

- One of the most misunderstood spark plugs in the industry is the **Multiple Ground Electrode Spark Plug**. It has been used as OE (Mazda) since 1971 in rotary engines, then adopted by many other OE (Europeans and Japanese) throughout the years. Some OES manufacturers still offer them to feed the mentality of OE is best replacement.
- There are OE designs with 2, 3, and 4 ground electrodes, some competitors still offer them; and originally they thought it will help to avoid fouling, but this effect is short lived. These are now considered obsolete designs.
- Other OE manufacturers use it as a way to extend the durability, by having multiple ground electrodes so that as one wears out you will have additional functional electrodes to last 2 to 3 times more than a single electrode made of the same metallurgy.
- One of the **MYTHS** about multiple ground electrode spark plugs is, that they fire more than one spark at a time; a true understanding of basic electricity physics does not allow this to happen. The spark occurs one at a time in which ever facilitates the spark to occur (heat, closest one to the center, "gap", electric conductivity and ignition system design and air/fuel/ combustion conditions)
- The multi ground spark plug (70s) was the answer at the time, to make spark plugs more durable but comes at the cost of **ignitability**, most noticeable on rotary engines during cold start and higher mileage engines with lower compression or poorly maintained (PCV, EGR systems, incorrect oil/filters and fuels/additives and other issues) Spark plugs do not fix wear and tear.
- The electrodes are in the way and interfere with the flame kernel by **absorbing the heat energy**, the ground electrode technically is extinguishing the flame. This also happens in other more recent spark plug designs that have a massive ground electrode designs that absorb the kernel energy.
- Because of these problems, OE manufacturers need to have better ignitability to comply with emissions and avoid damaging the catalytic converter prematurely (performance emissions warranty) and as misfire detection began with OBD2, most professional technicians have switched to **Iridium Spark Plug technology** as it has proved to be all around better performing technology followed by OE Service, making the MGE spark plugs obsolete.
- **Autolite Iridium XP** durability is attained by having rare metal alloys that would last at least the manufacturers maintenance intervals or more. This spark plugs have outstanding durability and the fine wire Iridium center electrode and a platinum tip in the single V-trimmed ground electrode; also with anti-fouling ceramic. **Autolite Iridium XP** provides the ultimate ignitability and is the best one with Real Performance - Real Value and works in any ignition system.

