	housing
					in.	mm	in.	mm												
80188	Unpainted	1,000	•		2.0	51	10.5	267	11.0	279	5.8	147	5.3	135	—	—	1.8	2.0		
80167	Paint	1,000	•		2.1	53	16.0	406	19.7	500	5.8	147	5.3	135	—	—	1.8	2.0		
80177	Paint	1,000	•		2.0	51	10.4	264	11.0	279	5.8	147	5.3	135	—	—	1.8	2.0		
80029	Zinc	1,000	•		1.6	41	13.2	335	17.0	432	5.8	147	5.3	135	—	—	1.8	2.0		
80036	Paint	1,000	•		2.1	53	13.7	348	17.0	432	5.8	147	5.3	135	—	—	1.8	2.0		
80126	Paint	1,000		•	2.3	58	16.0	406	19.5	495	6.3	160	6.0	152	1.3	33	1.8	2.0		
80172	Paint	1,000		•	2.2	56	10.5	267	13.1	333	6.3	160	6.0	152	1.3	33	1.8	2.0		
82522	Unpainted	2,000	•		1.0	25	11.0	279	14.2	361	5.8	147	5.3	135	6.7	170	2.0	2.2		
81141	Paint	2,000*		•	2.3	58	16.3	414	21.7	551	6.4	163	6.0	152	1.0	25	2.0	2.2		
80380	Unpainted	5,000	•		1.4	36	15.5	394	20.3	516	5.8	147	5.3	135	—	—	2.0	2.2		
80220	Painted-OBSOLETE	1,000	•		2 1/4	553	35 5/8	905	19 5/8	499	6 3/8	161	5 1/4	133			1 5/8	1 7/8		
80230	Painted-OBSOLETE	1,000	•		19	483	30 3/4	780	17	431	6 3/8	161	5 1/4	133			1 5/8	1 7/8		
80239	Painted-OBSOLETE	1,000	•		13	330	21 1/2	545	12 3/8	314	6 3/8	161	5 1/4	133			1 5/8	1 7/8		
80240	Painted-OBSOLETE	1,000	•		13	330	21 1/2	545	11	280	6 3/8	161	5 1/4	133			1 5/8	1 7/8		
80311	Painted-OBSOLETE	1,000		•	20 3/8	519	34 1/8	867	18 5/8	472	6 5/8	167	6 5/8	167			1 5/8	1 7/8		
80321	Painted-OBSOLETE	1,000		•	14	355	22 1/4	566	12 1/8	310	6 5/8	167	6 5/8	167			1 5/8	1 7/8		
81310	Painted-OBSOLETE	1,000	•		18 5/8	472	30 3/4	780	17	431	6 3/8	161	5 1/4	133			1 5/8	1 7/8		

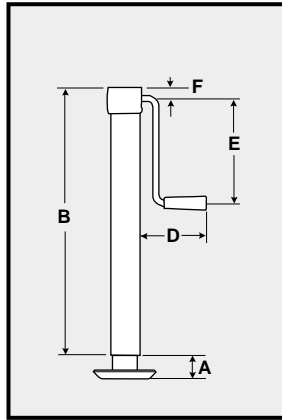
JACK SCREW REPAIR KITS

Part No.	Handle	Gear	Bearing	Repair	Cap	Caster	Short Foot	Long Foot
80188	82700	x	81416	x	x	80259	80260	80261
80167	82700	x	81416	x	x	80259	80260	80261
80177	82700	x	81416	x	x	80259	80260	80261
80029	82700	x	81418	x	x	80259	80260	80261
80036	82700	x	81418	x	x	80259	80260	80261
80126	x	x	x	80454	80457	80259	80260	80261
80172	x	x	x	80454	80457	80259	80260	80261
82522	82700	x	81416	x	x	x	x	x
81141	25526	81480	81416	x	84120	80552	82650	82660
80380	82700	x	81417	x	x	80552	82650	82660
80220	82700	x	81416	x	x	NLA	82655	82665
80230	82700	x	81418	x	x	NLA	82655	82665
80239	82700	x	81416	x	x	NLA	82655	82665
80240	82700	x	81416	x	x	NLA	82655	82665
80311	25526	25524	81418	x	25525	NLA	82655	82665
80321	25526	25524	81418	x	25525	NLA	82655	82665
81310	82700	x	81418	x	x	NLA	82655	82665

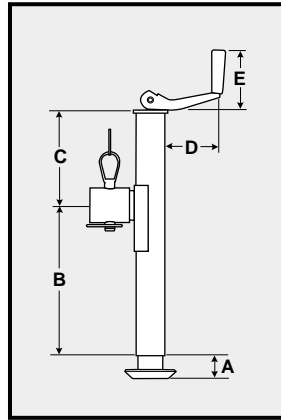
Atwood Square Tube Jacks



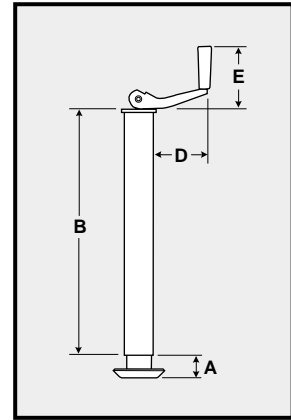
80407



80408



80409



80410

SUPPORT CAPACITY DEFINITION:
The support capacity is the maximum vertical load the jack can support.

4

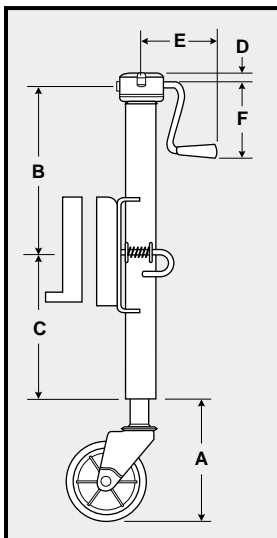
SQUARE TUBE JACK SELECTION GUIDE

Part No.	Description	Support Capacity lbs.	WIND		A				B		C		D		E		F		Outer Dimension	
					Top	Side	retracted												extended		Inner ram	housing
			in.	mm			in.	mm	in.	mm	in.	mm	in.	mm						
80407	With tube swivel bracket	3,500		•	1	25.4	16	406	14.38	365	10.25	260	5.8	147	9.0	229	1.0	25.4	2.25	2.5
80408	Without bracket	3,500		•	1	25.4	16	406	24.63	627	—	—	5.8	147	9.0	229	1.0	25.4	2.25	2.5
80409	With tube swivel bracket	5,000	•		1	25.4	17	432	14.38	365	8.25	210	5.0	127	5.5	140	—	—	2.25	2.5
80410	Without bracket	5,000	•		1	25.4	17	432	22.63	575	—	—	5.0	127	5.5	140	—	—	2.25	2.5

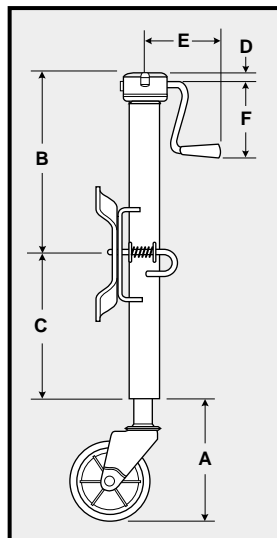
SQUARE TUBE JACK REPAIR KITS

Part No.	Handle & Pin	Handle	Gear	Thrust Bearing	Cap	Pin & Chain
80407	83401/70229	x	80333	81419	71416	85719
80408	83401/70229	x	80333	81419	71416	x
80409	x	82700	x	81415	x	85719
80410	x	82700	x	81415	x	x

Atwood Bolt Swivel Jacks



84025, 84026



84015, 84020

FEATURES

SPECIFICATIONS

Working Capacity 500 lbs., 1000 lb.
Supporting Capacity 800 lbs., 1000 lb.
Finish Zinc Plated
Travel (extension) 8" - 14"
Frame Brackets weld-on, bolt on adjustable bolt-on
Screw and Nut 8 pitch
Locking Mechanism 1/2" dia. single pin
Bevel Gears 15 and 15 tooth (500 lbs.)
 15 and 15 tooth (1000 lb.)

STANDARD

500 lbs., 1000 lb.
 800 lbs., 1000 lb.
 Zinc Plated
 8" - 14"
 weld-on, bolt on adjustable bolt-on
 8 pitch
 1/2" dia. single pin
 15 and 15 tooth (500 lbs.)
 15 and 15 tooth (1000 lb.)

PRO TOW

750 lbs.
 1000 lb.
 Zinc Plated
 11-1/2"
 weld-on adjustable bolt-on
 6 pitch
 1/2" dia. single pin
 15 and 15 tooth (750 lbs.)

BOLT SWIVEL JACK REPAIR KITS

Part No.	Handle	Gear	Thrust Bearing	Cap
84015	25526	25524	81416	84120
84020	25526	25524	81416	84120
84025	25526	25524	81416	84120
84026	25526	25524	81416	84120

* Packed individually in retail carton.

CAPACITY DEFINITION: The working, or work, capacity is the maximum load that the jack can support for castering and easy lifting of a fully loaded trailer.
 The supporting, or support, capacity is the maximum vertical load that the jack can support.

BOLT SWIVEL JACKS SELECTION GUIDE

Part No.	Finish	Work Capacity lbs.	Support Capacity lbs.	Side Wind	A				B		C		D		E		F	
					retracted		extended											
					in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
84015	Zinc plated, bolt on bracket	750	1000	•	7.1	180	18.6	472	16.9	429	6.1	155	1.0	25	6.4	163	6.0	152
84020*	Zinc plated, bolt on bracket	750	1000	•	7.1	180	18.6	472	16.9	429	6.1	155	1.0	25	6.4	163	6.0	152
84025	Zinc plated, weld-on bracket	750	1000	•	7.1	180	18.6	472	16.9	429	6.1	155	1.0	25	6.4	163	6.0	152
84026	Paint, weld-on bracket	750	1000	•	7.1	180	18.6	472	16.9	429	6.1	155	1.0	25	6.4	163	6.0	152

Atwood Implement Swivel Jacks

80518

82332, 82333

80459, 81264, 81353, 82340

82471

80273, 80294, 80452, 80453

81421
Bolt-on bracket fits frames 2" or 3" wide and 3, 4 or 5" deep

80580
Weld-on bracket Fits most frames

80590
Bolt-through bracket

87501
Weld-on bracket fits most frames. Bulk 25 quantity

87502
Bolt-on bracket fits frames 2 or 3" wide and 3, 4, or 5" deep.

SUPPORT CAPACITY DEFINITION:
The maximum vertical load that the jack can support.
*If jack is used with caster then the system capacity will be rated at 1,000 lb (the load carrying capacity of the caster).

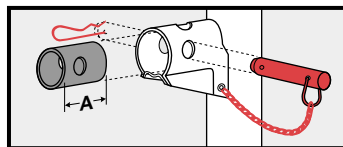
IMPLEMENT SWIVEL JACK SELECTION GUIDE

Part No.	Painted housing, zinc plated ram and foot	Support Capacity lbs.	Top Wind	Side Wind	A				B		C		D		E		F			
					retracted		extended		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
					in.	mm	in.	mm												
Tubular Swivel Jack																				
80459	Jack only, order bracket 81271	2,000	•		1.3	33	11.3	287	3.8	97	10.4	264	5.8	147	5.3	135	—	—		
81264	Jack only, order bracket 81271	2,000	•		3.2	81	18.3	465	14.3	363	11.0	275	5.8	147	5.3	135	—	—		
81353	Jack only, order bracket 81271	2,000	•		1.3	33	15.8	401	6.1	155	13.6	345	5.8	147	5.3	135	—	—		
82340	Jack only, order bracket 81271	2,000	•		3.2	81	18.3	465	12.2	310	10.0	254	5.8	147	5.3	135	—	—		
82332	Jack only, order bracket 81271	2,000		•	0.9	23	10.9	277	4.8	122	10.7	272	6.8	173	6.4	163	1.0	25		
82333	Jack only, order bracket 81271	2,000		•	3.1	79	17.3	439	13.3	338	10.9	277	6.8	173	6.4	163	1.0	25		
82471	Jack only, order bracket 82500	5,000	•		0.4	10	15.1	384	14.5	368	10.6	269	5.8	147	5.3	135	—	—		
Retaining Ring Swivel Jack																				
80522	Pkg. bulk w/o bracket, Lrg. foot	1,000	•		1.7	43	16.9	429	6.0	152	13.2	335	5.8	147	5.3	135	—	—		
80523	Pkg. bulk w/o bracket, Lrg. foot	1,000	•		1.2	30	11.3	287	3.3	84	10.5	267	5.8	147	5.3	135	—	—		
80518	Pkg. bulk w/ weld-on bracket, Sml. foot	2,000	•		0.9	23	11.0	279	3.4	86	10.7	272	5.8	147	5.3	135	—	—		
80519	Pkg. bulk w/o bracket, Sml. foot	2,000	•		0.9	23	11.0	279	3.4	86	10.7	272	5.8	147	5.3	135	—	—		
OBSOLETE																				
80273	Painted w/ zinc ram & foot	1,000	•		115/8	296	213/4	553	33/8	85	63/8	162	51/2	140	—	—				
80294	Painted w/ zinc ram & foot	1,000	•		147/8	379	30	762	6	152	63/8	162	51/2	140	—	—				
80452	Painted w/ zinc ram & foot	2,000	•		115/8	296	213/4	553	33/8	85	63/8	162	51/2	140	—	—				
80453	Painted**	2,000	•		115/8	296	213/4	553	33/8	85	63/8	162	51/2	140	—	—				

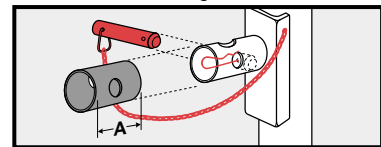
IMPLEMENT SWIVEL JACK REPAIR KITS

Part No.	Handle	Gear	Bearing	Cap	Pin & Chain
80459	82700	x	81416	x	85411
81264	82700	x	81416	x	85411
81353	82700	x	81416	x	85411
82340	82700	x	81416	x	85411
82332	25526	81410	81416	84120	85411
82333	25526	81410	81416	84120	85411
82471	82700	x	81417	x	85719
80522	82700	x	81416	x	x
80523	82700	x	81416	x	x
80518	82700	x	81416	x	x
80519	82700	x	81416	x	x
80273	82700	x	81416	x	x
80294	82700	x	81416	x	x
80452	82700	x	81416	x	x
80453	82700	x	81416	x	x

All Atwood Swivel Jacks must use Atwood Mounting Brackets.



81271 Tubular Mount Bracket Only (Shown in dark gray)



82500 Tubular Mount Bracket Only (Shown in dark gray)

85411 Pin and Lanyard Kit (Shown in red)

86493 Pin and Lanyard Kit (Shown in red)

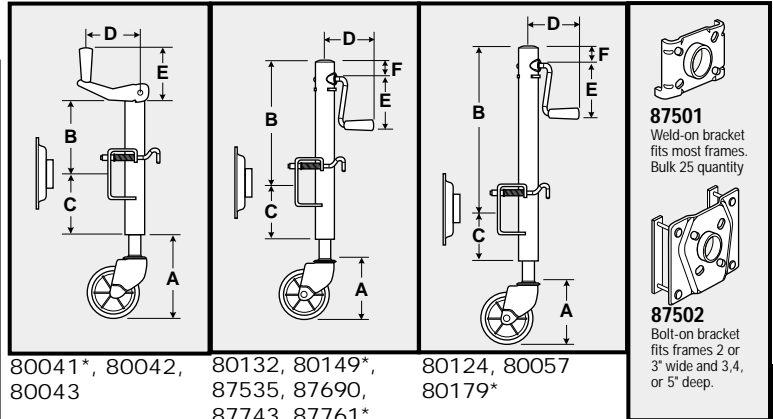
TUBULAR MOUNT BRACKETS

Part No.	Description	A		I.D.		O.D.		PIN SIZE	
		in.	mm	in.	mm	in.	mm	in.	mm
81271	Unpainted, female, weld-on receiver bracket for 2,000 lb. tubular mount jacks	2.5	64	—	—	2	51	.63	16
82500	Unpainted, female, weld-on receiver bracket for 5,000 lb. tubular mount jacks	3.5	89	2.5	64	3	76	.88	22

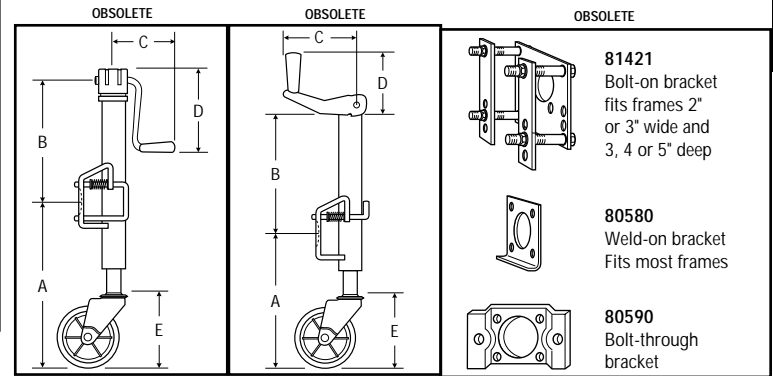
Atwood Retaining Ring Swivel Jacks

RETAINING RING & DOUBLE LOCK PIN SWIVEL JACK REPAIR KITS

Part No.	Handle	Gear	Bearing	Repair	Cap
80041	82700	x	81416	x	x
80042	82700	x	81416	x	x
80043	82700	x	81416	x	x
80149	x	x	x	80454	80457
80132	x	x	x	80454	80455
87535	x	x	x	80454	80457
80179	x	x	x	80465	80456
80124	x	x	x	80465	80456
80057	x	x	x	80465	80456
87761	x	x	x	80455	80456
87743	x	x	x	80455	80456
87690	x	x	x	80455	80456
80302	82700	x	81416	x	x
81413	25526	25524	81418	x	25525
83171	25526	25524	81416	x	84120
84200	25526	25524	81418	x	25525
84205	25526	25524	81416	x	84120
84250	25526	25524	81416	x	84120
84255	25526	25524	81418	x	25525
84290	82700	x	81416	x	x
80373	25526	25524	81418	x	25525



80041*, 80042, 80043 80132, 80149*, 87535, 87690, 87743, 87761* 80124, 80057, 80179*



81413, 83171, 84200, 84205, 84250, 84255 80302, 84290

RETAINING RING SWIVEL JACKS WITH CASTER SELECTION GUIDE

Part No.	Description	Work Capacity lbs.	Support Capacity lbs.	Top Wind	Side Wind	A				B		C		D		E		F			
						retracted		extended		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
						in.	mm	in.	mm												
80041	Retail package w/ appropriate bracket	500	800	•		7.4	188	15.9	404	6.1	155	5.3	135	5.8	147	5.3	135	—	—		
80042	Bulk w/ bolt-on bracket	500	800	•		7.4	188	15.9	404	6.1	155	5.3	135	5.8	147	5.3	135	—	—		
80043	Bulk, no bracket	500	800	•		7.4	188	15.9	404	6.1	155	5.3	135	5.8	147	5.3	135	—	—		
80149	Retail package w/ appropriate bracket	500	800		•	7.8	198	18.1	460	8.7	221	5.8	147	6.3	160	6.8	173	1.3	33		
80132	Bulk w/ bolt-on bracket	500	800		•	7.8	198	18.1	460	8.7	221	5.8	147	6.3	160	6.8	173	1.3	33		
87535	Bulk, no bracket	500	800		•	7.8	198	18.1	460	8.7	221	5.8	147	6.3	160	6.8	173	1.3	33		
80179	Retail package w/ appropriate bracket	1,000	1,000		•	7.3	185	21.4	544	17.4	442	4.0	102	6.3	160	6.8	173	1.7	43		
80124	Bulk w/ bolt-on bracket	1,000	1,000		•	7.3	185	21.4	544	17.4	442	4.0	102	6.3	160	6.8	173	1.7	43		
80057	Bulk, no bracket	1,000	1,000		•	7.3	185	21.4	544	17.4	442	4.0	102	6.3	160	6.8	173	1.7	43		
87761	Retail package w/ appropriate bracket	1,000	1,200		•	7.2	183	17	432	11.7	297	5.8	147	6.3	160	6.8	173	1.7	43		
87743	Bulk w/ bolt-on bracket	1,000	1,200		•	7.2	183	17	432	11.7	297	5.8	147	6.3	160	6.8	173	1.7	43		
87690	Bulk, no bracket	1,000	1,200		•	7.2	183	17	432	11.7	297	5.8	147	6.3	160	6.8	173	1.7	43		
80302	Zinc plated, with caster	500	800	•		127/8	327	21 3/8	543	6	152	6 3/8	162	5 1/2	140	6 3/4	172		OBSOLETE		
81413	Zinc plated, w/ caster	500	800		•	127/8	327	23	584	9 5/8	244	6 5/8	168	6 5/8	168	6 3/4	172		OBSOLETE		
83171	Zinc plated, w/ caster	1,000	1,000		•	11 1/4	286	25 3/8	644	15 5/8	398	6 5/8	168	6 5/8	168	6 3/4	172		OBSOLETE		
84200	Zinc plated, w/ caster*	500	800		•	127/8	327	23	584	9 5/8	244	6 5/8	168	6 5/8	168	6 3/4	172		OBSOLETE		
84205	Zinc plated, w/ caster*	1,000	1,000		•	11 1/4	286	25 3/8	644	15 5/8	398	6 5/8	168	6 5/8	168	6 3/4	172		OBSOLETE		
84250	Zinc plated, w/ caster	1,000	1,000		•	11 1/4	286	25 3/8	644	15 5/8	398	6 5/8	168	6 5/8	168	6 3/4	172		OBSOLETE		
84255	Zinc plated, w/ caster	500	800		•	127/8	327	23	584	9 5/8	244	6 5/8	168	6 5/8	168	6 3/4	172		OBSOLETE		
84290	Zinc plated, w/ caster*	500	800	•		127/8	327	21 3/8	543	6	152	6 3/8	162	5 1/2	140	6 3/4	172		OBSOLETE		

Note: All Atwood retaining ring swivel jacks must use Atwood mounting brackets.

CAPACITY DEFINITION: The working, or work, capacity is the maximum load that the jack can support for casting and easy lifting of a fully loaded trailer. The supporting, or support, capacity is the maximum vertical load that the jack can support.



Atwood Mobile Products
 4750 Hiawatha Drive • Rockford, IL 61103-1298
PHONE: 815•877•5700 **FAX:** 815•877•7469
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Manual Tongue Jacks

TROUBLE SHOOTING GUIDE

Effective: 7/9/98

Guides are only intended for use on Atwood® products by service technicians who have successfully completed Atwood® training. This guide should be used in conjunction with the appropriate Instruction Manual provided with the product and any applicable Industry Standards. This is not intended to be a complete list. Please direct questions concerning service of Atwood® products to 800-825-4328 before proceeding.

Difficult to Crank

- Too much tongue weight Verify weight and determine if adequate rated jack has been used
- Jack mounted at angle Reinstall jack perfectly vertical
- Dry gears Grease gears
- Dirt in gears Clean and grease gears
- Worn ball socket Replace coupler
- Broken teeth on bevel gears Replace gears
- Binding thrust bearing Replace bearing
- Stripped acme nut Replace jack
- Worn worm gear Replace jack
- Bent inner ram Replace jack

Jack Leg Seizes

- Stripped acme nut Replace jack
- Stripped worm gear Replace jack
- Obstruction in gears Clean and grease gears
- Bent inner ram Replace jack

4



WARNING

PERSONAL INJURY AND/OR PRODUCT DAMAGE

- If any of the following conditions develop, the trailer must not be used until proper corrective action is taken.

CONDITION WITH SOLUTIONS

Handle Turns and Jack Leg Does Not Move

- Stripped bevel gears Replace gears
- Gear pin missing Replace pin
- Stripped acme nut Replace jack

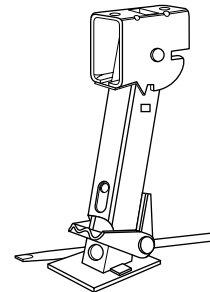
Atwood Stabilizer Jacks

STABILIZER JACK SELECTION GUIDE

Model No.	Part No.	Painted	Work capacity	Support capacity	Retracted		Extended	
					in.	cm	in.	cm
Single Jack—standard	82301	●	650lbs	1,000lbs	11.5	29.21	17.75	45.09
Single Jack—long	82297	●	650lbs	1,000lbs	15.5	39.37	21.75	55.25
Single Jack—standard	82306		650lbs	1,000lbs	11.5	29.21	17.75	45.09
Single Jack—standard	82307*	●	650lbs	1,000lbs	11.5	29.21	17.75	45.09
Set of 2 Jacks	82302	(2) of #82301 and (1) #85026 jack rod						
Set of 2 Jacks	82298	(2) of #82297 and (1) #85026 jack rod						
Jack Rod	80480	Bulk Pack of 25						

* with u-bolt and welded bracket

Pull on the leg until the tab disengages from the slot. Swing the leg down and snap into position.



Atwood Telescoping Stabilizers

TELESCOPING STABILIZER SELECTION GUIDE

Part No.	Description	Retracted		Extended		Maximum Vertical Load	Weight
		in.	mm	in.	mm		
480920	2" Outer Tube	20	508	26	660	3,000	5
82215	2 1/2" Outer Tube	30	762	45	1143	6,000	14

Weld the outer housing to a structural attachment point on the trailer.





Atwood Mobile Products
 4750 Hiawatha Drive • Rockford, IL 61103-1298
PHONE: 815•877•5700 **FAX:** 815•877•7469
INTERNET: http://www.atwoodmobile.com

Power Jack

TROUBLE SHOOTING GUIDE

Effective: 11/21/03

Guides are only intended for use on Atwood® products by service technicians who have successfully completed Atwood® training. This guide should be used in conjunction with the appropriate Instruction Manual provided with the product and any applicable Industry Standards. This is not intended to be a complete list. Please direct questions concerning service of Atwood® products to 800-825-4328 before proceeding.



WARNING

PERSONAL INJURY AND/OR PRODUCT DAMAGE

- If any of the following conditions develop, the trailer must not be used until proper corrective action is taken.

CONDITION WITH SOLUTIONS

MOTOR WILL NOT OPERATE

- No or low voltage Check battery & electrical connections. Must have minimum of 10 VDC
- Jack flange not making good contact to provide adequate ground with coupler surface Clean paint or dirt from coupler frame
- Blown fuse Replace with 30 amp AWG fuse
- Loose wires on ON/OFF switch Secure wire connections
- ON/OFF switch faulty Replace switch
- Motor faulty Replace motor

POOR GROUND

WHEN BUTTON IS PRESSED ON JACK -

- Jack doesn't operate Inspect motor mounting bolt for Loctite®.
- Jack operates only partially up or down If Loctite® found, replace with new 1/4-20 x 3" screw and two lock washers. If bolt unavailable, clean present bolt and hole with wire buffing wheel. Inspect bolt hole. If dirty, clean with a 1/4-20 tap.
- Jack runs intermittently

MOTOR CLUTCH ENGAGES

- Normal if jack leg is at fully retracted or extended position None, but let go of switch when you hear the clutch
- Worn worm gear Replace jack ram
- Dirty inner ram tube Clean ram tube and coat with light coat of silicon spray
- Bent inner ram Replace inner ram
- Clutch faulty Replace motor
- Jack at angle Secure mounting bolts and ensure a support plate is used.
- Excessive tongue weights Determine if jack is adequate for tongue weight.

UTILITY LIGHT DOES NOT WORK

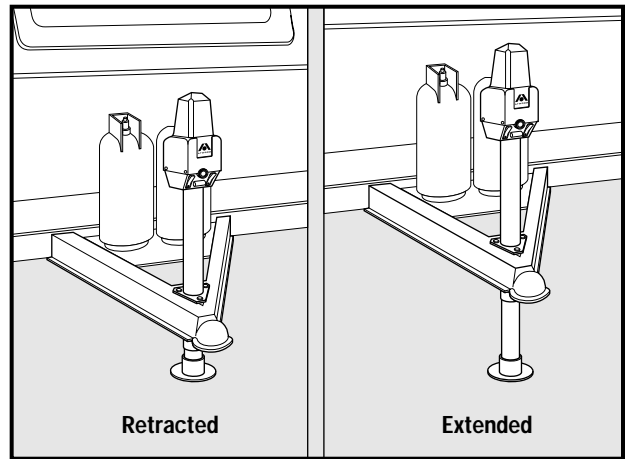
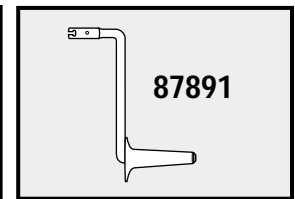
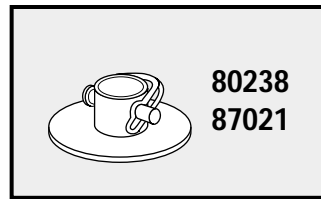
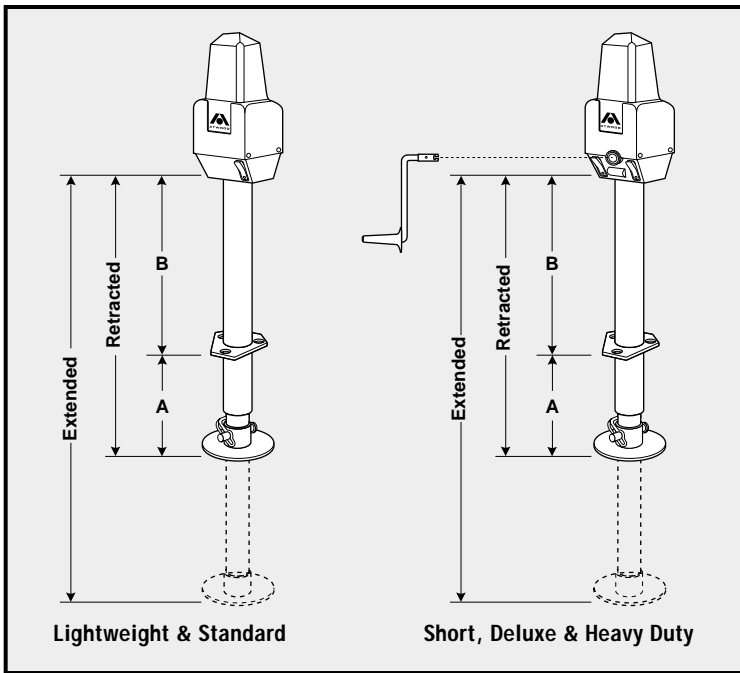
- Loose wires on the ON/OFF switch Secure wire connection
- Bad light bulb Replace bulb

IMPORTANT CAUTION - If equalizer bars are attached to the tow vehicle and the trailer while operating the power tongue jack, you may experience the motor clutching the moment the jack sees load. This will occur because you are lifting both the tongue of the trailer and the rear of the tow vehicle. The 1500 lb. and 2500 lb. acme screw jacks cannot lift this excessive weight. To overcome this excessive weight, you should upgrade to the 3500 lb. power jack. The ball screw mechanism utilized in this jack should allow you to lift this load.



Atwood Power & Marine Jacks

4



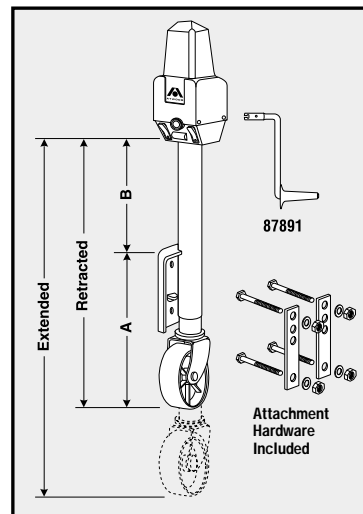
POWER JACK SELECTION GUIDE

POWER JACK													
Part No.	Description	Rate of Travel	A		B		Retracted		Extended		Capacity		Coupler Ball Size
			in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kg	in.
80236	Lightweight Power Jack	10" per minute	10 1/8	257.2	14 3/4	374.7	24 7/8	631.8	39 1/4	997	1,500	680	2
80511	Standard Power Jack	10" per minute	10 1/8	257.2	14 3/4	374.7	24 7/8	631.8	39 1/4	997	2,500	1134	2 5/16
80515	Deluxe Power Jack	10" per minute	10 1/8	257.2	14 3/4	374.7	24 7/8	631.8	39 1/4	997	2,500	1134	2 5/16
80530	Heavy Duty Power Jack	15" per minute	10 1/8	257.2	14 3/4	374.7	24 7/8	631.8	39 1/4	997	3,500	1588	2 5/16
80509	Short Jack	10" per minute	10	254.0	9 7/8	251.0	19 7/8	505.0	31 5/16	795	2,500	1134	2 5/16
80524	Marine Jack	10" per minute	14 3/4	374.7	10 1/8	257.2	24 7/8	631.8	39 1/4	997	1,000	1134	2 5/16

REPLACEMENT GUIDE

REPLACEMENT FOOT			
Part No.	Description	Height	
80238	Short, round foot pad for Lightweight Power Jack	2.5 in	64 cm
87021	Short, round foot pad for the other Jacks	2.5 in	64 cm

MANUAL CRANK HANDLE	
87891	Optional handle for manual operation of Lightweight and Standard Power Jacks
87595	Top cover for Deluxe and Heavy Duty Power Jack
87571	Top cover for Lightweight and Standard Power Jack
87596	Bottom cover for Deluxe and Heavy Duty Power Jack
87573	Bottom cover for Lightweight and Standard Power Jack



Marine Power Jack

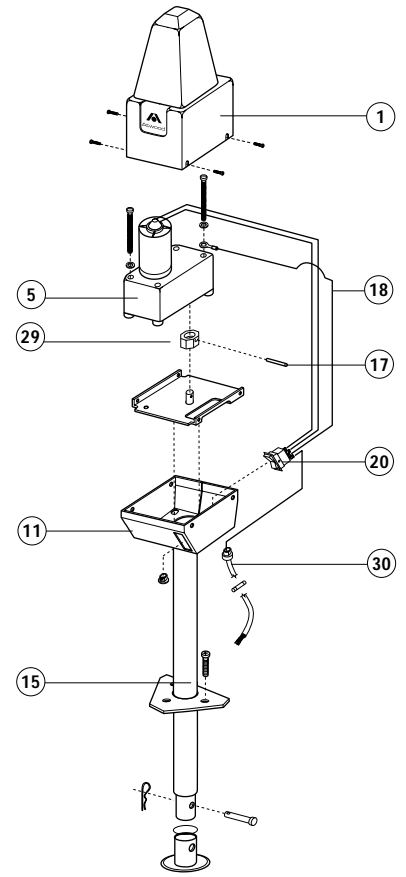
SHIPPING SPECIFICATIONS—POWER JACKS

Product	Shipping Wt.		Carton Length		Carton Width		Carton Depth	
	lbs.	kg	in.	mm	in.	mm	in.	mm
Lightweight—boxed	27	12.2	37	940	8	203	8	203
Standard Jack—boxed	27	12.2	37	940	8	203	8	203
Deluxe Jack—boxed	27	12.2	37	940	8	203	8	203
Heavy Duty—boxed	29	13.2	37	940	8	203	8	203
Short—boxed	27	12.2	37	940	8	203	8	203
Marine—boxed	29.5	13.4	37	940	8	203	8	203

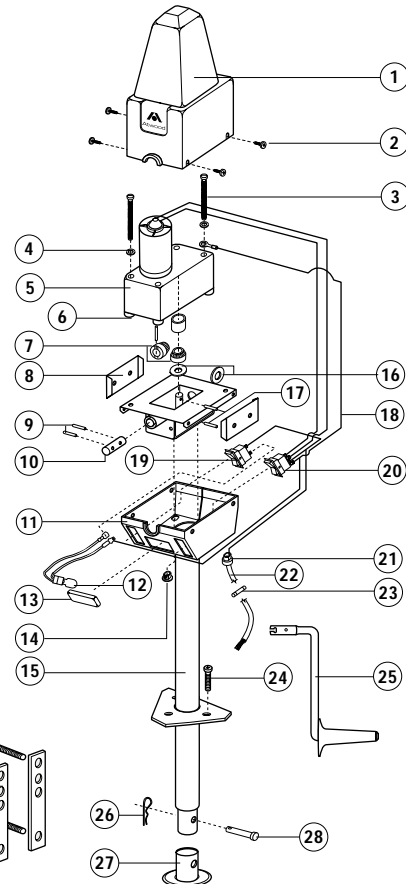
REPLACEMENT SERVICE PARTS / PIÈCES DÉTACHÉES

ITEM ARTICLE	LIGHT WT LÉGER	STANDARD STANDARD	SHORT	DELUXE DE LUXE	HEAVY DUTY HAUTE CAPACITÉ	MARINE	DESCRIPTION DESCRIPTION
1	87571	87571	87595	87595	87595	87595	Upper Cover Couvercle supérieur
2	87057	87057	87057	87057	87057	87057	Cover Screw Vis du couvercle
3	87055	87055	87942	87942	87942	87942	Motor Ground Screw / Vis
4	86111	86111	86111	86111	86111	86111	Lock Washer Rondelle de blocage
5	75721	75721	75722	75722	75722	75722	Motor and Terminals Moteur et bornes
6	N/A	N/A	87916	87916	87916	87916	Cover Tube Tube du couvercle
7	N/A	N/A	87108	87108	87108	87108	Bevel Gear Kit Pignon conique
8	N/A	N/A	88002	88002	88002	88002	Gear Housing Cover Couvercle de la boîte de vitesse
9	N/A	N/A	70298	70298	71132	70298	Drive Pin Goupille d'entraînement
10	N/A	N/A	87936	87936	87936	87936	Drive Shaft Arbre d'entraînement
11	87572	87572	87597	87597	87597	87597	Lower Cover Couvercle inférieur
12	N/A	N/A	N/A	N/A	N/A	N/A	Light Bulb* Ampoule électrique*
13	N/A	N/A	87591	87591	87591	87591	Lens / Lentille
14	87035	87035	87035	87035	87035	87035	Hole Plug Bouchon de l'orifice
15	80237	80512	81489	87500	87559	--	Jack Hsing & Ram Assy 16" trvl Enveloppe du vérin et corps du cric à course de 16 po
16	N/A	N/A	87847	87847	87847	87847	Washer Support Support de rondelle
17	70229	70229	70667	70667	70667	70667	Pin / Tige
18	87568	87568	87598	87598	87598	87598	Ground Wire Fil de terre
19	N/A	N/A	87586	87586	87586	87586	Light Switch Commutateur d'éclairage
20	87570	87570	87570	87570	87570	87570	Motor Switch Commutateur du moteur
21	87327	87327	87327	87327	87327	87327	Strain Relief Bushing Bague de bride de cordon
22	N/A	N/A	87599	87599	87599	87599	Jumper Wire & Fuse Fil de connexion et fusible
23	N/A	N/A	N/A	N/A	N/A	N/A	Fuse▲ / Fusible▲
24	87176	87176	87176	87176	87176	87176	Mounting Bolt / Boulon
25	OPTIONAL	OPTIONAL	87891	87891	87891	87891	Manual Drive Handle Manette de commande manuelle
26	70269	70269	70269	70269	N/A	70269	Cotter Pin Goupille fendue
27	80238	87021	87021	87021	87021	87021	Round Foot Pad Coupelle ronde
28	87709	87709	87709	87709	70215	87709	Clevis Pin Axe de chape
29	87077	87077	N/A	N/A	NA	N/A	Hex Drive Nut Ecrou de commande hexagonal
30	87569	87569	N/A	N/A	N/A	N/A	Fuse Wire Fil du fusible
31						87150	Bracket
32						84037	Caster

Standard & Lightweight Power Jack



Short, Deluxe & Heavy Duty Power Jack



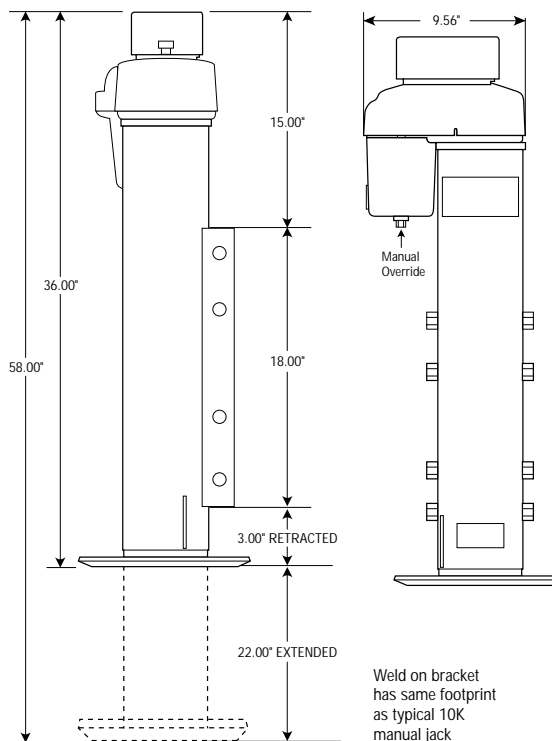
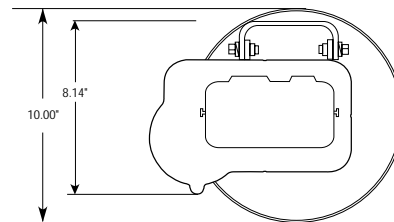
*912 type T5 12 candle power *912 type T5 12 candelas
▲Buss Type AGC-30 amp fuse ▲Buss type AGC-30 à fusible

4

DuraLeg™ Center Mount Jack by Atwood®

Atwood DuraLeg™ Selection Guide

Atwood DuraLeg					
Part Number	Description	Capacity		Weight	
		lbs	Kg	lbs	Kg
66256	DuraLeg, single, boxed	10,000	4,536	80	36.3



Weld on bracket has same footprint as typical 10K manual jack

TIP:

If the storage battery of the trailer is charged by the tow vehicle; it will improve the performance of the jack under very heavy loads if the tow vehicle wiring harness is connected and the tow vehicle is running. This is not required but may improve the performance in some cases.

⚠ WARNING
PERSONAL INJURY

• Make sure the tow vehicle is in park and the emergency brake is set when making vehicle hoop up and operating the jack.

4



MAINTENANCE

1. Internal part of Duraleg are permanently lubricated at the factory and do not require any further lubrication.
2. If it is not possible to get Duraleg to operate freely, replace Duraleg.
3. At least once each usage season fully extend jacks and clean dirt and grime from outside of inner tube. Coat entire outside of inner tube with silicone spray lubricant. This will protect the finish of the inner tube and provide lubrication between the jack's tubes. Clean dirt and grime from outer housing.
4. Apply a good automotive polish or wax to the outer tube of the jacks to maintain the appearance.

Manual Override

To Manually Extend or Retract jack, use a 1/2" socket on Drive nut on end of motor (fig 12).

Note: It takes 500 revolutions of nut to extend/retract leveler one (1") inch.

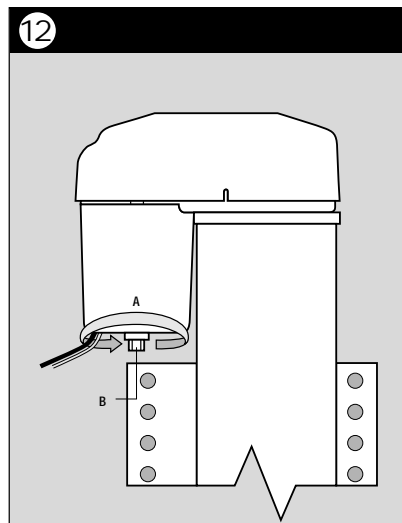
⚠ CAUTION
PERSONAL INJURY/PRODUCT DAMAGE

- Battery operated drills, 9.6V to 18V, are powerful. Hold drill with both hands to protect your wrist. Keep loose clothing and body parts away from drill as the reaction torque from the drill may cause it to kick back.
- Refer to your drill manufacturer's operation manual.
- Use a battery operated drill/drive to rotate nut counter clockwise (looking from bottom end of nut (FIG 12) to extend jack.

SYSTEM PROTECTION FEATURES:

Low Voltage Protection

Low Battery indicator lights indicates voltage drop below 9.5 volts. Charge battery or connect trailer to tow vehicle. Turn system off then back on to clear low battery. If system "times out" and shuts off automatically, just turning it back on will clear low battery indicator.



For complete Duraleg operating instructions please see Literature Number MPD 66199



Atwood Mobile Products

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Remote Control Electric Ball Screw Camper Jacks

TROUBLE SHOOTING GUIDE

Effective: 8/23/01

Guides are only intended for use on Atwood® products by service technicians who have successfully completed Atwood® training. This guide should be used in conjunction with the appropriate Instruction Manual provided with the product and any applicable Industry Standards. This is not intended to be a complete list. Please direct questions concerning service of Atwood® products to 800-825-4328 before proceeding.



WARNING

PERSONAL INJURY AND/OR PRODUCT DAMAGE

- If any of the following conditions develop, the trailer must not be used until proper corrective action is taken.

CONDITION WITH SOLUTIONS

REMOTE WORKS INTERMITTENTLY

- Low voltage Recharge the camper battery.
- Antennae out of alignment Straighten the antennae. Arrange so they are perpendicular to the sides of the relay module.
- Small energy drains Turn appliances and electronic equipment off, not just in sleep mode.
- Interference from other RF devices Move other radio frequency devices such as cell phones, key fobs, or TV remote control, away from the camper. These can interfere with the proper operation of the remote control system.
- Weak signal Walk around outside the camper, while operating the remote, to determine the best position for operation.

LIGHT ON ACTIVATION SWITCH DOES NOT TURN OFF

- Relay module operation Turn on the activation switch. Now turn it off. If the light does not go out, replace the relay module.

ONE OR MORE JACKS DO NOT OPERATE

- Jack cord not plugged in Verify that each jack cord is securely plugged into the outside of the camper.
- Wiring Check wiring between relay module and jack are correct & wires are not crossed.

- Low voltage Using a digital voltmeter, verify there is at least 12 volts present and the polarity changes between "extend" and "retract".
- Module operation If there is no output voltage, replace the relay module. Check operation of electric jack and its wiring before connecting it to the new relay module - shorted jack will damage the relay module if connected and turned on.
- Shorted wiring or jack If there is voltage on the output of the relay module, the problem is in the wiring or the electric jack.

NOTHING HAPPENS

- Remote control battery dead Replace the 9V battery in the hand held remote control.
- Unmatched dip switch settings Compare the dip switch settings on the relay module to those of the hand held remote control. If different, make them the same settings.
- Relay module operation Replace the relay module and see if the system operates.
- Remote control operation Replace the remote control and see if the system operates.
- Cable Obtain a known good cable from another Atwood remote control system and install the cable between the relay module and the activation switch.

NOTHING HAPPENS WHEN I PRESS "ALL JACKS", BUT I HEAR A CLICKING SOUND

- Low voltage Recharge the camper battery.
- Battery connections Check the battery connections.

ONE OR MORE JACKS, BUT NOT ALL, CANNOT BE CONTROLLED BY THE HAND HELD REMOTE

- Crossed wires Verify that the output wiring is correct.
- Jack operation Verify, using the hand crank, that the electric jacks work properly.
- Module operation If the two above are correct, replace the relay module.



Atwood Truck Camper Jacks

Truck Camper Jack Selection Guide

Model	Part No.	Pure (Arctic) White	New White	8' or shorter campers (1500 lbs. or less)	campers exceeding 8' length	Color	Application
REMOTE CONTROL JACKS (set of four (4) jacks only)							
Electric Ball Screw	80491	●		●	●		
Electric Ball Screw	80492		●	●	●		
Heavy Duty Ball Screw	80411		●	●	●		
Heavy Duty Ball Screw	80417	●		●	●		
REMOTE CONTROL KIT							
Wireless	85441						
JACKS (set of four (4) jacks only)							
Electric Ball Screw	80488	●		●	●		
Electric Ball Screw	80489		●	●	●		
Heavy Duty Ball Screw	80412	●		●	●		
Manual Ball Screw	84371	●		●	●		
Manual Ball Screw	84376		●	●	●		
Acme Screw	84241		●	●	●		
Acme Screw	84246	●		●	●		
HARDWARE/BACKET KITS for wide front, narrow rear with lower clamps or rear jacks							
Electric Ball Screw	85930		●	●	●		
Electric Ball Screw	85964	●		●	●		
Manual Ball Screw	85925		●	●	●		
Manual Ball Screw	85927	●		●	●		
Acme Screw	85966		●	●	●		
Acme Screw	85967	●		●	●		
HARDWARE/BACKET KITS for wide front, wide rear with lower clamps							
Electric Ball Screw	85981		●	●	●		
Electric Ball Screw	85983	●		●	●		
Remote Electric	85984	●		●	●		
Remote Electric	85985		●	●	●		
Manual Ball Screw	85979		●	●	●		
Manual Ball Screw	85982	●		●	●		
HARDWARE/BACKET KITS for wide front, wide rear without lower clamps							
Acme Screw	85969		●	●	●		
Acme Screw	85970	●		●	●		
HARDWARE/BACKET KITS for narrow front, narrow rear with lower clamps							
Electric Ball Screw	85972	●		●	●		
Manual Ball Screw	85974	●		●	●		
SWING-OUT KITS for use with dual-wheel pick-ups							
All Pickup Jacks	85428		●				
All Pickup Jacks	85473	●					
RETROFIT KIT (Zinc plated ONLY) Retrofits onto existing Atwood jacks							
Electric Ball Screw	87357						
Remote Electric	87329						
REPLACEMENT PARTS							
Handheld Wireless Remote	85442						
14' Phone Cable	85453						

Wireless Remote Control Kit—85441

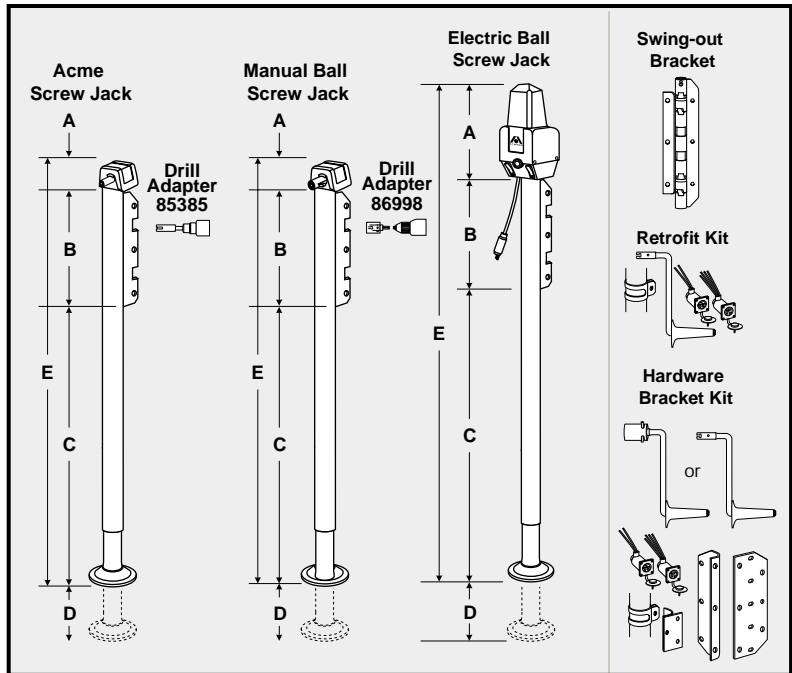
The Remote Control Kit consists of the micro-processor unit with antennae, activation wall switch, cable connecting the unit to the wall switch, and handheld remote control.



TO ORDER JACKS, KITS AND REPLACEMENT PARTS -

- DETERMINE TYPE OF JACK**
 - Hand Cranked Acme Manual Ball Screw
 - Electric Switched Remote Control

SEE SELECTION GUIDE ON LEFT
- COLOR CHOICE** New White or Pure White
- REMOTE CONTROL** Order kit separately
- BRACKET KITS** Wide Front / Wide Rear
 - GVWR < 1500 lbs. (ONLY) Order Narrow Fronts / Narrow Rears
 - Interference in the camper rear (generator or water heater compartment) .. Order Wide Fronts / Narrow Rears
 - Truck with Dual Rear Wheels Order Swingout Bracket Kits



Dimensions

Model	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
Electric	11	279	13	330	32	813	33.5	851	56	1422
Manual	3	76	13	330	32	813	33.5	851	48	1219
Acme	3	76	13	330	32.5	826	27.5	699	48.5	1232

Accessories

Model	Part No.	Color
High Lift Foot	87368	—

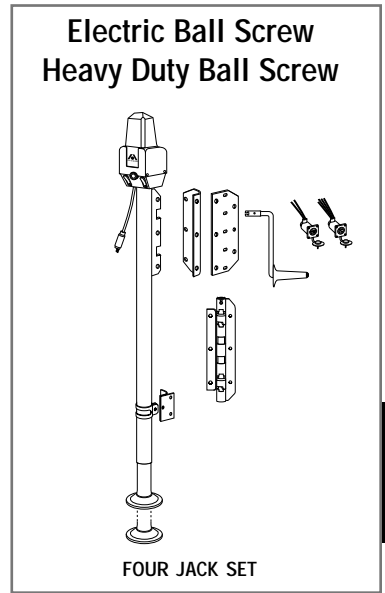
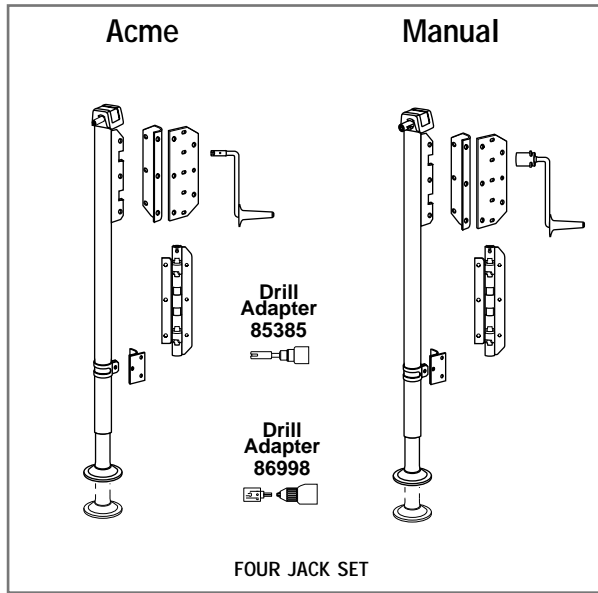
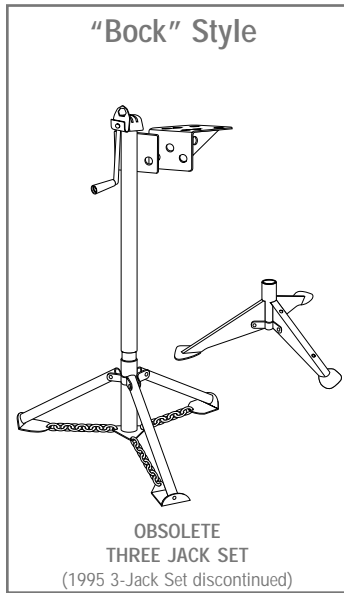
* Includes mounting brackets as specified, required bolts, washers and nuts, handle, wiring receptacles and installation/operation instructions.

Hardware/Bracket Kits (required) include mounting brackets, required bolts, washers and nuts, handle and installation/operation instructions, plus wire receptacles for the Electric Ball Screw Jack.

The Swing-Out Kit, to accommodate dual-wheel pick-ups, must be used in conjunction with a Hardware/Bracket Kit.

Retrofit Kit includes lower zinc clamp, wiring receptacles, required bolts, washers and nuts, handle and installation/operation instructions.

TRUCK CAMPER JACKS



4

SPECIFICATIONS	LIGHT-WT	STANDARD	HEAVY	BALL SCREW*		ELECTRIC*			
				ACME	MANUAL	REGULAR		REMOTE CONTROL	
						REGULAR	HEAVY DUTY	REGULAR	HEAVY DUTY
Max. Camper Weight (lbs)				2,250 (4)	3,900 (4)	3,900 (4)	5,000 (4)	3,900 (4)	5,000 (4)
Individual Jack Rating (lbs)	1000	1000	2000	1,250	2,200	2,200	2,800	2,000	2,800
Tripod	Stamped	Chained	Chained						
Drill Adapter				85385	86998				
Travel (extension in inches)	22	22	22	27.5	29.5	29.5	29.5	29.5	29.5
Bevel Gear Teeth	15 & 15	15 & 15	12 & 16	15 & 15	15 & 15	12 & 16	12 & 16	12 & 16	12 & 16
* Individual jack may see up to 60% of camper weight N/N = Narrow Narrow USE ONLY IF GVWR<1500 LBS. WF/NR = Wide Front Narrow Rear						MOTOR AMP DRAW	Single leg, no load Single leg, X < 2000 lbs All legs, 2500 lbs	7 amps 19 amps 40 amps	

Shipping Specifications

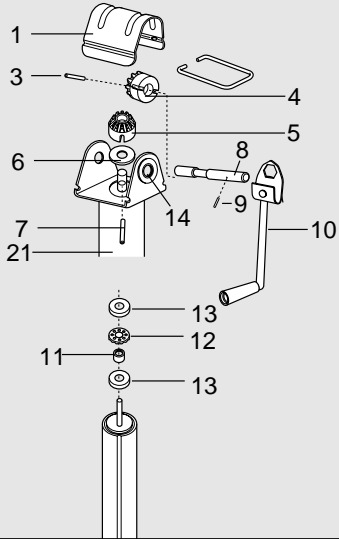
Product	Shipping Wt.		Carton Length		Carton Width		Carton Depth	
	lbs.	kg	in.	cm	in.	cm	in.	cm
Remote Control (set of 4)	145	65.8	62	157.5	32	81.3	8	20.3
Electric Jack (set of 4)	145	65.8	62	157.5	32	81.3	8	20.3
Manual Jack (set of 4)	108	49.1	55	139.7	18	45.7	8	20.3
Acme Jack (set of 4)	78	35.5	54	137.2	16	40.6	8	20.3
Hardware/bracket kits	20	9.1	22	55.9	12	30.5	3	7.6
Swing-out kits	15	6.8	15	38.1	8	20.3	3	7.6

Individually Boxed Truck Camper Jacks

ELECTRICAL	Switched Pure white	Switched New White	Switched Colonial White	Heavy Duty Switched Pure White	Remote Pure White	Remote New White	Heavy Duty Remote Pure White	Heavy Duty Remote New White
Set of 4	80488	80489	80487 - OBS	80412	80491	80492	80417	80411
Driver Front	80470	80466	80461 - OBS	80440	80473	80469	80443	80444
Passenger Front	80471	80467	80462 - OBS	80442	80471	80467	80442	80445
Driver Rear	80472	80468	80463 - OBS	80441	80471	80467	80442	80445
Passenger Rear	80473	82469	80464 - OBS	80443	80473	80469	80443	80444

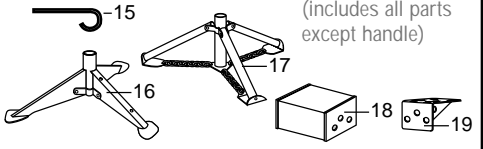
MANUAL	Ball Screw Pure white	Ball Screw New White	Ball Screw Colonial White	Acme Pure White	Acme New White	Acme Colonial White
Set of 4	84371	84376	84351 - OBS	84246	84241	84298 - OBS
Driver Front	81443	81439	81435 - OBS	81456	81452	81488 - OBS
Passenger Front	81444	81440	81436 - OBS	81455	81451	81447 - OBS
Driver Rear	81445	81441	81437 - OBS	81458	81454	81450 - OBS
Passenger Rear	81446	81442	81438 - OBS	81457	81453	81449 - OBS

OBSELETE - "BOCK" STYLE CAMPER JACK - REPLACEMENT PARTS

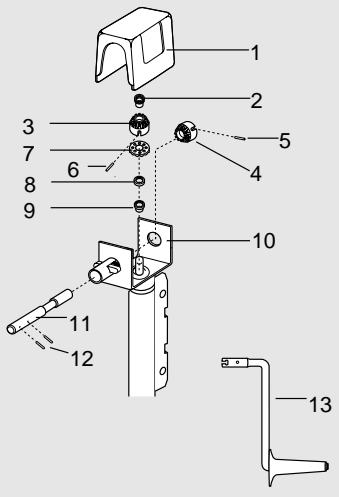


ITEM #	LIGHT & STANDARD	HEAVY DUTY	DESCRIPTION
1	25525	84120	Cover Kit
			COVER
			COVER CLIP
3, 7	25524	81480	Bevel Gear Kit
			GEAR PINS
4, 5			BEVEL GEARS
6	23721		Thrust Washer
8	87189	87193	Shaft
9	71132	71132	Crank Pin
10	87258	87258	Crank
11		25503	Felt Washer
12		25504	Bearing
13	25500	25500	Thrust Washer
14	21693	21693	Bushing
15	87258	87257	Carrier Ring
16	87272		Tripod-stamped
17	87264	87283	Tripod-chained.

ITEM #	LIGHT & STANDARD	HEAVY DUTY	DESCRIPTION
18	87318	87318	Dual Wheel Jack
			Ext. Brkt. Kit
			(2 brackets + hrdwr)
19	87293	87293	Mounting Bracket-Standard
N/S	87281	87281	Mounting Bracket Hardware Kit
			BOLT 5/8" x 1"
			BRACKET NUT 5/8"
N/S	81071	81020	Inner & Outer Ram Assembly
			(includes all parts except handle)



ACME & MANUAL BALL SCREW JACK - REPLACEMENT PARTS

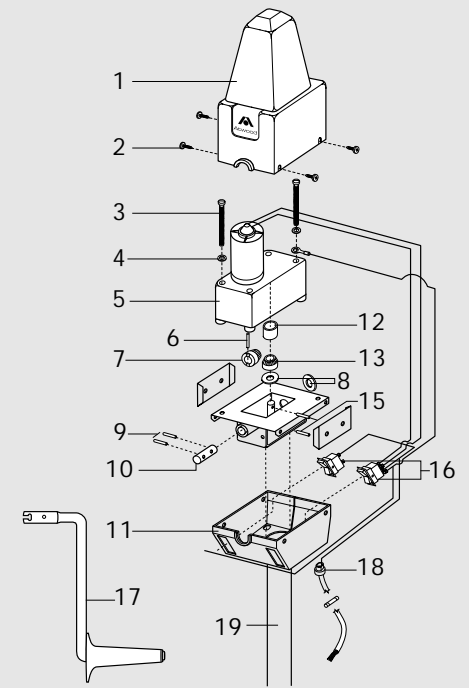


ITEM #	ACME	MANUAL BALL SCREW	DESCRIPTION
1	85171	85171	Cover-pure white
	85172	85172	Cover-new white
3,4,5,6		85387	Bevel Gear Kit
			(2 gears, 2 pins)
2		87853	Knurled Nut
3	85706		Bevel Gear
4	71138		Bevel Gear
5	71132		Gear Pin
6	70229		Gear Pin
7	25504	25504	Thrust Bearing

ITEM #	ACME	MANUAL BALL SCREW	DESCRIPTION
8	87846	87846	Spacer
9	70224	70224	Bushing, nylon
10	21693	21693	Bushings
11	87378	87232	Drive Shaft
12	70298	70298	Drive Pin
13	87891	87030	Handle
BELOW	85385	86998	Drill Adapter
N/S	86470		Bearing



ELECTRIC & HEAVY DUTY BALL SCREW JACK - REPLACEMENT PARTS



ITEM #	PART #	DESCRIPTION UPPER COVERS
1	87595	New White
	87663	Pure White
2	87057	Cover Screws
3	87942	Screw
4	86111	Lock Washer
5	75722	Motor
6,7, & 13,15	87108	Bevel Gear Kit
		(2 gears, 2 pins)
16	87570	Motor Switch
8	87847	Washer
N/S	87912	Nylon Bushing
9	70298	Driver Pin
10	87941	Drive Shaft

ITEM #	PART #	DESCRIPTION LOWER COVERS
11	87594	New White FRONT DS
	87684	New White FRONT PS
	87665	Pure White FRONT DS
	87682	Pure White FRONT PS
12	87916	Cover Tube
17	87891	Handle
18	87326	Strain Relief Bushing

For Standard Jack only - Lower Assembly for Electric (does not include Heavy Duty)

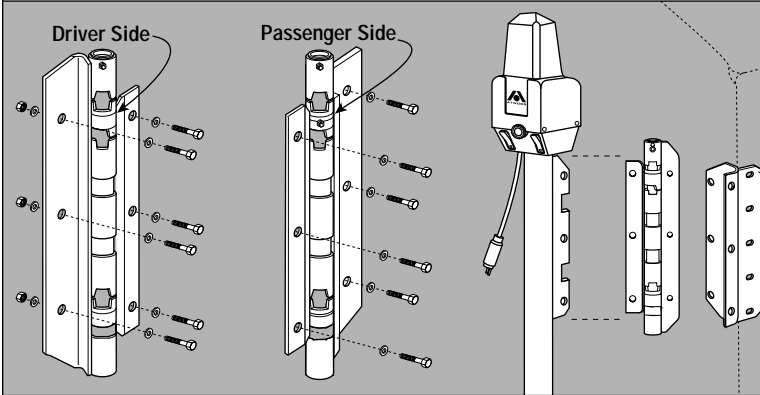
19	80460	Pure White
19	80449	New White

NOTE: DS = Driver Side
PS = Passenger Side

SWING OUT BRACKET

Effective 9/11/03

Use with Atwood Acme and Ball Screw Truck Camper Jacks when additional width between the two front jacks is required to clear the fenders on dual wheel trucks. Due to the variety of camper sizes and truck trims, please verify that these swingout brackets provide enough clearance for driver comfort during loading and unloading.

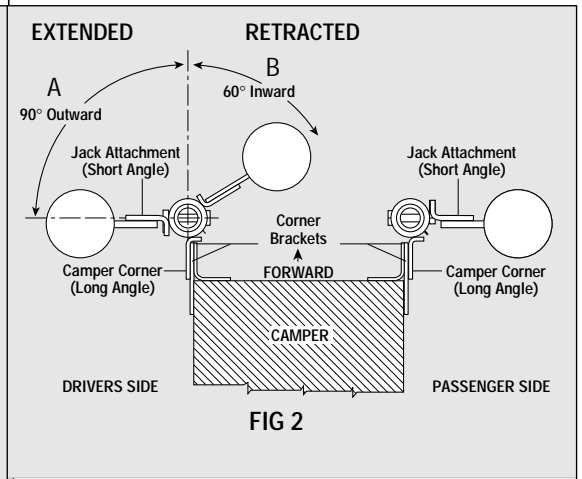
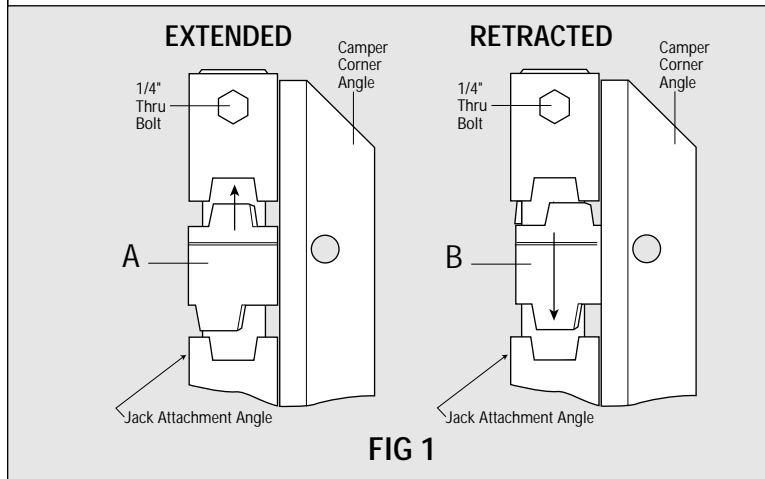


MPD 85401 - New White
 MPD 85438 - Pure White

Swing Out Bracket Kit contains -

- 1 - Driver Side bracket. Identified by the single grooved bushings.
- 1 - Passenger Side bracket. Identified by the double grooved bushings.
- 6 - nuts and bolts
- 12 - washers

For complete Acme and Ball Screw truck camper instructions consult MPD 87903.



INSTALLATION

1. The end with the 1/4" thru-bolt must be at the top of the bracket during installation (FIG 1).
2. The angle bracket welded to the bushing with the thru-bolt attaches to the bracket already on the camper corner.
3. Use three-3/8" x 1-1/2" long Grade 5 bolts and washers to attach each bracket. Torque bolts to between 15-20 ft. lbs.
4. Attach jack to other angle bracket with three 3/8" x 1-1/2" long Grade 5 bolts and washers. Torque bolts to between 15-20 ft. lbs.

Note: For Acme and Manual Ball Screw Jacks switch the front jacks from driver side to passenger side and vice versa to allow the crank handle to operate.

WARNING
 PERSONAL INJURY/PROPERTY DAMAGE

- Position swing out brackets properly. In the **Extended Position** - 90° outward to the side of camper (FIG 2-A) and in the **Retracted Position** - 60° inward to the side of camper (FIG 2-B).

WARNING
 PERSONAL INJURY/PROPERTY DAMAGE

- Jack bracket must be in retracted position when traveling on roadway (FIG 2-B).

OPERATION

Extended Position -

1. Lift jack and swing outward from camper body to clear truck's dual wheel fenders. When jack is in the extended position, be sure the jack attachment angle bracket attached to the jack rides up into the notch in the camper corner angle bracket attached to the camper (FIG 1-A). This must be done visually prior to loading jack.

Retracted Position -

2. After the jack is retracted, lift the jack and rotate it forward (inward) so when released, the jack attachment angle bracket attached to the jack rides down into the notch in the camper corner angle (FIG 1-B).

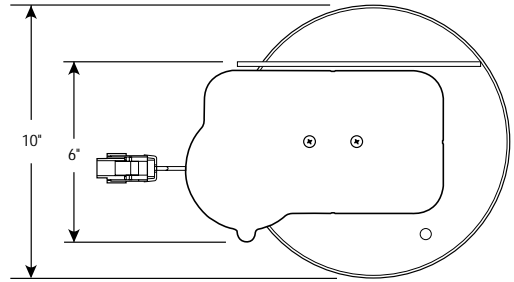
MAINTENANCE

1. Spray entire bracket with silicon spray lubricant at least once each camping season. Wipe off excess.

Atwood Levellegs™

Atwood Levellegs Selection Guide

Atwood Levellegs						
Part Number	Description	Capacity		Weight		
		lbs	Kg	lbs	Kg	
66280	7.5K 15" travel	7,500	3,409	34	15	
66170	9K Driver Front/Pass Rear	9,000	4,090	60	27	
66310	12K Driver Front/Pass Rear	12,000	5,454	54	25	
66320	12K Driver Rear/Pass Front	12,000	5,454	54	25	
66210	9K Driver Rear/Pass Front	9,000	4,090	60	27	
66302	7.5K 13" travel	7,500	3,409	60	27	
Control Kits						
66200	Workhorse® Chassis Control Kit, Manual					
66205	Ford® Chassis control Kit, Manual					
66276	Workhorse® Auto Position					
66272	Ford® Auto Position					



5

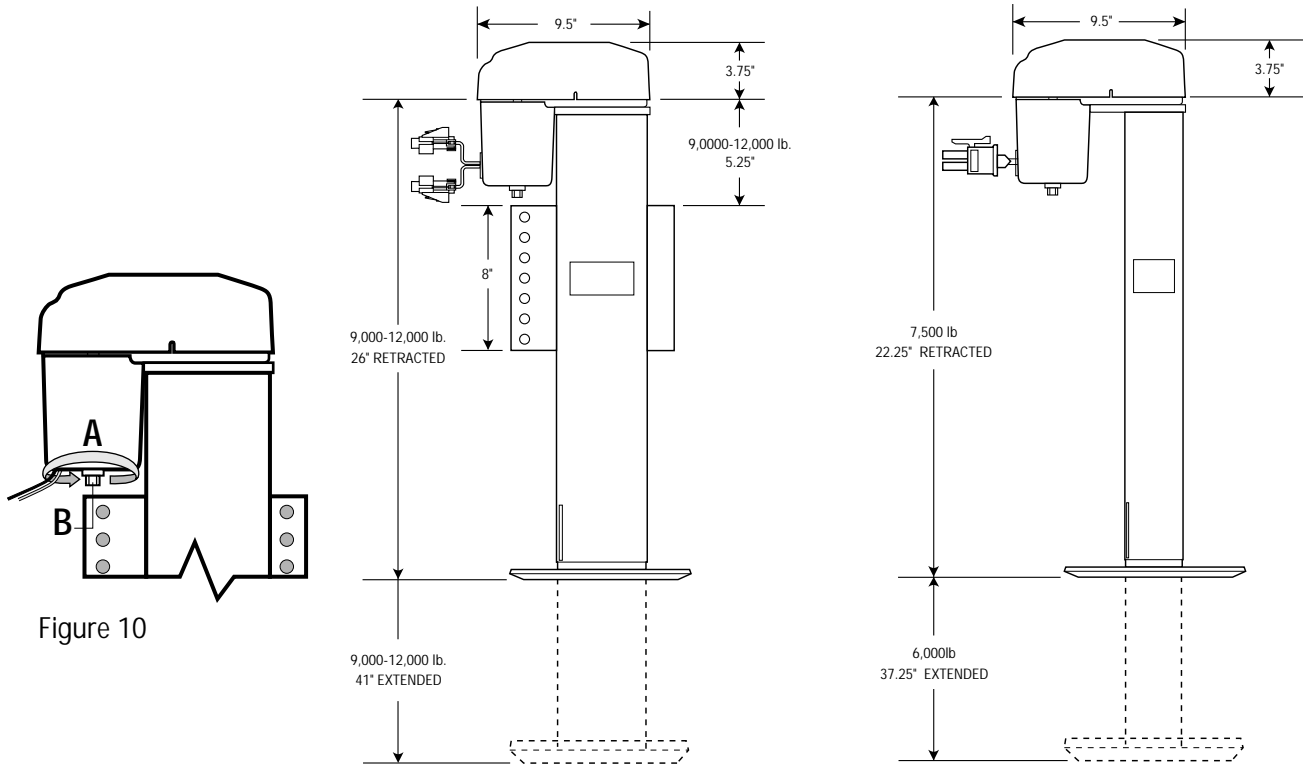


Figure 10

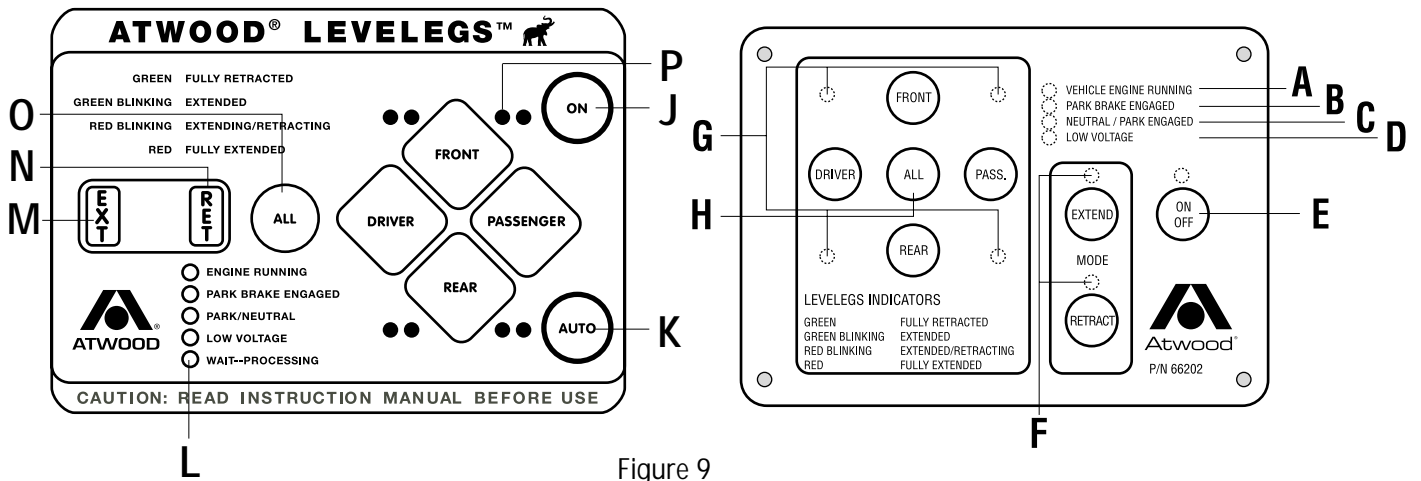


Figure 9

TROUBLE SHOOTING

The following error modes are built into your system to detect problems.

False RET (full retraction) Error Mode

- a. For extensions greater than 20 seconds, if the retraction time for any leveler is less than the extension time (indicating premature clutching prior to full retraction), the following occurs:
 1. Warning alarm will sound.
 2. Power is removed from the control box disabling normal operations. (This is done to encourage operator to do a visual inspection of levelers prior to further leveling operations.)
 3. The red and green LED's for the particular leveler will blink on and off to indicate the system is in an error mode.
- b. To proceed, the following is required:
 1. Turn system on. This will shut the warning alarm off.
 2. Visually inspect the leveler.
 3. If it is required, activate levelers to correct problem. Simultaneously press the EXTEND or RETRACT mode switch along with the adjacent two (2) leveler switches common to the lit LED's. In error mode, any leveler can be activated in this manner.
 4. Complete an ALL RETRACT operation and system is now out of error mode and ready for normal operations.

No Current Error Mode

- a. During any operation if no current is detected from leveler after leveler is activated, the following occurs:
 1. Warning alarm will sound.
 2. Power is removed from the control box disabling normal operations.
 3. The red and green LED's for that leveler will blink on and off to indicate the system is in an error mode.
- b. To proceed, the following is required:
 1. Turn system on. This will shut the warning alarm off.
 2. Supply power to the leveler.
 3. Complete an ALL RETRACT operation and system is now out of error mode and ready for normal operations.
 4. In the event retraction of the levelers is required without rectifying the problem, individual levelers can be retracted by simultaneously pressing the retract mode switch along with the adjacent two (2) leveler switches common to the leveler requiring retraction.

SYSTEM PROTECTION FEATURES

Automatic Retract

- Anytime the engine is on, if the vehicle brake is depressed and transmission is taken out of park, the levelers will fully retract automatically.
- During auto retraction, an alarm will sound and all LEDs will blink on and off.

Nine Cycle Maximum

- The controls will shut off for 15 minutes any time nine (9) full retractions occur in less than 30 minutes.
- When this occurs, all four system status lights blink off and on.
- This sequence can be over ruled by turning the ignition off, then back on.

Low Voltage Protection

- If the voltage falls below 10.5 VDC, leveler operation will cease and the low voltage LED will flash.
- Controls will be inoperable until battery voltage climbs above 13 VDC, at which time leveling functions will resume.

NOTE: These controls have the following features to facilitate leveling:

- **TO MAXIMIZE AVAILABLE LEVELER STROKE** During the initial activation of a pair of levelers following the ALL extend activation, for every six (6) seconds the first pair of levelers extend, the opposite pair of levelers will retract for two (2) seconds. This process will repeat for the first 60 continuous seconds of extension of first pair of levelers.
 - **FULL EXTENSION** If a leveler is fully extended, its corresponding LED will indicate this and further operation of that pair of levelers in the extend direction is prevented. If the switch is held on, the second leveler of the pair will operate with its alternate pair partner leveler. (i.e., if the front two levelers are extending and the left front leveler becomes fully extended, the right front leveler will continue to operate and the right rear leveler will start to extend.) This is to keep the frame from twisting.
 - **LOAD COMPENSATION** If one leveler becomes disproportionately more loaded than its pair partner, power will shut off to the first leveler. The second leveler will continue to operate until the load is more balanced between the pair of levelers. Power to the first leveler will then resume.
2. To set the AUTO position
 - a. Manually get the RV to the position you want.
 - b. Then press the ON (FIG 9-J) switch one time, to turn controls off.
 - c. Press the EXT switch (FIG 9-M) five (5) times.
 - d. Press the RET switch (FIG 9-N) five (5) times. All control panel lights will blink on and off.
 - e. Press the ALL switch (FIG 9-O) three (3) times. All control panel lights turn off.
 - f. Turn controls on. Do an ALL retract (FIG 9-O & 9-N).
 3. When complete, press the ON switch (FIG 9-J) to turn off the control pad.

Manual Override

- To Manually Extend or Retract Leveler, use a 1/2" socket on Drive Nut on end of motor (FIG 10-A). Rotate nut counter clockwise (looking from bottom end of nut [FIG 10-B]) to extend leveler.

NOTE: It takes 500 revolutions of nut to extend/retract leveler 1".



CAUTION PERSONAL INJURY/PRODUCT DAMAGE

- Battery operated drills, 9.6V to 18V, are powerful. Hold drill with both hands to protect your wrist. Keep loose clothing and body parts away from drill as the reaction torque from the drill may cause it to kick back.
- Refer to your drill manufacturer's operation manual.
- Do not over extend or over retract levelers. Each leveler has built in stops. Excessive force applied against the stops will cause damage.
- When manually overriding the leveler do not use pneumatic tools to operate any leveler. They can over-extend or over-retract the leveler.
- If the motor will not extend/retract the leveler and the motor is making a ratcheting sound (clutch slipping), do not use the manual override. Immediately contact an Atwood Service Center and have leveler replaced. Do not use the leveler until replaced.

For complete Leveleg operating instructions
see Literature Number MPD 66166.

5th Wheel Landing Gear Selection Guide

Landing Gear includes handle.

LANDING GEAR										
P/N	P/N Boxed*	Description	Screw Type	Leg Capacity		System Capacity		Version		Rate of Travel
				lbs.	kg.	lbs.	kg.	Electric	Manual	Approximate
75374	OBS	2 Motor Standard Duty	Acme	2,000	909	4,000	1818	●		4.5 in/min
75384	75333	Heavy-duty*	Acme	3,000	1364	6,000	2727		●	4.0 in/min
75399		2 Motor Heavy Duty	Acme	3,000	1364	6,000	2727	●		4.0 in/min
75326	75362	Super-Duty*	Ball Screw	4,000	1818	8,000	3636	●		6.2 in/min
75331		Direct Drive, inline	Ball Screw	4,000	1818	8,000	3636	●		6.2 in/min
75412		Direct Drive, adjacent	Ball Screw	4,000	1818	8,000	3636	●		6.2 in/min

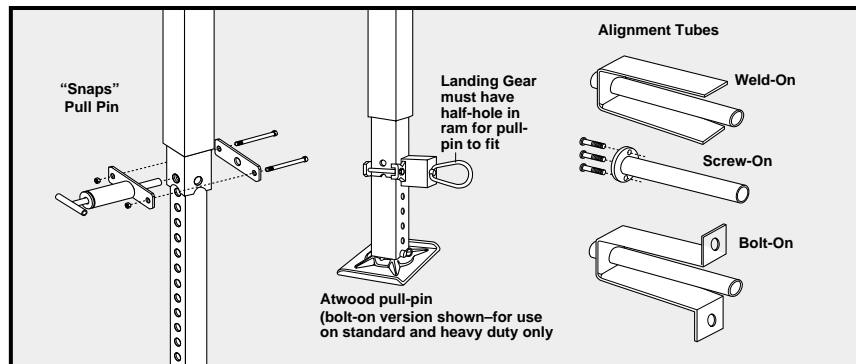
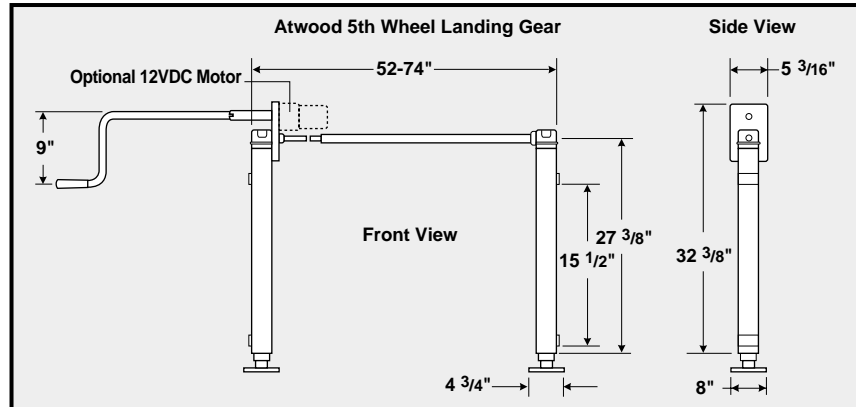
* Shipped without a motor. If (1) motor is needed, order 75391. If (2) motors are needed, order 75366

LEG CAPACITY DEFINITION: The leg capacity is the maximum vertical load the leg can support.
SYSTEM CAPACITY DEFINITION: The system capacity is the maximum vertical load both legs and motor (if included) can support.

Accessories

MOTORS	
Composite	Description
75391*	Single Motor Kit w/regular switch panel
75366	Two Motor Kit w/87701 Dual Motor Switch Panel
75388	Single Motor Replacement Kit for Super Duty
75387	Single Motor Kit w/teeny switch panel
75406	6000 lb Motor and Switch
HANDLE	
70920	Handle, One-piece 18"
70983	Handle, One-piece 26"
OPTIONAL PULL PIN	
70045	"Snaps" pull-pin, pair, bolt-on for use only with Super Duty legs
75360	Bolt-on, pair of pull-pins
ALIGNMENT TUBES	
75521	Alignment Tube, 21 3/4", screw-on
75529	Alignment Tube, 17 1/2", screw-on
75522	Alignment Tube, 2", screw-on
70542	Alignment Tube, 9 1/2", weld-on
70557	Alignment Tube, 7 1/2", bolt-on for use w/composite gear box
SWITCH PANEL	
87701	Switch Panel for 2 motor sets
GEAR BOX REPLACEMENT KIT	
70177	Kit for Heavy Duty
70180	Kit for Standard Duty

* UL Listed Marine Ignition Protected



CAPACITY DO NOT EXCEED THESE CAPACITIES

Standard Duty - OBSOLETE

Manual ▼	1,000 lbs. per leg,	2,000 lbs. system
Manual ▼▼	2,000 lbs. per leg,	4,000 lbs. system
Electric ⚡	2,000 lbs. per leg,	4,000 lbs. system

Heavy-Duty

Manual ▼▼	3,000 lbs. per leg,	6,000 lbs. system
Electric ⚡	2,500 lbs. per leg,	5,000 lbs. system
Electric ⚡⚡	3,000 lbs. per leg,	6,000 lbs. system

Super-Duty

Electric ⚡⚡	4,000 lbs. per leg,	8,000 lbs. system
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Direct Drive

Electric ⚡⚡	4,000 lbs. per leg,	8,000 lbs. system
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▼ without gear box
 ▼▼ with gear box

⚡ single motor
 ⚡⚡ dual motor



Atwood Mobile Products

4750 Hiawatha Drive • Rockford, IL 61103-1298

PHONE: 815•877•5700 FAX: 815•877•7469

INTERNET: <http://www.atwoodmobile.com>

3:1 GEAR BOX REPLACEMENT

METAL GEAR BOX REPLACED BY COMPOSITE GEAR BOX 5TH WHEEL LANDING LEGS

ENGLISH

• Service Kit
Effective 4/11/00

<p>WARNING avoid possible injury or death</p>	<p>CAUTION avoid possible injury and/or property damage</p>
--	--

FOR COMPLETE LANDING LEGS INSTRUCTIONS CONSULT MPD 71125.

For your safety read all instructions before operating landing legs.

NOTE: Atwood 5th Wheel Landing Legs are intended for use on recreational vehicle 5th wheel-type trailers only.

LANDING LEG CAPACITY	
Standard Duty	
Manual ▼	1,000 lbs. per leg, 2,000 lbs. system
Manual ▼▼	2,000 lbs. per leg, 4,000 lbs. system
Electric ⚡	2,000 lbs. per leg, 4,000 lbs. system
Heavy-Duty	
Manual ▼▼	3,000 lbs. per leg, 6,000 lbs. system
Electric ⚡	2,500 lbs. per leg, 5,000 lbs. system
Electric ⚡⚡	3,000 lbs. per leg, 6,000 lbs. system
Super-Duty	
Electric ⚡⚡	4,000 lbs. per leg, 8,000 lbs. system
▼ without gear box	⚡ single motor
▼▼ with gear box	⚡⚡ dual motor

DO NOT EXCEED THIS CAPACITY

WARNING
TRAILER CAN MOVE OR COLLAPSE

- Never exceed the rated capacity of 5th Wheel Landing Leg.
- LANDING LEGS ARE NOT DESIGNED TO BE USED AS TRAILER JACKS. Do not use the landings legs to lift the trailer during tire changes, axle work or trailer servicing (the trailer weight will exceed the capacity of the landing legs). The landing legs are designed to stabilize a portion of the trailer's weight. Support the front end of the trailer with structural stands rated for the GVWR of the trailer.
- The pin between the ram and drop tube should be the same diameter as the adjustment hole in the drop tube. Otherwise premature wear on drop tube and ram can occur.

DETERMINE LANDING LEG TYPE

- STANDARD DUTY** = A leg with a flat top (FIG 1-A).
- HEAVY DUTY** = A leg with a rounded top (FIG 1-A), with 1" between the centers of the holes in the drop tube (FIG 1-B).
- SUPER DUTY** = A leg with a rounded top, with 1-1/2" between the centers of the holes in the drop tube.

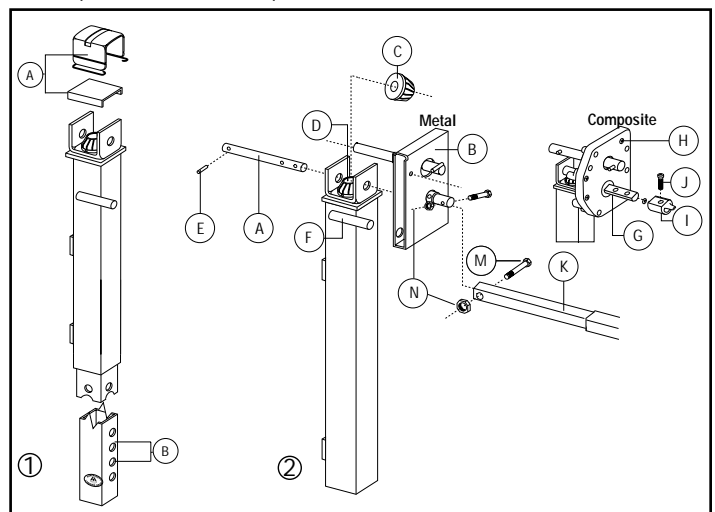
THE DRIVE SHAFTS ARE DIFFERENT. Check your kit. If you have a Standard Duty leg set, the new drive shaft should be silver. For Heavy or Super Duty, the drive shaft is gold.

REMOVAL PROCEDURE

1. Rotate the drive shaft (FIG 2-A) on the driver leg to fully retract the landing leg. Remove the motor (if there is one). Remove the old gear box (FIG 2-B) from the drive shaft.
2. Pop the cap (FIG 1-A) off the top of the leg.
3. Locate the vertical (FIG 2-C) and horizontal (FIG 2-D) bevel gears at the top of the leg.
4. Using a hammer and punch, drive out the pin (FIG 2-E) under the vertical bevel gear that holds it to the drive shaft.
5. Pull out the old drive shaft (FIG 2-A).
6. Cut or grind the mounting lug (FIG 2-F) off of the driver leg. Be careful not to burn through the housing if you use a welding torch. Grind the remaining weld flat to provide a smooth surface on the landing leg face. Paint bare metal with black paint.

INSTALLATION PROCEDURE

1. Slip the new D-drive shaft (FIG 2-G) through hole on the stop tab face of the leg housing. Then slip the D-shaft through the vertical bevel gear (FIG 2-C) and through the second hole in the leg housing.
2. Drive the new pin (FIG 2-E) back under the vertical bevel gear, attaching it to the drive shaft.
3. Reattach the cap (FIG 1-A) to the top of the leg.
4. Slip the new composite 3:1 gear box (FIG 2-H) over the D-shaft of the driver leg.
5. Slip the collar (FIG 2-I) over the D-shaft of the driver leg and fasten it with the screw (FIG 2-J). The extruded part of the collar goes into the cross shaft (if there is one).
6. Assemble the cross shaft, if used, (FIG 2-K), by placing undrilled end of 3/4" square tube into open end of 1" square tube.
7. Re-attach landing leg to frame. Fully retract before attaching cross shaft. Fasten drilled end of 3/4" square tube to end of shaft through gear box with 1/4" x 1-1/8" long screw (FIG 2-M) and lock nut (FIG 2-N). Bolt end of 1" square tube to shaft of driven leg with 1/4" x 1-1/8" long screw and lock nut. To prevent rattle between tubes, tack weld 1" square tube to 3/4" square tube.

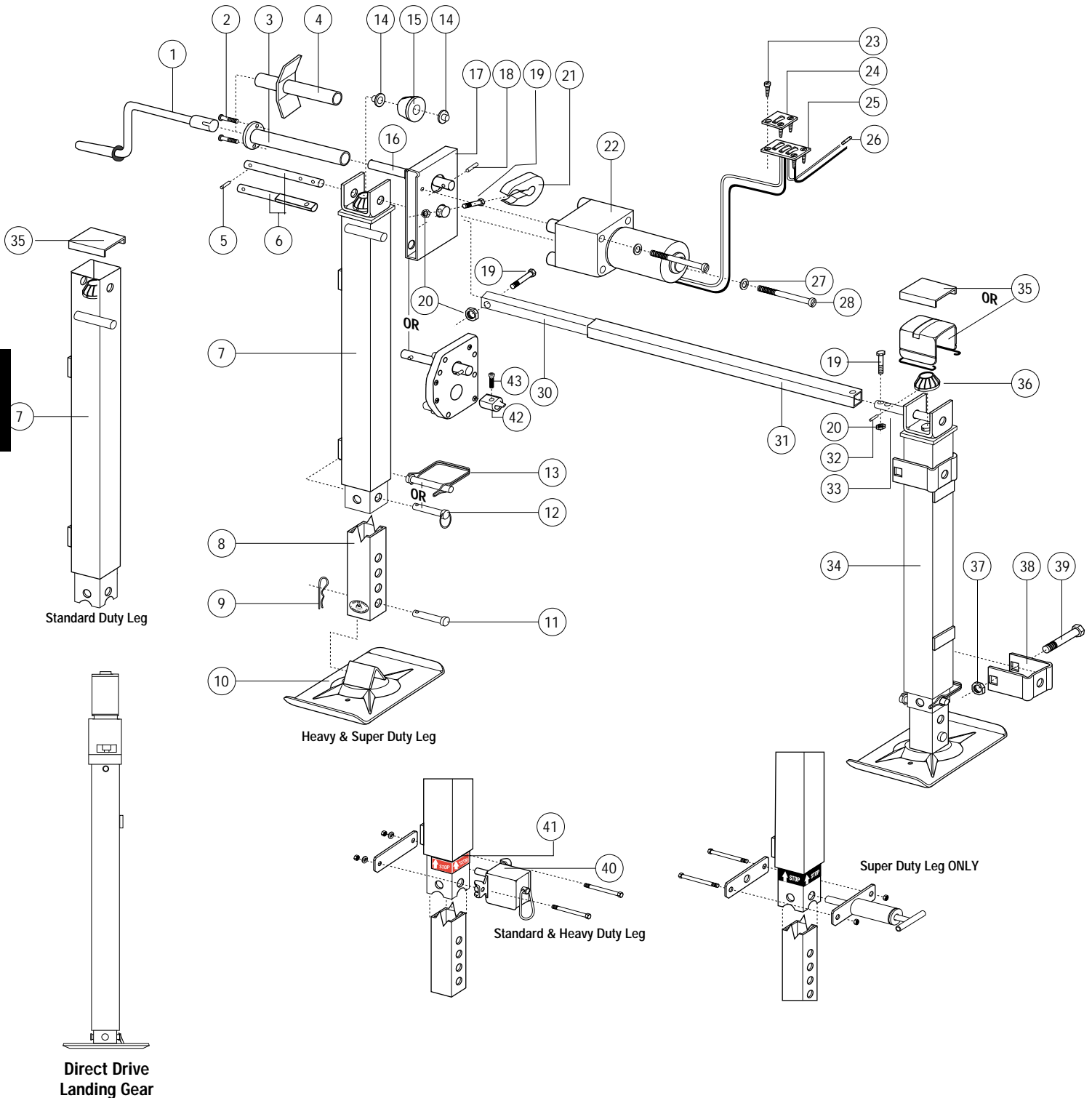


6

5TH WHEEL LANDING LEGS

STANDARD DUTY 2000 lbs / Landing Leg
 HEAVY DUTY 3000 lbs / Landing Leg
 SUPER DUTY 4000 lbs / Landing Leg

6



PART IDENTIFICATION					DESCRIPTION
ITEM	PART NUMBERS				
	STANDARD	HEAVY	SUPER	DIRECT	
				87891	Crank Handle
1	70920	70920	70920	N/A	Crank Handle Assembly / Manivelle, 41 cm
	70983	70983	70983	N/A	Crank Handle Assembly / Manivelle, 58 cm
2	70328	70328	70328	70328	Sheet Metal Screw / Vis Parker
3	75521	75521	75521	75521	Alignment Tube, 21-3/4" / Tube d'alignement, 55cm
	75529	75529	75529	75529	Alignment Tube, 17-1/2" / Tube d'alignement, 44.5cm
4	70542	70542	70542	70542	Alignment Tube, 9-1/2" / Tube d'alignement, 24 cm
	70557	70557	70557	70557	Alignment Tube, 7-1/2" / Tube d'alignement, 19 cm
5	71132	70229	70229	N/A	Gear Drive Pin / Goupille d'entraînement du réducteur
6	75062	75061	75061	87941	Driver Shaft - new / Arbre d'entraînement - NEW
6	70105	70757	70757	N/A	Driver Shaft - old / Arbre d'entraînement - OLD
7	*71486	*71488	71470	70502	Driver Leg, 15-1/2" between mtg. stops - new
				OR 71507	Vérin d'entraînement, 39,5 cm entre butées de montage - NEW
7	*71424	*71417	71435	N/A	Driver Leg, 15-1/2" between mtg. stops - old
					Vérin d'entraînement, 39,5 cm entre butées de montage - OLD
8	70004	70004	70216	N/A	Drop Tube / Tube télescopique
9	70269	70269	70269	N/A	Bridge Pin / Goupille de pont
10	70008	70008	70008	70271	Foot Pad / Patin
11	70325	70325	70325	N/A	Clevis Pin / Goupille d'articulation
12	N/S	N/S	70215	N/A	Ball Detent Pin / Cheville à bille
13	87186	87186	N/S	87186	Lock Pin / Goujon de blocage
14	21693	21693	21693	N/A	Bushing / Coussinet
15	75030	75029	70212	70227	Bevel Gear / Pignon de renvoi
16	70754	70754	70754	N/A	Crank Shaft / Goujon d'entraînement
17	71320	71320	71320	N/A	Metal 3:1 Gear Box / Réducteur 3/1
	75054	75054	75054	N/A	Plastic 3:1 Gear Box / Réducteur 3/1
18	70358	70358	70358	N/A	Motor Drive Pin / Goujon d'entraînement du moteur
19	70815	70815	70815	N/A	Screw, 1/4"x1.28" / Vis, .6 cm x 4.2 cm
20	70816	70816	70816	N/A	Lock Nut, 1/4" / Ecrou bloquant, .6 cm
21	71436	71436	71436	N/A	Gear Box Hub Cover for metal 3:1 gear box only Couvercle de moyeu de réducteur - metal 3:1 gear box only
22	75367	75367	75367	70002	Motor Assembly / Moteur complet
23	70243	70243	70243	70243	Sheet Metal Screw / Vis Parker
24	70254	70254	70254	70254	Switch DPDT / Commutateur DPDT
	70259	70259	70259	70259	Small Switch DPDT / Small Switch DPDT
	70266	70266	70266	70266	Ignition Protected Switch DPDT / Ignition Protected Switch DPDT
25	87701	87701	87701	87701	Three Switch Panel / Panneau avec trois commutateurs
26	N/A	N/A	N/A	N/A	Fuse, 30 amp / Fusible de 30 A, Buss-type ACC
27	86111	86111	86111	86111	Lock Washer / Rondelle-frein
28	70246	70246	70246	87942	Bolt, Motor Mounting 1/4" x 3-1/2" / Boulon de montage du moteur, .6 cm x 9 cm
30	70840	70840	N/A	N/A	Cross Shaft End tube, 3/4" sq. / Embout d'arbre creux intermédiaire, 19 mm carré
31	70841	70841	N/A	N/A	Cross Shaft Tube, 1" sq. / Arbre creux intermédiaire, 25 mm carré
32	70667	70666	70666	N/A	Machine Pin / Goujon usiné
33	71139	70817	N/A	N/A	Driven Shaft / Arbre secondaire
34	71425	*71415	N/A	N/A	Driven Leg, 15-1/2" between mtg. stops Vérin secondaire, 39 cm entre les butées de montage
35	71145	71416	71416	88002	Gear Case Cover / Couvercle de réducteur
36	75030	75029	70213	85707	Thrust Bearing/ Bevel Gear Kit / Thrust Bearing/Bevel Gear Kit
37	24527	24527	24527	24527	Lock Nut / Ecrou bloquant
38	70284	70284	70284	70284	Mounting Bracket / Patte de montage
39	70329	70329	70329	70329	Mounting Bracket Bolt / Boulon de patte de montage
40	N/S	N/S	N/S	N/S	Pull Pin (75360-bolt-on 75370-weld-on) Goupille de traction (75360 à boulonner - 75370 à souder)
41	70220	70220	70220	N/S	STOP Label / Étiquette ARRÊT
42	75059	75059	75059	N/S	Collar / collier
43	75045	75045	75045	N/S	Screw / Screw
				85385	Drill Adapter

• The manual Standard and Heavy Duty landing legs include the cross shaft. Order the optional motor kit, #75391, to convert them to electric jacks.

• For independently operated legs, the Heavy Duty can be ordered in a two-motor version.

• The Super Duty comes standard as two independent jacks.

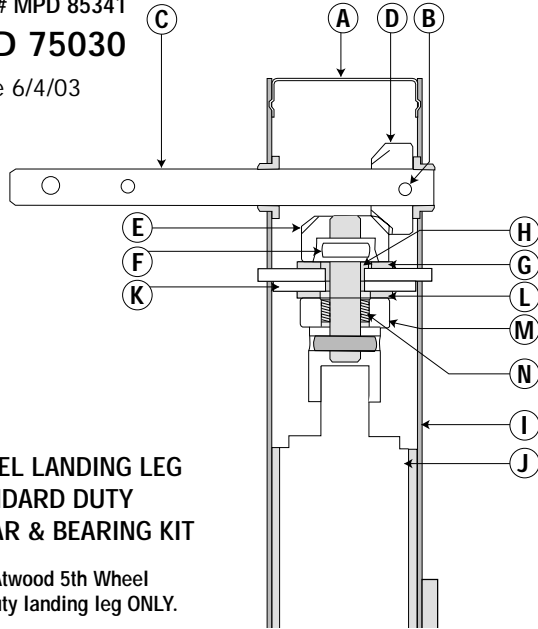
N/A Not supplied

* These part numbers vary on non-standard sets. When ordering replacement parts, know the overall length and dimension between mounting stops if any.

LITERATURE # MPD 85341

KIT MPD 75030

Effective 6/4/03



**5TH WHEEL LANDING LEG
STANDARD DUTY
BEVEL GEAR & BEARING KIT**

Use on Atwood 5th Wheel Standard Duty landing leg ONLY.

Remove 5th Wheel Landing Leg per instruction manual MPD 71125 and camper manufacturer instructions.

1. Remove Jack Cover (A).
2. Punch out Drive Pin (B).
3. Remove Drive Shaft (C), Bevel Gears (D) & (E), Machine Pin (F), Spacer Washer (G) and Nylon Brushing (H).
4. Lift Outer Housing (I) from Inner Ram (J).

5. From the top of the Inner Ram, remove Spreader Washer (K), Spacer Washer (L), Thrust Bearing (M) and Felt Sleeve (N).

6. Reassemble jack with the new components (B,D-H, K-N) following steps opposite to the disassembly steps.

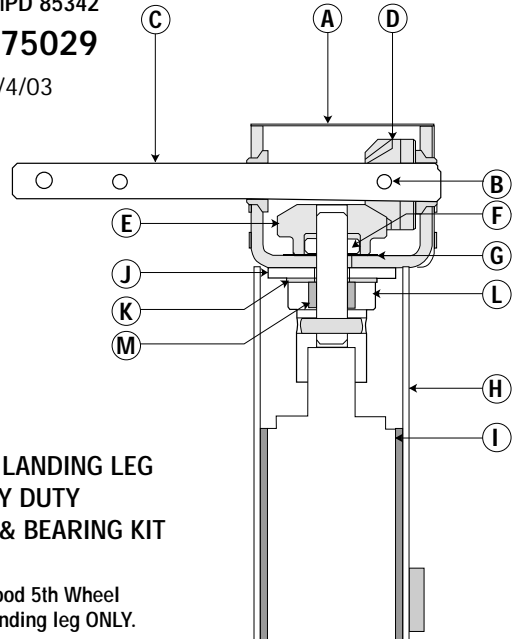
Install 5th Wheel Landing Leg per Instruction Manual MPD 71125 and camper manufacturer instructions.

For complete 5th Wheel Landing Leg instructions, consult MPD 71125.

LITERATURE # MPD 85342

KIT MPD 75029

Effective 6/4/03



**5TH WHEEL LANDING LEG
HEAVY DUTY
BEVEL GEAR & BEARING KIT**

Use on Atwood 5th Wheel Heavy Duty landing leg ONLY.

Remove 5th Wheel Landing Leg per Instruction Manual MPD 71125 and camper manufacturer instructions.

1. Remove Jack Cover (A).
2. Punch out Drive Pin (B).
3. Remove Drive Shaft (C), Bevel Gears (D) & (E), Machine Pin (F) and Thrust Washer (G).
4. Lift Outer Housing (H) from Inner Ram (I).

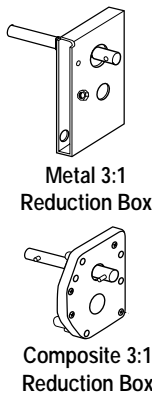
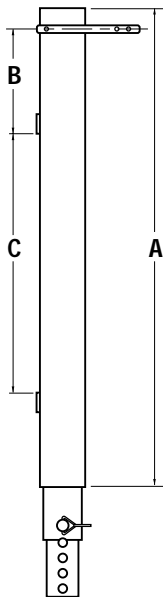
5. From the top of the Inner Ram, remove Cap (J), Support Washer (K), Thrust Bearing (L) and Felt Sleeve (M).

6. Reassemble jack with the new components (items B,D-G, J-M) following steps opposite to the disassembly steps.

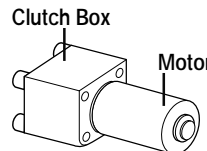
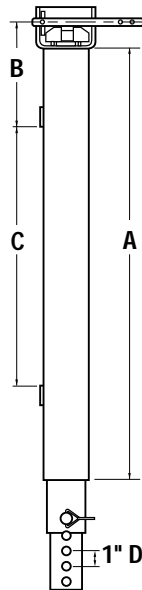
Install 5th Wheel Landing Leg per Instruction Manual MPD 71125 and camper manufacturer instructions.

For complete 5th Wheel Landing Leg instructions, consult MPD 71125.

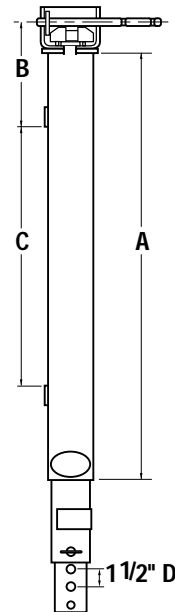
STANDARD DUTY (15/15)



HEAVY DUTY (12/16)



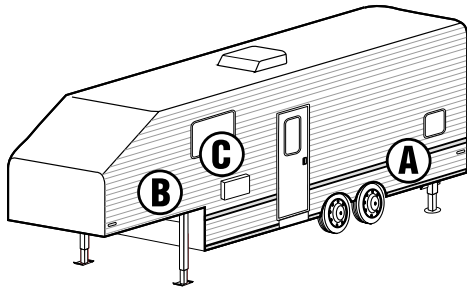
SUPER DUTY (12/16)



1. Are the legs driven manually, with a single motor, or dual motors?
2. Is the motor gear box black plastic or gray metal?
3. If the legs are driven manually or with a single motor, do you need the Driver (leader or master) leg or Driven (follower or slave) leg?
4. If you need the Driver leg, does the leg utilize a plastic 3:1 gear reduction box or metal 3:1 gear reduction box?
5. Count the number of teeth on each bevel gear on top of the leg. If the tooth count is 12 on one gear and 16 on the other and the system utilizes

6. Measure the total length of the outer housing tube (see letter "A" on drawing).
7. Measure from the center of the drive shaft to the bottom of the upper stop (see letter "B" on drawing).
8. Measure the distance between the stop tabs (see letter "C" on drawing).

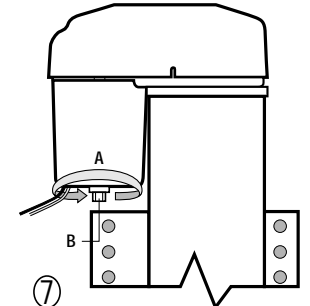
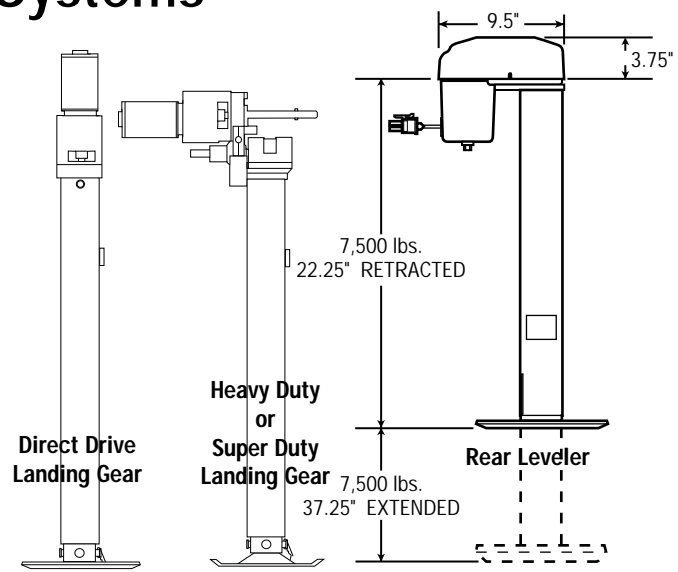
Atwood 5th Wheel Leveling Systems



Selection Guide

Part Number	Description	Leg Capacity		System Capacity	
		lbs	Kg	lbs	Kg
ATWOOD LEVELEGS (individual)					
66302	7.5K Leveleg	7,500	3,410	15,000	6,820
LANDING GEAR (sets of 2)					
75399	2 Motor H.D. Ldg. Gear	3,000	1,364	6,000	2727
75326	2 Motor Super Duty	4,000	1,818	8,000	3636
75331	2 Motor Direct Drive, Inline	4,000	1,818	8,000	3636
75412	2 Motor Direct Drive, Adjacent	4,000	1,818	8,000	3636
CONTROLLERS					
87701	Dual Switch Panel	Controls Front Only			
85476	Remote Control - 2 Motor	Controls Front Only			
85480	Remote Control - 4 Motor	Controls All Four Legs			

A
B
C



6

MAINTENANCE

- Before use, inspect drop tube and inner ram tube. Replace if bent or damaged.
- ONCE EACH YEAR:**
 - Extend landing legs as far as possible, clean drop tube and inner ram tube. Coat exposed surface of tubes with silicone spray lubricant.
 - Coat inside of handle alignment tube with silicone spray lubricant.
 - Oil shaft bushing in gear box and leg gear heads with SAE 30 oil.
 - Lubricate gears in gear box and landing leg gear heads with extreme pressure grease.
- For Electric Drive Motor Landing Legs, twice each year, check wiring connections at battery. Clean terminals with a solution of baking soda and water. Cover with a thin coat of grease.

NOTE: Electric Drive Motor is lubricated at factory and requires no further lubrication.

- The Electric Drive Motor Landing Leg system is protected by a 30 amp fuse. If replacement is necessary, replace only with a Buss Type AGC-30 fuse or equivalent, available in automotive supply stores.
- The 3:1 gear box is not repairable. Do not take it apart. If you have a problem with the gear box, replace it.

TROUBLESHOOTING

If all or any of the jacks or landing legs fail to operate:

- Check whether the 12VDC battery is fully charged. You may need to recharge it.
- Check that the camper jack cords are securely plugged into the exterior sockets. You may need to pull a plug out and replug it.
- If the motor will not extend/retract the jack and the motor is making a ratcheting sound (clutch slipping), do not use the manual override. Immediately contact an Atwood Service Center and have jack replaced. Do not use the jack until replaced.
- Assure the activation switch is turned on. The LED on the switch pad should be lit.

- Hold the hand-held remote vertically with the keypad facing you and have the remote between you and the camper.
- Check that you are within 20 feet of the camper.
- Replace the 9V battery
- Check that the battery terminals are clean and have no corrosion.
- Be sure the dip switch code for the remote and the power relay module are set for the same code.
- Look to see if other radio frequency devices such as an automobile key fob, cellular phone, TV remote control, are operating within range of your remote. These devices will make the jacks pause. Lift your finger from the button on the remote and re-press the button.

If the jacks keep running, push the activation switch and the light on the switch will go out. This will shut the power off to the jacks. If not, unplug the jack(s) from its (their) exterior socket(s).

Rear Leveler Operation

- To Manually Extend or Retract Leveler, use a 1/2" socket on Drive Nut on end of motor (FIG 7-A). Rotate nut counter clockwise (looking from bottom end of nut [FIG 7-B]) to extend leveler.

NOTE: It takes 500 revolutions of nut to extend/retract leveler 1".

CAUTION
PERSONAL INJURY/PRODUCT DAMAGE

- Battery operated drills, 9.6V to 18V, are powerful. Hold drill with both hands to protect your wrist. Keep loose clothing and body parts away from drill as the reaction torque from the drill may cause it to kick back.
- Refer to your drill manufacturer's operation manual.

For complete operating instructions of Landing Legs and Rear Levelers, please see literature numbers MPD 71125 and MPD 87920.

Atwood® 12 VDC Motor & Kits



Motor Kit Selection Guide*

Kit No.	MOTOR								SWITCH & WIRING HARNESS			
	Long Legged	Short Legged	3" diameter	Height				Shipping Weight	70254 Single	70259 Narrow Single	70266 Ignition Protected	87701 Dual Motor
				Overall		Leg						
in.	mm	in.	mm									
75366 †	2	—	—	8 15/16	227	3/4	19	5.75 lbs.	—	—	—	1
75367 †	1	—	—	8 15/16	227	3/4	19	5.75 lbs.	—	—	—	—
75387 †	1	—	—	8 15/16	227	3/4	19	5.75 lbs.	—	1	—	—
75388 † with Warning Label **	1	—	—	8 15/16	227	3/4	19	5.75 lbs.	1	—	—	—
75391 †	1	—	—	8 15/16	227	3/4	19	5.75 lbs.	1	—	—	—
75406 †	—	—	1	8 15/16	227	3/4	19	5.75 lbs.	1	—	—	—
75407 †	1	—	—	8 15/16	227	3/4	19	5.75 lbs.	—	—	1	—
75409 †	—	—	1	8 15/16	227	3/4	19	5.75 lbs.	—	—	—	—
75625 Δ	—	1	—	8 7/16	214	1/8	3	5.75 lbs.	—	—	—	—

* Note: All kits also include mounting hardware and instruction manual.

† Long-legged motor for Landing Legs & Power Jacks

Δ Short-legged motor for Ball Screw Jacks & Power Jacks

Remote Control Selection Guide

85476	Remote Control - 2 Motor	Controls Front Only
85480	Remote Control - 4 Motor	Controls All Four Legs
TBD	Remote Control - 1 Motor	Controls One Motor

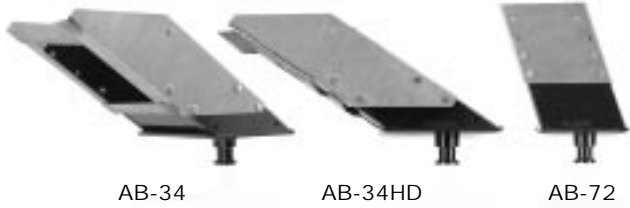
Motor Operating Characteristics

Load Condition	Min RPM	Torque (in-lbs.)	Max AMP
No Load	116	0	8
Operating Load	75	140	30
Clutch Slip	N/A	180 min. / 300 max.	45

* UL listed Marine Ignition Protected

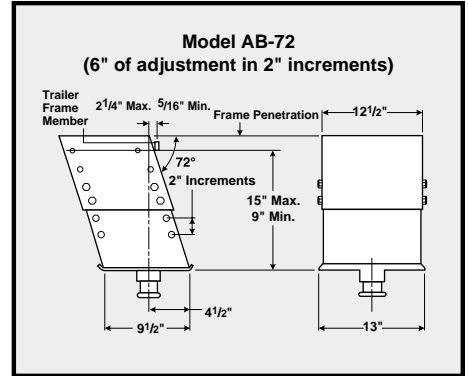
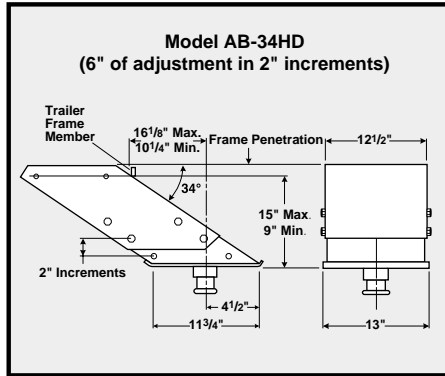
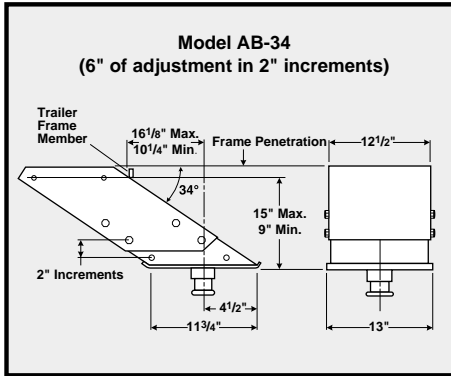
MOTOR TEMPLATE k

Atwood 5th Wheel RV Pin Boxes



5th Wheel King Pin Box Selection Guide

Model No.	Part No.	Description	Angle	Capacity
AB-34	75700	Adjustable height	34°	10,000 lbs. SAE/CSA
AB-34HD	75705	Adjustable height, heavy duty	34°	18,000 lbs. SAE/CSA
AB-72	75690	Adjustable height	72°	18,000 lbs. SAE/CSA
	71251	Inner Sleeve	72°	Fits AB 72
	71275	Inner Sleeve	34°	Fits AB 34

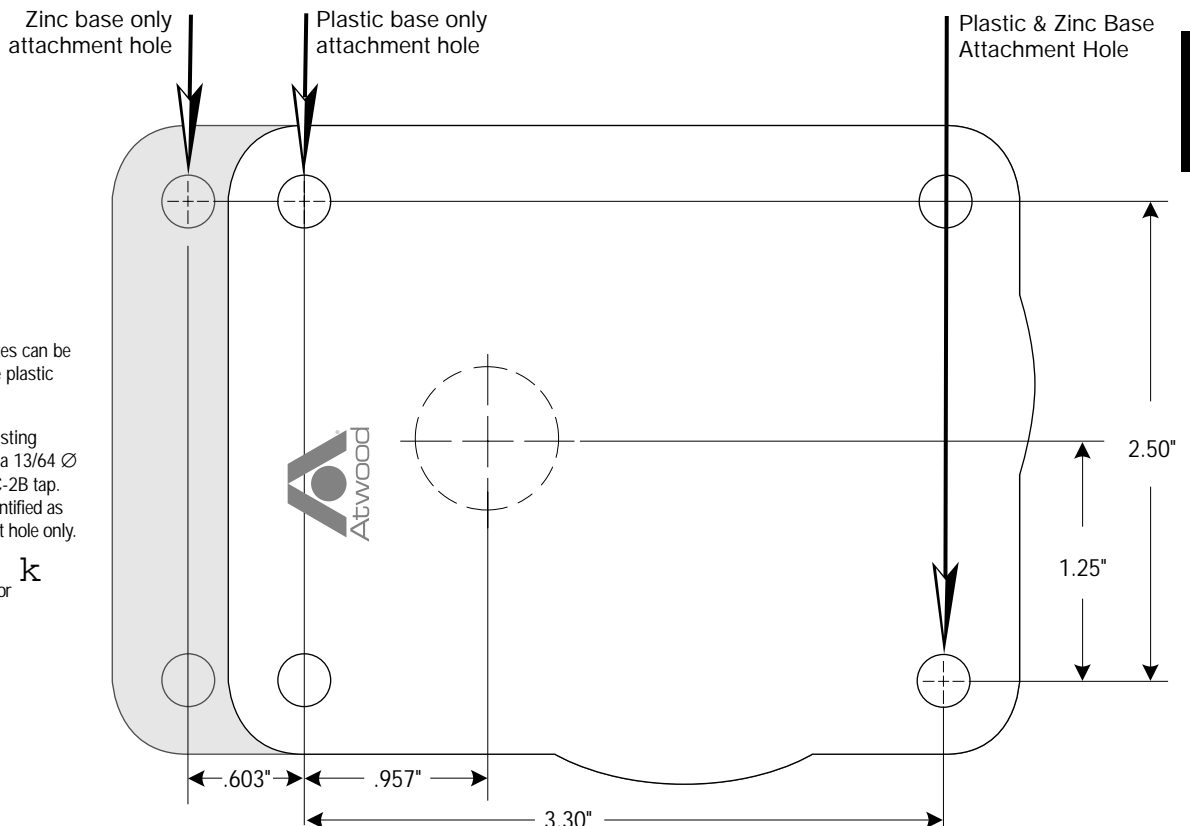


NOTE: Avoid loading motor to clutch slip.
Excessive loading to clutch slip will cause clutch to wear out, decreasing the operating characteristics of the motor. Limit clutch slip to a maximum of only 1 to 2 seconds.

NOTE:
Motor attachment plates can be modified to accept the plastic base motors.

To do, drill and tap existing attachment plate with a 13/64 Ø drill and a 1/4-20 UNC-2B tap. At the hole location identified as plastic base attachment hole only.

Use full scale layout **k** for measurements and/or template.

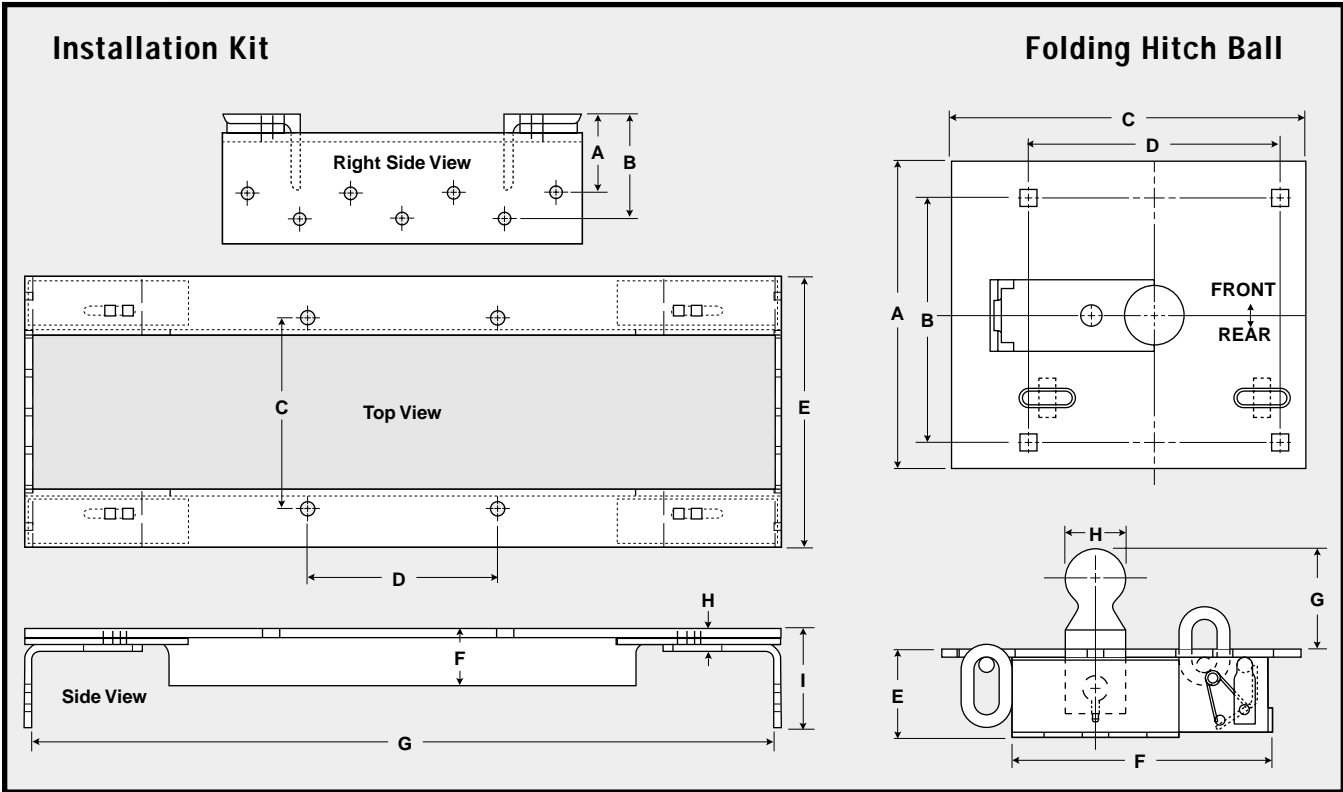


8

Atwood Folding Hitch Ball & Installation Kit



ADAPTABLE FOR RETRACTABLE KING PIN USE 75133

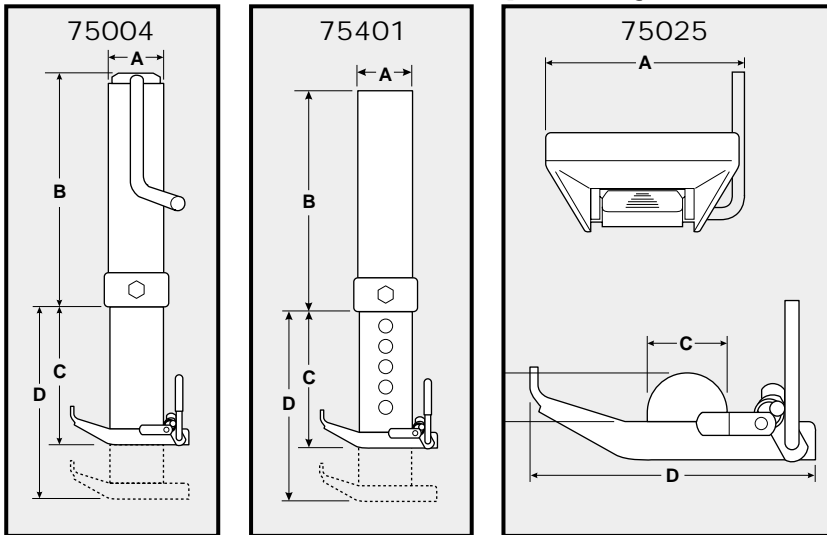


9 Folding Hitch Ball & Installation Kit Selection Guides

INSTALLATION KIT												
Part No.	Description	25,000 lbs G.V.W.R.	Dimensions									
			A	B	C	D	E	F	G	H	I	
70360	1994-2000 Dodge 2500/3500 1980-2000 Ford F250/ F350 Over 8,500 GVW	•	in.	31/8	4 1/8	9 7/8	9 7/8	14	3	36 1/2 – 38 1/2	11/8	51/8
			mm	79	105	251	251	356	76	927 – 978	29	130
70362	1988-1999 GM 2500 Series Old Style	•	in.	31/8	4 1/8	9 7/8	9 7/8	14	3	40 – 42 1/2	11/8	51/8
			mm	79	105	251	251	356	76	1,016 – 1,080	29	130

FOLDING HITCH BALL											
Part No.	Description	25,000 lbs G.V.W.R.	Dimensions								
			A	B	C	D	E	F	G	H	
75063	without safety chain attachments	•	in.	12	9 7/8	14	9 7/8	3 1/2	10 1/4	4	2 5/16
			mm	305	251	356	251	89	260	102	59
75064	with safety chain attachments <i>as shown</i>	•	in.	12	9 7/8	14	9 7/8	3 1/2	10 1/4	4	2 5/16
			mm	305	251	356	251	89	260	102	59

Atwood Gooseneck Coupler Systems



Gooseneck Coupler Selection Guide

Part No.	Description	Rated Capacity lbs.	A		B		C		D	
			in.	mm	in.	mm	in.	mm	in.	mm
75025	Gooseneck Coupler Unpainted	25,000	8 1/4	210	1 7/8	48	2 7/8	73	9 3/8	238

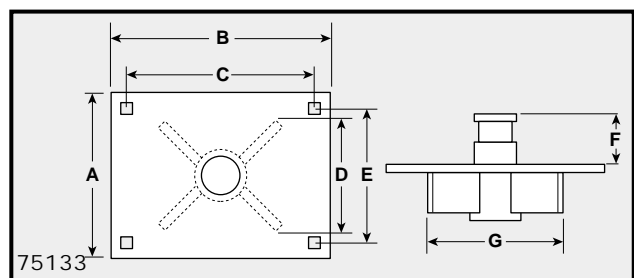
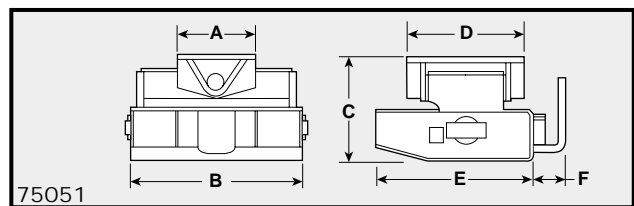
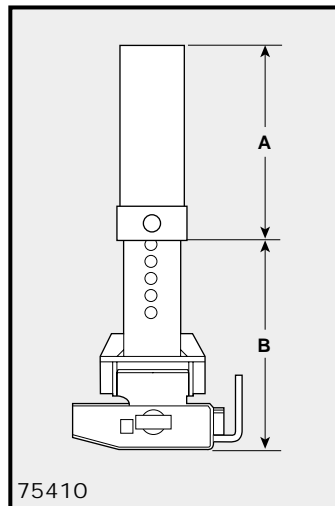
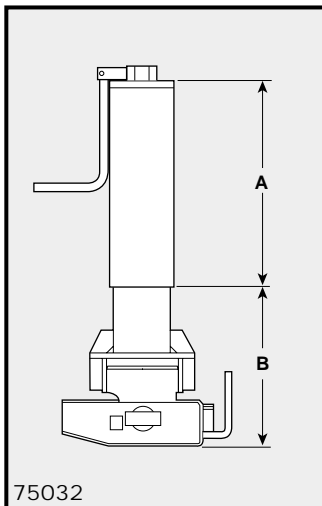
Part No.	Description	Rated Capacity lbs.	A		B		C		D	
			in.	mm	in.	mm	retracted		extended	
							in.	mm	in.	mm
75004	Gooseneck Coupler w/screw adjustable stem	25,000	5	127.0	24 5/8	625.5	3 5/8	92	13 5/8	346
75401	Gooseneck Coupler w/cross bolt drop stem	25,000	4 1/2	114.3	24 1/8	612.8	3 5/8	92	13 5/8	346

Atwood 5th Wheel Hitches

Mini 5th Wheel Hitches and Retractable King Pin Selection Guides

Part No.	Description	Rated Capacity lbs.	A		B		C		D		E		F		G	
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
75051	Dual Axis Mini 5th Wheel Hitch	32,000	6	152	13	330	10	254	9	229	12 1/4	311	2 5/8	67	—	—
75133	Retractable King Pin	32,000	12	305	17	432	15	381	7 1/4	184	10	254	3 3/8	86	7 1/4	184

Part No.	Description	Rated Capacity lbs.	A		B			
			in.	mm	retracted		extended	
					in.	mm	in.	mm
75032	Dual Axis Mini 5th Wheel Hitch, adjustable stem	32,000	24 3/4	629	12 1/8	308	22 1/8	562
75410	Dual Axis Mini 5th Wheel Hitch with drop stem	32,000	24 1/4	616	12 1/8	308	22 1/8	562



10

ATWOOD LIMITED WARRANTY HARDWARE SYSTEMS & COMPONENTS

Atwood Mobile Products warrants to the original owner this product will be free of defects in material and workmanship for a period of two years from the date of purchase. Atwood's liability hereunder is limited to the replacement of product, repair of product or replacement of product with a reconditioned product, at the discretion of the manufacturer. The warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material workmanship. The warranty extends to the original consumer purchaser of the product only, and is subject to the following conditions:

1. For two (2) year commencing with the date of purchase, Atwood will replace or repair any Hardware System & Components that are found to be defective by Atwood in material or workmanship.
2. In the event of a warranty claim, the original owner must contact the Atwood Consumer Service Department, 4750 Hiawatha Drive, Rockford, Illinois 61103-1298, Telephone: 815-877-5700 Fax: 815-877-7469. Warranty claim service must be performed as approved by the Atwood Consumer Service Department. Warranty

replacement hardware systems and components or parts will be furnished freight prepaid. Labor cost to repair or replace will be limited to the amount of the original purchase price of the systems and components. The replaced warranty products or parts become the property of Atwood Mobile Products and must be returned to the Atwood Consumer Service Department freight prepaid, unless prior arrangements have been agreed to.

3. This limited warranty is valid only when the product is applied, installed, maintained and operated in accordance with this Atwood Installation, Maintenance and Operating Manual. Any deviation from these recommended specifications must be approved in writing by Atwood.
4. Any implied warranties are limited to the duration of this limited warranty as stated above. Atwood does not assume responsibility for consequential damage or loss, including loss of use of vehicle, loss of time, inconvenience, expense for gasoline, telephone, travel, lodging, loss or damage to personal properties, or loss of revenues. Some states do not allow limitations on how long an implied warranty lasts or limitations on consequential damages, so the above limitations may not apply to you. This limited warranty gives you specific legal rights which may vary from state to state.

ATWOOD LIMITED WARRANTY HYDRAULIC SURGE BRAKE ACTUATOR, BRAKES AND BRAKE COMPONENTS

Atwood Mobile Products warrants to the original owner of this Atwood Hydraulic Surge Brake Actuator, Brakes and Components will be free of defects in material and workmanship for a period of two years from the date of purchase. Atwood's liability hereunder is limited to the replacement of product, repair of product or replacement of product with a reconditioned product, at the discretion of the manufacturer. The warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material workmanship. The warranty extends to the original consumer purchaser of the product only, and is subject to the following conditions:

1. For two (2) years commencing with the date of purchase, Atwood will replace or repair any part found to be defective by Atwood in material or workmanship.
2. In the event of a warranty claim, the original owner must contact the Atwood Consumer Service Department, 4750 Hiawatha Drive, Rockford, IL 61003, telephone 815-877-5700. Warranty Claim Service must be performed as approved by the Atwood Consumer Service Department. Warranty replacement parts will be furnished freight

prepaid. Labor cost to repair or replace will be limited to the amount of the original purchase price of the systems and components. The replaced warranty products or parts become the property of Atwood Mobile Products and must be returned to the Atwood Consumer Service Department freight prepaid, unless prior arrangements have been agreed to.

3. This limited warranty is valid only when the product is applied, installed, maintained and operated in accordance with Atwood Installation, Maintenance and Operating instructions. Any deviation from these recommended specifications must be approved in writing by Atwood.
4. Any implied warranties are limited to the duration of this limited warranty as stated above. Atwood does not assume responsibility for consequential damage or loss, including loss of use of vehicle, loss of time, inconvenience, expense for gasoline, telephone, travel, lodging, loss or damage to personal properties, or loss of revenues. Some states do not allow limitations on how long an implied warranty lasts or limitations on consequential damages, so the above limitations may not apply to you. This limited warranty gives you specific legal rights which may vary from state to state.

Atwood hydraulic surge brake systems are designed for use on trailers for the purpose of providing trailer braking. As such it should be used according to the instructions in the owner's manual and in compliance with state laws.

Warranty Procedures

Atwood water heater, furnace, range, hardware or detector warranties can be submitted in one of two ways.

If you are already set up with an owner care program through an OEM, you should submit the part and claim through their system.

To submit a claim directly to Atwood the following information is required:

1. **Owner's Name and Address.**
2. **Date of Purchase** - obtain from copy of original bill of sale.
3. **Model and Serial Number** - The model and serial number, which is located on every water heater, furnace and range is required on all Atwood appliance claims.
4. **Manufacturer, Model, Year and VIN # of RV.**
5. **Work Performed** - Describe in detail findings of existing problem and corrective measure taken.
6. **Return Parts** - A "MUST RETURN" parts list is attached. Failure to return parts listed will result in denial of your warranty claim.

7. **Return Good Number** - a Return Goods Number (RGN) must accompany all returned parts. This number may be obtained by calling the Atwood Mobile Products Service Department at 1-800-825-4328. The RGN must be clearly marked on the outside of each carton. Failure to do so will result in your shipment being refused at our receiving department.

8. **Return Freight** - Atwood does not accept C.O.D. shipments. Freight to return parts to Atwood should be indicated on your claim or repair order and you will be reimbursed.

9. **Travel Time** - Because our warranty is based on the customer's ability to present the unit for service, reimbursement for mileage, service calls and travel time **WILL NOT BE ALLOWED**.

10. **Payment for Warranty Service** - All parts are replaced at no charge, freight prepaid upon our inspection. Labor, on net 30 accounts is paid by credit memo within 30 days of receipt of parts.

11. **Flat Rate Schedule** - A reasonable flat rate schedule for warranty repairs has been set for each Atwood product. Should unusual circumstances take you beyond the standard time allowance, you must have prior approval by contacting the Atwood Mobile Products Service Department at 1-800-825-4328, and press option 5 after the recording.

FOR EFFICIENT PROCESSING OF CLAIM

1. Call for a RGN number.
2. Fill Warranty Service Report form out completely.
3. Using tape or a tag mark the returning part with the RGN #.
4. Package part including the Warranty Service Report in the box.
5. On the outside of the package clearly mark the RGN number.
6. Return part to the correct Division of Atwood Mobile Products.

Return Goods Policy

Effective August 7, 1995, all Atwood defective returns will no longer be repaired at the warehouses and returned to customers. Defective returns will be shipped back to the respective manufacturing facility for problem cause analysis within 30 days of sales. Full credit will be issued if the cause analysis determines Atwood is responsible. If the cause analysis determines the customer is responsible, partial or no credit will be issued.

Warranty Returns - the warranty policy, must return policy and approved labor rates provide the framework for warranty returns by product line.

Non-Defective Returns - A restocking fee of 20% will be charged for handling of overstock returns or standard stock items ordered incorrectly by the customer providing the product is received in resalable condition. **Product that has been specifically designed at a customers request is non-returnable. Obsolete or out dated product will not be accepted for credit.**

Shipping Damage - Once the product has been accepted at its final destination it is the customers responsibility to file a damage claim with the carrier.

Follow **Warranty Procedures** for Atwood returns.

Return Parts

When returning parts, there are three divisions responsible for specific product and their claims. Prior to returning parts, a Return Goods Number (RGN) must be obtained by calling the Atwood Mobile Product Service Department at 800-825-4328.

Shipping - Reasonable shipping charges are reimbursed on defective and warranty parts if the analysis determines Atwood is responsible for the disposition. All products not shipped via Atwood trucks should be shipped prepaid via UPS ground unless negotiated at the time the RGN is given. No collect shipments will be accepted.

Packaging - The RGN must be identified on each container & all packing information. Product returned must be properly packaged to prevent shipping damage. Full credit will not be issued on product sent back on an open skid or improperly packaged. Additional product boxes are available upon request.

Submit claims to the correct division. Failure to do so makes claim processing a more difficult and lengthy process delaying payment of your claims. Together we can maintain a speedy and efficient warranty program.

WATER HEATERS/HARDWARE (jacks, couplers, 5th wheel & braking systems)
Atwood Mobile Products
4750 Hiawatha Drive
Rockford, IL 60013

FURNACE/LP DETECTORS

Atwood Mobile Products
Salt Lake City Operations
1874 South Pioneer Road
Salt Lake City, UT 84104

CO DETECTOR

KIDDE Safety (1-800-880-6788)
1394 South Third Street
Mebane, NC 27302

RANGE/COOK TOPS/DROP-INS/SOL-A-VENTS

Atwood Mobile Products
Wedgewood Operations
6320 Kelly Willis Road
Greenbrier, TN 37073

Must Return Parts List

Under Atwood's Warranty Administration Program we require, with the return of warranty claims, the specific parts noted below. **Failure** to accompany your claims with these parts will result in the **non-shipment of a replacement part**, or the **non-processing of the appropriate credit** until such time as the part is received by Atwood.

Before returning the part, a **RGN (Return Goods Number)** must be obtained. This number can be acquired for all products except seating, by calling the Atwood Mobile Products Service Department at 1-800-825-4328. To obtain RGN's for seating components, please call 1-219-522-7891. **Without this RGN appearing on the outside of the shipping carton, the shipment will be refused at our receiving department.**

FURNACE

All parts

electrode

Complete ranges (BY APPROVAL ONLY)

HARDWARE

Couplers

Jacks

Actuators

Master cylinders

Shock absorbers

Foundation brakes

Power jacks

Power jack motors

Power jack relays

Power jack controls

All power jack switches

All 5th Wheel parts

SEATING COMPONENTS

All parts

WATER HEATER

Complete water heaters

Inner tanks

Gas thermostat valves

Circuit boards

Gas solenoid valves

Electric thermostats

Heating elements

Pilot assemblies

Spark probe assemblies

E.C.O. & T-stat kits

Thermal cut-offs

Pressure-Temperature

Relief Valves

On/Off Switches

RANGE & OVENS

Regulators

Oven thermostats

Safety pilot valves

Burner valves

Manifolds

Top pilot valves

12v ignition module

Burners w/ignition



Atwood Mobile Products
 4750 Hiawatha Drive • Rockford, IL 61103-1298
 PHONE: 815•877•5700 FAX: 815•877•7469
 INTERNET: http://www.atwoodmobile.com

Hardware

Flat Rate Schedule

November 2003

TIME ALLOWANCE SCHEDULE in hours

BRAKE SYSTEM

Complete Actuator:

Bolt On	1.00
Weld On	2.00
Master Cylinder	1.00
Push Rod Assembly .....	.75
Shock Absorber .....	.50
Shoulder Bolt .....	.50
Release Handle	1.00
Stop Spring.....	.50
Foundation Brakes (per axle).....	1.50
Shoe & Lining (per axle).....	1.50
Wheel Cylinder (per axle).....	1.50

COUPLER

Complete Coupler:

Bolt On .....	.50
Weld On	1.50
Latch (2" or 2 5/16")	1.00

5TH WHEEL LANDING LEG*

Both Legs**	1.50
One (1) Leg** .....	.75
Bevel Gears (per Leg) .....	.75
Cap .....	.25
Gear Box.....	.75
Motor .....	.50
Switch .....	.50

* Inner ram not available, replace appropriate leg.

** Flat rate pertains to landing gear that are accessible on outside of 5th wheel. If landing gear are buried in belly of 5th wheel, it may require more time.

LEVELEGS™

Front Levelegs (per leg) .....	.50
Rear Levelegs (per leg).....	.75
Relay Control .....	.50
Key Pad .....	.50

BALL SCREW CAMPER JACK*

Electric:

Complete Jack .....	.50
Bevel Gears	1.50
Brackets .....	.50
Cover Top-Bottom .....	.25
Motor .....	.75
Motor Switch .....	.50
2-Way/4-Way Plug .....	.50
Relay Control Module	1.00
Activation Switch.....	.50

Manual:

Complete Jack .....	.50
for each add'l jack add.....	.25
Cover .....	.25
Bevel Gears .....	.75
Brackets .....	.50

POWER JACK*

Complete Jack .....	.50
Cover .....	.25
Lens .....	.25
Light Socket .....	.25
Light Switch .....	.25
Motor .....	.50
Motor Switch .....	.25

SIDE WIND JACK*

Complete Jack:

Bolt On .....	.50
Weld On.....	.50
Bevel Gears .....	.50
Cover .....	.50
Handle.....	.50

STABILIZER JACK*

Complete Jack50
---------------------	-----

TOP WIND JACK*

Complete Jack:

Bolt On .....	.50
Weld On	1.00
Bearing.....	1.00
Handle .....	.50

NOTE: All flat rates include diagnostic time.