



ENGINEERING

Technical Bulletin

TB3400-021

Sheet: 1 of 1

3400 Neck Forming System

Issue: 02. 05. 2014

Main Gearbox Oil Service Life

CATEGORY: Recommended

Summary: CarnaudMetalbox Engineering clarify main gearbox oil service life.

Recommended Action for Customers

1. Replace section **3.20.2** of the machine manual with the revised manual page (attached)
2. Replace section **3.21** of the machine manual with the revised manual pages (attached)
3. Consult CMB website <http://www.cmbecanmaking.com/technical.php> for a revised edition of TB3400-004
4. Replace relevant pages from **Appendix 3** of the machine manual with the revised manual pages (attached)

The 6 monthly oil change frequency recommended in the above documentation supersedes all previous instructions, as detailed in the table below.

Main Gearbox Part Number	Oil Capacity (Litre)	Oil Service Life
2384406C	3.8L	6 Months
2398616C	3.8L	6 Months
4051670C	3.8L	6 Months
4050478D	9.5L	6 Months

For further information regarding this Technical Bulletin please contact either of the below quoting Technical Bulletin Number **TB3400-021** and your machine Serial Number

Note: a complete Library of Technical Bulletins is available on the Company Web Site.

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3.20.2 Motor Drive Gearbox

It is recommended to change the Gearbox oil every 6 months, as per the table below:

Main Gearbox Part Number	Oil Capacity (Litre)	Oil Service Life
2384406C	3.8L	6 Months
2398616C	3.8L	6 Months
4051670C	3.8L	6 Months
4050478D	9.5L	6 Months

Recommended Synthetic Oil: type CLP-HC320
For Lubricant Table refer to this manual Section 6, Appendix 3

3.20.3 Motor Drive Coupling

It is recommended to re grease the Coupling every Six Months.

Recommended Grease: Castrol - Olista Longtime 2 Grease.
For Castrol - Olista Longtime Safety Data Sheet refer to Proprietary Literature supplied with this manual (Section 6 refers)

For lubrication procedure refer to the Coupling Proprietary Literature supplied with this manual (Section 6 refers)

3.20.4 Air Lubrication

It is recommended to check weekly the waxer and lubrication Air Lubricators for correct oil level. Top up if required.

Recommended Oils: Shell Tellus R37, Mobil DTE Light or equivalent.

For Shell Tellus R37 and Mobil DTE Light Safety Data Sheets refer to Proprietary Literature supplied with this manual (Section 6 refers)

3.20.5 Pusher Ram Linear Guides

Continued reliability of the Pusher Ram Linear Guides will depend on annual replenishment of lubricant. Grease once a year using only the correct type of grease, care must be taken to prevent ingress of dirt or other particles

Use Kluber - ISOFLEX TOPAZ NCA52 grease or equivalent

Apply 1.6cc (Cubic Centimetres) of grease through the Grease Nipple

3.21 Preventative Maintenance

Continued reliability of the 3400 System will depend upon careful maintenance of the System Components. A programme of evaluative inspection must therefore be established, linked to a preventative maintenance procedure.



**WARNING! Risk of INJURY and ENTRAPMENT from MOVING PARTS
Trained operators/ maintenance personnel ONLY to use this machine
If in doubt ASK**

Procedures listed on the following pages are outlined by CarnaudMetalbox Engineering as a guide for initiating preventative maintenance and these coupled with other informative data available will provide the user with a set of procedures for implementation.

Subsequent adjustments can be made to the programme in the light of experience.

3400 System Preventative Maintenance - **Daily** (Sheet 1 of 1)

Index	Procedure	
1.	Check that the Guard Interlocks are fully functional	
2.	Check that all Fixed Guards are fitted.	
3.	Fill the Wax Reservoir	
4.	Check the Wick condition. Replace if necessary.	
5.	Check Waxer Injectors are functioning. (The Injector Pins must move in and out every time the pump operates).	
6.	Check the Waxer Pump Air Pressure (5-6 Bar)	
7.	Check the Lubrication Pump Air Pressure (4 Bar)	
8.	Check the Grease Reservoir. Fill if necessary).	
9.	Check the Light Tester Air Pressures (Seal Pressures 3.5 - 7 Bar), (Can Eject Pressure 55 Bar)	
10.	Clean the Light Tester Lenses, Pusher Pads and Lamp Cover	
11.	Check the condition of the Light Tester Can to Turret Seals (Replace if necessary)	
12.	Check that the Light Tester Bulbs are all working	
13.	Check the Main Machine Vacuum Pressures (minimum -0.08Bar)	
14.	Ensure that Vacuum is present at the Flanger and Light Tester Pusher Pads	
15.	Check the condition of the Friction Pusher Pads (Flanger and IBR). Replace if necessary.	

3400 System Preventative Maintenance - **Weekly** (Sheet 1 of 1)

Index	Procedure	
1.	Check that all Waxer Rollers are being driven (the Roller Drive 'O' Ring may require changing)	
2.	Replace the Waxer Wick.	
3.	Check the Waxer Pump Air Lubricator. Fill if required.	
4.	Check the Lubrication Pump Air Lubricator. Fill if required.	
5.	Check that the Lubrication System functions correctly (Injector function and system pressures).	
6.	Check the Light Tester Star Wheel for damage.	
7.	Check the Light Tester Wear Pads.	
8.	Check the condition of all Flexible Lubrication and Air Pipes.	

3400 System Preventative Maintenance - Monthly (Sheet 1 of 1)

Index	Procedure	
1.	Change the Waxer 'O'-Ring	
2.	Check the condition of the Waxer Roller Assembly (Neck Support Roll / Rubber Roller / Drive Roller)	
3.	Check monthly, or at machine maintenance, all the Cam Followers and Cams for signs of pick-up or excessive ware.	
4.	Check monthly, or at machine maintenance, condition of the Flanger Spindle Gears and Ring Gear.	
5.	Check the Flanging Roller Bearings	
6.	Check the Flanger and Light Tester Pusher Pads for Vacuum	
7.	Check the Gear Box oil level. Top up if required	
8.	Check the flexible lubrication pipes for damage. Replace if necessary	

3400 System Preventative Maintenance - Every Three Months (Sheet 1 of 1)

Index	Procedure	
1.	Reformer Tooling Assembly recommended parts available from CMB	
2.	IBR Head Assembly recommended parts available from CMB	
3.	IBR Shaft Assembly recommended parts available from CMB	
4.	Replace Main Air Filters	
5.	Change Discharge Blower Filter	
6.	Check the grease Rotary Unions for leaks (replace if necessary)	

3400 System Preventative Maintenance - Every Six Months (Sheet 1 of 1)

Index	Procedure	
1.	Check the Rotary Air Manifold Shoe for excessive wear. Replace if necessary.	
2.	Check the Waxer Drive Bearing for wear. Replace if necessary.	
3.	Check the Pusher and Knock Out Ram Assemblies for lift and twist.	
4.	Replace the Waxer Turret Needle Bearings.	
5.	Check the thickness of the Light Tester Air Manifold Wear Pad. Replace if necessary.	
6.	Grease the Main Drive Coupling	
7.	Check the condition of the Main Drive Belts. Replace if necessary.	
8.	Change Main Drive Gearbox Oil	

3400 System Preventative Maintenance - Yearly (Sheet 1 of 1)

Index	Procedure	
1.	Replace all the Cam Followers	
2.	Replace all the Oilite Bushes (Cam Follower and Anti-rotation Pins), Compression Springs and Shoulder Screws on both Pusher Ram and K.O Assemblies	
3.	Replace the Knock Out Ram and IBR Pusher Ram Seals and Ram Bushes.	
4.	Clean all the Vacuum Manifolds (Infeed, Waxer, Transfer and Discharge Turrets)	
5.	Replace all the Vacuum Manifold Seals (O-Rings on Infeed, Waxer and Transfer V-seal in Flanger and Light Tester)	
6.	Remove one Injector from each stage. Check for blockages.	
7.	Check and replace if necessary all the Bearings in the Flanging Tooling Assemblies	
8.	Replace the Drive Belt Tension Pulley Bearings and replace the Drive Belts	
9.	Replace the Rotary Grease Unions	
10.	Pneumatic Assy - Pneumatic Regulator. Change the Exhaust Valve Assembly	
11.	Pneumatic Assy - Pneumatic Filter. Change the Filter Element, O-Rings and Element Seal.	
12.	IBR Head Assembly recommended parts available from CMB	
13.	IBR Ram Assembly recommended parts available from CMB	
14.	Replenish grease in the Necker, Flanger and LT Pusher Ram Linear Guides. Ref. Technical Bulletin TB3400-007	

APPENDIX

Motor Drive Gear Unit

Helical Gearbox supplied filled with Synthetic oil type CLP-HC320

Information Sheets: Lenze Shrink Disk Instructions

Information Sheet: Lenze Lubricant Table

4 Mechanical installation

Mounting

Attachment of gearboxes with hollow shaft and shrink disk

4.2.7 Attachment of gearboxes with hollow shaft and shrink disk

STOP **Stop!**
 Do not dismantle new shrink disk.
 Never tighten clamping screws before the machine shaft is pushed in. Protect the shrink disk against contact while in operation by appropriate measure (e.g. cover).
 Degrease hollow shaft bore and machine shaft!

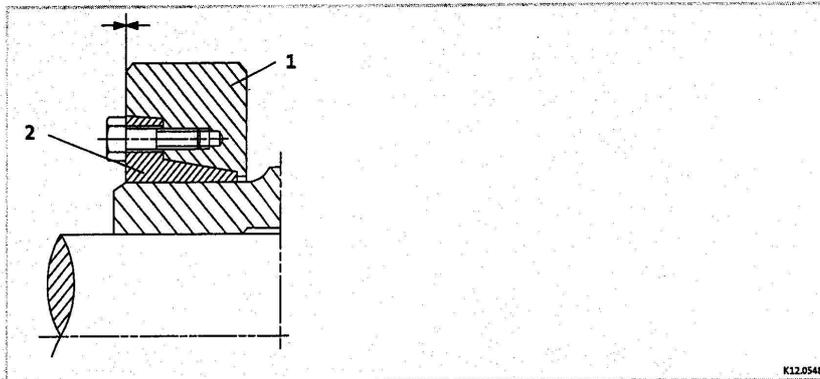


Fig. 5 Hollow shaft with shrink disk

- 1 Outer ring
- 2 Inner ring

Hollow shaft bore [mm]	20	25	30	35	40	50	60	65	80	100
Torque [Nm]	12	30	30	30	30	30	59	59	70	100

Tab. 5 Tightening torque for the clamping screws