

**THIS BULLETIN IS FAA APPROVED FOR ENGINEERING DESIGN**SERVICE BULLETIN M20-286
Date: May 09, 2005

SUBJECT: LANDING/TAXI LIGHT SYSTEM MODIFICATON
MODELS/ S/N MOONEY M20J, S/N 24-3411 thru 24-3431
AFFECTED: MOONEY M20K, S/N 25-2000 thru 25-2032
MOONEY M20M, S/N 27-0244 thru 27-0338
MOONEY M20R, S/N 29-0131 thru 29-0367
MOONEY M20S, S/N 30-0001 and ON
TIME OF COMPLIANCE: AIRCRAFT WITH WING MOUNTED LANDING AND TAXI LIGHTS
AT NEXT SCHEDULED ANNUAL INSPECTION, BUT WITHIN NEXT 100 FLIGHT HOURS.

INTRODUCTION: There has been a report that specific connecting pins and sockets in the Positronic, Inc. connector, PL104A/RC104A, of the 28 volt landing lights and taxi lights wiring located behind instrument panel circuit breaker panel may be of insufficient size for the applied load when landing light and taxi light circuits are energized. This may result in overheating of these pin connections. The specific wire segments involved are (ref. Figure SB M20-286-1):
- LL01C14 and LL02D14 connecting 25 AMP LANDING LIGHTS circuit breaker through PINS a on connector PL104A/RC104A to connector RC26A PIN Y, and
- LT01C14 and LT02D14 connecting 25 AMP TAXI LIGHTS circuit breaker through PIN b on connector PL104A/RC104A to connector RC26A PIN Z.
These wires will be capped and stowed per the instructions provided in this bulletin and a new connector harness assembly installed.

INSTRUCTIONS: Read entire procedure before beginning work.

1. Turn master switch - OFF.
2. Pull out circuit breaker panel from instrument panel far enough to access the Positronic, Inc. connector, PL104A. Refer to applicable aircraft Service and Maintenance Manual, Chapter 39, for instructions.
3. Locate and remove wires LL01C14 and LT01C14 from pin locations from "a" and "b" on circuit breaker panel connector, PL104A, (ref. Figure SB M20-286-1). See Figure SB M20-286-2 for pin locations.
4. Remove existing sockets, strip wire and add AMP 32448 knife connectors, (ref. Figure SB-M20-286-3).
5. Remove, cap and stow wires LL02D14 and LT02D14 from "Headliner" connector RC26A pins "Y" and "Z" (ref. figure SB M20-286-1).
6. Connect AMP knife connectors, 32448, attached in step 3 above, to supplied wiring harness, M20-286-001 (Kit M20-286-000), knife connectors on wires LL01E14 and LT01E14 (ref. Figure SB M20-286-3).
7. Route 32" landing light and taxi light wires to "HEADLINER" connector RC26A where wire LL01E14 will pin in at "Y" on RC26A and wire LT01E14 will pin in at "Z" on RC26A connector (ref. Figure SB M20-286-3).
8. Cover knife connectors with vinyl tubing, PVC105/2, and secure with tie wraps, TYB23M.
9. Secure new wiring harness installation to existing aircraft wiring.
10. Re-install circuit breaker panel per applicable aircraft Service and Maintenance Manual, Chapter 39, for instructions.
11. Turn master switch - ON.
12. Energize left, then right, landing lights from overhead panel exterior light switches to verify illumination of lights.
13. Energize left then right taxi lights from overhead panel exterior light switches to verify illumination of lights.

14. Complete logbook entry.
15. Return aircraft to service.

WARRANTY:

Mooney Airplane Company, Inc. will warrant labor (approximately 1 hour) and parts (ref. Kit below) required for the installation of subject harness on aircraft S/N's 27-0317 thru 27-0338 and S/N's 29-0281 thru 29-0367, when done in accordance with procedures of this Service Bulletin.

REFERENCE DATA:

MAC Service and Maintenance Manuals (applicable A/C) Chapter 39.

PARTS LIST:

Money Airplane Company, Inc., Parts Kit: M20-286-000

| <u>Item</u> | <u>P/N</u> | <u>Description</u> | <u>Qty</u> |
|-------------|-------------|----------------------------|------------|
| 1. | M20-286-001 | Harness Assembly | 1 |
| 2. | 32448 | Connector, AMP 32448 Knife | 2 |
| 3. | TYB23M | Wrap, Tie | 2 |
| 4. | PVC105/2 | Tubing, vinyl 3" | 2 |

FIGURE/TABLES:

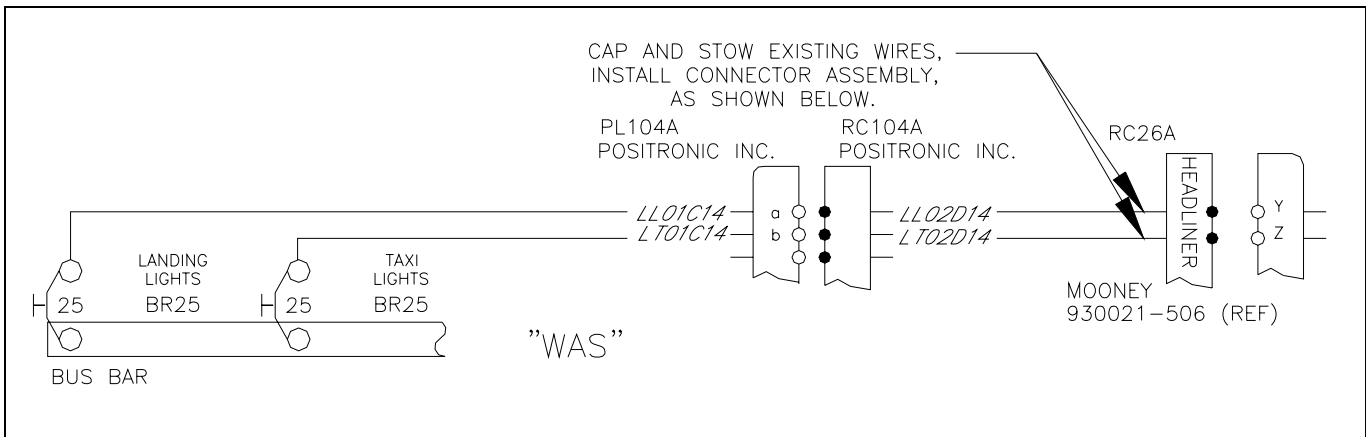


Figure SB M20-286-1

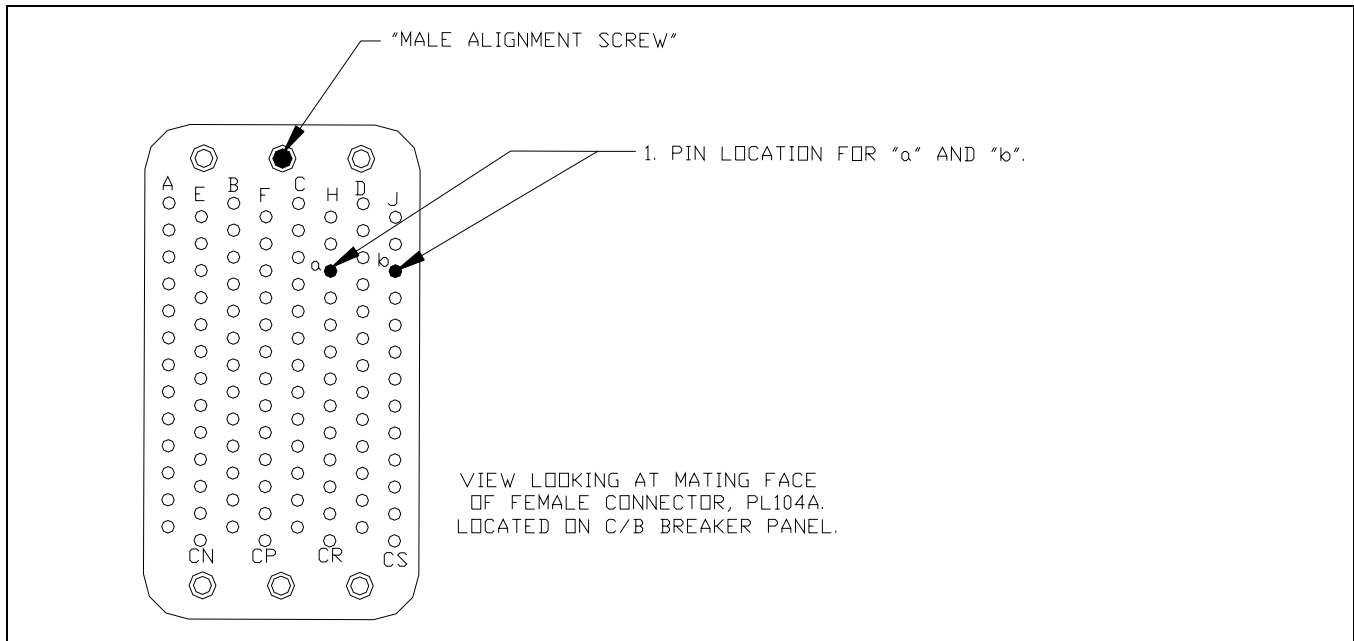


Figure SB M20-286-2

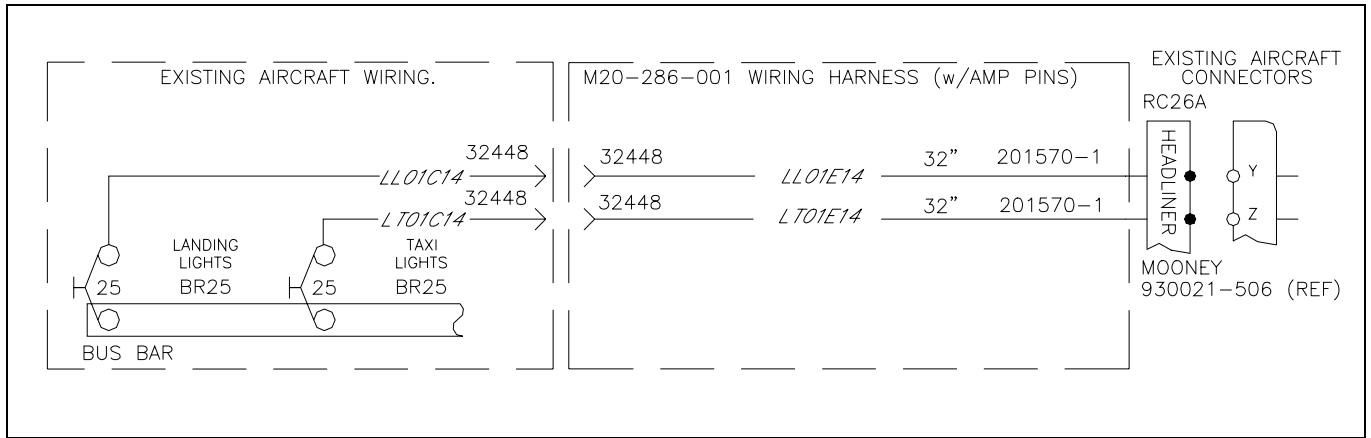


Figure SB M20-286-3