



# Electronically-Controlled Air Suspension (ECAS) Bus and Coach Technical Information

## ECAS Height Change Requirements

ECAS Function	Doors	Parking Brake	Transmission	Speed	Kneel	Height	Switches
Normal/Recover	Closed	No effect	No effect	No effect	No effect	No effect	Normal/recover
Lifting	Closed	Released	Not neutral	Less than or equal to $V_{LIMIT}$ (param. 17)	Not active	—	High ride
Lowering	Closed	Released	Not neutral	Less than or equal to $V_{LIMIT}$ (param. 17)	Not active	—	Low ride
Kneeling	Closed	Applied	Neutral	Less than or equal to 5 mph (no speed signal fault)	Not interrupted	Greater than or equal to normal	Kneeling
Shipping level	Closed	Applied	Neutral	Less than or equal to $V_{LIMIT}$ (param. 17)	Not active	—	Shipping level
*Disable all suspension movement	No effect	No effect	No effect	No effect	No effect	No effect	Wheel chair stowed signal from lift controller

\* Wheel chair lift inhibits feature for systems with ECAS ECU serial numbers of 4000 and higher.

## Blink Code Activation Procedure

1. Turn the vehicle ignition off for at least 2 seconds.
2. Press and hold the ECAS "stop" switch on the vehicle's dash.
3. While depressing the ECAS "stop" switch, turn the ignition on.
4. The ECAS "ride fault" lamp may blink briefly, but will go out.
5. When the lamp goes out, release the "stop" switch.
6. The ECAS "ride fault" lamp will flash a series of long blinks, followed by a pause, and then will flash a series of short blinks. The number of long and short flashes should be recorded.
7. Press the "stop" switch again for at least 1/4 second to read the next blink code. Repeat until no additional codes are indicated. **NOTE:** Blink code output will terminate if the "stop" switch is not pressed within one minute.
8. Use the following blink code identification chart to identify component(s) that require service.

## Erasing Stored Faults

- Press the "stop" switch for at least 5 seconds after the ignition-on bulb check is finished. All stored faults will be cleared.
  - Any faults which were not corrected will be detected and stored again and may be read using the blink code activation procedure.

**For technical assistance, call 800-535-5560.**

## ECAS Blink Code Identification

# Long Flashes	# Short Flashes	Type of Fault
0	1	Parameter fault — Contact the vehicle manufacturer
0	2	Distance sensor calibration fault — Re-calibrate
0	3	ECU program fault — Replace ECU
0	4	ECU data fault — Replace ECU
0	5	ECU distance sensor electrical circuit fault — Replace ECU
0	6	ECU RAM fault — Replace ECU
0	9	ECU valve relay fault — Replace ECU
1	0	Distance sensor, rear axle right — Open circuit/short circuit to battery
1	1	Distance sensor, rear axle left — Open circuit/short circuit to battery
1	2	Distance sensor, front axle — Open circuit/short circuit to battery
2	0	Distance sensor, rear axle right — Short circuit to ground
2	1	Distance sensor, rear axle left — Short circuit to ground
2	2	Distance sensor, front axle — Short circuit to ground
3	0	Raise/lower solenoid valve — Open circuit/short circuit to battery
3	1	Raise/lower solenoid valve, rear axle left — Open circuit/short circuit to battery
3	2	Raise/lower solenoid valve, rear axle right — Open circuit/short circuit to battery
3	3	Output exterior sounder — Open circuit/short circuit to battery
3	4	Raise/lower solenoid valve, front axle — Open circuit/short circuit to battery
3	5	Output auxiliary tank control — Open circuit/short circuit to battery
3	6	Output dash sounder — Open circuit/short circuit to battery
3	6	Output wheel chair lift inhibit — Open circuit/short circuit to battery
4	0	Raise/lower solenoid valve — Open circuit/short circuit to ground
4	1	Raise/lower solenoid valve, rear axle left — Open circuit/short circuit to ground
4	2	Raise/lower solenoid valve, rear axle right — Open circuit/short circuit to ground
4	3	Output exterior sounder — Open circuit/short circuit to ground
4	4	Raise/lower solenoid valve, front axle — Open circuit/short circuit to ground
4	5	Output auxiliary tank control — Short circuit to ground
4	6	Output dash sounder — Short circuit to ground
4	6	Output wheel chair lift inhibit — Short circuit to ground
8	0	ECU data fault — Replace ECU
8	1	Speed signal fault — Check SAE J1587 connection

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Printed in the USA

TP-98110A  
 Revised 04-03  
 16579/24240