



ELECTRIC PICKUP V-BOX

Service and Parts Manual



Monroe Snow & Ice Control

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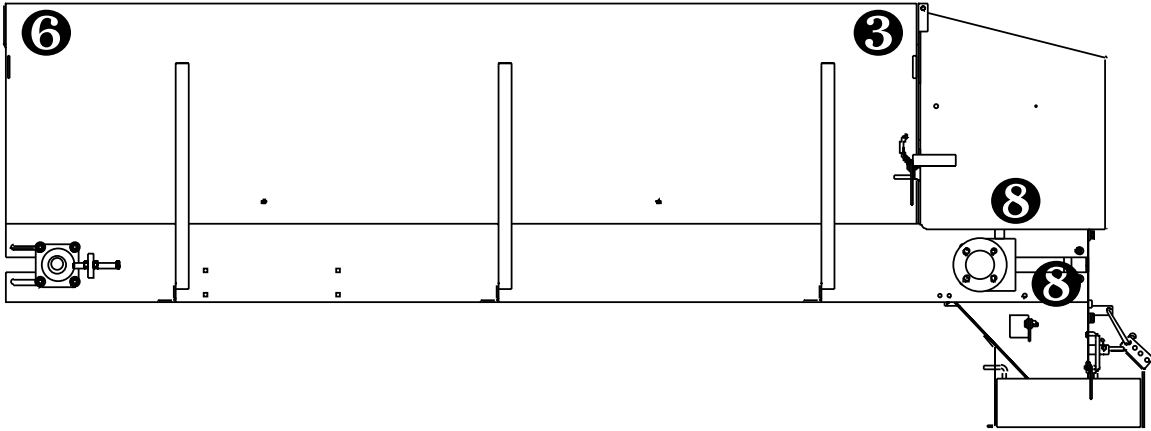
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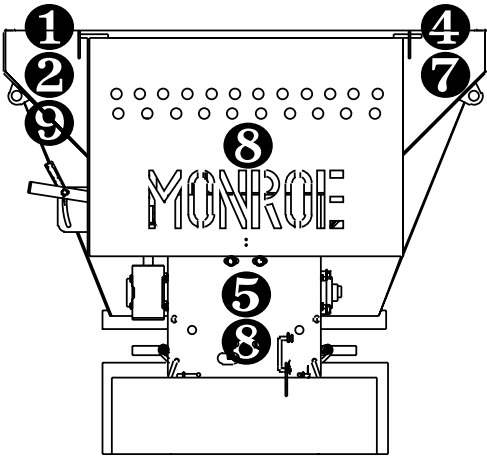
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SAFETY DECAL LOCATIONS

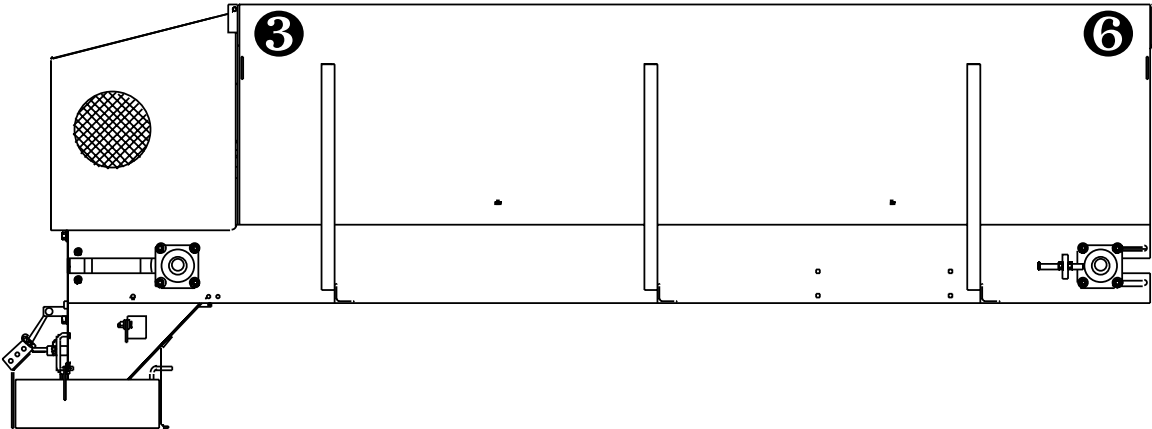
DRIVER SIDE



REAR VIEW



PASSENGER SIDE



SAFETY DECALS

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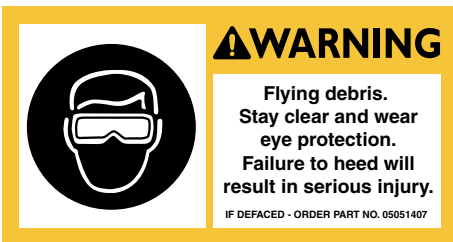
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Should you ever need replacement decals or parts/maintenance manuals, simply contact MTE and we will supply you with them FREE OF CHARGE. See page 23 for safety decal replacement part numbers.

SAFETY DECAL SIGNAL WORDS

DANGER

DANGER (*Red*) indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING (*Orange*) indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION (*Yellow*) indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION

CAUTION (*Yellow*) used without the safety risk alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

SAFETY INSTRUCTIONS

- Read all installation, safety and maintenance instructions completely before operating this equipment.
- Keep all personnel clear of moving parts while pickup v-box is being operated.
- Wear close fitting clothing and safety equipment appropriate to the job.
- Read and understand the following warning, danger and caution decals attached to this spreader. *(For locations of decals, see [page 2](#).)*

"DANGER Turn power off before servicing."

"WARNING Stay clear. Wear eye protection."

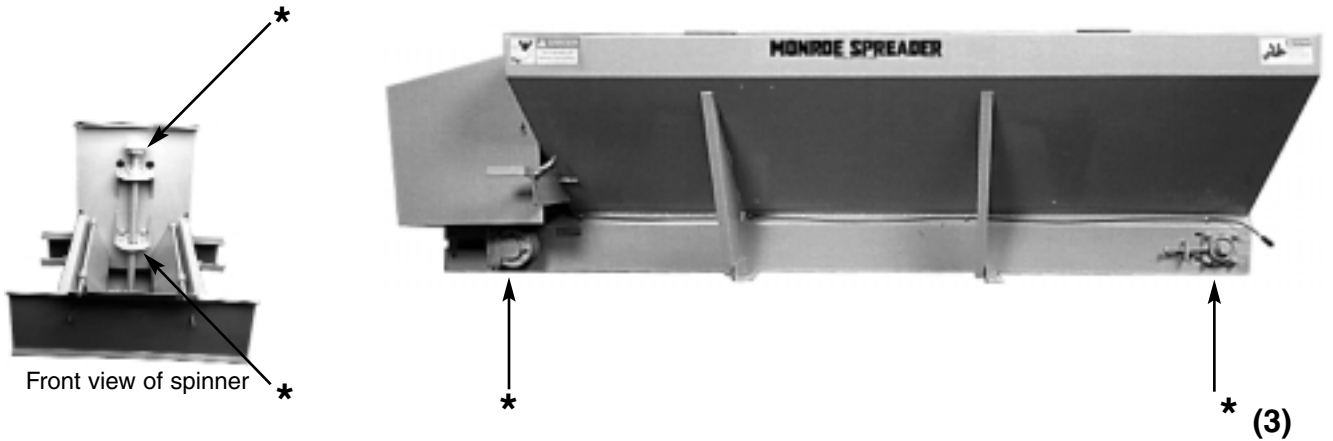
"CAUTION Keep hands and feet away from conveyor."

"DANGER Turning spinner throws material. Stay clear while spinner is turning."

"CAUTION

1. Keep all shields in place.
 2. Make sure everyone is clear of machine before starting engine or operation.
 3. Keep hands, feet and clothing away from power driven parts.
 4. Shut off electric motor and set parking brake before leaving operator's position.
 5. Make sure machine is solidly supported while it is being mounted, dismounted or stored.
 6. Use flashing lights when operating machine."
- Do not operate a spreader in need of maintenance! Repair immediately!
 - While operating this equipment, use common sense, use caution, be alert and be safety-conscious.
 - Top grates ***must*** be installed under top grate hold down gussets.

MAINTENANCE INSTRUCTIONS



* Location of grease fittings.

NOTE: SHUT OFF ELECTRIC MOTOR, STOP VEHICLE ENGINE BEFORE SERVICING. NEVER CLEAN, LUBRICATE OR ADJUST WHILE RUNNING.

- Grease idler bearings on idler shaft takeup assembly, outboard bearing on gearbox output shaft, and spinner bearings according to chart on [page 10](#).
- Grease input shaft bearing of gearbox every fifty hours of operation. (*Reference [page 33](#) for gearbox parts*) **CAUTION:** Over greasing may cause seal damage. The gearbox must be filled to oil level plug with SAE 90 gear-type lubricant. Keep breather plug clean.
- Drag chain slack on V-boxes should be checked periodically and taken up if distance between center line of rear sprocket and point where chain contacts lower flange on longmember is less than eight (8) inches.
- Roller chain tension must be maintained. **CAUTION:** Engine and hydraulics **MUST** be off! It is adjusted by loosening the spinner mounting bearings and sliding the bearings. Make sure the spinner shaft is straight up and down before retightening. Oil the chain often, especially at the end of the season.
- When the box is not in use, it should be washed out. If the box is put in storage, all surfaces should be oiled or painted after washing.

INSTALLATION INSTRUCTIONS

Installing Spinner Assembly to Spreader:

- Raise spreader to allow ground clearance for spinner assembly installation. Slide spinner assembly into the rear slots of the longmembers. Attach spinner to the longmembers using (2) $\frac{3}{8}$ " x $8\frac{1}{2}$ " L-bolts, (4) $\frac{3}{8}$ " flat washers, (4) $\frac{3}{8}$ " lock washers and (4) $\frac{3}{8}$ " nuts. Bolt top portion of spinner back plate to the engine mounting plate using (2) $\frac{3}{8}$ " x 1" bolts, (4) $\frac{3}{8}$ " flat washers, and (2) $\frac{3}{8}$ " top locknuts. Tighten all (6) nuts at this time. *(All mounting hardware is located in bag inside spreader box.)*
- Install roller chain between gearbox sprocket and spinner sprocket. Align sprockets by loosening allen screw in gearbox sprocket, and adjusting vertically as needed. Adjust chain tightness by loosening (4) bolts of spinner shaft mount and moving for desired chain tension. Retighten bolts and allen screw. *(Make sure spinner shaft is straight up and down before retightening bolts.)*

OPERATING INSTRUCTIONS

- Spread pattern depends on baffle setting and engine RPM, follow the table below to achieve desired results.

Table Symbols: L.B. = Left Baffle; R.B. = Right Baffle; B.B. = Back Baffle

Position of Baffle(s)	Result
1. L.B. in lowest position and R.B. and B.B. in highest position.	1. Immediate baffling effect to the left. With the effect tapering out to 11 ft. left of center pattern about 10 ft. behind the spinner. The pattern to the right and directly behind the spreader will continue as normal.
2. R.B. in lowest position and B.B. and L.B. in highest position.	2. Same as #1 but has the opposite effect on the right side.
3. R.B. and L.B. in lowest position and B.B. in highest position.	3. Immediate baffling effect is noticed on the right and left side with a gradual increase in pattern width proportional to the distance behind the spreader.
4. R.B. and B.B. in lowest position and L.B. in highest position.	4. Pattern: 2 ft. right of center and 10 - 15 ft. left of center.
5. B.B. and L.B. in lowest position and R.B. in highest position.	5. Pattern: 1 - 2 ft. left of center and 1 - 15 ft. right of center.
NOTE: For immediate baffling to the right or left #4 and #5 work the best.	
6. R.B. and L.B. in highest position and B.B. in lowest position.	6. Material will be dropped directly behind spreader and to both sides equally. There will be very little decrease in effective spread width.

INSTALLATION INSTRUCTIONS

Electric Pick-up V-Box Electrical Systems Installation

1. Before making any connections, open the junction box on the passenger side rear of the v-box and trip the resettable circuit breaker by fully depressing the red button.
2. Mount a 12 Volt battery (top post) in the supplied battery tray and fasten down with the supplied strap.
3. Connect the leads from the junction box labeled "Battery +" and "Battery-" to the corresponding posts on the v-box battery.
4. Connect the v-box battery to the vehicle charging system. The method of this connection is left to the installer. MTE strongly suggests isolating the v-box system so that the vehicle battery can not be drained by operating the v-box.

(We sell a Battery Isolator 95 Amp, PN: 05041402)

5. Run the control harness from the cab to the rear of the truck. Avoid sharp edges and tight corners.
6. Mount the receptacle end of the control harness in a secure location at the rear of the truck.
7. Connect the 7-pole plug on the control harness to the receptacle from (6) above. Grease both halves before connecting.
8. Reset the circuit breaker from (1) above.

Initial Operation: Single Rate Unit

- Operate the unit by turning the toggle switch in the cab "On" or "Off." While running, inspect the unit for proper mechanical operation.

Initial Operation: Variable Rate Unit

- Operate the unit by turning the switch to "On". The rate may be varied by turning the knob on the control panel.
- **IMPORTANT:** The operating conditions and granular material spread are different for every purchaser. The circuit board in the junction box is pre-tuned at MTE to verify correct operation, but should be field tuned under customer's operating conditions to optimize performance. Follow the instructions in the Leeson Controller manual (included with system) to tune the board for optimum performance. Loping or other erratic speed phenomena will dramatically shorten control life.

INSTALLATION INSTRUCTIONS

Installing the Pickup V-Box Spreader Into Truck Using the *Optional* 00057595 Mounting Kit:

- Lift spreader (with spinner attached) onto bed of truck and center. Leave 1" gap between rear bumper and spinner.
- Attach (4) eyebolts in corners of truck sides. Fasten each with (1) $\frac{3}{8}$ " lock nut and (2) $\frac{3}{8}$ " flat washers.
- Attach each of (4) chains to mounting tabs with (1) $\frac{3}{8}$ " x 1 $\frac{1}{2}$ " bolt, (1) $\frac{3}{8}$ " flat washer, (1) $\frac{3}{8}$ " lock washer and (1) $\frac{3}{8}$ " nut.
- Hook (4) turnbuckles onto eyebolts and hook other end to chains that are bolted to spreader tabs. Tighten turnbuckles so spreader is centered and immovable.

GENERAL INFORMATION

- Location descriptions are noted in direction of travel. (i.e. front, rear, left and right.)
- Delivery of replacement parts is subject to our sales delivery terms.
- Use only **Monroe Truck Equipment** O.E.M. replacement parts. Failure to do so will void warranty.
- Replacement parts listed in this manual reflect our most common PV Spreader items. If you do not find the part you require, please call your distributor.
- **Monroe Truck Equipment** reserves the right to make revisions or alterations to this parts manual.

LUBRICATION CHART

LUBRICATION

All bearing units are factory prelubricated and, therefore, do not require supplemental grease before service life begins. Relubrication, when administered correctly, can increase the life of a bearing substantially. MTE recommends the following general guidelines to maximize your bearing life:

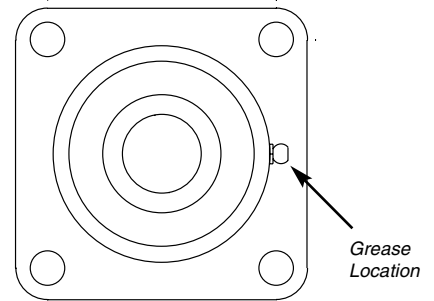
RPM	Temperature	Environmental Condition	Interval
100 500 1,000	32°F-120°F 32°F-150°F 32°F-210°F	Clean Clean Clean	6-12 months 2-6 months 2 wks to 2 months
1,500 Any	Over 210°F 32°F-150°F	Clean Dirty	Daily to weekly Weekly to monthly
Any Any	Over 150°F Any Temp.	Dirty Very Dirty	Daily to 2 wks Daily to weekly
Any	Any Temp.	Extremely Dirty	Daily to weekly

NOTE:

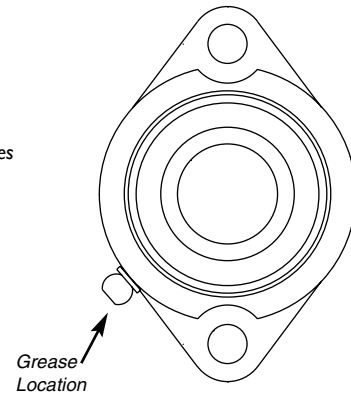
Over lubrication is a major cause of bearing failures. Please relubricate conservatively when unsure of bearing requirements.

When selecting a bearing lubricant, MTE suggests any lithium-based NLGI #2 grease. For operating temperatures higher than 210°F, please consult MTE

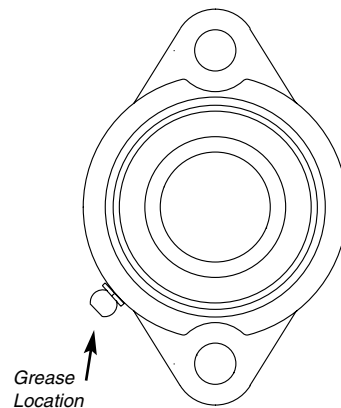
**BEARING, 1.25" 4-BOLT FLANGE
PN: 05030029**



**BEARING, 1" 2-BOLT FLANGE
PN: 05030023**



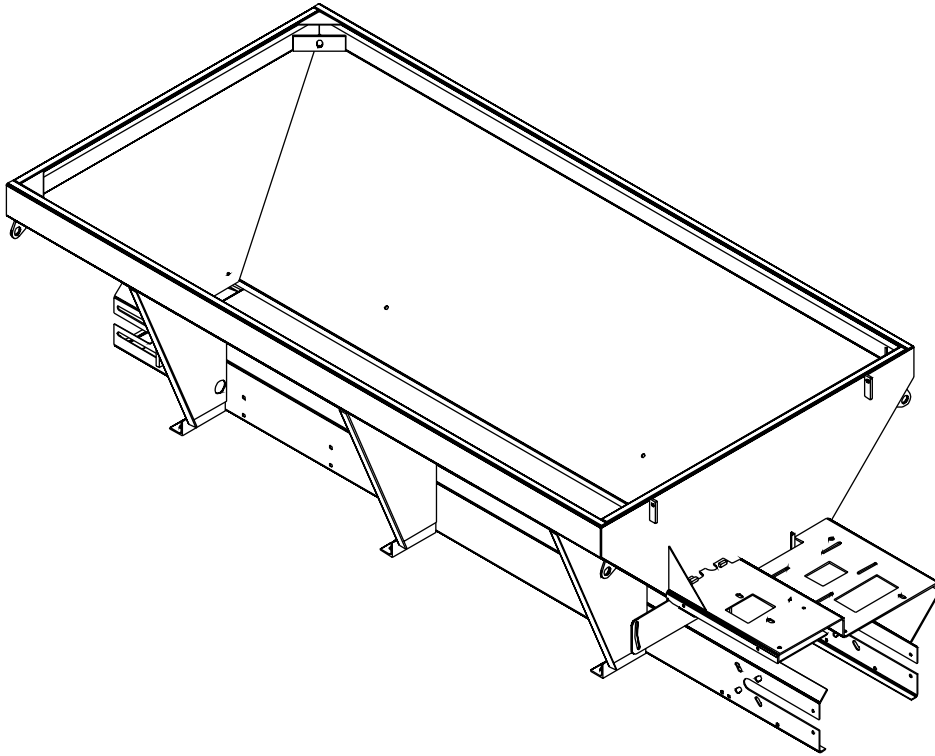
**BEARING, 1.25" 2-BOLT FLANGE
PN: 05030024**



NOTES

MSPV SPREADER

Item	Qty	Part Number	Description
1	1	<i>See page 14</i>	Chain Assembly
2	1	---	Serial Tag <i>(located on longmember near rear of unit)</i>
3	1	<i>See page 13</i>	Hopper Weldment
4	1	<i>See page 23</i>	Decal Kit
5	1	<i>See page 15</i>	Motor Kit
6	1	<i>See page 16-17</i>	Drive Kit
7	1	<i>See page 20</i>	Engine Hood Kit
8	1	<i>See page 21</i>	Door Kit
9	1	<i>See page 22</i>	Inverted V Kit

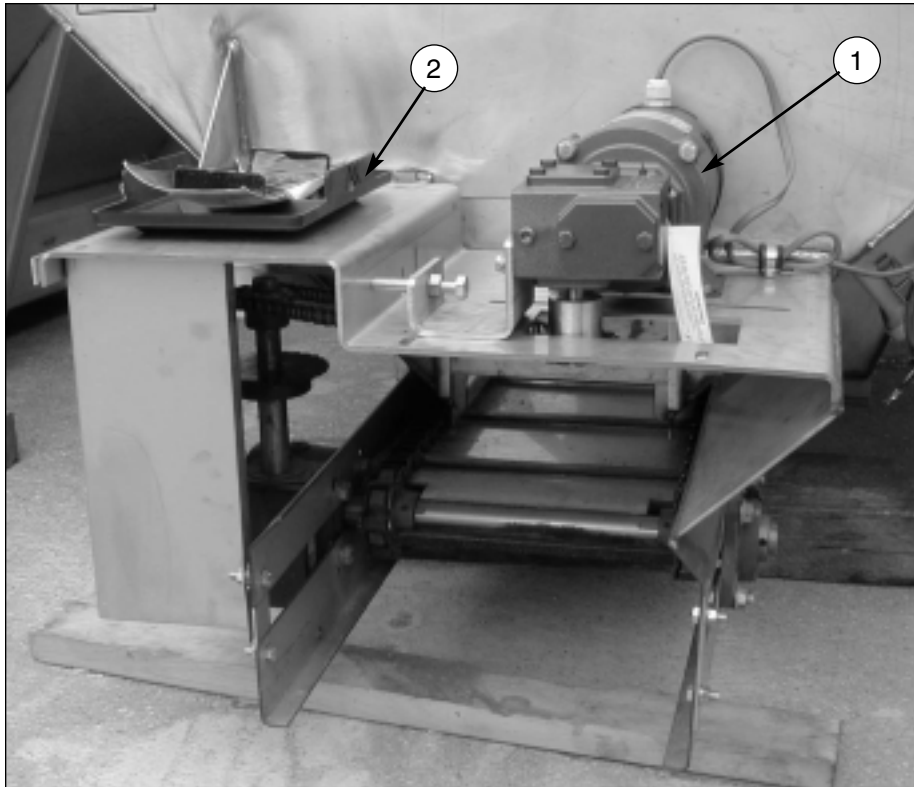


MSPV HOPPER WELDMENTS

Item	Qty	Part Number	Description
	1	00034549-A	Hopper Weldment, MSPV, 72-50-32, MS
	1	00034549-B	Hopper Weldment, MSPV, 72-50-32, 304 SST
	1	00034549-C	Hopper Weldment, MSPV, 72-50-32, 409 SST
	1	00050869-A	Hopper Weldment, MSPV, 72-50-32, MS, Poly Floor
	1	00050869-B	Hopper Weldment, MSPV, 72-50-32, 304 SST, Poly Floor
	1	00050869-C	Hopper Weldment, MSPV, 72-50-32, 409 SST, Poly Floor
	1	00031081-A	Hopper Weldment, MSPV, 84-50-32, MS
	1	00031081-B	Hopper Weldment, MSPV, 84-50-32, 304 SST
	1	00031081-C	Hopper Weldment, MSPV, 84-50-32, 409 SST
	1	00048358-A	Hopper Weldment, MSPV, 84-50-32, MS, Poly Floor
	1	00048358-B	Hopper Weldment, MSPV, 84-50-32, 304 SST, Poly Floor
	1	00048358-C	Hopper Weldment, MSPV, 84-50-32, 409 SST, Poly Floor
	1	00029469-A	Hopper Weldment, MSPV, 96-50-32, MS
	1	00029469-B	Hopper Weldment, MSPV, 96-50-32, 304 SST
	1	00029469-C	Hopper Weldment, MSPV, 96-50-32, 409 SST
	1	00048359-A	Hopper Weldment, MSPV, 96-50-32, MS, Poly Floor
	1	00048359-B	Hopper Weldment, MSPV, 96-50-32, 304 SST, Poly Floor
	1	00048359-C	Hopper Weldment, MSPV, 96-50-32, 409 SST, Poly Floor

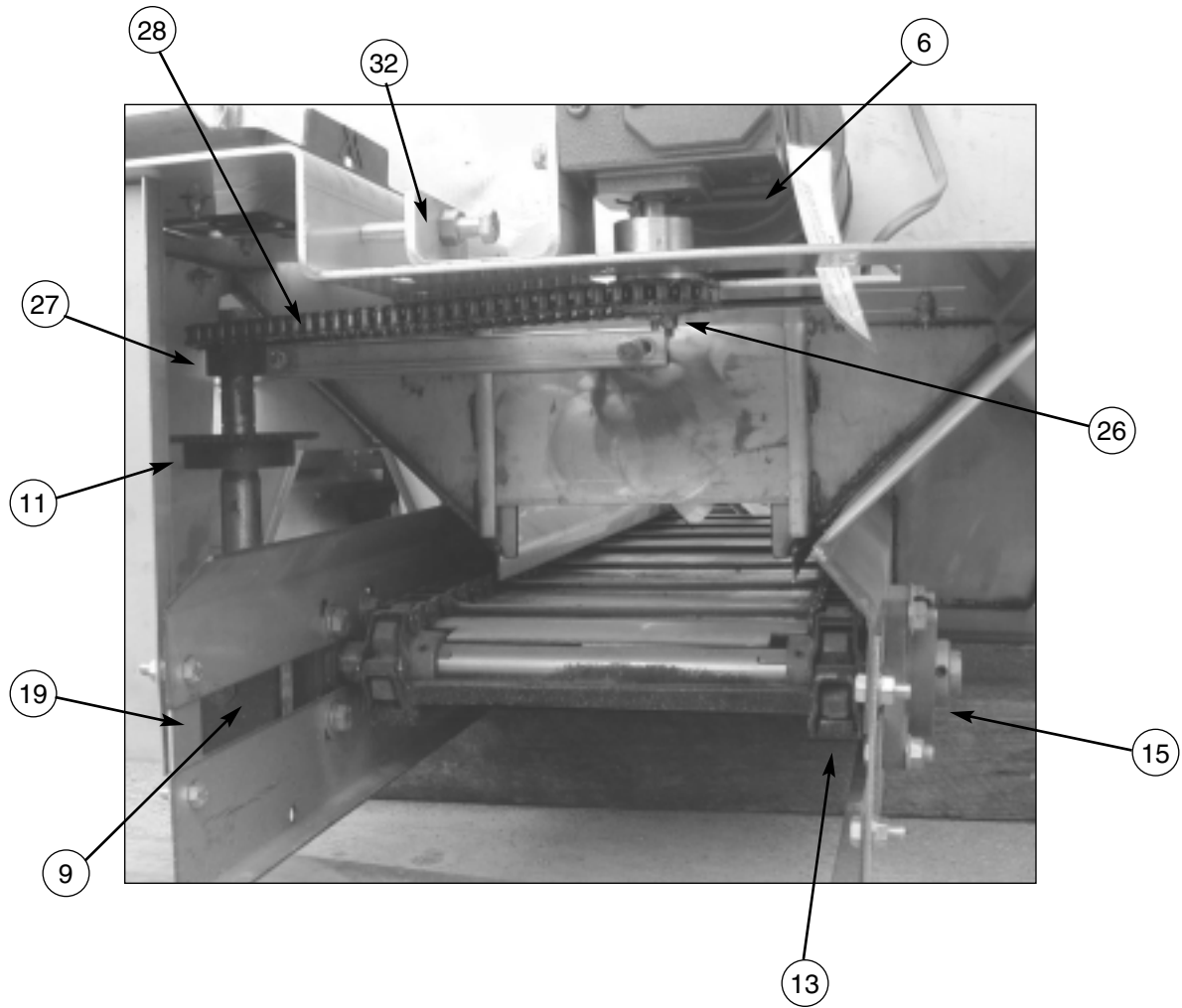
CHAIN ASSEMBLIES

Item	Qty	Part Number	Description
1	1	05036017	Chain Assembly, 124 Links, 31 Flats (Used on the 6' Body)
2	1	05036032	Chain Assembly, 108 Links, 27 Flats (Used on the 7' Body)
3	1	05036017	Chain Assembly, 124 Links, 31 Flats (Used on the 8' Body)



00059504 MOTOR KIT, 12 V DC

Item	Qty	Part Number	Description
1	1	05006420	Motor, ½ HP, 12VDC, Leeson
2	1	05050061	Battery Tray, Plastic
3	1	05050062	Battery Hold Down
4	1	05050063	Bolt, Battery Hold Down
5	4	05020899	Nut, ¼-20, Top Lock, Zinc
	4	05020906	Nut, ¼-20, Nylon Lock, SST
6	6	05021305	Washer, ¼, Flat, Zinc
	6	05021403	Washer, ¼, Flat, SST
7	4	05010619	Bolt, ⅝-18 x 1¼, G8, HHCS, Zinc
	4	05016139	Bolt, ⅝-18 x 1¼, HHCS, SST
8	6	05020265	Nut, ⅝-18, G8, Hex, Zinc
	6	05020855	Nut, ⅝-18, Nylon Lock, SST
9	6	05021364	Washer, ⅝, Lock, Zinc
	6	05021407	Washer, ⅝, Lock, SST
10	6	05021306	Washer, ⅝, Flat, Zinc
	6	05021404	Washer, ⅝, Flat, SST
11	2	05010593	Bolt, ¼-20 x 1, G8, HHCS, Zinc
	2	05016040	Bolt, ¼-20 x 1, HHCS, SST
12	2	05021363	Washer, ¼, Lock, Zinc
	2	05021393	Washer, ¼, Lock, SST
13	2	05020264	Nut, ¼-20, G8, Hex, Zinc
	2	05020844	Nut, ¼-20, Nylon Lock, SST
14	2	05014666	Screw, ⅝-18 x Flat Head Plain



00059503 DRIVE KIT, 12V DC, ELECTRIC

Item	Qty	Part Number	Description
1	1	00057412-A	Shield Bar, Rubber, MS
	1	00057412-B	Shield Bar, Rubber, 304 SST
	1	00057412-C	Shield Bar, Rubber, 409 SST
2	1	05051221	Wiper, Front
3	2	05010618	Bolt, 5/16-18 x 1, G8, HHCS, Zinc
	2	05016138	Bolt, 5/16-18 x 1, HHCS, SST
4	2	05020606	Nut, 5/16-18, G5, Spin Lock, Zinc
	2	05020901	Nut, 5/16-18, Spin Lock, SST
5	12	05010690	Bolt, 1/2-13 x 1 1/4, G8, HHCS, Zinc
	12	05016045	Bolt, 1/2-13 x 1 1/4, HHCS, SST
6	1	05007157	Gearbox, 7.5:1, Reducer
7	2	05016106	Bolt, 1/2-13 x 7
8	4	05020268	Nut, 1/2-13, G8, Hex, Zinc
	4	05020848	Nut, 1/2-13, Hex, SST

00059503 DRIVE KIT, 12V DC, ELECTRIC (CONTINUED)

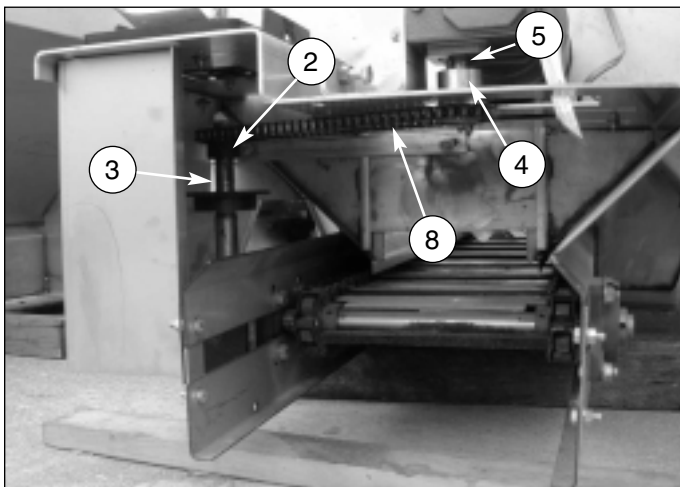
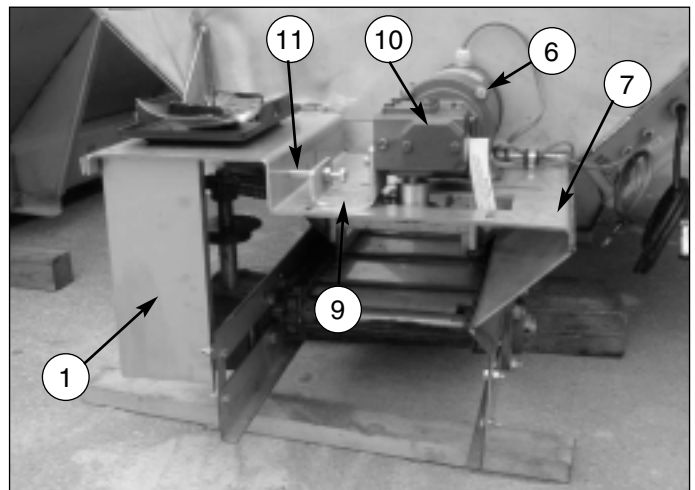
Item	Qty	Part Number	Description
9	1	05007160	Gearbox, 20:1, 1 1/4" Shaft (See page 32)
10	4	05010689	Bolt, 1/2-13 x1, G8, HHCS, Zinc
	4	05016047	Bolt, 1/2-13 x1, HHCS, SST
11	1	05033043	Sprocket
12	1	05051283	Snap Ring
13	3	05033024	Sprocket, Bored
14	1	00057415	Idler Shaft Weldment
15	3	05030029	Bearing, 1 1/4, 4-Bolt Flange
16	12	05021309	Washer, 1/2, Flat, Zinc
	12	05021391	Washer, 1/2, Flat, SST
17	4	05021367	Washer, 1/2, Lock, Zinc
	4	05021396	Washer, 1/2, Lock, SST
18	4	05010642	Bolt, 3/8-16 x 7/8, G8, HHCS, Zinc
	4	05016050	Bolt, 3/8-16 x 7/8, HHCS, SST
19	2	00057410-A	Stiffener Plate, MS
	2	00057410-B	Stiffener Plate, SST
20	4	05020607	Nut, 3/8-16, G5, Spin Lock, Zinc
	4	05020840	Nut, 3/8-16, Spin Lock, SST
21	12	05020609	Nut, 1/2-13, G5, Spin Lock, Zinc
	12	05020853	Nut, 1/2-13, Spin Lock, SST
22	2	05020593	Bolt, 1/4-20 x 1, G8, HHCS, Zinc
	2	05016040	Bolt, 1/4-20 x 1, HHCS, SST
23	4	05021305	Washer, 1/4, Flat, Zinc
	4	05021403	Washer, 1/4, Flat, SST
24	2	05020823	Nut, 1/4-20, Spin Lock, Zinc
	2	05020904	Nut, 1/4-20, Spin Lock, SST
25	1	00048320-A	Bracket, Atch, MSPV, MS
	1	00048320-B	Bracket, Atch, MSPV, 304 SST
	1	00048320-C	Bracket, Atch, MSPV, 409 SST
26	1	00013590	Sprocket Weldment, Output Shaft
27	1	00015403	Sprocket Weldment, Input Shaft
28	1	05036463	Chain Roller, #40, 35 Links
29	2	05051909	Screw, Set, #10
30	1	05050121	Key 1/4 x 1/4 x 1 1/2
31	1	05051817	Key, 1/4 x 1/4 x 2
32	1	00015496-A	Stiffener Plate, MS
	1	00015496-B	Stiffener Plate, SST
33	1	05010695	Bolt, 1/2-13 x 2 1/2, G8, HHCS, Zinc
	1	05016207	Bolt, 1/2-13 x 2 1/2, HHCS, SST
34	2	05020120	Nut, 1/2-13, G2, Jam, Zinc
	2	05020821	Nut, 1/2-13, Jam, SST
35	2	05010592	Bolt, 1/4-20 x 7/8, G8, HHCS, Zinc
	2	05016114	Bolt, 1/4-20 x 7/8, HHCS, SST
36	2	05021305	Washer, 1/4, Flat, Zinc
	2	05021403	Washer, 1/4, Flat, SST
37	2	05021363	Washer, 1/4, Lock, Zinc
	2	05021393	Washer, 1/4, Lock, SST

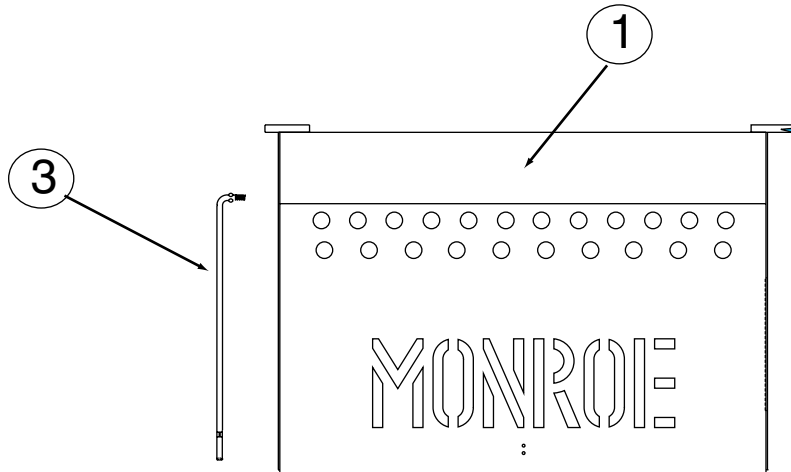
00013589 MODIFICATION KIT, ELECTRIC

Item	Qty	Part Number	Description
1	1	00013590	Sprocket Weldment Output Shaft
2	1	00015403	Sprocket Weldment, Input Shaft
3	1	05036463	Chain Roller
4	2	05051909	Screw, Set, #10-24 x ½
5	1	05050121	Key, ¼ x ¼ x 1½
6	1	05051817	Key, ¼ x ¼ x 2
7	1	05041325	Circuit Breaker, 50 Amp
8	1 FT	05051754	Wire, 10ga. Red
9	1	00015496-A	Stiffener Plate, MS
	1	00015496-B	Stiffener Plate, SST
10	1	05010695	Bolt, ½-13 x 2½, G8, HHCS, Zinc
	1	05016207	Bolt, ½-13 x 2½, HHCS, SST
11	2	05020120	Nut, ½-13, G2, Jam, Zinc
	2	05020821	Nut, ½-13, Jam, SST
12	2	05010592	Bolt, ¼ -20 x ⅞, G8, HHCS, Zinc
	2	05016114	Bolt, ¼ -20 x ⅞, HHCS, SST
13	2	05021305	Washer, ¼, Flat, Zinc
	2	05021403	Washer, ¼, Flat, SST
14	2	05021363	Washer, ¼, Lock, Zinc
	2	05021393	Washer, ¼, Lock, SST
15	1	00017575	Electric MSPV Modification Instructions

00017575 Electric MSPV Modification Instructions

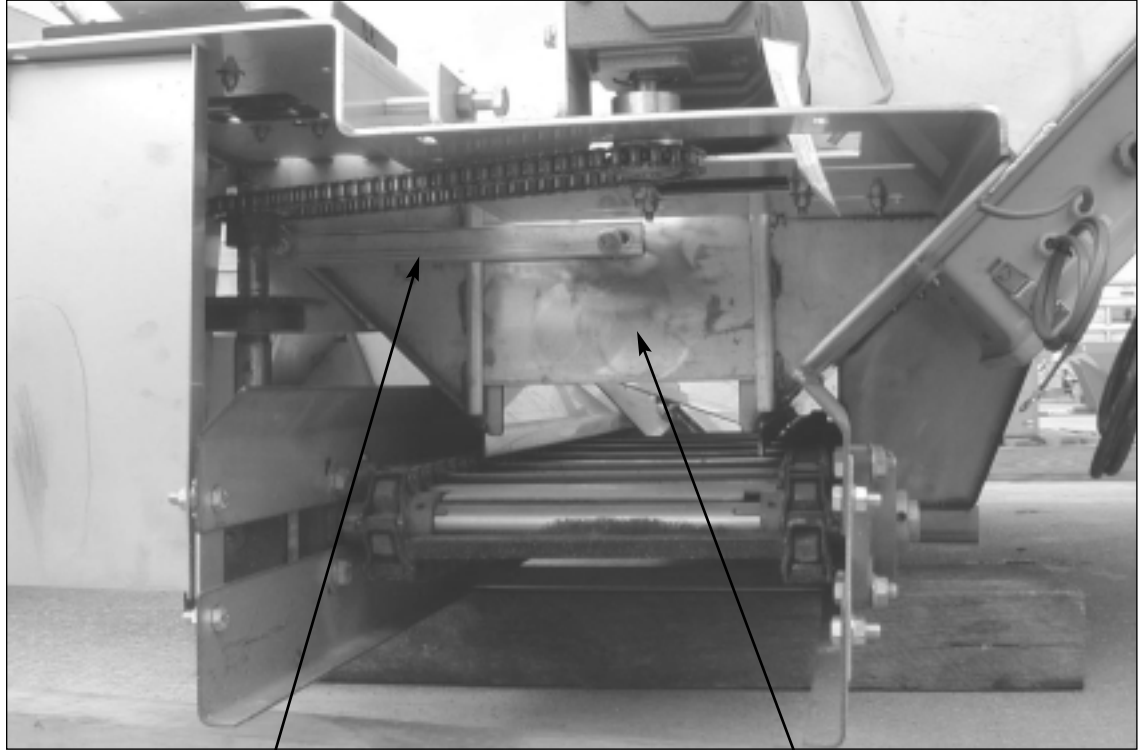
- Step 1: Remove spinner assembly, gearbox shield (Item 1), attachment brackets and shaft coupler.
- Step 2: Install 16 tooth sprocket with 1" ID Hub (Item 2) on gearbox shaft (Item 3).
- Step 3: Place motor (Item 6) on support plate (Item 7).
- Step 4: Install 16 tooth sprocket with $\frac{5}{8}$ " ID Hub (Item 4) on gearbox shaft (Item 5).
- Step 5: Install chain (Item 8) and adjust motor position.
- Step 6: Mark motor base hole location on support plate (Item 7).
- Step 7: Remove chain (Item 8) and motor (Item 6).
- Step 8: Drill (4) $\frac{3}{8}$ " DIA holes in support plate (Item 7).
- Step 9: Bolt motor (Item 6) to support plate (Item 7) and install chain (Item 8).
- Step 10: Bolt stiffener plate (Item 9) to reducer gearbox (Item 10).
- Step 11: Fasten adjustment bolt (Item 11) to stiffener plate (Item 9) using jam nuts.
- Step 12: Attach gearbox shield and spinner assembly.





00056273 ENGINE HOOD KIT

Item	Qty	Part Number	Description
1	1	00057199-A	Engine Shield Weldment, MS
	1	00057199-B	Engine Shield Weldment, 304 SST
	1	00057199-C	Engine Shield Weldment, 409 SST
2	1	00011655	Trim, MSPV Engine Hood
3	1	00057247	Rod Hood, 17.5" Long
4	2	00057575	Trim, MSPV, Engine Hood
5	1	05020851	Nut, 3/8-16, Acorn, Zinc
6	1	05022072	Pin, .156 x 7/8, Roll, Zinc
7	1	05050313	Clip Holder, MSPV Hood
8	1	05016941	Screw, #10-24 x 1/2, PH RD Head, SST
9	1	05020964	Nut, #10-24, Nylon Lock, 18-8 SS



2

1

00056267 DOOR KIT

Item	Qty	Part Number	Description
1	1	00057172-A	Door Weldment, Rear, Sliding, MS
	1	00057172-B	Door Weldment, Rear, Sliding, 304 SST
	1	00057172-C	Door Weldment, Rear, Sliding, 409 SSt
2	1	00042790	Handle Weldment, Door, Rear, MS
	1	00042791	Handle Weldment, Door, Rear, SST
3	1	05020841	Nut, 3/8-16 x 4 1/2, Handle
4	2	05020898	Nut, 3/8-16, Top Lock, GRC, C&W
		05020891	Nut, 3/8-16, Nylon Lock, SST



00056286 INVERTED V KIT

Item	Qty	Part Number	Description
1	1	00057251-A	Inverted V Weldment, MSPV, 7', 8', MS
	1	00057251-B	Inverted V Weldment, MSPV, 7', 8', 304 SST
2	4	05010642	Bolt, $\frac{3}{8}$ -16 x $\frac{7}{8}$ ", G8, HHCS, Zinc
	4	05016050	Bolt, $\frac{3}{8}$ -16 x $\frac{7}{8}$ ", G8, HHCS, SST
3	4	05020607	Nut, $\frac{3}{8}$ -16, G2, Spinlock, Zinc
	4	05020840	Nut, $\frac{3}{8}$ -16, G2, Spinlock, SST

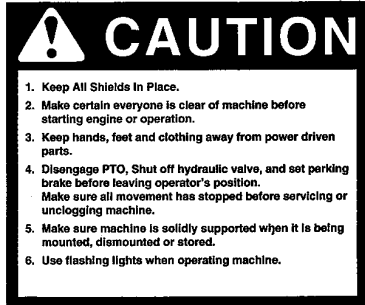
** WARNING: Operation of unit with Inverted V removed will cause excessive amp draw & possible electrical failure.*

MONROE SPREADER

Monroe, Wisconsin 53566

05051405

Side



05051404
Rear



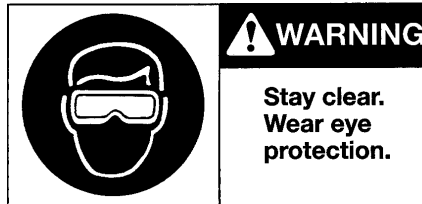
05051408
Side & Rear



05051409
Rear



05050681



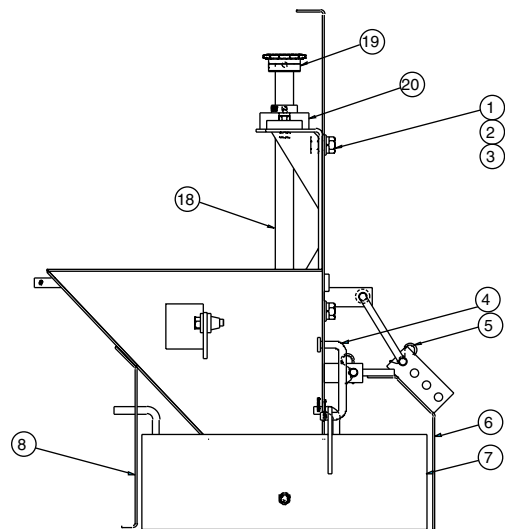
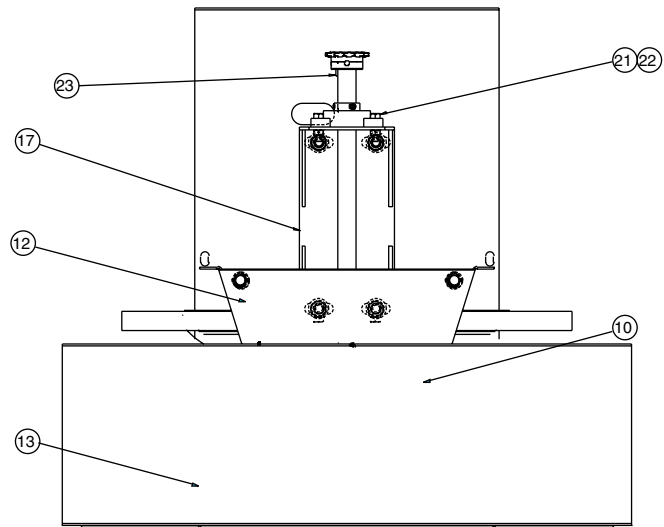
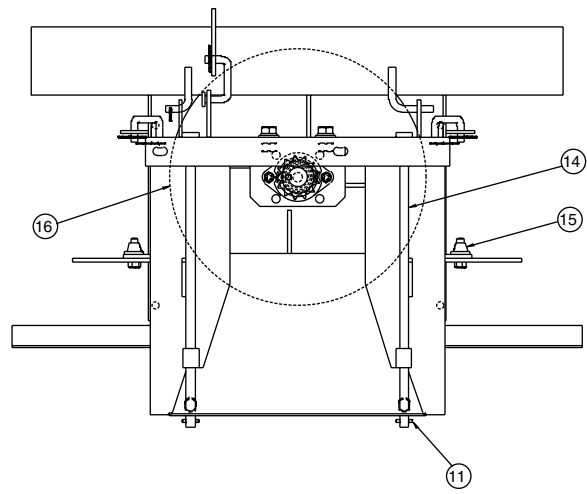
05051407
Rear



05051406
Side & Rear

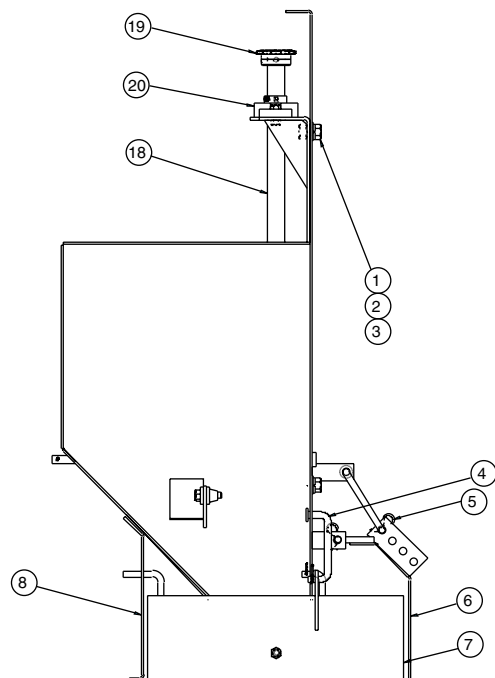
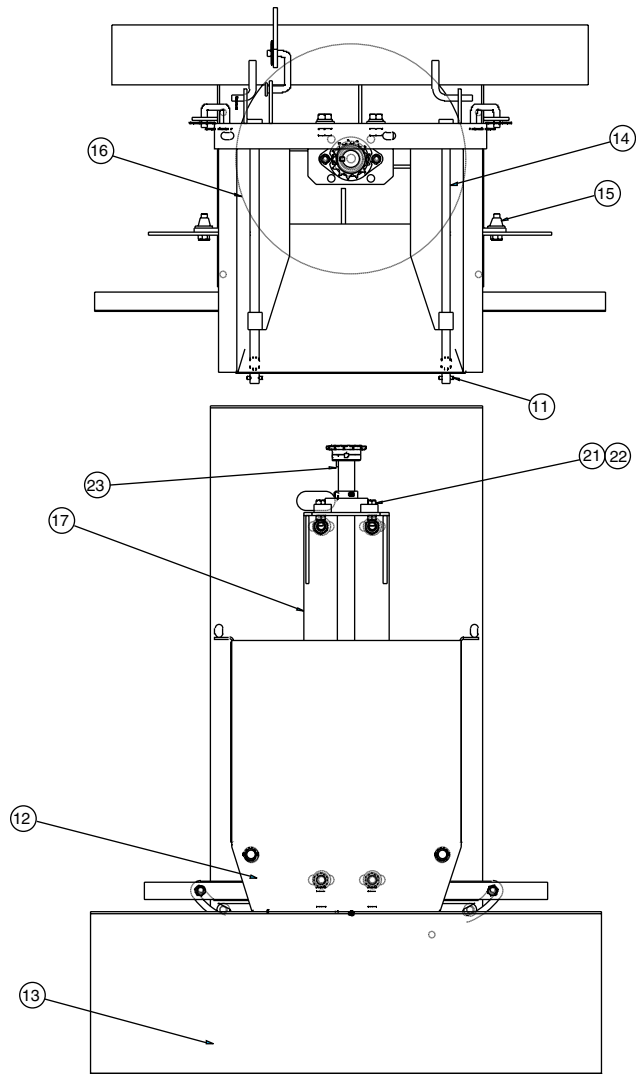
00056298 DECAL KIT

Item	Qty	Part Number	Description
1	2	05051405	Decal: Monroe Spreader
2	1	05051404	Decal: Caution #1-#6
3	2	05051408	Decal: Caution: Keep Hands & Feet....
4	1	05051407	Decal: Warning: Stay Clear. Wear...
5	1	05051409	Decal: Caution: Use Care When....
6	1	05051511	Decal: Danger: Turn Power Off....
7	2	05051406	Decal: Danger: Turn Power Off...
8	1	05050681	Decal: Bonded Power Coat Strength



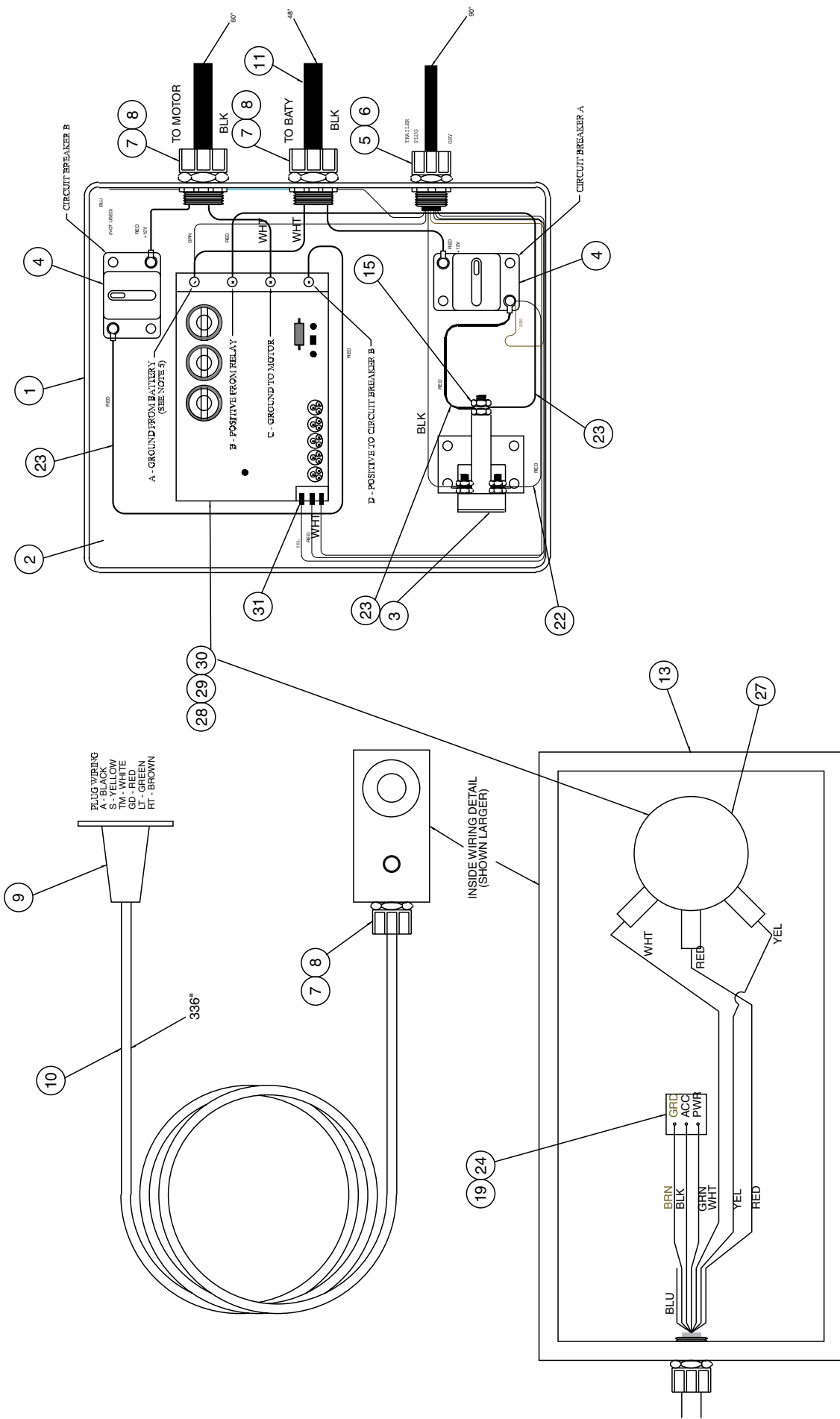
00059512 SPINNER ASSEMBLY, ELECTRIC

Item	Qty	Part Number	Description
1	4	05010689	Bolt, ½-13 x 1, GR8, HHCS, Zinc
	4	05016047	Bolt, ½-13 x 1, GR8, HHCS, SST
2	4	05021309	Washer, ½, Flat, Zinc
	4	05021391	Washer, ½, Flat, SST
3	4	05021367	Washer, ½, Lock, Zinc
	4	05021396	Washer, ½, Lock, SST
4	3	05051225	Arm, Adjusted Link for New Style
5	6	05022045	Pin, .0725 x 1.562 x ⅜, Hair
6	1	00057308-A	Deflector, Rear, Weldment, MS
	1	00057308-B	Deflector, Rear, Weldment, 304 SST
	1	00057308-C	Deflector, Rear, Weldment, 409 SST
7	1	00057360-A	Deflector, Side LH, Weldment, MS
	1	00057360-B	Deflector, Side LH, Weldment, 304 SST
	1	00057360-C	Deflector, Side LH, Weldment, 409 SST
8	1	00057582-A	Spinner Frame Weldment, MS
	1	00057582-B	Spinner Frame Weldment, 304 SST
	1	00057582-C	Spinner Frame Weldment, 409 SST
9	1	05020891	Nut, ⅜-16, G2, Spin Lock, Zinc
10	1	00057348-A	Diverter, LH Flow, Weldment, MS
	1	00057348-B	Diverter, LH Flow, Weldment, 304 SST
	1	00057348-C	Diverter, LH Flow, Weldment, 409 SST
11	2	05022072	Pin, .156 x ⅜, Roll, Zinc
12	1	00057347-A	Diverter, RH Flow, Weldment, MS
	1	00057347-B	Diverter, RH Flow, Weldment, 304 SST
	1	00057347-C	Diverter, RH Flow, Weldment, 409 SST
13	1	00057359-A	Deflector, RH Side, Weldment, MS
	1	00057359-B	Deflector, RH Side, Weldment, 304 SST
	1	00057359-C	Deflector, RH Side, Weldment, 409 SST
14	2	05050122	Pin, Pivot, ½ DIA x 15¼, Plated
15	2	05050574	Knob, Plastic Star Grip, ⅜-16
16	1	00057257-A	Spinner Disk Weldment, MS
	1	00057257-B	Spinner Disk Weldment, 304 SST
17	1	00057275-A	Bracket, Bearing Holder Weldment, MS
	1	00057275-B	Bracket, Bearing Holder Weldment, 304 SST
	1	00057275-C	Bracket, Bearing Holder Weldment, 409 SST
18	1	00057269	Spinner Shaft
19	1	05033006	Sprocket, 13 Tooth
20	2	05030023	Bearing, 1" Bore, 2 Bolt
21	4	05010619	Bolt, ⅝-18 x 1 ¼, G8, HHCS, Zinc
	4	05010639	Bolt, ⅝-18 x 1 ¼, HHCS, SST
22	4	05020265	Nut, ⅝-18, G8, Hex, Zinc
	4	05020855	Nut, ⅝-18, Hex, SST
23	1	05050121	Key, ¼ x ¼ x 1½
24	1	05010647	Bolt, ⅜-16 x 2, G8, HHCS, Zinc
	1	05016166	Bolt, ⅜-16 x 2, HHCS, SST
25	4	05021364	Washer, ⅝, Lock, Zinc
	4	05021407	Washer, ⅝, Lock, SST



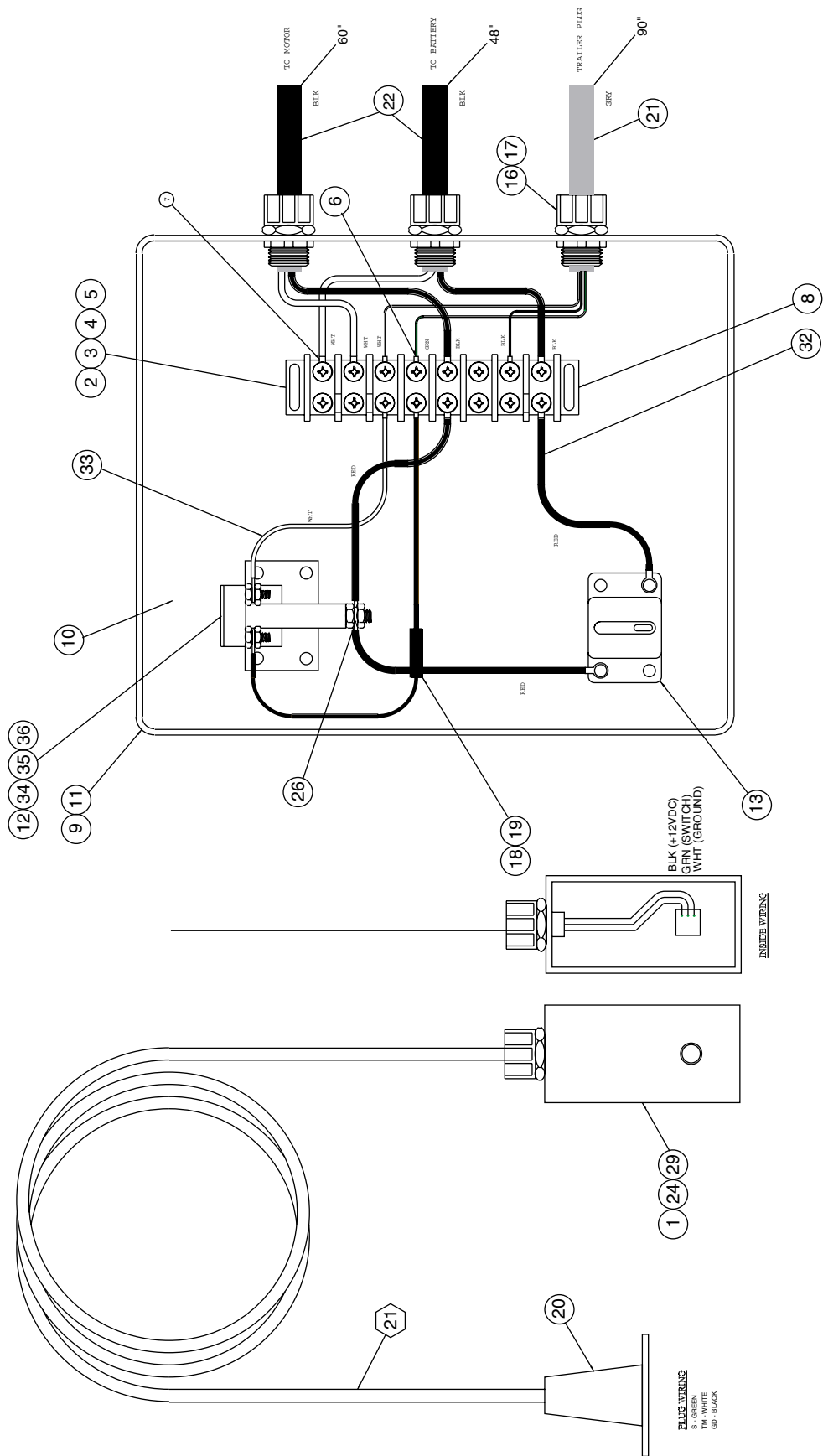
00059511 SPINNER ASSEMBLY, EXTENDED, ELECTRIC

Item	Qty	Part Number	Description
1	4	05010689	Bolt, ½-13 x 1, GR8, HHCS, Zinc
	4	05016047	Bolt, ½-13 x 1, GR8, HHCS, SST
2	4	05021309	Washer, ½, Flat, Zinc
	4	05021391	Washer, ½, Flat, SST
3	4	05021367	Washer, ½, Lock, Zinc
	4	05021396	Washer, ½, Lock, SST
4	3	05051225	Arm, Adjusted Link for New Style
5	6	05022045	Pin, .0725 x 1.562 x ⅜, Hair
6	1	00057308-A	Deflector, Rear, Weldment, MS
	1	00057308-B	Deflector, Rear, Weldment, 304 SST
	1	00057308-C	Deflector, Rear, Weldment, 409 SST
7	1	00057360-A	Deflector, Side LH, Weldment, MS
	1	00057360-B	Deflector, Side LH, Weldment, 304 SST
	1	00057360-C	Deflector, Side LH, Weldment, 409 SST
8	1	00057585-A	Spinner Frame Weldment, MS
	1	00057585-B	Spinner Frame Weldment, 304 SST
	1	00057585-C	Spinner Frame Weldment, 409 SST
9	1	05020607	Nut, ⅜-16, G2, Spin Lock, Zinc
10	1	00057348-A	Diverter, LH Flow, Weldment, MS
	1	00057348-B	Diverter, LH Flow, Weldment, 304 SST
	1	00057348-C	Diverter, LH Flow, Weldment, 409 SST
11	2	05022072	Pin, .156 x ⅜, Roll, Zinc
12	1	00057347-A	Diverter, RH Flow, Weldment, MS
	1	00057347-B	Diverter, RH Flow, Weldment, 304 SST
	1	00057347-C	Diverter, RH Flow, Weldment, 409 SST
13	1	00057359-A	Deflector, RH Side, Weldment, MS
	1	00057359-B	Deflector, RH Side, Weldment, 304 SST
	1	00057359-C	Deflector, RH Side, Weldment, 409 SST
14	2	05050122	Pin, Pivot, ½ DIA x 15¼, Plated
15	2	05050574	Knob, Plastic Star Grip, ⅜-16
16	1	00057257-A	Spinner Disk Weldment, MS
	1	00057257-B	Spinner Disk Weldment, 304 SST
	1	00057257-C	Spinner Disk Weldment, 409 SST
	1	05050064	Spinner Disc, UHMW, CCW
17	1	00057284-A	Shaft Mount Weldment, MS
	1	00057284-B	Shaft Mount Weldment, 304 SST
	1	00057284-C	Shaft Mount Weldment, 409 SST
18	1	00057272	Spinner Shaft
19	1	05033006	Sprocket, 13 Tooth
20	2	05030023	Bearing, 1" Bore, 2 Bolt
21	4	05010619	Bolt, ⅝-18 x 1 ¼, G8, HHCS, Zinc
	4	05010639	Bolt, ⅝-18 x 1 ¼, HHCS, SST
22	4	05020265	Nut, ⅝-18, G8, Hex, Zinc
	4	05020855	Nut, ⅝-18, Hex, SST
23	1	05050121	Key, ¼ x ¼ x 1½
24	1	05010647	Bolt, ⅜-16 x 2, G8, HHCS, Zinc
	1	05016166	Bolt, ⅜-16 x 2, HHCS, SST
25	4	05021364	Washer, ⅝, Lock, Zinc
	4	05021407	Washer, ⅝, Lock, SST



00068293 ELECTRICAL KIT, VARIABLE

Item	Qty	Part Number	Description
1	1	05041187	Junction Box, 12" x 10" x 5", Nema
2	1	05041188	Plate, Junction Box, 12"x 10", Aluminum
3	1	05014359	Relay, 100 Amp, 12 VDC, Heavy Duty
4	2	05041325	Circuit Breaker, 50 Amp, Resetable
5	1	05041130	Fitting, 3/4" Compression, Plastic, Wire
6	1	05041148	Nut, 3/8" w/ Seal
7	3	05041147	Fitting, 1/2" Compression, Plastic
8	3	05041149	Nut, 1/2" w/ Seal
9	1	05041112	Plug, 6-Pole, Trailer Connector, Chrome
10	36 FT	05041524	Cable, Wire, 14 Gauge, 7 Conduct, Trailer
11	9 FT	05040359	Cable, Wire, 10 Gauge, 2 Connector
12	2 FT	05051858	Tubing, 1/2 Black Shrink
13	1	05041632	Junction Box, Weatherproof
14	1	05041334	Socket, 6-Pole, Trailer
15	4	05041470	Terminal, Ring, 1/4" Stud
16	2	05041312	Terminal, Ring, #6 Stud
17	.5 FT	05051856	Tubing, 3/8" Black, Shrink
18	3	05041377	Terminal, Ring, 3/8" Stud
19	6	05050662	Heat Shrink Femal
20	.16 FT	05051857	Tubing, 3/16" Black
21	.5 FT	05051859	Tubing, 1/4" Black
22	1 FT	05051757	Wire, 14 Gauge, Red
23	2 FT	05051754	Wire, 10 Gauge, REd
24	1	05041478	Switch, Toggle, Lighted, Spst, On/Off
25	2	05050121	Key, 1/4 x 1/4 x 1 1/2
26	2	05051284	Key, Woodruf
27	1	05014320	Control, 12VDC Variable
28	10	05016956	Screw, #10-24 x 1, Hex Head
29	10	05020964	Nut, #10-25, Nylon Lock, 316 SST
30	20	05021413	Washer, #10, Flat, 18-8 SS
31	3	05041421	Connector, Female, Spade

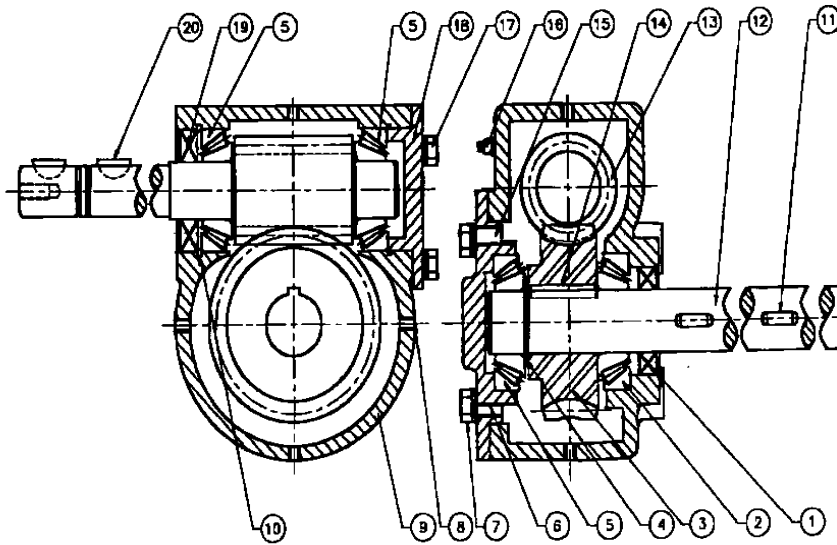


00068292 ELECTRICAL KIT, NON-VARIABLE, ELECTRIC

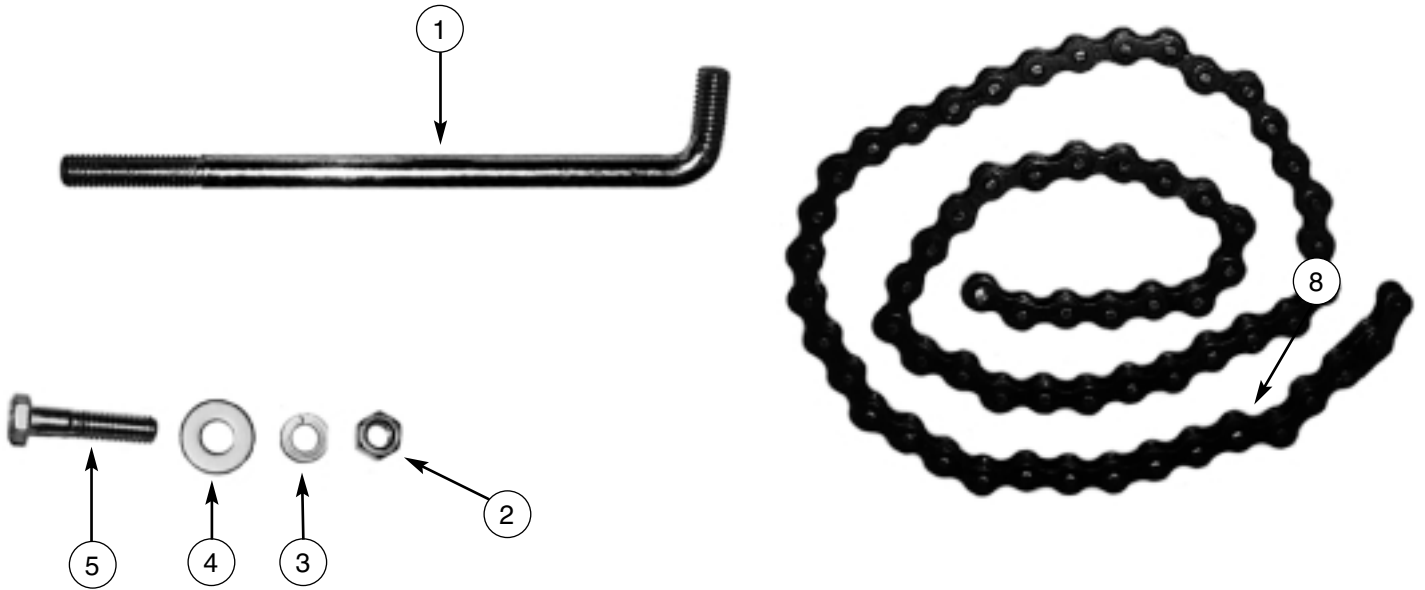
Item	Qty	Part Number	Description
1	1	05041478	Switch, Toggle, Lighted
2	1	05041161	Terminal Block, Double
3	2	05016059	Screw,#10-24
4	4	05021413	Washer, #10, Flat
5	2	05020964	Nut, #10-24 Nylon
6	11	05041311	Terminal, Ring, #10
7	4	05041420	Terminal, Ring, #10
8	3	05041162	Jumper Strip
9	1	05041187	Junction Box, 12 x 10 x 5
10	1	05041188	Plate Junction Box
12	1	05041359	Relay, 100 Amp, 12VDC, Heavy Duty
13	1	05041325	Circuit Breaker, 50 Amp
16	4	05041147	Fiting, 1/2" Compression, Plastic
17	3	05041149	Nut, 1/2" w/ Seal
18	1	05051860	Fuse Holder
19	1	05051853	Fuse
20	1	05041112	Plug, 6-Pole, Trailer Connector
21	36 FT	05041314	Cable, Wire, 14 Gauge
22	9 FT	05040359	Cable, Wire, 10 Gauge
23	2 FT	05051858	Tubing
24	1	05041016	Junction Box
25	1	05041334	Socket, 6-Pole
26	4	05041357	Terminal, Ring, 3/8"
27	2	05051854	Wire, Butt Connector
28	.5 FT	05051856	Tubing
29	2	05041375	Terminal Female
30	.16 FT	05051857	Tubing, 3/16"
31	.5 FT	05051859	Tubing, 1/4"
32	1.3 FT	05051757	Wire 14 Ga, Red
33	1 FT	05051761	Wire 14 Ga, White
34	6	05016040	Bolt, 1/4-20 x 1, HHCS, SST
35	6	05020906	Nut, 1/4-20, Nylon Lock, 316 SST
36	10	05021403	Washer, 1/4, Flat, SST
37	2	05050121	Key, 1/4 x 1/4 x 1 1/2
38	2	05051284	Key, 1/4" x 7/8"

05007160 -- GEARBOX ASSEMBLY, 20:1

USED ON ASSEMBLIES WITH SERIAL TAG NUMBER 00-03-7290 AND HIGHER, CONSECUTIVELY.



ITEM	QTY	PART #	DESCRIPTION
1	1	05007228	Double Lips Oil Seal
2	1	05007229	Tapered Roller Bearing
3	1	05007231	Worm Gear
4	1	05007232	External Circlip
5	3	05007233	Tapered Roller Bearing
6	1	05007234	Output Cover
7	4	05007235	Bolts
8	7	05007236	Socket Plug
9	1	05007237	Housing
10	1	05007238	Internal Circlip
11	2	05007239	Square Keys
12	1	05007241	Output Shaft
13	1	05007242	Single Thread Input Worm Shaft
14	1	05007243	Key
15	1	05007244	Socket Plug
16	1	05007245	Grease Fitting, Straight
17	3	05007246	Bolts
18	1	05007247	Input Cover
19	1	05007248	Double Lips Oil Seal
20	2	05007249	Woodruff Keys



00085500 ATTACHMENT KIT, ELECTRIC DRIVE, SPINNER

Item	Qty	Part Number	Description
1	2	05051069	Rod, $\frac{3}{8}$ - 16 x 8 $\frac{1}{2}$, 90° Bend
2	4	05020266	Nut, $\frac{3}{8}$ - 16, G8, Hex, Zinc
3	4	05021365	Washer, $\frac{3}{8}$, Lock, Zinc
4	8	05021307	Washer, $\frac{3}{8}$, Flat, Zinc
5	2	05010643	Bolt, $\frac{3}{8}$ - 16 x 1, G8, HHCS, Zinc
6	2	05020898	Nut, $\frac{3}{8}$ - 16, Top Lock, C&W, GR C
7	1	05051142	Connector Link, #41
8	1	05036428	Chain, Roller #41 Pitch w/ Connector Link

TRIMPOT ADJUSTMENTS

Before power is applied, the speed potentiometer and trimpots should be preset as follows:

TRIMPOT PRESET

1. Rotate Speedpot fully CCW.
2. Rotate Max trimpot CW 1/2 way.
3. Rotate Current Limit trimpot fully CW.
4. Rotate Min trimpot fully CCW.
5. Rotate Accel trimpot CW 1/2 way.
6. Rotate I.R. trimpot fully CW.

DC power can now be applied to the system and the control adjusted as follows:

TRIMPOT ADJUSTMENT

7. Increase the **MIN** trimpot in a CW direction until the desired minimum speed is reached.
8. Turn the Speedpot fully CW and adjust the **MAX** trimpot until the desired maximum speed is reached.
9. Adjust the **ACCEL** trimpot to achieve the desired soft start time. CW rotation will increase accel time.
10. Rotate the **CURRENT LIMIT** trimpot fully CCW until the motor begins to stall. Apply a full load to the motor and adjust the trimpot until a desired current setting is obtained.
11. Adjust **I.R.** trimpot CW 1/2 way. If motor RPM is inconsistent (jumpy), rotate I.R. trimpot CCW until rotation is stable.

IMPORTANT: DO NOT EXCEED CURRENT LIMIT AMPERAGE RATING. (see below)

LEESON SPEEDMASTER™ low voltage controls = 60 AMP MAX

Adjustment is now complete for the 175135.00REV1 and 175136.00REV1 models and the ammeter may be removed.

IN CASE OF DIFFICULTY

If a newly installed control will not operate, it is likely that a terminal or connection is loose. Check to make sure connections are secure and correct. If the control is still inoperative, refer to the following chart for reference:

PROBLEM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
MOTOR DOESN'T RUN	<ul style="list-style-type: none"> * INCORRECT OR NO POWER * SPEEDPOT SET AT ZERO * WORN MOTOR BRUSHES * CURRENT LIMIT SET TOO LOW 	INSTALL PROPER SERVICE ROTATE SPEEDPOT FULLY CW REPLACE MOTOR BRUSHES ADJUST CURRENT LIMIT POT CW
MOTOR "HUNTS"	<ul style="list-style-type: none"> * MOTOR SPEED IS ABOVE RATED SPEED * I.R. COMP. TRIMPOT SET TOO HIGH 	SEE TRIMPOT ADJUSTMENTS ON PAGE 6 SEE TRIMPOT ADJUSTMENTS ON PAGE 5
MOTOR RUNS AT "FULL SPEED" UNCONTROLLABLY	<ul style="list-style-type: none"> * LOOSE SPEEDPOT CONNECTIONS * MIN OR MAX TRIMPOTS NOT PROPERLY ADJUSTED * POSSIBLE CONTROL FAILURE 	SECURE ALL CONNECTIONS SEE TRIMPOT ADJUSTMENTS ON PAGE 5 SEND TO LEESON ELECTRIC CORP.
MOTOR ROTATES IN WRONG DIRECTION	<ul style="list-style-type: none"> * MOTOR ARMATURE HOOKED UP BACKWARDS 	REVERSE ARMATURE + AND - LEADS
MOTOR STALLS UNDER A LIGHT LOAD	<ul style="list-style-type: none"> * CURRENT LIMIT TRIMPOT IMPROPERLY ADJUSTED 	SEE TRIMPOT ADJUSTMENTS ON PAGE 5

SPECIFICATIONS

	175135.00REV1 and 175136.00REV1 Models	
Load current (continuous)	60 amps continuous	
Input Voltage	12VDC ± 10% (175135.00REV1)	24/36VDC ± 10% (175136.00REV1)
Output Voltage	0-12VDC (175135.00REV1)	0-24/36VDC (175136.00REV1)
Speed adjustment	5KΩ potentiometer or 0 to +10VDC input signal	
Speed range	30 : 1	
Overload capacity	200% for 10 seconds; 150% for one minute	
Current limit	adjustable 100% to 200% of full motor load, up to continuous current rating (page 5)	
Acceleration	adjustable - 0 to 10 seconds	
Deceleration	non-adjustable - 0.5 seconds	
Maximum speed	adjustable - 50 to 100% of base speed	
Minimum speed	adjustable - 30% of max speed	
Connections	barrier terminal block	
Speed regulation	1% of base speed	
Package configuration	black anodized aluminum extrusion	
Internal operating frequency	approximately 1.6K Hertz	
Thermal protection	Current foldback at 60° C. heatsink temperature	

175135.00REV1 / 175136.00REV1 SCHEMATIC

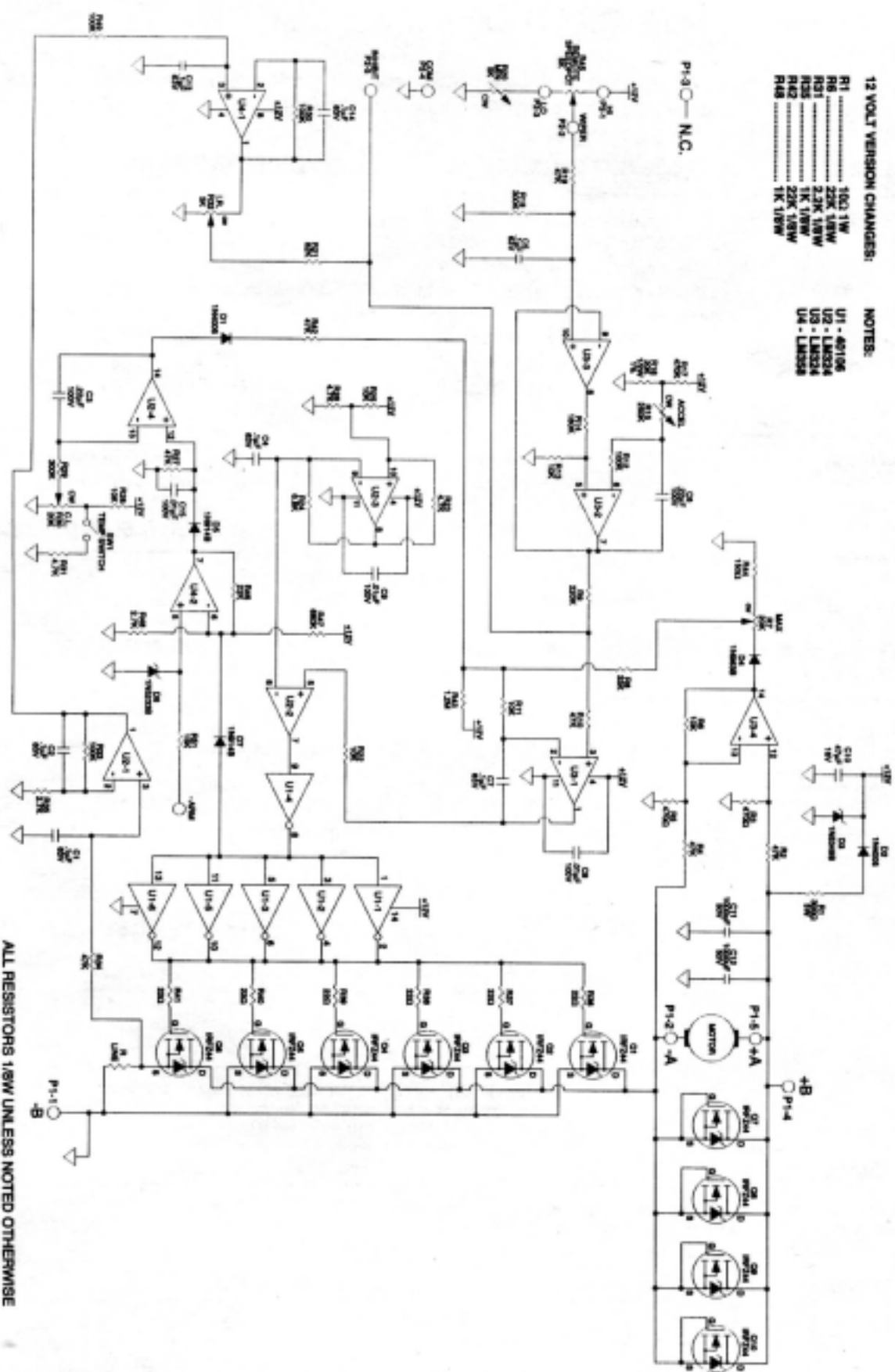
12 VOLT VERSION CHANGES:

- R1 150 1W
- R2 22K 1/8W
- R3 22K 1/8W
- R4 1K 1/8W
- R5 22K 1/8W
- R6 22K 1/8W
- R7 1K 1/8W

NOTES:

- U1 - 40106
- U2 - LM324
- U3 - LM324
- U4 - LM324

P1-3 - N.C.



ALL RESISTORS 1/8W UNLESS NOTED OTHERWISE

HOW TO ORDER PARTS

To order or inquire about replacement parts, please contact the **distributor** or **store** that the product was purchased through. To speed the information flow, please have the following information ready:

- Model Number
- Serial Number
- Part Number and/or description as per the parts manual
- Quantity needed

For further information about **Monroe Truck Equipment** replacement parts, please call 877-834-9049 and ask for **Snow & Ice Parts Sales**.

RETURN POLICY

Merchandise returned to **Monroe Truck Equipment** must have a Returned Goods Authorization (RGA) form filled out completely and signed by authorized personnel. To get your RGA form, call 800-880-0109. For whole goods, ask for **Snow & Ice Sales**. For replacement parts, ask for **Snow & Ice Parts Sales**. All returned items are subject to a 15% restocking fee and must be sent freight prepaid!

MONROE TRUCK EQUIPMENT, INC. WARRANTY SNOW & ICE CONTROL PRODUCTS

Monroe Truck Equipment, Inc. warrants to the original purchaser, that if any part of the product proves to be defective in workmanship or material within **ONE YEAR** of the original installation, and is returned to us within 30 days of the discovered defect, we will (at our option) repair or replace the defective part. This warranty does not apply to damage resulting from misuse, neglect, accident, improper installation, normal wear items or lack of maintenance. This warranty is exclusive and supersedes all other warranties, whether expressed or implied. **Monroe Truck Equipment, Inc.** neither assumes, nor authorizes anyone to assume for it, any other obligation or liability in connection with this warranty and will not be liable for consequential damages.

All engines, pumps, motors, cylinders and valves are warranted by their manufacturer and not by **Monroe Truck Equipment, Inc.**. The manufacturer's warranty will apply to these parts. Electrical and hydraulic components are not to be disassembled without the express written permission of Monroe Truck Equipment. Use of replacement parts other than original equipment voids this warranty.

All defective parts returned must be accompanied by the model number, serial number, date installed, date of defect, description of defect, and the name of the distributor from whom it was purchased. All warranty claims must have prior written approval from **Monroe Truck Equipment, Inc.**

Please return the warranty registration card that accompanies this manual to confirm receipt of this parts catalog and acknowledge the information contained within. Failure to return the attached card may result in a voided warranty.



1051 West 7th Street
Monroe, WI 53566
608-328-8127 ~ Fax: 608-328-4278

Warranty Policy

Uninstalled Parts and Equipment Provided by Monroe Truck Equipment

Monroe Truck Equipment will provide the following limited warranty for a period of one year to the original purchaser of all uninstalled goods provided by Monroe Truck Equipment:

LIMITED WARRANTY: All goods provided by Monroe Truck Equipment (MTE) will be free from defects in material and workmanship for a period of one year from the date of purchase by the original purchaser. This limited warranty shall be the sole and exclusive remedy for any such product found to be defective. This limited warranty supercedes all previous warranties and is exclusive and in lieu of all other warranties, whether expressed or implied.

This limited warranty applies only to parts or accessories manufactured by MTE and/or provided by same. Except with respect to title, this limited warranty does not pertain to parts or accessories not manufactured and/or provided by MTE, regardless of whether such parts or accessories were selected and/or recommended by MTE. MTE will, as a service to the buyer, pass on any warranties received from the original manufacturer of MTE provided parts and/or accessories.

MTE will not under any circumstances be liable for any incidental or consequential damages whether in tort, contract, or otherwise, for any bodily injury, death, property damage, loss of use, or loss of income resulting from or in any way arising out of any goods provided by MTE, or their sale, use, or manufacture.

Any warranty claim deemed to be arising from the result of misuse, abuse, neglect, accident, improper installation, lack of maintenance, act of war (whether declared or otherwise), or act of God will be denied. Any repair or modification by the buyer or any third party, without the prior written consent of MTE, will void any possible warranty compensation. Any damage deemed to be the result of abnormal operation will not be compensated by this warranty.

Normal or special maintenance items such as fuels, fluids, tires, belts, hoses, filters, air cleaners, light bulbs, and any other items subject to normal wear and tear that are supplied in connection with goods provided by MTE are not allowed under this warranty.

All engines, pumps, cylinders, valves, and motors are warranted by their manufacturer and not by Monroe Truck Equipment. The manufacturer's warranty will apply to these parts. Electrical and hydraulic components are not to be disassembled without the express written consent of MTE. Any disassembly of MTE provided components without prior authorization will void the applicable warranty.

Monroe Truck Equipment shall be the sole and final determining authority as it applies to the administration of this warranty policy. Purchaser acknowledges receipt of Monroe Truck Equipment Warranty Policy and agrees to be bound by same.



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Any and all warranty claims must be forwarded to MTE within 10 days of defect discovery. A copy of the original Monroe Truck Equipment invoice as well as the manufacturer's model number, serial number, and date of installation must accompany all correspondence regarding said claims. MTE will, at their option, choose whether to repair or replace the defective part unless otherwise specified by the original manufacturer of said part.

Procedures for Warranty Claims Notification

For submission of any warranty claim please contact Monroe Truck Equipment – Warranty Department at 800-356-8134

The following documentation will be needed when you call for initial warranty authorization:

1. A copy of the original MTE invoice.
2. Make, Model, and VIN or Serial Number of the equipment involved.
3. Part number and serial number of the part in question.
4. A complete description of the problem.

The following must accompany any claim submitted to Monroe Truck Equipment:

1. Documented photographs of any physical damage.
2. Inspection notes by MTE personnel or MTE authorized 3rd party.
3. Authorization number issued by Monroe Truck Equipment – Warranty Department.

Defective parts must be returned to Monroe Truck Equipment (freight prepaid) within 30 days of issuance of Authorization Number.

Monroe Truck Equipment reserves the right to void any warranty for failure to comply with Monroe Truck Equipment Warranty Policy.

This policy is effective October 11, 2012

