Mixer Pin and Bushing Replacement Procedures

Erie Strayer Company

1851 Rudolph Ave.
Erie, PA 16502

(814) 456-7001 phone
(814) 452-3422 fax

TECHNICAL SERVICE BULLETIN ESC121619

This is a TSB comprising all required parts and Erie recommended procedures for a full mixer pin and bushing replacement. Consult Erie Strayer service department with any questions.

Hardware

Erie Part Number	QTY	Description	Wrench/Socket Size
Bull Gear Guard			
16485	8	½" x 1 ½" Bolt	¾"
13561	8	½" Nut	¾"
15709	8	½" Lock Washer	
14708	8	½" Flat Washer	
Bull Gear Guard Wings			
16483	8	½" x 1" Bolts	¾"
Hydraulic Cylinders (x2)			
66707		**Complete Pin Assembly**	
19678	4	Pin	
13584	4	1 ¾" Nut Slotted	2 5/8"
20137	4	1 ¾" Flat Washer	
18463	2	Cotter Pin	
19675		Spacers (As Needed)	
10225	4	Torrington Ball Bushing	
Upper Hinge			
66706		**Complete Pin Set for (1) Hinge**	
19679	2	Pin (Main Base Side)	
60000	2	Spacer Collar	
19677	4	Liner Bushing	
58999	2	Bushing	
19681	2	Pin (Main Frame Side)	
19679	4	Liner Bushing	
10225	2	Torrington Ball Bushing	
13584	4	1 ¾" Nut Slotted	2 5/8"
20137	4	1 ¾" Flat Washer	
18463	4	¼" Cotter Pin	
19675		Spacers (As Needed)	
Lower Link			
66705		**Complete Pin Set for (1) Link**	
19680	4	Pin	
16831		Spacers (As Needed)	
10222	4	Torrington Ball Bushing	
13582	4	1 ¼" Nut Slotted	1 7/8"
14084	4	1 ¼" Flat Washer	
13630	4	3/16" Cotter Pin	

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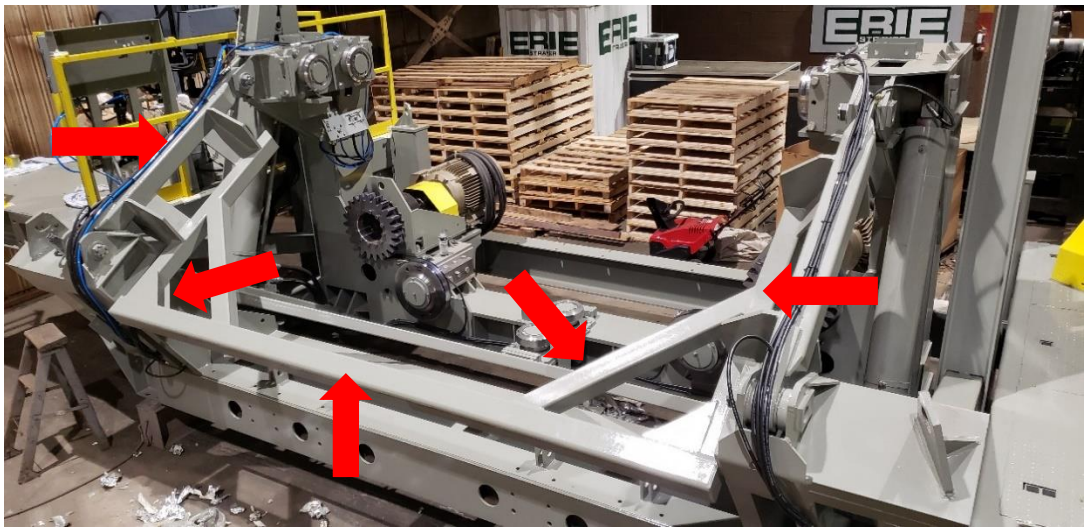
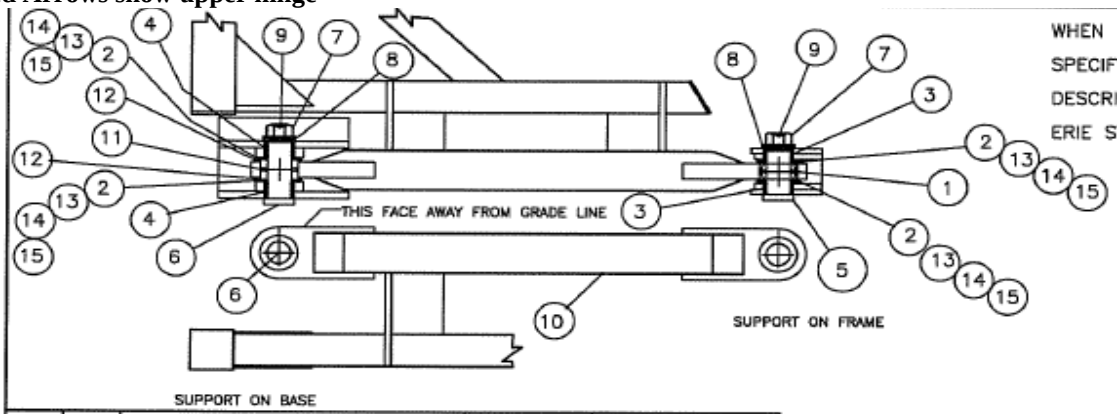
Part Descriptions



Red Arrows show upper hinge



WHEN ORDERING PARTS, PLEASE SPECIFY MIXER SIZE, CONTRACT NO DESCRIPTION OF PART, ITEM NO., ERIE STRAYER PART AND DWG. NO

8–12 CU YD MIXER PARTS LIST | HINGE PIN ASSEMBLY | 1A215740–3

ITEM	QTY	DESCRIPTION	E.S. PT. #	E.S. DWG #
15	8	SPACER	19675–03	1A219891
14	8	SPACER	19675–02	1A219890
13	8	SPACER	19675–01	1A219889
12	4	COLLAR SPACER	60000	1A215581–2
11	2	BUSHING	59999	2A215580–2
10	1	HINGE	58687	4A111810–4
9	4	COTTER PIN	18463	
8	12	WASHER	20137	
7	4	NUT	13584	
6	2	PIN	19679	2A–38715–3
5	2	PIN	19681	2A–38716–3
4	4	LINER SLEEVE	19677	1A–39056–5
3	4	LINER SLEEVE	19676	1A–39055–4
2	8	SPACER	19675–00	1A–36670–3
1	2	BALL BUSHING	10225	

REV. NO.	REVISION	DWG BY	DATE
3	UPDATE FOR TOTAL PIN ASSEMBLY	JRM	6/2 2014
2	ADD IT.13,14,15, CHG TO COMPUTER DWG.	DFH	5/10 2000
1	UP DATE P/N, NEW DRAWING	DFH	6/29 1993

SUPERSEDES NO. 1A215740-1

ERIE STRAYER CO.
ERIE PA

8 THRU 12 CU YD MIXER PARTS LIST
HINGE PIN ASSEMBLY
P/N 66706 FOR COMPLETE PIN SET
FOR (1) HINGE

CONTRACT NO.	DWG BY	DATE	CHK BY	DATE	APP BY
STD	DFH	7/13 1988			

SCALE 3/4" =1' | FILE | DWG NO 1A215740–3

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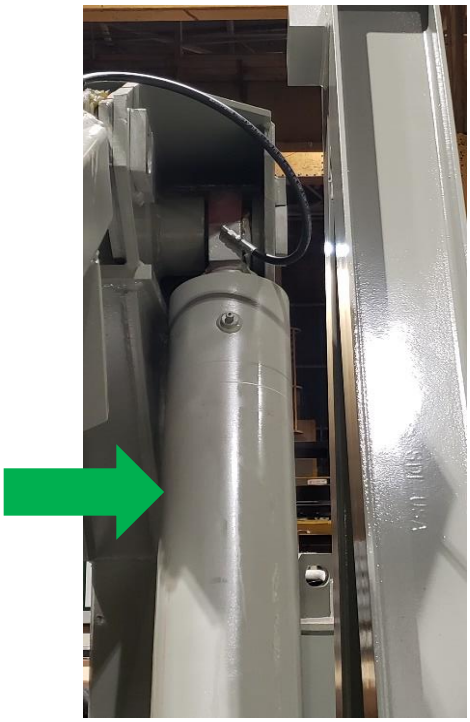
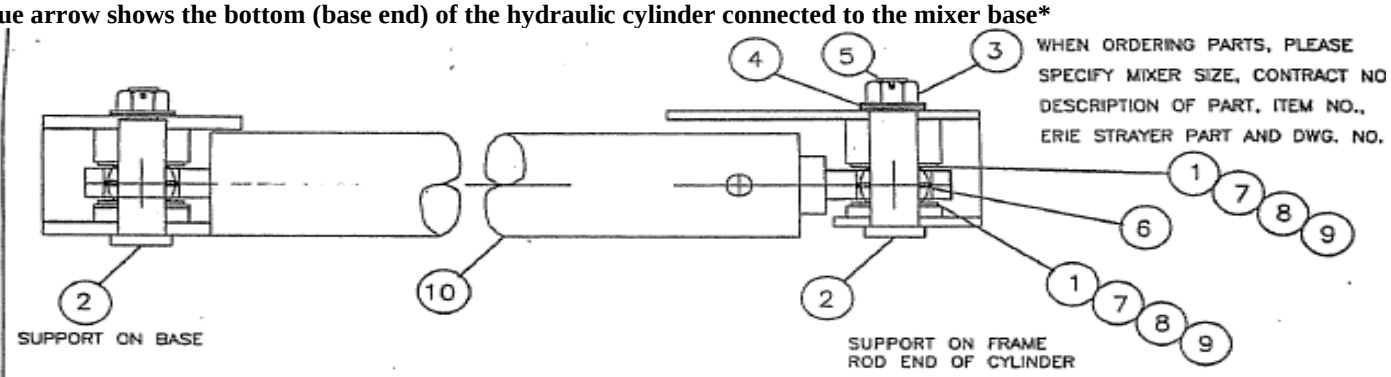


Green arrow shows the hydraulic cylinder

Blue arrow shows the bottom (base end) of the hydraulic cylinder connected to the mixer base



8-12 CU YD MIXER PARTS LIST | CYLINDER PIN ASSEMBLY | 1A101588-4

ITEM	QTY	DESCRIPTION	E.S. PT. #	E.S. DWG #
13				
12				
11				
10	2	SEE CYLINDER PARTS DRAWING	-----	-----
9	8	SPACER	19675-03	1A219891
8	8	SPACER	19675-02	1A219890
7	8	SPACER	19675-01	1A219889
6	4	BALL BUSHING(W/CYL LIST IT.17)	10225	
5	4	COTTER PIN	18463	
4	8	WASHER	20137	
3	4	NUT	13584	
2	4	PIN	19678	2A-38717-5
1	8	SPACER	19675-00	1A-36670-3

REV. NO.	REVISION	DWG BY	DATE
4	ADD ITEM 7,8,9. CHG.TO COMPUTER DWG	DFH	5/09 2000
3	ADD ITEM 6	DFH	3/12 1991
2	UP DATE DWG REV #	DFH	TM 6337
1	REDRAWN	T.ORE	8/13 1979

SUPERSEDES NO. 1A101588-3

ERIE STRAYER CO.
ERIE PA

8 THRU 12 CU YD MIXER PARTS LIST
CYLINDER PIN ASSEMBLY

CONTRACT NO.	DWG BY	DATE	CHK BY	DATE	APP BY
STD	GMZ	2/26 1979	✓		

SCALE 1 1/2"-1'-0" | FILE | DWG NO 1A101588-4

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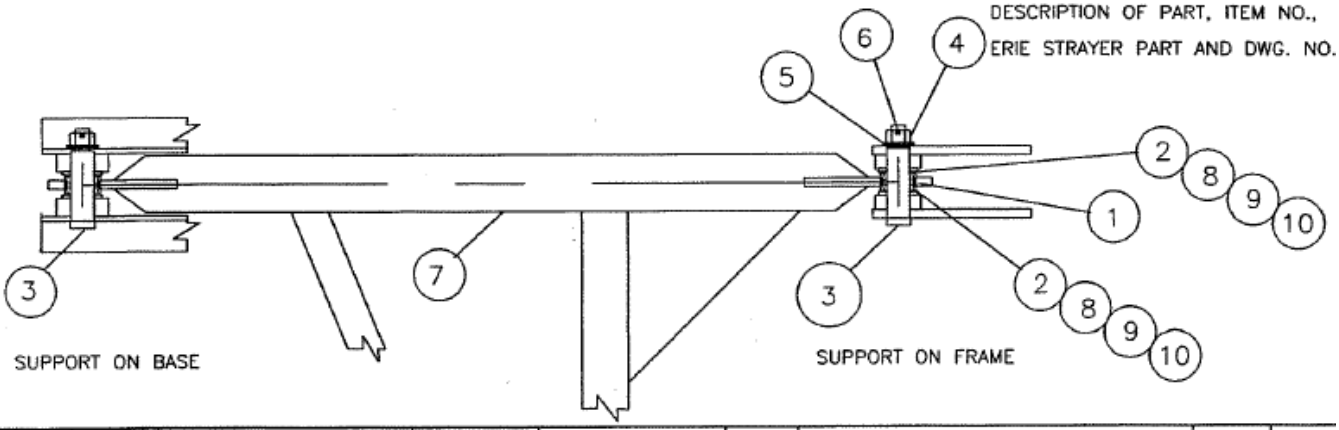
Yellow arrows show the Lower Link

8-12 CU YD MIXER PARTS LIST | LINK PIN ASSEMBLY | 1A111261-1

WHEN ORDERING PARTS, PLEASE
SPECIFY MIXER SIZE, CONTRACT NO
DESCRIPTION OF PART, ITEM NO.,
ERIE STRAYER PART AND DWG. NO.



ITEM	QTY	DESCRIPTION	E.S. PT. #	E.S. DWG #
13				
12				
11				
10	8	SPACER	16831-03	1A219888-1
9	8	SPACER	16831-02	1A219887-1
8	8	SPACER	16831-01	1A219886-1
7	1	LINK	58532	3A111166-9
6	4	COTTER PIN	13630	
5	12	WASHER	14084	
4	4	NUT	13582	
3	4	PIN	19680	1A36609-05
2	8	SPACER	16831-00	1A25004-3
1	4	BALL BUSHING	10222	

SUPERSEDES NO. 1A111261

REV. NO.	REVISION	DWG BY	DATE
3			
2			
1	ADD IT. 8,9,10 CHG TO COMPUTER DWG.	DFH	5/08 2000

ERIE STRAYER CO.
ERIE PA

8 THRU 12 CU YD MIXER PARTS LIST
LINK PIN ASSEMBLY

CONTRACT NO.	DWG BY	DATE	CHK BY	DATE	APP BY
STD	DFH	9/24 1985	r		CAK 2016

SCALE	FILE	DWG NO
1" =1'		1A111261-1

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Interconnection of Mixer "Upper" Hinge, "Lower" Link and Hydraulic Cylinders

The hinge connects mixer main frame to the mixer base.

The link connects the lower connections on the mixer main frame to the bottom of the mixer base.

The bottom (base end) of the hydraulic cylinders connect to the mixer base at the bottom and to the mixer main frame.

There are two solid ball bushings located on the hinge connections at the upper part of the mixer main frame. The remaining ten bushings are "Torrington" swivel bushings that connect cylinders, hinge, and link.

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Mixer Pin and Bushing Replacement

Before proceeding, make sure the motors and hydraulic power unit are locked out and tagged for safety. This is a must!

Mixer guard needs to be removed. There are (8) ½''x 1 ½'' bolts located on top of the mixer A-Frame, 4 on each side. There are 2 pick points on top of the mixer guard. When ½'' bolts are removed the mixer guard should be lifted directly up and cleared from mixer bull gear before swinging out.

If possible, the mixer drum should be removed from the cradle to facilitate access to the mixer pins and bushings for ease of replacement.

Remove the upper hinge first and then remove the lower link. Rebuild the lower link first. Then rebuild the upper hinge. Reinstall the lower link ensuring raised side is facing down. Then reinstall the upper hinge.

1. For safety, all pins and bushings for the hinge and link must be changed while the mixer is in the down (home) position.
2. Before changing out cylinder pins/bushings, raise mixer 3-4" and crib on mixer stops.
3. First swap out top (rod end) pins/bushings followed by base end.
4. All mixer pins supplied by Erie are tapped ¾" national course. A piece of good quality threaded pull rod is required to make an "A" frame puller for ease of pin removal. The puller should be made from 1-1/4" thick stock.
5. A ¾" capacity air impact wrench for use with the puller is required to pull the pins.
6. If the pins cannot be pulled out, they must be air arced out. A 400-amp capacity welder is required. Smaller welders do not have enough ampacity. There is no torch tip available that can burn the pins out; air arcing is the only way to remove seized up pins that cannot be pulled.
7. If the pins cannot be pulled out and you cannot air arc them out, they can be cut in half. This may be necessary if the pins are grooved and cannot be pulled. Cutting the pins in half will allow the mechanic to pull each half from its respective side. The spacers must also be cut when using this procedure. New spacers are provided with pins purchased from Erie.
8. The old bushings must be pounded out. Make a tool using an old bushing welded to a piece of plate to pound out the old bushings. You must first grind the outside of the tool bushing to reduce its diameter.
9. New bushings are pressed in at the factory. Once the old bushings are removed, the new bushings should tap in easily.
10. If the new bushings will not tap in easily, make a tool from mild steel to pound the bushings in.
11. A tool can be made from a bolt and two plates to pull the new bushing into position