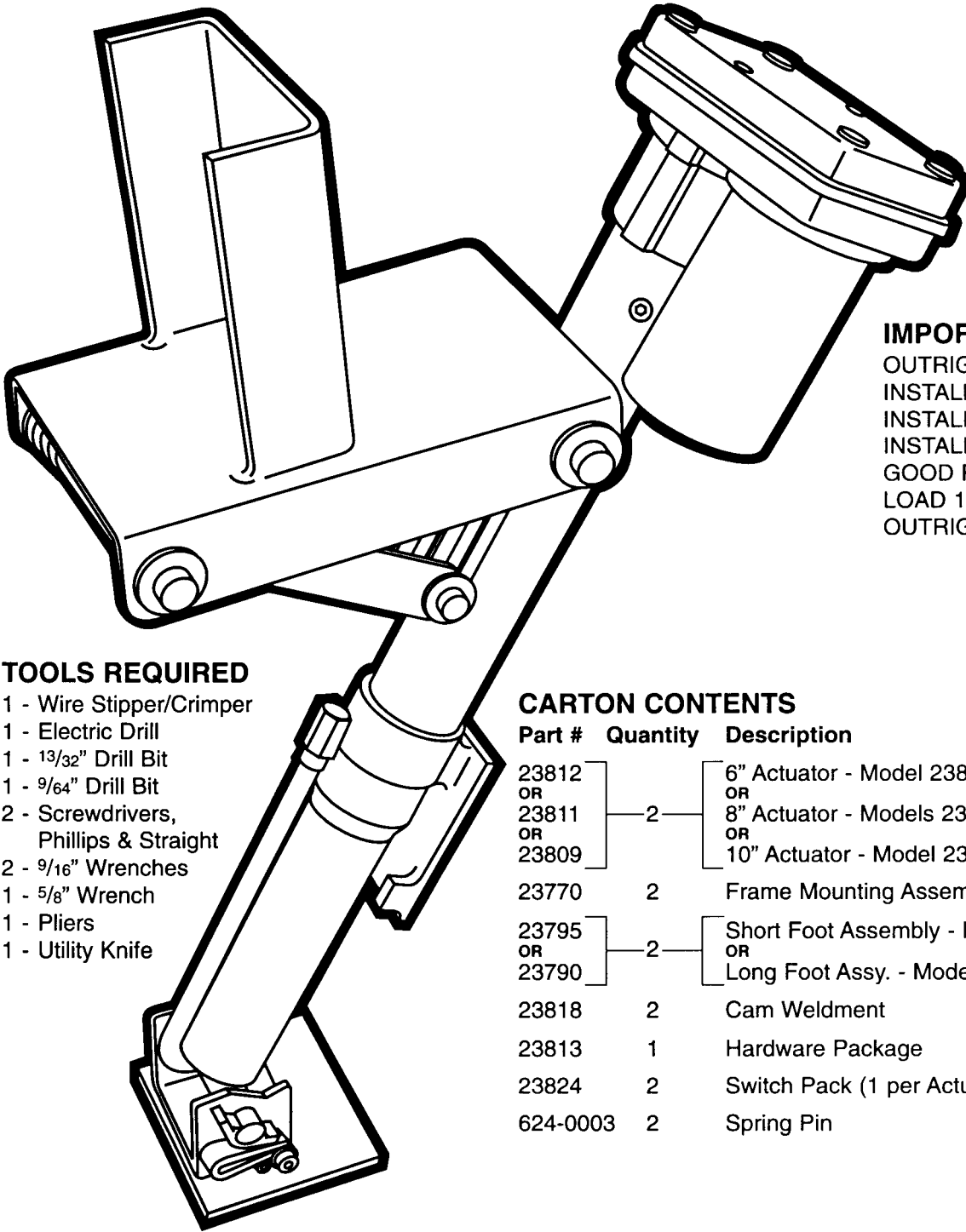


Owner's Manual

OUTRIGGER

Installation & Operating Instructions
Service & Parts Information



IMPORTANT:

OUTRIGGER MUST BE INSTALLED BY A REPUTABLE INSTALLER. VEHICLES TO BE INSTALLED IN MUST BE IN GOOD REPAIR. MAXIMUM LOAD 1500 POUNDS PER OUTRIGGER.

TOOLS REQUIRED

- 1 - Wire Stripper/Crimper
- 1 - Electric Drill
- 1 - 13/32" Drill Bit
- 1 - 9/64" Drill Bit
- 2 - Screwdrivers, Phillips & Straight
- 2 - 9/16" Wrenches
- 1 - 5/8" Wrench
- 1 - Pliers
- 1 - Utility Knife

CARTON CONTENTS

Part #	Quantity	Description
23812 OR 23811 OR 23809	2	6" Actuator - Model 23800 OR 8" Actuator - Models 23805, 23820 OR 10" Actuator - Model 23810
23770	2	Frame Mounting Assembly
23795 OR 23790	2	Short Foot Assembly - Models 23800, 23820 OR Long Foot Assy. - Models 23805, 23810
23818	2	Cam Weldment
23813	1	Hardware Package
23824	2	Switch Pack (1 per Actuator)
624-0003	2	Spring Pin



H&H ENGINEERING COMPANY

Division of Barker Manufacturing Company
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⚠WARNING!


Read and understand Installation Instructions. Ignition switch must be in "lock" position. Vehicle must be in safe parked condition. Remove jewelry (watches, rings, etc.) FAILURE TO FOLLOW THESE RULES COULD RESULT IN SERIOUS INJURY OR DEATH

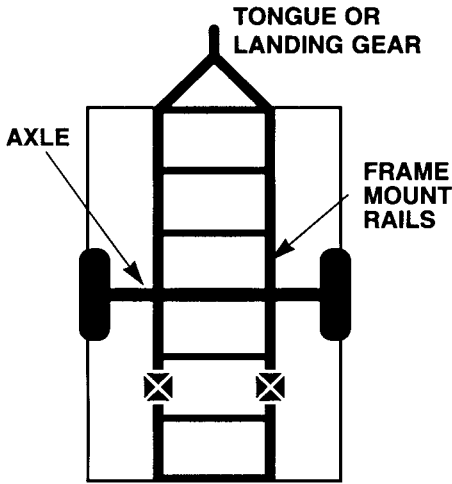
LOCATION AND INSTALLATION INSTRUCTIONS

CAUTION: The Outrigger swings up behind the frame of the vehicle in the travel position. Make sure no wires or other obstructions are behind the frame where the Outrigger will be mounted.

TWO OUTRIGGER SYSTEM


5th Wheels & Travel Trailers

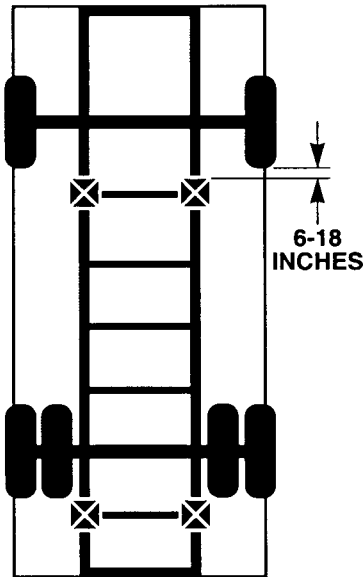
Select a location on the main frame rails (marked ) approximately halfway between the axle and the rear of the trailer.



FOUR OUTRIGGER SYSTEM

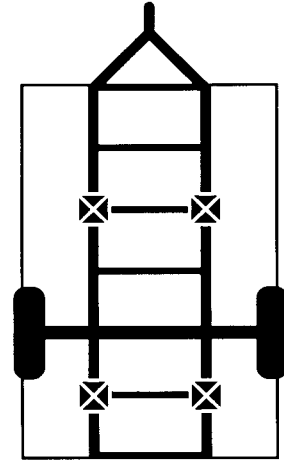
Class C Motorhomes

Locate two of the Outriggers on the main frame approximately halfway between the rear axle and the rear of the trailer. Locate the other two Outriggers on the main frame (also marked ) 6 to 18 inches behind the front tires.



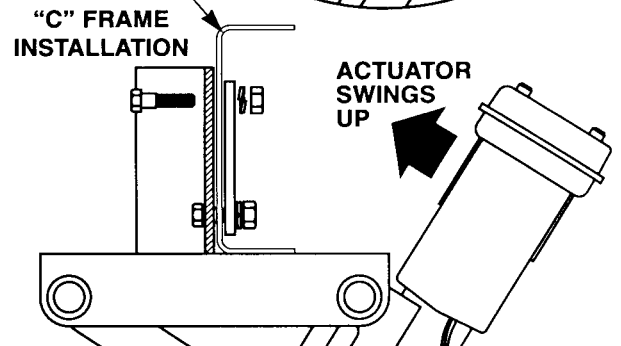
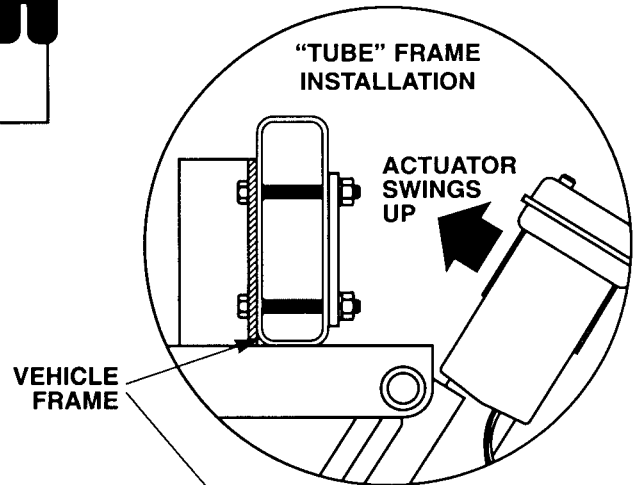
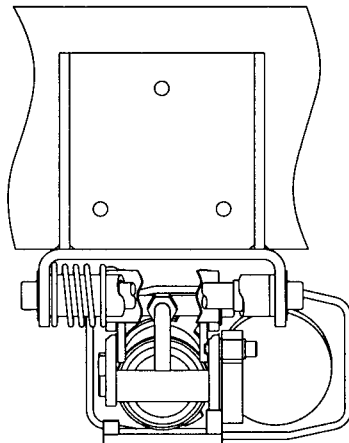
Travel Trailers

Locate two of the Outriggers as described in the two Outrigger system. Locate the other two Outriggers also on the main frame rails approximately halfway between the axle and the front of the trailer.



ATTACHING OUTRIGGER TO FRAME

- 1 After determining the location of each outrigger, use the Base Weldment as a template to mark the location of three holes on the frame of the vehicle.
- 2 Use the electric drill and $1\frac{3}{32}$ " bit to drill the holes.
- 3 Attach the Base Weldment and Back Up Plate to the frame of the vehicle with the three $\frac{3}{8}$ -16 $1\frac{1}{2}$ " Bolts (for "C" frames), $\frac{3}{8}$ -16 $2\frac{3}{4}$ " Bolts (for "Tube" frames), $\frac{3}{8}$ Lock-washers, and $\frac{3}{8}$ -16 Nuts.
- 4 Secure the nuts and bolts with the two $\frac{9}{16}$ " wrenches.



ELECTRICAL WIRING

1. Disconnect the ground cable from the vehicle's negative battery post to prevent electrical shock/shorting.
2. Refer to the appropriate wiring diagram for the two and four Outrigger systems.
3. Mount the Box Connectors to each Switch Box using the 0.875 inch hole (the slightly larger hole).
4. Carefully mount a Switch Box Label on each Switch Box keeping the holes from the Switch Box Label and Switch Box lined up on the top of the Switch Box. Fold the remainder of the label down the front of the Switch Box.
5. Mount a Toggle Switch using a Toggle Switch Seal to each Switch Box. Note: the Toggle Switch needs to be positioned such that the two connection terminals on the end of the Toggle Switch are on the right (when facing the open Switch Box).
6. Select a location to mount each Switch Box keeping it close to its respective Outrigger. Now measure an appropriate amount of wire to run from each Outrigger to its Switch Box Assembly and then to the appropriate battery terminal.
7. Use Butt Splices, Ring Terminals and Female Terminals supplied to properly wire each unit. Connect the Black Wire/Female Terminals to the back most terminals, Terminals #1 and #3, of the Toggle Switch (when facing the open Switch Box). Connect the Red Wire/Female Terminals to the front most terminals, Terminals #2 and #4, of the Toggle Switch. Proper connection of the wires will allow for raising the Outrigger when the Toggle Switch is pushed toward "RAISE" and lowering the Outrigger when the Toggle Switch is pushed toward "LOWER". Note: if happened to wire the switch backwards just rotate the switch 180 degrees. Also, it is recommended to use a 20 Amp slow blow fuse (not supplied) in the Red Wire line. Place the Cover on the Switch Box.
8. Use the Switch Box Assembly as a template to mark the mounting holes. Use a 9/64" drill to drill mounting holes. Use two #8 x 1/2" screws to secure each Switch Box Assembly. Secure all wiring appropriately.
9. Reconnect the ground cable to the vehicle's negative battery post.

OPERATING INSTRUCTIONS

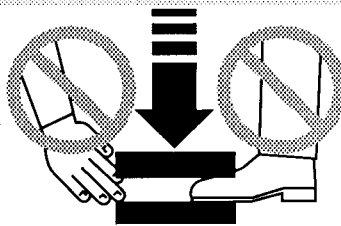
CAUTION:

Do not attempt to drive or move the vehicle until each Outrigger is in the travel position. Failure to do so could cause damage to your vehicle/trailer.

WARNING

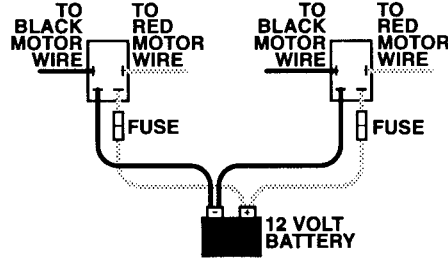
Don't risk serious injury or death in a shearing or squeezing accident. Keep body, hands, and feet away.

19989

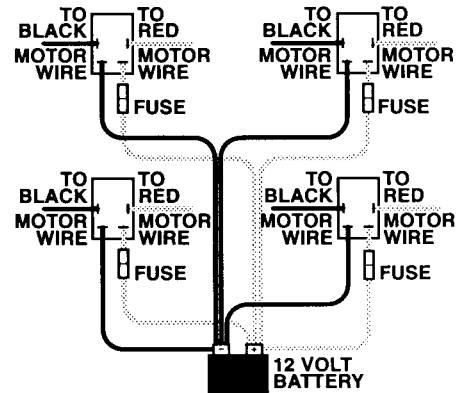


WIRING DIAGRAM

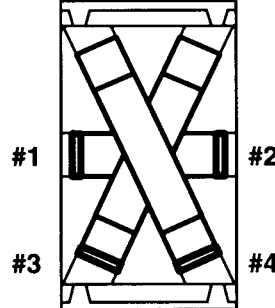
TWO OUTRIGGER SYSTEM



FOUR OUTRIGGER SYSTEM

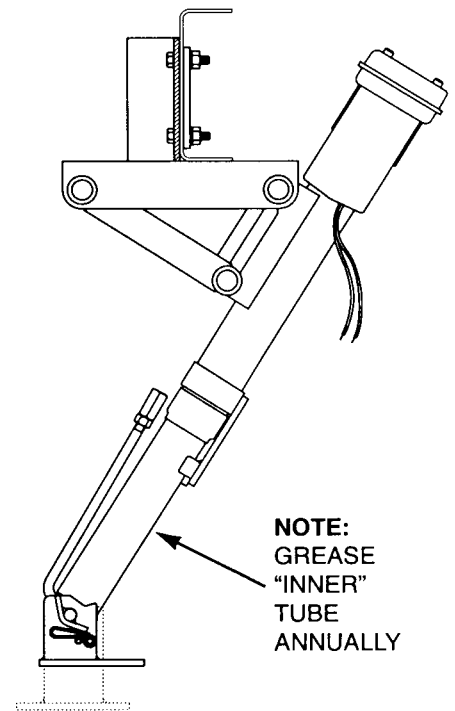


TOGGLE SWITCH TERMINALS



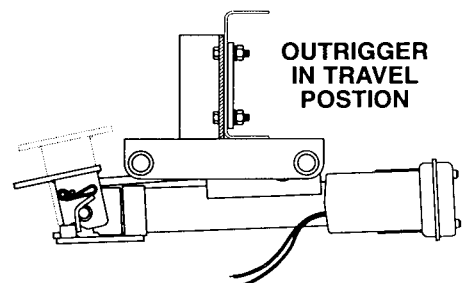
NOTE: Recommend using a 20 amp slow-blow fuse (not supplied)

OUTRIGGER IN EXTENDED/LIFTING POSITION



NOTE: GREASE "INNER" TUBE ANNUALLY

1. Use the Toggle Switches to lower each Outrigger (one at a time) until the foot (plate) reaches the ground.
2. With the Outriggers in the lowered position, extend each unit (one at a time) to the desired height.
3. To put the Outriggers in the travel position, use the Toggle Switches (one at a time) to retract each unit. The Outrigger will make a ratcheting sound when the unit is fully retracted.
4. **NOTE:** The "inner" sliding tube must be greased annually with Mobile-Lift SHC 460 grease or equivalent (see Outrigger in extended/lift position diagram at right).



OUTRIGGER IN TRAVEL POSITION

PARTS LIST

ITEM #	PART #	QTY.	DESCRIPTION
1	17855	1	Powerhead
2	19899	1	Wiper
3	23775	1	6" Post Assembly - Model 23800
	23780	-	8" Post Assembly - Models 23820, 23805
	23785	-	10" Post Assembly - 23810
4	645-0028	2	Flange Bearing
5	18843	1	Motor Sleeve
6	23756	1	Base Weldment
7	23759	1	Arm Weldment
8	23828	1	Pin
9	615-0002	4	Push Nut 5/8"
10	645-0027	2	Bearing
11	616-0002	2	Push Nut 1/2"
12	23847	1	Short Foot - Models 23800, 23820
	23846	-	Long Foot - Models 23805, 23810
13	23803	1	Cam Spring
14	624-0007	1	Spring Pin 1/4"
15	601-0021	1	1/4-20 x 1" SHCS
16	618-1007	2	1/4 Lockwasher
17	23818	1	Cam Weldment
18	624-0003	1	3/4 Spring Pin
19	23754	1	Back Up Plate
20	600-0002	3	3/8-16 x 1/2" Bolt
21	610-0009	3	3/8-16 Nut
22	618-1000	3	3/8 Lockwasher
23	23826	1	12 Gauge Black Wire, 15'
24	23826	1	12 Gauge Red Wire, 15'
25	635-0008	1	"O" Ring
26	742-0051	4	Female Terminal
27	742-0057	2	Ring Terminal
28	742-0043	4	Butt Splice
29	24007	1	Switch Box
30	24006	1	Box Cover
31	23188	1	Box Connector/Strain Relief
32	24008	1	Switch Box Label
33	607-0002	2	#8-18 x 1/2 Self-Tapping Screws
34	736-2300	1	Toggle Switch
35	17745	1	Toggle Switch Seal
36	80188	3	3/8-16 x 2 3/4" Bolt

