

Chronology of Principle Events

September 2, 2021

Suzuki Motor Corporation (SMC) received a Field Technical Information Report (FTIR) from its Portuguese distributor concerning a GSX1300R motorcycle front brake that was not working.

When the vehicle was inspected, it was found that the initial description was incorrect. It was not a case that the front brake was not working, rather that the condition was that the front brake lever travel could increase. The condition was resolved by repeated application of the front brake lever. It was not possible to investigate further as the condition had resolved, and the cause of the increased front brake lever travel could not be determined. The front brake master cylinder was collected for further investigation.

November 24, 2021

As a result of investigating the field sample part, it was confirmed that the outer circumference of the primary seal cup had swelled and flattened, and the distance between the primary seal cup and the primary pressure port was less than that of the in-house inventory. SMC was unable to determine if this finding was a causal factor.

December 29, 2021

SMC conducted testing of the field sample part and found that when the brake lever is fully released the primary seal cup could flatten, and in this condition the primary port may become blocked. When the brake fluid temperature decreases in this state, negative pressure is generated in the brake system and the brake caliper pistons retract into the caliper body, creating increased clearance between the brake pad and the brake disc. In this condition the front brake lever travel is increased in initial application.

February 9, 2022

The position of the primary port was changed to increase the distance from the primary port and the primary seal cup to prevent blockage if the primary seal cup flattens to the same degree as the field sample part.

March 23, 2022

The American distributor issued a FTIR reporting a complaint of spongy brakes and excessive brake lever travel. Sample parts related to the FTIR were collected.

April, 2022

Two additional FTIRs were issued by the American distributor regarding this matter. Sample parts related to the second FTIR were collected.

May 25, 2022

Vehicle brake performance testing was conducted with a front brake master cylinder collected from the market that exhibited a worst-case condition of blockage and SMC found that in this condition, satisfactory FMVSS compliance was confirmed. The cause of the seal cup flattening had not been determined, and SMC continued its investigation.

June 17, 2022

One additional FTIR was issued by the American distributor regarding this matter. Sample parts related to the FTIR were collected.

August, 2022

Three additional FTIRs were issued by the American distributor regarding this matter. Sample parts related to the second and third FTRs were collected.

September, 2022

Three additional FTIRs were issued by the American distributor regarding this matter. Sample parts related to the FTIRs were collected.

October 4, 2022

Flattened seal cups were analyzed and found to contain the same compound as exists in the master cylinder cap diaphragm (seal). Cause and effect of this factor was considered, and SMC continued its investigation.

November 29, 2022

One additional FTIR was issued by the American distributor regarding this matter. Sample parts related to the FTIR were collected.

December 21, 2022

One additional FTIR was issued by the American distributor regarding this matter.

January 25, 2023

SMC determined that the cause of the primary seal cup flattening was due to interaction of a compound present in the cap diaphragm that migrates into the brake fluid, and that this interaction could lead to primary port blockage and increased front brake lever travel.

February 9, 2023

Because a condition exists that could cause increased braking distance and that may result in a failure to comply with FMVSS 122, SMC decided to conduct a recall.