



INSTRUCTIONS FOR THE
SYSTEM TO MONITOR THE
STATUS OF PUMP CIRCUITS

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System working concept:

This system monitors 3 electrical circuits and can easily be modified to monitor more or less systems. In this example the system was designed to monitor the forward head (Vacuflush) vacuum pump status, the aft head (Vacuflush) vacuum pump status and the water pump pressure switch status. The system ties into the existing on/off switches for the 3 systems. When any of the systems are turned on, a green panel light illuminates, indicating that particular system is turned on and the monitoring system is functioning. When any of the systems are actually running, the yellow light goes on and the adjustable (1-10 minutes) relay starts a timing circuit. If the circuit operates correctly and shuts off the adjustable time delay relay within the pre-set time limit, the indicator lights return to the "green" only, or monitoring state. However, if the circuit stays on beyond where the timer is set, the monitor will turn the red light on and trigger the audible alarm.

The reason this monitor system was developed is that sometimes these systems malfunction for various reasons and the pumps run for long periods of time. Obviously this could run down batteries and will place additional wear on the pumps, or worse, overheat and possibly cause a fire. This is mostly preventative for most of us. For the rest of us anal control freaks, we just want to know everything is operating within normal parameters.. 😊

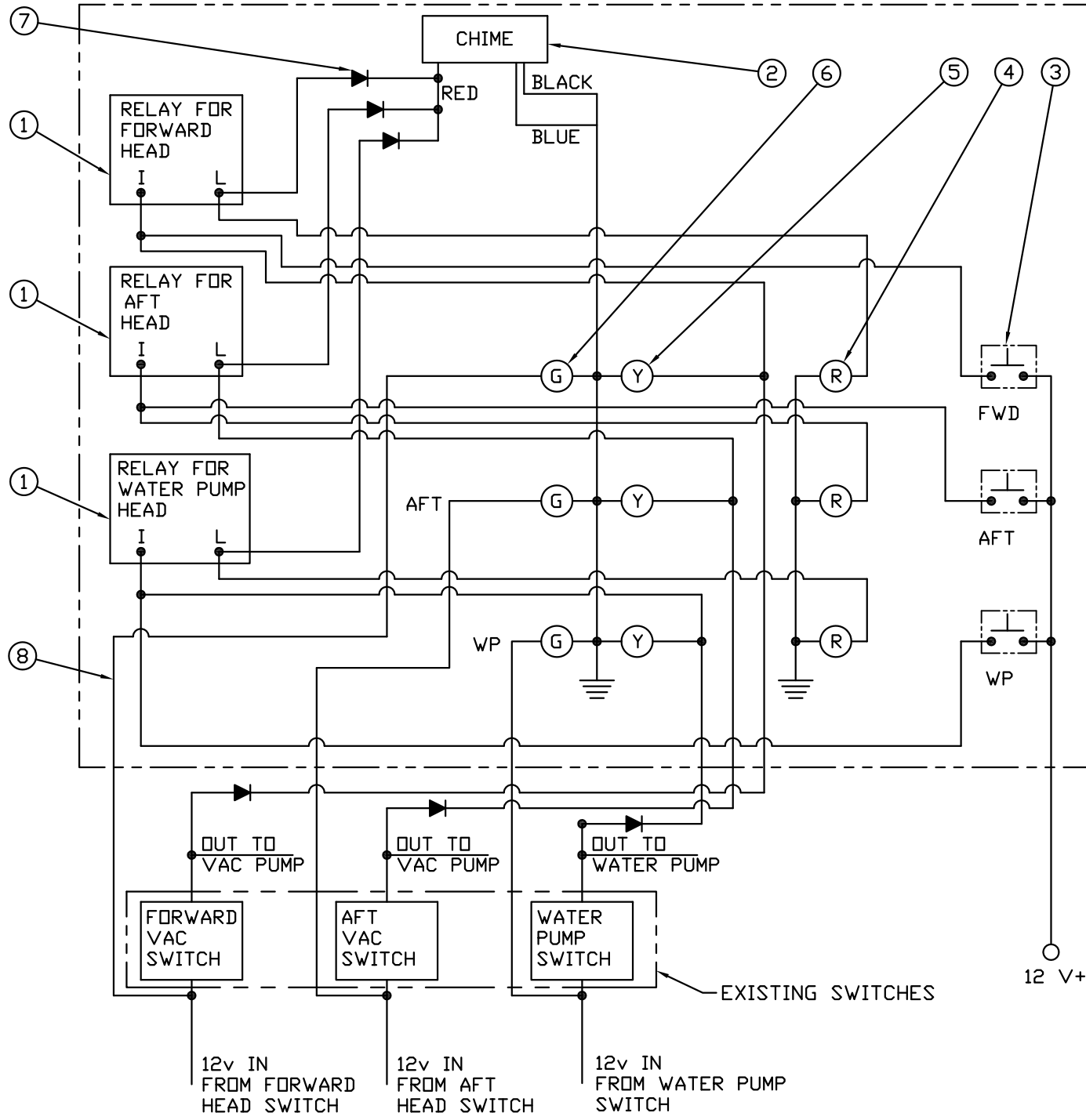
PICTURE OF COMPLETED SYSTEM



MONITOR CIRCUIT STOCKLIST

ITEM	QTY	PART NO.	DESCRIPTION	SUPPLIER	LOCATION
1	3	7705K736	SOLID STATE ADJUSTABLE RELAY	McMASTER CARR	WWW.MCMASRTERCARR.COM
2	1	273-071	CHIME	RADIO SHACK	WWW.RADIOSHACK.COM
3	3	315660	NO. MOMENTARY SWITCH	JAMECO ELECTRONICS	WWW.JAMECO.COM
4	3	215750	RED LAMP	JAMECO ELECTRONICS	WWW.JAMECO.COM
5	3	215758	YELLOW LAMP	JAMECO ELECTRONICS	WWW.JAMECO.COM
6	3	215766	GREEN LAMP	JAMECO ELECTRONICS	WWW.JAMECO.COM
7	3	276-1114 (3 PER PKG)	DIODE	RADIO SHACK	WWW.RADIOSHACK.COM
8	TO SUIT		18-20 GA STRANDED WIRE		
9	1	270-1809	ENCLOSURE 8" X 6" X 3" FOR 3 MONITOR CIRCUITS	RADIO SHACK	WWW.RADIOSHACK.COM
9	1	270-1806	ENCLOSURE 6" X 4" X 2" FOR 1 OR 2 MONITOR CIRCUITS	RADIO SHACK	WWW.RADIOSHACK.COM

LTR	CHANGES	DATE	NAME
A	RELEASED	02/02/13	BSB



LEGEND

R= RED LIGHT
 Y= YELLOW LIGHT
 G= GREEN LIGHT
 I= INPUT
 L=LOAD

TITLE			
3 CIRCUIT TIMED MONITORING SYSTEM (2) HEADS AND THE WATER PUMP			
DESIGN	MORLAND	DETAIL	BARTON
CHECK	DM	DATE	2/2/13
		SCALE	LETTER