



A NAVISTAR COMPANY

BOSCH BRAKE CAMPAIGN 51101-C FAQ'S

Q. What is the potential defect with brake calipers installed on units involved in Campaign 51101-C?

A. The brake calipers can stick in the applied position, causing the brake to drag which may result in abnormal heat generation at the wheel end. Vehicles that experience these concerns may have the affected calipers built with phenolic pistons which can change in size. Change in caliper piston size is due to the absorption of moisture, which when combined with heat, can prevent the piston from releasing normally.

Q. How can I verify if my vehicle is part of Campaign 51101-C?

A. Workhorse has created a web page so owners can check to see if their units are involved by entering their 17 digit Vehicle Identification Numbers (VIN) on www.Workhorse.com/brakeresourcecenter. All Workhorse RV chassis' Vehicle Identification Numbers will begin with "5B4". If a "6" is present in the 6th position of the 17 digit VIN then your unit will be part of Campaign 51101-C. Owners will also be able to register and verify their address is up to date on this site.

Q. What is the final remedy for Campaign 51101-C?

A. The final remedy will be to install 4 new redesigned brake caliper assemblies with a different piston material that is impervious to moisture absorption. Campaign 51101-C covers replacement and bleeding of 4 brake calipers. Other brake system components such as but not limited to brake pads and rotors are considered wearable maintenance items and are not part of Campaign 51101-C.

Q. Should I schedule an appointment to have campaign 51101-C performed?

A. Affected owners should contact their local Authorized Workhorse Service Center to schedule an appointment for Campaign 51101-C.

Q. Can I have Campaign 51101-C completed at an independent Non-Workhorse Service Center?

A. No, only Authorized Workhorse Service Centers will be able to obtain the correct parts to properly complete Campaign 51101-C.

Q. When will new style brake calipers be available to complete Campaign 51101-C?

A. Campaign 51101-C was launched on September 16, 2010. All Authorized Workhorse Service Centers now have the ability to order the new caliper assemblies to complete Campaign 51101-C.

Q. Why did it take so long to obtain the final remedy for Campaign 51101-C?

A. Workhorse and Bosch have been diligently working on a solution. It took extended evaluations to correctly identify the failure of the calipers and why the pistons can lock into the bores. Once the problem was identified, Workhorse and Bosch commenced testing using different piston materials in RV applications which may be stored for extended periods of time thus causing additional testing and evaluation time. This testing is now complete and Bosch is manufacturing the new brake caliper assembly.

Q. I have not yet received notification of Campaign 51101-C, can I still have the campaign completed?

A. Yes, any Authorized Workhorse Service Center will be able to verify if your unit has an open campaign(s). Owners will not need to present a letter to have the campaign performed.

Q. How long will it take to have Campaign 51101-C completed on my vehicle?

A. Though caliper replacement can take only several hours, there are many other factors which can lead to additional repair times. It is suggested you contact your nearest Authorized Workhorse Service Center to schedule an appointment to have this campaign completed.

Q. Will Workhorse pay to have a customer's unit towed to an Authorized Workhorse Service Center to have Campaign 51101-C completed?

A. If the vehicle is *inoperable* due to a *caliper failure*, towing to the *nearest* Authorized Workhorse Service Center will be authorized up to \$450.

Q. Will I still need to have Campaign 51101-C performed if I have had an interim repair done and am not experiencing any concerns with my brakes?

A. Yes, customers will be notified by mail and should schedule to have the campaign completed at an Authorized Workhorse Service Center. Any interim repairs you may have had completed would not have been done using the latest caliper design.

Q. How can Workhorse tell if my brake pads or rotors have been damaged by a caliper failure or need replacing due to age, use or other conditions?

A. Caliper failures are often instantaneous type failures and would display evidence of severe transfer of brake pad material onto the rotor or the rotor material into the brake pad. Additional conditions may include: Severe brake pad material transfer onto both sides of the rotor surface, dust boot degradation around the caliper piston, ABS sensor that has melted, front hub oil cap that is leaking or a wheel seal that has failed. Workhorse will consider these repairs as collateral damage with pre-authorization for the affected wheel end only. These types of failures show different tell tale signs than components damaged by riding brakes for extended periods of time, towing a vehicle without an auxiliary braking system, lack of caliper slide pin maintenance, corrosion and various other factors.

Q. Why is my Authorized Workhorse Service Center telling me Workhorse will not pay for brake pads?

A. Campaign 51101-C is only for the replacement of 4 brake caliper assemblies. Maintenance and wearable brake components such as, but not limited to: brake pads, rotors, seals, hoses and ABS system components are not part of Campaign 51101-C. Workhorse will evaluate cases on an individual basis where a seized brake caliper assembly is believed to have caused collateral damage to another brake system component. If the brake caliper is found to be the root cause of the collateral damage, the affected component may be covered by Workhorse.

Q. Why is my Authorized Workhorse Service Center telling me Workhorse will not pay for brake rotors?

A. Campaign 51101-C is only for the replacement of 4 brake caliper assemblies. Maintenance and wearable brake components such as, but not limited to: brake pads, rotors, seals, hoses and ABS system components are not part of Campaign 51101-C.

Q. Are *short radial cracks* in the rotor surface an indication of a brake caliper failure?

A. Short radial cracks on the rotor surface that come in contact with the brake pads are known as "Heat Checking" and are caused by the constant heating and cooling of the disc during normal operation. Existence of these short radial cracks is not an indication that there is a *caliper failure*. This type of heat checking does not justify rotor replacement.

Q. Are *large radial cracks* in the rotor surface an indication of a brake caliper failure?

A. Large radial cracks are not caused by a caliper failure. The continual heating and cooling of the rotor will cause "Heat Checking" and slight cracks which can eventually permeate into the cooling area. These are generally fatigue type failures and radial cracks are not warranted as part of Campaign 51101-C. A rotor exhibiting *large radial cracks* into the fin area will need to be replaced.

Q. Is it an indication of a brake caliper failure if my ABS lamp intermittently comes on or stays on continuously?

A. An ABS lamp coming on is not a guaranteed indicator that a brake caliper has failed. There are many possibilities that may cause an ABS lamp to illuminate including; the ABS speed sensor being out of adjustment, related wiring concerns or possible ABS speed sensor overheat. To properly diagnose this type of concern, it is recommended the vehicle be taken to an Authorized Workhorse Service Center. If during the inspection it is determined that the ABS concern was caused due to a **caliper failure**, Workhorse will cover the replacement of this component as part of Campaign 51101-C.

Q. Why is my Authorized Workhorse Service Center telling me Workhorse will not pay for a brake fluid “flush”?

A. Campaign 51101-C covers parts and installation of 4 new brake caliper assemblies, including bleeding the brake system at the wheel end and the brake fluid necessary to do so. Some service centers may offer “brake flushes” as part of their maintenance packages. These generally consist of flushing the entire brake system with new fluid as opposed to just bleeding the calipers. Workhorse does recommend changing brake fluid every 2 years or 24,000 miles, whichever occurs first, however this is considered RV chassis maintenance and will not be covered under Campaign 51101-C.