SERVICE BULLETIN

NUMBER: 02-002-15

GROUP: Front Suspension

DATE: January 27, 2015

SUBJECT:
Steering Wheel Not Centered

OVERVIEW:
This bulletin involves properly diagnosing and correcting an off center steering wheel.

SYMPTOM/CONDITION:
The customer may describe the steering wheel is off center.

SPECIAL TOOLS/EQUIPMENT REQUIRED:

NPN	Static Alignment Equipment
NPN	Steering Wheel Centering Lock or Clamp

DISCUSSION:
Proper diagnosis for a steering wheel off center condition must be made before any repairs are performed. It is important to understand the customer's concern and follow simple guidelines for diagnosis published in DealerCONNECT> TechCONNECT under: Service Info> 02 - Front Suspension> Wheel Alignment> Diagnosis and Testing. It is also important to separate steering wheel off center conditions from lead/pull conditions.

For example: a "steering wheel not centered" condition can be described as a lead/pull condition, the customer sees a steering wheel that is off center while traveling in a straight line, the customer straightens the steering wheel, and interprets this incorrectly as a lead/pull. Likewise, a lead/pull condition can be described by the customer as "the steering wheel is not centered" because the customer is compensating for a lead/pull condition by applying steering effort to keep the vehicle traveling straight, so the customer sees that the steering wheel is not straight, and interprets this incorrectly as the steering wheel is off center.

NOTE: Before proceeding to the diagnosis and correction of a steering wheel off center condition, the following preliminary checks must be made first:

VEHICLE CHECKS:
Test drive the vehicle "as is" before making any changes to confirm the customer's complaint or concern before proceeding with the following vehicle checks.

- Are the tires inflated to the recommended placard pressures?
- Is the tire wear even and symmetric?
- Is there any sign of suspension component damage?

STATIC ALIGNMENT EQUIPMENT CHECKS:

- Is the alignment equipment properly calibrated? Annual calibration is recommended. A calibration certificate should be available.
- FCA vehicles are checked 100% for alignment values at the manufacturing plant. If static alignment equipment consistently shows values that are out of specification for vehicles with less than 1000 miles, the static alignment equipment must be verified immediately.
- Is the latest alignment specification for the vehicle being checked loaded into the static alignment equipment? Specifications can be manually loaded into the static alignment equipment. Refer to alignment specifications published in DealerCONNECT> TechCONNECT under: Service Info> 02 - Front Suspension> Wheel Alignment> Specifications.

DIAGNOSIS AND CORRECTION OF A STEERING WHEEL OFF CENTER CONDITION:

Definition/Diagnosis of steering wheel off center: The steering wheel is rotated to the right or left more than the allowable amount, (typically +/-3.0 degrees) when driving on a straight flat road. It is important that the vehicle be driven on a straight flat road. If the vehicle is driven on a highly crowned road, the steering wheel may be turned off center to counteract the effect of the road crown; this could be interpreted as the steering wheel being off center when it is not. A steering wheel off center condition requires a toe adjustment only.

NOTE: If the vehicle has a lead/pull condition, and a steering wheel that is off center, repair the lead/pull condition first. The steps below outline how to diagnose and correct a steering wheel off center issue not a lead/pull condition.

NOTE: It is best to verify the centering of the steering wheel on a flat road (no road crown). If a flat road is not available, the static alignment equipment can be used to determine if the steering wheel is centered, providing the alignment equipment is level.

1. Road test the vehicle on a flat road to verify the customer's concern, steering wheel off center to the left or right.
   a. Yes >>> Steering wheel is off center to the left or right. Continue with Step #2.
   b. No >>> Steering wheel is at center position. This bulletin does not apply. Normal diagnosis of the customer's concern should be performed.
2. Place the vehicle on the alignment equipment.
3. Center the steering wheel and lock into place.
4. Adjust the front left toe into specification then adjust the front right toe into specification.

NOTE: If the final left and right toe adjustment values are offset when compared to the initial values in order to correct the steering wheel off center customer complaint, ensure that the total front toe is within specifications.

5. Measure the front toe to verify that the total front toe is within specification.
6. After the steering wheel centering is complete, road test the vehicle on a flat road to determine if the steering wheel is now centered.
   a. Yes >>> Steering wheel is now centered. Return the vehicle to the customer.
   b. No >>> Steering wheel is still off center to the left or right. Call the STAR center for assistance.

FAILURE CODE:
Information Only