GM/BMW 5L40E
NO REVERSE

COMPLAINT: Before or after overhaul vehicles equipped with the 5L40E transmission may exhibit a no reverse engagement condition.

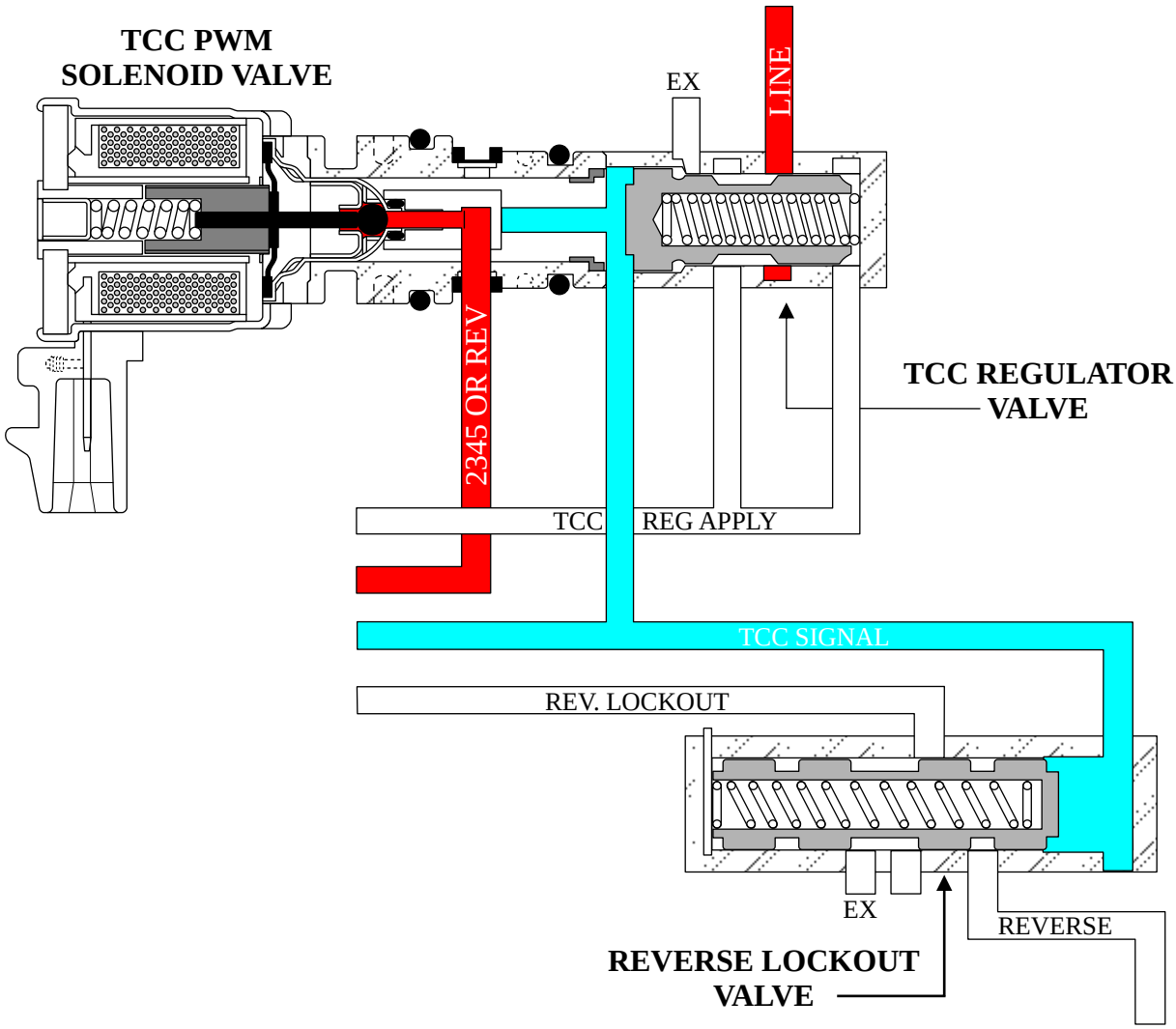
CAUSE: One cause may be a restricted or flooded TCC PWM SOLENOID. Oil pressure from the manual valve is directed to the TCC PWM Solenoid in 2nd, 3rd, 4th, 5th, and Reverse gears. If the solenoid becomes restricted in Reverse, oil pressure can build up and cause the REVERSE LOCKOUT VALVE to stroke in the valve body, and prevent the reverse clutch from applying, leaving the vehicle with no reverse engagement. Refer to Figures 1 and 2 for a partial hydraulic schematic of the PWM Solenoid and the Reverse Lockout Valve.

CORRECTION: Replace the TCC Pwm Solenoid and verify the Reverse Lockout valve is not stuck. Refer to Figures 3 and 4 for the location of the Solenoid and the Reverse Lockout Valve-train.

SERVICE INFORMATION:

TCC PWM SOLENOID.....24212690

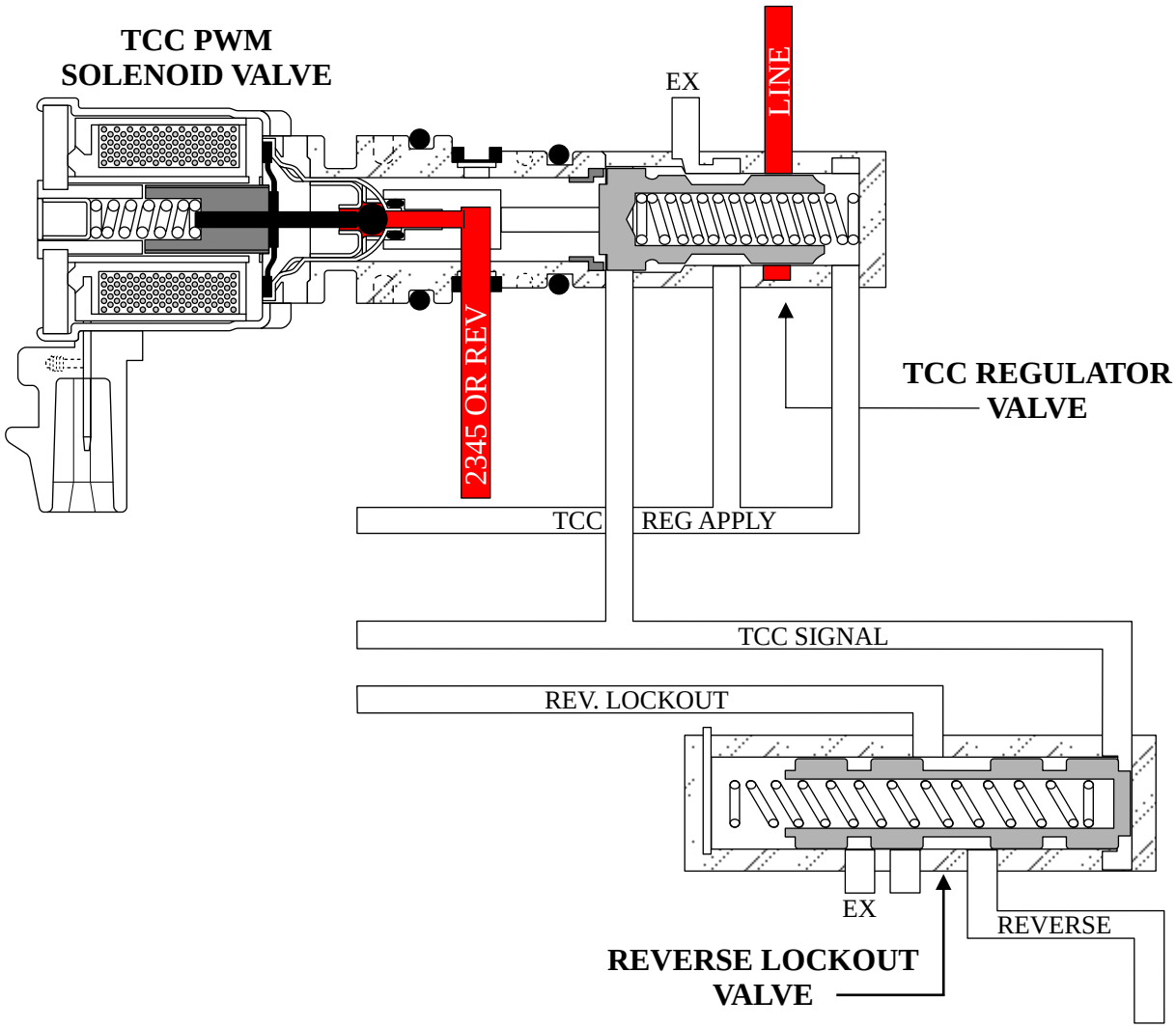
TORQUE CONVERTER CLUTCH APPLIED



Oil pressure from the manual valve is directed into the 2,3,4,5, and Reverse circuit in 2nd, 3rd, 4th, 5th, and Reverse gears. In the forward ranges, 2,3,4,5 oil is utilized to control movement of the TCC REGULATOR VALVE for lockup/TCC apply. In Reverse, it is used to control the REVERSE LOCKOUT VALVE, for reverse lockout function. If this solenoid becomes restricted, oil pressure can build up enough to stroke the REVERSE LOCKOUT VALVE, inhibiting reverse from engaging by blocking oil pressure from going to the reverse clutch.

Figure 1

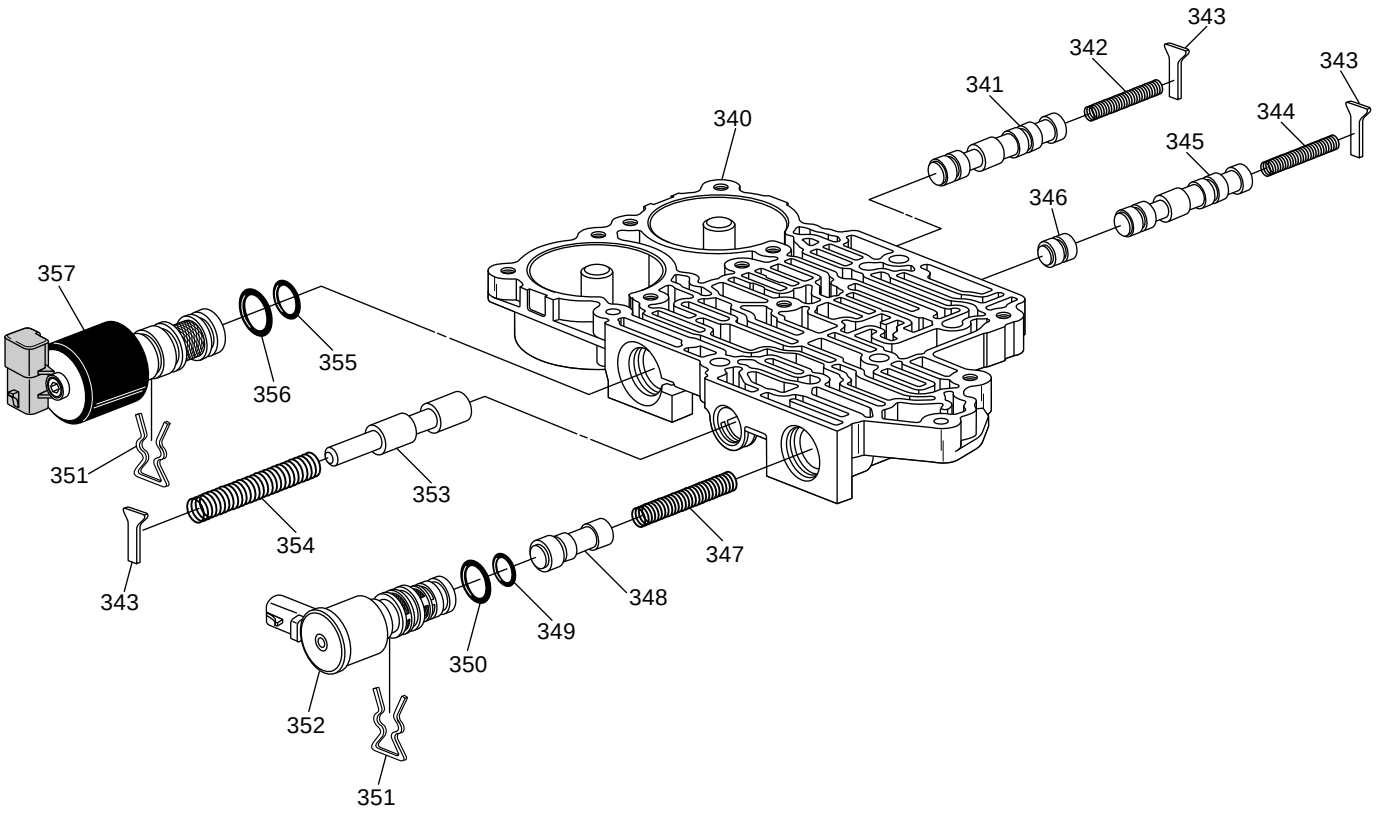
TORQUE CONVERTER CLUTCH NOT APPLIED



Summary: Reverse Lockout valve in the position to allow Reverse application

Figure 2

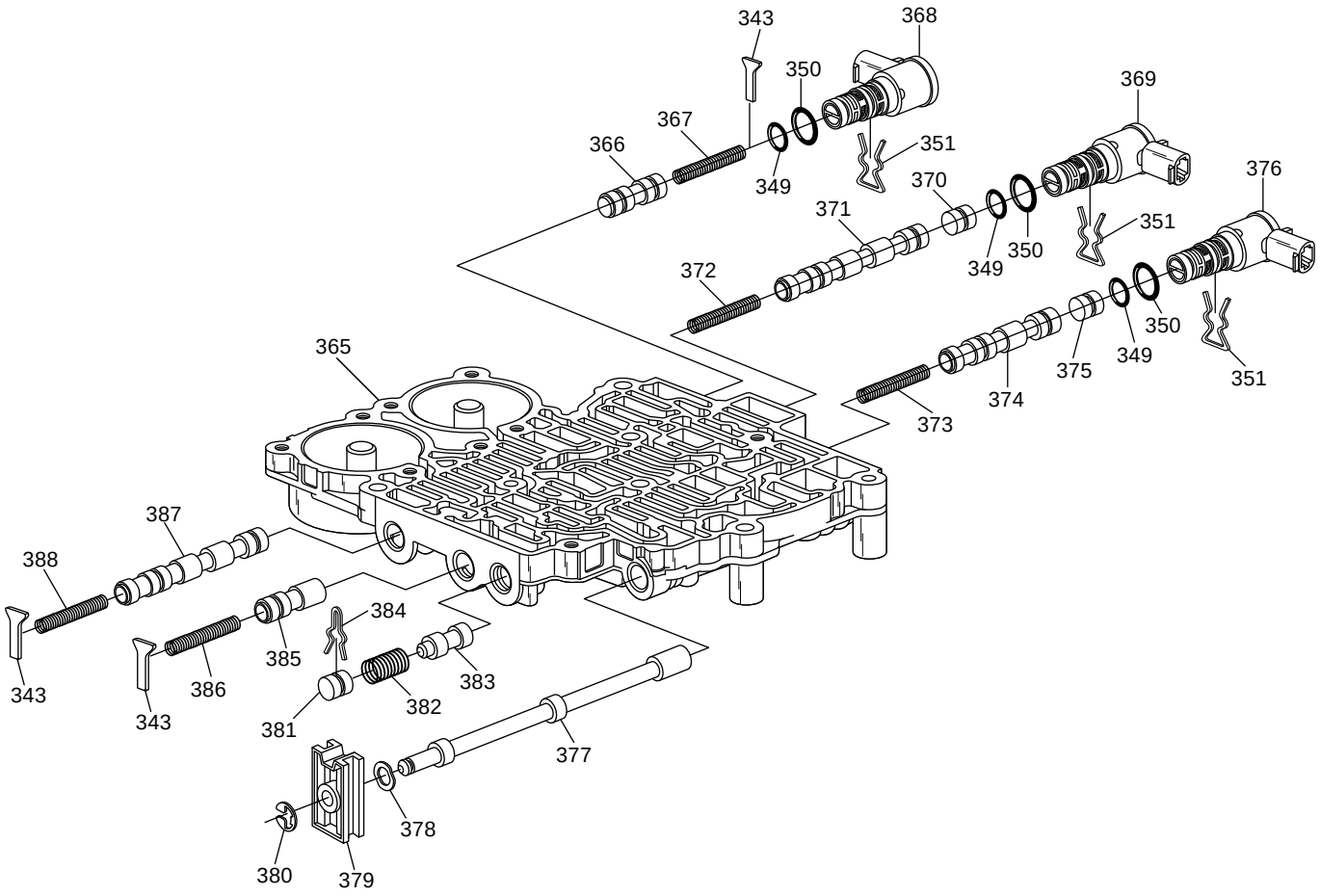
FRONT VALVE BODY ASSEMBLY EXPLODED VIEW



340 FRONT VALVE BODY CASTING ASSEMBLY
341 SAFETY MODE VALVE
342 SAFETY MODE VALVE SPRING
343 VALVE SPRING RETAINER
344 3-4 SHIFT VALVE SPRING
345 3-4 SHIFT VALVE
346 3-4 SHIFT CONTROL VALVE
347 TCC REGULATOR APPLY VALVE SPRING
348 TCC REGULATOR APPLY VALVE
349 SOLENOID ASSEMBLY SMALL "O" RING SEAL
350 SOLENOID ASSEMBLY LARGE "O" RING SEAL
351 SOLENOID ASSEMBLY RETAINER
352 TCC/PWM SOLENOID ASSEMBLY
353 FEED LIMIT VALVE
354 FEED LIMIT VALVE SPRING
355 PRESSURE CONTROL SOLENOID SMALL "O" RING SEAL
356 PRESSURE CONTROL SOLENOID LARGE "O" RING SEAL
357 PRESSURE CONTROL SOLENOID ASSEMBLY

Figure 3

REAR VALVE BODY ASSEMBLY EXPLODED VIEW



343 VALVE SPRING RETAINER
349 SOLENOID ASSEMBLY SMALL "O" RING SEAL
350 SOLENOID ASSEMBLY LARGE "O" RING SEAL
351 SOLENOID ASSEMBLY RETAINER
365 REAR VALVE BODY CASTING ASSEMBLY
366 1-2 SHIFT CONTROL VALVE
367 1-2 SHIFT CONTROL VALVE SPRING
368 1-2 SHIFT SOLENOID ASSEMBLY
369 2-3 SHIFT SOLENOID ASSEMBLY
370 2-3 SHIFT CONTROL VALVE
371 2-3 SHIFT VALVE
372 2-3 SHIFT VALVE SPRING
373 4-5 SHIFT VALVE SPRING
374 4-5 SHIFT VALVE
375 4-5 SHIFT CONTROL VALVE
376 4-5 SHIFT SOLENOID ASSEMBLY
377 MANUAL VALVE
378 MANUAL VALVE LINK "WAVED" WASHER
379 MANUAL VALVE LINK
380 MANUAL VALVE LINK "E" CLIP RETAINER
381 LOW PRESSURE CONTROL VALVE BORE PLUG
382 LOW PRESSURE CONTROL VALVE SPRING
383 LOW PRESSURE CONTROL VALVE
384 LOW PRESSURE CONTROL VALVE BORE PLUG RETAINER
385 REVERSE LOCKOUT VALVE
386 REVERSE LOCKOUT VALVE SPRING
387 1-2 SHIFT VALVE
388 1-2 SHIFT VALVE SPRING

Figure 4