

SYSTEMS DATA

SECTION 2

SUBSECTION 2.11

MISCELLANEOUS SYSTEMS DATA

2.11.1 INTRODUCTION.

Miscellaneous systems data pertain to items that are not covered in other systems. These items consist of timers, accelerometers (G-meter), and uprighting system.

2.11.2 TIMERS.

Two mission timers (electrical) and two event timers (electrical/mechanical) are provided for the crew in the command module. One mission timer is located on panel 2 of the MDC and the other on panel 306 in the left-hand forward equipment bay. Each mission timer has provisions for manually setting the readout (hours, minutes, and seconds), and the capability of starting, stopping, and resetting to zero. The numerical elements are electroluminescent lamps and the intensity is controlled by the NUMERICS light control on panels MDC-8 and LEB-100. The event timers are located on MDC-1 and -306 in the left-hand forward equipment bay, and provide the crew with a means of monitoring and timing events. All timers reset and start automatically when lift-off occurs, and the timer located on MDC-1 will be automatically reset and restarted if an abort occurs. The event timers are integrally illuminated by an internal electroluminescent lamp and controlled by the INTEGRAL light controls located on MDC-8 and LEB-100. (For further information, refer to section 3.)

2.11.3 ACCELEROMETER (G-METER).

The accelerometer or G-meter (MDC-1) provides the crew with a visual indication of spacecraft positive and negative G-loads. This meter is illuminated by an internal electroluminescent lamp and controlled by the INTEGRAL light control on MDC-8. For additional information, refer to section 3.

2.11.4 COMMAND MODULE UPRIGHTING SYSTEM.

The CM uprighting system is manually controlled and operated after the CM has assumed a stable, inverted floating attitude. The system consists of three inflatable air bags, two relays, three solenoid-control valves, two air compressors, control switches, and air lines. The inflatable bags are located in the CM forward compartment and the air compressors in the aft compartment. The control switches and circuit breakers are located in the crew compartment. The switches control relays which are powered by the postlanding bus and the relays control power to the compressors which are powered by battery buses A and B. (See figure 2.11-1.)

MISC

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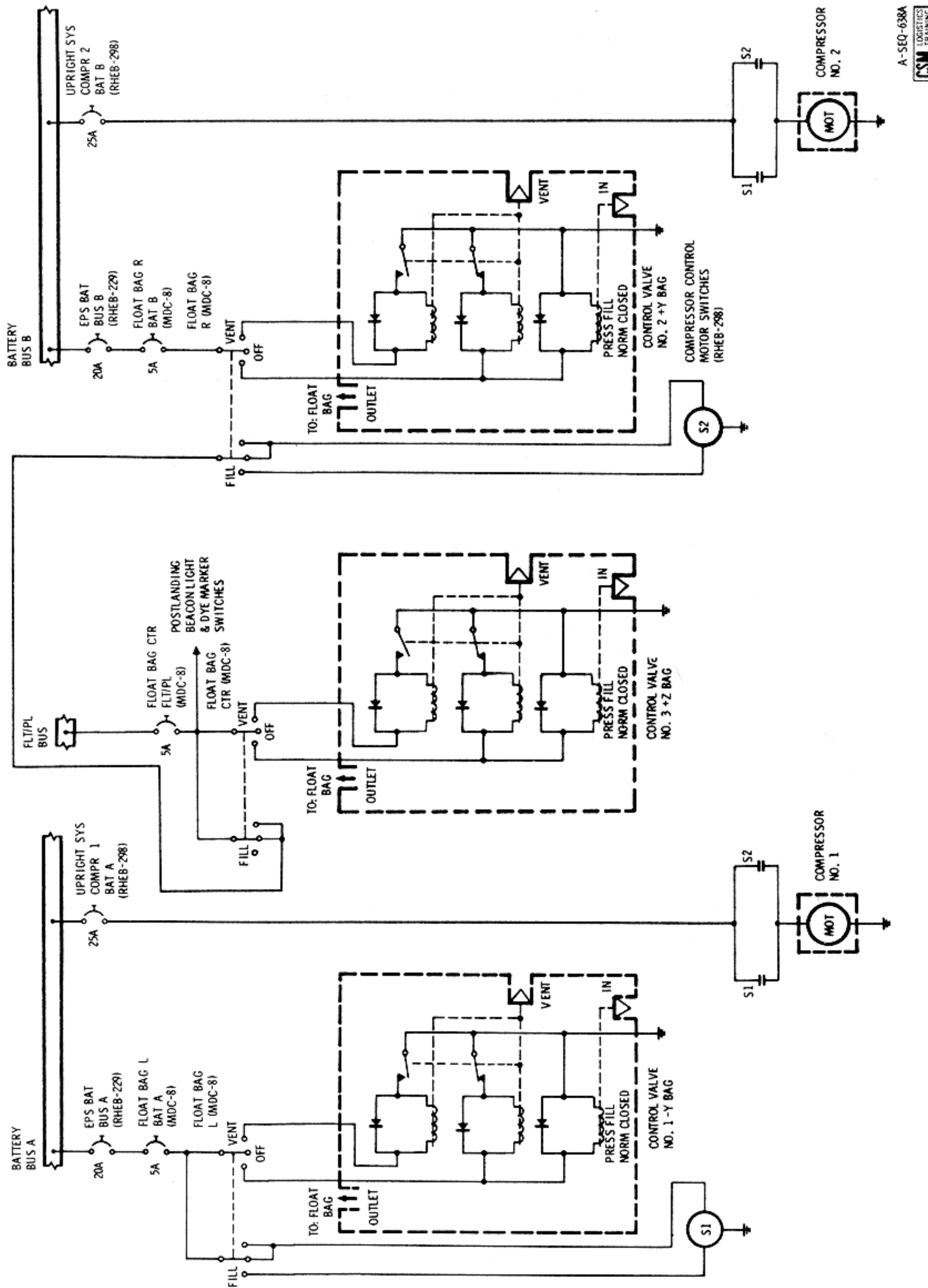


Figure 2.11-1. Uprighting System Electrical Schematic

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SM2A-03-BLOCK II-(1)
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2.11.4.1 Functional Description.

FLOAT BAG 1L switch controls inflation of the air bag on -Y axis, switch 2R controls inflation of the air bag on the +Y axis, and switch 3 CTR controls inflation of the air bag on the +Z axis of the CM. (See figure 2.11-1.) Each bag is 43 inches in diameter and has a capacity of approximately 24 cubic feet when inflated. If the CM becomes inverted after landing, the crewmember at station 1 initiates filling of the three bags by setting the FLOAT BAG 1L, 2R, and 3 CTR switches to FILL. When the CM is uprighted, the three FLOAT BAG switches will be set to OFF. A 4.25 ± 0.25 -psi relief valve is located in the inlet of each bag. Backup relief valves set at 13.5 psi are located in the outlet of each compressor.

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