PARTS, OPERATION AND MAINTENANCE SUPPLEMENT

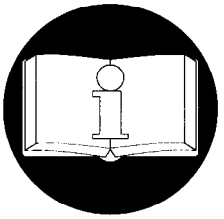
for

CAR PULLER ELECTRIC WINCHES*

1300 lbs. to 25,000 lbs. Capacity

(591 kg to 11,364 kg)

*** This supplement should be used in conjunction with the Electric Winch Parts, Operation and Maintenance Manual Form MHD56054. This supplement is specifically for winches built in 1989 or later. Information in this supplement may apply to older models, if a problem cannot be resolved contact the factory at (206) 624-0466.**



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 winch for lifting, supporting, or transporting people or lifting or supporting loads over people.

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

Form MHD56072
Edition 1
August 1993
71122196

INGERSOLL-RAND®
MATERIAL HANDLING

SPECIFICATIONS

Table 1

Model	Capacity*		Horsepower (HP)	Speed		Weight**	
	lbs.	kg		fpm	m/min	lbs.	kg
CP1300B20	1,300	591	1	20	6	370	168
CP1400B40	1,400	636	2	40	12	370	168
CP2000B20	2,000	909	1.5	20	6	375	170
CP2000B40	2,000	909	3	40	12	465	211
CP3000B40	3,000	1364	5	40	12	540	245
CP4000B20	4,000	1818	3	20	6	495	225
CP4500B50	4,500	2045	7.5	50	15	680	309
CP6000B20	6,000	2727	5	20	6	1010	459
CP6000B40	6,000	2727	7.5	40	12	1300	591
CP10000B20	10,000	4545	7.5	20	6	2035	925
CP10000B40	10,000	4545	15	40	12	2850	1295
CP15000B20	15,000	6818	10	20	6	2850	1295
CP25000B25	25,000	11364	20	25	7.5	3550	1614

* Capacities shown are with wire rope on the 2nd layer.

** Shipping weights are approximate and are based on winches with standard length drums, without wire rope and without options.

Model Code Explanation

When the letters "CP" appear before the standard model code it indicates that the winch has been manufactured with the optional Car Puller features. Refer to Electric Winch Parts, Operation and Maintenance Manual Form No. MHD56054.

Example: **CP**1300B20

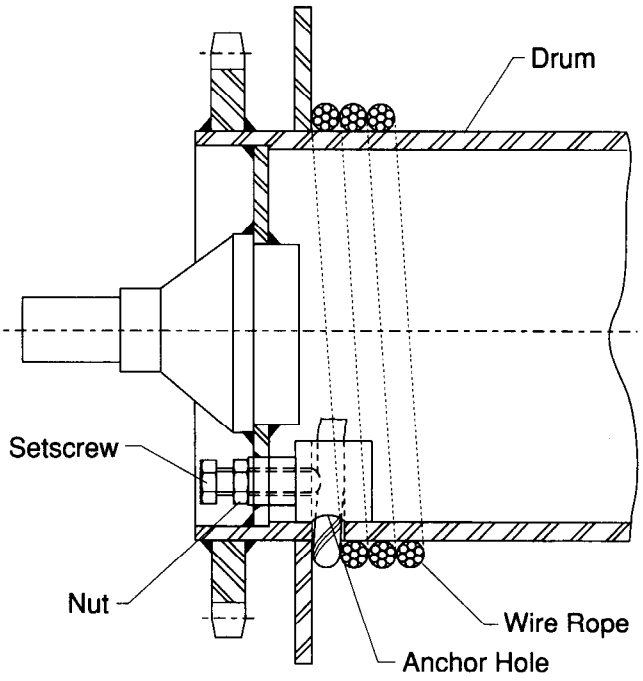
Install the winch in accordance with the installation instructions provided in the "INSTALLATION" section of the Electric Winch Parts, Operation and Maintenance Manual Form No. MHD56054.
In addition to the instructions provided in the Electric Winch Manual also:

1. Check that there is sufficient clearance for full travel of the clutch lever.
2. Adjust the drag brake in accordance with the drag brake adjustment procedure provided in the "MAINTENANCE" section.
3. Lubricate all pivot points prior to using the winch.

Installing Wire Rope

Two common methods of anchoring the wire rope to the drum are described in the Electric Winch Parts, Operation and Maintenance Manual Form No. MHD56054. Car Puller winches may be supplied with a third method which utilizes a setscrew to clamp the wire rope in the anchor pocket. (Ref. Dwg. MHTPA0483).
When this wire rope anchor method is used follow these instructions:

1. Cut wire rope to required length and fuse end to prevent fraying of strands in accordance with the wire rope manufacturer's instructions.
2. Feed approximately 5 in. (127 mm) of wire rope into the anchor hole in the drum barrel.
3. Rotate drum to align setscrew (133) with access hole in drum bearing support member on frame (1) and tighten setscrew (133) to clamp wire rope. Secure setscrew in position with nut (134).



(Dwg. MHTPA0483)

4. While keeping the wire rope under tension, wind the wire rope onto the drum.

⚠WARNING

• Always maintain a minimum of 3 tight wraps of wire rope on the drum at all times.

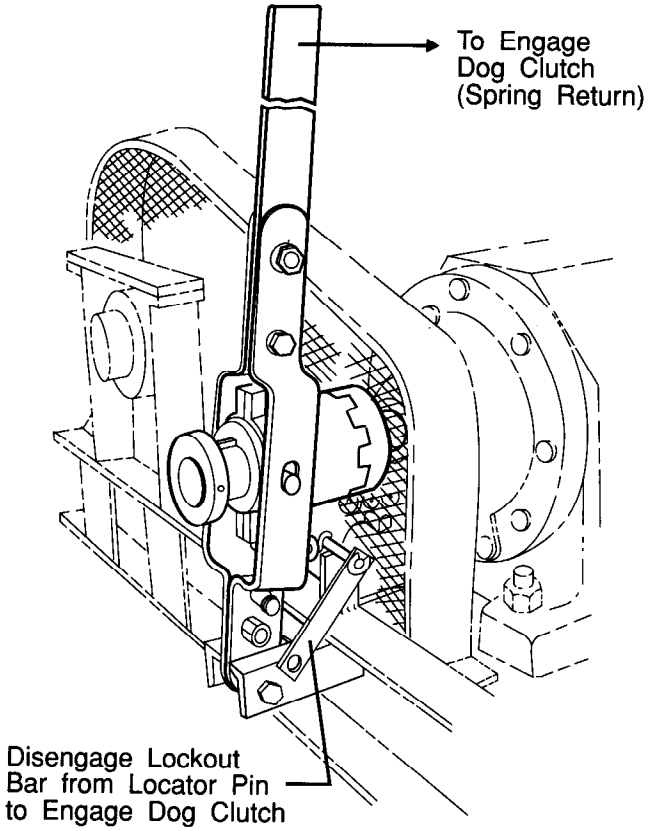
Electric base mounted car puller winches are equipped with a dog type jaw clutch which can be disengaged to allow wire rope to be pulled from the drum. To avoid overspooling or excessive unraveling of the wire rope an adjustable drag band brake is mounted to the drum. Refer to "MAINTENANCE" section for adjustment information.

⚠WARNING

• Do not disengage the clutch when wire rope is holding a load.

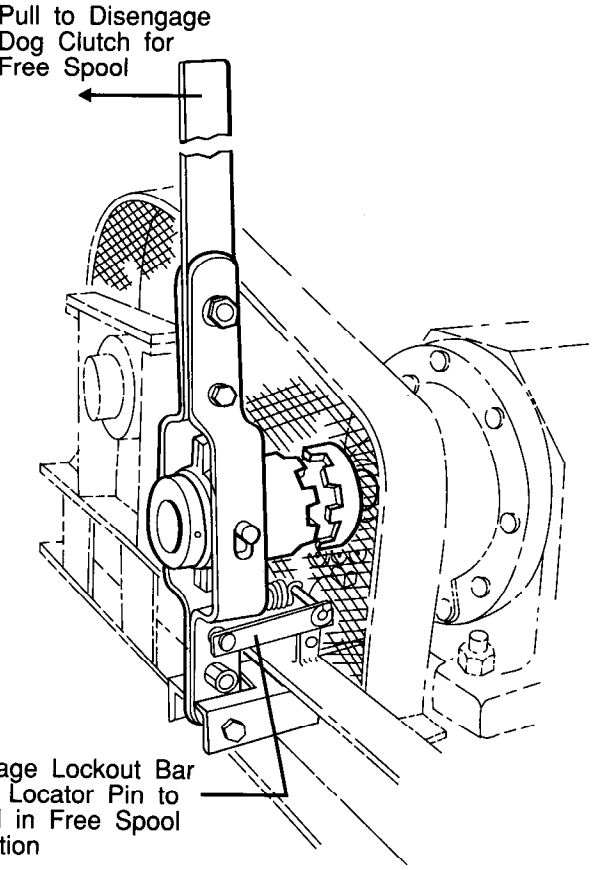
Clutch Operation

To engage the dog clutch ensure lockout bar (104) is disengaged from locator pin (124) and allow the lever to spring return toward the motor. The jaws of the dog clutch will engage allowing powered operation of the winch. It may be necessary to rotate the drum slightly to engage the dog clutch jaws. (Ref. Dwg. MHTPA0494).



(Dwg. MHTPA0494)

Pulling the clutch lever away from the motor will separate the jaws of the dog clutch disengaging the drive from the electric motor which allows the drum to free spool. To keep the dog clutch disengaged, locate the hole in the lockout bar (104) on the locator pin (124). (Ref. Dwg. MHTPA0495).



(Dwg. MHTPA0495)

⚠WARNING

• Always ensure clutch is fully engaged before operating winch under power.

• Do not attempt to engage clutch while drum is rotating.

INSPECTION

Follow all inspection procedures described in the Electric Winch Parts, Operation and Maintenance Manual Form No. MHD56054 plus the following:

Frequent Inspection

1. DOG CLUTCH. Check dog clutch for damage or failure to fully engage or disengage. Check for sticking or other signs of malfunction. Do not operate winch until all problems have been corrected.
2. WIRE ROPE ANCHOR. Check wire rope is securely anchored in the drum.

Periodic Inspection

1. BRAKE. Inspect the brake band lining after every 50 hours of use. When any part of the lining measures 1/16 in. (2 mm) or less, the brake band must be replaced. Check brake band lining is clean and not oil soaked.

LUBRICATION

Follow all lubrication procedures described in the Electric Winch Parts, Operation and Maintenance Manual Form No. MHD56054 plus the following:

Dog Clutch

The dog clutch on Car Puller winches may be equipped with grease fittings located in the sprocket hub and on the shifter band. Grease fittings should be lubricated monthly with 2 or 3 pumps from a grease gun, or more frequently, depending on severity of service. Rotate components slowly as grease is applied.

If the winch is disassembled, clean all parts thoroughly and coat bearings and shafts with clean grease. Use sufficient grease to provide a good protective coat. For temperatures -20° to 50° F (-29° to 10° C) use a multipurpose lithium-based EP 1 grease. For temperatures 30° to 120° F (0° to 49° C) use a multipurpose lithium-based EP 2 grease.

Pivot Points

Lubricate pivot points on shifter yoke to ensure dog clutch components operate freely. Use the same grease as is recommended for the dog clutch.

⚠WARNING

• Before performing maintenance, disconnect the load from the winch. A moving load could cause death, injury or property damage.
• Disconnect electrical power source before performing any maintenance. Accidental operation or contact with exposed power supply could cause death, injury or property damage.
• Before starting maintenance, tag winch:
DANGER - DO NOT OPERATE - EQUIPMENT BEING REPAIRED.
• Only allow personnel trained in the operation, service and repair of this unit to perform maintenance.
• After performing maintenance on load bearing parts, test winch to 110% of its rated capacity before returning to service.

Brake Drag Adjustment

1. Disengage dog clutch and slowly pull wire rope from drum.
2. Tighten nut (131) just enough to achieve brake drag which is suitable for the intended application. Loosening the nut will reduce the amount of drum drag.

NOTICE

• Adjusting brake band to provide more drag than is required to prevent wire rope over run in the free spool mode will result in excessive heat and premature brake wear.
• Brake drag adjustment should be conducted when winch is in typical operating condition.

General Disassembly

The following instructions are supplemental to those provided in the Electric Winch Parts, Operation and Maintenance Manual Form No. MHD56054 and provide the necessary information to disassemble, inspect, repair, and assemble the car puller section. An exploded drawing of the car puller components is provided in the Parts Section to assist part identification. If a winch is being completely disassembled for any reason, follow the order of the topics as they are presented. It is recommended that all maintenance work be performed in a clean dust free work area.

In the process of disassembly, observe the following:

1. Never disassemble the winch any further than is necessary to accomplish the needed repair. A good part can be damaged during the course of disassembly.
2. Never use excessive force when removing parts. Tapping gently around the perimeter of a part with a soft hammer should be sufficient to loosen the part.
3. Do not heat a part with a flame to free it for removal, unless the part being heated is already worn or damaged beyond repair and no additional damage will occur to other parts.

In general, components are designed to permit easy disassembly and assembly. The use of heat or excessive force should not be required.

4. Keep the work area as clean as practical, to prevent dirt and other foreign matter from getting into bearings or other moving parts.

Disassembly

1. Remove load from wire rope and disconnect electrical power to the winch.
2. Remove chain guard and chain.
3. Remove retainer rings (103) from lockout bracket (129) and locator pin (124).
4. Remove spring retainers (128), spring (127) and lockout bar (104).
5. Remove retainer rings (105) from locator pin (124) and pull locator pin (124) from shifter yoke (101).
6. Remove nuts (123) and (126), lockwashers (122) and (125) and capscrews (102) (106) and (107) from shifter yoke (101).
7. Remove handle (100) and shifter yoke (101).
8. Loosen setscrews (120) and pull collar (121) and shifter half (115) from motor shaft.
9. Loosen setscrews (114) and pull collar (113), sprocket hub (111) and thrust washer (109) from motor shaft. On CP25000 units loosen setscrew and remove second collar from motor shaft.
10. On CP15000B20 and CP25000B25 units remove nut (131) and brake band (132). Drive pin (136) out of brake drum (135) and pull brake drum from motor shaft.
11. Remove drum (2) as described in Electric Winch manual form MHD56054. Remove nut (131) from brake band (132). Remove capscrews and lockwashers and lift anchor bracket (130) from frame (1).

Cleaning, Inspection and Repair

Use the following procedures to clean, inspect, and repair the components of the winch.

Cleaning

Clean all components in solvent. Do not wash brake band. The use of a stiff bristle brush will facilitate the removal of accumulated dirt and sediments on the sprockets, frames and drum. Dry each part using low pressure, filtered compressed air.

Inspection

All disassembled parts should be inspected to determine their fitness for continued use. Pay particular attention to the following:

1. Inspect sprockets for worn, cracked, or broken teeth.
2. Inspect all bearings for wear, scoring, or galling.
3. Inspect shafts for ridges caused by wear. If ridges caused by wear are apparent on shafts, replace the shaft.
4. Inspect all threaded items and replace those having damaged threads.
5. Check guard for damage and that it provides suitable protection from the roller chain.
6. Inspect chain to ensure it is clean and free from rust. Refer to "LUBRICATION" section for information on cleaning and lubricating chain.
7. Inspect brake band lining. When any part of the lining measures 1/16 in. (2 mm) or less, the brake band must be replaced.
8. Inspect bushings (110) in sprocket hub (111). Refer to Table 2.

Table 2

Model Number	Bushing Bore Size			
	Original Dimension		Discard Dimension	
	in.	mm	in.	mm
CP1300B20, CP1400B40, CP2000B20 and CP2000B40	1.127	28.6	1.16	29.4
CP3000B40, CP4000B20 CP4500B50, CP6000B20 and CP6000B40	2.003	50.9	2.035	51.7
CP10000B20 and CP10000B40	2.505	63.6	2.540	64.5
CP15000B20	3.002	76.2	3.040	77.2
CP25000B25	3.504	89.0	3.540	90.0

Repair

Actual repairs are limited to the removal of small burrs and other minor surface imperfections from sprockets and shafts. Use a fine stone or emery cloth for this work.

1. Worn or damaged parts need to be replaced. Refer to the applicable Parts Section for specific replacement parts information.
2. Inspect all remaining parts for evidence of damage. Replace or repair any part which is in questionable condition. The cost of the part is often minor in comparison with the cost of redoing the job.
3. Smooth out all nicks, burrs, or galled spots on shafts, bores, pins, or bearings.
4. Examine all sprocket teeth carefully, and remove nicks or burrs.
5. Polish the edges of all shaft shoulders to remove small nicks which may have been caused during handling.
6. Remove all nicks and burrs caused by lockwashers.

Assembly

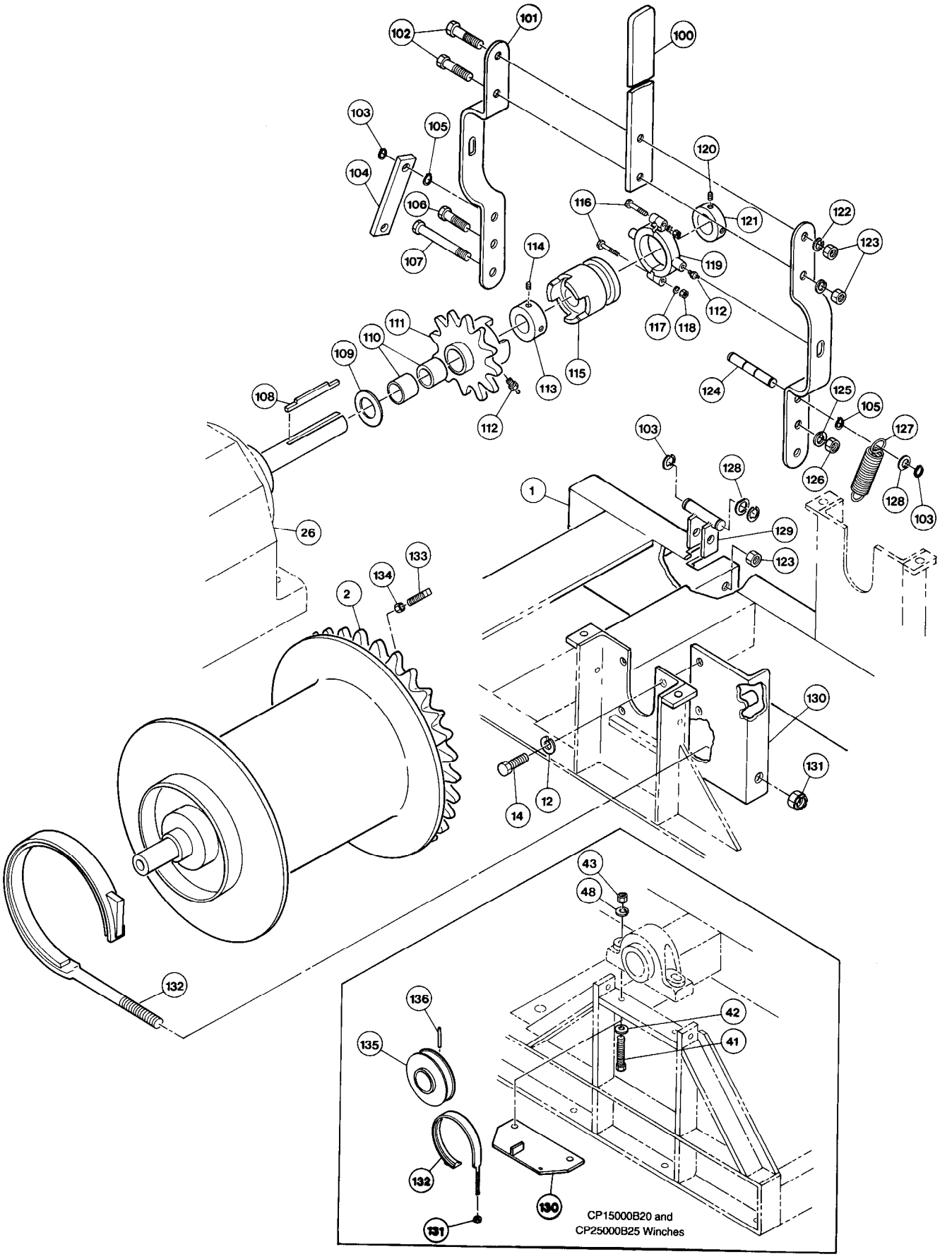
1. Install drum (2) as described in Electric Winch manual form MHD56054. Install anchor bracket (130) and secure with capscrews (14) and lockwashers (12).
   a. On CP15000B20 and CP25000B25 units anchor bracket is attached to outside of frame (1) with capscrews (41).
   b. On CP15000B20 and CP25000B25 units install brake drum (135) on drum spigot so pin hole is aligned. Tap pin (136) through brake drum and drum spigot until flush. Install brake band (132) and nut (131).
2. Install thrust washer (109), sprocket hub (111) and collar (113) on motor shaft. On CP25000 units begin with collar. Tighten setscrews (114).
3. Install shifter half (115) and collar (121) on motor shaft. Tighten setscrews (120).
4. Install shifter yoke (101) halves.
5. Install capscrew (106), lockwasher (125) and nut (126).
6. Install locator pin (124) in shifter yoke (101). Install retainer rings (105) on locator pin (124).
7. Install lockout bar (104), spring (127), spring retainer (128) and retainer rings (103). Flat edge of spring retainer must be nearest spring.
8. Install retainer rings (103) on lockout bracket (128) and locator pin (123).
9. Install handle (100). Secure with capscrews (102), lockwashers (122) and nuts (123).
10. Install chain and chain guard.

Test

Check operation of clutch assembly. Ensure dog clutch jaws are clear of each other when clutch is disengaged. Clutch lever and jaws must return to engaged position when clutch lever is released.

Conduct operating and load tests as described in the "MAINTENANCE" section of the Electric Winch Parts, Operation and Maintenance Manual Form No. MHD56054.

PARTS DRAWING



(Dwg. MHTPC0482)

PARTS LIST

This parts list and drawing only refers to parts used on winches with the Car Puller feature. Parts for the remainder of the winch can be found in the Electric Winch Parts, Operation and Maintenance manual, form number MHD56054.

ITEM NO.	DESCRIPTION OF PART	TOTAL QTY.	PART NUMBER	
			CP1300B20, CP1400B40, CP2000B20 and CP2000B40	CP3000B40, CP4000B20 and CP4500B50
1	Frame	1	9538	7384-1
2	Drum	1	1903-*	7386
3**	Guard	1	1905	7387-2
12	Lockwasher	2	51581	50181
14	Capscrew	2	50847	52008
26	Motor	1	See Chart	
100	Handle	1	6577-1	6577-2
101	Shifter Yoke	1 Set	6222-20	6222-30
102	Capscrew	2	52008	50872
103	Retainer Ring	4	53811	
104	Lockout Bar	1	617	
105	Retainer Ring	2	52911	
106	Capscrew	1	50183	
107	Capscrew	1	51763	54961
108	Key	1	1987-B	3631-A
109	Thrust Washer	1	1987-A	3631-B
110	Bushing	See ( )	50506 (1)	51242 (2)
---	Jaw Clutch Assy. (Incl's items 111 and 114)	1	21790	21078
111	Sprocket Hub (Incl's item 110)	1	6772	21077
112	Grease Fitting		53498	
113	Collar	1	1987-C	3631-C
114	Setscrew	2	52643	
115	Shifter Half	1	21792	3633SJ
116	Capscrew	2	54323	52844
117	Lockwasher	2	51801	51013
118	Nut	2	53390	52265
119	Shifter Band	1 set	6247-1	6247-2
120	Setscrew	See ( )	53154 (2)	52643 (3)
121	Collar	1	1987-D	3631-D
122	Lockwasher	3	50181	50203
123	Nut	4	51750	50913
124	Locator Pin	1	7867	
125	Lockwasher	1	50181	
126	Nut	1	52929	
127	Spring	1	1643	
128	Spring Retainer	2	4428	
129	Lockout Bracket***	1	1642	
130	Anchor Bracket	1	2974	2957
131	Nut	1	51750	
132	Brake Band	1	1771	
133	Setscrew	1	71062301	71081020
134	Nut	1	50914	

* Insert drum length in inches

** Not shown on drawing

*** Welded to frame at factory

PARTS LIST

This parts list and drawing only refers to parts used on winches with the Car Puller feature. Parts for the remainder of the winch can be found in the Electric Winch Parts, Operation and Maintenance manual, form number MHD56054.

ITEM NO.	DESCRIPTION OF PART	TOTAL QTY.	PART NUMBER			
			CP6000B20 and CP6000B40	CP10000B20 and CP10000B40	CP15000B20	CP25000B25
1	Frame	1	7805-*	7759-*	8022-*	5669
2	Drum	1	7516	3862-*	4420-*	7011-*
3**	Guard	1	14361	7760	4424	3852
26	Motor	1	See Chart			
41	Capscrew	2	---			52248
42	Washer	2	---			52253
43	Nut	2	---			52252
48	Lockwasher	2	---			52837
100	Handle	1	6577-2	6577-3		
101	Shifter Yoke	1 Set	6222-30	6222-45		6222-60
102	Capscrew	2	50872	50872		
103	Retainer Ring	4	53811			
104	Lockout Bar	1	617	617-2		617
105	Retainer Ring	2	52911			
106	Capscrew	1	50183	50850		
107	Capscrew	1	54961			
108	Key	1	3631-A	3639-B	4408-B	7019-B
109	Thrust Washer	1	3631-B	3639-A	4408-A	---
110	Bushing	2	51242	51688	51295	51302
---	Jaw Clutch Assy. (Incl's items 111 and 112)	1	22490	21278	4407	7013
111	Sprocket Hub (Incl's item 110)	1	22489	21279	4405-SJ	20707
112	Grease Fitting	See ( )	53498 (1)		53498 (2)	53498 (1)
113	Collar	1	3631-D	3639-D	4408-C	7019-D
114	Setscrew	See ( )	52643 (3)	54092	54092 (2)	54092 (4)
115	Shifter Half	1	3633SJ	3646-SJ	4406-SJ	7017-SJ
116	Capscrew	2	52844	51840		53391
117	Lockwasher	2	51013	50200		50181
118	Nut	2	52265	50198		50171
119	Shifter Band	1 set	6247-2	6247-3		6247-4
120	Setscrew	See ( )	52643 (2)		54092 (3)	54092 (4)
121	Collar	1	3631-C	3639-C	4408-D	7019-C
122	Lockwasher	3	50203			
123	Nut	4	50913			
124	Locator Pin	1	7867			
125	Lockwasher	1	50181	50203		
126	Nut	1	52929	50913		
127	Spring	1	1643			
128	Spring Retainer	1	4428			
129	Lockout Bracket***	1	1642			
130	Anchor Bracket	1	2041	3869	4421	7014
131	Nut	1	51750			

* Insert drum length in inches

** Not shown on drawing

*** Welded to frame at factory

ITEM NO.	DESCRIPTION OF PART	TOTAL QTY.	PART NUMBER			
			CP6000B20 and CP6000B40	CP10000B20 and CP10000B40	CP15000B20	CP25000B25
132	Brake Band	1	1771			
133	Setscrew	1	53831	---		
134	Nut	1	50914	---		
135	Brake Drum	1	---		7039	
136	Pin	1	---		54956	

* Insert drum length in inches

** Not shown on drawing

*** Welded to frame at factory

WINCH MOTOR ASSEMBLY PARTS LIST

Winch Model Number	Motor HP	Motor Mount Position	Reduction Gear Ratio	Amps at Full Load 460V 15 min Duty	Amps at Full Load 460V Continuous Duty	230V	230V/460V	460V
						Three Phase (60 cycle) (unless noted)		
CP1300B20	1	P	53:1	3.0	1.95		71099535	
CP1400B40	2	P	27:1	4.8	3.0			
CP2000B20	1.5	P	53:1	3.85	2.4			52342
CP2000B40	3	P	26.8:1	6.05	4.3			
CP3000B40	5	P	40:1	8.35	7.3		71107411	
CP4000B20	3	P	73.1:1	6.05	4.3			
		P	96:1					
CP4500B50	7.5	P	28.8:1	14.2	9.6			
CP6000B20	5	P	70:1	8.35	7.3			
CP6000B40	7.5	P	52:1	14.2	9.6		71124838 (M)	
CP10000B20	7.5	P	99:1	14.2	9.6			71125652 (M) 71061360
CP10000B40	15	P	40.6:1	25.5	18			
CP15000B20	10	P	103:1	20	---			
CP15000B20	12.5	P		---	15.8			
CP22000B30	25	P	80.36:1	---	33			
CP25000B25	20	P	95:1	34	---			71074199

Unless otherwise specified motor and reduction assemblies are manufactured for Ingersoll-Rand by Eurodrive

(M) Marine Option

P = Motor mounted parallel to drum

Contact your nearest distributor or Ingersoll-Rand Material Handling Office for part number information

NOTICE

• Motors are not interchangeable between standard winches and car puller winches. Motors used on car puller winches have a longer output shaft in order to accommodate the dog clutch.

WINCH MOTOR ASSEMBLY PARTS LIST (continued)

Winch Model Number	Motor HP	Motor Mount Position	*Reducer Gear Ratio	Amps at Full Load 380V	380V (50 cycle)		Amps at Full Load 575V	575V (60 cycle)	
					Standard	Marine		Standard	Marine
					Three Phase			Three Phase	
CP1300B20	1	P	53:1	2.2			1.55		
CP1400B40	2	P	27:1	3.65			2.4		
CP2000B20	1.5	P	53:1	2.85			1.9		
CP2000B40	3	P	26.8:1	5.2			3.45		
CP3000B40	5	P	40:1	9.2			5.8		
CP4000B20	3	P	73.1:1	5.2			3.45		
		P	96:1						
CP4500B50	7.5	P	28.8:1	11.6			7.7		
CP6000B20	5	P	70:1	9.2			5.8		71116586 (M)
CP6000B40	7.5	P	52:1	11.6			7.7		
CP10000B20	7.5	P	99:1	11.6			7.7		
CP10000B40	15	P	40.6:1	22			14.5	71108682	
CP15000B20	12.5	P	103:1	19			12.6		
CP25000B30	25	P	95:1	39			26.5		

Unless otherwise specified motor and reduction assemblies are manufactured for Ingersoll-Rand by Eurodrive

* For 575V (60 cycle) only. Slightly modified ratios are used for 380V (50 cycle) motors

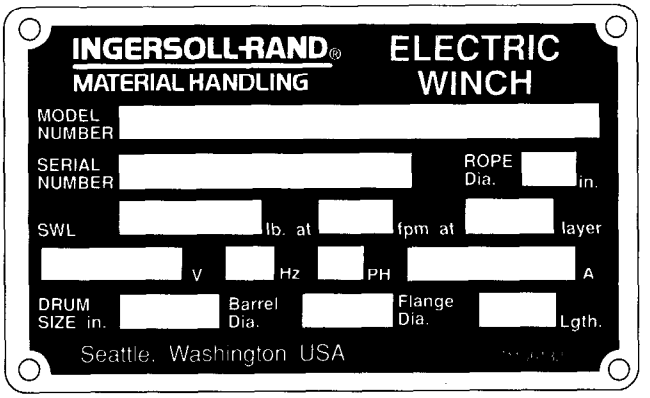
P = Motor mounted parallel to drum

Contact your nearest distributor or Ingersoll-Rand Material Handling Office for part number information

The use of replacement parts other than **Ingersoll-Rand Material Handling** will invalidate the Company's warranty. For prompt service and genuine **Ingersoll-Rand Material Handling** parts, provide your nearest Distributor with the following:

1. Complete winch model number and serial number as it appears on the nameplate.
2. Part number and part description as shown in this manual.
3. Quantity required.

The model and serial number plate is located on the frame.



For your convenience and future reference it is recommended that the following information be recorded.

Winch Model Number.....

Winch Serial Number.....

Date Purchased.....

Return Goods Policy

Ingersoll-Rand will not accept any returned goods for warranty or service work unless prior arrangements have been made and written authorization has been provided from the location where the goods were purchased.

NOTICE

• Continuing improvement and advancement of design may cause changes to this winch which are not included in this manual. Manuals are periodically revised to incorporate changes. Always check the manual edition number on the front cover for the latest issue.

When the life of the winch has expired, it is recommended that the winch be disassembled, degreased and parts separated as to materials so that they may be recycled. For additional information contact:

Ingersoll-Rand Material Handling
2724 Sixth Avenue South
Seattle, Wa 98124 USA
Phone: (206) 624-0466
Fax: (206) 624-6265
or
Ingersoll-Rand Material Handling
Samiia, Douai Operations
111, avenue Roger Salengro
59450 Sin Le Noble, France
Phone: (33) 27-93-08-08
Fax: (33) 27-93-08-00

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
P.O. Box 618
510 Hester Drive
White House, TN 37188
Phone: (615) 672-0321
Telex: 786573
Fax: (615) 672-0801

For Technical Support

Ingersoll-Rand
Material Handling
P.O. Box 24046
2724 Sixth Avenue South
Seattle, WA 98124-0046
Phone: (206) 624-0466
Telex: 328795
Fax: (206) 624-6265

Regional Sales Offices

Atlanta, GA
111 Ingersoll-Rand Drive
Chamblee, GA 30341
Phone: (404) 936-6230

Detroit, MI
23192 Commerce Drive
Farmington Hills, MI 48335
Phone: (313) 476-6677
Fax: (313) 476-6670

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

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

Milwaukee, WI
12311 W. Silver Spring Dr.
Milwaukee, WI 53225
Phone: (414) 461-0973

Philadelphia, PA
P.O. Box 425
900 E. 8th Ave., Suite 103
King of Prussia, PA 19406
Phone: (215) 337-5930

International

Offices and distributors in principal cities throughout the world. Contact the nearest **Ingersoll-Rand** office for the name and address of the distributor in your country or write/fax to:

Ingersoll-Rand
Material Handling
P.O. Box 24046
2724 Sixth Avenue South
Seattle, WA 98124-0046
USA
Phone: (206) 624-0466
Telex: 328795
Fax: (206) 624-6265

Canada
National Sales Office
Regional Warehouse
Toronto, Ontario
51 Worcester Road
Rexdale, Ontario
M9W 4K2
Phone: (416) 675-5611
Fax: (416) 675-6920
Order Desk
Fax: (416) 674-6549

Regional Sales Offices

Calgary, Alberta
44 Harley Road S.E.
Calgary, Alberta
T2V 3K3
Phone: (403) 252-4180
Fax: (403) 252-4462

Edmonton, Alberta
1430 Weber Center
5555 Calgary Trail N.W.
Edmonton, Alberta
T6H 5G8
Phone: (403) 438-5039
Fax: (403) 437-3145

Montreal, Quebec
3501 St. Charles Blvd.
Kirkland, Quebec
H9H 4S3
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Fax: (514) 695-0963

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