



# 7400 Ultimate Series Nose Bar Conveyors

Installation, Maintenance and Parts Manual





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# Introduction

### **A** CAUTION

Some illustrations may show guards removed. DO NOT operate equipment without guards.

Upon receipt of shipment:

- Compare shipment with packing slip. Contact factory regarding discrepancies.
- Inspect packages for shipping damage. Contact carrier regarding damage. Accessories may be shipped loose.
- See accessory instructions for installation.

The Dorner Limited Warranty applies.

Dorner 7400 Series conveyors have patents pending.

#### NOTE

Proper conveyor application, cleaning, and sanitation are the responsibility of the end user.

Dorner reserves the right to make changes at any time without notice or obligation.

Intralox is a registered trademark of Laitram L.L.C. in the United States and / or other countries.

# Warnings - General Safety

### **A** DANGER



#### **SEVERE HAZARD!**

KEEP OFF CONVEYORS. Climbing, sitting, walking or riding on conveyor will result in death or serious injury.

### **▲** DANGER



#### **EXPLOSION HAZARD!**

- DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT. The electric gearmotor generates heat and could ignite combustible vapors.
- Failure to comply will result in death or serious injury.

### **A** WARNING



#### **CRUSH HAZARD!**

- DO NOT place hands or fingers inside the conveyor while it is running.
- DO NOT wear loose garments while operating the conveyor. Loose garments can become caught up in the conveyor.
- Failure to comply could result in serious injury.

### **WARNING**



#### **CRUSH HAZARD!**

- SUPPORT CONVEYOR SECTIONS PRIOR TO LOOSENING STAND HEIGHT OR ANGLE ADJUSTMENT SCREWS.
- Loosening stand height or angle adjustment screws may cause conveyor sections to drop down, causing serious injury.

### **WARNING**



#### SEVERE HAZARD!

LOCK OUT POWER before removing guards or performing maintenance. Exposed moving parts can cause serious injury.

### **A** WARNING



#### **BURN HAZARD!**

DO NOT TOUCH the motor while operating, or shortly after being turned off. Motors may be HOT and can cause serious burn injuries.

### **A WARNING**



#### **PUNCTURE HAZARD!**

Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.

### **WARNING**



#### **SEVERE HAZARD!**

- Dorner cannot control the physical installation and application of conveyors.
  Taking protective measures is the responsibility of the user.
- When conveyors are used in conjunction with other equipment or as part of a multiple conveyor system, CHECK FOR POTENTIAL PINCH POINTS and other mechanical hazards before system start-up.
- Failure to comply could result in serious injury.

# **Product Description**

Refer to (Figure 1) for typical conveyor components.

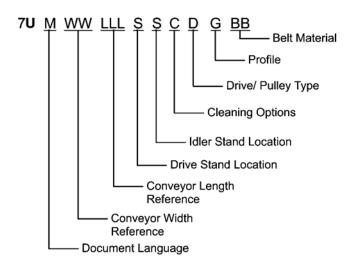
#### **Typical Components** 1 Conveyor 2 Gearmotor 3 Belt 4 Return 5 Support Stands Motor Controller 6 7 Drive End 8 Tension End



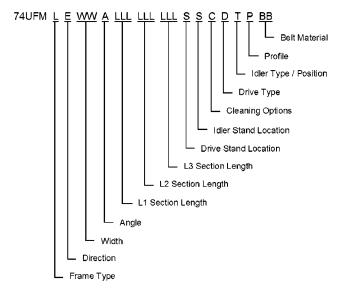
Figure 1

# **Specifications**

### Flat Belt 7400 Series Conveyor



### Flat Belt 7400 Series LPZ Conveyor



# **Specifications**

### **Conveyor Supports**

#### **Maximum Distances:**

1 = 3 ft (914 mm)

2 = 8 ft (2438 mm)\*\*

3 = 3 ft (914 mm)

\*\* For conveyors longer than 10 ft (3.05 m), install support at frame joint.

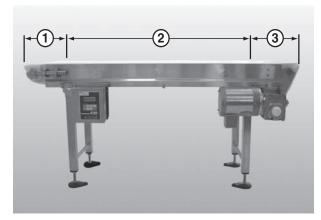


Figure 2

### **Specifications**

Conveyor Width Reference (WW)	06 – 36 in 02 increments
Conveyor Belt Width	6" (152 mm) – 36" (914 mm) in 2" (51 mm) increments
Maximum Conveyor Load	20 lb / ft <sup>2</sup> (97 kg / m <sup>2</sup> ) with a maximum of 1000 lb / ft <sup>2</sup> (4882 kg / m <sup>2</sup> )
Belt Travel	12" (305 mm) per revolution of pulley
Maximum Belt Speed	233 ft / minute (71 m / minute)
Belt Take-up	2" (51 mm)

Conveyor Length Reference ( <u>LLL</u> )	036 – 999 in 001 increments
Conveyor Length	36" (914 mm) - 999" (25.4 m) in 1" (25 mm) increments
LPZ Section Lengths ( <u>LLL</u> )	024 – 252 in 001 increments
LPZ Section Length	24" (610 mm) – 252" (6401 mm) in 1" (25 mm) increments
Total LPZ Conveyor Length	(L1 +L2 + L3) = Maximum 38' (11.6 m) long conveyor

### **IMPORTANT**

Maximum conveyor loads are based on:

- Non-accumulating product
- Product moving toward gearmotor
- Conveyor being mounted horizontally
- Conveyor being located in a dry environment
- Conveyor equipped with standard belt only

### **A** CAUTION

Dorner recommends cleaning all the "food zones" prior to placing conveyor into service. Ensure adequate access is provided for cleaning and servicing equipment so that the required level of hygiene can be maintained.

#### **NOTE**

Proper conveyor application, cleaning, and sanitation are the responsibility of the end user.

# **A** CAUTION

Conveyor MUST be mounted straight, flat, and level within confines of conveyor. Use a level (Figure 3, item 1), during setup.

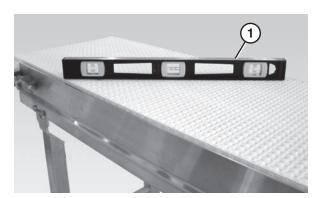


Figure 3

### **Required Tools**

- 17 mm wrench (for hexagonal head fasteners)
- 4 mm hex wrench (for bearing shaft assembly fasteners)
- Level
- Torque wrench

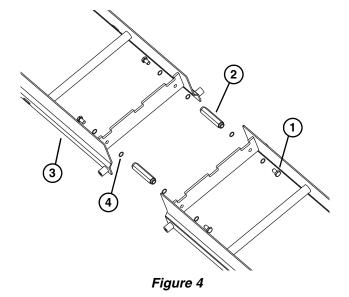
# Recommended Installation Sequence

- 1. Attach the stands to the conveyor. Refer to "Stand Installation" on page 8.
- 2. Attach the tail assemblies to the frame. Refer to "Tail Assembly Installation" on page 9.
- 3. Attach the lifters, if applicable. Refer to "Lifter Installation" on page 11.
- 4. Install the gearmotor, if applicable. Refer to the "7400 Series Drive Package Installation, Maintenance and Parts Manual."
- 5. Attach the wearstrips. Refer to "Wear Strip Installation" on page 12.
- 6. Install the belt. Refer to "Belt Installation" on page 12.
- 7. Attach the belt returns. Refer to "Belt Return Installation" on page 13.
- 8. Attach any guides / accessories. Refer to the "Service Parts" section starting on page 26.

# Conveyors Longer than 10 ft (3048 mm)

Typical Connection Components (Figure 4)

- 1 M10 x 1.5 mm hex head cap screws (x4)
- 2 Connector hex rods (x2)
- 3 Conveyor frames
- 4 O-rings (x8)



1. Locate the section number sequence etched on each section of frame (**Figure 5**, item 1)

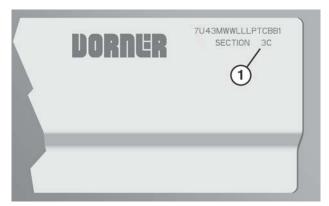


Figure 5

- 2. Position the frame sections in the correct order.
- 3. Connect the frame sections by bolting the hex post connectors (**Figure 6, item 1**) the sections of frame.

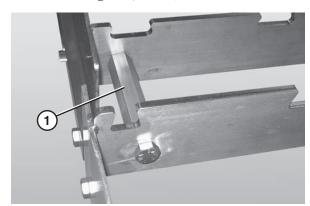


Figure 6

# **LPZ Conveyors**

#### **Knuckles**

1. Attach upper knuckle (**Figure 7, item 1**) to frame (**Figure 7, item 2**) with hex rods (**Figure 7, item 3**) and bolts (**Figure 7, item 4**).

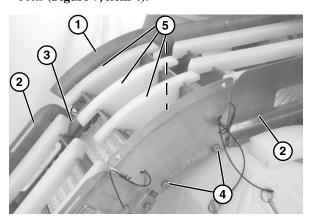


Figure 7

- 2. Install wear strips (Figure 7, item 5).
- 3. Attach lower knuckle (**Figure 8, item 1**) to frame (**Figure 8, item 2**) with hex rods (**Figure 8, item 3**) and bolts (**Figure 8, item 4**).

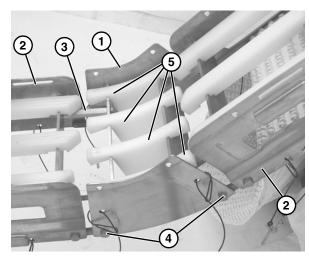


Figure 8

4. Install wear strips (**Figure 8, item 5**).

#### **Belt**

1. Slide belt (**Figure 9, item 1**) over knuckles on top of the wear strips.



Figure 9

#### **Guides**

1. Slide guides (**Figure 10**, **item 1**) on to the knuckle frame, and secure with pull pins (**Figure 10**, **item 2**).

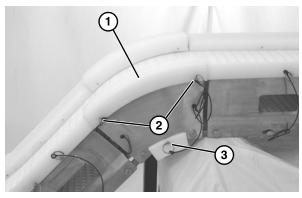


Figure 10

- Install return guides and secure with pull pin (Figure 10, item 3).
- 3. Slide guides (**Figure 11, item 1**) onto lower knuckle frame, and secure with pull pins (**Figure 11, item 2**).

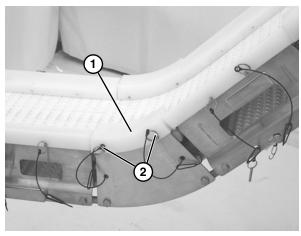


Figure 11

4. Install lower guides (**Figure 12**, **item 1**) onto lower end of knuckle and secure with pins (**Figure 12**, **item 2**).

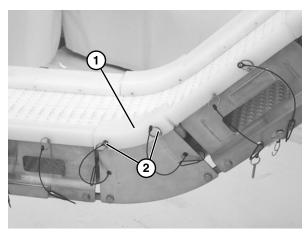


Figure 12

### **All Conveyors**

#### **Stand Installation**

Typical Stand Components (Figure 13)

- 1 Conveyor frame
- 2 Stand
- 3 M10 1.5 x 16 mm hex head cap screws (x4)

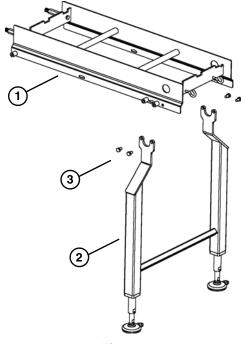


Figure 13

- 1. Position the stands on a flat, level surface.
- 2. Attach the stands to the frame (**Figure 14**).

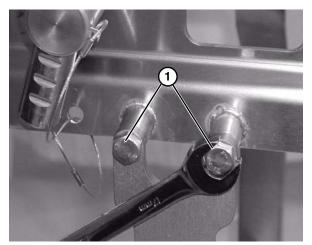


Figure 14

3. Tighten hex screws (**Figure 14, item 1**).

### **Tail Assembly Installation**

#### **Nose Bar Drive Tail**

Typical Nose Bar Drive Tail Components (Figure 15)

- 1 Nose bar drive tail assembly
- 2 Conveyor frame

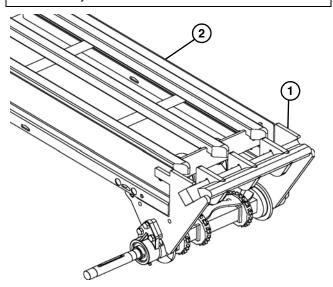


Figure 15

1. Install the drive package, if applicable. Refer to the "7400 Series Drive Package Installation, Maintenance and Parts Manual."

#### Nose Bar Tip Up Tail

Typical Nose Bar Tip Up Tail Components (Figure 16)

- 1 Tip up tail assembly
- 2 Pull pin (x2)
- 3 Tip up shaft
- 4 Key stops (x2)

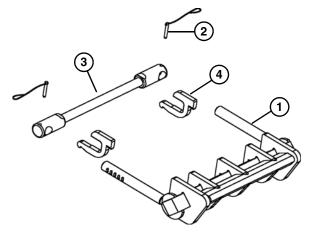


Figure 16

1. Slide the tip up shaft (**Figure 17, item 1**) through the designated slots in the frame.

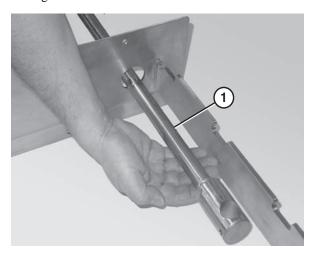


Figure 17

2. Attach the key stops (**Figure 18, item 1**) to the tip up shaft (**Figure 18, item 2**). The rounded end of the key stop should face the tail.

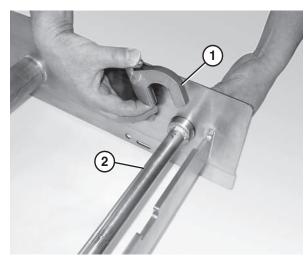


Figure 18

3. Attach the nose bar idler shaft hands (Figure 19, item 1) to the tip up shaft (Figure 19, item 2).

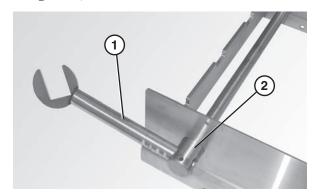


Figure 19

4. Attach the nose bar transfer post (**Figure 20, item 1**) to the nose bar idler shaft hands (**Figure 20, item 2**).

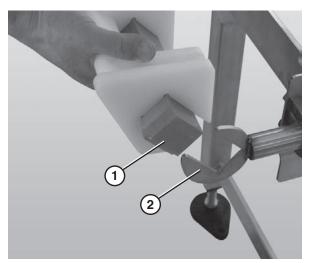


Figure 20

5. Ensure that the nose bar pucks (**Figure 21**, **item 1**) are in line with the conveyor frame (**Figure 21**, **item 2**).

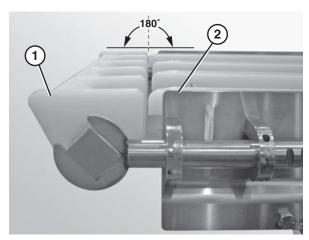


Figure 21

### **NOTE**

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

#### **Tip Up Idler Tail**

Typical Tip Up Idler Tail Components (Figure 22)

- 1 Tip up tail assembly
- 2 Pull pin (x2)
- 3 Tip up shaft
- 4 Key stops (x2)

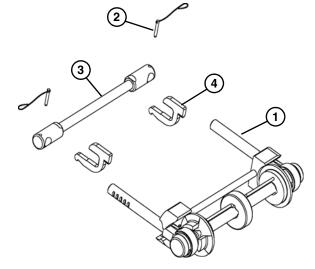


Figure 22

1. Slide the tip up shaft (**Figure 23, item 1**) through the designated slots in the frame.

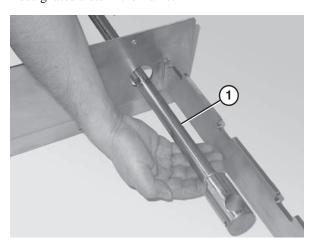


Figure 23

2. Attach the key stops (**Figure 24, item 1**) to the tip up shaft (**Figure 24, item 2**). The rounded end of the key stop should be facing the tail.

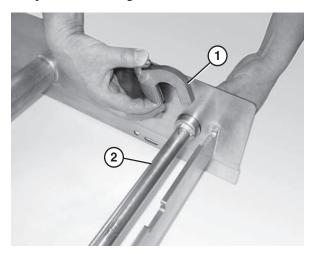


Figure 24

3. Slide the bearing shafts (**Figure 25, item 1**) into the holes in the tip up shaft (**Figure 25, item 2**).

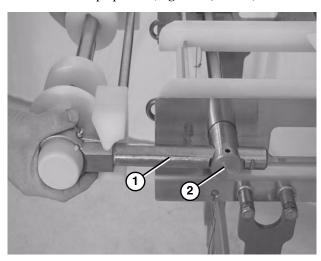


Figure 25

### NOTE

Do not insert the pull pins on the tension end of the conveyor until the belt has been installed.

#### **Lifter Installation**

Typical Lifter Components (Figure 26)

- Belt lift pivot bar
- 2 Lifter bars
- 3 Belt lift handle
- 4 M8 1.25 x 16 mm hex head cap screw

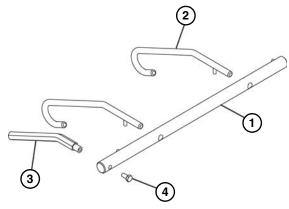


Figure 26

1. Slide the belt lift pivot bar (**Figure 27**, **item 1**) through the designated holes in the frame.

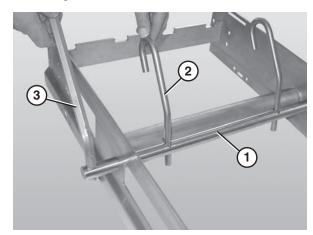


Figure 27

- 2. Attach the lifter bars (**Figure 27**, **item 2**) to the belt lift pivot bar (**Figure 27**, **item 1**). Make sure the hooked ends of the lifter bars are facing down when resting against the frame.
- 3. Attach the lifter handle (**Figure 27, item 3**) to the belt lift pivot rod.

### **Wear Strip Installation**

Typical Wear Strip Components (Figure 28)

1 Wear strip

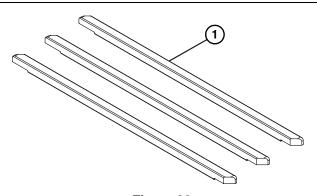


Figure 28

1. Position the wear strips (**Figure 29, item 1**) on the frame.

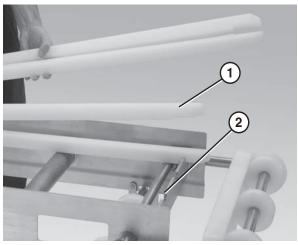


Figure 29

2. Make sure the wear strips are situated securely in the frame slots (**Figure 29**, **item 2**).

#### **Belt Installation**

Typical Belt Components (Figure 30)

- 1 Chain belt
- 2 Belt rod

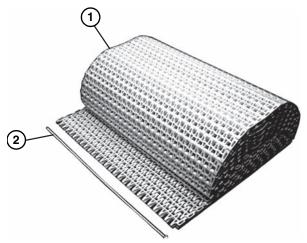


Figure 30

1. Position the belt on the conveyor frame (**Figure 31**).



Figure 31

2. Wrap the belt around the conveyor, making sure the sprocket teeth have engaged the belt.

3. Bring the ends of the belt together (**Figure 32**).



Figure 32

4. Insert the belt rod (**Figure 33, item 1**).

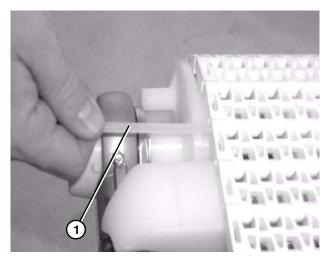


Figure 33

- 5. Push the belt rod in as far as possible.
- 6. Lightly tap the head of the rod with a hammer until it snaps into position.
- 7. Extend the tension end to remove excess slack in the belt (**Figure 34**).

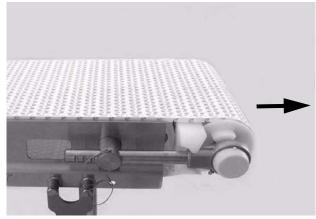


Figure 34

8. Insert the pull pins (**Figure 35, item 1**) on the tension end of the conveyor.

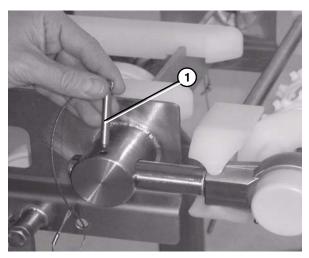


Figure 35

9. If no more travel is available, remove one or more belt links to take up the tension. Refer to "Standard Belts: Replacing a Section of Belt" on page 17.

#### **Belt Return Installation**

Typical Belt Return Components (Figure 36)

- 1 Return shaft
- 2 Chain return shoe

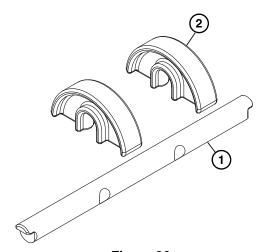


Figure 36

1. Attach the chain return shoes (**Figure 37, item 1**) to the return shaft (**Figure 37, item 2**).

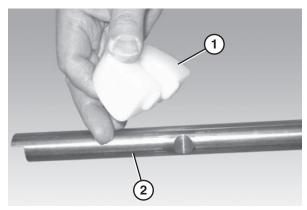


Figure 37

2. Slide the return shaft (**Figure 38, item 1**) up and through the large slot (**Figure 38, item 2**) in the frame (picture shown without the belt or wear strips).

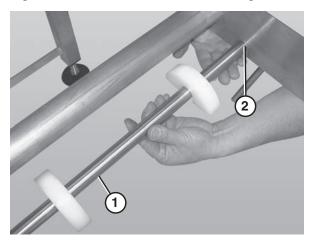


Figure 38

3. Push up on the return shaft (**Figure 38, item 1**) and slide the notched end of the shaft through the small slot on the opposite side of the frame.

4. Check belt sag by measuring from the top of the return (**Figure 39**). Belt sag should not exceed 4" (102 mm). Follow steps 7 – 9 in the "Belt Installation" section on page 12 to remove slack from the belt.

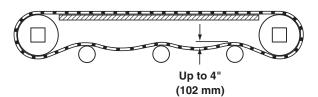


Figure 39

### **A** CAUTION

Belt sag should not exceed 4" (102 mm) from the top of the returns.

### **Required Tools**

- 17 mm wrench (or adjustable wrench)
- 4 mm hex wrench (for bearing shaft assembly fasteners)
- 3 mm hex wrench
- Punch and hammer (to remove belt rod)

#### Checklist

- Keep service parts on hand. Refer to the "Service Parts" section starting on page 26 for recommendations.
- Replace any worn or damaged parts.

### Cleaning

#### NOTE

Proper conveyor application, cleaning, and sanitation are the responsibility of the end user.

### **A** CAUTION

Dorner recommends cleaning all the "food zones" prior to placing conveyor into service. Ensure adequate access is provided for cleaning and servicing equipment so that the required level of hygiene can be maintained.

### **Routine Cleaning**





#### **SEVERE HAZARD!**

LOCK OUT POWER before removing guards or performing maintenance. Exposed moving parts can cause serious injury.

Dorner recommends cleaning the inside and the outside of the conveyor on a daily basis. Refer to the following steps to access the inside of the conveyor.

#### **Standard Conveyors**

1. Remove the guides, if applicable, by removing the pull pins (**Figure 40, item 1**) that connect the guide (**Figure 40, item 2**) to the frame.

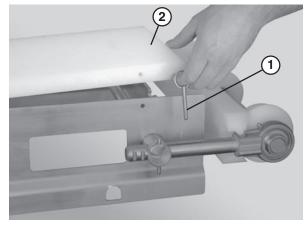


Figure 40

2. Remove the pull pin (**Figure 41, item 1**) on the tension end of the conveyor to release belt tension.

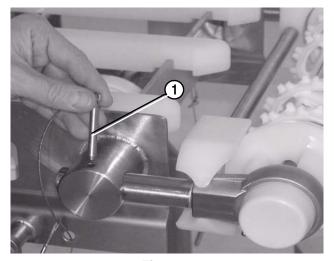


Figure 41

3. Lift up on the belt (**Figure 42**).



Figure 42

#### **Conveyors with Lifters**

- 1. Remove the guides, if applicable, by removing the pull pins (**Figure 40, item 1**) that connect the guide (**Figure 40, item 2**) to the frame.
- 2. Use the lifter handle (**Figure 43, item 1**) to raise the lifters (**Figure 43, item 2**) and raise the tip up tail (**Figure 43, item 3**).

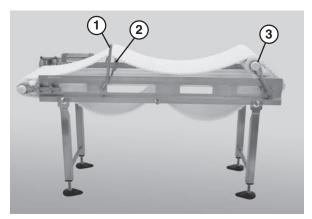


Figure 43

### **A** CAUTION

DO NOT submerge or soak bearing assemblies. This will reduce the life of the bearing.

### **Periodic Cleaning**

Dorner recommends complete disassembly of the conveyor periodically for thorough cleaning.

For conveyor disassembly and reassembly instructions:

- Refer to "Conveyor Belt Replacement" on page 17.
- Refer to "Sprocket and Puck Removal" on page 19.
- Refer to "Reassembling Tail Assemblies" on page 22.

#### Lubrication

#### **Conveyor Bearings**

Conveyor bearing lubrication is required. Dorner recommends using an H-1 food grade grease.

#### NOTE

Although bearings are sealed, re-greasing is recommended to increase bearing life. An H-1 food grade grease is recommended. The frequency of bearing re-greasing is dependent upon the application in which the conveyor is being used. Frequency of regreasing will increase with the frequency of conveyor washing.

1. Add grease to the bearing using the zerk fitting (**Figure 44, item 1**) on the exterior of the bearing shaft assembly.

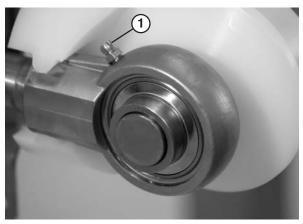


Figure 44

2. Replace the bearings if they become worn.

### **Wearstrips and Belt Returns**

Replace the wearstrips and belt returns if they become worn.

For wearstrip and belt return installation instructions:

- Refer to "Wear Strip Installation" on page 12.
- Refer to "Belt Return Installation" on page 13.

### **Maintaining the Conveyor Belt**

### **Troubleshooting**

#### NOTE

Visit www.dorner.com for complete list of troubleshooting solutions.

Inspect conveyor belt for:

- · Surface cuts or wear
- Skipping

Damage to belt links or rods, surface cuts and / or wear indicate:

- · Sharp or heavy parts impacting belt
- · Jammed parts
- · Accumulated dirt
- Foreign material inside the conveyor
- · Improperly positioned accessories

Skipping indicates:

- · Excessive load on belt
- Worn sprockets or impacted dirt on drive pulley

Damage to belt links or rods indicate:

- · Excessive load on belt
- Dirt impacted on sprockets
- Excessive or improper side loading
- Improperly positioned accessories

### **Conveyor Belt Replacement**



LOCK OUT POWER before removing guards or performing maintenance. Exposed moving parts can cause serious injury.

### **Conveyors with Guides**

1. Remove the pull pins (**Figure 45, item 1**) that connect the guide (**Figure 45, item 2**) to the frame.

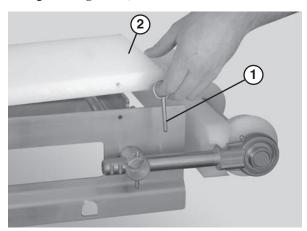


Figure 45

2. Remove the guide (Figure 46, item 1).

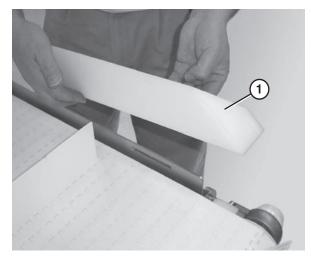


Figure 46

 Follow the belt replacement procedures described in "Standard Belts" on page 17, "Specialty Intralox 1100 Series Belts" on page 18, or "Specialty Intralox 1600 Series Belts" on page 18.

#### **Standard Belts**

### Replacing a Section of Belt

1. Remove the pull pins (**Figure 47, item 1**) on the tension end of the conveyor to release tension on the belt.

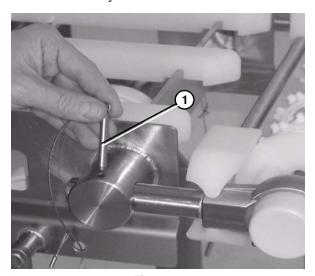
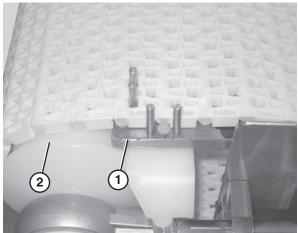


Figure 47

### **A** CAUTION

Secure the retaining head side of the belt prior to removing a belt rod in order to prevent damaging the belt.

2. Secure the retaining head side of the belt. Use the belt removal tool (3., item 1) for 1" pitch belts. For all other belts, position the section of belt so that it is braced by the flanged puck (3., item 2).



3. Use a punch and hammer to push the belt rod out by striking the rod end opposite the retaining head (Figure 48).



Figure 48

- 4. Remove the belt rods on both sides of the section of belt being replaced.
- 5. Replace the old section with a new section of belt.

### **A** CAUTION

DO NOT reuse belt rods that are damaged or show signs of wear.

#### Replacing the Entire Belt

1. Remove the belt returns by pushing up on the return shaft (**Figure 49, item 1**) and sliding it through the large hole (**Figure 49, item 2**) in the frame.

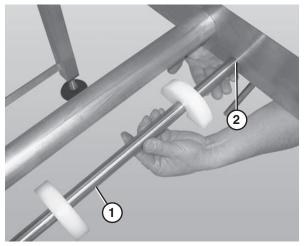


Figure 49

- 2. Lower the opposite end of the return shaft (**Figure 49, item 1**) and slide it out of the frame.
- 3. Follow steps 1-3 in "Standard Belts: Replacing a Section of Belt" on page 17.
- 4. Remove the belt.
- Replace the damaged or worn belt. Refer to "Belt Installation" on page 12 and "Belt Return Installation" on page 13.

### **Specialty Intralox 1100 Series Belts**

#### Replacing a Section of Belt

1. Place the edge of a flat head screwdriver between the the two belt links and turn clockwise (**Figure 50**).

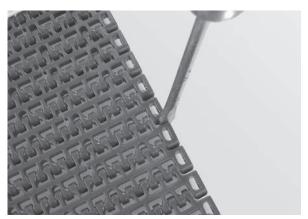


Figure 50

2. Use a second belt rod of the same size to push on the opposite end of the belt rod. (Figure 51).

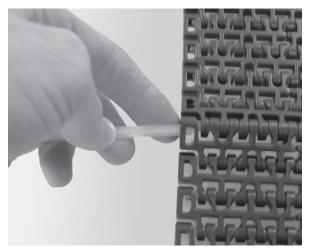


Figure 51

- Remove the belt rods on both sides of the section of belt being replaced.
- 4. Replace the old section with a new section of belt.

### **A** CAUTION

DO NOT reuse belt rods that are damaged or show signs of wear.

#### Replacing the Entire Belt

- 1. Remove the belt returns.
- 2. Follow steps 1 2 in "Specialty Intralox 1100 Series Belts: Replacing a Section of Belt" on page 18.
- 3. Remove the belt.
- 4. Replace the damaged or worn belt. Refer to "Belt Installation" on page 12 and "Belt Return Installation"

### Conveyor Belt Tensioning





**SEVERE HAZARD!** 

**LOCK OUT POWER before removing guards** or performing maintenance. Exposed moving parts can cause serious injury.

### **A** CAUTION

Belt sag should not exceed 4" (102 mm) from the top of the returns.

Remove both pull pins (**Figure 52, item 1**). Place tip up idler tail in the down position (Figure 52, item 2).

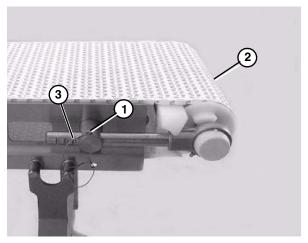


Figure 52

- Extend the idler tail to the next groove (Figure 52, item 3) on the bearing shaft.
- 3. Continue extending the tension end until the belt is sufficiently tight (Figure 53).

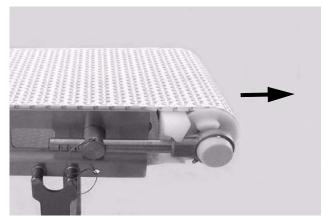


Figure 53

- Reinsert the pull pins.
- If no more travel is available, remove one or more belt links to take up the tension. Refer to "Replacing a Section of Belt" on page 17.

# Sprocket and Puck Removal



**LOCK OUT POWER before removing guards** or performing maintenance. Exposed moving parts can cause serious injury.

- 1. Remove the conveyor belt to access the sprockets / pucks. Refer to "Conveyor Belt Replacement" starting on page 17.
- 2. Remove the desired sprocket / puck by following these instructions:
- A Drive Sprocket Removal
- B Nose Bar Puck Removal
- C Idler Puck Removal

### A - Drive Sprocket Removal



Handle drive shaft keyway with care. It may be sharp and could puncture the skin, causing serious injury.

1. Loosen the fasteners (**Figure 54, item 1**) that connect the gearmotor to the drive spindle using a hex wrench (**Figure 54, item 2**).

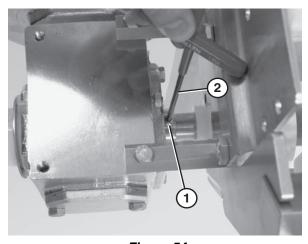


Figure 54

- 2. Remove the bolts that connect the motor to the drive assembly (**Figure 55**).
- 3. Remove the motor (**Figure 55, item 1**) from the drive assembly (**Figure 55, item 2**).

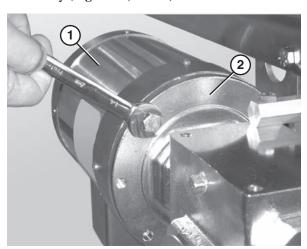


Figure 55

4. Unbolt the drive assembly and slide it off the bearing spindle (**Figure 56**).

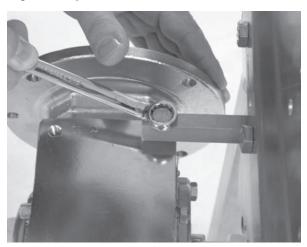


Figure 56

5. Remove the bearing cover.

6. Loosen the 3 hole flange (**Figure 57, item 1**) with bearing fasteners using a hex wrench (**Figure 57, item 2**).

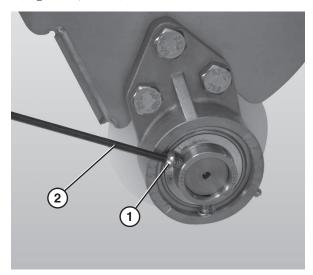


Figure 57

7. Disconnect the 3 hole flange bearing (Figure 58, item 1) from the nose bar drive weldment (Figure 58, item 2).

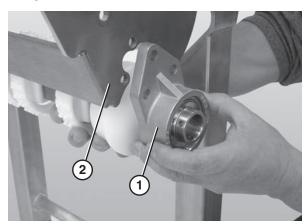


Figure 58

8. Lower the entire drive assembly.

9. Slide the 3 hole flange with bearing (**Figure 59, item 1**) and flanged puck (**Figure 59, item 2**) off the drive spindle.

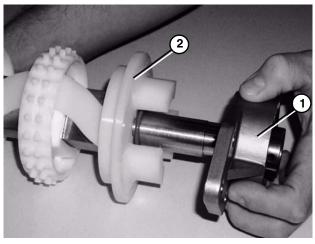


Figure 59

10. Slide the sprockets (**Figure 60, item 1**) and the sprocket alignment bar (**Figure 60, item 2**) off the drive spindle (**Figure 60, item 3**).

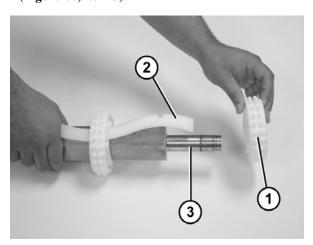


Figure 60

#### **B - Nose Bar Puck Removal**

1. Slide the nose bar drive or transfer post (Figure 61, item 1) out of the nose bar drive weldment or idler hands (Figure 61, item 2).

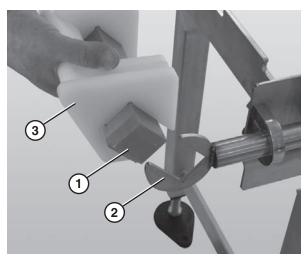


Figure 61

- 2. Remove the nose bar tracking pucks (**Figure 61, item 3**), if applicable.
- 3. Remove the nose bar wear strip (**Figure 62, item 3**).

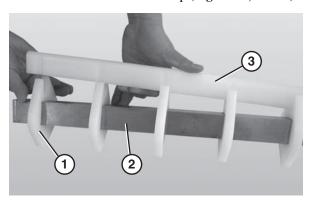


Figure 62

4. Slide the nose bar pucks (**Figure 62, item 1**) off the nose bar shaft (**Figure 62, item 2**).

#### C - Idler Puck Removal

1. Remove the pull pins (Figure 63, item 1).

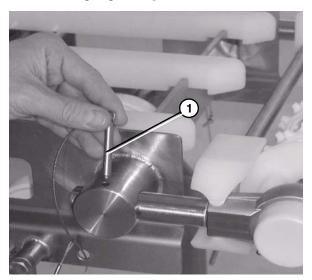


Figure 63

2. Slide the idler tail assembly (**Figure 64, item 1**) out of the take up blocks (**Figure 64, item 2**).

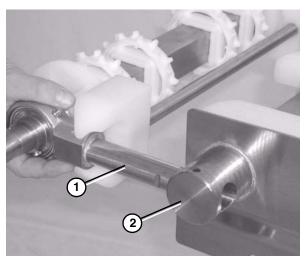


Figure 64

3. Remove the bearing cover (**Figure 65, item 1**).



Figure 65

4. Use a hex wrench (**Figure 66, item 1**) to loosen the bearing shaft assembly fasteners (**Figure 66, item 2**).

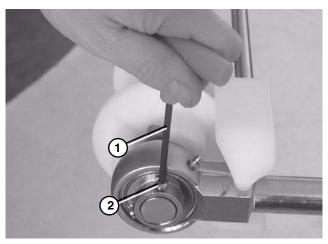


Figure 66

5. Slide the bearing shaft assembly (**Figure 67**, **item 2**) off the idler shaft.

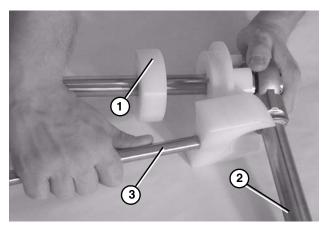


Figure 67

- 6. Remove the guard bar (**Figure 67, item 3**).
- 7. Slide the pucks (**Figure 67, item 1**) off the idler shaft.

### **Reassembling Tail Assembly**

Refer to the "Service Parts" section starting on page 26 for complete diagrams and lists of all tail assembly components.

#### **Nose Bar Drive Tail**

#### **Nose Bar Assembly**

1. Slide the nose bar pucks (**Figure 68, item 1**) onto the nose bar drive post (**Figure 68, item 2**).

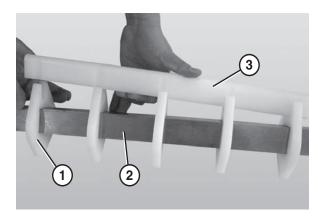


Figure 68

2. Attach the nose bar wear strip (**Figure 68, item 3**).

### **Drive Tail Assembly**

1. Slide the first sprocket (**Figure 69, item 1**) onto the drive spindle (**Figure 69, item 2**).

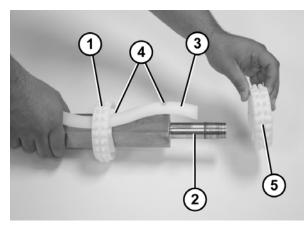


Figure 69

- 2. Insert the sprocket alignment bar (**Figure 69, item 3**) into the first sprocket and align the sprocket with the notch (**Figure 69, item 4**) in the sprocket alignment bar.
- 3. Slide the remaining sprockets (**Figure 69, item 5**) onto drive spindle and align each sprocket with the notches (**Figure 69, item 4**) in the sprocket alignment bar.

4. Attach the flanged pucks (**Figure 70**, **item 1**), O-ring (**Figure 70**, **item 2**), washer (**Figure 70**, **item 3**), and the 3 hole flange with bearing (**Figure 70**, **item 4**) to the drive spindle.

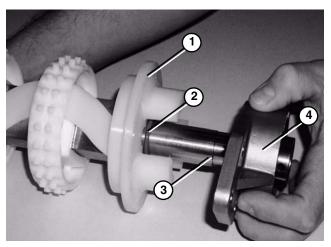


Figure 70

5. Tighten the 3 hole flange with bearing fasteners (Figure 71, item 1) using a hex wrench (Figure 71, item 2) to 54 in•lbs (6 N•m). Check after 24 hours of conveyor use.

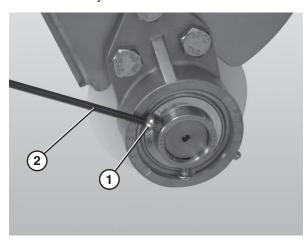


Figure 71

### Nose Bar Idler and Tip Up Tail

1. Slide the nose bar pucks (**Figure 72**, **item 1**) onto the nose bar drive post (**Figure 72**, **item 2**).

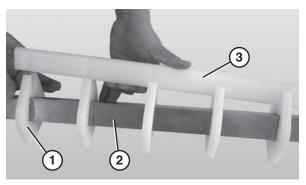


Figure 72

- 2. Attach the nose bar wear strip (Figure 72, item 3).
- 3. Attach the nose bar tracking pucks (**Figure 73, item 1**) to the nose bar drive post (**Figure 73, item 2**).

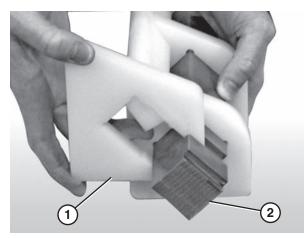


Figure 73

### **Idler Tail and Tip Up Tail**

- 1. Place the idler puck (**Figure 74**, **item 1**) at the center of the bent retaining bar (**Figure 74**, **item 2**).
- 2. Slide the idler puck onto the idler shaft (**Figure 74, item 3**). Make sure to center the idler puck.

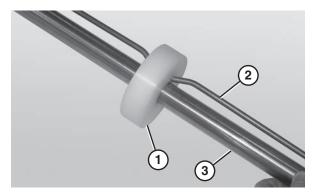


Figure 74

- 3. Attach the flanged pucks (**Figure 75**, **item 2**) and bearing shaft assemblies to the idler shaft.
- 4. Attach the guard bar (**Figure 75, item 1**).

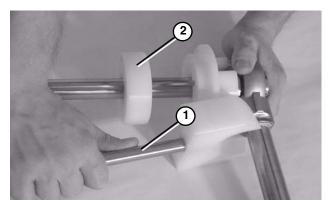


Figure 75

5. Use a hex wrench (**Figure 76**, **item 1**) to tighten the bearing shaft fasteners (**Figure 76**, **item 2**) to 54 in•lbs (6 N•m). Check after 24 hours of conveyor use.

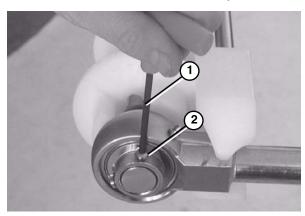


Figure 76

6. Attach the bearing covers. Reference Figure 60.

# **Bearing Replacement**

- 1. Secure the bearing shaft in the take up blocks.
- 2. Insert the rod end of a second bearing shaft through the bearing (**Figure 77**).



Figure 77

- 3. Apply lateral pressure to the rod until the bearing comes loose.
- 4. Remove the worn or damaged bearing (**Figure 78**).

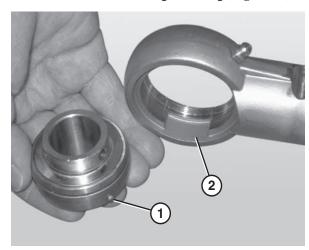


Figure 78

5. Replace the bearing.

#### NOTE

When inserting the new bearing, make sure the anti-rotation notch (Figure 78, item 1) on the bearing lines up with the groove inside the housing (Figure 78, item 2).

#### **LPZ Knuckles**

### Wearstrips and Belt Returns

Replace the wearstrips and belt returns if they become worn.

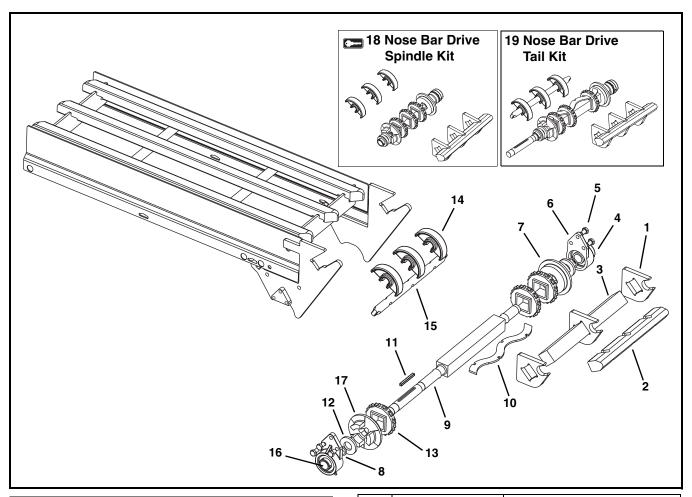
For wearstrip and belt return installation instructions:

- For wearstrips, replace as needed, making sure wear strips are situated securely in the frame slots.
- For belt returns, Refer to "Belt Return Installation" on page 13.

### **NOTE**

For replacement parts other than those shown in this section, contact an authorized Dorner Service Center or the factory. Key Service Parts and Kits are identified by the Performance Parts Kits logo . Dorner recommends keeping these parts on hand.

# **Nose Bar Drive End Components**



Item	Part Number	Description
1	500278	Nose Bar Puck
2	5055 <u>WW</u>	.5" Pitch Nose Bar Wear Strip
	5057 <u>WW</u>	1" Pitch Nose Bar Wear Strip
3	5178 <u>WW</u>	Nose Bar Drive Post
4	807-1454	Cover
5	961016MSS	Hex Head Cap Screw M10- 1.5x16mm
6	500288	3 Hole Flange with Bearing
7	5172 <u>WW</u>	Flange Puck for Standard Belt
	5173 <u>WW</u>	Flange Puck for Specialty Intralox Belt
8	807-1588	O-Ring

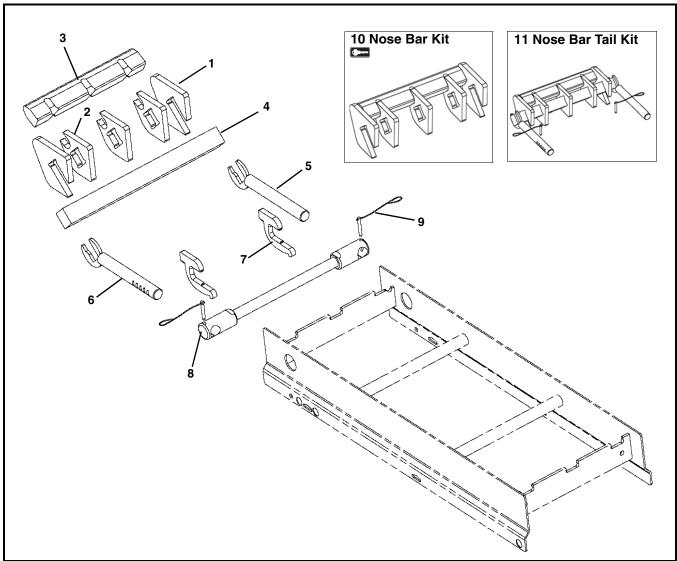
Item	Part Number	Description
9	5179 <u>WW</u>	Drive Spindle for Standard Belt
	5180 <u>WW</u>	Drive Spindle for Specialty Intralox Belt
10	5086 <u>WW</u>	Sprocket Alignment Bar for Standard .50" Pitch Belt
	5087 <u>WW</u>	Sprocket Alignment Bar for Specialty Intralox .60" Pitch Belt
11	912-111SS	Square Key .25" x 2.50"
12	501381	Washer, Puck Standoff
13	807-1443	Sprocket for Standard .50" Pitch Belt
	807-1446	Sprocket for Specialty Intralox .60" Pitch Belt
14	500075	Belt Return
15	5032 <u>WW</u>	Return Shaft

Item	Part Number	Description	
16	802-162	Bearing	
17	517201	Drive Puck	
18	74UNBDD12- <u>WW</u>	Nose Bar Drive Spindle Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package for Standard .50" Pitch Belt (Includes Items 1, 2, 4, 7, 13, 14, 16 and 17)	
	74UNBDD11- <u>WW</u>	Nose Bar Drive Spindle Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package for Specialty Intralox .60" Pitch Belt (Includes Items 1, 2, 4, 7, 13, 14, 16 and 17)	
	74UNBDC12- <u>WW</u>	Nose Bar Drive Spindle Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package for Standard .50" Pitch Belt (Includes Items 1, 2, 4, 7, 13, 14, 16 and 17)	
	74UNBDC11- <u>WW</u>	Nose Bar Drive Spindle Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package for Specialty Intralox .60" Pitch Belt (Includes Items 1, 2, 4, 7, 13, 14, 16 and 17)	
19	74UNBCDT12- <u>WW</u>	Nose Bar Drive Tail Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package for Standard .50" Pitch Belt (Includes Items 1, 2, 4, 7 through 17)	
	74UNBCDT11- <u>WW</u>	Nose Bar Drive Tail Kit when Conveyor is ordered with a Dorner Gearmotor Mounting Package for Specialty Intralox .60" Pitch Belt (Includes Items 1, 2, 4, 7 through 17)	
	74UNBCDT12- <u>WW</u>	Nose Bar Drive Tail Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package for Standard .50" Pitch Belt (Includes Items 1, 2, 4, 7 through 17)	
	74UNBCDT11- <u>WW</u>	Nose Bar Drive Tail Kit when Conveyor is ordered without a Dorner Gearmotor Mounting Package for Specialty Intralox .60" Pitch Belt (Includes Items 1, 2, 4, 7 through 17)	
	<u>WW</u> = Conveyor width ref: 06 - 36 in 02 increments		
* When the conveyor is ordered with a Dorner gearmotor			

Sprocket Quantity (Item 4)		
Width	Sprocket Quantity	
6" (152mm)	2	
8" (203mm)	2	
10" (254mm)	3	
12" (305mm)	3	
14" (356mm)	4	
16" (406mm)	4	
18" (457mm)	5	
20" (508mm)	5	
22" (559mm)	6	
24" (610mm)	6	
26" (660mm)	7	
28" (711mm)	7	
30" (762mm)	8	
32" (813mm)	8	
34" (864mm)	9	
36" (914mm)	9	

<sup>\*</sup> When the conveyor is ordered with a Dorner gearmotor mounting package the shaft assembly is replaced with a gearmotor mounting bracket.

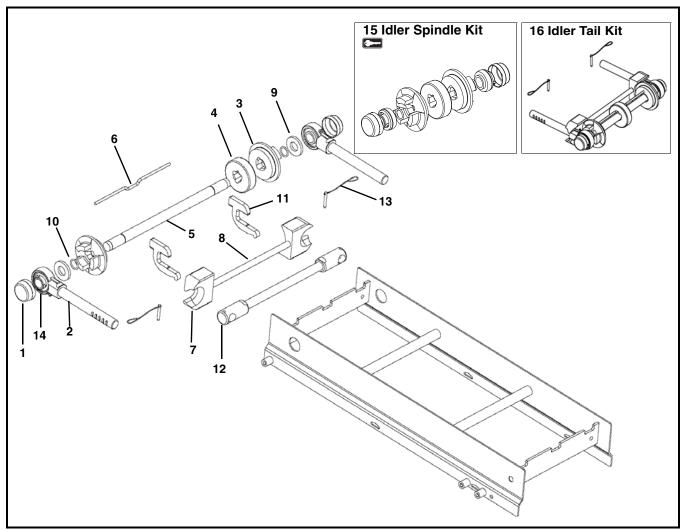
# Nose Bar Tip Up Tension End



Item	Part Number	Description
1	500490	Nose Bar Tracking Puck
2	500278	Nose Bar Puck
3	5056 <u>WW</u>	.5" Pitch Nose Bar Wear Strip
	5058 <u>WW</u>	1" Pitch Nose Bar Wear Strip
4	5176 <u>WW</u>	Nose Bar Transfer Post for Standard Belt
	5177 <u>WW</u>	Nose Bar Transfer Post for Specialty Intralox Belt
5	500487	Nose Bar Idler Shaft Left Hand
6	500488	Nose Bar Idler Shaft Right Hand
7	501184	Key Stop
8	5182 <u>WW</u>	Tip Up Shaft Assembly

Item	Part Number	Description
9	501676	Pin Assembly
10	74UNB5- <u>WW</u>	.5" Nose Bar Kit for Standard Belt (Includes Items 1 through 3)
	74UNB1- <u>WW</u>	1" Nose Bar Kit for Specialty Intralox Belt (Includes Items 1 through 3)
11	74UNBT5- <u>WW</u>	.5" Nose Bar Tail Kit for Standard Belt (Includes Items 1 through 6 and 9)
	74UNBT1- <u>WW</u>	1" Nose Bar Tail Kit for Standard Belt (Includes Items 1 through 6 and 9)
	74UNBT5S- WW	.5" Nose Bar Tail Kit for Specialty Intralox Belt (Includes Items 1 through 6 and 9)
	74UNBT1S- WW	1" Nose Bar Tail Kit for Specialty Intralox Belt (Includes Items 1 through 6 and 9)
<u>WW</u> = Conveyor width ref: 06 - 36 in 02 increments		

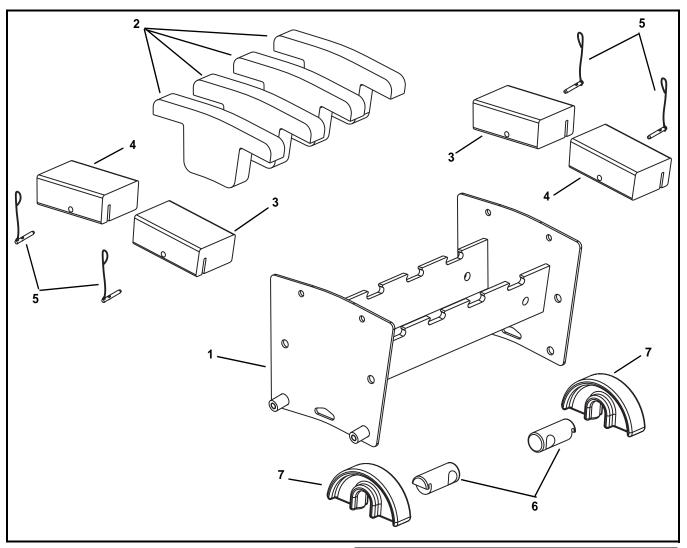
# **Tip Up Tension End**



Item	Part Number	Description
1	807-1454	Bearing Cover
2	500079	Shaft Assembly with Bearing
3	5172 <u>WW</u>	Flanged Puck, Idler Tail for Standard Belt
	5173 <u>WW</u>	Flanged Puck, Idler Tail for Specialty Intralox Belt
4	501189	Idler Puck
5	5156 <u>WW</u>	Idler Shaft
6	5157 <u>WW</u>	Bent Retaining Bar for Standard Belt
	5167 <u>WW</u>	Bent Retaining Bar for Specialty Intralox Belt
7	501188	Guard Bar
8	5154 <u>WW</u>	Guard Bar Shaft
9	501381	Washer
10	807-1588	O-Ring

Item	Part Number	Description
11	501184	Key Stop
12	5182 <u>WW</u>	Tip Up Shaft Assembly
13	501676	Pin Assembly
14	802-162	Bearing
15	74UI- <u>WW</u>	Idler Spindle Kit for Standard Belt (Includes Items 1, 3, 4, 10 and 14)
	74UIS- <u>WW</u>	Idler Spindle Kit for Specialty Intralox Belt (Includes Items 1, 3, 4, 10 and 14)
16	74UIT- <u>WW</u>	Idler Tail Kit for Standard Belt (Includes Items 1 through 10, 13 and 14)
	74UITS- <u>WW</u>	Idler Tail Kit for Specialty Intralox Belt (Includes Items 1 through 10, 13 and 14)
WW = Conveyor width ref: 06 - 36 in 02 increments		

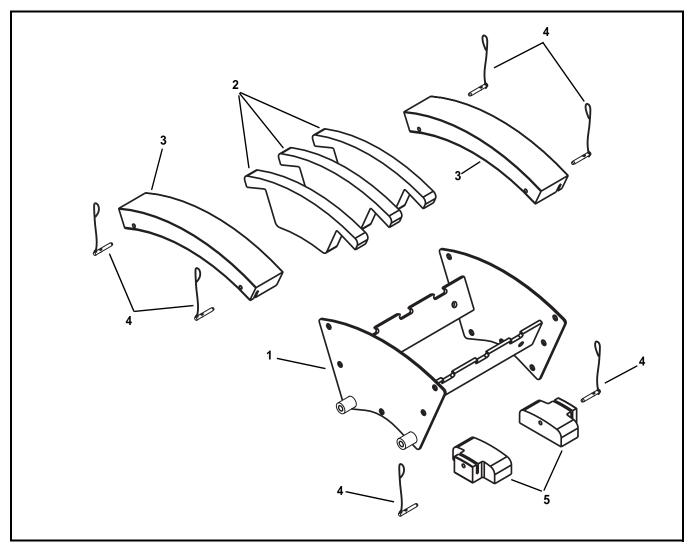
# Upper Knuckle for $5^{\circ}$ - $15^{\circ}$



Item	Part Number	Description
1	5236 <u>WW</u>	Frame Assembly for 5° Knuckle
	5237 <u>WW</u>	Frame Assembly for 10° Knuckle
	5238 <u>WW</u>	Frame Assembly for 15° Knuckle
2	501695- <u>AA</u>	Wear Strips for 5° - 15° Knuckle
3	501893- <u>AA</u>	1.5" Hold Down Guide for 5° - 15° Knuckle Right Hand 6"-16" wide
	501685- <u>AA</u>	1.5" Hold Down Guide for 5° - 15° Knuckle Right Hand 18"-24" wide
	501883- <u>AA</u>	3" Hold Down Guide for 5° - 15° Knuckle Right Hand 6"-16" wide
	501684- <u>AA</u>	3" Hold Down Guide for 5° - 15° Knuckle Right Hand 18"-24" wide

Item	Part Number	Description			
4	501699- <u>AA</u>	1.5" Hold Down Guide for 5° - 15° Knuckle Left Hand 6"-16" wide			
	501687- <u>AA</u>	1.5" Hold Down Guide for 5° - 15° Knuckle Left Hand 18"-24" wide			
	501698- <u>AA</u>	3" Hold Down Guide for 5° - 15° Knuckle Left Hand 6"-16" wide			
	501686- <u>AA</u>	3" Hold Down Guide for 5° - 15° Knuckle Left Hand 18"-24" wide			
5	501676	Pull Pin			
6	500196	Return Shaft			
7	500075	Return Shoe			
<u>WW</u> =	WW = Conveyor width ref: 06 - 24 in 02 increments				
$\underline{AA} = A$	<u>AA</u> = Angle 05, 10 or 15				

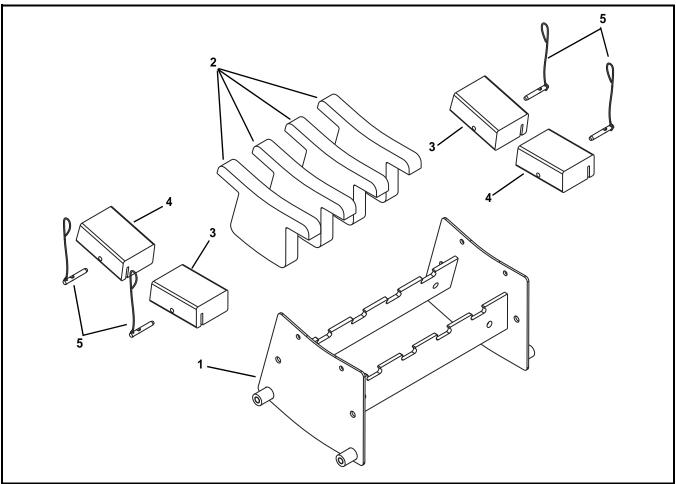
# **Upper Knuckle for 30°**



Item	Part Number	Description
1	5239 <u>WW</u>	Frame Assembly for 30° Knuckle
2	501693-30	Wear Strips for 30° Knuckle
3	501697-30	1.5" Hold Down Guide for 30° Knuckle
	501879-30	3" Hold Down Guide for 30° Knuckle

Item	Part Number	Description		
4	807-1553	Pull Pin		
5	501683	Return Guide		
<u>WW</u> = Conveyor width ref: 06 - 24 in 02 increments				

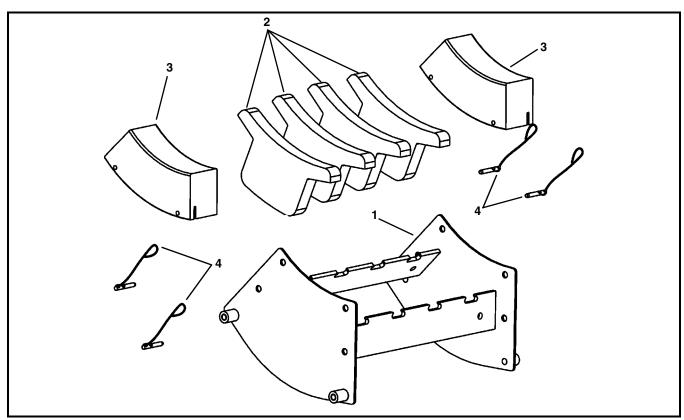
# Lower Knuckle for 5° - 15°



Item	Part Number	Description
1	5230 <u>WW</u>	Frame Assembly for 5° Knuckle
	5231 <u>WW</u>	Frame Assembly for 10° Knuckle
	5232 <u>WW</u>	Frame Assembly for 15° Knuckle
2	501694- <u>AA</u>	Wear Strips for 5° - 15° Knuckle
3	501993- <u>AA</u>	1.5" Hold Down Guide for 5° - 15° Knuckle Right Hand 6"-16" wide
	501987- <u>AA</u>	1.5" Hold Down Guide for 5° - 15° Knuckle Right Hand 18"-24" wide
	501992- <u>AA</u>	3" Hold Down Guide for 5° - 15° Knuckle Right Hand 6"-16" wide
	501986- <u>AA</u>	3" Hold Down Guide for 5° - 15° Knuckle Right Hand 18"-24" wide

Item	Part Number	Description		
4	501991- <u>AA</u>	1.5" Hold Down Guide for 5° - 15° Knuckle Left Hand 6"-16" wide		
	501989- <u>AA</u>	1.5" Hold Down Guide for 5° - 15° Knuckle Left Hand 18"-24" wide		
	501990- <u>AA</u>	3" Hold Down Guide for 5° - 15° Knuckle Left Hand 6"-16" wide		
	501988- <u>AA</u>	3" Hold Down Guide for 5° - 15° Knuckle Left Hand 18"-24" wide		
5	501676	Pull Pin		
<u>WW</u> =	<u>WW</u> = Conveyor width ref: 06 - 24 in 02 increments			
<u>AA</u> = Angle 05, 10 or 15				

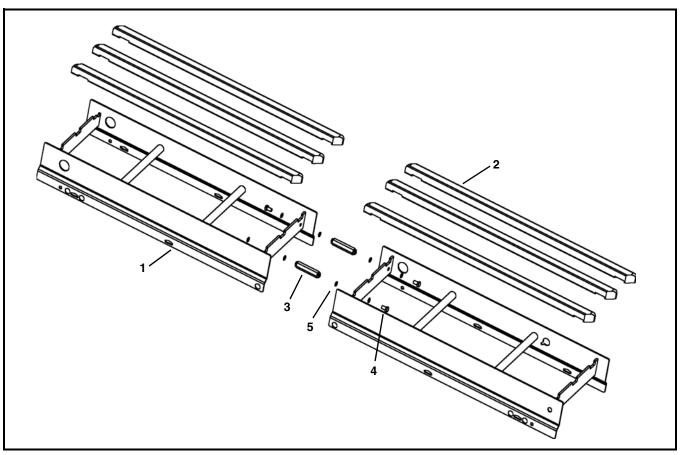
# **Lower Knuckle for 30°**



Item	Part Number	Description
1	5233 <u>WW</u>	Frame Assembly for 30° Knuckle
2	501691-30	Wear Strips for 30° Knuckle

Item	Part Number	Description			
3	501692-30	1.5" Hold Down Guide for 30° Knuckle			
	501878-30	3" Hold Down Guide for 30° Knuckle			
4 501676 Pin Assembly					
WW =	WW = Conveyor width ref: 06 - 24 in 02 increments				

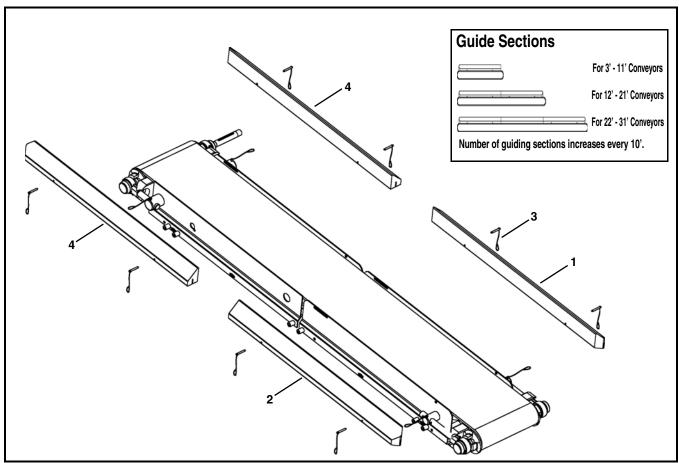
# **Conveyor Frame and Extension**



Item	Part Number	Description		
1		Consult Factory for Frame Part Number		
2	501800- <u>LLL</u>	Straight Wear Strip		
3	501190	Hex Post Connector		
4 961016MSS		Hex Head Cap Screw M10-1.5 x 16mm		
5	807-1616	O-Ring		
<u>LLL</u> = Conveyor length ref: 036 - 999 in 001 increments				

	Wear Strip Quantity (Item 2)								
			Conveyor Length ( <u>LLL</u> )						
		036-	133-	253-	373-	493-	613-	733-	853-
		132	252	372	492	612	732	852	999
	06	2	4	6	8	10	12	14	16
	08	2	4	6	8	10	12	14	16
	10	3	6	9	12	15	18	21	24
	12	3	6	9	12	15	18	21	24
Sī	14	3	6	9	12	15	18	21	24
$\geq$	16	4	8	12	16	20	24	28	32
Conveyor Width (WW	18	4	8	12	16	20	24	28	32
Vid	20	5	10	15	20	25	30	35	40
۲ V	22	5	10	15	20	25	30	35	40
eyc	24	5	10	15	20	25	30	35	40
Š	26	6	12	18	24	30	36	42	48
ŏ	28	6	12	18	24	30	36	42	48
	30	6	12	18	24	30	36	42	48
	32	7	14	21	28	35	42	49	56
	34	7	14	21	28	35	42	49	56
	36	8	16	24	32	40	48	56	64

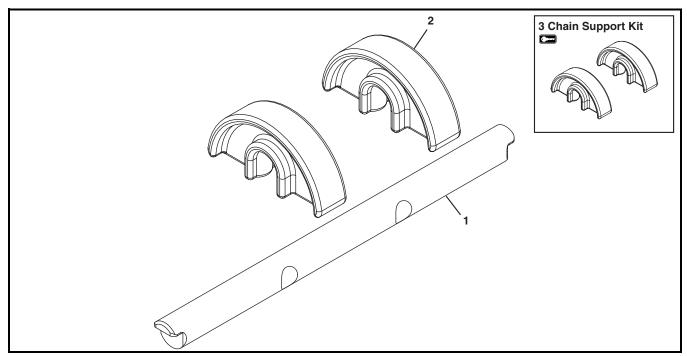
# 3" (76 mm) High Sides



Item	Part Number	Description
1	503501- <u>LLLLL</u>	Right Hand High Side Guide
2	503601- <u>LLLLL</u>	Left Hand High Side Guide
3	501676	Pin Assembly

Item	Part Number	Description		
4	503401- <u>LLLLL</u>	Square End High Side Guide		
<u>LLLLL</u> = Guide Length in inches with 2 decimal places.				
Example: Guide Length = 95.25" LLLLL = 09525				

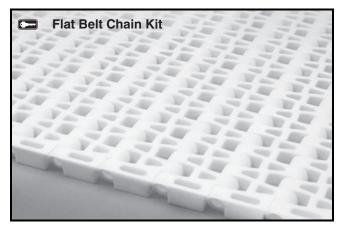
# **Flat Belt Returns**



Item	Part Number	Description
1	5032 <u>WW</u>	Return Shaft
2	500075	Chain Return Shoe

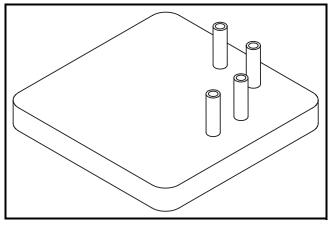
Item	Part Number	Description	
3	74R- <u>WW</u>	Chain Support Kit (Includes Item 2)	
WW = Conveyor width ref: 06 - 36 in 02 increments			

# Flat Belt Chain Repair Kit



Item	Part Number	Description		
1	74 <u>BB</u> - <u>WW</u>	Flat Belt Chain Repair Kit (Includes 1 ft (305 mm) of flat belt chain and assembly pins)		
BB = Chain Reference Number				
WW = Conveyor width ref: 06 - 36 in 02 increments				

# **Belt Removal Tool**



Item	Part Number	Description
1	500582	Tool Rod Removal for 1" Pitch Flush Grid Belt
	500494	Tool Rod Removal for 1/2" Pitch Flush Grid Belt

### **Ordering a Replacement Chain**

Determine the length of chain required for the conveyor and round up to the nearest foot length. Order the proper number of chain repair kits (1' long each) for your conveyor. Dorner will ship chain kits that are of a reasonable length fully assembled.

#### Example:

Overall chain length = 42' 5" (rounded up = 43')

Order: Qty (43) of 74<u>BB-WW</u>

BB = Chain reference number

<u>WW</u> = Conveyor width ref: 06 - 36 in 02 increments

### **Configuring a Conveyor Part Number**

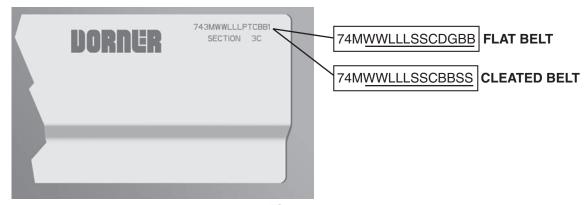


Figure 79

### Flat Belt Conveyor

Refer to the model number on the conveyor frame (**Figure 79**). From the model number, determine conveyor width (<u>WW</u>), length (<u>LLL</u>), drive stand location ( $\underline{S}$ ), idler stand location ( $\underline{S}$ ), cleaning options ( $\underline{C}$ ), drive/pulley type ( $\underline{D}$ ), profile ( $\underline{G}$ ) and belt material ( $\underline{BB}$ ).

# Example: 74M12072CC1NA10

7400 Series end drive, cleated belt conveyor, 12" (305mm) wide x 72" (1829mm) long, stands located 18" (457mm) from each end, frame cutout cleaning option, NA cleated belt material, side drive with standard pulleys on each end, and 10 link spacing for cleats.

# **Return Policy**

Returns must have prior written factory authorization or they will not be accepted. Items that are returned to Dorner without authorization will not be credited nor returned to the original sender. When calling for authorization, please have the following information ready for the Dorner factory representative or your local distributor:

- 1. Name and address of customer.
- 2. Dorner part number(s) of item(s) being returned.
- 3. Reason for return.
- 4. Customer's original order number used when ordering the item(s).
- 5. Dorner or distributor invoice number.

A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization number for reference.

There will be a return charge on all new undamaged items returned for credit where Dorner was not at fault. Dorner is not responsible for return freight on such items.

#### Conveyors and conveyor accessories

#### **Parts**

Standard stock parts 30% MPB, cleated and specialty belts non-returnable items

Returns will not be accepted after 60 days from original invoice date.

The return charge covers inspection, cleaning, disassembly, disposal and reissuing of components to inventory.

If a replacement is needed prior to evaluation of returned item, a purchase order must be issued. Credit (if any) is issued only after return and evaluation is complete.

Dorner has representatives throughout the world. Contact Dorner for the name of your local representative. Our Technical Sales, Catalog Sales and Service Teams will gladly help with your questions on Dorner products.

For a copy of Dorner's Warranty, contact factory, distributor, service center or visit our website at www.dorner.com.

For replacement parts, contact an authorized Dorner Service Center or the factory.

DORNER

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