

## REPLACEMENT REASONS

- Valve or engine damage.
- Noisy operations.
- Power loss.
- Poor compression.
- Excessive oil or fuel consumption.
- Premature wear of the Valve Train system.

Once the Valve starts operating off line (out of alignment), it is beyond the serviceable limit. The destructive axial energy then affects operation for the Valve.

When a Guide is new the full length is utilised. A worn Guide has a reduced operating surface with the Valve. This can result in premature failure.

## WHEN REPLACING

Replace both Valves and Guides, especially after timing failure. Ensure perpendicular Valve alignment to the Camshaft lobe, preventing premature failure.

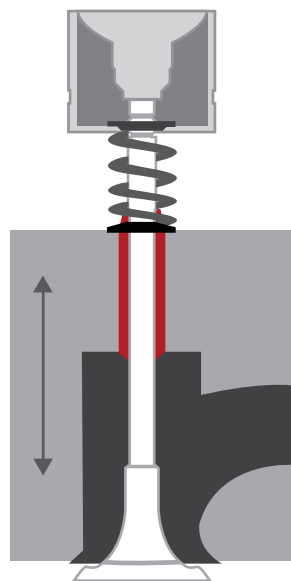


**AS A MANUFACTURER WE PROVIDE RECOMMENDATIONS AND GUIDELINES TO ENSURE THE LONGEVITY OF NEW PRODUCTS. FAILURE TO FOLLOW THESE GUIDELINES COULD SHORTEN THE OPERATING LIFE OF THE PRODUCT AND INFLUENCE THE OUTCOME OF ANY FUTURE CLAIMS.**

## REPLACING VALVE GUIDES

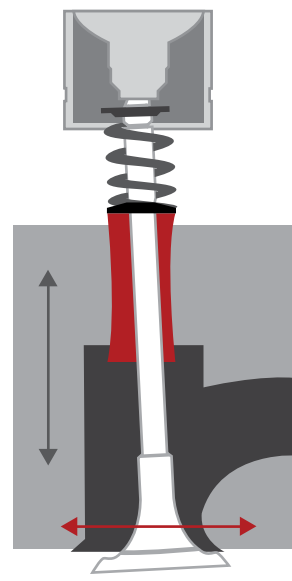
### General advice

FIGURE 1:



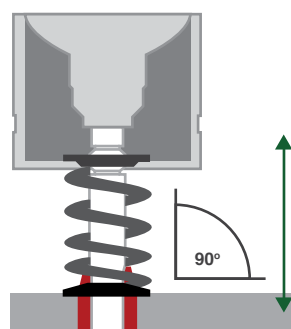
Demonstrates the correct linear Valve operating assembly.

FIGURE 2:



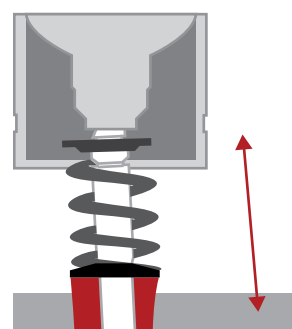
Displays a Valve with excessive wear that's functioning on both linear and axial plains.

FIGURE 3:



Displays the Valve and Lifter in perfect linear alignment.

FIGURE 4:



Displays how worn guides affect the function of both Valves and Lifters.



BGA products are to be replaced by an experienced automotive installer. This information is to be used as reference only. Always seek manufacturer specification.