

Common Installation Errors

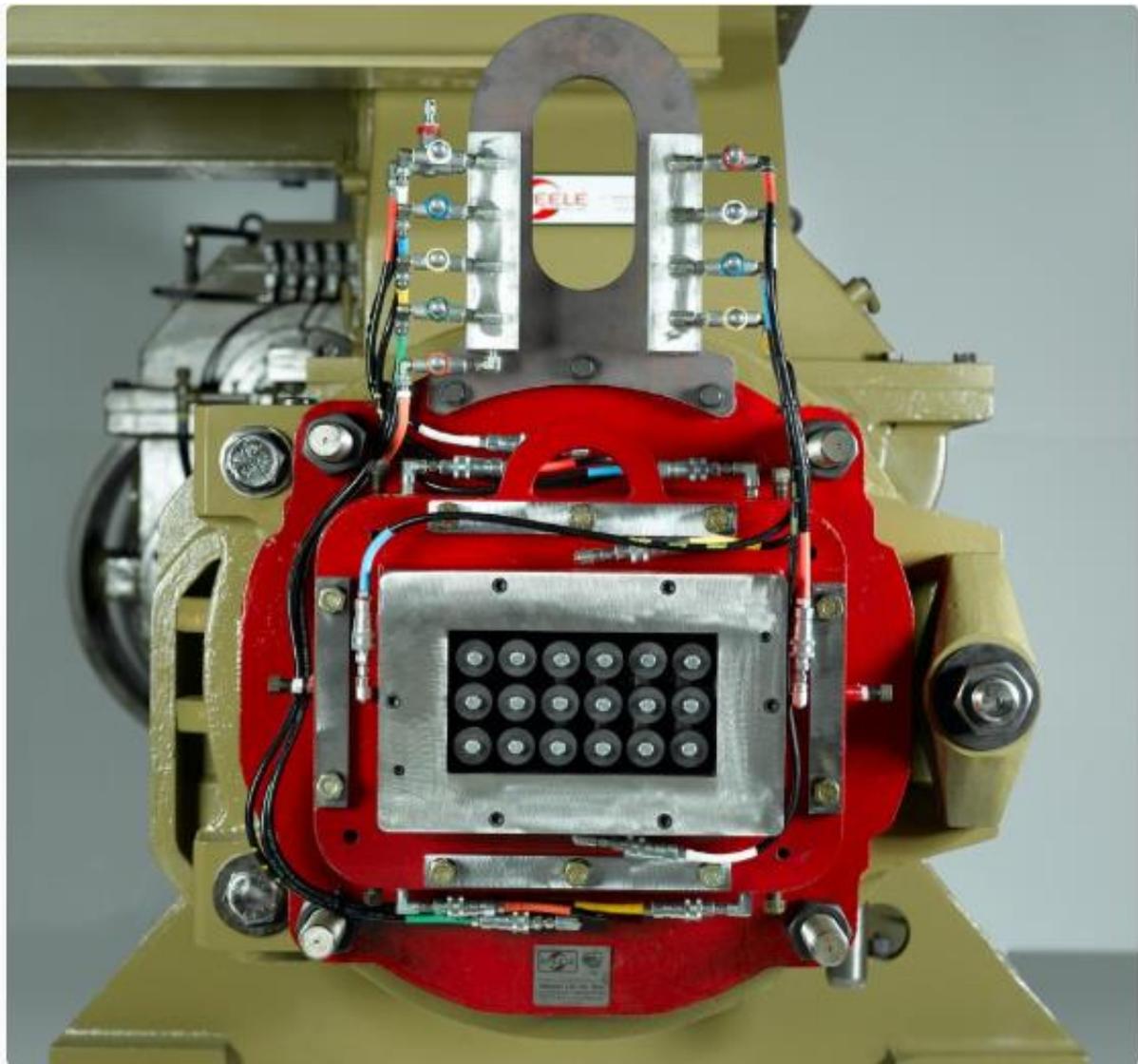
George Campbell

Sales and Service

The Global Leader in Stiff Extrusion



A job well done, begins with knowing what you need



Shaper Cap / Die Issues

- Section Transitions and Lubrication
- Ordering the correct size
- Avoid Mistakes
- Reduce Downtime



And We Won't Waste
Money!



attention
to
detail

A magnifying glass with a black handle and a silver rim is positioned over the word "attention" in the text "attention to detail". The lens of the magnifying glass is focused on the word "attention", making it appear larger and more prominent than the other words. The text "attention to detail" is written in a bold, black, sans-serif font. The word "attention" is on the top line, "to" is on the middle line, and "detail" is on the bottom line. The magnifying glass handle is angled from the bottom left towards the top right, passing through the word "attention".

Shaper Cap Set-Up



Core Installation



Cores should never extend beyond the face of the shaper cap!!!



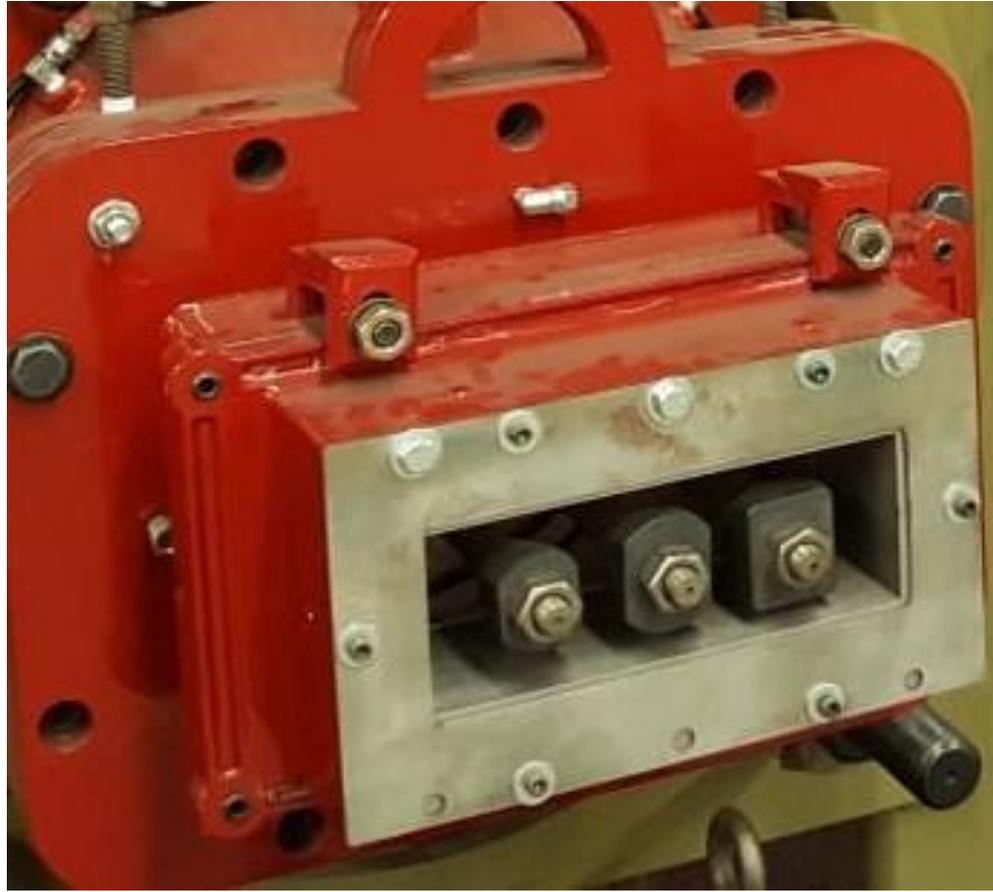
Correct Position of Core Tips



Use the correct parts for the job



A die with all the correct parts



Incorrect transition to shaper cap



Results of a poor transition

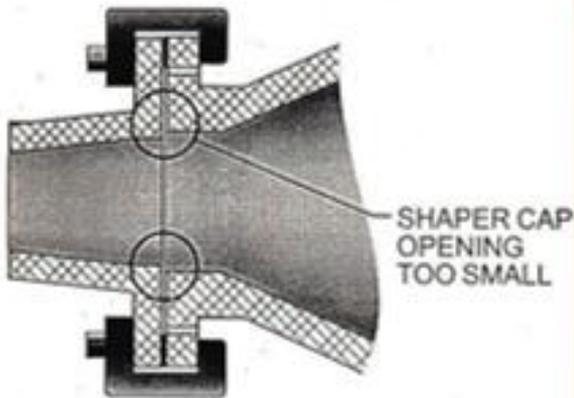


- Irregular wear
- Premature wear
- Quality Issues
- Lubrication Issues



Shaper Cap Transition

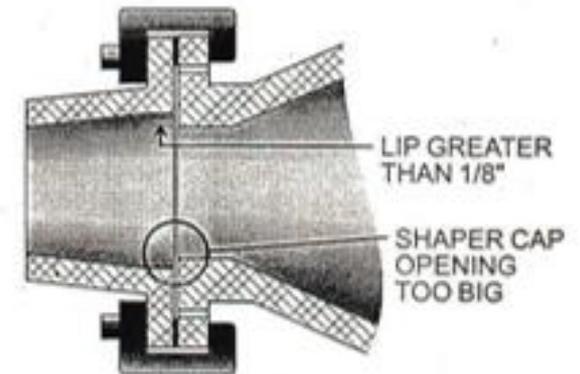
INCORRECT TRANSITION



INCORRECT TRANSITION

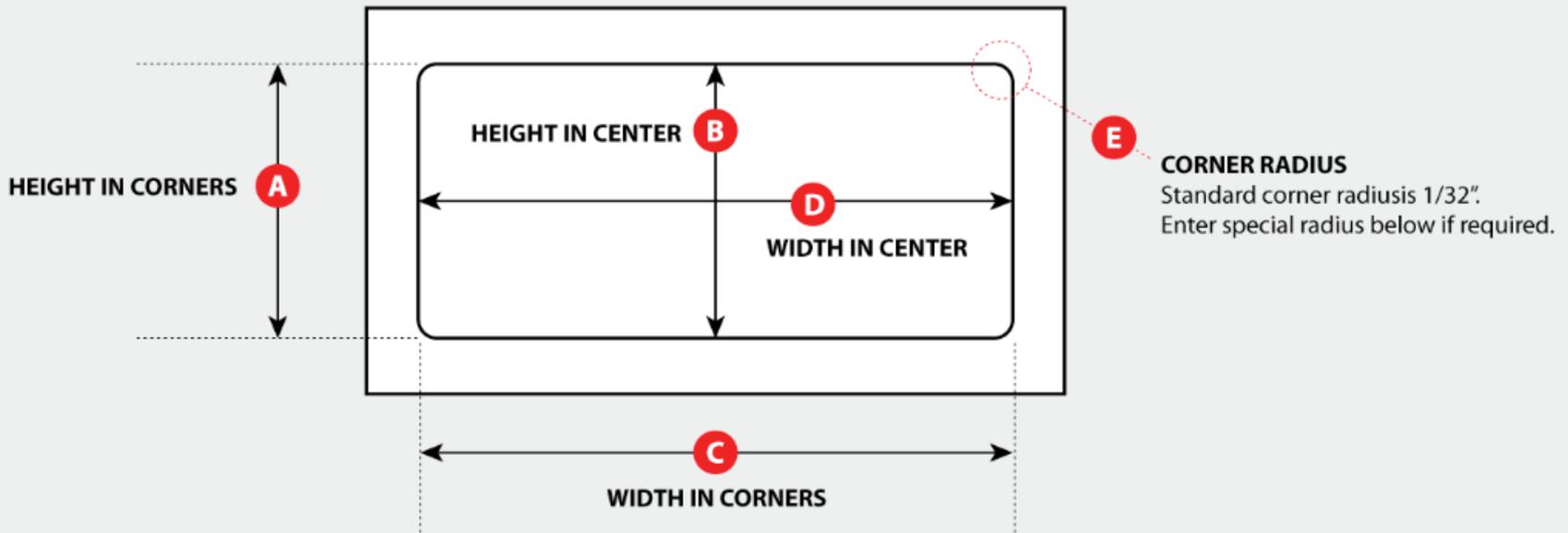


CORRECT TRANSITION



Shaper Cap Ordering Form

FRONT OPENING OF SHAPER CAP

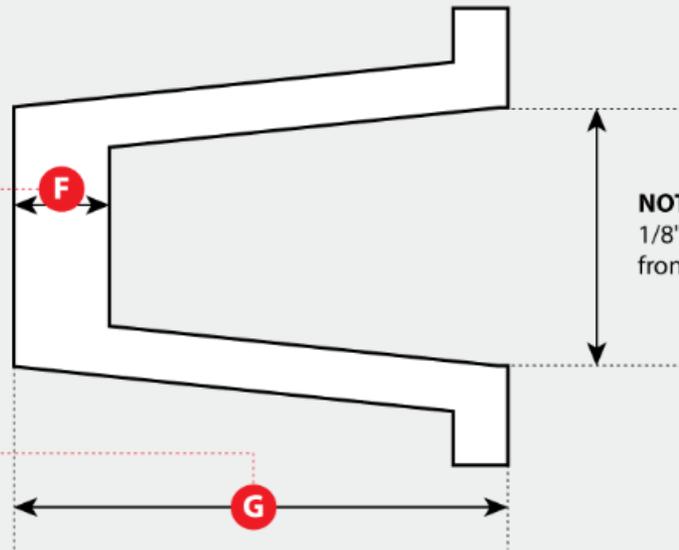


Shaper Cap Ordering Form

CROSS SECTION OF SHAPER CAP

F OPTIONAL FLAT CAP:
Optional 1" Flat at cap front opening extends useful life of cap in some cases. Select below if desired.

G LENGTH: Standard length of Shaper Cap is 4-1/4". If you require a custom length (from 2-1/4" to 10") enter below.



NOTE: All rear openings should be 1/8" HIGHER and WIDER than front opening of die base.



Shaper Cap Ordering Form

DIE OPENING

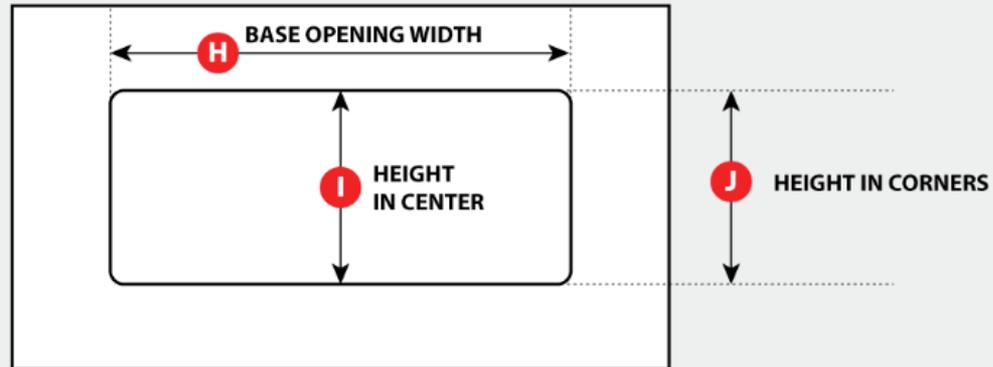


CAUTION

You must provide die base opening dimensions (what they are now, NOT when the base was new).

Failure to do so could drastically reduce the life of your new shaper cap.

NOTE: The die base opening must never be WIDER or HIGHER than the rear opening in the shaper cap.



Lubrication

Using the Wrong Pump?

V-1
Lubrication
Pump



- A single pump
- Simple and affordable
- Reasonably good for oil control in die back or die front
- Good for oil based lubricants only

Lubrication Pump Application

V-2
Lubrication
Pump



- A single pump that provides :
Independent flow and pressure control at the rear of the die
Independent flow and pressure control at the front of the die
Precise control and durability with water or oil based lubricants

Installation Location Error



Extruder Auger Liners



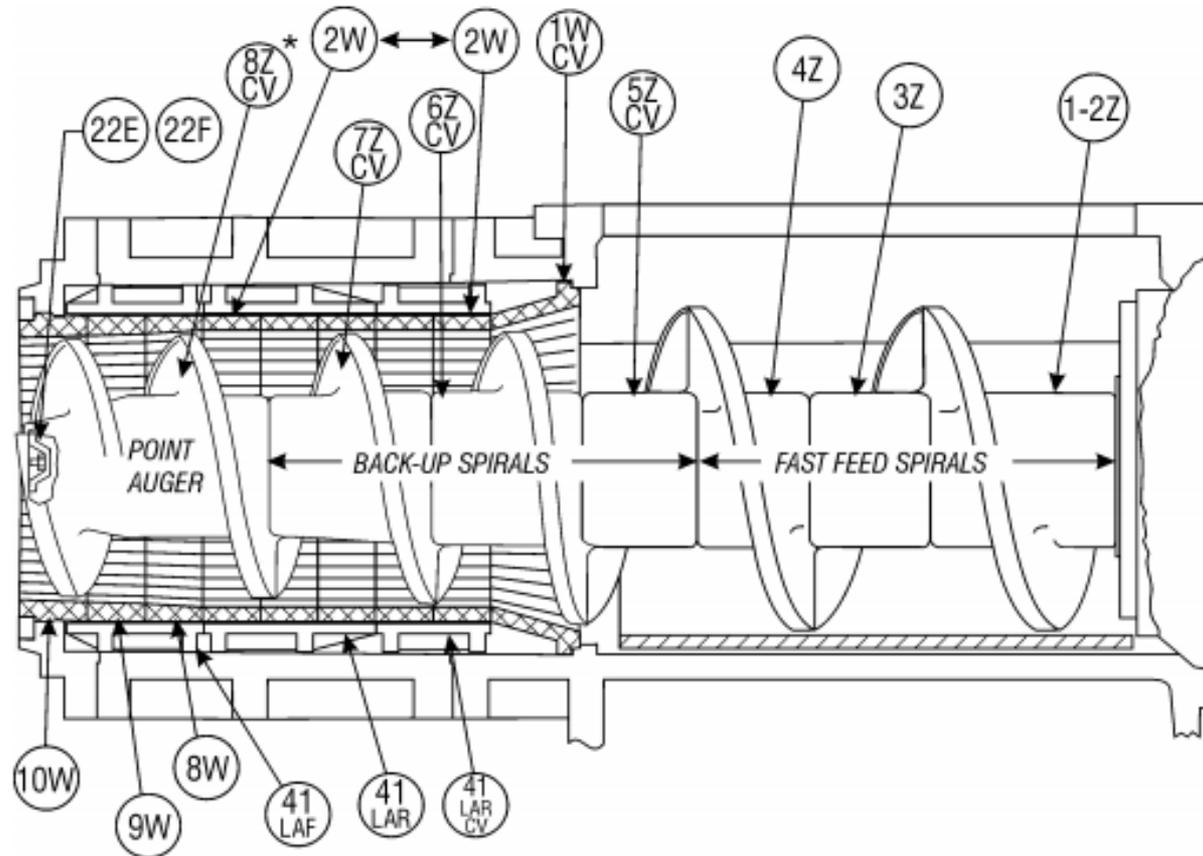
Order and Orientation

- Pay attention to the order
 - Make notes/take pictures when removing parts
- Parts can be installed 180 degrees off
- Parts can be installed on shafts reversed



Ordering Chart Drawings

WEDGE GROOVE LINERS



Vacuum Systems



DO NOT REVERSE THE FILTER HOUSING



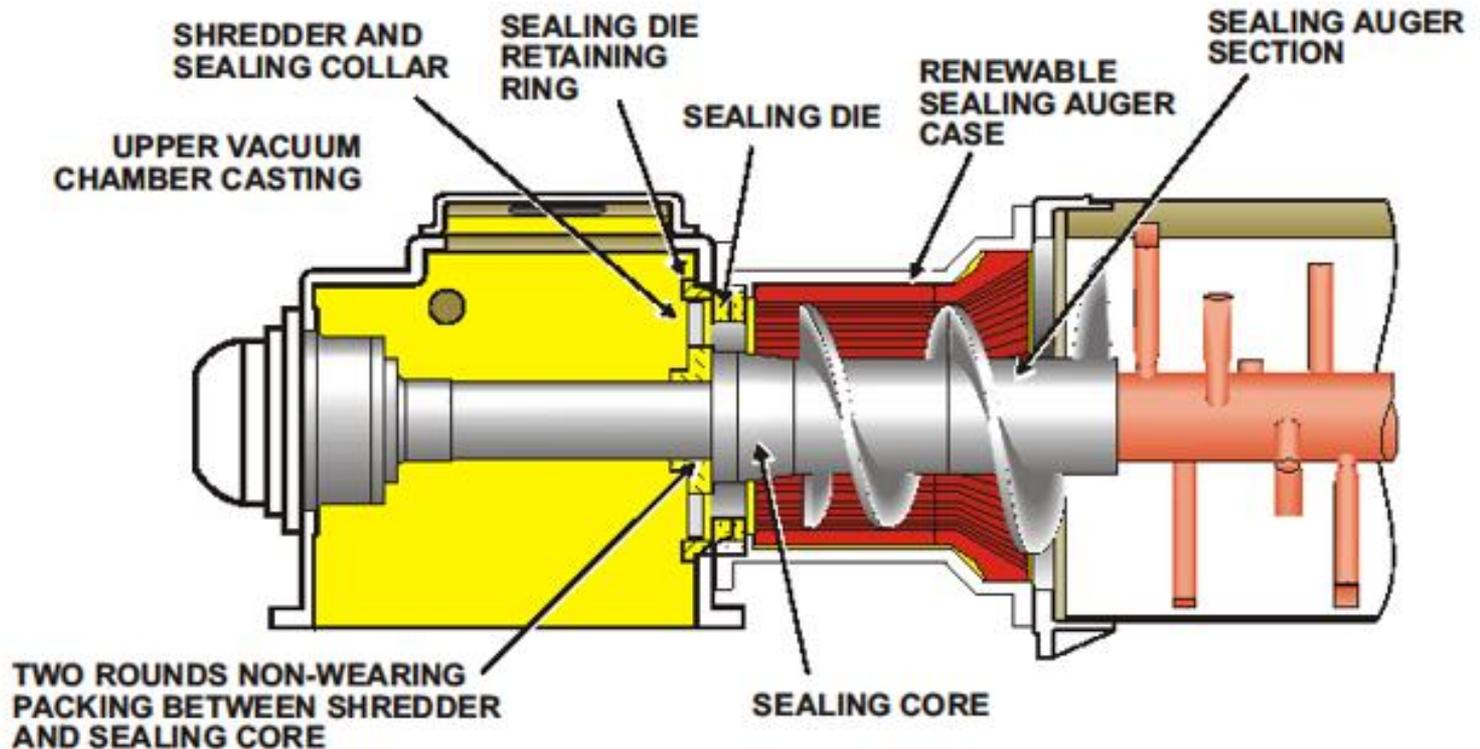
Shredder Installation



Replace all required components

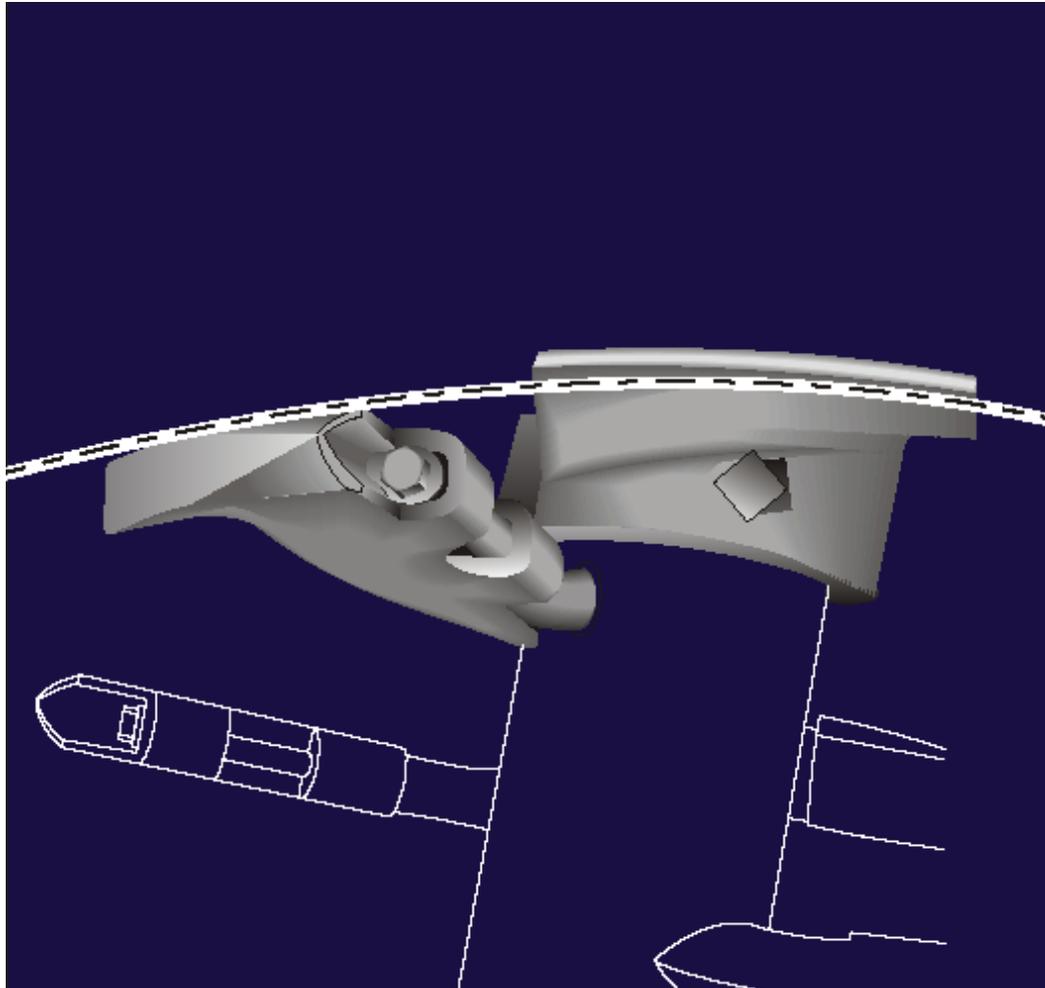


Pug-Sealing Area



FRONT KNIFE PITCH

ALIGN WITH THE WING OF THE SEALING AUGER



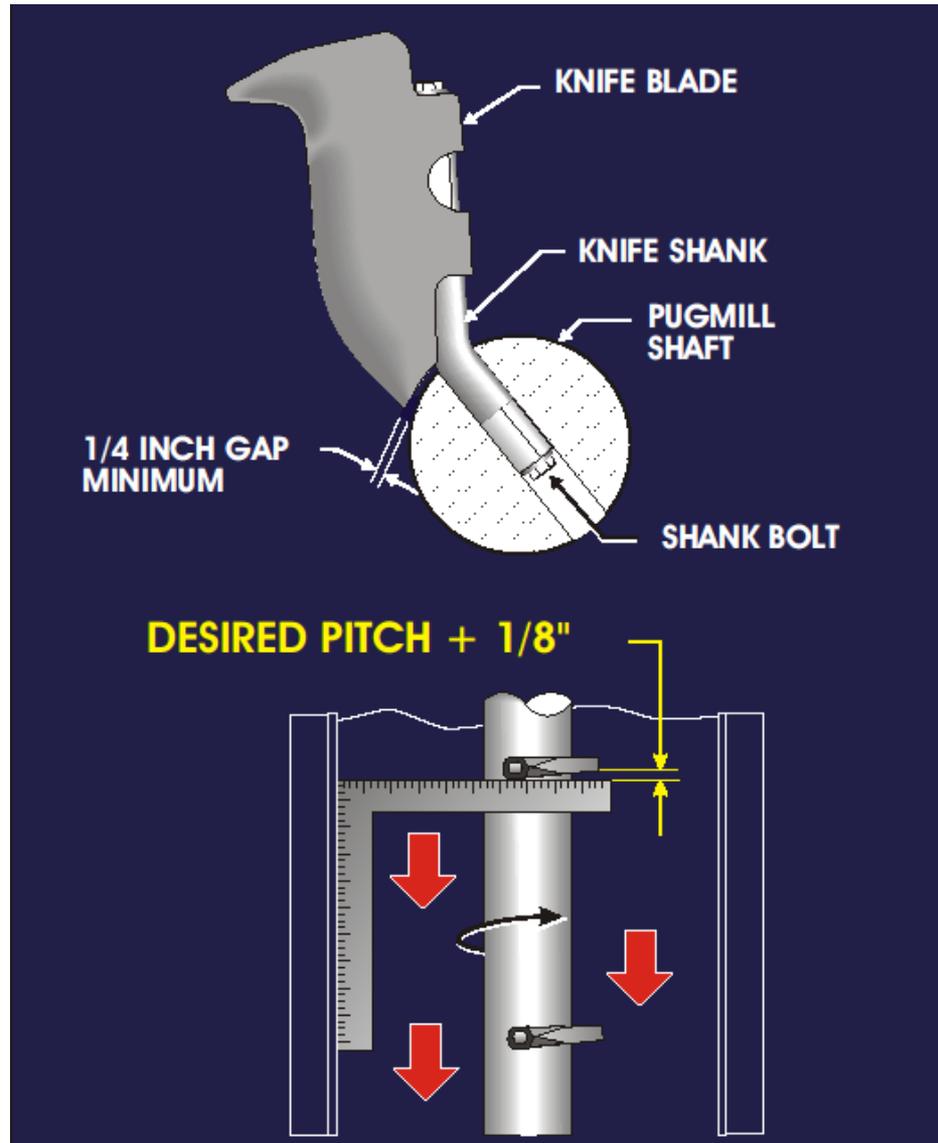
Pug Knife Pitch



Material Flow and Mixing



Proper Knife Installation



Identifying the Part



ENGRAVING
ON FRONT
OF MACHINE

FIG 5: 90ADEX liner with engraving indicating the front side



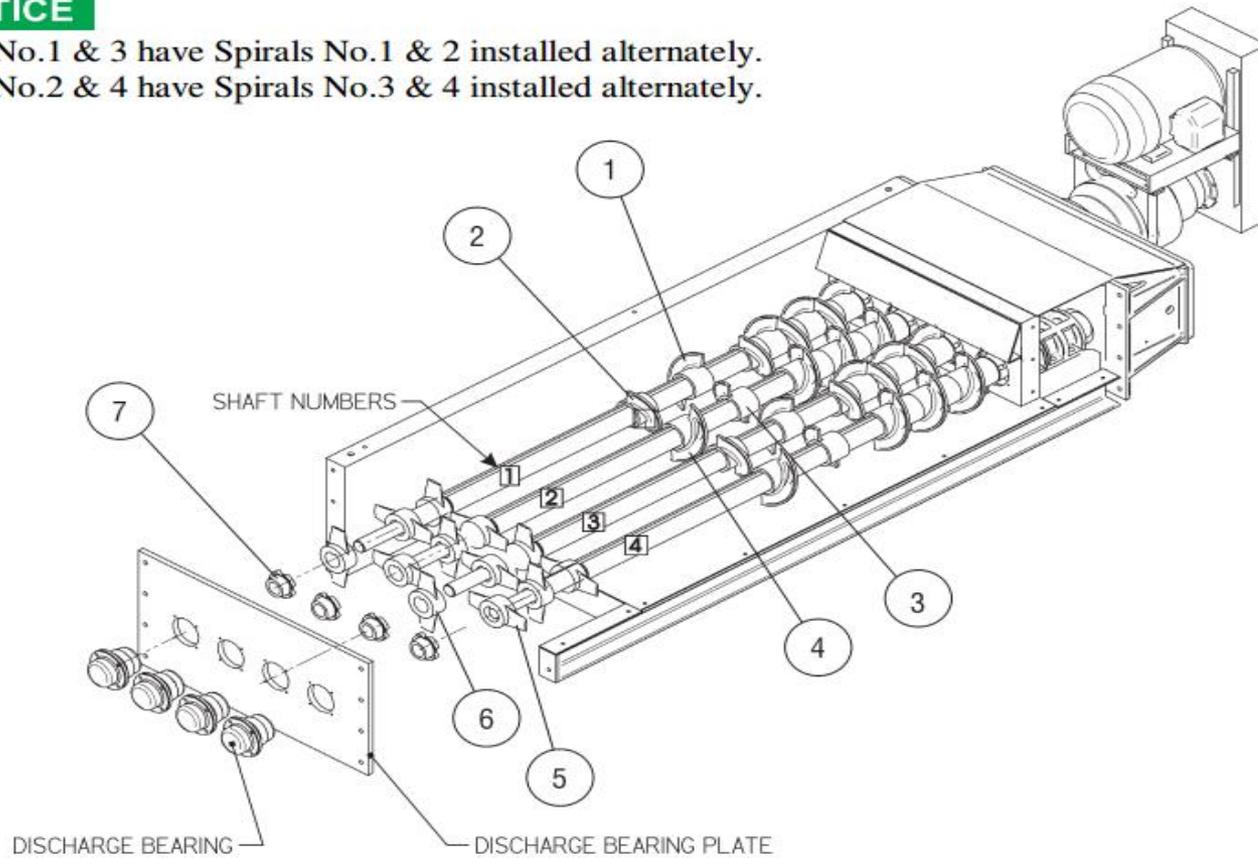
Even Feeder



Order of Installation

NOTICE

Shaft No.1 & 3 have Spirals No.1 & 2 installed alternately.
Shaft No.2 & 4 have Spirals No.3 & 4 installed alternately.



Machine Installation



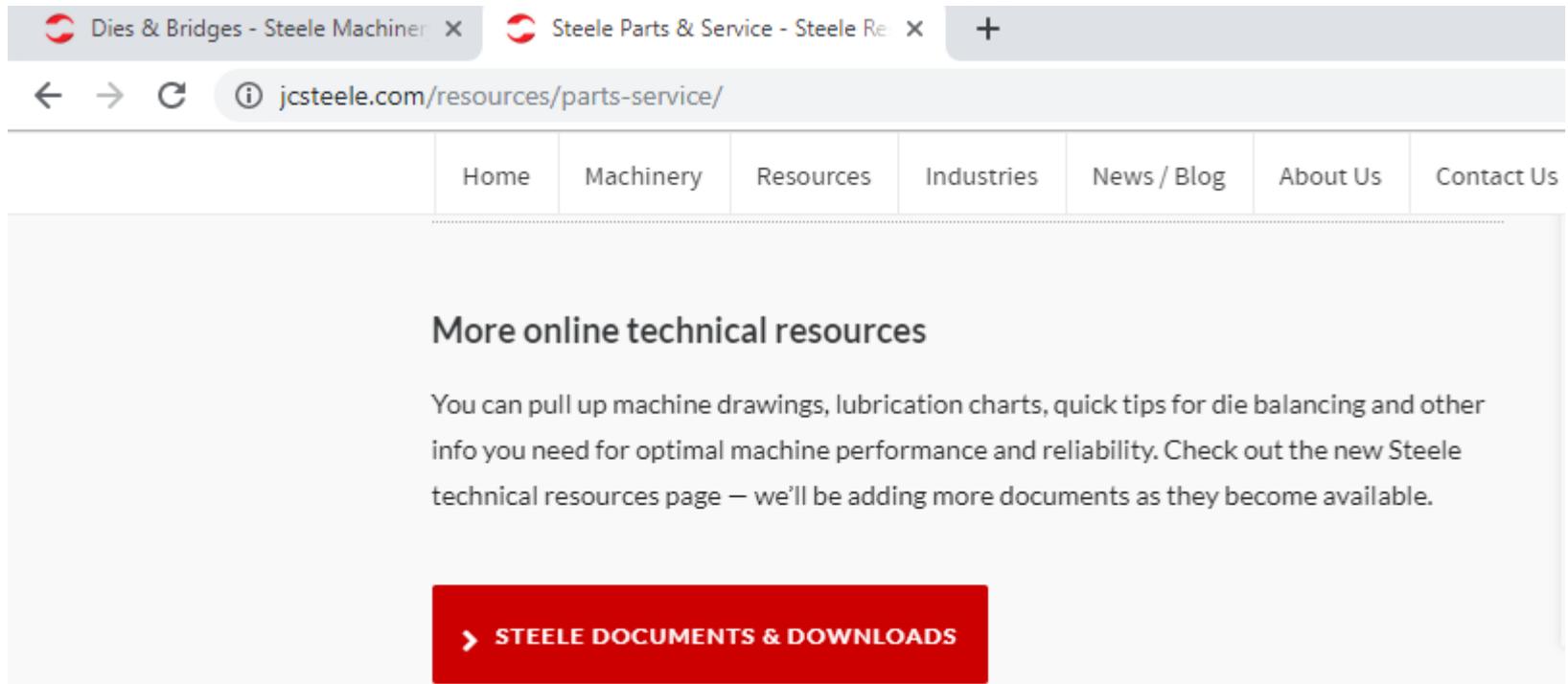
Starrett
Model 98
Machine
Level



Online Resources

<https://www.jcsteele.com/machinery/extruders-and-pug-sealers/90-series/>

Documents and Downloads



The screenshot shows a web browser window with two tabs: 'Dies & Bridges - Steele Machiner' and 'Steele Parts & Service - Steele Re'. The address bar shows the URL 'jcsteele.com/resources/parts-service/'. The navigation menu includes 'Home', 'Machinery', 'Resources', 'Industries', 'News / Blog', 'About Us', and 'Contact Us'. The main content area features the heading 'More online technical resources' and a paragraph: 'You can pull up machine drawings, lubrication charts, quick tips for die balancing and other info you need for optimal machine performance and reliability. Check out the new Steele technical resources page – we'll be adding more documents as they become available.' A red button with a white arrow and the text 'STEELE DOCUMENTS & DOWNLOADS' is positioned at the bottom of the content area.



General Information

Technical Service Bulletins (TSBs)

General TSBs

-  TSB GEN 0001 Extrusion Efficiency
-  TSB GEN 0002 Extrusion Efficiency with no Slug Cutter
-  TSB GEN 0003 Extrusion Steam Events
-  TSB GEN 0004 Hardcaking
-  TSB GEN 0005 MOR Testing
-  TSB GEN 0006 Welding AR Plate
-  TSB GEN 0007 Belt Tensioning and Maintenance of Drive Systems
-  TSB GEN 0009 Required Safety Grating of Pug Sealers & Pug Mills

General De-airing Equipment TSBs

-  TSB DXX 0001 Inspecting Thrust Bearing Cover Plate and Locknut
-  TSB DXX 0002 Replacing Gearbox Oil Filter
-  TSB DXX 0005 Installing Pug Shanks and Pug Knives
-  TSB DXX 0006 Installing Sealing Core to Prevent Vacuum Leaks
-  TSB DXX 0007 Design and Maintenance Of Feedroller Shear Pin
-  TSB DXX 0008 Installation of Pulleyshaft Seals
-  TSB DXX 0009 Gear Oil Recommendations
-  TSB DXX 0011 When to Replace Wear Parts

TSB Support Videos

-  TSB DLM 0003: Installing 90BPS Sealing Augers
-  TSB DSD 0004: Replacing the CAT-Seal in the JC Steele 90AD Extruder
-  Installation of the Steele Sealing Core, Packing and Shredder for the Steele Extruders



Online Resources



45 SERIES

51 US Tons/hr

47 Metric Tons/hr

[▶ LEARN MORE](#)



75 SERIES

59 US Tons/hr

54 Metric Tons/hr

[📄 75 SERIES BROCHURE](#)



90 SERIES

90 US Tons/hr

81 Metric Tons/hr

[▶ LEARN MORE](#)



90 Series Information

90-Series Documents and Downloads

Lubrication Charts (PDFs)

- [90AD Extruder](#)
- [90AS Pug Sealer](#)
- [90BDDV Pug Sealer](#)
- [90DB Pug Sealer](#)

Instructional Service Videos

- [Replacing the CAT-Seal in the 90AD Extruder](#)
- [Sealing Core, Packing and Shredder Installation](#)
- [Installing 90BPS Sealing Augers](#)

Technical Service Bulletins (PDFs)

EXTRUDERS:

- [Removing Thrust Assembly \(TSB DSD 0001\)](#)
- [Removing Thrust Assembly - with Sled \(TSB DSD 0002\)](#)
- [Replacing Bearings in Thrust Assembly \(TSB DSD 0003\)](#)
- [Replacing the Cat Seal \(TSB DSD 0004\)](#)
- [Replacing Augers and Liners \(TSB DSD 0006\)](#)
- [Assembling the Feedroller Shaft \(TSB DSD 0007\)](#)
- [Pulleyshaft Seal Replacement Procedure \(TSB DSD 0008\)](#)
- [Installing the 3690 Hydraulic Die Changer \(TSB DSD 0009\)](#)
- [Replacing the Hydraulic Cylinder \(TSB DSD 0010\)](#)
- [Commonly Accessed Fasteners \(TSB DSD 0011\)](#)
- [Replacing the Rear-most Feed Roll Shaft Bearing \(#20\) \(TSB DSD 0012\)](#)

PUG SEALERS:

- [Commonly Accessed Fasteners \(TSB DLM 0002\)](#)
- [Procedure for Installing 90BPS Sealing Augers \(TSB DLM 0003\)](#)
- [Pulleyshaft Seal Replacement Procedure \(TSB DSD 0008\)](#)



Sample TSB (Technical Service Bulletin)

8. Remove **point auger** by pulling off of **shaft**.
9. Install **puller rods** in the **liner adaptor (41LAR)** and pull out front of the **barrel**.
10. Do the same thing to remove the **adaptor (41LARC)**.
 - **Figure 4** refers to the HCV model, though this same procedure can be applied to the HTR model.
11. Pull the **auger (72ZCV)** off the **shaft**.
12. Slide the **wedge liner (1WCV)** out of the **barrel**.
13. Pull the **auger (6ZCV)** off of the **shaft**.

3

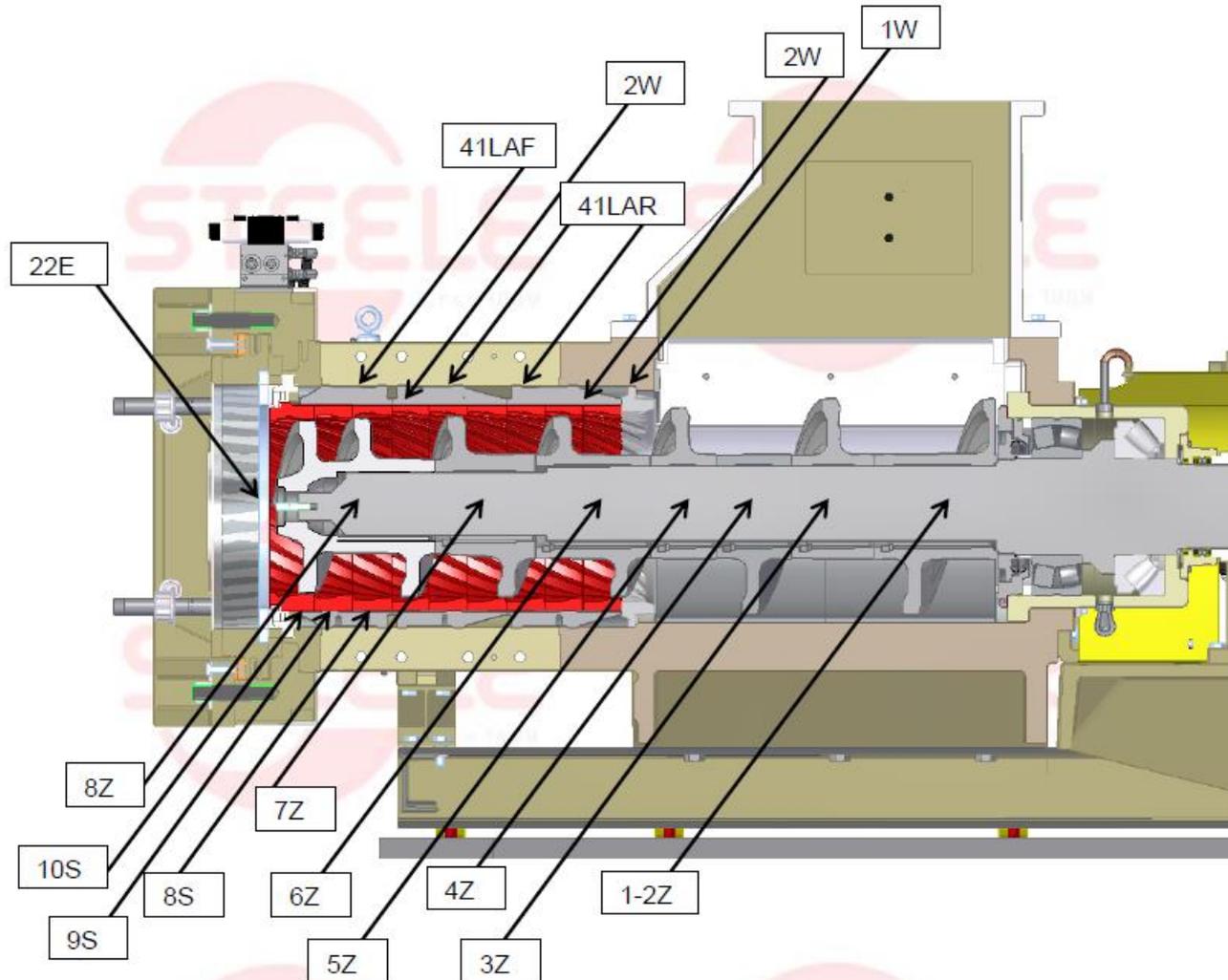
↑ TSB DSD 0006

Rev. 0
7 Aug 2018

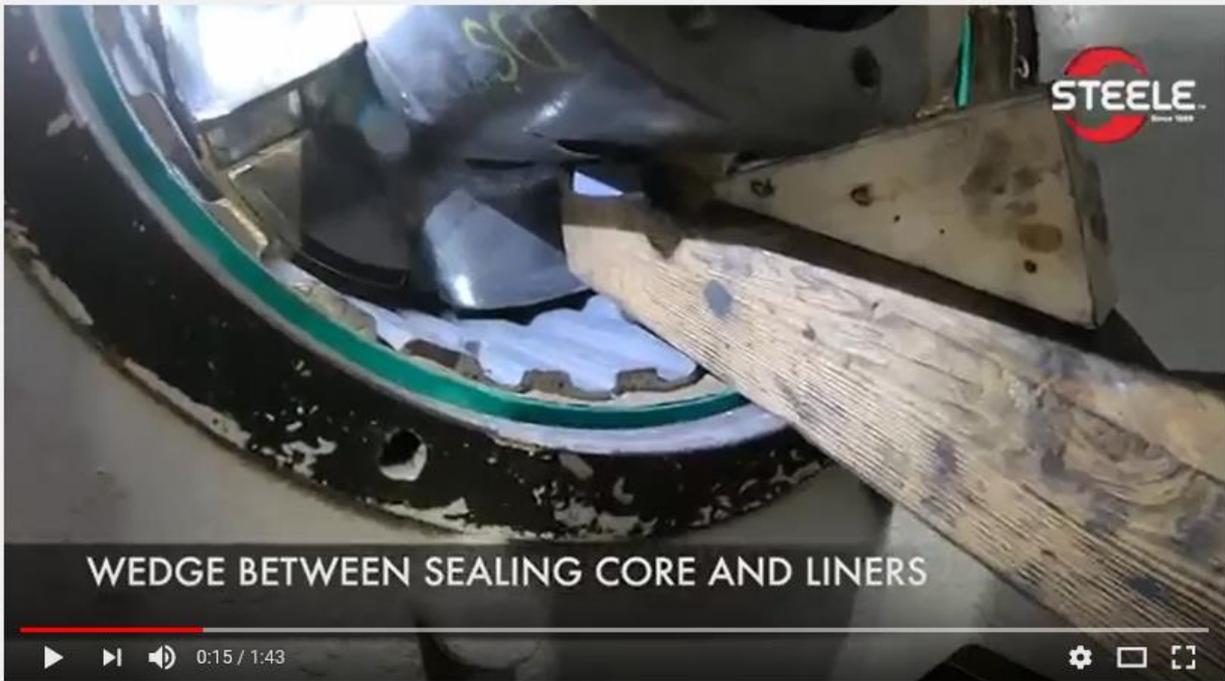
14. Remove the other **augers (5ZCV, 4Z, 3Z, 2Z, 1Z)** in the same way.
15. Clean **auger shaft**.
16. Coat **auger shaft** with **grease** or **anti-seize**.
17. Remove all of **old liners** from **adaptors** and clean **adaptors** (inside and outside).
18. Install a **1/4" bead of silicone** on the rear hub of each **auger** and let dry.
19. The rear of the **auger** is the side that has the number on it.
20. Install the **auger (1Z)** on the **shaft** and push it all the way back.
21. Install the **auger (2Z)** so the **wing** will match up to the **wing** of the **auger (1Z)**.
 - If the **wings** do not match up, remove the **auger (2Z)** and turn 180 degrees and reinstall.
22. Install the **augers (3Z, 4Z, 5ZCV, 6ZCV)** in the same way.
23. Install the **liner (1WCV)** with the tapered side to the rear of machine.
24. Install the **liner (2W)** in the **adaptor (41LARC)** with the engraved letter or number facing the front.



TSB Auger Illustration



Online Resources



Installation of the Steele Sealing Core, Packing and Shredder

 jcsteeleandsonsinc
 229

123 views

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 2  0

Published on Sep 27, 2018
Installation of the Steele Sealing Core, Packing and Shredder for the Steele Extruders



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Emergency Pager	Allow 30 minutes for Return Call – leave your full phone number, including area code	704-832-0455	
Toll Free - Receptionist		800-278-3353	



FOR INFORMATION VISIT

www.jcsteele.com

