

CATEGORY: Recommended procedure at next overhaul.

Summary: CarnaudMetalbox recommend the following procedural guidance for Sealpack change on 5000 Bodymakers with Flanged Lightweight Rams.

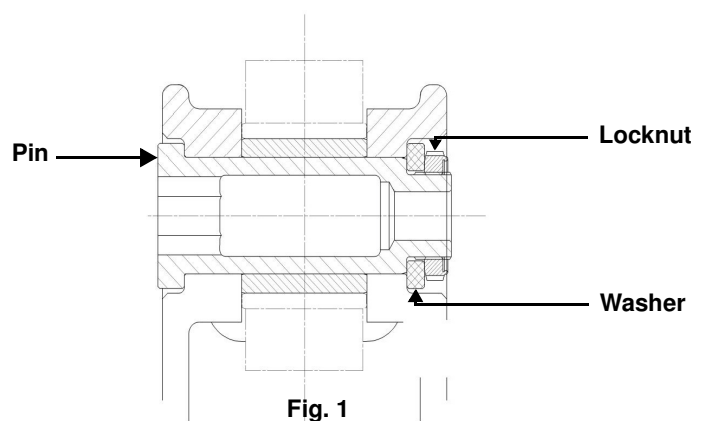
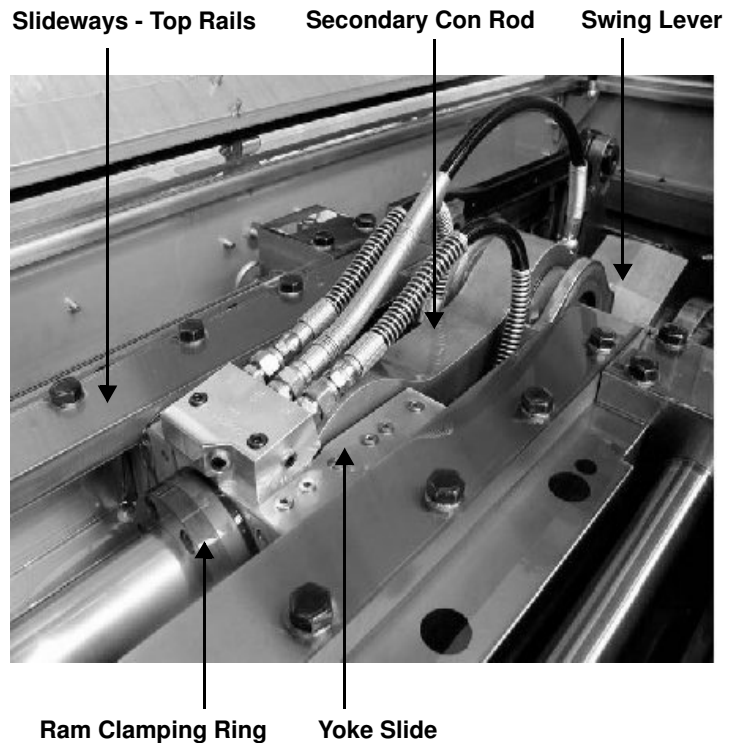
Special Tools required:

1. Torque wrench.
2. Special Locknut Socket (**Part number 2019100B**)
3. Top Pin Tee Bar (**Part number 2016483C**)
4. Sling.
5. Hoist.

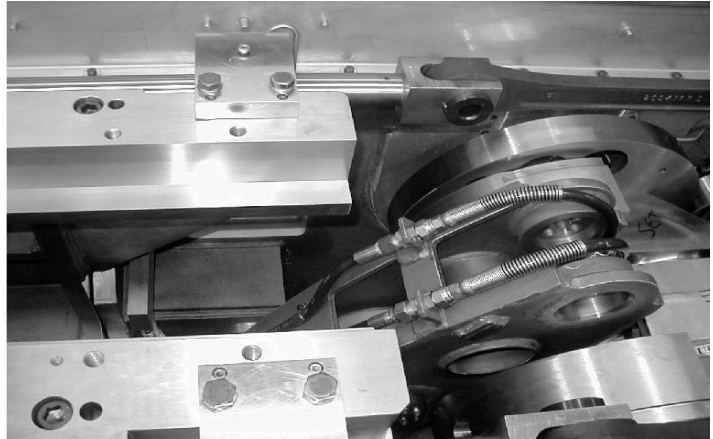
PROCEDURE TO REMOVE RAM:

Refer to Swing Lever Assembly & Yoke Slide Assembly drawings

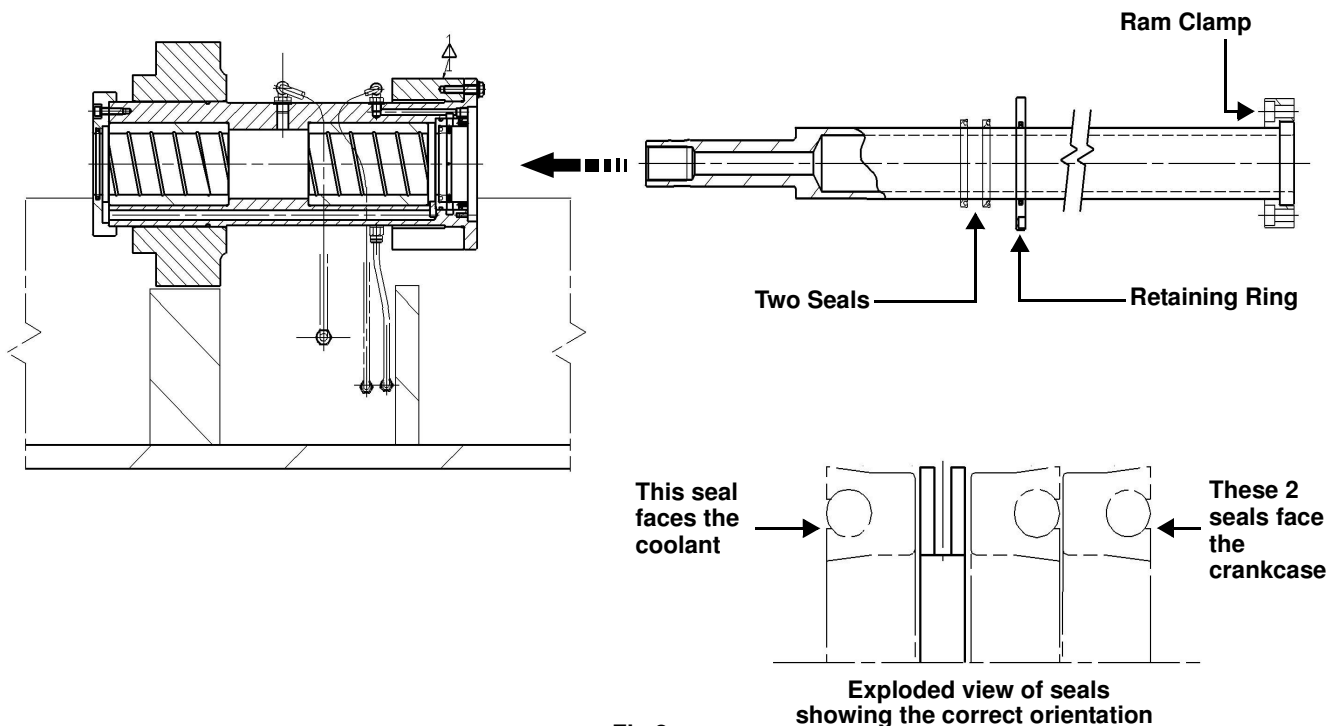
1. Stop the Bodymaker
2. Stop the Main Drive Motor
3. Switch the machine into Bar Mode.
4. Remove the Coolant Spacers, Redraw Ring and all Ironing die rings from the Toolpack.
5. Bar the Ram fully forward.
6. Unscrew the Punch Retaining Bolt and remove Punch Nose, Punch and Punch Spacer if used.
7. Bar the Ram to the back dead center.
8. Turn **OFF** all Pumps
9. Lock out & Tag out machine for Safety.
10. Before removal of the Ram, mark top of Ram with a marker pen to obtain same orientation for replacement.
11. Remove six Soc. Hd Cap Screws securing the Ram Clamp housing to the Yoke Slide Assembly.
12. Slide the Ram slightly forward.
13. Disconnect oil / air supply hoses from Yoke Manifold.
14. Carefully Remove Slide Way Top Rails
15. Remove the Locknut and Washer at the top of the Swing Lever using the special socket and Top Pin Tee Bar. (**See Fig. 1**)
16. Support the Secondary Connecting Rod.



17. Carefully remove Pivot Pin. This can only be removed from Operator Side.
18. Using correct lifting equipment carefully lift Yoke Slide and Secondary Connecting Rod Assembly from machine.
19. Carefully remove the Ram by sliding it back through the Primary & Secondary Housing.
20. Remove Seal Pack assembly.


Slideways with Yoke Slide Assembly Removed
Seal Pack Replacement:

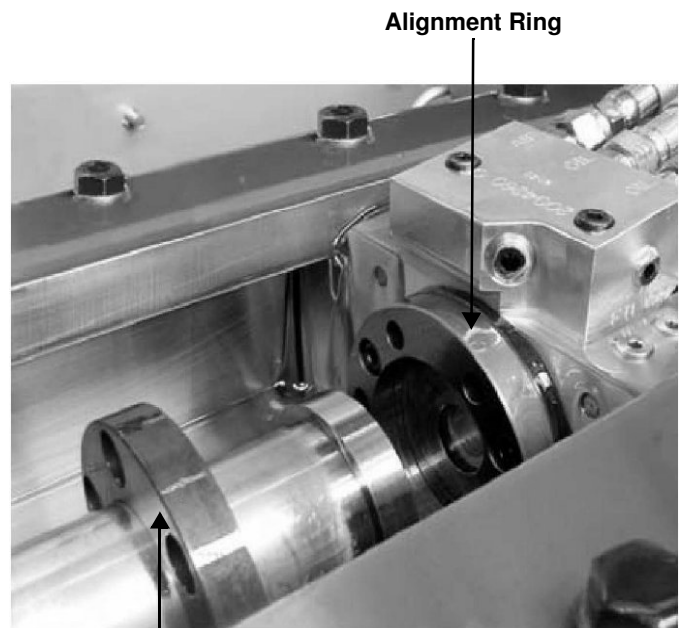
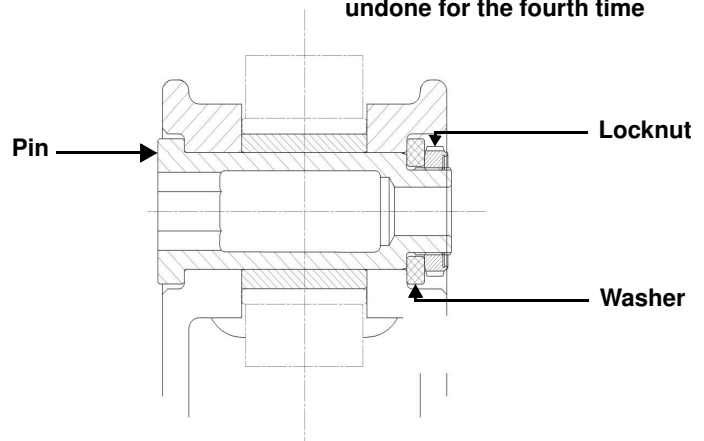
1. Install Seal Pack Housing into the rear of the Front Bushing. Insert the first Parker Seal with the Spacer into the Seal Pack Housing. **(See Fig 2. below) Please note the correct orientation of the Seal.**


Fig 2.
Assembly for a Lightweight Ram

2. Install Slipper Seal into the Retaining Ring.
3. Slide the Ram Clamp, retaining ring and remaining Seals onto the Ram (**See Fig. 2 above**). Again ensure the Seals are fitted in the correct orientation.
4. **CAREFULLY** slide the Ram through the Front Bushing. **NOTE:** the Ram Clamp can not be fitted after the Ram has been installed.
5. Ensure Seals are located into the Seal Pack Housing before securing the Retaining Ring using 4-M5 Cap Head Screws.
6. Carefully replace the Yoke Slide and Secondary Connecting Rod back into the Slideways.
7. Position the Secondary Connecting Rod into the top of the Swing Lever.
8. Insert Pin.
9. Fit washer and Socket.
10. Replace top Rails, Hex Head Screws and Nordlock washers. Torque to 252NM (186lbs ft)
11. Using the Special Locknut (**Part Number 2019100**). Torque tighten Locknut to 320NM (236lbs ft). **NOTE: This Special Locknut should be replaced after it has been undone for the fourth time.**
12. Position the Ram to Back Dead Centre.
13. Turn on the Coolant to the Front Bushing. (Minimum Flow 5 Litres / min)
14. Turn on the High-Pressure oil to the machine.
15. Allow the oil and coolant to come up to temperature. (40°C - 45°C)
16. Allow the length of the Ram to come up to temperature.
17. Position the Ram central about the Ram housing assembly (Without the Punch).

Torque Tighten Locknut to 320Nm (236lbs ft) using Special Socket (Part Number 2019100B)

NOTE: This Special Locknut should be replaced after it has been undone for the fourth time



Ram Clamp Ring

18. Ensure correct clearance between the Hydrostatic Pads on the Yoke and the Slideway Rails. (Minimum 0.0015")

19. The Ram must extend equally through the Primary and Secondary Bushing when securing it to the Slide Yoke.

20. Position a Dial Test Indicator on the Side and Top of the Ram and check there is no deflection when locating into the Alignment Ring.

21. When securing the Ram, Cross Torque the Ram Securing Screws carefully and evenly **(See Fig. 3)**.

22. Recheck the Hydrostatic Yoke Clearance.

23. Before initial running of the machine ensure that the Flow meter is set correctly to prevent the machine from operating when there is Low or High Coolant Flow. (Refer to flow setting instructions)

24. Run the machine without making cans for at least ½ hour in **LOW SPEED** to allow the new Seals to bed in.

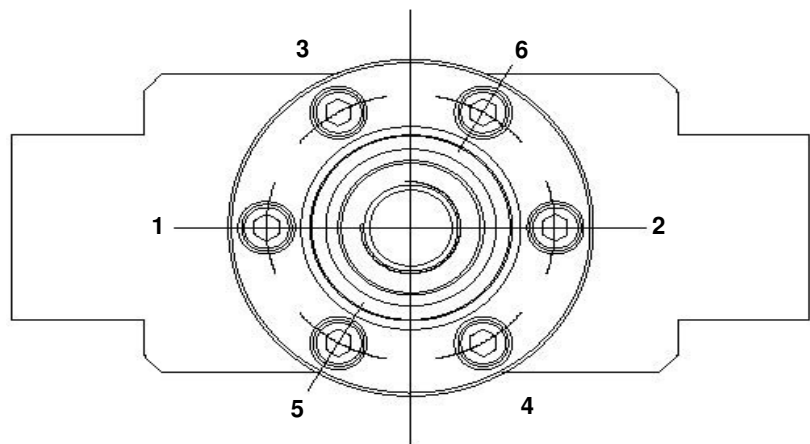


Fig. 3

**Torque to 15 lbs ft, then 25 lbs ft and finally 45 lbs ft (61 Nm)
Use magnetic based dial indicators placed on front and side of
Ram to check the Ram does not move when tightened.**

NOTE: Before connecting the Ram ensure that the Bodymaker Oil temperature is approximately 46°C (115°F) and stable. Make sure that the Lee Jets in the Slide Yoke and the Primary and Secondary Bushings are clean and correct size.

See Section 7 of the machine manual for additional details.

For further information regarding this Technical Bulletin please contact either of the contacts below quoting Technical Bulletin Number **TB5000-060** and your machine Serial Number

NOTE: a complete Library of Technical Bulletins is accessible on the Company Web Site.