Tiffin Battery Merge Spec – 08.16.2016

• Battery Merge Triggers

- Case 1 Chassis charging: Ignition signal present for 30 seconds <u>and</u> chassis voltage is above 13.3V (charging) <u>and</u> the house voltage is below 12.4V (low battery voltage)
 - Overview Merge for one hour <u>or</u> until chassis voltage drops below 12.6V for 30 seconds or ignition signal is removed or generator starts
- O Case 2 House charging: House voltage is above 12.5V (charging) <u>and</u> the chassis voltage is below 12.4V (low battery voltage) for 30 seconds
 - Overview Merge for one hour <u>or</u> until house voltage drops below 12.2V (house charger stops) for 30 seconds

• Battery Un-merge Triggers

- O Case 1 only Generator starts unmerge and lockout all merge functionality until the generator running signal is removed (or until the ignition signal is removed)
- o Case 1 only Ignition signal is removed
- o Case 1 only While the ignition signal is present, if chassis voltage drops below 12.6V for more than 30 seconds, unmerge until the ignition signal is cycled
- o Case 2 only House voltage drops below 12.2V for more than 30 seconds
- Case 1 or 2 Timed battery merge period expires (60 minutes)

• Inputs

- o Ignition input J14 pin 1
 - Chassis mobility status: 1FFF4h byte 5 bits 0&1 00 off, 01 on
- Generator run input J5 pin 2
 - Generator Status 1: 1FFDCh byte 0 00 stopped, 03 running
- Chassis voltage input J5 pin 1
 - DC Source Instance 2: 1FFFDh
- o Manual merge input − J14 pin 3 (If House batteries are completely dead, ignition signal must be present for the manual merge to work.)

General Notes

- o Battery merge/unmerge instance: DC Load #7
- o Switched House & House Battery Nut Torque Setting: 70 in-lb

Power Management Module 2016.23.08 **HOUSE BATTERY +12V** SWITCHED HOUSE +12V (TIGHTEN TO 70 IN-LB) (TIGHTEN TO 70 IN-LB) HSE BAT FR D/S SLIDE EXT GND INPUT FR D/S SLIDE RET GND INPUT NET LED FR P/S SLIDE RET GND INPUT J15 +12V A/C CONDENSOR FAN OUTPUT (SPADE) _+12V IGNITION INPUT CHASSIS VOLTAGE +12V _+12V A/C CONDENSOR INPUT GEN RUNNING +12V INPUT GND TRIGGER FROM MERGE SWITCH _GND TRIGGER TO MERGE SWITCH _+12V TO HSE DISC. SW _UNLATCH HSE DISC. TRIGGER LATCH HSE DISC. TRIGGER _+12V TO MERGE SOLENOID _GND TO MERGE SOLENOID (OPTIONAL)

Tiffin Motorhomes

NOTE: CONNECTORS ARE SHOWN HERE IN THE LOADED (REAR) VIEW.

GROUND WIRE