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# SAFETY GUIDELINES

This manual contains information that is important for you, the owner/operator, to know and understand. This information relates to protecting **personal safety** and **preventing equipment problems**. It is the responsibility of the owner/operator to inform anyone operating or working in the area of this equipment of these safety guidlines. To help you recognize this information, we use the symbols that are defined below. Please read the manual and pay attention to these sections. Failure to read this manual and it's safety instructions is a misuse of the equipment and may lead to serious injury or death.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



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



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



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

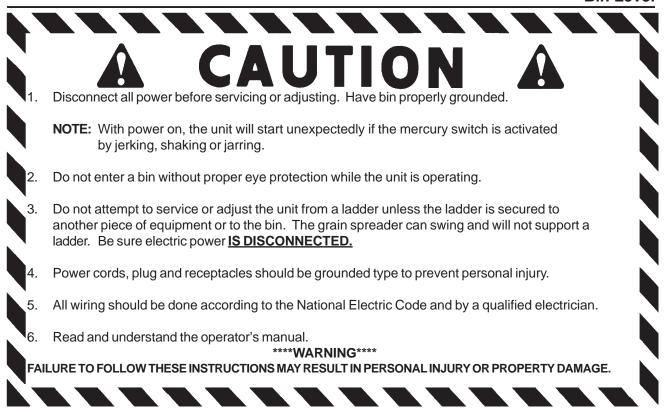


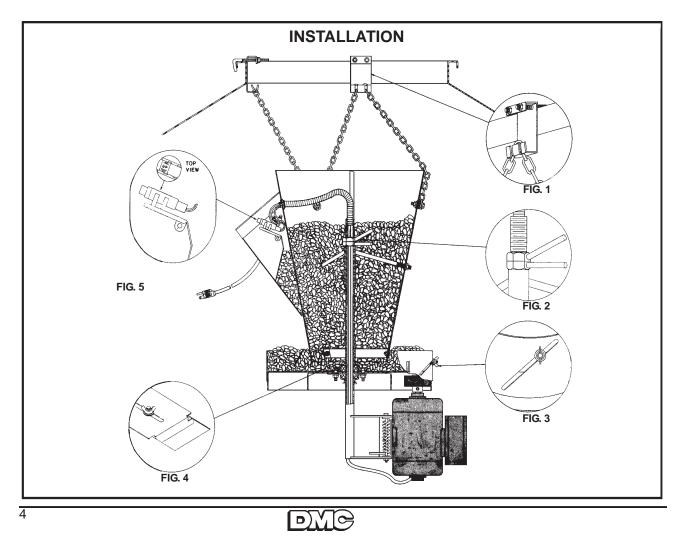
**CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.



**NOTE** indicates information about the equipment that you should pay special attention to.







## **INSTALLATION**

Figure 1: 918 and 936 Bin Level - Hanger Hooks and Chains

Double chains are attached to the hopper in three places. One chain from each of the three attachment points is hooked into a hanger hook to form a "V". This is necessary to keep the spreader from swinging around the fillhole each time the spreader is started.

The Bin Level hanging height can change the spreading pattern. On steep-roofed bins, hanging the Bin Level lower in the bin will be beneficial for a more level grain spread.

All Bin Levels should be installed so that, during operation, grain from legs or augers is not directly hitting the mercury switch control plate.

## INSTALL THE BIN LEVEL SPREADER AS LEVEL AS POSSIBLE

### **ADJUSTMENT & OPERATION**

#### Figure 2: Adjusting Flow Rate

The two wing nuts inside of the top of the hopper regulate the volume of grain the Bin Level will spread by adjusting the gap between the lower end of the hopper and the spreader pan. This adjustment should be made so the incoming grain operates the switch, turning the motor on at least <u>three times per minute</u> and <u>not more than six times per minute</u>. If the Bin Level is adjusted to start and stop less than three times per minute, level spread cannot be achieved. If adjusted to start and stop more than six times per minute, motor damage can result. Adjusting the Bin Level to operate within the recommended "stop" and "start" pattern is a must to achieve a level spread.

### Figure 3: Outside Ring Adjustment

The outside ring of the Bin Level grain spreader is designed so it can be raised or lowered depending upon the amount of grain being put through the spreader and the width of spread needed. Because of this feature the grain is showered up and out into the bin which allows an even spread, regardless of the corn depth in the bin. To attain this showering action, the outside ring has to be kept higher than the bottom of the hopper cone. Under normal conditions, the outside ring should be from 1/2" to 3/4" higher than the bottom of the Bin Level cone or fill hopper.

Raise the ring to throw grain farther to the outside. Lower the ring to decrease spread width.

#### Figure 4: Side Gate Adjustments

A slide gate is provided in the spreader pan to keep the center level with the remainder of the bin. Adjustment of the slide gate will vary, depending upon volume and number of start-stops per minute at which the Bin Level is set.

## CHECK PERIODICALLY FOR CLOGGING WITH TRASH

### Figure 5: Mercury Switch Control

This is the heart of the Bin Level grain spreader. By use of the mercury switch, the spreader is always operating under full-load capacity so a very even spread is obtained. **IMPORTANT**: For proper operation, the mercury switch plate has to be kept from becoming bent or from having other physical damage, and must work freely at all times.

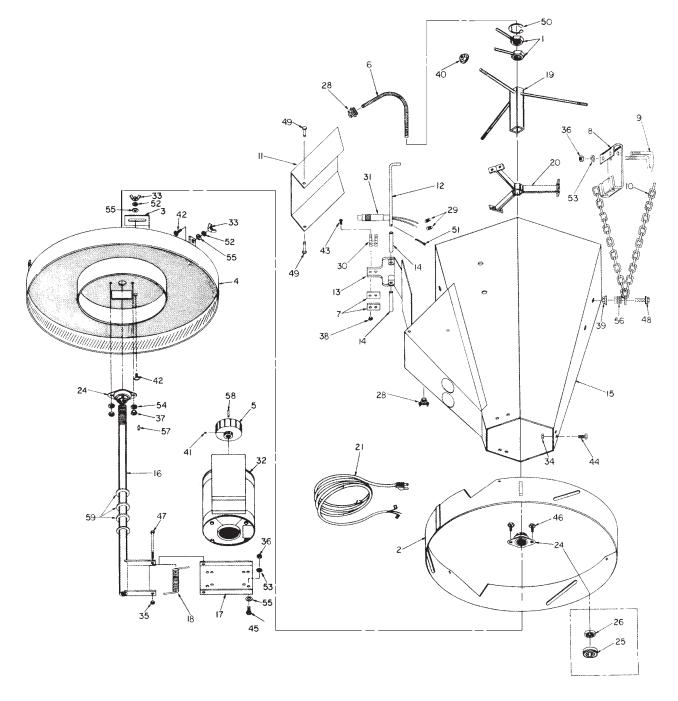
Do not direct flow of grain onto the mercury switch plate. Mercury switch and/or motor failure will result!

SPREADING CAPACITIES					
Various Weights of Grain in Relation to Distance Spread					
MODEL	HP	BIN SIZE			
		HEAVY	GRAIN	LIGHT GRAIN	
		2500 BPH	3500 BPH	3500 BPH	
918	1/3	18'-30'	18'-27'	18'-24'	
936	1/2	31'-36'	28'-33'	25'-30'	

## **BIN LEVEL GRAIN SPREADER**

## PARTS DRAWING

## FOR MODELS 918 & 936

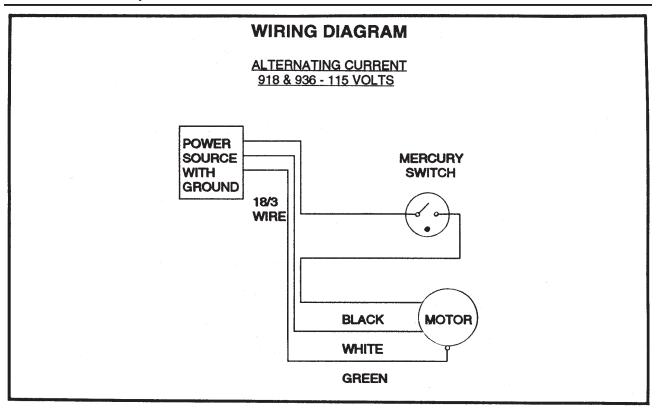




## Bin Level Grain Spreader Parts List

Ref.         Part         Number         Required         Description           1         301A0102         2         Handle Nat         1         301A01102         2         Handle Nat           2         301A01100         1         Reg Outside Pan         3         301A0110         1         Geta - Silice           3         301A01122         1         Wheal - Rubber Drive, 2-34/*         5         302A0103         1         Wheal - Rubber Drive, 3-14/*           6         301B0202         1         Shield - Power Cord         6         301B0202         2         Counter Balance Wt-Switch Plate           7         301B0202         3         Bracket - Hanger         8         301B0220         3         Bracket - Hanger           9         301B0221         3         UrBahr - Hanger, C4' Length         10         301B0227         1         Hange Pin - Mercury Switch Plate         13         301B0237         1         Hange Pin - Mercury Switch Plate         13         301B0239         1         Mercury Switch Plate           13         301B0239         1         Mercury Switch Plate         13         301B0239         1         Mercury Switch Plate           13         301B0239         1         Hanger - Mercury Switch				918				936
1         301A0102         2         Handle Nut         1         301A0102         2         Handle Nut           2         301A0110         1         Gate - Stide         3         301A0110         1         Gate - Stide           3         301A0110         1         Gate - Stide         3         301A0110         1         Gate - Stide           4         301A0110         1         Gate - Stide         3         301A0110         1         Gate - Stide           5         301B0220         1         Shield - Power Cord         5         301B0220         3         Bracket - Hanger         7         301B0220         3         Bracket - Hanger         301B0220         3         Bracket - Hanger         9         301B0220         3         Chain - Hanger         1         301B0220         3         Ubent - Hanger         301B0220         3         Ubent - Hanger         301B0227         1         Hinge Pn - Mercung Switch Plate         13         301B0227         1         Hinge Pn - Mercung Switch Plate         13         301B0226         1         Spacer Tube         14         301B0226         1         Spacer Tube         13         301B0226         1         Hinge Pn - Mercung Switch Plate         13         301B0226 <t< th=""><th>Ref.</th><th>Part</th><th>No.</th><th></th><th>Ref.</th><th>Part</th><th>No.</th><th></th></t<>	Ref.	Part	No.		Ref.	Part	No.	
2         301A0108         1         Ring - Outside Pan         2         302A0309         1         Ring - Outside Pan           3         301A0111         1         Pan - Spreader, 18" O.D.         4         302A0307         1         Pan - Spreader, 20" O.D.           3         301A0111         1         Pan - Spreader, 18" O.D.         4         302A0307         1         Pan - Spreader, 20" O.D.           3         301B0220         1         Shield - Paver Cord         6         301B0220         2         Counter Balance WtSwitch Plate         301B0220         3         Bracket - Hanger         9         301B0221         3         U-Boit - Hanger         9         301B0220         3         Bracket - Hanger         9         301B0220         3         Bracket - Hanger         9         301B0221         3         U-Boit - Hanger         10         301B0220         3         Bracket - Hanger         9         301B0220         3         U-Boit - Hanger         11         301B0220         1         Henger In-Mercury Switch Plate         13         301B0221         1         Henger In-Mercury Switch Plate         13         301B0231         1         Hencury Switch Plate         13         301B0231         1         Hencury Switch Plate         13         301B0231 </td <td>No.</td> <td>Number</td> <td>Required</td> <td>Description</td> <td>No.</td> <td></td> <td>Required</td> <td>Description</td>	No.	Number	Required	Description	No.		Required	Description
3         301A0110         1         Gale         Skie         3         301A0110         1         Gale         Skie           4         301A0122         1         Wheel         Fubber Drive, 2-34"         5         302A0313         1         Wheel         Fubber Drive, 2-34"         5         302A0313         1         Wheel         Fubber Drive, 3-14"           6         301B0220         1         Shiek I - Power Cord         7         301B0221         3         Ubber I - Ranger         8         301B0221         3         Ubber I - Hanger         8         301B0221         3         Ubber I - Hanger         9         301B0221         3         Ubber I - Hanger         9         301B0221         3         Ubber I - Hanger         301B0221         3         Ubber I - Hanger         301B0221         301B0221         301B0221         301B0223         1         Hange Fn - Mercury Switch Pate         13         301B0223         1         Hange Fn - Mercury Switch Pate         13         301B0223         1         Hange Fn - Mercury Switch Pate         13         301B0224         2         Spacer Tube         14         301B0244         2         Spacer Tube         14         301B0244         2         Spacer Tube         16         302A033         1<								
4         301A0111         1         Pan - Spreader, 10° O.D.         4         302A0307         1         Pan - Spreader, 20° O.D.           5         30180202         1         Shield - Dower Cord         5         30180202         1         Shield - New Cord         6         30180202         3         Shield - New Cord         6         30180220         3         Bracket - Hanger         9         30180221         3         U-Boit - Hanger, 54° Length         10         30180221         3         L-Boit - Hanger, 72° Length           11         30180223         1         Horge Ph. Mercury Switch Plate         13         30180223         1         Horge Ph. Mercury Switch Plate         13         30180242         1         Horge Ph. Mercury Switch Plate           13         30180239         1         Mercury Switch Plate         13         30180241         2         Spacer Tube           14         30180244         2         Spacer Tube         14         30180244         2         Spacer Tube           15         30180245         1         Hopper - Hex         15         30180244         2         Spacer Tube           16         302A0304         1         Pate - Motor Mount         17         302A0304         1         Pa		301A0108		5		302A0309		5
5         301A0122         1         Wheel - Rubber Drive, 2-34"         5         302A0313         1         Wheel - Rubber Drive, 3-14"           7         301B0208         2         Counter Balance WL-Switch Plate         7         301B0220         3         Bracket - Hanger           8         301B0221         3         Urbabit - Hanger         8         301B0221         3         Urbabit - Hanger           10         301B0221         3         Urbabit - Hanger         8         301B0221         3         Urbabit - Hanger           11         301B0221         3         Urbabit - Hanger         9         301B0221         1         Henger, 72 Length           12         301B0237         1         Henger N- Mercury Switch Plate         13         301B0234         1         Hopper - Hate           13         301B0244         2         Spacer Tube         14         301B0245         1         Hopper - Hate           13         301B0244         1         Spring - Motor Mount, Torsion         18         302A0304         1         Bate - Motor Mount, Torsion           18         302A0301         1         Shaft - Hopper Center - Lower         20         302B0408         1         Support - Hopper Center - Lower <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
6         301B0202         1         Shield - Power Cord         6         301B0203         2         Counter Balance Wt-Switch Plate           8         301B0221         3         Dracket - Hanger         9         301B0221         3         L'Bott - Hanger, 54' Length           10         301B0223         1         Counter Balance Wt-Switch Plate         8         301B0221         3         L'Bott - Hanger, 72' Length           11         301B0236         1         Cover - Switch Housing         11         301B0237         1         Hinge Pn - Mercury Switch Plate           13         301B0239         1         Mercury Switch Plate         13         301B0244         2         Spacer Tube           15         301B0245         1         Hopper - Hax         15         301B0245         1         Hopper - Hex           16         302A0304         1         Spring - Motor Mount         17         302A0304         1         Spring - Motor Mount           17         302A0304         1         Spring - Motor Mount         18         302A031P         1         Spring - Motor Mount           18         302A0311         1         Spring - Motor Mount         18         302A031P         1         Spring - Motor Mount         10<				,				· · · · ·
7         301B0208         2         Counter Balance WL-Switch Plate         7         301B0221         3         Counter Balance WL-Switch Plate           9         301B0221         3         U-Boit - Hanger         9         301B0221         3         U-Boit - Hanger           10         301B0222         3         Onain - Hanger, 72' Length         10         301B0237         1         Hanger, 72' Length           11         301B0237         1         Hanger, Netroury Switch Plate         12         301B0239         1         Mercury Switch Plate           13         301B0244         2         Spacer Tube         14         301B0245         1         Hopper - Hex           16         302A0303         1         Shaft - Hopper Center         16         302A0304         1         Shaft - Hopper Center           17         302A0304         1         Shaft - Hopper Center - (Lower)         20         302B0406         1         Support - Hopper Center - Lower         20         302B0408         1         Support - Hopper Center - (Lower)           21         301N0014         1         Cord - Power         21         301N0014         1         Cord - Power           21         301N0014         1         Cord - Power								
8         301B0220         3         Bracket - Hanger         8         301B0221         3         Bracket - Hanger           10         301B0221         3         Chain - Hanger, 54" Length         10         301B0221         3         UBoit - Hanger, 72" Length           11         301B0237         1         Hinge Fn - Mercury Switch Plate         12         301B0237         1         Hinge Fn - Mercury Switch Plate           13         301B0239         1         Mercury Switch Plate         13         301B0239         1         Mercury Switch Plate           13         301B0231         1         Hinge Fn - Mercury Switch Plate         14         301B0239         1         Mercury Switch Plate           14         301B0231         1         Hopper - Hex         15         301B0245         1         Hopper - Hex           15         301B0241         2         Space Tube         14         301B0241         1         Space Tube           16         302A0303         1         Shaft - Hopper Center - (Lower)         19         302B0408         1         Support - Hopper Center - (Lower)           20         302B0408         1         Support - Hopper Center - (Lower)         21         30110014         Cord - Power         21								
9         301B0221         3         U-Both - Hanger         9         301B0221         3         U-Both - Hanger           10         301B0223         Ohan - Hanger, 54' Length         10         301B0237         1         Hinger, 72' Length           11         301B0237         1         Hinger, 71' Length         11         301B0237         1         Hinger, 72' Length           12         301B0237         1         Hinger, 71' Length         11         301B0237         1         Hinger, 72' Length           13         301B0244         2         Spacer Tube         14         301B0244         2         Spacer Tube           13         302A0303         1         Shaft - Hopper - Hex         15         301B0245         1         Hopper - Hex           18         302A0304         1         Pate - Motor Mount, Torsion         18         302A0304         1         Sparer Tube           18         302A0304         1         Sparer Tube         20         302B0439         Support - Hopper Center - (Uper)           19         302B0406         1         Support - Hopper Center - (Uper)         20         301N0014         1         Cord - Pow er           24         PTO101         2         Dearing, (								
10       301B0222       3       Chain - Hanger, 54" Length       10       301B0237       Changer, 72" Length         11       301B0237       1       Honger An - Mercury Switch Plate       11       301B0237       1       Hinger An - Mercury Switch Plate         13       301B0238       1       Mercury Switch Plate       12       301B0237       1       Hinger An - Mercury Switch Plate         13       301B0244       2       Spacer Tube       14       301B0245       1       Hopper - Hex         16       302A0303       1       Shaft - Hopper Center       16       302A0304       1       Plate - Motor Mount       17       302A0304       1       Plate - Motor Mount       17       302A0304       1       Plate - Motor Mount, Torsion         18       302A0304       1       Support - Hopper Center - (Lower)       18       302B0408       1       Support - Hopper Center - (Lower)         20       302B0408       1       Support - Hopper Center - (Lower)       21       301M0014       Cord - Power       12       301M0014       Cord - Power       12<				5				0
11       301B0236       1       Cover - Switch Housing         12       301B0237       1       Hinge Pin - Mercury Switch Pate       12       301B0237       1       Hinge Pin - Mercury Switch Pate         13       301B0234       1       Spacer Tube       14       301B0244       2       Spacer Tube         14       301B0245       1       Hopper - Hex       15       301B0244       2       Spacer Tube         15       301B0244       1       Spacer Tube       14       301B0244       2       Spacer Tube         16       302A0303       1       Shaft - Hopper Center       16       302A0304       Pate - Moor Mount, Torsion         19       302B0406       1       Support - Hopper Center - (Upper)       20       302B0408       Support - Hopper Center - (Upper)         20       302B0406       1       Support - Hopper Center - (Upper)       20       302B0408       Support - Hopper Center - (Upper)         21       301N0014       1       Cord - Power       24       PT0111       Searing, (Complete) 1' (Precision)         25       PT0215       2       Bearing, 1' w./Locking Collar       25       PT0411       Colar - Eocentric Lock, 1'         26       PT0401       2       Ota								-
12       301B0237       1       Hinge Bn - Mercury Switch Plate       12       301B0237       1       Hinge Bn - Mercury Switch Plate         13       301B0239       1       Mercury Switch Plate       13       301B0239       1       Mercury Switch Plate         13       301B0244       2       Spacer Tube       14       301B0239       1       Mercury Switch Plate         15       301B0245       1       Hopper - Hex       15       301B0245       1       Hopper Center         16       302A0304       1       Plate - Motor Mount, Torsion       18       302A0314       1       Spring - Motor Mount, Torsion         18       302B0406       1       Support - Hopper Center - (Upper)       19       302B0408       1       Support - Hopper Center - (Upwer)         20       302B0408       1       Support - Hopper Center - (Upwer)       20       302B0408       1       Cord - Power         21       301N014       1       Cord - Power       21       301N014       1       Cord - Fower       21       301N014       1       Cord - Fower       21       801N04       1       Cord - Fower       21       801N04       1       Cord - Fower       21       801N04       1       Cord - Fower								
13       30180239       1       Mercury Switch Plate       13       30180244       2       Spacer Tube         14       30180245       1       Hopper - Hex       15       30180245       1       Hopper - Hex         15       30180245       1       Hopper - Hex       15       30180244       2       Spacer Tube         16       302A0303       1       Shaft - Hopper Center       16       302A0303       1       Plate - Motor Mount         17       302A0304       1       Bate - Motor Mount, Torsion       18       302A0311P       1       Support - Hopper Center - (Uper)         13       301N0014       1       Cord - Pow er       21       301N014       1       Cord - Pow er       21       201L0200				0				
14         301B0244         2         Space Tube           15         301B0245         1         Hopper - Hex         15         301B0245         1         Hopper - Hex           16         302A0303         1         Shaft - Hopper Center         16         302A0304         1         Rate - Motor Mount         17         302A0304         1         Rate - Motor Mount         70           18         302A031P         1         Support - Hopper Center - (Upper)         17         302A0319         1         Support - Hopper Center - (Upper)           20         302B0406         1         Support - Hopper Center - (Upper)         20         302B0408         1         Support - Hopper Center - (Low er)           21         301N0014         1         Cord - Pow er         21         301N0014         1         Cord - Pow er           24         PT0109         2         Bearing, 1"w. Uocking Collar         25         PT0215         Bearing, 1"w. Uocking Collar         25         PT0241         2         Connector, Gray           29         1EL053         2         Wire Twist Connector, Gray         29         1EL0802         1         Mercury Switch Gip           30         1EL0801-R         Mercury Switch Gip         30				5				
15       301B0245       1       Hopper - Hex       15       302A0303       1       Shaft - Hopper Center         16       302A0304       1       Rate - Motor Mount       17       302A0304       1       Pate - Motor Mount, Torsion         18       302A0311P       1       Spring - Motor Mount, Torsion       18       302A0311P       1       Spring - Motor Mount, Torsion         19       302B0406       1       Support - Hopper Center - (Lower)       20       302B0408       1       Support - Hopper Center - (Lower)         20       302B0408       1       Support - Hopper Center - (Lower)       20       302B0408       1       Support - Hopper Center - (Lower)         21       301N0014       1       Cord - Pow er       21       301N0014       1       Cord - Pow er         21       301N0014       1       Cord - Pow er       21       301N0014       1       Cord - Pow er         21       301N0014       1       Cord - Pow er       21       301N0014       1       Cord - Pow er         22       Connector, 3/8"       29       1EL0553       2       Wire Twist Connector, Gray       29       1EL0553       2       Morcury Switch (Dip       30       1EL0802       1       Motor, 1/2 Pr,				2				-
16         302A 0303         1         Shaft - Hopper Center         16         302A 0304         1         Shaft - Hopper Center           17         302A 0304         1         Pate - Motor Mount, Torsion         17         302A 0304         1         Pate - Motor Mount, Torsion           18         302A 0311P         1         Support - Hopper Center - (Low er)         19         302B0408         1         Support - Hopper Center - (Low er)           20         302B0408         1         Support - Hopper Center - (Low er)         20         302B0408         1         Support - Hopper Center - (Low er)           21         301N0014         1         Cord - Power         21         301N0014         1         Cord - Power           24         PT0119         2         Bearing, 1'' w.Locking Collar         25         PT0215         2         Bearing, 1'' w.Locking Collar         26         PT0401         2         Collar - Eccentric Lock, 1''         28         1782         2         Cornector, 3'8''         20         12L.0601         1         Mercury Switch, 10         23         31         12L.0601-R         1         Mercury Switch, 20         32         32         32         32         32         32         34         4         Wing Nut, 1/4''								
17       302A0304       1       Pate - Moior Mount       17       302A0311P       1       Pate - Moior Mount         18       302A0311P       1       Spring - Motor Mount, Torsion       18       302A0311P       1       Support - Hopper Center - (Upper)         20       302B0406       1       Support - Hopper Center - (Upwer)       20       302B0408       1       Support - Hopper Center - (Upwer)         21       301N0014       1       Cord - Pow er       20       302B0408       1       Support - Hopper Center - (Low er)         24       PT019       2       Bearing, (Complete) 1" (Precision)       24       PT0111       2       Bearing, (Complete) 1" (Precision)         25       PT0215       2       Bearing, Tw /Locking Collar       25       PT0215       2       Bearing, (Complete) 1" (Precision)         26       PT0401       2       Collar - Eccentric Lock, 1"       26       PT0401       2       Collar - Eccentric Lock, 1"         27       HEL0853       2       Wire Tw ist Connector, Gray       29       1EL0802       1       Mercury Switch, 6 Degree       31       2EL0601-R       1       Mercury Switch, 6 Degree       33       S-4198       4       Wing Nut, 1/4"       34       S-4310       6       Hex L								
18         302A0311P         1         Spring - Motor Mount, Torsion           19         302B0406         1         Support - Hopper Center - (Loper)         19         302B0408         1         Support - Hopper Center - (Low er)           20         302B0408         1         Support - Hopper Center - (Low er)         20         302B0408         1         Support - Hopper Center - (Low er)           21         301N0014         1         Cord - Pow er         21         301N0014         Cord - Pow er           24         PT0109         2         Bearing, (Complete) 1" (Precision)         24         PT0111         2         Bearing, 1" w/Locking Collar           26         PT0401         2         Connector, 3/8"         28         1782         2         Connector, Gray           30         1EL0601-R         Mercury Switch, Clip         30         12         22         32         32         32         34         5438         4         Wing Nut, 1/4"         34         S-4310         6         Hex Lock Nut, 3/8"           35         S-4663         1         Hex Lock Nut, 3/8"         35         S-4663         1         Hex Lock Nut, 3/8"           36         S-396         10         Hex Nut, 5/16"         39								
19         302B0406         1         Support - Hopper Center - (Upper)         19         302B0439         1         Support - Hopper Center - (Upper)           20         302B0408         1         Support - Hopper Center - (Low er)         20         302B0408         1         Support - Hopper Center - (Low er)           21         301N0014         1         Cord - Pow er         21         301N0014         1         Cord - Pow er           24         PT0109         2         Bearing, (1" w/Locking Collar         25         PT0215         2         Bearing, 1" w/Locking Collar           25         PT0215         2         Bearing, 1" w/Locking Collar         26         PT0401         2         Collar - Escentric Lock, 1"           26         1762         2         Wire Twist Connector, Gray         29         1EL0553         2         Wire Twist Connector, Gray         30         1EL0802         1         Metorury Switch, Clip           31         2EL0601-R         1         Metorury Switch, Clip         31         1EL0602         1         Metorury Switch, Glip           32         S-4565         1         Motor, 1/3 HP, T.E.N.V. Bectric         33         S-4189         4         Wing Nut, 1/4"           34         S-4310         6<								
20         302B0408         1         Support - Hopper Center - (Low er)         20         302B0408         1         Support - Hopper Center - (Low er)           21         301N0014         1         Cord - Pow er         21         301N0014         Cord - Pow er           24         PT0109         2         Bearing, (Complete) 1" (Precision)         25         PT0215         2         Bearing, (Complete) 1" (Precision)           25         PT0215         2         Bearing, (Complete) 1" (Precision)         25         PT0215         2         Bearing, (Complete) 1" (Precision)           26         PT0401         2         Connector, 3/8"         28         1782         2         Connector, Gray           30         1EL0802         1         Mercury Switch, Gip         30         1EL0802         1         Mercury Switch, Gip           31         2EL0601-R         1         Mercury Switch, Gip         32         32EJ062         1         Motor, 1/2 HP, T.E.N.V. Electric           32         SL5055         1         Motor, 1/3 HP, T.E.N.V. Electric         32         32EJ062         1         Motor, 1/4"           35         S-4663         1         Hex Lock Nut, 3/8"         35         S-4663         1         Hex Lock Nut, 1/4"				1 5				5
21       301N0014       1       Cord - Power       21       301N0014       1       Cord - Power         24       PT0199       2       Bearing, (Complete) 1" (Precision)       24       PT0111       2       Bearing, (Complete) 1" (Precision)         25       PT0215       2       Bearing, 1" w/Locking Collar       25       PT0401       2       Collar - Escentric Lock, 1"       26       PT0401       2       Collar - Escentric Lock, 1"       28       PT0215       2       Bearing, 1" w/Locking Collar         28       1782       2       Connector, 3/8"       28       1782       20       Collar - Escentric Lock, 1"       28       1782       20       Collar - Escentric Lock, 1"       28       18       20       11       Mercury Switch Clip       30       11       12L053       2       Wire Twist Connector, Gray       30       11       12L052       1       Motor, 1/2 HP, T.E.NV. Bectric         33       S-4189       4       Wing Nut, 1/4"       34       S-4363       1       Hex Lock Nut, 3/8"       36       S-396       1       Hex Lock Nut, 3/8"       36       S-396       1       Hex Nut, S/16"       37       S-456       2       Hex Nut, 3/8"       36       S-396       1       Hex Nut, S/16"								
24         PT0109         2         Bearing, 1" w/Locking Collar         24         PT0111         2         Bearing, 1" w/Locking Collar           25         PT0215         2         Bearing, 1" w/Locking Collar         25         PT0215         2         Bearing, 1" w/Locking Collar           26         PT0401         2         Collar - Eccentric Lock, 1"         26         PT0410         2         Collar - Eccentric Lock, 1"           28         1782         2         Connector, 3/8"         29         1EL0553         2         Wire Tw ist Connector, Gray           29         1EL0553         1         Mercury Sw itch G Degree         31         2EL0601-R         1         Mercury Sw itch G Degree           31         2EL0601-R         1         Mercury Sw itch, 6 Degree         31         2EL0601-R         1         Mercury Sw itch, 6 Degree           32         3E-4189         4         Wing Nut, 1/4"         34         S-4310         6         Hex Lock Nut, 3/8"           35         S-4663         1         Hex Lock Nut, 3/8"         35         S-4563         1         Hex Lock Nut, 3/8"           36         S-396         10         Hex Nut, 5/16"         30         1FH0983         Hex Range Lock Nut, 5/16"								
25         PT0215         2         Bearing, 1" w/Locking Collar         25         PT0215         2         Bearing, 1" w/Locking Collar           26         PT0401         2         Collar - Eccentric Lock, 1"         26         PT0401         2         Collar - Eccentric Lock, 1"           28         1782         2         Connector, 3/8"         28         1782         2         Connector, 3/8"           29         1EL0553         2         Wire Tw ist Connector, Gray         29         1EL0802         1         Mercury Switch, 6 Degree           31         2EL0601-R         1         Mercury Switch, 6 Degree         31         2EL0601-R         1         Mercury Switch, 6 Degree           33         S-4189         4         Wing Nut, 1/4"         33         S-4198         4         Wing Nut, 1/4"           34         S-4463         1         Hex Lock Nut, 3/8"         35         S-4663         1         Hex Lock Nut, 3/8"           35         S-4663         1         Hex Lock Nut, 3/8"         36         S-396         10         Hex Lock Nut, 3/8"           36         S-396         10         Hex Nut, 5/16"         39         1FH0983         Hex Flange Lock Nut, 7/16"           37         S-456 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
26         PT0401         2         Collar - Eccentric Lock, 1"         26         PT0401         2         Collar - Eccentric Lock, 1"           28         1782         2         Connector, 3/8"         28         1782         2         Connector, Gray           30         1EL0553         2         Wire Twist Connector, Gray         30         1EL057         2         Wire Twist Connector, Gray           30         1EL0802         1         Mercury Switch, 6 Degree         31         2EL0601-R         1         Mercury Switch, 6 Degree           31         2EL0553         1         Motor, 1/2 PT, TE.N.V. Electric         33         S-4189         4         Wing Nut, 1/4"           34         S-4310         6         Hex Lock Nut, 3/8"         35         S-4663         1         Hex Lock Nut, 3/8"           35         S-4663         1         Hex Lock Nut, 3/8"         36         S-396         10         Hex Nut, 5/16"           36         S-396         10         Hex Nut, 5/16"         38         Fr0543         Hex Range Lock Nut, 5/16"           37         S-456         2         Hex Nut, 5/16"         39         1FH0983         Hex Flange Lock Nut, 5/16"           38         Fr054         2						-		
28         1782         2         Connector, 3/8"         28         1782         2         Connector, 3/8"           29         1EL0553         2         Wire Twist Connector, Gray         29         1EL0553         2         Wire Twist Connector, Gray           30         1EL0802         1         Mercury Switch, 6 Degree         30         1EL0802         1         Mercury Switch, 6 Degree           31         2EL0601-R         1         Mercury Switch, 6 Degree         31         2EL0601-R         1         Mercury Switch, 6 Degree           32         3EL5055         1         Motor, 1/3 HP, T.E.N.V. Bectric         32         3EL5065         1         Motor, 1/4 H*         34         S-4310         6         Hex Lock Nut, 1/4"           35         S-4663         1         Hex Lock Nut, 3/8"         35         S-4663         1         Hex Lock Nut, 3/8"           36         S-396         10         Hex Nut, 3/8"         35         S-456         2         Hex Machine Screw Nut, #4-40           38         S-7054         2         Hex Machine Screw Nut, #1/4"         38         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"           41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"         1								
29         1EL0553         2         Wire Twist Connector, Gray         29         1EL0553         2         Wire Twist Connector, Gray           30         1EL0802         1         Mercury Switch Clip         30         1EL0802         1         Mercury Switch Clip           31         2EL0601-R         1         Mercury Switch, 6 Degree         31         2EL0601-R         1         Mercury Switch Clip           32         3EL5055         1         Motor, 1/3 HP, T.E.N.V. Bectric         32         3EL5062         1         Motor, 1/2 HP, T.E.N.V. Bectric           33         S-4189         4         Wing Nut, 1/4"         33         S-4198         4         Wing Nut, 1/4"           34         S-4361         1         Hex Lock Nut, 3/8"         35         S-4663         1         Hex Nut, 5/16"           36         S-396         10         Hex Nut, 3/8"         36         S-396         10         Hex Nut, 3/8"           38         S-7054         2         Hex Nut, 3/4"         37         S-456         2         Hex Nut, 5/16"           40         1FH0983         3         Hex Flange Lock Nut, 5/16"         39         1FH0985         3         Hex Flange Lock Nut, 7/16"           41         S								
30         1EL0802         1         Mercury Switch Clip         30         1EL0802         1         Mercury Switch Clip           31         2EL0601-R         1         Mercury Switch, 6 Degree         31         2EL0601-R         1         Mercury Switch, 6 Degree           32         3EL5055         1         Motor, 1/3 HP, T.E.N.V. Electric         32         3EL5062         1         Motor, 1/2 HP, T.E.N.V. Electric           34         S-4310         6         Hex Lock Nut, 1/4"         33         S-4198         4         Wing Nut, 1/4"           35         S-4663         1         Hex Lock Nut, 5/16"         35         S-4663         1         Hex Lock Nut, 5/16"           37         S-456         2         Hex Nut, 5/16"         36         S-396         10         Hex Nut, 5/16"           38         S-7054         2         Hex Machine Screw Nut, #4-40         38         S-7054         2         Hex Machine Screw Nut, #4-40           39         1FH0983         Hex Flange Lock Nut, 7/16"         40         1FH0985         Hex Flange Lock Nut, 7/16"           41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"         41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"         42         S-63		1EL0553		-	29	1EL0553		
31       2EL0601-R       1       Mercury Switch, 6 Degree       31       2EL0601-R       1       Mercury Switch, 6 Degree         32       3EL5055       1       Motor, 1/3 HP, T.E.N.V. Electric       32       3EL5062       1       Motor, 1/2 HP, T.E.N.V. Electric         33       S-4189       4       Wing Nut, 1/4"       33       S-4189       4       Wing Nut, 1/4"         34       S-4310       6       Hex Lock Nut, 1/4"       34       S-4310       6       Hex Lock Nut, 1/4"         35       S-4663       1       Hex Lock Nut, 3/8"       35       S-4663       1       Hex Lock Nut, 3/8"         36       S-396       10       Hex Nut, 5/16"       36       S-396       10       Hex Nut, 3/8"         37       S-456       2       Hex Nut, 3/8"       36       S-7054       Hex Machine Screw Nut, #4-40         38       S-7054       2       Hex Machine Screw Nut, #1/4"       40       1FH0985       3       Hex Flange Lock Nut, 7/16"         40       1FH0985       3       Hex Flange Lock Nut, 7/16"       40       1FH0985       4       Carriage Boit, 1/4"x1/4"         42       S-6369       4       Carriage Boit, 1/4"x1/4"       41       S-7166       2 <td< td=""><td>30</td><td>1EL0802</td><td></td><td></td><td>30</td><td>1EL0802</td><td></td><td>Mercury Switch Clip</td></td<>	30	1EL0802			30	1EL0802		Mercury Switch Clip
32         3EL5055         1         Motor, 1/3 HP, T.E.N.V. Electric         32         3EL5062         1         Motor, 1/2 HP, T.E.N.V. Electric           33         S-4189         4         Wing Nut, 1/4"         33         S-4198         4         Wing Nut, 1/4"           34         S-4189         4         Wing Nut, 1/4"         34         S-4198         4         Wing Nut, 1/4"           34         S-4663         1         Hex Lock Nut, 1/4"         34         S-4663         1         Hex Lock Nut, 3/8"           36         S-396         10         Hex Nut, 5/16"         36         S-396         10         Hex Nut, 3/8"           37         S-456         2         Hex Nut, 3/8"         36         S-396         10         Hex Nut, 3/8"           38         S-7054         2         Hex Machine Screw Nut, #4-40         38         S-7054         Hex Machine Screw Nut, #4-40           39         1FH0983         Hex Flange Lock Nut, 7/16"         40         1FH0985         Hex Flange Lock Nut, 7/16"           40         1FH0985         3         Hex Flange Lock Nut, 7/16"         41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"           42         S-6369         4         Carriage Bo	31	2EL0601-R	1		31	2EL0601-R	1	
34       S-4310       6       Hex Lock Nut, 1/4"       34       S-4310       6       Hex Lock Nut, 1/4"         35       S-4663       1       Hex Lock Nut, 3/8"       35       S-4663       1       Hex Lock Nut, 3/8"         36       S-396       10       Hex Nut, 5/16"       36       S-396       10       Hex Nut, 5/16"         37       S-456       2       Hex Machine Screw Nut, #4-40       38       S-7054       2       Hex Mut, 5/16"         39       1FH0983       3       Hex Flange Lock Nut, 7/16"       40       1FH0985       3       Hex Flange Lock Nut, 7/16"         40       1FH0985       3       Hex Flange Lock Nut, 7/16"       40       1FH0985       3       Hex Flange Lock Nut, 7/16"         41       S-7186       2       Set Screw - Skt. Hd. 1/4"x1/4"       41       S-6169       4       Carriage Bolt, 1/4"x3/4"         42       S-6369       4       Carriage Bolt, 1/4"x1/4"       42       S-6369       4       Carriage Bolt, 1/4"x1/4"         43       2FH0687       2       Machine Screw -Rd. Hd.#4-40x5/8"       44       S-1101       6       Hex Bolt, 5/16"x3/4"         44       S-1101       6       Hex Bolt, 3/6"x 1 1/2"       45       S-8072	32	3EL5055	1	Motor, 1/3 HP, T.E.N.V. Electric	32	3EL5062	1	
35         S-4663         1         Hex Lock Nut, 3/8"         35         S-4663         1         Hex Lock Nut, 3/8"           36         S-396         10         Hex Nut, 5/16"         36         S-396         10         Hex Nut, 3/8"           37         S-456         2         Hex Nut, 3/8"         37         S-456         2         Hex Nut, 3/8"           38         S-7054         2         Hex Machine Screw Nut, #4-40         38         S-7054         2         Hex Machine Screw Nut, #4-40           39         1FH0983         3         Hex Flange Lock Nut, 5/16"         39         1FH0983         Hex Flange Lock Nut, 5/16"           40         1FH0985         3         Hex Flange Lock Nut, 7/16"         40         1FH0985         3         Hex Flange Lock Nut, 7/16"           41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"         41         S-7186         Set Screw - Skt. Hd. 1/4"x1/4"           42         S-6369         4         Carriage Bolt, 1/4"x3/4"         42         S-6369         4         Carriage Bolt, 1/4"x3/4"           43         2FH0687         2         Machine Screw Net, Hd. 44-40x5/8"         43         S-1106         Hex Bolt, 3/8"x 1 1/2"           45         S-8072	33	S-4189	4	Wing Nut, 1/4"	33	S-4198	4	Wing Nut, 1/4"
36         S-396         10         Hex Nut, 5/16"         36         S-396         10         Hex Nut, 5/16"           37         S-456         2         Hex Nut, 3/8"         37         S-456         2         Hex Nut, 3/8"           38         S-7054         2         Hex Machine Screw Nut, #4-40         38         S-7054         2         Hex Machine Screw Nut, #4-40           39         1FH0983         3         Hex Flange Lock Nut, 5/16"         39         1FH0985         3         Hex Flange Lock Nut, 5/16"           40         1FH0985         3         Hex Flange Lock Nut, 7/16"         40         1FH0985         3         Hex Flange Lock Nut, 7/16"           41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"         41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"           42         S-6369         4         Carriage Bolt, 1/4"x1/4"         42         S-6369         4         Carriage Bolt, 1/4"x1/4"           43         2FH0687         2         Machine Screw -Rd. Hd.#4-40x5/8"         43         2FH0687         2         Machine Screw -Rd. Hd.#4-40x5/8"           44         S-1101         6         Hex Bolt, 5/16"x3/4"         45         S-8072         4         Hex Bolt, 5/16"x3/4"<	34	S-4310	6	Hex Lock Nut, 1/4"	34	S-4310	6	Hex Lock Nut, 1/4"
37       S-456       2       Hex Nut, 3/8"       37       S-456       2       Hex Nut, 3/8"         38       S-7054       2       Hex Machine Screw Nut, #4-40       38       S-7054       2       Hex Machine Screw Nut, #4-40         39       1FH0983       3       Hex Flange Lock Nut, 5/16"       39       1FH0983       3       Hex Flange Lock Nut, 7/16"         40       1FH0985       3       Hex Flange Lock Nut, 7/16"       40       1FH0983       3       Hex Flange Lock Nut, 7/16"         41       S-7186       2       Set Screw - Skt. Hd. 1/4'x1/4"       41       S-7186       2       Set Screw - Skt. Hd. 1/4'x1/4"         42       S-6369       4       Carriage Bolt, 1/4"x3/4"       42       S-6369       4       Carriage Bolt, 1/4"x1/4"         43       2FH0687       2       Machine Screw -Rd. Hd.#4-40x5/8"       43       2FH0687       2       Machine Screw-Rd. Hd.#4-40x5/8"         44       S-1101       6       Hex Bolt, 3/8"x 1 1/2"       44       S-1101       6       Hex Bolt, 3/8"x 1/2"         45       S-8072       4       Hex Bolt, 3/8"x 1/2"       45       S-8072       4       Hex Bolt, 3/8"x 1/2"         46       S-7521       2       Hex Bolt, 3/8"x 5-1/2"	35	S-4663	1		35	S-4663	1	Hex Lock Nut, 3/8"
38         S-7054         2         Hex Machine Screw Nut, #4-40         38         S-7054         2         Hex Machine Screw Nut, #4-40           39         1FH0983         3         Hex Flange Lock Nut, 5/16"         39         1FH0983         3         Hex Flange Lock Nut, 5/16"           40         1FH0985         3         Hex Flange Lock Nut, 7/16"         40         1FH0985         3         Hex Flange Lock Nut, 7/16"           41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"         41         S-7186         2         Set Screw - Skt. Hd. 1/4"x1/4"           42         S-6369         4         Carriage Bolt, 1/4"x3/4"         42         S-6369         4         Carriage Bolt, 1/4"x1/4"           43         2FH0687         2         Machine Screw -Rd. Hd. #4-40x5/8"         43         2FH0687         2         Machine Screw -Rd. Hd. #4-40x5/8"           44         S-1101         6         Hex Bolt, 5/16"x3/4"         45         S-8072         4         Hex Bolt, 5/16"x3/4"           45         S-8072         4         Hex Bolt, 3/8"x 1 1/2"         46         S-7521         2         Hex Bolt, 3/8"x 1 1/2"           46         S-7744         1         Hex Bolt, 3/8"x 5-1/2"         47         S-7744         1 <td></td> <td></td> <td></td> <td></td> <td>36</td> <td></td> <td></td> <td></td>					36			
39       1FH0983       3       Hex Flange Lock Nut, 5/16"       39       1FH0983       3       Hex Flange Lock Nut, 5/16"         40       1FH0985       3       Hex Flange Lock Nut, 7/16"       40       1FH0985       3       Hex Flange Lock Nut, 7/16"         41       S-7186       2       Set Screw - Skt. Hd. 1/4"x1/4"       41       S-7186       2       Set Screw - Skt. Hd. 1/4"x1/4"         42       S-6369       4       Carriage Bolt, 1/4"x3/4"       42       S-6369       4       Carriage Bolt, 1/4"x3/4"         43       2FH0687       2       Machine Screw - Rd. Hd.#4-40x5/8"       43       2FH0687       2       Machine Screw - Rd. Hd.#4-40x5/8"         44       S-1101       6       Hex Bolt, 5/16"x3/4"       45       S-8072       4       Hex Bolt, 5/16"x3/4"         45       S-8072       4       Hex Bolt, 3/8" x 11/2"       46       S-7521       2       Hex Bolt, 3/8" x 11/2"         46       S-7521       2       Hex Bolt, 3/8" x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"         47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"       47       S-7744       1       Hex Bolt, 3/6" x 5-1/2"         48       2FH0990       3       Hex Flange W					37			
40       1FH0985       3       Hex Flange Lock Nut, 7/16"       40       1FH0985       3       Hex Flange Lock Nut, 7/16"         41       S-7186       2       Set Screw - Skt. Hd. 1/4"x1/4"       41       S-7186       2       Set Screw - Skt. Hd. 1/4"x1/4"         42       S-6369       4       Carriage Bolt, 1/4"x3/4"       42       S-6369       4       Carriage Bolt, 1/4"x3/4"         43       2FH0687       2       Machine Screw - Rd. Hd.#4-40x5/8"       43       2FH0687       2       Machine Screw - Rd. Hd.#4-40x5/8"         44       S-1101       6       Hex Bolt, 5/16"x3/4"       45       S-8072       4       Hex Bolt, 5/16"x3/4"         45       S-8072       4       Hex Bolt, 3/8"x 1 1/2"       46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"         46       S-7521       2       Hex Bolt, 3/8"x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"         47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"         48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0567       1       Snap Ring 1"				-				-
41       S-7186       2       Set Screw - Skt. Hd. 1/4"x1/4"       41       S-7186       2       Set Screw - Skt. Hd. 1/4"x1/4"         42       S-6369       4       Carriage Bolt, 1/4"x3/4"       42       S-6369       4       Carriage Bolt, 1/4"x3/4"         43       2FH0687       2       Machine Screw -Rd. Hd.#4-40x5/8"       43       2FH0687       2       Machine Screw -Rd. Hd.#4-40x5/8"         44       S-1101       6       Hex Bolt, 1/4"x1/2"       44       S-1101       6       Hex Bolt, 5/16"x3/4"         45       S-8072       4       Hex Bolt, 5/16"x3/4"       45       S-8072       4       Hex Bolt, 3/8"x 1 1/2"         46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"       46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"         47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"         48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"				-				-
42       S-6369       4       Carriage Bolt, 1/4"x3/4"       42       S-6369       4       Carriage Bolt, 1/4"x3/4"         43       2FH0687       2       Machine Screw -Rd. Hd.#4-40x5/8"       43       2FH0687       2       Machine Screw -Rd. Hd.#4-40x5/8"         44       S-1101       6       Hex Bolt, 1/4"x1/2"       44       S-1101       6       Hex Bolt, 1/4"x1/2"         45       S-8072       4       Hex Bolt, 5/16"x3/4"       45       S-8072       4       Hex Bolt, 5/16"x3/4"         46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"       46       S-7521       2       Hex Bolt, 3/8"x 5-1/2"         47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"         48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0567       1       Snap Ring 1"         50       3FH0567       1       Snap Ring 1"       50       SFH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       52       S-2041				-				-
43       2FH0687       2       Machine Screw -Rd. Hd.#4-40x5/8"       43       2FH0687       2       Machine Screw -Rd. Hd.#4-40x5/8"         44       S-1101       6       Hex Bolt, 1/4"x1/2"       44       S-1101       6       Hex Bolt, 1/4"x1/2"         45       S-8072       4       Hex Bolt, 5/16"x3/4"       45       S-8072       4       Hex Bolt, 5/16"x3/4"         46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"       46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"         47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"         48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0567       1       Snap Ring 1"         50       3FH0567       1       Snap Ring 1"       50       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 5/16"       53       S-1147								
44       S-1101       6       Hex Bolt, 1/4"x1/2"       44       S-1101       6       Hex Bolt, 1/4"x1/2"         45       S-8072       4       Hex Bolt, 5/16"x3/4"       45       S-8072       4       Hex Bolt, 5/16"x3/4"         46       S-7521       2       Hex Bolt, 3/8" x 1 1/2"       46       S-7521       2       Hex Bolt, 3/8" x 1 1/2"         47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"         48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0567       1       Snap Ring 1"         50       3FH0567       1       Snap Ring 1"       50       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 5/16"         54       S-1054       2       Lock Washer, 3/8"       54       S-1054       2       Lock								-
45       S-8072       4       Hex Bolt, 5/16"x3/4"       45       S-8072       4       Hex Bolt, 5/16"x3/4"         46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"       46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"         47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8"x 5-1/2"         48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0530       2       Pop Rivet-3/16" Aluminum         50       3FH0567       1       Snap Ring 1"       50       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 5/16"         54       S-1054       2       Lock Washer, 3/8"       54       S-1054       2       Lock Washer, 3/8"         55       S-1430       8       Flat Washer, SAE, 5/16"       56       S-1937       12								
46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"       46       S-7521       2       Hex Bolt, 3/8"x 1 1/2"         47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"         48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0530       2       Pop Rivet-3/16" Aluminum         50       3FH0567       1       Snap Ring 1"       50       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 1/4"       52       S-2041       4       Lock Washer, 5/16"         53       S-1147       10       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 3/8"         54       S-1054       2       Lock Washer, 1/4"       55       S-1430       8       Flat Washer, 1/4"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12								
47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"       47       S-7744       1       Hex Bolt, 3/8" x 5-1/2"         48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0530       2       Pop Rivet-3/16" Aluminum         50       3FH0567       1       Snap Ring 1"       50       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 1/4"       52       S-2041       4       Lock Washer, 5/16"         53       S-1147       10       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 3/8"         54       S-1054       2       Lock Washer, 1/4"       55       S-1430       8       Flat Washer, 1/4"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12       Flat Washer, SAE, 5/16"         57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"       57       3FH0999 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>								
48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"       48       2FH0990       3       Hex Flange Wiz Lk.Scr., 5/16"x1"         49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0530       2       Pop Rivet-3/16" Aluminum         50       3FH0567       1       Snap Ring 1"       50       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 1/4"       52       S-2041       4       Lock Washer, 5/16"         53       S-1147       10       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 3/8"         54       S-1054       2       Lock Washer, 1/4"       55       S-1430       8       Flat Washer, 1/4"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12       Flat Washer, SAE, 5/16"         57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"       57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"         58       S-6371       1       Key - Square, 1/8"x1"       58       3FH1015								
49       3FH0530       2       Pop Rivet-3/16" Aluminum       49       3FH0530       2       Pop Rivet-3/16" Aluminum         50       3FH0567       1       Snap Ring 1"       50       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 1/4"       52       S-2041       4       Lock Washer, 1/4"         53       S-1147       10       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 5/16"         54       S-1054       2       Lock Washer, 1/4"       55       S-1430       8       Flat Washer, 1/4"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12       Flat Washer, SAE, 5/16"         57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"       57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"         58       S-6371       1       Key - Square, 1/8"x1"       58       3FH1015       1       Key - Square, 3/16"x1"								
50       3FH0567       1       Snap Ring 1"       50       3FH0567       1       Snap Ring 1"         51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 1/4"       52       S-2041       4       Lock Washer, 1/4"         53       S-1147       10       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 3/8"         54       S-1054       2       Lock Washer, 1/4"       55       S-1430       8       Flat Washer, 1/4"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12       Flat Washer, SAE, 5/16"         57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"       57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"         58       S-6371       1       Key - Square, 1/8"x1"       58       3FH1015       1       Key - Square, 3/16"x1"								-
51       S-9159       1       Cotter Pin, 1/8"x3/4"       51       S-9159       1       Cotter Pin, 1/8"x3/4"         52       S-2041       4       Lock Washer, 1/4"       52       S-2041       4       Lock Washer, 1/4"         53       S-1147       10       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 5/16"         54       S-1054       2       Lock Washer, 3/8"       54       S-1054       2       Lock Washer, 3/8"         55       S-1430       8       Flat Washer, 1/4"       55       S-1430       8       Flat Washer, 3/8"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12       Flat Washer, SAE, 5/16"         57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"       57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"         58       S-6371       1       Key - Square, 1/8"x1"       58       3FH1015       1       Key - Square, 3/16"x1"								
52       S-2041       4       Lock Washer, 1/4"       52       S-2041       4       Lock Washer, 1/4"         53       S-1147       10       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 5/16"         54       S-1054       2       Lock Washer, 3/8"       54       S-1054       2       Lock Washer, 3/8"         55       S-1430       8       Flat Washer, 1/4"       55       S-1430       8       Flat Washer, 1/4"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12       Flat Washer, SAE, 5/16"         57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"       57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"         58       S-6371       1       Key - Square, 1/8"x1"       58       3FH1015       1       Key - Square, 3/16"x1"								. –
53       S-1147       10       Lock Washer, 5/16"       53       S-1147       10       Lock Washer, 5/16"         54       S-1054       2       Lock Washer, 3/8"       54       S-1054       2       Lock Washer, 3/8"         55       S-1430       8       Flat Washer, 1/4"       55       S-1430       8       Flat Washer, 1/4"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12       Flat Washer, SAE, 5/16"         57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"       57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"         58       S-6371       1       Key - Square, 1/8"x1"       58       3FH1015       1       Key - Square, 3/16"x1"				-				
54       S-1054       2       Lock Washer, 3/8"       54       S-1054       2       Lock Washer, 3/8"         55       S-1430       8       Flat Washer, 1/4"       55       S-1430       8       Flat Washer, 1/4"         56       S-1937       12       Flat Washer, SAE, 5/16"       56       S-1937       12       Flat Washer, SAE, 5/16"         57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"       57       3FH0999       1       Key - Woodruff(Tab Type) 1/4" x1"         58       S-6371       1       Key - Square, 1/8"x1"       58       3FH1015       1       Key - Square, 3/16"x1"								
55         S-1430         8         Flat Washer, 1/4"         55         S-1430         8         Flat Washer, 1/4"           56         S-1937         12         Flat Washer, SAE, 5/16"         56         S-1937         12         Flat Washer, SAE, 5/16"           57         3FH0999         1         Key - Woodruff(Tab Type) 1/4" x1"         57         3FH0999         1         Key - Woodruff(Tab Type) 1/4" x1"           58         S-6371         1         Key - Square, 1/8"x1"         58         3FH1015         1         Key - Square, 3/16"x1"				-				
56         S-1937         12         Flat Washer, SAE, 5/16"         56         S-1937         12         Flat Washer, SAE, 5/16"           57         3FH0999         1         Key - Woodruff(Tab Type) 1/4" x1"         57         3FH0999         1         Key - Woodruff(Tab Type) 1/4" x1"           58         S-6371         1         Key - Square, 1/8"x1"         58         3FH1015         1         Key - Square, 3/16"x1"								
57         3FH0999         1         Key - Woodruff(Tab Type) 1/4" x1"         57         3FH0999         1         Key - Woodruff(Tab Type) 1/4" x1"           58         S-6371         1         Key - Square, 1/8"x1"         58         3FH1015         1         Key - Square, 3/16"x1"								
58 S-6371 1 Key - Square, 1/8"x1" 58 3FH1015 1 Key - Square, 3/16"x1"								
				, , ,				





### INSTALLATION

Use Tables A & B to determine the proper size of fuse protection and the length and size of wiring required. Portable extension cords, if used, should be as short as possible to minimize voltage drop. Cords that are too long, or cords that are of a too small wire gauge, can cause the motor to fail.

TABLE A (WIRE SIZE) DISTANCE				
MOTOR	25 FT.	50 FT.	100 FT.	200 FT.
1/3 HP (918) 1/2 HP (936)	#18 Ga. #16 Ga.	#16 Ga. #14 Ga.	#12 Ga. #12 Ga.	#10 Ga. # 8 Ga.

		TAB	LE B (I	USE SIZE)		
MOTOR	TYPE OF FUSE (CODE LETTER)					
	NON-T		LAY	DUAL ELEMENT TIME DELA		
	A	B-E	F-V	A	B-E	F-V
1/3 HP (918) 1/2 HP (936	10 15	15 25	20 30	10 15	10 15	10 15



TROUBLE SHOOTING						
PROBLEM		CORRECTION				
Grain is high on one side of bin.		<ul> <li>(a) Spreader is not hung level.</li> <li>(b) Spreader not stopping &amp; starting properly during filling. See Figure 2.</li> <li>(c) Spreader running continuously.</li> </ul>				
Grain is high at the center of bin.	F	<ul> <li>(a) Slide Gate open too far.</li> <li>(b) Spreader stopping too long, letting too much grain through slide gate.</li> <li>See Figure 4.</li> <li>(c) Outside ring set too low. See Figure 3.</li> </ul>				
Grain is low at the center of bin.		<ul> <li>(a) Slide Gate not open far enough.</li> <li>(b) Spreader not stopping enough to let grain out through slide gate.</li> <li>See Figures 2 and 4.</li> <li>(c) Outside ring set too high. See Figure 3.</li> </ul>				
Grain forms "doughnut" a few feet from bin wall.		<ul> <li>Caused by grain bouncing off bin wall excessively.</li> <li>(a) Adjust outside ring. See Figure 3.</li> <li>(b) Hook Spreader higher in the roof cone to increase grain bouncing off underside of roof and then being deflected straight downward.</li> <li>(c) Open slide gate more to help fill center.</li> <li>(d) Spreader model not correct for bin size.</li> </ul>				
Grain not getting all the way to the wall.		<ul> <li>(a) The Model 918 Bin Level will only spread over an entire bin width of up to 30' and the Model 936 up to 36'. If the bin is bigger, lower sides will result because grain will not throw out far enough.</li> <li>(b) Adjust outside ring up. See Figure 3.</li> <li>(c) Bin Level hanging too high under bin roof.</li> <li>(d) Rubber drive wheel badly worn.</li> </ul>				
Spreader swings exces- sively		This condition is caused by improper hooking up of the suspension chains There should be the same number of links from spreader to hook with all six strands of chain. This will also usually ensure level hanging of the Spreader. Equal spacing of hanger brackets is important. The hanger brackets should be on the outer fill-hole ring.				
Spreader does not run.		<ul> <li>(a) Mercury switch plate may be frozen shut or plugged with foreign material</li> <li>(b) Rubber drive wheel may be slipping because of excessive moisture or broken mounting plate spring.</li> <li>(c) Motor overload may have tripped. It will reset automatically after the moto has cooled.</li> <li>(d) Blown fuse or broken wire.</li> <li>(e) Faulty mercury switch.</li> <li>(f) Mercury switch plate bent out of shape.</li> <li>(g) Grain extremely high moisture may not flow enough to operate the mercur switch plate. Bending section of the plate holding the mercury switch up to make it more sensitive may help.</li> <li>(h) The motor will not start and will "chatter" if the voltage is too high.</li> <li>(i) The motor will not start and will "hum" if the voltage is too low. See Table A on Page 8 for the proper length and size of wiring to prevent excessive voltage drop.</li> </ul>				
Motor slows down when loaded.		(a) Motor wired for the wrong direction. Pan should turn clockwise when				



# NOTES



## The GSI Group, Inc. Warranty

THE GSI GROUP, INC. ("GSI") WARRANTS ALL PRODUCTS WHICH IT MANUFACTURES TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USAGE AND CONDITIONS FOR A PERIOD OF 12 MONTHS AFTER RETAIL SALE TO THE ORIGINAL END USER. THE PURCHASER'S SOLE REMEDY AND GSI'S ONLY OBLIGATION SHALL BE TO REPAIR OR REPLACE, AT GSI'S OPTION AND EXPENSE, PRODUCTS THAT, IN GSI'S SOLE JUDGMENT, CONTAIN A MATERIAL DEFECT DUE TO MATERIALS OR WORKMANSHIP. ALL DELIVERY AND SHIPMENT CHARGES TO AND FROM GSI'S FACTORY WILL BE PURCHASER'S RESPONSIBILITY. EXPENSES INCURRED BY OR ON BEHALF OF THE PURCHASER WITHOUT PRIOR WRITTEN AUTHORIZATION FROM AN AUTHORIZED EMPLOYEE OF GSI SHALL BE THE SOLE RESPONSIBILITY OF THE PURCHASER.

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(revised December 2005)



This Equipment shall be installed in accordance with the current installation codes and applicable regulations which should be carefully followed in all cases. Authorities having jurisdiction should be consulted before installation occurs.

For more information, contact the DMC Distribution Center closest to you.

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FAX:

aption, Illinois 62510 Clear L 217-226-5100 Phone: 217-226-5070 FAX:

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