

Procedure: 3-Point Lap and Shoulder Belt Removal and Re-Installation

1. SUMMARY

- 1.1. The purpose of this procedure is to explain proper removal and re-installation of 3-point lap and shoulder belt on Kiel seating.
- 1.2. Kiel engineering department is responsible for implementation and management of this procedure.

2. REVISION AND APPROVAL

Rev.	Date	Nature of Changes	Approved By
0	8/05/2020	Original issue.	J. Rebman

3. PROCEDURE:

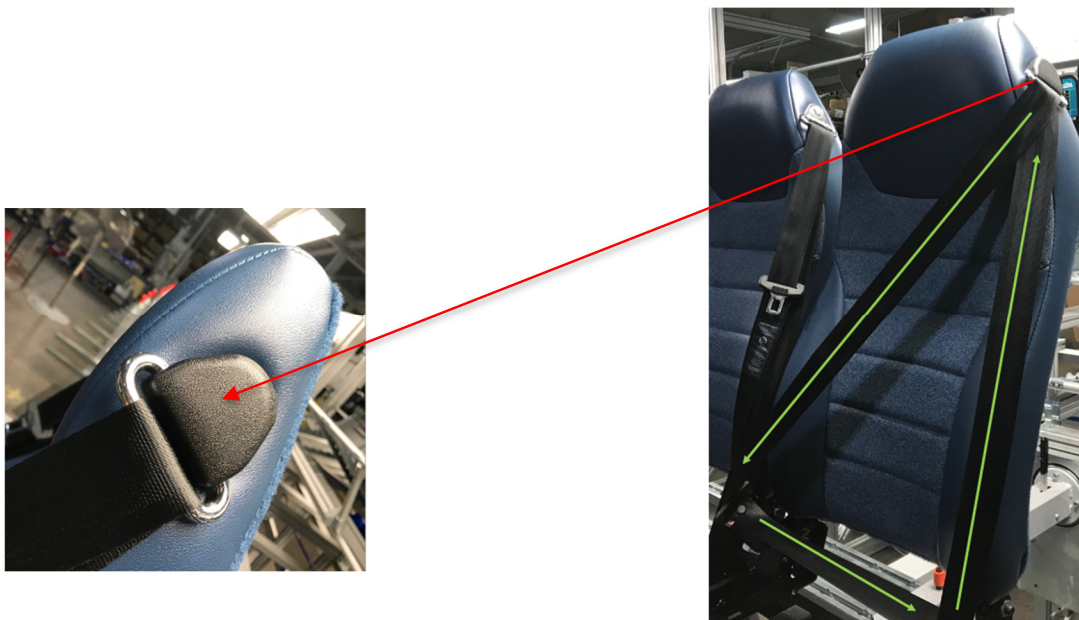
3.1. Proper 3-point belt removal:

Removal of belt with ELR / ALR (Emergency Locking Retractor) (Automatic Locking Retractor) function.

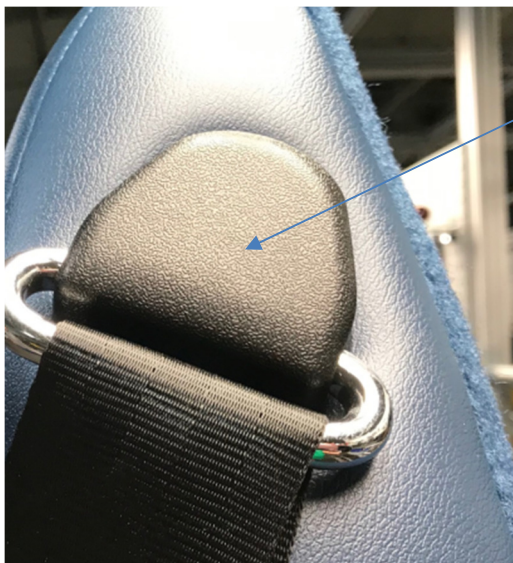
3.1.1. Remove seat cushion by lifting at front.



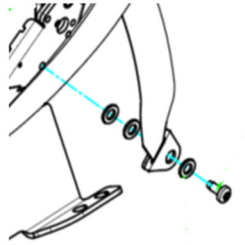
- 3.1.2 **IMPORTANT:** Prior to belt removal, webbing route/direction should be noted for seat. Re-installation must follow exact webbing route. Cell photo record prior to removal is recommended.



- 3.1.3 Remove and save the D-ring cap. DO NOT remove D-ring at shoulder position.



- 3.1.4 Disconnect 3-point belt webbing from chassis as shown below. Save all hardware and note hardware sequence. Cell photo record recommended. Mounting is same for each seat position. Do not remove female buckle unless it is damaged or requires replacement.

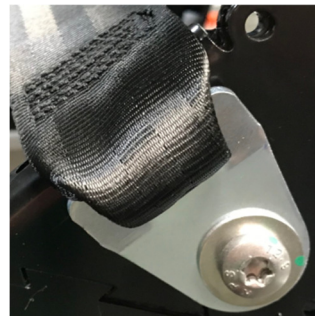


- 3.1.5 Route webbing, male tongue, and belt end bracket through the D-ring. Allow it to lay out off to side.

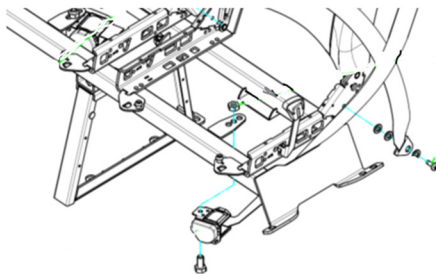
Male tongue:



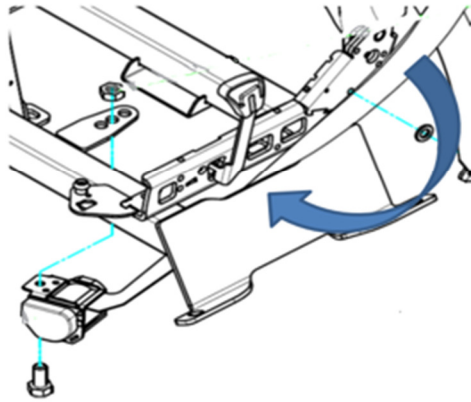
Belt end bracket:



- 3.1.6 Disconnect 3-point belt retractor under seat chassis mounting point as shown below. Save all hardware and note hardware sequence. Cell photo record recommended.

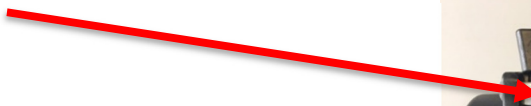


3.1.7 While holding retractor, pull webbing out between the wall mount and the seat chassis.



3.1.8 **SAVE** belt and permanently mark with coach number, seat number, and date. Belt(s) should be bagged separately for return to Kiel NA. Kiel NA requires retractor return within 10 days of removal. Please call Kiel NA Customer Service Dept. for **Return Authorization** documents prior to return shipment.

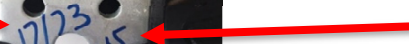
Date:



Coach Number



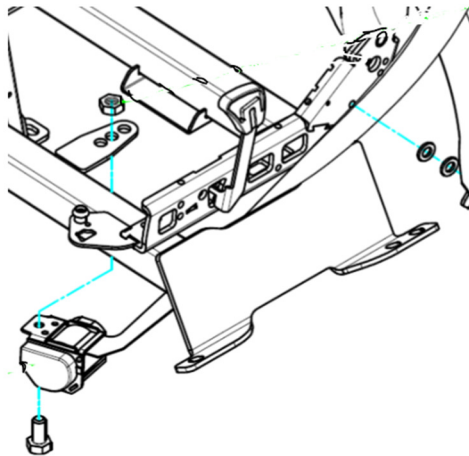
Seat Number



3.2 Proper 3-point belt installation:

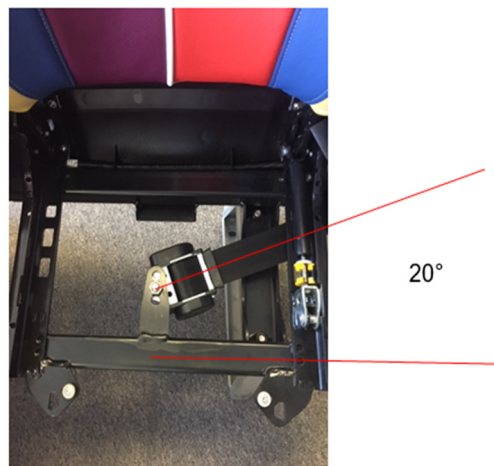
Installing belt with ELR / ALR (Emergency Locking Retractor) (Automatic Locking Retractor) function. Installation is in reverse steps of removal as described in previous section.

- 3.2.1 Install 3-point belt retractor at under seat chassis mounting point. Place in same mounting hole.

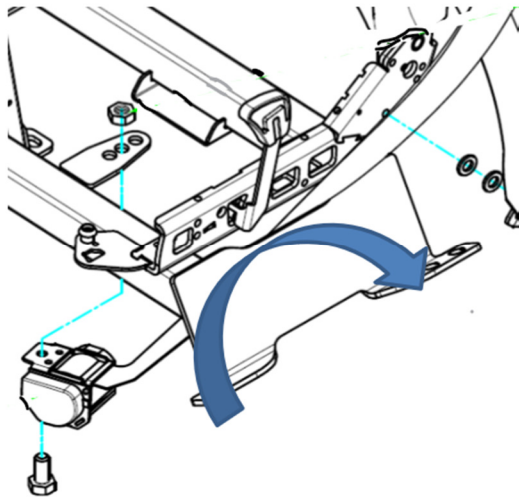


- 3.2.2 Hand tighten hardware. Ensure retractor is at approximately 20° to horizontal chassis frame tube. Use Loctite number 242 on bolt.

- 3.2.3 When retractor is at 20°, torque nut to 28 Nm or 21 ft. lbs.



3.2.4 Thread webbing between wall mount and seat chassis, as shown below. Do not roll or twist webbing.

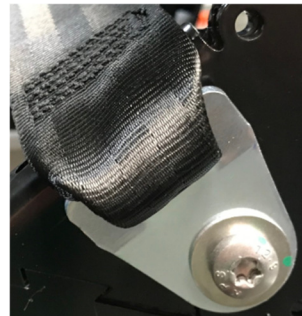


3.2.5 Route webbing, belt end bracket and male tongue through D-ring, and allow to lay out off to side.

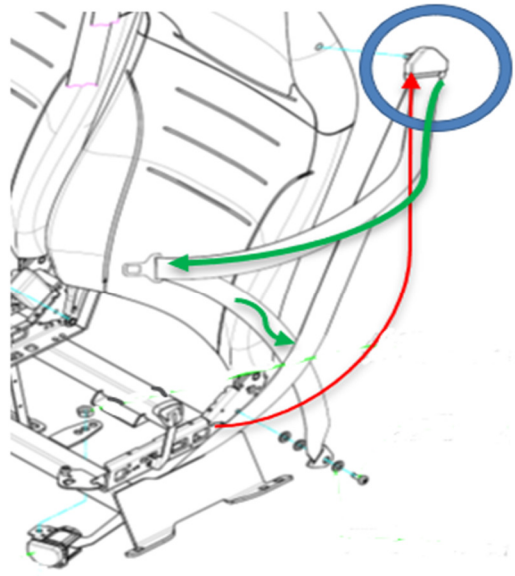
Male tongue:



Belt end bracket:





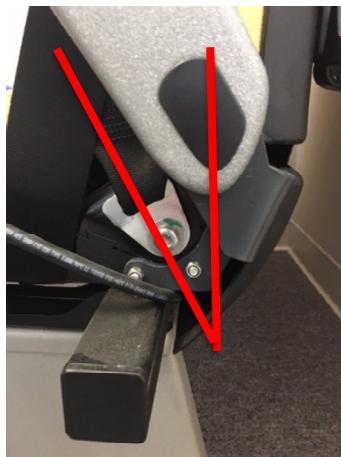


3.2.6 Allow webbing to lay vertically without twisting.

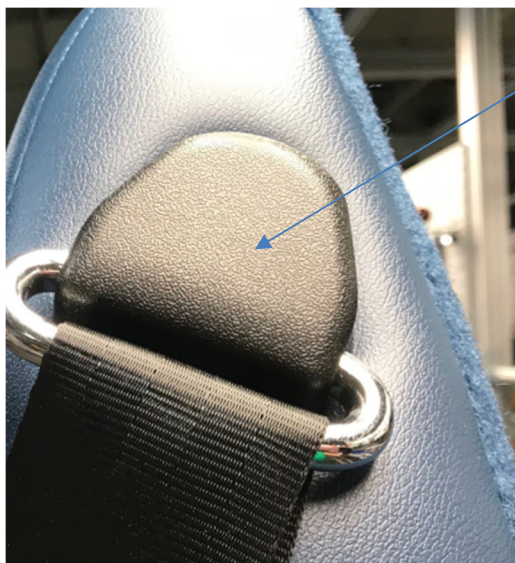


- 3.2.7 Install belt end bracket to side of chassis as shown, noting hardware sequence. Bracket should be at an approximately 15° angle. Torque nut to 22 Nm or 16 ft. lbs.

15°



- 3.2.8 Reinstall D ring cap.



- 3.2.9 Test belt through operational / functional ELR / ALR procedure. See Document [“Procedure - 3-Point Lap and Shoulder Belt Function”](#).

4. MAINTENANCE INFORMATION AND RECOMMENDATIONS

- 4.1. **Important: Never disassemble retractor housing. This constitutes a safety hazard and should only be performed by belt manufacturer.**
- 4.2. Service and maintenance should be performed by qualified personnel only.
- 4.3. Use of safety equipment and personal protective (PPE) according to relevant guidelines.
- 4.4. Procedure document **3-Point Lap and Shoulder Belt Removal and Re-Installation** is designed as a training document. Training is supported by Kiel NA. Please call 574-327-2050 or email customerservice@kielna.com to request additional materials.