

BIL-JAX[®]

TRASH REMOVAL SYSTEMS

PLASTI-CHUTE

INSTRUCTION MANUAL

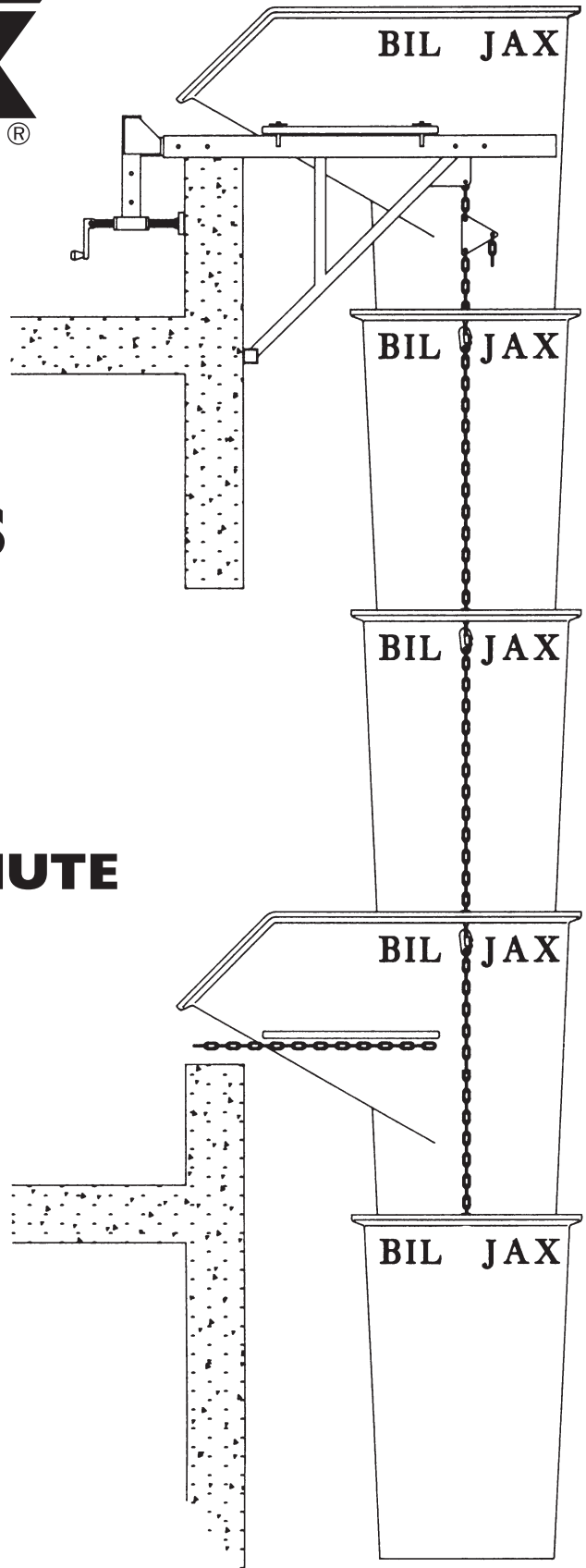


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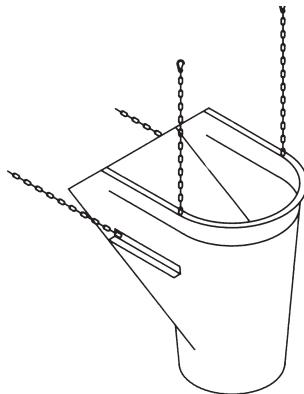
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PARTS LIST

| PART NO. | DESCRIPTION | WT.# |
|-----------|--|------|
| 0086-042Y | Chute Section \varnothing 30" x 48"L w/Chain | 33 |
| 0086-043 | Molded Hopper Section w/ Support Chains, Retainer Chains, and Rubber Dust Flap | 61 |
| 0086-038 | Parapet Outrigger Assembly (pair) | 120 |
| 0086-015 | Lifting Triangle (pair) | 5 |
| 0086-031 | Lifting Jig | 14 |
| 0086-004 | Pulley Stand | 15 |
| 0086-078 | Hand Winch (Includes 90' Cable w/Stand & Winch) | 50 |
| 0086-032 | Hopper Retainer Chain Replacement (pair) | 5 |
| 0086-035 | Hopper Rubber Flap Replacement | 10 |
| 0086-044 | Galvanized Steel Chute Liner | 33 |
| 0086-065 | Galvanized Steel Hopper Liner | 14 |
| 0086-010 | Chain Assembly Replacement | 2 |

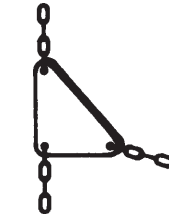


CHUTE WITH CHAINS

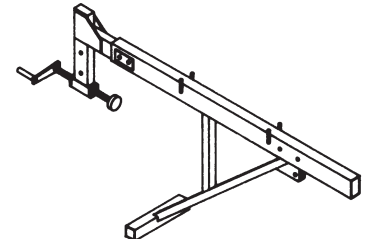


MOLDED HOPPER SECTION

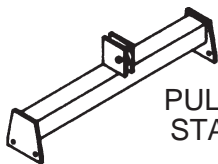
(Incl. Support Chains, Retainer Chains, & Rubber Dust Flap)



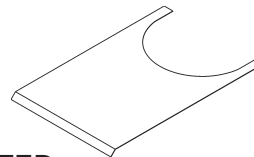
LIFTING TRIANGLE (PAIR)



PARAPET OUTRIGGER ASSEMBLY



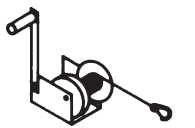
PULLEY STAND



GALVANIZED STEEL HOPPER LINER



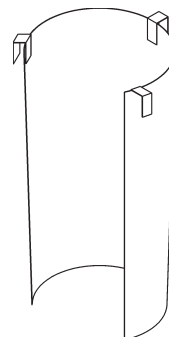
LIFTING JIG



WINCH W/CABLE



WINCH STAND



GALVANIZED STEEL CHUTE LINER
(For Highly Abrasive Conditions)

GENERAL SAFETY AND USE INFORMATION

WARNING

FAILURE TO FOLLOW THESE INSTRUCTIONS, OR ANY OTHER IMPROPER USE OF THIS EQUIPMENT WILL RESULT IN SERIOUS INJURY OR DEATH!

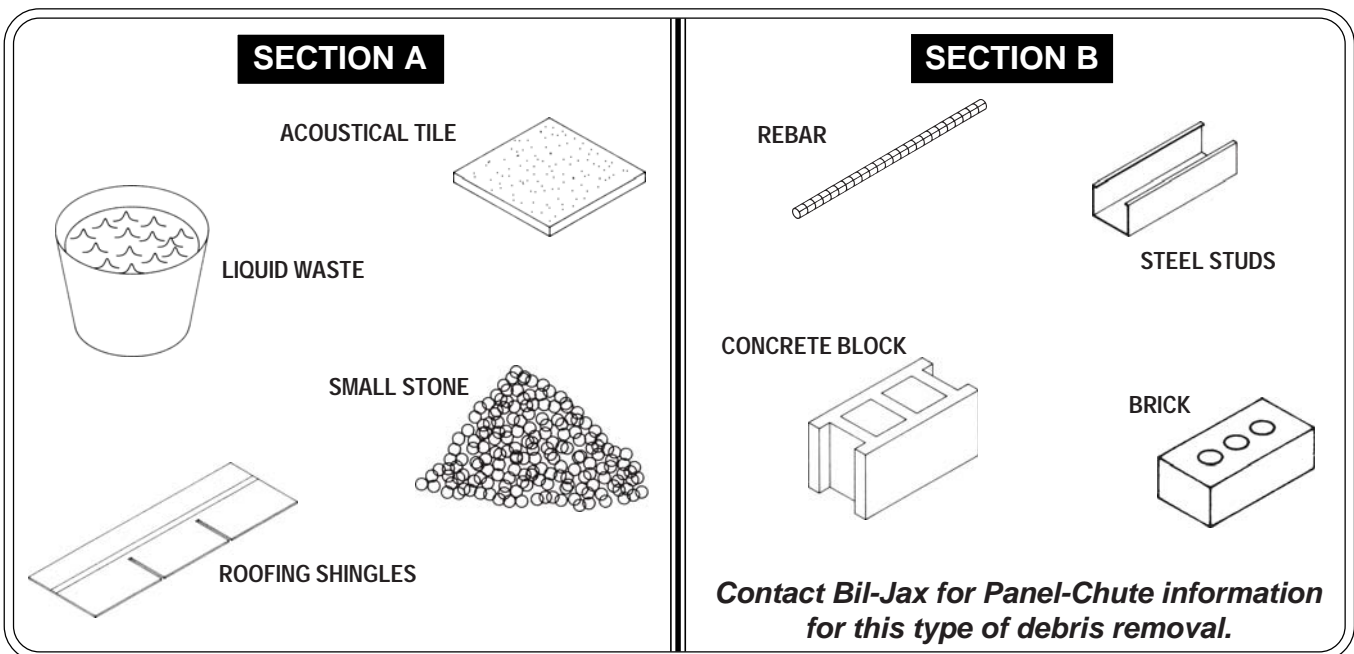
ASSEMBLY:

- Before beginning assembly, read and understand operation manual and all instructions and warnings on the equipment. If you do not understand anything in the manual or any of the warnings on the equipment, **DO NOT** attempt to assembly this product. Contact your supervisor for assistance or contact the manufacturer (Bil-Jax).
- Inspect all components before and during assembly. Pay special attention to chains, hoods, mounting hardware, outrigger assemblies, and winch mechanism to be certain all components are in good working order.
- Pre-planning is essential! Measure the total chute length and distance between hoppers before beginning assembly. Chain length adjustment should be made accordingly as assembly progresses to be sure that all hoppers will be located appropriately.
- Check to be sure that the support structure for the outriggers will be able to carry the load. NEVER support the chute outriggers from a structure of questionable strength.
- A full body safety harness and lanyard must be worn at all times when assembling, disassembling, or adjusting trash removal system. **NEVER** attempt to assemble, disassemble, or adjust trash removal system components without wearing full body harness and lanyard.
- Lanyard must be attached to independent life line or other structurally sound attaching point.
- Install outrigger assembly every 700 lbs. of chute (See table on page 7). **DO NOT** exceed this weight between outriggers.
- Never build a trash removal system of excessive weight or height.
- Trash removal system must be tied to the structure at every hopper and at intermediate intervals as necessary to prevent excessive movement.
- NEVER create angles to tight bends within the system. Install a rope or cable inside the system for ease of movement and to create gradual sloping of the chute when necessary.
- Once the trash removal system is completely assembled, guard rail must be installed at all levels where hopper will be used.

USE:

- Cordon off or barricade the area under and around the chute to ensure that fellow workers and the public are protected from falling debris.
- This system is designed for the discarding of debris only! **NEVER** use it as a slide or exit ramp for people.

- **NEVER** attempt to discard debris that is larger than 1/2 the diameter of the system (14" in length or diameter).
- **NEVER** discard debris that could puncture the chute. Plasti-Chute must always be used for materials it was designed to accommodate. Examples of these types of materials are acoustical tile, liquid waste, small stone, roofing shingles.
- **Always** cordon off the general work area to keep personnel out while chute is in use.
- **NEVER** allow debris to accumulate within the system or at the bottom of the system.
- Periodically reposition the bottom of the chute so that debris will be deposited uniformly into the truck or dumpster.
- Periodically check dumpster or truck as debris is deposited in chute to be sure that no obstruction has occurred. **NEVER** enter the chute to attempt to clear out an obstruction.
- **NEVER** place your head, arms, legs, or any other part of your body into the hopper or chute to check for obstructions, to clear out debris, or for any other reason.
- If trash system is tied to a dumpster or a truck, be sure to untie it before moving either the dumpster or the truck.
- **NEVER** leave chute unattended. Either raise or remove bottom sections at the end of each work day or when work at the site stops.



GENERAL GUIDELINES

- NOTHING LARGER THAN 14" IN DIAMETER OR LENGTH SHOULD BE PLACED IN THE CHUTE.
- AVOID SHARP OBJECTS THAT COULD CAUSE PUNCTURE.
- ALWAYS CORDON OFF THE GENERAL WORK AREA TO KEEP PERSONNEL OUT WHILE CHUTE IS IN USE.

PLANNING AND PREPARATION OF CHUTE ELEMENTS

DUMPING AREA

- Choose an area that can be easily accessed by trash removal vehicles.
- Cordon off or barricade the area to ensure fellow workers and public are protected from falling debris.

MOUNTING AREA

- Choose a supporting structure from which to hang outriggers.
- Select appropriate outriggers for your supporting structure. Parapet outriggers must be used in window openings and parapet roofs. Slab outriggers must be used with a slab edge.
- Measure the height requirement of the proposed chute. Calculate the number of chutes and hoppers needed by dividing the total height by 3.25 feet (usable height of each chute).
- Determine if the supporting structure is capable of carrying the load imposed by the chute. Use the following table to assist in determining load: See table on page 7.
- Use additional sets of outriggers when weight of chutes and hoppers exceeds 700 lbs.

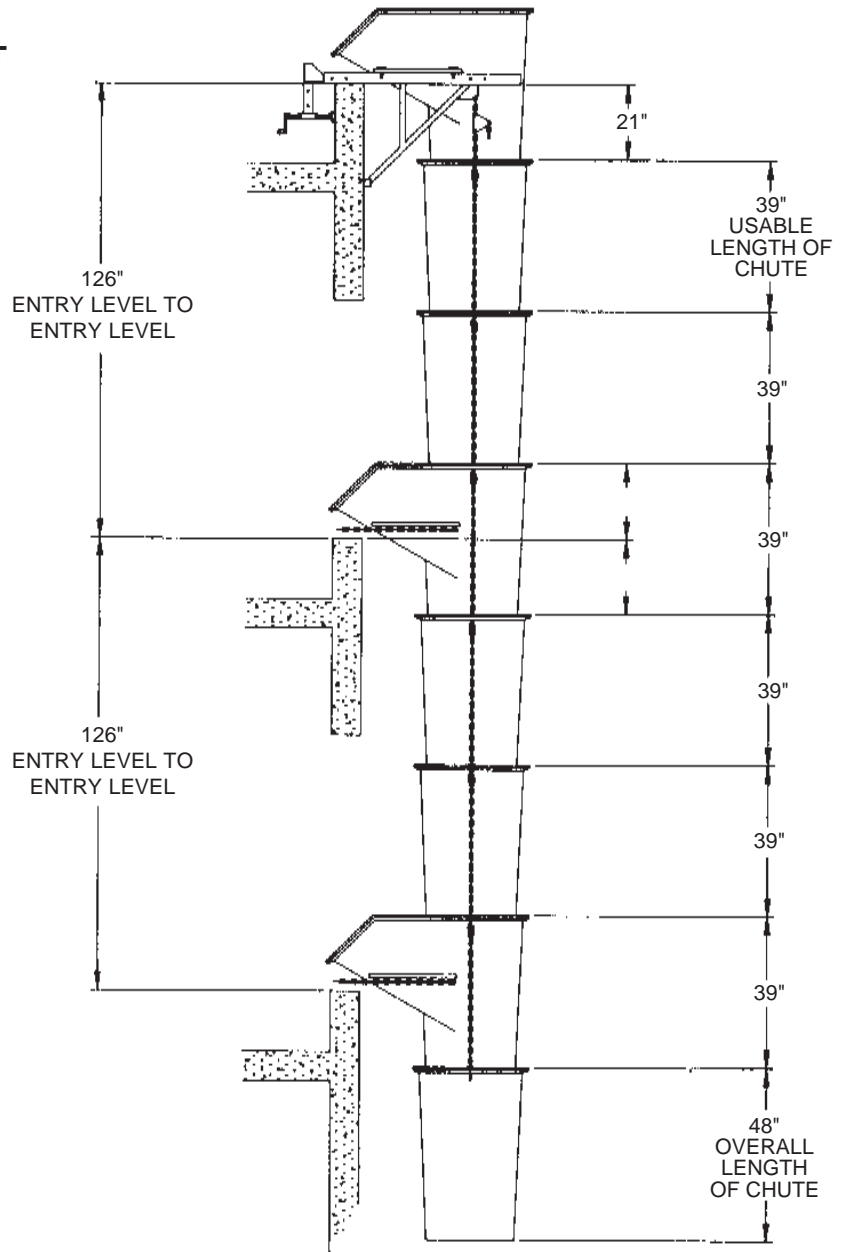
700 Lbs. Lifting / Supporting Capacity

NUMBER OF CHUTES

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1 | 86LB 3.5FT | 112LB 7.0FT | 138LB 10.5FT | 164LB 14.0FT | 190LB 17.5FT | 216LB 21.0FT | 242LB 24.5FT | 268LB 28.0FT | 294LB 31.5FT | 320LB 35.0FT | 346LB 38.5FT | 372LB 42.0FT | 398LB 45.5FT | 424LB 49.0FT | 450LB 52.5FT | 476LB 56.0FT | 502LB 59.5FT | 528LB 63.0FT | 554LB 66.5FT | 580LB 70.0FT | 606LB 73.5FT | 632LB 77.0FT | 658LB 80.5FT | 684LB 84.0FT |
| 2 | 146LB 7.0FT | 172LB 10.5FT | 198LB 14.0FT | 224LB 17.5FT | 250LB 21.0FT | 276LB 24.5FT | 302LB 28.0FT | 328LB 31.5FT | 354LB 35.0FT | 380LB 38.5FT | 406LB 42.0FT | 432LB 45.5FT | 458LB 49.0FT | 484LB 52.5FT | 510LB 56.0FT | 536LB 59.5FT | 562LB 63.0FT | 588LB 66.5FT | 614LB 70.0FT | 640LB 73.5FT | 666LB 77.0FT | 692LB 80.5FT | | |
| 3 | 206LB 10.5FT | 232LB 14.0FT | 258LB 17.5FT | 284LB 21.0FT | 310LB 24.5FT | 336LB 28.0FT | 362LB 31.5FT | 388LB 35.0FT | 414LB 38.5FT | 440LB 42.0FT | 466LB 45.5FT | 492LB 49.0FT | 518LB 52.5FT | 544LB 56.0FT | 570LB 59.5FT | 596LB 63.0FT | 622LB 66.5FT | 648LB 70.0FT | 674LB 73.5FT | 700LB 77.0FT | | | | |
| 4 | 266LB 14.0FT | 292LB 17.5FT | 318LB 21.0FT | 344LB 24.5FT | 370LB 28.0FT | 396LB 31.5FT | 422LB 35.0FT | 448LB 38.5FT | 474LB 42.0FT | 500LB 45.5FT | 526LB 49.0FT | 552LB 52.5FT | 578LB 56.0FT | 604LB 59.5FT | 630LB 63.0FT | 656LB 66.5FT | 682LB 70.0FT | | | | | | | |
| 5 | 326LB 17.5FT | 352LB 21.0FT | 378LB 24.5FT | 404LB 28.0FT | 430LB 31.5FT | 456LB 35.0FT | 482LB 38.5FT | 508LB 42.0FT | 534LB 45.5FT | 560LB 49.0FT | 586LB 52.5FT | 612LB 56.0FT | 638LB 59.5FT | 664LB 63.0FT | 690LB 66.5FT | | | | | | | | | |
| 6 | 386LB 21.0FT | 412LB 24.5FT | 438LB 28.0FT | 464LB 31.5FT | 490LB 35.0FT | 516LB 38.5FT | 542LB 42.0FT | 568LB 45.5FT | 594LB 49.0FT | 620LB 52.5FT | 646LB 56.0FT | 672LB 59.5FT | 698LB 63.0FT | | | | | | | | | | | |
| 7 | 446LB 24.5FT | 472LB 28.0FT | 498LB 31.5FT | 524LB 35.0FT | 550LB 38.5FT | 576LB 42.0FT | 602LB 45.5FT | 628LB 49.0FT | 654LB 52.5FT | | | | | | | | | | | | | | | |
| 8 | 506LB 28.0FT | 532LB 31.5FT | 558LB 35.0FT | 584LB 38.5FT | 610LB 42.0FT | 636LB 45.5FT | 662LB 49.0FT | 688LB 52.5FT | | | | | | | | | | | | | | | | |
| 9 | 566LB 31.5FT | 592LB 35.0FT | 618LB 38.5FT | 644LB 42.0FT | 670LB 45.5FT | 696LB 49.0FT | | | | | | | | | | | | | | | | | | |
| 10 | 626LB 35.0FT | 652LB 38.5FT | 678LB 42.0FT | | | | | | | | | | | | | | | | | | | | | |
| 11 | 686LB 38.5FT | | | | | | | | | | | | | | | | | | | | | | | |

NUMBER OF HOPPERS

MEASUREMENT REQUIREMENT ILLUSTRATION

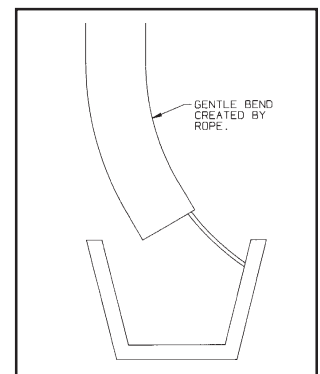
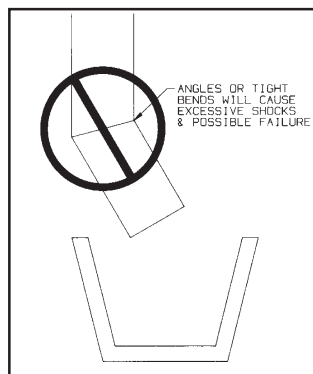


MEASUREMENT REQUIREMENT FOR INTERMEDIATE HOPPERS

- Figure the location of intermediate hoppers by measuring the distance from the entry level of one level to the entry level of the next. Subtract 39" (usable length of hopper) from this measurement. The difference is the length of chute required between hoppers.
- Record this value for later use when raising the chute.
- For additional hoppers, repeat the previous procedure until all intermediate hoppers have a location.
- Record these values for later use when raising the chute.
- It is important to remember that the more care taken in obtaining precise measurements the fewer adjustments that will be necessary after assembly.

ADDITIONAL PRE-ASSEMBLY INSTRUCTIONS

- Never create an angle or tight bend in chute. See installation of rope at right.



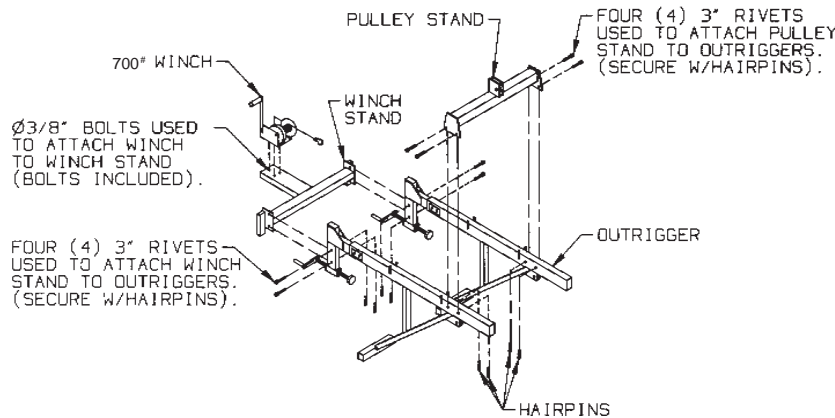
INSTALLATION OF THE CHUTE

INSTALLATION OF OUTRIGGERS

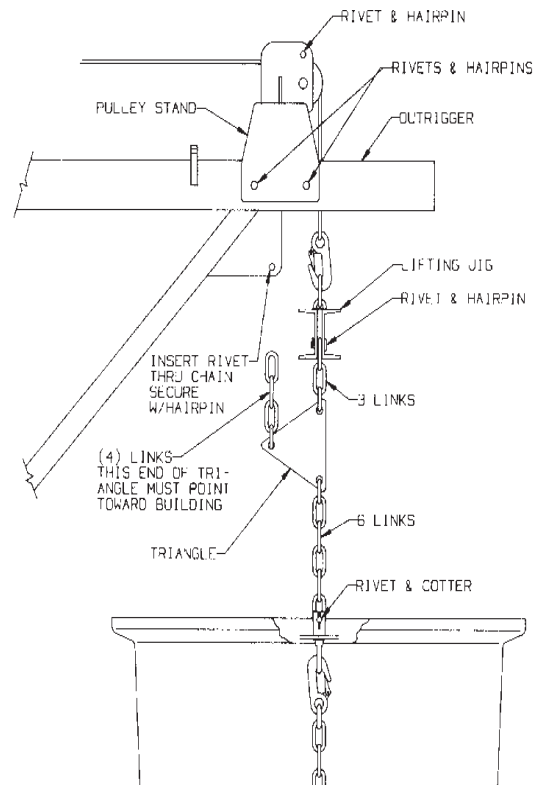
- Wear full body safety harness with lanyard securely fastened to rigid structure capable of carrying the weight of the installer prior to installing outriggers.
- Position outriggers with 28-1/2 inches between them (inside to inside).
- Secure each outrigger by tightening rubber foot snugly against supporting structure.

INSTALLATION OF LIFTING MECHANISM

- Place pulley stand on outriggers with pulley facing away from building. Align holes in pulley stand with those in outriggers by sliding outward. Place all (4) rivets through holes in both and secure with hairpins.



- Mount winch stand to end of outrigger arm by aligning holes in which stand with those in outrigger arms. Place all (4) rivets through holes in both and secure with hairpins.
- Pull cable off winch, over pulley stand, and lower to the ground. Replace rivet just above pulley to ensure that cable stays in pulley groove.
- Place hook at end of cable through lifting eye hook on lifting jig.
- Attach lifting triangle to jig as shown in illustration below. Pay close attention to orientation of triangle. If triangle is not oriented properly, assembly of chutes to outriggers may not be possible.
- Attach first chute to triangle by removing lifting chains from chute and replacing rivet through last link in lifting triangle. Secure with cotter.



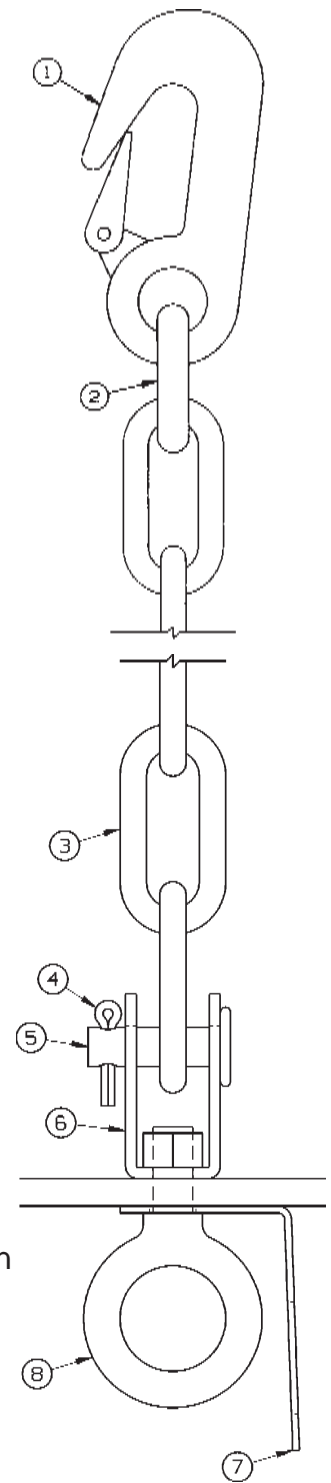
RAISING THE CHUTE

- Raise the first chute until it is approximately 40 inches above the ground.
- Attach the snap hooks of the next chute to the eye bolt of the chute above.
- Continue to add chutes and intermediate hoppers as necessary. Don't forget to adjust the length of chain as necessary to ensure proper hopper height. (Use values obtained in additional height requirement portion of instructions.)
- Adjust length of chain on intermediate hoppers by removing rivet that secures lifting chain and replacing rivet through appropriate link that satisfies the length requirement.

| NO | # | DESCRIPTION | PART # |
|----|---|-------------------------|-----------|
| 1 | 1 | SNAP HOOK | 0090-0661 |
| 2 | 1 | Ø1/4" MISSING LINK | 0090-0698 |
| 3 | 1 | 5/0 CHAIN (24 LINKS) | 0086-017 |
| 4 | 1 | Ø5/32" x 3/4" COTTER | 0090-0151 |
| 5 | 1 | Ø3/8" RIVET (1-1/4" LG) | 0086-009 |
| 6 | 1 | HOOK BRACKET WELDMENT | 0086-014 |
| 7 | 1 | CONNECTING FLAT | 0086-053 |
| 8 | 1 | Ø3/8" SHLDR EYE BOLT | 0086-020 |

ATTACHING CHUTE TO OUTRIGGERS

- Raise chute until lifting jig is within a half an inch of the bottom of the outriggers.
- Place chain from free portion of lifting triangle between the gussets on lower side of outrigger.
- Pin through hole in gussets and chain using rivet. Secure rivet with hairpin.
- Lower lifting jig until all weight is supported by gussets.
- Detach lifting jig from chute by removing rivets on both ends of jig.



ANCHORING OF RETAINER CHAINS

- Anchor each intermediate hopper from excessive movement by securing retainer chains with anchor bolts (not included) to sill of intermediate entry level.

INSTALLATION OF ROPE

- Install rope (not included) by tying one end near the outermost portion of the outrigger.
- Feed rope through chute making sure the rope is kept against the back side of chute.
- Tie rope securely to dumpster or the like to create a gentle slope.

INSTALLATION OF UPPERMOST HOPPER

- Remove lifting jig, pulley stand, and winch stand from outriggers.
- Grasp hopper with entry facing toward building. Slide onto outriggers until hopper falls over pins on outriggers. Secure with hairpins.

DISASSEMBLY

- Put on and wear full body harness with lanyard securely fastened to rigid structure capable of carrying the weight of the person disassembling the system.
- Disconnect all intermediate hoppers from wall by removing anchors on retainer chain.
- Remove uppermost hopper.
- Reinstall winch, winch stand, pulley stand, and lifting jig.
- Connect loose chain of lifting triangle to lifting jig.
- Transfer weight from gussets to lifting jig by raising jig to within 1/2 inch of outriggers.
- Disconnect lifting triangle from gussets.
- Lower chutes to ground, disassembling as necessary.



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