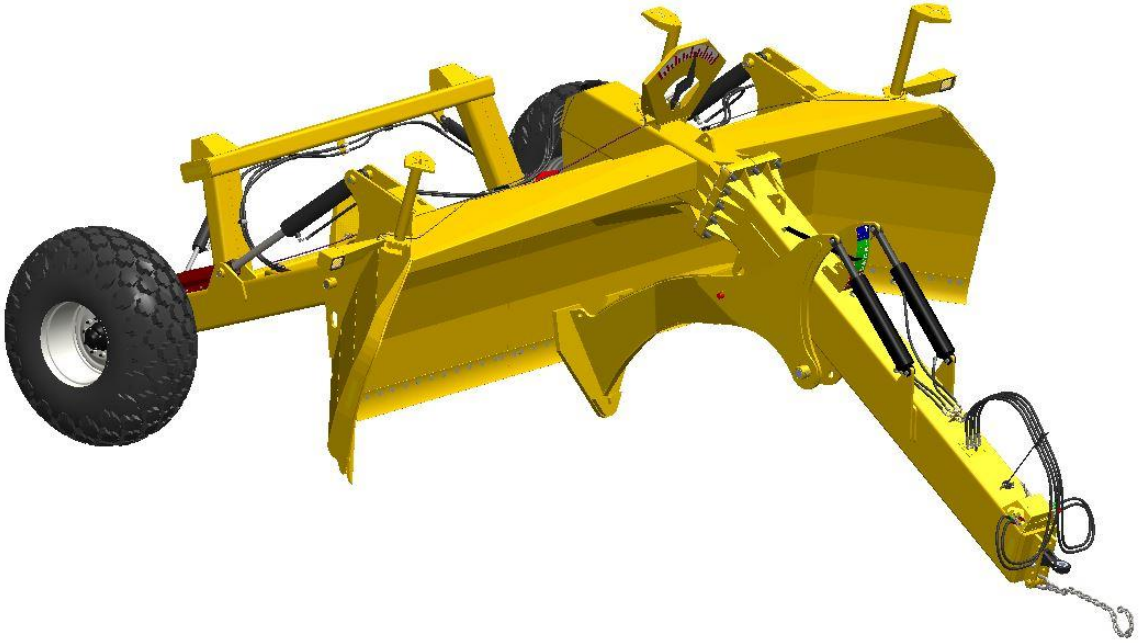
BRIDGEVIEW MFG. INC.



PULLDOZER

1810 1810XL 2410 2410XL

Operator & Parts Manual

Last Updated: June 30, 2026

Bridgeview Manufacturing Inc.

P.O. Box 4

Gerald, Saskatchewan, Canada

S0A 1B0

Phone: 1-306-745-2711

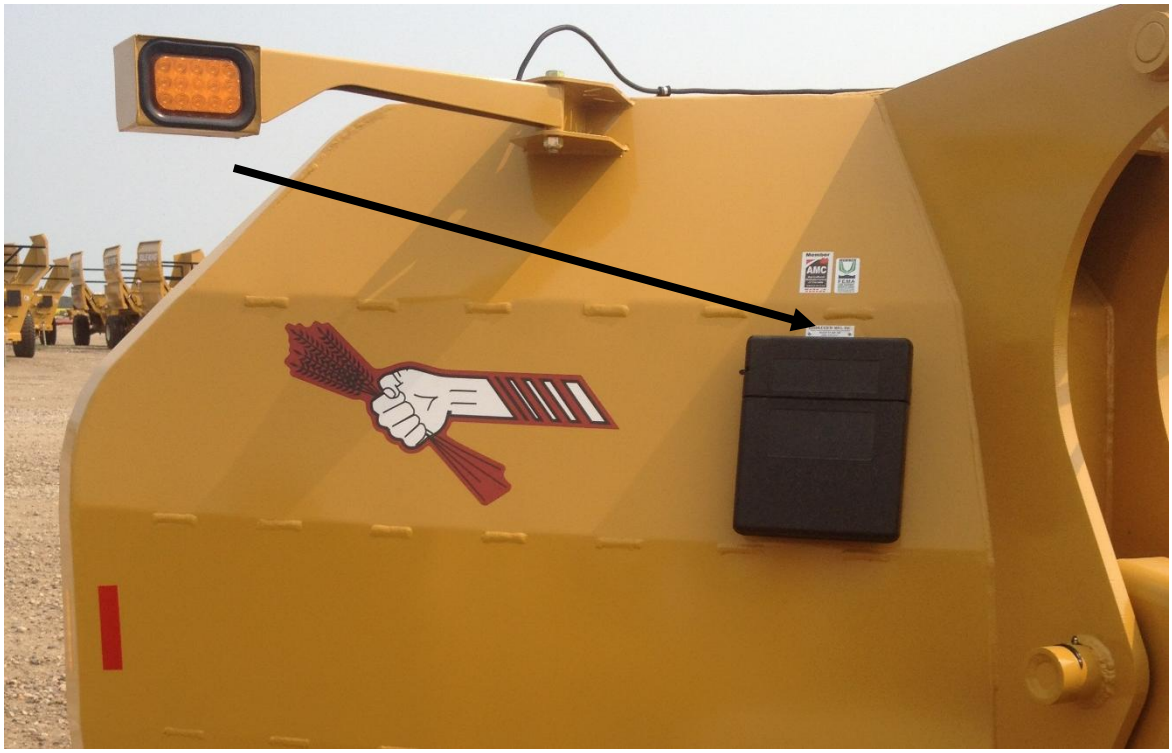
Fax: 1-306-745-3364

Email: bridgeview@bridgeviewmfg.ca

www.bridgeviewmanufacturing.com

Your Authorized Dealer
Your Serial Number

The serial number is located on the back of the blade on the left side of the machine.



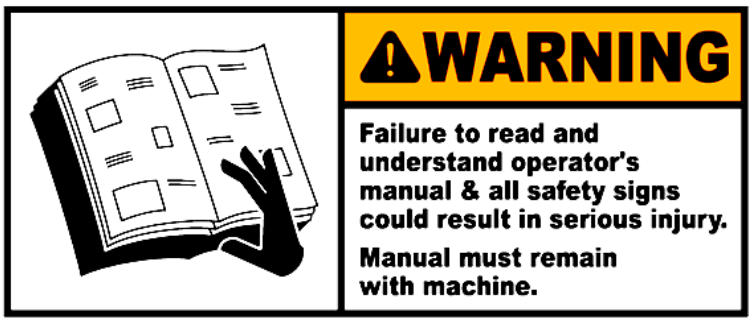


TABLE OF CONTENTS

INTRODUCTION....1
SAFETY PRECAUTIONS....1
HYDRAULIC SYSTEMS....3
TRANSPORTATION....4
TRANSPORTATION LOCKS....6
OPERATION....7
HITCH OPTIONS....8
TIRES....9
LUBRICATION....9
CUTTING EDGE OPTIONS....10
TRENCHER OPTION....11
GPS OPTION....13
PARTS MANUAL....14
MACHINE OVERVIEW (1810/2410)....15
HITCH SECTION....16
TRENCHER OPTION....18
BLADE SECTION....20
CUTTING EDGE OPTIONS....22
GPS OPTION....23
FRAME SECTION....24
HYDRAULIC SCHEMATIC....28
ELECTRICAL SCHEMATIC....29
DECALS....31
INSTALLATION....34
FASTENER TORQUE CHARTS....41
NOTES....43

INTRODUCTION

Thank you for purchasing a **Pulldozer** from Bridgeview Manufacturing. With the proper operation and service as outlined in this manual, the Pulldozer will provide you with years of trouble-free operation.

This is a complete safety, operation and parts manual for the Pulldozer 1810, 1810XL, 2410, and 2410XL Pulldozers. The manual covers in detail how to safely and effectively use your new machine. The procedures outlined in this manual should be followed to ensure safe operation and longevity of your machine. The parts and assembly manual covers all parts you may need to order in case of accident or breakdown and how to install them. Please read completely through this manual before beginning operation of your new machine.



Safety Precautions

Power Requirements:

The Pulldozer is designed to utilize the pulling power of a large four-wheel-drive tractor. The following table shows the recommended drawbar horsepower required to use each size Pulldozer. Pulling with too large a tractor risks damaging the machine, while too small a tractor risks overloading and damaging the tractor.

	Horsepower	**Maximum Tractor Weight**
18 Foot	250 - 400 HP	60,000lbs
24 Foot	400 - 600 HP	67,000 lbs.

Call Before You Dig:

Every time you dig in the ground, wherever it may be, **THERE IS DANGER BELOW!** You run the risk of loss of life or damage to property if you hit any of the many buried cables, conduits, gas or oil pipelines and/or other underground facilities that serve our cities, towns, and rural areas.



Contact the nearest **ONECALL (Call Before You Dig)** services for optimal diligence towards preventing damage to underground infrastructure.

Canada		
Province	**Number**	**Website**
British Columbia	1.800.474.6886	http://www.bconecall.bc.ca/
Alberta	1.800.242.3447	http://www.alberta1call.com/
Saskatchewan	1.866.828.4888	http://www.sask1stcall.com/
Manitoba	1.800.827.5094	www.callb4udig.mb.ca/
Ontario	1.800.400.2255	http://www.on1call.com/
Quebec	1.800.663.9228	http://www.info-ex.com/
United States		
All states	811	http://www.call811.com/
TransCanada Pipelines		
Canada	1.888.982.7222	
United States	1.800.447.8066	

Hydraulic Systems

Hydraulic systems store considerable energy. They are used to:

- Lift and change the position of attachments
- Operate hydraulic motors
- Assist in steering and braking

Leaks from hydraulic systems are a serious hazard because of the high pressure and temperature of the fluid contained in the system. Even fine jets of hydraulic fluid can burn or pierce skin and tissue. Workers should:

- **NEVER** inspect hydraulic hoses with bare hands;
- Wear long sleeves, heavy gloves and safety glasses when checking for leaks;
- Follow the instructions (blade to be on the ground and no pressure in hydraulic lines during maintenance) because the specific procedures for servicing these systems are very important for one's safety.

Where appropriate, a properly qualified and certified mechanic should perform repairs and maintenance.

Work should not be performed under raised hydraulic equipment.

Transportation

Check with local authorities regarding transport on public roads. Follow all applicable laws and regulations.

Note the transportation dimensions shown below:

	1810	**1810XL**	**2410**	**2410XL**
Total Weight	18000 lbs	22000 lbs	24000 lbs	28000 lbs
Hitch Weight	6000 lbs	7600 lbs	7500 lbs	9000 lbs
Axle Weight	12000 lbs	14400 lbs	16500 lbs	19000 lbs
Transport Height	9'-5"		10'-5"	
Flat Height Blade to Top	8'-1"		8'-11"	
Transport Blade Clearance	2'-0"		2'-0"	
Transport Width (Blade)	18'-5"		24'-5"	
Transport Width (Tires)	14'-2"		22'-0"	
Transport Length	26'-7"		26'-2"	

When transporting the Pulldozer on public roads, the following precautions should be taken:

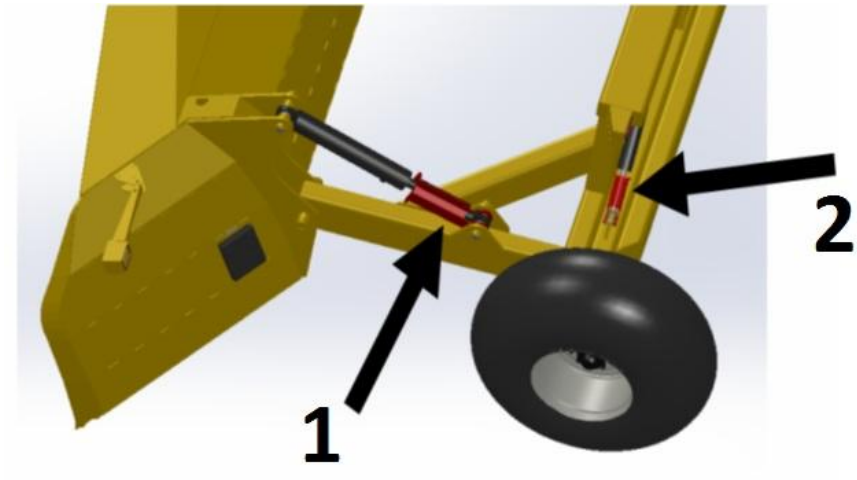
- **AVOID** transporting at night whenever possible
- **ALWAYS** ensure that the flashers and tail lights are clean and operational
- **ALWAYS** ensure that the Slow-Moving Vehicle (SMV) sign is visible
- **NEVER** exceed speeds of 25 mph (40 km/h)
- **DO NOT** tow with a vehicle that cannot handle the massive weight of the Pulldozer

- Check for the oversized or overload permit with the authorities for transportation on public highways.
- **ALWAYS** ensure that blade is fully lifted, level, and not in contact with the road (maintain a safe level from the ground).
- **ALWAYS** ensure that the trencher attachment (if installed) is fully retracted.
- **ALWAYS** ensure that all safety locks are in place
- **ALWAYS** ensure that the hydraulic hoses are properly secured (not dragging on the ground)

Transportation Locks

Ensure that all the safety locks and pins are **ON** in the right position while transporting. This will prevent the blade from accidentally falling during transport.

1. Blade lift lock (both sides) - swing over cylinder shaft
2. Tilt lock (both sides) - swing over cylinder shaft
3. Trencher lock - insert pin through hole





OPERATION

The Pulldozer land shaper operates as a dozer, scraper, grader, and V-ditcher (XL series) all in one complete, efficient, and virtually indestructible package.

The Pulldozer is capable of reclaiming unproductive land to allow for more seeded acreage. It can also drag dirt to elevate sloughs and potholes, level land, back-slope, clean and contour existing ditches, improve draining, and allow for sooner access by seeding equipment.

When mated with a GPS leveling system, the Pulldozer is excellent at making perfectly contoured fields for maximum drainage, or water retention.

Operators have reported 1 acre per hour of land reclamation, leaving it seed bed ready.

The Pulldozer allows for up to 25 cubic yards of dirt movement over short distances for the 24 foot unit, and up to 18 cubic yards for the 18 foot unit.

The retractable trencher allows for trenches up to 36" wide by 24" deep, while leaving no windrow ridges to interfere with draining. This allows most farm equipment to easily drive right over the trench on an angle.

Enjoy operating your new Pulldozer.

Hitch Options

Your Pulldozer comes with a choice of two different articulating implement hitches. Category 4 and Category 5. **See page 18, item #22 for details**.

The articulating joint reduces drawbar and draw pin wear thereby increasing the life of drawbar. This hitch allows more control, especially with GPS navigation.

For maximum articulation, the hitch must be set to the correct height based on your tractor's drawbar height as follows.

Holes Used	Drawbar Height (inches)
1,2	20.50
2,3	18.25
3,4*	16.00
4,5	13.75
5,6	11.50

**** Factory setting for 2-Hole***

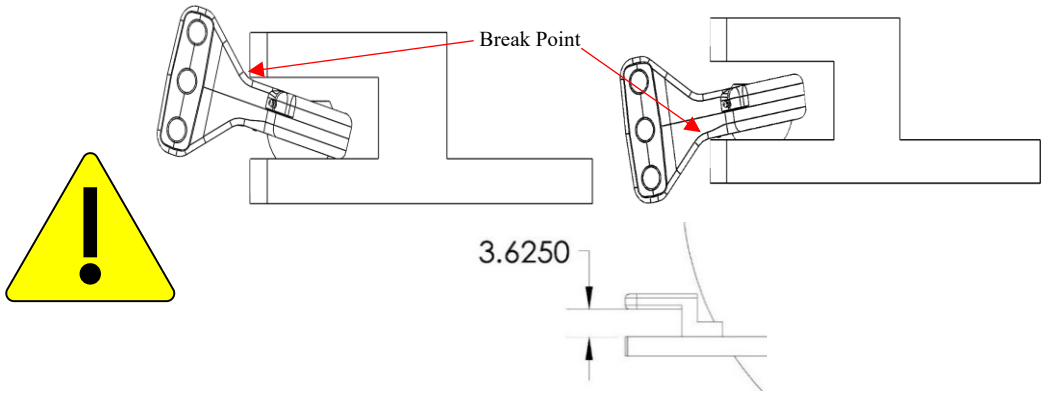
Holes Used	Drawbar Height (inches)
1,2,3	20.50
2,3,4*	18.25
3,4,5	16.00

**** Factory Setting for 3-Hole***

For maximum articulation, a 3-5/8" clearance between the drawbar and hammer strap is also recommended. This will allow for 35 degrees front to back and 40 degrees side to side. This translates into a 10% grade (or 17 degree slope).

<u>- NOTE: Exceeding this articulation range may damage or break the hitch –</u>

<u>Breakage due to exceeding articulation range will no be covered by warranty!</u>



Tires

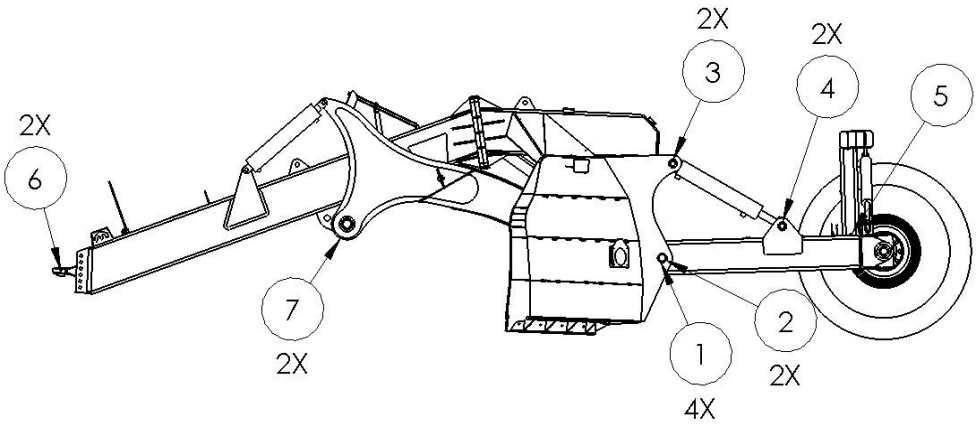
Diamond tread tires provide excellent flotation characteristics and minimal soil disturbance on packing and hauling applications. The speed and pressure on these tires should not exceed 25 mph (40 km/h)) and 36 psi (250 kPa).

Check tire pressure and wheel torque on a regular basis.

Specifications	1810	2410
Tire Size	23.1-26, 12 ply	28L-26, 16 ply
Tire Type	R3 Diamond Tread	R3 Diamond Tread
Rim Size	DW20A-26	DW25B-26
Tire Pressure	**16 psi**	**24 psi**
Wheel Nut Torque	**280 ft-lb**	**280 ft-lb**

Lubrication

There are several pivot points on your Pulldozer that require lubrication for continuing performance. They are in the following areas:



		Location	Interval
1	Blade Pivot	Outside bushings	10 hours
2	Blade Pivot	Center	10 hours

3	Lift Cylinder	Facing towards top	20 hours
4	Lift Cylinder	Facing towards top	20 hours
5	Axle Pivot	Behind SMV Sign	10 hours
6	Hitch	Each side of casting	20 hours
7	Trencher Pivot	Bottom	10 hours
8	Wheel Hub	Remove dust cap and pack with grease	100 hours or seasonally

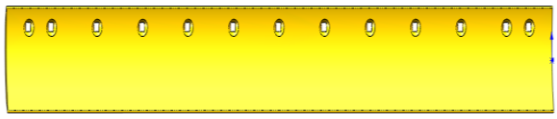
Grease using Mobil UNIREX EP2 GC-LB or equivalent.

Cutting Edge Options

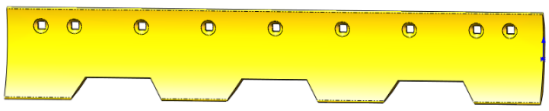
Efficient machine applications require the proper dozer attachments for the job at hand. Dozers are used in a wide variety of construction and maintenance applications for which a number of cutting edge types have been developed. Soil characteristics, moisture content, compaction, ambient temperatures and terrain are just some of the variables that will influence proper cutting edge selection for optimal dozing productivity.

Using the right cutting edge for the job will result in fuel savings, higher productivity, less wear tear on the tractor and a better finished product. Some dozer cutting edge s are designed for a specific application, while others have a broader range of uses and are more often employed. The Pulldozer comes with a choice of two cutting edges.

1. Regular cutting edges: General purpose operation. It has a penetration force of 1000 lb/ft. This is the factory standard.



2. Notched cutting edges: More suitable for higher penetration requirements. It can withstand penetration force up to 2000 lb/ft. Operators have noted that this cutting edge leaves the field in better condition for immediate seeding.



NOTE: These cutting edges wear over time. Contact your nearest Pulldozer representative to order any additional cutting edges.

Trencher Option

Trenching will drain your land fast; simply set the Pulldozer at ground level and lower the trencher unit to the required depth and go.

As the trench is cut the dirt flows to the sides and is drawn outward by the Pulldozer. There is no windrow ridges of dirt left on the sides of the trench. As a result, your land will drain faster and with no side ridges you'll be able to work through the trench with most farm equipment. Operators report "smooth going" when crossing the trench at an angle.



Use the dirt from the trench to elevate low areas. When the Pulldozer is full simply raise the blade to dump and level the dirt. The Trencher can keep cutting while the Pulldozer is dumping and leveling.

The Trencher uses the full weight of the Pulldozer to keep it in the ground and works when the ground is wet or dry. Hardened cutting edges ensure long life.

In retracted position the Trencher does not interfere with normal operation. The trencher adds approximately 4,000 lbs. of weight to the Pulldozer.

NOTE: On standard machines, regular trenching can be done by tilting the blade to one side, and lowering the tip into the ground.

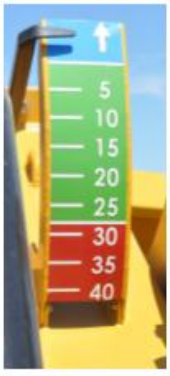


Depth Penetration:

The trencher comes with a depth indicator showing the position of the trencher tip relative to the blade tip. This allows the operator to set the required trenching depth.

	Clean Depth	Max Depth	Width
18 Foot	Up to 22"	Up to 35"	36" wide
24 Foot	Up to 28"	Up to 42"	36" wide

The maximum penetration of the trencher causes back filling of the trench if the blade is in contact with the ground. Lift the blade up for the regular trenching technique. For clean trenching, use in the "green" range of the depth indicator.



Depth Indicator

GPS Option

This GPS mounting tower kit **(24763)** is designed to be installed on any Pulldozer where GPS functionality is desired. On new machines one mounting location is provided: in the center of the blade behind the angle indicator.

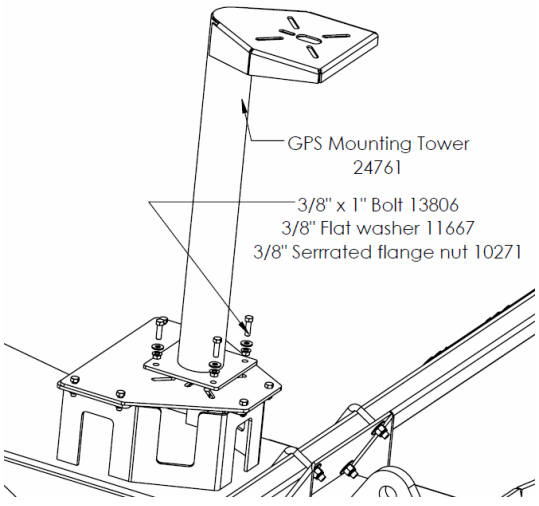
Before starting, ensure that all required components are present:

ID#	Description	QTY
24761	GPS Mounting Tower	1
13806	3/8" x 1-1/4" Bolt	4
11667	3/8" Flat washer	4
10271	3/8" Serrated flange nut	4

The following tools are required to install this kit:

Lifting device
Impact socket, 9/16"
Hand wrench, 9/16"

Before installing the mounting bracket, install the GPS antenna to the top (hardware is not supplied). Use the nuts and bolts to hold the tower in place.



Route the electrical wires to the tractor cab through the grommets located on the rear and front bulkhead plates.

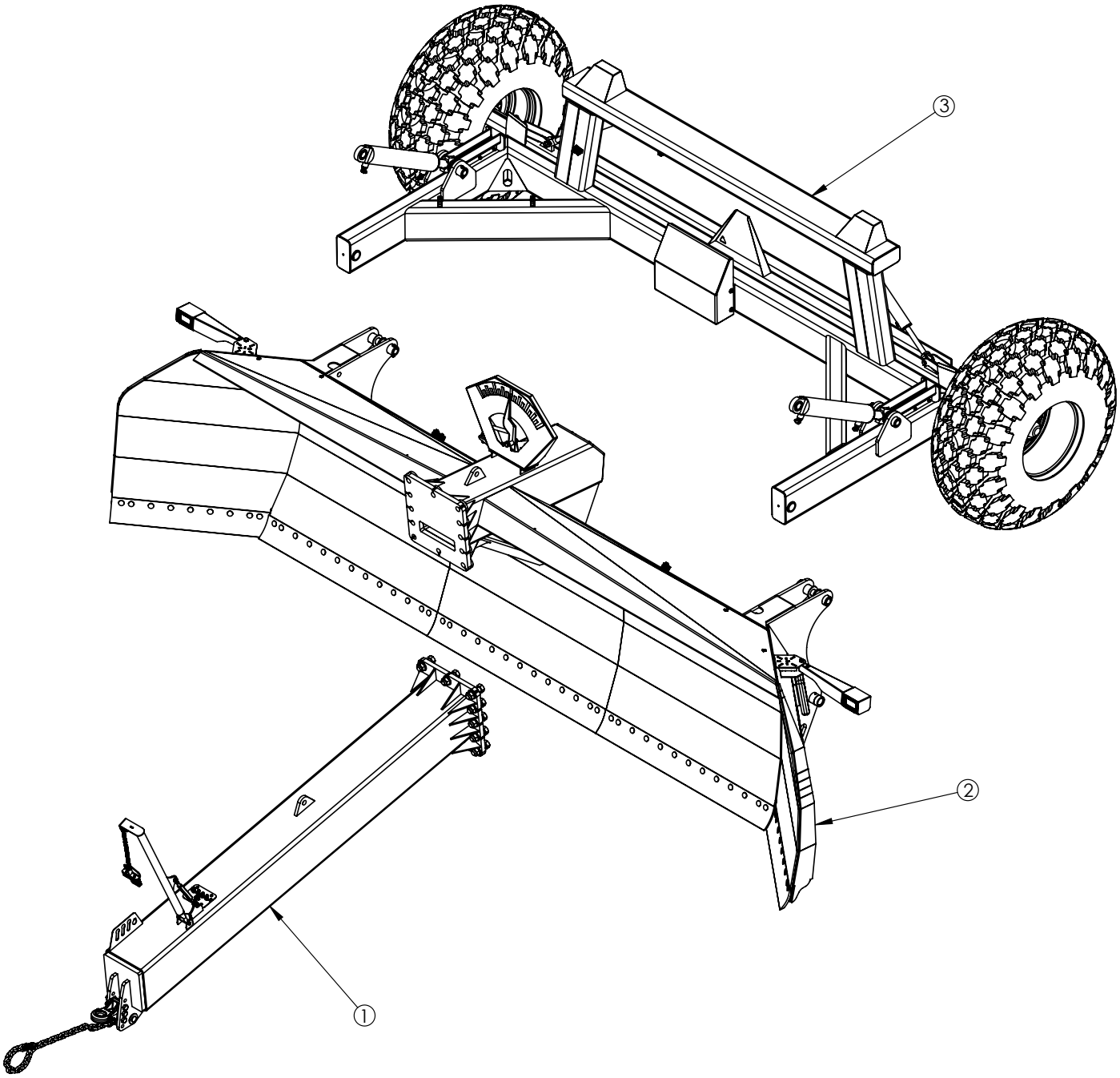
PARTS MANUAL

PARTS MANUAL 14
MACHINE OVERVIEW (1810/2410) 15
HITCH SECTION 16
TRENCHER OPTION 18
BLADE SECTION 20
BLADE OPTIONS 22
GPS OPTION 23
FRAME SECTION 24
HYDRAULIC SCHEMATIC 28
ELECTRICAL SCHEMATIC 29
DECALS 31
INSTALLATION 34

Machine Overview (1810/2410)

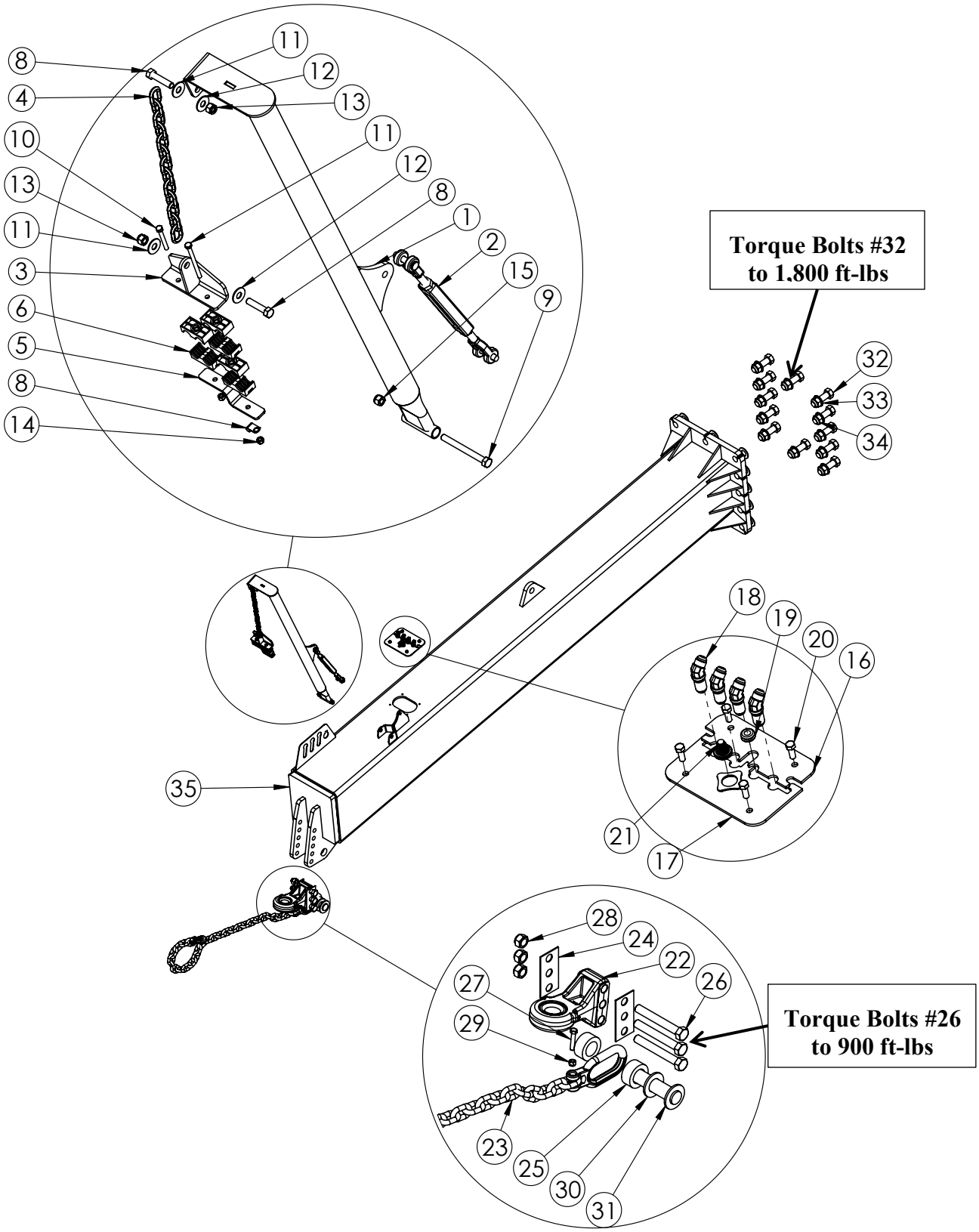
NOTE: *ID Numbers and weights showed as 1810/2410, where different.*

NOTE: *Parts may not be exactly as shown.*



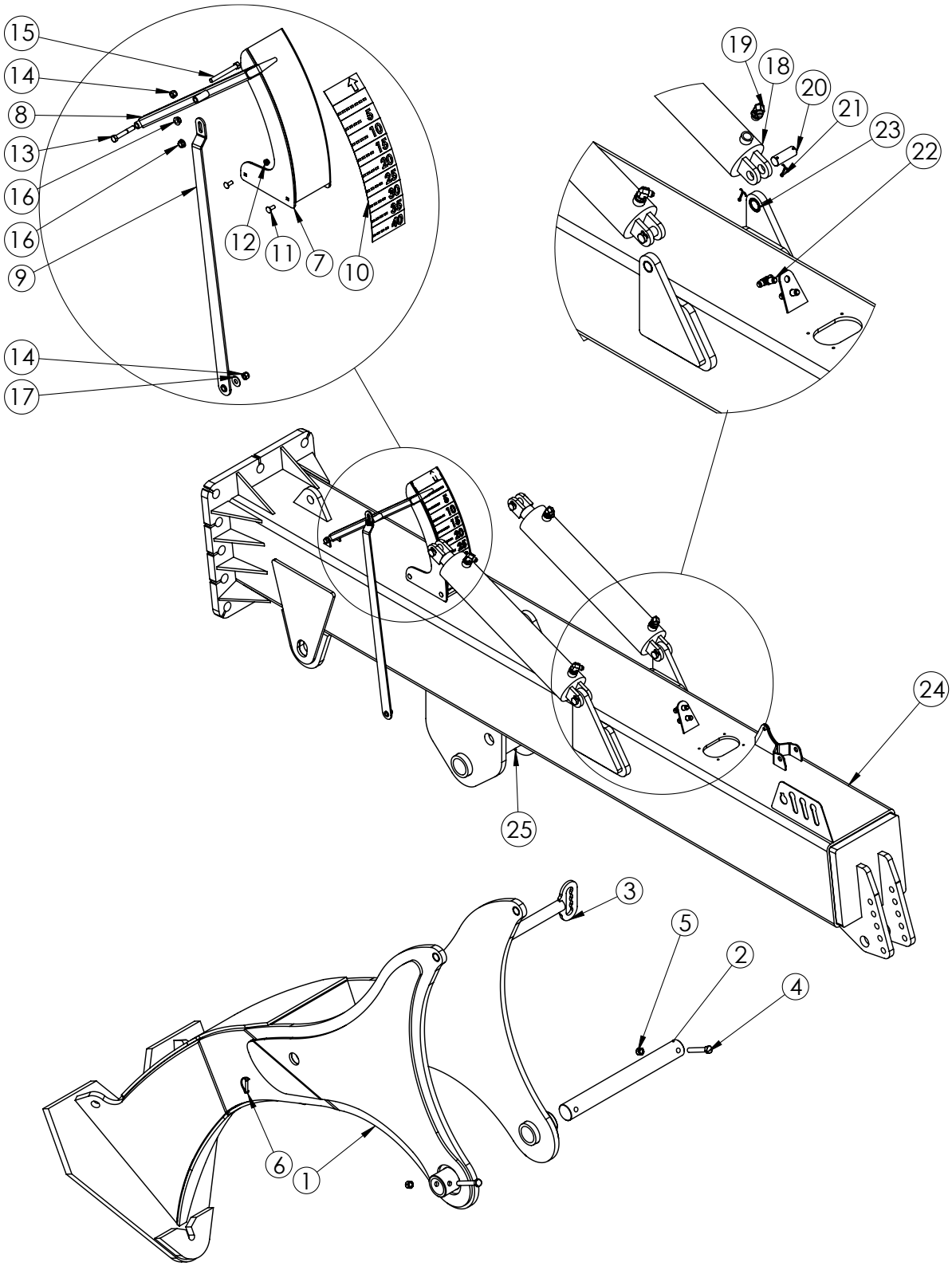
#	DESCRIPTION	MODEL	PART #	QTY
1	Hitch Section	-	-	**1**
2	Blade Section	-	-	**1**
3	Frame Section	-	-	**1**

Hitch Section



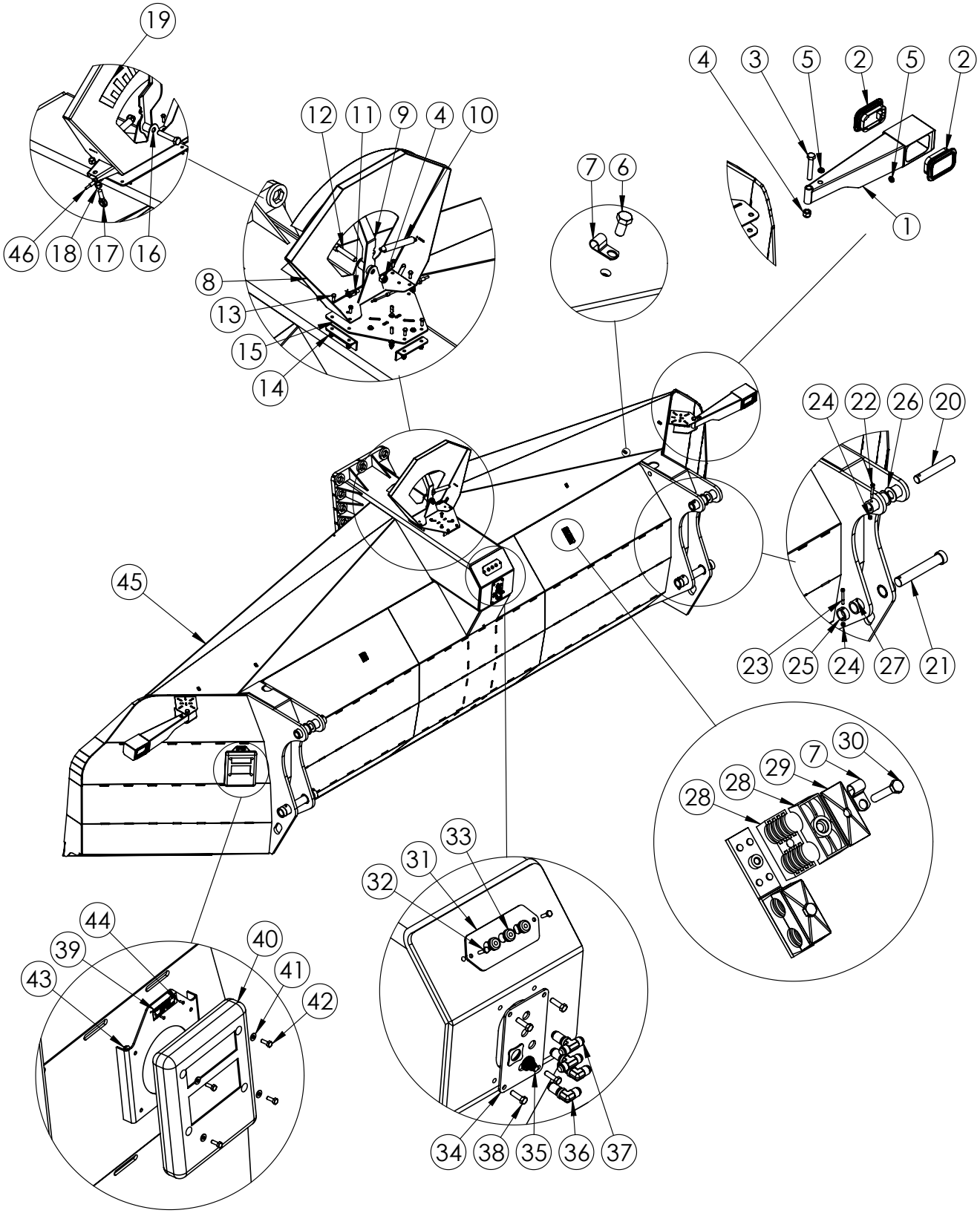
#	DESCRIPTION	MODEL	PART #	QTY
1	Hydraulic Hose Hanger	ALL	32168	**1**
2	Turnbuckle	ALL	14276	**1**
3	Hose Holder Top Clamp	ALL	34507	**1**
4	Hose Holder Chain (5/16”)	ALL	32168	**1**
5	Bottom Hose Holder Plate	1810 & 2410XL 1810XL & 2410XL	34506 34520	**1** **1**
6	Plastic Hose Clamp	1810 & 2410 1810XL & 2410XL	21561 21561	**4** **6**
7	Cable Clamp	ALL	13629	**1**
8	Bolt 1/2” x 2-1/2”	ALL	10804	**2**
9	Bolt, 3/4" x 5"	ALL	10803	**1**
10	Bolt 5/16” x 2-1/2”	1810 & 2410 1810XL & 2410XL	19115 19115	**2** **1**
11	Bolt 5/16” x 4”	1810XL & 2410XL	31837	**1**
12	Flat washer, 1/2”	ALL	11668	**4**
13	Nylon Lock Nut, 1/2”	ALL	10241	**2**
14	Nylon Lock Nut, 5/16”	ALL	11815	**2**
15	Nut, 3/4" Stover Lock	ALL	11823	**1**
16	Hitch Bulkhead Plate 3	(S/N PD1223 & DOWN) (S/N PD1224 & UP)	23343 30422	**1** **1**
17	Front Bulkhead	(S/N PD1223 & DOWN) (S/N PD1224 & UP)	23344 30422	**1** **1**
18	Fitting - 8MJBH-8MJ45 (1/2" Bulkhead 45)	ALL	-	**4**
19	Grommet, 7/16" x 1/4" (RB-234)	ALL	21428	**1**
20	Bolt, 3/8" x 1-1/4"	ALL	10253	**4**
21	Stepped Grommet {Essentra 462041}	ALL (S/N PD1224 & UP)	30036	**1**
22a	Hitch, CAT 4 – 1.5” Sleeve*	ALL	27373	**1**
22b	Hitch, CAT 4 – 2.0” 2-Hole	1810 & 1810XL	27371	**1**
22c	Hitch, CAT 4 – 2.0” 3-Hole	2410 & 2410XL	27372	**1**
22d	Hitch, CAT 5 – 2.75” 3-Hole	2410 & 2410XL	30128	**1**
23	Safety Chain 5/8” Grade 100 5’	ALL (S/N PD1234 & UP)	26609	**1**
24a	Bull Pull Hitch Shim 3 Hole A – 10 gauge	ALL	33891	**-**
24b	Bull Pull Hitch Shim 3 Hole B – 12 gauge	ALL	33892	**-**
24c	Bull Pull Hitch Shim 3 Hole C – 14 gauge	ALL	33893	**-**
24d	Bull Pull Hitch Shim 3 Hole D – 16 gauge	ALL	33894	**-**
25	Safety Chain Pin Bushing	ALL (S/N PD1234 & UP)	26714	**2**
26	Bolt, 1" x 7-1/2" Gr.8 NF	1810 & 1810XL 2410 & 2410XL	21103 21103	**2** **3**
27	Bolt, 1/2" x 2-1/2"	ALL (S/N PD1234 & UP)	10804	**1**
28	Nut, 1" Stover NF	1810 & 1810XL 2410 & 2410XL	21104 21104	**2** **3**
29	Stover Lock Nut, 1/2"	ALL (S/N PD1234 & UP)	14393	**1**
30	Safety Chain Washer	ALL (S/N PD1234 & UP)	26712	**1**
31	Safety Chain Pin	ALL (S/N PD1234 & UP)	27224	**1**
32	Bolt, 1-1/2” x 5” GR. 8 NF	1810 & 1810XL 2410 & 2410XL	20653 20653	**8** **12**
33	Washer, 1-1/2” Fat GR. 8	1810 & 1810XL 2410 & 2410XL	20434 20434	**8** **12**
34	Nut, 1-1/2” Hex NF	1810 & 1810XL 2410 & 2410XL	20654 20654	**8** **12**
35	Hitch Weldment	1810 2410	30420 211770	**1** **1**

Trencher Option



#	DESCRIPTION	MODEL	PART #	QTY
1	Trencher	1810XL 2410XL	23337 23336	**1** **1**
2	Trencher Pivot Pin	ALL	22099	**1**
3	Trencher Safety Pin	ALL	22136	**1**
4	Bolt, 3/4" x 5"	ALL	10803	**2**
5	Nut, 3/4" Stover Lock	ALL	11823	**2**
6	Lock Pin	ALL	12050	**1**
7	Trench Depth Indicator Bracket	ALL	23340	**1**
8	Trench Depth Indicator Arm	ALL	22137	**1**
9	Trench Depth Indicator Linkage	ALL	23341	**1**
10	Depth Indicator Decal	1810XL 2410XL	22209 22078	**1** **1**
11	Bolt, 3/8" x 1" Carriage	ALL	15718	**4**
12	Nut, 3/8" Serrated Flange	ALL	10271	**4**
13	Bolt, 1/2" x 3-1/4"	ALL	11782	**1**
14	Nut, 1/2" Nylon Lock	ALL	10241	**2**
15	Bolt, 1/2" x 4-1/2"	ALL	15574	**1**
16	Nut, 1/2" Serrated Flange Nut	ALL	10273	**2**
17	Washer, 1/2" Flat	ALL	11668	**1**
18	5 x 24 x 2-1/2" Hyd. Cylinder	ALL	20431	**2**
19	Fitting: 12MB - 8MJ90	ALL	22174	**4**
20	Cylinder Pin, 1-1/4" x 3-3/8"	ALL	20688	**4**
21	Cotter Pin, 3/16" x 2"	ALL	11670	**8**
22	Fitting: 8MJBH - 8MJT	ALL	21581	**2**
23	Bushing, Press-In, 1-1/4" Pin	ALL	23711	**4**
24	XL Hitch Section	1810XL 2410XL	30419 34508	**1** **1**
25	Grease Zerk, 1/4"-28 Self-Tapping	ALL	16364	**2**

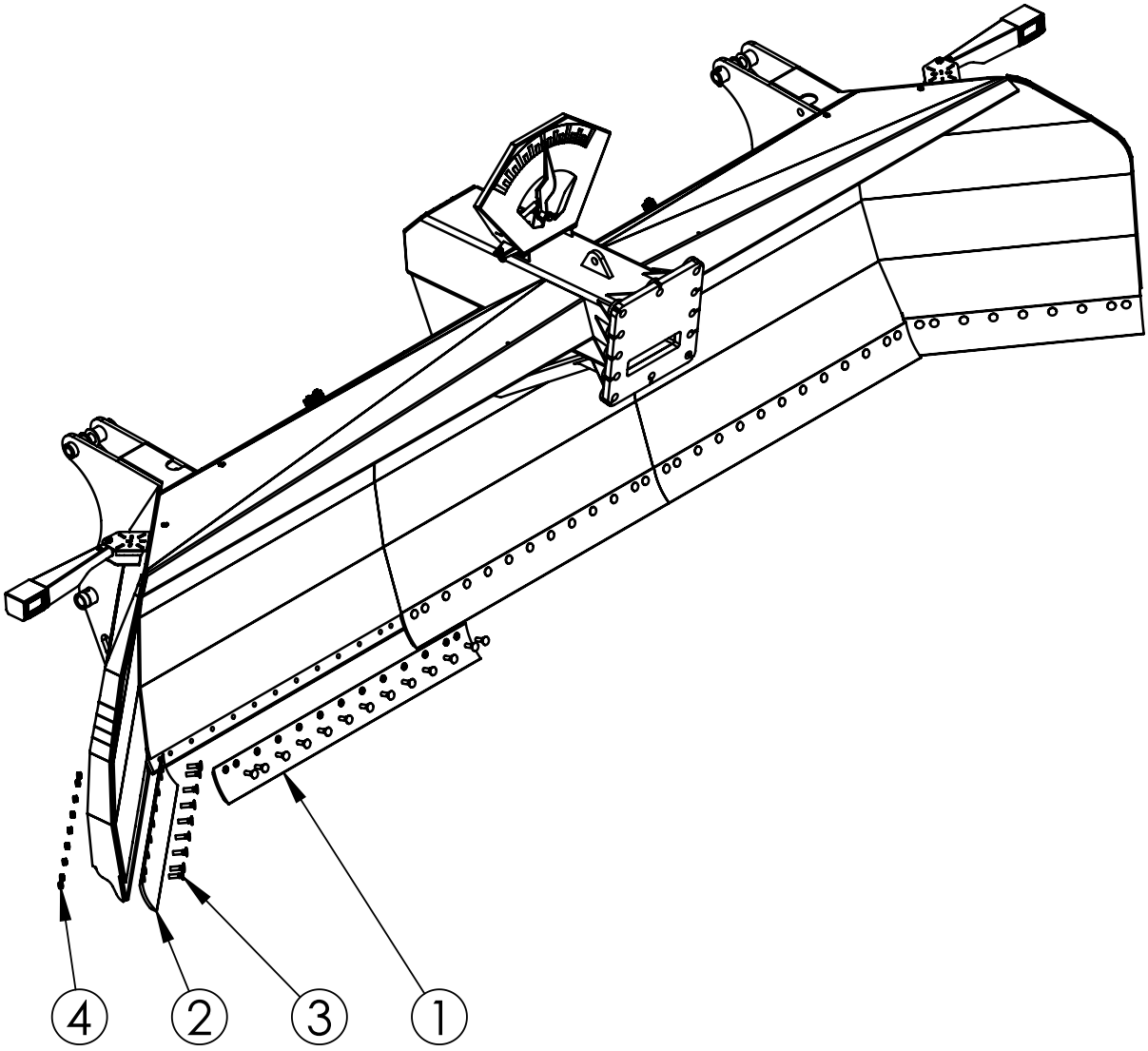
Blade Section



#	DESCRIPTION	MODEL	PART #	QTY
1	Flasher Light Arm	ALL	21454	**2**
2	Amber Flasher Light	ALL	21420	**4**
3	Bolt, 3/4" x 4-1/2"	ALL	21460	**2**
4	Nut, 3/4" Stover Lock	ALL	11823	**3**
5	Grommet, 5/16" x 1/8" (RB-224)	ALL	21439	**4**
6	Bolt, 3/8" x 3/4"	ALL	11816	**5**
7	Cable Clamp	ALL	13629	**7**
8	Angle Indicator Bracket	(S/N 24986 & UP) (S/N 24985 & DOWN)	31171 22908	**1** **1**
9	Angle Indicator Needle	(S/N 24986 & UP) (S/N 24985 & DOWN)	24060 22911	**1** **1**
10	Spring, 1" x 8-1/2" Closed	ALL	11787	**1**
11	Clevis Body (Comes as kit)	ALL	22957	**1**
12	Bolt, 3/4" x 4"	ALL	15578	**1**
13	Bolt, 3/8" x 1" Bolt, 3/8" x 3/4"	(S/N 24986 & UP) (S/N 24985 & DOWN)	13806 11816	**6** **3**
14	Nut, 3/8" Serrated Flange	(S/N 24986 & UP) (S/N 24985 & DOWN)	10271 10271	**6** **3**
15	Top Center Laser Mount	(S/N 24986 & UP)	24010	**1**
16	Brass Flail Bushing	ALL	10005	**1**
17	Ball Joint End, 5/8"	ALL	22955	**1**
18	Nut, 5/8" Hex NF	ALL	10275	**2**
19	Angle Indicator Sticker	(S/N 24986 & UP) (S/N 24985 & DOWN)	23724 22462	**1** **1**
20	Lift Cylinder Pin	ALL	22912	**2**
21	Main Frame Pin	ALL	23338	**2**
22	Bolt, 1/2" x 3-3/4"	ALL	15397	**2**
23	Bolt, 1/2" x 4"	ALL	19112	**2**
24	Nut, 1/2" Nylon Lock	ALL	10241	**4**
25	Blade Pin Collar	ALL	20741	**2**
26	Washer, 2-1/8" ID x 3-3/4" OD x 3/16"	ALL	23304	**4**
27	Grease Zerk, 1/4"-28 Self-Tapping	ALL	16364	**4**
28	Hose Clamp, 1/2" Plastic	ALL	21561	**6**
29	Hose Clamp, Top Plate	ALL	21725	**3**
30	Bolt, 5/16" x 1-3/4"	ALL	21726	**3**
31	Pulldozer Wire Harness Bulkhead Junction Box, 7-Pin	(S/N PD1310 & UP) (S/N PD1309 & DOWN)	32249 13668	**1** **1**
32	Bolt, 1/4" x 1"	ALL	11810	**2**
33	Grommet Rubber, 5/16 ID x 1 OD x 1/4 Grommet, 7/16" x 1/8" (RB-232)	(S/N PD1310 & UP) (S/N PD1309 & DOWN)	13179 23327	**3** **1**
34	Rear Bulkhead Plate	(S/N PD1224 & UP) (S/N PD1223 & DOWN)	30427 -	**1** **1**
35	Stepped Grommet {Essentra 462041}	(S/N PD1224 & UP)	30036	**1**
36	Fitting - 8MJBH-8MJ90	ALL	10531	**2**
37	Fitting - 8MJBHL-8MJT	ALL	-	**4**
38	Bolt, 3/8" x 1-1/4"	ALL	10253	**4**
39	Serial Number Plate	ALL	-	**1**
40	Manual Holder Box	ALL	22409	**1**
41	Washer, 1/4" Flat	ALL	11666	**4**
42	Bolt, 1/4" x 3/4"	ALL	11809	**4**
43	Nut, 1/4" Serrated Flange	ALL	11812	**4**
44	Rivet, 1/8" x 1/2"	ALL	13825	**2**

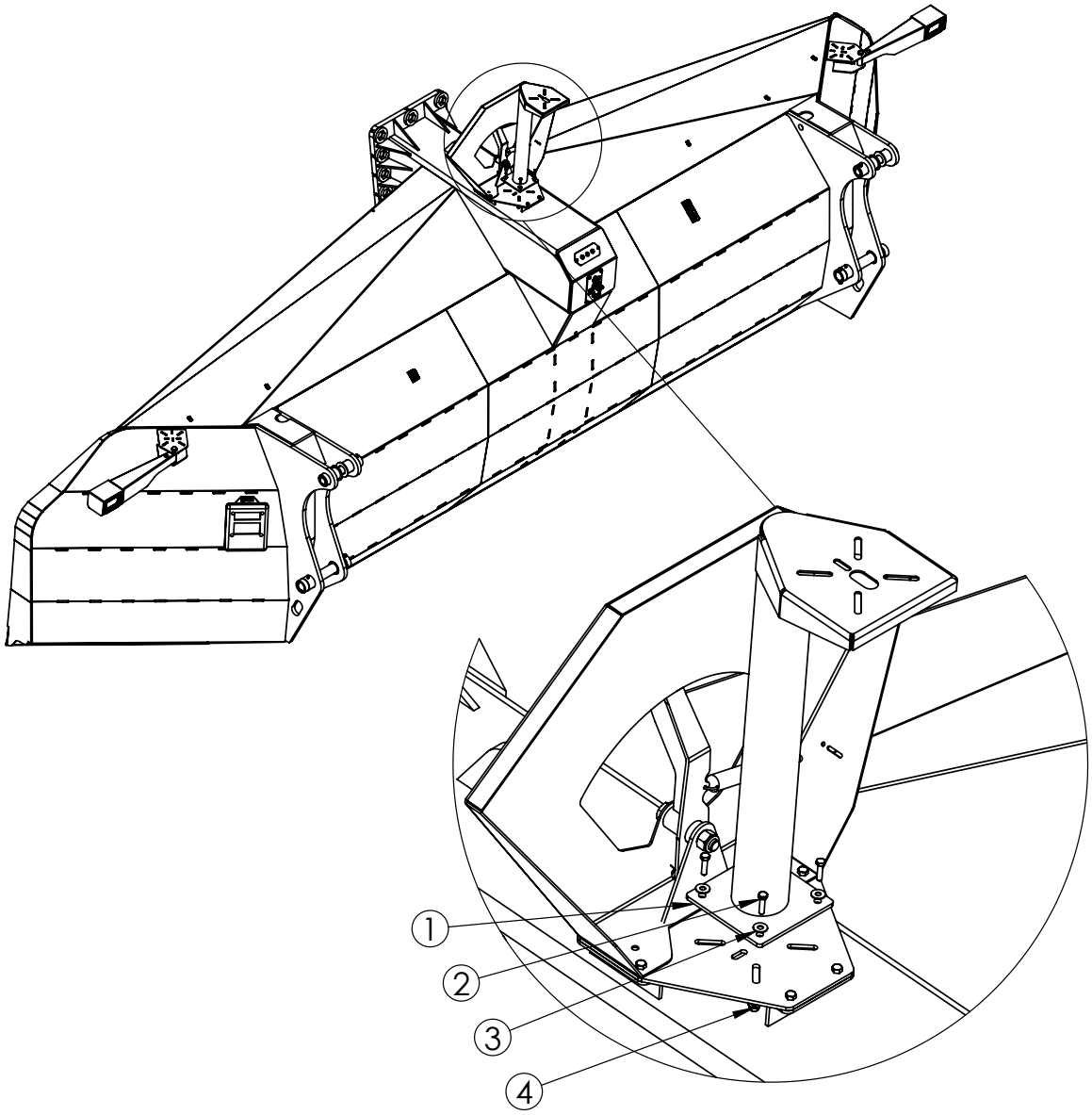
45	Blade Section	1810 & 1810XL 2410 & 2410XL	30525 30530	**1** **1**
46	PTO Cable, 15 ft, Bulkhead Ends	ALL	22958	**1**

Cutting Edge Options



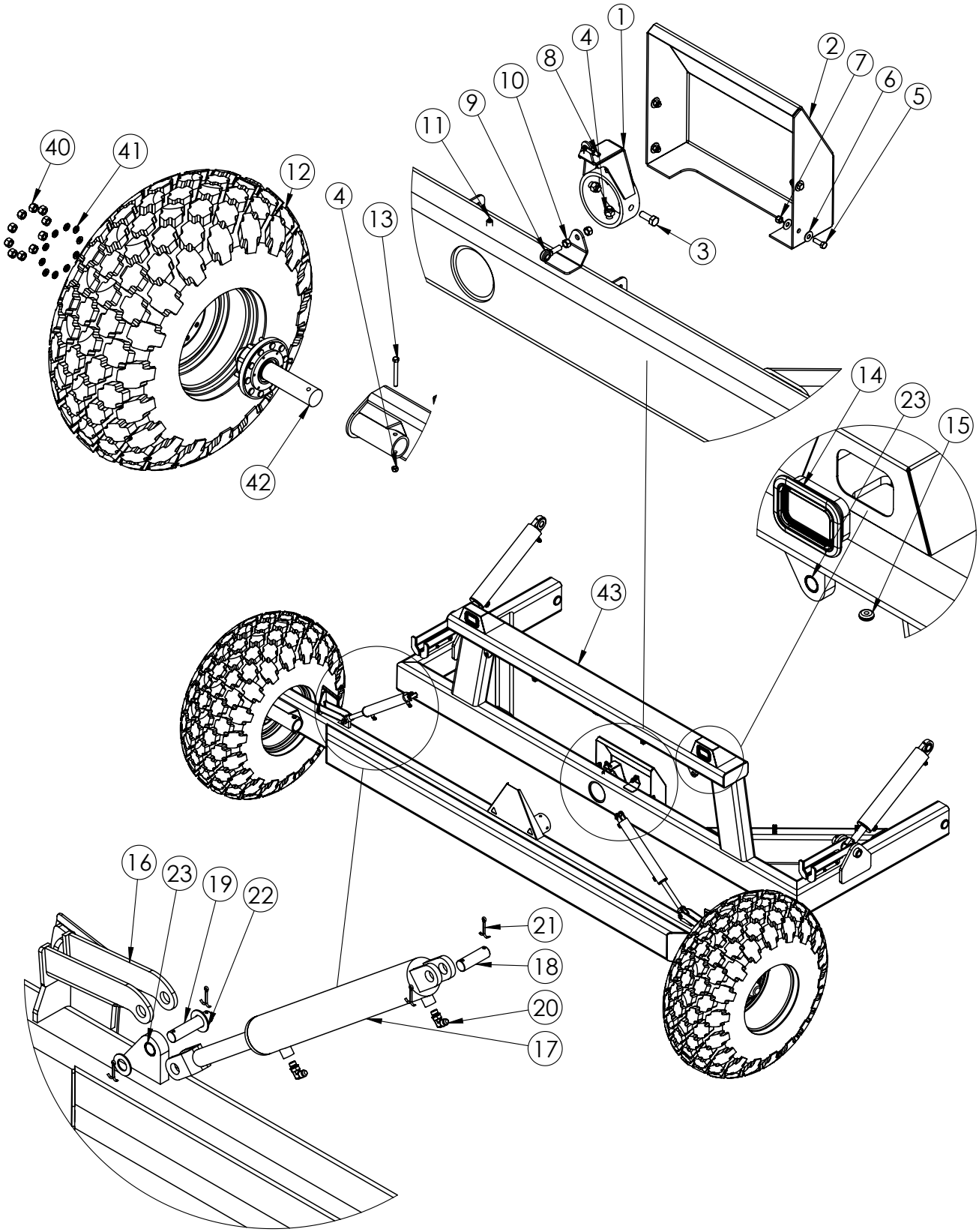
#	DESCRIPTION	MODEL	PART #	QTY
1a	Straight Cutting Edge, 6 Foot	1810 & 1810XL 2410 & 2410XL	20430 20430	**2** **3**
1b	Serrated Cutting Edge, 6 Foot	1810 & 1810XL 2410 & 2410XL	21427 21427	**2** **3**
2a	Straight Cutting Edge, 4 Foot	ALL	20428	**2**
2b	Serrated Cutting Edge, 4 Foot	ALL	21426	**2**
3	Bolt, 3/4" x 2-3/4" Plough	1810 & 1810XL 2410 & 2410XL	20488 20488	**44** **57**
4	Nut, 3/4" Hex	1810 & 1810XL 2410 & 2410XL	20606 20606	**44** **57**

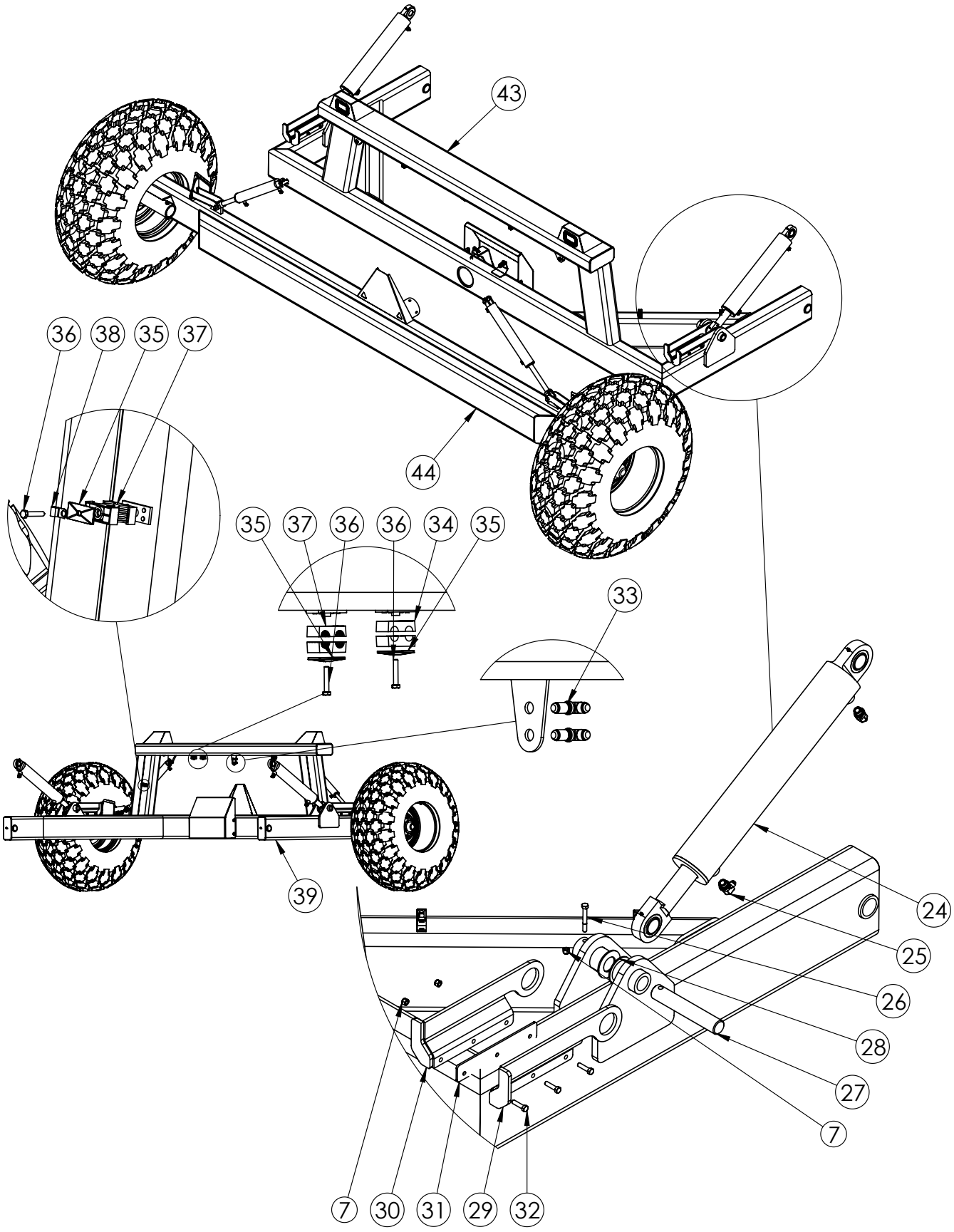
GPS Option



#	DESCRIPTION	MODEL	PART #	QTY
1	GPS Mounting Tower	ALL	24761	**1**
2	Bolt, 3/8” x 1-1/4”	ALL	13806	**4**
3	Washer, 3/8” Flat	ALL	11667	**4**
4	Nut, 3/8” Serrated Flange	ALL	10271	**4**

Frame Section

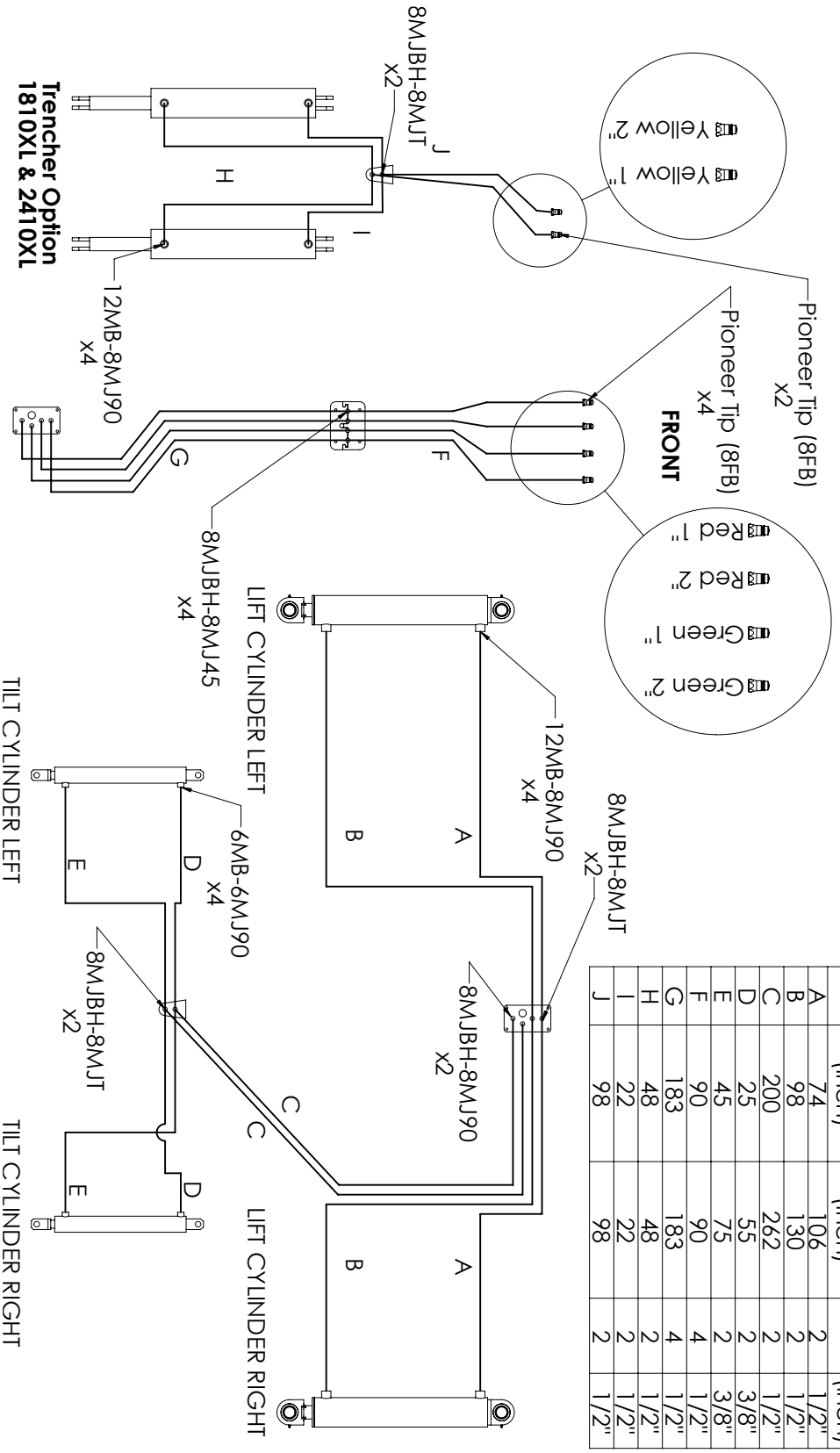



43
44
36
38
35
37
35
37
36
36
34
35
33
39
24
25
26
28
27
7
7
30
31
29
32

#	DESCRIPTION	MODEL	PART #	QTY
1	Angle Indicator Axle Pivot	1810 & 1810XL 2410 & 2410XL (S/N PD1233 & DOWN) 2410 & 2410XL (S/N PD1234 & UP)	22905 22905 30449	**1** **1** **1**
2	Angle Indicator Deflector	1810 & 1810XL 2410 & 2410XL	30434 30454	**1** **1**
3	Bolt, 3/4" x 2"	ALL	21243	**4**
4	Nut, 3/4" Stover Lock	ALL	11823	**4**
5	Bolt, 1/2" x 1-1/2"	ALL	10174	**4**
6	Flat Washer, 1/2"	ALL	11668	**8**
7	Nut, 1/2" Nylon Lock	ALL	10241	**14**
8	Clevis Body (Comes as kit)	ALL	22957	**1**
9	Ball Joint End, 5/8"	ALL	22955	**1**
10	Nut, 5/8" Hex NF	ALL	10275	**2**
11	Grease Zerk, 1/8" NPT Straight	ALL	10270	**1**
12	Rim & Tire	1810 & 1810XL 2410 & 2410XL	20900 20675	**2** **2**
13	Bolt, 3/4" x 6-1/2"	ALL	20787	**2**
14	Red Flasher Light	ALL	21419	**2**
15	Grommet, 5/16" x 1/8" (RB-224)	ALL	21439	**1**
16	Tilt Cylinder Safety Lock	ALL	21228	**2**
17	3 x 20 x 1-1/2" Hyd. Cylinder	ALL	20488	**2**
18	Cylinder Pin, 1" x 2-7/8"	ALL	10339	**2**
19	Cylinder Pin, 1" x 4-1/2"	ALL	20788	**2**
20	Fitting - 6MB - 6MJ90	ALL	16386	**4**
21	Cotter Pin, 3/16" x 2"	ALL	11670	**8**
22	Flat Washer, 1"	ALL	14472	**4**
23	Pin Hole Pressed Bushing, 1"	ALL	23708	**4**
24	5 x 24 x 2-1/2" Hydraulic Cylinder	ALL	23310	**2**
25	Fitting - 12MB - 8MJ90	ALL	-	**4**
26	Bolt, 1/2" x 3-3/4"	ALL	15397	**2**
27	Lift Cylinder Pin	ALL	22912	**4**
28	Washer, 2-1/8" ID x 3-3/4" OD x 3/16"	ALL	23304	**4**
29	Lift Cylinder Safety Lock Right	ALL	23315	**2**
30	Lift Cylinder Safety Lock Left	ALL	22903	**2**
31	Lift Cylinder Safety Lock Wear Plate	ALL	23313	**2**
32	Bolt, 1/2" x 2"	ALL	10322	**6**
33	Fitting - 8MJBHL-8MJT	ALL	-	**4**
34	Hose Clamp, 3/8" Plastic	2410 & 2410XL	22180	**4**
35	Hose Clamp, Top Plate	1810 & 1810XL 2410 & 2410XL	21725 21725	**3** **6**
36	Bolt, 5/16" x 1-3/4"	1810 & 1810XL 2410 & 2410XL	21726 21726	**3** **6**
37	Hose Clamp, 1/2" Plastic	1810 & 1810XL 2410 & 2410XL	21561 21561	**6** **8**
38	Cable Clamp	ALL	13629	**3**
39	Grease Zerk, 1/8" NPT x 90 deg. Extended	ALL	20670	**2**
40	Wheel Nut	ALL	20783	**20**
41	Spherical Washer	ALL	21151	**20**
42	Hub Assembly, 16000 lb with Spindle	ALL	23727	**2**
43	Frame Weldment	1810 & 1810XL	30429	**1**

		2410 & 2410XL	23331	**1**
44	Axle Weldment	1810 & 1810XL 2410 & 2410XL	23334 23333	**1** **1**

Hydraulic Schematic

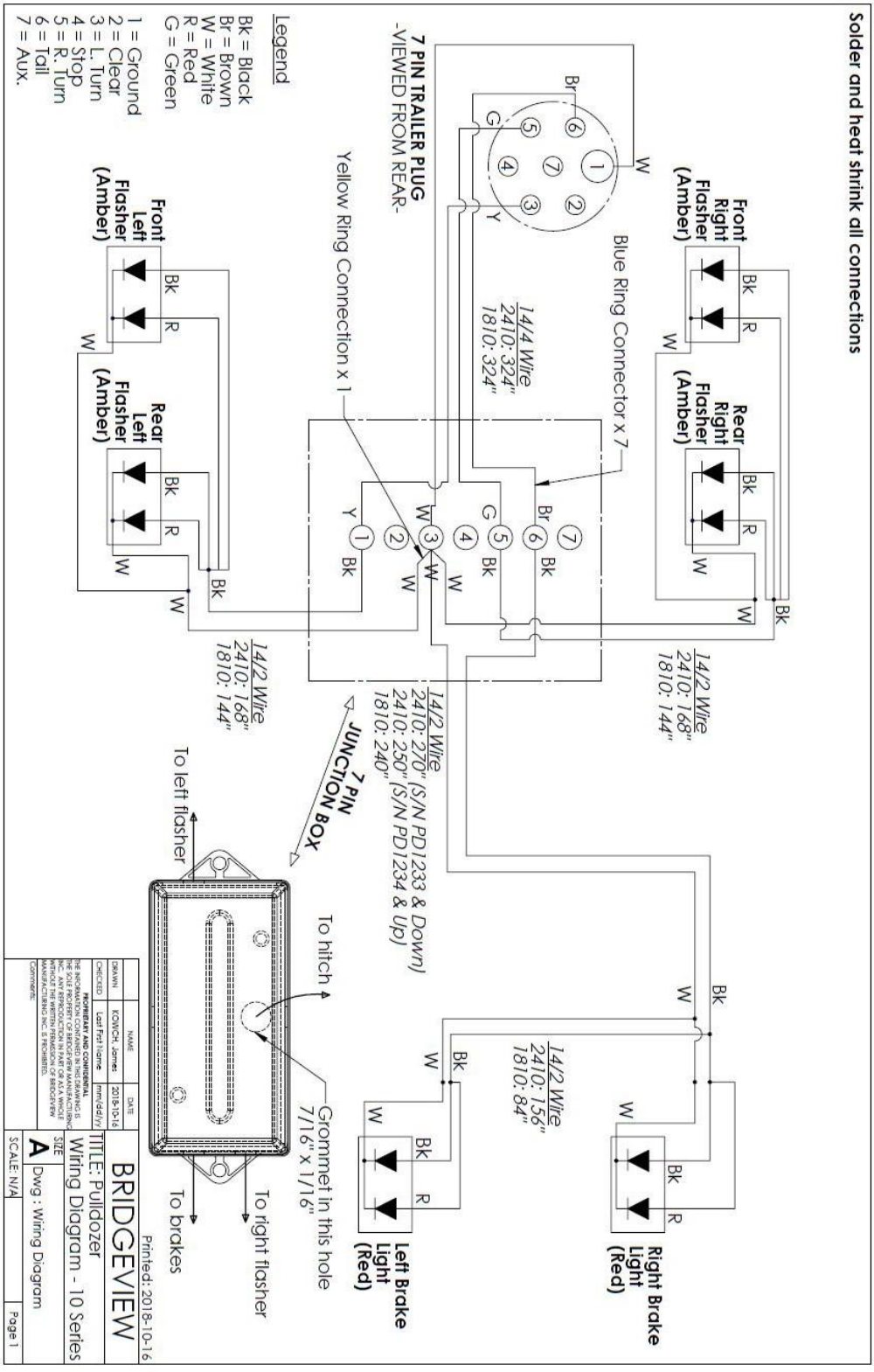


Hose Length

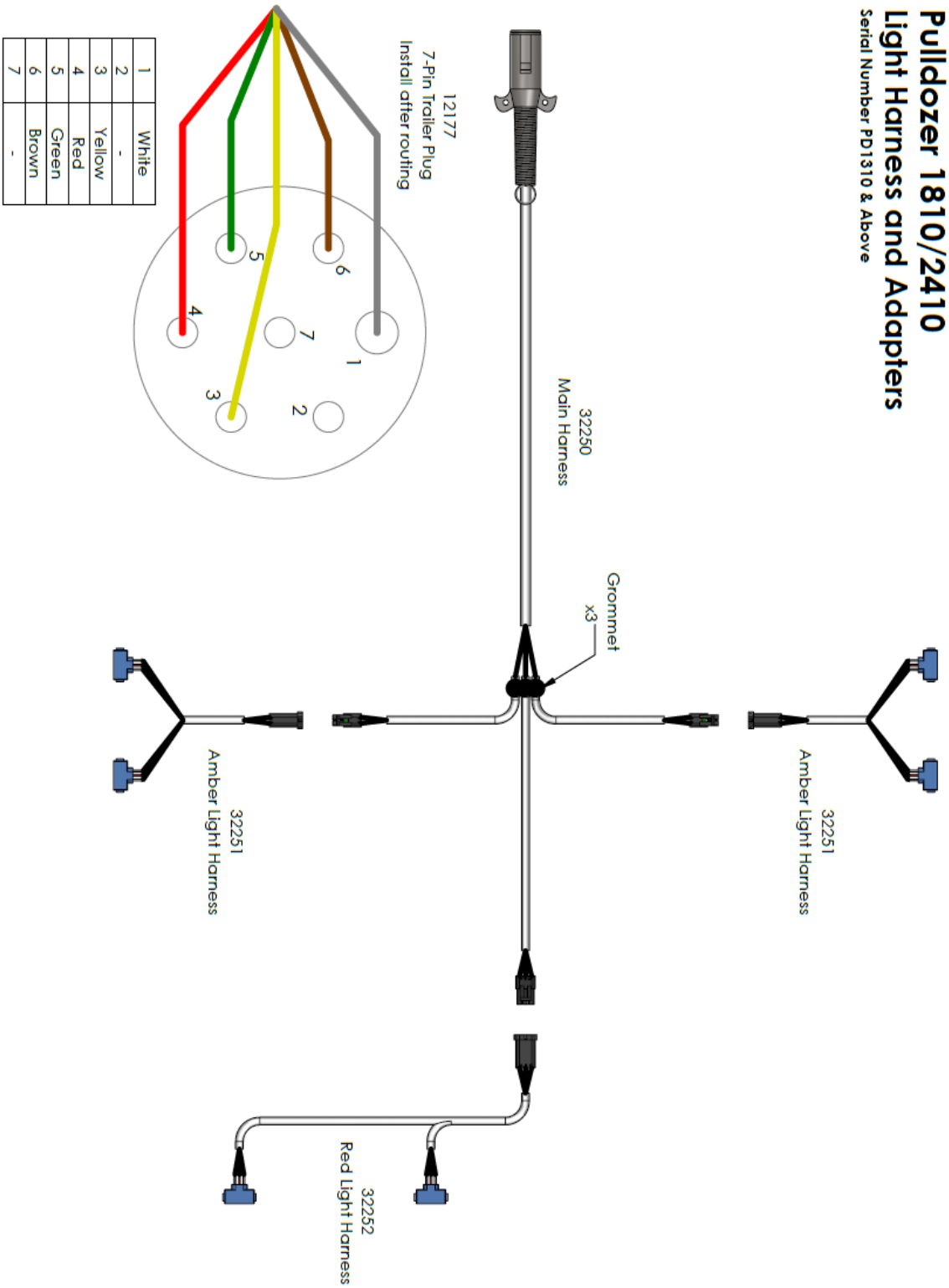
	PD1810 (inch)	PD2410 (inch)	QTY	Dia. (inch)
A	74	106	2	1/2"
B	98	130	2	1/2"
C	200	262	2	1/2"
D	25	55	2	3/8"
E	45	75	2	3/8"
F	90	90	4	1/2"
G	183	183	4	1/2"
H	48	48	2	1/2"
I	22	22	2	1/2"
J	98	98	2	1/2"

Electrical Schematic

PD1309 & DOWN



PD1310 & UP


Pulldozer 1810/2410
Light Harness and Adapters
Serial Number PD1310 & Above
12177
7-Pin Trailer Plug
Install after routing
1 White
2 -
3 Yellow
4 Red
5 Green
6 Brown
7 -
32250
Main Harness
Grommet
x3
32251
Amber Light Harness
32251
Amber Light Harness
32252
Red Light Harness

Decals

All Pulldozers:

12228	Slow Moving Vehicle Sign	1
23724	Angle Indicator Decal (2013)	1
28383	Red Reflector (2” x 9”)	4
28384	Yellow Reflector (2” x 9”)	8
28385	Fluorescent Orange (2” x 9”)	4
33135	Pulldozer Hydraulic Hose Decal	1

"Red/Green Option"

20938	FRONT BARRICADE LEFT	"FIST ///"	RED
20939	FRONT BARRICADE RIGHT	"FIST ///"	RED
20940	WHEAT FIST LEFT	"FIST ///"	RED
20941	WHEAT FIST RIGHT	"FIST ///"	RED
21604	FRONT BARRICADE LEFT	"FIST ///"	GREEN
21605	FRONT BARRICADE RIGHT	"FIST ///"	GREEN
21606	WHEAT FIST LEFT	"FIST ///"	GREEN
21607	WHEAT FIST RIGHT	"FIST ///"	GREEN

Model-Specific:

"1810"

23152	REAR AXLE 1810	"//// PULLDOZER 1810 ////"	RED
23153	RIGHT HITCH, 1810	"FIST PULLDOZER 1810 \\\\"	RED
23154	LEFT HITCH, 1810	"//// PULLDOZER 1810 FIST"	RED
23157	REAR AXLE 1810	"//// PULLDOZER 1810 ////"	GREEN
23155	RIGHT HITCH, 1810	"FIST PULLDOZER 1810 \\\\"	GREEN
23156	LEFT HITCH, 1810	"//// PULLDOZER 1810 FIST"	GREEN

"2410"

23142	REAR AXLE 2410	"//// PULLDOZER 2410 ////"	RED
23140	RIGHT HITCH, 2410	"FIST PULLDOZER 2410 \\\\"	RED
23141	LEFT HITCH, 2410	"//// PULLDOZER 2410 FIST"	RED
23145	REAR AXLE 2410	"//// PULLDOZER 2410 ////"	GREEN
23144	RIGHT HITCH, 2410	"FIST PULLDOZER 2410 \\\\"	GREEN
23143	LEFT HITCH, 2410	"//// PULLDOZER 2410 FIST"	GREEN

"1810XL"

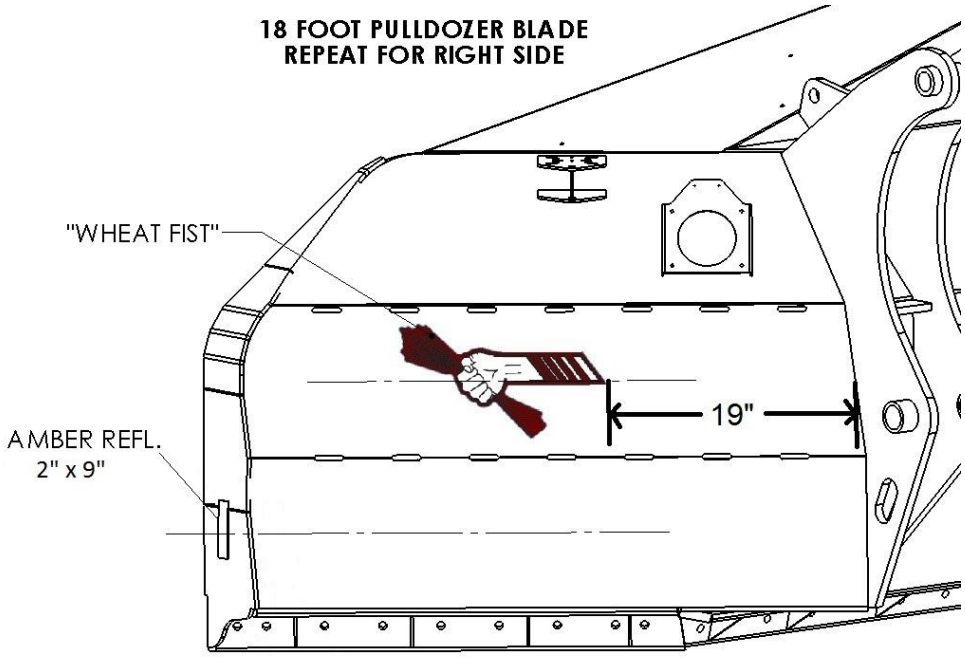
23163	REAR AXLE 1810XL	"//// PULLDOZER 1810XL ////"	RED
23161	RIGHT HITCH, 1810XL	"FIST PULLDOZER 1810XL \\\\"	RED
23162	LEFT HITCH, 1810XL	"//// PULLDOZER 1810XL FIST"	RED
23158	REAR AXLE 1810XL	"//// PULLDOZER 1810XL ////"	GREEN
23159	RIGHT HITCH, 1810 XL	"FIST PULLDOZER 1810XL \\\\"	GREEN
23160	LEFT HITCH, 1810XL	"//// PULLDOZER 1810XL FIST"	GREEN
22209	DEPTH INDICATOR DECAL - 18 FOOT		

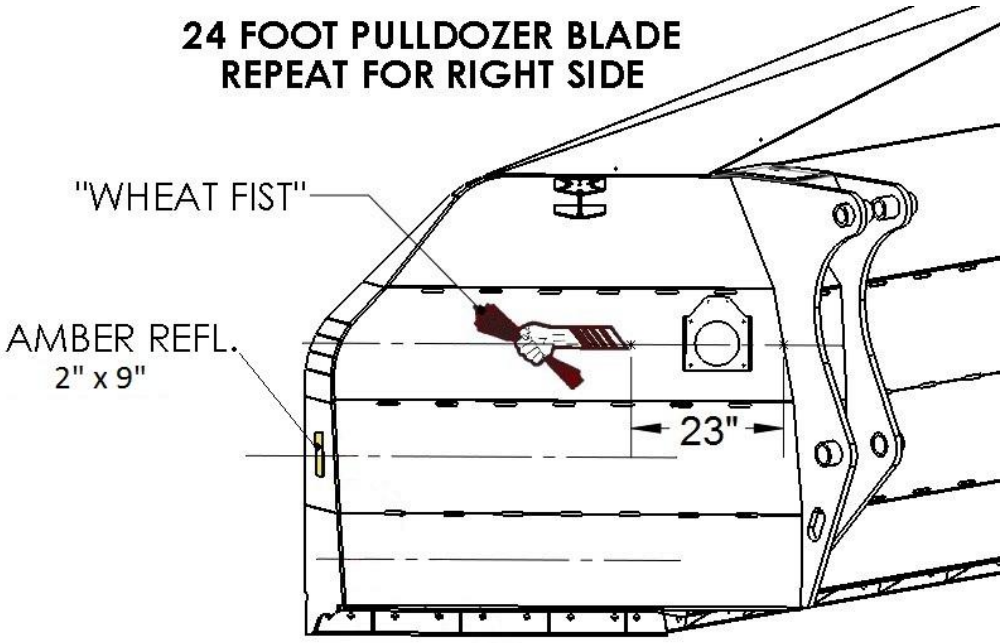
"2410XL"

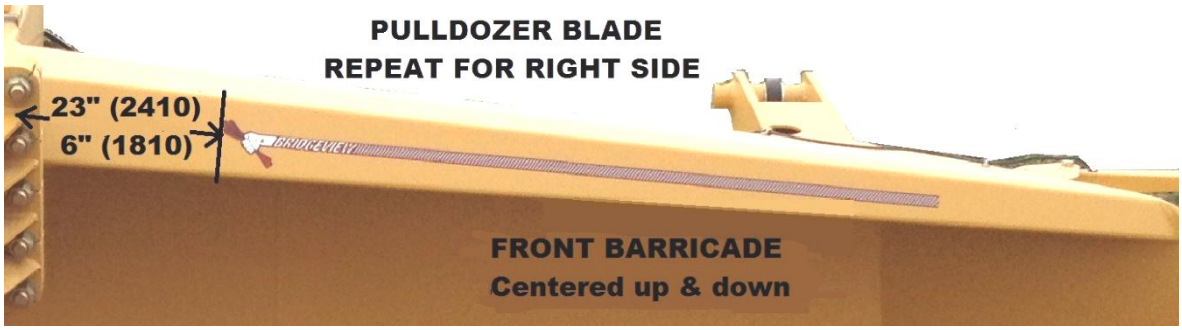
23146	REAR AXLE 2410XL	"//// PULLDOZER 2410XL ////"	RED
23148	RIGHT HITCH, 2410XL	"FIST PULLDOZER 2410XL \\\\"	RED
23147	LEFT HITCH, 2410XL	"//// PULLDOZER 2410XL FIST"	RED
23149	REAR AXLE 2410XL	"//// PULLDOZER 2410XL ////"	GREEN

23150	RIGHT HITCH, 2410XL	"FIST PULLDOZER 2410XL \\\\"	GREEN
23151	LEFT HITCH, 2410XL	"//// PULLDOZER 2410XL FIST"	GREEN
22078	DEPTH INDICATOR DECAL - 24 FOOT		

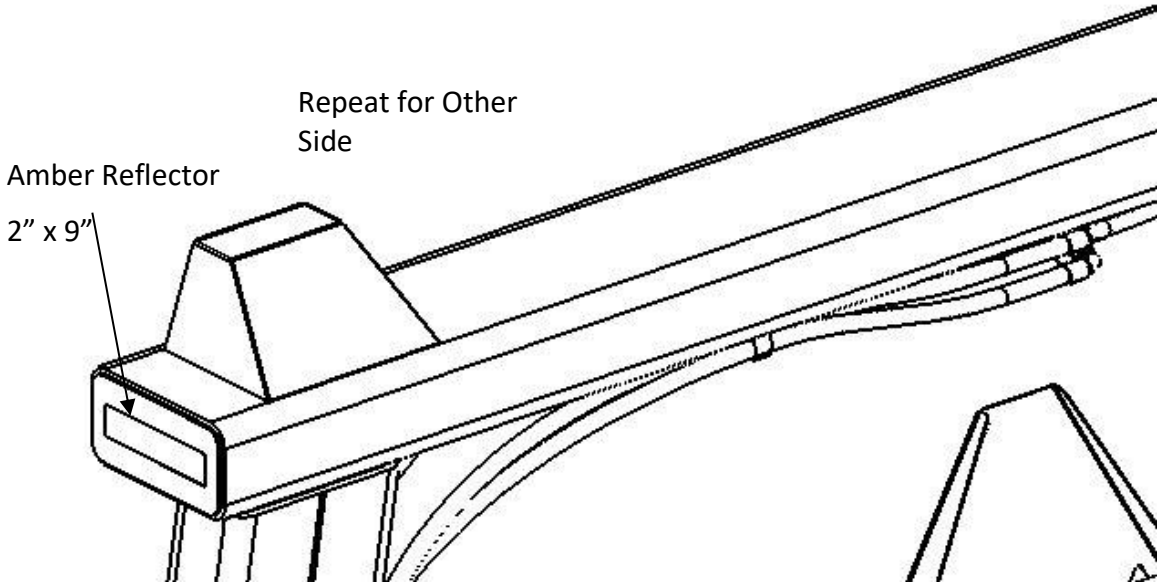
INSTALLATION



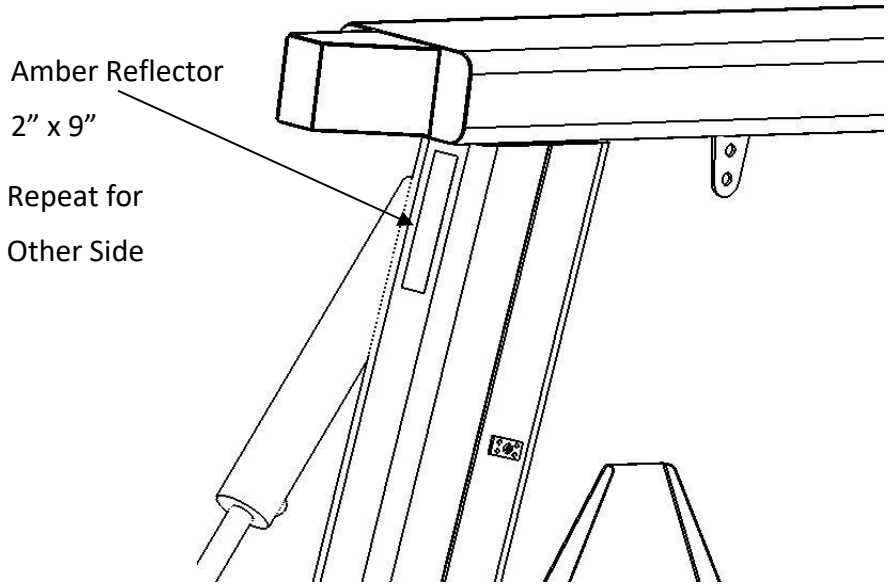


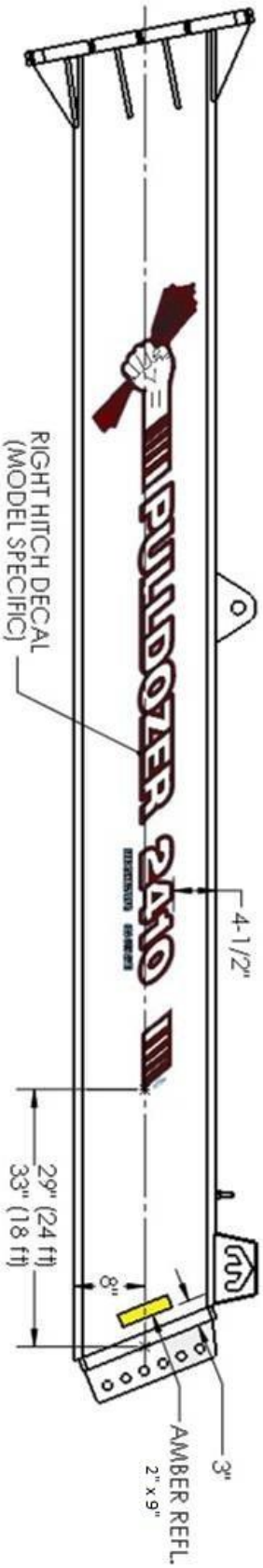


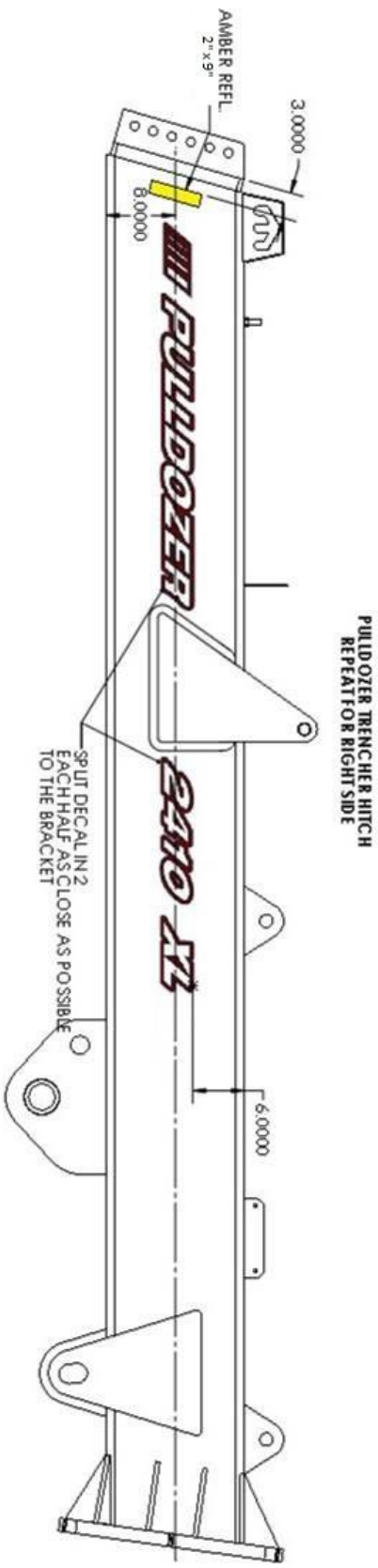
2410 Main Frame Reflector

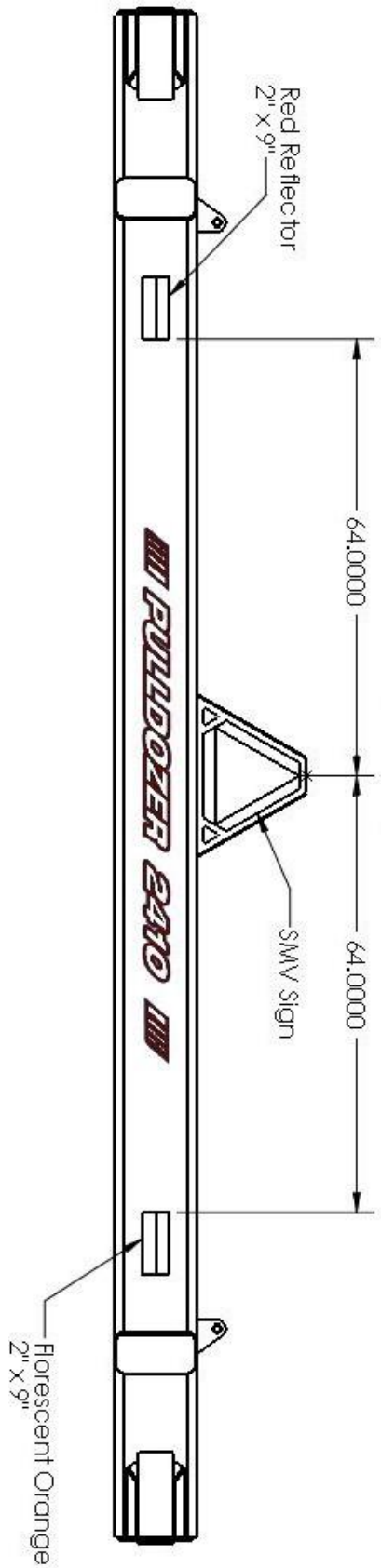


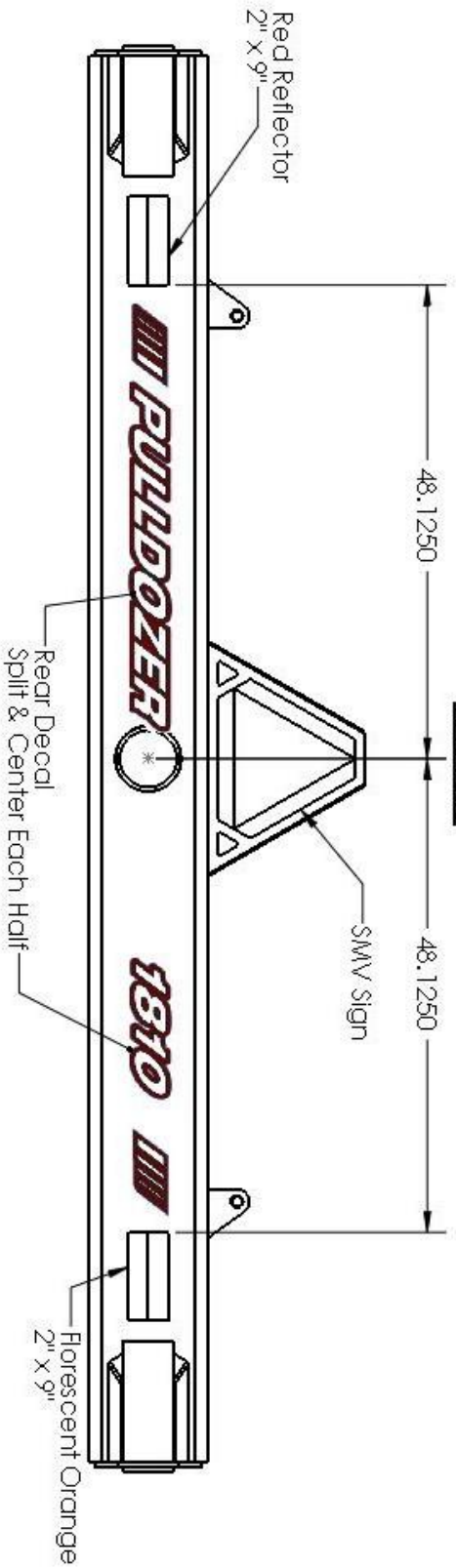
1810 Main Frame Reflector




PULLDOZER HITCH
REPEAT FOR LEFT SIDE
RIGHT HITCH DECAL
(MODEL SPECIFIC)
PULLDOZER 2410
4-1/2"
29" (24 ft)
33" (18 ft)
8"
3"
AMBER REFL.
2" x 9"

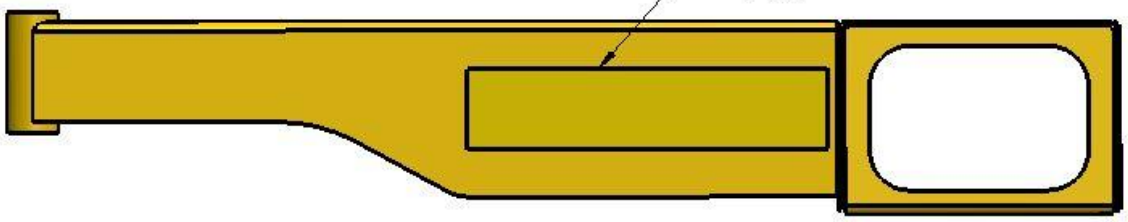

PULLDOZER TRENCHER HITCH
REPEAT FOR RIGHT SIDE
AMBER REFL.
2" x 9"
3.0000
8.0000
PULLDOZER 2410 ZT
SPLIT DECAL IN 2
EACH HALF AS CLOSE AS POSSIBLE
TO THE BRACKET
6.0000


Red Reflector
2" x 9"
64.0000
64.0000
2410 Axle
SMV Sign
PULLDOZER 2410
Florescent Orange
2" x 9"

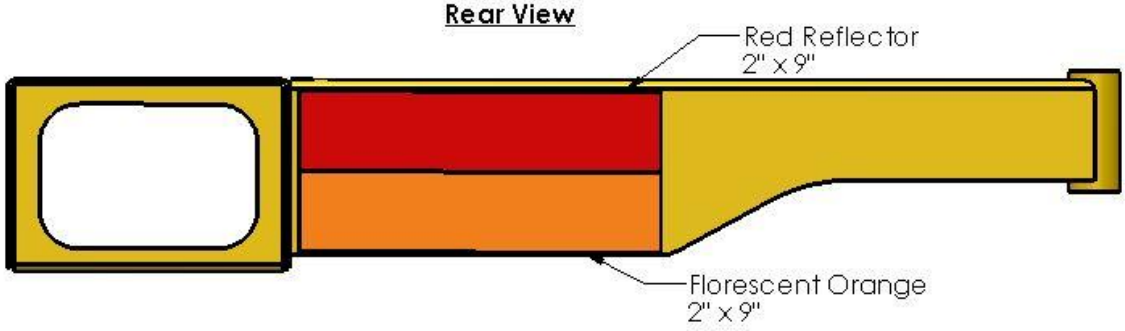

Red Reflector
2" x 9"
48.1250
48.1250
1810 Axle
SMV Sign
Rear Decal
Split & Center Each Half
PULLDOZER 1810
Florescent Orange
2" x 9"

1810/2410 Light Bracket

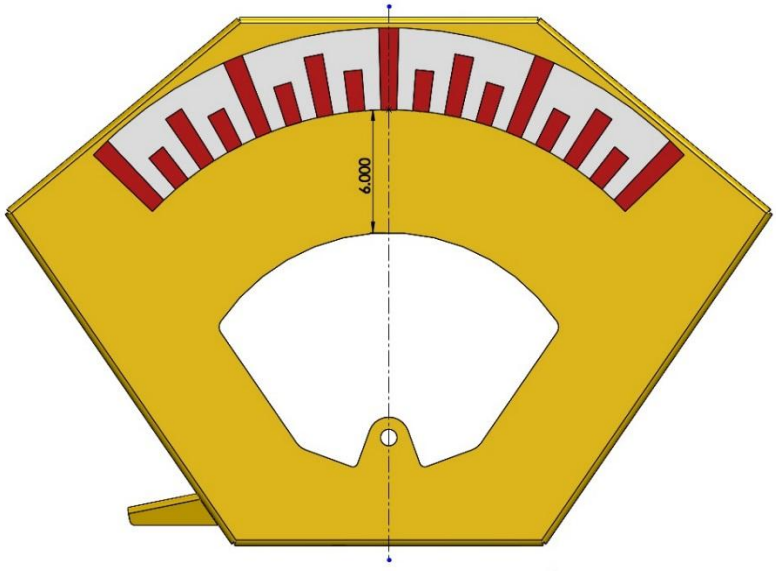
Front View



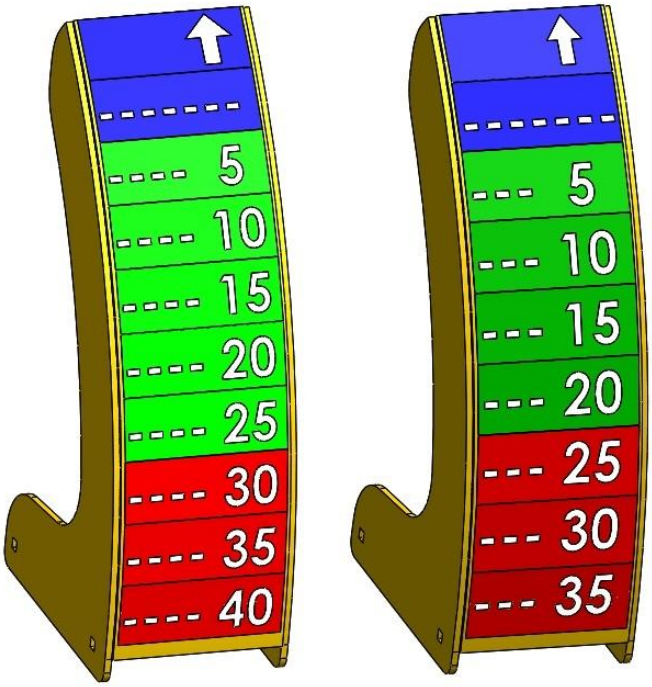
Rear View



PULLDOZER
ANGLE INDICATOR

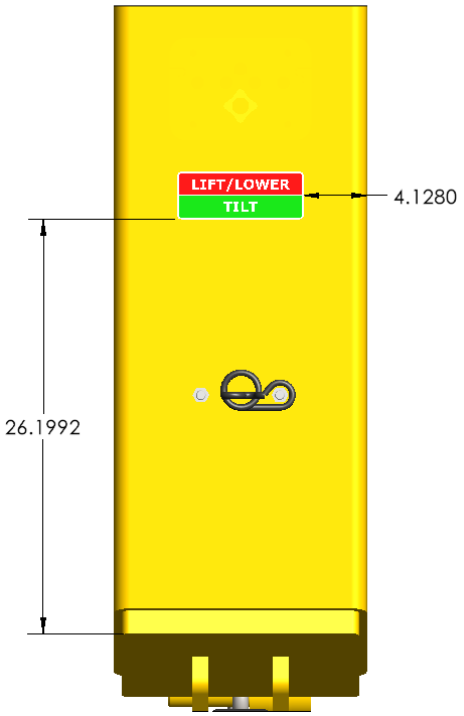


PULLDOZER TRENCHER
DEPTH INDICATOR



24 Foot **18 Foot**

Pulldozer Hydraulic
Hose Decal (33135)



- ASSEMBLY IS NOW COMPLETE –

Fastener Torque Charts

FASTENER TORQUE CHARTS





BOLT CLAMP LOADS

Suggested Assembly Torque Values



DIAMETER & THREADS PER INCH	USS/SAE GRADE 5					USS/SAE GRADE 8				
	TENSILE STRENGTH MIN. PSI	PROOF LOAD LB	CLAMP LOAD LB	TORQUE DRY FT LB	LUBRICATED FT LB	TENSILE STRENGTH MIN. PSI	PROOF LOAD LB	CLAMP LOAD LB	TORQUE DRY FT LB	LUBRICATED FT LB
1/4-20	120,000	2,700	2,020	8	6.3	150,000	3,800	2,850	12	9
28	120,000	3,100	2,320	10	7.2	150,000	4,350	3,250	14	10
5/16-18	120,000	4,450	3,340	17	13	150,000	6,300	4,700	24	18
24	120,000	4,900	3,700	19	14	150,000	6,950	5,200	27	20
3/8-16	120,000	6,600	4,950	30	23	150,000	9,300	6,980	45	35
24	120,000	7,450	5,600	35	25	150,000	10,500	7,900	50	35
7/16-14	120,000	9,050	6,780	50	35	150,000	12,800	9,550	70	50
20	120,000	10,100	7,570	55	40	150,000	14,200	10,650	80	60
1/2-13	120,000	12,100	9,050	75	55	150,000	17,000	12,750	110	80
20	120,000	13,600	10,200	85	65	150,000	19,200	14,400	120	90
9/16-12	120,000	15,500	11,600	110	80	150,000	21,800	16,350	150	110
18	120,000	17,300	12,950	120	90	150,000	24,400	18,250	170	130
5/8-11	120,000	19,200	14,400	150	110	150,000	27,100	20,350	210	160
18	120,000	21,800	16,350	170	130	150,000	30,700	23,000	240	180
3/4-10	120,000	28,400	21,300	260	200	150,000	40,100	30,100	380	280
16	120,000	31,700	23,780	300	220	150,000	44,800	33,500	420	310
7/8-9	120,000	39,300	29,450	430	320	150,000	55,400	41,600	600	450
14	120,000	43,300	32,450	470	350	150,000	61,100	45,800	670	500
1-8	120,000	51,500	38,600	640	480	150,000	72,700	54,500	910	680
14	120,000	57,700	43,300	720	540	150,000	81,500	61,100	1,020	760

When using anti-seize, reduce the lubed chart reading by 20% to properly torque. Always lubricate and use lubed torque values.

NOTES:

The above recommended assembly torques are offered as a guide only. Torque specifications, especially for critical joints, should be determined under actual assembly conditions due to the many variables involved which are difficult to predict and do affect the torque-tension relationship.

The above recommended clamp loads are based on 75% of the minimum specified proof loads for each grade and size.

Torques for Grades 5 and 8 were calculated based on the following relationship:

T = R D P

Where: T = Torque (ft lb)

D = Nominal Diameter (in)

P = Clamp Load (lb)

R = Tightening Coefficient

The value of R is assumed to be equal to .20 for dry, unplated conditions and equal to .15 for lubricated, including plated, conditions. Actual values of R can vary between .05 and .35 for commonly encountered conditions.

STRENGTH GRADE	APPLICABLE SIZES	PROOF LOAD STRESS (PSI)	YIELD STRENGTH MIN. STRESS (PSI)	TENSILE STRESS MIN. (PSI)
SAE Gr. 5	1/4 to 1" diameter over 1" diameter to 1-1/2 diameter	85,000 74,000	92,000 81,000	120,000 105,000
SAE Gr. 8	1/4 to 1" diameter	120,000	130,000	150,000

Pounds to Inch Pound Conversion

lb x 12 = inch lb

Example: 9 lb x 12 = 108 inch lb

FRACTIONAL MEASUREMENT		
BOLT DIAMETER	CAP SCREW WRENCH SIZE	NUT WRENCH SIZE
1/4	7/16	7/16
5/16	1/2	1/2
3/8	9/16	9/16
7/16	5/8	11/16
1/2	3/4	3/4
9/16	13/16	7/8
5/8	15/16	15/16
3/4	1-1/8	1-1/8
7/8	1-5/16	1-5/16
1"	1-1/2	1-1/2
1-1/8	1-11/16	1-11/16
1-1/4	1-7/8	1-7/8
1-3/8	2-1/16	2-1/16
1-1/2	2-1/4	2-1/4
1-3/4	2-5/8	2-5/8
2"	3"	3"
2-1/4	3-3/8	3-3/8
2-1/2	3-3/4	3-3/4
2-3/4	4-1/8	4-1/8
3"	4-1/2	4-1/2

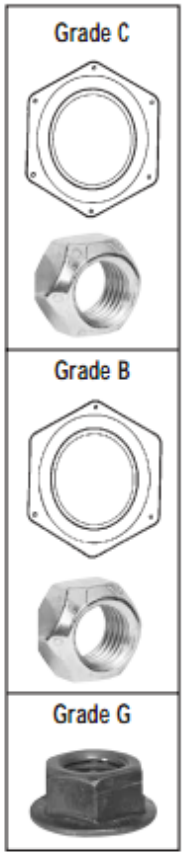
Imperial has made a concerted effort to provide accurate information in its catalog and on its website, however Imperial assumes no responsibility for the accuracy of the information. All information published by Imperial in its catalogs, marketing literature, and on its website is provided "as is" without warranty, expressed or implied. Imperial and its vendors disclaim all warranties, expressed or implied including, without limitation, warranties of merchantability and fitness for a particular purpose.

FASTENER TORQUE CHARTS

GUIDE FOR PREVAILING-TORQUE LOCK NUT ASSEMBLY TORQUES (CAD AND WAX, GRADE B, C, AND GRADE G FLANGE NUTS) LOCK NUT STANDARDS FROM IFI-100 REQUIREMENTS

Torque-Tension Requirements

Size Threads Per Inch	Grade B Clamp Load (lb)	Grade B Assembly Torque Max.	Grade B Assembly Torque Min.	Grade C Clamp Load (lb)	Grade C Assembly Torque Max.	Grade C Assembly Torque Min.	Grade G Clamp Load (lb)	Grade G Assembly Torque Max.	Grade G Assembly Torque Min.
1/4–20	2,000	85**	60**	2,850	125**	85**	2,850	150**	100**
1/4–28	2,300	90**	65**	3,250	125**	85**	3,250	160**	105**
5/16–18	3,350	150**	110**	4,700	190**	130**	4,700	240**	155**
5/16–24	3,700	160**	120**	5,200	200**	140**	5,200	230**	155**
3/8–16	4,950	20	14.5	6,950	28	20	6,950	32	21
3/8–24	5,600	22	16	7,900	29	21	7,900	33	22
7/16–14	6,800	32	23	9,600	43	31	9,600	51	34
7/16–20	7,550	34	24	10,700	43	31	10,700	60	40
1/2–13	9,050	50	37	12,800	62.5	45	12,800	85	55
1/2–20	10,200	52.5	37.5	14,440	70	50	14,440	89	59
9/16–12	11,600	70	50	16,400	95	70	16,400	120	80
9/16–18	13,000	77.5	57.5	18,300	95	70	18,300	132	88
5/8–11	14,500	95	70	20,300	122.5	90	20,300	143	95
5/8–18	16,300	97.5	72.5	23,000	125	90	23,000	175	115
3/4–10	21,300	165	125	30,100	210	155	30,100	240	160
3/4–16	23,800	165	120	33,600	210	155	33,600	270	170
7/8–9	29,500	250	185	41,600	312.5	225	41,600	360	260
7/8–14	32,400	270	200	45,800	312.5	225	45,800	402	247
1–8	38,700	375	275	54,600	462.5	360	54,600	530	410
1–12	42,300	395	290	59,750	490	360	59,750	—	—
1–14	43,000	400	300	61,100	500	362.5	61,100	645	398
1-1/8–7	42,100	404	294	69,000	585	454	69,000	—	—
1-1/8–12	47,500	437	327	76,800	622	453	76,800	—	—
1-1/4–7	53,500	513	375	87,000	736	573	87,000	—	—
1-1/4–12	59,700	549	412	96,600	782	570	96,600	—	—
1-3/8–6	63,800	612	445	104,000	880	685	104,000	—	—
1-3/8–12	72,900	670	503	118,000	955	696	118,000	—	—
1-1/2–6	77,600	745	545	127,000	1,075	837	127,000	—	—
1-1/2–12	87,700	807	605	142,000	1,150	837	142,000	—	—



- Clamp loads for the Grade B lock nuts equal 75% of the bolt proof loads specified for SAE J-429 Grade 5, and ASTM A-449 bolts.
  Clamp loads for Grade C lock nuts equal 75% of the bolt proof loads specified for SAE J-429 Grade 8, and ASTM A-354 Grade BD bolts.
- IFI-100 does not govern lock nuts above 1". The values shown in the chart are to be used as a mid-range guideline.

** Torque values for 1/4" and 5/16" sizes are in inch lb. All other torque values are in foot lb.

METRIC TORQUE CHART FOR HEX HEAD CAP SCREWS

Size	Class	Newton Meters Zinc Plated	Newton Meters Unplated	Foot Pounds (approx.) Zinc Plated	Foot Pounds (approx.) Unplated	Class
M4 x .70 Pitch	8.8	3.1	2.2	2.30	1.65	
M5 x .80 Pitch	8.8	6.1	5.5	4.58	4.13	
M6 x 1.00 Pitch	8.8	10.4	9.5	7.80	7.13	
M7 x 1.00 Pitch	8.8	17.0	15.5	12.75	11.63	
M8 x 1.25 Pitch	8.8	25.0	23.0	18.75	17.25	
M8 x 1.00 Pitch	8.8	27.0	24.5	20.25	18.38	
M10 x 1.50 Pitch	8.8	51.0	46.0	38.25	34.50	
M10 x 1.00 Pitch	8.8	57.0	52.0	42.75	39.00	
M10 x 1.25 Pitch	8.8	54.0	49.0	40.50	36.75	
M12 x 1.75 Pitch	8.8	87.0	79.0	65.25	59.25	
M12 x 1.25 Pitch	8.8	96.0	87.0	72.00	65.25	
M12 x 1.50 Pitch	8.8	92.0	83.0	69.00	62.25	
M14 x 2.00 Pitch	8.8	140.0	125.0	105.00	93.75	
M14 x 1.50 Pitch	8.8	150.0	135.0	112.50	101.25	
M16 x 2.00 Pitch	8.8	215.0	195.0	161.25	146.25	
M18 x 2.50 Pitch	8.8	300.0	280.0	225.00	210.00	
M20 x 2.50 Pitch	8.8	430.0	390.0	322.50	292.50	
M22 x 2.50 Pitch	8.8	580.0	530.0	435.00	397.50	
M24 x 3.00 Pitch	8.8	740.0	670.0	555.00	502.50	
M6 x 1.00 Pitch	10.9	15.5	14.0	11.63	10.50	
M8 x 1.25 Pitch	10.9	37.0	34.0	27.75	25.50	
M10 x 1.50 Pitch	10.9	75.0	68.0	56.25	51.00	
M12 x 1.75 Pitch	10.9	160.0	117.0	97.50	87.75	
M14 x 2.00 Pitch	10.9	205.0	185.0	153.75	138.75	
M16 x 2.00 Pitch	10.9	310.0	280.0	232.50	210.00	





TORQUE CHART FOR STAINLESS STEEL CAP SCREWS

Size	316 inch-lb	18/8 inch-lb
6-32	10.1	9.6
6-40	12.7	12.1
8-32	20.7	19.8
8-36	23.0	22.0
10-24	23.8	22.8
10-32	33.1	31.7
1/4-20	78.8	75.2
1/4-28	99.0	94.0
5/16-18	138.0	132.0
5/16-24	147.0	142.0
3/8-16	247.0	236.0
3/8-24	271.0	259.0
7/16-14	393.0	376.0
7/16-20	418.0	400.0
1/2-13	542.0	517.0
1/2-20	565.0	541.0
9/16-12	713.0	682.0
9/16-18	787.0	752.0
5/8-11	1,160.0	1,110.0
5/8-18	1,301.0	1,244.0
3/4-10	1,582.0	1,530.0
3/4-16	1,558.0	1,490.0
7/8-9	2,430.0	2,328.0
7/8-14	2,420.0	2,318.0
1"-8	3,595.0	3,440.0
1"-14	3,250.0	3,110.0

PHONE: 1-800-558-2808 FAX: 1-800-553-8769 WEB: www.imperialsupplies.com

NOTES