April 15, 2021
Lit. No. 30588, Rev. 00

TS200
Zero-Turn Mower Spreader

Owner's Manual and Installation Instructions

Original Instructions

⚠ CAUTION

Read this manual before installing or operating the spreader.

This document supersedes all editions with an earlier date.

TABLE OF CONTENTS

This manual has been prepared to acquaint you with the safety information, operation, and maintenance of your new zero-turn mower spreader. Please read this manual carefully and follow all recommendations. This will help ensure profitable and trouble-free operation of your spreader. Keep this manual accessible. It is a handy reference in case minor service is required.

When service is necessary, bring your spreader to your distributor. They know your spreader best and are interested in your complete satisfaction.

NOTE: This spreader is designed to spread seed, granular fertilizer, granular pesticide, and granular herbicide only. Do not use it for purposes other than those specified in this manual.

Warranty Registration

Follow the directions on the TurfEx® Warranty Registration and Customer Survey form included in the spreader literature kit.

The registration form is also available online at *www.turfexproducts.com*. Under "Support" select "Warranty Registration."

OWNER'S INFORMATION

Owner's Name: _____

Date Purchased: _____

Distributor Name: _____ Phone:_____

Distributor Address:_____

Vehicle Model:_____ Year: _____

Spreader Model: _____ Serial #:_____

Spreader Weight:_____lb/kg

SAFETY DEFINITIONS

⚠ WARNING

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

⚠ CAUTION

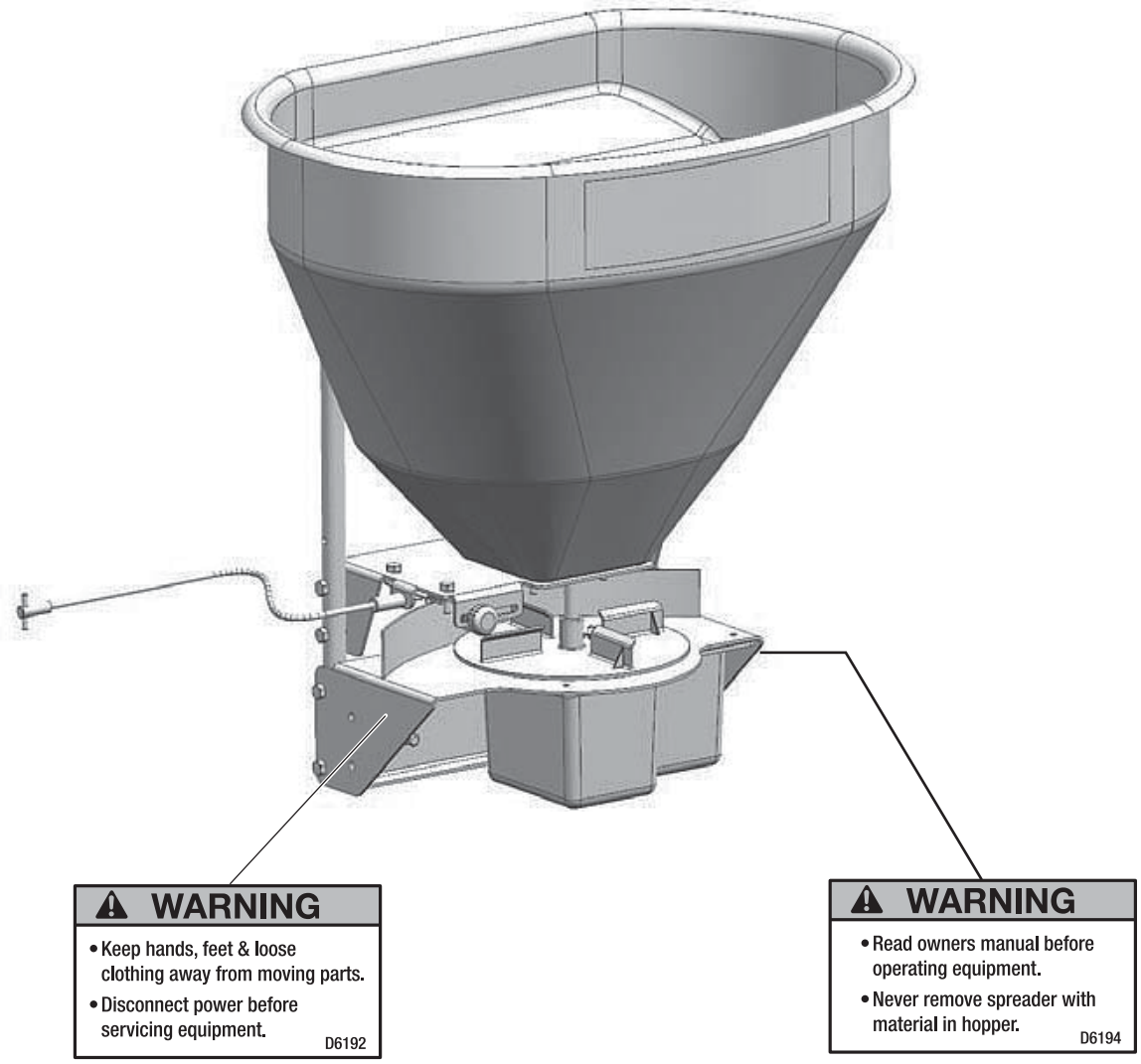
Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE: Indicates a situation or action that can lead to damage to your spreader and vehicle or other property. Other useful information can also be described.

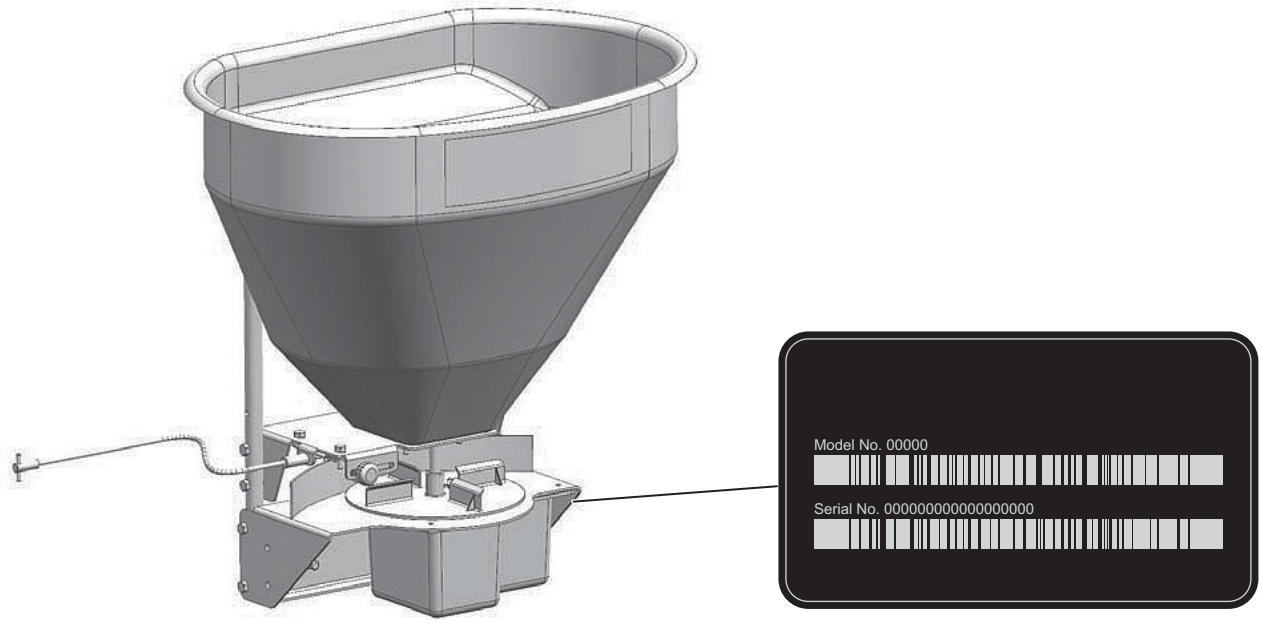
WARNING/CAUTION LABELS

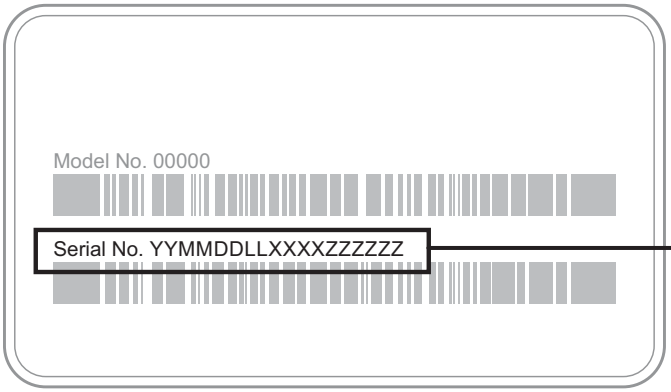
Please become familiar with the warning and caution labels on the spreader.

NOTE: If labels are missing or cannot be read, see your sales outlet.



SERIAL NUMBER LABEL





Code	Definition
YY	2-Digit Year
MM	2-Digit Month
DD	2-Digit Day
LL	2-Digit Location Code
XXXX	4-Digit Sequential Number
ZZZZZZ	Assembly Part Number

SAFETY PRECAUTIONS

Improper installation and operation could cause personal injury and/or equipment and property damage. Read and understand labels and this Owner's Manual before installing, operating, or making adjustments.

⚠ WARNING

- **Driver to keep bystanders minimum of 25 feet away from operating spreader.**
- **Before working with the spreader, secure all loose-fitting clothing and unrestrained hair.**
- **Before operating the spreader, verify that all safety guards are in place.**
- **Before servicing the spreader, wait for auger and spinner to stop.**
- **Do not climb into or ride on spreader.**

⚠ WARNING

Overloading could result in an accident or damage. Do not exceed GVWR or GAWR ratings as found on the vehicle. See Loading section to determine maximum volumes of spreading material.

⚠ CAUTION

During the hopper spreader installation we recommend the addition of an OSHA compliant backup alarm. This alarm is required for OSHA governed employers.

⚠ CAUTION

- **Do not operate a spreader in need of maintenance.**
- **Before operating the spreader, reassemble any parts or hardware removed for cleaning or adjusting.**
- **Before operating the spreader, remove materials such as cleaning rags, brushes, and hand tools from the spreader.**
- **While operating the spreader, use auxiliary warning lights, except when prohibited by law.**
- **Tighten all fasteners according to the Torque Chart. Refer to Torque Chart for the recommended torque values.**

⚠ CAUTION

Disconnect electric and/or hydraulic power and tag out if required before servicing or performing maintenance.

⚠ CAUTION

DO NOT leave unused material in hopper. Material can freeze or solidify, causing unit to not work properly. Empty and clean after each use.

NOTE: Lubricate grease fittings after each use. Use a good quality multipurpose grease.

PERSONAL SAFETY

- Remove ignition key and put the vehicle in PARK or in gear to prevent others from starting the vehicle during installation or service.
- Wear only snug-fitting clothing while working on your vehicle or spreader.
- Do not wear jewelry or a necktie, and secure long hair.
- Wear safety goggles to protect your eyes from battery acid, gasoline, dirt, and dust.
- Avoid touching hot surfaces such as the engine, radiator, hoses, and exhaust pipes.
- Always have a fire extinguisher rated BC handy, for flammable liquids and electrical fires.

FIRE AND EXPLOSION

⚠ WARNING

Gasoline is highly flammable and gasoline vapor is explosive. Never smoke while working on vehicle. Keep all open flames away from gasoline tank and lines. Wipe up any spilled gasoline immediately.

Be careful when using gasoline. Do not use gasoline to clean parts. Store only in approved containers away from sources of heat or flame.

CELL PHONES

A driver's first responsibility is the safe operation of the vehicle. The most important thing you can do to prevent a crash is to avoid distractions and pay attention to the road. Wait until it is safe to operate mobile communication equipment such as cell phones, text messaging devices, pagers, or two-way radios.

VENTILATION

⚠ WARNING

Vehicle exhaust contains lethal fumes. Breathing these fumes, even in low concentrations, can cause death. Never operate a vehicle in an enclosed area without venting exhaust to the outside.

BATTERY SAFETY

⚠ CAUTION

Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks, or lit tobacco to come near the battery. When charging or working near a battery, always cover your face and protect your eyes, and also provide ventilation.

- **Batteries contain sulfuric acid which burns skin, eyes, and clothing.**
- **Disconnect the battery before removing or replacing any electrical components.**

NOISE

Airborne noise emission during use is below 70 dB(A) for the spreader operator.

VIBRATION

Operating spreader vibration does not exceed 2.5 m/s^2 to the hand-arm or 0.5 m/s^2 to the whole body.

TORQUE CHART

⚠ CAUTION

Read instructions before assembling. Fasteners should be finger tight until instructed to tighten according to torque chart. Use standard methods and practices when attaching spreader including proper personal protective safety equipment.

Recommended Fastener Torque Chart

Inch Fasteners Grade 5 and Grade 8

Size	Torque (ft-lb) Grade 5	Torque (ft-lb) Grade 8	Size	Torque (ft-lb) Grade 5	Torque (ft-lb) Grade 8
1/4-20	8.4	11.9	9/16-12	109	154
1/4-28	9.7	13.7	9/16-18	121	171
5/16-18	17.4	24.6	5/8-11	150	212
5/16-24	19.2	27.3	5/8-18	170	240
3/8-16	30.8	43.6	3/4-10	269	376
3/8-24	35.0	49.4	3/4-16	297	420
7/16-14	49.4	69.8	7/8-9	429	606
7/16-20	55.2	77.9	7/8-14	474	669
1/2-13	75.3	106.4	1-8	644	909
1/2-20	85.0	120.0	1-12	704	995

Metric Fasteners Class 8.8 and 10.9

Size	Torque (ft-lb) Class 8.8	Torque (ft-lb) Class 10.9	Size	Torque (ft-lb) Class 8.8	Torque (ft-lb) Class 10.9
M6 x 1.00	7.7	11.1	M20 x 2.50	325	450
M8 x 1.25	19.5	26.9	M22 x 2.50	428	613
M10 x 1.50	38.5	53.3	M24 x 3.00	562	778
M12 x 1.75	67	93	M27 x 3.00	796	1139
M14 x 2.00	107	148	M30 x 3.50	1117	1545
M16 x 2.00	167	231	M33 x 3.50	1468	2101
M18 x 2.50	222	318	M36 x 4.00	1952	2701

These torque values apply to fasteners except those noted in the instructions.

This manual covers vehicles which have been recommended for carrying the spreader. Please see your local dealer for proper vehicle applications.

APPROXIMATE MATERIAL WEIGHTS

⚠ WARNING

Overloading could result in an accident or damage. Do not exceed GVWR or GAWR as found on the vehicle.

⚠ WARNING

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

⚠ CAUTION

Never use wet materials or materials with foreign debris with any of these spreaders. These units are designed to handle dry, clean, free-flowing material.

⚠ CAUTION

Read and adhere to manufacturer's material package labeling including Safety Data Sheet requirements.

Material	Density (lb/ft^3)
Seed	See product information on bag or bulk material.
Pesticide	See product information on bag or bulk material.
Herbicide	See product information on bag or bulk material.
Fertilizer	See product information on bag or bulk material.

Weight of spreader and mount must be added to struck material weight to determine total spreader weight. Do not exceed maximum material capacity as shown on the safety label (see Safety section).

Use only spreading material that is compatible with the tailgate spreader.

NOTE: If spreader and material loading is in doubt, weigh vehicle for compliance with vehicle ratings.

ASSEMBLY INSTRUCTIONS

1. Attach the hopper tube support to the complete drive assembly using four 5/16" x 1-3/4" cap screws and four 5/16" locknuts through the holes at bottom end of the tube.

2. Place the spreader gate deck upside down on a table.

3. Assemble the gate indicator/stop on the stop slide with the gate knob. The gate stop must be on the inside of the deck where it will stop the track.

4. Insert a 5/16" cap screw with hole through the gate slide. Place a 5/16" locknut on the cap screw. Finger tighten.

5. Screw the bulkhead cable fitting onto the T-handle cable.

6. Place the assembly through the tab on the gate deck. Tighten down with the supplied washer and nuts.

NOTE: There should be a nut on either side of tab.

7. Lower the gate assembly over the spinner shaft. The spinner shaft must go through the 5/8" hole on the deck. Center the shaft in the hole.

8. Fasten the deck to the hopper tube using four 5/16" x 1-3/4" cap screws and four 5/16" locknuts.

NOTE: Tighten the bottom cap screws, pull the front of the deck up, then tighten the top set of cap screws.

9. Place the hopper on the deck. The 5/8" hole must be used for the spinner shaft.

10. Install two 5/16" x 1" cap screws through the bottom of the hopper. Finger tighten.

11. Place four flat washers over the 5/16" x 1-3/4" cap screws. Place cap screws through the hopper back and through the tube support. Fasten the cap screws with four 5/16" locknuts. Tighten the fasteners in the bottom of the hopper.

12. Place the agitator on the spinner shaft. Tighten to the middle of the flat with a short Allen key.

13. Attach the receiver mount to the transmission frame using four 1/2" x 1-1/2" cap screws and four 1/2" locknuts.

CABLE INSTALLATION

⚠ CAUTION

During removal or mounting, securely grip spreader to avoid dropping.

1. Place the unit on vehicle where it will be permanently used. Place the hitch pin in the hitch so that the unit does not move.

2. Route the T-handle to the desired operating location. Make sure that there are not any bends or sharp corners.

3. Take the T-handle out of the sleeve. Remove the nuts and washer from the sleeve.

⚠ CAUTION

Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

4. Drill holes to mount the T-handle mounting bracket. Mount the T-Handle to the bracket.

5. Close the gate slide all the way.

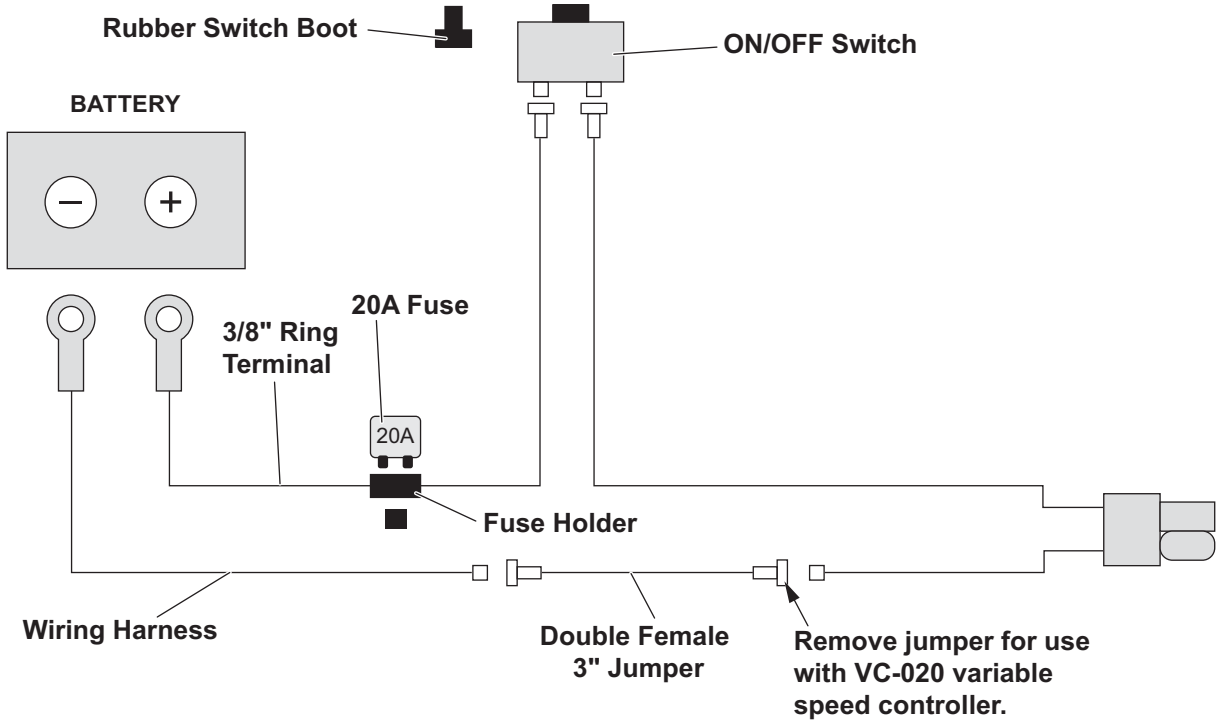
6. Re-insert the cable handle and wire all the way. Aim it through the bolt with hole and tighten the cap screw.

WIRING INSTRUCTIONS

⚠ CAUTION

Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

1. Install the switch at the desired location.
2. Run the spreader/vehicle harness from the rear of the vehicle to the switch area. Attach the female spade red wire to the switch. Leave the black wire for Step 5.
3. Route the power harness from the battery to the switch/control.
4. Attach the red lead to the POSITIVE (+) side of the battery and the black lead to the NEGATIVE (–) side of the battery.
5. Attach the female spade red wire on switch terminal. Using the 3" double female black wire jumper, attach the black wire from the power harness to the black wire of the vehicle harness.
6. Install the rubber weatherproof boot on the switch.
7. Apply dielectric grease on terminals of the SAE plug at the rear of the vehicle.

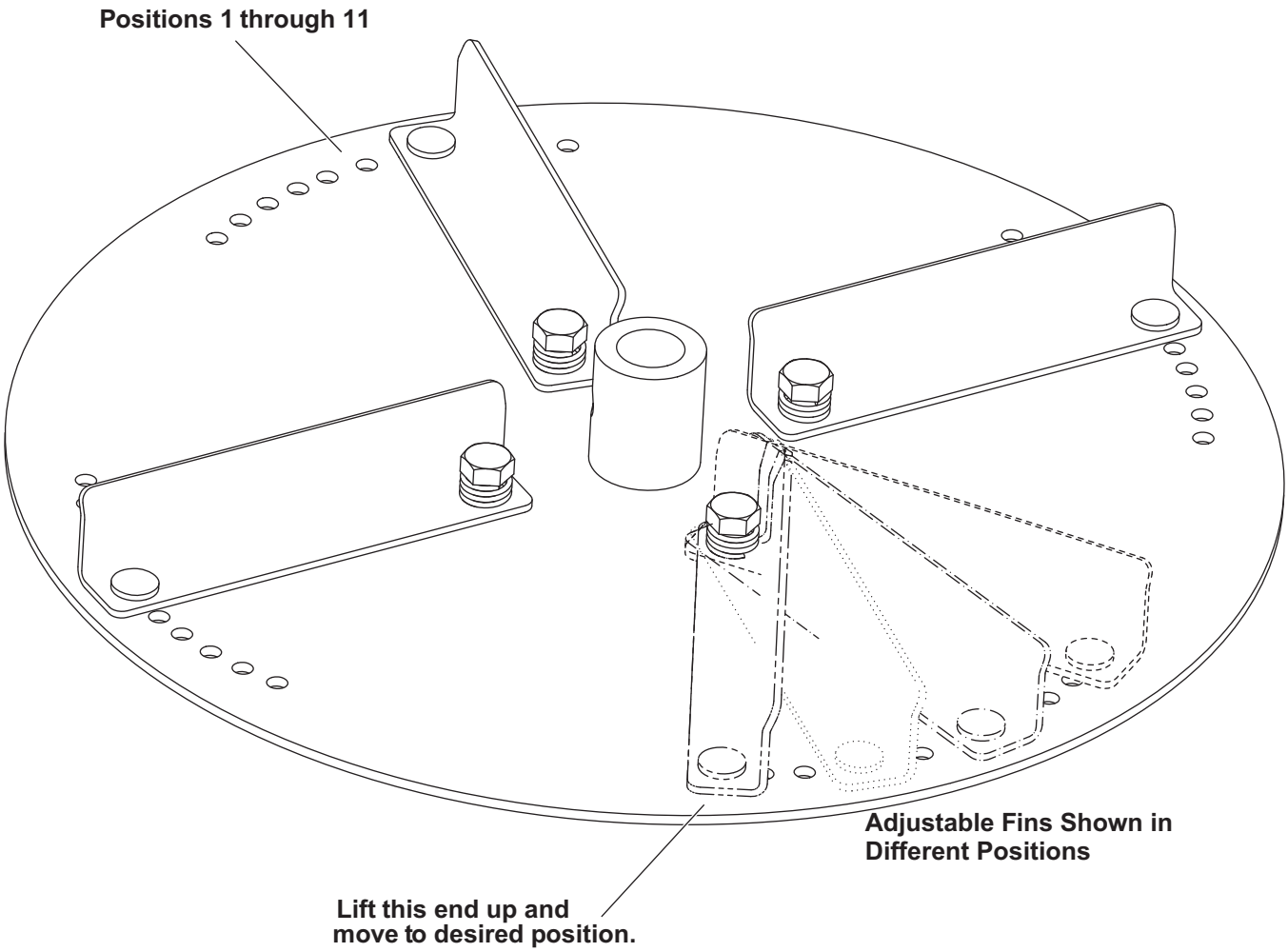


ADJUSTABLE SPINNER ASSEMBLY

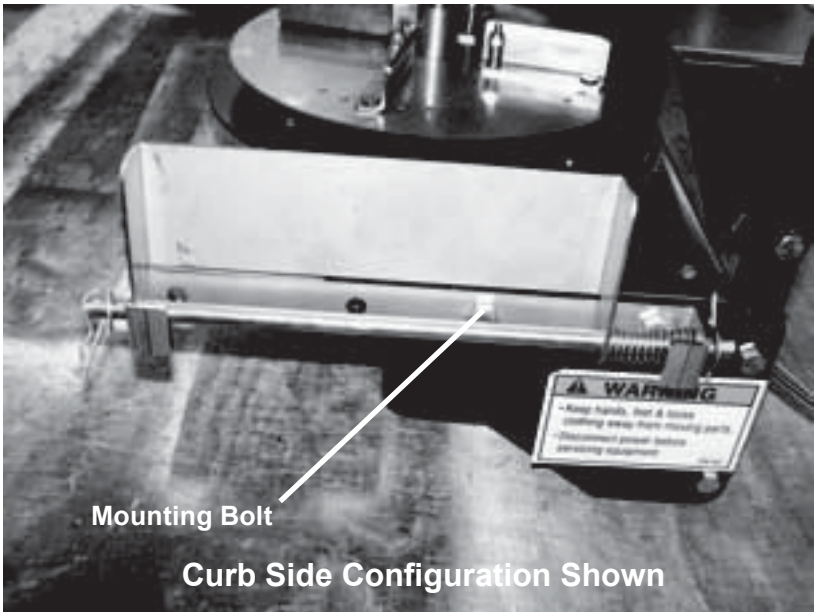
The purpose of the adjustable fin is to provide a way to adjust the spread patterns with different materials. You can select the desired position by simply lifting up on the outside top edge. You will notice that different materials act in different ways in relation to spinner speed.

By moving the fins you will be able to correct most pattern issues without having to sacrifice spinner speed.

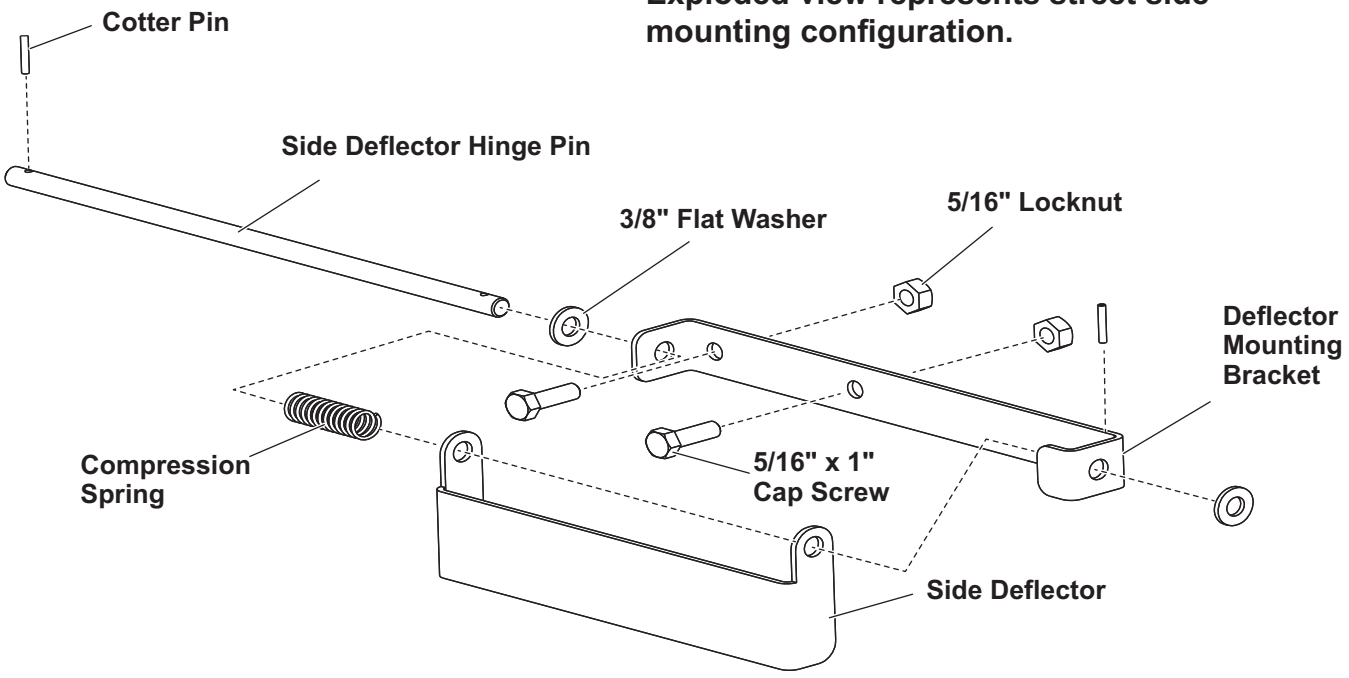
All adjustments should be made on pavement and positions noted for future reference. This process should be incorporated into your normal calibration process.



Mount the deflector to either the right or left side of the spreader as shown in the picture.



Exploded view represents street side mounting configuration.



OPERATING THE SPREADER: CALIBRATION (FOR REFERENCE ONLY)

It is the responsibility of the person using this equipment to make sure that every type of material is properly calibrated to perform as expected. This process should take place on a solid at surface away from drains and livestock areas in order to achieve a safe and accurate reading for proper material distribution. Failure to do so may cause an over/under application that could damage turf areas or give an ineffective pest control treatment. Any calibration charts contained in this manual are given as a reference point only and should not be used as an absolute condition. Spending a few extra minutes to properly calibrate will not only save on wasted materials and time but also protect turf and other vegetation. Below are several points to be aware of before operating your spreader in the field.

Flow rates of chemicals can change for many reasons:

1. Formulations vary within the same brand or even between brands.
2. Formulations vary between batches or dates of manufacture.
3. Humidity can cause the material to clump and flow poorly.
4. Poor spreader maintenance can cause flow changes.
5. Slide stop has moved or calibrated to another type of material.
6. Human error can cause rate miscalculation.

Items needed for calibration:

1. A way to catch the material for weighing.
2. A device to measure distance.
3. A scale to weigh your product.
4. A stop watch or other means to time.

Conversion:

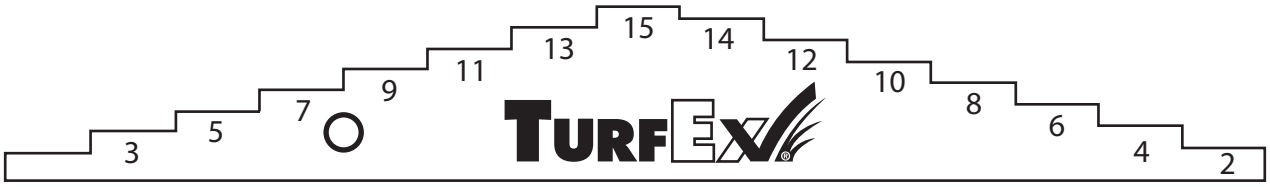
To convert pounds per 1000 square feet to pounds per acre, multiply your rate by 43.6

Other important information:

- 1 acre is equal to 43,600 square feet (ft^2).
- Ground speed is very important to keep in mind when doing calculations. You will want to convert miles per hour (mph) to feet per minute (fpm).
- Set the spreader stop at midpoint on its travel length as a starting point. Fill the hopper with enough material to cover a known area of 1000 square feet. Open the gate and make note of the start/stop time; this is very important. Next weigh the material on a scale, divide the weight by the known area to establish an application rate. You may have to adjust the gate stop for more or less material depending on your results.

TURFEX KEY SETTING	Gate Setting	Materials: Urea 46-0-0	Lesco Turface	Lesco Shade Mix	Lesco Fert 30-0-10	Lesco Insecticide
	1	X	X	X	X	0.57
	2	1.39	0.83	X	0.39	5.28
	3	7.15	2.11	X	3.84	14.38
	4	10.54	X	0.18	8.79	18.06
	5	15.97	X	0.40	13.55	30.24
	6	24.66	X	0.51	17.07	35.04
	7	31.36	14.70	0.66	23.94	50.32
	8	35.70	X	0.98	29.74	56.22
	9	47.70	X	1.78	39.38	64.56
	10	55.29	X	5.59	45.20	76.47
	11	63.39	37.95	7.27	53.22	82.59
	12	73.59	X	8.72	64.64	106.49
	13	78.60	X	10.00	69.06	122.64
	14	83.08	X	11.81	73.80	133.72
	15	93.52	57.32	11.94	91.32	145.00
		FLOW RATES ARE CALCULATED AT POUNDS PER MINUTE (lb/min)				

NOTE: Calibration Data Is For Reference Only.



Calibration Index Key

CALIBRATION SPEED-TIME-DISTANCE CHART

TIME REQUIRED IN SECONDS TO TRAVEL				SPEED-DISTANCE	
GROUND SPEED (mph)	**100 FEET**	**200 FEET**	**300 FEET**	**GROUND SPEED (mph)**	**FEET TRAVELED PER MINUTE**
0.5	136	272	408	0.5	44
1.0	68	136	204	1.0	88
1.5	45	91	192	1.5	132
2.0	34	68	136	2.0	176
2.5	27	54	82	2.5	220
3.0	23	45	68	3.0	264
3.5	20	39	58	3.5	308
4.0	17	34	521	4.0	352
4.5	15	30	45		
5.0	14	27	41		
6.0	11	23	34		
7.0	9.7	19	29		
8.0	8.5	17	26		
9.0	7.6	15	23		
10.0	6.8	14	20		
12.0	5.7	11	17		
15.0	4.5	9	13.6		
20.0	3.4	6.8	10.2		

⚠ 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

Never remove the spreader with material in the hopper.

⚠ CAUTION

Disconnect electric power at spreader electrical wiring harness connection and tag out if required before servicing or performing maintenance.

⚠ CAUTION

- **When replacing parts, use only original manufacturer's parts. Failure to do so will void warranty.**
- **The control is a solid-state electronic unit and is not serviceable. Any attempt to service will void warranty.**
- **There are no serviceable parts in the motor/transmission assembly. Any attempt to service will void warranty.**
- **When pressure washing motor enclosure area, keep spray at least 36" away from motor enclosures.**

REMOVING THE SPREADER

⚠ CAUTION

Empty the hopper before removing the spreader.

⚠ CAUTION

During removal or mounting, securely grip spreader to avoid dropping.

1. Unplug the spreader harness from the vehicle harness.
2. Remove the hitch pin from the receiver hitch.
3. Remove the spreader from the vehicle and stand spreader in an upright position. This may require additional support.

LUBRICATION

To keep your spreader running smoothly, observe the following recommendations:

- Lubricate bearings after every 20 hours of use.
- Apply a small amount of light oil to latches as needed.
- Keep gate cable lubricated with a graphite type lubricant (non-tacky) after each use.

AFTER EACH USE

⚠ CAUTION

DO NOT leave unused material in hopper. Material can freeze or solidify, causing unit to not work properly. Empty and clean after each use.

- Gently wash unit after each use to prevent material build-up and corrosion.
- Apply dielectric grease on all electrical connections to prevent corrosion.

AT THE END OF EACH SEASON OR AFTER EXTENDED STORAGE

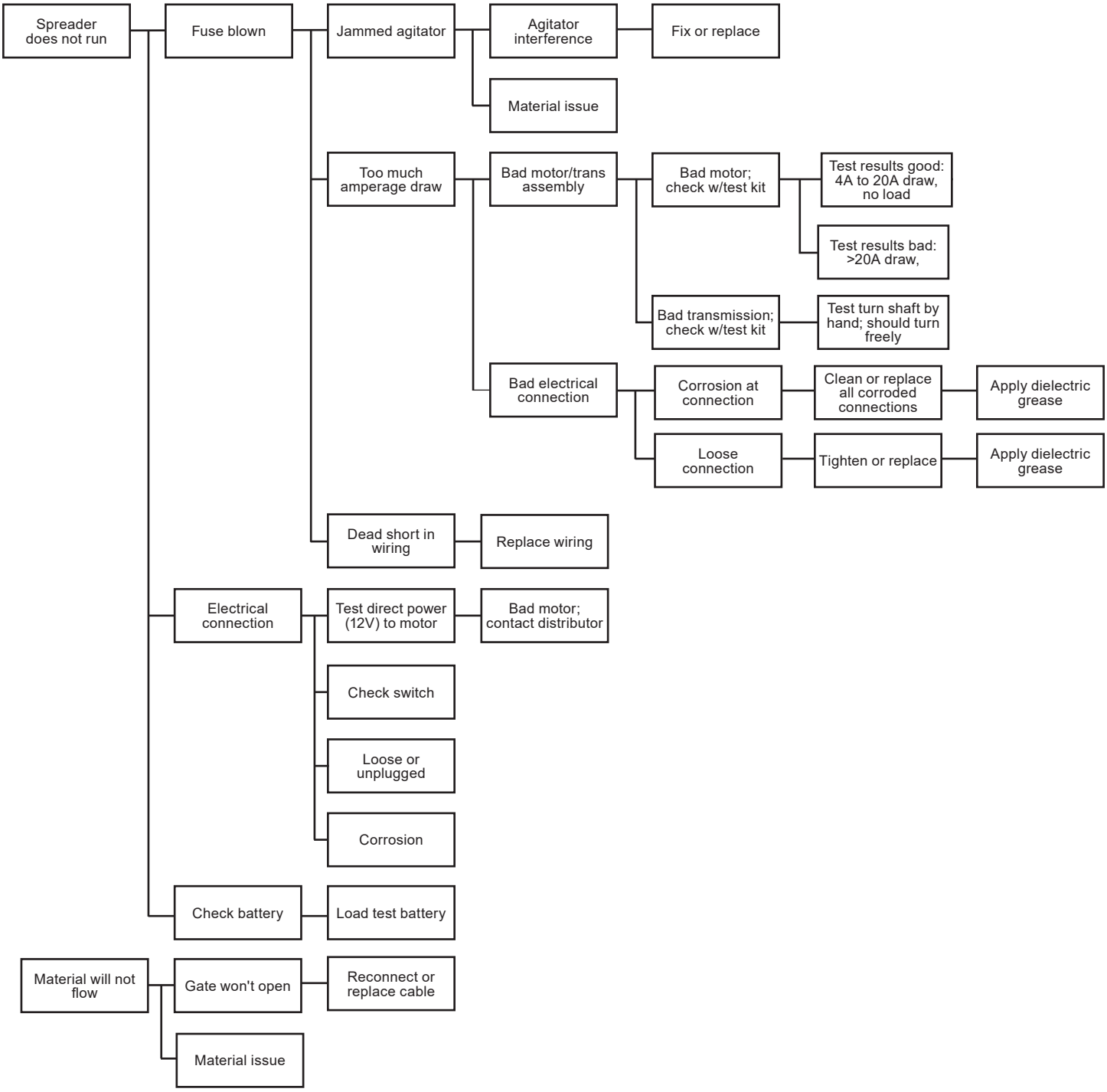
- Wash out the hopper and rinse off all external surfaces.
- Apply dielectric grease on all electrical connections to prevent corrosion at the beginning and end of the season and each time plugs are disconnected.
- Lubricate all grease fittings with good quality multipurpose grease.
- Oil or paint all bare metal surfaces.
- If motor cover is removed for any reason, use silicone sealant to ensure weatherproofing of enclosure.

STORAGE

Store the spreader in a clean, dry location and away from direct sunlight.

Store the control in safe dry spot during the off season.

TS200 SPREADER



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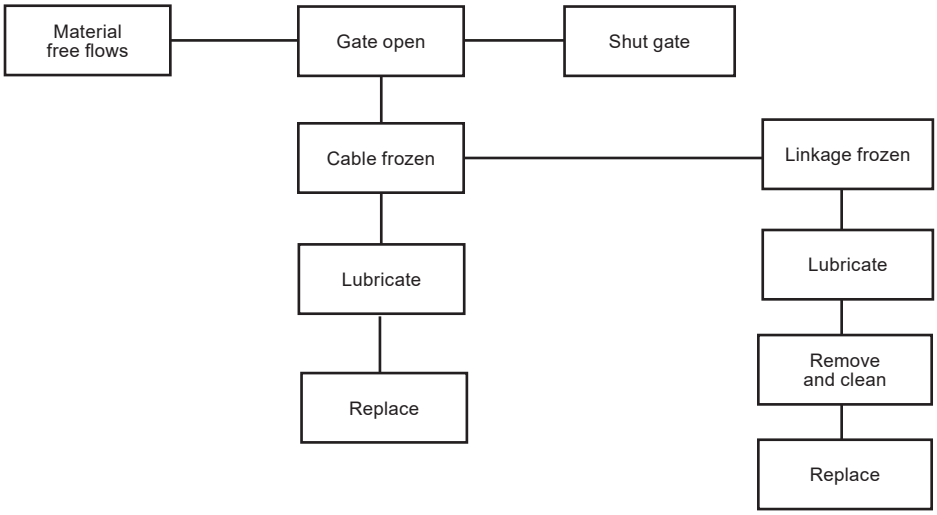

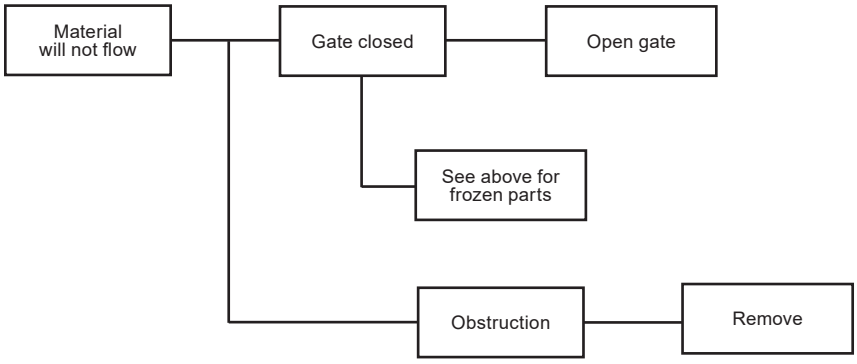

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