

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
**ACTIVITY REPORT: On-site Inspection**

B249762985

<b>FACILITY:</b> DARTON ARCHERY EQUIPMENT		<b>SRN / ID:</b> B2497
<b>LOCATION:</b> 3540 DARTON RD, HALE		<b>DISTRICT:</b> Bay City
<b>CITY:</b> HALE		<b>COUNTY:</b> IOSCO
<b>CONTACT:</b> Ted Harpham , Operations Manager		<b>ACTIVITY DATE:</b> 05/24/2022
<b>STAFF:</b> Nathanael Gentle	<b>COMPLIANCE STATUS:</b> Compliance	<b>SOURCE CLASS:</b> MINOR
<b>SUBJECT:</b> Scheduled Onsite Inspection		
<b>RESOLVED COMPLAINTS:</b>		

On May 24, 2022, AQD staff conducted a scheduled onsite inspection at Darton Archery Manufacturing, SRN B2497. Staff arrived onsite at 9:50 AM and departed at 10:20 AM. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment Great Lakes and Energy, Air Quality Division (AQD) Administrative Rules; and to evaluate compliance with the facilities two Permits to Install, PTI No. 885-85 and PTI No. 883-85. EGLE staff were assisted onsite by Operations Manager, Mr. Ted Harpham. At the time of inspection, the facility was found to be in compliance.

### Facility Description and History

The Darton Archery Manufacturing facility is located at 3450 Darton Rd Hale, MI 48739. The facility specializes in the design and manufacturing of archery equipment, specifically compound bows, and crossbows. Bow components are manufactured, finished, and assembled into the final product onsite. Individual aluminum components are fabricated in the onsite machine shop. Equipment in the machine shop includes CNC mills, saws, grinders, drills etc. Manufactured components are then placed into one of two vibratory polishers to soften the edges and prepare the material for coating. Once removed from the polishers, the materials are dried and ready to be coated. Coating processes include a single powder coating booth and its associated natural gas fired drying oven, as well as a process known as Kolorfusion and its associated electric oven. Individual components are then assembled into the final product which are test fired before they are ready for sales.

The Darton Archery Manufacturing facility recently underwent new ownership. Darton Archery was acquired by Black Eagle Arrows and Conquest Archery LLC in 2020. Two active Permits to Install (PTI) are associated with the facility, PTI No. 883-85 and PTI No. 885-85. Four voided permits are on file for the facility including, PTI No. 884-85, PTI No. 886-85, PTI No. 887-85, and PTI No. 888-85. The four voided permits were each for paint spray booths at the facility. The paint spray booth permits were voided in November 1996 after it was determined the emission units could be operated under AQD PTI exemptions. Active permit, PTI No. 883-85 is for woodworking and plastic/fiberglass machining operations with a Carter Day dust collector. The other active permit, PTI No. 885-85 is for a gas fired bake oven associated with an automated paint line. At the time of inspection, the permitted equipment was no longer being used. The equipment remains onsite, out of operation. The facility was last inspected on July 23, 2014. At the time of the 2014 inspection, the facility was found to be in compliance.

### Compliance Evaluation

Aluminum bow components are fabricated onsite using a variety of equipment. Equipment observed in the fabrication process includes, but is not limited to, CNC mills, saws, grinders, and drills. One active PTI is associated with the process and dust collection, PTI No. 883-85. Previously, the facility utilized a Carter Day dust collector, a reverse jet dry bag filter, to collect particulate matter from onsite machining processes. The unit was connected to a hood vent system to collect dust and particulate materials from onsite processes and discharge to a single collection point. The facility no longer utilizes the Carter Day dust collector. At the time of inspection, the unit remained onsite; however, hood vents and duct work were observed to be removed. Staff report process changes at the facility have rendered the Carter Day dust collector no longer needed. Instead, individual fabric filters and collection systems are in place for the equipment. Collection of air contaminants is performed in a manner to minimize introduction of air contaminants to the outer air, Special Condition S.C. 13. No visible emissions were observed from the machining operations, S.C. 10. CNC mills are contained in individual housing units. The housing units contain and collect particulate matter and material shavings from the milling process. Saws, grinders, and drills were visually verified to be equipped with dust collection systems. A variety of fabric filter collector systems were observed in the shop for collecting material shavings and particulate matter. Machines appeared clean with no visible buildup of material, indicating the collection system in place is operating properly. The collected material is stored in bins onsite. Once a bin is full, the material is recycled. Air emissions from onsite machining processes are all vented to the in-plant environment. Staff report filters for the machining equipment are replaced monthly. Machining equipment utilized onsite would likely meet the exemption criteria for exemption Rule 285(2)(l)(vi).

Fabricated materials are placed into one of two large vibratory tumblers to soften the edges and prepare the material for coating. Water is added to the tumblers to capture dust produced from the process. As a result, a liquid slurry is produced. Emissions from the tumblers is to the in plant environment only. No visible emissions were observed from the process. The metal components are removed from the tumblers, dried, and ready to be coated.

Liquid coating is no longer conducted at the facility. Paint spray booths and their associated stacks were observed to still be onsite at the time of inspection. Liquid paint booths include manual spray application booths, as well as an automated paint line and its associated drying oven. The gas fired drying oven is permitted by PTI No. 885-85. At the time of inspection, the liquid paint booths were not being operated. Staff report liquid paint and solvents have not been used as part of facility operations for approximately 1.5 years. The gas fired drying oven associated with automated paint line is no longer used.

Coatings on manufactured archery parts is applied using powder coating and Kolorfusion. Parts are first coated with powder coating. The powder coats are applied in a powder coating booth. The powder coating booth was observed to be equipped with fabric filter control. Staff report the filters on the powder coating booth are changed every 2 weeks. Filtered air from the powder coating booth vents to the in-plant environment. Once parts are coated in the powder coating booth, they are placed into a gas fired cure oven. The powder coating booth and its associated oven appear to meet the requirements of exemption Rule 287(2)(d).

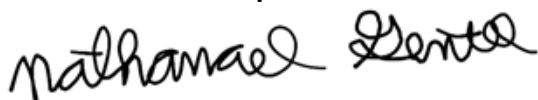
Once powder coats are dry, a process known as Kolorfusion is used to apply the final coat to the products. As described on the website for Kolorfusion International, the process is a dye

sublimation process that utilizes heat and vacuum pressure to transfer colors from a material called "Kolortex" directly into products. Darton archery wraps parts to be coated in the "Kolortex" material of the desired print pattern. The materials are then placed into vacuum seal bag and vacuum sealed. The vacuum sealed parts are then placed into an electric oven where they are heated, transferring the dye from the "Kolortex" material directly into the parts. The transfer of dye occurs while the products are vacuum sealed, minimizing air emissions. No VOC odors were detected while observing the Kolorfusion process.

Brand logos and labels are printed onto coated parts using an onsite printer. The printer appears to meet the requirements of either exemption Rule 285(2)(l)(vii) or exemption Rule 287(2)(c). Finished individual components are then assembled into the final product which are test fired before they are ready for sales.

## Summary

The Darton Archery Manufacturing facility specializes in the design and manufacturing of archery equipment, specifically compound bows, and crossbows. The facility is located at 3450 Darton Rd Hale, MI 48739. Bow components are manufactured, finished, and assembled into the final product onsite. Two active Permits to Install (PTI) are associated with the facility, PTI No. 883-85 and PTI No. 885-85. Active permit, PTI No. 883-85 is for woodworking and plastic/fiberglass machining operations with a Carter Day dust collector. The other active permit, PTI No. 885-85 is for a gas fired bake oven associated with an automated paint line. At the time of inspection, the permitted equipment was no longer being used. The equipment remains onsite, out of operation. A review of existing processes onsite was conducted. At the time of inspection, the facility was found to be in compliance.



DATE 5/31/2022

SUPERVISOR 

NAME