Tech Paper CB#_024109

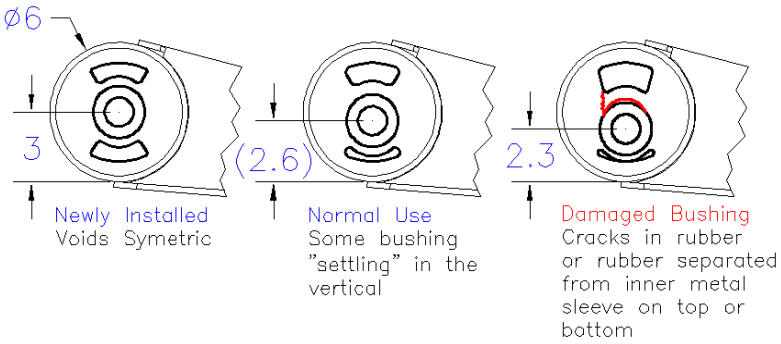
CUSTOMER BULLETIN

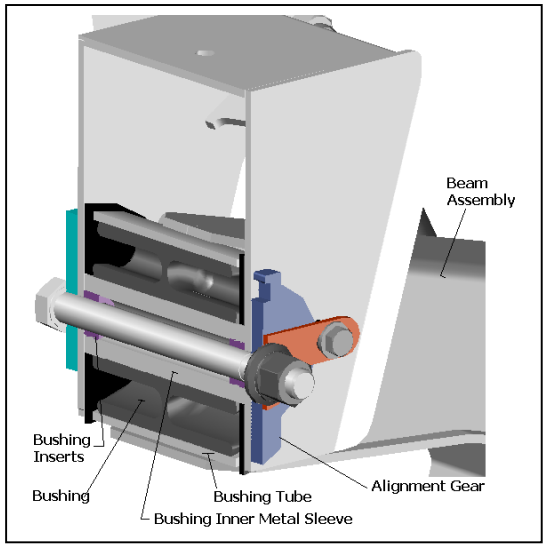
DATE: **February, 2010**
SUBJECT: **"Dual Rate" Pivot Bushing Inspection**

Pivot Components
The pivot of a suspension component is a main link to connect the suspension to your trailer. This link provides a resilient connection that allows an axle to walk without excessive flexing. Re-bushing of a suspension may require the use of a bushing removal/installation tool and bushing kit, containing the required components for re-bushing. Contact Cush for information regarding the tool and the proper kit for your suspension and review any instructions on your suspension drawing.

The "Dual Rate" pivot bushing is a standard part on most of our trailing arm suspensions. Proper operation of this bushing is a key component to suspension life. Bushings are a replaceable item of an air suspension and when maintained can extend the life of your air suspension and trailer. Some things can indicate it is time to replace bushings: Uneven tire wear, poor ride characteristics, broken or torn air springs, broken shocks, loose pivot bolt hardware.

Inspection:
With the trailer unloaded, the pivot bushing should be inspected visually and by measuring the bushing "settle". Do not take apart the pivot connection to inspect the bushing unless the bushing "settle" is ¾" or more or other visual indicators lead you to believe the bushing is bad. If you disassemble the pivot connection to visually inspect the bushing and find a bushing that has a rubber crack or rubber to inner metal sleeve separation, replace the bushing and pivot hardware. Also, visually inspect the beam and hanger for any metal damage.





Inspection Measurement:
Because some different suspensions have different hanger heights, measure on the outside of the hanger from the bushing pivot bolt center to the bottom of the frame hanger = **Y**. Then measuring on the inside of the hanger from the bottom of the frame hanger to the bottom of the bushing tube sleeve = **S**.

The newly installed measurement would be:
Y = **S** + **3**" (no void deflection)

The normal use measurement should show some bushing deflection. And a damaged bushing may show up in a measurement that has a bushing "settle" of ¾" or more:
S – (Y – 3) >= ¾"

CTO Model Example:
If **Y**=3" then **S** should not be greater than ¾"