



## Drag Link and Pitman Arm Replacement

Service Category Service Department

Section Function Group 642

Technician Skill Level A

Market North America

### Applicability

Mack

Model Years	Models
2016-2021	MR, TE

### Introduction

At the request of [REDACTED] representative, Mack Trucks has authorized repairs on 2016–2021 model year MR and TE trucks operated by [REDACTED]. For the affected population, please follow the instructions below to replace the drag link and pitman arm, and to adjust the steering stops and pressure reliefs as needed.

### Production Change Information

This bulletin applies to vehicles built within the specified production changes below.

Brand	Engine	Emission Level	Starting Build Date	Ending Build Date
Mack	MP7	EM-USA14, EM-USA17	16-April-2015	21-October-2020

### Warranty Information

<p>This repair may be eligible for reimbursement if a product failure was experienced with in time and mileage limits of the applicable Warranty coverage. Reimbursement is obtained via the normal claim handling process.</p>		
Claim Type (used only when uploading from the Dealer Bus. Sys.)	B	
Main Labor Code	Description	Hours
6438-03-02-01	Link Rod, Replacement	0.7
6437-03-02-01	Pitman Arm, Replacement	2.0
6439-05-02-01	Steering Stop, Adjustment	0.4
1720-16-09-01	Campaign, General (0.1 X 2)	0.2
Causal Part	21129355, 21129340	
SCC Authorization Code	S4571	
Expiration Date	August 31, 2026	

## Parts Information

All parts are on mandatory return to TMAC

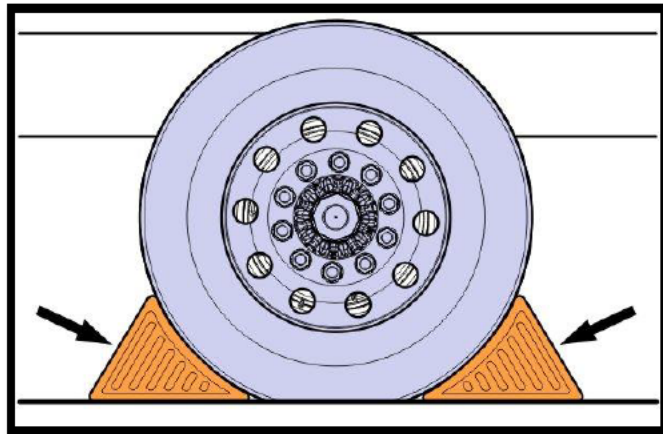
Part Numbers	Part Names	Quantity
21129355	Link Rod	1
21129340	Pitman Arm	1
993909	Hexagon Screw	1
994882	Washer	2
990954	Flange Lock Nut	1
25092079	Split Pin	1
20705040	Hexagon Screw	1
20705836	Lock Nut	1
8148-1790972K	Arm Retainer	1

## Required Tools & Equipment

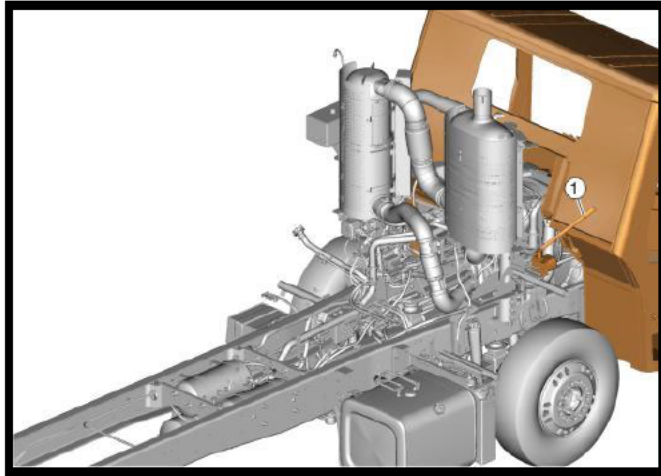
N/A

## Repair Procedure

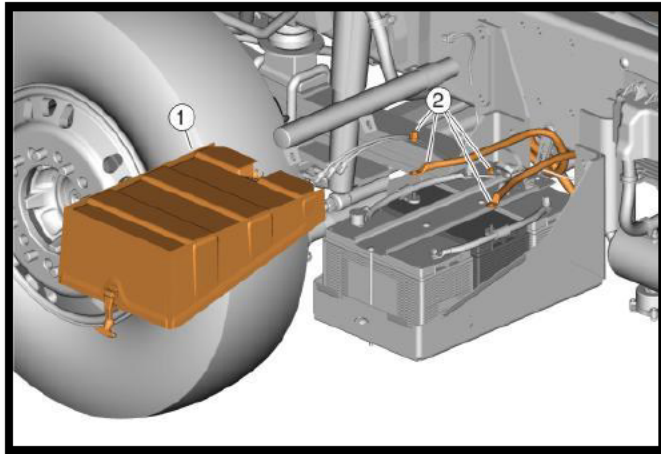
1. Park the vehicle on a level surface.
2. Apply the parking brake.
3. Place the gear lever in neutral.
4. Install the wheel chocks.



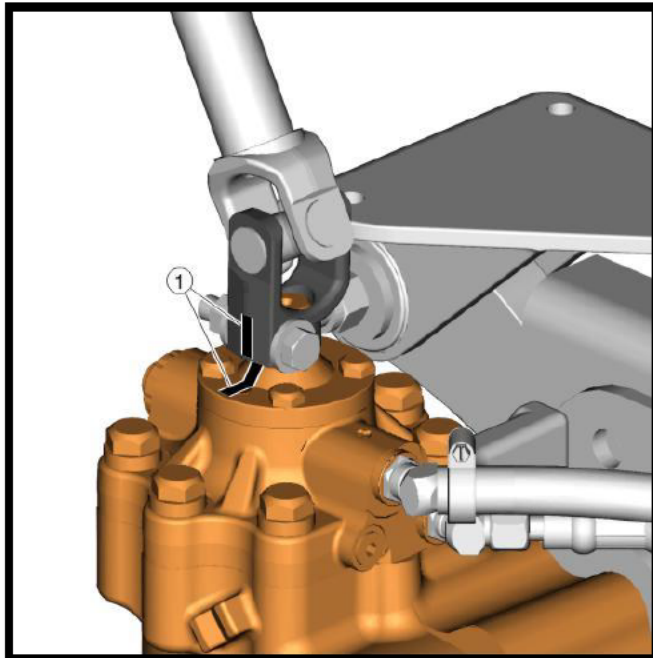
5. Raise the cab using the tilt pump.



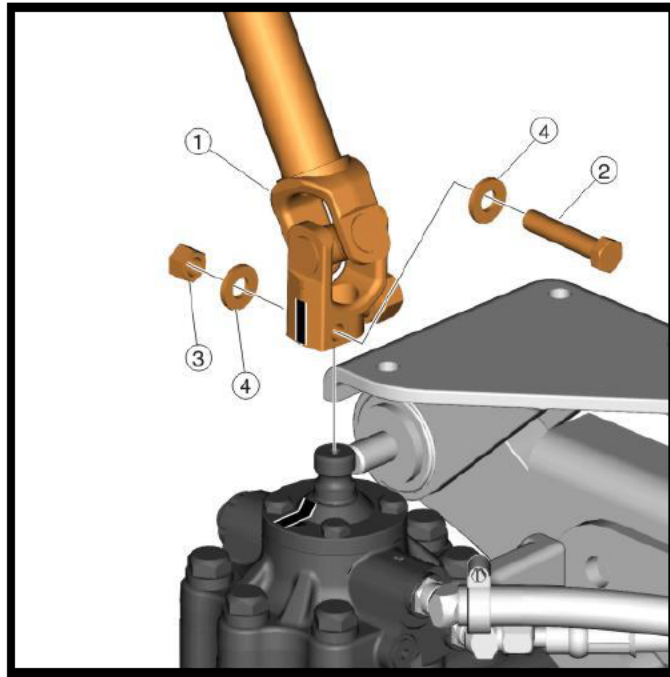
6. Remove the battery box cover and disconnect the negative battery cable.



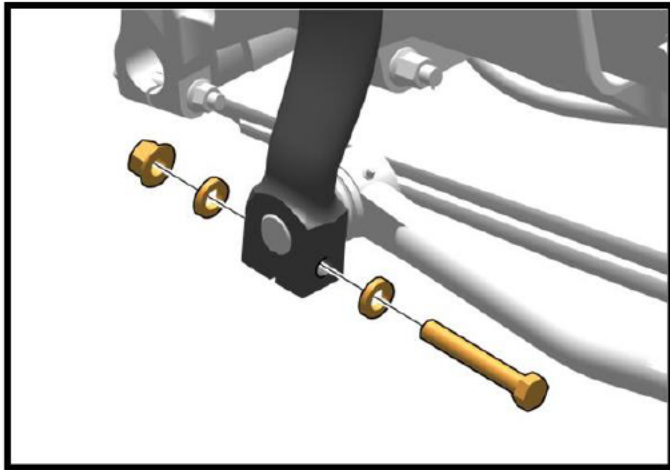
7. Mark the position of the steering gear shaft connection at the pinch bolt.



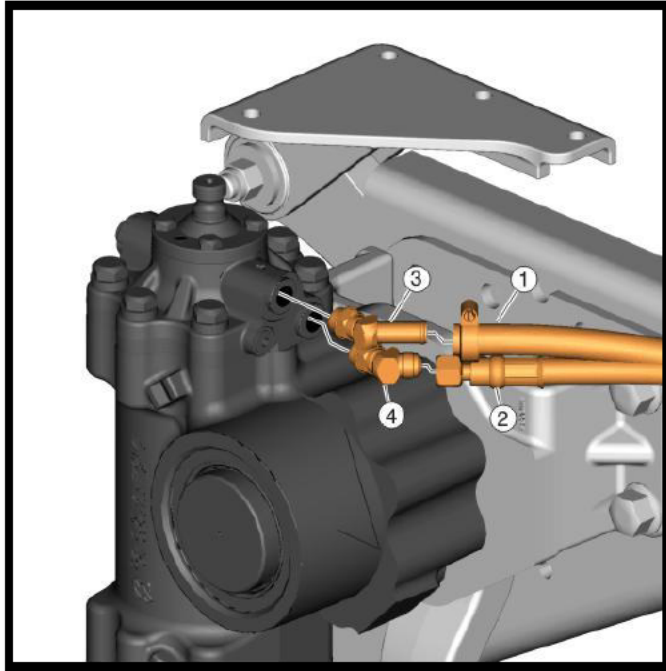
8. Remove the bolt and shaft from the steering gear.



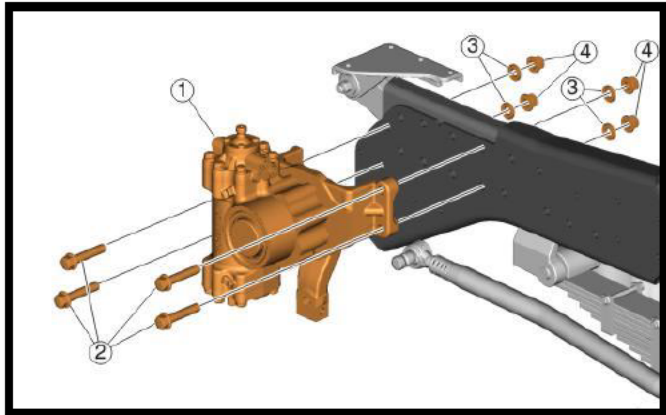
9. Remove the drag link pinch bolt.
10. Remove drag link from the pitman arm.



11. Use an approved container and drain the power steering system.
12. Disconnect the power steering lines from the steering gear.



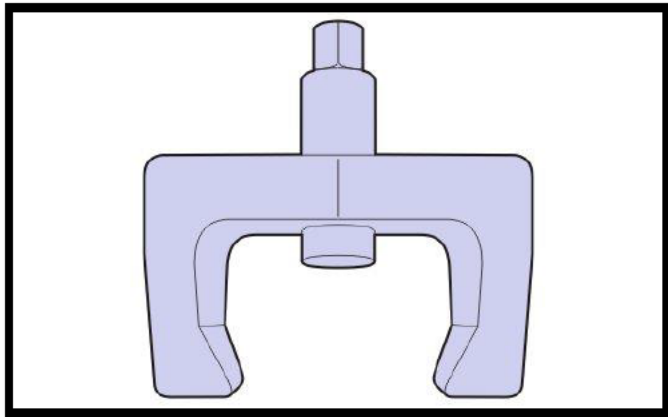
13. Position and attach a hoist to the steering gear.
14. Remove the steering gear mounting hardware.
15. Remove the steering gear from the chassis.



16. Put the steering gear on the work bench.
17. Release the locking tabs on the pitman arm retaining bolt.
18. Remove the bolt.



19. Using a puller, remove the pitman arm from the steering gear.

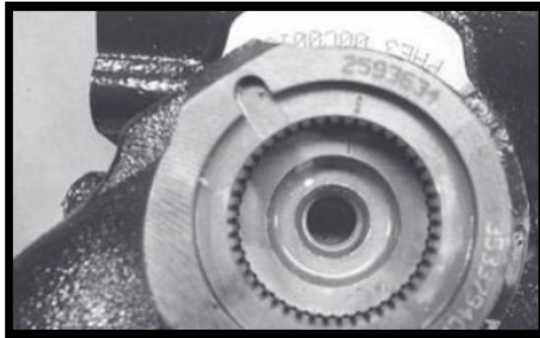


20. Position the new pitman arm on the steering gear making sure to align the marks.

21. Install the new pitman arm retaining bolt and torque to spec.

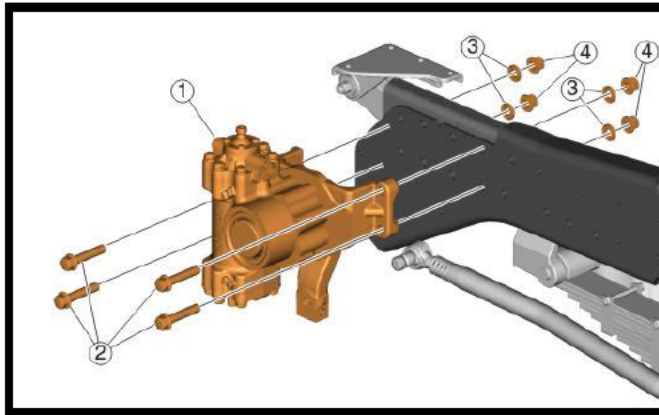
Tightening torque	
Pitman arm, bolt	Torque tighten the nut to 746 Nm (550 lb ft) and then tighten the nut until the notches are aligned with next bent tab of the washer.

22. Bend the locking tab into place.



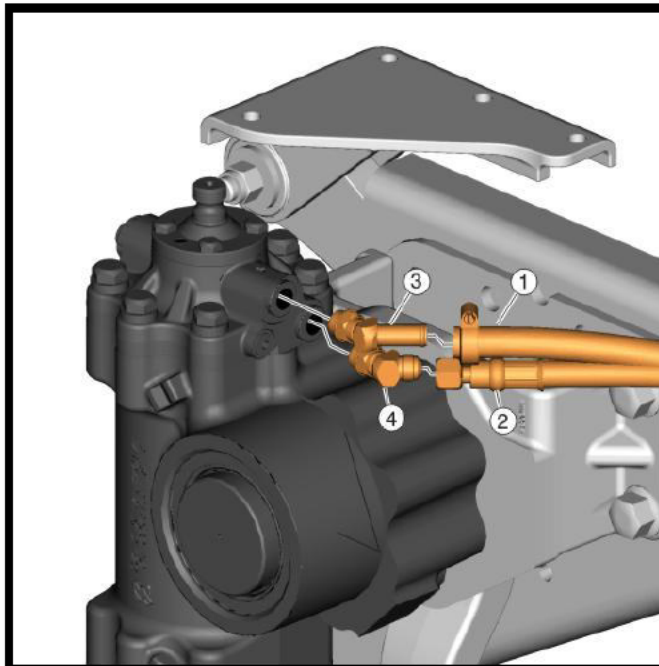
23. Using a hoist, install the steering gear on the frame.

24. Install the original steering gear mounting hardware and torque to spec.

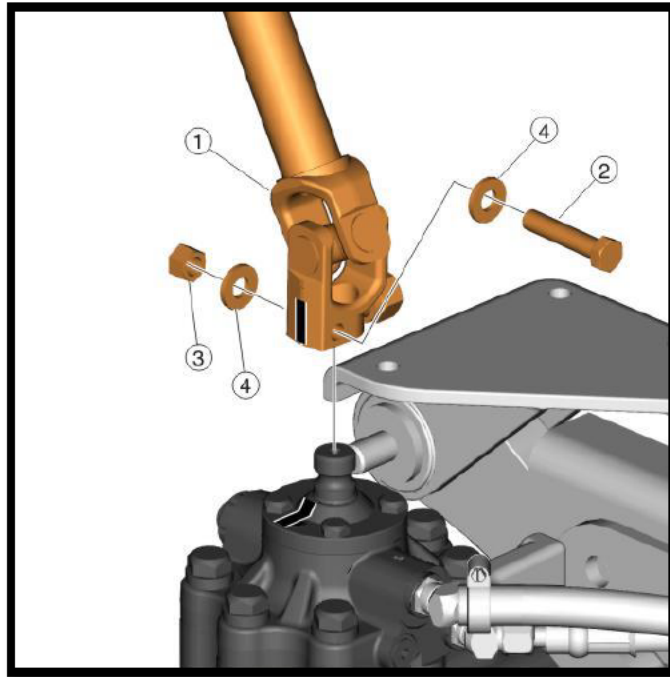


Tightening torque	
Steering gear mounting, bolts	370 ±50 Nm (273 ±37 lbf-ft)

25. Connect the power steering oil lines to the steering gear.

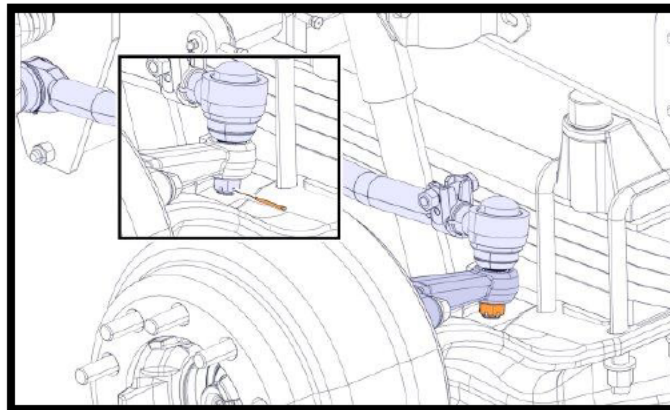


26. Install the steering shaft onto the steering gear making sure to align the marks made during removal.
27. Install a new pinch bolt and flange lock nut and torque to spec.

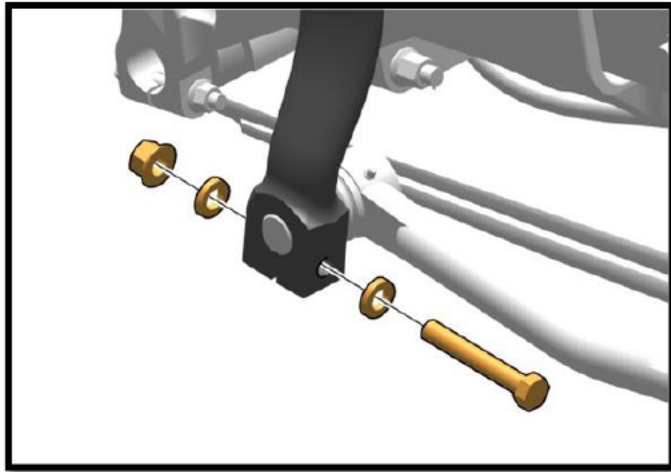


Tightening torque	
Steering shaft, bolts	30 ±3 Nm (22 ±2 lb <sub>f</sub> -ft)

28. Remove the split pin and nut.

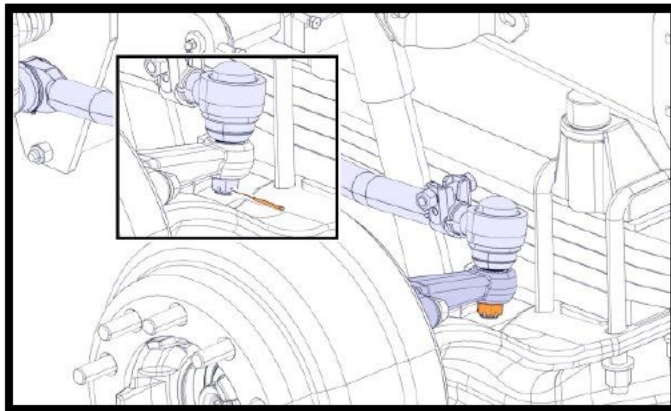


29. Remove the old drag link.
30. Install the new drag link on the steering knuckle and pitman arm.
31. Install new drag link pinch bolt and lock nut, torque to spec.



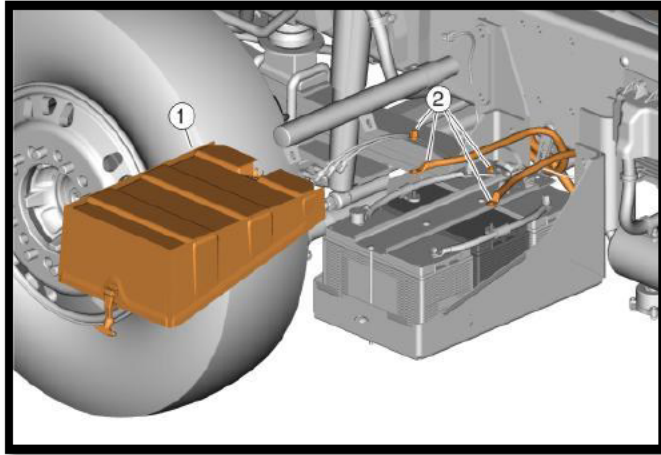
Tightening torque	
Pitman arm, lower nut	275 ±20 Nm (203 ±15 lb <sub>f</sub> -ft)

32. Torque the drag link to knuckle nut and install new split pin.



Tightening torque	
Link rod, nut	340 Nm (251 lb <sub>f</sub> -ft)

33. Fill the power steering reservoir to the proper level.  
34. Connect the negative battery cable and install the cover.



35. Lower the cab, start the engine and turn the steering wheel lock to lock to purge air from the system.
36. Verify the correct power steering fluid level.
37. Verify the steering Curve angle adjustment following Impact repair document **Identity 142168285 Curve angle, adjustment.**
38. If relief plunger adjustment is required follow the manufactures procedure for adjustment. [RH Sheppard Sheppard Service Bulletins and Manuals - RH Sheppard](#) and click on the D Series Manual.
39. Remove wheel chocks.

