



VOLKSWAGEN/AUDI 09G FLARED SHIFTS

COMPLAINT: After overhaul the transmission continues to have shift quality complaints such as flared shifts. All parts and components have been inspected and have either been repaired or replaced as needed during the rebuild procedure and the necessary memory resets have been performed yet the flared shift condition remains.

CAUSE: The 09G is highly dependant on a wide range of things for proper shift overlap. If any of these items are compromised it affects shift quality. These items consist of clutch adaption issues, fluid pressure concerns, solenoid failure, valve body bore or valve wear, counter balance piston problems, transmission fluid temperature, worn bushings, shrunk sealing rings, K2 Clutch sealing ring sleeve leakage, excessive clutch clearances, excessive end play.

Diagnostic Note:

Before performing the clutch regulator valve adjustment, take the vehicle for a road test with the scan tool connected. Scan the "Data Blocks" until you reach Data Block 10, this block should be "Trans Condition", Refer to Figure 1. If the window displays "ERROR", back out of this screen and go to "Clear Codes". Even if it says "No Codes Found", DO IT ANYWAY! This may have to be done more than once. After each code clear check Data Block 10 to see if it no longer displays "ERROR". At this point in time your flared shift condition may be gone. If the transmission still exhibits flared shifts, then perform the procedure under "CORRECTION" below.

CORRECTION: With all other causes of flared shifts addressed, it is possible to cure the shift quality concerns by adjusting the spring tension on the clutch regulator valves.

For example, if there is a flared 3-4 shift which is the apply of the K2 Clutch, then turn the K2 Regulator Valve adjustment screw out 1.5 turns. Use the chart in Figure 2 to determine which clutch and solenoid is used during the flared shift.

Each clutch has its own regulating valve and solenoid. There are adjustment screws on the lower valve body for each clutch regulating valve, Refer to Figure 3.

Turn the adjusting screw for the offending clutch counterclockwise 1.5 turns to increase clutch pressure, this should eliminate the flared shift condition.

A special thank you to Lorenzo from Scottsdale, Az. for sharing his experience with ATSG.

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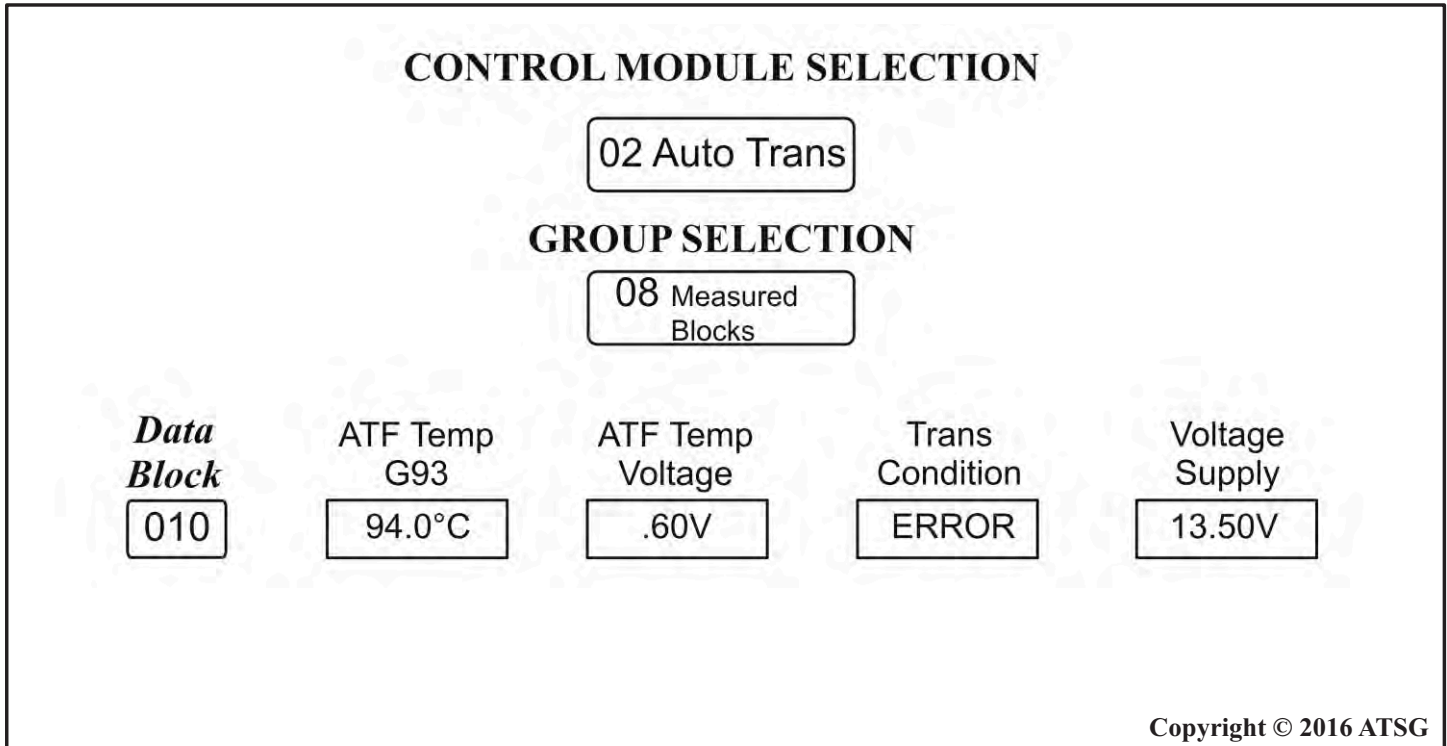


Figure 1

SOLENOID & CLUTCH APPLICATION CHART												
	Pressure Control Solenoids						Component					
Gear	N92 S-5	N282 S-9	N90 S-3	N283 S-10	N93 S-6	N91 S-4	K1	K2	K3	B1	B2	F1
1st Gear	Off	On	On	On	PWM		On				On*	On
2nd Gear	Off	On	On	Off	PWM		On			On		
3rd Gear	Off	On	Off	On	PWM	PWM	On		On			
4th Gear	Off	Off	On	On	PWM	PWM	On	On				
5th Gear	On	Off	Off	On	PWM	PWM		On	On			
6th Gear	On	Off	On	Off	PWM	PWM		On		On		
Rev Gear	On	On	Off	On	PWM	PWM			On		On	

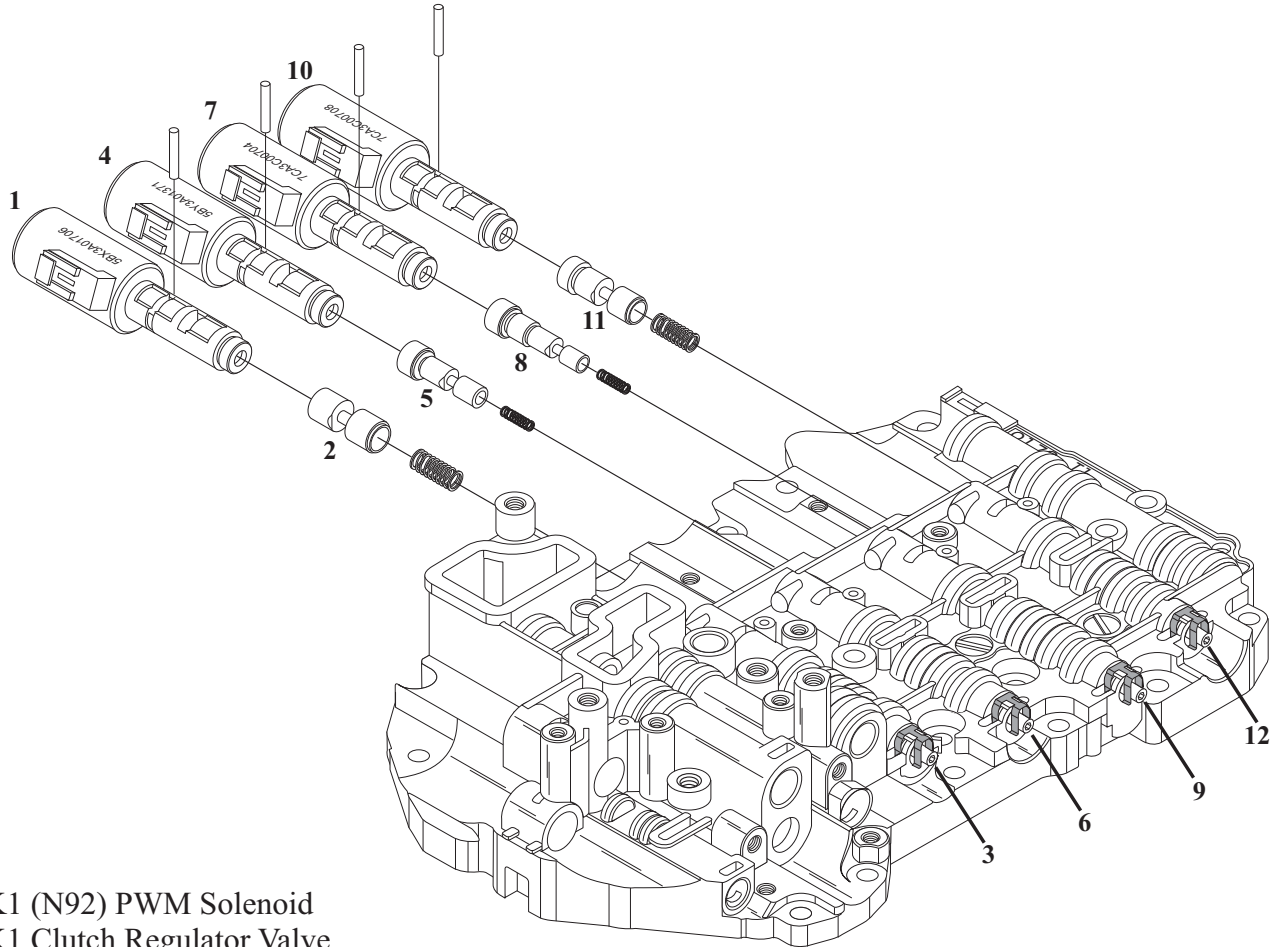
* The B2 clutch is applied in Tiptronic Mode 1st gear only for engine braking.

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Figure 2

VOLKSWAGEN/AUDI 09G FLARED SHIFTS

"09G" LOWER VALVE BODY ASSEMBLY



1. K1 (N92) PWM Solenoid
2. K1 Clutch Regulator Valve
3. K1 Clutch Regulator Valve Adjustment Screw
4. K2 (N282) PWM Solenoid
5. K2 Clutch Regulator Valve
6. K2 Clutch Regulator Valve Adjustment Screw
7. B1 (N283) PWM Solenoid
8. B1 Clutch Regulator Valve
9. B1 Clutch Regulator Valve Adjustment Screw
10. K3 (N90) PWM Solenoid
11. K3 Clutch Regulator Valve
12. K3 Clutch Regulator Valve Adjustment Screw

***Turn Adjusting Screw Counterclockwise
1.5 Turns To Increase Clutch Pressure***

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Figure 3