

## Hella Compact Xenon Driving Lights

As small and medium sized 4x4 frontal areas shrink and grille areas become smaller there's often no space to fit large-diameter driving lights. Until recently that's meant a compromise in light intensity, because of the lower outputs of smaller-diameter driving and pencil lights, but the introduction of HID gas discharge technology to smaller lamps is changing that situation.



The latest Hella compact lights even have housing space for internal ballast.

Another good reason for buying gas discharge lights rather than halogens is that smaller 4x4s usually have lower-output alternators and feeding a pair of 100-watt halogens, plus a fridge, can stretch alternator capacity. Most HID lights need only 35W globes. The clincher is much longer globe life from HIDs compared with halogens.

The new-generation Rallye FF 4000 Compact iX Series xenon gas discharge pencil beam and driving lights measure only 170mm across and 139mm deep. The lights have die-cast zinc housings and brackets, clear-glass lenses and protective polycarbonate caps. Beam shaping is achieved by free-form (FF) reflectors, with subtle moulding differences between spread and pencil beam models. Electronic ballast units that strike the arcs in the xenon globes are built into the back of the housings, so the wiring kit is similar to that used with conventional halogen globe lights.

We've never been fans of Hella's light-mounting designs, finding them difficult to attach and adjust, but the Rallye FF 4000 Compact iX Series have excellent brackets that are very easy to work with. A yoke-shaped mounting bracket bolts to the bar with a conventional nut and washer, and the light body attaches to the bracket by way of two, side-fixed Allen screws.

Hella claims a pencil beam of almost one kilometre, with a useful width of 30 metres and a spread beam range of 500m x 60m – that's equivalent to a large-diameter halogen light pair, so the small Hella xenons certainly promised to brighten our outback way.

The Hella Model 1383/1384 pair came with all necessary wiring, switching, relay and diagrammatic installation instructions, so there were no obvious difficulties. The boxed set contained a pencil beam and a spread beam, but we found it difficult to tell them apart, because both had clear lenses and segmented reflectors. The clues are a slight difference in reflector shape and the fact that the spread



beam reflector carries a small ECE compliance number, where the pencil beam reflector has no printed markings.

We mounted the pencil beam on the driver's side and wired them up quickly enough, but they wouldn't work. Hmmm. Polarity, most likely.

We took a harder look at the Hella installation wiring diagram and discovered that the power supply wire was marked as 'blue' and the earth wire as 'brown'- not what your average household sparky would expect, but there you are. With our instinctive power and earth connections reversed the Hella's burst into life. We did a rough alignment and headed for dark and bumpy roads.



In the world of lighting - even in the gas discharge zone - size does matter, so we didn't expect the 170mm diameter Hella's to match the performance of a pair of xenon 225s. However, the Rallye FF 4000 Compact iX pencil beam was surprisingly far-seeing. The spread beam didn't have quite the side penetration of larger lights, but was judged very useful.

Both beams were even, without any blotches and ignition time was only a couple of seconds.

The new mounting designs are a giant leap over previous Hella brackets, offering ease of adjustment, both laterally and vertically, as well as extreme resistance to shake on bumpy surfaces.

We think this is because the support points are near each lamp's centre of gravity, eliminating the tendency for the housings to 'nod' and their functions are separated: lateral adjustment is done by turning the yoke and tightening the bottom nut, while vertical adjustment is done with the Allen screws.



The lens is attached to the housing via a securing ring and four Allen screws, giving easy access to the globe, reflector and ballast unit.

Pricing is at least twice that of halogens, at around \$1400-1600 for the pair, but the additional performance may well justify the extra money. In the realm of small HID lights the latest Hella Rallye FF 4000 Compact iX pair is the best we've seen.

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