



# ROTORCRAFT

## REPAIR & MANUFACTURING



**Mission + Rotor Blade Repair**

**Erosion/Corrosion-DSX Protection Coating**

**Non-Destructive Inspection**



### Highest Quality

With decades of experience, we guarantee to meet your needs at the highest quality standards.



### Proven Capabilities

We are experienced in all kinds of makes and models and can complete nearly any service or repair as needed.



### Servicing Worldwide

We have the ability to service clients internationally. No matter where you are, we can be your rotor blade resource.

## Get in touch



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Pocahontas, AR  
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## Inspection, Overhaul & Fabrication

Rotorcraft Repair & Manufacturing LLC holds a repair station from the Federal Aviation Administration for non-destructive inspection techniques and the maintenance and modification of bonded structures for helicopter main and tail helicopter rotor blades.

We offer a full range of inspection and restoration services from non-destructive testing of aviation and non-aviation articles to full over-haul of civil, public use, and military main and tail rotor blades. We also have capabilities to modify blades from and to various configurations.

To bring the cost and turn time down, we provide in-house fabrication of replacement parts for ourselves and our owners and operators.

We take pride in our work and innovation that allow us to return your blades to service quickly, efficiently, and cost effectively.

## Facilities

Rotorcraft Repair & Manufacturing's state-of-the-art facility ensures the high efficiency required to perform complex fabrication and restoration activities in a timely and cost-efficient manner.

In 2020 Rotorcraft Repair & Manufacturing LLC moved and expanded its facility from 12,000 to 40,000 square foot. The new capabilities ensure our non-destructive inspection and rotor blade services can be maintained to the highest standards. The Rotorcraft Repair & Manufacturing's relocation will allow the addition of precision fabrication equipment and an enclosed autoclave.

## Our Mission

Our mission is to provide services that allows the continued use of main and tail rotor blades through FAA approved repairs and modifications that are not only safe but economical.







# DSX

DSX (Dragon Skin Xtreme) is a rotor blade leading edge erosion/corrosion protective coating. For 10-years DSX underwent rigorous testing and development before obtaining FAA approval in 2012. Since then DSX has developed a proven record in the harsh environments encountered by agricultural, fire, humanitarian, medical, and military operations. DSX has established its durability by over 3000 plus operating hours on a variety of rotor blades with no appreciable issues.

Stop wasting time and money with other so-called erosion coatings.

### **Apply DSX to your rotor blades.**

*It is the proven solution for erosion protection.*

DSX protects blades operating in sand, rain, salt water atmosphere, and hydrolysis environments.

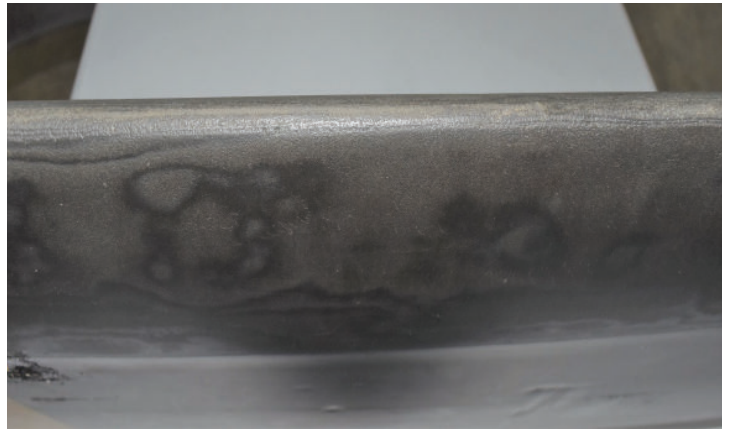
Just some of the helicopter models with FAA approval for the DSX Coating are:

**Bell 47 • Bell 47 wood blade • Bell 206A & B  
Bell 206L • Bell OH-58 • Bell 407 • Bell 412  
Bell AH-1 • Bell UH-1H/UH-1F/UH-1P/TH-1F/SW205  
Airbus/Eurocopter BO 105  
Airbus/Eurocopter 350/355 • Hiller UH-12  
MD Helicopter 369/500 • Schweizer 269  
Military use rotorcraft • Public use rotorcraft**

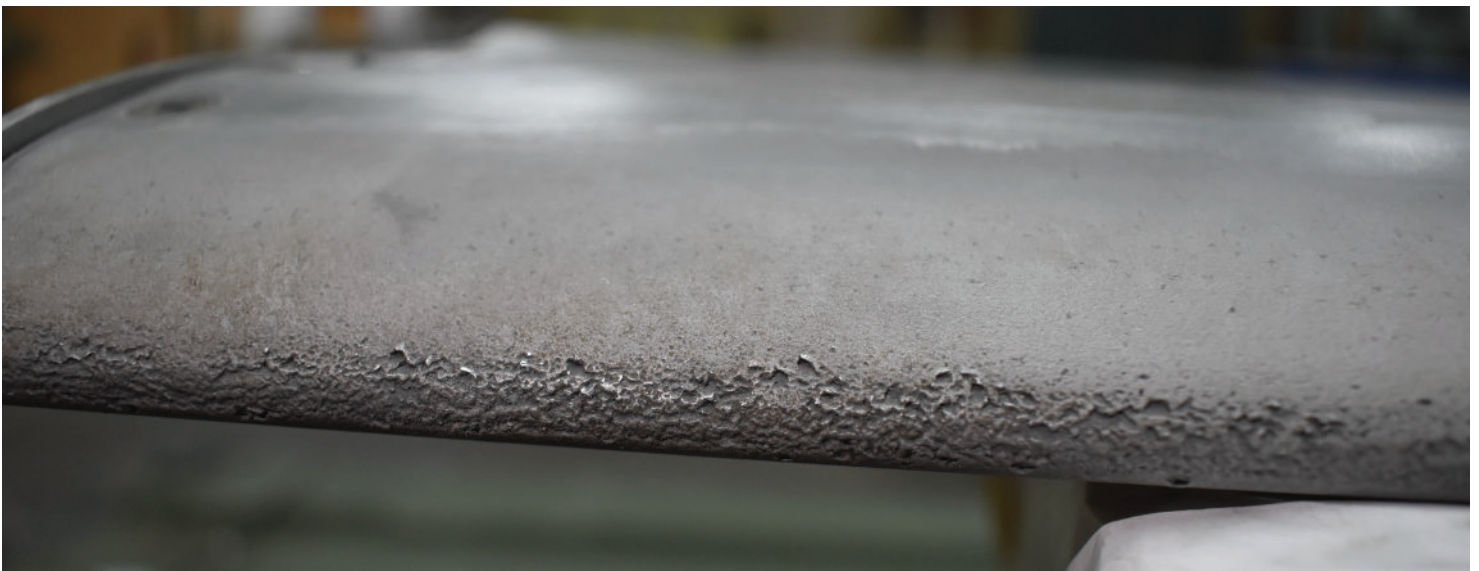




✔ Newly applied **DSX** leading edge coating to an OH-58 main rotor blade.



✔ **DSX** leading edge coating applied to an OH-58 main rotor blade that had flown for more than 3000-hours in aerial application.



✘ Leading Edge of a Bell 206 B model main rotor blade that had been flown for 1000-hours in aerial application. At this rate of erosion and corrosion this main rotor blade will NOT meet it's life expectancy.



The DSX logo is set against a black background. Above the text are two glowing white eyes with red, flame-like patterns radiating from them. The letters 'DSX' are written in a white, elegant, serif font.

## Benefits of DSX

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- **DSX** has proven itself to be far superior to other rotor blade erosion coatings like Task L-100, Hontek, and blades tapes like 3M, Bell, Airbus, and MD Helicopters.
- **DSX** offers the owners/operators peace of mind that the most important part of the blade (the spar) is safe and protected.
- **DSX** has protected agriculture, military, personnel, firefighting, and government agencies blades for more than 10 years.
- **DSX** can provide fuel savings over time due to maintaining the perfect airfoil.
- **DSX** will NOT fly off during operation like some blade tapes and other blade coatings.
- **DSX** will not melt and become gummy during extreme heat.
- **DSX** has proven to be outstanding by withstanding light to medium foreign object debris (FOD).
- **DSX** will not degrade with excess exposure to ultraviolet rays (UV), like other polyurethane tapes and coatings will.
- **DSX** will NOT degrade over time, **DSX** becomes better with time. **DSX** will wear very evenly, this will ensure that the airfoil is always kept perfect.
- **DSX** has proven itself to last in excess of 3000 operating hours, unlike blade tapes that will only last on average 25 to 50 hours of operation. If **DSX** was applied to a new 206 series helicopters rotor blade, the **DSX** coating would last the life of the blade.
- **DSX** could allow the aircraft to have longer operational time between routine maintenance for rotor blades.
- **DSX** could provide less stress on the engine by maintaining the perfect airfoil for extended hours of operation.
- Less AOG time due to main rotor blade maintenance.





**DSX**

## **DSX Q & A**

### ***Where and how do I purchase DSX for my main rotor blades?***

**DSX** is a product that is unique to Rotorcraft Repair & Manufacturing.

**DSX** may be purchased directly from Rotorcraft Repair & Manufacturing by calling us at (870) 202-1454 or emailing us at [info@rotorcraft.biz](mailto:info@rotorcraft.biz) and scheduling your main rotor blades to come to our facility to have the **DSX** applied.

### ***Is my helicopter eligible to have DSX applied to my rotor blades?***

The following helicopter models are eligible to have **DSX** applied to their main rotor blades:

**Bell 47 • Bell 47 wood blade**

**Bell 206A & B • Bell 206L • Bell OH-58**

**Bell 407 • Bell 412 • Bell AH-1**

**Bell UH-1H/UH-1F/UH-1P/TH-1F/SW205**

**Airbus/Eurocopter BO 105**

**Airbus/Eurocopter 350/355 • Hiller UH-12**

**MD Helicopter 369/500 • Schweizer 269**

**Military use rotorcraft • Public use rotorcraft**

### ***Does my rotor blade qualify to have DSX applied to it?***

We look for well-maintained or new main rotor blades with at least 40% of the life limit remaining to enter into the **DSX** program. Each situation and each rotor blade is different so give us a call and we can help you decide if **DSX** would be good for you.

### ***What is necessary to prepare my rotor blade for DSX application?***

There are no necessary steps you have to take, your main rotor blade will go through an extensive inspection process and if any repairs are needed, they will be completed before the application of **DSX**. **DSX** is generally applied to the rotor blade before it is refinished. Once the inspection process is carried out, and any repairs are made, then the **DSX** is applied, and the rotor blade is refinished.

### ***Will this change how my helicopter operates?***

No, this will not change how your helicopter operates, you will still follow all OEM requirements and recommendations. Although we have had testimony from clients that they do experience a smoother flight.

### ***Is there instruction for continued airworthiness?***

No, there are not any instructions for continued airworthiness, please follow the OEM requirements and recommendations.



***Can I put DSX on one blade?***

No, **DSX** must be applied to a set of main rotor blades, and they must be operated together. During the **DSX** process we go to great lengths to ensure the blades in the set match very well.

***Will DSX change the weight & balance of my rotor blade?***

No, the main rotor blades will be balanced to OEM standards.

***Can I put DSX on my tail rotor blade?***

No, **DSX** is not approved for tail rotor blade application. However, Rotorcraft Repair & Manufacturing is currently working toward approval for tail rotor blades.

***What is the life expectancy of DSX?***

We have seen **DSX** operated for more than 3000 hours without any issues or concerns.

***How long will it take for my rotor blades to have DSX applied?***

A small (MD 500) to medium (Bell 206) size blade will take on average of 3 weeks to complete and the large blades (UH-60) will take on average of 5 weeks to complete. This will vary depending on our current workload.

***Is DSX FAA approved?***

Yes, **DSX** was FAA approved in 2012, and has been successfully flying ever since.

***Has DSX been tested?***

Yes, **DSX** went through rigorous bench and flight testing over an 8-year period, during the process of FAA approval.

***Does DSX change the life limit of the rotor blade?***

No, **DSX** will not change the life limit of your main rotor blade, please follow OEM requirements and recommendations, however, **DSX** once applied generally lasts the lifetime of the rotor blade.

***Will DSX have to be reapplied with every overhaul?***

No, **DSX** may be inspected during the overhaul but will not have to be reapplied.

***Can I repaint my blades without removing the DSX?***

Yes, you can have your main rotor blades refinished without removing the **DSX**. It is recommended that you send your main rotor blades to Rotorcraft Repair & Manufacturing for refinishing.

***Other than due to physical damage (blade strike) has DSX had a failure?***

No, **DSX** has not had any type of failures during operation. The rotor blades in our **DSX** program come back for routine maintenance, inspection, and refinish, however, the **DSX** shows no damage.

***Does the application of DSX cause my rotor blade to retain water in the spar?***

No, the **DSX** will not cause water to be retained inside the blade. The blades that have drain holes in them, the drain holes will remain unobstructed.

***Will my blade corrode under the DSX?***

No, the main rotor blade will go through an intense preservation process before **DSX** is applied. The **DSX** application is an erosion prevention, that also stops the corrosion of the leading edge at the same time it eliminates the erosion of the leading edge.



## Non-Destructive Inspection

Non-destructive inspection is used to detect geometrical faults, e.g., material thickness, welding defects, bondline defects, delamination, wrinkles, porosity, dry areas, foreign objects, cracks, or corrosion.

This ensures their products integrity and reliability while in-service, which allows them to save both time and money when evaluating their products.

## We offer the full range of inspections and blade testing services:

- Tap testing
- X-ray inspection
- Leak testing
- Penetrant inspection
- Eddy current inspection
- Magnetic particle inspection

**Need another inspection service? Ask us!**



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