



IGNITION  
PARTS

## TECHNICAL INFORMATION SHEET

### INSULATOR CRACKS / BREAKAGE

The top of the insulator of a spark plug can become cracked or broken due to physical force applied to the top of the insulator or the top terminal.

*A break in the insulation will cause a spark plug to either misfire or not spark at all.* The crack is usually visible, but can sometimes be out of sight, below the top of the metal shell.

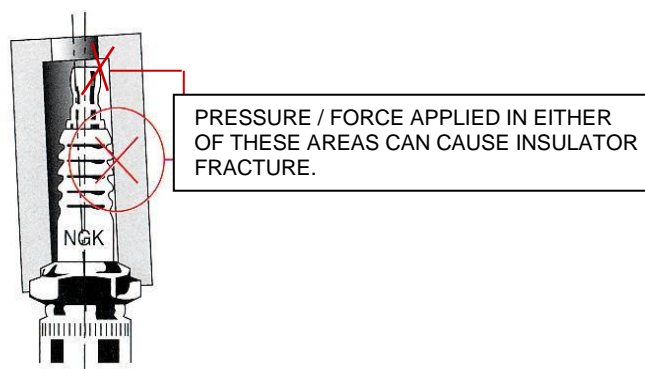
#### Dropping:

Accidental dropping of the product can break the insulator, but a more common cause is 'Wrench Slip'.

#### Wrench Slip / Tilt:

If the wrench slips off or tilts at an angle on the spark plug hexagon, a crack in the insulator can occur.

A poorly fitted or a poorly designed spark plug socket causes this problem. The diagrams below show how wrench slip occurs and how pressure can cause breakages.



Poor socket design



Preferred socket design

**Solution:** select a hexagonal type socket design that is the least likely to slip, still ensuring that the socket does not tilt on the spark plug hexagon during tightening or loosening. If an extension bar is required for deeply recessed spark plugs, select one that is as short as possible.