



Steering System Specialists

## Proud of our engineering heritage



Founded in 1969, Pailton Engineering is a global leader in the design and manufacture of steering systems for Commercial and Military vehicles.



Based in Coventry England, the 90,000 sq. ft facility offers fully incorporated design, test and production facilities meeting the latest quality and manufacturing standards.



We are focussed on assisting mid volume Original Equipment (OE) vehicle manufacturers with bespoke engineered solutions for their Driveline system.

## How we can help you:

- **Unrivalled design flexibility including full system development**
- **Expert modelling of designs to ensure all your requirements are achieved**
- **Deliver the highest performance parts for safety-critical markets**
- **Keep vehicle whole life costs to a minimum**

## Why choose Pailton?

We are specialists in steering design. Many of our blue-chip customers have been loyal to us for over 30 years; they value our design expertise, support, product knowledge, quality and service.

We excel where our competitors fail; offering engineered solutions where standard, off-the-shelf parts simply won't do.

Direct liaison between our engineers and yours ensures our wealth of technical knowledge and experience is available at all times.

---

Global reach

Pailton Engineering designs and manufactures steering parts for the following industries:

Bus and Coach



Military



Truck



Construction



Emergency



Utility



Wherever you are...

Pailton Engineering can deliver

## Design capabilities

Design is at the heart of Pailton Engineering, it is what sets us apart from the competition.

If you would like to discuss your requirements, call us +44 (0) 2476 680455 or email [sales@pailton.com](mailto:sales@pailton.com)

Pailton is a design lead company providing full technical and engineering support from concept, through design and test, to production.

We utilise the latest 3D modelling CAD systems and in-house test facilities to ensure full compatibility with customer requirements, including:

- Finite Element Analysis
- Space envelope verification
- System motion analysis
- 3D printing
- Complete system development and optimisation

With 50 years' experience of supplying parts for the most demanding of environments, we understand that every component in the steering system is safety-critical and our teams of experienced Design and Production engineers work closely with each customer to ensure we convert your requirements into a fully tested and approved production-ready part.

## Testing & quality control



EMS 74987



OHS 601520

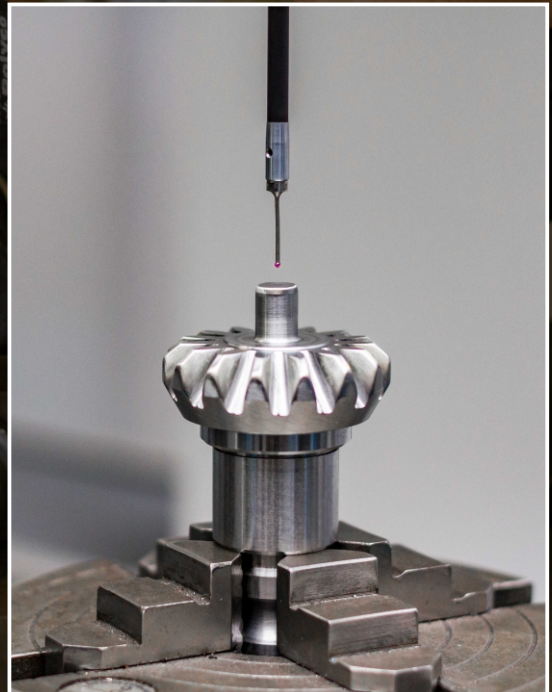


640662

## Testing

To support product quality we utilise internationally recognised external test houses in addition to our own well-equipped laboratory where we can measure a range of requirements including; load, cycles, tensile strength, fatigue, salt spray and accelerated durability.

Over the past 50 years we have developed numerous internal test specifications but we can also accommodate bespoke customer performance requirements, for example we created a 56-week environmental test programme where our Generation 3 Bevel Boxes operated, fully submerged in salt water and grit, to ensure they conformed with ingress protection standards IP66 and IP67.



## Steering columns

Multiple  
Shaft interface  
options

Mechanical memory  
functionality

- Manual, pneumatic or electronic adjustment
- Made to your tilt and telescope requirements
- Compatible with steering sensors, locking collars and many other accessories on request
- A range of steering wheels available
- Various mounting options

## Bevel / Mitre / T-boxes



- Available front, side or floor mounted
- T-box options for dual steer
- Standard 1:1 ratio, other options available
- Can be pre-built into steering column assembly
- IP66 and IP67 rated: excellent water submersion capabilities for wading and submersion
- Sealed-for life for lower maintenance costs
- Lightweight aluminium housing
- Functions effectively at extreme temperatures between -40°C and 100°C

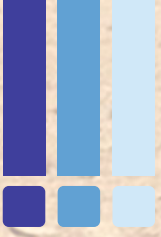
## Drag links

**Straight or formed**  
to avoid obstructions  
under the vehicle

**Optimum tube size**  
calculated using latest  
finite element analysis

- Strong and lightweight
- Custom lengths
- Straight or complex, compound bends
- Choice of assembly methods – crimped, locknut or clamp





## Sliding steering shafts

**Fixed**  
or detachable  
universal joint  
for easy servicing

**Multiple**  
interface  
options

- Custom lengths
- Re-grease or service free
- Optional gaiter for enhanced protection in harsh environments
- High working angle for use in a range of applications
- Small turning circle envelopes (occupying as little space as possible)

## Drop arms / Pitman arms



- Tapered spline design provides improved clamping between components
- Fully bespoke design to fit the space envelope available
- Made using high quality material for additional strength and durability
- Machined from forged or solid billet

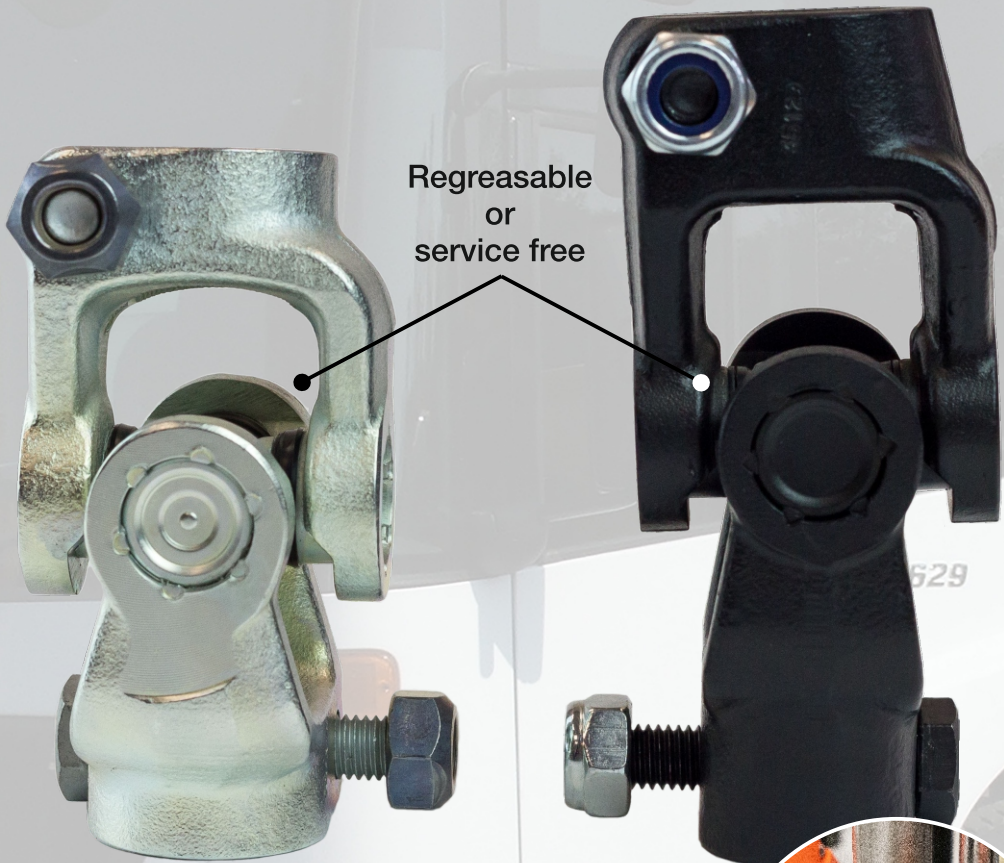




## Panhard rods and suspension links

- Custom lengths depending on vehicle geometry
- Strong and lightweight
- Range of trunnion sizes available
- Choice of assembly methods – Crimped, Locknut or Clamp
- V Links available

## Steering universal joints

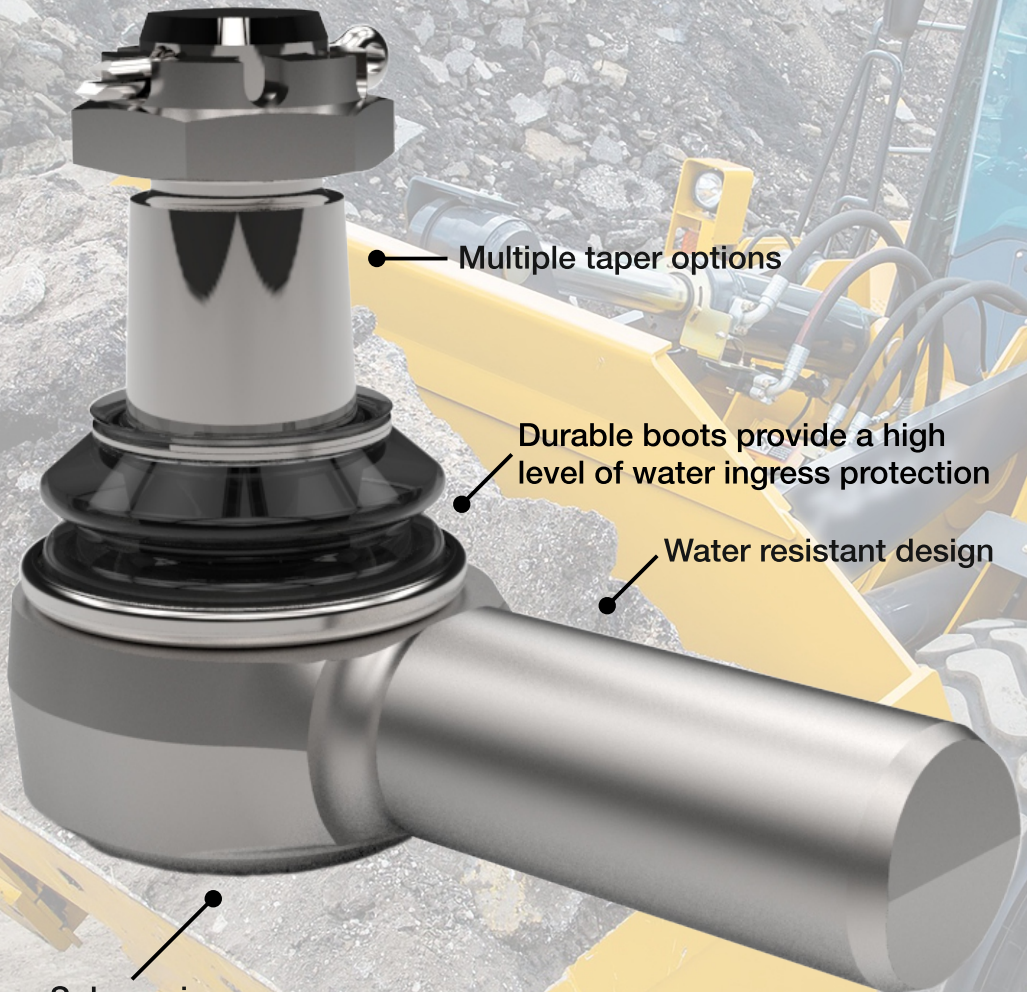


Regreasable  
or  
service free

Pailton Engineering has invested in a purpose-built staking rig, to ensure the highest level of accuracy in the universal joint staking process.

- High working angle
- Multiple interface options
- Optional gaiter available for enhanced environmental protection

## Ball joints



Multiple taper options

Durable boots provide a high level of water ingress protection

Water resistant design

Sphere sizes up to 65mm

- Internal or external threads
- Straight or offset shanks
- High articulation
- Induction hardened to provide increased product life

# Wherever you are in the world...

Steering  
Columns



- Manual, pneumatic & electric
- Various mounting options
- SAS & cancelling cams can be incorporated

Bevel / Mitre /  
T-boxes



- IP66 & IP67 rated for water ingress
- Front, side or floor mounted
- Functions between -40c +100c

Drag  
links



- Strong & lightweight
- Straight or formed
- Crimped, clamped or locknut

Sliding  
steering shafts



- Small turning circle envelopes
- Multiple interface options
- Optional gaiter for enhanced environmental protection



# Pailton Engineering can deliver

## Drop arms / Pitman arms



- Fully bespoke design
- High quality, robust material
- Machined from forged or solid billet

## Panhard rods & suspension links



- Custom lengths
- Range of trunion sizes
- Crimped, locknut or clamp

## Steering universal joints



- Regreasable or service free
- High working angles
- Multiple interface options

## Ball joints



- Sphere sizes up to 65mm
- Induction hardened
- High articulation



## Beyond standard

When you need something more than standard, we can help:

- Expert design and technical support including full system design and optimisation
- Bespoke solutions
- Design and manufacturing under one roof
- Multitude of product variations
- Unique steel tube material for ideal elongation and strength characteristics
- Fixed or adjustable links with a choice of connection methods
- Complex, compound bending
- Mid-volume production runs
- Reduced whole life vehicle costs
- Quality assured safety critical parts



Better by Design

Full system

Component

Aftermarket