

**SUPPLEMENT TO OWNER'S MANUAL**

**FOR**

**HARRINGTON  
PEERLESS CB  
CHAIN HOIST**

**30 to 50 Ton Capacity**

**Model M3**

**Hoists**

**HARRINGTON**  
Cranes

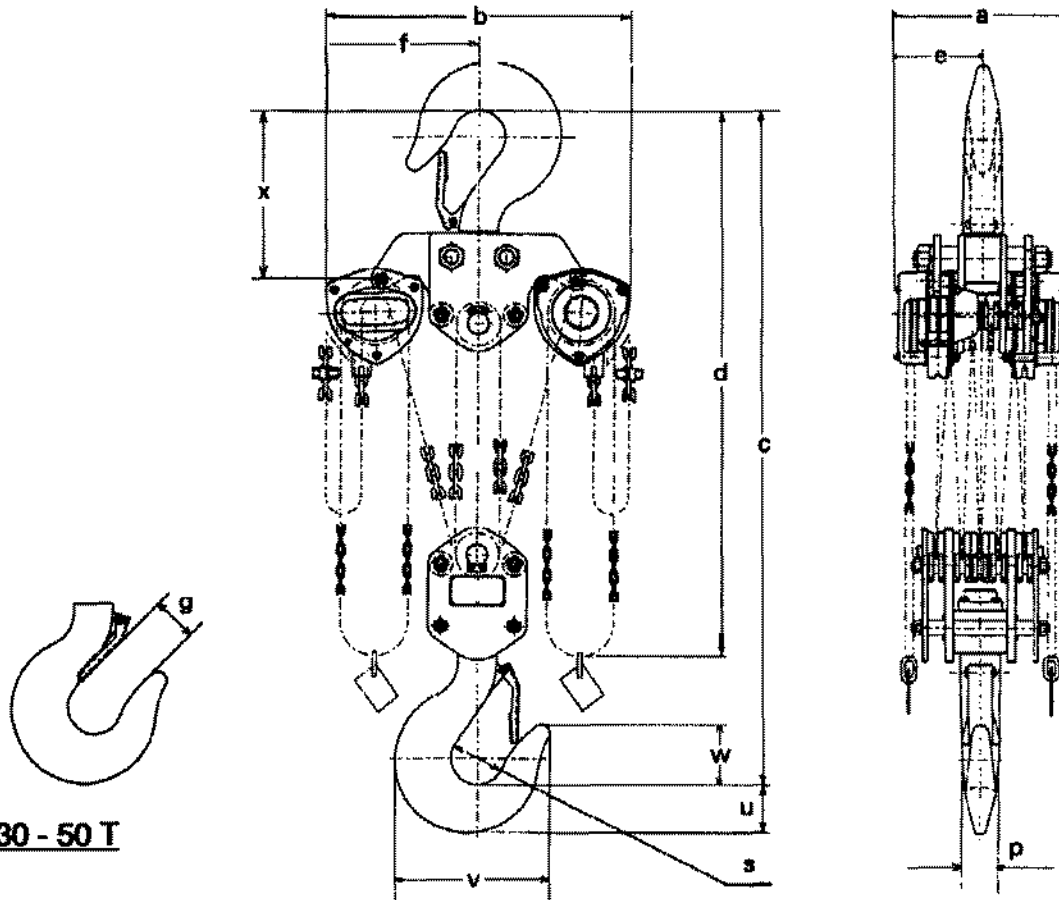
**BUILT BETTER, BACKED BETTER**

**HARRINGTON HOISTS, INC.  
401 WEST END AVENUE  
MANHEIM, PA 17545**

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TOLL FREE: 1-800-233-3010  
FAX: (717)665-2861**

# 1. Main Specifications

(1) Refer to Sec. 2....Pg. 7



## Specifications

| Model | Code  | Cap. (U.S. ton) | Std. Lift m (ft.) | Chain Pull to Lift Full Load kg (lb) | Overhaul Ratio ft. | Test Load (U.S. ton) | Net Weight kg (lb) | Shipping Weight (approx) kg (lb) | Load chain Fall (Lines) | Weight for Additional One Foot of Lift kg (lbs) |
|-------|-------|-----------------|-------------------|--------------------------------------|--------------------|----------------------|--------------------|----------------------------------|-------------------------|---|
| M3    | CB300 | 30              | 3.5(11.5)         | 43x2(94.8x2)                         | 495 x 2            | 37.5                 | 310(683)           | 400(882)                         | 10                      | 19.2(42.3)                                      |
| M3    | CB400 | 40              | 3.5(11.5)         | 43x2(94.8x2)                         | 693 x 2            | 50                   | 480(1058)          | 630(1389)                        | 14                      | 26.2(57.8)                                      |
| M3    | CB500 | 50              | 3.5(11.5)         | 49x2(108x2)                          | 792 x 2            | 62.5                 | 640(1411)          | 790(1742)                        | 16                      | 29.7(65.5)                                      |

Any lift of chain is available on request. Because Harrington chains are specially heat treated, only authentic Harrington chains should be used on your hoist. NEVER attempt to lengthen the chain by attaching additional chain links to it or by any other means. Harrington can supply almost any length of chain desired. Simply specify the length of chain desired when ordering.

## Dimensions


| Code  | Cap. (tons) | Min. Headroom:C mm(in) | a mm(in.) | b mm(in.) | d m(ft.)  | e mm(in.) | f mm(in.) | g mm(in.) | s mm(in.) | p mm(in.) | u mm(in.) | v mm(in.) | w mm(in.) | x mm(in.) |
|-------|-------------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| CB300 | 30          | 1300(51.2)             | 404(15.9) | 746(29.4) | 4.8(15.7) | 202(8.0)  | 373(14.7) | 103(4.1)  | 125(4.9)  | 85(3.3)   | 112(4.4)  | 367(14.4) | 143(5.6)  | 400(15.7) |
| CB400 | 40          | 1480(58.3)             | 502(19.8) | 760(29.9) | 4.9(16.1) | 251(9.9)  | 380(15.0) | 104(4.1)  | 140(5.5)  | 95(3.7)   | 125(4.9)  | 420(16.5) | 160(6.3)  | 445(17.5) |
| CB500 | 50          | 1560(61.4)             | 544(21.4) | 796(31.3) | 4.9(16.1) | 272(10.7) | 398(15.7) | 112(4.4)  | 155(6.1)  | 106(4.2)  | 140(5.5)  | 468(18.4) | 178(7.0)  | 467(18.4) |

## 2. Periodic Inspection

### (1) Refer to Sec. 4.3....Pg.11

#### Regular Inspection Procedure

Figures in parentheses are Figure Nos. in Parts List.

| Item   | Inspection Method   | Discard Limit/Criteria  | Measures               |
|--|---|---|------------------------|
| Name Plates  | Check visually  | Capacity indication is not clear.                                       | Attach new name plate. |
| Hook (45,66)<br><br>(Upper & Lower)  | Measure dimension "e" between two embossed marks at time of purchase with slide calipers. | Dimensions are greater than those in the following table.               | Replace the hook.      |
| 1. Deformation/<br>twist of hook,<br>opening of<br>hook.                           | Check visually.   | Twist is large enough to be detected visually.                          | Replace the hook.      |
|  | Measure "c" and "d" with slide calipers.  | The dimensions are more than 5% greater than those just after purchase. | Replace the hook.      |
| 2. Wear  |   |   |                        |

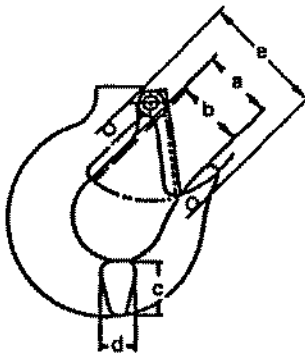
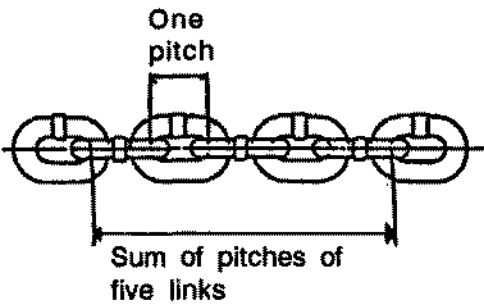



Table S1

| Cap.<br>(U.S.<br>ton) | a                |                  | b         |           | c mm(in) |          | d mm(in) |  |
|-----------------------|------------------|------------------|-----------|-----------|----------|----------|----------|--|
|                       | Normal<br>mm(in) | Normal<br>mm(in) | Normal    | Discard   | Normal   | Discard  |          |  |
| 30                    | 118(4.65)        | 103(4.05)        | 112(4.41) | 107(4.21) | 71(2.80) | 68(2.67) |          |  |
| 40                    | 128(5.04)        | 104(4.09)        | 125(4.92) | 119(4.68) | 80(3.15) | 76(3.00) |          |  |
| 50                    | 136(5.35)        | 112(4.41)        | 140(5.51) | 133(5.24) | 90(3.54) | 86(3.39) |          |  |

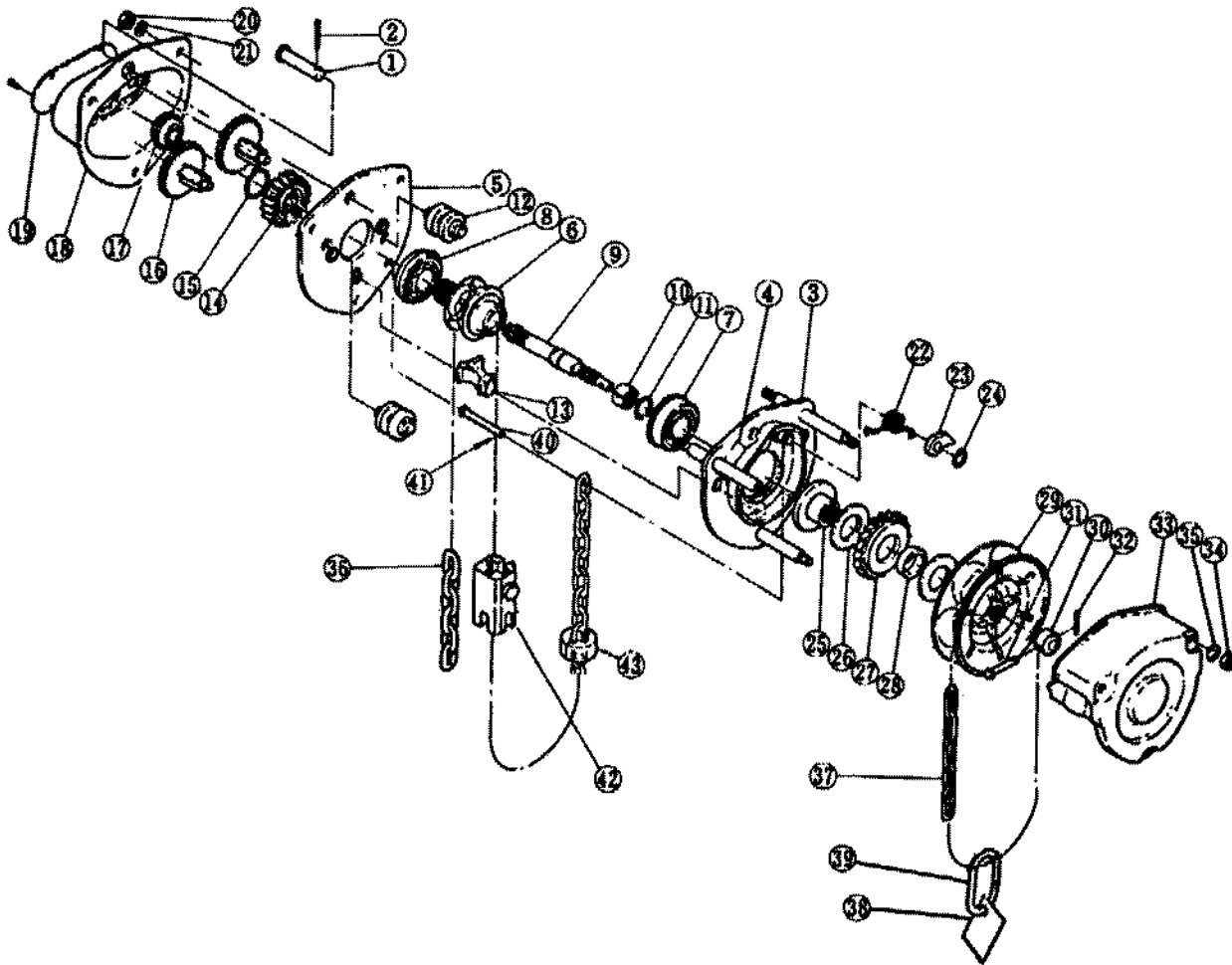
## (2) Refer to Sec. 4.3....Pg. 12

| Item  | Inspection Method                   | Discard Limit/Criteria   | Measures           |                     |                                     |                      |          |              |              |
|---|-------------------------------------|--|--------------------|---------------------|-------------------------------------|----------------------|----------|--------------|--------------|
| <b>LOAD CHAIN</b><br>(28)<br>1. Wear  | Measure with slide calipers.        | Measure the sum of pitches of five chain links and check that the maximum length is not exceeding the values shown below in Table S2.  | Replace the chain. |                     |                                     |                      |          |              |              |
|  |                                     | Table S2 <table border="1"> <thead> <tr> <th>Capacity (U.S. ton)</th> <th>Sum of Pitches of Five Links mm(in)</th> <th>Discard Limit mm(in)</th> </tr> </thead> <tbody> <tr> <td>30,40,50</td> <td>136.0(5.354)</td> <td>140.0(5.512)</td> </tr> </tbody> </table> |                    | Capacity (U.S. ton) | Sum of Pitches of Five Links mm(in) | Discard Limit mm(in) | 30,40,50 | 136.0(5.354) | 140.0(5.512) |
| Capacity (U.S. ton)   | Sum of Pitches of Five Links mm(in) | Discard Limit mm(in)   |                    |                     |                                     |                      |          |              |              |
| 30,40,50  | 136.0(5.354)                        | 140.0(5.512)   |                    |                     |                                     |                      |          |              |              |

## (3) Refer to Sec. 4.3....Pg. 14

| Item  | Inspection Method   | Discard Limit/Criteria  | Measures          |                 |                            |                      |          |           |           |
|---|---|---|-------------------|-----------------|----------------------------|----------------------|----------|-----------|-----------|
| 5. Bushing (39); wear and oil.<br>Type of oil to be used: ISO VG68 or equivalent. | Check radial thickness (t) with caliper and oil existence.<br><br><br>Bushing (28)<br><br>t=Radial thickness | Radial thickness (t) should be uniform. Oil should be contained. Refer to Table S3.   | Replace the part. |                 |                            |                      |          |           |           |
|   |   | Table S3 <table border="1"> <thead> <tr> <th>Cap. (U.S. ton)</th> <th>Normal Thickness: t mm(in)</th> <th>Discard Limit mm(in)</th> </tr> </thead> <tbody> <tr> <td>30,40,50</td> <td>4.0(.157)</td> <td>3.0(.118)</td> </tr> </tbody> </table> |                   | Cap. (U.S. ton) | Normal Thickness: t mm(in) | Discard Limit mm(in) | 30,40,50 | 4.0(.157) | 3.0(.118) |
| Cap. (U.S. ton)   | Normal Thickness: t mm(in)  | Discard Limit mm(in)  |                   |                 |                            |                      |          |           |           |
| 30,40,50  | 4.0(.157)   | 3.0(.118)   |                   |                 |                            |                      |          |           |           |

### 3. PARTS LIST



| Fig. No. | Part Name          | Nos. per Hoist | Capacity (tons) |    |    |
|----------|--------------------|----------------|-----------------|----|----|
|          |                    |                | 30              | 40 | 50 |
| 1        | Top Pin            | 2              | M3163025        |    |    |
| 2        | Split Pin          | 2              | 9009424         |    |    |
| 3        | Side Plate A Assy. | 2              | M3B101025       |    |    |
| 5        | Side Plate B Assy. | 2              | M3B102025       |    |    |
| 6        | Load Sheave        | 2              | M3116025        |    |    |
| 7        | Ball Bearing       | 2              | M3140020        |    |    |
| 8        | Ball Bearing       | 2              | M3140020        |    |    |
| 9        | Pinion             | 2              | M3B111025       |    |    |
| 10       | Roller Bearing     | 2              | M3130020        |    |    |
| 11       | Snap Ring          | 2              | M3118020        |    |    |
| 12       | Guide Roller       | 4              | M3B161025       |    |    |
| 13       | Stripper           | 2              | M3162025        |    |    |
| 14       | Load Gear          | 2              | M3114025        |    |    |
| 15       | Snap Ring          | 2              | 9047134         |    |    |

| Fig. No. | Part Name              | Nos. per Hoist | Capacity (tons) |    |    |
|----------|------------------------|----------------|-----------------|----|----|
|          |                        |                | 30              | 40 | 50 |
| 16       | Gear #2 Assy.          | 4              | M3B112025       |    |    |
| 17       | Ball Bearing           | 2              | M3135020        |    |    |
| 18       | Gear Case Assy.        | 2              | M3103025        |    |    |
| 19       | Name Plate B w/ Rivets | 2              | M3B800025       |    |    |
| 20       | Nut                    | 6              | 9093433         |    |    |
| 21       | Spring Washer          | 6              | 9012713         |    |    |
| 22       | Pawl Spring A*         | 2              | M3179005        |    |    |
|          | Pawl Spring B*         | 2              | M3180005        |    |    |
| 23       | Pawl                   | 2              | M3155005        |    |    |
| 24       | Snap Ring              | 2              | 9047110         |    |    |
| 25       | Friction Disc          | 2              | M3B153025       |    |    |
| 26       | Friction Plate         | 4              | M3B151025       |    |    |
| 27       | Ratchet Disc           | 2              | M3B152025       |    |    |
| 28       | Bushing                | 2              | M3B154025       |    |    |
| 29       | Hand Wheel             | 2              | M3B115025       |    |    |
| 30       | Wheel Stopper          | 2              | CF159010        |    |    |
| 31       | Wheel Stopper Pin      | 2              | M2167005        |    |    |
| 32       | Split Pin              | 2              | 9009410         |    |    |
| 33       | Wheel Cover Assy.      | 2              | M3171025        |    |    |
| 34       | Nut                    | 6              | 9093424         |    |    |
| 35       | Spring Washer          | 6              | 9012711         |    |    |
| 36       | Load Chain             | 1              | LCC3025         |    |    |
| 37       | Hand Chain             | 2              | HCCF005         |    |    |
| 38       | Warning Tag            | 2              | WTAG4           |    |    |
| 39       | Chain Stopper Link     | 2              | L4045030        |    |    |
| 40       | End Pin                | 2              | M3B164100       |    |    |
| 41       | Split Pin              | 2              | 9009415-5       |    |    |
| 42       | Cross Guide            | 2              | M3B176100       |    |    |
| 43       | Stopper Assy.          | 2              | M3045100        |    |    |

\* Pawl Spring A and B must be used as a set.

# ADDITIONAL PARTS

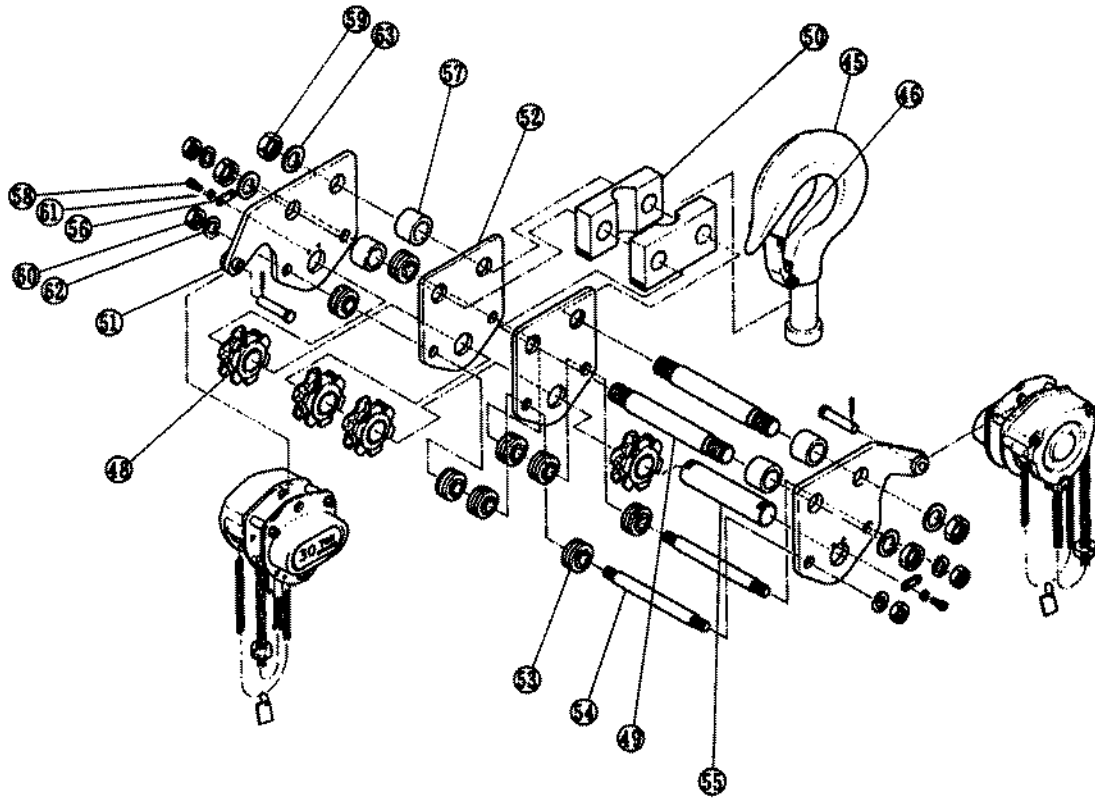


Fig. 44 Top hook set for 30t

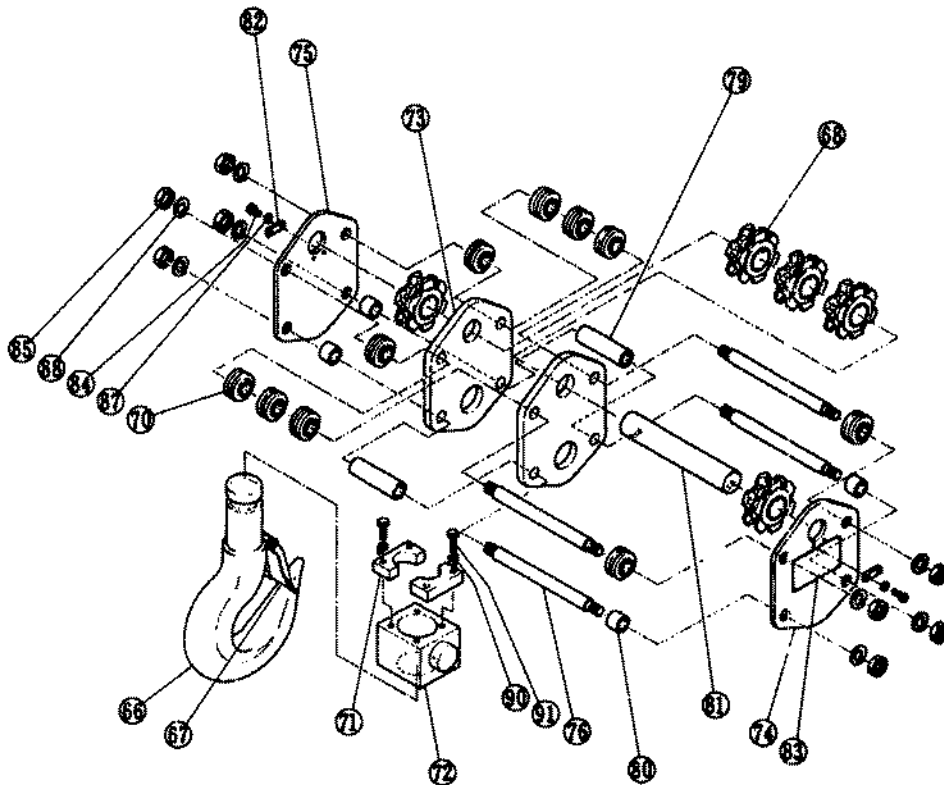


Fig. 65 Bottom hook set for 30t

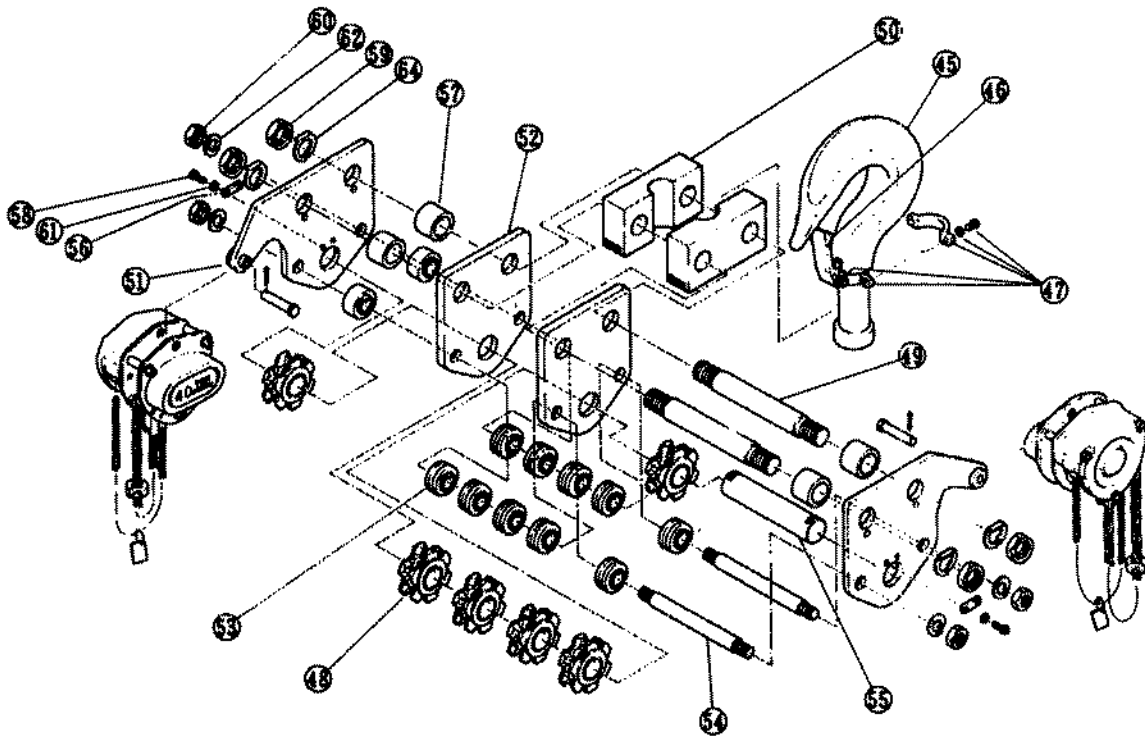


Fig. (44) Top hook set for 40t

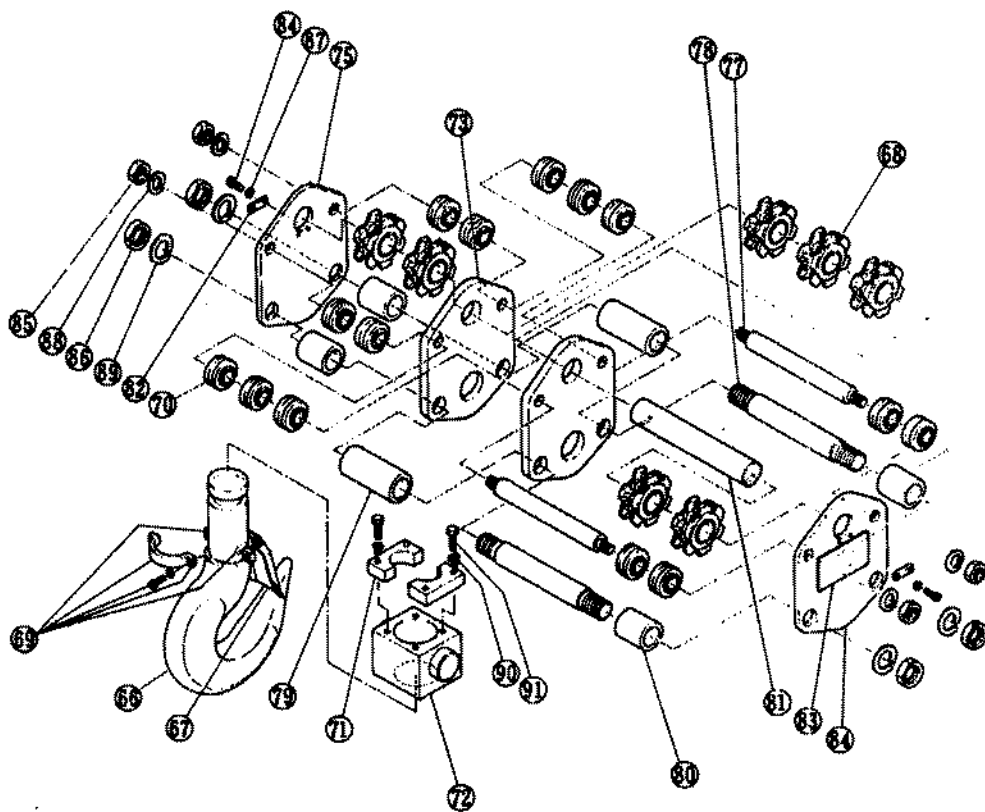


Fig. (65) Bottom hook set for 40t



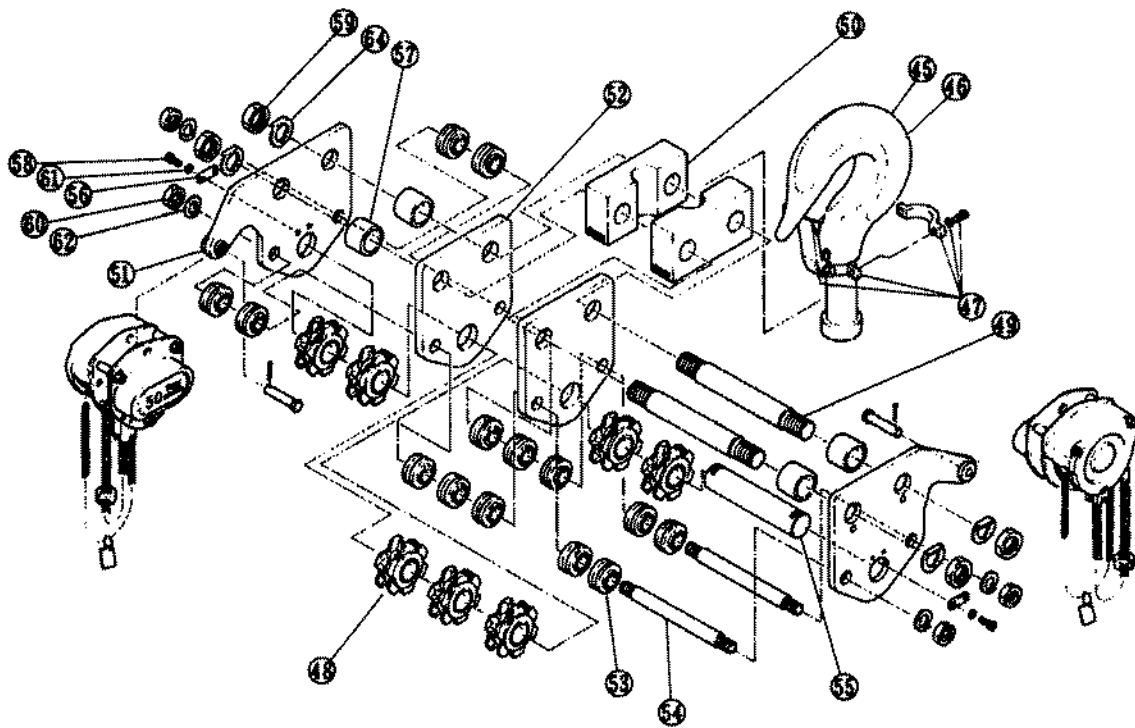


Fig. (44) Top hook set for 50t

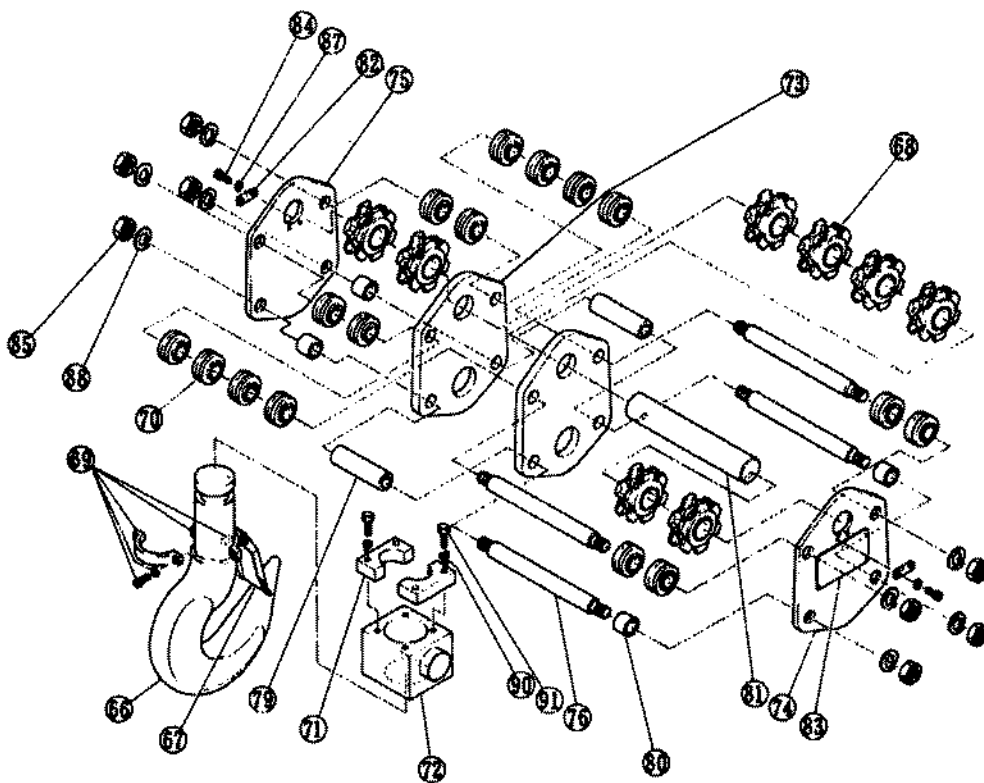


Fig. (65) Bottom hook set for 50t

| Fig. No. | Part Name             | Nos. per Hoist | Capacity (tons) |           |           |
|----------|-----------------------|----------------|-----------------|-----------|-----------|
|          |                       |                | 30              | 40        | 50        |
| 44       | Top Hook Set          | 1              | M3001A300       | M3001A400 | M3001A500 |
| 45       | Top Hook              | 1              | M3001300        | M3001400  | M3001500  |
| 46       | Hook Latch Assembly   | 1              | M3072300        | M3072400  | M3075500  |
| 47       | Lever Holder Assembly | 1              |                 | M2076400  | M2076500  |
| 48       | Idle Sheave Assembly  | 4              | M3051150        |           |           |
|          |                       | 6              |                 | M3051150  |           |
|          |                       | 7              |                 |           | M3051150  |
| 49       | Top Suspension Shaft  | 2              | M3010300        | M3010400  | M3010500  |
| 50       | Top Yoke              | 2              | M3011300        | M3011400  | M3011500  |
| 51       | Top Plate A Assembly  | 2              | M3012300        | M3012400  | M3021500  |
| 52       | Top Plate C           | 2              | M3114300        | M3114400  | M3114500  |
| 53       | Guide                 | 8              | M3018150        |           |           |
|          |                       | 12             |                 | M3018400  |           |
|          |                       | 14             |                 |           | M3018500  |
| 54       | Stay Bolt             | 2              | M3019300        | M3019400  | M3019500  |
| 55       | Top Shaft             | 1              | M3053300        | M3053400  | M3053500  |
| 56       | Key Plate             | 2              | M2056150        |           |           |
| 57       | Collar                | 4              | M3027300        | M3027400  | M3027500  |
| 58       | Socket bolt           | 4              | 9091270         |           |           |
| 59       | Nut                   | 4              | 9093464         | 9093469   | 9093472   |
| 60       | Nut                   | 4              | 9093445         | 9093452   | 9093464   |
| 61       | Spring Washer         | 4              | 9012711         |           |           |
| 62       | Spring Washer         | 4              | 9012717         | 9012719   | 9012723   |
| 63       | Spring Washer         | 4              | 9012723         | 9012725   | 9012727   |
| 64       | Pawled Washer         | 4              |                 | M2089400  | M2089500  |
| 65       | Bottom Hook Set       | 1              | M3021A300       | M3021A400 | M3021A500 |
| 66       | Bottom Hook           | 1              | M3021300        | M3021400  | M3021500  |
| 67       | Hook Latch Assembly   | 1              | M3072300        | M3072400  | M3072500  |
| 68       | Idle Sheave Assembly  | 5              | M3051150        |           |           |
|          |                       | 7              |                 | M3051150  |           |
|          |                       | 8              |                 |           | M3051150  |
| 69       | Lever Holder Assembly | 1              |                 | M2076400  | M2076500  |
| 70       | Guide                 | 10             | M3018150        |           |           |
|          |                       | 14             |                 | M3018400  |           |
|          |                       | 16             |                 |           | M3018500  |

| Fig. No. | Part Name              | Nos. per Hoist | Capacity (tons) |          |          |
|----------|------------------------|----------------|-----------------|----------|----------|
|          |                        |                | 30              | 40       | 50       |
| 71       | Hook Support           | 2              | M3026300        | M3026400 | M3026500 |
| 72       | Bottom Yoke            | 1              | M3030300        | M3030400 | M3030500 |
| 73       | Bottom Plate A         | 2              | M3034300        | M3030400 | M3030500 |
| 74       | Bottom Plate B         | 1              | M3035300        | M3035400 | M3035500 |
| 75       | Bottom Plate C         | 1              | M3036300        | M3036400 | M3036500 |
| 76       | Stay Bolt              | 4              | M3038300        |          | M3038500 |
| 77       | Stay Bolt A            | 2              |                 | M3037400 |          |
| 78       | Stay Bolt B            | 2              |                 | M3038400 |          |
| 79       | Collar A               | 2              | M3039300        | M3039400 | M3039500 |
| 80       | Collar B               | 4              | M3040300        | M3040400 | M3040500 |
| 81       | Bottom Shaft           | 1              | M3054300        | M3054400 | M3054500 |
| 82       | Key Plate              | 2              | M2056150        |          |          |
| 83       | Name Plate A w/ Rivets | 1              | M3069300        | M3069400 | M3069500 |
| 84       | Socket Bolt            | 4              | 9091270         |          |          |
| 85       | Nut                    | 4              |                 | 9093452  |          |
|          |                        | 8              | 9093445         |          | 9093464  |
| 86       | Nut                    | 4              |                 | 9093458  |          |
| 87       | Spring Washer          | 4              | 9012711         |          |          |
| 88       | Spring Washer          | 8              | 9012717         |          | 9012723  |
|          |                        | 4              |                 | 9012719  |          |
| 89       | Spring Washer          | 4              |                 | 9012721  |          |
| 90       | Tongued Washer         | 4              | M3091150        |          |          |
| 91       | Bolt                   | 4              | 9093351         | 9093354  |          |