

### Purpose:

To provide instructions and lists of the parts required to convert between NER020M and NER030C hoists. The conversions involve changing between single (020M) and double (030C) fall configurations.

### Application Information:

- For other 020M and 030C mounting configurations, use the parts above omitting the Top Hook Assembly (Page 56, Figure No. 8) then follow EDOC0049 to identify the additional Kit/parts required.
- Converting a chained hoist from a 020M to a 030C will cut the lift on the hoist in half. Converting a chained hoist from a 030C to a 020M will double the lift. Depending on the application, the push button pendant drop may need to be changed (not included in the scope of this document).
- When converting pre-chained units or hoists in the field, it is necessary to remove and reinstall the load chain so that the end links are correctly oriented. Harrington strongly recommends for field conversion to be performed by a repair center or experienced/qualified distributor because of the de-chaining and re-chaining of the hoist.

#### FROM NER020M TO NER030C

Page*	Figure No.*	Part Name	Qty.	Part No.
48	52	Name Plate B	1	A1CHM30R9A3
48	54	Name Plate AD	1	ER1DR9868
56	3	Connection Yoke	1	ER1DR9030
56	5	Yoke Bolt	1	ER1ES9032
56	6	Slotted Nut	1	ES088020L
56	7	Split Pin	1	9009436
56	8	Top Hook Assembly	1	ER1DR1001
56	10	Chain Pin	1	ES041030
56	11	Slotted Nut	1	M2049020
56	12	Split Pin	1	9009413
56	26	Bottom Hook Complete Set	1	ER1DR1011
56	39	Stopper Assembly	1	ES1045015
60	8	Chain Spring	1	ER1DL9051
61	25	End Suspender Assembly	1	ENDSUSDR**

#### FROM NER030C TO NER020M

Page*	Figure No.*	Part Name	Qty.	Part No.
48	52	Name Plate B	1	A1CHM20E9A3
48	54	Name Plate AD	1	ER1CE9868
56	8	Top Hook Assembly	1	ER1DL1001
56	26	Bottom Hook Complete Set	1	ER1ES1011
61	25	End Suspender Assembly	1	ENDSUSCD**

\*From ER/NER Owners Manual Owners

\*\*End Suspender Assembly is only required on hoist without chain container.

## Procedures:

**⚠ CAUTION** The hoist must be properly powered and operational in order to perform the following procedures.

**⚠ WARNING** Be certain that any new or replacement Load Chain is obtained from Harrington and is the exact size, grade and construction as required for the hoist. The Load Chain must have an odd number of links so that both its end links have the same orientation. Destroy any damage or worn out Load Chain to prevent its reuse.

**⚠ CAUTION** When replacing load chain, check for wear on mating parts, i.e. Load Sheave, Chain Guides and Idle Sheaves, and replace parts if necessary.

### CONVERTING A NER020M INTO NER030C:

- 1) Refer to Figure 1 for steps 2 through 9.
- 2) Remove the 4 Controller Cover Socket Head Bolts and allow the Control Cover Assembly to swing fully open.
- 3) Loosen the 3 captive screws holding the electrical component mounting Plate against the main body of the hoist and swing the Plate out to access the required components.
- 4) Loosen 1 of 2 Machine Screws attaching Plate A and remove the second Machine Screw. Allow Plate A to rotate out from the retaining slot in the bottom side of the Connection Shaft.
- 5) Pull out the Connection Shaft and the Hoist Fixing Shaft then remove the 2 Ton Top Hook Assembly or Connection Yoke.
- 6) Place the 3 Ton Connection Yoke on the top of the hoist. Line up the holes for the Connection Shaft and the Hoist Fixing Shaft and reinsert the shafts.
- 7) Reinstall Plate A, the Panel and Control Cover.
- 8) Install the 3 Ton Top Hook (or Suspender) into the Connection Yoke using the Yoke Bolt, Slotted Nut and Split Pin (cotter pin).
- 9) Suspend the hoists from the Top Hook or Suspender.
- 10) For hoists fully assembled as a NER020M with Load Chain and Chain Components:
  - Remove all chain components including the Bottom Hook Set Assembly, Stopper, Cushion Rubber, Chain Spring(s), and End Wire (or End Suspender) from the Load Chain – Refer to Figure 2 or 3. Inspect and replace any damaged or worn parts that will be reinstalled on the hoist in the 3 Ton configuration.
  - Using a C-link, attach a Leader Chain (short length of Load Chain) to the end link of the Load Chain on the load side (hook side) – Refer to Figure 4. Operate the hoist in the up direction until the Load Chain is out of the hoist body and the Leader Chain is threaded through the hoist.
- 11) So that the end links of the Load Chain are in the correct orientation, connect or re-connect the Load Chain to the Leader Chain on the no-load side using **2** C-links. The end link of the Load Chain should be connected so that the welded portions of the Load Chain's standing links are oriented to the outside as they pass over the Sheave – Refer to Figure 4. Operate the hoist in the down direction until a sufficient amount of the Load Chain is accumulated on the load side.
- 12) Feed the end link on the load side of the Load Chain through the required chain components and the bottom hook's Idle Sheave – Refer to Figure 2 or 3. Attach the remaining chain components to the Load Chain in their proper location as shown in Figure 2 or 3 using the 030C End Suspender for hoists without a chain container. Connect the end link to the top Connection Yoke with the Chain Pin, Slotted Nut and Cotter pin. Ensure that chain remains free of twists.

- 13) Feed the end link on the no-load side of the Load Chain through the Cushion Rubber or Chain Spring. For hoists using an End Wire or End Suspender install the Stopper on the 15<sup>th</sup> link from the free end then attach the Load Chain to the Hoist body – Refer to Figure 5. For hoists using an optional Chain Container install the Stopper on the 3<sup>rd</sup> link from the free end.
- 14) Remove the 2 Ton Name Plate, transfer the hoist's model and serial number from the 2 Ton to the new 3 Ton Name Plate and install affix it to the Control Cover.

#### **CONVERTING A NER030C INTO NER020M:**

- 1) Disconnect the end link from the top Connection Yoke by removing the Split Pin (cotter pin), Slotted Nut and Chain Pin then remove the Bottom Hook Set Assembly and chain components.
- 2) Refer to Figure 1 for steps 3 through 9.
- 3) Remove the 4 Controller Cover Socket Head Bolts and allow the Control Cover to swing fully open.
- 4) Loosen the 3 captive screws holding the electrical component mounting Plate against the main body of the hoist and swing the plate out to access the required components.
- 5) Loosen 1 of 2 Machine Screws attaching Plate A and remove the second Machine Screw. Allow Plate A to rotate out from the retaining slot in the bottom side of the Connection Shaft.
- 6) Pull out the Connection Shaft and the Hoist Fixing Shaft then remove the 3 Ton Connection Yoke.
- 7) Place the 2 Ton Top Hook Assembly or Connection Yoke on the top of the hoist. Line up the holes for the Connection Shaft and the Hoist Fixing Shaft and reinsert the shafts.
- 8) Reinstall Plate A, the Panel and Control Cover.
- 9) If using a Connection Yoke, install the 2 Ton Suspender into the Connection Yoke using the Yoke Bolt, Slotted Nut and Split Pin (cotter pin).
- 10) Suspend the hoists from the Top Hook or Suspender.
- 11) For hoists fully assembled as a NER030C with Load Chain and Chain Components:
  - Remove all remaining chain components including the Stopper, Cushion Rubber or Chain Springs, and End Wire (or End Suspender) from the Load Chain – refer to Figure 2 or 3. Inspect and replace any damaged or worn parts that will be reinstalled on the hoist in the 2 Ton configuration.
  - Using a C-link, attach a Leader Chain (short length of Load Chain) to the end link of the Load Chain on the load side (hook side) – Refer to Figure 4. Operate the hoist in the up direction until the Load Chain is out of the hoist body and the Leader Chain is threaded through the hoist.
- 12) So that the end links of the Load Chain are in the correct orientation, connect or re-connect the Load Chain to the Leader Chain on the no-load side using **2** C-links. The end link of the Load Chain should be connected so that the welded portions of the Load Chain's standing links are oriented to the outside as they pass over the Sheave – Refer to Figure 4. Operate the hoist in the down direction until a sufficient amount of the Load Chain is accumulated on the load side.
- 13) Feed the end link on the load side of the Load Chain through the required chain components and Attach the 2 Ton Bottom Hook Set Assembly using the 020M End Suspender for hoists without a chain container – Refer to Figure 2 or 3.
- 14) Feed the end link on the no-load side of the Load Chain through the Cushion Rubber or Chain Spring. For hoists using an End Wire or End Suspender install the Stopper on the 15<sup>th</sup> link from the free end then attach the Load Chain to the Hoist body – Refer to Figure 5. For hoists using an optional Chain Container install the Stopper on the 3<sup>rd</sup> link from the free end.
- 15) Remove the 3 Ton Name Plate, transfer the hoist's model and serial number from the 3 Ton to the new 2 Ton Name Plate and install affix it to the Control Cover.

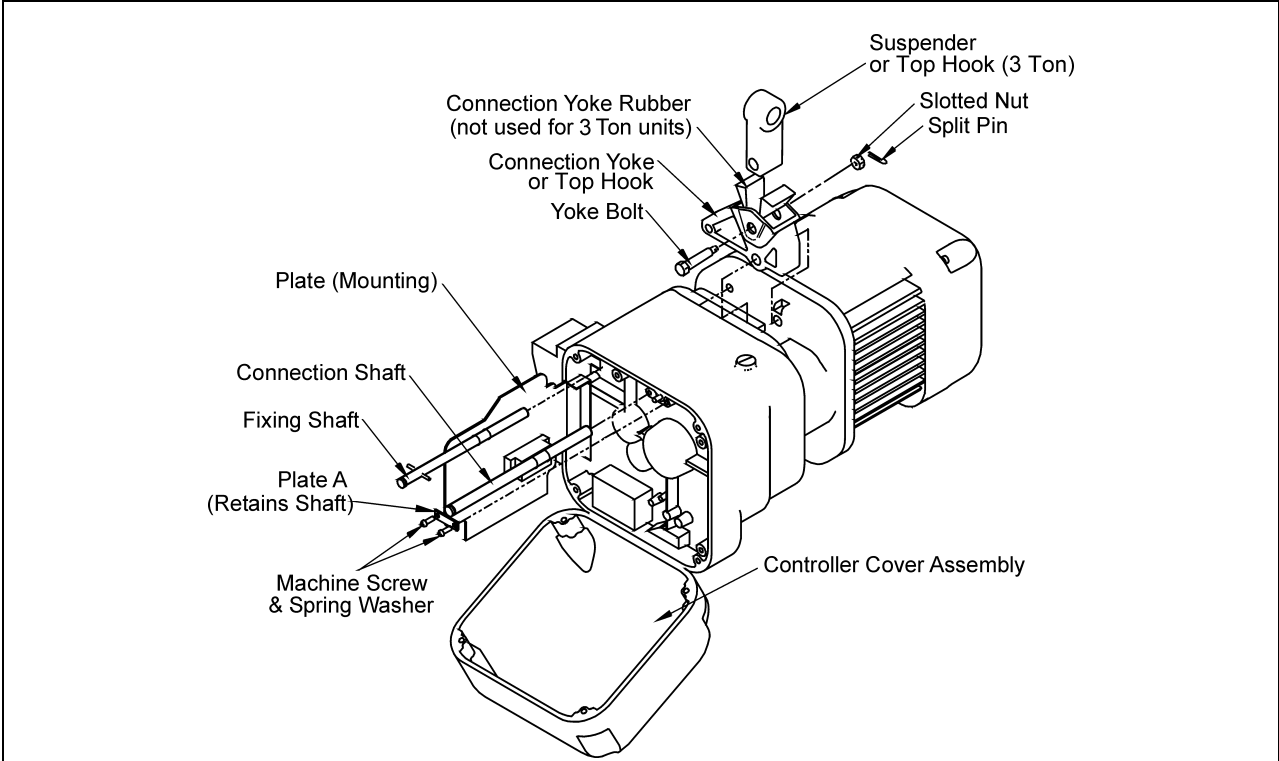


Figure 1 Accessing the Hoist Fixing Shaft and Connection Shaft.

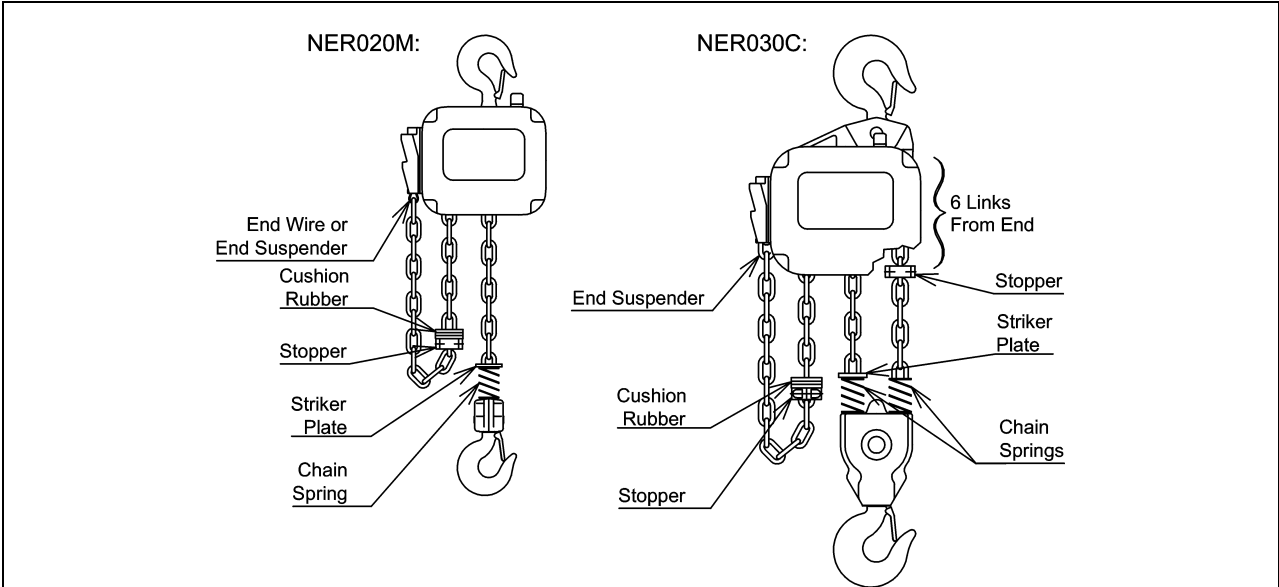
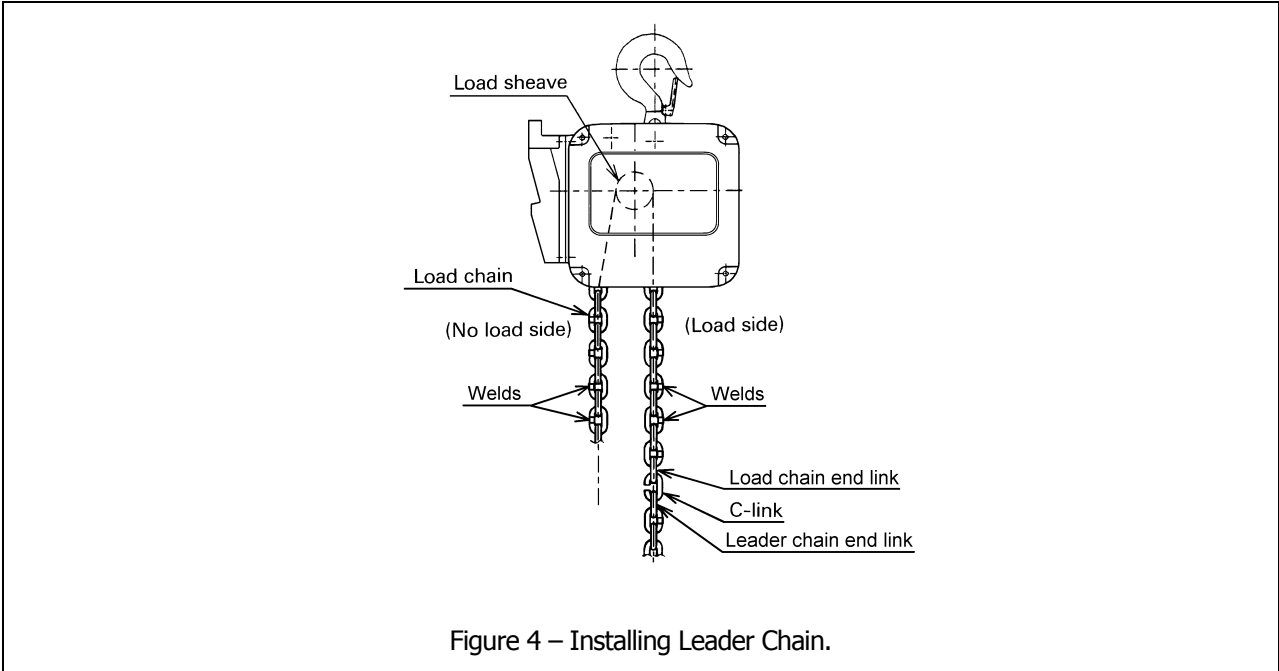
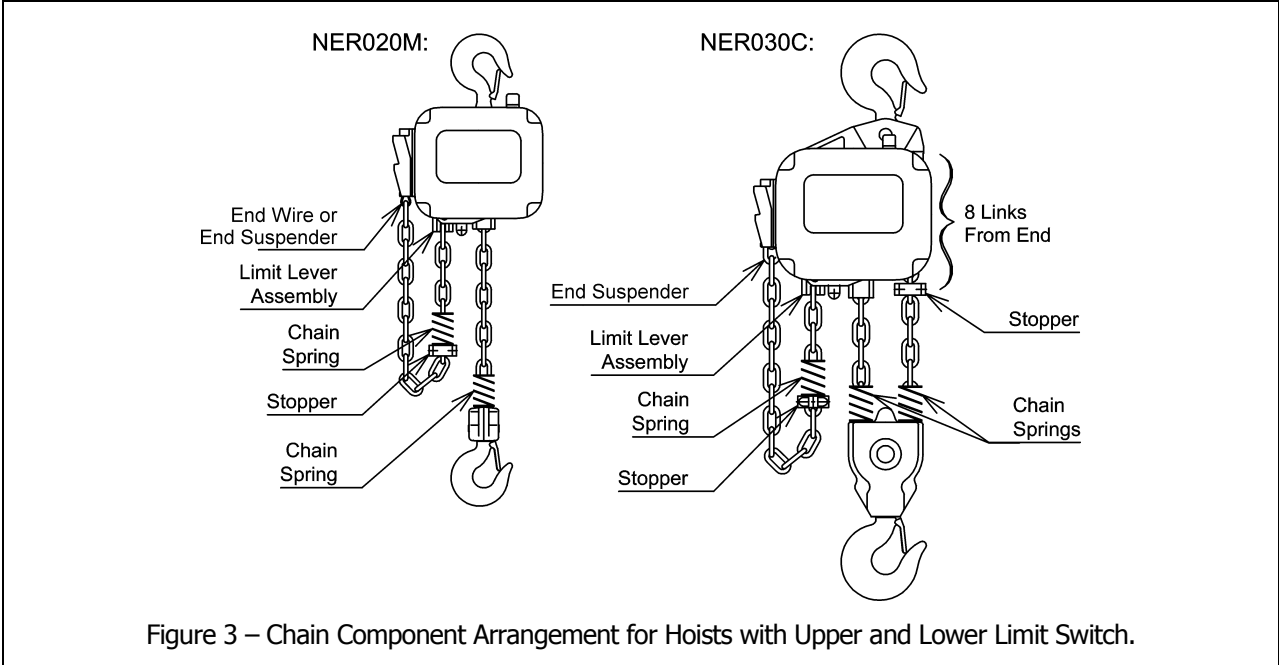


Figure 2 – Chain Component Arrangement for Hoists with Upper Limit Switch Only.



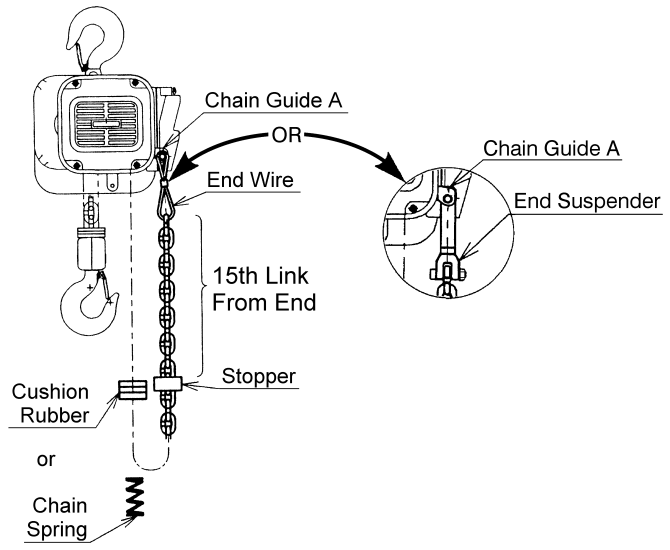


Figure 5 – Attachment of Chain to Hoist Body – No Chain Container