

## VARIABLE GEOMETRY MECHANISM CHECKS - 6.7L

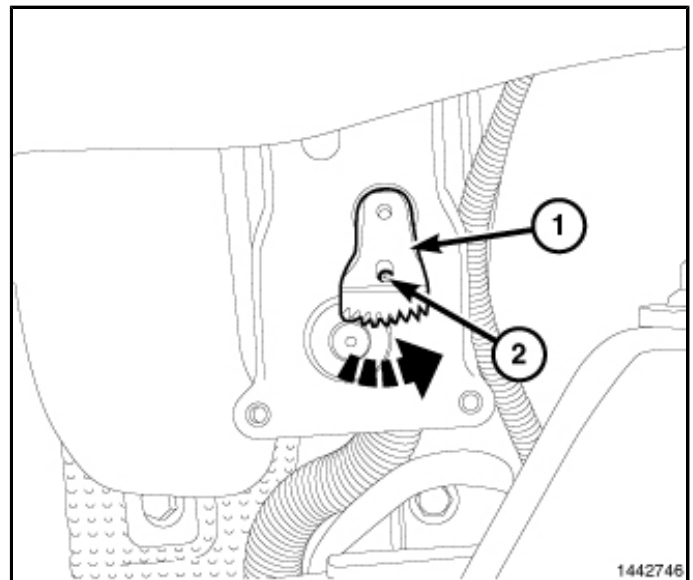
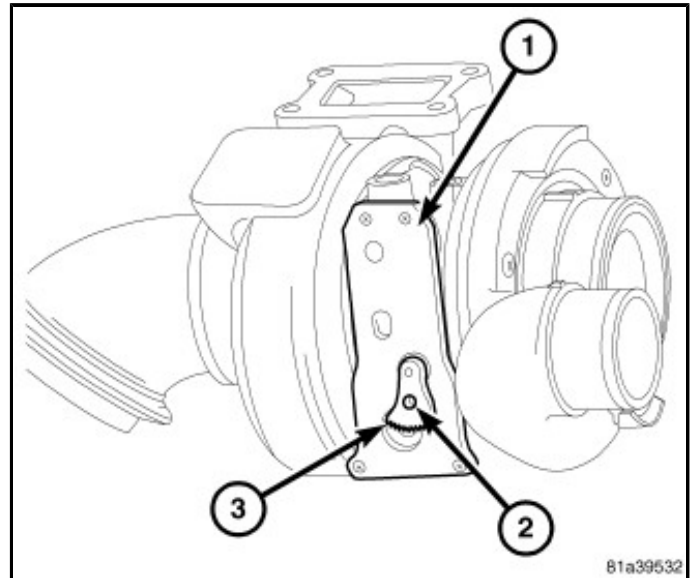
1. Remove turbocharger electronic actuator, (Refer to 09 - Engine/Turbocharger System/ACTUATOR, Turbocharger - Removal).
2. Inspect turbocharger sector gear (3) and bearing housing (1) surface for damage. Replace turbocharger if damaged.

**NOTE:** Only moderate force should be required to rotate sector gear (3). Do not use tools of any kind to force sector gear to move.

3. Rotate sector gear (3) clockwise and counterclockwise. Movement should be smooth, without binding and require only moderate force. If the turbocharger sector gear (3) binds or does not move with moderate force, replace turbocharger.

**NOTE:** Use stepped alignment pin from turbocharger actuator service kit. If service kit is not available, use pin or drill bit of specified size.

4. Rotate turbocharger sector gear (1) counterclockwise (forward). Insert large end of alignment pin (or a 0.187 in. pin or a 3/16 in. drill) through the turbocharger sector gear alignment hole (2) until it engages hole in turbocharger bearing housing and sector gear (1) will not rotate. If alignment pin does not engage hole in turbocharger bearing housing, variable geometry mechanism is not closing completely. Turbocharger must be replaced.



- Remove alignment pin from sector gear and rotate sector gear (1) clockwise (rearward) and insert small end of alignment tool (or 0.125 in. pin or a 1/8 in drill.) through the sector gear alignment hole (3) until it engages the alignment hole (2) in turbocharger bearing housing and sector gear will not rotate. If alignment pin does not engage hole (2) in turbocharger bearing housing, variable geometry mechanism is not opening completely. Turbocharger must be replaced.

**NOTE:** If turbocharger has passed sector gear movement checks, turbocharger is functional. Turbocharger actuator must be replaced. Leave alignment pin in place.

- Install electronic turbocharger actuator,(Refer to 09 - Engine/Turbocharger System/ACTUATOR, Turbocharger - Installation)

