

## AIR STEP TROUBLESHOOTING FOR 1989 SP36

Attached is a troubleshooting chart for the 1989 SP36 and a schematic I obtained from Blue Bird. Also attached is the wiring diagram # 39179033 for the air step on this coach and a printout from the web for what I believe is the correct Clippard air cylinder. Whether these are applicable to other coaches I do not know but I would expect this system was not reinvented every year.

The relays are in the right front compartment which is actually in the right side overhead cabinet, above the cabinet with the glass door, just ahead of the entrance door. To get to the relays you must unscrew the cover.

The chart starts with the power supply and the relays. The power supply should be checked and then the relays but I think the relays are the least likely culprits. Rather the air control/solenoid assembly mounted on the underside of the coach and exposed to the elements is what I would check after confirming the power supply.

Using the chassis wiring diagram and a test light with a probe that pierces insulation, I suggest checking the power supply to the solenoids on each end of the air control. Do this with air pressure up with the door open and closed. With the door open one solenoid should be energized and with the door closed the other solenoid should be energized. If you do not find this then check the mercury switch to see if it is bad and check to see if power is going to the mercury switch. Confirm that there is a good ground. Also, check the continuity of the solenoids. Remove the screw that holds the plug on the solenoid and remove the plug in order to check continuity of the solenoid itself. Check the pressure switch to confirm it is functioning.

**BE CAREFUL AT ALL STAGES, IF THE STEP MOVES WITH YOUR HAND IN THE WAY YOU CAN BE SERIOUSLY HURT!!! MOVING THE WIRES AND PIERCING THE INSULATION MAY CAUSE THE STEP TO MOVE. AT EACH STAGE CHECK TO BE SURE YOUR HAND WILL NOT BE IN THE WAY IF THE STEP MOVES.**

I found that using the wiring diagram was the most helpful guide. By studying the wiring diagram you can determine which circuits should have power and under what circumstances. My problem was a burned out solenoid and a bad mercury switch. While I like the challenge of rebuilding things and parts may be available from the manufacturer of the air control/solenoid assembly, I chose to replace the 12-year old air control/solenoid assembly - pn 3837150 and pressure switch - pn 3805207 in addition to the mercury switch. Blue Bird had the parts on hand and the price was not too bad, approximately \$150 for everything, as I recall, and not much more than the price from the manufacturer which would have had to make up the assembly.

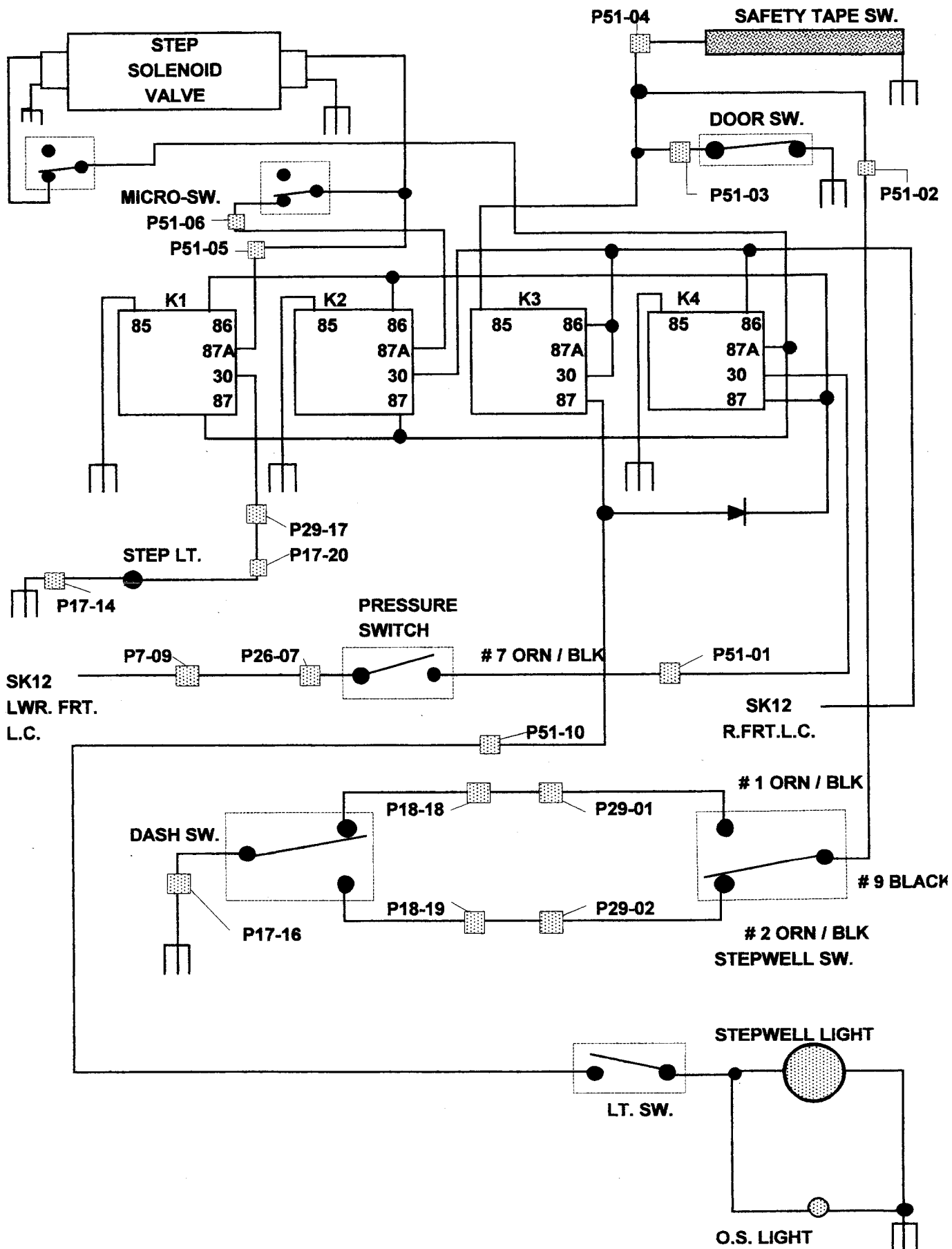
The black nylon air lines are easily removed when pressure is out of the system. Push the line toward the fitting and then push the ring on the fitting toward the fitting. This will release the air line.

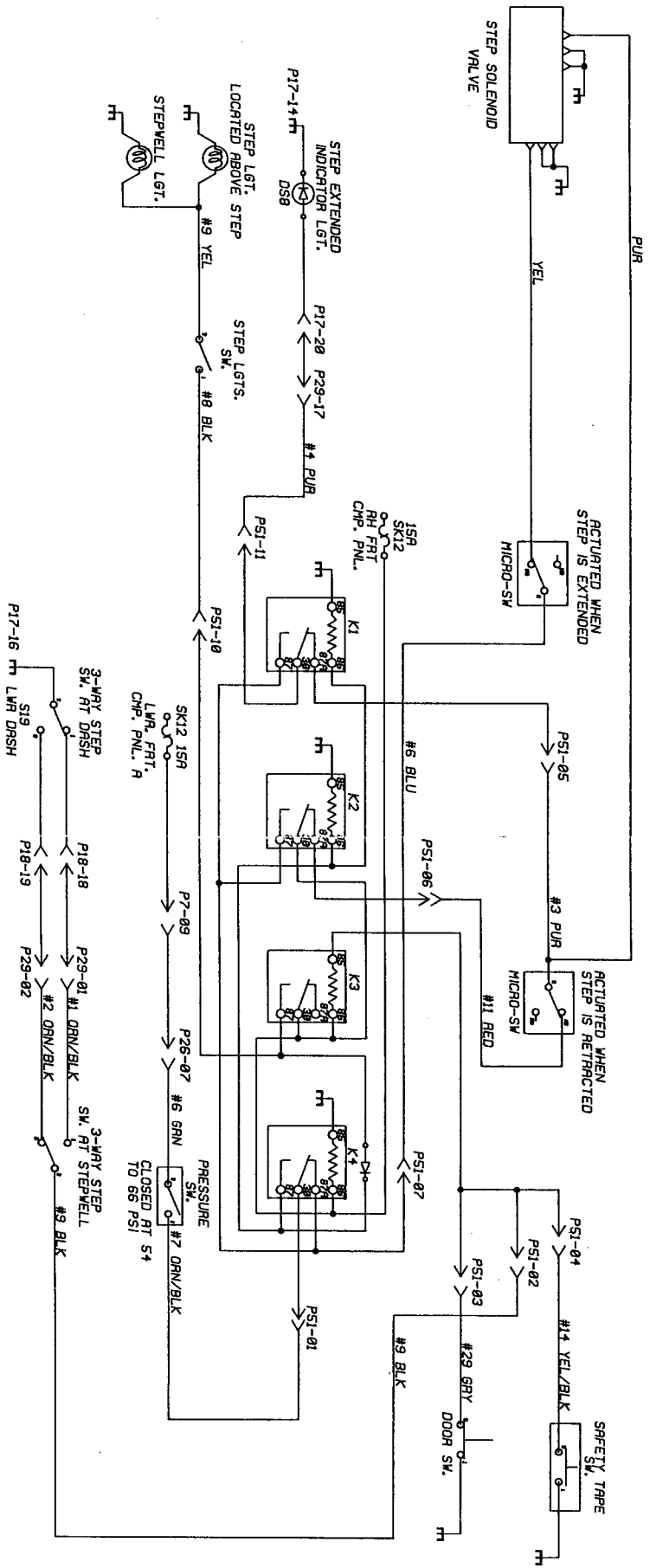
# TROUBLESHOOTING CHARTS: STEP

## SYMPTOM: STEP WON'T RETRACT

1989 WLSP

STEP SEQUENCE	RESULT	WHAT TO DO NEXT
<b>CHECK FOR:</b>		
<ul style="list-style-type: none"> <li>* damage of step components</li> <li>* electronic master on</li> <li>* full auxillary air pressure</li> </ul>	all checks ok	go to 1-2
<b>1-2 CHECK SWITCHES</b>		
<ul style="list-style-type: none"> <li>* 12vdc at sk12-rh frt. l.c.</li> <li>* 12vdc at sk12- lwr. frt. l.c.</li> <li>* full auxillary air pressure</li> <li>* remove wire from k3-terminal 85</li> </ul>	step won't retract	go to 1-3
	step retracts	go to 1-4
<b>1-3 CHECK PRESSURE SWITCH</b>		
<ul style="list-style-type: none"> <li>* full auxillary air pressure</li> <li>* remove wire on K4-terminal 30</li> </ul>	step won't retract	go to 1-5
	step retracts	pressure switch defective or check adjustment of switch
<b>1-4 CHECK SAFETY TAPE</b>		
<ul style="list-style-type: none"> <li>* reattach wire to K3-85</li> <li>* remove ground wire from safety tape</li> <li>* full auxillary air pressure</li> </ul>	step won't retract	go to 1-6
	step retracts	short in safety tape: replace safety tape & reattach ground
<b>1-5 CHECK MICRO SWITCHES</b>		
<ul style="list-style-type: none"> <li>* check for 12vdc at K2 terminal 87A</li> </ul>	12vdc	go to 1-7
	no 12vdc	check 12vdc at K3 terminal 30-if voltage present at 30 and no voltage on 87: replace k3
<b>1-6 CHECK DOOR SWITCH</b>		
<ul style="list-style-type: none"> <li>* remove door switch and disconnect # 29 grey wire and check # 29 grey wire for short</li> <li>* full auxillary air pressure</li> </ul>	step won't retract	go to 1-5
	step retracts	defective door switch:replace
<b>1-7 CHECK MICRO SWITCHES</b>		
<ul style="list-style-type: none"> <li>* check for 12vdc at # 11 red wire at micro switch in and out</li> <li>* check for cracked microswitches</li> </ul>	12vdc at micro switch in and out	go to 1-8
	no 12vdc out	replace micro switch
	no 12vdc at micro-switch	check P51-6 and ,repair terminal, connection or wire
<b>1-8 CHECK AIR SOLENOID VALVE</b>		
<ul style="list-style-type: none"> <li>* check for 12vdc and ground at coil</li> <li>* full auxillary air pressure at valve</li> <li>* check speed controls</li> </ul>	speed controls open 12vdc and ground ok air pressure to valve ok step won't retract	replace air solenoid valve





NOTE: RELAYS K1-4 ARE LOCATED ON RH FRT. CMP. PNL.

**INACTIVE 8-10-57 PER CCN # 8311**

REL. CCN	8376B	BLUE BIRD WANDERL OJGE	SCALE
		FORT VALLEY, GEORGIA USA	
DIAGRAM, WIRING, AIR STEP			
DR. 10-26-88	BY J MEYER	1989 WLSP	
APP. 11-18-88	BY C. Williams	INACTIVITY	
OK.	BY	3917903	

**Clippard**  
ON LINE

1 . 8 7 7 . C I L . 6 A I R      1 . 5 1 3 . 5 2 1 . 4 2 6 1  
7 3 9 0 C O L E R A I N A V E      C I N C I N N A T I , O H I O 4 5 2 3 9

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<b>Part #:</b>	UDR-40-6
<b>List Price:</b> (U.S. Dollar)	\$86.35
<b>Discription:</b>	Stainless Steel Cylinder
<b>Max PSI:</b>	250 PSI
<b>Spring Force:</b>	
<b>Options:</b>	
<b>Ports</b>	1/4 NPT
<b>Temperture Range:</b>	30 F to 250 F
<b>Medium:</b>	Air
<b>Notes</b>	

**PURCHASE**

You can see your order history on the [Order History Page](#).

Clippard Instrument Laboratory 1.877.CIL.6AIR