



2016-2017 SXS1000M (Pioneer) Clutch Slipping Common Issues - Repair Tips

This Special Edition of *The Wrench* includes tips to help reduce common issues when performing Service Bulletin SXS1000 #3 - Product Improvement Campaign for Clutch Slipping on 2016-2017 SXS1000M (Pioneer) series vehicles. Be sure to review SXS1000 #3 and the information in this document, including the linked video, before performing this repair.

Use the chart below as a quick-reference guide to help identify the problem area then refer to the corresponding section in this document for more information regarding the issue.

Problem Area	Low Oil Pressure	Oil Light On	Stalling	Won't Initialize	Clutch Slip	Harsh Engagement	Difficult/No Shift	Creep in Gear	No Drive	DTC 57-1	DTC 62-1	DTC 74-1	Multiple DTCs
Split Rings	⊙	⊙	⊙	⊙	⊙				⊙		⊙		
Emergency Valve		⊙	⊙	⊙				⊙	⊙				
Clutch Cover Orifice	⊙	⊙		⊙									
Clutch Cover/Shaft Bearing					⊙	⊙			⊙				
Shift Reduction Gear							⊙			⊙			
Clutch Plates			⊙	⊙			⊙	⊙	⊙				
Oil Pressure Relief Valve												⊙	
Sub-harness/Grounds		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙				⊙

Definite Symptom = ⊙

Possible Symptom = ⊙

INITIAL TIPS

- For 5P models: To improve access, elevate the cargo bed by disconnecting the hydraulic strut and remove the bumps stops. Secure the bed from dropping by using suitable supports.
- For 3P models: To improve access, remove the cargo bed.
- Completely clean any debris from oil pressure relief valves/pumps/tank/cooler/pan, spacer cover, valve body, and pick-up screen.

SPLIT (SEAL) RINGS

Symptoms: Low oil pressure, oil light on, stalling, will not initialize, possible clutch slip, no drive, DTC 62-1

Cause: Improper installation of the clutch assembly onto the main shaft.

Troubleshooting: Check clutch line engine oil pressures in neutral when engine is warm (p.s.i. are approx.).

- At idle = 115 p.s.i.
- At 5,000 RPM = 130 p.s.i.

Check No. 1 clutch engine oil pressures in gear when engine is warm (p.s.i. are approx.).

- At idle = 20 p.s.i.
- At 5,000 RPM (driving) = 50 p.s.i.

There should be no oil pressure bleed over between clutches exceeding 2-3 p.s.i.

Repair Tips:

1. Grease split rings and guide collar washers to ensure they remain in place during clutch installation.
2. Cradle the clutch assembly with both hands and never let the weight of the clutch assembly rest on any part of the main shaft at any time.
3. Very carefully guide the assembly onto the main shaft until fully seated to avoid damaging the split rings.

EMERGENCY VALVE

Symptoms: Oil light on, stalls when shifted into gear, will not initialize, no drive

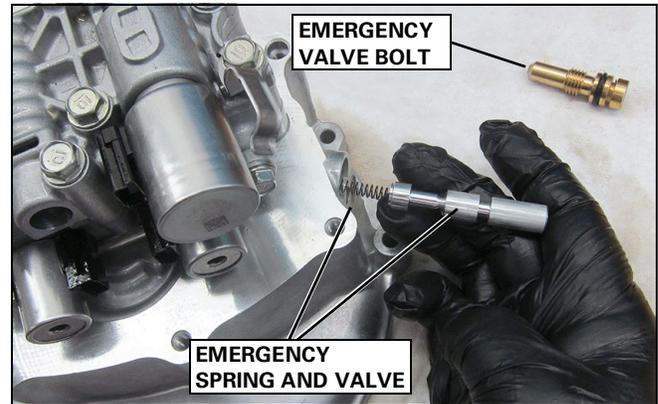
Cause: Incorrect installation of the emergency valve.

Troubleshooting: Check if emergency valve is bent from over torquing of the emergency bolt by rolling it on a flat surface. Be sure there are no burrs or other damage before installing.

Repair Tips:

- Check for damage (bent, burrs, etc.) and smooth operation.

- The top surface of the emergency valve is flat and the bottom surface is cupped for spring seating (install as shown).



CLUTCH COVER ORIFICE

Symptoms: Possible low oil pressure, oil light on when hot, may not initialize

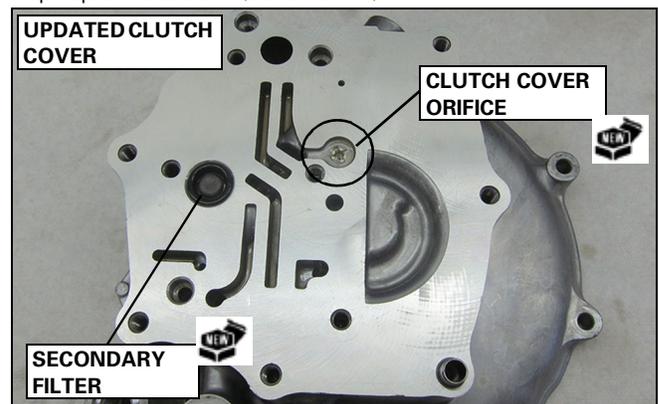
Causes: Orifice not installed in new cover, orifice installed in wrong place

Troubleshooting:

- Be sure the orifice is installed correctly.

Repair Tips:

- Be sure the orifice is installed correctly, in its proper location (as shown).



CLUTCH COVER / SHAFT BEARING

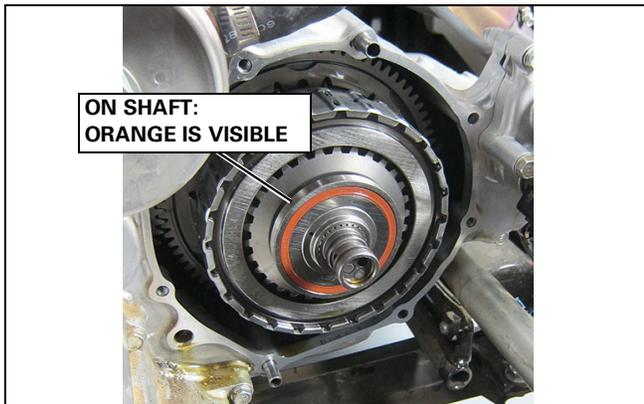
Symptoms: Clutch slip, possible harsh engagement, no drive

Causes: Clutch cover/shaft bearing installed backwards damaging both clutches due to lack of lubrication.

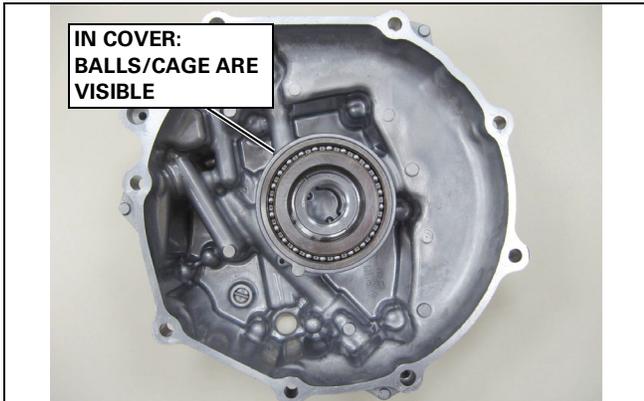
Troubleshooting: Be sure the clutch cover/shaft bearing is installed correctly.

Repair Tips:

- If the bearing is on the shaft, be sure the orange colored (sealed) side is visible (as shown).



- If the bearing is in the cover, be sure the balls and cage are visible (as shown).



SHIFT REDUCTION GEAR

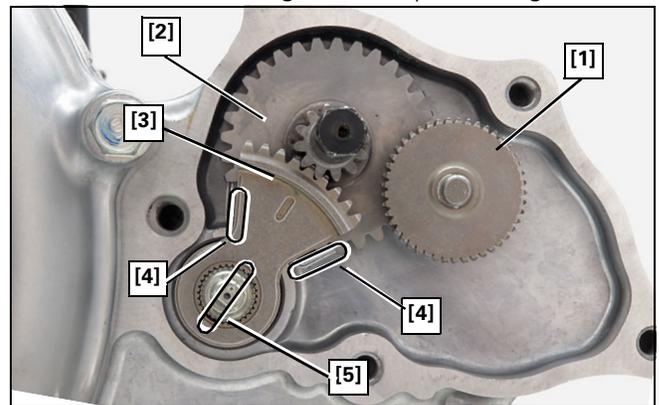
Symptoms: Difficult/no shift, DTC 57-1

Cause: Shift reduction gear installed backwards.

Troubleshooting: Be sure gears are installed with marks facing out and move freely without binding.

Repair Tips: Install gears with marks facing out (as shown) and as described below.

1. Install reduction gears [1]/[2].
2. Install gear [3] onto the shaft spindle by aligning the wide groove with the wide tooth.
3. Make sure the gear ends align with the lugs [4] on the rear cover spacer and the punch marks [5] on the gear and spindle align.



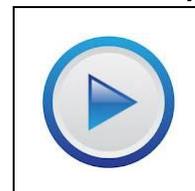
CLUTCH PLATES / GUIDE COLLAR

Symptoms: Stalls in gear, will not initialize, no drive, possible difficult/no shift

Cause: Clutch guide collar not aligned or fully seated causing clutch plate damage during cover installation.

Troubleshooting: Check clutch guide for proper seating. Watch the linked video below or you can access the video by navigating to:

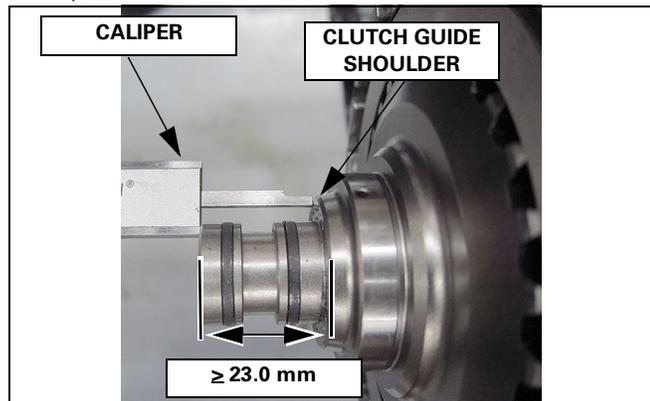
Service > TechLine > TechLine > Technical Library > Video Library > SXS1000 Series Slipping Clutch Repair.



Repair Tips: Replace clutch assembly

- Be sure the clutch cover is fully seated against the gasket surface before tightening the cover bolts.

Verify ≥ 23.0 mm measurement (as shown).



OIL PRESS RELIEF VALVE

Symptoms: DTC 74-1 (DCT Oil Pressure Logic Error)

Cause: Oil pressure relief valve installed backwards.

Troubleshooting: Check for excessive oil pressure or code 74-1 comes back after clearing.

Repair Tips:

- Install oil pressure relief valve the correct way per the Service Manual.

SUB-HARNESS/GROUNDS

Symptoms: Possible oil light on, possible stalling, will not initialize, possible clutch slip, harsh engagement, difficult/no shift, possible no drive, multiple DTCs

Cause: Damaged pins or broken wires from removal of sub-harness. Poor grounds.

Troubleshooting: Remove all accessory connections, check battery with Midtronics tester, inspect pin fit, check ECM Multi-pin connector for tight pin fit.

Repair Tips: Replace damaged components, clean and tighten all grounds.

- Be sure to use an OEM battery. Aftermarket batteries are known to cause a variety of issues.

LINEAR SOLENOID VALVE

In a smaller number of cases, a dirty or stuck linear solenoid valve has been a problem area. If after troubleshooting all other more likely problem areas in this document, and if the vehicle has no drive, test the linear solenoid valve (Dual clutch PC Solenoid Valve). Turn in the emergency valve then check if the vehicle has drive in 2nd gear. If so, try a known-good linear solenoid valve.

DEALER SUPPORT

If the repair cannot be completed using the information provided in Service Bulletin SXS1000 #3 or this document, including the linked video, contact TechLine.



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