

Project Manual
Contract Documents and Specifications



City of Raton
Municipal Solid Waste Two Year
Transportation
Contract

May 2018

Contracting Agency
THE CITY OF RATON
224 SAVAGE AVENUE
POST OFFICE BOX 910
RATON, NEW MEXICO 87740

NOTICE OF INVITATION FOR BID

Notice is hereby given that competitive sealed bids will be accepted by the City of Raton, New Mexico for the Transportation of Municipal Solid Waste. The work shall generally consist of transporting approximately 5000 tons of municipal solid waste annually to one of three designated landfills. The contract term shall be for two years with mutually agreed upon renewal opportunities for up to (two) additional years.

Sealed bids will be received at the Office of the City Clerk, located at the Raton Municipal Building, 224 Savage Avenue, P.O. Box 910, Raton, New Mexico 87740. Bids are due by Friday, June 1, 2018 at 1:00 PM. All interested parties are invited to attend. Bids will be opened and publicly read aloud immediately after the specified closing time. Bids received after this date and time will be returned unopened. The City of Raton reserves the right to waive technicalities, accept or reject any or all bids as deemed to be in the best interest of the City of Raton.

Copies of the bid documents are available for download on the City's website www.ratonNm.gov or by contacting City Clerk/Chief Procurement Officer, Michael Anne Antonucci at 575-445-9451 or by email at mantonucci@cityofraton.com.

Raton City Clerk/Chief Procurement Officer: Michael Anne Antonucci

Date: May 15, 2018

City of Raton
Request for Sealed Bids
Transportation Services for Municipal Solid Waste

BID OPENING DATE: June 1, 2018
BID OPENING TIME: 1:00 PM

INSTRUCTIONS TO THE BIDDER

1. Notice is hereby given that sealed bids will be received at the City of Raton Chambers of the City Commission, 224 Savage Avenue, Raton, New Mexico 87740 prior to June 1, 2018 at **1:00 PM** (local time), at which time the said bids to transfer Municipal Solid Waste (as defined in the New Mexico Solid Waste Act) from the City's solid waste collection center to a permitted transfer station or landfill will be opened and recorded as received.
2. One copy of the bid must be returned and the outside bottom left hand corner marked "Sealed Bid for Solid Waste Hauling" and presented to:

Michael Anne Antonucci - City Clerk
City of Raton
224 Savage Avenue
Raton, New Mexico 87740

Bids received later than the time and date specified will not be considered.

3. The Purchaser as used in these specifications shall refer to the City of Raton (City) and the Solid Waste Department.
4. Sealed bids are required from licensed hauling contractors in accordance with the specifications as attached.
5. All prices shall be F.O.B. destination and include all applicable state and federal tax, fees, license and permit expenses. Deliveries will be made as needed or scheduled.
6. Any bidder wishing to be given consideration as a New Mexico Resident Contractor or New Mexico Veteran Resident Contractor shall provide his certification in the space provided for that purpose, on the attached bid form.
7. The Purchaser has the right to refuse any or all bids and is the sole interpreter of the intent of any clause of these specifications and the sole judge as to whether the item bid or any part of fitting thereof complies with these specifications. This bid may be awarded individually or in aggregate, whichever is most advantageous to the City.
8. Pursuant to Section 13-1-131 NMSA, 1987 Comp., as amended, the City reserves the right to reject any and all bids, whole or in part, submitted hereunder, provided that such rejections shall be accompanied by a written statement declaring the reason for the rejection.
9. Any exceptions to the bid shall be listed separately and specifications attached are minimum requirements. The specifications submitted herein are all that were available at the time of the bid. Minor deviations to the specifications as listed may be considered.

10. This award/bid is contingent upon available funding. This bid may be awarded all, part, or none; whichever is deemed to be in the best interest of the City. This bid may be multi-awarded contingent upon the needs of the City. The award is subject to the City's Terms and Conditions.
11. Your signature on the completed bid form will serve as a warranty that your bid is genuine and compliant with all applicable and current standards and that this proposal is made without any understanding, agreement or connection with the same purpose and this proposal is in all respects fair and without collusion or fraud, and you agree with all contract provisions.
12. Contact the Procurement Manager for Plans, Specification and Questions.

Michael Anne Antonucci
City Clerk
Post Office Box 910
Raton, New Mexico 87740
Phone 575-445-9451
Email: mantonucci@cityofraton.com

13. All bids will remain valid for sixty (60) days after bid opening.
14. The New Mexico Procurement Code, Sections 13-1-28 through 13-1-199, NMSA, 1978 imposes civil and criminal penalties for code violations. In addition, the New Mexico criminal statues impose felony/penalties for illegal, bribes, gratuities, and kickbacks.
15. Contract prices will be firm throughout the contract term. Fuel Cost Adjustment provisions shall remain effective throughout the contract term.
16. The New Mexico Procurement code, Sections 13-1-28 through 13-1-199 NMSA, 1978 imposes civil and criminal penalties for code violations. In addition, the New Mexico criminal statues impose felon/penalties for illegal, bribes, gratuities, and kickbacks.
17. The New Mexico Department of Finance Campaign Contribution Disclosure Form must be completed and returned with your bid.
18. A sample contract is enclosed that the City would expect your organization to sign upon legal review.
19. Successful Bidder: The lowest Responsible Bidder to whom the Owner, on the basis of the Owner's evaluation, makes an award. A Successful Bidder does not become the Contractor until an agreement is signed with the Owner.

Attachments: TERMS & CONDITIONS SAMPLE
CONTRACT CAMPAIGN
CONTRIBUTION FORM

**Technical Specifications
The City of Raton Municipal Solid Waste
Transportation Contract**

Part 1 General

Scope of Work:

1. The City of Raton (City) is seeking bids to transfer Municipal Solid Waste (as defined in the New Mexico Solid Waste Act) from the City of Raton solid waste facilities collectively referred to as transfer station, convenience station, or collection center.
2. Transfer the collected Municipal Solid Waste in City owned trailers to a permitted landfill/transfer station as directed by the City of Raton. The City reserves the right to remove all recyclable material from the tipping floor before depositing into the transfer trailer for hauling.
2. May perform hauling up to 20 tons per day Monday through Friday. Raton's estimated waste generation is 5000 tons annually. Such hauls shall be performed Monday thru Friday, between the hours of 5:00 a.m. and 3:00 p.m.

The landfill or transfer station to be transported to shall be an independently owned and operated third party facility with an independent agreement with the City of Raton for waste tipping and disposal. Landfill terms of operation, including times and dates, and health and safety provisions are determined by the landfill operator, within certain limitations specified in the independent agreement with the City of Raton. It will be the responsibility of the Hauling Contractor to become familiar with and comply with disposal facility's terms, operation policies, hours, and procedures.

3. The City of Raton shall provide a total of three (3) Wilkens X Series Rear Loading Solid Waste Transport Trailers equipped with hydraulic expandable sidewalls and Keith Running Floor II loading/unloading system. These City of Raton owned trailers shall be utilized for transport of City of Raton municipal solid waste and construction waste to disposal facility designated by the City of Raton, as is in the best interest of the City of Raton. Contractor shall be selected to provide transport and unloading of waste trailers to designated disposal facility. Contractor shall provide and perform appurtenant tasks, daily inspection of trailers, and minor maintenance to trailers typically required for the functional operation of loading, transporting, unloading, moving, parking, operation of mechanical, hydraulic and electrical systems, and permit/ compliance tasks.
4. Contractor shall provide tractor(s)/ transportation vehicle(s) as needed for the functional operation and transportation of waste trailers and containers to designated waste disposal facility. Contractor shall be required to transport loaded and unloaded waste trailers and containers intrastate and interstate on available federal, state and local routes. Contractor shall provide equipment for the reliable, safe, efficient transportation of waste trailers. Contractor's equipment shall conform to manufacturer's recommendations regarding hydraulic, electrical and mechanical power supply; as well as hydraulic, electrical and mechanical connection and interface components. Contractor's equipment shall conform to applicable federal, state and local laws, regulation, statute, ordinance, and shall be continuously available, prepared and functional for usage on the regularly established schedule determined by the City of Raton.

5. The Contractor shall provide a contingency plan or backup equipment as necessary to fulfill the hauling obligations. The Contractor shall not exceed a 72 hour period for transport and unloading of a fully loaded, ready to haul trailer/container.
5. The awarded contractor must abide by all Federal, State, and local laws, ordinances, statues, etc. that affect this hauling contract.
6. The awarded contractor will bear all costs for taxes, license, fees, permits, etc. that affect this contract. A copy of the current **NMED Hauling Registration/Certificate** must be obtained prior to hauling solid waste. This registration is required of all commercial haulers of solid waste and non-commercial haulers of special waste in accordance with the Solid Waste Act, NMSA 1978, § 74-9-8 (H), and the New Mexico Solid Waste Rules (SWR), 20.9.3.31.A NMAC.
7. It is the responsibility of the Contractor to ensure that the designated landfill is open prior to shipment. The Contractor should consider himself at risk once he has removed the load from the transfer location. The City will not compensate the transporter for costs incurred in the event that the landfill closes prior to his arrival. Under no circumstance will the city pay for the transportation of the same load more than once. The contractor should satisfy himself that the road is passable and the landfill open prior to removing the transport vessel from the transfer site.
8. Commingling of waste prohibited. The contractor is notified that only municipal solid waste and construction waste generated by the City of Raton and loaded at the Raton transfer facility is to be transported in any trailer, container or vehicle that is expensed to the City of Raton. The contractor shall not pick up or transport any waste or product on behalf of Contractor, other agency, or third party while engaged by the City of Raton. Backhaul of any material or product is prohibited.
9. For the purpose of this bid request, the contractor is informed that the designated facility will be selected independently by the City of Raton. Bidder shall provide bid pricing per the attached Bid Schedule for the following waste disposal facilities:

Facility Name	Location	Operator
(1) Northeastern New Mexico Regional Landfill	Levi, NM	G.G.H. Wagon Mound
(2) Southside Landfill	Pueblo, CO	Waste Connections
(3) Midway Landfill	Fountain, CO	Waste Management

Contractor is notified that tipping fees are not to be included in the contract price as the City of Raton will make payment directly to the operators of the landfill.

10. The Contractor is solely responsible for the waste material from the time it leaves the transfer facility until it reaches the designated landfill. It is the contractor's responsibility to ensure that all waste is handled and transported in accordance with applicable laws and regulations. The contractor is solely responsible for any debris that may exit the vehicle during transport. The contractor shall be liable for cleaning up any debris, waste or related material that is dislodged during transport including an accident or inadvertent dumping.

11. The Contractor shall make himself familiar with the requirements of the contract, facilities of the City of Raton, and the statutory requirements of the work. Contractor shall acknowledge that time is of the essence and Contractor's failure to meet scheduled waste transportation or delay in performance of required transportation in a timely manner will cause material harm to the City of Raton. Contractor shall warrant his ability to provide competent, qualified personnel and supervision, proper equipment as required, and ability to meet City of Raton requirements.
12. The Contractor shall maintain insurance coverage throughout the contract term for not less than the following amounts or greater as required by law or regulations:

a. Workman's Compensation:	Statutory
b. Comprehensive General Liability:	
Bodily Injury – Each Occurrence	\$1,000,000
Property Damage – Each Occurrence	\$500,000
Combined Single Limit	\$1,000,000
c. Comprehensive Automobile Liability:	
Bodily Injury – Each Occurrence	\$1,000,000
Property Damage – Each Occurrence	\$500,000
Combined Single Limit	\$1,000,000
d. Non-Owned Trailer Liability and Physical Damage:	
Property Damage – Each Occurrence	\$100,000

Technical Specifications
The City of Raton Municipal Solid Waste Transportation
Contract

Part 2 Contractor Requirements, Conditions,
Measurement and Payment

The Contractor shall provide the following equipment and adhere to the following provisions:

The Contractor shall provide a minimum of one (1) tractor for transportation, fully equipped with hydraulic power capability meeting all recommendations of trailer manufacturer and walking floor manufacturer. The awarded contractor shall be registered with the New Mexico Environment Department, Solid Waste Bureau and must provide registration information at time of bid. Contractor shall be required to obtain all permits necessary to transport solid waste within New Mexico and Colorado, and shall be capable of transporting solid waste to designated disposal facilities listed in New Mexico and Colorado. Permit costs, taxes and fees shall be incidental and no separate payment shall be made. Solid waste shall be loaded at the City of Raton transfer facility and transported to landfill designated by the City of Raton.

Measurement and Payment

The Contractor shall be paid for each load of solid waste delivered to the landfill. Each load shall be weighed at the scales provided by the City of Raton and recorded by transfer station operators. In addition the contractor should provide the City with any scale tickets and documentation provided at the landfill. Contractor shall be paid per trip for each trailer load of solid waste delivered to the contracting landfill. Contractor may submit up to two applications for payment each month. Contractor shall provide an invoice and all supporting documentation for each payment application.

Fuel Cost Adjustment

These provisions provide for compensation adjustments in the cost of motor fuels (diesel and gasoline) consumed in prosecuting the contract work. The Owner or Owner's Engineer will calculate the Fuel Cost Adjustments. Payments or credits will be applied to partial and final payments for work items set forth herein.

For this purpose, the City of Raton will establish a Base Fuel Index (BFI) for fuel to be used on the Project. The Base Fuel Index will be the average of high and low retail (or wholesale, if applicable) prices locally in Raton, New Mexico for No. 2 Ultra Low sulfur diesel fuel and gasoline (as applicable) for the day of the contract letting.

A Current Fuel Index (CFI) in cents per gallon will be established for each month. The CFI will be the average of comparable retail (or wholesale, if applicable) prices for motor fuels based upon purchase records submitted to Owner by Contractor for the monthly period being adjusted. Purchase records shall be accurate submittals of actual fuel purchases by Contractor for exclusive purpose of City of Raton municipal solid waste transportation.

The Engineer will compute the ratio of the Current Fuel Index to the Base Fuel Index (CFI/BFI) each month. If that ratio falls between 0.85 and 1.15, no fuel adjustment will be made that month. If the ratio is less than 0.85, a credit to the City of Raton will be computed. If the ratio is greater than 1.15, additional payment to the Contractor will be computed. Fuel cost adjustment credit or additional payment shall be limited to actual fuel cost difference from BFI amount during the period. Fuel consumption volume factor utilized in adjustment calculation shall be determined annually for any tractor/ trailer combination utilized. Fuel cost adjustment shall be determined by Owner based on total fuel volume used during the period.

A Fuel Cost Adjustment credit to the City of Raton will be deducted as a lump sum each payment period from any monies due the Contractor. Upon completion of the work under the Contract, any difference between the estimated quantities previously paid and the final quantities will be determined. The CFI in effect on the day of completion of the Contract will be applied to the quantity differences in accordance with the procedures set forth above.

CITY OF RATON
PURCHASING TERMS & CONDITIONS
UNLESS OTHERWISE SPECIFIED

- 1. It is the intent of the Owner to award a contract to the lowest responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. The unreasonable failure of a Bidder to promptly supply information in connection with an inquiry with respect to responsibility is grounds for a determination that the Bidder is not a responsible Bidder (§13-1-133 NMSA 1978).**
- 2. Bids shall comply with instructions and bidders shall provide the information requested. Bidder's non-compliance or exception to requirement may result in rejection of bid, as determined at the exclusive determination of the City of Raton.**
- 3. Envelopes containing bids must be sealed and marked with name, address of the bidder, due date, and bid number. Bids received later than the time and date specified will not be considered.**
- 4. Corrections and/or modifications received after the opening time specified will not be accepted.**
- 5. Successful Bidder: The lowest Responsible Bidder to whom the Owner, on the basis of the Owner's evaluation, makes an award. A Successful Bidder does not become the Contractor until an agreement is signed with the Owner.**
- 6. All purchases made by the City of Raton are subject to the New Mexico Public Procurement Act (§13-1-29 through §13-1-199) and the City of Raton applicable ordinance rules, and/or regulations.**
- 7. The City of Raton reserves the right to reject any and all bids, to waive any informality in bids, and unless otherwise specified to the bidder, to accept any item on the bid. Conditional Bids or Bids with additional terms will not be accepted.**
- 8. In case of error in the extension of prices in the bid, the unit price will govern.**
- 9. The City of Raton requires vendor certification be the New Mexico State Purchasing Agent before the 5% in-state bidding preference can be extended. Bidders claiming this preference must show certification number on bid and must be prepared to show evidence of certification for the commodity being bid. In-state vendors: failure to secure above will result in non-considerations of any preference for in-state bidders.**
- 10. The City of Raton reserves the right to award by item, group of items, or total bids; to reject any and all bids in whole or in part if in the judgment of the City of Raton, the best interests of the City of Raton will be served.**
- 11. The City of Raton reserves the right to cancel all or any part of this order without cost to the City, if the Bidder/ Contractor fails to meet the provisions of this order and except as otherwise provided herein, to hold the Vendor liable for any excess cost occasioned by the City due to the Bidder/ Contractor default. The Bidder/ Contractor shall not be liable for any excess costs if failure to perform the order arises out of cause beyond the control and without the fault or negligence of the Bidder/ Contractor.**

- 12. In signing this bid or accepting Purchase Order, the Bidder/ Contractor certifies he/she has not, either directly or indirectly, entered into action in restraint of free competitive bidding in connection with this proposal submitted to the City of Raton.**

- 13. Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil and criminal penalties for its violation. The New Mexico criminal statutes impose felony penalties for bribes, gratuities, and kickbacks.**

Bid Proposal Forms

And

Campaign Contribution Forms

(Must be completed and turned in as Bid Documents)

BID PROPOSAL FORM

Project: City of Raton Municipal Solid Waste Two Year Transportation Contract
Friday June 1, 2018 at 1:00 PM

Bid submitted to: The City of Raton
224 Savage Avenue
Post Office Box 910
Raton, New Mexico 87740
(575) 445-9451

Bidder is instructed to complete Bid Schedule, inclusive of all items.

The undersigned bidder, having examined the requirements of the project, documents relating to the project (including Invitation to Bid, Form of Contract, and Addenda, if applicable) and conditions and characteristics of the work, and having familiarized himself/ themselves with project locations, hereby proposes to furnish all materials, tools, equipment and to perform all labor, supervision, work and appurtenances necessary for the complete construction of the work described and in accordance with attached project documents, applicable specifications, standards and codes and to contract for the unit prices itemized as follows:

**Bid Schedule A: Transportation to Northeastern New Mexico Regional Landfill
Levi, New Mexico
Operator: GGH Wagon Mound, LLC**

Item	Annual Estimated	Unit			
\ No.	Description	Units	Quantity	Bid Price	Amount Bid
1.	Transportation of Municipal Solid Waste to N.E.N.M Regional Landfill	Each Load Round Trip	275	_____	_____

**New Mexico Gross Receipts Tax @ 7.9375%
Of Subtotal Above**

Total Bid Amount – Bid Item 1 plus NMGR

Note – The basis for award of the Bid shall be the lowest responsive Base Bid amount including all taxes and fees.

**Bid Schedule B: Transportation to Southside Landfill
Pueblo, Colorado
Operator: Waste Connections**

Item No.	Description	Units	Annual Estimated Quantity	Unit Bid Price	Amount Bid
1.	Transportation of Municipal Solid Waste to Southside Landfill	Each Load Round Trip	275		

No New Mexico Gross Receipts Tax On Out Of State Trucking

Not Applicable

Total Bid Amount – Bid Item 1

Note – The basis for award of the Bid shall be the lowest responsive Base Bid amount including all taxes and fees.

**Bid Schedule C: Transportation to Midway Landfill
Fountain, Colorado
Operator: Waste Management**

Item No.	Description	Units	Annual Estimated Quantity	Unit Bid Price	Amount Bid
1.	Transportation of Municipal Solid Waste to Midway Landfill	Each Load Round Trip	275		

No New Mexico Gross Receipts Tax On Out Of State Trucking

Not Applicable

Total Bid Amount – Bid Item 1

Note – The basis for award of the Bid shall be the lowest responsive Base Bid amount including all taxes and fees.

As further consideration for the award of the contract, the undersigned agrees to the following terms, conditions and acknowledgements:

- A. City of Raton reserves the right to reject any or all bids, to waive any informalities, or to accept any portion of the bid as is in the best interest of City of Raton.
- B. To execute the standard form of contract and to Certificates of Insurance within fifteen (15) days following receipt of notification of acceptance of this proposal. Failing to do so will allow the City of Raton to award the contract to others.
- C. City of Raton reserves the right to increase or decrease any or all quantities as in the best interest of City of Raton.
- D. To commence work within 15 calendar days following execution of the contract, or such additional time as may be allowed in writing by City of Raton, and to complete the contract as awarded.
- E. The Bidder has examined the site, the project documents, details, bid quantities, terms and conditions of the proposed Agreement and is satisfied to conditions, regulations and requirements that may affect cost, progress and performance of the Work. The Contractor does not consider additional examination, investigation, tests, studies or data necessary for performance of the Work at contract unit prices, in accordance with terms and conditions of the Contract Documents, and within stated contract times. Contractor agrees that Contract Documents are generally sufficient to indicate and convey understanding of all terms, conditions and requirements for performance and furnishing of the Work.
- F. City of Raton shall consider and apply provisions of NMSA 13-4-2 regarding Certified New Mexico Resident Contractor and NMSA 13-1-21/ 13-1-22 regarding Certified Veterans Preference in this procurement.
- G. The original contact term will be for two years with up to (2) additional one year renewal periods allowed by mutual agreement of both parties.

Bidder acknowledges receipt of the addenda: _____

Dated this _____ Day of _____, 2014

Respectfully Submitted:

Firm Name: _____

By (Signature and Print Name): _____

Title: _____

Business Address: _____

Business Telephone: _____

New Mexico Resident Contractor
Certification Number
(If Applicable; NMSA 13-4-2) _____

New Mexico Veterans Preference
Certification Number
(If Applicable; NMSA 13-1-21/ 13-1-22) _____

Contractor's Federal I.D. Number: _____

ATTEST: _____

Secretary
(If Applicable)

CAMPAIGN CONTRIBUTION DISCLOSURE FORM

Pursuant to the Procurement Code, Sections 13-1-28, et seq., NMSA 1978 and NMSA 1978, § 13-1-191.1 (2006), as amended by Laws of 2007, Chapter 234, any prospective contractor seeking to enter into a contract with any state agency or local public body **for professional services, a design and build project delivery system, or the design and installation of measures the primary purpose of which is to conserve natural resources** must file this form with that state agency or local public body. This form must be filed even if the contract qualifies as a small purchase or a sole source contract. The prospective contractor must disclose whether they, a family member or a representative of the prospective contractor has made a campaign contribution to an applicable public official of the state or a local public body during the two years prior to the date on which the contractor submits a proposal or, in the case of a sole source or small purchase contract, the two years prior to the date the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor, a family member or a representative of the prospective contractor to the public official exceeds two hundred and fifty dollars (\$250) over the two year period.

Furthermore, the state agency or local public body may cancel a solicitation or proposed award for a proposed contract pursuant to Section 13-1-181 NMSA 1978 or a contract that is executed may be ratified or terminated pursuant to Section 13-1-182 NMSA 1978 of the Procurement Code if: 1) a prospective contractor, a family member of the prospective contractor, or a representative of the prospective contractor gives a campaign contribution or other thing of value to an applicable public official or the applicable public official's employees during the pendency of the procurement process or 2) a prospective contractor fails to submit a fully completed disclosure statement pursuant to the law.

The state agency or local public body that procures the services or items of tangible personal property shall indicate on the form the name or names of every applicable public official, if any, for which disclosure is required by a prospective contractor.

THIS FORM MUST BE INCLUDED IN THE REQUEST FOR PROPOSALS AND MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

“Applicable public official” means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

“Campaign Contribution” means a gift, subscription, loan, advance or deposit of money or other thing of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official’s behalf for the purpose of electing the official to statewide or local office. “Campaign Contribution” includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee, nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

“Family member” means spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law of (a) a prospective contractor, if the prospective contractor is a natural person; or (b) an owner of a prospective contractor.

“Pendency of the procurement process” means the time period commencing with the public notice of the request for proposals and ending with the award of the contract or the cancellation of the request for proposals.

“Prospective contractor” means a person or business that is subject to the competitive sealed proposal process set forth in the Procurement Code or is not required to submit a competitive sealed proposal because that person or business qualifies for a sole source or a small purchase contract.

“Representative of a prospective contractor” means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

Name(s) of Applicable Public Official(s) if any:

Mayor – James Neil Segotta
Mayor Pro Tem – Linde’ Schuster
Commissioner - Ronald Chavez
Commissioner – Donald Giacomo
Commissioner – Lori Chatterley
Municipal Judge – Roy Manfredi

DISCLOSURE OF CONTRIBUTIONS BY PROSPECTIVE CONTRACTOR:

Contribution Made By: _____

Relation to Prospective Contractor: _____

Date Contribution(s) Made: _____

Amount(s) of Contribution(s) _____

Nature of Contribution(s) _____

Purpose of Contribution(s) _____

(Attach extra pages if necessary)

Signature

Date

Title (position)

--OR--

NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250) WERE MADE to an applicable public official by me, a family member or representative.

Signature

Date

Title (Position)

Sample Contract

CITY OF RATON
HAULING SERVICE AGREEMENT

BY THIS AGREEMENT, entered into by and between CITY OF RATON, hereinafter referred to as "CITY" and _____, hereinafter referred to as "CONTRACTOR", the parties mutually agree:

ARTICLE 1. SCOPE OF WORK:

- A. The CITY shall"
 - 1. Continue to own the transfer station and convenience station, but shall not be responsible for the transporting of solid waste.
 - 2. Be responsible for any permits or registrations required by the State of New Mexico.
 - 3. Will provide the necessary signing, fencing, and roads to and from the transfer station and convenience station.
 - 4. Be responsible for manning and maintaining the transfer station and convenience station.
 - 5. Shall reserve the right to set the hours and days of the week which the stations shall be open.
 - 6. Provide improvements and maintenance at the stations.
 - 7. Provide the transport trailers at the City of Raton Transfer Station.
 - 8. Be responsible for the payment of any disposal fees to the landfill/s utilized by the CITY.

- B. The CONTRACTOR shall:
 - 1. Maintain registration as a solid waste hauler in the states of New Mexico and Colorado.
 - 2. Comply with all regulations applicable for supplying services requested under the laws of the state, federal, and/or local government.
 - 3. Maintain transporting records and prepare reports as required by New Mexico Environment Department – Solid Waste Bureau, the City of Raton, and applicable Colorado state authority.
 - 4. Provide workmen's' compensation, automotive, non-owned trailer liability and physical damage, and general liability as indicated in the Technical Specifications with City of Raton named as additional insured.
 - 5. Provide any necessary permit fees for the services provided, all permits, if required and certificate of insurance shall be provided on or before the effective date of the contract.
 - 6. Be responsible for transporting of the solid waste from the transfer site located in Raton, New Mexico and shall provide equipment for efficient handling of solid waste.

7. CONTRACTOR will utilize the CITY owned transfer trailers. The CONTRACTOR will inspect and not allow any abuse of the trailers. Any maintenance required will be reported by the CONTRACTOR immediately to the CITY and the CITY will make the necessary repairs and services for normal wear and tear. Any repairs or services due to the CONTRACTOR'S neglect or failure to report needed repairs or services will be the responsibility of the CONTRACTOR.
8. Transport solid waste in accordance with New Mexico and Colorado Solid Waste Rules, as applicable.
9. Provide for the hauling of the transfer trailers from the Raton Transfer Station to a landfill selected by the CITY.
10. Shall make extra hauls as needed from the designated locations. The CONTRACTOR shall oversee and report to the City Manager when extra hauls are necessary prior to providing services.
11. Not accept hazardous waste nor contaminated infectious waste (that which has not been decontaminated by certification of depositor). CONTRACTOR shall immediately report to the City of Raton any such occurrence.
12. Provide a contingency plan or backup equipment as necessary to fulfill the hauling obligations.
13. Cover solid waste during transporting prior to leaving the station.
14. Provide all weight tickets for landfill disposal fees to the City.
15. Be responsible for the payment of any applicable taxes to include New Mexico Gross Receipts Tax for the services if required.

ARTICLE II. COMPENSATION:

For services satisfactorily performed pursuant to the scope of work, the Contractor shall be reimbursed by the City for hauling services from the transfer site provided as follows:

(A)	(B)	(C)	(D)	(E)
			Contract Price per Load	Amount C x D
1	Transportation of MSW to NENM Regional Landfill	275 Loads Annually	\$ _____	\$ _____
2	Transportation of MSW to Southside Landfill	275 Loads Annually	\$ _____	\$ _____
3	Transportation of MSW to Midway Landfill	275 Loads Annually	\$ _____	\$ _____

ARTICLE III. TERM:

This agreement shall be effective on _____ 2014 and shall terminate on _____ 2016. This agreement shall be terminated by either of the parties hereto, upon written notice delivered to the other party at least thirty (30) days prior to the termination date of this contract. By such termination neither party may nullify obligations already incurred for performance or failure to perform prior to the date of termination.

ARTICLE IV. STATUS OF CONTRACTOR:

The CONTRACTOR and his agents and employees are independent contractors performing professional services for CITY and not employees of CITY. The CONTRACTOR and his agents and employees shall not accrue leave, retirement, insurance, bonding, use of vehicle, or any other benefits afforded to employees of CITY as a result of this agreement.

ARTICLE V. ASSIGNMENT:

The CONTRACTOR shall not assign nor transfer any interest in this agreement nor assign any claims for money due under this agreement without prior written approval of CITY.

ARTICLE VI. SUBCONTRACTING:

The CONTRACTOR shall not subcontract any portions of the services to be performed under this agreement without prior written approval of CITY.

ARTICLE VII. RECORDS AND AUDIT:

The CONTRACTOR shall be responsible to maintain required records as provided in the New Mexico Solid Waste Rules during the term of this agreement and for a period of three (3) years following the final date of this Agreement. The records shall be subject to inspection by CITY.

ARTICLE VIII. INDEMNIFICATION:

The Contractor shall hold harmless, indemnify and defend the City and its "public employees" as defined in the New Mexico Tort Claims Act, Sections 41-4-1 to 41-4-29, NMSA 1978, as amended, against and from any and all claims, losses, demands, judgments, damages, liabilities, lawsuits, expenses, fees of attorneys, costs and/or actions

of any kind and nature whether from death, bodily injury or damage to property resulting from or related to the Contractor's negligence or intentional acts, errors or omissions in the Contractor's performance under this Contract. The Contractor's agreement to hold harmless, indemnify and defend shall not be affected or terminated by the cancellation, expiration of the term or any renewal or any other modification of the Contract for any reason and shall survive the cancellation, expiration of the term or any renewal or any other modification of this Contract, for negligence, acts, errors or omissions to act occurring during the term of this Contract.

ARTICLE IX. SCOPE OF AGREEMENT:

This Agreement incorporates all the agreement, covenants, and understandings between the parties hereto concerning the subject matter hereto, and all such covenants and agreements and understandings have been merged into this written Agreement. No prior agreement or understanding, verbal or otherwise, of the parties or their agents shall be valid or enforceable unless embodied in this Agreement.

ARTICLE X. APPLICABLE LAW:

This Agreement shall be governed by the Laws of the State of New Mexico.

IN WITNESS WHEREOF, the parties have executed this Agreement
this _____ day of _____, 2014.

CITY OF RATON

BY _____

Mayor

ATTEST:

City Clerk

BY: _____
Contractor

Walking Floor and Trailer Information



Manufacturer of Transfer Trailers

- Walking Floor®
- Live Floors
- Tippers
- Recycling Trailers

INDUSTRIES, INC.

184 South County Road 22 Morris, MN 56267

(320) 589-1971

1-800-833-6045

FAX: (320) 589-1974

www.wilkens-ind.com

**WET KIT/HYDRAULIC REQUIREMENTS
TO OPERATE THE X-SERIES MODEL TRAILER
AND OTHER WALKING/LIVE FLOOR TRAILERS**

PUMP: Commercial P-51 2 1/2" Gear Pump capable of flowing 30-60 GMP
at 2800 -3000 PSI.

RELIEF VALVE: Must be set at 2800 minimum and 3000 maximum PSI.

HYDRAULIC COUPLERS: Aero Quip model, Pressure: 5601-16-16S,
Return: 5602-16-16S.

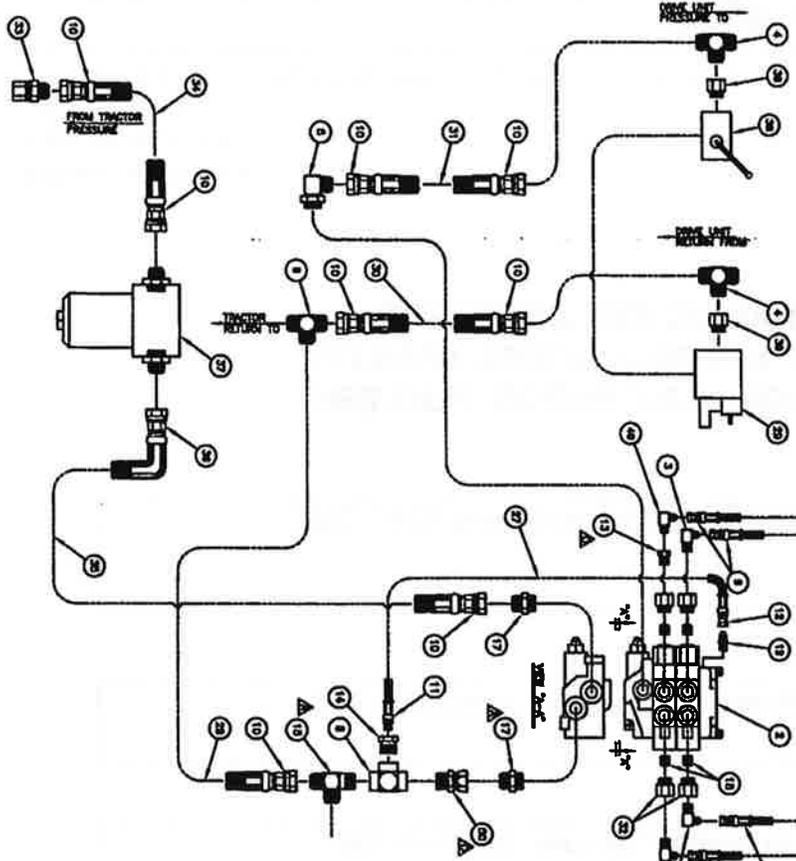
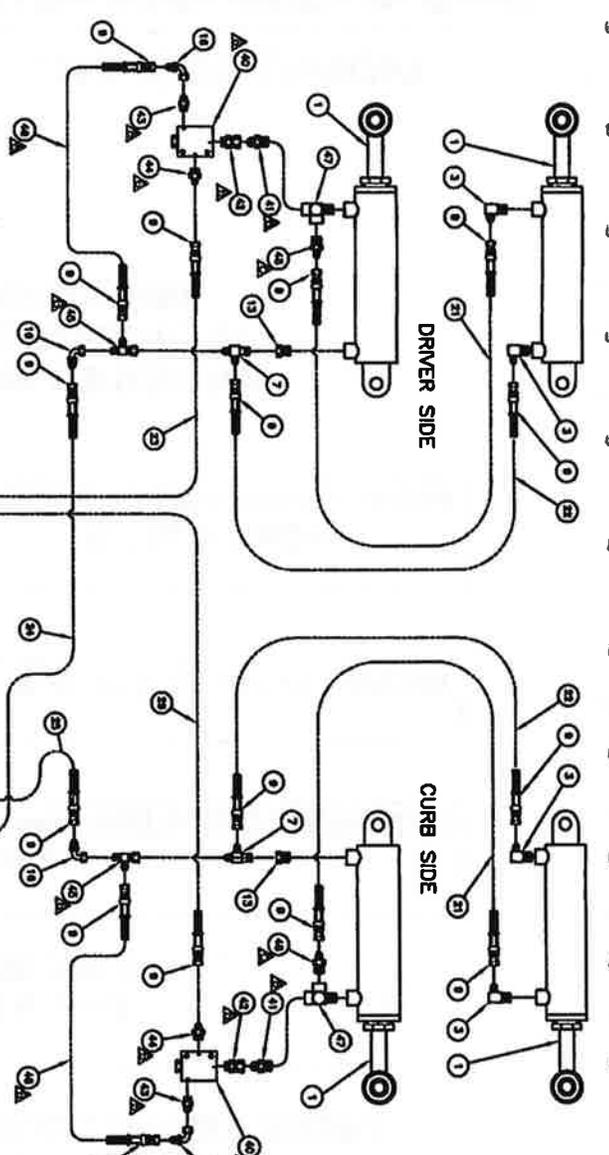
**HOSES MUST BE ATTACHED TO THE TRUCK
8'-12' IN LENGTH, 1" DIAMETER MINIMUM.**

**THERE ARE NO EXCEPTIONS TO THESE SPECIFICATIONS!
YOUR WET KIT MUST BE ABLE TO
OPERATE WALKING FLOOR TRAILERS!!!**

**WET KITS THAT OPERATE ROLL-OFF TRAILERS, DUMPTRAILERS,
OR EJECTOR TRAILERS WILL NOT WORK!!!**

SEE ATTACHED WET KIT SPECIFICATIONS AND PLUMBING SCHEMATIC

Manufacturer of the patented "X-Series" Expanding Wall Trailer



SEE NOTE NO. 2
SEE NOTE NO. 3

NO.	DESCRIPTION	QTY	UNIT	REF. NO.
1	CONNECTOR, 3" X 1/2" JOINTS	1	0700411	
2	HOSE, 3/8" ID, 10' LONG	1	0700411	
3	HOSE, 3/8" ID, 10' LONG	1	0700411	
4	HOSE, 3/8" ID, 10' LONG	1	0700411	
5	HOSE, 3/8" ID, 10' LONG	1	0700411	
6	HOSE, 3/8" ID, 10' LONG	1	0700411	
7	HOSE, 3/8" ID, 10' LONG	1	0700411	
8	HOSE, 3/8" ID, 10' LONG	1	0700411	
9	HOSE, 3/8" ID, 10' LONG	1	0700411	
10	HOSE, 3/8" ID, 10' LONG	1	0700411	
11	HOSE, 3/8" ID, 10' LONG	1	0700411	
12	HOSE, 3/8" ID, 10' LONG	1	0700411	
13	HOSE, 3/8" ID, 10' LONG	1	0700411	
14	HOSE, 3/8" ID, 10' LONG	1	0700411	
15	HOSE, 3/8" ID, 10' LONG	1	0700411	
16	HOSE, 3/8" ID, 10' LONG	1	0700411	
17	HOSE, 3/8" ID, 10' LONG	1	0700411	
18	HOSE, 3/8" ID, 10' LONG	1	0700411	
19	HOSE, 3/8" ID, 10' LONG	1	0700411	
20	HOSE, 3/8" ID, 10' LONG	1	0700411	
21	HOSE, 3/8" ID, 10' LONG	1	0700411	
22	HOSE, 3/8" ID, 10' LONG	1	0700411	
23	HOSE, 3/8" ID, 10' LONG	1	0700411	
24	HOSE, 3/8" ID, 10' LONG	1	0700411	
25	HOSE, 3/8" ID, 10' LONG	1	0700411	
26	HOSE, 3/8" ID, 10' LONG	1	0700411	
27	HOSE, 3/8" ID, 10' LONG	1	0700411	
28	HOSE, 3/8" ID, 10' LONG	1	0700411	
29	HOSE, 3/8" ID, 10' LONG	1	0700411	
30	HOSE, 3/8" ID, 10' LONG	1	0700411	
31	HOSE, 3/8" ID, 10' LONG	1	0700411	
32	HOSE, 3/8" ID, 10' LONG	1	0700411	
33	HOSE, 3/8" ID, 10' LONG	1	0700411	
34	HOSE, 3/8" ID, 10' LONG	1	0700411	
35	HOSE, 3/8" ID, 10' LONG	1	0700411	
36	HOSE, 3/8" ID, 10' LONG	1	0700411	
37	HOSE, 3/8" ID, 10' LONG	1	0700411	
38	HOSE, 3/8" ID, 10' LONG	1	0700411	
39	HOSE, 3/8" ID, 10' LONG	1	0700411	
40	HOSE, 3/8" ID, 10' LONG	1	0700411	
41	HOSE, 3/8" ID, 10' LONG	1	0700411	
42	HOSE, 3/8" ID, 10' LONG	1	0700411	
43	HOSE, 3/8" ID, 10' LONG	1	0700411	
44	HOSE, 3/8" ID, 10' LONG	1	0700411	
45	HOSE, 3/8" ID, 10' LONG	1	0700411	
46	HOSE, 3/8" ID, 10' LONG	1	0700411	
47	HOSE, 3/8" ID, 10' LONG	1	0700411	
48	HOSE, 3/8" ID, 10' LONG	1	0700411	
49	HOSE, 3/8" ID, 10' LONG	1	0700411	
50	HOSE, 3/8" ID, 10' LONG	1	0700411	
51	HOSE, 3/8" ID, 10' LONG	1	0700411	
52	HOSE, 3/8" ID, 10' LONG	1	0700411	
53	HOSE, 3/8" ID, 10' LONG	1	0700411	
54	HOSE, 3/8" ID, 10' LONG	1	0700411	
55	HOSE, 3/8" ID, 10' LONG	1	0700411	
56	HOSE, 3/8" ID, 10' LONG	1	0700411	
57	HOSE, 3/8" ID, 10' LONG	1	0700411	
58	HOSE, 3/8" ID, 10' LONG	1	0700411	
59	HOSE, 3/8" ID, 10' LONG	1	0700411	
60	HOSE, 3/8" ID, 10' LONG	1	0700411	

- NOTES:
1. ITEMS NO. 26, AND 28 ARE CUT LONG FOR 1/2" DIA. LINE FROM NO. TO 1/2" DIA OF HOSE ASSEMBLY, WITH 1/2" LENGTH IS EXTENDED.
 2. ITEMS NO. 26, AND 28 ARE OPEN TOOTHED 1/2" FROM END.
 3. ITEMS NO. 26, AND 28 ARE OPEN TOOTHED 1/2" FROM END.
 4. IF TUBES IS 1/2" CHINA TO SEE WHERE THE DRIVE UNIT IS LOCATED, TUBES FROM WALK TO FRONT CHAIRS SIDE.

WILKENS INDUSTRIES, INC. 204 WEST GERRY ROAD ST. LOUIS, MISSOURI 63105

SCALE: 1/7

DATE: 02/02/02

REV: 1 OF 1

REV: 001 DATE: 02/02/02

REV: 002 DATE: 02/02/02

REV: 003 DATE: 02/02/02

REV: 004 DATE: 02/02/02

REV: 005 DATE: 02/02/02

REV: 006 DATE: 02/02/02

REV: 007 DATE: 02/02/02

REV: 008 DATE: 02/02/02

REV: 009 DATE: 02/02/02

REV: 010 DATE: 02/02/02

REV: 011 DATE: 02/02/02

REV: 012 DATE: 02/02/02

REV: 013 DATE: 02/02/02

REV: 014 DATE: 02/02/02

REV: 015 DATE: 02/02/02

REV: 016 DATE: 02/02/02

REV: 017 DATE: 02/02/02

REV: 018 DATE: 02/02/02

REV: 019 DATE: 02/02/02

REV: 020 DATE: 02/02/02

REV: 021 DATE: 02/02/02

REV: 022 DATE: 02/02/02

REV: 023 DATE: 02/02/02

REV: 024 DATE: 02/02/02

REV: 025 DATE: 02/02/02

REV: 026 DATE: 02/02/02

REV: 027 DATE: 02/02/02

REV: 028 DATE: 02/02/02

REV: 029 DATE: 02/02/02

REV: 030 DATE: 02/02/02

REV: 031 DATE: 02/02/02

REV: 032 DATE: 02/02/02

REV: 033 DATE: 02/02/02

REV: 034 DATE: 02/02/02

REV: 035 DATE: 02/02/02

REV: 036 DATE: 02/02/02

REV: 037 DATE: 02/02/02

REV: 038 DATE: 02/02/02

REV: 039 DATE: 02/02/02

REV: 040 DATE: 02/02/02

REV: 041 DATE: 02/02/02

REV: 042 DATE: 02/02/02

REV: 043 DATE: 02/02/02

REV: 044 DATE: 02/02/02

REV: 045 DATE: 02/02/02

REV: 046 DATE: 02/02/02

REV: 047 DATE: 02/02/02

REV: 048 DATE: 02/02/02

REV: 049 DATE: 02/02/02

REV: 050 DATE: 02/02/02

REV: 051 DATE: 02/02/02

REV: 052 DATE: 02/02/02

REV: 053 DATE: 02/02/02

REV: 054 DATE: 02/02/02

REV: 055 DATE: 02/02/02

REV: 056 DATE: 02/02/02

REV: 057 DATE: 02/02/02

REV: 058 DATE: 02/02/02

REV: 059 DATE: 02/02/02

REV: 060 DATE: 02/02/02

REV: 061 DATE: 02/02/02

REV: 062 DATE: 02/02/02

REV: 063 DATE: 02/02/02

REV: 064 DATE: 02/02/02

REV: 065 DATE: 02/02/02

REV: 066 DATE: 02/02/02

REV: 067 DATE: 02/02/02

REV: 068 DATE: 02/02/02

REV: 069 DATE: 02/02/02

REV: 070 DATE: 02/02/02

REV: 071 DATE: 02/02/02

REV: 072 DATE: 02/02/02

REV: 073 DATE: 02/02/02

REV: 074 DATE: 02/02/02

REV: 075 DATE: 02/02/02

REV: 076 DATE: 02/02/02

REV: 077 DATE: 02/02/02

REV: 078 DATE: 02/02/02

REV: 079 DATE: 02/02/02

REV: 080 DATE: 02/02/02

REV: 081 DATE: 02/02/02

REV: 082 DATE: 02/02/02

REV: 083 DATE: 02/02/02

REV: 084 DATE: 02/02/02

REV: 085 DATE: 02/02/02

REV: 086 DATE: 02/02/02

REV: 087 DATE: 02/02/02

REV: 088 DATE: 02/02/02

REV: 089 DATE: 02/02/02

REV: 090 DATE: 02/02/02

REV: 091 DATE: 02/02/02

REV: 092 DATE: 02/02/02

REV: 093 DATE: 02/02/02

REV: 094 DATE: 02/02/02

REV: 095 DATE: 02/02/02

REV: 096 DATE: 02/02/02

REV: 097 DATE: 02/02/02

REV: 098 DATE: 02/02/02

REV: 099 DATE: 02/02/02

REV: 100 DATE: 02/02/02

TOLERANCES
(EXCEPT AS NOTED)
FRACTIONS $\pm 1/32$
DECIMALS .XX $\pm .03$
.XXX $\pm .015$
ANGLES $\pm 1^\circ$

WILKENS INDUSTRIES, INC.
SOLID WASTE TRANSFER TRAILERS

HWY. 50 SOUTH CO. RD. 22
RR 3 BOX 169
MORRIS, MINNESOTA 56267

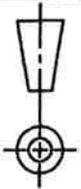
MAT'L SPEC
SCALE
N.T.S.

DRAWN BY
TAK
APPROVED BY

TITLE

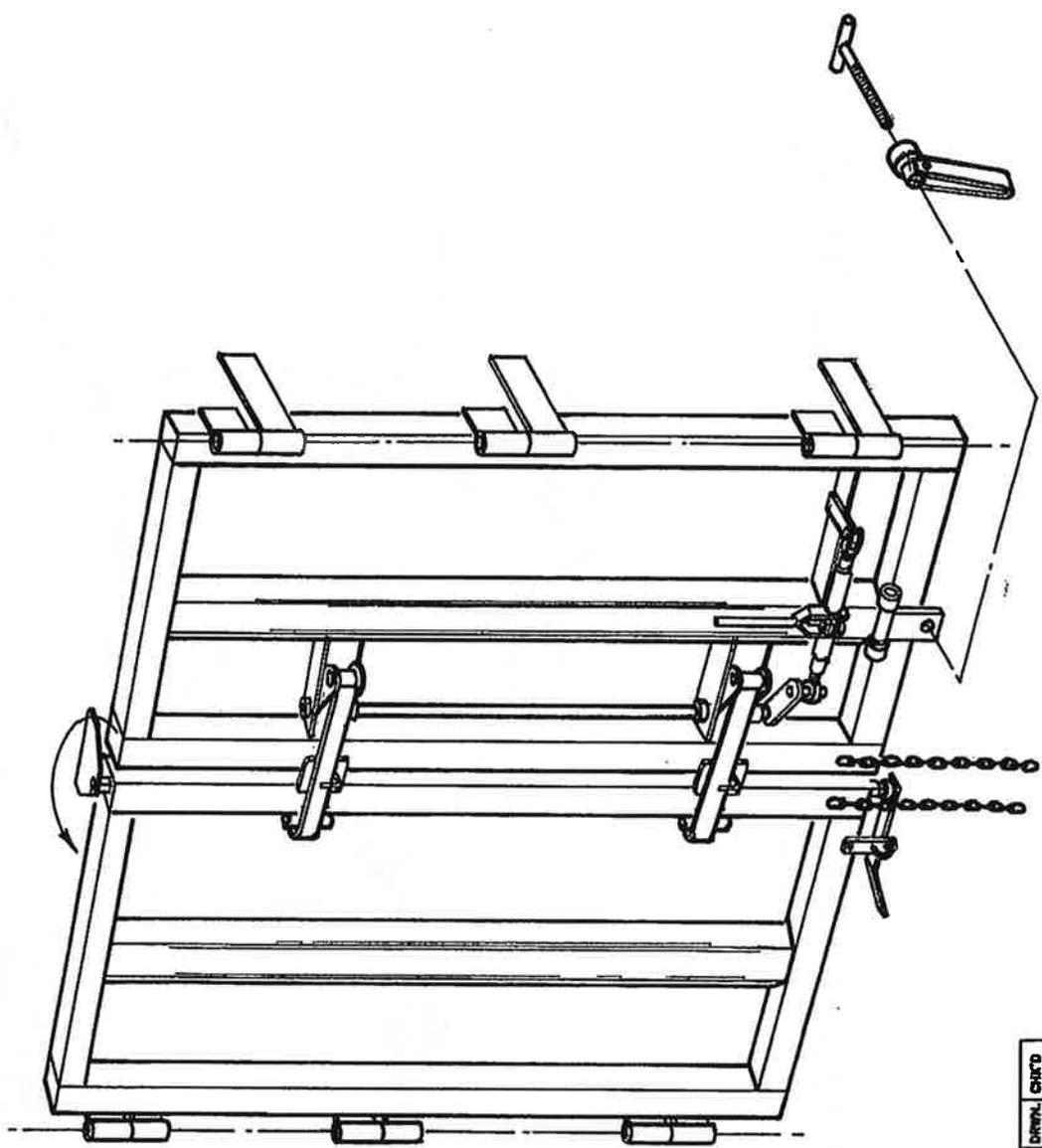
REAR DOOR ASSY. - X-SERIES

DATE 10-15-99
JOB NO.:
PART NO.
REV.



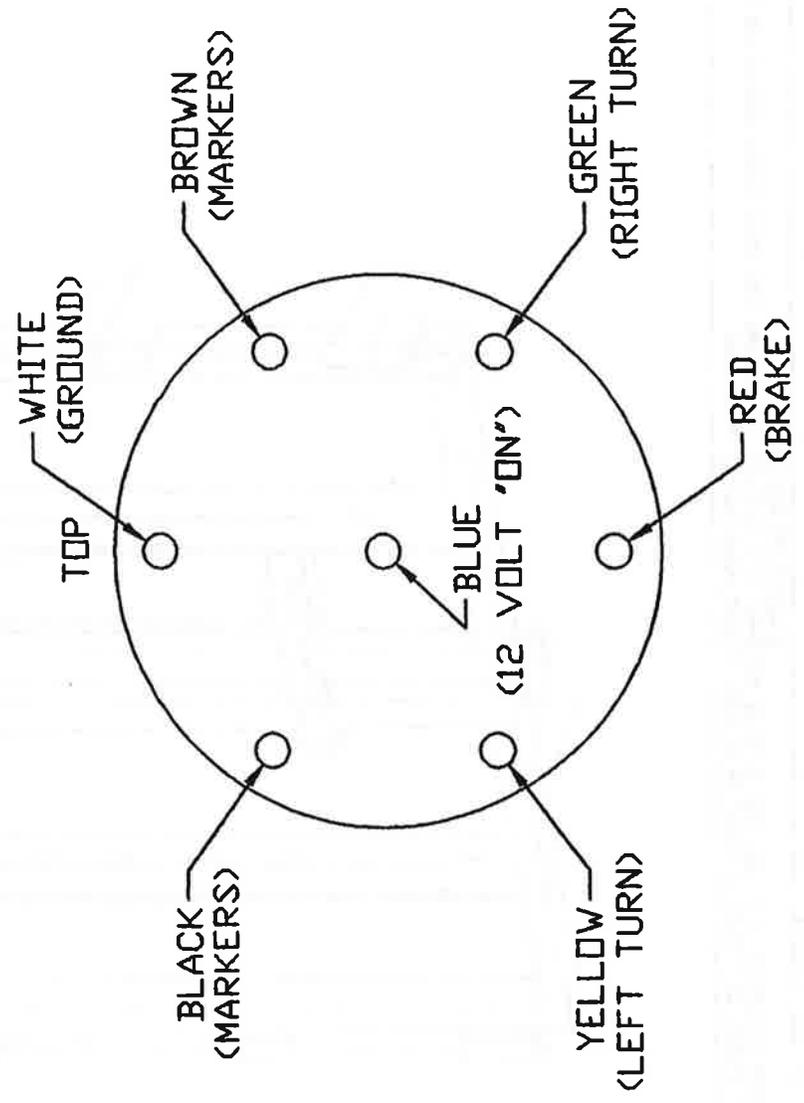
(PROPRIETARY NOTICE)

THIS DRAWING IS THE PROPERTY OF WILKENS INDUSTRIES. IT IS LENT AND IS TO BE RETURNED UPON REQUEST. THE DESIGNS AND IDEAS SHOWN HEREON ARE THE PROPERTY OF WILKENS INDUSTRIES AND SHALL NOT BE USED, DISCLOSED TO OTHERS, OR COPIED, IN WHOLE OR IN PART, WITHOUT PRIOR WRITTEN PERMISSION.



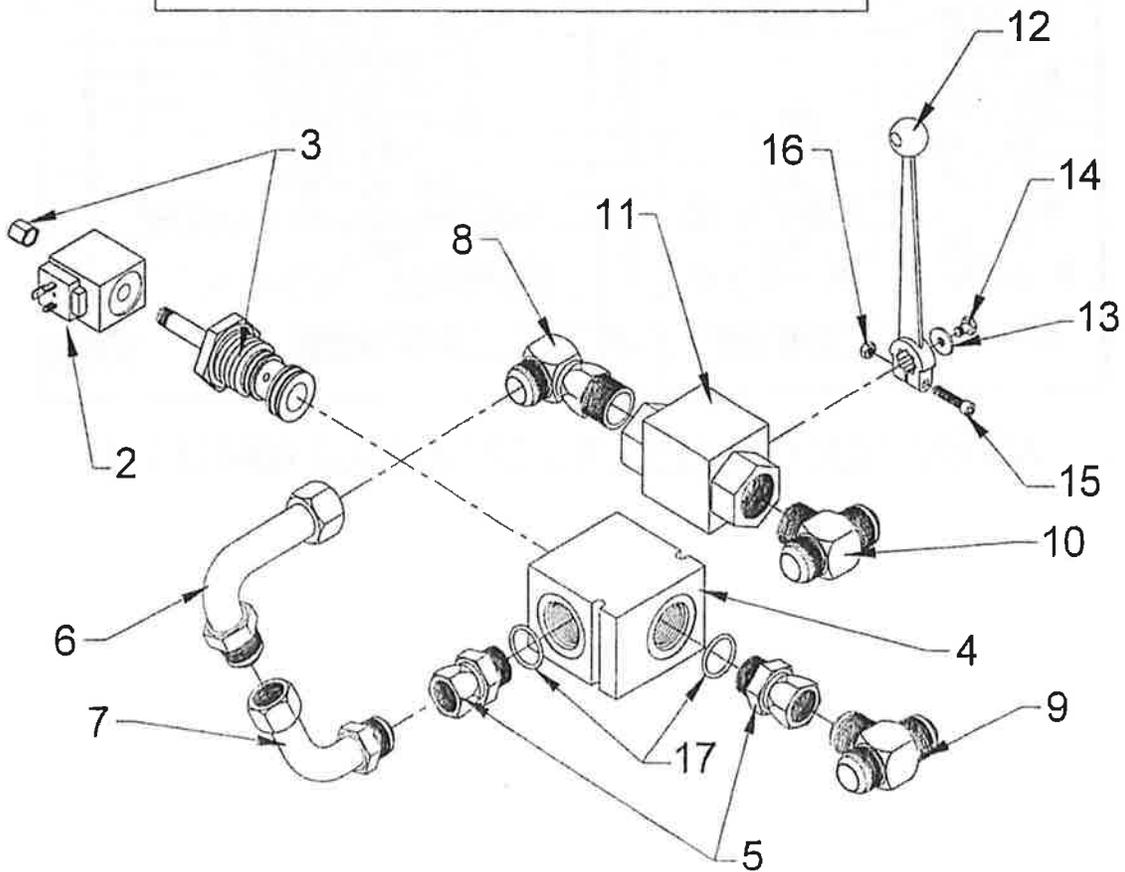
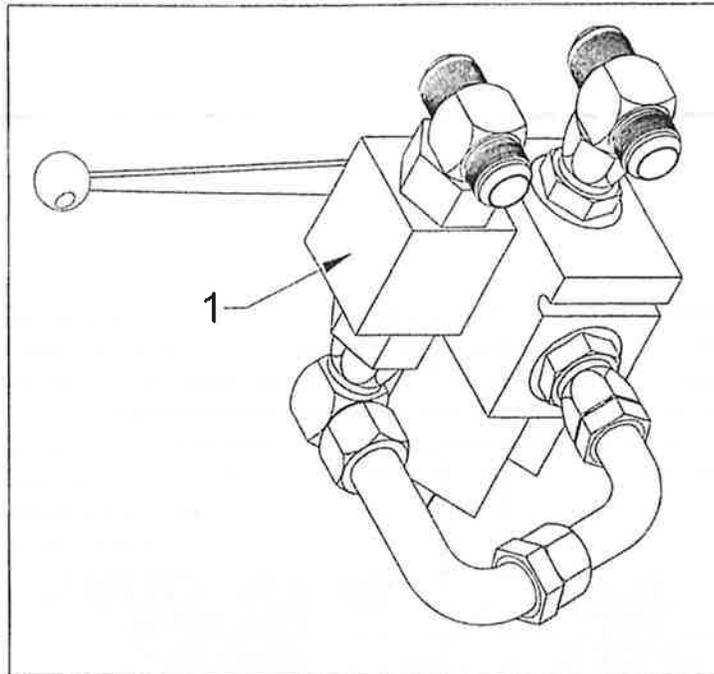
REV DATE CHANGE DESCRIPTION DRAWN CHK'D

X-SERIES BULKHEAD 7/WAY POWER PLUG



Electric Ball Valve On/Off Assembly

RUNNING FLOOR II™

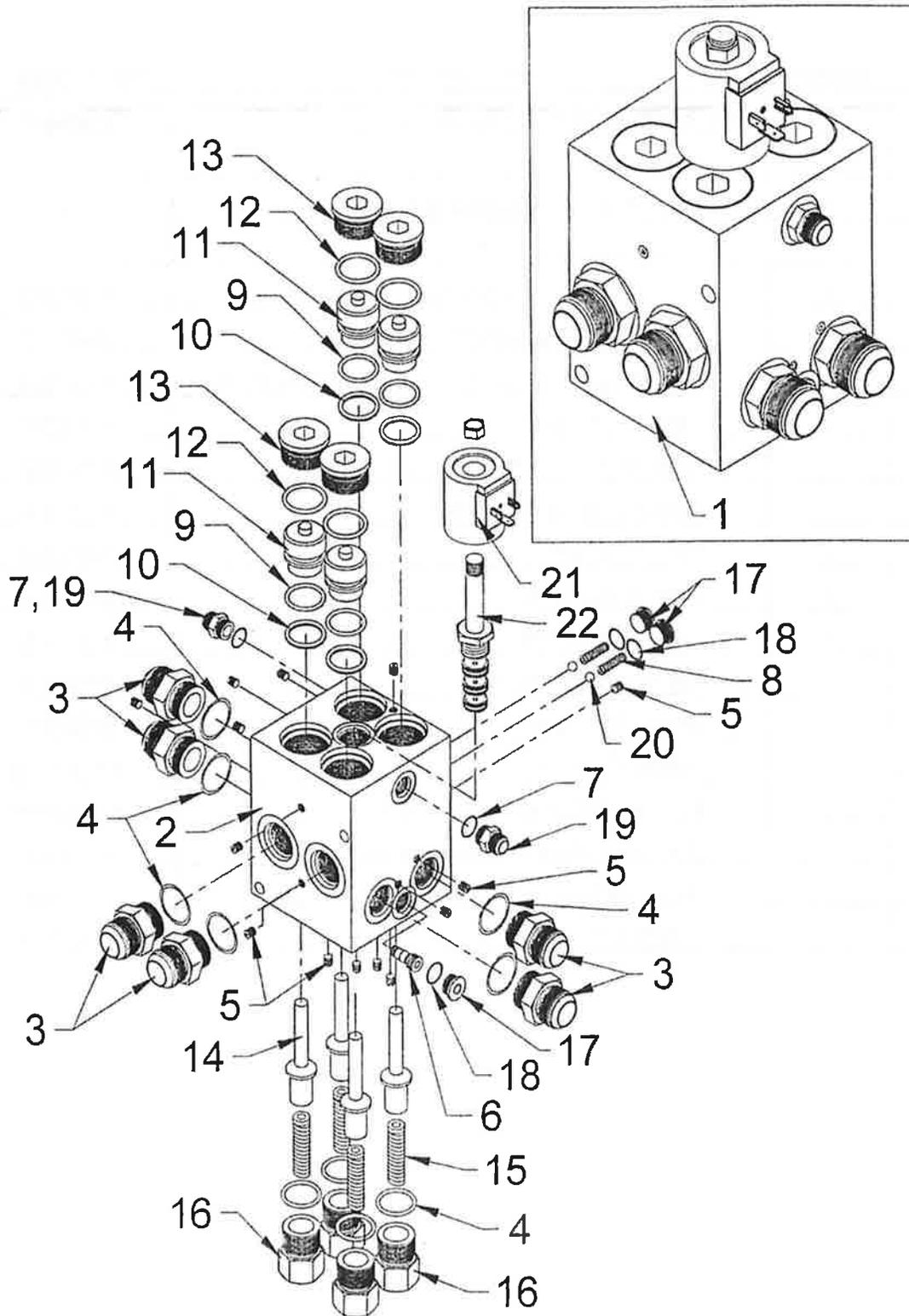


Parts List

ID #	QUANTITY	DESCRIPTION	PART NUMBER
1	1	Valve Ball Electric On/Off Assembly	03426601
-	-	Includes Items 2-17	-
-	1	Valve Solenoid SV3-20-0-16T-24DP	-
-	-	Includes Items 2 & 3	-
2	1	Coil 12 VDC DIN Vickers 02-178086	85603000
3	1	Valve Solenoid SV3-20-0-16T-00	85108100
4	1	Body Valve Housing 2-Way SAE -16 Vickers 20822	85101600
5	2	6402-16-16 Straight	84686200
6	1	63UC-16-16 Long Bent Stem 90°	84683700
7	1	63UA-16-16 Bent Stem 90°	84683200
8	1	2501-16-16 90°	84677400
9	1	2603-16-16-16 Tee	84678100
10	1	2601-16-16-16 Tee	84677700
11	1	Ball Valve Assembly 1"	84802800
12	1	Handle Ball Valve	84802900
13	1	Washer Flat 6mm	w/ball valve
14	1	Bolt Hex GR8 6mmx1mmx10mm	w/ball valve
15	1	Bolt Socket Head GR8 6mmx1mmx30mm	w/handle
16	1	Nut Hex 6mmx1mm	w/handle
17	2	O-Ring 916	84387800

Electric Load/Unload Control Valve Assy.

RUNNING FLOOR II™



Parts List

ID #	QUANTITY	DESCRIPTION	PART NUMBER
1	1	Control Valve Electric 6 Port	03244601
-	-	Includes Items 2-22	-
2	1	Body Control Valve Electric	03134701
3	6	6400-12-12 Straight	84685000
4	10	O-Ring 912	84387400
5	14	5406-01 Socket Pipe Plug	84679130
6	1	Valve Cartridge Load Shuttle LS04-B-30-0-N	85104800
7	2	O-Ring 906	84386800
8	2	Spring Small I-9	84450800
9	4	O-Ring 213	84381200
10	4	O-Ring Backup 8-213	84391200
11	4	Plunger Pilot Operated Check Valve	03123601
12	4	O-Ring 916	84387800
13	4	6409-16 M O-Ring Socket Plug	84687900
14	4	Check Valve Pilot Operated	03138401
15	4	Spring External Check Valve Large B-18273	84453400
16	4	End Cap -12 Spring Pilot Operated	03860201
17	3	6409-04 M O-Ring Socket Plug	84687300
18	3	O-Ring 904	84386600
19	2	6400-06-06 Straight	84684000
20	2	Ball 5/16" Chrome Steel	84800500
-(1)	4	6400-12-10 Straight	84684900
-(1)	4	O-Ring 910	84387200
-	1	Valve Solenoid SV10-40M-24DP	-
-	-	Includes Items 21 & 22	-
21	1	Coil 12 VDC DIN HF 6356012	85601800
22	1	Valve Solenoid SV10-40M	85108600

(1) Not shown for use with pre 1997 control valves.

Wilkens Industries X-series® Priority Flow Hydraulic Oil

Schematic

3rd design, with Gresen valve
2010

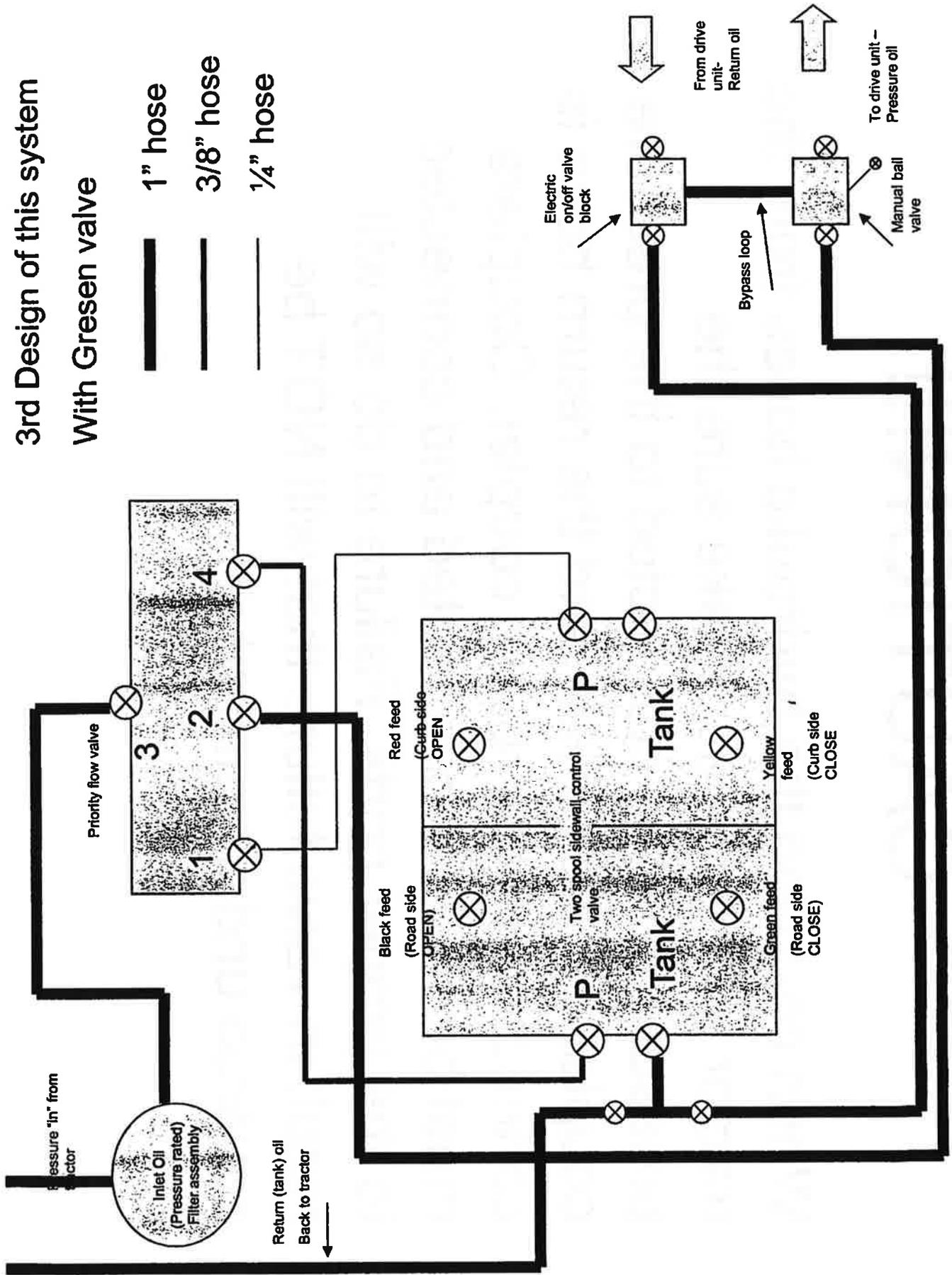
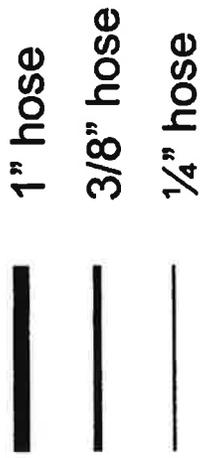
www.wilkens-ind.com

CAUTION!!!

When coupling the hydraulic hoses from the tractor to the trailer , make sure the pressure hose is connected to the pressure coupler on the trailer ,and the return hose is connected to the return coupler. Couplers must be FULLY connected and connected to the proper ports. Failure to do so will result in valve failure that will NOT be covered under warranty!!

3rd Design of this system

With Gresen valve



Manual over ride for walls are located under the caps on the spool valve near each solenoid. Remove cap, and push button to manually run wall in or out as required. Re-install caps.

To Manually operate floor, engage P.T.O., and turn handle on ball valve 90 degrees. This blocks of the bypass loop and forces oil thru the drive unit. To stop floor, move handle back 90 degrees.

To manually change floor direction, locate cap on the end of the load/unload solenoid block. It is identified by being red in color, and has a knurled grip. Push this in and turn 90 degrees to get floor to move into the "load position" You will feel the button lock into place. (NOTE ! Normal position for this valve is to have floor moving in the "unload" position. If the button is not returned to this position after manually operating direction change, the electric controls will not operate properly!)

When servicing the coils on the on/off valve and load/unload valve use Loctite on the threads and do not over tighten. 8-10 inch lbs. of torque maximum. Damage to the spool inside of these cartridges will result from over tightening!

Service the pressure filter on the inlet oil line a minimum of every 6 months. There is a sight gauge on the filter that shows the current flow rate.

Hydraulic oil and Wet Kit information

Quick Specs;

Oil ; Chevron AW 46 or equivalent

Chelsea series 442/489 P.T.O. recommended

Commercial P-51 pump is the ONLY pump Keith Manufacturing recommends for use with their floor systems.

Pump flow should be between 20-40 gallons per minute.

Pressure relief must be set to a minimum of 2800 p.s.i., and a maximum of 3000 p.s.i. Settings lower than 2800 can cause the oil to start bypassing and cause oil to heat . This will damage the wet kit and trailer hydraulics! Settings above 3000 p.s.i. can cause components problems, i.e; blown seals, etc.

Oil reservoir should be a minimum of a 40 gallon tank.

Return oil filter should be 10-30 micron, double element Zinga or equivalent

Pressure hoses should be 1" diameter, Return hoses ,1" -1.25" ,

More detailed hydraulic information can be found on our website at www.wilkens-ind.com. Follow the 'parts' link in the option box. Wet kit and hydraulic information can be found in the Keith Walking Floor Repair Clinic manual.

You can contact Wilkens Industries for any replacement parts, information ,or questions at

320-589-1971

800-833-6045

320-589-1974 fax

www.wilkens-ind.com

keithk@wilkens-ind.com

Hydraulic oil and Wet Kit information

Quick Specs;

Oil ; Chevron AW 46 or equivalent

Chelsea series 442/489 P.T.O. recommended

Commercial P-51 pump is the ONLY pump Keith Manufacturing recommends for use with their floor systems.

Pump flow should be between 20-40 gallons per minute.

Pressure relief must be set to a minimum of 2800 p.s.i., and a maximum of 3000 p.s.i. Settings lower than 2800 can cause the oil to start bypassing and cause oil to heat . This will damage the wet kit and trailer hydraulics! Settings above 3000 p.s.i. can cause components problems, i.e; blown seals, etc.

Oil reservoir should be a minimum of a 40 gallon tank.

Return oil filter should be 10-30 micron, double element Zinga or equivalent

Pressure hoses should be 1" diameter, Return hoses ,1"-1.25"

More detailed hydraulic information can be found on our website at www.wilkens-ind.com. Folow the 'parts' link in the option box. Wet kit and hydraulic information can be found in the Keith Walking Floor Repair Clinic manual.

You can contact Wilkens Industries for any replacement parts, information ,or questions at

320-589-1971

800-833-6045

320-589-1974 fax

www.wilkens-ind.com

keithk@wilkens-ind.com



X-series trailer

Hydraulic control diagnosis

The Wilkens Industries X-series trailer features an electric over hydraulic control system that operates the rear wall sections and controls the operation of the running floor. This is a trouble-shooting guide that will assist you in any repairs that may be needed for the system. To operate this trailer, you will need a hydraulic power source capable of 30-35 GPM, with a relief valve setting of 2800-3000 PSI, and a 12 volt power source. Before you proceed with testing of the electrical system, you must first check the hydraulic operation of trailer, and the manual controls. Leaving the electrical source for the trailer disconnected, turn on the hydraulic power source, and let the oil flow into the trailer. It should circulate with very little pressure. Go under the trailer, and move the handle on the manual ball valve 90 degrees. This should set the drive unit into motion, and the floor slats should cycle in the "unload" motion. Move the ball valve handle 90 degrees back, and the floor should stop moving. On the opposite side of the drive unit, you will see the load/unload solenoid. In the center of this is a knurled knob about 1/2" in diameter, and usually red in color. Push this in slightly and give it a slight twist. This will change direction of the floor from unload, to the load position. Pull ball valve handle 90 degrees

again, and the floor should start moving in the "load" direction . After verifying floor direction, shut floor off with ball valve , and return the direction knob to the "unload" position . This must be put back to "unload", as leaving the manual control in "load" will override the electrical control , and the floor will only move in the "load" direction when operated with the pendant control!!

While the hydraulics are running , and the electrical supply is not turned on , you can check the hydraulic operation of the side walls by moving the handles hanging down from the 2 spool valve located by the inside of the curbside frame rail . Make sure the rear doors are fully opened prior to testing to avoid damaging the doors and hinges!! The forward handle operates the road side wall , and the rearward handle operates the curb side wall. If the walls open and close completely with these 2 handles , and the live floor operates as outlined , the hydraulic control is working correctly.

The trailer needs a 12 volt power supply to operate the control pendant. Power should be supplied thru the center pin ("blue"coded) on the main 7 way connector on the front of the trailer. Voltage goes via the 7 wire cord to the main junction box located under the trailer inside the left frame rail . From the "blue" pin ,and the "white" pin(system ground), a 2 wire cable is run to another junction box inside the toolbox on the side of the trailer. At this box , power is divided to run the 6 solenoids under the trailer that control all trailer

functions. These solenoids have all been designated a color code wire for operation. (NOTE : The 2 wire harnesses that feed the solenoids are all black and white wires. The black is the 12 volt line, and the white is the ground. The color designation comes from the labeling of the pins within the junction box . You will have to trace these two wire harnesses to their correct location .)

The 12 volt supply coming from the main junction box is hooked to the "white +" pin in the junction box. The ground wire is hooked to the "white -" pin in the junction box. This is how the power is supplied to the junction box for the controls.

Once 12 volts and ground are at the junction box , voltage can be directed to the solenoids thru the control pendant. The pendant is connected to the junction box by a standard 7 wire cord. The wires on this cord are connected to the corresponding color coded pins. The "white " wire runs 12 volts to the pendant box, where the toggle switches send voltage back to the junction box, thru the 2 wire harnesses ,to the solenoids (see diagram of pendant wiring).The wire coding is as follows;

White = 12 volts in

Blue = 12 volts to on/off solenoid

Brown = 12 volts to load/unload solenoid

Red = curb side wall "open"

Yellow = curb side wall "close"

Black = road side wall "open"

Green = road side wall "close"

Solenoid location is as follows ;

On/off solenoid is located on the road side of the drive unit , on the ball valve for manual control of drive . The Load/unload solenoid is located on the curb side of the drive unit , next to the #3 cylinder . The wall control solenoids are located on the two spool valve next to the curb side frame rail. The forward solenoid next to the frame is the Road side open solenoid . The solenoid on the same spool on the opposite side is the Road side close solenoid . The rearward solenoid next to the frame rail is the Curb side open solenoid . The opposite solenoid on this spool is the Curb side close solenoid.

On the ends of the harnesses, there is an "A" pin, and a "B" pin . The "A" side is the 12 volt signal, and the "B" side is the ground. This is consistent on all solenoid ends.

The entire electrical control pendant can be tested and diagnosed with a 12 volt test light. By connecting the test light between the "A" and "B" pin at the solenoid connectors, you can see if the pendant is delivering voltage correctly .After making sure the hydraulic supply is turned OFF, supply the trailer with 12 volt power and ground , disconnect the six solenoid leads and check for voltage as follows ;

Turn the "master " switch to the on position . All leads should have no voltage with switches in center position. Turn floor control switch to the "unload" position. Only the lead for the floor "on/off" solenoid should have 12 volts. Move the toggle to the "load" position . There should be 12 volts at the "on/off" solenoid (blue pin wire), and the "load/unload" solenoid (brown pin

wire). Return switch to center position. On the "curb side wall switch" , push and hold switch to "open" . Only the "red " pin wire should have 12 volts. Push switch to "close" , and hold. Only the "yellow" pin wire should have 12 volts . Go to the "road side" switch next, and switch toggle to "open". Only the "black" pin wire should have 12 volts. Push toggle to "close", and only the "green" pin wire should have 12 volts.

Once you have determined that you have voltage where it should be, you can test the solenoids for the "on/off" and the "load/unload" functions. These can be tested by first removing the .500 UNF nut that holds them to the pilot spool , and removing the solenoid from the spool . Hold a small screwdriver in the center opening of the solenoid, and apply voltage to the solenoid by turning on the appropriate switch for the particular solenoid in question. The screwdriver will be pulled to the side of the solenoid by a very noticeable magnetic pull. If you have voltage at the solenoid, but it will not produce a magnetic field , the solenoid is faulty. When re-installing the "on/off" and "load/unload" solenoids, be very careful to not over tighten the center nut. Over tightening WILL cause either solenoid or spool cartridge failure, and void the warranty on these parts. Tighten these to a MAXIMUM of 10-12 inch pounds of torque , and use a small amount of Loctite thread sealer on the threads. This value is slightly past finger tight.

These two solenoids operate pilot spools which will turn the floor on and off , as well as switch floor direction. If you have checked the electrical controls for proper

operation , and you have verified that the trailer works when manually operating the hydraulic system , you may have a faulty valve cartridge .

As with the "on/off" and "load/unload solenoids, the wall control solenoids can be diagnosed much the same way . If any of the 4 wall functions do not work with the pendant, manually check the wall operations , then check for proper voltage and grounds for the solenoids . If they check out correctly, any of the solenoids can be replaced by disconnecting the wires , and un-screwing the solenoid from the 2 spool valve.

This system needs to have clean hydraulic oil , as particles as small as .005 can cause the spools and solenoids to stick. There is a filter on the pressure line before the drive unit , and this filter should be changed at least twice a year , and more often if your oil is noticeably dirty. These parts , when replaced under warranty, will all be sent to our valve supplier to be checked for failure . We will charge the customer for the parts used , and credit the account as we have replaced parts inspected . Damaged spool cartridges, crushed solenoids, and sticking spools and solenoids resulting from debris are usually NOT warranted.

If you have any questions , or are having any problems with diagnosis or repair , feel free to call us here at Wilkens Industries. Phone number is; 320-589-1971.

TROUBLE SHOOTING

HYDRAULIC POWER SOURCES FOR WALKING/LIVE FLOORS

- SYMPTOMS:
1. Floor does not seem to have enough power.
 2. Floor seems to be laboring and does not cycle at the speed it should or has in the past.

****NOTE:** The standard walking/live floor is rated at around 72,000 pounds or 36 tons of net payload at around 2,800 to 3,000 P.S.I. Many times trailers are overloaded and the unloading system will not move or moves slowly because of extra weight.
DETERMINE IF "OVERLOADING" IS THE PROBLEM BEFORE PROCEEDING TO THE FOLLOWING TEST CHECKS.

*****FOLLOWING ARE SUGGESTED PROCEDURES FOR PERFORMING TEST CHECKS ON POWER SOURCES THAT OPERATE THE KEITH RUNNING FLOOR SYSTEM OR THE HALLCO UNLOADING SYSTEM THAT DO NOT SEEM TO HAVE ANY POWER.**

*****YOU DO NOT NEED THE HYDRAULIC LINES CONNECTED TO THE TRAILER TO PERFORM THESE TESTS. YOU CAN LOOP THE PRESSURE AND RETURN LINES THROUGH THE TEST METER.**

A. CHECKING PRESSURE (P.S.I.) :

1. From the hydraulic power source, use a certified flow control/pressure meter to create a restriction in the pressure line.
2. Check the hydraulic system to make sure the system is equipped with a pressure relief valve. If none, install one.
3. Monitor pressure by closing the needle valve on the flow control/pressure meter.
4. As the flow is restricted, pressure should build to 2,800 to 3,000 P.S.I. when the line is totally blocked (do not allow pressure to exceed 3,000 P.S.I.).
5. The hydraulic power source relief valve should open and bypass the restricted flow. If P.S.I. is less than required, adjust the relief valve setting to between 2,800 to 3,000 P.S.I.
6. Before adjusting the relief valve, open flow meter valve completely. Allow oil to free-flow for a few seconds, then check the pressure again.
7. If the setting of the relief valve does not change the P.S.I., then most likely the pump should be replaced. Turn off power source to the hydraulic system before servicing.

*****Remember !! Flow or R.P.M. does not have a significant effect on P.S.I.**

- B. CHECKING FLOW (Gallons Per Minute--G.P.M) :

1. Exactly determine the hydraulic power source. Remember, revolutions per minute (R.P.M.) will determine G.P.M. output. The size of your hydraulic pump and the R.P.M. of your power source will determine the minimum and maximum G.P.M. flow.
2. If power source is electric and R.P.M. is 1,750, then your flow will be constant.
3. If power source R.P.M. is variable, then flow will fluctuate. The speed of the unloading system is determined by G.P.M. Therefore, the less G.P.M. flow, the slower the floor movement. The required unloading/loading time will be set by G.P.M., (10 to 60 G.P.M.). The average G.P.M. for off-loading should be 45 G.P.M.
4. Use certified hydraulic flow meter installed in the pressure side of main supply line which is plumbed to the unloading/loading system. No restriction is required in the line to determine flow. You may also check flow by looping the pressure and return lines through the flow meter. The hydraulic lines do not have to be connected to the trailer.
5. While the flow meter is in place, turn on power source. The unloading system should be in neutral (if connected to the power source).
6. The flow rate will change as R.P.M. increases or decreases. The G.P.M. flow rate should correspond to the recommended or required flow of the hydraulic power source. If flow is less than the required amount, the pump is either worn or it is not receiving the correct amount of hydraulic oil to its source.
7. Check suction screens. Also check for pinched suction lines, collapsed suction lines, perforated suction lines, closed suction line gate valves, low oil in reservoir, or coagulated oil. If all these areas are acceptable, then the hydraulic pump is inadequate and should be replaced.

***NOTE: IF YOU ARE STILL HAVING PROBLEMS AFTER ALL THESE TESTS, PLEASE CONTACT A SERVICE TECHNICIAN AT WILKENS INDUSTRIES, INC. AT 1-800-833-6045 or 1-320-589-1971.

TROUBLE SHOOTING TIGHT FLOORS

*****SOMETIMES WALKING/LIVE FLOORS CAN GET TIGHT IN A TRAILER. IF THIS IS EVIDENT, PLEASE FOLLOW THESE SUGGESTIONS TO IDENTIFY THE PROBLEM.**

- A. **PROBLEM:** Rear loading from a compactor and/or loading with the Walking/Live Floor.

CAUSE: Product may be forced under the front shield/baffle. It can be packed full, preventing the floor from a complete cycle.

REMEDY:

1. Cycle floor so all floor slats are in the most rearward position.
2. Turn off floor and its power source.
3. Remove front shield/baffle and clean out as needed.
4. Re-install front shield/baffle.
5. Test-run floor and determine whether or not this was the cause of problem.

*****NOTE: THIS MAY BE MORE NOTICEABLE DURING COLD FREEZING CONDITIONS.**

- B. **PROBLEM:** Baffle/front shield area is clean and the floor seams to be tight.

CAUSE: Product fines have sifted through floor and have built up in between the trailer's under-structure and the bottom of the floor, such as the upper coupler area, frame members, splash plates, and rear thresholds.

REMEDY:

1. Turn off floor and its power source.
2. If the product is built up in the upper coupler area, it will be necessary to unbolt the floor. Pull it back 6-10 feet, then clean out that area.
3. Any exposed areas under the floor should be pressure washed, such as the frame members, cross-members or rear thresholds.

*****NOTE: DURING COLD FREEZING WEATHER, THE FLOOR SLATS CAN FREEZE TO THE PRODUCT BUILD-UP UNDER THE FLOOR. IN ADDITION, WHEN TRAILER IS LOADED, THE WEIGHT OF THE LOAD PUSHES THE SLATS DOWN ONTO THE PRODUCT BUILD-UP AND CAUSES THE FLOOR SLATS TO DRAG OR BIND.**

C. **PROBLEM:** Baffle/Front Shield area and under-structure area is clean and floor still seems to be tight.

CAUSE: Fines have filled in the area behind floor slat seals and expanded. This, in turn, forces floor slats to push out laterally and bind between the trailer's bottom rail and side sealer. This is common in cold weather. When the product freezes, it expands and creates side pressure.

REMEDY IF YOU NEED THE FLOOR SEAL:

1. Turn off floor and its power source.
2. Pull floor out of trailer and clean area out behind the seal. When this has been completed, re-install floor.

REMEDY IF YOU DO NOT NEED THE FLOOR SEAL:

1. Turn off floor and its power source.
2. Cut seals out with a heavy-duty utility knife or circle saw.

*****NOTE: PRIOR TO FOLLOWING ANY OF THE ABOVE PROCEDURES, IT IS SUGGESTED THAT YOU CONTACT THE MANUFACTURER OF THE UNLOADING SYSTEM.**

D. **PROBLEM:** Floor will not cycle or move.

CAUSE: Load is frozen to floor.

REMEDY: See Winter Weather Operating Instructions.

E. **FLOOR WEAR:** Inspect the condition of the floor slats. If the rear discharge end of the floor appears to be getting thin, you can possibly rotate the floor slats end for end. This has been known to double the life/usage of the floor slats. You will have to do all the slats, you cannot do only a few.

*****NOTE: IF STILL EXPERIENCING PROBLEMS AFTER THESE SUGGESTED STEPS HAVE BEEN COMPLETED, PLEASE CONTACT A SERVICE TECHNICIAN AT WILKENS INDUSTRIES, INC. AT 1-800-833-6045 OR 320-589-1971.**

PRE-WINTER SERVICE AND ANNUAL OPERATIONAL TIPS
FOR WALKING/LIVE FLOOR TRAILERS

1. Check your hydraulic pump pressure and flow. The pressure relief valve should be at 2800-3000 psi maximum and the pump should flow 30-50 gpm. Note: on unloading systems with 3.5" and 4" cylinders, the system should flow 40-60 gpm to get the same floor speed as the 3" cylinders.
2. Change your pressure and/or return filters. Check your suction screen in the Hydraulic tank. Clean or replace as needed.
3. Check your oil viscosity and change the oil if needed. Hydraulic oil does break down and get dirty. It's recommended you change seasonally. Consult your hydraulic supplier for the recommended seasonal oil series.
4. Pressure test your system and repair any hydraulic leaks. Inspect all hoses and hydraulic lines for wear and replace as needed. Make any adjustments to the switching valve as needed. Replace or repair any faulty or leaking control, directional, or check valves on the drive unit as needed.
5. Remove the front shield inside the trailer and clean out above the King Pin section area. Pressure wash the bottom side of the trailer body under the floor and the inside of the Trailer body and floor, especially the seals between the floor slats.
6. Check all floor bolts, fasteners and drive unit bolts. Tighten or replace as needed.
7. On Open Top trailers, during the winter months (in snow areas) park with the covers open. If it snows, you do not want the snow to accumulate on the covers. This could cause damage and be very difficult to remove. Your only options to avoid damage are to leave the covers open or remove them.
8. If it does snow, the snow must be removed from inside the trailer and off the floor prior to loading. Snow may cause the load to slip between the floor and the rest of the load and could cause some problems unloading. Sweep or shovel the snow out. If there's a large amount of snow in the Trailer, turn the floor on and push/shovel the snow toward the back. The floor will help unload the snow.
9. When "parking" the floor, make sure that the slats are all stopped in the "all the way forward" position. If the load does freeze in the trailer, it will freeze more to the floor than the side walls. By having the floor parked in the forward position, this will enable it to push rearward. If the slats do not cycle back, the load could be frozen to the floor. Reverse the floor, move the load forward and repeat the operation. If the load still does not move, idle the truck up more and move the floor back and forth quickly. This has been known to jar the load loose. If this does not work, warm the load/trailer up from the bottom side, and then the floor should move.

10. In addition, if freezing is a concern or has been a problem, use an environmentally safe and approved anti-freeze product. You can spray this on the floor and side walls prior to loading.
- 11. In extreme cold weather and prior to unloading, it is a good practice to connect all the hydraulic hoses, engage the pump and allow the oil to circulate for several minutes. This will warm the oil and get the oil flowing. Idle the engine while doing this. Excessive speed could cause the pump damage.
12. Remember, if it gets cold enough, the load is going to freeze. It will not matter what type of trailer or container that the load is in. Proper prevention may prevent some problems.
13. Also at this time, check the condition/wear of the floor slats. You can rotate the floor from end to end, putting the rear of the floor toward the front. This has been known to double the life/usage of the floor. You have to do all the slats at once, you cannot turn just a few.

For more information about frozen loads or other cold weather operational "tips" call the "HOT LINE" at 1-800-833-604. Wilkens Industries, Inc; RR 3, Box 169; Co. Rd. 22; Morris, MN 56267 or FAX us at: 320-589-1974

REMEMBER YOUR PROPER PLANNING PREVENTS POOR PERFORMANCE!!!

REVISED 11/98

saved: MSW\TRBLSHNG.WPS

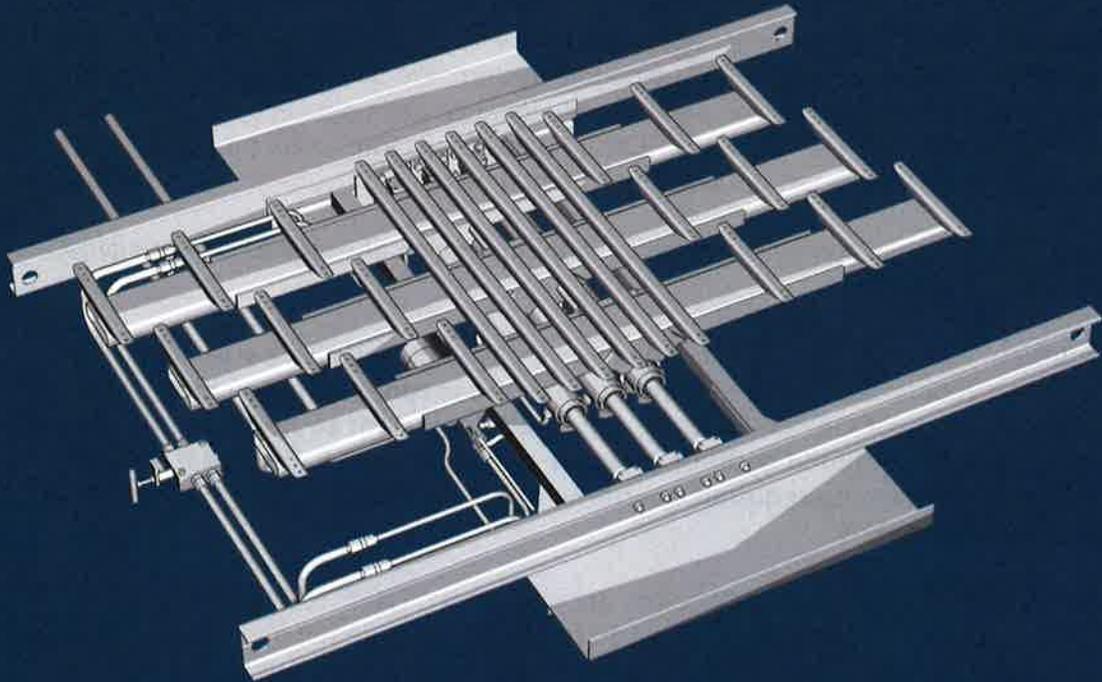
CAUTION!!!!
CHECK HYDRAULIC
COUPLERS!!!

BOTH Hydraulic couplers must
be attached **PROPERLY** and
SECURELY BEFORE

Turning P.T.O. on !! Damage to
trailer hydraulic system , and
possibly trailer body , **will**

OCCUR if hoses are not
connected fully and locked, or if
hooked up backwards.

WALKING FLOOR[®]
ONLY BY KEITH[®]



KEITH[®] RUNNING FLOOR II[®] OWNERS MANUAL

High Quality Ball Seal
Advanced Switching Valve
Center Frame Design
Cross-Drive Support
Winged Bearings
Snapdown Bearings & flooring

Interchangeable Cylinders
External Check Valves
No Hydraulic Hoses
Strong Drive Frame
Compact Design
Double Rod Wipers Protect Seals

Revised 10.01.10. Updates available online at <http://www.keithwalkingfloor.com>



Superior by design.

KEITH Mfg. Co.
WORLD HEADQUARTERS
401 N.W. Adler St.
Madras, OR 97741
(800) 547-6161
(541) 475-3802
(541) 475-2169 fax
sales@keithwalkingfloor.com

www.keithwalkingfloor.com

We at KEITH Mfg. Co. are very happy that you have decided to equip your trailer with the KEITH® RUNNING FLOOR II® unloading system. We take great pride in the fact that we manufacture the simplest and lowest maintenance self-unloading system available. Installing the KEITH® RUNNING FLOOR II® unloader in your trailer provides you with the versatility to load or unload virtually any type of material.

The following pages contain information on the operation of your KEITH® RUNNING FLOOR II® unloader.

In addition, we have provided information on the type of hydraulic wet kit that will be needed on your tractor. **Please be sure to use the recommended pumps, filters and pressure relief valves listed, or approved equivalent equipment. It is critical to adhere to the outlined hydraulic wet kit specifications. Failure to follow the guidelines concerning required operation pressures can lead to your system operating improperly.**

Please review the entire manual before operating the KEITH® RUNNING FLOOR II® unloading system. If you have any questions or concerns, do not hesitate to contact our factory toll-free at 800-547-6161 or via email at techdept@keithwalkingfloor.com and our trained personnel will be happy to assist you.

Thank you again for equipping your trailer with a KEITH® RUNNING FLOOR II® unloader.

Sincerely,

Keith Foster
Founder

WARRANTY AND SAFETY

Warranty.....	2
Safety.....	3
Safety Decals.....	4

OPERATION

Safe Start-Up/Shut Down.....	5
Driver Check List.....	6
Operation of Your Running Floor II® Unloader.....	7
Component Location Guide.....	8
How It Works.....	9
Plumbing Diagram.....	11
Start-Up Check List.....	11
Wet Kit Diagram.....	12
Floor Speed.....	12
Wet Kit Information.....	13

TROUBLESHOOTING

Switching Valve Adjustment.....	14
Switching Valve Troubleshooting.....	16
Check Valve Troubleshooting.....	17
Replacing a Check Valve.....	18
Control Valve, Ball Valve Troubleshooting.....	19
Hydraulic Cylinders Troubleshooting.....	20
Repairing Cylinders.....	21
KEITH® RUNNING FLOOR II® Oil Flow Diagram.....	22
Suggested Preventive Maintenance Schedule.....	23

PARTS

Drive Frame & Related Components.....	24
Cross-Drive Assembly.....	26
Cylinder Assembly.....	28
Hydraulic Tubes & Fittings.....	30
Check Valve Assembly.....	32
Control Valve Assembly.....	34
Switching Valve Assembly.....	36
Ball Valve Assembly.....	38
Front Shield Assembly.....	39
Floor Components.....	40

MAINTENANCE AND WARRANTY

Maintenance for New Systems.....	42
Warranty Registration.....	43

Note: The following parts guide is for the KEITH® RUNNING FLOOR II® 24 slat system. For all other systems please contact KEITH Mfg. Co. at 800-547-6161.



Superior by design.

KEITH Mfg. Co.
WORLD HEADQUARTERS
401 N.W. Adler St.
Madras, OR 97741
(800) 547-6161
(541) 475-3802
(541) 475-2169 fax
sales@kelthwalkingfloor.com

www.keithwalkingfloor.com

WARRANTY

KEITH Mfg. Co. hereby warrants, only to the first owner of a new **KEITH® WALKING FLOOR®** unloader from the factory or selling distributor that the product shall be free from defects in material and workmanship for a period of one year after delivery to the first registered owner. This warranty does not cover normal wear and tear and maintenance and is not to be construed as a service contract.

Owners Obligation: To qualify for warranty coverage, a warranty card must be completed and on file at KEITH Mfg. Co. and the equipment must be subject to normal use and service only.

Definition of Normal Use and Service: Normal use and service means the loading and/or unloading of uniformly distributed, non-corrosive material, properly restrained and secured, on properly maintained public roads, with gross vehicle weights not in excess of factory rated capacity. For stationary installations, normal use and service means the conveying of uniformly distributed, non-corrosive materials, with weights not in excess of factory rated capacity.

Sole and Exclusive Remedy: If the product covered hereby fails to conform to the above stated warranty, **KEITH Mfg. Co.'s** sole liability under this warranty and the owner's sole and exclusive remedy is limited to repair or replacement of the defective part(s) at a facility authorized by **KEITH Mfg. Co.** This is the owner's sole and exclusive remedy for all contract claims, and all tort claims including those based on the strict liability in tort and negligence. Any defective part(s) must be shipped prepaid to KEITH Mfg. Co., Madras, OR.

Except As Expressly Set Forth Above, KEITH Mfg. Co. Makes No Warranties: Express, implied or statutory, specifically, no warranties of fitness for a particular purpose or warranties of merchantability are made. Further, **KEITH Mfg. Co.** will not be liable for incidental damages or consequential damages such as, but not limited to, loss of use of the product, damage to the product, towing expenses, attorney's fees and the liability you may have in respect to any other reason.

Tort Disclaimer: KEITH Mfg. Co. shall not have any liability in tort with respect to the products, including any liability based on strict liability in tort and negligence.

If This Warranty Violates Law: To the extent any provision of this warranty, contravenes the law of any jurisdiction, that provision shall be inapplicable in such jurisdiction and the remainder of the warranty shall not be affected thereby.

To Prevent Possible Injury or Death

1. **Do Not** Operate the floor with the doors closed.
2. **Do Not** Stand behind the trailer or in the discharge area when the floor is operating.
3. **Do Not** Make adjustments to the unloading mechanism with the floor operating.
4. **Do Not** Operate unloader when protective covers and screens are not in place.
5. **Do Not** Go underneath the trailer when floor is operating.
6. **Do Not** Leave the trailer unattended while the unloader is in operation.

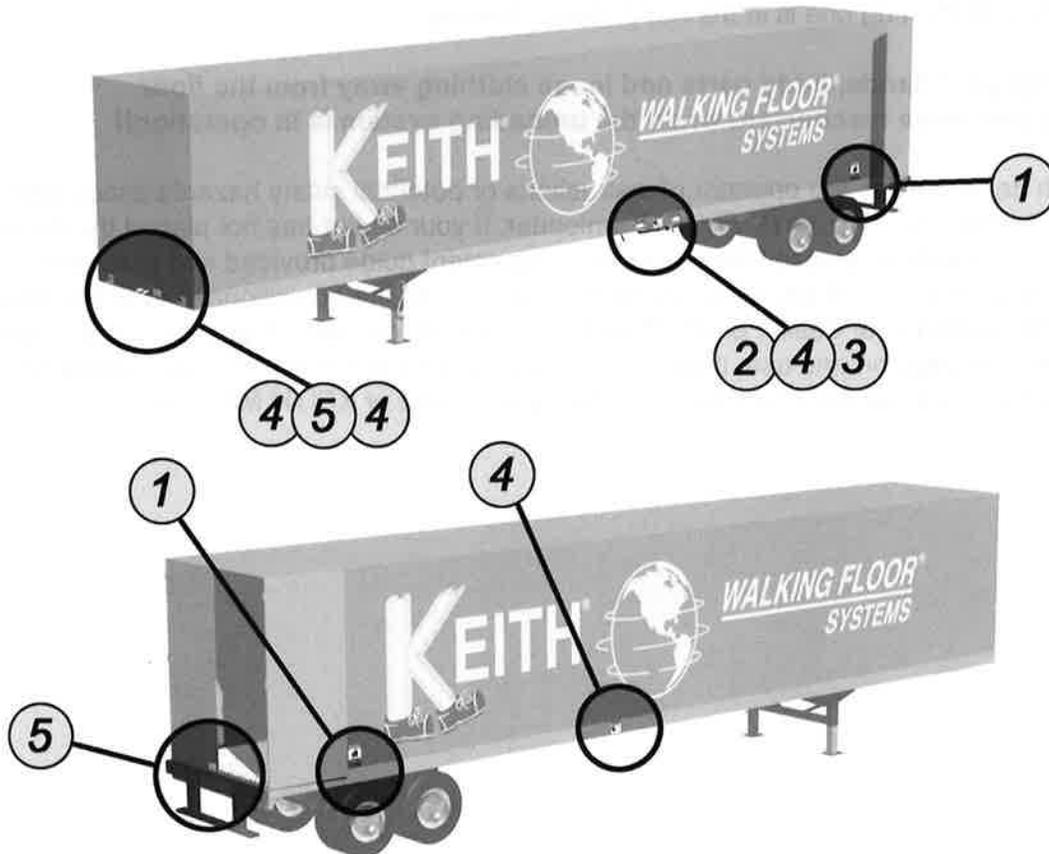
Always:

1. Disengage the trailer from the (P.T.O.) hydraulic power unit before service and maintenance.
2. Shut off the power supply before going underneath the trailer.
3. Stay away from any oil leaks when hydraulic pressure is high.
4. Shut off the hydraulic power take off unit (P.T.O.) before moving the trailer.
5. Make certain no one is in the trailer during loading.

!!Keep your hands, body parts and loose clothing away from the floor slats and drive mechanism when the unloading system is in operation!!

Each decal notifies the operator of instructions or potential safety hazards associated with the KEITH® *WALKING FLOOR*® unloader. If your dealer has not placed the decals during installation, please follow the decal placement guide provided and place the decals as directed. If you have not been provided with the operational and safety decals, please contact your dealer, or KEITH Mfg. Co. directly and we will provide a set of decals for your application and use. If you have any questions or concerns regarding the decal placement, please don't hesitate to contact your dealer or KEITH Mfg. Co.

<p>⚠ DANGER ⚠ PELIGRO</p> <p>1</p>  <p>CRUSH HAZARD PELIGRO DE APLASTAR LE DANGER D'ECRASER STAY CLEAR OF THIS AREA DURING OPERATION.</p>	<p>NOTICE CIERRE DE EMERGENCIA Arrêt d'urgence EMERGENCY SHUT-OFF</p> <p>2</p>  <p>STOP Parada Arrêt</p> <p>RUN Funcionamiento Couru</p> <p>⚠ WARNING ⚠ ADVERTENCIA ⚠ AVERTISSEMENT</p> <p>4</p>  <p>PINCH POINTS PUNTOS PELIGROSOS POINT DE PINCEMENT Moving parts can crush or cut. KEEP CLEAR.</p>	<p>NOTICE OPERATION OF CONTROL VALVE</p> <p>3</p>  <p>PUSH TO LOAD EMPUJE PARA CARGAR POUSSEZ POUR CHARGER Handle Pushed Completely In</p> <p>PULL TO UNLOAD TIRE PARA DESCARGAR TIREZ POUR DÉCHARGER Handle Pulled Completely Out</p> <p>⚠ WARNING</p> <p>5</p> <p>DO NOT PREVENT POSSIBLE INJURY OR DEATH Do not enter the trailer while the WALKING FLOOR® is in operation. Do not stand in or move through the area where the load discharges. Operator must remain at controls while load discharges. Do not leave trailer operating while vehicle is unattended or when performing maintenance or service. Always disengage the Power-Take-Off when trailer is not in use or when moving vehicle.</p> <p>KEITH WALKING FLOOR®</p>
---	--	---



Safe Start-Up/Shutdown

1. Set parking brake on truck and trailer.
2. Open trailer doors fully and secure doors with provided chains or loop rings. **ALWAYS** have doors fully open! **Do not, under any circumstances, engage the Power Take Off / Pump (P.T.O.) or WALKING FLOOR® unloader with the doors of the trailer closed. Do not go under trailer body or enter the trailer while the system is in operation, nor allow anyone to stand or move through the area where the load is being discharged.**
3. Close the ball valve by pulling the handle outward.
4. Connect hydraulic hoses to power unit (truck).
5. Engage P.T.O. and set to unload RPM.
6. While unloading, **NEVER** leave truck and trailer unattended!
7. After unloading has been completed, stop the floor with all slats in the forward position by placing the ball valve in the open position.
8. Disengage P.T.O.
9. Close doors and secure hydraulic hoses.
10. If a problem should arise while unloading, promptly do one of the following:
 - a. Disengage P.T.O. system.
 - b. Open ball valve.

CAUTION

Observations may be made while system is operating for troubleshooting purposes, but NEVER touch any moving part or attempt to make any adjustments to the system with the Power Take Off/Pumping system engaged or the WALKING FLOOR® unloader operating. Do not attempt to make adjustments or repairs without consulting with a trained service technician from your company or contact KEITH Mfg. Co. at 1-800-547-6161 or via email at techdept@keithwalkingfloor.com for further assistance.

Driver Check List

Pre-trip Check: Trailer Empty

1. Inspect hoses and connectors for damage and contamination. Clean all dirt and water from connectors before hooking up.
2. Inspect drive unit for leaking fittings or hoses and visible damage.
3. Open trailer door and inspect flooring for impact damage.
4. Inspect flooring at the rear of the trailer for loose or bent slats that may have popped up.
5. Hook up hydraulic connectors and operate the floor. Inspect for leaks while operating. Engage and disengage ball valve to check for proper operation. Check control valve for proper operation (Forward, reverse).
6. If problems are found, report them to the maintenance shop as soon as possible.
7. Secure trailer door and proceed.

Note: If trailer is loaded, perform steps 3 and 4 after unloading.

As the driver, you will see damage or operational problems before anyone else. Please report it as soon as possible.

Operation of your KEITH® Running Floor II® Unloader

UNLOADING

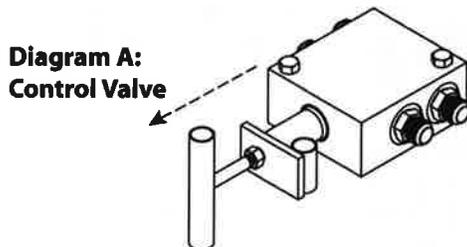
1. Before beginning to unload, make sure the trailer door(s) is/are open.
2. To unload with your KEITH® Running Floor II® system, pull the control valve handle all the way out. (See Diagram A.)
3. Make sure that the ball valve, located between the pressure and return lines, is in the closed (run) position. (See Diagram B.) This ball valve is used for the emergency shut-off.
4. Engage the P.T.O., then bring the tractor engine up to the predetermined unloading RPM. Your trailer floor should now be operating.
5. To stop the floor at any time during the loading or unloading process, switch the ball valve to the open (Stop) position. (See Diagram B.)

LOADING

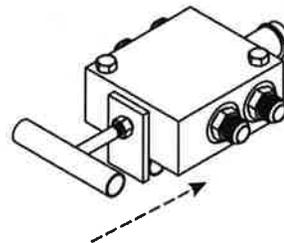
1. To load with your bi-directional KEITH® Running Floor II® system, simply turn the control valve handle parallel to the ground and push it all the way in. (See Diagram A.) Then follow instructions 3, 4 and 5 listed above.

!!Note!!

Make sure the trailer door(s) is/are open **BEFORE** starting the floor or the trailer door(s) may be damaged. The nose of the trailer may also be damaged by the load force when loading.

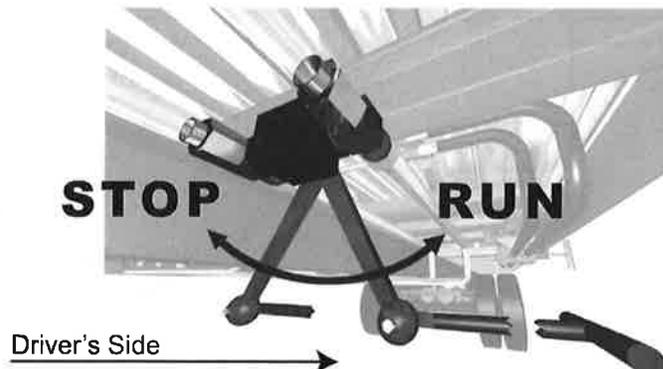


PULL TO UNLOAD
Handle Pulled Completely Out

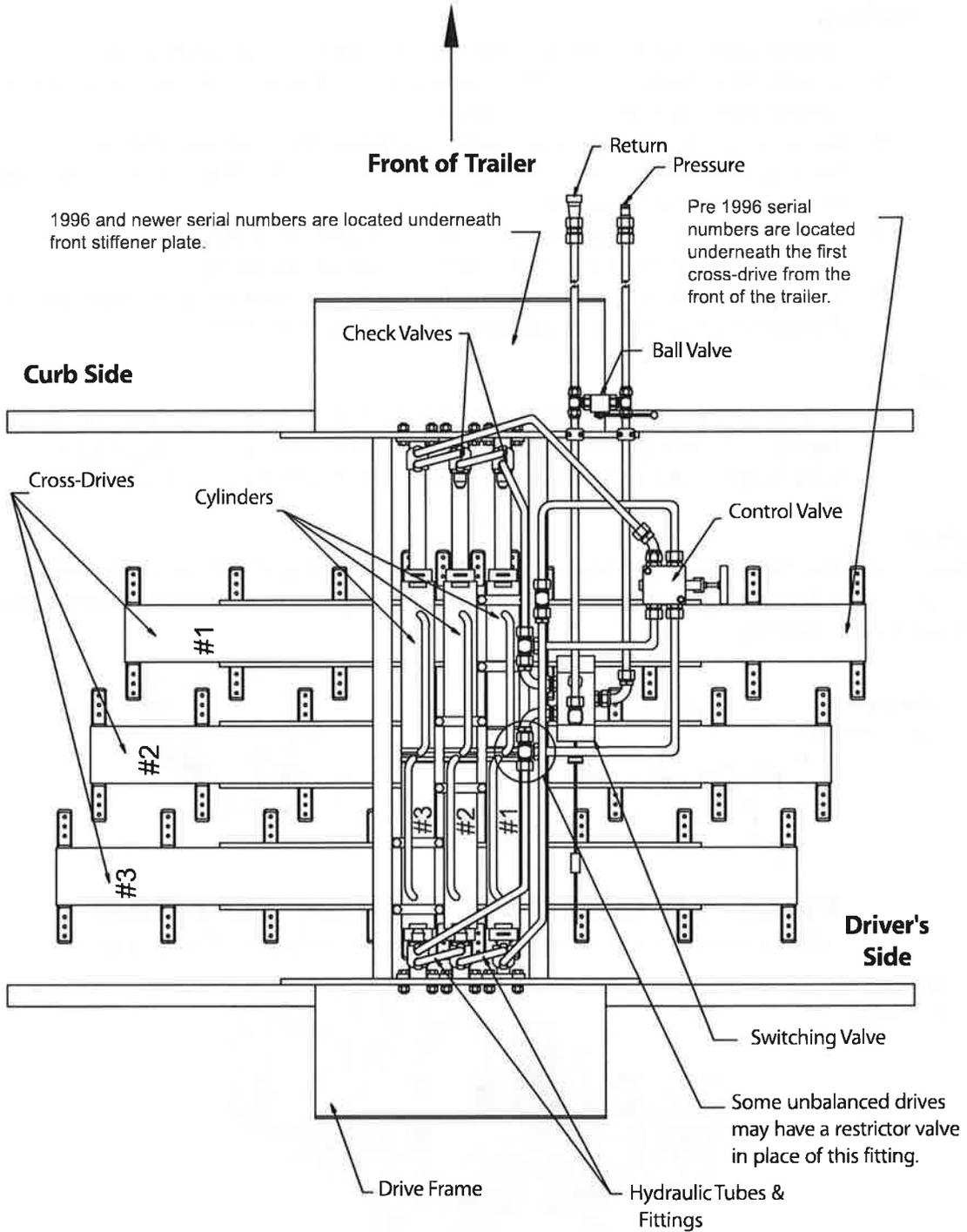


PUSH TO LOAD
Handle Pushed Completely In

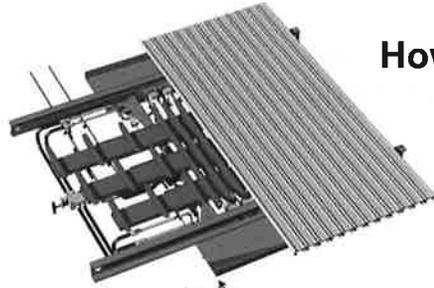
Diagram B:
Ball Valve



Component Location Guide *(View from underneath the trailer).*

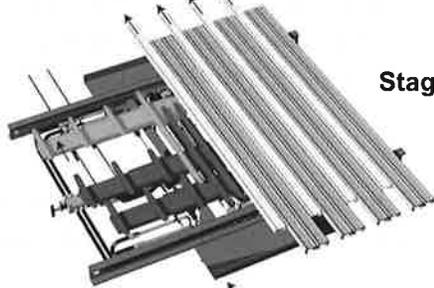


How It Works



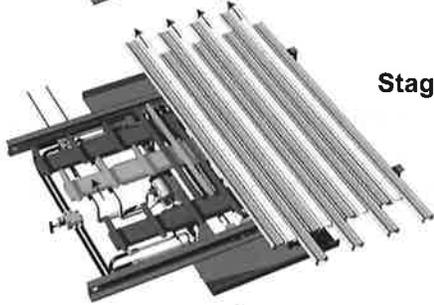
Initial State

All slats/planks at discharge end.



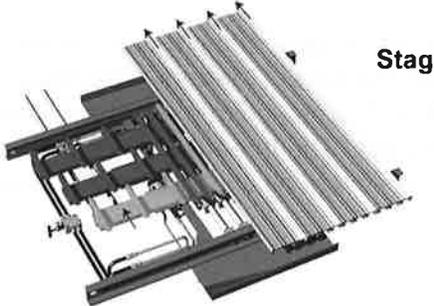
Stage 1

The first group of slats/planks moves under the load.
Load does not move.



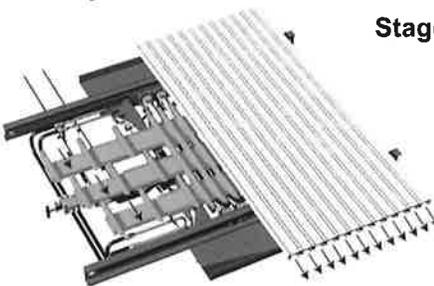
Stage 2

The second group of slats/planks moves under the load.
Load does not move.



Stage 3

The final group of slats/planks moves under the load.
Load does not move.



Stage 4

All slats/planks move together.
Load moves toward the discharge end.

(Stages 1, 2 & 3 require more pressure than stage 4.)

Running Floor II® Drive How The System Works

Unload Cycle Description-

Phase One:

Cylinder (#1), the drivers' side cylinder, travels toward the front of the trailer. As it reaches the end, the #1 check valve is opened. This releases blocked oil, allowing cylinder (#2), the center cylinder, to travel.

Phase Two:

Cylinder (#2) travels toward the front of the trailer. The #2 check valve is opened, releasing oil and allowing cylinder (#3), the curb side cylinder, to travel.

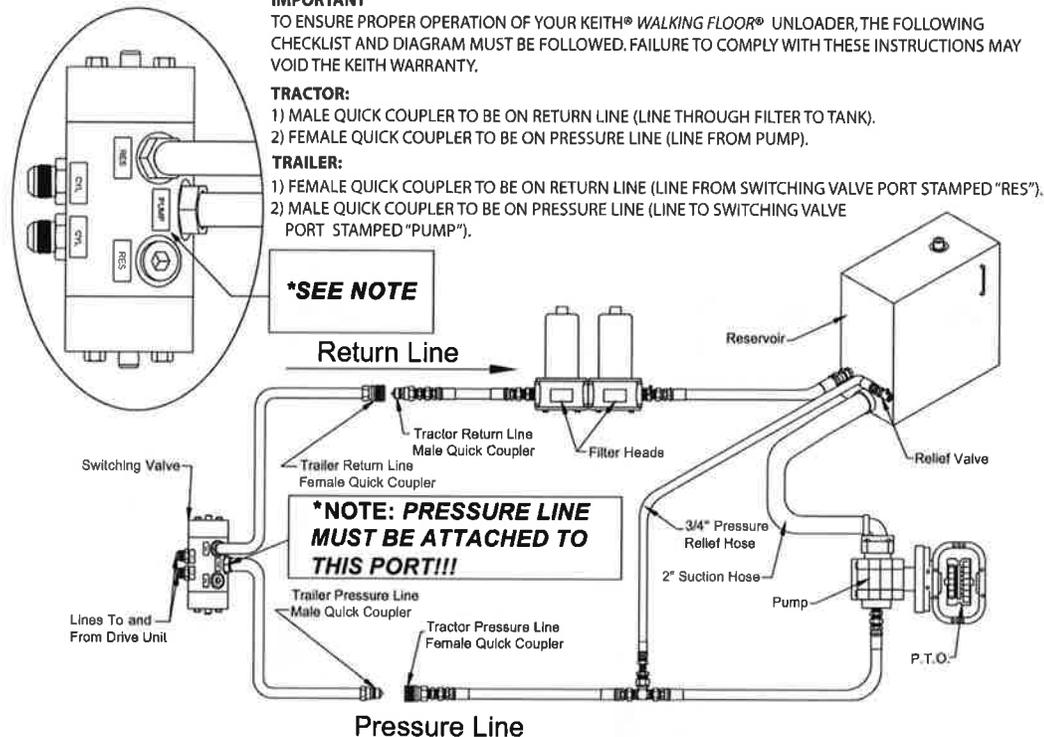
Phase Three:

Cylinder (#3) travels toward the front of the trailer. As it reaches the end of its travel, a loop on the #3 cross-drive pushes the threaded rod connected to the switching valve. The threaded rod is pushed into the switching valve, changing the hydraulic oil flow direction.

Phase Four:

As all three cylinders travel toward the rear of the trailer, the load is transferred to the discharge end. When all cylinders have reached their maximum stroke, the loop on the #1 cross-drive pushes the threaded rod connected to the switching valve. The threaded rod is pushed into the switching valve, changing the flow of oil and starting the cycle over.

Plumbing Diagram



***NOTE: The pressure and return lines must attach to their proper ports on the switching valve. If you have any questions or problems, call KEITH Mfg. Co. at 800-547-6161.**

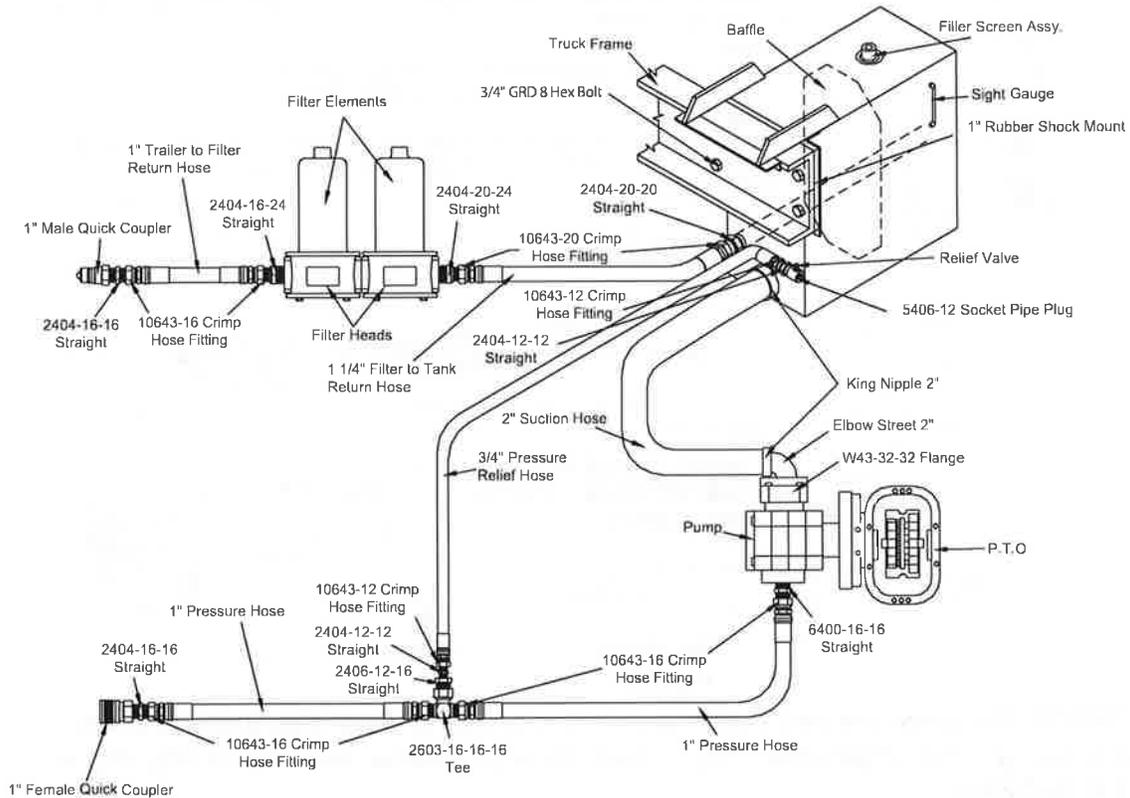
Start-Up Check List for the KEITH® RUNNING FLOOR II® System

Before starting your new KEITH® RUNNING FLOOR II® unloader, a quick start-up check should be made.

1. Is your entire system plumbed to the plumbing diagram?
2. *Pump: Will it pump 30-35 GPM at 3000 PSI?
3. *Relief Valve: Is it set at 2800-3000 PSI?
4. Oil: Have you filled the reservoir?
5. Power Take Off: Is the P.T.O. engaged?
6. Quick Disconnects: Are they the same size and type? Are they completely engaged?
7. Ball Valve: Is the ball valve on the drive unit closed?
8. Is the pressure line on the trailer attached to the pressure line on the tractor and the return line on the trailer attached to the return line on the tractor?

*If the information about your pump and relief valve is not known, a pressure/flow check will help determine this information. Be sure that your entire wet kit system meets the requirements of the hydraulic wet kit specifications in this manual.

Wet Kit Diagram



Floor Speed in Relation to Engine RPM

Example: With a P.T.O. output shaft speed rated at 118% of engine RPM, using a P51, P051, P5100 or PL27 type pump with dowelled housing and a 2 1/2" gear. The engine RPM in relation to the floor movement is as follows.

Engine RPM	Pump Output	Speed Ft/ Minute*	Unloading Time 45 ft Trailer
950 RPM	30 g/minute	8.2 ft/minute	7-8 minutes
1430 RPM	45 g/minute	12.5 ft/minute	5-6 minutes
1900 RPM	60 g/minute	16.4 ft/minute	3-4 minutes

Above specifications are for RUNNING FLOOR II® drive unit with 3.0" bore cylinders. These are approximate feet per minute only and should be used strictly as a guide.

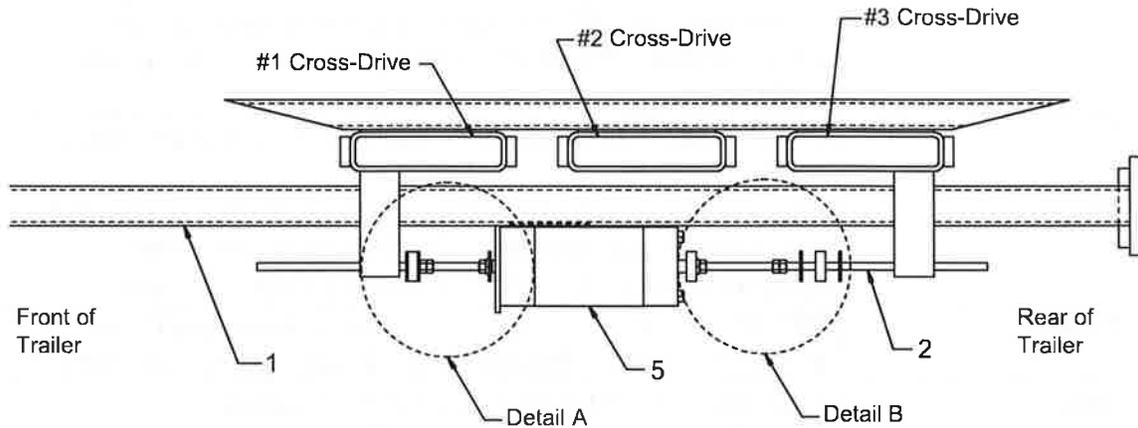
Note: KEITH Mfg. Co. recommends installing KEITH® RUNNING FLOOR II® drive units incorporating 3.5 inch cylinders for use in all semi-trailers with three or more axles.

Wet Kit Information

Transmission:	This wet kit is designed to be used with most transmissions. Power Take Off (P.T.O.) specifications may vary with some transmissions. Please check with your supplier for specific applications.
Oil:	Chevron AW46 hydraulic oil or equivalent. (Lower viscosity in colder climates).
P.T.O.:	Chelsea series 442/489 or Muncie CS6/CS8 Power Take Off unit, rated at approximately 118-125% of engine RPM. (Electronic Overspeed Control is highly recommended).
Pump:	P51, P051, P5100 or PL27 type pump with dowelled housing and a 2 1/2" gear. (Recommend a 2" four bolt, suction port).
Filter:	Filter should be 10 to 25 micron on the return line. Filter should be a double element Zinga or equivalent. Filter head #DF-15-25. MF 2215-25-0-2-0. Filter element #LE-10 or LE-25. (The filter element should be changed after 6 hours initially, and then every 6 months thereafter. This may vary with the operating environment).
Hydraulic Reservoir:	Should hold approximately 1 gallon of oil for every gallon per minute you plan to pump, i.e. 40 GPM = 40 gallon reservoir. Reservoir should hold a minimum of 40 gallons of oil.
Suction Line:	Suction line from the tank to the pump should be no more than 5' in length and a minimum of 2" inside diameter. Example: SAE-100R4. (This type of line has a spiral wire to keep the hose from collapsing under suction).
Pressure Line:	Hose from truck to trailer should be 1" 16 SAE-100R2.
Return Line:	Hose from trailer to filter should be 1" 16 SAE-100R1. Hose from filter to tank should be 1 1/4" 20 SAE-100R1.
*Pressure Relief Valve:	High quality valve, with the ability to relieve full pump flow at 3000 PSI.

***Note: It is critical that the relief valve is set at no less than 2800 PSI and no more than 3000 PSI.**

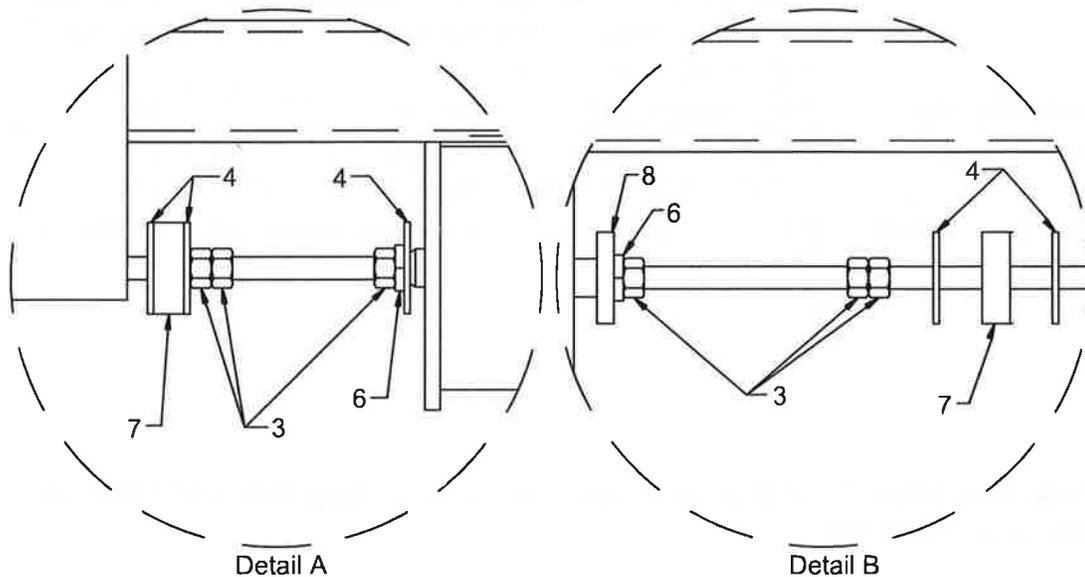
Switching Valve Adjustment



NOTE: This view is from the driver's side of the trailer. All cylinders are shown to the rear of the trailer.

1. 2" x 2" Steel Tube
2. 3/8" Threaded Rod (typ. 2 pcs)
3. 3/8" Nuts
4. 3/8" Flat Washers

5. Switching Valve
6. 3/8" Lock Washer
7. Switching Valve Grommet
8. Switching Valve Limit Cap



Switching Valve Adjustment

Tools needed: (2) 9/16 inch open-end wrenches.

Most switching valves are incorrectly replaced because they are out of adjustment. Always adjust the switching valve as described below.

1.	<p>Use the ball valve to stop the drive unit. The ball valve is located toward the front of the drive unit, in front of the hydraulic cylinders. Move the ball valve handle toward the center of the trailer, which will allow the hydraulic oil to by-pass the drive unit.</p>
2.	<p>Loosen the 3/8" jam nuts located on the threaded rods on each end of the switching valve. On each threaded rod there are two flat washers and a rubber grommet. The 3/8" jam nuts are located between the switching valve and the washers. After loosening the nuts, adjust them toward the switching valve. Doing this will throw the switching valve out of adjustment. Repeat the process at the other end of the switching valve.</p>
3.	<p>Start the truck engine and engage the P.T.O. Let the clutch out slowly. Pull the ball valve handle toward the driver's side. The drive unit will move to the load or unload direction. The system will lock up and be under high pressure when the cylinders reach the end of the stroke. Immediately push the ball valve handle toward the center of the trailer. This will allow the hydraulic oil to bypass the system. At this point, the cylinders will be at maximum stroke.</p>
4.	<p>Disengage P.T.O.</p>
5.	<p>Push the threaded rod in the direction that the cylinders are bottomed. Slide the washers and rubber grommet out toward the loop on the cross drive. Turn the 3/8" jam nuts out until they are tight against the washers. Then turn the first nut one extra turn. Bring the second nut up to the first nut and tighten the two together, setting the jam nuts.</p>
6.	<p>Engage P.T.O.</p>
7.	<p>Move the ball valve handle slowly, causing the hydraulic cylinders to travel to the opposite direction. Let the cylinders travel until they lock up. Then push the ball valve handle to the center.</p>
8.	<p>Disengage P.T.O.</p>
9.	<p>Push the threaded rod in the direction that the cylinders are bottomed. Slide the washers and rubber grommet out toward the loop on the other cross drive. Turn the 3/8" jam nuts out until they are tight against the washers. Then turn the first nut one extra turn. Bring the second nut up to the first nut and tighten the two together, setting the jam nuts.</p>
10.	<p>The switching valve adjustment is completed.</p>

Switching Valve Troubleshooting

Problem:	Cylinder (#1) moves toward the front of the trailer. Cylinder (#2) moves toward the front of the trailer. Cylinder (#3) moves toward the front of the trailer; then the system stops.
Cause:	The threaded rod nuts on the discharge end of the switching valve are not adjusted correctly.
Solution:	Break the two nuts apart and adjust toward the rear of the trailer.
Problem:	All three cylinders move toward the rear of the trailer; then the system stops.
Cause:	The threaded rod nuts on the forward end of the switching valve are not adjusted correctly, or there is not enough hydraulic pressure. (See *Note.)
Solution:	Break the two nuts apart and adjust toward the front of the trailer.
Problem:	Floor runs fine empty or with a light load, but will not cycle with a heavy load.
Cause:	The nuts on the threaded rod are slightly out of adjustment, or there is not enough hydraulic pressure. (See *Note.)
Solution:	Break the two nuts apart and adjust them away from the Switching Valve body.
Problem:	After installing a new switching valve, the floor will not move.
Solution:	The switching valve is out of adjustment or the new-style switching valve will not work if the pressure and return lines are backward.
Problem:	The cylinders cycle to the front correctly— cylinder (#1), followed by (#2) then (#3). Then, as all three cylinders begin to move toward the rear, (#3) cross-drive and cylinder move two to three inches back and forth.
Solution:	The switching valve loop on the cross-drive is bent and binding against the threaded rod. Bend the loop away from the threaded rod so that it will enable the threaded rod to travel freely.

***Note: (If floor stops in the full rear position and the switching valve has switched, you may not have enough oil pressure. Less pressure is required to move the load than to pull the slats 1/3 at a time under the load.)**

Check Valve Troubleshooting

The exterior check valve is designed to vent oil from the return side of the cylinder. It does not direct pressurized oil into the cylinder.

Unloading

Problem:	Cylinders (#1) and (#2) extend together toward the front of trailer.
Cause:	The check valve at the forward end of cylinder (#1) has malfunctioned.
Solution:	Rebuild or replace the check valve.
Problem:	Cylinders (#2) and (#3) extend together toward the front of trailer.
Cause:	The check valve at the forward end of cylinder (#2) has malfunctioned.
Solution:	Rebuild or replace the check valve.
Problem:	All three cylinders extend together toward the front of trailer.
Cause:	The check valves at the forward end of cylinders (#1) and (#2) have malfunctioned (Unlikely) or oil is leaking in the control valve and "floating" the check valves.
Solution:	Rebuild or replace the check valves or control valve.

Loading

Problem:	Cylinders (#2) and (#3) extend together toward the rear of trailer.
Cause:	The check valve at the rear end of cylinder (#3) has malfunctioned.
Solution:	Rebuild or replace the check valve.
Problem:	Cylinders (#1) and (#2) extend together toward the rear of trailer.
Cause:	The check valve at the rear end of cylinder (#2) has malfunctioned.
Solution:	Rebuild or replace the check valve.
Problem:	All three cylinders extend together toward the rear of trailer.
Cause:	The check valves at the rear end of cylinders (#2) and (#3) have malfunctioned (Unlikely) or oil is leaking in the control valve and "floating" the check valves.
Solution:	Rebuild or replace the check valves or control valve.

See "Replacing a Check Valve" Page 18

The check valves at the rear of the cylinders (discharge end) do nothing when you are unloading. The check valves at the rear are used for loading only.

Note: When empty, some trailers will cycle in sequence forward 1-2-3, then back 3-2-1, (Instead of all slats moving back together). This is not a malfunction; no repairs are needed. When a load is put on a trailer, the drag will cause the floor to sequence properly.

Replacing a Check Valve

Replacing a KEITH® RUNNING FLOOR II® external check valve is a simple procedure. The tools required to do this are:

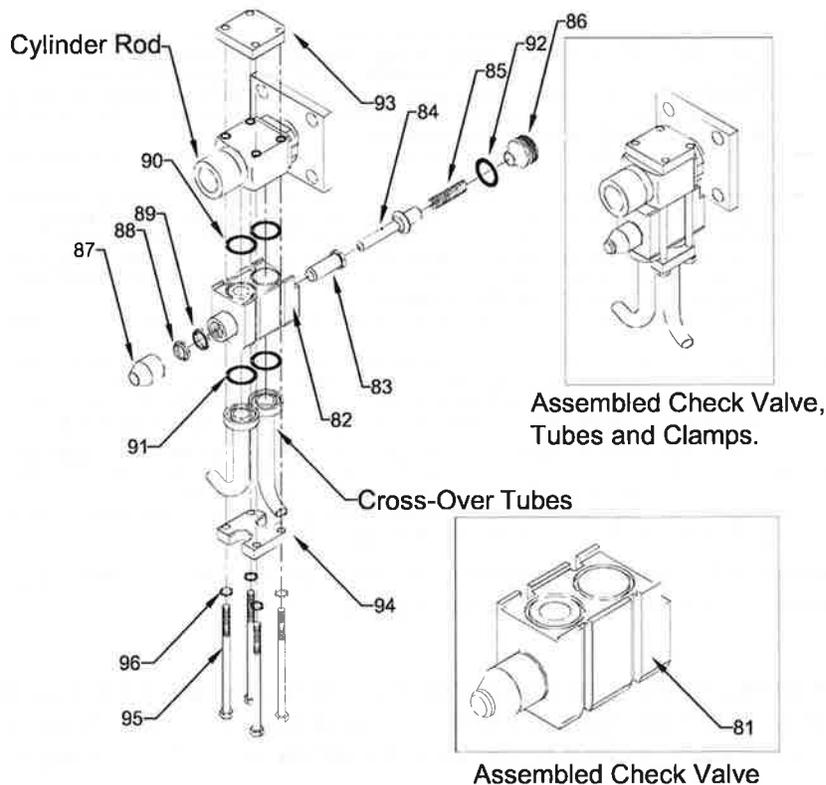
- (1) 1/2" socket
- (1) 6" or 12" extension
- (1) ratchet

DISASSEMBLY

Before removing any bolts, run the cylinder away from the check valve in order to free it. Next remove the four 5/16" x 5-1/2" bolts and tube clamp. Loosen the other end of the tubes and remove the check valve.

ASSEMBLY

First, make sure all of the surfaces are clean and the O-rings are in the proper places. Put the new check valve in place making sure it seats flat on the rod end. Put the tube clamp back on and put the 5/16" x 5-1/2" bolts back in. Make sure the tubes fit snugly back into the tube clamp and tighten the 5/16" x 5-1/2" bolts down. Tighten the other ends of the cylinder cross-over tubes and run the floor to check for leaks.



Control Valve, Ball Valve Troubleshooting

Control Valve

The control valve controls the direction of material movement (Load or unload).

Hydraulic oil is directed through the valve by moving the valve handle in or out. When the handle is pulled out, the *WALKING FLOOR*® system unloads. The oil is flowing through the outside hydraulic lines and blocked from flowing through the inside lines. When the valve handle is pushed in, the floor loads. Oil flows through the inside lines and is blocked from flowing through the outside lines.

If the valve spool becomes worn or scored, a hydraulic bypass will be created and the oil will get hot. Isolate the valve by pulling the handle out. Remove the two inside hydraulic lines, cap the valve and plug the lines. If the drive unit runs without the oil getting hot, the valve needs to be changed.

Ball Valve

Note: The ball valve is intended to use as an emergency shut off!

The ball valve will start or stop the floor.

The ball valve is open when the handle is pushed in. Oil is allowed to flow through the ball valve and back to the tank. When the handle is pulled out, the valve is closed. Oil flows to the drive unit. If the ball valve gets hot to the touch, the inner seals are worn. This can occur from using the wrong hydraulic pump, bad quick couplers, or from any problem that causes a hydraulic bypass. The ball valve has two Teflon® cup seals; one located on each side of the ball port. If these seals get hot, they will break down. This causes hydraulic oil to slip by, creating heat. You may not be able to move the load because of loss of pressure. The ball valve needs to be rebuilt or replaced.

Hydraulic Cylinders Troubleshooting

Hydraulic Cylinders

Hydraulic cylinders are usually damaged from heat or foreign materials (Causing seals, wear sleeve, etc. to break down).

The way to check the cylinders is to use an infrared heat detector or by touching each end of the cylinder barrel. If you find one end or both that are warmer than the other cylinders, it usually indicates which cylinder is damaged.

Caution: Never touch any component part of the Running Floor II® drive or perform this check while the drive unit is operating or P.T.O. engaged. Always shut the system down before performing maintenance.

Problem:	Cylinder (#1) moves fine, (#2) moves fine, (#3) will start to move then suddenly stop. (#3) will then travel four to five inches and move fast.
Solution:	The cylinder (#3) clamp is too tight. This could happen on any one of the three cylinders. Re-torque to 135 ft-lbs.
Problem:	After (#1) cylinder, the drivers' side cylinder, has been changed, the system is operated. (#1) moves to the check valve and opens the check valve. (#2) moves forward, but stops before it reaches the check valve and the hydraulics are at high pressure.
Solution:	Cylinder (#1) was not installed in the correct position. This is not allowing (#2) to travel the distance needed to open the (#2) check valve. The correct measurements for the Running Floor II® 3.0" and 3.5" cylinders are as follows: Cylinder (#1) from end of barrel to front threaded clamp = 1 ½" Cylinder (#3) from end of barrel to front threaded clamp = 1 ½" Cylinder (#2) is centered between (#1) and (#3) Do not measure from the cylinder head.
Problem:	In the Unload mode: As all three cylinders travel toward the rear of the trailer, cylinder (#3) moves faster than (#1) or (#2).
Solution:	There is not enough restriction on cylinder (#3). It is recommended to install an RV-2 valve, a restrictor valve, between the switching valve and cylinder or a check valve with a heavier internal spring.

Repairing Cylinders

To repair or replace the cylinder, you have to remove the check valves on each end of the cylinder that will be removed. Loosen the bolts from the check valve beside the one being removed. This is so you can swing the hydraulic cross-over tubes out of the way. There will be a total of twelve 5/8" bolts. Each end of the cylinder will have four and there will be four bolts from the cross-drive. Leave one bolt on each end of the cylinder to hold it in place, but loosen it so that it is almost out. Have one person on each end of the cylinder remove the bolt and let the cylinder down. Use the same method to put the cylinder back in.

Before installing the new cylinder, be sure to check the threaded pad on the cylinder and upper clamp on the cross-drive for damage. If the threads are damaged, replace with a new barrel or cross-drive, if necessary. The threaded pads must mate perfectly and the barrel clamps must be tightened properly to prevent slippage. (135 ft-lbs).

On cylinder (#1) and cylinder (#3), at the end closest to the cross-drive from the end of the barrel to the cross-drive upper clamp, the measurement is 1-1/2". Cylinder (#2) is located in the center of the upper clamp.

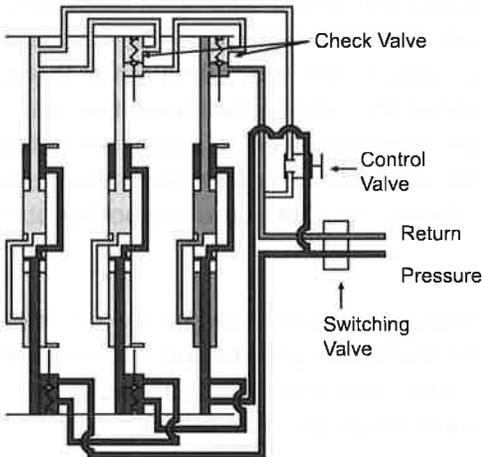
Note: In all Running Floor II® units, cylinder (#1) is located on the driver's side of the trailer. It is also the first cross-drive that moves to the front of the trailer. We do have different firing on some of our drives. Always check this first, as well as check if all three cylinders are the same.

Rule of Thumb:

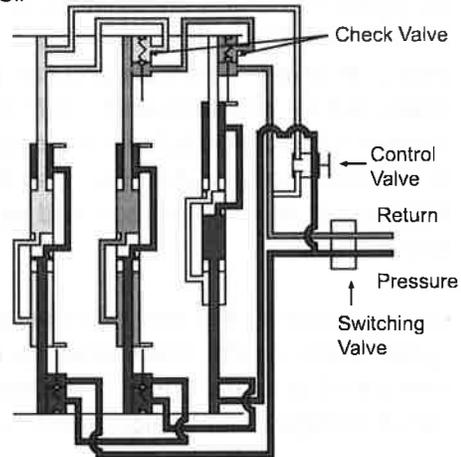
If you have a cylinder leaking due to heat, usually all three cylinders will need to be (Or should be) repaired or replaced.

KEITH® Running Floor II® Oil Flow Diagram (Unloading Cycle)

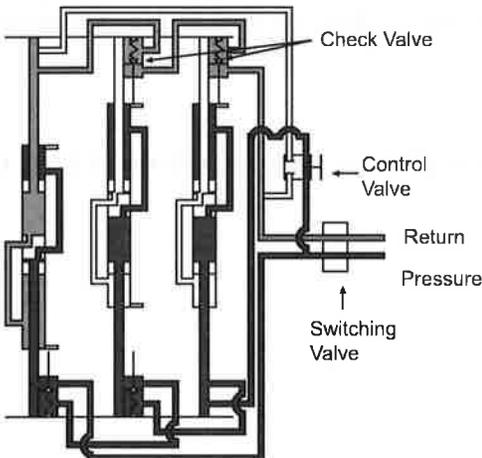
Pressure
 Return
 Blocked
 Standing Oil
 Return Oil



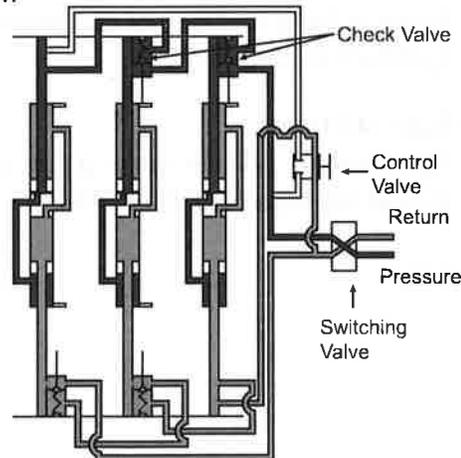
Phase 1
 Pressure in the rear of all cylinders as shown in .
 Open to return.
 Blocked by check valves.
Note: Phase 1 requires more pressure than phase 4.



Phase 2
 The #1 cylinder completes its full stroke, opening the check valve and allowing the oil in the #2 cylinder to escape as shown in . (Shows standing oil.)
 Pressure still in rear of all cylinders as shown in .
 Blocked by check valve.
Note: Phase 2 requires more pressure than phase 1.



Phase 3
 The #2 cylinder completes its full stroke, opening the check valve and allowing the oil in the #3 cylinder to escape to return as shown in . (Shows standing oil.)
 Pressure still in rear of all cylinders as shown in .
Note: Phase 3 requires more pressure than phase 2.



Phase 4
 When the #3 cylinder completes its stroke, the pressure and return are switched by the switching valve, transferring the pressure to the front of all cylinders as shown in . All cylinders are open to return as shown in . All cylinders move to rear of trailer together, moving the load.
Note: Phase 4 requires less pressure than phases 1, 2, or 3.

Suggested Preventive Maintenance Schedule

New Trailer:

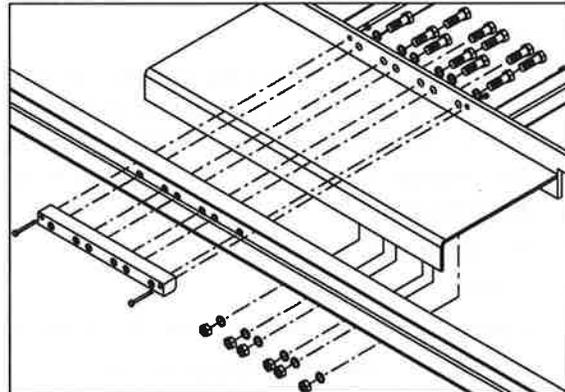
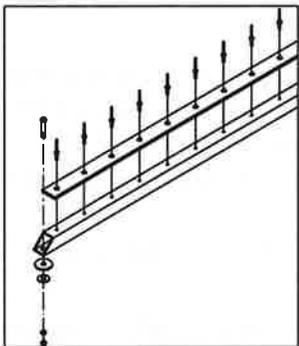
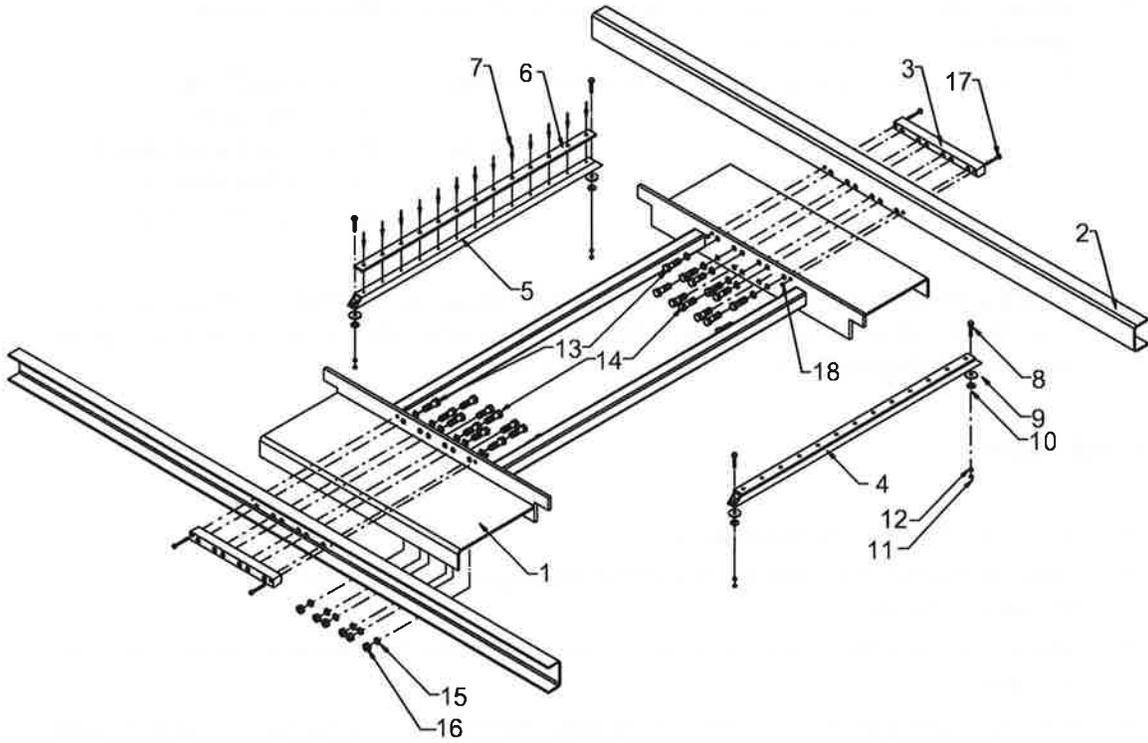
1. Check torque on barrel clamp bolts before first load and after the first week of operation. 5/8" bolts/135-lbs.
2. Check torque on floor bolts after one week of operation. 5/16" bolts/22-lbs.
3/8" bolts/42-lbs.
5/8" bolts/180-lbs 9 Slat Kwik Klamp .
5/8" bolts/150-lbs 24 Slat Kwik Klamp.
3/8" bolts/45-lbs Integrated V Slat.
3. Visually check for hydraulic leaks. Check the cylinder area, around the pressure and return hydraulic tubes, around the switching valve, check valves, and the quick disconnect. If leaks are found, retighten the fittings.

Used Trailer:

1. Visually check for hydraulic leaks.
2. Visually inspect the cross-drive support bearing for excessive wear. Replace if needed.
3. Visually inspect the cross-drive tubes and drive shoes for damage. Replace or repair as needed.
4. Inspect flooring for loose slats or bent slats that may have popped up due to impact damage.
5. Visually inspect for excessive wear of the floor bearings over each vehicle tire. Replace as needed.
6. The type of material being transported will affect the timing of the following procedure. A general guide for slat rotation or replacement is after approximately 3,000 loads. Check for wear on the rear of the slats and if they are worn more than 3/4" of the original thickness, it is suggested to remove and rotate the flooring end-for-end for extended life.
7. Pressure wash the drive unit, sub-deck and slats at least twice per year. Once per quarter, if possible.
8. Cycle the system and observe for proper operation in the load and unload modes.
9. Check the torque of the barrel clamp and floor bolts. See torque chart Page 42.

Note: The hydraulic wet kit must meet KEITH Mfg. Co. requirements and must be properly maintained to avoid damaging the *WALKING FLOOR®* system.

Drive Frame & Related Components



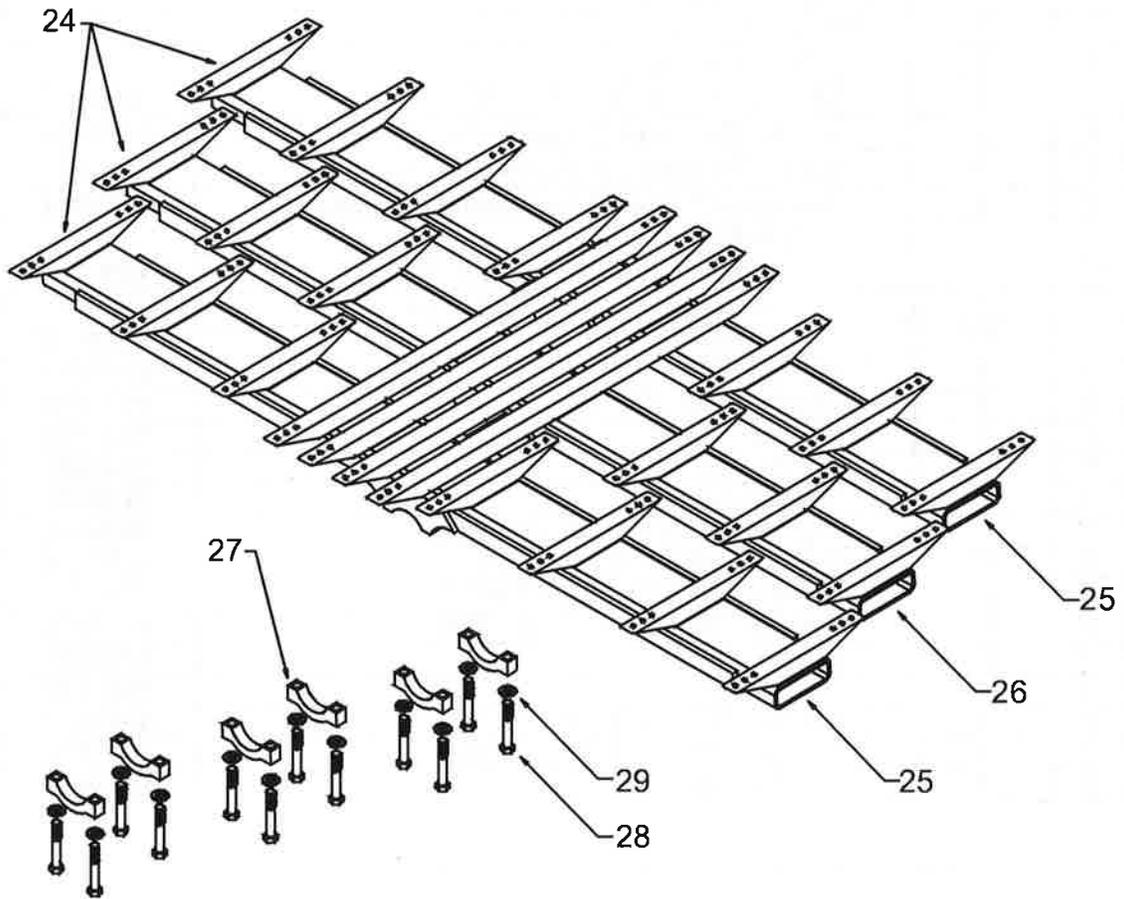
Drive Frame & Related Components

ID #	QUANTITY	DESCRIPTION	PART NUMBER
Drive Frame & Related Components			
-	1	Drive Frame Assembly	-
-	-	Includes items 1-18	-
1 ⁽¹⁾	1	Drive Frame Steel	-
2 ⁽¹⁾⁽²⁾	2	Channel Formed 4"x2 1/4"x3/16"	w/frame
3 ⁽¹⁾	2	Nut Bar Threaded 4.5" Cylinder Centers	04175101
3 ⁽¹⁾	2	Nut Bar Threaded 5.0" Cylinder Centers	01173101
4 ⁽¹⁾	2	Bearing 1/4" Cross-Drive Support Assembly	03467801
-	-	Includes items 5-7	-
5 ⁽¹⁾	1	Bearing Cross-Drive Support Tube	03467701
6 ⁽¹⁾	1	Bearing Cross-Drive Support 1/4" UHMW	03453901
7	13	Rivet 3/16"x1/2"	86528150
8	4	Bolt Hex GR5 3/8"x1 1/4"	86438000
9	4	Washer Large OD 3/8"	86553500
10	4	Washer Flat 3/8"	86554000
11	4	Nut Hex 3/8"	86628500
12	4	Washer Lock 3/8"	86555000
13	12	Bolt Hex GR8 5/8"x2 3/4", (3.0" Cyl)	86466500
13	12	Bolt Hex GR8 5/8"x3", (3.5" Cyl)	86467000
14	12	Bolt Hex GR8 5/8"x2", (3.0" Cyl)	86464500
14	12	Bolt Hex GR8 5/8"x2 1/4", (3.5" Cyl)	86465500
15	24	Washer Lock 5/8"	86559000
16	24	Nut Hex 5/8"	86632000
17	4	Bolt Hex GR5 1/4"x2 1/4", (3.0" Cyl)	86419500
17	4	Bolt Hex GR5 1/4"x2 1/2", (3.5" Cyl)	86420000
18	4	Nut Hex Nylock 1/4"	86626000

(1) Part numbers and descriptions vary based on the drive configuration and application.

(2) Formed Channels are included with frame. In many applications they are non-removable.

Cross-Drive Assembly



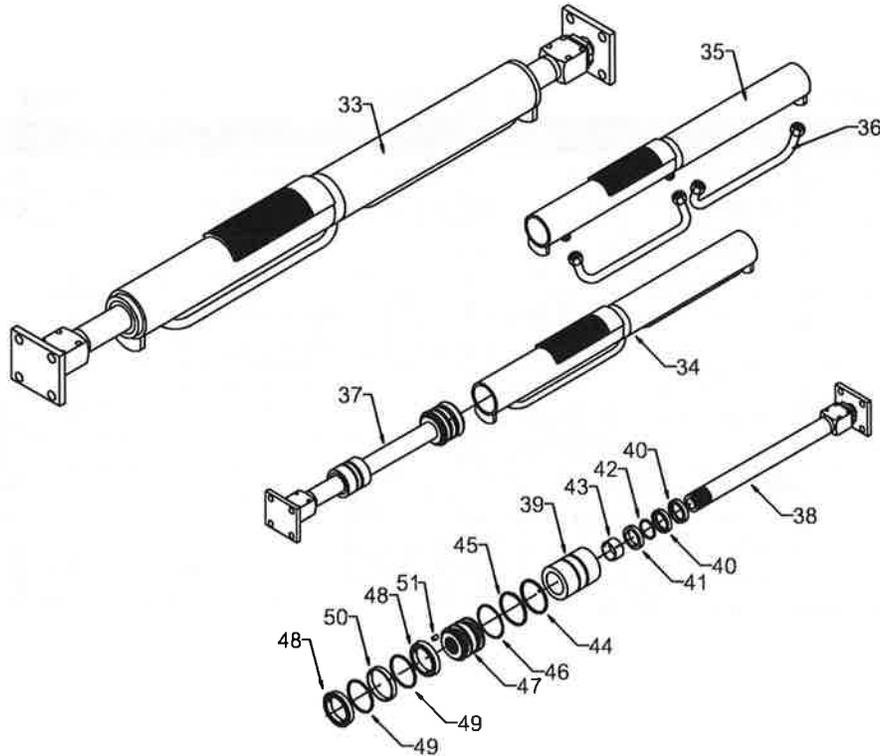
Cross-Drive Assembly

Parts List

ID #	QUANTITY	DESCRIPTION	PART NUMBER
Cross-Drive Assembly			
24 ⁽¹⁾	1	Cross-Drive 24 Slat 3.0" 4.5" Cylinder Center Set	02535501
24 ⁽¹⁾	1	Cross-Drive 24 Slat 3.5" 5.0" Cylinder Center Set	02520501
-	-	Includes items 25 & 26	-
25 ⁽¹⁾	2	Cross-Drive 24 Slat 3.0" 4.5" Cylinder Center #1 & #3	02535502
25 ⁽¹⁾	2	Cross-Drive 24 Slat 3.5" 5.0" Cylinder Center #1 & #3	02520502
26 ⁽¹⁾	1	Cross-Drive 24 Slat 3.0" 4.5" Cylinder Center #2	02535503
26 ⁽¹⁾	1	Cross-Drive 24 Slat 3.5" 5.0" Cylinder Center #2	02520503
27	6	Clamp 3.0" Lower Cross-Drive	03910501
27	6	Clamp 3.5" Lower Cross-Drive	03910601
28	12	Bolt Hex Patchloc GR8 5/8"x4", (3.0" Cyl)	86470010
28	12	Bolt Hex Patchloc GR8 5/8"x4 1/2", (3.5" Cyl)	86470510
29	12	Washer, Wedge Locking 5/8", (3.0" Cyl)	86559010
29	12	Washer, Wedge Locking 5/8", (3.5" Cyl)	86559090

(1) Part numbers and descriptions vary based on drive configuration

Cylinder Assembly



ID #	QUANTITY	DESCRIPTION	PART NUMBER
33	1	Cylinder 3.0" Assembly	04567901
33	1	Cylinder 3.5" Assembly	04568001
-	-	Includes items 34-51	
34	1	Barrel Assembly 3.0" Cylinder	04560901
34	1	Barrel Assembly 3.5" Cylinder	04561001
-	-	Includes items 35 & 36	
35	1	Barrel Weld Assembly 3.0" Cylinder	04560601
35	1	Barrel Weld Assembly 3.5" Cylinder	04560701
36	2	Cylinder Cross-Over Tube Assembly	04560801
37	2	Rod W/Piston & Head 3.0" Assembly	02553201
37	2	Rod W/Piston & Head 3.5" Assembly	02553301
-	-	Includes items 38-51	
38 ⁽¹⁾	1	Rod 45mm W/Block & Plate	02568501

(1) Part numbers and descriptions vary based on drive configuration and application.

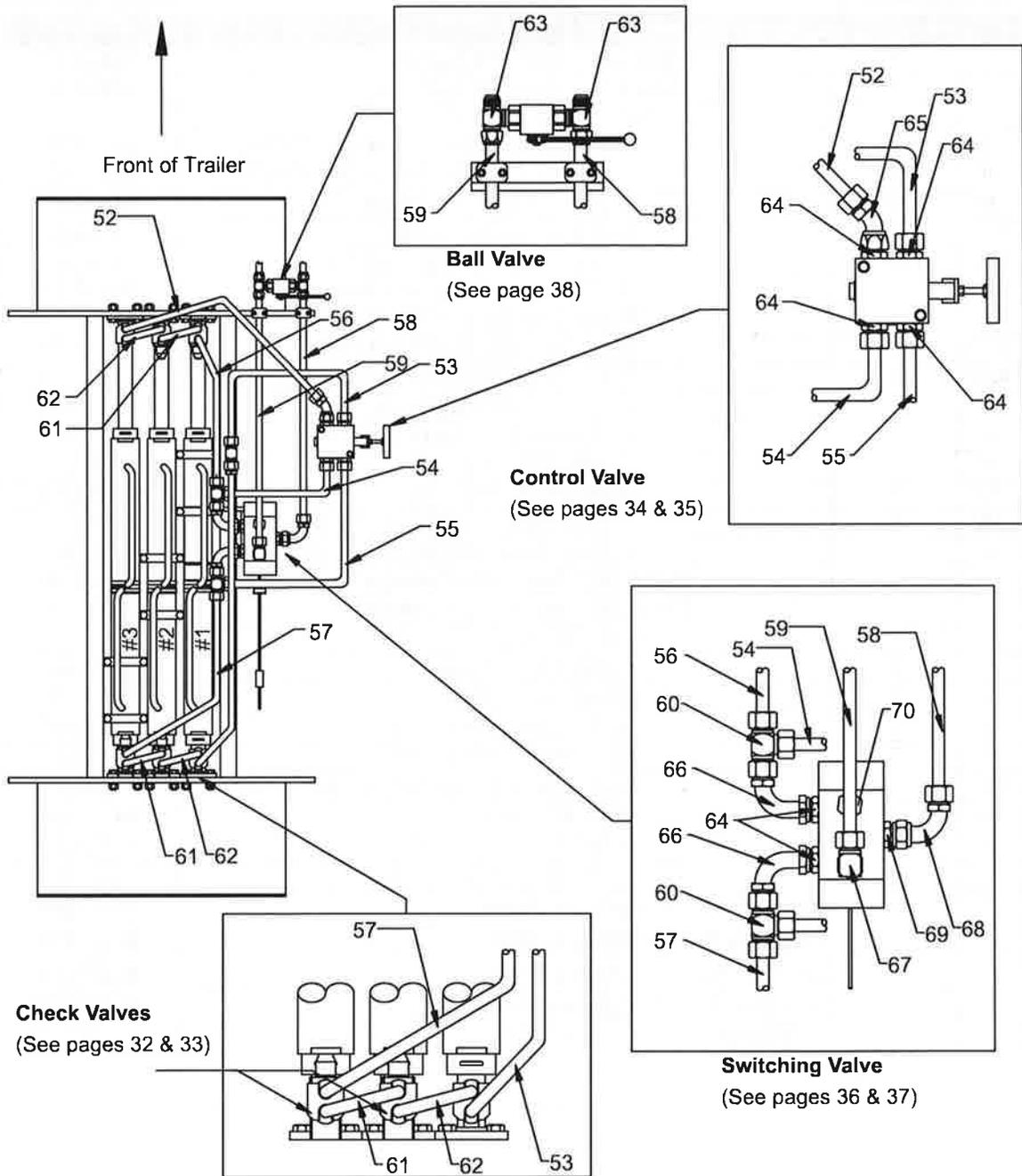
Cylinder Assembly

ID #	QUANTITY	DESCRIPTION	PART NUMBER
Cylinder Assembly			
-	1	Head 3.0" Assembly Cylinder	03808501
-	1	Head 3.5" Assembly Cylinder	03811001
-	-	Includes items 39-46	-
39	1	Head 3.0" Cylinder (Replace Old 01786201)	06372501
39	1	Head 3.5" Cylinder (Replace Old 02553501)	06375501
40	2	Wiper Rod 45mm Canned	84426600
41-1	1	Seal Rod Cylinder 45mm	84354200
41-2	1	Seal Backup Rod Cylinder 45mm	w/seal
42-1	1	Buffer Seal Rod Cylinder 45mm	84400201
42-2	1	Buffer Seal Backup Rod Cylinder 45mm	w/Buffer Seal
43-1	1	Wear Ring Rod Cylinder 45mm	84401105
43-2	1	PTFE Wear Ring Rod Cylinder 45mm (Blue)	84401205
44	1	Lock Wire 3.0" Head Cylinder	03812102
44	1	Lock Wire 3.5" Head Cylinder	03812104
45	1	O-Ring 232, (3.0" Cyl)	84384200
45	1	O-Ring 236, (3.5" Cyl)	84384600
46	1	O-Ring Backup 8-232, (3.0" Cyl)	84392400
46	1	O-Ring Backup 8-236, (3.5" Cyl)	84392800
-	1	Piston 3.0" Assembly Cylinder	03808101
-	1	Piston 3.5" Assembly Cylinder	03810901
-	-	Includes items 47-51	-
47	1	Piston 3.0" Cylinder	02564801
47	1	Piston 3.5" Cylinder	02553601
48	2	Seal Piston Cylinder 3.0"	84353600
48	2	Seal Piston Cylinder 3.5"	84353800
49 ⁽²⁾	2	Seal Backup Piston Cylinder 3.0" & 3.5"	w/seal
50	1	Wear Ring Piston 3.0"	84404600
50	1	Wear Ring Piston 3.5"	84404800
51	1	Pin Drive Lock 3/16" x 1/2"	86650400
_(3)	1	Old Seal Kit 3.0" Cylinder Metric	03877501
_(3)	1	New Seal Kit 3.0" Cylinder Metric	06528901
_(3)	1	Old Seal Kit 3.5" Cylinder Metric	03877601
_(3)	1	New Seal Kit 3.5" Cylinder Metric	06529001
-	-	Includes items 40-46 & 48-50	-

(2) Backup included with seal.

(3) The seal kit includes all necessary items required to rebuild the entire cylinder. It does not include items such as the Rod or Piston.

Hydraulic Tubes & Fittings

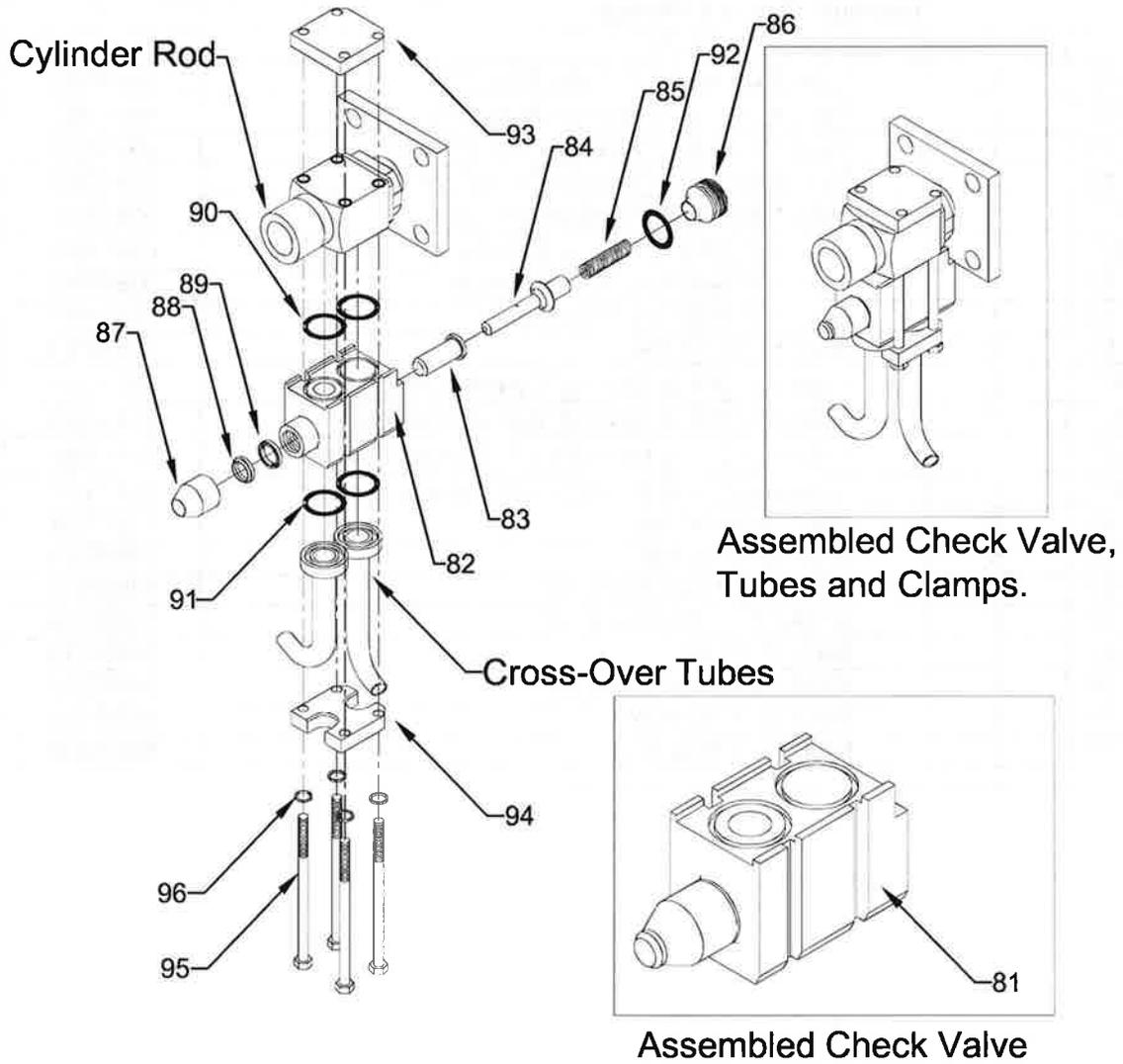


Hydraulic Tubes & Fittings

ID #	QUANTITY	DESCRIPTION	PART NUMBER
Hydraulic Tubes & Fittings			
-	-	Hydraulic Tubes & Fittings	-
-	-	Includes items 52-70	-
52 ⁽¹⁾	1	Tube #52 Front of Cylinder #3 to CTV	03843501
53 ⁽¹⁾	1	Tube #53 Rear of Cylinder #1 to CTV	03843601
54	1	Tube #54 Control Valve to Front of SWV	03843701
55	1	Tube #55 Control Valve to Rear of SWV	03843801
56 ⁽¹⁾	1	Tube #56 SWV to Front of Cylinder #1	03816901
57 ⁽¹⁾	1	Tube #57 SWV to Rear of Cylinder #3	03817001
58	1	Tube #58 Switching Valve Pressure	03843901
59	1	Tube #59 Switching Valve Return	03844001
60	2	6602-12-12-12 Tee	84690300
61 ⁽¹⁾	2	Tube #61 CkV to CkV 4.5" Cylinder Centers	03813801
61 ⁽¹⁾	2	Tube #61 CkV to CkV 5.0" Cylinder Centers	03813802
62 ⁽¹⁾	2	Tube #62 CkV to Non-CkV 4.5" Cylinder Centers	03813901
62 ⁽¹⁾	2	Tube #62 CkV to Non-CkV 5.0" Cylinder Centers	03813902
63	2	2601-16-16-16 Tee	84677880
64	6	6400-12-12 Straight	84685000
65	1	63TA-12-12 Bent Stem 45°	84682600
66	2	63UA-12-12 Bent Stem 90°	84683100
67	1	6801-16-12 90°	84691700
68	1	63UA-16-16 Bent Stem 90°	84683200
69	1	6400-16-16 Straight	84685400
70	1	6408-12 O-Ring Plug	84686900

(1) Part numbers and descriptions vary based on drive configuration and application.

Check Valve Assembly

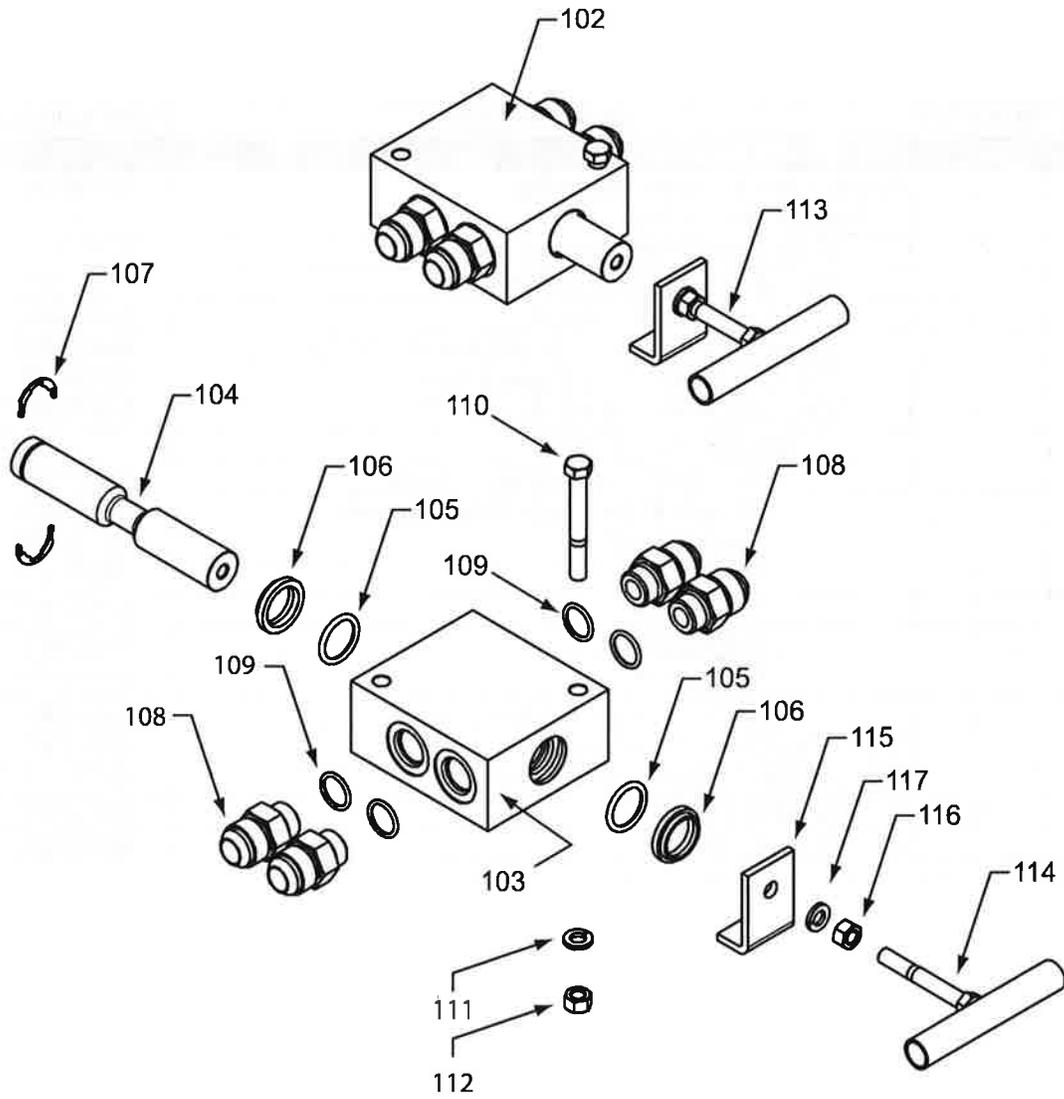


Check Valve Assembly

ID #	QUANTITY	DESCRIPTION	PART NUMBER
Check Valve Assembly			
81	1	Check Valve External Assembly	03709401
-	-	Includes Items 82-92	-
82	1	Body Check Valve External	03654601
83	1	Plunger Check Valve External	01771101
84	1	Rod Check Valve External	01766901
85	1	Spring Check Valve External Large #B-18273	84453400
86	1	End Cap Check Valve External Threaded	03654501
-	1	Seal Kit Check Valve External	03878101
-	-	Includes items 87-92	-
87	1	Dust Boot Check Valve External	84801100
88	1	Plunger Wiper Check Valve External	84426800
89	1	Seal Rod 5/8"	84352200
90	2	O-Ring 122	84377800
91	2	O-Ring 214	84381600
92	1	O-Ring 916	84387800
-(1)	1	O-Ring 124	84378000
-(1)	1	Lock Wire Check Valve External	03889301
93	1	Clamp Top Check Valve External	02513001
94	1	Clamp Bottom Check Valve External	02513101
95	4	Bolt Hex GR5 5/16"x5 1/2"	86434500
96	4	Washer Lock 5/16"	86553000

(1) Not shown, for use with Check Valve Body part #01248601 equipped with lock wire end cap.

Control Valve Assembly

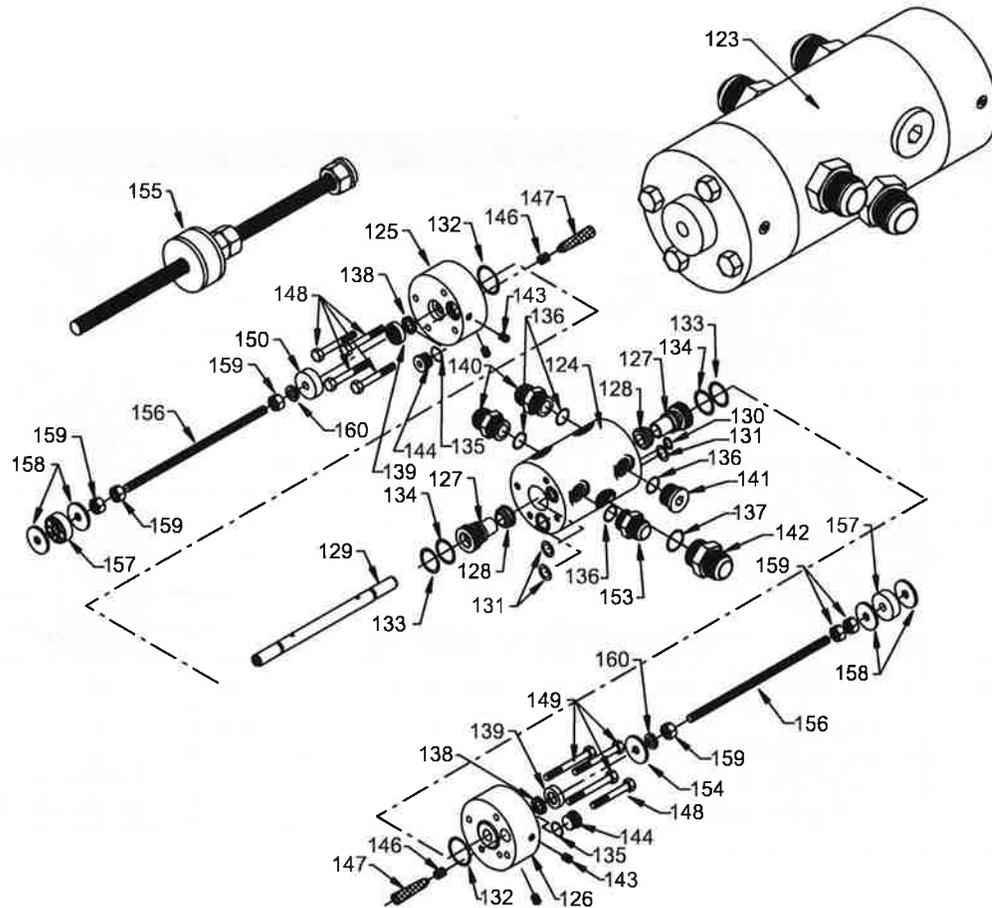


Control Valve Assembly

Control Valve Assembly			
102	1	Control Valve Load/Unload Assembly	02552701
-	-	Includes items 103-109	-
103	1	Body Control Valve	01049501
104	1	Spool Control Valve	03423201
-	1	Seal Kit Control Valve Load/Unload	03877901
-	-	Includes items 105-107	-
105	2	O-Ring 214 B-70	84381800
106	2	Wiper 1" Rod	84427000
107	1	Snap Ring 2-Piece For Spool	84801000
108	4	6400-12-10 Straight	84684900
109	4	O-Ring 910	84387200
110	2	Bolt Hex GR5 3/8"x3"	86442000
111	2	Washer Lock 3/8"	86555000
112	2	Nut Hex 3/8"	86628500
113	1	Handle Assembly Control Valve Load/Unload	02552601
-	-	Includes items 114-117	-
114 ⁽¹⁾	1	"T" Handle	-
115 ⁽¹⁾	1	"T" Handle Plate	-
116	1	Nut Hex 3/8"	86628500
117	1	Washer Lock 3/8"	86555000

(1) Not sold separately. Included only with Control Valve Handle Assembly.

Switching Valve Assembly



ID #	QUANTITY	DESCRIPTION	PART NUMBER
Switching Valve Assembly			
123 ⁽¹⁾	1	Switching Valve Assembly SAE	03888901
-	-	Includes Items 124-154	-
124 ⁽¹⁾	1	Body Switching Valve	04504601
125 ⁽¹⁾	1	End Cap Right Switching Valve	04504701
126 ⁽¹⁾	1	End Cap Left Switching Valve	04504801
127	2	Poppet Switching Valve	03718901
128	2	Ring Poppet Switching Valve	03718801
129	1	Rod Control Switching Valve	01335501
- ⁽²⁾	1	Seal Kit Switching Valve	03878001
-	-	Includes items 130-139	-
130	1	O-Ring 111	84376200

(1) Part numbers vary for Switching Valves made before 1998.

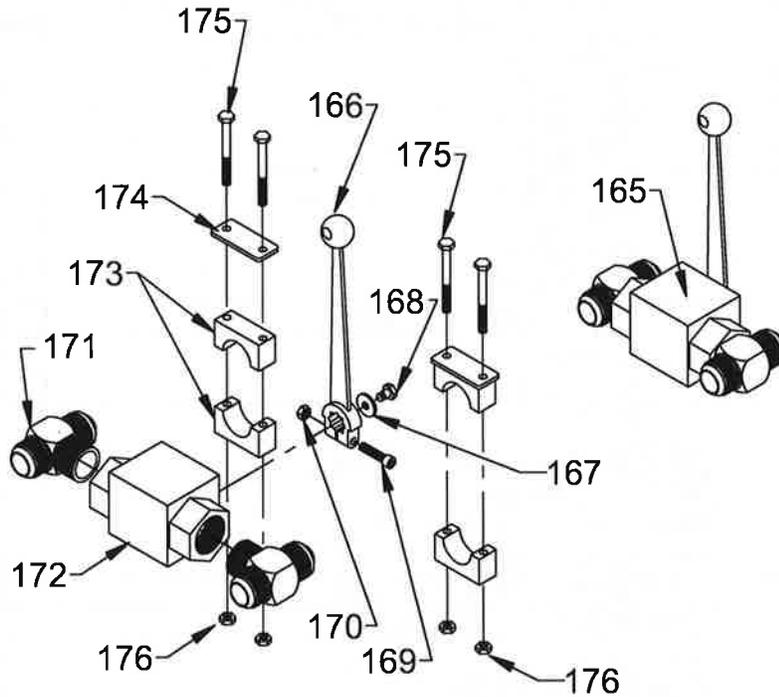
(2) The Switching Valve Seal Kit contains all necessary components to rebuild all Switching Valve models.

Switching Valve Assembly

ID #	QUANTITY	DESCRIPTION	PART NUMBER
131	3	O-Ring 117	84377000
132	2	O-Ring 126	84378200
133	2	O-Ring 216	84382200
134	2	O-Ring Backup 8-216	84391600
135	2	O-Ring 908	84387000
136	4	O-Ring 912	84387400
137	1	O-Ring 916	84387800
138	2	Seal Rod 5/8"	84352200
139	2	Wiper Canned 5/8" Rod	84427200
_(3)	3	O-Ring 011	84375200
_(3)	1	O-Ring 114	84376700
_(3)	2	O-Ring 124	84378000
_(3)	1	1/2" Pipe Plug Socket 7/8" Taper	84680790
140	2	6400-12-12 Straight	84685000
141	1	6408-12 M O-Ring Socket Plug	84687700
142	1	6400-16-16 Straight	84685400
143	4	1/8" Pipe Plug Socket 7/8" Taper	84680780
144	2	6408-08 M O-Ring Socket Plug	84687500
146	2	Spring S157	84451750
147	2	Filter Element CF0563-46	84012700
148	5	Bolt Hex GR5 3/8"x2 1/2"	86441000
149	3	Bolt Hex GR5 3/8"x3"	86442000
150	1	Cap Limit Switching Valve	02552101
153	1	6400-16-12 Straight	84685300
154	1	Washer Large OD 3/8"	86553500
155	2	Rod Threaded Assembly Switching Valve	03869701
-	-	Includes Items 156-160	-
156	1	Threaded Rod 3/8"x18"	86603000
157	1	Switching Valve Grommet	83217500
158	2	Washer Large OD 3/8"	86553500
159	3	Nut Hex 3/8"	86628500
160	1	Washer Lock 3/8"	86555000

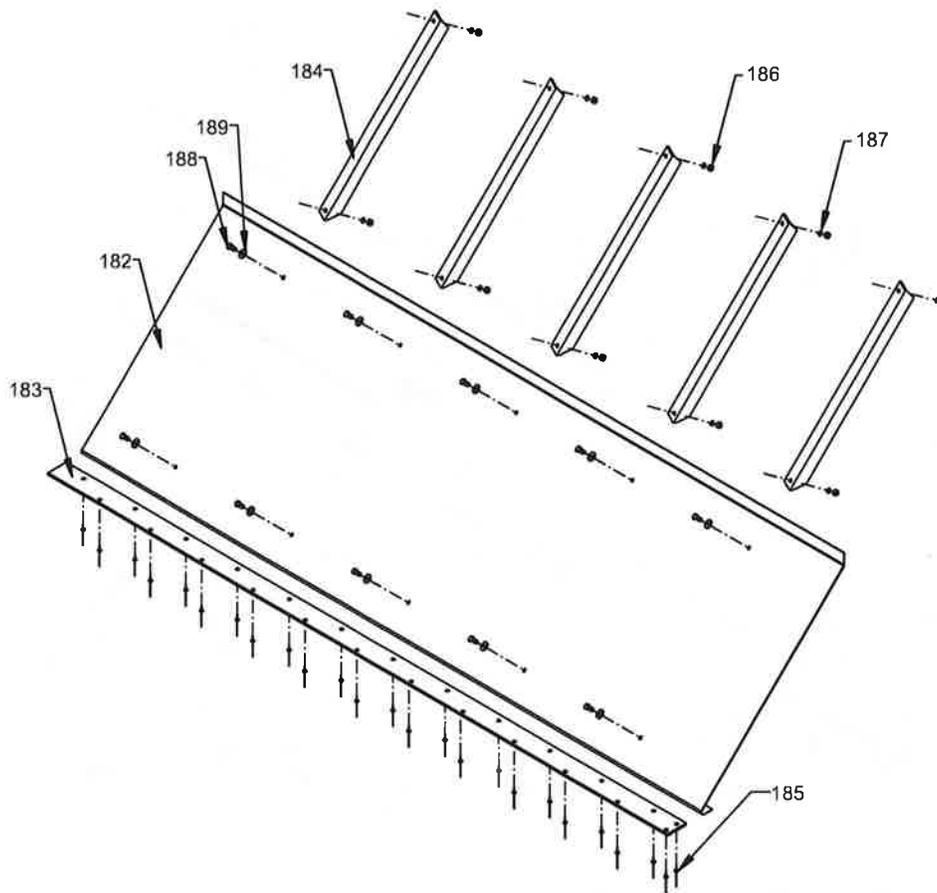
(3) Not shown. For use with previous model Switching Valve.

Ball Valve Assembly



ID #	QUANTITY	DESCRIPTION	PART NUMBER
Ball Valve Assembly			
165	1	Ball Valve 1" W/ Tees & Handle	84802600
-	-	Includes items 166-172	-
166	1	Handle Ball Valve	84802900
167	1	Washer Flat 6mm	w/ball valve
168	1	Bolt Hex GR8 6mmx1mmx10mm	w/ball valve
169	1	Bolt Socket Head GR8 6mmx1mmx30mm	w/handle
170	1	Nut Hex 6mmx1mm	w/handle
171	2	2601-16-16-16 Tee	84677880
172	1	Ball Valve Assembly 1"	84802800
-	2	Clamp Hydraulic Tube 1" Kit	04631101
-	-	Includes items 173-176	-
173 ⁽¹⁾	1	Clamp Hydraulic Tube 1" Set	84750300
174	1	Plate Clamp Tube Top COP-3	84751200
175	2	Bolt Hex GR5 1/4"x2 1/4"	86419500
176	2	Nut Hex Nylock 1/4"	86626000

Front Shield Assembly

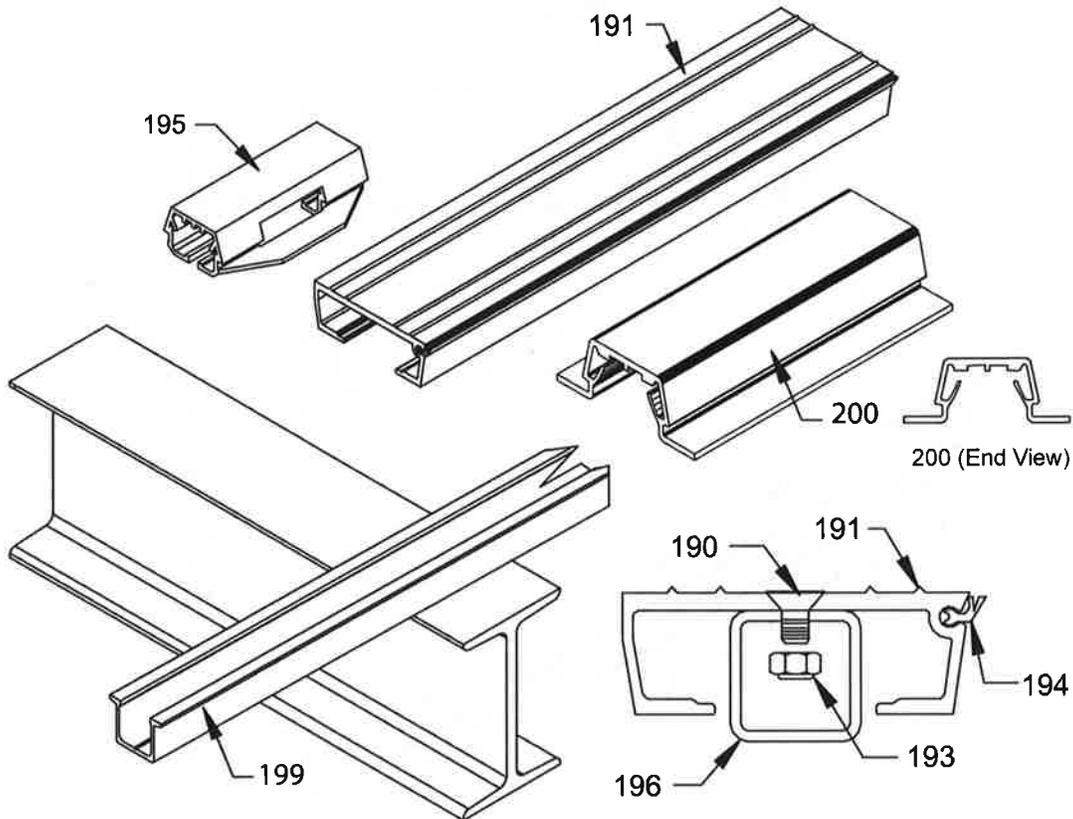


ID #	QUANTITY	DESCRIPTION
FRONT SHIELD ASSEMBLY		
-(1)	1	Front Shield 96" Wide Assembly
-	-	Includes items 182-189
182 ⁽¹⁾	1	Front Shield 96" Wide 14 Gauge
183 ⁽¹⁾	1	Bearing Strip Front Shield 1/4"x2 7/8"
184	5	Stiffener Angle Front Shield 1 1/2"x 1 1/2"x3/16"
185 ⁽²⁾	25	Rivet 3/16"x1/2"
186	10	Nut Hex 10mm
187	10	Washer Lock 10mm
188	10	Bolt Hex 8.8 10mm x 20mm
189	10	Washer Large OD 3/8"

(1) Part numbers and descriptions vary based on trailer width and application.

(2) Quantity varies based on trailer width and application.

Floor Components



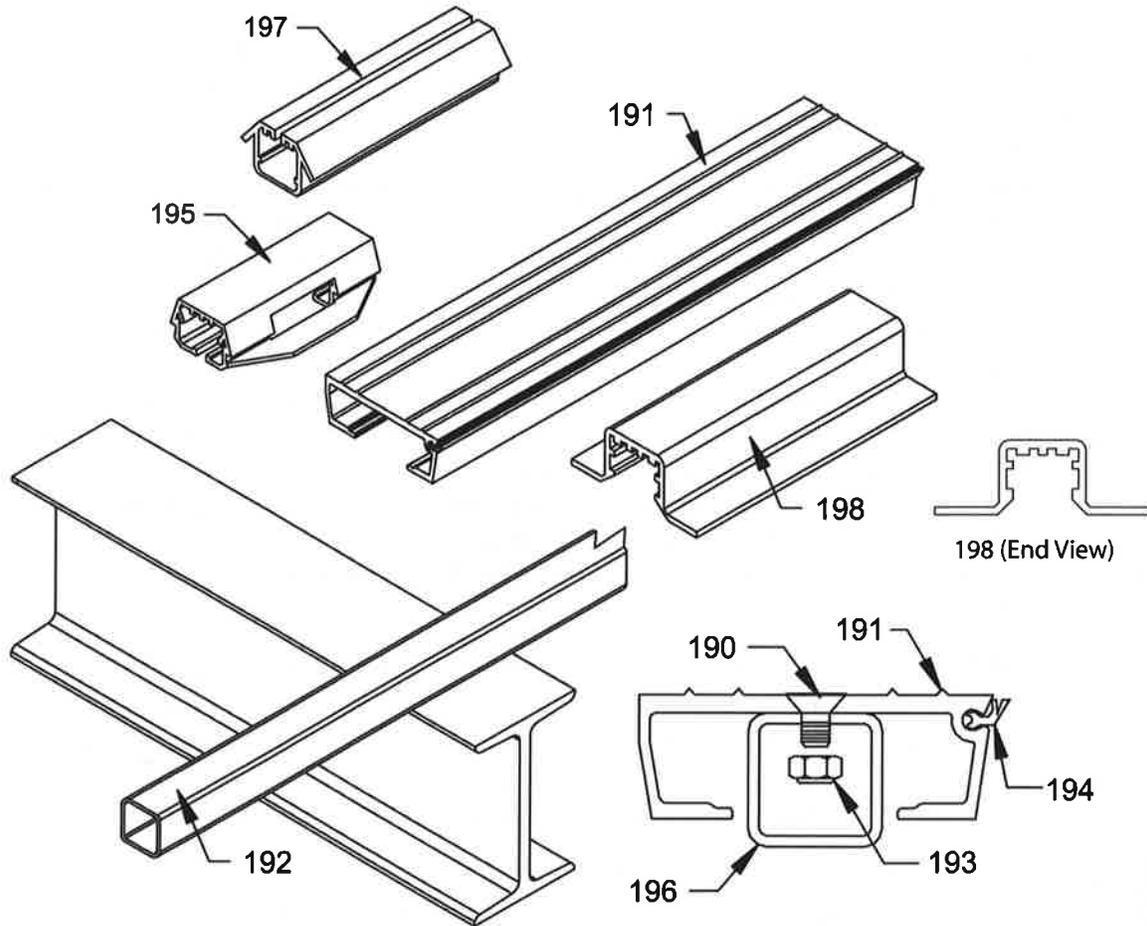
ID #	QUANTITY	DESCRIPTION
FLOOR COMPONENTS		
-	-	FLOOR COMPONENTS
-	-	Includes items 190, 191, 193-197, 199, 200
190 ⁽¹⁾	-	Bolt Hex GR5 5/16"x 2 1/4"
191 ⁽¹⁾	-	Slat 3.5" 2295 1/2" Impact [®] Series 1212
193 ⁽¹⁾	-	Nut Hex Nylock 5/16"
194 ⁽¹⁾	-	Seal Floor Bent "Y"
195 ⁽¹⁾	-	Bearing 3.5" Floor Slat
196 ⁽¹⁾	-	Drive Shoe
199 ⁽¹⁾⁽²⁾	-	2469 Aluminum Channel
198 ⁽¹⁾	-	Splash Guard Hold-Down Bearing

(1) Part numbers and descriptions vary based on trailer width and application.

(2) Channel is also available in 44' lengths (8224694400) and 48' lengths (8224694800)

* The last four digits in a ten part number refers to length in feet and inches (Example 8222954305 is 43'05" long).

Floor Components



ID #	QUANTITY	DESCRIPTION
FLOOR COMPONENTS		
-	-	FLOOR COMPONENTS
-	-	Includes items 190-198
190 ⁽¹⁾	-	Bolt Hex GR5 5/16"x1"
191 ⁽¹⁾	-	Slat 3.5" 2295 1/2" Impact® Series
192 ⁽¹⁾	-	Subdeck 1"x1"x.063"x20' Steel Tube
193 ⁽¹⁾	-	Nut Hex Nylock 5/16"
194 ⁽¹⁾	-	Seal Floor Bent "Y" 1212
195 ⁽¹⁾	-	Bearing 3.5" Floor Slat
196 ⁽¹⁾	-	Drive Shoe
197 ⁽¹⁾	-	Bearing Hold Down 3.5" Floor Slat
198 ⁽¹⁾	-	Splash Guard Bearing (Not Hold-Down)

(1) Part numbers and descriptions vary based on trailer width and application.

* The last four digits in a ten part number refers to length in feet and inches (Example 8222954305 is 43'05" long).

**Maintenance For Your New
KEITH® RUNNING FLOOR II® and Hydraulic Wet Kit**

1. For proper operation of your new RUNNING FLOOR II® equipped trailer and wet kit, make sure the pressure and return lines are hooked up correctly. It is important to periodically inspect hoses and connectors for damage and contamination. Clean all dirt and water from connectors before hooking up.
2. Change the hydraulic return filter element after the first six (6) hours of operation and then every six (6) months. This may vary with the operating environment.
3. During the first two (2) weeks of operation, it will be necessary to check and tighten all floor bolts. Floor bolts should be checked regularly for proper torque, in accordance with a preventive maintenance program, as loose floor bolts will cause serious damage to floor slats.
4. After the first week of operation, you must check and tighten the lower cross-drive clamp bolts that fasten the cross-drives to the cylinder. Also check the end cylinder rod plate bolts that fasten the cylinders to the drive frame.
5. During the first several weeks of operation, examine the check valve and tube clamps regularly to ensure that they are securely fastened.
6. It is recommended to pressure wash the top of the floor slats and seal every six months.

Bolt Description	Recommended Bolt Torque Values	Torque
Bolt Floor 5/16" FHCS	82° flat head floor bolt	22 FT-LBS
Bolt Floor 3/8" FHCS	82° flat head floor bolt	42 FT-LBS
Bolt Hex 5/8" HCS	Lower cross-drive clamp bolt (Over torque may distort the barrel enough to bind the piston.)	135 FT-LBS
Bolt Hex 5/8" HCS	Rod end plates	135 FT-LBS
Bolt Hex 5/16" HCS	Check valve and tube clamp bolts	20 FT-LBS

Problems and Trouble-Shooting

KEITH Mfg. Co. 24-hour Fax Service (541) 475-2169
 KEITH Mfg. Co. Customer Service and Support (800) 547-6161 or (541) 475-3802
 Monday - Friday, 7 am to 4 pm Pacific Standard Time
 Email: techdept@keithwalkingfloor.com

Before you call, please review the following:

1. See start-up check list on page 11.
 Re-checking items on this list can solve most problems.
2. We will be better able to help solve any problems if you have the information indicated below before you call.

a. Drive Model Number	d. Trailer make
b. Drive Serial Number	e. Cylinder bore size
c. Number of floor slats	

**PLEASE FILL OUT AND RETURN IMMEDIATELY TO
KEITH Mfg. Co.**

The warranty registration card must be completed and on file at KEITH Mfg. Co. in order for the warranty period to begin on the purchase date. If no purchase date is registered, the beginning of the warranty will be the date of the manufacture if no other date can be determined.

Please make sure the serial number listed on the card coincides with the serial number plate on the drive unit.

**Please print or type
KEITH® RUNNING FLOOR II® Warranty Registration Card**

Purchaser		
Address	Phone	
City	State/Prov.	
Country	Postal Code	
Original Purchase Date of System		
KEITH Model No.		
KEITH Serial No. (See page 8 for location guide)		
Installed in:	New Trailer	Used Trailer
Dealer Name & Location		
Type of Material Unloaded		

I have fully read the KEITH Mfg. Co. warranty information and I/we fully understand and agree to the terms of the warranty.

Signature _____ Date _____

Note: To validate the warranty, this registration card must be filled out completely and returned to KEITH Mfg. Co. within ten (10) days of purchase and/or installation.

Please fax, mail or email this warranty registration information to KEITH Mfg. Co. at:

**Warranty Registration
KEITH Mfg. Co.
P.O. Box 1
Madras, OR 97741-0001
Fax: (541) 475-2169
Email: techdept@keithwalkingfloor.com**

CUT HERE

Warranty Return Policy

1. Contact KEITH Mfg. Co. at 1-800-547-6161 or techdept@keithwalkingfloor.com for a "Returned Goods Authorization" (RGA) number before returning any item for repair or replacement. The following information is needed to ensure parts are returned as quickly as possible.

- | | |
|-----------------|------------------------------|
| a. Company name | e. Part number |
| b. Contact name | f. Quantity |
| c. Address | g. Reason for return |
| d. Phone number | h. Customer's account number |

2. Prior approval and a RGA number is needed when returning any unused product for credit. Make sure the RGA number is on the outside of the shipping carton and all paperwork is included. Return all material on a Freight Prepaid Basis.

!!CAUTION!!

To prevent Possible Injury or Death

DO NOT:

1. Operate the floor with the doors closed.
2. Stand behind the trailer or in the discharge area when floor is operating.
3. Make adjustments to the unloading mechanism with floor operating.
4. Operate the unloader when protective covers and screens are not in place.
5. Go underneath the trailer when floor is operating.
6. Leave the trailer unattended while the unloader is in operation.

ALWAYS:

1. Disengage the trailer from the hydraulic power unit (P.T.O.) before service and maintenance.
2. Shut off the power supply before going underneath the trailer.
3. Stay away from any oil leaks when hydraulic pressure is high.
4. Shut off the hydraulic power take off unit (P.T.O.) before moving the trailer.
5. Make certain no one is in the trailer during loading.

!!Keep your hands, body parts and loose clothing away from the floor slats and drive mechanism when the unloading system is in operation!!



