



## NEXTGEN (CRS) Child Restraint Seat Operation Explained

### Tech Tip #19-1019REVC



## ARE YOU AWARE OF HOW THE NEXTGEN CHILD RESTRAINT SEATS OPERATE?

We have had inquires concerning the operation of the restraint belts and specifically the “locking” of these bests. HSM has detailed the operation of these belts in the attached document.

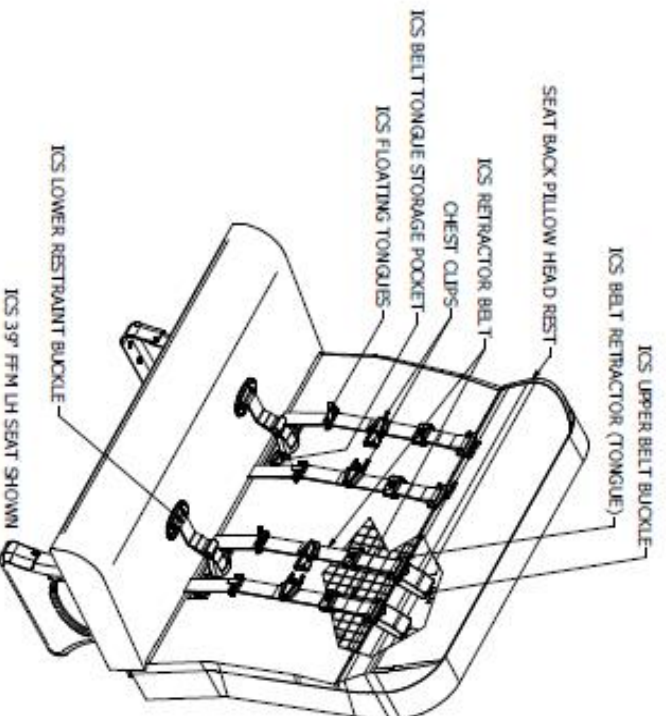
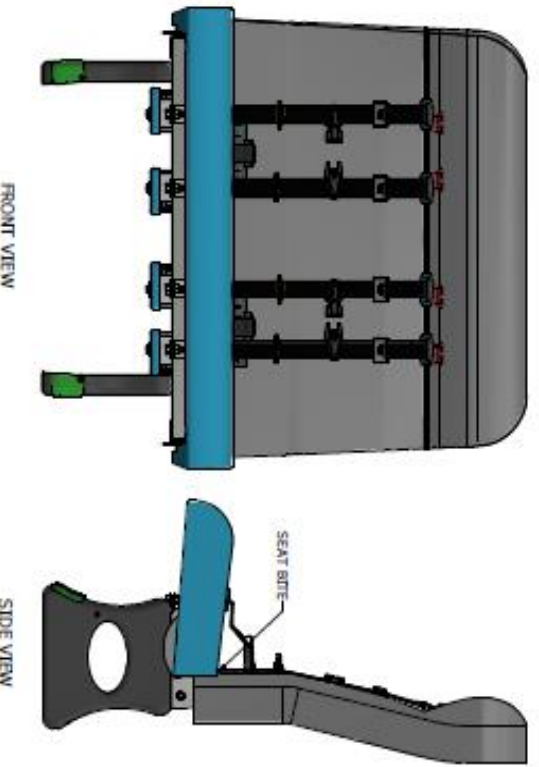
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## INSTRUCTIONS: RESTRAINING OCCUPANT & OPERATING BELTS:

1. ATTACH ICS BELT TONGUES INTO ICS UPPER BELT BUCKLES WITHIN SEAT BACK PILLOW HEAD REST. TUG BELT STRAPS TO ENSURE BUCKLE ENGAGEMENT.
2. CENTER OCCUPANT BETWEEN ICS BELTS & LOWER ICS BUCKLE.
3. LOCATE THE ICS BELT RETRACTOR TONGUES IN ICS BELT TONGUE STORAGE POCKET, THEN FULLY EXTEND BELTS UPWARD (SEE ILL #1).
- NOTE: BELTS AT FULL EXTENSION WILL ENGAGE THE SECONDARY LOCKING FEATURE.
4. PLACE OCCUPANT IN BETWEEN ICS BELTS AND CENTER TO LOWER ICS RESTRAINT BELT BUCKLE.
5. THE ICS BELTS WILL RETRACT TO FIT SNUGLY ON OCCUPANT. A RATCHET NOISE IS AUDIBLE WHEN BELTS RETRACT.
- NOTE: THE BELTS WILL ONLY RETRACT AND NOT EXTEND WHEN ENGAGED IN USE. THIS PREVENTS EXTENSION WHEN IN USE AND KEEPS OCCUPANT SECURED.
6. SECURE LOWER RESTRAINT BELT BUCKLE TO ICS FREE FLOATING TONGUES.
7. CONNECT CHEST CLIPS TO ONE ANOTHER AND LOCATE ACROSS CHEST JUST BELOW ARM PIT LEVEL.
8. CHECK THAT OCCUPANT IS RESTRAINED WITH BELT HARNESS FITTING SNUG.

## REMOVING RESTRAINED OCCUPANT AND STOWING BELTS:

1. DISENGAGE LOWER RESTRAINT BELT BUCKLE FROM ICS FLOATING TONGUES.
2. DISCONNECT CHEST CLIPS AND REMOVE OCCUPANT.
3. TO STOW ICS BELTS, START AT SEAT BACK HEAD REST TO DISENGAGE ICS BELT TONGUES FROM ICS UPPER BELT BUCKLES.
4. FULLY RETRACT EACH ICS BELT TOWARD THE SEAT BITE.
5. PLACE ICS BELT TONGUES INTO ICS BELT TONGUE STORAGE POCKET & PLACE ICS LOWER RESTRAINT BUCKLE INTO SEAT BITE. (SEE ILL #2)
- NOTE: IF NEXT OCCUPANT REQUIRES ICS BELT HARNESS, BELTS DO NOT HAVE TO BE STOWED.



REV	DATE	DESCRIPTION	BY	CHK
A	03/11/2019	NEW RELEASE	ALM	DM883
~ REVISION HISTORY ~				

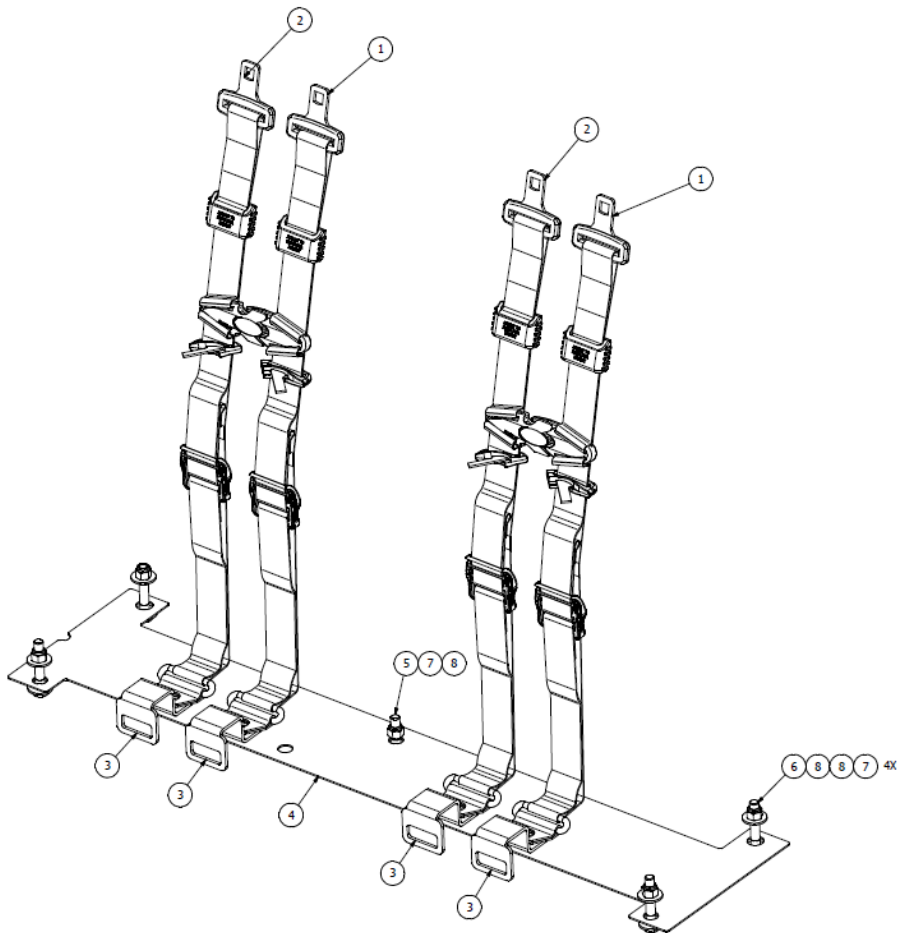
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<b>MODEL</b> NS-193 <b>DESCRIPTION</b> NEXTGEN ICS BELT RETRACTOR <b>INSTRUC TIONS</b>	<b>TOOL PARTS</b> NONE <b>OPERATING WEIGHT</b> 20.4 LB <b>HEIGHT</b> 39.4 IN <b>WIDTH</b> 18.0 IN <b>DEPTH</b> 18.0 IN	<b>INSTALLATION</b> 7-8 MIN <b>REQUIREMENTS</b> NONE <b>ENVIRONMENTAL</b> 5-50 °F 20-80% RH 10-100 FT	<b>DATE</b> 03/11/2019 <b>REV</b> A

# UPDATE – October 19, 2020

HSM has changed to a “STATIC” designed belt system for these seats and has available a “Retrofit” kit which addresses the issue which we have heard from some customers about where the retractor becomes locked.

The change requires installation of new belts and a plastic tray acting as a catch for the belts, so they do not hang below the seat.

Below is a diagram of the belts and the following 4 pages are instructions on installing the new kits.



- NOTES:  
 1. REFERENCE INS-220 & INS-205 FOR INSTALLATION INSTRUCTIONS  
 2. GUSSET (WALL) MOUNT & FLOOR/TRACK MOUNT DO NOT REQUIRE FASTENERS THROUGH WEB CATCH TWO HOLES AT WALL MOUNT SIDE.  
 3. FULLY FLOOR/TRACK MOUNT SEATS REQUIRE FASTENERS THROUGH WEB CATCH AT ALL FOUR ORIGINERS.

ITEM	PART NUMBER	QTY	DESCRIPTION
8	660380013	9	WASHER, FLAT 3/8 USS
7	682380012	5	NUT, NYLOC 3/8-16 UNC
6	601383622	4	SCREW, HX HD 3/8-16 UNC X 2.25
5	601382422	1	SCREW, HX HD 3/8-16 UNC X 1.50
4	800-665-039	1	PLASTIC, ICS BELT WEB CATCH
3	701-362	4	BRKT, GENESIS ICS ATTACHMENT
2	590-223	2	ASSY, NEXTGEN ICS STATIC BELT RH
1	590-222	2	ASSY, NEXTGEN ICS STATIC BELT LH

PARTS LIST	
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PART NUMBER <b>KIT-280-039</b>	DESCRIPTION <b>KIT, GENESIS 39" (2) ICS STATIC BELT</b>
DRAWN BY <b>ALMUS</b>	DATE <b>5/22/2020</b>
CHECKED BY _____	DATE _____

TOLERANCES UNLESS OTHERWISE SPECIFIED	weight
DIMENSIONS .XX ± .03 .XXX ± .005 ANGLES ± .2°	HOLE DIAMETERS .000 ± .010 .005 .001 ± .012 -.006
SOFT GOODS ± .12 SEAT ASSEMBLIES ± .38	SHEET 5 OF 5 REV: A

REV	DATE	DESCRIPTION	FROM	ECN
A	5/22/2020	NEW RELEASE	ALN	CM1096
REVISION HISTORY				

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Service Campaign Title:	<b>Genesis ICS &amp; 3PT/ICS Belt Install</b>	Document Reference #		
		HSM #:	<b>INS-220</b>	
		SRP #:	<b>2000-0003 &amp; INS-205</b>	
		KIT #:	<b>KIT-280-0XX</b>	
Author's Name:	Department:	Date Created:	REV LVL:	REV Date:
ALN	Engineering	5/20/2020	A	5/20/2020

HSM Product Models Impacted:	GENESIS ICS & 3PT/ICS all sizes
Issue Being Addressed:	ICS Static belts replacing ICS Retractable belts
Remedy:	Removal of retractable belts with replacement of static belts.

Tools Required:		
Item:	QTY:	Description:
Impact Drill	1	Cordless Drill w/ Battery
Socket	1	Power Socket, Hex Head 5/8"
Socket	1	Power Socket, Hex Head 7/8"
Wrench	1	Wrench 5/8
Wrench	1	Wrench 7/8

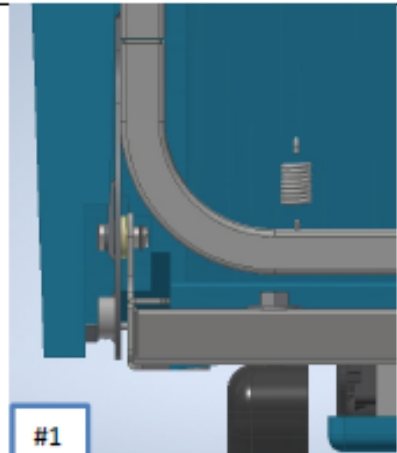
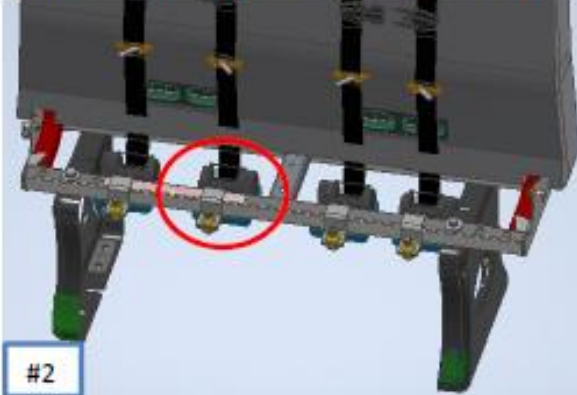
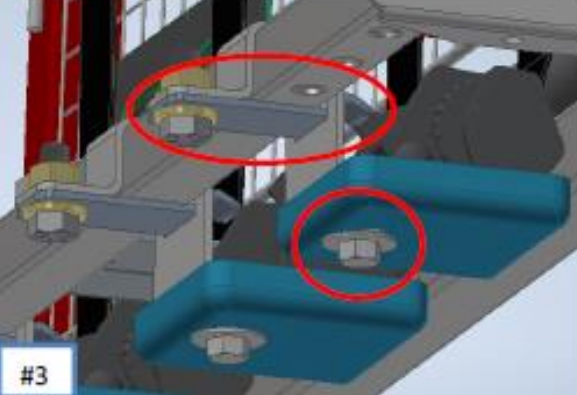
Parts Required:			
Item:	QTY:	Part #:	Description:
ICS Static belt LH	1-2	590-222	Belt, ICS Static Belt LH (Reference KIT-280-XXX for visual)
ICS Static belt RH	1-2	590-223	Belt, ICS Static Belt RH (Reference KIT-280-XXX for visual)
Web Catch	1	800-665-039	Web Catch (Reference KIT-280-XXX for visual)
ICS Brkt	2-4	701-362	Brkt, Genesis ICS Attachment (Reference KIT-280-XXX for visual)
Fastener	1	601382422	Bolt, 3/8-16 x 1.50
Fastener	2-4	601383622	Bolt, 3/8-16 x 2.25
Fastener	2-4	682380012	Nut, Nyloc 3/8-16 UNC
Fastener	2-4	601442022	Bolt, 7/16-20 x 1.25
Fastener	2-4	660440012	Washer, 7-16 USS
Fastener	2-4	600-505	Nut, 7-16-20 UNC Serrated Flange
Cushion Key	1	600-640	Genesis Cushion Key

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## Vehicle Preparation(s):

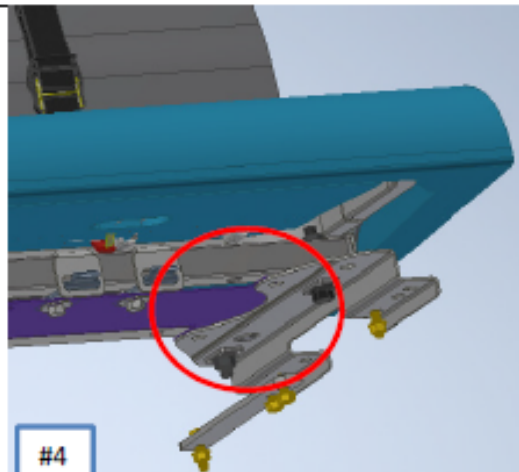
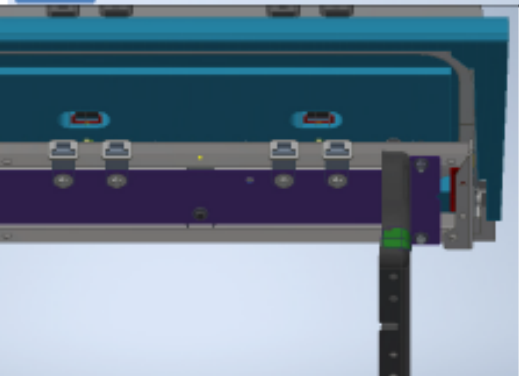
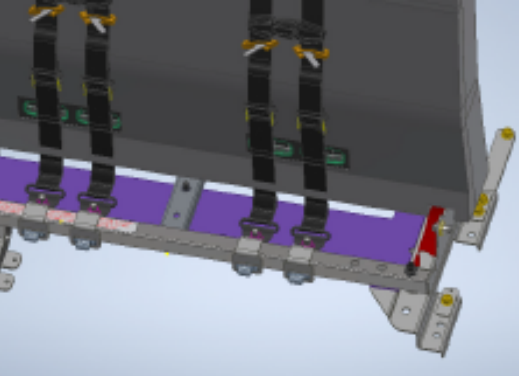
1	The vehicle should be parked on a flat level surface.
2	The vehicle ignition must be in the OFF position.
3	The vehicle park brake must be engaged and wheel chocks utilized.
4	Ensure adequate lighting is used during service operation.

## Repair Instruction:

Step:	Description:	Ref Image / Other:
1	ASSURE ALL NEEDED PARTS/ITEMS ARE AVAILABLE.	
2	UNLOCK CUSHION AND PLACE IN UPWARD POSITION. TO UNLOCK PLACE KEY IN PLUNGER, TWIST TO SET AND PULL OUT TO DISENGAGE.	
2A.	SOME SEAT SIZES, MOUNTING CONDITIONS & PERSONAL PREFERENCE WILL REQUIRE THE CUSHION TO BE REMOVED. TO REMOVE CUSHION, USE NEEDLE NOSE PLIERS TO REMOVE RETAINING CLIP FROM CLEVIS PIN. PUSH CLEVIS PIN OUTWARD WITH HAND. RETAIN PLASTIC WASHER THAT IS BETWEEN CUSHION FRAME & SEAT FRAME. REPEAT ON OPPOSITE SIDE OF CUSHION.	 #1
3.	REMOVE ALL ICS RETRACTABLE BELTS, BRKTS & FASTENERS USED; THERE WILL BE 1-2 SETS. SEE VIEW #2. KEEP ACCESSORY PLATES 700-849 & 7/16 FASTENERS: 601442022, 660440012 & 600-505. SEE VIEW #3. USE IMPACT WITH SOCKET SIZES 5/8 & 7/8, ALONG WITH WRENCHES. FASTENERS USED AT FRONT ARE 1/2 & BELT RETRACTOR TO BRKTS ARE 7/16.	 #2  #3

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4.	<p>REFERENCE INS-205 &amp; KIT-280-SIZE, MATCH SEAT SIZE &amp; MOUNTING CONDITION TO VIEW ON DRAWINGS.          FOLLOW 5B FOR GUSSET MOUNT (WALL MOUNT) &amp; FLOOR MOUNT.          FOLLOW 5C FOR FULLY FLOOR/TRACK MOUNT.</p>	
5B.	<p>INSTALL WEB CATCH &amp; ATTACH USING 3/8 FASTENERS. FASTENER REQUIREMENTS ARE (2) 601383622, (1) 601382422, (5) 660380012 &amp; (3) 682380012. ORIENT WEB CATCH BY PLACING HALF CIRCLE CUTOUT TOWARD BUS WALL &amp; HOLES TOWARD FRONT OF SEAT. SLIP END OF WEB CATCH BETWEEN FRAME BOTTOM AND TOP OF WALL MOUNT. MAY REQUIRE LOOSENING WALL MOUNT FROM SEAT FRAME USING IMPACT WITH 7/8 SOCKET &amp; WRENCH. MAY ALSO REQUIRE LOOSENING LEG FROM SEAT FRAME USING IMPACT WITH 5/8 SOCKET &amp; WRENCH. ASSURE EXISTING FASTENERS ARE TORQUED 40-60 FT. LBS. WALL MOUNT SIDE OF WEB CATCH DOES NOT REQUIRE FASTENERS. SEE VIEW #4</p>	 <p>#4</p>
5C.	<p>INSTALL WEB CATCH &amp; ATTACH USING 3/8 FASTENERS. FASTENER REQUIREMENTS ARE (4) 601383622, (1) 601382422, (9) 660380012 &amp; (5) 682380012. ORIENT WEB CATCH BY PLACING HALF CIRCLE CUTOUT TOWARD BUS WALL &amp; HOLES TOWARD FRONT OF SEAT. MAY REQUIRE LOOSENING LEG FROM SEAT FRAME USING IMPACT WITH 5/8 SOCKET &amp; WRENCH. ALL FOUR CORNERS OF WEB CATCH WILL BE SECURED WITH FASTENERS.</p>	 <p>#5</p>
6.	<p>INSTALL 1 OR 2 SETS OF ICS BELTS, APPLICABLE TO SEAT SIZE. REFERENCE KIT-280-SIZE &amp; INS-205 FOR BELT LOCATIONS. PARTS NEEDED PER SET OF BELTS; (2) 590-222, (2) 590-223, (2) 701-362, EXISTING PARTS FROM RETRACTABLE BELT SETS (2) 700-849 &amp; 7/16 FASTENERS (2) 601442022, (2) 660440012 &amp; (2) 600-505. TORQUE FASTENERS 40 – 60 FT. LBS. ICS BELTS FROM SECURED ANCHOR TRAVEL THRU BITE OF SEAT (CUSHION REAR &amp; SEAT BACK) SEE VIEW #6, (CUSHION REMOVED FOR CLARITY OF BELT PATH)</p>	 <p>#6</p>

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7.	IF CUSHION IS LOCKED IN UPWARD POSITION, USE KEY TO UNLOCK. VERIFY CUSHION FLIP FEATURE IS OPERABLE. LAST, LOCK CUSHION IN DOWNWARD POSITION. IF CUSHION IS ALREADY IN DOWNWARD POSITION, ASSURE FLIP FEATURE IS OPERABLE & THEN LOCK INTO DOWNWARD POSITION.
7A.	TO REINSTALL CUSHION, LOCATE CUSHION BETWEEN FRAME GUSSETS & ALIGN CLEVIS PIN HOLES. PLACE PLASTIC WASHER IN BETWEEN CUSHION FRAME & SEAT FRAME, INSERT CLEVIS PIN FROM OUTER FRAME TOWARD MIDDLE OF SEAT. REPEAT ON OPPOSITE SIDE OF CUSHION. SECURE RETAINING CLIPS TO CLEVIS PIN USING NEEDLE NOSE PLIERS. SEE VIEW #1 VERIFY CUSHION FLIP FEATURE IS OPERABLE. LAST, LOCK CUSHION IN DOWNWARD POSITION.
8.	INSPECT SEAT, ASSURE ALL APPLICABLE STEPS HAVE BEEN COMPLETED AND SEAT FINISHES AESTHETICALLY.

PLEASE NOTE: This particular set up is for a 39" seat, should you be working with a different width seat the "web catch" would be a different part number

# Kit #200-039

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