EASY LOADER

New 2022 Edition

Parts & Service Manual

20 Ton XPT
25 Ton XPT / XPL

ORDER GENUINE

Eager Beaver PARTS

General Engines Co., Inc., 548 Swedesboro Ave., Mickleton, NJ 08056

Parts: (800) 338-7088 **Sales: (800) 257-8163**

EagerBeaverTrailers.com

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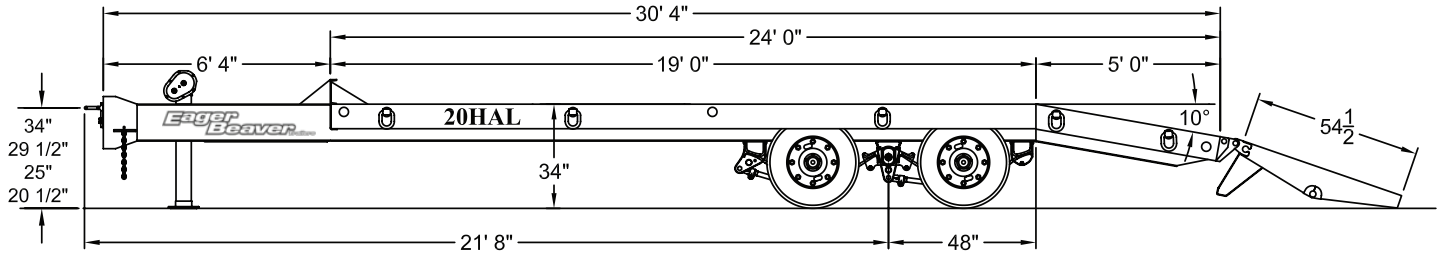
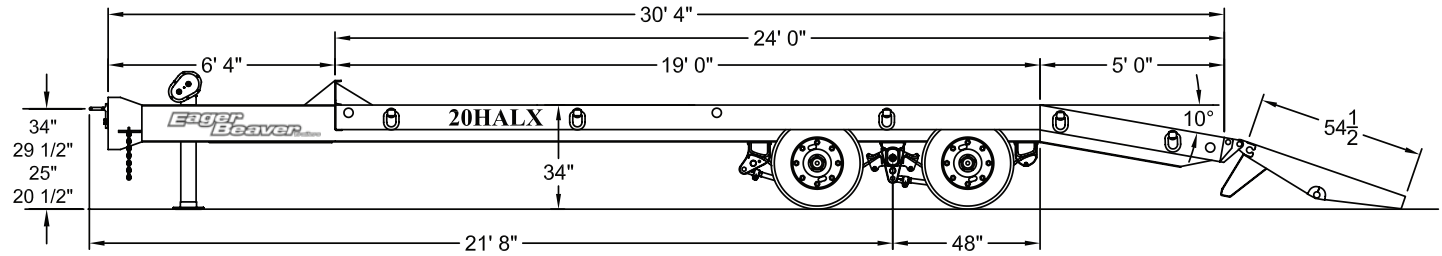
Standard Model Drawings

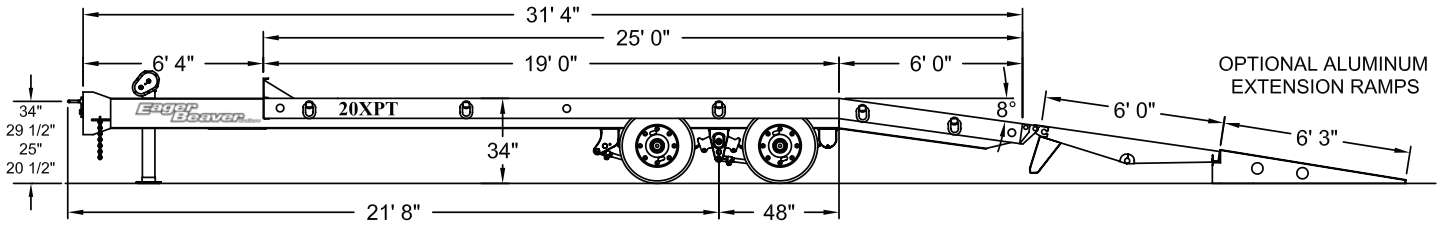
Model: 20 HAL



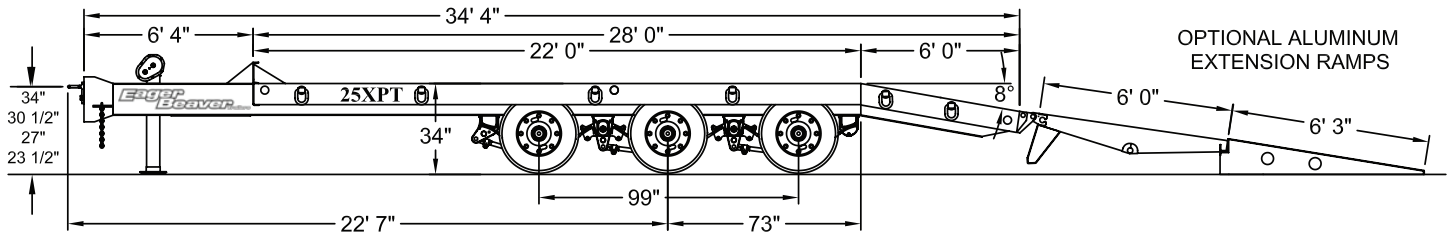
Model: 20 HALX



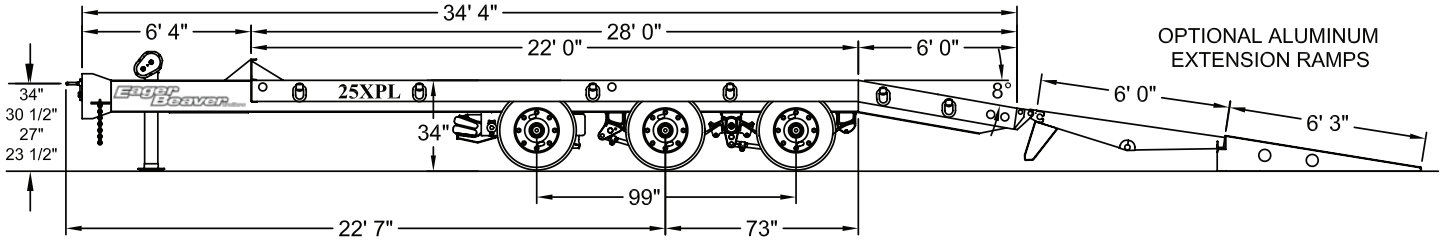
Model: 20 XPT



Model: 25 XPT



Model: 25 XPL



Trailer Setup

All Tow Behind Trailers

Setting up a trailer, especially a tow behind, has several aspects that are often not known or are misunderstood. Here is a description of the setup procedures for tow behind trailers.

Pre-Delivery

Perform the described pre-delivery procedure for tow behind trailers. See the pre-delivery sheet provided with each trailer. You can request a copy from customer service.

Tow Hitch

We will assume that the tow hitch is already installed on the tow vehicle. It is important to make sure that the tow hitch is completely compatible with the trailer hitch in both size and capacity. Eager Beaver can provide an appropriately sized pintle hook or ball when the trailer is ordered or through our parts department.

Attach the lunette eye or ball hitch to the nose plate using the holes that, once hitched, allows the nose end of the trailer to be 2"- 3" high at the front with the trailer unloaded. This will aid the trailer suspension in providing better weight distribution to all axles especially the rear. Once the trailer is loaded the trailer should be level or just a bit high in the front. The hitch should preferably be installed with the retaining bolt below the hitch if possible. Tighten the hitch shaft nut first until the lock washer is completely compressed, then tighten the retaining bolt nut until its lock washer is completely compressed.

CAUTION! Do not use any lunette eye, ball hitch or tow hitch that is excessively loose, large, damaged in any way or binds when the trailer turns.

Truck Wiring

See the trailer service manual for a schematic that shows how to properly wire the tow vehicle. For electric brake trailers, Eager Beaver can supply a proper truck harness and a brake controller. Refer to the literature provided with the brake controller for greater detail in installing the controller. Only a good sealing type tap connectors should be used for splicing into the truck wiring to prevent corrosion. Truck harness and controller sold separately.

Trailer Setup

All Tow Behind Trailers

Electrical Cable

Plug electrical nose harness into the tow vehicle receptacle. Make sure that there is sufficient slack to allow trailer to fully articulate without the cable getting too tight or, at the same time, not allow it to touch the ground when traveling straight.

Air Lines

On air brake trailers only, attach the two air line jumper hoses and check for the same slack clearance as for electrical cable.

Safety Chains

Attach the chains by looping them through an appropriate lash ring on the tow vehicle and then securing the hook to a chain link This is for our standard slip hook. If a safety hook with latch is used, then simply attach hook to the tow ring. The chains should attached to the tow vehicle by using a crossing pattern, under the trailer tongue. Make sure that there is sufficient slack in the chains to allow the trailer to fully articulate without the chains getting to tight and yet not having the chains drag on the ground, when trailer is straight.

CAUTION! Do not install chains on a tow vehicle that does not have an appropriate lashing ring for attaching chains.

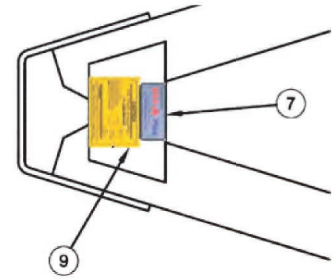
Break-away

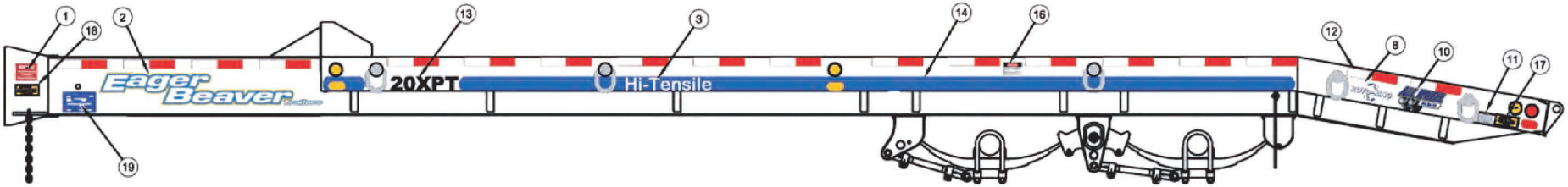
On electric brake trailers, see the instructions supplied with the break-away switch. The instructions and miscellaneous parts for the break-away switch are shipped in the loose box of parts. The break-away system will only operate after both the coupling and safety chains have failed. The break-away is not a parking brake.

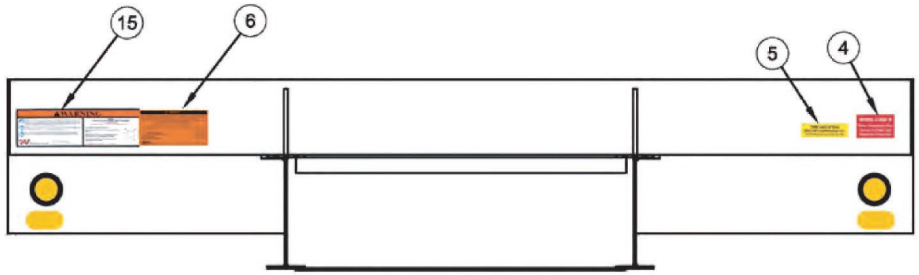
Conclusion

The final step in any setup is to make sure that all systems, electrical, air, hitching or break-away, all function properly before the trailer leaves the dealers yard. A safe trailer is good for your customer and good for business.

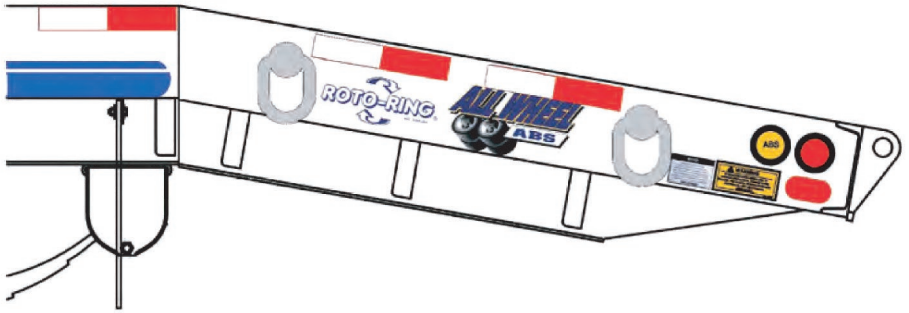
Decal Arrangement for 20 - 25 Tag







Front of Headboard



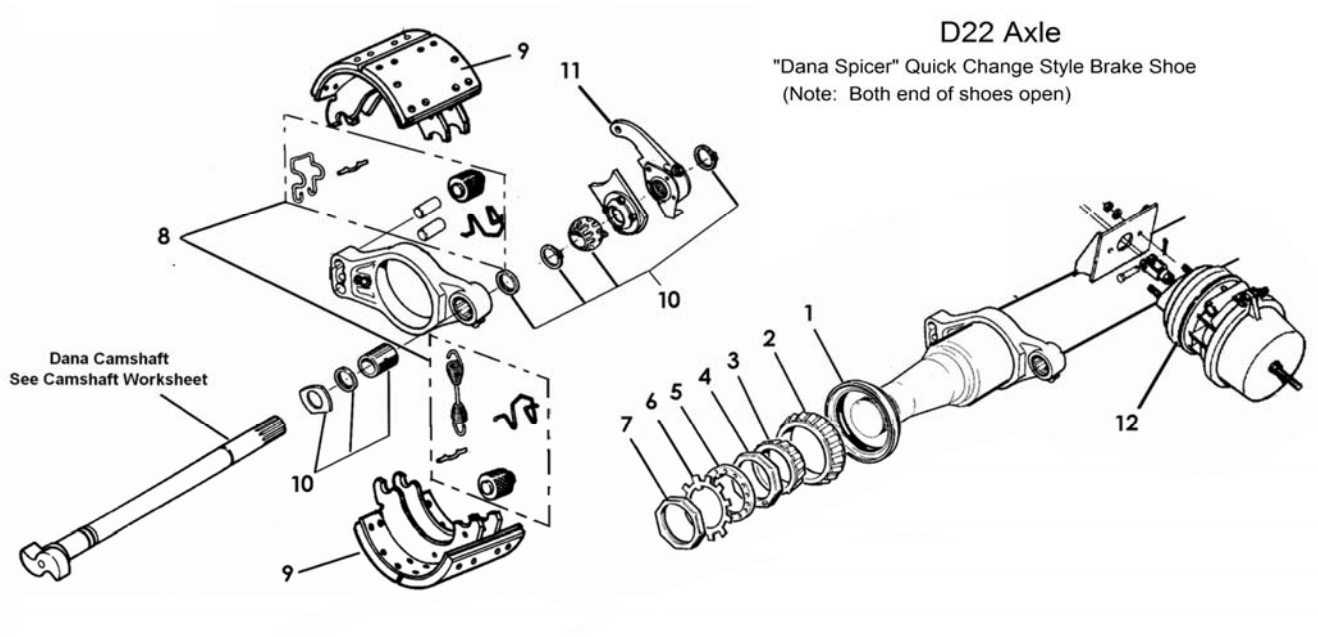
Rear of Tailboard

Eager Beaver 20 & 25 Ton Tag Trailer Decals

ITEM	PART #	QTY	DESCRIPTION
1	2059014	1	TRAILER CONNECTED WARNING
2	2059370	2	LARGE BLUE EAGER BEAVER, 8" H x 58" Long
	2062332		Optional MEDIUM BLUE EAGER BEAVER, 6" H x 37" L
3	2059325	2	HI TENSILE, WHITE
4	2059016	1	CHECK WHEEL LUG
5	2059162	1	TIRE INFLATION INFO
6	440025	1	HUTCH H9700 TORQUE (NOT IN KIT)
7	2062208	1	USA HARNESS DECAL (NOT IN KIT)
8	2060618	2	ROTO-RING
9	2062003	1	CAUTION TRAILER EQPT W / ABS BRAKES
10	2061051	2	ALL-WHEEL ABS
11	2062004	1	ABS INDICATOR LAMP INSTRUCTIONS
12	2060608	50	RED-WHITE CONSPICUITY STRIPING
13	440200	1	20 PT - WHITE
	2059170	1	20 HAL - WHITE
	2059294	2	20 HALX - WHITE
	2060841	2	20 XPT - WHITE
	2062014	2	25 XPT - WHITE
	2062171	2	25 XPL - WHITE
14	2059249	40	BLUE STRIPE (EB YELLOW TRAILERS)
	2061081	40	WHITE STRIPE (RED, BLUE, BLACK TRAILERS)
15	2062007	1	WEBB WHEEL TORQUE - HUB PILOTED
			Or 2059165 / Spoke Hub ; 2056558 / 10-Stud, BSM
16	2062179	1	DANGER SPRING BRAKES
17	2062173	1	REPLACE DAMAGED WOOD
18	2062174	1	PREVENT DAMAGE - LOAD ON EVEN GROUND
19	2062178	1	COLD DUAL VIN PLATE (NOT IN KIT)
	2062142	1	LIFT AXLE (25XPL ONLY)
	2062172	1	LIFT AXLE WARNING (25XPL ONLY)

PART #	**COMPLETE DECAL KIT** (Hub Pilot, ABS, Conspicuity)
2063511	20 HALX (BLUE STRIPING)
2062180	20 XPT (BLUE STRIPING)
2062181	20 XPT (WHITE STRIPING)
2062182	25 XPT (BLUE STRIPING)
2062183	25 XPT (WHITE STRIPING)
2062191	25 XPL (BLUE STRIPING)
2062192	25 XPL (WHITE STRIPING)

20-25 Tons with Dana D22 Axle Air Brake Components
Includes D22 Axles MFG by Hendrickson & AXN

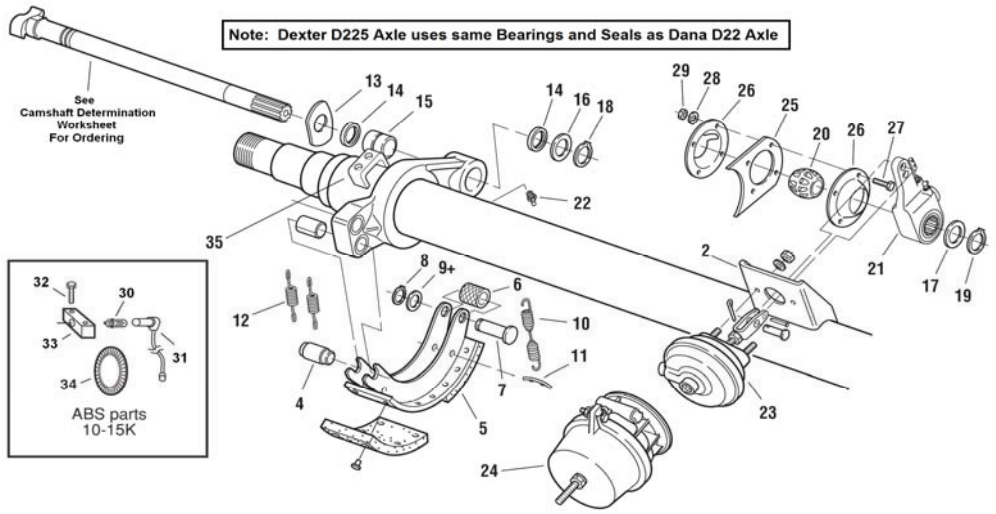


Item	Description	Part #
1	Seal	2055828
2	Inner Cone Bearing	2058309
3	Outer Cone Bearing	2058308
4	Inner Nut	2055836
5	Inner Lock Washer	2058268
6	Star Washer	2058267
7	Outer Nut	2059229
8	Brake Repair Kit (One Per Wheel)	2060956
9	Brake Pad (Two Per Wheel)	2060455
10	Cam Repair Kit (One Per Axle)	2062013
11	Slack Adjuster	2061083
not shown	Auto Slack Adjustment Bracket	2061084
12	Air Brake Chamber	2059596

Note: Items 8 - 11 are D22 Axle Unique and can NOT be used on Dexter D225 Axles

D22 Axles used exclusively between 1996 and 2012
Dana D22 & Dexter D225 Axles used extensively beween 1994 & 1996 and after 2012

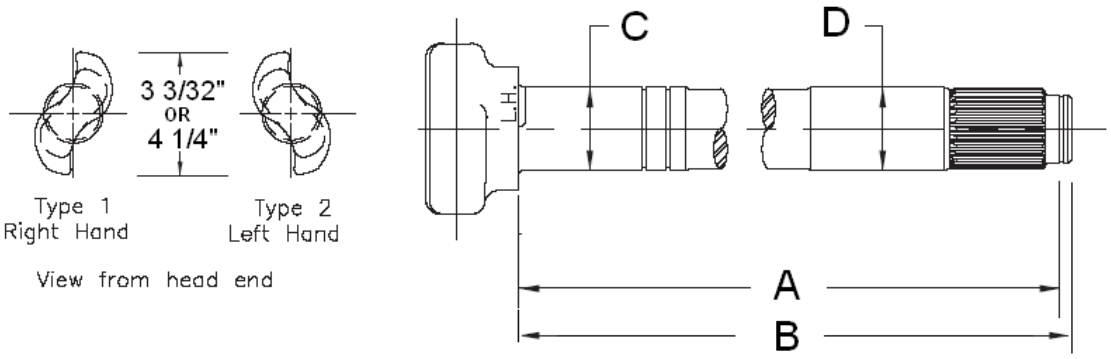
20-25 Ton with Dexter D225 Axle Air Brake Components



Item	Description	Dexter 22.5K Axle Part #
1	Camshaft LH or RH	See Worksheet
2	Air Chamber Bracket	2061091
3	Bushing Spider Anchor	In Brake Repair Kit
4	Anchor Pin	In Brake Repair Kit
5	"PQ" Brake Shoe (2 Per Wheel)	2060853
	"P" Brake Shoe (2 Per Wheel)	2055842
6	Roller	In Brake Repair Kit
7	Roller Pin	In Brake Repair Kit
8	Roller Pin Retainer	In Brake Repair Kit
9	Roller Pin Spacer	+ Not Used
10	Retractor Spring	In Brake Repair Kit
11	Retainer Pin	In Brake Repair Kit
12	Shoe Keeper Spring	In Brake Repair Kit
	"PQ" Brake Repair Kit (for 1 Wheel)	2060900
	'P' Brake Repair Kit (for 1 Wheel)	2058058
13	"D" Washer	In CAM Repair Kit
14	Grease Seal	In CAM Repair Kit
15	Camshaft Bushing	In CAM Repair Kit
16	Washer- Camshaft Spider End	In CAM Repair Kit
17	Camshaft Washer	In CAM Repair Kit
18	Retainer - Camshaft	In CAM Repair Kit
19	Retainer - Camshaft End	In CAM Repair Kit
20	Camshaft Support Bushing	In CAM Repair Kit
21	Slack Adjuster	See Worksheet
22	Grease Fitting	In CAM Repair Kit
	CAMSHAFT Repair Kit	2060632
23	Air Chamber (Pre ABS)	2058070
24	Spring Brake Chamber (Begin 1/1998)	2059596
25	Plate - Camshaft Support Bracket	2060363
26	Plate Bushing Retainer	2059399
27	Bolt, Retainer Plate	2060638
28	Lock Washer	2060637
29	Nut	2060636
30	ABS Sensor Retaining Clip	2062085
31	ABS Sensor with 1' Cable	2062086
	ABS 6' Sensor Extension Cable	2062102
32	Mounting Screw, Sensor Block	2060631
33	ABS Sensor Mounting Block	2060633
34	ABS Toner Ring (Supplied with Drum)	Special Order
35	ABS Sensor Block Base (Weld On)	2060634

Note: "P" Style Both Ends Open, Used Until 1992
"PQ Style One End Open, Used between 1993-1996; Beginning 2013

Cam Shaft Determination & Ordering Worksheet



Step 1 Decide whether the cam is a LEFT or a RIGHT hand and whether it is a SMALL (3 3/32”) or LARGE (4 º”) head.

Step 2 Measure the length of the cam. It is best to provide both the dimensions “A”, the distance from head to snap ring groove, and dimension “B”, the distance from the head to the end of the cam.

Step 3 Measure the diameter of the cam at both “C”, just behind the head, and “D” just inside the spline.

Step 4 Finally, determine whether the cam is a 10 spline or 28 tooth spline.

Please fill in the chart below when ordering a cam shaft

HEAD STYLE

LEFT HAND SMALL	
RIGHT HAND SMALL	
LEFT HAND LARGE	
RIGHT HAND LARGE	

DIMENSION

“A“	
“B”	
“C”	
“D”	

SPLINE

10	
28	

Fax the completed worksheet to Eager Beaver Trailers @ 856-423-0999.

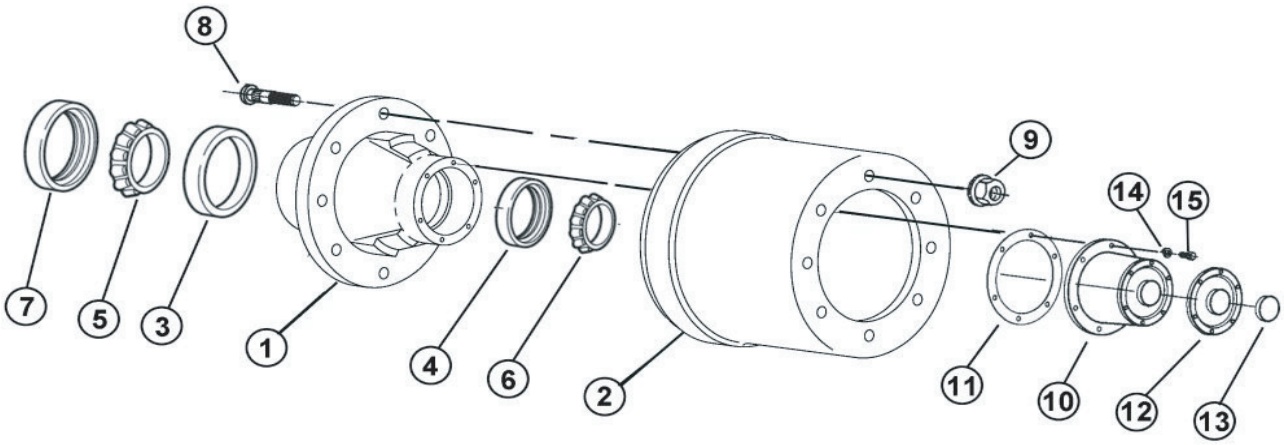
Your Name: _____.

Your Voice Tel #: _____.

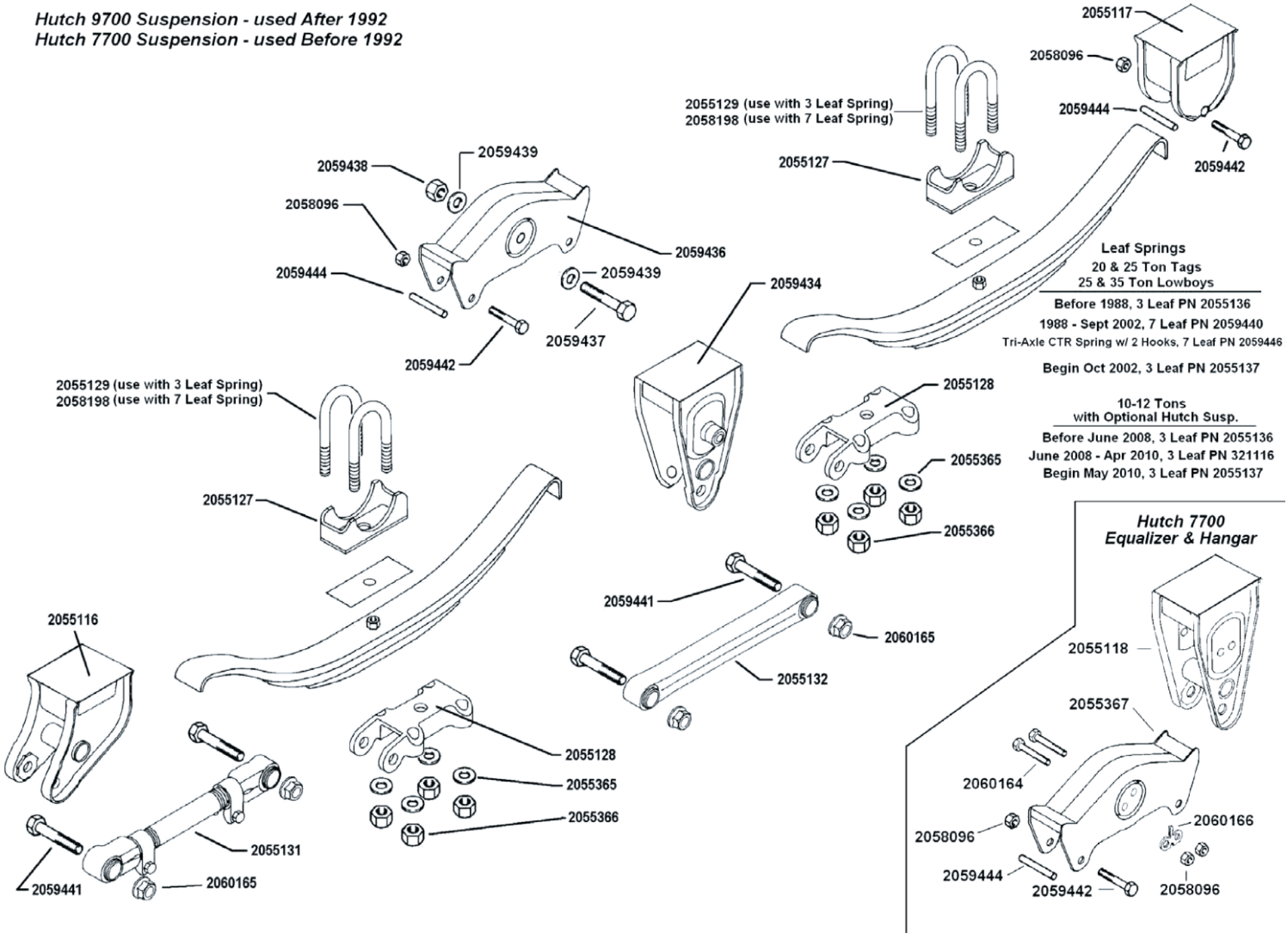
Eager Beaver Trailers 20 & 25 Ton Tag
Webb 8 Stud Hub Piloted Hub With Outboard Drum

275MM (10.827") Diameter Bolt Circle; 12¼" X 7½" Brake Shoes

Item	Nomenclature	P/N	Remarks
1	Hub	2062151	Webb 20271 (w Studs & Cups)
2	Drum	2062152	Webb 63680F
3	Inner Bearing Cup	2058307	
4	Outer Bearing Cup	2058306	
5	Inner Bearing	2058309	
6	Outer Bearing	2058308	
7	Oil Seal	2055828	
8	Studs	2061085	M22 x 1.5 thread
9	Flange Nut, Long	2061086	31mm H, steel wheels in/out
	Flange Nut, Short	342431	27mm H, steel in/alum wheel out
10	Oil Cap w/ plug	2055089	Cap, includes window & plug
11	Gasket - oil cap	2055090	
12	Oil cap window kit	2058056	Window, gaskets, & plug
13	Vent Plug	2055749	
14	Lock Washer		Procure locally
15	Machine screw		Procure locally (5/16-18 x 3/4)



Hutch 9700 Suspension - used After 1992
Hutch 7700 Suspension - used Before 1992

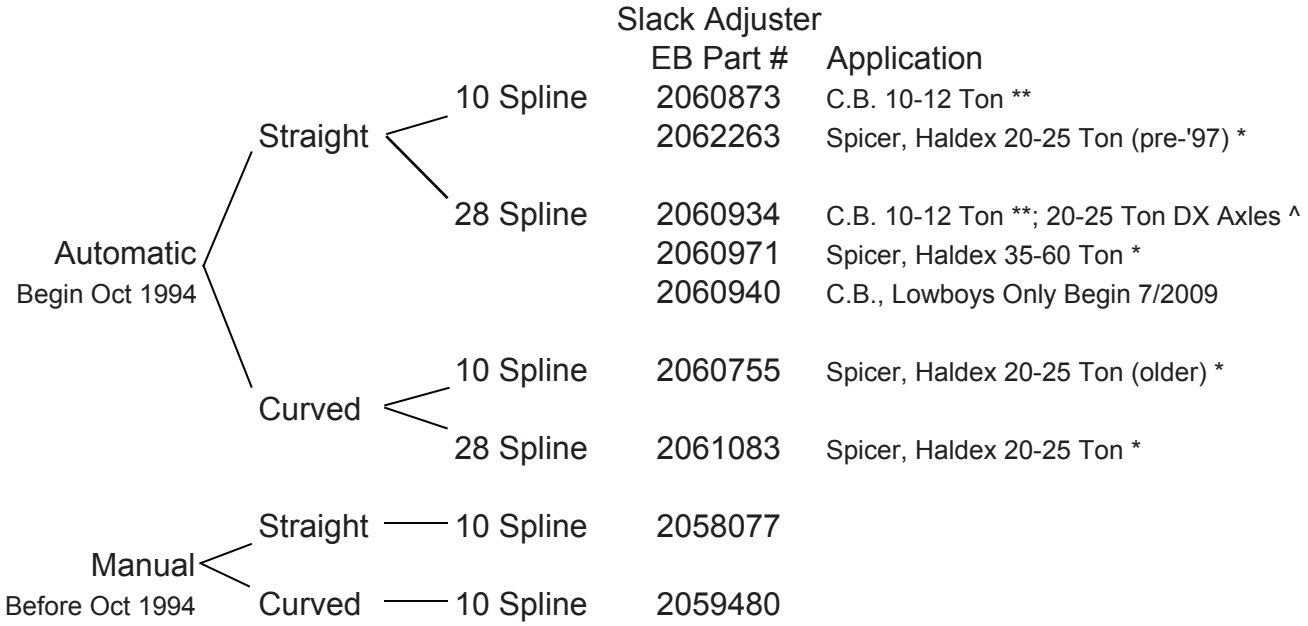


Eager Beaver Trailers
Slack Adjuster Determination & Ordering Worksheet

When ordering Slack Adjusters, please provide the following information:

1. Whether Automatic or Manual
2. Whether adjuster arm (which attaches to air brake chamber) is Straight or Curved
3. Whether it has 10 or 28 Splines
4. Manufacturer name and any part numbers from old slack adjuster

Circle Applicable Feature on Below Matrix



* Spicer Automatic Slack Adjuster Bracket 2061084 Not included with Slack

** 10K axles - attach Brake Chamber Clevis to 5" Hole in Slack; 12K uses 6" Hole in Slack

^ 22.5K Dexter Axles used intermittently between 2-2014 & 2-2015; and extensively after 2-2015

Original Slack Manufacturer:

OEM Part Number on Original Slack

Fax your order to Eager Beaver Trailer Parts: 856-423-0999

Your Name:

Your Voice Telephone:

LADDER RAMPS					
FL BOM Part #	NJ Part #	Trailer Model	Description	List Price Each	List Price Pair
992803	2062098	10-12 Ton	6' Long, 15" Bucket (Double Acting) *	$357.00	$714.00
991801	2059342	10-12 Ton, DOW	5' Long, 15" Bucket (Single Acting) *	$295.14	$590.28
991809	2059459	B6-B9 DOW	5' Long, 16.5" Bucket	$295.14	$590.28
	2059429	20HA & 20GLB	5' Long, 13" Bucket	$375.00	$750.00
992811	2059430	20HAL & 20HALX	5' Long, 15" Bucket	$395.00	$790.00
982142	2060935	20-25XPT	6' Long, 15" Bucket (HD)	$450.00	$900.00
982141		20-25XPT	5' Long, 15" Bucket (HD)	$395.00	$790.00
992842		25GLB	5' Long, 13" Bucket	$395.00	$790.00
992825	2060555	35Ton & up GHG, GLB, All GSL-BR	5' Long, 13" Bucket	$395.00	$790.00
991841		ALL 35GLB ONLY	6' Long, 13" Bucket ***	$420.61	$841.22

* Separate 10-12 Ton Single & Double acting ramps now being built as universal and will work with either spring system

*** Need measurement from center of ramp fixed link hole to start of bucket - add to order mid notes

WOOD FILLED STEEL RAMPS					
FL BOM Part #	NJ Part #	Trailer Model	Description	List Price Each	List Price Pair
	2060377	AP-10 (Not AP-10L)		$175.10	$350.20
982101		10-12 Ton (see 10-20 Ton PT)	6' Long, 15" Bucket (LW, Double Acting) **		
992802	2062099	10-12 Ton (see 10-20 Ton PT)	6' Long, 15" Bucket (Double Acting) *		
991800	2054643	10-12 Ton, DOW	5' Long, 15" Bucket (Single acting) *	$204.62	$409.24
991808	2057113	B6-B9 DOW	5' Long, 16.5" Bucket	$245.14	$490.28
	2060391	B6-B9 DOW	6' Long, 16.5" Bucket	$257.60	$515.20
992810	2055108	20HA & 20GLB	5' Long, 13" Bucket	$325.00	$650.00
2063271		20HAL & 20HALX	5' Long, 15" Bucket (Channel Side, SA)	$300.00	$600.00
982122		20XPT	5' Long, Double Acting	$300.00	$600.00
	2059222	20HAL & 20HALX	5' Long, 10" Bucket (13 Degree Load) (pre 1996)		
992814	2062167	10-12Ton PT & 20XPT	6' Long, 15" Bucket (LW, Double Acting)	$350.00	$700.00
982131	2062216	25XPT & XPL	6' Long, 15" Bucket (Double Acting)	$425.00	$850.00
992841		25GLB	5' Long, 13" Bucket	$325.00	$650.00
992824	2054764	35Ton & up GHG, GLB, All GSL-BR	5' Long, 13" Bucket	$350.00	$700.00
991828		ALL 35GLB ONLY	6' Long, 13" Bucket ***	$350.00	$700.00

* Separate 10-12 Ton Single & Double acting ramps now being built as universal and will work with either spring system

** LW DA Ramps measure 22" between ears. If trailer had pre-LW wood or Ladder Ramps with 19" wide ears and is being upgraded to LW, both linkage and linkage-to-ramp bar should be replaced with 23" wide linkage & 25" bar, respectively.

*** Need measurement from center of ramp fixed link hole to start of bucket - add to order mid notes

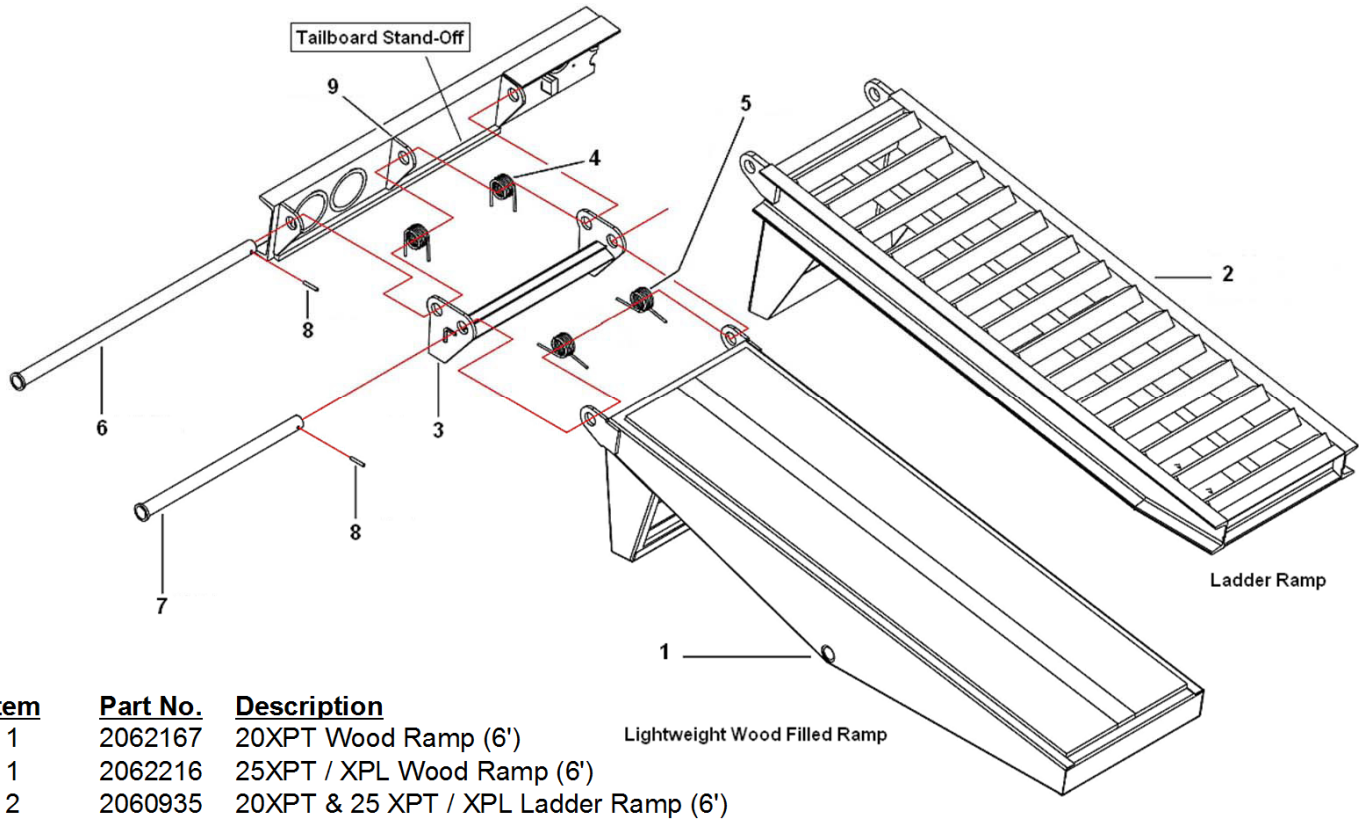
Conversion Kits - Converts from Single Acting to Double Acting Ramp System			
Part #	Trailer Model	Description	List Price
2063261	10-12 Ton	Linkage & Pins (no Springs, no Ramps)	$250.00
2063280	15-20 Ton (5' BT)	Includes 5' Wood Ramps	$1,100.00
2063281	15-20 Ton (6' BT)	Includes 6' Wood Ramps	$1,200.00
2063286	25 Ton (6'BT)	Includes 6' Wood Ramps	$1,350.00
2063291	15-20 Ton Single to Double Action Conv.	Linkage, Springs, and Pins (no Ramps)**	$520.00

Replacement Ramp Buckets			
Part #	Bucket Description	Ramp Application	List Price
142011	10" Bucket	Old Style, Single Acting (Pre 1996 HA w 13 degree load)	$75
142015	13" Bucket	Old Style, 20 & 25 T Ladder, All Lowboy	$75
2061018	15" Bucket	Old Style, 6-12 T Ladder & pre-LW Wood	$75
142014	16.5" Bucket	B6 & B9 DOW	
2063287	15.5" Bucket	Light Weight (wood filled)- Double Acting	$75
2063288	13.5" Bucket	20 & 25 Ton Ladder - Double Acting	$75

** Includes double acting movable linkage, springs, pins. Does not include ramps or tailboard fixed linkage.

Existing fixed linkage must be trimmed to work with new double acting system. Otherwise also order quantity 6 of the new fixed linkage, PN 141057 from plant (or PN 2062169 from parts warehouse).

Ramps and Linkage including conversion Kit
15 - 25 Ton Tag Trailers



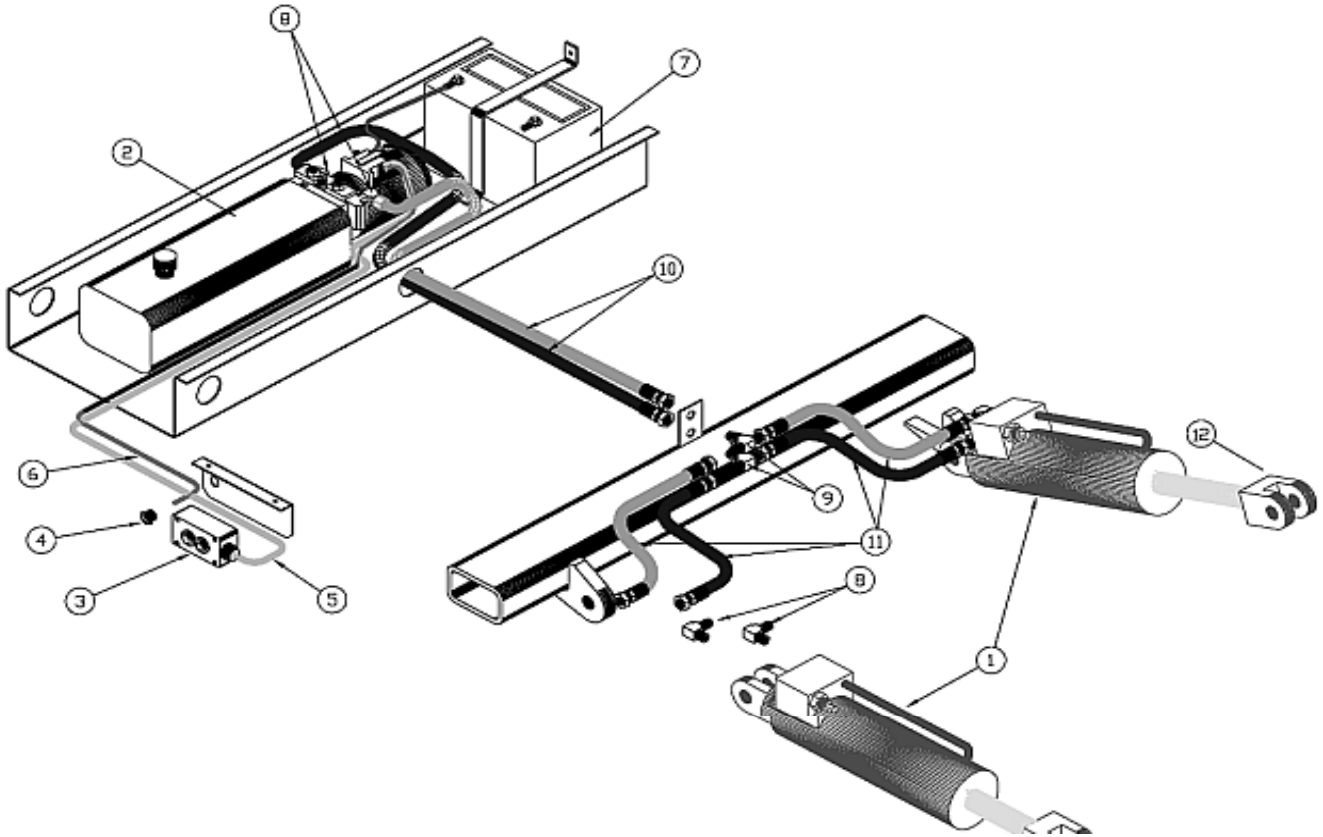
Item	Part No.	Description
1	2062167	20XPT Wood Ramp (6')
1	2062216	25XPT / XPL Wood Ramp (6')
2	2060935	20XPT & 25 XPT / XPL Ladder Ramp (6')
3	2062168	Light Weight Wood Filled Ramp Movable Link 4.5" Hole to Hole Center (23" Wide)
3	2062340	Ladder Ramp Movabe Linkage (21" Wide)
4	2062135	Tail Board Side Spring (one leg longer)
5	2062134	Ground Side Spring (both legs same)
6	2059186	Ramp Pivot Pin 36.5"
7	2063220	Wood Filled Ramp 1.5" Dia. x 25" Long Pivot Pin
7	2063225	Ladder Ramp 1.5" Dia. x 23.5" Long Pivot Pin
8	2059020	Roll Pin - Ramps
9	2062169	Light Weight Ramp Fixed Link (3/8" thick for 15-20 Ton)
9	2059195	Light Weight Ramp Fixed Link (1/2" thick for 25 Ton)
none	2062333	Tailboard standoff, 1/2 x 3/4 x 35" bar stock (protects lights from spring damage)
	2063291	Conversion kit: SA to DA LW Wood (15-20T), includes items 3-8 and tailboard stand off
	2060966	Conversion kit: SA to DA Ladder (15-20T), includes items 3-8 and tailboard stand off

Note: Conversion Kits convert from Single Acting to Double Acting springs and contain quantity six of items 4 & 5.
Note: Conversion Kits do NOT include ramps; order ramps separately

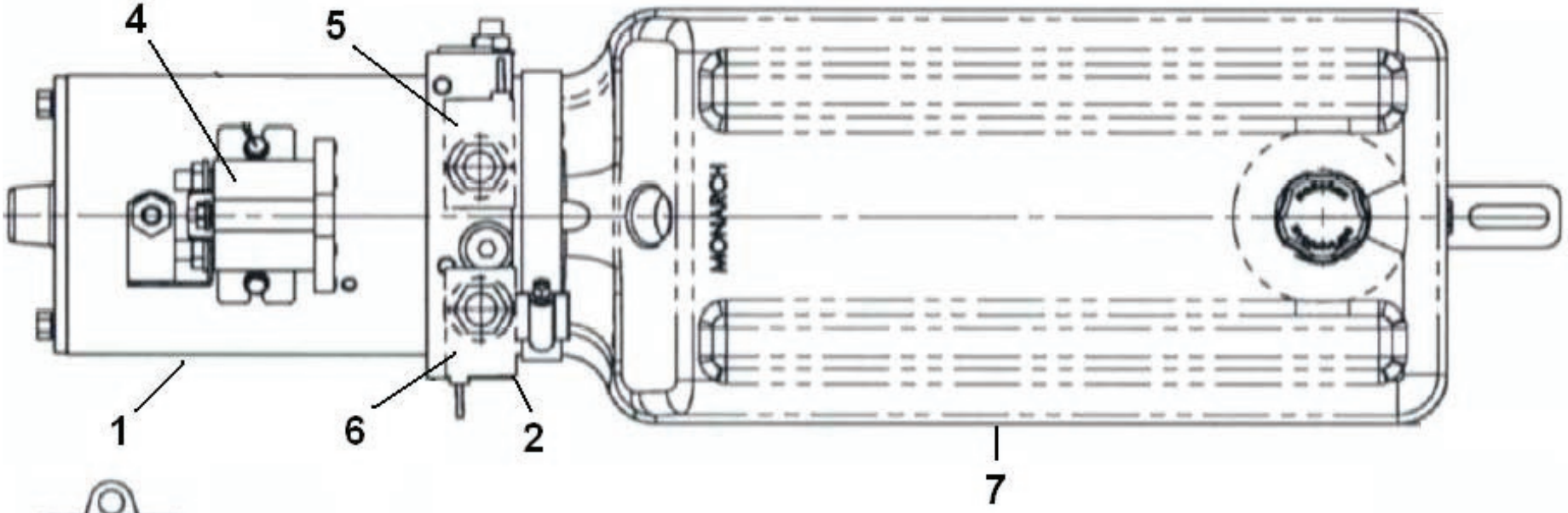
Eager Beaver Trailers

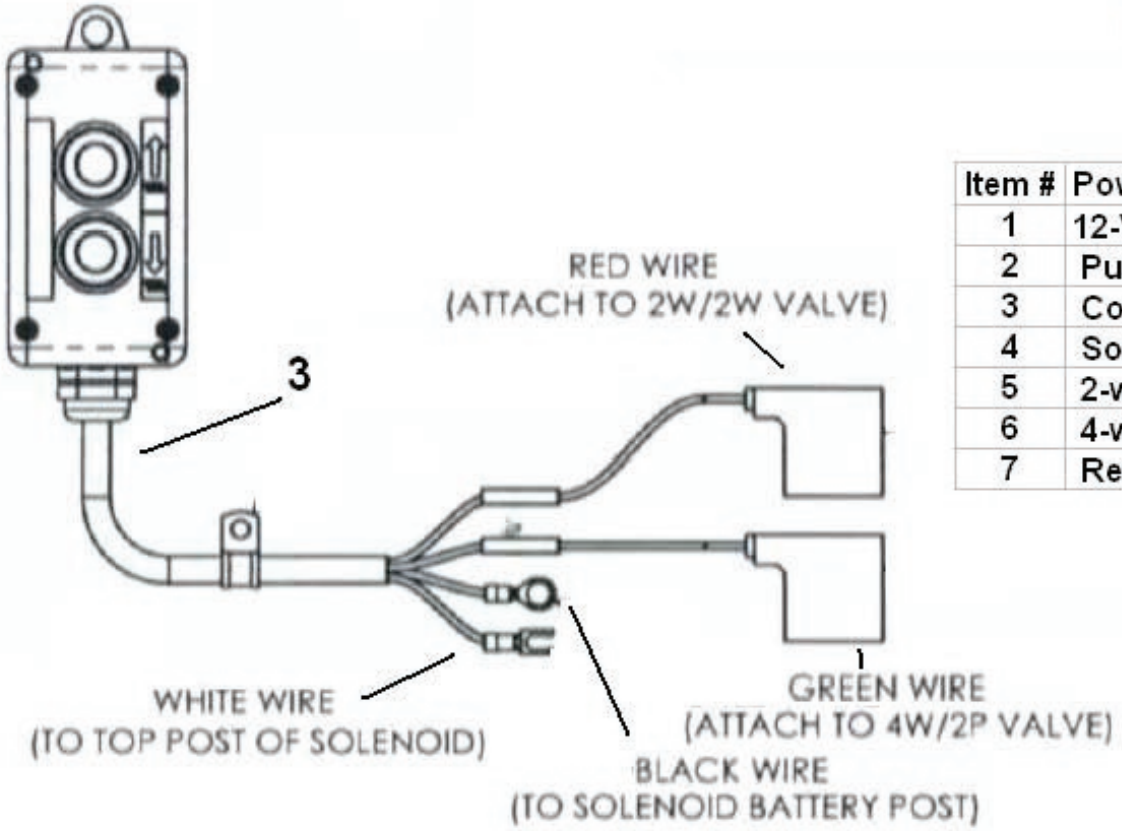
Electric Hydraulic Ramps with Counter Balance Lock (Since June 2007)

ITEM	DESCRIPTION	PN	NOTES
1	HYDRAULIC CYLINDER	2062326	4" Bore x 11" Stroke with Counter Balance Valve
not shown	PACKING KIT FOR HYDRAULIC CYLINDER	2059362	Prince PMCK-BH-0483
2	MONARCH M3551 MOTOR AND HYD PUMP	373002	
2a	VENT PLUG FOR HYDRAULIC RESEVOIR	2060007	
3	UP-DOWN CONTROL BOX	2057694	Includes Item # 5 Harness
4	ON-OFF SWITCH & KEYS (Waterproof)	2062304	Switch 95060-21 (begin 12-2014) ; -07 switch disc.
	Universal Spare Key for 95060-21 Switch Only	2059588	will not work with -07 switch
4	ON-OFF SWITCH & KEYS (Non-waterproof)	2062205	Cole Hersee PN M-489 (Prior to March 2008)
5	CONTROL BOX HARNESS	Special Order	
6	HARNESS WITH DEUTSCH DT06-6S CONNECTOR	392612	For waterproof switch only (After Mar 2008)
7	BATTERY (WET CELL) (31DS)	Procure Locally	55 Amp Per hour
12	CLEVIS END ONLY (PIN NOT INCLUDED)	2062296	Also used on Lowboy Stinger Cylinder
12A	PIN, CYLINDER (CLEVIS END & CYLINDER BASE)	2060965	2 Pins per package (1" Dia x 3.1875" L)
not shown	SINGLE POLE PLUG, TRAILER	2057672	Plug Only; Cole Hersee PN 11042
not shown	SINGLE POLE RECEPTACLE, TOW VEHICLE	2057671	Receptacle Only; Cole Hersee PN 11041
	HYDRAULIC OIL	Procure Locally	All Purpose 10W Hydraulic Oil



Monarch Powerpack for Hydraulic Ramps

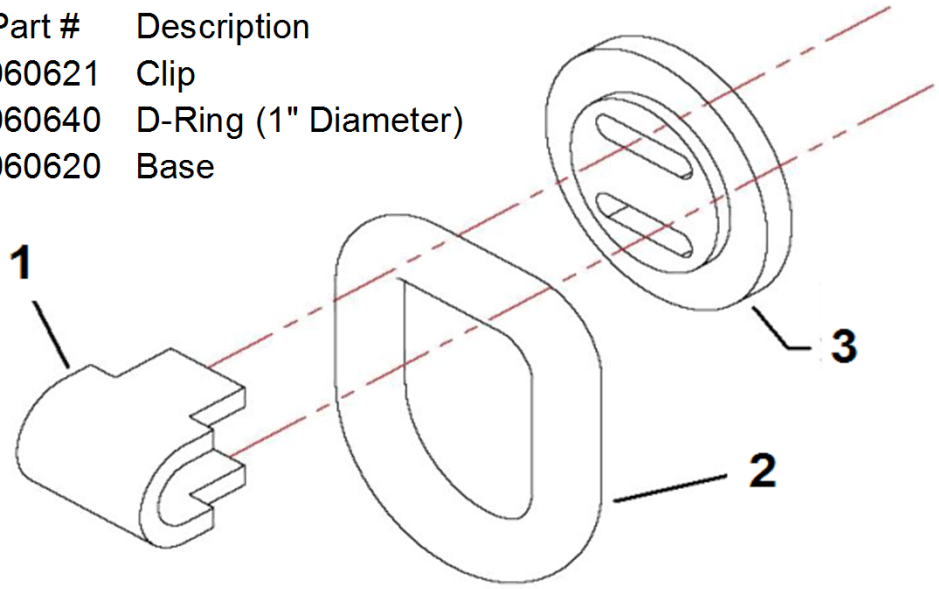




Item #	Powerpack Component	Monarch PN
1	12-VDC motor	8111
2	Pump	12171-250
3	Control Station	04334DH112-120
4	Solenoid Switch	17757
5	2-way cartridge valve	07193-D
6	4-way cartridge valve	00455-D
7	Reservoir	14168

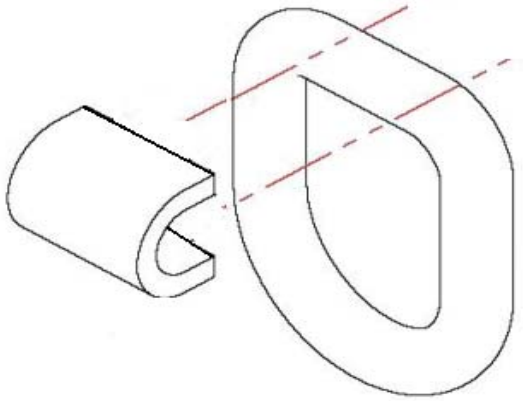
Roto-Ring: 15,000 Lbs (360 Degree) Working Load Limit
Complete Roto-Ring Assembly Part # 2063020

Item	Part #	Description
1	2060621	Clip
2	2060640	D-Ring (1" Diameter)
3	2060620	Base

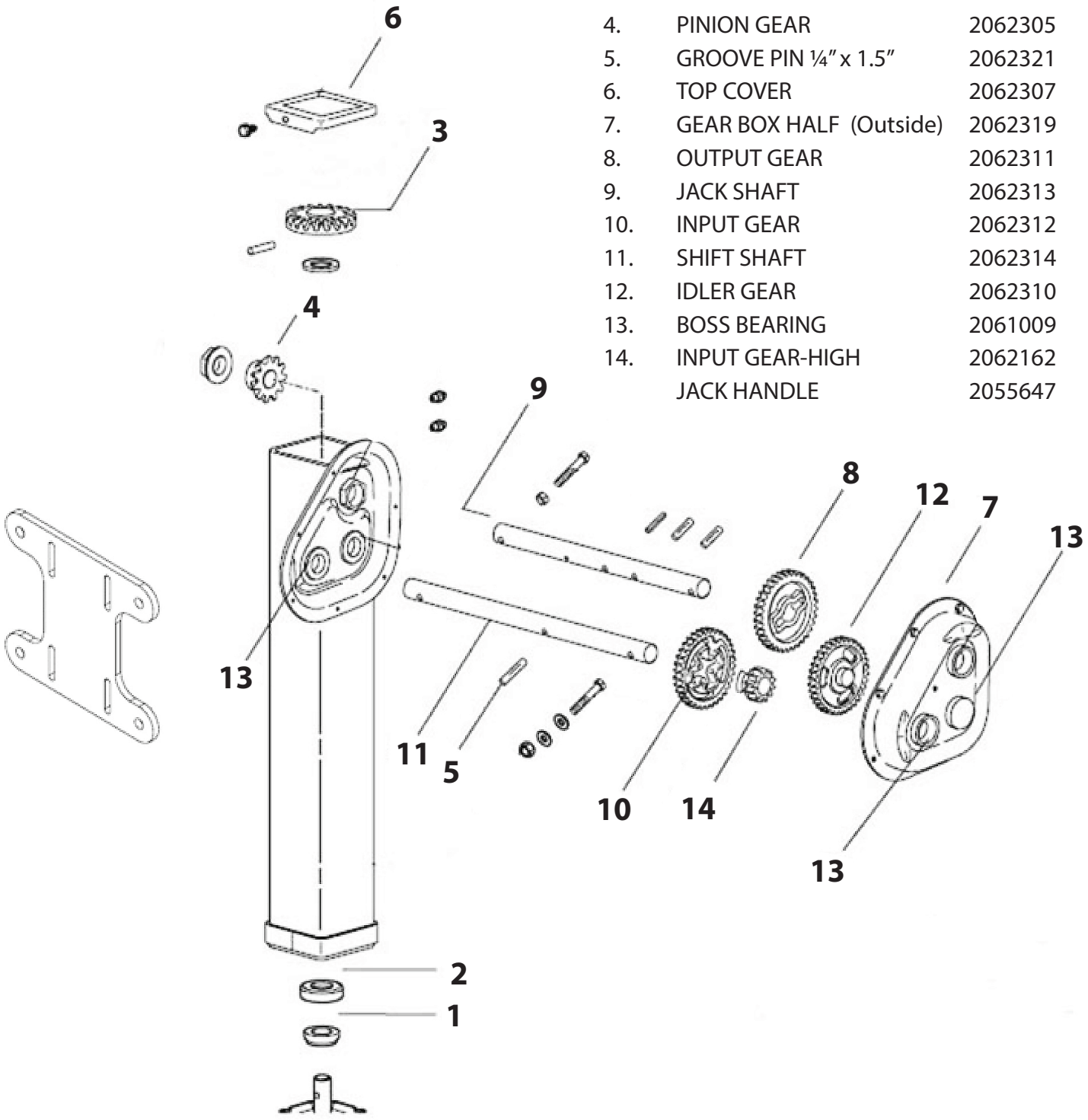


Fixed D-Ring (D-Ring and Clip included)

Part #	Description
2054792	1" Diameter - 15,000 Working Load Limit
2054733	⅝" Diameter - 6,130 Working Load Limit



20 TON 2- SPEED SQUARE JACK (SAF HOLLAND)
2063013 (Complete less Handle)



1.	COLLAR	2062315
2.	THRUST BEARING	2062316
3.	BEVEL GEAR	2062306
4.	PINION GEAR	2062305
5.	GROOVE PIN ¼" x 1.5"	2062321
6.	TOP COVER	2062307
7.	GEAR BOX HALF (Outside)	2062319
8.	OUTPUT GEAR	2062311
9.	JACK SHAFT	2062313
10.	INPUT GEAR	2062312
11.	SHIFT SHAFT	2062314
12.	IDLER GEAR	2062310
13.	BOSS BEARING	2061009
14.	INPUT GEAR-HIGH	2062162
	JACK HANDLE	2055647

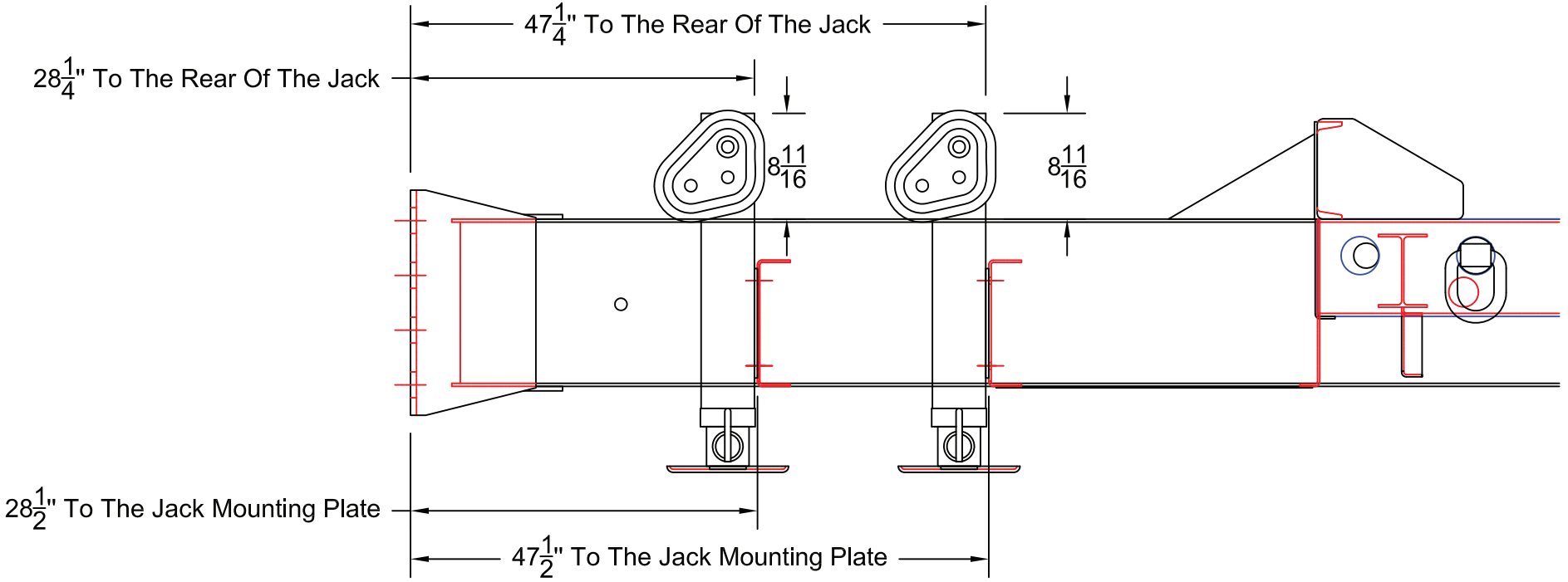
BOM 2063010 for BDOW, 10-12 Ton Tag Landing Gear Assembly

BOM 2063011 for 15-25 Ton Tag Landing Gear Assembly

Item #	PN	Qty	Description
1	401032	1	2-SPEED LANDING GEAR SET *
2	141212	2	1/4X7.5X16.5 LAND/LEG BRKT PLATE
3 **	141441	2	5/16X2X13.5 9-12TON L/G L/MNT BRACKET
3 **	141442	2	5/16X2X14.5 15-25TON L/G L/MNT BRACKET
4	167025	2	3/8X2X10 SQ L/G LWR/BRKT
5	401045	1	J-HOOK,CRANK HANGER
6	401042	1	CRANK,BLACK (LONG) 20"(730112)
7	211005	1	1"SCH 40 X 41.5 L/G CROSS TUBE
8	412105	16	5/8-11X2 ZN HXHD CPSCRW GRD 8
9	412203	16	5/8-11 LOCKNUT UNC ZN
10	412304	32	5/8 US.STD FLAT WASHER ZN
11	412101	2	3/8-16X2.5 ZN HXHD TAP BL
12	411321	2	3/8-16 NYLOC LOCKNUT

* Set includes Live Side (with 2 Speed Gear Box) and Dead Side Jacks

** 141441 included with BOM 2063010; 141442 included with BOM 2063011



Tires & Wheels

Trailer Models 20XPT, 25XPL, 25XPT

215/75R17.5 Tires (standard) (18,160# per axle Dual Rating)

235/75R17.5 Tires (optional) (22,700# per axle Dual Rating)

Description	Part #
Wheel, 8-Stud, Hub Piloted, 6.75 X 17.5	2062125
215 Tire & Wheel Assembly (Hub Piloted)	999983
235 Tire & Wheel Assembly (Hub Piloted)	999986

Note: 8 Stud, Hub Piloted wheels standard since 2002

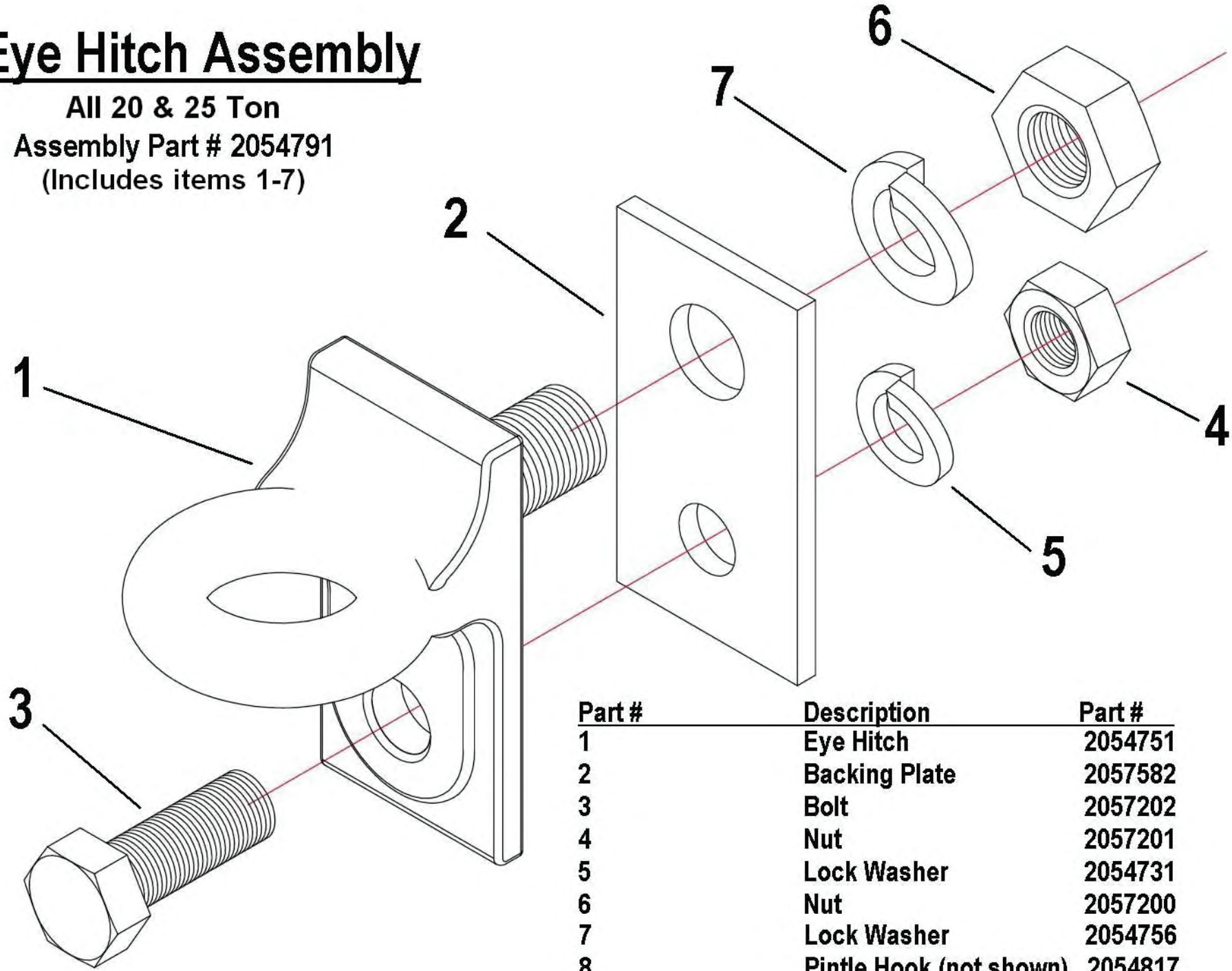
8-Stud Hub Piloted Wheel (Shown Above)

Description	Part #
Wheel, 10 Stud BSM, 6.75 X 17.5	2060234
Wheel, Open Center, 6.75 X 17.5	2059206

10 Stud BSM (Ball Seat Mount) used between 1999-2001
Demountable Rims (Open Center) used prior to 1999

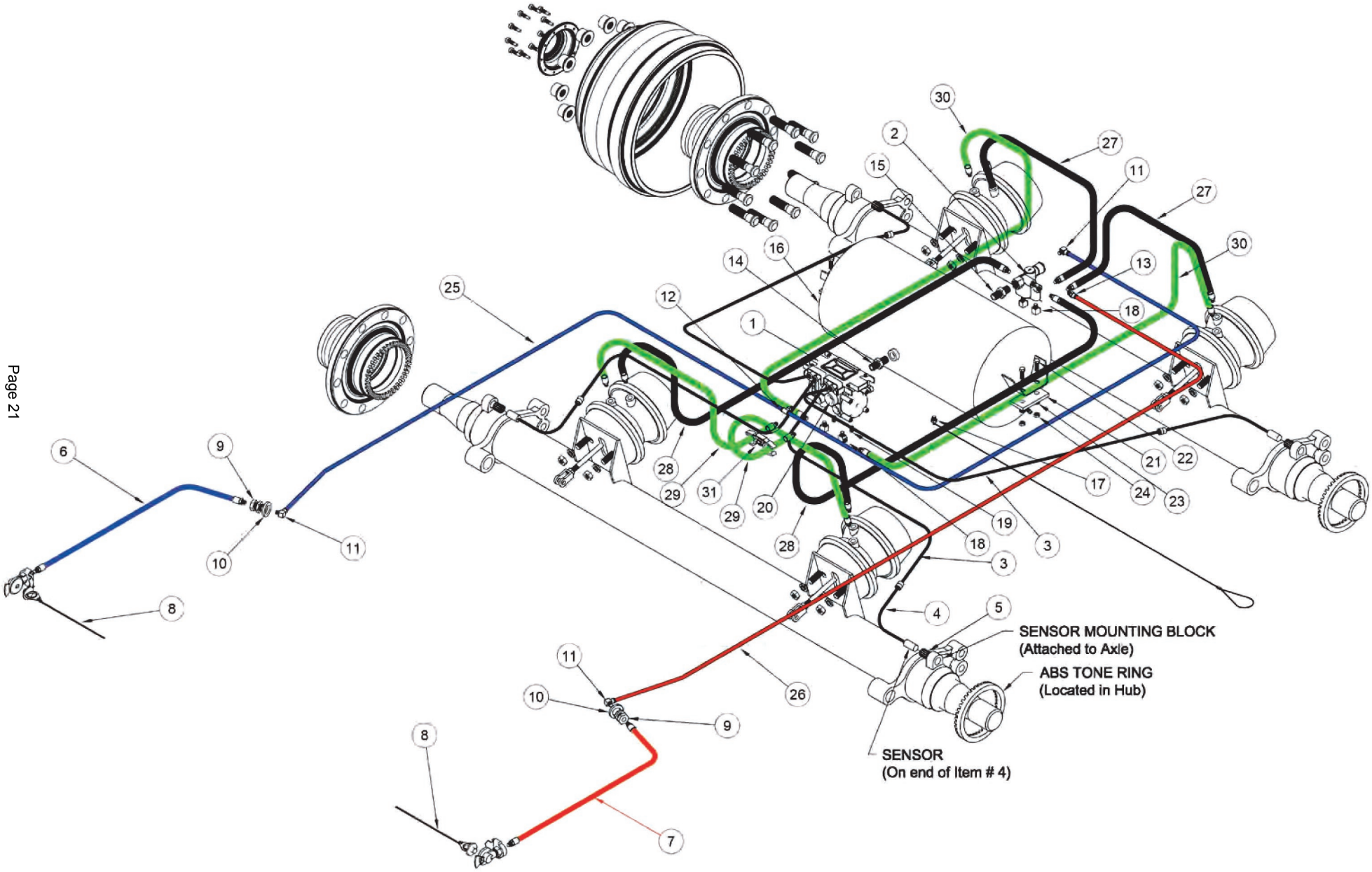
Eye Hitch Assembly

All 20 & 25 Ton
Assembly Part # 2054791
(Includes items 1-7)



Part #	Description	Part #
1	Eye Hitch	2054751
2	Backing Plate	2057582
3	Bolt	2057202
4	Nut	2057201
5	Lock Washer	2054731
6	Nut	2057200
7	Lock Washer	2054756
8	Pintle Hook (not shown)	2054817

ABS AIR SYSTEM DRAWING

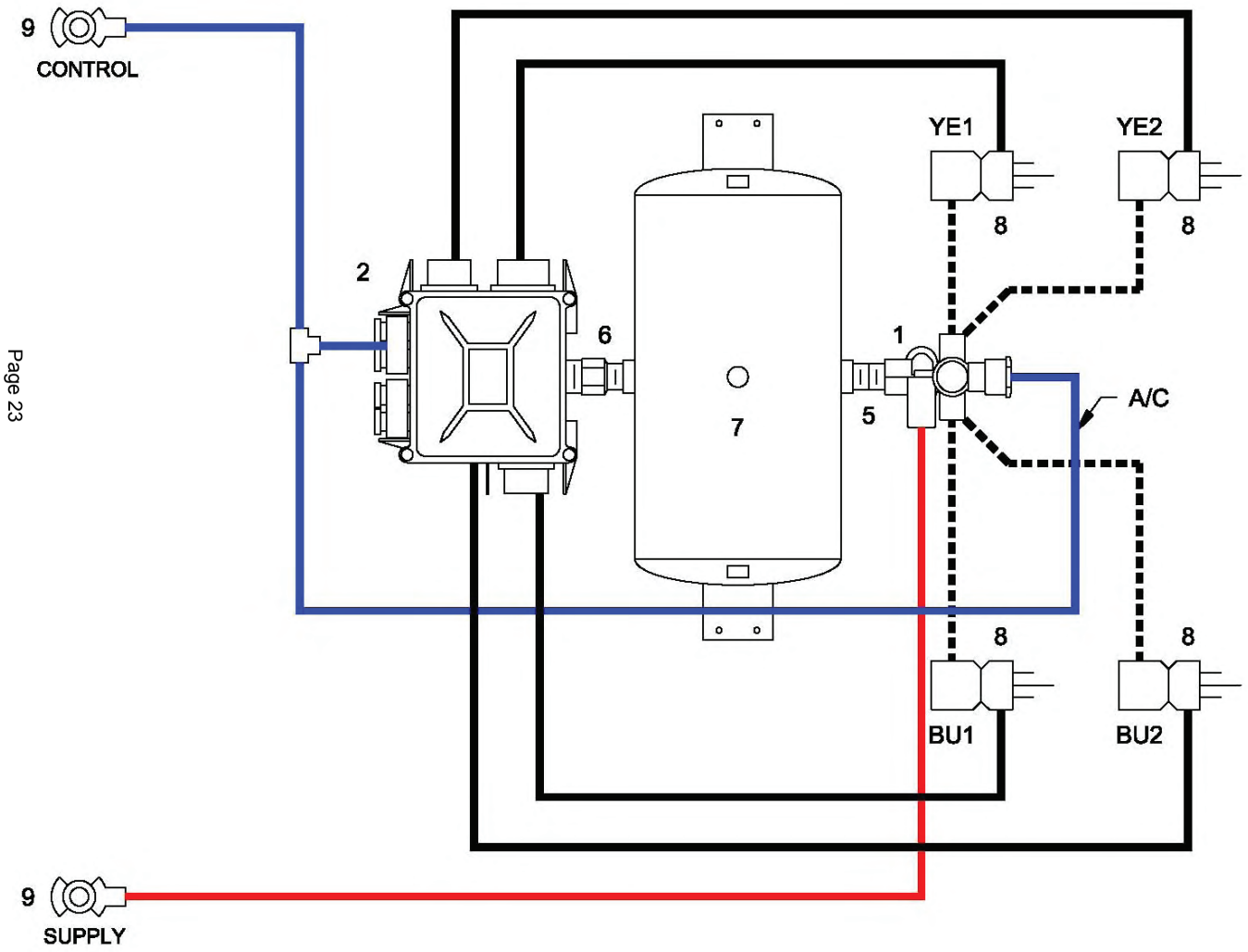


2 AXLE TAG WITH ABS PARTS LIST

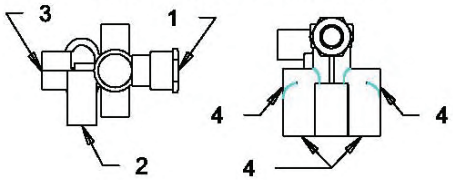
Item	PN	Qty	Description
1	2062139	1	4005001030 (2&3 AXLE ECU)
2	2062080	1	SPRING BRAKE VLV,SEALCO 110800
3	2062102	4	4497130180 6' SENSOR EXT CABLE
4	2062086	4	441-032-808-0 SENSOR W 1' CABLE
5	2062085	4	899-759-815-4 SENSOR CLIP
6	381001	1	3/8HOSE X 60" w /SERV, GLADHAND
7	381002	1	3/8HOSE X 60" w/ EMER, GLADHAND
7A	2055360	1	GLADHAND, SERVICE (BLUE)
7A	2055361	1	GLADHAND, EMERGENCY (RED)
7A	2059141	2	3/8" HOSE X 60"
8	2062131	2	SLOAN PACIFIER P/N 441721
9	2055359	2	3/8FPT-3/8FPT BULKHEAD FITTING (BRASS)
10	411471	2	1"SAE FLAT WASHER PLATED
11	382002	2	3/8T-3/8M SWVL 90 ELBOW (
12	381053	1	3/8T-1/4M SWVL BRNCH TEE
13	381031	1	3/8T-3/8M STRAIGHT CONNECTOR
14	381153	1	3/4"HD NIPPLE,SEALCO #6006
15	381156	2	3/4 MALE CON. 3/4TUBEX3/4
16	2062024	1	AIR TANK (2850) #HT-1242 2-PORT
17	2058065	1	REMOTE DRAIN VLV (350002-048)
18	382106	4	3/8 90°STRT ELBOW, BRASS
19	382162	4	3/8 SQHD PLUG (BRASS)
20	382163	1	3/4 HEXHD PLUG (BRASS)
21	420001	2	AIRTANK MOUNTING PAD #1068
22	411121	4	3/8-16X1.25 HEXHD CAPSCREW GR5
23	411501	8	3/8 STD FLAT WASHER, ZINC
24	411321	4	3/8-16 NYLOC LOCKNUT
25	381879	30	3/8OD NYLON BRAKE TUBING- BLUE
26	381878	30	3/8OD NYLON BRAKE TUBING- RED
27	2062120	2	36" 3/8 AIR BRAKE HOSE
28	2055693	2	60" 3/8 AIR BRAKE HOSE
29	2055692	4	24" 3/8 AIR BRAKE HOSE
30	2059140	2	66" 3/8 AIR BRAKE HOSE
31	411821	12	1/2ID HOSE SEPARATOR
	382156	1	1/2"X 3/4"HEX NIPPLE

4S-2M Air System Schematic

Tandem Axle Tag Trailers

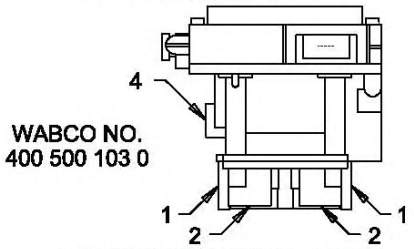


SPRING BRAKE CONTROL VALVE



SEALCO NO. 110800
1. CONTROL PORT (1)-3/8 N.P.T.
2. SUPPLY PORT (1)-3/8 N.P.T.
3. RESERVOIR PORT (1)-1/2 N.P.T.
4. DELIVERY PORT (4)-3/8 N.P.T.

ECU VALVE ASSEMBLY



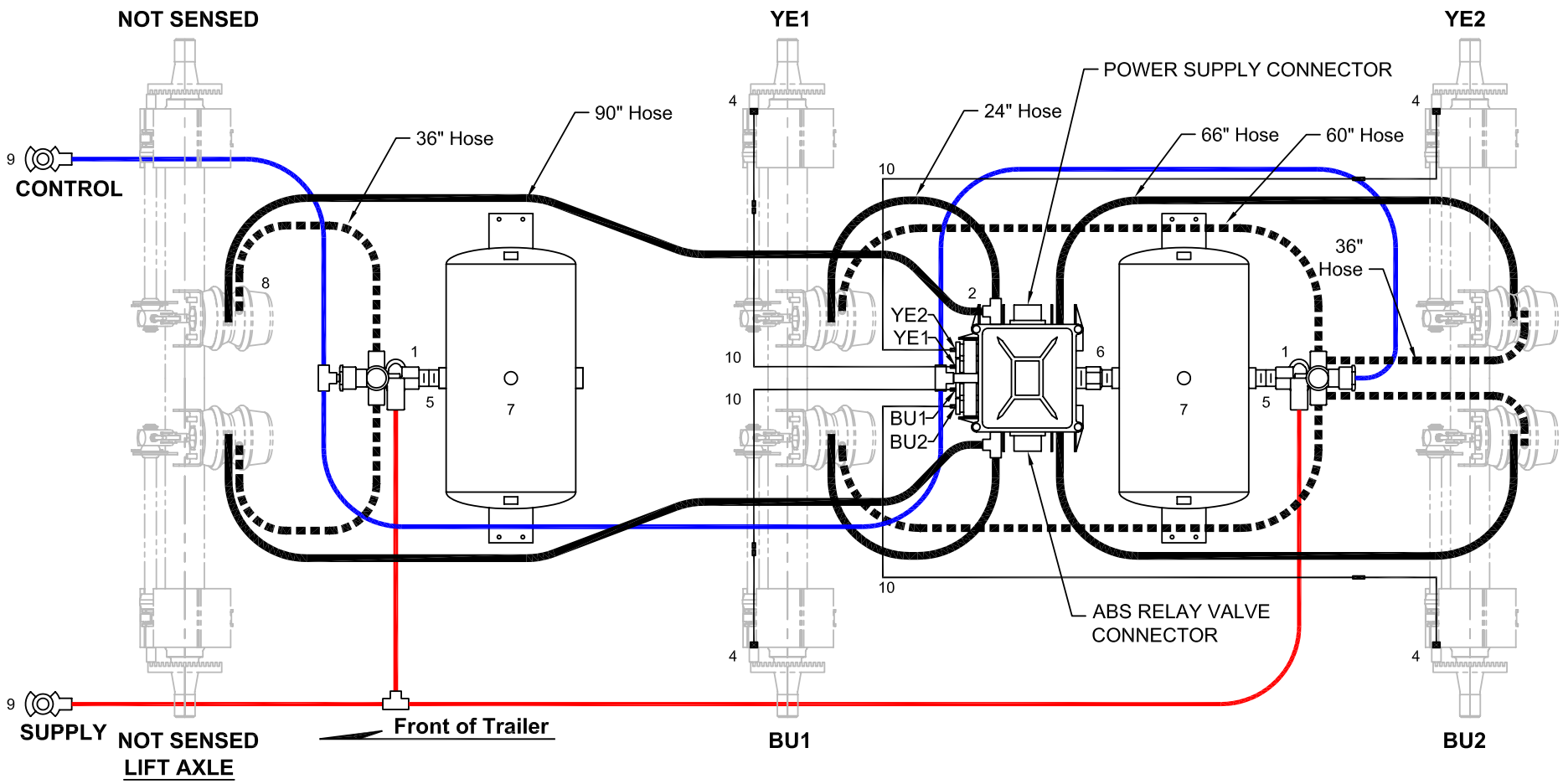
WABCO NO.
400 500 103 0

1. SUPPLY/RES PORT (2)-3/4 N.P.T.
2. DELIVERY PORT (4)-3/8 N.P.T.
4. CONTROL PORT (1)-1/4 N.P.T.

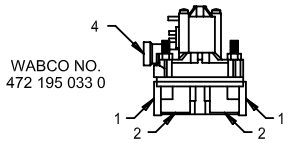
CONTROL LINE (BLUE)
SUPPLY LINE
SPRING BRAKE
SERVICE BRAKE

PLUG ALL UNUSED PORTS
A/C ANTI COMPOUNDING

4S-3M Air System Schematic for 25XPL



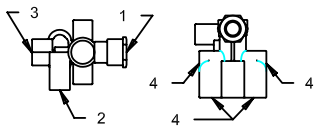
WABCO ABS RELAY VALVE



WABCO NO.
472 195 033 0

1. SUPPLY/RES PORT (2)-3/4 N.P.T.
2. DELIVERY PORT (4)-3/8 N.P.T.
4. CONTROL PORT (1)-3/8 N.P.T.

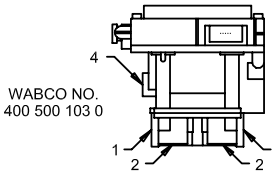
SPRING BRAKE CONTROL VALVE



SEALCO NO. 110800

1. CONTROL PORT (1)-3/8 N.P.T.
2. SUPPLY PORT (1)-3/8 N.P.T.
3. RESERVOIR PORT (1)-1/2 N.P.T.
4. DELIVERY PORT (4)-3/8 N.P.T.

ECU VALVE ASSEMBLY



WABCO NO.
400 500 103 0

1. SUPPLY/RES PORT (2)-3/4 N.P.T.
2. DELIVERY PORT (4)-3/8 N.P.T.
4. CONTROL PORT (1)-1/4 N.P.T.

CONTROL LINE (BLUE)
SUPPLY LINE (RED)
SPRING BRAKE
SERVICE BRAKE
PLUG ALL UNUSED PORTS

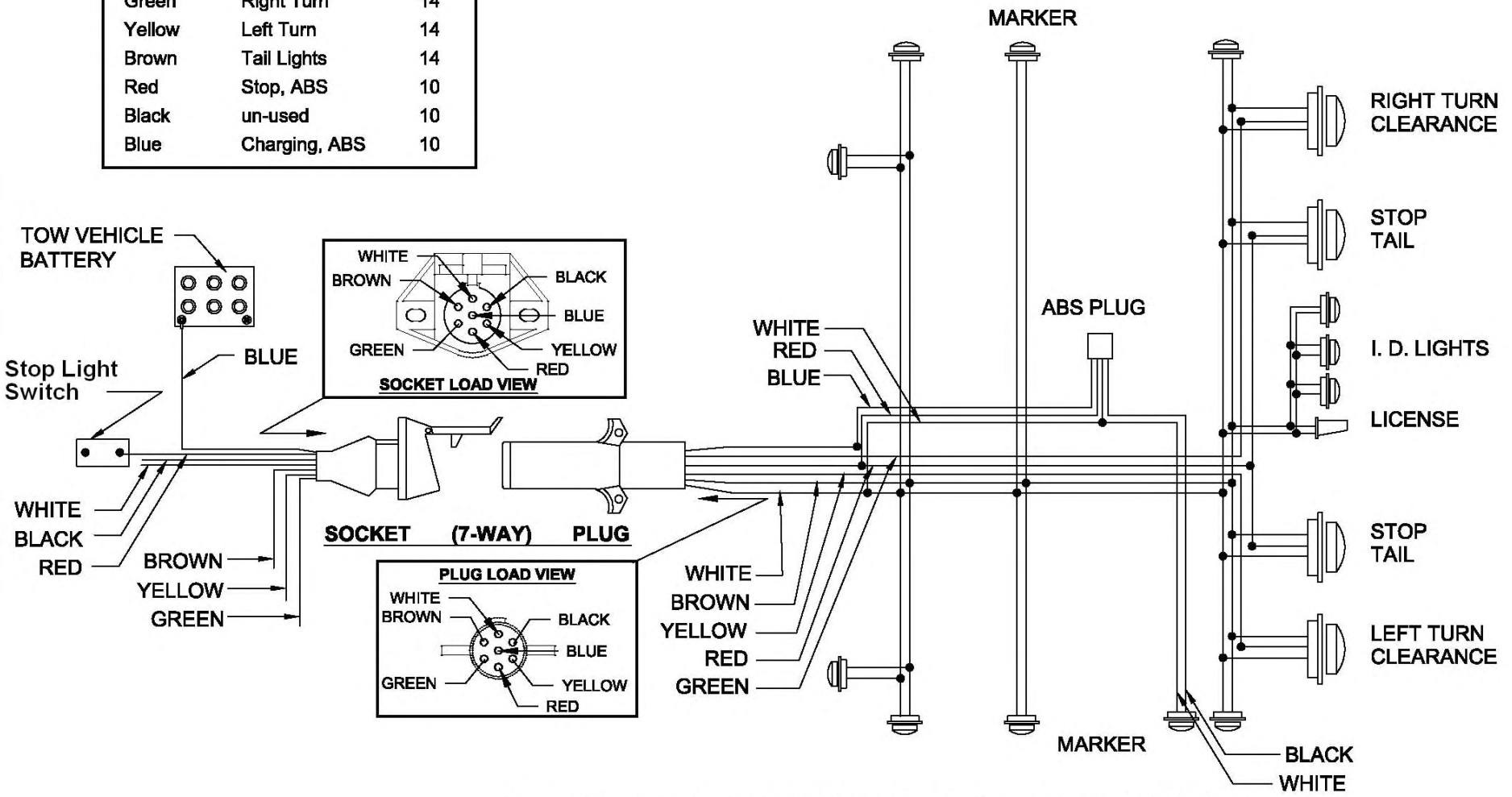
Item	Description
1	Spring Brake Valve
2	ECU ABS Valve
3	ABS Relay Valve
4	Wheel Sensors
5	3/4" x 3/4" Nipple
6	3/4" x 1/2" Nipple
7	2850 Culn Air Tank
8	Air Brake Chambers
9	Glad-hands
10	Sensor Extension Cable

General Engines Co., Inc., 14893 Highway 27, Lake Wales, Florida, USA, 33859, 1-800-257-8163

Note: **ALL** air lines and hoses must be properly routed and secured, so to prevent contact with any surfaces or each other.

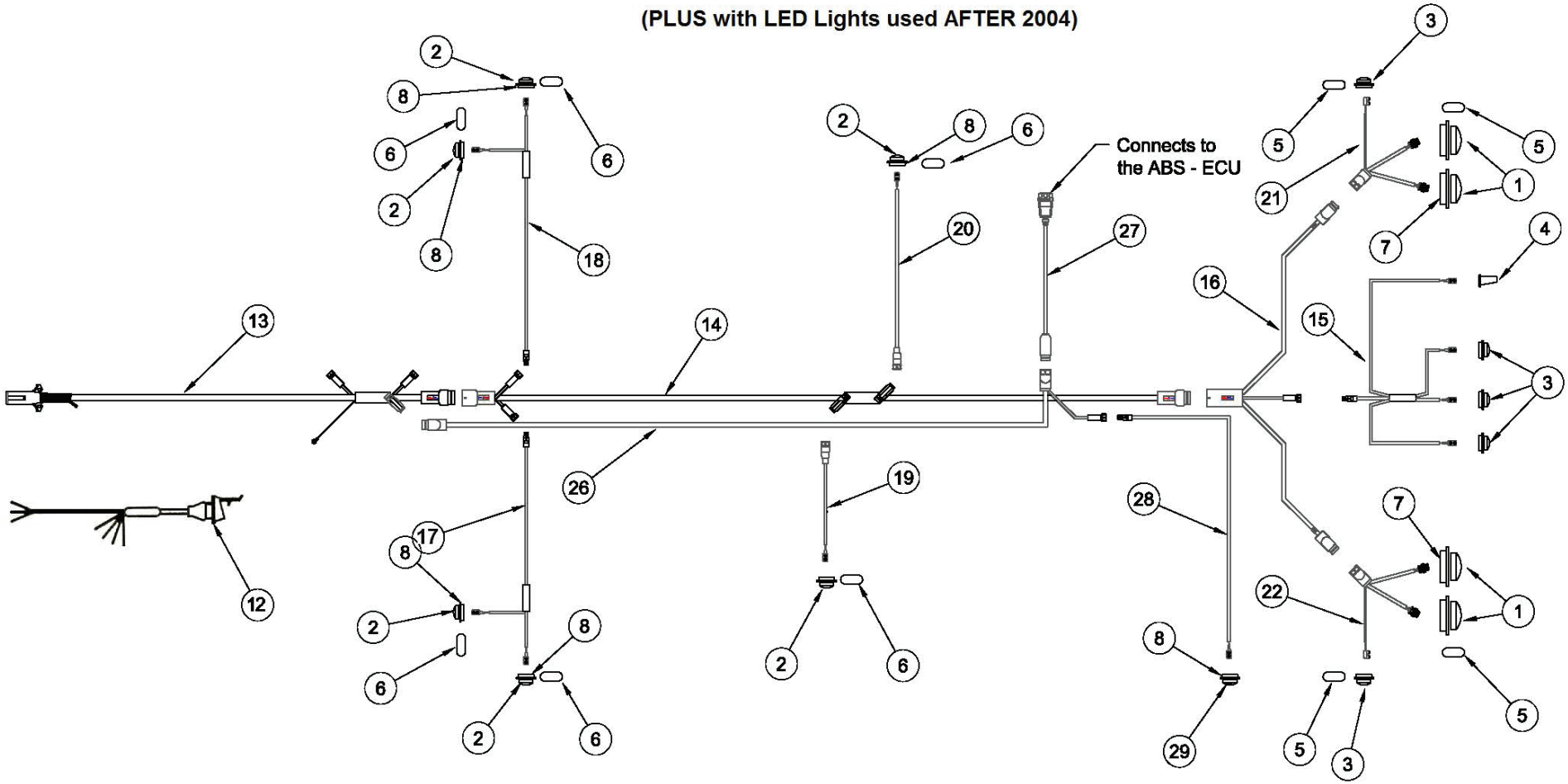
Electrical Wiring Schematic
for Tow Behind Trailers with ABS Brakes

Color	*Function*	*Gauge*
White	Ground	8
Green	Right Turn	14
Yellow	Left Turn	14
Brown	Tail Lights	14
Red	Stop, ABS	10
Black	un-used	10
Blue	Charging, ABS	10

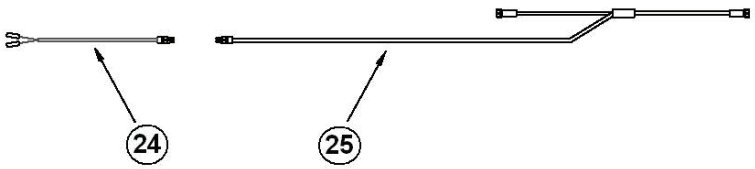


Notes: The **Black** wire is ***NOT*** used on trailers with ABS air brakes.
The **White** ground wire on the truck should be a good solid ground.
The **Blue** ABS wire on the truck **should** be keyed to the ignition and fused, 20-amp.
The **Red** stop light wire on the truck should be connected to the stop light switch.

Eager Beaver 10 - 25 Ton Air Brake Electrical System
with "LED" Lights and USA Harness "PLUS" System Harness
(PLUS with LED Lights used AFTER 2004)



10 - 15 Ton Electric Brake Add-On Harness
(Brake Away Switch Jumper & Electric Brake Harness)



PLUS (Positive Lock Under Seal) Harness & LED Lights Parts List

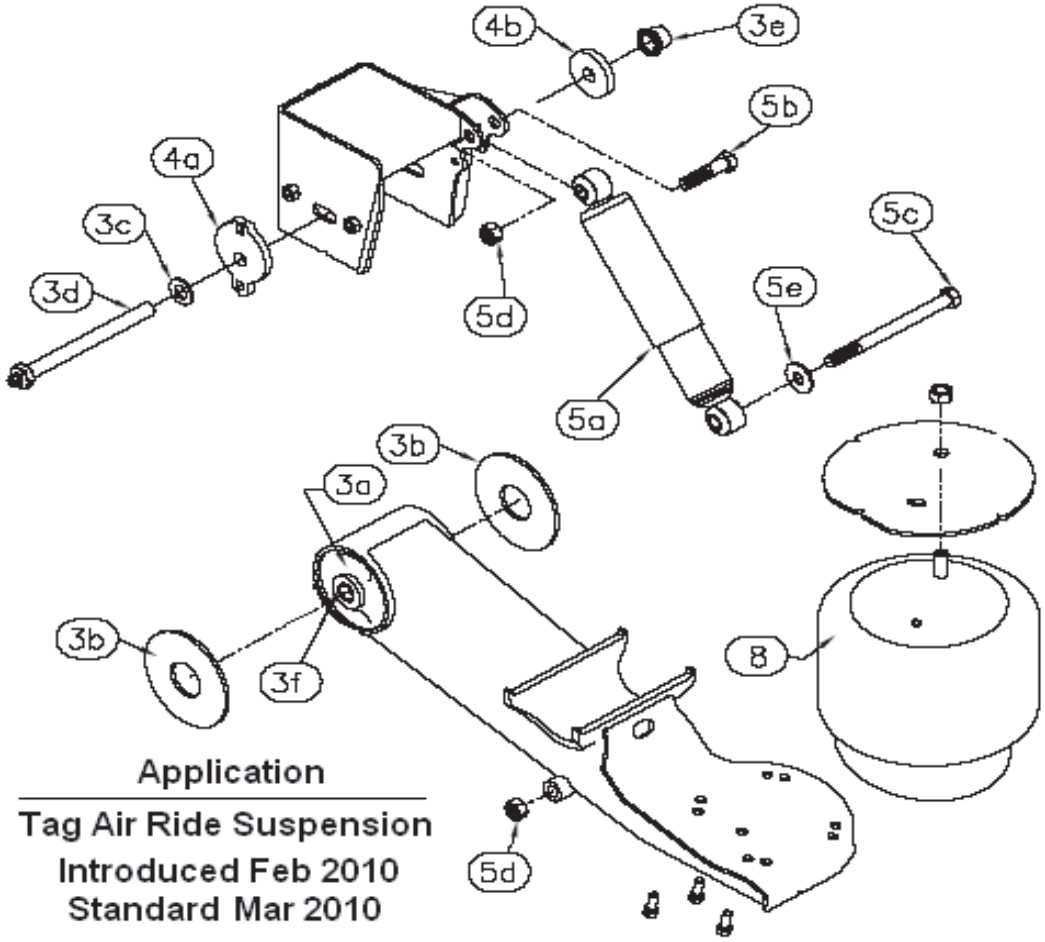
Item	Part no	Qty	Description
1	2062094	4	S/T/T "LED" LIGHT
2	2062095	6	2.5" AMBER LED MARKER LIGHT
3	2062093	5	2.5" RED LED MARKER LIGHT
4	2057075	1	LICENSE PLATE LIGHT (Non LED, One-Piece)
4a	2057072	1	LICENSE PLATE LIGHT HOUSING (2-piece only)
4a	2057074	1	LICENSE PLATE LIGHT (Non LED, 2-piece only)
5	2062130	2	OBLONG RED REFLECTOR
6	2062129	6	OBLONG AMBER REFLECTOR
7	2057067	4	GROMMET, BLACK S/T/T 4"
8	2057069	12	GROMMET, MARKER 2.5"
9-11			not used
12	2060659	1	TRUCK HARNESS, 18', SAE J560 RECEPTACLE
13	2062107	1	TAG NOSE END,12'
14	2062108	1	TAG 10-15 MAIN, 26' PLUS
15	2062193	1	TAILBOARD I.D., PLUS LED
16	2062061	1	TAILBOARD CENTER,ALL PLUS
17	2062194	1	FRONT MARKER, 2-LT, 39" PLUS LED
18	2062195	1	FRONT MARKER, 2-LT, 81" PLUS LED
19	2062196	1	CNTR MARKER,4-POLE, 51" PLUS LED
20	2062197	1	CNTR MARKER,4-POLE, 87" PLUS LED
21	2062198	1	C/S "LED"PGTL,TAG, 14" PLUS LED
22	2062199	1	S/S "LED"PGTL,TAG, 14" PLUS LED
23			not used
24	2062043	1	BREAK AWAY SWITCH JUMPER
25	2062042	1	ELECTRIC BRAKE HARNESS, 19'
26	2062039	1	TAG ABS ADAPTER, 210"
27	2062040	1	ABS POWER, 41"
28	2062041	1	MARKER, 2-POLE, 155"
29	2061097	1	ABS 2.5" MARKER LIGHT - NON LED
KIT	2062200	1	COMPLETE PLUS HARNESS ASSEMBLY *

* (Less ABS items 26, 27, 28 ; Less Elec Brake Items 24, 25 ; Less Item 12)

* (Lights & Grommets also not included with Harness Assembly)

KIT	2061048	1	ELECTRIC BRAKE ITEMS 24 AND 25
KIT	2062119	1	ABS AIR BRAKE ITEMS 26, 27 AND 28

CUSH CLC-25-005 (with Trac-Align)



Application

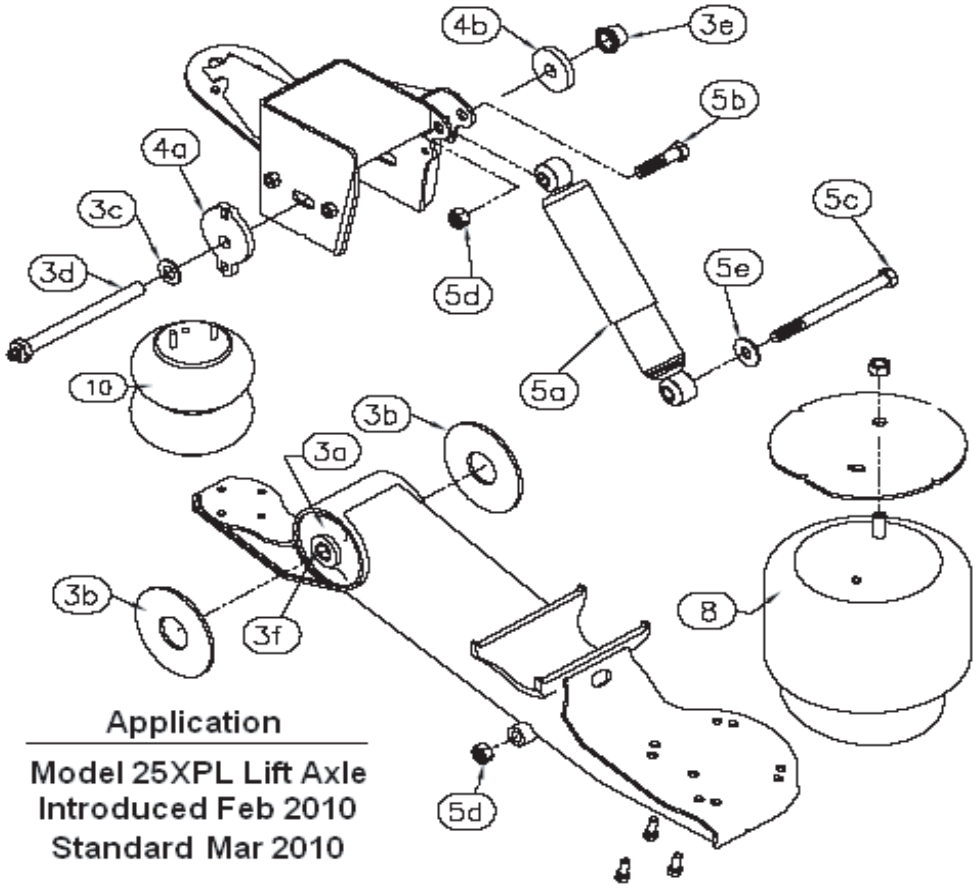
Tag Air Ride Suspension

Introduced Feb 2010

Standard Mar 2010

ITEM	DESCRIPTION	PART #
3a	Bushing Only, 6.75"L x 1.25" ID	2062281
3b	Wear Washer	2062282
3c	Washer, 0.875 SAE ID	2062030
3d	E-20 Torx Bolt .875"-9UNC x 10"	2062285
3e	SecureLoc Nut .875"-9UNC	incl. w/ Bolt
3f	Reducer fm 1.25" OD to 0.9" ID	2062029
4a	Trac-Align, eccentric, outer	2062031
4b	Trac-Align, washer, inner	2062032
5a	Shock Absorber	2062170
5b	Bolt 0.75" - 10UNC x 3.25" GR 5	2062035
5c	Bolt 0.75" - 10UNC x 9.5" GR 5	2062036
5d	Nut, lock, 0.75" - 10UNC	2062037
5e	Washer 3/4" ID	2062038
8	Susp. Air Spring (1 per swing arm)	2062187

CUSH CLC-25-005L (with Trac-Align)

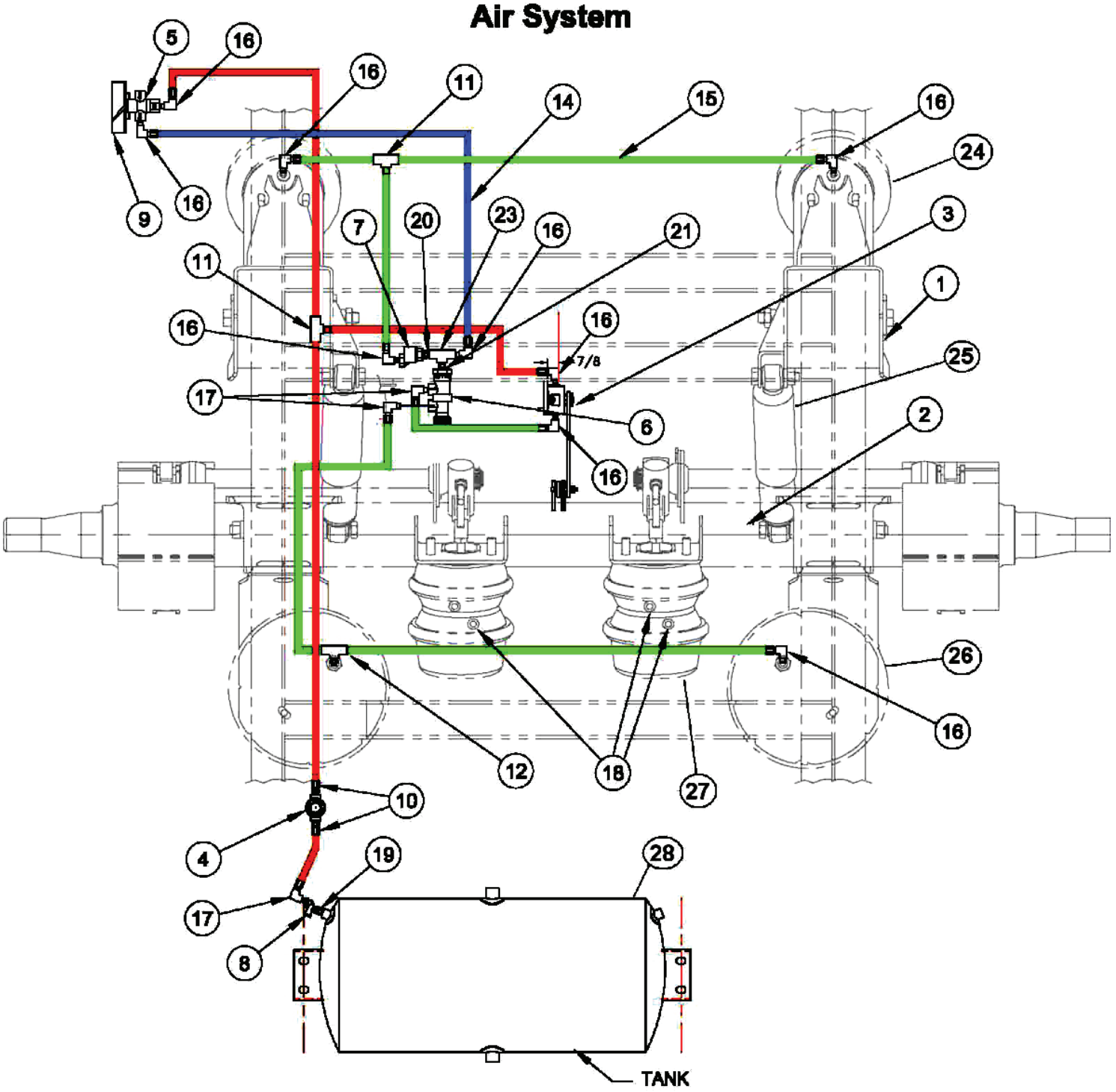


Application

Model 25XPL Lift Axle
Introduced Feb 2010
Standard Mar 2010

ITEM	DESCRIPTION	PART #
3a	Bushing Only, 6.75"L x 1.25" ID	2062281
3b	Wear Washer	2062282
3c	Washer, hard, 0.875 SAE ID	2062030
3d	E-20 Torx Bolt 0.875"-9UNC x 10"	2062285
3e	SecureLoc Nut 0.875"-9UNC	incl. w/ Bolt
3f	Reducer fm 1.25" OD to 0.9" ID	2062029
4a	Trac-Align, eccentric, outer	2062031
4b	Trac-Align, washer, inner	2062032
5a	Shock Absorber	2062170
5b	Bolt 0.75" - 10UNC x 3.25" GR 5	2062035
5c	Bolt 0.75" - 10UNC x 9.5" GR 5	2062036
5d	Nut, lock, 0.75" - 10UNC	2062037
5e	Washer 3/4" ID	2062038
8	Susp. Air Spring (1 per swing arm)	2062187
10	Lift Air Spring (1 per swing arm)	2062186

994684 - 25XPL with CUSH Lift
Air System

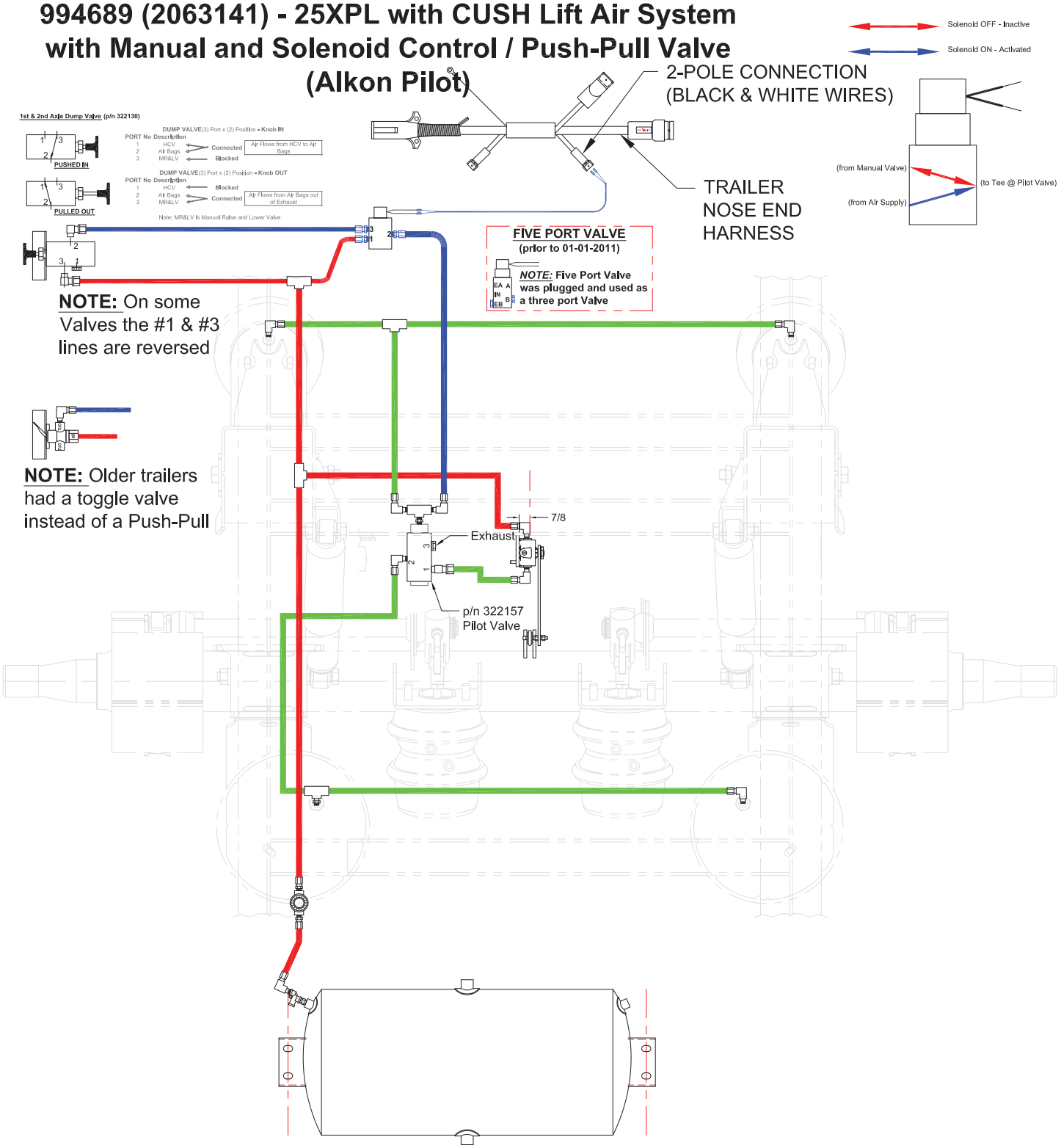


25 XPL CUSH LIFT **AIR SYSTEM** PARTS (994684)

(Toggle Valve used Before January 2007)

ITEM #	PART #	QTY	DESCRIPTION
1	322096	1	CUSH CLC-25-005 LOW MT LI FT
2	991935	1	25K77T HP ASS W/SB A/R AX ASSY
3	2062166	1	CUSH XPL HT CONTROL VALVE KIT
4	2062140	1	PRESS REG VALVE,FIXED @ 70 PSI
5	2062082	1	TOGGLE CTRL VLV SEALCO #21600-2
6	2060824	1	AIR PILOT VLV - SEALCO #110591
7	2062021	1	QUICK REL VLV P/N 3800
8	2062022	1	BRAKE PROTECT VALVE #140270
9	147251	1	12GA X 4X 4 PUSH-PULL VLV BRKT
10	381032	2	3/8T-1/4M STRAIGHT CONN (QCAB)
11	381041	2	3/8 TUBE UNION TEE (QCAS)
12	381053	1	3/8T-1/4M SWVL BRNCH TEE(QCAB)
13	381878	20	3/8 0D NYLON BRAKE TUBING-RED
14	381879	10	3/8 0D NYLON BRAKE TUBING-BLUE
15	381880	10	3/8 0D NYLON BRAKE TUBING-GREEN
16	382001	9	3/8T-1/4M SWVL 90 ELBOW (QCAB)
17	382002	3	3/8T-3/8M SWVL 90 ELBOW (QCAB)
18	382116	4	3/8 45°STRT ELBOW,BRASS,3350X6
19	382150	1	3/8"HEX NIPPLE (BRASS)
20	382151	1	1/4"HEX NIPPLE (BRASS)
21	382154	1	3/8"X 1/4"HEX NIPPLE (BRASS)
22	382171	1	1/4 HEX SOCKET PLUG (BRASS)
23	383121	1	1/4 NPT BRASS TEE.WIH 3700X4
24	2062186	2	AXLE LIFT AIR BAG
25	2062170	2	SHOCK ABSORBER
26	2062187	2	SUSPENSION AIR BAG
27	2059596	2	SPRING BRAKE CHAMBER
28	2062024	1	2-PORT AIR TANK

994689 (2063141) - 25XPL with CUSH Lift Air System with Manual and Solenoid Control / Push-Pull Valve (Alkon Pilot)



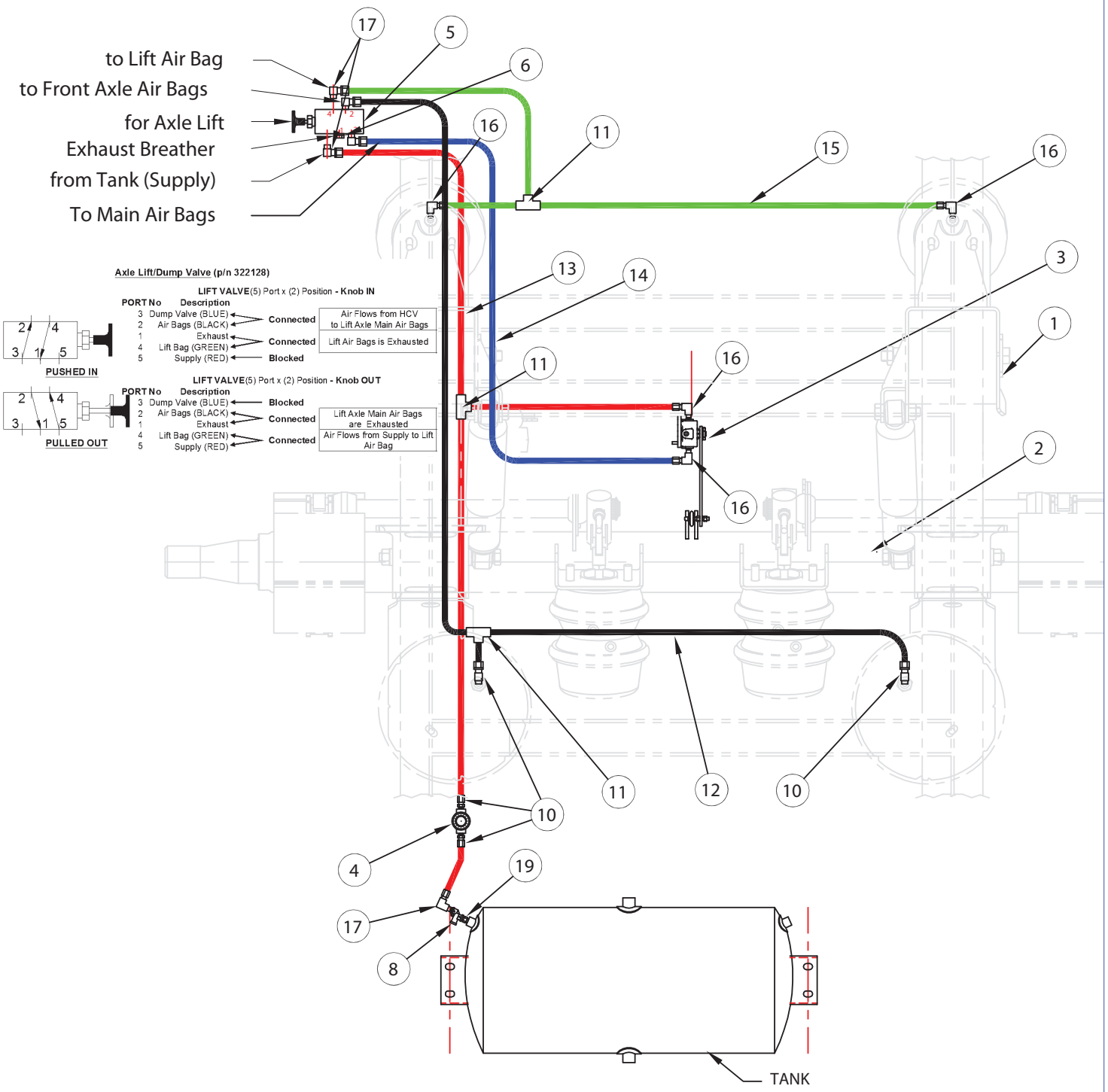
Item	Part No	Qty	Description
1	322096	1	CUSH CLC-25-005 LOW MT LIFT
2	991935	1	25K77T HP ABS W/SB A/R AX ASSY
3	322072	1	CUSH XPL HT CONTROL VALVE KIT
4	322129	1	PRESS REG VALVE,FIXED @ 70 PSI
5	322130	1	2/3 PUSH-PULL VALVE (After 12-06)
	322132	1	TOGGLE CTRL VALVE (prior to 12-06)
6	322157	1	3/2 PILOT VALVE,P/N V3810305
7	NOTE: Removed Quick Release Valve (12-22-10)		
8	322139	1	BRAKE PROTECT VALVE #140270
9	147251	1	12GA X 4X 4 PUSH-PULL VLV BRKT
10	381032	4	3/8T-1/4M STRAIGHT CONN (QCAB)
11	381041	3	3/8TUBE UNION TEE (QCAB)
12	381053	1	3/8T-1/4M SWVL BRNCH TEE(QCAB)

Item	Part No	Qty	Description
13	381878	20	3/8OD NYLON BRAKE TUBING- RED
14	381879	10	3/8OD NYLON BRAKE TUBING-BLUE
15	381880	10	3/8OD NYLON BRAKE TUBING-GREEN
16	382001	8	3/8T-1/4M SWVL 90 ELBOW (QCAB)
17	382002	5	3/8T-3/8M SWVL 90 ELBOW (QCAB)
18	382116	4	3/8 45°STRT ELBOW,BRASS,3350X6
19	382150	1	3/8"HEX NIPPLE (BRASS)
20	NOTE: Removed 1/4" Nipple (12-22-10)		
21	382154	1	3/8"X 1/4"HEX NIPPLE (BRASS)
22	382171	1	1/4 HEX SOCKET PLUG (BRASS)
23	383121	1	1/4 NPT BRASS TEE,W/H 3700X4
24	382145	1	SOLENOID VALVE 3-WAY 12VDC
26	392481	1	TAG MAIN JUMPER,27'(2)POL PLUS

General Engines Co., Inc., 14893 Highway 27, Lake Wales, Florida, USA, 33859, 1-800-257-8163

994684 - 25XPL with CUSH Lift

No Pilot Air System (Effective Jan 2007)



Item	Part No	Qty	Description
1	322096	1	CUSH CLC-25-005 LOW MT LIFT
2	991935	1	25K77T HP ABS W/SB A/R AX ASSY
3	322072	1	CUSH XPL HT CONTROL VALVE KIT
4	322129	1	PRESS REG VALVE,FIXED @ 70 PSI
5	322128	1	PUSH-PULL VLV ALKON TD6300,2/5
6	322155	1	SEALCO-EXHAUST SEAL P/N 110524
8	322139	1	BRAKE PROTECT VALVE #140270
9	147251	1	12GA X 4X 4 PUSH-PULL VLV BRKT

Item	Part No	Qty	Description
10	381032	4	3/8T-1/4M STRAIGHT CONN (QCAB)
11	381041	3	3/8TUBE UNION TEE (QCAB)
12	381881	20	3/8OD NYLON BRAKE TUBING- BLACK
13	381878	20	3/8OD NYLON BRAKE TUBING- RED
14	381879	10	3/8OD NYLON BRAKE TUBING-BLUE
15	381880	10	3/8OD NYLON BRAKE TUBING-GREEN
16	382001	4	3/8T-1/4M SWVL 90 ELBOW (QCAB)
17	382002	5	3/8T-3/8M SWVL 90 ELBOW (QCAB)

Eager Beaver Trailers 20 & 25 Ton Tag

Miscellaneous Parts & Paint Codes

PART NO.	DESCRIPTION
2054869	Deck Washer
2059133	Hex Head Bolt, Deck Washer, 3/8 x 2 1/2
2059134	Nut, Deck Washer, 3/8-16
2059901	Self-Tapping TORX Head Ramp Screw, 5/16-18 X 2 1/2
2060510	Nose Plate, 15-25 Ton Only
2054819	100,000 # Pintle Hook (Wallace Forge)
2060834	Aluminum Extension Ramps (Set)
2060659	Truck Wiring Harness, 18' with SAE J560 Receptacle
2058065	Air Tank Remote Drain Valve
2059175	Glad Hand replacement rubber seal
2055360	Glad Hand - Brake Control Service (Blue)
2055361	Glad Hand - Tank Supply (Red)
2059431	Safety Chain, 1/2" x 41", with Clevis Hook
2059432	Weld-on Anchor, Safety Chain, 5/8" x 8"
2061064	Clevis Hook, 1/2", Spring Loaded
2062129	Oblong Reflector - Amber
2062130	Oblong Reflector - Red
2060735	Eager Beaver Trailers Mud Flap - White 24" x 18"
2054792	Weld-on 1" Dia. Fixed D-Ring & Clip (15,000# WLL)
2054733	Weld-on 5/8" Dia. Fixed D-Ring & Clip (6,130# WLL)
2063021	Weld-on Spare Tire Carrier for Hub Piloted Wheel

Eager Beaver Standard Colors	Manufactured After 8/6/10 Dupont Imron	MFG between 9/22/06 and 8/6/10 PPG Color Code
Yellow	H7947	FP827
Red	77968	FP703
Black	1640	FP901
Blue	3759	*
White	1632	FP951

* Custom Mixed Color, No Code Assigned

Eager Beaver Trailers

Tag Trailer Weld On Lockable Toolbox Lid Kits

Specify Part # and Color when Ordering

Description	*Part #*
B6-9DOW	
STD TOOL BOX ASS'Y	2063002
10-25 TON	
NEW TOOL BOX 43" BC (Two Jack Locations)	2063005 *
STD TOOL BOX 37" BC (One Jack Location)	2063003
STD TOOL BOX 43" BC (One Jack Location)	2063001
15-20 TON WITH LANDING GEAR	
TOOL BOX 43" BC (with Landing Gear)	2063008

Note: All Eager Beaver Trailers are manufactured with a steel tray plate in the draw bar. Therefore, Toolbox Lid Kits do NOT include a tray plate (i.e., a toolbox bottom).

Should a tray plate need to be replaced, a list of the more common Tray Plates is provided below:

12GAX35X26 37BC 10-25 SML TPLT (2 Jack Mts)	141275
12GAX35X35 37BC TRAYPLT (1 Jack Mt)	141203
12GAX41X26 43BC 10-25 SML TPLT (2 Jack Mts)	141274 *
12GAX41X38 43BC 10-25 SML TPLT (1 Jack Mt)	141276
12GAX41X45 43BC TRAYPLT (15-25 Ton with L/G)	141202

* Standard Production since 2002

EASY LOADER

New 2022 Edition

Operation | Maintenance | Service

20 Ton XPT
25 Ton XPT / XPL

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Eager Beaver PARTS

General Engines Co., Inc., 548 Swedesboro Ave., Mickleton, NJ 08056

Parts: (800) 338-7088 **Sales: (800) 257-8163**

EagerBeaverTrailers.com

7700/9700

4-Spring Suspension Series

Maintenance Procedures

Advancing the Practical Application of Suspension Technology

Springfield, MO ■ (800) 654-8824 ■ (417) 862-5012
Fax (417) 862-2317 ■ www.hutchensindustries.com

Warning

We strongly emphasize that each of the maintenance procedures that we will discuss have a significant safety purpose. Failure to maintain proper torque values on each of the suspension components can result in a failure of suspension components. Further, use of any visibly worn component can result in a failure. Any of these failures can result in loss of vehicle control and personal injury or death. Safety is the number one concern at Hutchens Industries. We urge you to follow the maintenance procedures set out in our video and in these written instructions.

The first maintenance check should be performed after an initial break-in period of about 1,000 miles. A visual inspection of all suspension components and attachment welds should be performed to reveal any obvious problems, such as cracks or unexpected wear.

During this "walk-around" it is essential to also check the torque on all suspension fasteners. In the course of the initial "shake down" period in which the components of the suspension "seat-in," as much as 25% of the original clamp load on the bolted joints can be lost. After the parts of the suspension have worked together for a very short period of time, re-torquing the bolts is necessary to ensure that undue movement – which results in excessive suspension wear – does not occur.

During the first maintenance check, the trailer's axle alignment should be examined and adjusted to comply with the Truck Trailer Manufacturers Association (TTMA) Recommended Practice #71-05. Alignment should also be checked following any maintenance or repair procedure performed on the suspension. Visual inspections and re-torquing are maintenance procedures that are performed every four months throughout the life of the trailer.

Begin each inspection with a review of the Hutchens torque decal (shown below) for the appropriate torque values for each suspension fastener. The oiled torque values in the first column are for new fasteners with lubricated threads. When you are installing new components, we recommend you lubricate the threads and use the torque values in this column. For maintenance checks on fasteners that have been in service, use the higher torque values in the dry thread column. It is important that you check all bolts and nuts to ensure that the recommended torque values are being maintained.

You cannot rely on your visual inspection to detect loose fasteners. **USE A TORQUE WRENCH!**

⚠ WARNING

SAFETY ALERT! (1) FOLLOW ALL TORQUE REQUIREMENTS. (2) DO NOT USE ANY COMPONENT WITH VISIBLY WORN OR DAMAGED THREADS. FAILURE TO FOLLOW THESE SAFETY ALERTS CAN LEAD TO LOSS OF VEHICLE CONTROL, PROPERTY DAMAGE, SERIOUS PERSONAL INJURY OR DEATH.

Hutchens Suspension Torque Requirements
9600-9700 Series (Decal Part Number 16086-01 Rev. J)

After an initial break in period, approximately 1000 miles, and at least every 4 months periodically thereafter, ALL bolts and nuts should be checked to insure that recommended torque values are being maintained.

Oil torque values listed are for new fasteners with lubricated threads. It is recommended that new installations be performed with oiled fasteners. For dry threads which have been in service, use the higher torque values which are noted below.

	OILED	DRY
1 1/8-7 (9600/9700 Rocker Bolt)	590 lb-ft	790 lb-ft
1-14 or 1-8 (9700 Radius Rod Bolt)	540 lb-ft	720 lb-ft
7/8-14 (Axle U-Bolts & 9600 Radius Rod Bolt)	350 lb-ft	470 lb-ft
3/4-16 (Axle U-Bolts)	310 lb-ft	420 lb-ft
5/8-18 (Radius Rod Clamp Bolt)	130 lb-ft	170 lb-ft
5/8-18 (Spring Retainer Bolt)	35 lb-ft	50 lb-ft

HUTCH Hutchens Industries® Hutchens Industries, Inc., P.O. Box 1427, Springfield, Missouri 65801-1427 Toll Free 1 (800) 654-8824

Hutchens Torque Decal Part No. 16086-01

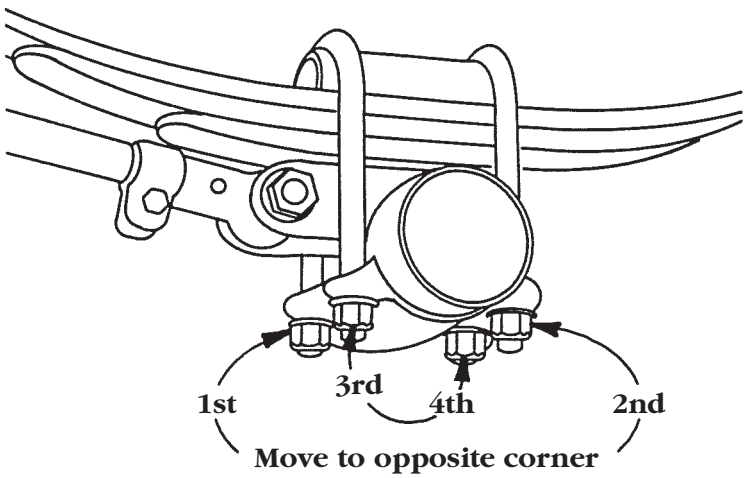
This decal should be installed on the side of the trailer in a visible location.
Decals can be obtained free of charge by contacting Hutchens Industries, Inc.

Now let's look closely at the maintenance requirements for each of the suspension's main component groups.

Axle Clamp Group and Springs

1. Check the torque on the U-bolt nuts by alternately tightening opposing corners of the clamp assembly. **See Figure 1.**
a. When using 7/8" – 14 U-bolts, the nuts should be torqued to a **dry** level of 470 lb-ft.
b. When using 3/4" – 16 U-bolts, the nuts should be torqued to a **dry** level of 420 lb-ft.

Fig. 1

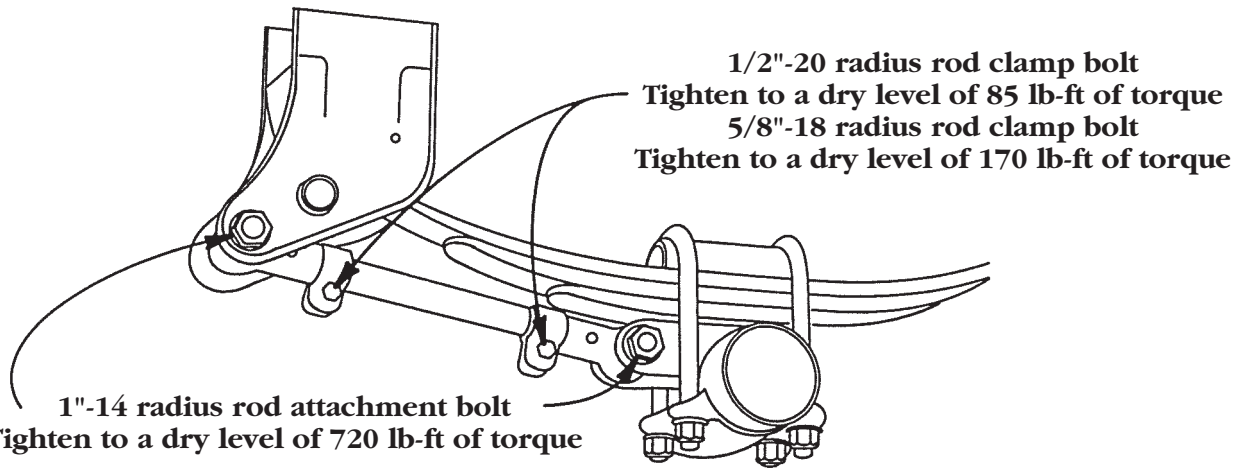


Always carefully inspect the spring and axle clamp components for any signs of wear or cracks, and replace if visible wear or cracks are present.

Radius Rods

2a. The 1" – 14 radius rod attachment bolts at the hangers and spring seats should be tightened to a **dry** level of 720 lb-ft of torque on both the adjustable and non-adjustable radius rods. **See Figure 2.**

Fig. 2



Loose operation of this bolt can result in wear requiring that new components be installed to avoid structural damage. During your visual inspection, if you observe any visible wear or loosening in the bushing, it is imperative that you immediately replace the radius rod bushing and bolt. Failure to replace these components will result in damage to the hanger, spring seat, and/or radius rod.

2b. Next check the 1/2" – 20 radius rod clamp bolt, which should be tightened to a **dry** level of 85 lb-ft of torque. The 5/8" – 18 radius rod clamp bolt should be tightened to a **dry** level of 170 lb-ft of torque. **See Figure 2.** If the clamp bolt has not been properly maintained, then wear between the radius rod screw and the eye end may be observed. If so, then the entire radius rod must be replaced. **Simply retightening or replacing the clamp bolt will not correct the problem.**

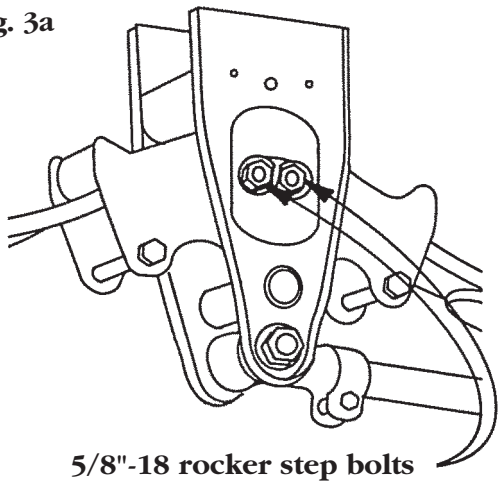
Rocker Bushings

3. The recommended torque values for the rocker bushing clamp bolts are different for each model.

a. If you are working on the 7700 model suspension, the 5/8" – 18 rocker step bolts should be tightened to a **dry** level of 170 lb-ft of torque. **See Figure 3a.**

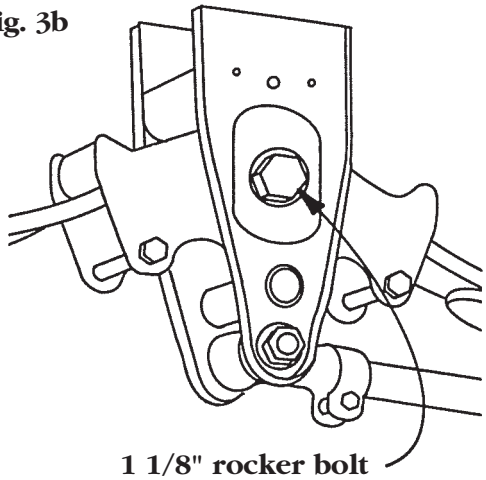
b. If you are working on the 9700 model suspension, the single 1 1/8" – 7 rocker bolt should be tightened to a **dry** level of 790 lb-ft of torque. **See Figure 3b.**

Fig. 3a



5/8"-18 rocker step bolts
Tighten to a dry level of 170 lb-ft of torque

Fig. 3b



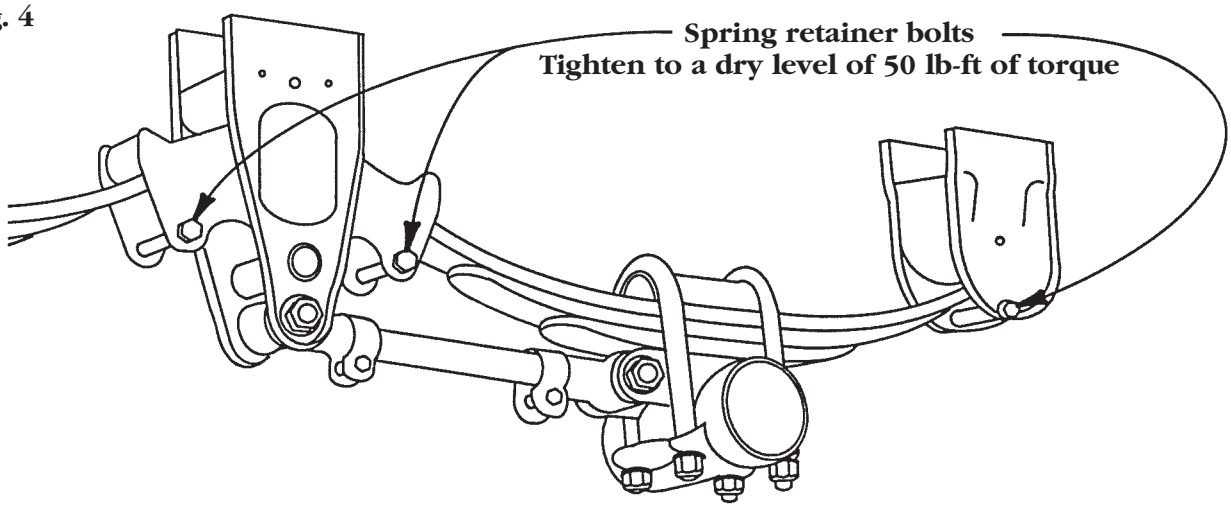
1 1/8" rocker bolt
Tighten to a dry level of 790 lb-ft of torque

During your check, if the bolts are loose a detailed inspection of the rocker is important to ensure that no structural damage has occurred. One way this can be done is by raising the trailer until the trailer weight is taken off the springs. If the rocker is displaced or if the joint is loose, then the rocker should be removed and the rocker and/or rocker bushing be replaced. Again, visually inspect the condition of all rocker/rocker hanger assembly components and replace if visible wear is present.

Hangers

4. Check all of the spring retainer bolts found in the rockers and rear hangers. A **dry** value of 50 lb-ft of torque should be maintained on all of these bolts. **See Figure 4.**

Fig. 4



Loose fasteners that are allowed to operate for any period of time will result in irreversible suspension damage and possible loss of vehicle control. **Retightening a worn fastener will not correct a situation created by loose operation!**

WHEEL BEARINGS

OIL LUBRICATED WHEEL ENDS*:

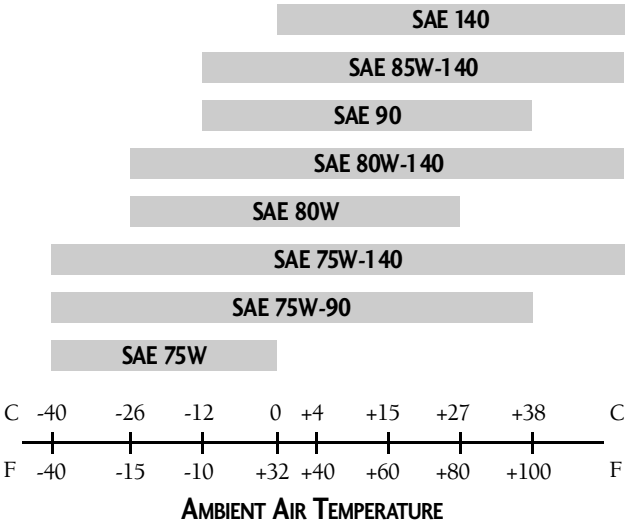
**Note: For unitized wheel ends, please refer to the Spicer RM™ Service Manual*

Oil should be changed at least every 100,000 miles or once a year, and whenever the seals or brakes are replaced. Oil level should be inspected every 1,000 miles. Always allow a few minutes, after adding oil or after vehicle operation, for the oil to settle when establishing the required oil level.

SUGGESTED OIL PROPERTIES

Petroleum based or synthetic oils that meet or exceed military specification MIL-L-2105D and API (American Petroleum Institute) service classification GL-1 through GL-5 are the minimum requirements for use in Spicer Trailer Axles.

The table below indicates which SAE viscosities are recommended for various temperature ranges the vehicle will encounter.



WARNING DO NOT MIX MOTOR OIL WITH EP GEAR OIL, DUE TO POSSIBLE COMPATIBILITY PROBLEMS.

GREASE LUBRICATED WHEEL ENDS:

Grease should be replaced if contaminated or if the hub is removed from the spindle. For normal service, grease should be replaced annually or at 100,000 mile intervals. For severe or off-highway service, grease should be replaced semi-annually or at 30,000 mile intervals. Bearings should be packed by machine or by hand methods to ensure grease is forced into the cavities between the rollers, cone and cage of the bearings. The wheel and hub cap should be filled with grease when reassembling.

SUGGESTED GREASE PROPERTIES

The table below indicates the NLGI† Grade of grease recommended under normal loading and operating speeds of 100-1000 rpm. For heavy loads and low speeds, the advice of a lubrication engineer should be obtained.

GREASE GUIDE

SOAP BASED GREASE TYPE	NLGI GREASE GRADE	NOTE
Calcium Complex	#1	Use in extreme cold
Lithium Complex	#2	Normally Preferred

SEMI FLUID SYNTHETIC GREASE TYPE	NLGI GREASE GRADE	NOTE
Mobilith 007 or equivalent	#00	Normally Preferred

† *National Lubricating Grease Institute*

WARNING DO NOT MIX LITHIUM, CALCIUM, SODIUM OR BARIUM COMPLEX GREASES DUE TO POSSIBLE COMPATIBILITY PROBLEMS. WHEN CHANGING FROM ONE TYPE OF GREASE TO ANOTHER, IT IS NECESSARY TO ENSURETHAT ALL THE OLD GREASE HAS BEEN REMOVED.

WARNING FAILURE TO CORRECTLY LUBRICATE BEARINGS - AND TO MAINTAIN PROPER LUBRICATION - COULD CAUSE BEARING AND AXLE SPINDLE DAMAGE, WHICH COULD RESULT IN THE WHEEL LOCKING UP OR COMING OFF DURING VEHICLE OPERATION.

WHEEL BEARING ADJUSTMENT PROCEDURE

Double Nut Arrangement

1. Prior to installing any wheel-end fasteners, make sure the spindle area is free of dirt and debris. As well, make sure all nuts and washers are free of dirt. Clean mating surfaces are important for proper wheel end assembly.

2. After properly installing the bearing cones and wheel end seal onto the spindle, and sliding the wheel end onto the spindle, tighten the inner spindle nut with a torque wrench to 150-200 ft. lbs. to set the bearings and wheel end. **Caution: Do not use an air impact wrench to tighten this nut!**

3. Loosen this inner nut to allow the brake drum to rotate freely. Backing off one (1) full turn is recommended.

4. Retighten the inner spindle nut to 50 ft. lbs. by hand using a torque wrench to position the bearings for final adjustment. **Caution: Do not use an air impact wrench to tighten this nut!**

5. Back the inner spindle nut off 1/4 turn.

6. Install the retaining fastener or fasteners onto the spindle according to the fastener used. If washers are used, be sure they are facing in the right direction and are clean. Make sure any washers with dowels fit properly into the mating holes.

7. Install the outer spindle nut. Using a torque wrench, tighten this nut to 300-400 ft.-lbs. Resulting end play should be .001" to .005".

Note: If end play is not .001" to .005", disassemble and repeat this procedure.

WARNING Failure to torque the outer lock nut properly could cause the wheel to come off during vehicle operation, which could result inproperty damage, serious injury or death.

WARNING If an external tang or setscrew type lock washer is used, it is important to remember to bend the tabs over the outer lock nut, or to install the set screws in the lock washer, after the outer nut has been torqued. Failure to follow this procedure could result in property damage, serious injury or death.

Periodic inspection and regular replacement of lubricant is important to obtaining maximum bearing life. Always inspect bearing for damage prior to installation. When installing wheel bearings it is important to ensure both the inside of the wheel hub and bearings are clean. Spicer recommends that seals be replaced when wheels are removed. Extreme care should be taken when reinstalling wheels to prevent damage to the seals.

SPECIFICATIONS

AXLE MODEL	LOCATION	SPICER BEARING CUP NUMBER	SPICER BEARING CONE NUMBER	INDUSTRY STD. CUP NUMBER	INDUSTRY STD. CUP NUMBER	WIDTH	OUTSIDE DIAMETER	INSIDE BORE
D22	Inner	M10HA102	M10HB100	HM218210	HM218248	1.575”	5.787”	3.542”
D22	Outer	M10HA103	M10HB101	HM212011	HM212049	1.500”	4.813”	2.625”
P22	Inner/Outer	M10HA116	M10HB119	HM518410	HM518445	1.563”	6.000”	3.501”

RECOMMENDED BRAKE ADJUSTMENT PROCEDURE

CAUTION FAILURE TO PROPERLY ADJUST BRAKES COULD CAUSE REDUCED BRAKING PERFORMANCE.

A. Grease cam bracket and spider fittings prior to brake shoe installation.

WARNING CARE MUST BE EXERCISED TO PREVENT GREASE FROM COMING IN CONTACT WITH BRAKE LININGS WHICH COULD CAUSE A REDUCTION IN BRAKING PERFORMANCE. REDUCED BRAKING PERFORMANCE COULD CAUSE AN ACCIDENT RESULTING IN SERIOUS INJURY OR DEATH.

B. Adjust the slack adjuster until the brake lining comes into contact with the brake drum.

1. For green brakes* there should be a slight amount of wheel drag at initial adjustment to compensate for any lining irregularities (high spots, etc.).

**A "green brake" is an unground, unburnished brake. There is a break-in period where the lining will seat into a normal conact pattern with the drum.*

2. For burnished or broken-in brakes, back off the slack adjuster to achieve .010" clearance between drum and shoe.

C. Apply brakes using normal truck operating pressure. (Average line pressure should be 90 psi.)

WARNING USE OF AIR PRESSURE IN EXCESS OF 130 PSI COULD RESULT IN FAILURE OF THE AIR CHAMBER OR SPRING BRAKE CHAMBER, WHICH COULD RESULT IN SERIOUS INJURY OR DEATH.

1. Check the amount of push rod travel. Maximum should not exceed 2.5" for Type 30 Long Stroke chambers, 2" for Type 30 chambers and 1 3/4" for Type 24 chambers.

a. Optimum pushrod travel on a green brake* should be under 2".

b. Optimum pushrod travel on a burnished or broken-in brake should be under 1 3/4".

2. Check the angle between the slack adjuster and push rod. With the brakes applied, the angle should be 90 degrees +/- 5 degrees.

CAUTION WHEN AUTOMATIC BRAKE ADJUSTERS ARE USED, IT IS NECESSARY TO FOLLOW THE INSTALLATION AND ADJUSTMENT PROCEDURERECOMMENDED BY THE AUTOMATIC BRAKE ADJUSTER MANUFACTURER. FAILURE TO FOLLOW THE RECOMMENDED PROCEDURE COULD RESULT IN IMPROPER OPERATION OF THE AUTOMATIC SLACK ADJUSTER, RESULTING IN REDUCED BRAKE PERFORMANCE OR PREMATURE LINING WEAR.

3. For burnished brakes, apply pressure to brakes and check for lining to drum contact. Using a .010" feeler gauge, the lining to drum contact should range from 60 to 100% during brake application.

4. Check to ensure the lining is inside the drum during application. More than .060" protruding out of the drum is not recommended.

D. Rapidly release air pressure from the brakes and confirm that all brakes quickly release to the normal relaxed position.

WARNING

- BRAKELININGSCONTAINNON -ASBESTOSFIBERS
- BREATHINGBRAKEDUST MAY BEHAZARDOUS TO YOUR HEALTHAND MAY CAUSE SERIOUSRESPIRATORY OR OTHERBODILY HARM.
- AVOIDCREATINGDUST.
- DON'T REMOVEBRAKEDRUM WITHOUTPROPER PROTECTIVE EQUIPMENT.
- DO NOT WORKON LININGSWITHOUTPROPERPR OTECTIVEEQUIPMENT.
- DO NOT REPLACELININGSWITHOUTPROPERPR OTECTIVE EQUIPMENT.
- DON'T ATTEMPT TO SAND, GRIND, CHISEL, FILE, HAMMERORALTERBRAKE LININGSINANY MANNER WITHOUTPROPERPR OTECTIVE EQUIPMENT.
- FOLLOW O.S.H.A. STANDARDS FOR PROPER PROTECTIVE DEVICES TO BE USED WHEN WORKING WITHBRAKEMATERIALS.

WARNING IT IS CRITICAL THAT ANY BRAKE DRUM REACHING MAXIMUM WEAR DIAMETER, AS CAST ON DRUM, BY TURNING, GRINDING, AND/OR WEARING BE CONSIDERED UNSAFE AND IMMEDIATELY REPLACED. IN ORDER TO AVOID SERIOUS INJURY OR DEATH, ANY BRAKE DRUM EXCEEDING THIS DIMENSION IS CONSIDERED A SAFETY HAZARD. IF IN DOUBT, CONTACT THE BRAKE DRUM MANUFACTURER.

BRAKE DISASSEMBLY:

1. Release brakes and back off slack adjuster.

2. Remove slack adjuster lock ring and slack adjuster.

3. Remove brake drum.

4. Remove anchor pins and brake shoes.

CAUTION EXCESSIVE POUNDING ON ANCHOR PINS OR CAM ROLLER PINS TO REMOVE OR INSTALL THEM CAN DAMAGE THE PINSAND CAUSE MISALIGNMENT OF THE BRAKE SPIDERS AND BRAKE SHOES. THE USE OF A SOFT HAMMER OR BRASS DRIFT IS RECOMMENDED TO REMOVE OR INSTALL THE ANCHOR PINS IF NECESSARY.

5. Remove brake return springs.

6. Remove camshaft lock ring, spacer washer, and cam shaft.

7. Remove cam roller and shaft (in the case of the cast shoe, remove roller shaft set screw and roller assembly) and anchor pin bushing from shoes.

8. Remove anchor pin bushings, camshaft bushing and seals from spider.

BRAKE ASSEMBLY

1. Install new anchor pin bushings, camshaft bushing and camshaft seals into the spider.

WARNING WHEN INSTALLING CAMSHAFT SEALS, THE SEAL ON THE SLACK ADJUSTER SIDE SHOULD BE INSTALLED WITH SEAL FACING INTO SPIDER. THIS ALLOWS GREASE TO PURGE OUTSIDE THE BRAKE ASSEMBLY WHEN GREASING THE CAMSHAFT BUSHING. FAILURE TO FOLLOW THISPROCEDURE COULD CAUSE GREASE TO COME INTO CONTACT WITH BRAKE LININGS, CAUSING BRAKE FAILURE.

2. Install cam roller assemblies onto the brake shoes.

3. Install the camshaft into the spider. Install spacer washer and lock ring on cam before sliding the cam through the camshaft support bracket. Install the slack adjuster and the lock ring.

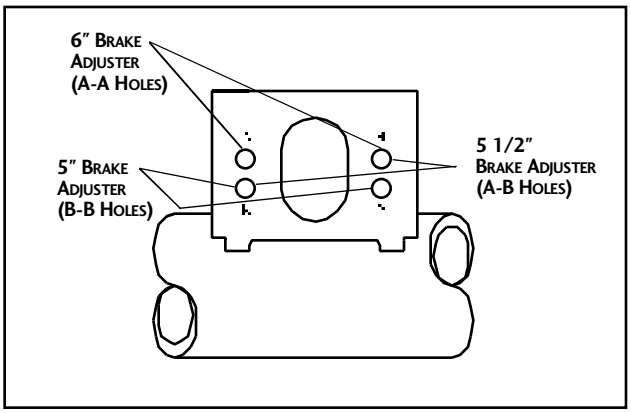


FIG. 4

WARNING WHEN REASSEMBLING BRAKES, SPICER TRAILER PRODUCTS RECOMMENDS THAT THE BRAKE RETURN SPRINGS BE REPLACED WITH NEW SPRINGS TO ASSURE PROPER OPERATION OF THE BRAKE.

4. Install the brake return springs on the brake shoes.

5. Position brake shoes on the spider and insert the anchor pins.

6. If air brake chambers are replaced, the correct mounting holes must be used to correspond to brake adjuster length (See Fig.4).

7. Connect slack adjuster to brake chamber push rod.

8. Adjust brakes as outlined in brake adjustment procedures.

NOTE TO ENSURE BRAKES MEET F.M.V.S.S. 121 PERFORMANCE REQUIREMENTS, SPICER TRAILER PRODUCTS RECOMMENDS THAT ONLY ORIGINAL EQUIPMENT BRAKE COMPONENTS BE USED.

Any questions or comments on the above procedure should be directed to the Spicer Trailer Engineering Department.

WELDING ABS WHEEL SPEED SENSOR BLOCKS

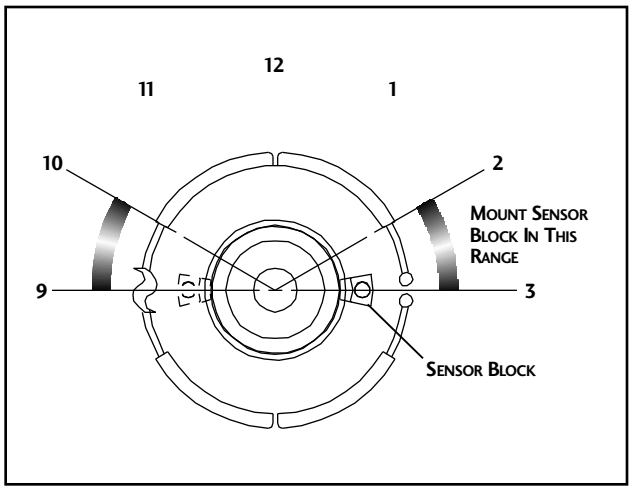


FIG. 5

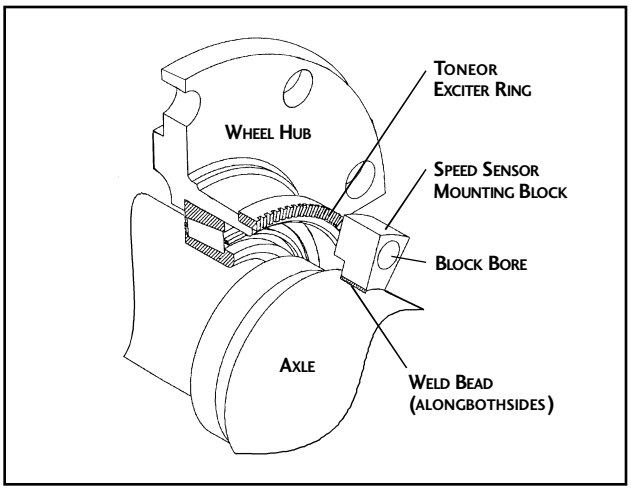


FIG. 6

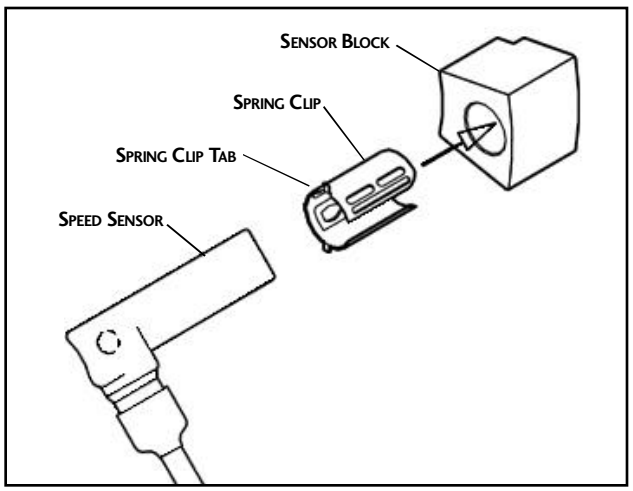


FIG. 7

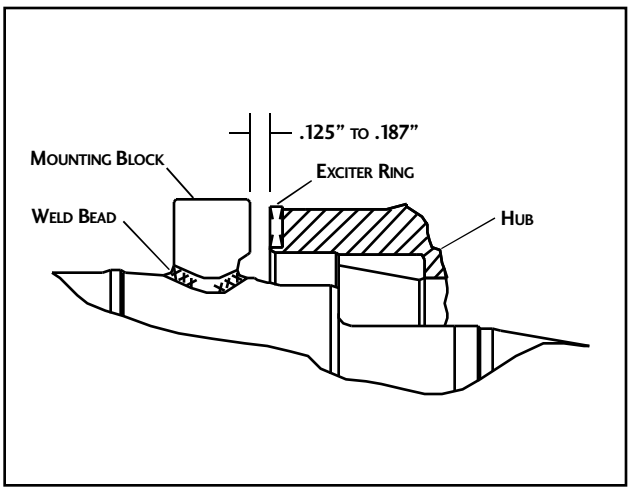


FIG. 8

Correct installation of the speed sensor blocks is extremely important for proper operation of the AntiLock system. Use electric welding equipment only to install the blocks.

1. Properly support the trailer axle using jack stands. Be sure to provide proper clearance to be able to weld the sensor block on the axle near the tone (exciter) ring.

2. With the hub in place, locate the sensor mounting block at the 9 or 3 o'clock position on the axle spindle to lessen the effect from axle flexure due to loading. See Figure 5. Manually hold the sensor block in place and scribe its location on the axle spindle. See Fig. 6 & 8.

Important: the distance of the sensor block from the face of the tone ring "teeth" must be between .125" to .187". See Fig. 8.

3. Remove the hub and bearing assembly and brake assembly from the axle spindle. Clean all oil or grease from the axle spindle.

4. Install the sensor block on the fixture tool and attach the fixture tool to the axle spindle.

5. Adjust the position of the fixture tool as necessary to align the sensor block to the scribed position in Step 2 and tighten in place.

6. Weld the sensor block to the spindle axle. Weld along both sides of the block. See Fig. 6.

7. Remove the fixture tool and let the sensor block cool. After cool down, install the sensor spring clip and sensor as illustrated in Fig. 7.

TORQUE SPECIFICATIONS

FASTENER SPECIFICATIONS		
PART NAME	**SIZE & THREAD**	**TORQUE**
Spindle Outer Nut	2 5/8 - 16 UN	250-400 ft.-lbs.
Cam Brackets	5/16 - 18 Self-tapping	175-225 in.-lbs.
Air Chamber Mounting Bolts	5/8 - 11 UNC	100-115 ft.-lbs.
Dust Shield Mounting	Self-tapping	180-200 in.-lbs.
Brake Lining To Table	Brass Screw 3/8 - 24 UNF	100-150 in.-lbs.
Hub Cap to Hub	1/14 - 20 UNC 5/16 - 18 UNC	96-144 in.-lbs. 144-216 in.-lbs.
Wheel Stud Backnut	3/4 - 16 UNF 7/8 - 14 UNF 1 - 14 UNF	175-200 ft.-lbs. 180-250 ft.-lbs. 200-300 ft.-lbs.
Haldex ABA Control Arm Nut	7/16 - 14 UN	40-50 ft.-lbs.

SUGGESTED PREVENTATIVE MAINTENANCE

Every 1,000 Miles:

☐ Check oil level in wheel hub and inspect wheel for leaks.

15,000 Miles or minimum of twice a year:

☐ Check brake adjustment.

☐ Repack wheel bearings (grease application).

25,000 to 30,000 Miles

☐ Check lining wear and estimate replacement time. Replace with new shoes or reline when thickness of lining is 1/4" at thinnest point, or 1/16" above rivet or bolt head. Replace any cracked, broken or oil-soaked linings immediately.

☐ Inspect camshaft, camshaft spider bushing, and camshaft support bracket bushing for any signs of wear.

☐ Lubricate camshaft bushings.

☐ Inspect brake drums for heat checks, grooves, hot spots, glazing, cracks, and out of round.

100,000 Miles, once a year, or at brake reline:

☐ Replace wheel bearing lubricating oil (if applicable).

☐ Check brake air chambers and slack adjusters.

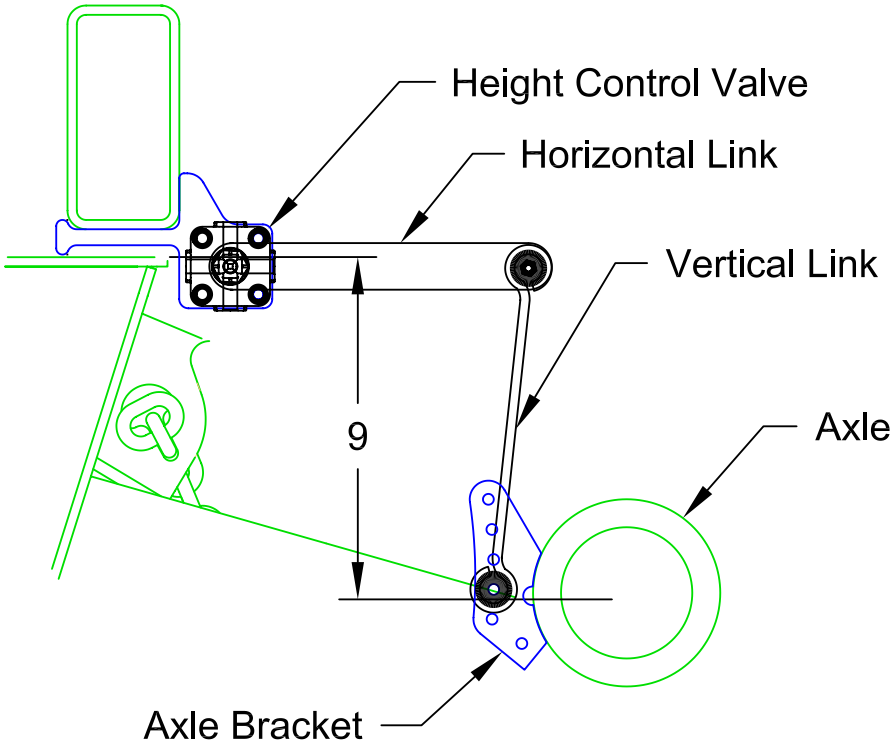
☐ Inspect brake rollers, roller shafts, anchor pins and bushings and replace if necessary.

☐ Lubricate brake adjusters.

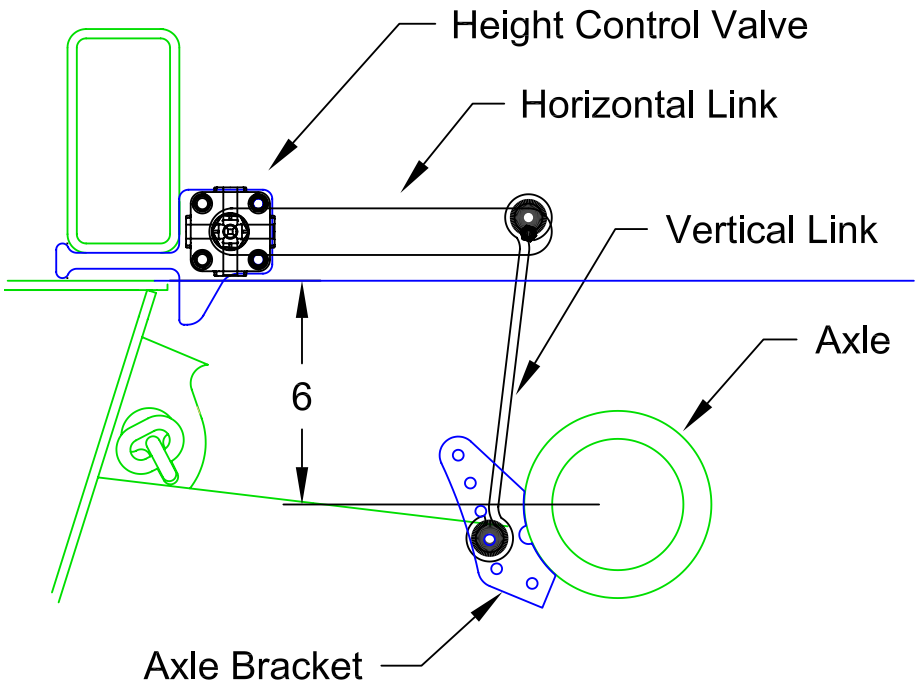
☐ Check shoes for bent shoe ribs, cracks in shoe table welds or ribs, and elongated rivet holes. Replace shoes if any of these conditions exist.

Ride Height Setting

Lowboy



25XPL



BARKSDALE RIDE HEIHT CONTROL VALVE
INSTALLATION and ADJUSTMENT PROCEDURES

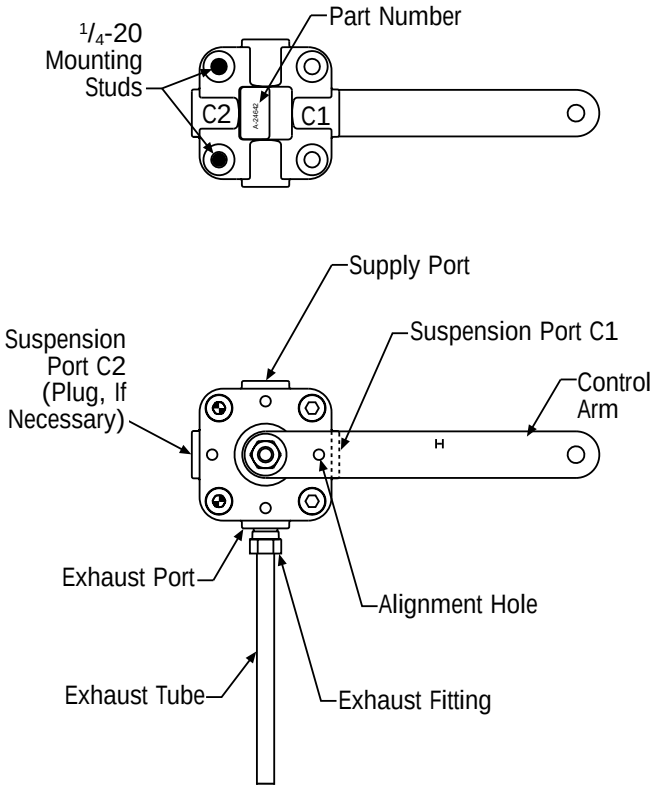


Figure 1. The Barksdale non-delay height control valve

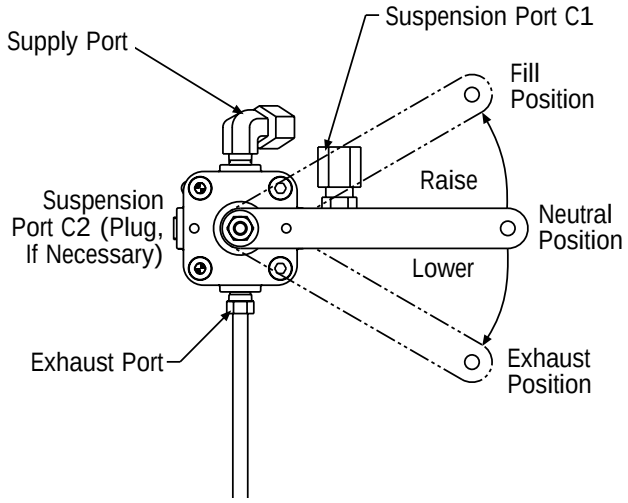


Figure 2. Ride height adjustment

FITTING INSTALLATION

1. Apply thread sealant onto the fitting threads, unless it is already pre-applied.

IMPORTANT: DO NOT APPLY TAPE to the fitting threads; the tape may cause contamination of the air system.

2. Install the supply and suspension fittings on the height control valve.

IMPORTANT: DO NOT OVERTIGHTEN fittings onto the height control valve. Overtightening the fittings may damage the valve body.

VALVE MOUNTING/AIR LINE ATTACHMENT

IMPORTANT: Before installing the height control valve, please review the drawings in the height control valve kit in order to determine the proper mounting and assembly.

1. When tightening the lock nuts on the height control valve mounting studs, DO NOT BACK OUT the studs from the height control valve body.

IMPORTANT: Loosening the studs may cause the height control valve to leak.

2. Ports C1 and C2 on the forward and rear face of the height control valve are the suspension ports. Attach the air line(s) from the air springs to the C1 and/or C2 port(s) (Figure 1).

3. When using only one suspension port, plug the unused port with the 1/4-inch NPT pipe plug provided in the height control valve kit.

4. Attach air supply line from the pressure protection valve to the supply port on the top of the height control valve (Figure 1).

5. Install the exhaust fitting into the exhaust port (Figure 1).

6. Tighten all the lines.

RIDE HEIGHT ADJUSTMENT

1. Determine recommended ride height by locating and reading the information on the identification tag; it is on the suspension trailing arm.

2. If necessary, rotate the control arm for the height control valve up to raise or down to lower the axle until the distance between the suspension mounting surface and the axle center matches the recommended suspension ride height (Figure 2).

IMPORTANT: After setting the ride height, the control arm must remain in the neutral position.

3. Insert the wooden centering dowel into the control arm alignment hole and engage into the housing (Figure 1).

Eager Beaver Trailers

Product Bulletin

December, 2004 No. 4002

25XPL Operation

Models Affected - 25XPL

This bulletin is intended to describe how to operate the lift axle of the 25XPL trailer. The lift axle should always be lifted, raised, unless the two rear axles are loaded in excess of 34,000 pounds. If you should need to use the lift axle, always have the axle lifted until after the trailer is loaded.

Warning! The axle should always be lifted during the loading and unloading of equipment or frame bending may occur. A decal, see below, should be affixed to the trailer near the lift control valve that states this.

After the trailer has been loaded you may lower the lift axle by moving the lift control valve lever. Since the trailer loaded, the main air bags should inflate immediately to same height as the rear two axles.

Warning! If the lift axle appears to raise the trailer up higher then the rear two axles, lift axle immediately and adjust automatic height control valve. The axle ride height should be set for 6", the same as the loaded rear axle height. See separate instructions for adjusting.

Note, if the axle is lowered, without a load on the trailer, the main air bags should not inflate since the automatic height control valve has not sensed the lower deck height of a loaded trailer. If the main air bags do inflate, the automatic height control valve will need adjusting. See separate instructions for adjusting.

General Engines Co., Inc.
14893 Highway 27, Lake Wales, FL, 33859
800-257-8163/863-638-1421
FAX: 863-638-2028

Barksdale Height Control Valve Installation

Physical Description

The Barksdale Height Control Valve (HCV) is a three-mode valve used to control the height of a vehicle by directing air to the air spring suspension. The main physical features of the valve are the following; (2) delivery ports*, (1) Exhaust port, (1) inlet/supply port, (1) Height Control Handle, and (2) ¼" Mounting Studs.

(* All ports are ¼" NPT, the (2) delivery ports are clearly marked, "C1" and "C2" on the back of the valve.)

Modes of Operation

The three modes of operation of the HCV are as follows;

1. Fill Mode
2. Exhaust Mode
3. Dead Band Mode

When the vehicle suspension is at the factory set ride height, the valve will be in Dead Band Mode. In Dead Band Mode, the Valve will not allow air to flow in or out of the air bags. As the vehicle becomes laden, the suspension will settle, causing the handle of the valve to rotate upwards. The valve will now enter Fill Mode, allowing air to enter the air bags, causing the vehicle to rise. As the vehicle approaches factory set ride height, the valve will once again enter Dead Band Mode. Similarly, if the bus is unloaded, the suspension will rise causing the control handle of the valve to rotate downward. When the handle rotates downward, the valve enters exhaust mode, thereby letting air out of the air bags, causing the vehicle to lower until Dead Band Mode is reached again at the factory set ride height.

Installation

Attach all fittings to valve before mounting to vehicle. Thread sealant must be applied to all fittings, which are tightened by hand until firm, at which point a wrench should be used to tighten additional 1- 1 ½ turns.

Recommended proper orientation for the valve handle for installation is when the valve handle is in line with the "C1" port.

Mount the Valve to a bracket using the ¼" studs. Do not fully tighten nuts at this time, to allow fine-tune adjustment of ride height. Attach Air Supply line to the port at the top of the valve. Attach the air bag air lines to the "C1" and "C2" ports.

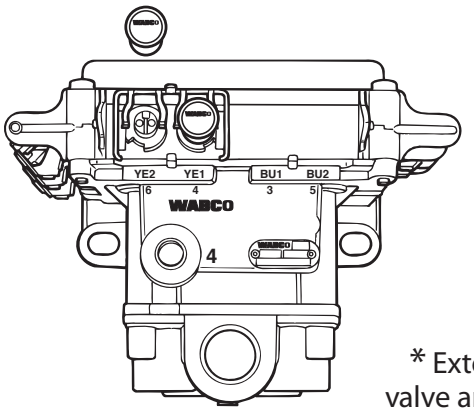
Set-Up

1. Adjust approximate ride height by turning the valve handle up toward the air supply line to add air to the bags to raise the vehicle above the ride height, down to exhaust air from the air bags to adjust to approximate ride height. Then put the handle in the horizontal position.
2. Install wood Centering Pin in hole provided in valve handle.
3. Connect linkage from suspension mount to valve handle and tighten linkage.
4. Adjust to final factory recommended ride height by rotating the valve assembly on the bracket.
5. Tighten nuts to 45 Inch pounds torque.
6. Remove the centering pin.

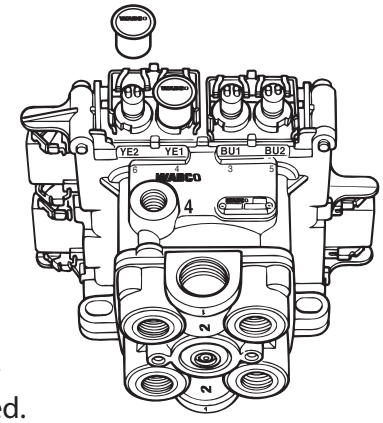
MERITOR WABCO

Easy-Stop™ and Enhanced Easy-Stop with PLC Trailer ABS Blink Code Diagnostic Guide

Easy-Stop™
2S/1M Basic
ECU/Modulator Valve Assembly



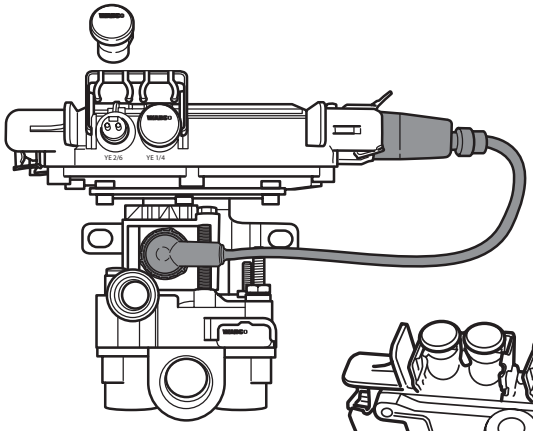
Easy-Stop™ 2S/1M,
2S/2M*, 4S/2M*, 4S/3M*
ECU/Modulator Valve Assembly



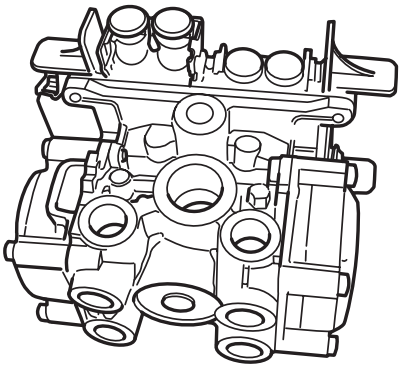
* External modulator valve and cable required.

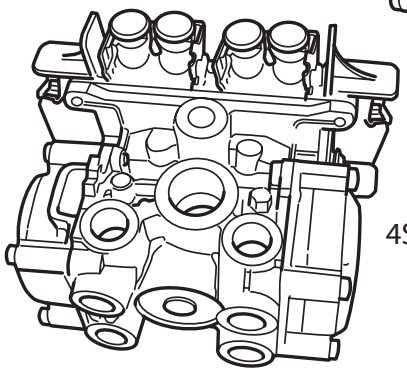
Enhanced Easy-Stop™ with PLC

2S/1M Basic ECU/Single
Modulator Valve Assembly



2S/2M Standard ECU/Dual
Modulator Valve Assembly





2S/2M, 4S/2M,
4S/3M * Premium ECU/Dual
Modulator Valve Assembly

* External modulator valve and cable required.

This publication covers all Enhanced Easy-Stop™ ECU/Valve Assemblies and Easy-Stop™ ECU/Valve Assemblies with serial numbers 3080002746 and higher. For Easy-Stop™ ECU/Valve Assemblies with serial numbers 3080002745 or lower, please call 1-800-535-5560 for assistance. Serial numbers are located on the bar-coded label on the side of the ECU/Valve Assembly.

Troubleshooting and Repair

Enhanced Easy-Stop™ blink codes may be accessed by ignition circuit and counting flashes on the trailer ABS indicator lamp on the side of the trailer.

To access blink codes:
- Turn ignition ON for one second,
- Turn ignition OFF for one second,
- Turn ignition ON and count the flashes on the ABS lamp.

With Enhanced Easy-Stop™, the Blink Code tool and the ABS Lamp on the trailer do not function simultaneously.

BLINK CODE	CAUSE OF FAULT	ACTION REQUIRED
0	No faults.	System O.K. No action needed.
3	Sensor BU1: Cable break, short circuit or out of adjustment.	Check sensor, sensor cable and cable connection; adjust sensor; or check for excessive hub runout, a sensor gap that is too wide or damage to the tooth wheels.
4	Sensor YE1: Cable break, short circuit or out of adjustment.	Check sensor, sensor cable and cable connection; adjust sensor; or check for excessive hub runout, a sensor gap that is too wide or damage to the tooth wheels.
5	Sensor BU2: Cable break, short circuit or out of adjustment.	Check sensor, sensor cable and cable connection; adjust sensor; or check for excessive hub runout, a sensor gap that is too wide or damage to the tooth wheels.
6	Sensor YE2: Cable break, short circuit or out of adjustment.	Check sensor, sensor cable and cable connection; adjust sensor; or check for excessive hub runout, a sensor gap that is too wide or damage to the tooth wheels.
7	Ext. Modulator (RD): Short to power, cable break or open, short to ground or cable damaged, or ECU/Valve Assembly Failure.	Check ABS valve and cable. Replace as required.
9	Easy-Stop™: External Modulator (BU) Enhanced Easy-Stop ™: Internal Modulator Failure, Inlet Valve #2: Short to power, cable break or open, short to ground or cable damaged, or ECU/Valve Assembly Failure.	Easy-Stop™: Check ABS valve and cable. Replace as required. Enhanced Easy-Stop™: Verify correct installation. If code continues, contact Meritor WABCO for assistance.
10	Easy-Stop™: ECU/Valve Assembly Modulator (YE) Enhanced Easy-Stop™: Internal Modulator Failure, Inlet Valve #1: Short to power, cable break or open, short to ground or cable damaged, or ECU/Valve Assembly Failure.	Easy-Stop™: Check ABS valve and cable. Replace as required. Enhanced Easy-Stop ™: Verify correct installation. If code continues, contact Meritor WABCO for assistance.
11	Internal Modulator Failure, Outlet Valve. Enhanced Easy-Stop ™ Only.	Verify correct installation. If code continues, contact Meritor WABCO for assistance.
14	Power Supply: Over or under voltage, current low, or internal failure.	Repair vehicle power supply, check vehicle voltage output and connector; check ECU's configuration.
15	ECU — Internal Failure Internal failure.	Internal failure, contact Meritor WABCO.
16	SAE J1708 Failure	Internal failure, contact Meritor WABCO.
17	Generic SAE J2497 (PLC) Failure	Internal failure, contact Meritor WABCO.
18	Generic I/O Failure	Verify correct electrical installation. Check power supply. Make necessary corrections.

Note: (Easy-Stop ™ only) If the blink code indicates there are no faults, but the trailer ABS indicator lamp continues to come on and stay on when you apply the brakes to the moving vehicle, there is an intermittent fault that must be repaired. Refer to Maintenance Manual No. 33, Expert Mode Diagnostics.

For further information on blink code diagnostics, refer to Maintenance Manual No. 33 (Easy-Stop™), Maintenance Manual MM-0180 (Enhanced Easy-Stop ™) or call: 800-535-5560 .

These manuals are posted on our website at meritorwabco.com .

MERITOR WABCO
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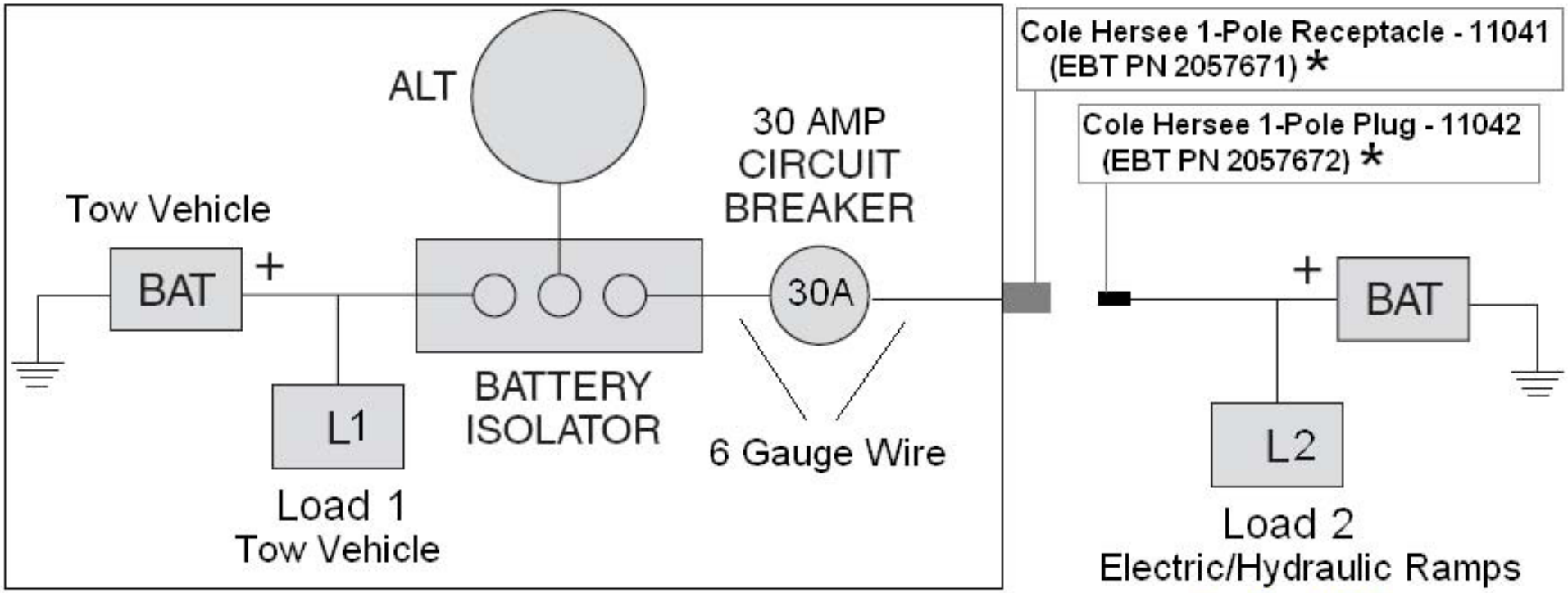
16579/22882

Eager Beaver Trailers - Hydraulic Ramp Wiring



Tow Vehicle Wiring **Trailer Wiring**

Optimal hookup (shown) - 6 gauge wire with 30 Amp Circuit Breaker and Dual Battery Isolator

Optional hookup - 6 gauge wire with 30 Amp Circuit Breaker or Fuse Connected directly to Tow Vehicle positive battery post or other suitably rated charging source

***Cole Hersee Receptacle with 25' of 6 guage wire provided with trailers which have hydraulic ramps. Additional components for tow vehicle (ie, fuse & battery isolator) not included. PNs are for replacement Plug and Receptacle only, and do not include the 6 guage wire.**

Additonal Part Numbers for Plug & Receptacle with 6 gauge wire as follows:
PN 2062294 - Plug w/ 40' 6 Guage Wire. PN 2062295 - Receptacle w/ 25' 6 Guage Wire.

OEM Service Manuals

Complete Service Manuals for the various OEM components are available for download from the internet at the following web site locations.

Cush Suspensions	http://cushcorp.com/pdfs/P1203-1_Manual.pdf
Hutch 9700 Suspension	http://www.hutchensindustries.com/pdfs/resource_suspensionMaintenance.pdf
D22 Axle Maintenance	http://www.hendrickson-intl.com/pdfs/trailer_PDFs/L1061.pdf
Wheel End Maintenance	http://www.hendrickson-intl.com/pdfs/trailer_PDFs/L496.pdf
Brake Maintenance	http://www.hendrickson-intl.com/pdfs/trailer_PDFs/L974.pdf
Meritor Wabco ABS (Premium ECU)	http://www.meritorwabco.com/MeritorWABCO_document/mm0180.pdf
Haldex Slack Adjusters	http://www.haldex.com/en/North-America/Applications-Products/Product-categories/Brake--Suspension-Systems/

If you do not have internet access, please call Eager Beaver Trailers at 800-257-8163 and we will send you the OEM Service Manuals on CD Rom.

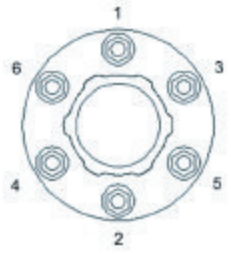
Eager Beaver Trailers Parts Manuals may also be downloaded from the internet at www.eagerbeavertrailers.com

Torque Specifications

HUBS (For Ball Seat Mounted Disc Wheels)
6 and 10 Stud Hubs
Applies to 3/4-16 and 1 1/8-16 Fastener Sizes
RECOMMENDED TORQUE DRY: 450-500 ft. lbs.

INNER CAP NUTS - First tighten cap nuts to 50 ft. lbs. using sequence shown. Then tighten cap nuts to recommended torque (450-500 ft. lbs. DRY) using sequence shown.

OUTER CAP NUTS - First tighten cap nuts to 50 ft. lbs. using sequence shown. Then tighten cap nuts to recommended torque (450-500 ft. lbs. DRY) using sequence shown.



6-STUD

10-STUD

Recheck torque after first 50 to 100 miles of service and retorque as required to recommended torque specifications.
NOTE: In all applications where an aluminum disc wheel is to be installed, a special inner cap nut must be substituted for the standard inner cap nut.

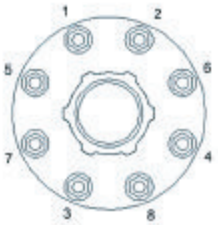
HUBS (For Pilot Mounted Disc Wheels)
8 and 10 Stud Hubs
Applies to M22 x 1.5 studs/two piece flange nuts
RECOMMENDED TORQUE: 450-500 ft.lbs.

All threads are right hand metric.

First tighten flange nuts to 50 ft. lbs. using sequence shown.

Check disc-wheels for proper positioning on pilots and proper seating against flange.

Then tighten flange nuts to recommended torque (450-500 ft. lbs.) using sequence shown.



8-STUD

10-STUD

Recheck torque after first 50 to 100 miles of service and retorque as required to recommended torque specifications.

SPOKE WHEELS

Applies to 3/4-10 Fastener Sizes

RECOMMENDED TORQUE DRY: 200-260 ft. lbs.

3 SPOKE

TIGHTEN CLAMPS EVENLY IN THIS ORDER

5 SPOKE

TIGHTEN CLAMPS EVENLY IN THIS ORDER

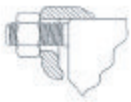
6 SPOKE

Recheck rim nut torque after first 50 to 100 miles of service and retorque as required to recommended torque specifications.

Heel-less clamps do not depend on a fulcrum at the bottom of the clamp to produce the force to wedge the rims.

Heel of clamp does not touch wheel.

HEEL-LESS CLAMP



Gap permissible but not required - if gap exceeds 1/4" or if clamp bottoms out before reaching 80% of recommended torque, check to insure that the proper clamps and spacer are being used.

HEEL TYPE CLAMP

IMPORTANT: Do not overtorque! Rim clamp does not have to heel. Overtorquing can deform rim spacer and damage back flange.

BRAKE DRUM or ROTOR ASSEMBLY TORQUE SPECIFICATIONS for Mounting Bolts (Grade 8 Fasteners)

Thread Size		Torque Requirements Foot Pounds Minimum	Maximum	Thread Size		Torque Requirements Foot Pounds Minimum	Maximum
5/8-18 (Tapped Holes)	Rotate Bolt	150	200	3/4-16 (Wheels)	Rotate Nut	275	300
5/8-18 (Through Holes)	Rotate Nut	150	175	3/4-16 (Hubs)	Rotate Nut	100	225
3/4-10	Rotate Nut	250	275	1-14	Rotate Nut	175	225

Note: All fastener parts must be clean and dry.

⚠ WARNING

This brochure contains information taken from our Installation, Service and Safety Instructions Manual. Copies of the complete manual can be obtained at no cost by contacting our Sales Department at the address shown below.

Read and Understand the Installation, Service and Safety Instructions Manual before installing or servicing the hub. Failure to do so may result in personal injury or death, and may result in a compromise of your vehicle's safety through loss or failure of a wheel or compromise of the braking system.

The symbol shown above is used to call your attention to instructions concerning your personal safety and the safety of others. Watch for this symbol. It points out important safety precautions. It means "ATTENTION! Become Alert! Your personal safety is involved!" Read the message that follows and be alert to the risk of personal injury or death.

"The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury." Ref: 29CFR 1926.20 (b) (4) (a) (2)

It is understood that safety rules within individual companies vary. If a conflict exists between the material contained in the manual and the rules of a using company, the more stringent rules should take precedence.

Webb Wheel Products, Inc. 2310 Industrial Drive SW Cullman, AL 35055
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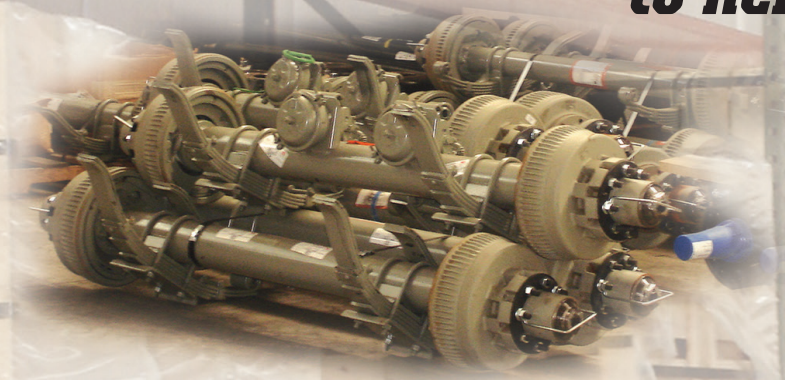

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