

# Lubricants in the Manufacturing of ULTER SPORT Exhaust Components

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## Introduction

The **ULTER SPORT exhaust system** is designed for high-performance vehicles, combining **aesthetic appeal, sound tuning, and optimal gas flow efficiency**. Its manufacturing involves **precision tube forming, welding, polishing, and assembly** using **stainless steel or aluminized steel materials**. To maintain consistent quality and durability, **specialized industrial lubricants** are used throughout production — ensuring clean forming, superior weldability, and long tool life while enhancing surface finish and corrosion resistance.

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## 1. Importance of Lubricants in ULTER SPORT Exhaust Manufacturing

- **Enhances Metal Formability:** Allows stainless steel tubes to bend and form without cracks or wrinkles.
  - **Reduces Tool & Die Wear:** Minimizes friction during bending, punching, or hydroforming operations.
  - **Improves Surface Finish:** Prevents scratches or burn marks on visible exhaust surfaces.
  - **Supports Weld Integrity:** Low-residue lubricants prevent weld porosity and contamination.
  - **Prevents Corrosion:** Rust-preventive coatings protect exhaust parts during storage and transit.
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## 2. Types of Lubricants Used

Process Stage	Lubricant Type	Key Benefits
Tube Bending & Forming	Synthetic or polymer-based tube bending lubricants (IRMCO)	Smooth forming, reduced friction, no residue.

<b>Hydroforming / Expanding</b>	Water-based high-pressure forming lubricants	Uniform expansion, no galling, consistent wall thickness.
<b>Cutting / Piercing / Trimming</b>	Semi-synthetic cutting oils or water-miscible coolants	Precise, burr-free cuts and extended tool life.
<b>Welding &amp; Assembly</b>	Low-residue lubricants / anti-spatter sprays	Clean, defect-free welds and improved adhesion.
<b>Polishing / Finishing</b>	Vanishing lubricants / micro-lubrication fluids	Glossy, clean metal finish ideal for visible parts.
<b>Corrosion Protection</b>	Solvent-based thin film rust preventives	Protects exhaust before packaging and installation.

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### 3. Benefits to Manufacturers

- **Improved Production Efficiency:** Reduced downtime due to less tool cleaning and maintenance.
  - **Enhanced Component Strength:** Cleaner welds and precise forming ensure mechanical durability.
  - **Superior Surface Quality:** Essential for high-visibility exhaust systems like ULTER SPORT.
  - **Reduced Environmental Impact:** Modern water-based or biodegradable lubricants lower VOC emissions.
  - **Simplified Post-Processing:** Low-residue lubricants minimize cleaning before assembly and coating.
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### 4. Industry Trends in Lubrication

- **Vanishing Lubricants:** Evaporate after use — no cleaning required, weld-ready finish.
- **Dry-Film Lubricants:** Applied as pre-coatings for consistent performance and reduced waste.
- **Eco-Friendly Formulations:** Chlorine-free, low-VOC, and biodegradable solutions for sustainability.
- **Precision Spray Application:** Automated systems ensure exact lubricant dosage for every operation.
- **Hybrid Lubricants:** Combine lubrication and corrosion protection in a single step to reduce process time.

# EXHAUST PART

Description:			
Product:	980-080	Company:	ULTER SPORT
Industry:	Automotive Tier Two +	Material:	Stainless Steel
Thickness:	1.2	Concentration:	20
Author:	Radosław Grochala POLAND	Tags:	
Date:	Feb 12, 2010		

