

## **igus new-starter fixes classic 4x4 as part of his initiation into the plastic bearing business**

As part of the training programme for all new sales recruits at igus, managing director Matthew Aldridge sets a project. The task is to solve an engineering problem using igus products. For new starter Darren Lane, the challenge was to come up with a way of stopping a classic 1962 Land Rover Series IIA throttle ball joint from detaching while accelerating.

Matthew has always been tinkering with broken machines and getting them back up and running. At the age of 16, he single-handedly restored a 1969 Triumph Herald 13/60, which he was then able to take on the road when he passed his driving test. The Land Rover Series IIA is his latest restoration project.

“I bought the Land Rover as a wreck 5 years ago,” says Matthew. “I’ve refurbished it and tinker with it during my spare time, when I’m not driving it off-road. One problem I had was that the throttle ball joint kept detaching under acceleration. Earlier this year it happened four times in one journey, which meant stopping the Land Rover, opening the bonnet and refitting the throttle ball joint - enough was enough.”

For every new sales engineer, a challenge is set whereby a problem is solved by working with igus products. Darren’s project was to find a solution to Matthew’s throttle ball socket problem that was adjustable and fitted the current ball studs. To add a bit of a twist, one of the studs was badly corroded and, as part of a riveted mechanism that is original to the vehicle, tricky to replace. The other ball stud, which had to be refitted when the carburettor was replaced, was brand new.

“When given the project, I felt excited and a little apprehensive,” says Darren, “after all, it was my new managing director’s own vehicle.” Familiar with the application and having just undergone 6 weeks of intensive product training, Darren was able to identify a potential product range to investigate further.

“I wanted the part to remain as ‘genuine’ to the Land Rover as possible, both aesthetically and functionally,” explains Darren. Initially, he considered using the same sized angled socket joint at each end. But, as one of the original ball studs was riveted in place, it could not be removed. The other one was replaceable. He increased the size of angled ball and socket joint at the replaceable end, choosing 2 igus WGLM-08 M8 ball joint linkages with M8 thread – one was used to manufacture a ‘lock nut’. This

enabled a secure and reliable threaded fit onto the mounting bracket on the vehicle. One the other end, he used 2 WGRM-06-LC M6 ball joint linkages.

“Changing the ball and socket size at one end meant having to replace the ‘link rod’ between the two ends,” explains Darren. “It had to have a larger left-handed thread at one end to allow for the larger ball and socket and remain useable for the adjustment of the linkage as per the original.” He added that the replacement parts also met with Matthew’s requirement for replacing the metal parts that had corroded, with igus parts that are maintenance and lubrication free, even in aggressive environments.

If you are planning to go rambling through the Northamptonshire countryside, please do watch out for Matthew’s Land Rover! For more information about igus products, visit the website: [www.igus.co.uk](http://www.igus.co.uk) or call igus directly on: 01604 677240

#### **Images and suggested captions:**



*Fully restored – 5 years ago, this classic 1962 Land Rover Series IIA was a wreck.*



*Just like it grew there – Darren Lane’s solution to Matthew Aldridge’s throttle linkage problem.*



*Darren Lane solves the throttle ball socket problem with lubrication-free igus parts that will not corrode.*

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Based in Northampton in the UK and with global headquarters in Cologne, Germany, igus is a leading international manufacturer of energy chain systems and polymer plain bearings. The family-run company is represented in 35 countries and employs 3.800 people around the world. In 2017, igus generated a turnover of 690 million euros with motion plastics, plastic components for moving applications.

With plastic bearing experience since 1964, cable carrier experience since 1971 and continuous-flex cable since 1989, igus provides the right solution based on 100,000 products available from stock with between 1,500 and 2,500 new product introductions each year. igus operates the largest test laboratories and factories in its sector to offer customers quick turnaround times on innovative products and solutions tailored to their needs.

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