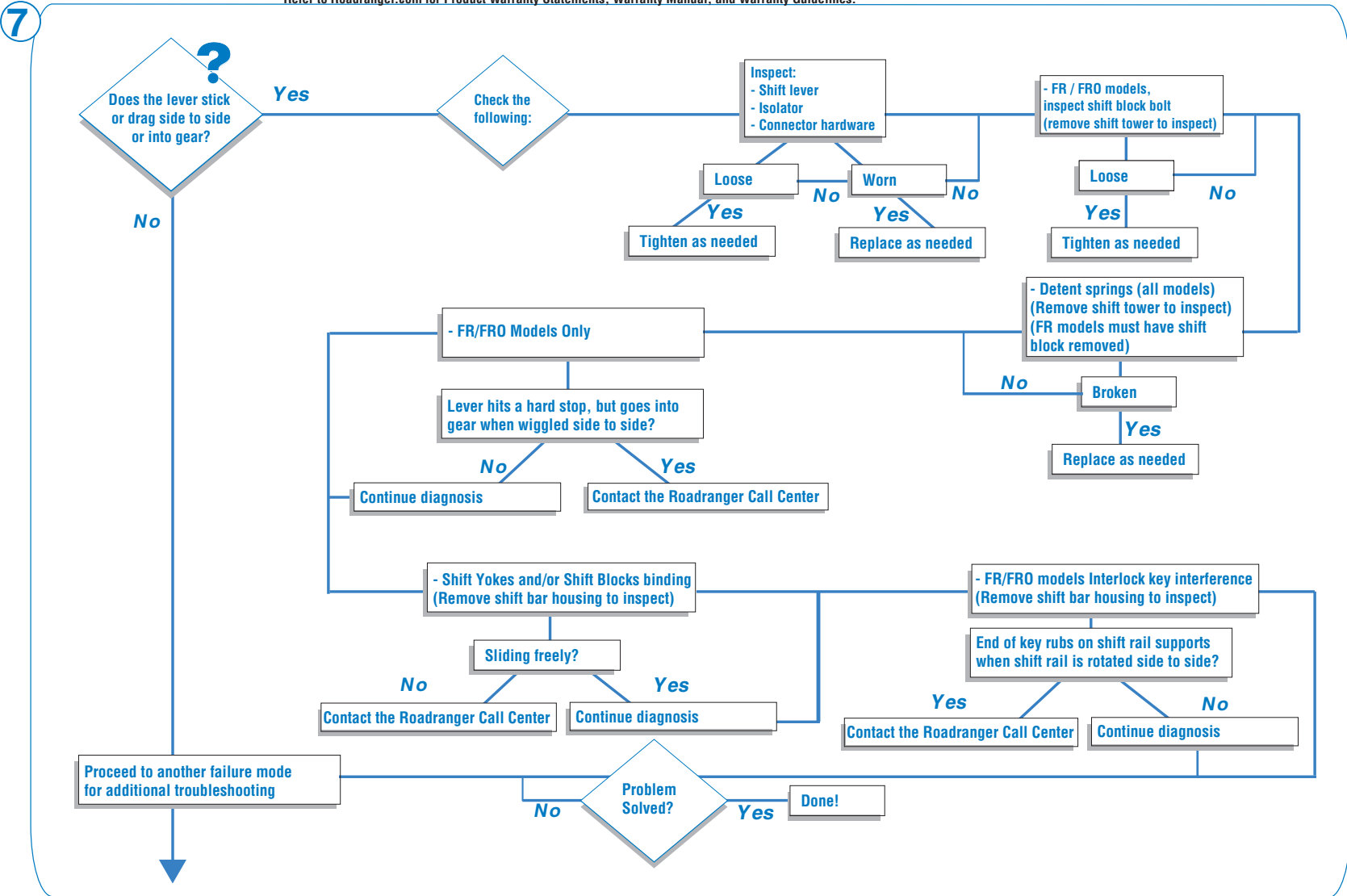


# Hard Shifting Diagnostics

**Important:** Use factory service manuals and procedures and refer to all applicable safety precautions when servicing vehicles.  
 This document is intended to assist with hard shift diagnosis. It does not guarantee an immediate solution nor does it guarantee warranty responsibility or reimbursement.  
 Refer to Roadranger.com for Product Warranty Statements, Warranty Manual, and Warranty Guidelines.

**Start**

- 1 Gather Information**  
 Customer, Vin, Mileage, Application  
 - When did the problem start?  
 - Transmission model, Serial number  
 - Lever or air shifting? If symptom occurs when air shifting, reference service manual.  
 - Hard shift with or without using clutch? Or both?  
 - Which lever position?
- 2 Road Test**  
 - Recreate hard shift  
 - Test drive through all lever positions low and high range using the master clutch  
 - Note how the lever engages into gear  
 - Note any complaint of gear engagement
- 3 Simulate Conditions**  
 - Gear lever position (high and low range positions)  
 - Vehicle loaded or unloaded?
- 4 Record Findings**  
 - Record how the lever engages into gear  
 - Gear lever position of failure? High or low range? Specify.
- 5 Preliminary Inspection**  
 - Verify transmission problem  
 - Pay particular attention to:  
 - OEM levers  
 - OEM shift boots  
 - OEM specified detent spring (see Bulletin 2005-FSUD-693)  
 - Levers designed by OEMs  
 - Cab interference with shift lever  
 - Remote control linkage LRC (Low Remote Control) and SRC (Single Rod Control)
- 6 Problem Not Determined**  
 - Remove all lever shift boots during troubleshooting  
 - Re-test per Step 2  
 - If problem is identified, proceed to Steps 7-12  
 - Contact the Roadranger Call Center



For parts or service call us  
Pro Gear & Transmission, Inc.



**1 (877) 776-4600**

**(407) 872-1901**

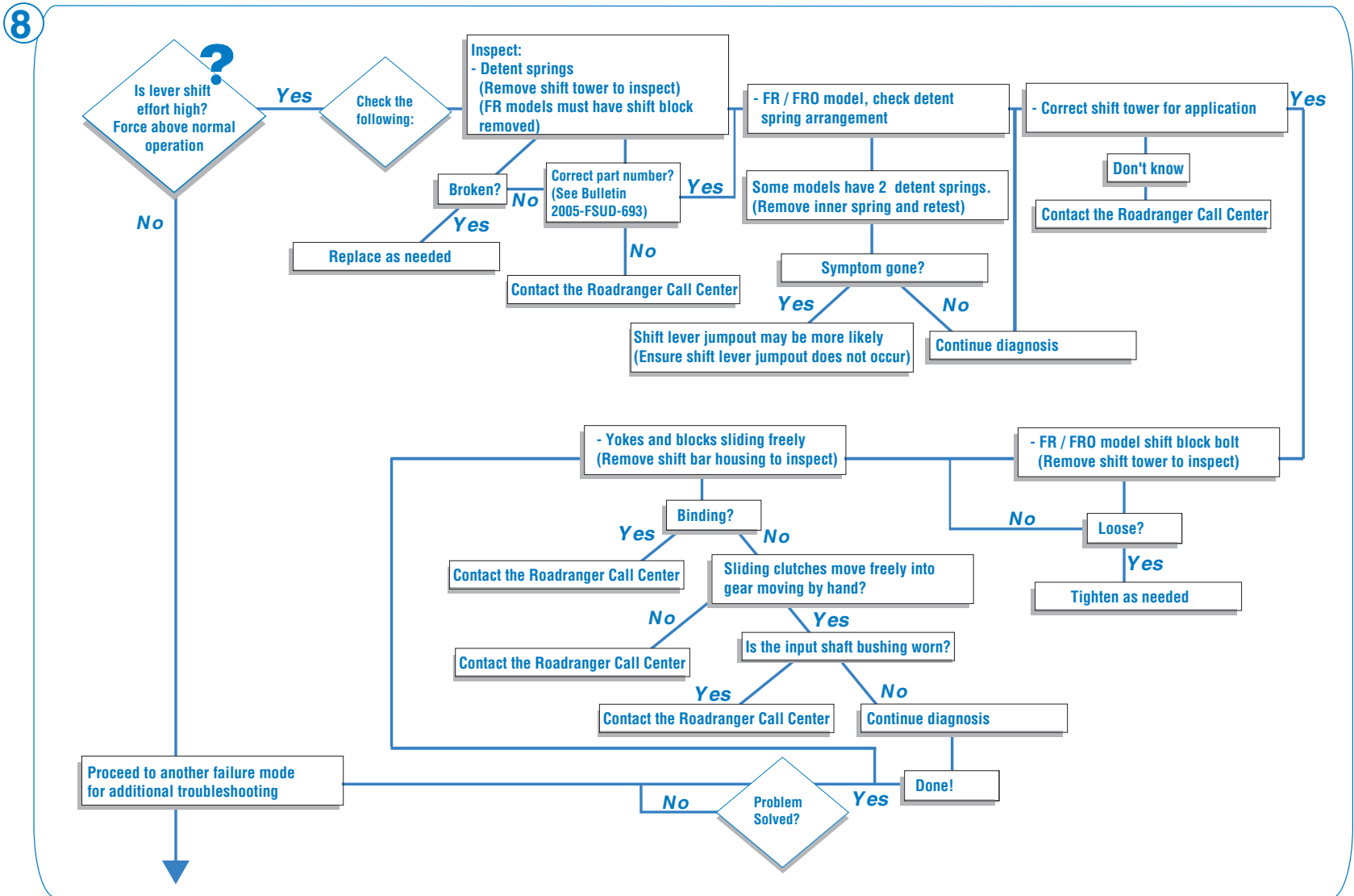
**parts@eprogear.com**

**906 W. Gore St.**

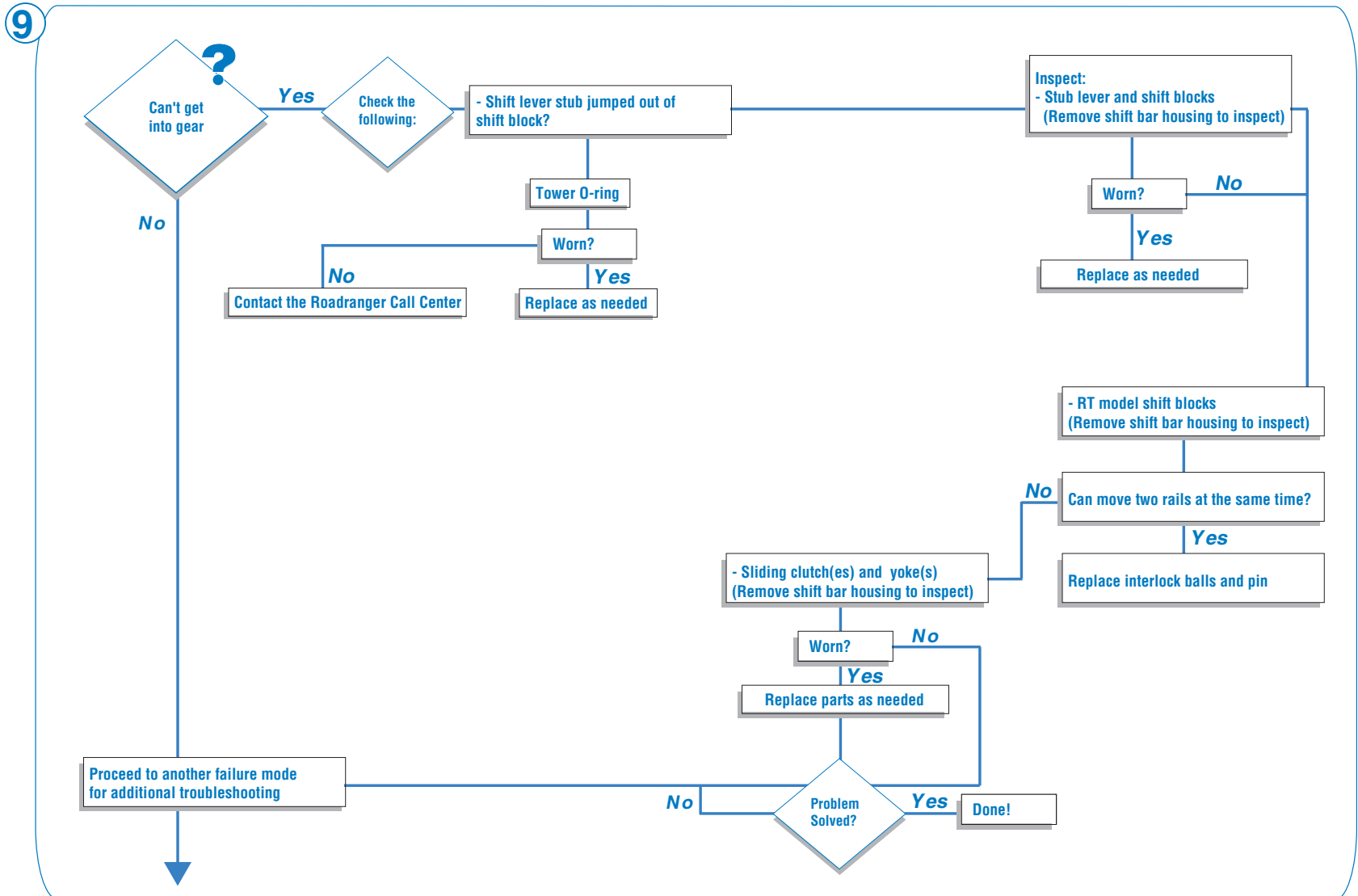
**Orlando, FL 32805**



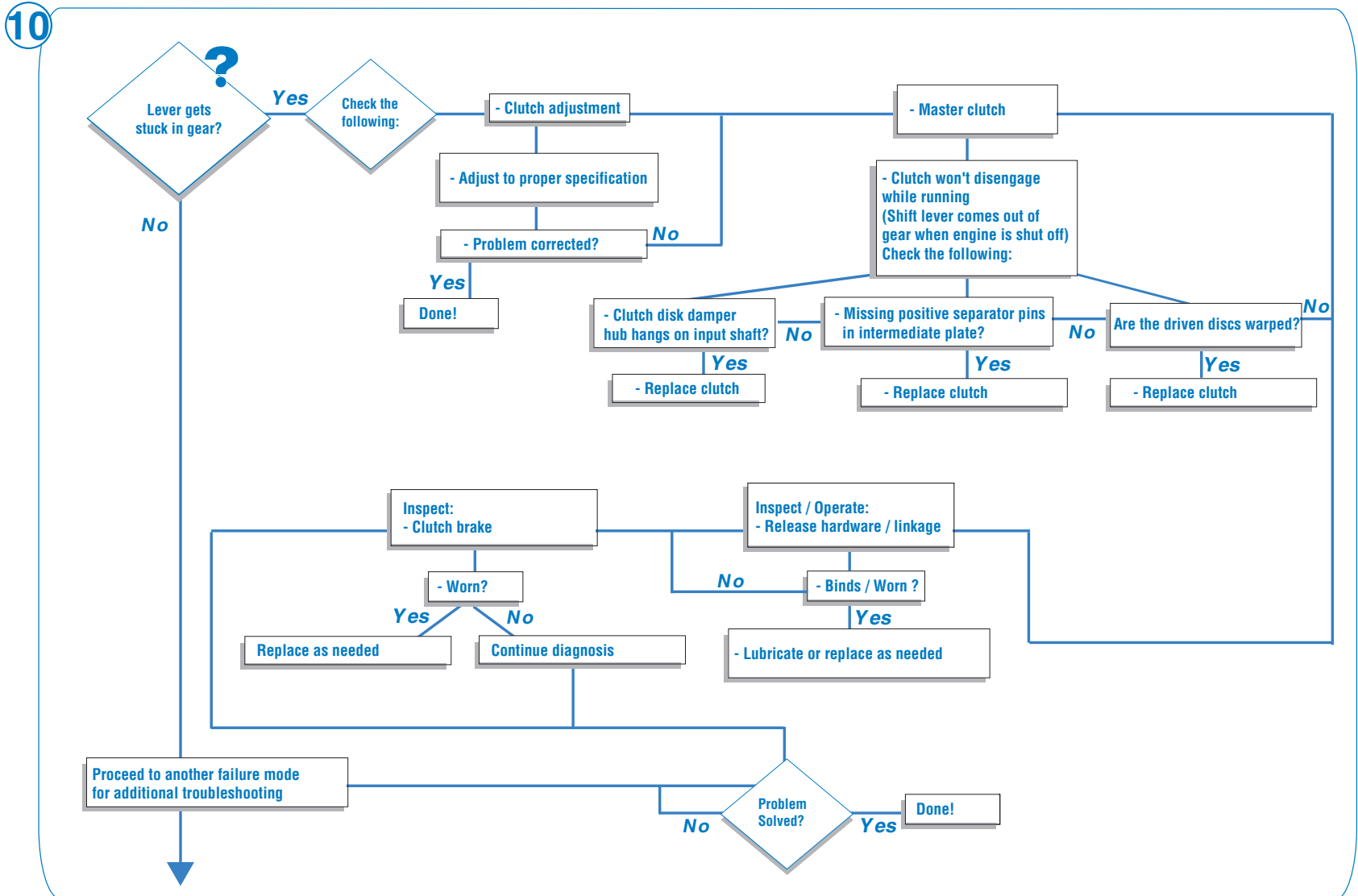
# Hard Shifting Diagnostics



# Hard Shifting Diagnostics

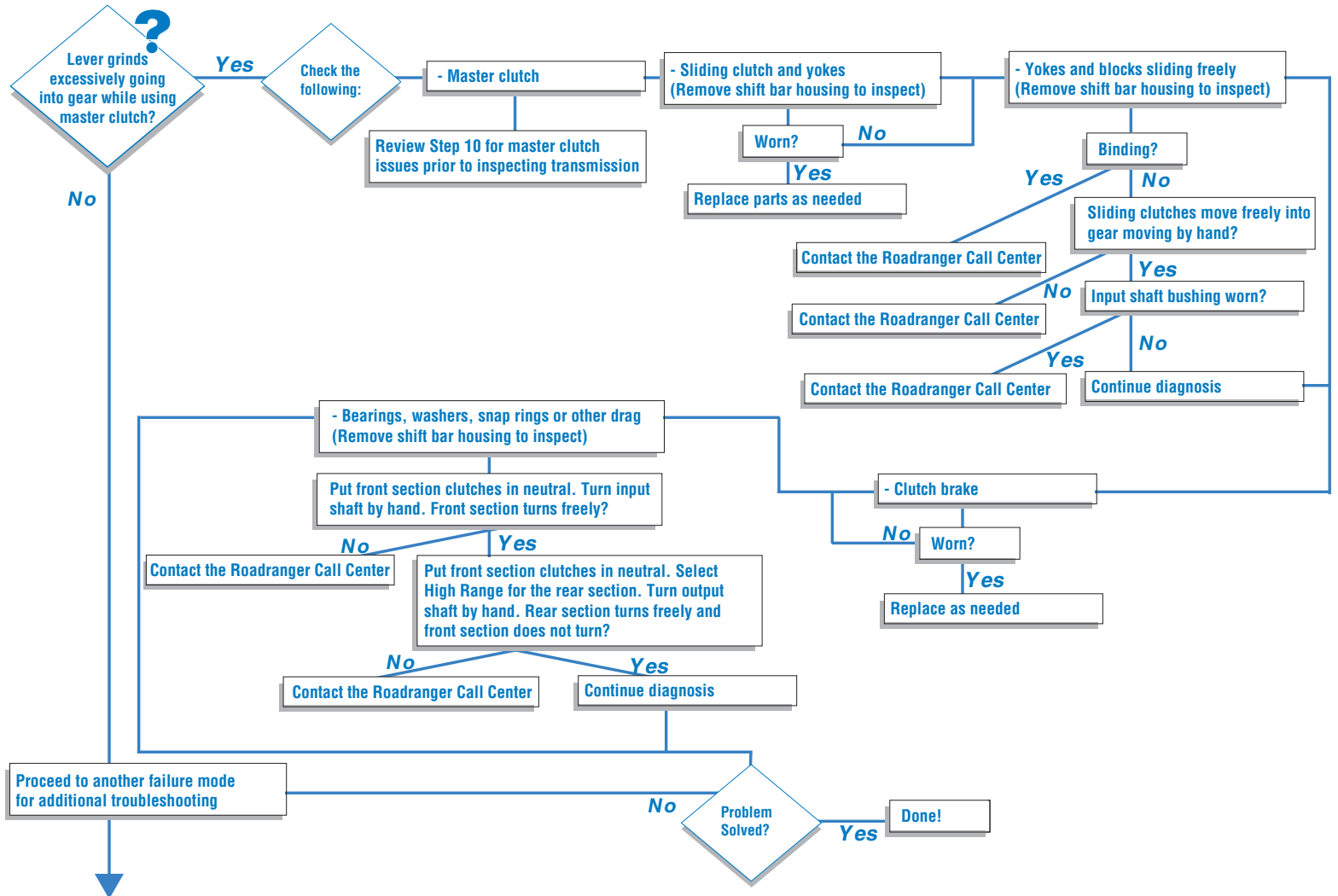


# Hard Shifting Diagnostics



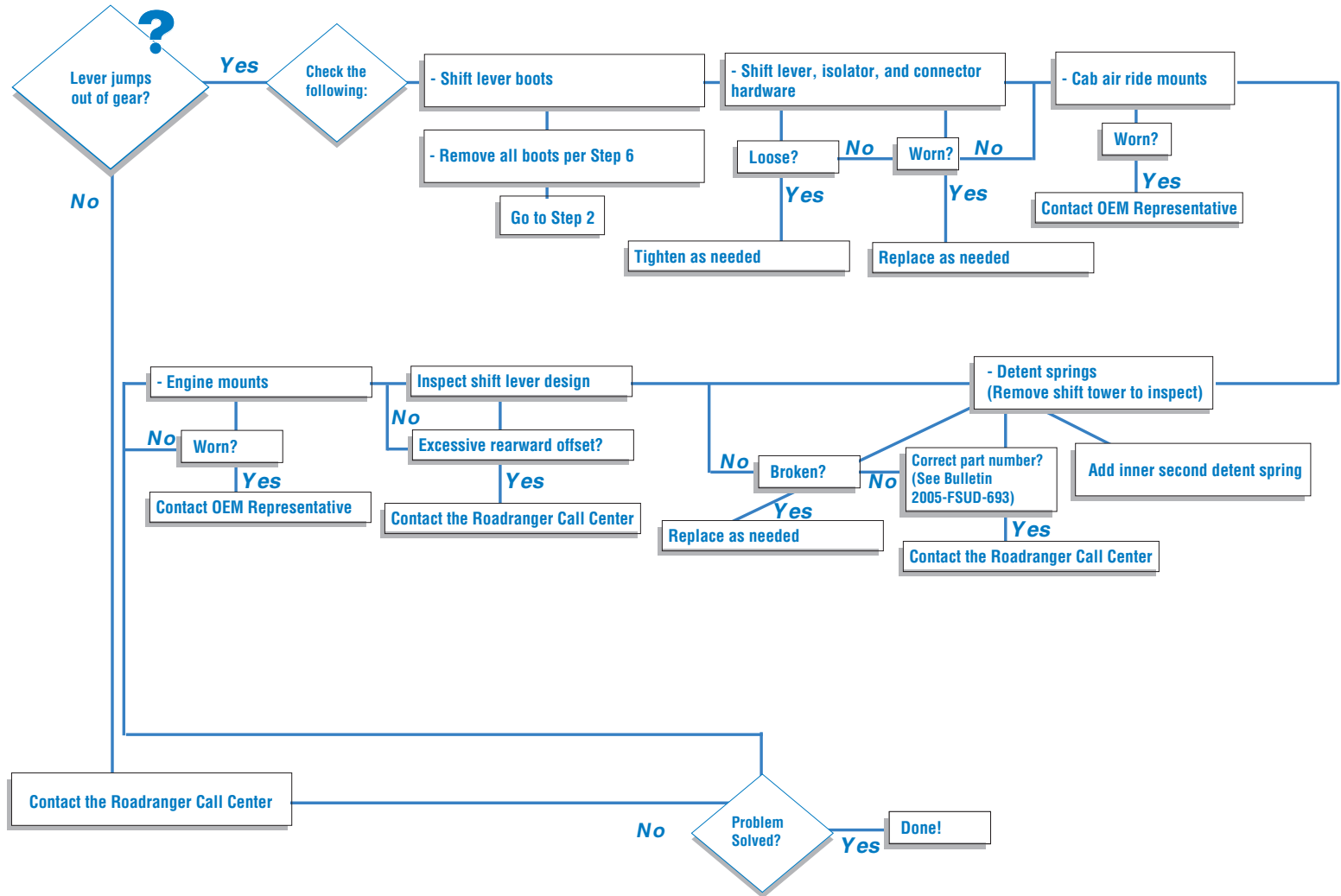
# Hard Shifting Diagnostics

11



# Hard Shifting Diagnostics

12



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