

OPERATOR'S MANUAL

Storm Tracker Track System



J. & M. Manufacturing Co., Inc.
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TO THE DEALER:

Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists in the Operator's Manual are completed before releasing equipment to the owner.

The dealer must complete the Warranty Registration Card attached to the front inside cover of this manual and return to J. & M. Mfg. Co., Inc. at the address indicated on the card. Warranty claims will be denied if the Warranty Registration Card has not been completed and returned.

EXPRESS WARRANTY:

J. & M. Mfg. Co. Inc. warrants against defects in construction or materials for a period of ONE year. We reserve the right to inspect and decide whether material or construction was faulty or whether abuse or accident voids our guarantee.

Warranty service must be performed by a dealer or service center authorized by J. & M. Mfg. Co. Inc. to sell and/or service the type of product involved, which will use only new or remanufactured parts or components furnished by J. & M. Mfg. Co. Inc. Warranty service will be performed without charge to the purchaser for parts or labor based on the Warranty Labor Times schedule. Under no circumstance will allowable labor times extend beyond the maximum hours indicated in the Warranty Labor Times schedule for each warranty procedure. The purchaser will be responsible for any service call and/or transportation of the product to and from the dealer or service center's place of business, for any premium charged for overtime labor requested by the purchaser, and for any service and/or maintenance not directly related to any defect covered under the warranty. Costs associated with equipment rental, product down time, or product disposal are not warrantable and will not be accepted under any circumstance.

Each warranty term begins on the date of product delivery to the purchaser. Under no circumstance will warranty be approved unless the product warranty registration card (attached to the inside of the Operator's Manual) has been properly completed and submitted to the equipment manufacturer. This Warranty is effective only if the warranty registration card is returned within 30 days of purchase.

This warranty does not cover a component which fails, malfunctions or is damaged as a result of (i) improper modification or repair, (ii) accident, abuse or improper use, (iii) improper or insufficient maintenance, or (iv) normal wear or tear. This warranty does not cover products that are previously owned and extends solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. J. & M. Mfg. Co. Inc. makes no warranty, express or implied, with respect to tires or other parts or accessories not manufactured by J. & M. Mfg. Co. Inc. Warranties for these items, if any, are provided separately by their respective manufacturers.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

In no event shall J. & M. Mfg. Co. Inc. be liable for special, direct, incidental or consequential damages of any kind. The exclusive remedy under this Warranty shall be repair or replacement of the defective component at J. & M. Mfg. Co. Inc's. option. This is the entire agreement between J. & M. Mfg. Co. Inc. and the Owner about warranty and no J. & M. Mfg. Co. Inc. employee or dealer is authorized to make any additional warranty on behalf of J. & M. Mfg. Co. Inc.

The manufacturer reserves the right to make product design and material changes at any time without notice. They shall not incur any obligation or liability to incorporate such changes and improvements in products previously sold to any customer, nor shall they be obligated or liable for the replacement of previously sold products with products or parts incorporating such changes.

SERVICE:

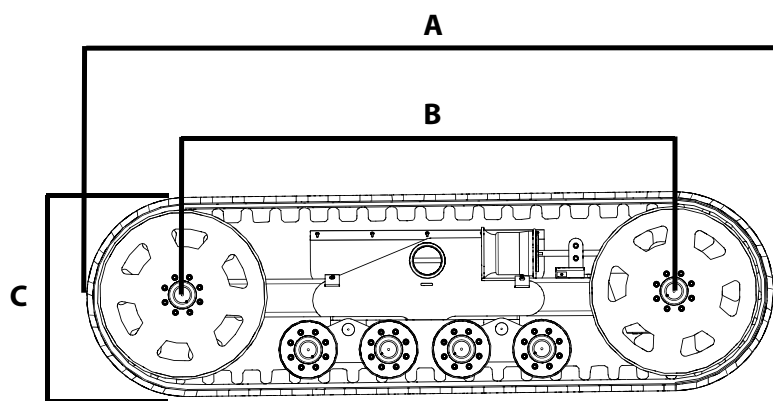
The equipment you have purchased has been carefully manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Lubricate the unit as specified. Observe all safety information in this manual and safety signs on the equipment.

For service, your authorized J. & M. dealer has trained mechanics, genuine J. & M. service parts, and the necessary tools and equipment to handle all your needs.

Use only genuine J. & M. service parts. Substitute parts may void the warranty and may not meet standards required for safe and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

Serial # _____ Purchase Date: _____ Purchased From: _____

Please provide this information to your dealer to obtain the correct parts:



Features	
End Idler Constructions	Steel
Mid Roller (Bogies) (4 Per Set)	4 Sets
Pivot Bogey System	Yes
Air-Spring Cushion Belt Tensioner	Yes
Leveraged Tensioner	2 to 1
# of Hubs Used	24

Specifications	
Track Width	36"
Idler Width (effective)	36"
Overall Length (A)	146"
Idler Diameter	36"
Roller Diameter	12 3/4"
Wheel Base (B)	105"
Main Pivot Pin Diameter	6" Dia (4140)
Track Length	324"
Track Height (C)	42"
Track Width	36"
Carry Capacity	120,000 lbs.
Overall Weight	11,350 lbs.
Belt Weight (each)	1,300 lbs.
Track Tension	10,000 psi
Footprint per Track	3,780 Sq. In.
Footprint (Total)	7,560 Sq. In.

GENERAL INFORMATION

TO THE OWNER:

The purpose of this manual is to assist you in operating and maintaining your track system in a safe manner. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance and help maintain safe operating conditions. If this machine is used by an employee or is loaned or rented, make certain that the operator(s), prior to operating:

1. Is instructed in safe and proper use.
2. Reviews and understands the manual(s) pertaining to this machine.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING** and **DANGER** are used in conjunction with the Safety-Alert Symbol, (a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.



This Safety-Alert symbol indicates a hazard and means
ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed.



CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

IMPORTANT Indicates that failure to observe can cause damage to equipment.

NOTE Indicates helpful information.

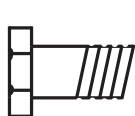
BOLT TORQUE CHART

Always tighten hardware to these values unless a different torque or tightening procedure is listed for a specific application.

Fasteners must always be replaced with the same grade as specified in the manual parts list.

Always use the proper tool for tightening hardware. SAE for SAE hardware and Metric for Metric hardware.

Make sure fastener threads are clean and you start the thread engagement properly. All torque values are given to specification used on hardware defined by SAE J1701 & J1701M (Jul 96).



SAE SERIES TORQUE CHART



SAE Grade 2
(No Dashes)

SAE Bolt Head
Identification

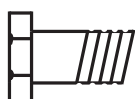


SAE Grade 5
3 Radial Dashes



SAE Grade 8
6 Radial Dashes

 Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		LBS.-FT.	N-m	LBS.-FT.	N-m	LBS.-FT.	N-m
1/4	7/16"	6	8	10	13	14	18
5/16	1/2"	12	17	19	26	27	37
3/8	9/16"	23	31	35	47	49	67
7/16	5/8"	36	48	55	75	78	106
1/2	3/4"	55	75	85	115	120	163
9/16	13/16"	78	106	121	164	171	232
5/8	15/16"	110	149	170	230	240	325
3/4	1-1/8"	192	261	297	403	420	569
7/8	1-5/16"	306	416	474	642	669	907
1	1-1/2"	467	634	722	979	1020	1383



METRIC SERIES TORQUE CHART



Metric
Grade 8.8

Metric Bolt Head
Identification



Metric
Grade 10.9

Diameter & (Millimeters) Thread Pitch	Wrench Size	COARSE THREAD				FINE THREAD				Diameter & (Millimeters) Thread Pitch
		MARKING ON THREAD				MARKING ON THREAD				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12.1.75	18 mm	68	50	94	70	75	55	103	76	12.1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be erased by an operator's single careless act. In addition, hazard control and accident prevention are dependent upon the awareness, concern, judgment, and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Make certain that the operator(s), prior to operating is instructed in safe and proper use and reviews and understands the manual(s) pertaining to this machine. Also make certain that the operator(s) reviews and understands the operator's manual of the grain cart and the tractor.

Read this manual before you operate this machine. If you do not understand any part of this manual, or need more information, contact the manufacturer or your authorized dealer.

SAFETY

Understand that your safety and the safety of other persons are measured by how you service, and operate this machine.

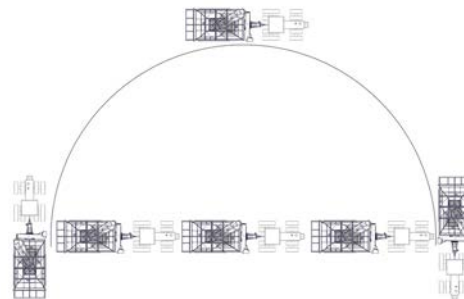
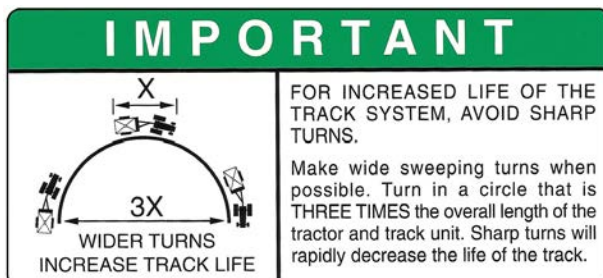
The safety information given in this manual does not replace safety codes, federal, state or local laws. Make certain your machine has the proper equipment as designated by local laws and regulations.

Travel speeds should be such that complete control and machine stability is maintained at all times. Where possible, avoid operating near ditches, embankments and holes. If a ditch must be crossed, do so at an angle. Avoid sharp turns to maximize the stability of the road. Reduce speed when turning, crossing slopes and rough, slick or muddy surfaces. Avoid running over hard objects protruding above the ground surface, if possible. Damage to the understructure or load may result. If the object is unavoidable, reduce speed.

Never adjust, service, clean, or lubricate track system until all power is shut off. Keep all safety shields in place. Support equipment and attachments properly when working beneath them. Do not depend on hydraulic cylinders to hold them up. An attachment can fail if a control is moved, or if a hydraulic line breaks. Wear protective glasses when servicing equipment.

OPERATING INSTRUCTIONS

IMPORTANT: To maximize the life of your track system, it is recommended that wide turns be consistently made whenever possible. Turning in a circle that is **THREE TIMES** the overall length of the tractor and track unit will reduce premature wear on the belt and undercarriage.



Lubrication Service Schedule

IMPORTANT: Your Track System has grease fittings at all critical points. These should be serviced before the track is put into operation. **BE SURE THAT ALL POWER IS SHUT OFF BEFORE SERVICING THE TRACK SYSTEM.**

The grease points shown should be lubricated daily before use. Multipurpose Lithium Grease is recommended for idler and mid-roller bearing lubrication.



⚠ WARNING: When Servicing The Track System, Be Certain All Power To Grain Cart Is Shut Off.

Repack the wheel bearings at least once a year. Use Bearing Gard MK1 or equivalent lubricant. Also check the seal for wear and replace if necessary.

Check the track system periodically for cracks in welds and for other structural damage. Have cracked welds fixed immediately. Failure to do so could result in extensive damage to the track system and grain cart and greatly reduce the life of the equipment.

Lubricate the track system according to the Lubrication Service Schedule.

Make sure that all guards and shields are in place before operating the track system.

Check the pressure in the air spring after every 100 hours of operation and at the beginning of each season. The correct air pressure is 100 psi.

Check the wheel hubs and make sure the nuts are torqued to 350 ft. lbs. Check the hub nuts after the first hour of operation, then every 10 hours of operation for the first 40 hours of use. These nuts must be kept tight at all times. Wheels that are improperly installed and maintained, resulting in failure, will nullify the warranty and shift the burden of liability to the owner/operator of the equipment.

TROUBLE SHOOTING

⚠ WARNING: Make sure all power is shut off to grain cart before servicing the track system. Maintenance and repair service work to be performed by qualified servicemen only.

Trouble...	Possible Causes...	Possible Remedy...
Belt Guide Lugs Show Wear	Misalignment	Adjust Front Alignment Weldment
No Belt Tension	Deflated Air Spring	Replace Air Spring (100 psi max.)

AIR BAG REPLACEMENT

If replacement of the track tension air springs become necessary, the following steps must be performed:

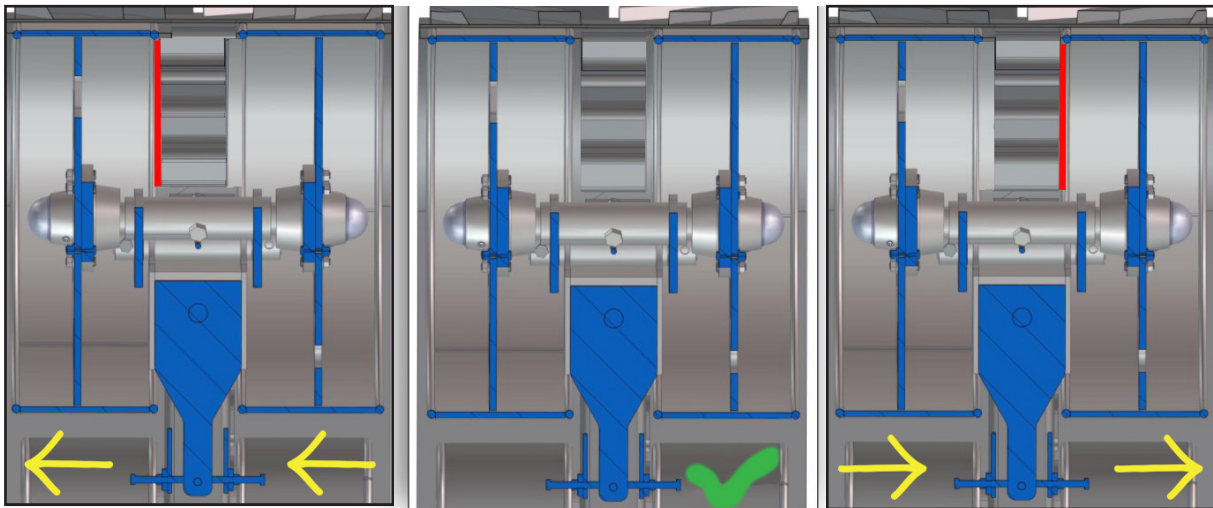
1. Slowly release the air pressure from the rubber bladder.
2. Remove the bolts that hold the air spring in place and remove the air spring.
3. Install new air spring between pressure plates. (Be careful not to damage brass air fitting on top of air spring.)
4. Install and tighten bolts on bottom side of air bag using blue lock-tight. DO NOT OVERTIGHTEN as cracking of plastic base will occur. Bolt torque should be 20-30 ft.-lbs.
5. Slowly fill air bag with compressed air to the recommended pressure in owner's manual. Stand clear of any moving parts while filling up air springs. Sudden movement can occur.

TRACK ALIGNMENT

The rubber tracks are held in proper alignment by the front alignment weldment. Track alignment is set at the factory but may need further adjustment. Rubber tracks require a run in period to seat properly. More adjustments may be necessary for the first week or two. It is normal for tracks to favor one side or the other depending on ground condition, contour and carrying weight. If after the first load you feel heat on the side of the Guide Lugs, follow the instructions below.

***Red represents heat.**

Guide Lugs



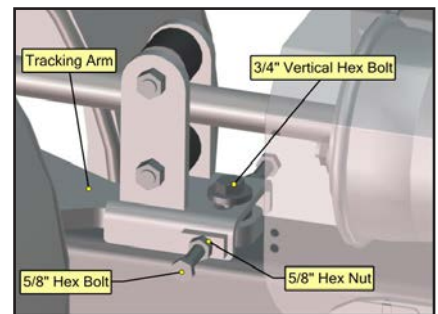
Step 1 - Loosen the 3/4" vertical hex bolt with an 1-1/8" wrench. (use wrench on wrench method for better leverage)

Step 2 - Loosen the 5/8" nuts (one each side) on the 5/8" adjuster bolts on both sides of the Tracking Arm. Use a 15/16" wrench.

Step 3 - Correct the alignment by moving the Tracking Arm with the 5/8" adjuster hex bolts on both sides of the Tracking Arm. Turn the adjuster bolts a 1/4 turn towards the heated side of the Guide Lugs. Use a 15/16" wrench to adjust the hex bolts.

Step 4 - Tighten the 5/8" nuts according to specifications on both sides of the Tracking Arm.

Step 5 - Check the alignment. Pull the track a short, straight distance on flat ground. Feel the Guide Lugs for heat. If the Guide Lugs on the rubber belt stay cool, the belt is properly aligned.



BELT INSPECTION

The rubber track is composed of several layers of cable, similar to the cables used in automotive tires. The most important set of cables are located about 8 mm (0.3 in.) beneath the inside surface of the track. This set of cables, called zero degree cables, withstands track tension. Other cables, called breaker cables, are located between the zero degree cables and the outside surface of the track. These are laid in various angles to provide lateral support and to protect the zero degree cables.

When any of the cables are exposed to moisture by cuts or gouges in the rubber, they can deteriorate by rusting. Because of this, any exposed cables should be repaired as soon as possible. Any damaged zero degree cables that protrude above the surface of the track should be clipped or ground down to below the surface of the track to prevent additional damage due to unraveling. Cuts, gouges and minor wear on guideblocks are not expected to cause operational problems. However, a track that has two or more consecutive guideblocks missing should be replaced since this could lead to untracking, possibly damaging other undercarriage components.

STORAGE PREPARATION

IMPORTANT: When the track system is not going to be used for a length of time, store the tracks in a dry, protected place. Leaving your track system outside, open to the weather, will shorten its life. Park the track system on level ground. Block the front and rear of the belts to prevent the tracks from rolling unexpectedly. Inspect the track system and touch-up spots where the paint has been worn away (use a good quality primer paint).

REMOVING FROM STORAGE

1. Make sure the air spring pressure is inflated to 100 psi.
2. Inspect rubber belt for cuts or gouges and repair any damaged cables.
3. Check for missing or damaged guideblocks and replace as necessary.
4. Lubricate all grease points.
5. Repack the wheel bearings. Use Bearing Guard MK1 or equivalent lubricant.
6. Check the seal for wear and replace if necessary.
7. Check the wheel hubs and make sure the nuts are properly torque to 350 ft.-lbs.

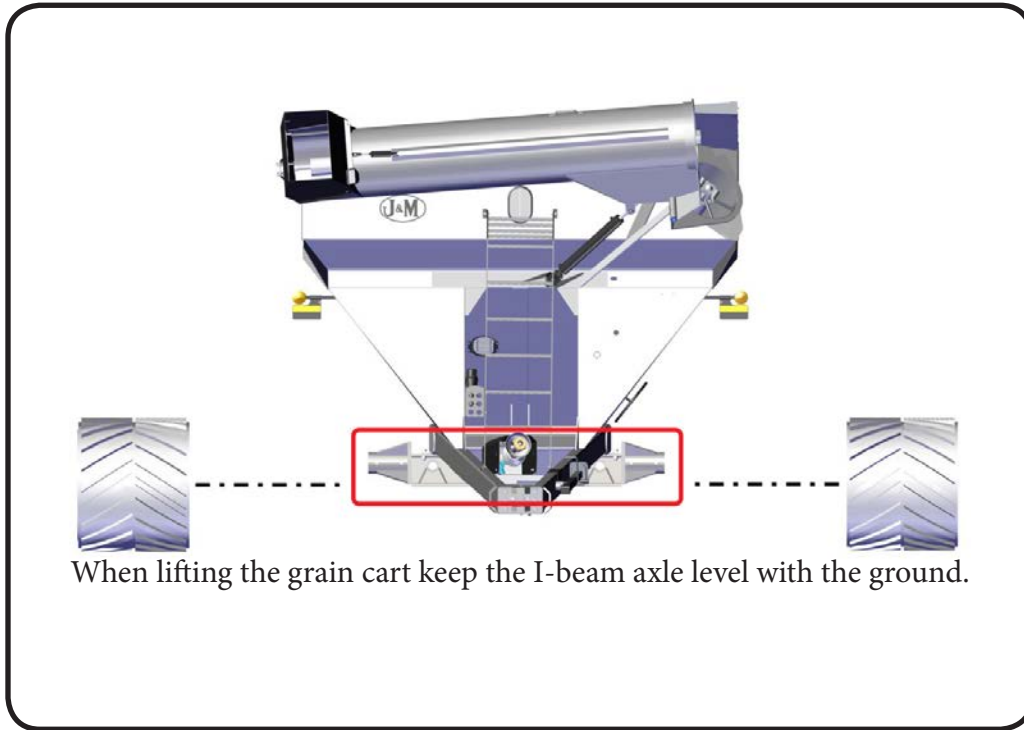
When performing maintenance work, wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head. Follow Operator's Manual instructions to ensure safe and proper maintenance and repair.

Your local, authorized dealer can supply genuine replacement parts. Substitute parts may not meet original equipment specifications and may be dangerous.

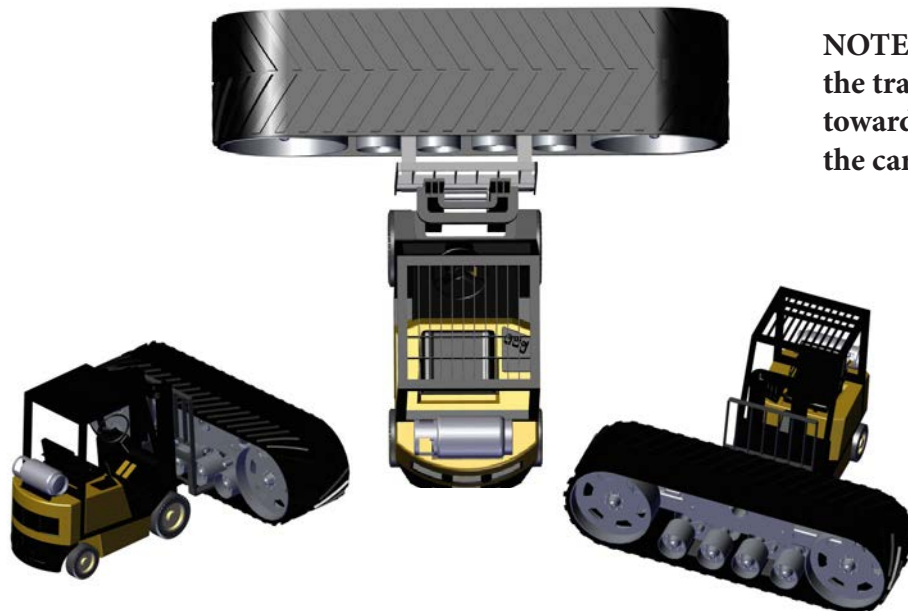
BE CERTAIN THAT ALL POWER IS SHUT OFF TO THE GRAIN CART BEFORE PERFORMING ANY MAINTENANCE OR REPAIR WORK.

Step 1 - Install both spindles. Use (2) 1" x 9" Hex Bolts and (2) 1" Centerlock Hex Nuts to attach the spindles to the cart. Next slip the 6" Rubber O-ring onto the spindle.

Step 2 - Use an overhead hoist to pick up the grain cart. Use a hoist and chains that are rated for the specific weights. The weights are located in the grain cart manual. When raising the grain cart keep the I-beam axle level with the ground.



Step 3 - Pick the Tracks up with a fork lift. Put both of the forks in-between two bogie wheels. It is recommended to use a forklift with the side shift option available. Use a fork lift that is rated for at least 6,000 lbs.

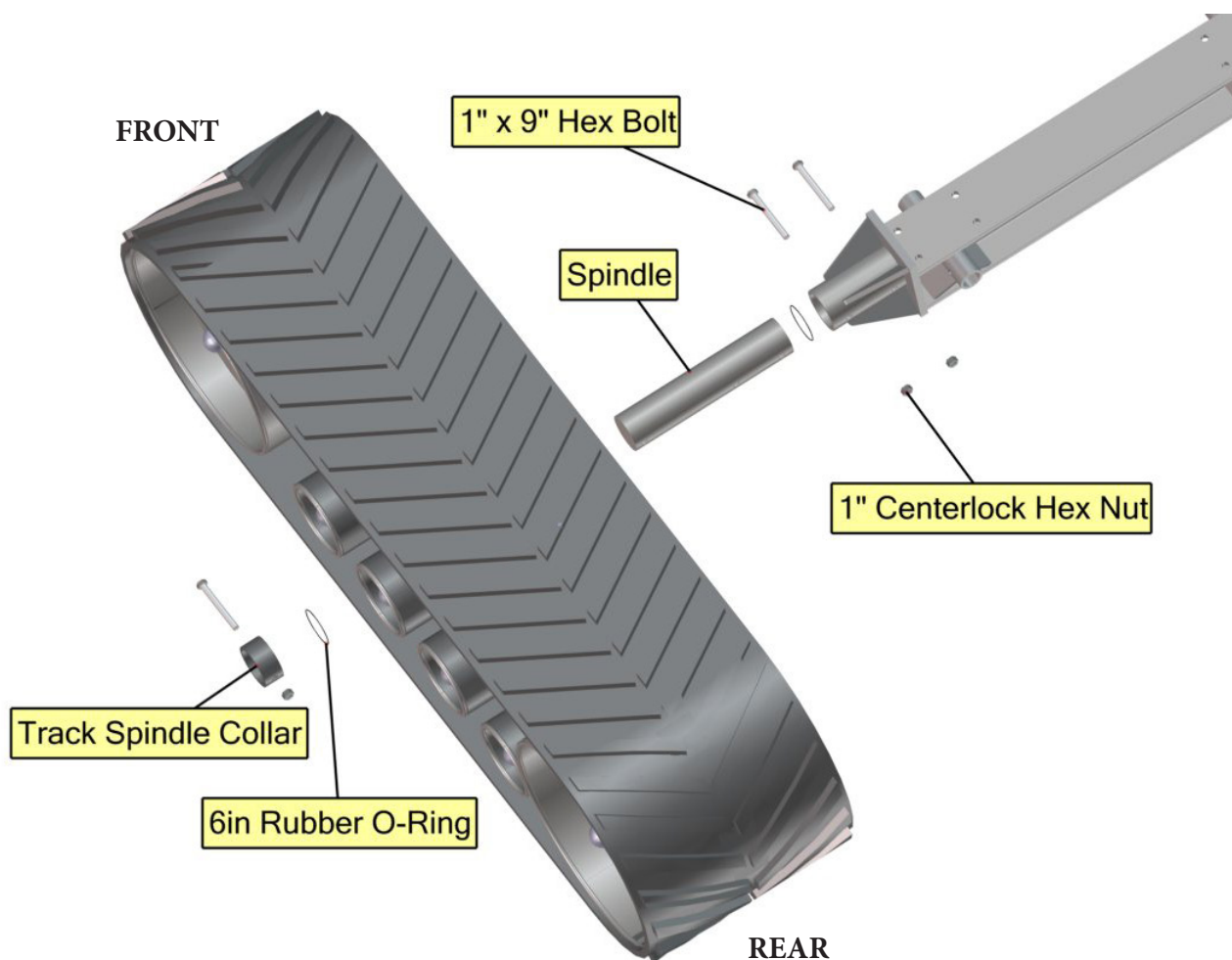


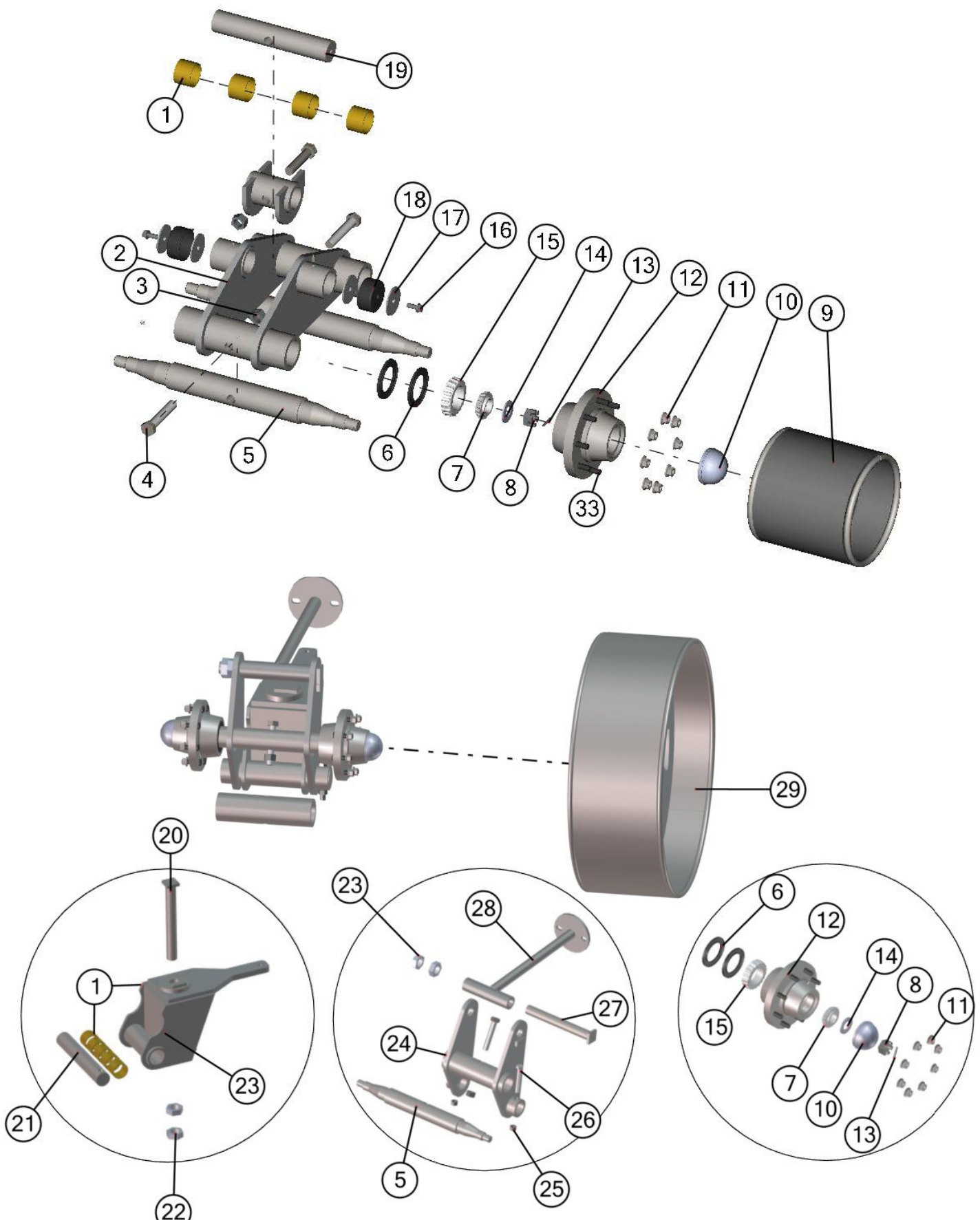
Step 4 - Slide the tracks onto the spindle.

Step 5 - Slip the 6" Rubber O-Ring onto the spindle, pushing it up against the track spindle.

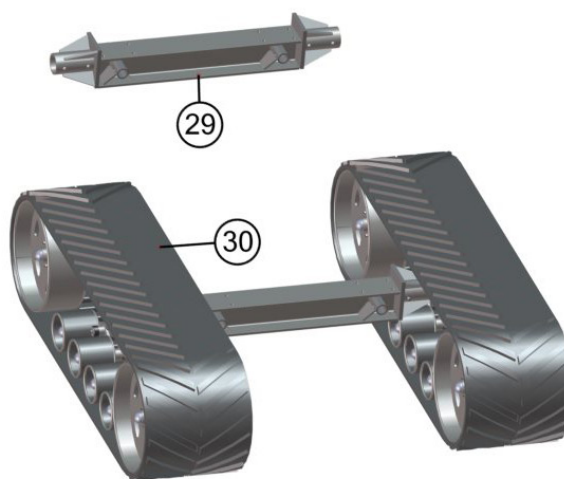
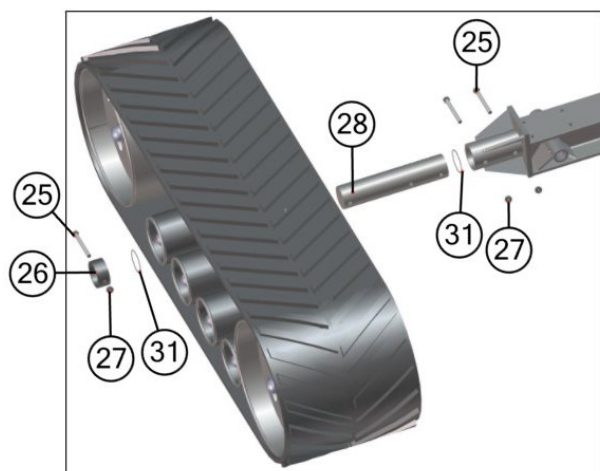
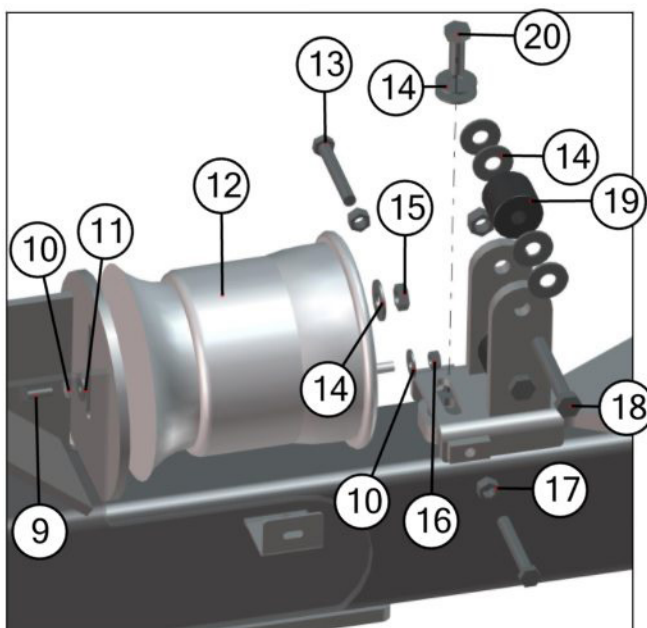
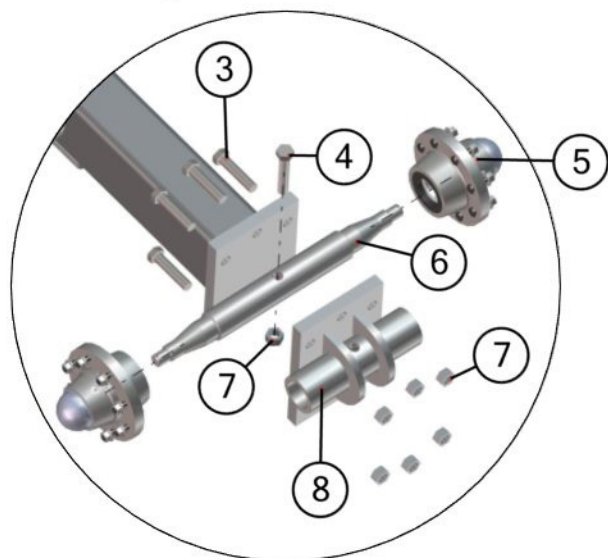
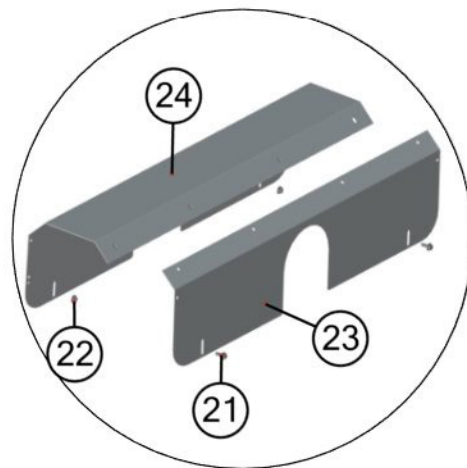
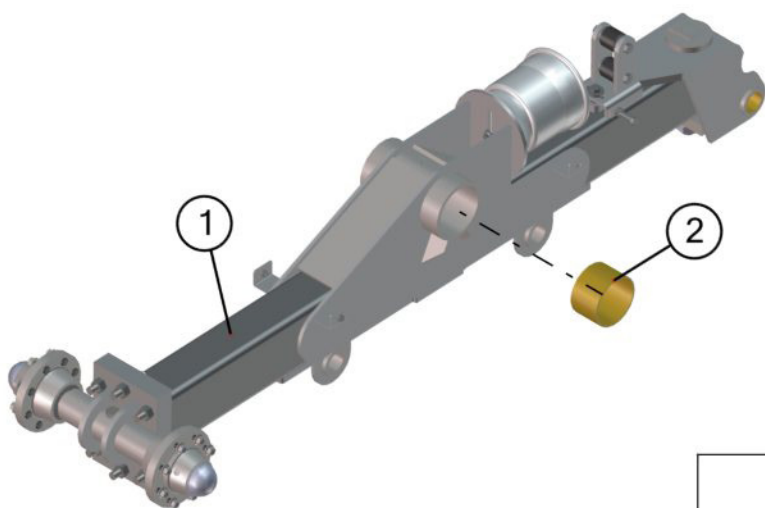
Step 6 - Install the Track Spindle Collar. Use a 1" x 9" Hex Bolt and a 1" Centerlock Hex Nut to fasten the Collar to the Spindle.

Step 7 - Tighten all of the hardware according to the Bolt Torque Chart located at the beginning of the manual.





#	Description	Part. No.
1	2-1/2" ID Bronze Bushing	JM0016841
2	Bogie Wheel Swivel Weldment	JM0020256
3	1"-8 Gr5 Z Centerlock Hex Nut	JM0002149
4	1"-8 x 5-1/2" Gr5 Z Hex Bolt	JM0002110
5	Double End Spindle 3" X 29 5/8"	JM0020287
6	30087 Seal	JM0020311
7	G848 Small Cone Bearing	JM0020305
8	1-1/4-12 Gr5 Z Castle Hex Nut	JM0010113
9	Bogie Wheel Weldment	JM0020268
9	Bogie Wheel Weldment (oil bath hub)	JM0025750
10	Dust Cap G848 Hub	JM0020304
10	Dust Cap G848 Oil Bath Hub	JM0025747
10	O-Ring for Dust Cap Oil Bath Hub	JM0020321
11	5/8"-18 Wheel Nut	JM0019246
11	3/4"-16 Wheel Nut (oil bath hub)	JM0018958
12	G848 Hub Cpt. 8000# with Studs Lugs and Races	JM0020309
12	G848 Oil Bath Hub with Studs Lugs and Races	JM0025743
13	1/4" x 1-3/4" Z ROLL PIN	JM0009911
14	1-1/4" ID x 2-1/2" O.D. x 1/8" ZN USS Flat Washer	JM0020322
15	G848 Large Cone Bearing	JM0020306
16	1/2"-13 x 1-1/4" Gr5 Z SF Hex Bolt	JM0010002
17	Track Washer	JM0015112
18	3-1/2" in Rubber Cap	JM0020315
19	Bogie Wheels Swivel Pin - 2" Thread Depth	JM0020288
20	1 3/4" x 14" Pin Weldment	JM0020328
21	Track Tightener Pivot Pin	JM0020293
22	1-3/4"-5 Gr5 Hex Nut	JM0019334
23	Track Swivel Hitch Weldment	JM0020291
24	Track Belt Tensioner Weldment	JM0020284
25	3/4"-10 Gr5 Z Centerlock Hex Nut	JM0002147
26	3/4"-10 x 5" Gr8 Z Hex Bolt	JM0020318
27	1 3/4" x 14" Pin Weldment	JM0020328
28	Plunger Rod Weldment	JM0020261
29	Large Track Wheel Weldment	JM0020249
30	*Grease Zerk (Not Shown)	JM0009756
31	*Grease Zerk Extension Hose Short (Not Shown)	JM0020498
32	*Grease Zerk Extension Hose Long (Not Shown)	JM0020489
33	5/8" Stud (Non Oil Bath Hubs)	JM0019235
33	3/4" Stud (Oil Bath Hubs)	JM0018957



#	Part. No.	Description
1	JM0020273	Track Carriage Beam Frame Weldment
2	JM0020350	6" ID Bronze Bushing
3	JM0016687	1"-8 X 4-1/2" Gr5 Z Hex Bolt
4	JM0002110	1"-8 X 5-1/2" Gr5 Z Hex Bolt
5	JM0020309	G848 Hub Cpt. 8000# with Studs Lugs and Races
6	JM0020287	Double End Spindle 3" X 29 5/8"
7	JM0002149	1"-8 Gr5 Z Centerlock Hex Nut
8	JM0020285	Carriage Beam End Plate Weldment
9	JM0001513	1/2"-13 X 1-1/4" Gr5 Z Hex Bolt
10	JM0003082	1/2" USS Flat Washer
11	JM0016059	1/2" Split Lock Washer
12	JM0020319	Track Air Spring
13	JM0020316	5/8"-11 X 4-1/2" Gr5 Z Hex Bolt
14	JM0010006	3/4" USS Flat Washer
15	JM0002125	3/4"-10 Gr5 Z Hex Nut
16	JM0002124	1/2"-13 Gr5 Z Hex Nut
17	JM0001522	5/8"-11 Gr5 Z Hex Nut
18	JM0020318	3/4"-10 X 5" Gr8 Z Hex Bolt
19	JM0020321	UHMW 2-1/2" OD x .781 ID x 2-1/8" Black Roller
20	JM0016693	3/4"-16 X 2" Gr5 Z Hex Bolt
21	JM0001592	3/8"-16 X 1" Gr5 Z SF Hex Bolt
22	JM0002152	3/8"-16 Gr5 Z SF Hex Nut
23	JM0015109	Track Spool Shield Assembly
24	JM0015110	Track Spool Shield
25	JM0001708	1"-8 X 9" Gr8 Z Hex Bolt
26	JM0020346	Tracks Spindle Collar
27	JM0002127	1"-8 Gr5 Z Centerlock Hex Nut
28	JM0020343	Track Spindle Shank 6" X 27 3/4"
29	JM0013908	Track I-Beam Axle Weldment
30	JM0020335	36" Rubber Belt x 324"
31	JM0020493	6" Rubber O-Ring



