

MONOCOQUE PULLING TOWER

PART NOS. 94000 & 94100

Assembly & Operation Instructions

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INTRODUCTION

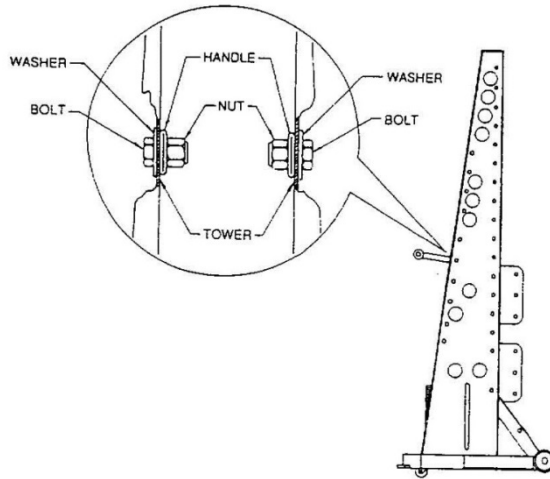
The Monocoque Tower Pulling Machine was designed to be used with the Wedge Clamp Aluminum floor anchoring rails.

SPECIAL FEATURES

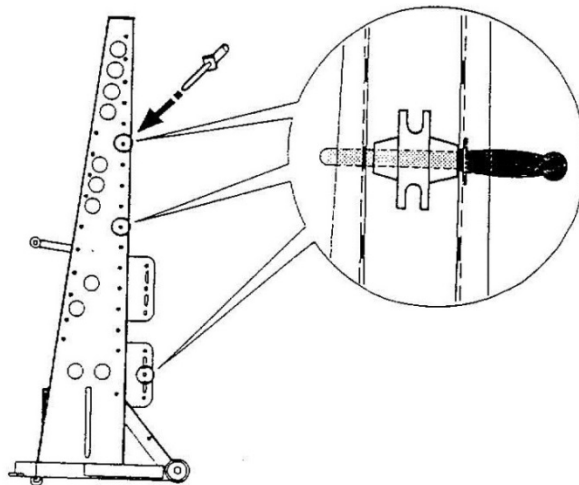
- Full 10 ton pulling power
- Works in 12'2" (3.7m) wide work bays
- 60" (1.52m) maximum pull height capability (See Page 9 for safety notice)
- Makes double pulls simultaneously, and the ability to lock out either pull while the other pull continue
- Easy to change pull heights
- Pulling at angle to the tail is permitted with the special rail tie-down
- Spring loaded rear swivel wheel allows easy movement and positioning of the tower
- Pressure monitoring gauge on hydraulic pump
- 16' (4.88m) long pulling chain
- Uses high grade tempered alloy chain
- Equipped with two alloy pull hooks
- Extensively tested for strength and functioning
- Uses lightweight tempered aluminum pulleys
- Quick return springs on hydraulic cylinder
- Easy to add "come – along" additional pulling
- Engine lift arm available as accessory for upward pulling over the vehicle
- Make multi pulls with Back Brace Kit accessory
- Quick rail connection with drop pin
- All zinc coated for long lasting appearance

ASSEMBLY INSTRUCTIONS

1. Position the two handle assemblies so that the handle arm forms a 90 angle with the back of the tower as shown.

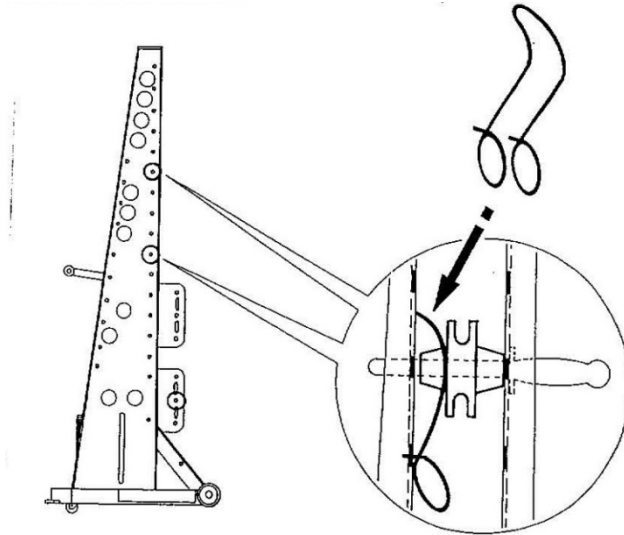


2. Pulleys may be positioned in any of the holes along the front edge.

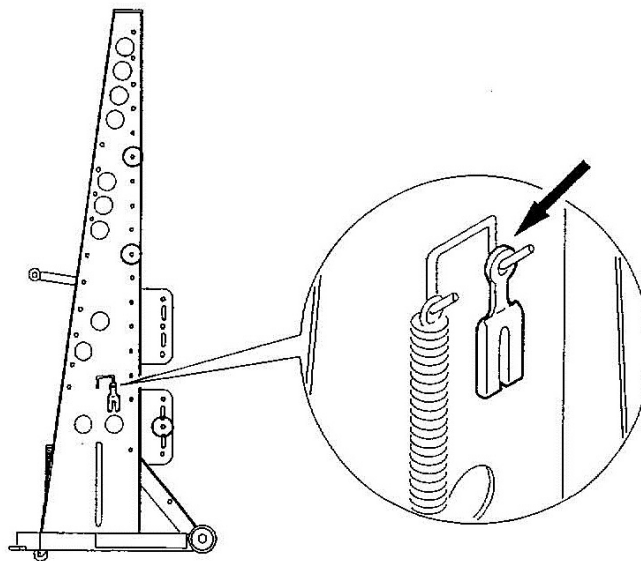


ASSEMBLY INSTRUCTIONS

- 3. The anti-roll springs are used to prevent the chain from rolling backward off the pulley. It is useful to use these springs when pulleys are in the higher positions on the tower.

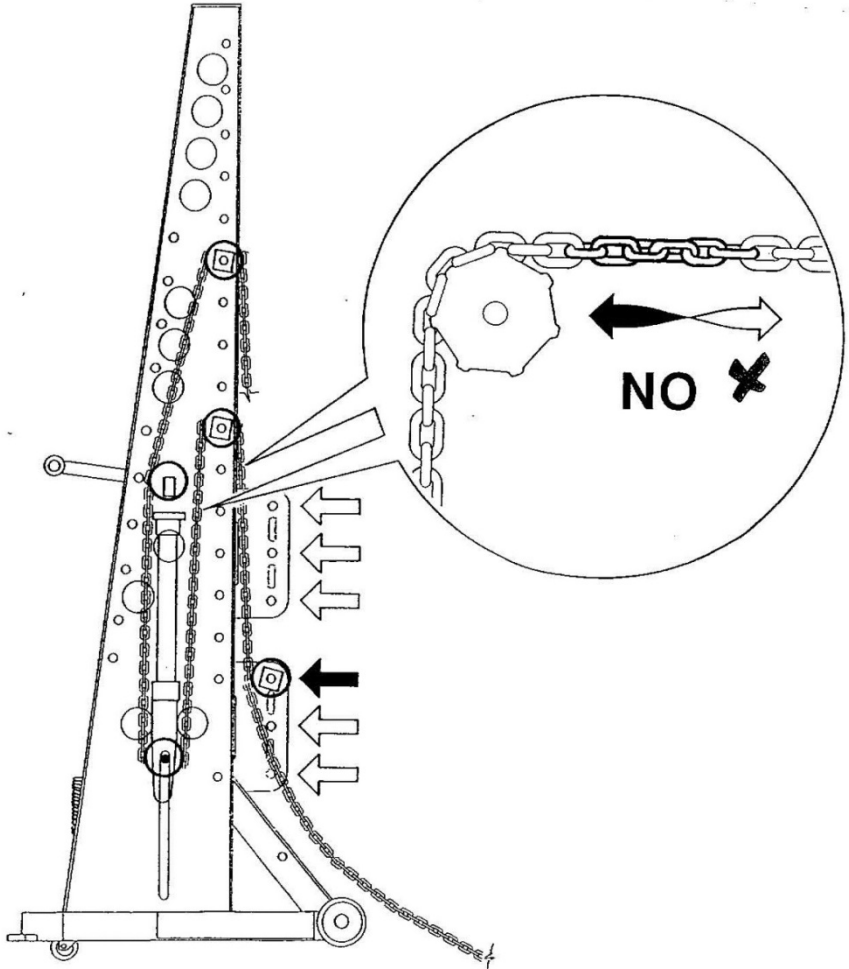


- 4. Locate the Chain lock onto the tower as shown, one each side.



ASSEMBLY INSTRUCTIONS

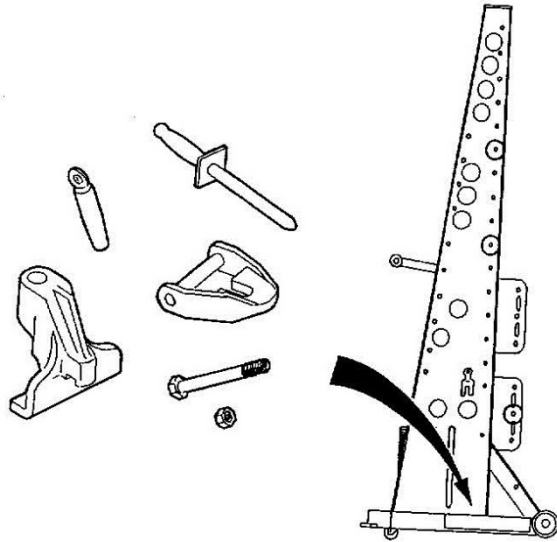
5. Standard Chain/Pulley Set Up



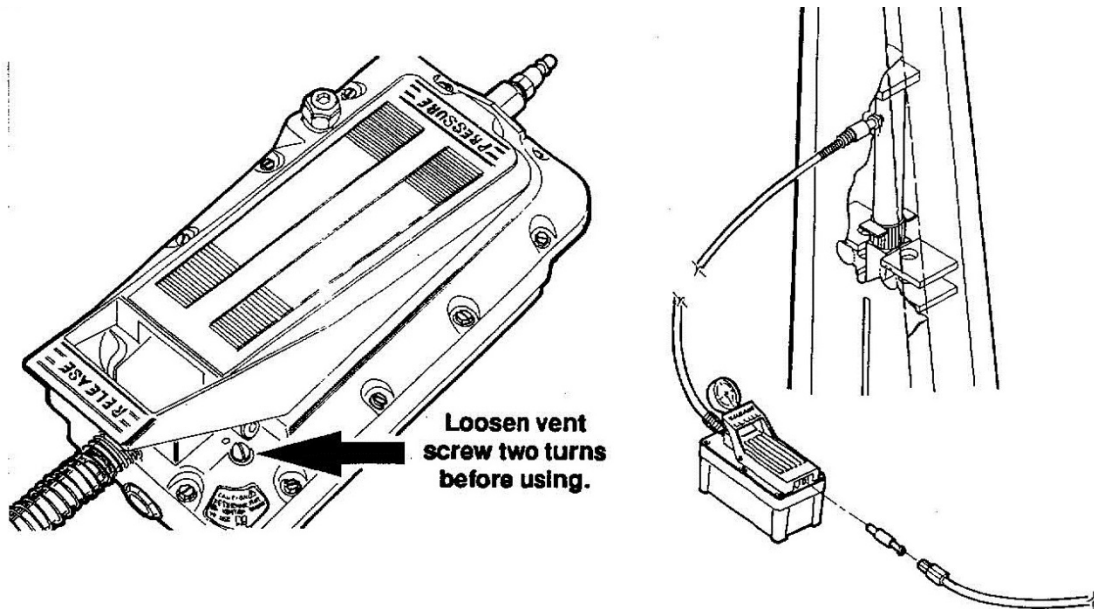
WARNING: Be sure that there are no twists in the chain.

ASSEMBLY INSTRUCTIONS

- 6. Place the Chain Tie Back, Rail Tie Down, Tie Down Pin, Locking Wedge, 3/4" Bolt and Nut in the tray

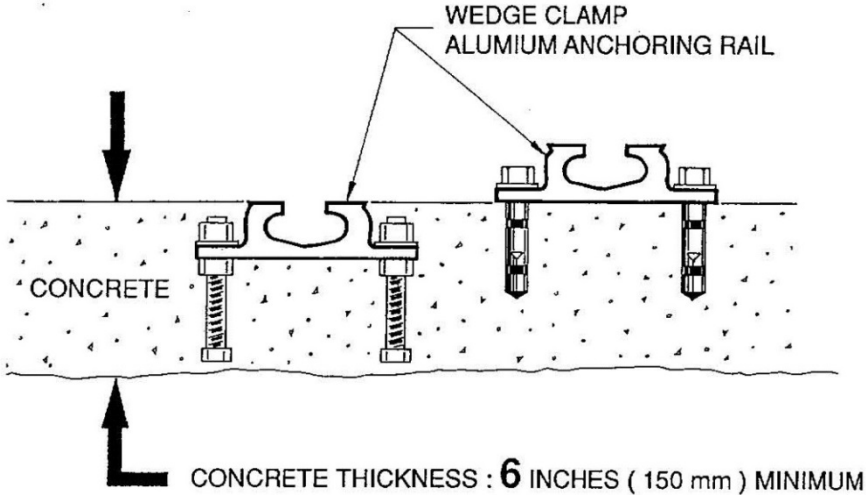


- 7. Attach the Hydraulic Pumo Hose to the Hydraulic Ram as shown.



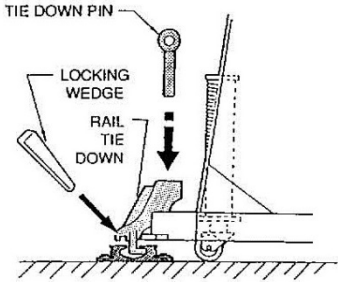
IMPORTANT SAFETY INFORMATION

- There is great upward pressure at the floor anchoring point. The floor rail anchoring method must be secure. We recommend one of the following anchoring rail methods.



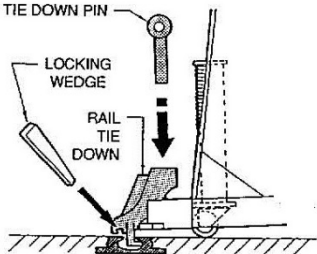
WARNING:

- The Rail Tie Down must always be used to anchor the tower to the floor rail before making any pull. Always insert the Tie Down Pin, and install the Locking Wedge by hammering the wedge into the slot as shown o prevent possible sideways movement of the tower.
- To lower the tower for flush mounted rails push down on the back edge of the tower. The spring suspension in the rear wheel will allow the tower to be lowered.



SURFACE MOUNTED RAIL

OR

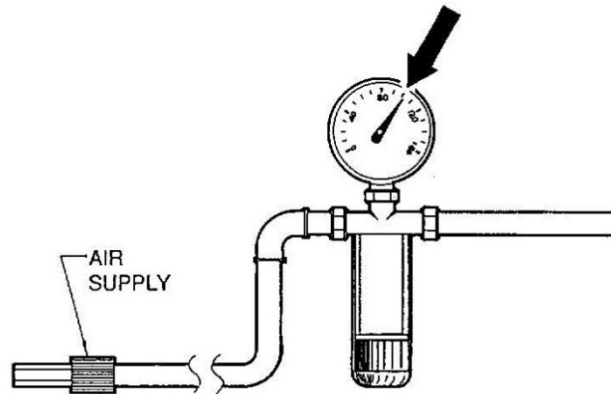


FLUSH MOUNTED RAIL

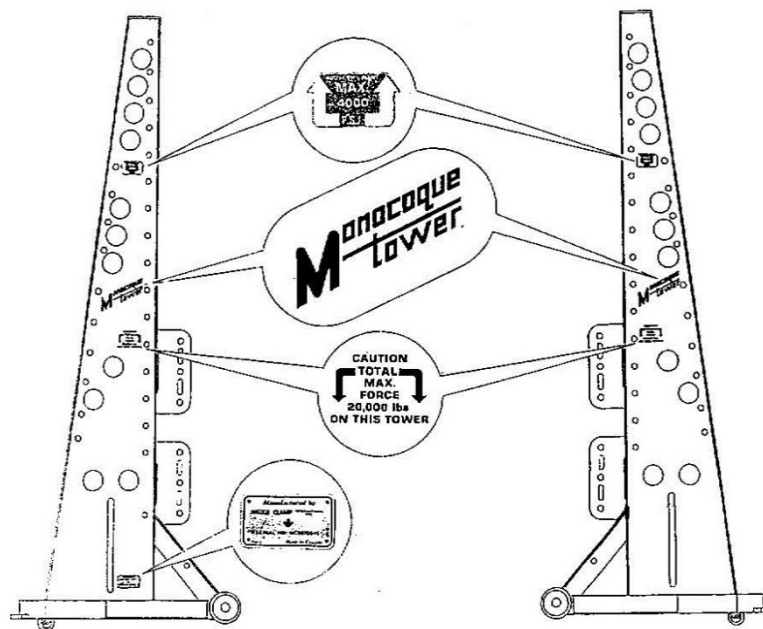
IMPORTANT SAFETY INFORMATION

WARNING:

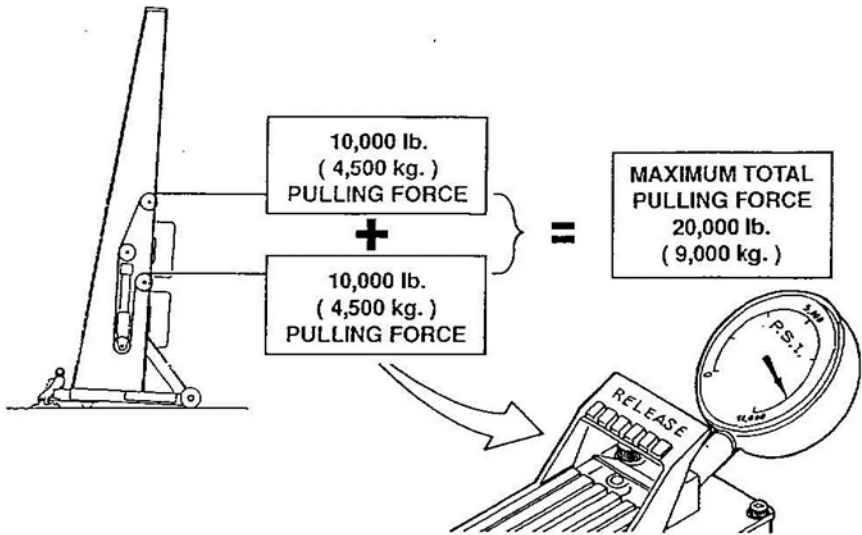
- Airline pressure should never be greater than 110 P.S.I (7.5 bar, 758 kPa). Pressure over 110 P.S.I can cause the hydraulic ram to overpull which can result in breakage and risk of personal injury.



- Check and review safety decals on the tower.

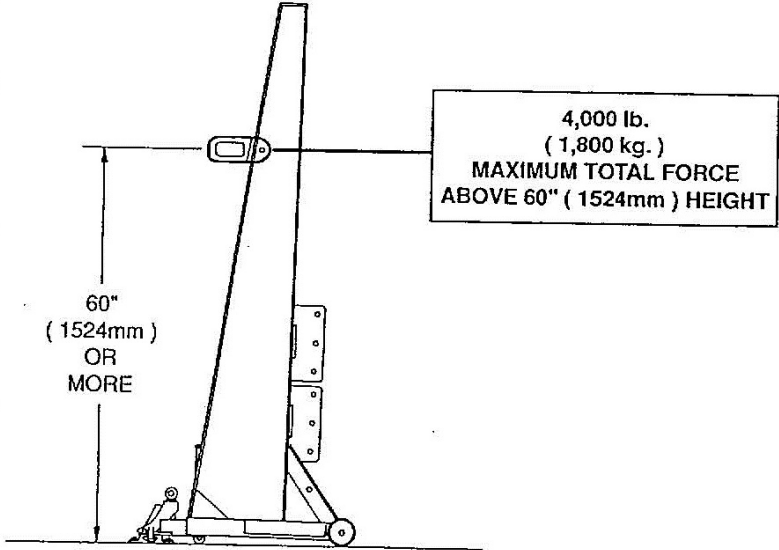


IMPORTANT SAFETY INFORMATION



WARNING:

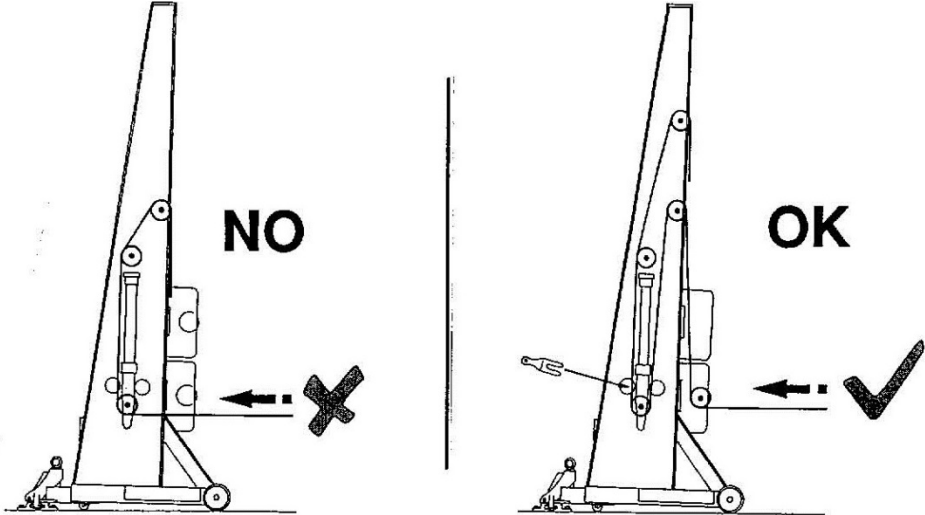
- Do not exceed 20,000lb. (9,000 kg) total pulling force on tower (8,900 P.S.I on hydraulic gauge = 20,000 lbs. force at the ram).
- Never exceed 4,000 lb. (1,800 kg) total pulling force above 60" (1.52 m) height on the tower.
- Never stand close to the tower when pulling.



IMPORTANT SAFETY INFORMATION

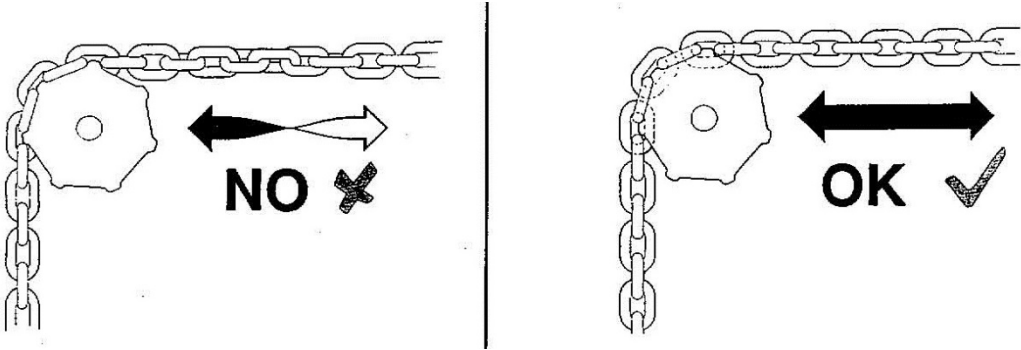
CAUTION:

- Never have the pulling chain routed directly to the ram pulley. If a low pulling height is required the chain must be routed as shown on the right.



WARNING:

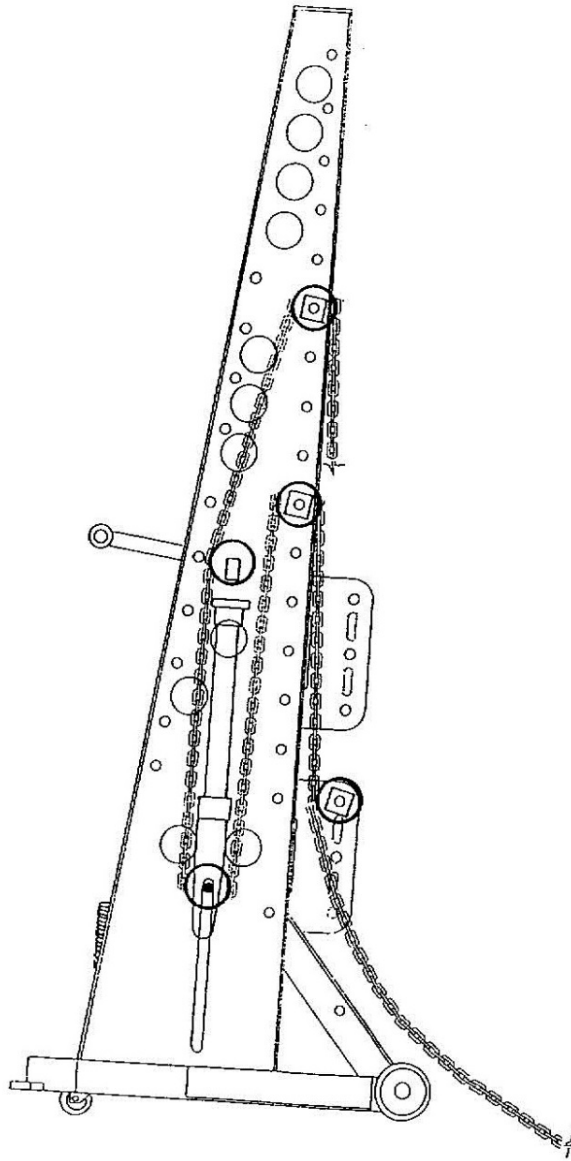
- Always remove any twists in the chains.



BASIC OPERATION OF MONOCOQUE TOWER

Chain:

- For standard pulls, positions the Chain as shown

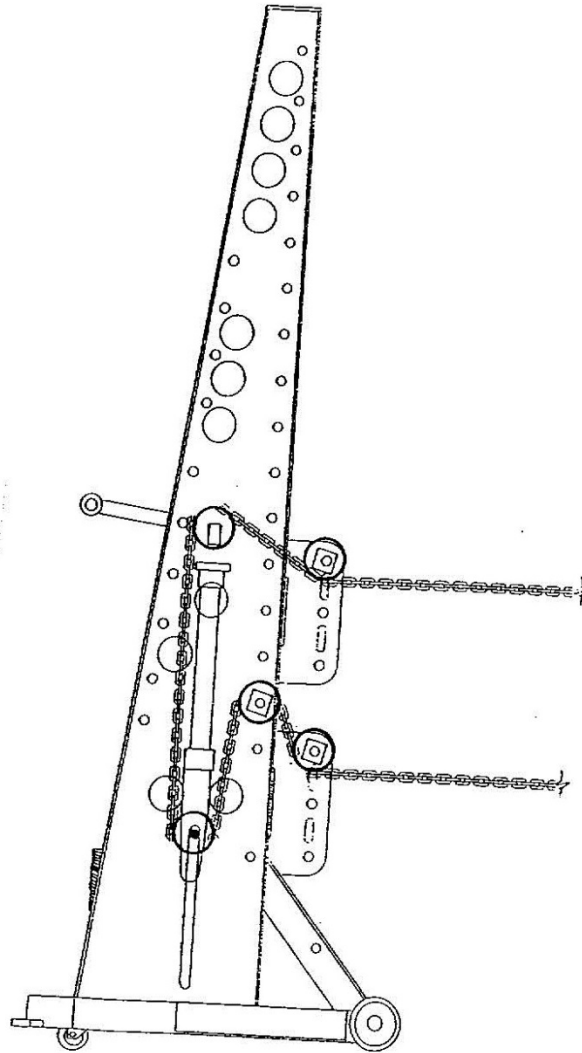


STANDARD PULLS

BASIC OPERATION OF MONOCOQUE TOWER

Chain:

- For double pulls, position the Chain as shown.

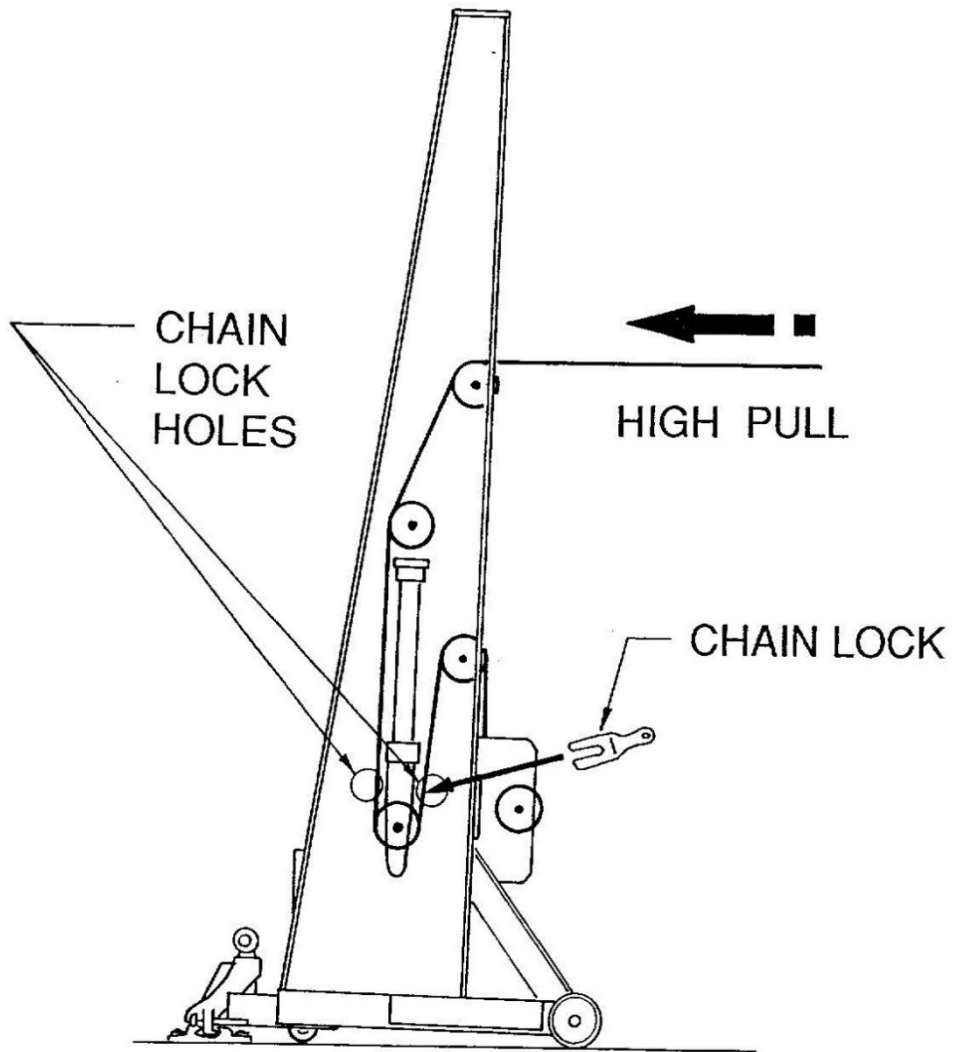


Double Pulls

BASIC OPERATION OF MONOCOQUE TOWER

Chain Lock(s):

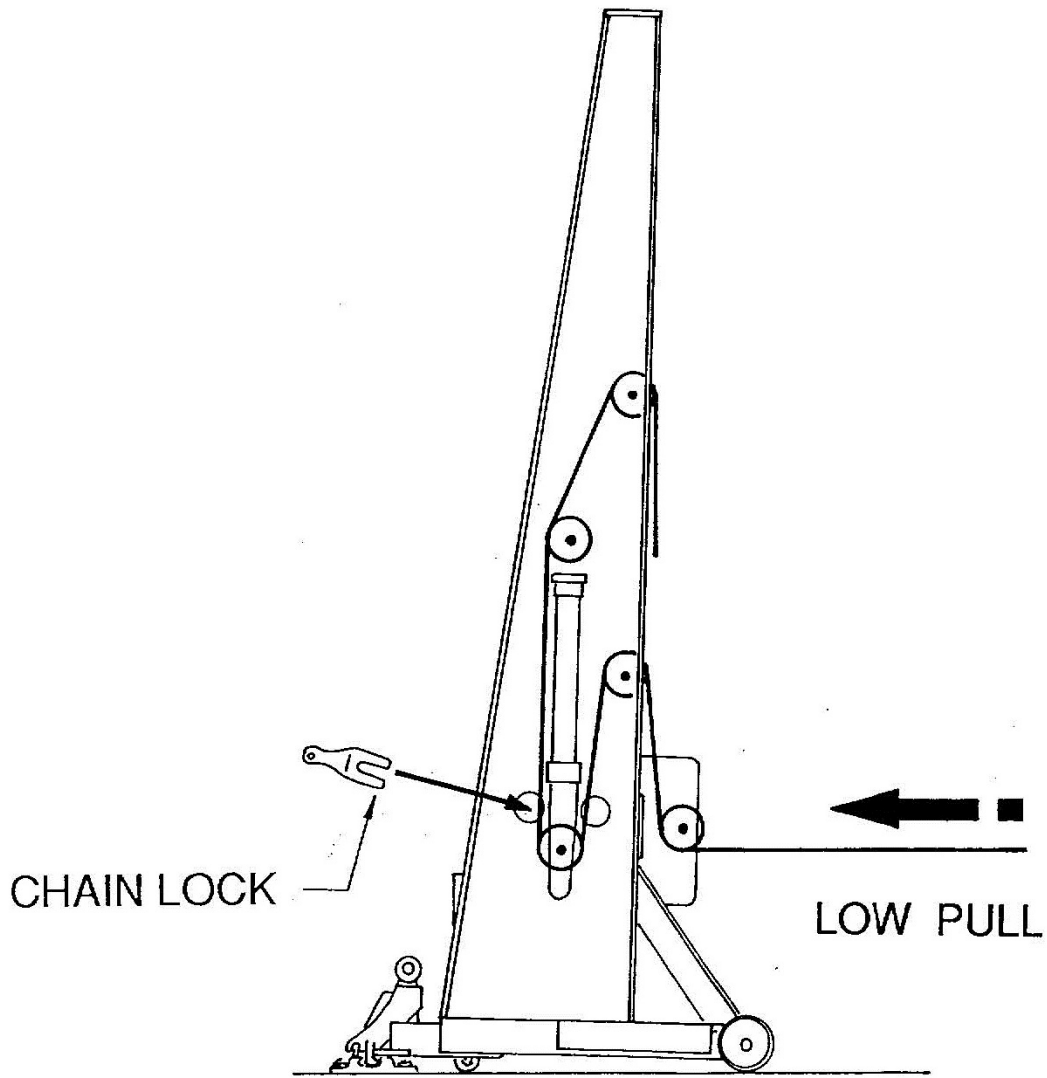
- When pulling on only one chain, insert the chain lock through the appropriate lockout hole as shown.



BASIC OPERATION OF MONOCOQUE TOWER

Chain Lock(s):

- When pulling on only one chain, insert the chain lock through the appropriate lockout hole as shown



ACCESSORIES FOR THE MONOCOQUE TOWER

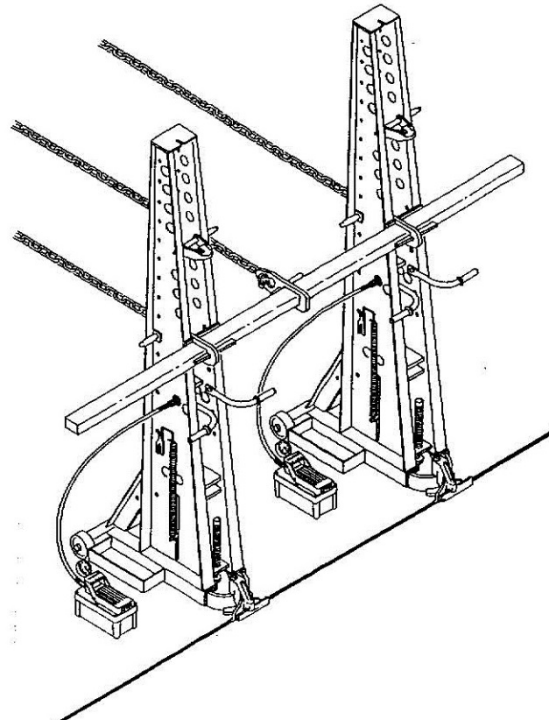
Back Brace Kit

Part No. 20600

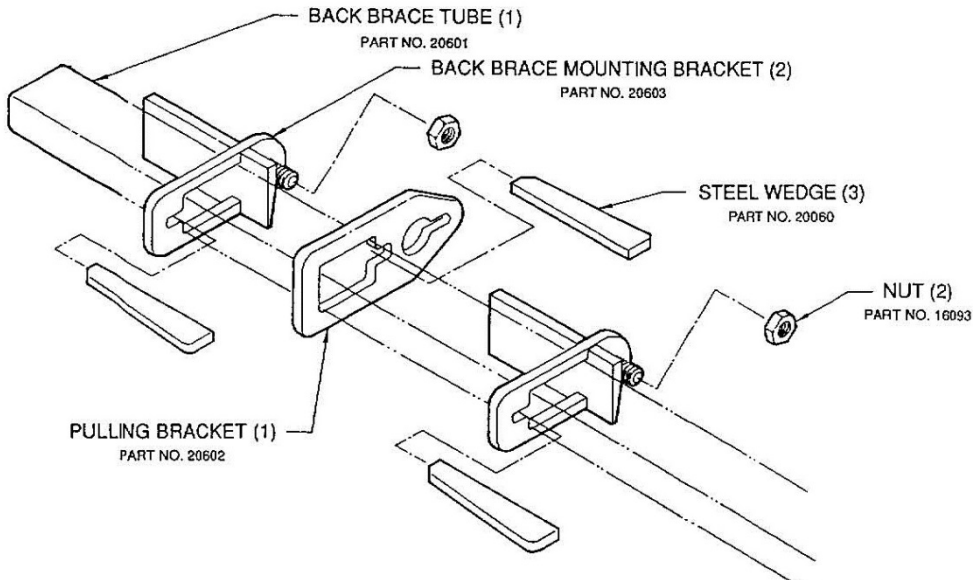
- Two Monocoque Tower can be linked together with the back brace to allow additional pulls to be made between the towers.

WARNING:

- Never exceed maximum total pulling force of 20,000 lb (9,000 kg) on any tower, and never exceed 4,000 lb. (1,800 kg) above 60" (1.52m) height on any tower.



Back Brace Kit Components (Part No. 20600)



Engine Lift Accessory Kit.

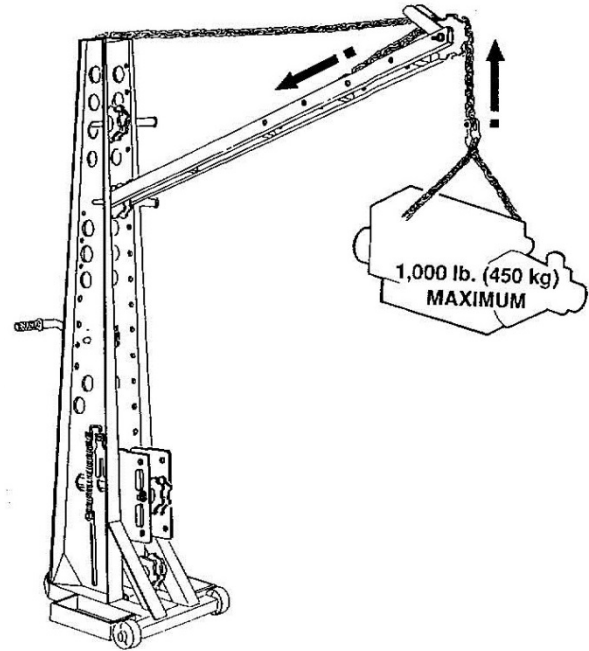
Part No. 20500 (uses 5/16" chain)

Part No. 21500 (uses 3/8" chain)

- The Engine Lift Accessory allows the Monocoque Tower to be used for vertical lifting or pulling using the tower's hydraulics.

WARNING:

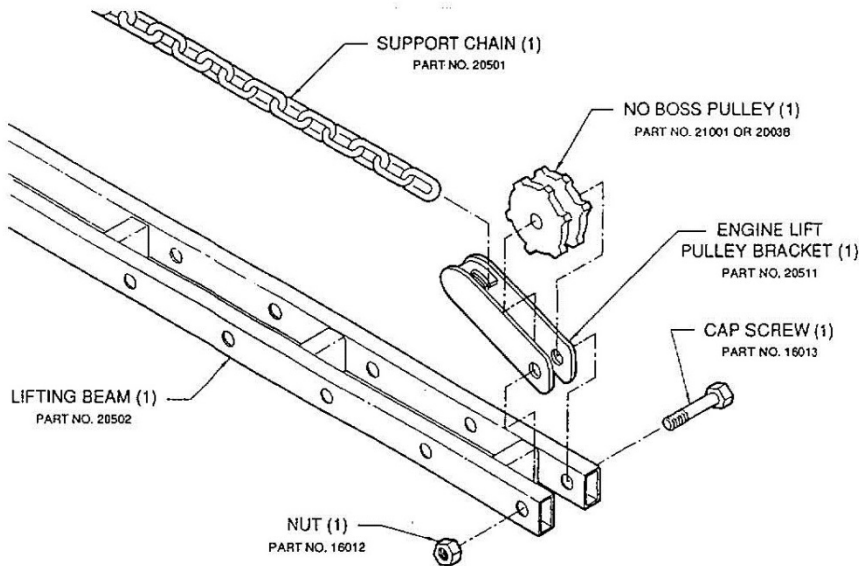
- Do not exceed lifting weight of 1,000 lb (450 kg).



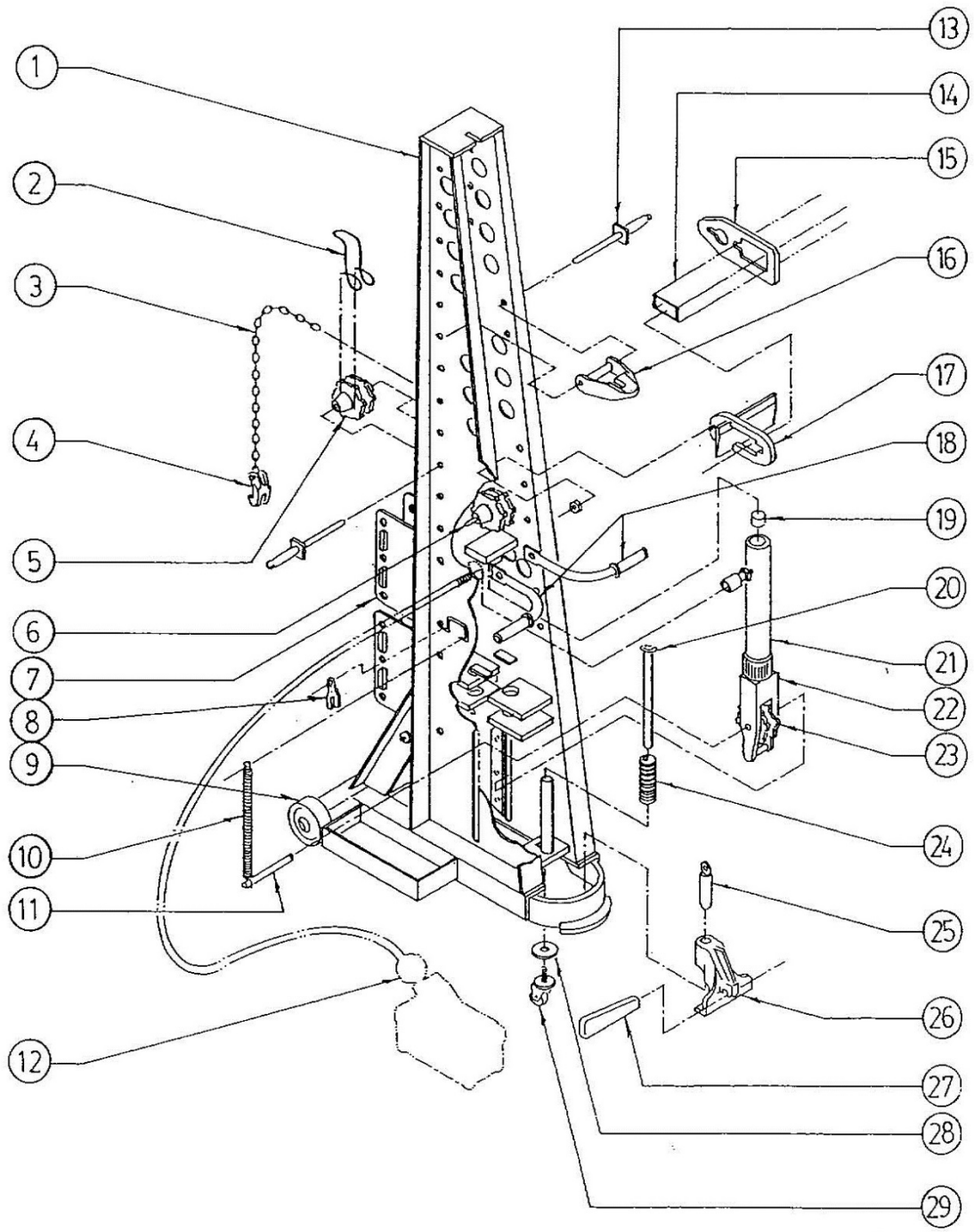
Engine Lift Accessory components

Part No. 20500 (5/16" chain)

Part No. 21500 (3/8" chain)



MONOCOQUE TOWER



REPLACEMENT PARTS LIST

Drawing Ref.	Part No.	Description	Shipping Wt. (kg)	Shipping Wt. (lb)
	94100	MONOCOQUE TOWER	141	310
1	20015	Monocoque Tower Frame (no hardware)	76	168
2	20063	Spring, Anti Roll, Pulley	-	-
3	21009	H.S. Alloy Chain, 3/8", (specify 16 ft. length)	10	21.6
3	20116	H.S. Alloy Chain, 5/16", (specify 16 ft. length) (optional)	6	14
4	20104	Claw Hook, 5/16" Chain (optional)	1	2
4	09067	Claw Hook c/w Bolt & Nut, 3/8" Chain	-	-
not shown	21006	Clevis Slip Hook, 3/8" Chain	1	2
not shown	21007	Clevis Grab Hook, 3/8" Chain	1	2
5	21002	Pulley with Boss, 3/8" Chain	-	-
5	20039	Pulley with Boss, 5/16" Chain (optional)	-	-
6	20010	Pulley Shaft	1	3
7	20047	Low Pull Brackets	3	6
8	20061	Chain Lock	1	2
9	20001	Wheel, Cast, 4"	1	2
10	20003	Spring, Ram Return	-	-
11	20005	Spring, Pulley Shaft	-	-
12	20054	Hydraulic Pump	7	15
12	20053	Hydraulic Hose	-	-
12	20111	Hydraulic Tee Fitting	1	2
12	20112	Hydraulic Elbow Fitting	1	2
12	20113	Pressure Gauge	-	-
13	20055	Pulley Pin	-	-
14	20601	Back Brace Tube (optional)	1	2
15	20602	Back Brace Pull Bracket (optional)	1	3
16	20056	Chain Tie Back	1	2
17	20603	Backbrace Mounting Bracket (optional)	1	2
18	20057	Mobility Handle Assembly	1	2
18	20101	Handle Grip	1	2
19	20013	Ram Centering Plug	-	-
20	20125	Caster Wheel Shaft Assembly	1	2
21	20014	Hydraulic Ram	7	15
22	20037	Pulley Bracket	2	4
23	20038	Pulley - No Boss, 5/16" Chain (optional)	1	2
23	21001	Pulley - No Boss, 3/8" Chain	1	3
24	20008	Spring, Caster Wheel	-	-
25	20059	Tiedown Pin	-	-
26	20058	Rail Tiedown	4	8
27	20060	Locking Wedge	-	-
28	16011	Washer, Caster	1	2
29	20009	Wheel, Caster	1	2
	20092	Instruction Book Monocoque Tower	-	-
not shown	20500	Engine Lift Complete, 5/16" Chain	15	34
not shown	21500	Engine Lift Complete, 3/8" Chain	15	34
	20018	Decal, Caution Force Max.	-	-
	20019	Decal, Monocoque Tower	-	-
	20020	Decal, P.S.I. Max.	-	-
		ASSEMBLIES		
	20052	Assembly, Pressure Gauge includes: (1)20111, (1)20112, (1)20113 ...	1	3
	20045	Assembly, Pump with Hose includes: (1)20111, (1)20112, (1)20113 ... (1)20053, (1)20054	9	20

