

PART # USGB

BRAZEL'S RV PERFORMANCE PRODUCTS - ULTRASTOP
ALLISON GRADEBRAKE UPGRADE INSTRUCTIONS



W20-W24 CHASSIS
M.Y. 2001-2004

- 1.** Locate an area close to the O/D and cut out a hole to mount the GradeBrake switch. It doesn't have to be next to the O/D switch, but we recommend it for ease of installation and use.
- 2.** Using the provided T-tap connect the blue wire with male spade from the GradeBrake module to the switched (cold) side of the brake switch. Use a test-light to verify which wire goes off and on when you depress and release the brake pedal (usual a light blue wire).
- 3.** Locate the back of the O/D switch and follow the wires down to a 4-wire connector, unplug here and insert the GradeBrake matching connectors between them.
- 4.** Run the red wire from the GradeBrake module to the under-dash Inst/Ign fuse (#4) cold side. If you're unsure which side is hot and which is cold remove the fuse and use a test-light to verify which is the cold side when the ignition is on.
- 5.** Disconnect the chassis battery.
- 6.** Locate the TCM mounted on top of the radiator, the TCM is the top mounted module.
- 7.** Remove the (3) 10mm bolts holding the TCM to the metal frame.
- 8.** Pull the TCM towards you as far as possible to gain best access to the two connectors at the rear of the TCM.
- 9.** Unplug the two connectors by sliding the red locking tabs rearward allowing you to depress the connector release.
- 10.** Locate the TCM connector with the clear plastic cover over the terminals. Pinch the retainers on the side and slide the plastic cover off to expose the terminals. Open the "clam-shell" of the connector by using a small flat blade screwdriver and gently release the two tabs on either side.
- 11.** Remove the wire and terminal from cavity #7 by very gently lifting the white retainer clip while pulling back on the wire. Take that wire and terminal and insert it into the available cavity #8.
- 12.** Run the blue wire from the GradeBrake module in to the now available cavity #7. Close the "clam-shell", making sure you feel it click shut. Place the clear plastic cover back over terminals being careful not to bend or push any terminals back. Make sure the cover clicks shut.
- 13.** For 2001-2003 Model Years Only: Locate the TCM connector with the red plastic cover. Remove the cover to expose the terminals. Open the "clam-

shell” of the connector. Remove the wire and terminal from cavity #30 (usually a green wire). Fold the wire back and tape it to the harness as you will not be using this wire and terminal anymore. Wire the provided relay between terminal #30 and #32, it does not matter direction the wires are inserted. Close the “clam-shell”, making sure you feel it click shut. Place the red plastic cover back over terminals being careful not to bend or push any terminals back. Make sure the cover clicks shut.

- 14.** Plug TCM connectors back into TCM and re-mount the TCM onto it's frame.
- 15.** Reconnect the chassis battery.
- 16.** We test all TCM's prior to building the GradeBrake kits to make sure they are operating properly. The TCM's are reset to factory settings and do require a “relearn” period of approximately 500 miles, so it is not unusual to experience extra firm or delayed shifting at first. If you are having an issue with transmission operator or a “Check Transmission” light is illuminated on your dash, double check your TCM connections (sometimes the terminals will back out if they weren't inserted fully and this will cause a loss of communication to the TCM).

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