Front Camber and Caster Adjustment - F-250/F-350, RWD

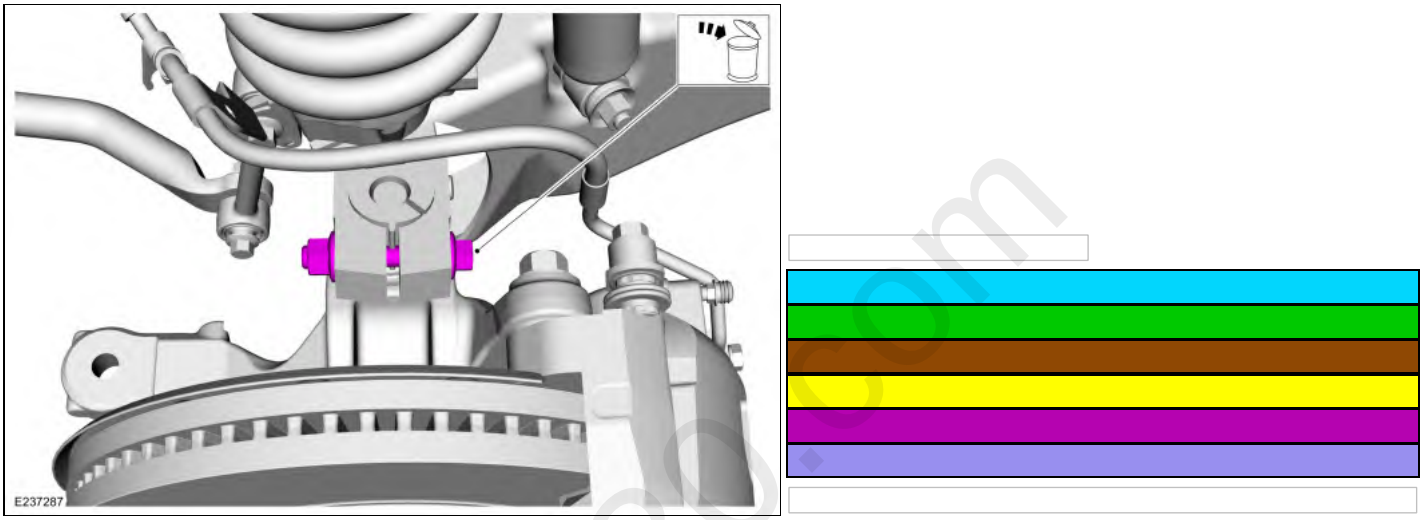
Adjustment

1. **NOTICE: Do not bend the axles or the radius arms to change alignment angles or damage to the vehicle's axle and radius arms can occur.**

   Using alignment equipment and the manufacturer's instructions, measure the caster and camber.
   - Refer to Alignment Specifications for optimal alignment settings.
     Refer to: Specifications (204-00 Suspension System - General Information, Specifications).
   - If the caster and camber values are not within specification, go to the next step.

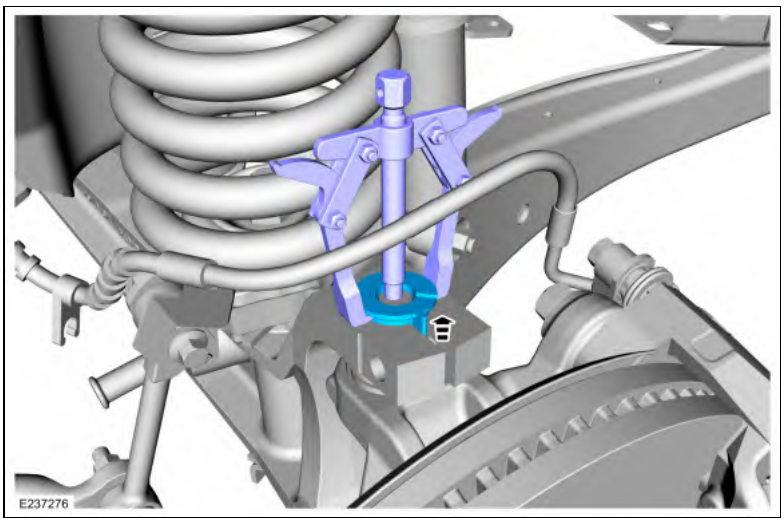
2. Remove the front wheels and tires.
   Refer to: Wheel and Tire - Vehicles With: Single Rear Wheels (204-04A Wheels and Tires, Removal and Installation).
   Refer to: Wheel and Tire - Vehicles With: Dual Rear Wheels (204-04A Wheels and Tires, Removal and Installation).

3. On both sides. Remove and discard the upper ball joint pinch bolt and nut.

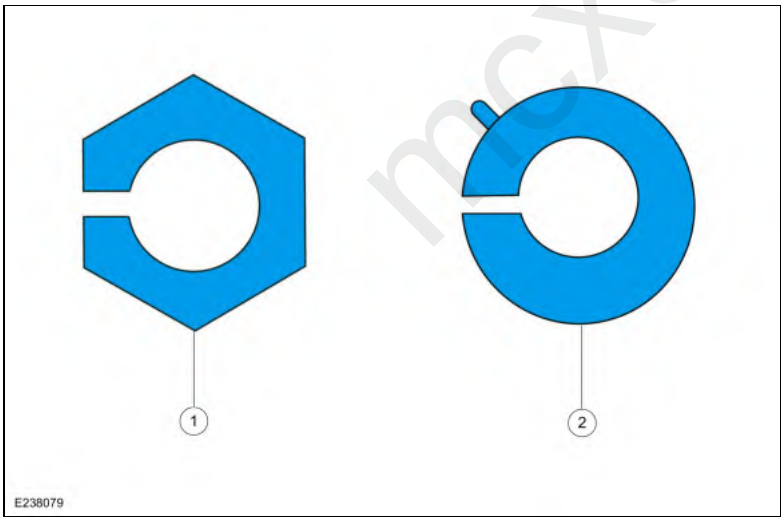


4. **NOTE:** *All vehicles are built by the assembly plant with a non-adjustable camber/caster sleeve. If service adjuster has been installed, mark position before removal.*

   On both sides. Remove the existing adjuster sleeve.



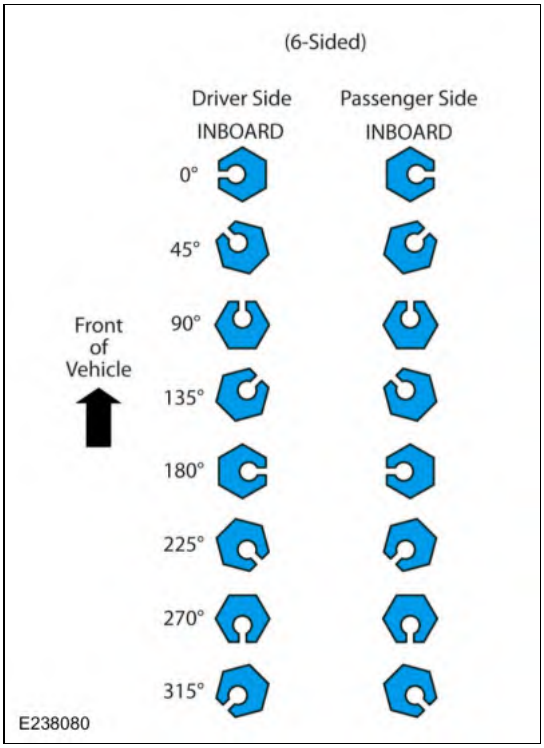
5.
    1. Service adjusters have a 6-sided flange with the camber/caster adjustment range stamped into the top (0 degree, 1/4 degree, 1/2 degree, 3/4 degree or 1 degree, 1-1/4 degree and 1-1/2 degree).
    2. Production adjusters have a round flange with a side tab. The amounts of pre-set camber and caster are stamped into the top of the adjuster.



6. On both sides. Install an interim 0 degree service adjuster.
7. Calculate the maximum amount of camber and/or caster adjustment required to achieve the optimal settings, as provided in the Alignment Specifications table, by subtracting the measured values from the optimal target values.
    - **NOTE:** *Example: for an F-350 Rear Wheel Drive (RWD) , Dual Rear Wheels (DRW) , Pickup:*
        - *optimal camber spec target = 0.62 Â± 1.0.*
        - *optimal LH spec target = 4.0 Â± 1.2.*
        - *measured camber = 1.85 (out-of-spec).*
        - *measured caster = 3.0 (within spec).*
        - *required camber adjustment = 0.62 - 1.85 = -1.23.*
        - *preferred caster adjustment = 4.0 - 3.0 = 1.0, however not required.*
8. Using the Camber/Caster Service Adjuster table, determine the appropriate replacement service adjuster needed to correct alignment. There is usually more than one

combination of service adjuster and orientation that can be chosen to achieve alignment measurements within specifications. If a compromise is required, choose the adjuster and orientation which optimizes the camber value and maximizes the caster value.

- Example: continuing the above example,
- Choose an adjuster with a one and a quarter degree adjustment circle.
- Set the adjuster to the 180 degree position to achieve a -1.25 degree camber and 0 degree caster shift setting.

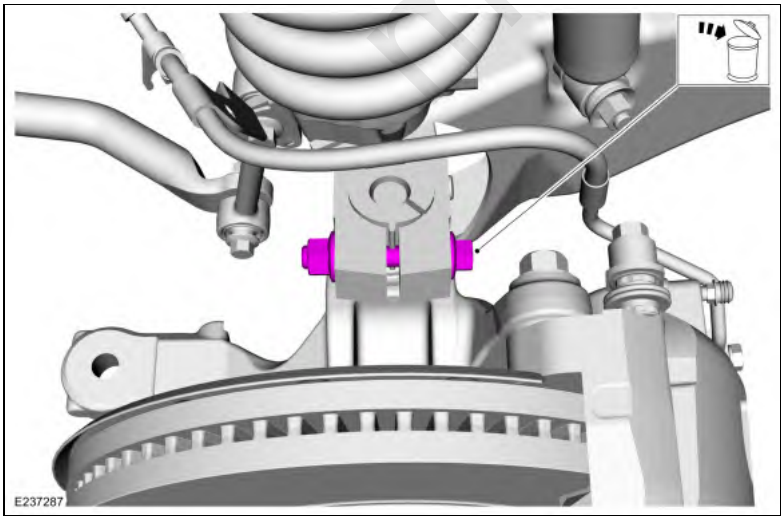


NOTE: *When selecting a replacement service adjuster to achieve the desired amount of camber and caster offsets, caution is required to make sure that all other alignment characteristics (camber split, caster split and individual caster) are maintained to within their specified ranges. When in doubt of which service adjuster to choose, make the selection which achieves measured results closest to the optimal targets in the following order of priority:*

- *Caster split*
- *Individual camber*
- *Camber split*
- *Individual caster*

9. On both sides. Remove the 0 degree service adjusters and install the appropriate replacement service adjusters to the correct rotational orientation specified in the Camber/Caster Service Adjuster table.

10. On both sides. Install the new upper ball joint pinch bolt and nut.
Torque: 66 lb.ft (90 Nm)



11. Verify the camber and caster settings, adjust as necessary.
    - Once the optimal caster/camber has been achieved, check the total toe and adjust as necessary.
      Refer to: Front Toe Adjustment - F-250/F-350, RWD (204-00 Suspension System - General Information, General Procedures).
      Refer to: Front Toe Adjustment - F-250/F-350/F-450/F-550, 4WD (204-00 Suspension System - General Information, General Procedures).