



OPERATOR, MAINTENANCE AND PARTS MANUAL

Models FH and FH-R

- Single Discharge
- Dual Discharge

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GENERAL INFORMATION

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Introduction

Congratulations on your purchase of the Road Widener material distribution machine. We would like to thank you for purchasing the Road Widener. The Road Widener was engineered and constructed to provide years of productive results on the jobsite.

Manufacturer's Limited Warranty terms are available if the machine is registered within 60 days of delivery. Registration can be completed online at **www.roadwidenerllc.com**.

Please watch our operational and instructional video for important instructions and tips on how to operate your attachment. The video can be found on our website under the RESOURCES page.

Password: **widenroad**

Read This Manual Prior to Operation

This manual contains safety information, operating instructions, lubrication and maintenance procedures, and a spare parts list. Read this manual carefully to learn how to operate and perform service on the machine correctly. Failure to do so could result in personal injury or equipment damage. In addition to the manual, a service and operation

video is available at www.roadwidenerllc.com and must be viewed before operating the machine.

The Road Widener is available in either a left-hand, right-hand or dual discharge model. All safety, operation and maintenance procedures are the same whether you have a left-hand, right-hand or dual discharge Road Widener machine.

This manual should be kept nearby and be readily accessible to the operator at all times. If this manual is lost or damaged, contact your authorized Road Widener dealer or the Road Widener LLC corporation immediately to order a replacement.

Some photographs or illustrations in this manual may show details or attachments that may be different from your machine. Guards and covers may have been removed for illustrative purpose. Guards should never be removed during operation.

Operating procedures in this manual are basic. They help with developing the skills and techniques required to operate the machine efficiently and economically. Skill level and techniques will develop as the operator gains more knowledge of the machine and its capabilities.

GENERAL INFORMATION

Contact Information

For additional information on Road Widener, go to www.roadwidenerllc.com. To ask a service or sales question, or to order spare parts, contact Road Widener at:

Road Widener LLC
514 Wells Street, Suite 1W
Delafield, WI 53018
www.roadwidenerllc.com
Sales E-mail: sales@roadwidenerllc.com
Parts E-mail: parts@roadwidenerllc.com
Phone: 844-494-3363

Limited Warranty

NOTE: To be eligible for coverage under this Limited Warranty (including with respect to any products, parts or labor), you must complete and return to Road Widener the Warranty Registration for this product. The Warranty Registration can be found on Road Widener's website (www.roadwidenerllc.com). Any questions or requests for assistance in completing the Warranty Registration must be directed to Road Widener's Parts Department.

WARRANTY

Subject to the limitations, exclusions, and claims procedures set forth herein, **ROAD WIDENER LLC** warrants to the first original purchaser from **ROAD WIDENER LLC** or its authorized distributor that this product will be free from material defects in material and workmanship under normal use and service during the warranty period.

If a material defect in material or workmanship is found, you must notify your authorized **ROAD WIDENER** distributor or **ROAD WIDENER LLC** in writing during the warranty period. **ROAD WIDENER LLC** or an authorized distributor will, at **ROAD WIDENER LLC's** option, repair or replace the product or any part of the product that **ROAD WIDENER LLC** determines has failed to conform to the warranty during the warranty period, or refund to the purchaser the purchase price received by **ROAD WIDENER LLC** for the product or part in question.

The warranty period will begin upon initial delivery of the product by **ROAD WIDENER LLC** or its authorized distributor to the first original purchaser, as such delivery date is identified in the invoice to the purchaser, and will expire (12) months following such delivery date.

Replacement parts manufactured by **ROAD WIDENER LLC** are covered for the remainder of the warranty period applicable to the product in which such parts are installed. **ROAD WIDENER LLC** reserves the right for it or its authorized

distributor to utilize reconditioned, refurbished, repaired, or remanufactured products or parts in the warranty replacement process. Such products and parts will be reasonably comparable in function and performance to an original product or part.

ROAD WIDENER LLC reserves the right to repair any part in lieu of replacing it. The purchaser shall, at its expense and risk, return defective products or parts, after pre-authorization by **ROAD WIDENER LLC**, to the distributor or manufacturing facility specified in such pre-authorization. This Limited Warranty covers only repair or replacement at such facility and does not include field service, travel, or other expenses, and does not include normal maintenance of products. Parts not manufactured by **ROAD WIDENER LLC** and purchased by **ROAD WIDENER LLC** or an authorized distributor are not warranted by **ROAD WIDENER LLC** but may carry a warranty from the manufacturer. **ROAD WIDENER LLC** will pass the warranty on to the purchaser if permitted by the manufacturer and reasonably practicable.

The purchaser is responsible for the costs and risks of transporting the product or part from such facility following review of the warranty claim or warranty service.

LIMITATIONS

- 1] **ROAD WIDENER LLC** has no obligation for any defects caused in whole or in part by misuse, abuse, abnormal use, neglect, tampering, misapplication, negligence, damage in transit, damage due to environmental or natural elements or accidents. **ROAD WIDENER LLC** has no obligation for failure to maintain, store, install, or use products or parts in accordance with **ROAD WIDENER LLC's** most current operating instructions.
- 2] **ROAD WIDENER LLC** has no obligation under this Limited Warranty if there has been unauthorized service or alteration of the product or parts.
- 3] **ROAD WIDENER LLC** has no obligation under this Limited Warranty for defects caused in whole or in part by any replacement parts or attachments not manufactured by or approved by **ROAD WIDENER LLC**.
- 4] **ROAD WIDENER LLC** has no obligation under this Limited Warranty if there has been a failure to conduct normal maintenance and operating service including, without limitation, providing lubricants, fluids, inspections, or adjustments.
- 5] **ROAD WIDENER LLC** has no obligation under this Limited Warranty if there has been unreasonable delay, as determined by **ROAD WIDENER LLC**, in making the applicable products or parts available upon notification of a service notice ordered by same.
- 6] This Limited Warranty sets forth the original purchaser's sole remedy, and **ROAD WIDENER LLC's** sole obligation, in connection with the **ROAD WIDENER LLC** product covered by the Limited Warranty. **ROAD WIDENER LLC** will not reimburse the purchaser for any expenses incurred by the purchaser in repairing

GENERAL INFORMATION

or replacing products or parts unless an authorized representative of **ROAD WIDENER LLC** approves such costs in advance in writing. Any oral or written description of a product or part is for the sole purpose of identifying it and shall not be construed as an express warranty. Any assistance **ROAD WIDENER LLC** or its authorized distributor provides outside the terms or limitations of this Limited Warranty does not constitute a waiver of such terms or limitations, or extend or revive the warranty. The limitations in this Limited Warranty apply notwithstanding any failure of the essential purpose of the limited remedies.

- 7] This Limited Warranty extends only to the first original purchaser, **and is not transferable.**
- 8] If any provision of this Limited Warranty shall be determined to be invalid or unenforceable under any applicable law, such provision shall be deemed null and void to the extent of such invalidity or unenforceability and the remainder of the Limited Warranty shall continue in full force and effect.
- 9] Used products or used parts of any kind including, without limitation, products that have been used personally or in demonstration by an authorized distributor, are not covered by this Limited Warranty, and there is **NO WARRANTY** on such products or parts.
- 10] This Limited Warranty does not apply if defects are caused in whole or in part by paint finish, corrosion, controller keyboards, or consumables including, without limitation, fluids, filters, belts, hoses, and replaceable teeth.
- 11] This Limited Warranty does not apply if the claim is due in whole or in part to normal wear and tear or operation of the product outside **ROAD WIDENER LLC's** recommended operating parameters.

OTHER LIMITATIONS

The purchaser must satisfy the following obligations in order to be eligible for coverage by this Limited Warranty. Prior to using or permitting use of the products, the purchaser shall determine the suitability of the products for the intended use and the purchaser assumes all risk and liability whatsoever in connection therewith. The purchaser shall familiarize itself with and comply with all laws and regulations now or hereafter in effect and applicable to the purchase, transport, use, supply, storage, sale, offer for sale, lease, offer for lease, and/or disposal of the products. The purchaser shall maintain and provide to **ROAD WIDENER LLC** on request complete and accurate service records for products with respect to which the purchaser makes a warranty claim. The purchaser shall cause any installation to be performed by an authorized distributor of **ROAD WIDENER LLC** in accordance with product specifications, including torque.

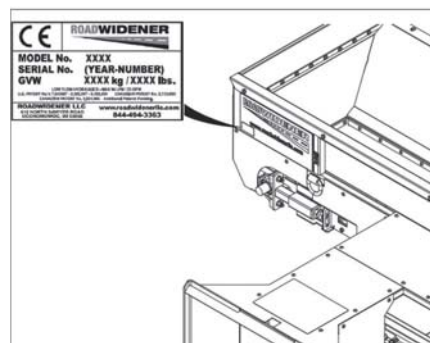
THE EXPRESS WARRANTY DESCRIBED HEREIN IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR

PURPOSE. ROAD WIDENER LLC DISCLAIMS AND EXCLUDES ALL OTHER EXPRESS AND IMPLIED WARRANTIES.

ROAD WIDENER LLC SHALL NOT BE LIABLE TO THE PURCHASER, OR TO ANYONE CLAIMING UNDER THE PURCHASER, FOR ANY OTHER REMEDIES, OBLIGATIONS OR LIABILITIES IN CONNECTION WITH PRODUCTS, THEIR USE OR PERFORMANCE INCLUDING, WITHOUT LIMITATION, REMEDIES, OBLIGATIONS, OR LIABILITIES ARISING OUT OF BREACH OF CONTRACT OR WARRANTY, NEGLIGENCE, OR OTHER TORT OR ANY THEORY OF STRICT LIABILITY, WITH RESPECT TO THE PRODUCTS OR ROAD WIDENER LLC'S ACTS OR OMISSIONS OR OTHERWISE. No sales representative, distributor or other party is authorized to modify or add to this Limited Warranty in any manner without **ROAD WIDENER LLC's** prior written permission. No sales representative, distributor or other party is authorized to bind **ROAD WIDENER LLC** to any representation or warranty concerning the products except as specifically set forth in this Limited Warranty.

IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT OR WARRANTY OR ALLEGED NEGLIGENCE OR LIABILITY WITHOUT FAULT, SHALL ROAD WIDENER LLC BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, LOSS OF PROFIT OR REVENUE, COST OF CAPITAL, COST OF SUBSTITUTED OR REPLACEMENT EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME COSTS, LABOR COSTS OR CLAIMS OF CUSTOMERS, PURCHASERS OR LESSEES FOR SUCH DAMAGES, EVEN IF ROAD WIDENER LLC WAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL ROAD WIDENER, LLC BE LIABLE FOR AMOUNTS IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT RECEIVED BY ROAD WIDENER LLC.

Model and Serial Tag



The model and serial number tag is located on the left side of the hopper. Refer to this tag when needing any warranty or service assistance. Also refer to this tag when ordering any spare parts. This will help ensure that the correct part is ordered.

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Specifications

Single Discharge Unit

Width of FH and FH-R Single Discharge Road Wideners	125 in. (3,175 mm)
Height of FH and FH-R Single Discharge Road Wideners	51 in. (1,300 mm)
Length of FH and FH-R Single Discharge Road Wideners	98 in. (2,489 mm)
Widths of Shoulders of Road Widening Material That Can Be Laid Down	12 in. (305 mm) to 48 in. (1,219 mm)
Number of Side Exit Chutes	1
Gross Weight of FH Single Discharge Road Wideners	2,900 lb (1,315 kg)
Height of Push Rollers	21 in. (530 mm)
Extra Amount Push Rollers Can Extend	12 in. (305 mm)
Conveyor Belt Type	Rubber
Conveyor Belt Length and Width	8 ft (2.4 m) x 20 in. (508 mm)
Conveyor Speed Range	0-350 ft/min (1.8 m/sec)
Head and Tail Drum Diameter	10 in. (254 mm)
Typical Working Pressure	3,000 psi (207 bar)
Flow Rate	17.5 - 24.2 gal/min (79.6 - 111 l/min)
Hydraulic Fittings	JIC and SAE
Maximum and Minimum Feed Rates	2.0 tons/hr (1.8 tonnes/hr)
Maximum Lump Size of Road Widening Material	10 in. (254 mm)
Optimum Traveling Speed Range While Laying Down Road Widening Material	0.5 to 1.5 mph (8.0 to 2.4 km/hr)

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Dual Discharge Unit

Width of FH and FH-R Dual Discharge Road Wideners	138 in. (3,505 mm)
Height of FH and FH-R Dual Discharge Road Wideners	51 in. (1,300 mm)
Length of FH and FH-R Dual Discharge Road Wideners	98 in. (2,489 mm)
Widths of Shoulders of Road Widening Material That Can Be Laid Down	12 in. (305 mm) to 48 in. (1,219 mm)
Number of Side Exit Chutes	2
Gross Weight of FH Dual Discharge Road Wideners	3,400 lb (1,542 kg)
Height of Push Rollers	21 in. (530 mm)
Extra Amount Push Rollers Can Extend	12 in. (305 mm)
Conveyor Belt Type	Rubber
Conveyor Belt Length and Width	9.5 ft (2.9 m) x 21 in. (533 mm)
Conveyor Speed Range	0-350 ft/min (1.8 m/sec)
Head and Tail Drum Diameter	10 in. (254 mm)
Typical Working Pressure	3,000 psi (207 bar)
Minimum Flow Rate	17.5 - 24.2 gal/min (79.6 - 111 l/min)
Hydraulic Fittings	JIC and SAE
Maximum and Minimum Feed Rates	2.0 tons/hr (1.8 tonnes/hr)
Maximum Lump Size of Road Widening Material	10 in. (254 mm)
Optimum Traveling Speed Range While Laying Down Road Widening Material	0.5 to 1.5 mph (8.0 to 2.4 km/hr)

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Crating and Uncrating Instructions

Type FH Single Discharge & Dual Discharge and FH-R Single Discharge & Dual Discharge Road Widener machines are generally shipped on an open, flatbed truck. For exports, the machines are packaged in shipping crates that are designed to ensure that the components will not be damaged during transport. Use caution when unpacking the shipping crates as the contents may have shifted during transit.

Assembly

The Road Widener machines come fully assembled from the factory; however, some accessories weigh more than 30 lb (15 kg). When lifting accessories or components more than 30 lb (15 kg), Road Widener recommends that a minimum of 2 people and appropriate lifting devices be used to assemble accessories or components.

Optional accessories weighing more than 30 lb (15 kg) are:

- Shoe Extension Kit
- Pintle Push Plate
- Push Roller Extensions (the push roller extensions are not more than 30 lb (15 kg), but to install the push roller extensions, lifting more than 30 lb (15 kg) is required)

Optional Equipment

Some optional equipment can be ordered from Road Widener for your specific job if needed.

Roller Extension

If the rollers need to be extended closer to the dump vehicle, roller extensions are available. The roller extensions will extend the rollers an additional 12 in. (30 cm).

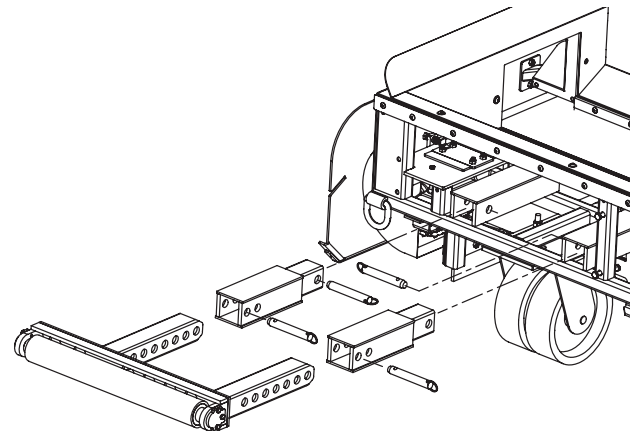


Figure 1: Roller Extension with Pins and Tubes Removed

- 1] Remove the pins holding the roller brackets to the frame and remove the roller assembly.
- 2] Insert the roller extension tubes into the frame and pin them in place.
- 3] Install the roller assembly into the extension tubes and pin the roller assemblies in place.

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Curb Attachment

The curb attachment extends the hopper and allows the shoe to be extended up over a curb to spread material outside the curb. The roller wheel acts as a guide and rides on the inside of the curb. It can be installed on a right discharge, a left discharge or either side of a dual discharge machine.

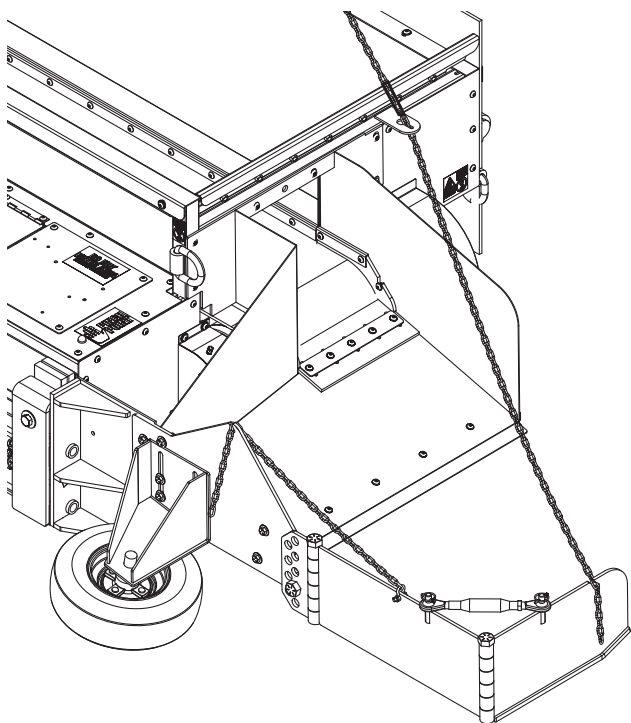


Figure 2: Curb Attachment Installed on Single Discharge Unit

INSTALLATION

NOTE: For easier installation have the machine mounted on a skid steer. An assistant may be required for the removal and the installation of some of the parts. This procedure shows mounting the curb attachment onto a right side single discharge machine. Mounting on a left side discharge or a dual discharge is similar.

- 1] Park the machine on a flat, level surface.

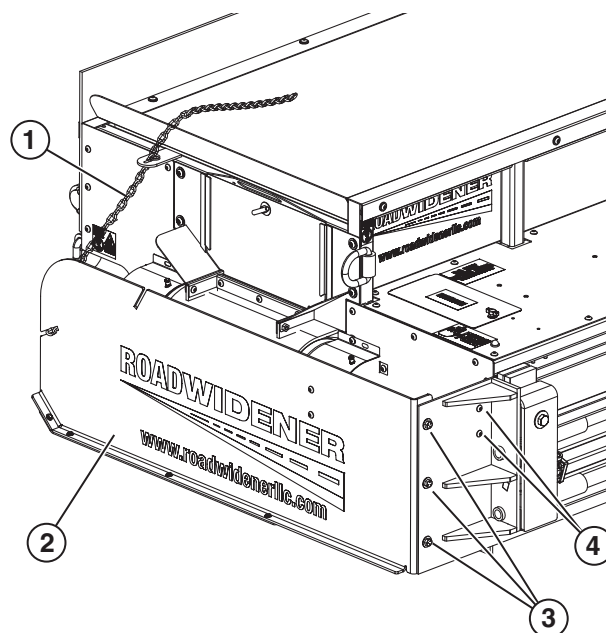


Figure 3: Shoe Hardware Removal

1. Support Bracket Socket Head Screws
2. Shoe Mounting Bolts and Locknuts
3. Chain
4. Shoe

- 2] Remove the 2 bolts for the support bracket.
- 3] Remove the shoe mounting bolts and locknuts.
- 4] Unhook the chain and remove the shoe.

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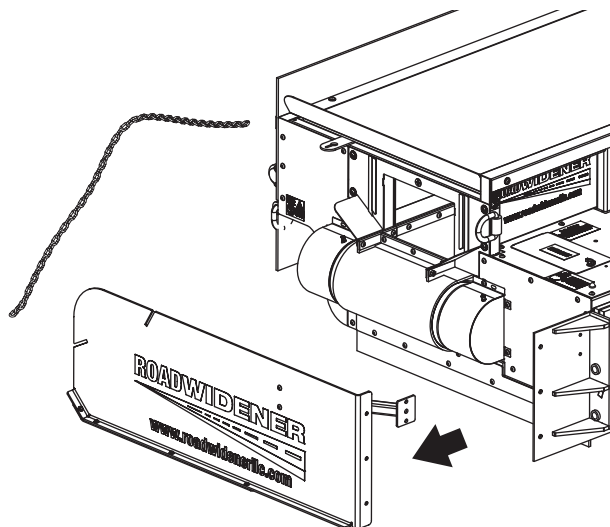


Figure 4: Shoe Removal

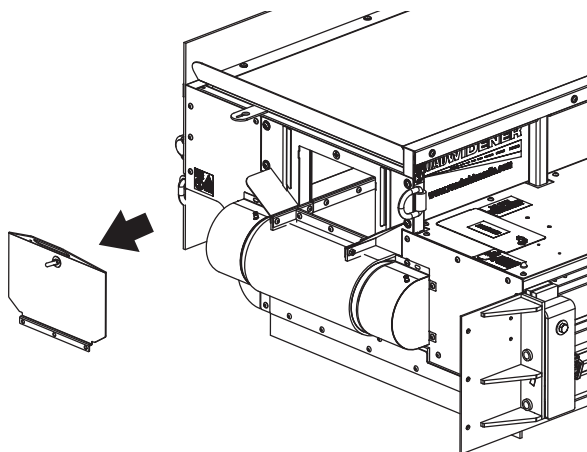


Figure 5: Discharge Plate Removal

- 5] On dual discharge units remove the closure plate if required.

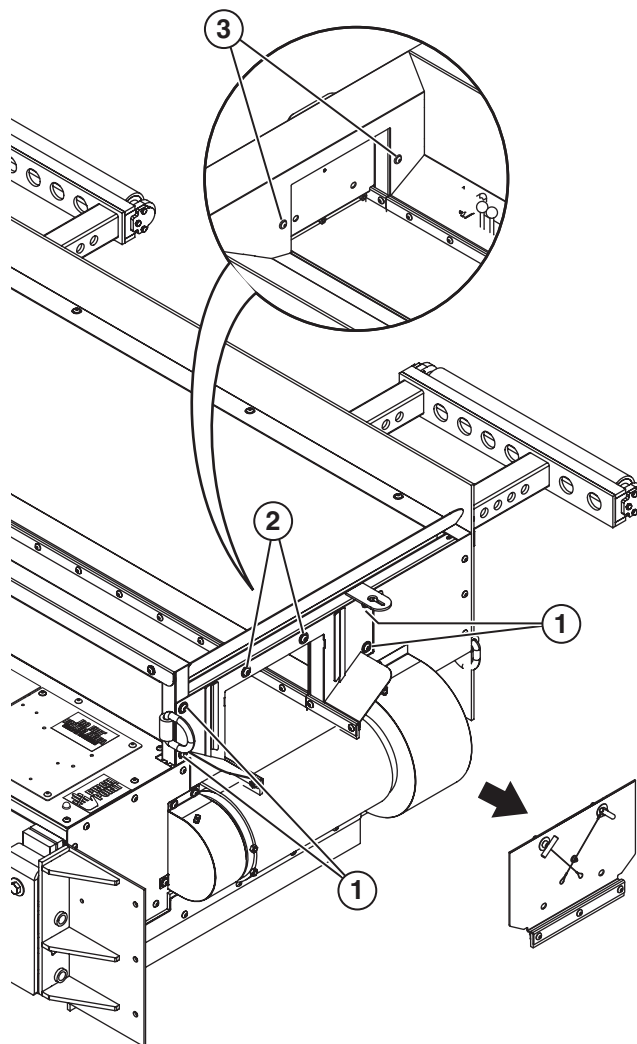


Figure 6: Chute Guide Plate

1. Socket Head Cap Screws
2. Outer Mounting Bolts
3. Inner Mounting Bolts

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- 6] Remove the 4 socket head cap screws.
- 7] Remove the 2 outer mounting bolts.
- 8] Remove the 2 inner mounting bolts.

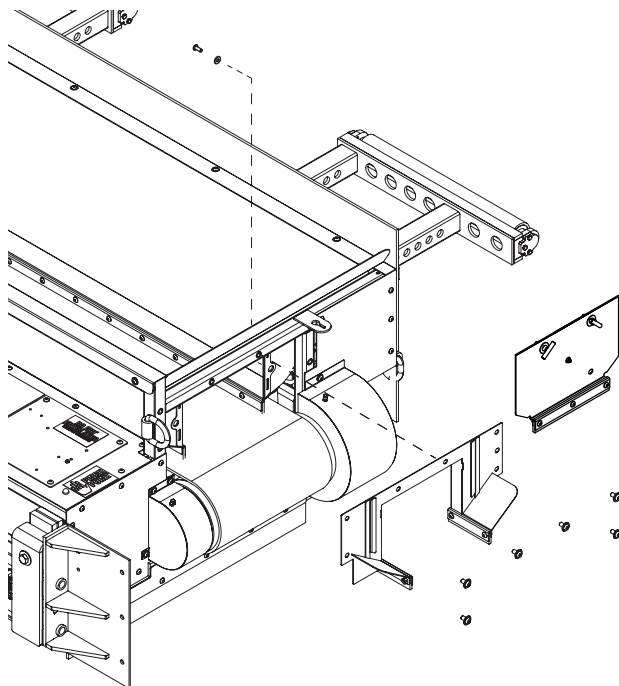


Figure 7: Chute Guide Plate Removal

- 9] Remove the chute guide plate.

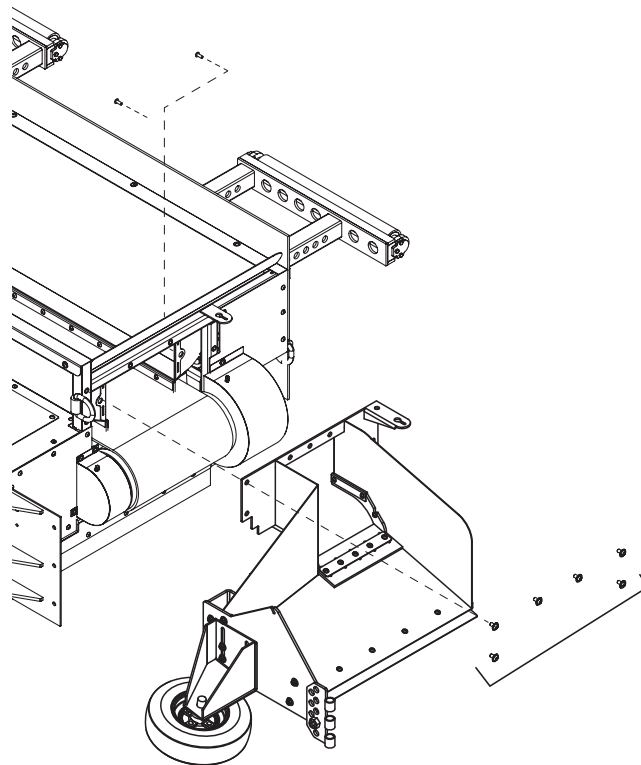


Figure 8: Install Curb Attachment

- 10] Mount the curb attachment frame using the socket head cap screws and the outer and inner mounting bolts removed earlier.

GENERAL INFORMATION

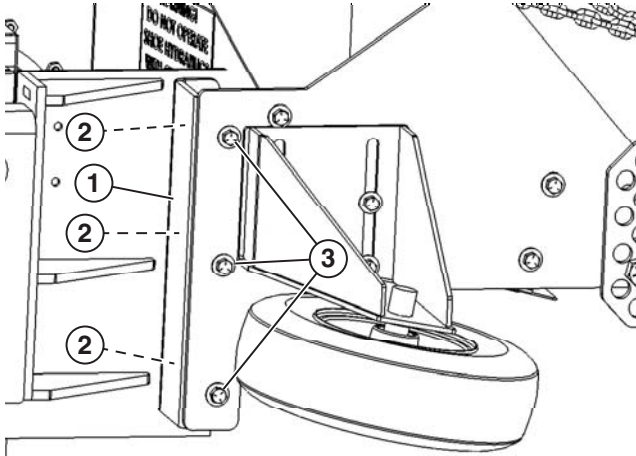


Figure 9: Spacer Plate

1. Spacer Plate
2. Spacer Plate Inner Mounting Bolts
3. Spacer Plate Outer Mounting Bolts

11] Mount the spacer plate between the Road Widener frame and the curb attachment using 6 bolts.

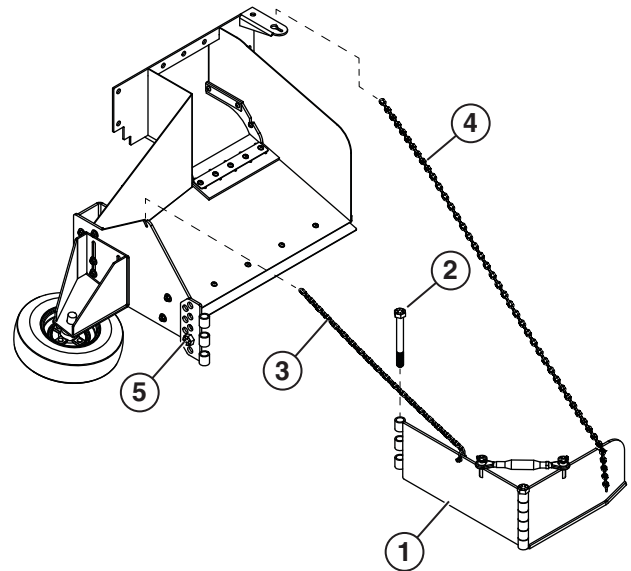


Figure 10: Installing Shoe and Chains

1. Shoe
2. Bolt
3. Rear Chain
4. Front Chain
5. Hinge

12] Install the shoe to the frame using the bolt. The shoe hinge must pivot up and down.

13] Install the front and rear chains.

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Push Plate

The push plate is used to push the dump vehicle when not using the rollers. It usually pushes on the trailer hitch receiver or the pintle hitch.



Figure 11: Push Plate with Four Pre-threaded Holes

- 1] Hold the push plate in place on the front of the machine.
- 2] Attach the push plate to the frame at the four pre-threaded holes using the approved hardware.

Pairing the Remote Control

Your remote control comes factory paired. **Almost never** will you need to pair your remote and receiver. The system will behave like it is not paired if less than **12 volts DC and 10 amps** are not present. If for some reason your remote does not work, double-check the power supply(s). In the unlikely event that pairing is required, see the separate pairing instructions that were supplied with the machine or go to www.roadwidenerllc.com for the pairing procedure.

Remote systems require a 12-volt DC accessory socket to be a 10-amp continuous solid-state connection. Using lower than a 10-amp DC accessory socket will cause the machine to not function. The handheld remote requires (2) AAA batteries and the host machine must deliver **12 volts DC and 10 amps**. Connect your machine to a known power source to verify! A direct circuit to the host machine's battery with a solid-state 10-amp fused circuit is advisable if your remote does not function at initial start-up. USB ports and some machine circuits provide less than 10 amps; if your host machine falls into this category, adding a circuit will be required.

GENERAL INFORMATION

Hardware Torque Chart

Use this chart when tightening hardware to the proper torque value.

U.S. Standard Cap Screw Torque Values

SAE GRADE NUMBER	 GRADE 1 OR 2			 GRADE 5			 GRADE 8		
SIZE/ THREADS PER INCH	TORQUE in.-lb (N·m)			TORQUE in.-lb (N·m)			TORQUE in.-lb (N·m)		
THREADS	DRY	OILED	PLATED	DRY	OILED	PLATED	DRY	OILED	PLATED
1/4 – 20	62 (7)	53 (6)	44 (5)	97 (11)	80 (9)	73 (8)	142 (16)	133 (15)	124 (14)
1/4 – 28	71 (8)	62 (7)	53 (6)	124 (14)	106 (12)	97 (11)	168 (19)	159 (18)	133 (15)
5/16 – 18	133 (15)	124 (14)	106 (12)	203 (23)	177 (20)	168 (19)	292 (33)	265 (30)	230 (26)
5/16 – 24	159 (18)	142 (16)	124 (14)	230 (26)	203 (23)	177 (20)	327 (37)	292 (33)	265 (30)
3/8 – 16	212 (24)	195 (22)	168 (19)	372 (42)	336 (38)	301 (34)	531 (60)	478 (54)	416 (47)
	ft-lb (N·m)			ft-lb (N·m)			ft-lb (N·m)		
3/8 – 24	20 (27)	18 (24)	16 (22)	35 (47)	32 (43)	28 (38)	49 (66)	44 (60)	39 (53)
7/16 – 14	28 (38)	25 (34)	22 (30)	49 (56)	44 (60)	39 (53)	70 (95)	63 (85)	56 (76)
7/16 – 20	30 (41)	27 (37)	24 (33)	55 (75)	50 (68)	44 (60)	78 (106)	70 (95)	62 (84)
1/2 – 13	39 (53)	35 (47)	31 (42)	75 (102)	68 (92)	60 (81)	105 (142)	95 (129)	84 (114)
1/2 – 20	41 (56)	37 (50)	33 (45)	85 (115)	77 (104)	68 (92)	120 (163)	108 (146)	96 (130)
9/16 – 12	51 (69)	46 (62)	41 (56)	110 (149)	99 (134)	88 (119)	155 (210)	140 (190)	124 (168)
9/16 – 18	55 (75)	50 (68)	44 (60)	120 (163)	108 (146)	96 (130)	170 (230)	153 (207)	136 (184)
5/8 – 11	83 (113)	75 (102)	66 (89)	150 (203)	135 (183)	120 (163)	210 (285)	189 (256)	168 (228)
5/8 – 18	95 (129)	86 (117)	76 (103)	170 (230)	153 (207)	136 (184)	240 (325)	216 (293)	192 (260)
3/4 – 10	105 (142)	95 (130)	84 (114)	270 (366)	243 (329)	216 (293)	375 (508)	338 (458)	300 (407)
3/4 – 16	115 (156)	104 (141)	92 (125)	295 (400)	266 (361)	236 (320)	420 (569)	378 (513)	336 (456)
7/8 – 9	160 (217)	144 (195)	128 (174)	429 (582)	386 (523)	343 (465)	605 (820)	545 (739)	484 (656)
7/8 – 14	175 (237)	158 (214)	140 (190)	473 (641)	426 (578)	379 (514)	675 (915)	608 (824)	540 (732)
1.0 – 8	235 (319)	212 (287)	188 (255)	644 (873)	580 (786)	516 (700)	910 (1,234)	819 (1,110)	728 (987)
1.0 – 14	250 (339)	225 (305)	200 (271)	721 (978)	649 (880)	577 (782)	990 (1,342)	891 (1,208)	792 (1,074)

NOTE:

- Dry torque values are based on the use of clean, dry threads.
- Oiled torque values have been reduced by 10% when engine oil is used as a lubricant.
- Plated torque values have been reduced by 20% for new plated cap screws.
- Oiled torque values should be reduced by 10% from dry when nickel-based antiseize compound is used as a lubricant.
- Cap screws which are threaded into aluminum may require a torque reduction of 30% or more.
- The conversion factor from ft-lb to in.-lb is ft-lb x 12 equals in.-lb.

GENERAL INFORMATION

EC Declaration of Conformity

EC DECLARATION OF CONFORMITY

Manufacturers Name: Road Widener LLC
Manufacturers' Address: 612 North Sawyer Road
 Oconomowoc, WI 53066

ROAD WIDENER

Declare that the Interchangeable Equipment described below complies with applicable health and safety requirements of Part 1 and relevant parts of Part 4 of Annex 1 of the Machinery Directive 2006/42/EC. Confidential technical documentation has been compiled in accordance with Part A of Annex VII of Machinery Directive 2006/42/EC and is available to European national authorities on written request only. If a request is received documentation will be transmitted either electronically and or by post.

Description: Single and Dual Discharge Road Wideners
Model Number: Models FH & FHR (Full Hydraulic & Full Hydraulic Remote)
Sizes: Spreading widths and discharge rates etc.
Serial Number: (As applicable)

The following standards have either been referred to or been complied with in part or in full as relevant:

EN ISO 12100: 2010	Safety of machinery	- Safety of machinery - General principles for design - Risk assessment and risk reduction.
EN ISO 13849-1:2015	Safety of machinery	- Safety-related parts of control systems - Part 1: General principles for design.
EN 13857:2008	Safety of machinery	- Safety distances to prevent hazard zones being reached by upper and lower limbs.
EN 349:1993+A1:2008	Safety of machinery	- Minimum gaps to avoid crushing of parts of the human body
EN ISO 14120:2015	Safety of machinery	- Guards - General requirements for the design and construction of fixed and movable guards.
EN 4413:2010	Hydraulic fluid power	- General rules and safety requirements for systems and their components.
EN 614-1:2006+A1:2009	Safety of machinery	- Ergonomic design principle Terminology and general principles
EN 614-2:2000+A1:2008	Safety of machinery	- Ergonomic design principles - Part 2: Interactions between the design of machinery and work tasks
EN ISO 13732-1:2008	Safety of machinery	- Ergonomics of the thermal environment - Methods for the assessment of human responses to contact with surfaces - Part 1.
EN 500-1:2006+A1:2009	Safety of machinery	- Mobile road construction machinery - Safety - Common requirements
ISO 3744:2010	Acoustics	- Determination of sound power levels of noise sources using sound pressure - Engineering method in an essentially free field over a reflecting plane.

Full Name of responsible person and place of signing (Typed)

..... (Typed)

Position (Typed)

Signature



Date

11/29/17



QNET BV
 Hommerterweg 286
 6436 AM Amstenrade
 The Netherlands

2

SAFETY



This safety alert symbol appears with most safety statements. It means attention, become alert, your safety is involved! Please read and abide by the message that follows the safety alert symbol.

The words DANGER, WARNING, CAUTION and NOTICE are used throughout this manual to highlight important information.



DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates a situation which can cause damage to the Road Widener, personal property, and/or the environment, or cause the equipment to operate improperly.

NOTE: Indicates a procedure, practice or condition that should be followed in order for the Road Widener to function in the manner intended.



WARNING



Before starting and operating the Road Widener, be sure to read and understand the content and safety messages within this manual as well as the safety labels on the Road Widener. The operator is responsible for safe operation of the Road Widener. Be sure all potential users of the Road Widener also understand these instructions.

Always keep your Road Widener in proper working condition.

SAFETY

WARNING

It is the operator's responsibility to read and understand the skid steer or wheel loader safety messages and proper operation and capabilities. Only qualified and responsible operators should be permitted to operate the machinery.

WARNING

Never operate the machine with the guards missing or damaged. Tampering with or modifying the guards may result in injury or premature wear on the machine.

WARNING

Know the total rated operating capacity of the skid steer or wheel loader which you will be attaching to the Road Widener. The total operating capacity should exceed the weight of the Road Widener.

WARNING



Before operating the machine, read the skid steer or wheel loader operation manual and know what the acceptable grade requirements are. The Road Widener attachment will usually add to the drive machine's stability. Road Widener assumes no responsibility of tipping due to the angle of use.

WARNING



Never operate the machine while under the influence of alcohol or drugs. Their effect on vision and judgment make operating the machine dangerous.

WARNING

Never allow an operator to sit or stand on Road Widener attachment while in operation. A non-slip surface is provided near the attachment plate for entering and exiting skid steer only. Horizontal surfaces may support maintenance personnel. This should only occur with machinery stopped and fully disconnected from power source.

WARNING

Road Widener machines should never be operated with the casters off the ground. Forward tipping may result. Road Widener machines should be lifted off the casters while loading and unloading only.

SAFETY

 WARNING

ALWAYS wear the appropriate personal protective equipment as required by the task at hand, including but not limited to:

- Relatively tight and belted clothing
- Safety gloves
- Safety shoes/boots
- Safety eye glasses/goggles/shields
- Hearing protection, ear plugs
- Head protection, hard hats

Operating the machine requires the full attention of the operator. Do not wear radio or music headphones that may interfere with jobsite communications or monitoring the machine in operation.

NOTICE

Do not drive the Road Widener through gravel piles or asphalt spills. Material can accumulate inside the belt and the belt rollers causing premature belt wear or belt failure.

NOTICE

Always be environmentally responsible.

- Follow the guidelines of the EPA or other governmental agencies for the proper disposal of hazardous materials. Consult the local authorities or reclamation facility.
- NEVER dispose of hazardous materials irresponsibly by dumping them into a sewer, on the ground, or into groundwater or waterways.
- Failure to follow these procedures may seriously harm the environment.

 WARNING

Use extreme caution when near rotating parts. Rotating parts can entangle hands, feet, hair, clothing and/or accessories. Traumatic amputation or severe laceration can result.

- Keep hands and feet away from rotating parts.
- Tie up long hair and remove jewelry.
- Operate equipment with all guards in place.
- DO NOT wear loose-fitting clothing, dangling drawstrings or items that could become caught.

Stay clear of all moving parts, rollers, conveyor belt and skid steer when the Road Widener is in operation.

NOTICE

Inspect all hoses, fittings and hydraulic components on both the Road Widener attachment and the drive machine before operation of the hydraulic system. Repair any problems that are discovered.

NOTICE

Do not lift with material in the hopper.

SAFETY

Safety Decals

Read and understand all machines' safety decals. Keep safety decals in good condition. Replace all missing or damaged safety decals. Replacement safety decals can be ordered from Road Widener LLC.

Safety decals located on your machine contain important and useful information that will help you operate your equipment safely. To ensure that all decals remain in place and in good condition, follow these instructions:

- Keep decals clean. Use soap and water, not mineral spirits, abrasive cleaners or other similar cleaners that will damage the decal.
- Replace any damaged or missing decals. When attaching decals, the surface temperature of the metal must be at least 40°F (5°C). The surface must also be clean and dry. When replacing a machine component with a decal attached, replace the decal also.

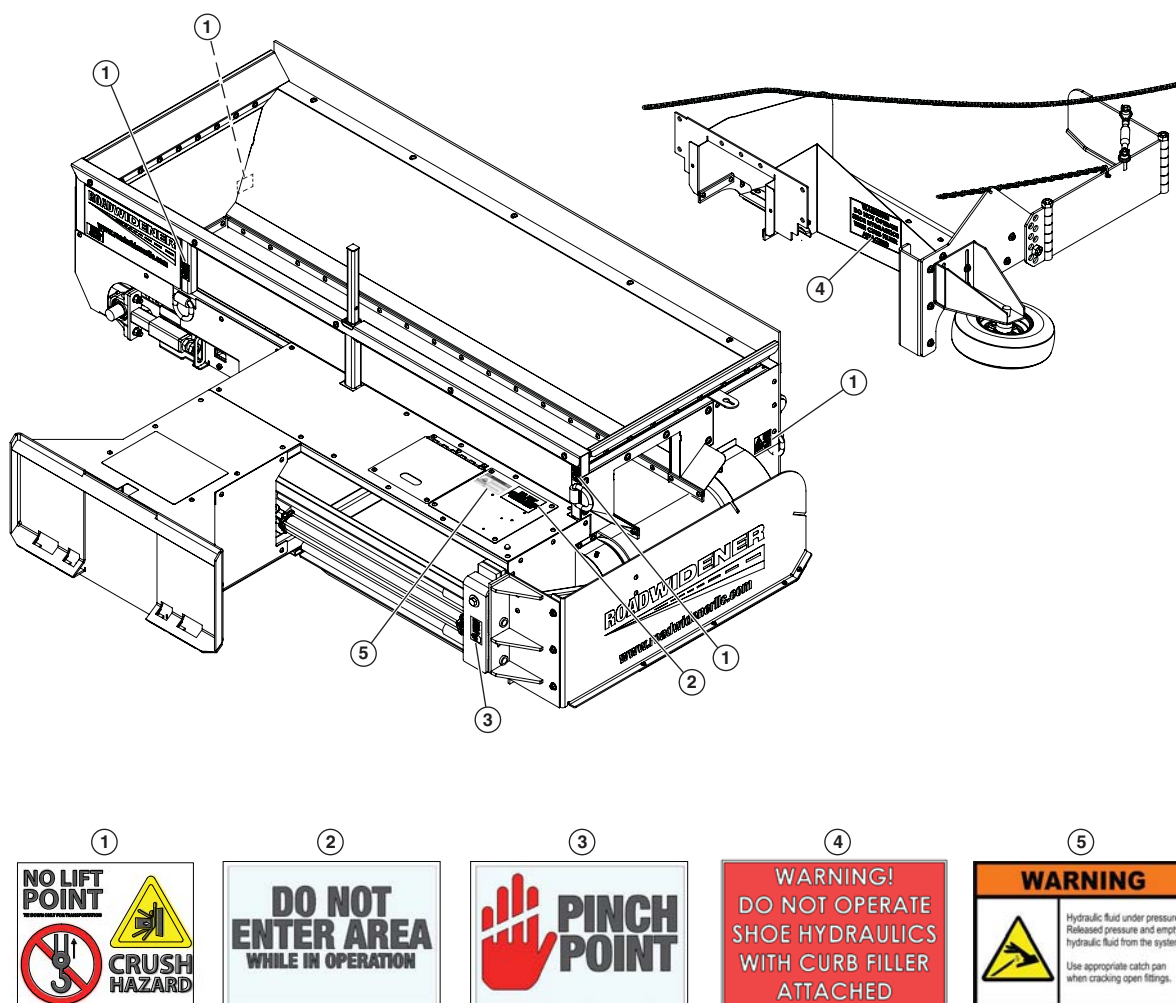


Figure 12: Locations of Safety Decals – FH-R Single Discharge Models

SAFETY

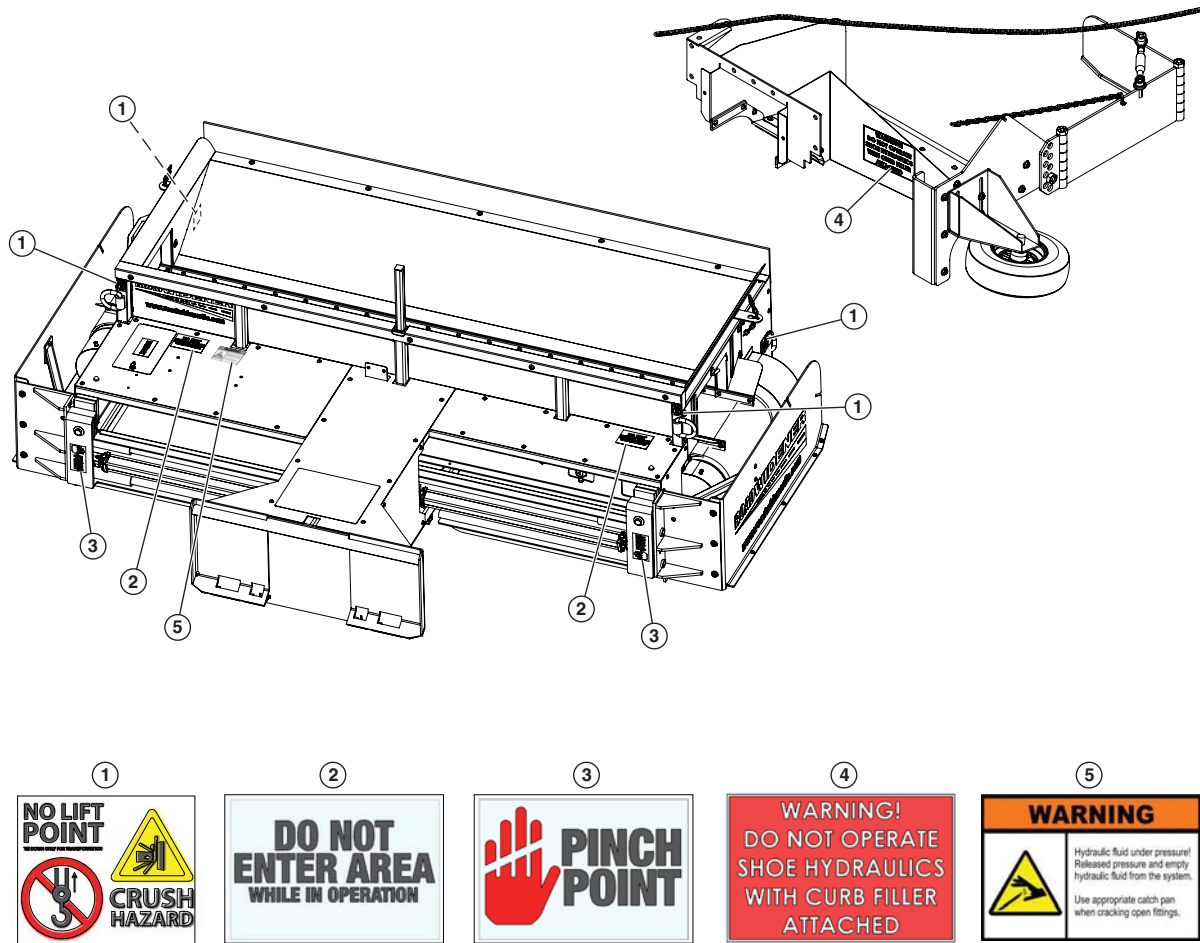


Figure 13: Locations of Safety Decals – FH-R Dual Discharge Models

SAFETY

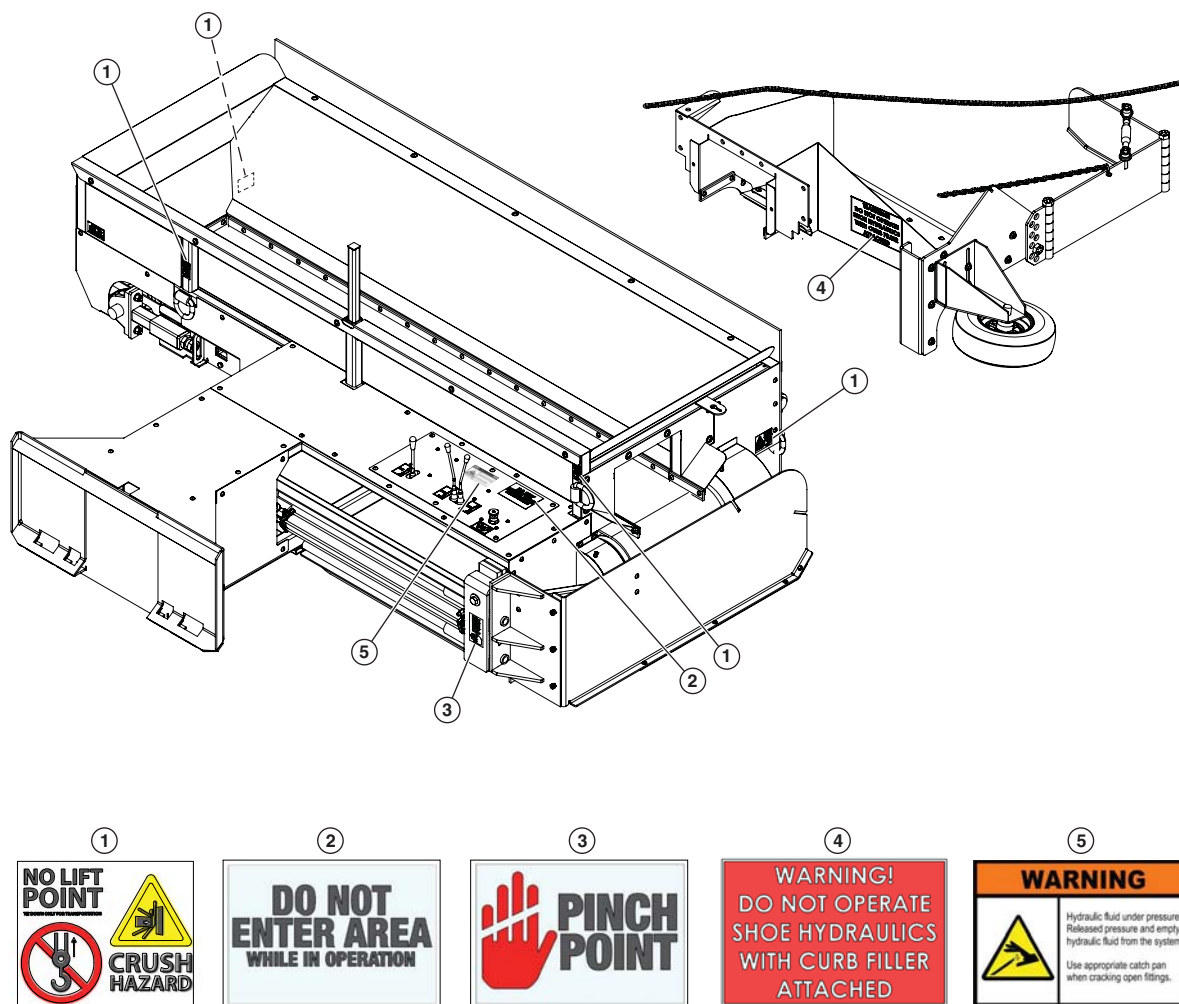


Figure 14: Locations of Safety Decals – FH Single Discharge Models

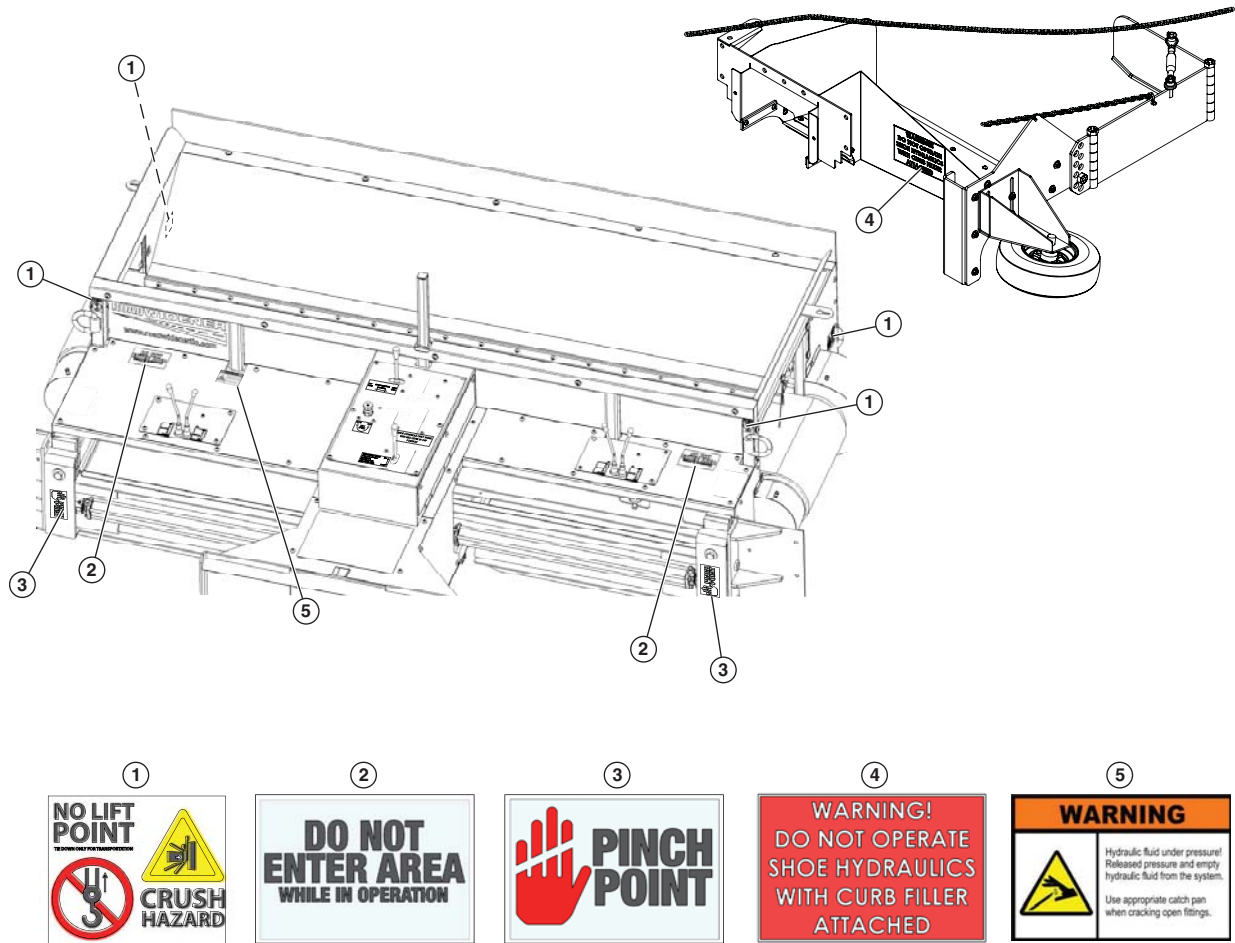
SAFETY

Figure 15: Locations of Safety Decals – FH Dual Discharge Models

SAFETY

Control Area Safety

- Understand operation and safety controls for both the drive machine and the Road Widener attachment
- Wear a high-visibility vest or jacket at all times
- Wear the correct Personal Protection Equipment (PPE) as required at all times
- Maintenance should never be performed during operation
- Maintenance should only be performed on a well lit, flat, level concrete surface with the machine off and disconnected from the power source
- Never let anyone sit or stand on the Road Widener attachment during operation



Figure 16: Safety Area

Never allow an operator or bystander in the control area (shown in orange) during the operation of the machine.

Road Widener recommends that all ground personnel and bystanders stay clear of the machine by 10 ft (3 m) (shown in yellow) during the operation of the machine.

All ground personnel and bystanders should also stay at least 10 ft (3 m) away from the dump truck.

The operators of the skid steer or wheel loader and the Road Widener should be familiar with the operation of both machines. The machines should always be stopped before performing any adjustments or allowing anyone to enter the control area. Both operators should be in constant communication with each other during operation.

3

TRANSPORTING THE ROAD WIDENER

Road Widener recommends loading and transporting the machine on a deck-over trailer or an appropriate trailer with enough capacity to sufficiently handle the weight of the Road Widener attachment. Reference the serial tag and the manual to determine the weight of your machine.



WARNING

Never try to load or unload the Road Widener attachment with a skid steer or wheel loader that does not have the correct lifting capacity to safely lift the Road Widener attachment.

Read the skid steer or wheel loader manual and make sure the maximum lift capacity is sufficient to handle the weight of the Road Widener attachment.

Lift Test

When loading or unloading, park the trailer on a flat, level surface. Due to different configurations, the operator should perform a lift test to determine if the skid steer or wheel loader has the proper lift capacity and the correct amount of rear ballast is installed.

- 1] Attach the mounting plate to the skid steer or wheel loader and lock in place. Connect the hydraulic lines and the 12-volt DC power line if required. See “Jobsite Preparation” on page 27.



Figure 17: Lift Test

- 2] Lift the machine 4 in. (10 cm) off the floor of the trailer and bring the lifting motion to a complete stop.
- 3] Jog the load briefly 1 or 2 seconds by raising the lift arms or tilting the machine forward slightly, or perform both.
- 4] Observe that the rear wheels of the skid steer or wheel loader did not raise off the ground when “jogging” the machine.

TRANSPORTING THE ROAD WIDENER

- 5] If a forward-tipping motion occurs, the skid steer or wheel loader is undersized or does not have the correct amount of ballast installed.

⚠ WARNING

Never attempt to load, unload or operate the machine with an undersized skid steer or wheel loader, or if the correct amount of rear ballast is not installed.



Figure 18: Rear Ballast Weights

- 6] Add rear ballast weights to your machine if required.

NOTE: See the skid steer or wheel loader operator's manual for the proper use and placement of the rear ballast weights.

Loading

⚠ WARNING

When loading or unloading the Road Widener, clear all bystanders from the area. Never stand under the Road Widener when it is being loaded or unloaded. Serious injury or death could occur.

- 1] Use a skid steer to load the Road Widener onto a suitable trailer.
- 2] If removing the Road Widener from the skid steer, disconnect the hydraulic lines and secure them to the Road Widener.
- 3] Disengage the locking pins from the skid steer pads and remove the pads from the universal mounting pad on the Road Widener.

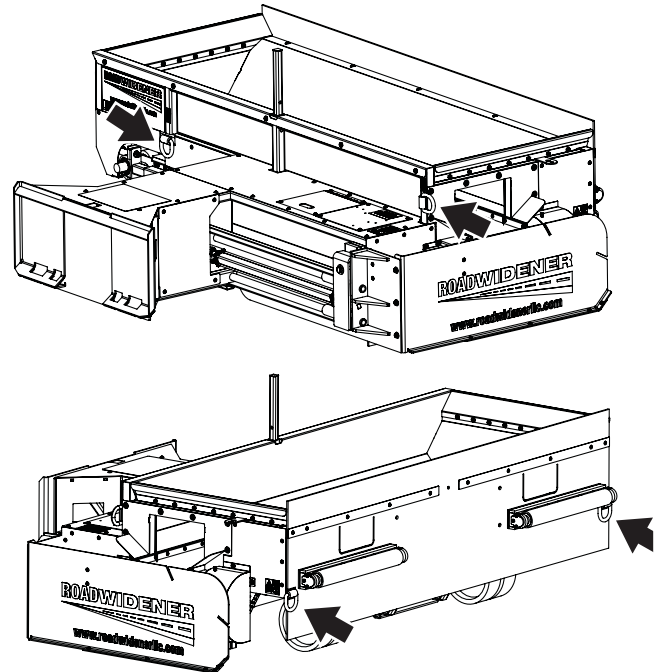


Figure 19: Four Tie-down Rings on Road Widener

TRANSPORTING THE ROAD WIDENER

- 4] There are 4 tie-down rings on the Road Widener. Use the appropriate chains and chain binders, and secure the Road Widener to the trailer using all 4 tie-down points on the Road Widener.

NOTICE

When towing, make sure the tow vehicle is rated for the weight the vehicle will be towing. Always follow any federal, state and local laws where required.

JOBSITE PREPARATION

4

WARNING

The skid steer being used with the Road Widener must have the capability of lifting a minimum of 3,400 lb (1,542 kg) for Dual Discharge and 2,900 lb (1,315 kg) for Single Discharge. Using too small of a skid steer could cause loss of control and possible machine rollover.

WARNING

Never allow anyone to be under or in the area of the Road Widener when it is being unloaded from the trailer.

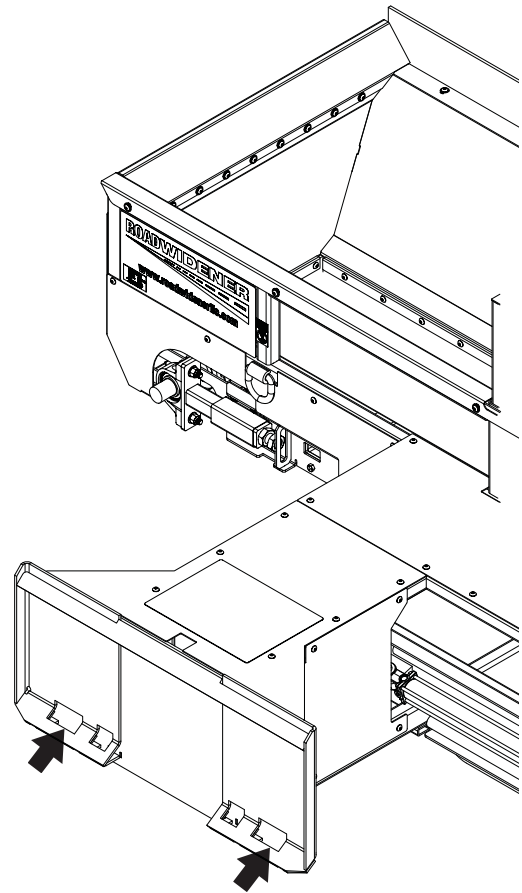


Figure 20: Universal Mounting Pad on Road Widener
(Arrows Indicate Skid Steer Attachment Points)

JOBSITE PREPARATION - FH-R MODELS (REMOTE UNIT)

- 1] Raise the boom on the skid steer and insert the skid steer pads into the universal mounting pad on the Road Widener.
- 2] Depending on your skid steer model, you may have hydraulic locking pins or manual locking pins. Make sure the locking pins are locked in to the universal mounting plate tabs on the Road Widener before moving the machine.
- 3] Slowly lift the Road Widener up off the trailer and slowly back away from the trailer.
- 4] As soon as the Road Widener clears the trailer, lower the Road Widener to the ground.
- 5] Shut off the skid steer and apply the parking brake.
- 6] Clean any dirt or debris from the male and female quick couplers on the Road Widener and the skid steer.



Figure 21: Hydraulic Lines Connecting to Skid Steer from Road Widener



WARNING

Never exceed hydraulic system pressure greater than 3,000 psi (207 bar). Refer to the skid steer or wheel loader manual for the system pressure before connecting the hydraulic lines.

- 7] Connect the hydraulic lines from the Road Widener to the quick coupler ports on the skid steer. Make sure the connections are secure.



Figure 22: 12-volt DC Power Cord

JOBSITE PREPARATION - FH-R MODELS (REMOTE UNIT)

NOTE: Remote systems require 12-volt DC accessory socket to be a 10-amp continuous solid-state connection. Using lower than a 10-amp DC accessory socket will cause the machine to not function. The handheld remote requires (2) AAA batteries and the host machine must deliver 12 volts DC and 10 amps. Connect your machine to a known power source to verify! A direct circuit to the host machine's battery with a solid-state 10-amp fused circuit is advisable if your remote does not function at initial start-up. USB ports and some machine circuits provide less than 10 amps; if your host machine falls into this category, adding a circuit will be required.

- 8] Plug in the 12-volt DC power cord into a 12-volt DC power socket on the skid steer.

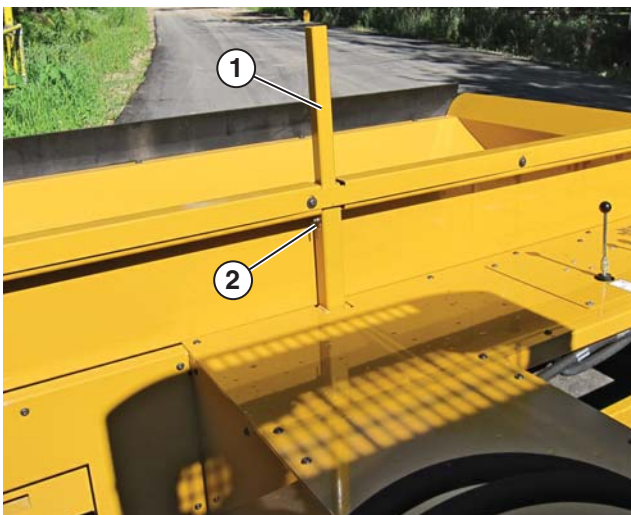


Figure 23: Tailgate Stop Bar, Clevis Pin and Clip

1. Tailgate Stop Bar
2. Clevis Pin and Clip

- 9] Install the tailgate stop bar into the square tube on the frame, and pin into place using the clevis pin and clip.

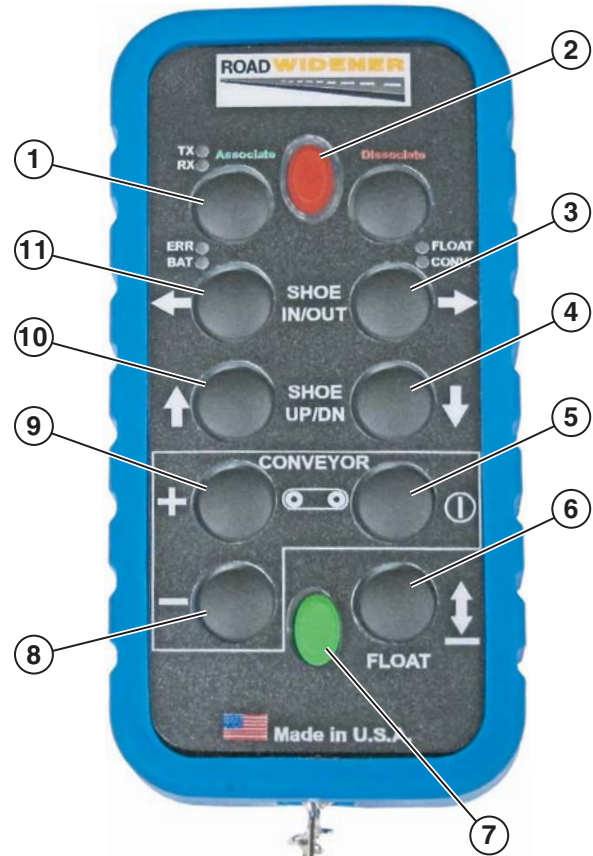


Figure 24: Single Discharge Units Remote

1. Associate Button
2. Power OFF Button
3. Shoe OUT Button
4. Shoe DOWN Button
5. Conveyor ON/OFF Button
6. Shoe Float Button
7. Power ON Button
8. Conveyor Speed Decrease Button
9. Conveyor Speed Increase Button
10. Shoe UP Button
11. Shoe IN Button

JOBSITE PREPARATION - FH-R MODELS (REMOTE UNIT)

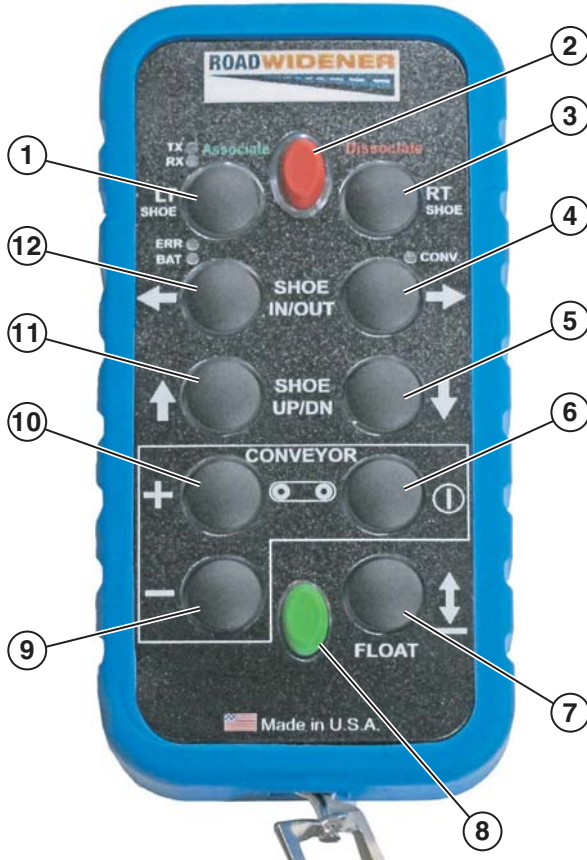


Figure 25: Dual Discharge Units Remote

1. Associate/Left Side Button
2. Power OFF Button
3. Dissociate/Right Side Button
4. Shoe OUT Button
5. Shoe DOWN Button
6. Conveyor ON/OFF Button
7. Shoe Float Button
8. Power ON Button
9. Conveyor Speed Decrease Button
10. Conveyor Speed Increase Button
11. Shoe UP Button
12. Shoe IN Button

10] The remotes must be paired to the machine before they can be used. If not already paired see "Pairing the Remote Control" on page 13.

NOTE: If experiencing problems with the remote during operation, refer to the remote operation tips sticker, which is located on the back of the remote.



Figure 26: Amber Battery Status LED

- 11] When the batteries for the remote are charged the battery status amber LED will be off.
- 12] When the battery charge status is at 2.1 volts DC the amber battery LED will begin to flash. This indicates a low battery condition. The remote can still be used but the batteries should be replaced as soon as possible.
- 13] When the battery charge status is at 2.0 volts DC the amber battery LED will turn on solid, the remote will begin to power down and a loss of signal will occur. The batteries must be replaced immediately. To replace the batteries see "Remote Battery Replacement" on page 56.
- 14] On the dual discharge units select which side you will be discharging material out of by pressing the LT button for left side discharge and the RT button for right side discharge.

JOBSITE PREPARATION - FH-R MODELS (REMOTE UNIT)



Figure 27: Red LED Side Indicator Light

- 15] Once the discharge side is selected the red LED indicator light will be lit on the side that is active.

NOTE: The dual discharge model is equipped with a check valve in the control valve. Depending upon your model of skid steer, the flow control valve for the skid steer must be in the correct position or the hydraulics for the Road Widener will not operate.

NOTE: The shoe width and slope adjustment setup is the same for both units.

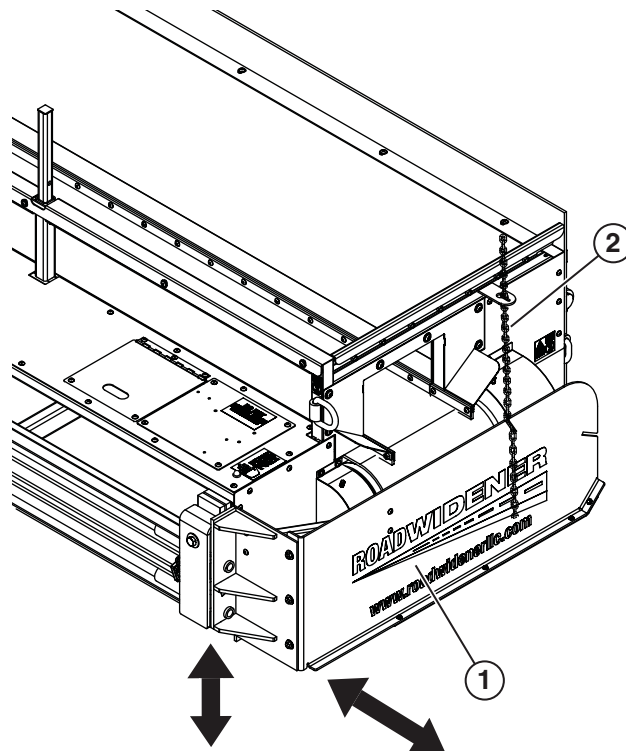


Figure 28: Setting Shoe Width and Shouldering Angle

1. Shoe Plate
2. Guide Chain

- 16] Set the shoe width by pressing the shoe OUT button to extend the shoe and press the shoe IN button to retract the shoe.
- 17] To set the shouldering angle, press the shoe DOWN button to decrease the angle and press the shoe UP button to increase the angle.
- 18] The shouldering angle can be put in the float position for uneven terrain. When in the float position, the shouldering angle follows the up and down contour of the ground to avoid scraping or scalping.
- 19] To put the shoe in the float mode, push and hold the float button.

JOBSITE PREPARATION - FH-R MODELS (REMOTE UNIT)



Figure 29: Blinking Red LED Light

- 20]** When the red LED begins to blink the shoe is in float mode.
- 21]** To take the shoe out of float mode, press the float button. The red LED will stop blinking and become solid.
- 22]** Once the shoe width and the shouldering angle have been set, take out any slack in the chain and attach it to the slot in the shoe plate.

JOBSITE PREPARATION - FH MODELS (NON-REMOTE UNIT)

- 1] Raise the boom on the skid steer and insert the skid steer pads into the universal mounting pad on the Road Widener.
- 2] Depending on your skid steer model, you may have hydraulic locking pins or manual locking pins. Make sure the locking pins are locked in to the universal mounting plate tabs on the Road Widener before moving the machine.
- 3] Slowly lift the Road Widener up off the trailer and slowly back away from the trailer.
- 4] As soon as the Road Widener clears the trailer, lower the Road Widener to the ground.
- 5] Shut off the skid steer and apply the parking brake.
- 6] Clean any dirt or debris from the male and female quick couplers on the Road Widener and the skid steer.



Figure 30: Hydraulic Lines Connecting to Skid Steer from Road Widener

- 7] Connect the hydraulic lines from the Road Widener to the quick coupler ports on the skid steer. Make sure the connections are secure.

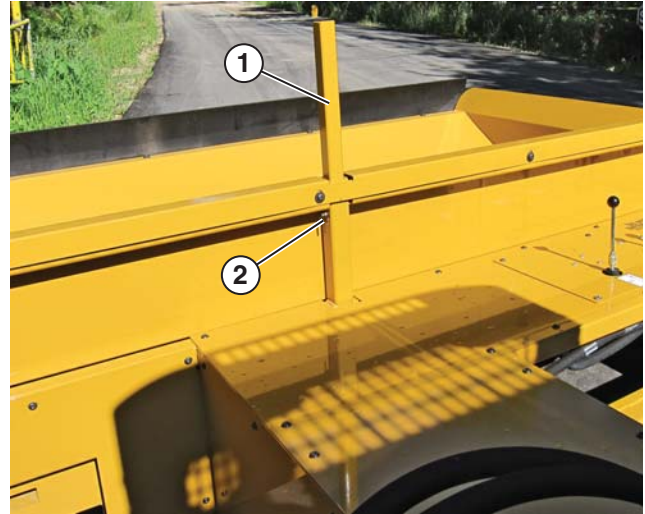


Figure 31: Tailgate Stop Bar, Clevis Pin and Clip

1. Tailgate Stop Bar
2. Clevis Pin and Clip

- 8] Install the tailgate stop bar into the square tube on the frame, and pin into place using the clevis pin and clip.

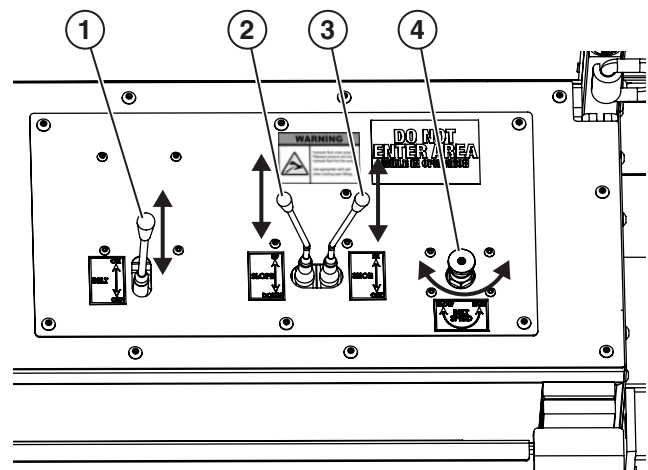


Figure 32: Levers and Control Knob – FH Model

1. Belt On/Off Lever
2. Slope Up/Down Lever
3. Shoe In/Out Lever
4. Belt Speed Control Knob

JOBSITE PREPARATION - FH MODELS (NON-REMOTE UNIT)

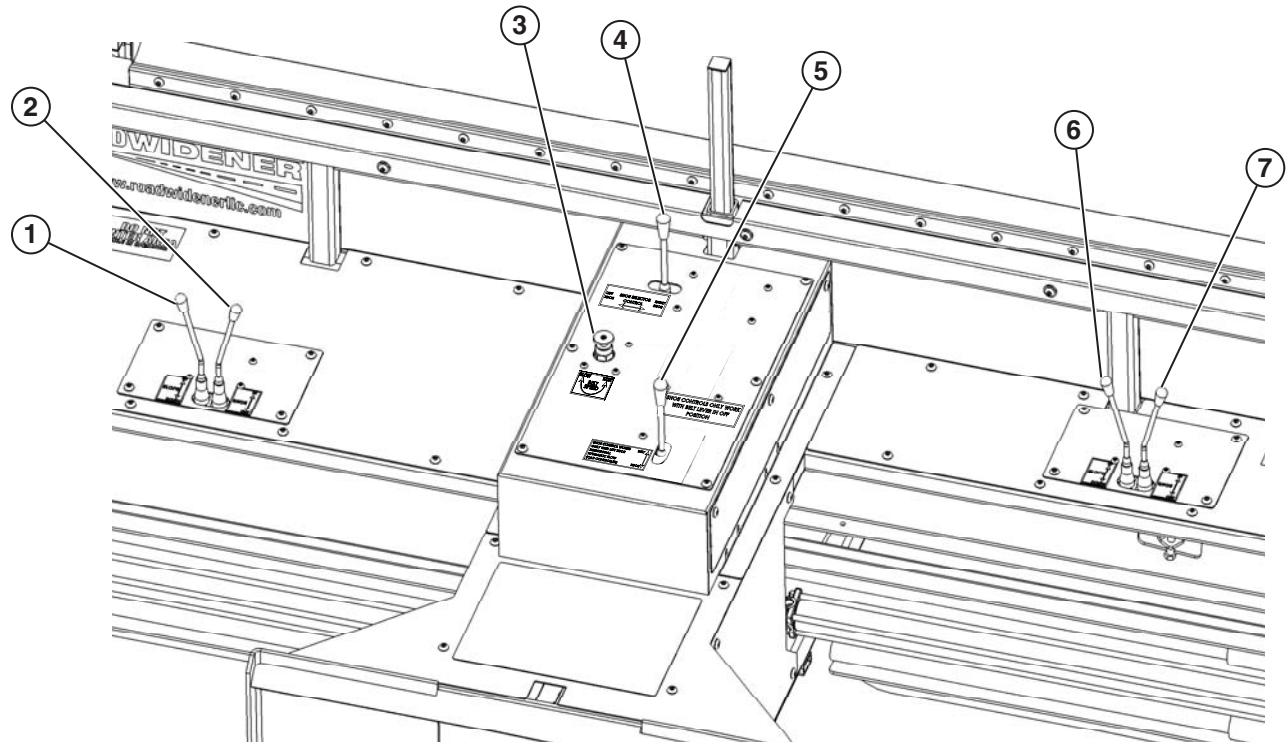


Figure 33: Levers and Controls – Dual Discharge Model

1. Left Slope Up/Down Lever
2. Left Shoe In/Out Lever
3. Belt Speed Control Knob
4. Shoe Selector Control Lever
5. Belt On/Off Lever
6. Right Slope Up/Down Lever
7. Right Shoe In/Out Lever

NOTE: The shoe width and slope adjustment setup is the same for the single discharge and the dual discharge models.

NOTE: The dual discharge model is equipped with a check valve in the control valve. Depending upon your model of skid steer, the flow control valve for the skid steer must be in the correct position or the hydraulics for the Road Widener will not operate.

- 9] Set the shoe width by pulling the shoe in/out lever [(3) in the single discharge model and (2) in the dual discharge model] back to move the shoe out, and push the lever forward to move the shoe in.
- 10] Set the shouldering angle by pulling the slope up/down lever [(2) in the single discharge model and (1) and (6) in the dual discharge model] back to lower the angle, and push the lever forward to raise the angle.

JOBSITE PREPARATION - FH MODELS (NON-REMOTE UNIT)

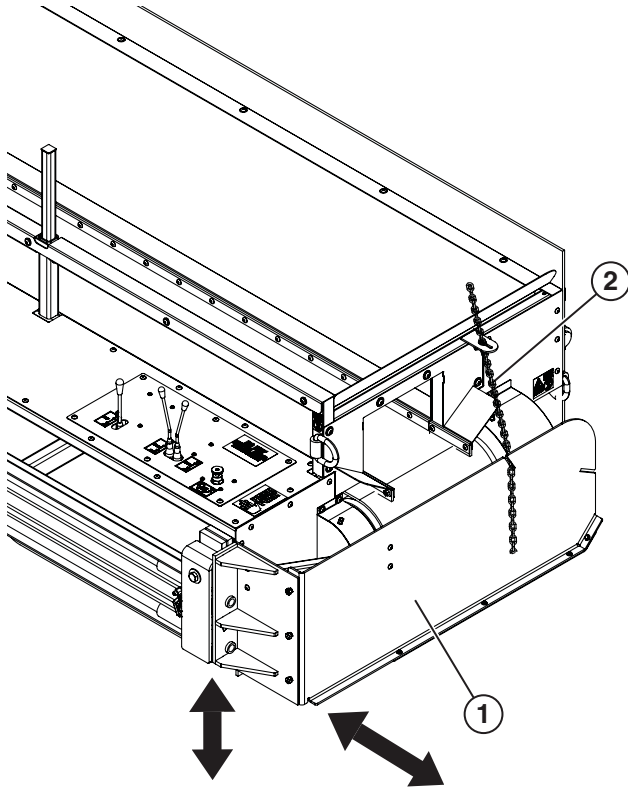


Figure 34: Setting Shoe Width and Shouldering Angle

1. Shoe Plate
2. Guide Chain

11] Once the shoe width and the shouldering angle have been set, take out any slack in the chain and attach it to the slot in the shoe plate.

5

OPERATION



DANGER

Never stand between the truck and the Road Widener when the truck is backing up. Serious injury or death could result.

- 1] Back the truck up to the Road Widener and make sure the tailgate is properly aligned over the hopper as close to the machine as possible.
- 2] Apply the parking brake to the truck to hold it in position.

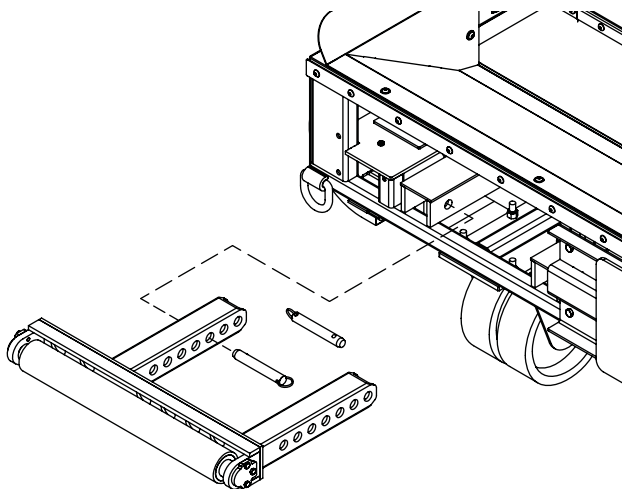


Figure 35: Removing Pins for Push Rollers

- 3] Remove the pins for the push rollers and adjust them as needed for the type of vehicle being unloaded so the rollers touch the wheels of the truck.



Figure 36: Rollers Touching Truck Wheels

- 4] The standard roller setup is designed to work with a quad-axle dump truck with a stone or asphalt tray. The rollers can be adjusted for many different vehicles by moving the pins or using the optional roller extensions.
- 5] Make sure the skid steer is lowered and the Road Widener is parallel to the road surface. Adjust the tilt on the skid steer if needed.

OPERATION - FH-R MODELS (REMOTE UNIT)

- 6] Adjust the tailgate chains on each side of the tailgate so they are both the same length.

NOTICE

On the dual discharge model the rubber skirt for the discharge closure plate should be just touching the conveyor belt with no material on the belt. Excessive rubbing of the rubber skirt on the conveyor belt will cause premature wear on the conveyor belt.

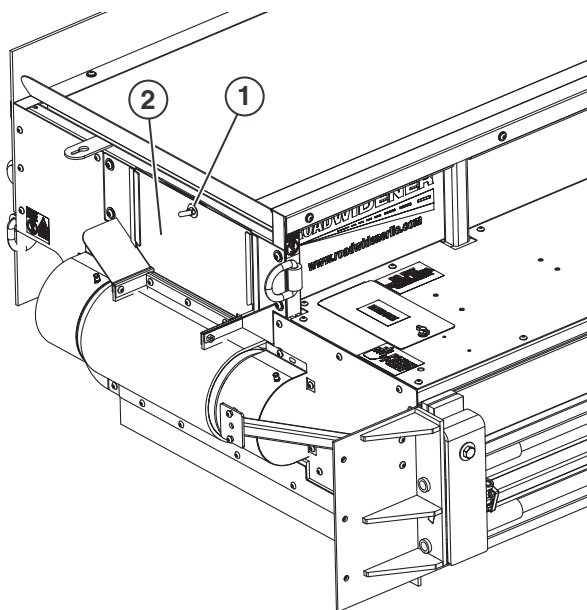


Figure 37: Chute Closure Plate – Dual Discharge Units

1. Screw
2. Closure Plate

- 7] On the dual discharge units install the closure plate on the side not being discharged on with the screw.

CAUTION

Nighttime operation may require extra lighting. Check your skid steer or wheel loader manual to make sure the proper work light kits are installed before operating in low light conditions.

NOTICE

The conveyor ON/OFF button on the remote should only be used as auxiliary or safety stop of the belt. During attachment use, the ON/OFF of the conveyor belt should be controlled by the host machine hydraulic controls. Using the ON/OFF button on the remote and leaving the remote in OFF mode while leaving host machine oil flow on can cause oil to overheat on some host machines.

- 8] Press the conveyor ON/OFF button to turn the conveyor on. Allow the belt to run for a couple of minutes with the hopper empty to warm it up.

WARNING

If the operator needs to leave the operator's seat of the skid steer or wheel loader during operation, make sure all the safety features on the machine are working properly. Refer to the machine's operator manual for more information.

- 9] To increase the belt speed, press the conveyor speed increase (+) button. To decrease the conveyor speed, press the conveyor decrease (-) button.

NOTE: Do not overfill the hopper. Overfilling the hopper may cause the conveyor belt to slip or not turn at all.

OPERATION - FH-R MODELS (REMOTE UNIT)

NOTICE

Do not drive the Road Widener through gravel piles or asphalt spills. Material can accumulate inside the belt and the belt rollers causing premature belt wear or belt failure.

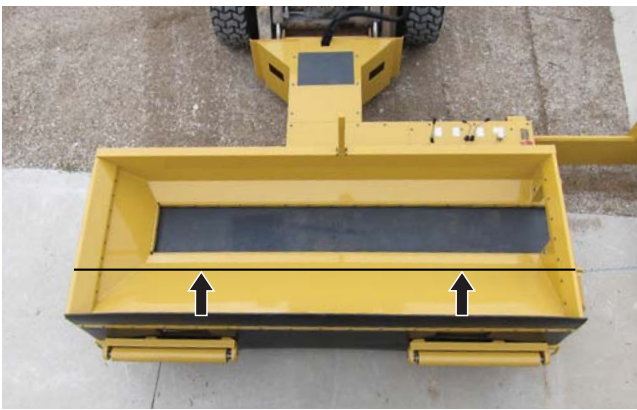


Figure 38: Hopper Dump Line

- 10] When dumping material in the hopper, make sure the back of the truck is close enough to the machine that the material is dumping into the hopper at the line shown in the figure above. Dumping in this area is the ideal area and will prevent spillage of material between the truck and the Road Widener. Adjust the push rollers if needed.
- 11] Raise the box and begin to spill material into the hopper. Do not overfill the hopper.
- 12] Make sure the truck park brake is off and the transmission is in neutral.

NOTE: To keep constant contact of the rollers to the truck tires, the truck operator may need to apply slight pressure to the brake pedal.

⚠ WARNING

Never have anyone standing between the Road Widener and the truck during operation. Serious injury or death could occur.

NOTE: On some model skid steers, the auxiliary hydraulics flow can be controlled by the skid steer operator, which will allow the conveyor belt to be started and stopped if required.

- 13] Begin moving forward with the skid steer pushing the truck.

NOTICE

Build-up of material on the rollers could occur during operation and should be removed if needed. Excessive build-up of material on rollers and belt can cause premature wear and possible belt failure.

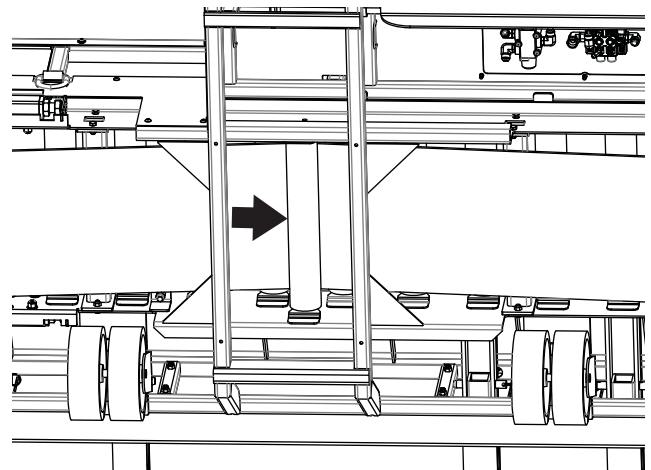


Figure 39: Bottom Idler Roller Location

- 14] When using the Road Widener with wet material or hot asphalt, material could build up on bottom idler roller and the belt.

OPERATION - FH-R MODELS (REMOTE UNIT)



Figure 40: Material Build-up

- 15]** Inspect the rollers for build-up of material before, during and after operation. Clean up any build-up before continuing operation.

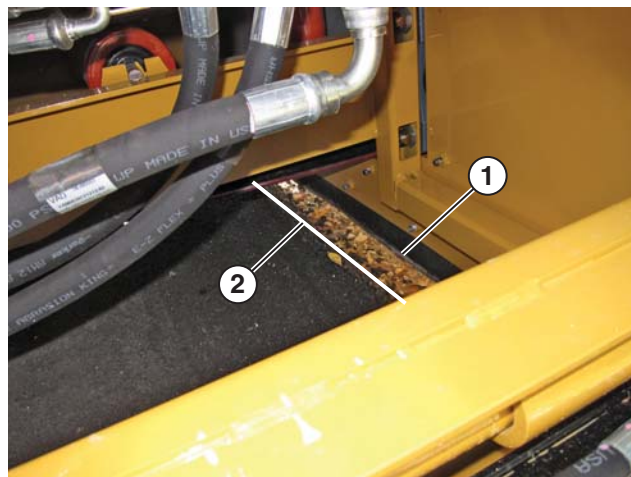


Figure 41: Rubber Skirt Should Follow Along Edge of Road

- 1. Rubber Skirt**
- 2. Edge of Road**

- 16]** Check the position of the material and the rubber skirt. The material is laying down correctly when the rubber skirt follows along the edge of the road.
- 17]** When traveling, the operator should pay attention to the hopper to make sure there is not too much or too little material in the hopper. It may be necessary to adjust the chains on the tailgate to allow more or less material out of the truck.
- 18]** When traveling, turn the conveyor belt on or off as needed using the auxiliary hydraulic controls on the skid steer. Do not allow material to spill over the top of the shoe.

OPERATION - FH-R MODELS (REMOTE UNIT)



Figure 42: Ensuring Material is Above Road Surface

- 19] If you are planning to compact the material, make sure the material is above the road surface. You can adjust the height of the material by raising or lowering the boom on the skid steer.

NOTICE

Do not allow the truck to pull away from the Road Widener with the box up. Damage to the truck or the Road Widener could occur.

- 20] When the truck is unloaded, stop moving. Have the truck operator apply the brakes. Lower the truck box and then have the truck operator pull away.
- 21] Align the next truck and start the process over again.

Curb Attachment Operation

The curb attachment is used to spread material up and over the back side of the curb. The operation is similar to standard operation with a few exceptions.

NOTICE

Never operate the shoe hydraulics when the curb attachment is installed. Damage to the machine will occur if the hydraulics are used.

- 1] Position the machine so the guide wheel is approximately 3 inches away from the curb.

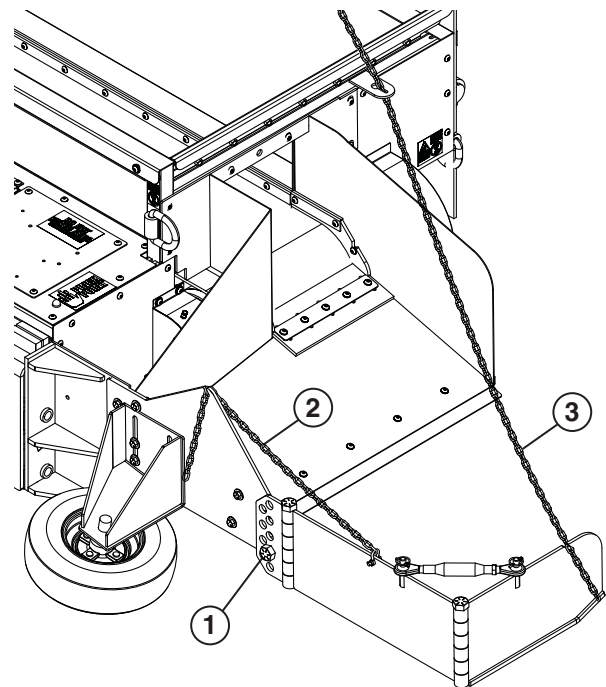


Figure 43: Adjusting Chains

1. Pivot Bolt
2. Rear Chain
3. Front Chain

- 2] Make sure the pivot bolt allows the shoe assembly to move up and down. The shoe assembly must pivot up and down to follow the contour of the terrain when spreading material.

OPERATION - FH-R MODELS (REMOTE UNIT)

- 3] Using the skid steer boom, raise or lower machine so the shoe is at correct height for the level of material you want to fill.
- 4] Adjust the front and rear chains to hold the shoe assembly in place.

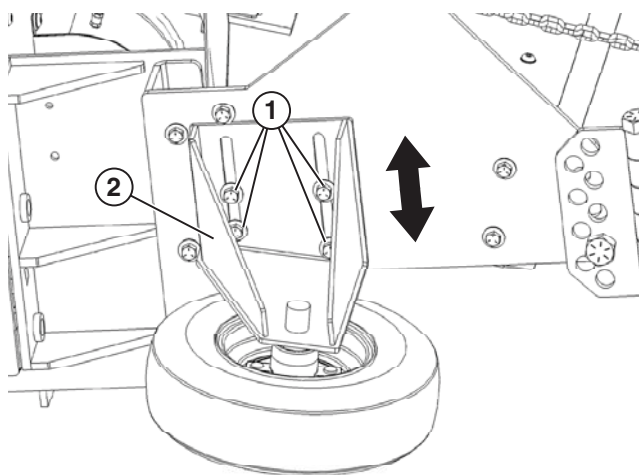


Figure 44: Adjusting the Guide Wheel

1. Wheel Bracket Mounting Bolts
2. Wheel Bracket

- 5] Loosen the 4 bolts holding the wheel bracket to the frame.
- 6] Move the wheel bracket up or down so the wheel is in the center of the curb. Tighten the bolts for the wheel bracket.

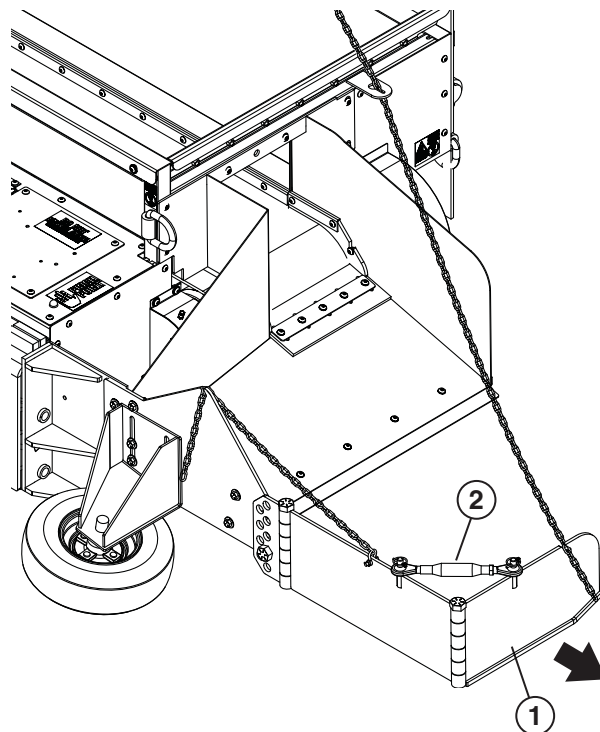


Figure 45: Adjusting Shoe Wider

1. Shoe Outside Edge
2. Adjustable Link

- 7] The shoe can be adjusted wider by disconnecting the front chain and turning the adjustable link to lengthen it.
- 8] Reattach the chain as needed.
- 9] Turn on the conveyor belt and adjust the speed.
- 10] Begin moving forward using the wheel to guide you against the curb.
- 11] Begin spreading material as you would using the standard method without the curb attachment.

OPERATION - FH-R MODELS (REMOTE UNIT)

Disconnecting Hydraulic and Electrical Lines

- 1] Once operation is complete, disconnect the 12-volt DC power plug from the drive machine.



Figure 46: Hydraulic Line Connections

- 2] To disconnect the hydraulic lines, push the male connector on the hydraulic line into the female coupler.
- 3] Push the sleeve on the female coupler toward the male coupler.
- 4] Release the hydraulic line from the female coupler.

Hydraulic Solenoid Manual Override

In the unlikely event that the remote would stop functioning, the hydraulic solenoids can be manually overridden to control the hydraulic functions.

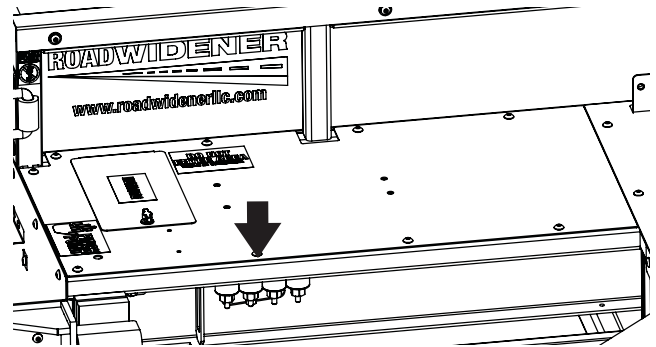


Figure 47: Dual Discharge Unit Hydraulic Valve Location

- 1] Locate the hydraulic valve, which is mounted under the top cover.

OPERATION - FH-R MODELS (REMOTE UNIT)

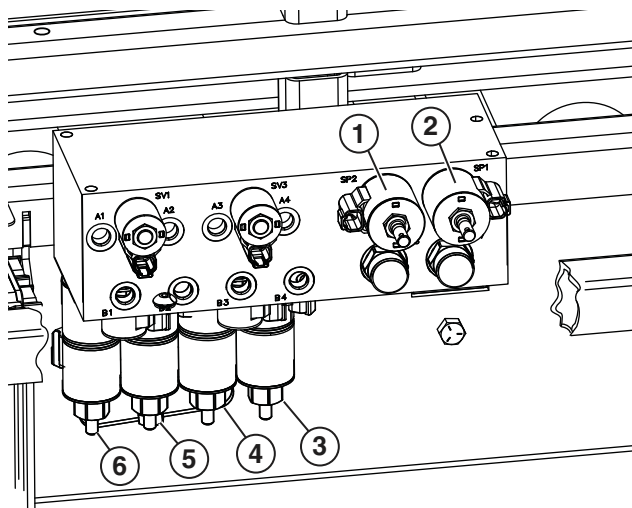


Figure 48: Dual Discharge Unit Hydraulic Valve

1. Conveyor On/Off
2. Conveyor Speed
3. Left Shoe Extend/Retract
4. Left Shoe Up/Down
5. Right Shoe Extend/Retract
6. Right Shoe Up/Down

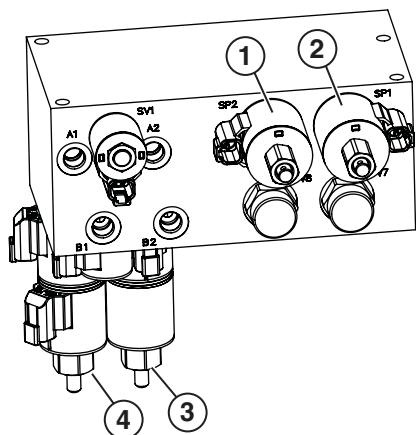


Figure 49: Single Discharge Unit Hydraulic Valve

1. Conveyor On/Off
2. Conveyor Speed
3. Shoe Extend/Retract
4. Shoe Up/Down

NOTE: How the hydraulic lines for the skid steer are hooked to the Road Widener will affect if the conveyor moves to the right or the left for the dual discharge machines. The left and right direction of the conveyor on the dual discharge units is determined by the direction of the hydraulic flow from the skid steer. Review your skid steer's operator manual to determine how to control the direction of hydraulic flow.

- 2] Locate the solenoid that controls the function that needs to be overridden by referencing Figure 4848 or Figure 49 on page 43.

NOTE: For the conveyor ON/OFF and the conveyor speed override push up and turn the button a ¼ turn clockwise to release the button from the detent. When finished, push up and turn the button a ¼ turn counterclockwise to lock the button into the detent.

- 3] To override the conveyor On/Off or the conveyor speed functions, push in on the round pin at the end of the solenoid.
- 4] To retract the shoe or raise the shoe up, push in on the round pin at the end of the solenoid.

NOTE: A small object such as an allen wrench can be inserted in the hole on the end of the round pin to help pull the round pin out of the solenoid.

- 5] To extend the shoe or lower the shoe down, pull out on the round pin at the end of the solenoid.

OPERATION - FH MODELS (NON-REMOTE UNIT)

DANGER

Never stand between the truck and the Road Widener when the truck is backing up. Serious injury or death could result.

- 1] Back the truck up to the Road Widener and make sure the tailgate is properly aligned over the hopper as close to the machine as possible.
- 2] Apply the parking brake to the truck to hold it in position.

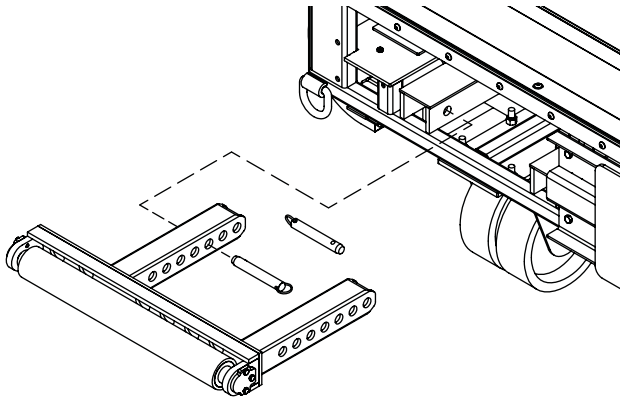


Figure 50: Removing Pins for Push Rollers

- 3] Remove the pins for the push rollers and adjust them as needed for the type of vehicle being unloaded so the rollers touch the wheels of the truck.



Figure 51: Rollers Touching Truck Wheels

- 4] The standard roller setup is designed to work with a quad-axle dump truck with a stone or asphalt tray. The rollers can be adjusted for many different vehicles by moving the pins or using the optional roller extensions.
- 5] Make sure the skid steer is lowered and the Road Widener is parallel to the road surface. Adjust the tilt on the skid steer if needed.
- 6] Adjust the tailgate chains on each side of the tailgate so they are both the same length.

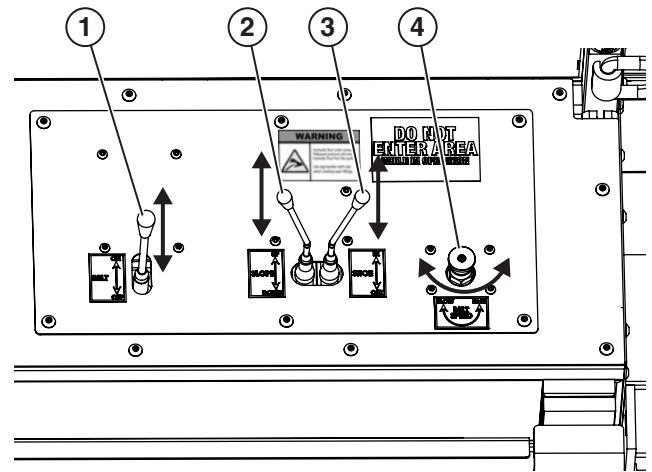


Figure 52: Levers and Control Knob – FH Models

1. Belt On/Off Lever
2. Slope Up/Down Lever
3. Shoe In/Out Lever
4. Belt Speed Control Knob

OPERATION - FH MODELS (NON-REMOTE UNIT)

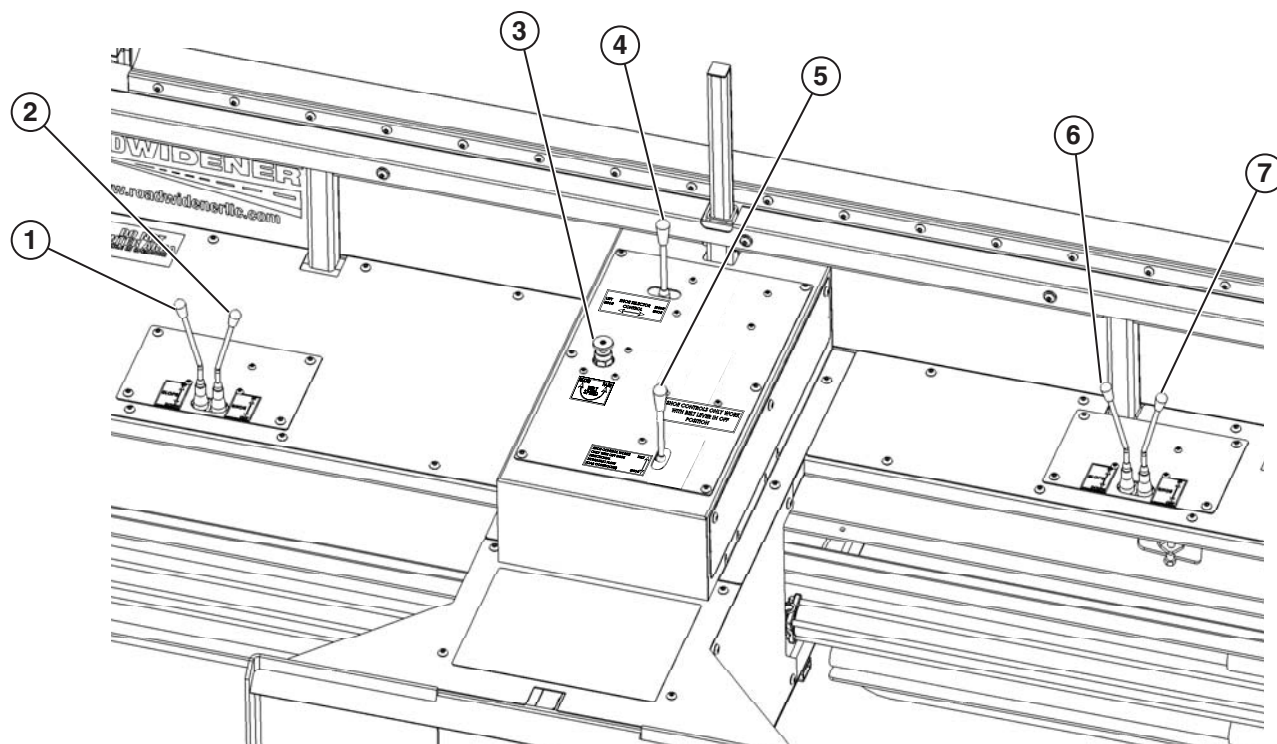


Figure 53: Levers and Controls – Dual Discharge Model

1. Left Slope Up/Down Lever
2. Left Shoe In/Out Lever
3. Belt Speed Control Knob
4. Shoe Selector Control Lever
5. Belt On/Off Lever
6. Right Slope Up/Down Lever
7. Right Shoe In/Out Lever

NOTE: The dual discharge model is equipped with a check valve in the control valve. Depending upon your model of skid steer, the flow control valve for the skid steer must be in the correct position or the hydraulics for the Road Widener will not operate.

NOTICE

On the dual discharge model the rubber skirt for the discharge closure plate should be just touching the conveyor belt with no material on the belt. Excessive rubbing of the rubber skirt on the conveyor belt will cause premature wear on the conveyor belt.

OPERATION - FH MODELS (NON-REMOTE UNIT)

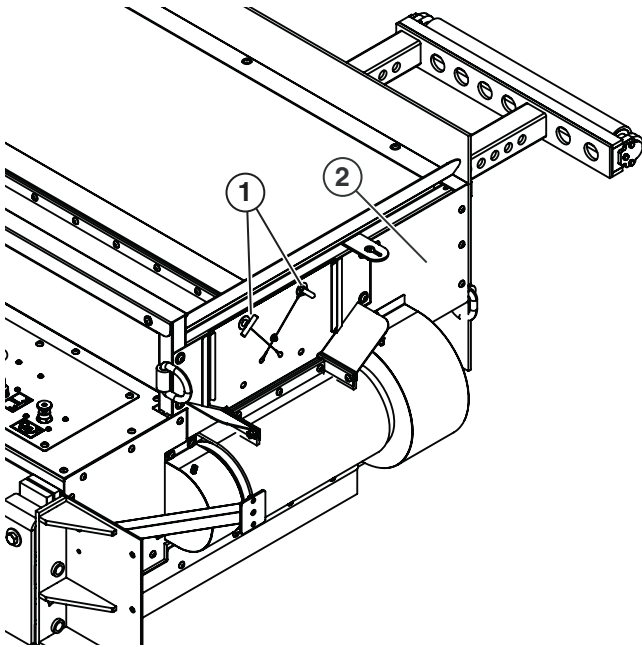


Figure 54: Chute Closure Plate – Dual Discharge Model

1. Screws
2. Closure Plate

- 7] On the dual discharge models install the closure plate on the side not being discharged on with the 2 screws.
- 8] Push the belt on/off lever up to the ON position. Allow the belt to run for a couple minutes with the hopper empty to warm it up.
- 9] Turn the belt speed control knob clockwise to increase the belt speed and counterclockwise to decrease the speed.

NOTE: Do not overfill the hopper. Overfilling the hopper may cause the conveyor belt to slip or not turn at all.

- 10] Raise the box and begin to spill material into the hopper. Do not overfill the hopper.
- 11] Make sure the truck park brake is off and the transmission is in neutral.

NOTE: To keep constant contact of the rollers to the truck tires, the truck operator may need to apply slight pressure to the brake pedal.



WARNING

Never have anyone standing between the Road Widener and the truck during operation. Serious injury or death could occur.

NOTE: On some model skid steers, the auxiliary hydraulics flow can be controlled by the skid steer operator, which will allow the conveyor belt to be started and stopped if required.

- 12] Begin moving forward with the skid steer pushing the truck.

NOTICE

Build-up of material on the rollers could occur during operation and should be removed if needed. Excessive build-up of material on rollers and belt can cause premature wear and possible belt failure.

OPERATION - FH MODELS (NON-REMOTE UNIT)

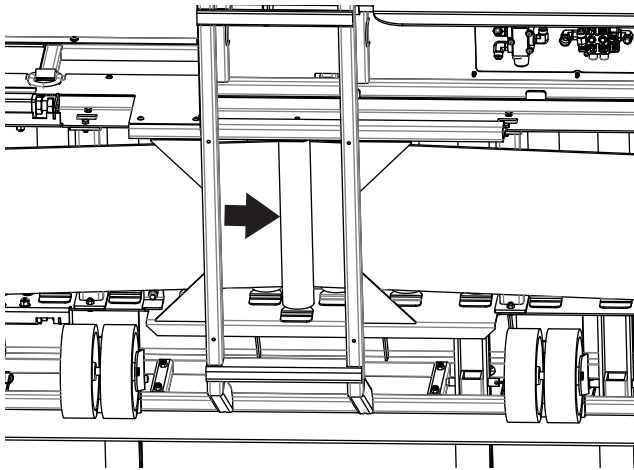


Figure 55: Bottom Idler Roller Location

- 13]** When using the Road Widener with wet material or hot asphalt, material could build up on bottom idler roller and the belt.



Figure 56: Material Build-up

- 14]** Inspect the rollers for build-up of material before, during and in between loads while actual operation is stopped and after operation. Clean up any build-up before continuing operation.

OPERATION - FH MODELS (NON-REMOTE UNIT)

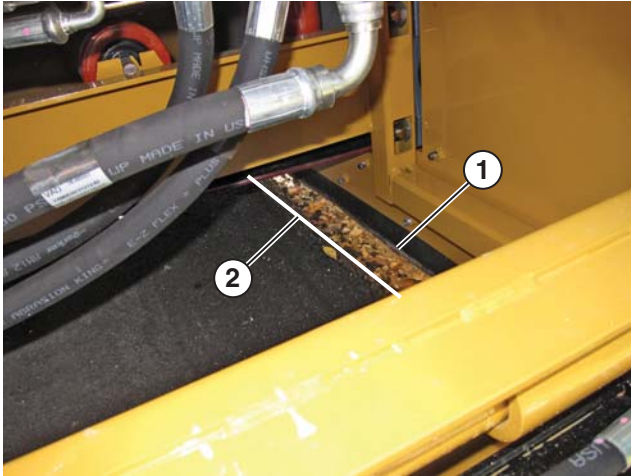


Figure 57: Rubber Skirt Should Follow Along Edge of Road

1. Rubber Skirt
2. Edge of Road

- 15] Check the position of the material and the rubber skirt. The material is laying down correctly when the rubber skirt follows along the edge of the road.
- 16] When traveling, the operator should pay attention to the hopper to make sure there is not too much or too little material in the hopper. It may be necessary to adjust the chains on the tailgate to allow more or less material out of the truck.
- 17] When traveling, turn the conveyor belt on or off as needed using the auxiliary hydraulic controls on the skid steer. Do not allow material to spill over the top of the shoe.



Figure 58: Ensuring Material is Above Road Surface

- 18] If you are planning to compact the material, make sure the material is above the road surface. You can adjust the height of the material by raising or lowering the boom on the skid steer.

NOTICE

Do not allow the truck to pull away from the Road Widener with the box up. Damage to the truck or the Road Widener could occur.

- 19] When the truck is unloaded, stop moving. Have the truck operator apply the brakes. Lower the truck box and then have the truck operator pull away.
- 20] Align the next truck and start the process over again.

OPERATION - FH MODELS (NON-REMOTE UNIT)

Curb Attachment Operation

The curb attachment is used to spread material up and over the back side of the curb. The operation is similar to standard operation with a few exceptions.

NOTICE

Never operate the shoe hydraulics when the curb attachment is installed. Damage to the machine will occur if the hydraulics are used.

- 1] Position the machine so the guide wheel is approximately 3 inches away from the curb.

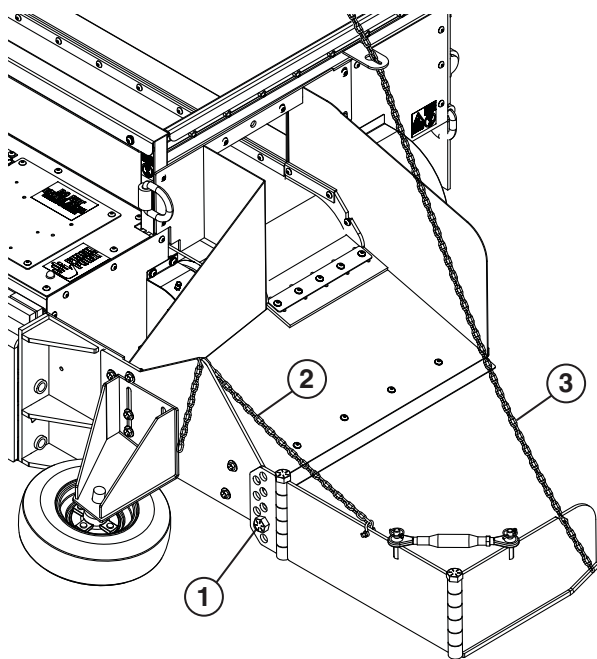


Figure 59: Adjusting Chains

1. Pivot Bolt
2. Rear Chain
3. Front Chain

- 2] Make sure the pivot bolt allows the shoe assembly to move up and down. The shoe assembly must pivot up and down to follow the contour of the terrain when spreading material.
- 3] Using the skid steer boom, raise or lower machine so the shoe is at correct height for the level of material you want to fill.
- 4] Adjust the front and rear chains to hold the shoe assembly in place.

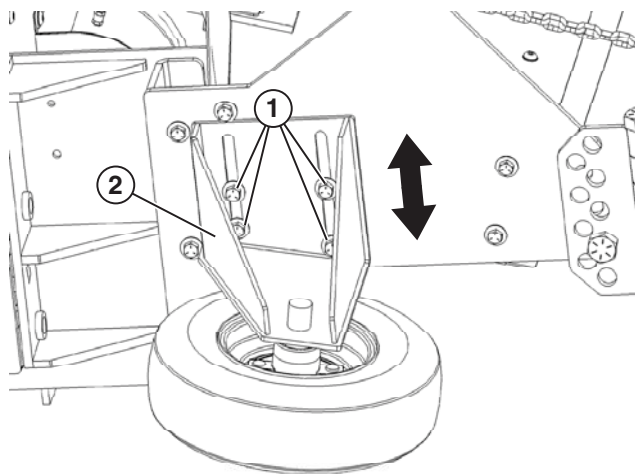


Figure 60: Adjusting the Guide Wheel

1. Wheel Bracket Mounting Bolts
 2. Wheel Bracket
- 5] Loosen the 4 bolts holding the wheel bracket to the frame.
 - 6] Move the wheel bracket up or down so the wheel is in the center of the curb. Tighten the bolts for the wheel bracket.

OPERATION - FH MODELS (NON-REMOTE UNIT)

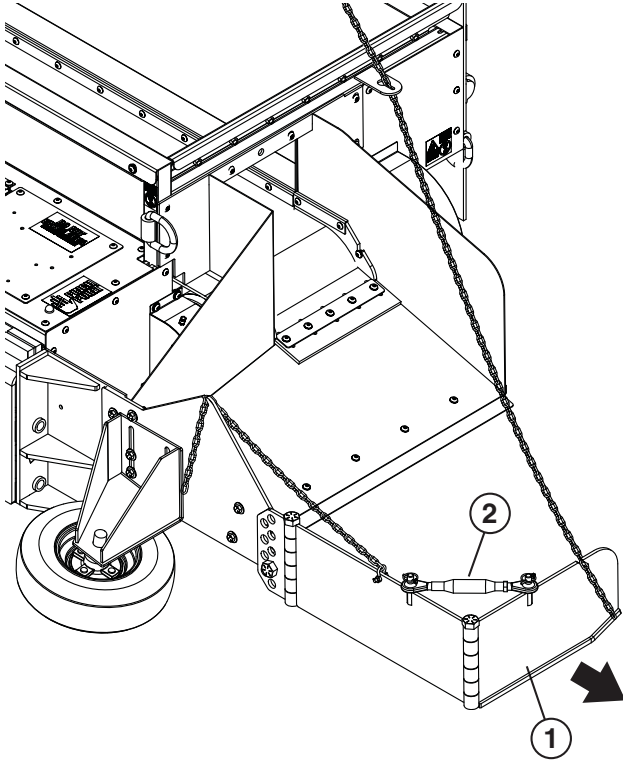


Figure 61: Adjusting Shoe Wider

1. Shoe Outside Edge
 2. Adjustable Link
- 7] The shoe can be adjusted wider by disconnecting the front chain and turning the adjustable link to lengthen it.
 - 8] Reattach the chain as needed.
 - 9] Turn on the conveyor belt and adjust the speed.
 - 10] Begin moving forward using the wheel to guide you against the curb.
 - 11] Begin spreading material as you would using the standard method without the curb attachment.

Disconnecting Hydraulic Lines



Figure 62: Hydraulic Line Connections

- 1] To disconnect the hydraulic lines, push the male connector on the hydraulic line into the female coupler.
- 2] Push the sleeve on the female coupler toward the male coupler.
- 3] Release the hydraulic line from the female coupler.

MAINTENANCE

6

Periodic Maintenance Chart

Review the "Safety" Section on page 16 before performing maintenance.

ITEM	DAILY CHECKS	WEEKLY	MONTHLY	EVERY YEAR OR 1,000 HOURS OF OPERATION
Greasing Machine	X	X	X	X
Belt Start-Up and Maintenance	X	X	X	X
Check Skid Steer/Wheel Loader Hydraulic Oil Level*	X	X	X	X
Check Conveyor Belt Tension	X	X	X	X
Hopper Rubber Flashing to Conveyor Belt Clearance		X	X	X
Adjusting Conveyor Belt Drive Chain			X	X
Checking Hydraulic Hoses		X	X	X
Remote Battery Replacement			X	X
Clean Machine When Using Gravel		X	X	X
Clean Machine When Using Hot Asphalt	X	X	X	X

* See your machine operator's manual for proper hydraulic oil level check.

MAINTENANCE



WARNING

Maintenance on the Road Widener should only be performed on a flat, level concrete surface. All hydraulic hoses and electrical connections, if equipped, should be disconnected from the skid steer or wheel loader.

NOTICE

Always be environmentally responsible.

- *Follow the guidelines of the EPA or other governmental agencies for the proper disposal of hazardous materials. Consult the local authorities or reclamation facility.*
- *NEVER dispose of hazardous materials irresponsibly by dumping them into a sewer, on the ground, or into groundwater or waterways.*
- *Failure to follow these procedures may seriously harm the environment.*



Figure 63: Lubrication Fittings

Performing maintenance on the Road Widener machine only requires the use of basic hand tools.

Greasing the Machine

The lubrication fittings should be greased daily or more often if the Road Widener is being used in adverse conditions. There are a total of 10 grease fittings on the machine, four for the conveyor bearings and six for the caster wheels.

MAINTENANCE

- 1] Apply grease to the conveyor belt front grease fittings on each side of the machine.

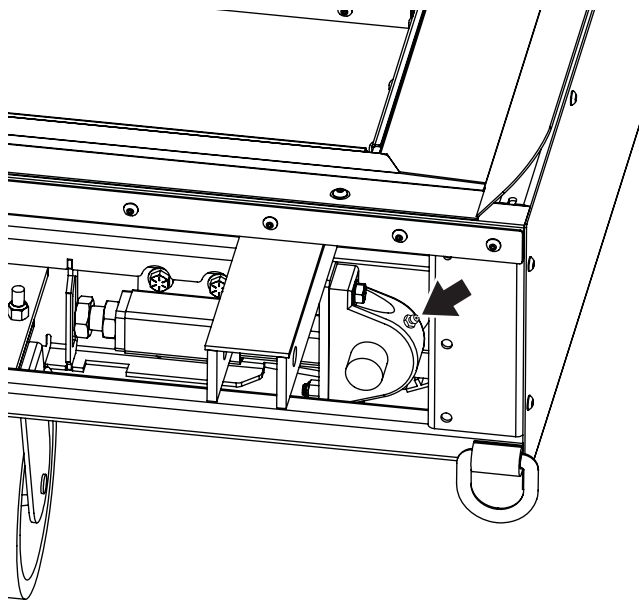


Figure 64: Front Conveyor Belt Grease Fittings

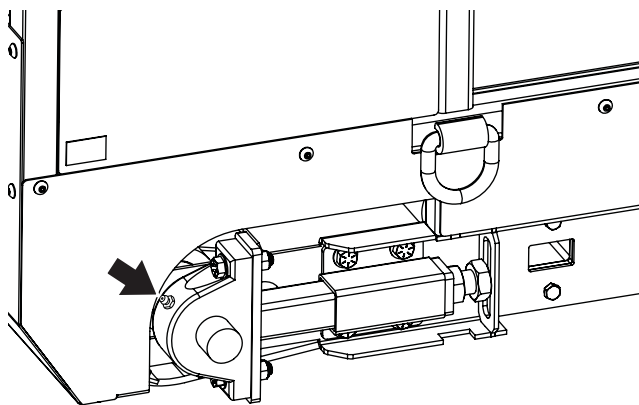


Figure 65: Rear Conveyor Belt Grease Fittings

- 2] Apply grease to the conveyor belt rear grease fitting on each side of the machine.

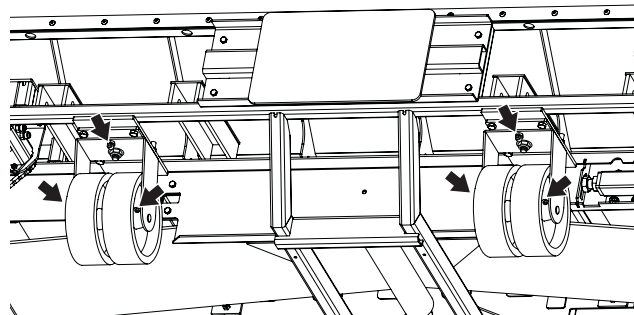


Figure 66: Caster Wheel Pivots and Axle Pins

- 3] Apply grease to each of the caster wheel pivots and to each caster wheel axle pin.

Belt Start-Up and Maintenance

Properly maintaining your belt will ensure a long belt life on your attachment. It is essential that you perform the following steps before use:

- 1] The first time attaching and connecting your attachment, run the belt and observe if the belt stays centered on the head pulley. If there is any "walking" of the belt, make sure to adjust the conveyor belt tension on either side of the belt to eliminate the "walking."
- 2] The first time you run material through the machine, run the belt and observe if the belt stays centered on the head pulley. If there is any "walking" of the belt, make sure to tighten either side of the belt to eliminate the "walking."
- 3] A new belt will stretch with use. Properly maintaining tension will extend the life of the belt. See manual for belt maintenance instructions.
- 4] If you run asphalt or wet topsoil through the machine, it is important to be mindful of the single idler pulley on the bottom of the conveyor belt. Treat the idler pulley with a release agent before every load. After use, clean the idler pulley of any build-up. See steps 13 and 14 on page 47 in the Operation section for more information.

MAINTENANCE

- 5] When using for hot asphalt or wet topsoil, constantly monitor the belt and the rollers for build-up during operation and between loads. If material is allowed to build up on the belt and the rollers it will cause the belt to be over-tensioned, which could cause premature belt failure. Tension the belt with the minimum amount of tension required to allow the belt to turn with no slippage, ensuring that the belt remains free of build-up as much as possible. If build-up occurs, stop the machine and remove build-up and build-up variables (i.e., get dry soil).

Checking Hydraulic Oil Level

The Road Widener attachment hydraulic system is filled at the factory with approximately 3 gallons (11 liters). During operation the hydraulic fluid in the Road Widener is circulated through the hydraulic system from the skid steer or wheel loader. The fluid level should be checked before operation.

- 1] Attach the Road Widener to the skid steer or wheel loader that is going to be used.
- 2] Connect the hydraulic lines and any electrical connections if required.
- 3] Start up the drive machine and extend and retract the cylinders for shoe in and out and up and down.
- 4] Run the conveyor belt for approximately 30 seconds.
- 5] Shut down the Road Widener machine and turn off the skid steer or wheel loader.
- 6] Check the oil in the skid steer or wheel loader hydraulic system by referring to the procedure in the machine's operation manual.

Adjusting Conveyor Belt Tension

The conveyor belt tension is adjusted from the factory but may require an adjustment after the machine has accumulated some run time.

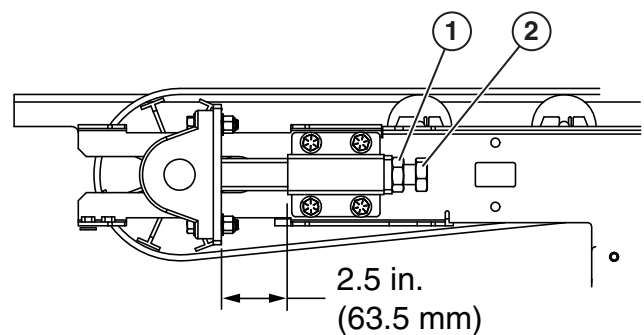


Figure 67: Adjusting Conveyor Belt Tension

1. **Jam Nut**
2. **Adjustment Bolt**

- 1] Inspect the conveyor belt rollers and make sure there is no material build-up on the rollers. Clean the rollers off if necessary.
- 2] Measure the distance from the back of the bearing plate to the front of the adjustment bracket. Do this on both sides of the belt. The measurement should be approximately 2.5 in. (63.5 mm).
- 3] If adjustment is needed, loosen the jam nut for the adjustment bolt.
- 4] Turn the adjustment bolt until the proper measurement is obtained. Repeat the procedure for the other side. The adjustment must be the same for both sides to ensure the conveyor belt tracks correctly.

MAINTENANCE

Hopper Rubber Flashing to Conveyor Belt Clearance

The hopper rubber flashing should be properly adjusted for proper operation. If the gap is too wide, material spillage between the rubber flashing and the conveyor belt can occur. If the gap is too small, it can cause premature wear on the rubber flashing and the conveyor belt.

- 1] Inspect the conveyor belt rollers and make sure there is no material build-up on the rollers. Clean the rollers off if necessary.

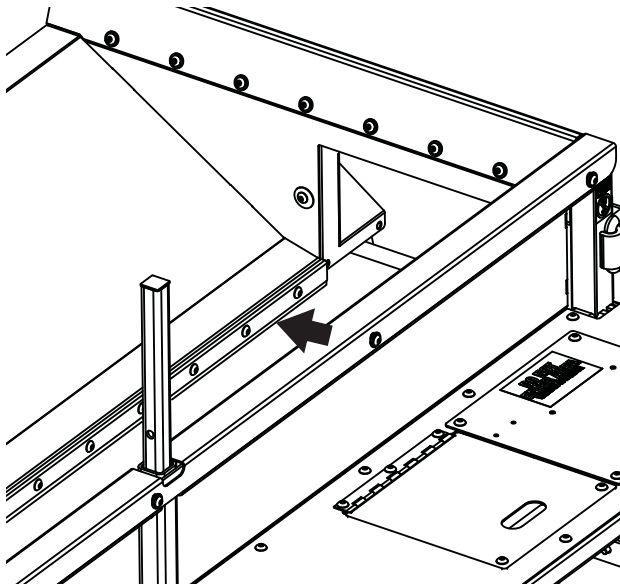


Figure 68: Hopper Rubber Flashing to Conveyor Belt Clearance

- 2] With no material in the hopper, check the clearance between the rubber flashing and the conveyor belt. The rubber flashing should be just touching the conveyor belt with the hopper empty.
- 3] To adjust the flashing, loosen the screws and raise or lower the flashing. Check the clearance on the entire length of the hopper and on both sides of the hopper.
- 4] Tighten the screws after the clearance has been adjusted.

Adjusting Conveyor Belt Drive Chain

After the first 10 hours of use, the conveyor belt drive chain may need to be adjusted. Adjust the conveyor belt drive chain periodically after the first adjustment.

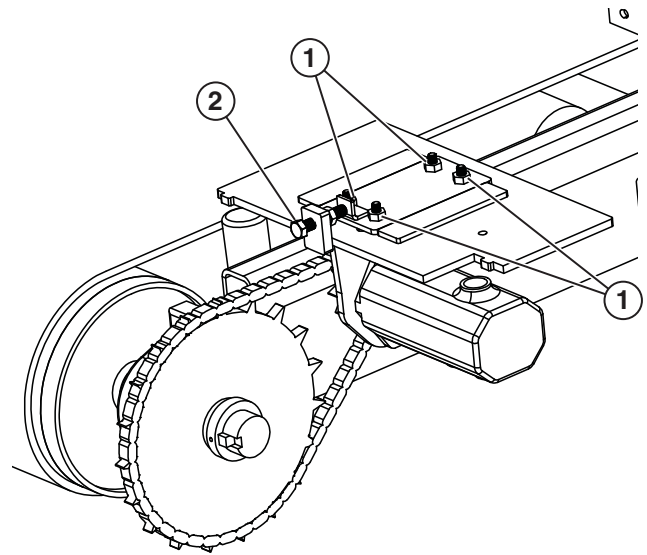


Figure 69: Adjust Conveyor Belt Drive Chain after First 10 Hours of Use

1. Mounting Bracket Nuts (4 used)
2. Adjusting Bolt

- 1] Loosen the mounting bracket nuts approximately 1-1/2 turns.
- 2] Loosen the jam nut on the adjusting bolt and turn the adjusting bolt clockwise to tighten the chain. Do not overtighten the chain.
- 3] Tighten the jam nut for the adjusting bolt and tighten the 4 mounting bracket nuts.

MAINTENANCE

Checking Hydraulic Hoses

- 1] Check the hydraulic hoses for any noticeable leaks. Make sure they are not rubbing on any moving parts. Fix any leaks before operating the equipment.
- 2] Check the hoses for any bulging, cracks, cuts, abrasions, twisting or bends. Repair or replace hoses as required.

Cleaning After Operation

Clean out the hopper of any material that is left in it. Make sure there is no build-up of material on the conveyor belt rollers. Clean the rollers if needed.

If asphalt was used, make sure debris is properly cleaned off using a releasing agent.

Remote Battery Replacement



Figure 70: Remote Battery Cover

- 1] Remove the four screws for the battery cover on the back of the remote and remove the cover.

MAINTENANCE



Figure 71: Battery Replacement

NOTE: Typical temperature range for alkaline batteries is -20°F to 130°F (-30°C to 55°C). To achieve maximum performance throughout all temperature ranges it is recommended that lithium ion batteries be used.

- 2] Remove the batteries and replace them with a high quality alkaline AAA battery.
- 3] Install new batteries with negative (-) side of the battery against the springs.
- 4] Install the battery cover.

7

TROUBLE-SHOOTING

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Machine tipping or unstable (All models)	Skid steer or wheel loader machine are undersized	Check weight capacities of skid steer and use a larger-sized loader.
	The Road Widener hopper is being loaded on unlevel ground	Load the hopper on level ground with the casters on the ground.
	Road Widener is not on the caster wheels	Lower the Road Widener so it is resting on the ground and is level.
Material spilling out of hopper (All models)	Truck is not properly lined up with hopper	Properly align truck with hopper.
	Push rollers are not adjusted properly	Adjust the push roller for the truck being unloaded.
	Truck tailgate is open too far	Adjust the tailgate chains.
	Too much material is in hopper	Do not fully fill the hopper.

TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	SOLUTION
No hydraulics	Hydraulic hoses are not hooked up correctly to loader (All models)	Check hose connections and hook up correctly.
	Loader's auxiliary hydraulics are off (All models)	Make sure the loader's auxiliary hydraulics are on.
	Control valve levers are not in the correct position (FH models)	Move the control valve levers to the correct position.
	Flow control valve is not set properly	Adjust the flow control valve. For FH models see Figures 36, 37, 56 and 57 and for FH-R models see Figures 28 and 29.
	Remote batteries are dead (FH-R models)	Replace the batteries.
	For dual discharge units, the flow control selector valve on skid is not set to correct position (FH models)	Move the selector valve control switch to the correct position.
Slow or no hydraulics (All models)	Possible air in the hydraulic system	Perform the solenoid manual override for the shoe extend, and the shoe up or down solenoids. Continue to override the solenoids for an additional 7 seconds after the maximum extension and retraction of the cylinders to allow the air to be dissipated.
	Debris in valve	Perform solenoid manual overrides to clear air or debris from valves.
	Low oil in skid steer attachment	Check oil and oil pressure from machine cylinders. They will typically extend more easily than they retract.
Shoe movement limitation (goes up but not down, down but not up, out but not in, in but not out, or a combination thereof) (FH-R models)	Loose or improper wire connections	Verify wire connectors are properly connected to the receiver(s) (brain box).
	Defective receiver	Swap the wire connectors from each receiver. Does the problem move to the left side? If yes, the receiver (brain box) is defective. Replace receiver. If no, check harnesses. Make sure the wire harness is not cut or spliced or rubbing on anything.

TROUBLESHOOTING

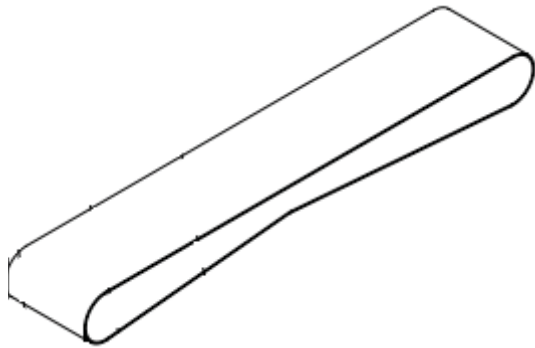
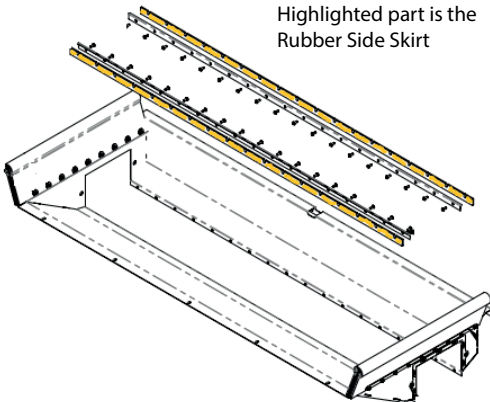
SYMPTOM	POSSIBLE CAUSE	SOLUTION
Conveyor belt not moving or slipping (All models)	Too much material is in the hopper	Remove some material from the hopper.
	Conveyor belt tension is incorrect	Adjust the conveyor belt tension.
	Tailgate is open too far and dumping too much material into the hopper	Shorten the tailgate chains to close the tailgate more.
Conveyor belt not tracking properly (All models)	Conveyor belt tension is incorrect	Adjust the conveyor belt tension.
	Material build-up on the rollers	Inspect the rollers and remove any built up material or debris. Apply a releasing agent to rollers if needed. See steps 13 and 14 on page 47 for more information.
	Too much material is in hopper	Remove some material from the hopper.
Loader loses traction when pushing truck (All models)	Loader is pushing too hard on truck	Apply less pressure to the back of the truck.
	Too much material is in hopper	Remove some material from the hopper.
	Brakes on truck are applied too hard	Apply less brake pressure on truck.
Handheld remote and base unit are not communicating (FH-R models)	Power is not supplied to base unit or remote	Make sure the 12-volt DC power cord is plugged into a 12-volt DC power source and the connection is clean of debris and corrosion.
		Make sure the amber battery LED is not illuminated. If illuminated, install new batteries in the remote.
The remote green TX LED is not illuminated or the remote does not stay connected with the base unit (FH-R models)	Remote batteries are low	Replace remote batteries. See "Remote Battery Replacement" on page 56.
The remote and the base unit are powered but are not communicating with each other (FH-R models)	Remote and base unit may be out of range	Make sure the units are in range.
	Obstructions or interference exist between remote and base unit	Make sure there is a clear line of sight between the base unit and the remote.
	Remote and base unit are not properly paired	In the unlikely event that pairing is required, see the separate pairing instructions that were supplied with the machine or go to www.roadwidenerllc.com for the pairing procedure.
	The 12-volt DC accessory socket or power cord is not rated for 10 amps	Make sure both the 12-volt DC accessory socket and power cord are rated for 10 amps.

TROUBLESHOOTING

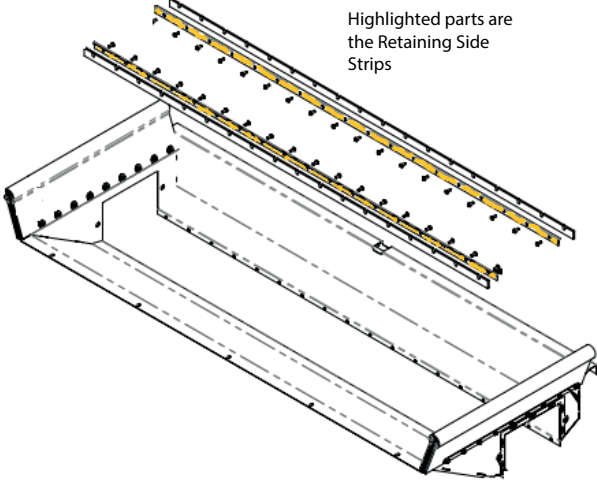
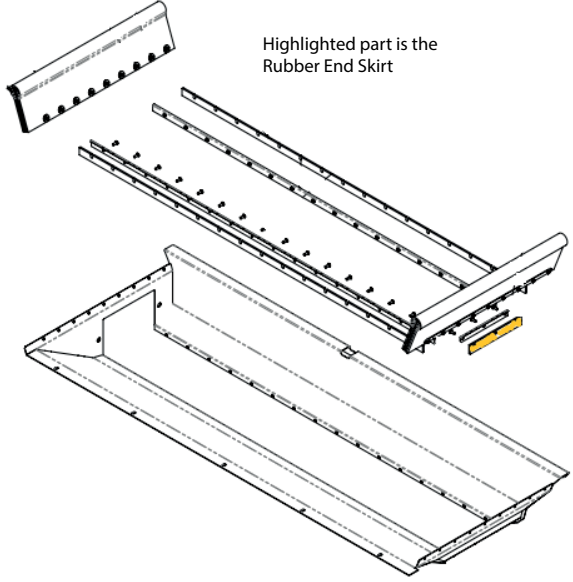
SYMPTOM	POSSIBLE CAUSE	SOLUTION
Red LED on machine is lit but functions are not working (FH-R models)	The 12-volt DC power source is not rated for the correct amperage	The recommended amperage for the 12-volt DC accessory socket is 10 amps. Make sure the 12-volt DC power source can supply a minimum of 10 amps.
Remote does not seem to be paired or will not pair correctly (FH-R models).	12-volt DC power source is not supplying enough amperage	Check the 12-volt DC power source to make sure it has the correct output of 10 amps.

8

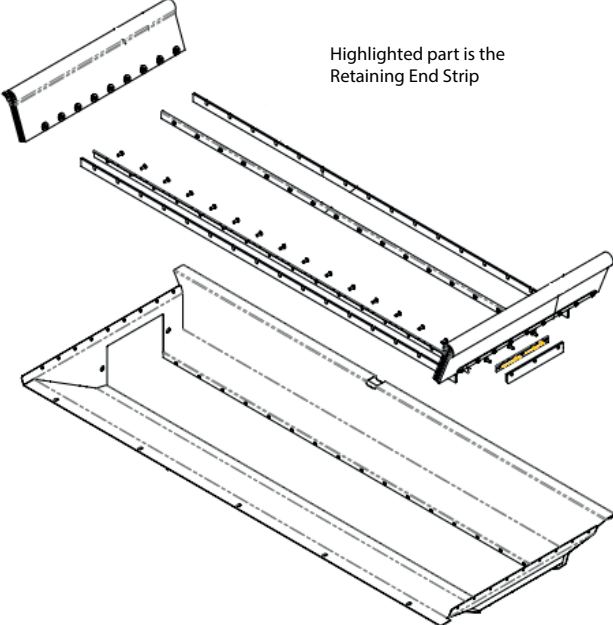
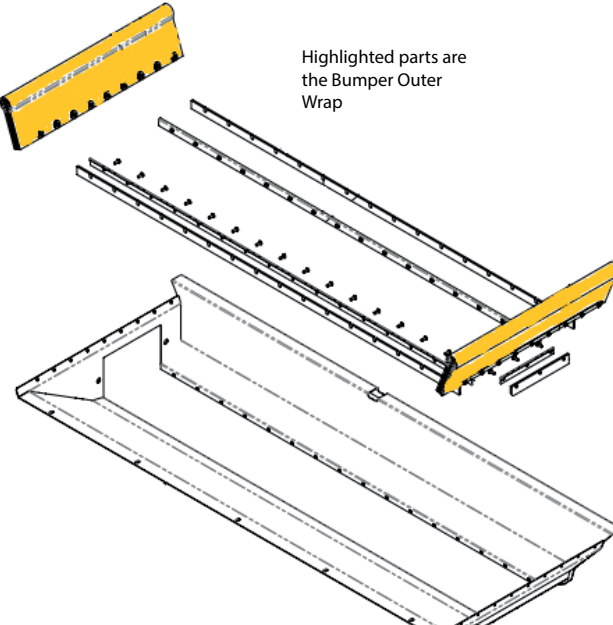
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Conveyer Belt 	Model: FH RW-3001135 FHR RW-3001135 FHRD RW-3003004 Prior to 2010 RW-3000082
Hopper Rubber Side Skirt 	Model: FH RW-3001131 FHR RW-3001131 FHRD RW-3003005 Note: Order 2 for complete set, one for each side.

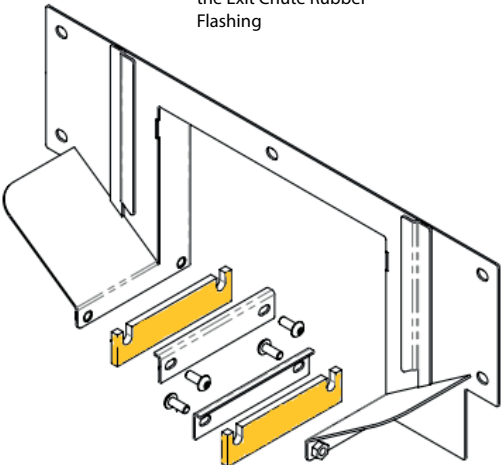
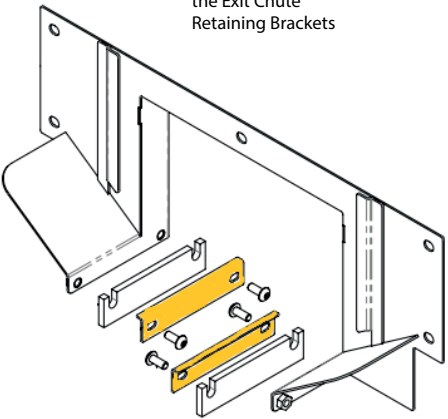
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER						
Hopper Steel Retaining Side Strip  Highlighted parts are the Retaining Side Strips	Model: <table> <tr> <td>FH</td><td>RW-3001129</td></tr> <tr> <td>FHR</td><td>RW-3001129</td></tr> <tr> <td>FHRD</td><td>RW-3003006</td></tr> </table> Note: Order 2 for complete set, one for each side.	FH	RW-3001129	FHR	RW-3001129	FHRD	RW-3003006
FH	RW-3001129						
FHR	RW-3001129						
FHRD	RW-3003006						
Hopper Rubber End Skirt  Highlighted part is the Rubber End Skirt	Model: <table> <tr> <td>FH</td><td>RW-3001132</td></tr> <tr> <td>FHR</td><td>RW-3001132</td></tr> <tr> <td>FHRD</td><td>N/A both sides of hopper open</td></tr> </table>	FH	RW-3001132	FHR	RW-3001132	FHRD	N/A both sides of hopper open
FH	RW-3001132						
FHR	RW-3001132						
FHRD	N/A both sides of hopper open						

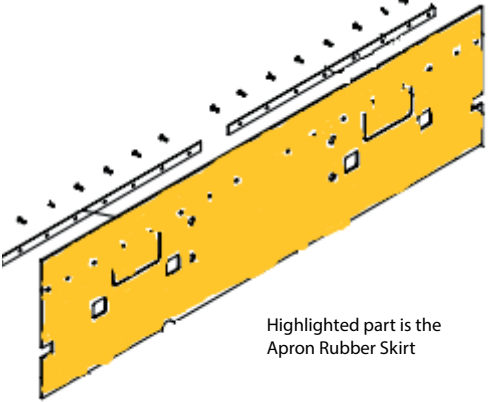
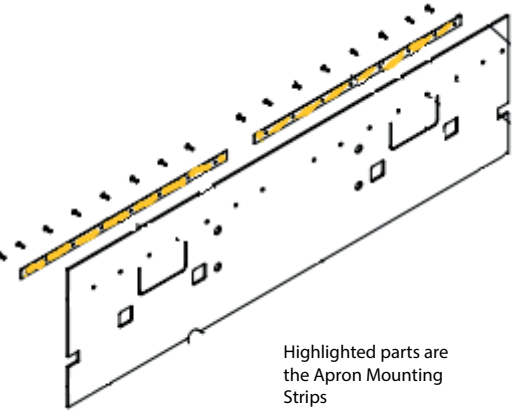
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Hopper Steel Retaining End Strip  Highlighted part is the Retaining End Strip	Model: FH RW-3001130 FHR RW-3001130 FHRD N/A both sides of hopper open
Hopper Bumper Outer Wrap  Highlighted parts are the Bumper Outer Wrap	All Models: RW-3001178 Note: Order 2 for complete set, one for each side.

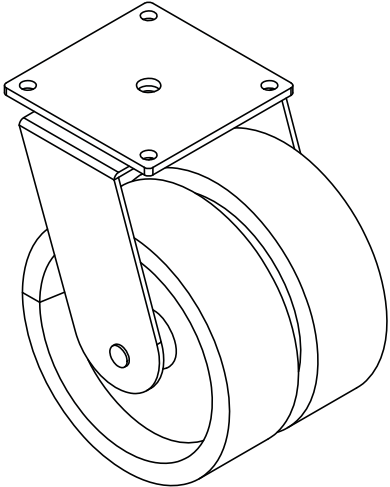
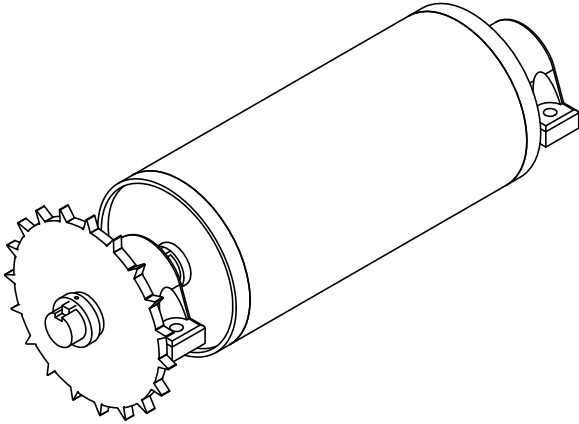
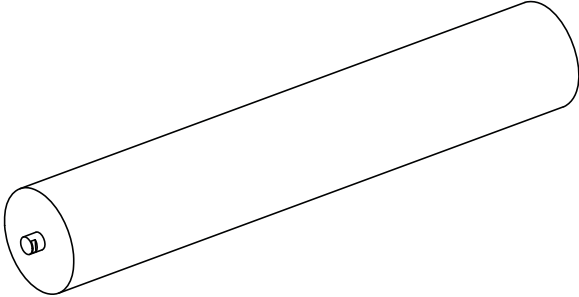
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Hopper Bumper Inner Reinforcement 	All Models: RW-4005066 Note: Order 4 for complete set, 2 for each side. These parts go on the inside of the Bumper Outer Wrap RW-3001178. See Hopper Bumper Outer Wrap on page 64.
Exit Chute Rubber Flashing Strip  Highlighted parts are the Exit Chute Rubber Flashing	All Models: RW-3000023 Note: The Exit Chute has 2 sides. For FH & FHR Models order 2 for complete set. For FHRD Model order 4.
Exit Chute Steel Retaining Strip  Highlighted parts are the Exit Chute Retaining Brackets	All Models: RW-3000024 Note: The Exit Chute has 2 sides. For FH & FHR Models order 2 for complete set. For FHRD Model order 4.

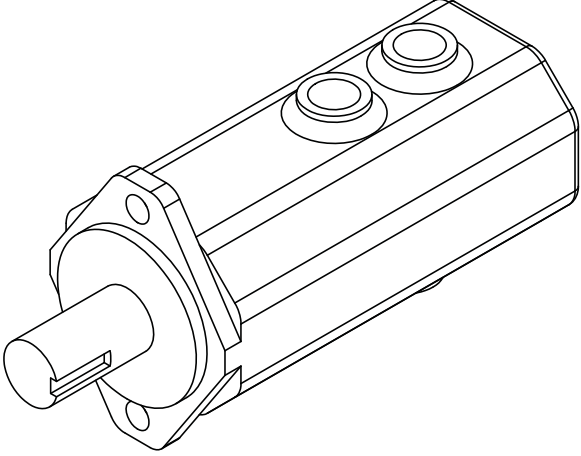
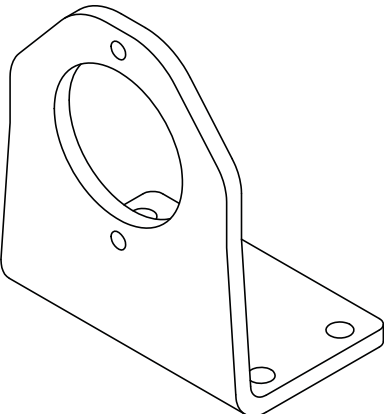
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Apron Rubber Skirt  Highlighted part is the Apron Rubber Skirt	All Models: RW-3001075
Apron Mounting Strips – Steel  Highlighted parts are the Apron Mounting Strips	All Models: RW-3001149 Note: Order 2 to attach Apron Skirt.
Indicator Light 	All Models: RW-4004068

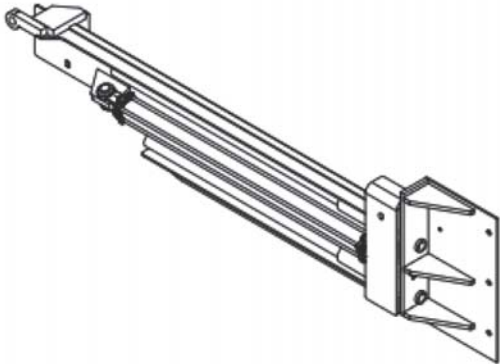
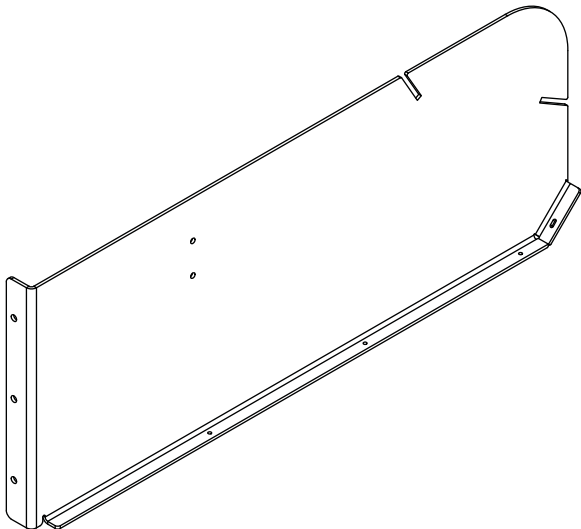
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Caster 	All Models: RW-4000004
Head Pulley Assembly 	All Models: RW-2001003
Idler Roller 	All Models: RW-4000017

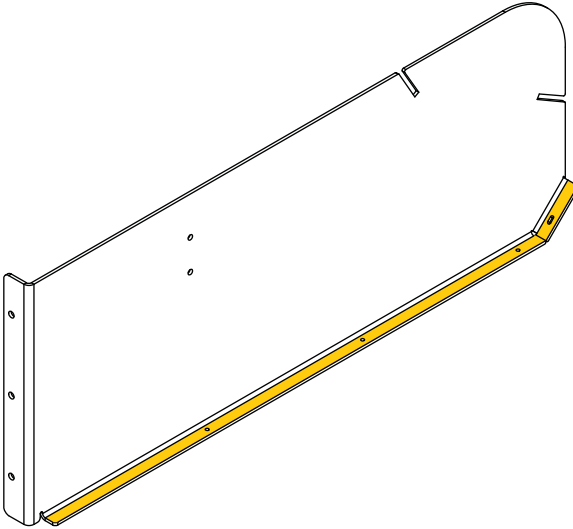
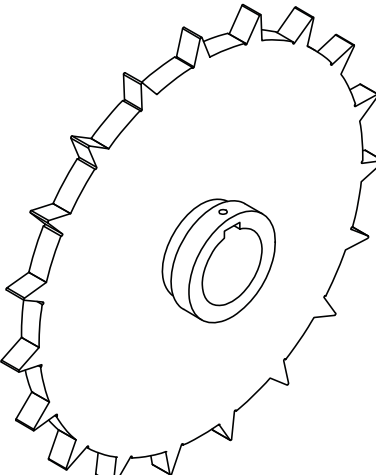
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Hydraulic Motor 	All Models: RW-4000005
Hydraulic Motor Mounting Bracket 	All Models: RW-3001122

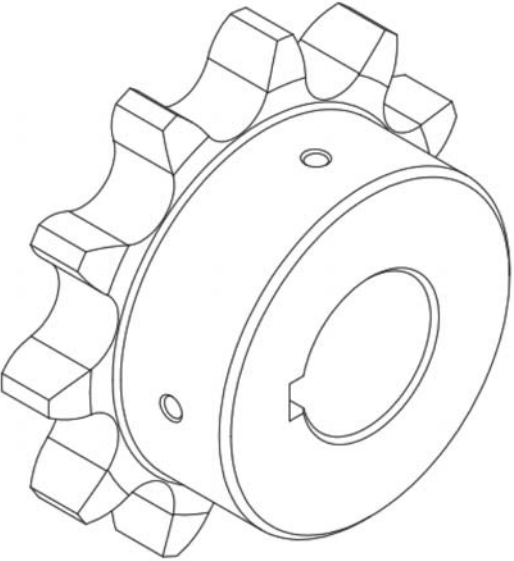
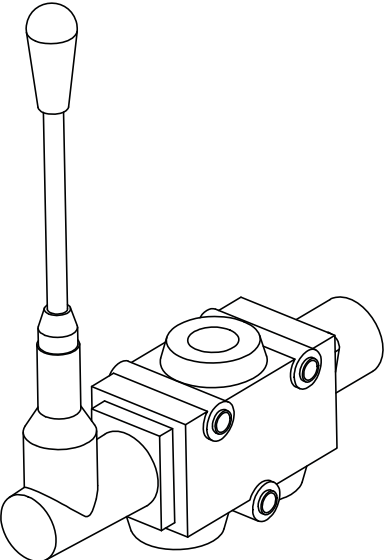
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Shoe Frame Assembly 	All Models: Right Hand RW-2001000 Left Hand RW-2002000
Shoe Catch 	Model: FH Right Hand RW-3001112 FH Left Hand RW-3002030 FHR Right Hand RW-3001112 FHR Left Hand RW-3002030 FHRD Right Side RW-3003044 FHRD Left Side RW-3003045 Wear Strip not included with this part

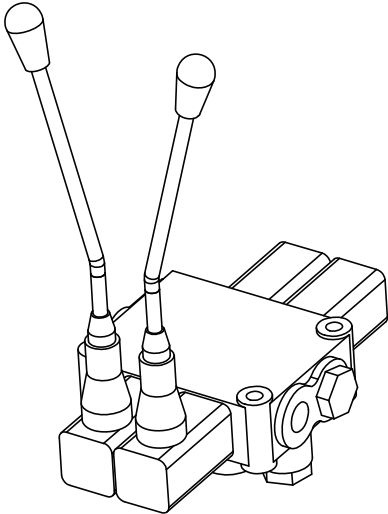
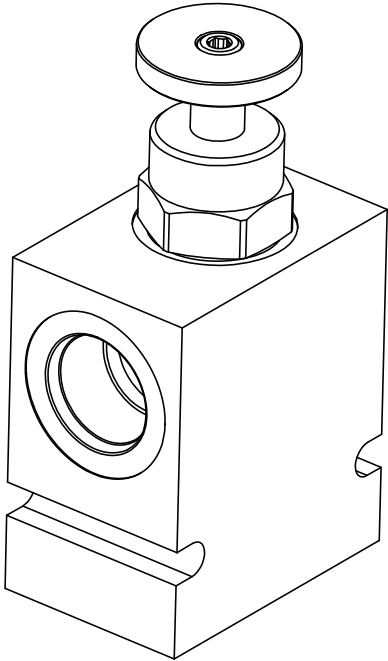
ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Wear Strip 	All Models: RW-3001113
Large Sprocket 	All Models: RW-4000008

ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Small Sprocket (Motor Sprocket) 	All Models: RW-4000020 Needs a Sprocket Key RW-3001139
Belt ON/OFF Control Valve 	FH Model: RW-4000037

ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Slope/Shoe Control Valve 	FH Model: RW-4000038
Belt Speed Control Valve 	FH Model: RW-4000016

ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER										
Remote Control Receiver 	Models: <table> <tr> <td>FH</td><td>Not Applicable</td></tr> <tr> <td>FHR 3120 and Older</td><td>RW-4005064</td></tr> <tr> <td>FHR 3121 and Newer</td><td>RW-4003000</td></tr> <tr> <td>FHRD 1089 and Older</td><td>RW-4005065</td></tr> <tr> <td>FHRD 1090 and Newer</td><td>RW-4003001</td></tr> </table>	FH	Not Applicable	FHR 3120 and Older	RW-4005064	FHR 3121 and Newer	RW-4003000	FHRD 1089 and Older	RW-4005065	FHRD 1090 and Newer	RW-4003001
FH	Not Applicable										
FHR 3120 and Older	RW-4005064										
FHR 3121 and Newer	RW-4003000										
FHRD 1089 and Older	RW-4005065										
FHRD 1090 and Newer	RW-4003001										
Single Remote Control 	Models: <table> <tr> <td>FH</td><td>Not Applicable</td></tr> <tr> <td>FHR</td><td>RW-4005019</td></tr> <tr> <td>FHRD</td><td>Not Applicable</td></tr> </table>	FH	Not Applicable	FHR	RW-4005019	FHRD	Not Applicable				
FH	Not Applicable										
FHR	RW-4005019										
FHRD	Not Applicable										

ILLUSTRATED PARTS LIST

DESCRIPTION	PART NUMBER
Dual Remote Control	Models:
	FH Not Applicable FHR Not Applicable FHRD RW-4005020



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