

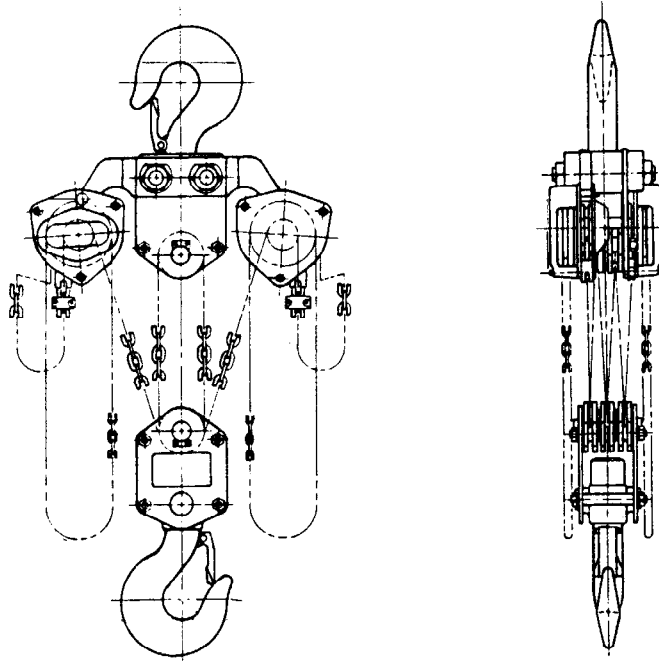
# OPERATION AND MAINTENANCE MANUAL

for

## CH SERIES

### STEEL MANUAL CHAIN HOIST

1/2 - 50 ton lifting capacity



1 ton = 2000 lbs.

20 ton shown

**READ THIS MANUAL BEFORE USING THESE PRODUCTS.** This manual contains important safety, installation, operation and maintenance information. Make this manual available to all persons responsible for the operation, installation and maintenance of these products.

**⚠ WARNING**

Do not use this hoist for lifting, supporting, or transporting people or lifting or supporting loads over people.

Always operate, inspect and maintain this Hoist in accordance with American National Standards Institute Safety Code (B30.16) and any other applicable safety codes and regulations.

Refer all communications to the nearest Ingersoll-Rand Material Handling Products Office or Distributor.

Form MHD56041  
Edition 2  
October 1991  
71073167

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**INGERSOLL-RAND®**  
**MATERIAL HANDLING**



# IMPORTANT

When ordering replacement parts, please specify the following points.

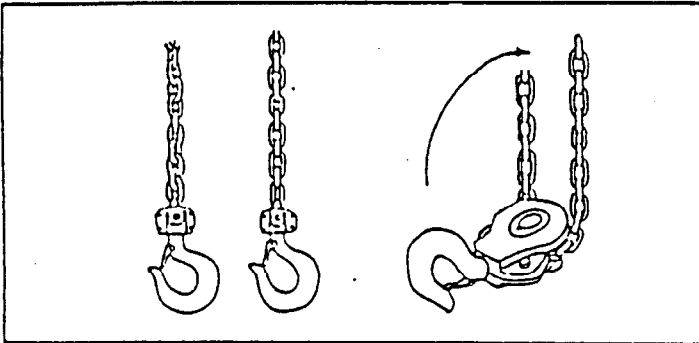
1. Part name and hoist capacity.
2. Correct fig. number and part number.
3. Any lift of chains available on request. load chain is heat treated. No addition to the chain to increase the length is possible. The chain must be replaced with a new one of desired length. Specify the length of chain when ordering. Also, include following lineal surplus length to secure sufficient lift.

005, 010 and 015 .....	0.2m	050 .....	0.7m
020 .....	0.3m		
030 .....	0.5m		

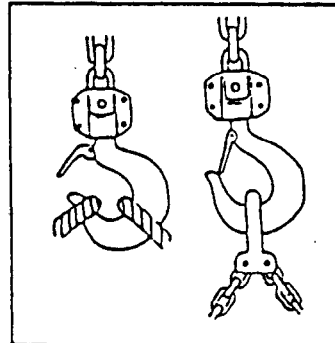
## Handling Manual

### WARNING

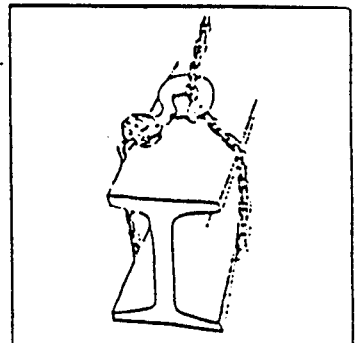
• No twisting. No capsizing for double type chains.



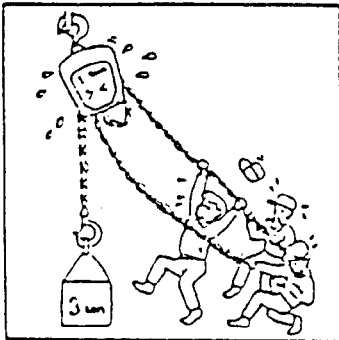
• Sling loads from the center of the hook.



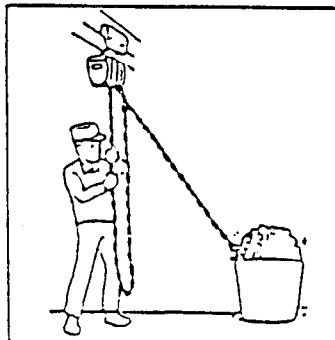
• No direct binding of a load with a load chain.



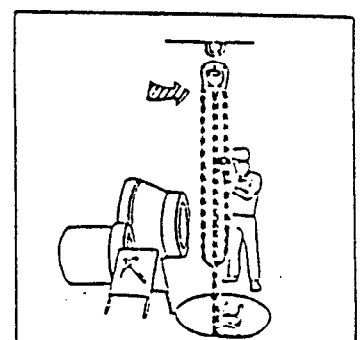
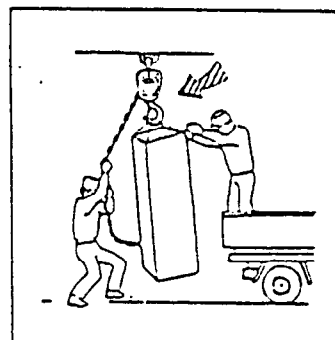
• No overloading.



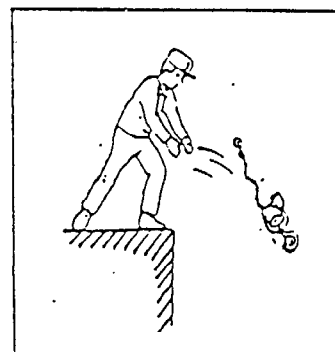
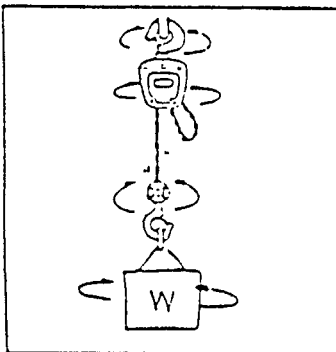
• No extreme slant slinging.



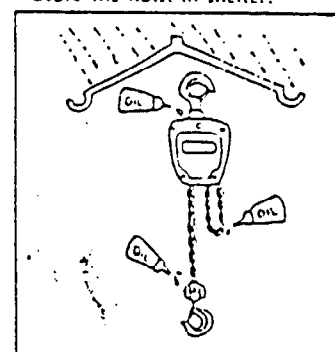
• No overlifting. No overlowering.



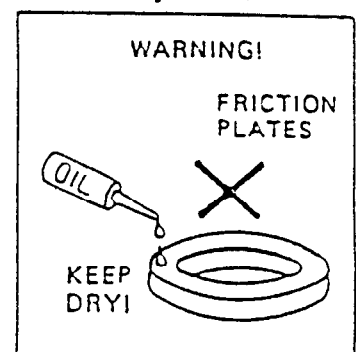
• No rough handling.



• Don't forget to oil the load chain and all the hook joints after use. Store the hoist in shelter.



• Don't disassemble under loading. Don't oil brake part but wipe off all foreign matter.

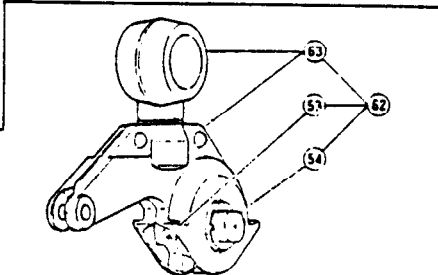
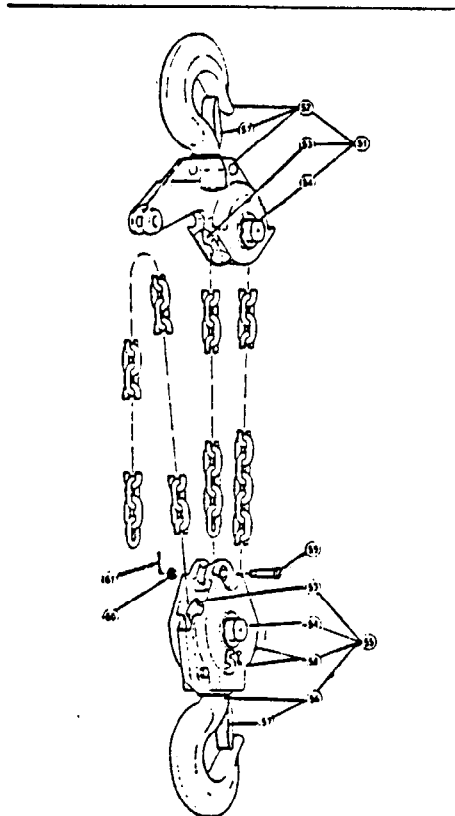
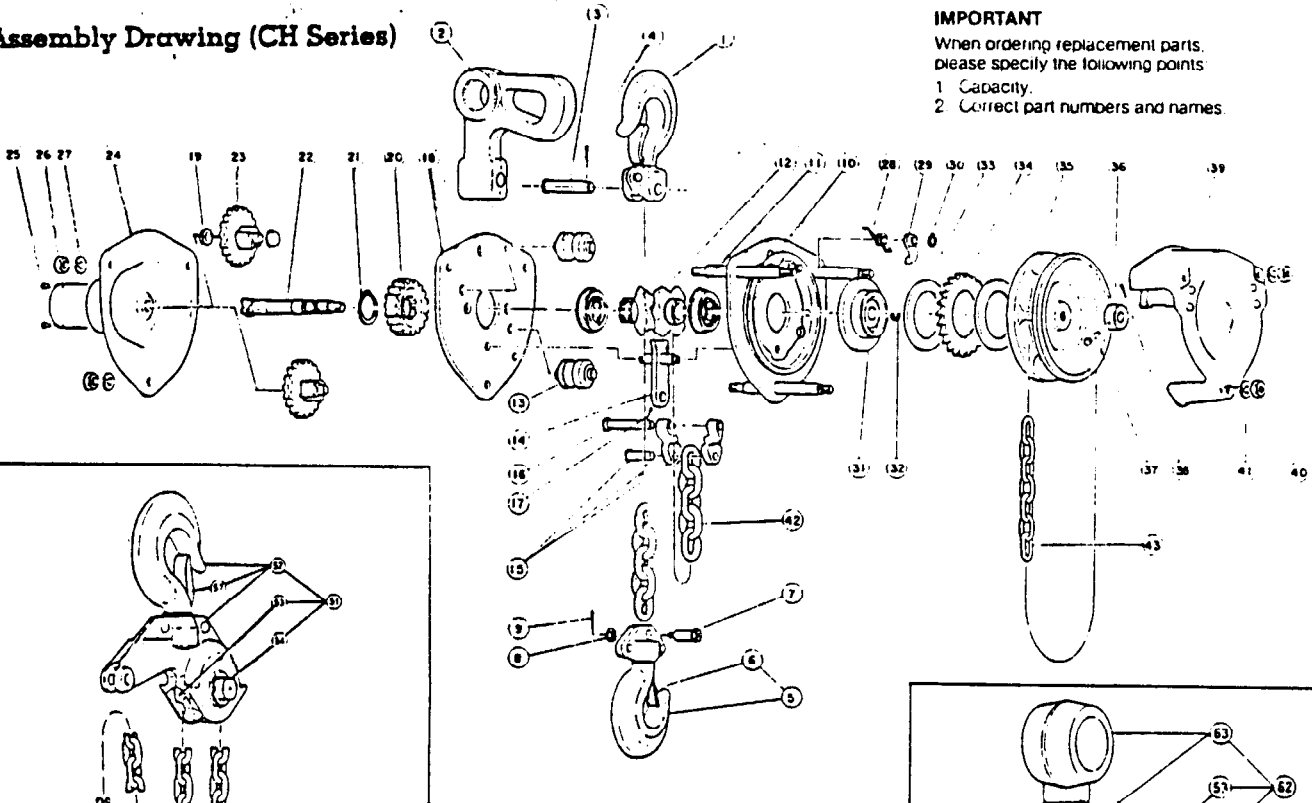


**Assembly Drawing (CH Series)**

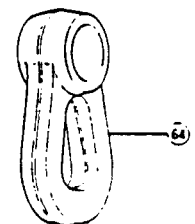
**IMPORTANT**

When ordering replacement parts,  
please specify the following points

1. Capacity.
2. Correct part numbers and names.



**Assembly Drawing (CH Series)  
Additional Parts**



MANUAL CHAIN HOIST PARTS

Steel (CH Series)

ITEM	DESCRIPTION	QTY	CAPACITY 1					PART NO.		
			1/2 TON	1 TON	1-1/2 TON	2 TON	3 TON	5 TON		
1	TOP HOOK ASSEMBLY	1	71666	71344	71370	71697	71481	---		
2	SUSPENDER	1	71309	71346	71372		71479	---		
3	TOP PIN	1	71670	71347	71373	71698	71482	71698		
4	SPLIT PIN	1	71671		71374		71455	71374		
5	BOTTOM HOOK ASSEMBLY	1	71672	71348	71375	71420	71733	---		
6	SAFETY LEVER ASSEMBLY	1	71667	71349	71376	71421	71456	---		
7	CHAIN PIN	1	71310	71350	71377	71422	71457	71422		
8	SLOTTED NUT	1	71311		71378	71423	71458	71423		
9	SPLIT PIN	1	71312		71379	71424	71459	---		
10	SIDE PLATE A	1	71313	71553	71380	71425	71460	71425		
11	BEARING B	2	71314	71351	71381	71426	71464	71426		
12	LOAD SHEAVE	1	71315	71352	71382	71427	71465	71427		
13	GUIDE ROLLER	2	71316	71353	71383	71417	71463	71417		
14	STRIPPER ASSEMBLY	1	71318	71554	71384	71428	71461	71428		
15	STOPPER ASSEMBLY	1	71317	71354	71385	71429	71462	71429		
16	TAIL PIN	1	71319	71355	71386	71430	71466	71430		
17	SPLIT PIN	1	71320							
18	SIDE PLATE B	1	71321	71356	71387	71431	71467	71431		
19	BEARING A	4	---	---	71388					
20	LOAD GEAR	1	71322	71357	71389	71432	71468	71432		
21	SNAP RING	1	71323	71358	71390	71433	71469	71433		
22	PINION	1	71325	71359	71391	71434	71470	71434		
23	GEAR #2/3	2	71326	71360	71392	71435	71471	71435		
24	GEAR CASE	1	71327	71361	71393	71436	71472	71436		
25	NAME PLATE	1	71328	71362	71394	71437	71473	71437		
26	NUT	3	71329		71396	71438				
27	SPRING WASHER	3	71330		71397	71439				
28	PAWL SPRING A	1	71545	71543	71541	71539				
28	PAWL SPRING B	1	71546	71544	71542	71540				
29	PAWL	1	71331	71363	71398	71440				
30	SNAP RING	1	71332		71399	71441				
31	FRICTION DISC	1	71333	71364	71400	71442	71474	71442		
32	SNAP RING	1	71334		71443					
33	FRICTION PLATE	2	71335	71365	71412	71444	71475	71444		
34	RATCHET DISC	1	71336	71366	71413	71445	71476	71445		
35	HAND WHEEL	1	71337	71555	71395	71415	71477	71415		
36	WHEEL STOPPER	1	71338	71367						
37	WHEEL STOPPER PIN	1	71339	71368						
38	SPLIT PIN	1	71340							
39	WHEEL COVER	1	71341	71369	71414	71416	71478	71416		
40	NUT	3	71342							
41	SPRING WASHER	3	71343							
42	LOAD CHAIN	1	LCCB005	LCCB010	LCCB015	LCCB020	LCCB030	LCCB020		
43	HAND CHAIN	1	HCCB005			HCCB015				

- Continued -

MF:br/7976A

MANUAL CHAIN HOIST PARTS

Steel (CH Series)

ITEM	DESCRIPTION	QTY	CAPACITY 1					PART NO.	
			1/2 TON	1 TON	1-1/2 TON	2 TON	3 TON	5 TON	
51	TOP HOOK ASSEMBLY	1	---	---	---	---	---	---	71454
52	TOP HOOK	1	---	---	---	---	---	---	71674
53	IDLE SHEAVE	1	---	---	---	---	---	---	71453
54	SHAFT ASSEMBLY	1	---	---	---	---	---	---	71452
55	BOTTOM HOOK ASSEMBLY	1	---	---	---	---	---	---	71451
56	BOTTOM HOOK	1	---	---	---	---	---	---	71450
57	SAFETY LEVER	1	---	---	---	---	---	---	71449
58	BOTTOM YOKE	1	---	---	---	---	---	---	71448
59	CHAIN PIN	1	---	---	---	---	---	---	71422
60	SLOTTED NUT	1	---	---	---	---	---	---	71423
61	SPLIT PIN	1	---	---	---	---	---	---	71424
62	SUSPENDER COMPLETE	1	---	---	---	---	---	---	71446
63	SUSPENDER	1	---	---	---	---	---	---	71334
64	SUSPENDER TYPE D	1	---	---	---	---	---	---	71447
65	HAND CHAIN GUIDE	1	12213	12214	12215	12216	12217	12216	

MF:br/7976A-2

### OPERATING INSTRUCTIONS: (Trolley)

Beebe Bros. Trolleys have the following features:

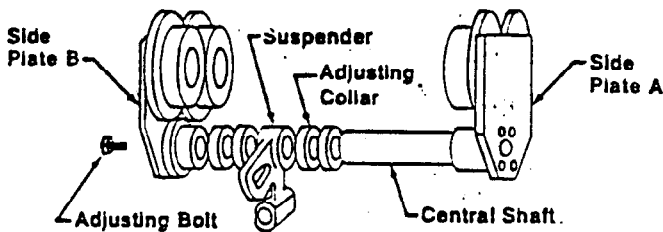
1. Sealed ball bearings used in all wheels for permanent lubrication.
2. Special design structure to assure correct contact with any "I" beam configurations.
3. Special contour wheels to assure proper contact with any kind of beam.
4. Adjustable collars to accommodate various "I" beam gauges.

### INSTALLATION:

The ideal way to install a trolley on the "I" beam is from the end after proper adjustments have been made in conformity with the width of the "I" beam, however, when the space between the "I" beam end and the building structure is limited and this procured method is inappropriate, then it is necessary to assemble the trolley on the "I" beam.

### HOW TO ADJUST TROLLEY WIDTH:

1. Remove the adjusting bolt and extract the side plate "B", the adjustable collars and the suspender unit from the central shaft.
2. Place the trolley wheels on the "I" beam and insert the required number of collars on both sides of the suspender on the central shaft as necessary.
3. Insert the side plate "B" into the central shaft and fix the adjusting bolt. See drawing below.



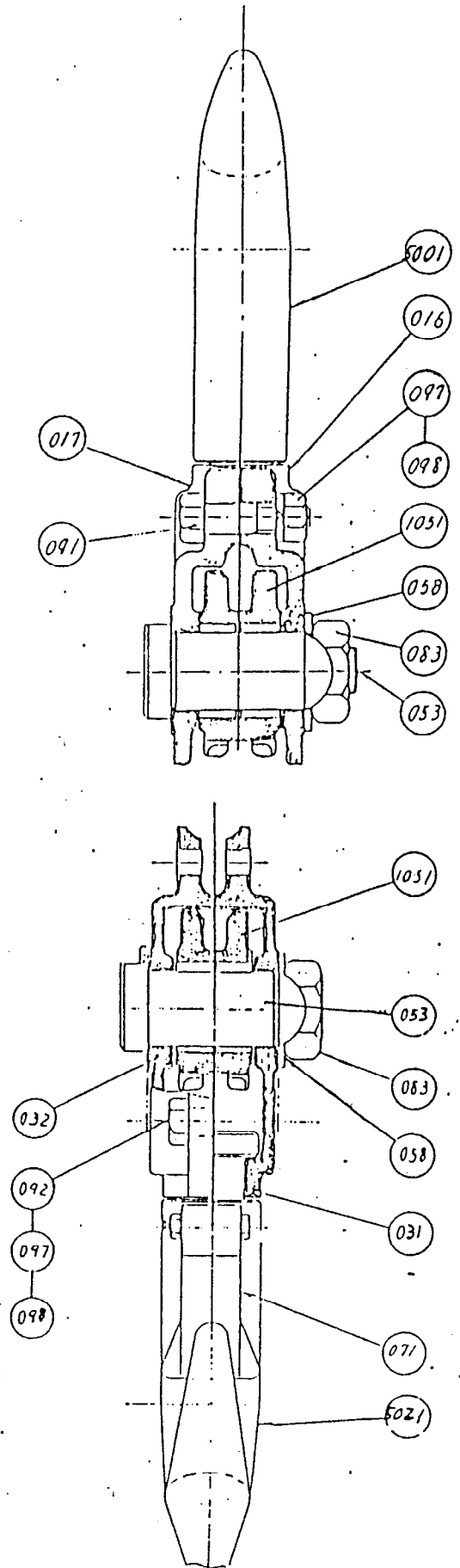
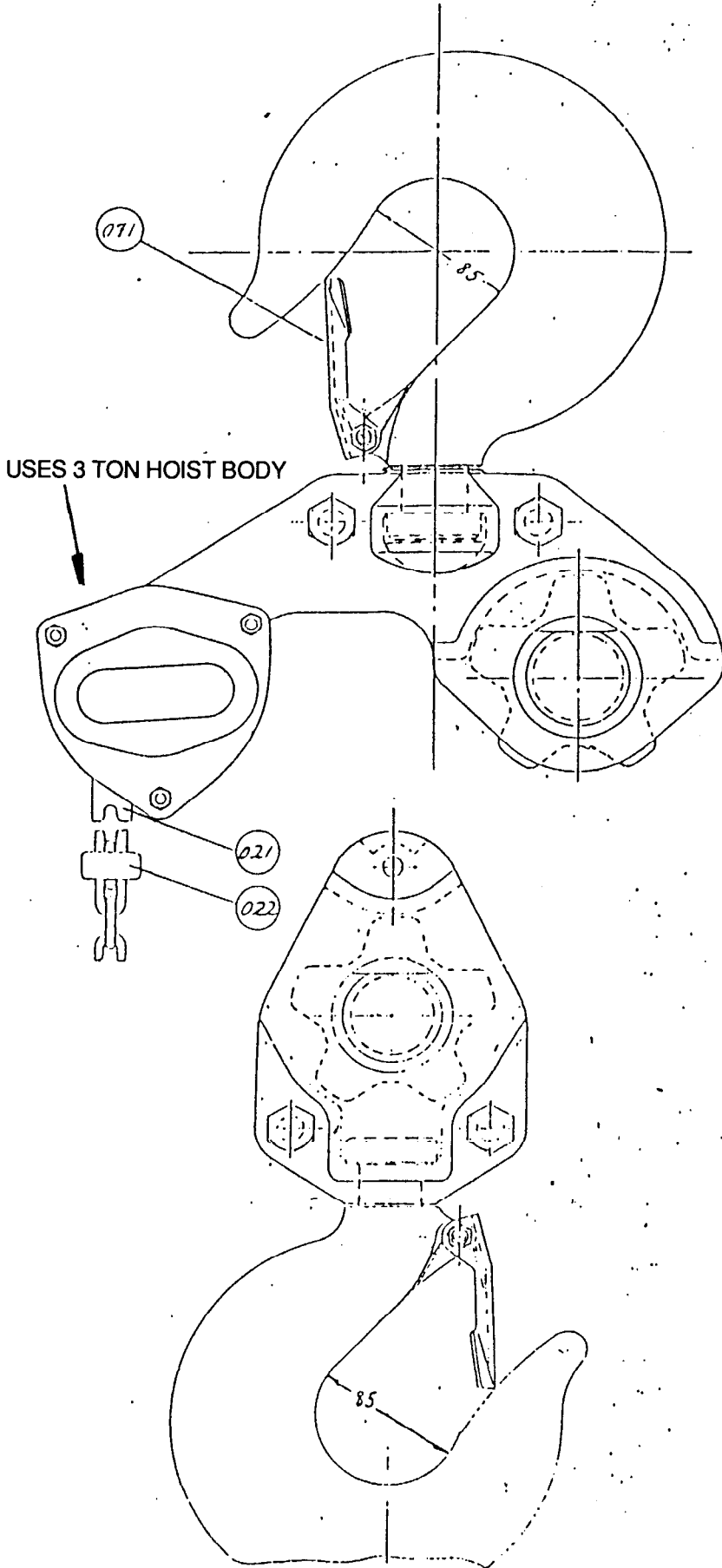
After use, sometimes oiling is needed in the small hole of the pinion support on the gear trolley. No oiling is necessary on the bearings of the wheels as they are permanently sealed.

### IMPORTANT:

The National Safety Council, Accident Prevention Manual for Industrial Operations, Seventh Edition and other recognized safety sources make a common point: "All employees working with cranes or hoists or assisting in hooking or arranging a load should be instructed to keep out from under load. From a safety standpoint, one factor is paramount: conduct all lifting operations in such a manner that if there were an equipment failure, no personnel would be injured. This means keep out from under raised load and keep out of the line of force of any load."

"It is the owner and users' responsibility to determine the suitability of a product for any particular use. Check all applicable industry, trade association, federal, state and local regulations. Read all operating instructions and warnings carefully."

# CH100 ASSEMBLY DRAWING





## CH100 PARTS LIST

### Top Hook

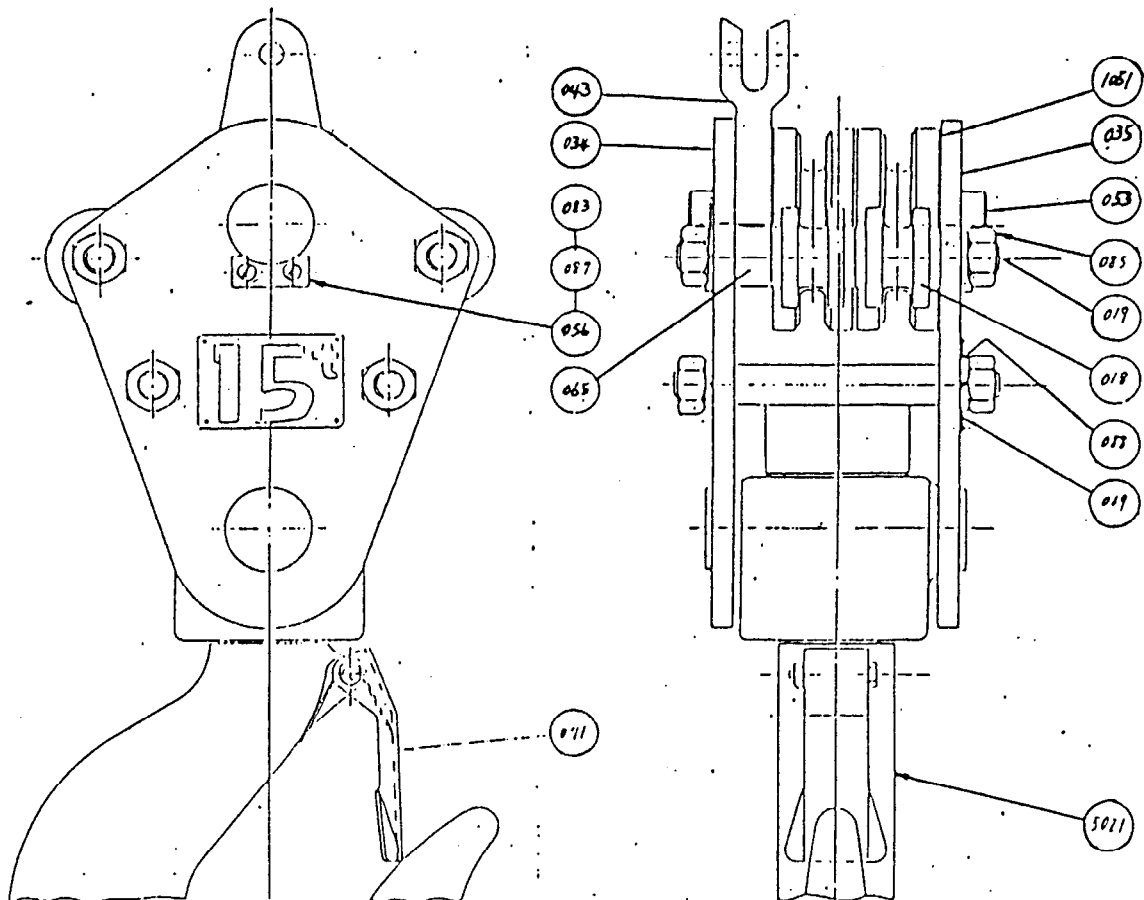
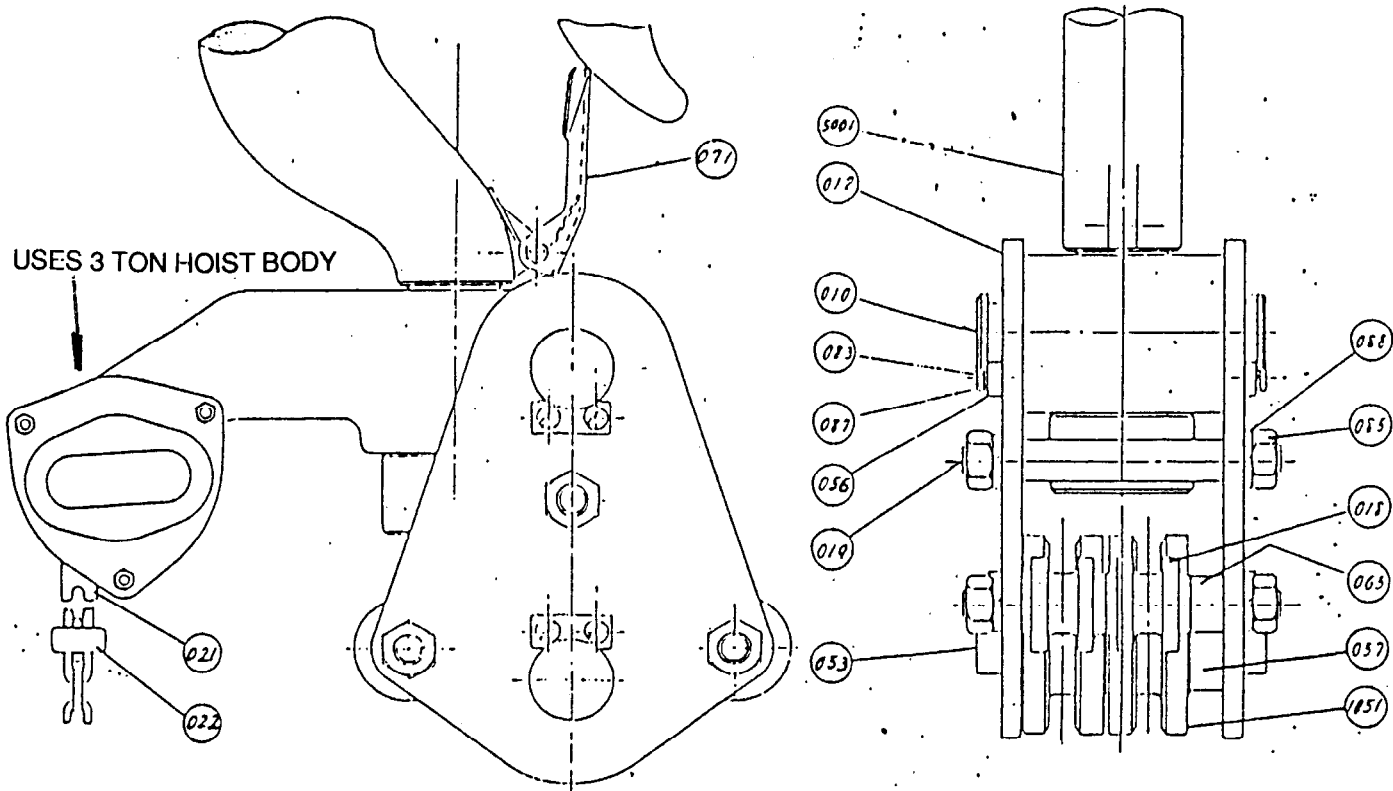
ITEM NO.	DESCRIPTION OF PART	TOTAL QTY.	PART NO.
5021	Top Hook Assembly	1	71490
071	Hook Latch Assembly	1	71483
016	Top Yoke A	1	
017	Top Yoke B	1	
091	Stay Bolt	2	
097	Nut	2	71494
098	Spring Washer	2	71495
1051	Idle Sheave with Bearing	1	71484
053	Idle Sheave Shaft	1	71485
083	Nut	1	71486
058	Pawl Washer	1	71487
021	Cross Guide Assembly	1	71488
022	Stopper Assembly	1	71489

### Bottom Hook

ITEM NO.	DESCRIPTION OF PART	TOTAL QTY.	PART NO.
5001	Bottom Hook Assembly	1	71496
071	Hook Latch Assembly	1	71483
031	Bottom Yoke A	1	71491
032	Bottom Yoke B	1	71492
092	Stay Bolt	2	71493
097	Nut	2	71494
098	Spring Washer	2	71495
1051	Idle Sheave with Bearing	1	71484
053	Idle Sheave Shaft	1	71485
083	Nut	1	71486
058	Pawl Washer	1	71487

Refer to CH030 for hoist parts.

# CH150 ASSEMBLY DRAWING



**CH150 PARTS LIST****Top Hook**

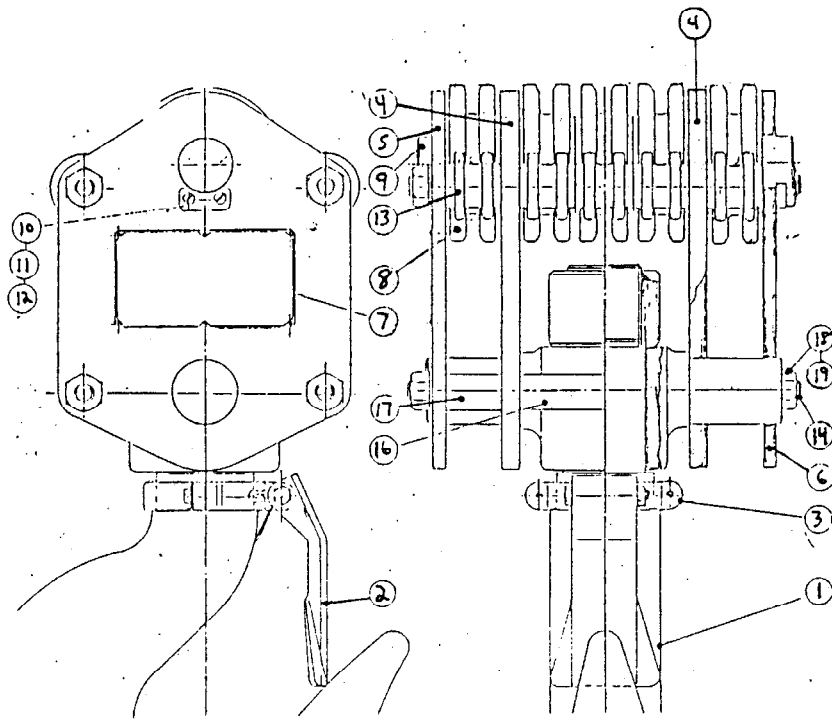
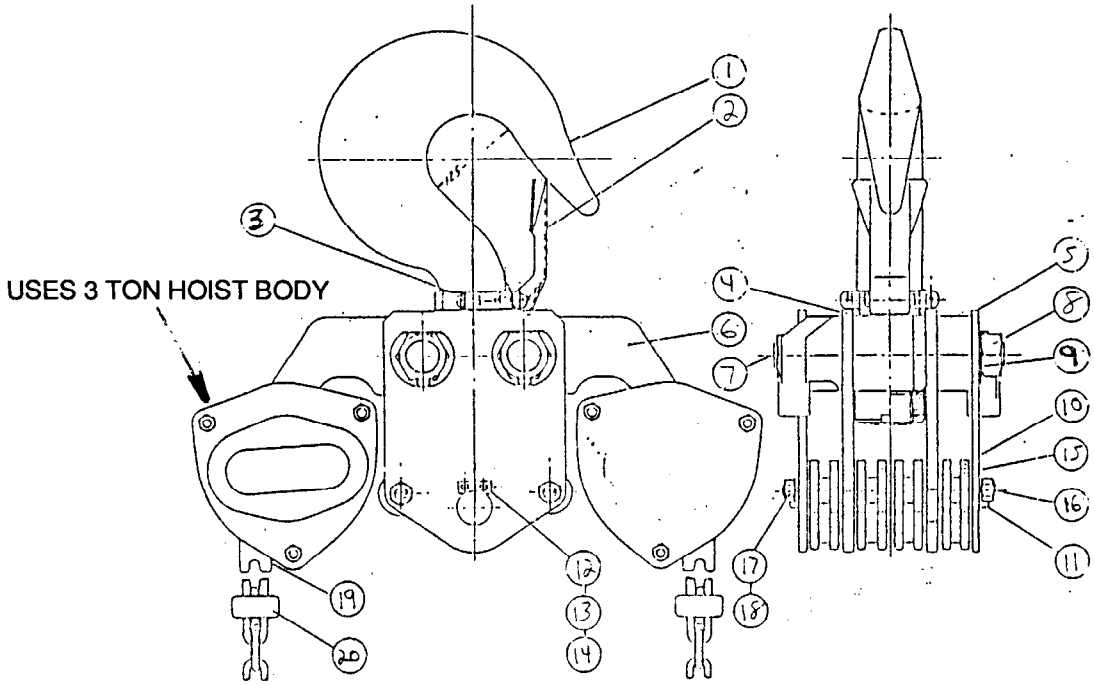
<b>ITEM NO.</b>	<b>DESCRIPTION OF PART</b>	<b>TOTAL QTY.</b>	<b>PART NO.</b>
5011	Top Hook Assembly	1	72145
071	Hook Latch Assembly	1	71498
012	Top Yoke	2	73063
010	Top Yoke Shaft	1	71980
056	Key Plate	4	70998
083	Flat Screw	8	71057
087	Spring Washer	8	71058
1051	Idle Sheave with Bearing	2	71499
053	Idle Sheave Shaft	1	70937
057	Shaft Collar	1	72068
018	Guide Roller	4	71500
019	Stay Bolt	3	72069
065	Bolt Collar	2	72079
085	Nut	6	72091
088	Spring Washer	6	73069
021	Cross Guide	1	70567
022	Stopper Assembly	1	72048

**Bottom Hook**

<b>ITEM NO.</b>	<b>DESCRIPTION OF PART</b>	<b>TOTAL QTY.</b>	<b>PART NO.</b>
5021	Bottom Hook Assembly	1	72028
071	Hook Latch Assembly	1	71498
034	Bottom Yoke A	1	71916
035	Bottom Yoke B	1	70889
069	Capacity Plate with Rivet	1	73064
043	Chain Suspender	1	73065
1051	Idle Sheave with Bearing	2	71499
053	Idle Sheave Shaft	1	70937
056	Key Plate	2	70998
083	Flat Screw	4	71057
087	Spring Washer	4	71058
018	Guide Roller	4	71500
019	Stay Bolt	4	72069
065	Bolt Collar	2	72079
085	Nut	8	72091
088	Spring Washer	8	73069

Refer to CH030 for hoist parts.

CH200 THRU CH500 ASSEMBLY DRAWING



## CH200 THRU CH500 PARTS LIST

### Top Hook

ITEM NO.	DESCRIPTION OF PART	PARTS PER HOIST				PART NO.			
		20t	30t	40t	50t	20t	30t	40t	50t
1	Top Hook Assembly	1	1	1	1	73066	73067	73068	70336
2	Hook Latch Assembly	1	1	1	1	72983	72984	72985	72986
3	Latch Holder Assembly	1	1	1	1	72987	72988	72989	72990
4	Top Yoke A	2	2	2	2	70337		70338	73070
5	Top Yoke B	-	2	2	2	-	72991	72992	72993
6	Suspension Arm	2	2	2	2	72994		72995	72996
7	Top Yoke Shaft	2	2	2	2	72997	72998	72999	73000
8	Nut	4	4	4	4	73001		73002	73003
9	Pawl Washer	4	4	4	4	73004			73005
10	Idle Sheave with Bearing	2	4	6	8	73006			73007
11	Idle Sheave Shaft	1	1	1	1	73008	73009	73010	73011
12	Key Plate	2	2	2	2	73012			73013
13	Flat Screw	4	4	4	4	73014			
14	Spring Washer	4	4	4	4	73015			
15	Guide Roller	4	8	12	16	73016		73017	73018
16	Stay Bolt	2	2	2	2	73019	73020	73021	73022
17	Nut	4	4	4	4	73023		73024	73025
18	Spring Washer	4	4	4	4	73026		73027	73028
19	Cross Guide Assembly	2	2	2	2	73029			73030
20	Stopper Assembly	2	2	2	2	73031			

### Bottom Hook

ITEM NO.	DESCRIPTION OF PART	PARTS PER HOIST				PART NO.			
		20t	30t	40t	50t	20t	30t	40t	50t
1	Bottom Hook Assembly	1	1	1	1	73072	73033	73034	73035
2	Safety Lever Assembly	1	1	1	1	72983	72984	72985	72986
3	Lever Holder Assembly	1	1	1	1	72987	72988	72989	72990
4	Bottom Yoke A	1	2	2	2	73036		73037	73038
5	Bottom Yoke B1	1	1	1	1	73039		73040	73041
6	Bottom Yoke B2	-	1	1	1	-	73042	73043	73044
7	Capacity Plate with Rivet	1	1	1	1	73045			
8	Idle Sheave with Bearing	3	5	7	9	73006			73007
9	Idle Sheave Shaft	1	1	1	1	73046	73047	73048	73049
10	Key Plate	2	2	2	2	73012			73013
11	Flat Screw	4	4	4	4	73014			
12	Spring Washer	4	4	4	4	73015			
13	Guide Roller	6	10	14	18	73016		73017	73018
14	Stay Bolt A	4	4	2	4	73050	73051	73052	73053
15	Stay Bolt B	-	-	2	-	-	-	73054	-
16	Belt Collar A	2	2	2	2	73055		73056	73057
17	Belt Collar B	-	4	4	4	-	73058	72059	73060
18	Nut	8	8	4	8	73023		73024	73025
19	Spring Washer	8	8	4	8	73026		73027	73028
20	Nut	-	-	4	-	-	-	73061	-
21	Spring Washer	-	-	4	-	-	-	73062	-

Refer to CH030 for hoist parts.

**SERVICE NOTES**

## HOIST AND WINCH LIMITED WARRANTY

Ingersoll-Rand Company (I-R) warrants to the original user its Hoists and Winches (Products) to be free of defects in material and workmanship for a period of one year from the date of purchase. I-R will repair, without cost, any Product found to be defective, including parts and labor charges, or at its option, will replace such Products or refund the purchase price less a reasonable allowance for depreciation, in exchange for the Product. Repairs or replacements are warranted for the remainder of the original warranty period.

If any Product proves defective within its original one year warranty period, it should be returned to any Authorized Hoist and Winch Service Distributor, transportation prepaid with proof of purchase or warranty card.

This warranty does not apply to Products which I-R has determined to have been misused or abused, improperly maintained by the user, or where the malfunction or defect can be attributed to the use of non-genuine I-R parts.

**I-R makes no other warranty, and all implied warranties including any warranty of merchantability or fitness for a particular purpose are limited to the duration of the expressed warranty period as set forth above. I-R's maximum liability is limited to the purchase price of the Product and in no event shall I-R be liable for any consequential, indirect, incidental, or special damages of any nature rising from the sale or use of the Product, whether based on contract, tort, or otherwise.**

**Note:** Some states do not allow limitations on incidental or consequential damages or how long an implied warranty lasts so that the above limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

## IMPORTANT NOTICE

It is our policy to promote safe delivery of all orders.

This shipment has been thoroughly checked, packed and inspected before leaving our plant and receipt for it in good condition has been received from the carrier. Any loss or damage which occurs to this shipment while enroute is not due to any action or conduct of the manufacturer.

### VISIBLE LOSS OR DAMAGE

If any of the goods called for on the bill of lading or express receipt are damaged or the quantity is short, do not accept them until the freight or express agent makes an appropriate notation on your freight bill or express receipt.

### CONCEALED LOSS OR DAMAGE

When a shipment has been delivered to you in

apparent good condition, but upon opening the crate or container, loss or damage has taken place while in transit, notify the carrier's agent immediately.

### DAMAGE CLAIMS

You must file claims for damage with the carrier. It is the transportation company's responsibility to reimburse you for repair or replacement of goods damaged in shipment. Claims for loss or damage in shipment must not be deducted from the Ingersoll-Rand invoice, nor should payment of Ingersoll-Rand invoice be withheld awaiting adjustment of such claims as the carrier guarantees safe delivery. You may return products damaged in shipment to us for repair, which services will be for your account and form your basis for claim against the carrier.

## United States Office Locations

### For Order Entry and Order Status:

#### INGERSOLL-RAND Distribution Center

510 Hester Drive  
P.O. Box 618  
White House, TN 37188  
Phone (615) 672-0321,  
Telex: 786573  
Fax: (615) 672-0601

### For Technical Support:

#### INGERSOLL-RAND Material Handling

2724 Sixth Avenue South  
P.O. Box 24046  
Seattle, WA 98124-0046  
Phone (206) 624-0466  
Telex: 3723554  
Fax: (206) 623-0464

#### Atlanta, GA

111 Ingersoll-Rand Drive  
Chamblee, GA 30341  
(404) 455-6200

#### Chicago, IL

888 Industrial Drive  
Elmhurst, IL 60126  
(708) 530-3800

#### Detroit, MI

22122 Telegraph Road  
Southfield, MI 48037  
(313) 353-3400

#### Houston, TX

2500 East T.C. Jester  
Suite 150  
Houston, TX 77008  
(713) 864-3700

#### Los Angeles, CA

5533 East Olympic Blvd.  
Los Angeles, CA 90022  
(213) 725-2826

#### Philadelphia, PA

900 E. 8th Ave., Suite 103  
King of Prussia, PA 19406  
(215) 337-5930

## International

Office and distributors in principal cities throughout the world. Contact the nearest Ingersoll-Rand office for the name and address or the distributor in your country or write to:  
Ingersoll-Rand  
Material Handling  
P.O. Box 24046 Seattle,  
WA 98124-0046 USA

#### Canada

#### Ingersoll-Rand Material Handling Division

123 Bowser Avenue  
North Vancouver, British Columbia V7P 3H1  
Phone: (604) 985-4470  
Fax: (604) 985-0160

#### Canada

#### National Sales Office

#### Power Tool Division Toronto, Ontario

2360 Millrace Court  
Mississauga, Ontario  
L5N 1W2  
(416) 858-8480

#### Calgary, Alberta

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