

Inspection Guide for PV Systems—Field Guide



Make sure all PV system ac/dc disconnects and circuit breakers are in the open position and verify the following.

**SHOULD BE “OFF”
TO START THE
INSPECTION**



1. All work done in a neat and workmanlike manner (NEC 110.12)



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**NO CONDUCTORS
HANGING DOWN
ATTRACTING
ATTENTION OR
DEBRIS**



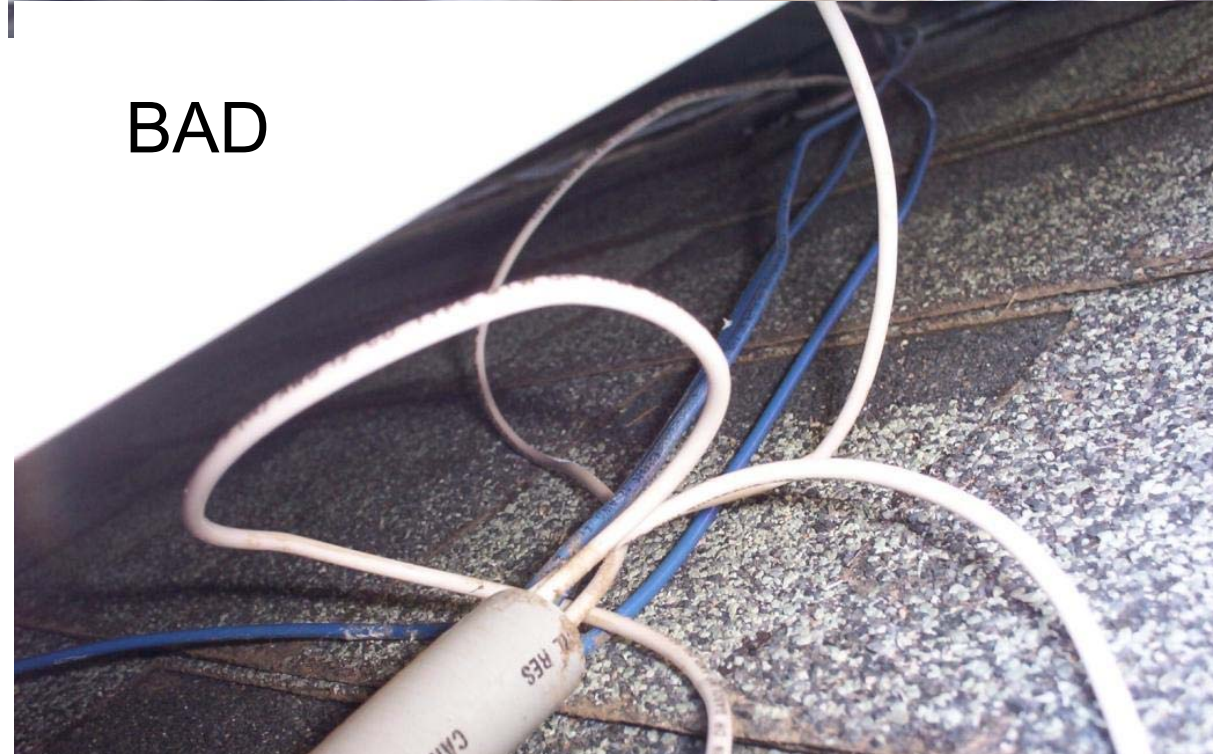
1. All work done in a neat and workmanlike manner (NEC 110.12)



UGLY



GOOD



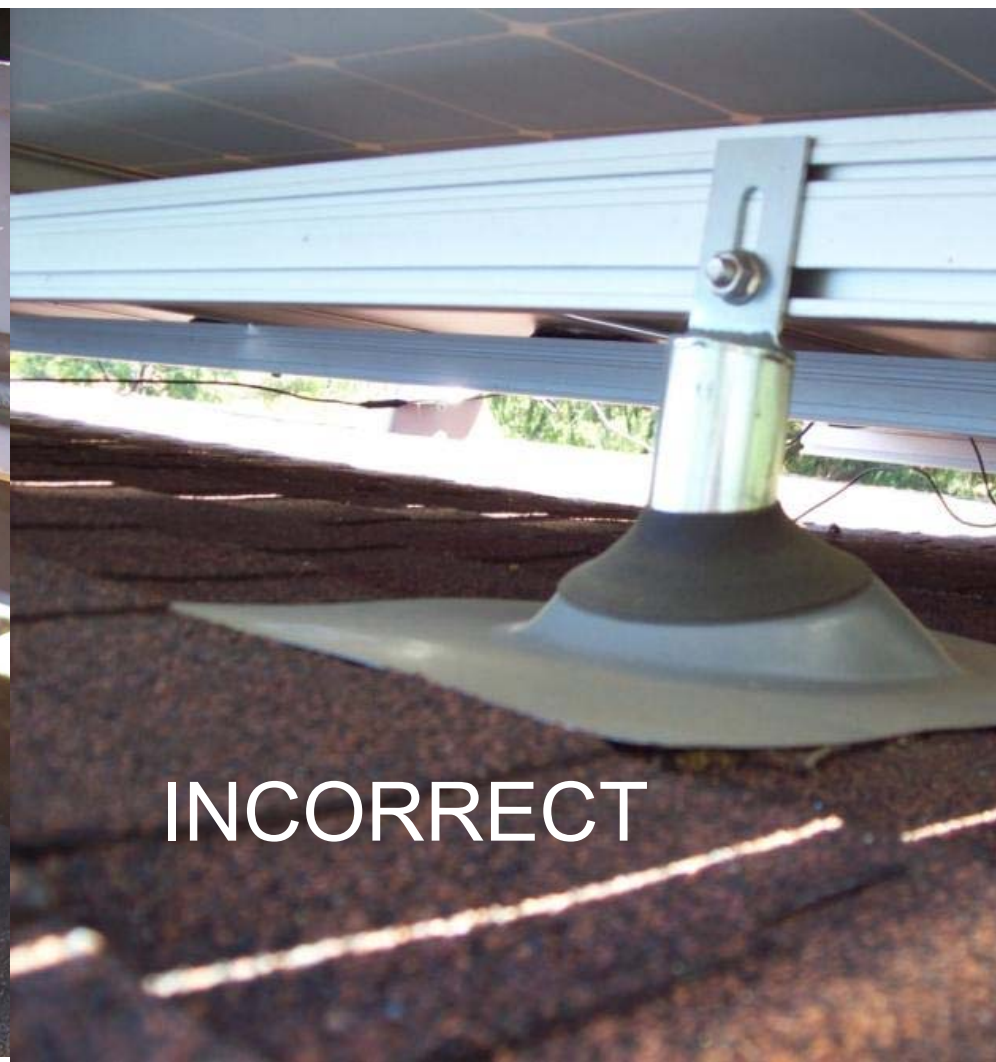
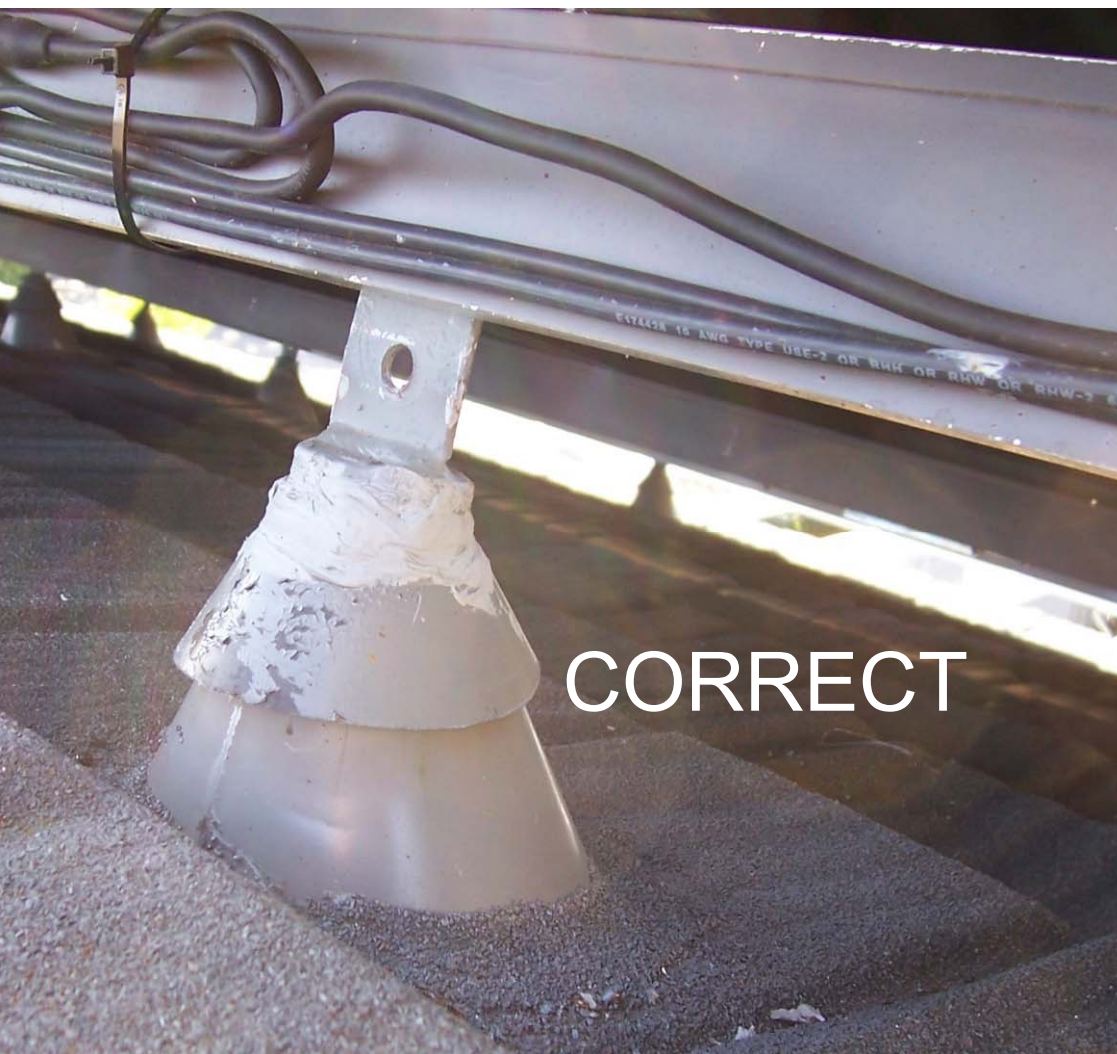
BAD

2. PV module model number, quantity and location (also neat and workmanlike)



2. PV module model number, quantity and location (bad structurally and aesthetically)





3. Array mounting system and structural connections according to the approved plan.

4. Roof penetrations flashed/sealed according to the approved plan.

5. Array exposed cables are properly secured, supported and routed to prevent physical damage.



**POORLY ROUTED
UNSECURED AND LAYING ON
ROOF SURFACE AND VENT**

5. Array exposed cables are properly secured, supported and routed to prevent physical damage.



**WELL SECURED AND
SUPPORTED**

6. Conduit correctly installed and according to CRC R331.3 and NEC 690.4(F).



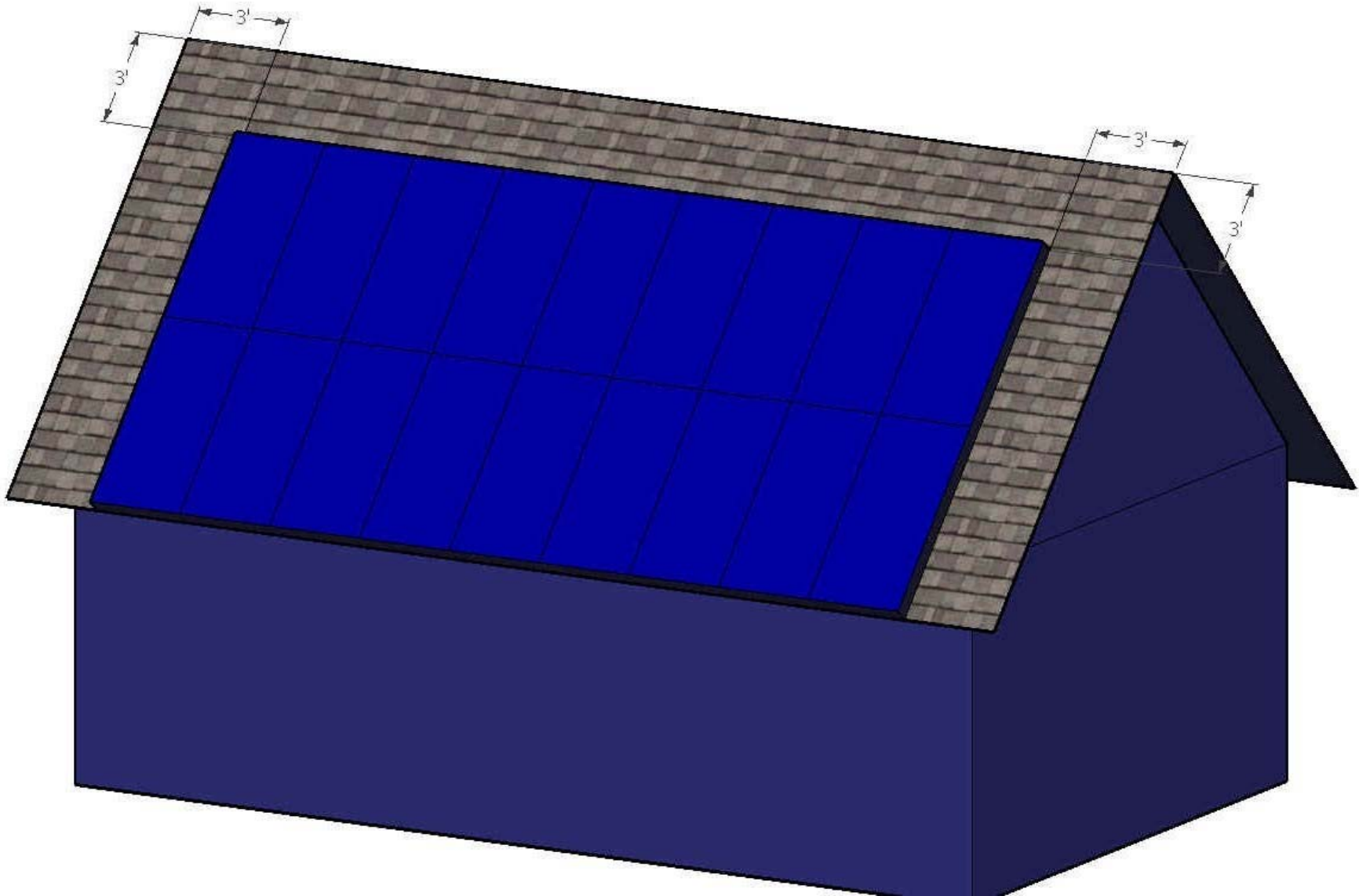
**RUN ALONG RIDGE
CONSISTENT WITH
690.4(F)**



**UNSECURED FLEX
LAYING ON ROOF**



7. Firefighter access according to approved plan.



7. Firefighter access according to approved plan.



**FIRE FIGHTERS HAD PLENTY OF ROOM TO
FIGHT THE FIRE AT THIS RESIDENCE**

8. Roof-mounted PV systems have the required fire classification

CERTIFICATE OF COMPLIANCE

Certificate Number 20150102 - E346702
Report Reference E346702 - 20140208
Issue Date 2015-JANUARY-02

Issued to: ZEP SOLAR INC |
161 Mitchell Blvd Ste 104
San Rafael, CA 94903-2085 USA |

This is to certify that
representative samples of

Mounting Systems, Mounting Devices, Clamping Devices
and Ground Lugs for Use with Photovoltaic Modules and
Panels |

Zep System (Steep Slope) with Type 1 modules |

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 2703, "Outline of Investigation for Mounting Systems,
Mounting Devices, Clamping/Retention Devices, and
Ground Lugs for Use with Flat-Plate Photovoltaic Modules
and Panels." |

Additional Information: See the UL Online Certifications Directory at
www.ul.com/database for additional information

The Zep System (Steep Slope) achieved a system fire
classification "A" when tested in combination with UL 2703

Li
m
P
E

Only those products bearing the UL Certi
fication and Follow-Up Service.

Look for the UL Certification Mark on the

B. Mahlen

Bruce Mahlenholz, Assistant Chief Engineer, Global Inspection and Field Se
UL LLC

Any information and documentation involving UL Mark services are provide
contact a local UL Customer Service Representative at www.ul.com/contact

PHOTOVOLTAIC MODULE			
MODEL	KC120-1		
SER NO.	01632A1055		
DATE	2001.6		
IRRADIANCE AND CELL TEMPERATURE	1000Wm ⁻² AM 1.5 25 °C	800Wm ⁻² AM 1.5 47 °C	MAX. SYS. VOLT.
P _{max}	120 W	87 W	600 V
V _{pmax}	16.9 V	15.2 V	SERIES FUSE
I _{pmax}	7.10 A	5.74 A	11 A
V _{oc}	21.5 V	---	MASS
I _{sc}	7.45 A	---	11.9 kg
UL C US LISTED 9P82		FIELD WIRING STRANDED COPPER ONLY 10-14 AWG INSULATED FOR 90°C	FIRE RATING CLASS C



Certificate of Compliance

Certificate: 2593411

Master Contract: 257442

Project: 70016432

Date Issued: December 3, 2014

Issued to: SolarWorld AG

24 Martin Luther King Strasse
Bonn, Nrth Rhine Westfalia 53175
Germany

*The products listed below are eligible to bear the CSA
Mark shown with adjacent indicators 'C' and 'US' for
Canada and US or with adjacent indicator 'US' for
US only or without either indicator for Canada only.*



*Tatjana Galonja-
Stojasavljevic*

Issued by: Tatjana Galonja-Stojasavljevic

PRODUCTS

CLASS 5311 10 - POWER SUPPLIES - Photovoltaic Modules and Panels

CLASS 5311 90 - POWER SUPPLIES - Photovoltaic Modules and Panels - Certified to US
Standards

PART A:

Photovoltaic Modules with maximum system voltage of 600 V dc or 1000 V dc and with Fire Performance of
Type 1, Model Series:

Sunmodule Plus SW, followed by 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260, 265, 270,
275, 280, 285, 290, 295 or 300 followed by "mono", may be followed by "black".

Sunmodule Plus SW, followed by 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260, 265, 270,
275 or 280 followed by "poly", may be followed by "black".

XL modules - "Sunmodule SW", followed by 260, 265, 270, 275, 280, 285, 290, 295, 300, 305, 310, 315, 320,
325, 330, 335, 340, 345, 350, 355 or 360 followed by "XL mono", may be followed by "black"

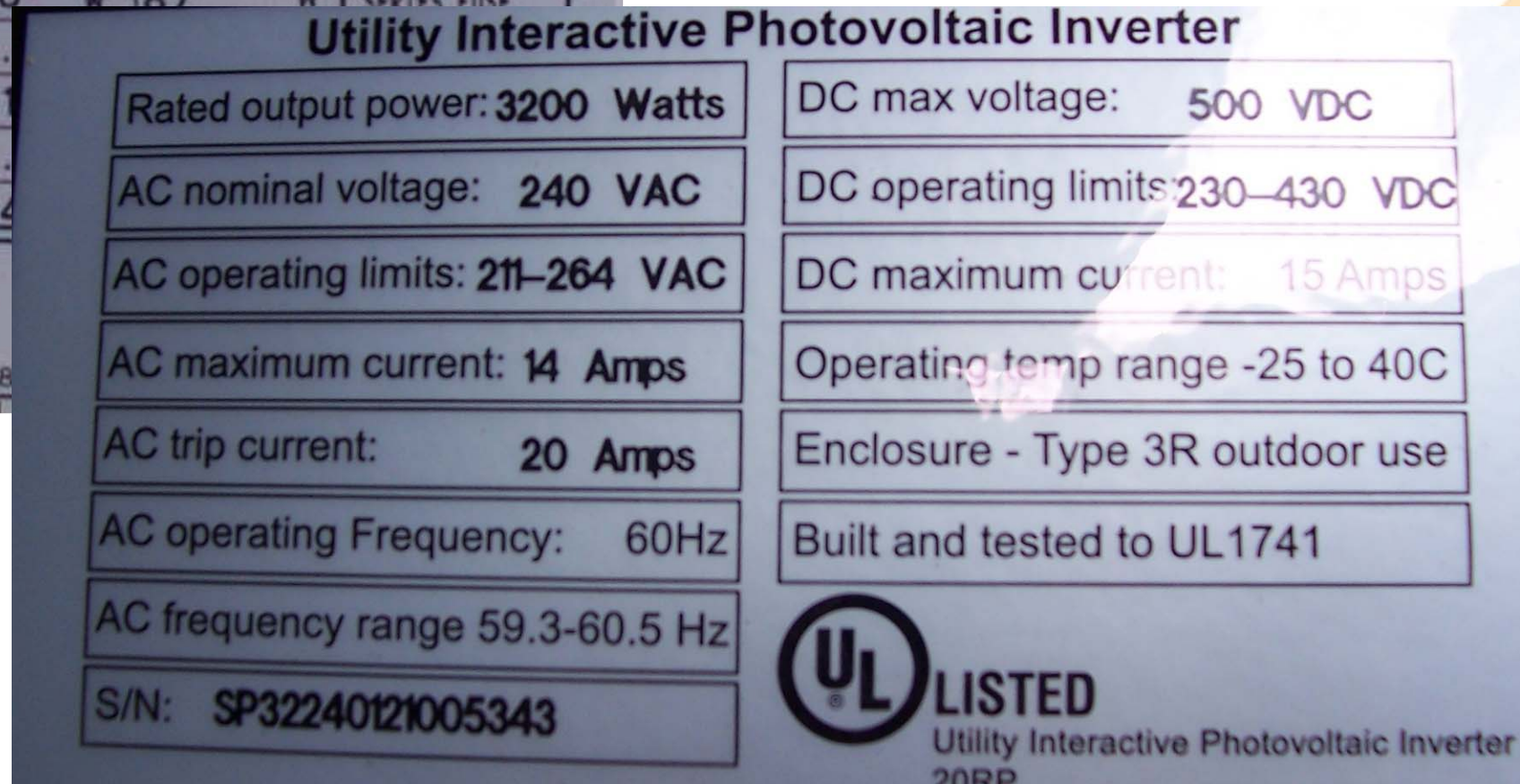
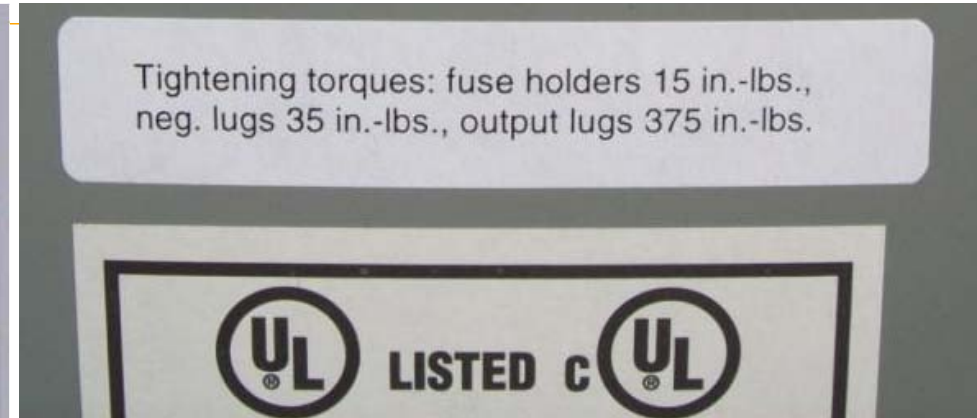
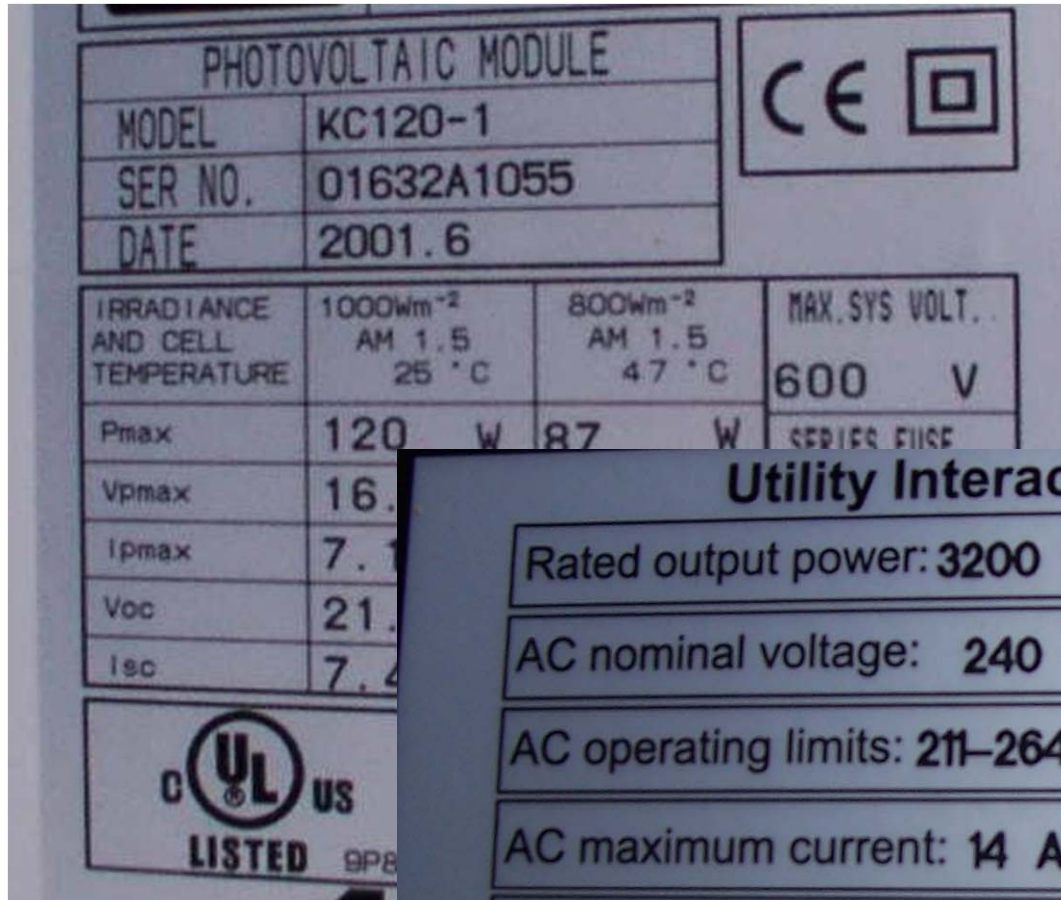
Notice
slight gap
caused by
properly
installed
clip

Wrong
grounding
hardware

Hardware consistent
with instructions

9. Grounding/bonding of rack and modules according to the manufacturer's installation instructions

10. Equipment listed and installed according to the approved plan
11. Inverter is marked "utility interactive."



12. Conductors, cables and conduit types, sizes and markings according to the approved plan.



THWN WIRE USED
OUTSIDE CONDUIT
IN SUNLIGHT-NOT
ALLOWED

PV WIRE HAS
CORRECT OUTDOOR
RATINGS

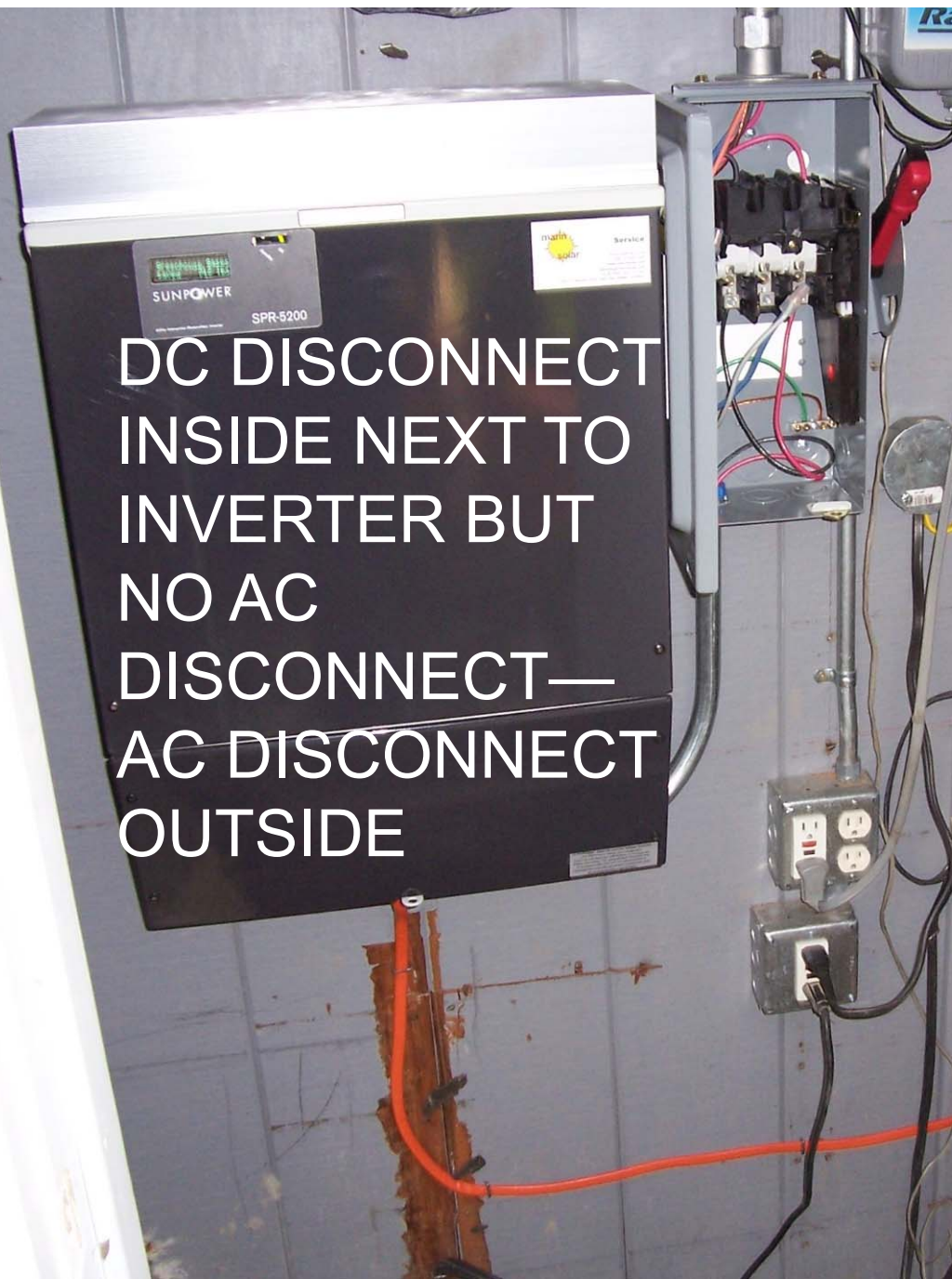


13. Overcurrent devices are the type and size according to the approved plan



14. Disconnects according to the approved plan and properly located as required by the NEC





14. Disconnects according to the approved plan and properly located as required

15. Inverter output circuit breaker is located at opposite end of bus from utility supply



Photo courtesy of Bill McGovern

16. PV system markings, labels and signs according to the approved plan

INTERACTIVE SYSTEM
POINT OF INTERCONNECTION

OPERATING AC CURRENT
54.1A

OPERATING VOLTAGE
480V



DC Photovoltaic Power Source

Operating current	19.6 A
Operating voltage	357.0 V
Maximum system voltage	519.5 V
Short-circuit current (max)	26.5 A

WARNING
ELECTRIC SHOCK HAZARD
DO NOT TOUCH TERMINALS
TERMINALS ON BOTH THE LINE AND LOAD SIDES
MAY BE ENERGIZED IN THE OPEN POSITION

16. PV system markings, labels and signs according to the approved plan



OWNER HAD ALL THE
EQUIPMENT STUCCOED—
INCLUDING ALL THE
SIGNS

17. Connection of the PV system to the grounding electrode system according to the approved plan.



18. Access and working space for operation and maintenance of PV equipment



ANYONE HAVE
A MACHETE
HANDY?

19. The rapid shutdown system is installed according to the approved plan [690.12]

