



AeroElectric Connection

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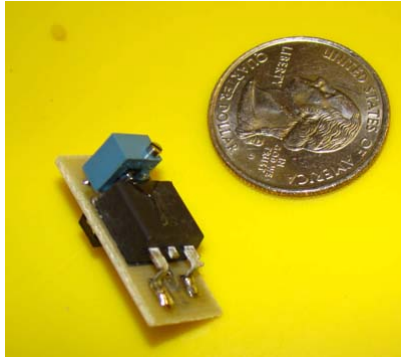
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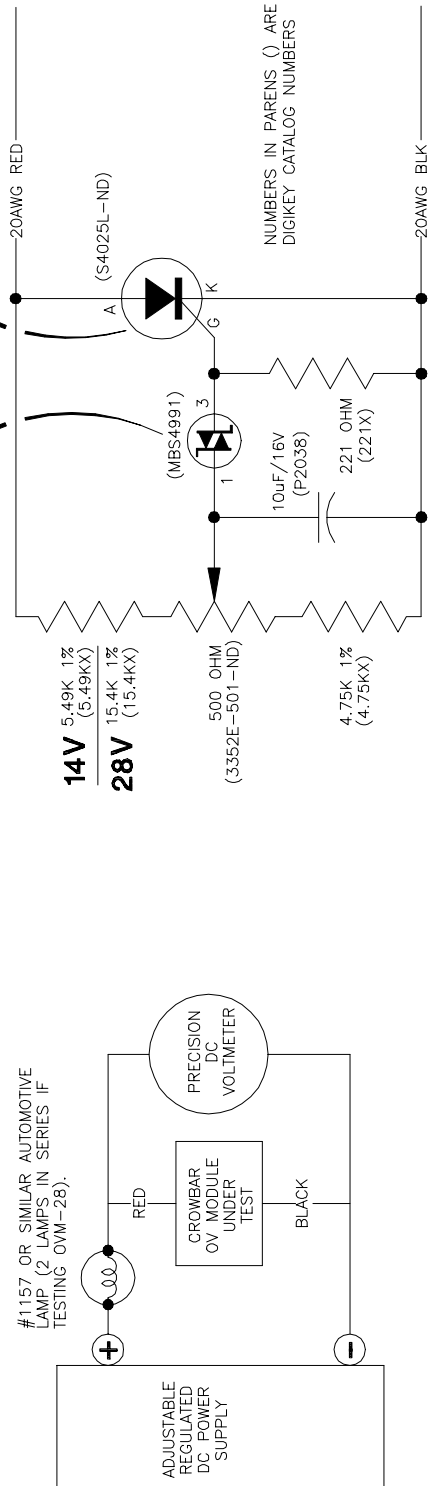
AEC9003-14A AEC9003-28A Crowbar OV Module CbOV-14 Crowbar OV Protection Module



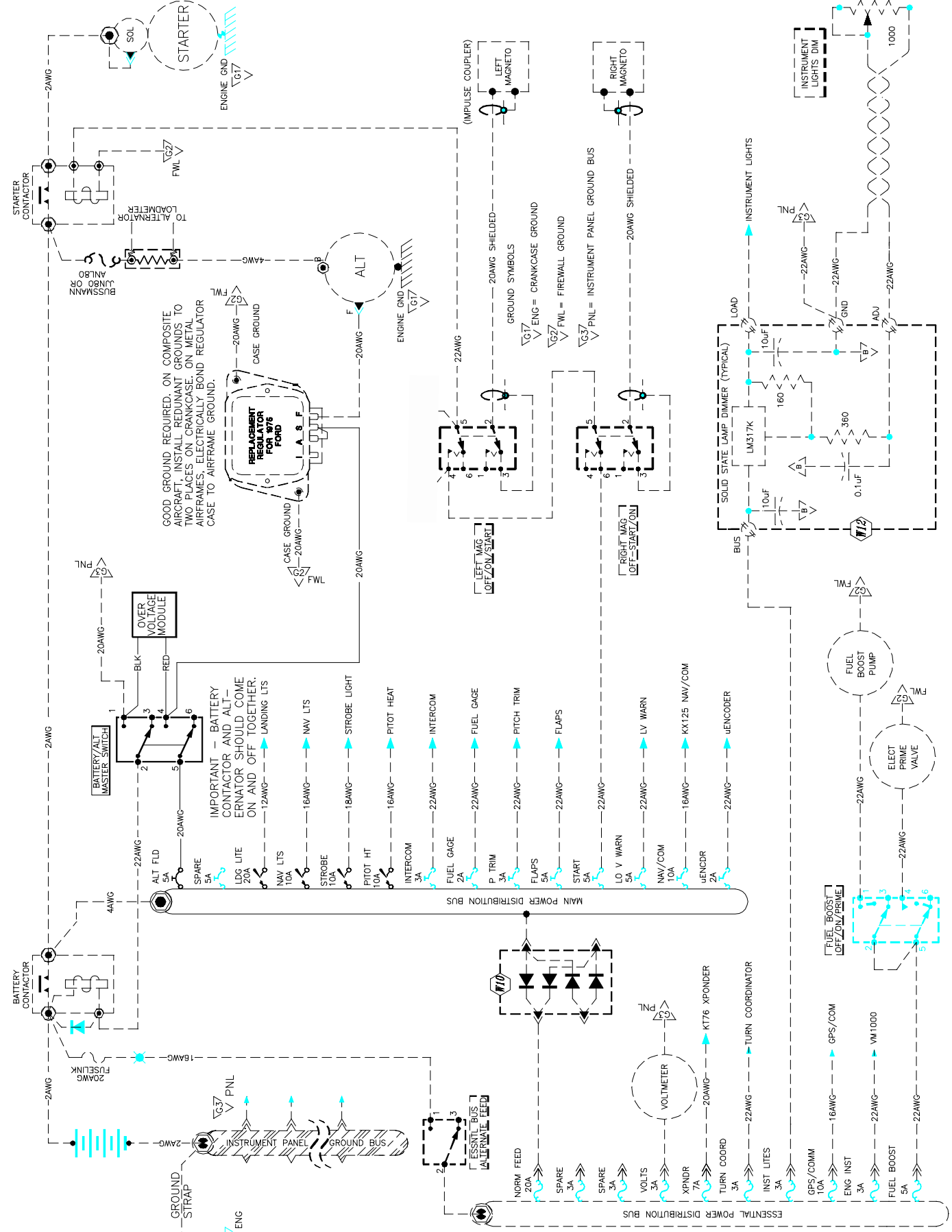
NOTES:

1. INTERCONNECT DEVICE TO BE TESTED AS SHOWN IN BENCH TEST SETUP TO THE LEFT. THE LAMP BULB IN SERIES WITH THE POWER SUPPLY PROTECTS SUPPLY FROM SHORT CIRCUIT DAMAGE WHEN CROWBAR "FIRES." IF POWER SUPPLY IS INTERNALLY PROTECTED FROM OVERCURRENT, THE LAMP MAY BE ELIMINATED.
2. SET THE POWER SUPPLY FOR 16.25 VOLTS. ADJUST POTENTIOMETER ON OVMODULE SLOWLY UNTIL IT TRIPS, CAUSING THE LAMP TO ILLUMINATE OR PLACES A DEAD-SHORT ON POWER SUPPLY. DISCONNECT OVMODULE TO RESET IT. SET POWER SUPPLY VOLTAGE BELOW 16 VOLTS AND RECONNECT OVMODULE. ADJUST POWER SUPPLY VOLTAGE SLOWLY UPWARD AND OBSERVE TRIP POINT. ADJUST POT AS NEEDED TO ACHIEVE TRIP POINT OF 16.2 TO 16.7 VOLTS (32.4 TO 33.4 VOLTS ON 28V SYSTEM).
3. THE OV PROTECTION MODULE IS SELF RESETTING IN NORMAL SERVICE. AFTER THE MODULE FIRES, THE BREAKER THAT SUPPLIES POWER TO THE CROWBAR MODULE AND ALTERNATOR FIELD WILL POP THUS REMOVING POWER FROM THE FAILED ALTERNATOR SYSTEM. RESETTING THE CIRCUIT BREAKER WILL RESTORE NORMAL SYSTEM OPERATION EXCEPT IN CASES WHERE THE VOLTAGE REGULATOR HAS FAILED WHEREUPON THE OV PROTECTION MODULE WILL TRIP AGAIN AND SHUT DOWN THE FAILED SYSTEM.
4. THE OV MODULE SHOULD BE TESTED EVERY YEAR FOR PROPER OPERATION. SUGGEST REMOVAL AT EVERY ANNUAL INSPECTION TIME FOR BENCH TESTING AS DESCRIBED IN NOTES 1 THRU 3 ABOVE.
5. NUMBERS IN PARENS () ARE DIGIKEY CATALOG NUMBERS. CALL 1-800-344-4539 AND REQUEST A CATALOG.
6. IF YOU BUILD THE OV PROTECTION MODULE AND CANNOT MAKE IT WORK, MAIL TO AEROELECTRIC CONNECTION, 6936 BAINBRIDGE ROAD, WICHITA, KS. 67226-1008 ALONG WITH \$3 FOR RETURN POSTAGE. AS LONG AS YOUR SCR IS GOOD, REPAIRS TO NON-WORKING UNITS ARE FREE.
7. IF YOU PREFER TO PURCHASE RATHER THAN BUILD, ASSEMBLED AND TESTED OVM-14 AND OVM-28 CROWBAR OV MODULES ARE AVAILABLE FOR \$35.00USD POSTAGE PAID IN N. AMERICA (ADD \$2.00USD FOR OVERSEAS).

BENCH TEST SETUP



SCHEMATIC AND BILL OF MATERIALS



GOOD GROUND REQUIRED. ON COMPOSITE AIRCRAFT, INSTALL REDUNDANT GROUNDS TO TWO PLACES ON CRANKCASE, ON METAL AIRFRAMES, ELECTRICALLY BOND REGULATOR CASE TO AIRFRAME GROUND.

IMPORTANT - BATTERY CONTACTOR AND ALT-ERNATOR SHOULD COME ON AND OFF TOGETHER. LANDING LITS

REPLACEMENT REGULATOR FOR 476

LEFT MAG [OFF-START]

RIGHT MAG [OFF-START/ON]

SOLID STATE LAMP DIMMER (TYPICAL)

FUEL BOOST [OFF-START/ON]

FUEL BOOST PUMP

ELECT PRIME VALVE

INSTRUMENT LIGHTS DIM

STARTER CONTRACTOR

TO ALTERNATOR

ALT

REPLACEMENT REGULATOR FOR 476

LEFT MAG [OFF-START]

RIGHT MAG [OFF-START/ON]

VOLTMETER

FUEL BOOST [OFF-START/ON]

ELECT PRIME VALVE

FUEL BOOST PUMP

INSTRUMENT LIGHTS DIM

BATTERY CONTRACTOR

OVER VOLTAGE MODULE

BATTERY/ALT MASTER SWITCH

REPLACEMENT REGULATOR FOR 476

LEFT MAG [OFF-START]

RIGHT MAG [OFF-START/ON]

VOLTMETER

FUEL BOOST [OFF-START/ON]

ELECT PRIME VALVE

FUEL BOOST PUMP

INSTRUMENT LIGHTS DIM

STARTER CONTRACTOR

TO ALTERNATOR

ALT

REPLACEMENT REGULATOR FOR 476

LEFT MAG [OFF-START]

RIGHT MAG [OFF-START/ON]

VOLTMETER

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INSTRUMENT LIGHTS DIM

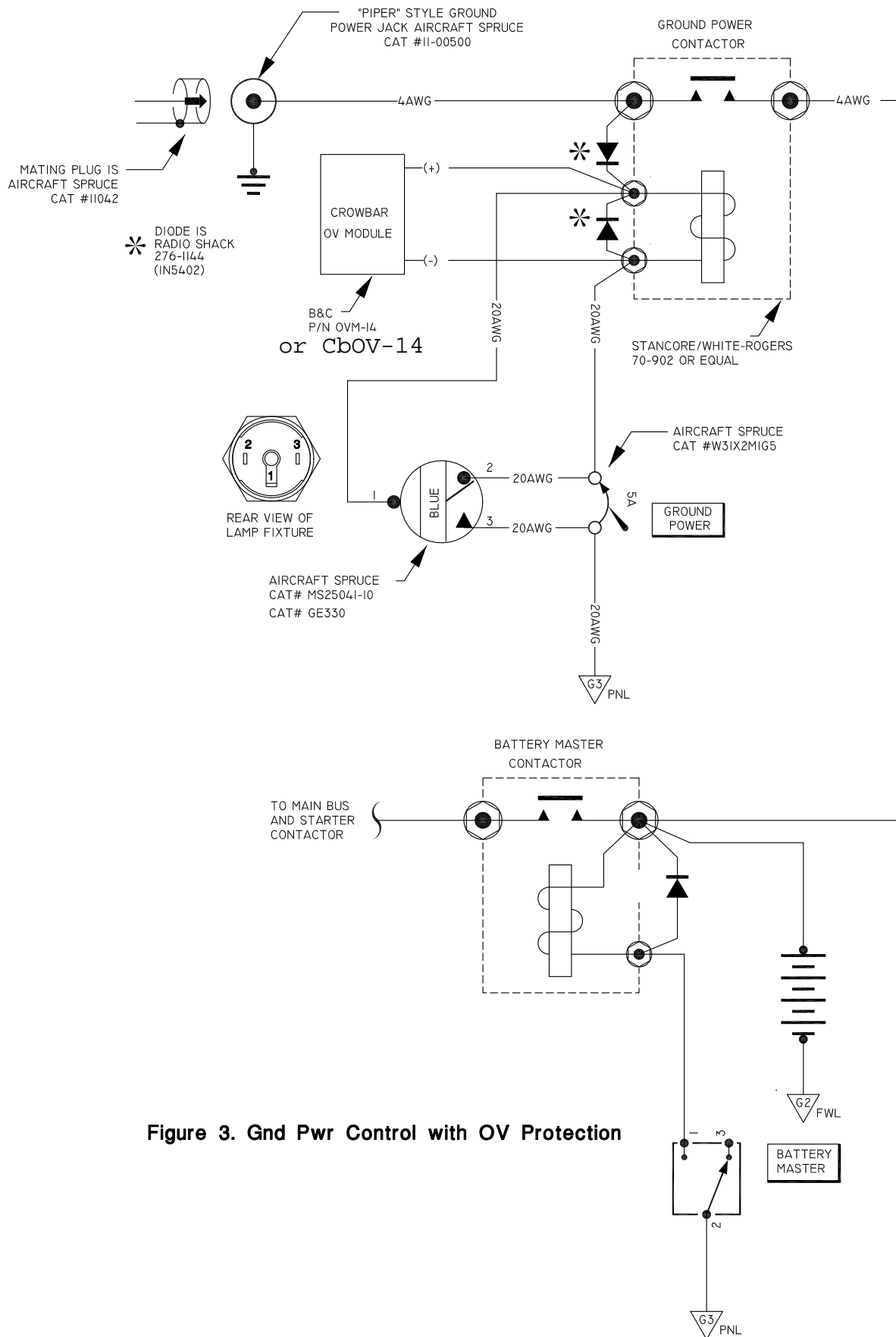


Figure 3. Gnd Pwr Control with OV Protection

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GROUND POWER	4.0