



Troubleshooting Report

INFORMATION REDACTED PURSUANT TO THE FREEDOM OF INFORMATION ACT (FOIA), 5 U.S.C. 552(B)(6)

POWER STEERING TROUBLESHOOTING REPORT

Mack Trucks, Inc.
Volvo Trucks North America, Inc.

Dealer Code	Dealer Name		[Redacted]		[Redacted]	
Chassis Model	Serial Number	Delivery Date		Month	Year	Engine Hours
VAD	195547			9	2018	
Description of Complaint <i>no power steering to the left Box dumps but holds psi both left & right</i>				Steering Gear Model		Original Gear Serial Number
				Original Replacement		
				Pump Model		Original Pump Serial Number
				Original Replacement		
				Model & Serial Number of Assist Cylinder/Slave Gear		
				Reservoir Location		Capacity
						Fluid Used
Prior Gear Failure?		Application				
☐ Yes ☒ No		☐ General Freight ☒ Dump ☐ Tractor ☐ Tanker				
		☐ Off-Highway Only ☐ Platform ☐ In-City Only ☐ Other				

TEST DATA

(For complete diagnostic procedures and before testing, see the appropriate service manual and read the steering system component manufacturer's service manuals. Be sure that the wheel stops are properly adjusted before recording any data.)

Oil Temp at Reservoir	Flow at Idle		Flow at Governed RPM		Back Pressure at Idle	
70°	@No load		@No load		200	
Fahrenheit	@1000 psi load		@1000 psi load		Back Pressure at Governed RPM	
60	600		750		1400	
Max. Pump Pressure at Idle (Load Valve Closed)				Weight Distribution		
2700						
Max. Pump Pressure at Governed RPM (Load Valve Closed)				Chassis Only		
2700				Front Rear Front Rear		
				X X X X		
Static Steering Pressure on Dry Concrete				Steering Input Effort at		
Center to Full Right Center to Full Left				X Max. Right X		
1600 1100				Steering Wheel -lb.in. X Max. Left X		
INTERNAL LEAKAGE - Gear Relief Valve Bypassed if Possible				Relief Plungers Adjuster? ☐ Yes ☐ No		
Right Turn Left Turn				Max Right Turn Max Left Turn		
GPM - Max. PSI GPM - Max. PSI				Ross (TRW) GPM-PSI Ross (TRW) GPM-PSI		
1600 1100						
INTERNAL LEAKAGE with Assist Cylinder/ Slave Gear Isolated				Relief Plungers Adjuster? ☐ Yes ☐ No		
Right Turn Left Turn				Max Right Turn Max Left Turn		
GPM - Max. PSI GPM - Max. PSI				GPM-Max PSI GPM-Max PSI		
X X						

If further problems exist, or if problem is not solved, install a power steering analyzer in a location that permits visual observation while test driving. Record pertinent information. I.e. pressure during max. turn events, flow, temperature, and any other symptoms that may be useful.

Pressure: _____ Flow: _____ Temperature: _____
Describe correction and any additional comments here: new steering box

Date: _____ Replacement Authorized by Whom? _____

PV771-500-05 (11/05)

400839c



POWER STEERING TROUBLESHOOTING REPORT

Mack Trucks, Inc.
Volvo Trucks North America, Inc.

Dealer Code		Dealer Name		Customer Name			
Chassis Model	Serial Number	Delivery Date		Test Date		Miles	Engine Hours
		Month	Year	Month	Year		
Description of Complaint				Steering Gear Model		Original Gear Serial Number	
				Original Replacement			
				Pump Model		Original Pump Serial Number	
				Original Replacement			
				Model & Serial Number of Assist Cylinder/Slave Gear			
Reservoir Location				Capacity		Fluid Used	
Prior Gear Failure?		Application					
☐ Yes ☐ No		(Check One)		☐ General Freight ☐ Dump ☐ Tractor ☐ Tanker		☐ Off-Highway Only ☐ Platform ☐ In-City Only ☐ Other	

TEST DATA

(For complete diagnostic procedures and before testing, see the appropriate service manual and read the steering system component manufacturer's service manuals. Be sure that the wheel stops are properly adjusted before recording any data.)

Oil Temp at Reservoir 130° Fahrenheit	Flow at Idle		Flow at Governed RPM		Back Pressure at Idle		160
	@ No load	650	@ No load	250	Back Pressure at Governed RPM		200
	@ 1000 psi load	500	@ 1000 psi load	800			
Max. Pump Pressure at Idle (Load Valve Closed)				Weight Distribution			
2700				Chassis Only		Loaded	
Max. Pump Pressure at Governed RPM (Load Valve Closed)				Front		Rear	
2700							
Static Steering Pressure on Dry Concrete		Steering Input Effort at		Max. Right			
Center to Full Right	Center to Full Left			Max. Left			
1500	1000						
INTERNAL LEAKAGE - Gear Relief Valve Bypassed If Possible		Relief Plungers Adjuster?		☐ Yes ☐ No			
Right Turn GPM - Max. PSI	Left Turn GPM - Max. PSI	Max Right Turn		Max Left Turn			
1500	1000	Ross (TRW) GPM-PSI		Ross (TRW) GPM-PSI			
INTERNAL LEAKAGE with Assist Cylinder/Slave Gear Isolated		Relief Plungers Adjuster?		☐ Yes ☐ No			
Right Turn GPM - Max. PSI	Left Turn GPM - Max. PSI	Max Right Turn GPM-Max PSI		Max Left Turn GPM-Max PSI			

If further problems exist, or if problem is not solved, install a power steering analyzer in a location that permits visual observation while test driving. Record pertinent information, i.e. pressure during max. turn events, flow, temperature, and any other symptoms that may be useful.

Pressure: _____ Flow: _____ Temperature: _____

Describe correction and any additional comments here: _____

Date: _____ Replacement Authorized by Whom? _____

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