



Recreation

Engineered Wear Components for
High-Performance Outdoor equipment

Recreational vehicles and outdoor power equipment are pushed harder than ever. Whether powering down trails, cutting through dense terrain, carving across snow, or navigating marine environments, components must withstand extreme abrasion, impact, corrosion, and vibration. Performance expectations are high, and reliability is critical, especially in remote and demanding conditions.

Fisher Barton partners with OEM engineers and purchasing teams to deliver high wear components and advanced surface engineered solutions that boost durability, extend service life, and reduce warranty and lifecycle costs.

From driveline and cutting components to wear surfaces and structural parts, our solutions are designed to perform consistently season after season. Grounded in deep metallurgy and material science expertise, our solutions are engineered to thrive in the toughest outdoor environments.



Common Recreational Components That Fail from Wear or Exposure

OEMs consistently report premature failures in the following areas—each a highlighted opportunity for improvement through metallurgy and surface engineering:

Drivetrain & Power Transmission

- Sprockets & chain drive components – abrasive wear, fatigue cracking
- Drive shafts, couplers, and yokes – fretting, galling, corrosion, spline wear
- Gear sets & pinions – pitting, surface fatigue, lubrication breakdown

Suspension & Steering

- Control arm bushings & pivot points – metal on metal wear, impact shock
- Ball joints & kingpins – abrasive ingress + corrosion leading to stiffness or failure
- Shock components & linkage hardware – wear from constant vibration

Engine & Small Power Systems

- Valves, tappets, and wear surfaces – heat + friction induced galling
- Blade spindles & rotating shafts – corrosion, fretting, abrasive wear
- Throttle, choke, and intake components – particulate abrasion

Marine & Watercraft Components

- Propeller shafts & hubs – saltwater corrosion + cavitation wear
- Steering linkages – moisture driven corrosion + abrasive sand intrusion
- Pump housings & impellers – erosion from high velocity water flow

These components commonly fail due to suboptimal material choice, inadequate heat treatment, or insufficient surface protection—areas where Fisher Barton excels.

Metallurgy & Material Science: The Foundation of Performance

Fisher Barton's Technology Center leverages advanced analytical tools and test capabilities to engineer wear optimized solutions:

- Alloy development for improved hardness, toughness, fatigue resistance, and corrosion resistance
- Microstructure tuning through proprietary heat treatments
- SEM, EDS, and laboratory wear modeling to identify failure mechanisms
- Application specific material pairing (substrate + coating + geometry)
- ASTM abrasion, erosion, fatigue, and impact testing

By understanding the science behind each failure mode, we tailor materials and surfaces to your application—not the other way around.

Understanding the Wear Challenges of the Recreation Industry

Recreation equipment is exposed to a unique combination of stressors:

- High impact shock from jumps, uneven terrain, and sudden load spikes
- Abrasive wear from sand, dirt, dust, mud, and debris
- Corrosive exposure from moisture, humidity, saltwater, and cleaning chemicals
- Heat generation from high RPM systems and friction interfaces
- Continuous vibration and cyclic fatigue from engines and drivetrain systems

These environmental and mechanical forces lead to accelerated material loss, cracking, galling, and corrosion—often at the same time.

Fisher Barton's engineering teams analyze each wear mechanism to design alloys, heat treatments, coatings, and geometries that deliver measurable improvements in part life.



Engineered Surface Solutions for Maximum Lifespan

Recreation components benefit significantly from Fisher Barton's advanced coating and surface technologies:

Thermal Spray Coatings

- HVOF for extremely dense, impact resistant surfaces
- Plasma and arc spray for high hardness wear surfaces
- Flame spray for economical, corrosion resistant coatings

Laser Cladding & Hardfacing

- Metallurgically bonded overlays for abrasion and impact
- Ideal for tines, edges, pivots, auger components, and more

Proprietary Wear Improvement Processes

- Surface bonding methods that reduce porosity and increase bond strength
- Low friction systems to reduce heat buildup and wear in rotating parts

Advanced Manufacturing for High Demand Recreational Applications

Our vertically integrated operations allow OEMs to consolidate suppliers while improving component quality:

- CNC machining for tight tolerance rotating and structural parts
- Laser and waterjet cutting for complex shapes and hardened materials
- Robotic welding and joining for repeatable strength
- Grinding, polishing, and finishing for noise, vibration, and friction control
- Integrated prototyping for rapid design validation

Why Recreation OEMs Choose Fisher Barton

- Proven wear solutions expertise across extreme outdoor industries
- Metallurgy driven engineering to eliminate premature failure
- Advanced coatings and surface technologies tailored to real world abuse
- Manufacturing consistency from prototype to high volume production
- Longer component lifespan, resulting reduced service intervals & fewer warranty claims

Fisher Barton is more than a component supplier— we're your engineering partner for durable, high performance wear parts in recreational equipment.



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