



## Mack Models

**Mack Model** Conventional , CHU - Pinnacle, Axle back , GU - Granite

## Engine family

Engine family Mack , MP7 , MP8 , MP10

## Emission Standard

Emission Standard US10+OBD13 , US14 , US14 CNG , US15 , US16 , US17 , OBD2017

\*\* SOLUTION \*\*

**Title** Draft Mack Chassis - Models GU / CHU Steering Wander, Will Not Center

**Cause** There have been reports of certain Mack Trucks - Models GU / CHU experiencing steering wander often at times perceived as constant correcting back to center or not holding a true line.

**Solution**

### GU/CHU Wandering

**Often times perceived as constant correcting back to center or not holding a true line.**

#### Vehicle Checks

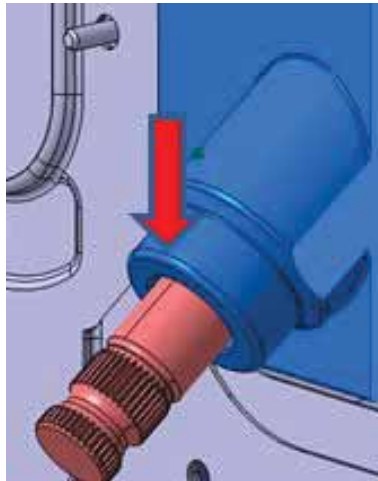
**(CHECKS MUST BE PERFORMED 1<sup>ST</sup>)**

- Tire design and pressure.
  - Over pressurized tires may cause adverse handling.
  - Tire damage, uneven or extreme tread wear or mismatched tires/sizes.
  - High tread block tires (ex. Bridgestone 426EL) may ride on the center sipe of the tire causing the truck to drive from the 'rear' causing a need to constantly correct with the steering wheel.
- If vehicle has a 5th wheel, is it lubed properly, does wandering only happen with a trailer?
- Basic alignment specs i.e. toe, thrust line, etc.
- Turning torque at the steering wheel nut, depending on surface area tested on, tires pressures, etc. avg. 60-75in lbs. or less.
  - Diagnosis can be completed by breaking the system into smaller sections (upper vs. lower, etc.).
- Looseness or binding in the following components:
  - Steering wheel or steering column
  - U-joints or slip joints in upper steering system
  - Steering gear (diagnose per manufacturer's specifications i.e. flow /pressure)
  - Pitman arm
  - Draglink ends and adjustment areas
  - Kingpins/bushings
  - Tie rod ends
  - Spindles
  - Wheel bearings

- Lug nuts
- Springs/spring hanger brackets
- Front and rear axles and u-bolts
- Steering box mounting, miss mounting may result in distortion of gear

### Alternate Cab Wall Boot

- For vehicles produced **prior** to 1<sup>st</sup> week of January 2017. A change of the upper steering column happened in November of 2014 (4mm shorter). With this change we believe an interference may have been created with the column boot on the cab wall. This may create undue pressure on the column shaft as it comes out of the cab wall.



- Pressure from the boot may be applied to the steering column shaft restricting it from turning freely. To check, disconnect upper steering shaft at base of column shaft. Remove boot (there may be a noticeable movement upward of the shaft). Reassemble steering shaft to steering column and test drive. If problem is resolved replace boot with 84723313 (Introduced into production 2017w01). Test drive after boot replacement to ensure problem is resolved before returning truck to customer.

### Alternate Steering Gear/Shaft Configuration

- On non-assist gear trucks we have a steering gear from Sheppard with a 90° miter box on top. This can be used with an Anthem 1 piece steering shaft.
  - Sheppard steering gear part # 8148-SD110PAE3.
  - Steering shaft 84703023 x 1.
  - Screw 25106380 x 2.
  - Nut 25098472 x 2.
- Follow Impact service procedures for gear and shaft replacement.
- Clearance to any component must be a minimum of 1”.
- Pillow block bearing bracket may be left in place and trimmed off or not.
- Slightly stiffer steering may result. May improve as components wear in.

- Use [84734967](#) as the causal part in the claim.



Solution visibility	<a href="#">Dealer distribution</a>
<b>Function(s)/component(s) affected</b>	
Function affected	steering , tires/wheels
<b>Function Group</b>	
Function Group	641 steering wheel, column lock, steering column, shaft
<b>Customer effect</b>	
Main customer effect	Poor straight-line directional stability , diagnostics/methodology , efficiency/abnormal behavior
Road behaviour	driveability
<b>Conditions</b>	
Vehicle operating mode	when driving , cornering
Frequency of occurrence of problem	always
<b>Administration</b>	

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