



# TECHNICAL SERVICES INFORMATION BULLETIN

TSIB 21-08 Rev A		October 6, 2021
<b>TO:</b>	All Operators	
<b>TITLE:</b>	<b>Kiel AVANE Model Seat Preventative Maintenance</b>	
<b>APPLICABILITY:</b>	MCI coaches with Kiel AVANCE 2050 model seats  JX500 - All coaches beginning with MY 2019 with Kiel AVANCE seats.  D4XXX - All coaches beginning with MY 2019 with Kiel AVANCE seats.	

## **WARNING**

*Read this entire procedure before beginning work.*

*Use Safe Shop Practices at All Times.*

*To avoid personal injury:*

- a. Proper Personal Protective Equipment (PPE) must be worn. Safety glasses and protective gloves are required for working with DEF Fluid.*
- b. Turn the main battery disconnect switch to the OFF position.*
- c. Ensure that both the front and the rear wheels are chocked.*
- d. Position the ENGINE RUN and ENGINE START switches on the engine compartment remote control box to the OFF position.*
- e. Allow enough time for components to cool down prior to working in the engine compartment.*

## 1.0 Description

This procedure outlines the recommended preventative maintenance for Kiel AVANCE model seats. Inspection should be done at the intervals detailed in section 5.0 Appendix. Refer to MCI P/N: 03-11-2802 for the parts list if replacements are needed.

## 2.0 Material Requirements

No materials are required.

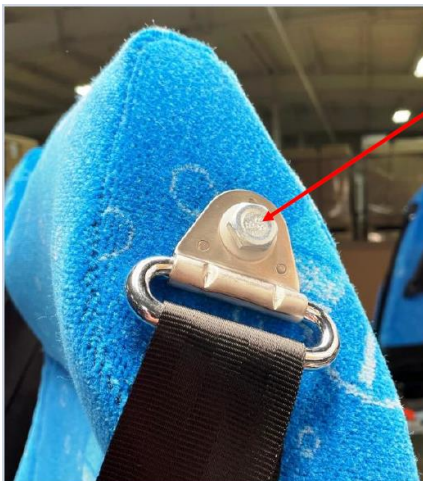
## 3.0 Special Tools

Torque wrench  
T30 Torx bit  
T40 Torx bit  
10mm hex socket  
17mm Socket  
13mm wrench  
17mm wrench  
19mm wrench

## 4.0 Procedure

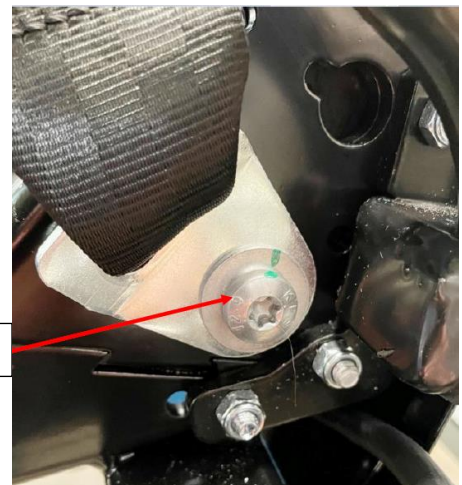
### 4.1 Seatbelt Shoulder and Belt Attachment Bolts

Check torque of top and bottom seatbelt bolts.



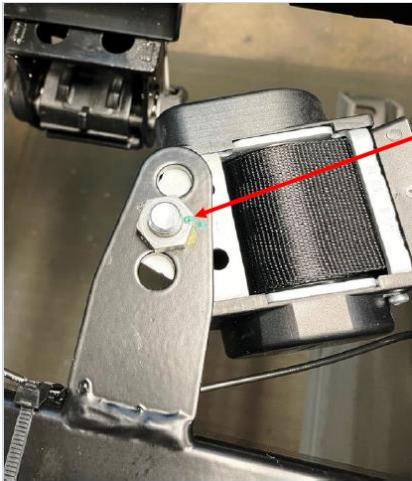
Torque to 18 FT-LBS

Torque to 16 FT-LBS



#### 4.2 Seatbelt Retractor and Buckle Attachment Bolts

Check torque of seatbelt retractor and buckle screws.



Torque to 21 FT-LBS

Torque top to 9 FT-LBS  
Torque bottom to 16 FT-LBS



#### 4.3 Female Seatbelt Buckle

Check for damage. Insert male belt latch into the female receipt and ensure it latches. Press the red release button and remove the belt. The red button should not stick down.



Inspect seatbelt buckle.

#### 4.4 Backrest Attachment Bolts

Remove seat cushion to reveal backrest bolts.



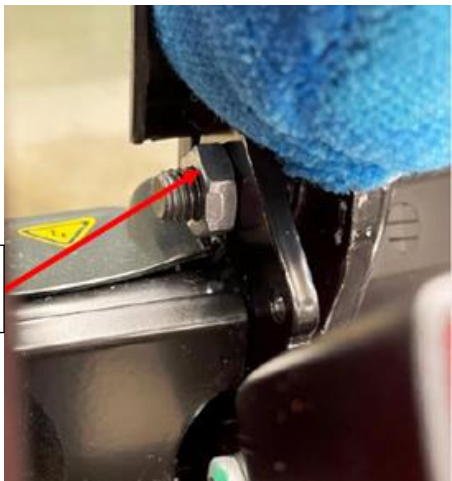
Locate backrest bolts.

Check torque of the backrest bolts and bolt lock nuts



Torque to 30 FT-LBS

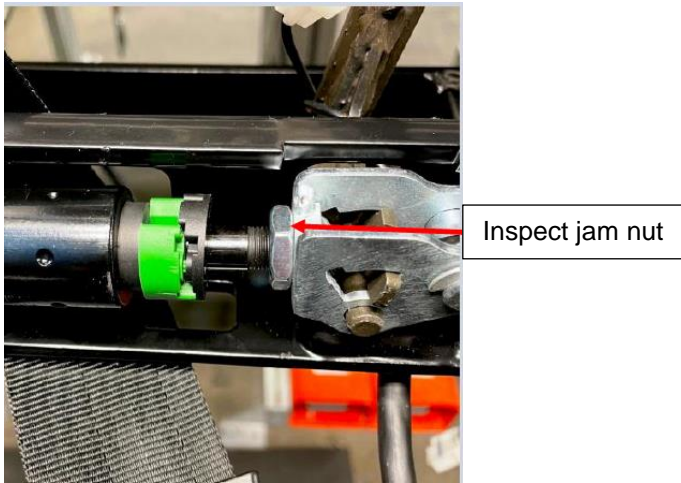
Torque to 30 FT-LBS





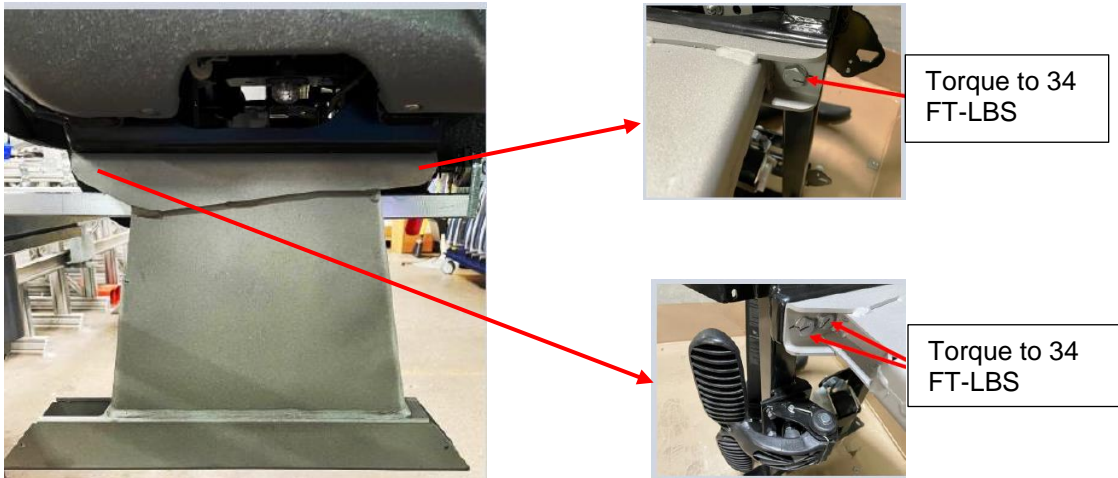
#### 4.5 Recline Cylinder Lock Nut

For the seat recline option, check the tightness of the jam nut. Tighten if required



#### 4.6 Pedestal Bolt to Chassis

Check torque on the pedestal to chassis bolts.



#### 4.7 Inspect Armrest

Check function. Lift arm to the fully raised position, then lower. Armrest will stop in the travel position. Lift arm to upward position then lower. The armrest will return to the lowered position.



Fully Raised Position



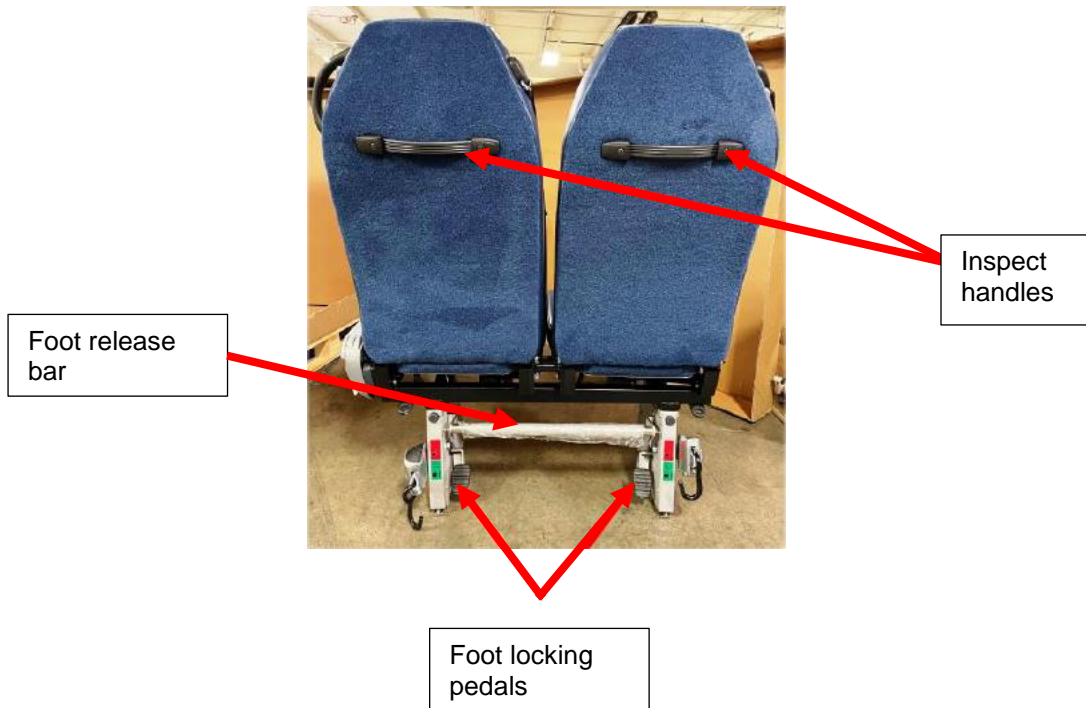
Lowered Position



Travel Position

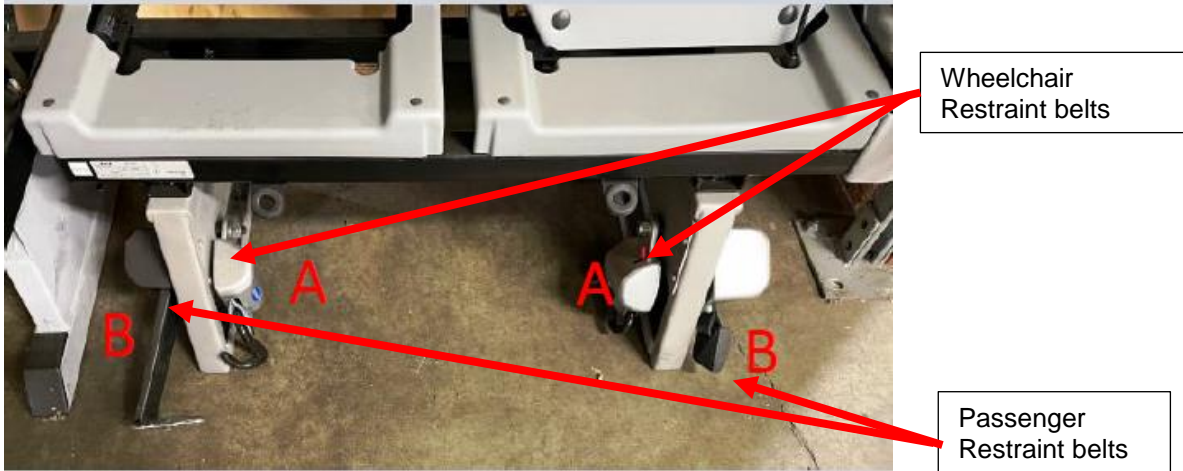
#### 4.8 Inspect Slider Seat

Check slider function. Depress foot release bar and slide seat. Return to home position making sure seat lock pins drop into position. Depress foot locking pedals (2) and check seat is secured and does not move.

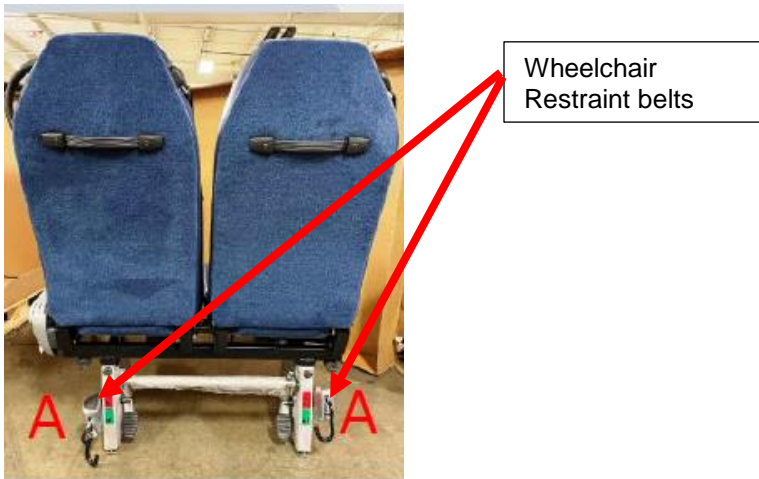


#### 4.9 ADA Area Wheelchair Seatbelt

Check the operation of wheelchair restraint belts (A) and passenger restraint belts (B) for smooth pull. Make sure belts return fully into the retractor. Check passenger belt latch function.



Check operation of wheelchair restraint belts (A) on the rear of the slider seat for smooth pull. Make sure belts return fully into the retractor.



**End of the procedure**



5.0 Appendix

**Recommended Preventive Maintenance (PM) Intervals**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
	Daily	15,000 Miles / 24,000 Km **	Yearly	After an Accident

Slide	Component	Maintenance Task	Recommended PM Interval			
			A	B	C	D
1	Seatbelt shoulder attachment bolts ***	Check torque. Tighten to 24 Nm - 18 ft/lb. if required		X	X	X
1	Seatbelt attachment belt bolts	Check torque. Tighten to 22 Nm - 16 ft/lb. if required		X	X	X
2	Seatbelt retractor attachment bolts torque	Check torque. Tighten to 28 Nm - 21 ft/lb. if required		X	X	X
2	Seatbelt buckle attachment bolts	Check torque. Tighten upper screw to 12 Nm - 9 ft/lb. Lower screw to 22Nm – 16 ft/lb. if required		X	X	X
3	Female seatbelt buckle	Check for damage, that it latches sticking release button	X			X
4	Backrest attachment bolts	Check torque. Tighten to 40 Nm - 30 ft/lb. if required		X	X	X
4	Backrest attachment bolt lock nuts	Check torque. Tighten if required		X	X	X
5	Recline cylinder lock nut	Check torque. Tighten nut if required		X	X	X
6	Pedestal bolt to chassis	Check torque. Tighten to 45 Nm - 34 ft/lb. if required		X	X	X
*	3-Point seat belt inspection	Check for proper operation of ALR/ELR function and damage to belt components	X			X
7	Armrest	Check for proper operation of armrest locking into raised position and unlocking to lower position and damage	X			
8	Slider seat	Check the slider function. Depress foot release bar and slide seat then return to home position making sure seat lock pins drop into position. Depress foot locking pedals (2) and check seat is secured and does not move	X			X
8	Slider seat back handle	Check for damage / missing handles	X			
9	ADA area wheelchair seatbelts	Check for proper function and inspect for belt damage	X			X

\* Covered in work instruction "3 Point Lap and Shoulder Belt Function"

\*\* First initial check then yearly checks

\*\*\* Covered in work instruction "D-Ring Cap Removal"

To place parts orders please contact NFI Parts.

**If you have questions or need further assistance, please contact the MCI Technical Call Center @ 1-800-241-2947.**