OPERATING INSTRUCTIONS

QUICK TOOL CHANGEOVER FC06/FC08

FC06/FC08

15.03.2021

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Table of contents

1 Important information

1.1 Overview

This chapter contains basic information regarding tool change-over at the can seamer and proper use of these operating instructions.

1.2 Reference to the operating instructions of the can seamer

These operating instructions are conceived as supplementary to the operating instructions of the can seamer, type FC06/FC08. The operating instructions of the can seamer have to be available on site at all times.

1.3 Manufacturer and contact address

Ferrum Packaging Ltd.
Canning Technology
Industriestrasse 11
CH-5503 Schafisheim

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Fax: +41 (0)62 889 12 55
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E-mail service: canning.service@ferrum.net

1.4 Target groups

If not otherwise mentioned, these operating instructions are intended for the operators (operating company) and users who are responsible for changing over and adjusting the can seamer tools. The following persons are meant in particular:

Function	Tasks and responsibilities
Service technicians from Ferrum Packaging Ltd.	Responsible for commissioning, assembly and disassembly of the can seamer, settings adjustments, test runs as well as modification for various can formats. The Ferrum Packaging Ltd. service technician is also responsible for regular service work on the can seamer.
Production manager/operations manager	Responsible for labor organization and coordination of diverse duties and tasks, as well as for materials and persons. The production manager/operations manager may also be responsible for health and safety.
Industrial mechanic	Personnel with sufficient competency (training and/or qualifications) to perform small repairs, assembly and disassembly work on the can seamer. Using available change-over kits and with appropriate training by Ferrum Packaging Ltd., an industrial mechanic may convert the can seamer to other can formats.

1.5 Obligation to read

NOTE

As operator (operating company) and user of the can seamer, you and all persons who work with or on the can seamer are required to read and understand these operating instructions, in particular the Chapter "Safety".

- Ferrum Packaging Ltd. or its representatives are not liable for personal injury or material damages that result from not observing these operating instructions.

If you have any questions or concerns, please contact a specialist at Ferrum Packaging Ltd..

1.6 What to do if a problem arises

For problems that cannot be solved using these operating instructions, please contact specialists from Ferrum Packaging Ltd.. In such situations, we ask to be given a precise description of the situation either by telephone or in writing.

1.7 Operating instructions

1.7.1 Validity of the specifications in these operating instructions

The specifications in these operating instructions relate to can seamers with the following type designations:

- FC06/FC08

Validity of the illustrations

Every can seamer has customer-specific characteristics. To demonstrate principles and interrelationships and provide overviews, these operating instructions contain illustrations that are completely correct in principle but may deviate in detail from type FC06/FC08 can seamers. Please note that these illustrations are for information only and are not binding.

Conventions

For the sake of simplicity, the difference between body (can without end) and can will be ignored in these operating instructions. The term "can" will be used as a collective term.

For the seaming machine, the term can seamer will be used. OP is the accepted abbreviation for seaming operations, i.e. OP 1 and OP 2.

1.7.2 Symbols in the operating instructions

Symbol	Meaning
■	For lists

1.7.3 Contents and purpose of the operating instructions

These operating instructions contain the tool change-over information required by the operating company and user. The purpose of the instructions is to help achieve safe and efficient change-over, adjustment and use of the can seamer.

No instructions are provided for adjustments and repairs that go beyond normal equipping and maintenance.

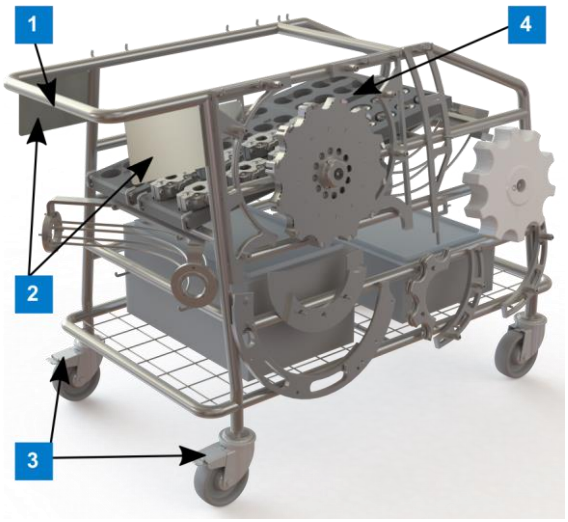
1.7.4 Location of the operating instructions

The operating instructions are to be supplied to persons who are assigned to work on the tool change-over of the can seamer.

The operating instructions must always be available to these persons at their workstations.

1.8 Tool carriage

A tool carriage for depositing the removed tool can be ordered from Ferrum Packaging Ltd. The unused tools can be kept on it until the next installation. The tool carriage offers space for one tool kit on each side.



1 Handrail
2 Diagram showing arrangement of tool parts
3 Parking brake
4 Support plate

Fig. 1: Tool carriage

Seaming levers including seaming rolls and seaming chucks can be stored safely on the support plate.

1 Support plate

Fig. 2: Support plate

For more information on the tool carriage see the “Tool carriage” operating instructions.

2 Safety

2.1 Overview

This is a general chapter on safety for all operating instructions of Ferrum Packaging Ltd.. This chapter contains the general safety regulations that must be observed during installation, operation and tool change-over as well as maintenance and service. Read this chapter carefully before performing any work on the can seamer.

2.2 Basic principle

The can seamer left the Ferrum Packaging Ltd. factory in sound condition and ensures a high level of technical safety. Incorrect operation or unintended use will endanger:

- Your life
- Your health
- Machines and equipment

2.3 Safety and operating information in these operating instructions

These operating instructions provide safety instructions regarding dangerous situations. This will help you to use the can seamer safely.

Operational information will help you to use the can seamer efficiently.

The information is labeled using symbols, signal words and signal colors.

Please observe the following safety and operational instructions:

Danger notices

DANGER

Danger notices indicate immediate danger with high risks that will result in death or serious physical injury if not prevented.

The danger notices describe the

- type and source of the danger
- consequences when measures are not performed
- measures for protecting against the danger

Warning notices

WARNING

Warning notices indicate possible danger with moderate risks that could result in death or (serious) physical injury if not prevented.

The warning notices describe the

- type and source of the danger
- consequences when measures are not performed
- measures for protecting against the danger

Caution notices

CAUTION

Caution notices indicate danger with low risks that could result in light or mild physical injury if not prevented.

The caution notices describe the

- type and source of the danger
- consequences when measures are not performed
- measures for protecting against the danger

Material damage notices

WARNING, DAMAGE TO EQUIPMENT

Material damage notices indicate situations that could result in damage to equipment when the described safety precautions are not performed.

Notes with additional information

NOTE

In these sections, useful and important additional information is provided.

2.4 Safety signs

The following tables provide information regarding the prohibition, warning and mandatory signs used by Ferrum Packaging Ltd. in these operating instructions. For further prohibition, warning and mandatory signs, refer to section "Safety signs" in chapter "Safety" in the operating instructions of the can seamer.

2.4.1 Mandatory signs

Mandatory signs	Meaning	Location of the mandatory sign
	Wear protective goggles.	Guard doors
	Wear protective gloves.	Guard doors
	Wear helmet.	
	Wear safety shoes.	
	Read information in the operating instructions.	
	Lift with two persons.	
	Wear hearing protection.	Guard doors
	Wear tight-fitting clothing.	

2.4.2 Warning signs

Warning signs	Meaning	Location of the warning sign
	Danger of hands being crushed	Infeed table
	Danger of being drawn in by rotating parts	
	Heavy load	
	Falling objects	

2.5 Intended use

The can seamer may only be used to seam round cans that contain liquid products. No product may protrude over the edge of the can.

Intended use according to the operating instructions of the can seamer includes

- Only trained personnel are allowed to operate and handle the machine.
- The can seamer may only be operated after installation in the production line and with the corresponding protective equipment in accordance with local standards.
- All safety and operational instructions have to be observed.
- All safety regulations have to be observed.
- The can seamer has to be cleaned as specified in the can seamer operating instructions.
- The maintenance instructions have to be followed.

Foreseeable misuse

Every use beyond the intended use is considered as misuse.

Personal injury or material damage

Misuse of the can seamer can lead to personal injury and damage, especially:

- Using cleaning agents that have not been approved by Ferrum Packaging Ltd..
- Operating the can seamer when cleaning solution residues are left in the can seamer.
- Processing products that the can seamer was not designed for.

Ferrum Packaging Ltd. and its representatives are not liable for damage resulting from unintended use of the can seamer.

2.6 Personnel trainings

Persons who operate or work on the can seamer must be authorized to do so by the operating company and trained accordingly. They must be capable of recognizing and avoiding possible hazards. This also requires knowledge of the accident prevention regulations, first aid measures and local rescue services.

Installation, start-up, settings, adjustments, change-over, maintenance and repairs may only be performed by specialized technicians with product-specific training who have received basic training in mechanical and electrical work and who have appropriate vocational experience. Specialized technicians with product-specific training are responsible for planning and inspecting this work.

2.7 Responsibilities of the personnel

Personnel	Qualifications
Production manager/operations manager	■ Product-specific training ■ Leadership experience ■ Responsible for ensuring that all tasks within the factory and relating to the can seamer are clearly defined. ■ Ensures that persons who work with or on the can seamer have read and understood the operating instructions, in particular the chapter on safety. ■ Is responsible for ensuring that only authorized and qualified personnel work with or on the can seamer. ■ Is responsible for ensuring that the personnel undergo regular (ongoing) training. ■ Is responsible for ensuring that the condition of the can seamer and its spare parts are inspected regularly, either by the production manager/operations manager personally or by other qualified personnel.
Safety officer	■ Is responsible for ensuring that the local safety regulations and the safety regulations in the operating instructions are observed. ■ Is responsible for ensuring that the personnel who work with or on the can seamer are familiar with the local and product-specific safety regulations. ■ Organizes first aid courses for the personnel. ■ Inspects the functioning of the safety devices of the can seamer in regular intervals.
Industrial mechanic Industrial electrician Maintenance personnel	■ Ensures that the safety devices are always functional during all work. ■ Only performs work for which he or she has been authorized and trained. ■ Always works according to the safety regulations described in the operating instructions. ■ Wears protective equipment where prescribed. ■ Uses Ferrum Packaging Ltd. original parts exclusively for modifications and works according to the information and instructions in these operating manual.
Operating personnel	■ Ensures that the safety devices are always functional during all work. ■ Only performs work for which he or she has been authorized and trained. ■ Always works according to the safety regulations described in the operating instructions. ■ Wears protective equipment where prescribed.

2.8 Tool change-over

The tool change-over on the can seamer has to be performed by two persons.

WARNING

Heavy parts

All tool parts of the can seamer are heavy. They can cause serious physical injury if handled negligently or inappropriately.

- Two persons needed for installation and removal of the tool parts
- Crane required for installation and removal of the end guide plate
- Never install or remove tool parts on your own.

2.9 Accident prevention

Protect yourself against accidents

- Wear protective equipment in hazardous zones.
- Never reach into a running can seamer.
- Wear additional protective equipment when using cleaning agents (see Chapter "Cleaning" in the operating instructions of the can seamer).
- Always observe the safety regulations described in this chapter.

2.10 Control stations

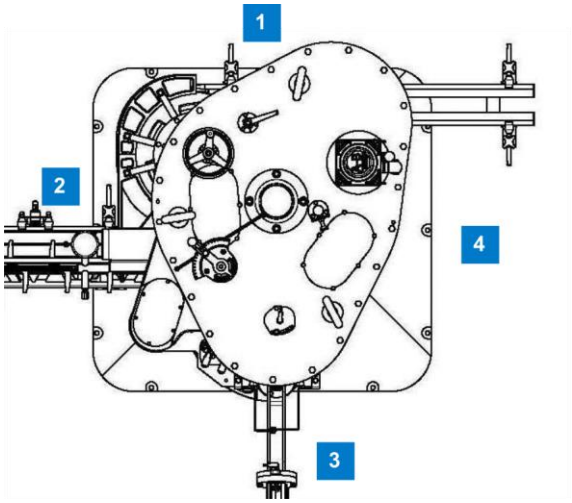


Fig. 3: Control panels

1 Rear control panel and machine side
2 Left control panel and machine side
3 Front control panel and machine side
4 Right control panel and machine side

2.11 Protective equipment

NOTE

Wear protective equipment

When working on the can seamer, wear:

- Safety shoes
- Tight-fitting, sturdy clothing

When working on running can seamer, wear additionally:

- Hearing protection

When working in the interior of the can seamer, wear additionally:

- Protective goggles
- Protective gloves
- Protective helmet during adjustments and change-over

2.12 General safety regulations and responsibilities

In general, the following safety regulations and responsibilities apply when working with or on the can seamer:

- The generally accepted rules for work safety are to be observed. Additionally, the locally applicable regulations regarding work safety and accident prevention are to be observed.
- The can seamer may only be used in a sound and clean condition.
- It is forbidden to remove, modify, bridge or bypass any safety device.
- It is forbidden to modify the can seamer.
- Only Ferrum Packaging Ltd. or persons who have been authorized by Ferrum Packaging Ltd. are authorized to overhaul the can seamer.
- Faults or damages are to be reported to the operating company immediately.
- Original Ferrum Packaging Ltd. spare parts must be used during repairs.
- Only persons who have been authorized by the operating company may be in the area of the can seamer. These persons must be informed of the residual risks and protected against these risks.
- All safety devices are to be inspected regularly and properly maintained by the operating company.
- For users with insufficient language skills, the operating company has to translate the applicable operating instructions for the work to be performed, as well as safety regulations and the safety-relevant information. This applies especially to all persons who do not come from the region where the can seamer is located.
- Every user is responsible for his or her own health.
- After every repair, the user has to perform a test run to ensure that the can seamer is in perfect working order.

Guarantee claims

If damage results to persons, material objects, the environment and/or assets because these operating instructions have not been followed, whether purposefully or unintentionally, Ferrum Packaging Ltd. is without fault and all guarantee claims are rejected. This also applies to any consequences resulting from the damages.

3 Removing the tool kit

3.1 Overview

This chapter contains all necessary information for removing the tool kit of the can seamer.

3.2 Safety regulations

The tool change-over may only be performed by trained, specialized technicians. They must have carefully read and understood the entire contents of this chapter, Chapter 2 "Safety" as well as all other referenced chapters.

WARNING, DAMAGE TO EQUIPMENT

Risk of a mix-up during installation of the tool kit

The can seamer may be damaged if parts from different tool kits are mixed up during installation.

- The different tool kits should be kept separate from each other during removal and installation in order to avoid mix-ups.
- Observe marks and labels on the tool parts.

WARNING

Unintentionally switching the can seamer on

If the can seamer is switched on unintentionally, rotating can seamer parts can cause serious physical injury or death.

- Never reach inside the machine when the can seamer is running.
- Always stop the can seamer before performing any work on it.
- Take measures to prevent the can seamer from being switched on unintentionally.
- When working on the can seamer, secure it so that no person or situation can effect changes to the can seamer while you are away from it.
- Before starting settings adjustment and maintenance tasks, padlock the main switch against being switched back on.

WARNING

Rotating and falling can seamer parts

Rotating and falling can seamer parts can cause serious physical injury or death.

- Never reach inside the machine when the can seamer is running.
- Be particularly careful when guard doors are open or covers have been removed.
- Keep tools, hands, feet, hair and clothing away from rotating can seamer parts.
- Never bypass safety devices.
- Check the function of the safety devices regularly.

3.3 Checking and cleaning tool parts

Check and clean tool parts for possible damage while installing and removing them. Ensures that tool parts are in perfect working order when replaced in the can seamer.

In this way, damage is detected promptly and a spare-part order can be elicited in good time.

Please consult the operating instructions of the can seamer for disposal of damaged parts or machine components.

3.4 Preparations

NOTE

Preparations before beginning the tool changeover

Before starting the changeover, make sure that

- the can seamer has been stopped and has cooled down (min. one hour),
- the cover has been removed from the end feed magazine,
- the can seamer has been cleaned.

3.5 Removing the tool kit

NOTE

Conversion of can/end format; conversion of can and end format

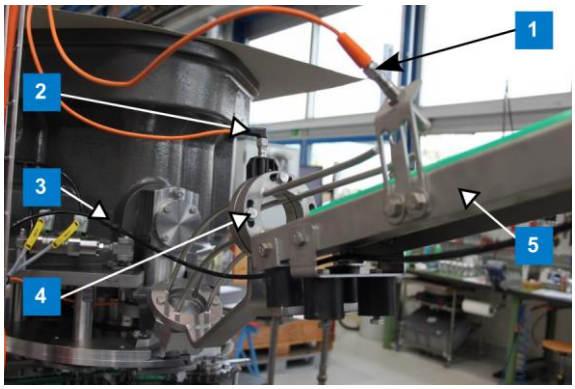
- Work steps that are necessary for retrofitting to a different can format are indicated by a can.
- Work steps that are necessary for retrofitting to a different end format are indicated by an end.
- All work steps must be carried out when retrofitting to a different can and a different end format.

Tools

- Wrench

Work steps

1. Disconnect the compressed air feed
2. Remove the end shortage sensor.
3. Remove the end feed magazine sensor.
4. Detach compressed air hose.
5. Release and remove screws.
6. Carefully remove the end feed.



1 End shortage sensor
2 End feed magazine sensor
3 Compressed air hose
4 Screws
5 End feed

Fig. 4: Removing the end feed

DAMAGE TO EQUIPMENT

Height range on the can seamer column

The can seamer can be damaged if the marked range is exceeded upwards or downwards.

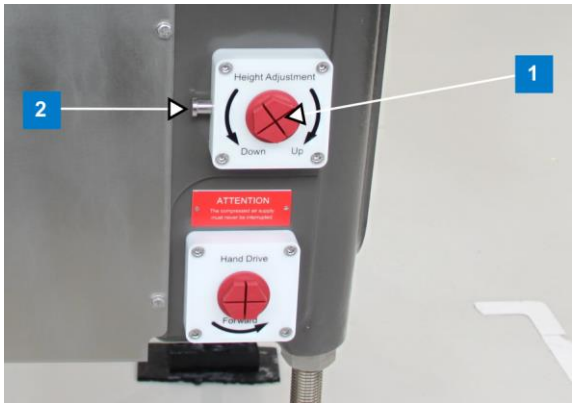
- Always keep an eye on the marks on the can seamer column when moving upwards or downwards.
- Do not cross the marks.

1 Mark for lowest position of the can seamer upper part

Fig. 5: Height range on can seamer column

7. Can seamer with automatic height adjustment: Drive the upper part of the can seamer up by the superordinate control. Continue at item 10.

   Can seamer with manual height adjustment: Remove height adjustment cover.



1 Height adjustment cover
2 Lock pin

Fig. 6: Adjusting the height

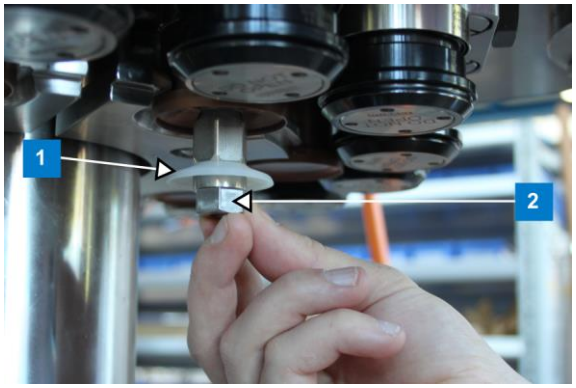
8. Drive the upper part of the can seamer up with the hex socket wrench. To set the can seamer height quicker, a cordless screwdriver with an appropriate attachment can be used.

1 Hex socket wrench

Fig. 7: Setting height

9. Install height adjustment cover.

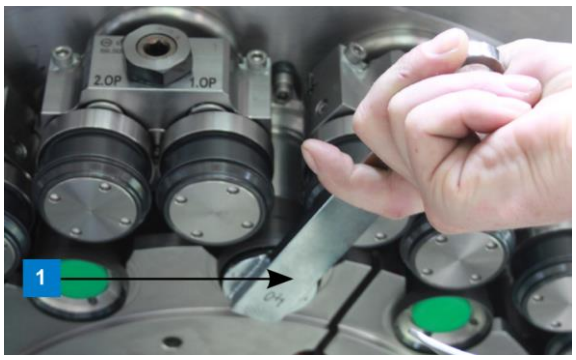
10. Remove the knock-out pads.



1 Knock-out pad
2 Wrench extension

Fig. 8: Removing the knock-out pads

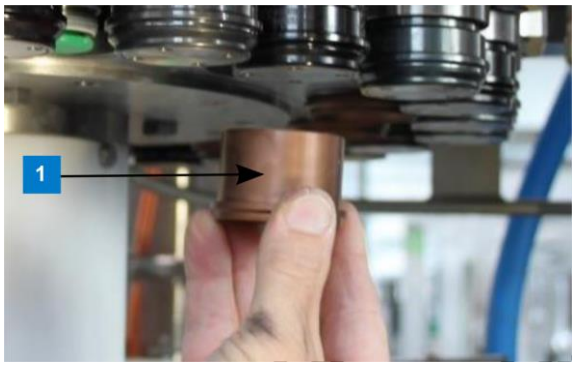
11. Loosen the seaming chucks using the seaming chuck wrench.



1 Seaming chuck wrench

Fig. 9: Loosening the seaming chucks

12. Remove the seaming chucks.



1 Seaming chuck

Fig. 10: Removing the seaming chucks

NOTE

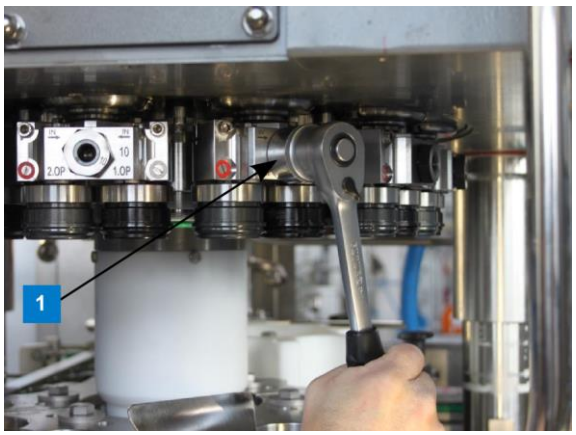
Do not lose the shims (0.2 mm) (if present).

13. Remove both chuck bell halves by loosening the 2 × M8×20 screws.

1 Chuck bell halves
2 Screw

Fig. 11: Removing the chuck bell

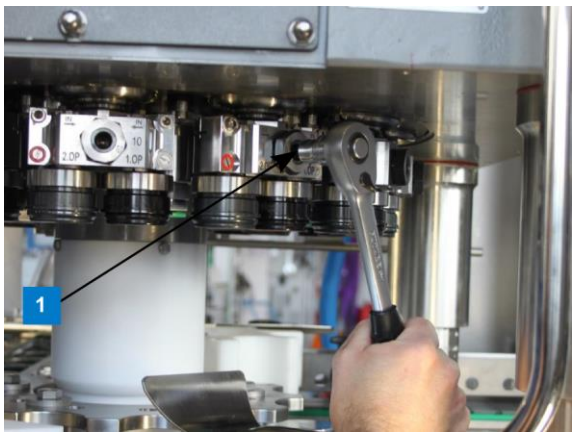
14. Loosen the locknut of the seaming lever (SW 30).



1 Loosen the locknut

Fig. 12: Loosening the locknut

15. Loosen the centering pin from the seaming lever using the Allen key (**10 mm**).



1 Centering pin

Fig. 13: Loosening the centering pin

16. Remove the centering pin from the seaming lever.

1 Centering pin

Fig. 14: Removing the centering pin

17. Completely remove the seaming lever.

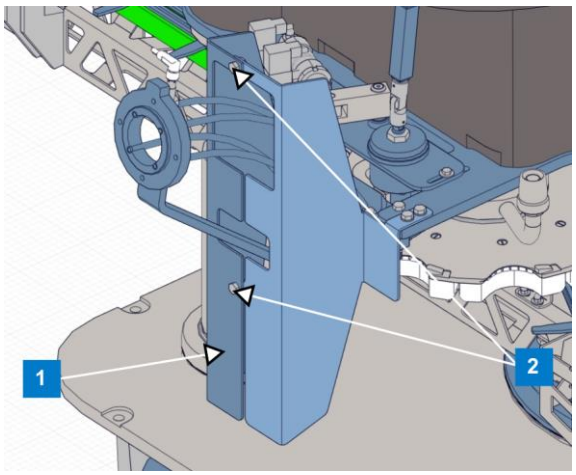
1 Seaming lever

Fig. 15: Removing the seaming lever

NOTE

Store the seaming lever, locknut, and centering pin together in an assembled condition.

18. Remove the guard.



1 Guard
2 Screws

Fig. 16: Removing the guard

19. Remove the discharge turret by loosening the screw.

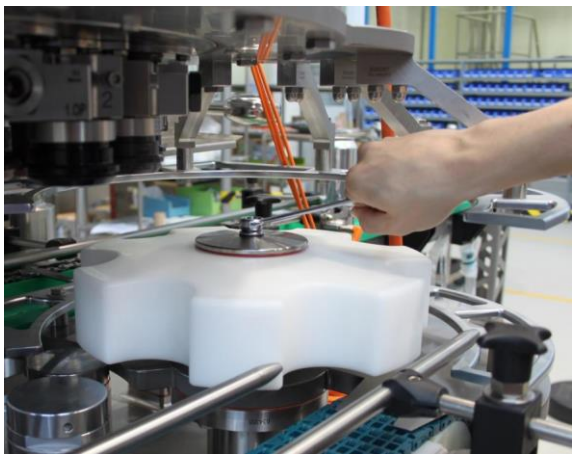
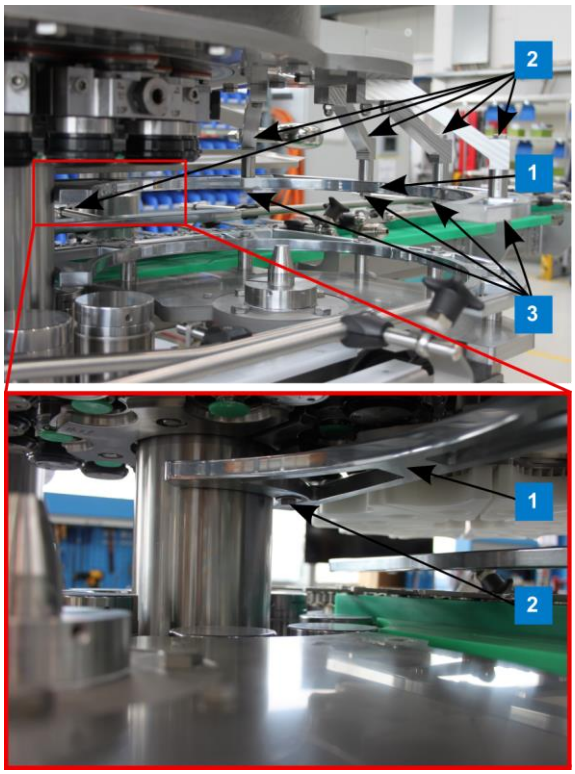


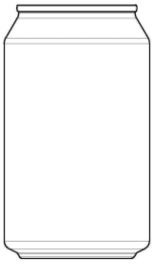
Fig. 17: Removing the discharge turret

20. Removing the upper can guides:
    Loosen 5 screws (2) (4 top screws, 1 bottom screw, see detailed view).
    Do not loosen the 4 bottom screws (3)!

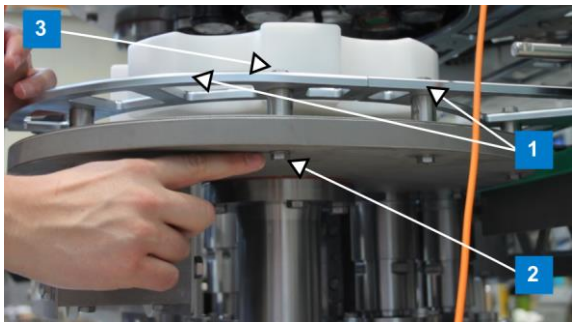


1 Upper can guides
2 Loosen screws
3 Don't loosen screws

Fig. 18: Removing upper can guides (overall and detailed view)



21. Remove the lower can guide by loosening the bottom screw.
    Do not loosen the top screw!



1 Lower can guide
2 Top screw
3 Bottom screw

Fig. 19: Removing the lower can guide

22. Remove the cover plate.

1 Cover plate

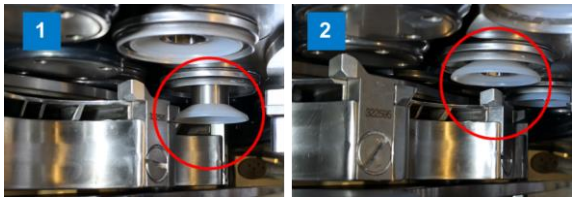
Fig. 20: Removing the cover plate

WARNING, DAMAGE TO EQUIPMENT

Position of the end feed pusher in relation to the knock-out pads

After the screws of the can/end-feed turret have been loosened, the knock-out pads can get damaged by the end feed pusher's rotor during a rotation.

- Bring knock-out pad into the correct position before loosening the can/end-feed turret
- When loosening the can/end-feed turret, always check the distance of the end feed pusher to the knock-out pads.



1 Wrong position of the end feed pusher in relation to the knock-out pads
2 Correct position of the end feed pusher in relation to the knock-out pads

Fig. 21: Positioning the end feed pusher in relation to the knock-out pads

CAUTION

Can/End-feed turret

There is a risk of fingers being crushed if care is not taken when removing the can/end-feed turret.

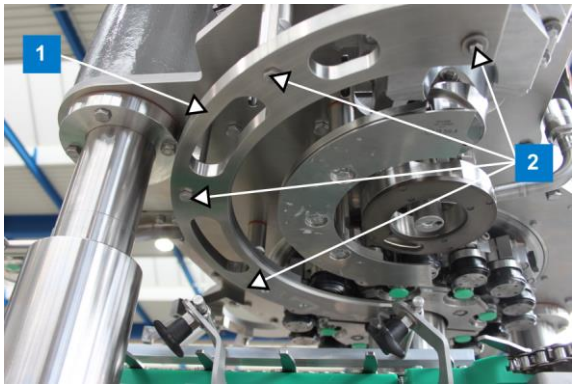
- Firmly hold the can/end-feed turret on the outer edge when removing it.

23. Loosen the screw in the center of the can/end-feed turret.
    Do not loosen the four outer screws!
24. Remove the can/end-feed turret.

1 Screw in the center of the can/end-feed turret
2 Outer screws

Fig. 22: Loosening screw in the center of the can/ end-feed turret.

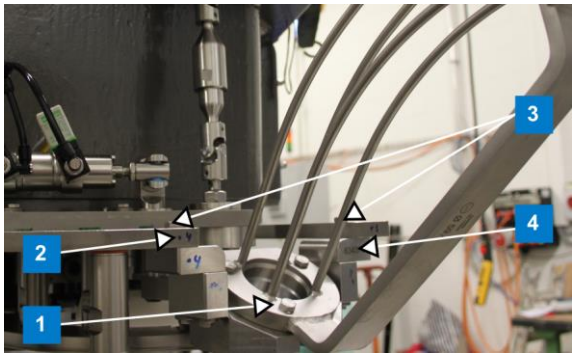
25. Release 4 screws on the outer end guide and remove.
26. Remove the outer end guide.



1 Outer end guide
2 Screws

Fig. 23: Removing the outer end guide

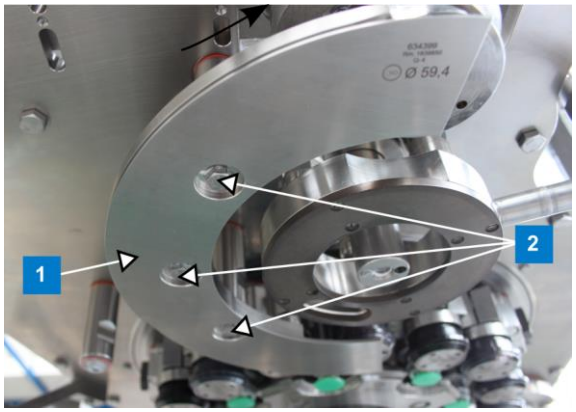
27. Release and remove 2 screws in the base plate.
28. Remove the end feed magazine together with the two spacers.



1 End feed magazine ring
2 Base plate
3 Screws
4 Spacer

Fig. 24: Removing the end feed magazine

29. Release 3 screws and remove the inner end guide.



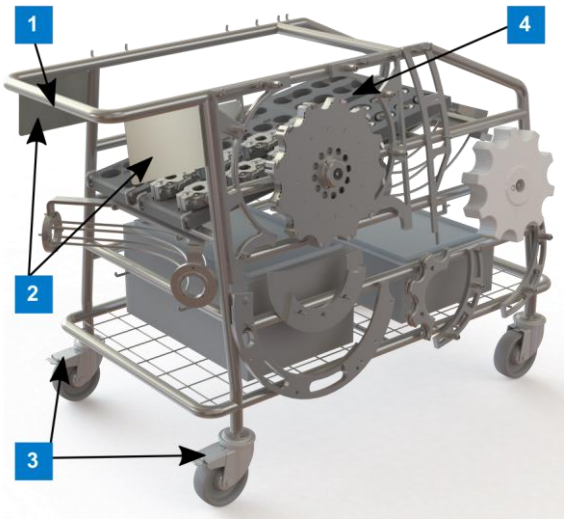
1 Inner end guide
2 Screws

Fig. 25: Removing the inner end guide

NOTE

Clean the removed tool parts before placing them on the tool carriage. Tool parts must not be washed on the tool trolley.

30. Clean the removed tool parts and store them in the intended place on the tool carriage.



1 Handrail
2 Diagram showing arrangement of tool parts
3 Parking brake
4 Support plate

Fig. 26: Tool carriage

31. Falzhebel inklusive Falzrollen und Falzköpfe auf der Trägerplatte lagern.

1 Support plate

Fig. 27: Support plate

4 Installing the tool kit

4.1 Overview

This chapter contains all necessary information for installing the tool kit of the can seamer.

4.2 Safety regulations

The tool change-over may only be performed by trained, specialized technicians. They must have carefully read and understood the entire contents of this chapter, Chapter 2 "Safety" as well as all other referenced chapters.

WARNING, DAMAGE TO EQUIPMENT

Risk of a mix-up during installation of the tool kit

The can seamer may be damaged if parts from different tool kits are mixed up during installation.

- The different tool kits should be kept separate from each other during removal and installation in order to avoid mix-ups.
- Observe marks and labels on the tool parts.

WARNING

Unintentionally switching the can seamer on

If the can seamer is switched on unintentionally, rotating can seamer parts can cause serious physical injury or death.

- Never reach inside the machine when the can seamer is running.
- Always stop the can seamer before performing any work on it.
- Take measures to prevent the can seamer from being switched on unintentionally.
- When working on the can seamer, secure it so that no person or situation can effect changes to the can seamer while you are away from it.
- Before starting settings adjustment and maintenance tasks, padlock the main switch against being switched back on.

WARNING

Rotating and falling can seamer parts

Rotating and falling can seamer parts can cause serious physical injury or death.

- Never reach inside the machine when the can seamer is running.
- Be particularly careful when guard doors are open or covers have been removed.
- Keep tools, hands, feet, hair and clothing away from rotating can seamer parts.
- Never bypass safety devices.
- Check the function of the safety devices regularly.

4.3 Checking and cleaning tool parts

Check and clean tool parts for possible damage while installing and removing them. Ensures that tool parts are in perfect working order when replaced in the can seamer.

In this way, damage is detected promptly and a spare-part order can be elicited in good time.

Please consult the operating instructions of the can seamer for disposal of damaged parts or machine components.

4.4 Installing the tool kit

NOTE

Conversion of can/end format; conversion of can and end format

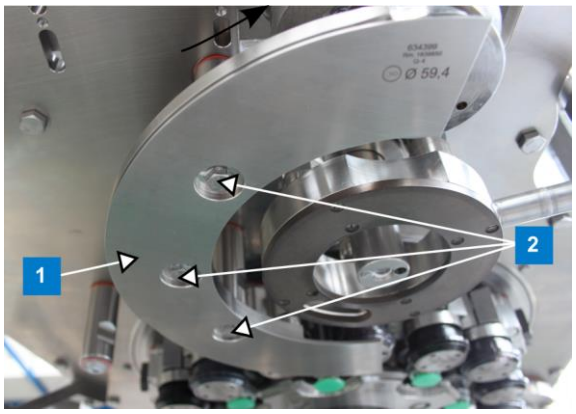
- Work steps that are necessary for retrofitting to a different can format are indicated by a can.
- Work steps that are necessary for retrofitting to a different end format are indicated by an end.
- All work steps must be carried out when retrofitting to a different can and a different end format.

Tools

- Wrench

Work steps

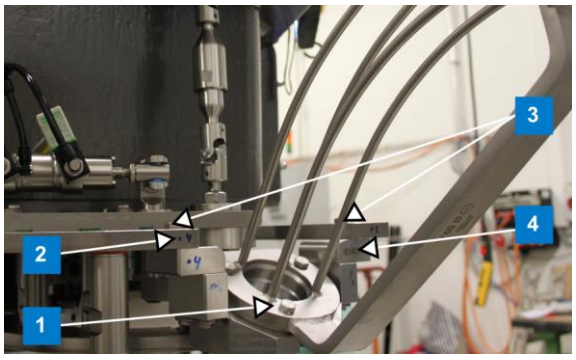
32. Install the inner end guide. Tighten the screws.



1 Inner end guide
2 Screws

Fig. 28: Installing the inner end guide

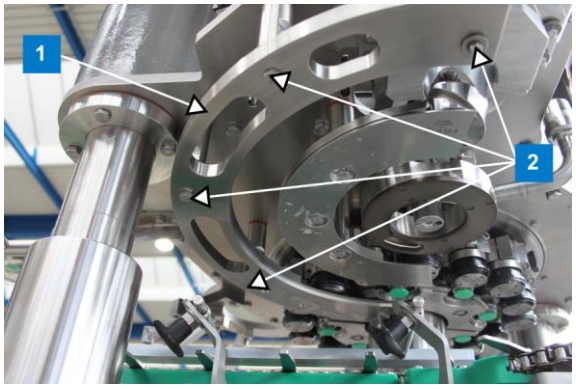
33. Install the end feed magazine together with the two spacers.
34. Tighten 2 screws in the base plate.



1 End feed magazine ring
2 Base plate
3 Screws
4 Spacer

Fig. 29: Installing the end feed magazine

35. Install the outer end guide.
36. Tighten 3 screws on the outer end guide.



1 Outer end guide
2 Screws

Fig. 30: Installing the outer end guide

WARNING, DAMAGE TO EQUIPMENT

Position of the end feed pusher in relation to the knock-out pads

Until the screw on the can/end-feed turret is tightened, the knock-out pads can get damaged by the end feed pusher during a rotation of the rotor.

- As long as the can/end-feed turret is not tightened, always check the distance of the end feed pushers to the knock-out pads.

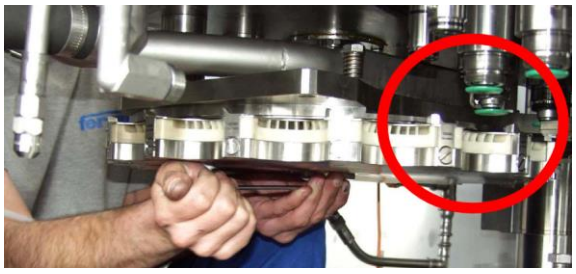


Fig. 31: Positioning the end feed pusher in relation to the knock-out pads

37. Place can/end-feed turret on shaft. The position is specified by a pin.

1 Pin hole for positioning

Fig. 32: Pin

CAUTION

Can/End-feed turret

There is a risk of fingers being crushed if care is not taken when fitting the can/end-feed turret.

- Firmly hold the can/end-feed turret on the outer edge when fitting it.

38. Tighten the screw in the center of the can/end-feed turret.
    Do not tighten the four outer screws!

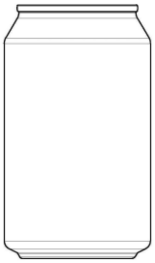
1 Screw in the center of the can/end-feed turret
2 Outer screws

Fig. 33: Tightening the screw in the center of the can/ end-feed turret.

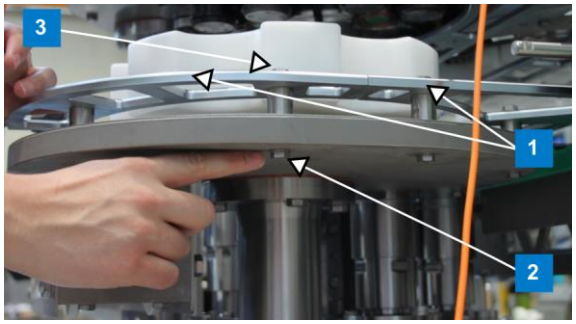
39. Install the cover plate.

1 Cover plate

Fig. 34: Installing the cover plate



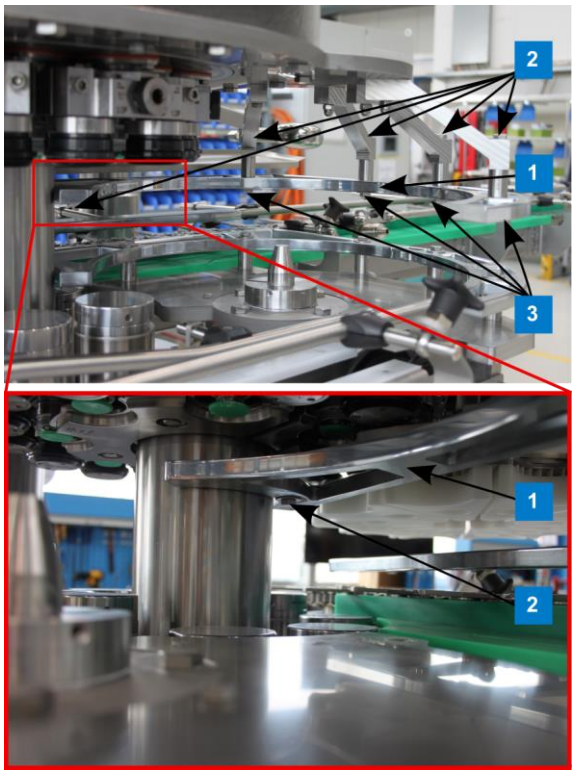
40. Install the lower can guide. Tighten the screw.
    Do not loosen the top screw!



1 Lower can guide
2 Top screw
3 Bottom screw

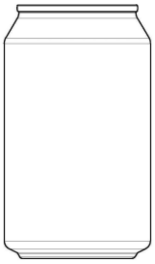
Fig. 35: Installing the lower can guide

41. Install the upper can guides:
    Tighten 5 screws (2) (4 top screws, 1 bottom screw, see detailed view).
    Do not loosen the 4 bottom screws (3)!



1 Upper can guides
3 Screw

Fig. 36: Installing upper can guides (overall and detailed view)



42. Install the discharge turret. Tighten the screw.

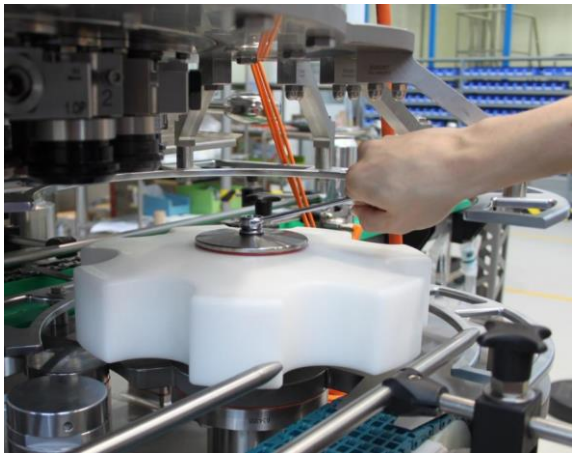
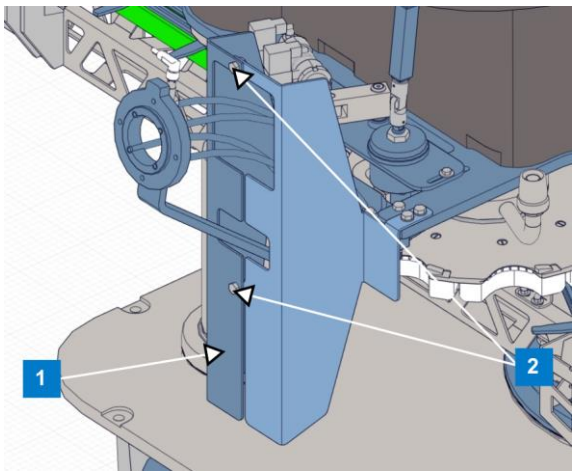


Fig. 37: Installing the discharge turret

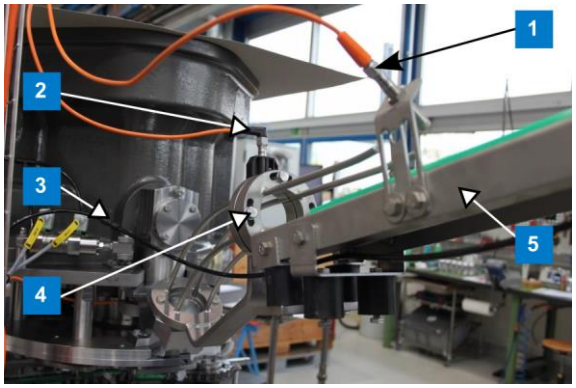
43. Install the guard. Tighten the screws.



1 Guard
2 Screws

Fig. 38: Installing the guard

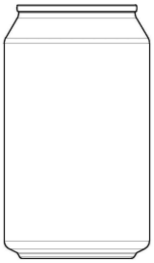
44. Carefully install the end feed.
45. Fit and tighten screws.
46. Connect compressed air hose.
47. Install the end feed magazine sensor.
48. Install end shortage sensor.



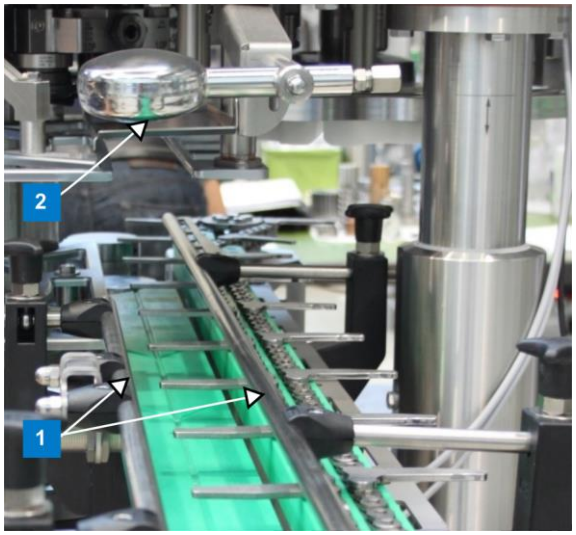
1 End shortage sensor
2 End feed magazine sensor
3 Compressed air hose
4 Screws
5 End feed

Fig. 39: Installing the end feed

49. Connect compressed air feed.

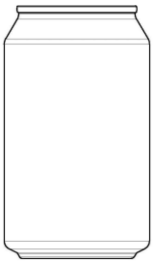


50. Set the lateral can guides on the infeed table.

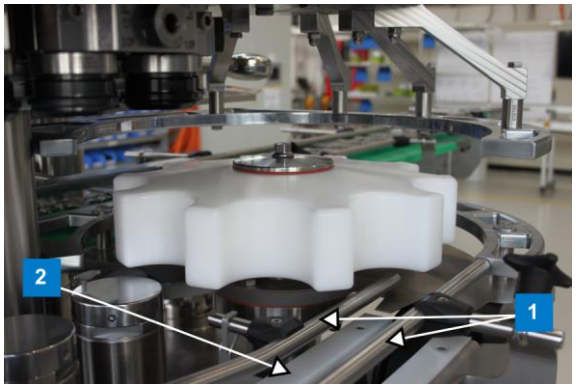


1 Can guides, lateral
2 Bubble breaker

Fig. 40: Lateral can guides, infeed table



51. Set the lateral can guides on the can discharge.



1 Can guides, lateral
2 Can discharge

Fig. 41: Lateral can guides, can discharge

NOTE

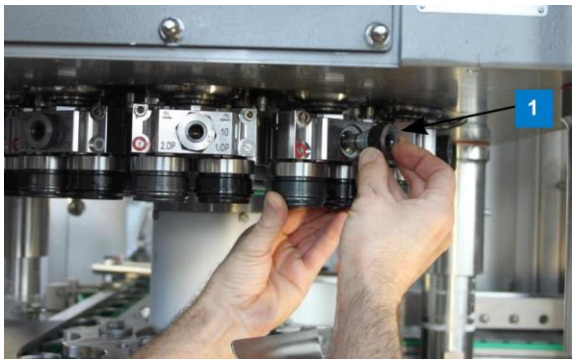
The station numbers must exactly match the numbers on the seaming lever.

52. Install the seaming lever.

1 Seaming lever

Fig. 42: Installing the seaming lever

53. Lightly grease and screw in the centering pin for the seaming lever.



1 Centering pin

Fig. 43: Screwing in the centering pin

NOTE

Tighten the centering pin with a torque of **30 Nm**.

54. Tighten the centering pin using the Allen key **10 mm**.

1 Centering pin

Fig. 44: Tightening the centering pin

55. Tighten the locknut (SW 30). (40 Nm)

1 Locknut

Fig. 45: Tightening the locknut

56. Install both chuck bell halves. Tighten the screws.

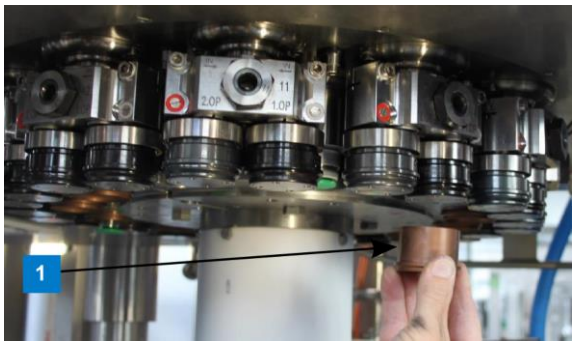
1 Chuck bell halves
2 Screw

Fig. 46: Installing the chuck bell

57. Lightly grease the seaming chuck bore hole and thread.

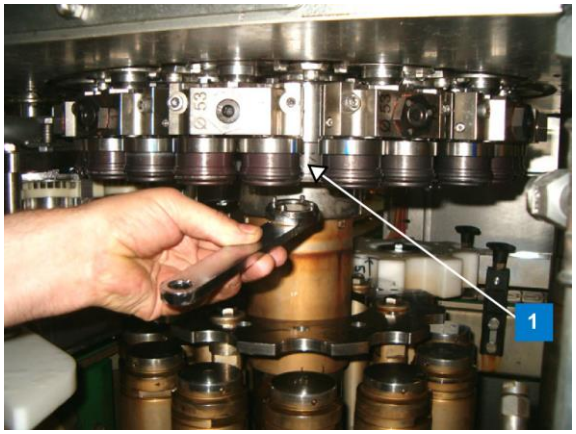
Fig. 47: Greasing the seaming chuck

58. Install all the seaming chucks by hand, except for station **1**, and tighten with the seaming chuck wrench.



1 Seaming chuck

Fig. 48: Installing the seaming chucks



1 Seaming chuck

Fig. 49: Tightening the seaming chucks

59. Check and make sure that all seaming chucks are tightened.

5 Checking the machine and adjusting if necessary

Depending on whether can and end formats are to be changed over, or only one of the two, certain set-up work is required. If the settings are incorrect, the individual components have to be re-set.

For the components with quick changeover function, it is recommended to only check the settings when there are problems with the production. The infeed chain must be set and the seam must be monitored in any event.

All necessary information for setting up the tool kit of the can seamer after a successful tool change-over can be found in the operating instructions of the can seamer, chapter „Settings“.

Work on components	Can format change-over	End format change-over
Checking the can guides (not for FC06/FC08)	No	Yes
Checking the can guides	Yes	No
Checking the can/end-feed turret	Yes*	Yes*
Setting the infeed chain	Yes	No
Checking the discharge turret	Yes*	No
Checking the end feeds	No	Yes
Seam monitoring	Yes	Yes
Adjusting seaming rolls	No	If necessary

* FC06/FC08: if necessary