

DGS Contract No. 7-12-23-15-05

March 25, 2014



Caltrans

Creative Bus Sales

Braun Corporation

Factory Audit Pilot Vehicle Report

CHRYSLER ENTERVAN Class (D) Low Floor Minivan

Author : Ralph Martinez /John Cano

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Section 1– Introduction

On March 25 , 2014 the State Department of Transportation (Caltrans) representatives conducted an on-site Factory Post-Award Audit which included a Pilot Vehicle review and First Article Inspection on behalf of Federal Transit Administration (FTA) in accordance with Federal Regulation [Title49 Sub-Part 663](#), Pre-Award and Post-Delivery Audits of Rolling Stock Purchases. A Post-Delivery vehicle review was started on March 25, 2014 and completed with acceptance of the First Article on June 13, 2014 as specified in the Department of General Services (DGS) Contract# 7-12-23-15-05. This report shall serve as a historic record of proof confirming due diligence in meeting all contract requirements by the Contractor Creative Bus Sales and the vehicle manufacturer Braun Corporation.

The Post-Delivery review included a 2014 Chrysler Grand Caravan Class (D) Entervan (VIN#2C7WDGBG6ER220308). Included in the Audit Report are documents confirming Braun Corporation stated position of compliance with Title 49 CFR part 663.31, Post-Delivery Audit requirements. Caltrans Post-Delivery review confirms this vehicle meets the requirements under Title 49 CFR 663.35; Post-Delivery Buy America Certification; 49CFR part 663.37 Post-Delivery Purchaser's Requirement Certification including meeting contract specification, vehicle construction and roadworthiness; and 49 CFR Part 663.41, certification of compliance with Federal Motor Vehicle Safety Standards.

In addition Caltrans also confirms this vehicle has met the applicable requirements of the California Vehicle Safety Standard Code of Regulation Title 13; California Health and Safety Code; California Air Resource Board and Environmental Agency regulation; and the Society of Automotive Engineers and International Standards.

All supporting documents detailed in this report were provided by the representatives of the respective supplier companies with the intent to satisfy the requirements set forth by Federal and State authority. As required, Caltrans also confirms that final assembly of this vehicle took place in the United States.

The Braun Corporation is a second stage manufacturer situated 631 West 11th Street Winamac, Indiana, specializing in manufacturing accessible and mobility vehicle's. The manufacturer has been in existence respectively for 40 years.

-John Cano-
Caltrans Senior Vehicle Inspector

Section 1.1

Pre-Award Compliance Certification-DGS Contract# 7-12-23-15-05

PRE-AWARD COMPLIANCE CERTIFICATIONS

PRE-AWARD BUY AMERICA COMPLIANCE CERTIFICATION

As required by 49 CFR Part 663-Subpart B, the Department of Transportation (Caltrans) is satisfied that the Class (D) Low Floor Minivan, as presented in the pilot, 2014 Entervan (Vin# 2C7WDGBG6ER220308), as provided in the California Department of General Services contract # 7-12-23-15-05 from Braun Corporation and Creative Bus Sales, meet the requirements of Section 165(b) (3) of the Surface Transportation Assistance Act of 1982, as amended. (Caltrans) has reviewed the documentation provided by the manufacturer, which lists (1) proposed component and subcomponent parts of the buses identified by manufacturer, country of origin, and cost as a percentage; and (2) the proposed location of the final assembly point for the buses, including a description of the activities that will take place at the final assembly point and cost of final assembly.

PRE-AWARD PURCHASER'S REQUIREMENTS CERTIFICATION

As required by 49 CFR Part 663-Subpart B, the Department of Transportation (Caltrans) certifies that the Class (D) Low Floor Minivan, 2014 Entervan (Vin#2C7WDGBG6ER220308) from Creative Bus Sales/Braun Corporation, are the same product described in the Department of General Services contract specification, and that the proposed manufacturer is a responsible manufacturer with the capability to produce a bus that meets the specifications.

PRE-AWARD FMVSS COMPLIANCE CERTIFICATION

As required by 49 CFR Part 663-Subpart D, the Department of Transportation (Caltrans) certifies that it received, at the pre-award stage, a copy of Braun Corporation self-certification information stating that the Class (D) Low Floor Minivan, 2014 Entervan (Vin#2C7WDGBG6ER220308), will comply with the relevant Federal Motor Vehicle Safety Standards issued by the National Highway Traffic Safety Administration in 49 CFR Part 571.

Date: 3/25/2014

Signature: [Handwritten Signature]

Title: Senior Transp Planner

Braun, Class D

Section-1.2

Post Delivery Certification DGS Contract #7-12-23-15-05

POST-DELIVERY COMPLIANCE CERTIFICATIONS

POST-DELIVERY BUY AMERICA COMPLIANCE CERTIFICATION

As required by 49 CFR Part 663-Subpart C, Caltrans (the recipient) certifies that it is satisfied that the buses received, 2014 Braun Entervan VIN#2C7WDG6G6ER220308 (number and description of buses) from Braun Corporation (the manufacturer), meet the requirements of Section 165(b)(3) of the Surface Transportation Assistance Act of 1982, as amended. Caltrans (the recipient) has reviewed the documentation provided by the manufacturer, which lists (1) the actual component and subcomponent parts of the buses identified by manufacturer, country of origin, and cost; and (2) the actual location of the final assembly point for the buses, including a description of the activities that took place at the final assembly point and the cost of final assembly.

POST-DELIVERY PURCHASER'S REQUIREMENTS CERTIFICATION

As required by 49 CFR Part 663-Subpart C, the Caltrans (the recipient) certifies that a resident inspector, Johan Cano and Ralph Martinez (name of inspector not an agent or employee of the manufacturer), was at Braun Corporation (the manufacturer's) manufacturing site during the period of manufacture of the buses 2014 Braun Entervan VIN#2C7WDG6G6ER220308 (number and description of buses). The inspector monitored manufacturing and completed a report on the manufacture of the buses providing accurate records of all bus construction activities. The report addresses how the construction and operation of the business fulfill the contract specifications. After reviewing the report, visually inspecting the buses, and road testing the buses, the (the recipient) certifies that the buses meet the contract specifications.

POST-DELIVERY FMVSS COMPLIANCE CERTIFICATION

As required by 49 CFR Part 663-Subpart D, Caltrans (the recipient) certifies that it received, at the post-delivery stage, a copy of Braun Corporation (the manufacturer's) self-certification information stating that the buses, 2014 Entervan VIN#2C7WDG6G6ER220308 (number and description of buses), comply with the relevant Federal Motor Vehicle Safety Standards issued by the National Highway Traffic Safety Administration in 49 CFR Part 571.

Date: 6/13/2014

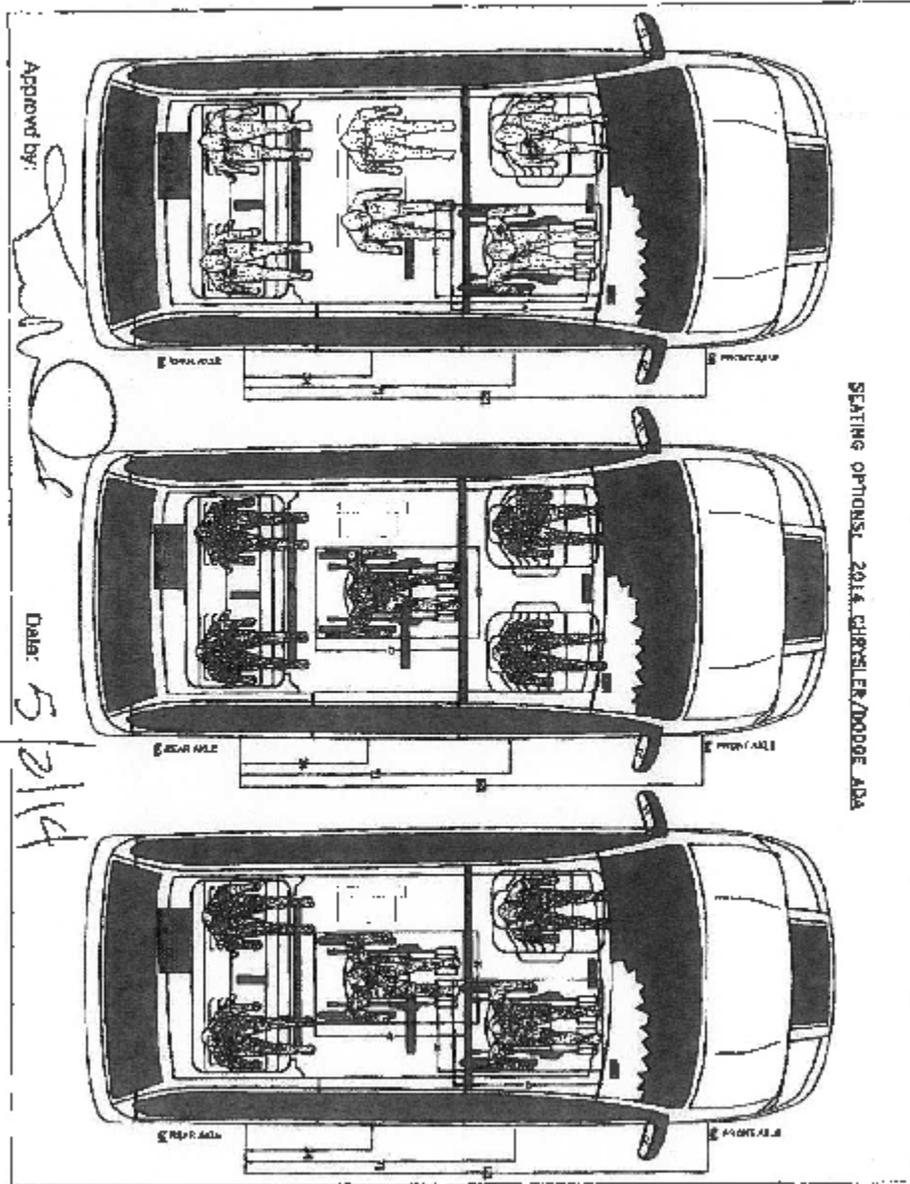
Signature: [Handwritten Signature]

Title: Senior Transp. Planner

Class D

Section 1.3

Pilot State Purchase Order/Quote/Floor Plan/Build Sheet





Customer Order
1114187

Customer ID: 1260
 Area Sales MGR: GMW
 Order Taken By: SH
 Terms: Net 30 / GEODF
 Freight Terms: billed

Order Date: 12/17/2013
 Customer PO: 47834/CR220308
 Desired Ship Date: 12/17/2013

Ship Via: CARRIER

Bill To: CREATIVE BUS SALES, INC.
 13501 BENSON AVE
 CHINO, CA 91710
 UNITED STATES

**** V CREATIVE BUS SALES**
 29220 PACIFIC STREET
 HAYWARD, CA 94541
 UNITED STATES

PART ID	Qty	Description	Unit Price	Extended	Amount
	1	NEW BRAUN DODGE/CHRYSLER CHASSIS VEVO			
DE3140	1	CHRYSLER ADA MANUAL FOLD/BRAUN NEW DE3140			
	1	CONV-14/DODGE MORONGO BASIN TRANSIT E140009008			
	1	SEAT 68M0 FREEDMAN/VINYL/ADA MANUAL E53F28-1301MS-D90			
	1	KIT-COVER-FRONT SEAT/PECCAQB0Z/D90GRAY E54916K-D60-11			
	1	CENTER ROW SEAT/GRAY/ADA MANUAL E53F28-1002MSYL-D90			
	1	BID Q&S/NO ADDITIONAL DISC AVAILABLE			
	1	OUTBOUND FREIGHT (VANS)			

stewart@creativebusesales.com
 sandrac@creativebusesales.com
 culon.walker@braunlift.com
 207WDDQBGBER220308
 BRIGHT WHITE/LIGHT GRAYSTONE
 UNSTARTED BRAUN VAN WITH BID ASSISTANCE

REV: CHANGED FROM MAIN TO SHIP TO: 358 PER S.A. EXANDER; DMB DB

**BUILD VAN WITH GRAY FLOOR, TRACK, RAMP, AND NO FOOTREST.

REF: CALACT STOCK

Item	Part ID	Description	Qty Per	Stock UM
	1 E51455K	KIT-PROTECTIVE SHIELD-UNDER VAN/ADA		1 EA
	2 E40510	ALIGNMENT-FOUR (4) WHEEL TIRE ALIGNMENT		1 EA
	3 18350	MIRROR-CONVEX 3'		1 EA
	4 E50856	BELT-EXTEN-SEAT BELT/CHRY RT 2008		1 EA
	5 34600	BELT EXT-3PT-8"-FREEDMAN & MOBILITY		1 EA
	6 E51466K	KIT-C-PILLAR SOFT GRAB RAIL/CHRY ADA		2 EA
	7 81490	BELT-TIE DOWN- RETRACTORS ONLY/QRT MAX		2 EA
	8 18212	CUTTER-SEAT BELT		1 EA
	9 20908	POUCH-BELT STORAGE-Q'STRAINT		1 EA
	10 E40133A-25-14	KIT-DODGE SAFETY EQUIPMENT	2	1 EA
	11 E51569LGS	PANEL CLIMATE CONTROL DELETE-RT		1 EA
	12 E51167KS	KEY BLANK		2 EA
	13 33774	Q'STRAINT MULTI PIECE CHEST & WA/ST BELT		1 EA
	14 19464	DECAL-WHEELCHAIR SEC LOCATION ADA		1 EA
	15 E51099YL	THRESHOLD PLATE-DVR/11-2013RT/GRIT YELL		1 EA
	16 E51167D3	HUBIK-LODGE-3 BUTTONS		2 EA
	17 29018	BELT-WEBBING LOOP,Q5-7583-Q 'STRAIN I'		8 EA
	18 21821WH-R096	TAPE-3M REFLEC. WHT- 2" X 95'		2 FA
	19 36457	DECAL-EMERGENCY EXIT-REAR HATCH-2010 CAL		1 EA
	20 36458	DECAL-FUEL TYPE-E85/UNLEADED-2010 CALTRA		1 EA
	21 E50907W-CAL	WMT-CENTER DOOR TRACK EXT/PASS/CAL		1 FA
	22 E51248W-CAL	WMT-CENTER DOOR TRACK EXT/PASS/CAL		1 EA
	23 CF08-350ADA	INSTR.PAD-CHRYSLER ADA LINE/CALACT		1 EA
	24 CF08-350ADA-1	INSTR.PAD-CHRY ADA PAS SIDE SLIDE/CALACT	1	1 EA
	25 E51617K	KIT-HARN CALTRANS DOOR AJAR	1	1 EA
	26 26809	DVD-Q-STRAINT/OPERATIONAL		1 EA
	27 38700	CARGO NET-MOPAR 82300812		1 EA
	28 38094	MANUAL-SERVICE-2013 DODGE/PUBLIC/ADA		1 EA
	29 38652	SUPPL-SERVICE-RT CHRY, PUB. USE-CALTRANS		1 EA
	30 37327	FLARE PAINT CHIP GUARD OPTION		1 EA
	31 E51835K	KIT-LIFTGATE STRAP BKT		1 EA
	32 E51905K	KIT-ASSY-ADA STRAP HANDLE/B		1 EA

Section 1.4

Post-Delivery Completed Vehicle Inspection Report

(Tare Weight Analysis/Alignment Report/FMVSS Certification Decal)



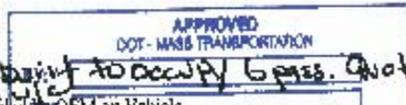
INSPECTION REPORT

Date: 6/13/2014 FROM PG2- accepted / (regulas tested)
Circle type report: Complete Partial Date of Follow-up 7/11/2014
Milestone Advt Development 2660-2274466 1391-1
Ship to name Center, Vallejo, CA PO# T.B.A Stock # 47634
VIN # 2C7WdgBg6ER220308 Mileage 45
Chassis OEM: Ford, Chevy, Chevy Final Manufacturer: BramAbility Body # BRM29
Year of Chassis 11/07 of cyl. 6 Fuel Type UVI, Bus Type D Dealer/location Creative Bus Sales Hayward, CA.

Comply with Specification Area of Inspection of Vehicle Comments

DOCUMENTATION

- Plant stamp label matches OEM info label
Copy of PO. Bus/options matches PO - vehicle being to occupy 6 pass. Note cans for 5 ft.
Copy of incomplete vehicle data sheet from OEM if not labeled by OEM on Vehicle
Copies of Alignment printout (with before and after readings and VD) and weight slip - needs alignment.
Inspector calculated stability of vehicle to carry worst-case passenger load with fuel tank.
Pull and not exceed GVWR - 6050 tare - 3000 lbs - 3050 lbs persons 89 = 5920
Required literature, Instructional disc, Warranty statement included in vehicle - vehicle exceeding GVWR.
Warranty statement - corrected



UNDER HOOD AREA

- (3) Filler/loss label
Engine oil level ok (needs less than 1/2 quart added)
Belt(s), cables, wiring (routing/secure/sealed/chaffing) - Loose negative battery cable
Labeling ok; coolant capacity / A/C refrigerant / lubricant / belt (if different from OEM)
Added Equipment installed properly (routing etc.) - Engine & Transmission mounts & heater hoses
Other

BODY ISSUES

- All locks work normal - NO spare FOB or key provided - corrected
Battery tray function, battery type, circuit breakers, wiring in Box area
Fit and Flush OK. No body damage - Includes Roof
Windshield OK - Includes all glass
Mirrors
All exterior lights - check Brake lamps - In working order
All doors function normal
Fuel type and Heater shut off (Heater-NA on Minivan) labels
Other - Fire Extinguisher missing Fire marshallett - corrected 6/20/14

INTERIOR ISSUES

- Fit and Finish Ok
Flooring
Seats, including type/function/foam/armrests/grab handles/spacing/track filler/
Aisle width /Seat belts
Wheel chair shoulder restraints, and Location
Exit windows, function, signage and accessibility
Electrical panel, wires secure, no chaff issues
Under dash and engine cover wiring, and hoses. (routing, chaffing)
Tolma switch at Brake pedal (wiring pointed up, secure)
No wiring in Park brake pedal travel area
Safety Equipment installed Fire extinguisher / 1 First Aid / 3 S/B ext / 1 B.Q. strain
Life and Interlock functions - Ramp striking on Ramp lock & Door stricker / 1 Spill Kit / 2 W/C LAD / 1 Spare tool
/ 1 Blower / 2 W/C Shoulder / 1 Air compressor / 1 Triangle / 1 Pouch

corrected



INSPECTION REPORT

Unit # R220308

Date 6/13/2014

Page 2

INTERIOR ISSUES *continued*

- Yes/No Inlets/stop lights ok
- Yes/No Wheel chair tie down location/size
- Yes/No Front A/C 33° Rear A/C 45° Front Heater 110° Rear Heater 112°
- Yes/No Other

UNDER VEHICLE

- Yes/No Wire routing/Bat cables/lift power cable
- Yes/No A/C and Heater hoses (routing/braiding/secure)
- Yes/No NA A/C condenser mounting secure
- Yes/No All grounds in place with proper prep and weather sealed
- Yes/No No added wiring/components secured to OEM brake/fuel lines, or Trans dipstick tube
- Yes/No Suspension/Mohydro OK rear shocks secure
- Yes/No Exhaust routing/hangers/catal height and location
- Yes/No Secure tire and mount (inside purveyor type 4) loose ship with No Carrier on vehicle - **All tires match**
- Yes/No Wheel Chair track, seat, lift and W/C harness securement Fasteners
- All done with required washers/hardware
- Yes/No Undercoating/corrosion protection (no bare areas, none on drive shaft)
- Yes/No NA Drive shaft Loop/s
- Yes/No No welds in restricted/prohibited areas of OEM frame
- Yes/No Body mounts/structure Ok, no notches/alterations
- Yes/No NA Telma mounts/whing
- Yes/No Other

ROAD TEST

- * Yes/No Steering, Brake function normal - **needs alignment**
- Yes/No Drives normal
- Yes/No No unusual noises, Rattles
- Yes/No Warning lights/gauges normal/ Radar function - **Includes cruise control**

Additional Comments:

NOTE: All loose ship or removable items to be counted and verified by end user at final delivery.

Vehicle: (circle one)

ACCEPTED

REQUIRES RECHECK

Signature of Inspector

John Carr

Date

7/11/2014

22187

ORIGINAL

6-17-14 8:33 AM

WEIGHED AT UNION CITY, CALIF. SCOTT'S MOBILE TRAILER REPAIR, PUNING WRIGHTMASTER

By	Deputy	INITIAL
By	Deputy	GROSS
By	Deputy	TARE
		NET
		WEIGHT

4960 lbs tare only

FRM	El Dorado Bus Sales	UNIT	1
TO	Pacific	COMMODITY	
	Hayward CA	SUPPLIERS & LOADERS	
	SEPTICS	COUNT	
TRUCK NO.	207WD989	DRIVER	James R
CARRIER	El Dorado Bus Sales		
TRAILER LICENSE NO.	6ER230308		
47634			

SCOTT'S MOBILE TRAILER REPAIR • (510) 478-7160 • 280 WHIFLE ROAD • UNION CITY, CA 94612

REVERSE PRINTED ORIGINALLY ON REVERSE

Work Order: ER220301
 Company: BRAUN
 Year: 16
 Technician: WEGLEY
 Mileage: 3
 Date: 2/17/14 10:04 AM

Dodge : Caravan / Grand Caravan / Ram CIV / Mini Ram Van : 2008-13

Front : Left

Actual	Before	Specified Range
0.1°	0.5°	-0.8° 0.8°
1.4°	1.3°	1.6° 3.6°
0.04°	-0.01°	0.03° 0.23°
12.2°	11.8°	
12.2°	12.4°	

Included Angle
 Turning Angle Dir.

Front : Right

Actual	Before	Specified Range
-0.1°	0.8°	-0.8° 0.8°
1.8°	1.6°	1.6° 3.6°
0.25°	-0.08°	0.03° 0.23°
12.2°	12.1°	
12.1°	12.1°	

Gross Camber
 Gross Caster
 Gross SAI
 Total Toe
 Cross Turn Dir.

Front

Actual	Before	Specified Range
0.2°	0.8°	-0.2° 0.8°
-0.2°	-0.2°	-0.6° 0.8°
0.1°	-0.3°	
0.28°	-0.06°	0.06° 0.46°

Rear : Left

Actual	Before	Specified Range
0.1°	0.1°	-0.8° 0.3°
0.50°	0.30°	-0.28° 0.36°

Camber
Toe

Rear : Right

Actual	Before	Specified Range
-0.3°	-0.2°	-0.8° 0.3°
-0.28°	-0.27°	-0.28° 0.31°

BUILT BY CHRYSLER GROUP LLC
 DATE OF MANUFACTURE: 11-13
 VIN: 27650246813
 CURR FINISH: 1339 AG 259 LG ALN 25-6507
 1786 S 4264 29 04 25 11 04
 CURR REAR: 1492 KS 3120 LB 419 25-6507
 1786 S 29 04 25 11 04



INCOMPLETE VEHICLE

05/19/2014 21:31

This vehicle may include mercury - added devices installed by the manufacturer:

- VIDEO DISPLAY
- NAVIGATION/CAMERA DISPLAY
- H.I.D. HEADLAMPS

Remove devices before vehicle disposal. Upon removal of devices please reuse, recycle or dispose as hazardous waste.

MANUFACTURED BY:

THE BROWN CORPORATION ENTREVAULT.COM
DATE OF MANUFACTURE IS MO. 14 YR.

INCOMPLETE VEHICLE MANUFACTURED BY:

CHRYSLER CORPORATION
DATE (MO, YR, HRS) 11 MO. 12 YR.

GVWR 3724 KG. 8250 LBS.

GVN FRONT 1185 KG. 2611 LBS.

WITH 275162847 TIRES

1728.5 INCH. @ 38 PSI COLD

GVWR REAR 1081 KG. 2386 LBS.

WITH 275162847 TIRES

1728.6 INCH. @ 38 PSI COLD

GVWR 2728 KG. 6010 LBS.

WITH 275162847 TIRES

1728.6 INCH. @ 38 PSI COLD

GVWR 2728 KG. 6010 LBS.

WITH 275162847 TIRES

1728.6 INCH. @ 38 PSI COLD

GVWR 2728 KG. 6010 LBS.

WITH 275162847 TIRES

1728.6 INCH. @ 38 PSI COLD

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1728.6 INCH. @ 38 PSI COLD

GVWR 2728 KG. 6010 LBS.

WITH 275162847 TIRES

1728.6 INCH. @ 38 PSI COLD

GVWR 2728 KG. 6010 LBS.

WITH 275162847 TIRES

1728.6 INCH. @ 38 PSI COLD

GVWR 2728 KG. 6010 LBS.

WITH 275162847 TIRES

05/19/2014 21:31

Section 2

Caltrans Braun Corporation Vehicle Initial Review

(Hayward Meeting 01/27/2014)

1/27/14 Braun mini-van review

1. Front seat covers fit and finish. Current review indicates that Braun has improved the loose fitting seat covers which also includes covering the side airbags.

Before



2. Front passenger seat: Has the front passenger seat base been redesign?

*The firewall bump-out impedes in the wheelchair foot area. Provide re-design options.

*Does the foot base meet the specification? Specification states: "Foot base for this seat position shall be easily removed from the seat base for easy transport and storage".

*Can covers be provided to cover the seat and/or openings when space is used for a wheel chair?



Firewall restricts W/C foot area



Competitor provides more foot space



Non removable foot base

3. Spare tire cover excessively loose.



4. Back up alarm location, noise decibel loudness is of concern. What are the options to reduce the decibel level? Where is the alarm located? (under the vehicle)
5. Driver's seat foot base created a safety problem when reposition driver's hoof from accelerator to brake pedal. The solution was to add carpeted cover plywood to raise the seat foot base level. We would like to see a permanent solution to the driver's foot base problem.



6. Upper and lower radiator hoses rubbing/chafing. Not presenting issue on sample viewed 1/27/14.

7. Fluid line routing unprotected at the rear wheel. Fluid lines along exhaust: require heat wrap.



8. Battery cables over tensioned. Request this problem be addressed. Possibly adding longer cables?



9. Request to improve the exhaust system to a one piece extension oblong design as shown below.



10. Has the ramp been redesigned for the new production model? If not what is the current sliding door release lever design?



Preferred door release lever



Spring cover impedes exit



Release rod needs to be secured better

11. Review passenger grab handles for location, fit and finish. We feel there's a need for an additional grab handle to assist with passenger boarding in front of the "C" pillar curb side.

12. High back center fold seat. Is there a shorter grab handle for the fold seat?



13. We would like have the head rest included with the rear fold down seat.



14. We request that the outside body step for the driver/passenger continue to be included.



15. Evidence of rust at the sliding door extensions present at the dealership? What is the cause? What is the solution "stainless steel extensions"? Braun identified the weld to be rusting. We ask that Braun send us documentation on the repair process.



16. Provide documentation on the Light Illumination Test per specification and ADA compliance:

The customer requirement test criteria is outlined in the Vehicle Specifications and Bid Requirements for CalACT Class D Low Floor Minivan Attachment A-2 dated October 2011, specifically paragraph 5.4 of the specification which states:

Overhead and lower lighting shall be installed in the interior rear of the vehicle that provides not less than two foot-candles of illumination at the entrance ramp area. This system shall illuminate automatically when the vehicle front and sliding doors are open. A manual switch must be available which overrides any timing device on the interior light system.

Additional lighting shall be installed in the lower panels of the vehicle which provides a minimum of two foot-candles of floor illumination for the center and rear seats. Interior lighting fixtures shall be reasonably flush with the interior walls and ceiling to prevent being a hazard to passengers. Additional lighting shall be wired to work in concert with the OEM interior overhead light switches. All additional lighting must be adequately circuit protected.

Section 3

Caltrans Pre-Award Factory Pilot Vehicle Report

**MANDATORY CONTRACT NO. 7-12-23-15-00
CONTRACT USER INSTRUCTIONS**

CLASS D, MODIFIED MINIVAN SPECIFICATION REQUIREMENTS

1.0 Scope

Braun *Vin # 2C1WDL6G6ER220308*
4/2, 2014

The Modification shall result in increased interior headroom and clearances and improved passenger accessibility provisions for persons with disabilities. The vans are to be converted in accordance with this specification. No modifications beyond the scope of this specification will be allowed. The van shall be a complete, operating vehicle, and, at a minimum, it shall conform in strength, quality of material and workmanship as provided by the automobile industry. The Manufacturer shall be ISO 9001:2000 certified for the design, sale, manufacture of customized buses and multipurpose passenger vehicles. A copy of the certification must accompany the bid submittals. All parts added as a result of the modification process shall be new. The basic van must be a current model year, factory production vehicle which is cataloged by the OEM manufacturer and for which published literature and printed specifications are currently available.

This specification is intended for use in purchasing a completed vehicle(s) with all equipment and accessories needed for its operation. All parts, equipment, and accessories shall be completely installed, assembled and/or adjusted as needed/required.

The vehicle shall conform in all respects to the following standards, laws, and regulations:

- Federal Motor Vehicle Safety Standards (FMVSS)
- Code of Federal Regulations, Title 49, Chapter V-National Safety Bureau
- California Code of Regulations (CCR), Title 13
- Americans With Disabilities Act (ADA) Accessibility Specifications for Transportation Vehicles, 49 CFR, Part 36, Subpart B-Buses, Vans and Systems
- State of California Vehicle Code
- California Health and Safety Code
- California Air Resources Board Regulations
- Original Equipment Manufacturer (OEM) Body Builders Book

1.1 CAPACITY

This minivan shall be capable of carrying in one trip two (2) ambulatory adult forward facing seated passengers and two (2) passengers seated in mobility aids, in addition to the driver. The vehicle must be convertible to at least five (5) ambulatory passengers, plus the driver. Conversion to a full ambulatory/mobility aid capacity will be achieved by the use of an ADA, and FMVSS compliant center mounted, fold up seat.

1.2 ADDITIONAL CAPACITY

An ambulatory passenger capacity that exceeds five (5) is desired, providing all specification requirements are met herein. Should a capacity larger than five (5) be offered, there shall be no additional price increase. No additional bid preference will be given.

1.3 MODIFICATION

This minivan shall be made ADA compliant through a modification whereby the vehicle floor area is cut from the engine firewall to the rear most passenger seat and lowered to meet minimum the ADA 56 inch door opening requirement. There shall be no extrusion to any portion of the vehicle roof in meeting the ADA 56 inch door-opening requirement. A manual, fold up mobility aid ramp is to be mounted on the curbside sliding door, and two mobility aid positions will be provided.

1.4 REQUIREMENTS:

All labor, parts, materials, and other items used shall be the best quality available in commercial practice.

**MANDATORY CONTRACT NO. 7-12-23-15-00
CONTRACT USER INSTRUCTIONS**

(a) The bidder shall submit passenger position loading schematics of engineering quality with the bid, which show the passenger seat positions. The schematics will show a chart with the ambulatory/mobility positions for each capacity, the equivalent weights, and compliance with the OEM GVWR and Gross Axle Weight Rating (GAWR) ratings for the specified vehicle. All weight calculations shall be estimated as 160 lbs. per ambulatory and 250 lbs. per mobility aid passenger. Loading calculations must be made with a full tank of fuel. For the center folding seat 300 lbs (150 lb per passenger x 2) shall be used in lieu of the 250 LB mobility aid passenger weight.

(b) A copy of a weight certificate from a state certified scale (state of final builders location will be accepted for these purposes) showing the unladen weight of the vehicle, with a full fuel tank, as specified, must be submitted with the bid.

(c) An additional weight detail breakout listing of engineering quality must be provided with the bid demonstrating GVWR compliance that separately lists:

- 1) The conversion base vehicle weight,
- 2) The specified passenger payload of at least two and three if available rear ambulatory, two middle ambulatory, one front wheelchair, plus driver.
- 3) The combined weight of all listed options,
- 4) The combined weight of all specified accessories (belts, fire extinguisher, first-aid kit, etc.) in this specification.

(d) All required weight breakout listings will show compliance with the OEM GAWR ratings, front and rear:

List the manufacturer's gross axle weight rating: Front: Rear: _____

(e) The Cooperative or purchasing agency reserves the right to request a state certified weight certificate, at contractor's expense, for each vehicle equipped as ordered, at any time, during the build/delivery process. The weight certificate will show compliance with the OEM GVWR with all accessories and options installed. A State of California certified weight slip will be required at time of inspection.

2.0 ENGINE

The engine shall be a California certified, 3.6 liter flex fuel, E-85, V-6, gasoline engine. The engine shall be a current production model and match the year of the chassis.

2.1 TRANSMISSION

The vehicle shall have an automatic transmission, with a minimum four (4)-speed transmission with automatic overdrive.

2.2 RADIATOR AND COOLING SYSTEM

The vehicle shall have the heaviest duty available radiator and cooling system, with a coolant recovery system factory installed, and with factory specified coolant.

2.3 HOOD

The hood lock release shall be inside the vehicle, easily identified and accessible to the driver.

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Tank, fuel and vent lines, and hardware must meet all current FMVSS standards, including FMVSS 301, as well as all current CARB and EPA requirements (see section 7.7). If the OEM tank is removed during conversion and replaced with an aftermarket tank, documentation from the tank manufacturer or vehicle second stage manufacturer to show compliance to regulations is required with the bid. The tank must replicate OEM capacity and shall be fully calibrated with the OEM dash fuel gauge. Tanks shall be treated or coated so as to resist corrosion for the complete applicable warranty period.

3.5 SUSPENSION

The vehicle will retain the complete OEM front and rear suspension with OEM components. Rear suspension must include OEM Load Leveling suspension (SER) to maintain a level position once loaded to full capacity without affecting the ride quality.

3.51 POWERTRAIN SUBFRAME INSTALLATION

The area of contact between the power train subframe and the OEM body structure shall be maintained. Installation of spacers shall replicate the OEM contact area between the frame and unibody.

3.6 ROAD CLEARANCE

With a full capacity load, the vehicle shall be able to clear a conventional public street speed bump, without making contact with any portion of the vehicle surface, at 10 miles per hour.

- a) Ground Clearance: With passengers and driver and with all available options installed (FULLY LOADED); there must be a minimum ~~of 1.2 inches~~ of clearance between the lowest part of the van and level ground.

3.7 WHEELS

The minivan shall be equipped with four (4) OEM Stamped Steel wheels with painted bolt-on wheel covers, ^{17"}18" minimum, and a matching OEM full size spare.

3.8 WHEEL WELLS

Wheel wells shall be OEM. Alteration of the lower portion of the rear wheel wells to accommodate lowered floor shall be done with stainless steel or aluminized steel.

4.0 TIRES

Five identical brand and size tires shall be furnished. Tires shall be steel belted radials, the size, load rating and the brand as provided by the OEM for the chassis specified.

4.1 SPARE TIRE

The spare tire shall be OEM Stamped Steel Wheel mounted inside the vehicle and secured in an easily accessible carrier as approved by the Cooperative.

4.2 TIRE CHANGING EQUIPMENT

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The vehicle shall be equipped with OEM needle or digital type gauges or OEM warning lights. All gauges will be installed in the OEM manufacturer's designated positions within the vehicle dashboard.

5.2 FRONT AND REAR HEATING

An OEM heating/defrosting system with vents front and rear shall be provided. All lines and hoses shall be sufficiently fastened, protected, and insulated to ensure against wear from friction and the elements. Non-OEM heater hoses shall be a continuous run of like material to the OEM heater lines which ran to the heater prior to conversion. No splices between the front and rear connections will be allowed. The lines must be mechanically attached in a manner which replicates the OEM. Whenever possible, and at a minimum, provide attachments to the vehicle structure at no greater than 18-inch intervals. Lines must be routed so as not to be exposed to wheel spray and not pass within 2 inches of any part of the exhaust system.

5.3 FRONT AND REAR AIR CONDITIONING

Air conditioning shall be OEM front and rear mounted, with separate fan controls mounted on the front center console. Rear ceiling mounted A/C controls shall be removed and a new low profile interior panel color matched to OEM interior shall be installed to eliminate head strike. Conversions shall not impede access to front and rear air conditioning components. Non-OEM refrigerant hoses shall be a continuous run of like material to the OEM refrigerant lines which ran to the rear evaporator prior to conversion. A label must be placed in the engine compartment detailing manufacturer's name, refrigerant type and quantity, and compressor oil type and quantity.

5.4 INTERIOR LIGHTING

Overhead and lower lighting shall be installed in the interior rear of the vehicle that provides not less than **two foot-candles of illumination at the entrance ramp area**. This system shall illuminate automatically when the vehicle front and sliding doors are open. A manual switch must be available which overrides any timing device on the interior light system.

a) **Seat Lights:** Additional lighting shall be installed in the lower panels of the vehicle which provides a minimum of **two foot-candles of floor illumination for the center and rear seats**. Interior lighting fixtures shall be reasonably flush with the interior walls and ceiling to prevent being a hazard to passengers. Additional lighting shall be wired to work in concert with the OEM interior overhead light switches. All additional lighting must be adequately circuit protected.

5.5 EXTERIOR LIGHTING

Exterior lighting shall be installed in accordance with the Federal Motor Carrier Safety Regulations and the California Code of Regulations, Title 13. All lights shall be sealed from moisture and grounded to the body framing structure. The brake light shall not override emergency flashers or turn signals. An OEM center spotlight, two OEM back-up lights, and **OEM running lights** shall remain factory installed and complete.

5.6 LIGHT COMPLIANCE

All accessory vehicle lighting will conform to ADA, 49 CFR, Part 38, and Subpart B.

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- e) **Road Noise:** At 60 miles per hour, the ambient noise level shall not exceed 89.5 DB measured from the passenger portion of the passenger compartment.
- f) **Fasteners:** All metal hardware and fasteners shall be non-corrosive high strength steel. Clamps shall be fully insulated to prevent premature wear.

6.5 MISCELLANEOUS BODY COMPONENTS:

- a) **Windshield Wipers:** Intermittent with dual jet washers and multiple speed control.
- b) **Rear Window Accessories:** The rear window shall have an OEM electric window defogger, wiper, and washer.
- c) **Paint:** The basic vehicle factory color shall be OEM standard white. Chip guard paint (same color as body) shall be standard. The reference point (for the top) shall be from a point 3 inches above the bottom of an unmodified sliding door. The chip guard shall be applied from this point to the bottom of the rocker panel, and shall extend from the rear of the front wheel opening to the front of the rear wheel opening.
- d) **Transit Striping:** Transit stripe, 3 inch width, will be installed on each side of the vehicle. Colors available at a minimum shall be: white, red, orange, yellow, green, light blue, and blue. Reference: Stripe shall be 3M reflective tape series 880, or approved equal. The stripe shall be white if user does not choose another color. The stripe will be installed in a professional manner with cutouts for emblems etc. See Drawing "A" Page 19 for install position of stripes.
- e) **Rear View Mirror:** An interior rear-view OEM mirror with a night driving adjustment shall be installed to afford the driver a view of all passengers.
- f) **Side View Mirrors:** Each minivan shall be equipped with OEM exterior left and right side mirrors, the largest available, containing a convex/wide view mirror on the right side. Mirrors shall have electric adjustment capability.
- g) **Sun Visors:** Two OEM fully adjustable sun visors shall be provided.
- h) **Sealant, Rust proofing and Undercoating:** The entire underside of the body including floor members, side panels below floor level (if metal), and fender wells shall be undercoated, at the time of manufacture, with a nonflammable resin type polyolefin undercoating for bus applications. All openings in the floorboards and firewall shall be sealed.

6.5 PASSENGER DOORS AND STEPWELLS

The minivan shall have standard OEM driver and passenger front doors, OEM manual right side mobility aid accessible rear passenger door, with a minimum opening height of 56 inches, a minimum usable width which will accommodate the ramp platform without causing the ramp to contact the door, and the opening bottom shall be a minimum of 9 inches above the ground. Door extensions shall be constructed of stainless steel. Both sliding doors shall have a locking mechanism to securely hold doors in the open position when the vehicle is on a hill.

- a) **Ground effects:** Vehicle shall incorporate stainless steel, aluminum or AFB body extensions on both street and curb side of vehicle. These shall be primed and painted to match the exterior color of the vehicle. See Drawing A for details.

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b) **Floor Pan:** The floor pan shall be a minimum #16 gauge stainless steel or aluminized steel, with rust inhibiting epoxy primer or equivalent covering the weld joints. The vehicle floor and related components must be structurally sufficient to meet the requirements of FMVSS 207 and 210 for all seating systems and belt anchorages as well as SAE J2249 for the mobility aid restraint system. Said tests must be performed using a representative floor pan vehicle structure. (Bench testing of OEM seats, if modified, that utilize unaltered OEM anchorages may be tested independent of the vehicle.) Testing must be done by an American Association for Laboratory Accreditation, or equal, accredited facility. Seats that do not utilize OEM floor structure must be tested with replacement floor structure. Above testing can be done with floor structure jig mounted if the vendor can validate this test will satisfy FMVSS requirements. Submit testing results prior to award. The resulting floor must be continuous and sealed to provide a watertight interior compartment. The replacement vehicle floor and related components must be corrosion resistant, meeting the requirements for 1000-hr exposure as specified in ASTM B117.

c) **Floor Covering Material:** The floor surface shall be covered by commercial-grade transit flooring, 1.8mm Altro Transfloor Chroma Zool, or approved equal, possessing anti-skid properties. Rear area behind seats to be covered with rubber material, securely adhered to the subfloor. The floor covering color shall be coordinated with the vehicle interior. The flooring shall be securely bonded to the sub-floor with Altro Eco 20 (or approved equal) water based adhesive for porous surfaces, all non-porous surfaces to use Altro 6165 (or approved equal) contact adhesive. Cargo area to be covered with OEM carpet material. Use of alternate adhesives are permissible with the provision of a manufacturer's warranty of no less than two years, unlimited mileage for installation and adhesion. Edges shall be sealed and all seams heat welded to prevent water penetration. The floor shall be installed according to manufacturer's directions, using proper tools, accessories and adhesives.

d) **Tripping Hazards:** All areas of the vehicle interior floor shall be level, with no tripping hazards throughout the access area. Mobility Aid restraint tracks, and seat locks shall be beveled with no sharp edges and will protrude no more than 1/4 inch above the floor surface.

7.1 SEATS AND GRAB HANDLES

a) All seats are to be manufactured utilizing materials designed to withstand the demands of transit and paratransit use. All visually exposed metal must be powder coated or stainless steel. All seat frames must be constructed with heavy-duty steel tubing and shall be jig welded to insure maximum consistency and durability. There are to be no sharp edges that may snag or injure passengers. All seats and restraints in the vehicle, as specified, must comply with current FMVSS standards, including 201, 202, 207, 208, 209, 210, and 214. Documentation of current model year testing and seats as specified within shall be provided prior to award. Testing by an American Association for Laboratory Accreditation or equal, accredited test facility of individual components independent of the vehicle will be accepted if done on a representative floor, and the vendor can validate that test results, meet all FMVSS requirements, and could be duplicated in the production vehicle. Any alterations to OEM seats or mounts that affect these tests must also be tested. All seat material shall be gray and compliant with Docket 90-A, FTA (ASTM E662/FAR 25.853). The seat material must also be bacterial resistant and conform to ASTM G21 on the face and back. Seat material shall be available in vinyl or fabric at buyer's option at no additional charge. All cushions must be fully enclosed by the seat fabric, vinyl or flame blocker material. Cloth seat fabric shall be a minimum 100,000 double rub woven material, anti-bacterial and anti-microbial; the seat fabric shall have a moisture repellent treatment that prevents liquids from passing through fabric.

b) **Front Passenger Seat:** The seat base shall be adapted to permit easy roll out for mobility aid access, OEM style is acceptable. The seat shall lock and unlock easily from the floor area, and have a positive lock device with visual indicator which assures securement is in place. This shall be highlighted with Yellow or

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- 30 mph/20 Impact Test criteria per SAE J2248
 - 36 CFR Part 1192 and CFR Part 38 (ADA)
 - All applicable FMVSS, as amended
 - California Code of Regulations, Title 13
- c) **Mobility Aid Securement System:** Each vehicle shall be equipped with the number of securement systems as required in Section 1.1 of this specification.
- d) **Track Mounting:** The system anchorages and/or "L" track shall be mounted to the vehicle floor in accordance with the requirements of the system manufacturer. A copy of the manufacturer's installation instructions must be provided to MBTA prior to award.
- e) **Track Installation:** As standard, the vehicle shall be equipped with laterally oriented mobility aid restraint track. Track shall include end caps where track does not terminate into the side wall. Floor plans illustrating locations of must be available for review and approval prior to the bid award. Floor plan must comply with requirements as described in "f" below. See drawing "B", Page 19, for current layout.
- f) **Occupant Restraint System:** For each mobility aid securement system set installed in the vehicle, a corresponding Occupant Restraint System shall also be provided. The Occupant Restraint System shall consist of an adjustable lap (pelvic) belt and a shoulder (upper torso) belt, and shall meet all applicable Federal Motor Vehicle Safety Standards (FMVSS), as amended.
- g) **Belt Web Cutter:** A high quality web cutter, for emergency use, shall be provided with each vehicle, along with instructions for use.
- h) **Storage Containers:** The Contractor shall furnish and permanently install a container within the rear cargo area behind the rear seat to store the First Aid Kit, Blood Borne Pathogen Protection Kit and Reflective Triangles. A container shall also be available or provided to store tie downs. The Cooperative must approve final designs and placement.
- i) **Mobility aid and Passenger Placement:** The bidder shall furnish drawings of proposed seating arrangements, including spaces for two (2) mobility aid positions, with one minimum clearance area of 30 inches by 48 inches. The bidder must indicate sufficient space for placing/boarding two mobility aids, one position in the rear passenger area and one position in the front passenger area. At a minimum, the securement location(s) and area(s) shall meet all applicable ADA requirements.

7.3 MOBILITY AID RAMP

The vehicle shall be equipped with a manually-operated, folding, mobility access ramp which folds and unfolds through the right side door. The ramp must also swing out of the doorway about a nominally vertical axis providing clear access for ambulatory passengers. (Ramp and all components shall leave a clear path to and from the rear and center seats with no trip hazards. Bidders shall provide illustrations of their ramp construction, which must be built to withstand heavy transit use. This ramp shall comply with ADA, 49 CFR Section 38.23(c) and 38.25(b). The fold and unfold motion of the ramp must be counterbalanced so that the force exerted by the operator does not exceed 15 lbs. damped so that, in the event the ramp is allowed to free fall, no point along the ramp length shall move faster than 18 inches/second.

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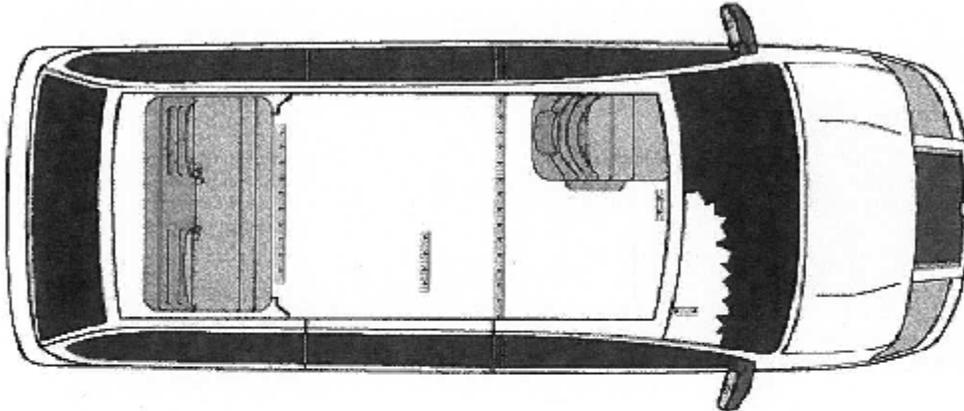
- a) First Aid Kit: A minimum 10 unit first-aid kit shall be furnished and mounted in the rear storage container which meets the requirements of the California Code of Regulations, Title 13 Section 1243.
- b) Blood Borne Pathogen Protection Kit: A blood borne pathogen protection kit with case shall be furnished and mounted in the rear storage area of the vehicle.
- c) Fire Extinguisher: One metal or plastic constructed California Highway Patrol approved minimum 2.5 lb. ABC fire extinguisher shall be provided, containing a gauge to indicate the state of charge and an ~~ab~~ alternative-type bracket with easy release strap for storage/securement. The extinguisher shall be mounted in the rear storage area of the vehicle. The fire extinguisher is to be inspected and certified by a California inspector authorized to do so by the State Fire Marshall at time of delivery.
- d) Reflective Triangles: One set of three triangle warning devices, in a container, meeting the requirements of FMVSS 571.125 and approved by the California Highway Patrol.
- e) Dash Warning Light: A red, flashing, heavy duty warning light, a minimum 1 inch in diameter, will be installed on the driver's side dash panel, in an area clearly noticeable to the driver in a seated position, and activated when right or left sliding door are open or ajar and the ignition switch on. The light lens or trimming shall be clearly lettered, "Door Ajar." Door Ajar
- f) Backup Alarm: A heavy-duty, weatherproofed warning alarm, ECCC #530 or 579, or approved equal, shall be provided which is readily audible from the outside when the transmission is in reverse. 97
- g) Air Bags: Front airbags shall be installed and equipped for the model specified by the OEM, and will meet all Federal and State Safety Standards.
- h) Rear Cargo Restraint: The rear cargo area will have web-like nylon/elastic netting to secure objects.
- i) Control Interlock: The curbside sliding door shall be interlocked with the vehicle emergency brakes and transmission to ensure the vehicle cannot be moved when the curbside sliding door is open when the side door is in the open position and the interlock is actually activated. If the interlock is not activated due to the side door being closed, then the parking brake would not be interlocked. The interlock shall be a fully automatic, solid state, microprocessor controlled unit (Ref. Intermotive ILIS 602Q) or approved equal. Interlock shall utilize an LCD display panel to show subsystem status and integrated into the dash. The interlock must prevent driving the vehicle with parking brake left on. The interlock must meet ADA Title 49 Lift Interlock requirements.
- j) Yellow Safety Tape or Coating: The interior folding ramp pivot hinge and center folding seat base shall be covered with a yellow tape or coating to provide contrast. Both curb side and street side door openings shall have a two inch yellow band across the edge of the door opening. The band shall be Altro floor material intended for step edges and installed flush with the existing Altro floor material and per manufacturer's instructions.

8.0 PUBLICATIONS AND PRINTED MATERIALS

- Each vehicle will have complete set of operation, quality assurance, and warranty publications.

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DRAWING B



9.0 CONTRACTOR REQUIREMENTS & NOTES

WARRANTY: The warranty of each unit shall include the chassis, engine, drive train, modifications, etc., and shall be equal to the current OEM standard warranty and shall start on the date of acceptance. The Contractor will coordinate warranty issues during the standard warranty period for all OEM and conversion manufacturer products.

Each contractor shall describe his/her policy and procedures concerning warranties, both on workmanship and material, as applying to this equipment, and the contractor's/manufacture's method of adjustment. The final stage manufacturer and Contractor shall assume the responsibility and warranty for all materials and accessories used in the vehicles, whether they are made by the manufacturer or purchased from an outside source for a minimum warranty of three (3) years or 36,000 miles. A copy of OEM warranty and manufacturer's warranty shall be provided for each unit. The California Department of Transportation shall not be considered to be a dealer; however, the Contractor shall provide The Cooperative a copy of any recall notice.

Any modification added to the base OEM vehicle that is required to be removed from the vehicle to perform warranty work will be at the cost of the Contractor.

All warranty repairs will be the responsibility of and under the control of the Contractor.

Fleet Defects: A Fleet defect is defined as the failure of identical items covered by the warranty and occurring in the warranty period in a proportion of vehicles delivered under this contract. For the purposes of this bid, identical defects occurring in 25 percent of the vehicles delivered shall be considered a "Fleet Defect." The Contractor shall correct a fleet defect under the warranty provisions. The Contractor then is responsible to perform inspections and take corrective action for all vehicles that incorporate the item having been found to be a "Fleet Defect." This inspection/repair action shall also be required on any vehicle that is no longer under the standard warranty if it still meets the time or mileage requirements of the warranty.

SERVICE WARRANTY: Any recognized service or warranty work required, which is performed by the Contractor, under the Contractor's or manufacturer's warranty shall be at a location within the state and will be the

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1. Check all fluid levels and fill as necessary. This inspection must include engine oil, hydraulic oil, transmission fluid, coolant level and mixture, battery levels, brake fluid, differential oil, washer fluid.
2. Complete wash and detail of the vehicle prior to delivery and inspection.
3. Full tank of fuel at the F.O.B. point.
4. Check to insure proper operation of all accessories, gauges, lights, mechanical, and hydraulic features. Particular attention shall be given to door alignment, lift operation, weather-stripping, hardware, paint condition and tagging of cooling system.
5. A copy of the pre-delivery inspection and all subsequent inspections by contract inspectors are to be provided to the receiving agency upon delivery.
6. A copy of a certificate from a State (state of final builders location will be accepted for the purpose of bid review) certified scale showing the unladen weight of the vehicle, with a full fuel tank, as specified must be submitted with the bid.

ACCEPTANCE: Final acceptance will be made upon delivery of acceptable products complying with the specifications at the designated locations in the purchase order and signature of acceptance by the agency listed on the purchase order.

Acceptance of delivery or placement in operation of any equipment shall not release the manufacturer from liability for faulty design, workmanship, or a material defect appearing even after final payment has been made.

VEHICLE REGISTRATION DOCUMENTS REQUIRED: The Contractor shall register all vehicles as per buyer's requirements. A certification of compliance for vehicle emissions must be supplied at the time of delivery of each unit.

GENERAL: All equipment cataloged as standard for the basic vehicle, unless superseded by these specifications, must be furnished and included in the purchase price of each vehicle.

Complete printed specifications, published literature, and photos, or illustrations of the basic unit or units that the bidder proposes to furnish must be provided prior to Award. Bids will not be considered if the Contractor's designated F.O.B. delivery destination is other than that stated in the invitation to bid.

Bids will be considered only from a manufacturer having a California representative carrying an adequate supply of repair parts in California. This representative shall have the capability of performing all warranty work in the State of California.

The manufacturer shall provide full and competent engineering services to handle any, and correct all problems associated with the performance of this equipment. At least one qualified service representative shall be available to render prompt service.

All equipment/options are to be factory installed. If the equipment/options are not available for factory installation, dealer-installed equipment/accessories may be acceptable to meet the specifications. Any component added to the vehicle by the dealer must meet manufacturers approved instructions for additions. The bidder is to specify those items that will be dealer installed.

Modifications to the vehicles may be performed by final-stage manufacturers only if National Highway Traffic Safety Administration certifies them and are registered to manufacture or alter vehicles in accordance with the Code of Federal Regulations, Title 49, Parts 567-588. In addition, all modifications must be in accordance with the OEM guidelines for building on an incomplete chassis (i.e. Ford's Quality Vehicle Modifiers guidelines and body builder's manual). The vehicle manufacturer must be ISO 9001 certified and a copy of the certifications must be submitted with the bid documents.

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- a) All equipment is required to be new and the latest model in current production. Used, shopworn, demonstrator, prototype, or discontinued models are not acceptable.
- b) Engineering changes and modifications shall conform to accepted practices of the Society of Automotive Engineers and other professional organizations, which may establish relevant standards.
- c) The minivan interior and exterior shall be aesthetically pleasing.
- d) All exposed metal shall be primed and painted. All metal shall be thoroughly cleaned and primed, including welded joints. Metal parts shall be free of dirt and rust.

1.5 CHASSIS AND PACKAGES

The model shall be a Dodge or Chrysler Caravan SE with OEM option packages that at a minimum contain items listed in section 1.6

1.6 SUB PACKAGES

Prior to award, the bidder shall provide a listing, published by the OEM, OEM chassis and packages with these items:

- a) Front and rear dual air conditioning
- b) AM/FM stereo with CD
- c) Dark tinted windows
- d) Cruise control
- e) Tilt steering
- f) Power door locks with remote keyless entry, and power windows on all side windows including passenger and driver's window, sliding doors and rear windows which pivot out electrically
- g) Largest OEM cooling system available
- h) Long wheelbase
- i) Heavy duty cooling
- j) Day time running lights
- k) Low back bucket seats
- l) White clear coat monotone paint
- m) 160 amp alternator

1.7 VEHICLE WEIGHT REQUIREMENTS

The Contractor shall certify that all vehicles delivered shall not exceed the Original Equipment Manufacturer's Gross Vehicle Weight Rating (GVWR) of the chassis, regardless of the installed options and seating configuration ordered. This shall be submitted with the bid.

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(a) The bidder shall submit passenger position loading schematics of engineering quality with the bid, which show the passenger seat positions. The schematics will show a chart with the ambulatory/mobility positions for each capacity, the equivalent weights, and compliance with the OEM GVWR and Gross Axle Weight Rating (GAWR) ratings for the specified vehicle. All weight calculations shall be estimated as 150 lbs. per ambulatory and 250 lbs. per mobility aid passenger. Loading calculations must be made with a full tank of fuel. For the center loading seat 300 lbs (150 lb per passenger x 2) shall be used in lieu of the 250 LB mobility aid passenger weight.

(b) A copy of a weight certificate from a state certified scale (state of final builders location will be accepted for these purposes) showing the unladen weight of the vehicle, with a full fuel tank, as specified, must be submitted with the bid.

(c) An additional weight detail breakout listing of engineering quality must be provided with the bid demonstrating GVWR compliance that separately lists:

- 1) The conversion base vehicle weight,
- 2) The specified passenger payload of at least two and three if available rear ambulatory, two middle ambulatory, one front wheelchair, plus driver,
- 3) The combined weight of all listed options,
- 4) The combined weight of all specified accessories (belts, fire extinguisher, first-aid kit, etc.) in this specification.

(d) All required weight breakout listings will show compliance with the OEM GAWR ratings, front and rear:

List the manufacturer's gross axle weight ratings: Front: _____ Rear: _____

(e) The Cooperative or purchasing agency reserves the right to request a state certified weight certificate, at contractor's expense, for each vehicle equipped as ordered, at any time, during the build/delivery process. The weight certificate will show compliance with the OEM GVWR with all accessories and options installed. A State of California certified weight slip will be required at time of inspection.

2.0 ENGINE

The engine shall be a California certified, 3.6 liter flex fuel, E-85, V-6, gasoline engine. The engine shall be a current production model and match the year of the chassis.

2.1 TRANSMISSION

The vehicle shall have an automatic transmission, with a minimum four (4)-speed transmission with automatic overdrive.

2.2 RADIATOR AND COOLING SYSTEM

The vehicle shall have the heaviest duty available radiator and cooling system, with a coolant recovery system factory installed, and with factory specified coolant.

2.3 HOOD

The hood lock release shall be inside the vehicle, easily identified and accessible to the driver.

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Tank, fuel and vent lines, and hardware must meet all current FMVSS standards, including FMVSS 301, as well as all current CARB and EPA requirements (see section 7.7). If the OEM tank is removed during conversion and replaced with an aftermarket tank, documentation from the tank manufacturer or vehicle second stage manufacturer to show compliance to regulations is required with the bid. The tank must replicate OEM capacity and shall be fully calibrated with the OEM dash fuel gauge. Tanks shall be treated or coated so as to resist corrosion for the complete applicable warranty period.

3.5 SUSPENSION

The vehicle will retain the complete OEM front and rear suspension with OEM components. Rear suspension must include OEM Load Leveling suspension (SLR) to maintain a level position once loaded to full capacity without affecting the ride quality.

3.51 POWERTRAIN SUBFRAME INSTALLATION

The area of contact between the power train subframe and the OEM body structure shall be maintained. Installation of spacers shall replicate the OEM contact area between the frame and unibody.

3.6 ROAD CLEARANCE

With a full capacity load, the vehicle shall be able to clear a conventional public street speed bump, without making contact with any portion of the vehicle surface, at 10 miles per hour.

- a) Ground Clearance: With passengers and driver and with all available options installed (FULLY LOADED); there must be a minimum of 4-1/2 inches of clearance between the lowest part of the van and level ground.

3.7 WHEELS

The minivan shall be equipped with four (4) OEM Stamped Steel wheels with painted bolt-on wheel covers, ^{17"}18" minimum, and a matching OEM full size spare.

3.8 WHEEL WELLS

Wheel wells shall be OEM. Alteration of the lower portion of the rear wheel wells to accommodate lowered floor shall be done with stainless steel or aluminized steel.

4.0 TIRES

Five identical brand and size tires shall be furnished. Tires shall be steel belted radials, the size, load rating and the brand as provided by the OEM for the chassis specified.

4.1 SPARE TIRE

The spare tire shall be OEM Stamped Steel Wheel mounted inside the vehicle and secured in an easily accessible carrier as approved by the Cooperative

4.2 TIRE CHANGING EQUIPMENT

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The vehicle shall be equipped with OEM needle or digital type gauges or OEM warning lights. All gauges will be installed in the OEM manufacturer's designated positions within the vehicle dashboard.

5.2 FRONT AND REAR HEATING

An OEM heating/defrosting system with vents front and rear shall be provided. All lines and hoses shall be sufficiently fastened, protected, and insulated to ensure against wear from friction and the elements. Non-OEM heater hoses shall be a continuous run of like material to the OEM heater lines which ran to the heater prior to conversion. No splices between the front and rear connections will be allowed. The lines must be mechanically attached in a manner which replicates the OEM. Whenever possible, and at a minimum, provide attachments to the vehicle structure at no greater than 18-inch intervals. Lines must be routed so as not to be exposed to wheel spray and not pass within 2 inches of any part of the exhaust system.

5.3 FRONT AND REAR AIR CONDITIONING

Air conditioning shall be OEM front and rear mounted, with separate fan controls mounted on the front center console. Rear ceiling mounted A/C controls shall be removed and a new low profile interior panel color matched to OEM interior shall be installed to eliminate head strike. Conversions shall not impede access to front and rear air conditioning components. Non-OEM refrigerant hoses shall be a continuous run of like material to the OEM refrigerant lines which ran to the rear evaporator prior to conversion. A label must be placed in the engine compartment detailing manufacturer's name, refrigerant type and quantity, and compressor oil type and quantity.

5.4 INTERIOR LIGHTING

Overhead and lower lighting shall be installed in the interior rear of the vehicle that provides not less than **two foot-candles of illumination at the entrance ramp area**. This system shall illuminate automatically when the vehicle front and sliding doors are open. A manual switch must be available which overrides any timing device on the interior light system.

a) **Seat Lights:** Additional lighting shall be installed in the lower panels of the vehicle which provides a minimum of **two foot-candles of floor illumination for the center and rear seats**. Interior lighting fixtures shall be reasonably flush with the interior walls and ceiling to prevent being a hazard to passengers. Additional lighting shall be wired to work in concert with the OEM interior overhead light switches. All additional lighting must be adequately circuit protected.

5.5 EXTERIOR LIGHTING

Exterior lighting shall be installed in accordance with the Federal Motor Carrier Safety Regulations and the California Code of Regulations, Title 13. All lights shall be sealed from moisture and grounded to the body framing structure. The brake light shall not override emergency flashers or turn signals. An OEM center stoplight, two OEM back-up lights, and **OEM running lights** shall remain factory installed and complete.

5.6 LIGHT COMPLIANCE

All accessory vehicle lighting will conform to ADA, 49 CFR, Part 38, and Subpart B.

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- e) **Flood Noise:** At 60 miles per hour, the ambient noise level shall not exceed 89.5 DB measured from the geometric center of the passenger compartment.
- i) **Fasteners:** All metal hardware and fasteners shall be non corrosive high strength steel. Clamps shall be fully insulated to prevent premature wear.

8.5 MISCELLANEOUS BODY COMPONENTS:

- a) **Windshield Wipers:** Intermittent with dual jet washers and multiple speed control.
- b) **Rear Window Accessories:** The rear window shall have an OEM electric window defogger, wiper, and washer.
- c) **Paint:** The basic vehicle factory color shall be OEM standard white. Chip guard paint (same color as body) shall be standard. The reference point (for the top) shall be from a point 3 inches above the bottom of an unmodified sliding door. The chip guard shall be applied from this point to the bottom of the rocker panel, and shall extend from the rear of the front wheel opening to the front of the rear wheel opening.
- d) **Transit Striping:** Transit stripe, 3 inch width, will be installed on each side of the vehicle. Colors available at a minimum shall be: white, red, orange, yellow, green, light blue, and blue. Reference: Stripe shall be 3M reflective tape series 680, or approved equal. The stripe shall be white if user does not choose another color. The stripe will be installed in a professional manner with cutouts for emblems etc. See Drawing "A" Page 19 for install position of stripe.
- e) **Rear View Mirror:** An interior rear view OEM mirror with a night driving adjustment shall be installed to afford the driver a view of all passengers.
- f) **Side View Mirrors:** Each minivan shall be equipped with OEM exterior left and right side mirrors, the largest available, containing a convex/wide view mirror on the right side. Mirrors shall have electric adjustment capability.
- g) **Sun Visors:** Two OEM fully adjustable sun visors shall be provided.
- h) **Sealant, Rust proofing and Undercoating:** The entire underside of the body including floor members, side panels below floor level (if metal), and fender wells shall be undercoated, at the time of manufacture, with a nonflammable resin type polyolefin undercoating for bus applications. All openings in the floorboards and frowall shall be sealed.

8.5 PASSENGER DOORS AND STEPWELLS

The minivan shall have standard OEM driver and passenger front doors, one manual right side mobility aid accessible rear passenger door, with a minimum opening height of 56 inches, a minimum usable width which will accommodate the ramp platform without causing the ramp to contact the door, and the opening bottom shall be a minimum of 9 inches above the ground. Door extensions shall be constructed of stainless steel. Both sliding doors shall have a locking mechanism to securely hold doors in the open position when the vehicle is on a hill.

- a) **Ground effects:** Vehicle shall incorporate stainless steel, aluminum or ABF body extensions on both street and curb side of vehicle. These shall be primed and painted to match the exterior color of the vehicle. See Drawing A for details.

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b) Floor Pan: The floor pan shall be a minimum #16 gauge stainless steel or aluminized steel, with rust inhibiting epoxy primer or equivalent covering the weld joints. The vehicle floor and related components must be structurally sufficient to meet the requirements of FMVSS 207 and 210 for all seating systems and belt anchorages as well as SAE J2249 for the mobility aid restraint system. Said tests must be performed using a representative floor pan vehicle structure. (Bench testing of OEM seats, if modified, that utilize unaltered OEM anchorages may be tested independent of the vehicle.) Testing must be done by an American Association for Laboratory Accreditation, or equal, accredited facility. Seats that do not utilize OEM floor structure must be tested with replacement floor structure. Above testing can be done with floor structure jig mounted if the vendor can validate this test will satisfy FMVSS requirements. Submit testing results prior to award. The resulting floor must be continuous and sealed to provide a watertight interior compartment. The replacement vehicle floor and related components must be corrosion resistant, meeting the requirements for 1000-hr exposure as specified in ASTM B117.

c) Floor Covering Material: The floor surface shall be covered by commercial-grade transit flooring, 1.8mm Altro Transflex Chroma Zeal, or approved equal, possessing anti-skid properties. Rear area behind seats to be covered with rubber material, securely adhered to the subfloor. The floor covering color shall be coordinated with the vehicle interior. The flooring shall be securely bonded to the sub-floor with Altro Eco 20 (or approved equal) water based adhesive for porous surfaces, all non-porous surfaces to use Altro 8165 (or approved equal) contact adhesive. Cargo area to be covered with OEM carpet material. Use of alternate adhesives are permissible with the provision of a manufacturer's warranty of no less than five years, unlimited mileage for installation and adhesion. Edges shall be sealed and all seams heat welded to prevent water penetration. The floor shall be installed according to manufacturer's directions, using proper tools, accessories and adhesives.

d) Trip Hazards: All areas of the vehicle interior floor shall be level, with no tripping hazards throughout the access area. Mobility Aid restraint tracks, and seat locks shall be beveled with no sharp edges and will protrude no more than 1/4 inch above the floor surface.

7.1 SEATS AND GRAB HANDLES

a) All seats are to be manufactured utilizing materials designed to withstand the demands of transit and paratransit use. All visually exposed metal must be powder coated or stainless steel. All seat frames must be constructed with heavy-duty steel tubing and shall be jig welded to insure maximum consistency and durability. There are to be no sharp edges that may snag or injure passengers. All seats and restraints in the vehicle, as specified, must comply with current FMVSS standards, including 201, 202, 207, 208, 209, 210, and 214. Documentation of current model year testing and seats as specified within shall be provided prior to award. Testing by an American Association for Laboratory Accreditation or equal, accredited test facility of individual components independent of the vehicle will be accepted if done on a representative floor, and the vendor can validate that test results, meet all FMVSS requirements, and could be duplicated in the production vehicle. Any alterations to OEM seats or mounts that affect those tests must also be tested. All seat material shall be gray and compliant with Docket 90-A, FTA (ASTM E662/FAR 25.853). The seat material must also be bacterial resistant and conform to ASTM G21 on the face and back. Seat material shall be available in vinyl or fabric at buyer's option at no additional charge. All cushions must be fully enclosed by the seat fabric, vinyl or flame blocker material. Cloth seat fabric shall be a minimum 100,000 double rub woven material, anti-bacterial and anti-microbial; the seat fabric shall have a moisture repellent treatment that prevents liquids from passing through fabric.

b) Front Passenger Seat: The seat base shall be adapted to permit easy roll out for mobility aid access, OEM style is acceptable. The seat shall lock and unlock easily from the floor area, and have a positive lock device with visual indicator which assures securement is in place. This shall be highlighted with Yellow or

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- 30 mph/20 Impact Test criteria per SAE J2249
 - 36 CFR Part 1192 and CFR Part 38 (ADA)
 - All applicable FMVSS, as amended
 - California Code of Regulations, Title 13
- c) **Mobility Aid Securement System:** Each vehicle shall be equipped with the number of securement systems as required in Section 1.1 of this specification.
- d) **Track Mounting:** The system anchorages and/or "L" track shall be mounted to the vehicle floor in accordance with the requirements of the system manufacturer. A copy of the manufacturer's installation instructions must be provided to MBTA prior to award.
- e) **Track Installation:** As standard, the vehicle shall be equipped with laterally oriented mobility aid restraint track. Track shall include end caps where track does not terminate into the side wall. Floor plans illustrating locations of must be available for review and approval prior to the bid award. Floor plan must comply with requirements as described in "f" below. See drawing "B", Page 19, for current layout.
- f) **Occupant Restraint System:** For each mobility aid securement system set installed in the vehicle, a corresponding Occupant Restraint System shall also be provided. The Occupant Restraint System shall consist of adjustable lap (pelvic) belt and a shoulder (upper torso) belt, and shall meet all applicable Federal Motor Vehicle Safety Standards (FMVSS), as amended.
- g) **Belt Web Cutter:** A high quality web cutter, for emergency use, shall be provided with each vehicle, along with instructions for use.
- h) **Storage Containers:** The Contractor shall furnish and permanently install a container within the rear cargo area behind the rear seat to store the First Aid Kit, Blood Borne Pathogen Protection Kit and Reflective Triangles. A container shall also be available or provided to store tie downs. The Cooperative must approve final designs and placement.
- i) **Mobility aid and Passenger Placement:** The bidder shall furnish drawings of proposed seating arrangements, including spaces for two (2) mobility aid positions, with one minimum clearance area of 30 inches by 48 inches. The bidder must indicate sufficient space for placing/boarding two mobility aids, one position in the rear passenger area and one position in the front passenger area. At a minimum, the securement location(s) and area(s) shall meet all applicable ADA requirements.

7.3 MOBILITY AID RAMP

- The vehicle shall be equipped with a manually-operated, folding, mobility access ramp which folds and unfolds through the right side door. The ramp must also swing out of the doorway about a nominally vertical axis providing clear access for ambulatory passengers. Ramp and all components shall leave a clear path to and from the rear and center seats with no trip hazards. Bidders shall provide illustrations of their ramp construction, which must be built to withstand heavy transit use. This ramp shall comply with ADA, 49 CFR Section 38.23(c) and 38.25(b). The fold and unfold motion of the ramp must be counterbalanced so that the force exerted by the operator does not exceed 15 lbs. damped so that, in the event the ramp is allowed to free fall, no point along the ramp length shall move faster than 18 inches/second.

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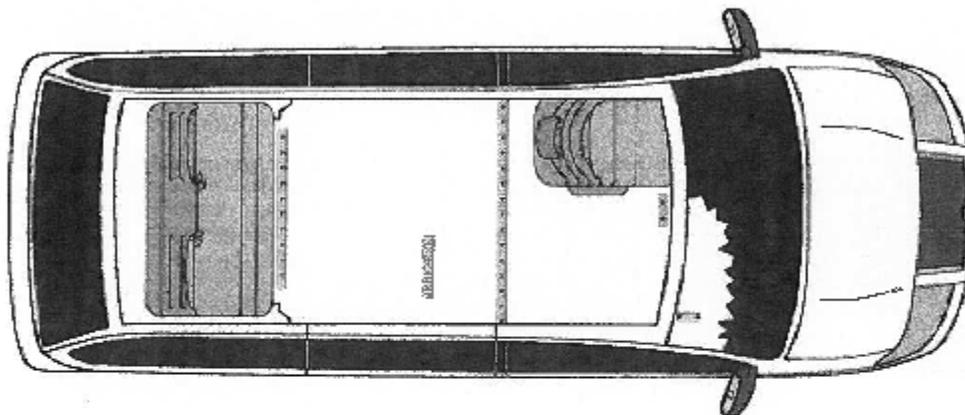
- a) First Aid Kit: A minimum 10-unit first-aid kit shall be furnished and mounted in the rear storage container which meets the requirements of the California Code of Regulations, Title 18 Section 1243.
- b) Blood Borne Pathogen Protection Kit: A blood borne pathogen protection kit with case shall be furnished and mounted in the rear storage area of the vehicle.
- c) Fire Extinguisher: One metal or plastic constructed California Highway Patrol approved minimum 2.5 lb. 4BC fire extinguisher shall be provided, containing a gauge to indicate the state of charge and an ~~attach~~ attach fire-type bracket with easy release strap for storage/securement. The extinguisher shall be mounted in the rear storage area of the vehicle. The fire extinguisher is to be inspected and certified by a California Inspector authorized to do so by the State Fire Marshall at time of delivery.
- d) Reflective Triangles: One set of three triangle warning devices, in a container, meeting the requirements of FMVSS 571.125 and approved by the California Highway Patrol.
- e) Dash Warning Light: A red, flashing, heavy duty warning light, a minimum 1 inch in diameter, will be installed on the driver's side dash panel, in an area clearly noticeable to the driver in a seated position, and activated when right or left sliding door are open or ajar and the ignition switch on. The light lens or trimming shall be clearly lettered, "door ajar." Door Ajar
- f) Backup Alarm: A heavy-duty, weatherproofed warning alarm, ECCO #530 or 575, or approved equal, shall be provided which is readily audible from the outside when the transmission is in reverse. 97
- g) Air Bags: Front airbags shall be installed and equipped for the model specified by the OEM, and will meet all Federal and State Safety Standards.
- h) Rear Cargo Restraint: The rear cargo area will have web-tike nylon/elastic ridding to secure objects.
- i) Control Interlock: The curbside sliding door shall be interlocked with the vehicle emergency brakes and transmission to ensure the vehicle cannot be moved when the curbside slide door is open when the slide door is in the open position and the interlock is actually activated. If the interlock is not activated due to the side door being closed, then the parking brake would not be interlocked. The interlock shall be a fully automatic, solid state, microprocessor controlled unit (Ref. Intermotive ILLIS 002G) or approved equal. Interlock shall utilize an LED display panel to show subsystem status and integrated into the dash. The interlock must prevent driving the vehicle with parking brake left on. The interlock must meet ADA Title 49 Lift Interlock requirements.
- j) Yellow Safety Tape or Coating: The interior folding ramp pivot hinge and center folding seat base shall be covered with a yellow tape or coating to provide contrast. Both curb side and street side door openings shall have a two inch yellow band across the edge of the door opening. The band shall be Altro floor material intended for step edges and installed flush with the existing Altro floor material and per manufacturer's instructions.

8.0 PUBLICATIONS AND PRINTED MATERIALS

- Each vehicle will have complete set of operation, quality assurance, and warranty publications.

**MANDATORY CONTRACT NO. 7-12-23-15-00
CONTRACT USER INSTRUCTIONS**

DRAWING B



9.0 CONTRACTOR REQUIREMENTS & NOTES

WARRANTY: The warranty of each unit shall include the chassis, engine, drive train, modifications, etc., and shall be equal to the current OEM standard warranty and shall start on the date of acceptance. The Contractor will coordinate warranty issues during the standard warranty period for all OEM and conversion manufacturer products.

Each contractor shall describe his/her policy and procedures concerning warranties, both on workmanship and material, as applying to this equipment, and the contractor's/manufacture's method of adjustment. The final stage manufacturer and Contractor shall assume the responsibility and warranty for all materials and accessories used in the vehicles, whether they are made by the manufacturer or purchased from an outside source for a minimum warranty of three (3) years or 30,000 miles. A copy of OEM warranty and manufacturer's warranty shall be provided for each unit. The California Department of Transportation shall not be considered to be a dealer; however, the Contractor shall provide The Cooperative a copy of any recall notice.

Any modification added to the base OEM vehicle that is required to be removed from the vehicle to perform warranty work will be at the cost of the Contractor.

All warranty repairs will be the responsibility of and under the control of the Contractor.

Fleet Defects: A Fleet defect is defined as the failure of identical items covered by the warranty and occurring in the warranty period in a proportion of vehicles delivered under this contract. For the purposes of this bid, identical defects occurring in 25 percent of the vehicles delivered shall be considered a "Fleet Defect." The Contractor shall correct a fleet defect under the warranty provisions. The Contractor then is responsible to perform inspections and take corrective action for all vehicles that incorporate the item having been found to be a "Fleet Defect." This inspection/repair action shall also be required on any vehicle that is no longer under the standard warranty if it still meets the time or mileage requirements of the warranty.

SERVICE WARRANTY: Any recognized service or warranty work required, which is performed by the Contractor, under the Contractor's or manufacturer's warranty shall be at a location within the state and will be the

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CONTRACT USER INSTRUCTIONS**

1. Check all fluid levels and fill as necessary. This inspection must include engine oil, hydraulic oil, transmission fluid, coolant level and mixture, battery levels, brake fluid, differential oil, washer fluid.
2. Complete wash and detail of the vehicle prior to delivery and inspection.
3. Full tank of fuel at the F.O.B. point.
4. Check to insure proper operation of all accessories, gauges, lights, mechanical, and hydraulic features. Particular attention shall be given to door alignment, lift operation, weatherstripping, hardware, paint condition and lagging of cooling system.
5. A copy of the pre-delivery inspection and all subsequent inspections by contract inspectors are to be provided to the receiving agency upon delivery.
6. A copy of a certificate from a State (state of final builders location will be accepted for the purpose of bid review) certified scale showing the unladen weight of the vehicle, with a full fuel tank, as specified must be submitted with the bid.

ACCEPTANCE: Final acceptance will be made upon delivery of acceptable products complying with the specifications at the designated locations in the purchase order and signature of acceptance by the agency listed on the purchase order.

Acceptance of delivery or placement in operation of any equipment shall not release the manufacturer from liability for faulty design, workmanship, or a material defect appearing even after final payment has been made.

VEHICLE REGISTRATION DOCUMENTS REQUIRED: The Contractor shall register all vehicles as per buyer's requirements. A certification of compliance for vehicle emissions must be supplied at the time of delivery of each unit.

GENERAL: All equipment cataloged as standard for the basic vehicle, unless superseded by these specifications, must be furnished and included in the purchase price of each vehicle.

Complete printed specifications, published literature, and photos, or illustrations of the basic unit or units that the bidder proposes to furnish must be provided prior to Award. Bids will not be considered if the Contractor's designated F.O.B. delivery destination is other than that stated in the invitation to bid.

Bids will be considered only from a manufacturer having a California representative carrying an adequate supply of repair parts in California. This representative shall have the capability of performing all warranty work in the State of California.

The manufacturer shall provide full and competent engineering services to handle any, and correct all problems associated with the performance of this equipment. At least one qualified service representative shall be available to render prompt service.

All equipment/options are to be factory installed. If the equipment/options are not available for factory installation, dealer installed equipment/accessories may be acceptable to meet the specifications. Any component added to the vehicle by the dealer must meet manufacturer's approved instructions for additions. The bidder is to specify those items that will be dealer installed.

Modifications to the vehicles may be performed by final-stage manufacturers only if National Highway Traffic Safety Administration certifies them and are registered to manufacture or alter vehicles in accordance with the Code of Federal Regulations, Title 49, Parts 567-569. In addition, all modifications must be in accordance with the OEM guidelines for building on an incomplete chassis (i.e. Ford's Quality Vehicle Modifiers guidelines and body builder's manual). The vehicle manufacturer must be ISO 9001 certified and a copy of the certifications must be submitted with the bid documents.

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Thursday, April 03, 2014

BraunAbility

Attn: Kevin Trudeau
631 West 11th Street
Winamac, IN 46996
574-946-4139

Re: Pre-Award Pilot Vehicle

Dear Kevin, On behalf of CalTrans I wish to thank you and your staff in assisting our efforts with our plant inspection along with the vehicle pilot inspection that took place on the 25th of March 2014.

As you are aware this letter is to serve as confirmation of a pilot vehicle inspection that took place at your facility. During this Pilot inspection some questions and concerns were noted pertaining to the pilot vehicle. We have included for your review a final report outlining all matters that were discussed and documented during our visit.

Included in our report as you will discover are Items that are pending. We would like to request a detail description be included in your reply on what the options or remedy shall be. Pictures and samples would be very helpful in assisting the efforts. This would also allow all interested parties to gain a better understanding of the process and what the expectations shall be moving forward. If you could provide a timeline on completion of all that is being requested as this would assist us in our decision process.

We look forward to hearing from you. Should you have any question please feel free to contact me.

Sincerely,

John Cano
Senior Vehicle Inspector
California Department of Transportation
Division of Mass Transportation
(916) 651-8242

2014 Pre-Award Vehicle Inspection Report
Grant 61 RFP# 11-03 Braun
Corporation Class D Low Floor Mini Van
Vin#2C7WDGBG6ER220308 Stock#ERTK29759780

1. Provide front passenger seat tracking (Dog Bone) Covers to be supplied along with installation instructions.
2. Provide Quality Spare Tire Cover.
3. Backup (Reverse Alarm) to be supplied with 97db alarm. **Manufacturer Agreed to supply 97db**
4. Provide hard covers shields for rear wheel well to shield EVAP canister along with heater and A/C hoses.
5. Install RED decal on Interior (curbside) slider door handle
6. Install second seat handle to center fold seat.
7. Install exterior (white) bright reflective stripe on vehicle side panel.
8. Interior (curbside) Slider door light very bright and not to ADA compliance.
9. Center fold seat requires Yellow reflective Tape at base. **Manufacturer Agreed to meet spec.**
10. Decal needs to be added to center dash ajar light to identify its purpose.
11. Provide weight calculations and build plan for Pilot Vehicle.
12. Update owner build manual to Include new 50/50 wheel chair ramp.
13. Provide Buy America Calculations specific to Pilot Vehicle. **Manufacturer will provide at appropriate time.**
14. Provide flooring warranty statement (5 year warranty) in lieu of adhering flooring with a no adhesive.
15. Provide electronic copies of available Entervan build floor plans and configurations.

16. Curbside slider door requires extra effort to close. Inspector accepted no issue found.
17. Supply model 8100 Q-straint restraints with Pilot Vehicle. Manufacturer agreed to provide with pilot.
18. Supply instructions and install indicators on pedals of front passenger removable seat.
19. All interior lighting is to illuminate when any door (including trunk) is opened and override timeout relay. Manufacturer correct by bypassing relay at pilot inspection.
20. Secure un-glued flooring (in front) flooring L-Track
21. Provide supporting documentation on wheel chair ramp capacity.
22. Install all second stage seat belts thru seat loops.

Cano, John@DOT

From: Kevin Trudeau [Kevin.Trudeau@braunability.com]
Sent: Friday, May 02, 2014 9:58 AM
To: Cano, John@DOT
Cc: Jay Holzhuter; Don White; Colton Walls; Greg Cook
Subject: RE: Pilot Vehicle

John,

Below is a recap of our conversation this morning in regards to Braun's plan of action and timelines in regards to the pilot vehicle for Caltrans.

- Braun will move forward with a stainless steel shield to protect the EVAP Charcoal Canister. This is in the design phase and will be complete in order to meet the timeline of shipping the Pilot vehicle by the end of next week
- Braun is waiting on a Freedman 60/40 seat as well as the PT3 middle row seat with grab handles. Braun ordered the seats from Freedman over 4 weeks ago and they are expected to arrive in Winamac today or Monday.
- Braun will ship pilot vehicle to Hayward California once seats arrive and are installed in Winamac. We anticipate this being no later than Friday May 9th. We will communicate expected arrival in Hayward to John Cano once ride has been secured.
- Braun would recommend a final inspection to take place either late in the week of the 12th or the following week which would be the week of the 19th. This will be achievable if there are no delays from Freedman on expected delivery times for the 60/40 seat and PT3 middle row seat.
- Braun has pre ordered chassis anticipating the Caltrans contract. They are due into Winamac the first week of June.

Braun appreciates the opportunity Caltrans has giving us and looks forward to a successful review of the pilot vehicle. Let me know if you have any questions.

Kevin Trudeau | Commercial Sales Manager/North America

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From: Cano, John@DOT [<mailto:john.cano@dot.ca.gov>]
Sent: Thursday, May 01, 2014 6:25 PM
To: Kevin Trudeau
Cc: Louie, Helen P@DOT; Marlinez, Ralph@DOT; Don White; Danw@creativebussales.com; jayh@creativebussales.com
Subject: Pilot Vehicle

Hello Kevin,

I wish to reach out to you in an effort to bring the pilot vehicle process to a conclusion. It has been several weeks since the factory pilot inspection had taken place and some concerns that were pointed out in Hayward and at our Factory

will continue to hinder the process. It is for this very reason I wish to voice some concerns. One issue that continues to be a pressing matter has to do with the relocation of the EVAP Charcoal Canister. Upon conclusion of our inspection it was understood that either relocating or building a wheel base shield to protect this canister and any exposed hoses would be a viable option.

After having detailed conversations with Colton on the matter, it has become apparent that engineering is confronted with the uncertain approach or solution to this issue. Leaving the canister as is will not be an acceptable option. After further review of the vehicle specification I have confirmed that any exposed lines and components which are exposed as a result of the floor modification shall be protected. Given the proximity of where this Canister is situated, is cause for a serious safety concern. One other concern is the potential exposure the component would have to road debris and other things as such.

It has also been mentioned that if relocation could take place this could potentially be weeks on out and would require different forms of testing. In the interest of time this cannot be accepted. We would like to request an immediate solution to this matter. Should you discover that a solution is not attainable then proper notice would be appreciated.

Given the sensitive nature of the project we are confronted with time constraints and would like to request the matter be given prompt attention. It is our expectation to have a response as soon as possible in an effort to confirm our options.

I look forward to hearing from you. Should you have any question please feel free to call me.

John Cano
Senior Inspector
Department of Transportation
Division Of Mass Transportation
1120 N Street
Sacramento, Ca. 95814
Office (916) 651-8242

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*** Please consider the environment before printing this email. ***

Section –4

Caltrans Pilot/First Article/Post-Delivery Vehicle Review

2014 Pre-Award Vehicle Inspection Report
Grant 61 RFP# 11-03 Braun
Corporation Class D Low Floor Mini Van
Vin#2C7WDGBG6ER220308 Stock#ERTK29759780

1. Provide front passenger seat tracking (Dog Bone) Covers to be supplied along with installation instructions. 05/20/2014 Task completed and verified by Inspector John/Ralph
2. Provide Quality Spare Tire Cover. 05/20/2014 Task completed. Accepted specific cover and verified by Inspector-John/Ralph
3. Backup (Reverse Alarm) to be supplied with 97dcb alarm, Manufacturer Agreed to supply 97dcb.
Task completed and verified 97dcb exist by Inspector John/Ralph
4. Provide hard covers shields for rear wheel well to shield EVAP canister along with heater and A/C hoses. 05/20/2014 Task completed and verified by Inspector- Shields installed on both rear wheel wells to comply with request EVAP Canister along with heater hoses.
5. Install RED decal on Interior (curbside) slider door handle 05/20/2014- Task completed and verified by Inspector- John/Ralph
6. Install second seat handle to center fold seat 05/20/2014- Task completed and verified by Inspector John/Ralph Low profile handles provided as requested.
7. Install exterior (white) bright reflective stripe on vehicle side panel. 05/24/2014-Final pilot product not accepted. Decal installation technique in question. Decals not having a smooth adhesion to surface. Did not accept. -Corrected and accepted 06/13/2014-John Cano

8. Interior (curbside) slider door light very bright and not to ADA compliance. 05/24/2014 Task completed. Manufacturer replaced lights on both sides to Optronics brand Model #BUL69CB and verified by Inspector-John/Ralph
9. Center fold seat requires Yellow reflective Tape at base. ^{Manufacturer Agreed to meet spec.}
05/20/2014 Task completed and verified by Inspector-John/Ralph
10. Decal needs to be added to center dash ajar light to identify its purpose. 05/20/2014-Task completed and verified by Inspector-John/Ralph
11. Provide weight calculations and build plan for Pilot Vehicle.05/24/2014 Task completed.
Inspected by Inspector John/Ralph. Verified vehicles floor plan's will comply and meet this technical specification.
12. Update owner build manual to include new 50/50 wheel chair ramp.05/24/2014 Task completed. Verified by Inspector John/Ralph.
13. Provide Buy America Calculations specific to Pilot Vehicle. ^{Manufacturers will provide at appropriate time.} Manufacturer provided proof of calculations at pilot/Factory audit 03/20/2014
14. Provide flooring warranty statement (5 year warranty) in lieu of adhering flooring with altro adhesive.05/05/2014 Manufacturer provided 5 year flooring warranty statement. Reviewed by Inspector John / Accepted.
15. Provide electronic copies of available Entervan build floor plans and configurations.05/20/2014 Manufacturer is expected to provide as soon as possible. Task completed-Ralph
16. Curbside slider door requires extra effort to close. ^{Inspector accepted no issue found.}

17. Supply model 810D Q-strait restraints with Pilot Vehicle. ^{Manufacturer agreed to provide with pilot.}

05/20/2014- Task completed on pilot. Inspector John/Ralph verified and confirmed 810D system included in pilot.

18. Supply instructions and install indicators on pedals of front passenger removable seat.

05/20/2014-Verified and accepted manufacturer

19. All interior lighting is to illuminate when any door (including trunk) is opened and override timeout relay ^{Manufacturer correct by bypassing relay at pilot inspection.}

20. Secure un-glued flooring (in Front) flooring L-Track 05/20/2014 Issue not corrected.

Manufacturer is expected to correct as soon as possible.-Corrected and Accepted

06/13/2014 John Cano

21. Provide supporting documentation on wheel chair ramp capacity. 05/05/2014-Task completed manufacturer provided test results.

22. Install all second stage seat belts thru seat loops. 05/20/2014 Inspector John/Ralph accepted 3rd row seat belts to remain outside of loops given a new model of belts was being provided.

23. Wheel Chair ramp is binding up against slider door well entry backside. 05/20/2014 Inspected and discovered at first article pilot review. Manufacturer is to correct Issue as soon as possible -We Solved problem and created another. Ramp now hits door striker. Corrected and accepted as is from factory 06-13/2014-John Cano

24. 05/20/2014 Manufacturer is to provide a bill of materials for box of contents that is provided with vehicle from factory. Manufacturer is to eliminate Q-strait stock tie downs supplied as standard accessory. 8100 model Q-strait are what is expected to be supplied. The supply list should reflect the expectation. -Task completed and verified 06/13/2014-John Cano

25. 05/20/2014 Manufacturer must supply a certificate validating NEW LED lighting meets ADA compliance and specifications set forth. Pictures shall not be accepted. Manufacturer Provided Certificate. 06/13/2014-John Cano

26. 05/20/2014 (First Article Pilot Vehicle) Inspector John/Ralph requested that 3rd Row Roof mount (center) shoulder belt be eliminated from our builds. This option is not accepted. Causes vehicle to exceed gross vehicle weight ratings. Manufacturer is expected to resolve matter As soon as possible. 06/01/2014-John Cano After recalculation including re-weigh

and review it was determined to not exceed GVWR. We will accept standard seat belt configuration. John/Ralph- 06/13/2014 accepted 06/17/2014

27. Manufacturer is to provide supplemental electrical schematic in maintenance for electrical on new Optonic Lighting. Task completed and verified 06/13/2014-John Cano

Section 5

Post-Delivery Buy America Certificate



U.S. Department
of Transportation

Federal Transit
Administration

Administrator

1200 New Jersey Avenue, SE
Washington, DC 20590

JUL 01 2013

Mr. Nick Gutwein
President
BraunAbility
631 West 11th Street
Wisnamic, IN 46996

Dear Mr. Gutwein:

I write in response to your letter to Dorval Carrer with the Federal Transit Administration (FTA) requesting a determination by the FTA of whether the processes used by the Braun Corporation (Braun) to convert an incomplete Chrysler or Dodge minivan into the Braun Commercial Entervan are sufficient to meet the Buy America final assembly requirements. For the reasons outlined in the enclosed memorandum, I am pleased to inform you of FTA's conclusion that the activities that take place during Braun's conversion processes constitute final assembly for minivans converted for wheelchair access.

FTA appreciates your commitment to its Buy America rules. Paramount in FTA's role as a steward of U.S. taxpayer dollars is to ensure that the use of such funds preserves and creates U.S. jobs. The intent and purpose of the Buy America requirement is to further this goal by ensuring that FTA-administered funds are used to purchase goods that are produced in the United States. FTA's commitment to ensuring Buy America compliance has resulted in a dramatic reduction in the number of waivers it has granted, from 52 in fiscal year (FY) 2010, 14 in FY 2011, 3 in FY 2012, and zero in FY 2013. Upon reviewing your request for guidance, it is apparent that Braun shares FTA's commitment to preserving and creating jobs in the United States.

If I can provide further information or assistance, please do not hesitate to contact me directly at (202) 366-4040.

Sincerely yours,

Peter Rogoff

Enclosure



U.S. Department
of Transportation
Federal Transit
Administration

Memorandum

Subject: Determination as to whether the process by which the Braun Corporation converts incomplete Chrysler minivans into Braun Entervans satisfies FTA's Buy America requirements for final assembly. Date: JUN 28 2013

From: Dorval R. Carter, Jr., Chief Counsel  Reply to: Mary J. Lee, Attorney-Advisor
Att. of: Mary J. Lee, Attorney-Advisor

To: Peter Rogoff, Administrator

The purpose of this memorandum is to document FTA's determination that the processes by which the Braun Corporation (Braun) converts incomplete Chrysler minivans into Braun Entervans satisfies FTA's Buy America requirements for final assembly.

I. Background

a. *Revision of Buy America Waiver for Minivans and Minivan Chassis*

On June 21, 2010, FTA issued a non-availability waiver of the Buy America final assembly requirement for all minivans and minivan chassis. *Notice of Buy America Waiver for Minivans and Minivan Chassis*, 75 Fed. Reg. 35,123. At that time, FTA determined that there was no manufacturer that was willing and able to perform final assembly on these types of vehicles in the United States. Id.

On August 3, 2012, FTA published a notice of a request to rescind the non-availability waiver for minivans and minivan chassis. 77 Fed. Reg. 46556. After reviewing and carefully considering all of the comments submitted pursuant to the request, FTA found that a domestic vehicle—the Vehicle Production Group's MV-1—is available that meets the Buy America final assembly requirements. Therefore, FTA determined that the waiver was no longer necessary and rescinded the waiver. *Decision to Rescind Buy America Waiver for Minivans and Minivan Chassis*, 77 Fed. Reg. 71,673 (Dec. 3, 2012).

Subsequently, in an undated letter sent in January 2013, Braun made a formal request to FTA to determine whether its processes were sufficient to meet the final assembly requirement under 49 C.F.R. § 661.11. Braun followed its request with a May 7, 2013 request to meet with FTA to discuss its processes, and a May 14, 2013 letter containing various certification documents citing that, among other things, Braun is the final stage manufacturer. In a May 16, 2013 letter, Braun requested that FTA provide Braun with any follow-up questions FTA had concerning Braun's processes. On June 4, 2013, Braun presented its manufacturing and conversion processes to FTA in person.

b. *Braun's Manufacturing Process for the Commercial Emervan*

Braun's manufacturing and conversion processes to the incomplete Chrysler minivans take place in Winamac, Indiana. According to Braun, it is a "final stage manufacturer" per the National Highway Traffic Safety Administration's (NHTSA) regulations at 49 C.F.R. Parts 567 and 568 that recertifies the Chrysler vehicles, which includes the child restraint anchorages, tires and rims, seating system, occupant crash protection, seat belt anchorages, side impact protection, fuel system integrity, and flammability. As a "final stage manufacturer," Braun receives incomplete vehicles from Chrysler and makes additions and alterations to the vehicle in order to complete or convert the vehicle. Braun provides that, at a minimum, the incomplete Chrysler vehicles do not include the "Stow'n Go center row seats, the center row seat fastener, the center row load floor, the load floor ISO panel, the center row seat tub liners and the seat tub lids, and the third row seat flipper panels."

Braun's manufacturing processes consists of the following:

- (a) "Strip-Out": consists of "removal of the front and rear seating components . . . interior wall and door panels, and all carpeting."
- (b) "Seat Re-engineering & Modifications": consists of "remanufactured [front seats] to be easily removable for wheelchair access" and rear seats are "modified to permit forward folding for access to a kneeling system linear actuator and a proprietary vehicle slide door/ramp controller."
- (c) "Subsystem Re-Engineering & Modifications": installing new, longer, reconfigured rear brake, fuel, heat, and air conditioning and fuel lines.
- (d) "Fuel Tank System Re-Engineering & Modifications": removal of the original fuel tank and charcoal canister from its mid-vehicle location, rotated, relocated, and reinstalled to aft of the rear axle location. The original fuel fill pipe assembly is removed and discarded and a "new, reconfigured fuel pipe assembly is installed to meet the relocated and rotated fuel tank."
- (e) "Fabrication of Lowered Floor Unit Body": fabrication of a new low floor unit body.
- (f) "Floor Re-Engineering & Modifications": removal of the Original Equipment Manufacturer (OEM) floor and undercarriage from the toe pan to the rear axle, adding of a new aft rear axle fuel tank support structure, a new kneeling system actuator housing and structure, a new spare tire/storage tub, and a new lowered floor structure, and various body work to accommodate the new lowered floor structure.
- (g) "Exhaust Re-Engineering & Modifications": removal of the heat shields, and installing a new reconfigured exhaust pipe, hanger brackets, and muffler.
- (h) "Engine/Transmission/Front Suspension Assembly Modifications": disconnection from the vehicle and removed, but with the engine lines and hoses left attached. Modifications are made to the engine/transmission/front suspension assembly, such as adding various types of spacing brackets, custom steering shaft extension, and two engine cradle safety bracket tube extensions. The engine/transmission/front suspension assembly is then

reinstalled. In addition, a CARB compliant fuel system is installed, and the exhaust system and heat shields are installed as well.

- (i) "Slide Door Re-Engineering & Modifications": removal of the slide doors and modifications made to accommodate a lowered floor/wheelchair ramp entrance. The doors are then reinstalled.
- (j) "Rear Axle & Suspension Re-Engineering & Modifications": removal, modifications done to the sway bar mounting, and coil spring mounts, addition of a kneel chain bracket, and reinstallation of the rear axle.
- (k) "Flooring & Walls": installation of a marine grade flooring substrate and covering and carpet or plastic panels with carpeted inserts. Walls are covered with new interior panels and trims.
- (l) "Rear Bumper Re-Engineering & Modifications": involves removal of the rear bumper, reinforcing the rear bumper, and reinstalling it.
- (m) "Wiring Re-Engineering & Modifications": reconfiguration of the seating systems and airbag systems, and modifications to accommodate the wheelchair ramp system, slide door operation, kneel function, and other accessibility modifications.
- (n) "Ramp": installation of the manual or power wheelchair ramps.
- (o) "Paint & Undercoat": newly installed components are painted and the entire floor is undercoated.
- (p) "Miscellaneous": Among other things, the vehicle is inspected, weighed, and recertified by Braun.

Braun states that the above-described processes require approximately thirty employees and approximately fifty hours to complete the processes per one vehicle. Braun employs approximately 150 employees for these conversion processes.

Because Braun is a final stage manufacturer under NHTSA's regulations and its conversion activities on the Chrysler vehicles are significant, Braun believes that it also meets the final assembly requirement under FTA's Buy America regulations at 49 C.F.R. § 661.11 and is requesting confirmation by FTA.

II. Buy America

a. *Buy America Requirements for Buses and Rail Cars*

Under 49 U.S.C. § 5323(j)(1), FTA may not obligate funds for a project unless the steel, iron, and manufactured goods used in a project are produced in the United States. For rolling stock procurements, this requirement does not apply if the cost of the components produced in the United States is more than 60 percent of the cost of all components and final assembly takes place in the United States. 49 U.S.C. § 5323(j)(2)(C); 49 C.F.R. § 661.11(a). Final assembly is defined as "the

creation of the end product from individual elements brought together for that purpose through application of manufacturing processes." 49 C.F.R. § 661.11(r).

The typical minimum final assembly requirements for rolling stock are further provided in Appendix D to § 661.11 and distinguished between minimum final assembly requirements for rail cars and buses. FTA provided guidance on the final assembly requirement for buses in a March 18, 1997 Dear Colleague Letter on Buy America: Pre-Award and Post-Delivery Audits, which has been added to FTA's existing regulation and is still applicable today:

In the case of a new bus, final assembly would typically include, at a minimum, the installation and interconnection of the engine, transmission, axles, including the cooling and braking systems; the installation and interconnection of the heating and air conditioning equipment; the installation of pneumatic and electrical systems, door systems, passenger seats, passenger grab rails, destination signs, wheelchair lifts; and road testing, final inspection, repairs and preparation of the vehicles for delivery.

See also 49 C.F.R. § 661.11 app. D, para. b.

If a manufacturer's assembly processes do not include all of the activities typically considered final assembly, the manufacturer may request an FTA determination of compliance. FTA Dear Colleague Letter, March 18, 1997; 49 C.F.R. § 661.11 app. D, para. c. FTA reviews these requests for compliance case by case, based upon the information provided by the manufacturer. 49 C.F.R. § 661.11 app. D, para. c.

b. *Final Assembly Requirements for Minivans*

While FTA addresses the typical final assembly requirements for rolling stock such as buses and rail cars in its regulations and guidance documents, FTA has not specifically addressed the final assembly requirements for minivans and minivan chassis. Moreover, because the minivans at issue here are converted for wheelchair accessibility, the typical final assembly requirements for buses, and even other minivans that are not wheelchair accessible, may not apply because of the significant amount of manufacturing that takes place in the vehicle during the conversion processes. Thus, in order to show that wheelchair accessible minivans meet the Buy America requirement for final assembly, Braun must show that the wheelchair accessible minivans it manufactures is a different vehicle from the incomplete minivan that it receives from Chrysler and that those processes include assembling the various components in the United States in order to produce a wheelchair-accessible minivan.

III. Discussion

Upon careful review of Braun's manufacturing processes in consultation with FTA engineers, I find that Braun's processes meets the final assembly requirement for rolling stock under 49 C.F.R. § 661.11(a) and (r). As stated above, in order to show that wheelchair accessible minivans meet the Buy America requirement for final assembly, a converted minivan that allows for wheelchair accessibility must be a different vehicle from the original Chrysler minivan and those processes must include assembling the various components in the United States in order to produce a wheelchair accessible minivan. Here, once all of Braun's conversion and manufacturing processes in the United States are complete, Braun's vehicle is no longer a "Chrysler" minivan. Instead, it becomes a "Braun Entervan" with different door, height, floor length, and seating dimensions, is wheelchair

accessible with a wheelchair ramp, and has different seating arrangements to accommodate one or more wheelchairs. Moreover, in order to accommodate the wheelchair accessibility features, Braun makes substantial changes to the interior and exterior of the minivan, including, among other things, the fuel system, exhaust system, body, doors, floors, and wiring. Finally, Braun is responsible for inspecting, testing, and certifying the vehicle. Thus, Braun's activities in the United States are sufficient to rise to the level of final assembly for minivans that are converted for wheelchair accessibility.

IV. Conclusion

Based upon the foregoing, I find that Braun's manufacturing activities meet the minimum final assembly requirements under 49 C.F.R. § 661.11. This decision is limited solely to minivans that are converted for wheelchair accessibility by Braun, as the final assembly processes are described in this memorandum. Deviations from these described processes may result in a different conclusion.

Cal-Trans Pre-Award Buy America Certification

Manufacturer: Braun
 RFP # MBTA 11-C3
 Item: ADA Minivan

Unit # ER20308

Agency Vehicle is for: Van: 2C7WD3B66ER20308

Major production activities to be undertaken at final Assembly location: The Braun Corp., 631 W. 11th St., Winamac, IN

Component	Manufacturer	Country of Origin	Assembled in US Yes/No	% of Total Cost	Vehicle Cost	Manufacturing Location
Chassis	Chrysler	U.S.	NO	47.52%		Windsor, Ontario, Canada
Lowered Floor	Braun Corporation	U.S.	YES	1.81%		Winamac, IN
Ramp	Dura Mold Casting	U.S.	YES	1.56%		South Bend, IN
Tiedown Belts & Track	Q'Straint	U.S.	YES	2.26%		Fl. Lauderdale, FL
Seat	F-seedman	U.S.	YES	2.84%		Chicago, IL
Interior Panels	Medallion Plastics, Inc.	U.S.	YES	2.13%		Mishawaka, IN
Exterior Panels	Star Design LLC	U.S.	YES	0.82%		Elkhart, IN
Plywood Underlayment	Huley Building Products	U.S.	YES	0.31%		Elkhart, IN
Misc. Fabricated Parts	MeriRyde	U.S.	YES	1.25%		Elkhart, IN
Steel	Joseph T. Eyanson & Son, Inc.	U.S.	YES	0.68%		Libe, IL
Steel	Carroll Metals	U.S.	YES	0.18%		East Chicago, IN
Misc. Plastic Parts	Hammer Plastic	U.S.	YES	0.30%		Mishawaka, IN
Other Specify:						
Total Percentage of Vehicle Manufactured in U.S.				60.97%		

Attach justification to match above statement for Buy America Component listing.

Signature: *Andy Carr*
 Title: Commercial Estimator Mgr
 Date: 3/28/2014

Section 6

Post-Delivery Vehicle Component County of Origin

MANUFACTURER VEHICLE COMPONENT COUNTRY OF ORIGIN

Family Line: 2014 Dodge Grand Caravan

COMPONENT	MANUFACTURER	COUNTRY OF ORIGIN	PERCENTAGE OF MATERIAL COST
Engine/Transmission	Chrysler Group LLC	USA	25%
Body in White	Chrysler Group LLC	USA	8%
Body in White	Purchased	USA	7%
Head/Tail Lamps	Purchased	USA	1%
Headliners	Purchased	USA	1%
Trim Panels / Liners	Purchased	USA	2%
Floor Covering	Purchased	USA	1%
Glass	Purchased	USA	1%
Instrument Panel	Purchased	USA	2%
Half Shaft	Purchased	USA	1%
Suspension	Purchased	USA	2%
Steer Gear	Purchased	USA	1%
Master Cylinder	Purchased	USA	2%
Wheels	Purchased	USA	1%
Exhaust System	Purchased	USA	2%
Fuel System	Purchased	USA	1%
Engine cooling Module	Purchased	USA	1%
Air Conditioning	Purchased	USA	1%
Misc. Value of Other	Purchased	USA	1%
Total US Content	Corp/Purchased	USA	61%

Section 7

Federal Motor Vehicle Safety Standard Self Certification Certificate

International Corporate Headquarters
The Braun Corporation
631 W. 110th Street
PO Box 340
Winamac, IN 46996 USA
1-800-THE LIFT
(574) 946-6153
FAX: (574) 946-4670

 **THE BRAUN
CORPORATION.**
"Providing Access to the World"



www.braunlift.com

FEDERAL MOTOR VEHICLE SAFETY STANDARDS
(Pre-Award)

The Braun Corporation certifies that the vehicle/vehicles being proposed will meet or exceed all applicable Federal Motor Vehicle Safety Standards (FMVSS).

Signed: *Andy Conner* Andy Conner

Title: Commercial Entervan Manager

Date: 3/25/14

MANUFACTURED BY:
THE BRAUN CORPORATION ENTERVAN.COM
DATE OF MANUFACTURE 10 MO. 13 YR.

INCOMPLETE VEHICLE MANUFACTURED BY:
C-RYBLER CORPORATION
DATE INC. VEH. MFD. 09 MO. 17 YR.

GAWR 2744 KG) 6050 LBS.
GAWR FRONT 1172 KG) 2584 LBS.
WHEEL 22X6R17 TRKS
6.5X17 RIMS @ 36 PSI COLO
(.248_A's coloj)

GAWR REAR 1013 KG) 2234 LBS.
WHEEL 22X6R17 TIRES
6.5X17 RIMS @ 36 PSI COLO
(.248_MPa coloj)

THE VEHICLE HAS BEEN COMPLETED
IN ACCORDANCE WITH THE PRIOR
MANUFACTURER'S MD, WHERE APPLICABLE.
THIS VEHICLE CONFORMS TO ALL APPLICABLE
FEDERAL MOTOR VEHICLE SAFETY STANDARDS
AND BUMPER AND THEFT PREVENTION STANDARDS
IN EFFECT IN 10 . 13
(MONTH - YEAR)

VEHICLE IDENTIFICATION NO:
207WV1C02ER144789

VEHICLE TYPE: MPV

THE BRAUN CORPORATION

631 W. 11th Street, Winamac, Indiana 46996

This vehicle was altered by THE BRAUN CORPORATION in
March 2009 and as altered it conforms to all applicable
Federal Motor Vehicle Safety, Bumper and Theft Prevention Standards
altered by the alteration and in effect in March 2009

Vehicle Type: MPV

VIN # 2A8HR44H06R811663

Available Payload Capacity: 1499 LBS (Without Passengers & Wheelchairs)

Section 8

Factory Pictures





Section– 9

Supporting Documentation

A.Plant Flow

B.Quality Assurance Manual

C.Welding Testing and Certificates

D.Fastener Testing

E.Torque Wrench Calibration

F. Drawing Samples

G.Paint Adhesion and Thickness Testing

H.ISO 9001-08 Certification

I. Braun Entervan Manufacturer Warranty

J. Proof of Altoona Testing

K.Wheel Chair Ramp Testing

L. Headlamp Adjustment Procedure

M.Suspension and Alignment Procedure

N.Altro Flooring

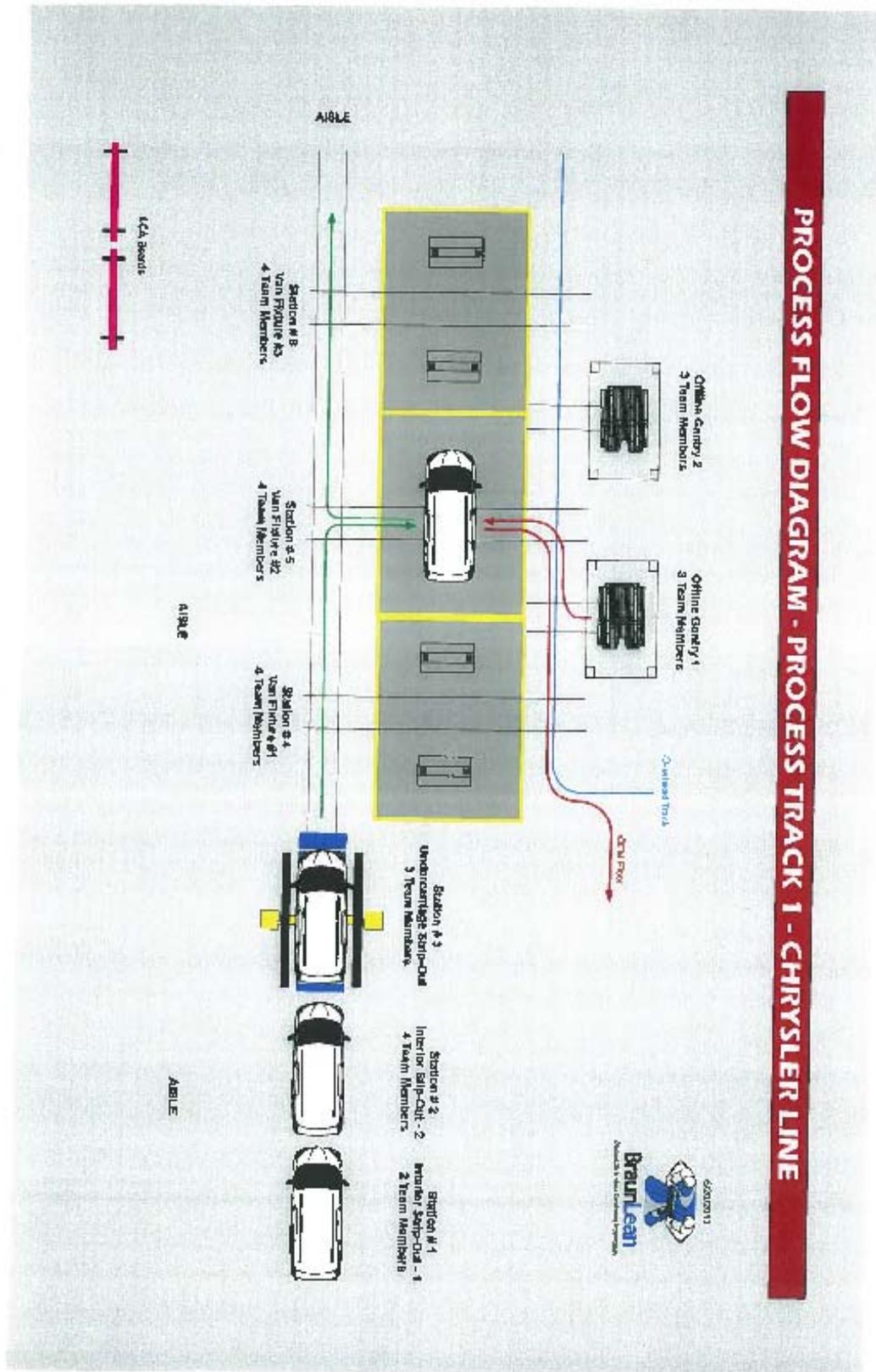
O.Water Test Certification

P.Air Conditioning Recovery and Recharge Procedure

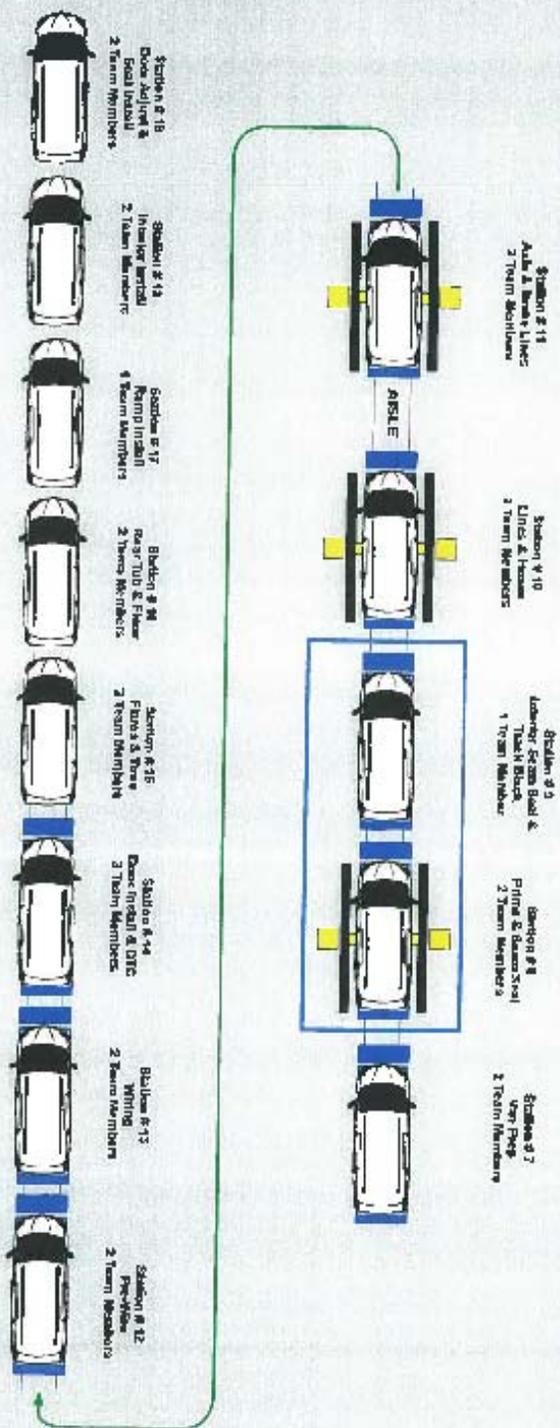
Q.ADA Lighting Test Certification

R.Floor Plan/Weight Analysis

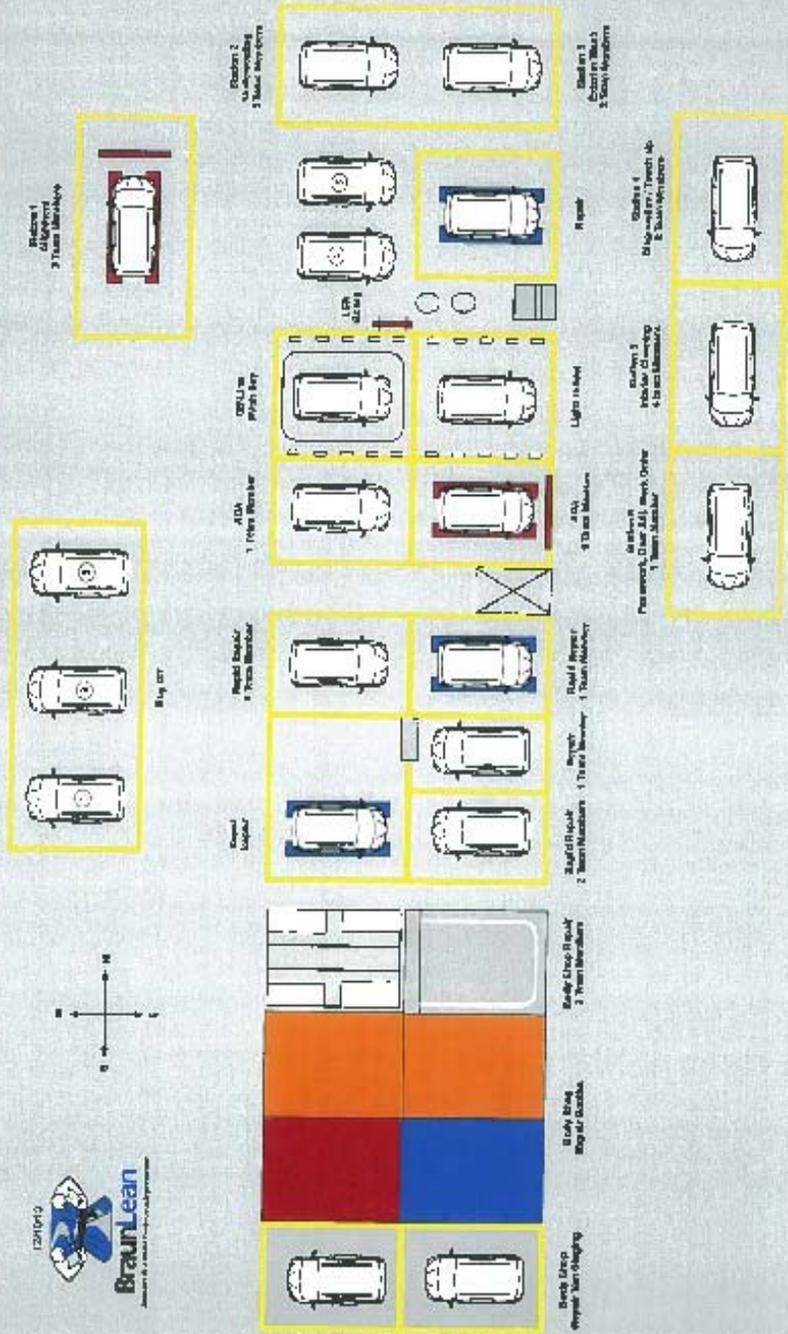
A. Plant Flow



PROCESS FLOW DIAGRAM - PROCESS TRACK 2 - CHRYSLER LINE



PROCESS FLOW DIAGRAM - VEHICLE FINAL



B. Quality Assurance Manual

		QUALITY STANDARDS	
PRODUCT: Chrysler RT/XT - NEW		DATE: 12/27/2012	APP'D BY: DJS
CODE	CATEGORY	DESCRIPTION OF STANDARD	
DB	BRAKES & E BRAKE (B)	*NO DAMAGE MAY BE PRESENT TO ANY PORTION OF THE BRAKING SYSTEM - THIS INCLUDE LINES, HOSES, RESERVOIR, ETC. 5/4" SLACK MIN. ON FLEXIBLE LINES.	
FB	BRAKES & E BRAKE (B)	*BRAKES MUST BE FULLY FUNCTIONAL WITH SOLID PEDAL FEEL. *BRAKES MUST PERFORM AS DESIGNED FROM THE OEM MANUFACTURER. *BRAKE LINES MUST BE ROUTED PER THE SOP'S AND PAD'S. AND BE SECURED. *BRAKE LINES MUST NOT LEAK. *BRAKE FLUID RESERVOIR MUST BE FILLED TO "FULL" LEVEL. *E BRAKE MUST FUNCTION SMOOTHLY AND RELEASE FULLY. *E BRAKE MUST HOLD VEHICLE IN POSITION AT 1000 RPM ON FLAT GROUND. *E BRAKE PEDAL MUST HAVE 1/8" MIN. CLEARANCE TO SIDE PANEL. *BRAKE/E BRAKE - NOTHING SHALL IMPEDE BRAKE PEDAL(S) TRAVEL. *BRAKE ASSEMBLIES MUST BE COMPLETE AND FULLY SECURED.	
SB	BRAKES & E BRAKE (B)	*SHORTAGES OF ANY KIND ARE NOT ACCEPTABLE ON BRAKING SYSTEMS. *BLEEDER VALVE CAPS MUST BE PRESENT	
CL	DASH/LIGHTS/ CONTROLS (L)	*DASH/CONTROLS/LIGHTS MUST BE IN NEW OEM CONDITION. *BRAUN ADDED COMPONENTS MUST BE IN NEW OEM CONDITION. *CENTER CONSOLE: **GAPS AT TOP, CURVED CORNERS SHALL NOT BE LARGER THAN 3/16"W x 1"L. **GAPS ABOVE CUP HOLDER SHALL NOT BE LARGER THAN 1/8"W. *SURFACES SHALL BE FREE OF DIRT, DEBS, AND NO OVERSPRAY.	
DL	DASH/LIGHTS/ CONTROLS (L)	*NO DAMAGE MAY BE PRESENT TO ANY AREA OF THE DASH AREA, INCLUDING BRAUN SUPPLIED COMPONENTS.	
QL	DASH/LIGHTS/ CONTROLS (L)	*NO FOREIGN OBJECTS ALLOWABLE IN DASH AREA.	
FL	DASH/LIGHTS/ CONTROLS (L)	*ALL COMPONENTS MUST FUNCTION AS DESIGNED. *SWITCHES MUST FUNCTION SMOOTHLY WITH NO INTERMITTENCY. *KNOWN OEM ISSUES THAT ARE SAFETY RELATED MUST BE REPAIRED. ALL OTHERS WILL BE REPAIRED OUTSIDE OF BRAUN. *NO TROUBLE LIGHTS / CODES MAY BE PRESENT. *ALL DOORS AND DRAWERS MUST FUNCTION SMOOTHLY.	
SL	DASH/LIGHTS/ CONTROLS (L)	*SHORTAGES OF ANY KIND ARE NOT ACCEPTABLE.	

NOTE: REFERENCE VEHICLE MATRIX

UNCONTROLLED DOCUMENT

PAGE 1 OF 9



QUALITY STANDARDS

PRODUCT: Chrysler RTX - NEW DATE: 12/27/2012 APP'D BY: DJS

CODE	CATEGORY	DESCRIPTION OF STANDARD
CS	SEAT/BELTS (S)	<ul style="list-style-type: none"> *SFATS MUST BE IN OEM CONDITION AND IN THE CORRECT COLOR. *BELTS MUST BE IN OEM CONDITION AND IN THE CORRECT COLOR. *FLOOR MAT SAFETY SHEET MUST BE IN GOOD CONDITION ON DR. SIDE FOOTREST
DS	SEAT/BELTS (S)	<ul style="list-style-type: none"> *NO DAMAGE MAY BE PRESENT TO ANY VISIBLE SURFACE.
FS	SFAT/BELTS (S)	<ul style="list-style-type: none"> *SEAT BELTS MUST LATCH SMOOTHLY AND IN THE PROPER LOCATION (DR -- PASS) *SEAT BELTS AND ADJUSTERS SHALL FUNCTION PROPERLY IN ALL POSITIONS. *FRONT SEAT BASE COVERS MUST FIT PROPERLY AND BE SECURE. *ALL OEM SEAT CONTROLS MUST FUNCTION AS DESIGNED. *FOOTRESTS SHALL BE FLAT WITH A MAXIMUM OF 3/8" GAP TO TOE PAN. *FRONT SFATS SHALL RELEASE AND RE-INSTALL SMOOTHLY. *DEAD PLUGS MUST BE PROPERLY SECURED AND ORIENTED. *ALL WIRES UNDER SEAT SHALL BE SECURED. *ALL RISOR BOLTS/NUTS SHALL BE SECURED. *REAR FLIP SEATS MUST UNLATCH AND LATCH SMOOTHLY. *REAR FLIP SEATS MUST STAY UP WHEN FLIPPED FORWARD. *REAR SFATS WHEN LATCHED SHALL NOT DAMAGE COMPONENTS UNDER SEAT. *REAR SEAT HARNESS MUST BE ROUTED PROPERLY TO PREVENT PRESSURE PTS. *REAR SEAT CHILD RESTRAINTS SHALL BE SECURE AND FREE OF SHARP EDGES. *REAR SEAT CHILD RESTRAINTS SHALL NOT DAMAGE THE SEAT BACK MATERIAL. *REAR SEAT BELTS MUST BE PROPERLY ROUTED AND SECURED
SS	SEAT/BELTS (S)	<ul style="list-style-type: none"> *SHORTAGES OF ANY KIND ARE NOT ACCEPTABLE.
QQ	TIE DOWNS & TRACK (Q)	<ul style="list-style-type: none"> *TRACK MUST BE COMPLETELY COVERED WITH POWDER COAT WITH NO METAL EXPOSED. EXCESS POWDER COAT IS NOT ALLOWABLE *TRACK MUST BE THE PROPER COLOR PER THE BOM. *TRACK MUST BE FREE OF DEBRIS - ON TOP OF, OR UNDERNEATH THE T.C. *FASTENERS IN TRACK MUST BE SEALED PROPERLY - FLUSH TO SURFACE. *GAPS BETWEEN TIE TRACK AND TRACK CAPS MUST NOT EXCEED 1/32". *TIE DOWNS MUST BE IN NEW OEM CONDITION - ALL TYPES.
DQ	TIE DOWNS & TRACK (Q)	<ul style="list-style-type: none"> *TRACK AND TIE DOWNS MUST NOT BE DAMAGED.
QQ	TIE DOWNS & TRACK (Q)	<ul style="list-style-type: none"> *TRACK MUST BE FREE OF ANY FOREIGN OBJECT. *TIE DOWNS MUST BE FREE OF ANY FOREIGN OBJECT.
FQ	TIE DOWNS & TRACK (Q)	<ul style="list-style-type: none"> *TIE DOWNS MUST LOCK SECURELY IN EACH POSITION OF THE TRACK. *TIE DOWN LOCK MUST POP-UP WITHOUT ASSISTANCE *BUCKLE END OF TIE DOWN (IF SO EQUIPPED) MUST LOCK SECURELY TO SEAT BELT
SQ	TIE DOWNS & TRACK (Q)	<ul style="list-style-type: none"> *SHORTAGES OF ANY KIND ARE NOT ALLOWED.

NOTE: REFERENCE VEHICLE MATRIX

UNCONTROLLED DOCUMENT

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QUALITY STANDARDS

PRODUCT: Chrysler RT/XT - NEW DATE: 12/27/2012 APP'D BY: DJS

CODE	CATEGORY	DESCRIPTION OF STANDARD
CC	CLIMATE CONTROL (C)	*CLIMATE CONTROL CONTROLS MUST BE IN NEW OEM CONDITION - BOTH FRONT AND REAR (IF SO EQUIPPED).
DC	CLIMATE CONTROL (C)	*NO DAMAGE MAY BE PRESENT TO ANY AREA OF THE CLIMATE CONTROL SYSTEM.
FC	CLIMATE CONTROL (C)	*CLIMATE CONTROL SHALL FUNCTION AS DESIGNED FOR BOTH FRONT AND REAR UNITS. *BLOWER FANS MUST NOT SQUEAL AT ANY SPEED. *BLOWER FANS MUST CHANGE OUTPUT BASED ON SPEED SELECTED. *CLIMATE CONTROL DISPLAY SHALL FUNCTION AS DESIGNED, WITH APPROPRIATE LIGHTS ILL
CI	INTERIOR (I)	*GAP BETWEEN A-B PILLAR PANEL AND FLOOR MUST NOT EXCEED 1/4". *GAP BETWEEN WEATHERSTRIP AND B-PILLAR PANEL MUST NOT EXCEED 1/4"W x 2"L. *GAP BETWEEN CUPHOLDER & CENTER CONSOLE MUST NOT EXCEED 1/8". *GAP BETWEEN RMC AND R VERTICAL TO FLOOR MUST NOT EXCEED 1/4". *REAR FOOTREST MIDDLE BRACKETS FLUSH AND NO GAP >1/4". *GAP FROM PANEL TO PANEL SHALL NOT EXCEED 1/8". *PASSENGER SLIDE DOOR PANEL GAP ALONG TOP EDGE (BY DOOR LOCK) MUST NOT EXCEED 1/4"W x 3"L. *PANELS MUST BE FREE OF SCRATCHES IN WHICH A FINGERNAIL CAN CATCH. *PANEL SCRATCHES MUST BE FREE OF SCRATCHES 1/2" OR GREATER WHEN VIEWED AT A DISTANCE OF TWO FEET (WITH 20/20 VISION). *PANELS MUST BE FREE OF STRESS MARKS THAT ARE LARGER THAN A PENCIL FRASER (APPROXIMATELY 1/4" IN DIAMETER) AT A DISTANCE OF TWO FEET. *PANEL MUST BE FREE OF VISIBLE CRACKS, & COLOR CONSISTENT THROUGHOUT. *PANELS MUST NOT SHOW SIGNS OF WARPAGE. *EXCESS PLASTIC SHAVINGS AROUND SCREW HOLES IS NOT ALLOWABLE. *FLOORING MUST BE EVEN AND CONSISTENT THROUGHOUT. *FLOORING AND PANELS MUST HIDE ALL WIRING, CABLES, AND WHITE SEAM SEAL. *HEADLINER MUST BE IN NEW, OEM CONDITION. *ALL DECALS MUST BE IN NEW CONDITION, AND PROPERLY PLACED INSIDE VEHICLE. *WELDING BURNS ARE NOT ALLOWABLE ON ANY INTERIOR SURFACE. *SLIDE DOORS MUST SEAL WHEN VIEWED FROM INSIDE
DI	INTERIOR (I)	*NEW OEM / BRAUN INTERIOR COMPONENTS MUST NOT HAVE ANY VISIBLE DAMAGE
OI	INTERIOR (I)	*NEW INSTALLED FLOORS MUST NOT "TIN CAN"
FI	INTERIOR (I)	*REAR FOOTRESTS MUST OPEN/CLOSE SMOOTHLY *ALL OEM COMPONENTS SHALL FUNCTION AS DESIGNED. *ALL PANELS SHALL BE SECURELY FASTENED. *ALL PUSH PLUGS SHALL FIT SNUGLY IN MATING HOLE. *PANELS SHALL NOT IMPEDE ANY VEHICLE OR CONVERSION FUNCTION OR RUB EACH OTHER CAUSING DAMAGE.
SI	INTERIOR (I)	*PART SHORTAGES OF ANY KIND ARE NOT ALLOWABLE IN NEW VEHICLES.

NOTE: REFERENCE VEHICLE MATRIX

UNCONTROLLED DOCUMENT

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QUALITY STANDARDS

PRODUCT: Chrysler RTXT - NEW DATE: 12/27/2012 APP'D BY: DJS

CODE	CATEGORY	DESCRIPTION OF STANDARD
CK	KEYFOB / MISC. (K)	*KEYFOBS MUST BE IN NEW CONDITION, WITH ALL SYMBOLS LEGIBLE. *ALL MISCELLANEOUS EQUIPMENT MUST BE IN NEW CONDITION.
FK	KEYFOB / MISC. (K)	*KEYFOBS MUST FUNCTION AS DESIGNED - OPENING AND CLOSING DOORS, LOCKING AND UNLOCKING ALL DOORS. *KEYFOBS MUST START VEHICLE - MUST FIT AND TURN IN THE IGNITION SMOOTHLY, AND IF KEYLESS EQUIPPED, START THE VEHICLE VIA THE IGNITION START BUTTON. *ALL ADDITIONAL BELTS, FIRE-EXTINGUISHERS, SAFETY EQUIPMENT, MISC. SHALL FUNCTION AS DESIGNED.
SK	KEYFOB / MISC. (K)	*PART SHORTAGES OF ANY KIND ARE NOT ALLOWABLE IN NEW VEHICLES.
CE	EXTERIOR (E)	*EXTERIOR MUST BE IN NEW OEM CONDITION AND CORRECT COLOR PER W.O. **INSPECT EXTERIOR AT A DISTANCE OF THREE FEET WADEQUATE LIGHT. ***ANY SCRATCHES, DINGS, DENTS, SWIRL MARKS, CHIPS, ETC. ARE NOT ALLOWABLE ON NEW VEHICLES. *EXTERIOR MUST BE FREE OF BURNS AND OVERSPRAY. *WINDOWS & LIGHTS SHALL BE IN NEW OEM CONDITION **INSPECT EXTERIOR AT A DISTANCE OF THREE FEET WADEQUATE LIGHT. ***ANY SCRATCHES, DINGS, SWIRL MARKS, CHIPS, ETC. ARE NOT ALLOWABLE ON NEW VEHICLES. *LIGHTS (IF REMOVED) SHALL FIT AS ORIGINALLY DESIGNED. *VENT WINDOWS SHALL BE CENTERED IN THE OEM OPENING WITH EQUAL GAPS. *BADGING SHALL BE PLACED IN SPECIFIED AREAS ON THE VEHICLE, EVENLY DISTRIBUTED, AND COMPLETE (NO MISSING ANY LETTERS). *BRAUN PLATE MUST BE FIVE AND PROPERLY POSITIONED ON FRONT BUMPER. *ROOF RACK SHALL BE IN NEW OEM CONDITION.
DE	EXTERIOR (E)	*NO DAMAGE MAY BE PRESENT TO ANY VISIBLE SURFACE.
OC	EXTERIOR (E)	*NEW VEHICLES MUST BE FREE OF ALL FOREIGN OBJECTS.
FE	EXTERIOR (E)	*ALL EXTERIOR COMPONENTS MUST HAVE THE FORM, FIT, AND FUNCTION OF A NEW OEM/BRAUN VEHICLE.
SE	EXTERIOR (E)	*PART SHORTAGES OF ANY KIND ARE NOT ALLOWABLE ON NEW VEHICLES.

PRODUCT: Chrysler RT/XT NEW	DATE: 12/27/2012	APP'D BY: DJS
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CODE	CATEGORY	DESCRIPTION OF STANDARDS
CF	FLARES (F)	<p>*FLARES MUST BE IN NEW OEM CONDITION AND CORRECT COLOR PER W.O.</p> <p>*INSPECT FLARES AT A DISTANCE OF THREE FEET W/ADEQUATE LIGHT.</p> <p>**FLARES SHALL BE FREE OF SCRATCHES, FINISHES, PAINT RUNS, CHIPS, CRACKS, WAVES, DIMPLES, SANDING MARKS, AND EXTRA HOLES.</p>
DF	FLARES (F)	*FLARE SURFACE MUST BE FREE OF ANY VISIBLE DAMAGE.
FF	FLARES (F)	<p>*FLARE MUST LINE UP WITH EACH OTHER (BODY LINES), AND FINISH IN AND OUT REAR TO SLIDE DOOR FLARE GAP SHALL NOT BE < 3/8 OR > 1/2</p> <p>*SLIDE DOOR FLARE TO FRONT DOOR FLARE GAP SHALL NOT BE < 1/8 OR > 3/8</p> <p>*FLARES SHALL BE SECURED TO VEHICLE WITH NO EXCESS MOVEMENT.</p> <p>*ALL SCREWS AND RIVETS (AS SPECIFIED) SHALL BE PAINTED THE OEM BODY COLOR.</p>
SF	FLARES (F)	<p>*FLARES SHALL NOT HIT EACH OTHER</p> <p>*SHORTAGES OF ANY KIND ARE NOT ALLOWABLE ON NEW OEM VEHICLES.</p>
CW	WHEEL ASSM. (W)	<p>*WHEEL ASSEMBLIES MUST BE IN NEW OEM CONDITION WHEN VIEWED AT A DISTANCE OF THREE FEET UNDER ADEQUATE LIGHTING.</p> <p>*WA MUST BE FREE OF SCRATCHES, SCRAPES, AND ROUGHS</p> <p>*TIRES MUST BE FREE OF ALL DAMAGE</p> <p>*WHEEL-WELL LINERS MUST BE IN NEW OEM CONDITION.</p>
DW	WHEEL ASSM. (W)	*NO VISIBLE DAMAGE IS ALLOWABLE ON NEW OEM WHEEL ASSEMBLIES, HUBCAPS OR RIMS, WHEN VIEWED AT A DISTANCE OF 3 FEET UNDER ADEQUATE LIGHTING
FW	WHEEL ASSM. (W)	<p>*WHEEL ASSEMBLIES MUST BE PROPERLY ATTACHED TO VEHICLE USING OEM RECOMMENDED TORQUE SPECS FOR LUG NUTS.</p> <p>*TIRES MUST BE FILLED TO TIRE PRESSURE STATED ON THE LOAD & TIRE INFORMATION TAG.</p> <p>*LOAD & TIRE INFORMATION TAG SHALL BE PROPERLY LOCATED ON THE DRIVER SIDE B-PILLAR EDGE AND LEGIBLE.</p> <p>*WHEEL-WELL LINERS MUST BE PROPERLY SECURED, WITH NO MISSING FASTENERS & NO GAP BETWEEN LINER AND WHEEL WELL LIP > 3/16</p> <p>*WHEEL-WELL LINERS MUST NOT INTERFERE WITH COMPONENTS OF THE STEERING SYSTEM, BRAKING SYSTEM, AND MISC. LINES AND HOSES.</p>



QUALITY STANDARDS

PRODUCT: Chrysler RT/XT - NEW DATE: 12/27/2012 APP'D BY: DJS

CODE	CATEGORY	DESCRIPTION OF STANDARD
CH	UNDERHOOD (H)	*UNDERHOOD MUST BE IN NEW OEM AND BRAUN CONDITION. *EXCESS COOLANT SPOTS (DRY OR WET) ARE NOT ALLOWED *ALL FLUIDS MUST BE IN THEIR APPROPRIATE CONTAINERS/LINES.
DH	UNDERHOOD (H)	*VISIBLE DAMAGE IS NOT ALLOWABLE ON NEW OEM / BRAUN COMPONENTS.
QH	UNDERHOOD (H)	*THE ENGINE COMPARTMENT MUST BE FREE OF ANY FOREIGN OBJECT.
FH	UNDERHOOD (H)	*ALL OEM AND BRAUN COMPONENTS MUST BE IN THEIR PROPER POSITION AND SHALL BE SECURED INCLUDING BATTERY CABLES. *HOOD MUST FIT ATCH AND LATCH SMOOTHLY. *ANY KINKED OR PINCHED LINES ARE NOT ALLOWABLE. *ALL WIRING HARNESSSES MUST BE ROUTED AWAY FROM HOT SURFACES, AND SHALL BE SECURED.
SH	UNDERHOOD (H)	*SHORTAGES OF ANY KIND ARE NOT ALLOWABLE.
CD	DOORS (D)	*EXTERIOR MUST CONFORM TO <u>CE</u> STANDARD. *INTERIOR MUST CONFORM TO <u>CF</u> STANDARD.
DD	DOORS (D)	*DSD, PSD PANEL @ FR/R REAR, DOOR SKIN TO PANEL GAP < 1/4" *EXTERIOR MUST CONFORM TO <u>DE</u> STANDARD. *INTERIOR MUST CONFORM TO <u>DF</u> STANDARD.
OD	DOORS (D)	*EXTERIOR MUST CONFORM TO <u>OE</u> STANDARD. *INTERIOR MUST CONFORM TO <u>OF</u> STANDARD.
FD	DOORS (D)	*EXTERIOR - ALL BODY LINES ON ALL DOORS AND OEM REAR QUARTERS SHALL LINE UP WITHIN 3/32". *EXTERIOR - DOOR GAPS BETWEEN THE FRONT DOORS AND SLIDE DOORS; AND SLIDE DOORS AND REAR QUARTERS - MUST BE A MINIMUM OF 1/8" AND A MAXIMUM OF 3/16". *DOORS MUST BE FLUSH WITH EACH OTHER AND/OR QUARTER PANELS WITHIN 1/8". *DRIVER SLIDE DOOR - W/POWER - SHALL OPEN FULLY IN A MAXIMUM OF 7 SEC. *DRIVER SLIDE DOOR - W/POWER - SHALL CLOSE FULLY IN A MAXIMUM OF 8 SEC. *PASSENGER SLIDE DOOR - W/POWER - SHALL OPEN FULLY IN A MAXIMUM OF 8 SEC. *PASSENGER SLIDE DOOR - W/POWER - SHALL CLOSE FULLY IN A MAXIMUM OF 8 SEC. *REAR HATCH SHALL NOT CONTACT TAIL LIGHTS OR BUMPER WHEN OPENED AND CLOSED. FUNCTION SHALL NOT BE IMPEDED BY BRAUN COVERS ON. *REAR HATCH SHALL FUNCTION NORMALLY WITH OEM POWER BUTTON. *INTERIOR DRIVER SLIDE DOOR SHALL OPEN AND CLOSE SMOOTHLY USING OEM INTERIOR HANDLE. *INTERIOR PASSENGER SLIDE DOOR SHALL OPEN AND CLOSE SMOOTHLY USING THE BRAUN INTERIOR HANDLE. *SLIDE DOOR INTERIOR SUNSCREENS SHALL MOVE UP AND DOWN SMOOTHLY. WHEN STOWED, SUNSCREENS SHALL NOT DROP INSIDE INTERIOR PANELS. *BRACKETS NOT RUB W/S AND ROLLERS NOT NOISEY.

NOTE: REFERENCE VEHICLE MATRIX

UNCONTROLLED DOCUMENT

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QUALITY STANDARDS

PRODUCT: Chrysler RTX NEW DATE: 12/27/2012 APP'D BY: DLS

CODE	CATEGORY	DESCRIPTION OF STANDARD
CR	RAMP (R)	<ul style="list-style-type: none"> *RAMP SHALL BE FREE OF SCRATCHES, SCRAPES, GOUGES, CHIPS, OVERSPRAY, AND FOOTPRINTS *RAMP SHALL BE THE CORRECT COLOR AS SPECIFIED ON THE WORK ORDER. *EDGE GUARDS SHALL BE PLACED PER PRINT AND SECURED. *ALL LABELS AND SAFETY ITEMS SHALL BE PROPERLY PLACED PER THE PRINT AND/OR WORK ORDER *HINGE BOLTS NEED TO BE FLUSH WITH SURFACE
DR	RAMP (R)	<ul style="list-style-type: none"> *NO VISIBLE DAMAGE SHALL BE PRESENT ON THE BRAUN RAMP.
FR	RAMP (R)	<ul style="list-style-type: none"> *RAMP SHALL HAVE MIN 2MM GAP AT B PILLAR LATCH AND MIN 5MM GAP TO DOOR EDGE W/S AND NOT IMPEDE THE DEPLOYMENT OF RAMP *RAMP ARM SHALL NOT RUB RAMP EDGE STOW BRACKET OR MOUNT *RAMP SHALL DEPLOY TO GROUND IN A MAXIMUM OF 11 SEC. *RAMP SHALL STOW TO UPRIGHT POSITION IN A MAXIMUM OF 11 SEC. *RAMP ANTI-RATTLE ROLLER MUST MAKE CONTACT WITH THE RAMP WITH THE PASSENGER SLIDE DOOR FULLY CLOSED. *SWING RAMPS (IF SO EQUIPPED) SHALL LATCH CLOSED SECURELY AND SWING OPEN FULLY TO THE FULL OPEN DETENT WITH NO INTERFERENCES OF PANELS *NO UNUSAL NOISES ALLOWED FROM THE RAMP MOTOR.
SR	RAMP (R)	<ul style="list-style-type: none"> *SHORTAGES OF ANY KIND ARE NOT ALLOWABLE ON A NEW CONVERSION.
FA	KNEEL (A)	<ul style="list-style-type: none"> *KNEEL ACTUATOR MUST BE FULLY ENCLOSED BY KNEEL BOX, AND ALL HARDWARE MUST BE SECURELY FASTENED. *VAN SHALL KNEEL FULLY, BEFORE THE DEPLOYED RAMP CONTACTS THE GROUND. *KNEEL SHALL NOT RATCIET DURING ANY POINT OF OPERATION. *GEAR BACKLASH NOISE SHALL NOT EXCEED 1.5 SECONDS. *CAM ARM SHALL NOT RUB RAMP.
SA	KNEEL (A)	<ul style="list-style-type: none"> *SHORTAGES OF ANY KIND ARE NOT ALLOWABLE ON A NEW CONVERSION.
CU	UNDER-CARRIAGE (U)	<ul style="list-style-type: none"> *UNDERCARRIAGE SHALL BE SEAM SEALED AND UNDERCOATED PER PAD'S AND SOP'S.
UU	UNDER-CARRIAGE (U)	<ul style="list-style-type: none"> *UNDERCARRIAGE SHALL BE FREE OF EXCESSIVE DAMAGE AND/OR DAMAGE THAT COULD INTERFERE WITH THE CONVERSION OR VAN FUNCTIONS
OU	UNDER-CARRIAGE (U)	<ul style="list-style-type: none"> *FOREIGN OBJECTS OF ANY KIND ARE NOT ALLOWABLE
FU	UNDER-CARRIAGE (U)	<ul style="list-style-type: none"> *ALL LINES, HARNESSSES, AND HARDWARE SHALL BE INSTALLED PER BRAUN/OEM STANDARDS AS LISTED ON PAD'S, SOP'S, AND OEM DATASHEETS. *KNEELING FUNCTION SHALL NOT EFFECT SURROUNDING COMPONENTS.
SU	UNDER-CARRIAGE (U)	<ul style="list-style-type: none"> *ALL WELDS MUST ADHERE TO BRAUN (ENGINEERING) STANDARDS *SHORTAGES OF ANY KIND ARE NOT ALLOWABLE ON A NEW CONVERSION.

NOTE: REFERENCE VEHICLE MATRIX

UNCONTROLLED DOCUMENT

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QUALITY STANDARDS

PRODUCT: Chrysler RT/VCT - NEW DATE: 12/27/2012 APP'D BY: DLR

CODE	CATEGORY	DESCRIPTION OF STANDARD
CT	TEST DRIVE (T)	*N/A
DT	TEST DRIVE (T)	*N/A
OT	TEST DRIVE (T)	*FOREIGN OBJECTS/LOOSE OBJECTS OF ANY KIND ARE NOT ALLOWABLE.
FT	TEST DRIVE (T)	<ul style="list-style-type: none">*ALL OEM AND BRAUN PARTS MUST REMAIN SECURE THROUGHOUT THE TEST DRIVE*ALL OEM CONTROLS AND FUNCTIONS MUST OPERATE AS DESIGNED*ALL BRAUN CONTROLS AND FUNCTIONS MUST OPERATE AS DESIGNED.*EXCESSIVE WIND NOISE AROUND THE SLIDE DOOR SEALS BEYOND WHAT IS NORMALLY OBSERVED IS NOT ALLOWED.*EXCESSIVE EXHAUST NOISE BEYOND WHAT IS NORMALLY OBSERVED IS NOT ALLOWED.*EXHAUST SHALL NOT "CLUNK" (HITTING FLOOR OR SWAY BAR) DURING TEST DRIVE.*STEERING WHEEL SHALL BE CENTERED ON DASH WHEN VEHICLE IS TRACKING STRAIGHT DOWN THE ROAD. NOTE: IF RE-ALIGNMENT IS REQUIRED, ALL LUG NUTS SHALL BE RE-TORQUED TO OEM SPECIFICATIONS.*STEERING WHEEL MUST MOVE FREELY WHEN TURNING. NO BINDING ALLOWED.*STEERING WHEEL MUST RETURN TO CENTER (UNASSISTED) AFTER TURNING.*PERFORM HIGH-SPEED STOP TO STRESS BRAKES AND LINES. CHECK CONNECTIONS AFTER TEST DRIVE IS COMPLETE.*ACCELERATOR PEDAL MUST RETURN TO AN IDLE POSITION AFTER BEING PUSHED COMPLETELY TO THE FLOOR.*SEATS MUST NOT MOVE (ROCK) WHEN HARD CORNERING OR PERFORMING QUICK LANE-CHANGE MANUEVERS*VERIFY THAT NO DIAGNOSTIC TROUBLE CODES HAVE BEEN ACTIVATED AFTER THE TEST DRIVE IS COMPLETE.*NO RATTLES OR SQUEAKS IN THE VAN DURING TEST DRIVE FROM PANELS, RAMPS, SEATS OR FROM UNDERNEATH. NO ABNORMAL NOISES IN VAN DURING TEST DRIVE.

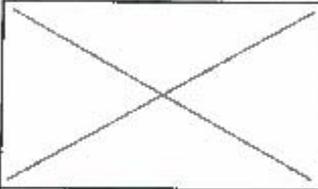
NOTE: REFERENCE VEHICLE MATRIX

UNCONTROLLED DOCUMENT

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PRODUCT: Chrysler RT/XT - NEW DATE: 12/27/2012 APP'D BY: DJS

**QUALITY MATRIX
VEHICLE FINAL**

	C	D	O	F	S
	COSMETIC	DAMAGE	FOD (FOREIGN OBJECTS / DEBRIS)	FORM / FIT / FUNCTION	SHORTAGES
					
BRAKES/EBRAKE		DB		FB	SB
DASH/CONTROLS/LGHT	CL	DL	OL	FL	SL
SEAT/BELTS	CS	DS		FS	SS
TIE DOWNS/TRACK (Q)	CQ	DQ	OQ	FQ	SQ
CLIMATE CONTROL	CC	DC		FC	
INTERIOR	CI	DI	OI	FI	SI
KEYFOB/MISC.	CK			FK	SK
EXTERIOR	CE	DE	OE	FE	SE
FLARES	CF	DF		FF	SF
WHEEL ASM.	CW	DW		FW	SW
UNDER HOOD	CH	DH	OH	FH	SH
DOORS	CD	DD	OD	FD	
RAMP	CR	DR		FR	SR
KNEEL (ACTUATOR)				FA	SA
UNDERCARRIAGE	CU	DU	OU	FU	SU
TEST DRIVE			OT	FT	

C. Welding Procedures And Certificates

PROCESS ASSISTANCE DOCUMENT "PAD"



BraunAbility
Because Life is a Moving Experience

CF08-060ADA
"B" & "C"
PILLAR WELDS

Edition Level: 2	Approval Date: 11.4.09	Approved By: JJ/DT	
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Introduction: All welds are solid welds unless otherwise specified.

Weld Information:

— Common Weld Location

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

- Safety Glasses
- Welding Helmet



- Protective Footwear
- Hearing Protection

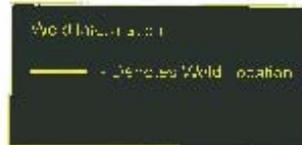
"B" & "C"
PILLAR WELDS




PROCESS ASSISTANCE DOCUMENT "PAD"

DRIVER'S SIDE "B" PILLAR

- 1** Weld in all locations marked in yellow on the outside of the driver's side "B" Pillar.



PART NO.	DESCRIPTION
E50B49DW	B-Pillar Support Driver's Side

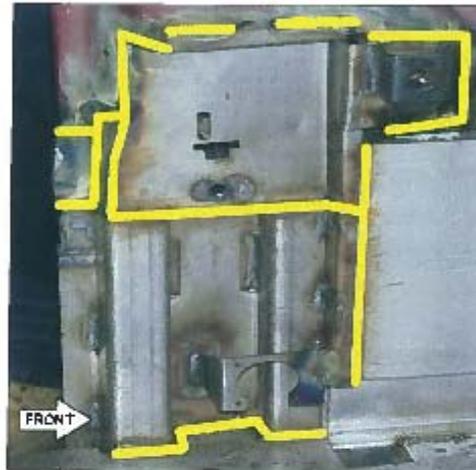


- 2** Weld both locations marked in yellow on the underside of the driver's side "B" Pillar.



PROCESS ASSISTANCE DOCUMENT "PAD"

- 3 Weld all locations marked in yellow on the interior of the driver's side "B" Pillar.



- 4 Weld inside the driver's side lower door track channel as shown.



PROCESS ASSISTANCE DOCUMENT "PAD"

DRIVER'S SIDE "C" PILLAR

- 5** Weld all locations marked in yellow on the exterior of the driver's side "B" Pillar.

PART NO.	DESCRIPTION
E50957D	C-Pillar Support Driver Side

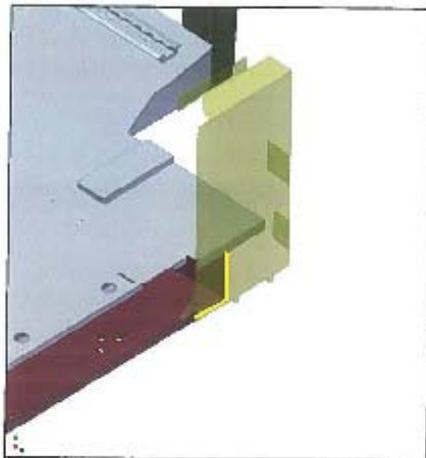


- 6** Weld the interior of the driver's side "C" Pillar.



PROCESS ASSISTANCE DOCUMENT "PAD"

- 7 Weld inside the lower track pan to the "C" Pillar weldment.



Outside View



- 8 Weld the inside the rear "C" Pillar weldment.

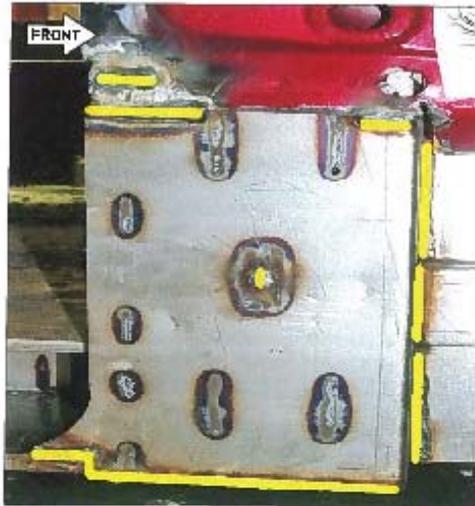


PROCESS ASSISTANCE DOCUMENT "PAD"

PASSENGER SIDE "B" PILLAR WELD LOCATIONS

- 9 Weld the outside of the passenger side "B" Pillar.

PART NO.	DESCRIPTION
E50949PW	R-Pillar Support Pass. Side

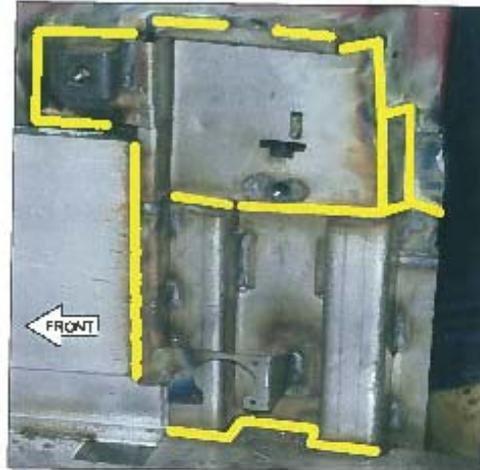


- 10 Weld in both locations on the ur derside of the passenger side "B" Pillar.



PROCESS ASSISTANCE DOCUMENT "PAD"

- 11 Weld the interior of the passenger side "B" Pillar.



- 12 Weld the passenger side lower door track channel as shown.



PROCESS ASSISTANCE DOCUMENT "PAD"

PASSENGER SIDE "C" PILLAR

- 13 Weld the interior of the passenger side "B" Pillar.

PART NO.	DESCRIPTION
E50857D	C-Pillar Support, Driver's Side



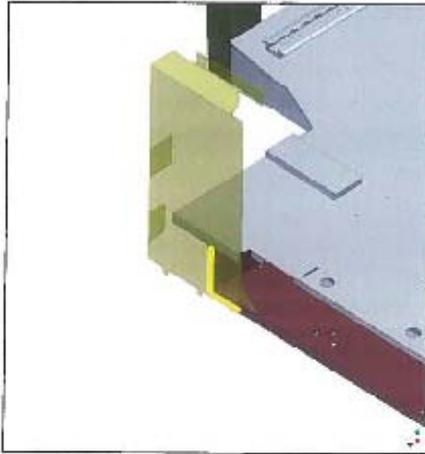
- 14 Weld the interior of the passenger side "C" Pillar.



PROCESS ASSISTANCE DOCUMENT "PAD"

- 15 Weld the inside of the lower track pan to the "C" Pillar weldment

Outside View



- 16 Weld inside the rear of the "C" Pillar weldment.



Pre Employment Welding Test

	RATING
HORIZONTAL WELD	<input type="text"/>
VERTICAL WELD	<input type="text"/>
OVERHEAD WELD	<input type="text"/>
CONDUCT	<input type="text"/>
ATTITUDE	<input type="text"/>

KEY
P-POOR
A-AVERAGE
E-EXCELLENT

Would You Recommend this Person for Another Process Track? Y/N
If Yes, which one or where? _____

Years of experience in m g welding

Name _____

Date _____

Name of Person Conducting Evaluation

4/23/2010

D. Fastener Testing

Manufacturing Instructions: MI1263 (3-06)

Torque Values

Suggested Maximum Torque Values In Inch lbs. for Various Materials and Conditions

Please note that these torque values are approximate and should not be accepted as accurate limits. Indeterminant factors in specific applications preclude the publication of accurate limits for universal use.

Screw Size	Weld. Per In.	C-1018 CRS. Nuts & Bolts	Std. Alumin. Nuts & Bolts	Std. Bronze Nuts & Bolts	Heat Treated Cap Screws 100% SAE Grade 5	Alloy Cap Screws SAE Grade 8	Socketed Hd. Cap Screws "Alloy"	Socketed Hd. Cap Screws "Aluminum"	"Aluminum" Flat Head & Balltop Hd. Cap Screws	Stainless Steel A287 Type 302 Socket Hd. Cap Screws	Stainless Steel A287 Type 302 HEX Socket Hd. Screws
0	80	7	---	10	---	---	---	---	---	---	---
1	64	1 1/2	---	1	---	---	---	3.5	1.5	---	---
	77	2	---	1 1/2	---	---	---	---	---	---	---
2	56	2 1/4	---	1 3/4	---	---	---	7	1.5	---	---
	64	2 3/4	---	3	---	---	---	---	---	---	---
3	66	3 1/2	---	2 1/2	---	---	---	10	4.5	---	---
	56	4	---	3	---	---	---	---	---	---	---
4	40	4 3/4	---	3 1/4	---	---	---	14	4.5	7	3.5
	40	6	---	4 1/4	---	---	---	---	---	---	4.1
5	40	7	---	5	---	---	---	20	9	1.5	---
	44	8 1/2	---	6	---	---	---	---	---	---	---
6	32	8 3/4	---	6 1/4	---	---	---	25	9.5	13	12
	40	11	---	7 3/4	---	---	---	---	---	---	8
8	32	18	---	13	---	---	---	40	16.5	23	27
	36	20	---	14	---	---	---	---	---	---	14
10	24	21	---	16	---	---	---	65	30	55	40
	32	32	12	25	---	---	---	---	---	---	26
1/4	20	22	---	16	132	144	---	100	70	100	115
	28	24	21	20	126	130	---	---	---	---	---
5/16	18	18	156	98	252	300	---	300	140	175	123
	24	158	43	105	276	360	---	---	---	---	---
3/8	16	276	---	175	406	600	---	500	220	270	200
	24	372	92	203	480	720	---	---	---	---	---
7/16	14	464	---	265	660	1020	---	350	150	400	---
	20	492	120	284	720	1140	---	---	---	---	---
1/2	13	604	---	385	1020	1500	---	1375	515	980	400
	20	768	---	403	1140	1680	---	---	---	---	330
9/16	12	864	---	---	1500	2100	---	---	---	---	---
	18	1092	---	---	1500	2340	---	---	---	---	---
5/8	11	1332	---	---	2100	2940	---	2800	1700	1360	900
	18	1536	430	---	2520	3240	---	---	---	---	---
3/4	10	2400	---	---	3800	5100	---	4400	2750	1360	---
	16	2676	---	---	3960	5520	---	---	---	---	---
1 1/8	9	3780	---	---	5400	7620	---	7000	4100	---	---
	14	4050	---	---	5820	8400	---	---	---	---	---
1"	8	4800	---	---	8160	11880	---	10,000	5600	---	---
	14	5520	---	---	8580	12,600	---	---	---	---	---

As Rec'd - with slight lubrication on end.

Based on dry assembly lubrication (if plating) may reduce these values by as much as 20%.

STANDARD BOLT HOW TO DETERMINE BOLT STRENGTH

Hexagon Head Bolt		Normal Recess Bolt		Deep Recess Bolt	Stud Bolt	Weld Bolt	Class
4	No Mark	No Mark	No Mark	No Mark			4T
5							5T
6	w/ Washer	w/ Washer					6T
7							7T
8							8T
9							9T
10							10T
11							11T

Manufacturing Instructions: MI1263 (3-06)

SPECIFIED TORQUE FOR STANDARD BOLTS

Class	Diameter (mm)	Pitch (mm)	Specified torque					
			Hexagon head bolt			Hexagon flange bolt		
			N·m	kgf·cm	ft·lbf	N·m	kgf·cm	ft·lbf
4T	5	1	5	55	48 in.·lbf	8	50	52 in.·lbf
	8	1.25	12.5	130	8	10	145	13
	10	1.25	25	250	13	29	290	21
	12	1.25	47	490	35	53	540	39
	14	1.5	74	760	55	82	850	61
	16	1.5	116	1,160	83	-	-	-
5T	6	1	6.5	65	56 in.·lbf	7.5	75	65 in.·lbf
	8	1.25	15.5	160	12	17.5	175	13
	10	1.25	32	330	24	36	360	26
	12	1.25	59	600	45	65	670	48
	14	1.5	91	930	67	100	1,050	75
	16	1.5	140	1,400	101	-	-	-
6T	6	1	8	80	69 in.·lbf	6	80	78 in.·lbf
	8	1.25	18	185	14	21	210	15
	10	1.25	36	400	29	44	440	32
	12	1.25	71	730	53	80	810	59
	14	1.5	110	1,100	80	125	1,250	90
	16	1.5	173	1,750	127	-	-	-
7T	6	1	10.5	110	6	12	120	9
	8	1.25	25	260	15	28	290	21
	10	1.25	52	530	38	58	590	43
	12	1.25	95	970	70	105	1,050	76
	14	1.5	145	1,500	108	185	1,700	123
	16	1.5	230	2,300	168	-	-	-
8T	8	1.25	25	330	22	33	330	24
	10	1.25	61	620	45	68	690	50
	12	1.25	110	1,100	80	120	1,250	90
9T	8	1.25	34	340	25	37	380	27
	10	1.25	70	710	51	78	790	57
	12	1.25	125	1,300	94	140	1,450	105
10T	8	1.25	38	380	28	42	430	31
	10	1.25	78	800	55	85	890	64
	12	1.25	140	1,450	105	155	1,600	116
11T	8	1.25	42	430	31	47	490	35
	10	1.25	87	890	64	97	990	72
	12	1.25	155	1,600	119	175	1,800	130

E. Torque Wrench Calibration Log

Andy Conner

From: Jeff Zeider
Sent: Wednesday, March 26, 2014 9:50 AM
To: Andy Conner
Subject: here ya go

Tool No.	Tool Description	Serial No.	Location	Set Torque	Manual / Air Tool	Torque Range	Last Insp. Date
G-112	K Tools 1/2" Man adj click	489371M7	STATION 22 CHRYSLER	30'	Manual	10' - 150'	2/5/2014
G-113	UVRU UX 1400	E43G44	Chrysler Lug nuts	190'	Air	75' - 120'	2/5/2014
G-188	Sturtevant Richmond	876495	TRACK CHRYSLER	20'	Manual	15 - 75'	2/5/2014
G-208	K-tool	72101	STATION 11 FRONT RAISE	40'	Manual	10'-150'	2/5/2014
G-209	K-Tool	72101	CHRY FRONT RAISE	83'	Manual	10'-150'	2/5/2014
G-210	K-Tool	72101	STATION 26 SHOCK BOLTS	70'	Manual	10'-150'	2/5/2014
G-216	ULT-100	HX3053	SWAYBAR CHRYSLER	48'	Air	52'-96'	2/5/2014
G-220	JX-1400	J23003	STATION 26 TRAILING ARM BOLTS	130'	Air	75'-140'	2/5/2014
G-221	UVRU-UX 1300	JX3187	STATION 5 FRONT RAISE	70'	Air	60'-95'	2/5/2014
G-236	K-Tool: KTI 72100	465176	CHRYSLER LINES AND HOSES	17'	Manual	20 - 200'	2/5/2014
G-240	K-TOOL 72101	441805	FRONT RAISE CHRYSLER	170'	MANUAL	10 - 150'	2/5/2014
G-254	K-TOOL 72120	5106234488	STATION 14 CHRYSLER AC LINES	17'	MANUAL	25' - 250'	2/5/2014
G-280	STURTEVANT RICHMOND	953478	FRONT RAISE CHRYSLER	83'	MANUAL	30-150'	2/5/2014
G-281	STURTEVANT RICHMOND	45DR250	STATION 26 CHRYSLER LUG NUTS	100'	MANUAL	50-250'	2/5/2014
G-295	KTI-72191	72101	CHRYSLER	35'	MAN	10'-150'	2/5/2014
G-297	KTI	72101	CHRY FRONT RAISE	55'	MAN	10'-150'	2/5/2014
G-298	KTI	72101	CHRY FRONT RAISE	65'	MAN	10'-150'	2/6/2014
G-299	KTI	72121	CHRY FRONT RAISE	40'	MAN	10' - 100'	2/6/2014
G-300	KTI	72121	CHRY FRONT RAISE	40'	MAN	10 - 100'	2/6/2014
G-301	KTI	72121	CHRY FRONT RAISE	38'	MAN	10'-100'	2/6/2014

G-302	KTI	72121	CHRY FRONT RAISE	33'	MAN	10-100'	2/6/2014
G-304	KTI	5130255123	CHRY FRONT RAISE	70'	MAN	10-100'	2/6/2014
G-305	KTI	5130255141	CHRY FRONT RAISE	70'	MAN	10-100'	2/6/2014
G-307	KTI	545879	CHRY FRONT RAISE	120'	MAN	75-250'	2/6/2014
G-320	K-Tool	504446	CHRYSLER ST. 13	40'	MAN	20-200'	2/6/2014
G-312	X-TOOL		CHRYSLER FRONT RAISE	33'	MAN	0-100'	2/6/2014

Jeff Zelder
Quality Group

BraunAbility
Wyncote, Indiana
Phone: 574-946-4139 ext.3269
jeff.zelder@braunability.com



G. Paint Adhesion And Thickness Testing

PROCESS ASSISTANCE DOCUMENT "P.A.D."



CF08-310 Paint Mil. Thickness & Exterior Cleaning

Edition Level: 3 Approval Date: 09.25.09 Approved By: CD/DT

- Vehicle Radio Is To Be Turned Off During The Conversion Process.
- When Using Cleaning Products, Solvents And Cleaners Protective Gloves Must Be Worn.
- The minimum paint thickness should be no less than 3.0 mil.

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

- Eye Protection
- Protective Gloves



- Protective Footwear

CHRYSLER LINE

Paint Mil. Thickness & Exterior Cleaning



CF08-310

Printed copies of this document are considered uncontrolled and may not be current.

Page 1 of 5

PROCESS ASSISTANCE DOCUMENT "P.A.D."

PAINT THICKNESS VERIFICATION

- 1 Check the paint thickness with a Mfl Thickness Gauge and note the thicknesses on page 14 of the Vehicle Quality Verification Sheet.

Note: Push the red button to turn the Mfl Thickness Sensor on.

Each time the sensor is placed against the vehicle the readout will change to the current thickness reading.

Press and hold the red button to turn off.

CRITICAL: The minimum paint thickness should be NO LESS THAN 3.0 mil



- 2 Record the mill thickness for each gauge point next to the corresponding number in the highlighted area.

ENTERVAN PAINT VERIFICATION	
VEHICLE #	
DATE	
MIL THICKNESS	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12
GAGE POINT	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12

PROCESS ASSISTANCE DOCUMENT "P.A.D."

EXTERIOR CLEANING

3 Wipe down all items below with Acrysol:

- Painted interior door surfaces.
- "A", "B" and "C" Pillars,
- Door jama,
- Weather stripping.
- Rear hatch.

PART NO.	DESCRIPTION
5PLY-0124	Protective Gloves
32952	Acetone
19641	Acrysol
06060	3M Rubbing Compound
16560	Glass Cleaner

4 Clean the outside of the windows and side mirrors using glass cleaner and a clean shop towel.



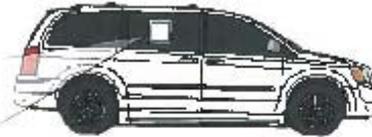
5 Remove undercoating and over spray from around the wheel wells with Acrysol or Acetone.



6 Wet sand or buff minor scuffs and scratches with 3M Extra Cut Rubbing Compound.

PROCESS ASSISTANCE DOCUMENT "P.A.D."

- 7 Match the window sticker supplied from Vehicle Shipping and Receiving to the VIN number on the van. Apply the sticker to the inside of the window on the passenger side sliding door.



PART NO.	DESCRIPTION
34855-DD-FO	Braun Window Sticker/Dodge-Fold-Out
34855-DD-IF	Braun Window Sticker/Dodge-In-Floor
34855-DD-RE	Braun Window Sticker/Dodge-Rear Entry



CF08-310

Paint Mil. Thickness
& Exterior Cleaning

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

- Eye Protection
- Protective Gloves



- Protective Footwear

KEY POINTS & REVISIONS:

- The minimum paint thickness should be no less than 3.0 mil

Verified By: _____ Clock #: _____

H. ISO 9001-08 Factory Certification



PERRY JOHNSON REGISTRARS, INC.

Certificate of Registration

Perry Johnson Registrars, Inc., has assessed the Quality Management System of:

The Braun Corporation

637 West 11th Street, Wisconsin, IL 60090-0001

*(Assessor called the Registrar and hereby declares that
Organization is in compliance with:*

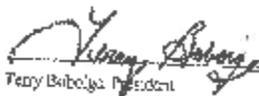
ISO 9001:2008

The Registration is in respect to the following scope of supply:

**Design, Manufacture, Assembly, Installation and Distribution of
Wheelchair Lifts, Chair Toppers and Related Component Parts
as well as Modification of Vans and Buses for Wheelchair Lifts**

*Such products shall be manufactured by the Organization at, or such processes or services shall be offered at or
from, only the address given above. This Registration is granted subject to the system rules governing the
Registration referred to above, and the Organization hereby commits with the Assessment body duty to observe
and comply with the said rules.*

F. J. P. J. R.


Terry Bibbe, President

Perry Johnson Registrars, Inc. (PJR)
755 West Big Beaver Road, Suite 1040
Troy, Michigan 48064
(482) 255-3385



The validity of this certificate is dependent upon ongoing surveillance.

Expiry Date:
July 31, 2011

Expiry Date:
July 30, 2014

Certificate No.:
C2011-00106

I. Braun Entervan Manufacturer Warranty Statement

International Corporate Headquarters
The Braun Corporation
691 W. 11th Street
PO Box 310
Winamac, IN 46796 USA
1-800-THE LIFT
(574) 540-6153
FAX: (574) 946-4670

www.braunlift.com



Warranty:

The vehicles being proposed would include the following

- * Chassis: OEM 3 year 36,000 mile Basic Limited Warranty
- * Chassis: OEM 5 year 100,000 mile Power train Warranty
- * Conversion: 3 year 36,000 mile
- * (See attached conversion warranty)

Signed: Andy Conner Andy Conner

Date: 3/25/14

Title: Commercial Entervan Manager

Limited Warranty

Braun® Public Use

Lowered Floor Minivan Conversion

34941 Rev A

IMPORTANT

This booklet contains Braqua Corporation limited warranties.
It should be kept in your vehicle and presented to your Dealer
if any warranty service is needed.

WARRANTY AND REGISTRATION INSTRUCTIONS

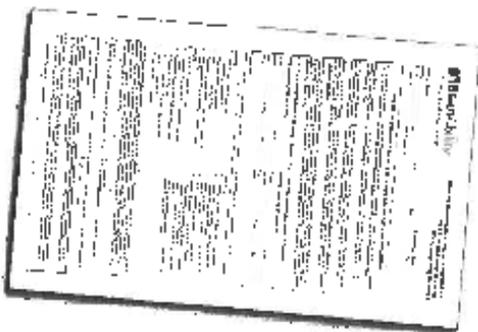
Examine your towed floor mount converter for any damage. Shock or any damage has occurred during delivery, notify the carrier at once with any claims.

Review the service agreement, delivery checklist and warranty registration form with your sales representative. The form must be signed by the consumer and returned. A hard copy is available upon request.

The warranty registration form must be processed electronically by the sales representative to activate the warranty. This Warranty Booklet contains detailed terms and provisions applicable to this vehicle.

Record the last eight digits of the vehicle identification number (VIN) in the space provided for future reference. This information must be provided when filing a warranty claim or ordering parts.

Vehicle Identification Number (VIN) _____



LIMITED WARRANTY

WHAT BRAUN WILL DO TO CORRECT PROBLEMS

In the event that a substantial defect in material or workmanship, attributable to Braun, is found to exist during the warranty coverage periods, it will be repaired or replaced, at Braun's option, without charge to the owner, in accordance with the terms, conditions and limitations of this limited warranty.

Braun's obligation to repair or replace defective materials or workmanship is the sole obligation of Braun under this limited warranty. Braun reserves the right to use new or remanufactured parts of similar quality to complete any work, and to make bars and design changes from time to time without notice to anyone. Braun reserves the right to make changes in the design or materials of its products without incurring any obligation to incorporate such changes in any previously manufactured product. Braun makes no warranty as to the future performance of this product, and this limited warranty is not intended to extend to the future performance of the product. In addition, the owner's obligation to return Braun, or one of its authorized independent dealers, of a claimant does not modify any obligation placed on the owner to contact Braun directly when attempting to pursue remedies under state or federal law.

LIMITED WARRANTY

LIMITATIONS, EXCLUSIONS AND DISCLAIMER OF IMPLIED WARRANTIES

ANY IMPLIED WARRANTY THAT IS FOUND TO ARISE BY WAY OF STATE OR FEDERAL LAW, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR ANY IMPLIED WARRANTY OF FITNESS, IS LIMITED IN DURATION TO THE TERMS OF THIS LIMITED WARRANTY AND IS LIMITED IN SCOPE OF COVERAGE TO THE SCOPE OF COVERAGE OF THIS LIMITED WARRANTY. Braun disclaims any express or implied warranty, including any implied warranty of fitness or merchantability, or items excluded from coverage as set forth in this limited warranty. Braun makes no warranty of any nature beyond that contained in this limited warranty. No one has authority to enlarge, amend or modify this limited warranty, and Braun does not authorize anyone to create any other obligation for or regarding this product. Braun is not responsible for any representation, promise or warranty made by any independent dealer or other person beyond what is expressly stated in this limited warranty. Any selling or servicing dealer is not Braun's agent, but an independent entity.

BRAUN SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES THAT MAY RESULT FROM BREACH OF THIS LIMITED WARRANTY OR ANY IMPLIED WARRANTY. THIS EXCLUSION OF CONSEQUENTIAL AND INCIDENTAL DAMAGES SHALL BE INDEPENDENT OF ANY FAILURE OF THE ESSENTIAL PURPOSE OF ANY WARRANTY, AND THIS EXCLUSION SHALL SURVIVE ANY DETERMINATION THAT THIS LIMITED WARRANTY OR ANY IMPLIED WARRANTY HAS FAILED OF ITS ESSENTIAL PURPOSE. This warranty does not cover, and it no event shall Braun be liable for towing charges, travel, lodging or any other expense incurred due to the loss of use of the product or other reason.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

LIMITED WARRANTY

HOW TO GET SERVICE

To obtain warranty service, the owner must do all of the following:

1. Notify an authorized service center of the claimed defect attributable to Braun, within the warranty coverage period designated above;
2. Provide the notification mentioned in (1), above, within ten (10) days of when the owner discovered, or should have discovered, the claimed defect;
3. Promptly schedule an appointment with and take the product to an authorized service center for service and
4. Pay any transportation costs and all expenses associated with obtaining warranty service.

Since Braun does not control the scheduling of service work at the independent dealerships you may encounter some delay in scheduling or completion of work. If you need assistance you may contact Braun at 631 West 11th Street, Winamac, Indiana 46786; Customer Experience Group 1-800-426-0339.

If two (2) or more service attempts have been made to correct any covered defect that you believe impairs the value, use or safety of the product, or if it has taken longer than thirty (30) days for repairs to be completed, you must, to the extent permitted by law, notify Braun directly, in writing, at the above address, of the unsuccessful repair(s) of the alleged defect(s) so that Braun can become directly involved in providing service pursuant to the terms of this limited warranty.

LIMITED WARRANTY

WHAT IS NOT COVERED

This limited warranty does not cover any of the following: defects in meters & components or parts of the product not attributable to Braun, any material component or part of the product that is warranted by another entity (note the written warranty provided by the manufacturer of the material component or part is the direct responsibility of that manufacturer); items that are added or changed after the product leaves Braun's possession; accidental items installed at any dealership or other place of business, or by any other party, other than Braun; any product used for rental or other commercial purposes (note: it shall be concluded that the product has been used for commercial and/or business purposes if the product owner or user files a tax form claiming any business or commercial tax benefit related to the product, or if the product is purchased in a business name); normal wear, tear, usage, maintenance, service, periodic adjustments; the effects of condensation or moisture from contamination; mold or any damage caused by mold impurities that do not affect the product; for its intended purpose; items that are working as designed but that you are not happy with; problems related to re-orientation, misuse, or handling, neglect, or abuse, including failure to maintain the product in accordance with the owner's manual, or other routine maintenance such as inspections, lubricating, adjustments, tightening of screws, sealing, wheel alignment or rotating tires; damage due to accident or collision, including any acts of weather or damage or corrosion; due to the environment; dirt, vandalism, fire, or other intentional or external surface of the product, including those caused by rocks or other road hazards caused by off road use; overloading or abuse of the product, or any of its components or parts.

Cracks and/or damage to interior and exterior surfaces and other appearance items may occur at the factory or when the product is in transit to a dealer. These items are usually detected and corrected at the factory or by the selling dealer prior to delivery to the retail customer. You must inspect the product for this type of damage when you take delivery. If you find any such defect or damage you will notify the selling dealer, or Braun, at the time of delivery, to have these items covered by this limited warranty and to have work performed on the items at no cost to you as provided by this limited warranty.

LIMITED WARRANTY

EVENTS DISCHARGING BRAUN FROM OBLIGATION UNDER WARRANTY

The following shall completely discharge Braun from any express or implied warranty obligation to repair or replace anything and void this warranty, any rental or other commercial use or purchase of the product (as defined in this warranty), misuse, neglect, collision, accidents, failure to provide routine maintenance (See Owner's Manual), unauthorized alteration of road use, damage from weather or the environment, theft, vandalism, tampering, fire, explosions, overloading the product and odorizer tampering.

LEGAL REMEDIES

Any action to enforce any part of this limited warranty, or any implied warranty, must be commenced within six (6) months after expiration of the warranty coverage period designated above or the action will be barred because of the passage of time. Any performance of repairs shall not suspend this limitation period from expiring. Any performance of repairs after the warranty coverage period has expired, or performance of repairs regarding any thing excluded from coverage under this limited warranty shall be considered "good will" repairs and they will not alter the terms of this limited warranty. No extension of any warranty coverage period or the filing limitation period in this paragraph. In addition, since it is reasonable to expect that the product will need some service during the warranty period, this warranty does not extend to future performance. It only sets forth what Braun will do and does not guarantee anything about the product or any time period. Nothing in this warranty, or any action of Braun, or any agent of Braun shall be interpreted as an extension of any warranty period or the filing limitation period in this paragraph. Some states do not allow a reduction in the statute of limitations, so this reduction may not apply to you.

LIMITED WARRANTY

WARRANTY REGISTRATION and MISCELLANEOUS

Your warranty registration records should be completed and delivered to the appropriate companies, including the Braun Delivery Checklist & Warranty form. That form must be returned to Braun within twenty (20) days of purchase. The Braun warranty will not be registered unless this warranty registration is completed and received by Braun. Failure to file this warranty registration with Braun will not affect your rights under this limited warranty as long as you can present proof of purchase, but it can cause delays in obtaining the benefits of this limited warranty and it changes the start date of the warranty to the date of final assembly of the product by Braun.

Braun agrees to repair or replace any of its factory installed parts found to have substantial defects within the appropriate warranty period designated above, provided that the repair is authorized by Braun and carried out by an authorized service center. (A Braun labor schedule determines the cost allowances for repairs). Braun will not honor any warranty claim for repairs or replacement of parts unless the claim is submitted with the appropriate paperwork, and the work is completed by an independent, factory authorized service center. The appropriate paperwork can be obtained by written or phone contact with Braun at the contact information in this warranty.

Braun reserves the right to designate where any Warranty work can be performed. Braun also reserves the right to examine any defective workmanship or part prior to giving any authorization for warranty work. Braun's return authorization procedure must be adhered to in order to process any warranty claims.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

"Providing Access to the World"



International Corporate Headquarters:
The Braun Corporation
631 W. 11th Street
RD. Box 310
Winamac, IN 46996 USA
1-800-THE LIFT
(574) 946-6153
FAX: (574) 946-6670

www.braunlift.com

 **THE BRAUN CORPORATION**
"Providing Access to the World"



BRAUNABILITY ADA E/V RAMP-SIDE SLIDING DOOR WEATHER STRIP SEAL:

Grant 61 RFP# 11-03, Braun Corporation, Class D Low Floor Mini Van

BraunAbility certifies that any premature wear on the ramp-side sliding door (body mounted) door opening weather strip seal will be fully addressed. All applicable parts and labor will be covered at no charge to Caltrans, the selling dealer or any agency involved for the life cycle of the vehicle.

BraunAbility

By, Colton Walle Colton Walle

Title: Area Sales Manager - Southwest

Date: 6/5/2014

J. Proof Of Altoona Testing

International Corporate Headquarters:

The Braun Corporation
631 W. 11th Street
P.O. Box 310
Winamac, IN 46996 USA
1-800-THE LIFT
(574) 946-6755
FAX: (574) 946-6670

www.braunlift.com



Altoona Bus Test Certification

The Braun Corporation states that a model 2008 Entervan III, gasoline powered, converted minivan has been submitted to the Altoona Bus test Center for a 4 yr./100,000 mile Surface Transportation and Uniform Relocation Assistance Act (STURAA) test. The test vehicle is constructed using a 2008 Dodge Grand Caravan SE mini-van. Test results will be provided to the agency after completion and prior to delivery.

Test #PIT-BT-R0901

Signed: Andy Conner Andy Conner

Title: Commercial Entervan Manager

Date: 3/25/14

STURAA TEST

4 YEAR

100,000 MILE BUS

from

THE BRAUN CORPORATION

MODEL ENTERVAN

APRIL 2009

PTI-BT-R0901

PENNSTATE



**The Thomas D. Larson
Pennsylvania Transportation Institute**
201 Transportation Research Building (814) 865-1891
The Pennsylvania State University
University Park, PA 16802

Bus Testing and Research Center
2237 Old Route 220 N. (814) 695-3404
Duncansville, PA 16635

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EXECUTIVE SUMMARY

The Braun Corporation submitted a model Entervan; gasoline-powered 5 seat (including the driver) 16-foot converted Dodge Grand Caravan SE, for a 4 yr/100,000 mile STURAA test. The odometer reading at the time of delivery was 25.0 miles. Testing started on January 22, 2009 and was completed on April 3, 2009. The Checkin section of the report provides a description of the bus and specifies its major components.

The primary part of the test program is the Structural Durability Test, which also provides the information for the Maintainability and Reliability results. The Structural Durability Test was started on February 18, 2009 and was completed on March 6, 2009.

The interior of the bus is configured with seating for five passengers including the driver plus one wheelchair position. This converted Dodge Grand Caravan SE does not allow for free floor space; therefore the design does not allow for standing passengers. At 150 lbs per person, plus 600 lbs (wheelchair position) this load results in a measured gross vehicle weight of 5,920 lbs. The first segment of the Structural Durability Test was performed with the bus loaded to a GVW of 5,920 lbs. Due to no standing passengers, the middle seated load weight segment was performed at the same 5,920 lbs and the final

segment was performed at a curb weight of 4,580 lbs. Durability driving resulted in unscheduled maintenance and failures that involved a variety of subsystems. A description of failures, and a complete and detailed listing of scheduled and unscheduled maintenance is provided in the Maintainability section of this report. **The test vehicle encountered no failures during the Structural Durability Test; therefore, no data is available in that section.**

Accessibility, in general, was adequate. Components covered in Section 1.3 (Repair and/or Replacement of Selected Subsystems) along with all other components encountered during testing, were found to be readily accessible and no restrictions were noted.

The Reliability section compiles failures that occurred during Structural Durability Testing. Breakdowns are classified according to subsystems. The data in this section are arranged so that those subsystems with more frequent problems are apparent. The problems are also listed by class as defined in Section 2. **The test bus encountered no failures during the Structural Durability Test; therefore, no data is available in this section.**

The Safety Test, (a double-lane change, obstacle avoidance test) was safely performed in both right-hand and left-hand directions up to a maximum test speed of 45 mph. The performance of the bus is illustrated by a speed vs. time plot. Acceleration and gradeability test data are provided in Section 4, Performance. The average time to obtain 50 mph was 15.36 seconds.

The Shakedown Test produced a maximum final loaded deflection of .080 inches with a permanent set ranging between -0.005 to 0.005 inches under a distributed static load of 2,475 lbs. The Distortion Test was completed with all subsystems, doors and

3

escape mechanisms operating properly. No water leakage was observed throughout the test. All subsystems operated properly.

The submitted test vehicle was not equipped with any type of tow eyes or tow hooks, therefore, the Static Towing Test was not performed. The Dynamic Towing Test was performed by means of a front-lift tow. The towing interface was accomplished using a hydraulic under-lift wrecker. The bus was towed without incident and no damage resulted from the test. The manufacturer does not recommend towing the bus from the rear; therefore, a rear test was not performed. The Jacking and Hoisting Tests were also performed without incident. The bus was found to be stable on the jack stands, and the minimum jacking clearance observed with a tire deflated was 2.9 inches.

A Fuel Economy Test was run on simulated central business district, arterial, and commuter courses. The results were 13.43 mpg, 14.36 mpg, and 23.54 mpg respectively; with an overall average of 15.64 mpg.

A series of Interior and Exterior Noise Tests was performed. These data are listed in Section 7.1 and 7.2 respectively.

K. Braun Wheel Chair Ramp Testing Certification

The Braun Corporation
Engineering Test Request Form

Section 1 – TEST ID (Completed by Requesting Engineer)

Test Request Number: TR13-063

Submitted By: Eric VonTobel

Date Submitted: 10-30-13

Desire Completion Date: 11-13-13

Part # to be tested: E515__A3006-Y1.CA1.

Top Assy #: E515__A3006-Y1.CA1.

Type of test:

- Internal Test External Test
 Endurance (Cycle):
 Performance (characteristic):

Section 2 – MECHANICAL REQUIREMENTS (Completed by Requesting Engineer)

Fixture (Identify individual responsible for mechanical setup): Eric VonTobel

Critical Parameters (Define applicable specifics/limits e.g. cycle rate, max temps, etc.): Ultimate Load 2400 lbs.

Data (Identify all mechanical data to be collected or observations to be made):

Section 3 – ELECTRICAL REQUIREMENTS (Completed by Requesting Engineer)

Fixture (Identify individual responsible for electrical setup):

Critical Parameters (Define applicable specifics/limits e.g. operating voltage, max current, etc.):

Data (Identify all electrical data to be collected or observations to be made):

Section 4 – TEST PROCEDURE (Completed by Test Engineer)

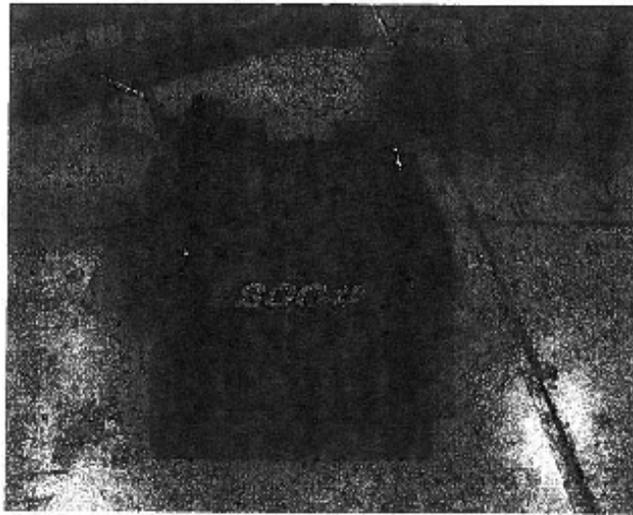
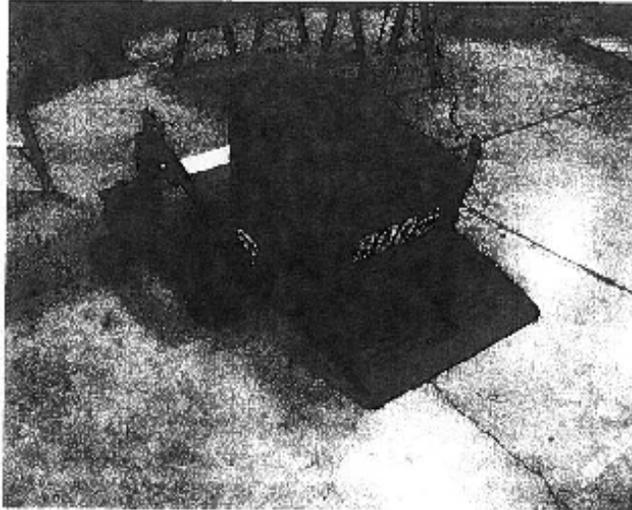
(Describe electrical and mechanical test fixtures and the procedure used to collect data.)

Load 800 lbs, 1000 lbs then Ultimate Load of 2400 lbs

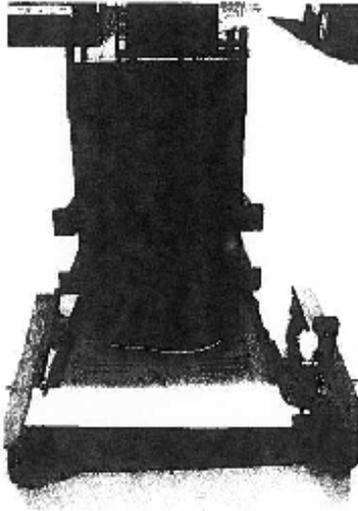
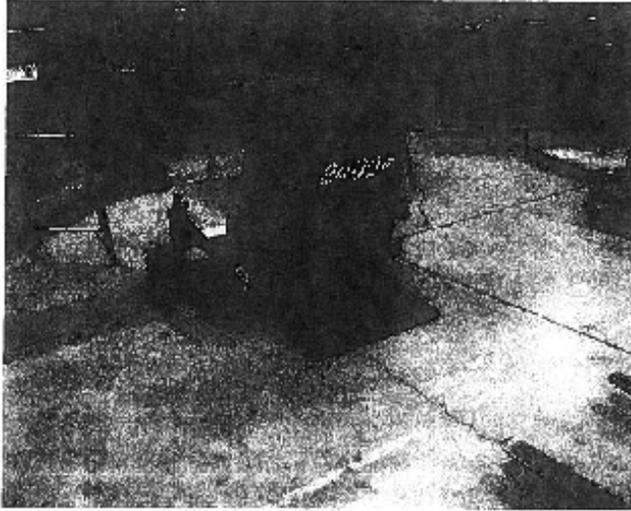
Section 5 – TEST DATA (Completed by Test Operator)

(Enter actual data here or list location where data/photos/etc. can be found.)

800 lbs. working load test:



2,400 lbs. ultimate load test:



L. Headlamp Adjustment Procedure

PROCESS ASSISTANCE DOCUMENT "PAD"

**BraunAbility**
Because Life is a Moving Experience

CF09-278
Headlight Adjustment

Edition Level:	3	Approval Date:	06/16/11	Approved By:	JJ/DT
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Introduction: The Process Assistance Document or "P.A.D." provides production guidelines when a high level of graphic detail is required in the production environment.

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

• Safety Glasses



• Protective Footwear







HONDA CHRYSLER TOYOTA

Headlight Adjustment

PROCESS ASSISTANCE DOCUMENT "PAD"

DODGE / CHRYSLER

- 1 Position the van approximately twenty-five feet from the headlight adjustment board.

Switch the lights to low beam and raise the hood.



- 2 Position the board so both headlights are centered side to side.

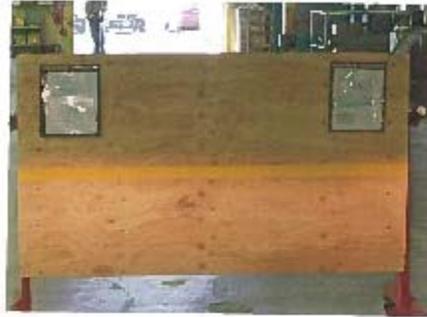


- 3 Using a T-20 Torx bit, turn the headlight adjustment screw to raise or lower the beam.



PROCESS ASSISTANCE DOCUMENT "PAD"

- 4 Adjust so the top of the floodlight illumination is even with the yellow line on the board as shown.



PROCESS ASSISTANCE DOCUMENT "PAD"

TOYOTA & HONDA

- 1 Position the board squarely in front of the van.

Use the cables to gauge a distance of five feet from the board to the center of the headlight lens.

NOTE: For 2011 Hondas place van 25 feet away from the board.



- 2



Gauge the distance from the board to the cross hair symbol in the center of the headlight lens.



- 3 Turn on the headlights and switch to **LOW BEAM**.

Adjust the headlights to shine in the center of the yellow lines on the board.

See the OEM Service Manual for the headlight adjustment screw locations.



CF09-278

Headlight Adjustment

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

• Safety Glasses



• Protective Footwear

KEY POINTS & REVISIONS:

- 5/25/2010 Added Honda and Toyota procedure.
- 6/16/2011 Made changes to show 2011 Honda procedure.

Verified By: _____ Clock #: _____

M. Suspension Alignment Procedure

PROCESS ASSISTANCE DOCUMENT "PAD"



CF09-407 Wheel Alignment

Edition Level: 1 Approval Date: 01.27.10 Approved By: JJ/DT

- Verify the rear hatch and the front doors are closed prior to driving the van onto the alignment hoist.

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

• Safety Glasses



• Protective Footwear

CHRYSLER LINE

Wheel Alignment



PROCESS ASSISTANCE DOCUMENT "PAD"

⚠ Verify the rear hatch and the front doors are closed prior to driving the van onto the alignment hoist. **⚠**

- 1 Drive the van onto the hoist until the front tires are on the alignment pads

When: Placement Before Alignment.



Alignment Pad

- 2 Raise the hoist to the proper height.
To achieve the proper height, the two bottom black and yellow strips of tape on the scissor arms align with each other

Black and Yellow Lines



PROCESS ASSISTANCE DOCUMENT "PAD"

- 3 Verify the VIN numbers on the tire labels match the VIN number of the van.

VIN # Label



- 4 Check the drivers side rear tire to prevent the van from rolling.

Chocks



- 5 Place the alignment targets on each of the four wheels. The diagram on top of each target shows which wheel the target is placed on.

Target Diagram

Alignment Targets



PROCESS ASSISTANCE DOCUMENT "PAD"

- 6 The target arrow must be in the vertical position.

Position Indicator



- 7 From the paperwork, enter the following information into the computer:

1. Work Order Number
2. Customer Name
3. VIN Number
4. Year of Vehicle
5. Mileage
6. Technician/Team Member



PROCESS ASSISTANCE DOCUMENT | "PAD"

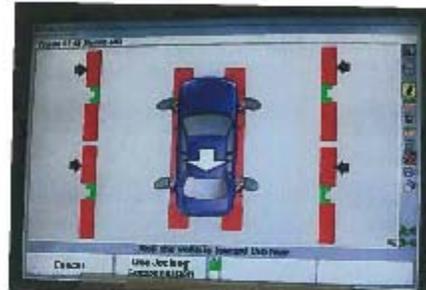
ROLLING COMPENSATION

1. Temporarily remove the wheel chocks. The computer takes a picture to make its first position calculation and instructs the team member to roll the van forward. Grab hold of the rear driver's side tire and roll the van forward until the vertical bars turn from red to green. The computer takes a second picture to complete the calculation and determine the roll compensation. The computer then instructs the team member to roll the van rearward. Reposition the wheel chocks.

Computer Shot to Target



Vertical Bars (Red)

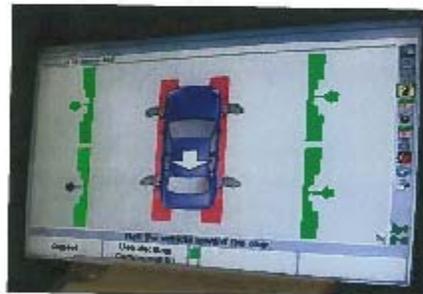


Target



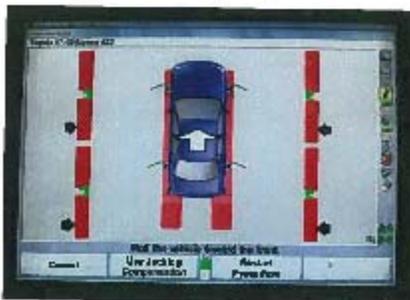
When the van is rolled back the targets set up for calculator.

First Position Shown, Calculation Not Complete



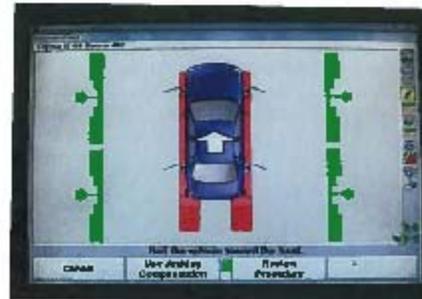
Second Position Shows, Calculation Complete

Vertical Bars (Red)



The white arrow shows the direction to roll the van.

Vertical Bars (Green)



PROCESS ASSISTANCE DOCUMENT "PAD"

ALIGNMENT ADJUSTMENTS

- 1 The computer fields are green if no adjustments are necessary. If the fields are red or show up in the shadow area, the computer shows which tie-rod/slut adjustments are necessary. When the adjustments are correct the computer will show green fields and save the information. Remove the alignment targets from the wheels and place them back on the alignment cart.

Shadowed Area Indicating Adjustments Needed



Slut Adjustment Points



Tie-Rod Adjustment Point





CF09-407

Wheel Alignment

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

• Safety Glasses



• Protective Footwear

KEY POINTS & REVISIONS:



WARNING



- Verify the rear hatch and the front doors are closed prior to driving the van onto the alignment hoist.

Verified By: _____ Clock: _____

N. Altro Flooring and Warranty

International Corporation Headquarters:
The Braun Corporation
631 W. 11th Street
PO. Box 310
Winamac, IN 46996 USA
1-800-996-4491
15711 946-6153
Fax: 3524-946-4670

www.braunlift.com



Manufacturer Limited Warranty

Commercial-Grade Transit Flooring (Altro)

(Morongo Basin Transit Authority RFP No. 11-03)

The Braun Corporation warrants installation and adhesion of the commercial-grade transit floor covering material (Altro) for a period of 5 years and unlimited mileage. The warranty period begins on the date the product is delivered to the purchaser. This limited warranty applies to the first purchaser, only. It may not be transferred. Coverage will only apply to those vehicles purchased through the Morongo Basin Transit Authority RFP No. 11-03)

The Braun Corporation

By Andy Conner Andy Conner

Title: Commercial Intervention Manager

Date: April 30, 2014



The floor's better with Altro

Country
North America

Product quick links
Please choose

Sample basket
View basket

USA Tel: 600.377.5597 | CANADA Tel: 800.565.4658

- Home
- Altro
- Walls
- Transflor
- Siteflor
- Technic
- Training & Education
- Partnerships
- News, Events & Other Stories
- About Us
- Search

- Bus Flooring
- Rail Roaming
- Maritime
- Custom Kit Program
- Key Kit Program
- Transflor Tech Over & Guides

- Altro Transflor Meta
- Altro Transflor Chrome
- Altro Transflor Windmill
- Altro Transflor Timberaflor II

Altro Transflor Meta

Altro Transflor Meta™ is designed for use as standard. Designed with your passengers comfort in mind, it creates comfortable, practical, a solid and consistent seating and stands history and feeling. It is sturdy, easy for use, maintenance and installation, as well as impolished, dust and odors.

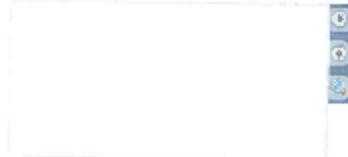
Altro Transflor Meta is engineered in three thicknesses to suit your installation requirements. It is a highly textured and skidable vinyl flooring with a durable wear layer, incorporating silicon carbide and aluminum oxide granules for slip-resistance. Dimensional stability is increased by including the air in the middle.

Contains Altro Easyclean™ Technology for:

- Improved cleanliness
- Reduces pH pick up for pH
- Prevents color retention

Contains Integral A-Lexan bacteriostatic for:

- Free of odor and hygiene
- Helps prevent the growth of bacteria



Room TM: 20x8 / 2500 / 27500
LRY: 8
Thickness: 6mm / 23mm / 2.7mm



Request a sample



Colors

Specifications

Key features

Key features

Technical data

Custom Kit

Specifications

Available in 3 Thicknesses

Format: Roll
Roll Length: 41' (12.5m)
Width: 87" (2m)

Thickness: 0.07" (1.8mm) Weight: 4.04 lbs/sq2 (1.9 kg/m2)

Thickness: 0.23" (5.8mm) Weight: 4.7 lbs/sq2 (2.2 kg/m2)

Thickness: 0.100" (2.7mm) Weight: 5.8 lbs/sq2 (2.6 kg/m2)

Other products you may be interested in

Altro Transflor Chrome

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Format: Transflor Meta | Transflor Chrome | Transflor Windmill | Transflor Timberaflor II

Altro USA
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Fax: 600.464.4375
Email: info@altrofloors.com

Altro Canada
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Fax: 416.964.1750
Email: info@altrofloors.com

Altro Transflor
Tel: 600.312.0333
Fax: 600.312.0333
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Altro Ltd.

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5.0/5.0

O. Water Test Certification

International Corporate Headquarters:

The Braun Corporation
631 W. 11th Street
P.O. Box 310
Winamac, IN 46796 USA
1-800-THE LIFT
(574) 946-6150
FAX: (574) 946-4570

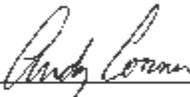
www.braunlift.com

 **THE BRAUN
CORPORATION**
"Providing Access to the World"



WATER TEST

The Braun Corporation water test consists of a series of nozzles, located around the perimeter of the vehicle in an enclosed booth. The nozzles will eject a volume of water no less than twenty-five pounds per square inch measured at the nozzle tip producing a fine droplet conical spray over the entire vehicle. Testing is completed at an ambient temperature not less than 40 degrees Fahrenheit and 100 degrees Fahrenheit. Vehicle will remain on level ground for the duration of the test. Upon test conclusion, the vehicle interior is closely examined for any sign of water intrusion.

Signed:  Andy Conner

Date: March 26, 2014

Title: Commercial Intervan Manager

P. Air Conditioning Recovery and Charge Procedures

PROCESS ASSISTANCE DOCUMENT "PAD"



CF09-403 A/C REFRIGERANT RECOVERY

Edition Level: 1 Approval Date: 08.31.09 Approved By: JJ/DT

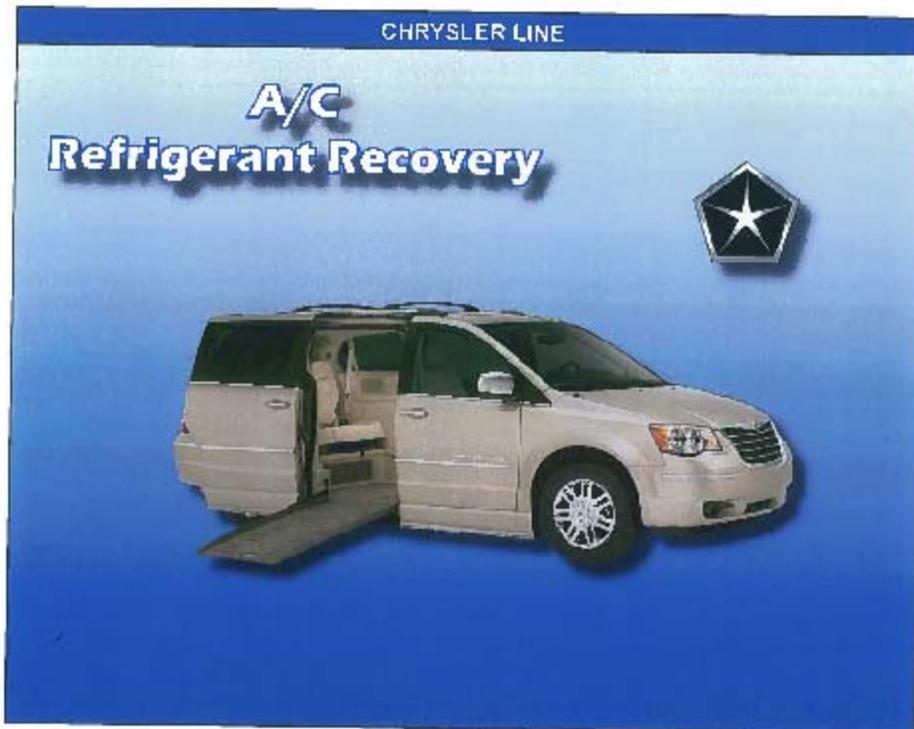
Introduction: The Process Assistance Document or "P.A.D." provides production guidelines when a high level of graphic detail is required in the production environment.

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

• Safety Glasses

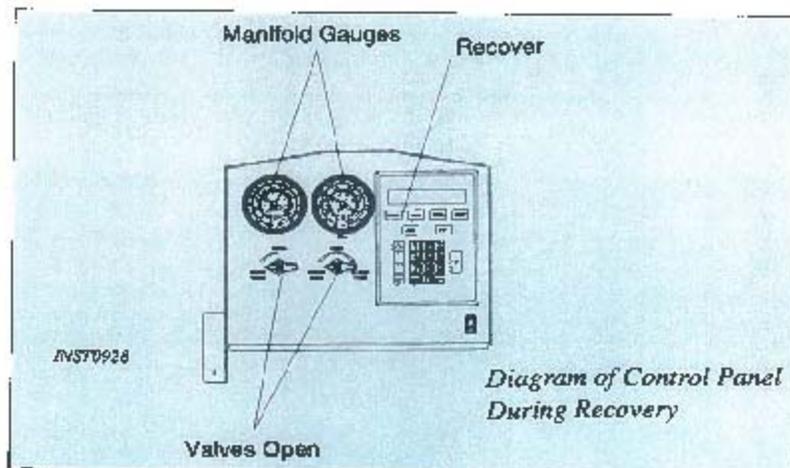


• Gloves
• Protective Footwear



PROCESS ASSISTANCE DOCUMENT "PAD"

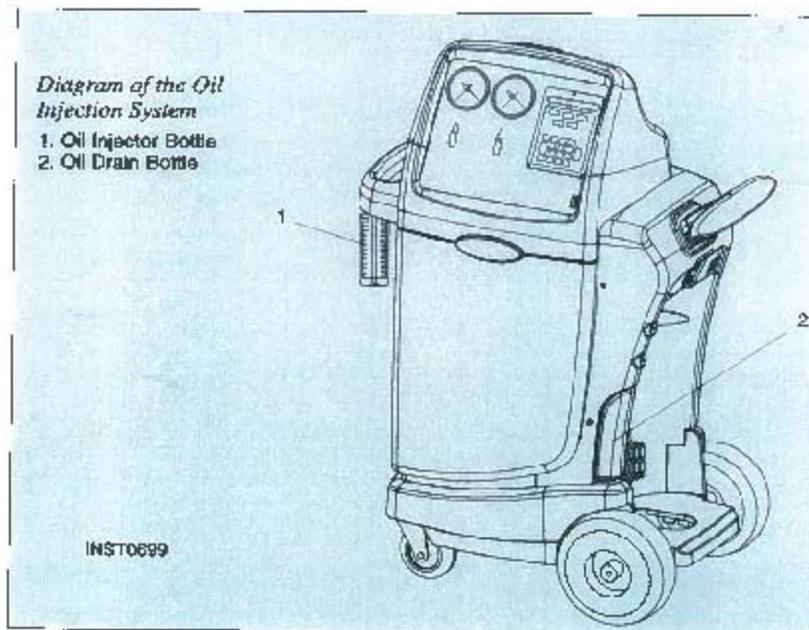
- 1 Connect the power cord to the back of the unit and plug it into the correct voltage outlet.
- 2 Turn on the MAIN POWER and, if necessary, empty the oil drain bottle located on the right hand side of the unit.
- 3 Press the **RECOVER** button.
- 4 If 150 pounds (68kg) or more of refrigerant has been recovered since the last filter-drier change, the display reads **FILTER WEIGHT XXXlb (XX kg)**. Press **START**.
- 5 Connect the high and low side hoses to the A/C system and open the coupler valves.
- 6 Put the Low Side Valve in the Recover/Vacuum position. Put the HIGH Side Valve in the Recover/Vacuum position. Press **START** to continue.
- 7 If the system pressure is below 25 psi, the display reads: **LOW SYSTEM PRESSURE** until the pressure increases or the **START** button is pressed. You may press **STOP** to exit at this point.
- 8 If the unit has refrigerant in the low-side plumbing, it begins the clearing process and displays **CLEARING IN PROGRESS**.



PROCESS ASSISTANCE DOCUMENT "PAD"

- 9 When the system has recovered to a vacuum level of approximately 13 in. Hg., the compressor automatically shuts off.
- 10 The unit then goes into automatic oil drain, and the display reads: OIL DRAINING. Oil draining can require up to 90 seconds and must be allowed to complete to prevent damage to the unit's compressor.
- 11 After the oil drain is complete, the display alternates between:
RECOVERY COMPLETE CHECK OIL BOTTLE
RECOVERED XX.XX lbs. (X.XX kg) RECOVERED XX.XX LBS. (X.XX kg)
- NOTE:** The displayed recovered weight can vary depending on ambient conditions, and should not be used as an indicator of scale accuracy.
- 12 Check the oil drain bottle, and note the amount of oil that was removed from the A/C system. This is the amount of the oil that must be charged in the A/C system after evacuation is complete.
- 13 To ensure complete recovery of refrigerant, wait 5 minutes, and watch the manifold gauges for a rise in pressure above 0in. Hg. A pressure rise may occur if there was freezing in the A/C system during recovery. If a rise occur, press the START button to resume the recovery process. Repeat as needed until the system pressure holds for two minutes, then press STOP to exit.

Recovery is now complete.





CF09-403

A/C REFRIGERANT RECOVERY

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

• Safety Glasses



• Gloves
• Protective Footwear

KEY POINTS & REVISIONS:



WARNING



Wear safety glasses when working with refrigerant. Read and follow all warnings before operating the unit.

- Connect the high and low side hoses to the A/C system.

Verified By: _____ Clock: _____

PROCESS ASSISTANCE DOCUMENT "P.A.D."

FUELING POLICY

New Braun Chassis:

Add 2 gallons to check the fuel gauge and for the test drive. If it comes off the line with ¼ tank or more, add no fuel.

Customer Drop Ship:

The fuel level was noted upon check-in and the same amount should be in the tank after the conversion. If the van was delivered to us empty, add 2 gallons.

Braun Pre-Owned:

Ship with 2 gallons only.

If vehicle was received with more than 2 gallons of fuel, reduce to approximately 2 gallons prior to shipment.

A/C SYSTEM TEMPERATURE VERIFICATION

- 1 Place the temperature gauge in the top center air conditioning vent and verify the system can obtain the proper temperature (listed below) within a 5 minute time period.

Temperature Outside (during test)	Temperature in Van (5 min)	Result
Below 75°	70°	
75° to 83°	66°	
Above 83°	73°	

Temp. Outside	Temp. In Van	Result
Below 75°	61°	
75° to 83°	64°	
Above 83°	72°	

VEHICLE FLUIDS

- 2 Test the battery (Cold Cranking Amps) with the digital battery analyzer.



PROCESS ASSISTANCE DOCUMENT "P.A.D."

Check the vehicle for the following:

EXTERIOR

- Body for dents, scratches, bums and color match.
- Paint-scratches-overspray-pin stippling and air bubbles
- Bumpers and grill area for scratches
- Backup sensors - rear bumper
- All glass-chips, cracks, scratches bums and alignment.
- Passengers and drivers mirrors
- Fender well wiring harness grommet
- All **DOOR ALIGNMENT** operation and door jamb grommets
- Front door lower weather strip
- Interlock of slide door and fuel lid
- Fuel lid operation and fuel cap
- Ground effect installation, color match, amount of screws and door clearance
- Inner fender well installation
- Driver and Passenger sides slide door center track cover installed
- Front license plate - Braun plate.

RAMP

- Manual operation and clearance handle cover (yellow)
- Auto operation - clearance and ramp restraint bracket
- Fold and unfold micro switch adjustment and ramp cover (fit and glue)
- Powder coat for scratches
- Latch and swing operation
- On in-floor ramp: make sure ramp slows completely
- Ramp crank
- Anti-rattle on ramp

INTERIOR

- All interior panels for scratches, dents and imperfections
- All interior glass for chips, cracks, burns, scratches and operation
- All interior for color match (carpet and floor mats)
- Door seals
- Eye brow sealing
- Interior door panels for proper fit
- Seats; number, rips, tears, operation and no rust under seat
- All seat belts latch correctly - covers
- Check all tie down track bolts
Torque Spec: 30 ft./lbs.
- Check all seat belt torques
Torque Spec: 30 ft./lbs.
- OEM striker covers and qty.
- Drawer under passenger seat, center console.
- Interior rear view mirror (day and night) or auto
- Sun visor light and extension operations
- Bolt in rear seat latches (fully secured)
- Floor for tin canning
- Carpet adhesion on seat base covers - all corners
- Shift indicator for gear selection
- Manual operation of front seats
- Headliner for crease and scuffs
- Parking brake function and indicator light

PROCESS ASSISTANCE DOCUMENT "P.A.D."

Check the vehicle for the following:

ELECTRICAL

- All functions for all interior lighting (doors)
- OEM key locks
- All key operated indicator lights: air bags alarm, ABS
- Low fuel, check gauges, door ajar, low oil, cruise, washer fluid, gate ajar, low voltage, check engine
- Audible chime for seat belt, head lights with key in
- Auto down function on front side windows
- Power windows front and rear
- Check manual/power door locks - all doors
- Power mirror - driver and passenger side
- Horn and tilt wheel
- Dash lights bright and dim
- Driver and passenger power seat - all functions
- Air bag light status with front seats - connected and unconnected (air bag light to remain off)
- Plug operation on easy out seats
- Presets 1 and 2 (power seat/mirror settings)
- Overhead console lights and computers - all functions
- Slide doors and rear tailgate operation and function
- Intermittent wipers and washers - front and rear
- Clock and all radio functions (steering wheel), satellite jack plugged in
- All speakers: left, right, front, rear, center, and rear top
- Front and rear heat and A/C fan speeds (front and rear), and rear defrost light
- Cigarette lighter
- Headlights (bright and dim), fog, hazard, brake, reverse, parking lights and turn signals
- Rear bumper (visual and audible chime, LED)
- Park interlock - operation and switch adjustment

ELECTRICAL (cont'd)

- All switches for door ramp and kneel operation
- Remote operation - no operation out of park
- Power seat harness - routed and secured correctly
- Cracks in fuse block
- All 4 grounds
- All connections on controller
- Fuse panel ground wires, DRB electrical, e-vap and gas
- Wires through floor - driver side rear

UNDERCARRIAGE

- Exhaust for leaks, proper routing, clearances and hangers
- Exhaust: noise, welds, rattles and drain hole
- Reflective material on engine compartment

VAN CHANGES

- Belts - 4 O/Center, belt bag, lap tongue fits receptacle
- Rear seat modification - installation, paint and operation - foot rests
- All quick disconnect seats or operation of fold down seats
- Front seat rear base covers
- Manual operation of passenger and driver slide door - latch and seat
- Lower roller arm covers
- Plastic seat covers - alignment
- Spare tire, jack, handle and tire cover

PROCESS ASSISTANCE DOCUMENT "P.A.D."

Check the vehicle for the following:

UNDER HOOD

- Hood latch and safety catch
- Battery condition
- Connect IOD fuse
- Disconnect IOD fuse
- All wiring connections and routing
- Power steering routing and fittings
- Brake line routing and fittings
- Fuel line routing and fittings
- A/C line routing and fittings
- Oil fluid level
- Antifreeze fluid levels (both radiator and reserve)
- Power steering fluid level
- Brake fluid level
- Transmission fluid level
- Circuit breakers tight
- A/C port caps
- Air filter compartment reinstallation - bolts tight
- 4 colored plugs

TEST DRIVE

Check all fluid levels before Test Drive.

- Tire pressure
- Power locking in drive and reverse for exhaust clearance
- Child lock operations
- Cruise control (set, resume, decel, accel, brake/accelerator travel)
- Transmission operation (passing gear)
- Steering and Handling
- Anti-lock brakes and operation
- Squeaks, rattles and vibrations (esp. ramp rattle)
- Starting in Park or Neutral
- All gauges, tach
- Gas gauge
- Odometer
- Trip Set
- Oil Pressure
- Charging system
- Cooling system (heat emitting from pass. rear "C" pillar)
- Emergency brake operation
- Engine running smoothly
- All fluid levels after Test Drive



CF08-290

Fueling Policy
A/C System Check
Misc. System Checks

PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS:

• Safety Glasses



• Protective Footwear

KEY POINTS & REVISIONS:

- 4/15/13 Updated the verbage and order of the check list on pages 3-5.

Verified By: _____ Clock #: _____

Q. ADA Lighting Test Certification

International Corporate Headquarters
The Braun Corporation
431 W. 11th Street
P.O. Box 310
Winamac, IN 46596 USA
1.800.THE LIFT
(574) 946-6153
FAX: (574) 946-1670



www.braunlift.com

June 5th, 2014

The Braun Corporation certifies that the proposed LED light bar, Optronics part# BUL69CB, as installed in Braun Test Report TR14-031, meets or exceeds the necessary illumination ADA lighting requirements.

Michael R. Pugh; PE



Engineering Manager-SE Vehicles



Purpose:

This test is to determine the capabilities of the lighting on the 2014 Braun Chrysler Entervan side entry.

Reference:

The test was conducted in accordance with Americans with Disabilities Act (ADA) Regulations - Accessibility Specifications for Transportation Vehicles - Section 38.31 Lighting.

Equipment:

- 2014 Chrysler Entervan
- Optronics part number BUL69CB "LED light bar"
- Light meter: Extech Instruments Model EA31; Serial number 100200751
- Power source 12 volts

Procedure:

- Apply 12 volts from van.
- Place ramp in the deploy position (Loading).
- Measure light at 3 locations: Threshold, Mid-ramp, End-ramp.

Threshold, stepwell or doorway (3.6 ft)



2014 (AOA) Braun Chrysler Entervan (side entry) with Ramp and LED Light Bar Test Report

Test Request: TR14-031
Part(s) being Tested:
Optronics part# BUL69CB "LED light bar"

Test Dates: April 28, 2014
Report Date: May 29, 2014

Prepared For:
The Braun Corporation
631 W. 11th Street, P.O. Box 310
Winamac, In. 46996

Prepared By:
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Middle of ramp (3.5 fc)



End of ramp, street surface (1.5 fc)



Conclusion:

Ramp light readings were greater than 2 foot candles of illumination measured on the step tread or ramp. Light readings on the street surface (end of ramp) for a distance of 3 feet (915 mm) were greater than 1 foot candle of illumination.

Sec. 38.31 Lighting.

- (a) Any stepwell or doorway immediately adjacent to the driver shall have, when the door is open, at least 2 foot-candles of illumination measured on the step tread or lift platform.
- (b) Other stepwells and doorways, including doorways in which lifts or ramps are installed, shall have, at all times, at least 2 foot-candles of illumination measured on the step tread, or lift or ramp, when deployed at the vehicle floor level.
- (c) The vehicle doorways, including doorways in which lifts or ramps are installed, shall have outside light(s) which, when the door is open, provide at least 1 foot-candle of illumination on the street surface for a distance 3 feet (915 mm) perpendicular to the bottom step tread or lift outer edge. Such light(s) shall be shielded to protect the eyes of entering and exiting passengers.

[55 FR 45756, Sept. 8, 1991, as amended at 63 FR 51667, 51702, Sept. 28, 1998]

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