

BODY STRAIGHTENER
10 TON CAPACITY

MODEL 851/857



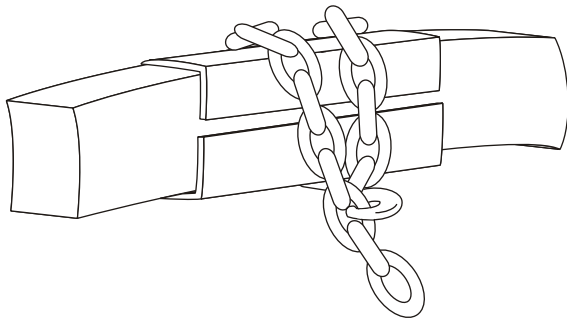
USER'S MANUAL

GENERAL SAFETY WARNINGS AND PRECAUTIONS

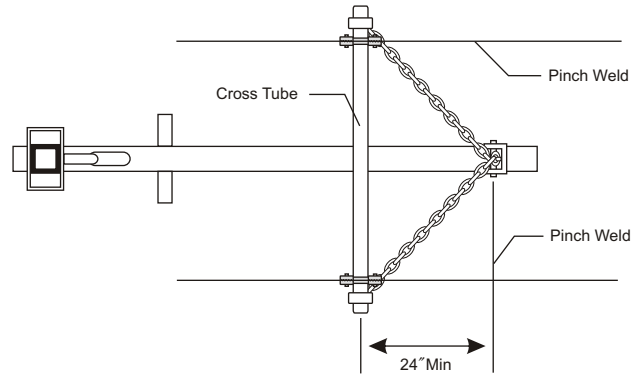
1. **KEEP WORK AREA CLEAN AND DRY.** Cluttered, damp or wet work areas invite injuries.
2. **KEEP CHILDREN AWAY FROM WORK AREA.** Do not allow children to handle this product. Do not allow children in the work area.
3. **STORE IDLE EQUIPMENT.** When not in use , tools and equipment should be stored in a dry location to inhibit rust. Always lock up tools and equipment and keep out of reach of children.
4. **DO NOT USE THIS PRODUCT IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** Read warning labels on prescriptions to determine if your judgment of reflexes are impaired while taking drugs. If there is any doubt, do not attempt to use this product.
5. **USE EYE PROTECTION.** Wear ANSI approved safety impact eye glasses when using this product. ANSI approved impact eye glasses are available form Harbor Freight Tools.
6. **DRESS SAFELY.** Non-skid footwear or safety shoes should be used when working with this product. Do not wear loose clothing or jewelry as hey can become caught in moving parts. Wear a protective hair covering to prevent long hair form becoming caught in moving parts. If wearing a long-sleeve shirt, roll sleeves up above elbows.
7. **DO NOT OVERREACH.** Keep proper footing and balance at all times to prevent tripping, falling, back injury, etcetera.
8. **STAY ALERT.** Watch what you are doing at all times. Use common sense. Do not use this product when you are tired or distracted form the job at hand.
9. **CHECK FOR DAMAGED PARTS.** Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace or repair damaged or worn parts immediately.
10. **MAINTAIN THIS PRODUCT FOR THE RIGHT JOB.** There are certain applications for which this product was designed. Do not use small equipment, tools or attachments to do the work of larger industrial equipment, tools or attachments to do the work of larger industrial equipment, loose or attachments. Do not use this product for a purpose for which it was not intended.

HOW TO SET UP THE FRAME STARIGHTENER

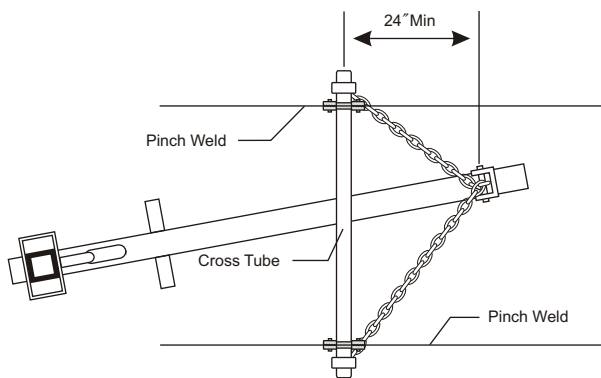
Frames and bodies are bent and distorted by collision with a relatively large area of the car bearing the impact. However, the correction procedure utilizes, powerful, concentrated loads at key points which can cause local crushing of frame members, etc., if these points are not properly padded to spread the load over a large area. Illustration of recommended anchoring procedures are shown below for efficient use of the under body anchoring System.



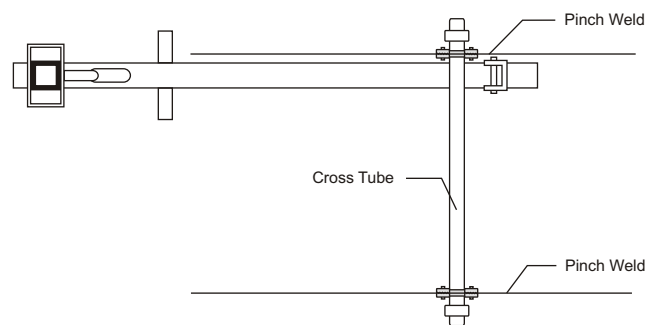
Box frames and channel sections should be padded with short pieces of angles iron to prevent damage to the corner of the section when a chain is wrapped a-round the frame section.



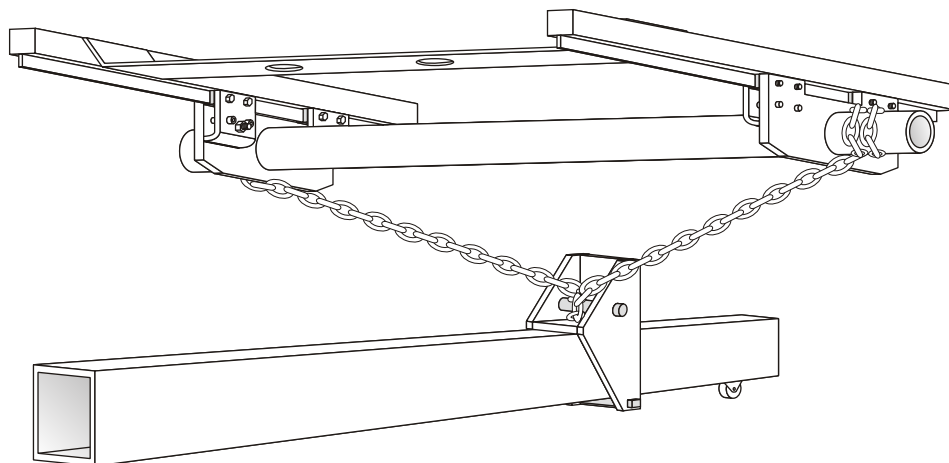
Proper anchoring for a heavy fore and aft pull utilizes the underbody anchoring system as shown here.



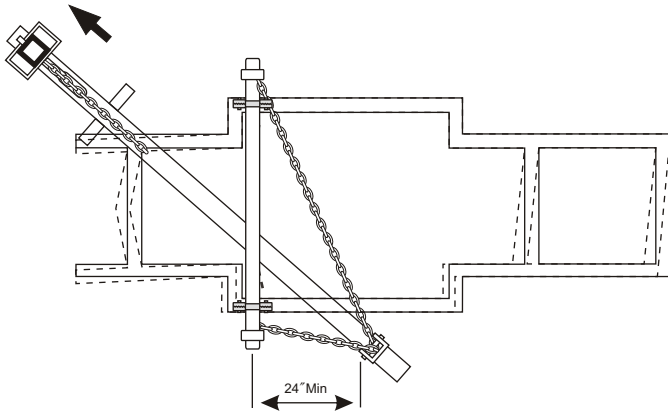
For a diagonal pull, the underbody anchoring system provides attachment to both rocker panels, for better efficiency and less damage. The anchoring loads are spread across both sides of the car.



For pulling on one side only, it is best to attach the cross tube to both rocker panels. Anchor your body straightener to the cross tube. This will prevent unwanted rolling of the underbody clamps on the pinch weld.

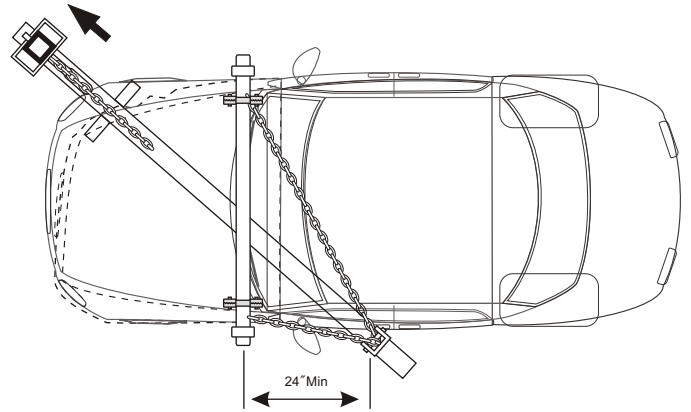


The underbody clamp secures to the pinch welds allows more versatile positioning of the body straightener.



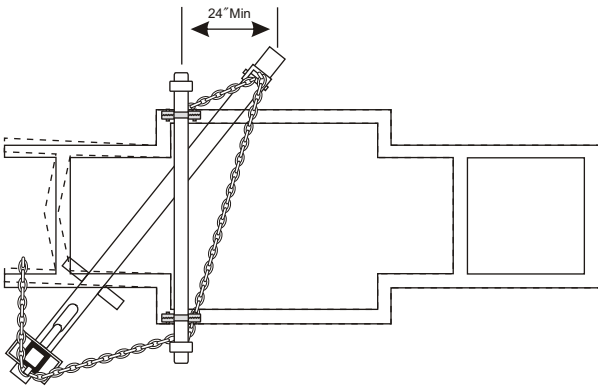
HOOK-FOR SWAY WITH MASH
Perimeter Frame(ladder frame)

this configuration will move the frame forward and sideways at the same time. Thereby correcting combination damage in a single hookup.



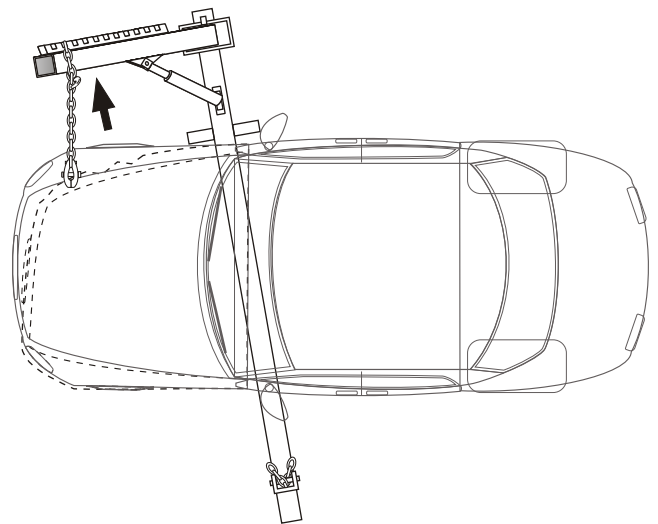
HOOK-UP SWAY AND MASH
Unibody Construction

For vehicles with unibody construction, secure the body by using underbody clamps and rocker pinch welds. Multiple clamps (secure points) maybe needed to move the section as a unit



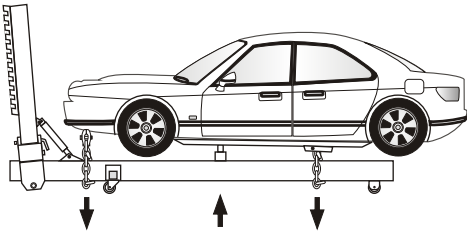
ALTERNATE HOOK-UP FOR FRONT END SWAY

Place the body straightener as show and anchor it to the rocker panel pinch weld. The pivot arm first is chained the frame rail or with the help of underbody clamps, to prevent the machine from swinging forward under load. Then a pulling chain is attached to the front end to provide a direct sideways pull. Both the holding chain and pulling chain should be attached to the body straightener at the same point to avoid tipping the body straightener.



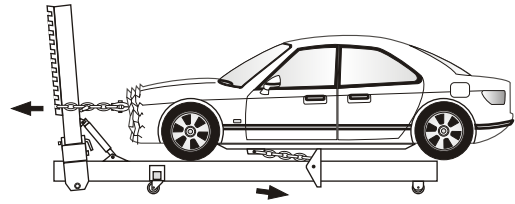
HOOK-UP FOR FRONT END SWAY

To obtain a direct side movement of the front end, use a hook-up as shown above. Place body straightener on its side and anchor it to the pinch welds or to the pivot arm pulls horizontally sideways. The underbody anchoring system should be used to resist the side load through both rocker panels. This system can be used with either unibody or frame type construction.



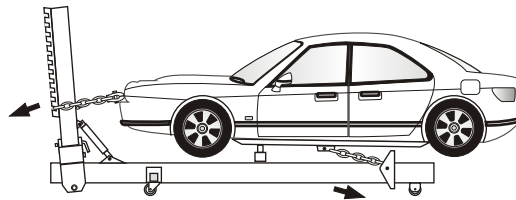
HOOK-UP FOR SAG OR KICK-UP

With the car firmly supported on safety stands, place the body straightener under the frame rail to be corrected. With the use of underbody clamps, anchor both front and rear end of the vehicle with chain onto the beam of the body straightener. Place a bottle jack or portapower on the Dozer beam under the low area to raise it.



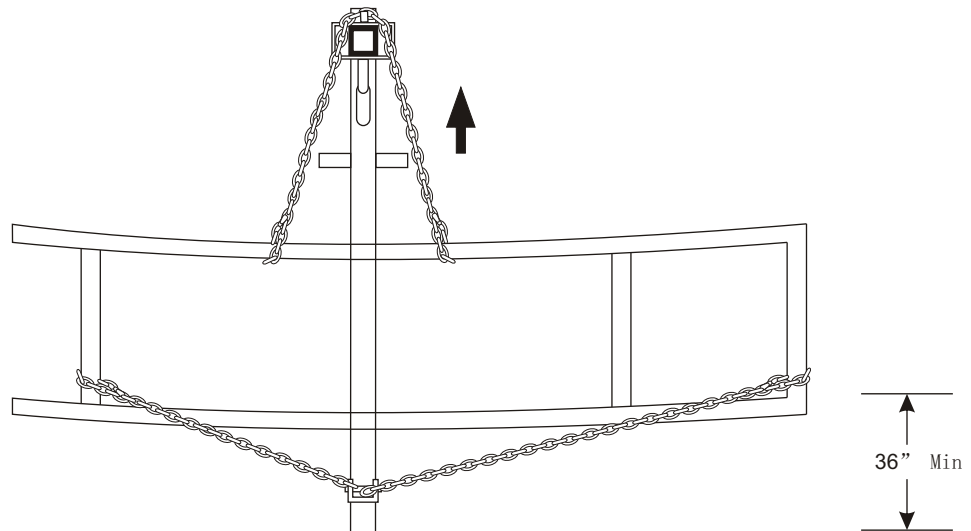
HOOK-UP FOR MASH

This is a basic pulling and stretching operation. With the car firmly supported on safety stands, place the body straightener under the frame rail to be corrected. Anchor the body straightener to the frame or the pinch weld with underbody clamps.



HOOK-UP FOR MASH WITH SAG

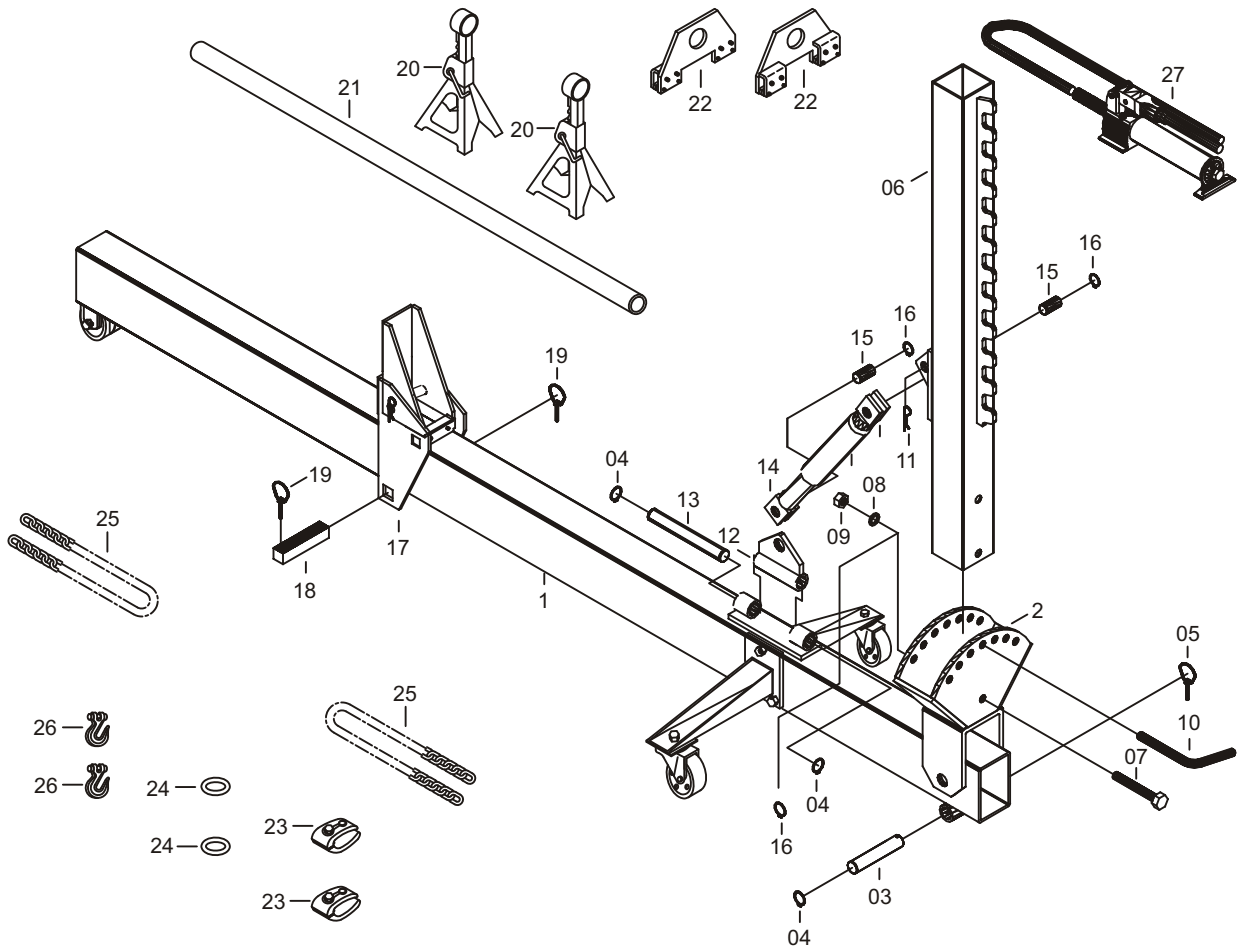
Attach the anchor post of the body straightener to the underside of the car near the rear wheels, using chain or the underbody anchoring system. Place a block or jack between the beam and the car. Chain the front of the frame to the pivot arm so that you pull the frame forward and downward simultaneously.



HOOK-UP FOR CENTER SWAY

This configuration shows a common hook-up for removing the center sway from a ladder frame. This set up can be used for other types of frame, but the frame should be tied together by the chain in order to move both rail at the same rate. Please note the car should be well supported with cross tubes and safety stands, and when attaching the frame with chains, it is a good idea to use short pieces of angle iron to pad the corners where chains wraps around the frame.

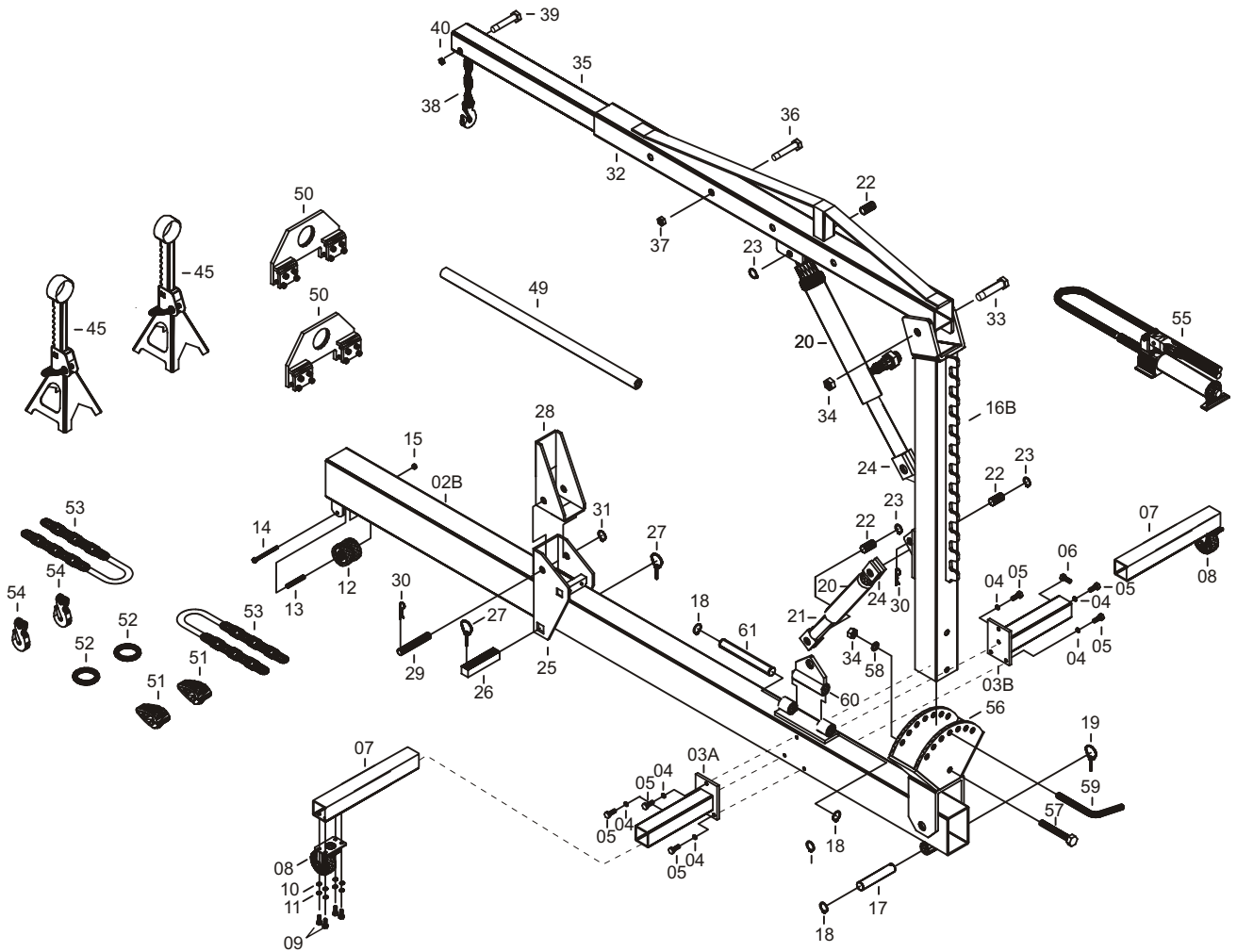
BODY STRAIGHTENER MODEL 851



PARTS LIST

PARTS NO	DESCRIPTION	QTY	PARTS NO	DESCRIPTION	QTY
01	MAIN BEAM	1	15	SPINDLE	2
02	TILTING SUPPORT	1	16	SNAP-RING"C"	2
03	SPINDLE	1	17	MULTI-POSITION ANCHOR POST	1
04	SNAP-RING"C"	3	18	STOP BLOCK	1
05	PIN	1	19	PIN	2
06	POST	1	20	SUPPORT STAND	2
07	BOLT 3*4"X7"	1	21	CROSS TUBE	1
08	SPRING WASHER	1	22	UNDERBODY SUPPORT CLAMPS	2
09	NUT 3/4"	1	23	PULL CLAMPS	2
10	LOCK PIN	1	24	PULL RING	2
11	COTTER PIN	3	25	6"X3/8"CHAIN	2
12	SUPPORT	1	26	3/8 HOOK	2
13	SPINDLE	1	27	10 TON HYDRAULIC UNIT	1
14	10 TON RAM	1			

BODY STRAIGHTENER W/2TON CRANE MODEL 857



PARTS NO	DESCRIPTION	QTY	PARTS NO	DESCRIPTION	QTY
02B	MAIN BEAM	1	28	ANCHOR POST UPPER BRACKET	1
03A	FRAME CANNULA	1	29	SPINDLE	1
03B	FRAME CANNULA	1	30	COTTER PIN	5
04	SPRING WASHER 3 15/16"	6	31	SNAP-RING"C"	1
05	BOLT 3 15/16"x 11 13/16"L	6	32	BOOM	1
06	BOLT 1/2"x3/4"L	2	33	BOLT 3/4"x46 1/4"L	1
07	EXTENSION BOOM	2	34	NUT 3/4"	2
08	CASTER ASS'Y	2	35	BOOM EXTENSION	1
09	BOLT 5/16"x3/4L	8	36	BOLT 5/8"x36 5/8"	1
10	SPRING WASHER 3 1/8"	8	37	NUT 5/8"	1
11	NUT 5/16"	8	38	HOOK AND CHAIN	1
12	FRONT WHEEL	2	39	BOLT 1/2"x30 5/16	1
13	BUSHING	1	40	NUT 1/2"	3
14	BOLT 3 1/8"x39 3/8"L	1	45	SUPPORT STAND	2
15	NUT 3 1/8"	1	49	CROSS TUBE	1
16B	POST	1	50	UNDERBODY SUPPORT CLAMPS	2
17	SPINDLE	1	51	PULL CLAMPS	2
18	SNAP-RING"C"	3	52	PULL RING	2
19	LOCK PIN	1	53	6"x3/8"CHAIN	2
20	CYLINDER	2	54	3/8"HOOK	2
21	ADAPTER	2	55	10 TON HYDRAULIC UNIT	1
22	SPINDLE	4	56	TILTING SUPPORT	1
23	SNAP-RING"C"	4	57	BOLT 3/4"x2 3/8"L	1
24	ADAPTER	2	58	SPRING WASHER	1
25	MULTI-POSITION ANCHOR POST	1	59	LOCK PIN	1
26	STOP BLOCK	1	60	SUPPORT	1