



IATF 16949  
ISO 9001



ISO 14001



OHSAS 18001



CNAS L5763



## Basic Facts of the Company

- 20 years experience in high strength fastener production, Shanghai facility was started in 2005 as an expansion.
- Total area 88,000 m<sup>2</sup> with about 700 employees.
- Producing mainly high tensile fasteners (for automotive, off-road vehicles for construction, agriculture, mining, etc.)
- Annual throughput 40,000 tons.
- Major equipment from West Europe, the US, and Taiwan.
- Production processes include raw material processing, cold heading, hot forging, thread rolling, secondary operation, heat treatment, surface treatment, sorting and packing, all done in-house.
- Registered to ISO9001, IATF16949, ISO14001, OHSAS 18001, ISO/IEC17025.

## Major Customers



## Autocraft Advantages



Vertically integrated production system—With an vertically integrated and complete manufacturing system, Autocraft is one of the most advanced fastener manufacturers in Asia.



Advanced production technology from abroad—state-of-the-art manufacturing equipment and most advanced technology are imported from Germany, Austria, the US and Japan for key processes.



Complete process in-house— we have virtually all production processes in-house, including raw material processing, tooling making, cold and hot heading, thread rolling, secondary processing, heat treatment and surface treatment.



High level of automation—highly automated or CNC production lines minimize unstableness caused by manual operations



Innovative research and service—the Autocraft engineering team provides customized R&D service to customers. And the marketing and sales team provides effective marketing and sales support to customers.



Total quality control—layered quality control system with world first class test and inspection equipment ensures meeting and exceeding customer quality requirements.



Excellent supply chain management—thanks to the state-of-the-art automated sorting, automated packing and high bay automated warehouse, Autocraft has achieved exceptional delivery performance.



Customized and standard fasteners— while manufacturing customized parts, Autocraft stocks standard hex socket screws and hex bolts as well.



Cross-national supply solutions—Autocraft has set up branch plants in other countries and areas of Asia, transplanting overseas its featured production system, providing a multi-location supply solution to our customers.



## Main Products

**Varieties:** bolts, screws, SEMS(screws with captive washers), nuts, washers (small size stampings), pins and rivets

**Applications:** for engines, chassis, car bodies, interior decoration...

### Bolts & Screws

**Property:** class 4.8-12.9, grade 5 & 8

**Size:** cold heading M3-M33 by length max. 350mm  
Bigger diameters and longer sizes by hot forging

### Rivets

**Property:** class 8.8 & 10.9, grade 5 & 8

**Size:** short tail type 12mm-25mm ,1/2"-1";  
pull-off type 8mm-25mm, 1/4"-1"

### Nuts

**Property:** class 4-10, grade 2H

**Size:** cold heading M3-M16, hot forging upto M48

### Stampings

Washers, clamps, spring nut clips, spring pins, etc.

## Chassis Fasteners

Autocraft fasteners are widely used in the joints of automotive chassis components. They are used to fasten swing arms (control arms), subframes, engine mounts, etc. They are produced with high quality medium carbon alloy steels. The manufacturing processes comprise raw material processing → cold heading → dephosphorizing → thread rolling → quenching and tempering → surface treatment → sorting → test and inspection → packing. These fasteners are usually class 10.9 (tensile strength 1040 MPa minimum). The surface finish is usually chromium free and hydrogen ion free zinc aluminium flake coating. There is no hydrogen embrittlement risk with this finish. 100% laser sorting plus manual examination can ensure the quality of each fastener.



## Critical Engine Fasteners

Autocraft produces for OEMs critical fasteners for different kinds of diesel and gasoline engines. These fasteners include connecting rod bolts, cylinder head bolts, flywheel bolts and so on. These fasteners are produced using medium carbon alloy steels, and the production process includes cold heading → dephosphorizing → heat treating → thread rolling → surface finishing → sorting → inspecting → packing. Thread rolling after heat treatment ensures high strength and high precision of bolt threads. Automated sorting plus 100% manual examination ensure the conformance of each piece of fasteners.



## Welding Screws

Autocraft has manufactured and developed for various OEM projects different kinds of screws for welding, including projection welding, spot welding, girth welding, etc. Low carbon steels of high weldability are used in most cases. The production process flow is raw material processing → cold heading → dephosphorizing → thread rolling → heat treatment → surface treatment → sorting → test and inspection → packing. Mechanical property class is usually 8.8 and surface treatments include zinc plating, copper plating, and plain with oil. Paint scraping spiral flutes are cut across threads along the shank in many cases to lower the effects of body paint on threads.



## Wheel Studs

Autocraft has manufactured large quantities of wheel studs for various types of cars, trucks, and mining and construction vehicles. High quality medium carbon steels are used. The studs are cold headed and the threads are rolled. The press fitting knurls under head are made with Autocraft patented knurl rolling plates to effectively avoid laps and cracking, ensuring the high quality of the studs.



## Body and Interior Fasteners

Autocraft manufactures large quantities of bolts for the joint of various accessories like engine accessories, doors, instrument consoles, etc. Such fasteners include hex flange screws, double end studs, ball head studs, pan head screws, flat countersunk head screws, etc. High quality low carbon or medium carbon steels are used as per actual property requirements. Production processes include cold heading, thread rolling, heat treatment, etc. Different kinds of anti-loosening technologies are used, such as spring washers, chemical patch or nylon patch, etc. Patented leading point technologies are also used. Products are all machine sorted and then 100% manual examined.



## Patent Technologies Developed by Autocraft

Autocraft has created series of patent technologies in the course of manufacturing for various projects. These patents include innovative products, new thread designs, new forming technologies, innovative forming equipment, knurl rolling technology, etc. Typical examples include technologies of anti-loosening threads, pilot threads and knurl rolling plates. The anti-loosening force generating mechanism of Autocraft loosening resistant thread design is in accordance with metal deformation theories. The design is simple for production, convenient for installation. The locking force is even. Autocraft patent pilot point combines the leading function with paint scraping, meeting complex joint requirements like those in chassis joints. Autocraft patented knurl rolling plates effectively avoid knurling laps and quenching cracking, ensuring the high quality of the wheel studs.



## Fasteners for Caterpillar

As a gold class supplier we have cooperated with Caterpillar for many years. Products autocraft supplied comprise bolts, nuts and washers, for instances, track shoe bolts, slewing bearing bolts, engine conrod bolts, and other critical parts. Fastener size up till M48 are cold headed or hot forged to meet the large size demand of mining and construction equipment. Special machines like magnetic particle flaw detection and surface induction hardening are used and are all installed in-house.



## Licensed Patent Technologies

Autocraft is a licensed and highly experienced manufacturer of the Taptite series, Remform series and MATHread series of patented threads. Taptite thread rolling screws are used with unthreaded holes to avoid the influences of welding slag and coating on internal threads. Besides, Taptite series of screws are also anti-loosening. Remform tapping threads are developed specially for use in a wide array of plastics and light alloys. In addition to the optimal thread pitch, reduced thread cross section, the Remform asymmetrical thread flank design helps to minimize radial stress during assembly and resist the pulling-out force. Remform threads can avoid boss cracking and develop higher clamping force. MATHread lead point solves the aligning problem at the beginning of the thread joint assembly, greatly raising assembly efficiency. It brings the axes of the mating threads into collinear alignment, preventing misaligned threads from cross threading (threads wedging into the mating ones).



## Automotive nuts

Autocraft has professional nut manufacturing capabilities. The size ranges is from M3 through M20. The varieties include hex nuts, hex flange nuts, non-metallic insert locking nuts, all-metal locking nuts, rivet nuts, wheel nuts, track shoe nuts, welding nuts, nuts of special contour, etc. Production processes are raw material processing → cold forming → thread tapping → (quenching and tempering) → surface treatment → sorting → testing and inspection → packing.



## Locking Rivets and Spring Stampings

Autocraft has developed innovative technical products of metal plastic deformation joint using pull rivet technologies. Such products eliminate transverse allowance in the joint after installation and is self-locking and fatigue resistant. Spring stampings are chiefly used in automotive decorations. They are formed with spring steel using punch presses and fulfill the fastening function via rigid rebounding interference fit. Spring stampings are small, light and cheap. Their installation and removal are quick and convenient.





## Autocraft State-of-the-art Manufacturing Facilities



Electroplating and Phosphating Workshop



Automated Sorting and Packing Workshop



Raw Material Processing Workshop

## Autocraft State-of-the-art Manufacturing Facilities



Cold Forming Workshop



Heat Treatment Workshop



Automated High Bay Warehouse



Central Lab



## Newly Added Coating Equipment





## Awards to Autocraft



Certificate of High and New Technology Enterprise



Excellent Quality Award by JAC Automobile Group



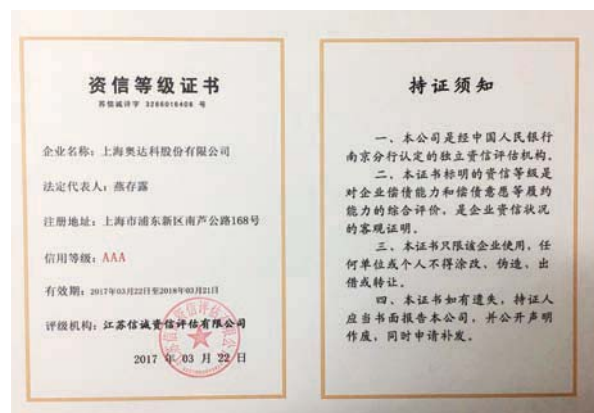
Famouse Brand of Shanghai



Caterpillar Supplier Quality Excellence Process Award



Accredited Company Engineering Center



AAA Grade Financial Credit Level Certificate

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