



350 Ton Elevator Links/Link Extensions Operation Manual

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Revision History

Rev	Date	Reason
A	12/31/2014	Issued for Use
B	02/25/2015	Changed p/n and added pin wear
C	05/25/2021	Added load test note, added 144”
D		

Description of Change

Rev	Change
B	Updated Table 3 and 6 (now 7). Added Figure 6 and Table 6. Updated Table of Contents.
C	Added note on page 5, added 144” on page 6
D	

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GENERAL



Figure 1 – Link extensions

Texas International Oilfield Tools (TIOT) offers 350 ton links and link extensions, which are used to hang elevators. See Specification tables on page 5 and 6 for size ranges. The links and link extensions are forged, heat treated, and weldless. The link extension adds length/reach to links.



Ensure links and link extensions are a matched set and the load is no more than the 350-ton capacity



Links cannot be repaired by welding



Links and link extensions are individually load tested

CONVENTIONS




IMPORTANT SYMBOL IDENTIFICATION	
	WARNING to Operators / Users
	CAUTION to Operators / Users
	NOTIFICATION to Operators / Users

Table 1

SAFETY

Texas International's equipment is used and installed in controlled rig environments involving hazardous operations and situations.

All personnel performing installation, operations, or maintenance on these links and link extensions must have knowledge of rig procedure. All crew in the vicinity of operations should be trained on rig safety and tool operation.

SPECIFICATIONS

350 Ton Links	
Size	Part Number
2-3/4" x 108"	T26940Y1108
2-3/4" x 192"	T26940Y1192
2-3/4" x 216"	T26940Y1216

Table 2

350 Ton Link Extension			
Size			Part Number
2-3/4"	x	72"	T6350N-EXT
2-3/4"	x	96"	T8350N-EXT
2-3/4"	x	120"	T10350N-EXT
2-3/4"	x	144"	T12350N-EXT

Table 3

PREVENTIVE MAINTENANCE



This is a suggested PM schedule. The tool owner has the responsibility to adjust the program according to actual tool usage

Normal wear in course of use will eventually reduce the link's capability. Inspect the link eyes' regularly for wear. Cracks or the appearance of damage can indicate impending failure and requires prompt attention. If found, the link must be pulled from operation immediately and evaluated with Magnetic Particle Inspection (MPI).

Daily (PM1) – While in use

- Apply EP 4 grease to contact radiuses
- Visually check for damage and cracks – if found, pull from operation
- Verify links (and extensions) are a matched set (A&B)
- Fasten elevator link block after inserting ears
- Nut should completely fasten into the pin on link extension

Semiannual (PM2)

- Pin and nut threads should not be galled
- Visually inspect the eye's radial contact surfaces for wear/flat areas – if found see Table 4
- Measure the contact length and compare against Table 5
- Remove coating and debris to perform MPI according to API 8C
- Carry on daily PM

Annual (PM3)

- Repeat semiannual PM
- Performance load test according to API RP 8B
- MPI critical areas twenty four (24) hours after load test

WEAR LIMITS

The wear of the link and link extensions affects its ability to support the required load. Contact areas must be rounded and free of rolled up metal.

Item	350 Link/ Link Extension
Minimum Thickness	
Shank	3.25"
Lower Eye (A)	2.56"
Upper Eye (B - link only)	4.75"

Table 4

Link Length	Contact Length Diff
> 180	1/4"
<=180	1/8"

Table 5

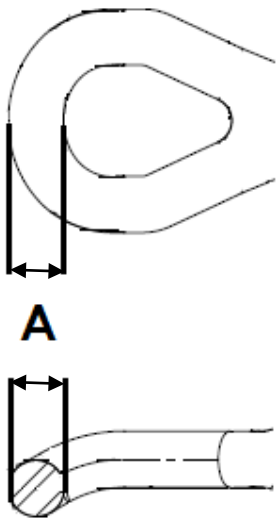


Figure 2: Lower eye

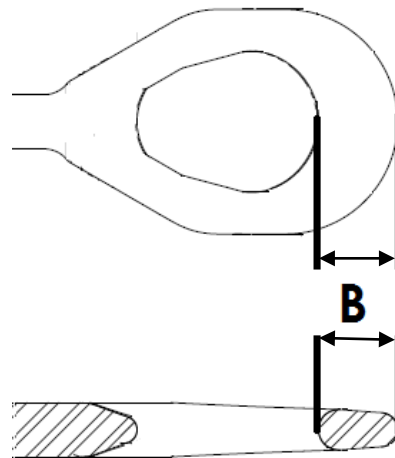


Figure 3: Upper eye

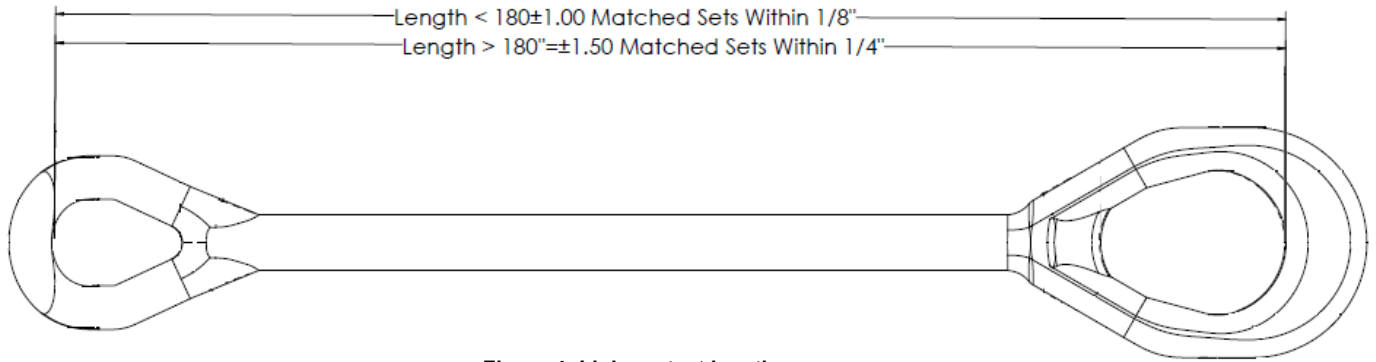


Figure 4: Link contact length

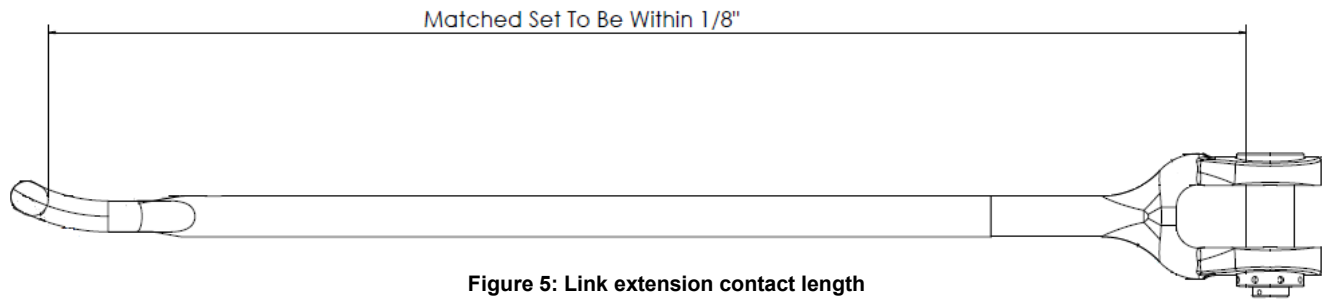


Figure 5: Link extension contact length

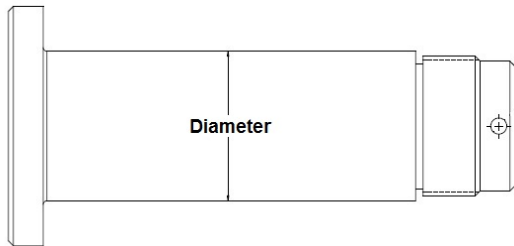


Figure 6: Link extension pin

Wear			
Pin Size	3.75"	4.25"	Description
Pin	3.56"	4.00"	Min Diameter
Hole	4.00"	4.50"	Max Diameter
Clearance	0.13"	0.13"	Total (H-P Dia)

Table 6

CRITICAL AREA MAP

The entire assembly is critical.

STORAGE AND TRANSPORTATION



Store the links and link extension with shims below the eyes to prevent unintended rolling during transport

- Unpainted surfaces should be coated with rust preventing agent
- Prevent excessive exposure to water and moisture
- Clean the tool after use - steam clean as needed; remove mud, debris and any other substances
- Transport in a suitable container or on a pallet

SPARE PARTS LIST

TIOT offers spare parts for the link extensions. The 4.25" pin is only available as a spare part as the assembly is no longer made. To combine the used link extensions with the new parts, TIOT recommends performing an Annual PM.

Item	Part Number
Pin - 4.25" dia	T6350-EXT-1
Nut for 4.25 pin	T6350-EXT-2
Cotter Pin	T6350-EXT-3
Pin - 3.75" dia	T6350N-EXT-1
Nut for 3.75 pin	T6350N-EXT-2

Table 7



Ensure pins stay as a matched set. If one pin is lost or damaged, order two (2) replacements

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