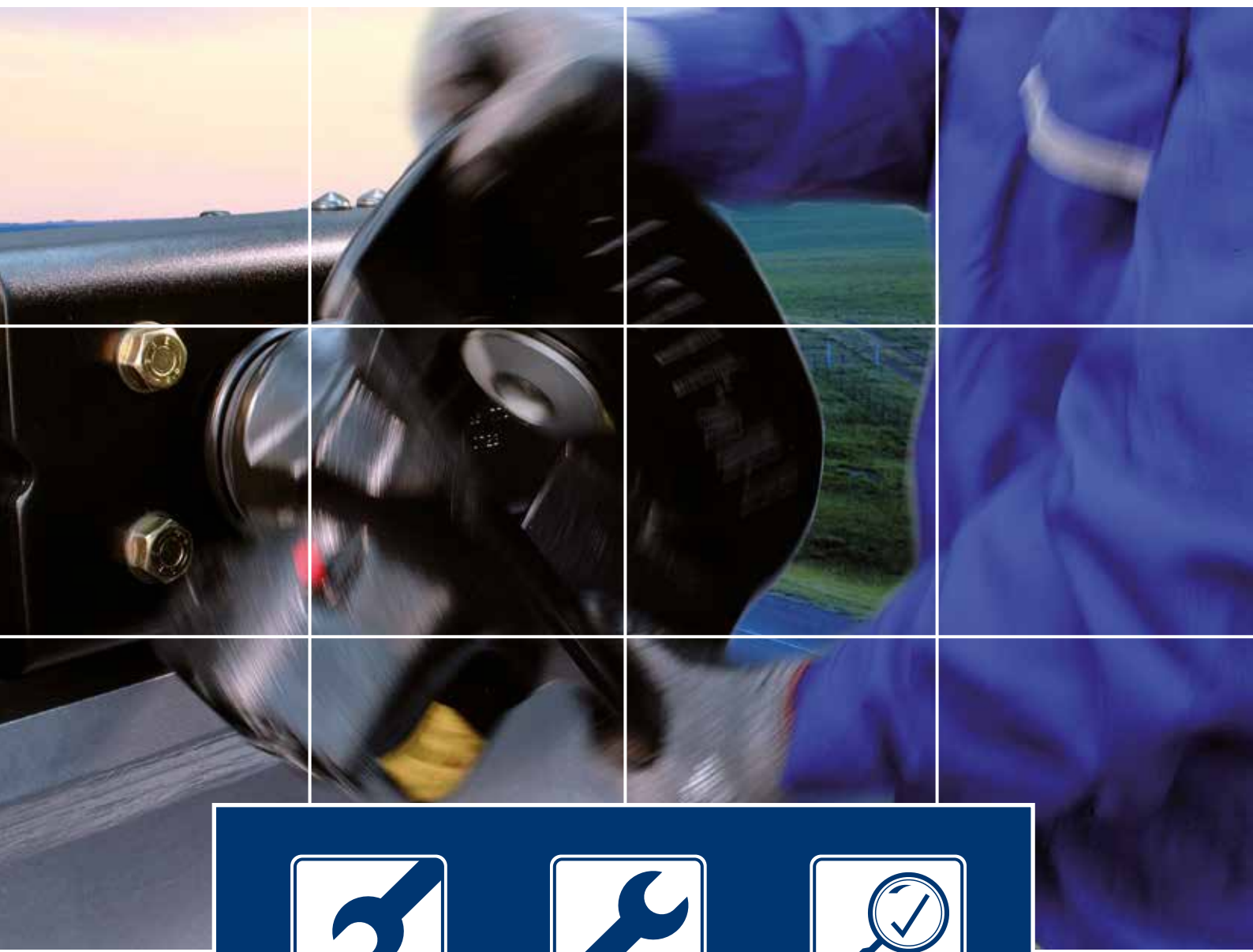




# RINGFEDER



Inspection

# Inhalt | Content

2 Inhalt | Content

---

3 Zeichenerklärungen | Signs and Symbols

---

4 Kupplungsübersicht | Overview Couplings

---

5 Tabellen | Tables

---

5 Identifizierung der Kupplung | Identification of coupling

---

6 Diagnosetabellen - mögliche Ursachen | diagnosis tables – possible causes

---

7 Übersicht Reparaturanleitung | Overview of repair instructions

---

## Explosionsdarstellungen | Exploded diagrams

8 Gruppe I. | Group I.

---

9 Gruppe II. | Group II.

---

10 Gruppe III. | Group III.

---

## Fahrzeug | Vehicle

12 Demontage vom Fahrzeug | Dismantling from vehicle

---

13 Montage am Fahrzeug | Fitting on vehicle

---

## Reparaturanleitung | Repair instructions

14 Gruppe I. | Group I.

---

24 Gruppe II. | Group II.

---

38 Gruppe III. | Group III.

---

59 Montage Schwenkwinkelwarnanzeige | Fitting the collision alert

---

60 Demontage des Sensors | Dismantling the sensor

---

62 Montage des Sensors | Fitting the sensor

---

### Reparaturen sollten nur in einer Fachwerkstatt durchgeführt werden.

Bei jedem Versplinten der Kronenmutter ist ein neuer, korrosionsgeschützter Splint zu verwenden!

Beim Austausch von Bauteilen der Anhängerkupplung sind nur Original RINGFEDER-Ersatzteile zu verwenden, da ansonsten keine sichere Funktion gewährleistet ist und keinerlei Gewährleistungsansprüche bestehen.

### Repairs should only be carried out by a professional workshop.

To fix the castellated nut with a cotter pin attend to always using new, corrosion-resisting cotter pin!

When replacing component parts of the trailer coupling only original RINGFEDER spare parts are to be used, since otherwise a safe performance cannot be safe guarded and every guarantee ceases.


# Zeichenerklärung | Signs and Symbols




Explosionsdarstellung  
Explosion diagram



Anzugsmoment  
Tightening torque




Erst Druckluftzufuhr stoppen  
First cut off supply of compressed air




Demontage  
Dismantling



Achtung!  
Caution!



Schweißpunkt mit Flex trennen  
Disconnect spotweld with angle grinder



Montage  
Fitting



Verletzungsgefahr – Hand wird gequetscht  
Risk of injury – Hand is crushed



Schweißen! Elektrode Ø 3,25 mm  
Heftstelle 15 mm, a = 3 mm  
Weld! Electrode Ø 3.25 mm  
Tack weld 15 mm, a = 3 mm  
ENIGB3/ENIGB2 (1), DIN 8573!

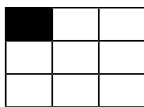
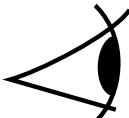
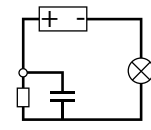


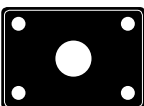
Tabelle beachten!  
(Seite 5)  
Follow the table!  
(Page 5)



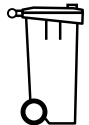
Visuelle Kontrolle  
Visual control




Schaltplan zur Montage LED und Steuereinheit  
Wiring scheme for fitting LED and control unit



Lochbild (e1 x e2)  
Hole pattern (e1 x e2)




Verschleißteil entsorgen und nicht wiederverwenden  
Dispose the wear part and do not reuse it



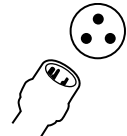
Prüfung visuelle Kontrolle  
Inspection of visual control



Schraube, Scheibe, Mutter  
Screw, washer, nut




Reinigen  
Cleaning




V (-+)



Kronenmutter  
Castle nut




Fetten  
(Bechem Berolub FR 16)  
Lubricate  
(Bechem Berolub FR 16)




Kabel optional  
Id. - Nr. 14996737  
Cable optional  
ID no.14996737



Schlüsselweite  
Spanner opening













Intervall 1 x pro Monat  
Interval 1 x per month








Kabel vom Kunden  
Cable from customer







# Kupplungsübersicht | Overview Couplings

Gruppe Group	 Seite Page	Ø 40 mm Typ Type ...	Ø 50 mm Typ Type ...
I.	8	 86 G/110	 80 A/B




Gruppe Group	 Seite Page	Ø 40 mm Typ Type ...	Ø 50 mm Typ Type ...
II.	9	 4040 A/B	 5050 A/B
		 4040 AM, AM/RL	 5050 AM, AM/RL
		 4045 A/B	
		 4045 AM, AM/RL	

Gruppe Group	 Seite Page	Ø 40 mm Typ Type ...	Ø 50 mm Typ Type ...
III.	10, 11	-	 5055 A
			 5055 AM, AM/RL
			 5055 AP
			 5055 AW

# Tabellen | Tables

 <b>e1 x e2 (mm)</b>	 <b>Ø d2 (mm)</b>		 <b>ISO 7089</b>	 <b>ISO 7042</b>	<b>Nm (± 5%)</b>	 <b>mm</b>
83 x 56	10,5	M 10 (≥ 8.8)	≥ 200 HV	≥ 8	47	17 (16)
120 x 55	15	M 14 (≥ 8.8)	≥ 200 HV	≥ 8	130	22
140 x 80	17	M 16 (≥ 8.8)	≥ 200 HV	≥ 8	200	24
160 x 100	21	M 20 (≥ 8.8)	≥ 200 HV	≥ 8	390	30

<b>1</b>		

	 <b>Nm</b>	 <b>mm</b>
M 30	≥ 250	46
M 36 x 3	≥ 350	55
M 45 x 3	≥ 500	70

	<b>2</b>	

# Identifizierung der Kupplung | Identification of coupling

## Typenschild | Type plate



selbsttätige Bolzenkupplung **Typ 4040 G/150 A**  
zur Verbindung mit Zugösen 40 DIN 74054 oder ISO 8755

10069978  
**Fabr.-Nr.**  **Bj.**   
Klasse S D 137 kN S 1000 kg  
EG-Typg. e11 00-6292 Dc 92 kN V 40 kN

[www.ringfeder.de](http://www.ringfeder.de)



## Zugstange | Connecting rod



Der auf der Zugstange eingestanzte Code kann auch zur Identifizierung des Kupplungstypen dienen

The code stamped into the connecting rod can also serve to identify the coupling type

# Diagnosetabellen | Diagnosis tables

## Kuppelmechanismus löst nicht aus | Coupling mechanism does not release

Bauteil   Component	Rep.-Nr.   Rep-No
Verschleißplatte   Wear plate	<b>1</b>
Zugösenauge am Anhänger verschlissen   Hitch ring eye on the trailer is worn	

## zuviel Spiel in Stangenführung | Too much play in rod guidance system

Bauteil   Component	Rep.-Nr.   Rep-No
Gummifedern   Rubber springs	<b>6</b>
Lagerbuchsen Stangenführung   Guide bushings on rod guidance system	<b>7</b>
Führungsbuchsen   Guide bushings	<b>10</b>

## Kuppelbolzen bleibt nicht oben | Coupling bolt does not stay up

Bauteil   Component	Rep.-Nr.   Rep-No
Abschlussdeckel   End cap	<b>4</b>

## Öffnungs- und Schließvorgang ist gestört | Opening and closing process is faulty

Bauteil   Component	Rep.-Nr.   Rep-No
Handhebel - Sperrhebel   Hand lever – locking lever	<b>8</b>

## Signalstift bleibt trotz geschlossener Kupplung draußen | Signal pin stays out despite closed coupling

Bauteil   Component	Rep.-Nr.   Rep-No
Sicherung   Safety device	<b>9</b>
Sensor   Sensor	<b>15</b>

## Kupplung öffnet nicht richtig | Coupling does not open properly

Bauteil   Component	Rep.-Nr.   Rep-No
Kuppelkörper   Coupling body	<b>11</b>
Rückstellfeder   Return spring	<b>3</b>
Bei Typ 5055 Verschleißplatte   On type 5055 wear plate	<b>1</b>



## Höhenspiel in Stangenführung | Vertical play in rod guidance system

Bauteil   Component	Rep.-Nr.   Rep-No
Lagerbuchsen   Guide bushings	<b>7</b>
Dämpfungspaket falsch eingebaut   Damping assembly fitted incorrectly	Seite   Page <b>13</b>

## Funktionsstörung der Fernbetätigung | Function fault in remote control

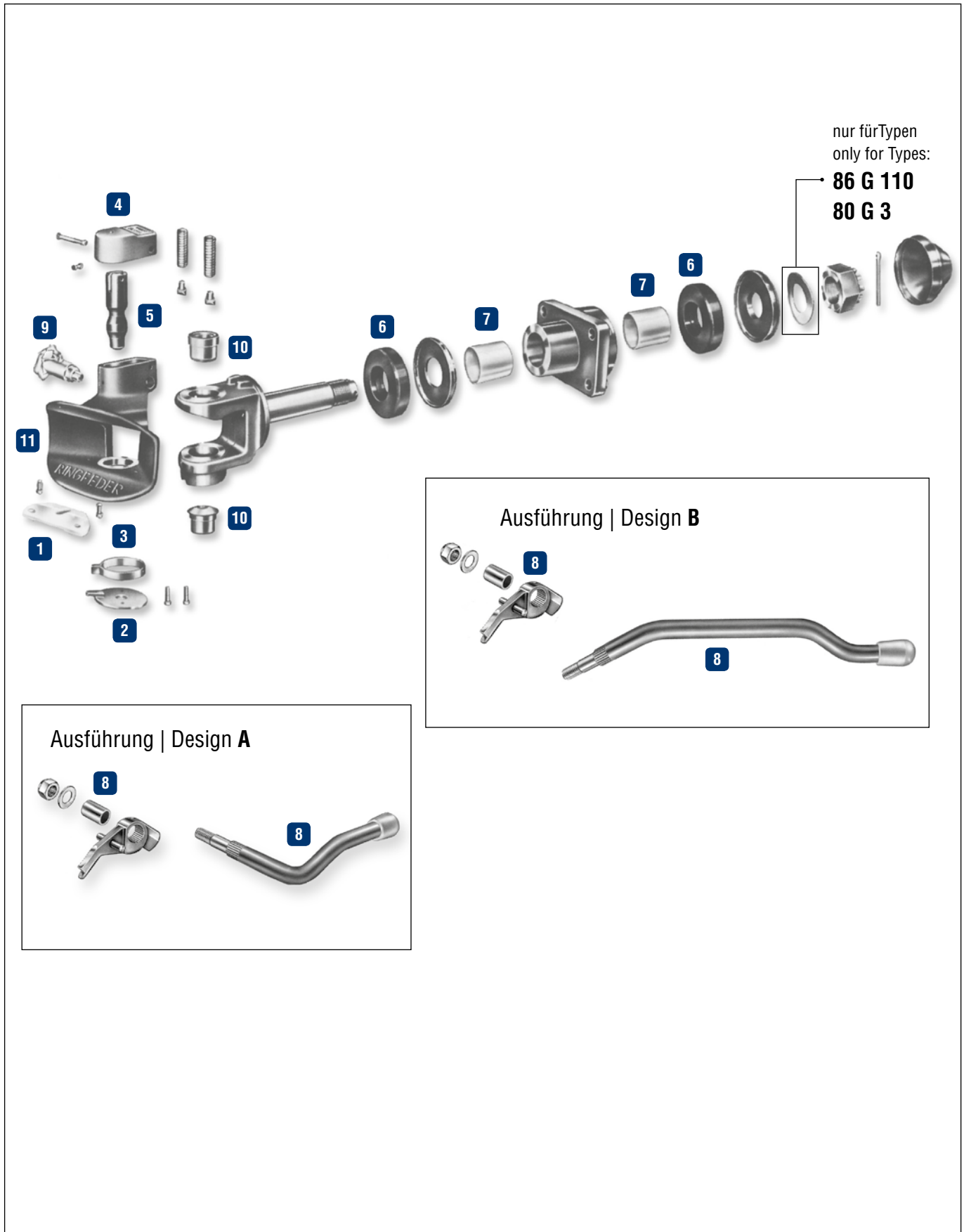
Bauteil   Component	Rep.-Nr.   Rep-No
Abschlussdeckel   End cap	<b>4</b>

# Reparaturanleitung | Repair instructions

Rep.-Nr. Rep-No	Reparatur / Austausch Repair / exchange	Gruppe Group	 Seite (Abb.) Page (Fig)	 Seite (Abb.) Page (Fig)
<b>1</b>	Verschleißplatte Wear plate	I.	<b>16</b> (I.1-7)	<b>21</b> (I.39-48)
		II.	<b>26</b> (II.1-10)	<b>33</b> (II.55-61)
		III.	<b>45</b> (III.1-37)	<b>50</b> (III.67-77)
<b>2</b>	Nasenscheibe Tab washer	I.	<b>16</b> (I.1-9)	<b>21</b> (I.37-48)
		II.	<b>26</b> (II.1-12)	<b>33</b> (II.53-61)
		III.	-	-
<b>3</b>	Rückstellfeder Return spring	I.	<b>16</b> (I.1-9)	<b>21</b> (I.37-48)
		II.	<b>26</b> (II.1-12)	<b>34</b> (II.53-61)
		III.	<b>39</b> (III.1-3)	<b>52</b> (III.75-77)
<b>4</b>	Abschlussdeckel End cap	I.	<b>15</b> (I.1)	<b>23</b> (I.48)
		II.	<b>25</b> (II.1)	<b>36</b> (II.61)
		III.	<b>39</b> (III.1-4)	<b>52</b> (III.74-77)
<b>5</b>	Kuppelbolzen Coupling bolt	I.	<b>15</b> (I.1-3)	<b>23</b> (I.46-48)
		II.	<b>25</b> (II.1-6)	<b>35</b> (II.59-61)
		III.	<b>39</b> (III.1-4)	<b>51</b> (III.72-77)
<b>6</b>	Gummifedern Rubber springs	I.	<b>17</b> (I.1-8)	<b>21</b> (I.34-48)
		II.	<b>28</b> (II.1-21)	<b>32</b> (II.40-61)
		III.	<b>46</b> (III.1-46)	<b>48</b> (III.56-77)
<b>7</b>	Lagerbuchsen / Stangenführung Guide bushings / rod guidance system	I.	<b>18</b> (I.1-21)	<b>19</b> (I.22-48)
		II.	<b>28</b> (II.1-25)	<b>31</b> (II.32-61)
		III.	<b>46</b> (III.1-50)	<b>48</b> (III.51-77)
<b>8</b>	Handhebel / Sperrhebel Hand lever / locking lever	I.	<b>15</b> (I.1-4)	<b>22</b> (I.45-48)
		II.	<b>26</b> (II.1-7)	<b>35</b> (II.58-61)
		III.	<b>40</b> (III.1-7)	<b>51</b> (III.71-77)
<b>9</b>	Sicherung Safety device	I.	<b>15</b> (I.1-6)	<b>22</b> (I.40-48)
		II.	<b>26</b> (II.1-9)	<b>35</b> (II.56-61)
		III.	<b>44</b> (III.1-34)	<b>51</b> (III.69-77)
<b>10</b>	Obere / untere Führungsbuchse Upper / lower guide bushing	I.	<b>16</b> (I.1-15)	<b>19</b> (I.27-48)
		II.	<b>27</b> (II.1-18)	<b>33</b> (II.46-61)
		III.	<b>45</b> (III.1-43)	<b>49</b> (III.59-77)
<b>11</b>	Kuppelkörper Coupling body	I.	<b>17</b> (I.1-13)	<b>20</b> (I.29-48)
		II.	<b>27</b> (II.1-16)	<b>33</b> (II.48-61)
		III.	<b>45</b> (III.1-43)	<b>50</b> (III.66-77)
<b>12</b>	Besonderheiten bei 4045 Special features on 4045	II.	<b>29</b> (II.26-31)	<b>31</b> (II.37-39) <b>32</b> (II.43-45)
<b>13</b>	Besonderheiten bei AM, AM/RL, AP, AW Special features on AM, AM/RL, AP, AW	II.	<b>25</b> (II.2-4)	<b>36</b> (II.62-II.65)
		III.	<b>40</b> (III.8-33)	<b>53</b> (III.78-106)
<b>14</b>	Schwenkwinkelwarnanzeige Swivel angle indicator	III.	-	<b>59</b> (III.107)
<b>15</b>	Demontage / Montage Sensor Dismantling / fitting of sensor	-	<b>61</b> (S1-4)	<b>62</b> (S5-8)



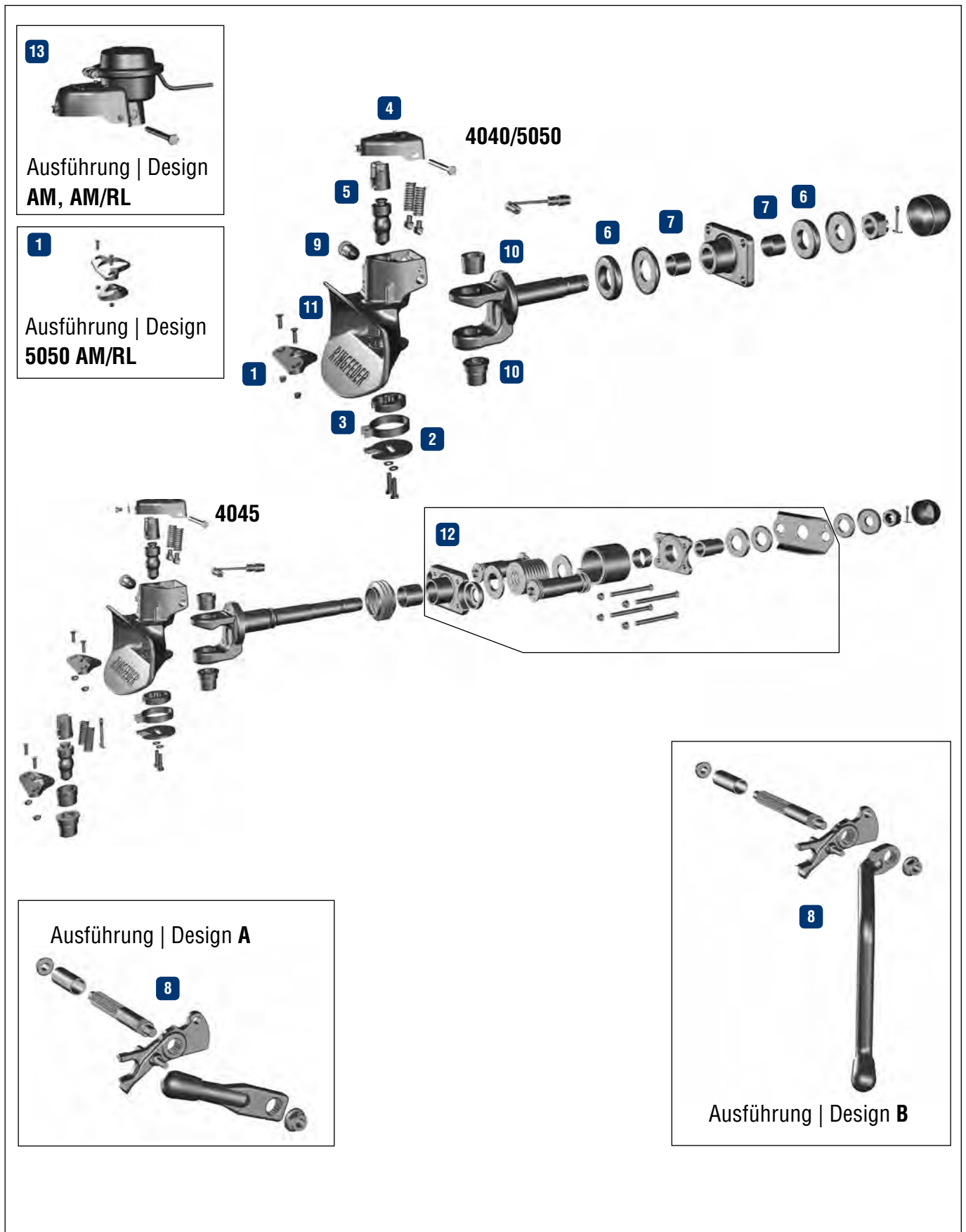
# I. Typen | Types: 86 G/110 - 80 A/B





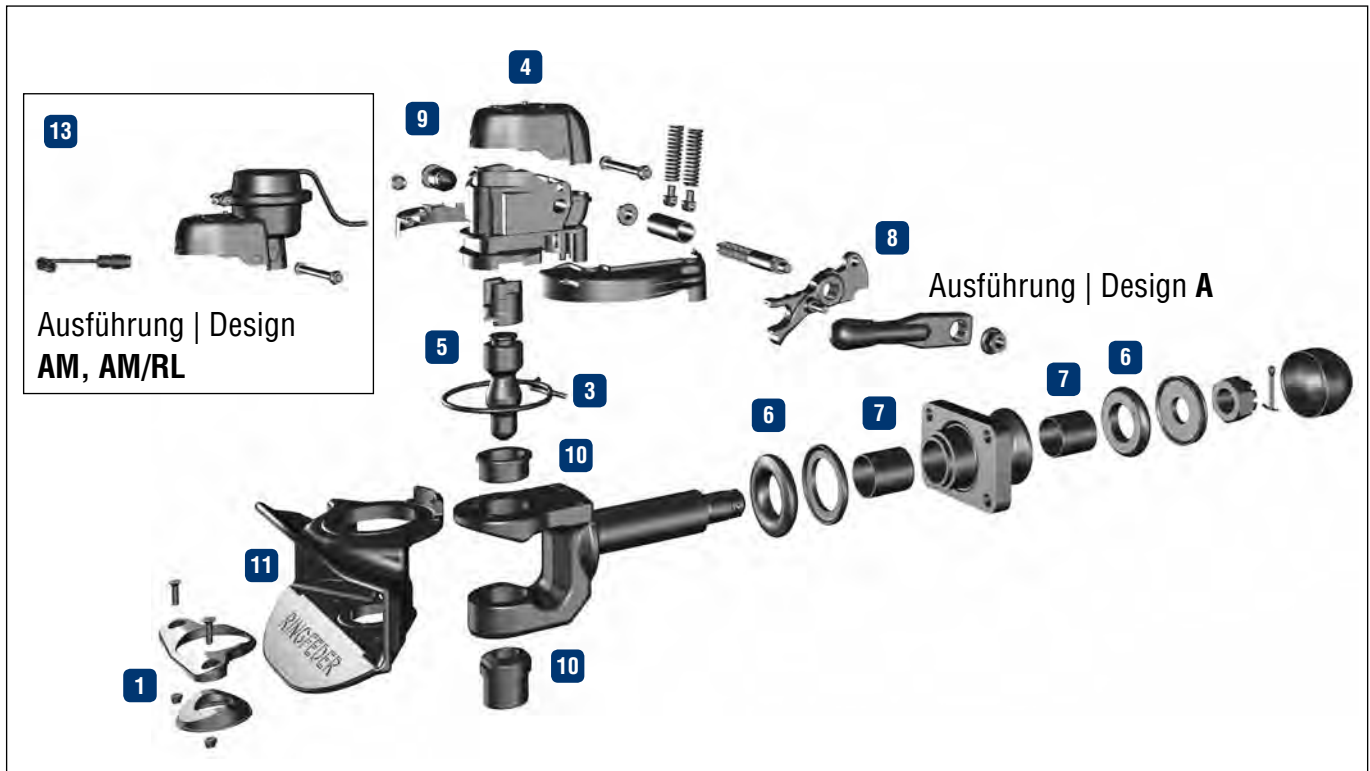


## II. Typen | Types: 4040 A/B, AM, AM/RL - 4045 A/B, AM, AM/RL - 5050 A/B, AM, AM/RL

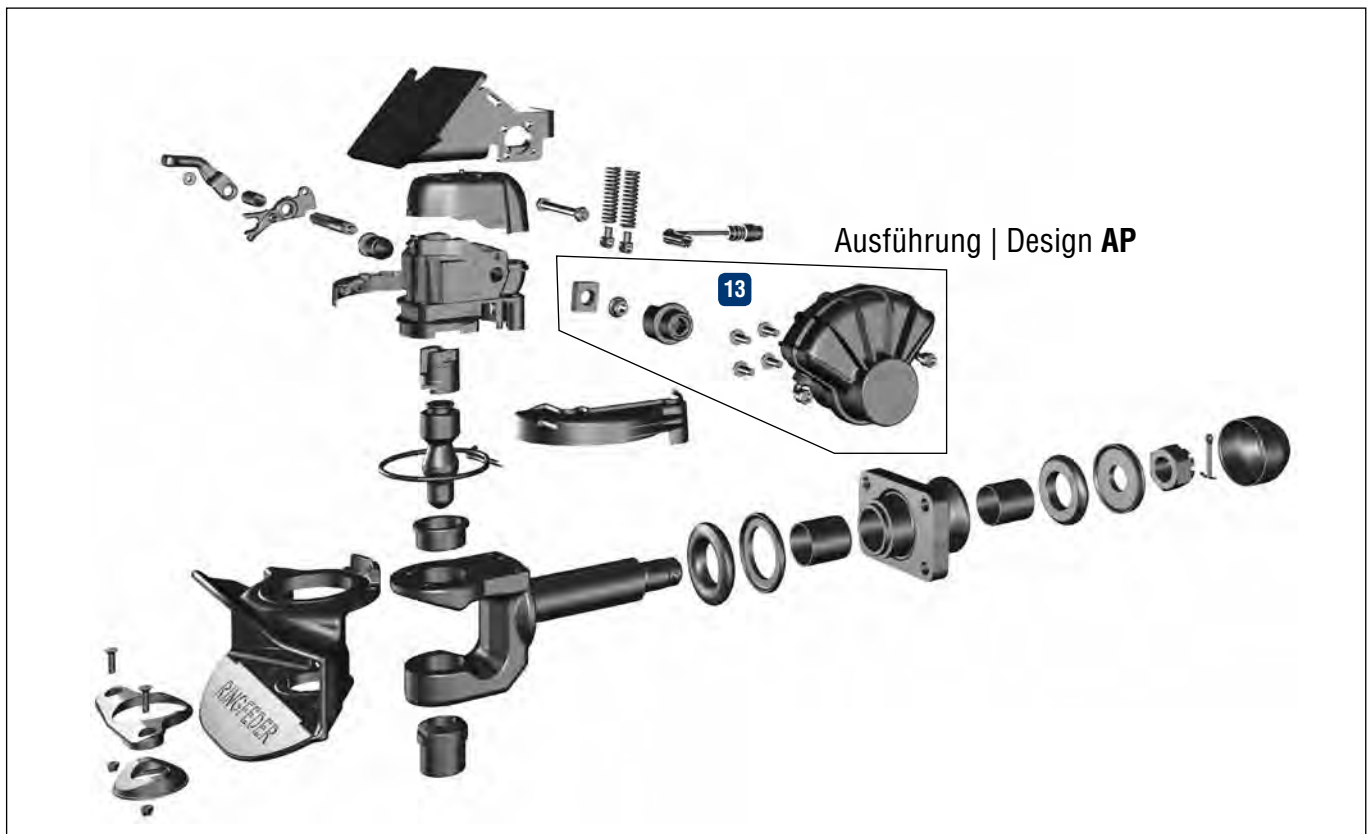


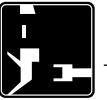


### III. Typen | Types: 5055 A, AM, AM/RL

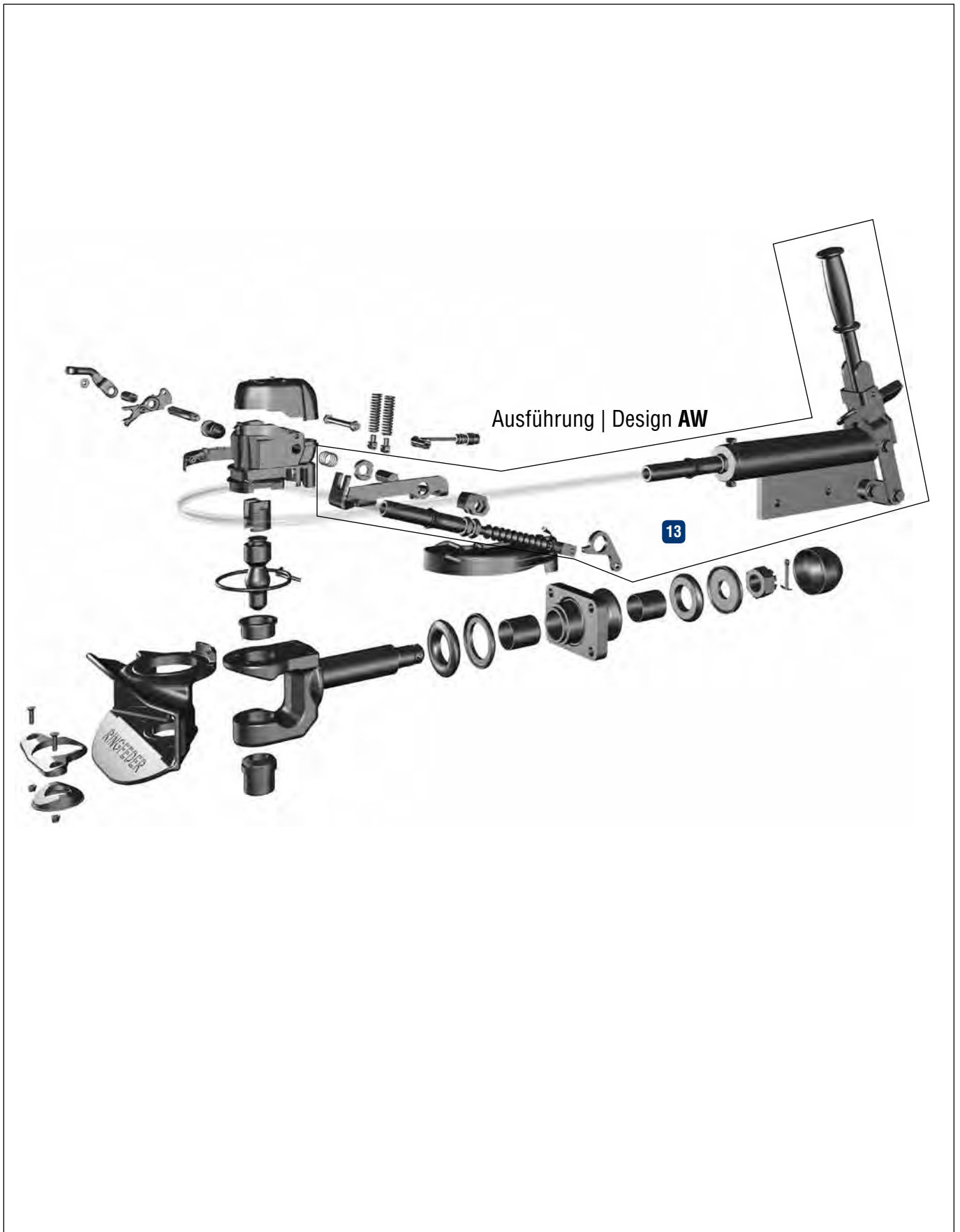


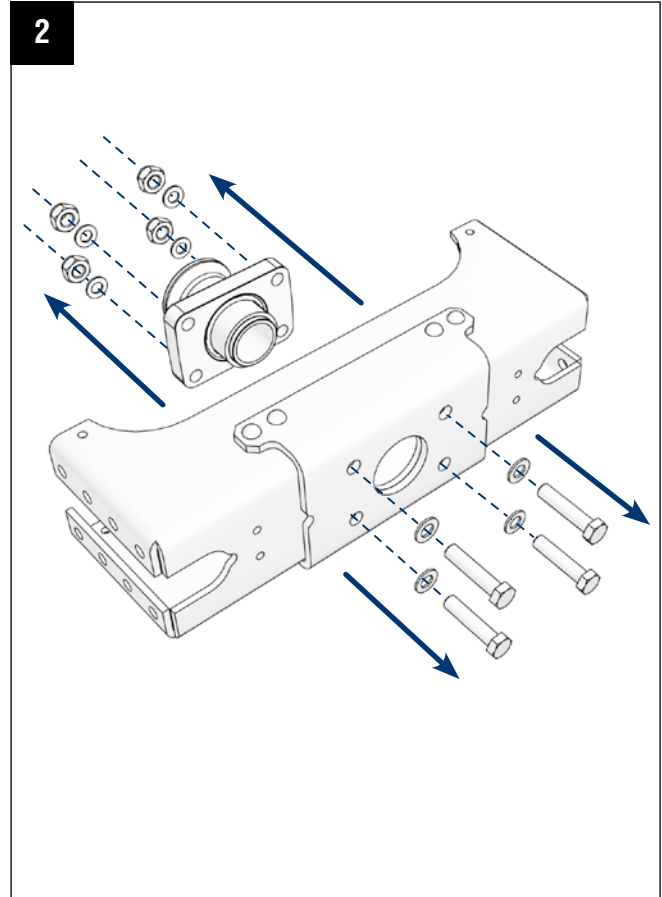
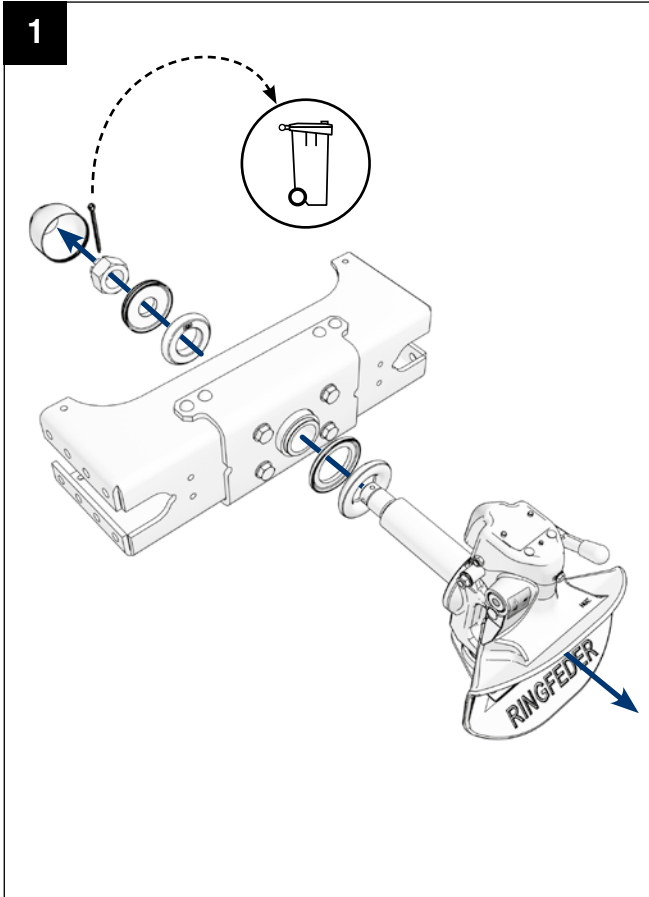
### III. Typen | Types: 5055 AP



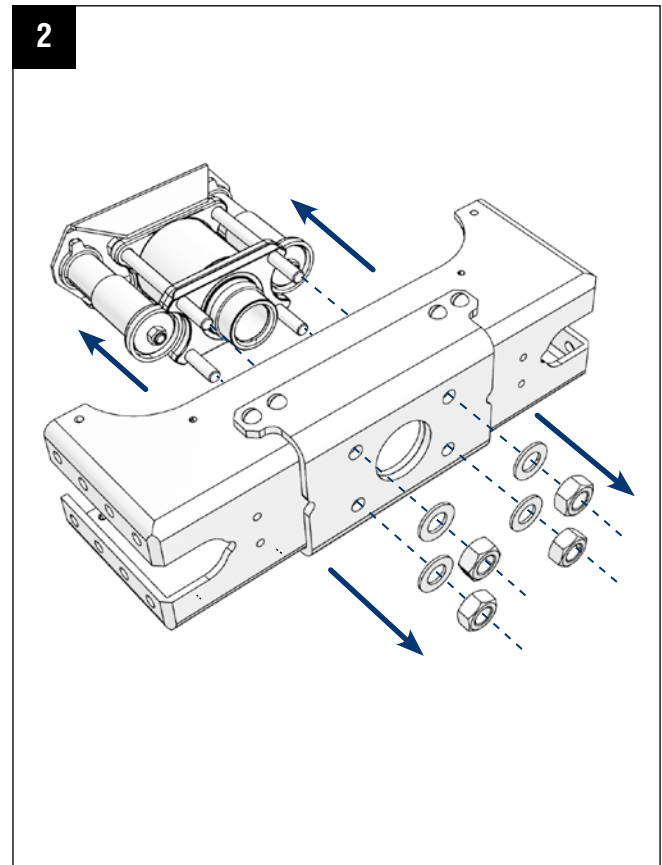
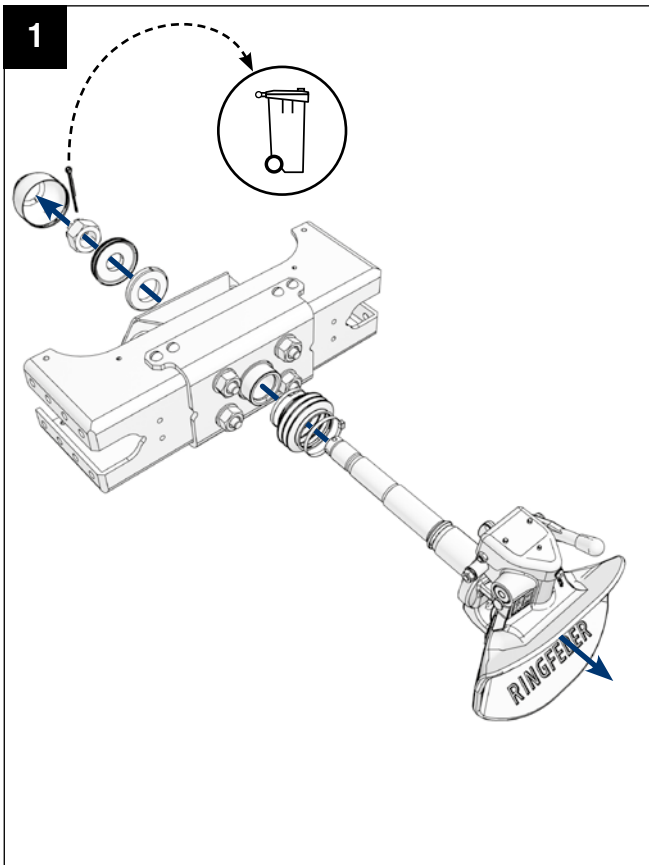


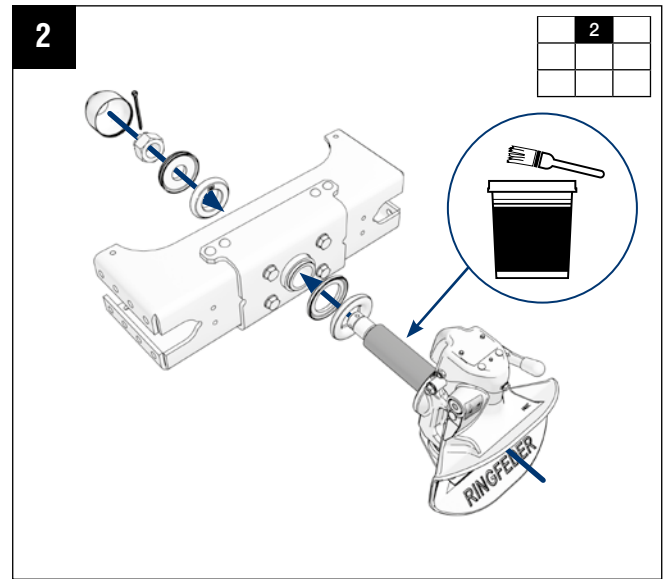
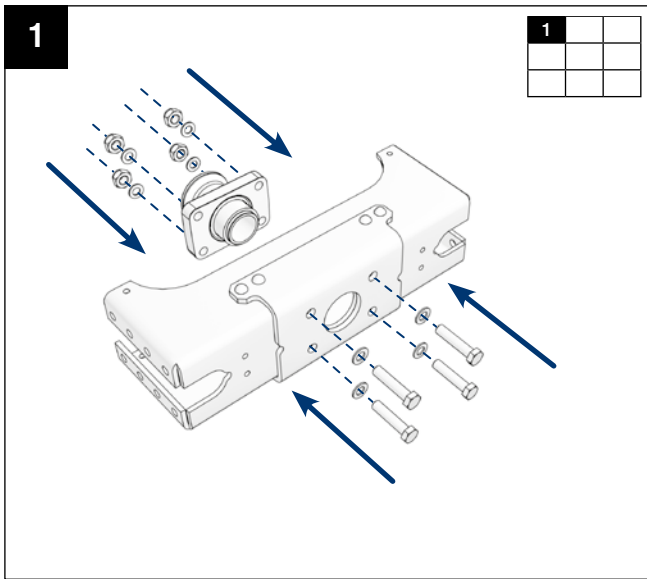
### III. Typen | Types: 5055 AW



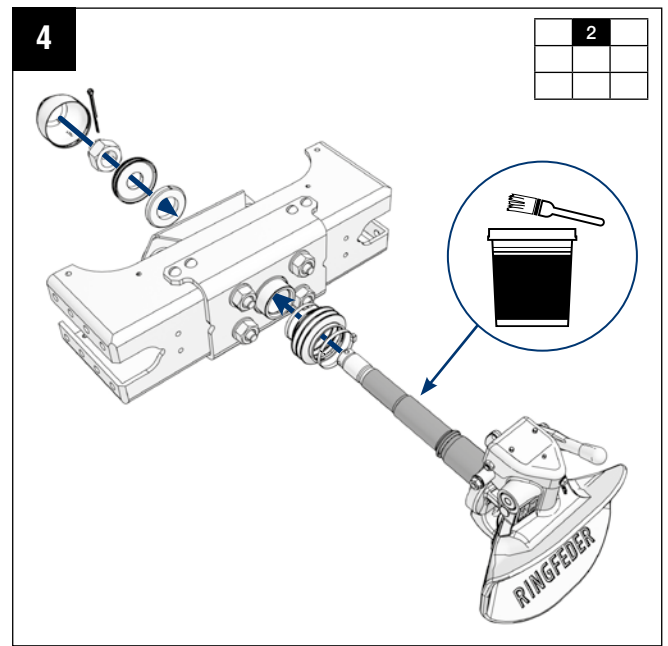
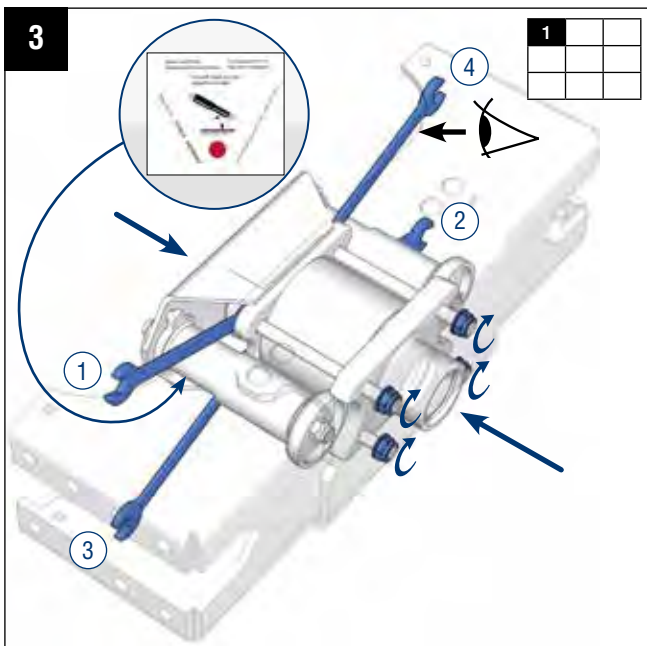


mit Dämpfungspaket | with damping assembly

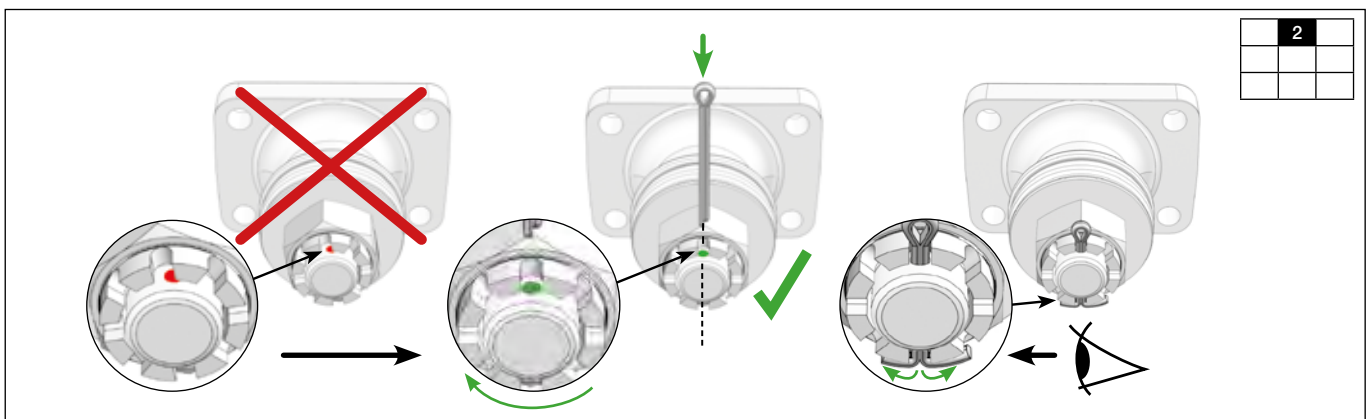





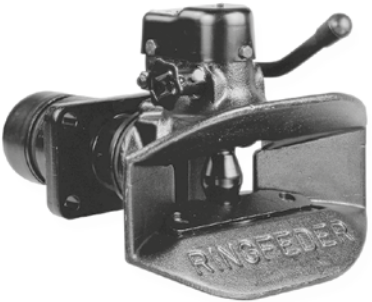
mit Dämpfungspaket | with damping assembly

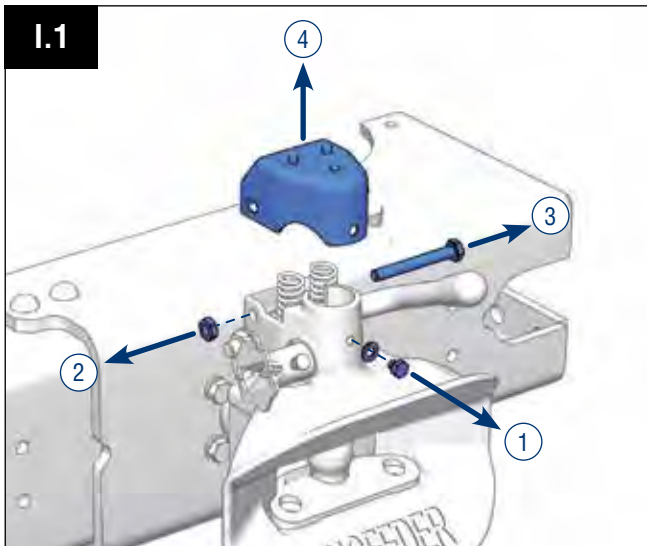


Splint | Splint

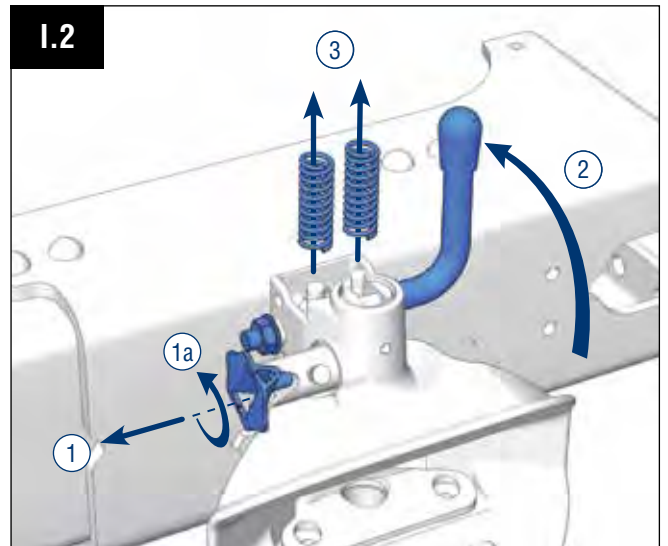


# Gruppe | Group I.

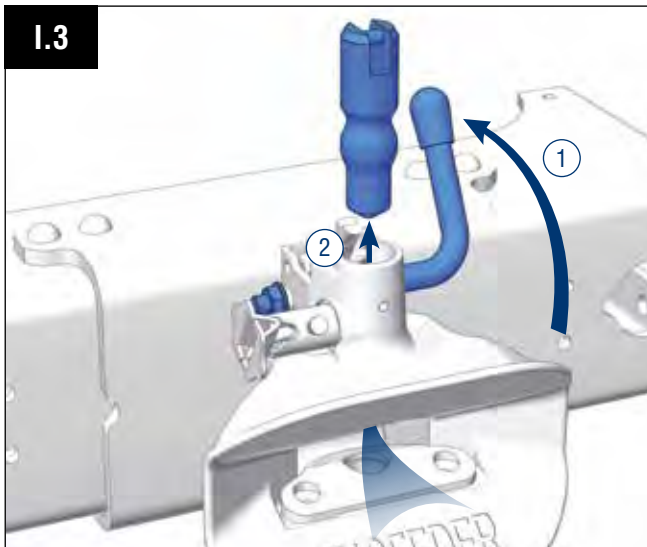
 Seite Page	<b>Ø 40 mm</b> Typ Type ...	<b>Ø 50 mm</b> Typ Type ...
8	 86 G/110	 80 A/B



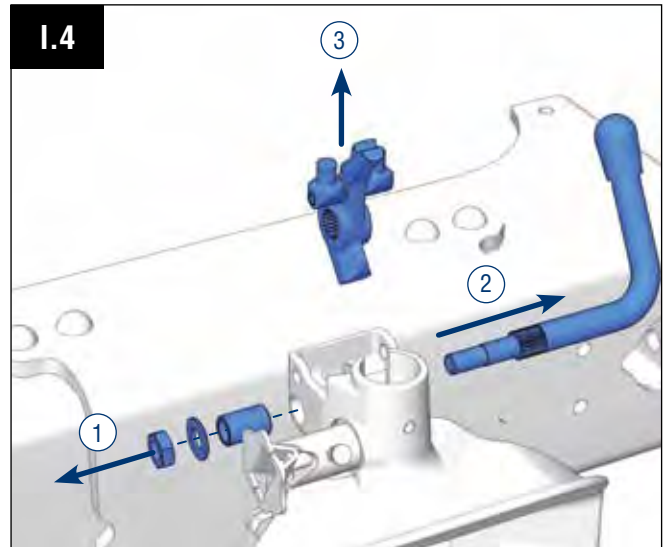
Demontage Abschlussdeckel | Dismantling of end cap



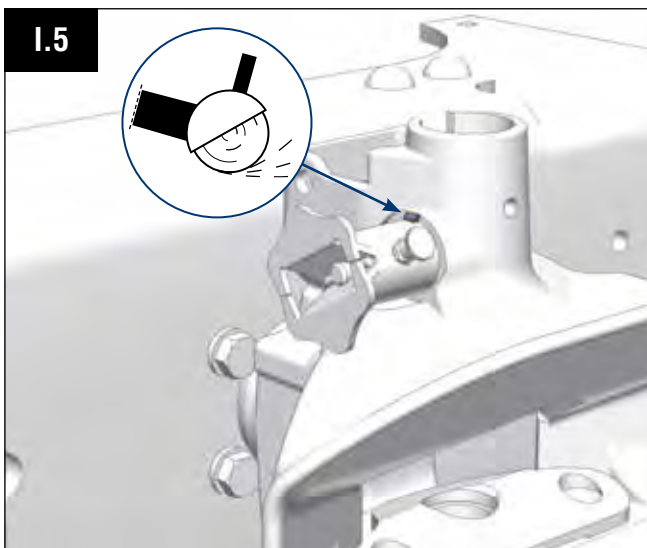
Demontage Schließfedern | Dismantling of closing spring



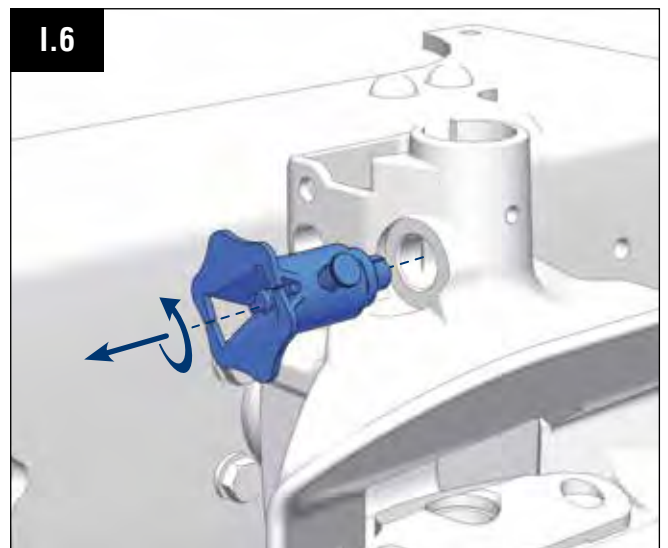
Demontage Kuppelbolzen | Dismantling of coupling bolt



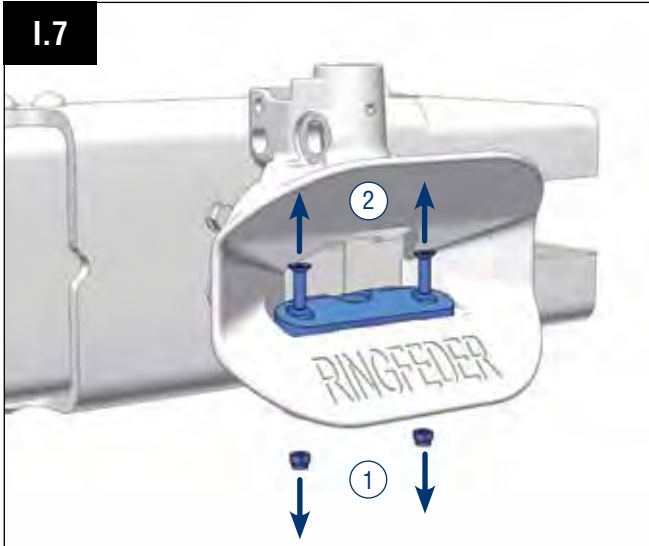
Demontage Handhebel, Demontage Sperrhebel  
Dismantling of hand lever, dismantling of locking lever



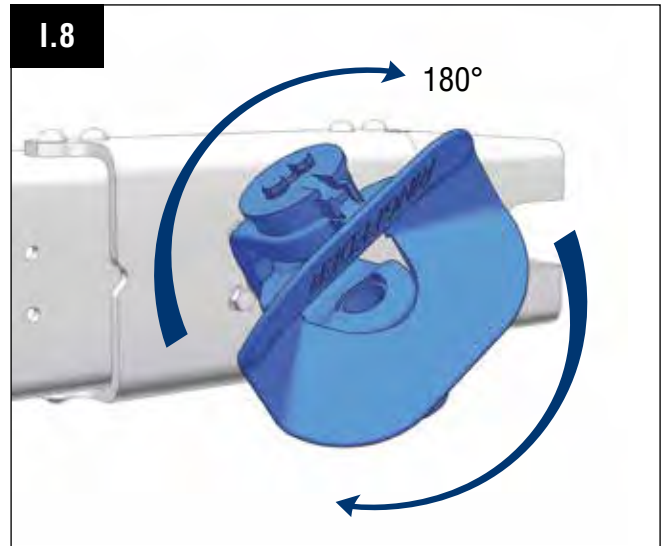
Ausbau der Sicherung (1) | Removal of safety device (1)



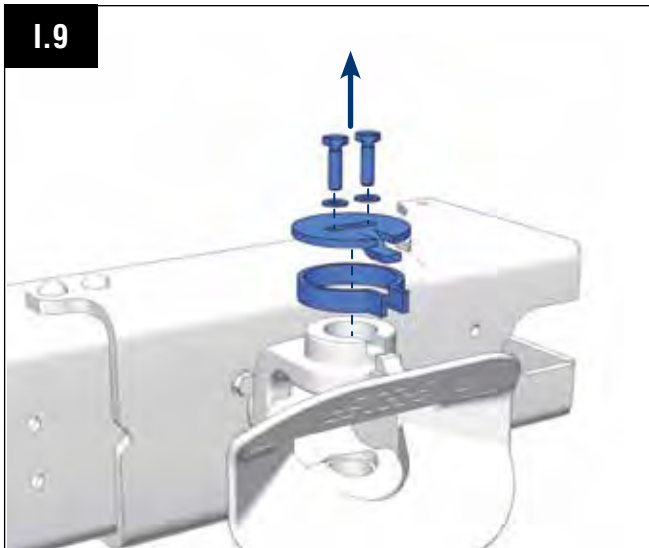
Ausbau der Sicherung (2) | Removal of safety device (2)



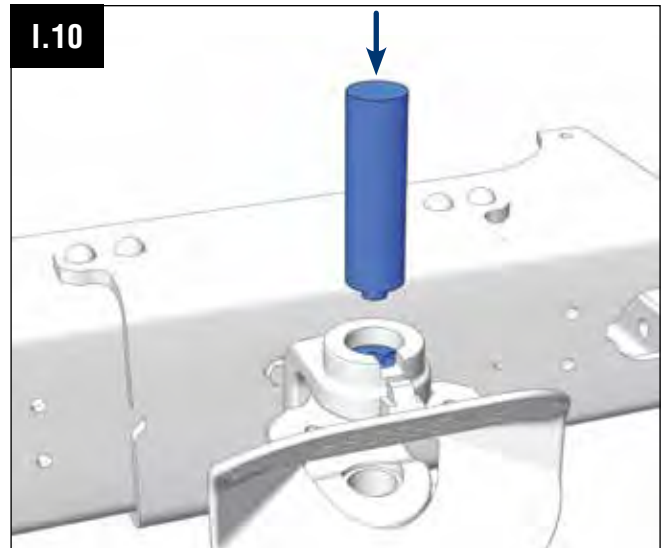
Demontage Verschleißplatte | Dismantling of wear plate



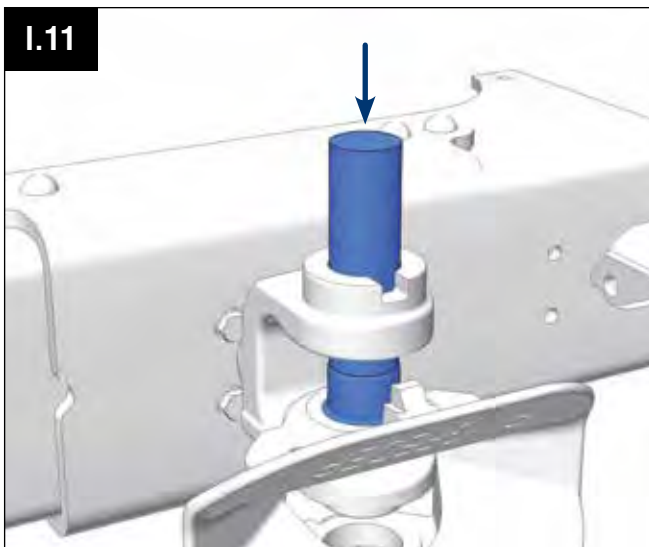
Drehung der Kupplung | Rotation of coupling



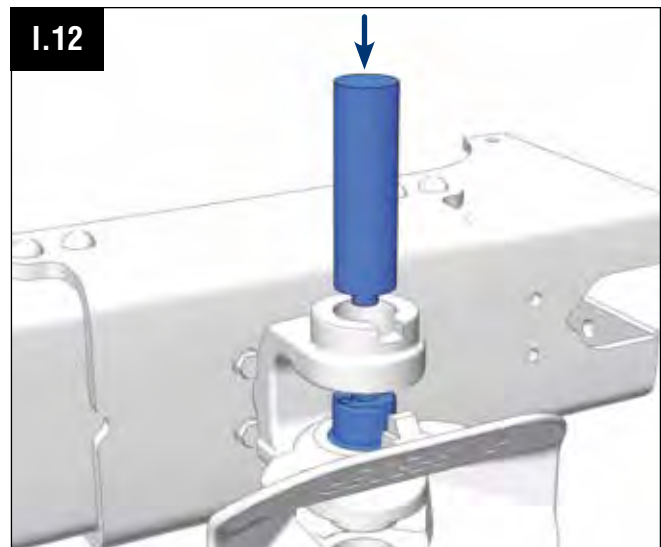
Demontage der Nasenscheibe, Demontage der Rückstellfeder  
Dismantling of the tab washer, dismantling of the return springs



Demontage der unteren Führungsbuchse und des Kuppelkörpers (1)  
Dismantling of the lower guide bushing and the coupling assembly (1)



Demontage der unteren Führungsbuchse und des Kuppelkörpers (2)  
Dismantling of the lower guide bushing and the coupling assembly (2)

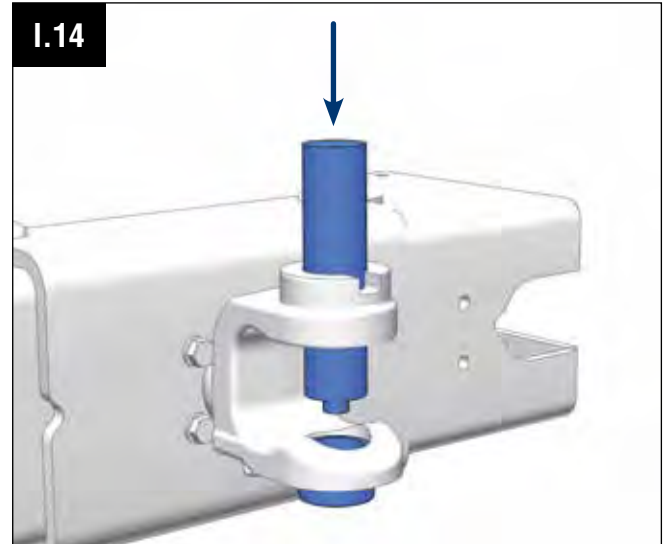


Demontage der unteren Führungsbuchse und des Kuppelkörpers (3)  
Dismantling of the lower guide bushing and the coupling assembly (3)

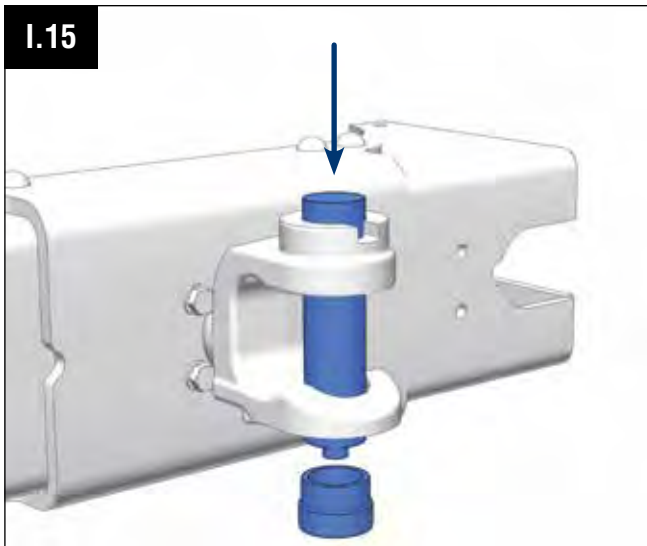




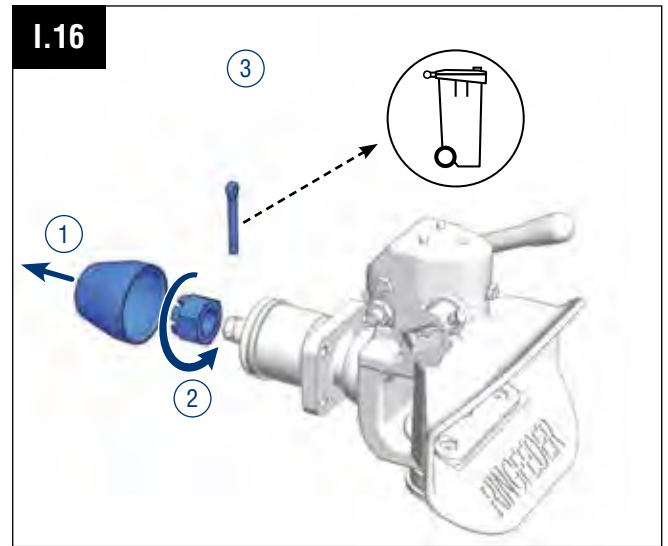
I.13  
Demontage der unteren Führungsbuchse und des Kuppelkörpers (4)  
Dismantling of the lower guide bushing and the coupling assembly (4)



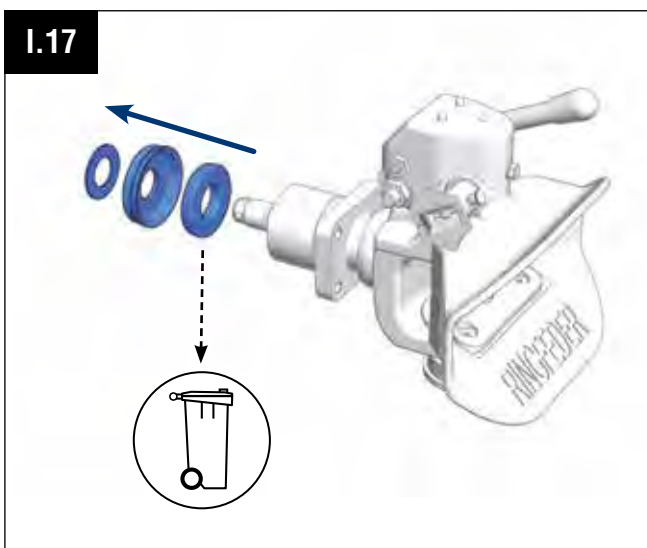
I.14  
Demontage der oberen Führungsbuchse (1)  
Dismantling of the upper guide bushing (1)



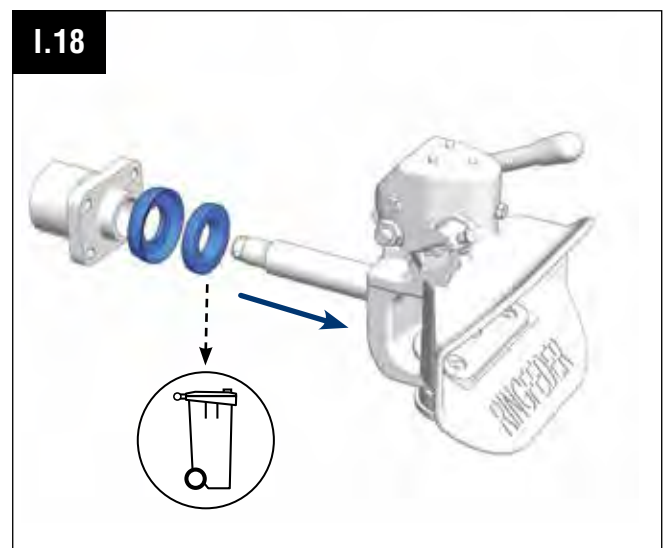
I.15  
Demontage der oberen Führungsbuchse (2)  
Dismantling of the upper guide bushing (2)



I.16  
Demontage der Gummifedern (1)  
Dismantling of the rubber springs (1)



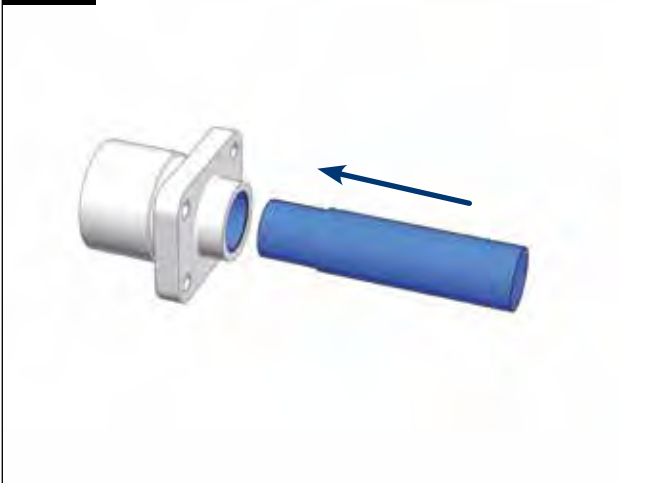
I.17  
Demontage der Gummifedern (2)  
Dismantling of the rubber springs (2)



I.18  
Demontage der Gummifedern (3)  
Dismantling of the rubber springs (3)

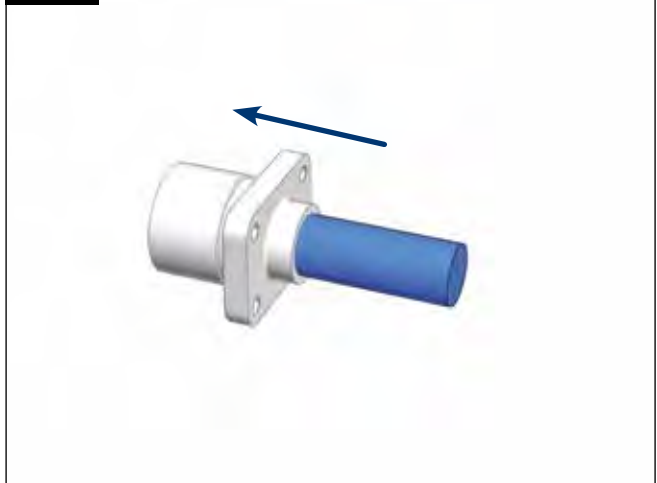


I.19



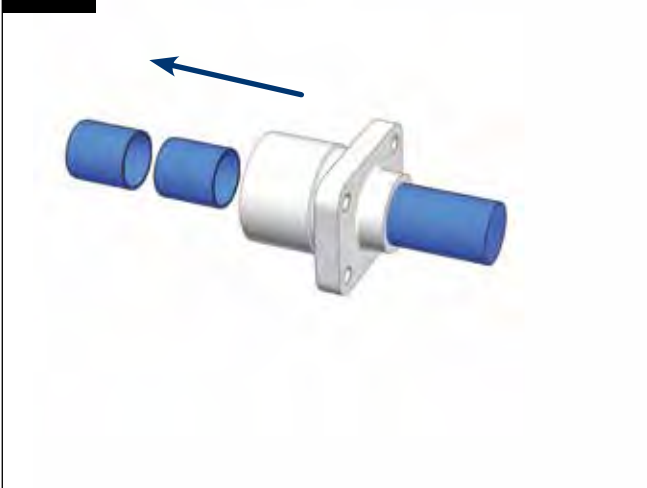
Demontage der Lagerbuchsen/Stangenführung (1)  
Dismantling of the bearing bushing /rod guidance system (1)

I.20

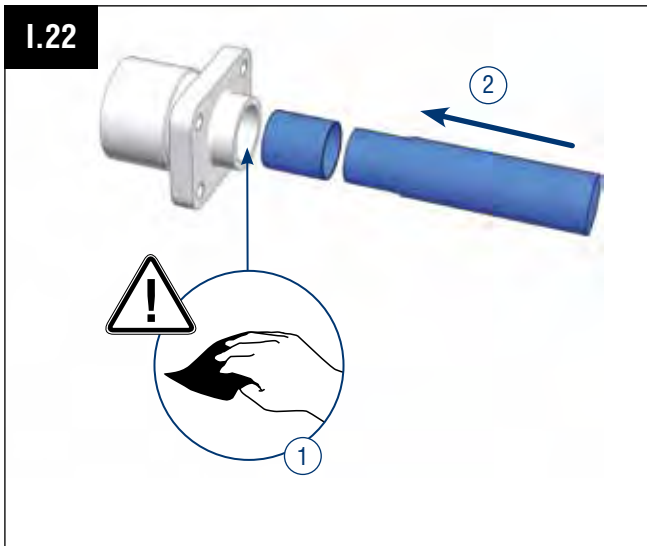


Demontage der Lagerbuchsen/Stangenführung (2)  
Dismantling of the bearing bushing /rod guidance system (2)

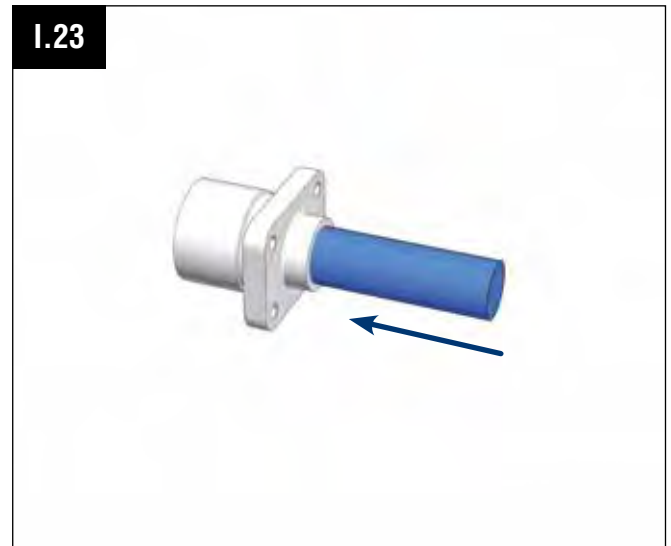
I.21



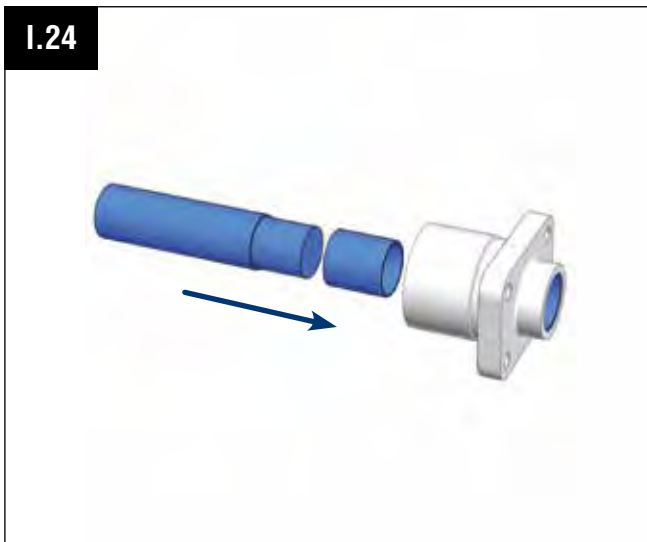
Demontage der Lagerbuchsen/Stangenführung (3)  
Dismantling of the bearing bushing /rod guidance system (3)



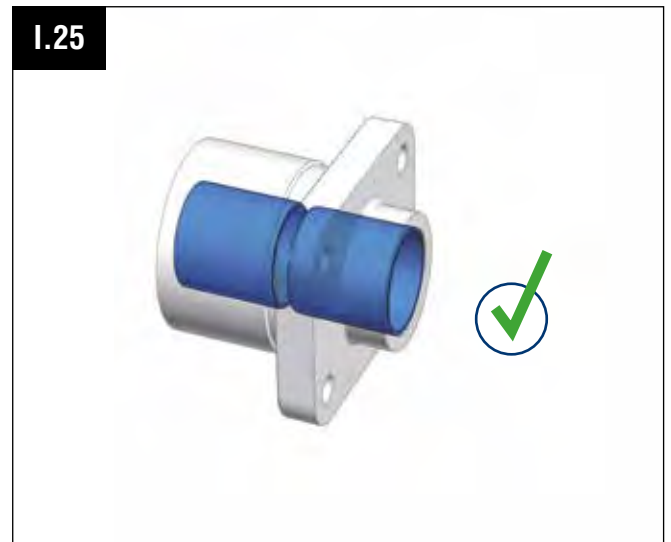
Montage der Lagerbuchsen/Stangenführung (1)  
Fitting of the bearing bushing/rod guidance system (1)



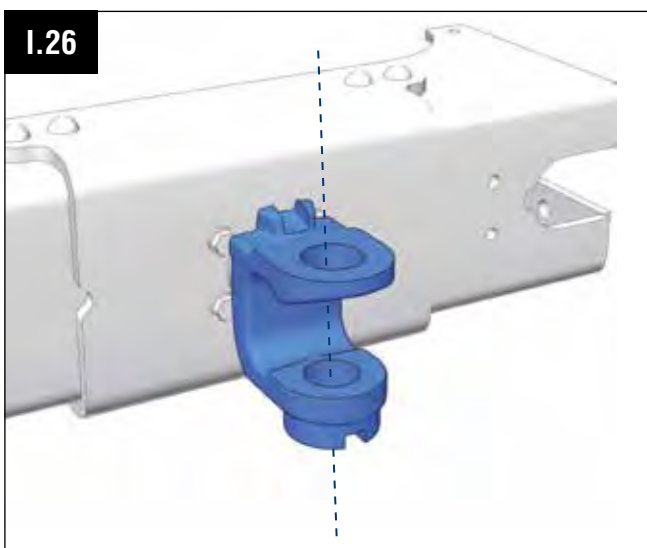
Montage der Lagerbuchsen/Stangenführung (2)  
Fitting of the bearing bushing/rod guidance system (2)



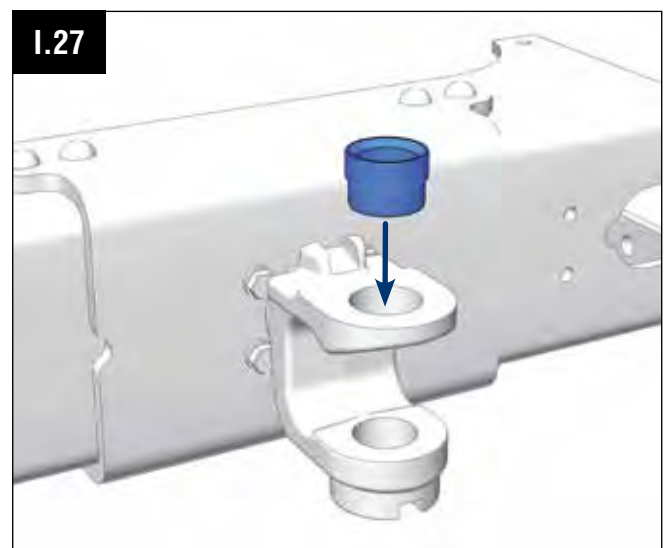
Montage der Lagerbuchsen/Stangenführung (3)  
Fitting of the bearing bushing/rod guidance system (3)



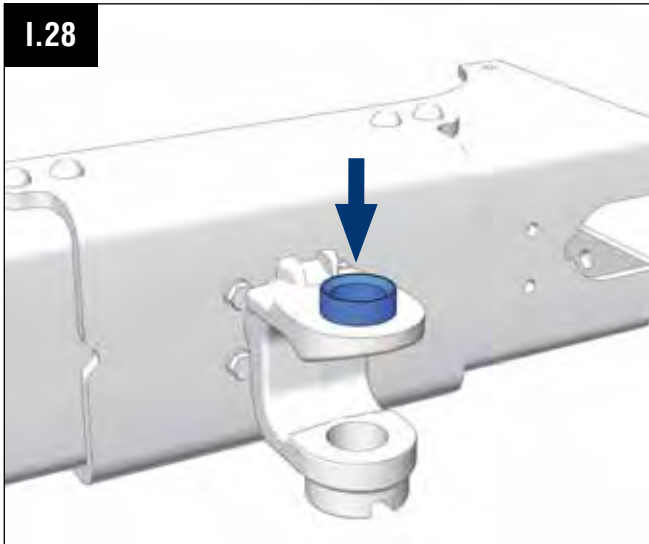
Montage der Lagerbuchsen/Stangenführung (4)  
Fitting of the bearing bushing/rod guidance system (4)



Position Zugstange | Position of the pull rod



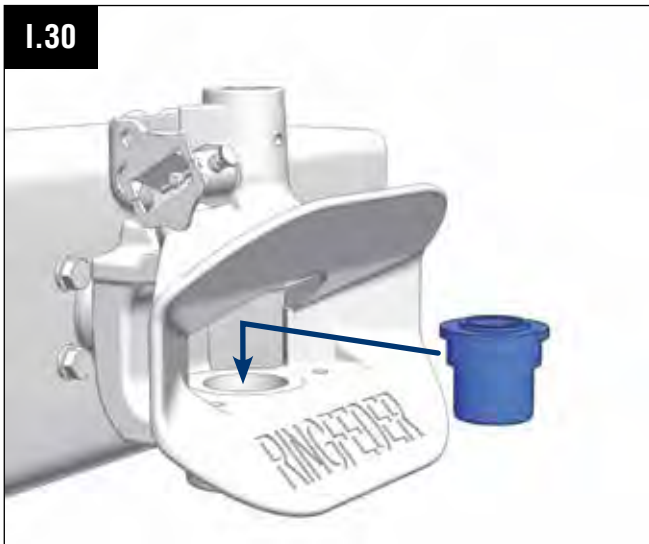
Montage der oberen Führungsbuchse (1)  
Fitting of the upper guide bushing (1)



I.28  
Montage der oberen Führungsbuchse (2)  
Fitting of the upper guide bushing (2)



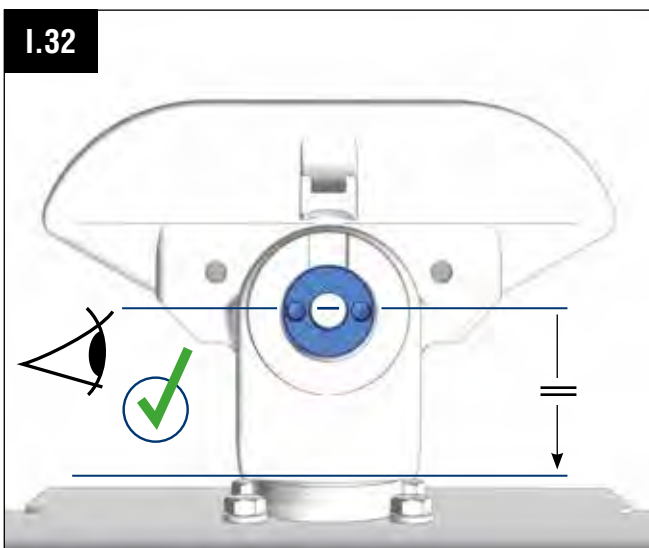
I.29  
Montage des Kuppelkörpers  
Fitting of the coupling assembly



I.30  
Montage der unteren Führungsbuchse (1)  
Fitting of the lower guide bushing (1)



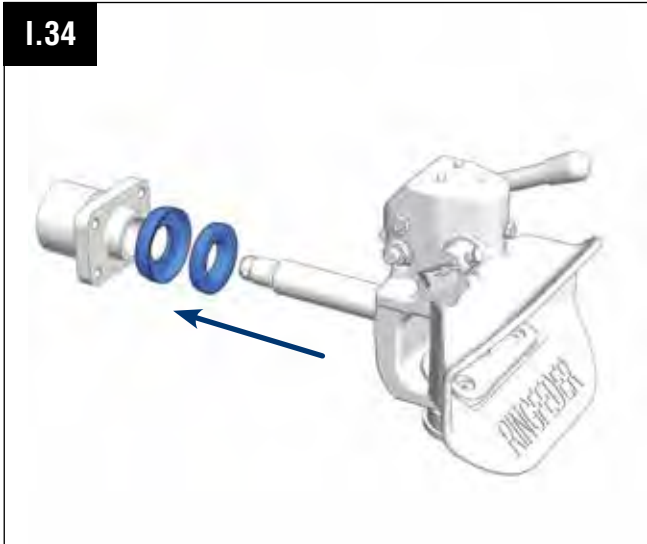
I.31  
Montage der unteren Führungsbuchse (2)  
Fitting of the lower guide bushing (2)



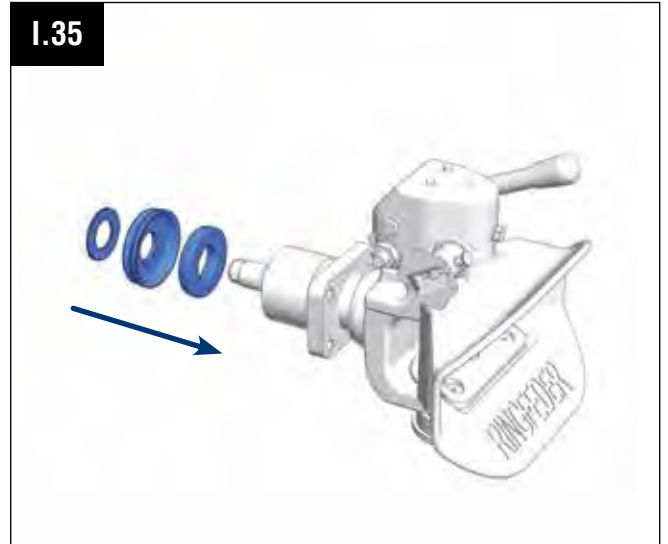
I.32  
Montage der unteren Führungsbuchse (3)  
Fitting of the lower guide bushing (3)



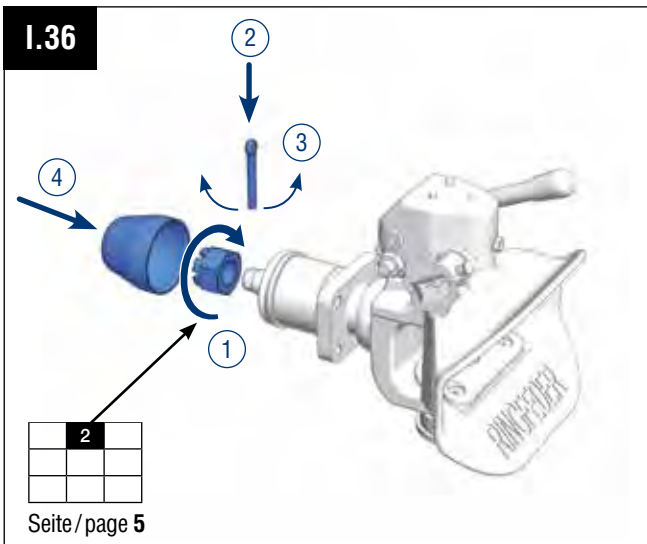
I.33  
Montage der unteren Führungsbuchse (4)  
Fitting of the lower guide bushing (4)



**I.34**  
Montage der Gummifedern (1)  
Fitting of the rubber springs (1)

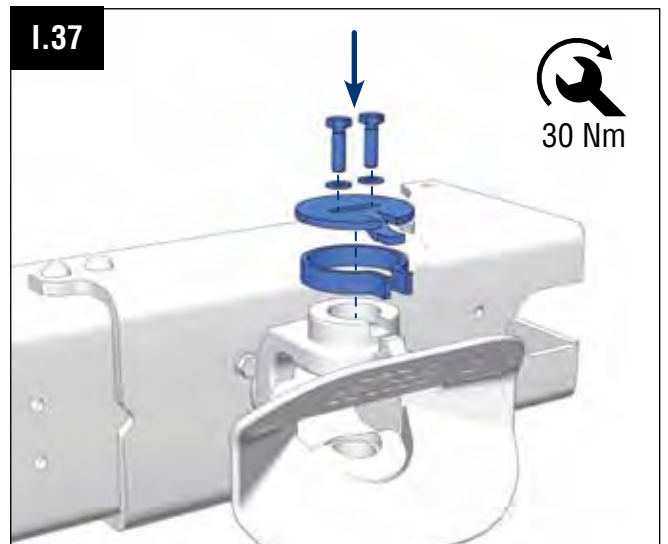


**I.35**  
Montage der Gummifedern (2)  
Fitting of the rubber springs (2)

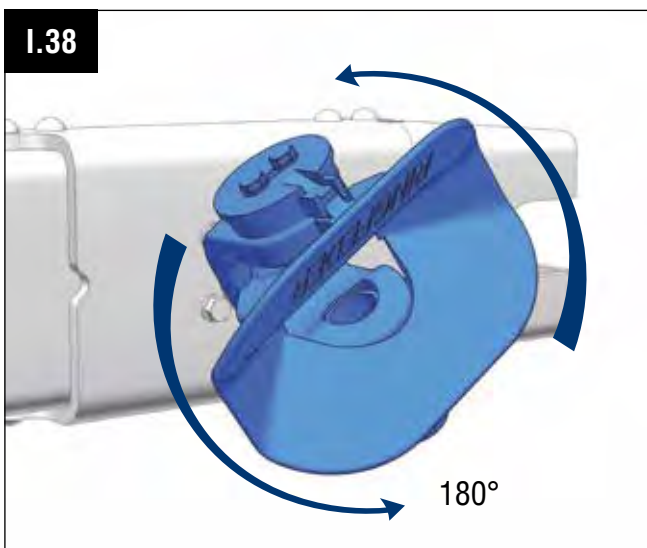


**I.36**  
Montage der Gummifedern (3)  
Fitting of the rubber springs (3)

Seite / page 5

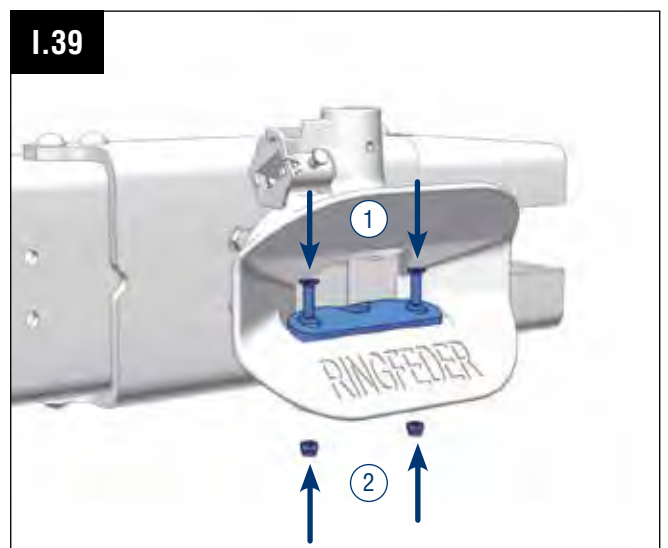


**I.37**  
Montage der Nasenscheibe, Montage der Rückstellfeder  
Fitting of the tab washer, fitting of the return springs

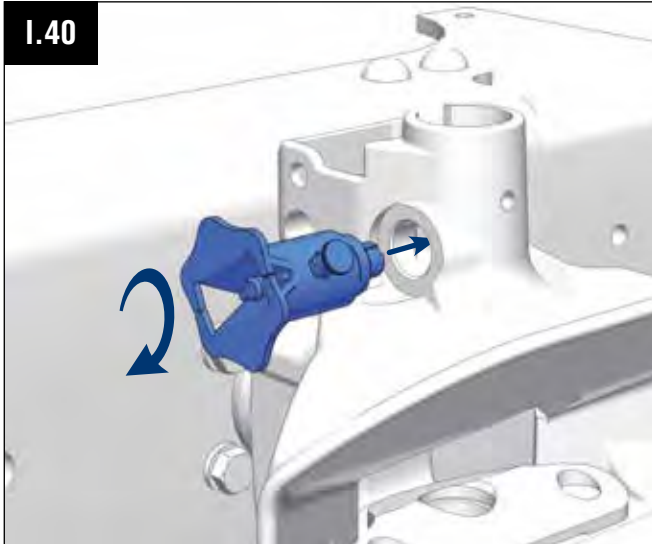


**I.38**  
(Zurück-) Drehung der Kupplung  
Rotate the coupling (back)

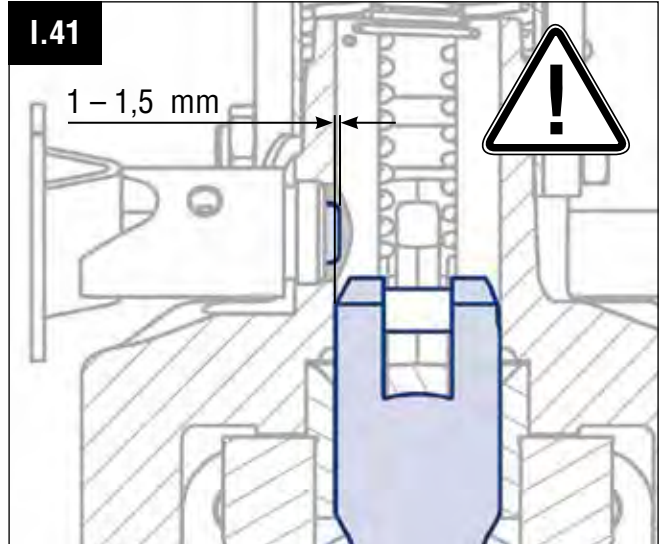
180°



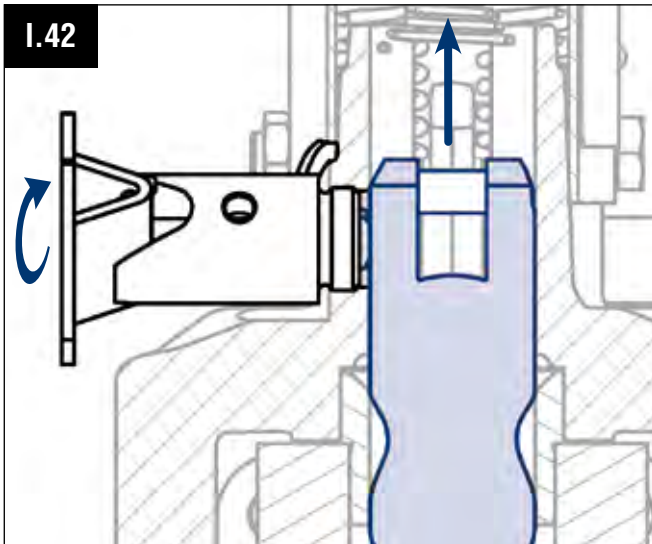
**I.39**  
Montage Verschleißplatte  
Fitting of wear plate



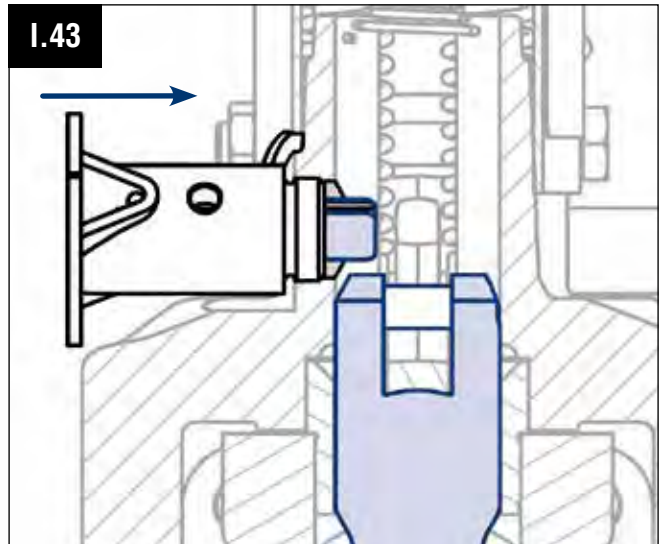
I.40  
Montage der Sicherung (1)  
Fitting of safety device (1)



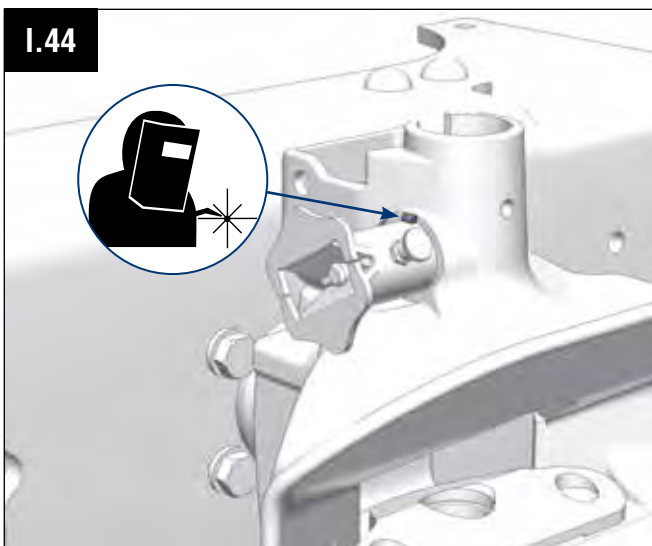
I.41  
Montage der Sicherung (2)  
Fitting of safety device (2)



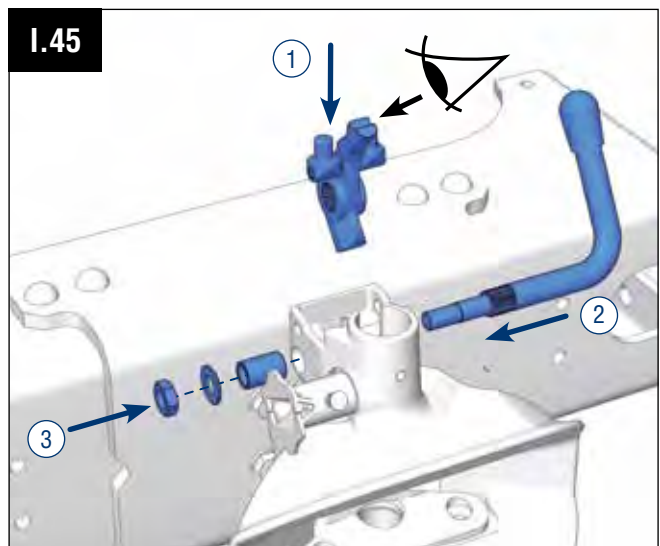
I.42  
Funktionsprüfung der Sicherung vor dem Verschweißen (1)  
Function test on safety device before welding (1)



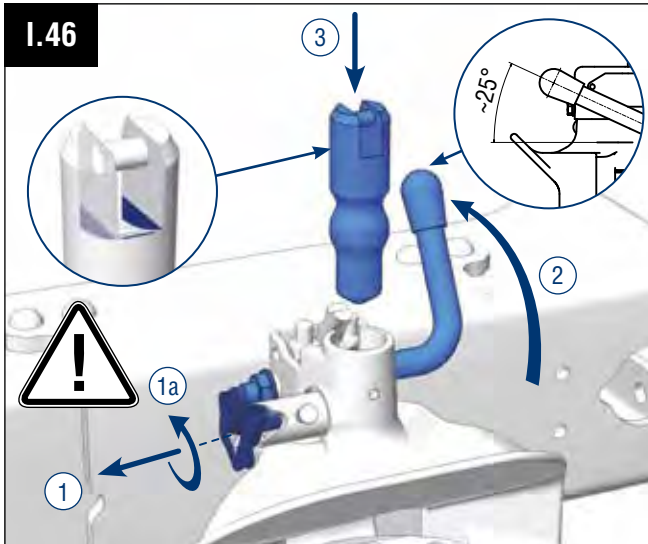
I.43  
Funktionsprüfung der Sicherung vor dem Verschweißen (2)  
Function test on safety device before welding (2)



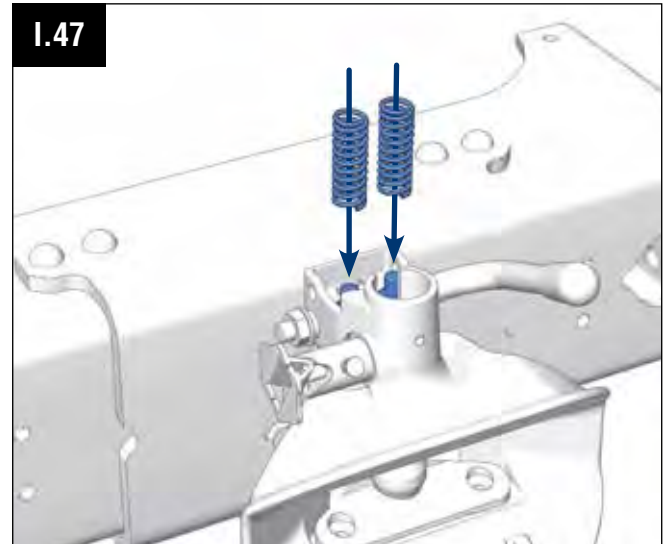
I.44  
Montage der Sicherung (3)  
Fitting of safety device (3)



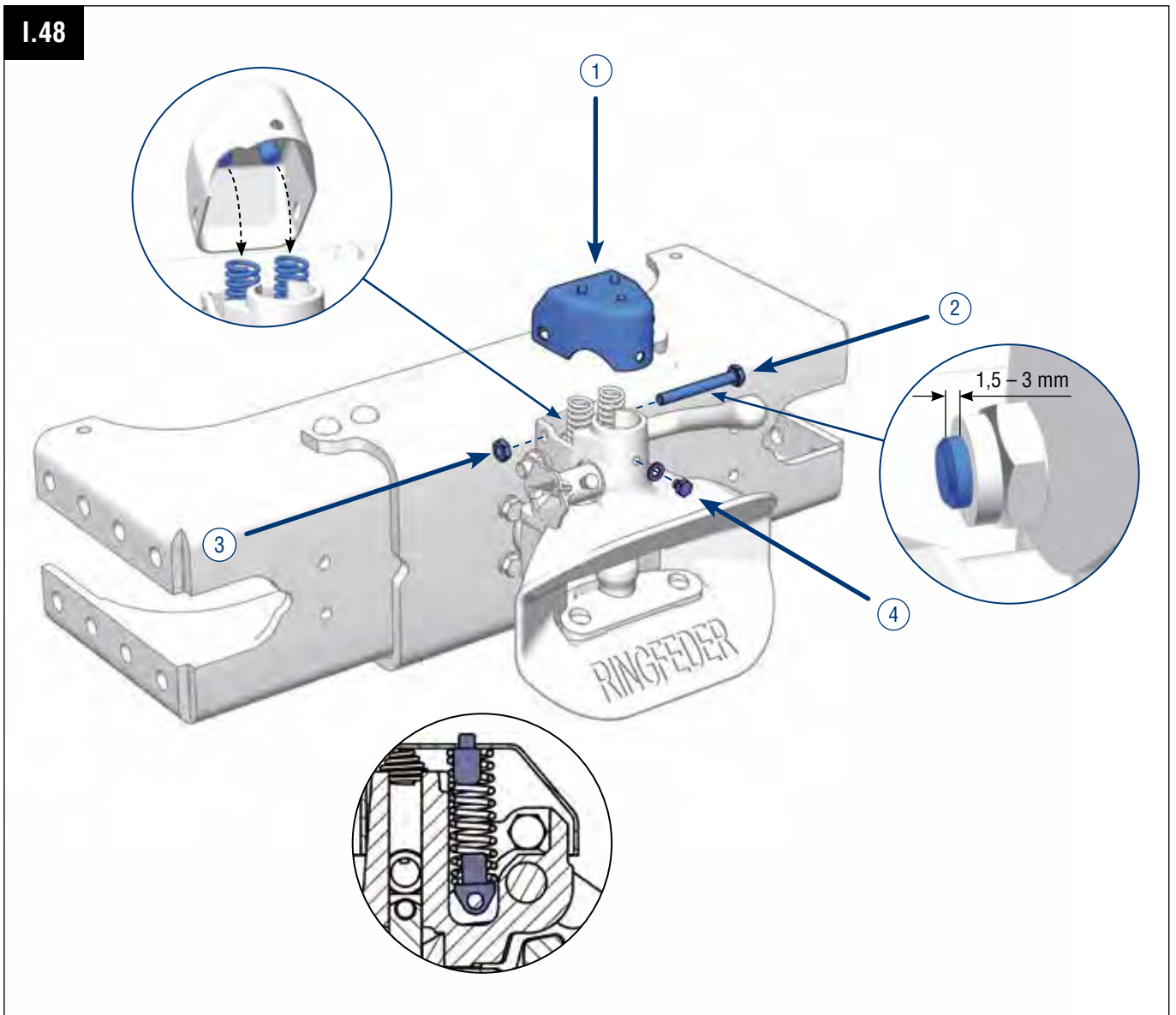
I.45  
Montage Handhebel, Montage Sperrhebel  
Fitting of hand lever, fitting of locking lever



Montage Kuppelbolzen  
Fitting of coupling bolt



Montage Schließfedern  
Fitting of closing spring

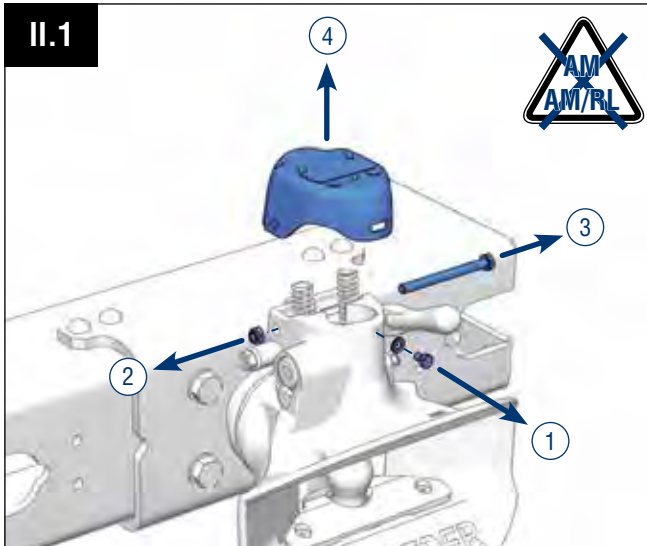


Montage Abschlussdeckel  
Fitting of end cap

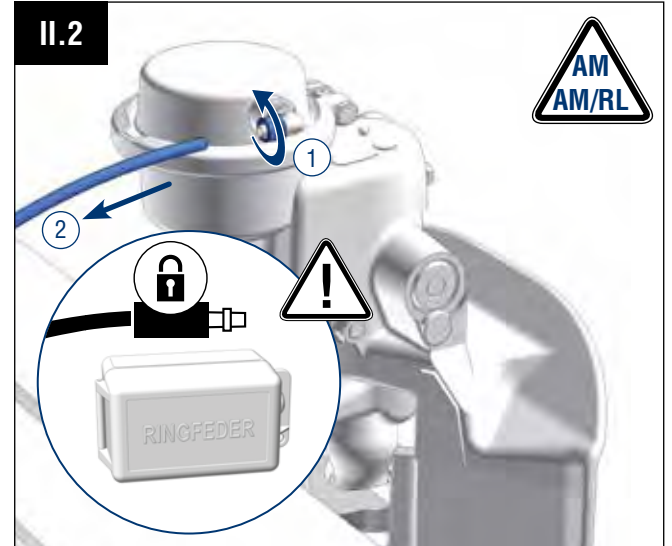
# Gruppe | Group II.

 Seite Page	<b>Ø 40 mm</b> Typ Type ...	<b>Ø 50 mm</b> Typ Type ...
9	 4040 A/B	 5050 A/B
9	 4040 AM,AM/RL	 5050 AM,AM/RL
9	 4045 A/B	
9	 4045 AM,AM/RL	

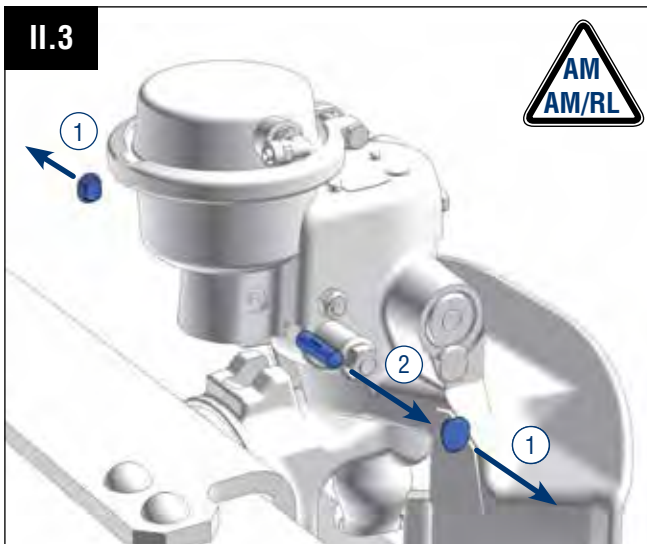




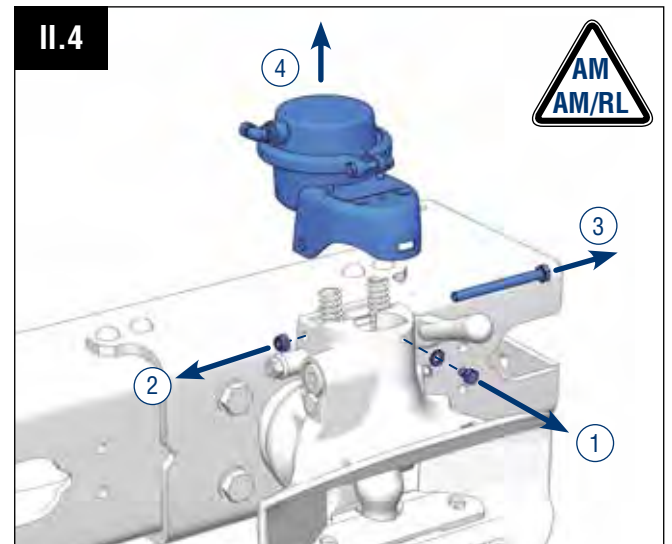
Demontage Abschlussdeckel  
Dismantling of end cap



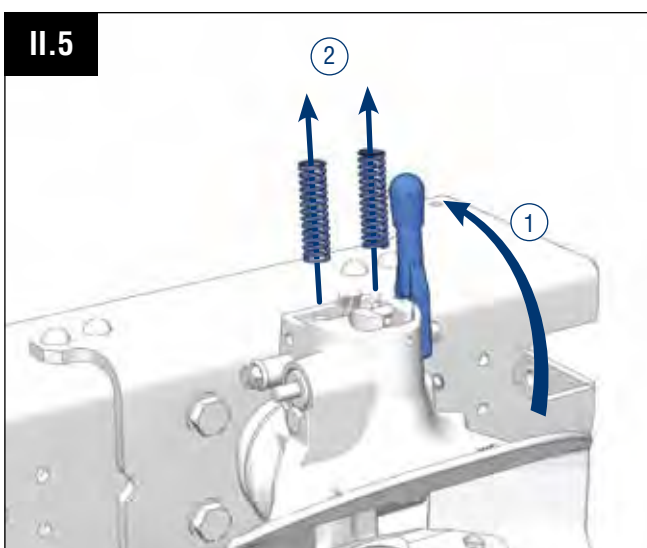
Druckluftleitung lösen | Release compressed air supply



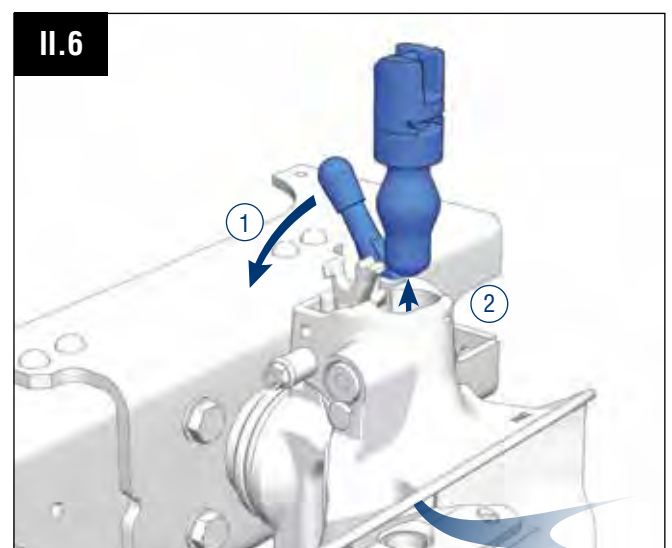
Spiralspannstift austreiben  
Drive out spiral pin



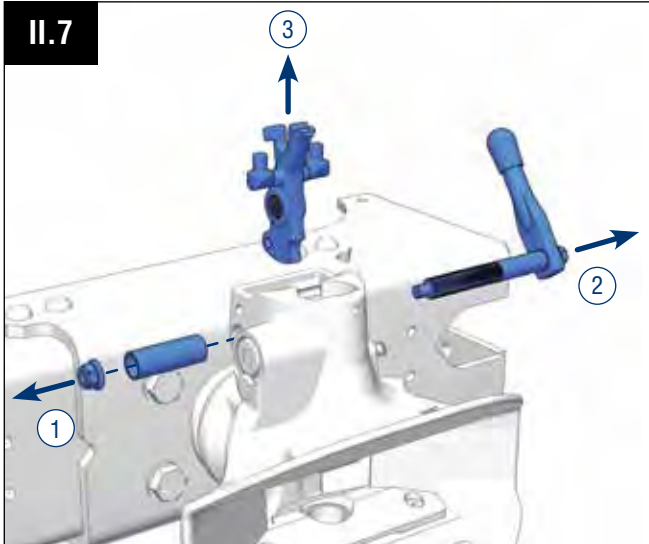
Demontage AM Deckel | Dismantling of AM cap



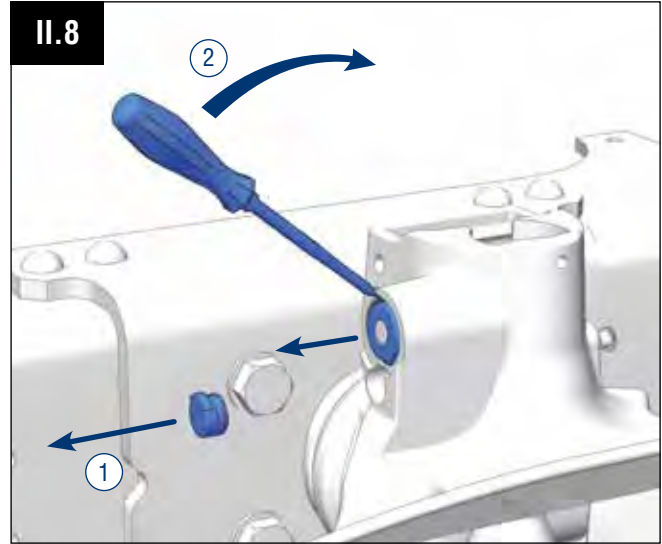
Demontage Schließfedern  
Dismantling of closing springs



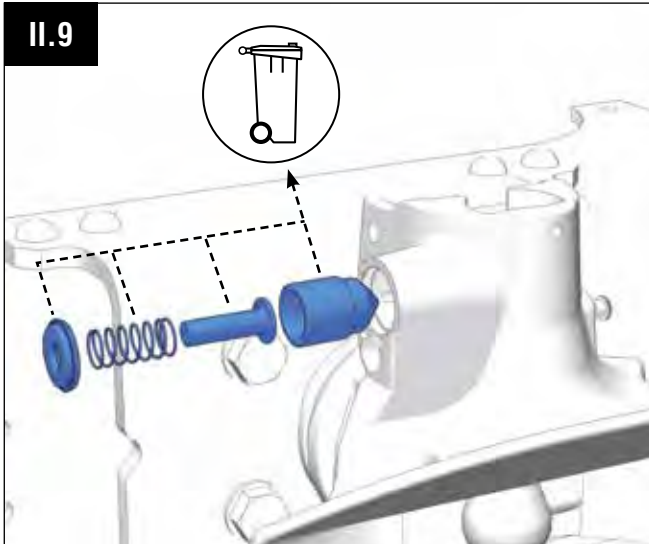
Demontage Kuppelbolzen  
Dismantling of coupling bolt



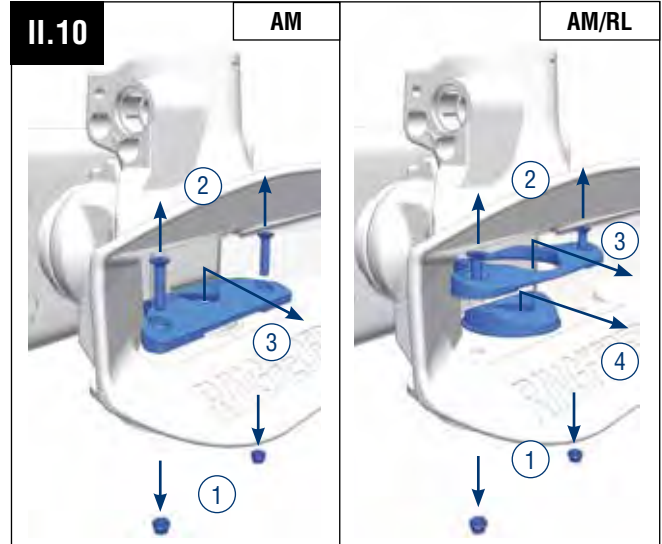
II.7  
Demontage Handhebel, Demontage Sperrhebel  
Dismantling of hand lever, dismantling of locking lever



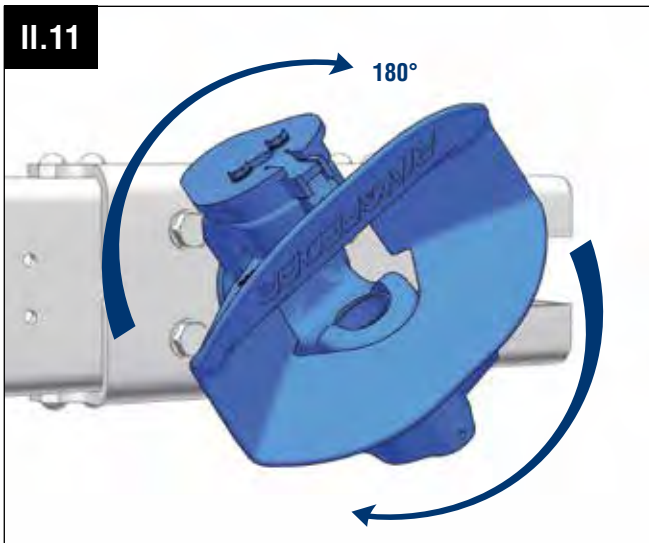
II.8  
Ausbau der Sicherung (1)  
Removal of safety device (1)



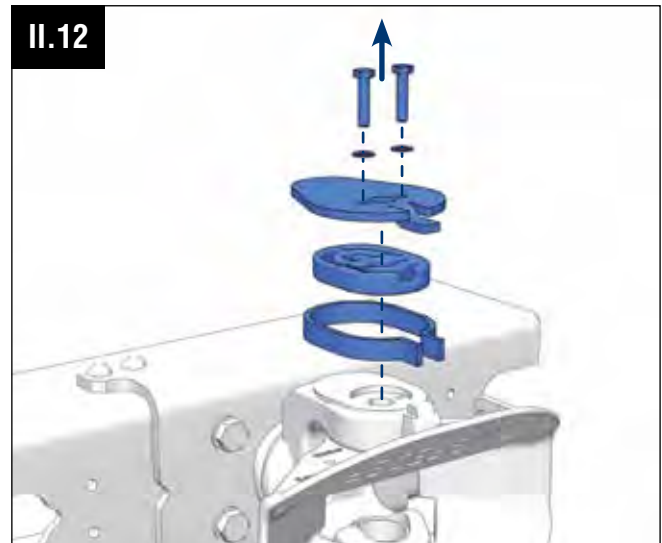
II.9  
Ausbau der Sicherung (2)  
Removal of safety device (2)



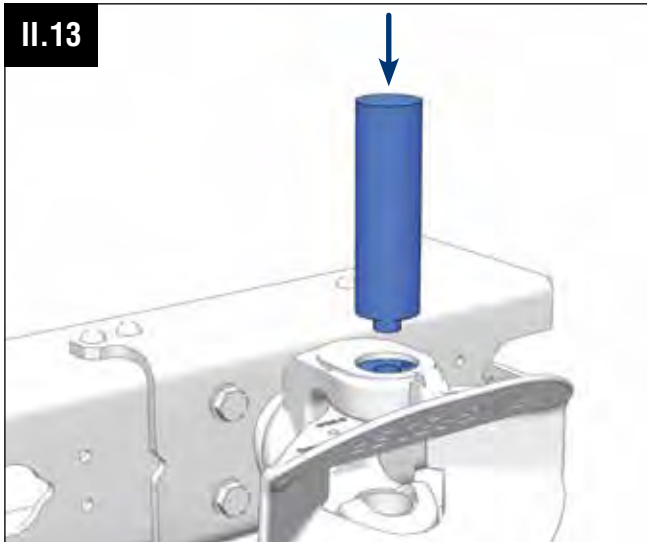
II.10  
Demontage Verschleißplatte  
Dismantling of wear plate



II.11  
Drehung der Kupplung  
Rotate coupling

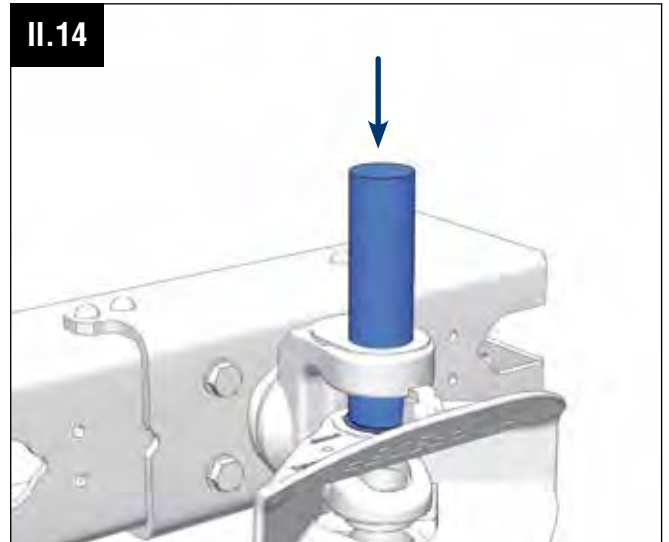


II.12  
Demontage der Nasenscheibe, Demontage der Rückstellfeder  
Dismantling of tab washer, dismantling of return spring



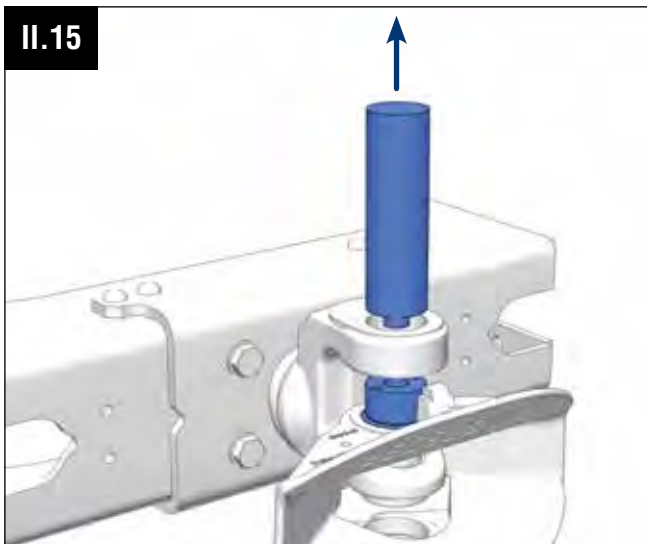
**II.13**

Demontage der unteren Führungsbuchse und des Kuppelkörpers (1)  
Dismantling of lower guide bushing and of the coupling assembly (1)



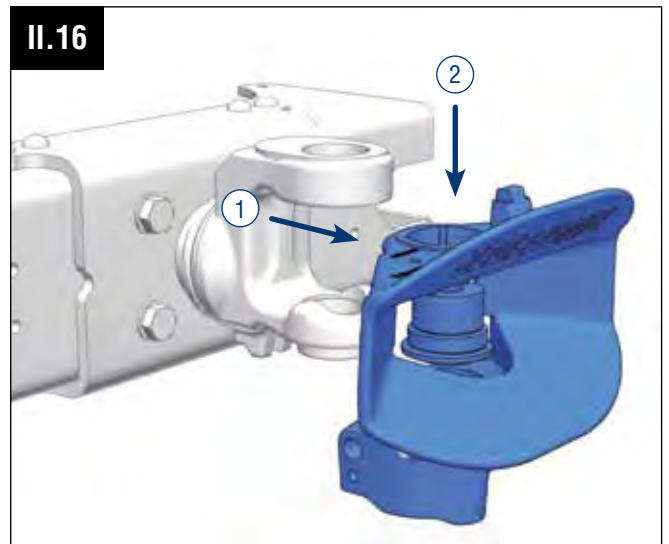
**II.14**

Demontage der unteren Führungsbuchse und des Kuppelkörpers (2)  
Dismantling of lower guide bushing and of the coupling assembly (2)



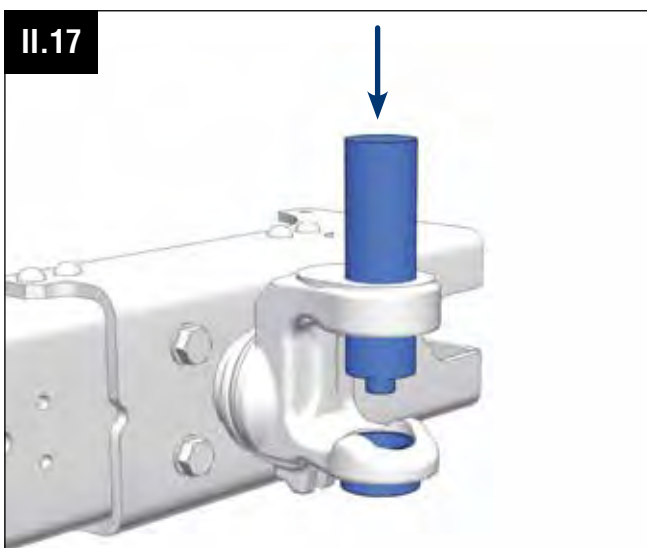
**II.15**

Demontage der unteren Führungsbuchse und des Kuppelkörpers (3)  
Dismantling of lower guide bushing and of the coupling assembly (3)



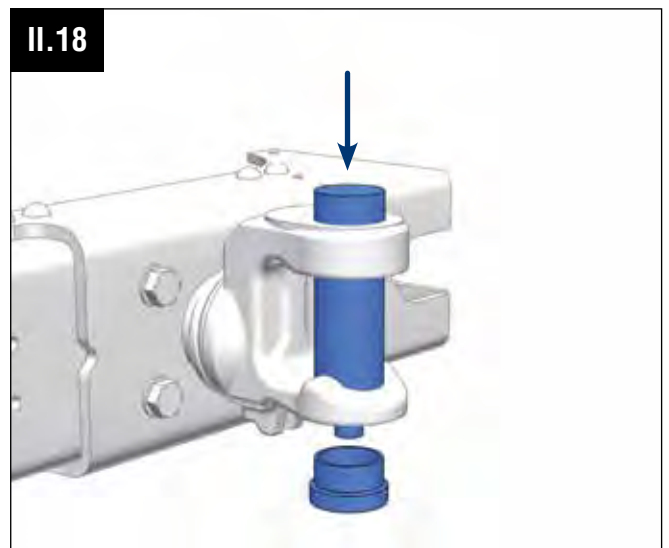
**II.16**

Demontage der unteren Führungsbuchse und des Kuppelkörpers (4)  
Dismantling of lower guide bushing and of the coupling assembly (4)



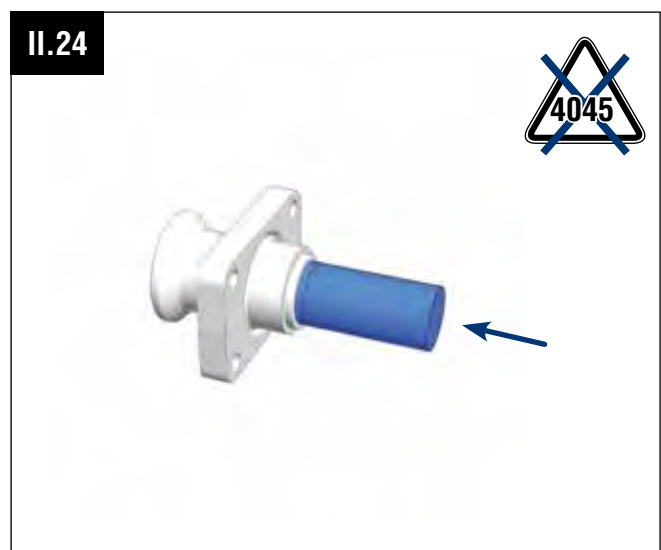
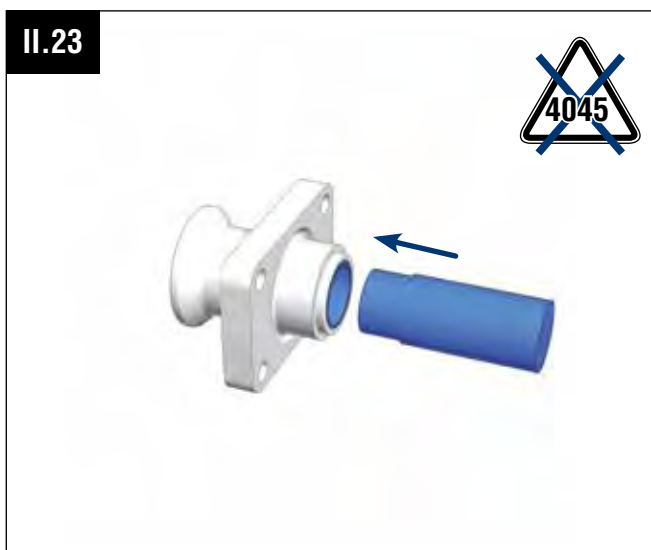
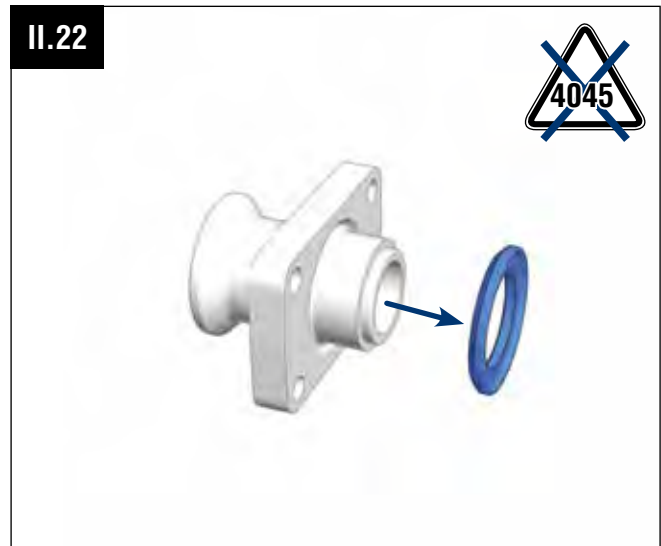
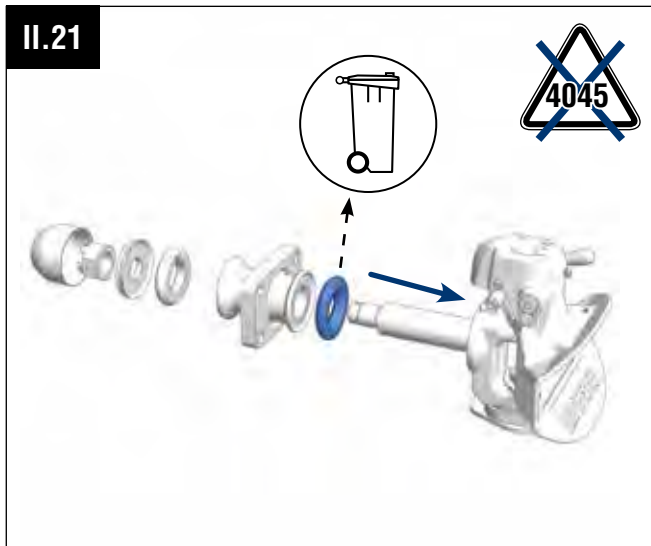
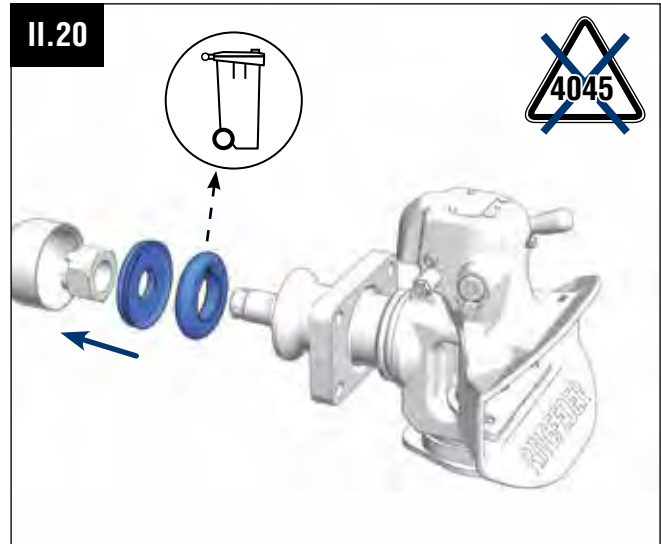
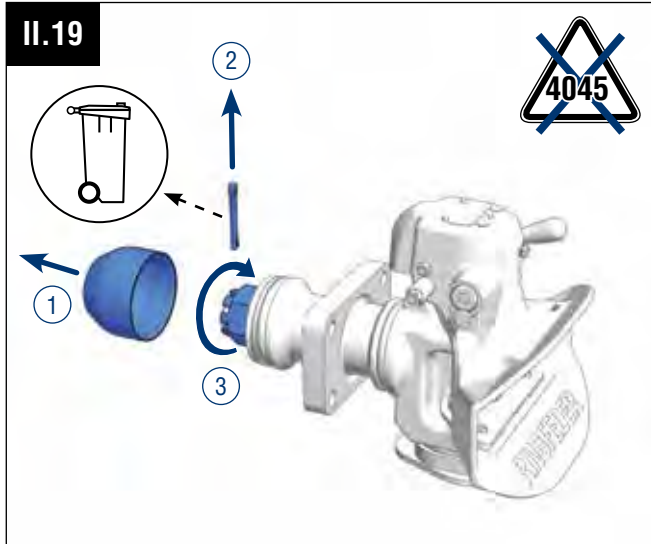
**II.17**

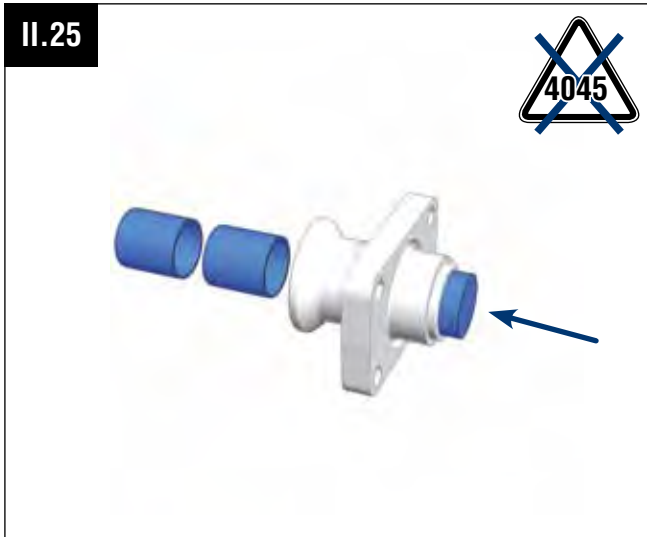
Demontage der oberen Führungsbuchse (1)  
Dismantling of the upper guide bushing (1)



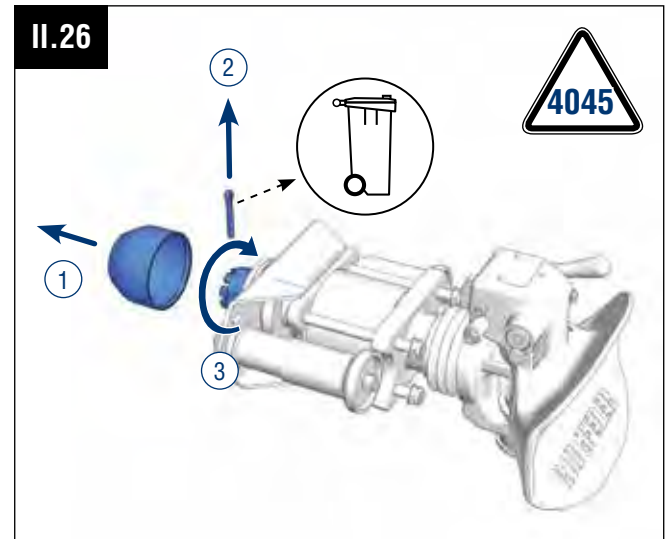
**II.18**

Demontage der oberen Führungsbuchse (2)  
Dismantling of the upper guide bushing (2)

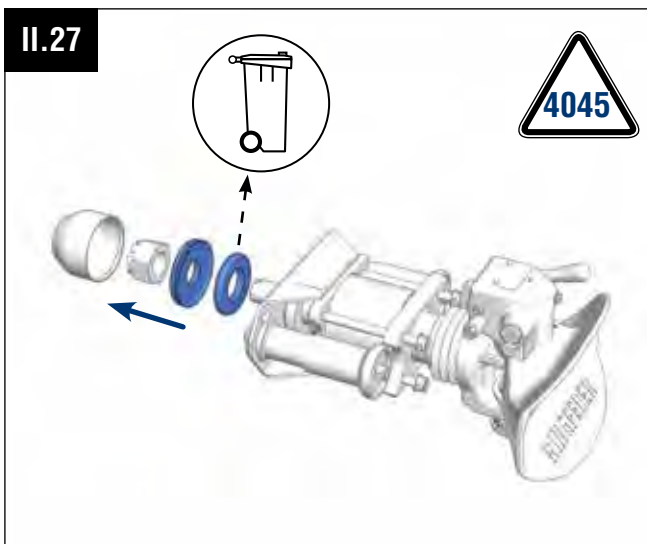




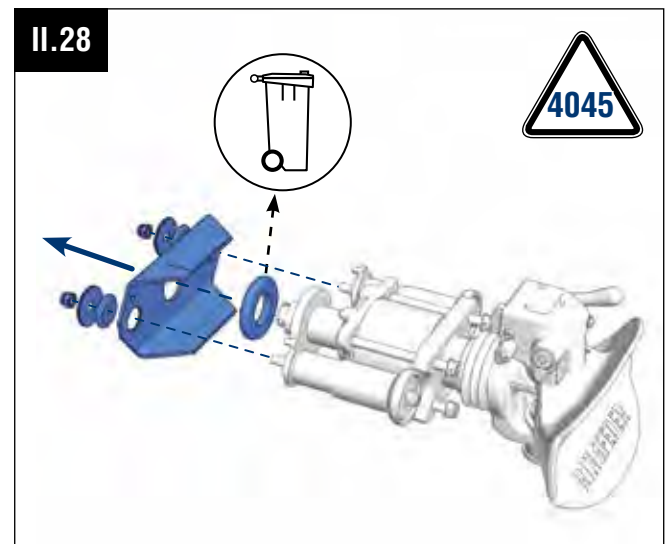
Demontage der Lagerbuchsen/Stangenführung (4)  
Dismantling of bearing bushing/rod guidance system (4)



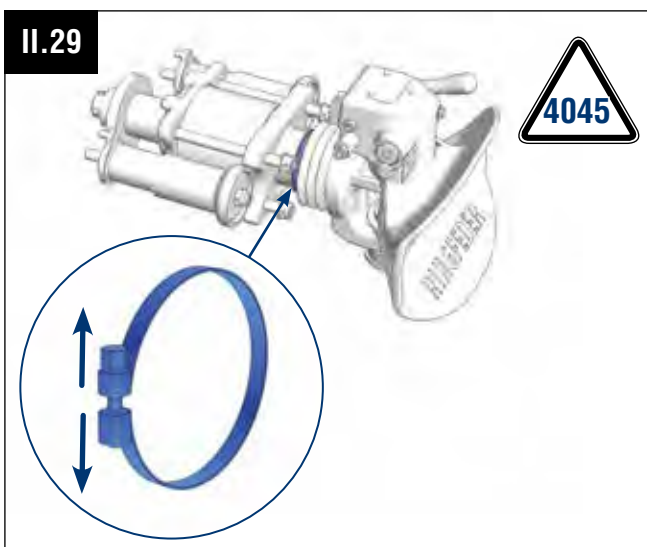
Demontage der Gummifedern (1)  
Dismantling of the rubber springs (1)



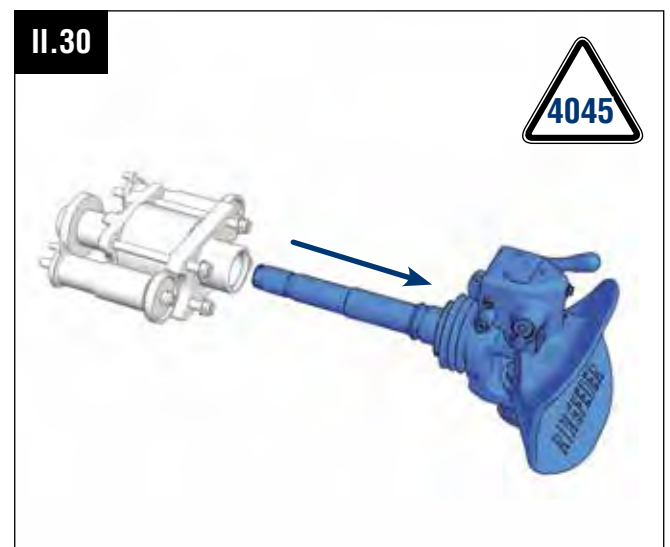
Demontage der Gummifedern (2)  
Dismantling of the rubber springs (2)



Demontage der Gummifedern (3)  
Dismantling of the rubber springs (3)



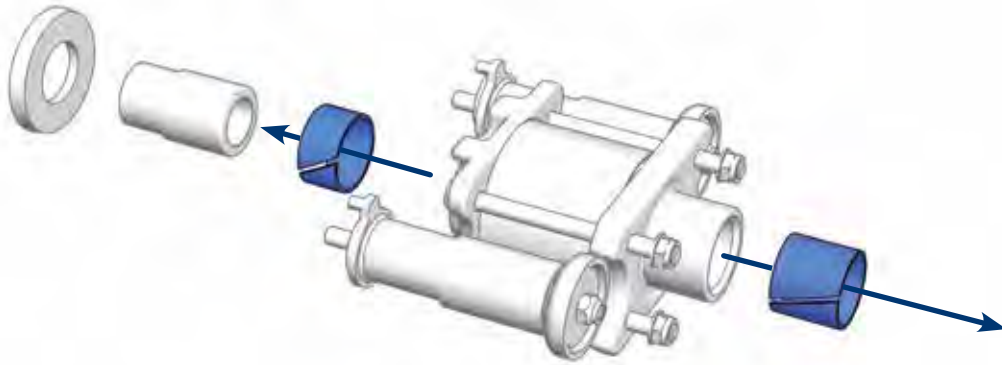
Demontage der Lagerbuchsen/Stangenführung (1)  
Dismantling of bearing bushing/rod guidance system (1)



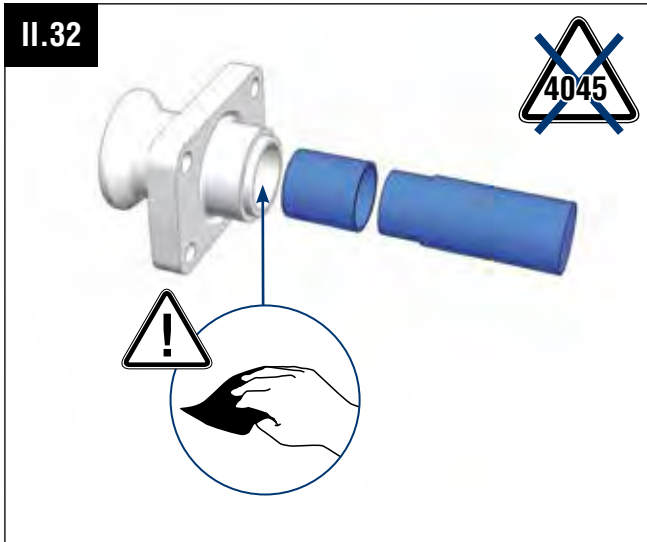
Demontage der Lagerbuchsen/Stangenführung (2)  
Dismantling of bearing bushing/rod guidance system (2)



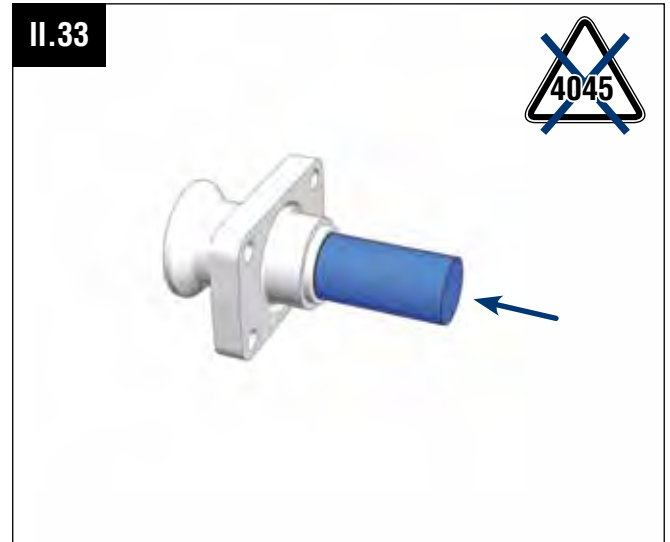
II.31



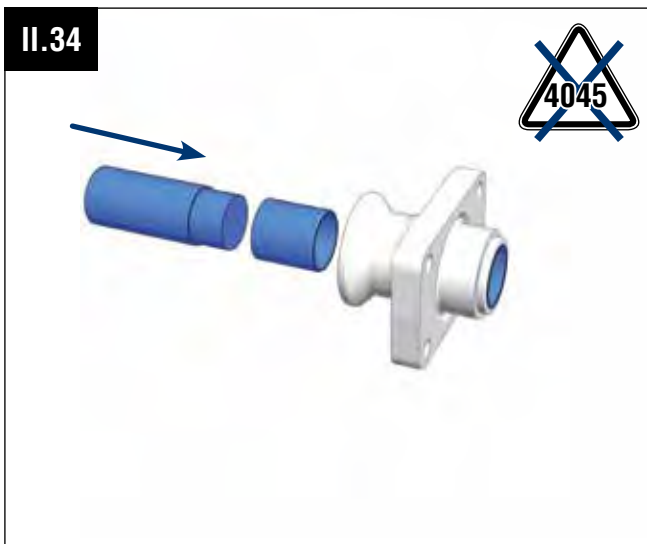
Demontage der Lagerbuchsen/Stangenführung (3)  
Dismantling of bearing bushing/rod guidance system (3)



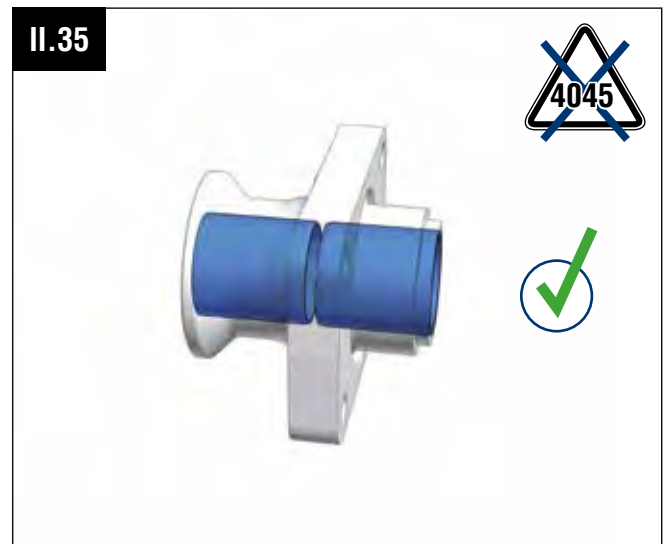
Montage der Lagerbuchsen/Stangenführung (1)  
Fitting of bearing bushing/rod guidance system (1)



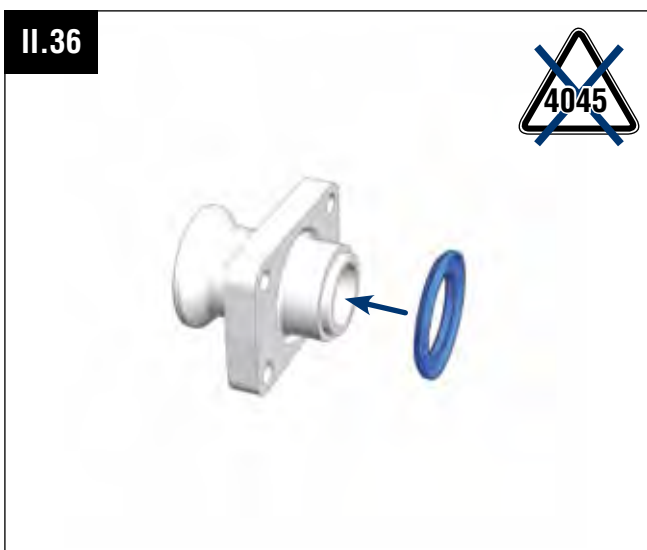
Montage der Lagerbuchsen/Stangenführung (2)  
Fitting of bearing bushing/rod guidance system (2)



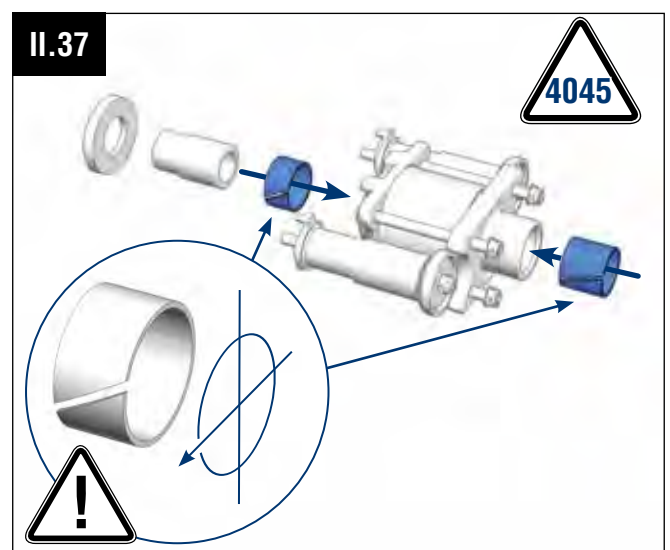
Montage der Lagerbuchsen/Stangenführung (3)  
Fitting of bearing bushing/rod guidance system (3)



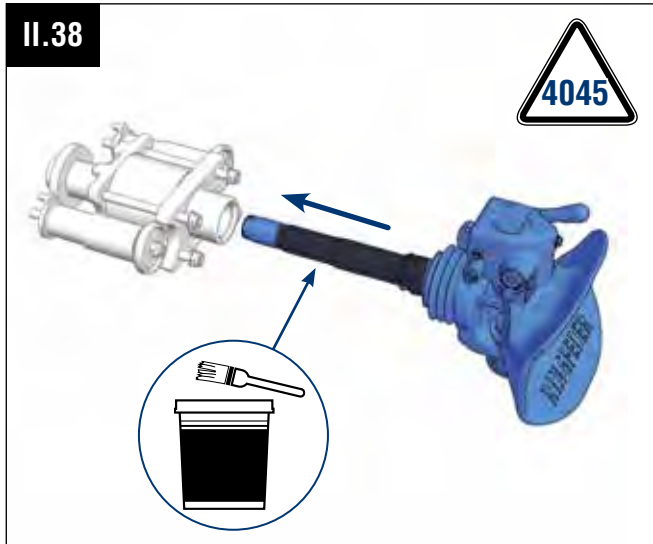
Montage der Lagerbuchsen/Stangenführung (4)  
Fitting of bearing bushing/rod guidance system (4)



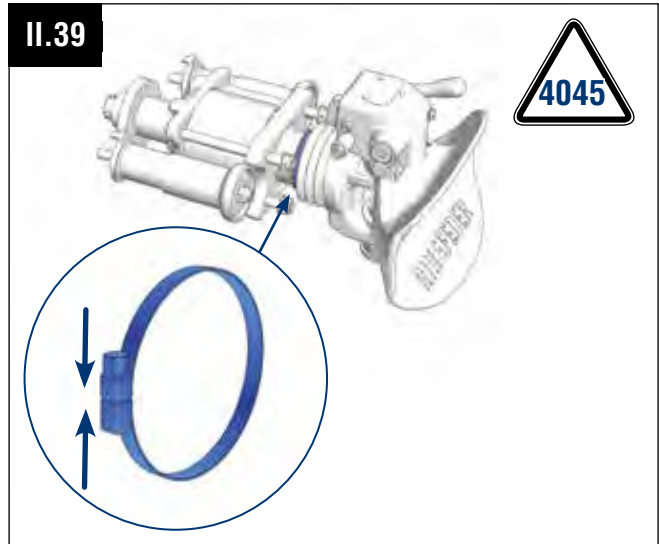
Montage der Lagerbuchsen/Stangenführung (5)  
Fitting of bearing bushing/rod guidance system (5)



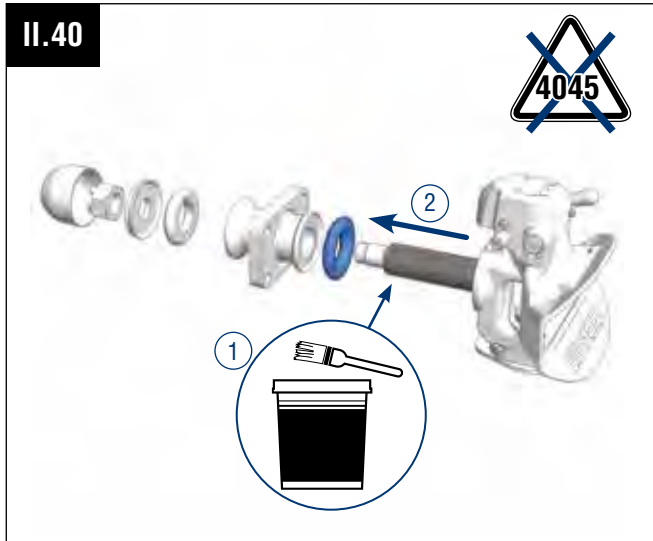
Montage der Lagerbuchsen/Stangenführung (1)  
Fitting of bearing bushing/rod guidance system (1)



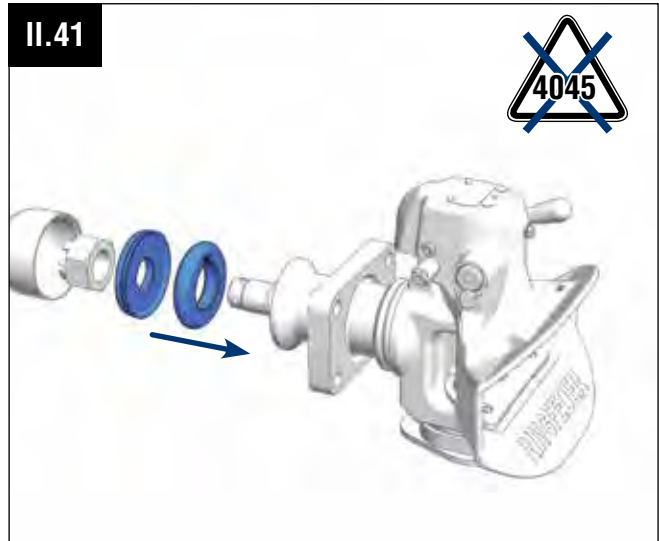
Montage der Lagerbuchsen/Stangenführung (2)  
Fitting of bearing bushing/rod guidance system (2)



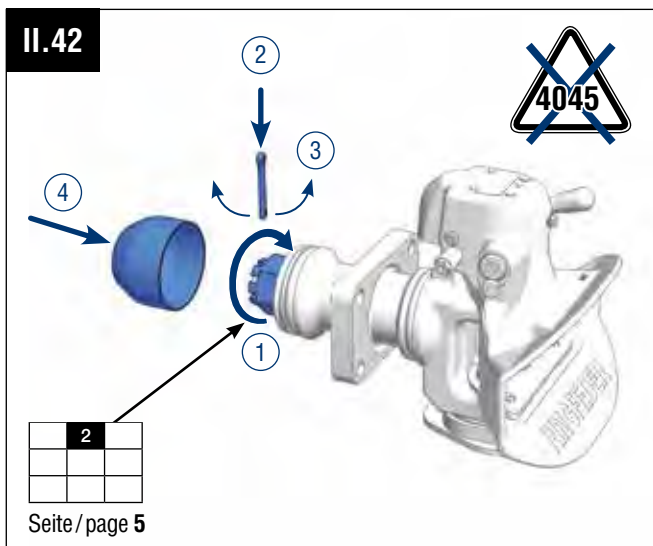
Montage der Lagerbuchsen/Stangenführung (3)  
Fitting of bearing bushing/rod guidance system (3)



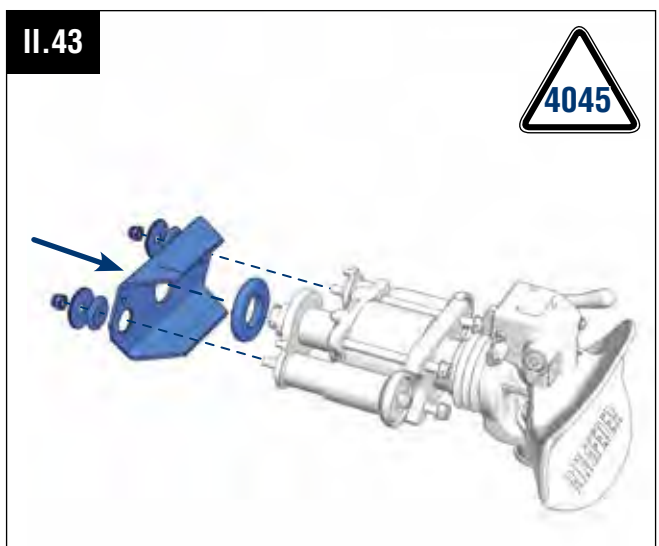
Montage der Gummifedern (1)  
Fitting of the rubber springs (1)



Montage der Gummifedern (2)  
Fitting of the rubber springs (2)

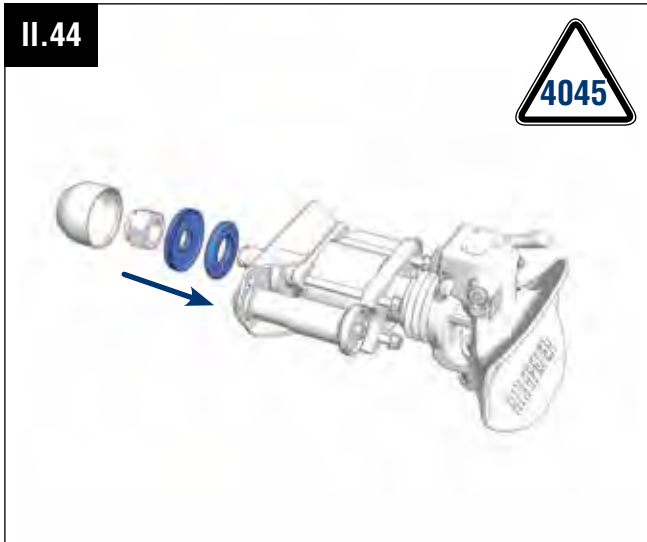


Montage der Gummifedern (3)  
Fitting of the rubber springs (3)

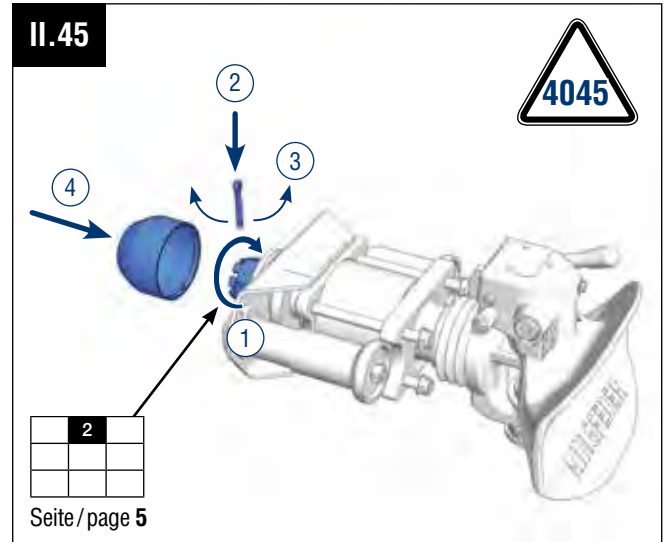


Montage der Gummifedern (1)  
Fitting of the rubber springs (1)





Montage der Gummifedern (2)  
Fitting of the rubber springs (2)



Montage der Gummifedern (3)  
Fitting of the rubber springs (3)



Montage der oberen Führungsbuchse (1)  
Fitting of the upper guide bushing (1)



Montage der oberen Führungsbuchse (2)  
Fitting of the upper guide bushing (2)



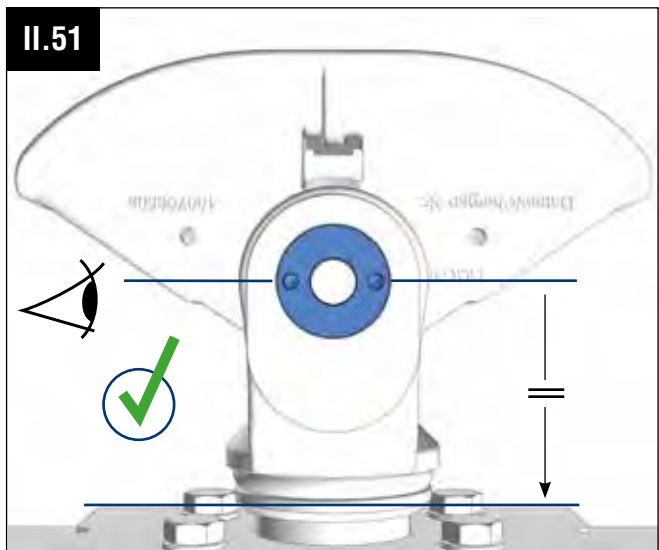
Montage des Kuppelkörpers  
Fitting of the coupling assembly



Montage der unteren Führungsbuchse (1)  
Fitting of the lower guide bushing (1)



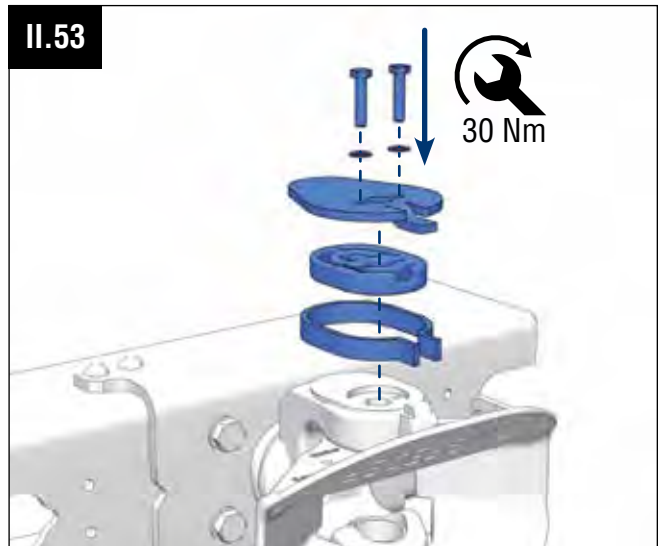
Montage der unteren Führungsbuchse (2)  
Fitting of the lower guide bushing (2)



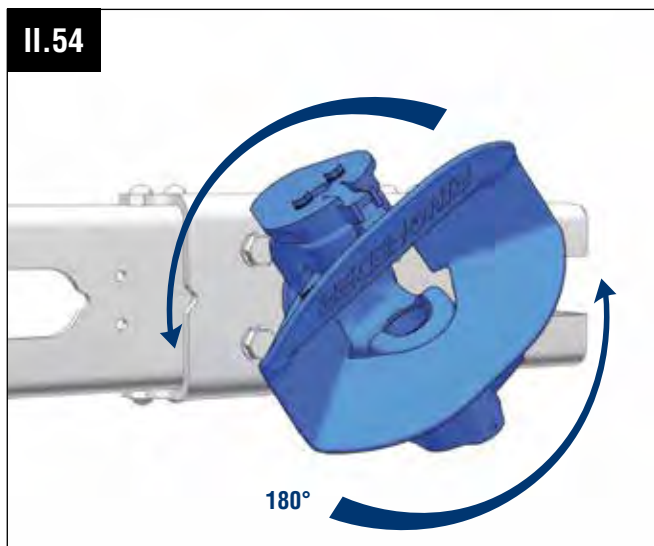
Montage der unteren Führungsbuchse (3)  
Fitting of the lower guide bushing (3)



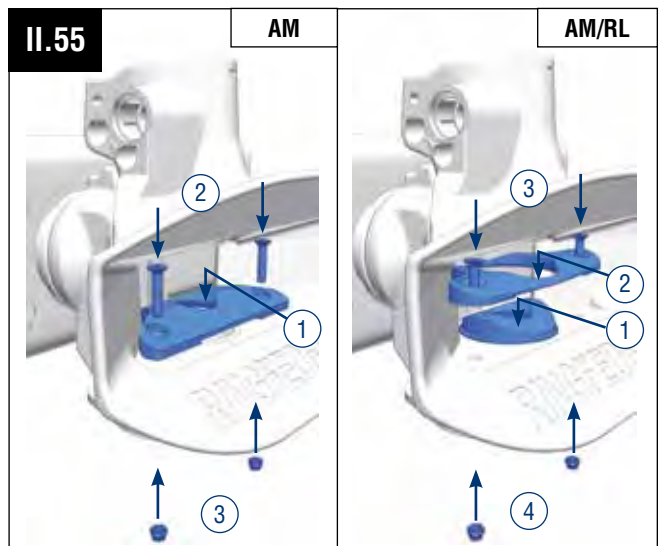
Montage der unteren Führungsbuchse (4)  
Fitting of the lower guide bushing (4)



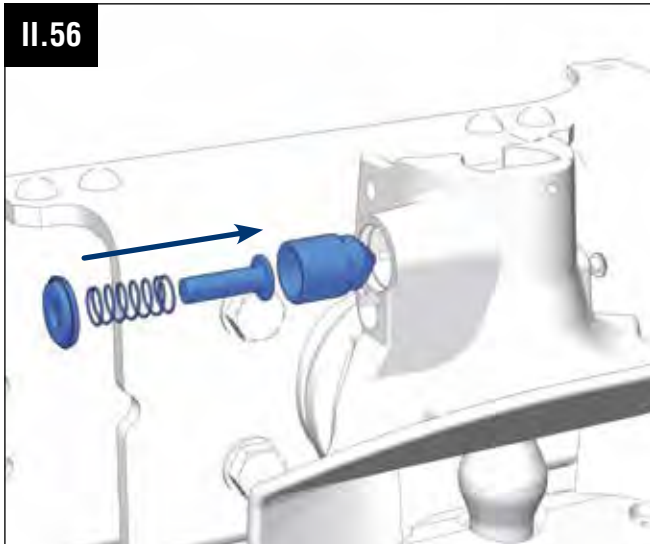
Montage der Nasenscheibe, Montage der Rückstellfeder  
Fitting of the tab washer, fitting of the return springs



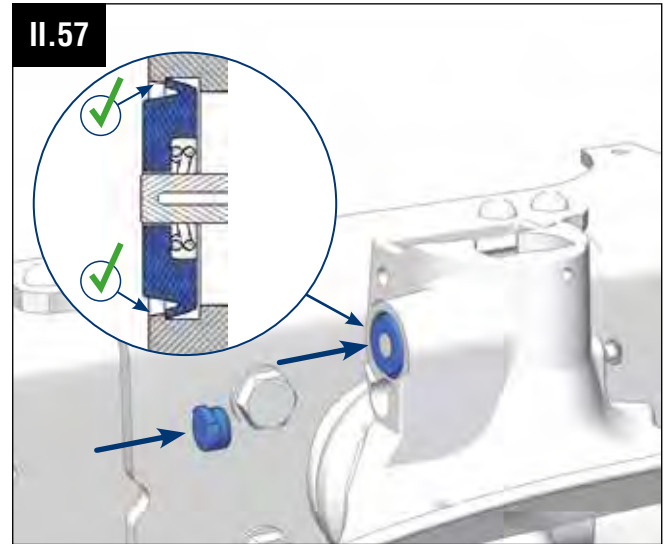
(Zurück-) Drehung der Kupplung)  
Rotate the coupling (back)



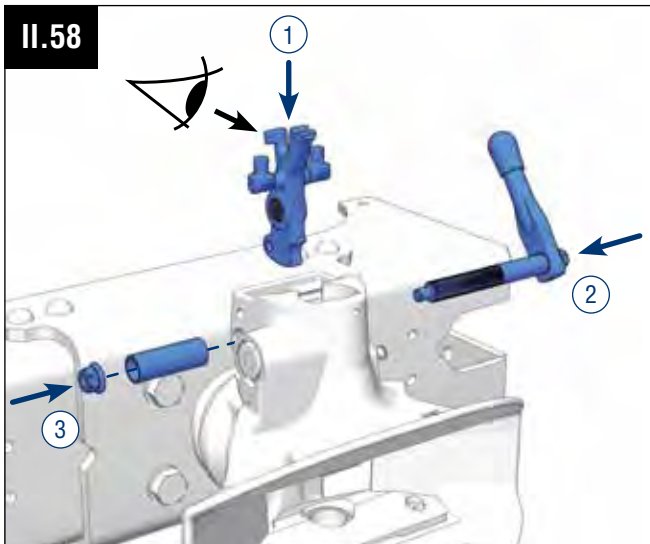
Montage Verschleißplatte  
Fitting of wear plate



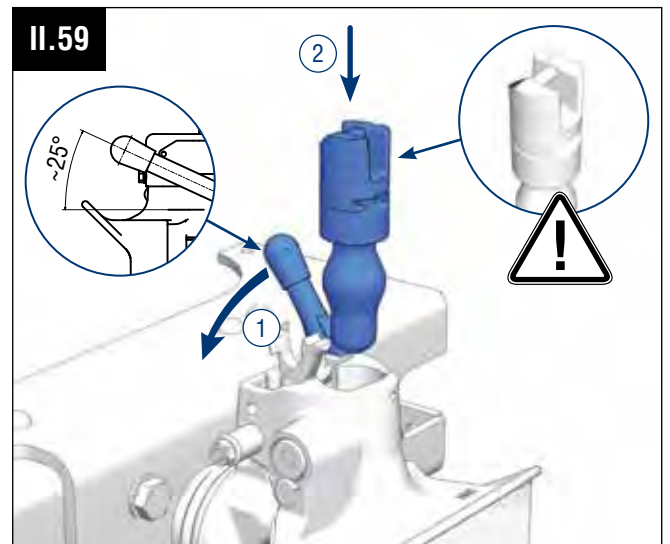
Montage der Sicherung (1)  
Fitting of safety device (1)



Montage der Sicherung (2)  
Fitting of safety device (2)



Montage Handhebel, Montage Sperrhebel  
Fitting of hand lever, fitting of locking lever



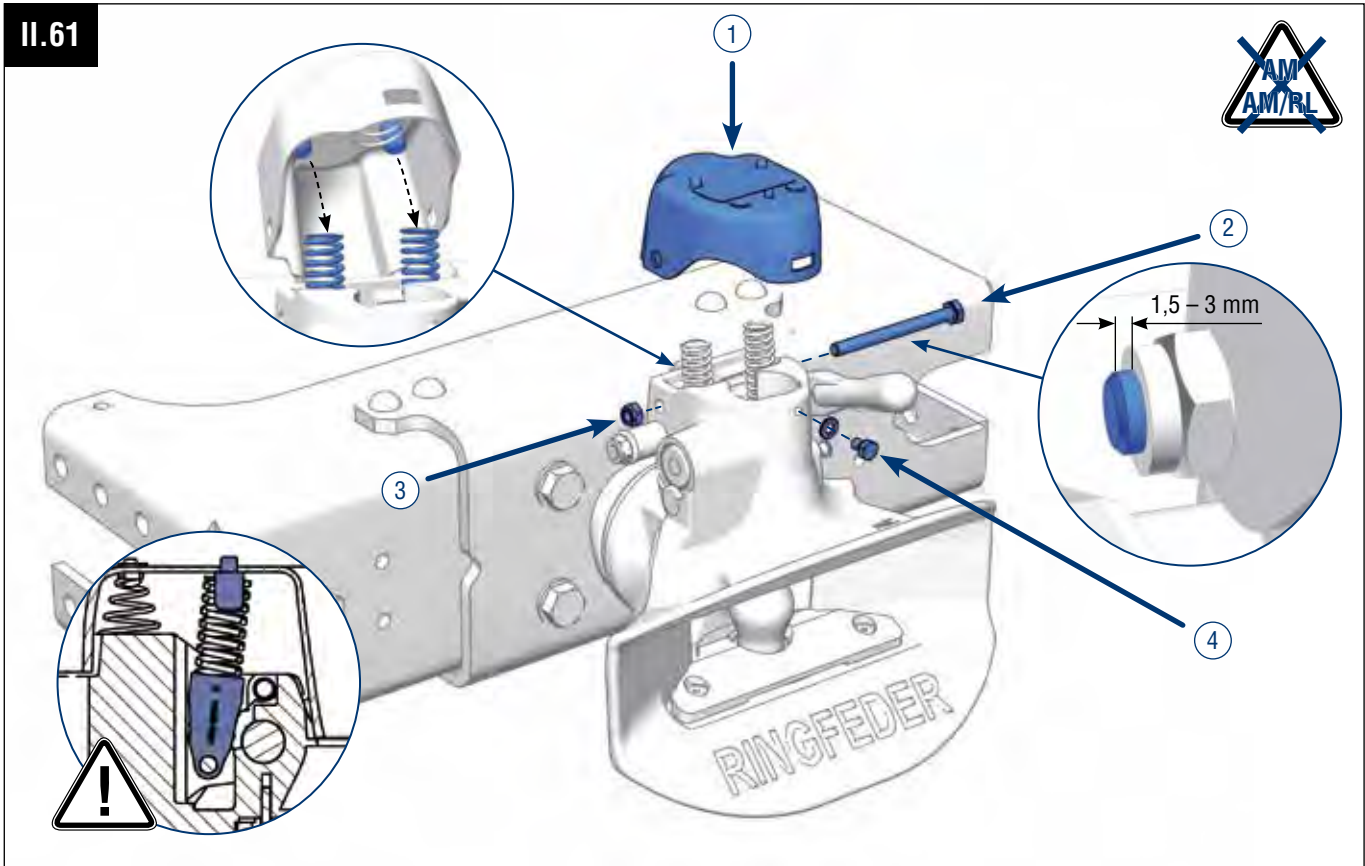
Montage Kuppelbolzen  
Fitting of coupling bolt



Montage Schließfedern  
Fitting of closing springs

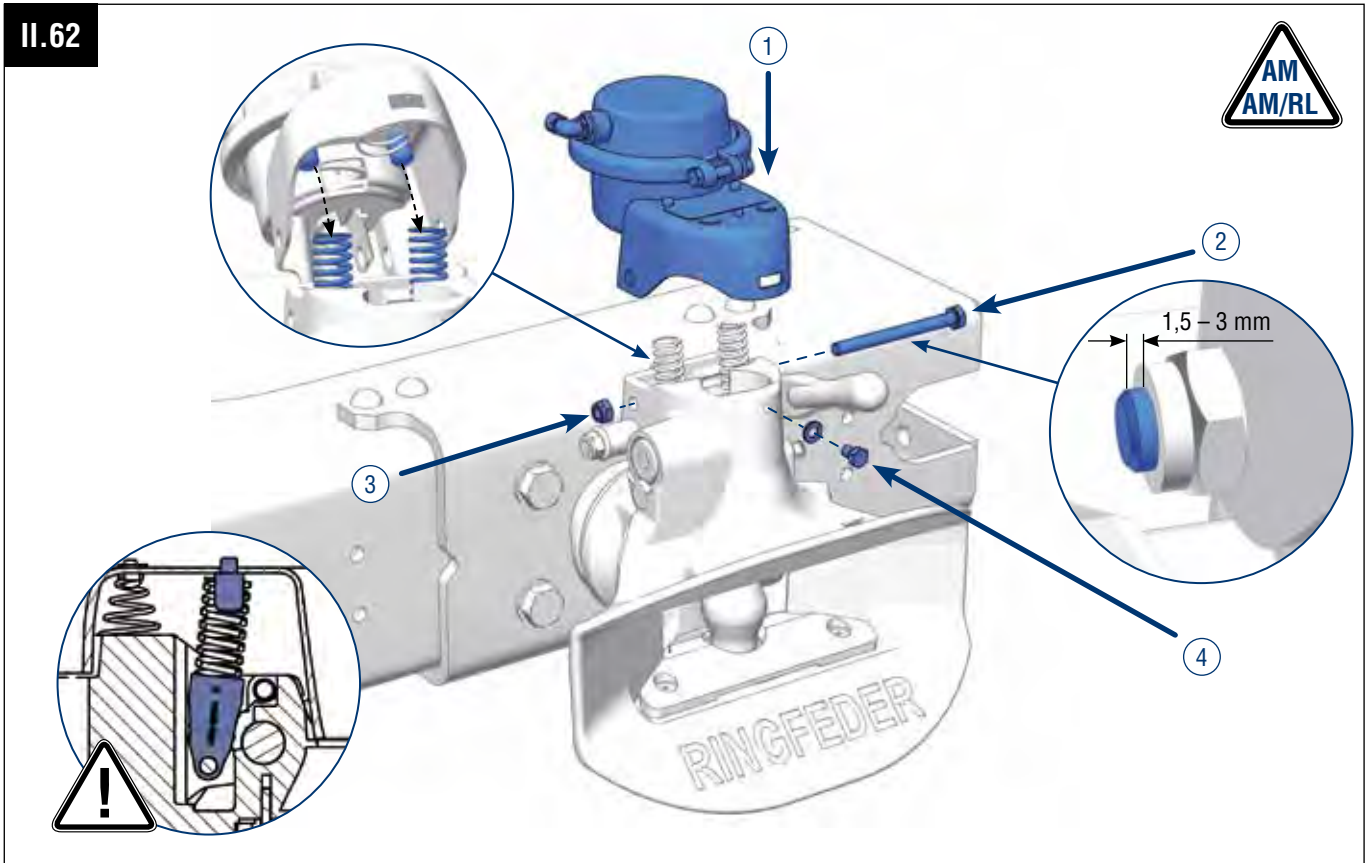


II.61

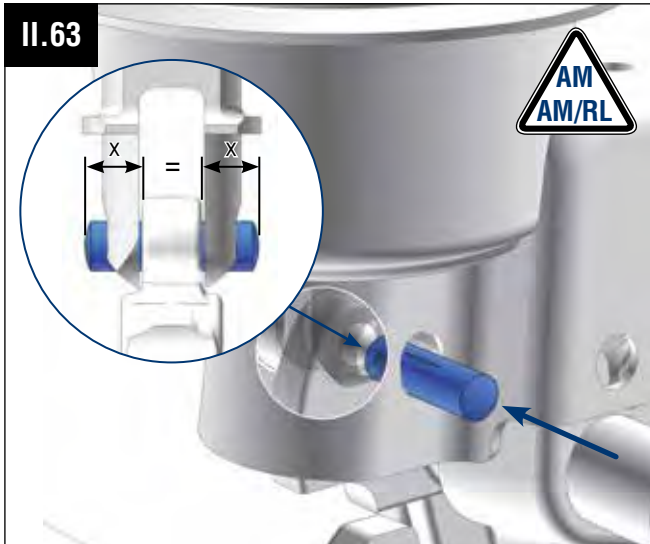


Montage Abschlussdeckel  
Fitting of end cap

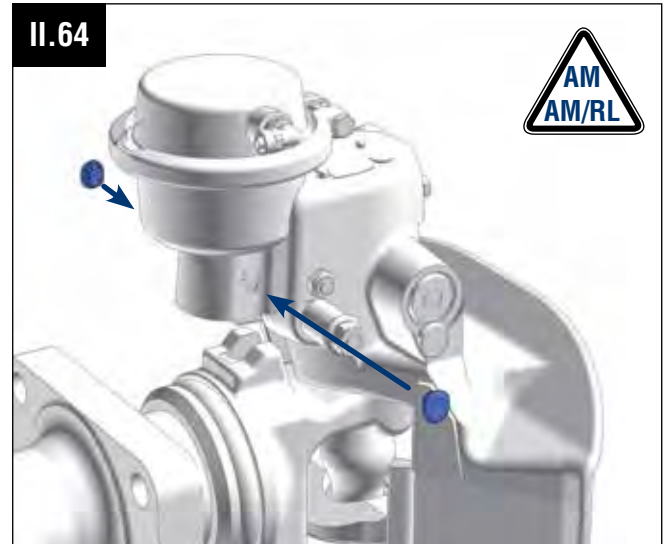
II.62



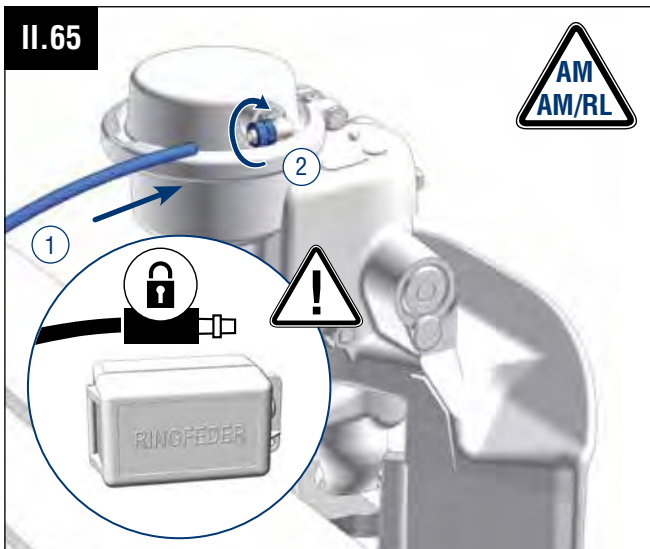
AM Abschlussdeckel montieren  
Fit AM end cap



Spiralspannstift eintreiben (1)  
Drive in spiral pin (1)


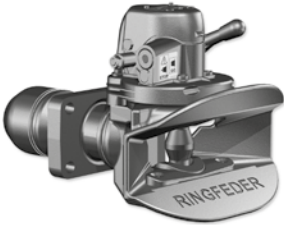
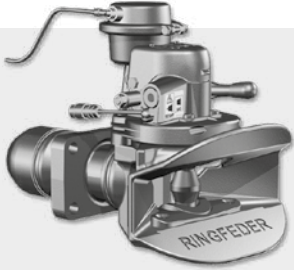




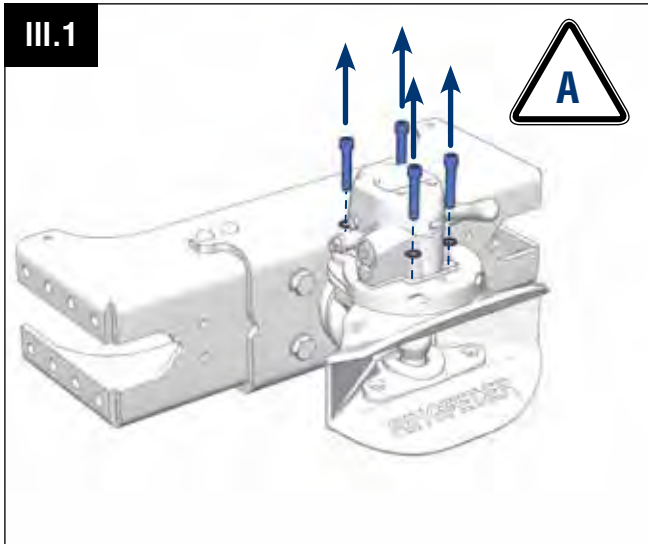
Spiralspannstift eintreiben (2)  
Drive in spiral pin (2)



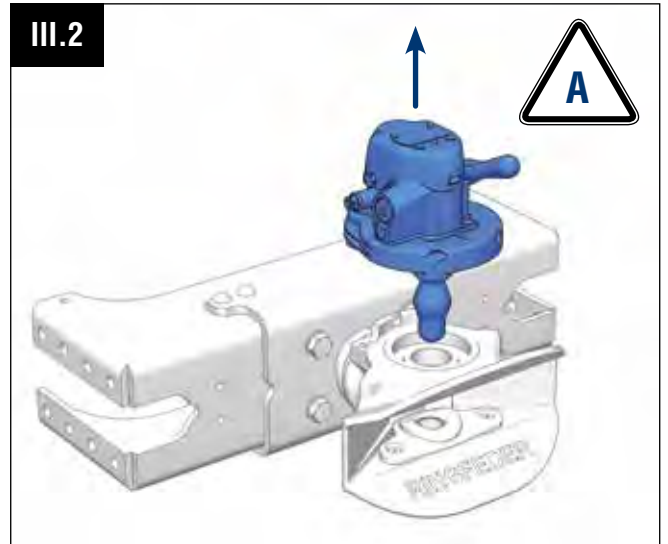
Druckluftleitung anschliessen  
Connect compressed air supply

# Gruppe | Group III.

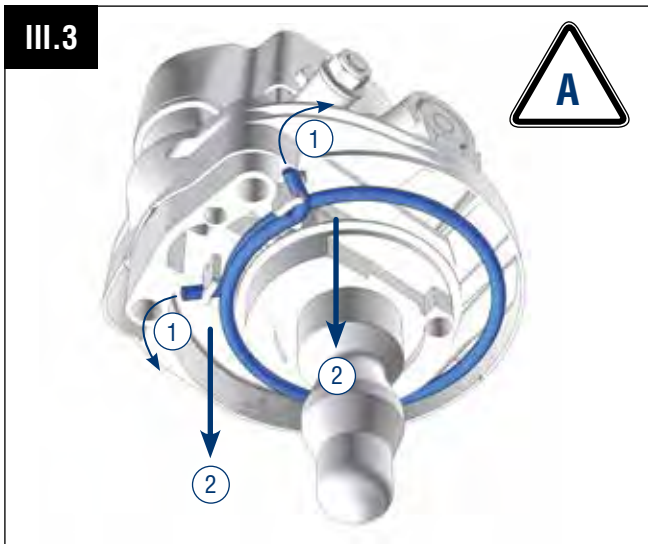
 Seite Page	Ø 40 mm Typ Type ...	Ø 50 mm Typ Type ...
10	-	 <p>5055 A</p>
10	-	 <p>5055 AM, AM/RL</p>
10	-	 <p>5055 AP</p>
11	-	 <p>5055 AW</p>



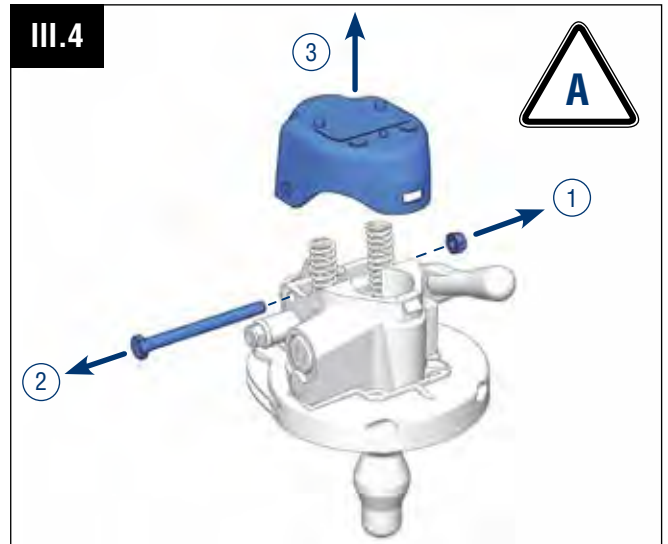
Demontage Kopfeinheit (1)  
Dismantling of head unit (1)



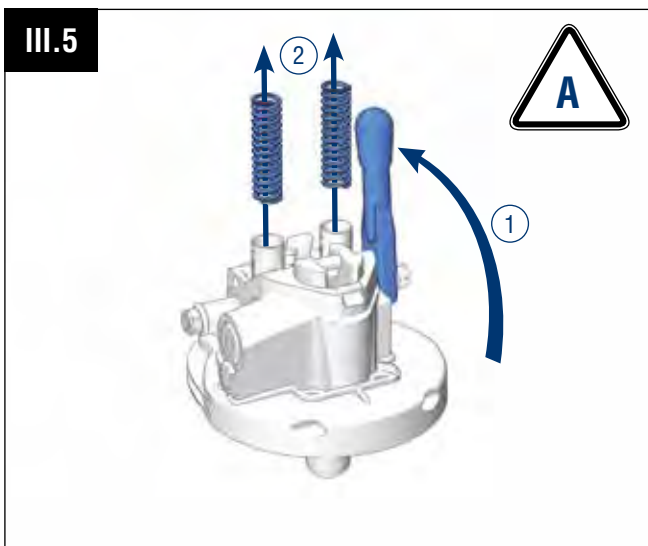
Demontage Kopfeinheit (2)  
Dismantling of head unit (2)



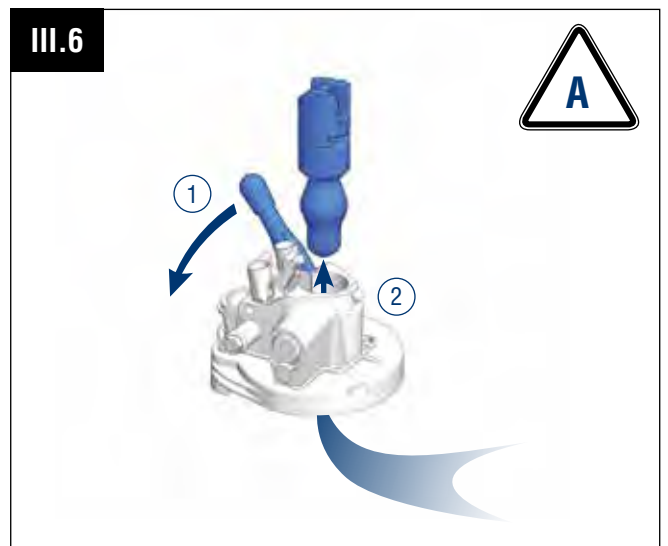
Demontage Rückstellfeder  
Dismantling of return springs



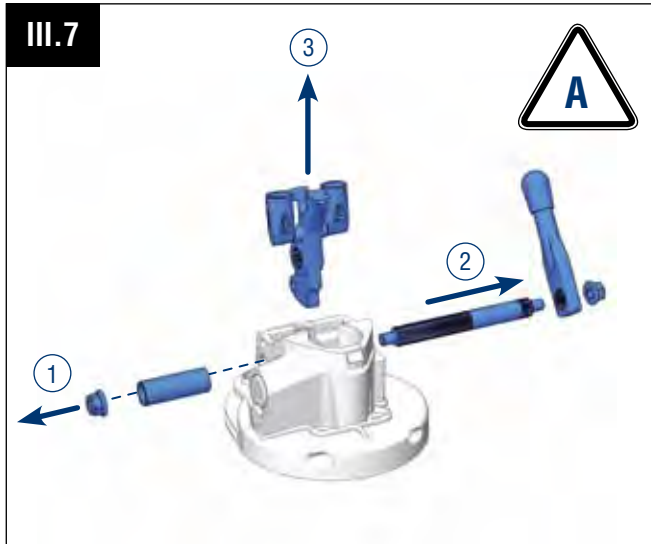
Demontage Abschlussdeckel  
Dismantling of end cap



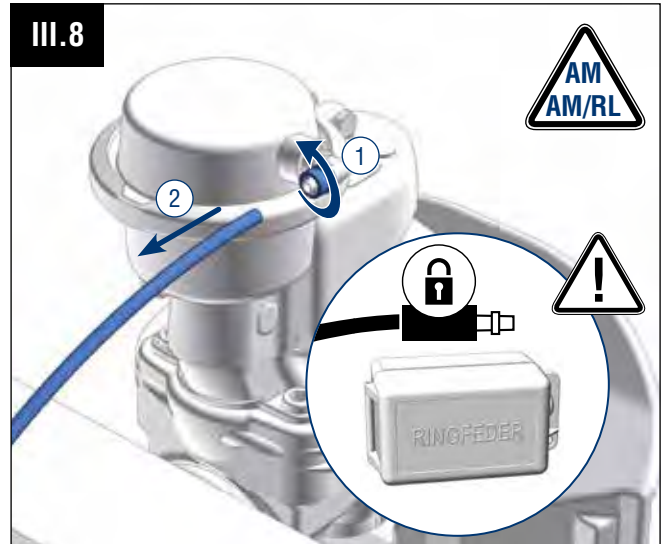
Demontage Schließfedern  
Dismantling of closing springs



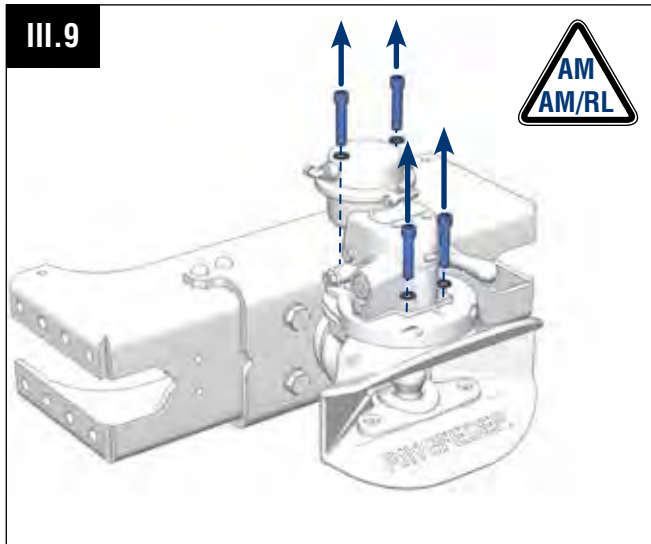
Demontage Kuppelbolzen  
Dismantling of coupling bolt



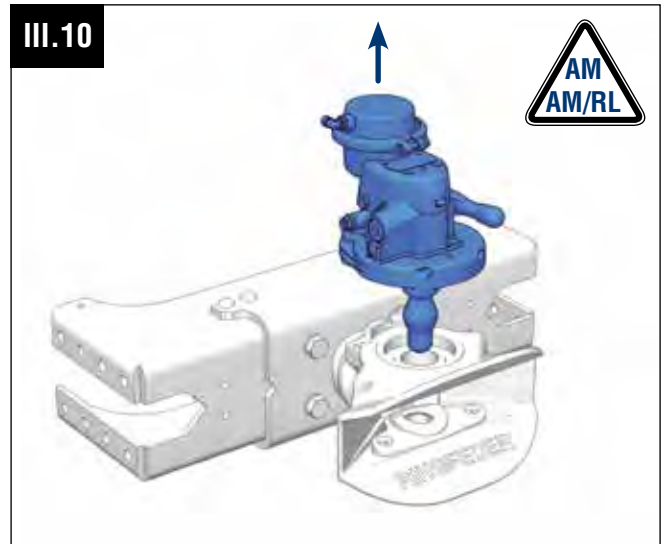
Demontage Handhebel, Demontage Sperrhebel  
Dismantling of hand lever, dismantling of locking lever



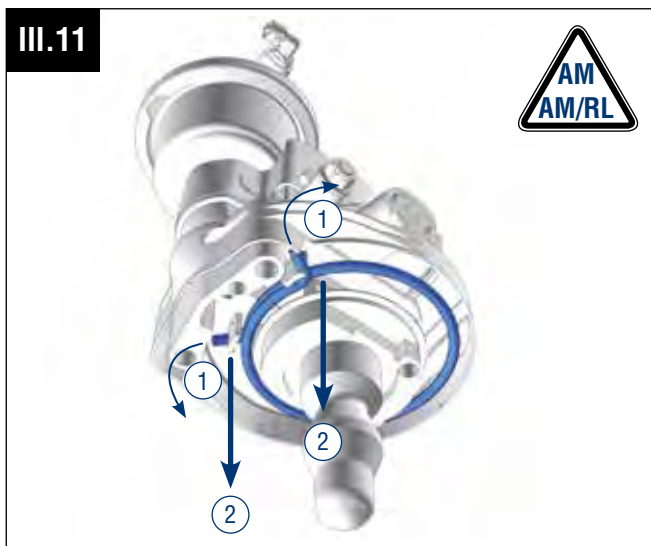
Druckluftleitung lösen  
Release compressed air supply



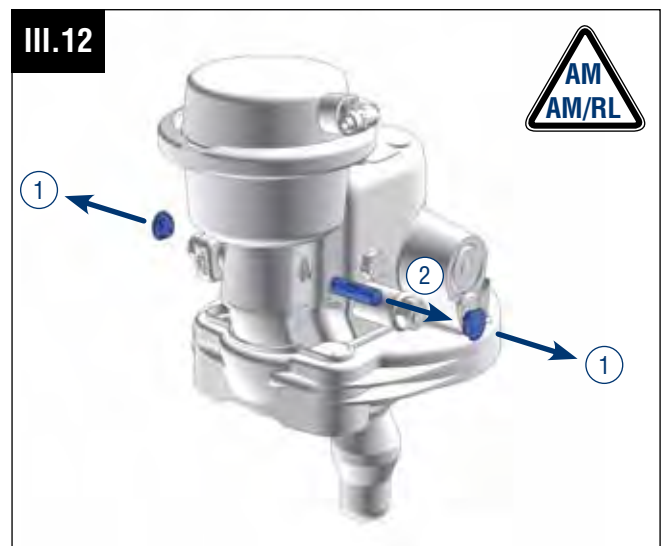
Demontage Kopfeinheit (1)  
Dismantling of head unit (1)



Demontage Kopfeinheit (2)  
Dismantling of head unit (2)

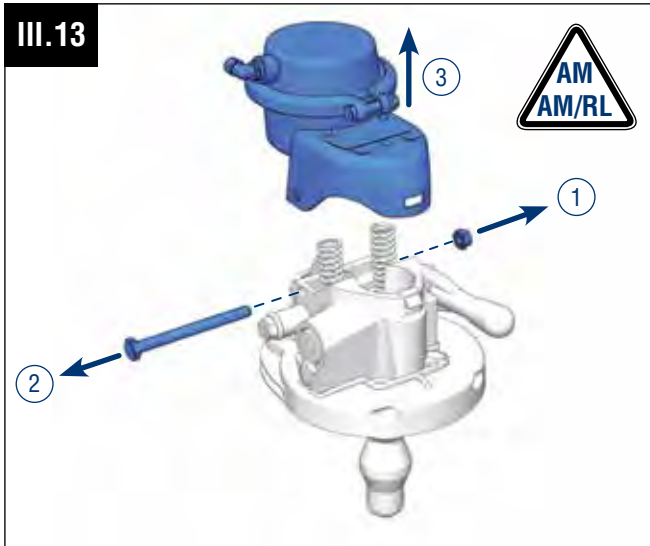


Demontage Rückstellfedern  
Dismantling of return springs

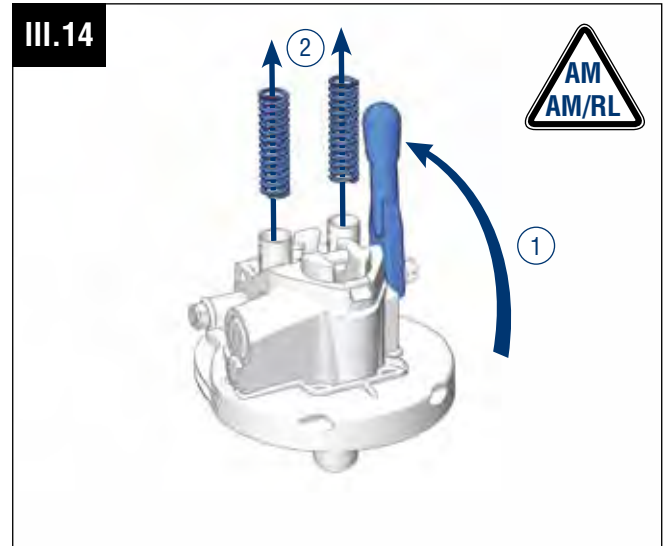


Demontage Spiralspannstift  
Dismantling of spiral pin

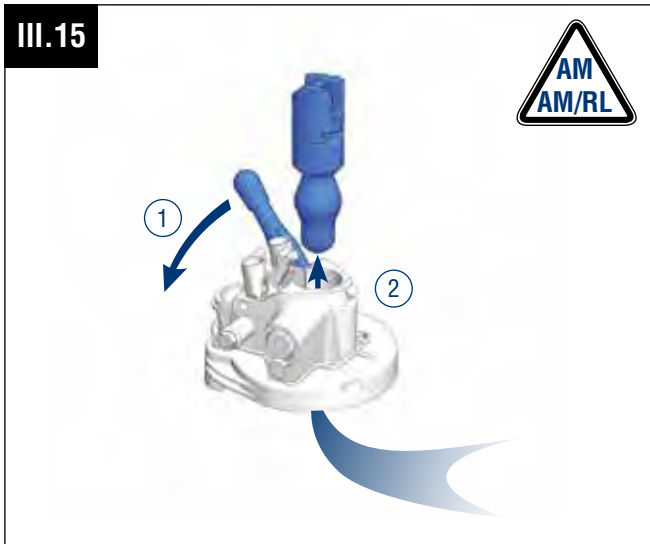




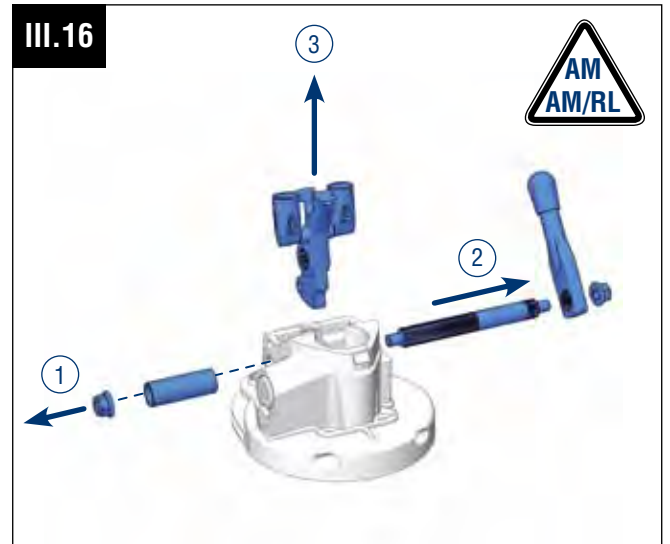
Demontage AM-Deckel  
Dismantling of AM cap



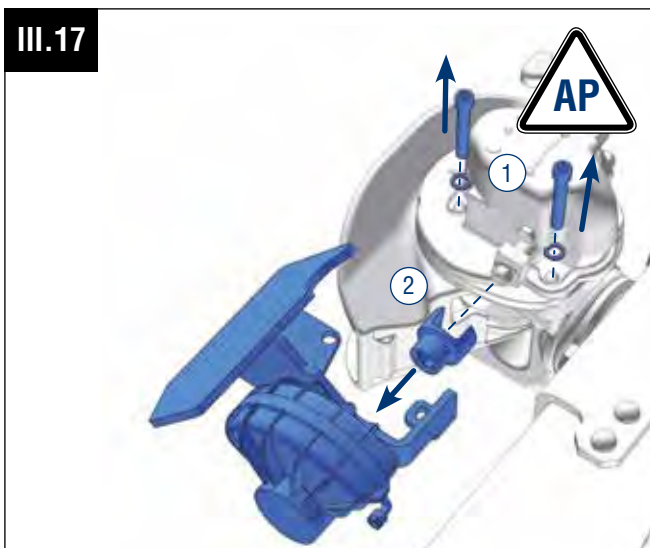
Demontage Schließfedern  
Dismantling of closing springs



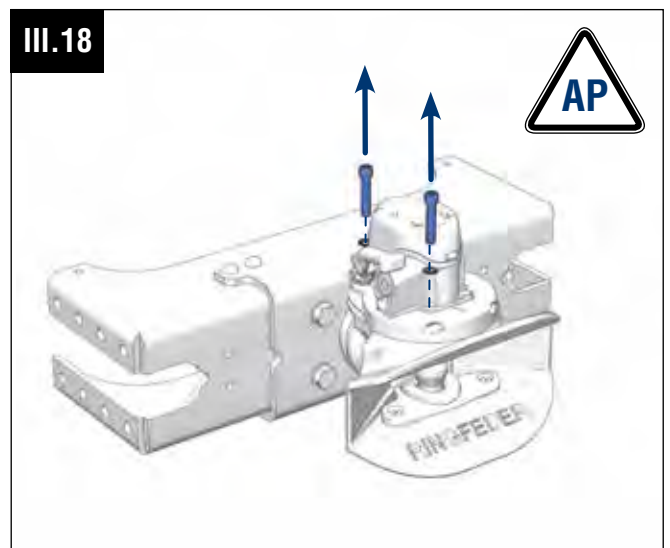
Demontage Kuppelbolzen  
Dismantling of coupling bolt



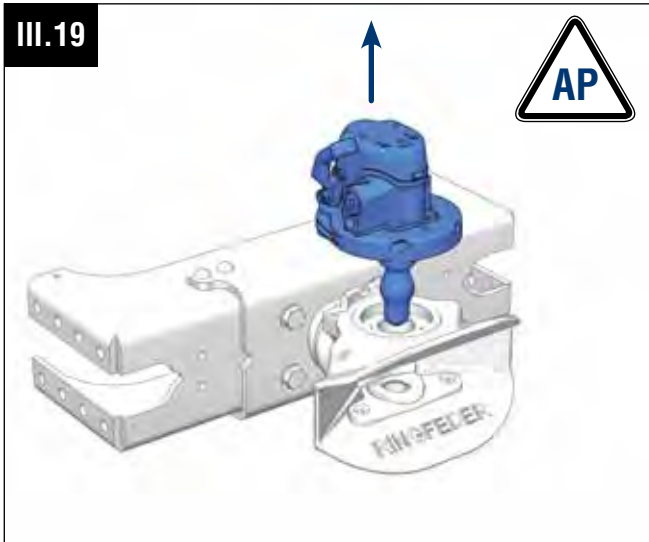
Demontage Handhebel, Demontage Sperrhebel  
Dismantling of hand lever, dismantling of locking lever



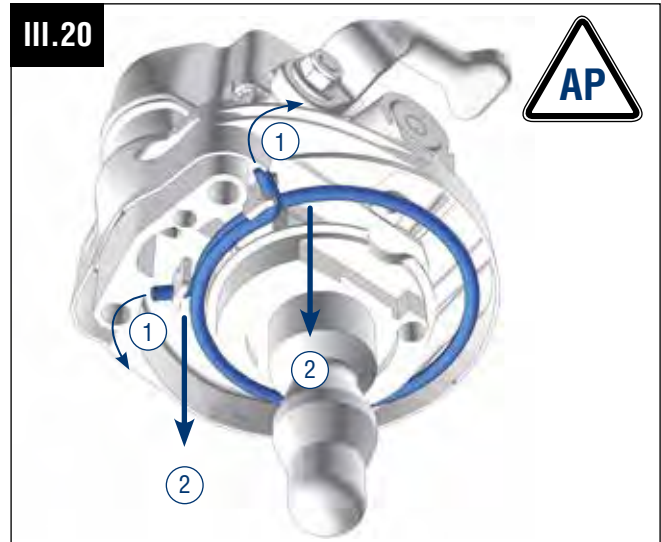
Demontage Power Actuator  
Dismantling of power actuator



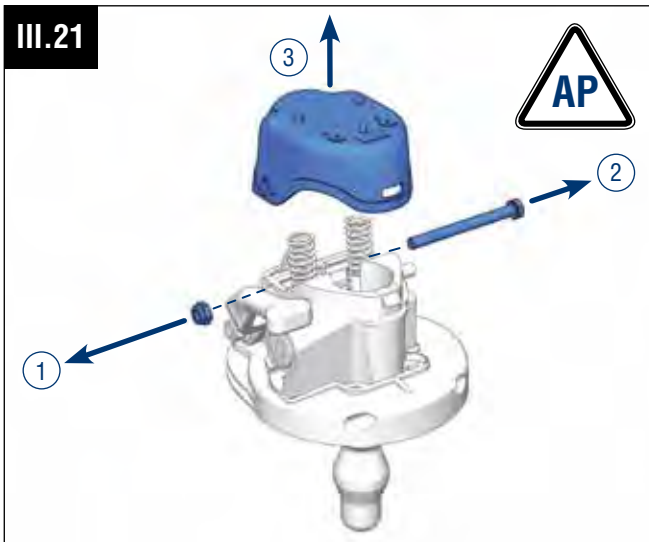
Demontage Kopfeinheit (1)  
Dismantling of head unit (1)



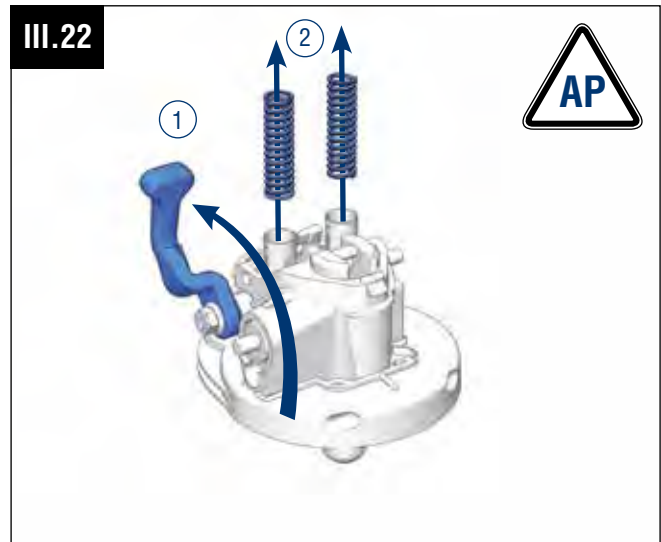
Demontage Kopfeinheit (2)  
Dismantling of head unit (2)



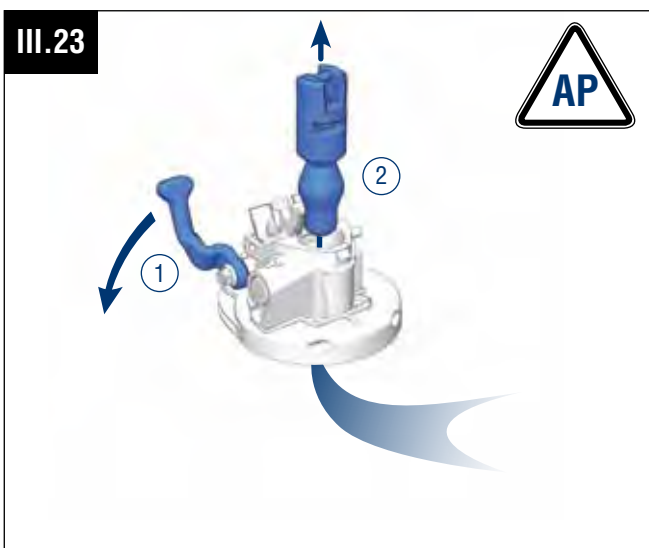
Demontage Rückstellfeder  
Dismantling of return springs



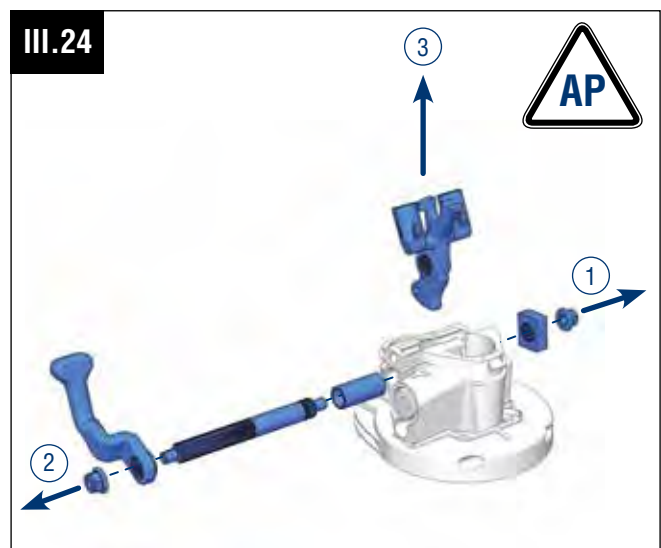
Demontage AP-Deckel  
Dismantling of AP cap



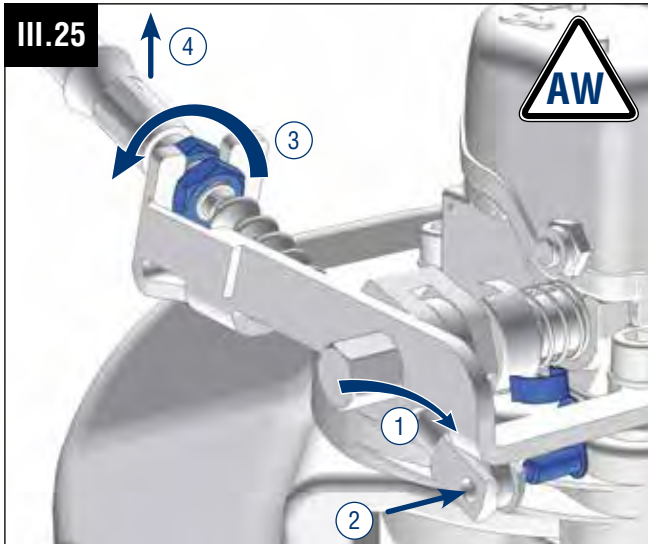
Demontage Schließfedern  
Dismantling of closing springs



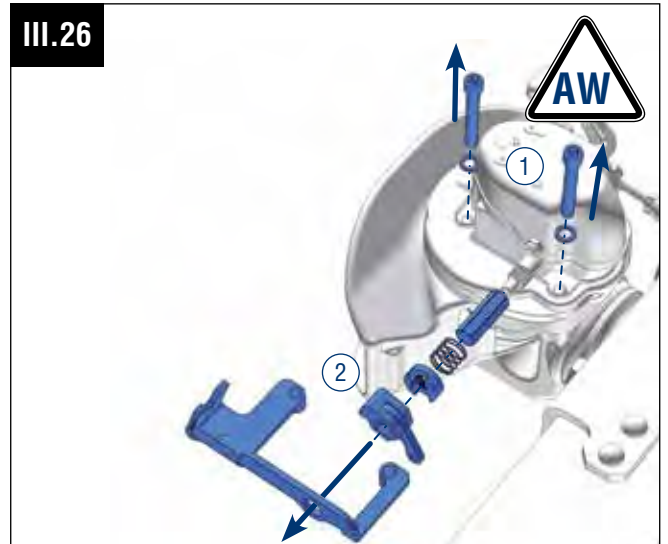
Demontage Kuppelbolzen  
Dismantling of coupling bolt



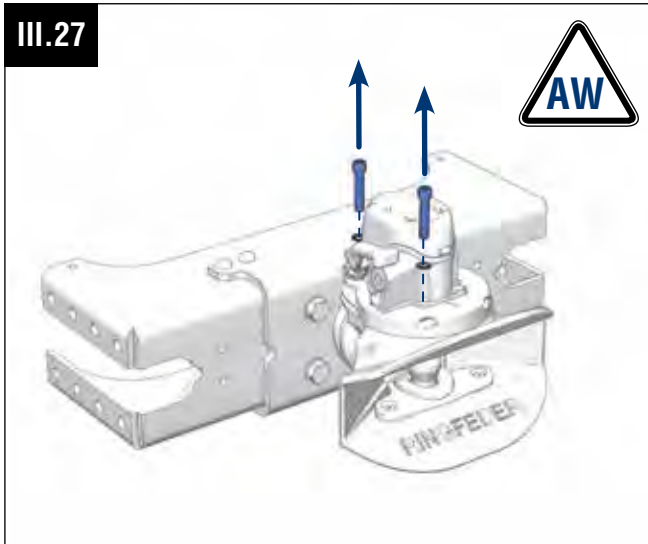
Demontage Handhebel, Demontage Sperrhebel  
Dismantling of hand lever, dismantling of locking lever



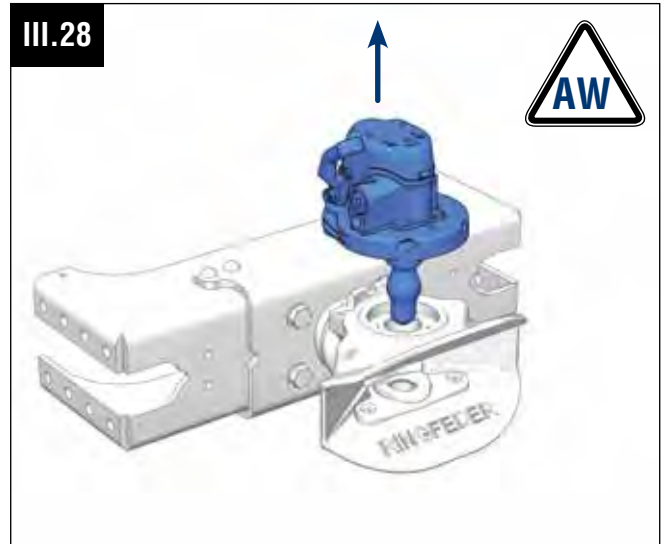
Seilzug lösen  
Release cable pull



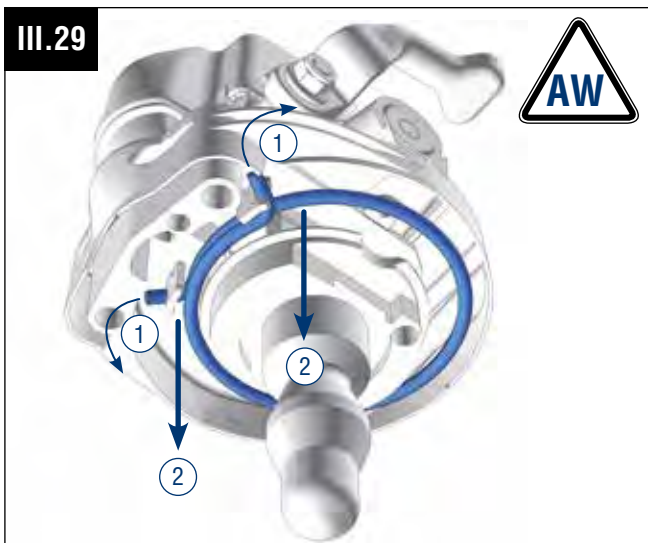
Demontage Gegenlager-/ Adaptersatz  
Dismantling of counter-bearing / adapter set



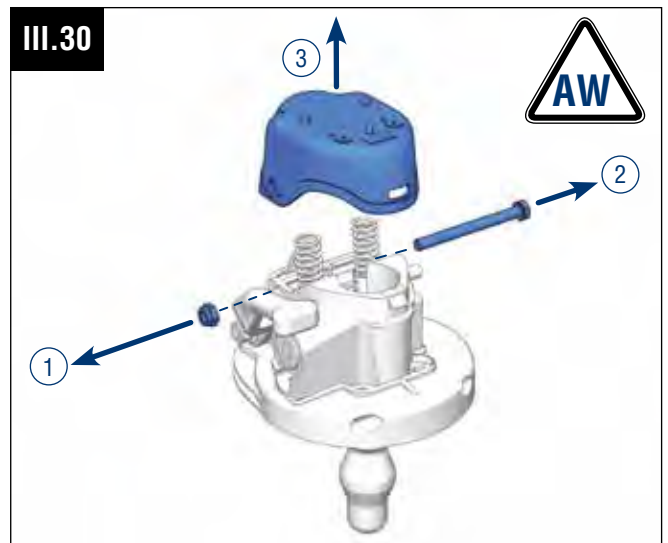
Demontage Kopfeinheit (1)  
Dismantling of head unit (1)



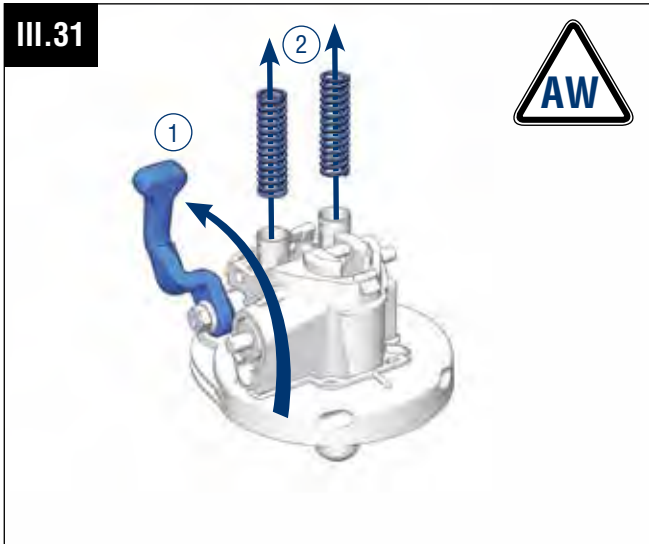
Demontage Kopfeinheit (2)  
Dismantling of head unit (2)



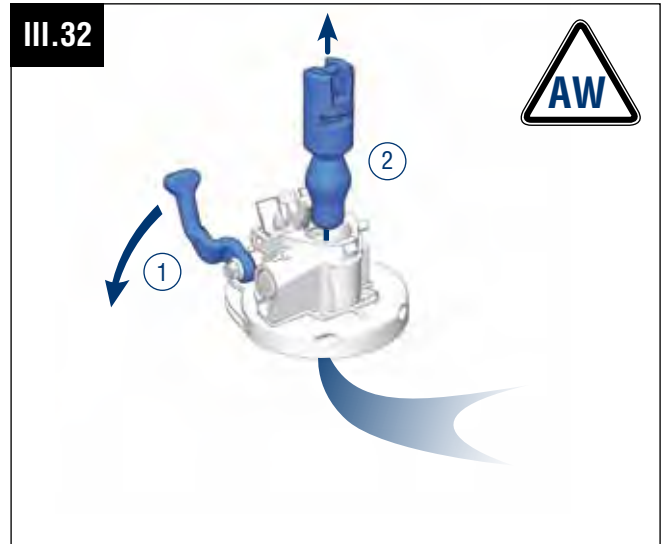
Demontage Rückstellfeder  
Dismantling of return springs



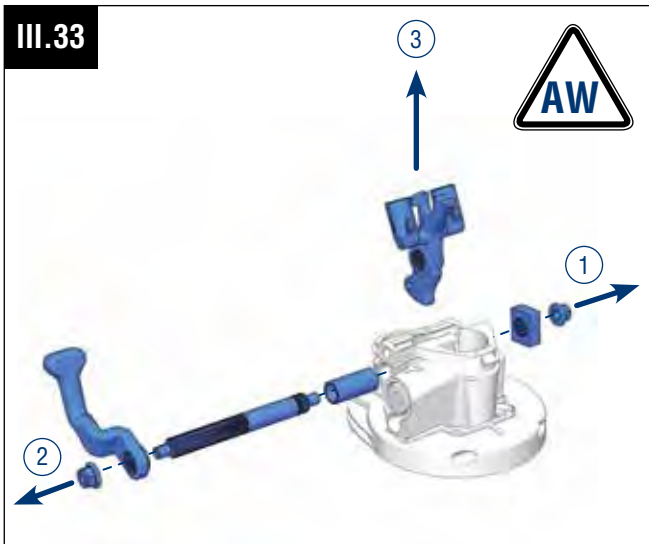
Demontage AW-Deckel  
Dismantling of AW cap



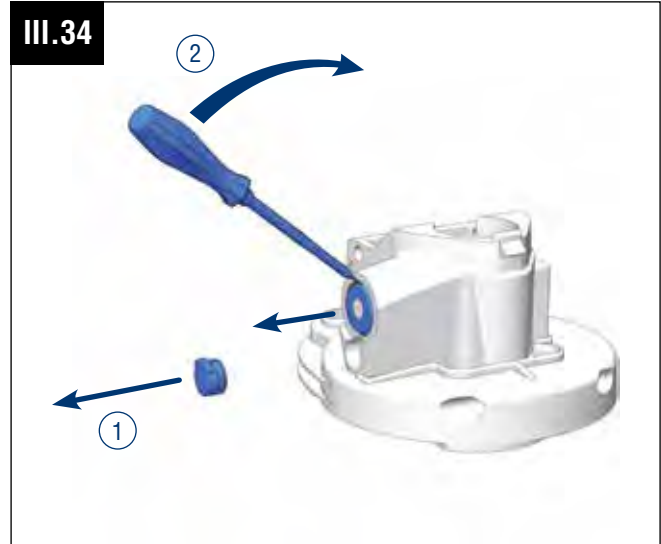
Demontage Schließfedern  
Dismantling of closing springs



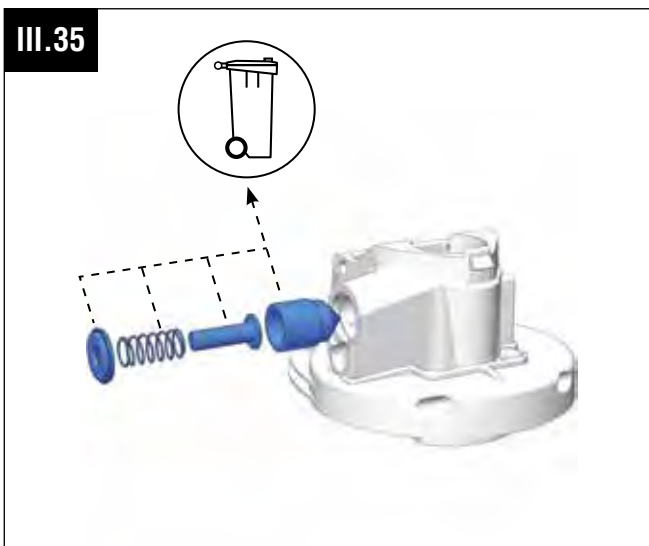
Demontage Kuppelbolzen  
Dismantling of coupling bolt



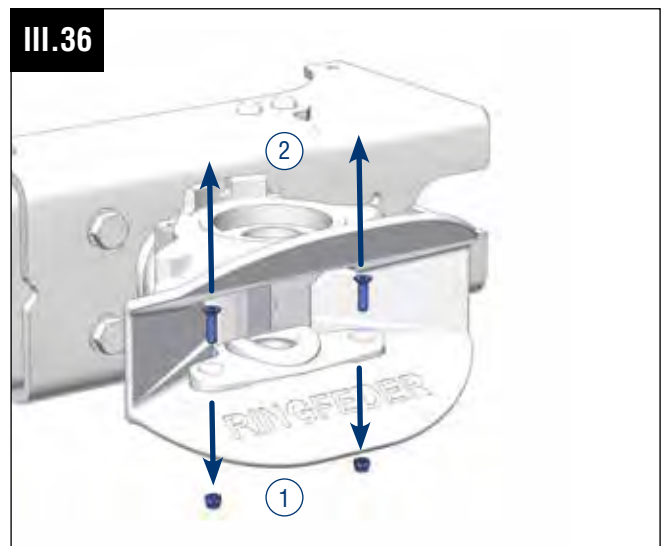
Demontage Handhebel, Demontage Sperrhebel  
Dismantling of hand lever, dismantling of locking lever



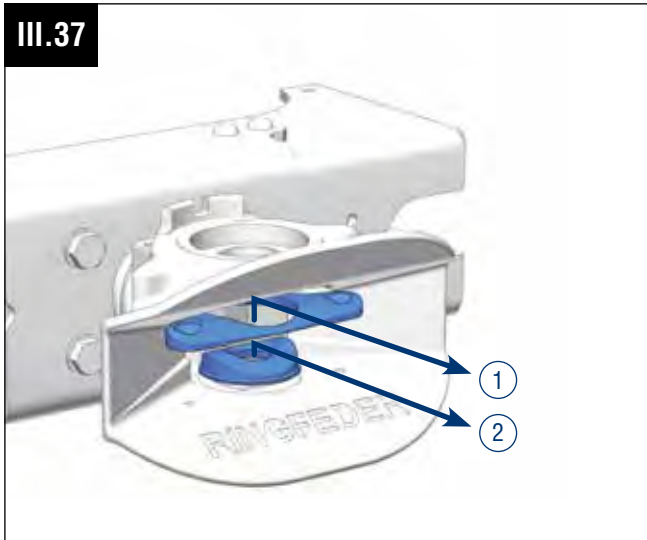
Demontage Sicherung (1)  
Dismantling of safety device (1)



Demontage Sicherung (2)  
Dismantling of safety device (2)



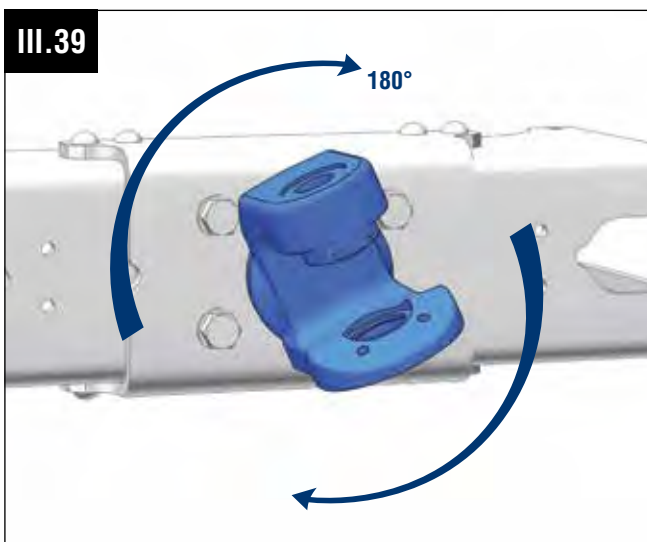
Demontage Verschleißplatte (1)  
Dismantling of wear plate (1)



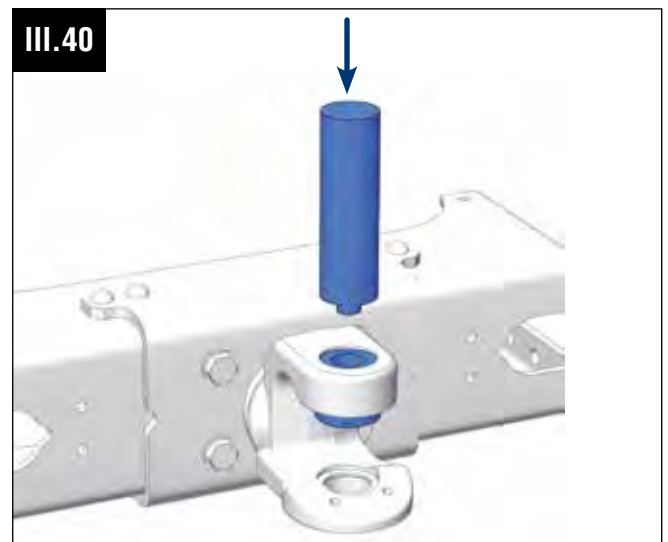
Demontage Verschleißplatte (2)  
Dismantling of wear plate (2)



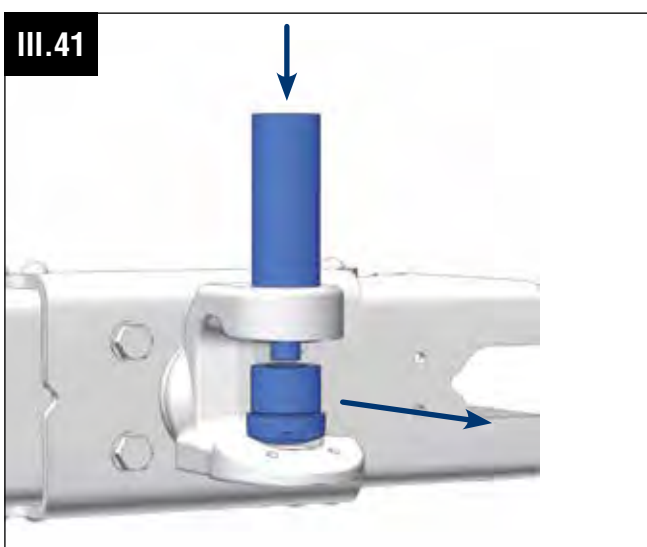
Demontage des Kuppelkörpers  
Dismantling of coupling assembly



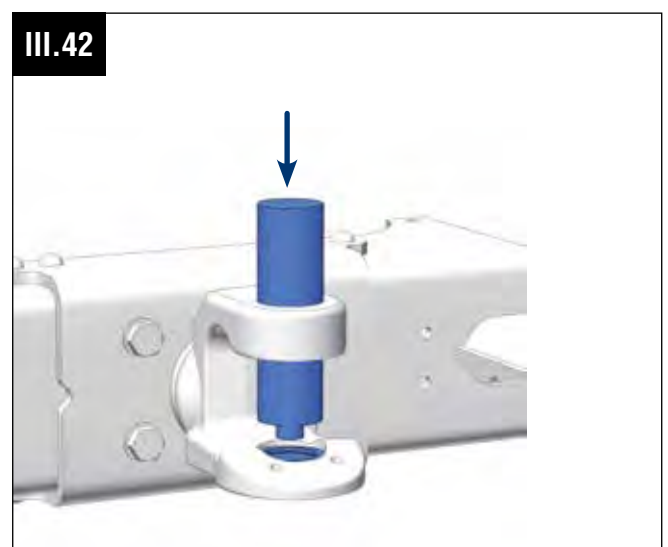
Drehung der Zugstange  
Turning of pull rod



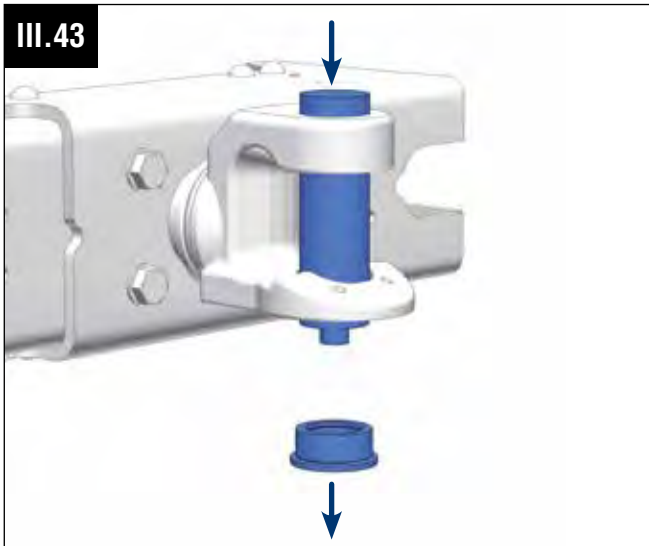
Demontage der unteren Führungsbuchse (1)  
Dismantling of the lower guide bushing (1)



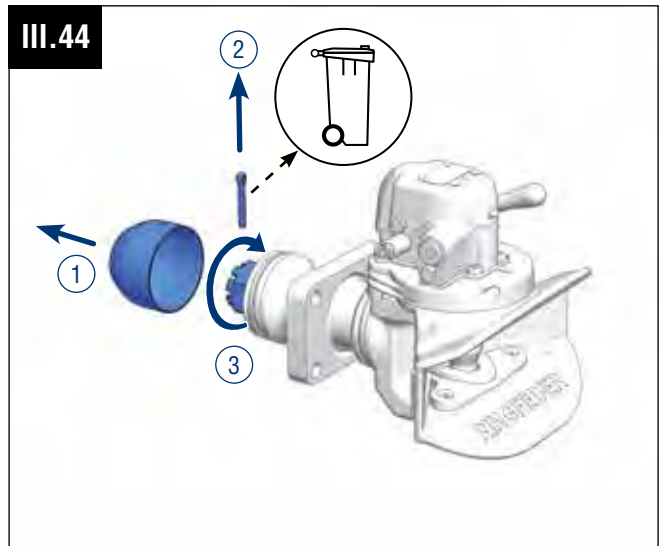
Demontage der unteren Führungsbuchse (2)  
Dismantling of the lower guide bushing (2)



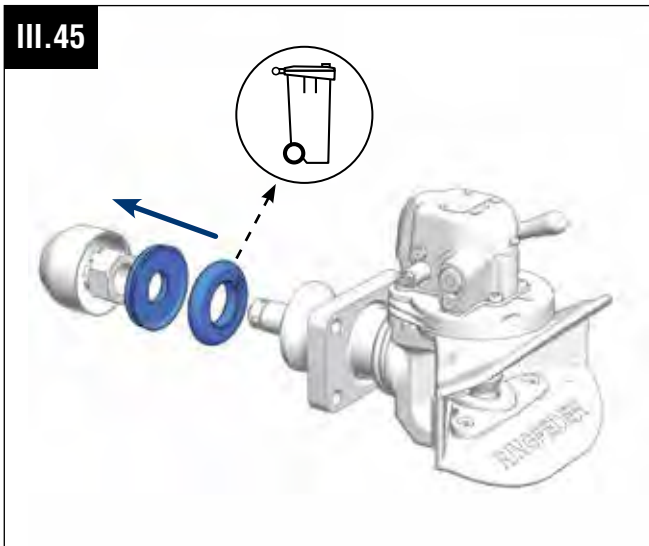
Demontage der oberen Führungsbuchse (1)  
Dismantling of the upper guide bushing (1)



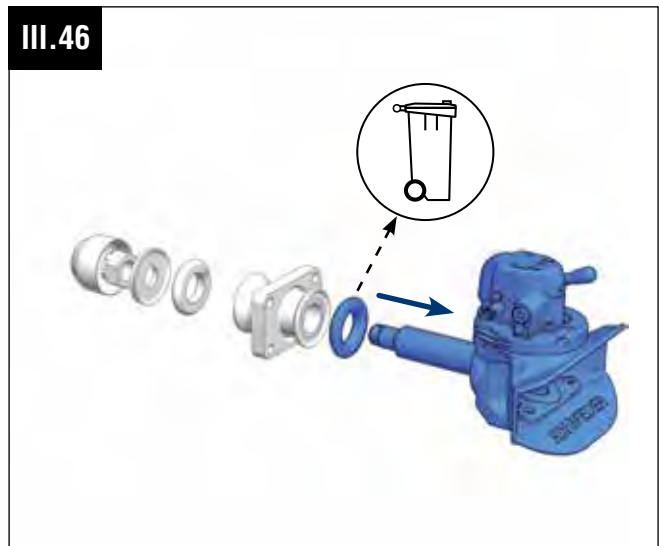
III.43  
Demontage der oberen Führungsbuchse (2)  
Dismantling of the upper guide bushing (2)



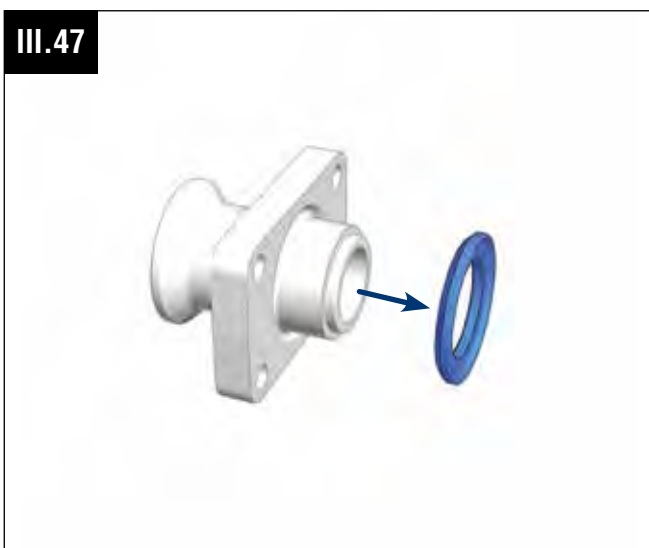
III.44  
Demontage der Gummifedern (1)  
Dismantling of the rubber springs (1)



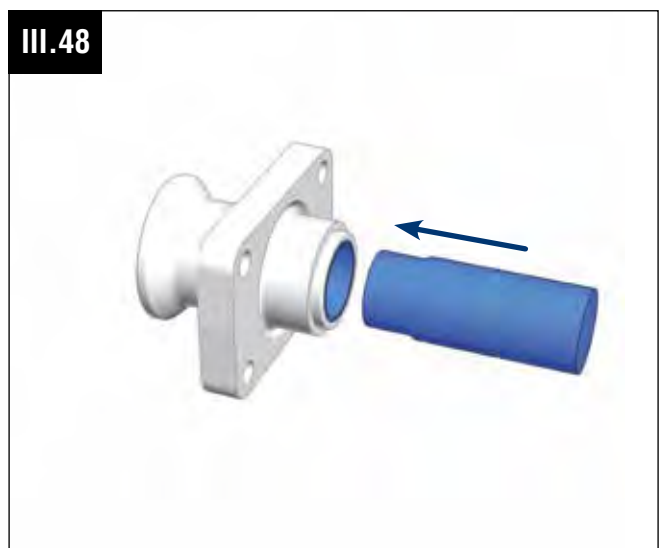
III.45  
Demontage der Gummifedern (2)  
Dismantling of the rubber springs (2)



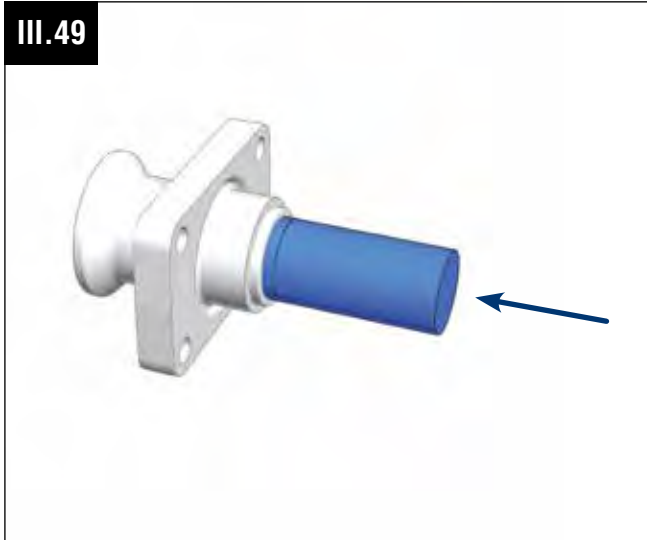
III.46  
Demontage der Gummifedern (3)  
Dismantling of the rubber springs (3)



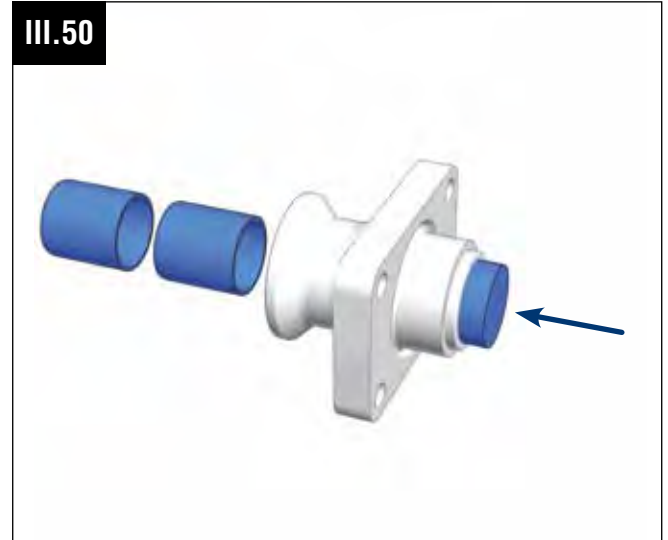
III.47  
Demontage der Lagerbuchsen / Stangenführung (1)  
Dismantling of bearing bushing/rod guidance system (1)



III.48  
Demontage der Lagerbuchsen / Stangenführung (2)  
Dismantling of bearing bushing/rod guidance system (2)



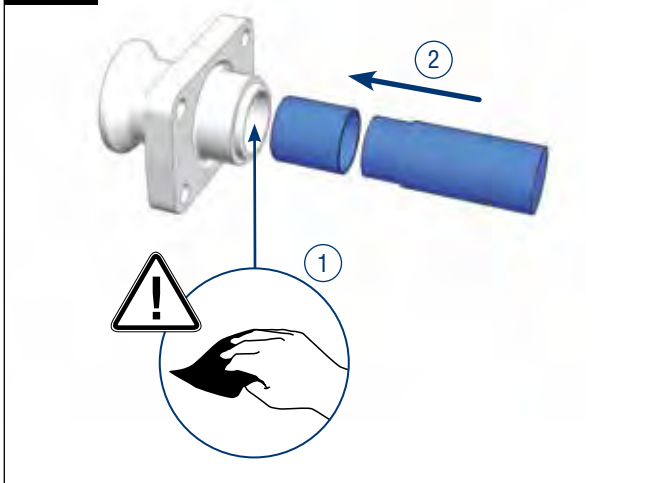
Demontage der Lagerbuchsen/Stangenführung (3)  
Dismantling of bearing bushing/rod guidance system (3)



Demontage der Lagerbuchsen/Stangenführung (4)  
Dismantling of bearing bushing/rod guidance system (4)

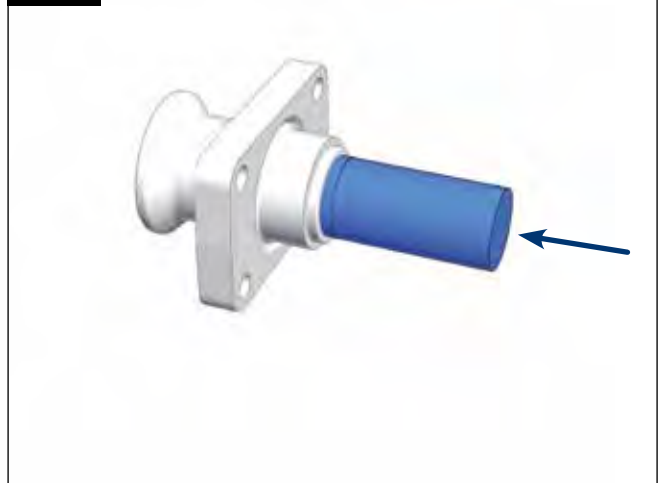


III.51



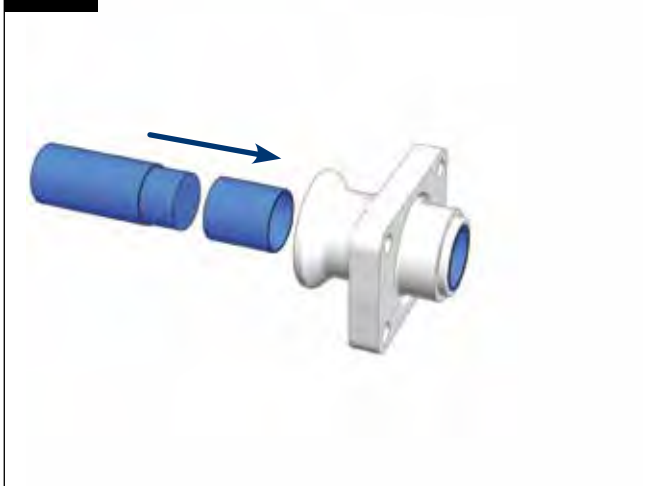
Montage der Lagerbuchsen/Stangenführung (1)  
Fitting of bearing bushing/rod guidance system (1)

III.52



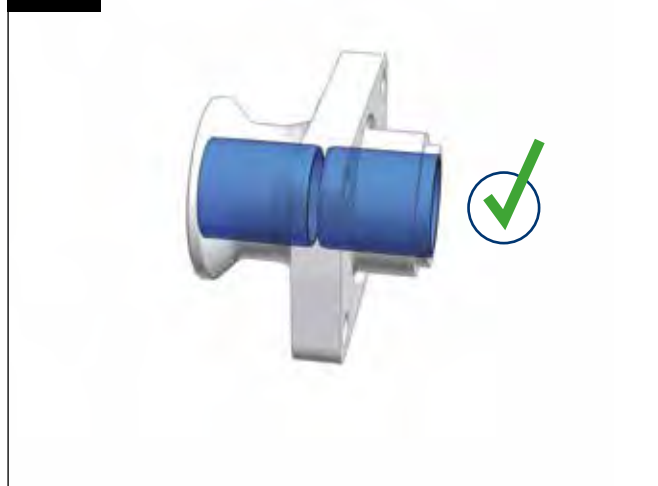
Montage der Lagerbuchsen/Stangenführung (2)  
Fitting of bearing bushing/rod guidance system (2)

III.53



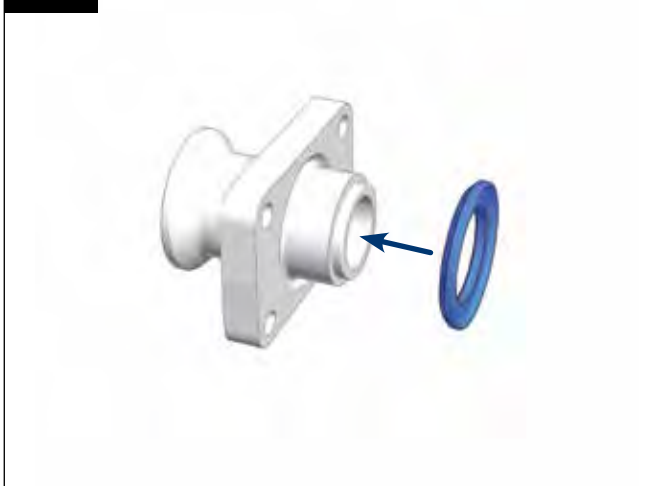
Montage der Lagerbuchsen/Stangenführung (3)  
Fitting of bearing bushing/rod guidance system (3)

III.54



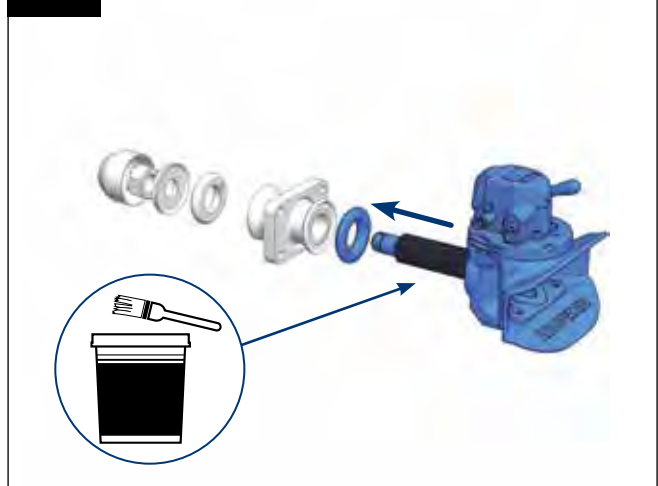
Montage der Lagerbuchsen/Stangenführung (4)  
Fitting of bearing bushing/rod guidance system (4)

III.55



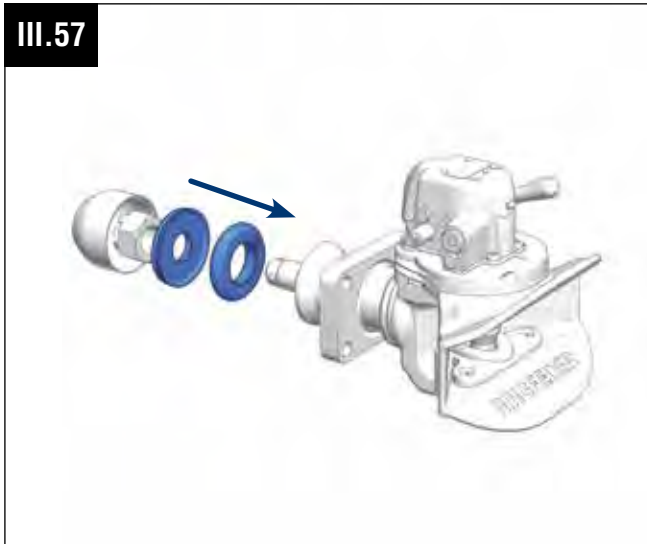
Montage der Lagerbuchsen/Stangenführung (5)  
Fitting of bearing bushing/rod guidance system (5)

III.56

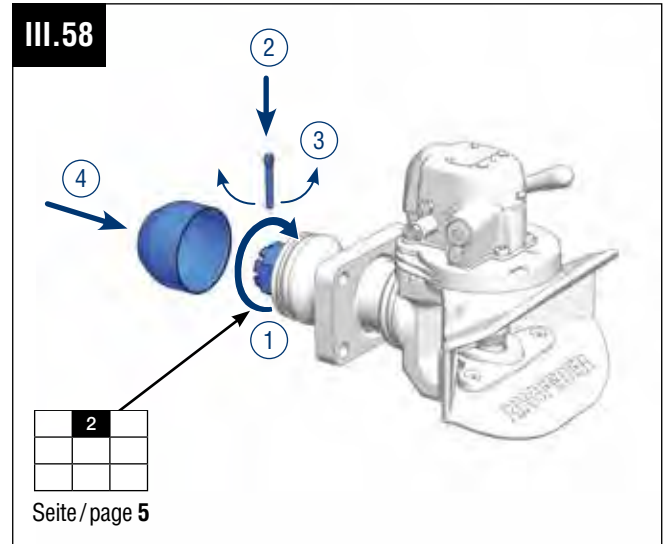


Montage der Gummifedern (1)  
Fitting of the rubber springs (1)



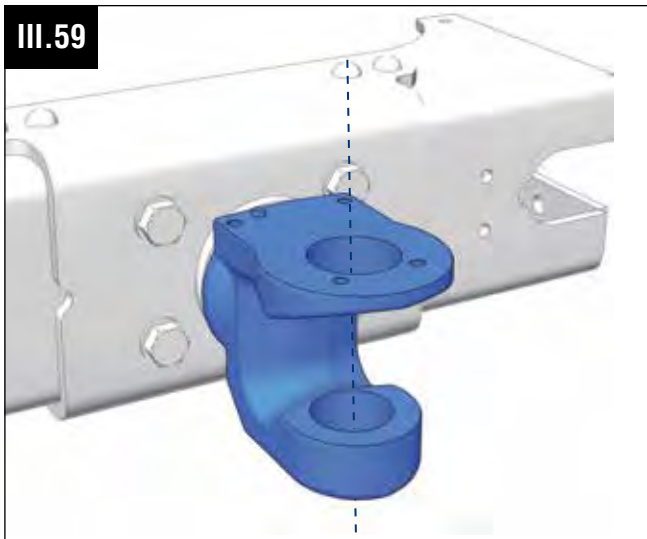


Montage der Gummifedern (2)  
Fitting of the rubber springs (2)



Montage der Gummifedern (3)  
Fitting of the rubber springs (3)

Seite / page 5



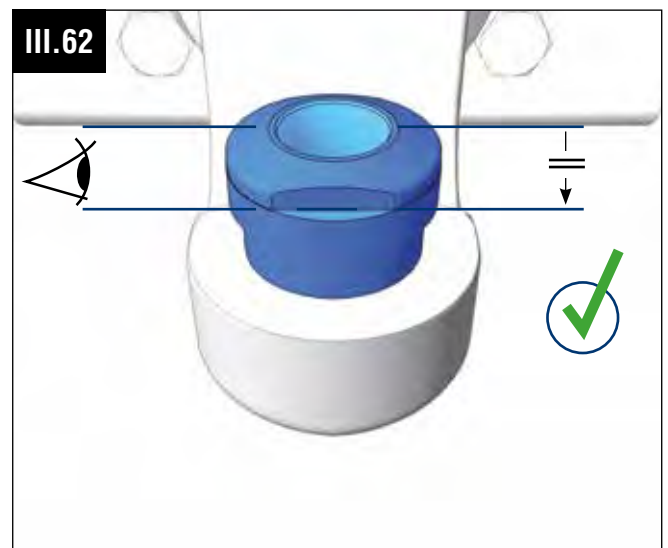
Position Zugstange  
Position of pull rod



Montage der unteren Führungsbuchse (1)  
Fitting of lower guide bushing (1)



Montage der unteren Führungsbuchse (2)  
Fitting of lower guide bushing (2)



Montage der unteren Führungsbuchse (3)  
Fitting of lower guide bushing (3)



III.63



Montage der unteren Führungsbuchse (4)  
Fitting of lower guide bushing (4)

III.64



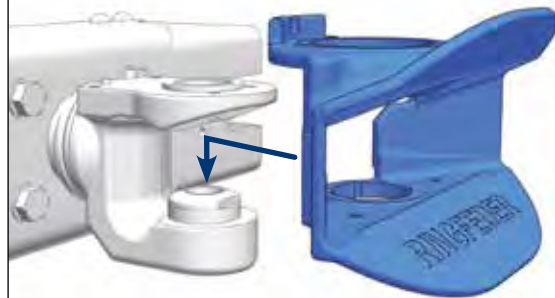
Montage der oberen Führungsbuchse (1)  
Fitting of the upper guide bushing (1)

III.65



Montage der oberen Führungsbuchse (2)  
Fitting of the upper guide bushing (2)

III.66



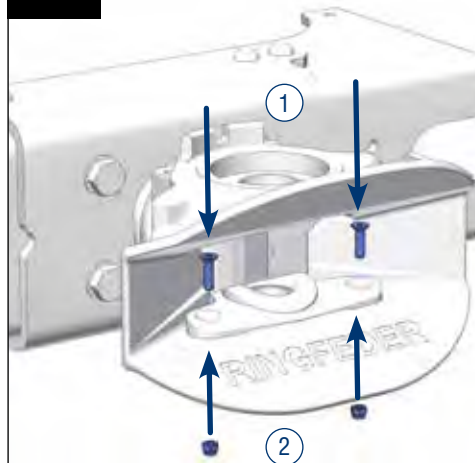
Montage des Kuppelkörpers  
Fitting of the coupling assembly

III.67



Montage Verschleißplatte (1)  
Fitting of wear plate (1)

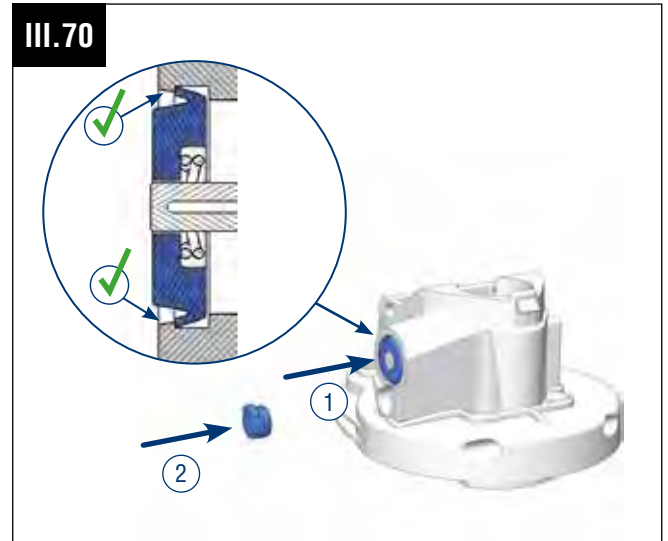
III.68



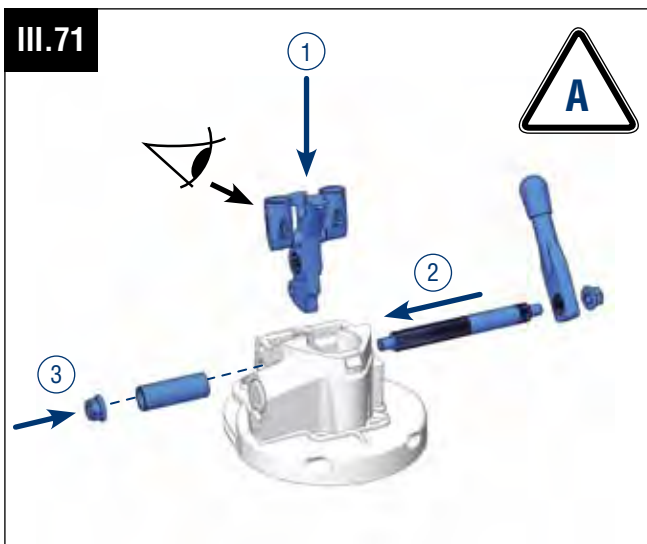
Montage Verschleißplatte (2)  
Fitting of wear plate (2)



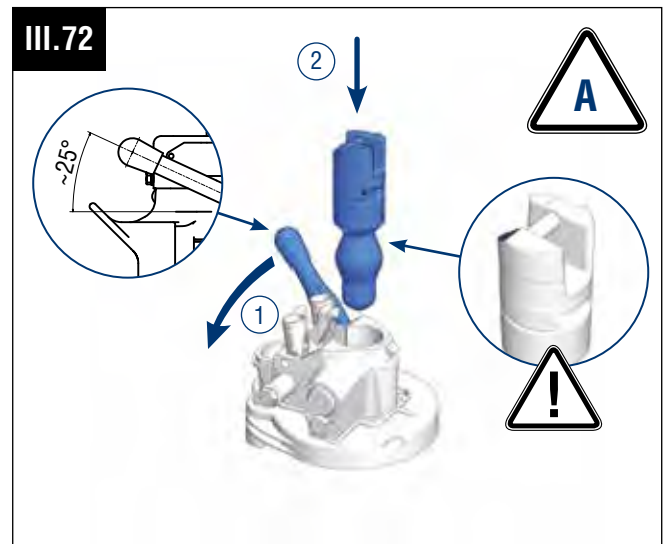
Montage Sicherung (1)  
Fitting of safety device (1)



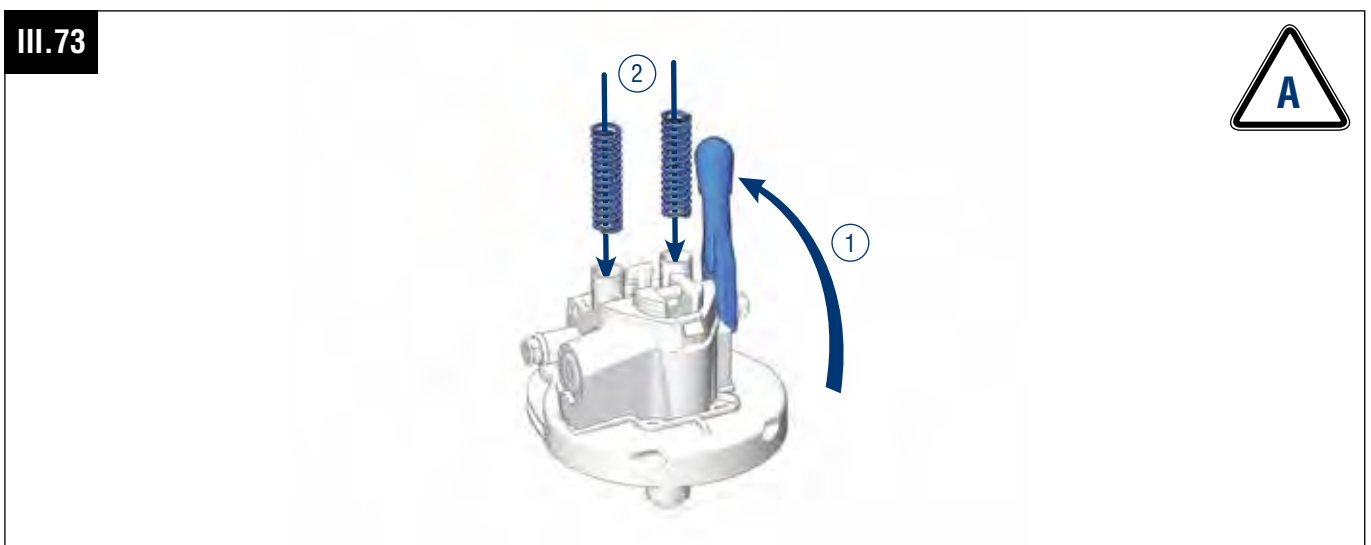
Montage Sicherung (2)  
Fitting of safety device (2)



Montage Handhebel, Montage Sperrhebel  
Fitting of hand lever, fitting of locking level



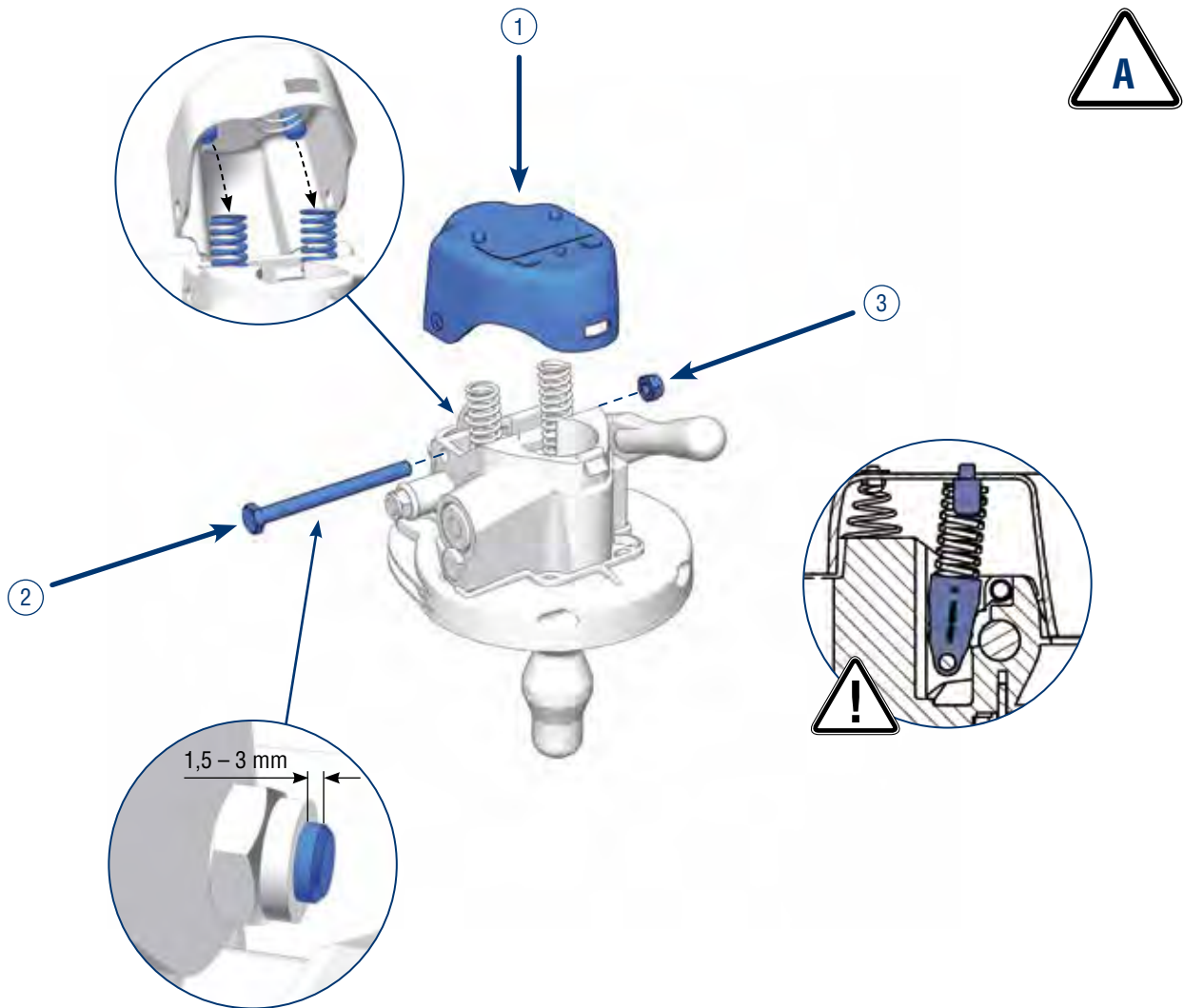
Montage Kuppelbolzen  
Fitting of coupling bolt



Montage Schließfedern  
Fitting of closing springs

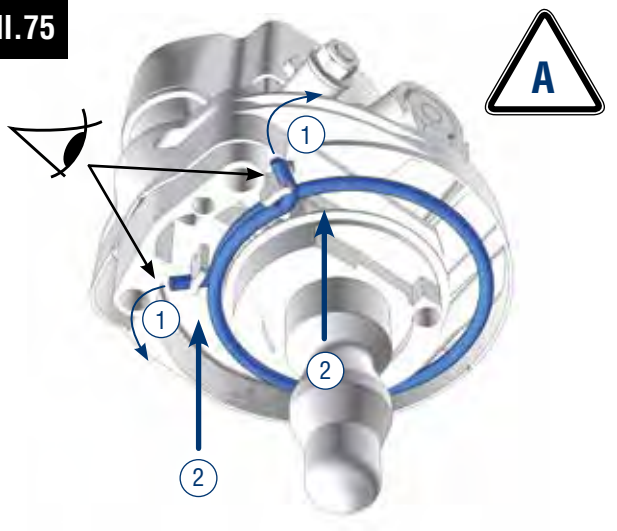


III.74



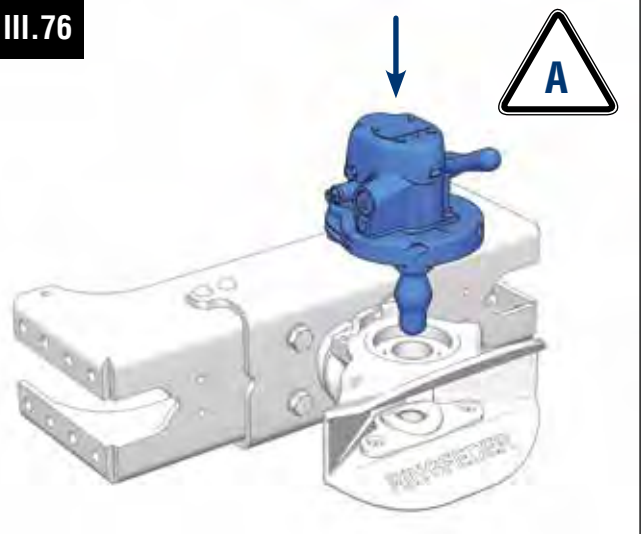
Montage Abschlussdeckel  
Fitting of end cap

III.75

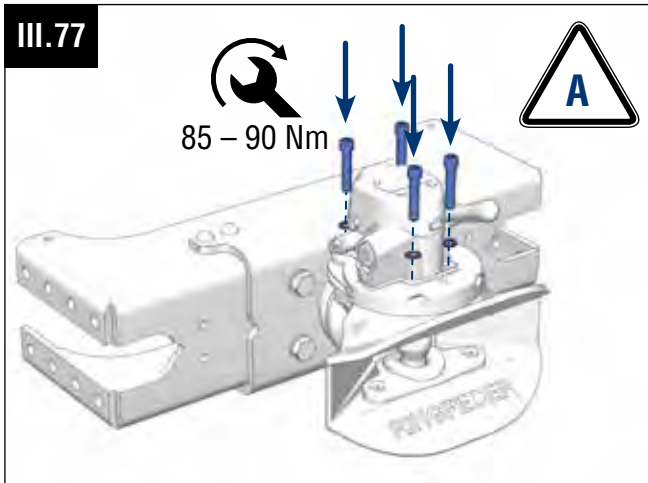


Montage Rückstellfeder  
Fitting of return springs

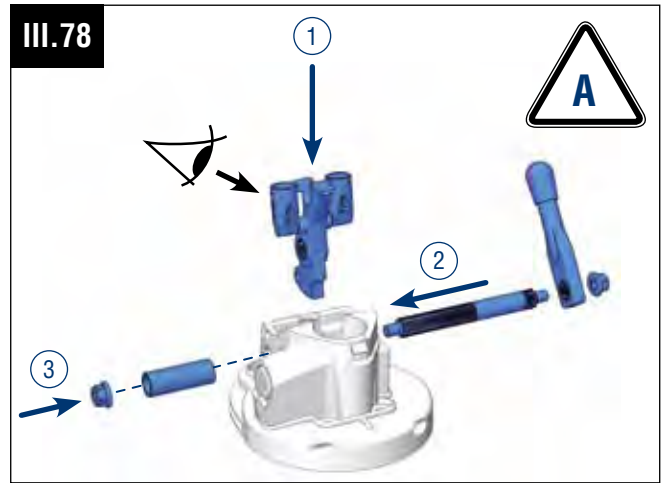
III.76



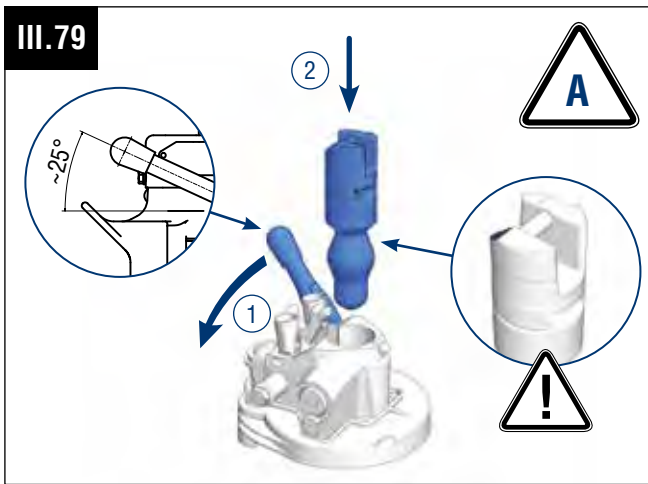
Montage Kopfeinheit (1)  
Fitting of head unit (1)



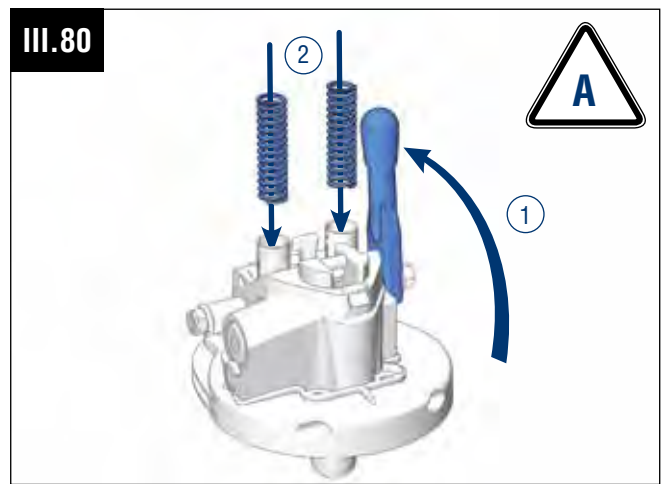
Montage Kopfeinheit (2)  
Fitting of head unit (2)



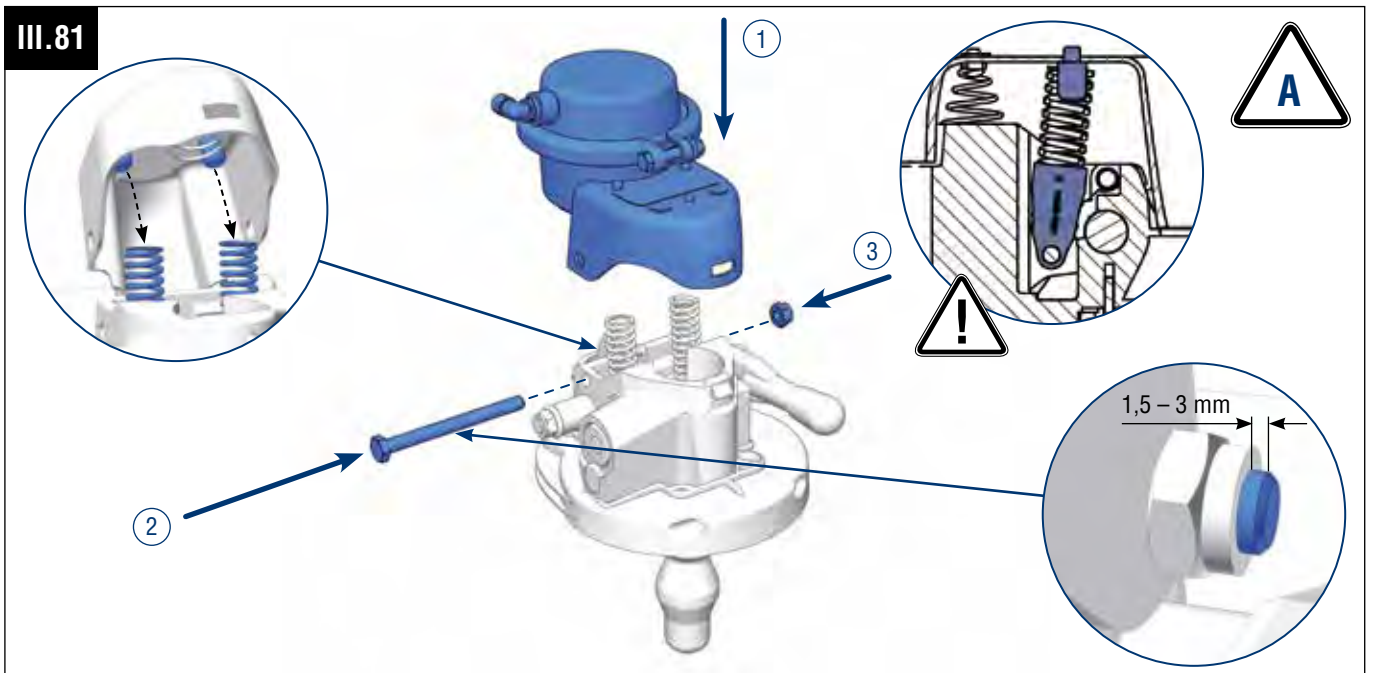
Montage Handhebel, Montage Sperrhebel  
Fitting of hand lever, fitting of locking lever



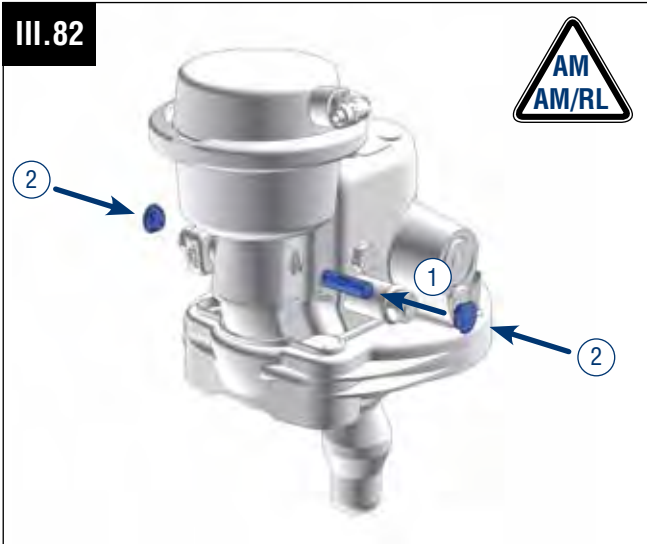
Montage Kuppelbolzen  
Fitting of coupling bolt



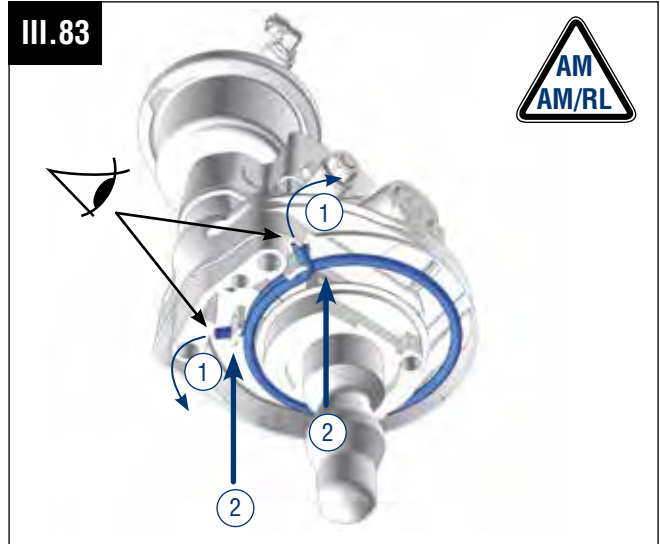
Montage Schließfedern  
Fitting of closing springs



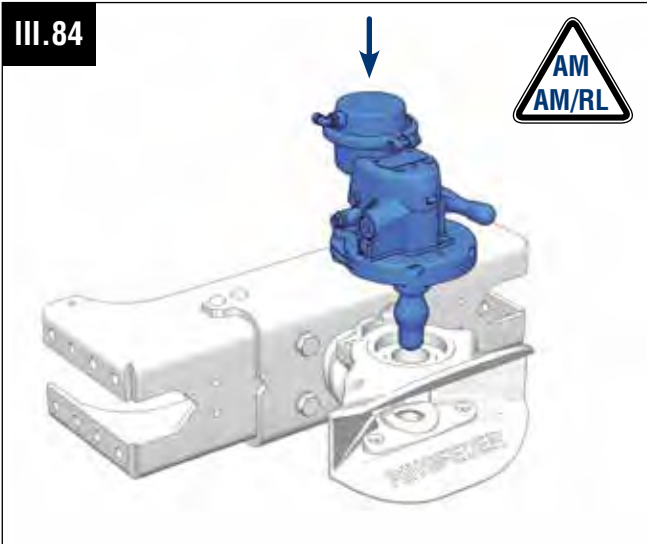
Montage AM-Deckel  
Fitting of AM cap



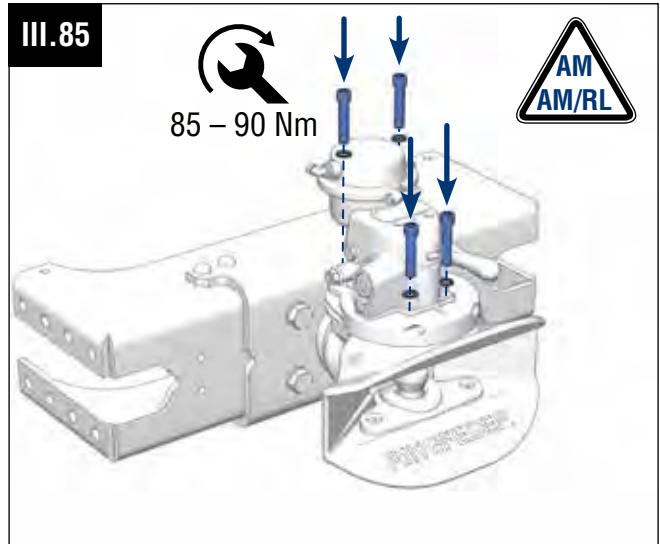
Montage Spiralspannstift  
Fitting of spiral pin



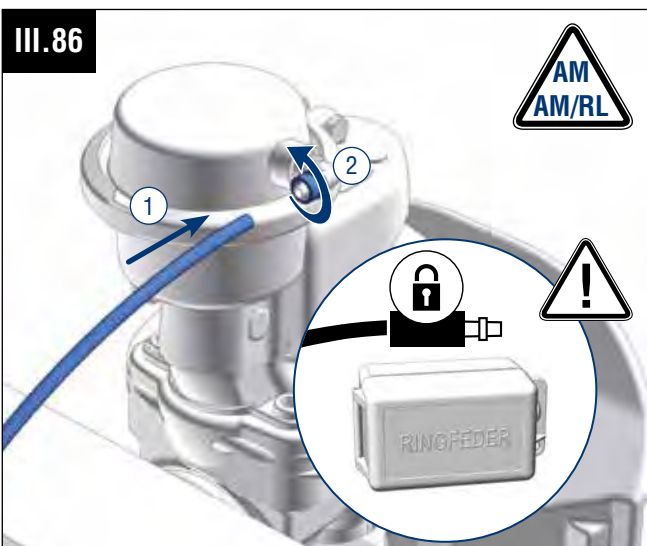
Montage Rückstellfedern  
Fitting of return springs



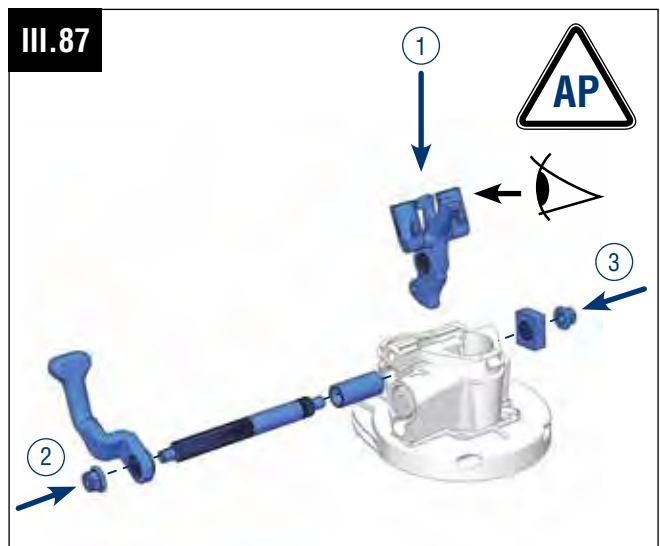
Montage Kopfeinheit (1)  
Fitting of head unit (1)



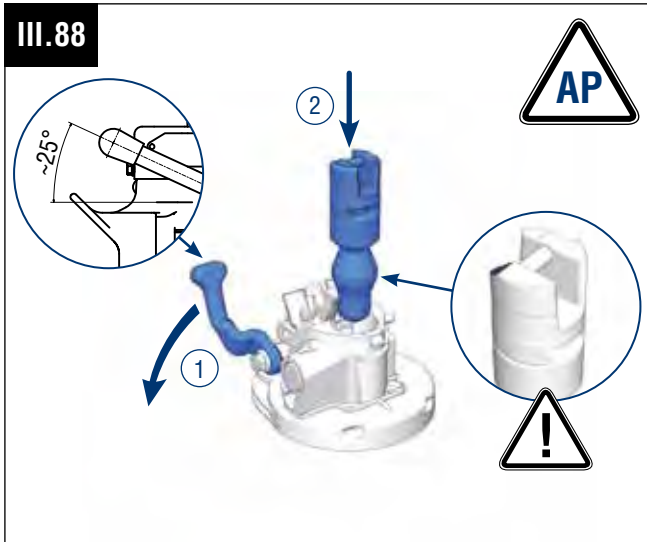
Montage Kopfeinheit (2)  
Fitting of head unit (2)



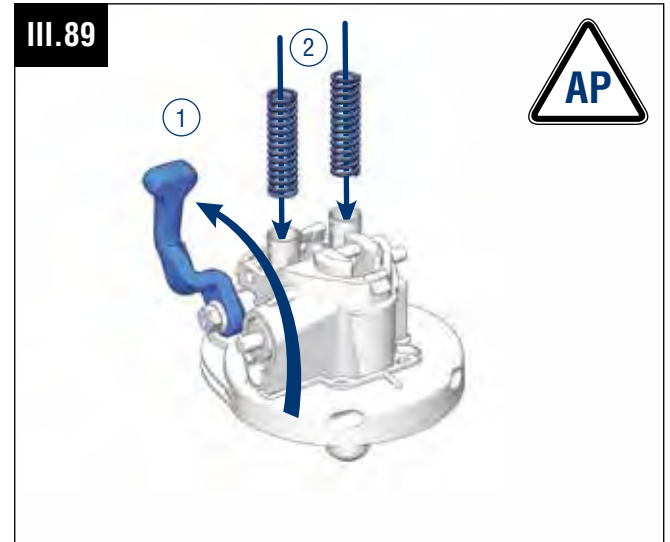
Montage Kopfeinheit (3)  
Fitting of head unit (3)



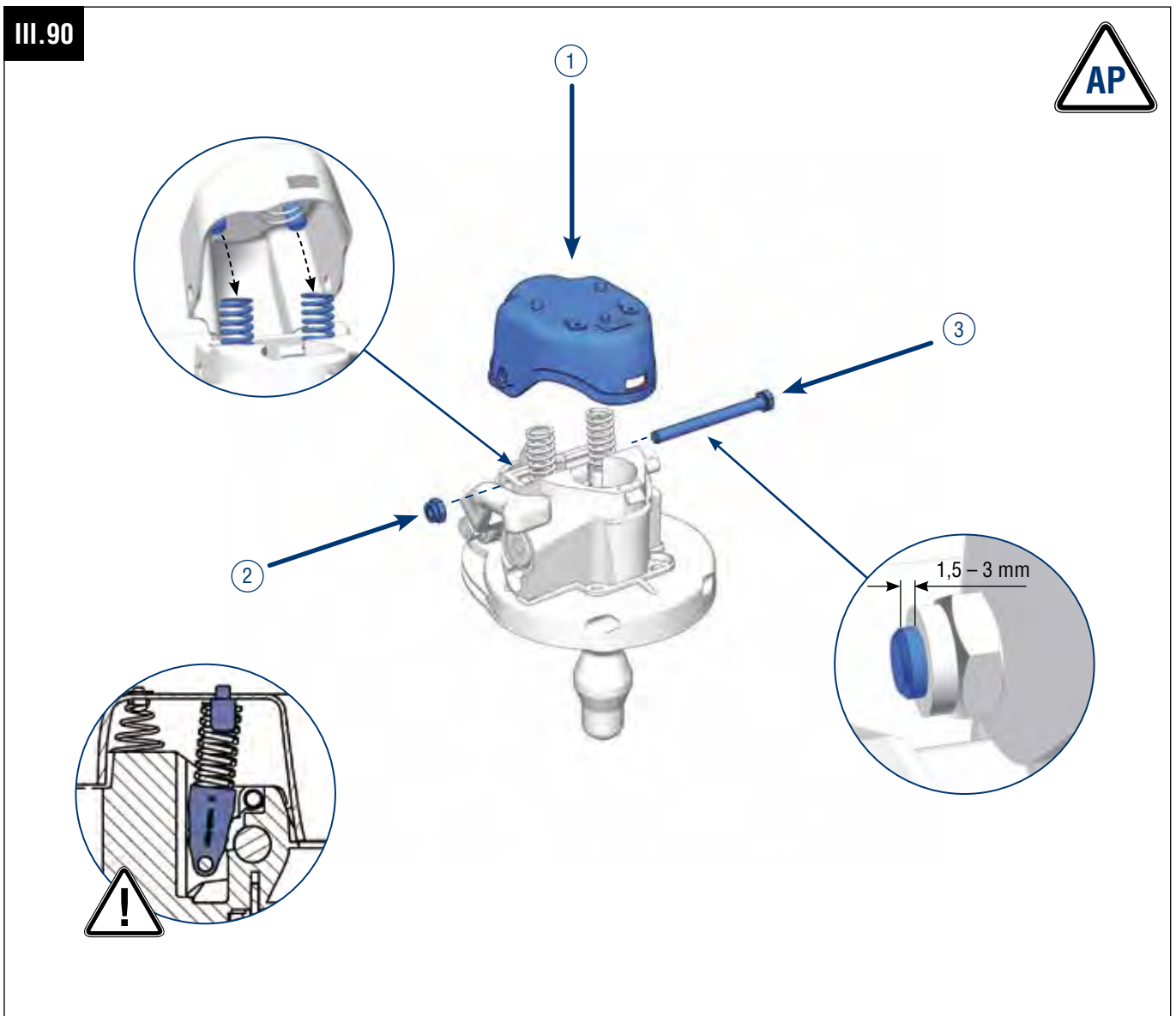
Montage Handhebel, Montage Sperrhebel  
Fitting of hand lever, fitting of locking lever



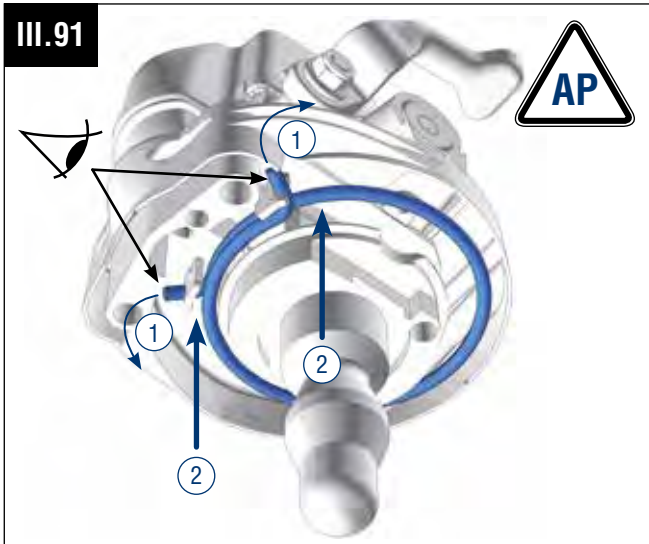
Montage Kuppelbolzen  
Fitting of coupling bolt



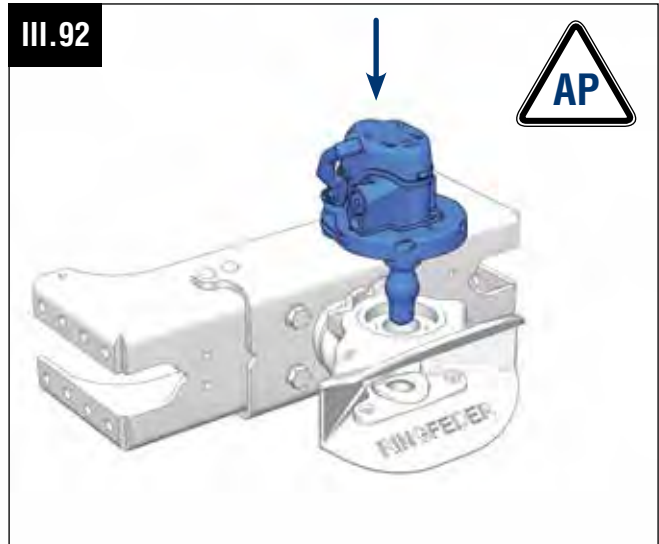
Montage Schließfedern  
Fitting of closing springs



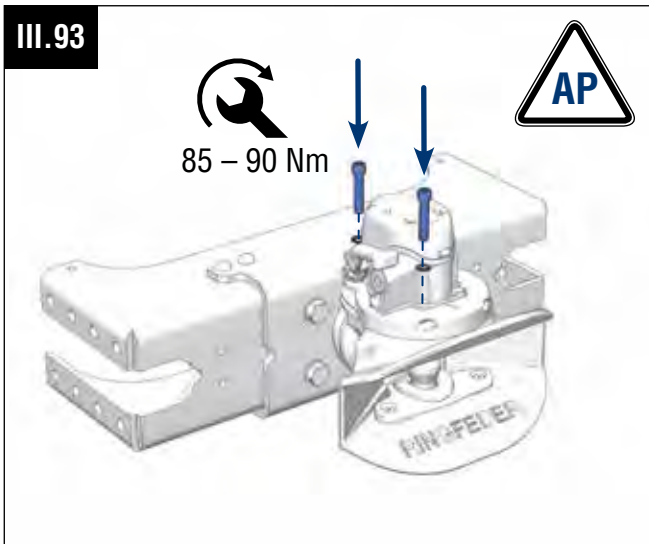
Montage AP-Deckel  
Fitting of AP cap



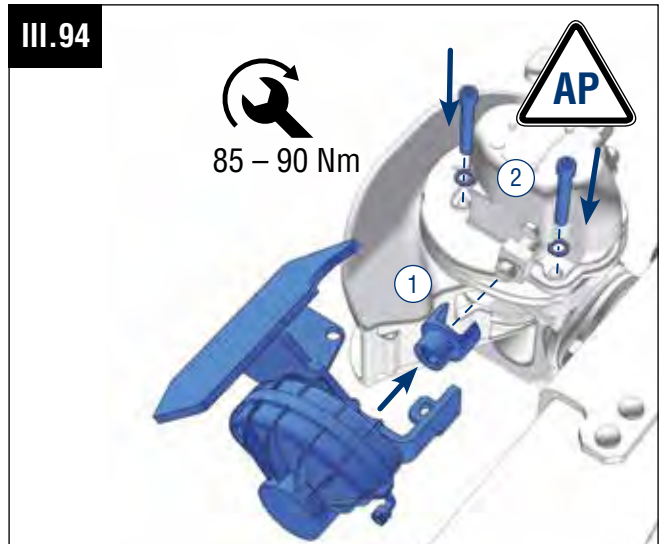
Montage Rückstellfeder  
Fitting of return springs



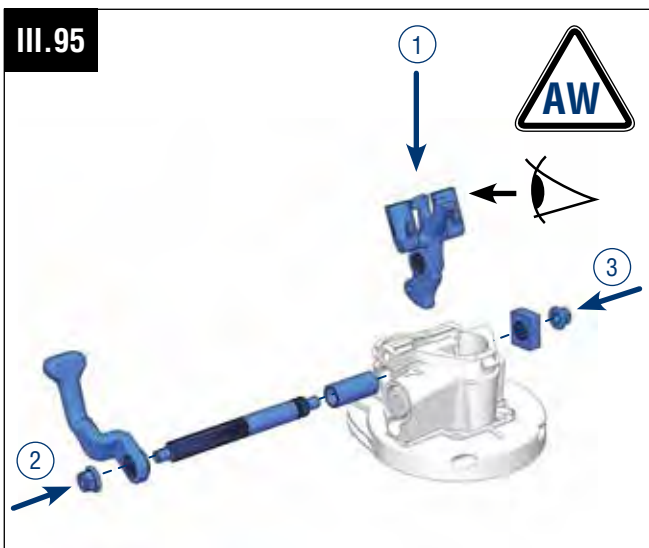
Montage Kopfeinheit (1)  
Fitting of head unit (1)



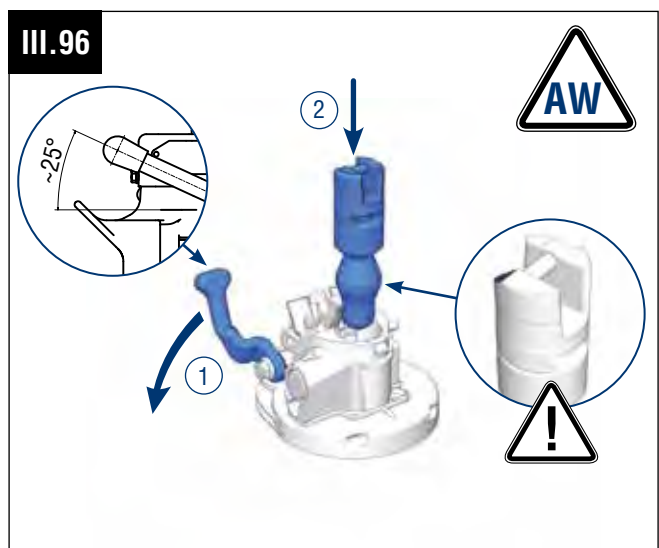
Montage Kopfeinheit (2)  
Fitting of head unit (2)



Montage Power Actuator  
Fitting of power actuator

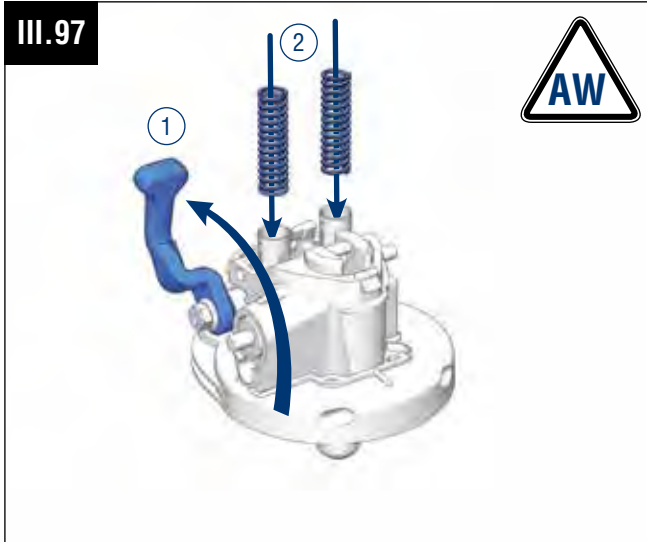


Montage Handhebel, Montage Sperrhebel  
Fitting of hand lever, fitting of locking lever

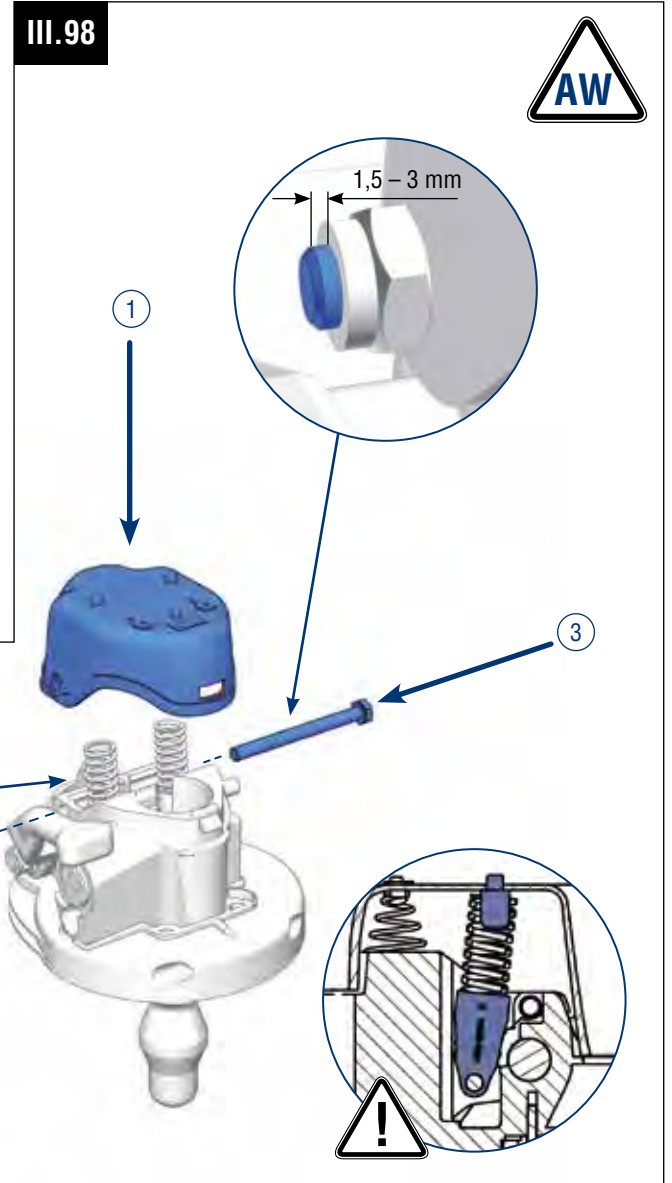


Montage Kuppelbolzen  
Fitting of coupling bolt

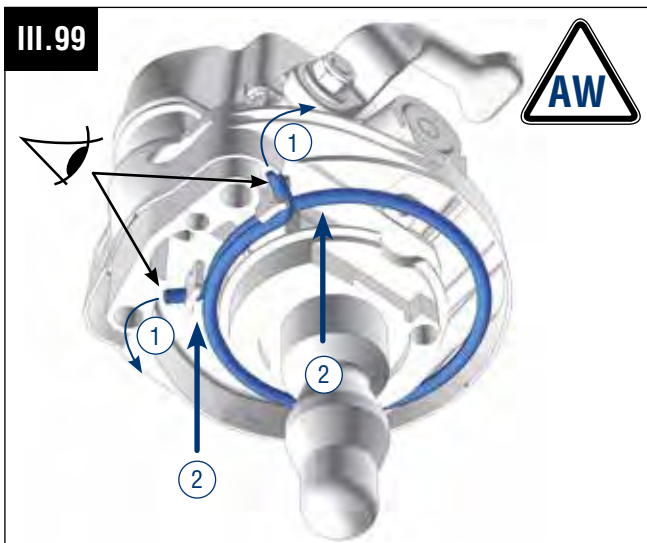




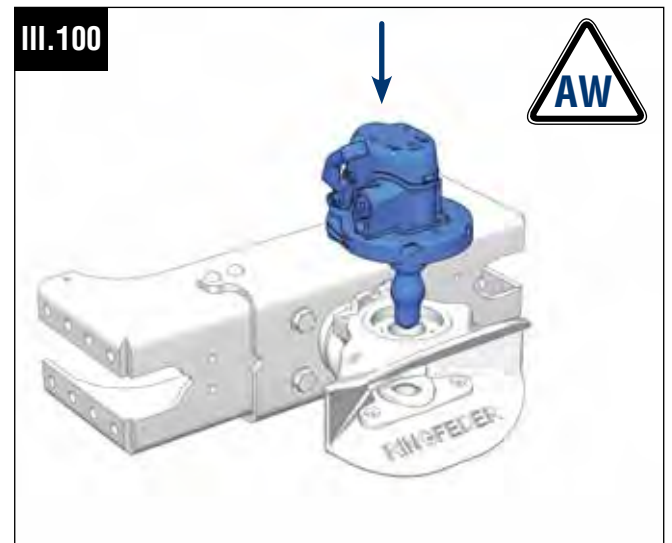
Montage Schließfedern  
Fitting of closing springs



Montage AP-Deckel  
Fitting of AP cap



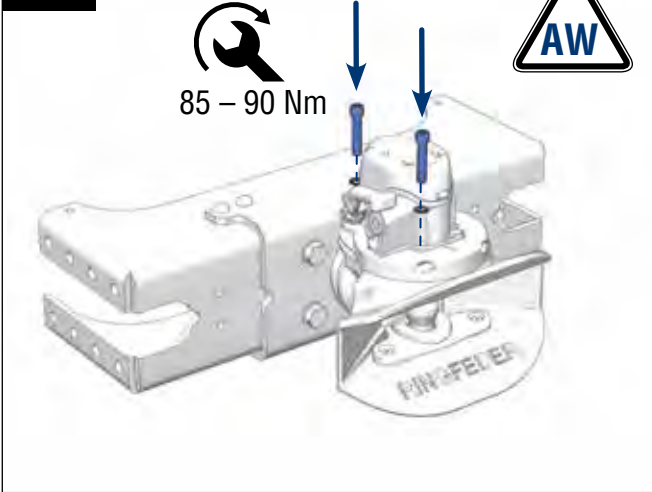
Montage Rückstellfeder  
Fitting of return springs



Montage Kopfeinheit (1)  
Fitting of head unit (1)

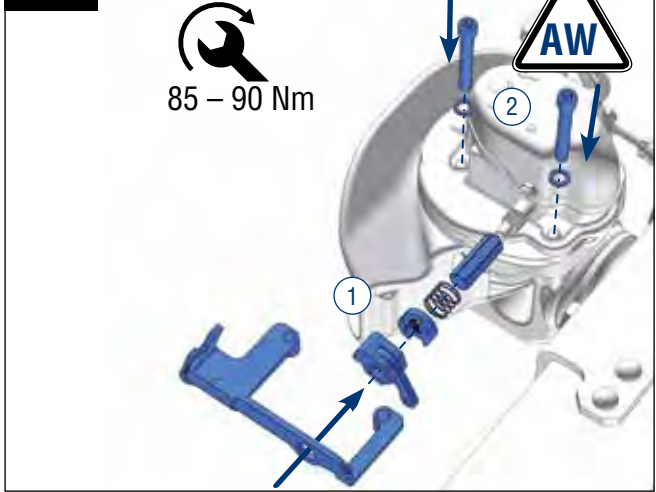


III.101



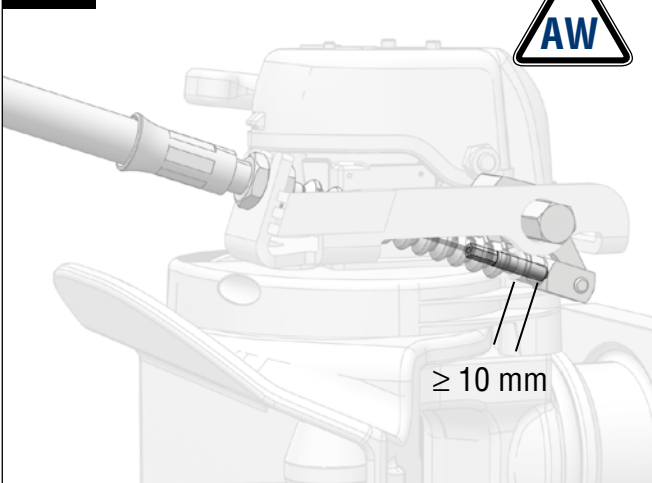
Montage Kopfeinheit (2)  
Fitting of head unit (2)

III.102



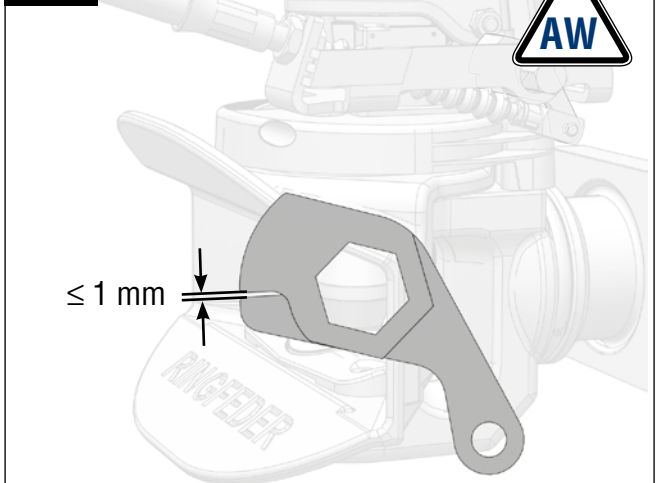
Montage Gegenlager-/ Adaptersatz  
Fitting of counter-bearing / adapter set

III.103



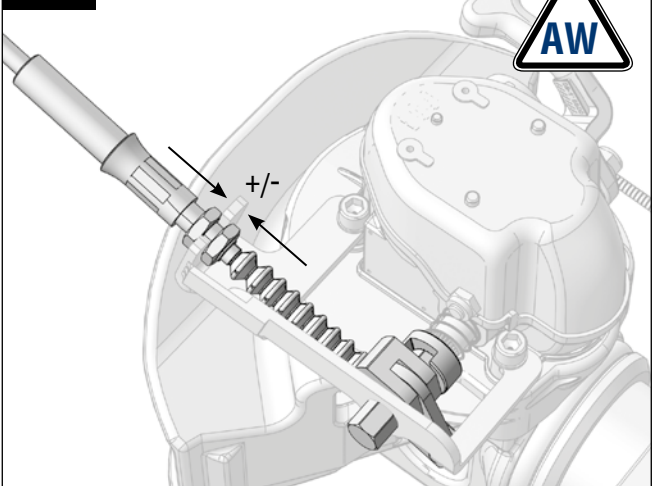
Justage (1)  
Adjustment (1)

III.104



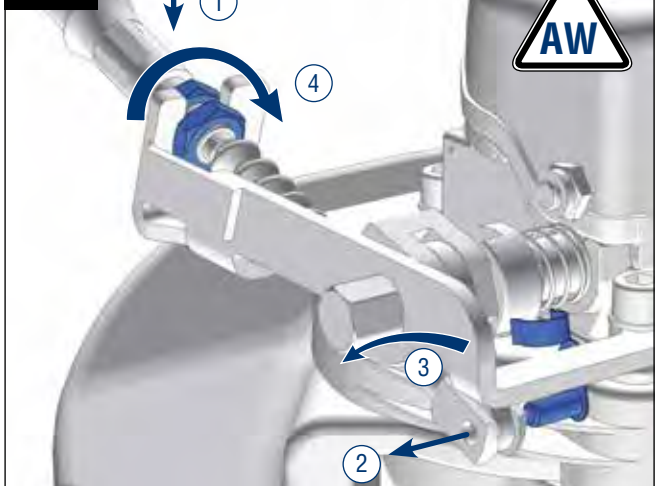
Justage (2)  
Adjustment (2)

III.105



Justage (3)  
Adjustment (3)

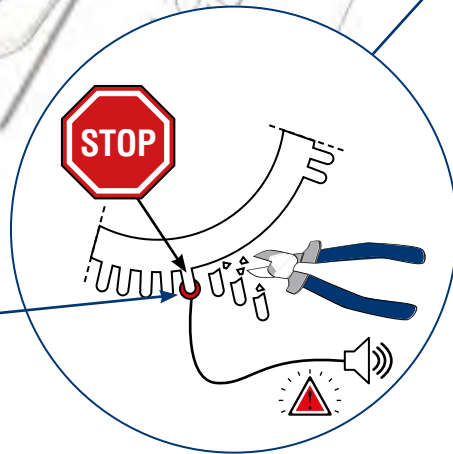
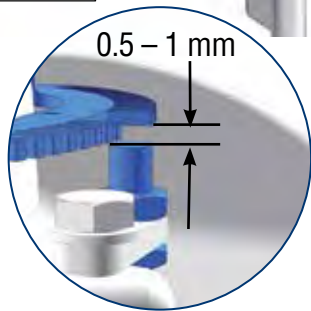
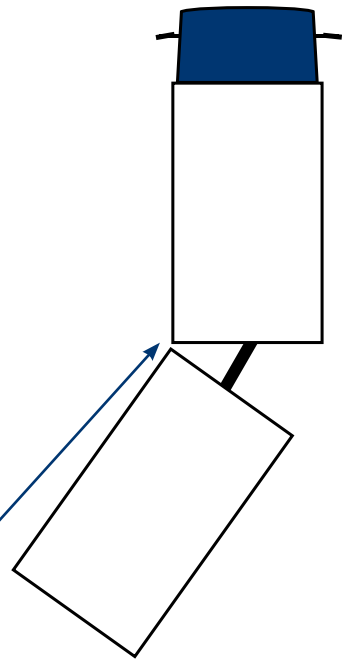
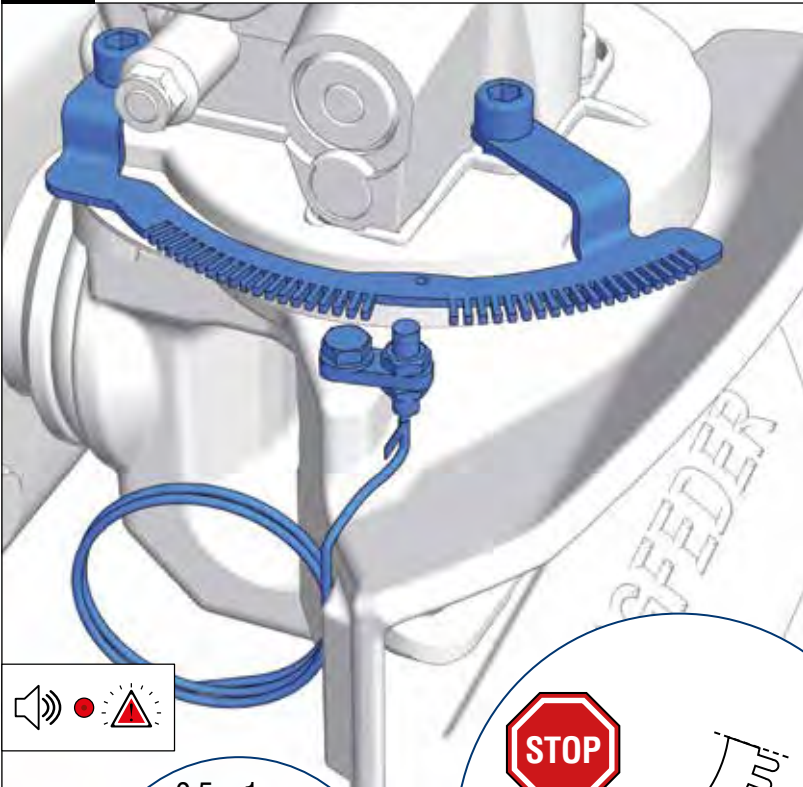
III.106



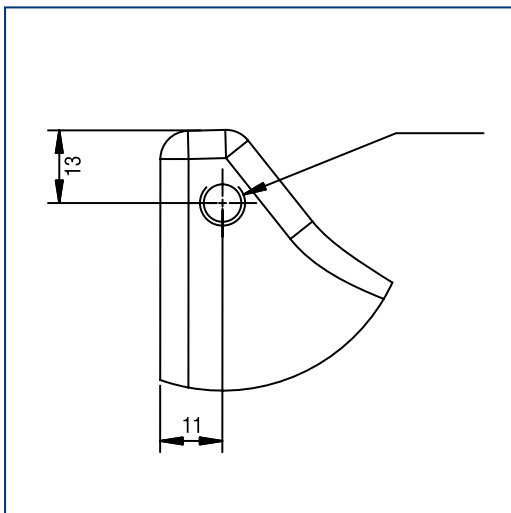
Seilzug anbringen  
Attach rope pull



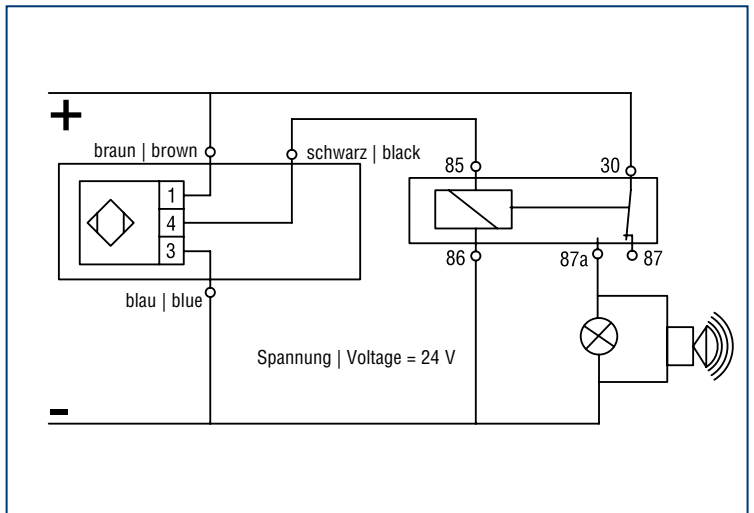
**III.107 Schwenkwinkelwarnanzeige | Collision Alert**



Einstellung der Schwenkwinkelwarnanzeige  
Adjustment of the Collision Alert

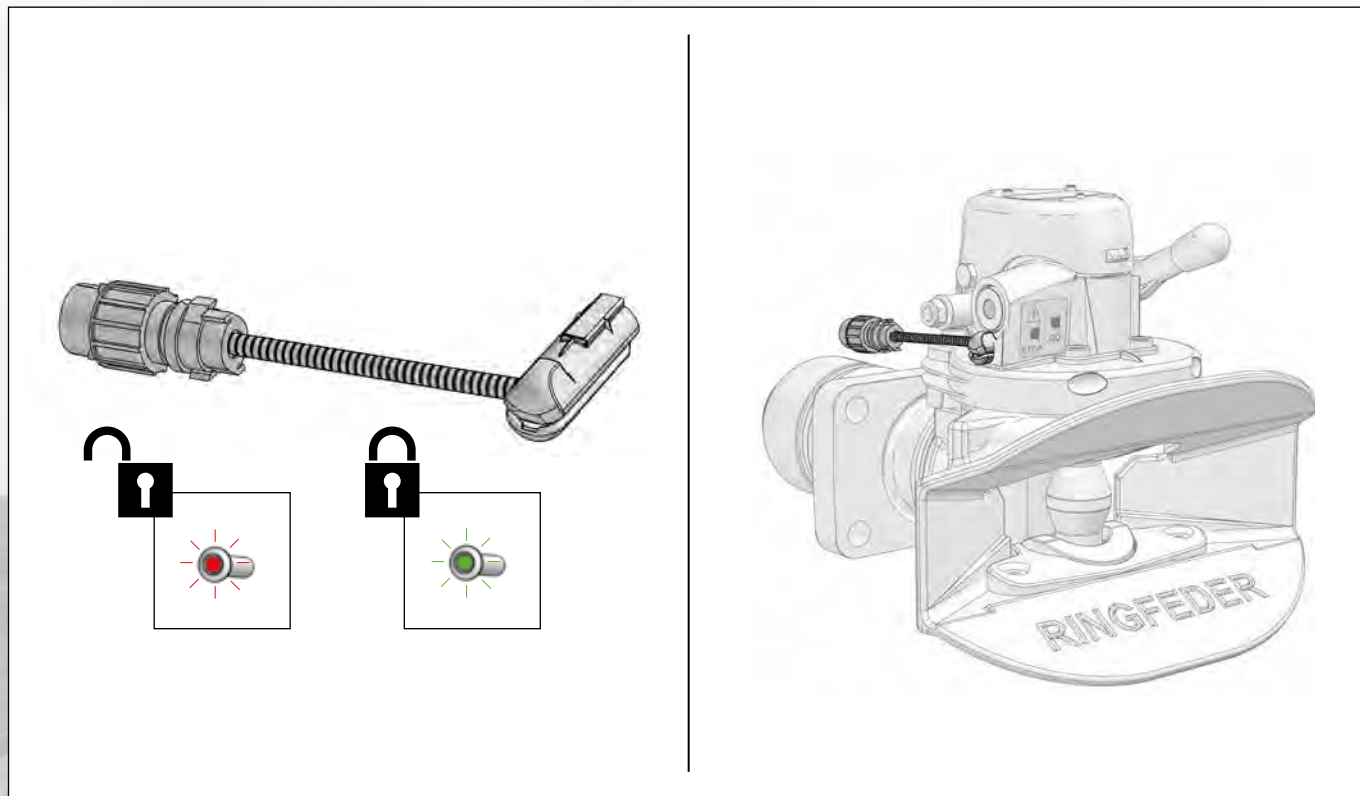


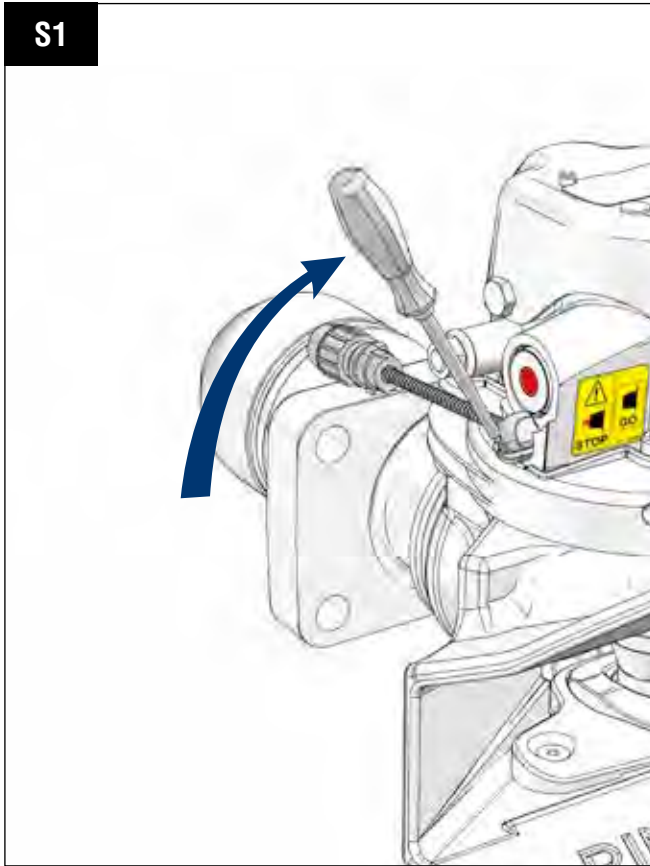
Position der Gewindebohrung im Kuppelmaul  
M8 x 20 tief  
Position of the tapped hole in the coupling mouth  
M8 x 20 deep



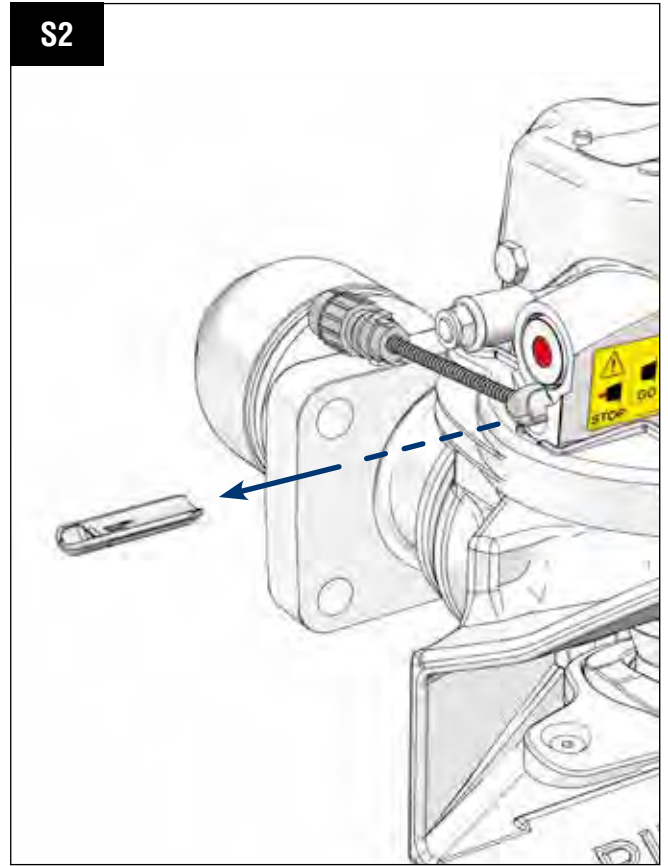
Schaltplan | Wiring scheme

# Sensor | Sensor

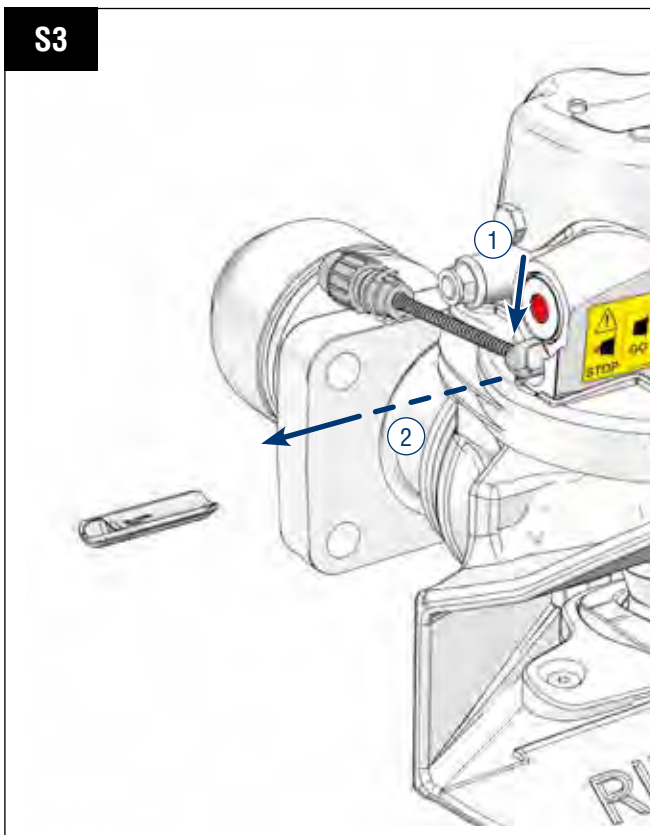




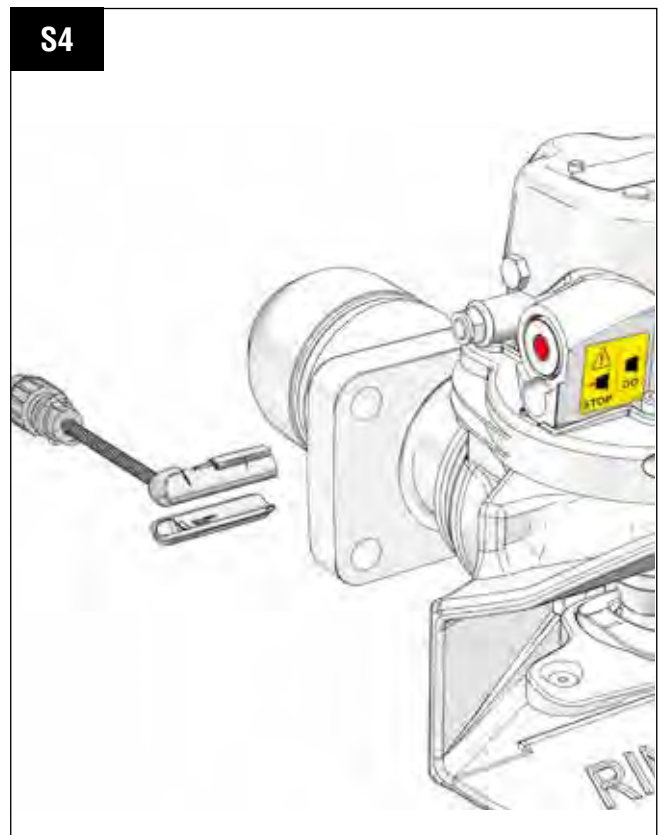
Wechseln des Sensors (1)  
Change of sensor (1)



Wechseln des Sensors (2)  
Change of sensor (2)



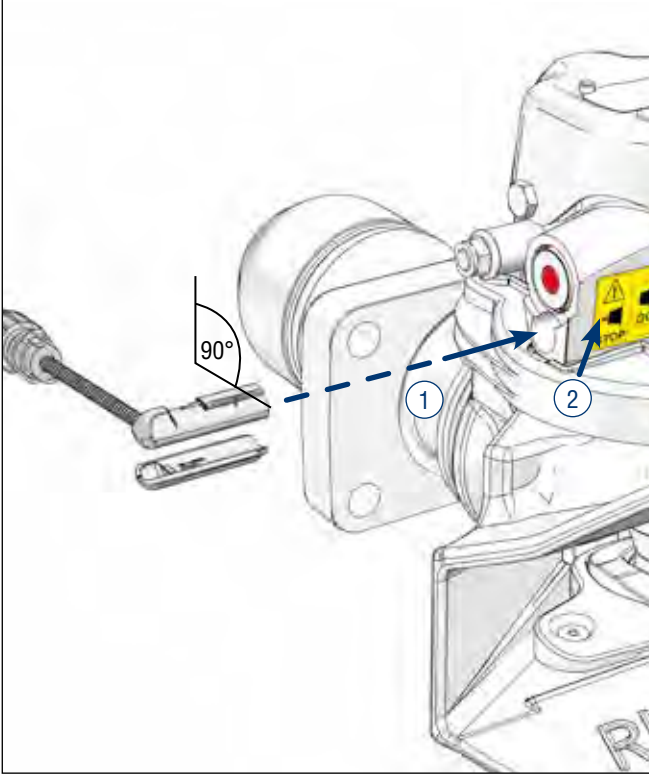
Wechseln des Sensors (3)  
Change of sensor (3)



Wechseln des Sensors (4)  
Change of sensor (4)

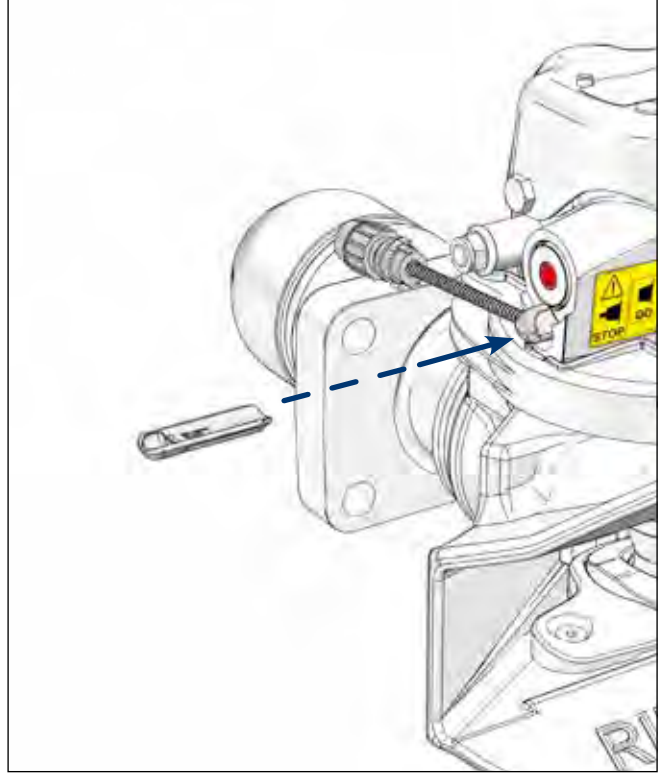


S5



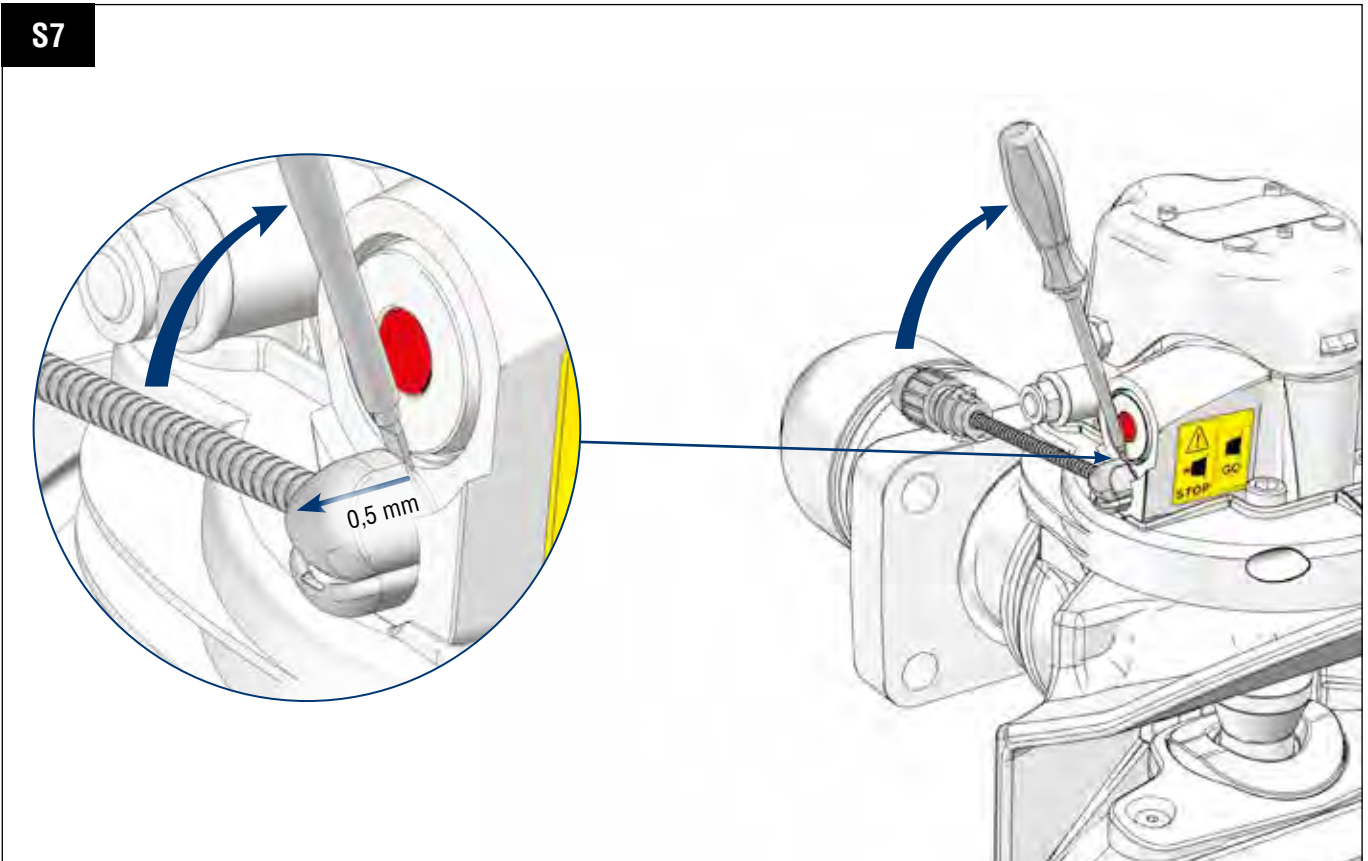
Wechseln des Sensors (5)  
Change of sensor (5)

S6



Wechseln des Sensors (6)  
Change of sensor (6)

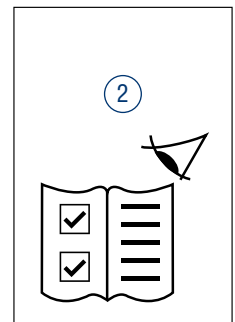
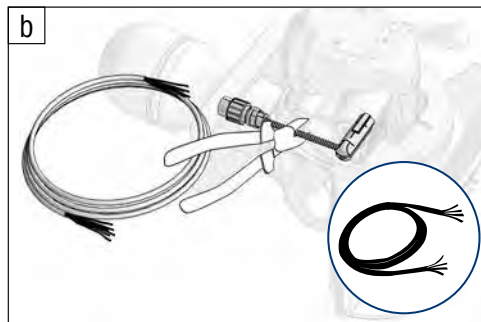
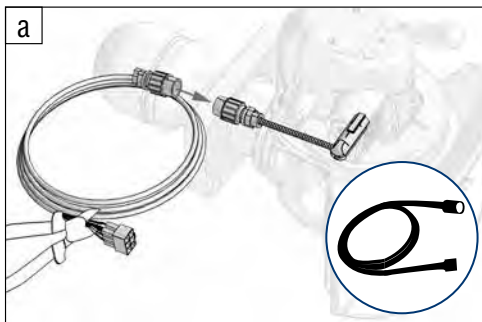
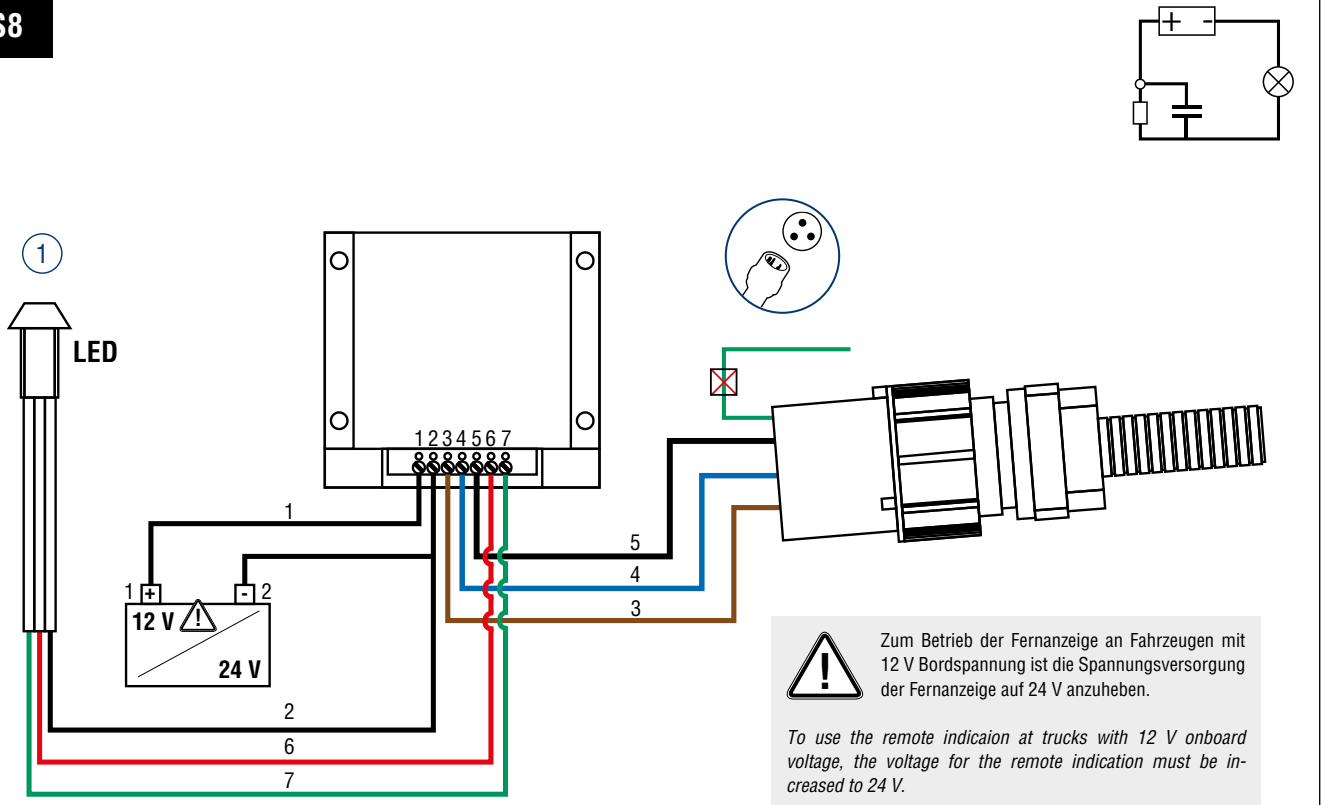
S7



Wechseln des Sensors (7)  
Change of sensor (7)



S8



Wechseln des Sensors (8)  
Change of sensor (8)

**Montage, Bedienung, Wartung  
Installation, Operation, Maintenance**  
[www.ringfeder.de](http://www.ringfeder.de)



RINGFEDER® 86/G 110, 4040, 4045  
80/G3-G5, 5050



RINGFEDER® 5055 A, B, AW, AP, AM



RINGFEDER® 4040 AM, 4045 AM  
5050 AM, 5055 AM



Sensoreinbau · Fitting sensor