

ENGINEERING MEMO #229

TO: Memo Distribution
 FROM: S. Hori
 SUBJECT: ADDITION OF HEAD RESTRAINTS TO FRONT SEAT ASSEMBLIES

- A. To comply with Motor Vehicle Safety Standard No. 202; Head Restraints-Passenger Cars, it will be necessary to provide a head restraint at each outboard front designated seating position on passenger cars (all Checker Vehicles except Model A-12W8) effective January 1, 1969.
- B. Changes required to add Head Restraints to the Standard Full Front Seat Assemblies.
1. The welded seat frame assemblies must be modified to relocate the back frame channels to center the head restraints with the steering wheel.
 2. To standardize the location of the back frame channels and the hanger and mounting brackets for the back springs, the Model A-12W8 front seat assembly and all center seat assembly components will also be revised.
 3. At the time of the change over, the existing stock of back frame assemblies and back spring assemblies can be reused for the Model A-12W8 front seat assemblies and Aerobus center seats.
 4. The relocation of the spring assembly mounting brackets and the back frame channels must be done simultaneously.
 5. List of Parts to be Affected:

ITEM	NAME	B OR M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
1.	Frame A.-Frt.Seat Welded	M	645581	645671	NO	YES	Use for A-12W8
2.	Frame A.-Frt.Seat Back	M	645582	645669	NO	NO	Use for A-12W8 & Ctr.St.
3.	Channel & Nut A.-Frt.Seat Back Frame	M	645585	645673	NO	YES	Reduce Usage
4.	Brkt.-Head Restraint Mtg.- Lwr.	M	-----	644493	NO	YES	New Part
5.	Panel-Frt.Seat Back Reinf.	M	644428	644495	NO	NO	Rework
6.	Brkt.-Head Restraint Mtg.- Upper	M	-----	644492	NO	YES	New Part

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ITEM	NAME	B or M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
7.	Rivet-3/16 #SD 66 BS Pop	B	626642	-----	YES	YES	Increase Usage
8.	Spring A.-Frt.St.Back	M	645591	645672	NO	NO	Use for A-12WB & Ctr. St.
9.	Frame A.-Frt.St.Back Bottom	M	645592	645670	NO	NO	Use for A-12WB & Ctr. St.
10.	Brkt.-Frt.St.Back Hanger	M	642937	-----	YES	YES	Reduce Usage
11.	Head Restraint A.-Frt.St.	B	-----	645708	NO	YES	New Part
12.	Post & Fr.A.-Frt.St.Hd./R.	M	-----	645693	NO	YES	New Part
13.	Post-Frt.St.Hd./R.	M	-----	644514	NO	YES	New Part
14.	Frame-Frt.St.Hd./R.	B	-----	644517	NO	YES	New Part
15.	Strap-Frt.St.Hd./R.Reinf.	M	-----	644513	NO	YES	New Part
16.	Casing-Frt.St.Hd. Restraint (Modified)	M	-----	644562	NO	YES	New Part
17.	Casing-Frt.St.Hd. Restraint	B	-----	644560	NO	YES	New Part
18.	Guide-Frt.St.Hd./R.Post	B	-----	644519	NO	YES	New Part
19.	Plate-Frt.St.Hd./R.Top	B	-----	644518	NO	YES	New Part
20.	Cover-Frt.St.Hd./R.Top Plate	B	-----	644520	NO	YES	New Part
21.	Frame A.-Ctr.St. (Welded)	M	643665	643672	YES	NO	Use
22.	Frame A.-Ctr.St.Back	M	645582	643673	NO	NO	Use
23.	Seat A.-Frt.Trimmed-Cab	M	645600	645711	NO	YES	Rework for A-12WB
24.	Seat A.-Frt.Trimmed-Blue W/Cloth	M	645724	645712	NO	YES	Rework for A-12WB
25.	Seat A.-Frt.Trimmed-Black W/Cloth	M	645603	645713	NO	YES	Rework for A-12WB
26.	Seat A.-Frt.Trimmed-Dk.Gray	M	645604	645714	NO	YES	Rework for A-12WB
27.	Seat A.-Frt.Trimmed-Brown	M	645605	645715	NO	YES	Rework for A-12WB
28.	Seat A.-Frt.Trimmed-Red	M	645606	645716	NO	YES	Rework for A-12WB
29.	Seat A.-Frt.Trimmed-Blue	M	645608	645717	NO	YES	Rework for A-12WB
30.	Seat A.-Frt.Trimmed-Aero.	M	643666	643677	NO	YES	Reduce Usage

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ITEM	NAME	B or M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
31.	Hd/R.A.-Trimmed-Cab Gray	M	-----	645767	NO	YES	New Part
32.	Hd/R.A.-Trimmed-Blue	M	-----	645768	NO	YES	New Part
33.	Hd/R.A.-Trimmed-Brown	M	-----	645769	NO	YES	New Part
34.	Hd/R.A.-Trimmed-Red	M	-----	645770	NO	YES	New Part
35.	Hd/R.A.-Trimmed-Black	M	-----	645771	NO	YES	New Part
36.	Hd/R.A.-Trimmed-Dk.Gray	M	-----	645772	NO	YES	New Part
37.	Cover A.-Frt.St.Hd/R-CabGr.	M	-----	645773	NO	YES	New Part
38.	Cover A.-Frt.St.Hd/R-Blue	M	-----	645774	NO	YES	New Part
39.	Cover A.-Frt.St.Hd/R-Brown	M	-----	645775	NO	YES	New Part
40.	Cover A.-Frt.St.Hd/R-Red	M	-----	645776	NO	YES	New Part
41.	Cover A.-Frt.St.Hd/R-Black	M	-----	645777	NO	YES	New Part
42.	Cover A.-Frt.St.Hd/R-Dk.Gr.	M	-----	645778	NO	YES	New Part
43.	Spring A.-Ctr.St.Back	M	-----	643674	NO	YES	New Part
44.	Frame A.-Ctr.St.Back Bottom	M	-----	643675	NO	YES	New Part
45.	Frame-Frt.St.Back Bottom Low.	M	644434	Chg"B"	NO	YES	Rework
46.	Frame A.-Frt.Seat Welded	M	-----	643676	NO	YES	New Part
47.	Zipper A.-#5 Jacket x 13"	B	-----	645758	NO	YES	New Part
48.	Coated Fabric-Cab Gray	B	ME-180	-----	NO	YES	Increase Use
49.	Coated Fabric-Blue	B	ME-247	-----	NO	YES	Increase Use
50.	Coated Fabric-Black	B	ME-268	-----	NO	YES	Increase Use
51.	Coated Fabric-Dk.Gray	B	ME-160	-----	NO	YES	Increase Use
52.	Coated Fabric-Brown	B	ME-246	-----	NO	YES	Increase Use
53.	Coated Fabric-Red	B	ME-248	-----	NO	YES	Increase Use
54.	Welt-3/8 Flange Cab Gray	B	ME-183	-----	NO	YES	Increase Use
55.	Welt-3/8 Flange Brown	B	ME-257	-----	NO	YES	Increase Use

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ITEM	NAME	B OR M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
	56. Welt-3/8 Flange Blue	B	ME-258	-----	NO	YES	Increase Use
	57. Welt-3/8 Flange Red	B	ME-259	-----	NO	YES	Increase Use
	58. Welt-3/8 Flange Black	B	ME-269	-----	NO	YES	Increase Use
CB	59. Guide-Frt.St.Hd.Rest Post-Mod.	M	-----	644578	NO	YES	New Part
B	60. Plate-Frt.St.Hd.Rest Top-Mod.	M	-----	644639	NO	YES	New Part
D	61. Cover A.-Frt.St.Back (Cab)	M	639409	645955	NO	YES	Rework or Serv.
D	62. Cover A.-Frt.St.Back (Cab Red)	M	645490	645956	NO	YES	Rework or Serv.
D	63. Cover A.-Frt.St.Back (Dk.Gray)	M	641369	645957	NO	YES	Rework or Serv.
D	64. Cover A.-Frt.St.Back (Blue V & C)	M	645725	645958	NO	YES	Rework or Serv.
D	65. Cover A.-Frt.St.Back (Blue Vin)	M	645078	645959	NO	YES	Rework or Serv.
D	66. Cover A.-Frt.St.Back (Brown Vin)	M	645077	645960	NO	YES	Rework or Serv.
	67. Cover A.-Frt.St.Back (Red Vin)	M	645079	645961	NO	YES	Rework or Serv.
D	68. Cover A.-Frt.St.Back (Black V)	M	645368	645962	NO	YES	Rework or Serv.
D	69. Cover A.-Frt.& Ctr.Seat Bk.(Aero)	M	643580	643707	NO	YES	Rework or Serv.
E	70. Head Restraint A.-Trimmed Cab Red	M	-----	645978	NO	YES	New Part
E	71. Cover A.-Hd.Restrict.-Cab Red	M	-----	645979	NO	YES	New Part

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C. Changes required to add Head Restraints to Thin Back Front Seat Assemblies for Safeguard Conversion Jobs.

1. A channel reinforcement and mounting bracket will be added to the Thin Back Seat Back Frame Assembly for each head restraint.
2. The same casing, guide, top plate and cover as used on the Standard Full Front Seat Assembly will all be used on the Thin Back Front Seat Assembly.
3. A different Head Restraint Assembly will be required.
4. List of Additional Parts to be Affected:

ITEM	NAME	B or M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
1.	Seat A.-Thin Bk.Frt.-Trimmed	M	645260	645785	NO	YES	Rework
2.	Back A.-Thin Bk.Frt.St.-Trimmed	M	645265	645760	NO	YES	Rework
3.	Back A.-Full Frt.Seat	M	645215	645718	NO	YES	Rework
4.	Cover A.-Thin Bk.Frt.St.Bk.	M	645264	645786	NO	YES	Scrap
5.	Channel-Thin Bk.Frt.St.Reinf.	M	-----	644527	NO	YES	New Part
6.	Wire-Full Frt.St.Bk.Trim	M	644306	-----	NO	YES	Reduce Usage
7.	Panel-Head Restraint	M	-----	644548	NO	YES	New Part
8.	Plate-Head Restraint Thin Back Front Seat	M	-----	644529	NO	YES	New Part
9.	Panel & Nut A.-Head Restraint	M	-----	645721	NO	YES	New Part
10.	Pad A.-Thin Back Frt.St.	M	645263	-----	NO	YES	Serv.or Scrap
11.	Pad-Bucket Front Seat	B	640030	MH-124	NO	YES	Revised Use
12.	Wire-Plain Trim-15" Long	M	636504	-----	NO	YES	Reduce Use
13.	Nut - 1/4-20 Type "G" Tee	B	453035	-----	NO	YES	Increase Use
14.	Head Restraint A.-Thin Back-Trimmed	M	-----	645808	NO	YES	New Part
15.	Head Restraint A.-Thin Bk.	M	-----	645722	NO	YES	New Part
16.	Post & Plate A.-Head Restraint	M	-----	645720	NO	YES	New Part
17.	Post-Front St.Head Restraint	M	-----	644530	NO	YES	New Part
18.	Plate-Head Restraint-Thin Back Seat	M	-----	644529	NO	YES	New Part

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ITEM	NAME	B OF M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
19.	Lockwasher-1/4 Int.Ext.Tooth	B	174916	-----	NO	YES	Increase Use
20.	Screw - 1/4-20 x 3/8 Tr.Hd.	B	137952	-----	NO	YES	Increase Use
21.	Pad-Frt.St.Head Restraint	B	-----	644544	NO	YES	New Part
22.	Cover A.-Thin Bk.St.Hd.Restr.	M	-----	645807	NO	YES	New Part
23.	Foam-Polyether Urethane	B	MH-108	-----	NO	YES	Increase Use
24.	Welt-5/8"Hidem Cab Gray	B	ME-215	-----	NO	YES	Increase Use
25.	Head Restr.A.-Thin Back-Red	M	-----	645986	NO	YES	New Part
26.	Cover A.-Thin Back Hd.Restr. -Red	M	-----	645987	NO	YES	New Part
27.	Welt-5/8 Hidem-Red	B	ME-259	-----	NO	YES	Increase Use

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- F. Changes required to add Head Restraint to A-12E "Limo".
1. Since the A-12E "Limo" now uses the Standard Front Seat Frame Assembly, the changes listed under paragraph "B" Page (1) of this memo will be incorporated on all "Limo" Front Seat Frame Assemblies.
 2. A-12E "Limo" without Partition will use the same Head Restraint Assembly as required for other Standard Front Seat Assemblies.
 3. Additional specific requirements for A-12E "Limo" with Partition will be determined at a later date.
 4. List of Additional Parts to be Affected:

ITEM	NAME	B OR M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
1.	Seat A.-Frt.Tr.Limo W/O Part.	M	645694	645913	NO	NO	Rework for A-12W8
2.	Seat A.-Frt.Tr.Limo W/Part.	M	645698	645914	NO	NO	Rework for A-12W8
3.	Hd/R.A.-Trimmed Limo W/O Part.	M	-----	645915	NO	YES	New Part
4.	Cover A.-Hd.Restr.Limo W/O Part.	M	-----	645916	NO	YES	New Part
5.	Coated Fabric-Charcoal	B	ME-221	-----	NO	YES	Increase Use
6.	Welt-Glazed Ant.Gun Metal	B	ME-223	-----	NO	YES	Increase Use

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D. Changes required to add Head Restraint to Bucket Front Seat Assembly used with Safeguard Conversion Jobs.

1. A channel reinforcement and mounting bracket will be added to the Bucket Seat Back Frame Assembly for the Head Restraint.
2. The same Casing, Guide, Top Plate and Cover as used on the Standard Full Front Seat Assembly will all be used on the Bucket Front Seat Assembly.
3. The Head Restraint Assembly will be the same as required for the Thin Back Front Seat Assembly except for the trim.
4. List of Additional Parts to be Affected:

ITEM	NAME	B or M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
1.	Seat A.-Bucket Frt.Trimmed	M	645253	645804	NO	YES	Use W/O Obsol. Prior to 1-1-69
2.	Back A.-Bucket Frt.St.Trimmed	M	643245	645755	NO	YES	Rework
3.	Frame A.-Bucket Frt.St.Bk.	M	643442	645756	NO	YES	Rework
4.	Wire-Bucket Frt.St.Bk.Bot.Tr	M	644312	644306	NO	YES	Rework to 644306
5.	Panel-Buck.Frt.St.Bk.Bottom	M	644311	644539	NO	YES	Serv.or Scrap
6.	Tube A-Bucket Frt.St.Back	M	643889	645757	NO	YES	Serv.or Scrap
7.	Tube-Bucket Frt.St.Back	M	644031	644540	NO	YES	Serv.or Scrap
8.	Panel-Bucket St.Bk.Reinf.	M	-----	644541	NO	YES	New Part
9.	Head Restraint A.-Bucket St. W/Part.Trimmed	M	-----	645805	NO	YES	New Part
10.	Cover A.-Bucket St.Hd.Restr.	M	-----	645806	NO	YES	New Part
11.	Welt-5/8 Hidem (Black)	M	ME-271	-----	NO	YES	New Part

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- E. Changes required to add Head Restraint to Bucket Seat Assemblies used without Safeguard Conversion.
1. This installation will use the same Bucket Seat Back Frame Assembly as required for Safeguard usage.
 2. A new Bucket Seat Back Cover Assembly and additional padding will be used to provide the necessary Energy Absorbing characteristics in the head impact area.
 3. A new Seat Back Trim Panel Assembly and revised hard-board will be required.
 4. The Head Restraint Assembly will be the same as used on the Standard Front Seat Assembly when trimmed in black.
 5. List of Additional Parts to be Affected:

ITEM	NAME	B or M	OLD PART NUMBER	NEW PART NUMBER	I	A	REMARKS
1.	Seat A.-Bucket Frt.Trim (W/O Part.)	M	645253	645811	NO	NO	Use W/O Obsol. Prior to 1-1-69
2.	Back A.-Bucket Frt.Seat Trim (W/O Part.)	M	643245	645847	NO	YES	Rework
3.	Cover A.-Bucket Frt.Seat Back (W/O Part.)	M	643246	645812	NO	YES	Reduce Usage
4.	Facing A.-Bucket Frt.Seat Back (W/O Part.)	M	643858	645849	NO	YES	Reduce Usage
5.	Latex Foam Rubber-1/2" Thick	B	MH-127	-----	YES	YES	Increase Usage
6.	Panel A.-Bucket Frt.Seat Back Trim	M	643864	645850	NO	YES	Use W/O Obsol. Prior to 1-1-69
7.	Panel-Bucket Frt.St.Back Trim	M	644006	644542	NO	YES	Rework
8.	Facing A.-Bucket Seat Blk.	B	645268	-----	YES	YES	Revise Usage