



2022

ANNUAL REPORT

THE
GREENBRIER
COMPANIES

LETTER FROM THE CHIEF EXECUTIVE OFFICER

To Our Shareholders:

In 2022, Greenbrier addressed growing customer demand as we developed our strategy for long-term growth. Fiscal 2022 brought global unrest, geopolitical uncertainty, a tight labor market and the most extensive and sustained supply-chain shortages we have ever experienced. In the face of these challenges, Greenbrier ended the fiscal year with \$3 billion in revenue and net earnings attributable to Greenbrier of \$47 million or \$1.40 per diluted share. In addition to solid annual results, we also maintained our quarterly dividend of \$0.27 per share for the 34th consecutive quarter.

Fiscal 2022 also brought leadership transitions to Greenbrier's executive team. In March, I succeeded Bill Furman as Greenbrier's Chief Executive Officer. I am honored to follow in Bill's footsteps and build on his remarkable achievements as Greenbrier's founder and CEO of 40 years. We are fortunate that he continues with us as a Board member until January 2024.

We achieved the best safety results in Greenbrier's history during fiscal 2022, all while growing our workforce by nearly 35%. Greenbrier's safety program and our ongoing dedication to employee wellbeing remain points of distinction. Our commitment to environmental sustainability is also moving forward. Our 2022 Environmental, Social and Governance report, *On Track Together*, sets ambitious goals around greenhouse gas reduction and climate risk. Our ESG report also details our approach to human capital management, including our employee engagement efforts—demonstrated by new employee resource groups as well as recognition and retention initiatives.

Greenbrier's long-term strategy, developed during the course of fiscal 2022, is to increase the scale and balance of our business by growing our services offerings. These include railcar leasing, maintenance, parts, management services and capital markets activities/lease syndications. Achieving scale in services will balance Greenbrier's business against the inherently cyclical nature of new railcar manufacturing. Make no mistake; we will maintain and bolster our leadership in manufacturing innovation as we lean into our services portfolio. Examples of this include new railcar designs like the high-strength steel gondola, which we introduced in fiscal 2022 in collaboration with U. S. Steel and Norfolk Southern.

We take pride in our accomplishments, and especially the dedication demonstrated by our employees. During a year of leadership transition, supply-chain challenges and economic uncertainty, Greenbrier employees acted quickly and creatively to implement supply-chain solutions, deliver high-quality products and achieve record safety performance across the organization. Focused on our strategic goals and core values, Greenbrier continues to advance our long-term objectives. Another year of high performance and success with the Greenbrier team is now underway.

Sincerely,



Lorie Tekorius
CEO & President

November 2022



UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549-1004

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended August 31, 2022

or

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from _____ to _____

Commission File No. 1-13146

THE GREENBRIER COMPANIES, INC.

(Exact name of Registrant as specified in its charter)

Oregon

(State of Incorporation)

93-0816972

(I.R.S. Employer Identification No.)

One Centerpointe Drive, Suite 200, Lake Oswego, OR 97035

(Address of principal executive offices)

(503) 684-7000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

<i>Title of Each Class</i>	<i>Trading Symbol(s)</i>	<i>Name of Each Exchange on Which Registered</i>
Common Stock without par value	GBX	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15 (d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

Aggregate market value of the registrant's Common Stock held by non-affiliates as of February 28, 2022 (based on the closing price of such shares on such date) was \$1,398,339,491.

The number of shares outstanding of the registrant's Common Stock on October 24, 2022 was 32,782,692 without par value.

DOCUMENTS INCORPORATED BY REFERENCE

Certain portions of the registrant's definitive Proxy Statement prepared in connection with the Annual Meeting of Shareholders to be held on January 6, 2023 are incorporated by reference into Parts II and III of this Report.

Auditor Firm Id: 185

Auditor Name: KPMG LLP

Auditor Location: Portland, Oregon

THE GREENBRIER COMPANIES, INC.
FORM 10-K

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Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

Many of these risks and other factors are beyond our ability to control or predict. Words such as “allows,” “anticipates,” “believes,” “committed,” “can,” “continue,” “could,” “designed,” “ensure,” “estimates,” “expects,” “foreseeable,” “future,” “goal,” “intends,” “likely,” “may,” “periodically,” “plans,” “potential,” “provides,” “results,” “seeks,” “should,” “strategy,” “will,” “would,” and similar expressions identify forward-looking statements. In addition, statements regarding expectations of cost savings or our ability to navigate current challenges, or any other statements that explicitly or implicitly draw trends in our performance or the markets in which we operate, or characterize future events or circumstances, are forward-looking statements.

These risks and uncertainties, as well as other risks and uncertainties that could cause our actual results to differ significantly from management’s expectations, are described in greater detail in Item 1A, “Risk Factors,” Item 1, “Business – Backlog,” Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and Item 9A, “Controls and Procedures – Inherent Limitations on Effectiveness of Controls.” Forward-looking statements are based on currently available operating, financial and market information and are inherently uncertain. Investors should not place undue reliance on forward-looking statements, which speak only as of the date they are made and are not guarantees of future performance. Actual future results and trends may differ materially from such forward-looking statements. Except as otherwise required by law, we do not assume any obligation to update any forward-looking statements.

All references to years refer to the fiscal years ended August 31st unless otherwise noted.

The Greenbrier Companies is a registered trademark of The Greenbrier Companies, Inc. Gunderson, Auto-Max II, and Multi-Max are trademarks of Gunderson LLC.

PART I

Item 1. BUSINESS

Introduction

We are one of the leading designers, manufacturers and marketers of railroad freight car equipment in North America, Europe, South America and other geographies as opportunities arise. We also are a manufacturer and marketer of marine barges in North America. We also offer railcar management, regulatory compliance services and leasing services to railcar owners or other users of railcars in North America. We are a leading provider of freight railcar wheel services, parts and maintenance in North America. Through unconsolidated affiliates we produce rail and industrial components and have an ownership stake in a railcar manufacturer in Brazil.

We operate an integrated business model in North America that combines freight car manufacturing, wheel services, railcar maintenance, component parts, leasing and fleet management services. Our model is designed to provide customers with a comprehensive set of freight car solutions by utilizing our substantial engineering, mechanical and technical capabilities as well as our experienced commercial personnel. Our integrated model allows us to develop cross-selling opportunities and synergies among our various business segments thereby enhancing our margins. We believe our integrated model is difficult to duplicate and provides greater value for our customers and investors.

We operate in three reportable segments: Manufacturing; Maintenance Services; and Leasing & Management Services. Financial information about our business segments as well as geographic information is located in Note 18 - Segment Information to our Consolidated Financial Statements.

The Greenbrier Companies, Inc., is incorporated in Oregon. Our principal executive offices are located at One Centerpointe Drive, Suite 200, Lake Oswego, Oregon 97035. Our telephone number is (503) 684-7000 and our Internet website is located at <http://www.gbrx.com>.

Products and Services

Manufacturing Segment

North American Railcar Manufacturing - We manufacture most freight railcar types currently in use in the North American market (other than coal cars) and we continue to expand our product features and functionality. We have demonstrated an ability to capture high market shares in many of the car types we produce. The primary products we produce for the North American market are:

Conventional Railcars - We produce a variety of covered hopper cars for cement, fertilizer, grain, plastic pellets and grain mill products as well as gondolas and open top hoppers for steel, scrap and aggregates. We also produce a wide range of boxcars, which are used in the transport of paper products, perishables and general merchandise. Our flat car products include center partition cars for the forest products industry and heavy-duty flat cars.

Tank Cars - We produce a variety of tank cars, including general purpose, pressurized, and stainless steel. These are designed for the transportation of hazardous and non-hazardous commodities such as petroleum products, ethanol, liquefied petroleum gas, petrochemicals, caustic soda, chlorine, fertilizers, vegetable oils, bio-diesel and various other products.

Intermodal Railcars - We manufacture a comprehensive portfolio of intermodal railcars. Our Maxi-Stack I and Maxi-Stack III are the most popular double-stack railcar well cars. The double-stack railcar is designed to transport containers stacked two-high on a single platform and provides significant operating and capital savings over other types of intermodal railcars.

Automotive - We manufacture a full line of railcar equipment specifically designed for the transportation of light vehicles. Our automotive offerings include the Auto-Max II, Multi-Max and Multi-Max Plus products, which are designed to carry automobiles, CUVs, SUVs, trucks and high sided vans efficiently.

Sustainable Conversions - We are a leading designer and manufacturer of Sustainable Conversions, which repurposes existing railcars into new equipment service. Our sustainable conversions are an efficient, environmentally sustainable and cost-savings option for railcar owners looking to diversify and optimize their fleets. We rebody or stretch covered hoppers into larger cubic service, re-rack or perform deck conversion on auto racks, and perform tank car retrofits to help customers manage pending regulations.

European Railcar Manufacturing - Our European manufacturing operations produce a variety of tank, automotive and conventional freight railcar types, including a comprehensive line of pressurized tank cars for liquid petroleum, LPG gas, chlorine and ammonia and non-pressurized tank cars for light oil, chemicals and other products. In addition, our European manufacturing operations produce flat cars, cars for coil steel and metals, gondolas, intermodal cars, sliding wall cars, hoppers and automobile transport cars.

Marine Vessel Fabrication - We manufacture a broad range of Jones Act ocean-going and river barges for transporting merchandise between ports within the United States. Our primary focus is on the larger ocean-going vessels although we have the capability to compete in other marine-related products. Our Portland, Oregon manufacturing facility, located on a deep-water port on the Willamette River, includes marine vessel fabrication capabilities.

Maintenance Services Segment

Wheel Services - We operate a wheel services network in North America. Our wheel shops provide complete wheel services including reconditioning of wheels and axles in addition to new axle machining, finishing and downsizing.

Railcar Maintenance - We operate a railcar maintenance network in North America including shops certified by the Association of American Railroads (AAR). Our shops perform routine railcar maintenance for third parties and for our leased and managed railcar fleets.

Component Parts Manufacturing - Our component parts facilities recondition and manufacture railcar cushioning units, couplers, yokes, side frames, bolsters and various other parts. We also produce roofs, doors and associated parts for boxcars.

Leasing & Management Services Segment

Leasing - We operate a railcar leasing business in North America through a number of subsidiaries. Our relationships with financial institutions and operating lessors combined with our ownership of a lease fleet of approximately 12,200 railcars enables us to offer flexible financing programs to our customers including operating leases of varied intervals and “per diem” leases. The percentage of owned units on lease was 98.4% at August 31, 2022 with an average remaining lease term of 3.7 years and an average age of 9 years. We also originate leases of railcars, which are either newly built or refurbished by our operations, or bought in the secondary market. These may be held in the fleet or sold with attached leases to financial institutions or other investors, typically with multi-year management services agreements. As an equipment owner and an originator of leases, we participate principally in the operating lease segment of the market. Assets from our owned lease fleet are periodically sold to accommodate customer demand, manage risk and maintain liquidity.

In February 2022, GBX Leasing, one of our subsidiaries, completed its inaugural offering of railcar asset-backed securities (“ABS”).

Management Services - Our North American management services business offers a broad array of software and services that include railcar maintenance management, railcar accounting services (such as billing and revenue collection, car hire receivable and payable administration), total fleet management (including railcar tracking using proprietary software), fleet logistics, administration and railcar re-marketing. We currently provide management services for a fleet of approximately 408,000 railcars for railroads, shippers, carriers, institutional investors and other leasing and transportation companies in North America. In addition, our Regulatory Services Group offers regulatory, engineering, process consulting and advocacy support to the tank car and petrochemical rail shipper community, among other services. Our management services business is responsible for a majority of the maintenance and administration of our fleet of railcars.

Unconsolidated Affiliates

U.S. Axle Manufacturing - We have a 41.9% interest in Axis, LLC (Axis), a joint venture that manufactures and sells axles to its joint venture partners for use and distribution both domestically and internationally.

Brazilian Railcar Manufacturing - We have a 60% ownership interest in Greenbrier Maxion-Equipamentos e Serviços Ferroviários S.A. (Greenbrier-Maxion), the leading railcar manufacturer in South America, located near São Paulo, Brazil. Greenbrier-Maxion also assembles bogies and offers a range of aftermarket services including railcar overhaul and refurbishment.

Brazilian Castings and Component Parts Manufacturing - We have a 29.5% ownership interest in Amsted-Maxion Fundação e Equipamentos Ferroviários S.A. (Amsted-Maxion) based in Cruzeiro, Brazil. Amsted-Maxion is a manufacturer of various castings and components for railcars and other heavy industrial equipment. Amsted-Maxion has a 40% ownership position in Greenbrier-Maxion and is integrated with the operations of our Brazilian railcar manufacturer.

Other Unconsolidated Affiliates - We have other unconsolidated affiliates which primarily include joint ventures that produce rail and industrial components.

Backlog

The following table depicts our reported railcar backlog subject to third party sale or lease in number of railcars and estimated future revenue value attributable to such backlog, at the dates shown:

	August 31,		
	2022	2021	2020
New railcar backlog units ⁽¹⁾	29,500	26,600	24,600
Estimated future revenue value (in millions) ⁽²⁾	\$ 3,480	\$ 2,810	\$ 2,420

(1) Each platform of a railcar is treated as a separate unit.

(2) Subject to change based on finalization of product mix.

Approximately 6% of backlog units and estimated value as of August 31, 2022 was associated with our Brazilian manufacturing operation which are accounted for under the equity method.

Based on current production schedules, approximately 22,100 units in the August 31, 2022 backlog are scheduled for delivery in 2023. The balance of the production is scheduled for delivery in 2024.

Backlog units for lease may be syndicated to third parties or held in our own fleet depending on a variety of factors. Multi-year supply agreements are a part of rail industry practice. A portion of the orders included in backlog reflects an assumed product mix. Under terms of the orders, the exact mix and pricing will be determined in the future, which may impact backlog. Marine backlog was \$31 million and \$70 million as of August 31, 2022 and 2021, respectively.

Our backlog of railcar units and marine vessels is not necessarily indicative of future results of operations. Certain orders in backlog are subject to customary documentation and completion of terms. Customers may attempt to cancel or modify orders in backlog. Historically, little variation has been experienced between the quantity ordered and the quantity actually delivered, though the timing of deliveries may be modified from time to time.

Customers

Customers across our segments include railroads, leasing companies, financial institutions, shippers, carriers and transportation companies. We have strong, long-term relationships with many of our customers. We believe that our customers' preference for high quality products, our technological leadership in developing innovative products, our focus on being highly responsive to our customer's needs and competitive pricing of our railcars have helped us maintain our long-standing relationships with our customers.

In 2022, revenue from three customers accounted for approximately 39% of total revenue which represented 44% of Manufacturing revenue, 17% of Maintenance Services revenue, and 2% of Leasing & Management Services revenue. No other customers accounted for greater than 10% of total revenue.

Raw Materials and Components

Our products require a supply of materials including steel and specialty components such as brakes, wheels and axles. Specialty components purchased from third parties represent a significant amount of the cost of most freight cars. Our customers often specify particular components and suppliers of such components. Although the number of alternative suppliers of certain specialty components has declined in recent years, there are at least two available suppliers for substantially all of our components.

Certain materials and components are periodically in short supply which could potentially impact production at our facilities. We experienced an increase in the price and shortages of certain materials and components during 2022. In an effort to mitigate shortages and reduce supply chain costs, we have entered into strategic alliances and multi-year arrangements for the global sourcing of certain materials and components, we operate a replacement parts business which aids in our vertical integration and we continue to pursue strategic opportunities to protect and enhance our supply chain. We periodically make advance purchases to avoid possible shortages of material due to capacity limitations of component suppliers, shipping and transportation delays and possible price increases.

In 2022, the top ten suppliers for all inventory purchases accounted for approximately 49% of total purchases. The top two suppliers accounted for 16% and 10% of total inventory purchases in 2022. No other suppliers accounted for more than 10% of total inventory purchases. We believe we maintain good relationships with our suppliers.

Competition

We are currently one of the two largest railcar manufacturers competing in North America. There are also a handful of specialty builders who focus on niche markets. We believe that in Europe we are in the top tier of railcar manufacturers. Through our 60% ownership interest in Greenbrier-Maxion, we are the leading railcar manufacturer in South America. The railcar manufacturing industry is becoming more global as customers are purchasing railcars from manufacturers outside of their geographic region. In all railcar markets that we serve, we compete on the basis of quality, price, reliability of delivery, innovative product design, reputation and customer service.

Competition in the marine industry is dependent on the type of product produced, customer type, including governmental or commercial, proximity to delivery point, and manufacturing capacity. There are few competitors that focus on the commercial large barge market. We compete on the basis of price, quality, reliability of delivery, launching capacity and experience with certain product types.

Competition in the Maintenance Services businesses is dependent on the type of product or service provided. There are many competitors in these businesses. We compete primarily on the basis of quality, timeliness of delivery, customer service, location of shops, price and engineering expertise.

There are at least twenty institutions in North America that provide railcar leasing and/or services similar to ours. Many of them are also customers that buy new railcars from our manufacturing facilities and used railcars from our lease fleet, as well as utilize our management and maintenance services. We compete primarily on the basis of quality, price, reliability of delivery, reputation, service offerings and deal structuring and syndication ability. We believe our strong servicing capability and our ability to sell railcars with a lease attached (syndicate railcars), integrated with our manufacturing, maintenance shops, railcar specialization and expertise in particular lease structures provide a strong competitive advantage.

Marketing and Product Development

In North America, we leverage an integrated marketing and sales effort to coordinate relationships in our various segments. We provide our customers with a diverse range of equipment and financing alternatives designed to satisfy each customer's unique needs, whether the customer is buying new equipment, sustainable conversion of existing equipment or seeking to outsource the maintenance or management of equipment. These custom programs may involve a combination of railcar products, leasing, sustainable conversions and remarketing services. In addition, we provide customized maintenance management, equipment management, accounting and compliance services and proprietary software solutions.

In Europe and South America, we maintain relationships with customers through market-specific sales personnel. Our engineering and technical staff works closely with their customer counterparts on the design and certification of railcars. Many European railroads are state-owned and are subject to European Union (EU) regulations covering the tender of government contracts.

Through our research and customer relationships, insights are derived into the potential need for new products and services. Marketing and engineering personnel collaborate to evaluate opportunities and develop new products and services that exceed customers' expectations. Research and development costs incurred during the years ended August 31, 2022, 2021 and 2020 were \$5.4 million, \$6.3 million and \$5.8 million, respectively.

Human Capital

With the oversight of the Board, our CEO and senior leadership are thoughtfully invested in our global workforce. We regularly review our priorities and progress in each of the areas highlighted below.

Safety – Employee safety is a top priority and we remain dedicated to continuously improving our safety performance over time. Our safety performance is monitored regularly by our CEO, senior leadership and our Board. We are proud of the sustained improvement in our safety statistics even while we have experienced significant increases in headcount. In 2022, our Total Injury Rate improved more than 10% from the end of 2021.

Talent and Diversity - We recognize that a talented and diverse workforce is critical to our success. This year we continued our focus on attracting talent, while simultaneously retaining and developing our people. During the year, we developed an onboarding framework that is focused on welcoming a diverse workforce by establishing a consistent and inclusive process.

To ensure we remain engaged and understand our employees' priorities, during 2022 we launched an employee engagement survey. We gained important insights to help our company improve and have developed goals to continue building on our core value of Respect for People.

During 2022, we continued to develop upon our IDEAL (Inclusion, Diversity, Equity, Access and Leadership) commitment by creating six Employee Resource Groups (ERGs). The ERGs are created by employees and offer a space for employees to facilitate development, cultural connection, diversity and understanding within the Greenbrier workforce.

Our commitment to investing in our people includes enhanced training and development pathways. We continue to offer learning and growth opportunities at all levels, including on-the-job learning, competency-based training, education assistance, tuition reimbursement and leadership development which promote workplace engagement and pathways to grow meaningful, long-term careers.

Compensation and Benefits - We are facing an unusually competitive compensation environment which could impact our ability to attract and retain talent. To remain competitive globally, we regularly evaluate our compensation programs. This includes reviewing base pay levels for equity both internally and externally and assessing the effectiveness of our short and long-term incentive programs. In addition, we strive to provide competitive health and wellness programs to our employees.

Community Involvement - We believe the best way to build strong communities is by thoughtfully selecting programs that are consistent with our core values and that bring prosperity and well-being to the areas we operate. In 2022 we committed more than \$1.5 million in support to the communities where we operate. This included a special contribution to the Grupo Industrial Monclova Pape Foundation to commemorate our 16 years of partnership in the community. The foundation serves the community in Monclova, Coahuila, Mexico through construction of schools, funding a children’s hospital, providing scholarships to students and sponsoring a local engineering school.

The items above support our overall emphasis on attracting a diverse talent base and fostering an inclusive culture for our global workforce.

Our Environmental, Social & Governance Report (ESG) provides additional information regarding our ESG goals and initiatives. It can be found on our website. Information contained on or accessible through our website is not incorporated into, and does not constitute a part of, this filing.

The following table summarizes the approximate number of employees by segment as of August 31, 2022 at our consolidated entities:

	Number of Employees
Manufacturing	13,500
Maintenance Services	600
Leasing & Management Services (Includes Corporate)	300
Total Employees	<u>14,400</u>

In Manufacturing, approximately 4,000 employees are represented by unions, primarily in Mexico and Europe. We believe we have good union relations. At our Maintenance Services locations, approximately 40 employees are represented by a union.

Patents and Trademarks

We have a proactive program aimed at protecting our intellectual property and the results from our research and development. We have obtained a number of U.S. and non-U.S. patents of varying duration, and pending patent applications, registered trademarks, copyrights and trade names. We believe that manufacturing expertise, the improvement of existing technology and the development of new products are at least as important as patent protection in establishing and maintaining a competitive advantage in our market.

Environmental Matters

We are subject to national, state and local environmental laws and regulations concerning, among other matters, air emissions, wastewater discharge, solid and hazardous waste disposal and employee health and safety. Prior to acquiring facilities, we conduct investigations to evaluate the environmental condition of subject properties and may negotiate contractual terms for allocation of environmental exposure arising from prior uses. We operate our facilities in a manner designed to maintain compliance with applicable environmental laws and regulations. Environmental studies have been conducted on certain of our owned and leased properties that indicate additional investigation and some remediation on certain properties may be necessary.

Portland Harbor Superfund Site

Our Portland, Oregon manufacturing facility (the Portland Property) is located adjacent to the Willamette River. In December 2000, the U.S. Environmental Protection Agency (EPA) classified portions of the Willamette River bed known as the Portland Harbor, including the portion fronting our manufacturing facility, as a federal "National Priority List" or "Superfund" site due to sediment contamination (the Portland Harbor Site). Our company and more than 140 other parties have received a "General Notice" of potential liability from the EPA relating to the Portland Harbor Site. The letter advised us that we may be liable for the costs of investigation and remediation (which liability may be joint and several with other potentially responsible parties) as well as for natural resource damages resulting from releases of hazardous substances to the site. Ten private and public entities, including our company (the Lower Willamette Group or LWG), signed an Administrative Order on Consent (AOC) to perform a remedial investigation/feasibility study (RI/FS) of the Portland Harbor Site under EPA oversight, and several additional entities did not sign such consent, but nevertheless contributed financially to the effort. The EPA-mandated RI/FS was produced by the LWG and cost over \$110 million during a 17-year period. We bore a percentage of the total costs incurred by the LWG in connection with the investigation. Our aggregate expenditure during the 17-year period was not material. Some or all of any such outlay may be recoverable from other responsible parties. The EPA issued its Record of Decision (ROD) for the Portland Harbor Site on January 6, 2017 and accordingly on October 26, 2017, the AOC was terminated.

Separate from the process described above, which focused on the type of remediation to be performed at the Portland Harbor Site and the schedule for such remediation, 83 parties, including the State of Oregon and the federal government, entered into a non-judicial mediation process to try to allocate costs associated with remediation of the Portland Harbor Site. Approximately 110 additional parties signed tolling agreements related to such allocations. On April 23, 2009, our company and the other AOC signatories filed suit against 69 other parties due to a possible limitations period for some such claims; *Arkema Inc. et al v. A & C Foundry Products, Inc. et al*, U.S. District Court, District of Oregon, Case #3:09-cv-453-PK. All but 12 of these parties elected to sign tolling agreements and be dismissed without prejudice, and the case has been stayed by the court until January 14, 2025.

The EPA's January 6, 2017 ROD identifies a clean-up remedy that the EPA estimates will take 13 years of active remediation, followed by 30 years of monitoring with an estimated undiscounted cost of \$1.7 billion. The EPA typically expects its cost estimates to be accurate within a range of -30% to +50%, but this ROD states that changes in costs are likely to occur. The EPA has identified 15 Sediment Decision Units within the ROD cleanup area. One of the units, RM9W, includes the nearshore area of the river sediments offshore of the Portland Property as well as downstream of the facility. It also includes a portion of our company's riverbank. The ROD does not break down total remediation costs by Sediment Decision Unit. The EPA requested that potentially responsible parties enter AOCs during 2019 agreeing to conduct remedial design studies. Some parties have signed AOCs, including one party with respect to RM9W which includes the area offshore of our Portland Property. We have not signed an AOC in connection with remedial design, but will assist in conducting or funding a portion of the RM9W remedial design.

The ROD does not address responsibility for the costs of clean-up, nor does it allocate such costs among the potentially responsible parties. Responsibility for funding and implementing the EPA's selected cleanup remedy will be determined at an unspecified later date. Based on the investigation to date, we believe that we did not contribute in any material way to contaminants of concern in the river sediments or the damage of natural resources in the Portland Harbor Site and that the damage in the area of the Portland Harbor Site adjacent to its property precedes our ownership of the Portland Property. Because these environmental investigations are still underway, sufficient information is currently not available to determine our liability, if any, for the cost of any required remediation or restoration of the Portland Harbor Site or to estimate a range of potential loss. Based on the results of the pending investigations and future assessments of natural resource damages, we may be required to incur costs associated with additional phases of investigation or remedial action, and may be liable for damages to natural resources. In addition, we may be required to perform periodic maintenance dredging in order to continue to launch vessels from our launch ways in Portland, Oregon, on the Willamette River, and the river's classification as a Superfund site could result in some limitations on future dredging and launch activities. Any of these matters could adversely affect our business and Consolidated Financial Statements, or the value of the Portland Property.

On January 30, 2017 the Confederated Tribes and Bands of Yakama Nation sued 33 parties including our company as well as the U.S. and the State of Oregon for costs it incurred in assessing alleged natural resource damages to the Columbia River from contaminants deposited in Portland Harbor. *Confederated Tribes and Bands of the Yakama Nation v. Air Liquide America Corp., et al.*, U.S. Court for the District of Oregon Case No. 3:17-cv-00164-SB. The complaint does not specify the amount of damages the plaintiff will seek. The case has been stayed until January 14, 2025.

Oregon Department of Environmental Quality (DEQ) Regulation of Portland Manufacturing Operations

We entered into a Voluntary Cleanup Agreement with the Oregon Department of Environmental Quality (DEQ) in which we agreed to conduct an investigation of whether, and to what extent, past or present operations at the Portland Property may have released hazardous substances into the environment. We have also signed an Order on Consent with the DEQ to finalize the investigation of potential onsite sources of contamination that may have a release pathway to the Willamette River. Interim precautionary measures are also required in the order and we are discussing with the DEQ potential remedial actions which may be required. Our aggregate expenditure has not been material, however we could incur significant expenses for remediation. Some or all of any such outlay may be recoverable from other responsible parties.

Regulation

We must comply with the rules of the U.S. Department of Transportation (USDOT) and the administrative agencies it oversees including the Federal Railroad Administration (FRA), the Pipeline and Hazardous Materials Safety Administration (PHMSA), and the Department of Homeland Security (DHS) in the U.S. and Transport Canada (TC) in Canada, each of which administer and enforce laws and regulations relating to railroad safety. More specifically, the transportation of hazardous materials by rail is subject to rigorous oversight by FRA, PHMSA, and DHS. Railroads, acting through the Association of American Railroads (AAR), work in partnership with these and other local, state, and federal entities on hazardous materials-related issues, including train routing, security, tank car design and emergency response. Railroads also require compliance with certain industry best practices which at times exceed federal requirements for trains carrying hazardous materials. These regulations govern equipment and safety appliance standards for freight cars and other rail equipment used in interstate and international commerce throughout North America. The AAR promulgates rules and regulations governing the safety and design of equipment, relationships among railroads and other railcar owners with respect to railcars in interchange, and other matters. The AAR also certifies railcar builders and component manufacturers that provide equipment for use on North American railroads. These regulations require maintaining certifications with the AAR as a railcar builder and maintenance provider and component manufacturer, and products sold and leased by us in North America must meet AAR, TC, PHMSA and FRA standards.

The primary regulatory and industry authorities involved in the regulation of the ocean-going barge industry are the U.S. Coast Guard, the Maritime Administration of the USDOT, and private industry classing organizations such as the American Bureau of Shipping.

Our operations are subject to regulation of health and safety matters by the U.S. Occupational Safety and Health Administration ("OSHA") and the Secretaria del Trabajo y Prevision Social ("STPS") in Mexico. We believe that we employ appropriate precautions to protect our employees and others from workplace injuries and harmful exposure to materials handled and managed at our facilities. However, claims asserted against us for work-related illnesses or injury and the further adoption of occupational safety and health regulations in the U.S. or in foreign jurisdictions in which we operate could increase our operating costs. While we do not anticipate having to make material expenditures in order to remain in substantial compliance with health and safety laws and regulations, we are unable to predict the ultimate cost of compliance.

The regulatory environment in Europe consists of a combination of EU regulations and country specific regulations, including a harmonized set of Technical Standards for Interoperability of freight wagons throughout the EU. The regulatory environment in Brazil consists of oversight from the Ministry of Infrastructure, the National Agency of Ground Transportation and the National Association of Railroad Transporters. In all other countries, we conform to country specific regulations where applicable.

Additional Information

We are a public reporting company and file annual, quarterly, current and special reports, proxy statements and other information with the SEC. The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at <http://www.sec.gov>. Through a link on the Investor Relations section of our website, <http://www.gbrx.com>, we make available the following filings as soon as reasonably practicable after they are electronically filed with or furnished to the SEC: our Annual Report on Form 10-K; Quarterly Reports on Form 10-Q; Current Reports on Form 8-K; and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended. All such filings are available free of charge. Copies of our Audit Committee Charter, Compensation Committee Charter, Nominating and Corporate Governance Committee Charter, Corporate Governance Guidelines and Code of Business Conduct and Ethics are also available on our web site at <http://www.gbrx.com>. In addition, each of the reports and documents listed above are available free of charge by contacting our Investor Relations Department at The Greenbrier Companies, Inc., One Centerpointe Drive, Suite 200, Lake Oswego, Oregon 97035.

Item 1A. RISK FACTORS

The following risks could materially and adversely affect our business, financial condition, operating results, liquidity and cash flows, prospects, and stock price. These risks do not identify all risks that we face; other factors, events, or uncertainties currently unknown to us or that we currently do not consider to present significant risks to our business or that emerge in the future could affect us adversely.

Risks Related to Our Business

An economic downturn and economic uncertainty may adversely affect demand for our products and services.

Our customers are often able to delay replacing rail equipment during economic downturns. Factors affecting the level of customer spending for our products and services include general economic conditions, such as inflation, and other factors such as business confidence in future economic conditions, fears of recession, and the availability and cost of efficient capital, among other factors. Worldwide economic conditions remain uncertain. As global economic conditions continue to be volatile or economic uncertainty increases, trends in business spending may become increasingly unpredictable and subject to reductions and fluctuations. Unfavorable economic conditions may lead our customers to delay or reduce purchases of our products and services, result in lower sales volumes, lower prices, lower lease utilization rates, and decreased revenues and profits.

Increases in the price of materials and components used in the production of our products could negatively impact our profit margin on the sale of our products.

A significant portion of our business depends on the adequate supply of steel, other raw materials, and energy, as well as numerous specialty parts and components, such as brakes, wheels, side frames, bolsters, and bearings for the railcar business, at cost-effective prices. During 2022, we experienced significantly elevated commodity and supply chain costs including the costs of labor, raw materials, energy, fuel, materials and other inputs necessary for the production and distribution of our products, and we expect elevated levels of inflation to continue in 2023. The cost of steel and all other materials used in the production of our railcars represents more than half of our direct manufacturing costs per railcar and in the production of our marine barges represents more than 30% of our direct manufacturing costs per marine barge. If we are not able to purchase materials and energy at competitive prices, our ability to produce and sell our products on a cost-effective basis could be adversely impacted which, in turn, could adversely affect our revenue and profitability. Our fixed-price contracts generally anticipate material price increases and surcharges. If we are unable to adjust our selling prices or have adequate protection in our contracts against changes in material prices, our margins could be adversely affected. Further, although a portion of the costs we must incur to meet our contractual obligations are subject to escalation clauses which allow us to pass through costs to our customers, we will absorb some cost increases thereby decreasing margin on some of our customer contracts.

Disruptions in the supply of materials and components used in the production of our products could negatively impact our business and results of operations.

Supply chains were severely disrupted by the COVID-19 global pandemic. Armed conflict in Ukraine has also severely disrupted supply chains for the materials and components that we use in manufacturing our products. Certain materials for our products are currently available from a limited number of suppliers and, as a result, we may have limited control over pricing, availability, and delivery schedules. Additionally, factors beyond our control, including adverse political conditions, trade embargoes, increased tariffs or import duties, inclement weather, natural disasters, terrorism and labor disputes may adversely impact our supply chain, particularly if these conditions or disputes result in work slowdowns, lockouts, strikes, facility closures, or related disruptions. The inability to purchase a sufficient quantity of materials on a timely basis could create disruptions in our production and result in delays while we attempt to engage alternative suppliers. Any such disruption or conditions could harm our business and adversely impact our results of operations. The loss of suppliers or their inability to meet our price, quality, quantity and delivery requirements could have an adverse effect on our ability to manufacture and sell our products on a cost-effective basis.

Shortages of skilled labor, increased labor costs, or failure to maintain good relations with our workforce could adversely affect our operations.

We depend on skilled labor in all areas of our business. Some of our facilities are located in areas where demand for skilled labor often exceeds supply. Shortages of some types of skilled labor such as welders and machine operators could restrict our ability to maintain or increase production rates, lead to production inefficiencies and increase our labor costs. Due to the competitive nature of the labor markets in which we operate and the cyclical nature of the railcar industry, the resulting employment cycle increases our risk of not being able to recruit, train and retain the employees we require at efficient costs and on reasonable terms, particularly when the economy expands, production rates are high or competition for such skilled labor increases. We are a party to collective bargaining agreements with various labor unions at some of our operations. Disputes with regard to the terms and conditions of these agreements or our potential inability to negotiate acceptable contracts with these unions in the future could result in, among other things, strikes, work stoppages or other slowdowns by the affected workers. We cannot be assured that our relations with our workforce will remain positive. If our workers were to engage in a strike, work stoppage or other slowdown, or other employees were to become unionized or the terms and conditions in future labor agreements were renegotiated, or if union representation is implemented at such sites and we are unable to agree with the union on reasonable employment terms, including wages, benefits, and work rules, we could experience a significant disruption of our operations and incur higher ongoing labor costs. If we are unable to recruit, train and retain adequate numbers of qualified employees and third party labor providers on a timely basis or at a reasonable cost or on reasonable terms, our business and results of operations could be adversely affected.

Our business may be negatively impacted as a result of armed conflict in Ukraine.

In February 2022, the Russian Federation commenced a military invasion of Ukraine. We cannot predict the full impact of the war in Ukraine, the economic sanctions imposed on Russia, and the related economic and geopolitical instability, including instability in the manufacturing and freight rail markets. Some of our operations, particularly in Europe, have experienced higher energy costs, an increase in the price and decrease in the availability of steel and certain other materials and components, disruptions in transportation and supply chains, and higher manufacturing and borrowing costs. Not all of these costs are subject to escalation and related clauses which allow us to pass through costs to our customers, and there is a risk we will not be successful in renegotiating or managing the implementation of existing agreements to allow us to pass through these increased prices of manufacturing. As a result of these impacts and due to the lack of new railcar orders in Europe during the third quarter of 2022, we have slowed down production at our European manufacturing facilities. These negative factors may continue to occur along with other risks to our business that may emerge which include, among others, prolonged heightened inflation, macroeconomic interventions in response to inflation, cyber disruptions or attacks, and disruptions in credit markets. All of these factors and others could disrupt our business directly and could disrupt the business of our customers thereby reducing or delaying orders of our goods and services. Prolonged civil unrest, political instability or uncertainty, military activities, or broad-based sanctions could have an adverse effect on our operations and business outlook.

The COVID-19 coronavirus pandemic, and potential future related decline in global economic activity, as well as governmental reaction to the pandemic could continue to negatively impact our business, liquidity and financial position, results of operations, stock price, and ability to convert backlog to revenue.

We currently identify the following factors as the most significant risks to our business due to COVID-19, governmental actions, and economic conditions.

- We may be prevented from operating our manufacturing facilities, maintenance shops, wheel shops or other worksites due to the illness of our employees, “stay-at-home” regulations, and employee reluctance to appear for work for many different reasons including the implementation of any government-imposed vaccination or testing mandates. Extended closure of one or more of our large facilities or a material decrease in our available workforce could have a material negative impact on our financial position and results of operations. Labor shortages in the geographies where we operate could prevent us from converting backlog to revenue.
- Risks associated with inflation, currency volatility, increases in interest rates, and a mismatch of supply and demand, each as discussed further in this section.

- Risks associated with the disruptions of the operations of one or more of our customers or suppliers, as discussed further in this section.
- Our indebtedness may increase due to our need to increase borrowing to fund operations during a period of reduced revenue.
- The market price of our common stock may drop or remain volatile.
- We may incur significant employee health care costs under our self-insurance programs.

The longer the pandemic continues, the more likely that more of the foregoing risks will be realized and that other negative impacts on our business will occur, some of which we cannot now foresee.

A material disruption in the movement of rail traffic could impair our ability to deliver railcars and other products to our customers in a timely manner which could prevent us from meeting customer demand, reduce our sales, and negatively impact our results of operations.

Once a railcar or other product is manufactured in one of our plants, it must be moved by rail to a customer delivery point. In many cases, the manufacturing plant and the delivery point are in different countries. Many different and unrelated factors could cause a delay in our ability to move our goods in a timely manner from the manufacturing plant to the delivery point including physical disruptions such as armed conflict, natural disasters and power outages, strikes, labor stoppages or shortages hindering the operation of railroads and related transportation infrastructure, regulatory and bureaucratic inefficiency and unresponsiveness, and other causes. A material disruption in the movement of rail traffic could negatively impact our business and results of operations.

Equipment failures, technological failures, costs and inefficiencies associated with changing of production lines, or transfer of production between facilities, could lead to production, delivery, or service curtailments or shutdowns, loss of revenue or higher expenses.

We operate a substantial amount of equipment at our production facilities. An interruption in production capabilities or maintenance and repair capabilities at our facilities, as a result of equipment or technology failure, acts of nature, terrorism, costs and inefficiencies associated with changing of production lines or transfer of production between facilities, could reduce or prevent our production, delivery, service, or repair of our products and increase our costs and expenses. A halt of production at any of our manufacturing facilities could severely affect delivery times to our customers. Any significant delay in deliveries not otherwise contractually mitigated could result in cancellation of all or a portion of our orders, cause us to lose future sales, and negatively affect our reputation and our results of operations.

We depend on our senior management team and other key employees, and significant attrition within our management team or unsuccessful succession planning for members of our senior management team and other key employees who are at or nearing retirement age, could adversely affect our business.

Our success depends in part on our ability to attract, retain and motivate senior management and other key employees. Achieving this objective may be difficult due to many factors, including fluctuations in global economic and industry conditions, competitors' hiring practices, cost reduction activities, and the effectiveness of our compensation programs. Competition for qualified personnel can be very intense. We must continue to recruit, retain and motivate senior management and other key employees sufficient to maintain our current business and support our future projects and growth objectives. We are vulnerable to attrition among our current senior management team and other key employees. Some members of our senior management team and other key employees are at or nearing retirement age. If we are unsuccessful in our succession planning efforts, the continuity of our business and results of operations could be adversely affected. A loss of any such personnel, or the inability to recruit and retain qualified personnel in the future, could have an adverse effect on our business, financial condition and results of operations.

Our backlog is not necessarily indicative of the level of our future revenues.

Our manufacturing backlog represents future production for our customers in various periods, and estimated potential revenue attributable to such production. Our backlog of railcar units and marine vessels is not necessarily indicative of future results of operations. Certain orders in backlog are subject to customary documentation and completion of terms which may not occur. Some backlog is subject to certain conditions, including potential adjustment to prices due to changes in prevailing market prices, or due to lower prices for new orders accepted by us from other customers for similar cars on similar terms and conditions during relevant time periods. Our reported backlog may not be converted to revenue in any particular period and some of our contracts permit cancellations with limited compensation that would not replace lost revenue or margins. In addition, some customers may attempt to delay orders, cancel or modify a contract even if the contract does not allow for such cancellation or modification, and we may not be able to recover all revenue or earnings lost due to a breach of contract or a contract may be found to be unenforceable. The likelihood of cancellations, modifications, rejection and non-payment for our products generally increases during periods of market weakness. The timing of converting backlog to revenue is also materially impacted by our decision whether to lease railcars, sell railcars, or syndicate railcars with a lease attached to an investor. Actual revenue may not equal our anticipated revenues based on our backlog.

We derive a significant amount of our revenue from a limited number of customers, the loss of or reduction of business from one or more of which could have an adverse effect on our business.

A significant portion of our revenue is generated from a few major customers. Although we have some long-term contractual relationships with our major customers, we cannot be assured that we will continue to have good relations with our customers, or that our customers will continue to purchase or lease our products or services, or will continue to do so at historical levels, or will renew their existing contracts with us. A reduction in the purchasing or leasing of our products, a termination of our services by one or more of our major customers, a decline in the financial condition of a major customer, or our failure to replace expiring customer contracts with new customer contracts on satisfactory terms could result in a loss of business and have an adverse effect on our business and operating results.

We rely on limited suppliers for certain components and services needed in our production. If we are not able to procure specialty components or services on commercially reasonable terms or on a timely basis, our business, financial condition and results of operations would be adversely affected.

Our manufacturing operations depend in part on our ability to obtain timely deliveries of materials, components and services in acceptable quantities and quality from our suppliers. In 2022, the top ten suppliers for all inventory purchases accounted for approximately 49% of total purchases. The top two suppliers accounted for 16% and 10% of total inventory purchases in 2022. No other suppliers accounted for more than 10% of total inventory purchases. Certain components of our products, particularly specialized components like castings, bolsters, trucks, wheels and axels, and certain services, such as lining capabilities, are currently only available from a limited number of suppliers. If any one or more of our suppliers cease to provide us with sufficient quantities of our components or services in a timely manner or on terms acceptable to us, or cease to provide services or manufacture components of acceptable quality, or go out of business, we could incur disruptions or be limited in our production of our products and may not be able to promptly identify alternative sources for these components or services.

In addition, we are increasing the number of components and services we manufacture or provide ourselves, directly or through joint ventures. If we are not successful at manufacturing such components or providing such services or have production problems after transitioning to self-produced supplies, we may not be able to replace such components or services from third party suppliers in a timely manner. Any such disruption in our supply of specialized components and services or increased costs of those components or services could harm our business and adversely affect our results of operations.

The timing of our asset sales and related revenue recognition could cause significant differences in our quarterly results and liquidity.

We may build products in anticipation of a customer order, or lease railcars to a customer with the aim of selling such railcars on lease to a third party. In such cases, the lag between production and sale results in uneven recognition of revenue and earnings over time. Our production during any given period may be concentrated in relatively few contracts, intensifying the amplitude and irregularity of our revenue streams. The timing of recognizing revenue on a railcar is also materially impacted by our decision whether to lease the railcar to a lessee, sell the railcar, or syndicate the railcar with a lease attached to an investor. In addition, we periodically sell railcars from our own lease fleet and the timing and volume of such sales are difficult to predict. As a result, comparisons of our manufacturing revenue, deliveries, quarterly net gain on disposition of equipment, income and liquidity between quarterly periods within one year and between comparable periods in different years may not be meaningful and should not be relied upon as indicators of our future performance.

We face risks related to cybersecurity threats and incidents that increase our costs and could disrupt our business and operations.

We regularly face attempts by others to gain unauthorized access through the Internet, or to introduce malicious software, to our information technology systems. Additionally, malicious hackers, state-sponsored organizations, terrorists, employees and third-party service providers, or intruders into our physical facilities may attempt to gain unauthorized access and corrupt the processes used to operate our businesses and to design and manufacture our products. We are also a target of malicious attackers who attempt to gain access to our network or those of our customers; steal proprietary information related to our business, products, employees, and customers; interrupt our systems and services or those of our customers; or demand ransom to return control of such systems and services. Such attempts are increasing in number and in technical sophistication, and if successful, would expose us and the affected parties to risk of loss or misuse of proprietary or confidential information or disruptions of our business operations. Our information technology infrastructure also includes products and services provided by third parties, and these providers can experience breaches of their systems and products that affect the security of our systems and our proprietary or confidential information. Our reliance on information technology increases as working remotely increases among our employees.

Addressing cybersecurity threats and incidents, whether or not successful, could result in our incurring significant costs related to, for example, disruptions in our operations, rebuilding internal systems, implementing additional threat protection measures, defending against litigation, responding to regulatory inquiries or actions, paying damages, or taking other remedial steps with respect to third parties, as well as reputational harm. In addition, these threats are constantly evolving, thereby increasing the difficulty of successfully defending against them or implementing adequate preventative measures. While we seek to detect and investigate unauthorized attempts and attacks against our network, products, and services, and to prevent their recurrence where practicable through changes to our internal processes and tools, we remain potentially vulnerable to additional known or unknown threats. In some instances, we, our customers, and the users of our products and services can be unaware of an incident or its magnitude and effects.

The theft, loss, or misuse of third party data collected, used, stored, or transferred by us to run our business could result in significantly increased business and security costs or costs related to defending legal claims. Global privacy legislation, enforcement, and policy activity in this area are rapidly expanding and creating a complex regulatory compliance environment. Costs to comply with and implement these privacy-related and data protection measures could be significant, and noncompliance could expose us to significant monetary penalties, damage to our reputation, and even criminal sanctions. Even our inadvertent failure to comply with federal, state, or international privacy-related or data-protection laws and regulations could result in audits, regulatory inquiries, or proceedings against us by governmental entities or other third parties.

Updates or changes to our information technology systems may result in problems that could negatively impact our business.

We have information technology systems, comprising hardware, network, software, people, processes and other infrastructure that are important to the operation of our businesses. We continue to evaluate and implement upgrades and changes to information technology systems that support substantially all of our operating and financial functions. We could experience problems in connection with such implementations, including compatibility issues, training requirements, higher than expected implementation costs and other integration challenges and delays. A significant problem with an implementation, integration with other systems or ongoing management and operation of our systems could negatively impact our business by disrupting operations. Such a problem could also have an adverse effect on our ability to generate and interpret accurate management and financial reports and other information on a timely basis, which could have a material adverse effect on our financial reporting system and internal controls and adversely affect our ability to manage our business.

A failure to design or manufacture products or technologies or to achieve timely certification or market acceptance of new products or technologies could have an adverse effect on our profitability.

We continue to introduce new railcar product innovations and technologies. We occasionally accept orders prior to receiving railcar certification or proving our ability to manufacture a quality product that meets customer standards. We could be unable to successfully design or manufacture new railcar product innovations or technologies. Our inability to develop and manufacture new product innovations or technologies in a timely and profitable manner, or to obtain timely certification, or to achieve market acceptance, or to avoid quality problems in our new products, could have a material adverse effect on our revenue and results of operations and subject us to losses including penalties, cancellation of orders, rejection of railcars by a customer and/or other losses.

Our debt could have negative consequences to our business or results of operations.

We face several risks due to our debt and debt service obligations including our potential inability to satisfy our financial obligations related to our consolidated indebtedness; potential breach of the covenants in our credit agreements; our ability to borrow additional amounts or refinance existing indebtedness in the future to fund operating needs may be limited or costly; our availability of cash flow may be inadequate because a portion of our cash flow is needed to pay principal and interest on our debt; we may be at a disadvantage relative to our competitors that have greater financial resources than us or more flexible capital structures than us; we face additional exposure to the risk of increased interest rates as certain of our borrowings are at variable rates of interest, which could result in higher interest expense in the event of an increase in interest rates; restrictions under debt agreements may adversely interfere with our financial and operating flexibility; and exposure to the possibility that we may suffer a material adverse effect on our business and financial condition if we are unable to service our debt or obtain additional financing, as needed.

We, our subsidiaries, and our joint ventures may incur additional indebtedness, including secured indebtedness, and other obligations and liabilities that do not constitute indebtedness. This could increase the risks associated with our debt. Some of our credit facilities and existing indebtedness use variable rates including the London Interbank Offered Rates (LIBOR), the Secured Overnight Financing Rate (SOFR), and other prime rates of reference banks. Replacement reference rates, which includes SOFR, are relatively new with a limited history, and changes in SOFR have, on occasion, been more volatile than changes in other benchmark or market rates. As a result, the amount of interest we may pay on our variable rate indebtedness is difficult to predict.

Our product and service warranties could expose us to significant claims.

We offer our customers limited warranties for many of our products and services. Accordingly, we may be subject to significant warranty claims in the future, such as multiple claims based on one defect repeated throughout our production or servicing processes, claims for which the cost of repairing the defective part is highly disproportionate to the original cost of the part or defects in railcars or services which we discover in the future resulting in increased warranty costs or litigation. Warranty and product support terms may expand beyond those which have traditionally prevailed in the rail supply industry. These types of warranty claims could result in costly product recalls, customers seeking monetary damages, significant repair costs and damage to our reputation. If warranty claims attributable to actions of third party component manufacturers are not recoverable from such parties due to their poor financial condition or other reasons, we could be liable for warranty claims and other risks for using these materials in our products.

Our financial performance and market value could cause future write-downs of goodwill or intangibles or other long-lived assets in future periods.

We are required to perform an annual impairment test of goodwill and other indefinite lived assets which could result in an impairment charge if it is determined that the carrying value of the asset exceeds its fair value. We perform a goodwill impairment test annually at the reporting unit level during the third quarter of each year, or whenever events or circumstances indicate that the carrying value of these assets may exceed their fair value.

If indicators suggest it is more likely than not that the fair value of a reporting unit is less than its carrying value, it may result in an impairment of goodwill. As of August 31, 2022, we had \$84.3 million of goodwill in our Manufacturing segment and \$43.0 million in our Maintenance Services segment. Impairment charges to our goodwill or other indefinite lived intangible assets would impact our results of operations. Future write-downs of goodwill and other assets could affect certain of the financial covenants under debt instruments and could restrict our financial flexibility.

Our business will suffer if we are unsuccessful in making, integrating, and maintaining acquisitions, joint ventures and other strategic investments.

We have acquired businesses and invested in or entered into joint ventures in past periods. We may in the future acquire other businesses or invest in or enter into joint ventures with other companies. Our failure to identify future acquisition or joint venture opportunities, or to complete potential acquisitions or joint ventures on favorable terms, could hinder our ability to grow our business. Additionally, these transactions create risks such as:

- disruption of our ongoing business, including loss of management focus on existing operations;
- the difficulty of incorporating acquired operations, technology, and rights into our existing business and product and service offerings, unanticipated expenses related to such integration and the lack of control if such integration is delayed or not successfully implemented;
- the challenges of coordinating geographically dispersed organizations, integrating personnel with disparate business backgrounds, and combining different corporate cultures;
- the challenges of retaining key personnel of the acquired business or joint venture;
- the risk of incurring unanticipated operating losses and expenses of the acquired business or joint venture;
- the potential impairment of customer and other relationships of the acquired company or of the joint venture partner or our own customers as a result of any integration of operations;
- losses we may incur as a result of declines in the value of a joint venture investment or as a result of incorporating an investee's financial performance into our financial results;
- the difficulty of implementing at companies we acquire the controls, procedures, and policies appropriate for a public company;
- potential unknown liabilities associated with a company we acquire or in which we invest;
- the risks associated with businesses we acquire or invest in, which may differ from or be more significant than the risks our other businesses face;
- our inability to complete capital expenditure projects on time and within budget or the failure of capital expenditure projects once completed to operate as planned or to return expected benefits as planned; and
- the difficulty of completing such transactions and achieving anticipated cost efficiencies, synergies and other benefits within expected timeframes, or at all.

In addition, we might need to issue additional equity securities, spend our cash, or incur debt, contingent liabilities, or amortization expenses related to intangible assets in connection with effecting an acquisition or joint venture, any of which could reduce our profitability and harm our business or only be available on unfavorable terms, if at all. In addition, valuations supporting our acquisitions and investments could change rapidly. We could determine that such valuations have experienced impairments or other-than-temporary declines in fair value, which could adversely impact our financial results.

If we are unable to protect our intellectual property or if third parties assert that our products or services infringe their intellectual property rights, our ability to compete in the market may be harmed, and our business and financial condition may be adversely affected.

If our intellectual property rights are not adequately protected, we may not be able to commercialize our technologies, products or services and our competitors could commercialize our technologies, which could result in a decrease in our sales and market share and could materially adversely affect our business, financial condition and results of operations. Conversely, third parties might assert that our products, services, or other business activities infringe their patents or other intellectual property rights. Infringement and other intellectual property claims and proceedings brought against us, whether successful or not, could result in substantial litigation and judgment costs and harm our reputation.

Insurance coverage could be costly, unavailable or inadequate.

The ability to insure our businesses, facilities and rail assets is an important aspect of our ability to manage risk. As there are only limited providers of this insurance to the railcar industry, there is no guarantee that such insurance will be available on a cost-effective basis in the future. In addition, we cannot assure that our insurance carriers will be able to pay current or future claims. Additionally, the nature of our business subjects us to physical damage, business interruption and product liability claims, especially in connection with the repair and manufacture of products that carry hazardous or volatile materials. Although we maintain liability insurance coverage at commercially reasonable levels compared to similarly sized heavy equipment manufacturers, an unusually large physical damage, business interruption or product liability claim or a series of claims based on a failure repeated throughout our production process could exceed our insurance coverage or result in damage to our reputation, which could materially adversely impact our financial condition and results of operations.

Risks Related to Market and Economic Factors

Weak economic conditions and inflation in the global economy could negatively impact our business and results of operations.

Customer demand for our products and services may be impacted by weak economic conditions, recession, equity market volatility or other negative economic factors in the U.S. or other nations. General inflation in the United States, Europe and other geographies has risen to levels not experienced in recent decades. General inflation, including rising prices for energy, metals, components, and other inputs as well as rising wages negatively impact our business by increasing our operating costs. General inflation also negatively impacts our business by decreasing the capital for our customers to deploy to purchase our goods and services. Inflation may cause our customers to reduce or delay orders for our goods and services thereby causing a decrease in sales of our goods and services. In addition, if the U.S. economy enters a recession, we may experience sales declines and may have to decrease prices, either of which could have a material adverse impact on our financial results.

Monetary and other policy interventions by governments and central banks, including the increase of interest rates, as well as uncertainty about governmental macroeconomic policies, could negatively impact our business and results of operations.

The United States Federal Reserve, the European Central Bank, and several other central banks, have undertaken or signaled increases in benchmark interest rates. Rising interest rates increases our borrowing costs potentially decreasing our profitability. Additionally, increased borrowing costs faced by our customers could result in decreased demand for our products. Monetary interventions also risk a sustained decline in aggregate demand, either globally or within one more geographic market. A decline in demand for our products would most likely have a negative impact on our business and results of operations.

The types of rail equipment we sell and the services we provide significantly impact our revenue and our margin and are dependent on broad economic trends over which we have little or no control.

We manufacture, lease, maintain and refurbish a broad range of railcars and related rail equipment. The demand for specific types of railcars and the mix of repair and refurbishment work varies over time. Changes in the global economy and the industries and geographies that we serve cause shifts in demand for specific products and services. These shifts in demand could affect our results of operations and could have an adverse effect on our revenue and our profitability. Demand for specific types of railcars increases and decreases with the demand for goods such as grains, metals, construction aggregates, fertilizer, perishables and general merchandise, plastic pellets, oil and gas, bio-fuels, chemicals, and automobiles, among others, which is beyond our control.

Cyclical economic downturns in our industry usually result in decreased demand for our products and services and reduced revenue.

The industry in which we operate is subject to periodic economic cycles, and the purchasing trends of customers in our industry have a significant impact on demand for our products and services. As a result, during downturns, the rate at which we convert backlog to revenue usually decreases and we may slow down or halt production at some of our facilities. The current economic downturn in our industry has impacted the demand for our products and services, and will continue to result in one or more of the following: lower sales volumes, lower prices, lower lease utilization rates and decreased revenues and profits.

Demand for our railcar equipment and services is dependent on the future of rail transportation and the manner in which railroads operate.

Demand for our rail equipment and services may decrease if freight rail decreases as a mode of freight transportation used by customers to ship their products, or if governmental policies favor modes of freight transportation other than rail. If rail freight transportation becomes more efficient or dwell times decrease, demand for our rail equipment and services may decrease. If the rail freight industry becomes oversupplied, prices for our railcars, lease rates, and demand for our products and services may decrease. The industries in which our customers operate are driven by dynamic market forces and trends, which are in turn influenced by economic, regulatory, and political factors. Features and functionality specific to certain railcar types could result in those railcars becoming obsolete as customer requirements for freight delivery change.

Risks related to our operations outside of the U.S. could adversely affect our operating results.

We own, lease, operate or have invested in businesses that have manufacturing facilities in Mexico, Brazil and Europe, and have customers and suppliers located outside the United States. Instability in the macroeconomic, political, military, legal, trade, financial, labor or market conditions in or relating to the countries where we, or our customers or suppliers, operate could negatively impact our business activities and operations. Some foreign countries in which we operate or may operate have authorities that regulate railroad safety and rail equipment design and manufacturing. If we do not have appropriate certifications, we could be unable to market and sell our rail equipment in those markets. Adverse changes in foreign regulations applicable to us or our customers, such as labor, environment, trade, tax, currency and price regulations, could limit our operations, make the manufacture and distribution of our products difficult, and delay or limit our ability to repatriate income derived from foreign markets.

Our business benefits from free trade agreements between the United States and foreign governments, and from various U.S. corporate tax provisions related to international commerce. Any changes in trade or tax policies by the U.S. or foreign governments in jurisdictions in which we do business, as well as any embargoes, quotas or tariffs imposed on our products and services, could adversely and significantly affect our financial condition and results of operations.

Among the political risks we face outside the U.S. are governments nationalizing our business or assets, or repudiating or renegotiating contracts with us, our customers or our suppliers. In our cross-border business activities, we could experience longer customer payment cycles, difficulty in collecting accounts receivable or an inability to protect our intellectual property. We could be adversely affected by violations of the U.S. Foreign Corrupt Practices Act and similar worldwide anti-corruption laws, which may conflict with local business customs in certain jurisdictions. The failure to comply with laws governing international business may result in substantial penalties and fines and reputational harm. Transactions with non-U.S. entities expose us to business practices, local customs, and legal processes with which we may not be familiar, as well as difficulty enforcing contracts and international political and trade tensions. If we are unable to successfully manage the risks associated with our foreign and cross-border business activities, our results of operations, financial condition, liquidity and cash flows could be negatively impacted.

Fluctuations in foreign currency exchange rates could lead to increased costs and lower profitability.

Outside of the U.S., we primarily conduct business in Mexico, Europe and Brazil and our non-U.S. businesses conduct their operations in local currencies. We also source materials worldwide. Fluctuations in exchange rates may affect demand for our products in foreign markets or our cost competitiveness and may adversely affect our profitability. Although we attempt to mitigate a portion of our exposure to changes in currency rates through currency rate hedge contracts and other activities, these efforts cannot fully eliminate the risks associated with the foreign currencies. In addition, some of our borrowings are in foreign currency, giving rise to risk from fluctuations in exchange rates. A material or adverse change in exchange rates could result in significant deterioration of profits or in losses for us.

We could be unable to lease railcars at satisfactory rates, remarket leased railcars on favorable terms upon lease termination, or realize the expected residual values for end of life railcars due to changes in scrap prices, each of which could reduce our revenue and decrease our overall return or affect our ability to sell leased assets in the future.

The profitability of our railcar leasing business depends on our ability to lease railcars at satisfactory rates, sell railcars with sufficiently profitable leases to investors, and to remarket, sell or scrap railcars we own or manage upon the expiration of leases. The rent we receive during the initial railcar lease term typically covers only a small portion of the railcar acquisition or production costs. Thus, we are exposed to a remarketing risk throughout the life of the railcar because we must obtain lease rates or a sale price sufficient to cover our acquisition or production costs related to the railcar. Our ability to lease or remarket leased railcars profitably is dependent on several factors, including, but not limited to, market and industry conditions, cost of, and demand for, competing used or newer models, availability of credit and the credit-worthiness of potential customers, costs associated with the refurbishment of the railcars, the market demand or governmental mandates for refurbishment, customers not defaulting on their leases, as well as market perceptions of residual values and interest rates. A downturn in the industries in which our lessees operate and decreased demand for railcars could also increase our exposure to remarketing risks because lessees may demand shorter lease terms, requiring us to remarket leased railcars more frequently. Furthermore, the resale market for previously leased railcars has a limited number of potential buyers. Our inability to lease, remarket or sell leased railcars on favorable terms could result in an adverse impact to our consolidated financial statements or affect our ability to sell leased railcars to investors in the future. Additionally, when the price of scrap steel declines, our revenues and margins in such businesses decrease.

A limited availability of financing or higher interest rates could increase the cost of, or potentially deter, new leasing arrangements with our customers, reduce our ability to syndicate railcars under lease to financial institutions, or impact the sales price we may receive on such syndications, any of which could materially adversely affect our business, financial condition and results of operations.

Some of our competitors are owned or financially supported by foreign governments and may sell products below cost or otherwise compete unfairly.

The markets in which we participate are intensely competitive and we expect them to remain intensely competitive into the foreseeable future. Some of our competitors are owned or financially supported by foreign governments or sovereign wealth funds, and may potentially sell products and services below cost, or otherwise compete unfairly, in order to gain market share. The relative competitiveness of our manufacturing facilities and products affects our performance. A number of competitive factors challenge or affect our ability to compete successfully including the introduction of competitive products and new entrants into our markets, a limited customer base and price pressures from unfair competition and increases in raw materials and labor costs. If we do not compete successfully, our market share, margin and results of operations may be adversely affected.

Fires, natural disasters, pandemics, terrorism, or severe or unusual weather conditions could disrupt our business and result in loss of revenue or higher expenses or decreased demand.

Any serious disruption at any of our facilities due to pandemic, terrorism, fire, hurricane, earthquake, flood, other severe weather events or any other natural disaster could impair our ability to use our facilities and have a material adverse impact on our revenues and increase our costs and expenses. If there is a natural disaster or other serious disruption at any of our facilities, particularly at any of our Mexican or Arkansas facilities, it could impair our ability to adequately supply our customers, cause a significant disruption to our operations, cause us to incur significant costs to relocate or reestablish these functions and negatively impact our operating results. While we insure against certain business interruption risks, such insurance may not adequately compensate us for any losses incurred as a result of natural or other disasters.

Additionally, seasonal fluctuations in weather conditions may lead to greater variation in our quarterly operating results as unusually mild weather conditions will generally lead to lower demand for our wheel-related products and services. Unusually mild weather conditions throughout the year may reduce overall demand for our wheel-related products and maintenance services. If occurring for prolonged periods, such weather could have an adverse effect on our business, results of operations and financial condition.

The deterioration of conditions in the global capital markets, weakening of macroeconomic conditions and changes in the credit markets and the financial services industry could negatively impact our business, results of operations, financial condition or liquidity.

Our leasing subsidiaries' operations relies in large part upon banks and capital markets to fund its operations and contractual commitments and refinance existing debt. These markets can experience high levels of volatility and access to capital can be constrained for extended periods of time. In addition to conditions in the capital markets, a number of other factors could cause us to incur increased borrowing costs and have greater difficulty accessing public and private markets for both secured and unsecured debt. The credit markets and the financial services industry may experience volatility which can result in tighter availability of credit on more restrictive terms and limit our ability to sell railcar assets or to syndicate railcars to investors with leases attached. Our liquidity, financial condition and results of operations could be negatively impacted if our ability to borrow money to finance operations, obtain credit from trade creditors, obtain credit to maintain our hedging programs, offer leasing products to our customers or sell railcar assets were to be impaired. In addition, scarcity of capital could also adversely affect our customers' ability to purchase, lease, or pay for products from us or adversely affect our suppliers' ability to provide us with product. Any of these conditions or events could result in reductions in our revenues, increased price competition, or increased operating costs, which could adversely affect our business, financial condition and results of operations.

Risks Related to Legal, Compliance and Regulatory Matters

Risks related to potential misconduct by employees may adversely impact us.

Our employees may engage in misconduct, fraud or other improper activities, including noncompliance with our policies or regulatory standards and requirements, which could subject us to regulatory sanctions and reputational damage and materially harm our business. It is not always possible to deter employee misconduct, and the precautions we take to prevent and detect this activity may not be effective in controlling unknown or unmanaged risks or losses, including risks associated with harassment, as well as whistleblower complaints and litigation. There can be no assurance that we will succeed in preventing misconduct by employees in the future. In addition, the investigation of alleged misconduct disrupts our operations and may harm the public's perception of our company, which may be costly. Any such events in the future may have a material adverse impact on our financial condition or results of operations.

Changes in, or failure to comply with, applicable regulations may adversely impact our business, financial condition and results of operations.

Our company and the other participants in our industry are subject to regulation by governmental agencies. These authorities establish, interpret, and enforce rules and regulations for the railcar industry. New rules and regulations and shifting enforcement priorities of regulators could increase our operating costs and the operating costs of our customers. Changes to the process for obtaining regulatory approval in Europe for the operation of new or modified railcars may make it more difficult for us to deliver products timely and to comply with our sales contracts.

We cannot guarantee that we or our suppliers will be in compliance at all times and compliance may prove to be more costly and limiting than we currently anticipate and compliance requirements could increase in future years. If we or our suppliers fail to comply with applicable requirements and regulations, we could face sanctions and penalties that could negatively affect our financial results.

We have potential exposure to environmental liabilities, which could increase our operating costs or have an adverse effect on our results of operations.

We are subject to extensive national, state, foreign, provincial and local environmental laws and regulations concerning, among other things, air emissions, water discharge, solid waste and hazardous substances handling and disposal and employee health and safety. These laws and regulations are complex and frequently change. We could incur unexpected costs, penalties and other civil and criminal liabilities if we, or in certain circumstances others, fail to comply with environmental laws or permits issued pursuant to those laws. We also could incur costs or liabilities related to off-site waste disposal or remediating soil or groundwater contamination at our properties, including as set forth in Item 3, "Legal Proceedings." In addition, future environmental laws and regulations may require significant capital expenditures or changes to our operations, or may impose liability on us in the future for actions that complied with then applicable laws and regulations when the action was taken.

Business, regulatory, and legal developments regarding climate change may affect the demand for our products or the ability of our critical suppliers to meet our needs.

Scientific studies have suggested that emissions of certain gases, commonly referred to as greenhouse gases (GHGs) including carbon dioxide and methane, may be contributing to warming of the Earth's atmosphere and other climate changes. Legislation and new rules to regulate emission of GHGs have been introduced in numerous state legislatures, the U.S. Congress, and by the EPA. Some of these proposals would require industries to meet stringent new standards that may require substantial reporting of GHGs and other carbon intensive activities in addition to potentially mandating reductions in our carbon emissions. While we cannot assess the direct impact of these or other potential regulations, we recognize that new climate change reporting or compliance protocols could affect our operating costs, the demand for our products and/or affect the price of materials, input factors and manufactured components which could impact our margins. Other adverse consequences of climate change could include an increased frequency of severe weather events and rising sea levels that could affect operations at our manufacturing facilities, the price of insuring company assets, or other unforeseen disruptions of our operations, systems, property or equipment.

Train derailments or other accidents or claims could subject us to legal claims that adversely impact our business, financial condition and our results of operations.

We provide a number of services which include the manufacture and supply of new railcars, wheels, components and parts and the lease and maintenance of railcars for our customers that transport a variety of commodities, including tank railcars that transport hazardous materials such as crude oil, ethanol and other products. In addition, we have a Regulatory Services Group which offers regulatory, engineering, process consulting and advocacy support to the tank car and petrochemical rail shipper community, among other services. We could be subject to various legal claims, including claims of negligence, personal injury, physical damage and product or service liability, or in some cases strict liability, as well as potential penalties and liability under environmental laws and regulations, in the event of a derailment or other accident involving railcars, including tank railcars whether resulting from natural disasters, human error, terrorism, or other causes. If we become subject to any such claims and are unable successfully to resolve them or maintain inadequate insurance for such claims, our business, financial condition and results of operations could be materially adversely affected.

The products we manufacture are designed to work optimally when properly operated, installed, repaired, maintained and used to transport the intended cargo. Our products may be sold to third parties who may misuse, improperly install or improperly or inadequately maintain or repair such products, which may result in us being subjected to claims or litigation associated with product damage, injuries or property damage that could increase our costs and weaken our financial condition.

We have identified a material weakness in our internal control over financial reporting. If we fail to properly remediate the material weakness or to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud.

During its evaluation of the effectiveness of disclosure controls and procedures as of August 31, 2022, management determined that our internal control over financial reporting was not effective, because we did not have effective controls over change management of system configurations in one IT environment to ensure all changes were logged and approved. Management has determined that this deficiency constitutes a material weakness in our internal control over financial reporting. We have identified and are implementing remedial measures to address the control deficiency that led to the material weakness. However, there can be no assurance that our remedial measures will correct the deficiency. If we are unable to remediate the material weakness, or are otherwise unable to maintain effective internal control over financial reporting or disclosure controls and procedures, it may result in material misstatements, as well as adversely affect the reliability of our financial statements, our reputation, our business, and the trading price of our common stock. More information regarding the material weakness and our remediation efforts is provided in “Item 9A. Controls and Procedures.”

Changes in or the implementation of accounting standards or inaccurate estimates or assumptions in the application of accounting policies could adversely affect our financial results.

Our accounting policies and methods are fundamental to how we record and report our financial condition and results of operations. Some of these policies require use of estimates and assumptions that may affect the reported value of our assets or liabilities and financial results and are critical because they require management to make difficult, subjective, and complex judgments about matters that are inherently uncertain. Estimates, judgments and assumptions underlying the accompanying consolidated financial statements include, income taxes, warranty accruals, environmental costs, and goodwill, among others. If our accounting policies, methods, judgments, assumptions, estimates and allocations prove to be incorrect, or if circumstances change, our business, financial condition, results of operations, liquidity, ability to pay dividends or stock price may be materially adversely affected.

Accounting standard setters and those who interpret the accounting standards (such as the Financial Accounting Standards Board, the SEC, and independent registered public accounting firms) may amend or even reverse their previous interpretations or positions on how these standards should be applied. In some cases, we could be required to apply a new or revised standard retrospectively, resulting in the revision of prior period financial statements. Changes in accounting standards can be hard to predict and can materially impact how we record and report our financial condition and results of operations.

Some of our customers place orders for our products in reliance on their ability to utilize tax benefits or tax credits any of which benefits or credits could be discontinued thereby reducing incentives for our customers to purchase our rail products.

There is no assurance that tax authorities will reauthorize, modify, or prevent the expiration of tax benefits, tax credits, or other policies aimed to incentivize the purchase of our products. If such incentives are discontinued or diminished, the demand for our products could decrease, thereby creating the potential for a material adverse effect on our financial condition or results of operations.

Risks Related to our Common Stock

Our stock price has been volatile and may continue to experience large fluctuations.

The price of our common stock has experienced rapid and significant price fluctuations. The price for our common stock is likely to continue to be volatile and subject to price and volume fluctuations in response to market and other factors, including the factors discussed elsewhere in these risk factors. A material decline in the price of our common stock may result in the assertion of certain claims against us, and/or the commencement of inquiries and/or investigations against us. A prolonged decline in the price of our common stock could result in a reduction in the liquidity of our common stock, a reduction in our ability to raise capital, and the inability of investors to obtain a favorable selling price for their shares. Following periods of volatility in the market price of their stock, historically many companies have been the subject of securities class action litigation. If we became involved in securities class action litigation in the future, it could result in substantial costs and diversion of our management's attention and our resources and could harm our stock price, business, prospects, financial condition and results of operations.

Our current shareholders could experience dilution.

We require substantial working capital to fund our business. If additional funds are raised through the issuance of equity securities or convertible securities, the percentage ownership held by our shareholders would be reduced and the equity securities we issue may have rights, preferences or privileges senior to those of our common stock. Additionally, we have the option to settle outstanding convertible notes in cash, although if we opt not to or do not have the ability to settle outstanding convertible notes in cash, the conversion of some or all of our convertible notes may dilute the ownership interests of existing shareholders. Any sales in the public market of the common stock issuable upon the conversion of the notes could adversely affect prevailing market prices of our common stock. In addition, the existence of the notes may encourage short selling by market participants, because the conversion of the notes could depress the price of our common stock.

Certain provisions in our charter documents, Oregon law, and our debt instruments could make an acquisition of our company more difficult, limit attempts by our shareholders to replace or remove members of our Board of directors and may adversely affect the market price of our common stock.

Our Articles of Incorporation and Bylaws, Oregon law, and contracts and debt instruments to which we are a party, contain certain provisions that could delay, defer or prevent an acquisition proposal that some, or a majority, of our shareholders might believe to be in their best interests or in which shareholders might receive a premium for their common stock over the then-prevailing market price. These provisions could also dissuade shareholders or third parties from contesting director elections and could cause investors to view our securities as less attractive investments and reduce the market price of our common stock. Certain relevant provisions of our Articles of Incorporation and Bylaws, as well as Oregon law, are described in further detail in "Description of the Registrant's Securities Under Section 12 of the Securities Exchange Act of 1934" annexed as Exhibit 4.3 to this Annual Report.

Payments of cash dividends on our common stock may be made only at the discretion of our Board of Directors and may be restricted by Oregon law.

Any decision to pay dividends will be at the discretion of our Board of Directors and will depend upon our operating results, strategic plans, capital requirements, financial condition, provisions of our borrowing arrangements and other factors our Board of Directors considers relevant. Furthermore, Oregon law imposes restrictions on our ability to pay dividends. Accordingly, we may not be able to continue to pay dividends in any given amount in the future, or at all.

Our business and operations could be negatively affected if we become subject to shareholder activism, which could cause us to incur significant expense, hinder execution of our business strategy and impact our stock price.

Shareholder activism which could take many forms, including potential proxy contests and public information campaigns continues to increase. Shareholder activism could result in substantial costs to the Company, give rise to perceived uncertainties as to our future, adversely affect our relationships with suppliers, customers, and regulators, make it more difficult to attract and retain qualified personnel, and adversely impact our stock price.

Our share repurchase program is intended to enhance long-term shareholder value although we cannot guarantee this will occur and this program may be suspended or terminated at any time.

The Board of Directors has authorized our company to repurchase our common stock through a share repurchase program. Our share repurchase program may be modified, suspended or discontinued at any time without prior notice. Although the share repurchase program is intended to enhance long-term shareholder value, we cannot provide assurance that this will occur.

General Risk Factors

Unanticipated changes in our tax provisions or exposure to additional income tax liabilities could affect our financial condition and profitability and we may take tax positions that the Internal Revenue Service or other tax authorities may contest.

We are subject to income taxes in both the United States and foreign jurisdictions. Significant judgments and estimates are required to be made in determining our worldwide provision for income taxes. Changes in estimates of projected future operating results, loss of deductibility of items, recapture of prior deductions (including related to interest on convertible notes), limitations on our ability to utilize tax net operating losses in the future or changes in assumptions regarding our ability to generate future taxable income could result in significant increases to our tax expense and liabilities that could adversely affect our financial condition and profitability.

We have in the past and may in the future take tax positions that the Internal Revenue Service (IRS) or other tax authorities may contest. We are required by an IRS regulation to disclose particular tax positions to the IRS as part of our tax returns for that year and future years. If the IRS or other tax authorities successfully contests a tax position that we take, we may be required to pay additional taxes, interest or fines that may adversely affect our results of operations and financial position.

The use of social and other digital media to disseminate false, misleading and/or unreliable or inaccurate data and information could create unwarranted volatility in our stock price and losses to our shareholders and could adversely affect our reputation, products, business, and operating results.

A substantial number of people are relying on social and other digital media to receive news, data, and information. Social and other digital media can be used by anyone to publish data and information without regard for factual accuracy. The use of social and other digital media to publish inaccurate, offensive, and disparaging data and information coupled with the frequent use of strong language and hostile expression, may influence the public's inability to distinguish between what is true and what is false and could obstruct an effective and timely response to correct inaccuracies or falsifications. Such use of social and other digital media could result in unexpected and unsubstantiated claims concerning our business in general or our products, our leadership or our reputation among customers and the public at large, thereby making it more difficult for us to compete effectively, and potentially having a material adverse effect on our business, operations, or financial condition.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

We operate at the following primary facilities as of August 31, 2022:

Description	Location	Status
Manufacturing Segment		
Operating facilities:	6 locations in the United States	Owned
	3 locations in Mexico	Owned – 2 locations Leased – 1 location
	3 locations in Poland	Owned
	3 locations in Romania	Owned
	1 location in Turkey	Owned
	Administrative offices:	2 locations in the United States
Maintenance Services Segment		
Operating facilities:	17 locations in the United States	Leased – 9 locations
		Owned – 8 locations
Leasing & Management Services Segment		
Corporate offices, railcar marketing and leasing activities:	Lake Oswego, Oregon	Leased

We believe that our facilities are in good condition and that the facilities, together with anticipated capital improvements and additions, are adequate to meet our operating needs for the foreseeable future. We continually evaluate our facilities in order to remain competitive and to take advantage of market opportunities.

Item 3. LEGAL PROCEEDINGS

There is hereby incorporated by reference the information disclosed in Note 21 - Commitments and Contingencies to Consolidated Financial Statements, Part II, Item 8 of this Form 10-K.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

Information about our Executive Officers

Current information regarding our executive officers is presented below.

Lorie L. Tekorius, 55, is President and Chief Executive Officer and serves on the Board of Directors. Ms. Tekorius has served as President since August 2019 and was promoted to Chief Executive Officer on March 1, 2022. Ms. Tekorius was elected to the Board of Directors on March 28, 2022. Ms. Tekorius has served in various management positions for the Company since 1995, most recently as Executive Vice President and Chief Operating Officer and prior to that, as Executive Vice President and Chief Financial Officer.

Martin R. Baker, 66, is Senior Vice President, General Counsel and Chief Compliance Officer, a position he has held since joining the Company in May 2008. Prior to joining the Company, Mr. Baker was Corporate Vice President, General Counsel and Secretary of Lattice Semiconductor Corporation.

Alejandro Centurion, 66, served as Executive Vice President of the Company and President of Greenbrier Manufacturing Operations until August 31, 2022, a position he has held since January 2015. Mr. Centurion has served in various management positions for the Company since 2005, most recently as President of North American Manufacturing Operations.

Brian J. Comstock, 60, is Executive Vice President, Chief Commercial and Leasing Officer, a position he has held since January 2021. Mr. Comstock has served in various management positions for the Company since 1998, most recently as Executive Vice President, Sales and Marketing.

Adrian J. Downes, 59, is Senior Vice President, Chief Financial Officer and Chief Accounting Officer. Mr. Downes has served as Senior Vice President and Chief Accounting Officer since joining the Company in March 2013. Mr. Downes was promoted to Acting Chief Financial Officer in August 2018 and was promoted to Chief Financial Officer in May 2019.

William A. Furman, 78, served as the Executive Chairman until August 31, 2022 and continues to serve as a Director. Mr. Furman previously served as Chief Executive Officer from 1994 until March 1, 2022, and as Chairman of the Board of Directors from January 2014 until his appointment to Executive Chairman on March 28, 2022. Mr. Furman was Vice President of the Company, or its predecessor company, from 1974 to 1994 and President of the Company from 1994 to 2019.

Executive officers are designated by the Board of Directors. No director or executive officer has a family relationship with any other director or executive officer of the Company.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock has been traded on the New York Stock Exchange under the symbol GBX since July 14, 1994. There were approximately 550 holders of record of common stock as of October 24, 2022.

Issuer Purchases of Equity Securities

The Board of Directors has authorized the Company to repurchase shares of the Company's common stock. The share repurchase program has an expiration date of January 31, 2023. There were no share repurchases during the year ended August 31, 2022 under this program. The amount remaining for repurchase was \$100.0 million as of August 31, 2022.

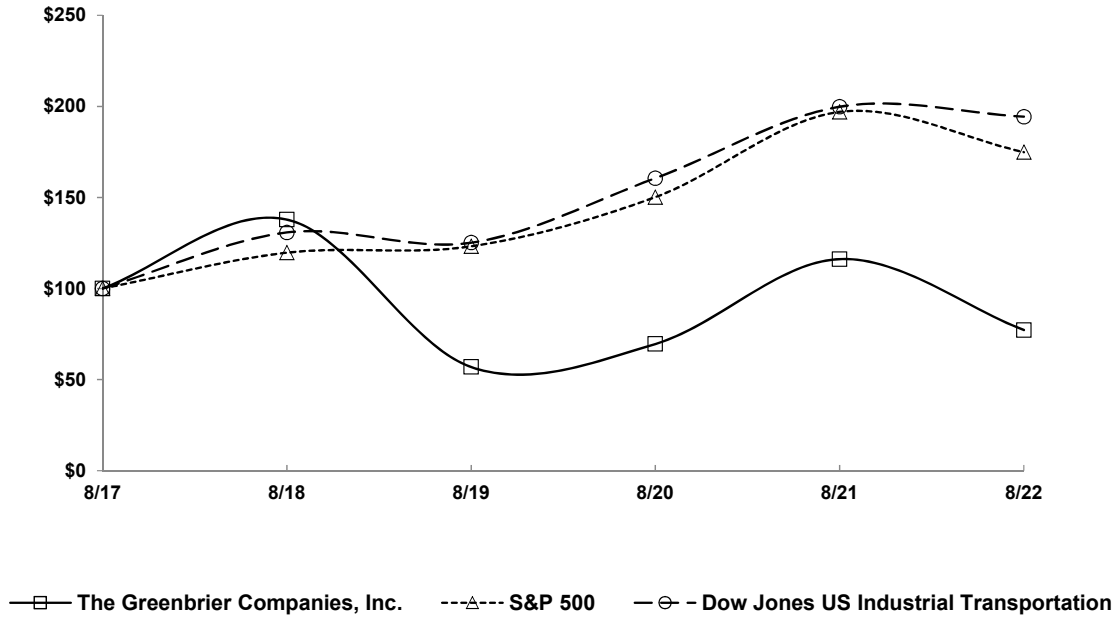
Performance Graph

The following graph demonstrates a comparison of cumulative total returns for the Company's Common Stock, the Dow Jones U.S. Industrial Transportation Index and the Standard & Poor's (S&P) 500 Index. The graph assumes an investment of \$100 on August 31, 2017 in each of the Company's Common Stock and the stocks comprising the indices. Each of the indices assumes that all dividends were reinvested and that the investment was maintained to and including August 31, 2022, the end of the Company's 2022 fiscal year.

The comparisons in this table are required by the SEC, and therefore, are not intended to forecast or be indicative of possible future performance of our Common Stock.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among The Greenbrier Companies, Inc., the S&P 500 Index
and the Dow Jones US Industrial Transportation Index



*\$100 invested on 8/31/17 in stock or index, including reinvestment of dividends.
Fiscal year ending August 31.

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Item 6. RESERVED

Not Applicable

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS



“The residual impacts of the pandemic, exacerbated by unprovoked war in Europe and global economic headwinds, presented challenging business conditions. Refusing to relent to these obstacles, Greenbrier achieved growth in fiscal year 2022. Our proven ability to manage liquidity, increase revenues and navigate a volatile supply chain, all during a leadership transition, enhances Greenbrier's ability to achieve in fiscal 2023 when we expect stronger manufacturing activity and growth in our services business.”

—LORIE TEKORIUS, PRESIDENT & CEO

Executive Summary

The financial results for 2022 reflect a year of transition and agility. We delivered strong results despite a volatile macroeconomic environment. We identify a few general trends impacting our business at present, all of which we believe are reflected in our results for the year ended August 31, 2022. First, we believe the North American freight rail equipment market continues to emerge from the cyclical decrease in economic activity which began prior to the emergence of COVID-19. Second, we believe global economic activity continues to recover from the historic decrease resulting from the COVID-19 pandemic. We were able to leverage these trends to accomplish the following:

- Significant increases in production throughout 2022;
- Growth in new order activity year over year; and
- Strong ending backlog value and units.

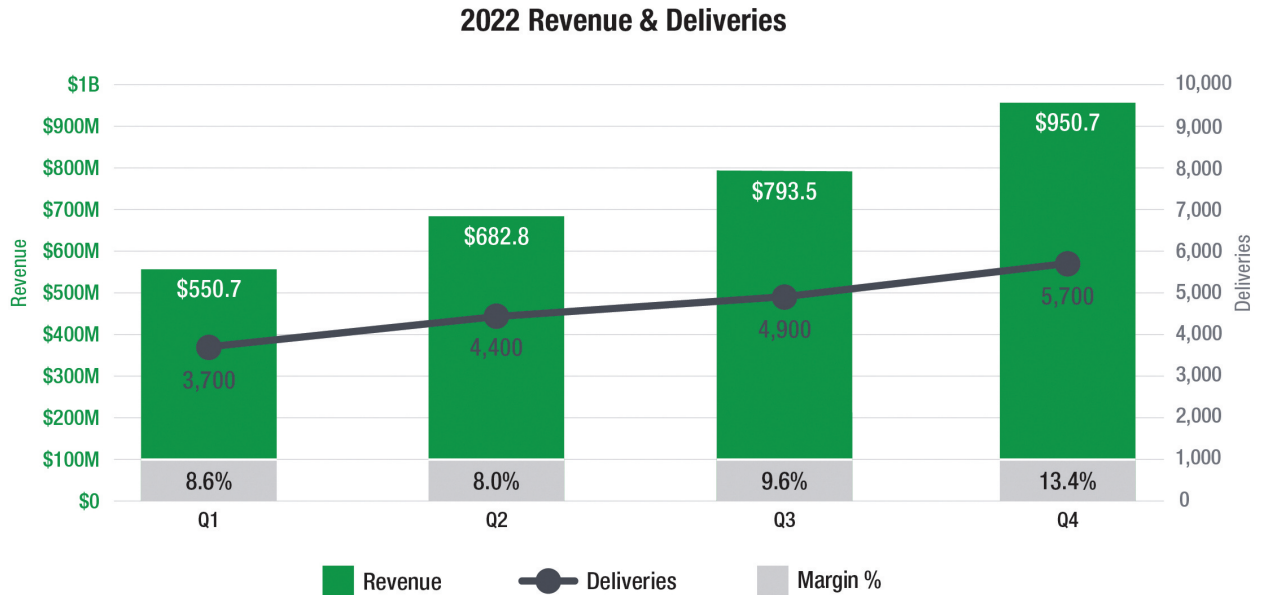
Despite these accomplishments, inflation, rising interest rates, price volatility, supply chain disruptions and geopolitical disquiet, demand concerted management focus for successful execution across the business. We believe we have the necessary management expertise and are well-positioned to navigate the immediate challenges. While we believe the current market and broader economic environment most likely will present many positive opportunities for our business, as we navigate the recovery, we face a number of challenges which include:

- Inflation and policy reactions thereto, currency volatility and rising interest rates;
- An increase in the price and the shortage of certain materials and components;
- Shipping and transportation delays;
- Shortages of skilled labor; and
- Adverse effects on the European market and the global economic markets, generally from the war in Ukraine.

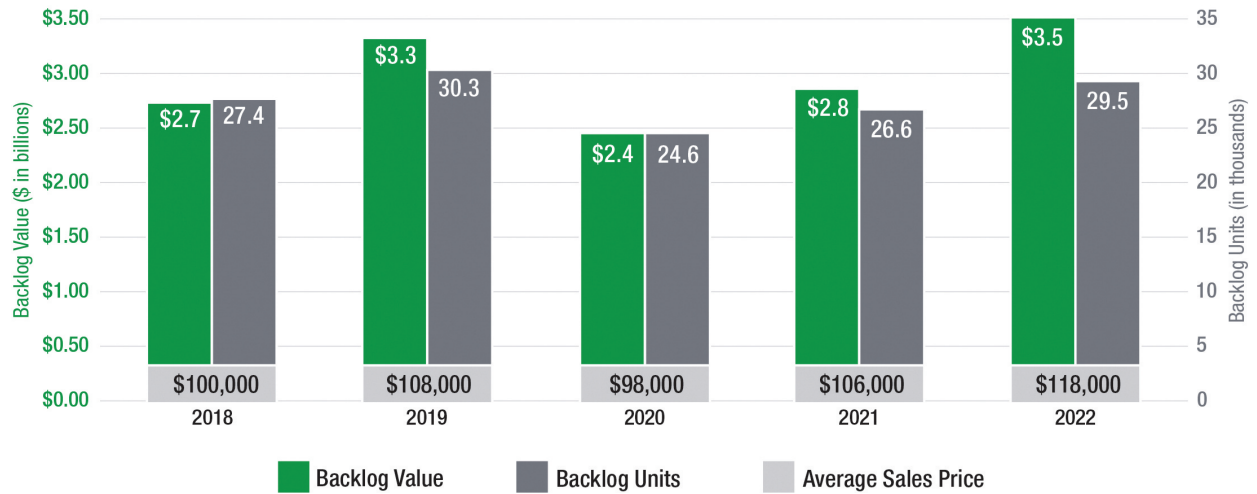
Business Highlights

Despite the challenging operating environment, we achieved the following accomplishments in 2022:

- We progressively increased our revenue during the year. The sequential growth in revenue was primarily driven by higher deliveries throughout the year.
- Our revenue increased by \$1.2 billion and 70.4% compared to the prior year driven by a 65.5% increase in railcar deliveries.
- In February 2022, we completed our first offering of railcar asset-backed securities.
- In September 2021, we acquired more than 3,600 railcars in a successful portfolio acquisition. The railcar acquisition advanced our strategy to increase the scale of our lease fleet assets.
- We increased our global headcount by nearly 40% during a challenging labor market to support higher levels of business activity.



Railcar Manufacturing Backlog



Manufacturing Backlog

Our backlog remains strong at August 31, 2022 with an increase in backlog units and value highlighted by the following:

- Our railcar backlog was 29,500 units with an estimated value of \$3.5 billion as of August 31, 2022 with deliveries that extend into 2024.
- We generated new railcar orders of 24,600 units valued at approximately \$2.9 billion.
- We increased our backlog compared to the prior year by approximately 2,900 units and \$670 million.
- In addition to our new railcar backlog, we had sustainable conversion orders at August 31, 2022 of approximately \$180 million.

Backlog units for lease may be syndicated to third parties or held in our lease fleet depending on a variety of factors. Multi-year supply agreements are a part of rail industry practice. A portion of the orders included in backlog reflects an assumed product mix. Under terms of the orders, the exact mix and pricing will be determined in the future, which may impact backlog. Approximately 6% of backlog units and estimated backlog value as of August 31, 2022 was associated with our Brazilian manufacturing operations which is accounted for under the equity method. Marine backlog as of August 31, 2022 was \$31 million with deliveries that extend into 2023.

Our backlog of railcar units and marine vessels is not necessarily indicative of future results of operations. Certain orders in backlog are subject to customary documentation and completion of terms. Customers may attempt to cancel or modify orders in backlog. Historically, little variation has been experienced between the quantity ordered and the quantity actually delivered, though the timing of deliveries may be modified from time to time.

Financial Overview

Revenue, Cost of revenue, Margin and Earnings from operations (operating profit) presented below, include amounts from external parties and exclude intersegment activity that is eliminated in consolidation.

<i>(In millions, except per share amounts)</i>	Year Ended August 31,	
	2022	2021
Revenue:		
Manufacturing	\$ 2,476.6	\$ 1,311.1
Maintenance Services	347.7	298.3
Leasing & Management Services	153.4	138.5
	<u>2,977.7</u>	<u>1,747.9</u>
Cost of revenue:		
Manufacturing	2,300.9	1,189.2
Maintenance Services	322.0	280.4
Leasing & Management Services	48.8	46.7
	<u>2,671.7</u>	<u>1,516.3</u>
Margin:		
Manufacturing	175.7	121.9
Maintenance Services	25.7	17.9
Leasing & Management Services	104.6	91.8
	<u>306.0</u>	<u>231.6</u>
Selling and administrative	225.2	191.8
Net gain on disposition of equipment	(37.2)	(1.2)
Earnings from operations	118.0	41.0
Interest and foreign exchange	57.4	43.3
Net loss on extinguishment of debt	—	6.3
Earnings (loss) before income tax and earnings from unconsolidated affiliates	60.6	(8.6)
Income tax (expense) benefit	(18.1)	40.2
Earnings before earnings from unconsolidated affiliates	42.5	31.6
Earnings from unconsolidated affiliates	11.3	3.5
Net earnings	53.8	35.1
Net earnings attributable to noncontrolling interest	(6.9)	(2.7)
Net earnings attributable to Greenbrier	\$ 46.9	\$ 32.4
Diluted earnings per common share	\$ 1.40	\$ 0.96

Performance for our segments is evaluated based on operating profit. Corporate includes selling and administrative costs not directly related to goods and services and certain costs that are intertwined among segments due to our integrated business model. Management does not allocate Interest and foreign exchange or Income tax (expense) benefit for either external or internal reporting purposes.

<i>(In millions)</i>	Year Ended August 31,	
	2022	2021
Operating profit (loss):		
Manufacturing	\$ 97.2	\$ 48.3
Maintenance Services	21.7	6.5
Leasing & Management Services	108.3	68.9
Corporate	(109.2)	(82.7)
	<u>\$ 118.0</u>	<u>\$ 41.0</u>

Consolidated Results

(In millions)	Year Ended August 31,		2022 vs 2021	
	2022	2021	Increase (Decrease)	% Change
Revenue	\$ 2,977.7	\$ 1,747.9	\$ 1,229.8	70.4%
Cost of revenue	\$ 2,671.7	\$ 1,516.3	\$ 1,155.4	76.2%
Margin (%)	10.3%	13.3%	(3.0%)	*
Net earnings attributable to Greenbrier	\$ 46.9	\$ 32.4	\$ 14.5	44.8%

* Not meaningful

Through our integrated business model, we provide a broad range of custom products and services in each of our segments, which have various average selling prices and margins. The demand for, and mix of, products and services delivered changes from period to period, which causes fluctuations in our results of operations.

The 70.4% increase in revenue for the year ended August 31, 2022 as compared to the prior year was primarily due to an 88.9% increase in Manufacturing revenue. The increase in Manufacturing revenue was primarily attributed to a 65.5% increase in railcar deliveries.

The 76.2% increase in cost of revenue for the year ended August 31, 2022 as compared to the prior year was primarily due to a 93.5% increase in Manufacturing cost of revenue. The increase in Manufacturing cost of revenue was primarily attributed to a 65.5% increase in railcar deliveries and higher steel and other input costs in the current year.

Margin as a percentage of revenue was 10.3% and 13.3% for the years ended August 31, 2022 and 2021, respectively. The overall margin as a percentage of revenue was negatively impacted by a decrease in Manufacturing margin from 9.3% to 7.1% was primarily attributed to higher costs and inefficiencies in our Manufacturing operations in part due to ramping up production. Many of our customer contracts include price escalation provisions. When certain of our manufacturing costs increase, we are able to increase the sales price to our customers. While this has no impact to our margin dollars, the increase in revenue and cost of sales has a negative impact to our margin as a percentage of revenue.

The \$14.5 million increase in net earnings attributable to Greenbrier for the year ended August 31, 2022 as compared to the prior year was primarily due to the following:

- An increase in margin dollars primarily due to higher railcar deliveries and syndication revenue for the year ended August 31, 2022.
- An increase in Net gain on disposition of equipment for the year ended August 31, 2022.

These were partially offset by:

- The income tax benefit for the year ended August 31, 2021, which primarily related to accelerated depreciation and the impact of the CARES Act which allowed us to carry back tax losses to years when tax rates were higher, resulting in a tax benefit.
- An increase in Selling and administrative expense for the year ended August 31, 2022 primarily attributed to higher employee related costs as well as higher costs for legal, consulting and travel associated with increased business activity.

Manufacturing Segment

<i>(In millions, except railcar deliveries)</i>	Year Ended August 31,		2022 vs 2021	
	2022	2021	Increase (Decrease)	% Change
Revenue	\$ 2,476.6	\$ 1,311.1	\$ 1,165.5	88.9%
Cost of revenue	\$ 2,300.9	\$ 1,189.2	\$ 1,111.7	93.5%
Margin (%)	7.1%	9.3%	(2.2%)	*
Operating profit (\$)	\$ 97.2	\$ 48.3	\$ 48.9	101.2%
Operating profit (%)	3.9%	3.7%	0.2%	*
Deliveries	18,700	11,300	7,400	65.5%

* Not meaningful

Our Manufacturing segment primarily generates revenue from manufacturing a wide range of freight railcars and from the conversion of existing or in-service railcars through our facilities in North America and Europe. We also manufacture a broad range of ocean-going and river barges for transporting merchandise between ports within the United States.

Manufacturing revenue increased \$1.2 billion or 88.9% for the year ended August 31, 2022 compared to the prior year. The increase in revenue was primarily attributed to a 65.5% increase in railcar deliveries. The increase was also due to the additional revenue associated with an increase in steel and other input costs during the year ended August 31, 2022, as many of our customer contracts include price escalation provisions when certain of our manufacturing costs increase.

Manufacturing cost of revenue increased \$1.1 billion or 93.5% for the year ended August 31, 2022 compared to the prior year. The increase in cost of revenue was primarily attributed to a 65.5% increase in the volume of railcar deliveries and higher steel and other input costs as well as inefficiencies in our Manufacturing operations in part due to ramping up production and supply chain issues during the year ended August 31, 2022.

Manufacturing margin as a percentage of revenue decreased 2.2% for the year ended August 31, 2022 compared to the prior year. The decrease in margin percentage for the year ended August 31, 2022 was primarily attributed to higher costs and inefficiencies in our Manufacturing operations in part due to ramping up production. Many of our customer contracts include price escalation provisions. When certain of our manufacturing costs increase, we are able to increase the sales price to our customers. While this has no impact to our margin dollars, the increase in revenue and cost of sales has a negative impact to our margin as a percentage of revenue. In addition, the margin percentage for year ended August 31, 2021 benefited from a \$15.8 million favorable resolution of warranty and other loss contingencies associated with our international operations.

Manufacturing operating profit increased \$48.9 million for the year ended August 31, 2022 compared to the prior year. The increase in operating profit was primarily attributed to an increase in railcar deliveries.

Maintenance Services Segment

<i>(In millions)</i>	Year Ended August 31,		2022 vs 2021	
	2022	2021	Increase (Decrease)	% Change
Revenue	\$ 347.7	\$ 298.3	\$ 49.4	16.6%
Cost of revenue	\$ 322.0	\$ 280.4	\$ 41.6	14.8%
Margin (%)	7.4%	6.0%	1.4%	*
Operating profit (\$)	\$ 21.7	\$ 6.5	\$ 15.2	233.8%
Operating profit (%)	6.2%	2.2%	4.0%	*

* Not meaningful

Our Maintenance Services segment primarily generates revenue from railcar component manufacturing and servicing and from providing railcar maintenance services.

Maintenance Services revenue increased \$49.4 million or 16.6% for the year ended August 31, 2022 compared to the prior year. The increase was primarily attributed to higher volumes due to increased demand and an increase in scrap metal pricing and volume as we scrap wheels and other components.

Maintenance Services cost of revenue increased \$41.6 million or 14.8% for the year ended August 31, 2022 compared to the prior year. The increase was primarily due to higher costs associated with an increase in volumes and an increase in material and labor costs.

Maintenance Services margin as a percentage of revenue increased 1.4% for the year ended August 31, 2022 compared to the prior year. The increase in margin percentage was primarily attributed to an increase in volumes and scrap metal pricing. These were partially offset by higher material and labor costs during the year ended August 31, 2022.

Maintenance Services operating profit increased \$15.2 million or 233.8% for the year ended August 31, 2022 compared to the prior year. The increase in operating profit was primarily attributed to higher volumes and an increase in scrap metal pricing and lower selling and administrative costs.

Leasing & Management Services Segment

<i>(In millions)</i>	Year Ended August 31,		2022 vs 2021	
	2022	2021	Increase (Decrease)	% Change
Revenue	\$ 153.4	\$ 138.5	\$ 14.9	10.8%
Cost of revenue	\$ 48.8	\$ 46.7	\$ 2.1	4.5%
Margin (%)	68.2%	66.3%	1.9%	*
Operating profit (\$)	\$ 108.3	\$ 68.9	\$ 39.4	57.2%
Operating profit (%)	70.6%	49.7%	20.9%	*

* Not meaningful

Our Leasing & Management Services segment generates revenue from leasing railcars from our lease fleet which includes GBX Leasing, providing various management services, syndication revenue associated with new railcar sales with leases attached, interim rent on leased railcars for syndication and the sale of railcars purchased from third parties with the intent to resell. The gross proceeds from the sale of these railcars are recorded in revenue and the costs of purchasing these railcars are recorded in cost of revenue.

Leasing & Management Services revenue increased \$14.9 million or 10.8% for the year ended August 31, 2022 compared to the prior year. The increase was primarily attributed to higher syndication revenue from an increase in the volume of new railcar sales with leases attached as well as higher revenue from additions to our lease fleet. In addition, revenue for the year ended August 31, 2021 benefited from a lease modification and transfer fee.

Leasing & Management Services cost of revenue increased \$2.1 million or 4.5% for the year ended August 31, 2022 compared to the prior year. The increase was primarily due to an increase in costs from the additions to our lease fleet, partially offset by lower costs associated with railcars we had purchased from third parties with the intent to resell.

Leasing & Management Services margin as a percentage of revenue increased 1.9% for the year ended August 31, 2022 compared to the prior year. The increase in margin percentage was primarily attributed to higher syndication activity. In addition, the margin percentage for the year ended August 31, 2021 was negatively impacted by higher sales of railcars that we purchased from third parties which have lower margin percentages.

Leasing & Management Services operating profit increased \$39.4 million or 57.2% for the year ended August 31, 2022 compared to the prior year. The increase was primarily attributed to an increase of \$32.5 million net gain on disposition of equipment and higher syndication activity.

Selling and Administrative

<i>(In millions)</i>	Year Ended August 31,		2022 vs 2021	
	2022	2021	Increase (Decrease)	% Change
Selling and Administrative	\$ 225.2	\$ 191.8	\$ 33.4	17.4%

Selling and administrative expense was \$225.2 million or 7.6% of revenue for the year ended August 31, 2022 and \$191.8 million or 11.0% of revenue for the year ended August 31, 2021.

The \$33.4 million increase was primarily attributed to higher employee related costs as well as higher costs for legal, consulting and travel associated with increased business activity.

Net Gain on Disposition of Equipment

Net gain on disposition of equipment primarily includes the sale of assets from our lease fleet (Equipment on operating leases, net) and disposition of property, plant and equipment. Assets are periodically sold in the normal course of business in order to accommodate customer demand and to manage risk and liquidity.

Net gain on disposition of equipment was \$37.2 million and \$1.2 million for the years ended August 31, 2022 and 2021, respectively. The increase in Net gain on disposition of equipment was primarily attributed to sales of assets from our lease fleet during the year ended August 31, 2022.

Interest and Foreign Exchange

Interest and foreign exchange expense was composed of the following:

<i>(In millions)</i>	Year Ended August 31,		Increase (decrease)
	2022	2021	2022 vs 2021
Interest and foreign exchange:			
Interest and other expense	\$ 55.7	\$ 44.7	\$ 11.0
Foreign exchange (gain) loss	1.7	(1.4)	3.1
	<u>\$ 57.4</u>	<u>\$ 43.3</u>	<u>\$ 14.1</u>

The \$14.1 million increase in interest and foreign exchange expense during the year ended August 31, 2022 compared to the prior year was primarily attributed to an increase in interest expense from higher levels of borrowings and interest rates.

Net Loss on Extinguishment of Debt

Net loss on extinguishment of debt was \$6.3 million for the year ended August 31, 2021 relates to the retirement of \$227.3 million of our 2.875% convertible notes due 2024 and \$50.0 million of our 2.25% convertible notes due 2024.

Income Tax

In 2022 our income tax expense was \$18.1 million on \$60.6 million of pre-tax earnings for an effective tax rate of 29.9%. The tax rate was primarily attributable to the geographic mix of earnings, partially offset by net favorable discrete items.

In 2021 our income tax benefit was \$40.2 million on \$8.6 million of pre-tax loss. The tax benefit was primarily attributable to accelerated depreciation and impact of the CARES Act which allowed us to carry back tax losses to years when tax rates were higher, resulting in a tax benefit. The tax benefit is primarily derived from the U.S. Federal tax rate differential between 2016 - 2017 tax rates of 35% and the current rate of 21%.

The effective tax rate can fluctuate year-to-year due to discrete items and changes in the mix of foreign and domestic pre-tax earnings. It can also fluctuate with changes in the proportion of pre-tax earnings attributable to our Mexican railcar manufacturing joint venture. The joint venture is treated as a partnership for tax purposes and, as a result, the partnership's entire pre-tax earnings are included in Earnings (loss) before income taxes and earnings from unconsolidated affiliates, whereas only our 50% share of the tax is included in Income tax (expense) benefit.

Earnings From Unconsolidated Affiliates

Through unconsolidated affiliates we produce rail and industrial components and have an ownership stake in a railcar manufacturer in Brazil. We record the after-tax results from these unconsolidated affiliates.

Earnings from unconsolidated affiliates was \$11.3 million and \$3.5 million for the years ended August 31, 2022 and 2021, respectively. The increase was primarily attributable to higher profitability at our Brazil operations.

Net Earnings Attributable to Noncontrolling Interest

Net earnings attributable to noncontrolling interest was \$6.9 million and \$2.7 million for the years ended August 31, 2022 and 2021, respectively, which primarily represents our joint venture partner's share in the results of operations of our Mexican railcar manufacturing joint ventures, adjusted for intercompany sales, and our European partner's share of the results of our European operations.

Liquidity and Capital Resources

<i>(In millions)</i>	Year Ended August 31,	
	2022	2021
Net cash used in operating activities	\$ (150.4)	\$ (40.5)
Net cash used in investing activities	(224.0)	(117.8)
Net cash provided by (used in) financing activities	244.9	(22.7)
Effect of exchange rate changes	17.2	10.3
Net decrease in cash and cash equivalents and restricted cash	<u>\$ (112.3)</u>	<u>\$ (170.7)</u>

We have been financed through cash generated from operations and borrowings. At August 31, 2022 cash and cash equivalents and restricted cash were \$559.1 million, a decrease of \$112.3 million from \$671.4 million at the prior year end.

Cash Flows From Operating Activities

The change in cash used in operating activities for 2022 compared to 2021 was primarily due to a net increase in working capital as we increased production rates and from higher steel and other input costs. Cash flows from operating activities benefited from a cash tax refund received in 2022.

Cash Flows From Investing Activities

Cash used in investing activities primarily relates to capital expenditures net of proceeds from the sale of assets and investment activity with our unconsolidated affiliates. The change in cash used in investing activities for 2022 compared to 2021 was primarily attributable to an increase in capital expenditures partially offset by an increase in proceeds from the sale of assets. The increase in capital expenditures in 2022 primarily relates to additions to our lease fleet as part of our leasing strategy.

<i>(In millions)</i>	Year Ended August 31,	
	2022	2021
Capital expenditures:		
Leasing & Management Services	\$ (323.2)	\$ (103.8)
Manufacturing	(48.3)	(26.6)
Maintenance Services	(9.2)	(8.6)
Total capital expenditures (gross)	<u>\$ (380.7)</u>	<u>\$ (139.0)</u>
Proceeds from sale of equipment	155.5	15.9
Total capital expenditures (net of proceeds)	<u>\$ (225.2)</u>	<u>\$ (123.1)</u>

Capital expenditures primarily relate to additions to our lease fleet and on-going investments into our facilities, including the safety and productivity of our facilities. Proceeds from the sale of assets primarily relate to sales of railcars from our lease fleet within Leasing & Management Services. Assets from our lease fleet are periodically sold in the normal course of business to accommodate customer demand and to manage risk and liquidity.

Capital expenditures for 2023 are expected to be approximately \$240 million for Leasing & Management Services, approximately \$80 million for Manufacturing and approximately \$10 million for Maintenance Services. Capital expenditures for 2023 primarily relate to additions to our lease fleet reflecting our enhanced leasing strategy and continued investments into the safety and productivity of our facilities.

Cash Flows From Financing Activities

The change in cash provided by (used in) financing activities for 2022 compared to 2021 was primarily attributed to proceeds from the issuance of debt, net of repayments. During the year ended August 31, 2022 we issued asset backed securities of \$323.3 million, and used proceeds to pay down our warehouse credit facility for GBX Leasing. We also amended our \$200 million term facility to provide an additional \$75 million in term debt, with another \$75 million available as a delayed draw within the next six months.

During 2021, we refinanced certain debt by issuing \$373.8 million of new convertible notes due 2028 and retiring a total of \$277.3 million of convertible notes due 2024. We also renewed and extended our \$600.0 million domestic revolving facility, \$291.9 million term loan to 2026 and \$200.0 million term loan until August 2027. GBX Leasing entered into its initial \$300.0 million non-recourse warehouse credit facility, which was increased to \$350 million in 2022.

Dividend & Share Repurchase Program

A quarterly dividend of \$0.27 per share was declared on October 18, 2022.

The Board of Directors has authorized our company to repurchase shares of our common stock. The share repurchase program has an expiration date of January 31, 2023. The amount remaining for repurchase was \$100.0 million as of August 31, 2022. Under the share repurchase program, shares of common stock may be purchased on the open market or through privately negotiated transactions from time to time. The timing and amount of purchases will be based upon market conditions, securities law limitations and other factors. The program may be modified, suspended or discontinued at any time without prior notice. The share repurchase program does not obligate us to acquire any specific number of shares in any period. There were no shares repurchased under the share repurchase program during 2022, 2021 or 2020.

Cash, Borrowing Availability and Credit Facilities

As of August 31, 2022, we had \$543.0 million in Cash and cash equivalents and \$147.9 million in available borrowings. Our current cash balance is part of our strategy to maintain strong liquidity to respond to current uncertainties.

Senior secured credit facilities, consisting of four components, aggregated to \$1.14 billion as of August 31, 2022. We had an aggregate of \$147.9 million available to draw down under committed credit facilities as of August 31, 2022. This amount consists of \$97.3 million available on the North American credit facility, \$15.6 million on the European credit facilities and \$35.0 million on the Mexican credit facilities.

As of August 31, 2022, a \$600.0 million revolving line of credit, maturing August 2026, secured by substantially all of our U.S. assets not otherwise pledged as security for term loans, the warehouse credit facility or the railcar asset-backed securities, was available to provide working capital and interim financing of equipment, principally for the Company's U.S. and Mexican operations. Advances under this facility bear interest at SOFR plus 1.50% plus 0.10% as a SOFR adjustment or Prime plus 0.50% depending on the type of borrowing. Available borrowings under the credit facility are generally based on defined levels of eligible inventory, receivables, property, plant and equipment and leased equipment, as well as total debt to consolidated capitalization and fixed charges coverage ratios.

As of August 31, 2022, a \$350.0 million non-recourse warehouse credit facility existed to support the operations of GBX Leasing, a joint venture in which we own approximately 95%. Advances under this facility bear interest at SOFR plus 1.85% plus 0.11% as a SOFR adjustment. The warehouse credit facility converts to a term loan in August 2025 and matures in August 2027. As of August 31, 2022, there were no outstanding borrowings associated with this facility. We intend that GBX Leasing will aggregate leased railcars to obtain term or capital market financing, similar to the securitization in February 2022.

As of August 31, 2022, lines of credit totaling \$67.2 million secured by certain of our European assets, with variable rates that range from Warsaw Interbank Offered Rate (WIBOR) plus 1.2% to WIBOR plus 1.6% and Euro Interbank Offered Rate (EURIBOR) plus 1.5%, were available for working capital needs of our European manufacturing operations. The European lines of credit include \$40.8 million which are guaranteed by us. European credit facilities are regularly renewed. Currently, these European credit facilities have maturities that range from September 2022 through October 2023.

As of August 31, 2022, our Mexican railcar manufacturing operations had four lines of credit totaling \$120.0 million. The first line of credit provides up to \$30.0 million, of which we and our joint venture partner have each guaranteed 50%. Advances under this facility bear interest at LIBOR plus 3.75% to 4.25%. The Mexican railcar manufacturing joint venture will be able to draw amounts available under this facility through June 2024. The second line of credit provides up to \$35.0 million, of which we and our joint venture partner have each guaranteed 50%. Advances under this facility bear interest at LIBOR plus 3.75%. The Mexican railcar manufacturing joint venture will be able to draw amounts available under this facility through June 2023. The third line of credit provides up to \$50.0 million and matures in October 2024. Advances under this facility bear interest at LIBOR plus 4.25%. The fourth line of credit provided up to \$5.0 million and matured September 2022. Advances under this facility bear interest at LIBOR plus 2.95% and are to be used for working capital needs.

<i>(In millions)</i>	As of August 31,	
	2022	2021
Credit facility balances:		
North America	\$ 160.0	\$ 160.0
GBX Leasing	—	147.0
Europe	51.6	50.2
Mexico	85.0	15.0
Total Revolving notes	<u>\$ 296.6</u>	<u>\$ 372.2</u>

As of August 31, 2022, outstanding commitments under the North American credit facility included letters of credit which totaled \$6.9 million.

Other Information

The revolving and operating lines of credit, along with notes payable, contain covenants with respect to us and our various subsidiaries, the most restrictive of which, among other things, limit our ability to: incur additional indebtedness or guarantees; pay dividends or repurchase stock; enter into financing leases; create liens; sell assets; engage in transactions with affiliates, including joint ventures and non U.S. subsidiaries, including but not limited to loans, advances, equity investments and guarantees; enter into mergers, consolidations or sales of substantially all our assets; and enter into new lines of business. The covenants also require certain maximum ratios of debt to total capitalization and minimum levels of fixed charges (interest plus rent) coverage. As of August 31, 2022, we were in compliance with all such restrictive covenants.

From time to time, we may seek to repurchase or otherwise retire or exchange securities, including outstanding convertible notes, borrowings and equity securities, and take other steps to reduce our debt, extend the maturities of our debt or otherwise improve our balance sheet. These actions may include open market repurchases, unsolicited or solicited privately negotiated transactions or other retirements, repurchases or exchanges. Such retirements, repurchases or exchanges of one note or security for another note or security (now or hereafter existing), if any, will depend on a number of factors, including, but not limited to, prevailing market conditions, trading levels of our debt, our liquidity requirements and contractual restrictions, if applicable. The amounts involved in any such transactions may, individually or in the aggregate, be material and may involve all or a portion of a particular series of notes or other indebtedness which may reduce the float and impact the trading market of notes or other indebtedness which remain outstanding.

We have global operations that conduct business in their local currencies as well as other currencies. To mitigate the exposure to transactions denominated in currencies other than the functional currency of each entity, we enter into foreign currency forward exchange contracts with established financial institutions to protect the revenue or margin on a portion of forecasted foreign currency sales and expenses. Given the strong credit standing of the counterparties, no provision has been made for credit loss due to counterparty non-performance.

To mitigate the exposure to changes in interest rates, we have managed a portion of our variable rate debt with interest rate swap agreements, effectively converting \$478.7 million of variable rate debt to fixed rate debt as of August 31, 2022.

We expect existing funds and cash generated from operations, together with proceeds from financing activities including borrowings under existing credit facilities and long-term financings, to be sufficient to fund expected debt repayments, working capital needs, planned capital expenditures, additional investments in our unconsolidated affiliates and dividends during the next twelve months.

The following table shows our estimated future contractual cash obligations as of August 31, 2022:

<i>(In millions)</i>	Year Ended August 31,						
	Total	2023	2024	2025	2026	2027	Thereafter
Notes payable	\$ 1,290.2	\$ 35.3	\$ 83.8	\$ 36.4	\$ 259.1	\$ 241.9	\$ 633.7
Interest ⁽¹⁾	289.7	43.8	40.9	38.9	36.0	27.1	103.0
Railcar & operating leases	61.7	12.9	11.1	8.4	7.3	4.6	17.4
Revolving notes	296.6	296.6	—	—	—	—	—
	<u>\$ 1,938.2</u>	<u>\$ 388.6</u>	<u>\$ 135.8</u>	<u>\$ 83.7</u>	<u>\$ 302.4</u>	<u>\$ 273.6</u>	<u>\$ 754.1</u>

⁽¹⁾ A portion of the estimated future cash obligation relates to interest on variable rate borrowings. Amounts are based on interest rates as of August 31, 2022.

Off Balance Sheet Arrangements

We do not currently have off balance sheet arrangements that have or are likely to have a material current or future effect on our Consolidated Financial Statements.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the U.S. requires judgment on the part of management to arrive at estimates and assumptions on matters that are inherently uncertain. These estimates may affect the amount of assets, liabilities, revenue and expenses reported in the financial statements and accompanying notes and disclosure of contingent assets and liabilities within the financial statements. Estimates and assumptions are periodically evaluated and may be adjusted in future periods. Actual results could differ from those estimates.

Goodwill - In accordance with Accounting Standards Codification (ASC) Topic 350, *Intangibles—Goodwill and Other* (ASC 350), the Company evaluates goodwill for possible impairment annually or more frequently if events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. The Company uses a two-step process to assess the realizability of goodwill. The first step is a qualitative assessment that analyzes macroeconomic considerations and industry indicators, financial performance and cost estimates associated with a particular reporting unit. This assessment requires subjectivity based on cumulative information available at the assessment date. If a qualitative assessment indicates it is more likely than not that the fair value of a reporting unit is less than its carrying amount, the Company will proceed to the quantitative second step where the fair value of a reporting unit is calculated based on weighted income and market-based approaches.

If the fair value of a reporting unit is lower than its carrying value, an impairment to goodwill is recorded, not to exceed the carrying amount of goodwill in the reporting unit. We performed our annual goodwill impairment test during the third quarter of 2022 and concluded that goodwill for all reporting units was not impaired.

Pursuant to the authoritative guidance, we make certain estimates and assumptions to determine our reporting units and whether the fair value for each reporting unit is greater than its carry value. The above highlighted judgments contemplated estimates and effects of macroeconomic trends that are inherently uncertain. Changes in these estimates, which may include the effects of inflation and policy reactions thereto, continued increases in pricing of materials and components, or potential macroeconomic events may cause future assessment conclusions to differ.

Income taxes - The asset and liability method is used to account for income taxes. We are required to estimate the timing of the recognition of deferred tax assets and liabilities, make assumptions about the future deductibility of deferred tax assets and assess deferred tax liabilities based on enacted law and tax rates for each tax jurisdiction to determine the amount of deferred tax assets and liabilities. Deferred income taxes are provided for the temporary effects of differences between assets and liabilities recognized for financial statement and income tax reporting purposes. Valuation allowances reduce deferred tax assets to an amount that will more likely than not be realized. We recognize liabilities for uncertain tax positions based on whether evidence indicates that it is more likely than not that the position will be sustained on audit.

It is inherently difficult and subjective to estimate whether a valuation allowance or uncertain tax position is necessary. In making this assessment, management may analyze future taxable income, reversing temporary differences and/or ongoing tax planning strategies. Should a change in circumstances lead to a change in judgment about the realizability of deferred tax assets in future years, the Company would adjust related valuation allowances in the period that the change in circumstances occurs, along with a corresponding increase or charge to income. Changes in tax law or court interpretations may result in the recognition of a tax benefit or an additional charge to the tax provision. For further information regarding income taxes, see Note 17 of the Consolidated Financial Statements.

Warranty accruals - Warranty costs to cover a defined warranty period are estimated and charged to operations. The estimated warranty cost is based on historical warranty claims for each particular product type. For new product types without a warranty history, preliminary estimates are based on historical information for similar product types.

These estimates are inherently uncertain as they are based on historical data for existing products and judgment for new products. If warranty claims are made in the current period for issues that have not historically been the subject of warranty claims and were not taken into consideration in establishing the accrual or if claims for issues already considered in establishing the accrual exceed expectations, warranty expense may exceed the accrual for that particular product. Conversely, there is the possibility that claims may be lower than estimates. The warranty accrual is periodically reviewed and updated based on warranty trends. However, as we cannot predict future claims, the potential exists for the difference in any one reporting period to be material. For further information regarding the warranty accrual, see Note 11 of the Consolidated Financial Statements.

Environmental costs - At times we may be involved in various proceedings related to environmental matters. We estimate future costs for known environmental remediation requirements and accrue for them when it is probable that we have incurred a liability and the related costs can be reasonably estimated based on currently available information. Adjustments to these liabilities are made when additional information becomes available that affects the estimated costs to study or remediate any environmental issues or when expenditures for which reserves are established are made.

Judgments used in determining if a liability is estimable are subjective and based on known facts and our historic experience. If further developments in or resolution of an environmental matter result in facts and circumstances that differ from those assumptions used to develop these reserves, the accrual for environmental remediation could be materially understated or overstated. Due to the uncertain nature of environmental matters, there can be no assurance that we will not become involved in future litigation or other proceedings or, if we were found to be responsible or liable in any litigation or proceeding, that such costs would not be material to us. For further information regarding our environmental costs, see Note 21 of the Consolidated Financial Statements.

New Accounting Pronouncements

See Note 2 of Notes to Consolidated Financial Statements included in Part II, Item 8 of this Annual Report on Form 10-K.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency Exchange Risk

We have global operations that conduct business in their local currencies as well as other currencies. To mitigate the exposure to transactions denominated in currencies other than the functional currency of each entity, we enter into foreign currency forward exchange contracts to protect revenue or margin on a portion of forecasted foreign currency sales and expenses. At August 31, 2022 exchange rates, notional amounts of forward exchange contracts for the purchase of Polish Zlotys and the sale of Euros; and the purchase of Mexican Pesos and the sale of U.S. Dollars aggregated to \$73.6 million. Because of the variety of currencies in which purchases and sales are transacted and the interaction between currency rates, it is not possible to predict the impact of a movement in a single foreign currency exchange rate would have on future operating results.

In addition to exposure to transaction gains or losses, we are also exposed to foreign currency exchange risk related to the net asset position of our foreign subsidiaries. At August 31, 2022, net assets of foreign subsidiaries aggregated to \$146.1 million and a 10% strengthening of the U.S. Dollar relative to the foreign currencies would result in a decrease in equity of \$14.6 million, or 1.1% of Total equity - Greenbrier. This calculation assumes that each exchange rate would change in the same direction relative to the U.S. Dollar.

Interest Rate Risk

We have managed a portion of our variable rate debt with interest rate swap agreements, effectively converting \$478.7 million of variable rate debt to fixed rate debt. Notwithstanding these interest rate swap agreements, we are still exposed to interest rate risk relating to our revolving debt and a portion of term debt, which are at variable rates. At August 31, 2022, 79% of our outstanding debt had fixed rates and 21% had variable rates. At August 31, 2022, a uniform 10% increase in variable interest rates would result in approximately \$1.4 million of additional annual interest expense.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
The Greenbrier Companies, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of The Greenbrier Companies, Inc. and subsidiaries (the Company) as of August 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the years in the three-year period ended August 31, 2022, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of August 31, 2022 and 2021, and the results of its operations and its cash flows for each of the years in the three-year period ended August 31, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of August 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated October 28, 2022 expressed an adverse opinion on the effectiveness of the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Company has changed its method of accounting for convertible instruments and contracts in the Company's own equity as of September 1, 2021 due to the adoption of Accounting Standards Update 2020-06, *Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Qualitative goodwill impairment assessment of the Europe Manufacturing and Wheels & Parts reporting units

As discussed in Note 7 to the consolidated financial statements, the goodwill balance as of August 31, 2022 was \$127.3 million, of which \$27.7 million related to the Europe Manufacturing reporting unit and \$43.0 million related to the Wheels & Parts reporting unit. As discussed in Note 2, the Company performs goodwill impairment testing on an annual basis and whenever events or changes in circumstances indicate that the carrying value of a reporting unit likely exceeds its fair value using either a qualitative or a quantitative assessment. If the qualitative assessment is performed and the Company determines that fair value of each reporting unit more likely than not exceeds its carrying value, no further assessment is necessary. For the annual impairment test that occurred during 2022, the Company performed a qualitative assessment to test the goodwill related to its Europe Manufacturing and Wheels & Parts reporting units.

We identified the evaluation of the Company's qualitative assessment that it was more likely than not the fair value of the Europe Manufacturing and Wheels & Parts reporting units exceeded their carrying values as a critical audit matter. There was subjective auditor judgement in evaluating the impact of (1) macroeconomic considerations, as well as industry and market indicators included in the Company's goodwill impairment assessment, and (2) the entity-specific financial performance, including management's current and prior year cost reduction initiatives on the reporting units' actual financial results.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the goodwill impairment process. This included controls related to the evaluation of the qualitative factors used by the Company to assess the Europe Manufacturing and Wheels & Parts reporting units. We evaluated the Company's assessment of the macroeconomic considerations, as well as industry and market indicators by comparing them to publicly available industry and market information. We evaluated the entity-specific financial performance, including management's cost reduction initiatives, by:

- comparing actual and projected performance to projected results of relevant prior periods, and
- assessing cost savings resulting from current and prior year actions on the reporting units' actual financial results.

/s/ KPMG LLP

We have served as the Company's auditor since 2011.

Portland, Oregon
October 28, 2022

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Consolidated Balance Sheets
AS OF AUGUST 31,

<i>(In millions, except number of shares which are reflected in thousands)</i>	2022	2021
Assets		
Cash and cash equivalents	\$ 543.0	\$ 646.8
Restricted cash	16.1	24.6
Accounts receivable, net	501.2	306.4
Income tax receivable	39.8	112.1
Inventories	815.3	573.6
Leased railcars for syndication	111.1	51.6
Equipment on operating leases, net	770.9	609.8
Property, plant and equipment, net	645.2	670.2
Investment in unconsolidated affiliates	92.5	79.9
Intangibles and other assets, net	189.1	183.6
Goodwill	127.3	132.1
	<u>\$ 3,851.5</u>	<u>\$ 3,390.7</u>
Liabilities and Equity		
Revolving notes	\$ 296.6	\$ 372.2
Accounts payable and accrued liabilities	725.1	569.8
Deferred income taxes	68.6	73.3
Deferred revenue	35.3	42.8
Notes payable, net	1,269.1	826.5
Commitments and contingencies (Notes 20 & 21)		
Contingently redeemable noncontrolling interest	27.7	29.7
Equity		
Greenbrier		
Preferred stock - without par value; 25,000 shares authorized; none outstanding	—	—
Common stock - without par value; 50,000 shares authorized; 32,603 and 32,397 outstanding at August 31, 2022 and 2021	—	—
Additional paid-in capital	424.8	469.7
Retained earnings	897.7	881.7
Accumulated other comprehensive loss	(45.6)	(43.7)
Total equity - Greenbrier	1,276.9	1,307.7
Noncontrolling interest	152.2	168.7
Total equity	\$ 1,429.1	\$ 1,476.4
	<u>\$ 3,851.5</u>	<u>\$ 3,390.7</u>

The accompanying notes are an integral part of these financial statements.

Consolidated Statements of Income
YEARS ENDED AUGUST 31,

(In millions, except number of shares which are reflected in thousands and per share amounts)	2022	2021	2020
Revenue			
Manufacturing	\$ 2,476.6	\$ 1,311.1	\$ 2,309.5
Maintenance Services	347.7	298.3	324.7
Leasing & Management Services	153.4	138.5	158.0
	2,977.7	1,747.9	2,792.2
Cost of revenue			
Manufacturing	2,300.9	1,189.2	2,065.2
Maintenance Services	322.0	280.4	302.2
Leasing & Management Services	48.8	46.7	71.7
	2,671.7	1,516.3	2,439.1
Margin	306.0	231.6	353.1
Selling and administrative	225.2	191.8	204.7
Net gain on disposition of equipment	(37.2)	(1.2)	(20.0)
Earnings from operations	118.0	41.0	168.4
Other costs			
Interest and foreign exchange	57.4	43.3	43.6
Net loss on extinguishment of debt	—	6.3	—
Earnings (loss) before income tax and earnings from unconsolidated affiliates	60.6	(8.6)	124.8
Income tax (expense) benefit	(18.1)	40.2	(40.2)
Earnings before earnings from unconsolidated affiliates	42.5	31.6	84.6
Earnings from unconsolidated affiliates	11.3	3.5	3.0
Net earnings	53.8	35.1	87.6
Net earnings attributable to noncontrolling interest	(6.9)	(2.7)	(38.6)
Net earnings attributable to Greenbrier	\$ 46.9	\$ 32.4	\$ 49.0
Basic earnings per common share	\$ 1.44	\$ 0.99	\$ 1.50
Diluted earnings per common share	\$ 1.40	\$ 0.96	\$ 1.46
Weighted average common shares			
Basic	32,569	32,648	32,670
Diluted	33,631	33,665	33,441

The accompanying notes are an integral part of these financial statements.

Consolidated Statements of Comprehensive Income
YEARS ENDED AUGUST 31,

<i>(In millions)</i>	2022	2021	2020
Net earnings	\$ 53.8	\$ 35.1	\$ 87.6
Other comprehensive income (loss)			
Translation adjustment	(21.6)	4.0	(5.6)
Reclassification of derivative financial instruments recognized in net earnings ¹	4.7	5.0	4.2
Unrealized gain (loss) on derivative financial instruments ²	15.7	(0.4)	(7.3)
Other (net of tax effect)	(0.7)	0.5	0.7
	<u>(1.9)</u>	<u>9.1</u>	<u>(8.0)</u>
Comprehensive income	51.9	44.2	79.6
Comprehensive income attributable to noncontrolling interest	(6.9)	(2.6)	(38.6)
Comprehensive income attributable to Greenbrier	<u>\$ 45.0</u>	<u>\$ 41.6</u>	<u>\$ 41.0</u>

1. Net of tax effect of (\$1.7 million), (\$1.7 million) and (\$1.5 million) for the years ended August 31, 2022, 2021 and 2020, respectively
2. Net of tax effect of (\$6.2 million), \$1.0 million and \$2.9 million for the years ended August 31, 2022, 2021 and 2020, respectively

The accompanying notes are an integral part of these financial statements.

Consolidated Statements of Equity

<i>(In millions)</i>	Attributable to Greenbrier						Noncontrolling Interest	Total Equity	Contingently Redeemable Noncontrolling Interest
	Common Stock Shares	Additional Paid-in Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Total Equity - Greenbrier	Total Equity			
Balance August 31, 2019	32.5	\$453.9	\$867.6	\$(44.8)	\$1,276.7	\$165.0	\$1,441.7	\$31.5	
Cumulative effect adjustment due to adoption of Topic 842 (See Note 2)	—	—	4.4	—	4.4	—	4.4	—	
Net earnings	—	—	49.0	—	49.0	39.1	88.1	(0.4)	
Other comprehensive loss, net	—	—	—	(8.0)	(8.0)	—	(8.0)	—	
Noncontrolling interest adjustments	—	—	—	—	—	1.4	1.4	—	
Joint venture partner distribution declared	—	—	—	—	—	(37.6)	(37.6)	—	
Noncontrolling interest acquired	—	—	—	—	—	12.1	12.1	—	
Restricted stock awards (net of cancellations)	0.2	2.7	—	—	2.7	—	2.7	—	
Unamortized restricted stock	—	(4.9)	—	—	(4.9)	—	(4.9)	—	
Restricted stock amortization	—	8.7	—	—	8.7	—	8.7	—	
Cash dividends (\$1.06 per share)	—	—	(35.5)	—	(35.5)	—	(35.5)	—	
Balance August 31, 2020	32.7	\$460.4	\$885.5	\$(52.8)	\$1,293.1	\$180.0	\$1,473.1	\$31.1	
Cumulative effect adjustment due to adoption of ASU 2016-13 (See Note 2)	—	—	(0.5)	—	(0.5)	—	(0.5)	—	
Net earnings	—	—	32.4	—	32.4	4.1	36.5	(1.4)	
Other comprehensive income, net	—	—	—	9.1	9.1	—	9.1	—	
Noncontrolling interest adjustments	—	—	—	—	—	2.2	2.2	—	
Joint venture partner distribution declared	—	—	—	—	—	(24.6)	(24.6)	—	
Investment by joint venture partner	—	—	—	—	—	7.0	7.0	—	
Restricted stock awards (net of cancellations)	0.2	13.5	—	—	13.5	—	13.5	—	
Unamortized restricted stock	—	(16.8)	—	—	(16.8)	—	(16.8)	—	
Restricted stock amortization	—	14.7	—	—	14.7	—	14.7	—	
Repurchase of stock	(0.5)	(20.0)	—	—	(20.0)	—	(20.0)	—	
2.875% Convertible senior notes, due 2028 - equity component, net of tax	—	56.3	—	—	56.3	—	56.3	—	
2.875% Convertible senior notes, due 2028 issuance costs - equity component, net of tax	—	(1.8)	—	—	(1.8)	—	(1.8)	—	
2.875% Convertible senior notes, due 2024 - equity component extinguishment, net of tax	—	(29.2)	—	—	(29.2)	—	(29.2)	—	
2.25% Convertible Senior Notes, due 2024 - equity component, net of tax	—	(7.4)	—	—	(7.4)	—	(7.4)	—	
Cash dividends (\$1.08 per share)	—	—	(35.7)	—	(35.7)	—	(35.7)	—	
Balance August 31, 2021	32.4	\$469.7	\$881.7	\$(43.7)	\$1,307.7	\$168.7	\$1,476.4	\$29.7	
Cumulative effect adjustment due to adoption of ASU 2020-06 (See Note 2)	—	(58.9)	4.9	—	(54.0)	—	(54.0)	—	
Net earnings	—	—	46.9	—	46.9	8.9	55.8	(2.0)	
Other comprehensive loss, net	—	—	—	(1.9)	(1.9)	—	(1.9)	—	
Noncontrolling interest adjustments	—	2.2	—	—	2.2	(6.2)	(4.0)	—	
Joint venture partner distribution declared	—	—	—	—	—	(19.2)	(19.2)	—	
Restricted stock awards (net of cancellations)	0.2	11.3	—	—	11.3	—	11.3	—	
Unamortized restricted stock	—	(15.0)	—	—	(15.0)	—	(15.0)	—	
Restricted stock amortization	—	15.5	—	—	15.5	—	15.5	—	
Cash dividends (\$1.08 per share)	—	—	(35.8)	—	(35.8)	—	(35.8)	—	
Balance August 31, 2022	32.6	\$424.8	\$897.7	\$(45.6)	\$1,276.9	\$152.2	\$1,429.1	\$27.7	

The accompanying notes are an integral part of these financial statements.

Consolidated Statements of Cash Flows
YEARS ENDED AUGUST 31,

<i>(In millions)</i>	2022	2021	2020
Cash flows from operating activities			
Net earnings	\$ 53.8	\$ 35.1	\$ 87.6
Adjustments to reconcile net earnings to net cash provided by (used in) operating activities:			
Deferred income taxes	12.9	51.1	(9.5)
Depreciation and amortization	102.0	100.7	109.9
Net gain on disposition of equipment	(37.2)	(1.2)	(20.0)
Stock based compensation expense	15.5	14.7	9.0
Net loss on extinguishment of debt	—	6.3	—
Accretion of debt discount	—	7.1	5.5
Noncontrolling interest adjustments	1.6	2.3	1.4
Other	3.8	2.4	1.0
Decrease (increase) in assets:			
Accounts receivable, net	(198.2)	(82.1)	144.4
Income tax receivable	72.3	(103.0)	(9.1)
Inventories	(267.9)	(166.5)	166.6
Leased railcars for syndication	(40.6)	(11.9)	(12.9)
Other assets	(28.1)	(5.8)	(65.0)
Increase (decrease) in liabilities:			
Accounts payable and accrued liabilities	165.3	109.9	(108.8)
Deferred revenue	(5.6)	0.4	(27.9)
Net cash provided by (used in) operating activities	<u>(150.4)</u>	<u>(40.5)</u>	<u>272.2</u>
Cash flows from investing activities			
Proceeds from sales of assets	155.5	15.9	83.5
Capital expenditures	(380.7)	(139.0)	(66.9)
Investment in and advances to unconsolidated affiliates	(2.3)	—	(1.8)
Cash distribution from unconsolidated affiliates and other	3.5	5.3	12.7
Net cash provided by (used in) investing activities	<u>(224.0)</u>	<u>(117.8)</u>	<u>27.5</u>
Cash flows from financing activities			
Net changes in revolving notes with maturities of 90 days or less	(101.3)	197.4	146.5
Proceeds from revolving notes with maturities longer than 90 days	35.0	112.0	176.5
Repayments of revolving notes with maturities longer than 90 days	—	(287.0)	—
Proceeds from issuance of notes payable	398.3	391.9	—
Repayments of notes payable	(23.4)	(337.8)	(30.2)
Debt issuance costs	(7.3)	(22.0)	—
Repurchase of stock	—	(20.0)	—
Dividends	(35.8)	(35.6)	(35.2)
Cash distribution to joint venture partner	(16.9)	(25.3)	(38.9)
Investment by joint venture partner	—	7.0	—
Tax payments for net share settlement of restricted stock	(3.7)	(3.3)	(2.2)
Net cash provided by (used in) financing activities	<u>244.9</u>	<u>(22.7)</u>	<u>216.5</u>
Effect of exchange rate changes	17.2	10.3	(12.6)
Increase (decrease) in cash and cash equivalents and restricted cash	<u>(112.3)</u>	<u>(170.7)</u>	<u>503.6</u>
Cash and cash equivalents and restricted cash			
Beginning of period	671.4	842.1	338.5
End of period	<u>\$ 559.1</u>	<u>\$ 671.4</u>	<u>\$ 842.1</u>
Balance Sheet Reconciliation			
Cash and cash equivalents	\$ 543.0	\$ 646.8	\$ 833.8
Restricted cash	16.1	24.6	8.3
Total cash and cash equivalents and restricted cash as presented above	<u>\$ 559.1</u>	<u>\$ 671.4</u>	<u>\$ 842.1</u>
Cash (received) paid during the period for			
Interest	\$ 45.1	\$ 28.1	\$ 31.7
Income taxes, net	\$ (55.0)	\$ 11.1	\$ 60.0
Non-cash activity			
Transfer from Leased railcars for syndication and Inventories to Equipment on operating leases, net	\$ (11.6)	\$ 188.5	\$ 55.6
Capital expenditures accrued in Accounts payable and accrued liabilities	\$ 10.9	\$ 5.2	\$ 4.1
Transfer from Property, plant and equipment, net to Intangibles and other assets, net for assets moved to Assets held for sale	\$ 3.5	\$ —	\$ —
Change in Accounts payable and accrued liabilities associated with dividends declared	\$ —	\$ —	\$ (0.3)
Change in Accounts payable and accrued liabilities associated with cash distributions to joint venture partner	\$ 1.4	\$ 0.6	\$ 1.4

The accompanying notes are an integral part of these financial statements.

Notes to Consolidated Financial Statements

Note 1 — Nature of Operations

The Company operates in three reportable segments: Manufacturing; Maintenance Services; and Leasing & Management Services. The segments are operationally integrated. The Manufacturing segment, which currently operates from facilities in the U.S., Mexico, Poland, Romania and Turkey, produces double-stack intermodal railcars, tank cars, conventional railcars, automotive railcar products and marine vessels. The Maintenance Services segment performs wheel and axle servicing, railcar maintenance and produces a variety of parts for the rail industry in North America. The Leasing & Management Services segment, which includes GBX Leasing, owns approximately 12,200 railcars as of August 31, 2022. The Company also provides management services for approximately 408,000 railcars for railroads, shippers, carriers, institutional investors and other leasing and transportation companies in North America as of August 31, 2022. Through unconsolidated affiliates the Company produces rail and industrial components and has an ownership stake in a railcar manufacturer in Brazil.

In 2022 the Company renamed two of its reportable segments to more prominently display the nature of the customer solutions it provides and markets in which it operates. The new names of its reportable segments are Manufacturing (unchanged), Maintenance Services (previously Wheels, Repair & Parts), and Leasing & Management Services (previously Leasing & Services). The name changes have no impact on the organization's reporting structure nor on financial information previously reported. Separately, effective September 1, 2021, the Company changed its measurement basis for allocating syndication revenue between the Manufacturing and Leasing & Management Services reportable segments. This change in measurement reflects the information currently used by management to assess the Company's operating performance in accordance with its refined leasing strategy and has no impact to the Company's total consolidated revenue. Segment results for the prior periods have been recast to conform to the current period presentation.

Note 2 — Summary of Significant Accounting Policies

Principles of consolidation - The financial statements include the accounts of the Company and its subsidiaries in which it has a controlling interest. All intercompany transactions and balances are eliminated upon consolidation.

Unclassified balance sheet - The balance sheets of the Company are presented in an unclassified format as a result of significant leasing activities for which the current or non-current distinction is not relevant. In addition, the activities of the Manufacturing; Maintenance Services; and Leasing & Management Services segments are so intertwined that in the opinion of management, any attempt to separate the respective balance sheet categories would not be meaningful and may lead to the development of misleading conclusions by the reader.

Foreign currency translation - Certain operations outside the U.S. prepare financial statements in currencies other than the U.S. Dollar. Revenues and expenses are translated at monthly average exchange rates during the year, while assets and liabilities are translated at year-end exchange rates. Translation adjustments are accumulated as a separate component of equity in other comprehensive income (loss). The net foreign currency translation adjustment balances were \$57.4 million, \$35.8 million and \$39.8 million as of August 31, 2022, 2021 and 2020, respectively

Cash and cash equivalents - Cash may temporarily be invested primarily in money market funds. All highly-liquid investments with a maturity of three months or less at the date of acquisition are considered cash equivalents.

Restricted cash - Restricted cash relates to amounts held to support a target minimum rate of return on certain agreements, terms of our credit agreement, and a pass through account for activity related to management services provided for certain third party customers.

Accounts receivable - Accounts receivable consists of receivables from customers and receivables from related parties (see Note 16 - Related Party Transactions) and is stated net of allowance for doubtful accounts of \$2.3 million and \$2.4 million as of August 31, 2022 and 2021, respectively.

<i>(In millions)</i>	As of August 31,		
	2022	2021	2020
Allowance for doubtful accounts			
Balance at beginning of period	\$ 2.4	\$ 2.7	\$ 2.2
Additions, net of reversals	0.4	0.6	1.7
Usage	(0.3)	(0.8)	(1.3)
Currency translation effect	(0.2)	(0.1)	0.1
Balance at end of period	<u>\$ 2.3</u>	<u>\$ 2.4</u>	<u>\$ 2.7</u>

Inventories - Inventories are valued at the lower of cost or net realizable value using the first-in first-out method. Work-in-process includes material, labor and overhead. Finished goods includes completed wheels, parts and railcars in transit or not on lease.

Leased railcars for syndication - Leased railcars for syndication consist of newly-built railcars manufactured at one of the Company's facilities or railcars purchased from third parties, which have been placed on lease to a customer and which the Company intends to sell to an investor with the lease attached. These railcars are generally anticipated to be sold within six months of delivery of the last railcar in a group or six months from when the Company acquires the railcar from a third party and are typically not depreciated during that period as the Company does not believe any economic value of a railcar is lost in the first six months. In the event the railcars are not sold in the first six months, the railcars are either held in Leased railcars for syndication and are depreciated or are transferred to Equipment on operating leases and are depreciated.

Equipment on operating leases, net - Equipment on operating leases is stated net of accumulated depreciation. Depreciation to estimated salvage value is provided on the straight-line method over the estimated useful lives of up to forty years. Management periodically reviews useful lives and salvage value estimates based on current scrap prices and what the Company expects to receive upon disposal.

Investment in unconsolidated affiliates - Investment in unconsolidated affiliates includes the Company's interests in certain investees which are accounted for under the equity method of accounting as the Company has determined that the investment provides the Company with the ability to exercise significant influence, but not control, over the investee. Significant influence is generally deemed to exist if the Company has an ownership interest in the voting stock of the investee of at least 20%. Several factors are considered in determining whether the equity method of accounting is appropriate including the relative ownership interests and governance rights of the joint venture partners.

As of August 31, 2022, selected investments in unconsolidated affiliates include the Company's 60% interest in Greenbrier-Maxion, 29.5% interest in Amsted-Maxion Cruzeiro (which owns 40% of Greenbrier-Maxion), 40% interest in Greenbrier Railcar Funding I LLC and 41.9% interest in Axis, LLC.

Property, plant and equipment - Property, plant and equipment is stated at cost, net of accumulated depreciation. Depreciation is provided on the straight-line method over estimated useful lives which primarily are as follows:

	Depreciable Life
Buildings and improvements	10 - 30 years
Machinery and equipment	3 - 20 years
Other	3 - 7 years

Intangible and other assets, net - Intangible assets are recorded when a portion of the purchase price of an acquisition is allocated to assets such as customer contracts and relationships and trade names. Intangible assets with finite lives are amortized using the straight line method over their estimated useful lives which are up to 20 years. Other assets include nonqualified savings plan investments, and revolving note fees which are capitalized and amortized as interest expense over the life of the related borrowings.

Impairment of long-lived assets - When changes in circumstances indicate the carrying amount of certain long-lived asset groups may not be recoverable, the assets are evaluated for impairment. If the forecasted undiscounted future cash flows are less than the carrying amount of the assets, an impairment charge to reduce the carrying value of the assets to estimated realizable value is recognized in the current period. No impairment of long-lived assets was recorded in the years ended August 31, 2022, 2021 and 2020.

Goodwill - Goodwill is recorded when the purchase price of an acquisition exceeds the fair market value of the net assets acquired. Goodwill is not amortized and is tested for impairment at least annually and more frequently if indicators of impairment arise. The Company reviews goodwill for impairment annually using either a qualitative assessment or a quantitative goodwill impairment test. If the qualitative assessment is selected and the Company determines that fair value of each reporting unit more likely than not exceeds its carrying value, no further assessment is necessary. For reporting units where the Company performs the quantitative goodwill impairment test, an impairment loss is recorded to the extent that the reporting unit's carrying amount exceeds the reporting unit's fair value. An impairment loss cannot exceed the total amount of goodwill allocated to the reporting unit. See Note 7 – Goodwill for additional information.

Warranty accruals - Warranty costs are estimated and charged to operations to cover a defined warranty period. The estimated warranty cost is based on history of warranty claims for each particular product type. For new product types without a warranty history, preliminary estimates are based on historical information for similar product types. The warranty accruals, included in Accounts payable and accrued liabilities, are reviewed periodically and updated based on warranty trends.

Income taxes - The asset and liability method is used to account for income taxes. Deferred income taxes are provided for the temporary effects of differences between assets and liabilities recognized for financial statement and income tax reporting purposes. Valuation allowances reduce deferred tax assets to an amount that will more likely than not be realized. The Company recognizes liabilities for uncertain tax positions based on whether evidence indicates that it is more likely than not that the position will be sustained on audit. The Company reevaluates these uncertain tax positions on a quarterly basis. Changes in tax law or court interpretations may result in the recognition of a tax benefit or an additional charge to the tax provision.

Deferred revenue - Cash payments received prior to meeting revenue recognition criteria are recorded in Deferred revenue. Amounts are reclassified out of Deferred revenue once the revenue recognition criteria have been met.

Noncontrolling interest and Contingently redeemable noncontrolling interest - The Company has a joint venture with Grupo Industrial Monclova, S.A. (GIMSA) that manufactures new railroad freight cars for the North American marketplace at GIMSA's existing manufacturing facility located in Frontera, Mexico. Each party owns a 50% interest in the joint venture. The financial results of this operation are consolidated for financial reporting purposes as the Company maintains a controlling interest as evidenced by the right to appoint the majority of the Board of Directors, control over accounting, financing, marketing and engineering and approval and design of products. The noncontrolling interest related to the partner's 50% interest in the joint venture is included in Noncontrolling interest in the equity section of the Company's Consolidated Balance Sheet.

Greenbrier-Astra Rail was formed in 2017 between the Company's existing European operations headquartered in Swidnica, Poland and Astra Rail, based in Arad, Romania. Greenbrier-Astra Rail is controlled by the Company with an approximate 75% interest. Astra Rail also received a put option to sell its entire noncontrolling interest to Greenbrier at an exercise price equal to the higher of fair value or a defined EBITDA multiple as measured on the exercise date. During 2022, the option was extended to be exercisable 30 business days prior to and up until June 1, 2026. The Company consolidates Greenbrier-Astra Rail for financial reporting purposes and includes the noncontrolling interest in the mezzanine section of the Consolidated Balance Sheet in Contingently redeemable noncontrolling interest. The carrying value of the noncontrolling interest cannot be less than the maximum redemption amount, which is the amount Greenbrier will settle the put option for if exercised. Adjustments to reconcile the carrying value to the maximum redemption amount are recorded to retained earnings.

In August 2018, Greenbrier-Astra Rail entered into an agreement to take an approximately 68% ownership stake in Rayvag, a railcar manufacturing company based in Adana, Turkey. Rayvag is controlled by the Company. The Company consolidates Rayvag for financial reporting purposes. The noncontrolling interest related to the partner's interest is included in Noncontrolling interest in the equity section of the Company's Consolidated Balance Sheet.

Net earnings attributable to noncontrolling interest on the Company's Consolidated Statement of Income represents the Company's partners' share of results from operations.

Accumulated other comprehensive loss – Accumulated other comprehensive loss, net of tax as appropriate, consisted of the following:

<i>(In millions)</i>	Unrealized Gain (Loss) on Derivative Financial Instruments	Foreign Currency Translation Adjustment	Other	Accumulated Other Comprehensive Loss
Balance, August 31, 2021	\$ (7.4)	\$ (35.8)	\$ (0.5)	\$ (43.7)
Other comprehensive income (loss) before reclassifications	15.7	(21.6)	(0.7)	\$ (6.6)
Amounts reclassified from accumulated other comprehensive loss	4.7	—	—	\$ 4.7
Balance, August 31, 2022	<u>\$ 13.0</u>	<u>\$ (57.4)</u>	<u>\$ (1.2)</u>	<u>\$ (45.6)</u>

The amounts reclassified out of Accumulated other comprehensive loss into the Consolidated Statements of Income, with the financial statement caption, were as follows:

<i>(In millions)</i>	Year Ended August 31,		Financial Statement Caption
	2022	2021	
(Gain) loss on derivative financial instruments:			
Foreign exchange contracts	\$ 1.2	\$ 1.4	Revenue and Cost of revenue
Interest rate swap contracts	4.9	5.3	Interest and foreign exchange
	6.1	6.7	Total before tax
	(1.4)	(1.7)	Tax expense
	<u>\$ 4.7</u>	<u>\$ 5.0</u>	Net of tax

Revenue recognition – The Company measures revenue at the amounts that reflect the consideration to which it expects to be entitled in exchange for transferring control of goods and services to customers. The Company recognizes revenue either at the point in time or over the period of time that performance obligations to customers are satisfied. Payment terms vary by segment and product type and are generally due within normal commercial terms. The Company's contracts with customers may include multiple performance obligations (e.g. railcars, maintenance, management services, etc.). For such arrangements, the Company allocates revenues to each performance obligation based on its relative standalone selling price. The Company has disaggregated revenue from contracts with customers into categories which describe the principal activities from which it generates revenues.

Manufacturing

Railcars are manufactured in accordance with contracts with customers. The Company recognizes revenue upon its customers' acceptance of the completed railcars at a specified delivery point. From time to time, the Company enters into multi-year supply agreements. Each railcar delivery is considered a distinct performance obligation, such that the amounts that are recognized as revenue following railcar delivery are generally not subject to change.

The Company typically recognizes marine vessel manufacturing revenue over time using the cost input method, based on progress toward contract completion measured by actual costs incurred to date in relation to the estimate of total expected costs. This method best depicts the Company's performance in completing the construction of the marine vessel for the customer. When estimates of total costs to be incurred on a contract exceed total revenue, the expected loss is recorded in the period in which the loss is determined.

Maintenance Services

The Company operates a network of facilities in North America that provide complete wheelset reconditioning and maintenance services.

Wheels revenue is recognized when wheelsets are shipped to the customer or when consumed by customers in the case of consignment arrangements. Parts revenue is recognized upon shipment of the parts to the customers.

Maintenance revenue is typically recognized over time using the cost input method, based on progress toward contract completion measured by actual costs incurred to date in relation to the estimate of total expected costs. This method best depicts the Company's performance in servicing the railcars for the customer. Maintenance services are typically completed in less than 90 days.

Leasing & Management Services

The Company owns a fleet of new and used railcars which are leased to third-party customers. Lease revenue is recognized over the lease-term in the period in which it is earned.

Syndication transactions represent new and used railcars which have been placed on lease to a customer and which the Company sells to an investor with the lease attached. At the time of such sale, revenue and cost of revenue is allocated between the Manufacturing segment and Leasing & Management Services segment based on the relative standalone selling price of the product and services provided. Revenue and cost of revenue associated with railcars which were obtained from a third-party with the intent to resell them and subsequently sold, are recognized in the Leasing & Management Services segment.

The Company enters into multi-year contracts to provide management and maintenance services to customers for which revenue is generally recognized on a straight-line basis over the contract term as a stand-ready obligation. Costs to fulfill these contracts are recognized as incurred.

Interest and foreign exchange - Interest and foreign exchange includes foreign exchange transaction gains and losses, amortization of debt issuance costs, and external interest expense.

<i>(In millions)</i>	Year Ended August 31,		
	2022	2021	2020
Interest and foreign exchange:			
Interest and other expense	\$ 55.7	\$ 44.7	\$ 42.4
Foreign exchange (gain) loss	1.7	(1.4)	1.2
	<u>\$ 57.4</u>	<u>\$ 43.3</u>	<u>\$ 43.6</u>

Forward exchange contracts - Foreign operations give rise to risks from fluctuations in foreign currency exchange rates. Forward exchange contracts with established financial institutions are used to hedge a portion of such risk. Realized and unrealized gains and losses on effective hedges are deferred in other comprehensive income (loss) and recognized in earnings concurrent with the hedged transaction or when the occurrence of the hedged transaction is no longer considered probable. Ineffectiveness is measured and any gain or loss is recognized in foreign exchange (gain) loss. Even though forward exchange contracts are entered into to mitigate the impact of currency fluctuations, certain exposure remains, which may affect operating results. In addition, there is risk for counterparty non-performance.

Interest rate instruments - Interest rate swap agreements are used to reduce the impact of changes in interest rates on certain debt. The net cash amounts paid or received under the agreements are recognized as an adjustment to interest expense.

Research and development - Research and development costs are expensed as incurred. Research and development costs incurred for new product development during the years ended August 31, 2022, 2021 and 2020 were \$5.4 million, \$6.3 million and \$5.8 million, respectively, included in Selling and administrative expenses.

Net earnings per share - Basic earnings per common share (EPS) is calculated using weighted average basic common shares outstanding, which include restricted stock grants and restricted stock units that are considered participating securities when the Company is in a net earnings position.

Diluted EPS is calculated using the if-converted method, associated with shares underlying the 2024 and 2028 2.875% Convertible notes, and the treasury stock method associated with restricted stock units that are not considered participating securities and performance based restricted stock units subject to performance criteria.

Stock-based compensation – The value of stock-based compensation awards is amortized as compensation expense from the date of grant through the earlier of the vesting period or in some instances the recipient’s eligible retirement date. Stock based compensation expense consists of restricted stock units and restricted stock awards. The fair value of awards is measured using the number of shares granted multiplied by the closing share price on the grant date. Stock based compensation expense for the years ended August 31, 2022, 2021 and 2020 was \$15.5 million, \$14.7 million and \$9.0 million, respectively and was recorded in Selling and administrative and Cost of revenue on the Consolidated Statements of Income.

Restricted stock units and restricted stock awards are accounted for as equity based awards (see Note 14 - Equity).

Management estimates - The preparation of financial statements in conformity with accounting principles generally accepted in the U.S. requires judgment on the part of management to arrive at estimates and assumptions on matters that are inherently uncertain. These estimates may affect the amount of assets, liabilities, revenues and expenses reported in the financial statements and accompanying notes and disclosure of contingent assets and liabilities within the financial statements. Estimates and assumptions are periodically evaluated and may be adjusted in future periods. Actual results could differ from those estimates.

Reclassifications - Certain immaterial reclassifications have been made to the accompanying prior year Consolidated Financial Statements to conform to the current year presentation.

Initial Adoption of Accounting Policies

Lease accounting

On September 1, 2019, the Company adopted Accounting Standards Update 2016-02, *Leases* and related amendments (Topic 842). Upon adoption, the Company recorded a cumulative-effect adjustment of \$4.4 million as an increase to retained earnings. Under the short term lease recognition exemption, the Company does not recognize ROU assets or lease liabilities for qualifying leases with terms of less than twelve months. The Company does not separate lease and non-lease components. The Company utilizes both Topic 842 and Accounting Standards Codification 606, *Revenue from Contracts with Customers* (Topic 606) when evaluating retained risk of services and other performance obligations in conjunction with selling railcars with a lease attached as part of the syndication model.

Derivatives and Hedging

In August 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update 2017-12, *Derivatives and Hedging: Targeted Improvements to Accounting for Hedging Activities* (ASU 2017-12). The Company adopted this guidance effective September 1, 2019 and it did not have a material impact on its consolidated financial statements.

Measurement of Credit Losses on Financial Instruments

In June 2016, the FASB issued Accounting Standard Update 2016-13, *Financial Instruments – Credit Losses* (ASU 2016-13). The Company adopted this guidance using a modified retrospective approach through a cumulative effect adjustment, which decreased opening retained earnings by \$0.5 million on September 1, 2020.

Convertible Instruments and Contracts in an Entity's Own Equity

In August 2020, the FASB issued Accounting Standard Update 2020-06, *Accounting for Convertible Instruments and Contracts in an Entity's Own Equity* (ASU 2020-06), which simplifies the accounting for certain convertible instruments, amends guidance on derivative scope exceptions for contracts in an entity's own equity and modifies the guidance on diluted EPS calculations as a result of these changes. The Company adopted this guidance effective September 1, 2021 on a modified retrospective basis and recorded a cumulative effect adjustment to increase Retained earnings by \$5 million. The impact of adoption also resulted in a reduction to Additional paid in capital of approximately \$59 million related to amounts attributable to conversion options that had previously been recorded in equity and the associated derecognition of related deferred tax liabilities of \$17 million. Additionally, the Company recorded an increase to its convertible notes balance by an aggregate amount of approximately \$71 million as a result of derecognizing the debt discount. The adoption of this guidance also decreased the amount of non-cash interest expense to be recognized in future periods as a result of eliminating the discount associated with the equity component. The Company did not incur any impact to liquidity or cash flows. Beginning September 1, 2021, when calculating net earnings attributable to Greenbrier per share of common stock, the Company uses the if-converted method as required under ASU 2020-06 to determine the dilutive effect of its convertible notes.

Simplification of Accounting for Income Taxes

In December 2019, the FASB issued Accounting Standard Update 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (ASU 2019-12), which simplifies the accounting for income taxes by removing certain exceptions to the general principles in Topic 740 for: recognizing deferred taxes for investments, performing intra-period allocations and calculating taxes in interim periods. The ASU also improves consistent application of GAAP for other areas of Topic 740 by clarifying and amending existing guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. The Company adopted this guidance September 1, 2021 with no impact to the Company's consolidated financial statements. The ongoing application of ASU 2019-12 is not expected to materially impact the Company's consolidated financial statements.

Reference Rate Reform

In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of Effects of Reference Rate Reform on Financial Reporting*, which provides practical expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The elective amendments provide expedients to contract modification, affected by reference rate reform if certain criteria are met. The expedients and exceptions provided by this guidance apply only to contracts, hedging relationships, and other transactions that reference the London interbank offered rate ("LIBOR") or another reference rate expected to be discontinued as a result of reference rate reform. This guidance is not applicable to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022. The guidance can be applied immediately through December 31, 2022. During the fourth quarter of fiscal year 2022, the Company adopted the optional relief guidance provided under this ASU after modifying certain debt to update the reference rate from LIBOR to SOFR. This caused a temporary mismatch in our interest rate swap and debt for a period of time. The application of this expedient preserves the presentation of the derivatives consistent with past presentation. The Company will continue to assess the impact of the guidance and may apply other elections as applicable going forward.

Note 3 – Asset Backed Securities

GBX Leasing 2022-1 LLC (GBXL I) was formed as a wholly owned special purpose entity (SPE) of GBX Leasing to securitize the leasing assets of GBX Leasing. On February 9, 2022, GBXL I (Issuer) issued \$323.3 million of term notes secured by a portfolio of railcars and associated operating leases and other assets, acquired and owned by GBXL I. Greenbrier Management Services, LLC (GMS) entered into certain agreements relating to the management and servicing of the Issuer's assets. The Company used the net proceeds received from the issuance of the term notes to pay down the GBX Leasing warehouse credit facility.

The Company evaluated the accounting for the transaction and concluded that, based on its equity investment in the Issuer combined with GMS's capacity as servicer, the Company is the primary beneficiary of the SPE and will consolidate the SPE for financial reporting purposes.

Issued debt includes \$302.6 million of GBXL I Series 2022-1 Class A Secured Railcar Equipment Notes (Class A Notes) and \$20.7 million of GBXL I Series 2022-1 Class B Secured Railcar Equipment Notes (Class B Notes), collectively the GBXL Series 2022-1 Notes (the GBXL Notes). The GBXL Notes bear interest at fixed rates of 2.87% and 3.45% for the Class A Notes and Class B Notes, respectively. The GBXL Notes are payable monthly and have a legal maturity date of February 20, 2052. The Company incurred \$5.0 million in debt issuance costs, which will be amortized to interest expense through the expected repayment period. Both Class A and Class B Notes have an anticipated repayment date of January 20, 2029 and a legal maturity date. While the legal maturity date is in 2052, the cash flows generated from the railcar assets will pay down the GBXL Notes in line with the agreement, which based on expected cash flow payments, would result in repayment in advance of the legal maturity date. If the principal amount of the GBXL Notes has not been repaid in full by the anticipated repayment date, then the Issuer will also be required to pay additional interest to the holders at a rate equal to 4.00% per annum.

The GBXL Notes are obligations of the Issuer only and are nonrecourse to Greenbrier. The GBXL Notes are subject to a Master Indenture between the Issuer and U.S. Bank Trust Company, National Association, as trustee, as supplemented by a Series 2022-1 Supplement dated February 9, 2022. The GBXL Notes may be subject to acceleration upon the occurrence of certain events of default.

The following table summarizes the Issuer's net carrying amount of the assets transferred and the related debt.

<i>(In millions)</i>	<u>As of August 31,</u> <u>2022</u>
Assets	
Restricted cash	\$ 6.9
Equipment on operating leases, net	401.8
Liabilities	
Notes payable, net	\$ 312.8

Note 4 – Revenue Recognition

Contract balances

Contract assets primarily consist of unbilled receivables related to marine vessel construction and railcar maintenance services, for which the respective contracts do not yet permit billing at the reporting date. Contract liabilities primarily consist of customer prepayments for manufacturing, maintenance, and other management-type services, for which the Company has not yet satisfied the related performance obligations.

The opening and closing balances of the Company's contract balances are as follows:

<i>(In millions)</i>	Balance sheet classification	August 31, 2022	August 31, 2021	\$ change
Contract assets	Accounts receivable, net	\$ 13.0	\$ 5.9	\$ 7.1
Contract assets	Inventories	\$ 6.0	\$ 6.7	\$ (0.7)
Contract liabilities ¹	Deferred revenue	\$ 30.5	\$ 36.4	\$ (5.9)

¹ Contract liabilities balance includes deferred revenue within the scope of Topic 606.

For the years ended August 31, 2022 and 2021 the Company recognized \$16.4 million and \$7.4 million of revenue, respectively, that was included in Contract liabilities as of August 31, 2021 and 2020.

Performance obligations

As of August 31, 2022, the Company has entered into contracts with customers for which revenue has not yet been recognized. The following table outlines estimated revenue related to performance obligations wholly or partially unsatisfied, that the Company anticipates will be recognized in future periods.

<i>(In millions)</i>	August 31, 2022	
Revenue type:		
Manufacturing – Railcar sales	\$	2,634.0
Manufacturing – Marine	\$	30.9
Manufacturing – Conversions	\$	183.6
Services	\$	123.8
Other	\$	12.3
Manufacturing – Railcars intended for syndication ¹	\$	623.7

¹ Not a performance obligation as defined in Topic 606

Based on current production and delivery schedules and existing contracts, approximately \$2.1 billion of the Railcar sales amount is expected to be recognized in the next 12 months while the remaining amount is expected to be recognized through 2024. The table above excludes estimated revenue to be recognized at the Company's Brazilian manufacturing operations, as they are accounted for under the equity method.

Revenue amounts reflected in Railcars intended for syndication may be syndicated to third parties or held in the Company's fleet depending on a variety of factors.

Marine revenue is expected to be recognized through 2023 as vessel construction is completed.

Services includes management and maintenance services of which approximately 54% are expected to be performed through 2027 and the remaining amount through 2037.

Note 5 — Inventories

<i>(In millions)</i>	As of August 31,	
	2022	2021
Manufacturing supplies and raw materials	\$ 570.2	\$ 352.8
Work-in-process	183.3	167.3
Finished goods	75.9	73.4
Excess and obsolete adjustment	(14.1)	(19.9)
	<u>\$ 815.3</u>	<u>\$ 573.6</u>

<i>(In millions)</i>	As of August 31,		
	2022	2021	2020
Excess and obsolete adjustment			
Balance at beginning of period	\$ 19.9	\$ 24.2	\$ 9.5
Charge to cost of revenue	1.5	0.8	18.0
Disposition of inventory	(6.9)	(5.0)	(3.6)
Currency translation effect	(0.4)	(0.1)	0.3
Balance at end of period	<u>\$ 14.1</u>	<u>\$ 19.9</u>	<u>\$ 24.2</u>

Note 6 — Property, Plant and Equipment, net

<i>(In millions)</i>	As of August 31,	
	2022	2021
Land and improvements	\$ 88.4	\$ 94.6
Machinery and equipment	623.7	609.8
Buildings and improvements	367.1	379.1
Construction in progress	55.3	50.0
Other	107.4	92.8
	1,241.9	1,226.3
Accumulated depreciation	(596.7)	(556.1)
	<u>\$ 645.2</u>	<u>\$ 670.2</u>

Depreciation expense was \$70.7 million, \$75.3 million and \$86.6 million for the years ended August 31, 2022, 2021 and 2020, respectively.

Note 7 — Goodwill

Changes in the carrying value of goodwill are as follows:

<i>(In millions)</i>	Manufacturing	Maintenance Services	Leasing & Management Services	Total
Balance August 31, 2021	\$ 88.8	\$ 43.3	\$ —	\$ 132.1
Translation and other adjustments	(4.5)	(0.3)	—	(4.8)
Balance August 31, 2022	<u>\$ 84.3</u>	<u>\$ 43.0</u>	<u>\$ —</u>	<u>\$ 127.3</u>

<i>(In millions)</i>	Goodwill
Gross goodwill balance before accumulated goodwill impairment losses and other reductions	\$ 290.1
Accumulated goodwill impairment losses	(138.2)
Accumulated other reductions	(24.6)
Balance August 31, 2022	<u>\$ 127.3</u>

The Company performed its annual goodwill impairment test during the third quarter. For the annual impairment test during the third quarter of 2022, the Company utilized the qualitative assessment allowable under ASC 350 *Intangibles – Goodwill and Other* to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying value. This qualitative assessment may include, but is not limited to, reviewing factors such as macroeconomic considerations and industry indicators, financial performance and cost estimates associated with a particular reporting unit. If based on a review of qualitative factors, it is more likely than not that the fair value of a reporting unit is less than its carrying value, a quantitative impairment test is performed by comparing the fair value of a reporting unit with its carrying amount. Based on our review of the qualitative factors, the Company determined for all three of our reporting unit goodwill balances that a quantitative impairment analysis was not necessary, primarily as a result of positive market indicators and entity-specific financial performance during the assessment period.

As of August 31, 2022, our Manufacturing segment includes the North America Manufacturing reporting unit with a goodwill balance of \$56.6 million and the Europe Manufacturing reporting unit with a goodwill balance of \$27.7 million. The Maintenance Services segment had a goodwill balance of \$43.0 million related to the Wheels & Parts reporting unit.

Based on the results of the Company's annual impairment test, the Company concluded that goodwill was not impaired.

Note 8 — Intangibles and Other Assets, net

Intangible assets that are determined to have finite lives are amortized over their useful lives. Intangible assets with indefinite useful lives are not amortized and are periodically evaluated for impairment.

The following table summarizes the Company's identifiable intangible and other assets balance:

<i>(In millions)</i>	As of August 31,	
	2022	2021
Intangible assets subject to amortization:		
Customer and supplier relationships	\$ 87.5	\$ 89.8
Accumulated amortization	(66.1)	(64.1)
Other intangible assets	42.4	40.3
Accumulated amortization	(16.5)	(13.0)
	<u>47.3</u>	<u>53.0</u>
Intangible assets not subject to amortization	2.4	2.4
Prepaid and other assets	32.4	26.7
Operating lease ROU assets	54.2	39.8
Nonqualified savings plan investments	40.3	47.7
Debt issuance costs, net	8.7	8.6
Assets held for sale	3.8	5.4
	<u>\$ 189.1</u>	<u>\$ 183.6</u>

Amortization expense for the years ended August 31, 2022, 2021 and 2020 was \$9.3 million, \$11.6 million and \$11.0 million, respectively. As of August 31, 2022, amortizable intangible assets had a weighted-average remaining useful life of 8 years. Amortization expense for the years ending August 31, 2023, 2024, 2025, 2026 and 2027 is expected to be \$8.5 million, \$7.6 million, \$7.2 million, \$6.0 million and \$5.3 million, respectively.

Note 9 — Revolving Notes

Senior secured credit facilities, consisting of four components, aggregated to \$1.14 billion as of August 31, 2022.

As of August 31, 2022, a \$600.0 million revolving line of credit, maturing August 2026, secured by substantially all the Company's U.S. assets not otherwise pledged as security for term loans, the warehouse credit facility or the railcar asset-backed securities, existed to provide working capital and interim financing of equipment, principally for the Company's U.S. and Mexican operations. Advances under this North American credit facility bear interest at SOFR plus 1.50% plus 0.10% as a SOFR adjustment or Prime plus 0.50% depending on the type of borrowing. Available borrowings under the credit facility are generally based on defined levels of eligible inventory, receivables, property, plant and equipment and leased equipment, as well as total debt to consolidated capitalization and fixed charges coverage ratios.

As of August 31, 2022, a \$350.0 million non-recourse warehouse credit facility existed to support the operations of GBX Leasing, a joint venture in which the Company owns approximately 95%. Advances under this facility bear interest at SOFR plus 1.85% plus 0.11% as a SOFR adjustment. The warehouse credit facility converts to a term loan in August 2025 which matures in August 2027.

As of August 31, 2022, lines of credit totaling \$67.2 million secured by certain of the Company's European assets, with variable rates that range from Warsaw Interbank Offered Rate (WIBOR) plus 1.2% to WIBOR plus 1.6% and Euro Interbank Offered Rate (EURIBOR) plus 1.5%, were available for working capital needs of the Company's European manufacturing operations. The European lines of credit include \$40.8 million which are guaranteed by the Company. European credit facilities are regularly renewed. Currently, these European credit facilities have maturities that range from February 2023 through October 2023.

As of August 31, 2022, the Company's Mexican railcar manufacturing operations had four lines of credit totaling \$120.0 million. The first line of credit provides up to \$30.0 million, of which the Company and its joint venture partner have each guaranteed 50%. Advances under this facility bear interest at LIBOR plus 3.75% to 4.25%. The Mexican railcar manufacturing joint venture will be able to draw amounts available under this facility through June 2024. The second line of credit provides up to \$35.0 million, of which the Company and its joint venture partner have each guaranteed 50%. Advances under this facility bear interest at LIBOR plus 3.75%. The Mexican railcar manufacturing joint venture will be able to draw amounts available under this facility through June 2023. The third line of credit provides up to \$50.0 million and matures in October 2024. Advances under this facility bear interest at LIBOR plus 4.25%. The fourth line of credit provided up to \$5.0 million and matured September 2022. The interest rate under this facility was LIBOR plus 2.95%.

<i>(In millions)</i>	As of August 31,	
	2022	2021
Credit facility balances:		
North America	\$ 160.0	\$ 160.0
GBX Leasing	—	147.0
Europe	51.6	50.2
Mexico	85.0	15.0
Total Revolving notes	<u>\$ 296.6</u>	<u>\$ 372.2</u>

In addition, outstanding commitments under the North American credit facility included letters of credit which totaled \$6.9 million and \$8.4 million as of August 31, 2022 and 2021, respectively.

As of August 31, 2022, the Company had an aggregate of \$147.9 million available to draw down under committed credit facilities.

Note 10 — Accounts Payable and Accrued Liabilities

<i>(In millions)</i>	As of August 31,	
	2022	2021
Trade payables	\$ 401.5	\$ 265.1
Other accrued liabilities	102.8	109.1
Operating lease liabilities	56.4	42.6
Accrued payroll and related liabilities	140.4	125.1
Accrued warranty	24.0	27.9
	<u>\$ 725.1</u>	<u>\$ 569.8</u>

Note 11 — Warranty Accrual

<i>(In millions)</i>	As of August 31,		
	2022	2021	2020
Balance at beginning of period	\$ 27.9	\$ 45.2	\$ 46.7
Charged to cost of revenue	5.0	(8.0)	4.0
Payments	(7.9)	(9.2)	(6.2)
Currency translation effect	(1.0)	(0.1)	0.7
Balance at end of period	<u>\$ 24.0</u>	<u>\$ 27.9</u>	<u>\$ 45.2</u>

Note 12 — Notes Payable, net

<i>(In millions)</i>	As of August 31,	
	2022	2021
Term loans	\$ 867.5	\$ 492.3
2.875% Convertible senior notes, due 2028	373.8	373.8
2.875% Convertible senior notes, due 2024	47.7	47.7
Other notes payable	1.2	1.7
	<u>\$ 1,290.2</u>	<u>\$ 915.5</u>
Debt discount and issuance costs ⁽¹⁾	(21.1)	(89.0)
	<u>\$ 1,269.1</u>	<u>\$ 826.5</u>

(1) As described in Note 2 – Summary of Significant Accounting Policies, effective September 1, 2021, the debt discount associated with convertible senior notes was derecognized upon adoption of ASU 2020-06 using the modified retrospective approach. Financial results for 2021 were not adjusted. See discussion below for additional information.

Term loans are primarily composed of:

- \$291.9 million of senior term debt, with a maturity date of August 2026. The debt bears a floating interest rate of SOFR plus 1.5% plus 0.10% as a SOFR adjustment with principal of \$3.65 million paid quarterly in arrears and a balloon payment of \$222.6 million due at maturity. Interest rate swap agreements cover 75% of the principal balance to swap the floating interest rate to a fixed rate. The principal balance as of August 31, 2022 was \$280.9 million.
- \$275.0 million of senior term debt, with a maturity date of August 2027, which is secured by a pool of leased railcars. The original \$200 million term debt agreement was amended on July 29, 2022 to provide for an incremental \$75 million term loan and an additional \$75 million available as a delayed draw until January 2023, subject to satisfaction of certain conditions. The debt bears a floating interest rate of SOFR plus 1.375% plus 0.10% as a SOFR adjustment, with principal of \$2.4 million paid quarterly in arrears and a balloon payment of \$219.9 million due at maturity. Interest rate swap agreements cover 100% of the principal balance to swap the floating interest rate to a fixed rate. The principal balance as of August 31, 2022 was \$268.0 million.
- \$323.3 million of senior term debt, which is secured by a portfolio of railcars and associated operating leases and other assets, acquired, and owned by GBXL I. See Note 3 – Asset Backed Securities for additional information. The principal balance as of August 31, 2022 was \$318.6 million.

Convertible senior notes, due 2028 (2028 Convertible Notes), bear interest at a fixed rate of 2.875%, paid semiannually in arrears on April 15th and October 15th. Issuance costs are amortized using the effective interest rate method through 2028 and the amortization expense is included in Interest and Foreign exchange on the Company's Consolidated Statement of Income. As of August 31, 2022, the effective interest rate was 5.75%. The convertible notes mature on April 15, 2028, unless earlier repurchased, redeemed or converted in accordance with their terms prior to such date. The convertible notes are senior unsecured obligations and rank equally with other senior unsecured debt. The notes are convertible into shares of the Company's common stock, at an initial conversion rate of 18.0317 shares of common stock per \$1,000 principal amount which is equivalent to an initial conversion price of approximately \$55.46 per share. The conversion rate and the resulting conversion price are subject to adjustment in certain events, such as distributions, dividends or stock splits. Conversion of the par value of the note will be settled in cash, with any premium convertible in cash or shares at the Company's option. Upon a conversion of the notes, the Company may elect to pay or deliver, as the case may be, cash and, if applicable, shares of the Company's common stock, as provided in the 2028 Notes Indenture (as defined below). As of August 31, 2022, the Company has reserved approximately 8.8 million shares for issuance upon conversion of these notes.

The 2028 Convertible Notes are subject to an indenture entered into on April 20, 2021 by the Company and Wells Fargo Bank, National Association, as trustee, as amended and restated by the first supplemental indenture dated June 1, 2021 (2028 Notes Indenture). The 2028 Convertible Notes are convertible at the option of the holders prior to January 15, 2028, under certain circumstances as described in the 2028 Notes Indenture. Additionally, the Company may elect to call the notes on or after April 15, 2025 and on or before the 40th trading day prior to April 15, 2028, at a cash redemption price described in the 2028 Notes Indenture if the stock price exceeds 130% of the conversion price during certain trading days as defined in the 2028 Notes Indenture. Calling any Convertible Note for redemption will constitute a make-whole fundamental change with respect to that Convertible Note, in which case the conversion rate applicable to the conversion of that Convertible Note will be increased in certain circumstances if it is converted after it is called for redemption.

Convertible senior notes, due 2024 (2024 Convertible Notes), bear interest at a fixed rate of 2.875%, paid semiannually in arrears on February 1st and August 1st. Issuance costs are amortized using the effective interest rate method through 2024 and the amortization expense is included in Interest and Foreign exchange on the Company's Consolidated Statement of Income. As of August 31, 2022, the effective interest rate was 4.99%. The convertible notes mature on February 1, 2024, unless earlier repurchased by the Company or converted in accordance with their terms. Upon the satisfaction of certain conditions, holders may convert at their option at any time prior to the business day immediately preceding the stated maturity date. The convertible notes are senior unsecured obligations and rank equally with other senior unsecured debt. The convertible notes are convertible into shares of the Company's common stock, at an initial conversion rate of 16.6234 shares per \$1,000 principal amount of the notes (which is equal to an initial conversion price of \$60.16 per share). The initial conversion rate and conversion price are subject to adjustment upon the occurrence of certain events, such as distributions, dividends or stock splits. As of August 31, 2022 the Company has reserved approximately 1.1 million shares for issuance upon conversion of these notes.

As described in Note 2 – Summary of Significant Accounting Policies, effective September 1, 2021, the Company adopted ASU 2020-06 using the modified retrospective approach under which financial results reported in prior periods were not adjusted. Prior to the adoption of the standard, the convertible notes were separated into liability and equity components with an associated debt discount. The debt discount was amortized using the effective interest rate method over the term of the convertible notes until September 1, 2021, when the debt discount associated with these convertible notes was derecognized.

Other notes payable includes \$1.2 million of unsecured debt with maturity dates ranging from February 2023 to February 2027.

The notes payable, along with the revolving and operating lines of credit, contain certain covenants with respect to the Company and various subsidiaries, the most restrictive of which, among other things, limit the ability to: incur additional indebtedness or guarantees; pay dividends or repurchase stock; enter into capital leases; create liens; sell assets; engage in transactions with affiliates, including joint ventures and non U.S. subsidiaries, including but not limited to loans, advances, equity investments and guarantees; enter into mergers, consolidations or sales of substantially all the Company's assets; and enter into new lines of business. The covenants also require certain maximum ratios of debt to total capitalization and minimum levels of fixed charges (interest and rent) coverage.

As of August 31, 2022, principal payments on the notes payable are expected as follows:

<i>(In millions)</i>	
Year ending August 31,	
2023	\$ 35.3
2024 ⁽¹⁾	83.8
2025	36.4
2026	259.1
2027	241.9
Thereafter ⁽¹⁾	633.7
	\$ 1,290.2

(1) The repayment of the \$47.7 million of 2024 Convertible Notes due February 2024 and the \$373.8 million of 2028 Convertible Notes due April 2028 is assumed to occur at the scheduled maturity instead of assuming an earlier conversion by the holders.

Note 13 — Derivative Instruments

Foreign operations give rise to market risks from changes in foreign currency exchange rates. Foreign currency forward exchange contracts with established financial institutions are utilized to hedge a portion of that risk. Interest rate swap agreements are used to reduce the impact of changes in interest rates on certain debt. The Company's foreign currency forward exchange contracts and interest rate swap agreements are designated as cash flow hedges, and therefore the effective portion of unrealized gains and losses is recorded in accumulated other comprehensive income or loss.

At August 31, 2022 exchange rates, notional amounts of forward exchange contracts for the purchase of Polish Zlotys and the sale of Euros; and the purchase of Mexican Pesos and the sale of U.S. Dollars aggregated to \$73.6 million. The fair value of the contracts is included on the Consolidated Balance Sheets as Accounts payable and accrued liabilities when in a loss position, or as Accounts receivable, net when in a gain position. As the contracts mature at various dates through October 2023, any such gain or loss remaining will be recognized in manufacturing revenue or cost of revenue along with the related transactions. In the event that the underlying transaction does not occur or does not occur in the period designated at the inception of the hedge, the amount classified in accumulated other comprehensive loss would be reclassified to the results of operations in Interest and foreign exchange at the time of occurrence. At August 31, 2022 exchange rates, approximately \$3.5 million loss would be reclassified to revenue or cost of revenue in the next year.

At August 31, 2022, interest rate swap agreements maturing from September 2023 through January 2032 had notional amounts that aggregated to \$478.7 million. The fair value of the contracts are included on the Consolidated Balance Sheets in Accounts payable and accrued liabilities when in a loss position, or in Accounts receivable, net when in a gain position. As interest expense on the underlying debt is recognized, amounts corresponding to the interest rate swap are reclassified from Accumulated other comprehensive loss and charged or credited to interest expense. At August 31, 2022 interest rates, approximately \$6.4 million would be credited to interest expense in the next year.

Fair Values of Derivative Instruments

<i>(In millions)</i>	Asset Derivatives				Liability Derivatives		
	Balance sheet caption	August 31,		Balance sheet caption	August 31,		
		Fair Value	Fair Value		Fair Value	Fair Value	
Derivatives designated as hedging instruments							
Foreign forward exchange contracts	Accounts receivable, net	\$ 0.6	\$ 0.1	Accounts payable and accrued liabilities	\$ 2.9	\$ 0.3	
Interest rate swap contracts	Accounts receivable, net	20.8	—	Accounts payable and accrued liabilities	—	10.0	
		<u>\$ 21.4</u>	<u>\$ 0.1</u>		<u>\$ 2.9</u>	<u>\$ 10.3</u>	
Derivatives not designated as hedging instruments							
Foreign forward exchange contracts	Accounts receivable, net	\$ —	\$ —	Accounts payable and accrued liabilities	\$ 0.1	\$ 0.1	

The Effect of Derivative Instruments on the Consolidated Statements of Income

Derivatives in cash flow hedging relationships	Location of gain (loss) recognized in income on derivative	Gain (loss) recognized in income on derivatives Years ended August 31,	
		2022	2021
Foreign forward exchange contract	Interest and foreign exchange	\$ (0.3)	\$ (0.1)

Derivatives in cash flow hedging relationships	Gain (loss) recognized in OCI on derivatives Years ended August 31,		Location of gain (loss) reclassified from accumulated OCI into income	Gain (loss) reclassified from accumulated OCI into income Years ended August 31,		Location of gain (loss) in income on derivative (amount excluded from effectiveness testing)	Gain (loss) recognized on derivative (amount excluded from effectiveness testing) Years ended August 31,	
	2022	2021		2022	2021		2022	2021
Foreign forward exchange contracts	\$ (4.7)	\$ (2.0)	Revenue	\$ (1.5)	\$ (1.3)	Revenue	\$ 0.9	\$ 0.6
Foreign forward exchange contracts	0.5	—	Cost of revenue	0.3	(0.1)	Cost of revenue	0.7	0.1
Interest rate swap contracts			Interest and foreign exchange			Interest and foreign exchange		
	26.1	0.6		(4.9)	(5.3)		—	—
	<u>\$ 21.9</u>	<u>\$ (1.4)</u>		<u>\$ (6.1)</u>	<u>\$ (6.7)</u>		<u>\$ 1.6</u>	<u>\$ 0.7</u>

The following table presents the amounts in the Consolidated Statements of Income in which the effects of the cash flow hedges are recorded and the effects of the cash flow hedge activity on these line items for the years ended August 31, 2022, 2021 and 2020:

<i>(In millions)</i>	For the Year Ended August 31,					
	2022		2021		2020	
	Total	Amount of gain (loss) on cash flow hedge activity	Total	Amount of gain (loss) on cash flow hedge activity	Total	Amount of gain (loss) on cash flow hedge activity
Revenue	\$ 2,977.7	\$ (1.5)	\$ 1,747.9	\$ (1.3)	\$ 2,792.2	\$ (0.7)
Cost of revenue	2,671.7	0.3	1,516.3	(0.1)	2,439.1	(2.2)
Interest and foreign exchange	57.4	(4.9)	43.3	(5.3)	43.6	(2.7)

Note 14 — Equity

Stock Incentive Plan

The 2021 Stock Incentive Plan was approved by shareholders on January 6, 2021. The new plan replaced the 2014 Amended and Restated Stock Incentive Plan, which was amended and restated as the 2017 Amended and Restated Stock Incentive Plan on October 24, 2017 and approved by shareholders on January 5, 2018. The 2021 Stock Incentive Plan provides for the grant of incentive stock options, non-statutory stock options, restricted shares, restricted stock units and stock appreciation rights. In addition to the 1,500 thousand shares reserved for issuance under the 2021 Stock Incentive Plan, up to 466 thousand shares previously reserved for issuance, but not issued or subject to outstanding awards, are available for issuance under the 2021 Stock Incentive Plan, and up to 884 thousand shares that were subject to outstanding awards under the 2017 Amended and Restated Stock Incentive Plan as of the effective date of the 2021 Stock Incentive Plan will also become available for issuance under the 2021 Stock Incentive Plan to the extent such shares are not issued and cease to be subject to such awards following the effective date of the 2021 Stock Incentive Plan.

On August 31, 2022, there were 1,394 thousand shares available for grant compared to 1,618 thousand and 466 thousand shares available for grant as of the years ended August 31, 2021 and 2020, respectively. There are no stock options or stock appreciation rights outstanding as of August 31, 2022. The Company currently grants restricted stock units. Shares associated with restricted stock unit awards are not considered legally outstanding shares of common stock until they are issued following vesting. Restricted stock unit awards, including performance-based awards, some of which are entitled to participate in dividends and these awards are considered participating securities and are considered outstanding for earnings per share purposes when the effect is dilutive.

During the years ended August 31, 2022, 2021 and 2020, the Company awarded restricted share and restricted stock unit grants totaling 391 thousand, 538 thousand, and 470 thousand shares, respectively, which include performance-based grants and dividend equivalent rights. As of August 31, 2022, there were a total of 653 thousand shares associated with unvested performance-based grants. The actual number of shares that will vest associated with performance-based grants will vary depending on the Company's performance. Approximately 653 thousand additional shares may be granted if performance-based restricted stock unit awards vest at maximum levels of performance. These additional shares are associated with restricted stock unit awards granted during the years ended August 31, 2022, 2021 and 2020. The fair value of awards granted was \$18.7 million, \$18.0 million, and \$14.5 million for the years ended August 31, 2022, 2021 and 2020, respectively. The fair value of awards granted is determined based on the market closing price of the underlying shares on the date of grant.

The value, at the date of grant, of stock awarded under restricted share grants and restricted stock unit grants is amortized as compensation expense over the lesser of the vesting period of one to three years or to the recipients eligible retirement date. Compensation expense recognized related to restricted share grants and restricted stock unit grants for the years ended August 31, 2022, 2021 and 2020 was \$15.5 million, \$14.7 million, and \$8.7 million, respectively, and was recorded in Selling and administrative and Cost of revenue on the Consolidated Statements of Income. Unamortized compensation cost related to restricted stock unit grants was \$12.8 million as of August 31, 2022.

Total unvested restricted share and restricted stock unit grants were 1,042 thousand and 1,024 thousand as of August 31, 2022 and 2021, respectively. During the year ended August 31, 2022, a total of 290 thousand restricted stock units vested, including shares that were withheld on behalf of employees to satisfy the minimum statutory tax withholding requirements. The following table summarizes restricted share and restricted stock unit grant transactions for shares, both vested and unvested, under the 2021 Stock Incentive Plan and the 2017 Amended and Restated Stock Incentive Plan:

<i>(In thousands)</i>	Shares
Balance at August 31, 2019 ⁽¹⁾	4,575
Granted	470
Forfeited	(86)
Balance at August 31, 2020 ⁽¹⁾	4,959
Granted	538
Forfeited	(190)
Balance at August 31, 2021 ⁽¹⁾	5,307
Granted	391
Forfeited	(167)
Balance at August 31, 2022 ⁽¹⁾	5,531

(1) Balance represents cumulative grants net of forfeitures.

Share Repurchase Program

The Board of Directors has authorized the Company to repurchase shares of the Company's common stock. The share repurchase program has an expiration date of January 31, 2023 and the amount remaining for repurchase is \$100.0 million. Under the share repurchase program, shares of common stock may be purchased on the open market or through privately negotiated transactions from time to time. The timing and amount of purchases will be based upon market conditions, securities law limitations and other factors. The program may be modified, suspended or discontinued at any time without prior notice. The share repurchase program does not obligate the Company to acquire any specific number of shares in any period. There were no shares repurchased under this program during the years ended August 31, 2022, 2021 and 2020.

Other Share Repurchases

The Company repurchased \$20.0 million of its common stock during 2021. These shares were repurchased, in privately negotiated transactions, as part of the Company's debt refinancing in April 2021 and were not associated with the Company's publicly announced share repurchase program.

Note 15 — Earnings Per Share

The shares used in the computation of the Company’s basic and diluted earnings per common share are reconciled as follows:

<i>(In thousands)</i>	Year Ended August 31,		
	2022	2021	2020
Weighted average basic common shares outstanding ⁽¹⁾	32,569	32,648	32,670
Dilutive effect of 2.875% Convertible notes, due 2024 ⁽²⁾⁽³⁾	—	—	—
Dilutive effect of 2.875% Convertible notes, due 2028 ⁽⁴⁾	—	—	N/A
Dilutive effect of 2.25% Convertible notes, due 2024 ⁽⁵⁾	N/A	—	—
Dilutive effect of restricted stock units ⁽⁶⁾	1,062	1,017	771
Weighted average diluted common shares outstanding	<u>33,631</u>	<u>33,665</u>	<u>33,441</u>

- (1) Restricted stock grants and restricted stock units that are considered participating securities, including some grants subject to certain performance criteria, are included in weighted average basic common shares outstanding when the Company is in a net earnings position.
- (2) The dilutive effect of the 2.875% Convertible notes, due 2024 was excluded for the years ended August 31, 2021 and 2020 as the average stock price was less than the applicable conversion price and therefore was anti-dilutive under previous applicable guidance. See further discussion below.
- (3) The dilutive effect of the 2.875% Convertible notes due 2024 was excluded for the year ended August 31, 2022 as they were considered anti-dilutive under the “if converted” method as further discussed below.
- (4) The dilutive effect of the 2.875% Convertible notes, due 2028 was excluded for the years ended August 31, 2022 and 2021 as the average stock price was less than the applicable conversion price and therefore was considered anti-dilutive. As these notes require cash settlement for the principal, only a premium is potentially dilutive. These convertible notes were issued in April 2021.
- (5) The dilutive effect of the 2.25% Convertible notes, due 2024 was excluded for the years ended August 31, 2021 and 2020 as the average stock price was less than the applicable conversion price and therefore was considered anti-dilutive under previous applicable guidance. These convertible notes were retired in April 2021.
- (6) Restricted stock units that are not considered participating securities and restricted stock units subject to performance criteria, for which actual levels of performance above target have been achieved, are included in weighted average diluted common shares outstanding when the Company is in a net earnings position.

Basic earnings per common share (EPS) is computed by dividing Net earnings attributable to Greenbrier by weighted average basic common shares outstanding, which includes restricted stock grants and restricted stock units that are considered participating securities when the Company is in a net earnings position.

The Company's approach for calculating diluted EPS was modified beginning September 1, 2021 upon the adoption of ASU 2020-06, *Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity*. See Note 2 - Summary of Significant Accounting Policies for additional information.

For the year ended August 31, 2022, diluted EPS was calculated using the more dilutive of two methods. The first method includes the dilutive effect, using the treasury stock method, associated with restricted stock units that are not considered participating securities and performance based restricted stock units subject to performance criteria, for which actual levels of performance above target have been achieved. The second method supplements the first by also including the “if converted” effect of the 2.875% Convertible notes due 2024 and shares underlying the 2.875% Convertible notes due 2028, when there is a conversion premium. Under the “if converted” method, debt issuance and interest costs, both net of tax, associated with the convertible notes due 2024 are added back to net earnings and the share count is increased by the shares underlying the convertible notes.

For the years ended August 31, 2021 and 2020, diluted EPS was calculated using the treasury stock method associated with shares underlying the 2.875% Convertible notes due 2024, 2.25% convertible notes due 2024, restricted stock units that are not considered participating securities and performance based restricted stock units subject to performance criteria, for which actual levels of performance above target have been achieved.

<i>(In millions, except number of shares which are reflected in thousands and per share amounts)</i>	Year Ended August 31,		
	2022	2021	2020
Net earnings attributable to Greenbrier	\$ 46.9	\$ 32.4	\$ 49.0
Weighted average basic common shares outstanding	32,569	32,648	32,670
Basic earnings per share	\$ 1.44	\$ 0.99	\$ 1.50
Net earnings attributable to Greenbrier	\$ 46.9	\$ 32.4	\$ 49.0
Add back:			
Interest and debt issuance costs on the 2.875% convertible notes due 2024, net of tax	n/a	n/a	n/a
Earnings before interest and debt issuance costs on the 2.875% convertible notes due 2024	n/a	n/a	n/a
Weighted average diluted common shares outstanding	33,631	33,665	33,441
Diluted earnings per share	\$ 1.40	\$ 0.96	\$ 1.46

Note 16 — Related Party Transactions

The Company has a 41.9% interest in Axis, a joint venture. The Company purchased \$11.5 million, \$13.5 million and \$12.7 million of railcar components from Axis during the years ended August 31, 2022, 2021 and 2020, respectively.

The Company has a 40% interest in the common equity of an entity that buys and sells railcar assets that are leased to third parties. As of August 31, 2022 and 2021 the carrying amount of the investment was \$0.7 million and \$3.2 million, respectively, which is classified in Investment in unconsolidated affiliates in the Consolidated Balance Sheets. Upon sale of railcars to this entity from Greenbrier, 60% of the related revenue and margin is recognized and 40% is deferred until the railcars are ultimately sold by the entity. The Company recognized \$4.7 million in revenue associated with railcars sold into the leasing warehouse during the year ended August 31, 2020. The Company had no material revenue with railcars sold into the leasing warehouse during the years ended August 31, 2022 and 2021. The Company recognized \$9.3 million with railcars sold out of the leasing warehouse during the year ended August 31, 2022. The Company had no material revenue with railcars sold out of the leasing warehouse during the years ended August 31, 2021 and 2020. The Company also provides administrative and remarketing services to this entity and earns management fees for these services which were immaterial for each of the years ended August 31, 2022, 2021 and 2020.

Mr. Furman is the owner of a private aircraft managed by a private independent management company. From time to time, the Company's business requires charter use of privately-owned aircraft. In such instances, it is possible that charters may be placed on Mr. Furman's aircraft. The Company placed charters on Mr. Furman's aircraft which aggregated to \$0.9 million, \$0.2 million and \$0.3 million for each of the years ended August 31, 2022, 2021 and 2020, respectively.

In May 2020, the Company and its manufacturing partner GIMSA amended its joint venture agreement for its joint ventures in Monclova, Mexico. In addition to certain temporary changes to the existing fee arrangements, the joint ventures also paid dividends of \$22.5 million to each of the joint venture partners during the year ended August 31, 2020.

As of August 31, 2020, the Company had a \$4.5 million note receivable due from Amsted-Maxion Cruzeiro, its unconsolidated Brazilian castings and components manufacturer and a \$3.8 million note receivable from Greenbrier-Maxion, its unconsolidated Brazilian railcar manufacturer. These note receivables were included on the Consolidated Balance Sheets in Accounts receivable, net as of August 31, 2020 and were repaid in 2021.

Note 17 — Income Taxes

Components of income tax expense (benefit) were as follows:

<i>(In millions)</i>	Year Ended August 31,		
	2022	2021	2020
Current			
Federal	\$ (6.7)	\$ (95.9)	\$ 21.0
State	0.9	1.9	0.8
Foreign	19.2	4.3	25.4
	13.4	(89.7)	47.2
Deferred			
Federal	2.2	54.1	(8.3)
State	1.4	(2.3)	0.7
Foreign	1.6	(3.4)	0.5
	5.2	48.4	(7.1)
Change in valuation allowance	(0.5)	1.1	0.1
Income tax expense (benefit)	\$ 18.1	\$ (40.2)	\$ 40.2

Earnings (loss) before income tax and earnings from unconsolidated affiliates for the years ended August 31, 2022, 2021 and 2020 were \$12.4 million, (\$30.7 million) and \$71.2 million, respectively, for our domestic U.S. operations and \$48.2 million, \$22.1 million and \$53.6 million, respectively for our foreign operations.

In response to the COVID 19 pandemic, the CARES Act was signed into law in March 2020. The CARES Act lifts certain deduction limitations originally imposed by the Tax Cuts and Jobs Act of 2017 (the “2017 Tax Act”). Corporate taxpayers may carryback net operating losses (“NOLs”) originating in 2018 through 2020 for up to five years, which was not previously allowed under the 2017 Tax Act. The CARES Act also eliminates the existing limitation on taxable income of 80% by allowing corporate entities to fully utilize NOL carryforwards to offset taxable income in 2018, 2019, or 2020, and allows taxpayers with alternative minimum tax credits to claim a refund in 2020 for the entire amount of the credits instead of recovering the credits through refunds over a period of years, as originally enacted by the 2017 Tax Act. In addition, the CARES Act makes qualified improvement property generally eligible for 15-year cost-recovery and 100% bonus depreciation.

Due to the enactment of the CARES Act, the Company filed a Federal claim to carryback fiscal year 2021 tax losses to the fiscal years 2016 through 2018, allowing the recovery of Federal income taxes previously paid at Federal rates of 35.0% or 25.7%, rather than the current Federal rate of 21.0% in effect beginning with the fiscal year 2019. The aggregate impact of the CARES Act resulted in a Federal tax benefit of \$38.5 million.

On August 16, 2022, the Inflation Reduction Act (the “IRA”) was signed into law. In general, the provisions of the IRA will be effective beginning with fiscal year 2023, with certain exceptions. The IRA includes a new 15% corporate minimum tax as well as a 1% excise tax on corporate stock repurchases applicable to repurchases after December 31, 2022. The Company is in the process of evaluating the potential impacts of the IRA and does not currently expect the IRA to have a material impact on our effective tax rate. However, the analysis is ongoing and incomplete, and it is possible that the IRA could have an adverse effect on the Company’s tax liability.

The reconciliation between effective and statutory tax rates on operations is as follows:

	Year Ended August 31,		
	2022	2021	2020
Federal statutory rate	21.0%	(21.0%)	21.0%
State income taxes, net of federal benefit	3.4	(15.0)	2.0
Foreign operations	9.0	25.5	4.5
Carryback rate benefit	(3.2)	(379.1)	—
Permanent differences	7.2	(45.6)	8.9
Change in valuation allowance	(0.8)	12.6	0.1
Uncertain tax positions	(1.8)	(44.0)	3.1
Noncontrolling interest in flow-through entity	(3.0)	(2.9)	(6.1)
Other	(1.9)	0.7	(1.3)
Effective tax rate	<u>29.9%</u>	<u>(468.8%)</u>	<u>32.2%</u>

The tax effects of temporary differences that give rise to significant portions of deferred tax assets and deferred tax liabilities were as follows:

<i>(In millions)</i>	As of August 31,	
	2022	2021
Deferred tax assets:		
Accrued payroll and related liabilities	\$ 27.6	\$ 23.7
Deferred revenue	6.7	7.4
Inventories and other	9.8	16.8
Maintenance and warranty accruals	3.2	2.5
Lease liability	12.4	8.5
Net operating losses	19.6	15.9
Investment, asset tax credits and other	1.5	1.4
	<u>80.8</u>	<u>76.2</u>
Valuation allowance	(9.9)	(10.4)
Deferred tax liabilities:		
Fixed assets	(110.6)	(106.1)
Original issue discount	(0.1)	(17.1)
Intangibles	(5.3)	(3.0)
Right-of-use asset	(11.9)	(8.9)
Other	(11.7)	(4.0)
	<u>(139.5)</u>	<u>(139.1)</u>
Net deferred tax liability	<u>\$ (68.6)</u>	<u>\$ (73.3)</u>

As of August 31, 2022, the Company had \$104.8 million of state net operating loss carryforwards that will begin to expire in fiscal 2026, \$1.2 million of state credit carryforwards that began to expire in 2022, \$33.5 million of foreign net operating loss carryforwards that began to expire in fiscal 2022 and \$26.1 million of foreign net operating loss carryforwards that do not expire. The Company has placed a valuation allowance of \$9.9 million against the deferred tax assets for which no benefit is anticipated, including those for loss and credit carryforwards not likely to be used before their expiration dates or where the possibility of utilization is remote. The net decrease in the total valuation allowance was approximately \$0.5 million for the year ended August 31, 2022.

The Company's cumulative undistributed foreign earnings, if repatriated, would be accompanied by foreign withholdings taxes. However, the Company does not intend to repatriate these foreign earnings and continues to assert that its foreign earnings are indefinitely reinvested. As a result, it has not recorded a liability for foreign withholding taxes associated with undistributed foreign earnings.

The following is a tabular reconciliation of the total amounts of unrecognized tax benefits:

<i>(In millions)</i>	Year Ended August 31,		
	2022	2021	2020
Unrecognized Tax Benefit – Opening Balance	\$ 1.6	\$ 5.5	\$ 1.6
Gross increases – tax positions in prior period	—	—	4.0
Gross decreases – tax positions in prior period	(0.9)	(3.6)	—
Settlements	—	—	—
Lapse of statute of limitations	(0.3)	(0.3)	(0.1)
Unrecognized Tax Benefit – Ending Balance	<u>\$ 0.4</u>	<u>\$ 1.6</u>	<u>\$ 5.5</u>

The Company is subject to taxation in the U.S. and in various states and foreign jurisdictions. The Company is effectively no longer subject to U.S. Federal examination for fiscal years ending before 2015, to state and local examinations before 2015, or to foreign examinations before 2017.

Unrecognized tax benefits, excluding interest, at August 31, 2022 and 2021 were \$0.4 million and \$1.6 million, respectively which if recognized, would affect the effective tax rate. Accrued interest on unrecognized tax benefits as of August 31, 2022 and August 31, 2021 was \$0.1 million and \$0.4 million, respectively, and included a reduction of \$0.3 million and \$0.6 million during the period for changes in unrecognized tax benefits. The Company has not accrued any penalties on the unrecognized tax benefits, and does not anticipate a significant decrease in unrecognized tax benefits or accrued interest during the next twelve months.

Interest and penalties related to income taxes are classified as a component of income tax expense. Benefits from the realization of unrecognized tax benefits for deductible differences attributable to ordinary operations will be recognized as a reduction of income tax expense.

Note 18 — Segment Information

The Company operates in three reportable segments: Manufacturing; Maintenance Services; and Leasing & Management Services.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. Performance is evaluated based on Earnings from operations. Corporate includes selling and administrative costs not directly related to goods and services and certain costs that are intertwined among segments due to our integrated business model. The Company does not allocate Interest and foreign exchange or Income tax benefit (expense) for either external or internal reporting purposes. Intersegment sales and transfers are valued as if the sales or transfers were to third parties. Related revenue and margin are eliminated in consolidation and therefore are not included in consolidated results in the Company's Consolidated Financial Statements.

In the first quarter of 2022 the Company renamed two of its reportable segments to more prominently display the nature of the customer solutions it provides and markets in which it operates. The new names of its reportable segments are Manufacturing (unchanged), Maintenance Services (previously Wheels, Repair & Parts), and Leasing & Management Services (previously Leasing & Services). The name changes have no impact on the organization's reporting structure nor on financial information previously reported. Separately, effective September 1, 2021, the Company changed its measurement basis for allocating syndication revenue between the Manufacturing and Leasing & Management Services reportable segments. This change in measurement reflects the information currently used by management to assess the Company's operating performance in accordance with its refined leasing strategy and has no impact to the Company's total consolidated revenue. Segment results for the prior periods have been recast to conform to the current period presentation.

The information in the following table is derived directly from the segments' internal financial reports used for corporate management purposes.

For the year ended August 31, 2022:

<i>(In millions)</i>	Revenue			Earnings (loss) from operations		
	External	Intersegment	Total	External	Intersegment	Total
Manufacturing	\$ 2,476.6	\$ 191.6	\$ 2,668.2	\$ 97.2	\$ 11.9	\$ 109.1
Maintenance Services	347.7	26.4	374.1	21.7	—	21.7
Leasing & Management Services	153.4	1.9	155.3	108.3	0.1	108.4
Eliminations	—	(219.9)	(219.9)	—	(12.0)	(12.0)
Corporate	—	—	—	(109.2)	—	(109.2)
	<u>\$ 2,977.7</u>	<u>\$ —</u>	<u>\$ 2,977.7</u>	<u>\$ 118.0</u>	<u>\$ —</u>	<u>\$ 118.0</u>

For the year ended August 31, 2021:

<i>(In millions)</i>	Revenue			Earnings (loss) from operations		
	External	Intersegment	Total	External	Intersegment	Total
Manufacturing	\$ 1,311.1	\$ 92.4	\$ 1,403.5	\$ 48.3	\$ 6.9	\$ 55.2
Maintenance Services	298.3	9.1	307.4	6.5	0.1	6.6
Leasing & Management Services	138.5	1.1	139.6	68.9	0.2	69.1
Eliminations	—	(102.6)	(102.6)	—	(7.2)	(7.2)
Corporate	—	—	—	(82.7)	—	(82.7)
	<u>\$ 1,747.9</u>	<u>\$ —</u>	<u>\$ 1,747.9</u>	<u>\$ 41.0</u>	<u>\$ —</u>	<u>\$ 41.0</u>

For the year ended August 31, 2020:

<i>(In millions)</i>	Revenue			Earnings (loss) from operations		
	External	Intersegment	Total	External	Intersegment	Total
Manufacturing	\$ 2,309.5	\$ 3.0	\$ 2,312.5	\$ 157.0	\$ 0.1	\$ 157.1
Maintenance Services	324.7	12.6	337.3	9.0	(0.9)	8.1
Leasing & Management Services	158.0	2.3	160.3	81.4	0.2	81.6
Eliminations	—	(17.9)	(17.9)	—	0.6	0.6
Corporate	—	—	—	(79.0)	—	(79.0)
	<u>\$ 2,792.2</u>	<u>\$ —</u>	<u>\$ 2,792.2</u>	<u>\$ 168.4</u>	<u>\$ —</u>	<u>\$ 168.4</u>

<i>(In millions)</i>	Year Ended August 31,		
	2022	2021	2020
Assets:			
Manufacturing	\$ 1,853.9	\$ 1,493.5	\$ 1,301.7
Maintenance Services	284.8	260.9	271.9
Leasing & Management Services	1,152.2	949.4	739.0
Unallocated, including cash	560.6	686.9	861.2
	<u>\$ 3,851.5</u>	<u>\$ 3,390.7</u>	<u>\$ 3,173.8</u>
Depreciation and amortization:			
Manufacturing	\$ 61.7	\$ 67.8	\$ 78.0
Maintenance Services	10.7	12.0	12.6
Leasing & Management Services	29.6	20.9	19.3
	<u>\$ 102.0</u>	<u>\$ 100.7</u>	<u>\$ 109.9</u>
Capital expenditures:			
Manufacturing	\$ 48.3	\$ 26.6	\$ 48.2
Maintenance Services	9.2	8.6	11.7
Leasing & Management Services	323.2	103.8	7.0
	<u>\$ 380.7</u>	<u>\$ 139.0</u>	<u>\$ 66.9</u>

The following table summarizes selected geographic information.

<i>(In millions)</i>	Year Ended August 31,		
	2022	2021	2020
Revenue ⁽¹⁾:			
U.S.	\$ 2,452.1	\$ 1,221.4	\$ 2,018.7
Foreign	525.6	526.5	773.5
	<u>\$ 2,977.7</u>	<u>\$ 1,747.9</u>	<u>\$ 2,792.2</u>
Assets:			
U.S.	\$ 2,689.6	\$ 2,506.1	\$ 2,359.3
Mexico	948.4	656.6	590.8
Europe	213.5	228.0	223.7
	<u>\$ 3,851.5</u>	<u>\$ 3,390.7</u>	<u>\$ 3,173.8</u>

(1) Revenue is presented on the basis of geographic location of customers.

Reconciliation of Earnings from operations to Earnings (loss) before income tax and earnings from unconsolidated affiliates:

<i>(In millions)</i>	Year Ended August 31,		
	2022	2021	2020
Earnings from operations	\$ 118.0	\$ 41.0	\$ 168.4
Interest and foreign exchange	57.4	43.3	43.6
Net loss on extinguishment of debt	—	6.3	—
Earnings (loss) before income tax and earnings from unconsolidated affiliates	<u>\$ 60.6</u>	<u>\$ (8.6)</u>	<u>\$ 124.8</u>

Note 19 — Customer Concentration

Customer concentration is defined as a single customer that accounts for more than 10% of total revenues or accounts receivable. In 2022, revenue from three customers represented 16%, 12% and 11% of total revenue. In 2021, revenue from two customers each represented 13% of total revenue. In 2020, revenue from two customers represented 15% and 11% of total revenue. No other customers accounted for more than 10% of total revenues for the years ended August 31, 2022, 2021, or 2020. One customer had a balance that represented 12% of the consolidated accounts receivable balance at August 31, 2022. No customer had a balance that individually equaled or exceeded 10% of accounts receivable at August 31, 2021.

Note 20 — Lease Commitments

Lessor

Equipment on operating leases is reported net of accumulated depreciation of \$48.6 million, \$34.4 million, and \$33.4 million as of August 31, 2022, 2021, and 2020, respectively. Depreciation expense was \$22.0 million, \$13.8 million and \$11.6 million as of August 31, 2022, 2021, and 2020 respectively. In addition, certain railcar equipment leased-in by the Company on operating leases is subleased to customers under non-cancelable operating leases with lease terms ranging from one to fourteen years. Operating lease rental revenues included in the Company's Consolidated Statements of Income as of August 31, 2022, 2021, and 2020 was \$66.8 million, \$69.4 million and \$38.7 million respectively, which included \$18.1 million, \$17.1 million, and \$11.2 million respectively, of revenue as a result of daily, monthly or car hire utilization arrangements.

Aggregate minimum future amounts receivable under all non-cancelable operating leases and subleases at August 31, 2022, will mature as follows:

<i>(In millions)</i>	
2023	\$ 46.4
2024	37.7
2025	30.3
2026	26.6
2027	22.8
Thereafter	51.2
	<u>\$ 215.0</u>

Lessee

The Company leases railcars, real estate, and certain equipment under operating and, to a lesser extent, finance lease arrangements. As of and for the twelve months ended August 31, 2022, 2021, and 2020, finance leases were not a material component of the Company's lease portfolio. The Company's real estate and equipment leases have remaining lease terms ranging from less than one year to 76 years, with some including options to extend up to 15 years. The Company recognizes a lease liability and corresponding right-of-use (ROU) asset based on the present value of lease payments. To determine the present value of lease payments, as most of its leases do not provide a readily determinable implicit rate, the Company's incremental borrowing rate is used to discount the lease payments based on information available at lease commencement date. The Company gives consideration to its recent debt issuances as well as publicly available data for instruments with similar characteristics when estimating its incremental borrowing rate.

The components of operating lease costs were as follows:

<i>(In millions)</i>	Twelve Months Ended August 31,		
	2022	2021	2020
Operating lease expense	\$ 10.7	\$ 13.2	\$ 15.3
Short-term lease expense	6.0	5.3	8.3
Total	<u>\$ 16.7</u>	<u>\$ 18.5</u>	<u>\$ 23.6</u>

Aggregate minimum future amounts payable under operating leases having initial or remaining non-cancelable terms at August 31, 2022 will mature as follows:

<i>(In millions)</i>	
2023	\$ 12.9
2024	11.1
2025	8.4
2026	7.3
2027	4.6
Thereafter	17.4
Total lease payments	\$ 61.7
Less: Imputed interest	(5.3)
Total lease obligations	\$ 56.4

The table below presents additional information related to the Company's leases:

Weighted average remaining lease term	
Operating leases	11.4 years
Weighted average discount rate	
Operating leases	2.3%

Supplemental cash flow information related to leases were as follows:

<i>(In millions)</i>	Twelve months ended August 31, 2022
Cash paid for amounts included in the measurement of lease liabilities	
Operating cash flows from operating leases	\$ 11.4
ROU assets obtained in exchange for new operating lease liabilities	\$ 24.7
ROU assets disposed of for lease terminations	\$ —

Note 21 — Commitments and Contingencies

Portland Harbor Superfund Site

The Company's Portland, Oregon manufacturing facility (the Portland Property) is located adjacent to the Willamette River. In December 2000, the U.S. Environmental Protection Agency (EPA) classified portions of the Willamette River bed known as the Portland Harbor, including the portion fronting the Company's manufacturing facility, as a federal "National Priority List" or "Superfund" site due to sediment contamination (the Portland Harbor Site). The Company and more than 140 other parties have received a "General Notice" of potential liability from the EPA relating to the Portland Harbor Site. The letter advised the Company that it may be liable for the costs of investigation and remediation (which liability may be joint and several with other potentially responsible parties) as well as for natural resource damages resulting from releases of hazardous substances to the site. Ten private and public entities, including the Company (the Lower Willamette Group or LWG), signed an Administrative Order on Consent (AOC) to perform a remedial investigation/feasibility study (RI/FS) of the Portland Harbor Site under EPA oversight, and several additional entities did not sign such consent, but nevertheless contributed financially to the effort. The EPA-mandated RI/FS was produced by the LWG and cost over \$110 million during a 17-year period. The Company bore a percentage of the total costs incurred by the LWG in connection with the investigation. The Company's aggregate expenditure during the 17-year period was not material. Some or all of any such outlay may be recoverable from other responsible parties. The EPA issued its Record of Decision (ROD) for the Portland Harbor Site on January 6, 2017 and accordingly on October 26, 2017, the AOC was terminated.

Separate from the process described above, which focused on the type of remediation to be performed at the Portland Harbor Site and the schedule for such remediation, 83 parties, including the State of Oregon and the federal government, entered into a non-judicial mediation process to try to allocate costs associated with remediation of the Portland Harbor Site. Approximately 110 additional parties signed tolling agreements related to such allocations. On April 23, 2009, the Company and the other AOC signatories filed suit against 69 other parties due to a possible limitations period for some such claims; *Arkema Inc. et al v. A & C Foundry Products, Inc. et al*, U.S. District Court, District of Oregon, Case #3:09-cv-453-PK. All but 12 of these parties elected to sign tolling agreements and be dismissed without prejudice, and the case has been stayed by the court until January 14, 2025.

The EPA's January 6, 2017 ROD identifies a clean-up remedy that the EPA estimates will take 13 years of active remediation, followed by 30 years of monitoring with an estimated undiscounted cost of \$1.7 billion. The EPA typically expects its cost estimates to be accurate within a range of -30% to +50%, but this ROD states that changes in costs are likely to occur. The EPA has identified 15 Sediment Decision Units within the ROD cleanup area. One of the units, RM9W, includes the nearshore area of the river sediments offshore of the Portland Property as well as downstream of the facility. It also includes a portion of the Company's riverbank. The ROD does not break down total remediation costs by Sediment Decision Unit. The EPA requested that potentially responsible parties enter AOCs during 2019 agreeing to conduct remedial design studies. Some parties have signed AOCs, including one party with respect to RM9W which includes the area offshore of the Portland Property. The Company has not signed an AOC in connection with remedial design, but will assist in conducting or funding a portion of the RM9W remedial design.

The ROD does not address responsibility for the costs of clean-up, nor does it allocate such costs among the potentially responsible parties. Responsibility for funding and implementing the EPA's selected cleanup remedy will be determined at an unspecified later date. Based on the investigation to date, the Company believes that it did not contribute in any material way to contaminants of concern in the river sediments or the damage of natural resources in the Portland Harbor Site and that the damage in the area of the Portland Harbor Site adjacent to its property precedes the Company's ownership of the Portland Property. Because these environmental investigations are still underway, sufficient information is currently not available to determine the Company's liability, if any, for the cost of any required remediation or restoration of the Portland Harbor Site or to estimate a range of potential loss. Based on the results of the pending investigations and future assessments of natural resource damages, the Company may be required to incur costs associated with additional phases of investigation or remedial action, and may be liable for damages to natural resources. In addition, the Company may be required to perform periodic maintenance dredging in order to continue to launch vessels from its launch ways in Portland, Oregon, on the Willamette River, and the river's classification as a Superfund site could result in some limitations on future dredging and launch activities. Any of these matters could adversely affect the Company's business and Consolidated Financial Statements, or the value of the Portland Property.

On January 30, 2017 the Confederated Tribes and Bands of Yakama Nation sued 33 parties including the Company as well as the U.S. and the State of Oregon for costs it incurred in assessing alleged natural resource damages to the Columbia River from contaminants deposited in Portland Harbor. *Confederated Tribes and Bands of the Yakama Nation v. Air Liquide America Corp., et al.*, U.S. Court for the District of Oregon Case No. 3:17-CV-00164-SB. The complaint does not specify the amount of damages the plaintiff will seek. The case has been stayed until January 14, 2025.

Oregon Department of Environmental Quality (DEQ) Regulation of Portland Manufacturing Operations

The Company entered into a Voluntary Cleanup Agreement with the Oregon Department of Environmental Quality (DEQ) in which the Company agreed to conduct an investigation of whether, and to what extent, past or present operations at the Portland Property may have released hazardous substances into the environment. The Company has also signed an Order on Consent with the DEQ to finalize the investigation of potential onsite sources of contamination that may have a release pathway to the Willamette River. Interim precautionary measures are also required in the order and the Company is discussing with the DEQ potential remedial actions which may be required. The Company's aggregate expenditure has not been material, however it could incur significant expenses for remediation. Some or all of any such outlay may be recoverable from other responsible parties.

Other Litigation, Commitments and Contingencies

Following conclusion of an investigation, the Company reached a preliminary agreement in principle ("Proposed Settlement") with the Securities and Exchange Commission ("SEC") staff pursuant to which the Company would consent, without admitting or denying the SEC's allegations, to the entry of an administrative order to cease-and-desist from violating certain federal securities laws and would pay a civil penalty of \$1 million. The Proposed Settlement relates to disclosures of executive compensation prerequisites and related party transactions in the Company's proxy statements filed with the SEC in connection with annual meetings of shareholders. None of the violations included in the Proposed Settlement include an allegation of intentional wrongdoing by the Company. The Proposed Settlement with the SEC staff is subject to approval by the Commissioners of the SEC. There can be no assurance that the Proposed Settlement will be approved by the Commissioners of the SEC upon the terms as currently proposed or at all.

In consultation with outside advisors, the Company has determined that no amendment to the Company's previously filed periodic reports, and no restatement of the previously issued financial statements of the Company for the applicable periods, would be required in connection with the matters described above. The Company believes the Proposed Settlement is in the best interest of the Company and its shareholders.

From time to time, Greenbrier is involved as a defendant in litigation in the ordinary course of business, the outcomes of which cannot be predicted with certainty. While the ultimate outcome of such legal proceedings cannot be determined at this time, the Company believes that the resolution of pending litigation will not have a material adverse effect on the Company's Consolidated Financial Statements.

As of August 31, 2022, the Company had outstanding letters of credit aggregating to \$6.9 million associated with performance guarantees, facility leases and workers compensation insurance.

Note 22 – Fair Value Measures

Certain assets and liabilities are reported at fair value on either a recurring or nonrecurring basis. Fair value, for this disclosure, is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants, under a three-tier fair value hierarchy which prioritizes the inputs used in measuring a fair value as follows:

Level 1 - observable inputs such as unadjusted quoted prices in active markets for identical instruments;

Level 2 - inputs, other than the quoted market prices in active markets for similar instruments, which are observable, either directly or indirectly; and

Level 3 - unobservable inputs for which there is little or no market data available, which require the reporting entity to develop its own assumptions.

Assets and liabilities measured at fair value on a recurring basis as of August 31, 2022 are:

<i>(In millions)</i>	Total	Level 1	Level 2 ⁽¹⁾	Level 3
Assets:				
Derivative financial instruments	\$ 21.4	\$ —	\$ 21.4	\$ —
Nonqualified savings plan investments	40.3	40.3	—	—
Cash equivalents	119.4	119.4	—	—
	<u>\$ 181.1</u>	<u>\$ 159.7</u>	<u>\$ 21.4</u>	<u>\$ —</u>
Liabilities:				
Derivative financial instruments	\$ 3.0	\$ —	\$ 3.0	\$ —

Assets and liabilities measured at fair value on a recurring basis as of August 31, 2021 are:

<i>(In millions)</i>	Total	Level 1	Level 2 ⁽¹⁾	Level 3
Assets:				
Derivative financial instruments	\$ 0.1	\$ —	\$ 0.1	\$ —
Nonqualified savings plan investments	47.7	47.7	—	—
Cash equivalents	228.9	228.9	—	—
	<u>\$ 276.7</u>	<u>\$ 276.6</u>	<u>\$ 0</u>	<u>\$ —</u>
Liabilities:				
Derivative financial instruments	\$ 10.4	\$ —	\$ 10.4	\$ —

(1) Level 2 assets include derivative financial instruments which are valued based on significant observable inputs. See Note 13 - Derivative Instruments for further discussion.

Note 23 – Fair Value of Financial Instruments

The estimated fair values of financial instruments and the methods and assumptions used to estimate such fair values are as follows:

<i>(In millions)</i>	Carrying Amount ¹	Estimated Fair Value (Level 2)
Notes payable as of August 31, 2022	\$ 1,289.0	\$ 1,231.2
Notes payable as of August 31, 2021	\$ 913.8	\$ 935.9

¹ Carrying amount disclosed in this table excludes debt discount and debt issuance costs.

The carrying amount of cash and cash equivalents, accounts and notes receivable, revolving notes and accounts payable and accrued liabilities is a reasonable estimate of fair value of these financial instruments. Estimated rates currently available to the Company for debt with similar terms and remaining maturities and current market data are used to estimate the fair value of notes payable.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management has evaluated, under the supervision and with the participation of our Principal Executive Officer and Principal Financial and Accounting Officer, the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report pursuant to Rule 13a-15(b) under the Securities Exchange Act of 1934 (the Exchange Act). Based on that evaluation, our Principal Executive Officer and Principal Financial and Accounting Officer have concluded that, as of the end of the period covered by this report, our disclosure controls and procedures were not effective at the reasonable assurance level in ensuring that information required to be disclosed in our Exchange Act reports is (1) recorded, processed, summarized and reported in a timely manner, and (2) accumulated and communicated to our management, including our Principal Executive Officer and Principal Financial and Accounting Officer, due to the material weakness in internal control over financial reporting, described below, to allow timely decisions regarding required disclosure.

In light of the material weakness described below, management performed additional analysis and other procedures to ensure that our consolidated financial statements were prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). Accordingly, management believes that the consolidated financial statements included in this Annual Report on Form 10-K fairly present, in all material respects, our financial position, results of operations, and cash flows as of and for the periods presented, in accordance with U.S. GAAP.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed under the supervision of our Principal Executive Officer and Principal Financial and Accounting Officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in accordance with U.S. GAAP.

As of the end of our 2022 fiscal year, management conducted an assessment of the effectiveness of our internal control over financial reporting based on the framework established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has determined that our internal control over financial reporting was not effective as of August 31, 2022 because of a material weakness in our internal control over financial reporting. We did not have effective controls over change management of system configurations in one IT environment to ensure all changes were logged and approved. As a result, process level automated controls that are dependent on the affected IT environment were ineffective because they could have been adversely impacted. This control deficiency was the result of our risk assessment not identifying a control to ensure the completeness and accuracy of all system configuration changes subject to change management controls.

Notwithstanding that we did not identify any material misstatements to the consolidated financial statements and there were no changes to previously released financial results as a result of this material weakness, the control deficiency created a reasonable possibility that a material misstatement to the consolidated financial statements would not be prevented or detected on a timely basis.

Our independent registered public accounting firm, KPMG LLP, who audited the consolidated financial statements included in this report, has issued an adverse opinion on the effectiveness of the Company's internal control over financial reporting, which is included at the end of Part II, Item 9A of this Form 10-K.

Remediation Plans

We plan to implement controls to ensure that all system changes to configurations within this IT environment are logged and approved. Once controls are designed and implemented, the controls must be operating effectively for a sufficient period of time and be tested by management in order to consider them remediated and conclude that the design is effective to address the risks of material misstatement.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting during the quarter ended August 31, 2022 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent Limitations on Effectiveness of Controls

Our management, including the Principal Executive Officer and Principal Financial and Accounting Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent or detect all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within our company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Projections of any evaluation of controls effectiveness to future periods are subject to risks. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
The Greenbrier Companies, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited The Greenbrier Companies, Inc. and subsidiaries' (the Company) internal control over financial reporting as of August 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, because of the effect of the material weakness, described below, on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of August 31, 2022, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of August 31, 2022 and 2021, the related consolidated statements of income, comprehensive income, equity, and cash flows for each of the years in the three-year period ended August 31, 2022, and the related notes (collectively, the consolidated financial statements), and our report dated October 28, 2022 expressed an unqualified opinion on those consolidated financial statements.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. A material weakness related to ineffective controls over change management of system configurations in one IT environment to ensure all changes were logged and approved resulted in ineffective process level automated controls dependent on the affected IT environment that could have been adversely impacted and has been identified and included in management's assessment. The material weakness was considered in determining the nature, timing, and extent of audit tests applied in our audit of the 2022 consolidated financial statements, and this report does not affect our report on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Portland, Oregon
October 28, 2022

Item 9B. OTHER INFORMATION

None

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not Applicable

PART III

Item 10. DIRECTORS AND EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information required by this item will be included under the captions “Election of Directors”, “Board Committees, Meetings and Charters” and “Our Code of Business Conduct and Ethics and FCPA Compliance” in our definitive Proxy Statement on Schedule 14A for the 2023 Annual Meeting of Shareholders to be filed with the Securities and Exchange Commission within 120 days after the year ended August 31, 2022 (as amended, updated, supplemented, or restated, “2023 Proxy Statement”) and is incorporated herein by reference. Information required by this item regarding the executive officers of the Company is included under the caption “Information about our Executive Officers” in Part I of this 10-K and is incorporated herein by reference.

Item 11. EXECUTIVE COMPENSATION

The information required by this item will be included under the caption “Executive Compensation”, “Compensation Committee Report”, “2022 Director Compensation” and “Risk Oversight” in the 2023 Proxy Statement and is incorporated herein by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDERS MATTERS

The information required by this item will be included under the captions “Stock Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” in the 2023 Proxy Statement and is incorporated herein by reference.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item will be included under the captions “Related Person Transactions” and “Board Independence” in the 2023 Proxy Statement and is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item will be included under the caption “Ratification of Appointment of Independent Auditors” in the 2023 Proxy Statement and is incorporated herein by reference.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(1) Financial Statements

See Consolidated Financial Statements in Item 8

(a) (2) Financial Statements Schedule**

* * All other schedules have been omitted because they are inapplicable, not required or because the information is given in the Consolidated Financial Statements or notes thereto. This supplemental schedule should be read in conjunction with the Consolidated Financial Statements and notes thereto included in this report.

(a) (3) The following exhibits are filed herewith and this list is intended to constitute the exhibit index:

- 3.1 Registrant's Articles of Incorporation are incorporated herein by reference to Exhibit 3.1 to the Registrant's Form 10-Q filed April 5, 2006.
- 3.2 Articles of Merger amending the Registrant's Articles of Incorporation are incorporated herein by reference to Exhibit 3.2 to the Registrant's Form 10-Q filed April 5, 2006.
- 3.3 Amended and Restated Bylaws of The Greenbrier Companies, Inc. dated July 6, 2022 and Effective September 1, 2022
- 4.1 Specimen Common Stock Certificate of Registrant is incorporated herein by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-3 filed April 7, 2010 (SEC File Number 333-165924).
- 4.2 Indenture between the Registrant and Wells Fargo Bank, National Association, as Trustee, including the Form of Note attached as Exhibit A thereto, dated February 6, 2017, is incorporated herein by reference to Exhibit 4.1 to the Registrant's Form 8-K filed February 6, 2017.
- 4.3 Description of the Registrant's Securities Under Section 12 of the Securities Exchange Act of 1934 is incorporated herein by reference to Exhibit 4.3 to the Registrant's Form 10-K filed October 29, 2019.
- 4.4 Indenture between the Registrant and Wells Fargo Bank, National Association, as Trustee, including the Form of Note attached as Exhibit A thereto, dated April 20, 2021 is incorporated herein by reference to Exhibit 4.1 to the Registrant's Form 8-K filed April 21, 2021.
- 4.5 First Supplemental Indenture dated June 1, 2021 to the Indenture dated April 20, 2021 between the Registrant and Wells Fargo Bank, National Association, as Trustee, including the Form of Note attached as Exhibit A thereto is incorporated herein by reference to Exhibit 4.5 to the Registrant's Form 10-Q filed July 9, 2021.
- 10.1* Amended and Restated Employment Agreement between the Registrant and Mr. William A. Furman, dated August 28, 2012, is incorporated herein by reference to Exhibit 10.3 to the Registrant's Form 10-Q filed January 9, 2013.
- 10.2* Amendment to Amended and Restated Employment Agreement between Registrant and Mr. William A. Furman dated as of July 6, 2020, is incorporated herein by reference to Exhibit 10.1 to the Registrant's Form 8-K filed July 10, 2020.

- 10.3* Form of Amended and Restated Employment Agreement between the Registrant and certain of its executive officers, as amended and restated on August 28, 2012, is incorporated herein by reference to Exhibit 10.8 to the Registrant's Form 10-K filed November 1, 2012.
- 10.4* Amendment No. 1 to Form of Amended and Restated Employment Agreement between the Registrant and certain of its executive officers, as amended and restated on August 28, 2012, is incorporated herein by reference to Exhibit 10.1 to the Registrant's Form 10-Q filed January 8, 2014.
- 10.5* Second Amendment to Form of Amended and Restated Employment Agreement between the Registrant and certain of its executive officers, as amended and restated on August 28, 2012, is incorporated herein by reference to Exhibit 10.1 to the Registrant's Form 10-Q filed June 29, 2018.
- 10.6* Form of Amendment to Amended and Restated Employment Agreement between the Registrant and certain of its executive officers is incorporated herein by reference to Exhibit 10.5 to the Registrant's Form 10-K filed October 29, 2019.
- 10.7* Amended and Restated Fourth Amendment to the Amended and Restated Employment Agreement between Registrant and Alejandro Centurion dated as of September 17, 2021 is incorporated herein by reference to Exhibit 10.7 to the Registrant's Form 10-K filed October 26, 2021.
- 10.8* Form of Change of Control Agreement is incorporated herein by reference to Exhibit 10.5 to the Registrant's Form 10-Q filed April 4, 2013.
- 10.9* The Greenbrier Companies, Inc. Form of Amendment to Change of Control Agreement, approved on May 28, 2013, is incorporated herein by reference to Exhibit 10.2 of the Registrant's Form 8-K filed June 3, 2013.
- 10.10* The Greenbrier Companies, Inc. 2014 Amended and Restated Stock Incentive Plan is incorporated herein by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A filed November 19, 2014.
- 10.11* The Greenbrier Companies, Inc. 2021 Stock Incentive Plan is incorporated herein by reference to Exhibit 99.1 to Registrant's Form S-8 filed January 6, 2021.
- 10.12* Stock Incentive Grant Program for Non-Employee Directors under the 2021 Stock Incentive Plan is incorporated by reference to Exhibit 10.2 to Registrant's Form 10-Q filed April 6, 2021.
- 10.13* Third Amendment dated as of January 27, 2021 to Amended and Restated Employment Agreement between Registrant and Mark Rittenbaum is incorporated by reference to Exhibit 10.3 to Registrant's Form 10-Q filed April 6, 2021.
- 10.14* The Greenbrier Companies, Inc. 2017 Amended and Restated Stock Incentive Plan is incorporated herein by reference to Appendix A to the Registrant's Proxy Statement on Schedule 14A filed November 14, 2017.
- 10.15* The Greenbrier Companies, Inc. Nonqualified Deferred Compensation Plan 2018 Amendment and Restatement of the Basic Plan Document is incorporated herein by reference to Exhibit 10.4 to the Registrant's Form 10-Q filed June 29, 2018.

- 10.16* The Greenbrier Companies Nonqualified Deferred Compensation Plan 2018 Amendment and Restatement of the Adoption Agreement is incorporated herein by reference to Exhibit 10.5 to the Registrant's Form 10-Q filed June 29, 2018.
- 10.17* Updated Rabbi Trust Agreements, dated October 1, 2012, related to The Greenbrier Companies, Inc. Nonqualified Deferred Compensation Plan, are incorporated herein by reference to Exhibit 10.1 to the Registrant's Form 10-Q filed January 9, 2013.
- 10.18* Amendment No. 1 to Trust Agreement, dated June 15, 2018, related to The Greenbrier Companies, Inc. Nonqualified Deferred Compensation Plan, is incorporated by reference to Exhibit 10.6 to the Registrant's Form 10-Q filed June 29, 2018.
- 10.19* The Greenbrier Companies Nonqualified Deferred Compensation Plan Adoption Agreement for Directors, dated July 1, 2012, is incorporated herein by reference to Exhibit 10.28 to the Registrant's Form 10-K filed November 1, 2012.
- 10.20* Amendment No. 1 to the Greenbrier Companies Nonqualified Deferred Compensation Plan Adoption Agreement for Directors, dated December 15, 2015, is incorporated herein by reference to Exhibit 10.1 to the Registrant's Form 10-Q filed April 5, 2016.
- 10.21* The Greenbrier Companies, Inc. 2014 Employee Stock Purchase Plan is incorporated herein by reference to Appendix B to the Registrant's Definitive Proxy Statement on Schedule 14A filed on November 19, 2014.
- 10.22* The Greenbrier Companies, Inc. Amendment to 2014 Employee Stock Purchase Plan is incorporated herein by reference to Appendix A to the Registrant's Definitive Proxy Statement on Schedule 14A filed on November 14, 2018.
- 10.23* Consulting Services Agreement between Greenbrier Leasing Company LLC and Charles J. Swindells dated January 7, 2016 is incorporated herein by reference to Exhibit 10.3 to the Registrant's Form 10-Q filed April 5, 2016.
- 10.24 Dissolution Agreement, dated August 20, 2018, by and among the Registrant, Greenbrier Rail Services Holdings, LLC, Watco Companies, L.L.C., Millennium Rail, L.L.C., Watco Mechanical Services, L.L.C., GBW Railcar Services Holdings, L.L.C., GBW Railcar Services, L.L.C., and GBW Railcar Services Canada, Inc. is incorporated herein by reference to Exhibit 10.26 to the Registrant's Form 10-K filed October 26, 2018.
- 10.25 Second Amended and Restated Limited Liability Company Agreement of GBW Railcar Services Holdings, L.L.C., dated August 20, 2018, by and among Greenbrier Rail Services Holdings, LLC, Watco Mechanical Services, L.L.C., and Millennium Rail, L.L.C. is incorporated herein by reference to Exhibit 10.27 to the Registrant's Form 10-K filed October 26, 2018.
- 10.26 Fourth Amended and Restated Credit Agreement, dated as of September 26, 2018, by and among The Greenbrier Companies, Inc., Bank of America, N.A., as Administrative Agent, Merrill Lynch, Pierce, Fenner & Smith Incorporated, as Sole Lead Arranger and Sole Bookrunner, MUFG Union Bank, N.A., as Syndication Agent, Bank of the West, Branch Banking and Trust Company, Fifth Third Bank, and Wells Fargo Bank, National Association, as Co-Documentation Agents, and the lenders identified therein is incorporated herein by reference to Exhibit 10.28 to the Registrant's Form 10-K filed October 26, 2018.

- 10.27 First Amendment to the Fourth Amended and Restated Credit Agreement, dated as of September 26, 2018, by and among The Greenbrier Companies, Inc., Bank of America, N.A., as Administrative Agent, Merrill Lynch, Pierce, Fenner & Smith Incorporated, as Sole Lead Arranger and Sole Bookrunner, MUFG Union Bank, N.A., as Syndication Agent, Bank of the West, Branch Banking and Trust Company, Fifth Third Bank, and Wells Fargo Bank, National Association, as Co-Documentation Agents, and the lenders identified therein is incorporated by reference to Exhibit 10.22 to the Registrant's Form 10-K filed October 29, 2019.
- 10.28 Second Amendment to the Fourth Amended and Restated Credit Agreement, dated as of August 27, 2021, by and among The Greenbrier Companies, Inc., the guarantors and lenders party thereto, and Bank of America, N.A., as Administrative Agent is incorporated herein by reference to Exhibit 10.28 to the Registrant's Form 10-K filed October 26, 2021.
- 10.29 Fourth Amended and Restated Security Agreement, dated as of September 26, 2018, by and among The Greenbrier Companies, Inc., and the other parties identified as Debtors therein, in favor of Bank of America, N.A., as Administrative Agent is incorporated herein by reference to Exhibit 10.29 to the Registrant's Form 10-K filed October 26, 2018.
- 10.30 Fourth Amended and Restated Pledge Agreement, dated as of September 26, 2018, by and among The Greenbrier Companies, Inc., and the other parties identified as Debtors therein, in favor of Bank of America, N.A., as Administrative Agent is incorporated herein by reference to Exhibit 10.30 to the Registrant's Form 10-K filed October 26, 2018.
- 10.31 Amended and Restated Credit Agreement, dated as of September 26, 2018, by and among Greenbrier Leasing Company LLC, an Oregon limited liability company, Bank of America, N.A., as Administrative Agent, Merrill Lynch, Pierce, Fenner & Smith Incorporated, as Sole Lead Arranger and Sole Bookrunner, MUFG Union Bank, N.A., as Syndication Agent, and the lenders identified therein is incorporated herein by reference to Exhibit 10.31 to the Registrant's Form 10-K filed October 26, 2018.
- 10.32 First Amendment to Amended and Restated Credit Agreement, dated as of August 27, 2021, by and among Greenbrier Leasing Company LLC, an Oregon limited liability company, lenders party thereto, and Bank of America, N.A., as Administrative Agent is incorporated herein by reference to Exhibit 10.32 to the Registrant's Form 10-K filed October 26, 2021.
- 10.33 Amended and Restated Security Agreement, dated as of September 26, 2018, by and between Greenbrier Leasing Company LLC, an Oregon limited liability company, in favor of Bank of America, N.A., as Administrative Agent is incorporated herein by reference to Exhibit 10.32 to the Registrant's Form 10-K filed October 26, 2018.
- 10.34 Purchase Agreement, dated January 31, 2017, among The Greenbrier Companies, Inc., Merrill Lynch, Pierce, Fenner & Smith Incorporated and Goldman, Sachs & Co. is incorporated herein by reference to Exhibit 10.1 of the Registrant's Form 8-K filed February 6, 2017.
- 10.35 Asset Purchase Agreement, dated as of April 17, 2019, by and among The Greenbrier Companies, Inc., GBXL, LLC, and American Railcar Industries, Inc., is incorporated herein by reference to Exhibit 2.1 to the Registrant's Form 8-K filed April 18, 2019.
- 10.36 Convertible Promissory Note issued by The Greenbrier Companies, Inc. to American Railcar Industries, Inc. is incorporated herein by reference to Exhibit 4.1 to the Registrant's Form 8-K filed July 29, 2019.

- 10.37 Second Amendment to Amended and Restated Credit Agreement, dated as of July 29, 2022, by and among Greenbrier Leasing Company LLC, an Oregon limited liability company, lenders party thereto, and Bank of America, N.A., as Administrative Agent.
- 10.38 Third Amendment to the Fourth Amended and Restated Credit Agreement, dated as of July 29, 2022, by and among The Greenbrier Companies, Inc., the guarantors and lenders party thereto, and Bank of America, N.A., as Administrative Agent.
- 10.39* Amended and Restated Third Amendment to the Amended and Restated Employment Agreement between the Registrant and William A. Furman is incorporated herein by reference to Exhibit 10.1 to the Registrant's Form 10-Q filed on July 11, 2022.
- 10.40* Amended and Restated Fifth Amendment to the Amended and Restated Employment Agreement between the Registrant and Alejandro Centurion is incorporated herein by reference to Exhibit 10.2 to the Registrant's Form 10-Q filed on July 11, 2022.
- 10.41 Master Indenture dated February 9, 2022 between GBX Leasing 2022-1 LLC and U.S. Bank Trust Company, National Association as indenture trustee and U.S. Bank National Association, as securities intermediary is incorporated herein by reference to Exhibit 10.37 to the Registrant's Form 10-Q filed on April 6, 2022. [Portions omitted]
- 10.42 Series 2022-1 Supplement dated February 9, 2022 between GBX Leasing 2022-1 LLC and U.S. Bank National Association, as Indenture Trustee (including Forms of Note attached as Exhibit A and Exhibit B thereto) is incorporated herein by reference to Exhibit 10.38 to the Registrant's Form 10-Q filed on April 6, 2022. [Portions omitted]
- 10.43 Amendment No. 2 to Warehouse Loan Agreement dated August 26, 2022 by among GBXL I, LLC, as borrower, Bank of America N.A. as a lender and as agent and Credit Agricole Corporate and Investment Bank, as lender.
- 21.1 List of the subsidiaries of the Registrant.
- 23.1 Consent of KPMG LLP.
- 31.1 Certification pursuant to Rule 13(a) – 14(a).
- 31.2 Certification pursuant to Rule 13(a) – 14(a).
- 32.1 Certification pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 32.2 Certification pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
- 101.INS Inline XBRL Instance Document.
- 101.SCH Inline XBRL Taxonomy Extension Schema Document.
- 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document.
- 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document.
- 101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document.

101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document.

104 Cover Page Interactive Data File (Formatted as inline XBRL and contained in Exhibit 101).

* Management contract or compensatory plan or arrangement

Note: For all exhibits incorporated by reference, unless otherwise noted above, the SEC file number is 001-13146.

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities and Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

THE GREENBRIER COMPANIES, INC.

Dated: October 28, 2022

By: /s/ Lorie L. Tekorius
Lorie L. Tekorius
Chief Executive Officer
(Principal Executive Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Date</u>
<u>/s/ Lorie L. Tekorius</u> Lorie Tekorius, President, Chief Executive Officer and Director	October 28, 2022
<u>/s/ Thomas B. Fargo</u> Thomas B. Fargo, Chair of the Board	October 28, 2022
<u>/s/ Wanda F. Felton</u> Wanda F. Felton, Director	October 28, 2022
<u>/s/ William A. Furman</u> William A. Furman, Director	October 28, 2022
<u>/s/ Antonio Garza</u> Antonio Garza, Director	October 28, 2022
<u>/s/ James R. Huffines</u> James R. Huffines, Director	October 28, 2022
<u>/s/ Graeme A. Jack</u> Graeme A. Jack, Director	October 28, 2022
<u>/s/ David L. Starling</u> David L. Starling, Director	October 28, 2022
<u>/s/ Charles J. Swindells</u> Charles J. Swindells, Director	October 28, 2022
<u>/s/ Wendy L. Teramoto</u> Wendy L. Teramoto, Director	October 28, 2022
<u>/s/ Kelly M. Williams</u> Kelly M. Williams, Director	October 28, 2022
<u>/s/ Adrian J. Downes</u> Adrian J. Downes, Senior Vice President, Chief Financial Officer and Chief Accounting Officer (Principal Financial Officer and Principal Accounting Officer)	October 28, 2022

Directors

Director Name and Title

Thomas B. Fargo Independent Chair

Wanda F. Felton Independent Director

William A. Furman Director

Antonio O. Garza Independent Director

James R. Huffines Independent Director

Graeme A. Jack Independent Director

David L. Starling Independent Director

Charles J. Swindells Independent Director

Lorie L. Tekorius Director

Wendy L. Teramoto Independent Director

Kelly M. Williams Independent Director

Executive and Other Officers

Lorie L. Tekorius

Chief Executive Officer and President

Martin R. Baker

Senior Vice President,
General Counsel and
Chief Compliance Officer

Brian J. Comstock

Executive Vice President and
Chief Commercial & Leasing Officer

Laurie Dornan

Senior Vice President,
Chief Human Resources Officer

Adrian J. Downes

Senior Vice President,
Chief Financial Officer
and Chief Accounting Officer

Rick Galvan

Senior Vice President,
Greenbrier Rail Services

William Glenn

Chair of the Management Board,
Greenbrier Europe

Jack Isselmann

Senior Vice President,
External Affairs & Communications

William Krueger

Senior Vice President,
President Greenbrier Manufacturing
Operations

Christian M. Lucky

Assistant General Counsel and
Corporate Secretary

Justin M. Roberts

Vice President,
Corporate Finance and Treasurer

Investor Information

Corporate Offices

The Greenbrier Companies, Inc.
One Centerpointe Drive, Suite 200
Lake Oswego, OR 97035

Annual Shareholders' Meeting

Friday, January 6, 2023 | 2:00 pm PT
Via Webcast at:
www.virtualshareholdermeeting.com/GBX2023

Financial Information

Request for copies of this annual report
and other financial information should be
made to:

Investor Relations

The Greenbrier Companies, Inc.
One Centerpointe Drive, Suite 200
Lake Oswego, OR 97035
investorrelations@gbrx.com
503-684-7000

Independent Auditors

KPMG LLP
Portland, OR 97201

Transfer Agent

Computershare Trust Company, N.A.
PO Box 505000
Louisville, KY 40233

Greenbrier's Transfer Agent maintains
stockholder records, issues stock
certificates and distributes dividends.
Requests concerning these matters
should be directed to Computershare
Trust Company, N.A.



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THE
GREENBRIER
COMPANIES

THE GREENBRIER COMPANIES

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