

Massachusetts Institute of Technology  
Charles Stark Draper Laboratory  
Cambridge, Massachusetts

LUMINARY Memo #137

To: Distribution  
From: R. Larson  
Date: 30 January 1970  
Subject: LUM 131A Revision 3 Testing

The following test plan has been established to verify LUM 131 A REV 3. It is anticipated that testing and review will be completed by 9 February. A forthcoming memo will describe the changes between LUMINARY 131 Rev 009 and LUM 131 A Rev 003. NASA has requested that testing be done to verify this assembly as a candidate for Apollo 13.

I. Heaviest Concentration

- A. Landing (10%, 5% TLOSS; 2% if time available)
  - 1. Automatic (w/V59, manual throttle)
  - 2. P66 (w/redesignations, manual throttle)
- B. Aborts from Descent (10%, 5% TLOSS, 2% if time available)
  - 1. 30K ft
  - 2. 7K ft
  - 3. Post T. D.
- C. All Servicer Tests
  - 1. Rendezvous (5% TLOSS)  
P41's, P42
  - 2. Ascent (5% TLOSS)  
P12

II. Normal Testing

Rendezvous (P52, 30, 32, 33, 34, 35)  
Alignment (P57)  
Extended Verbs

### III. Scrutinize Servicer TLOSS Effects

- A. Note throttle performance
- B. Note alarms
- C. Plot Servicer jobs timing
- D. Cycle Data Good bit to observe long/short Servicer cycles

The Luminary 1D development has essentially ceased until the release of or termination of revision 003 of LUM131A. The release of Luminary 1D now is 31 March 1970. The RTCC testing effort for Apollo 13 has slipped 10 days.

After the tests have been completed, they will be reviewed and then sent to Stan Mann at MSC.

A test review team will consist of the following:

- B. McCoy
- P. Volante
- A. Klumpp
- D. Eyles
- P. Rye
- R. Covelli
- P. Adler
- R. Larson

The findings of this review team will be presented to MSC on 9 February.