

SAFETY RECALL

Mack Trucks Inc.
Greensboro, NC USA



Date	Number	Release	Page
05.2022	SC0434	01	1(9)

Mack LRE Steering Assist LRE

RECALL INFORMATION

(May 2022)

Mack Trucks has determined that certain 2021-2023 model year LRE vehicles could experience an increased torque on the steering wheel due to pressure drop in the power steering system. On affected vehicles there is a potential for the driver to lose hydraulic assist during strong steering/evasive maneuvering which may result in a vehicle crash, property damage and/or personal injury.

Mack Trucks has not received any complaints or reports of vehicle crashes because of this safety issue; therefore, Mack considers this as a proactive measure to protect the public and Mack's customers from the potential risk associated with this defect.

To ensure that these vehicles meet Mack's stringent quality requirements, follow the instructions outlined below to replace the steering gear, pitman arm, steering gear return hose, servo pump's power cable, and to reprogram the electronic control module.

VEHICLES AFFECTED

Certain Mack LR Battery Electric Vehicles manufactured between February 20, 2022, and March 07, 2022.

VEHICLE QUANTITY

There are 37 vehicles affected by this recall. (33 US, 4 CAN)

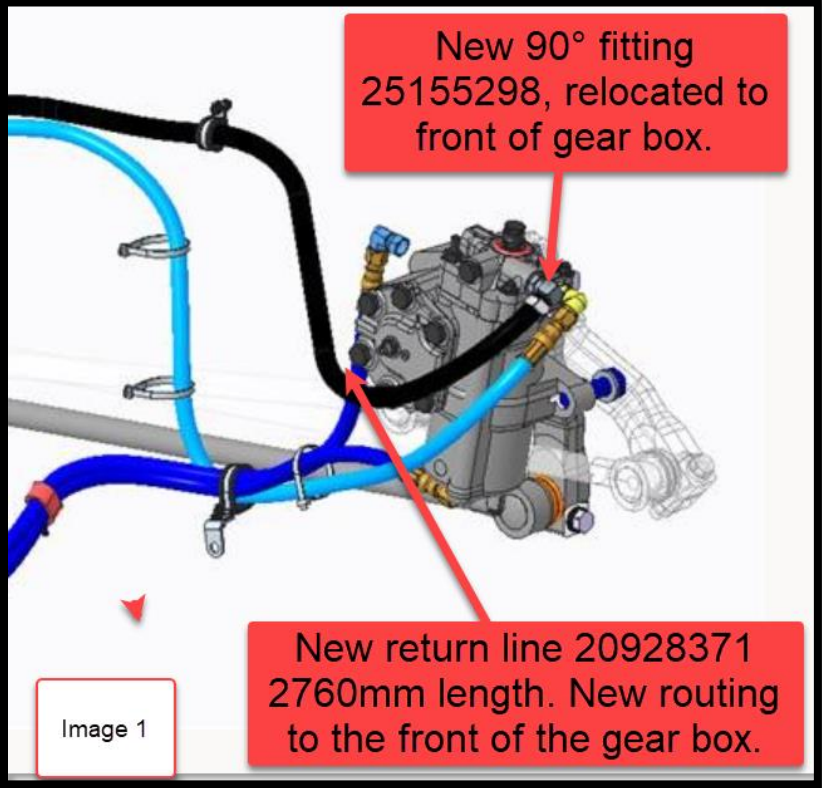
Parts

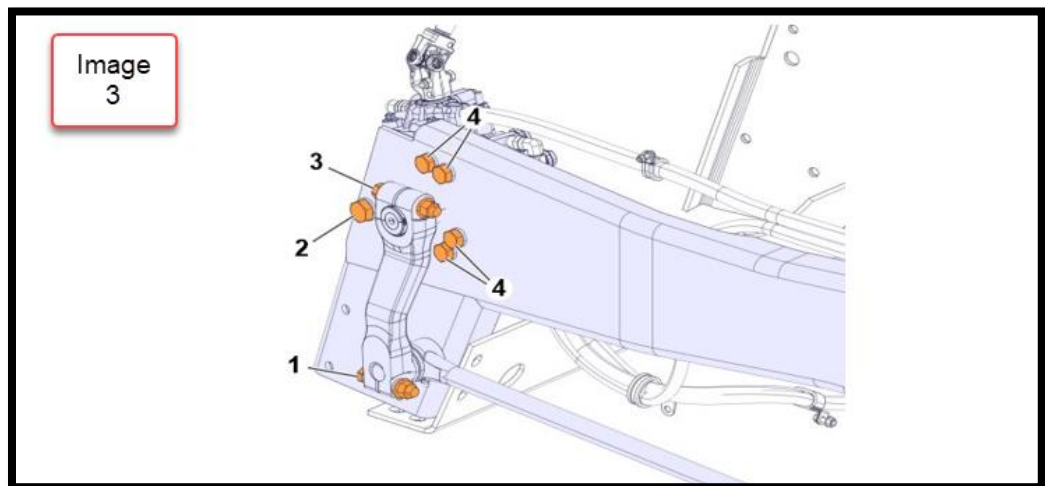
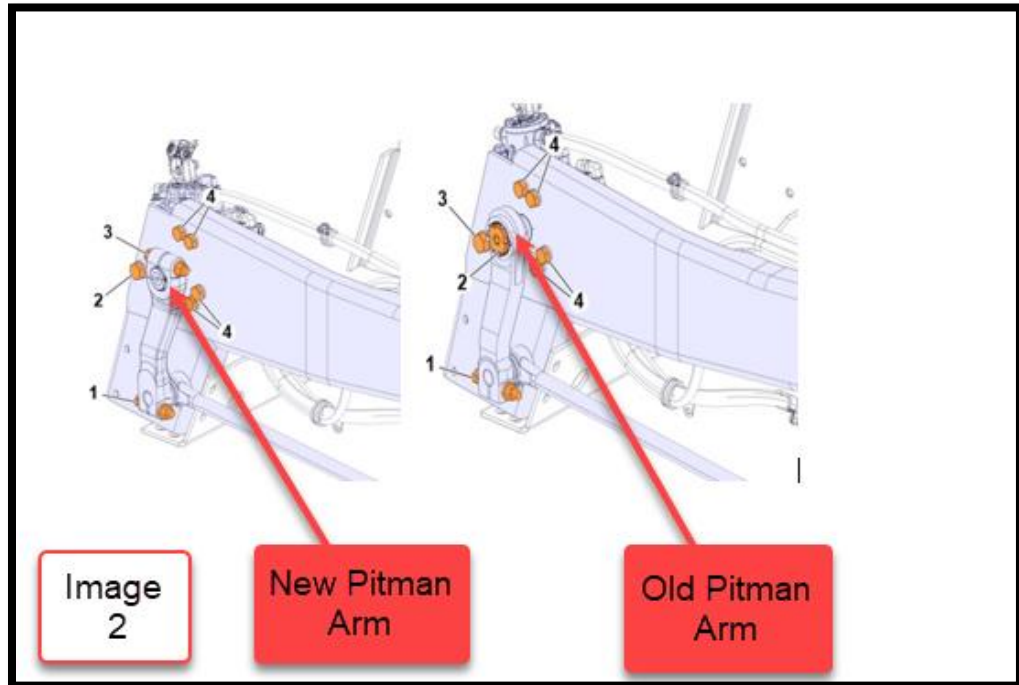
Note: When ordering parts you must request the steering gear, pitman arm, and servo pump power cable by emailing Chris Mann at chris.mann@volvo.com. Chris will then ship these parts directly to your location. All other part listed will need to be ordered through the normal ordering process.

Part Number	Part Description	Quantity
25174675	Steering Gear (Do not order see note above)	1
23118147	Pitman Arm (Do not order see note above)	1
24298026	Servo Pump's Power Cable (Do not order see note above)	1
20928371	Steering Gear Return Hose (cut to length, 2760mm)	1
25155298	Fitting (90 degree)	1
25106380	Screw 7/16-20	1
25098472	Nut retainer	1
990993	Locking Nut M20 by 20.3	1
992479	Hexagon screw	1
994884	Washer	2
25107354	Hexagon screw	4
25093315	Washer	4
25165443	Hexagon screw	1
990954	Lock nut M16	1
994882	Washer	2
993909	Hexagon screw	1

Repair Instructions
Hardware replacement

1. Secure Vehicle for Service.
2. Follow operation **6421-03-02-01** in Impact **Steps 1 – 67** for replacement of the steering gear and pitman arm. Changes listed below are needed to adapt new gear box and pitman arm to chassis.
 - a. New Steering Gear has the return port located on the front side of the steering gear. This requires a new 90° fitting (25155298) and a longer return hose requiring a routing change See image 1 below.
 - b. New steering gear also requires a new style pitman arm (23118147), The new pitman arm attaching point is a pitch type instead of a taper fit. See image 2 below.
 - c. When performing **steps 55-56**, all new mounting hardware is required for the installation of the gear box and a new style pitman arm. Torque all hardware to spec. See image 3 below.





Tightening torque		
Item	Description	Torque
1	Pitman arm, screw	275 ± 20 Nm (203 ± 15 ft-lb)
2	Steering gear, screw	644 ± 34 Nm (475 ± 25 ft-lb)
3	Pitman arm, screw	450 ± 40 Nm (332 ± 30 ft-lb)
4	Steering gear, screw	427 ± 20 Nm (315 ± 15 ft-lb)

3. Install new steering gear to reservoir return hose (20928371 cut to length, 2760mm), ensure proper routing around steering gear found in image 1 above. Torque both return hose clamps to spec.

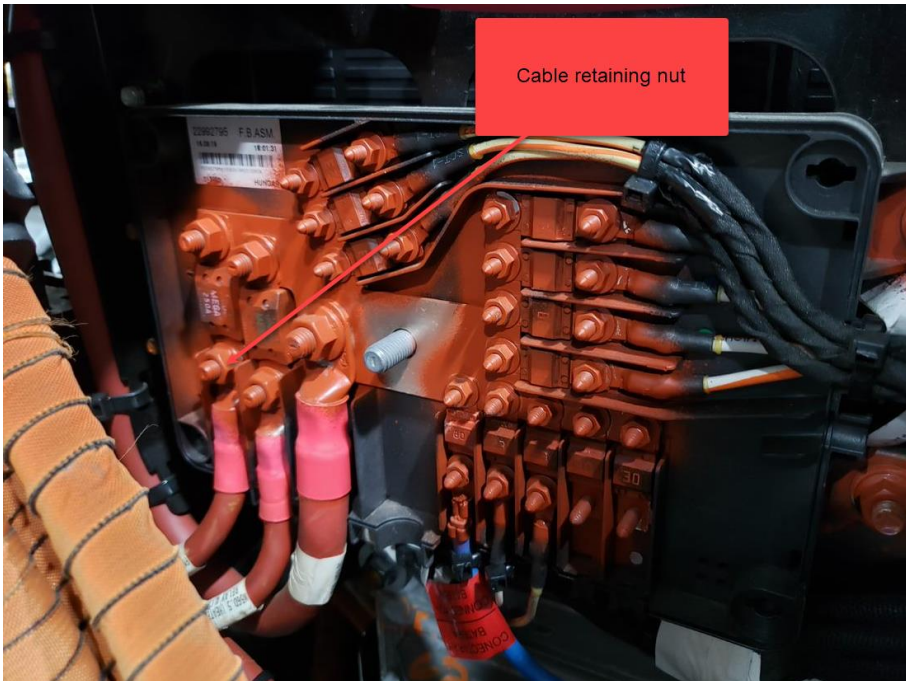
Tightening torque	
Steering gear, hose clamp	5 ± 0.5 Nm (4 ± 0.4 ft-lb)

NOTE
Do not installing any covers and fuses that were removed in Steps 1 – 67 at this time

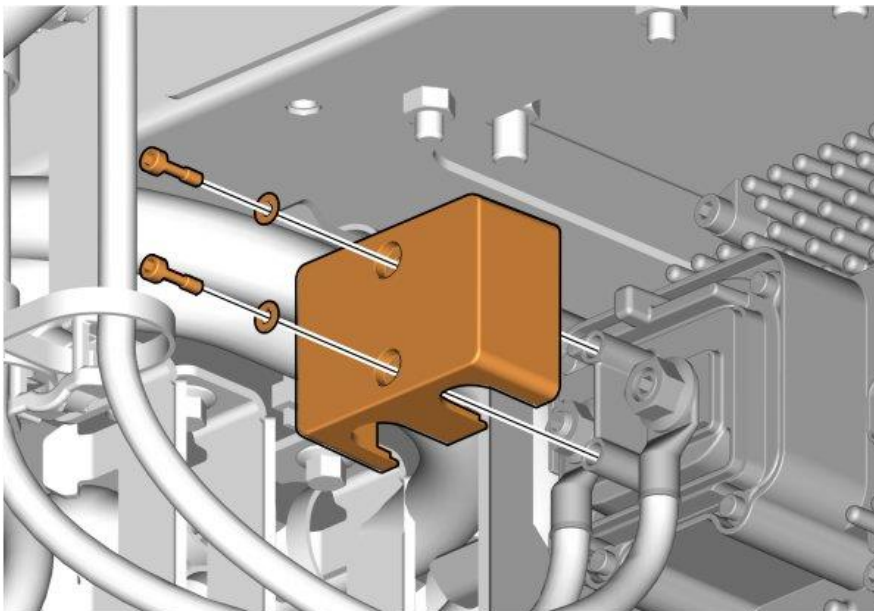
4. Remove the cover on the Fuse Box (shown below).



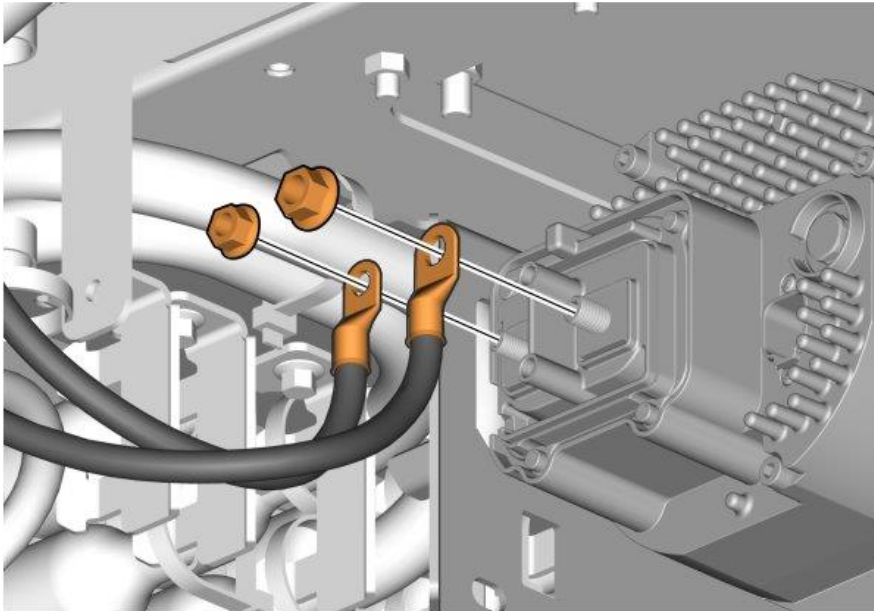
5. Remove the retraining nut and positive power steering cable from the fuse box.



6. On the power steering pump, remove the two screws and cover to gain access to the power cable terminal.



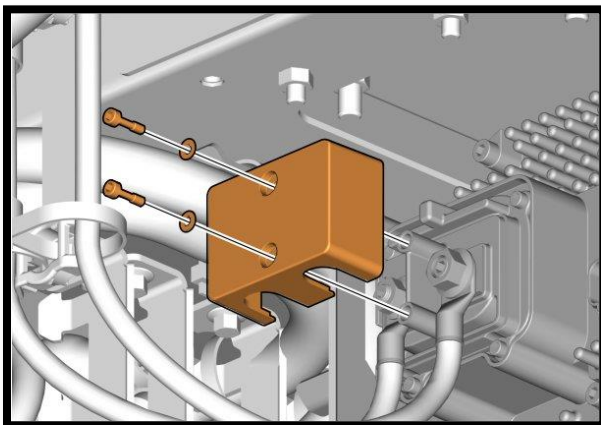
7. Remove **ONLY** the **positive** power cable terminal nut and remove cable.



8. Cut all cable ties securing the power cable and remove it from the chassis.
9. Install new power cable (24298026) making sure to route in the same location as the old one.
10. Install cable terminal onto servo pump stud and torque to spec.

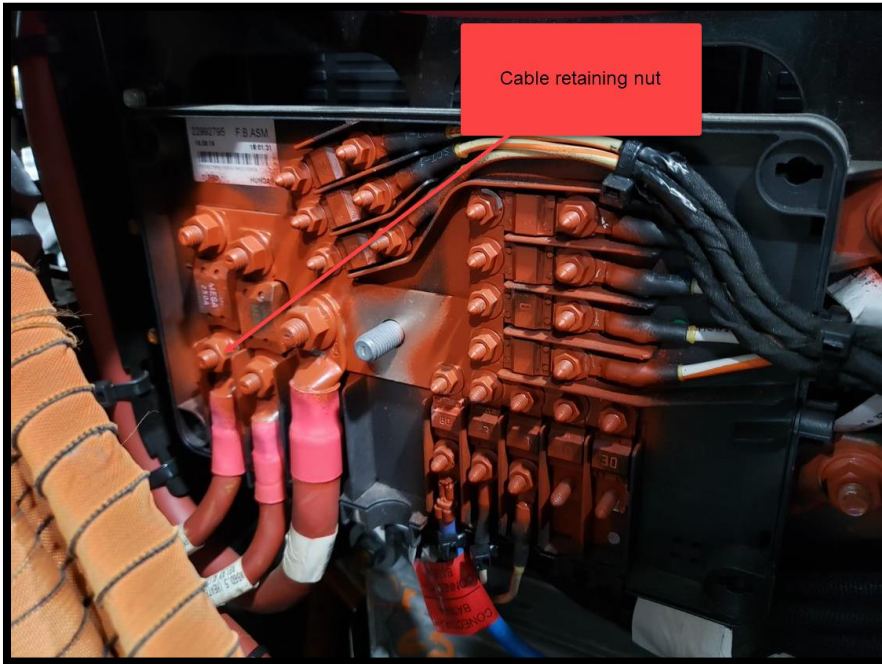
Tightening torque	
Servo pump cable (M8) nut	10 ± 3 Nm (7 ± 2 ft-lb)

11. Install cover and screws on servo pump and torque to spec.



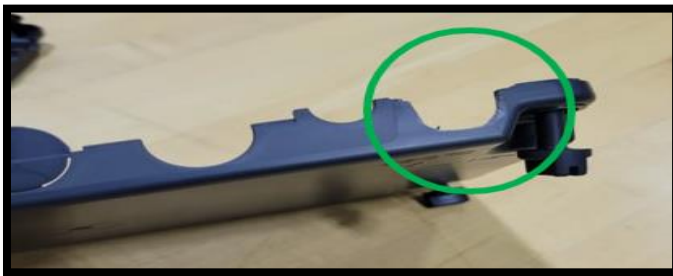
Tightening torque	
Servo pump, cover, screws	1 Nm (1 ft-lb)

12. Install new power cable terminal in fuse box and torque to spec.



Tightening torque	
Fuse box, cable nut	20 ±3 Nm (15 ±2 ft-lb)

NOTE
It may be necessary to modify the fuse cover for proper fitment of the new power cable. (See below)



13. Install fuse box cover.



14. Follow operation **6421-03-02-01** in Impact **Steps 68-121** to complete steering gear replacement and bleed air from system.

Software Install:

15. Connect PTT to truck and run operation **1700-22-03-06** using accessory kit Part # **85163833**
16. Confirm operation of power steering system.
17. Return vehicle to service.

REIMBURSEMENT

This repair is covered by an authorized Safety Recall. Reimbursement is obtained through the normal claim handling process.	
	UCHP Reimbursement
Claim Type (used only when uploading from the Dealer Business System)	40

Recall Status	
Vehicle repaired per instructions	1-Modified per instructions
Labor Codes	
6421-03-02-01 Steering Gear, Replacement	2.5
3714-03-02-16 Power Cable, Power Steering Pump, Replace	0.5
6459-03-02-01 Power Steering Hose, Replacement	0.6
1700-22-03-11 Campaign, Programming	0.3
Causal Part	23056973
Authorization Number	C6641

Note: Dealers are to perform Safety Recalls on all subject vehicles at no charge to the vehicle owner regardless of mileage, age of vehicle or ownership (original purchaser or subsequent purchasers). Whenever vehicles are subject to a Safety Recall are brought to your dealership for service, or taken into your dealership vehicle inventory, it is strongly recommended that every effort be made to perform the recall correction before the vehicle is sold or released to the owner.