

# APPLICATION NOTE/ USER CASE STUDY

## Video Microscope on articulated arm mount solves the problem of high precision inspection on large workpieces

### Introduction

ReGo Autoparts based in Kent is synonymous with high quality remanufactured steering components under the Lenco brand.

The modernisation of vehicles has brought new challenges for automotive manufacturers with the shift from hydraulic to electric power assistance requiring new, specialised inspection equipment. Re-Go Autoparts, the high-quality remanufacturer of steering components, needed to invest in a complete solution for high precision electrical rework and circuit board inspection – the product chosen was Vision Engineering's Evo Cam with articulated arm mount.



*“Let’s face it, surgeons use this type of set up now as routine in operations - enough said.”*

### About Optimax

Optimax is one of the UK’s leading independent production metrology, optical inspection, non-contact metrology and force measurement specialists.

We offer a technical and solution-based approach to a customer’s production measurement requirements, and their applications, to providing the ideal solution.

With UKAS accreditation and an experienced team of qualified engineers we also provide service, repairs, calibration, and upgrades to equipment in house and at customer premises.

Contact us to find out more about how we can support your production metrology and visual inspection requirements.

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# Optimax

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## Easy to use Evo-Cam Solution Solves the Problem

Re-Go Autoparts are committed to delivering the highest quality re-engineered steering components with a surface life equal to that which the part had before fault. Their requirements for the high-magnification view of electrical components poses a significant inspection challenge, as these small parts are mounted onto heavy and awkward workpieces. Having received a complete measurement solution from Optimax previously, Re-Go Autoparts were confident in their purchase of the Evo Cam with articulated arm mount:

## Significant impact to inspect large objects

The large working distance between camera and workpiece and the moveable display, further ensures the maintenance of a comfortable working position for the operator and excellent hand-eye coordination. Gary explained that reducing worker fatigue was a crucial motivation in the purchase of this ergonomic solution:

With the ability to put your hands under the camera, you have space to work, use tools, tweezers, and soldering work. It becomes natural and easy to use in a short time. This technique is now common with use this type of set up now as routine in operations - enough said stated Gary Martin. The video camera also facilitates digital zooming in addition to the optical zoom. The image capture facility also allows Re-Go Autoparts to easily generate reports for customers to explain what is damaged, and for suppliers to discuss needed parts. This improved traceability also supports essential research and development work.

## Calibration

The equipment is UKAS calibrated by Optimax, ensuring that it conforms to an internationally recognised standard, providing an independently audited process of verification.

*"We saw that the Evo Cam was the most suitable device – really ticking all the boxes. Most competitor equipment is fixed to a stage which wouldn't allow us to fit our workpieces below it. With such a complex process you must have a good view of the components, so the flexibility and manoeuvrability of the articulated arm mount is crucial. The Evo Cam's overlay grids also offer useful reference for scale, which is ample for this application."* Gary Martin, Re-Go

Our thanks to Re-Go Autoparts

*"The Evo Cam's overlay grids also offer useful reference for scale"*

