

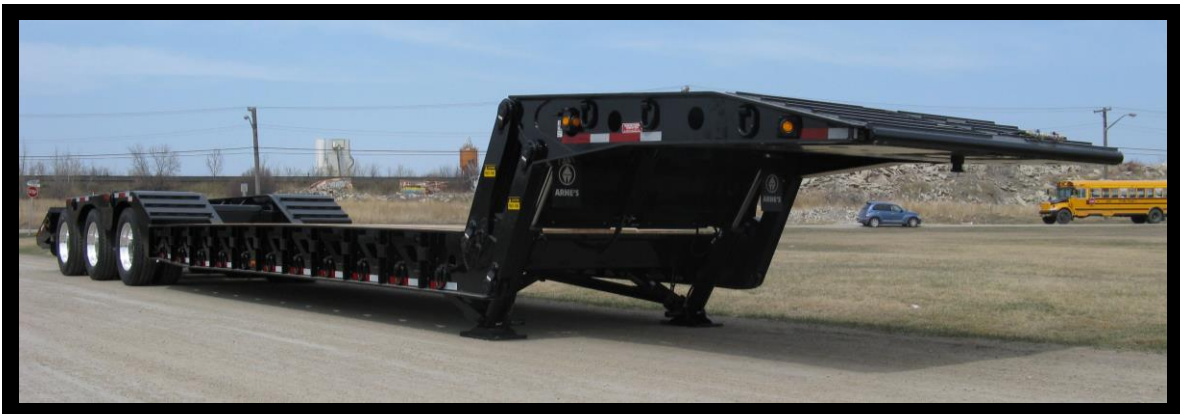
Thank You For Purchasing Your Arne's Trailer!

Arne's trailers are built stronger to give you better performance. Whether your trailer is a side dump, end dump, hopper, lowbed or flatbed, an Arne's unit will provide long lasting, low maintenance service, whatever your application may be.

To ensure your continued trouble free usage of an Arne's trailer, we have provided this manual illustrating key aspects of your unit, complete with suggested maintenance schedules. Please familiarize yourself with this manual. In addition to this document, detailed service and parts manuals are available from the various top line component manufacturers that are used in the manufacturing of an Arne's trailer.

Arne's cares about your safety.

Please review and follow the safe operating procedures indicated in this manual.





ARNE'S TRAILER SALES

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Winnipeg, Manitoba

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Serial Number: _____

Dealer Stamp

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Pre Operations Check List

All trailers equipment should be inspected daily. Items to check include, but are not limited to the following recommendations.

- Drivers of all vehicles should inspect the condition and operation of the following before beginning to drive: tires, all lights, steering gear, and turn signals.
- If any defective equipment is found, it should be corrected as soon as reasonably possible.
- Walk around the vehicle before reversing it. Precautions must be taken to ensure that the path is clear and that no person, other vehicle or any object is in the intended path of travel.
- Walk arounds should be performed before moving any vehicle which has been parked unattended for any period of time to assess any vehicle defects or damage and to refresh your awareness of obstacles around the vehicle.



Visual Inspection List

Air Tanks - All air lines should be checked for any damage or deterioration during the check on the air tanks.

Brake lines - Visually check the brake lines for leaks (check for moisture on the brake line). Repair leaks as soon as possible. Do not operate equipment with air leaks.

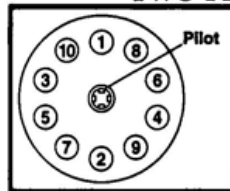
Tires - Conduct the following checks on all the tires:

- Visually check the tires for deep cuts, separations and embedded rocks, nails or any other foreign material.
- Check for tire bulges at the road surfaces which indicate low air pressure.
- Check the rims for cracks and breaks.
- Check the valve stems for wear and cuts.

Wheel Nuts - Check each day. If there are broken or loose wheel nuts, do not operate equipment.

⚠WARNING

**THIS VEHICLE IS EQUIPPED WITH
ACCURIDE 10 HOLE, 285.75 MM HUB PILOTED DISC WHEELS,
TWO-PIECE FLANGE NUTS, AND M22 X 1.5 STUDS.**



Nut Tightening Sequence

- Tighten to 50 ft.-lbs., in the sequence shown and then torque to 450-500 ft.-lbs. (oiled) using the same sequence.
- Recheck torque level 50-100 miles after installation and at 10,000 mile intervals thereafter or sooner.

For servicing and maintenance information call or write:

ACCURIDE®

Corporation

P.O. Box 40

Henderson, Kentucky 42419

1 - 800 - 626 - 7096

Failure to follow these instructions can result in wheel loss which can lead to property damage and injury or death.

Refer to product service or owner's manual for additional information.

Suspension

Check trailer unit suspension. Check the leaf springs and also check that all fastening devices are tight and in place.

Fluid Levels

Check all the fluid levels with the equipment on level ground. Refer to the manufacturer's requirements to ensure the proper procedure is followed. Look for fluid leaks while checking the fluid levels. There may be fluid lines or gaskets that are leaking.

Hydraulic and Air Cylinders

Visually check the hoist rams to ensure that the hoist anchor pins and keepers are in place. Check the condition of the hydraulic hoses and look for leaks.

Main Frame

Visually check the main frame for cracks.

Lights

Turn on all equipment lights to ensure they are working properly.

Handrails and Ladder

Check the condition of the handrails and ladder and look for loose handrails or rungs.



Proper Loading

Regulatory Requirements

It is extremely important that no vehicle shall operate when loaded in excess of maximum capacity, as outlined by Federal, State, Provincial and Municipal regulations.

- ◇ No person should be allowed in the trailer dump box during loading/unloading operations.
- ◇ Loads must be evenly distributed throughout the trailer for proper weight distribution.

Hoisting

Operating any hoist system must be done with extreme care and caution. An operator must insure that;

- ◇ All wheels are in ground contact.
- ◇ Overhead clearance is adequate.
- ◇ Ensure dump zone is free and clear of any obstacles and pedestrians.
- ◇ The truck/trailer position is level.
- ◇ Controls must be manned at all times.
- ◇ Do not “jerk” or “jog” the trailer with control valve when encountering blocked loads.
- ◇ Do not move the trailer until the dump box is completely lowered.

ROLLOVER OR LATERAL TILT CAN CAUSE SEVERE INJURY OR DEATH AND/OR DAMAGE TO THE UNIT AND CYLINDER.

- The hydraulic cylinder will not prevent the dump body or trailer from rollover or lateral tilt. The cylinder is strictly a lifting device and is not a structural member of the unit.
- Cylinders are not to be used as a means of stabilizing the unit. The hydraulic cylinder mounted in the unit should be free to find its own trajectory line of extension, free of any lateral loading of the plungers.
- Misalignment of the top or bottom mountings, or mounting pins too tight, may cause scoring of the plungers, leaking, or improper sequencing which could cause the unit to upset.
- The hydraulic cylinder will not withstand lateral pressure when the unit is leaning. Only activate the cylinder when the tractor and trailer are in a straight line (not jack-knifed). Do not activate the cylinder while on unlevelled or soft ground, or during heavy crosswinds. Doing so may cause the unit to upset.
- Do not activate the cylinder while personnel or equipment are alongside or behind the dump body or trailer.



- The operator should stay at the controls during the entire dumping operation. If the body starts to lean, the operator should immediately lower the dump body or trailer.
- It is important to slowly position the cylinder control valve into the hold position to avoid subjecting the cylinder to high pressure.
- Do not overload the unit. The load must be distributed evenly during loading or unloading to avoid rollover and lateral tilt.
- Loads stuck while the cylinder is partially or completely extended increases the hazard of rollover and lateral tilt. Lower the dump body or trailer entirely with the cylinder control valve partially open (avoid lowering the dump body or trailer with the cylinder control valve completely open). Then unload the dump body or trailer manually or with an alternative mechanical aid.

SHOCK PRESSURE CAN CAUSE SEVERE INJURY OR DEATH AND/OR DAMAGE TO THE UNIT AND CYLINDER

- Do not move the truck and jam the brakes while the cylinder is partially or fully extended to loosen loads stuck in the dump body or trailer.
- Do not move the truck until the dump body or trailer is lowered completely.

OVER PRESSURIZING THE CYLINDER CAN CAUSE SEVERE INJURY OR DEATH AND/OR DAMAGE TO THE UNIT AND CYLINDER.

- Do not operate the cylinder at pressures greater than 2,000 P.S.I. unless otherwise approved in writing by Custom Hoists/Nordsen.

WORN OR DAMAGED HYDRAULIC HOSES CAN CAUSE SEVERE INJURY OR DEATH AND/OR DAMAGE TO THE UNIT AND CYLINDER.



- Hydraulic hoses should be checked regularly and replaced if worn out or damaged.
- Do not drive the unit while the P.T.O. or hydraulic pump is engaged.
- The hydraulic oil should be checked and changed regularly to avoid contamination leading to internal cylinder damage.
- A damp to light film of oil on each plunger indicates a good cylinder operation. A small accumulation of oil may be noticed on the plunger at the head nuts after many cycles. This should not be mistaken for packing leakage.
- It is advisable to bleed air from the cylinder weekly to free entrapped air. This will result in a smoother operation cylinder.

Tailgate

If you raise the box to shift the load you should do it with the tailgate unlatched, should the load move in one piece it may cause sever damage to the tailgate.

You should not jerk the truck to make the load move as this may



State and Provincial Laws and Regulations

Drivers should not operate equipment which is defective or which is not in compliance with the law. Drivers may be personally liable and responsible for the consequences of provincial and community violations. Arne's encourages all owner / operators to familiarize themselves of the appropriate rules and regulations pertaining to their Arne's unit for every jurisdiction of operation.



Operations And Maintenance Schedules Arne's Trailer Component Specific



WARNING

A WARNING indicates that you must follow a procedure exactly. Otherwise, serious personal injury can occur.



CAUTION

A CAUTION indicates that you must follow a procedure exactly. Otherwise, damage to equipment or components can occur. Serious personal injury can also result, in addition to damaged or malfunctioning equipment or components.

NOTE

A NOTE indicates an operation, procedure or instruction that is important for proper service. A NOTE can also supply information that can help to make service quicker and easier.



TORQUE

This symbol indicates that you must tighten fasteners to a specific torque value.

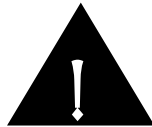


WARNING

TO PREVENT EYE INJURY, ALWAYS WEAR SAFE EYE PROTECTION WHEN PERFORMING VEHICLE MAINTENANCE AND SERVICE



Axles / Brakes



CAUTION

Before any repair or maintenance work that requires raising a vehicle, secure it with lift stands that are properly rated. Also, make sure wheel chocks are accurately inserted. Do not depend on wheel jacks alone for support of vehicle.

Oil And Grease Change Suggested Intervals:

Due to varying load and driving conditions, service intervals will vary. Below is a generally accepted guideline on which maintenance scheduling can be observed. Always clean parts thoroughly with proper solvents and equipment. Do not use gasoline or steel brushes. Never refill the hub with old oil.

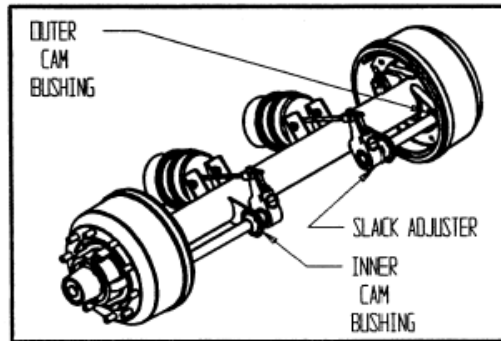
Extra attention should be given to seals. Contaminated lubricants can quickly destroy the entire wheel assembly.

DISTANCE OR TIME	OIL	GREASE	BRAKE COMPONENTS
1000mi 1600km	Inspect oil level in hub replace if contaminated. Check for leaks. Replace if hub removed for servicing. See indicated "ADD and FULL rings on the hub cap.	----- -----	----- -----
12,000mi 19,200km	----- -----	----- -----	Check brakes for adjustment
30,000mi 48,000km or 6 month interval	Heavy-Duty (On/Off road) Change oil lubricant	Heavy Duty (On/Off Road) Regrease bearings. See DWG 500950	Check lining wear. Check cam and spider bushings for wear. Grease brake actuating parts.
100,000mi 160,000km or 1yr interval	Standard-Duty Change oil lubricant	Standard Duty Regrease bearings. See DWG 500950	-----
750,000mi 1,200,000km	Replace synthetic "Semi-Fluid" Long Life Greases: Also Replace if hub removed for servicing.		

IMPORTANT!

Grease Fitting Location

A trailer axle fitted with S-cam brakes has grease fittings located at the inner cam bushings, outer cam bushings and slack adjusters.



SAE 90	Normally Preferred
SAE 75W, SAE 80W	Extreme Cold Environment
SAE 140	Extreme Hot Environment

Automatic Slack adjusters

No Autoslack can compensate for Braking System Deficiencies. The brakes should be in good operating condition and be well maintained. Crewson Industries Autoslacks should not require manual adjustment except for initial installation and brake relines. The Autoslack unit must be installed with a Crewson Industries clevis and template.

- **If the stroke is correct, the Autoslack is operating properly. No other tests are necessary. The following only apply if the air chamber stroke is past the readjustment stroke.**

Lubricant Leakage

Inspect the axle for lubricant leakage. Wear or damage to seals can result in either leaks or component contamination, and could ultimately lead to wheel-end loss.

Any signs of lubricant leakage should be investigated, and the seals or rings replaced if any damage or improperly installed components are found. Seal leakage can lead to loss of wheel-end lubricant and ultimately cause the wheel end to overheat.

Lubrication Preparation

If possible, clean the trailer prior to lubrication. This will help the mechanic locate the grease fittings and spot any problems with the trailer.

Park the trailer on level ground and set the parking brakes. Be sure the landing gear is in place and free of defects- Chock the wheels to prevent the trailer from rolling, and block accessibility to the trailer so that no one attempts to hook it up and drive it off.

Locate all fittings to be lubricated and wipe off any excess grease or road film with a clean rag or paper towel.

Using a hand-held grease gun, free of grit, add grease to each component through the appropriate grease fitting.

Grease should be added until a small quantity of fresh grease appears at the purge point or at any opening of the component. This ensures that the contaminants have been flushed from the component without over greasing. The excess grease should be wiped after it purges from the joint. This helps ensure that contaminants are not attracted to the lubrication point during regular road operations, and that grease does not contaminate the brake lines, or drop onto the road surface.



Air system

Maintenance Instructions for lubricator for air system on hopper

WARNING: IF YOUR UNIT HAS A PLASTIC BOWL

1. **DO NOT** use plastic bowl units without a bowl guard installed.
*Plastic bowl units are sold only with bowl guards to minimize the danger of flying fragments in the event of bowl failure. If this unit is in service without a bowl guard installed, manufacturer's warranties are void, and the manufacturer assumes no responsibility for any resulting loss. (*EXCEPT L00, LO8 MODEL)
2. **DO NOT** install the unit where it will be subjected to temperatures higher than 125°F (52°C),
3. **DO NOT** install the unit where it will be subjected to pressures higher than 150 psig (10,3 bar).
4. **CAUTION:** Certain compressor oils, household cleaners, chemicals, solvents, paints and fumes will attack plastic bowls and can cause plastic bowl failure.
5. **WHEN BOWL** becomes dirty replace bowl or wipe only with a clean, dry cloth.
6. **DO NOT** install on a compressed air line where the compressor is lubricated with, or the air contains, a material that will attack plastic bowls.
7. Do inspect plastic bowls to detect crazing, cracking, damage or other deterioration. Immediately replace any crazed, damaged or deteriorated bowl with a metal bowl or a new plastic bowl and metal bowl guard.
8. **IF A UNIT HAS BEEN IN SERVICE AND DOES NOT HAVE A BOWL GUARD, ORDER ANOTHER ONE AND INSTALL BEFORE PLACING BACK IN SERVICE.**



IMPORTANT INSTALLATION INSTRUCTIONS FOR LUBRICATORS

1. DO NOT install the unit until you have read this entire product information sheet. If your unit has a plastic bowl, note the special warning information that applies.
2. EXCEPT as otherwise specified by manufacturer, this product is specifically designed for compressed air service, and use with any other fluid (liquid or gas) is a misapplication. For example, use with or injection of certain hazardous liquids or gases in the system (such as alcohol or liquid petroleum gas) could be harmful to the unit or result in a combustible condition or hazardous external leakage. Manufacturer's warranties are void in the event of misapplication and manufacturer assumes no responsibility for any resulting loss. **Maximum pressure end temperature ratings for plastic bowls are 150 psig (10,3 bar) and 125°F (52°C); and for metal bowls 200 psig (14 bar) and 175°F (79° C), [(08/18/28 Series--250 psig (17 bar) and 175°F (79°C)].**
3. INSTALL as close as possible to the equipment which is to be lubricated. Be sure lubricator is positioned so that surrounding equipment will allow easy filling.
4. INSTALL the unit with the air flowing through the body in the direction indicated by the arrow.
5. INSTALL the same size unit as the pipeline in use. Avoid using fittings, couplings, etc., that restrict the airflow.
6. FILL lubricator prior to pressurization by pouring the oil into the bowl through the fill port.
7. TO FILL lubricator while under pressure, remove the fill plug and pour the oil into the bowl through the fill port only.
8. USE CLEAN, NONDETERGENT OIL, preferably SAE 10 (90SSU), or lighter. The rate of oil delivery may be controlled by turning the adjusting screw counterclockwise for more and clockwise for less oil delivered. Once set, the Flow-Guide variable orifice in the lubricator will maintain the same ratio of oil to airflow regardless of any change in airflow rate.



IMPORTANT MAINTENANCE INSTRUCTIONS FOR LUBRICATORS

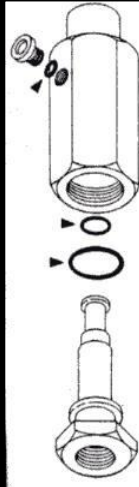
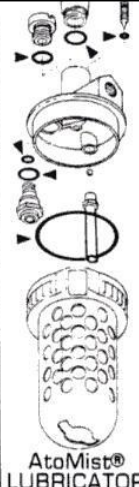
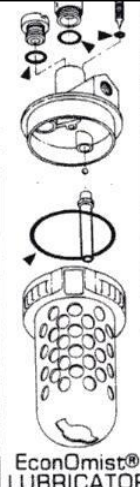

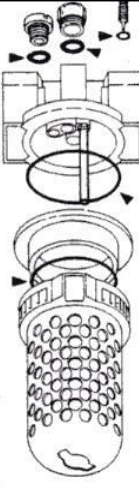

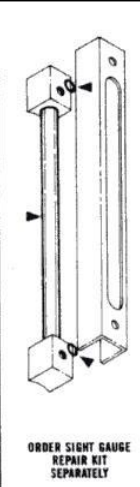

1. **BEFORE SERVICING THIS UNIT READ THIS ENTIRE PRODUCT INFORMATION SHEET.** If your unit has a plastic bowl, note the special warning information that applies.
2. **DEPRESSURIZE UNIT BEFORE REMOVING GUARD AND/OR BOWL.**
3. If it is a plastic bowl unit, inspect daily to detect crazing, cracking, damage or other deterioration. Immediately replace any crazed, cracked, damaged or deteriorated bowl with a new metal bowl or a new plastic bowl and bowl guard.
4. Periodically remove the adjusting screw and clean the needle and the seat in the body by blowing off with air blowgun.
5. If siphon hose is equipped with a filter, occasionally clean the filter by blowing off with air blowgun.
6. Drain off any contaminants, which may collect in the bottom of the bowl.
7. On plastic bowl units reinstall bowl guard before pressurizing.
8. Should consume 2 to 3 drops of oil per gate operation.

Caution

Use of solvents, compressor oils, household cleaners, and chemicals may cause plastic bowl failure



Lubricator Repair Kit Wilkerson Installation and Maintenance Sheet

 <p>FIG. A</p>	 <p>AtoMist® LUBRICATOR</p> <p>FIG. B</p>	 <p>EconOmist® LUBRICATOR</p> <p>FIG. C</p>	 <p>AtoMist® LUBRICATOR</p> <p>FIG. D</p>	 <p>EconOmist® LUBRICATOR</p> <p>FIG. E</p>	 <p>EconOmist® LUBRICATOR</p> <p>FIG. F</p>	 <p>ORDER SIGHT GAUGE REPAIR KIT SEPARATELY</p> <p>FIG. G</p>
 <p>EconOmist® LUBRICATOR</p> <p>FIG. H</p>	<p>Use Of Instruction Sheet The Illustrations represent the various Lubricator Models. The AtoMist™ Lubricator and the EconOMist™ Lubricator are basically the same except for the Atomist™ generator. Figures B and D depict units with the AtoMist™ generator while Figures C, F and H are EconOMist™ Lubricators.</p> <p style="text-align: center;">Denotes component included in Repair Kit. Parts may vary according to model.</p> <p>Refer to cautions and warnings.</p> <p>Sight Gauge Repair Kit must be ordered separately.</p>					

Warning

GRP-95-705	G	L10, L12, L20, L25
LRP-95-022	F	L16
LRP-95-058	B, C, H	L30, L34
	H	L31, L32
LRP-95-059	D, F	L26, L27
LRP-95-060	E	L40, L50
LRP-95-061	H	L41, L42, L43, L51, L52, L53
LRP-95-074	A	L01
LRP-95-143	C	L10
LRP-95-145	C, H	L20, L21, L22, L23, L24, L25
LRP-95-146	C	L12
LRP-95-202	D	L17
LRP-95-716	G	L23, L32, L33, L42, L43, L52, L53
LRP-95-771	G	L22, L30, L31, L34, L40, L41, L50, L51

DO NOT PLACE PLASTIC BOWL UNIT IN SERVICE WITHOUT METAL BOWL GUARD INSTALLED.

Plastic bowl units are sold only with metal bowl guards. To minimize the danger of flying fragments in the event of plastic bowl failure, the metal bowl guards should not be removed. If the unit is in service without the metal bowl guard installed, manufacturer's warranties are void, and the manufacturer assumes no responsibility for any resulting loss.

IF UNIT HAS BEEN IN SERVICE AND DOES NOT HAVE A METAL BOWL GUARD, ORDER ONE AND INSTALL BEFORE PLACING BACK IN SERVICE.

CAUTION

Certain compressor oils, chemicals, household cleaners, solvents, paints and fumes will attack plastic bowls and can cause bowl failure. Do not use near these materials. When bowl becomes dirty replace bowl or wipe only with a clean, dry cloth. Reinstall metal bowl guard or buy and install a metal bowl guard. Immediately replace any crazed, cracked, damaged or deteriorated plastic bowl with a metal bowl or a new plastic bowl and a metal bowl guard.

WE CANNOT POSSIBLY LIST ALL HARMFUL SUBSTANCES. SO CHECK WITH A MOBAY CHEMICAL OR GENERAL ELECTRIC OFFICE FOR FURTHER INFORMATION ON POLYCARBONATE PLASTIC.

Except as otherwise specified by the manufacturer, this product is specifically designed for compressed air service, and use with any other fluid (liquid or gas) is a misapplication. For example, use with or injection of certain hazardous liquids or gases in the system (such as alcohol or liquid petroleum gas) could be harmful to the unit or result in a combustible condition or hazardous external leakage. Manufacturer's warranties are void in the event of misapplication, and manufacturer assumes no responsibility for any resulting loss. Before using with fluids other than air, or for non-industrial applications, or for life support systems consult manufacturer for written approval.



Hydraulic Relief Valve On End Dump Trailers

A hydraulic relief valve is installed in the hydraulic system of these trailers to protect the hoist cylinder from over pressure conditions. Applying excessive hydraulic pressure to the hoist may damage the seals in the cylinders. Plugging or tampering with this relief valve may void the warranty on the hoist.

During the 2004 model year a new style of relief valve was introduced. The new valve has been preset at the factory at 2,500 psi. **Do not change this setting.** The valve used previously was set at 2,000 PSI.

If you find that the relief valve is opening and leaking oil, it is highly likely that the valve is working exactly as it was planned. While it is possible that a valve is malfunctioning, it is more likely that your tractor is over-pressuring the system. Please check the hydraulic pressure on your tractor and ensure that it is not set higher than 2,500 psi.

TIP TO AVOID OIL LEAKAGE

Once the hoist has reached full stroke, there is no need to keep the full system pressure applied. Slip the hydraulics into the "HOLD" position if you need to keep the box in the fully raised position for a moment.



Lighting

All lamps are shock resistant, rubber mounted sealed beams, located to meet all current Canadian M.V.S.S. and U.S. F.M.V.S.S. regulations. All lamps are mounted in protective steel housings and recessed to be reasonably protected from physical damage.



Hydraulic Cylinders

Normal Service Items

Packing, wipers and bushings are considered normal service or replacement items. These items are subject to contamination from external and internal foreign materials, many of which are abrasive in nature, causing abnormal wear or damage to the parts, to the extent replacements are required.

Cylinders may be subject to leaking oil past the seal for various reasons requiring adjustment of the head nut(s). This is considered a normal installation and field service adjustment to correct the leakage.

Hoist Lubrication

All internal cylinder parts are lubricated by hydraulic oil in the circuit. Particular attention must be paid to the condition and level of the oil in the circuit. Dirty oil is one of the main causes of hydraulic component failure resulting in expensive downtime. Dirty oil is detectable, a sample on a dipstick will show its condition. Take the sample and put a drop on a blotter cloth or paper, any revealed residue means dirty oil. To replace the oil supply, drain and flush the entire system and clean or replace any filter screens.

Recommended Lubricants

Approximately 100 SSU is considered optimum operating viscosity
50 SSU Minimum @ Operating Temperature
7500 SSU Maximum @ Starting Temperature
150 to 225 SSU @ 100°F (37.8°C) (Generally)
44 to 48 SSU @ 210°F (98.9°) (Generally)

Oil Grade	(37.8°C)	(98.9°C)
SAE 10	150	43
SAE20	330	51

Normal Temperature 0°F (-18°C) to 100°F (37.8°C) Ambient 100°F (37.8°C) to 180°F (82.2°C) System

Other Desirable Properties and Characteristics:

- ◇ Viscosity Index - 90 minimum.
- ◇ Aniline Point - 175 minimum.
- ◇ Stability of physical and chemical characteristics:
- ◇ High demulsibility (low emulsibility) for separation of water, contaminants and air.
- ◇ Resistant to the formation of gums, sludges, acids, tars and varnishes
- ◇ High lubricity and film strength.

**WARNING**

Never use a detergent oil, crank case drainings, kerosene fuel oil, or any non-lubricating fluid (such as water) in the hydraulic system.

Proper Operation

A damp to light film of oil on each plunger indicates a good cylinder operation. A small accumulation of oil may be noticed on the plunger at the head nut after many cycles. This should not be mistaken for packing leakage.

Hoist Maintenance**WARNING**

A Before making adjustments or repairs to the cylinder when mounted in the unit, use strong, heavy, positive supports to hold the body from accidentally lowering. Place the cylinder valve in the "LOWER" position to ensure the pressure is relieved in the cylinder.

- ◇ It is advisable to bleed air from the cylinder weekly to free entrapped air. This will result in a smoother operation.
- ◇ Hydraulic hoses should be checked regularly and replaced if worn or damaged.



Hoist Maintenance Continued

- ◇ Hydraulic oil should be checked daily, added to if needed and changed on a regular schedule along with filters and filter screens in accordance with the Manufacturer's recommendations.
- ◇ Hydraulic system should be flushed periodically.
- ◇ Hydraulic oil poured into the reservoir should pass through a 10 micron element. Pour only clean oil from clean containers into the reservoir.
- ◇ Bleed air from the cylinder weekly to free entrapped air. This will result in a smoother operation.
- ◇ Grease the cylinder base end and plunger end pin mountings regularly.
- ◇ Fully extend cylinder and check plungers for proper sequencing, abnormal wear and/or scoring on a regular basis.
- ◇ Check head nut areas for hydraulic oil leaks on a regular basis.
- ◇ Do not leave your cylinder partially or fully extended. Exposed plunger surfaces are subject to rust.

Tips For Repair of Leaking Cylinders:

1. Loosen set screw(s) in head nut of leaking stage(s).
2. Tap head nut lightly around circumference with a hammer.
3. Using a chain wrench, back head nut off one half to one full turn. If plunger turns as you are turning the head nut, the plunger will have to be held, preferably with a strap wrench.
4. Cycle cylinder two or three times to reset vee ring packing.
5. Tighten head nut one half turn farther than it was loosened.
6. Tighten set screw(s).

Tips For Repair of Miss-Sequencing Cylinders:

1. Loosen set screw in head nut on stage that is sticking.
2. Tap head nut lightly around circumference with a hammer.
3. Using a chain wrench, back off head nut one half turn.
4. Cycle cylinder. If cylinder still miss-stages, back off head nut another half turn.
5. Cycle cylinder. If cylinder still miss-stages, tighten the head nut on the next stage that is extending. If plunger turns as you are turning the head nut, the plunger will have to be held, preferably with a strap wrench.
6. Tighten set screw(s).

 **CAUTION**

Arne's recommends field service repairs be limited to replacement of packing, bushings, wipers and adjustment of head nuts for leakage and proper sequencing.

If a cylinder cannot be corrected by minor field repair, we recommend that the cylinder be returned to a factory qualified service dealer.





Suspensions

The suspension system that Arne's Trailers utilized for your vehicle has been designed to safely provide a long life and low-maintenance operation.

Suspension Operating Considerations

FRAME-TO-GROUND HEIGHT (CENTER LIFT AXLES)

The height of the bottom of the trailer frame (or suspension mounting surface) from the ground must be determined at each suspension location. This dimension must provide the desired LOADED deck height.

A leaf spring suspension's ride height will change under various loads. The auxiliary air suspension's ride height must be specified to match the loaded leaf spring suspension's ride height.


AIR DUMP VALVES

Air dump (or exhaust) valves increase stability during the loading and unloading of the trailer, as well as prolong component life. The valves can be controlled automatically, manually or by the use of an air-pilot valve.

Approved uses of air dump valves include;

- A trailer parked for any length of time, loaded or unloaded, either when connected to the tractor or supported by the landing gear legs.
- A trailer being loaded or unloaded, particularly when fork lift trucks are used.
- A dump trailer during the dump mode only.
- A trailer experiencing a sudden off loading of cargo, such as steel removed with a crane.

Arne's Trailers suggests that any variation beyond these conditions must be approved in writing by the suspension manufacturer's Applications Engineering Department.

 **CAUTION:** Due to the geometry of all trailing-beam air suspensions, the trailer moves forward when air exhausts from the suspension and trailer brakes are locked. When supported by the trailer's landing gear, this movement may damage or collapse the legs. Always exhaust the suspension air before locking the brakes. (Automatic air-dump systems are available.)

PERIODIC INSPECTION SCHEDULE

The trailer air suspension requires very little attention. Your air suspension may well last the life of the vehicle by using the information in this publication and other Hendrickson technical publications.

PRE DELIVERY INSPECTIONS

In your review of the vehicle for the first time, check the following:

- trailer is level
- all welds are of acceptable quality
- all bolts are in place and secure
- no component interferences exist

SUSPENSION

PRE DELIVERY INSPECTIONS Continued

- Make sure that all springs are properly located on the wear pad. Twisted springs or cocked hangers will cause uneven spring contact and will result in excessive wear on the suspension.
- Check to make sure that there is sufficient clearance between the springs and rockers. Improper spring centers and/or hanger spacing will create binding in this area and result in excessive wear.
- Check the rocker beam to be sure that there is adequate clearance between the ends of the spring and the rocker beam hub when the axle is unloaded and loaded.
- Double check all bolts to see that they have been tightened to the proper torque as indicated in the supplier specifications.

 **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. H)

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.

Oiled 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


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



SUSPENSION INSPECTION SCHEDULES

DAILY INSPECTIONS

A quick look to verify a level trailer that is riding at the correct ride height is suggested. This inspection will help you find any obvious problems. A closer inspection can detect broken or loose parts before any serious problems appear.

30-DAY INSPECTION

At 30 days, inspect clearances around air springs, tires, shock absorbers and all other moving parts. Evidence of part interference requires immediate attention by a qualified mechanic. The 30-day inspection includes the following checks:

- bolts are secure
- axle connections are tight
- any sign of wear

90-DAY INSPECTION

At 90 days, thoroughly check all items that were inspected at 30 days. The 90-day inspection also includes these items:

- all welded connections for signs of deterioration
- frame attachment joints, crossmember structures and all pivoting and clamping connections for problems.

Your careful attention to these periodic inspections can save a great deal of time and expenses by avoiding unexpected difficulties in remote locations. Contact Arne's Trailers at (204) 233-7111 or the Hendrickson Applications Engineering Department at (330) 456-7288 to discuss any questions about the construction and/or operation of your Hendrickson trailer air suspension.

QUIK-ALIGN® INSPECTION

Inspection of the QUIK-ALIGN occurs at 4,800 km or 3,000 miles and at every lining change.



ABS Brake System



The ABS is an electrical system. When you work on the ABS, take the same precautions that you must take with any electrical system to avoid serious personal injury. As with any electrical system, the danger of electrical shock or sparks exists that can ignite flammable substances. Arnes' recommends always disconnect the battery ground cable before working on the electrical system.

Arne's Trailers utilize the Meritor Wabco Easy-Stop™ Trailer ABS. All information pertaining to Easy-Stop™ is referenced from Meritor Wabco Maintenance Manual No. 33, revised 4-98

Meritor WABCO's Easy-Stop™ Trailer ABS is an electronic, self-monitoring system that works with standard air brakes. The major components of the system are the Electronic Control Unit (ECU)/Valve Assembly, ABS relay (modulator) valve, tooth wheel and wheel speed sensor.

ECU Part Numbers 400 500 1010 for 2S1M system and 400 500 1030 for 4S2M system have an external diagnostics connector for use with a special diagnostic tool. These models are also compatible with an MPSI Pro-Link® 9000 diagnostic tool and Meritor WABCO cartridge.

The ABS configuration defines the number of wheel speed sensors and ABS relay valves used in a system. For example, a 2S/1M configuration includes two wheel sensors and one ABS relay valve. A 2S/2M configuration includes two wheel sensors and two relay valves. A 4S/2M configuration includes four wheel sensors and two ABS relay valves.

How Trailer ABS Works

Meritor WABCO ABS is an electronic system that monitors and controls wheel speed during braking. The system works with standard air brake systems.

ABS monitors wheel speeds at all times and controls braking during wheel lock situations. The system improves vehicle stability and control by reducing wheel lock during braking. The ECU receives and processes signals from the wheel speed sensors. When the ECU detects a wheel lockup, the unit activates the appropriate modulator valve, and air pressure is controlled.

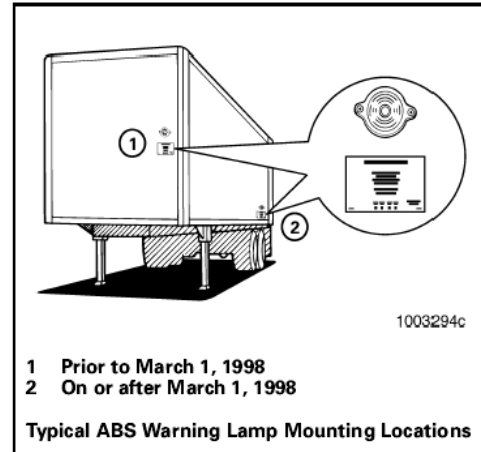
In the event of a malfunction in the system, the ABS in the affected wheel(s) is disabled; that wheel still has normal brakes. The other wheels keep the ABS function. An ABS warning lamp lets drivers know the status of the system.

What does the trailer ABS warning lamp mean to service personnel? The trailer ABS warning lamp indicates the status of the trailer ABS. If it comes **ON** and stays **ON** when you apply the brakes to a moving vehicle, there is an ABS malfunction. It is normal for the lamp to come **ON** and go **OFF** to perform a bulb check, but it should not stay **ON** when the vehicle is moving above 4 mph. As with any safety system, it is important not to ignore this warning.

If the warning lamp indicates a malfunction, the vehicle can be operated to complete the trip, but it is important to have it serviced as soon as possible using the appropriate maintenance manual to ensure proper braking performance and that the benefits of ABS remain available to your drivers.

Typical ABS warning lamp mounting locations are illustrated in **Figure 3.1** .

For more information, call the Meritor Customer Support Center, 1-800-535-5560.





When a fault exists in the ABS, standard braking returns to the affected wheel, and the ABS still controls other monitored wheels. This lets you complete the trip. You should not ignore the warning lamp and should have the vehicle serviced as soon as possible after the lamp comes **ON** and stays **ON**.



MERITOR WABCO Blink Codes Troubleshooting and Repair

BLINK CODE	CAUSE OF FAULT	ACTION REQUIRED
0	No faults.	System okay. 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 run out, 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 run out, 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 run out, 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 run out, 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 proper 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 proper installation. If code continues, contact Meritor WABCO for assistance.
11	Internal Modulator Failure, Outlet Valve. Enhanced Easy-Stop Only.	Verify proper installation. If code continues, contact Meritor WABCO for assistance.
14	Power Supply: Over and 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 Failure	Internal failure, contact Meritor WABCO.
18	Generic I/O Failure	Verify proper electrical installation. Check power supply. Make necessary corrections.

Note: (Easy-Stop) 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 33, *Expert Mode Diagnostics*.

For further information on the blink code diagnostics, refer to Maintenance Manual 33 (Easy-Stop).

Maintenance Manual No. 0180 (Enhanced Easy-Stop) or call:

800-535-5560

Wheels, Rims and Hubs

Safety



An exploding tire or rim part can injure or kill. The air pressure in an inflated truck tire is explosive enough to burst tire/rim components apart with great force. This is true of both single piece and multi-piece assemblies. To help avoid accidents, follow all instructions below.

Improper handling and assembly of truck tires and rims/wheels can cause serious or fatal accidents. Components can explode at any time when proper procedures have not been followed, including during:

- removal from vehicle
- demounting
- inflation
- later handling or while on the vehicle

Follow these guidelines:


Use **clean, matching components** in good condition. Discard any worn-out, damaged, excessively rusted, or corroded parts.

Learn and follow **safe operating procedures**. Every time.

Assemble components according to **recommended procedures**. Don't take shortcuts.


- ◇ **Refer to Wheel and Rim Association's safe operating guidelines.**

INSTALL WHEEL ON VEHICLE PROPERLY

 **WARNING** Improperly installed wheels can fail and lead to an accident. Serious injury, or death may result. When you mount the rim/wheel on the vehicle, be sure to pay attention to the following:

- Proper size of nut and stud (and clamp where required).
- Proper installation of spacer band on dual demountable rim assemblies.
- Correct nut tightening sequence.
- Correct torque of the nuts.

Suggested Maintenance

 **WARNING** Improperly maintained wheels can fail and lead to an accident. Serious injury, or death may result.

Inspect rims and wheels for damage during tire checks and at periodic maintenance intervals. Remove and replace damaged or worn parts.

Follow all instructions for inspecting and installing rims/wheels,

- Wheels must be mounted with the required studs. Stud types are not interchangeable.
- Always use hub mount wheels and flange nuts on hub mount hubs and stud mount wheels and chamfered nuts on stud mount hubs. Mixing designs can cause premature wheel failure.
- Recheck the torque level of nuts between the first 50 and 100 miles of operation and as part of a vehicle's ongoing scheduled maintenance or at 16,000 km (10,000 mile intervals), whichever comes first. Retighten, if necessary, to the recommended torque using the proper sequence.
- Each tire, wheel and axle has its own maximum rating. Do not load and inflate the tire/wheel/axle system beyond the rating of the lowest rated component.



Wheel Seals and Bearings

SUGGESTED MAINTENANCE

12,000 Km or 7,500 Miles

Visually inspect seal and hub cap for leakages and hub oil level (if oil bath type).

12 MONTHS

Note: Only qualified personnel should perform this activity.

At 12 months or 160,000 Km or 100,000 miles, which ever occurs first:

- Visually inspect seal and R&I hub cap for contaminants.
- Check wheel bearing adjustment and install new oil (if oil filled).
- Replace hub cap gasket then re-torque and repair if necessary.



Tarping System, Cable Operated

General Maintenance

- Lubricate Cable regularly with W-D 40.
- Check V-belt for wear and if worn replace.
- Check V-belt to see if it needs to be tightened.
- If tarp system is a chain drive system, lubricate chain regularly to prevent rust build up.
- Check 9" nylon ties to insure they are secure to the single hoops.
- Check rear double hoop to ensure 10 - 24 self-tapping screws are secure.
- Check if the cable is tight, but do not apply excessive tension to cable or the front shaft will deform.
- Check the bearings on front shaft for wear.
- Check to see if boards on top of side walls are damaged. Repair or replace as needed or the cross members will not operate properly and smoothly.
- Check timing of tarp. Timing means that the Double rear hoop must be parallel on the drivers & passenger's side when the tarp is in the open position.
- If the distance is not the same, change the hoop position, which is closest to the 1" front shaft by loosening the pulley hex nut of rear pulley and then adjusting tension hex nut on the tightener.
- When cable tension is released, the hoop will adjust to an equal distance by cranking handle towards front so that the hoops are the same distance from the 1" front shaft.

NOTE

If Tarp Material Is Wearing Prematurely

- Tarp material is not cranked fully to rear of trailer causing slack in tarp material. This will cause excessive tarp wear.
- V-Belt is loose and does not have proper tension, causing excessive tarp wear.

NOTE

Tarp Lifts While In Transport

- Check Safety latches to see if they are positioned properly.



Parts Information





Major Parts List

Axle Bearings & Seals			
Bearing Taper Cone	Cone	Inner	HM218248
Bearing		Inner	HM218210
Bearing Taper Cone		Outer	HM212049
Bearing	Race	Outer	HM212011
Seal			32021110
Wear Ring Dust Grit Guard			3151504
Axle assembler 1/2 inch wall, 77" Track			D22FLWN5775
Axle assembler 5/8 inch wall, 77" Track			D22FLWN6775
Hubs and Drums			
Meritor Unimount 10 Stud Hub & Drum			14-15571-102
Meritor long stud complete with centrifuge drums	Long Stud Steel Unimount Drum Universal Stud Assembly		1400415984013
			14003123207002
			14004159984036
22.5 Unimount Wheel			1600001
24.5 Unimount Wheel			1600002



Suspension Types

End Dumps	Intraax AA 250T Hendrickson Turner air ride HT300		
Side Dumps	Hendrickson Turner air ride HT300		
Hoppers	Hendrickson Turner air ride HT230		
Low Beds	Hendrickson Turner air ride HT300/250		
Machinery Trailers	Hendrickson Turner air ride HT250T		



Vendor Parts List

Hydraulic Hoists	Custom Hoist		
Tarps	Michael's Tarp Systems		
ABS Brake System	Sealco / Meritor Wabco		
Crankdown Legs	Holland		
Air Cylinders For Cross Gate			R250AW20P
Air Cylinders For Windrow Hoppers			ZZ031100
Flow Dividers	Matarus		289 – FD 22W9546
Control Valve	Commercial		291 – VAW9475
Seal kit for Hydraulic Control Shifter			3911873036



Hutch Suspension

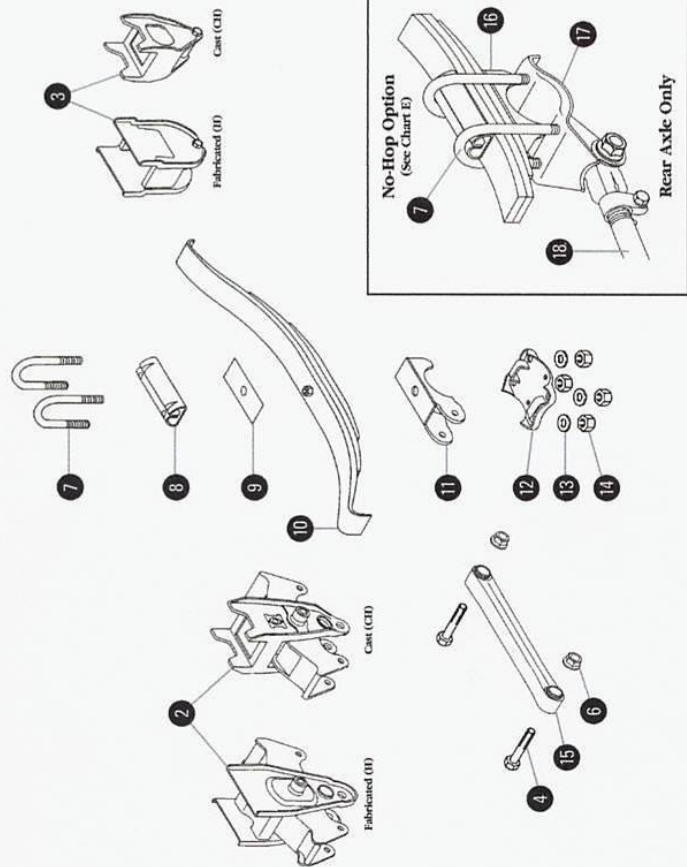
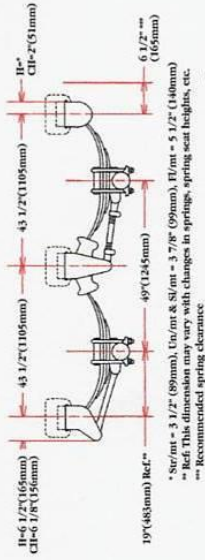
H-9700 and CH-9700

Item	Part Number	Quantity		Description
		Single	Tandem	
		Axle	Axle	
1	20728-01	2	2	Front Spring Hanger
2	10319-02	0	2	Center Rock/Rocker Hanger Assembly
3	20732-01	2	2	Rear Spring Hanger assembly
4	719-02	4	8	Radius Rod Bolt – Hex Bolt – 1-14 UNS x 5”
5	16398-04	1	2	Radius Rod w/ Bushing – 19.25 LG
6	10562-00	4	8	Flange Locknut – 1-14 UNS.GRF & Cad PL
7	16300-15-15	4	8	U Bolt – Standard .875” U – Bolt (Shown)
8	16868-01	2	4	Top Plate
9	17350-02	2	4	Galvanized Liner (Not Required on Flat Plate – 7 or 8 leaf springs)
10	TRA 2741	2	4	Spring Assembly – Standard 3 leaf (Shown)
11	19360-07	2	4	Spring Seat – 5” Round (Shown)
12	16297-01	2	4	Bottom Plate – 5” Round (Shown)
13	35-00 or 817-00	8	16	Washer – PI, 15/16 ID x 1 ¾ OD (For STD .875” U – Bolt Shown) Washer – 1/8” x 13/16 ID x 1 ½ OD (For Optional .75” U-Bolt)
14	16303-01	8	16	Hex Nut ¾” – 16 UNF (For Optional .75” U-Bolt)
15	715-00	1	2	Non-Adj. Radius Rod w/Rubber Bushing
16	7717-01	2 per hanger		Washer Bushing – Replaces Sideplate Washer 10561-00 on Fabricated (H) Front and Center Hangers Only
17	722-00	2 per Rad. Rod		Radius Rod Bushing Only – 3” LG

Hutch Suspension H-9700 and CH-9700 Continued				
18	37-03	2 per Rocker 1 per rear hanger	Hex Lock Nut – 5/8” – 18 UNE GRB (Shipped Loose, not part of center rocker & hanger assembly. However, it is part of the rear hanger assembly)	
19	756-00	2 per Rocker 1 per Rear HGR.	Sleeve Spacer – 3/4” OD x 18 GA x 3 1/4 LG. (Shipped Loose, not part of center rocker & hanger assembly. However, it is part of the rear hanger assembly)	
20	759-00	2 per Rocker 1 per Rear HGR.	Hex Bolt – 5/8” – 18 UNF x 4 1/2 LG. GR2 (Shipped Loose, not part of center rocker & hanger assembly. However, it is part of the rear hanger assembly)	
21	11154-00	1 per Rocker	Hex Lock Nut 1 1/8” – 7 UNC,GR5	
22	837-00	2 per Rocker	Washer – 1/8” x 1 1/4” ID x 2 1/4 OD	
23	16158-01 or 17784-01	0 0	2 2	Fabricated Rocker Assembly w/ Rubber Bushing (Shown) Cast Rocker Assembly w/ Rubber Bushing (Not Shown)
24	18723-01	1 per Rocker	Rocker Bushing Only – Rubber	
25	16150-01	1 per Rocker	Hex Cap Screw – 1 1/8” x 7” x 6.62” LG,GR5	

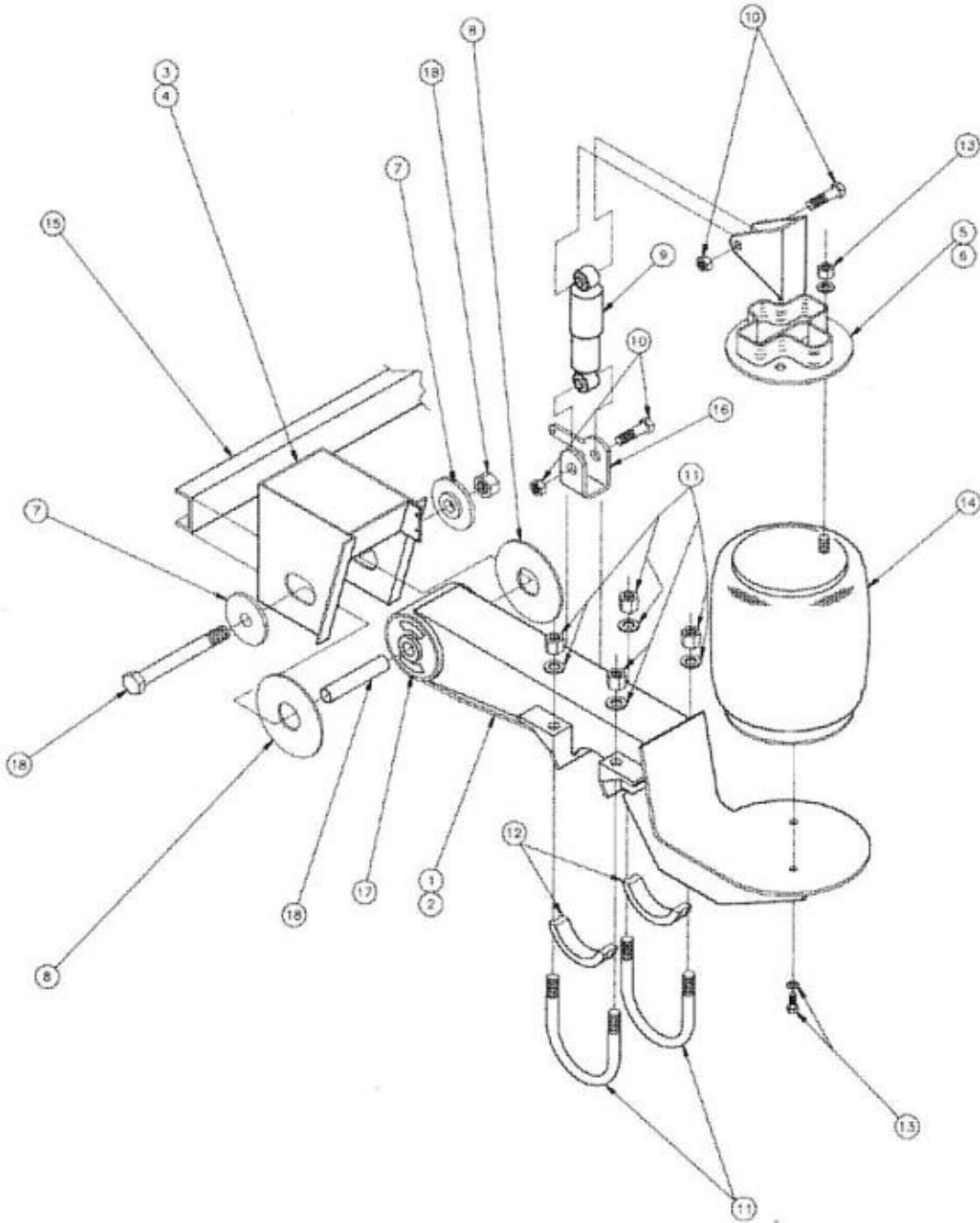


H-9700/CH-9700



Replacement Parts





Hendrickson 250T Series Top Mount Style

ITEM	DESCRIPTION	PART NO.	QTY.	MODEL NO. (HT250T-)		
1	BEAM ASSEMBLY (roadside)	D-20602-1	1	ALL		
2	BEAM ASSEMBLY (curbside)	D-20602-2	1	ALL		
3	FRAME BRACKET (roadside)	C-20064-1	1	12-001, 14-001, 15-001		
		C-20065-1	1	16-001, 17-001		
4	FRAME BRACKET (curbside)	C-20064-2	1	12-001, 14-001, 15-001		
		C-20065-2	1	16-001, 17-001		
5	AIR SPRING SHOCK MOUNT (roadside)	Assembly				
		Shock Bracket, Upper	C-20011-1	1	12-001, 14-001	
		Air Spring Plate	C-20023	1		
			B-20035	1		
		Assembly				15-001
		Shock Bracket, Upper	C-20012-1	1		
		Air Spring Spacer Ass'y	C-20023	1		
			C-20016-1	1		
		Assembly				16-001
		Shock Bracket, Upper	C-20013-1	1		
		Air Spring Spacer Ass'y	C-20023	1		
			C-20016-2	1		
Assembly				17-001		
Shock Bracket, Upper	C-20014-1	1				
Air Spring Spacer Ass'y	C-20023	1				
	C-20016-3	1				
6	AIR SPRING SHOCK MOUNT (curbside)	Assembly				
		Shock Bracket, Upper	C-20011-2	1	12-001, 14-001	
		Air Spring Plate	C-20023	1		
			B-20035	1		
		Assembly				15-001
		Shock Bracket, Upper	C-20012-2	1		
		Air Spring Spacer Ass'y	C-20023	1		
			C-20016-1	1		
		Assembly				16-001
		Shock Bracket, Upper	C-20013-2	1		
		Air Spring Spacer Ass'y	C-20023	1		
			C-20016-2	1		
Assembly				17-001		
Shock Bracket, Upper	C-20014-2	1				
Air Spring Spacer Ass'y	C-20023	1				
	C-20016-3	1				

NOTES:

1. Shock clevis (item #16) included when ordering the suspension beam assembly (items #1 & #2).
2. Bushing tool #C-5994 is required to correctly re-bush the suspension. This tool can be either purchased or borrowed from Hendrickson Turner.

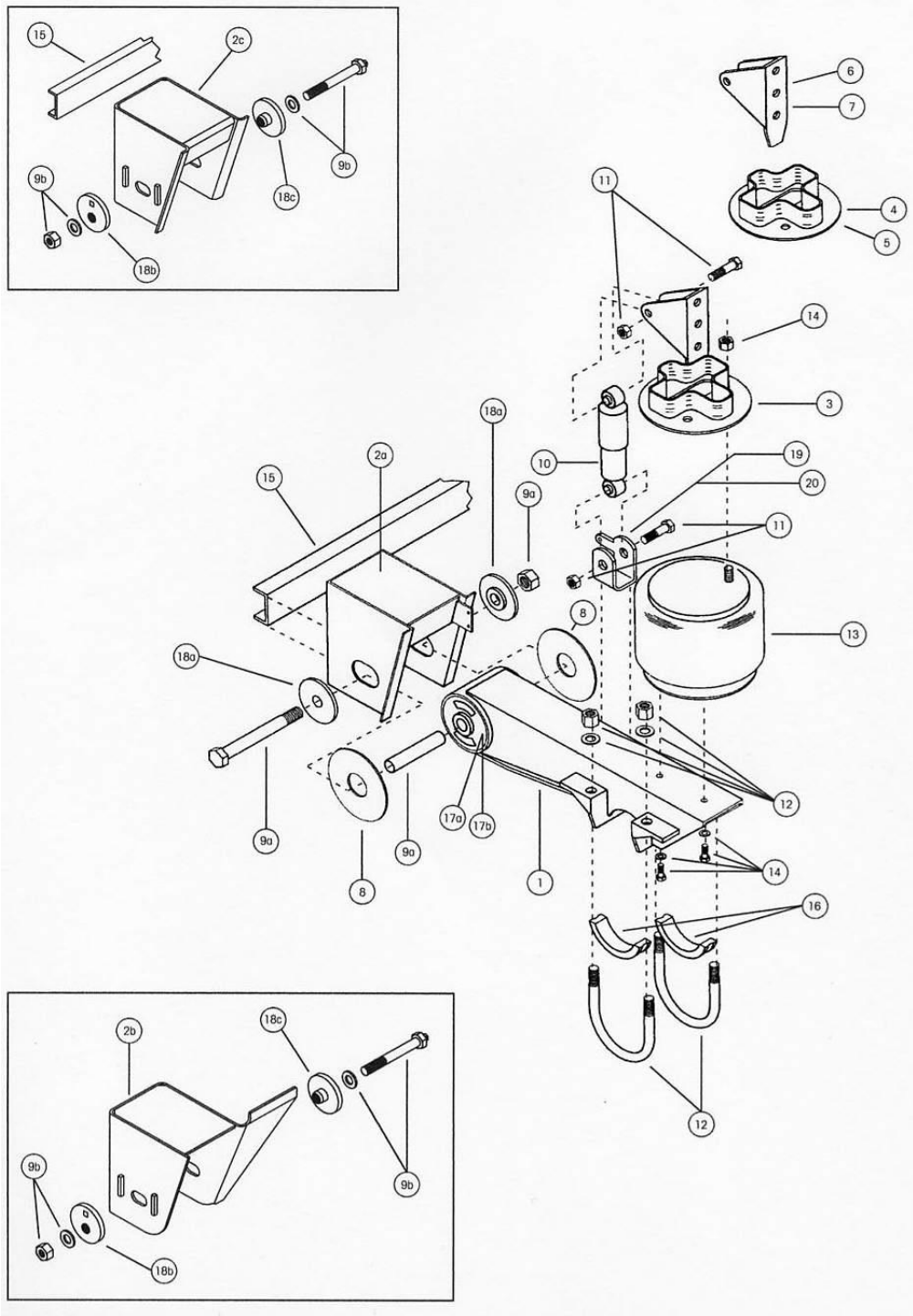
RECOMMENDED BOLT TORQUE VALUES

ITEM NUMBER	DESCRIPTION	SIZE	TORQUE (ft. lbs.) ¹
18	Pivot Bolt ²	1.125" (1-1/8")	800
11	U-Bolt	.875" (7/8")	475
10	Shock Bolt	.750" (3/4")	150
13	A/S Bolt (Bottom)	.500" (1/2")	25
13	A/S Nut (Top)	.750" (3/4")	45

¹ Torque values are specified for the fasteners in the condition in which they are supplied by Hendrickson Turner. **DO NOT APPLY ANY ADDITIONAL LUBRICANTS.**

² Applicable only to suspension pivots which use the threaded pivot fastener.

Hendrickson HT 230 Top Mount





ITEM	DESCRIPTION	PART NO.	QTY	MODEL NO. (HT230 ? or N-HT230 ?)		
1	BEAM ASSEMBLY					
	Roadside	S-20000-1	1	ALL		
	Curbside	S-20000-2	1	ALL		
2	FRAME BRACKET					
2a	Wingless, Welded Alignment,					
	Roadside, Weld-on	C-20064-1	1	-14-001	-14-005	-14-007
				-15-001	-15-003	-15-007
				-15-027		
		C-20065-1	1	-16-001	-17-001	-17-003
		C-20149-1	1	-15-016		
	Wingless, Welded Alignment,					
	Curbside, Weld-on	C-20064-2	1	-14-001	-14-005	-14-007
				-15-001	-15-003	-15-007
				-15-027		
		C-20065-2	1	-16-001	-17-001	-17-003
		C-20149-2	1	-15-016		
	Wingless, Welded Alignment,					
	Roadside, Bolt-on	C-20047-1	1	-15-025		
		C-20007-1	1	-14-002		
		C-20008-1	1	-16-002		
	Wingless, Welded Alignment,					
	Curbside, Bolt-on	C-20047-2	1	-15-025		
		C-20007-2	1	-14-002		
		C-20008-2	1	-16-002		
2b	Winged, QUIK-ALIGN®,					
	Roadside, Weld-on	D-21179-1	1	TA14-001	TA15-001	TA15-003
		D-21165-1	1	TA16-001	TA17-001	
		D-21179-3	1	TA15-016		
	Winged, QUIK-ALIGN®,					
	Curbside, Weld-on	D-21179-2	1	TA14-001	TA15-001	TA15-003
		D-21165-2	1	TA16-001	TA17-001	
		D-21179-4	1	TA15-016		
2c	Wingless, QUIK-ALIGN®,					
	Roadside, Weld-on	D-21590-1	1	TB14-001	TB15-001	
		D-21592-1	1	TB16-001	TB17-001	
	Wingless, QUIK-ALIGN®,					
	Curbside, Weld-on	D-21590-2	1	TB14-001	TB15-001	
		D-21592-2	1	TB16-001	TB17-001	
3	AIR SPRING/SHOCK MOUNT					
	Roadside	C-20011-1	1	-14-001	TA14-001	TB14-001
				-14-005	-15-003	TA15-003
				-15-016	TA15-016	-15-027
		C-20012-1	1	-15-001	TA15-001	TB15-001
		C-20013-1	1	-16-001	TA16-001	TB16-001
				-17-003		
		C-20014-1	1	-17-001	TA17-001	TB17-001
		C-20015-1	1	-14-002		
		C-20041-1	1	-16-002		



ITEM	DESCRIPTION	PART NO.	QTY.	MODEL NO. (HT230 ? or N-HT230 ?)						
3	AIR SPRING/SHOCK MOUNT (cont.) Curbside	C-20011-2	1	-14-001	TA14-001	TB14-001				
				-14-005	-15-003	TA15-003				
				-15-016	TA15-016	-15-027				
				C-20012-2	1	-15-001	TA15-001	TB15-001		
				C-20013-2	1	-16-001	TA16-001	TB16-001		
						-17-003				
				C-20014-2	1	-17-001	TA17-001	TB17-001		
				C-20015-2	1	-14-002				
				C-20041-2	1	-16-002				
		4	AIR SPRING SPACER ASSEMBLY	C-20016-1	2	-15-007				
5	AIR SPRING PLATE	B-20037	2	-14-007						
6	UPPER SHOCK CLEVIS¹	S-2592	2	-14-007	-15-007					
7	UPPER SHOCK BRACKET	S-20023	2	-15-025						
8	BUSHING WEAR PAD	S-11613	4	ALL						
9	PIVOT BOLT KIT									
9a	Welded Alignment	S-3646	2	-14-001	-14-002	-14-005				
				-14-007	-15-001	-15-003				
				-15-007	-15-016	-15-025				
				-15-027	-16-001	-16-002				
				-17-001	-17-003					
9b	QUIK-ALIGN®	S-24679	2	TA14-001	TB14-001	TA15-001				
				TB15-001	TA15-003	TA15-016				
				TA16-001	TB16-001	TA17-001				
				TB17-001						
10	SHOCK ABSORBER	S-20002	2	-14-001	TA14-001	TB14-001				
				-14-002	-14-005	-15-001				
				TA15-001	TB15-001	-15-003				
				TA15-003	-15-016	TA15-016				
				-15-025	-15-027	-16-001				
				TA16-001	TB16-001	-16-002				
				-17-001	TA17-001	TB17-001				
				-17-003						
						S-2160	2	-14-007	-15-007	
				11	SHOCK ABSORBER BOLT KIT	S-20031/2	2	-14-001	TA14-001	TB14-001
-14-002	-14-005	-15-001								
TA15-001	TB15-001	-15-003								
TA15-003	-15-016	TA15-016								
-15-025	-15-027	-16-001								
TA16-001	TB16-001	-16-002								
-17-001	TA17-001	TB17-001								
-17-003										
		S-2157/2	2	-14-007	-15-007					
12	U-BOLT KIT	S-20032/4	4	ALL						
13	AIR SPRING	S-20010	2	ALL						
14	AIR SPRING BOLT KIT	S-20033/2	2	ALL						

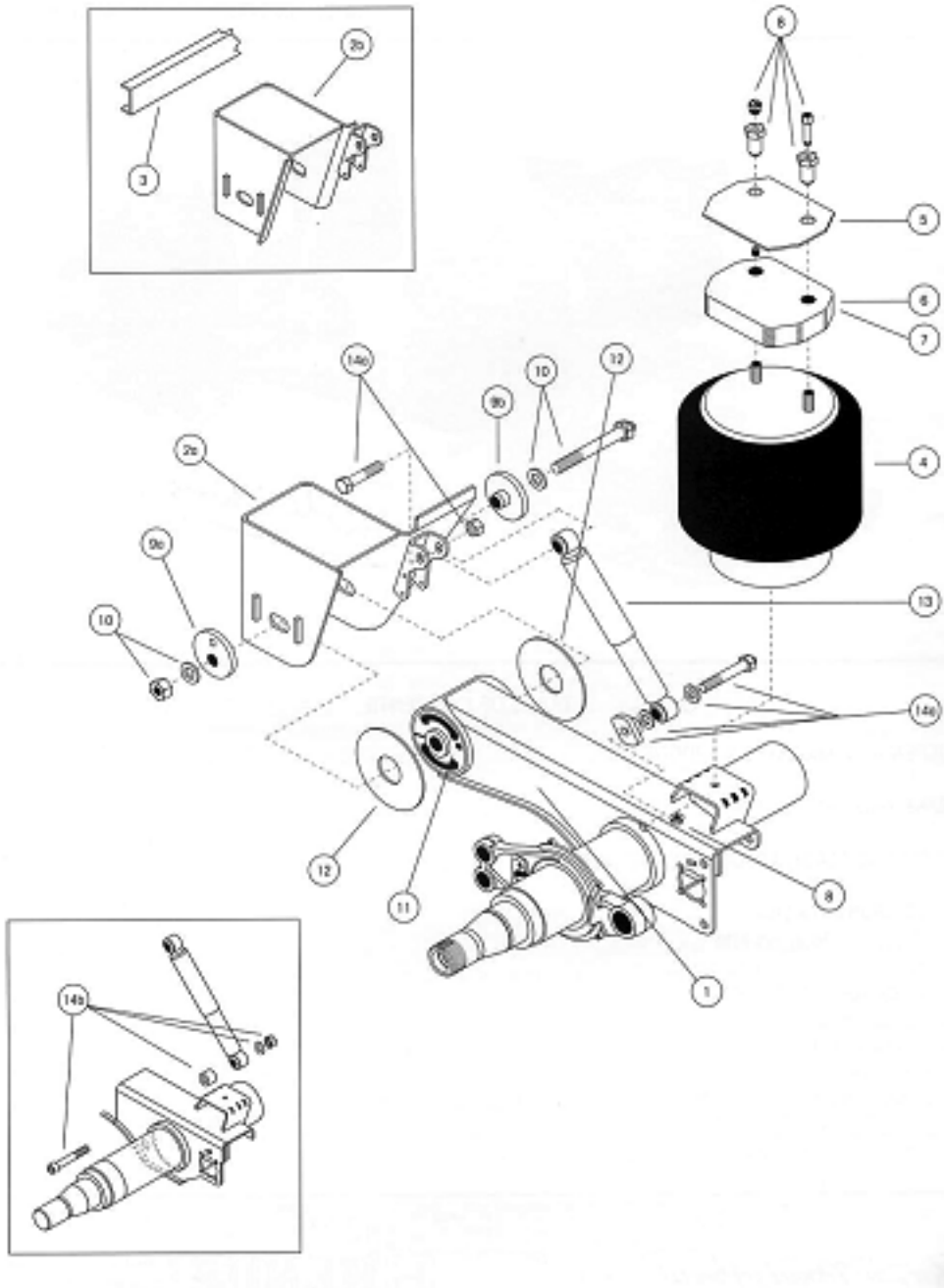


ITEM	DESCRIPTION	PART NO.	QTY.	MODEL NO. (HT230 ? or N-HT230 ?)		
15	FRAME BRACKET CHANNEL	A-1631-19	1	-14-001	TB14-001	-14-002
				-14-005	-14-007	-15-001
				TB15-001	-15-003	-15-007
				-15-025	-16-001	TB16-001
				-16-002	-17-001	TB17-001
				-17-003		
16	AXLE SPACER	S-20701	4	ALL		
17	TRI-FUNCTIONAL® II BUSHING KIT ²					
17a	Welded Alignment	A-6914	2	-14-001	-14-002	-14-005
				-14-007	-15-001	-15-003
				-15-007	-15-016	-15-025
				-15-027	-16-001	-16-002
				-17-001	-17-003	
17b	QUIK-ALIGN®	S-24691	2	TA14-001	TB14-001	TA15-001
				TB15-001	TA15-003	TA15-016
				TA16-001	TB16-001	TA17-001
				TB17-001		
18	ALIGNMENT COLLARS					
18a	Welded Alignment	S-2770	4	-14-001	-14-002	-14-005
				-14-007	-15-001	-15-003
				-15-007	-15-016	-15-025
				-15-027	-16-001	-16-002
				-17-001	-17-003	
18b	Eccentric, QUIK-ALIGN®	S-20925	2	TA14-001	TB14-001	TA15-001
				TB15-001	TA15-003	TA15-016
				TA16-001	TB16-001	TA17-001
				TB17-001		
18c	Concentric, QUIK-ALIGN®	S-20924	2	TA14-001	TB14-001	TA15-001
				TB15-001	TA15-003	TA15-016
				TA16-001	TB16-001	TA17-001
				TB17-001		
19	LOWER SHOCK CLEVIS ³	C-20069	2	-14-001	TA14-001	TB14-001
				-14-002	-14-005	-15-001
				TA15-001	TB15-001	-15-003
				TA15-003	-15-016	TA15-016
				-15-025	-15-027	-16-001
				TA16-001	TB16-001	-16-002
				-17-001	TA17-001	TB17-001
-17-003						
20	LOWER SHOCK BRACKET	S-2723	2	-14-007	-15-007	



Hendrickson Intraax

AA230T/AA250T Suspension and Axle Components



AA230T/AA250T SUSPENSION AND AXLE COMPONENTS

ITEM	DESCRIPTION	PART NO.	QTY.	NOTE
1	AXLE/BEAM WELDMENT			Contact Hendrickson for assistance
2	FRAME BRACKET¹ (Standard Travel)			Contact Hendrickson for assistance
2a	8" Weld-on, Winged, Roadside	C-21028-1	1	13 ¹ / ₂ ", 14" and 15" ride heights
	8" Weld-on, Winged, Slotted Top Plate, Roadside	C-21028-3	1	13 ¹ / ₂ ", 14" and 15" ride heights
	10" Weld-on, Winged, Roadside	D-21082-1	1	16" and 17" ride heights
	8" Weld-on, Winged, Curbside	C-21028-2	1	13 ¹ / ₂ ", 14" and 15" ride heights
	8" Weld-on, Winged, Slotted Top Plate, Curbside	C-21028-4	1	13 ¹ / ₂ ", 14" and 15" ride heights
	10" Weld-on, Winged, Curbside	D-21082-2	1	16" and 17" ride heights
2b	8" Weld-on, Wingless, Roadside	D-21905-1	1	13 ¹ / ₂ ", 14" and 15" ride heights
	10" Weld-on, Wingless, Roadside	D-21906-1	1	16" and 17" ride heights
	8" Weld-on, Wingless, Curbside	D-21905-2	1	13 ¹ / ₂ ", 14" and 15" ride heights
	10" Weld-on, Wingless, Curbside	D-21906-2	1	16" and 17" ride heights
3	FRAME BRACKET CHANNEL	A-1631-19	1	
4	AIR SPRING			
	For AA230T Units Shipped Before 6/1/96	S-20900	2	Use to replace C-20900 air spring
	For AA230T Units Shipped After 6/1/96	S-21800	2	Use to replace C-21800 air spring
	For AA250T Units	S-21784	2	Includes disk assembly; use to replace C-20901 air spring
5	AIR SPRING MOUNTING PLATE			
	All Weld-on Applications	B-20905	2	13 ¹ / ₂ " through 17" ride heights only
	Various Bolt-on Applications	B-21145	2	Distance from outboard side of spacer to center of first trailer frame mounting bolt hole is 1 ¹ / ₂ "; 13 ¹ / ₂ " through 17" ride heights only
	Various Bolt-on Applications	B-22390	2	Distance from outboard side of spacer to center of first trailer frame mounting bolt hole is 2 ¹ / ₄ "; 13 ¹ / ₂ " through 17" ride heights only
	Various Bolt-on Applications	B-21715	2	Distance from outboard side of spacer to center of first trailer frame mounting bolt hole is 1 ³ / ₄ "; 13 ¹ / ₂ " through 17" ride heights only
6	AIR SPRING SPACER			
	Plastic, 1 ¹ / ₈ " Thick Spacer	B-22510-1	2	Typically 15" ride height
	Plastic, 1 ⁷ / ₈ " Thick Spacer	B-22510-2	2	Typically 16" ride height
	Plastic, 3 ¹ / ₈ " Thick Spacer	B-22510-3	2	Typically 17" ride height
7	AIR SPRING SPACER ASSEMBLY			
	Steel, Weld-on, 1 ⁵ / ₁₆ " Thick Spacer Assembly	C-22302-2	2	Typically 15" ride height
	Steel, Weld-on, 2 ¹ / ₁₆ " Thick Spacer Assembly	C-22302-3	2	Typically 16" ride height
	Steel, Weld-on, 3 ⁵ / ₁₆ " Thick Spacer Assembly	C-22302-4	2	Typically 17" ride height
	Steel, Weld-on, 4 ¹ / ₁₆ " Thick Spacer Assembly	C-22302-5	2	Typically 18" ride height
	Steel, Weld-on, 5 ⁵ / ₁₆ " Thick Spacer Assembly	C-22302-6	2	Typically 19" ride height
	Steel, Bolt-on, 4 ⁵ / ₁₆ " Thick Spacer Assembly	C-22738-1	2	Typically 18" ride height
	Steel, Bolt-on, 5 ⁹ / ₁₆ " Thick Spacer Assembly	C-22738-2	2	Typically 19" ride height

¹ Other options exist including: standard travel bolt-on frame brackets; bolt-on frame brackets for limited travel and high control applications; weld-on frame brackets for limited travel and high control applications. High control applications include dollies, full trailers and pups used in doubles or triples. Contact Hendrickson for assistance in determining a part number for the above applications.

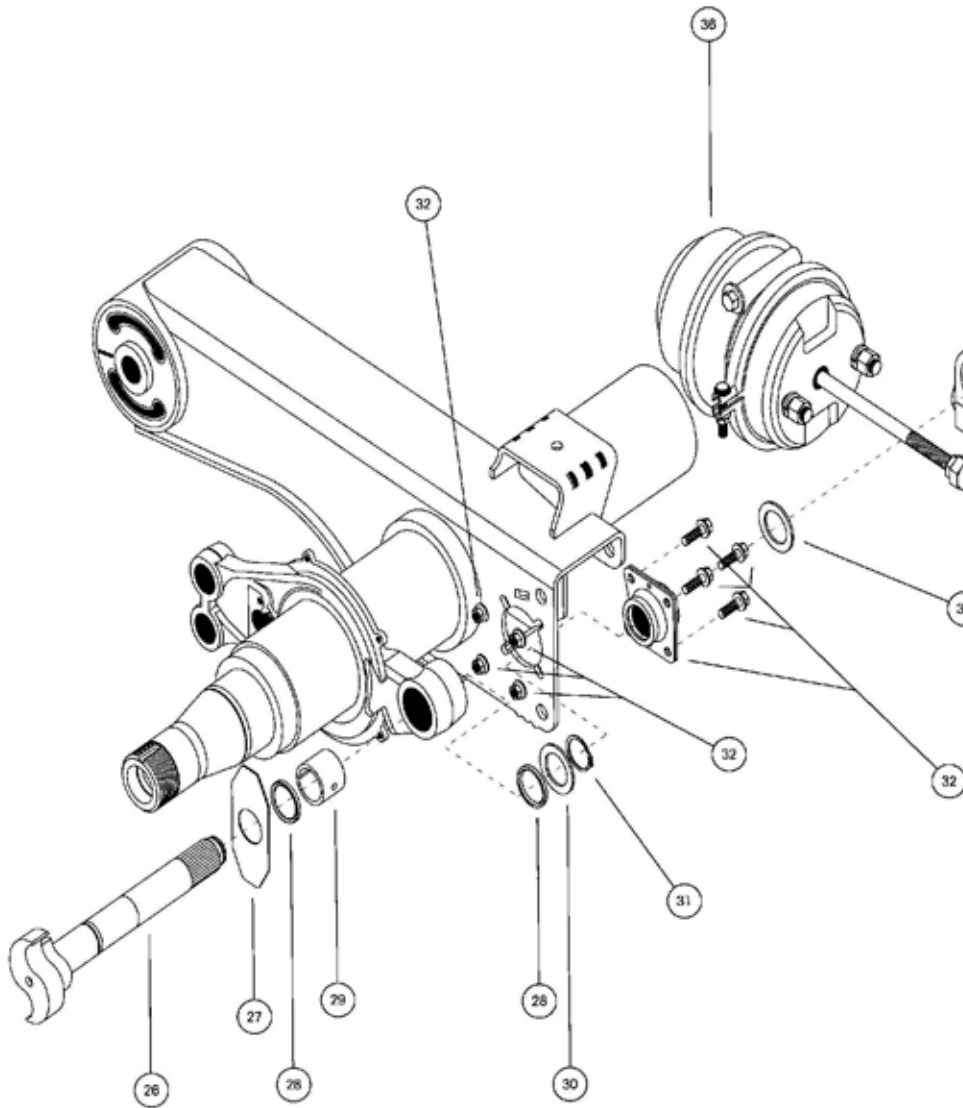


AA230T/AA250T SUSPENSION AND AXLE COMPONENTS

ITEM	DESCRIPTION	PART NO.	QTY.	NOTE
8	AIR SPRING MOUNTING KIT² (Per Air Spring)			
		S-22619/2	2	For units with no spacer or with 1 ⁵ / ₁₆ " 2 ¹ / ₁₆ " ³ , 3 ⁵ / ₁₆ " ³ , 4 ¹ / ₁₆ " ³ , 4 ⁵ / ₁₆ " ³ , 5 ⁵ / ₁₆ " ³ or 5 ⁹ / ₁₆ " thick spacer assemblies
		S-22630/2	2	For units with a 1 ¹ / ₈ " thick spacer
		S-22631/2	2	For units with a 1 ⁷ / ₈ " thick spacer
		S-22632/2	2	For units with a 3 ¹ / ₈ " thick spacer
9	ALIGNMENT COLLARS			
9a	Eccentric Alignment Collar	S-20925	2	Pivot bolt hole is offset from center of collar
9b	Concentric Alignment Collar	S-20924	2	Pivot bolt hole is in center of collar
10	QUIK-ALIGN[®] PIVOT BOLT KIT^{2,3}	S-24679	2	Includes shear-type bolt, nut and washers
11	QUIK-ALIGN PIVOT BUSHING KIT^{2,3}			
	Standard	S-24691	2	Includes bushing, pivot bolt kit, wear pads and lube
	High Control	S-24681	2	Includes bushing, pivot bolt kit, high control wear pads and lube
12	BUSHING WEAR PAD			
	Standard	S-11613	4	Four (4) required per axle
	High Control	B-21099	4	Four (4) required per axle
13	SHOCK ABSORBER⁴			
	Standard Duty	S-23566	2	Use to replace A-20002 or B-23566 shock absorbers
	Extended Service	S-24125	2	Use to replace A-20126 or B-24125 shock absorbers
	Extended Service with High Dampening	S-24023	2	Use to replace B-21553 or B-24023 shock absorbers
	Limited Rebound	S-23361	2	Use to replace B-22345 or B-23361 shock absorbers
14	SHOCK ABSORBER BOLT KIT^{2,3}			
14a	For Units Shipped After 8/11/95	S-24021 ⁵	2	One (1) required per shock
14b	For Units Shipped Before 8/11/95	S-20896/2	2	One (1) required per shock

Hendrickson Intraax

AA230T/AA250T S-CAM and Slack Adjuster





AA230T/AA250T S-CAM AND SLACK ADJUSTER COMPONENTS

ITEM	DESCRIPTION	PART NO.	QTY.	NOTE
26	S-CAM			
	Right Hand, 28 Spline	S-24636-1R	1	Standard and HXS®
	Right Hand, 10 Spline	S-23857-1R	1	Standard and HXS; not for U.S. use
	Left Hand, 28 Spline	S-24636-1L	1	Standard and HXS
	Left Hand, 10 Spline	S-23857-1L	1	Standard and HXS; not for U.S. use
27	OUTER CAM WASHER⁶			Included in axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁶
28	SPIDER SEAL⁶			Included in axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁶
29	SPIDER CAMSHAFT BUSHING⁶			Included in axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁶
30	S-CAM JOURNAL WASHER⁶			Included in axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁶
31	SPIDER RETAINING RING⁶			Included in axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁶
32	S-CAM SUPPORT BUSHING ASSEMBLY⁶			Included in axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁶
33	SPLINE INNER WASHER⁶			Included in axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁶
34	SPLINE RETAINING RING⁶			Included in axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁶
35	SLACK ADJUSTER KITS (Per Wheel)			
	28 Spline, Gunite, 5 1/2"	S-21398-1	2	Includes unhanded autoslack, outer nut and inner sleeve
	28 Spline, Gunite, 6"	S-21398-2	2	Includes unhanded autoslack, outer nut and inner sleeve
	28 Spline, Haldex, 5 1/2"	S-21399-1	2	Includes unhanded autoslack, anchor stud, nut and slack adjuster clevis assembly
	28 Spline, Haldex, 6"	S-21399-2	2	Includes unhanded autoslack, anchor stud, nut and slack adjuster clevis assembly
	10 Spline, Gunite, 5 1/2"	S-15191-1	2	Includes unhanded autoslack, outer nut and inner sleeve; not for U.S. use
	10 Spline, Gunite, 6"	S-15191-2	2	Includes unhanded autoslack, outer nut and inner sleeve; not for U.S. use
	10 Spline, Haldex, 5 1/2"	S-15192-1	2	Includes unhanded autoslack, anchor stud, nut and slack adjuster clevis assembly; not for U.S. use
	10 Spline, Haldex, 6"	S-15192-2	2	Includes unhanded autoslack, anchor stud, nut and slack adjuster clevis assembly; not for U.S. use
36	BRAKE CHAMBER (10" Push Rod)			
	MGM 30/30	S-20837-1	2	
	MGM 30/30 L3	C-24225	2	Long Stroke
	MGM 30/30, 3"	C-24247-1	2	Long Stroke
	Haldex/Midland 30/30	S-20837-2	2	
	TSE 30/30	S-20837-3	2	
	Carlisle 30/30	C-20837-4	2	
37	CLAMP-ON DUST SHIELD			
	Sealed	S-23579/2	1	Not shown
	Unsealed	S-25160/2	1	Not shown

AA230T/AA250T KIT COMPONENTS LIST


ITEM	DESCRIPTION	QTY.	PART NO.
AIR SPRING MOUNTING KITS			
8	NO SPACER OR WITH 1⁵/₁₆" , 2 ¹ / ₁₆ " , 3⁵/₁₆" , 4 ¹ / ₁₆ " , 4⁵/₁₆" , 5 ⁵ / ₁₆ " OR 5⁹/₁₆" THICK SPACER ASSEMBLY (Per Air Spring)		S-22619/2
	1/4"-18 NPFT Plug	1	
	1/2"-13 Flanged Nut, Metal	1	
	3/4"-16 Flanged Nut, Metal	2	
8	1¹/₈" THICK SPACER (Per Air Spring)		S-22630/2
	1/4"-18 NPFT Plug	1	
	Air Fitting, 1.10"	1	
	Extension Nut Fitting, .65"	2	
	1/2"-13 Flanged Nut, Metal	1	
8	1⁷/₈" THICK SPACER (Per Air Spring)		S-22631/2
	1/4"-18 NPFT Plug	1	
	Air Fitting, 2.10"	1	
	Extension Nut Fitting, 1.73"	2	
	1/2"-13 Flanged Nut, Metal	1	
	Plug	1	
8	3¹/₈" THICK SPACER (Per Air Spring)		S-22632/2
	1/4"-18 NPFT Plug	1	
	Air Fitting, 3.10"	1	
	Extension Nut Fitting, 2.65"	2	
	1/2"-13 Flanged Nut, Metal	1	
	Plug	1	
PIVOT BOLT/BUSHING KITS			
10	QUIK-ALIGN® PIVOT BOLT KIT (Per Hanger) ³		S-24679
	7/8" Hardened Flat Washer	2	
	7/8"-9 UNC x 10" Grade 8, Shear-Type Bolt	1	
	7/8"-9 UNC Prevailing Torque Hexnut	1	
11	QUIK-ALIGN PIVOT BUSHING KIT - Standard (Per Hanger) ³		S-24691
	7/8" Hardened Flat Washer	2	
	7/8"-9 UNC x 10" Grade 8, Shear-Type Bolt	1	
	7/8"-9 UNC Prevailing Torque Hexnut	1	
	Bushing Wear Pad	2	
	TRI-FUNCTIONAL® II BUSHING	1	
	Lubricant Packet	1	
11b	QUIK-ALIGN PIVOT BUSHING KIT - High Control (Per Hanger) ³		S-24681
	7/8" Hardened Flat Washer	2	
	7/8"-9 UNC x 10" Grade 8, Shear-Type Bolt	1	
	7/8"-9 UNC Prevailing Torque Hexnut	1	
	Bushing Wear Pad - High Control	2	
	TRI-FUNCTIONAL II BUSHING	1	
	Lubricant Packet	1	

AA230T/AA250T KIT COMPONENTS LIST

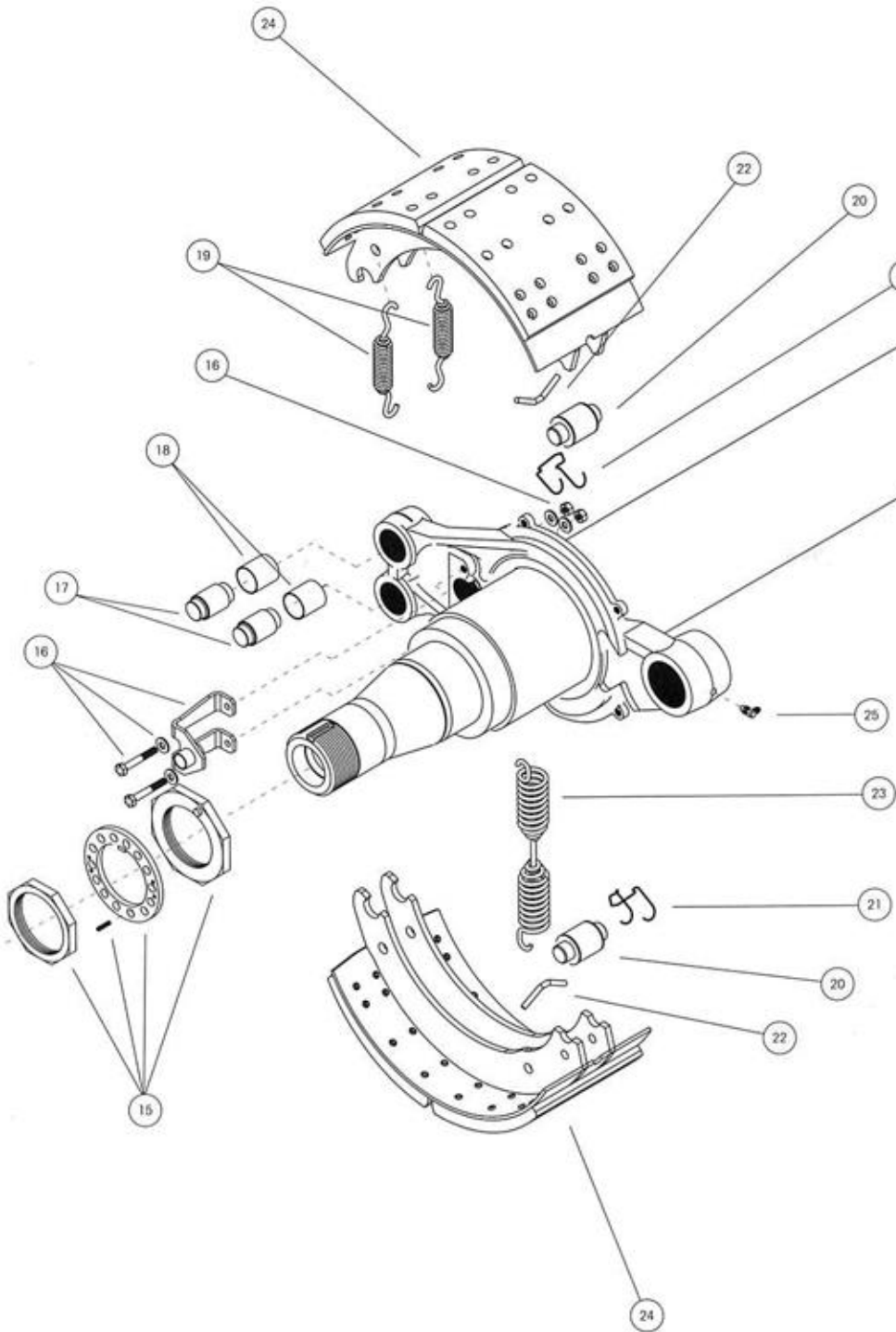

ITEM	DESCRIPTION	QTY.	PART NO.
BRAKE SHOE KITS			
BRAKE, SHOE KIT (Per Wheel)¹⁰			S-21266-1
24	Lined Brake Shoe	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
BRAKE, SHOE KIT (Per Wheel)¹⁰			S-23750-1
24	Lined Brake Shoe	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
BRAKE, SHOE KIT (Per Wheel)¹⁰			S-23750-3
24	Lined Brake Shoe	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
BRAKE, SHOE KIT (Per Wheel)¹⁰			S-23751-1
24	Lined Brake Shoe	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
BRAKE, SHOE KIT (Per Wheel)¹⁰			S-23751-3
24	Lined Brake Shoe	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
BRAKE OVERHAUL KITS			
ALL STANDARD BRAKES, MINOR OVERHAUL KIT (Per Wheel)			S-21183
17	Anchor Pin	2	
18	Anchor Pin Bushing	2	
19	Brake Retaining Spring	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
23	Brake Return Spring	1	
ALL HXS® BRAKES, MINOR OVERHAUL KIT (Per Wheel)			S-23752
17	Anchor Pin	2	
18	Anchor Pin Bushing	2	
19	Brake Retaining Spring	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
23	Brake Return Spring	1	
BRAKES, MAJOR OVERHAUL KIT (Per Wheel)¹⁰			S-21184-1
17	Anchor Pin	2	
18	Anchor Pin Bushing	2	
23	Brake Return Spring	1	
19	Brake Retaining Spring	2	
24	Lined Brake Shoes	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	



AA230T/AA250T KIT COMPONENTS LIST

ITEM	DESCRIPTION	QTY.	PART NO.
BRAKES, MAJOR OVERHAUL KIT (Per Wheel)¹⁰			S-23753-1
17	Anchor Pin	2	
18	Anchor Pin Bushing	2	
23	Brake Return Spring	1	
19	Brake Retaining Spring	2	
24	Lined Brake Shoes	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
BRAKES, MAJOR OVERHAUL KIT (Per Wheel)¹⁰			S-23753-3
17	Anchor Pin	2	
18	Anchor Pin Bushing	2	
23	Brake Return Spring	1	
19	Brake Retaining Spring	2	
24	Lined Brake Shoes	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
BRAKES, MAJOR OVERHAUL KIT (Per Wheel)¹⁰			S-23754-1
17	Anchor Pin	2	
18	Anchor Pin Bushing	2	
23	Brake Return Spring	1	
19	Brake Retaining Spring	2	
24	Lined Brake Shoes	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	
BRAKES, MAJOR OVERHAUL KIT (Per Wheel)¹⁰			S-23754-3
17	Anchor Pin	2	
18	Anchor Pin Bushing	2	
23	Brake Return Spring	1	
19	Brake Retaining Spring	2	
24	Lined Brake Shoes	2	
20	Brake Shoe Roller	2	
21	Roller Retainer	2	
22	Return Spring Pin	2	

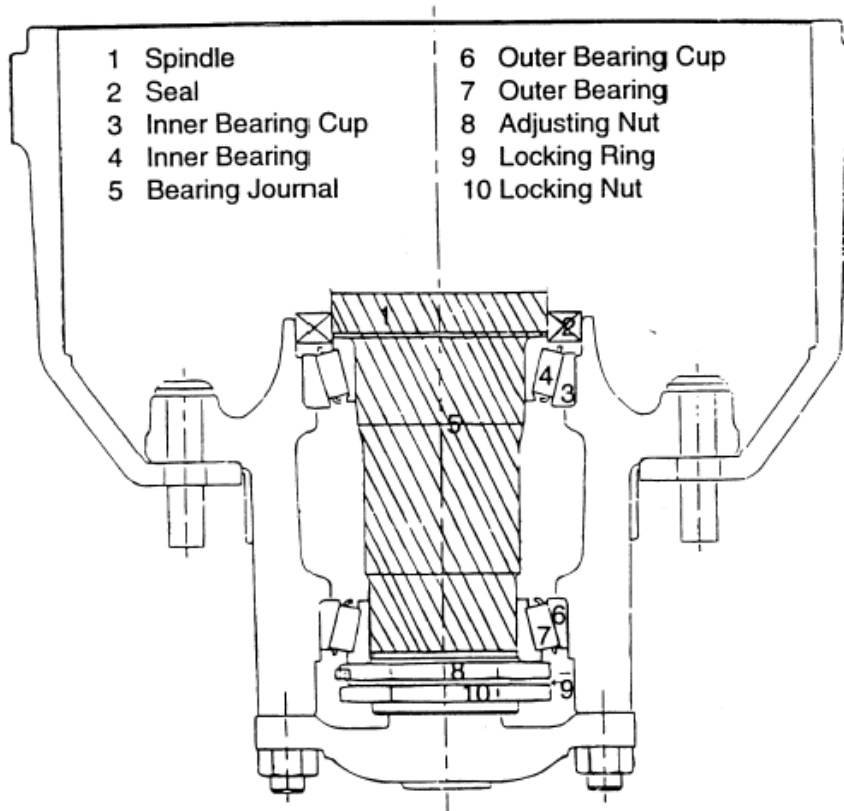
AA230T/AA250T Brake and Spindle Components



AA230T/AA250T BRAKE AND SPINDLE COMPONENTS

ITEM	DESCRIPTION	PART NO.	QTY.	NOTE
15	AXLE NUT KIT⁷			
	HN Spindle Type	S-20492/2	2	Includes inner axle nut, outer axle nut, lock washer and set screw
	HP Spindle Type	S-20475/2	2	Includes inner axle nut, outer axle nut, lock washer and set screw
16	ABS BRACKET KIT⁷			
	HN Spindle Type	S-24903	1	Includes sensor bracket, bolts, lock nuts and flat washers
	HP Spindle Type	S-24904	1	Includes sensor bracket, bolts, lock nuts and flat washers
17	ANCHOR PIN⁶			Included in minor overhaul brake kits and major overhaul brake kits ⁷
18	ANCHOR PIN BUSHING⁶			Included in minor overhaul brake kits and major overhaul brake kits ⁷
19	BRAKE RETAINING SPRING⁶			Included in minor overhaul brake kits and major overhaul brake kits ⁷
20	BRAKE SHOE ROLLER⁶			Included in brake shoe kits, minor overhaul brake kits and major overhaul brake kits ⁷
21	ROLLER RETAINER⁶			Included in brake shoe kits, minor overhaul brake kits, major overhaul brake kits, axle S-cam major overhaul kits and wheel S-cam major overhaul kits ⁷
22	RETURN SPRING PIN⁶			Included in brake shoe kits, minor overhaul brake kits and major overhaul brake kits ⁷
23	BRAKE RETURN SPRING⁶			Included in minor overhaul brake kits and major overhaul brake kits ⁷
24	BRAKE SHOE⁶			
	16 1/2" x 7" Standard Service			
	Brake Shoe Kit ⁷	S-21266-1 ⁴	2	ABEX 3030-197, FMSI 4515
	Major Overhaul Brake Kit ⁷	S-21184-1 ⁴	2	ABEX 3030-197, FMSI 4515
	16 1/2" x 7" HXS[®]			
	Brake Shoe Kit ⁷	S-23750-1	2	ABEX 3030-197, FMSI 4707
		S-23750-3	2	ABEX 931-162, FMSI 4707
	Major Overhaul Brake Kit ⁷	S-23753-1	2	ABEX 3030-197, FMSI 4707
		S-23753-3	2	ABEX 931-162, FMSI 4707
	16 1/2" x 8 5/8" HXS			
Brake Shoe Kit ⁷	S-23751-1	2	ABEX 3030-197, FMSI 4711	
	S-23751-3	2	ABEX 931-162, FMSI 4711	
Major Overhaul Brake Kit ⁷	S-23754-1	2	ABEX 3030-197, FMSI 4711	
	S-23754-3	2	ABEX 931-162, FMSI 4711	
25	Grease Fitting	A-22830	2	Self tapping

Wheels And Hubs



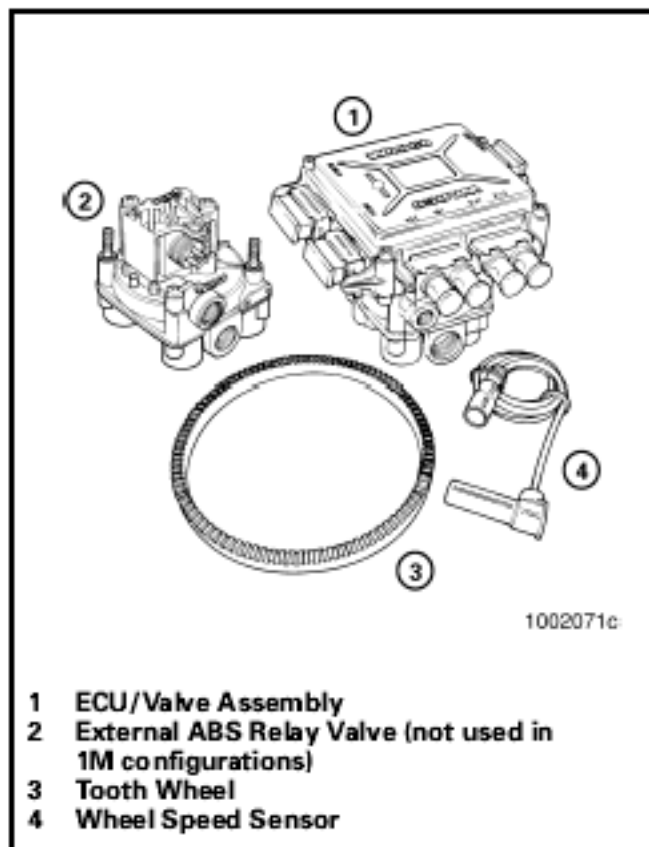
HUBS AND DRUMS

Meritor	Unimount 10 stud hub and drum	14-15571-102
	22.5 Unimount wheel	28408
	24.5 Unimount wheel	28409

Meritor Wabco ABS Parts And Accessories Description

ECU Part Numbers 400 5001010 for 2S-1M system and 400 5001030 for 4S-2N system have an external diagnostics connector for use with a special diagnostic tool.

These models are also compatible with an MPSI Pro-Link® 9000 diagnostic tool and Meritor WABCO cartridge.



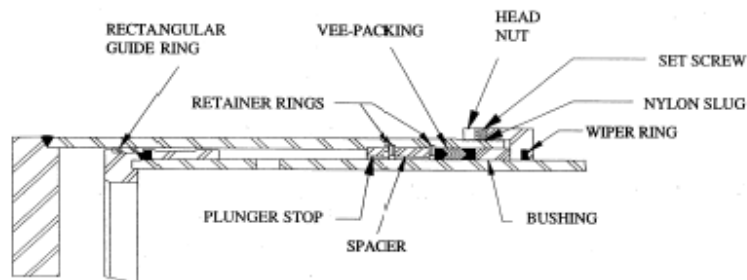
Custom Hoist Parts

- Custom Hoists, Inc. model numbers and serial numbers are stamped on the O.D. of the cylinder body. Using these model numbers will eliminate misunderstandings when placing orders or requesting information.

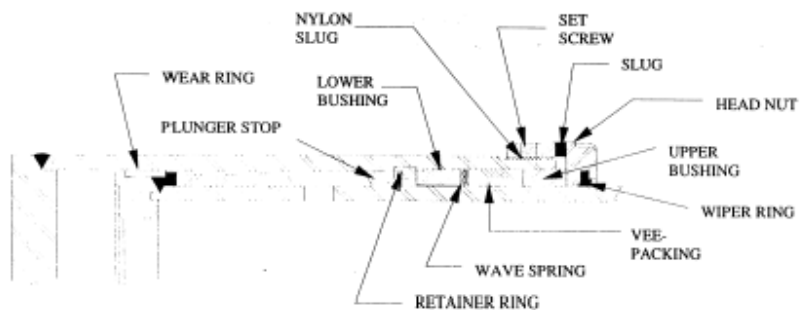
Three types of repair kits are available for all Single-Acting Telescopic Cylinders.

To order, use the cylinder prefix (*) number.

Single-Acting Telescopic standard design manufactured from February 1, 1997 to September 12, 1997 with a serial number of 350,000 to 399,999.



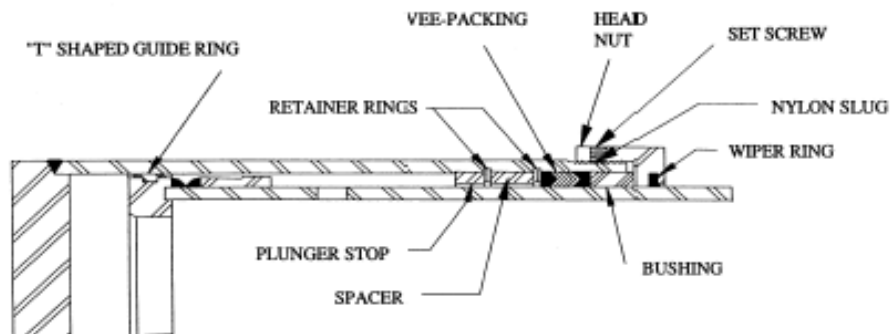
Single-Acting Telescopic standard design manufactured after September 15, 1997 with a serial number of 400,000 or higher.



b) Kits to be used on single-acting telescopic cylinders with a serial number of 400,000 or higher:

<u>Kit Number</u>	<u>Description</u>	<u>Consists of the Following Items for Each Stage</u>	<u>When Used</u>
SK-(*)-400	Seal Kit	Wiper Ring Wave Spring Packing Set Set Screw Nylon Slug	Minor field repair
MPK -(*)-400	Minor Packing Kit	Upper Bushing Lower Bushing Plus all items listed for seal kit	When bushings show excessive wear
MRK -(*)-400	Major Repair Kit	Plunger Stop Retainer Ring Wear Ring Plus all items listed for seal kit and minor packing kit	Major overhaul of cylinder

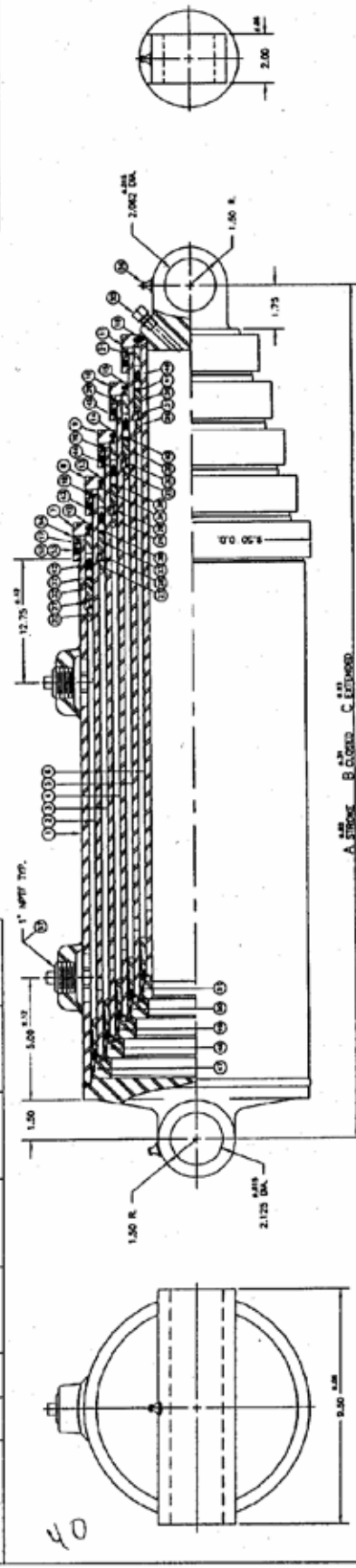
Single-Acting Telescopic standard design manufactured until January 31, 1997 with a serial number up to 349,999.



CYL NO.	A	B	C	ITEM #1 CYL. TUBE ASSY	ITEM #2 1st PLUN. ASSY	ITEM #3 2nd PLUN. ASSY	ITEM #4 3rd PLUN. ASSY	ITEM #5 4th PLUN. ASSY	ITEM #6 LAST PLUN. ASSY	DESCRIPTION	RECD	ITEM	PART NO.	DESCRIPTION	RECD	ITEM	PART NO.	DESCRIPTION	RECD
85-402-170	188.25	49.85	218.13	3CT18-211-39 3/4	2PM-250-38 1/8	2PA7-250-40 1/4	2PM-250-41 3/8	2PA5-250-43 1/2	2PMA-689-44 3/8	HEAD NUT	1	7	3-HN-1-9		1	32	1-BU-195-8	BUSHING	1
85-402-180	188.25	53.88	242.13	3CT18-211-43 3/4	2PM-250-43 1/8	2PA7-250-44 1/4	2PM-250-45 3/8	2PA5-250-48 1/2	2PMA-689-46 3/8		1	8	3-HN-1-8		1	33	1-BU-195-7		1
85-402-220	218.26	56.88	278.13	3CT18-211-49 3/4	2PM-250-49 1/8	2PA7-250-50 1/4	2PM-250-51 3/8	2PA5-250-53 1/2	2PMA-689-54 3/8		1	9	3-HN-1-7		1	34	1-BU-195-6		1
85-402-235	233.25	63.00	298.25	3CT18-211-54 3/4	2PM-250-54 1/8	2PA7-250-55 1/4	2PM-250-56 3/8	2PA5-250-59 1/2	2PMA-689-59 3/8		1	10	3-HN-1-6		1	35	1-BU-195-5		1
85-402-250	248.25	66.00	318.25	3CT18-211-57 3/4	2PM-250-57 1/8	2PA7-250-58 1/4	2PM-250-59 3/8	2PA5-250-62 1/2	2PMA-689-62 3/8		1	11	3-HN-1-5		1	36	1-BU-195-4		1
85-402-260	188.25	55.88	254.12	3CT18-211-45 3/4	2PM-250-45 1/8	2PA7-250-46 1/4	2PM-250-47 3/8	2PA5-250-48 1/2	2PMA-689-50 3/8	WIPER RING	1	12	1-WR-1-8		1	37	1-WA-11-8	WAVE SPRING	1
85-402-280	228.25	70.00	328.25	3CT18-211-59 3/4	2PM-250-59 1/8	2PA7-250-60 1/4	2PM-250-61 3/8	2PA5-250-63 1/2	2PMA-689-64 1/2		1	13	1-WR-1-7		1	38	1-WA-11-7		1
85-402-106	104.38	37.50	143.88								1	14	1-WR-1-6		1	39	1-WA-11-6		1
85-402-1805	189.00	53.88	233.88	3CT18-211-43 3/4	2PM-250-43 1/8	2PA7-250-44 1/4	2PM-250-45 3/8	2PA5-250-46 1/2	2PMA-689-48 3/8		1	15	1-WR-1-5		1	40	1-WA-11-5		1
85-402-180	158.25	47.88	206.13	3CT18-211-37 3/4	2PM-250-37 1/8	2PA7-250-38 1/4	2PM-250-39 3/8	2PA5-250-40 1/2	2PMA-689-42 3/8		1	16	1-WR-1-4		1	41	1-WA-11-4		1
											1	17	1-BU-11-8	BUSHING	1	42	1-PK-1-8	PACKING SET	1
											1	18	1-BU-11-6		1	43	1-PK-1-7		1
											1	19	1-BU-11-5		1	44	1-PK-1-6		1
											1	20	1-BU-11-4		1	45	1-PK-1-5		1
											1	21	1-BO-11-4		1	46	1-PK-1-4		1
											1	22	2-PS-36-8	PLUNGER STOP	1	47	2-WO-1-8	WEAR RING	1
											1	23	2-PS-36-7		1	48	2-WO-1-7		1
											1	24	2-PS-36-6		1	49	2-WO-1-6		1
											1	25	2-PS-36-5		1	50	2-WO-1-5		1
											1	26	2-PS-36-4		1	51	2-WO-1-4		1
											1	27	2-RR-58-8 1/2	RETAINER RING	1	52	1-S5-3-1	SET SCREW	5
											1	28	2-RR-58-7 1/2		1	53	1-S5-2-1	SLUG	5
											1	29	2-RR-58-6 1/2		1	54	1-S5-6	SLUG	5
											1	30	2-RR-58-5 1/2		1	55	1-MRVA-2	BLEEDER SCREW	1
											1	31	2-RR-58-4 1/2		1	56	1-GF-1-1	GREASE FITTING	2
											1				1	57	1-PP-1-3	PIPK PLUG	2

SK-85-400 SEAL KIT
 ITEMS: 12,13,14,15,16,37,38,39,40,41,
 42,43,44,45,46,52,53,54
 WPK-85-400 MINOR PACKING KIT
 ITEMS: 17,18,19,20,21,32,33,34,35,36,SK-85-400
 WRK-85-400 MAJOR REPAIR KIT
 ITEMS: 22,23,24,25,26,27,28,29,30,31,47,48,49,50,51,
 WPK-85-400

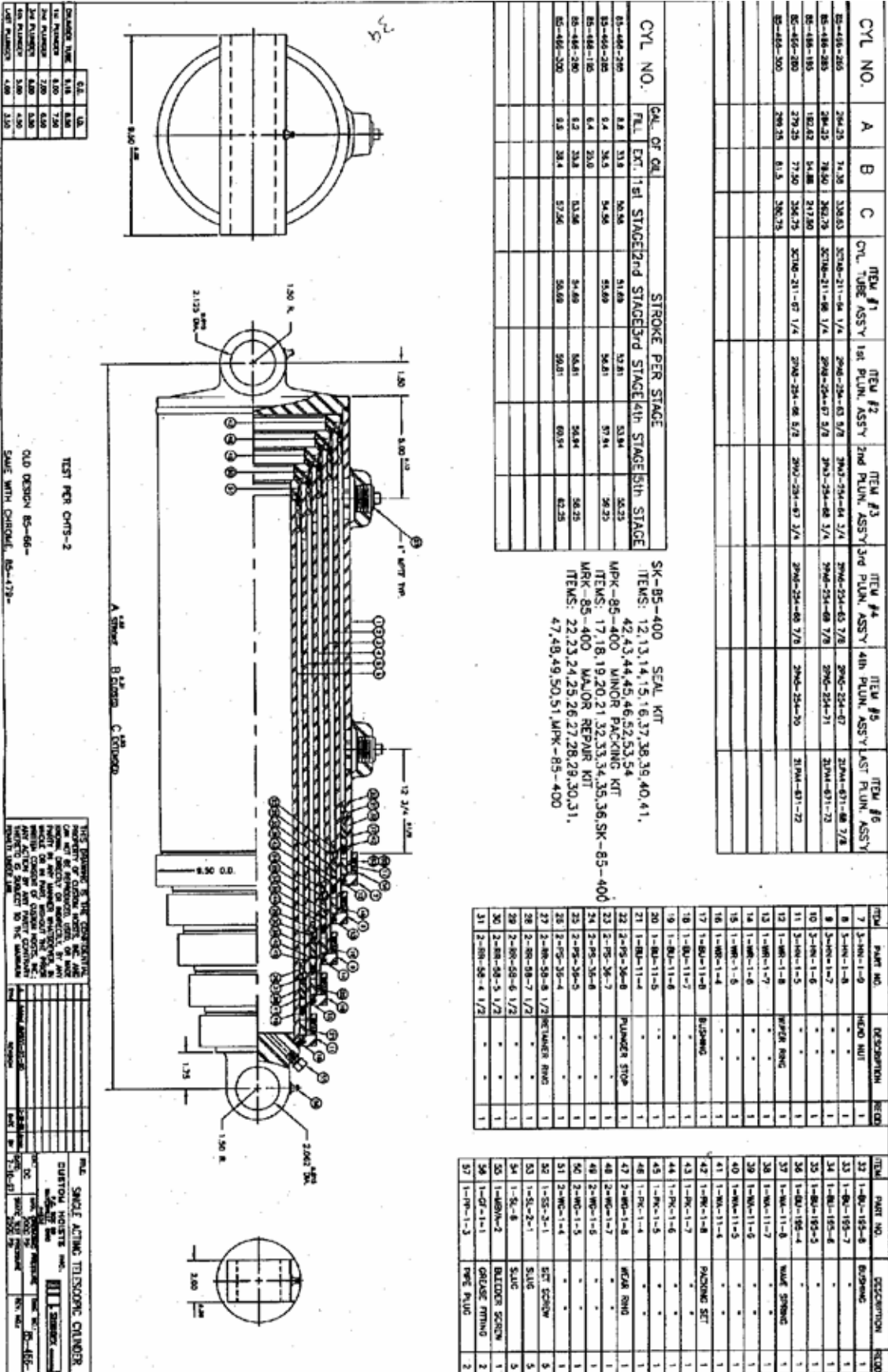
CYL NO.	GAL. OF OIL					STROKE PER STAGE				
	FILL	EXT.	1st STAGE	2nd STAGE	3rd STAGE	4th STAGE	5th STAGE	6th STAGE	7th STAGE	8th STAGE
85-402-170	6.8	21.8	30.56	33.81	35.44	36.75				
85-402-180	6.3	24.3	34.56	37.81	39.44	40.75				
85-402-220	7.3	28.2	40.56	41.69	43.44	45.75				
85-402-235	7.8	30.1	43.56	44.69	46.44	49.75				
85-402-250	8.3	32.0	46.56	47.69	49.81	51.44	52.75			
85-402-260	8.6	33.1	48.56	49.69	51.81	53.44	54.75			
85-402-1805	3.5	13.6	34.56	35.69	37.81	39.44	32.50			
85-402-180	5.3	20.5	28.56	29.69	31.81	33.44	34.75			



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TEST PER CHTS--2
 OLD DESIGN 85-2--
 SAME WITH CHROME, 85-443--

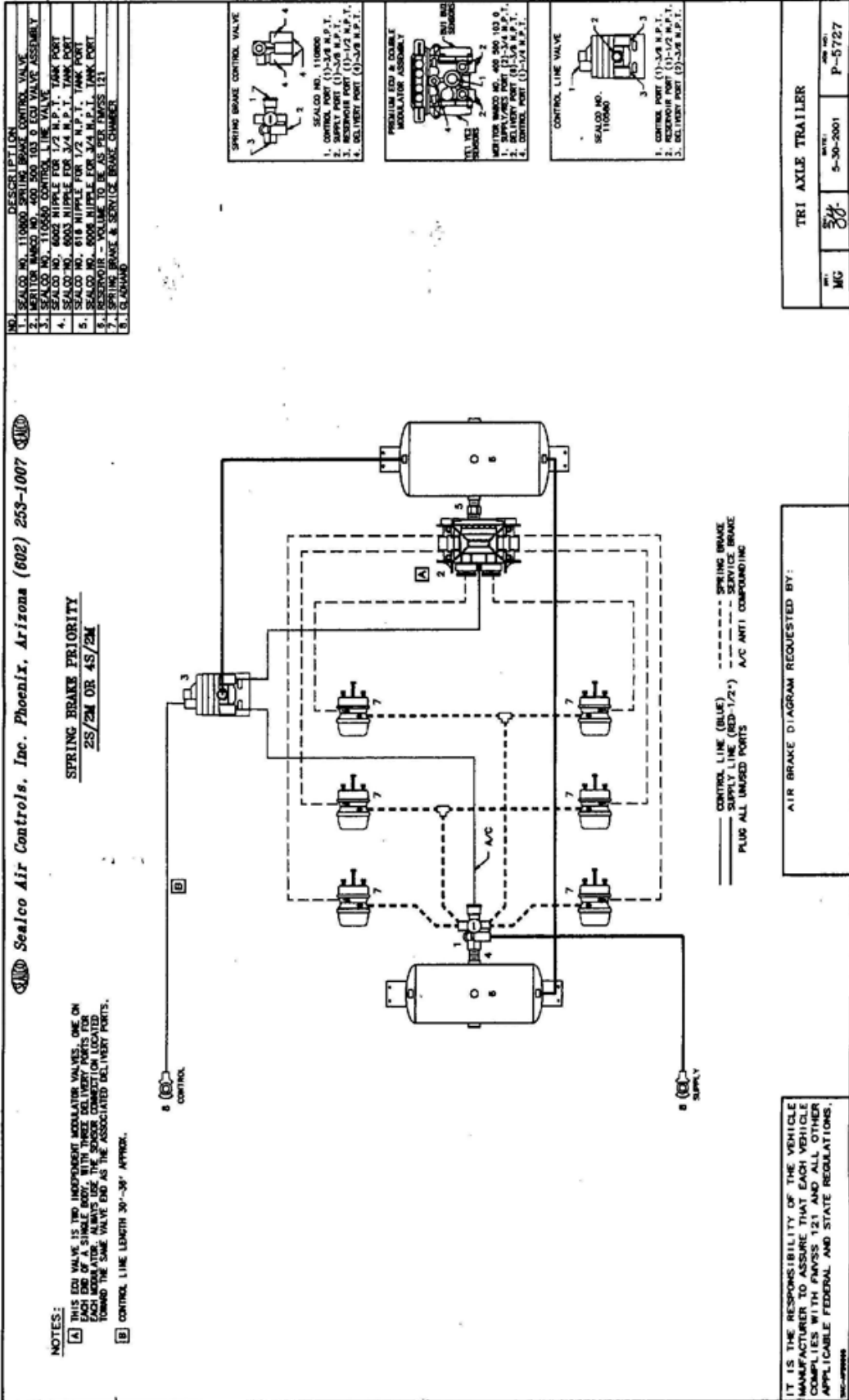
CYLINDER TYPE	U.S.	M.M.
1 1/2" PLUNGER	3.93	100.0
2" PLUNGER	5.08	128.0
2 1/2" PLUNGER	6.35	160.0
3" PLUNGER	7.62	193.0
4" PLUNGER	101.6	2580.0



Air Systems - Sealco Schematic

CYL NO.	A	B	C	ITEM #1 CYL. TUBE ASSY	ITEM #2 1st PLUN. ASSY	ITEM #3 2nd PLUN. ASSY	ITEM #4 3rd PLUN. ASSY	ITEM #5 4th PLUN. ASSY	ITEM #6 5th PLUN. ASSY
85-486-285	254.25	14.26	328.83	SC106-21-64 1/4	2PM-24-43 5/8	2PM-24-43 7/8	2PM-24-47 1/4	2PM-24-47 1/2	2PM-24-47 3/4
85-486-285	254.25	14.26	328.83	SC106-21-64 1/4	2PM-24-43 5/8	2PM-24-43 7/8	2PM-24-47 1/4	2PM-24-47 1/2	2PM-24-47 3/4
85-486-193	182.83	64.88	217.80	SC106-21-68 1/4	2PM-24-47 5/8	2PM-24-47 7/8	2PM-24-47 1/4	2PM-24-47 1/2	2PM-24-47 3/4
85-486-280	279.25	77.50	356.75	SC106-21-67 1/4	2PM-24-46 5/8	2PM-24-46 7/8	2PM-24-46 3/4	2PM-24-46 1/2	2PM-24-46 1/4
85-486-300	299.50	81.5	380.75						

ITEM	PART NO.	DESCRIPTION	QTY	ITEM	PART NO.	DESCRIPTION	QTY
7	3-NK-1-9	HEAD NUT	1	32	1-RK-153-8	BRUSHING	1
8	1-NK-1-8	"	1	33	1-RK-153-7	"	1
9	3-NK-1-7	"	1	34	1-RK-153-6	"	1
10	3-NK-1-6	"	1	35	1-RK-153-5	"	1
11	3-NK-1-5	"	1	36	1-RK-154-4	"	1
12	1-NK-1-8	WATER RING	1	37	1-NK-11-8	WATER RING	1
13	1-NK-1-7	"	1	38	1-NK-11-7	"	1
14	1-NK-1-6	"	1	39	1-NK-11-5	"	1
15	1-NK-1-5	"	1	40	1-NK-11-5	"	1
16	1-NK-1-4	"	1	41	1-NK-11-4	"	1
17	1-RK-11-8	BLUSHING	1	42	1-RK-11-8	PACKING SET	1
18	1-RK-11-7	"	1	43	1-RK-11-7	"	1
19	1-RK-11-6	"	1	44	1-RK-11-6	"	1
20	1-RK-11-5	"	1	45	1-RK-11-5	"	1
21	1-RK-11-4	"	1	46	1-RK-11-4	"	1
22	3-PS-26-8	PLUNGER STOP	1	47	3-PS-26-7	WEAR RING	1
23	2-PS-26-7	"	1	48	2-PS-26-7	"	1
24	3-PS-26-6	"	1	49	2-PS-26-6	"	1
25	2-PS-26-5	"	1	50	2-PS-26-5	"	1
26	2-PS-26-4	"	1	51	2-PS-26-4	"	1
27	2-PS-26-4	1/2 RETAINER RING	1	52	1-SS-2-1	SET SCREW	5
28	2-PS-26-4	1/2	1	53	1-SS-2-1	SLUG	5
29	2-PS-26-4	1/2	1	54	1-RK-2-1	BLIND SCREW	5
30	2-PS-26-5	1/2	1	55	1-RK-2-1	BLIND SCREW	5
31	2-PS-26-4	1/2	1	56	1-DF-1-1	GRIND RING	2
				57	1-PS-1-3	PIPE PLUG	2





Wiring Colour Codes For Canadian Trailers

6 Or 7 Wire Cable Color Applications for Auxiliary Functions							
	GREEN .	YELLOW .	RED .	BLACK .	BROWN .	WHITE .	BLUE .
End Dump							
Tailgate Air Trip with Air Bag Dump	x						
Tailgate Air Trip with	x						
Separate Air Bag Dump			x				
B Train Side Dump Lead Unit							
Over the Side Box - Up				x			
Over the Side Box - Down		x					
Air Bag Dump - Lead Unit			x				
End Dump Rear Unit							
Tailgate Air Trip	x						
End Dump Box - Up					x		
End Dump Box - Down						x	
Air Bag Dump - Rear Unit			x				
B Train Side Dump Lead Unit							
Over the Side Box #1 - Up				x			
Over the Side Box #1 - Down		x					
Air Bag Dump - Lead Unit			x				
B Train Side Dump Rear Unit							
Over the Side Box #2 - Up					x		
Over the Side Box #2 - Down						x	
Over the Side Box #3 - Up	x						
Over the Side Box #3 - Down							x
Air Bag Dump - Rear Unit			x				

6 Or 7 Wire Cable Color Applications for Auxiliary Functions							
	GREEN .	YELLOW.	RED .	BLACK .	BROWN.	WHITE .	BLUE .
B Train Tailgate Style Side Dump Lead Unit							
Tailgate Air Trip and Selector Valve				X			
Air Bag Dump Lead Unit			X				
End Dump Rear Unit							
Tailgate Air Trip with Air Bag Dump	X						
Tailgate Air Trip with	X						
Separate Air Bag Dump			X				
- p/n 289HSV1C air cylinder							
- p/n 289HSV100 selector valve							
Single Axle / Tandem Wagon or Tandem / Tandem Wagon							
Tailgate Air Trip with Air Bag Dump	X						
Tailgate Air Trip with	X						
Separate Air Bag Dump			X				
Tandem or Triaxle Cross Gate Hopper							
Dual Gate Control with air Bag Dump				X			
Dual Gate Control with				X			
Separate Air Bag Dump			X				
Individual Gate Control							
Front Gate				X			
Rear Gate		X					
Air Bag Gate			X				

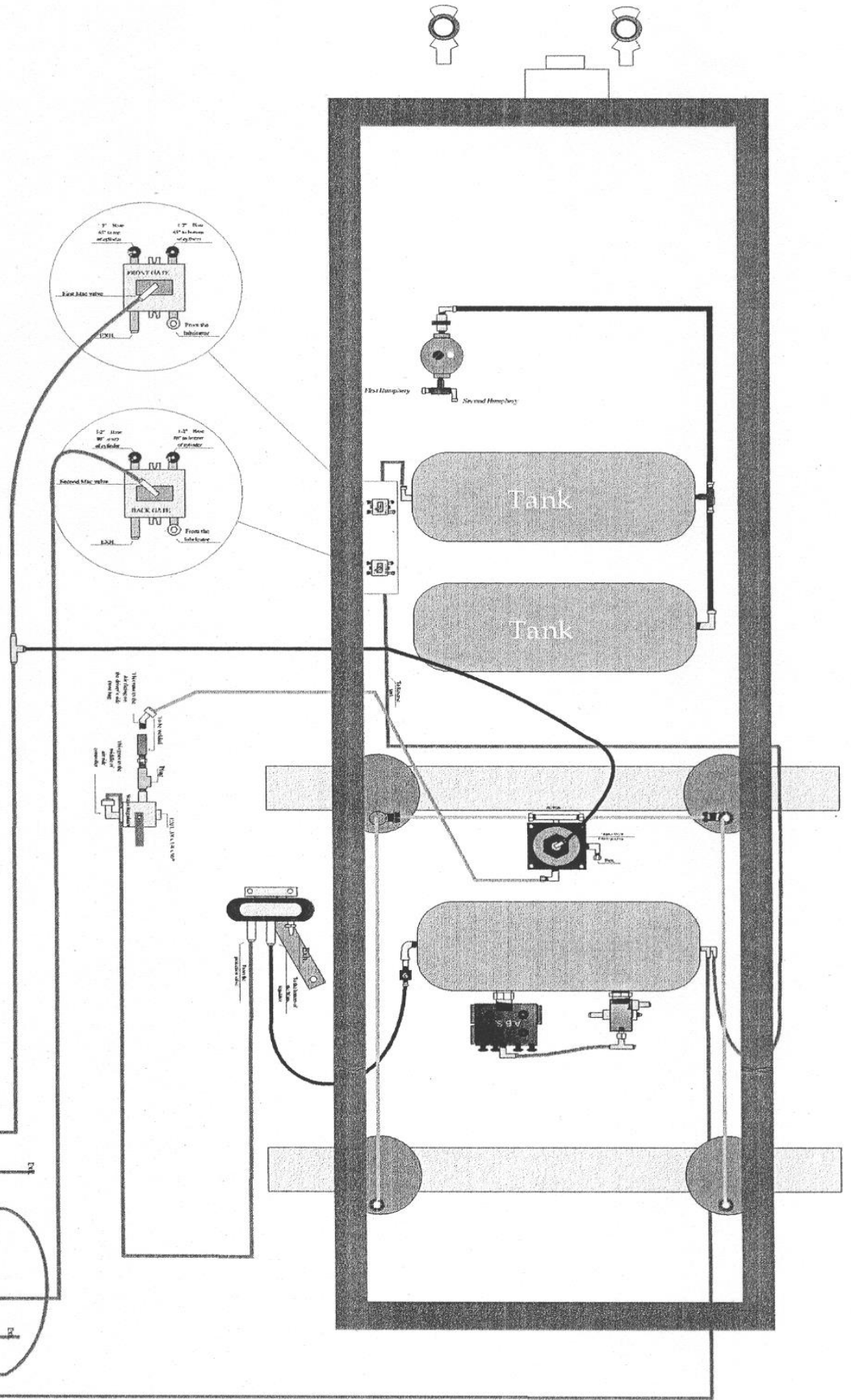
6 Or 7 Wire Cable Color Applications for Auxiliary Functions							BLUE .
	GREEN .	YELLOW .	RED .	BLACK .	BROWN .	WHITE .	
B Train Cross Gate Hopper Lead Unit							
Dual Gate Control with air Bag Dump	X						
Dual Gate Control with	X						
Separate Air Bag Dump			X				
B Train Cross Gate Hopper Rear Unit							
Dual Gate Control with air Bag Dump				X			
Dual Gate Control with				X			
Separate Air Bag Dump			X				
Individual Gate Control							
Front Gate				X			
Rear Gate		X					
Air Bag Gate			X				
Tandem Triaxle Windrow Hopper (Canadian)							
Gate Control with Air Bag Dump				X			
Gate Control with				X			
Separate Air Bag Dump			X				
Gate Limiter Control					X		
B Train Windrow Hopper Lead Unit							
Gate Control with Air Bag Dump	X						
Gate Control with	X						
Separate Air Bag Dump			X				
Gate Limiter Control		X					
B Train Windrow Hopper Rear Unit							
Gate Control with Air Bag Dump				X			
Gate Control with				X			
Separate Air Bag Dump			X				
Gate Limiter Control					X		

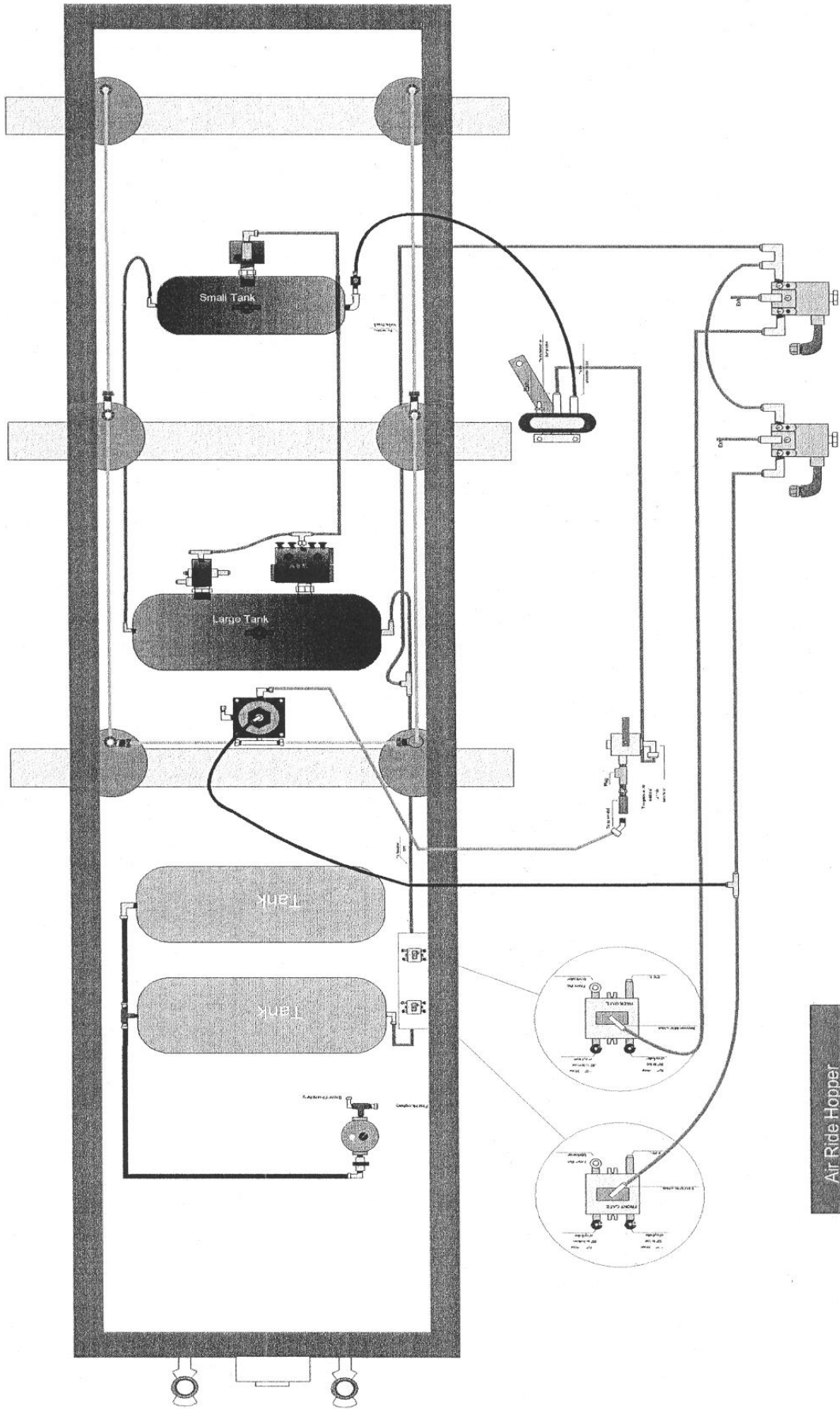
6 Or 7 Wire Cable Color Applications for Auxiliary Functions							
	GREEN .	YELLOW .	RED .	BLACK .	BROWN .	WHITE .	BLUE .
B Train Coal Hopper Lead Unit							
Gate Control with Air Bag Dump	X						
Gate Control with	X						
Separate Air Bag Dump			X				
Gate Limiter Control							
B Train Coal Hopper Rear Unit							
Gate Control with Air Bag Dump				X			
Gate Control with				X			
Separate Air Bag Dump			X				
Gate Limiter Control					X		
Triaxle U.S. Side Dump							
Box Up			X				
Box Down	X						
Air Bag Dump				X			
Triaxle U.S. Windrow							
Gate Open (EGS Controlled)	X						
Gates Closed		X					
Electronic Gate Stop (EGS) Override			X				
Air Bag Dump				X			

**Air Ride Hopper
Schematics
Cross gate TDM**

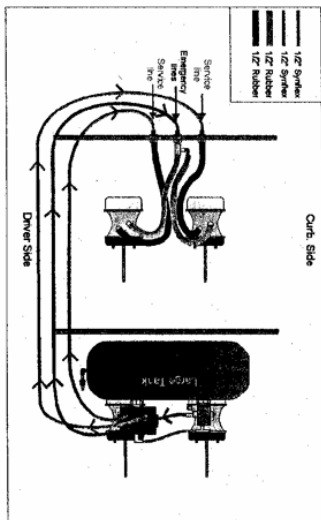
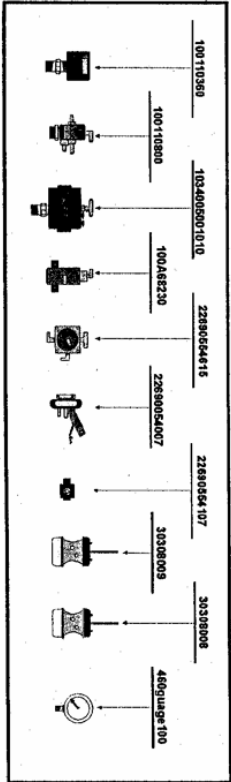
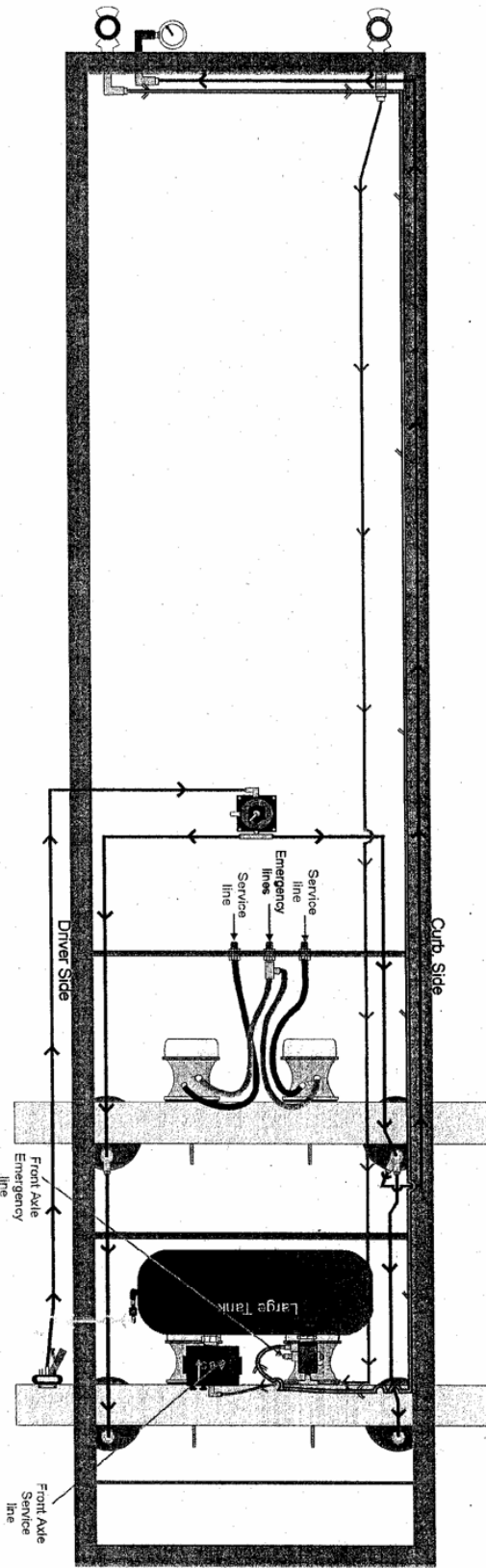
Dual gate operation:
one wire is white
and the other is blue
this is the same for
both Mic valves

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1999





Air Ride Hopper
Schematics
Cross gate

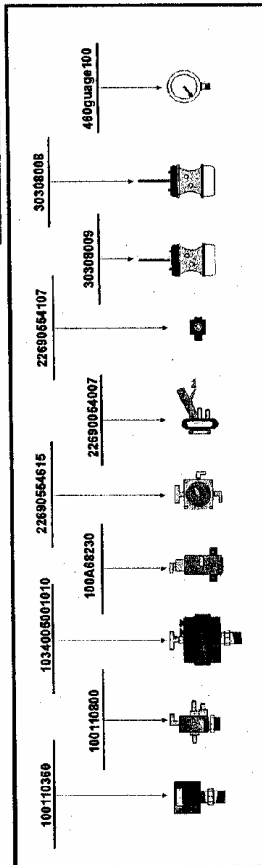
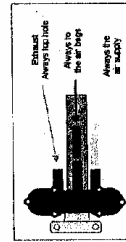
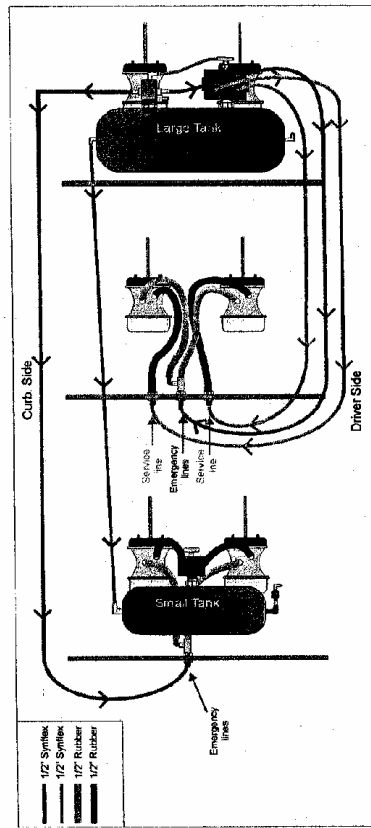
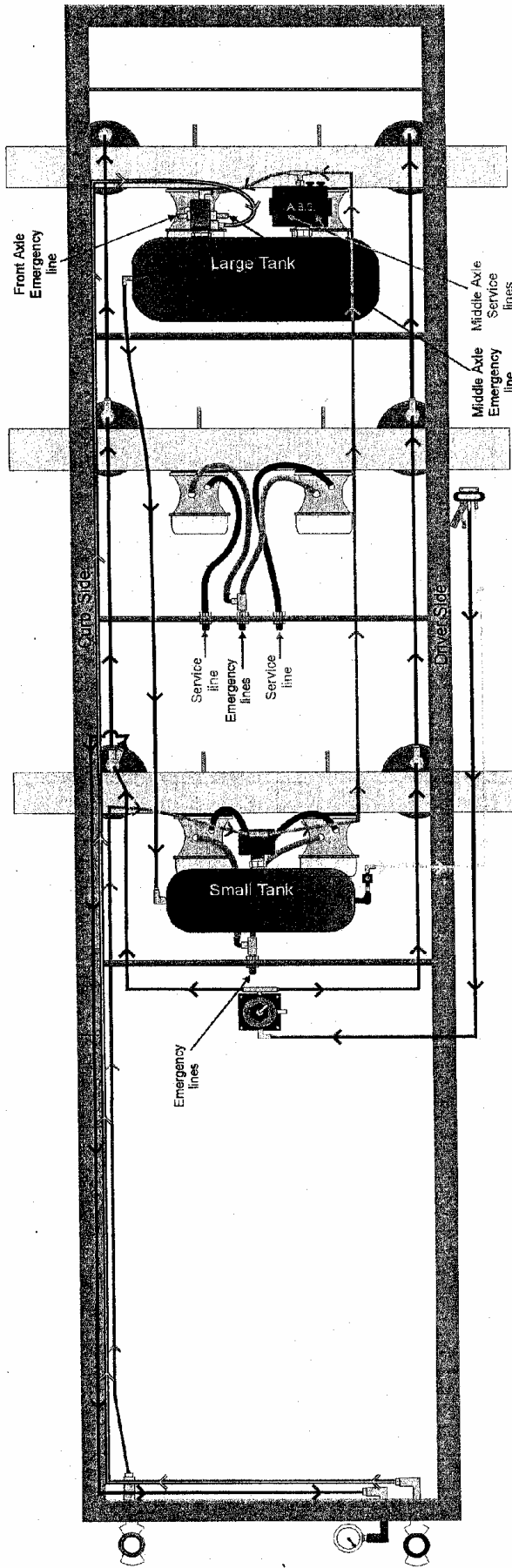


www.opticalresolution.com
 Designer
 Steep Pedders

Old : 00/00/00
 New: 15/06/03

Generic
 Tdm axle 2s-1m

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www.opticalresolution.com
Designer:
Stacy Peeters

Old : 00/00/00

New: 19/04/03

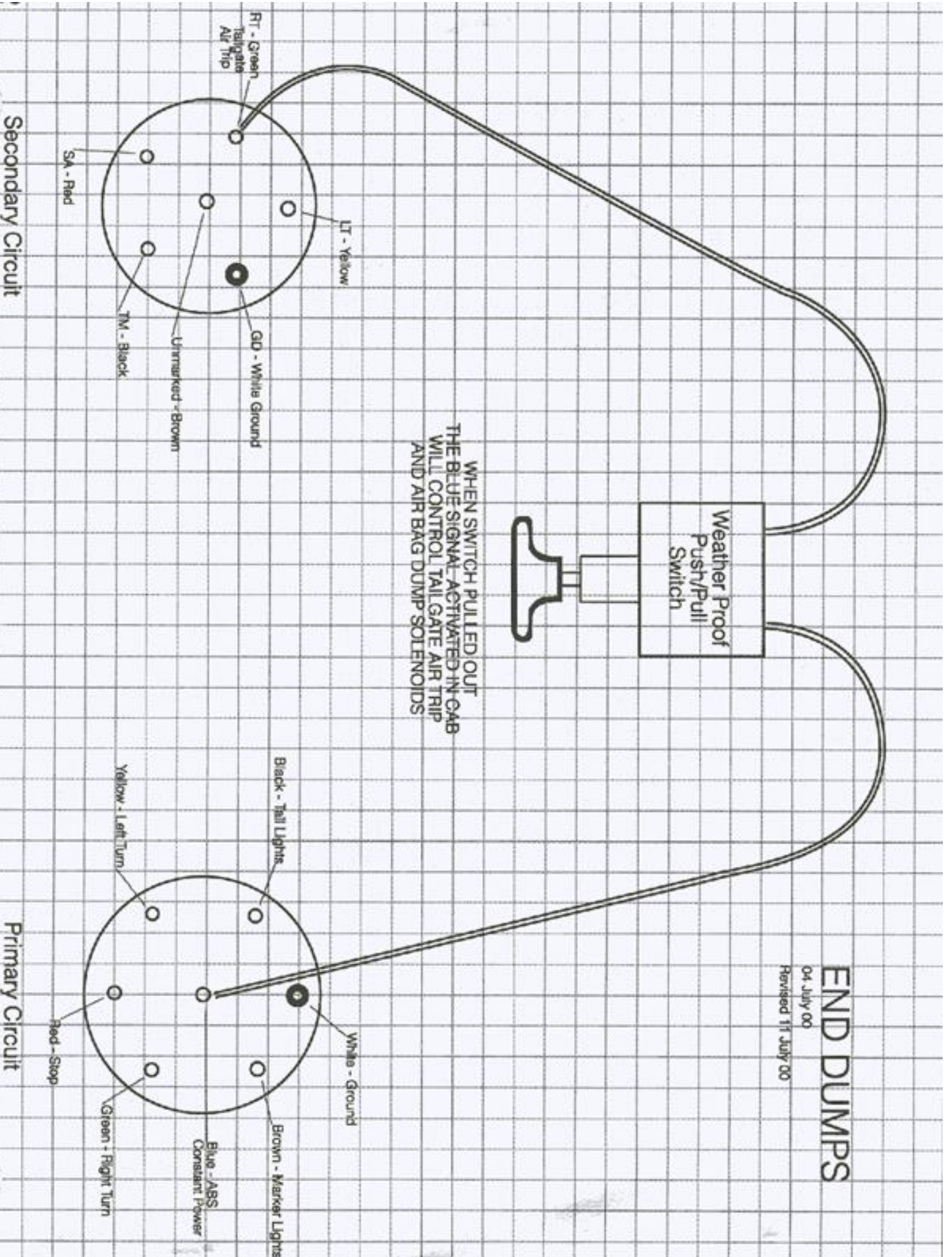
Generic
Triaxle 2s-1m

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END DUMPS

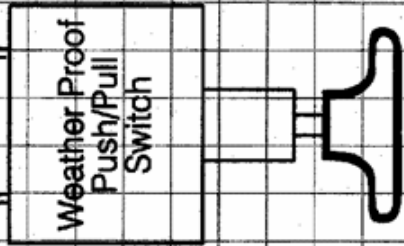
04 July 00

Revised 11 July 00

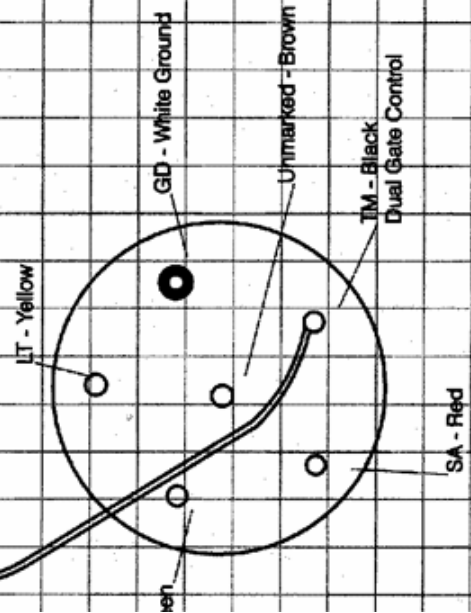


CROSS GATE HOPPER

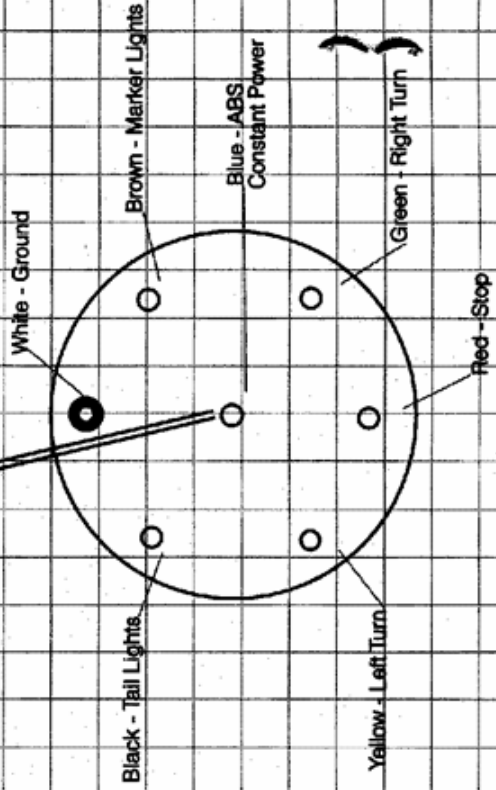
04 July 00
Revised 11 July 00



WHEN SWITCH PULLED OUT
THE BLUE SIGNAL ACTIVATED IN CAB
WILL CONTROL HOPPER GATE AND
AIR BAG DUMP VALVES



Secondary Circuit



Primary Circuit



Wet Kit Information

Side Dump Trailers with Double Acting Hydraulic Cylinders

2 Line-System
Pressure and return lines
25 GPM Hydraulic Pump
@ 1000 RPM
@ 2000 PSI

35 Gallon Hydraulic Tank

End Dump Trailers with single acting Cylinders

1 Line-Systems
25 GPM Hydraulic Pump
@ 1000 RPM
@ 2000 PSI

50 Gallon Hydraulic Tank



Warranty Details

This is to certify that ARNE'S Welding Ltd. warrants to the **first purchaser** only (hereinafter referred to as "Purchaser"), the described new trailer manufactured by it to be free from defects in materials and workmanship, when properly maintained, and under normal use and services which means the loading, unloading, and transportation of uniformly distributed legal loads of non corrosive cargo, adequately restrained and secured, in a manner which does not subject the trailer to strains or impacts greater than are imposed by normal use. Total weight of trailer and cargo must not exceed the Gross Vehicle Weight Rating (GVWR) set forth on the vehicle identification plate fastened to the trailer at the factory, and the loading of each axle must not exceed the Gross Axle Weight Rating (GAWR) listed on the same plate.

Warranty shall be limited as follows; in the event that components built by ARNE'S Welding Ltd. prove defective in materials and workmanship, it shall be repaired or replaced at the option of ARNE'S Welding Ltd. (The Main Frame Rails for a period of 5 years, Cross members & Framing for a period of 1 year, Gravel Boxes for a period of 3 years, and other components built by ARNE'S Welding Ltd. for a period of 1 year.)

For applicable warrantable periods, see the [Warranty Coverage Table](#). Components or parts thereof, manufactured by persons who supply ARNE'S Welding Ltd. are warranted to no greater extent than the warranty provided by such suppliers.

The sole and exclusive remedy of Purchaser under this warranty shall be the repair or replacement, at the option of ARNE'S Welding Ltd., of any part of said trailer which was furnished and installed by ARNE'S Welding Ltd. The part in question must have failed as a result of defect in materials or in workmanship. Such a failure must have taken place under normal and accepted working conditions. Transportation to and from the repair facility are to be borne by the purchaser.

Repairs under this warranty shall be at a repair facility designated by Arne's Welding Ltd. Using an unauthorized repair facility could result in the warranty claim being null and void.

The warranty described herein is in lieu of any and all other warranties, expressed or implied. No warranty of merchantability is made, and there are no warranties, which extend beyond the description of the face hereof. The warranty provisions described herein shall not apply to any trailer which shall have been repaired or altered, without the prior approval of Arne's Welding Ltd., in any way so as, in the judgment of Arne's Welding Ltd. to adversely affect its stability, reliability, or durability; neither shall the warranty provisions described apply to any trailer which has been subjected to misuse, abuse, neglect, accident or incident.

Defects in material and workmanship must be brought to the attention of Arne's Welding Ltd., using the Warranty Claims form, within 10 days of discovery, and any correction or repairs must be commenced within 30 days thereafter. A completed Warranty Claims form must be submitted or the claim could be denied.

The warranty described herein does not apply to, and Arne's Welding Ltd. makes no warranties, expressed or implied, with respect to:

- Parts, accessories, or other items manufactured by others which are used or installed on the trailer as a result of customer specifications; (Whatever warranty is given to Arne's Welding Ltd. on such items will be passed on to the Purchaser)
- Items which, while not defective, are subject to fair wear and tear, because of which replacement may have to be made during the warranty period

ARNE'S Welding Ltd. and Purchaser agree that ARNE'S Welding Ltd. will have no liability for any cargo loss, usage loss, or other consequential or incidental damages alleged to have been caused by any defect in the trailer.

On any repair under warranty Arne's must be contacted and approval received in the form of a Warranty Purchase Order prior to any work commencing.

Warranty claims are subject to the following conditions: - No claims will be paid that have not received prior authorization including a Warranty Purchase Order Number. - Arne's reserves the right to supply warranty parts. - Any invoices covering warranty parts and labour that in Arne's opinion is excessive will be paid on the basis of the costs for such labour and parts as if the work had been done at Arne's factory. - No warranty will be paid for until faulty parts have been returned prepaid for our inspection. Warranty invoices must show the number of labour hours. Arne's will or may pay labour on all authorized repairs at a pre-approved labour rate. - Warranty Request must be in writing. No verbal or telephone requests will be authorized. - Freight and shipping charges are not warranty. - Work is to be commenced not more than 30 days from failure date and completed to factory specifications. - Arne's Welding Ltd. must authorize repairs or services before they are performed. - Arne's Welding Ltd. will pay a specified labour allowance amount for repair or replacement as determined by Arne's Warranty Personnel. - Costs and procedures will be determined at that time. Some factory instructions may be required and must be followed to completion. Service provider must complete the work as instructed.



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Warranty Coverage

Item	Applicable Period					Per Supplier	Supplier Website Address
	3 Mth	1 Yr	3 Yr	5 Yr			
Main Frame Rails of I Beam construction using 100,000 lb Tensile Strength (T1) material				X			
Gravel Boxes including Conventional End Dump, 2010 Style End Dump, and Truck Boxes			X				
Cross Members (structural I Beams and Fabricated)		X					
Framing (Tubing and Formed Channel)		X					
Fabricated Components (Light Boxes, Oscillating King Pin Assy, Tipping Hinge Assy, etc.		X					
Suspension Frame Assy (Hoppers)		X					
Paint				X			
Tarps & Tarp Mechanisms					X		www.michels.ca
Hydraulic Wet Kit Power Plant					X		
Hydraulic Flow Dividers, Selector Valves, Control Valves, Pressure Relief Valves, Hoses, & Couplings					X		
Hydraulic Cylinders					X		www.customhoists.com www.ramindustries.com
Rims					X		www.butlerproducts.com www.accuridewheels.com
Tires					X		www.bfgoodrichtires.com
Axles					X		www.hendrickson-intl.com
Suspensions					X		www.hendrickson-intl.com www.hutch-susp.com
Pneumatic Valves, Cylinders, Switches, Lubricators & Controls					X		
Air Bags & Air Tanks					X		www.hoosiertank.com
Height Control Valve					X		
Brake Valves					X		www.sealcocvp.com
Brake Pots					X		www.rangerbrake.net
Electric Motors (Tarp, Winch, Vibrator, etc.)					X		www.michels.ca
Lighting					X		www.grote.com
Wiring Harnesses					X		www.grote.com
All other purchased parts not identified above					X		

Warranty Claim Conditions

On any repair under warranty Arne's must be contacted and approval received in the form of a Warranty Purchase Order prior to any work commencing. No claims will be paid that have not received prior written authorization including a Warranty Purchase Order Number.

Arne's reserves the right to:

- Select the authorized repair depot
- Procure all warranty parts
- Invoices for labour hours (detailed on the invoice) and parts will be paid "as authorized" and based upon Arne's labour shop rates and parts costs.
- For payment of Warranty claims the following conditions must be met:
 - Faulty parts must be returned prepaid for our inspection
 - Work must be started within 30 days of the date of authorization
 - Arne's Welding Ltd. must authorize repairs or services in writing before they are performed
 - Factory instructions are the responsibility of the warranty service depot.
 - The warranty service depot must complete the work as instructed or the liability falls to the warranty service depot
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