

Part 573 Safety Recall Report

23E-072

Manufacturer Name : Precision Circuits Inc.

Submission Date : SEP 29, 2023

NHTSA Recall No. : 23E-072

Manufacturer Recall No. : PCI-2023-01



Manufacturer Information :

Manufacturer Name : Precision Circuits Inc.

Address : 2538 Wisconsin Ave
Downers Grove IL 60515

Company phone : 6305159100

Population :

Number of potentially involved : 176

Estimated percentage with defect : 100 %

Equipment Information :

Brand / Trade 1 : Precision Circuits

Model : Power Control System

Part No. : 00-10024-900

Size : 14" x 14"

Function : Power Control

Descriptive Information : The recall population was determined by looking at Brinkley RV Model G production. This particular RV Brand and Model is the only customer of this product for this application. This product differs from other product that has been produced in that a production error occurred during the subject timeframe. Production utilized/installed the incorrect wire gauge for the 50 amp service application. Precision Circuits production inadvertently utilized 88 inches in length of 10 gauge wiring in lieu of 88 inches in length of 6 gauge wiring for the neutral wire utilized by the Power Control System. The incorrect wire gauge was immediately corrected in production upon learning of the error. The total number of affected products is 176.

Production Dates : OCT 31, 2022 - SEP 22, 2023

Description of Noncompliance :

Description of the Noncompliance : Precision Circuits utilized/installed the incorrect wire gauge in its Power Control System for the 50 amp service application required by Brinkley Model G. Precision Circuits production inadvertently utilized 88 inches in length of 10 gauge wiring in lieu of 88 inches in length of 6 gauge wiring for the neutral wire utilized by the Power Control System. The incorrect wire gauge was immediately corrected in production by Precision Circuits upon learning of the error. Brinkley RV also instituted a stop ship of its units still located at Brinkley RV to permit the correct version of the Power Control System to be installed to further limit the subject range.

FMVSS 1 : 101 - Control and displays

FMVSS 2 : NR

Description of the Safety Risk : Brinkley RV and Precision Circuits believes that the risk to safety due to thermal event is extremely improbable. However, utilization of 10 gauge wiring in lieu of 6 gauge for 50 Amp applications is in violation of applicable code. When all electrical equipment is utilized simultaneously in the Brinkley RV Model G recreational vehicles, the max amperage on the Power Control System could exceed the maximum NEC rating of the 10 gauge wiring inadvertently utilized. After conducting laboratory testing instructed by the max amperage output of a Brinkley Model G (37 Amps), the wiring is actually sized correctly for the application. However, the overall RV electrical system is rated at 50 Amps. In order to comply with all code applicable to the specified 50 Amp system, the wiring should be changed to 6 gauge. The retail owners of the subject units could add equipment to the unit that increases the total amperage above the amperage limits of the 10 gauge wiring, potentially resulting in a fire.

Description of the Cause : Precision Circuits utilized/installed the incorrect wire gauge in its Power Control System for the 50 amp service application required by Brinkley Model G. Precision Circuits production inadvertently utilized 88 inches in length of 10 gauge wiring in lieu of 88 inches in length of 6 gauge wiring for the neutral wire utilized by the Power Control System. The incorrect wire gauge was immediately corrected in production by Precision Circuits upon learning of the error. Brinkley RV also instituted a stop ship of its units still located at Brinkley RV to permit the correct version of the Power Control System to be installed to further limit the subject range.

Identification of Any Warning that can Occur : We do not expect any Brinkley RV Model G to encounter an issue given that its maximum amperage output is 37 Amps. That said, should the amperage in the system exceed the 40 Amp rating of the 10 gauge wiring, the 50 Amp inline circuit protection would trip. Even with 50 Amps on the subject wiring, when tested in the laboratory, the wire temperature was observed at a 60 degree Fahrenheit deviation above ambient temperature. Thus, the RV would have to exceed 161 degrees Fahrenheit for years to exceed the 10 gauge wire rating in question which is rated at 221 Fahrenheit.

Involved Components :

Component Name : 10 gauge THHW 105°C 600V wire

Component Description : 10 gauge THHW 105°C 600V wire

Component Part Number : 30-41010-099

Supplier Identification :**Component Manufacturer**

Name : Precision Circuits

Address : 2538 Wisconsin Ave
Downers Grove Illinois 60515

Country : United States

Chronology :

On Thursday, September 21, 2023, during an electrical audit performed at Brinkley RV, it was discovered that the neutral wire for the Power Control System was undersized for a 50 Amp service system. The neutral wire was discovered to be 10 gauge during the audit. Of note is there have been zero reported issues in the field relative to this issue. Precision Circuits was contacted immediately and advised of the error. Thereafter, Precision Circuits traveled to Brinkley RV on September 22, 2023 to review the application and to confirm that the wire in fact was undersized. Immediate corrective action was taken at the Precision Circuits production facility to ensure no other components were built with the undersized wiring. All Brinkley RV Model G units located on Brinkley RV premises were subjected to a stop ship to permit all units to be remedied prior to shipment. Precision Circuits manufactured new Power Control System assemblies and helped to facilitate swapping the correct systems for those units containing undersized wiring version of the Power Control System. Once completed, Brinkley RV permitted those units to ship as the intended remedy was supplied in those units and effectively removed them from the VIN range of this recall. In parallel, Precision Circuits also performed lab testing to evaluate the risk related to amperage draw and temperature and found that the wire was at no risk of component failure or fire hazard when continuously subjected to 50Amps of power. Despite this determination by Precision Circuits, Brinkley RV and Precision Circuits both still agreed that changing to the 6 gauge neutral wire is necessary and should be performed to be in compliance with applicable code. Owners of Brinkley Model G units may elect to add additional power equipment to the RV in reliance on the 50 Amp rating of the RV changing the loads and thus this recall is being instituted to ensure there is no possibility of a thermal event occurring due to changes.

Description of Remedy :

Description of Remedy Program : Precision Circuits will supply to Brinkley RV pre-packaged boxes containing the new code-compliant Power Control Systems and including the replacement instructions therein. Brinkley RV will be notifying all of its affected dealers and retail customers and will ship out the replacement parts upon request or the same. Brinkley RV will indicate to both dealers and customers that the remedy will be supplied free of charge and all reimbursements for any out of pocket expenses by a dealer or retail customer can be submitted to Brinkley RV for immediate reimbursement.

How Remedy Component Differs from Recalled Component : The neutral wire on the remedy component is 6 gauge THHN or THHW 600V wire. The neutral wire on the recalled component is 10 gauge THHW 600V wire.

**Identify How/When Recall Condition
was Corrected in Production :**

On September 22, 2023, when Precision Circuits verified the undersized wiring condition, it immediately halted production and ensured that all components built thereafter utilize the 88 inches of 6 gauge THHN wire. A stop ship was instituted and any Power Control System that was built prior thereto was quarantined and the neutral wire sizing remedied. Brinkley RV also instituted a stop shipment on its' Model G units until the remedy component (Power Control System) was installed on all units still within Brinkley RV's possession. Further, any stock in the possession of Brinkley RV was swapped out for compliant Power Control Systems. And, any in process production units containing the non-compliant Power Control Systems were remedied prior to them coming off the production line.

Recall Schedule :

Description of Recall Schedule : Brinkley will notify all dealers who either have or had inventory of Brinkley Model G units in the subject range, advising of the TSB, remedy, and correction action process.

Planned Dealer Notification Date : OCT 09, 2023 - OCT 09, 2023

Planned Owner Notification Date : OCT 16, 2023 - OCT 16, 2023

Purchaser Information :

The following manufacturers purchased this defective/noncompliant equipment for possible use or installation in new motor vehicles or new items of motor vehicle equipment:

Name : Brinkley RV

Address : 1655 Brinkley Way East
Goshen IN 46528

Country : US

Company Phone : 5743615185

* NR - Not Reported