

FORD F450-550 TRUCKS WITH 5R110W INTERMITTENT SOLENOID CODES

DESCRIPTION: Ford F450 & 550 trucks equipped with the 5R110W transmission may store a variety of solenoid codes intermittently. In this case history the solenoids are good.

DIAGNOSIS: Once the solenoids have been verified good, the next step in the diagnosis process should be internal and external wiring checks because a vehicles wiring harnesses are more prone to producing intermittent codes rather than hard codes.

A visual approach to wiring is a good place to start such as the internal wiring damage shown in Figure 1, but external wiring cannot always be accessible without some degree of vehicle disassembly. Checking resistance is valuable to determine if the wire is open or shorted but is not the definitive answer.

At this point the technician needs to know if the circuit can carry an electrical load, this can be accomplished by the use of a power probe. If a power probe is not available the good old fashioned method of attaching a headlamp to one end of the circuit and 12 volts to the other end should do the job. Load testing can expose a problem with wire damage as seen in Figure 2 which is caused by the wiring being tightly bundled and placed in chassis to body areas where body flexing or tension can result in chafing or wire strands being pulled apart.

With the F450-550 vehicles, the area where this short takes place can be difficult to find. The harness where this rubbing usually takes place is accessible from the drivers side inner wheel well located near the shock tower and is rubbed by a sharp edge.

SOLUTION: If the choice is made to repair the wiring damage, the harness will have to be accessible. It may be necessary to add length to the wiring to relieve tension or to reposition the harness to prevent chafing.

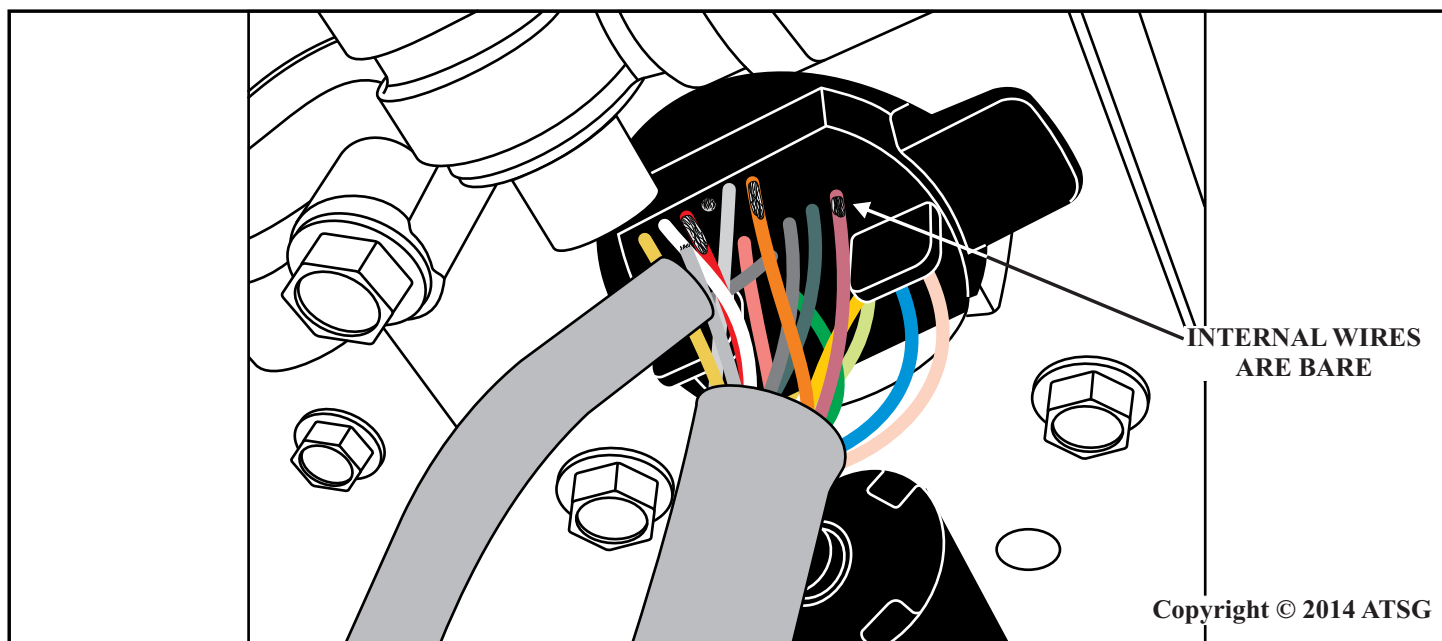


Figure 1

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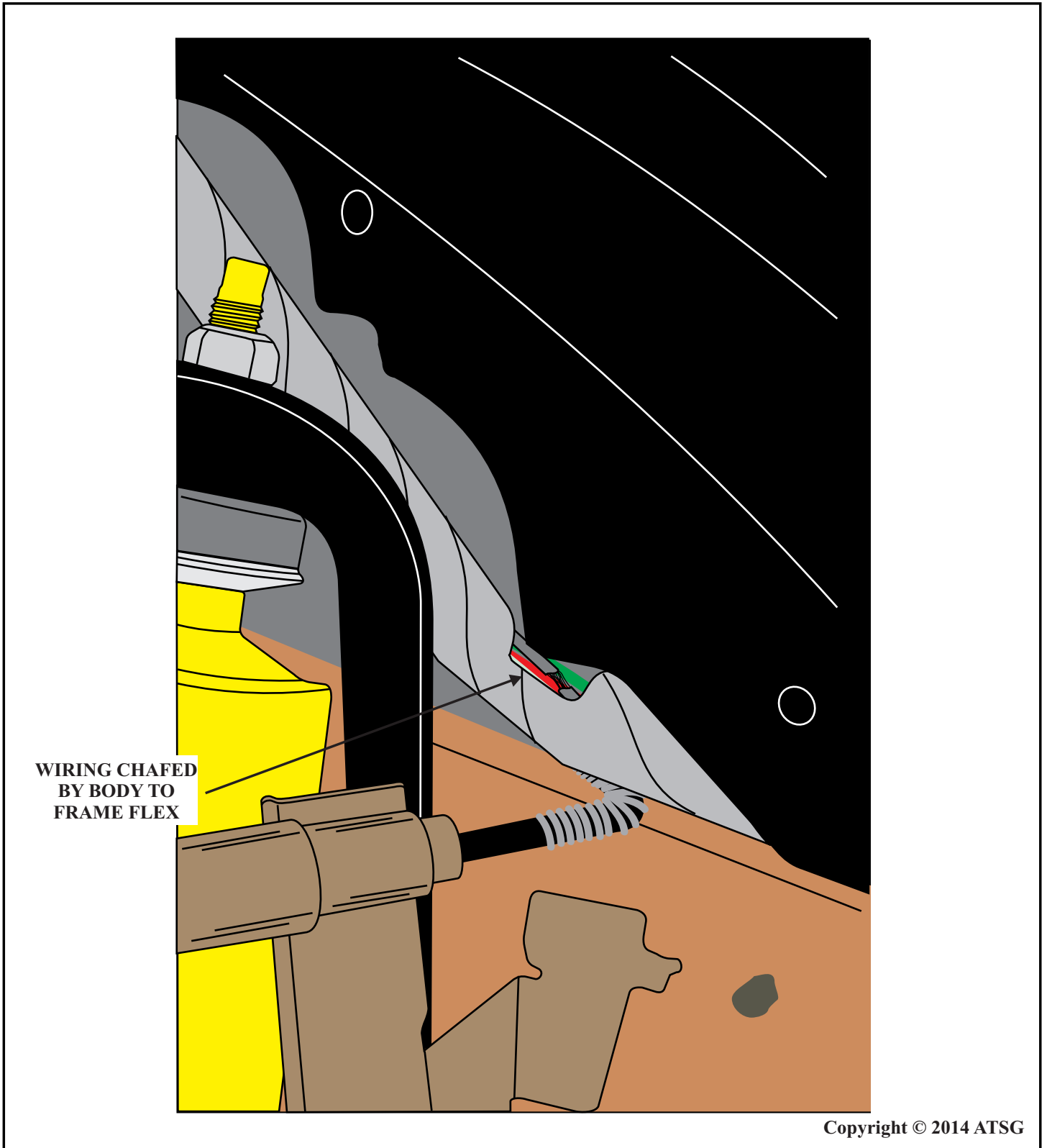


Figure 2