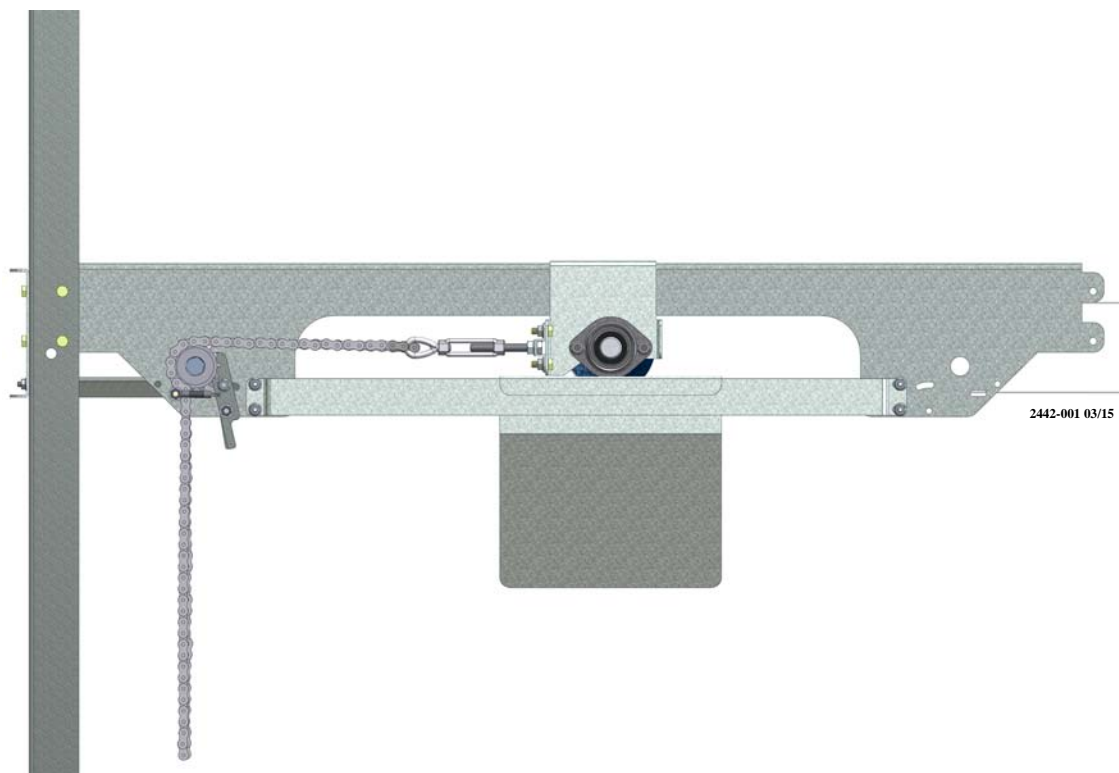




Chain Idler Kit Installation and Operators Instruction Manual



Installation and Operators Manual

Installation and Operators Manual

CTB Inc.
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Limited Warranty

Chore-Time Group, a division of CTB, Inc. ("Chore-Time") warrants new CHORE-TIME Chain Idler Parts manufactured by Chore-Time to be free from defects in material or workmanship under normal usage and conditions, for One (1) year from the date of installation by the original purchaser ("Warranty"). If such a defect is determined by Chore-Time to exist within the applicable period, Chore-Time will, at its option, (a) repair the Product or Component Part free of charge, F.O.B. the factory of manufacture or (b) replace the Product or Component Part free of charge, F.O.B. the factory of manufacture. This Warranty is not transferable, and applies only to the original purchaser of the Product.

CONDITIONS AND LIMITATIONS

THIS WARRANTY CONSTITUTES CHORE-TIME'S ENTIRE AND SOLE WARRANTY AND CHORE-TIME EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES. CHORE-TIME shall not be liable for any direct, indirect, incidental, consequential or special damages which any purchaser may suffer or claim to suffer as a result of any defect in the Product. Consequential or Special Damages as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs, and operational inefficiencies. *Some jurisdictions prohibit limitations on implied warranties and/or the exclusion or limitation of such damages, so these limitations and exclusions may not apply to you. This warranty gives the original purchaser specific legal rights. You may also have other rights based upon your specific jurisdiction.*

Compliance with federal, state and local rules which apply to the location, installation and use of the Product are the responsibility of the original purchaser, and CHORE-TIME shall not be liable for any damages which may result from non-compliance with such rules.

The following circumstances shall render this Warranty void:

- Modifications made to the Product not specifically delineated in the Product manual.
- Product not installed and/or operated in accordance with the instructions published by the CHORE-TIME.
- All components of the Product are not original equipment supplied by CHORE-TIME.
- Product was not purchased from and/or installed by a CHORE-TIME authorized distributor or certified representative.
- Product experienced malfunction or failure resulting from misuse, abuse, mismanagement, negligence, alteration, accident, or lack of proper maintenance, or from lightning strikes, electrical power surges or interruption of electricity.
- Product experienced corrosion, material deterioration and/or equipment malfunction caused by or consistent with the application of chemicals, minerals, sediments or other foreign elements.
- Product was used for any purpose other than for the care of poultry and livestock.

The Warranty and Extended Warranty may only be modified in writing by an officer of CHORE-TIME. CHORE-TIME shall have no obligation or responsibility for any representations or warranties made by or on behalf of any distributor, dealer, agent or certified representative.

Effective: **April, 2014**

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Safety

DANGER: Electrical Hazard

Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

Ground all non-current carrying metal parts to guard against electrical shock.

With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.



Decal Descriptions

DANGER: Moving Parts

Disconnect electrical power before working on system, equipment may start automatically. Otherwise personal injury will result.

Severe personal injury will result if the equipment is operated without covers properly installed.



Introduction

The Chain Idler is designed to adjust and maintain tension in the manure belt, allowing for both coarse and fine adjustment. Coarse adjustment is achieved using spring-latched sprockets and fine adjustment with turnbuckles. There are two chain assemblies per tier of the manure belt module. They are attached to and face out from the idler rails on either side of the cage row. Installation instructions are the same for both sides.

Installation

Idler Rail, Idler Back, Plus Assembly

Assemble the Idler Rails, Idler Back, Corner Braces, Litter Diverters, and Litter Braces as shown below.

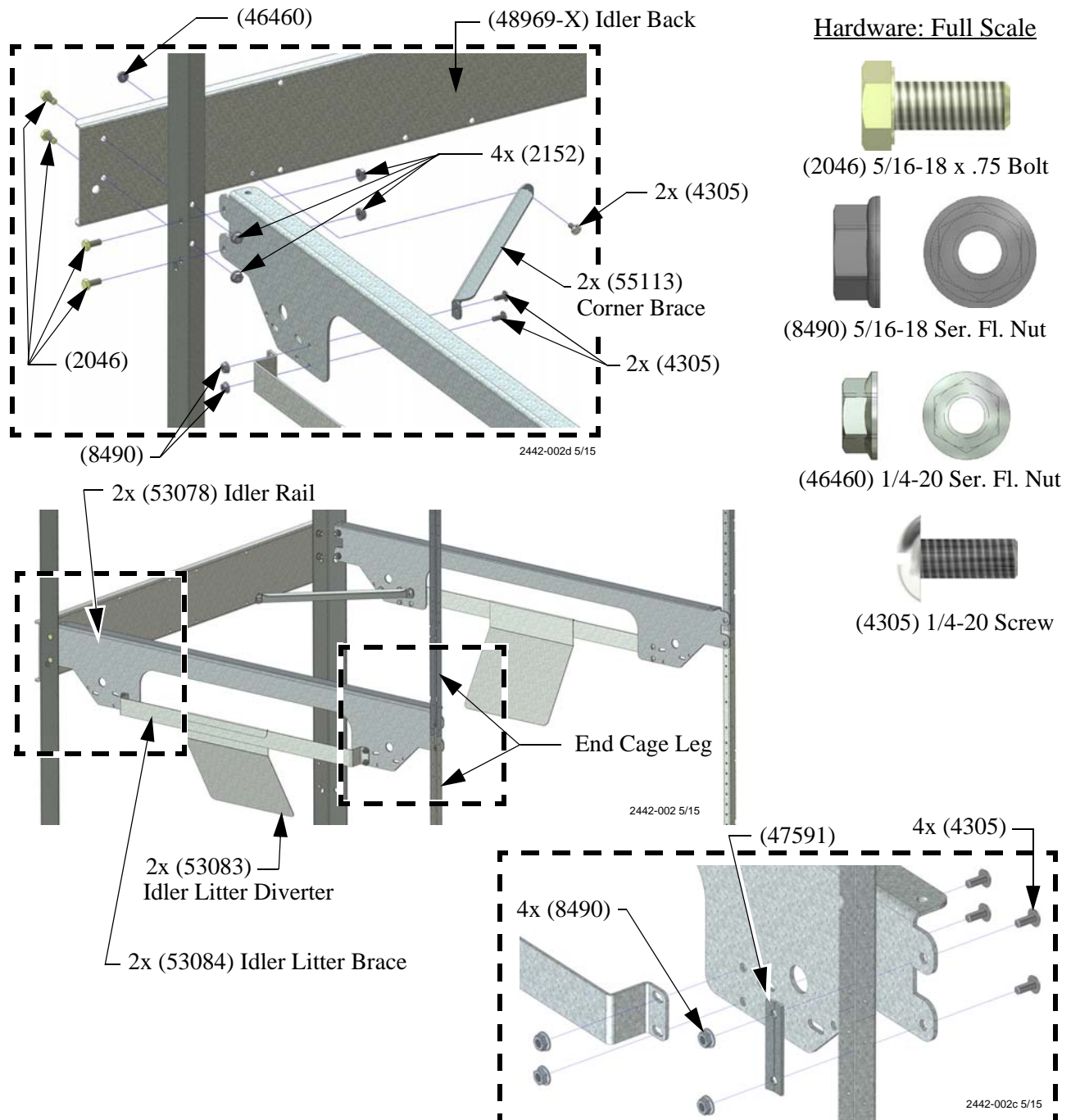


Figure 1. Idler Rails Plus Assembly

Idler Assembly and Installation

- 1.Center the Idler (Auger Idler 51062-X), or (Solid Idler Roller 49048-X) on the Idler Shaft and tighten the Set Screws to 80 in-lbs [9 N-m] as shown. Initial assembly and installation of Solid and Auger Idler is the same.
- 2.Slide a Bearing and Collar on each end of the Idler Shaft but do not tighten at this time.

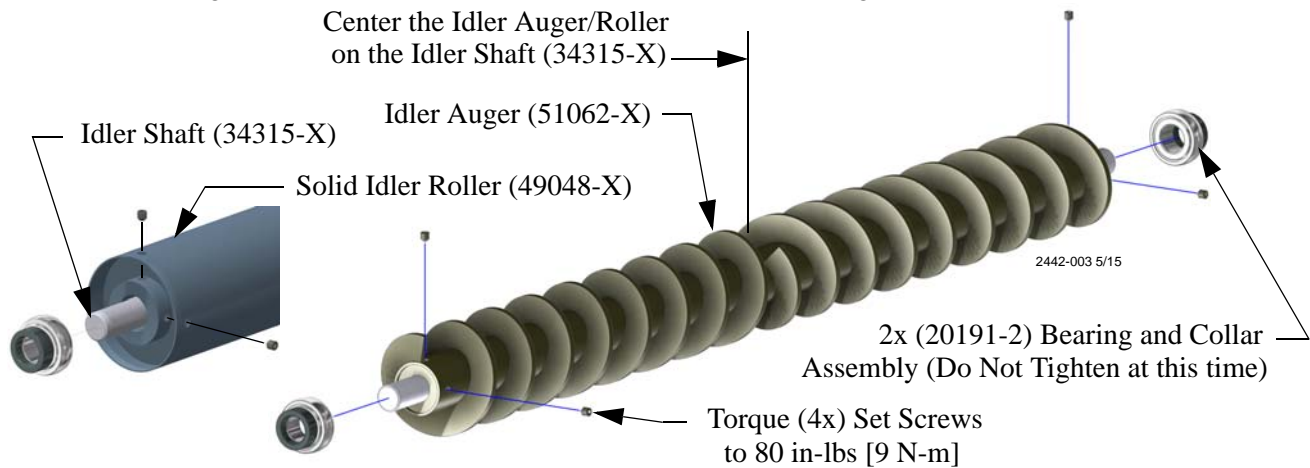


Figure 2. Auger Assembly

- 3.Hang the Idler Bearing Holders (51653-1 and 51653-2) on the Rails (**See Figure 3.**)
- 4.Orient the Auger/Roller as shown, install a Flangette (20191-1) on each end of the Idler Shaft, and insert the Ends of the Auger/Roller into the Idler Bearing Holders.
- 5.Use 20125 Bolts and 8490 Flange Nuts to Fasten the Flangettes.
- 6.**Center the Idler** and while pressing the Bearing and Collar Assemblies (20191-2) against the Flangettes turn them in the direction that the Shaft will turn to lock them into place.
- 7.Tighten the Set Screws to 75 in-lbs [8.5 N-m] (**See Figure 3.**).

Important !- V at center of Auger Idler points toward the Idler Back

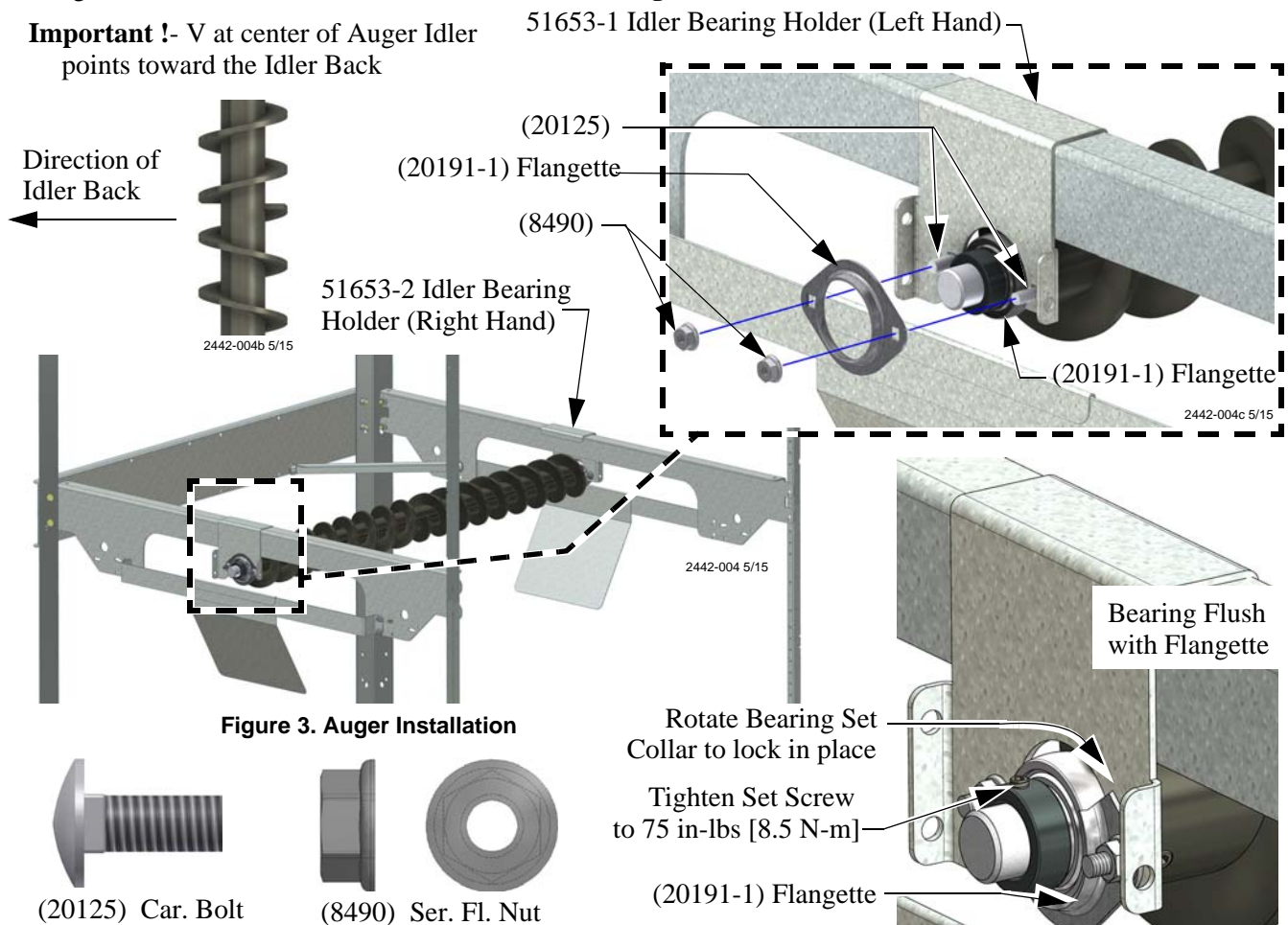


Figure 3. Auger Installation

Idler Roller Brace

1. Thread a 3/8-16 x 3.00 Bolt (4413-7) through the Idler Roller Brace.
2. Attach the Idler Roller Brace to the Idler Bearing Holder as shown in **Figure 4**.

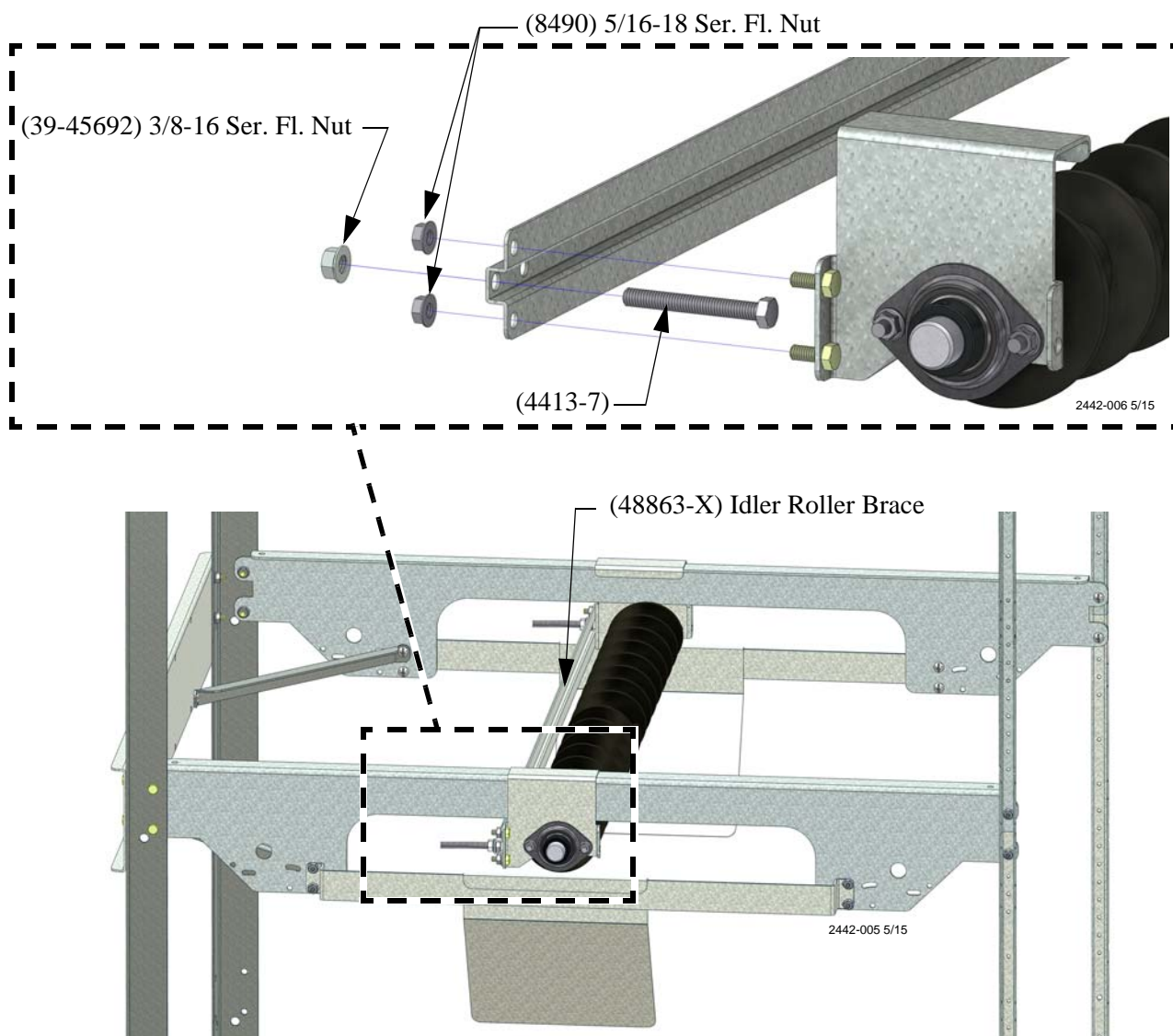
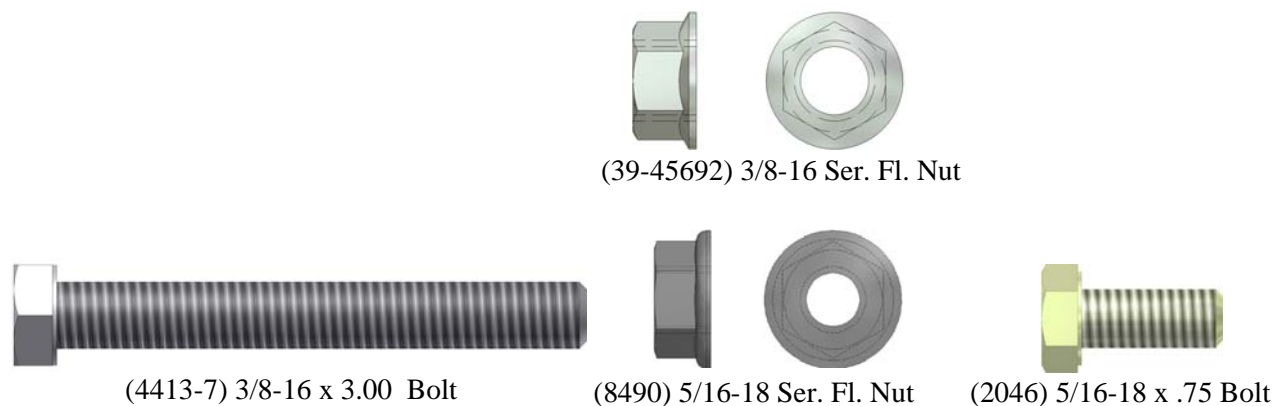
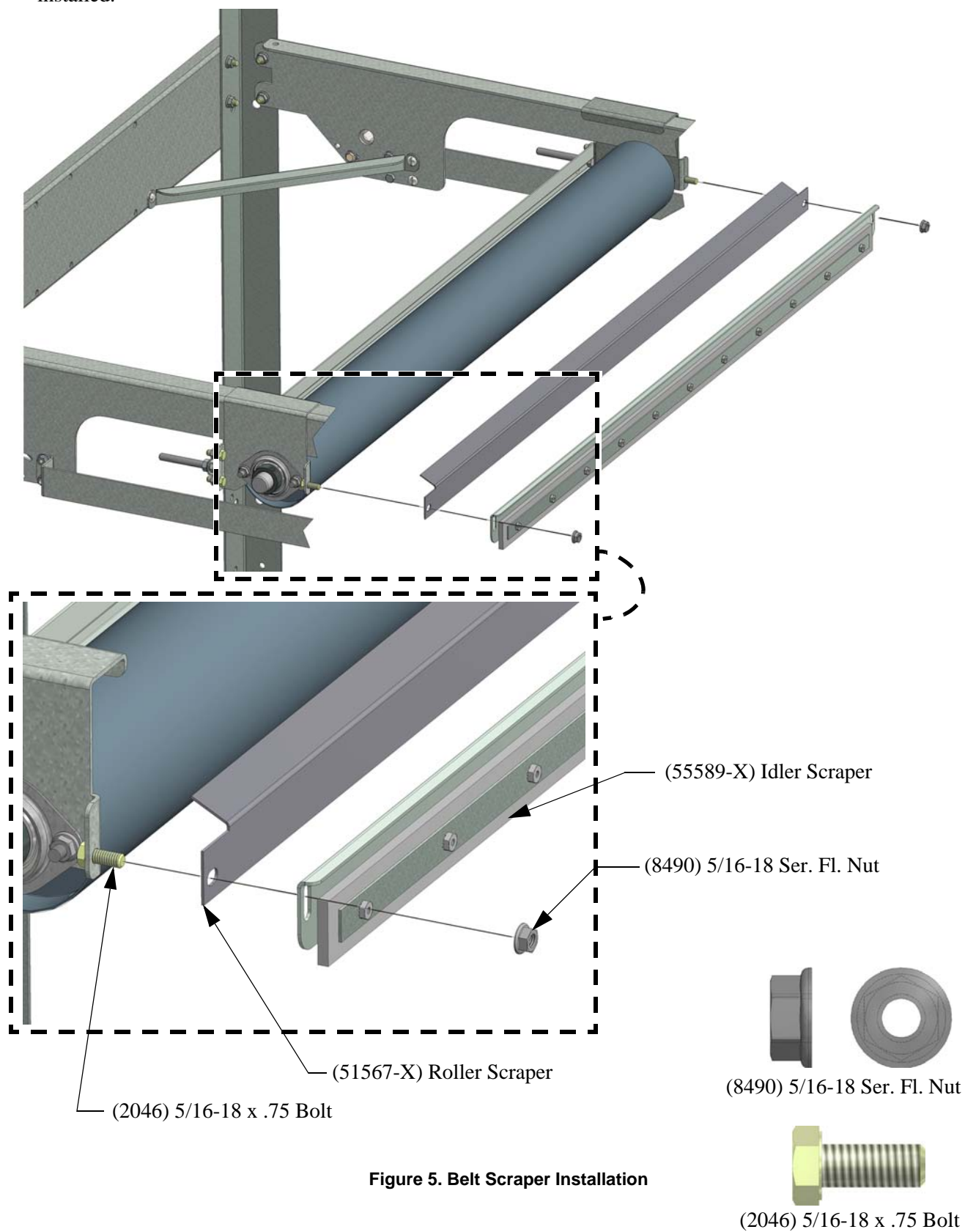


Figure 4. Idler Roller Brace Installation



Belt Scraper (Solid Roller Idler Only)

1. Attach a Roller Scraper (51567-X) and a (55589-X) Idler Scraper to the Idler Bearing Holders with (8490) Nuts and (2046) Bolts as shown. Adjustments to the Scraper will have to be made after the Belt has been installed.



Hex Shaft

1. Slide two Set Collars onto the Chain Idler Hex Shaft and slide it through the 7/8" holes in Idler Rails as shown in below in **Figure 6**.
2. Center shaft and secure the Set Collars flush against the inside surface of the Idler Rails. Torque Set Screws to 90 in-lb [10.2 Nm].

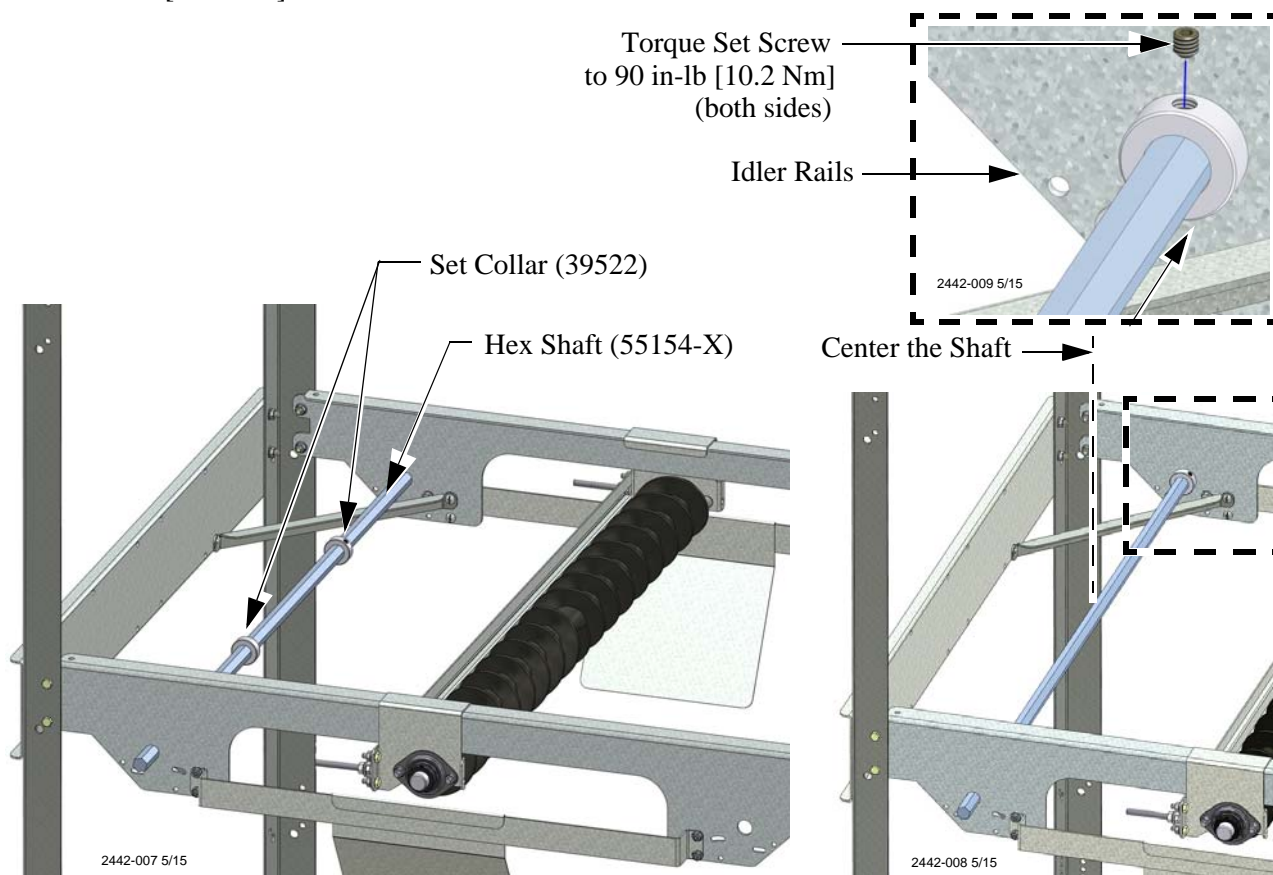


Figure 6. Idler Roller Brace Installation

Idler Sprocket Installation

Important! Sprockets are manufactured in matched sets so that the teeth line up when placed correctly on the shaft.

1. Place the first Idler sprocket onto the Hex shaft. Set the Chain on the Sprocket and with a small Gap between the Chain and the Idler Rail tighten the Set Screws to 75 in-lbs [8.5 N-m].

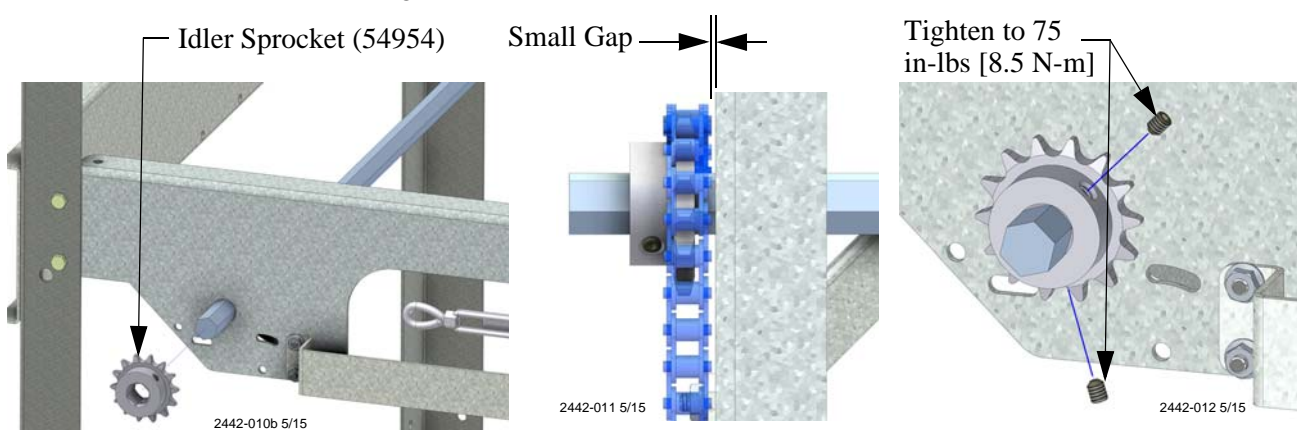


Figure 7. Idler Sprocket Installation

- Place the Second Sprocket on the other end of the Hex Shaft. It is important that the two Idler Sprockets are lined up with each other exactly (see **Figure 8.**).
- Tighten the Set Screws on the sprocket to 75 in-lbs [8.5 N-m].

Line up the Sprocket Teeth on one side with the Sprocket teeth on the other before tightening.

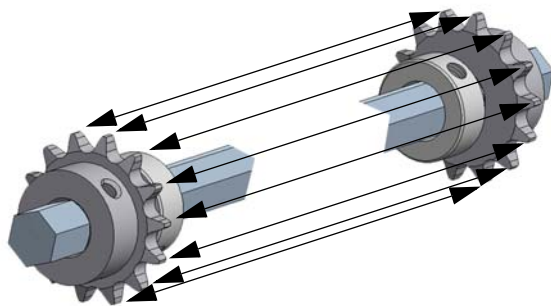
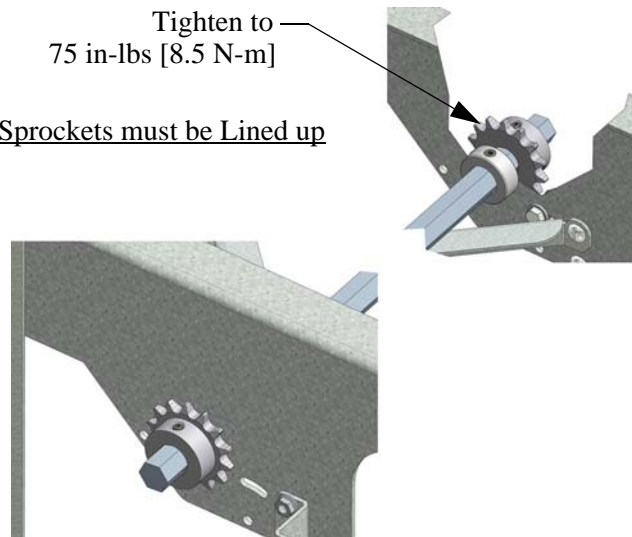


Figure 8. Idler Sprocket Installation

Tighten to
75 in-lbs [8.5 N-m]

Sprockets must be Lined up



Sprocket Catch

- Install the Sprocket Catch parts as shown below in **Figure 9.**

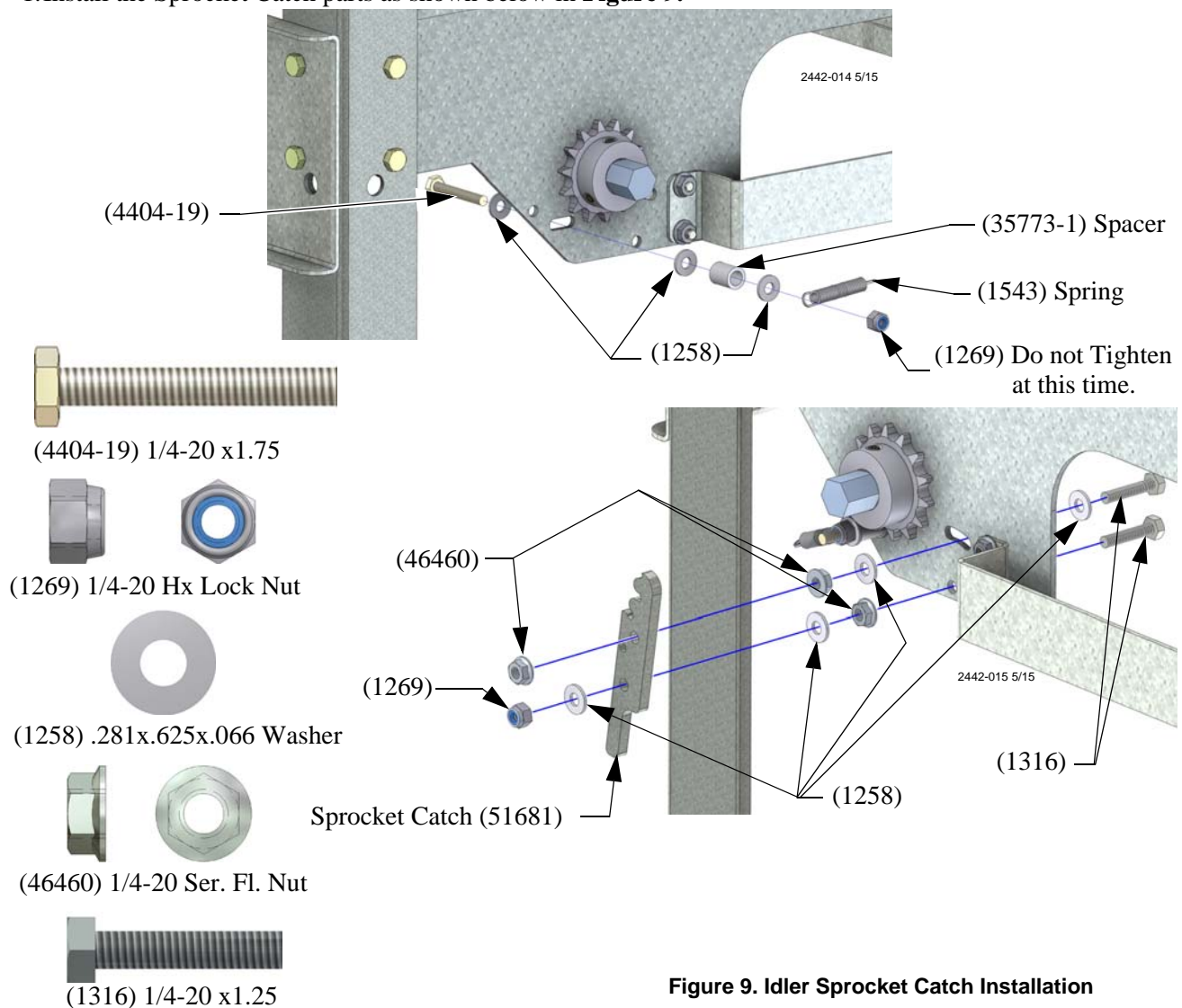
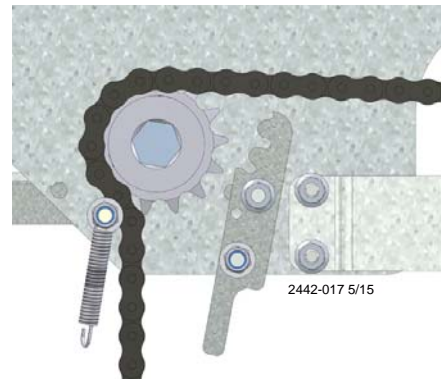
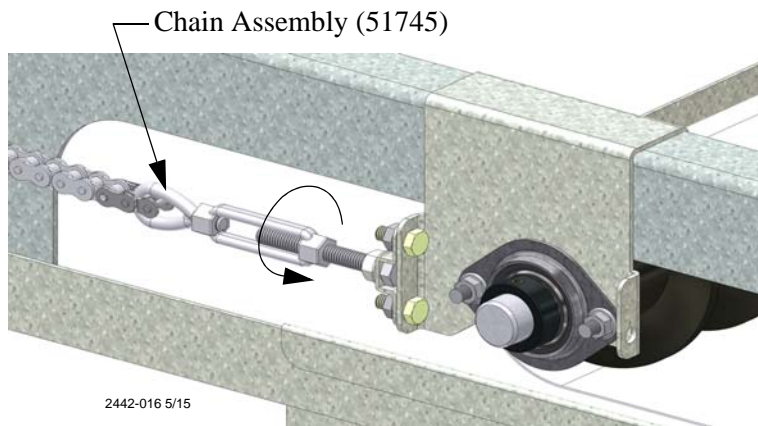


Figure 9. Idler Sprocket Catch Installation

Chain Assembly

1. Thread the Turnbuckle at the end of the Chain Assembly onto the 3" Bolt Installed earlier.
2. Thread the Chain around the Sprocket and between the Spacer and Sprocket as shown.
3. Repeat Installing a Sprocket Catch and Chain Assembly on the other side.



Chain Routing

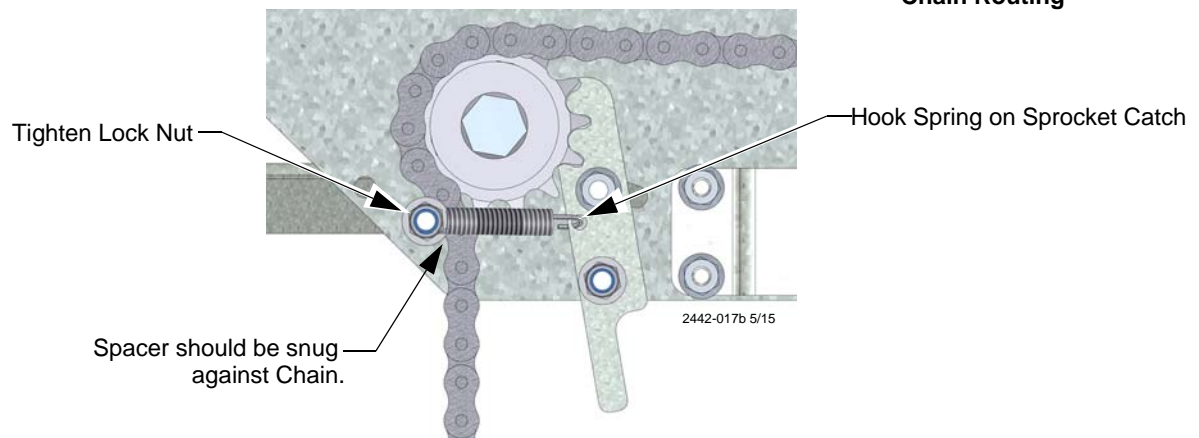


Figure 10. Chain Assembly Installation

Belt Installation

1. Install the Belt as per the Belt Installation Manual.

Install Chain Idlers on each of the remaining Tiers.

Operation

Coarse Tension Adjustment

The Belt can be Tensioned in Large increments using the Sprocket and Catch Mechanism.

Tightening the Belts

1. One person can increase belt tension by placing a 3/4" Wrench onto the end of the Hex Shaft protruding from either side of the system **See Figure 11**. Make sure that the Sprocket Catch engages the Sprocket when finished tightening.

Loosening the Belts

1. Two people (one on each side) are required to loosen the belts in large increments.
2. Put a 3/4" Wrench on one end of the Hex Shaft and turn the wrench as if to tighten the belt until the teeth of the Sprocket Catch are disengaged with the Sprocket.

Danger! when the Sprocket Catches are disengaged keep a tight grip on the wrench and keep hands away from pinch points!

3. Once the teeth are disengaged, press the Sprocket Catches on both sides (requires person on other side) to allow the Hex Shaft to rotate freely.
4. Turn the wrench Carefully toward the Auger Idler until the desired tension is reached and release the Sprocket Catches.
5. Make sure that the Sprocket Catch teeth are engaged completely with the Sprockets.

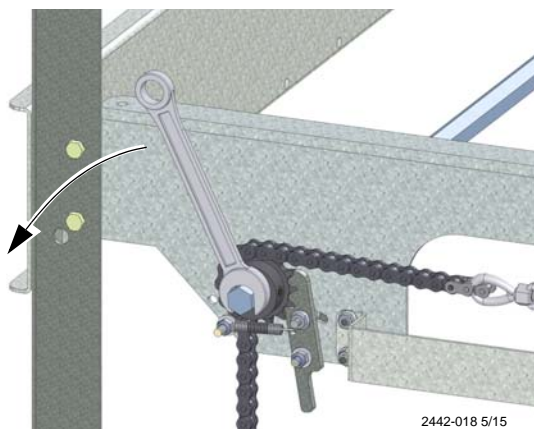


Figure 11. Coarse tension Adjustment (Tightening)

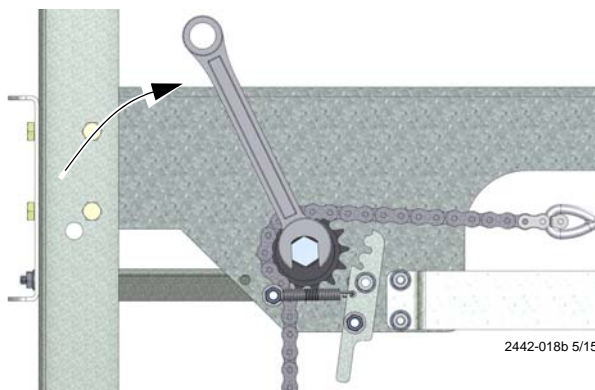
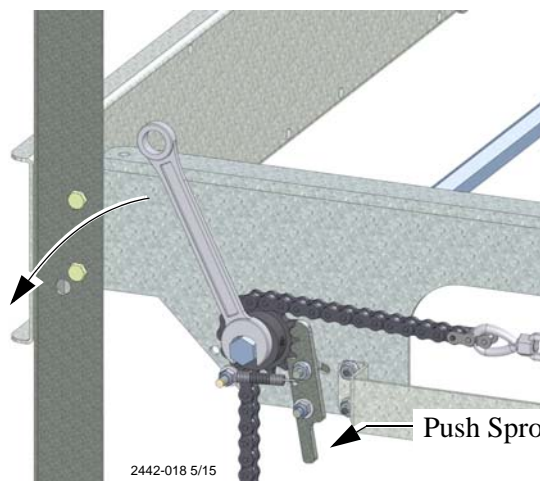


Figure 12. Large tension Adjustment (Loosening)

Fine Tension Adjustment

The Belt tension can be fine tuned by using the Turnbuckles as shown below. The Belt can be tightened on one or both sides to the desired tension.

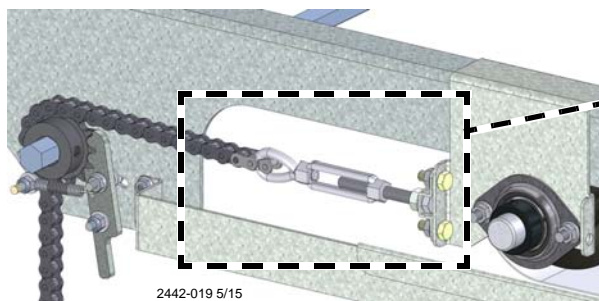
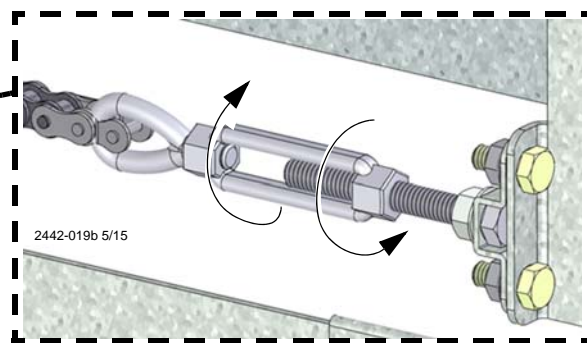


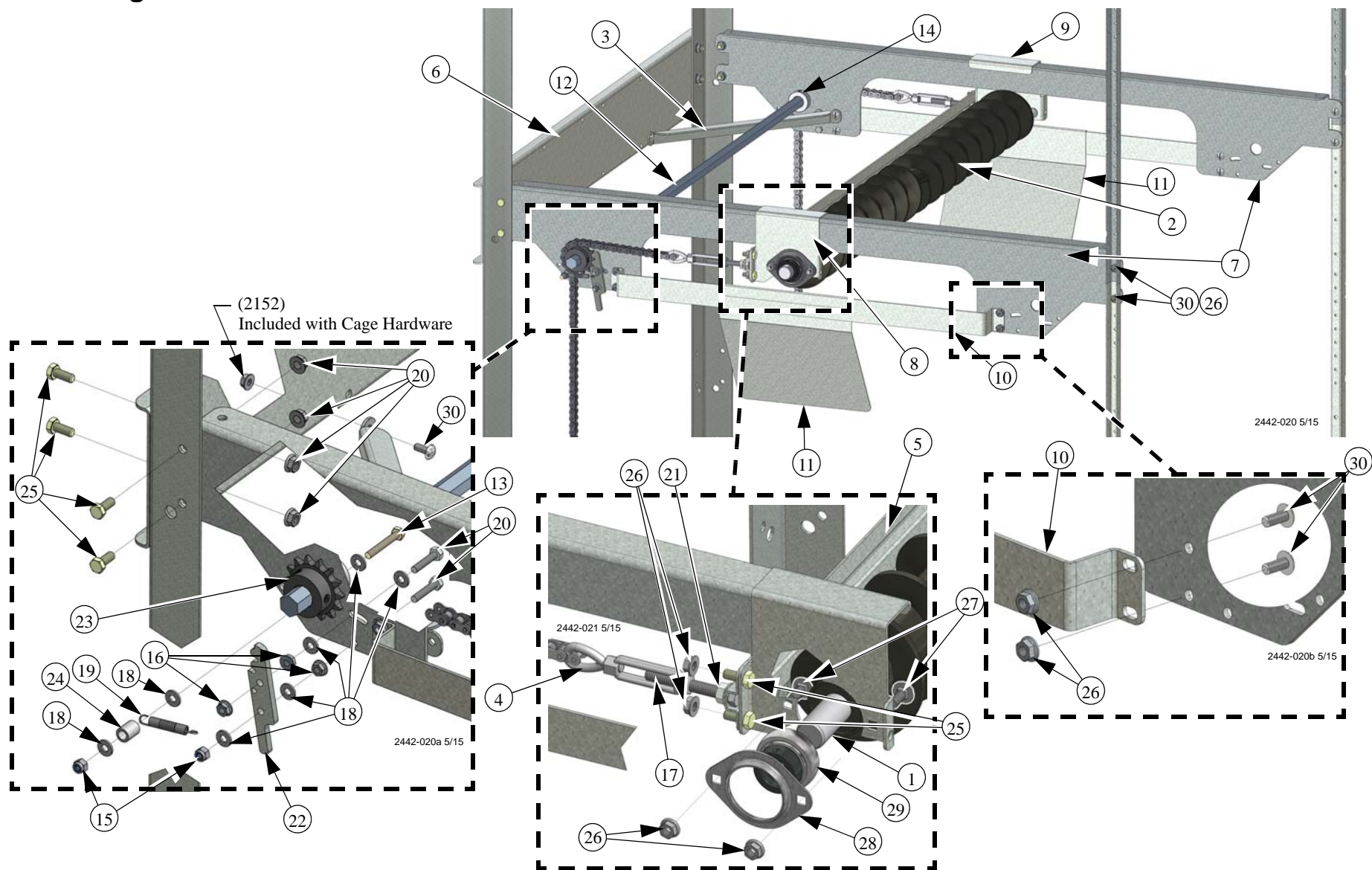
Figure 13. Fine Adjustment



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Part Numbers

55161 Auger Idler

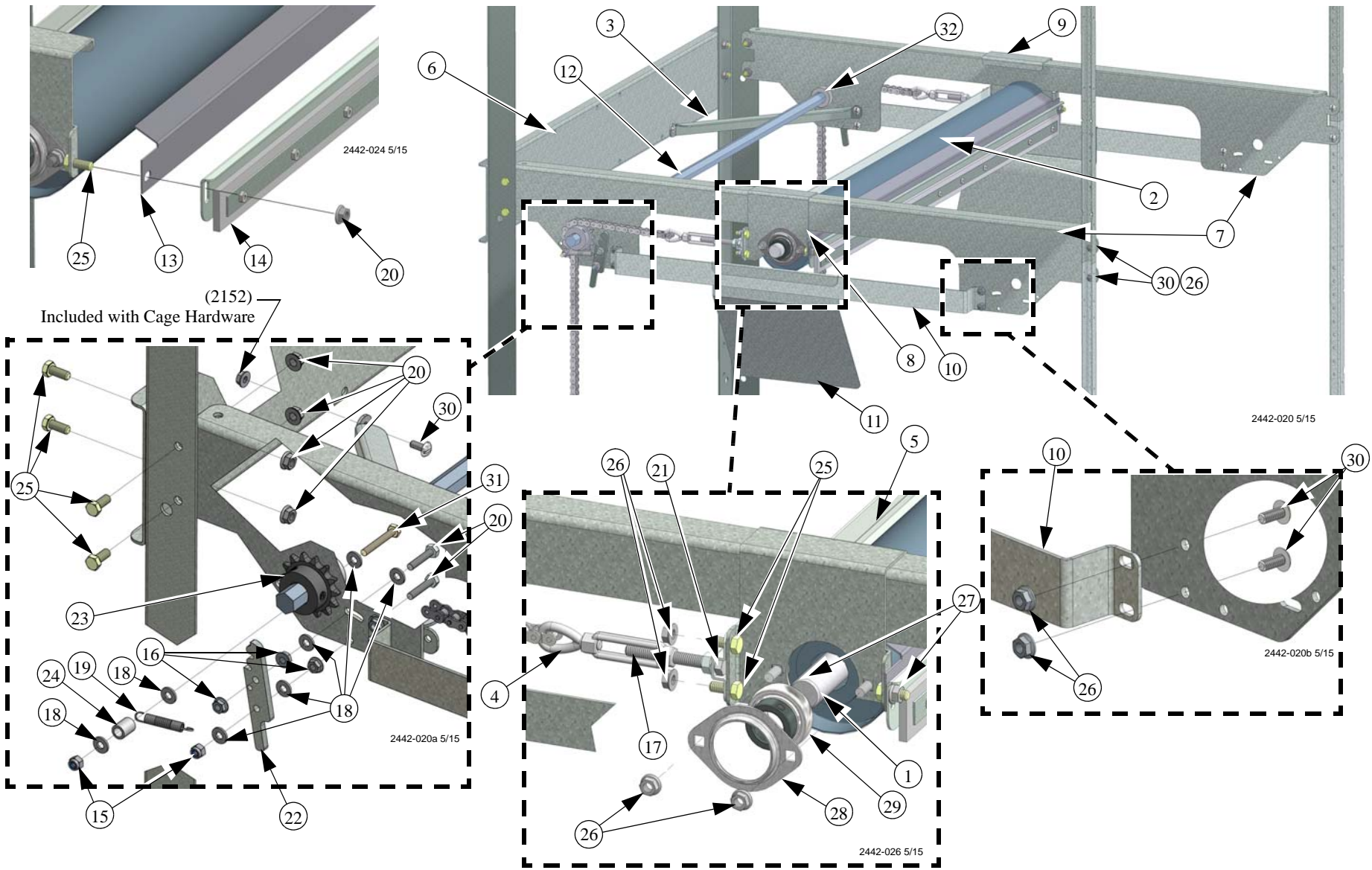


Item	Description	18" Tall 43.99" Wide	49.07" Wide	49.99" Wide & Versa	55.07" Wide	Versa 2
		55161-21 (2 Tier) 55161-31 (3 Tier)	55161-22 (2 Tier) 55161-32 (3 Tier)	55161-23 (2 Tier) 55161-33 (3 Tier)	55161-24 (2 Tier) 55161-34 (3 Tier)	55161-25 (2 Tier) 55161-35 (3 Tier)
		Part Number				
1	Idler Shaft	34315-5	34315-6	34315-7	34315-8	34315-9
2	Auger Weldment Idler	51062-1	51062-2	51062-3	51062-4	51062-6
3	Corner Brace	55113	55113	55113	55113	55113
4	Chain Assembly	51745	51745	51745	51745	51745
5	Idler Roller Brace	48863-1	48863-2	48863-3	48863-4	48863-5
6	Idler Back	48969-1	48969-2	48969-3	48969-4	48969-5
7	Versa Idler Rail	53078	53078	53078	53078	53078
8	L.H. Auger Idler Bearing Holder	51653-1	51653-1	51653-1	51653-1	51653-1
9	R.H. Auger Idler Bearing Holder	51653-2	51653-2	51653-2	51653-2	51653-2
10	Idler Litter Brace	53084	53084	53084	53084	53084
11	Idler Litter Diverter	53083	53083	53083	53083	53083
12	Idler Tensioner Hex Shaft	55114-47	55114-52	55114-53	55114-58	55114-55

Item	Description	25.6" MMBBG Wide	28.8" MMBBG Wide	Versa Plus	MMBBG No Air Reg. or 2+2	MMBBG w/42537 Air Tube & 27.87" No Air
		55161-26 (2 Tier) 55161-36 (3 Tier)	55161-27 (2 Tier) 55161-37 (3 Tier)	55161-28 (2 Tier) 55161-38 (3 Tier)	55161-29 (2 Tier) 55161-39 (3 Tier)	55161-210 (2 Tier) 55161-310 (3 Tier)
		Part Number				
1	Idler Shaft	34315-10	34315-11	34315-12	34315-7	34315-8
2	Auger Weldment Idler	51062-7	51062-8	51062-9	51062-3	51062-4
3	Corner Brace	55113	55113	55113	55113	55113
4	Chain Assembly	51745	51745	51745	51745	51745
5	Idler Roller Brace	48863-6	48863-7	48863-8	48863-3	48863-4
6	Idler Back	51058-1	51058-3	48969-8	51058-1	51058-2
7	Versa Idler Rail	53078	53078	53078	53078	53078
8	L.H. Auger Idler Bearing Holder	51653-1	51653-1	51653-1	51653-1	51653-1
9	R.H. Auger Idler Bearing Holder	51653-2	51653-2	51653-2	51653-2	51653-2
10	Idler Litter Brace	53084	53084	53084	53084	53084
11	Idler Litter Diverter	53083	53083	53083	53083	53083
12	Idler Tensioner Hex Shaft	55114-54	55114-60	55114-67	55114-53	55114-58

55219 Hardware Package		
Item	Description	Part No.
13	1/4-20 x 1.75 HHBolt	4404-19
14	7/8 Set Collar	39522
15	1/4-20 Hex Lock Nut	1269
16	1/4-20 Serrated Flange Nut	46460
17	3/8-16 x 3.00 Bolt	4413-7
18	.281 x .625 x.066	1258
19	Extension Spring	1543
20	1/4-20 x 1.25 Bolt	1316
21	3/8-16 Whiz Nut	39-45692
22	Sprocket Catch	51681
23	.75 Bore 14T #40 Sprocket	54954
24	Spacer	35773-1
25	5/16-18 x .75 HH Bolt	2046
26	5/16-18 Hx Ser. Flange Nut	8490
27	5/16-18 x .75 Car. Bolt	20125
28	1" Flangette	20191-1
29	1" Bearing and Collar	20191-2
30	1/4-20 x .625 Sltd Screw	4305

55588 Solid Roller Idler



		18" Tall 43.99" Wide	49.07" Wide	49.99" Wide & Versa	55.07" Wide	MMBBG No Air Reg. or 2 +2	MMBBG w/42537 Air Tube & 27.87" MMBBG No Air
		55588-21 (2 Tier) 55588-31 (3 Tier)	55588-22 (2 Tier) 55588-32 (3 Tier)	55588-23 (2 Tier) 55588-33 (3 Tier)	55588-24 (2 Tier) 55588-34 (3 Tier)	55588-25 (2 Tier) 55588-35 (3 Tier)	55588-26 (2 Tier) 55588-36 (3 Tier)
Item	Description	Part Number					
1	Idler Shaft	34315-5	34315-6	34315-7	34315-8	34315-7	34315-8
2	Solid Idler Roller	49048	49048-1	49048-2	49048-3	49048-2	49048-3
3	Corner Brace	55113	55113	55113	55113	55113	55113
4	Chain Assembly	51745	51745	51745	51745	51745	51745
5	Idler Roller Brace	48863-1	48863-2	48863-3	48863-4	48863-3	48863-4
6	Idler Back	48969-1	48969-2	48969-3	48969-4	51058-1	51058-2
7	Versa Idler Rail	53078	53078	53078	53078	53078	53078
8	L.H. Auger Idler Bearing Holder	51653-1	51653-1	51653-1	51653-1	51653-1	51653-1
9	R.H. Auger Idler Bearing Holder	51653-2	51653-2	51653-2	51653-2	51653-2	51653-2
10	Idler Litter Brace	53084	53084	53084	53084	53084	53084
11	Idler Litter Diverter	53083	53083	53083	53083	53083	53083
12	Idler Tensioner Hex Shaft	55114-47	55114-52	55114-53	55114-58	55114-53	55114-58
13	Roller Scraper	51567	51567-1	51567-2	51567-3	51567-2	51567-3
14	Idler Scraper	55589	55589-1	55589-2	55589-3	55589-2	55589-3

55219 Hardware Package		
Item	Description	Part No.
15	1/4-20 Hex Lock Nut	1269
16	1/4-20 Serrated Flange Nut	46460
17	3/8-16 x 3.00 Bolt	4413-7
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26	5/16-18 Hx Ser. Flange Nut	8490
27	5/16-18 x .75 Car. Bolt	20125
28	1" Flangette	20191-1
29	1" Bearing and Collar	20191-2
30	1/4-20 x .625 Std Screw	4305
31	1/4-20 x 1.75 HHBolt	4404-19
32	7/8 Set Collar	39522



MADE TO WORK.

BUILT TO LAST.®

Revisions to this Manual

Page No.	Description of Change
	New Manual

Contact your nearby Chore-Time distributor or representative for additional parts and information.

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