

TUBE•LINE™

Tubeline Manufacturing Limited
6455 Reid Woods Drive RR #4
Elmira, Ontario, Canada N3B 2Z3

Email: sales@tubeline.ca

Fax: 519.669.5808

Tel: 519.669.9488

Toll-free (North America): 1.888.856.6613

www.tubeline.ca

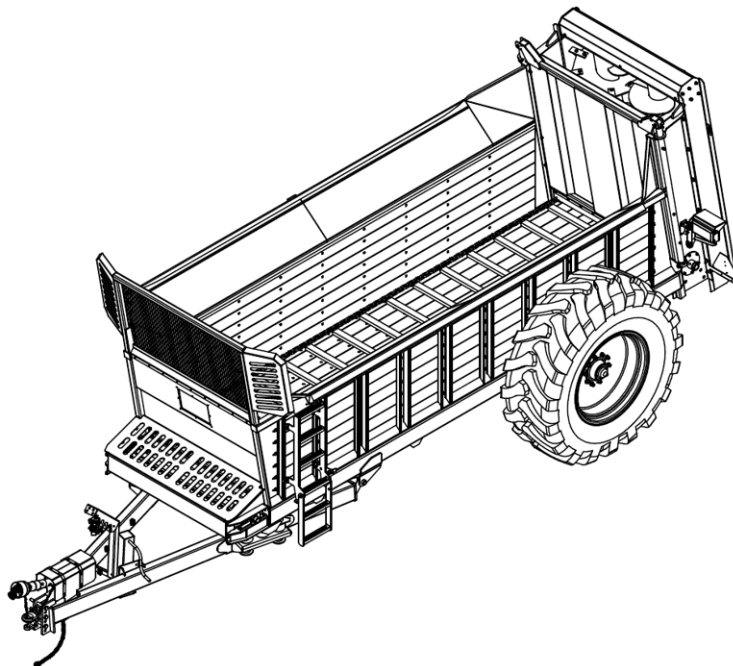
Parts Manual

Keep this manual with the machine at all times.

NITRO

Manure Spreader

Nitro 450



Parts Manual

Thank you for choosing the Tubeline 450 Manure Spreader. Our hope is that it will give you many years of productive service. This machine is designed to spread various types of manure evenly over a wide area.

Warranty and Limitation of Liability

All equipment is sold subject to mutual agreement that it is warranted by the company to be free from defects of materials and workmanship. But the company shall not be liable for special, indirect or consequential, damages of any kind under this contract or otherwise. The company's liability shall be limited exclusively to replacing or repairing without charge, at its factory or elsewhere, at its discretion.

Any material, or workmanship defects which become apparent within one year from the date on which the equipment was purchased, and the company shall have no liability for damages of any kind. The buyer by the acceptance of the equipment will assume all liability for any damages, which may result from the use or misuse by his employees or others.

Nitro Apron Chain Warranty



Tubeline Manufacturing Ltd offers a limited lifetime non-transferable warranty to the original purchaser of a Nitro manure spreader. This warranty applies to chain link breakage and covers parts only. Should a connecting link fail, only it will be replaced. However, if a standard link breaks the complete chain will be provided. Freight and labor to install is the responsibility of the purchaser and is not covered under the terms of the limited warranty.

Tubeline Manufacturing Ltd reserves the right to request the return of the failed chain.

Warranty coverage is null and void unless Warranty Registration form has been completely filled in and is on file at Tubeline Manufacturing Ltd.

Manuals

Parts manuals are printed and shipped with machines as they leave the manufacturer. Your machine may include parts or features not yet included in the initially shipped manual. The latest manual version can be found at www.tubeline.ca/support. Tubeline reserves the right to update and change manuals as seen fit. Dealers are informed of any pressing changes/ modifications. They can help you with any questions regarding replacement parts.

Serial Number

The implement serial number is located on the front of the frame. This number helps us to track changes and improvements and must be mentioned when ordering parts or requesting service. For your convenience, a space has been provided inside the front cover of this manual to record the serial number, model number, purchase date, and dealer name.

Model No: _____

Serial No: _____

Date Purchased: _____

Dealer Name: _____

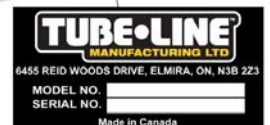
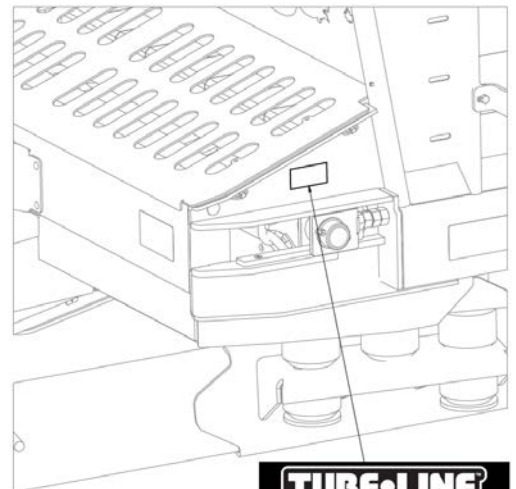


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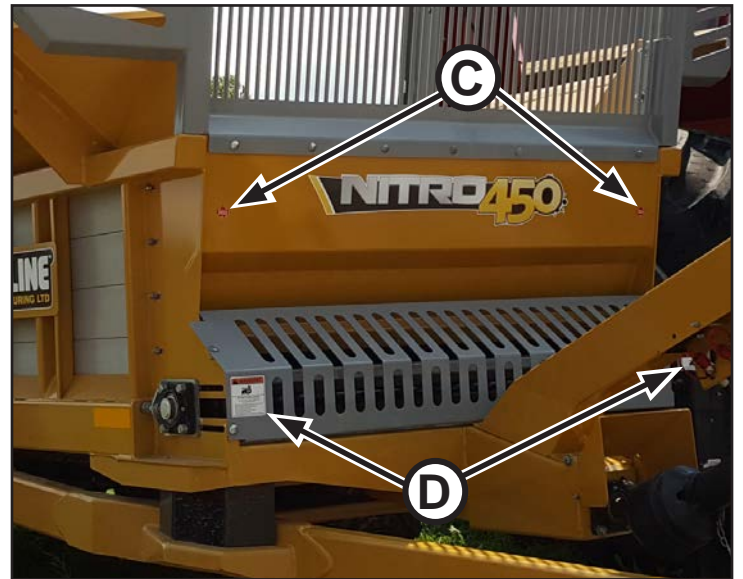
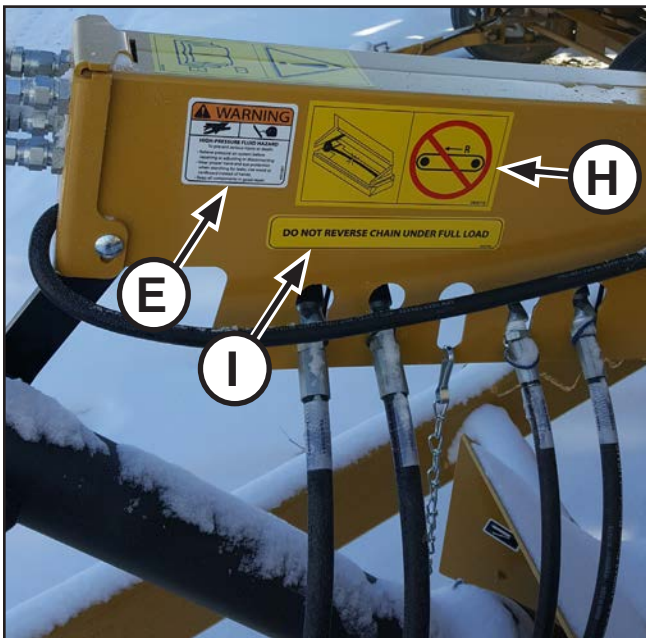
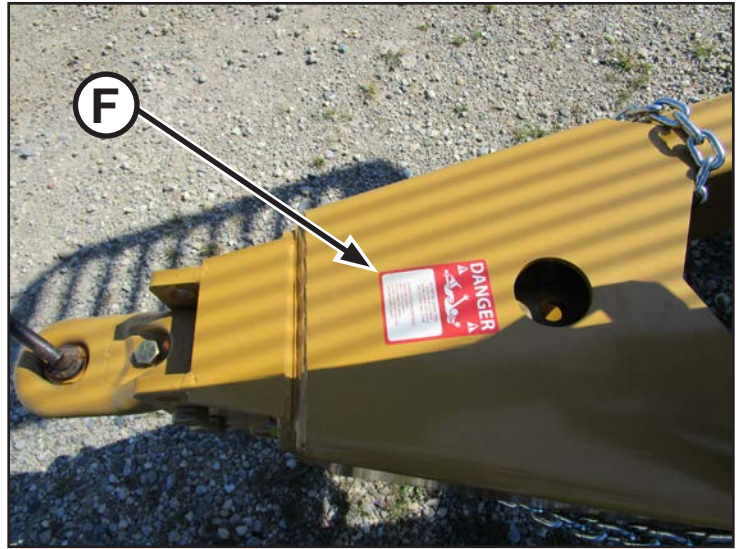
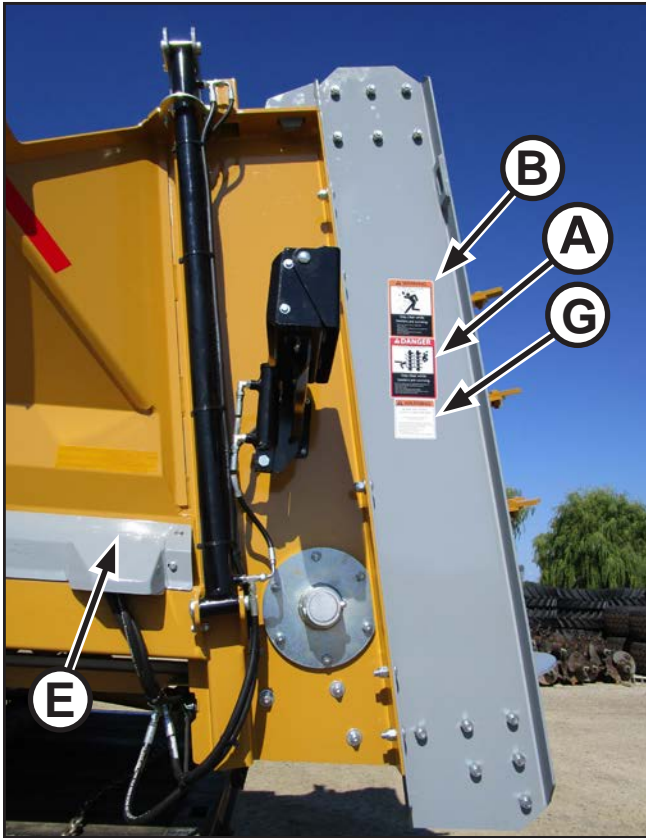
Safety Sign Locations

The types of safety signs and locations on the equipment are shown in the illustrations that follow. Good safety requires that you familiarize yourself with the various safety signs, the types of warning, and the area, or proper function related to that area, that requires your safety awareness.

Examples only - Actual decals may differ in text and graphic representation.

REMEMBER

If safety signs have been damaged, removed, become illegible or parts replaced without safety signs, new safety signs must be applied. New safety signs are available from your authorized dealer.



Safety Decals

Item: A

Part No: DE39395

DANGER

ENTANGLEMENT DANGER



**Stay clear while
beaters are running.**

To prevent serious injury or death from entanglement.

- Stay away from beater area during operation.
- Keep others away.
- Keep arms and limbs away from beaters.
- Do not reach into beaters while machine is running.
- Keep loose clothing and hair away.

Item: B

Part No: DE39396

WARNING

**THROWN OBJECT HAZARD
KEEP AWAY**



**Stay clear while
beaters are running.**

- To prevent serious injury or death from thrown object:
- Stay away from discharge area during operation. Keep others away.
- Do not point discharge toward people, animals or property

Item: C

Part No: DECANADA



Item: D

Part No: DE23836

WARNING



MOVING CHAIN HAZARD

To prevent serious injury or death from moving chain and parts:

- Close and secure guards and shields before starting.
- Keep hands, feet, hair, and clothing away from moving chain and parts.
- Disconnect and lockout power source before adjusting or servicing
- Do not stand or climb on machine when operating.

Item: E

Part No: DE23838

WARNING




HIGH-PRESSURE FLUID HAZARD

To prevent serious injury or death:

- Relieve pressure on system before repairing or adjusting or disconnecting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

Safety Decals

Item: F

Part No: DE39397



Item: G

Part No: DE23845



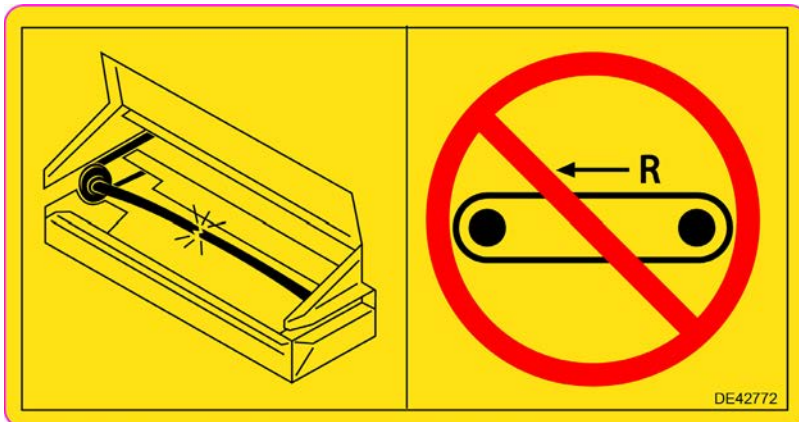
Item: J Part No: DE42784

See Operators Manual for decal explanation.

Item: H

Part No: DE42772

Reversing apron chain while spreader is fully loaded will cause front apron shaft breakage.

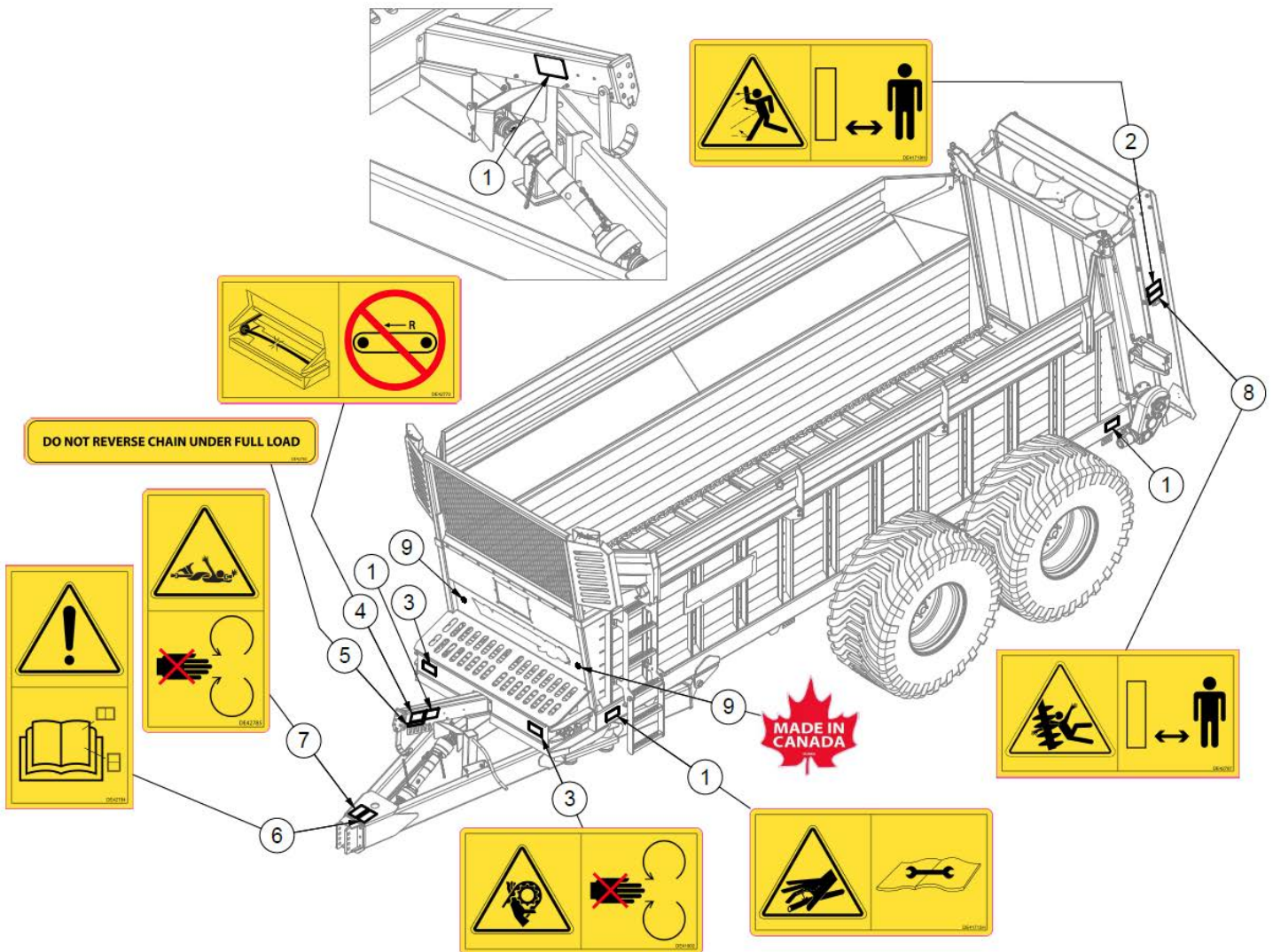


Item: I

Part No: DE42782 - Reversing apron chain while spreader is fully loaded will cause front apron shaft breakage.



ISO Safety Decal Locations



ITEM	QTY	PART NUMBER	DESCRIPTION
1	6	DE41713H	ISO Decal - High Pressure Fluid Horizontal
2	2	DE41718H	ISO Decal - Thrown Object Horizontal
3	2	DE41902	ISO Decal - Chain Entanglement
4	1	DE42772	ISO Decal - Nitro Reverse Chain
5	1	DE42783	Nitro Reverse Chain Text Decal
6	1	DE42784	ISO Decal - Read OM Decals Section
7	1	DE42785	ISO Decal - PTO Entanglement
8	2	DE42787	ISO Decal - Nitro Beater Entanglement
9	2	DECANADA	Decal Made In Canada

ISO Safety Decals



Item 1: DE41713H

Do not use hand to check for hydraulic leaks, alternatively use a piece of cardboard.



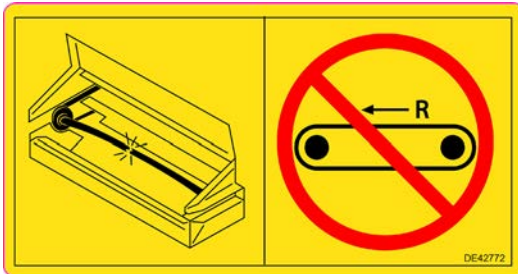
Item 2: DE41718H

Keep clear of machine while operating. Serious injury may occur.



Item 3: DE41902

Keep hands clear of rotating parts while machine running. Do not operate without shielding in place. Do not wear loose clothing while operating.



Item 4: DE42772

Reversing apron chain while spreader is fully loaded will cause front apron shaft breakage.



Item 5: DE42783



Item 6: DE42784

Read Operator's manual decal section to understand safety decals.



Item 7: DE42785

Do not use hand to check for hydraulic leaks, alternatively use a piece of cardboard.

Item 8: DE42787

Stand clear of rotating beaters to avoid entanglement. Serious injury or death hazard.



Item 9: DECANADA

Manufacturer's country of origin.

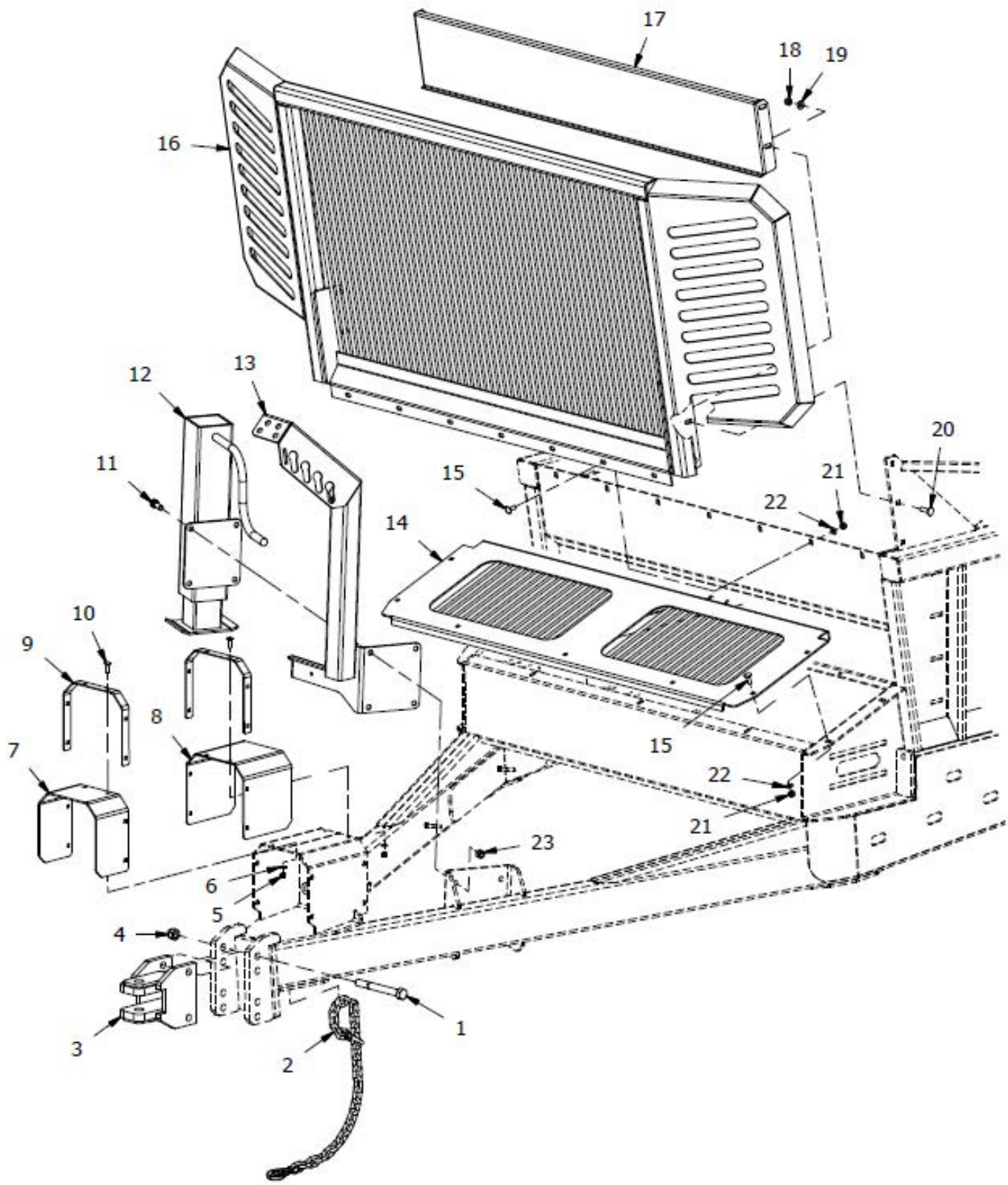


Section 2 - Parts Breakdowns & Lists

Illustrations may differ slightly from actual machine.

Front Components - Original

Used until serial no. 15NS101



Front Components - Original

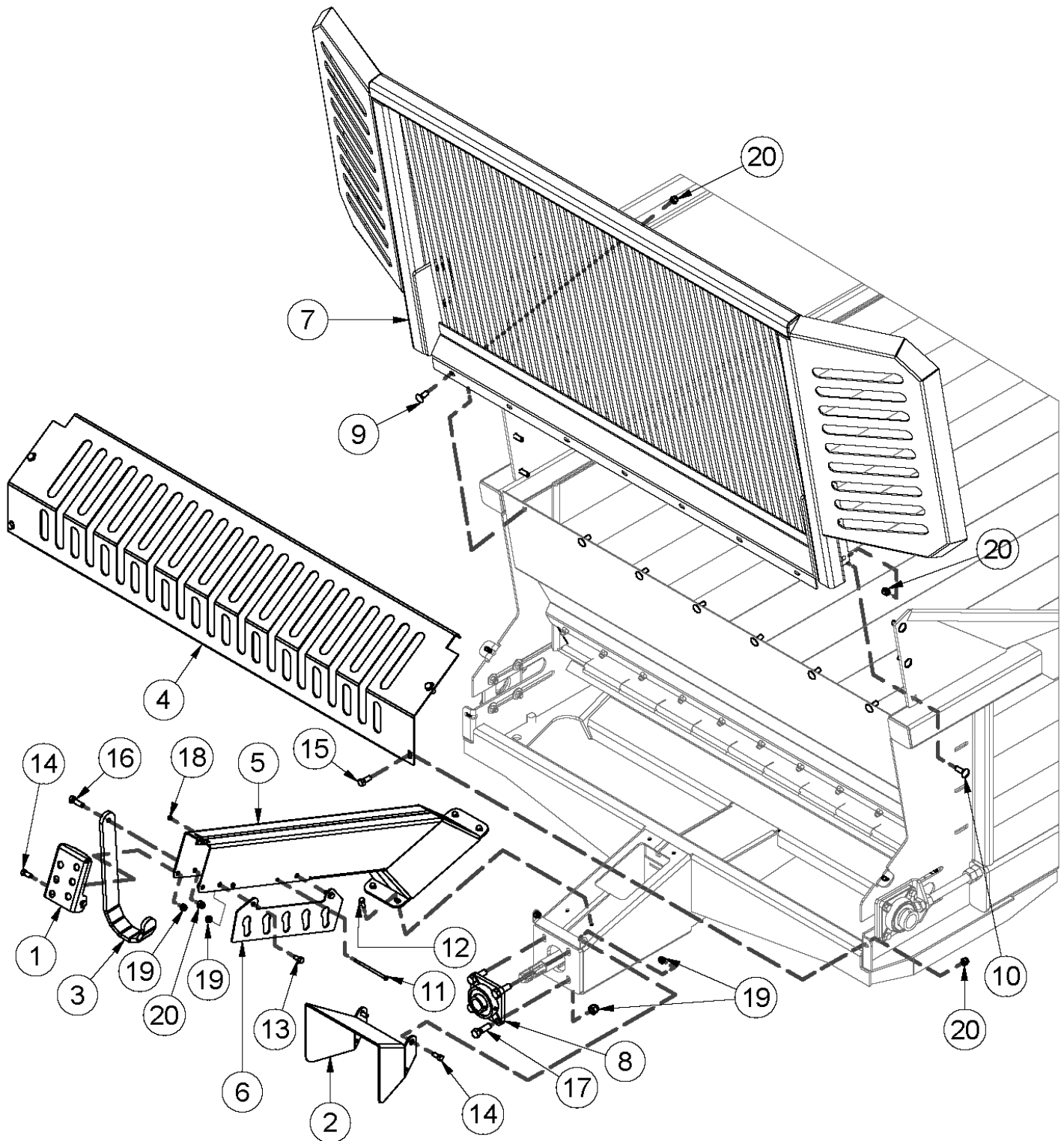
Used until serial no. 15NS101

**Purchase two 4"x4"x16' pressure treated posts from your local hardware store and trim as needed.*

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	HB 1-8X8.0 Z5	Hex Bolt 1"-8 x 8" Grade 5 Zinc Plated Hex Cap Screw N.C
2	1	400-605	Safety Chain
3	1	30826	Hitch Base
	1	30825	Clevis
	1	30884	Hitch Cap Screw
	1	30669	Hitch Locknut
4	2	LN 1.0 N	Locknuts - 1-8 Zinc Plated Nylon Insert
5	12	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
6	8	FW 3/8	Flatwasher Plated, 3/8" Zinc Plated USS (2984)
7	1	700-047	Rubber PTO Shield
8	1	600-819	Rubber PTO Shield
9	2	700-048	Front Shield Hold-down
10	12	CB 3/8-16X1.1/4 Z5	Carriage Bolt - 3/8"-16 x 1-1/4" Zinc Finish SAE J429 Grade 5 Round Head
11	4	HB 5/8-11X2.0 Z5	Hex Bolt 5/8-11 x 2 Grade 5 Zinc Plated Hex Cap Screw NC
12	1	30850	12000 lbs Jack
13	1	450-129	Hose Suspension Arm
14	1	450-122	Front Apron Drive Cover
15	14	CB 7/16-14X1.1/4Z5	Carriage Bolt - 7/16-14 x 1 1/4" Grade 5 Zinc
16	1	600-316	Stone Guard Shield
17	1	450-413	Optional Stone Guard Cover
18	6	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
19	6	FW 1/2	Flatwasher - 1/2" Zinc Plated USS (1096)
20	6	CB 1/2-13X1.3/4 Z5	Carriage Bolt Zinc
21	14	LN 7/16	Center Locknuts - 7/16-14 Top Lock Nut
22	14	FW 7/16	Flatwasher - 7/16" Zinc Plated USS
23	4	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut

Front Components - Current

Used since serial no. 15NS102



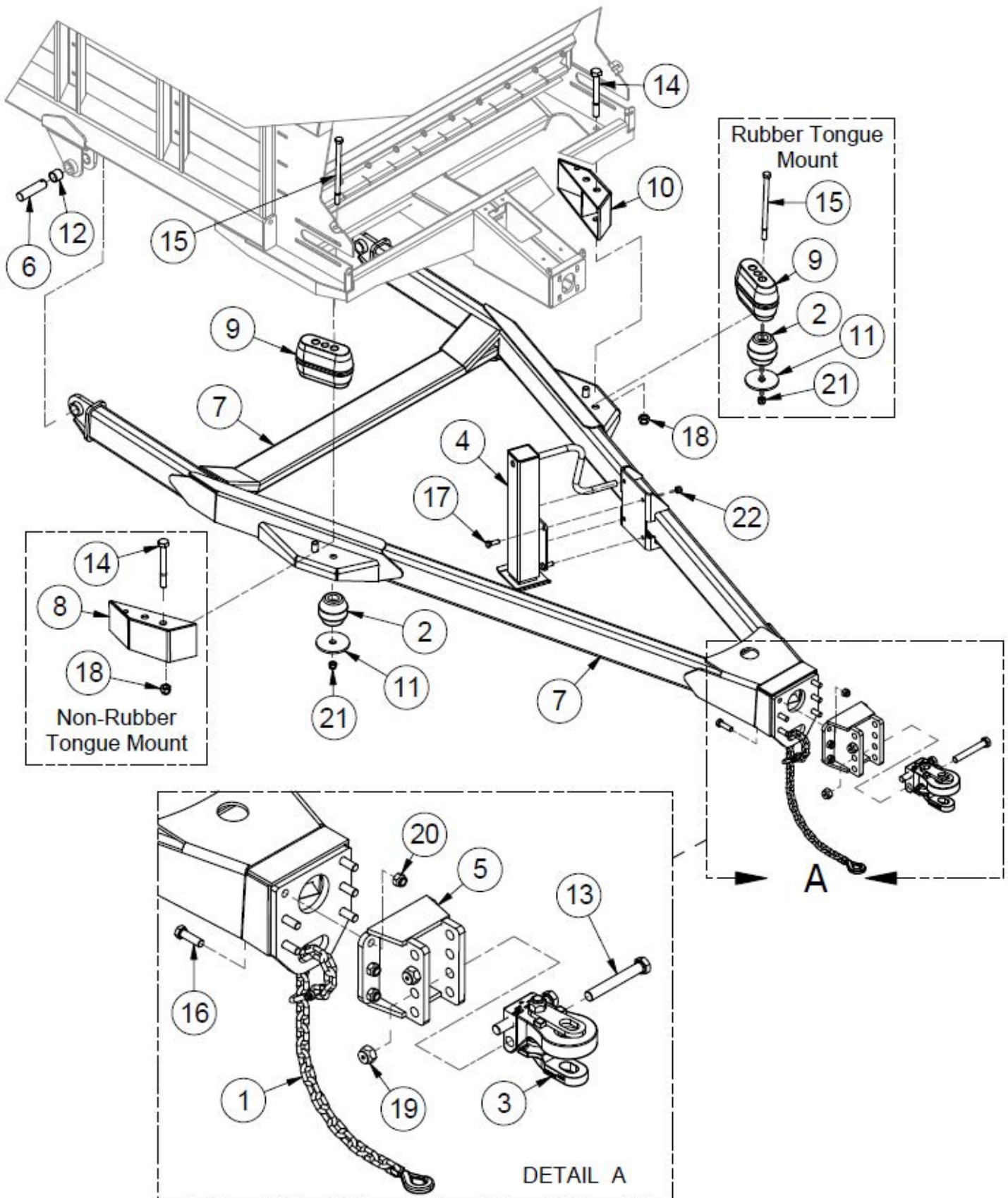
Front Components - Current

Used since serial no. 15NS102

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	35425	Hose Mount
2	1	35430	Shield Mount
3	1	35754	PTO Holder
4	1	39770	Front Shield
5	1	39776	Hose Mount
6	1	40257	Hose Hanger
7	1	600-316	Shield Stone Guard
8	1	BEA UCF208-24-1.5	1.5" Flange Bearing
9	7	CB 1/2-13X1.1/4 Z5	Carriage Bolt Zinc
10	16	CB 1/2-13X1.1/2 Z5	Carriage Bolt - 1/2-13 x 1-1/2" Grade 5 Zinc
11	2	HB 1/4-20X5.0 Z5	Hex Bolt Plated Gr. 5 N.C (500)
12	14	HB 3/8-16X1.0 Z5	Hex Bolt 3/8-16 x 1" Grade 5 Zinc Plated Hex Cap Screw NC
13	2	HB 7/16-14X3/4 Z5	Hex Bolt Plated Gr. 5 NC
14	4	HB 7/16-14X1.0 Z5	Hex Bolt Plated Gr. 5 NC
15	4	HB 1/2-13X1.1/4 Z5	Hex Bolt 1/2-13 x 1 1/4" Grade 5 Zinc Plated Hex Cap Screw NC
16	1	HB 1/2-13X1.1/2 Z5	Hex Bolt 1/2-13 x 1 1/2" Grade 5 Zinc Plated Hex Cap Screw NC
17	20	HB 5/8-11X2.0 Z5	Hex Bolt 5/8-11 x 2 Grade 5 Zinc Plated Hex Cap Screw NC
18	2	LN 1/4 N	Locknuts - 1/4-20 Zinc Plated Nylon Insert
19	10	LN 7/16	Center Locknuts - 7/16-14 Top Lock Nut
20	69	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut

Tongue

Used since serial no. 15NS102

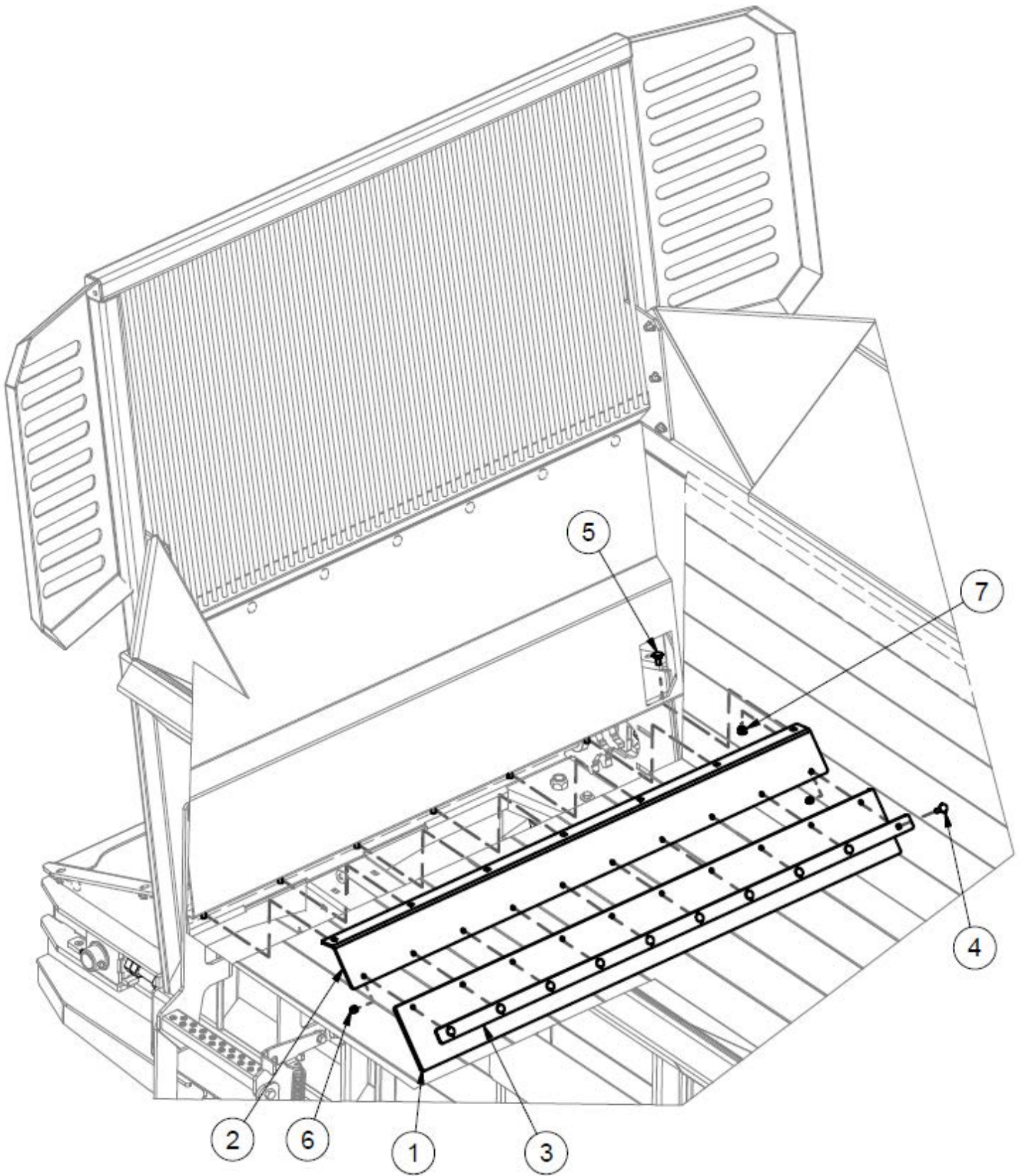


Tongue

Used since serial no. 15NS102

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	25262	Safety Chain 20000 # 60"	
2	2	30823	Small Timbren Bushing	Optional
3	1	30826	Clevis Hitch Assembly Cat.3	Pg.3-2 for Hitch Options
4	1	30850	Implement Jack - 15" - 12000# Manure Spreaders	
5	1	35451	Pull Plate	
6	2	36811	Tongue Pivot Pin	
7	1	36830	Spring Tongue	
8	1	36837	Right Suspension Block	Standard
9	2	36949	Timbren Suspension Bushing	Optional
10	1	40869	Left Suspension Block	Standard
11	2	700-473	Timbren Pull Washer	Optional
12	2	BEA1.5X1.75X1.5	Bronze Olite Bearing 1.75 OD X 1.5 ID X 1.5 Long	
13	2	HB 1-14 X7 YZ8	Hex Bolt 1-14x7 Grade 8 Zinc Hex Cap Screw	
14	2	HB 1-8X8.5 Z5	Hex Bolt 1-8x8 1/2 Grade 5 Zinc Plated Hex Cap Screw	Standard
15	2	HB 3/4-10X13 Z5	Hex Bolt 3/4-10x13 Grade 5 Zinc Plated Hex Cap Screw	Optional
16	6	HB 3/4-16 X2.5 YZ8	Hex Bolt 3/4-16x2 1/2 Grade 8 Zinc Hex Cap Screw	
17	4	HB 5/8-11X1.75 Z5	Hex Bolt 5/8-11x1 3/4 Grade 5 Zinc Plated Hex Cap Screw	
18	2	LN 1 N	LN 1-8 Zinc Plated Nylon Insert Lock Nut	Standard
19	2	LN 1-14 F	Center Locknuts (1-14) 2-Way Fine Thread	
20	6	LN 3/4 F	Center Locknuts (3/4-16) 2-Way Fine Thread	
21	2	LN 3/4 N	LN 3/4-10 Zinc Plated Nylon Insert Lock Nut	Optional
22	4	LN 5/8 N	LN 5/8-11 Zinc Plated Nylon Insert Lock Nut	

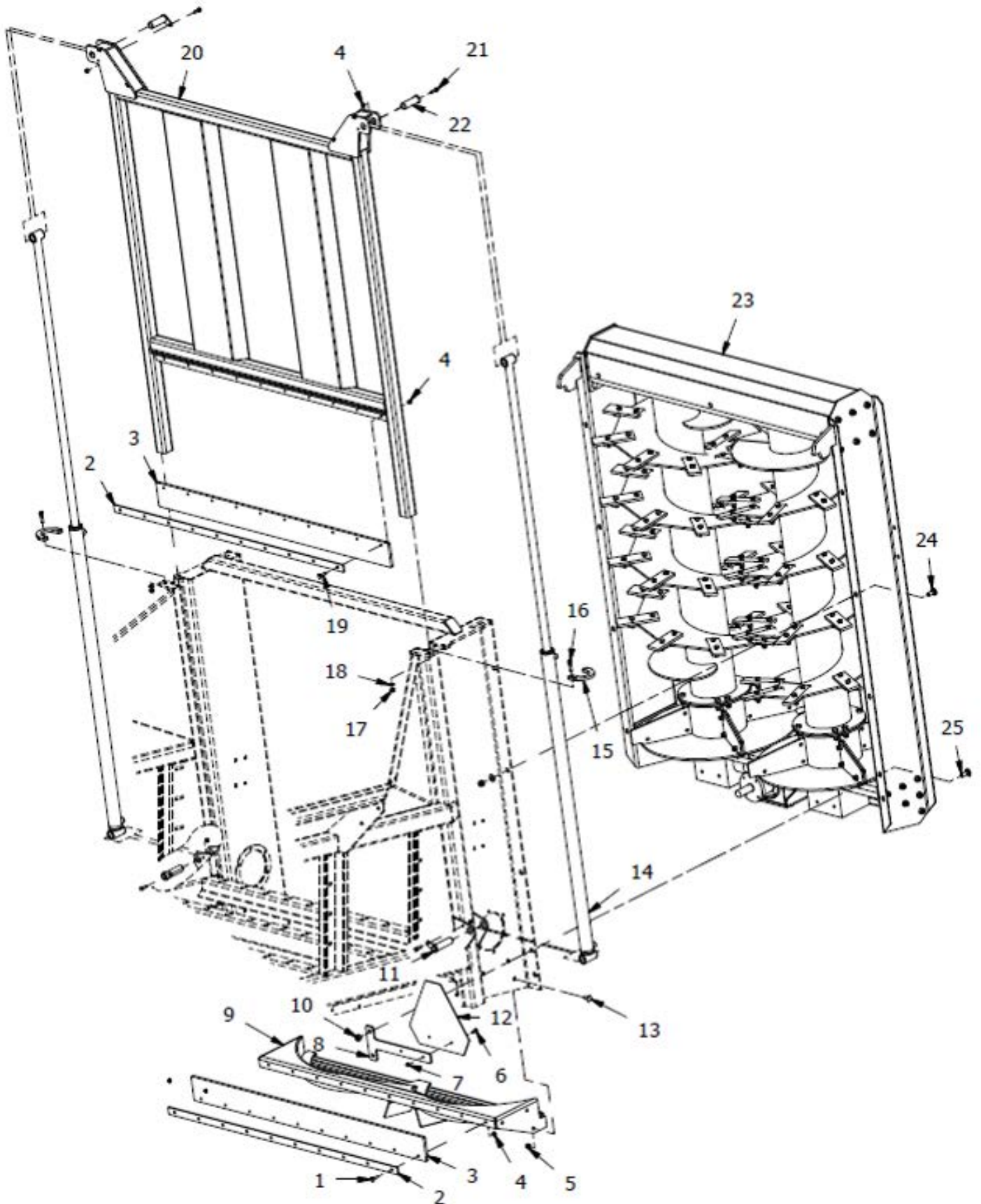
Front Scraper



Front Scraper

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	450-441	Rubber Seal
2	1	600-769	Rubber Seal Mount
3	1	600-790	Rubber Hold Down
4	10	CB 3/8-16X1.1/2 Z5	Carriage Bolt - 3/8-16 x 1 1/2" Grade 5 Zinc
5	7	CB 7/16-14X1.0 Z5	Carriage Bolt - 7/16-14 x 1" Grade 5 Zinc
6	10	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
7	7	LN 7/16 N	Center Locknuts - 7/16-14 Top Lock Nut

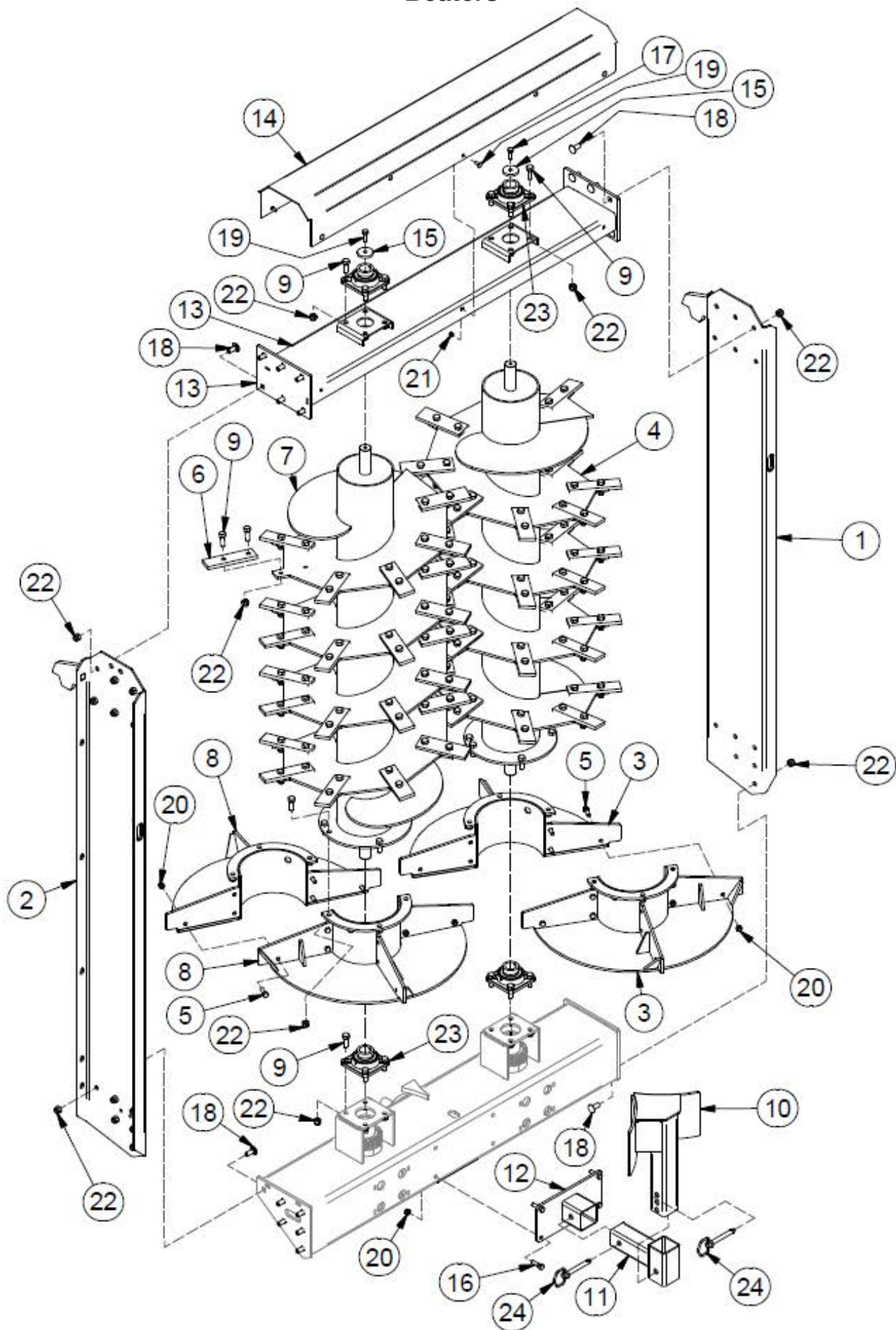
Rear Components



Rear Components

ITEM	QTY	PART NUMBER	DESCRIPTION
1	10	CB 3/8-16X1.1/2 Z5	Carriage Bolt - 3/8-16 x 1 1/2" Grade 5 Zinc
2	2	600-790	Rubber Hold-down
3	2	450-441	Rubber Seal
4	24	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
5	6	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
6	2	HB 5/16-18X 3/4 Z5	Hex Bolt - 5/16"-18 x 3/4" Grade 5 Zinc Plated Hex Cap Screw NC
7	2	LN 5/16 N	Locknut - 5/16-18 Type NE Zinc Plated Nylon Insert
8	1	700-108	SMV Mount
9	1	450-130	Spinner Shroud
10	9	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut
11	2	700-619	Pin
12	1	DESMV	Slow Moving Vehicle Sign
13	6	CB 1/2-13X1.1/4 Z5	Carriage Bolt Zinc
14	2	31328	Hydraulic Cylinder
15	2	700-142	Endgate Cyl. Support Plate
16	4	HB 7/16-14X1.3/4 Z5	Hex Bolt Plated Gr. 5 N.C
17	4	LN 7/16	Center Locknuts - 7/16-14 Top Lock Nut
18	4	FW 7/16	Flatwasher - 7/16" Zinc Plated USS (1620)
19	10	CB 3/8-16X1.3/4 Z5	Carriage Bolt - 3/8"-16 x 1-3/4" Zinc Finish SAE J429 Grade 5 Round Head
20	1	450-126	Endgate
21	4	HB 3/8-16X1.1/4 Z5	Hex Bolt 3/8-16 x 1 1/4" Grade 5 Zinc Plated Hex Cap Screw NC
22	2	400-601	Pin
23	1	450-106	Complete Beater
24	7	CB 5/8-11X1.1/2 Z5	Carriage Bolt - 5/8-11 x 1-1/2" Grade 5 Zinc
25	2	CB 5/8-11X1.3/4 Z5	Carriage Bolt - 5/8-11 x 1-3/4" Grade 5 Zinc

Beaters



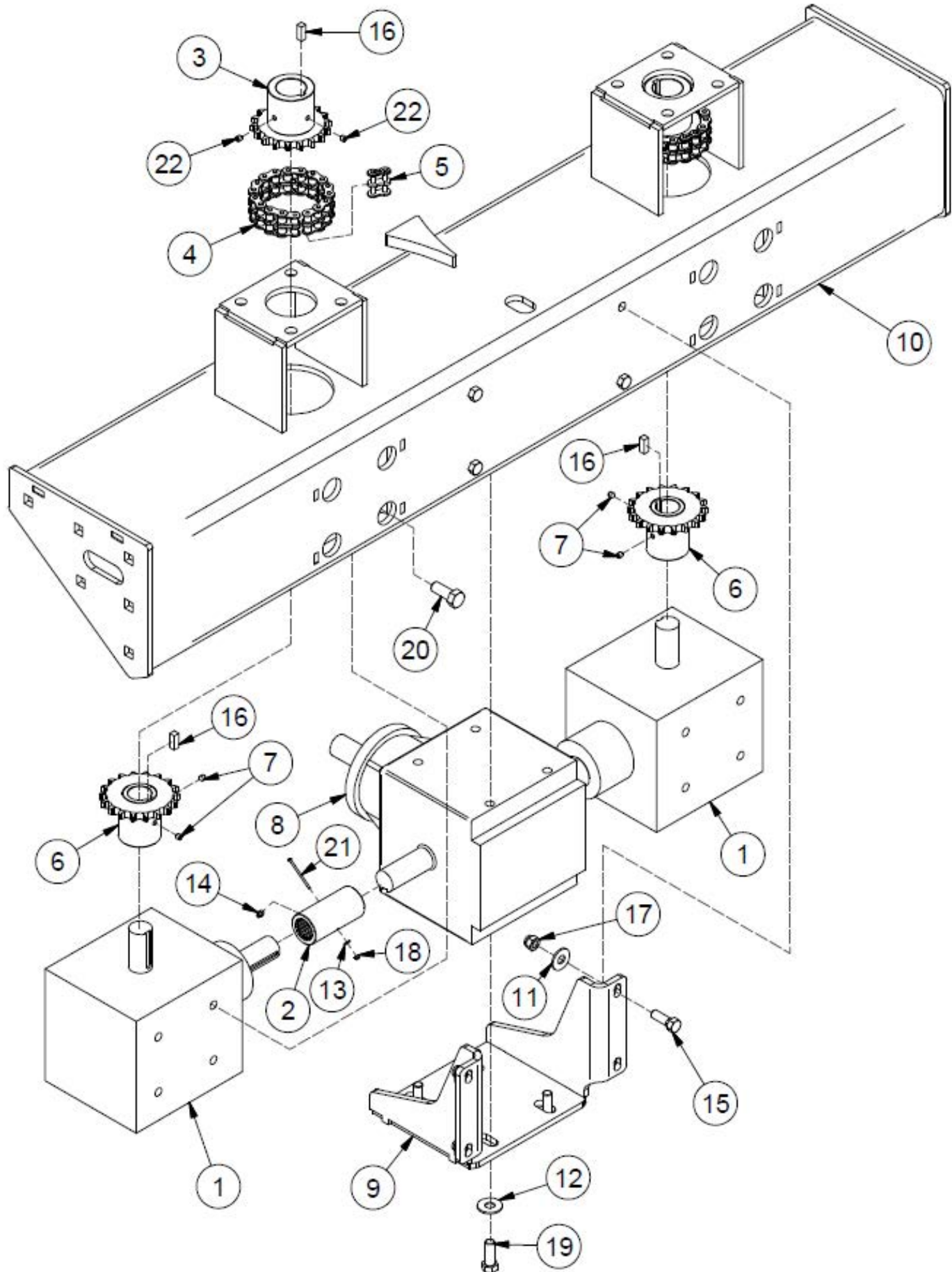
Beaters

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	450-107	Side Frame Beater Right
2	1	450-108	Side Frame Beater Left
3	2	36966	Right Spinner Beater
4	1	450-111*	N450 Right Hand Beater with Blades
5	12	HB 1/2-13X1.1/2 Z5	Hex Bolt 1/2-13 x 1 1/2" Grade 5 Zinc Plated Hex Cap Screw NC
6	64	400-438	Beater Paddle
7	1	450-112*	N450 Left Hand Beater with Blades
8	2	450-116	Left Spinner Beater
9	156	HB 5/8-11X1.3/4 Z5	Hex Bolt - 5/8"-11 x 1-3/4" Grade 5 Zinc Plated Hex Cap Screw NC
10	1	450-131	Beater Deflector
11	1	450-134	Deflector Mount Insert
12	1	450-139	Deflector Mount Socket
13	1	450-133	Cross Beam Beater Top
14	1	450-405	Top Beater Cover
15	2	700-157	Load Bearing Washer
16	4	HB 1/2-13X1.3/4 Z5	Hex Bolt Plated - 1/2"-13 x 1-3/4" Zinc Finish SAE J429 Gr. 5 NC
17	6	CB 3/8-16X1.0 Z5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc
18	24	CB 5/8-11 UNC X 1.5 Z5	Carriage Bolt 5/8-11 x 1.5" Gr.5 Zinc Plated
19	2	HB 1/2-13X1.1/2 Z5	Hex Bolt 1/2-13 x 1 1/2" Grade 5 Zinc Plated Hex Cap Screw NC
20	156	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
21	6	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
22	180	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut
23	4	BEA UCF209-28R3	Flange Bearing -Triple Seal- Ductile Iron
24	2	TL384804	3/4 x 4 1/4 Hitch Pin w/Chain & Lynch Pin

** If replacing beaters (up to serial 15NS116), top sprockets must also be replaced with part no. 42303*

Beater Gearbox - Version 1 - 1 3/8" Keywayed

Used up to serial number 15NS116



Beater Gearbox - Version 1 - 1 3/8" Keywayed

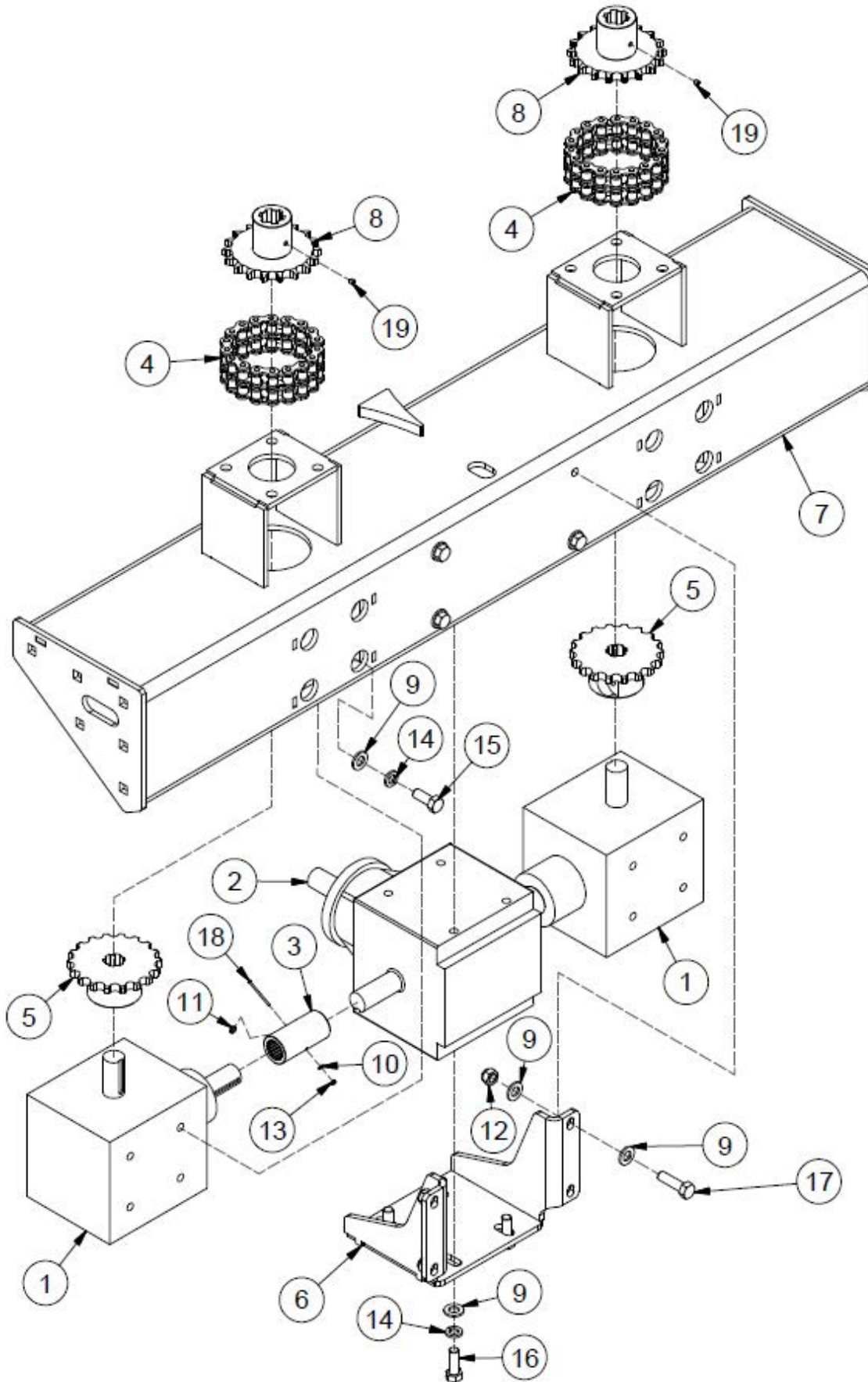
Used up to serial number 15NS116

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	30847	Gear Box (Outside) for 1000 PTO with Keywayed Output Shaft
2	2	30849	Sleeve- Gear box Spreaders- V450-V600
3	2	400-905	1.75" Bore Keyway Sprocket
4	2	31515	#60 Chain Connector w/Fether
5	2	CHAIN 60 CON	#60 Chain Coupler Link
5	1	30848	Gear Box-Center-Spreaders
6	2	402-906	1.375" Bore Keyway Sprocket
7	4	SS 516X38	Allan Head Set Screw, Cup Point Set Screw 5/16 x 3/8
8	1	403-420	Center Gearbox
9	1	403-912	Gearbox Mount Bracket
10	1	450-115*	Bottom Cross Beam
11	4	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
12	4	FW 9/16	Flatwasher - 9/16" Zinc Plated USS
13	2	FWMM4	Sealing Bonded Washer #4
14	2	GR 1/4 X 28	Grease Fitting 1/4-28 Strght-Standrd Zerk
15	4	HB 1/2-13X1.1/2 Z5	Hex Bolt 1/2-13 x 1 1/2" Grade 5 Zinc Plated Hex Cap Screw NC
16	4	KS39999	Keystock .375 x 1
17	4	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
18	2	LN 4MM	Locknut - M6-1.0 DIN 985 Zinc Plated Nylon Insert Lock Nut
19	4	M14X40X2.0	Metric Bolt
20	8	M16X40X2.0	Metric Bolt (280)
21	2	MS 4X40X2.5	Machine Screw Pan Head Philips 4-4-2.1/2
22	4	SS 516X38	Allan Head Set Screw, Cup Point Set Screw 5/16 x 3/8

* Replacement cross beam of this version requires complete lower assembly replacement (this page minus sprockets and chain couplers). Order part number 35802, 2 #80 sprockets for beater side (700-641), 2 #80 sprockets for gearbox side (700-645) and 2 #80 chain sprockets (31518). *Call local dealer or manufacturer for further clarification.*

Beater Gearbox - Version 2 - 1 3/8" 6-Spline

Used from serial number 15NS117 to 16NS1111



Beater Gearbox - Version 2 - 1 3/8" 6-Spline

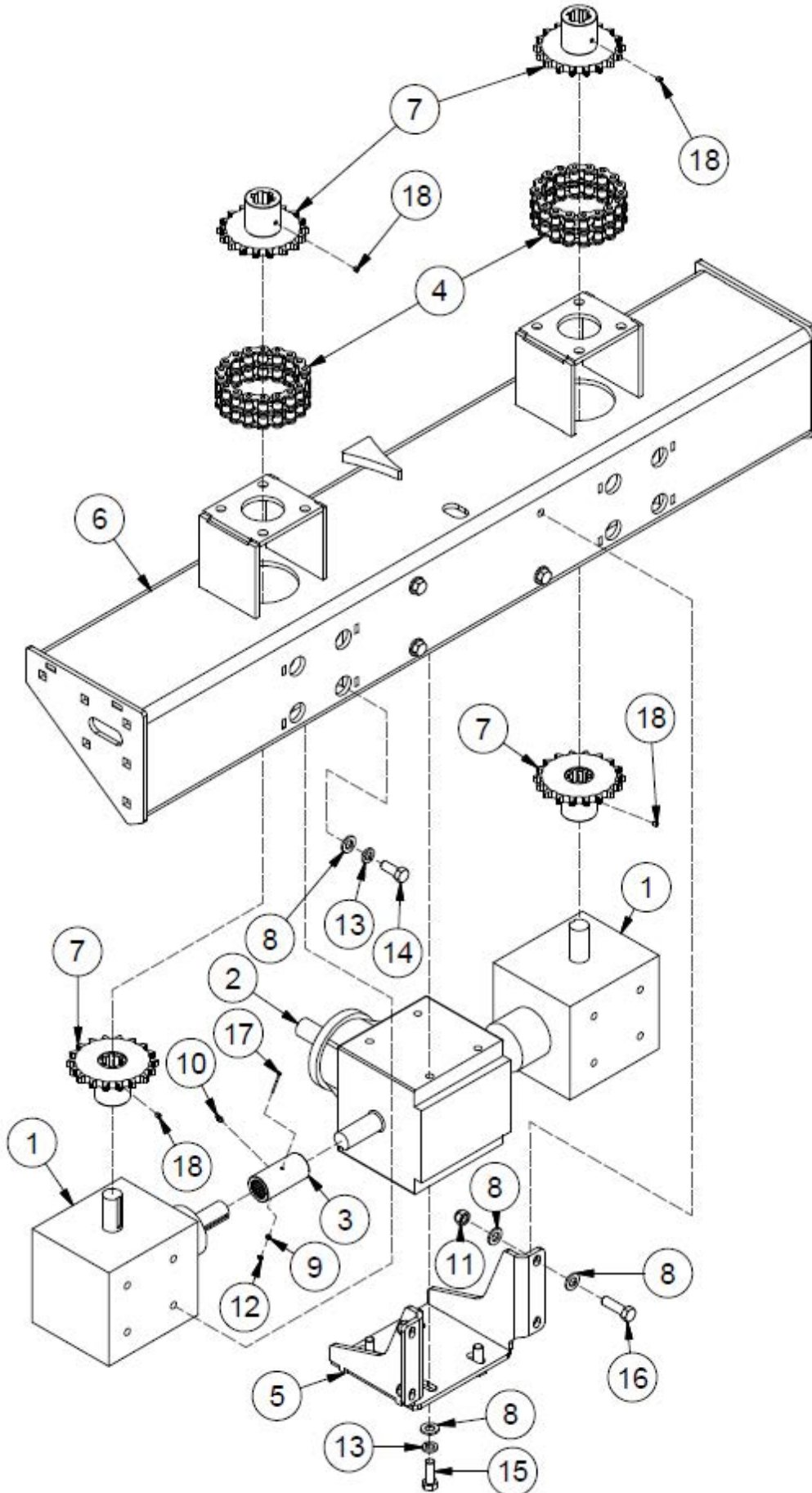
Used from serial no. 15NS117 to 16NS1111

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	30847-1	Gear Box (Outside) for 1000 PTO with 540 - 1 3/8 Spline Output Shaft
2	1	30848	Gear Box-Center-Spreaders
3	2	30849	Sleeve- Gear box Spreaders- V450-V600
	2	31516	#80 Chain Connector Coupling Chain
4	2	31518	Coupling Chain # 80
5	2	37839	Sprocket Assembly 80B18 with 1.38 x 6 Spline Hub
6	1	403-912	Mounting Bracket- Gearbox
7	1	450-115*	Cross Beam Beater Bottom
8	2	700-645	Sprocket Weldment 80B18,-1.75 x 6 Spline
9	20	FWMM16	Flatwasher - M16 Black DIN6916 Struct.
10	2	FWMM4	Sealing Bonded Washer #4
11	2	GR 1/4 X 28	Grease Fitting 1/4-28 Strght-Standrd Zerk
12	4	LN 16X2MM N	Metric Nylon Lock Nut M16x2
13	2	LN 4MM	Locknut - M6-1.0 DIN 985 Zinc Plated Nylon Insert Lock Nut
14	12	LW 16MM	Lockwasher Metric
15	8	M16X40X2.0	Metric Bolt (280)
16	4	M16X45X2.0	Metric Bolt
17	4	M16X55X2	Metric Bolt
18	2	MS 4X40X2.5	Machine Screw Pan Head Philips 4-4-2.1/2
19	2	SS 516X38	Allan Head Set Screw, Cup Point Set Screw 5/16 x 3/8

* Replacement cross beam of this version requires complete lower assembly replacement (this page minus sprockets and chain couplers). Order part number 35802 and 2 #80 sprockets for gearbox side (700-645). Beater side sprockets and chain sprockets can be reused. *Call local dealer or manufacturer for further clarification.*

Beater Gearbox - Version 3 - 1 3/4" 6-Spline

Used from serial no. 16NS112 to current



Beater Gearbox - Version 3 - 1 3/4" 6-Spline

Used from serial no. 16NS112 to current

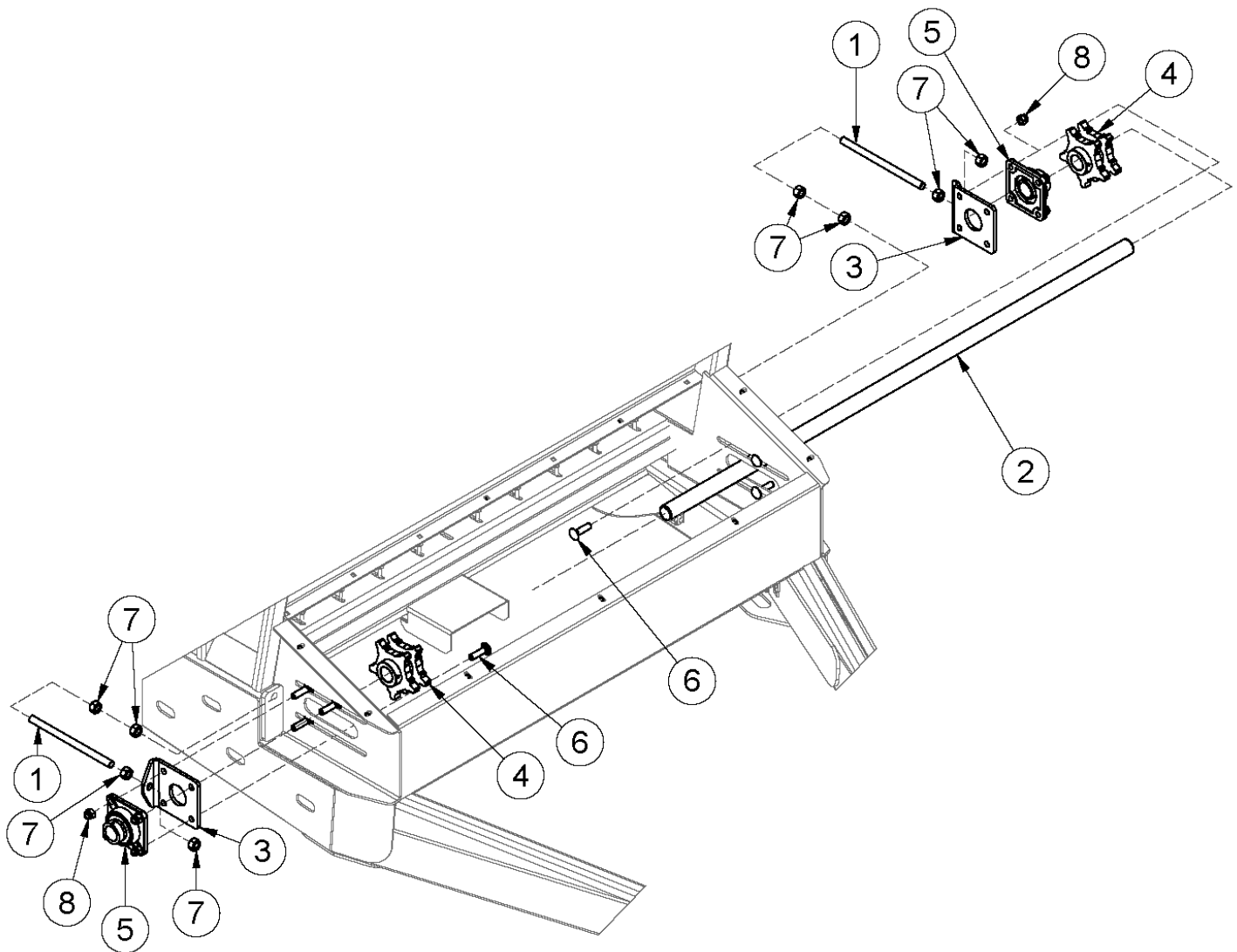
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	30847-2	Gear Box (Outside) for 1000 PTO with 540 - 1 3/4 Spline Output Shaft
2	1	30848	Gear Box-Center-Spreaders
3	2	30849	Sleeve- Gear box Spreaders- V450-V600
	2	31516	#80 Chain Connector Coupling Chain
4	2	31518	Coupling Chain # 80
5	1	403-912	Mounting Bracket- Gearbox
6	1	450-115*	Cross Beam Beater Bottom
7	4	700-645	Sprocket Weldment 80B18,-1.75 x 6 Spline
8	20	FWMM16	Flatwasher - M16 Black DIN6916 Struct.
9	2	FWMM4	Sealing Bonded Washer #4
10	2	GR 1/4 X 28	Grease Fitting 1/4-28 Strght-Standrd Zerk
11	4	LN 16X2MM N	Metric Nylon Lock Nut M16x2
12	2	LN 4MM	Locknut - M6-1.0 DIN 985 Zinc Plated Nylon Insert Lock Nut
13	12	LW 16MM	Lockwasher Metric
14	8	M16X40X2.0	Metric Bolt (280)
15	4	M16X45X2	Metric Bolt
16	4	M16X55X2	Metric Bolt
17	2	MS 4X40X2.5	Machine Screw Pan Head Philips 4-4-2.1/2
18	4	SS 516X38	Allan Head Set Screw, Cup Point Set Screw 5/16 x 3/8

Order part no. 35802 to replace complete lower beam (this page minus sprockets & chain couplers).
Call local dealer or manufacturer for further clarification.

Front Apron Drive - Original

Welded Tongue Style

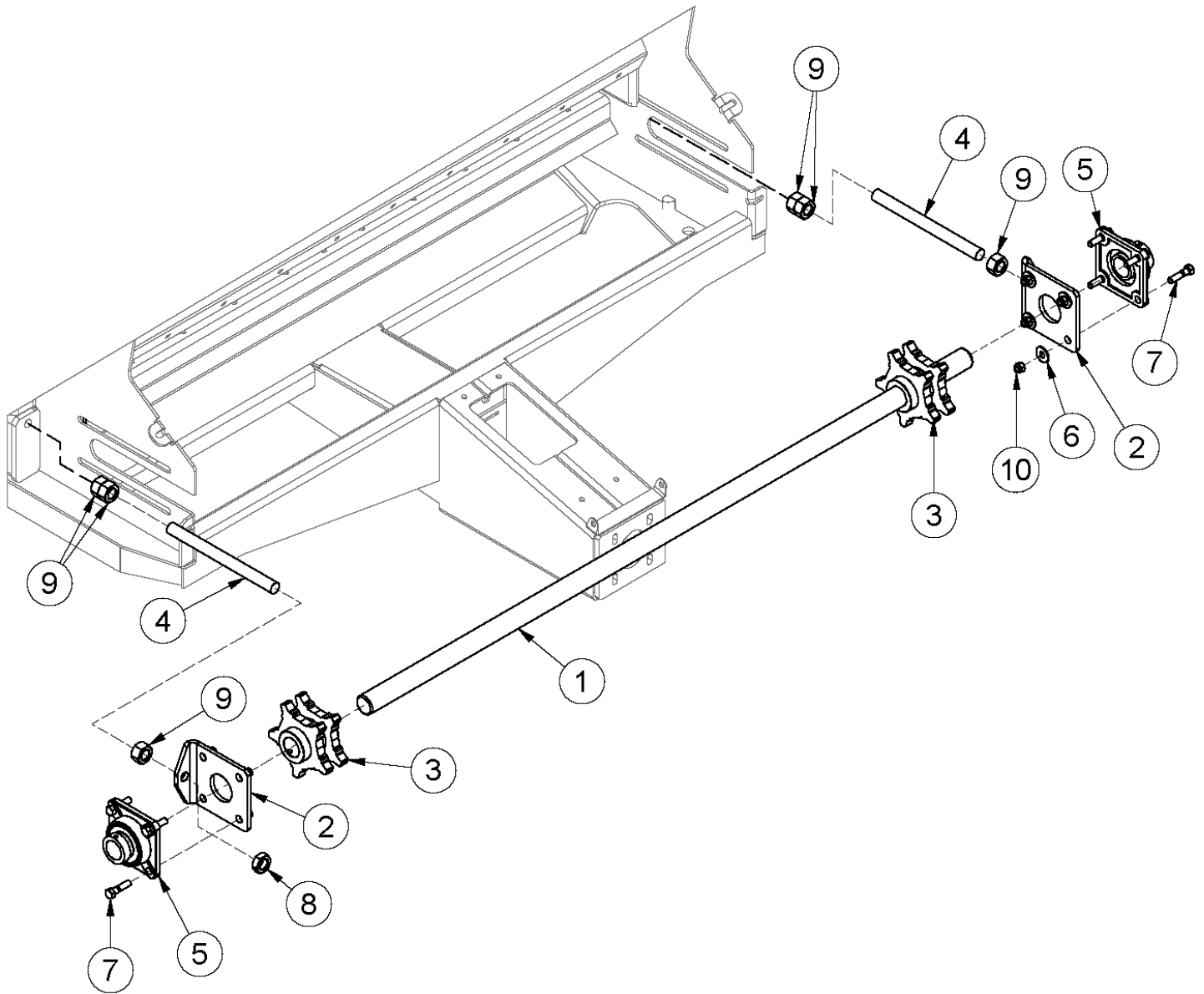
Serial No: Up to **15NS101**



ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	400-875	Threaded Tightener
2	1	400-162	1045 Front Apron Drive Shaft
3	2	400-169	Bearing Mount Plate
4	2	400-934	Apron Sprocket
5	2	BEA UCF209-28R3	Flange Bearing -Triple Seal- Ductile Iron
6	8	CB 5/8-11X2.1/4 Z5	Carriage Bolt - 5/8-11 x 2-1/4" Grade 5 Zinc
7	8	HN 3/4	Hex Nut - 3/4"-10 Grade 5 Zinc Plated Finished NC
8	8	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut

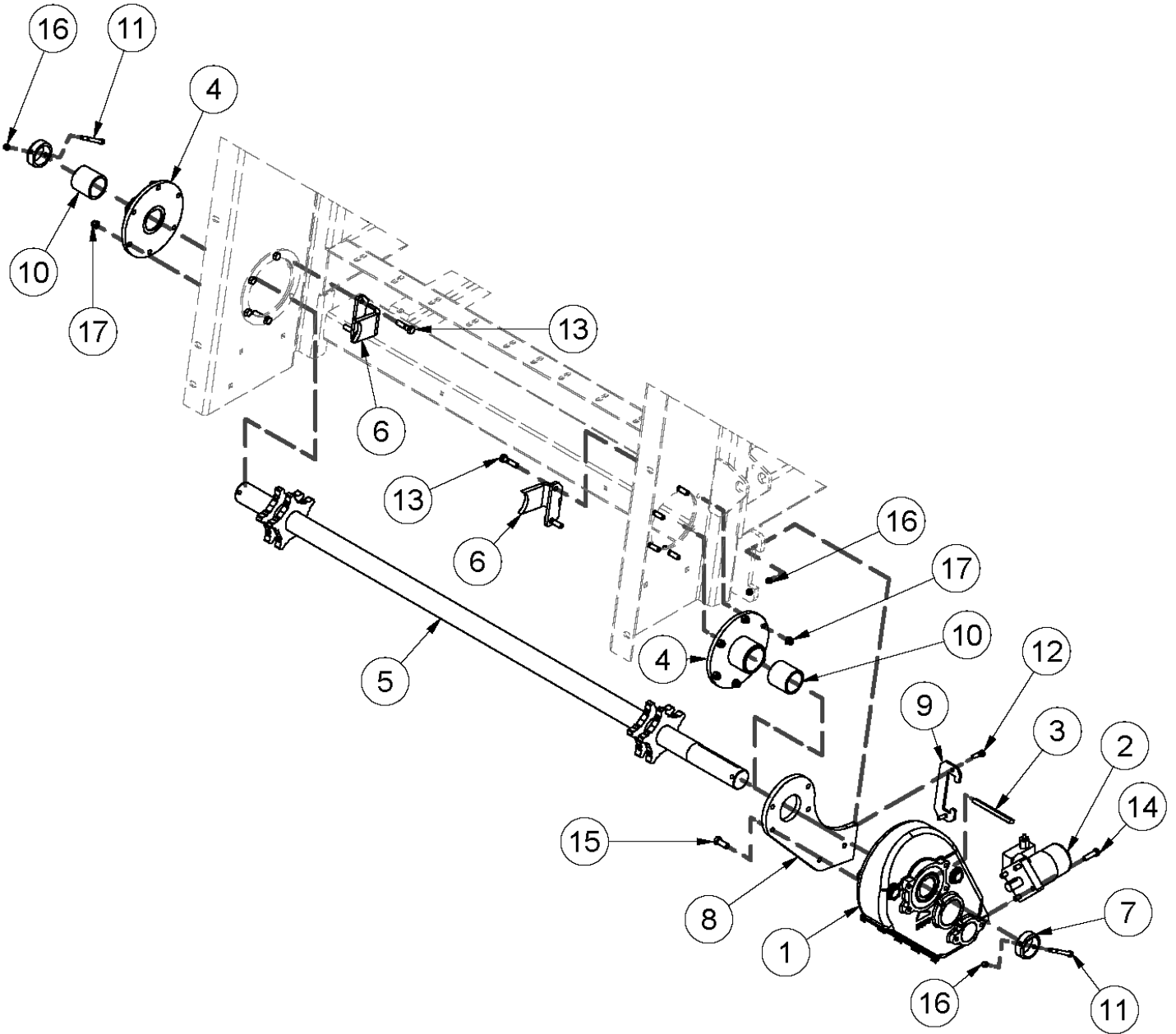
Front Apron Drive - Current

Suspension Tongue Style
Serial No: 15NS102-Current



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	400-162	1045 Front Apron Drive Shaft
2	2	400-169	Bearing Mount Plate
3	2	400-934	Apron Sprocket
4	2	700-040	Threaded Rod Tightener
5	2	BEA UCF209-28R3	Flange Bearing -Triple Seal- Ductile Iron
6	8	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
7	8	HB 1/2-13X2.0 Z5	Hex Bolt 1/2-13 x 2" Grade 5 Zinc Plated Hex Cap Screw NC
8	2	HN 1.0 JAM	Hex Nut - 1-14 Zinc Plated Hex Jam Nut (Half Thickness Nut)
9	6	HN 1.0	Hex Nut - 1"-8 Grade 5 Zinc Plated Finished NC
10	8	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut

Rear Apron Drive

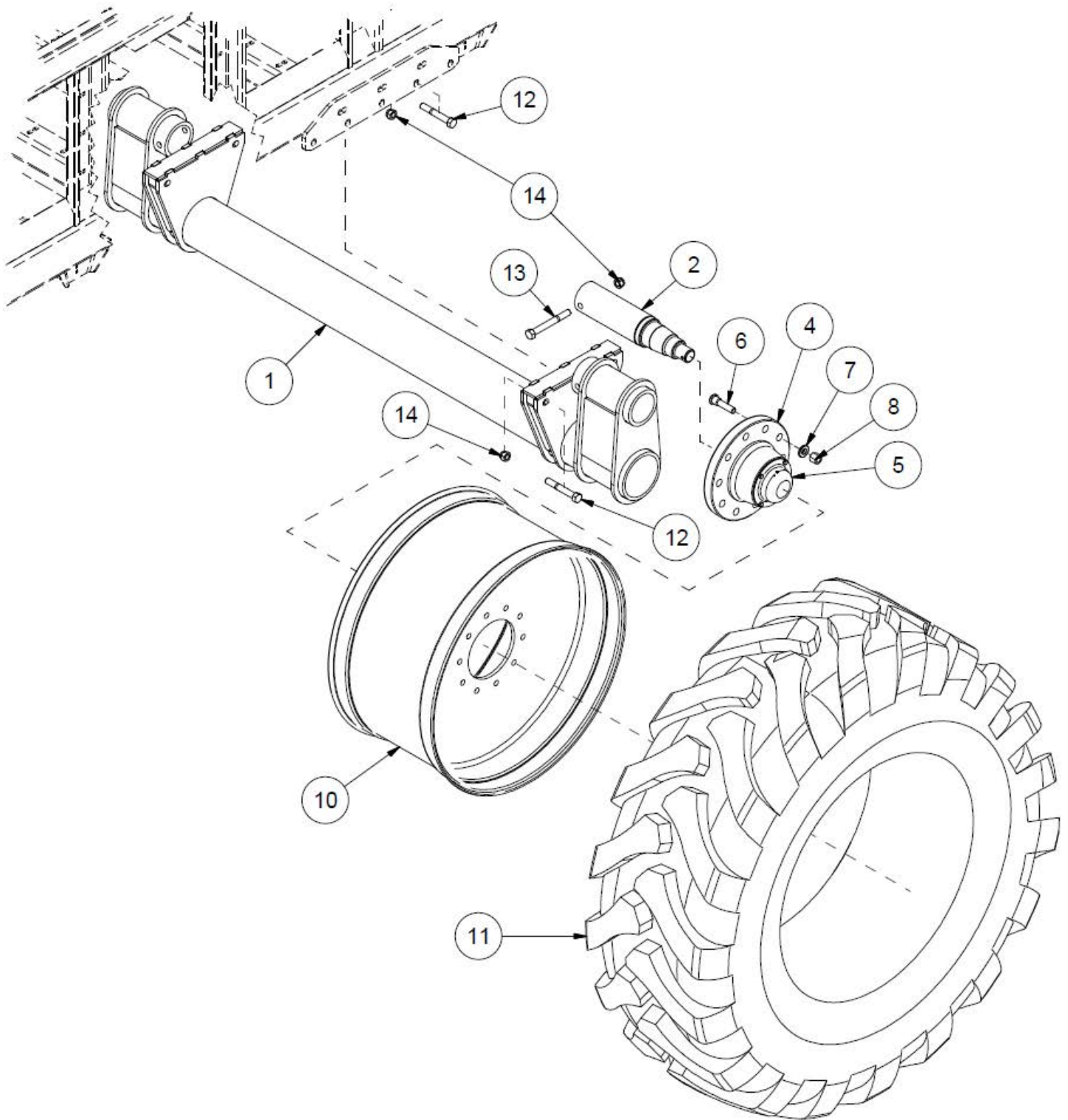


Rear Apron Drive

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	30842	Apron Drive Gearbox
2	1	30854	Hydraulic Motor
3	1	30859	Metric Key 18 x 11 x 150mm
4	2	450-135	Bearing Housing
5	1	450-137	Apron Drive Shaft
6	2	450-138	Apron Shaft Scraper
7	2	450-371	Apron Shaft Bushing
8	1	450-428	Gearbox Torque Arm
9	1	450-433	Torque Arm Retainer
10	2	700-431	Apron Bushing
11	2	HB 3/8-16X4.0 Z5	Hex Bolt - 3/8"-16 x 4" Zinc Finish SAE J429 Grade 5 Hex Cap Screw NC
12	2	HB 3/8-16X1.1/2 Z5	Hex Bolt - 3/8-16 x 1 1/2" Grade 5 Zinc Plated Hex Cap Screw NC
13	4	HB 1/2-13X2.0 Z5	Hex Bolt 1/2-13 x 2" Grade 5 Zinc Plated Hex Cap Screw NC
14	4	M12X45X1.75	Metric Bolt
15	6	M14X35X2.0	Metric Bolt
16	4	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
17	12	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut

Single Axle - Original

Used until serial no. 13NS104



Single Axle - Original

Used until serial no. 13NS104

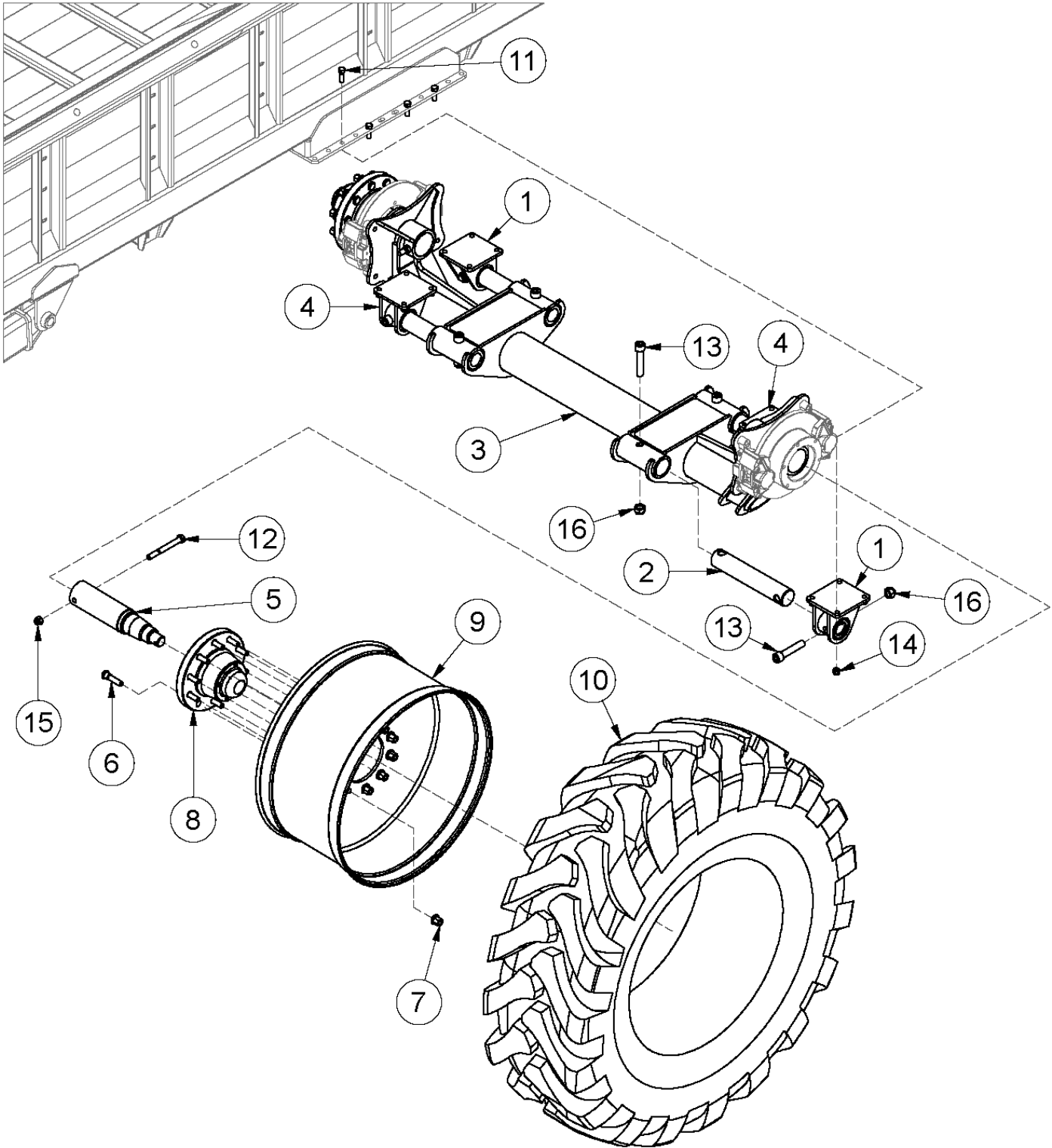
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	450-120	Offset Axle
2	2	450-435	16000lb Spindle
3	2	HUB 16000	Complete 16000lb Hub
4	2	31522	16000lb Hub
5	2	HUB 16000-CCS	16000lb Hub Bearing & Seal Kit
6	20	31529	3/4 Wheel Stud
7	20	39600	W750 Washer
8	20	31530	3/4 Wheel Nut
9	2	450-118/450-119	Complete Tire (Left/Right)
10	2	450-338	Rim
11	2	450-339	Tire
12	4	HB 3/4-10X5.0 Z5	Hex Bolt - 3/4"-10 x 5" Grade 5 Zinc Plated Hex Cap Screw NC
13	2	HB 3/4-10X6.1/2 Z5	Hex Bolt - 3/4"-10 x 6 1/2" Grade 5 Zinc Plated Hex Cap Screw NC
14	6	LN 3/4 N	Locknuts - 3/4-10 Zinc Plated Nylon Insert

NITRO 450 TIRE CHART		
Axle Type	Part Number	Tire Size
Single	WHE 600X65X34	600/65-34
Tandem	WHE 425X65X22.5L	425/22.5 Recap (Truck)
Tandem	WHE 550X45X22.5	550/45-22.5

NOTE: Refer to Nitro Operator's Manual for wheel load capacity charts.

Single Axle - Current

Used after serial no. 14NS101



Single Axle - Current

Used after serial no. 14NS101

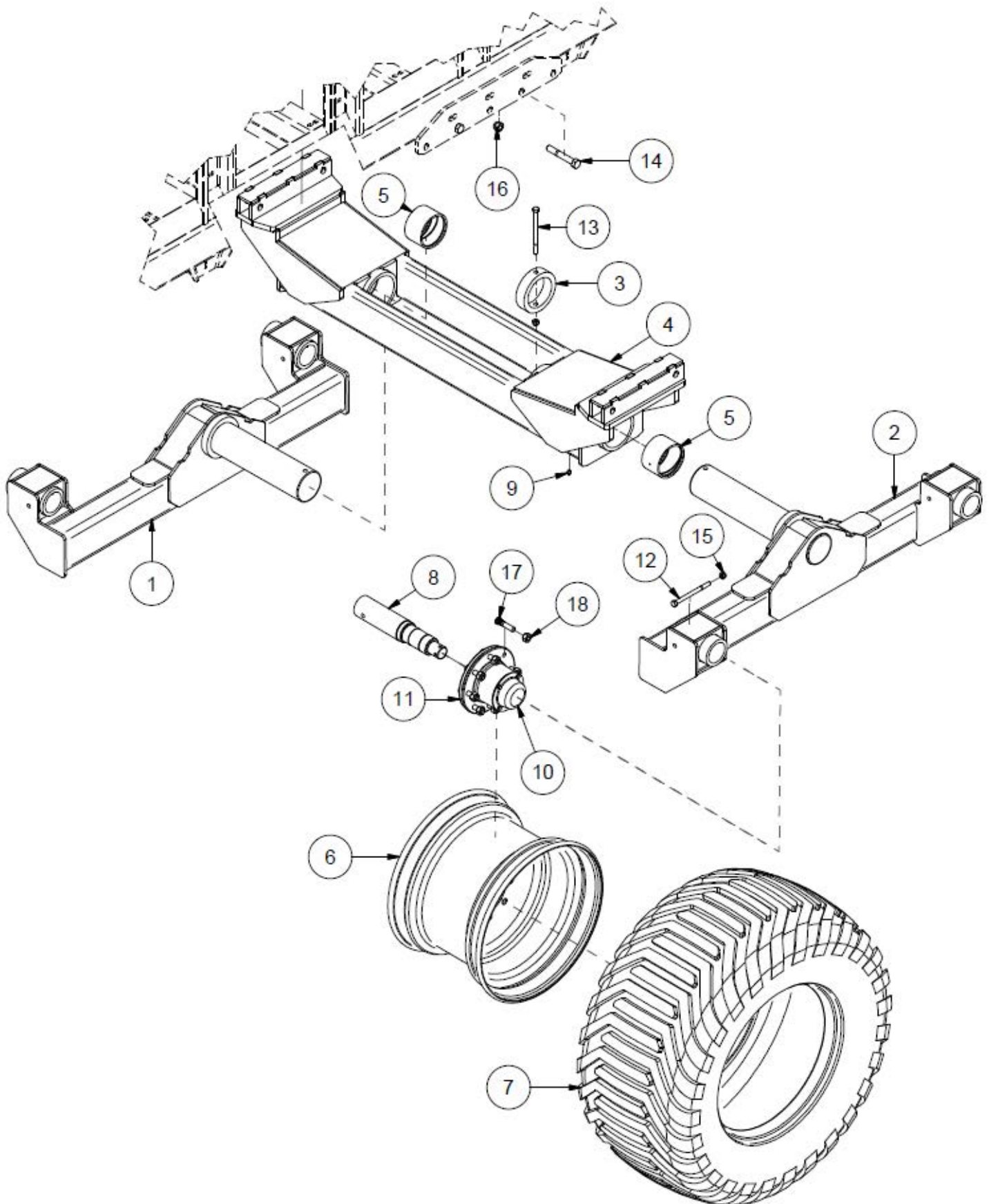
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	35812	Left Frame Mount
2	4	36037	Axle Mount Pin
3	1	36835	Single Axle
4	2	36836	Right Frame Mount
5	2	450-435	16000lb Hub Spindle
6	20	31529	.75 Wheel Stud
7	20	31530	.75 Wheel Nut
8	2	HUB 16000	16000lb Hub
	2	HUB 16000-CCS	16000lb Hub Bearing & Seal Kit
9	1	*Varies*	*Rims vary on tire used, contact dealer or manufacturer
10	1	*Varies*	*See tire sidewall for size
11	20	HB 5/8-11X2.0 Z5	Hex Bolt 5/8-11 x 2 Grade 5 Zinc Plated Hex Cap Screw NC
12	2	HB 3/4-10X7.0 Z5	Hex Bolt - 3/4"-10 x 7" Grade 5 Zinc Plated Hex Cap Screw
13	8	HB 1-8X5.1/2 SHCS	Hex Bolt - 1"-8 x 5-1/2" Socket Head Cap Screw
14	33	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut
15	9	LN 3/4 N	Locknuts - 3/4-10 Zinc Plated Nylon Insert
16	14	LN 1.0 N	Locknuts - 1-8 Zinc Plated Nylon Insert

NITRO 450 TIRE CHART		
Axle Type	Part Number	Tire Size
Single	WHE 600X65X34	600/65-34
Tandem	WHE 425X65X22.5L	425/22.5 Recap (Truck)
Tandem	WHE 550X45X22.5	550/45-22.5

NOTE: Refer to Nitro Operator's Manual for wheel load capacity charts.

Tandem Axle - Original

Used until serial no. 13NS104



Tandem Axle - Original

Used until serial no. 13NS104

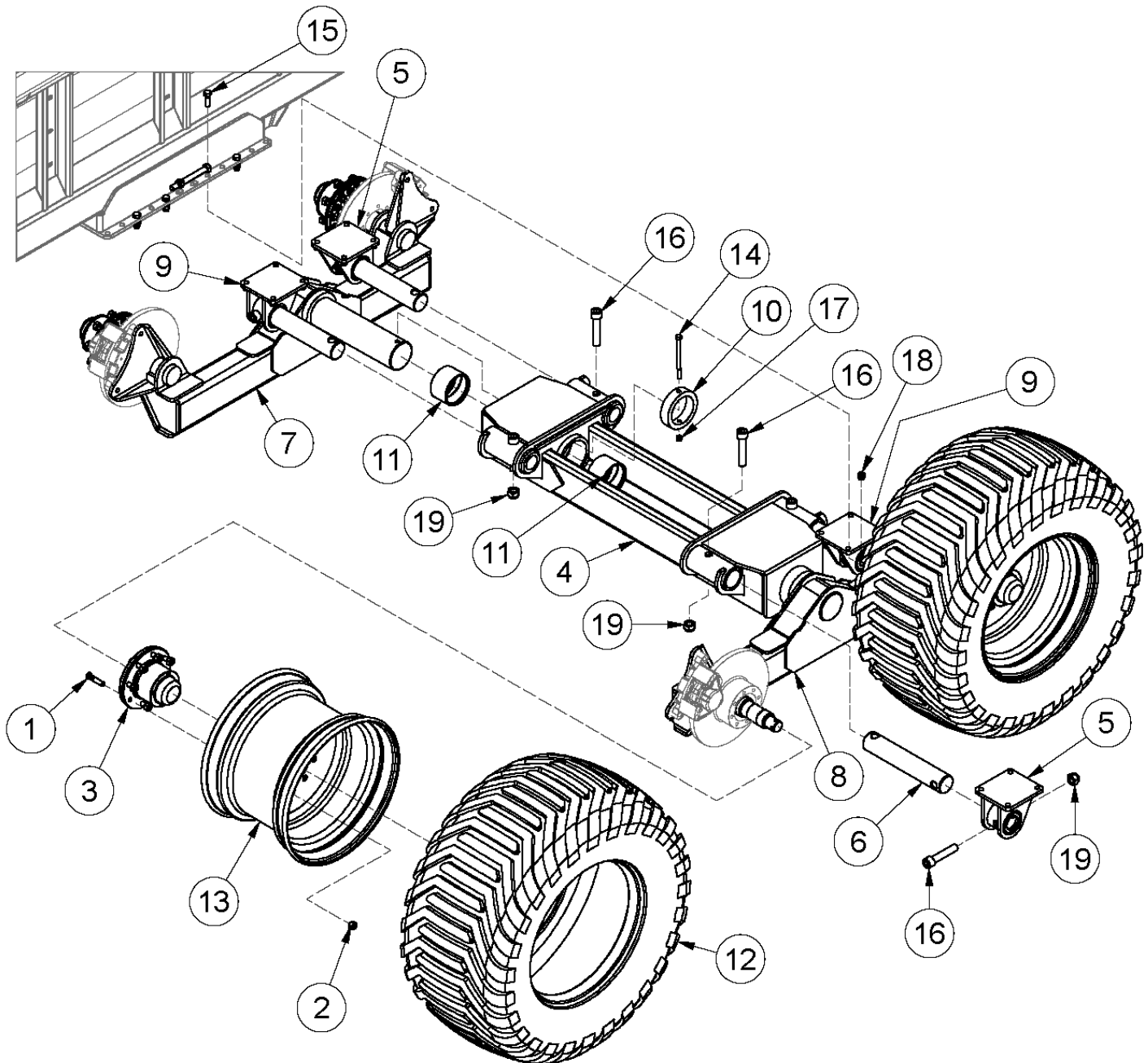
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	450-113	Right Walking Beam
2	1	450-114	Left Walking Beam
3	2	400-118	Axle Bushing
4	1	450-128	Offset Axle
5	4	400-304	Walking Beam Bushing
6	4	400-429	Tandem Rim
7	4	400-430	Tandem Tire
8	4	450-12001	3 x 15 1/4 Spindle
9	4	GRNPT 1/8	Grease Fitting 1/8 Straight
10	4	HUB 12000-CCS	12000lbs Hub Bearing & Seal Kit
11	4	HUB 12000	Complete 12000lbs Hub
12	4	HB 1/2-13X6.1/2 Z5	Hex Bolt - 1/2"-13 x 6-1/2" Grade 5 Zinc Plated Hex Cap Screw
13	2	HB 1/2-13X7.0 Z5	Hex Bolt - 1/2"-13 x 7" Grade 5 Zinc Plated Hex Cap Screw
14	4	HB 3/4-10X5.0 Z5	Hex Bolt - 3/4"-10 x 5" Grade 5 Zinc Plated Hex Cap Screw NC
15	6	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
16	4	LN 3/4 N	Locknuts - 3/4-10 Zinc Plated Nylon Insert
17	32	31531	5/8 Wheel Stud
18	32	31532	5/8 Wheel Nut

NITRO 450 TIRE CHART		
Axle Type	Part Number	Tire Size
Single	WHE 600X65X34	600/65-34
Tandem	WHE 425X65X22.5L	425/22.5 Recap (Truck)
Tandem	WHE 550X45X22.5	550/45-22.5

NOTE: Refer to Nitro Operator's Manual for wheel load capacity charts.

Tandem Axle - Current

Used after serial no. 14NS101



Tandem Axle - Current

Used after serial no. 14NS101

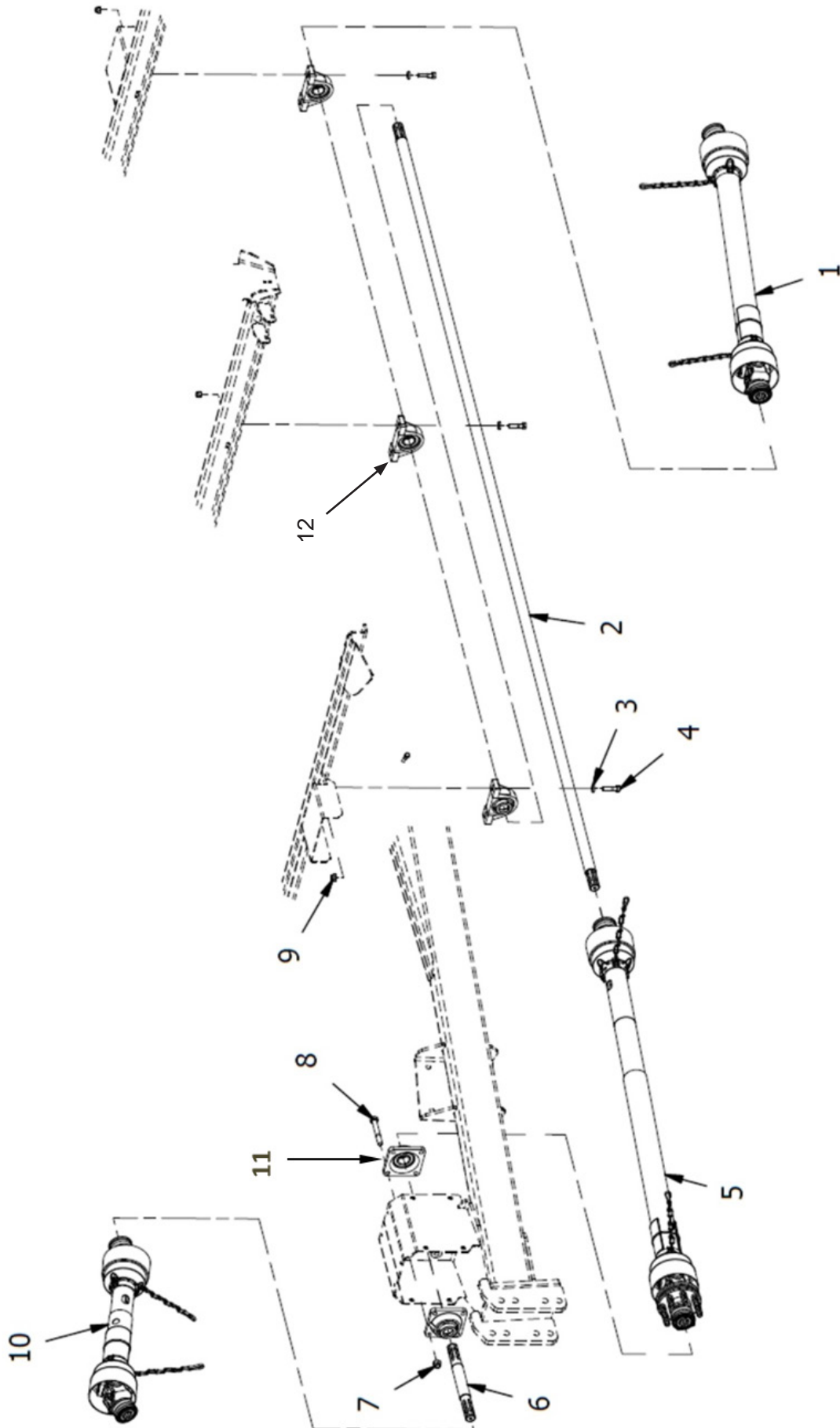
ITEM	QTY	PART NUMBER	DESCRIPTION
1	32	31531	.625 Wheel Stud
2	32	31532	.625 Wheel Nut
3	4	HUB 12000	12000lb Hub
	4	HUB 12000-CCS	12000lb Hub Bearing & Seal Kit
4	1	35811	Tandem Axle
5	2	35812	Left Frame Mount
6	4	36037	Axle Mount Pin
7	1	36832	Right Walking Beam
8	1	36834	Left Walking Beam
9	2	36836	Right Frame Mount
10	2	400-118	Axle Bushing
11	4	400-304	Walking Beam Bushing
12	4	*Varies*	*See tire sidewall for size
13	4	*Varies*	*Rims vary on tire used, contact dealer or manufacturer
14	2	HB 1/2-13X7.0 Z5	Hex Bolt - 1/2"-13 x 7" Grade 5 Zinc Plated Hex Cap Screw
15	20	HB 5/8-11X2.0 Z5	Hex Bolt 5/8-11 x 2 Grade 5 Zinc Plated Hex Cap Screw NC
16	8	HB 1-8X5.1/2 SHCS	Hex Bolt - 1"-8 x 5-1/2" Socket Head Cap Screw
17	69	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
18	33	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut
19	14	LN 1.0 N	Locknuts - 1-8 Zinc Plated Nylon Insert

NITRO 450 TIRE CHART		
Axle Type	Part Number	Tire Size
Single	WHE 600X65X34	600/65-34
Tandem	WHE 425X65X22.5L	425/22.5 Recap (Truck)
Tandem	WHE 550X45X22.5	550/45-22.5

NOTE: Refer to Nitro Operator's Manual for wheel load capacity charts.

Driveline - Original

Used until serial no. 16NS106



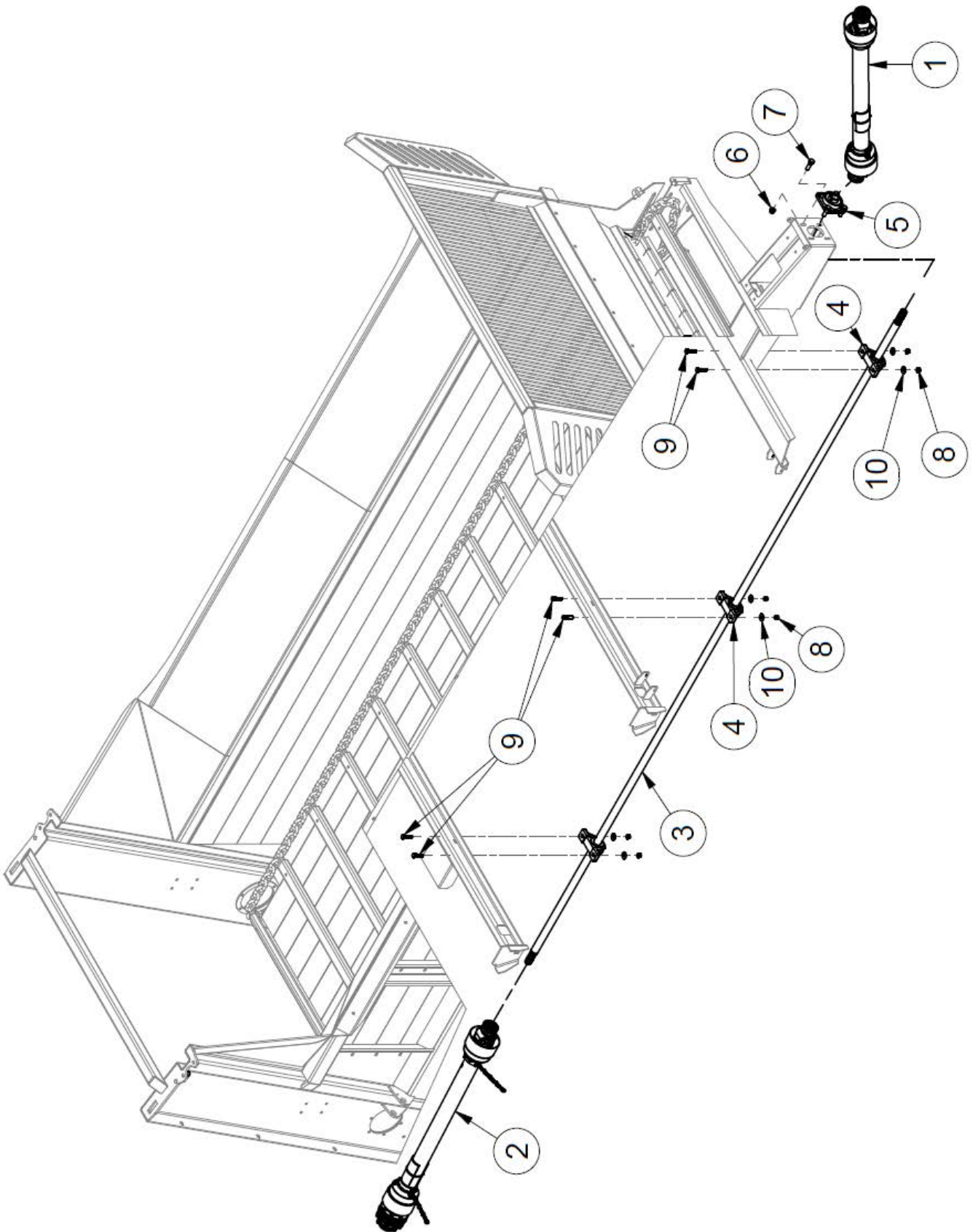
Driveline - Original

Used until serial no. 16NS106

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	30839	Rear Drive Shaft PTO
2	1	450-354	Splined Drive Shaft
3	6	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
4	6	HB 1/2-13X2.0 Z5	Hex Bolt 1/2-13 x 2" Grade 5 Zinc Plated Hex Cap Screw NC
5	1	30840	Over Running Slip Clutch PTO
6	1	400-994	Splined Drive Shaft
7	4	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut
8	4	HB 5/8-11X4.1/2 Z5	Hex Bolt Plated Gr. 5 NC
9	6	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
10	1	30841	Front Drive Shaft PTO
11	5	BEA UCF208-24R3	Flange Bearing 4 Bolt -Triple Seal- Ductile Iron
12	2	BEA UCP208-24R3	Pillow Block Bearing -Triple Seal- Ductile Iron

Driveline - Current

Used since serial no. 16NS107



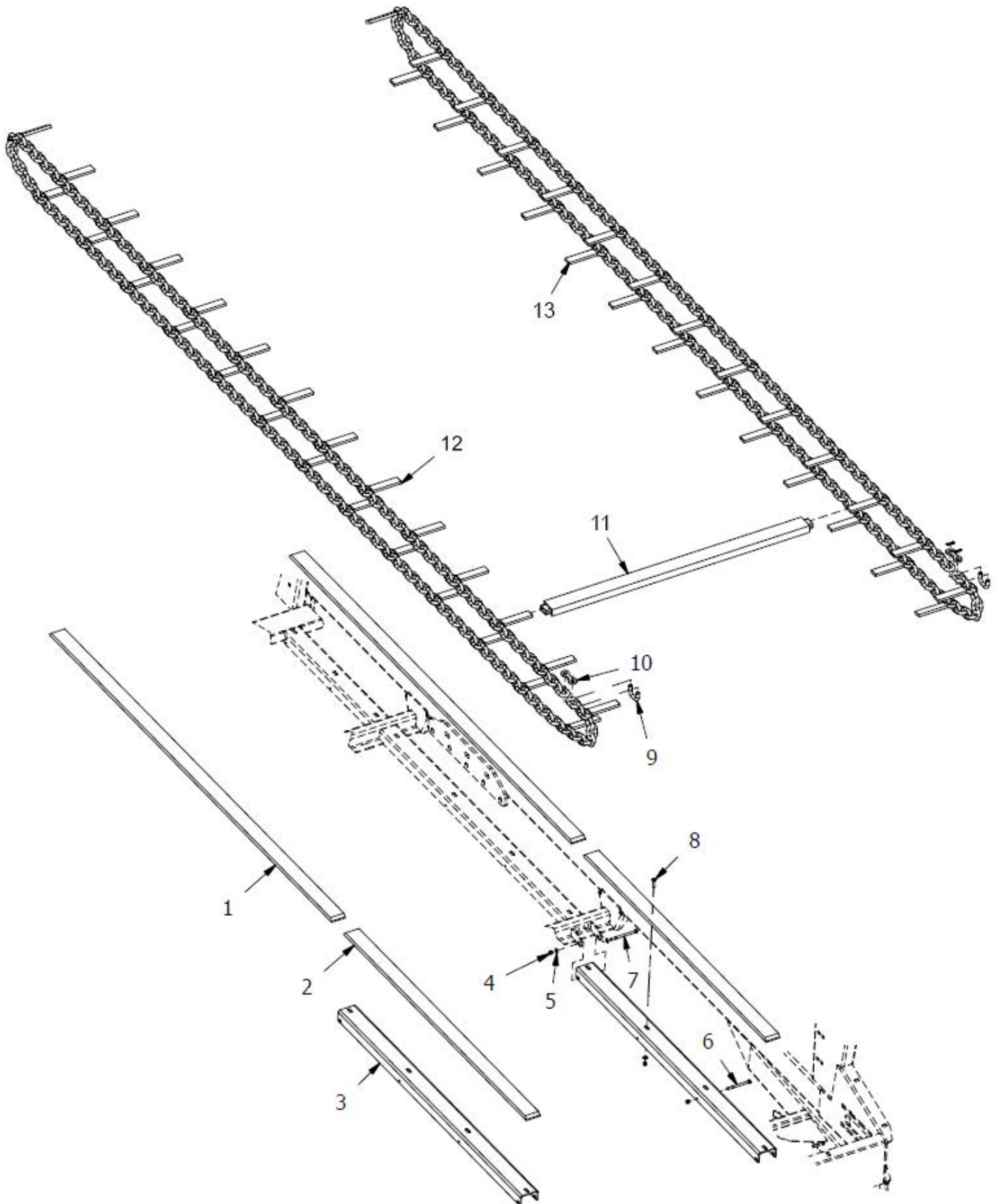
Driveline - Current

Used since serial no. 16NS107

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	39850	PTO. 375,450,525,600,750 (V80-141P028359-028028-CV80-CLS)
2	1	39851	PTO. 375,450,525,(T60-086P265011-306048-CLS(3500NM)
3	1	39937	Drive Shaft- Center 1.5 "x 187" Long -450 Nitro
4	3	BEA P208-108DI	Pillow Block NTN 2B 1.5"
5	1	BEA UCF208-24-1.5	1 1/2" 4 Bolt Flange Bearing
6	6	FW 1/2	Flatwasher - 1/2" Zinc Plated USS
7	6	HB 1/2-13X2.0 Z5	Hex Bolt 1/2-13 x 2" Grade 5 Zinc Plated Hex Cap Screw NC
8	4	HB 5/8-11X2.0 Z5	Hex Bolt 5/8-11 x 2 Grade 5 Zinc Plated Hex Cap Screw NC
9	6	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
10	4	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut

Apron Runners - Original

Used until serial no. 15NS117



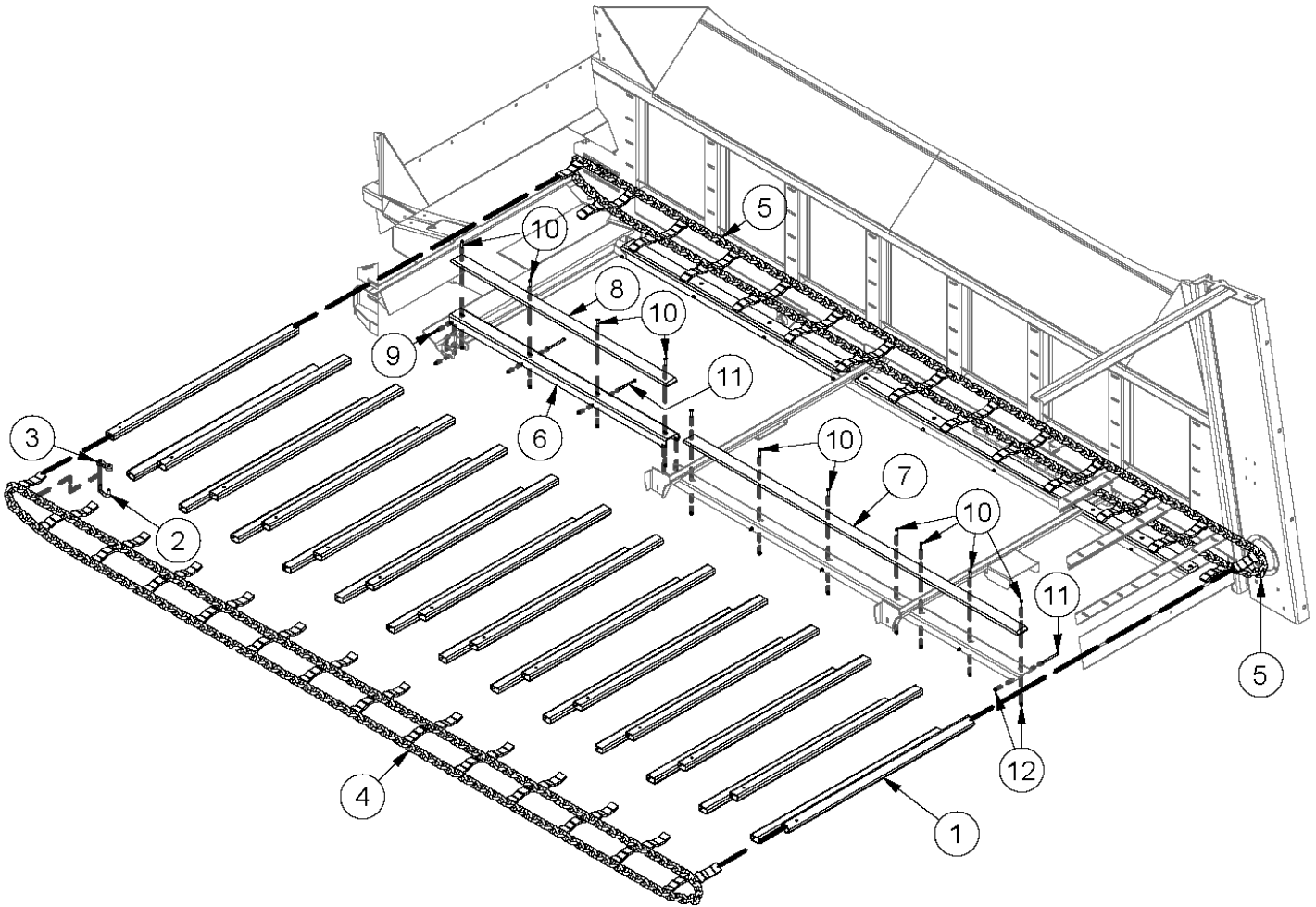
Apron Runners - Original

Used until serial no. 15NS117

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	450-442	Rear Apron Runner
2	2	450-443	Front Apron Runner
3	2	450-361	Apron Runner Mount Bar
4	38	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
5	38	FW 3/8	Flatwasher Plated, 3/8" Zinc Plated USS
6	12	HB 3/8-16X4.1/2 Z5	Hex Bolt 3/8"-16 x 4-1/2" Zinc Finish SAE J429 Grade 5 Hex Cap Screw NC
7	4	HB 3/8-16X5.1/4 Z5	Hex Bolt - 3/8"-16 x 5 1/4" Grade 5 Zinc Plated Hex Cap Screw NC
8	22	HB 3/8-16X1.3/4 Z5	Hex Bolt - 3/8-16 x 1 3/4" Socket Head Cap Screw
9	2	400-889	Chain Connector Link
10	2	400-890	Chain Connector Tab
11	27	400-914	Apron Slat
12	1	450-124	Apron Chain w/ Lugs
13	1	450-125	Apron Chain w/ Lugs

Apron Runners - Current

Used since serial no. 15NS118

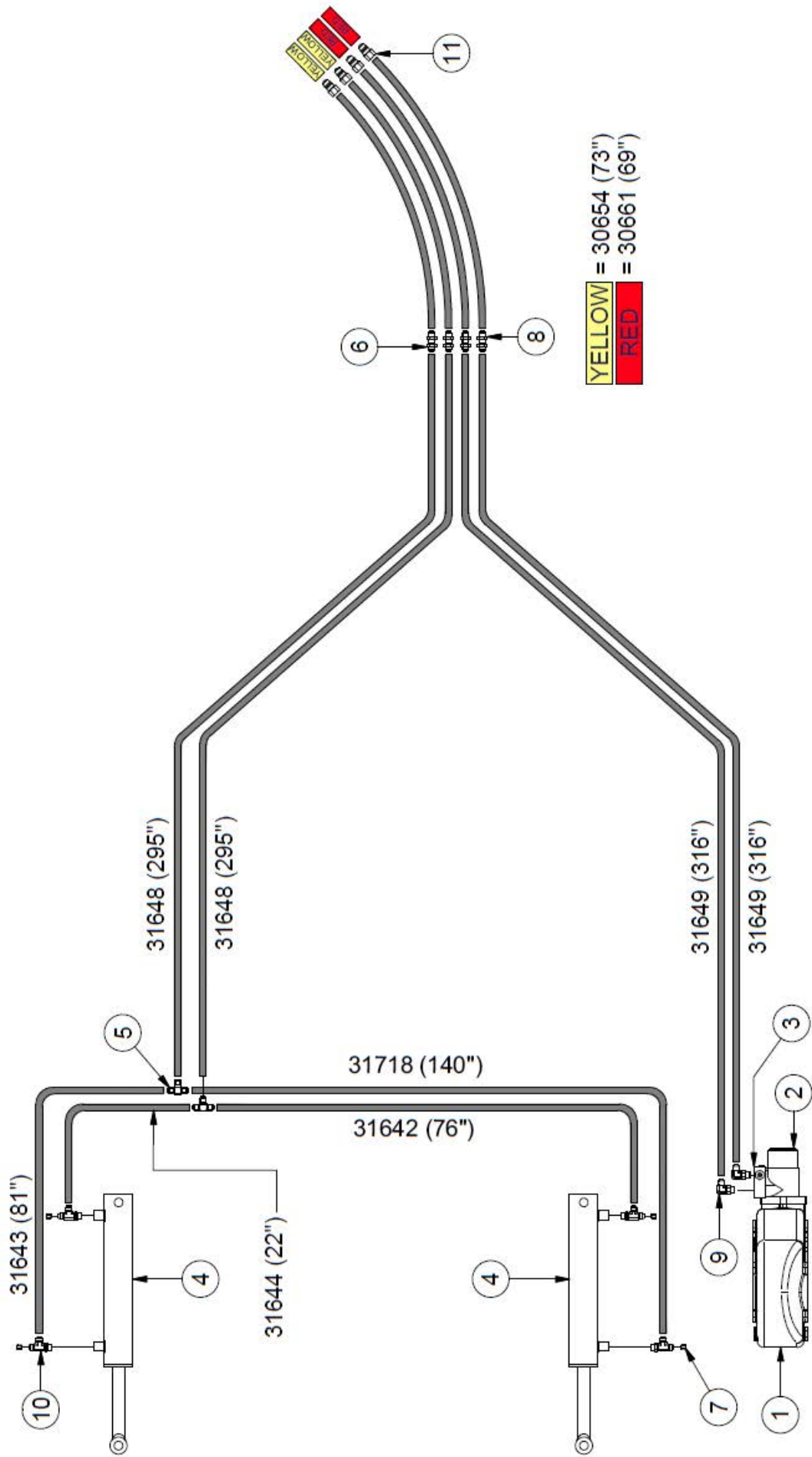


Apron Runners - Current

Used since serial no. 15NS118

ITEM	QTY	PART NUMBER	DESCRIPTION
1	27	37820	Slat
2	2	400-889	Chain Connector Link
3	2	400-890	Chain Connector Link Tab
4	1	40866	Left Apron Chain w/ Lugs
5	1	40867	Right Apron Chain w/ Lugs
6	2	450-361	Apron Runner Mount Bar
7	2	450-442	Rear Apron Runner
8	2	450-443	Front Apron Runner
9	8	HB 3/8-16X1.0 Z5	Hex Bolt 3/8-16 x 1" Grade 5 Zinc Plated Hex Cap Screw NC
10	22	HB 3/8-16X1.3/4 FHSCS	Hex Bolt - 3/8-16 x 1 3/4" Flat Socket Head Cap Screw
11	10	HB 3/8-16X4.1/2 Z5	Hex Bolt 3/8"-16 x 4-1/2" Zinc Finish SAE J429 Grade 5 Hex Cap Screw NC
12	42	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut

Hydraulic Schematic

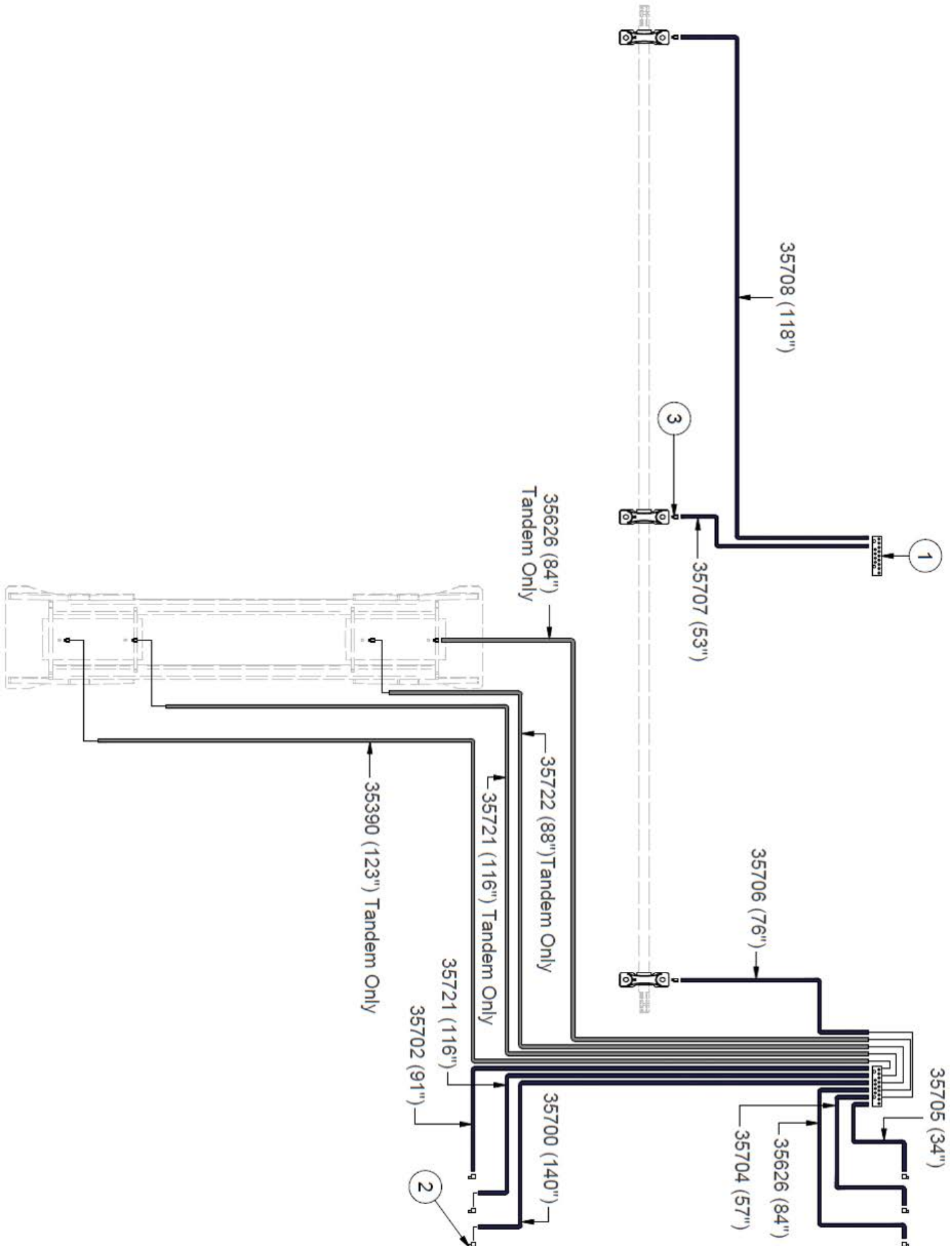


Hydraulic Schematic

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	30842	Gear Box- Berma- V450,600 Spreaders (RT500)
2	1	30854	Hydraulic Motor
3	1	30856	Cross Over Relief Valve
4	2	CYL31731	Cylinder 2.0x56.75x1.5 Nitro450
5	2	HF 2603-8-8-8	Hydraulic Tee Fitting
6	4	HF 2700LN-8-8	Hydraulic Bulkhead Fitting
7	4	HF 304-C-6	Female JIC Cap
8	4	HF 306-8	Bulkhead Nut
9	2	HF 6801-8-10	Hydraulic Elbow Fitting
10	4	HF 6804-6-6	Hydraulic Fitting - Male JIC - Male ORB Tee
11	4	HF 8010-4	Male Quick Coupler

Grease Line Schematic - Original

Use for spreaders up to serial no. 15NS406



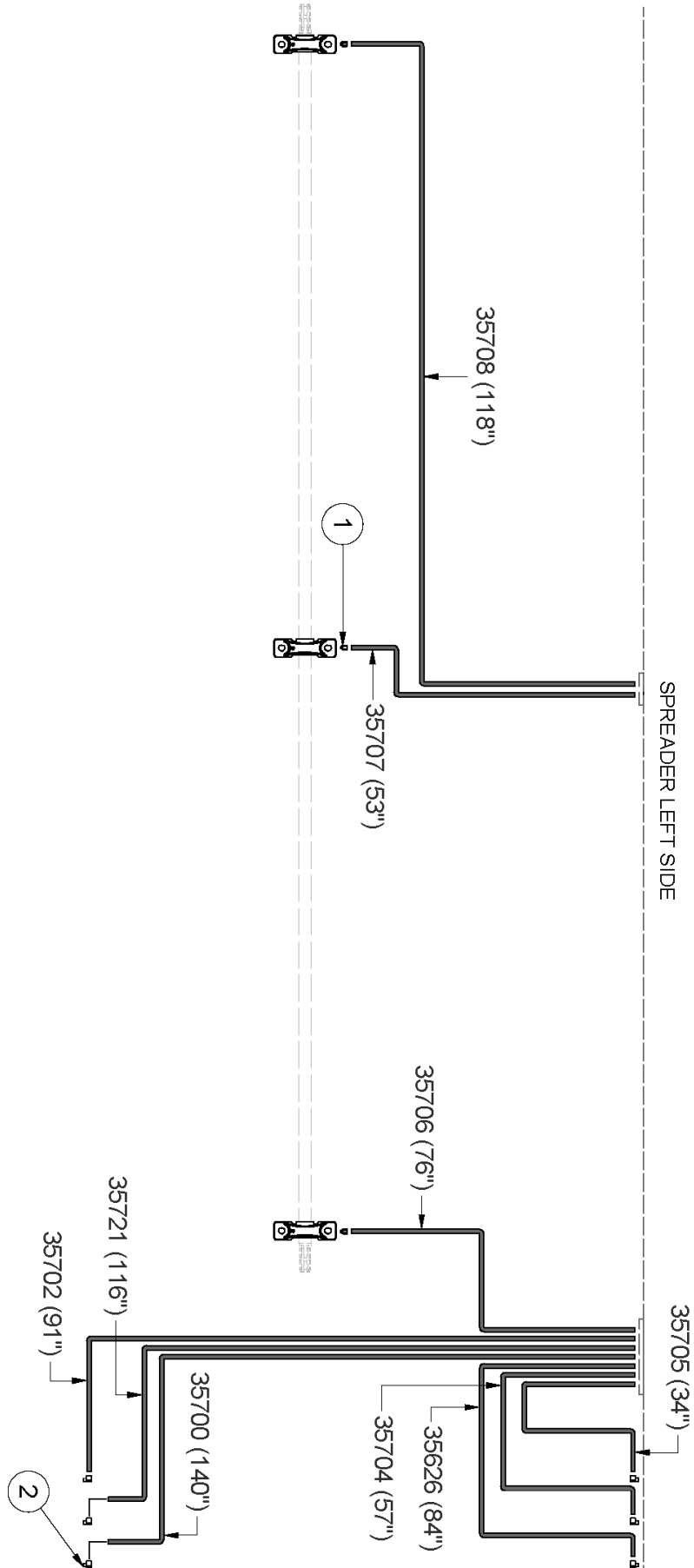
Grease Line Schematic - Original

Use for spreaders up to serial no. 15NS406

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	GR21999-0419	Block Grease Bank Manifold
2	8	35617	HF 5404-2-4 Hydraulic Fitting
3	6	35618	HF 5502-2-2 Hydraulic Fitting

Grease Line Schematic - Current

Use for spreaders from serial no. 15NS407 to current

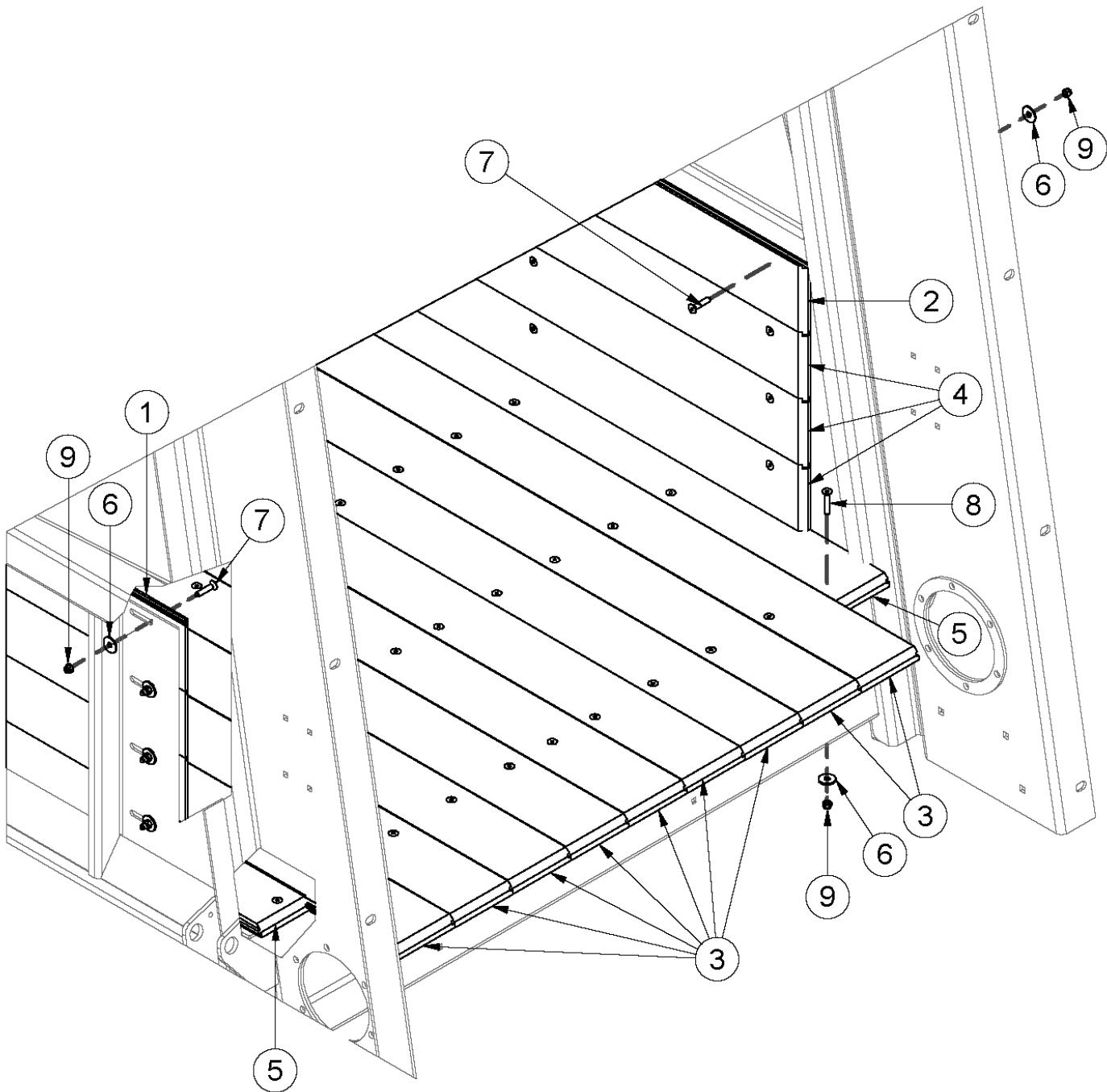


Grease Line Schematic - Current

Use for spreaders from serial no. 15NS407 to current

ITEM	QTY	PART NUMBER	DESCRIPTION
1	3	35617	HF 5404-2-4 Hydraulic Fitting
2	6	35618	HF 5404-2-2 Hydraulic Fitting

Side - Floor Boards



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	36918	450 Left Side Top Board
2	1	36919	450 Right Side Top Board
3	8	450-355	Floor Board
4	6	450-356	Side Board
5	2	450-365	Trimmed Floor Board
6	196	FW 3/8	Flatwasher Plated, 3/8" Zinc Plated USS (2984)
7	64	HB 3/8-16X1.3/4 FHSCS	Hex Bolt - 3/8-16 x 1 3/4" Flat Socket Head Cap Screw
8	132	HB 3/8-16X2.0 FHSCS	Hex Bolt - 3/8-16 x 2" Flat Socket Head Cap Screw
9	196	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut

Section 3 - Options

Optional Kit Numbers

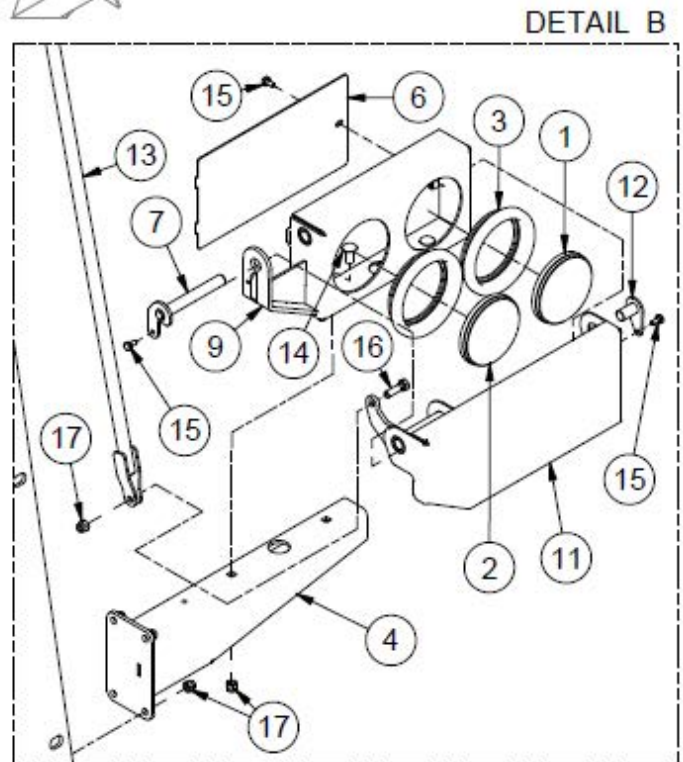
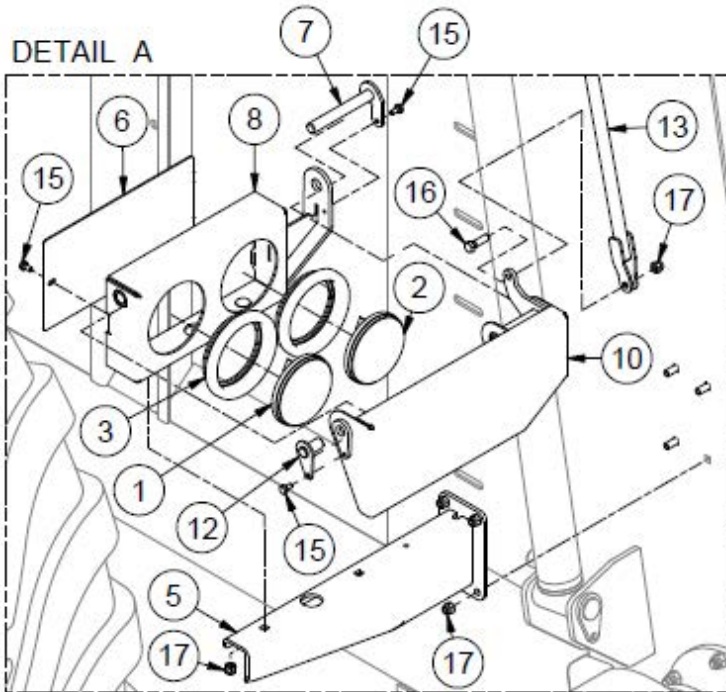
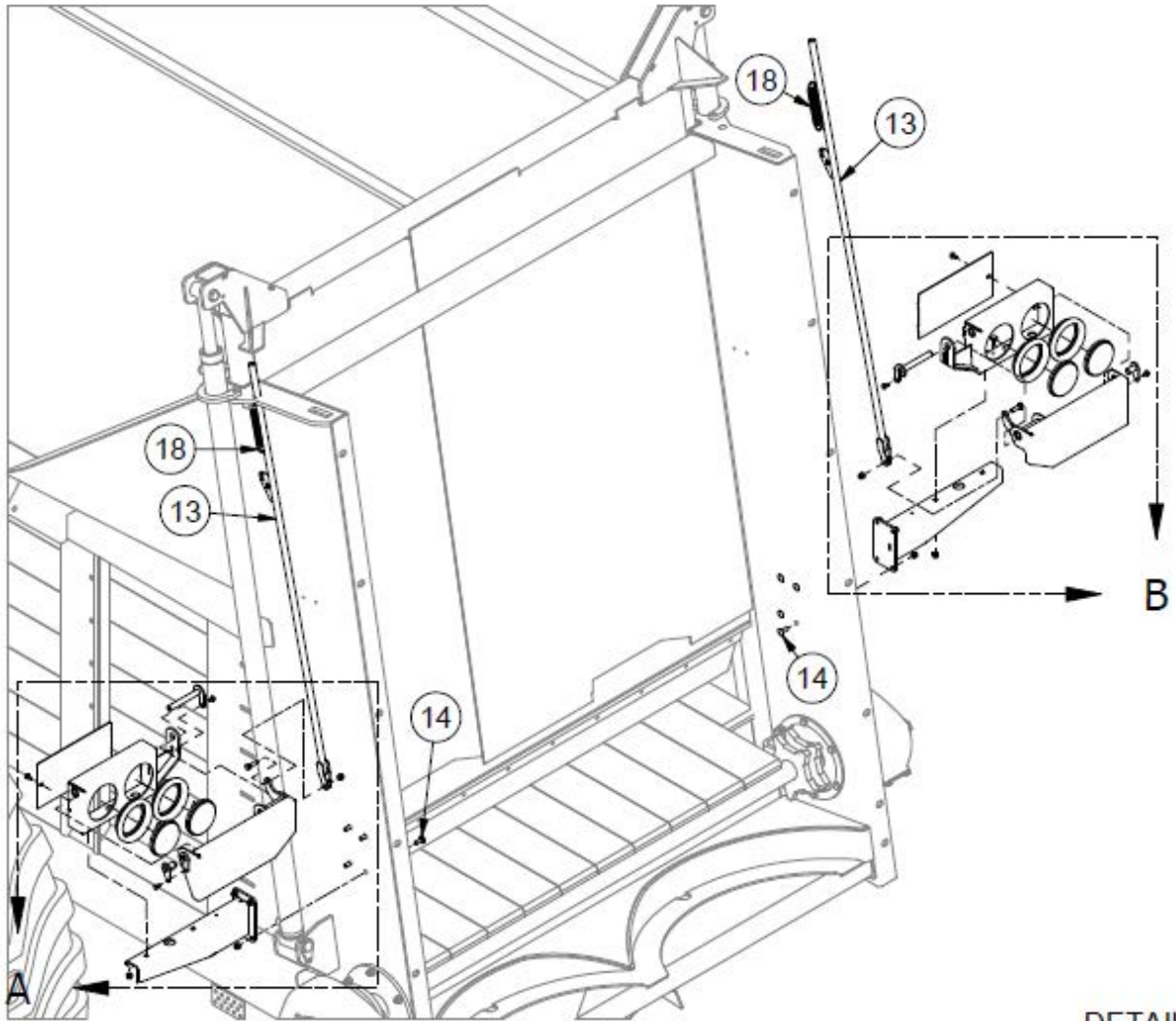
KIT NUMBER	DESCRIPTION	PAGE(S)	NOTE
	Hitches	Pg.3-2,3	
43673	Mechanical Light Kit	Pg.3-4,5	
TLVLK-450M	Manual Light Kit		
	Light Kit Base	Pg.3-6,7	
	Manual Light Kit	Pg.3-8	
	Wiring Harness	Pg.3-12,13	
TLVLK-450	Hydraulic Light Kit		
	Light Kit Base	Pg.3-6,7	
	Hydraulic Light Kit Cylinders	Pg.3-9	
	Hydraulic Light Kit Hoses	Pg.3-10,11	
	Wiring Harness	Pg.3-12,13	
N450SB	Single Brake System	Pg.3-14	
N450TB	Tandem Brake System	Pg.3-15	
N750LC	5 Point Scale System	Pg.3-16	
N750LCNT460	5 Point Scale System with GPS	Pg.3-16	
N750LCNT8000	Automatic Scale Rate Control Base System	Pg.3-17	
	Flow Control Mounting	Pg.3-18	
31797	Electric Flow Control		
	Flow Control Hydraulic Layout - Electric	Pg.3-20,21	
	Electric Flow Control Wiring	Pg.3-22,23	
31578	Manual Flow Control		
	Flow Control Hydraulic Layout - Manual	Pg.3-19	
41504	Flange Paddle Kit	Pg.3-24,25	
45816	Endgate Indicator Kit	Pg.3-26,27	

Hitch Options

ITEM	QTY	PART NUMBER	DESCRIPTION	WHERE USED	NOTE
1		30826	Clevis Hitch Assembly Cat.3	Up to N525RS	Standard
1.1	1	43062	Clevis Hitch Top Plate Cat.3		
1.2	1	43060	Clevis Hitch Base Cat.3		
1.3	1	30825	Clevis Hitch Cat.3		
1.4	1	HB 1-8X6YZ8	Hex Bolt 1-8x6 Grade 8 Zinc Hex Cap Screw		
1.5	1	LN 1-8TCZ8	1"-8 Grade 8 Zinc Finish Steel Top Lock Nut		
2		39290	Power Pin Cat 3 Ball Hitch Assembly 2" Pin	All Models	Option
2.1	1	39291	Power Pin 2" Ball Cat.3 Hitch		
2.2	1	44994	Power Pin Cat.3 Ball Hitch Base		
3		40865	Power Pin Cat 3 Ball Hitch Assembly 1.5" Pin	All Models	Option
3.1	1	44994	Power Pin Cat.3 Ball Hitch Base		
3.2	1	39994	Power Pin 1.5" Ball Cat.3 Hitch		
4		41956	Rollover Ball Hitch 2.0" ID Cat.4	All Models	Requires Scale Option
4.1	1	39291	Power Pin 2" Ball Cat.3 Hitch		
4.2	1	45033	Articulating Ball Hitch Base		
5		45034	Rollover Ball Hitch 1.5" ID Cat.4	All Models	Requires Scale Option
5.1	1	45033	Articulating Ball Hitch Base		
5.2	1	39994	Power Pin 1.5" Ball Cat.3 Hitch		
6		43060	Clevis Hitch Base Cat.3	N600 - N750	Standard
7	1	36241	Cell Hitch		Requires Scale Option
8		HB 1-8X5.5 SHCS	Hex Bolt - 1-8 x 5 1/2 Socket Head Cap Screw		
9		HB 1-14 X6.5 YZ8	Hex Bolt 1-14x6 1/2 Grade 8 Zinc Hex Cap Screw		
10		LN 1 N	LN 1-8 Zinc Plated Nylon Insert Lock Nut		
11		LN 1-14 F	Center Locknuts (1-14) 2-Way Fine Thread		

Mechanical Light Kit - 43673

Used from serial no. 19NS101 to current.



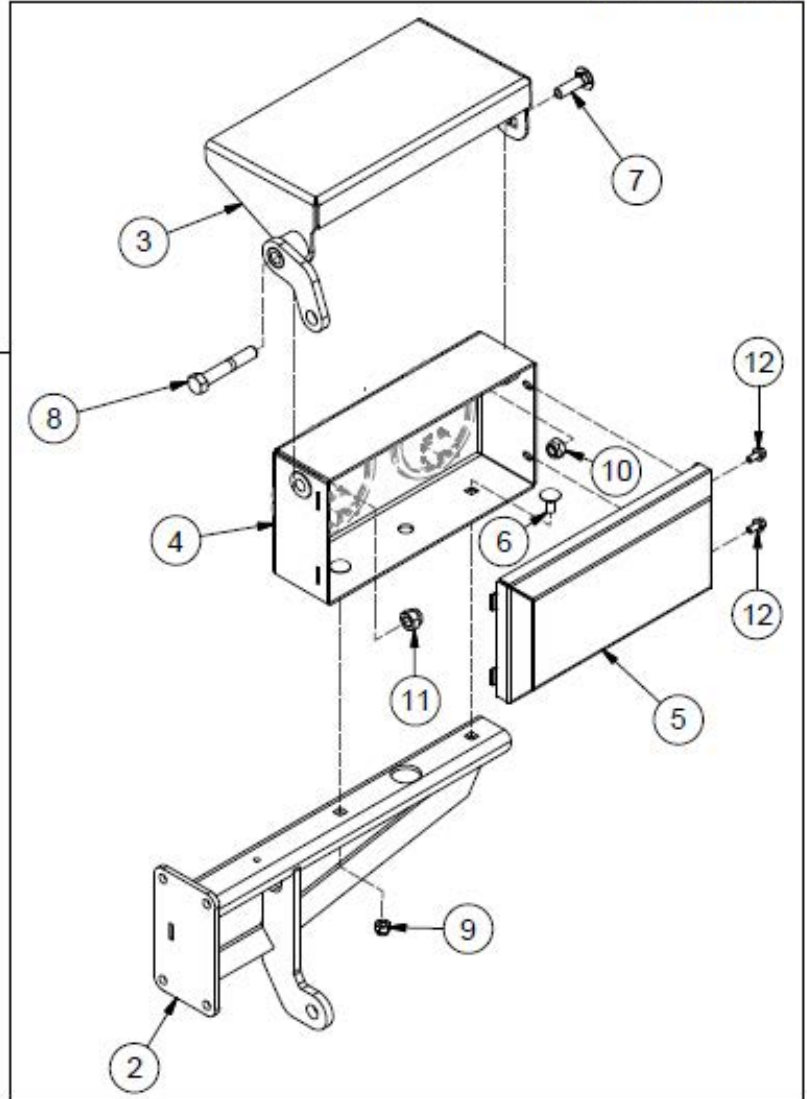
Mechanical Light Kit - 43673

Used from serial no. 19NS101 to current.

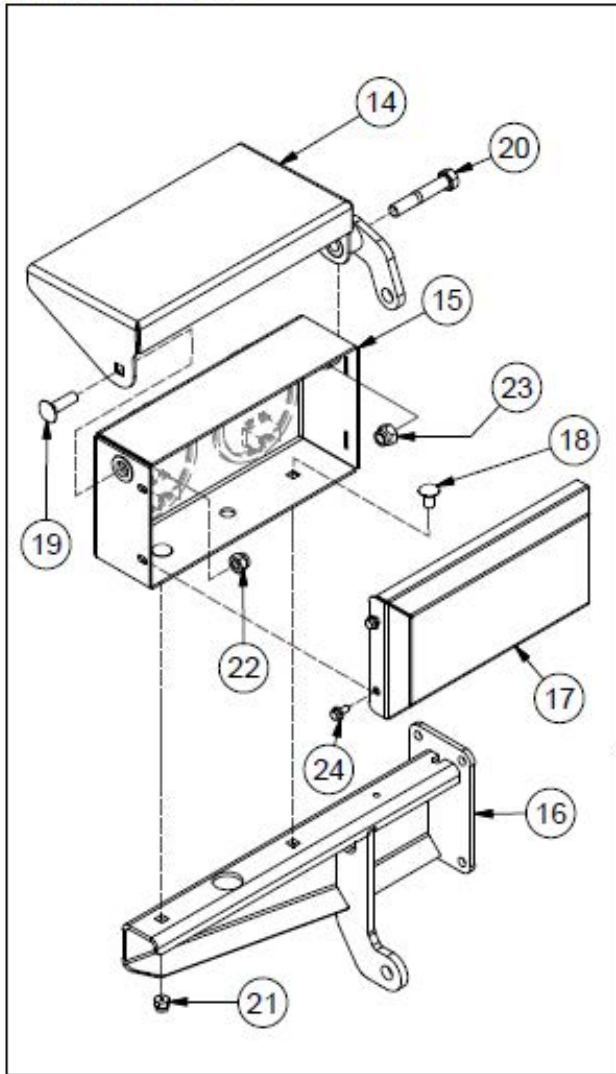
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	31788	Red LED Light for Nitro Spreader
2	2	31789	Amber LED Light for Nitro Spreader
3	4	31798	Grommet for LED Lights on Nitro
4	1	42139	Right Light Bracket
5	1	42140	Left Light Bracket
6	2	43178	Light Box Cover
7	2	43204	Inner Pin Assembly
8	1	43206	Left Light Box Assembly
9	1	43207	Right Light Box Assembly
10	1	43208	Left Light Cover
11	1	43209	Right Light Cover
12	2	43213	Outer Pin Assembly
13	2	43580	450/525RS Manual Light Push Arm
14	12	CB 3/8-16 X1 Z5	Carriage Bolt - 3/8-16 x 1" Grade 5 Zinc
15	6	HB 1/4-20X0.5 Z5	Hex Bolt 1/4-20x1/2 Grade 5 Zinc Plated Hex Cap Screw
16	2	HB 3/8-16X1.25 Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
17	14	LN 3/8 N	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
18	2	PP00679	Spring 2-TE 86B (AC-08044)

Light Kit Base

Item 1 - 400-850



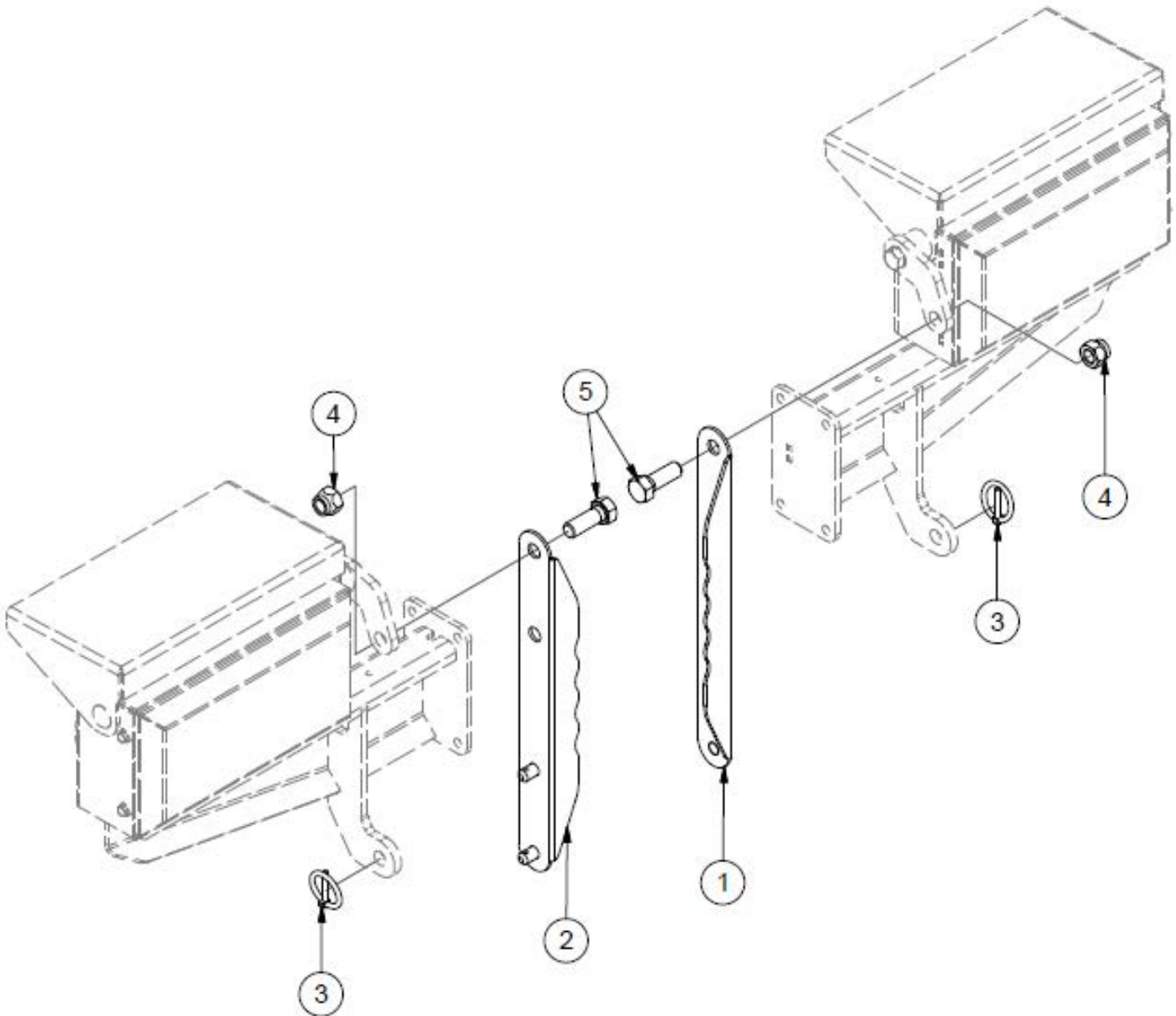
Item 13 - 400-855



Light Kit Base

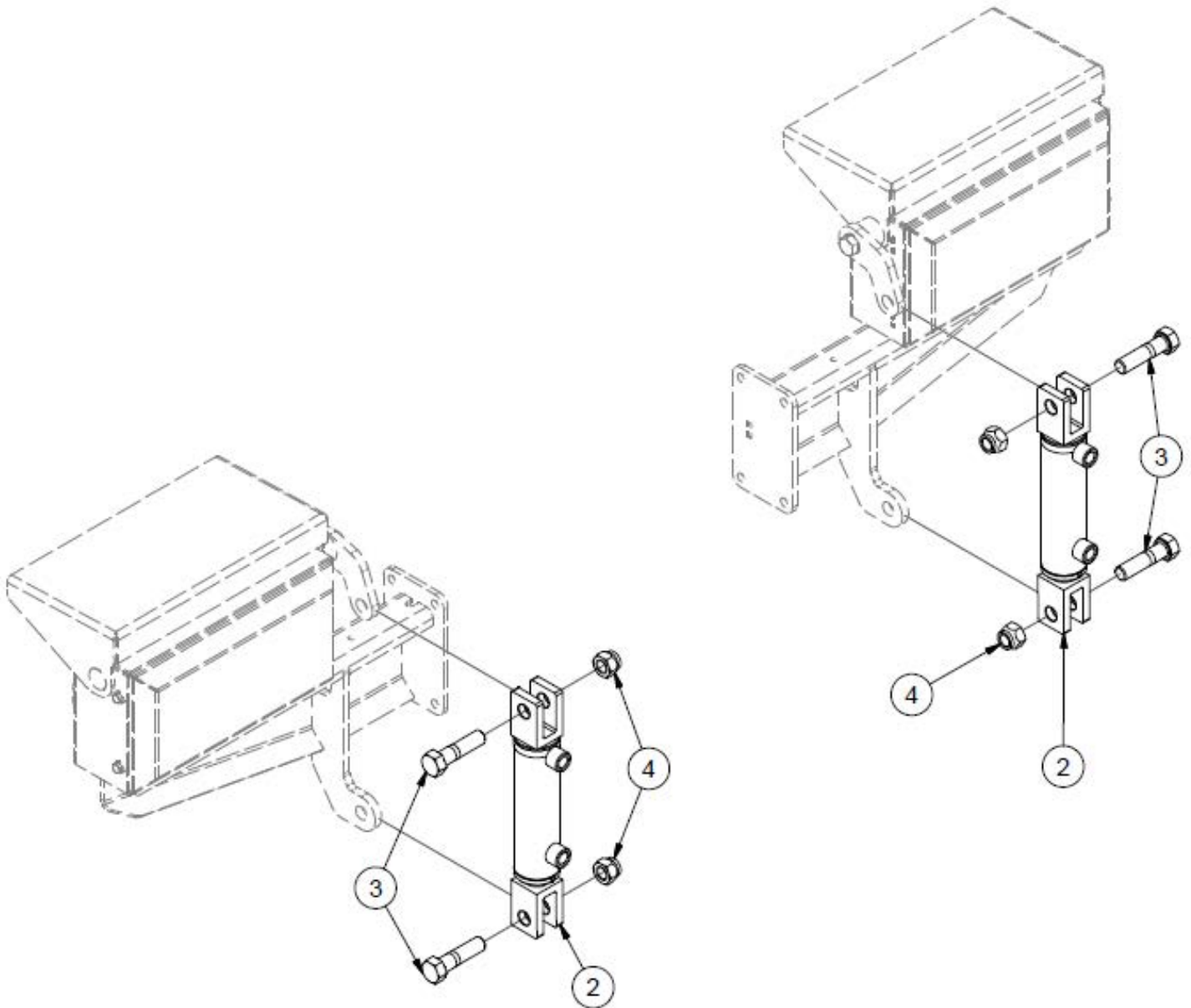
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	400-850	Left Light Assembly
2	1	400-354	Left Light Mount Bar
3	1	400-939	Left Light Cover
4	1	400-940	Left Light Housing
5	1	400-943	Light Housing Lid
6	2	CB 3/8-16X 3/4 Z5	Carriage Bolt - 3/8-16 x 3/4" Grade 5 Zinc
7	1	CB 7/16-14X1.1/2 Z5	Carriage Bolt - 7/16-14 x 1 1/2" Grade 5 Zinc
8	1	HB 1/2-13X3.0 Z5	Hex Bolt 1/2-13 x 3" Grade 5 Zinc Plated Hex Cap Screw NC
9	2	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
10	1	LN 7/16	Center Locknuts - 7/16-14 Top Lock Nut
11	1	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
12	2	HBC14X12	Hex Bolt 1/4-20 x 1/2 Grade 8.2 Zinc Flange Bolt SAE
13	1	400-855	Right Light Assembly
14	1	400-355	Right Light Cover
15	1	400-356	Right Light Housing
16	1	400-941	Right Light Mounting Bar
17	1	400-943	Light Housing Lid
18	2	CB 3/8-16X 3/4 Z5	Carriage Bolt - 3/8-16 x 3/4" Grade 5 Zinc
19	1	CB 7/16-14X1.1/2 Z5	Carriage Bolt - 7/16-14 x 1 1/2" Grade 5 Zinc
20	1	HB 1/2-13X3.0 Z5	Hex Bolt 1/2-13 x 3" Grade 5 Zinc Plated Hex Cap Screw NC
21	2	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
22	1	LN 7/16	Center Locknuts - 7/16-14 Top Lock Nut
23	1	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
24	2	HBC14X12	Hex Bolt 1/4-20 x 1/2 Grade 8.2 Zinc Flange Bolt SAE

Manual Light Kit



ITEM	QTY	PART NUMBER	DESCRIPTION
	1	37773	Manual Light Kit Assembly
1	1	37771	Left Light Lid Link
2	1	37772	Right Light Lid Link
3	2	25680	Lynch Pin 3/16 x 1.5
4	2	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut
5	2	HB 5/8-11X1.3/4 Z5	Hex Bolt - 5/8"-11 x 1-3/4" Grade 5 Zinc Plated Hex Cap Screw NC

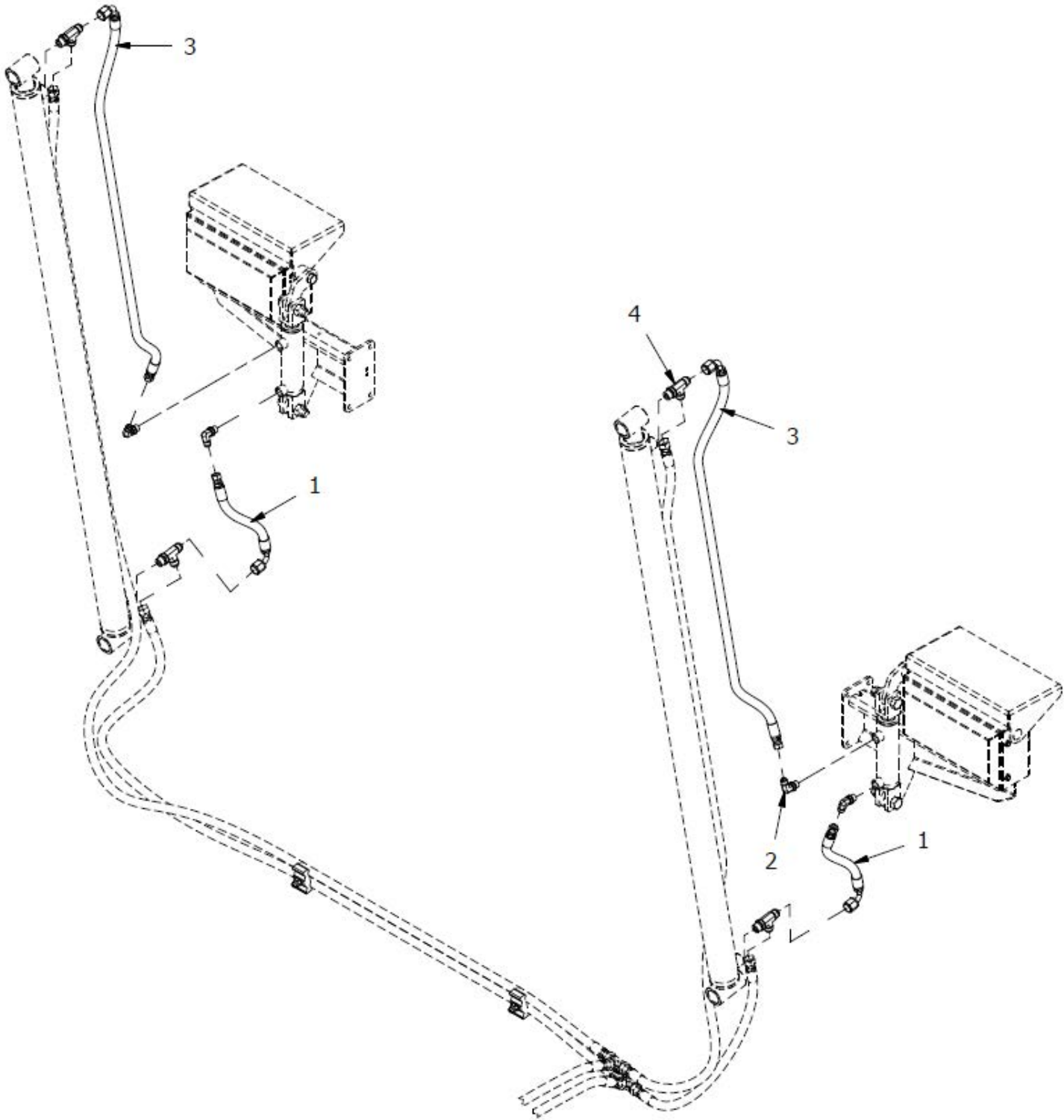
Hydraulic Light Kit Cylinders



ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37768	Complete Hydraulic Kit*
2	2	31326	Hydraulic Cylinder
3	4	HB 5/8-11X2.1/2 Z5	Hex Bolt 5/8-11 x 2 1/2" Grade 5 Zinc Plated Hex Cap Screw NC
4	4	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut

*Includes hose kit on [pages 3-10,11](#).

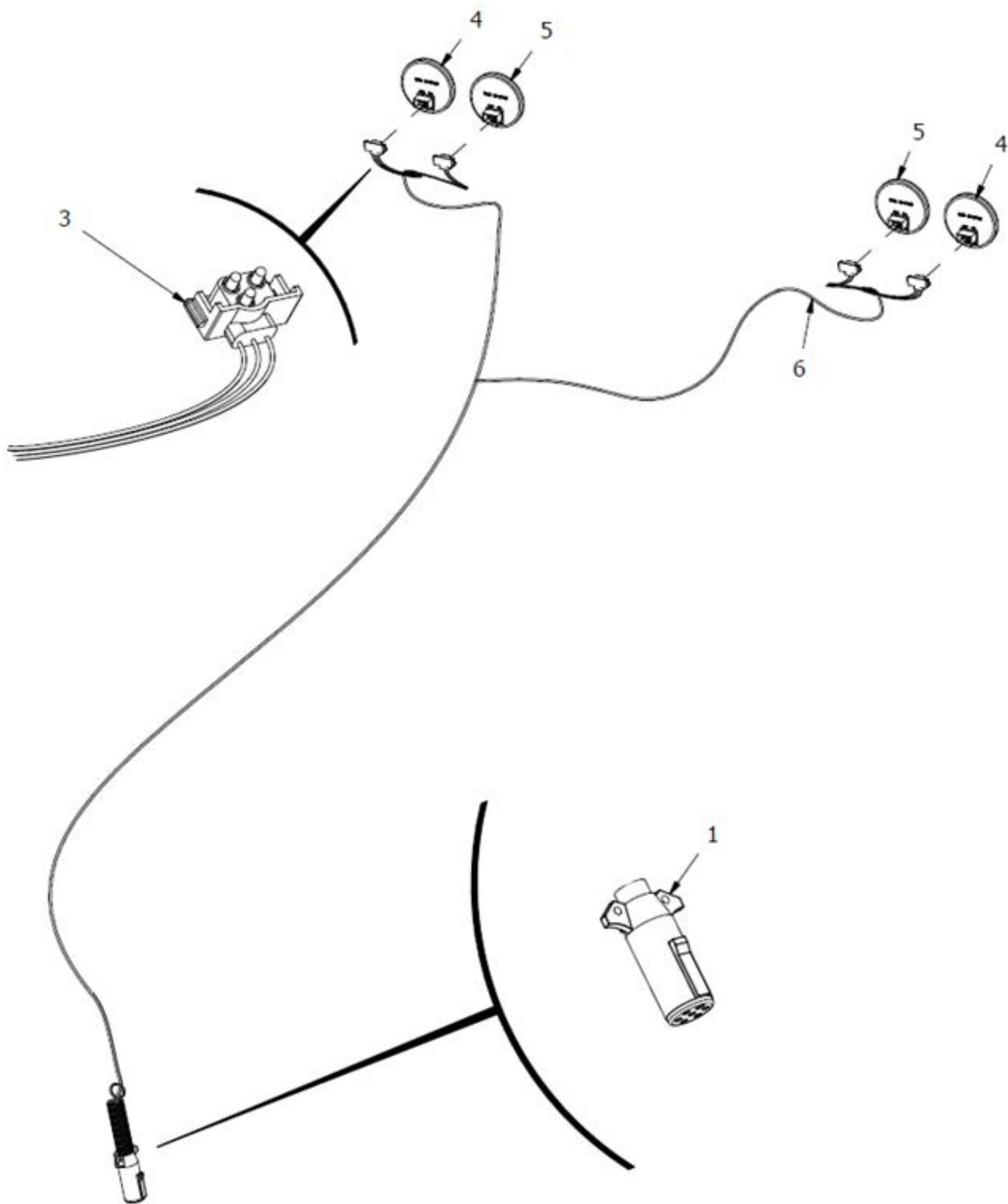
Hydraulic Light Kit Hoses



Hydraulic Light Kit Hoses

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	30800	HH43 - 4AT1(6FJX90,6FJX) HCL 43"
2	4	HF 6801-6-6	Hydraulic Fitting
3	2	30801	HH10 - 4AT1(6FJX90,6FJX) HCL 10"
4	4	HF 6804-8-8-8	Hydraulic Fitting

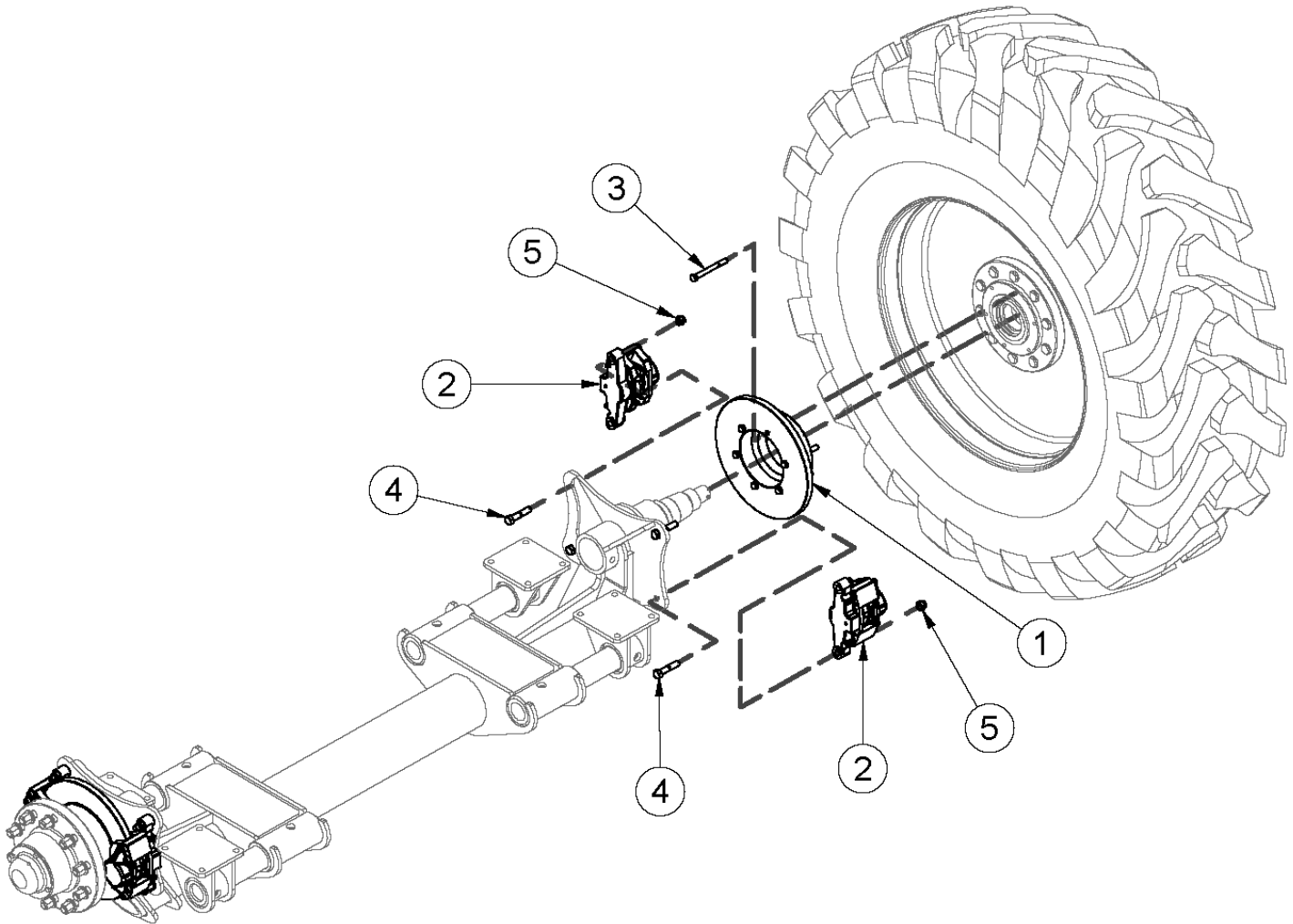
Light Kit Wiring



Light Kit Wiring

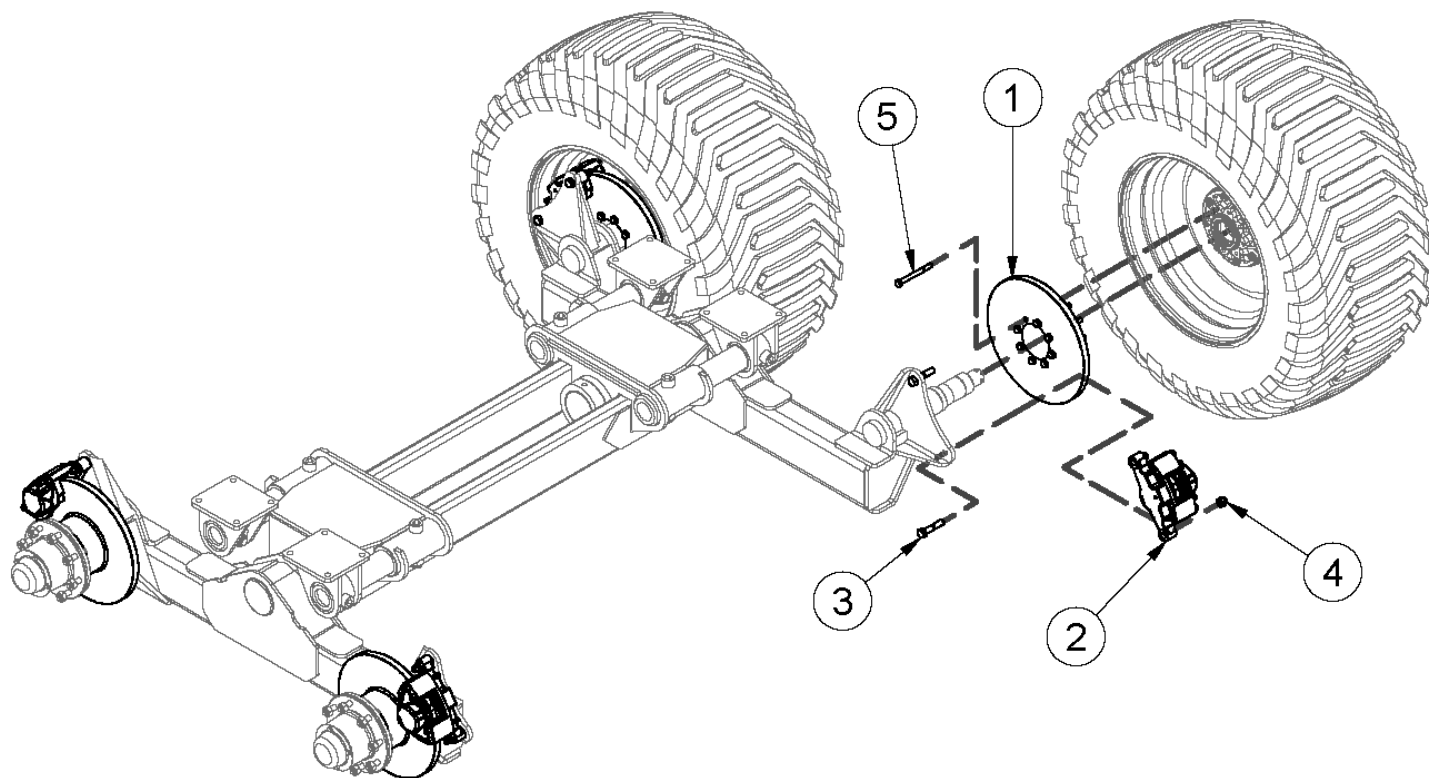
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	TL550-200-117	Female 7 Pin Plug
	4	31798	Grommet
3	4	31790	Individual Light Harness
4	2	31788	Red Tail Light
5	2	31789	Amber Tail Light
6	1	36924	Nitro N375, N450 Light Wiring Harness
	1	31573	Complete Light Wiring Harness

Single Axle Brakes



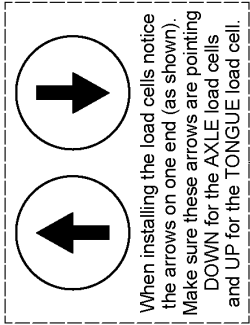
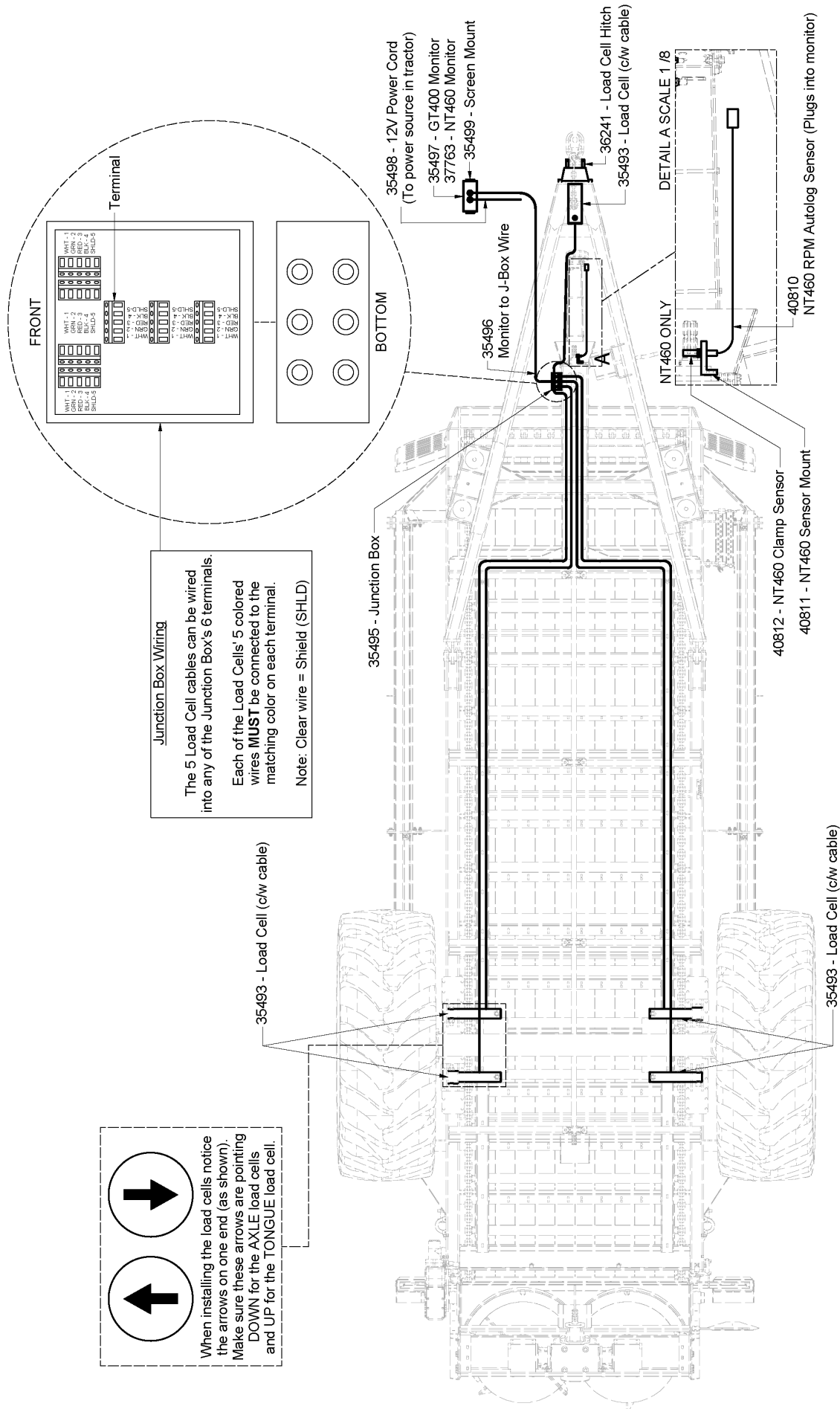
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	31773	Rotor for 16000lb Hub
2	4	LA-11-1527	Brake Caliper
3	12	HB 1/2-20X5.0 Z8	Hex Bolt 1/2-20 x 5" Grade 8 Plated Hex Cap Screw
4	8	HB 5/8-18X3.0 YZ8	5/8"-18 x 3" Grade 8 Yellow Zinc Hex Cap Screw
5	8	LN 5/8 N-18	Locknut - 5/8-18 Zinc Plated Nylon Insert Lock Nut

Tandem Axle Brakes

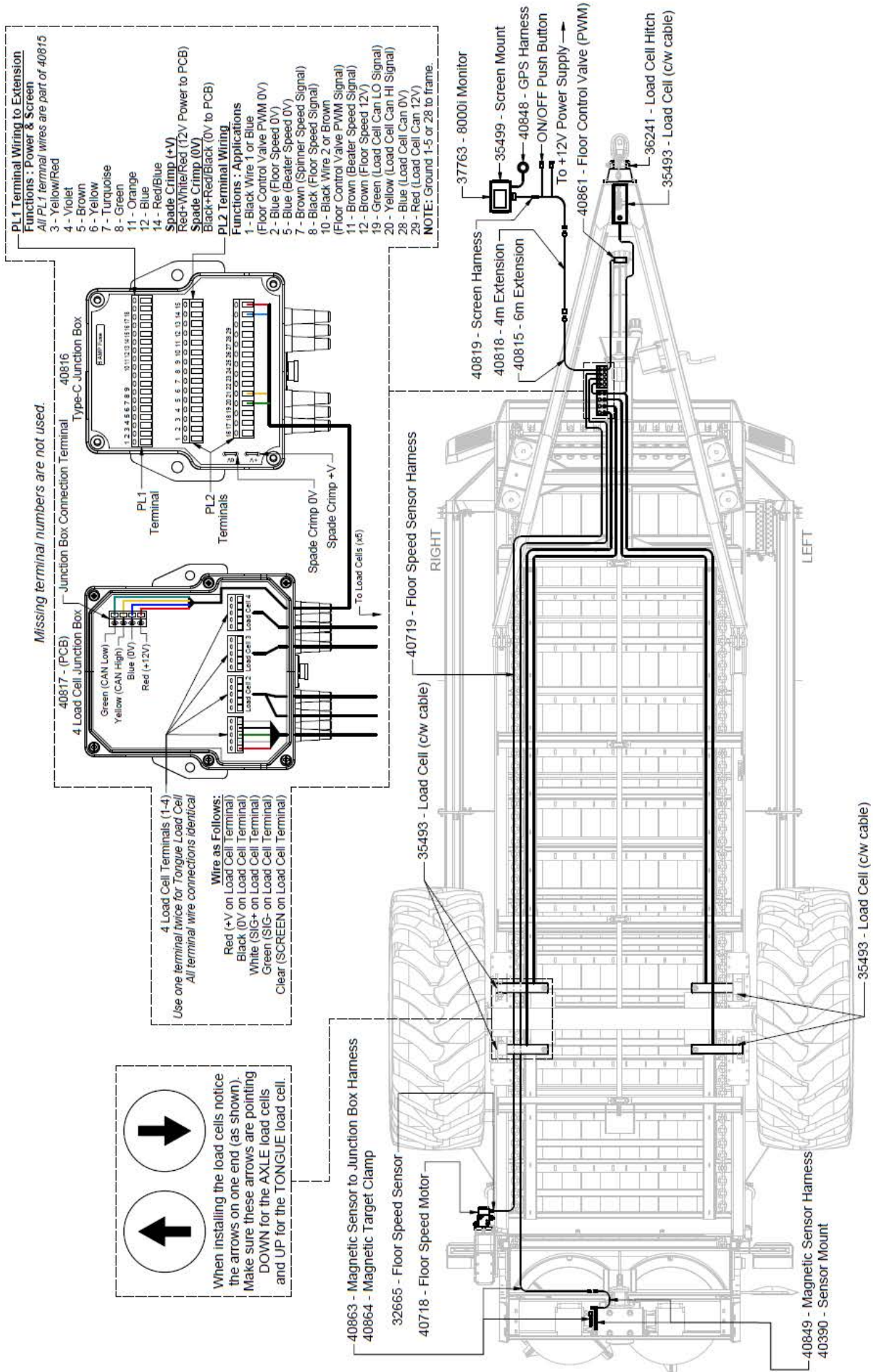


ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	36042	Rotor for 12000lb Hub
2	4	LA-11-1527	Brake Caliper
3	8	HB 5/8-18X3.0 YZ8	5/8"-18 x 3" Grade 8 Yellow Zinc Hex Cap Screw
4	8	LN 5/8 F	Center Locknuts (5/8-18) 2-Way Fine Thread
5	32	HB 1/2-20X5.0 Z8	Hex Bolt 1/2-20 x 5" Grade 8 Plated Hex Cap Screw

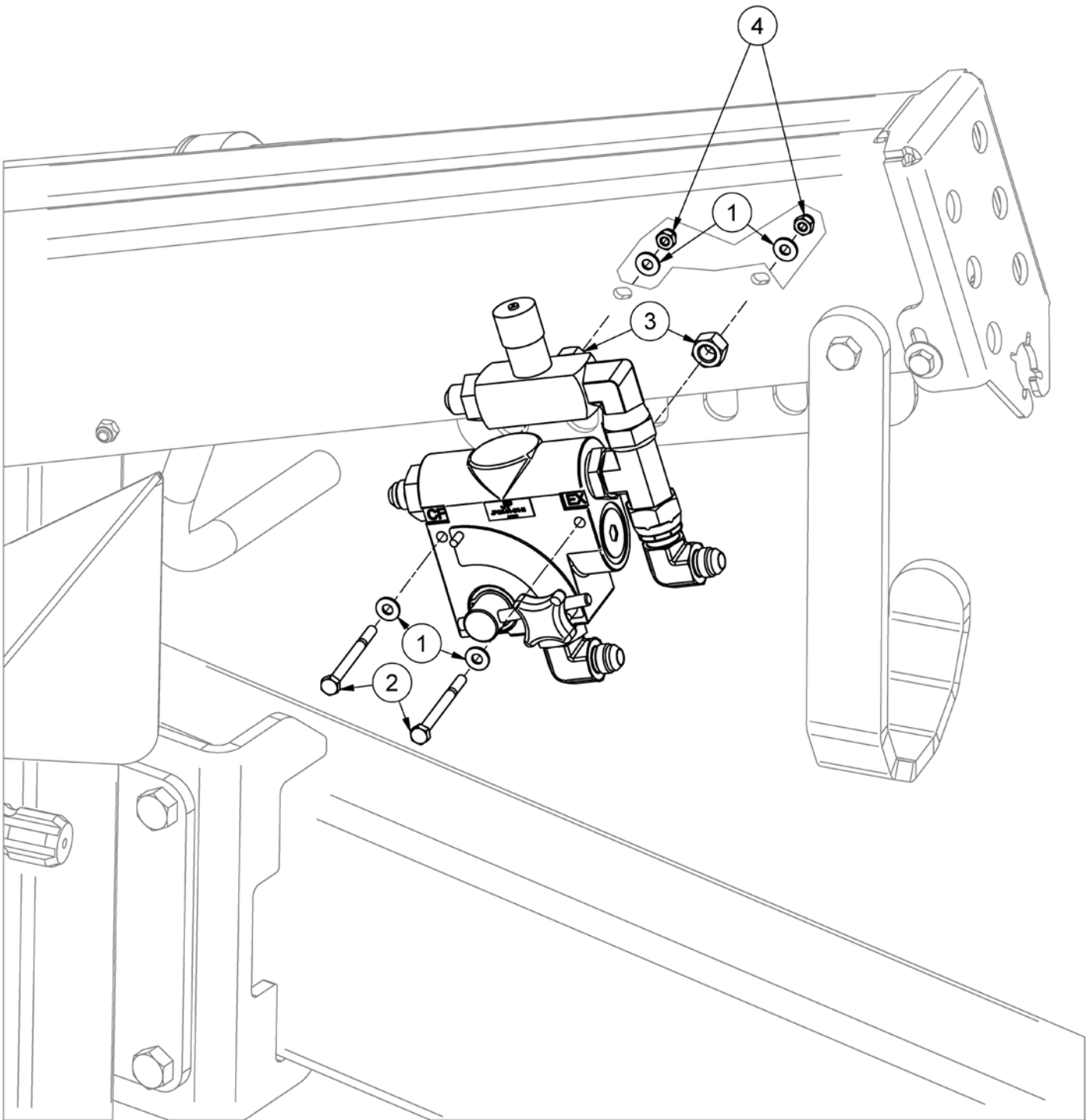
N750LC (GT400) / N750LCNT460 Scales



N750LCNT8000 Scales



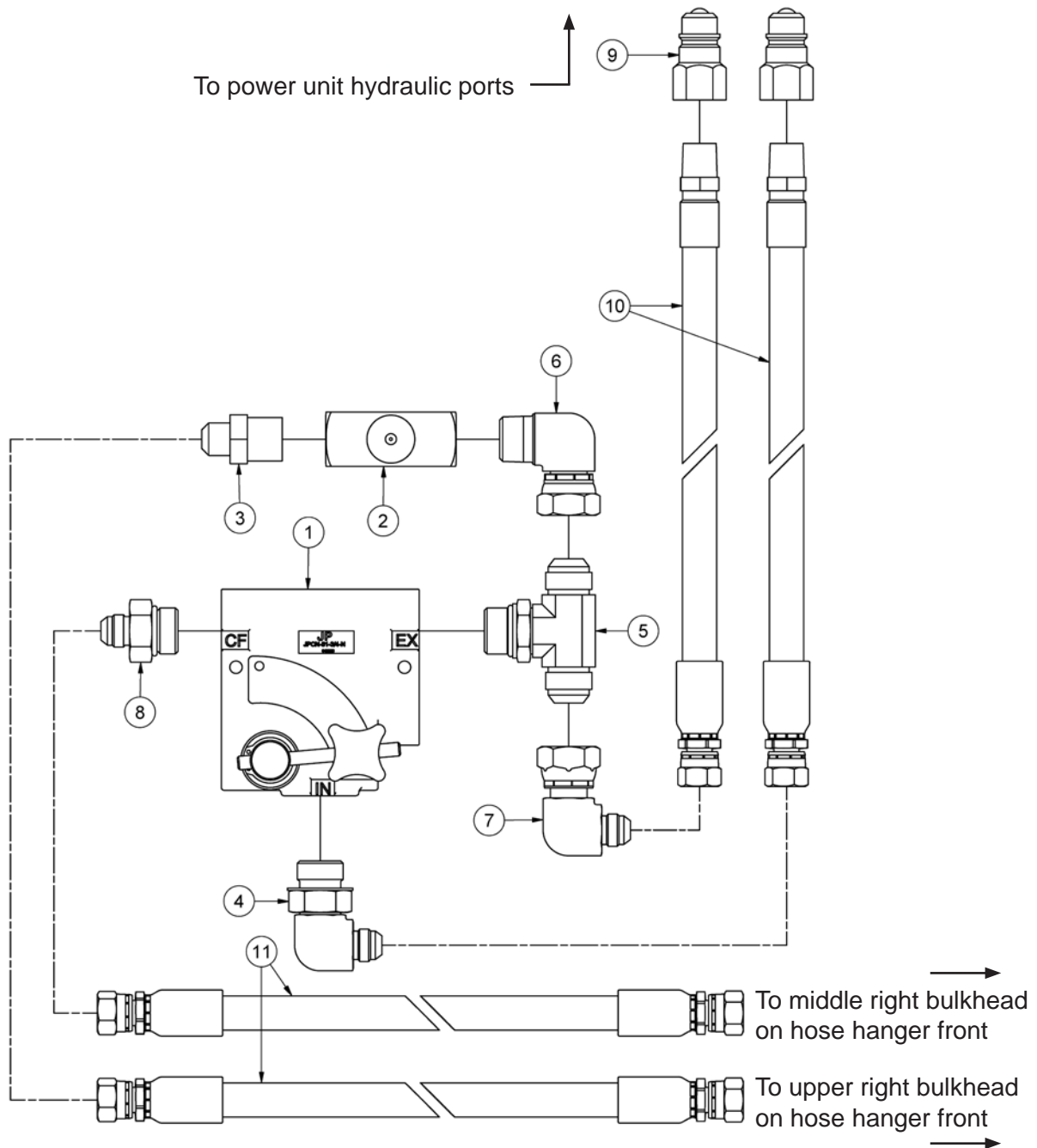
Flow Control Mounting



ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	FW 1/4	Flatwasher - 1/4" Zinc Plated USS
2	2	HB 1/4-20X3 Z5	Hex Bolt 1/4-20x3 Grade 5 Zinc Plated Hex Cap Screw
3	2	HN 1/2	Hex Nut 1/2"-13 Grade 5 Zinc Plated Finished
4	2	LN 1/4 N	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut

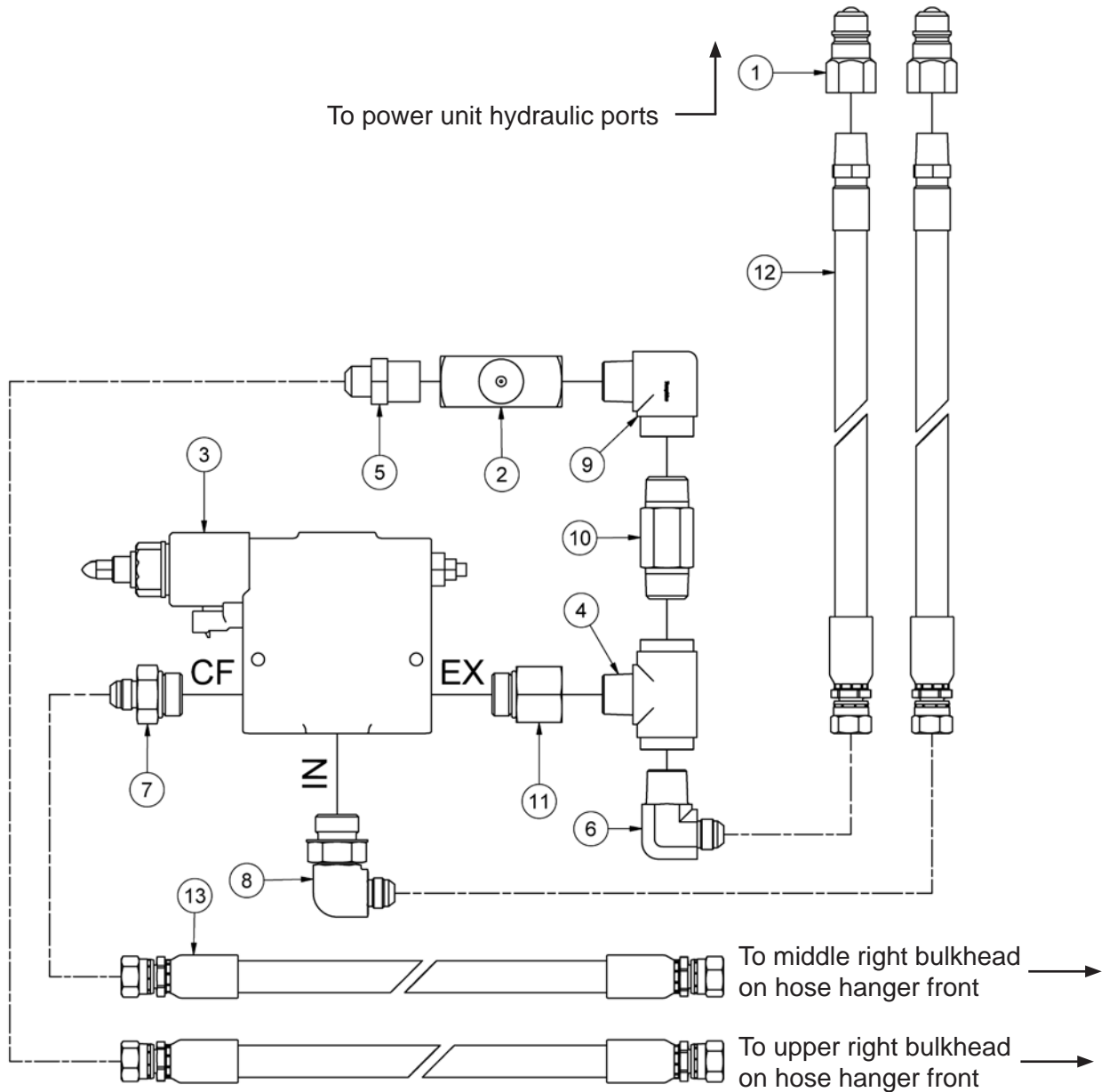
NOTICE: Manual flow control shown. Electric flow control option has same mounting hardware. See hydraulic layouts for flow control breakdowns.

Flow Control Hydraulic Layout - Manual



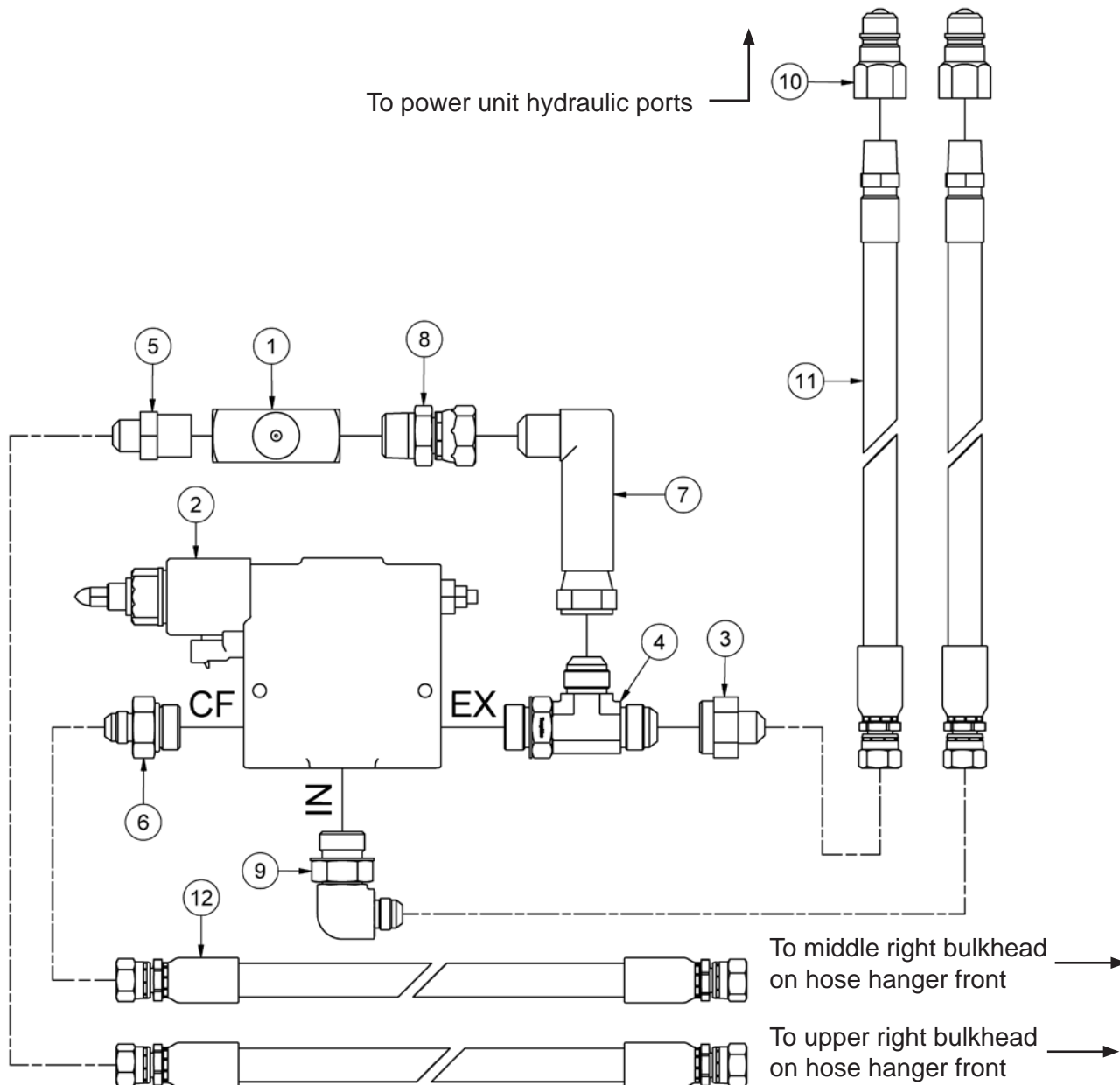
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	30855	Flow Control - Pressure Compensated 3/4
2	1	30857	Flow Control Valve - 3/4"
3	1	HF 2404-8-12	Hydraulic Fitting - Union
4	1	HF 6801-8-12	Hyd. Fitting - 1/2" JIC - 3/4" 90 Degree Elbow
5	1	HF 6803-12-12-12	Hyd. Fitting Male JIC Male JIC Male ORB Tee
6	1	HF 6501-12-12	Hyd. Fitting 90° 3/4 MNPT - 3/4 FJXH
7	1	HF 6500-8-12	Hyd. Fitting 1/2 Male JIC - 3/4 Female JIC 90°
8	1	HF 6400-8-12	Hyd. Fitting
9	2	HF 8010-4	Quickcoupler 1/2" Male Tip
10	2	30661	HH 1/2 72",8FJX,8MP
11	2	37987	HH 1/2 48",8FJX,8FJX

Flow Control Hydraulic Layout - Electric (Original)



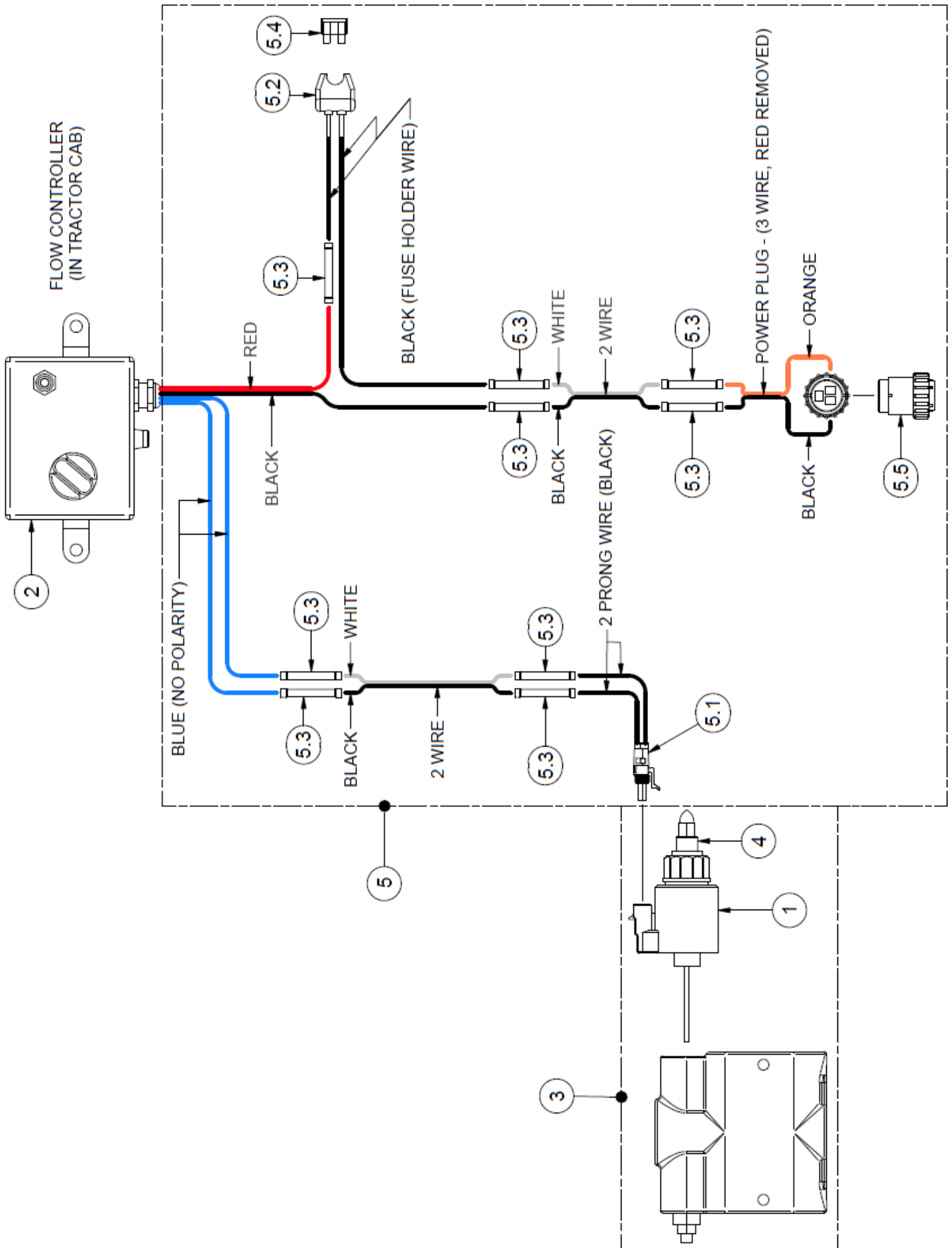
ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	2	HF 8010-4	Quickcoupler 1/2" Male Tip	
2	1	30857	Flow Control Valve - 3/4"	
3	1	37976	Electric Flow Control	Brkdwn on Pg.3-16
4	1	HF 5604-12-12	3/4 FNPT X 1/2 MNPT Branch Tee	
5	1	HF 2404-8-12	Hydraulic Fitting - Union	
6	1	HF 2501-8-12	Hydraulic Elbow Fitting - MJIC-MNPT	
7	1	HF 6400-8-12	Hyd. Fitting	
8	1	HF 6801-8-12	Hyd. Fitting - 1/2" JIC - 3/4" 90 Degree Elbow	
9	1	HF 5502-12-12	Hyd. Fitting - 90 Deg. Elbow 12-12	
10	1	HF 5404-L-12-12	Hyd. Fitting 3/4" X 3/4" MNPT Hex Nipple 3" Long	
11	1	HF 6405-12-12	Hydraulic Fitting - Male SAE-ORB to Female NPT	
12	2	30661	1/2" Hydraulic Hose (8FJX,8MP) - 69"	
13	2	37987	1/2" Hydraulic Hose (8FJX,8FJX) - 73"	

Flow Control Hydraulic Layout - Electric (Current)



ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	30857	Flow Control Valve - 3/4"	
2	1	37976	Electric Flow Control	Brkdwn on Pg.3-16
3	1	HF 2406-12-8	Hydraulic Adapter Fitting JIC	
4	1	HF 6804-12-12-12	Hydraulic Tee Fitting - SAE-ORB - MJICs	
5	1	HF 2404-8-12	Hydraulic Fitting - Union	
6	1	HF 6400-8-12	Hyd. Fitting	
7	1	HF 6500-L-12-12-FG	MJ-FJS 90° Elbow Long	
8	1	HF 6505-12-12	Male Pipe To Female JIC Swivel	
9	1	HF 6801-8-12	Hyd. Fitting - 1/2" JIC - 3/4" 90 Degree Elbow	
10	2	HF 8010-4	Quickcoupler 1/2" Male Tip	
11	2	30661	1/2" Hydraulic Hose (8FJX,8MP) - 69"	
12	2	37987	1/2" Hydraulic Hose (8FJX,8FJX) - 73"	

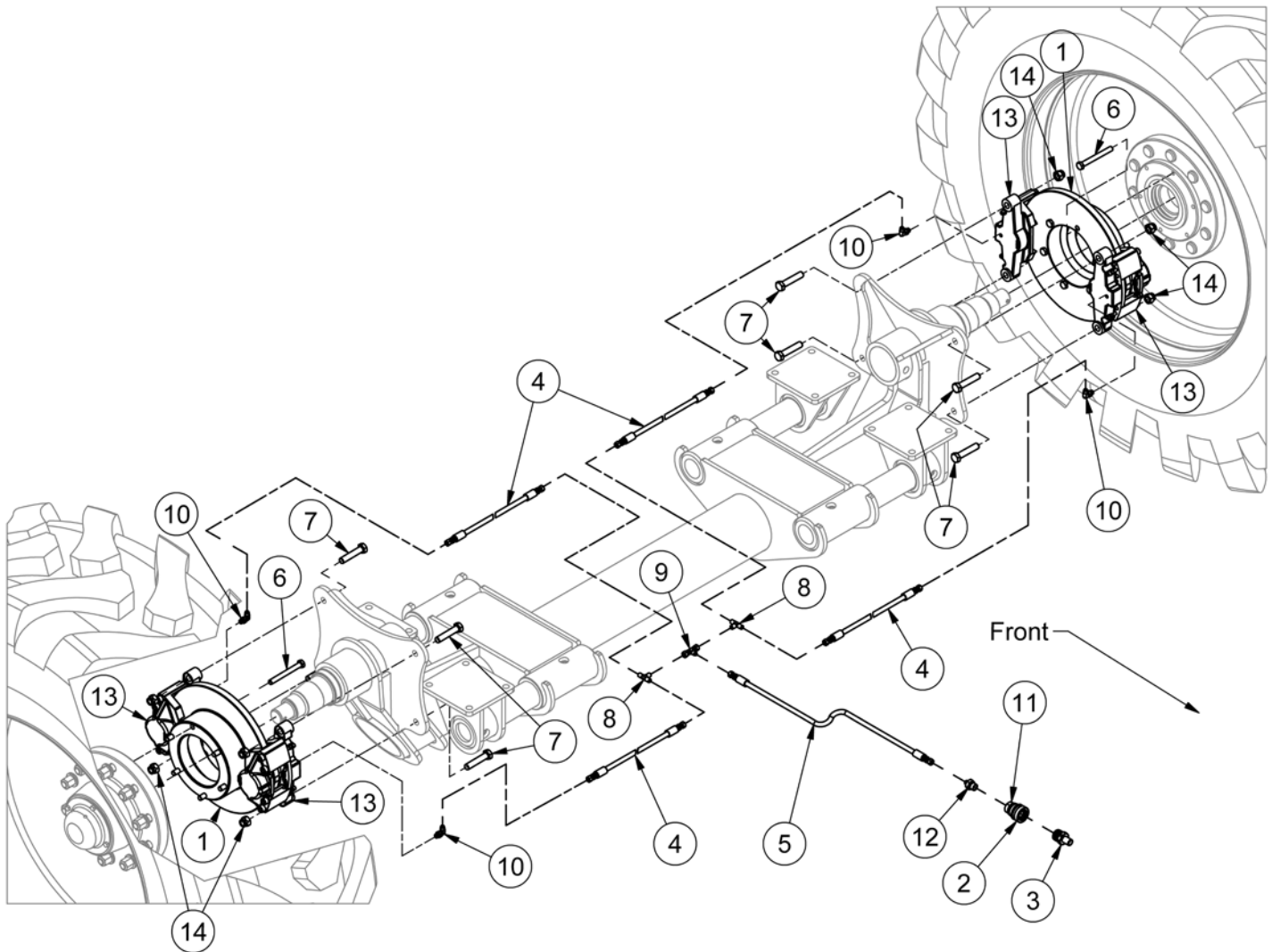
Electric Flow Control Wiring



Electric Flow Control Wiring

ITEM	QTY	PARTNUMBER	DESCRIPTION
1	1	37968	Solenoid
2	1	45344	Electric Flow Controller
3	1	45345	Electric Flow Control
4	1	45346	Core Tube
5	1	43621	Electric Flow Control Wiring Harness
5.1	1	37970	2 Prong Plug
5.2	1	TL82-2164	Fuse Holder
5.3	9	EL23662	Wire Connector
5.4	1	TL550-100-079	15 AMP Fuse
5.5	1	TB109-110-307	Power Plug

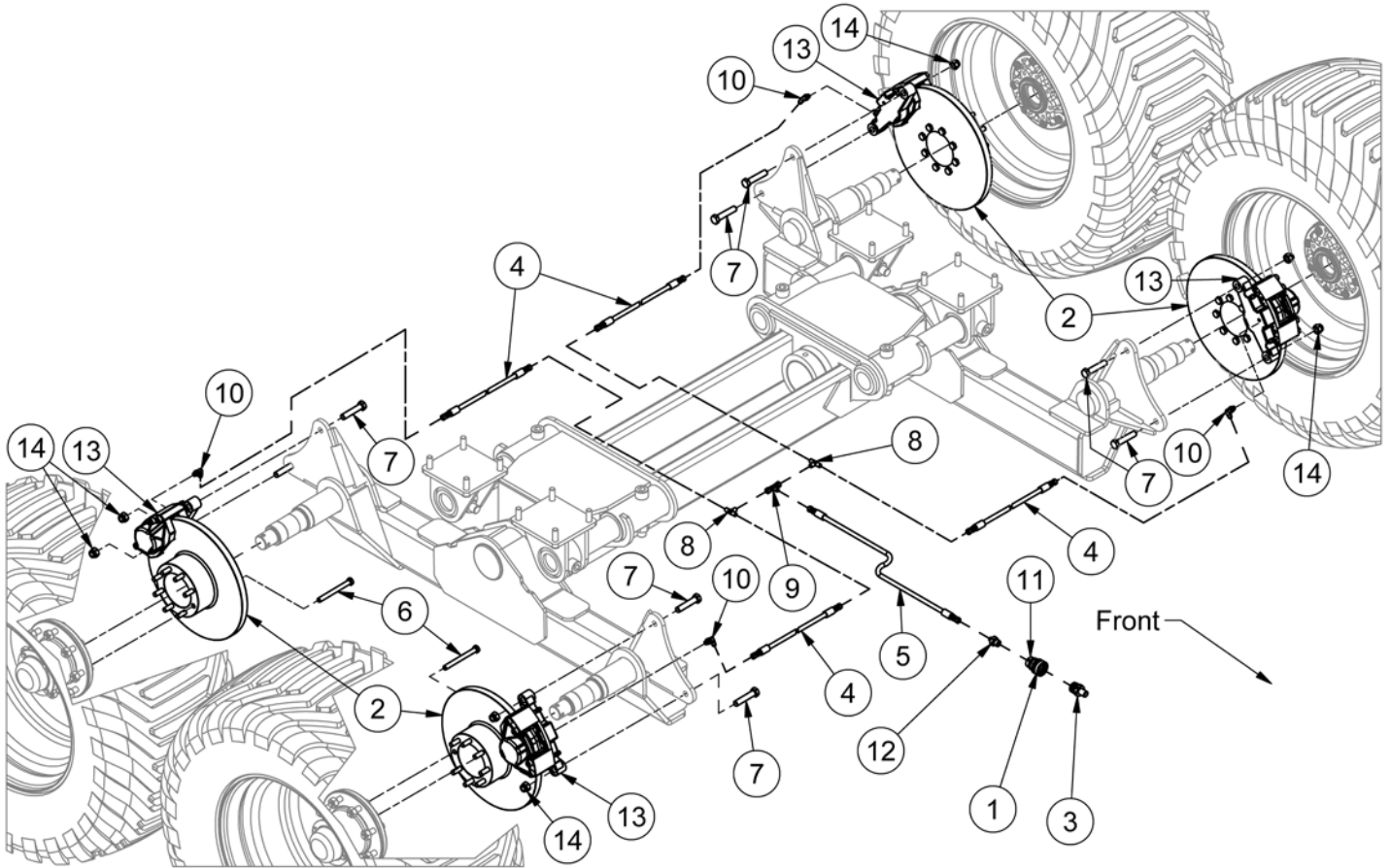
N450SB - Single Axle Brake Kit



*Scale ready axle shown.

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	2	31773	Rotor for 16000# Hub - 9 Bolt	
2	1	36022	Hyd. Quick Coupler- Female- For Nitro Brakes	Inc. Item 11
3	1	37846	Hyd. Quick Coupler- Male- For Nitro Brakes	
4	4	39500	Hose - HH76 4AT1(4G4FJX,4G4FJX)HCL76"	
5	1	39501	Hose - HH336 4AT1(4G4FJX,4G4FJX)HCL336"	
6	18	HB 1/2-20 X4.5 YZ8	Hex Bolt 1/2-20x4 1/2 Grade 8 Zinc Hex Cap Screw	
7	8	HB 5/8-18 X3 YZ8	Hex Bolt 5/8-18x3 Grade 8 Zinc Hex Cap Screw	
8	2	HF 2603-4	Hydraulic Fitting - Male JIC Tee	
9	1	HF 6603-4-4-4	T- Fitting JIC	
10	4	HF 6801-4-4	Hydraulic Fitting - 90° O-Ring to JIC	
11	1	HF 9500-18MM	Metric Thread Bonded Seal	
12	1	HF 9606-04-S18	Hydraulic Adaptor - 1/4" JIC/M18-1.5	
13	4	LA-11-1527	16000# Caliper	
14	8	LN 5/8 N	LN 5/8-11 Zinc Plated Nylon Insert Lock Nut	

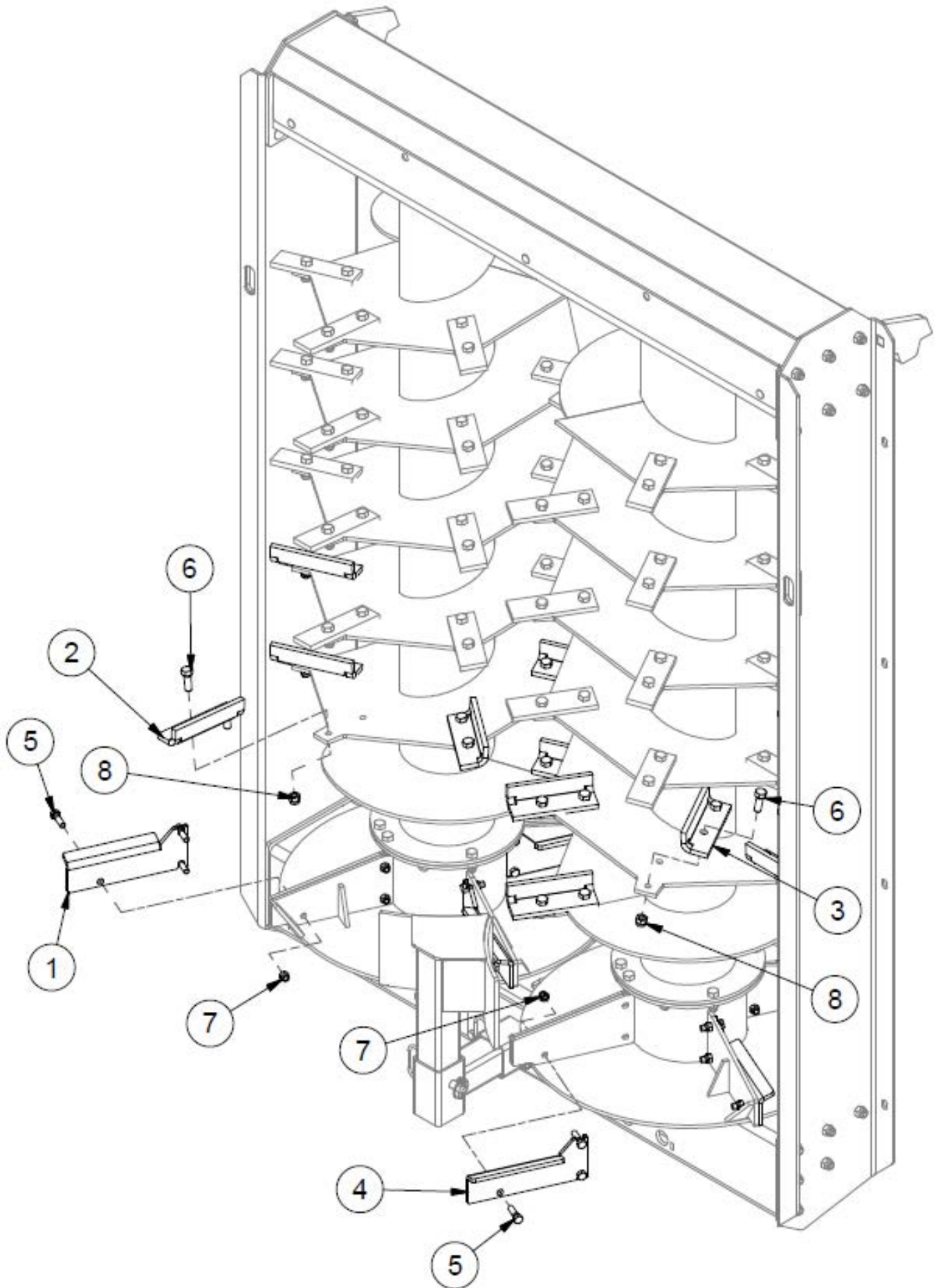
N450TB - Tandem Axle Brake Kit



*Scale ready axle shown.

ITEM	QTY	PART NUMBER	DESCRIPTION	NOTE
1	1	36022	Hyd. Quick Coupler- Female- For Nitro Brakes	Inc. Item 11
2	4	36042	12000# Hub Rotor	
3	1	37846	Hyd. Quick Coupler- Male- For Nitro Brakes	
4	4	39500	Hose - HH76 4AT1(4G4FJX,4G4FJX)HCL76"	
5	1	39501	Hose - HH336 4AT1(4G4FJX,4G4FJX)HCL336"	
6	32	HB 1/2-20 X5 YZ8	Hex Bolt 1/2-20x5 Grade 8 Zinc Hex Cap Screw	
7	8	HB 5/8-18 X3 YZ8	Hex Bolt 5/8-18x3 Grade 8 Zinc Hex Cap Screw	
8	2	HF 2603-4	Hydraulic Fitting - Male JIC Tee	
9	1	HF 6603-4-4-4	T- Fitting JIC	
10	4	HF 6801-4-4	Hydraulic Fitting - 90° O-Ring to JIC	
11	1	HF 9500-18MM	Metric Thread Bonded Seal	
12	1	HF 9606-04-S18	Hydraulic Adaptor - 1/4" JIC/M18-1.5	
13	4	LA-11-1527	16000# Caliper	
14	8	LN 5/8 F	Center Locknuts (5/8-18) 2-Way Fine Thread	

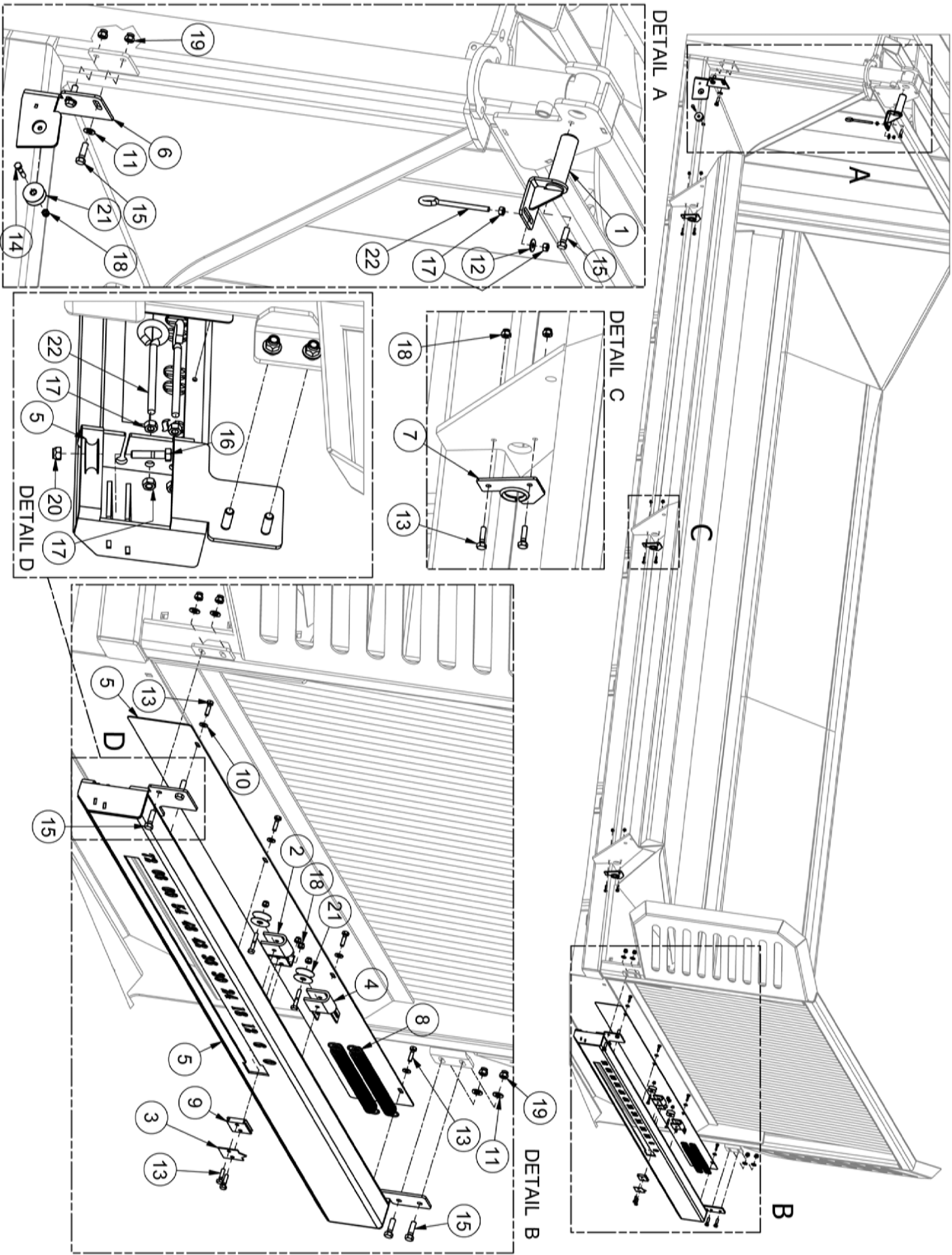
Flange Paddle Kit - 41504



Flange Paddle Kit - 41504

ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	33321	Cupped Paddles - Left
2	10	36518	Beater Paddle (Cupped) Left
3	10	37718	Beater Paddle (Cupped) Right
4	4	37719	Cupped Paddles - Right
5	24	HB 1/2-13X1.75 Z5	Hex Bolt 1/2-13x1 3/4 Grade 5 Zinc Plated Hex Cap Screw
6	40	HB 5/8-11X1.75 Z5	Hex Bolt 5/8-11x1 3/4 Grade 5 Zinc Plated Hex Cap Screw
7	44	LN 1/2 N	LN 1/2-13 Zinc Plated Nylon Insert Lock Nut
8	40	LN 5/8 N	LN 5/8-11 Zinc Plated Nylon Insert Lock Nut

Endgate Indicator Kit - 45816

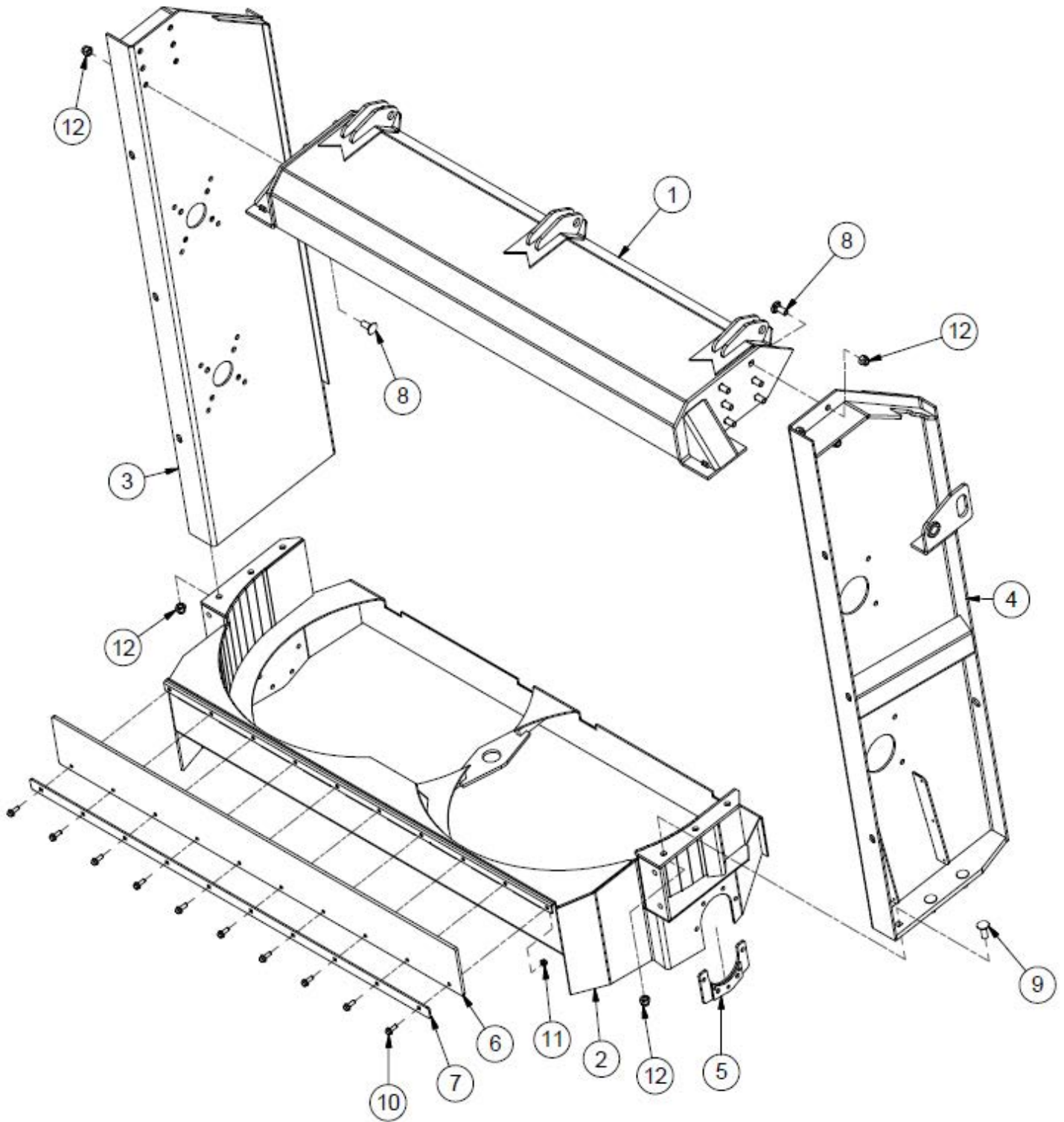


Endgate Indicator Kit - 45816

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	45314	Endgate Cable Pin
2	1	45407	Indicator Slider Mount
3	1	45409	Indicator Arrow
4	1	45410	Spring Tensioner Pulley
5	1	45578	Indicator
6	1	45812	Rear Pulley
7	3	45898	Indicator Wire Plate
8	2	46086	Spring 12.0 X 1.0 X .105
9	1	BF5000-183	Indicator Slider
10	4	FW 1/4	Flatwasher - 1/4" Zinc Plated USS
11	6	FW 3/8	Flatwasher - 3/8" Zinc Plated USS
12	1	FW 5/16	Flatwasher - 5/16" Zinc Plated USS
13	12	HB 1/4-20X1 Z5	Hex Bolt 1/4-20x1 Grade 5 Zinc Plated Hex Cap Screw
14	3	HB 1/4-20X1.5 Z5	Hex Bolt 1/4-20x1 1/2 Grade 5 Zinc Plated Hex Cap Screw
15	7	HB 3/8-16X1.25 Z5	Hex Bolt 3/8-16x1 1/4 Grade 5 Zinc Plated Hex Cap Screw
16	1	HB 5/16-18X1.5 Z5	Hex Bolt 5/16-18x1 1/2 Grade 5 Zinc Plated Hex Cap Screw
17	6	HN 5/16	Hex Nut 5/16"-18 Grade 5 Zinc Plated Finished
18	11	LN 1/4 N	LN 1/4-20 Zinc Plated Nylon Insert Lock Nut
19	7	LN 3/8 N	LN 3/8-16 Zinc Plated Nylon Insert Lock Nut
20	1	LN 5/16 N	LN 5/16-18 Zinc Plated Nylon Insert Lock Nut
21	3	PP00423	Pulley
22	3	PP00682	Eye Bolt - 5/16-18 x 4" Shank Zinc Plated Turned

Section 4 - Option - Poultry Beaters

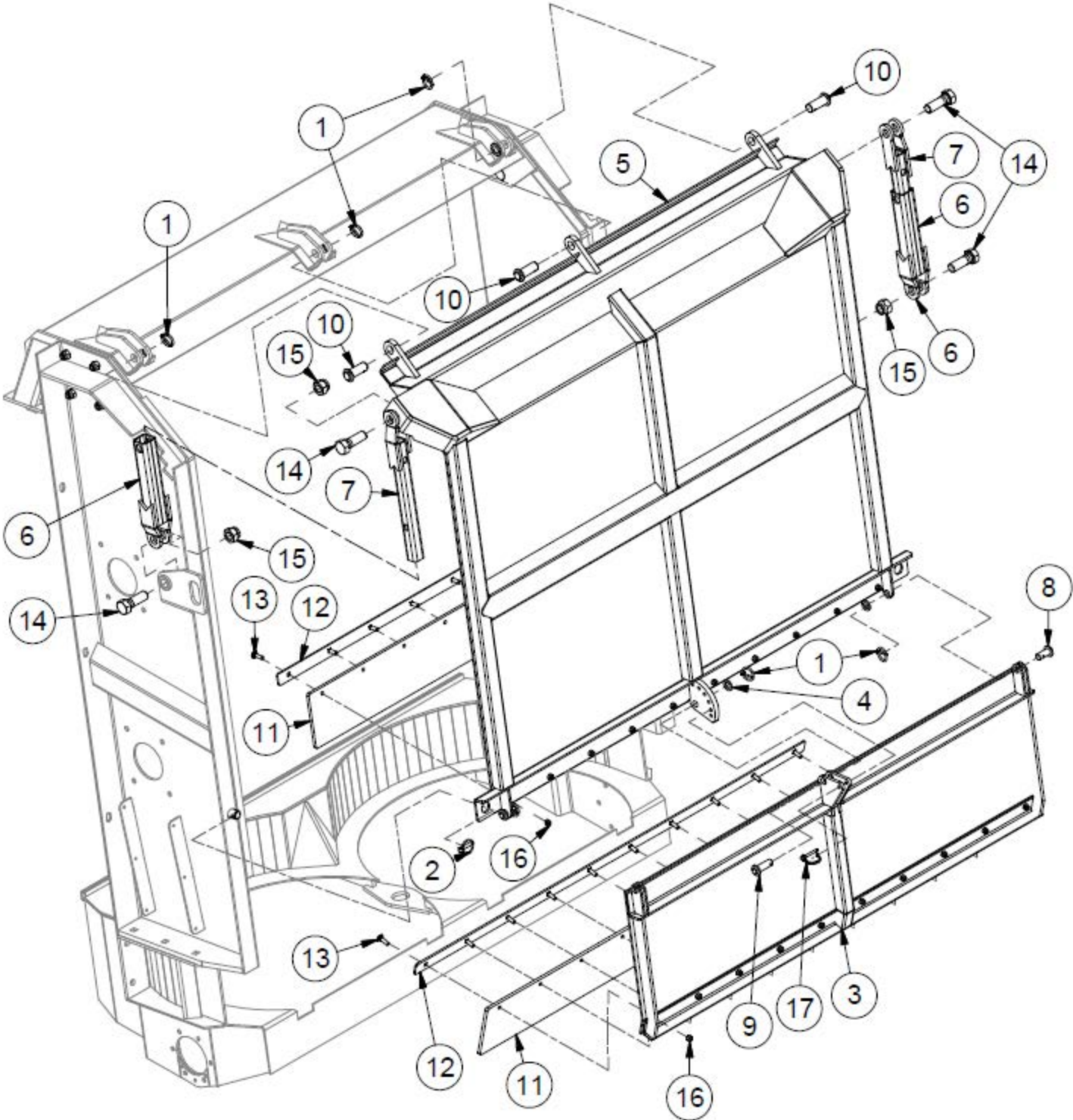
Poultry Beaters - Frame



Poultry Beaters - Frame

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	40334	Beater Gate Mount
2	1	40335	Spinner Mounting Assembly
3	1	40378	Beater Right Panel
4	1	40380	Beater Left Panel
5	1	42173	Bottom Gearbox Support
6	3	450-441	Rubber Seal
7	3	600-790	Rubber Hold Down
8	12	CB 5/8-11X1.1/2 Z5	Carriage Bolt - 5/8-11 x 1-1/2" Grade 5 Zinc
9	6	CB 5/8-11X1.3/4 Z5	Carriage Bolt - 5/8-11 x 1-3/4" Grade 5 Zinc
10	10	HBC38X1	Hex Bolt Cerrated
11	10	HNC38	Hex Nut Cerrated
12	138	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut

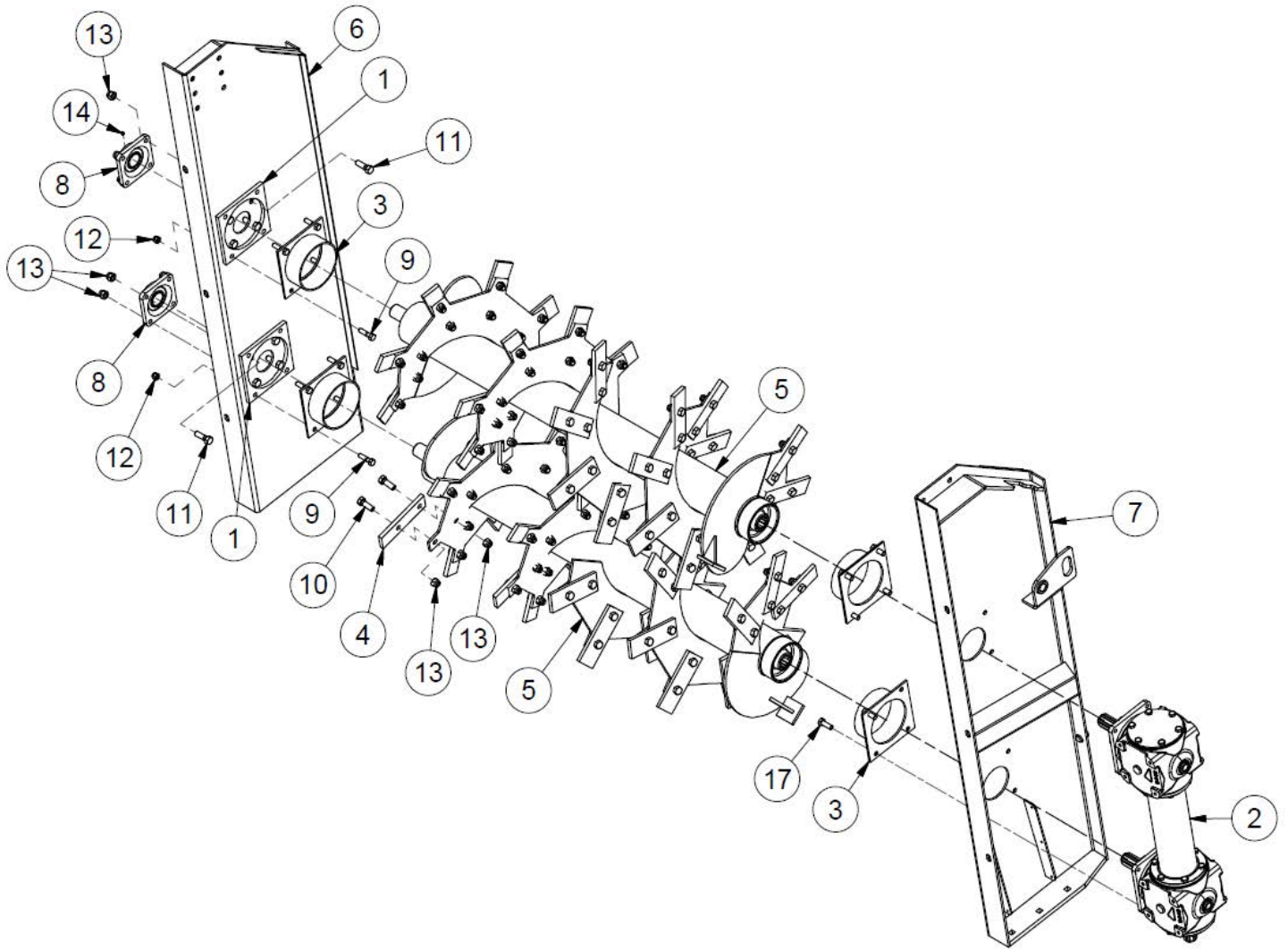
Poultry Beaters - Endgate



Poultry Beaters - Endgate

ITEM	QTY	PART NUMBER	DESCRIPTION
1	6	25680	Lynch Pin 3/16 x 1.5
2	2	28940	Lynch Pin - 3/8 X 1-3/4"
3	1	40332	Lower Gate
4	3	40365	Beater Gate Washer
5	1	40375	Upper Gate
6	2	40389	Sliding Hinge Clevice
7	2	40393	Sliding Hinge Arm
8	2	42175	Gate Pin
9	1	42176	Long Gate Pin
10	3	42177	Top Gate Pin
11	3	450-441	Rubber Seal
12	3	600-790	Rubber Hold Down
13	20	CB 3/8-16X1.1/4 Z5	Carriage Bolt - 3/8"-16 x 1-1/4" Zinc Finish SAE J429 Grade 5 Round Head
14	4	HB 1-8X3.0 Z5	Hex Bolt - 1"-8 x 3" Grade 5 Zinc Plated Hex Cap Screw NC
15	4	LN 1.0 N	Locknuts - 1-8 Zinc Plated Nylon Insert
16	20	LN 3/8 N	Locknuts - 3/8-16 Zinc Plated Nylon Insert Lock Nut
17	1	LP B1995	Pin - Lock Pin 1/4x1 3/4

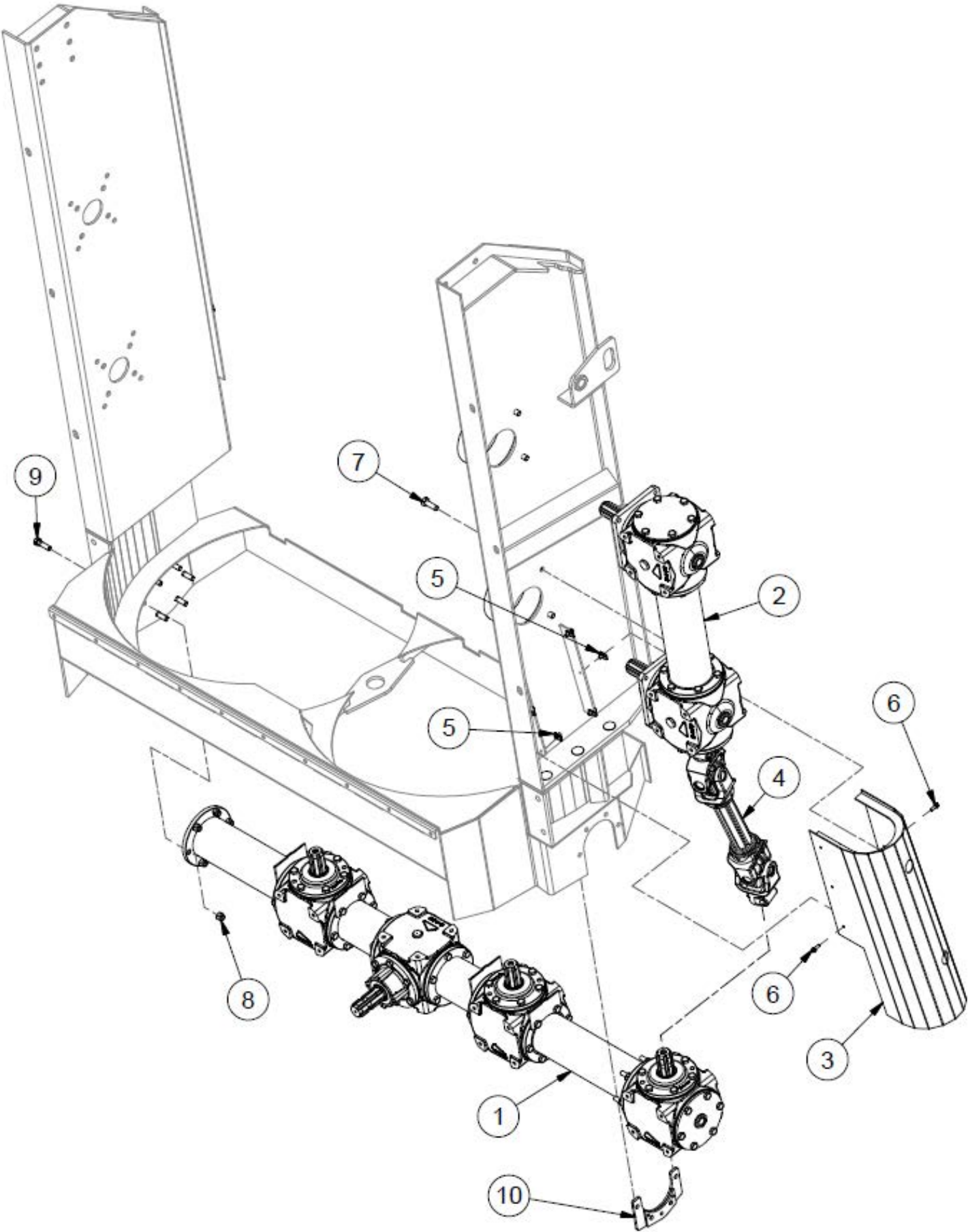
Poultry Beaters - Beaters



Poultry Beaters - Beaters

ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	36723	Inside Plate for Beaters
2	1	37827	Gear Box - Side Poultry
3	4	37936	Beater End Covers
4	58	400-438	Beater Paddle
5	2	40356	Beater
6	1	40378	Beater Right Panel
7	1	40380	Beater Left Panel
8	2	BEA UCF209-28R3	Flange Bearing -Triple Seal- Ductile Iron
9	16	HB 1/2-13X2.0 Z5	Hex Bolt 1/2-13 x 2" Grade 5 Zinc Plated Hex Cap Screw NC
10	112	HB 5/8-11X1.3/4 Z5	Hex Bolt - 5/8"-11 x 1-3/4" Grade 5 Zinc Plated Hex Cap Screw NC
11	8	HB 5/8-11X2.0 Z5	Hex Bolt 5/8-11 x 2 Grade 5 Zinc Plated Hex Cap Screw NC
12	36	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
13	138	LN 5/8 N	Locknut - 5/8-11 Zinc Plated Nylon Insert Lock Nut
14	4	SS 516X38	Allan Head Set Screw, Cup Point Set Screw 5/16 x 3/8

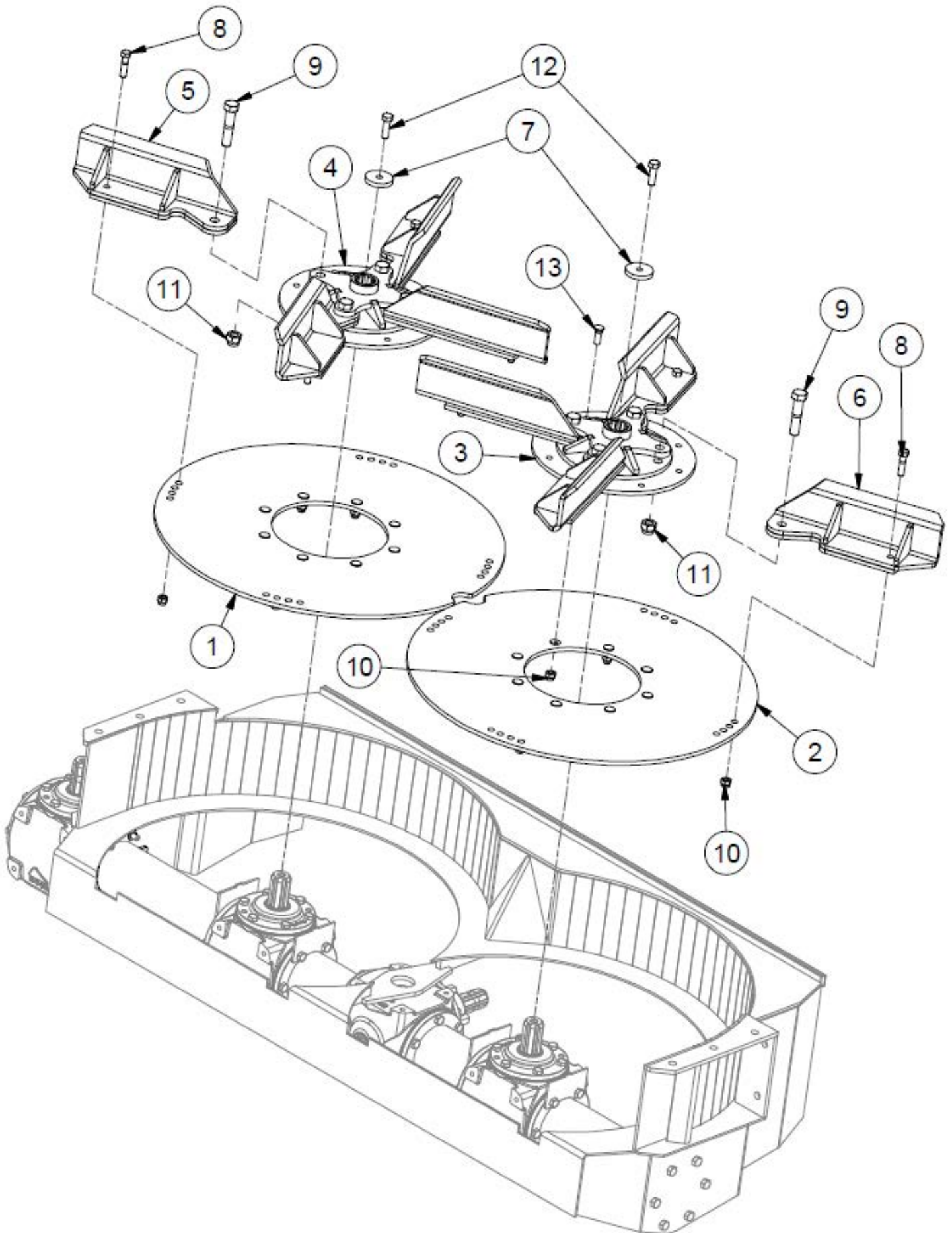
N450 Poultry Beaters - Drivelines



N450 Poultry Beaters - Drivelines

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37828	Gear Box - Lower Poultry
2	1	37827	Gear Box - Side Poultry
3	1	40259	PTO Shield
4	1	39998	PTO Cross Drive Shaft
5	6	HNP 5/16	Panel Nut - 5/16" U-Type Spring
6	6	HBC14X34	Hex Bolt - 1/4-20 x 3/4 Grade 8.2 Zinc Flange Bolt SAE
7	8	M14X40X2.0	Metric Bolt
8	36	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
9	6	HB 1/2-13X1.3/4 Z5	Hex Bolt Plated - 1/2"-13 x 1-3/4" Zinc Finish SAE J429 Gr. 5 NC
10	1	42173	Bottom Gearbox Support

Poultry Beaters - Spinners

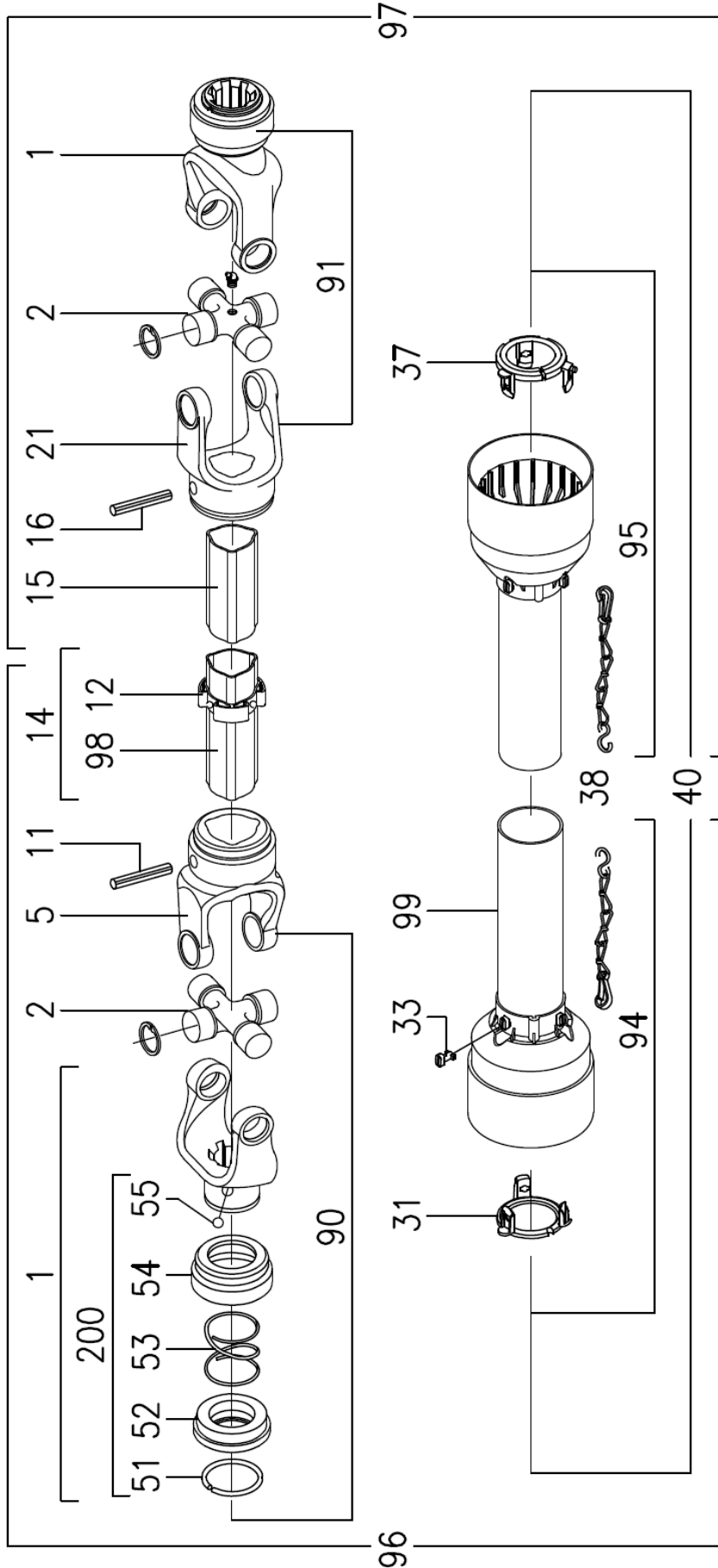


Poultry Beaters - Spinners

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	37881	Left Spinner Plate
2	1	37902	Right Spinner Plate
3	1	39843	Braced Spinner Hub
4	1	40298	Braced Spinner Hub
5	4	40310	Left Paddle
6	4	40311	Right Paddle
7	2	700-157	Load Bearing Washer
8	16	HB 1/2-13X2.0 Z5	Hex Bolt 1/2-13 x 2" Grade 5 Zinc Plated Hex Cap Screw NC
9	8	HB 3/4-10X3.1/2 Z5	Hex Bolt - 3/4-10 x 3 1/2" Grade 5 Zinc Plated Hex Cap Screw NC
10	36	LN 1/2 N	Locknuts - 1/2-13 Zinc Plated Nylon Insert Lock Nut
11	8	LN 3/4 N	Locknuts - 3/4-10 Zinc Plated Nylon Insert
12	2	M14X45X2.0	Metric Bolt
13	16	PB 1/2X1.1/2	Plow Bolts Gr.5

Section 5 - PTOs

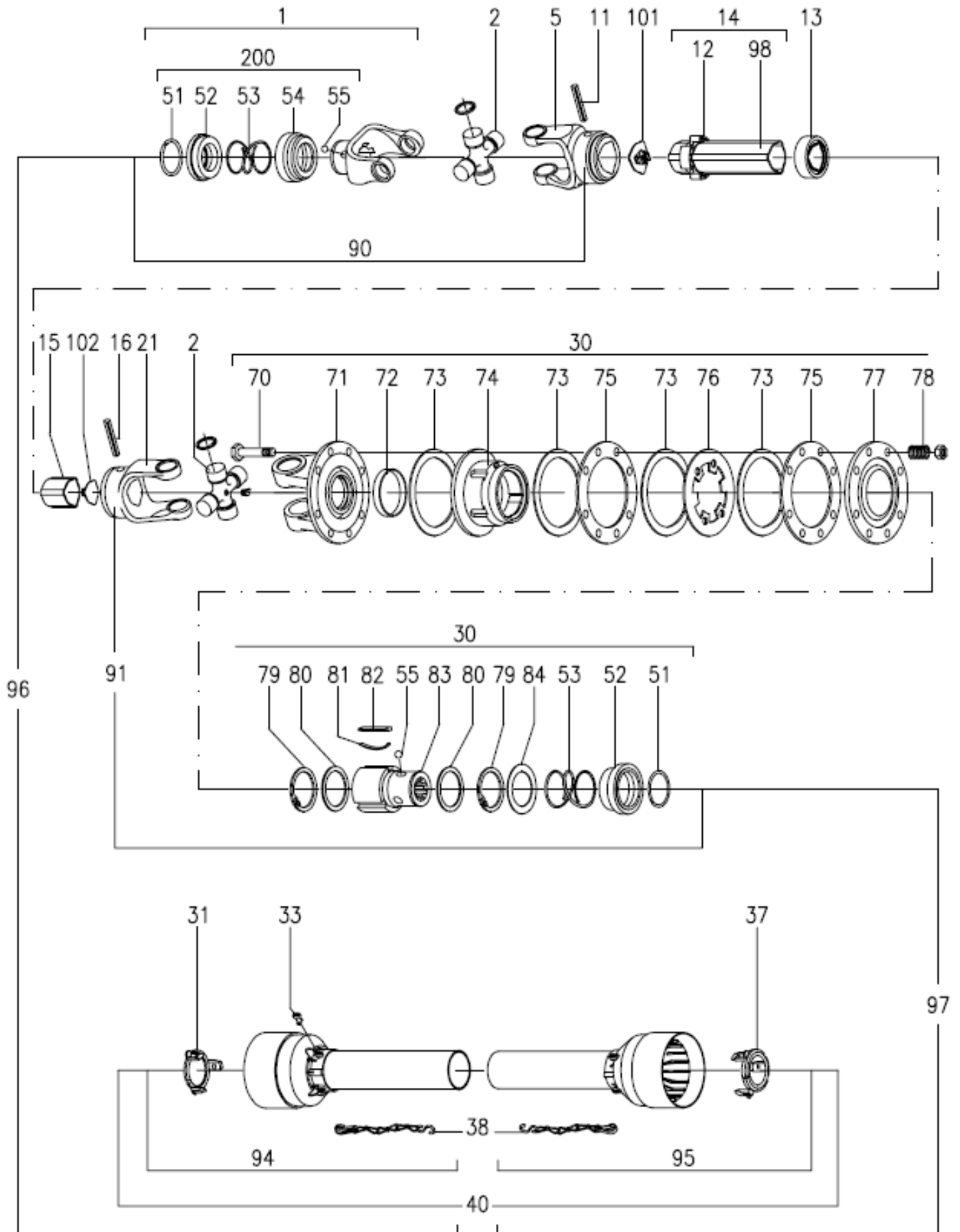
30839 - PTO Shaft - Primary Shaft for Manure Spreader N375-N600



30839 - PTO Shaft - Primary Shaft for Manure Spreader N375-N600

ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	PTO141.026.544	Complete Collar Yoke C12 1 3/8" Z6
2	2	PTO180.016.130	Cross Journal Set 30.2x92
5	1	PTO151.016.028	Outer Yoke
11	1	PTO190.000.018	Roll Pin for Outer Tube
12	1	PTO180.016.316	Bush with Grease Nipple
14	1	PTO152.170.271.0720	Complete Outer Tube L=850
15	1	PTO153.160.112	Inner Tube L=865
16	1	PTO190.000.016	Roll Pin for Inner Tube
21	1	PTO151.016.029	Inner Yoke
31	1	PTO180.016.016	Guard Retaining Collar for Outer Tube
33	6	PTO190.000.019	Bolt
37	1	PTO180.016.015	Guard Retaining Collar for Inner Tube
38	2	PTO180.016.025	Safety Chains
40	1	PTO142.260.429.7620	Complete Guard with Instruction Manual
51	2	PTO190.000.451	Outer Circlip
52	2	PTO151.016.486	Sliding Sleeve Collar
53	2	PTO180.016.487	Spring
54	2	PTO180.016.483	Fixed Sleeve
55	6	PTO190.000.078	Ball Ø 1/2"
90	1	PTO121.026.899.10	U Joint for Outer Tube
91	1	PTO121.026.900.10	U Joint for Inner Tube
94	1	PTO142.266.203.7620	Half Female Guard
95	1	PTO142.261.305.7620	Half Male Guard
96	1	PTO123.360.334.10	Half Female Shaft with Guarding
97	1	PTO123.460.773.10	Half Male Shaft with Guarding
98	1	PTO190.000.216	DANGER Label for Outer Tube
99	1	PTO190.000.215	DANGER Label for Outer Guard Tube
100	1	PTO190.000.371	Instruction Manual
200	2	PTO165.000.628	Kit Collar 1 3/8"

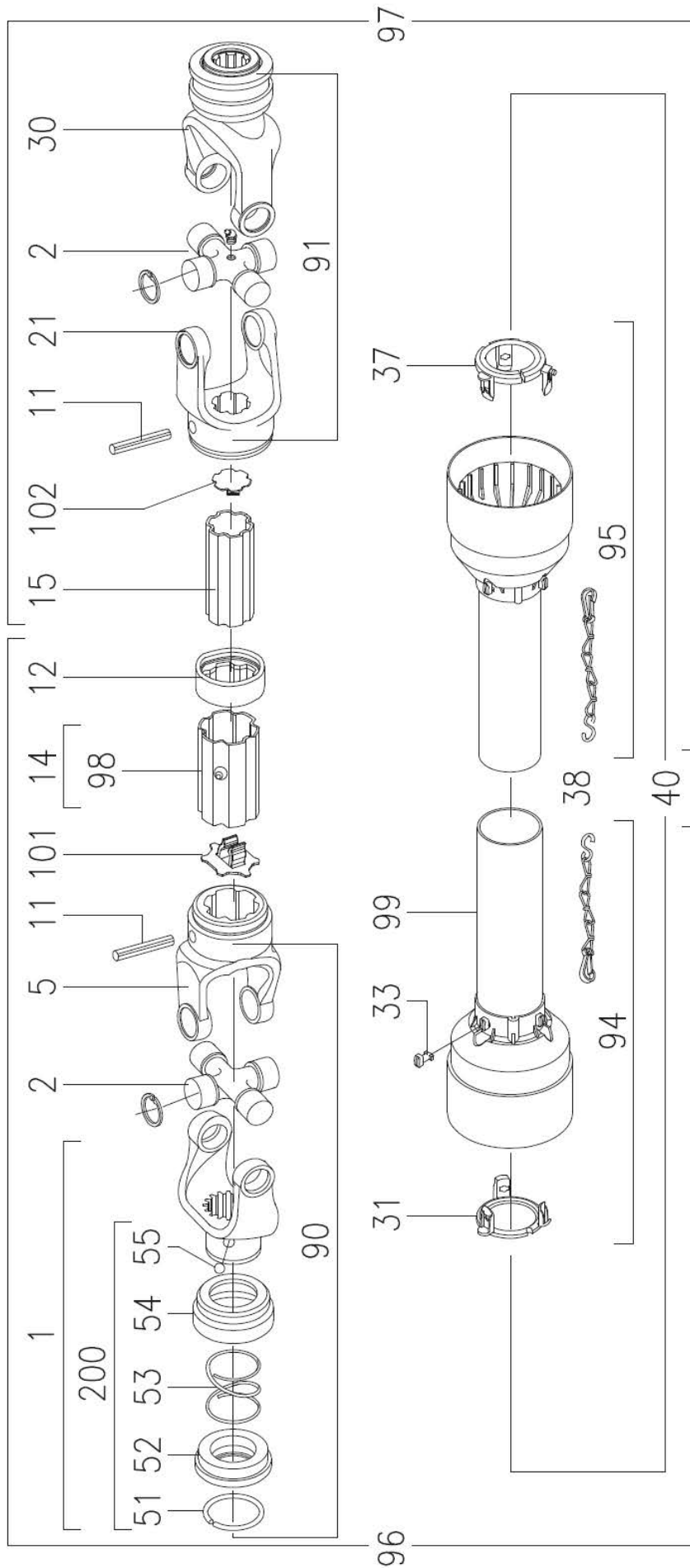
30840 - PTO Slip Clutch for Manure Spreader



30840 - PTO Slip Clutch for Manure Spreader

ITEM	QTY	PART NUMBER	DESCRIPTION				
1	1	PTO141.026.544	Complete Collar Yoke C12 1 3/8" Z6	71	1	PTO.141.026.347	Flanged Yoke
				72	1	PTO180.017.112	Bush
				73	4	PTO180.017.106	Lining Ring
2	2	PTO180.016.130	Cross Journal Set 30.2x92	74	1	PTO141.027.107	Body RF with Grease Nipple
				75	2	PTO180.017.105	Inner Plate
5	1	PTO151.016.028	Outer Yoke	76	1	PTO180.017.104	Intermediate Plate
11	1	PTO190.000.018	Roll Pin for Outer Tube	77	1	PTO180.017.114	Pressure Plate
12	1	PTO180.016.316	Bush for Grease Fitting	78	8	PTO180.014.022	Spring
13	1	PTO180.016.572	Wiper	79	2	PTO190.000.183	Inner Circlip
14	1	PTO152.170.366.0720	Complete Outer Tube L=1005	80	2	PTO180.014.135	Retaining Washer
				81	3	PTO180.014.137	Carriage Spring
15	1	PTO153.160.114	Inner Tube L=1065	82	3	PTO151.014.136	Tang
16	1	PTO190.000.016	Roll Pin for Inner Tube	83	1	PTO151.016.546	Hub R12
				84	1	PTO180.015.143	Spring Push Ring
21	1	PTO151.016.029	Inner Yoke	90	1	PTO121.026.899.10	U Joint for Outer Tube
30	1	PTO146.364.001	Complete Disc Clutch RF6 (1400 Nm)				
31	1	PTO180.016.029	Guard Retaining Collar for Outer Tube	91	1	PTO121.026.747.10	U Joint for Inner Tube
				94	1	PTO142.266.272.7620	Half Female Guard
33	6	PTO190.000.019	Bolt	95	1	PTO142.267.239.7620	Half Male Guard
37	1	PTO180.016.015	Guard Retaining Collar for Inner Tube	96	1	PTO123.360.465.10	Half Female Shaft with Guarding
38	2	PTO180.016.636	Safety Chains	97	1	PTO123.460.1007.10	Half Male Shaft with Guarding
40	1	PTO142.260.496.7620	Complete Guard with Instruction Manual	98	1	PTO190.00.216	DANGER Label for Outer Tube
				99	1	PTO190.000.215	DANGER Label for Outer Guard Tube
51	2	PTO190.000.451	Outer Circlip	100	1	PTO190.000.371	Instruction Manual
52	2	PTO151.016.486	Sliding Sleeve Collar				
53	2	PTO180.016.487	Spring	101	1	PTO180.016.468	Outer Closing Cap
54	1	PTO180.016.483	Fixed Sleeve				
55	6	PTO190.000.078	Balls Ø1/2"	102	1	PTO180.016.529	Inner Closing Cap
70	8	PTO165.000.548	Bolt M10x100 & nut				
				200	1	PTO165.000.628	Kit Collar 1 3/8"

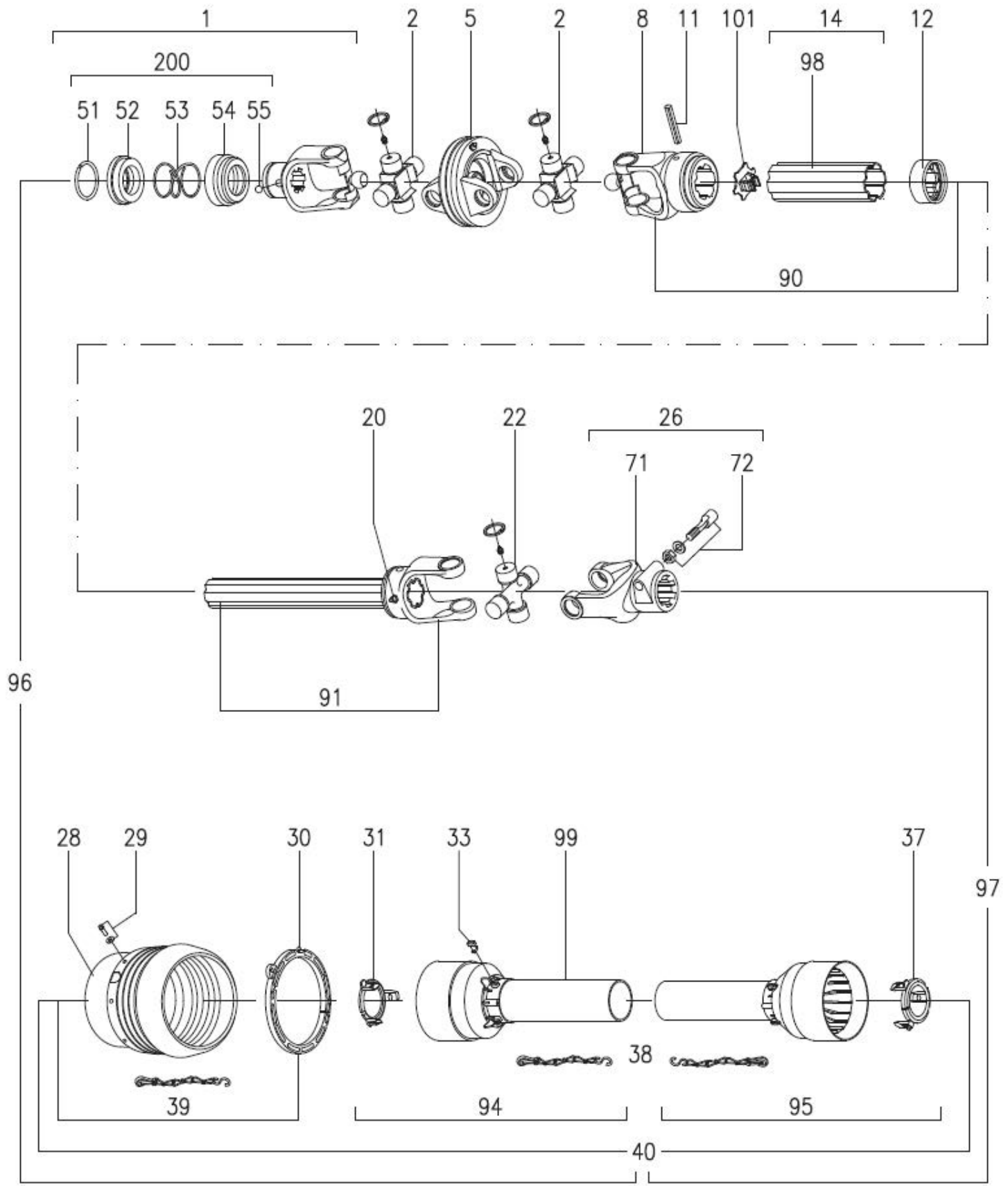
30841 - PTO Secondary Shaft - Manure Spreader



30841 - PTO Secondary Shaft - Manure Spreader

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PTO141.026.553	Complete Collar Yoke C13 1 3/8" Z21
2	2	PTO180.016.004	Cross Journal Set 30.2x92
5	1	PTO151.016.388	Outer Yoke
11	1	PTO8.4.5.02111	Roll Pin for Outer Tube
12	1	PTO180.016.573	Wiper
14	1	PTO150.260.014.0720	Complete Outer Tube L=355
15	1	PTO153.260.108	Inner Tube L=415
16	1	PTO190.000.018	Roll Pin for Inner Tube
21	1	PTO151.016.389	Inner Yoke
30	1	PTO141.026.544	Complete Collar Yoke C12 1 3/8" Z6
31	1	PTO180.016.016	Guard Retaining Collar for Outer Tube
33	6	PTO190.000.019	Bolt
37	1	PTO180.016.015	Guard Retaining Collar for Inner Tube
38	2	PTO180.016.790	Safety Chains
40	1	PTO142.260.505.9620	Complete Guard with Instruction Manual
51	2	PTO190.000.451	Outer Circlip
52	2	PTO151.016.486	Sliding Sleeve Collar
53	2	PTO180.016.487	Spring
54	2	PTO180.016.483	Fixed Sleeve
55	6	PTO190.000.078	Ball Ø 1/2"
90	1	PTO121.026.913.00	U Joint for Outer Tube
91	1	PTO121.026.912.00	U Joint for Inner Tube
94	1	PTO142.266.280.9620	Half Female Guard
95	1	PTO142.267.248.9620	Half Male Guard
96	1	PTO123.366.197.00	Half Female Shaft with Guard
97	1	PTO123.466.342.00	Half Male Shaft with Guard
98	1	PTO190.000.216	DANGER Label for Outer Tube
99	1	PTO190.000.215	DANGER Label for Outer Guard Tube
100	1	PTO190.000.371	Instruction Manual
101	1	PTO180.016.474	Outer Closing Cap
102	1	PTO180.016.575	Inner Closing Cap
200	2	PTO165.000.628	Kit Collar 1 3/8"

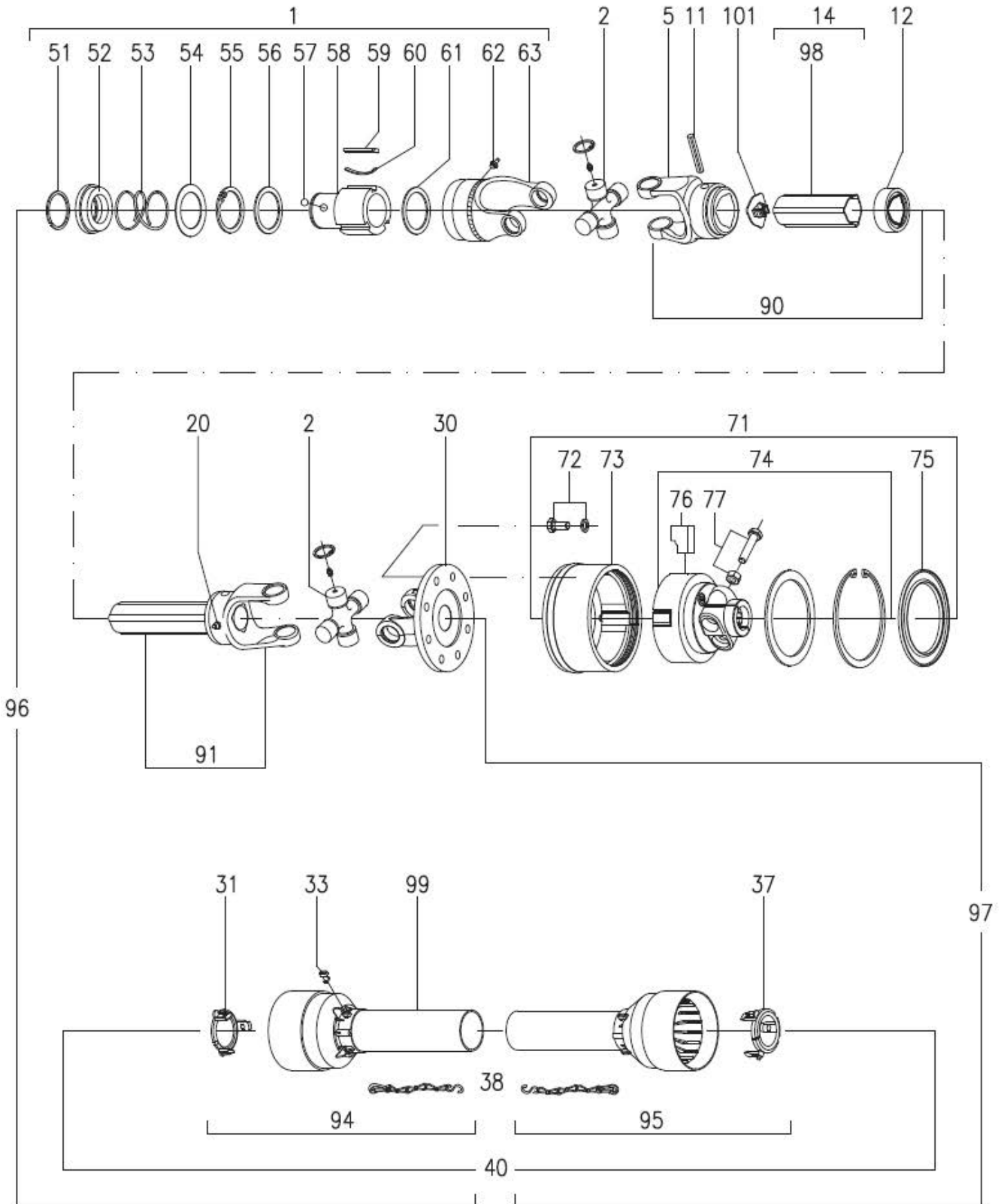
39850 - PTO. 375,450,525,600,750 (V80-141P028359-028028-CV80-CLS)



39850 - PTO. 375,450,525,600,750 (V80-141P028359-028028-CV80-CLS)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PTO141.028.359.1	Complete Collar yoke C03 for CV-Joint
2	2	PTO180.018.580	Cross Journal Set for CV-Joint
5	1	PTO141.028.157.1	Wide Angle Double Yoke
8	1	PTO141.028.248.1	Outer Yoke
11	1	PTO190.000.243	Roll Pin for Outer Tube
12	1	PTO180.018.437	Wiper
14	1	PTO152.280.566.0720	Complete Outer Tube
20	1	PTO180.017.411	Grease Nipple for Lube
22	1	PTO180.018.641	Cross Journal Set
26	1	PTO141.028.028.1	Complete Yoke 132
28	1	PTO180.018.582	Guard Cone for Wide Angle CV-Joint
29	6	PTO165.000.694	Screw Kit
30	1	PTO158.018.582	Bearing Ring
31	1	PTO180.018.251	Guard Retaining Collar for Outer Tube
33	3	PTO180.014.240	Bolt
37	1	PTO180.018.252	Guard Retaining Collar for Inner Tube
38	1	PTO180.016.790	Safety Chains
39	1	PTO165.000.801	Guard Cone Set
40	1	PTO142.981.078.2821	Complete Guard with Instruction Manual
51	1	PTO190.000.451	Outer Circlip
52	1	PTO151.016.486	Sliding Sleeve Collar
53	1	PTO180.016.487	Spring
54	1	PTO180.016.483	Fixed Sleeve
55	3	PTO190.000.078	Ball Ø 1/2"
71	1	PTO151.018.028.1	Yoke 132
72	1	PTO165.000.502	Tapered Pin Set 1" 3/8
90	1	PTO122.981.049.1	Female Tube with Yoke and Lube System
91	1	PTO122.580.526.1	Male Tube with Yoke and Lube System
94	1	PTO142.283.260.2821	Half Female Guarding with Label
95	1	PTO142.287.230.2821	Half Male Guarding
96	1	PTO199811410F05006	Half Female Shaft with Guarding
97	1	PTO123.486.358.01	Half Male Shaft with Guarding
98	1	PTO190.000.216	DANGER Label for Outer Tube
99	1	PTO190.000.215	DANGER Label for Outer Guard Tube
100	1	PTO190.000.371	Instruction Manual
101	1	PTO180.018.393	Plastic Cap for Outer Tube
200	1	PTO165.000.628	Kit Collar for Yoke 1 3/8"

39851 - PTO. 375,450,525,(T60-086P265011-306048-CLS(3500NM))














39851 - PTO. 375,450,525,(T60-086P265011-306048-CLS(3500NM))

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	PTO145.265.011.1	Complete Overrunningclutch R12
2	2	PTO180.016.780	Cross Journal Set
5	1	PTO151.016.028.1	Outer Yoke
11	1	PTO190.000.018	Roll Pin for Outer Tube
12	1	PTO180.016.572	Wiper
14	1	PTO152.160.435.0720	Complete Outer Tube
20	1	PTO180.017.411	Grease Nipple for Lube
30	1	PTO151.016.543.1	Flange FGL
31	1	PTO180.016.237	Guard Retaining Collar for Outer Tube
33	6	PTO180.014.240	Bolt
37	1	PTO180.016.238	Guard Retaining Collar for Inner Tube
38	2	PTO180.016.790	Safety Chains
40	1	PTO142.260.536.7621	Complete Guard for Instruction Manual
51	1	PTO190.000.451	Outer Circlip
52	1	PTO151.016.486	Sliding Sleeve Collar
53	1	PTO180.016.487	Spring
54	1	PTO180.015.143	Spring Push Ring
55	1	PTO190.000.183	Inner Circlip
56	1	PTO180.014.135	Retaining Washer
57	3	PTO190.000.078	Ball
58	1	PTO151.016.546	Hub R12 (1 3/8" Z6)
59	3	PTO151.014.136	Ratchet
60	3	PTO180.014.137	Leaf Spring
61	1	PTO190.000.199	Retaining Washer
62	1	PTO190.00.020	Grease Nipple M8x1
63	1	PTO141.026.210.1	Outer Casting with Yoke
71	1	PTO144.306.137.1	Automatic Torque Limiter (1 3/8" Z6)
72	8	PTO165.000.708	Special Screw M12x1.25x25 w/ Washers type "SCHNOOR"
73	1	PTO141.028.411.1	Outer Casing
74	1	PTO165.000.850	Complete Hub (2700Nm with Springs)
75	1	PTO180.018.400	Grease Retainer
76	4	PTO151.018.390	Ratchet
77	2	PTO165.000.752	Bolts M12x1.25x60 & Nuts
90	1	PTO122.360.088.1	Female Tube with Yoke and Lube System
91	1	PTO122.360.568.1	Male Tube with Yoke and Lube System
94	1	PTO142.266.311.7621	Half Female Guarding with Label
95	1	PTO142.267.286.7621	Half Male Guarding
96	1	PTO123.360.519.11	Half Female Shaft with Guarding
97	1	PTO123.460.1081.11	Half Male Shaft with Guarding
98	1	PTO190.000.216	DANGER Label for Outer Tube
99	1	PTO190.000.215	DANGER Label for Outer Guard Tube
100	1	PTO190.000.371	Instruction Manual
101	1	PTO180.016.468	Plastic Cap for Outer Tube

Torque Values - Imperial

UNIFIED INCH BOLT AND CAP SCREW TORQUE VALUES

SAE Grade and Head Markings	1 or 2 ^b	5	5.1	5.2	8	8.2
	NO MARK 					
SAE Grade and Nut Markings	2	5		8		
	NO MARK 					

TS1162 -19-03M4101

Size	Grade 1				Grade 2 ^b				Grade 5, 5.1, or 5.2				Grade 8 or 8.2			
	Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a	
	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft
1/4	3.7	2.8	4.7	3.5	6	4.5	7.5	5.5	9.5	7	12	9	13.5	10	17	12.5
5/16	7.7	5.5	10	7	12	9	15	11	20	15	25	18	28	21	35	26
3/8	14	10	17	13	22	16	27	20	35	26	44	33	50	36	63	46
7/16	22	16	28	20	35	26	44	32	55	41	70	52	80	58	100	75
1/2	33	25	42	31	53	39	67	50	85	63	110	80	120	90	150	115
9/16	48	36	60	45	75	56	95	70	125	90	155	115	175	130	225	160
5/8	67	50	85	62	105	78	135	100	170	125	215	160	240	175	300	225
3/4	120	87	150	110	190	140	240	175	300	225	375	280	425	310	550	400
7/8	190	140	240	175	190	140	240	175	490	360	625	450	700	500	875	650
1	290	210	360	270	290	210	360	270	725	540	925	675	1050	750	1300	975
1-1/8	400	300	510	375	400	300	510	375	900	675	1150	850	1450	1075	1850	1350
1-1/4	570	425	725	530	570	425	725	530	1300	950	1650	1200	2050	1500	2600	1950
1-3/8	750	550	950	700	750	550	950	700	1700	1250	2150	1550	2700	2000	3400	2550
1-1/2	1000	725	1250	925	990	725	1250	930	2250	1650	2850	2100	3600	2650	4550	3350

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

^a "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

^b Grade 2 applies for hex cap screws (not hex bolts) up to 152 mm (6-in.) long. Grade 1 applies for hex cap screws over 152 mm (6-in.) long, and for all other types of bolts and screws of any length.

Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

DX TORQ1 -19-20JUL04

Torque Values - Metric

METRIC BOLT AND CAP SCREW TORQUE VALUES

Property Class and Head Markings	4.8		8.8		9.8		10.9		12.9	
Property Class and Nut Markings	5		10		10		10		12	

Size	Class 4.8				Class 8.8 or 9.8				Class 10.9				Class 12.9			
	Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a		Lubricated ^a		Dry ^a	
	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft	N-m	lb-ft
M6	4.8	3.5	6	4.5	9	6.5	11	8.5	13	9.5	17	12	15	11.5	19	14.5
M8	12	8.5	15	11	22	16	28	20	32	24	40	30	37	28	47	35
M10	23	17	29	21	43	32	55	40	63	47	80	60	75	55	95	70
M12	40	29	50	37	75	55	95	70	110	80	140	105	130	95	165	120
M14	63	47	80	60	120	88	150	110	175	130	225	165	205	150	260	190
M16	100	73	125	92	190	140	240	175	275	200	350	255	320	240	400	300
M18	135	100	175	125	260	195	330	250	375	275	475	350	440	325	560	410
M20	190	140	240	180	375	275	475	350	530	400	675	500	625	460	800	580
M22	260	190	330	250	510	375	650	475	725	540	925	675	850	625	1075	800
M24	330	250	425	310	650	475	825	600	925	675	1150	850	1075	800	1350	1000
M27	490	360	625	450	950	700	1200	875	1350	1000	1700	1250	1600	1150	2000	1500
M30	675	490	850	625	1300	950	1650	1200	1850	1350	2300	1700	2150	1600	2700	2000
M33	900	675	1150	850	1750	1300	2200	1650	2500	1850	3150	2350	2900	2150	3700	2750
M36	1150	850	1450	1075	2250	1650	2850	2100	3200	2350	4050	3000	3750	2750	4750	3500

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical property class.

Fasteners should be replaced with the same or higher property class. If higher property class fasteners are used, these should only be tightened to the strength of the original.

^a "Lubricated" means coated with a lubricant such as engine oil, or fasteners with phosphate and oil coatings. "Dry" means plain or zinc plated without any lubrication.

Make sure fasteners threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown in the chart, applied to the nut, not to the bolt head. Tighten toothed or serrated-type lock nuts to the full torque value.

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