Fire & Rescue NSW
Safety Bulletin 2012/01
Incompatible electrical connectors

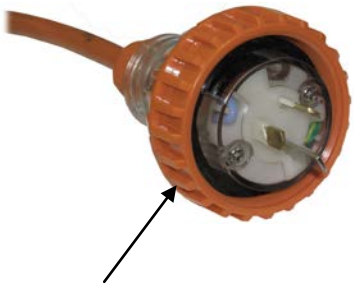
Issue

A fault has been identified with some electrical connectors (plugs and sockets) manufactured by GWR. Some of the connectors are incompatible, which means they cannot be properly secured using the locking ring, increasing the electrical hazard risk.

These connectors are used on extension leads, generators, power boards and portable lighting issued to FRNSW appliances.

Background

Electrical connectors on extension leads, generators, power boards and portable lighting issued to appliances have increased protection against penetration by water and dust and from accidental disconnection. This protection is rated according to the Ingress Protection (or IP) Ratings Code (AS 60529–2004).



An IP rated plug found on extension leads, power boards and portable lighting.

An IP rated surface socket found on generators and power boards.

An IP rated in line socket found on extension leads.

When the connections are not secured using the locking ring on the plug, the increased protection, and therefore the IP rating, is lost.

It has been identified that there are variations in the manufacture of the thread on the locking rings and sockets. Because some threads on both locking rings and sockets are incompatible, the connection cannot be properly secured.

Action required

Station Commanders and supervisors must check the compatibility of all electrical connectors with an IP rating in accordance with the following procedure within 7 days of the date of this bulletin.

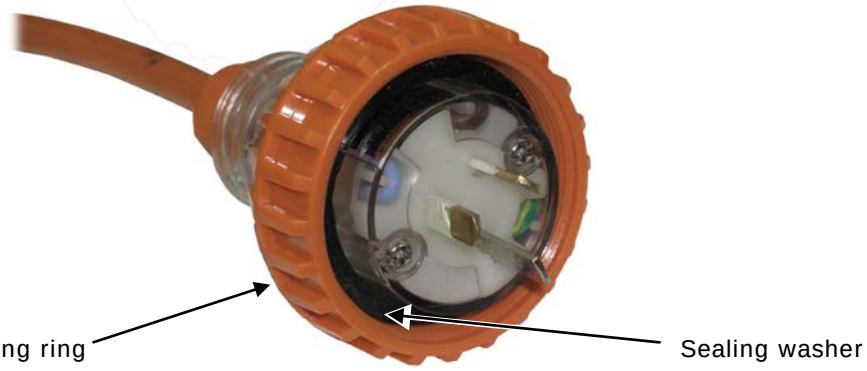
Safety Bulletin 2012/01
Incompatible electrical connectors

Procedure

WARNING

Do not conduct this testing with the generator running or with any of the equipment plugged into mains power supply.

1. Remove all extension leads, generators, power boards and portable lighting from the appliance, and place them in a clear area for testing.
2. Check that the rubber sealing washer of each plug is in place and undamaged.



3. Check that **each** plug can be connected to **every** socket and that:
   - The locking ring easily engages with the thread on the socket.
   - The locking ring easily and smoothly, with no force required, turns approximately two full rotations until the plug and socket are securely fastened together.
4. The connection is faulty if there is:

Movement in the connection when gentle sideways force is applied to the plug.

Movement when gentle outwards force is applied to the plug. (Pull on the plug, not the cord.)

More than one thread showing on the socket below the locking ring.

5. If any plugs or sockets are incompatible:
   a. Remove the equipment with plugs or sockets **manufactured by GWR** from service
   b. Tag this equipment with a pink repair tag, and
   c. Place the equipment in a secure location at the station or section.
6. Return all serviceable equipment to the appliance.
7. Submit the results of the checks using this electronic form for each appliance separately.
8. Make an entry in the occurrence book recording that the check has been completed and that the results have been submitted.

Repairs

The Rescue Section will coordinate the repair of the incompatible equipment with the supplier.

If you have not been contacted by Rescue Section by 6 April 2012 to make arrangements for the repair of the faulty equipment, contact the Deputy Manager Rescue/Technical Services.

Contact officer: Station Officer Greg Watson, Deputy Manager Rescue/Technical Services, (02) 9742 7153, gregory.watson@fire.nsw.gov.au.

Noted: Station Commander	**A**	**B**	**C**	**D**	**Other**
Checked: Duty Commander					

Previous Safety Bulletin: Safety Bulletin 2011/04, *Electric shock injuries*