

IV. MAINTENANCE

This chapter contains maintenance information for the RICON *Activan*® *TX* for *Caltrans*. The information consists of a floor panel precaution, maintenance schedule, troubleshooting guide, and maintenance diagrams. Maintenance must be performed only by an authorized Ricon service agent using only Ricon parts. This chapter is not intended to replace, but rather supplement the appropriate section of vehicle manufacturers' Owner's Manual. For information or instructions regarding non-RICON features, refer to manufacturers' Owner's Manual. When jacking or hoisting vehicle refer to **Section III.E**.

WARNING

THIS RICON PRODUCT IS HIGHLY SPECIALIZED. MAINTENANCE AND REPAIRS MUST BE PERFORMED ONLY BY AN AUTHORIZED RICON SERVICE AGENT USING ONLY RICON REPLACEMENT PARTS. MODIFYING OR FAILING TO PROPERLY MAINTAIN THIS PRODUCT MAY RESULT IN UNSAFE OPERATING CONDITIONS AND WILL VOID WARRANTY.

A. FLOOR PANEL PRECAUTION

Refer to **Figure [4-1]**. Beneath the central portion of interior floor is a cavity containing electrical harnesses, etc. **Do not cut or drill into this area.**

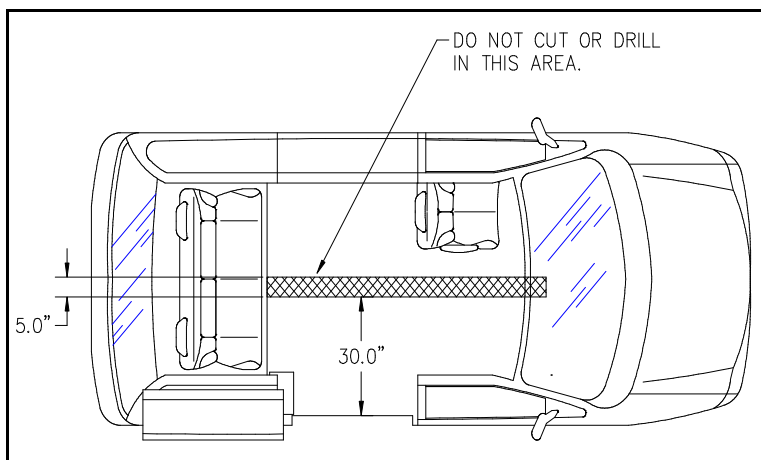


FIGURE [4-1]: ACTIVAN INTERIOR FLOOR

B. MAINTENANCE SCHEDULE

Routine maintenance of the *ACTIVAN TX* will optimize the performance and reduce the need for repairs. During the Ricon warranty period, maintenance inspections listed in **Table [4-1]** (following page) must be performed by an authorized Ricon service agent at least once every six (6) months or sooner, depending on usage. After warranty period, maintenance inspections are recommended for same time intervals. Under conditions of excessive use (more than 10 cycles per day), service should be increased.

TABLE [4-1]: MAINTENANCE SCHEDULE

SERVICE POINT	DESCRIPTION
DAILY SAFETY CHECK	
Removable Passenger Seat	<ul style="list-style-type: none"> • Be certain that removable passenger seat base is properly locked in position.
Foldaway Middle Seat	<ul style="list-style-type: none"> • Be certain that folding seat is locked firmly in position (folded or unfolded).
Air Suspension	<ul style="list-style-type: none"> • Be certain that low pressure indicator goes out and that compressor stops running when vehicle reaches normal ride height.
Door Ajar Indicator	<ul style="list-style-type: none"> • Be certain that red door ajar indicator flashes when ignition is on and either sliding door is ajar.
Reverse Alarm	<ul style="list-style-type: none"> • Be certain that reverse alarm sounds when ignition is on and vehicle is in reverse.
MONTHLY SAFETY CHECK	
Sliding Door	<ul style="list-style-type: none"> • Wash lower door track and lightly lubricate contact surfaces.
Folding Ramp	<ul style="list-style-type: none"> • Clean and lightly lubricate pivot points and hinges.
SIX-MONTH SAFETY CHECK	
Load Leveling Air Suspension	<ul style="list-style-type: none"> • Be certain that air lines do not leak; tighten fittings as required. • Inspect filter/dryer (see section V.B.3.j). • Check air bags for damage caused by rubbing or misalignment. • Verify that vehicle attains proper ride height (see section V.B.1.c). • Check compressor connections and be certain that compressor mounting bolts are snug.
Removable Passenger Seat	<ul style="list-style-type: none"> • Verify that locking mechanism on removable passenger seat operates properly be removing and reinstalling seat (see section II.D.2.b).
Electrical Connections (under hood)	<ul style="list-style-type: none"> • Be certain that circuit breaker connections are free of corrosion; clean and apply protective coating as required.
ANNUAL SAFETY CHECK	
Under carriage	<ul style="list-style-type: none"> • Be certain that undercoating is intact. Recoat areas as required. <p>Note: The rust inhibiting coating should provide years or trouble free service. However, severe conditions (frequent use of unimproved or heavily salted road surfaces, etc.) may cause premature corrosion.</p> <p>Any area where undercoating is bulging due to flaky rust, area should be cleaned using a wire brush, treated with a primer and recoated.</p>
Hoses and Fittings	<ul style="list-style-type: none"> • Be certain that fuel fill hoses are free of cracking or damage. • Be certain that all fuel lines are intact and not damaged.
END OF TABLE	

C. ELECTRICAL WIRING DIAGRAM

For *ACTIVAN TX* electrical wiring diagram, refer to following sections:

1. ELECTRICAL WIRING DIAGRAM LEGEND

a. Wire Color Codes

TABLE [4-2]: WIRE COLOR CODES			
LETTER	COLOR	LETTER	COLOR
BK	Black	R	Red
BL	Blue	R/BK	Red w/ Black Stripe
BR	Brown	T	Tan
BR/O	Brown w/ Orange Stripe	VI	Violet
GN	Green	W	White
GY	Gray	Y	Yellow
O	Orange		

END OF TABLE

b. Wiring Diagram Symbols

Figure [4-2] defines symbols used in electrical wiring diagrams.

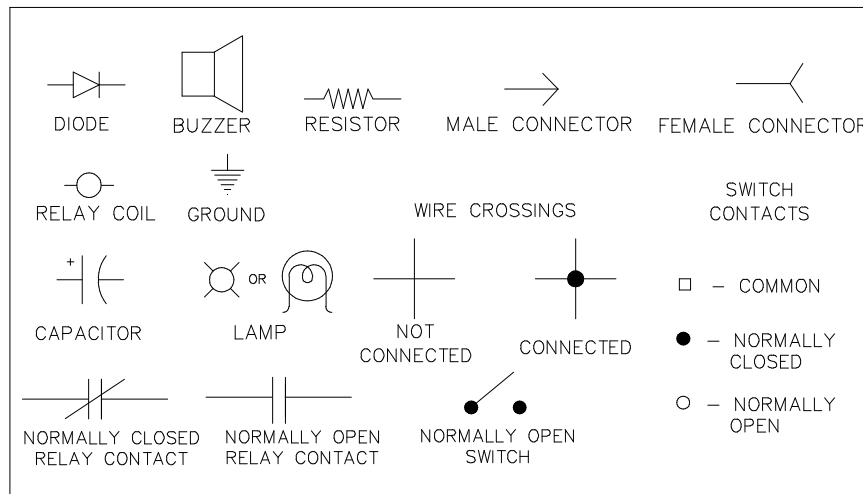


FIGURE [4-2]: DIAGRAM SYMBOLS

2. WIRING DIAGRAMS

For electrical system wiring diagrams, refer to **Figures [4-3] thru [4-5]**:

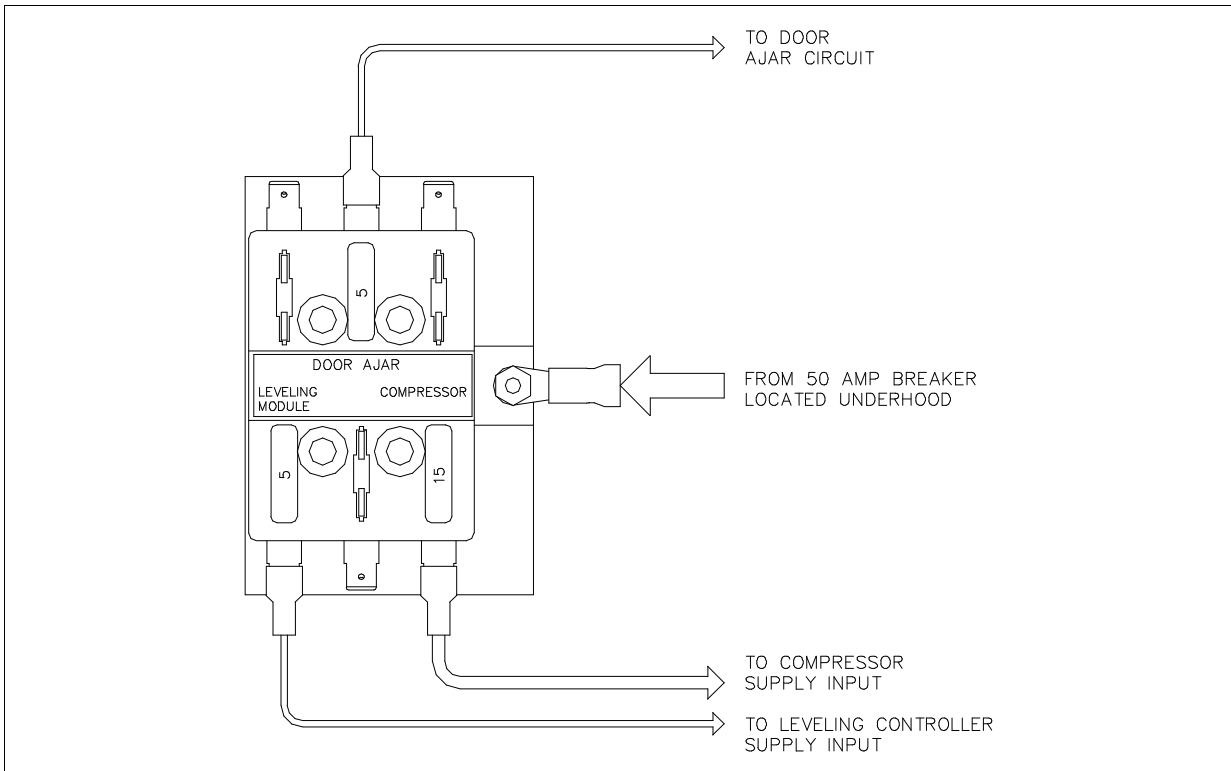


FIGURE [4-3]: POWER DISTRIBUTION (FUSE) BLOCK

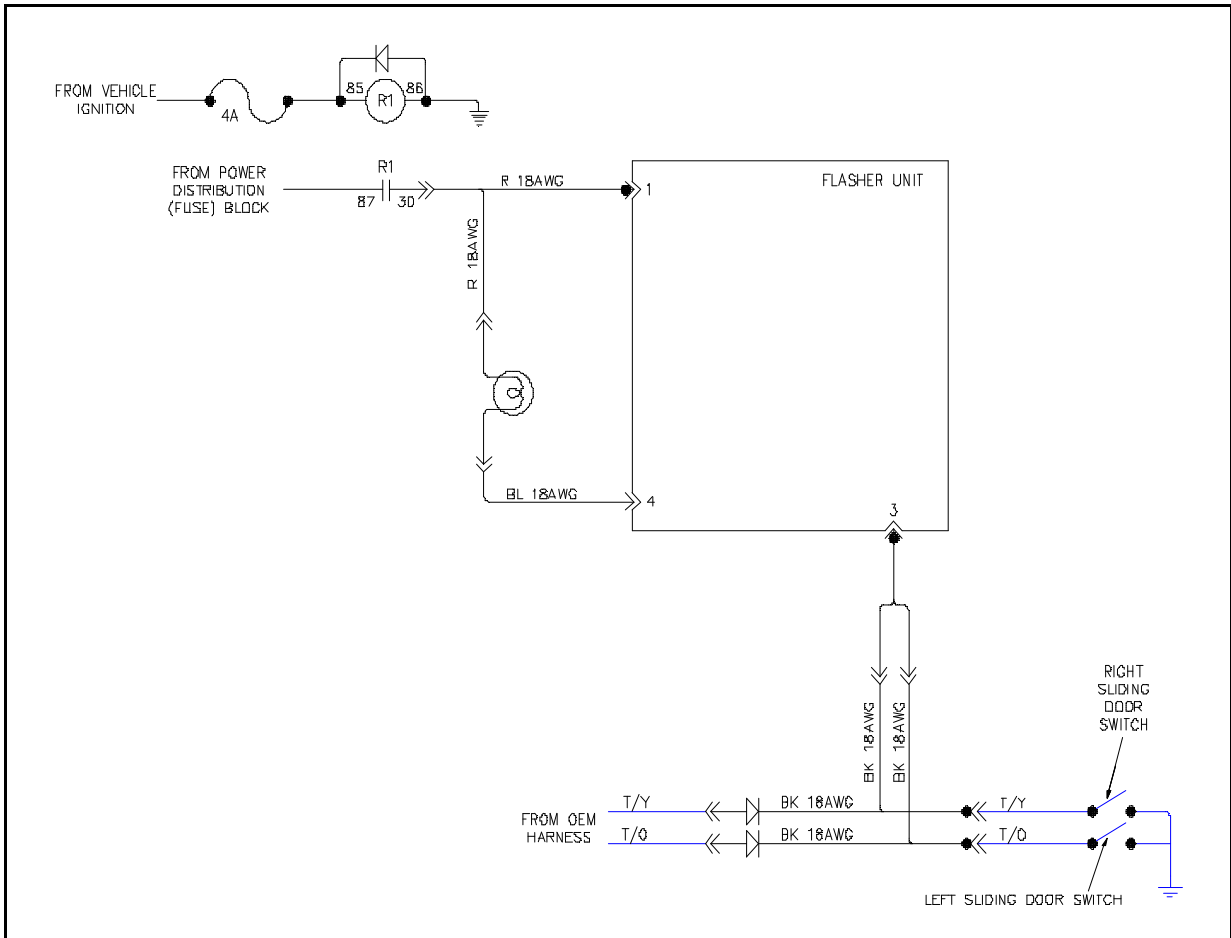


FIGURE [4-4]: DOOR AJAR SCHEMATIC AND WIRING DIAGRAM

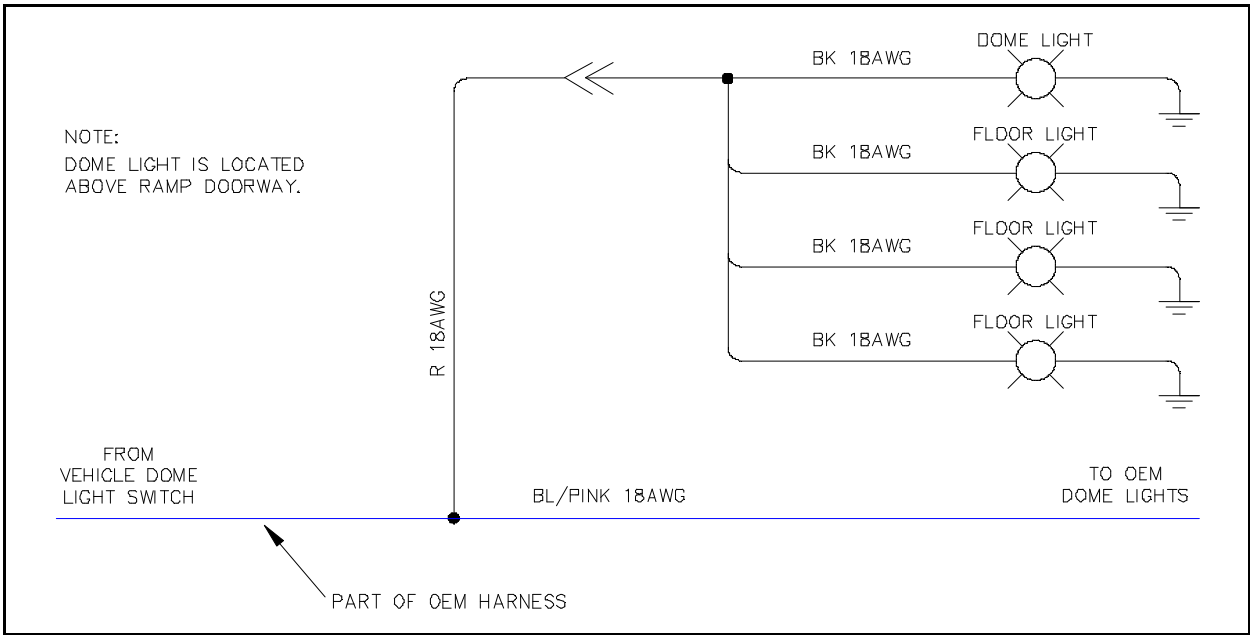


FIGURE [4-5]: DOME AND FLOOR LIGHT WIRING DIAGRAM

D. AIR SUSPENSION CONTROL DIAGRAMS

For air suspension control diagrams, refer to **Figures [4-6] and [4-7]:**

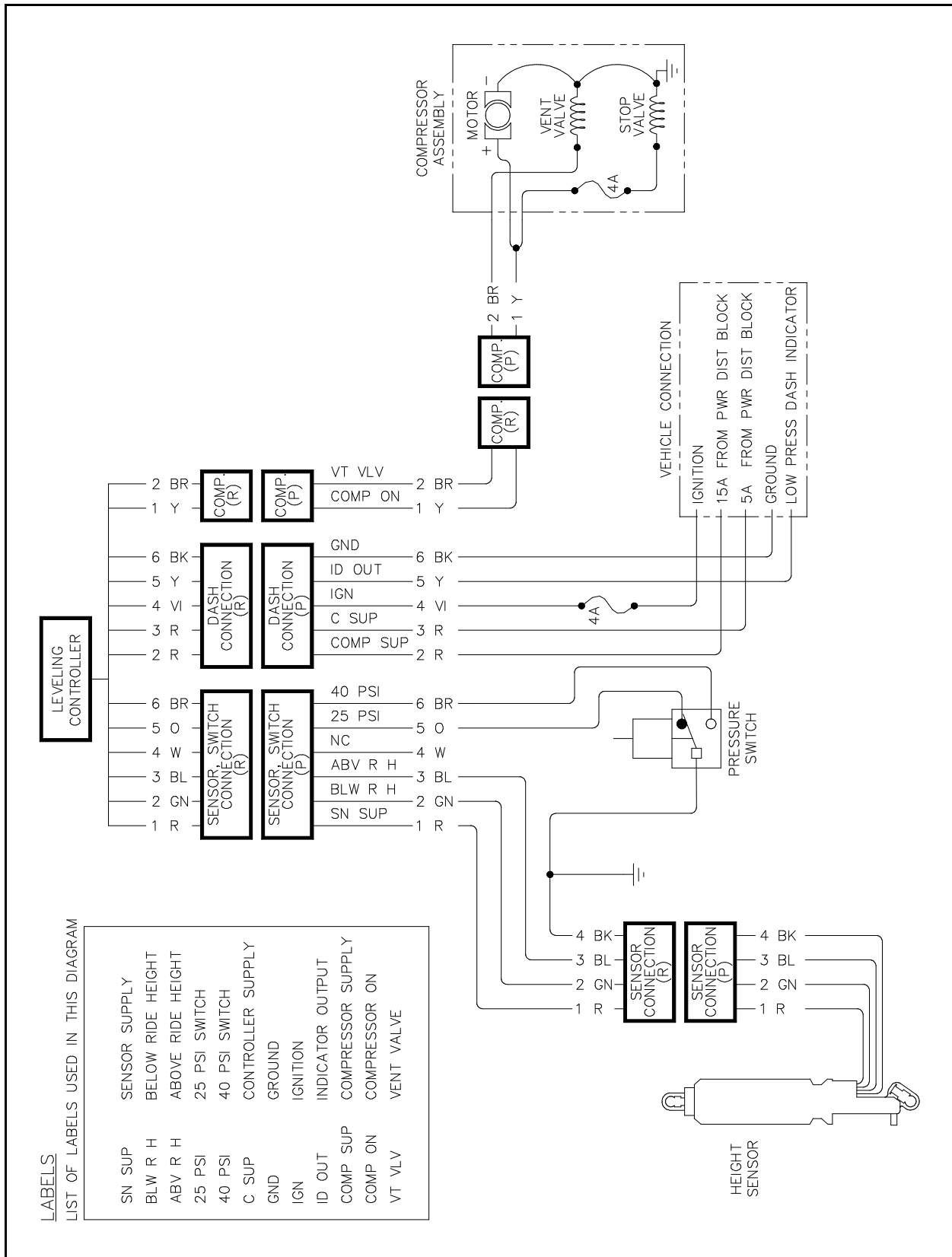


FIGURE [4-6]: LEVELING SYSTEM WIRING DIAGRAM

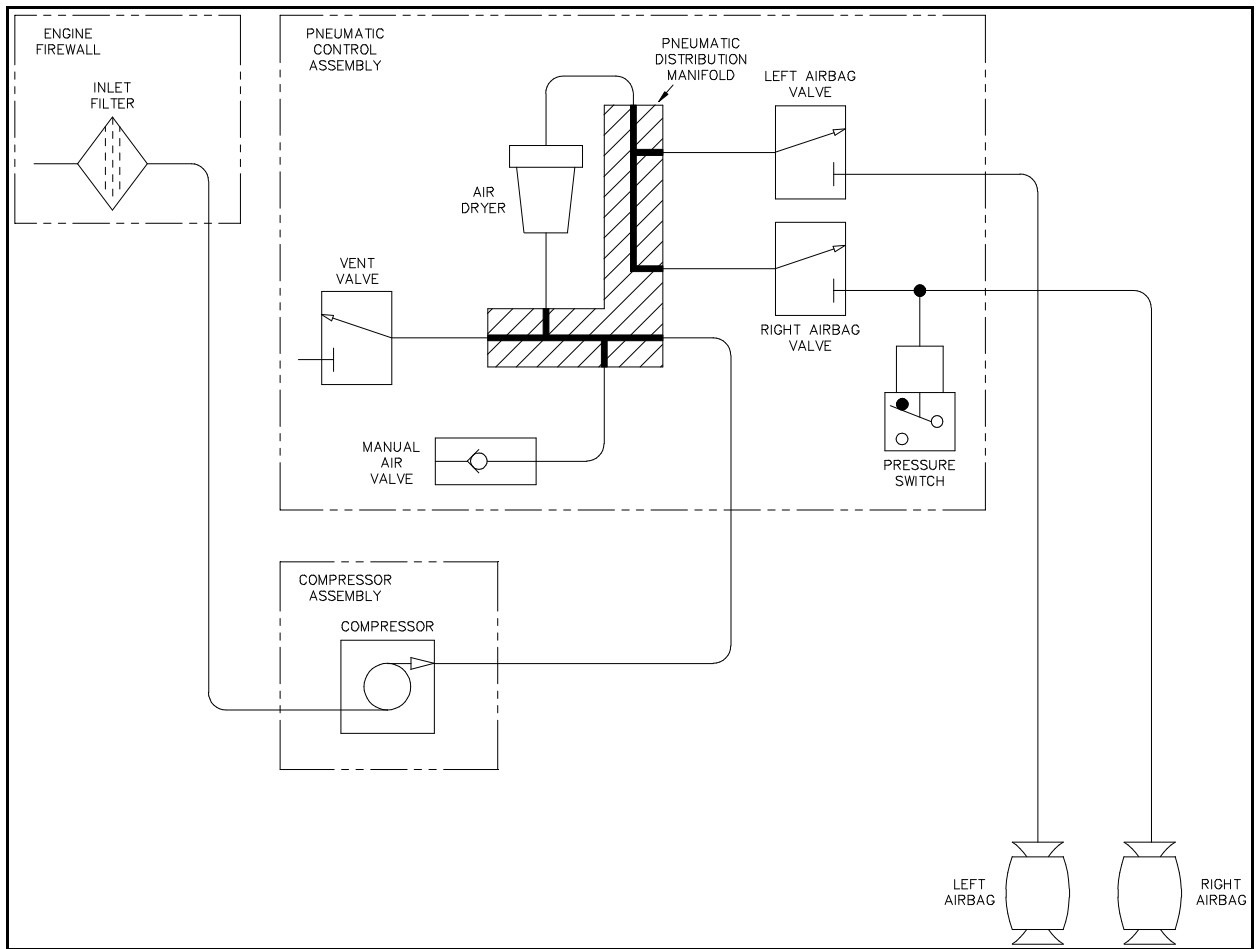


FIGURE [4-7]: LEVELING SYSTEM PNEUMATIC DIAGRAM

E. TROUBLESHOOTING GUIDE

The troubleshooting guide is designed to provide a logical starting point to locate general problems that could occur with special features of *ACTIVAN TX*. However, not all possible problems or combinations of problems are listed. For troubleshooting *ACTIVAN TX*, refer to **Table [4-2]**. The guide does not incorporate routine safety precautions or preliminary procedures and assumes that vehicle battery is fully charged and battery terminals/connectors are clean and tight.

WARNING

THE TROUBLESHOOTING GUIDE DOES NOT INCORPORATE ROUTINE SAFETY PRECAUTIONS OR PRELIMINARY PROCEDURES. DURING THE RICON WARRANTY PERIOD ONLY A TRAINED, AUTHORIZED RICON SERVICE AGENT MUST PERFORM TROUBLESHOOTING. AFTER WARRANTY PERIOD, IT IS RECOMMENDED THAT TROUBLESHOOTING BE PERFORMED BY AN AUTHORIZED RICON SERVICE AGENT.

TABLE [4-3]: TROUBLESHOOTING GUIDE

FUNCTION	SYMPTOM	POSSIBLE CAUSE	REMEDY
LOAD LEVELING SUSPENSION	Air bags will not inflate, but compressor operates normally.	Air leak in system.	Check air lines and replace if defective.
		Blockage in air lines.	Check air lines and purge if necessary.
		Defective air bags.	Replace air bags.
	Air bags will not inflate, but air compressor motor runs, with ignition key in ON position.	Air leak in system.	Check air lines and replace if defective.
		Defective vent valve.	Replace vent valve.
		Defective compressor.	Replace compressor assembly.
	Air bags will not inflate; compressor does not operate with ignition key in ON position.	Defective leveling controller or no power to compressor (COM SUP).	Refer to leveling system wiring diagram and make proper connections, or replace controller if defective.
		Defective height sensor.	Replace height sensor.
		Blockage in system.	Check air lines.
		Defective compressor.	Replace compressor assembly.
	Compressor runs continuously with key OFF.	Compressor relay stuck in ON position.	Replace leveling controller.

TABLE [4-2]: TROUBLESHOOTING GUIDE

FUNCTION	SYMPTOM	POSSIBLE CAUSE	REMEDY
	Compressor does not come on when vehicle ignition is on and is below ride height.	No power to compressor relay.	Check fuse labeled COMPRESSOR. Replace with an appropriate 15 amp fuse if necessary.
			Check connection between power distribution (fuse) block and leveling controller. Repair as necessary.
		No power to compressor from leveling controller (either faulty leveling controller or faulty height sensor assembly).	Replace leveling controller.
			Replace height sensor assembly.
	Compressor comes on when vehicle is below ride height and ignition is on, but vehicle does not raise.	Vent valve is stuck in open position.	Check if air is escaping from vent valve when compressor is on. If so, check to see if valve is getting a 12VDC signal. If so, replace leveling controller. If not, replace compressor assembly.
		Stop valve is stuck in closed position.	Disconnect air hose from fitting at outlet of compressor assembly. See if there is an air flow when compressor is running. If not, replace compressor assembly.
		Broken air hose or air bag.	Find location of break and repair as necessary. Replace hose or air bag as necessary.
Compressor runs continuously.		Faulty leveling controller.	Replace leveling controller.
		Faulty height sensor.	Replace height sensor assembly.
Compressor runs in short intervals with a short time interval between cycles/height adjustment is needed more often than normal.		Leak in air system.	Detect leak with a soap/water mixture in a spray bottle (window cleaner works well). Repair leak(s).
System will not correct when vehicle is higher than ride height.		Vent valve missing 12VDC signal.	Correct loose connection or wiring.
		Plugged vent valve.	Repair or replace compressor assembly.
		Defective leveling controller or defective height sensor (no signal to vent valve).	Replace leveling controller.
			Replace height sensor assembly.
	Bad connection between leveling controller and height sensor or between leveling controller and vent valve.	Repair as necessary.	

TABLE [4-2]: TROUBLESHOOTING GUIDE

FUNCTION	SYMPTOM	POSSIBLE CAUSE	REMEDY
BACK-UP ALARM	Back-up alarm does not sound when ignition is on and vehicle is put into reverse.	12VDC signal not getting to alarm.	Check OEM back-up light wiring and socket. Correct as necessary.
		Defective back-up alarm.	Replace alarm.
DOME OR FLOOR LIGHT	Light does not illuminate when door is opened.	Lamp is burned out.	Replace as necessary
		Defective OEM electrical system (no OEM lights are illuminating).	Take to service agentship for service.
		Bad connection between OEM harness and light.	Check splice between dome light harness and OEM harness. Check connector between splice and light. Correct as necessary.
DOOR AJAR INDICATOR	Door ajar light does not flash when door is open while ignition is on.	Defective flasher assembly.	Replace flasher assembly.
	Door ajar light does not illuminate when door is open.	Burned out bulb.	Replace bulb.
		Bad connection between OEM harness and flashing assembly (sometimes characterized by only one sliding door triggering flashing light).	Repair as necessary. Check diode in Ricon harness and replace as necessary. Do not bypass diode built in to RICON harness.

END OF TABLE