

CURTIS Tractor Cab, Inc. **FAST-CAST SERIES** **SPREADERS**

INSTALLATION & OWNER'S MANUAL

Covers: Fast-Cast 175, 2000, 3000, 4000

Table of Contents

Safety Precautions & Warnings	Pp. 1-3
Wiring Instructions.....	Pp. 4,5
Operating Instructions.....	Pp. 6,7
Fast-Cast 175 Schematic Assembly.....	P. 8
Fast-Cast 175 Assembly & Wiring Instructions..	Pp. 9-11
Drop Utility Mount Schematic Assembly.....	P. 12
3-Point Hitch Mount Schematic.....	P. 13
Fast-Cast 2000 Schematic Assembly.....	P. 14
Fast-Cast 3000 Schematic Assembly.....	P. 15
Drive Assembly Schematic.....	P. 16
Fast-Cast 4000 Schematic Assembly.....	P. 17
Swing Away-Pivot Mount Schematic.....	P. 18-20
Troubleshooting.....	P. 21
Spreader Maintenance.....	P. 22

Fast-Cast 175

Application: SALT, DEICERS, FREE FLOWING MATERIAL

Fast-Cast 2000

Application: SALT, DEICERS, FREE FLOWING MATERIAL

Fast-Cast 3000

Application: SALT, DEICERS, FREE FLOWING MATERIAL

Fast-Cast 4000

Application: 100% SAND, SAND/SALT MIX

Curtis Tractor Cab, Inc. and/or Curtis International, Inc. reserves the right to change product design or specifications without notice or liability. Curtis snowplows and truck equipment should only be used on vehicles equipped with the manufacturer's snowplow preparation package. Snowplowing without the original snowplow preparation package may damage your vehicle and the added weight of the equipment may impair the operation and control of the vehicle.

CURTIS PRODUCTS ARE PROTECTED UNDER THE FOLLOWING PATENT NUMBER: 5815956. OTHER PATENTS PENDING



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Safety



Before attempting any procedure in this book, these safety instructions must be read and understood by all workers who have any part in the preparation or use of this equipment.

For your safety warning and information decals have been placed on this product to remind the operator of safety precautions. **If anything happens to mark or destroy the decals, please request new ones.**



Remember most accidents are preventable and caused by human error. **Exercising of care and precautions must be observed to prevent the possibility of injury to operator or others!**



Never operate equipment when under the influence of alcohol, drugs, or medication that might alter your judgment and/or reaction time.



Before working with the spreader, secure all loose fitting clothing and unrestrained hair.



Always wear safety glasses with side shields when working metal against metal. Failure to do this could result in serious injury to the eyes or other parts of the body.

Safety (continued)



Never allow children to operate or climb on equipment.

Never weld or grind on equipment without having a fire extinguisher available.

Always check areas to be spread to be sure no hazardous conditions or substances are in the area.

Always inspect unit for defects: broken, worn or bent parts, weakened areas on spreader or mount.



Always shut off vehicle and power source before attempting to attach or detach or service spreader unit. Be sure vehicle/power source is properly braked or chocked.



Always make sure personnel are clear of areas of danger when using equipment.



Always keep hands, feet, and clothing away from power-driven parts.

Remember it is the owner's responsibility to communicate information on safe usage and proper maintenance of all equipment.

Safety Precautions



Never exceed 45 m.p.h. when loaded spreader is attached to vehicle. Braking distances may be reduced and handling characteristics may be impaired at speeds above 45 m.p.h.



Never use wet materials, or materials with foreign debris in the Fast-Cast 175, Fast-Cast 2000, and Fast-Cast 3000. These units are designed to handle dry, clean, free-flowing material.

Note: Can not spread water softner salt.



Never leave material in hopper for long periods of time. Be aware that all ice melters are hygroscopic and will attract atmospheric moisture and harden up.



Always inspect pins, and latches whenever attaching or detaching spreader, and before traveling.



Inspect the unit periodically for defects. Parts that are broken, missing, or worn out must be replaced immediately. The unit, or any part of it should not be altered without prior written permission from the manufacturer.



Wiring Instructions

STEP 1: TAKE HARNESS ASSEMBLY AND ROUTE FROM THE REAR OF THE VEHICLE TO THE FRONT. ROUTE HARNESS ALONG FRAME AND ATTACH TO FRAME HOLES AND FRAME SUPPORTS. IT IS NOT RECOMMENDED TO ATTACH TO FUEL OR BRAKE LINES FOR OBVIOUS REASONS. DO NOT ROUTE CLOSE TO EXHAUST SYSTEM OR ENGINE, EVEN THOUGH CURTIS USES HIGH TEMPERATURE WIRING IT STILL COULD MELT UNDER EXTREME HEAT AND SHORT THE SPREADER ELECTRICAL SYSTEM AS WELL AS THE VEHICLE ELECTRICAL SYSTEM.

STEP 2: MOUNT REAR PLUG ON BUMPER USING SUPPLIED BOLTS, LOCATE TOWARDS THE CENTER OF THE BUMPER TO REDUCE THE AMOUNT OF DEBRIS THE TIRES WILL THROW TO THE REAR. **IMPORTANT-APPLY A SMALL AMOUNT OF DIELECTRIC GREASE TO THE PLUG.**

STEP 3: SECURE HARNESS FROM THE REAR TO THE FRONT USING HEAVY DUTY TY-WRAPS OR FRAME CLIPS ALONG THE FRAME AND LIGHTER DUTY TY-WRAPS EVERYWHERE ELSE.

STEP 4: LAYOUT HARNESS PORTION THAT CONNECTS TO THE BATTERY ALONG THE FIRE WALL AND FENDER WELL. DO NOT CONNECT POWER LEADS TO BATTERY YET. DRILL A 3/4" HOLE IN THE FIRE WALL FOR THE CONTROL PORTION OF THE HARNESS AND ROUTE CONNECTOR AND HARNESS THROUGH HOLE. BE SURE TO CHECK THE AREA ON THE OTHER SIDE OF THE FIRE WALL TO MAKE SURE YOU ARE NOT GOING TO DRILL INTO THE VEHICLE HARNESS OR A CONTROL MODULE. GENERALLY YOU CAN DRILL ON EITHER SIDE OF THE STEERING WHEEL FOR A GOOD LOCATION.

STEP 4A: (FAST-CAST 4000) THE POWER HARNESS FROM CONTROL BOX TO BATTERY WILL NEED TO BE ROUTED FROM THE INSIDE OF THE CAB TO THE BATTERY – THIS RESULTS FROM THE LARGE HIGH AMPERAGE CONNECTOR. ROUTE LEADS WITH LUGS TO BATTERY – DO NOT CONNECT POWER AT THIS TIME.

STEP 5: CONNECT HARNESS TO THE BACK OF THE CONTROLLER AND MOUNT TO A SUITABLE LOCATION. ****(NOTE)****YOU MAY WANT TO CONTACT CUSTOMER BEFORE MOUNTING CONTROLLER, SOME PREFER NOT TO HAVE HOLES DRILLED INTO THE DASHBOARD. TY-WRAP LOOSE CONTROLLER HARNESS AND MOVE TO THE ENGINE COMPARTMENT.

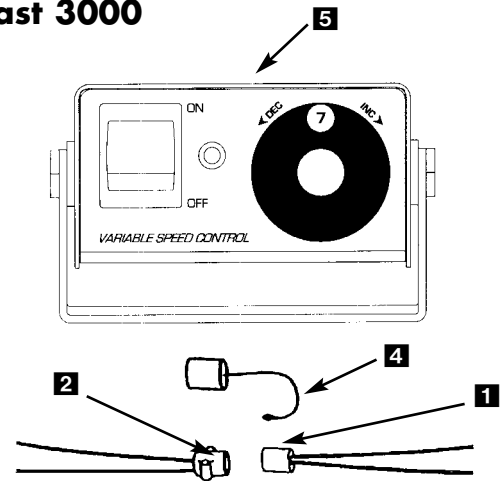
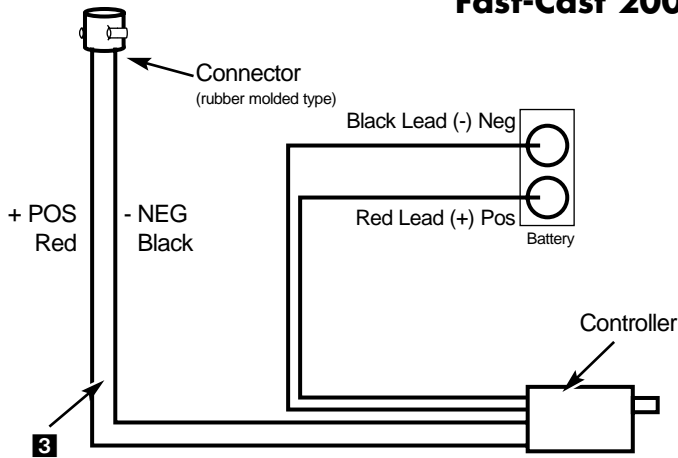
STEP 6: CONNECT POWER LEADS TO THE BATTERY: RED+ POSITIVE, BLACK - NEGATIVE, ALWAYS CONNECT TO THE PRIMARY BATTERY IF USING A DUAL BATTERY SYSTEM, SECURE LOOSE LOOM TO ANY OTHER LARGE OR MEDIUM VEHICLE HARNESS WITH MEDIUM DUTY TY-WRAPS THIS WILL SECURE WIRING HARNESS.

STEP 7: INSTALL IGNITION WIRE TO AN AUXILIARY CIRCUIT THAT IS HOT WHEN THE IGNITION KEY IS TURNED TO ON POSITION. THIS WIRE IS 60" LONG AND HAS A FEMALE TERMINAL ATTACHED TO IT. THIS WIRE WILL PLUG INTO BACK OF CONTROLLER. THIS WIRE MUST BE INSTALLED IN ORDER FOR CONTROLLER TO WORK.

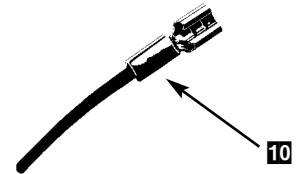
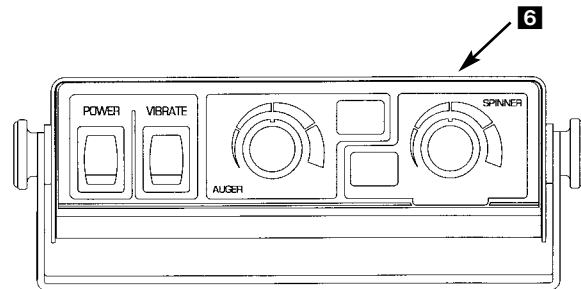
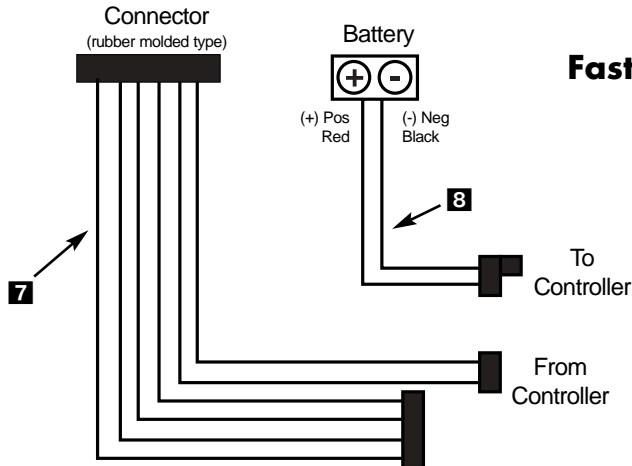
STEP 8: PUSH THE ON/OFF BUTTON ON THE CONTROLLER TO CHECK FOR POWER, WHEN THAT HAS BEEN CONFIRMED TURN POWER OFF. THE ELECTRICAL PORTION OF THE INSTALLATION IS COMPLETE.

NOTE: IF ADDING AN INLINE FUSE, USE A 35 AMP SLOW BLOW FUSE (FAST-CAST 2000 AND FAST-CAST 3000 ONLY), AND USE A 60 AMP SLOW BLOW FUSE FOR FAST-CAST 4000 ONLY.

Control Parts / Wiring Schematic Fast-Cast 2000 / Fast-Cast 3000



Fast-Cast 4000



Special Notes:

1. All external connections must have dielectric grease.
2. Read lead labels before attaching to power source or ground.
3. No other devices may be spliced into wiring harness.
4. Any repairs to wiring harness must be done with heat shrink butt connectors.
5. If inline fuse is installed, use a 35 amp slow blow (Fast-Cast 2000 and Fast-Cast 3000), and use a 60 amp slow blow fuse for Fast-Cast 4000 only.

Item No.	Part No.	Description	Qty.
1	1CS1P39	Male Splice Cord - 18"	1
2	1CS1P38	Female Splice Cord - 18"	1
3	1CS1P35	Wiring Harness - 24'	1
4	1CS1P36	Dust Cover	1
5	1CS1P32	Controller	1
6	1CS4P25	Fast-Cast 4000 Controller	1
7	1CS4P26	Fast-Cast 4000 Wiring Harness - 25'	1
8	1CS4P27	Control Power Cable	1
9	1CS1P52	Dielectric Grease - 1 1/2 oz.	1
10	1CS1P40	60" Ignition Wire	1



Operating the Spreader

Preparation

Caution – Sweep area clear of foreign objects or obstacles that could cause personal injury. Keep other persons, children, or animals out of the area to be spread.

Spreader Loading

Warning – Do not overload vehicle. Use chart below to calculate weight of material. Weights of material are an average for dry materials.

<u>Material</u>	<u>Weight Per Cubic Ft.</u>
Rock Salt	35-40 lbs.
Coarse Sand	85-95 lbs.

- Maximum weight of material for the Fast-Cast 175, 180 lbs., the Fast-Cast 2000, 300 lbs., the Fast-Cast 3000, 600 lbs., and the Fast-Cast 4000, 750 lbs.
- Be sure to comply with manufacturer's maximum gross vehicle weight ratings.
- **Warning** – Never leave materials in hopper for long periods of time as salt is hygroscopic and will attract atmospheric moisture and harden up. When spreading sand mix with 20% ice melter to prevent the material from freezing.

Spreading Tips

- Never exceed 10 m.p.h. when spreading.
- For a wider pass, increase spinner speed.
- For a heavier pass, drive slower, or increase auger speed (Fast-Cast 4000).
- Never operate spreader around pedestrians.
- Spread ice melters with the storm to prevent unmanageable levels of ice.
- Calculate spread pattern when near vegetation.



Operating the Spreader (cont.)

Spreader Operation

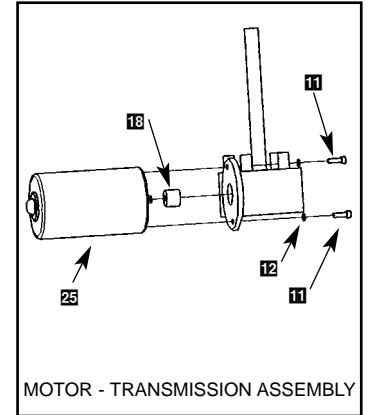
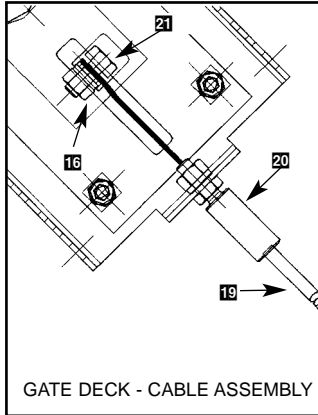
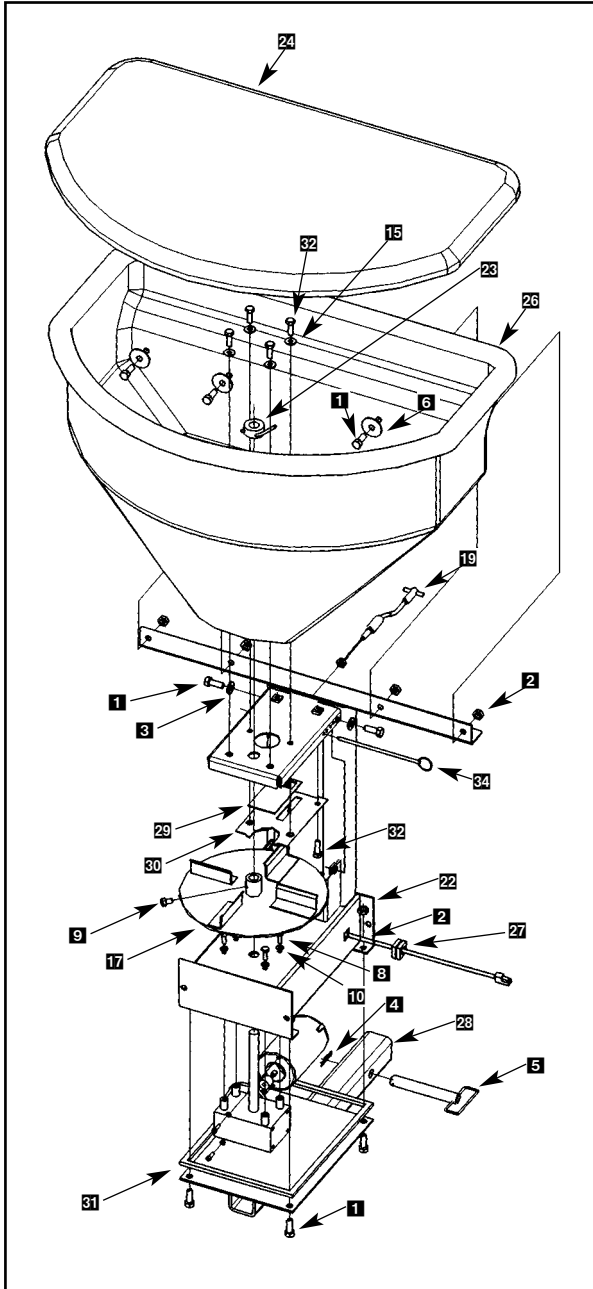
Fast-Cast 2000 / Fast-Cast 3000

- The variable speed controller has finger-tip dial action, digital system status with warning protection.
- To start, press power switch on controller and spreader will accelerate to speed set on dial.
- To stop, press power switch on controller to off position.
- Adjust speed of spinner by using dial on right side of controller.
- If audible beeping occurs, read the sequence and refer to page 21.

Fast-Cast 4000

- The Dual Variable Speed Control has dual finger-tip dials for maximum performance, digital system status with warning protection and built-in Vibrator Switch.
- To start, press power switch on controller and spreader will accelerate to speed set on spinner and auger dials.
- To stop, press power switch on controller to off position.
- Speed of auger and spinner may be adjusted separately to get desired flow and spread distance from spreader.
- The Vibrator Switch is needed for dense material or to increase the flow to the Auger. This eliminates bridging of material.
- A Material Baffle (Part #1CS4P19) has been installed in your spreader to stop fine material from free-flowing. If using dense or damp material, or if more flow is desired, remove Material Baffle. However, it is recommended that the Material Baffle remain in place if using bulk salt.
- It is important that the Inverted Vee (Part #1CS4P18) not be removed except when servicing.
- If audible beeping occurs, read display to identify problem. If display reads "OL" (overload) or "OH" (overheat). Shut controller down and carefully clear jammed auger. If display reads "E1" this means there is a dead short in system. Do not use until problem is corrected. If display reads "E 0" this means that the motor is not getting any power. Check all connections. If display reads "LB" the vehicle battery is extremely low and could damage system.
- If there are any problems while operating the spreader, refer to **Troubleshooting Guide** on page 21.

**Fast-Cast 175
Schematic Assembly**



Item No.	Part No.	Description	Qty.
1	1CS1P8	3/8" - 16" x 1" Hex Bolt	10
2	1CS1P9	3/8" - Locknut	10
3	1CS1P41	3/8" Flat Washer	2
4	1SM1P3	2-5/16" Hair Pin Clip	1
5	1SM1P2	5/8" x 5-1/2" Hitch Pin	1
6	1CS2P15	3/8" Fender Washer	4
7	1CS1P53	Transmission	1
8	1CS1P25	1/4" - 20 x 3/4" Stainless Hex Bolt	4
9	1CS1P24	5/16" - 18 x 1/2" Hex Bolt	1
10	1CS1P30	1/4" Stainless Lock Washer	4
11	1CS1P27	#10 - 32 x 5/8" Hex Machine Screw	2
12	1CS1P28	#10 - 32 Lockwasher	2
13	1SM5P1	5/16" Lock Nut	6
14	1CS1P46	5/16" Lockwasher	1
15	1CS2P21	5/16" Flatwasher	4
16	1CS1P7	5/16" - 18 Hex Nut	1
17	1CS1P18	10" Steel Spinner	1
18	1CS1P51	Motor Drive Coupler	1
19	1CS2P2	T-Handle Cable - 10'	1
20	1CS2P16	Bulkhead Cable Fitting	1
21	1CS2P17	5/16" - 16 x 3/4" Bolt w/hole	1
22	1CS2P3	Main Frame	1
23	1CS2P7	Agitator Spring	1
24	1CS2P23	Weather Cover	1
25	1CS2P10	Motor 12 Volt DC	1
26	1CS2P20	Hopper	1
27	1CS2P11	Cord Restraint	1
28	1CS2P12	Bottom Cover Assembly	1
29	1CS2P13	Gate Slide	1
30	1CS2P14	Gate Track	1
31	1CS2P18	Foam Seal 40"	1
32	1CS2P19	5/16" - 18 x 1" Hex Bolt S.S.	6
33	1CS2P22	Gate Deck	1
34	1CS2P24	Gate Slide Stop Pin	1



Fast-Cast 175 Assembly Instructions

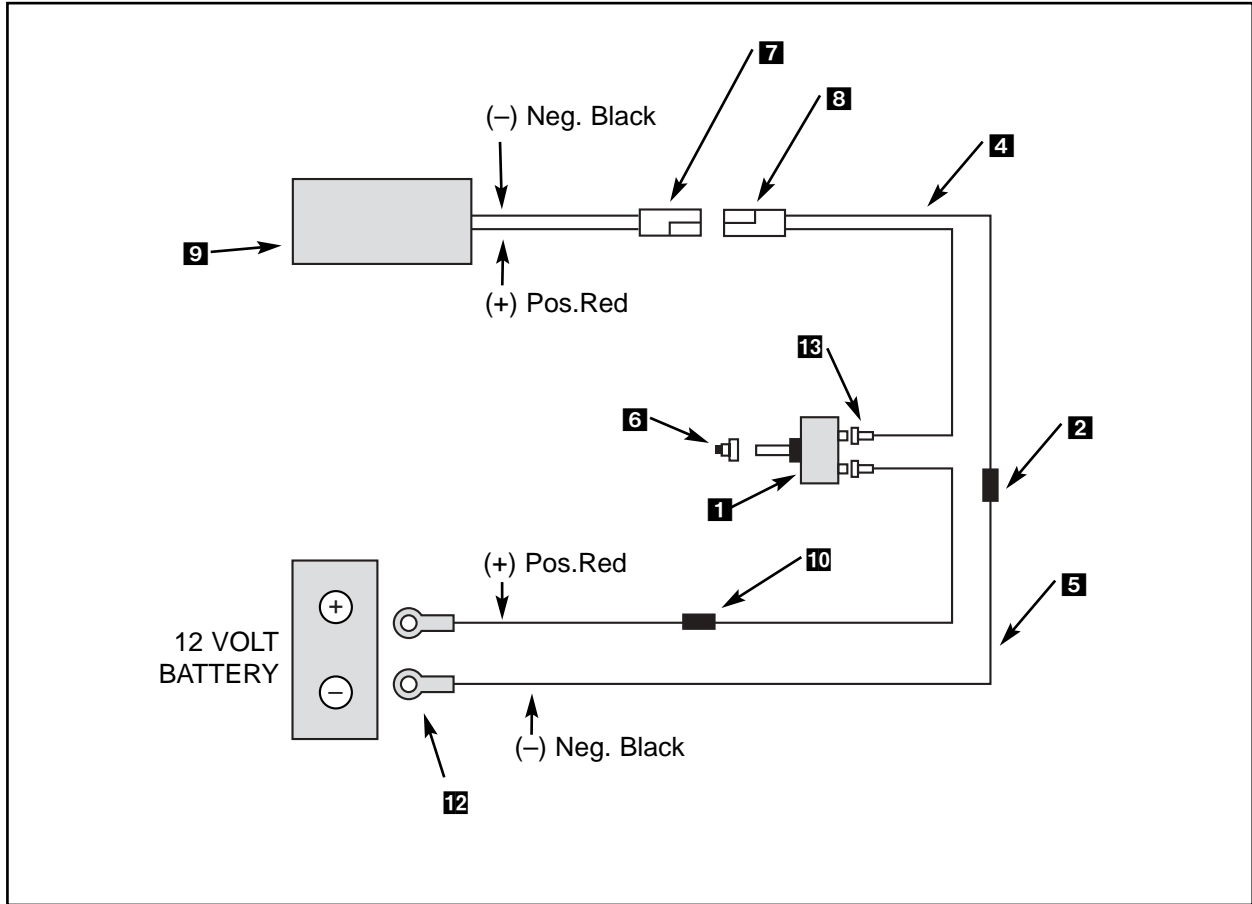
1. Install foam tape on bottom of motor enclosure/frame assembly.
2. Bolt bottom cover assembly on to motor enclosure. Make sure 2" square tube faces the rear.
3. Attach bulkhead cable fitting onto cable outer jacket. Using pliers to hold the cable, thread fitting onto jacket with a wrench. Be careful not to bend or kink cable. Important: To maximize the life of the cable and prevent corrosion, apply a small amount of oil to the inner cable.
- 3a. If you need to reduce the cable length, remove inner cable by twisting the T-handle counter clockwise and pull wire out of cable jacket, and trim to desired length. Make note of the amount of wire that extends beyond outer jacket. You will need to maintain this length for proper operation.
- 3b. Optional* You may run the cable through either the left or right side of rear spreader frame. There are two holes located along the back side of the rear upper horizontal support. This would be used to keep cable routed away from other equipment or to take up any slack in cable. Also this will keep cable from being kinked if mounted on a pickup truck.
4. Attach cable assembly to the side and insert fitting into rear gate deck hole. Make sure you have the first jam hex nut threaded onto the fitting.
- 4a. Once cable is inserted through rear gate deck, slide star washer and second jam nut over cable fitting. Leave these loose for now.
5. Locate special 5/16" hex bolt with a small hole drilled in it. Insert bolt through slide tab. The hole in bolt must be as close to being in line with the cable as possible.
6. Rotate hex bolt until hole aligns with the cable. Insert cable through hole. Thread lock washer and hex nut on. Do not tighten yet.
7. Make sure gate is at full close and that the cable is at full close. Once this is done, tighten hex bolt on gate slide, then tighten cable assembly on rear gate deck. This will insure that the gate slide can seal off hopper 100%.
8. Test gate travel by pulling and pushing the T-handle. The cable assembly has a twist-lock feature. Turning clockwise locks the gate into position, turning counter clockwise allows gate to move back and forth.
9. Install nylon lid.
10. Mount spreader into a 2" receiver type tube, align holes on mount and spreader and install 4" locking pin.



Fast-Cast 175 Wiring Instructions

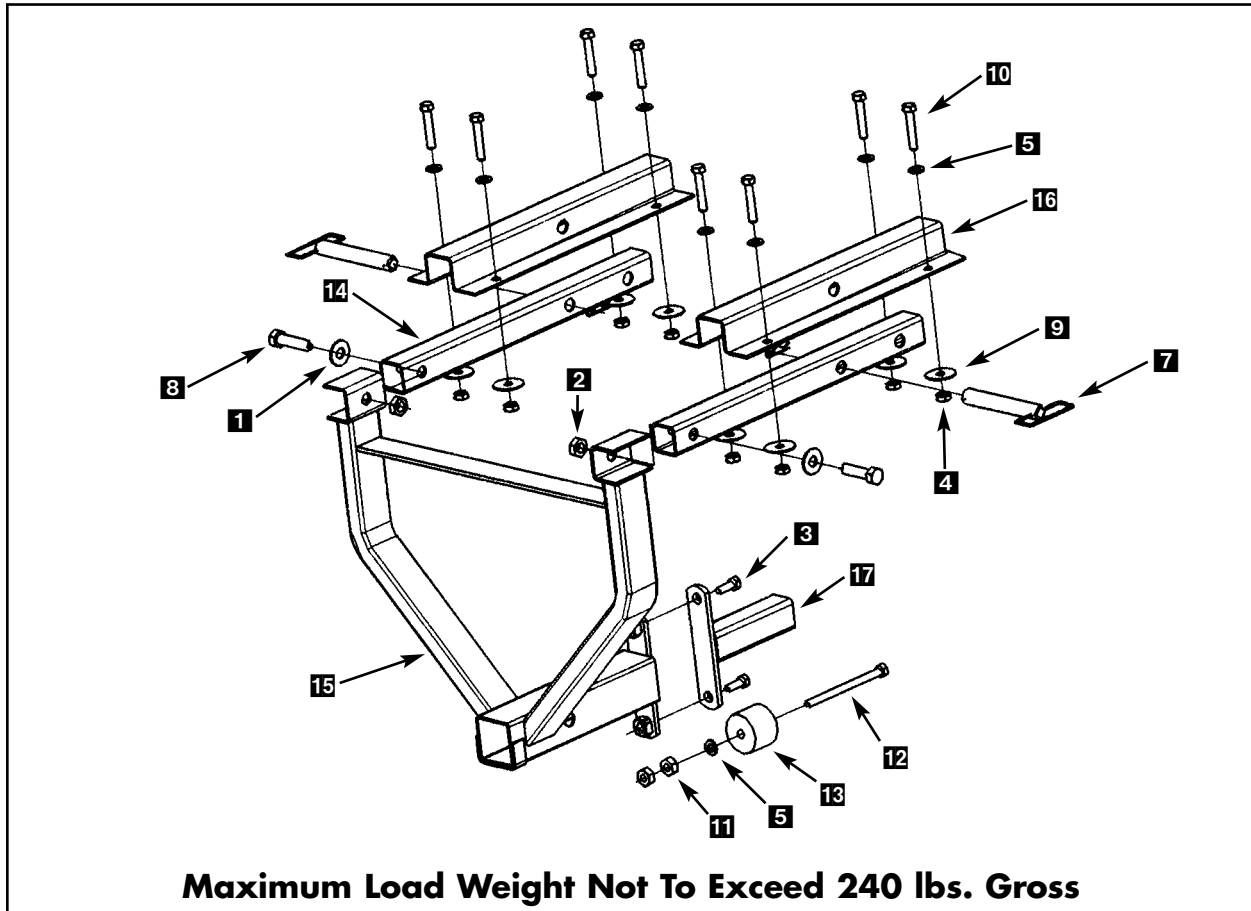
1. First, install switch at desired location. This will determine what your proper wire length is to be.
2. Run spreader/vehicle harness from the rear of vehicle to switch area. Remove approx. 3" of the black outer jacket exposing two single leads (red and black), strip a 1/4" off each lead. Crimp 1/4" female connector on red lead and crimp the butt connector to the black lead. Place the female spade/red wire to the on/off switch and leave the black wire for the next step.
3. Route the power harness from the battery to the switch; this will determine your proper length to cut wires. Repeat step #2 regarding cable jacketing and connection points to the switch and butt connector.
4. Install an inline 30 amp. fuse on the positive (red) lead from the battery to the switch. Locate an easily accessible place, out of the elements, for the fuse and remove approx. 3" of the black outer jacket exposing two single leads (red and black). Cut the red lead in half and strip a 1/4" off each lead. Insert into the fuse connector and crimp. Insert 30 amp. blade fuse into connector.
5. At the battery end of the power harness, remove 8" of the black outer jacket exposing two single leads (red and black). Strip 1/4" off each lead. Crimp a 3/8" lug terminal to each lead and attach the red lead to the positive side of the battery and the black lead to the negative side of the battery.
6. Install rubber weatherproof boot on switch before finishing installation.

**Fast-Cast 175
Wiring Schematic**



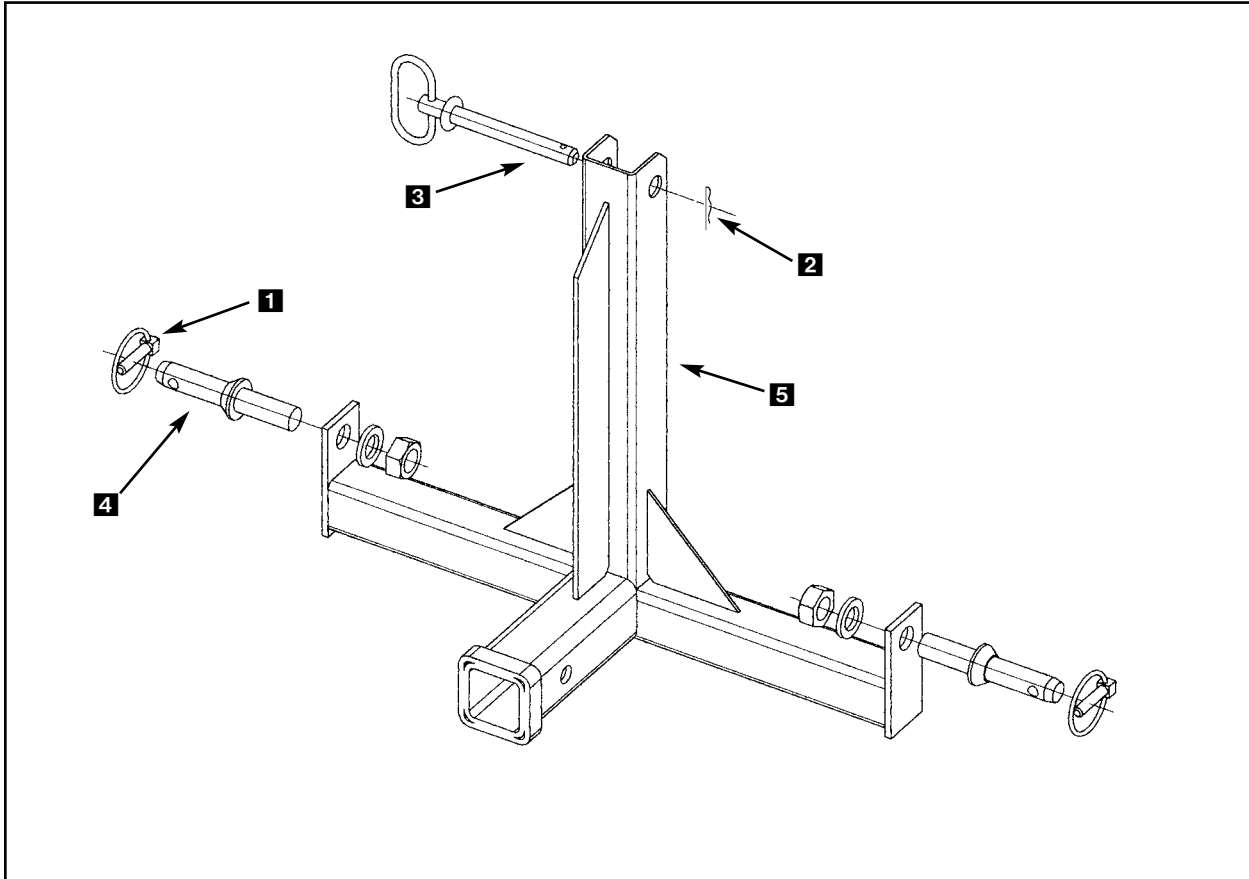
Item No.	Part No.	Description	Qty.
1	1CS2P25	On/Off Switch	1
2	1CS2P26	Butt Connector	1
3	1CS1P52	Dielectric Grease	1
4	1CS2P27	20' Vehicle Harness	1
5	1CS2P28	10' Battery Harness	1
6	1CS2P29	Rubber Switch Boot	1
7	1CS2P30	Spreader Splice Cord - 10"	1
8	1CS2P31	Harness Splice Cord - 10"	1
9	1CS2P10	Motor 12 Volt DC	1
10	1CS2P32	30 Amp Fuse	1
11	1CS2P33	Fuse Holder	1
12	1CS2P34	Ring Terminal	2
13	1CS2P35	Spade Connector	2

Drop Utility Mount Schematic Assembly



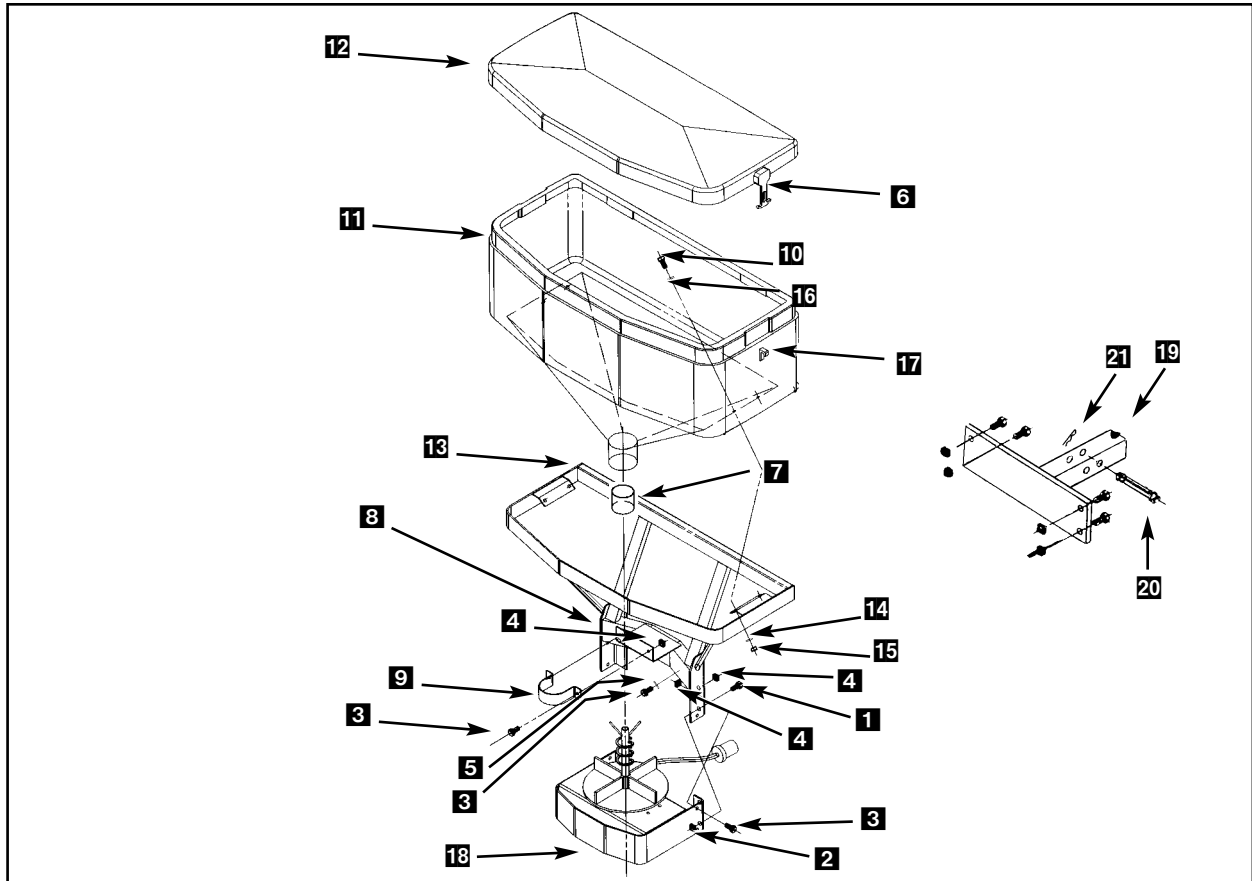
Item No.	Part No.	Description	Qty.
1	1SM3P4	1/2" Flat Washer	2
2	1CS1P11	1/2"-Lock Nut	2
3	1CS1P8	3/8"-16x1 Hex Bolt	2
4	1CS1P9	3/8"-Lock Nut	8
5	1CS1P41	3/8" Flat Washer	9
6	1SM1P3	2 - 5/16" Hair Pin Clip	2
7	1SM1P2	5/8" x 5-1/2" Hitch Pin	2
8	1SM4P10	1/2" - 13 x 2" Hex Bolt	2
9	1CS2P15	3/8" Fender Washer	8
10	1SM4P2	3/8" - 16 x 2 Truss Bolt Full Thread	8
11	1SM4P3	3/8" - 16 Hex Nut	2
12	1SM4P4	3/8" - 16 x 5" Hex Bolt	1
13	1SM4P5	2" Rubber Stopper	1
14	1SM4P9	Mounting Rail	2
15	1SM4P6	Drop Mount Weldment	1
16	1SM4P7	Mounting Rail Hat Section	2
17	1SM4P8	Mule Adapter	1

3-Point Mount Schematic Assembly



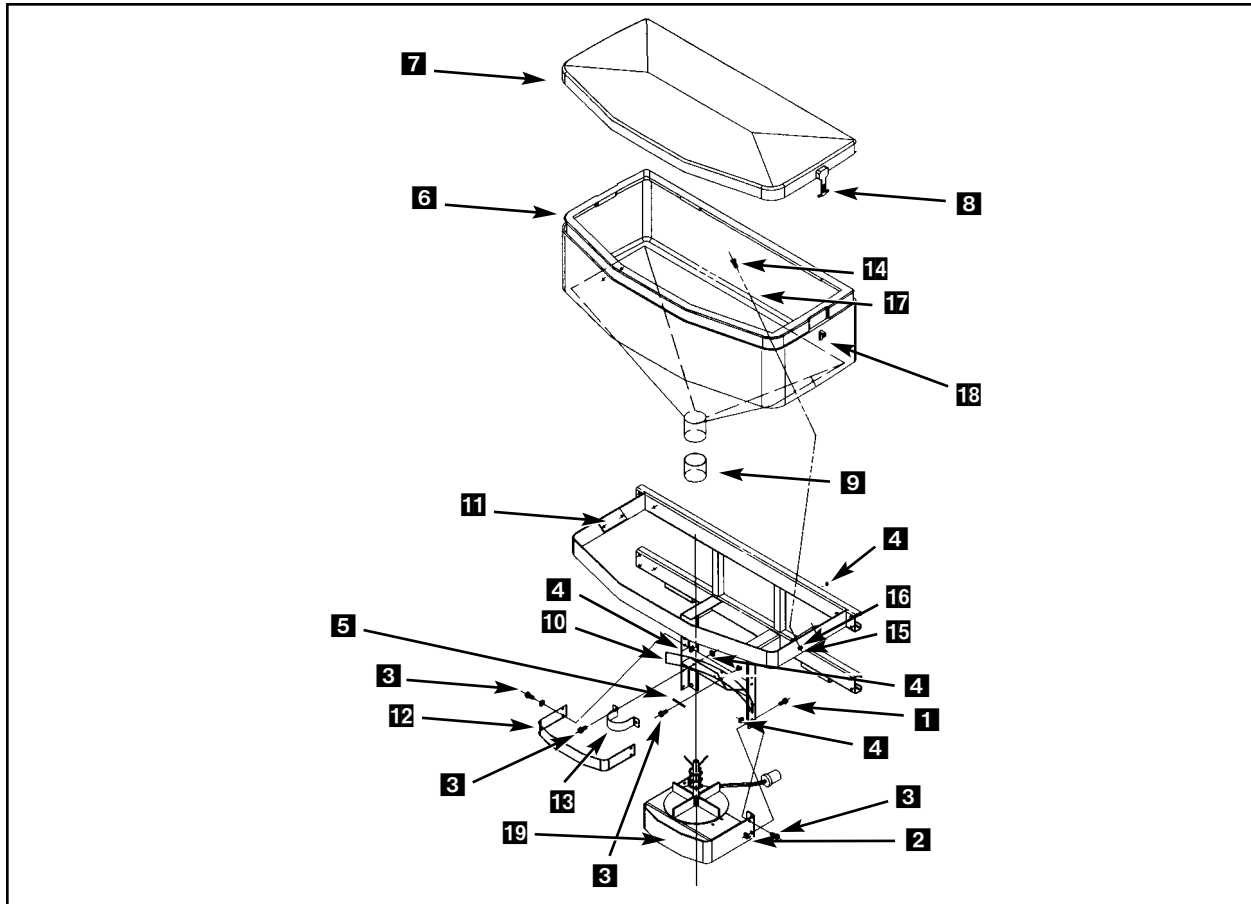
Item No.	Part No.	Description	Qty.
1	1SM1P7	5/16" Linch Pin	2
2	1SM1P3	2-5/16" Hairpin Clip	1
3	1SM1P2	5/8" x 5-1/2" Hitch Pin	1
4	1SM1P6	7/8" x 5-1/2" Lift Arm Pin	2
5	1SM1P1	3-Point Frame	1

Fast-Cast 2000 Schematic Assembly



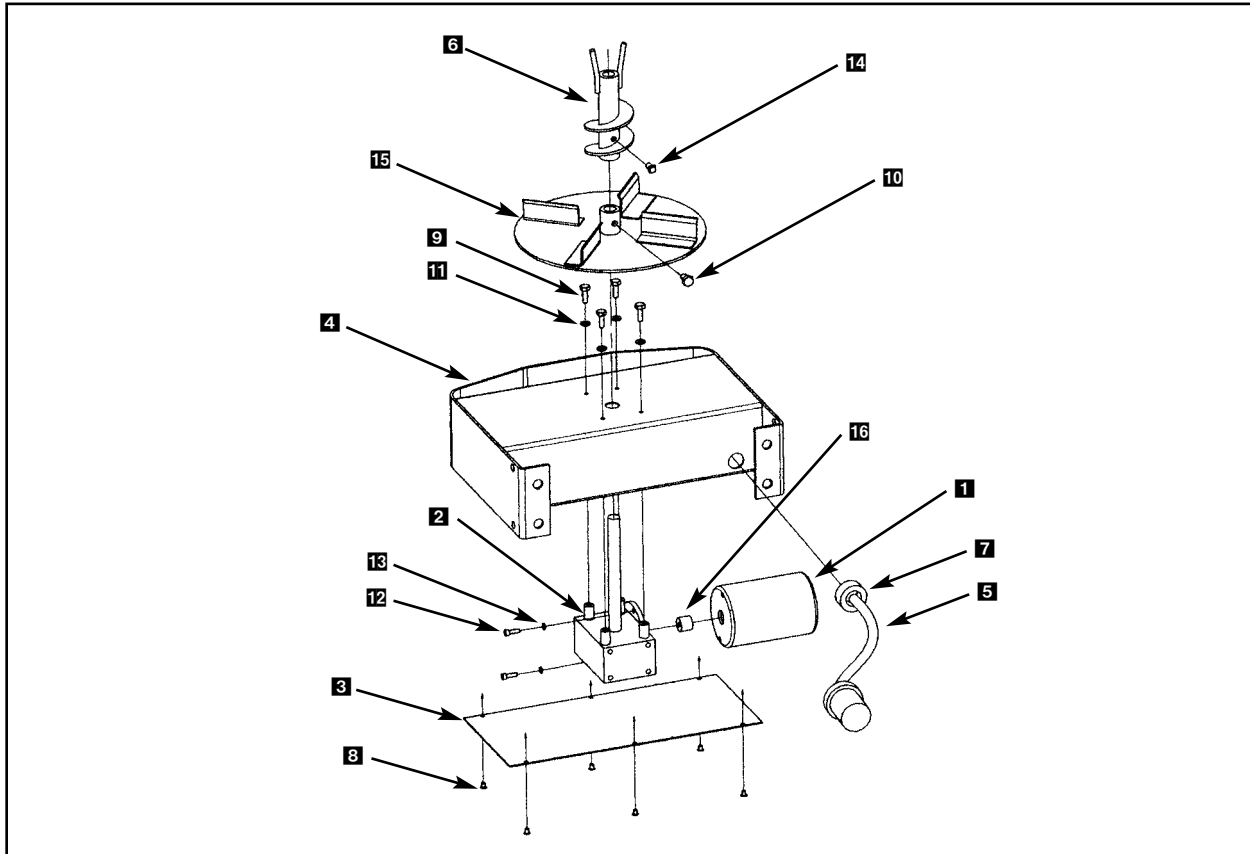
Item No.	Part No.	Description	Qty.
1	1CS1P10	1/2"-13 x 1 1/2" Hexbolt	4
2	1CS1P11	1/2"-Lock Nut	4
3	1CS1P8	3/8"-16x1 Hex Bolt	8
4	1CS1P9	3/8"-Lock Nut	8
5	1CS1P41	3/8" Flat Washer	2
6	1CS1P2	Flexible Draw Latch	2
7	1CS1P42	Stainless Throat Liner	1
8	1CS1P12	Deflector 20"	1
9	1CS1P5	Throat Clamp	1
10	1CS1P6	5/16"-18x1 1/4" Stainless Pan Head Phillips Bolt	2
11	1CS1P3	Hopper	1
12	1CS1P1	Lid W/Latches	1
13	1CS1P4	Main Frame	1
14	1CS1P46	5/16" lock washer	2
15	1CS1P7	5/16"-Hex Nut	4
16	1CS1P47	3/8" S/S Washer	2
17	1CS1P48	Latch Keeper	2
18	1CS1P49	Complete Drive Assembly	1
Optional Mount			
19	1SM2P1	2" Receiver Hitch	1
20	1SM1P2	5/8" x 5-1/2" Hitch Pin	1
21	1SM1P3	2 - 5/16" Hair Pin Clip	1

Fast-Cast 3000 Schematic Assembly



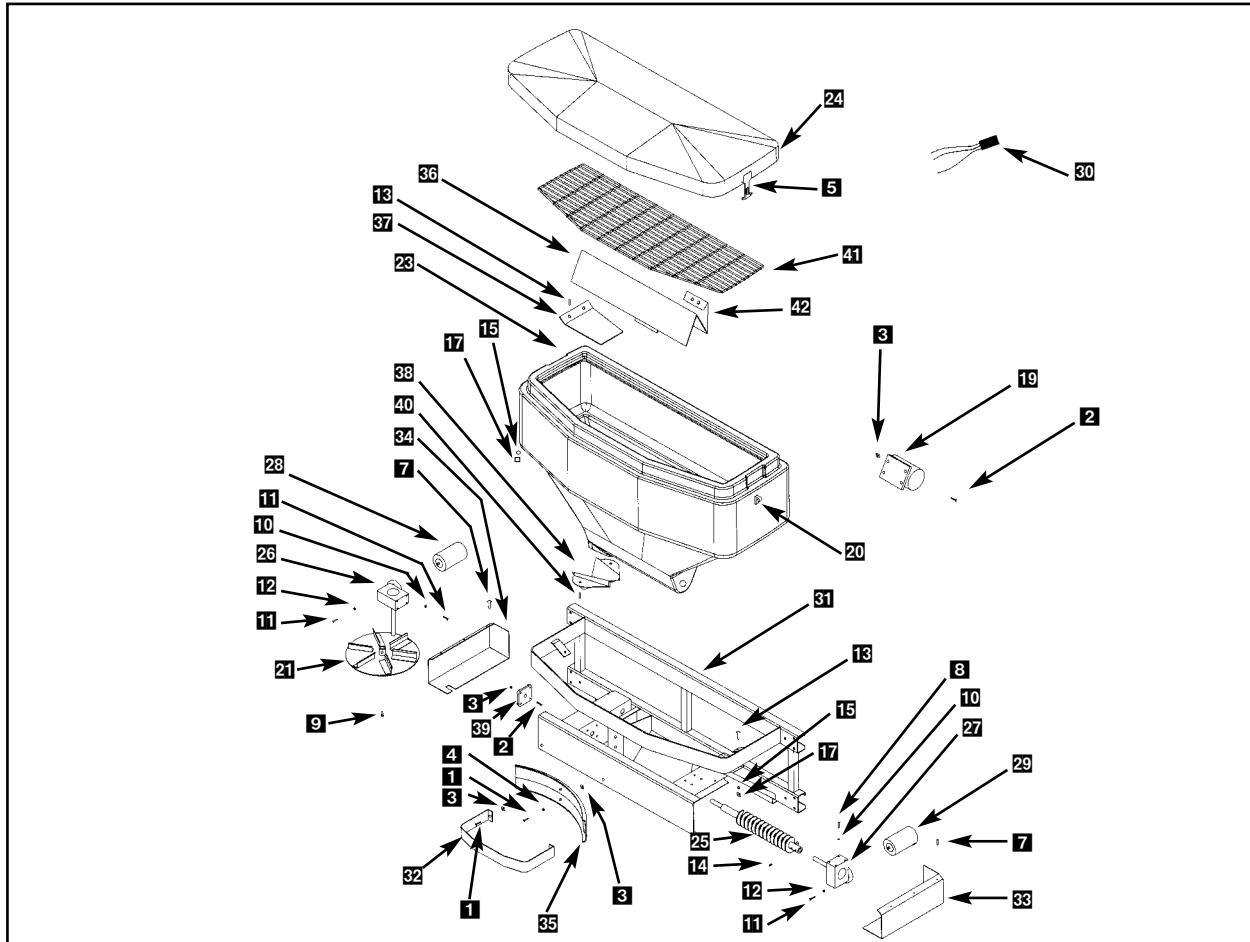
Item No.	Part No.	Description	Qty.
1	1CS3P1	1/2"-13x1" Hex Bolt	4
2	1CS1P11	1/2"-Locknut	4
3	1CS1P8	3/8"-16 x 1" Hex Bolt	12
4	1CS1P9	3/8"-Locknut	12
5	1CS1P41	3/8" -Flat Washer	2
6	1CS3P2	Hopper	1
7	1CS3P3	Lid W/Latches	1
8	1CS1P2	Flexible Draw Latch	2
9	1CS1P42	Stainless Throat Liner	1
10	1CS1P12	Deflector - 20"	1
11	1CS3P4	Main Frame	1
12	1CS3P5	Spinner Guard	1
13	1CS1P5	Throat Clamp	1
14	1CS1P6	5/16"-18 x 1 1/4" Stainless Panhead Phillips Bolt	2
15	1CS1P46	5/16" -Lock Washer	2
16	1CS1P7	5/16" -Hex Nut	2
17	1CS1P47	3/8" -S.S. Washer	2
18	1CS1P48	Latch Keeper	2
19	1CS3P6	Complete Drive Assembly	1

Complete Drive Assembly Schematic



Item No.	Part No.	Description	Qty.
1	1CS1P16	Motor 12 Volt DC	1
2	1CS1P53	Transmission	1
3	1CS1P17	Motor Cover	1
4	1CS1P13	Drive Enclosure	1
5	1CS3P7	Fast-Cast 3000 Power Cable	1
5	1CS1P21	Fast-Cast 2000 Power Cable	1
6	1CS1P19	Auger	1
7	1CS1P22	Cord Restraint	1
8	1CS1P29	3/16" Aluminum Rivet	6
9	1CS1P25	1/4"-20 x 3/4" Hex Bolt Stainless	4
10	1CS1P24	5/16"-18 x 1/2" Hex Bolt	1
11	1CS1P30	1/4" Stainless Lock Washer	4
12	1CS1P27	#10-32 x 5/8" Cap Screw	2
13	1CS1P28	#10 Lock Washer	2
14	1CS1P23	5/16"-18 x 3/8" Set Screw	1
15	1CS1P18	10" Steel Spinner	1
16	1CS1P51	Motor Drive Coupler	1

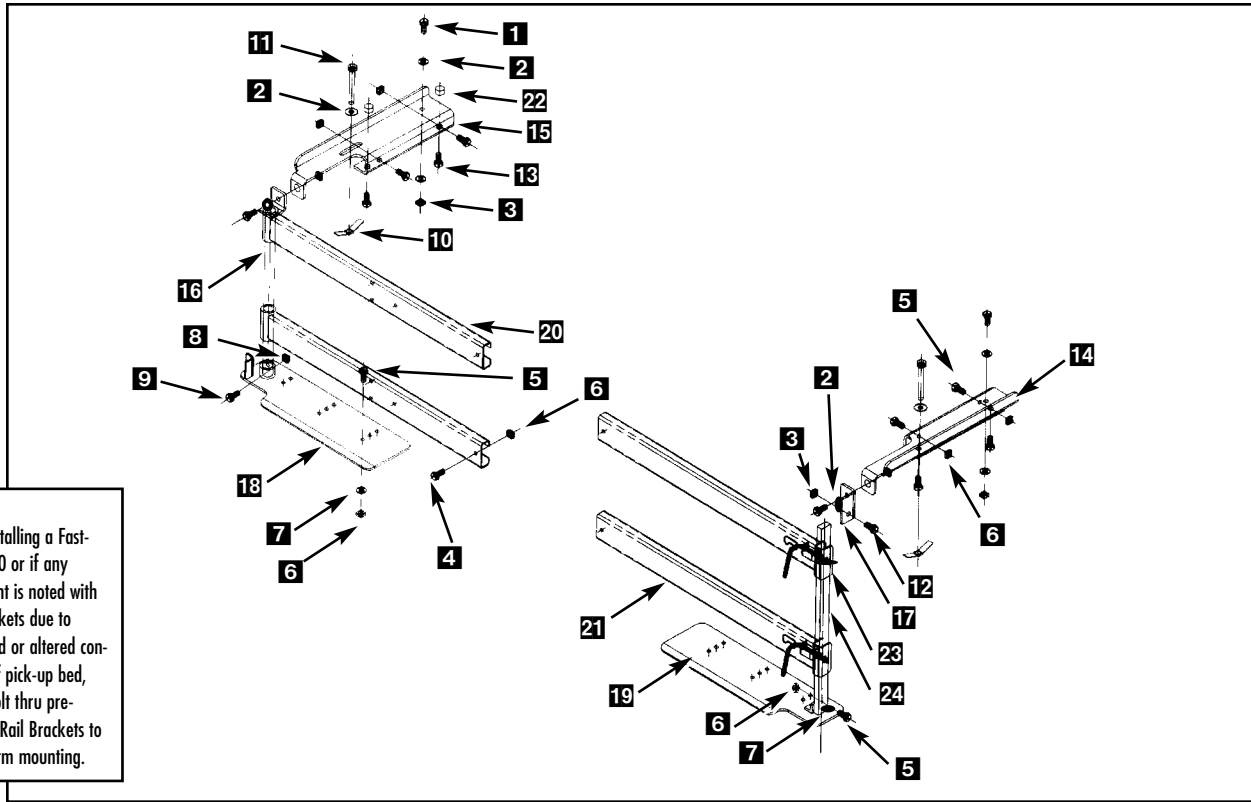
Fast-Cast 4000 Schematic Assembly



Item No.	Part No.	Description	Qty.
1	1CS1P8	3/8-16x1" Hex Bolt	8
2	1CS4P1	3/8-16x1-1/2" Hex Bolt	4
3	1CS1P9	3/8-16 Lock Nut	12
4	1CS1P41	3/8" Flat Washer	2
5	1CS1P2	Flexible Draw Latch	2
6	1CS1P22	Cord Strain Relief	2
7	1CS1P29	3/16" Aluminum Rivit	12
8	1CS1P25	1/4"-20x1" SS Hex Bolt	20
9	1CS1P24	5/16-18x1/2" Hex Bolt	1
10	1CS1P30	1/4" Stainless Lock Washer	8
11	1CS1P27	10/32x5/8" Cap Screw	4
12	1CS1P28	10/32 Lock Washer	4
13	1CS1P6	5/16-18x1" Pan Head SS Bolt	2
14	1CS1P23	5/16-18x3/8" Set Screw	2
15	1CS1P46	5/16" Lock Washer	2
16	1CS4P2	3/8"-16x2" Hex Bolt	4
17	1CS1P7	5/16" Hex Nut	2
18	1CS1P47	3/8" SS Flat Washer	6
19	1CS4P3	DC-80 Vibrator	1
20	1CS1P48	Latch Keeper	2
21	1CS4P4	12" Steel Spinner	1

Item No.	Part No.	Description	Qty.
22	1CS1P51	Motor Trans Coupler	2
23	1CS4P5	Hopper	1
24	1CS4P6	Lid	1
25	1CS4P7	Auger	1
26	1CS4P8	Spinner Transmission	1
27	1CS4P9	Auger Transmission	1
28	1CS4P10	Spinner Motor	1
29	1CS4P11	Auger Motor	1
30	1CS4P12	Power cord-48"	1
31	1CS4P13	Frame	1
32	1CS4P14	Trim Ring	1
33	1CS4P15	Right Hand Motor Cover	1
34	1CS4P16	Left Hand Motor Cover	1
35	1CS4P17	Plastic Deflector	1
36	1CS4P18	Inverted V-Support	1
37	1CS4P19	Material Baffle	1
38	1CS4P20	Chute	1
39	1CS4P21	Auger Shaft Bearing	1
40	1CS4P22	3/16" Rivet, Long	2
41	1CS4P23	Top Screen	1
42	1CS4P24	Inverted V-Mount Brkt	1

Swing Away - Pivot Mount Schematic Assembly

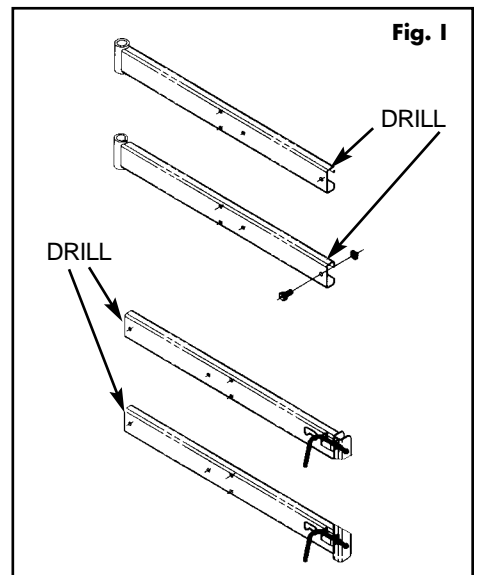
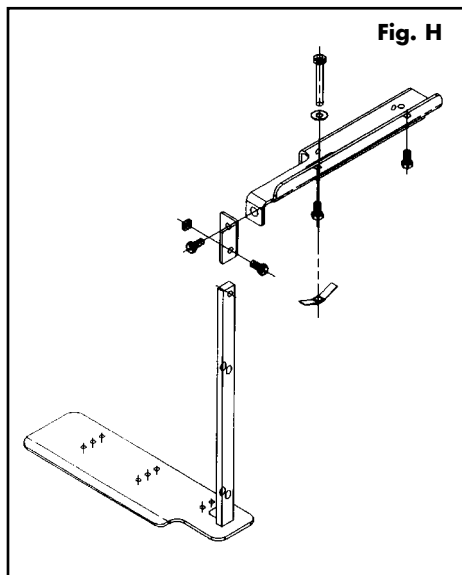
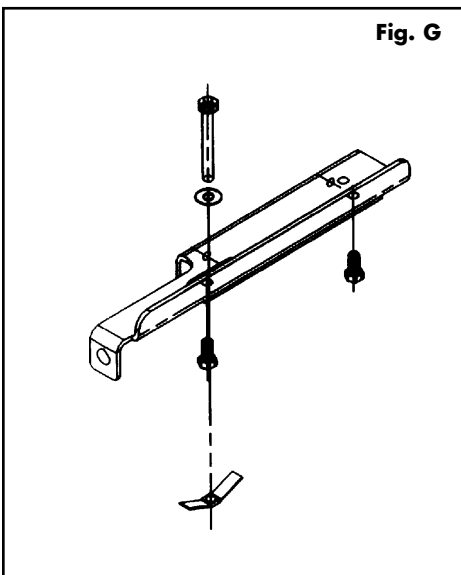
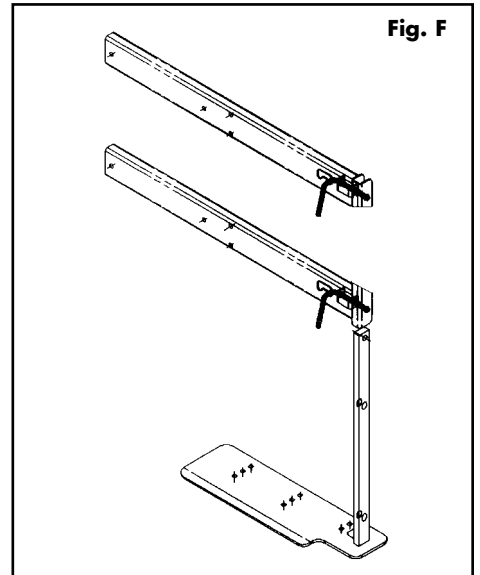
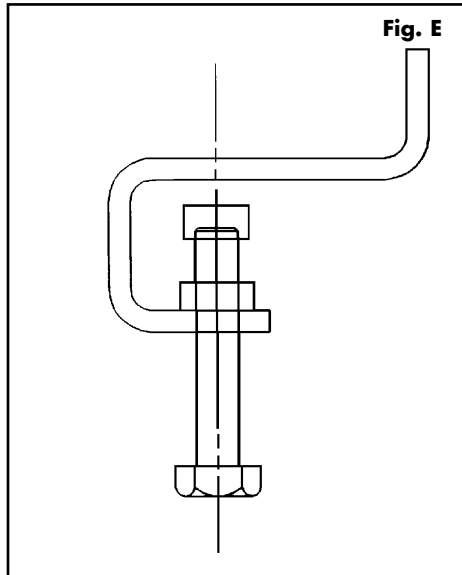
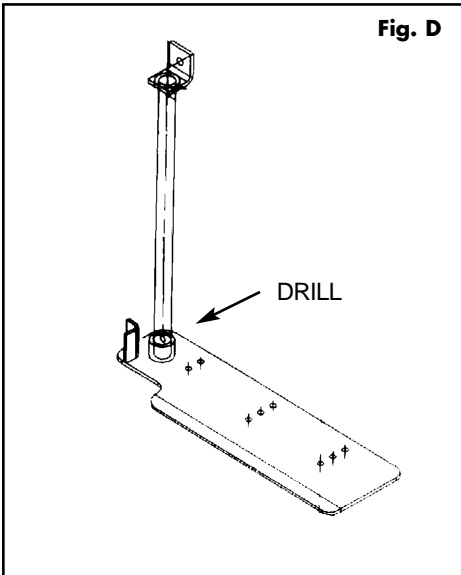
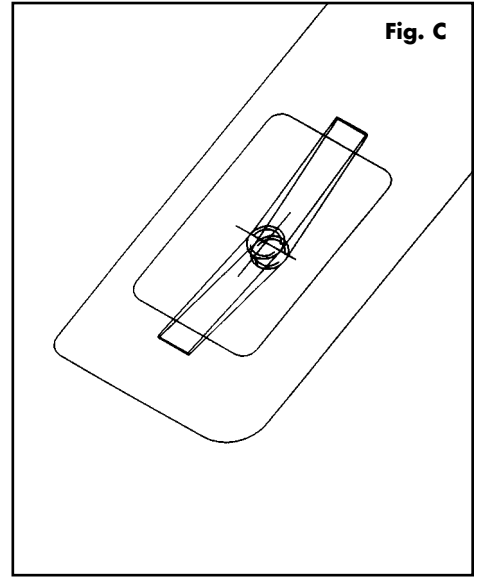
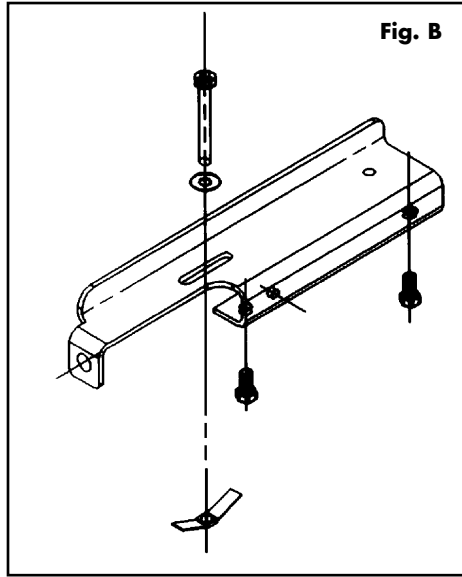
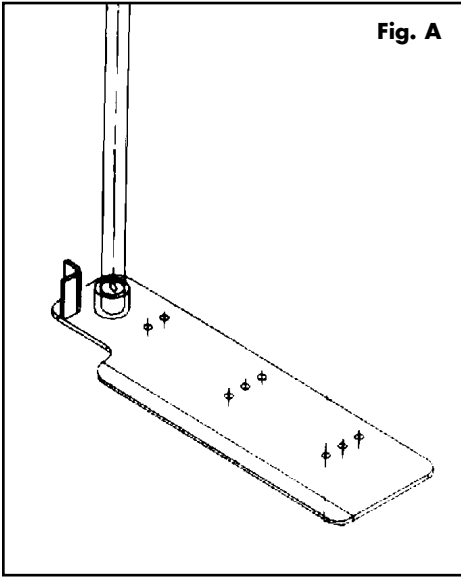


Item No.	Part No.	Description	Qty.	Item No.	Part No.	Description	Qty.
1	1CS1P10	1/2" 13 x 1 1/2" Hex Bolt	2	13	1SM5P6	1/2" 13 x 3" Hex Bolt Full Thread	4
2	1SM3P4	1/2" Flat Washer	7	14	1SM5P7	Bed Rail Bracket Right	1
3	1CS1P11	1/2" Lock Nut	5	15	1SM5P8	Bed Rail Bracket Left	1
4	1CS1P8	3/8" 16 x 1" Hex Bolt	16	16	1SM5P9	Pivot Tube Assembly	1
5	1CS4P1	3/8" 16 x 1 1/2" Hex Bolt	13	17	1SM5P10	Angle Top	1
6	1CS1P9	3/8" Lock Nut	29	18	1SM5P11	Pivot/ Bumper Bracket	1
7	1CS1P41	3/8" Flat Washer	9	19	1SM5P12	Latch /Bumper Bracket	1
8	1SM5P1	5/16" Lock Nut	1	20	1SM5P13	Pivot Channel Assembly	2
9	1SM5P2	5/16" 18 x 2" Hex Bolt	1	21	1SM5P14	Latch Channel Assembly	2
10	1SM5P3	1/2" Toggle	2	22	1SM5P15	Rubber Tip Protector	4
11	1SM5P4	1/2" 13 x 4" Hex Bolt Full Thread	2	23	1SM5P16	1/8" x 2-1/16" Hair Pin Clip	2
12	1SM5P5	1/2" 13 x 1 1/4" Hex Bolt	3	24	1SM5P17	Latch Bar	1

Swing Away - Pivot Mount Installation Instructions

- Step 1. Insert upper & lower pivot rails into main frame of spreader. Line up the pre-punched holes on the pivot rail with the main frame, then bolt together. Holes are pre-determined and can be relocated if spreader is not centered on vehicle.
- Step 2. Locate top bed rail mounting brackets and set on top of pickup bed rails; Center by moving out towards the bumper. Maintain a minimum of 2" clearance between tailgate and spreader.
- Step 3. Locate left & right bumper brackets. The left side or the pivot side will have a two piece system that will act as the hinge for the spreader. (See fig. D) The right side will have a two-piece system that will be the latching side. (See fig. H). Attach pivot tube and latch bar to the bumper plates using the posts as centering guides. Line up with the bed rail brackets. Be sure that the tailgate will open before locating any of these brackets permanently. Make sure bumper brackets are parallel to the lower main frame so that everything will be straight. After aligning all pieces, mark & drill holes using the bumper plates as a guide. (As seen in Fig. A) Once holes have been drilled, bolt securely to bumper. Note: Use a minimum of 3 holes.
- Step 4. Locate toggle bolt assembly and install on left and right upper bed rail brackets as seen in (Fig. B). Position toggle bolt (Fig. C) to keep in position while tightening. Pull up on the bracket to keep a slight amount of pressure on the toggle bolt. * NOTE *: When tightening toggle bolt assembly, do not exceed 30 foot pounds of torque, or you may damage toggle assembly. Take the two 3" full threaded bolts and screw into bottom of bed rail brackets. Use rubber tip protectors on bolt end as seen in (Fig. E). Torque bolts down using a hand ratchet only - you may also want to use a small amount of blue removable thread locker. Do this only as a final assembly once you have a proper tailgate clearance established.
- Step 5. Now that the lower bumper brackets and upper bed rail brackets are mounted, you will now need to check both the pivot tube assembly and latch bar to see if these need to be cut down. Due to the variety of truck bumpers, bed rail heights, etc. We made these two parts intentionally too long. On the pivot side you will need to align the top of the pivot tube hole to the left side bed rail bracket hole. Trim off the amount needed with a cut off saw.
- Step 6. Put this piece aside for now. Now that you have the pivot side assembly cut to length, mount spreader main frame assembly to truck. With an assistant, place pivot side of spreader on truck. Take pivot tube assembly and insert through pivot rails to the bumper plate locator tube. Take and bolt the upper pivot tube assembly to the bed rail bracket. (Make sure bed rail bracket is secure) Swing spreader until both support pads on lower main frame rail are completely on the bumper. Drill a 5/16" hole, (as seen in Fig. D) and bolt lower portion of pivot tube assembly. This will now complete pivot side installation.
- Step 7. The latching side will be done the same way, except that you will need to mount the locator bracket to the right side bed rail bracket (see Fig F, G, H). Once you have completed, trim flush with the top of the locator bracket. After cutting bar to proper length, drill a 1/2" hole in mounting bar. Bolt the upper portion and the lower portion of the latching bar.
- Step 8. Locate latching rails and insert into spreader main frame, position the latch rails so they are latched to the latching bar. Center latching bar in the pocket of the end of the latch rail. (see Fig. F) This will insure proper latching when closing spreader.
- Step 9. Using an assistant or a large vice grip to insure rails do not move, drill three 3/8" holes using the pre-punched holes as a guide. Repeat this process for the lower rail also. Bolt together. This completes the latch side of the pivot mount.
- Step 10. Drill four more 3/8" holes as seen in (Fig I) to stiffen the whole frame/rail system. Bolt together. This will insure minimum frame deflection under extreme load conditions.
- Step 11. Make sure spreader is level and clear from the tailgate when closed. You can make minor adjustments by loosening the bed rail brackets (one at a time) and trimming the unit out. Also at this time you may want to apply a small amount of removable thread locker to insure the bolts stay secure.
- Step 12. Lube zerck fittings on pivot tubes.
- Step 13. **IMPORTANT:** When installing a Fast-Cast 4000 or if any movement is noticed with the bed rail brackets due to weakness or altered conditions of pickup bed, drill and bolt thru the pre-punched holes located on the sides of the bed rail brackets and bolt securely.
- Step 14. After first use tighten all nuts and bolts on mount and spreader.

Swing Away - Pivot Mount Installation Schematic





Troubleshooting

Whenever service is necessary, your local dealer knows your Curtis Spreader best. Take your Curtis Spreader to your local dealer for any maintenance or service needs on your unit. If this is not possible, the Troubleshooting Guide below may assist you in identifying the problem.

Warning: First read all warning instructions and safety messages before servicing your spreader.

Preliminary Checks

- Be sure all electrical connections are tight and clean.
- Be sure nothing is jammed in the hopper.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Motor doesn't run.	Loose electrical connections. Blown Fuse. Motor Seized.	Check all connections. Replace fuse. Replace motor.
Shut down.	Jammed auger. Poor electrical connections. Electrical short. Controller Bad. Controller Bad.	Carefully clear jammed material. Clean or replace connectors. Use dielectric grease. Check electrical connections. Check for bare wires. Replace controller.
Material will not feed.	No material in hopper. Wet material. Frozen or coarse material. Spinner not turning. Auger loose on shaft.	Fill hopper. Replace with dry material. Replace material. Check drive assembly. Tighten locking bolt on the side of the auger. There is a flat machined on the driver shaft. Align the auger with this flat and tighten the bolt.

ERROR FLASH CODES

Repeating Sequence	Status
Short-Short-Short	Open circuit in spreader motor circuit
Short-Short-Long	Short circuit in spread motor circuit
Short-Long-Short	Low battery
Short-Long-Long	Jammed Hopper
Long-Short-Short	Overheated
Long-Short-Long	Overload in spreader motor circuit



SPREADER MAINTENANCE

- **WARNING** – When servicing is necessary, perform it in a protected area. Do not use power tools in rain or snow because of danger of electrical shock or injury. Keep area well lighted. Use proper tools. Keep the area of service clean to help avoid accidents.
- **WARNING** – Disconnect electricity to spreader before servicing.
- **CAUTION** – The controller is a solid state electronic unit and is not serviceable. Any attempt to service will void warranty.
- **CAUTION** – There are no serviceable parts in our motor/transmission assembly. Any attempt to service will void warranty.
- **CAUTION** – When replacing parts use only original manufacturer's parts. Failure to do so will void warranty.
- Use dielectric grease on all electrical connections to prevent corrosion at the beginning and end of the season and each time power plugs are disconnected.
- Wash unit after each use to prevent material build-up and corrosion.
- **CAUTION** – When pressure washing motor enclosure area stay at least 36" away.
- Paint or oil all bare metal surfaces at the end of the season.
- Apply small amount of light oil to latches and hinges as needed.
- If motor cover is removed for any reason use silicone sealant to ensure weather proofing of enclosure.
- Grease all bearings after 20 hours use (Fast-Cast 4000 only).
- After first use tighten all nuts and bolts on spreader and mount.
- Apply a small amount of oil on gate cable to prevent corrosion and maximize the cable life (Fast-Cast 175 only).