Part 573 Safety Recall Report 22V-148

Manufacturer Name : Vicinity Motor Corporation
Submission Date : MAR 11, 2022
NHTSA Recall No. : 22V-148
Manufacturer Recall No. : Campaign 000-043

Manufacturer Information :

Manufacturer Name : Vicinity Motor Corporation
Address : 3168 - 262nd Street
Aldergrove 00 V4W 2Z6
Company phone : 999

Population :

Number of potentially involved : 92
Estimated percentage with defect : NR

Vehicle Information :

Vehicle 1 :	2020-2021 Vicinity Vi38
Vehicle Type :	LOW VOLUME VEHICLES
Body Style :	OTHER
Power Train :	DIESEL
Descriptive Information :	An investigation was carried out in tandem with manufacturing and supply partners, and it was determined that the defect (steering box setup and alignment of IFS steering axle) is limited to the batch of vehicles that were produced for Delta Airlines in the US - 92 Vi38 Buses. Quality Assurance mechanisms were likely compromised for this batch of vehicles due to personnel changes and training shortcomings. To date, all warranty claims citing this defect have been limited to the Delta Airlines population and have manifested shortly after the vehicles entered service, with the failures occurring at an average of 6081miles. Conversely, vehicles that were produced prior to this batch have been in operation for a far greater period of time, and have substantially higher average accumulated mileage (169,368mi.) without any exhibiting the same defect.
Production Dates :	DEC 01, 2020 - MAY 31, 2021

VIN Range 1 :	Begin :	2G9B38AA2MA098583	End :	2G9B38AA2MA098583	☐	Not sequential
VIN Range 2 :	Begin :	1G9B38AA4MA545517	End :	1G9B38AA4MA545517	☐	Not sequential
VIN Range 3 :	Begin :	1G9B38AA4MA545520	End :	1G9B38AA4MA545520	☐	Not sequential
VIN Range 4 :	Begin :	2G9B38AA2MA098521	End :	2G9B38AA2MA098527	☐	Not sequential
VIN Range 5 :	Begin :	2G9B38AA7MA098529	End :	2G9B38AA7MA098544	☐	Not sequential
VIN Range 6 :	Begin :	2G9B38AA7MA098546	End :	2G9B38AA7MA098550	☐	Not sequential
VIN Range 7 :	Begin :	2G9B38AA2MA098552	End :	2G9B38AA2MA098553	☐	Not sequential
VIN Range 8 :	Begin :	2G9B38AA8MA098555	End :	2G9B38AA8MA098557	☐	Not sequential
VIN Range 9 :	Begin :	2G9B38AA1MA098560	End :	2G9B38AA1MA098568	☐	Not sequential
VIN Range 10 :	Begin :	2G9B38AA6MA098571	End :	2G9B38AA6MA098572	☐	Not sequential
VIN Range 11 :	Begin :	2G9B38AA1MA098574	End :	2G9B38AA1MA098575	☐	Not sequential
VIN Range 12 :	Begin :	2G9B38AA6MA098585	End :	2G9B38AA6MA098607	☐	Not sequential
VIN Range 13 :	Begin :	2G9B30AAXMA098610	End :	2G9B30AAXMA098613	☐	Not sequential
VIN Range 14 :	Begin :	1G9B38AA7MA545558	End :	1G9B38AA7MA545559	☐	Not sequential
VIN Range 15 :	Begin :	1G9B38AA1MA545569	End :	1G9B38AA1MA545570	☐	Not sequential
VIN Range 16 :	Begin :	1G9B38AA2MA545578	End :	1G9B38AA2MA545582	☐	Not sequential
VIN Range 17 :	Begin :	2G9B38AA9MA098516	End :	2G9B38AA9MA098516	☐	Not sequential
VIN Range 18 :	Begin :	2G9B38AA2MA098518	End :	2G9B38AA2MA098519	☐	Not sequential
VIN Range 19 :	Begin :	2G9B38AA7MA098577	End :	2G9B38AA7MA098577	☐	Not sequential
VIN Range 20 :	Begin :	1G9B38AA9MA545528	End :	1G9B38AA9MA545528	☐	Not sequential
VIN Range 21 :	Begin :	1G9B38AA9MA545545	End :	1G9B38AA9MA545545	☐	Not sequential
VIN Range 22 :	Begin :	1G9B38AA9MA545528	End :	1G9B38AA9MA545528	☐	Not sequential
VIN Range 23 :	Begin :	1G9B38AA9MA545545	End :	1G9B38AA9MA545545	☐	Not sequential
VIN Range 24 :	Begin :	1G9B38AA4MA545551	End :	1G9B38AA4MA545551	☐	Not sequential
VIN Range 25 :	Begin :	1G9B38AAXMA545554	End :	1G9B38AAXMA545554	☐	Not sequential
VIN Range 26 :	Begin :	1G9B38AA3MA545573	End :	1G9B38AA3MA545573	☐	Not sequential
VIN Range 27 :	Begin :	1G9B38AA9MA545576	End :	1G9B38AA9MA545576	☐	Not sequential
VIN Range 28 :	Begin :	1G9B38AA8MA545584	End :	1G9B38AA8MA545584	☐	Not sequential

Description of Defect :

Description of the Defect :	Possible cracked or broken mounting ears on the steering box due to over-stress of the steering components.
FMVSS 1 :	NR
FMVSS 2 :	NR
Description of the Safety Risk :	Our analysis has indicated that the combination of the two deficiencies (described under the cause section) could occur simultaneously, leading to an overload situation of the power steering box. This could lead to damage of the steering box housing, including fracture of the mounting lugs and possible loss of steering control, which may result in a crash and/or bodily injury.
Description of the Cause :	Data indicates the cause of the defect is likely due to the setup of the steering box and alignment of the IFS steering axle. Specifically, the following deficiencies were noted: 1- The end-of-travel pressure relief plungers on the Sheppard M100PNA3 power steering box were incorrectly set. This would result in excessive forces on the steering system when at full-lock. 2- The cut-angles of the wheels were seen to been in excess of the manufacture's specifications. This could result in the internal mechanisms of the steering box bottoming-out. If bump-steer inherent to the IFS system would occur simultaneously to the box being bottomed-out the shock load would be transmitted directly to the power steering box.
Identification of Any Warning that can Occur :	Noisy steering, poor steering performance, or complete loss of steering.

Involved Components :

Component Name 1 :	STEERING GEAR BOX ASSEMBLY
Component Description :	SHEPPARD M100PNA3
Component Part Number :	1000-0291

Component Name 2 :	STEERING MOUNTING BRACKET
Component Description :	STEERING MOUNTING BRACKET
Component Part Number :	1000-7792

Supplier Identification :

Component Manufacturer

Name : R. H. Sheppard Co., Inc.

Address : 2770 Research Dr.
Rochester Hills Michigan 48309-4901

Country : United States

Chronology :

An warranty claim pertaining to the defect was first reported in late September 2021. It cited a fracture of the steering box mounting tabs on a vehicle operated in the US population. It was suspected that external impact may have played a role in the fracture, however as further failures occurred in October 2021, it became clear that there was a systemic issue and an investigation was launched in conjunction with R. H. Sheppard Co., Inc.'s Engineering Center.

The initial campaign was released by October 2021, to notify the customer of the need for inspection. Over the following months, as the likely cause for the defect was identified, campaign updates were issued to the customer as the scope was further refined.

Description of Remedy :

Description of Remedy Program : Reimbursement and Remedy costs have been covered, and will continue to be covered under warranty to rectify this issue.

Approximate costs incurred to remedy the defect:

Without Steering Box Replacement:
- Labor costs: Up to 150 CAD/hr for 3.5 hrs of work
- Miscellaneous costs: 10 CAD

With Steering Box Replacement:
- Labor costs: Up to 150 CAD/hr for 4 hrs of work
- Miscellaneous costs: 10 CAD
- Steering gear box: 452.45 CAD
- Bracket: 190.04 CAD

How Remedy Component Differs from Recalled Component : The components are identical - The distinguishing feature being the correct setup of the component during installation and alignment.

Identify How/When Recall Condition was Corrected in Production :	Corrective actions were communicated from our engineering department to production management at the manufacturing facility. Final confirmation steps were added to pre-delivery inspections to ensure that the corrective action was implemented.

Recall Schedule :

Description of Recall Schedule :	The campaign was first issued to the customer on October 2021, to notify them of the defect and prescribe mitigating actions. As the cause of the defect was better understood, the scope of the campaign was further developed, and successive campaign updates were issued to the customer. As such, the notification period is as follows: Initial Campaign Release (Owner Notification Begin) Date: 10/01/2021 Final Campaign Notification (Owner Notification End) Date: 03/25/2022 (Please note the following: - The "Planned Owner Notification Begin Date" box is set to the current date, since it does not go back to 10/01/2021 which is the actual start date for the campaign. - The Owner Notification End Date refers to the notification that will be issued to ensure that the campaign is compliant with NHTSA regulations, and any required outstanding information or language is conveyed to the customer.)
Planned Dealer Notification Date :	NR - NR
Planned Owner Notification Date :	MAR 11, 2022 - MAR 25, 2022

* NR - Not Reported