

Hutchinson I Mayrath

INSTALLATION INSTRUCTIONS



This safety symbol is used throughout these instructions to alert you to information about unsafe actions or situations, and may be followed by the word **DANGER**, **WARNING**, or **CAUTION**. **Be Alert! Your safety and the safety of others is involved.**

DANGER - Indicates immediate hazards that may result in severe injury or death. **WARNING** - Indicates unsafe actions or situations that may cause severe injury, death and/or major equipment or property damage. **CAUTION** - Indicates unsafe actions or situations that may cause injury, and/or minor equipment or property damage.

Please remember that safety is the number one priority. Use caution during all phases of the assembly process. Wear proper PPE (personal protective equipment) and follow the safety recommendations included in the manual provided with your equipment.

1012 & 1214 LEAVE-IN SWEEP

DRIVE ASSEMBLY KITS

PARTS NO'S.

BK1201DSR (1012 KLEAN SWEEP)

BK1403DSR (1214 KLEAN SWEEP)

Before beginning assembly it is suggested to read through these instructions and lay out all items from the kit to ensure all parts are accounted for. This not only helps you become familiar with the parts and assembly procedures, but also makes you aware of what tools, equipment or materials you may need to complete the installation process.

When installing the drive assembly to an existing sweep, it will be necessary to disconnect the sweep shield and flight and remove the existing drive assembly from center well. The pivot pin on the new drive assembly will be inserted into the existing center well pivot tube.



WARNING! Make sure all power is shut down and locked out before entering the bin.

Electric motors and controls shall be installed by a qualified electrician and must meet the standards set by the National Electric Code and all local and state codes.

Some components are heavy, use assistance when working with these parts.

Wear proper PPE during all phases of the assembly process.

Keep work area clean and orderly and free of all debris and tools that may cause accidental tripping, falling or other serious injuries.

DRIVE ASSEMBLY INSTALLATION

If using the Adjustable Pivot Mount assembly for the center well pivot point, refer to the Adjustable Pivot Mount instructions Publication No. 1052290 included in this kit, and install prior to installation of the drive assembly.

1012 Klean Sweep instructions pages 1 to 4.

1214 Klean Sweep instructions Pages 5 to 7.

1012 Klean Sweep Drive Assembly Gearbox to Pivot Mount Assembly

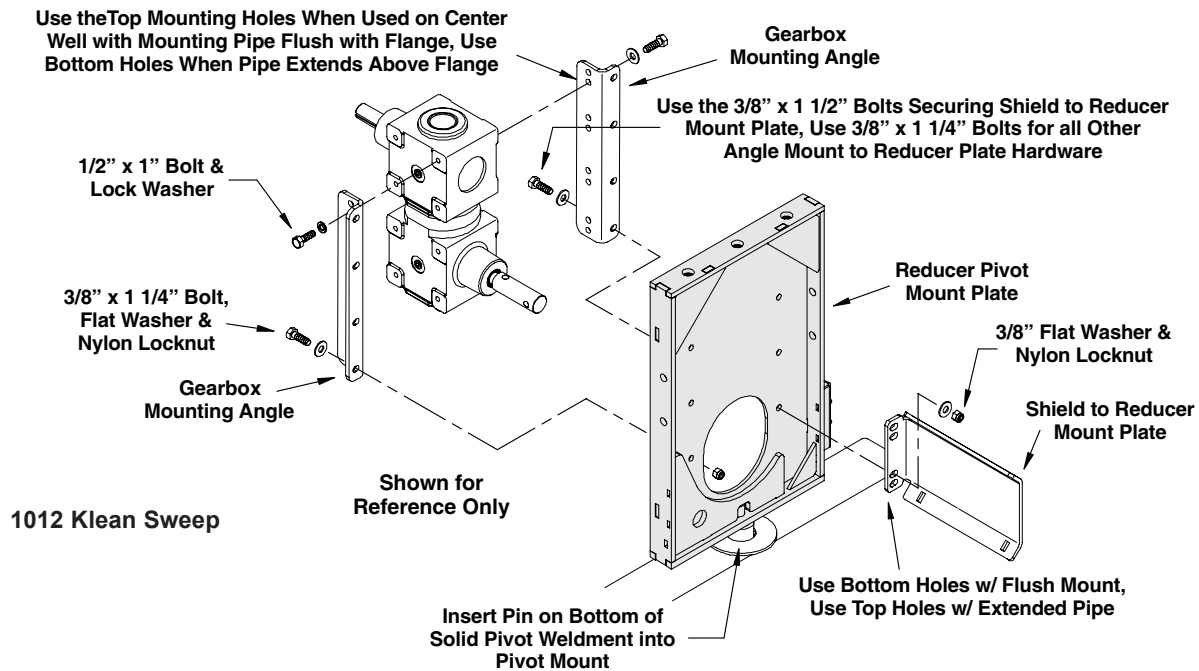
The gearboxes are shipped with oil already installed. It is recommended to check oil level before assembly to ensure level is correct. See "Lubrication & Maintenance" Section in this manual for instructions on checking and adding oil to the gearboxes.

1. Disconnect the shield and the flight from the existing sweep.
 - **Remove the existing drive assembly from the center well.**

1012 Klean Sweep Drive Assembly Gearbox to Pivot Mount Assembly (con't.)

2. Insert the solid pivot weldment frame into the mounting pipe in the center well.
3. Install the gearbox mounting angles to the sides of the gearboxes and secure using the 1/2" x 1" bolts and lock washers provided.
4. The gearbox with mounting angles can now be attached to the solid pivot plate. Use the top holes of the mounting angles when used on center wells with the mounting pipe flush with the well flange, use the bottom holes when the pipe protrudes above the well flange.

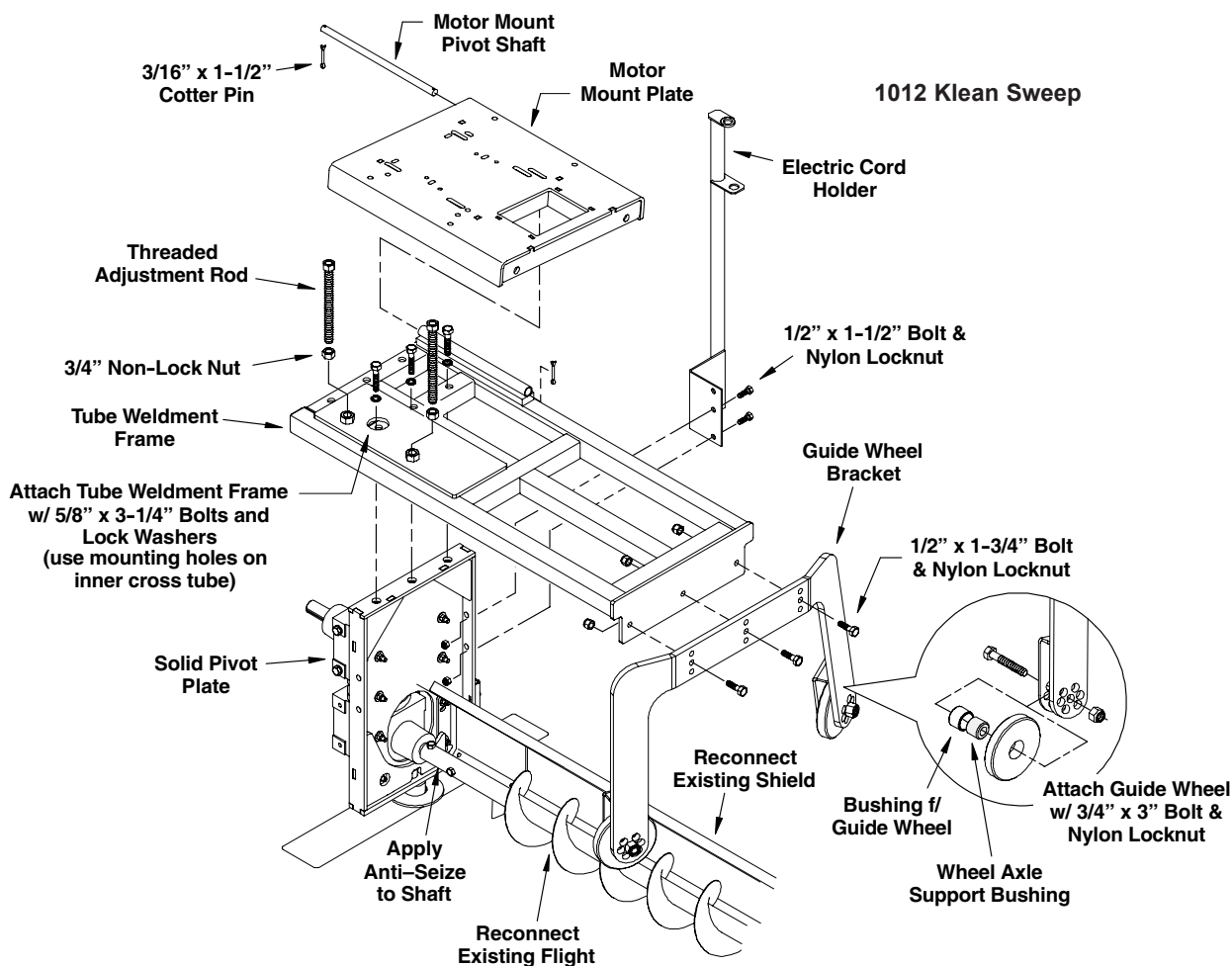
The shield to reducer mount plate will also be attached at this time. Use 3/8" x 1 1/2" bolts, flat washers and nylon locknuts when installing the shield mount plate and 3/8" x 1 1/4" bolts, flat washers and nylon locknuts for the remaining angle mounting hardware (See illustration below).



5. Apply an anti-seize compound to the gearbox shaft.
 - Reconnect the existing flight to the gearbox shaft using 1/2" x 4" bolts and nylon locknuts.
 - Reconnect the existing shield to the new reducer mount plate using 3/8" x 1-1/4" carriage bolts, flat washers and nylon locknuts.

1012 Klean Sweep Motor Mount Assembly

1. Loosely attach the tube weldment frame to the top of the solid pivot plate using three 5/8" x 3-1/4" bolts and lock washers. (use the three mounting holes on the inner cross tube as shown below).
2. Assemble the guide wheel, bushing and axle support bushing together and install into each end of the guide wheel bracket as shown below. Secure each wheel using the 3/4" x 3" bolt and nylon locknut provided.
3. Attach the guide wheel bracket to the tube weldment frame using three 1/2" x 1-3/4" bolts and nylon locknuts (See illustration below). **Note: To ensure the weldment frame and solid pivot plate assembly remains level, there are various mounting holes on the guide wheel bracket for adjustment of the guide wheels, as well as an up-and-down adjustment on the mounting holes of the wheel bracket.** Use any of these adjustments alone or in combination with each other as needed to ensure the assembly is level.
4. Thread a 3/4" non-lock nut onto each end of the threaded adjustment rods. Install the adjustment rods into the nuts welded to the tube weldment frame until there is approximately 2" (51 mm) of the threaded rods protruding above the weldment frame (See illustration below).
5. Position the motor mount plate above the weldment frame and install the pivot shaft as shown below. Secure the pivot shaft using two 3/16" x 1-1/2" cotter pins.
6. Attach the electric cord holder to the side of the solid pivot plate using 1/2" x 1-1/2" bolts and nylon locknuts (See illustration below).

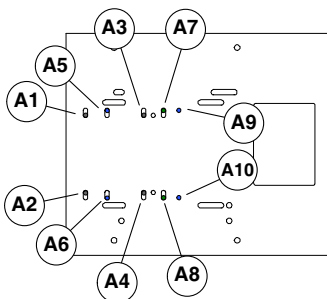
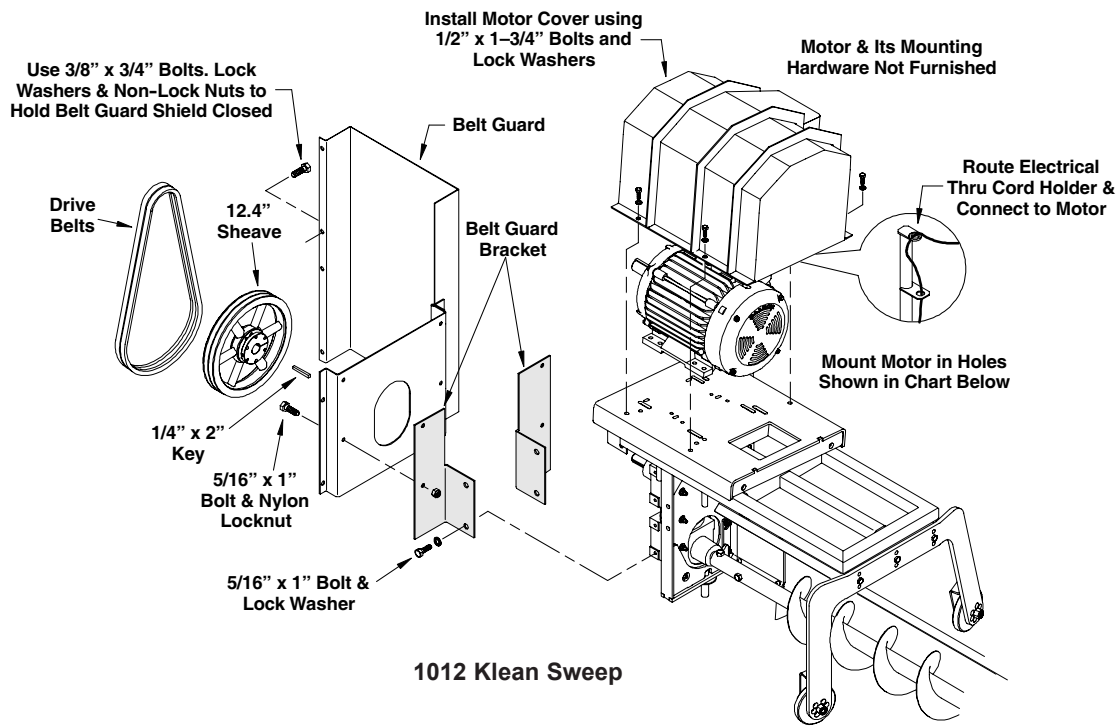


1012 Klean Sweep Belt Guard & Drive Assembly

1. Attach the belt guard brackets to the sides of the gearbox as shown in the illustration below. Secure the brackets using 5/16" x 1" bolts and lock washers.
2. Install the belt guard to the brackets and secure using 5/16" x 1" bolts and nylon locknuts. Install the sheave and 1/4" x 2" sq. key onto the upper gearbox shaft. Slide the sheave as close to the back of the belt guard as possible without contacting the guard. Secure sheave into place.
3. Using the chart below, mount the electric motor into the appropriate mount holes as determined by the motor's horsepower (*kw*) rating. **The motor and the motor's mounting hardware are not furnished.** Install motor pulley and using a straight edge on the face of the pulleys, align both pulleys and secure into place.
4. Use two 3/8" x 3/4" bolts, lock washers and non-lock nuts to secure the belt guard door in the closed position.
5. Route the electrical cord through the cord holder and connect cord to motor. Refer to manual that came with the sweep system for more information on routing the cord to the power source.

IMPORTANT! Electric motors and controls shall be installed by a qualified electrician and must meet the standards set by the National Electrical Code and all local and state codes.

6. After motor has been properly connected, install motor cover. Secure to motor mount plate using 1/2" x 1-3/4" bolts and lock washers.



Bin Dia.	Motor Size HP (kW)	Motor Frame Size	Bolt Dia. Req'd.	Mount in Holes Marked (•)											
				A1	A2	A3	A4	A5	A6	A7	A8	A9	A10		
24' to 37'	3 hp (2.2 kW)	182T	3/8"	•	•	•	•								
39' to 55'	5 hp (4 kW)	184T	3/8"	•	•	•	•								
60' to 75'	7.5 hp (5.5 kW)	213T	3/8"					•	•	•	•				
78' to 90'	10 hp (7.5 kW)	215T	3/8"					•	•				•	•	

1214 Klean Sweep Drive Assembly

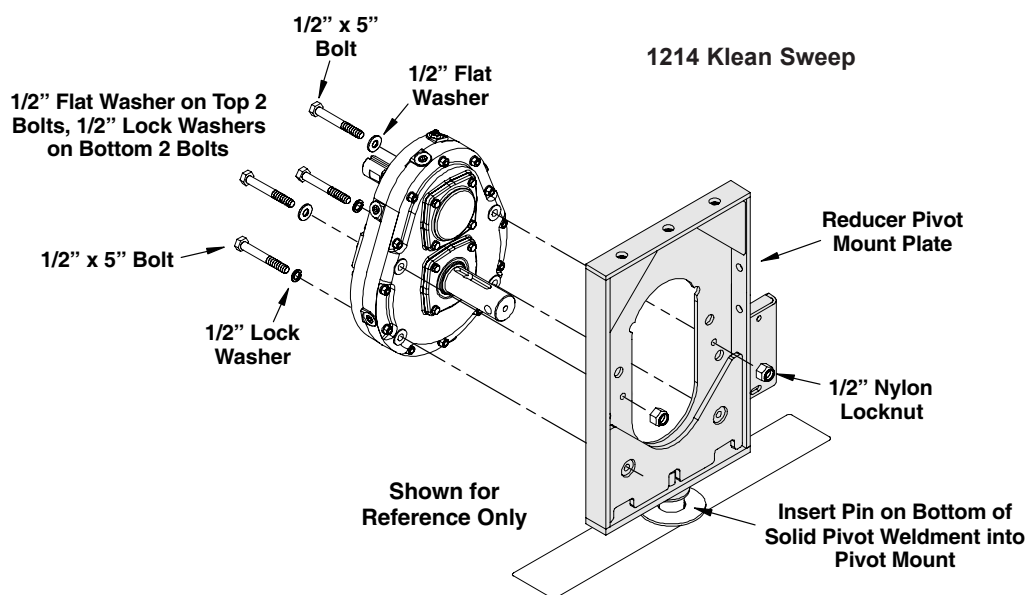
If using the Adjustable Pivot Mount assembly for the center well pivot point, refer to the Adjustable Pivot Mount instructions Publication No. 1052290 included in this kit, and install prior to installation of the drive assembly.

Gearbox to Pivot Mount Assembly

The gearboxes are shipped with oil already installed. It is recommended to check oil level before assembly to ensure level is correct. See "Lubrication & Maintenance" Section in this manual for instructions on checking and adding oil to the gearboxes.

1. Disconnect the shield and the flight from the existing sweep.
 - **Remove the existing drive assembly from the center well.**
2. Insert the solid pivot weldment frame into the mounting pipe in the center well.
3. Install a 1/2" flat washer onto two of the 1/2" x 5" bolts. Position the gearbox as shown in the illustration below and using the two top mounting holes in the gearbox, fasten it to the solid pivot mount using 1/2" nylon locknuts (these bolts will be loosened to allow the belt guard to be slid behind the bolt heads and washers, just snug up the bolts for now).

Install a 1/2 lock washer onto the remaining two 1/2" x 5" bolts. Install them into the lower two mounting holes in the gearbox and secure.

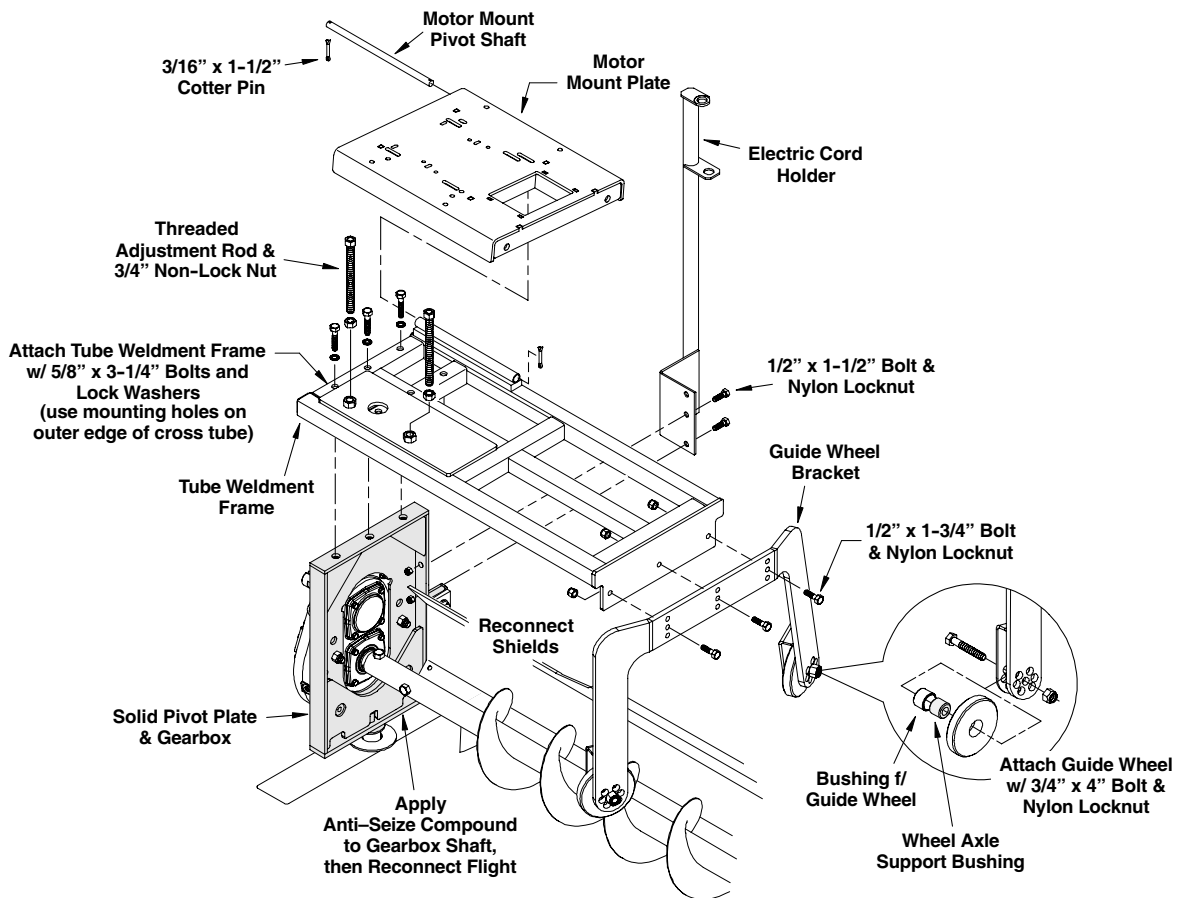


1214 Klean Sweep Drive Assembly (con't.)

4. Apply an anti-seize compound to the gearbox shaft.
 - Reconnect the existing flight to the gearbox shaft using 1/2" x 4" bolts and nylon locknuts.
 - Reconnect the existing shield to the new reducer mount plate using 3/8" x 1-1/4" carriage bolts, flat washers and nylon locknuts.

Motor Mount Assembly

1. Loosely attach the tube weldment frame to the top of the solid pivot plate using three 5/8" x 3-1/4" bolts and lock washers. (use the three mounting holes on the outer cross tube as shown below).
2. Assemble the guide wheel, bushing and axle support bushing together and install into each end of the guide wheel bracket as shown below. Secure each wheel using the 3/4" x 4" bolt and nylon locknut provided.
3. Attach the guide wheel bracket to the tube weldment frame using three 1/2" x 1-3/4" bolts and nylon locknuts (See illustration below). **Note: To ensure the weldment frame and solid pivot plate assembly remains level, there are various mounting holes on the guide wheel bracket for adjustment of the guide wheels, as well as an up-and-down adjustment on the mounting holes of the wheel bracket.** Use any of these adjustments alone or in combination with each other as needed to ensure the assembly is level.
4. Thread a 3/4" non-lock nut onto each end of the threaded adjustment rods. Install the adjustment rods into the nuts welded to the tube weldment frame until there is approximately 2" (51 mm) of the threaded rods protruding above the weldment frame (See illustration below).
5. Position the motor mount plate above the weldment frame and install the pivot shaft as shown below. Secure the pivot shaft using two 3/16" x 1-1/2" cotter pins.
6. Attach the electric cord holder to the side of the solid pivot plate using 1/2" x 1-1/2" bolts and nylon locknuts (See illustration below).

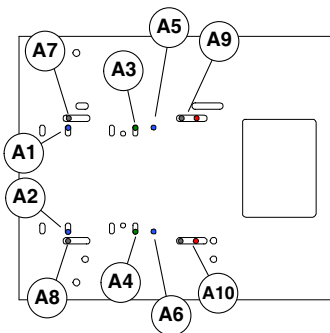
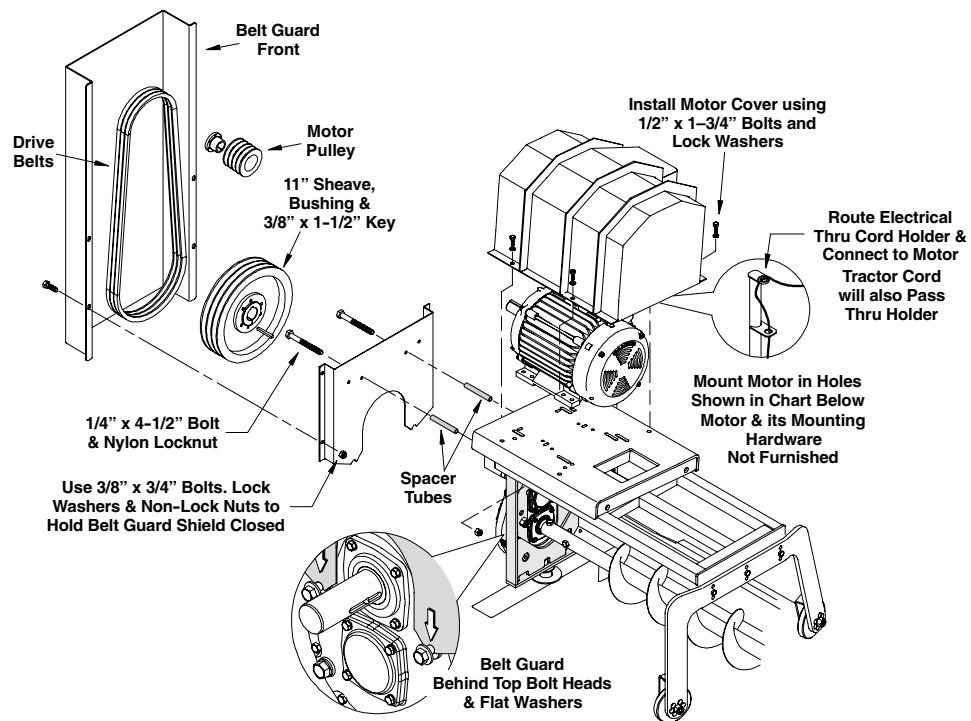


Belt Guard & Drive Assembly

1. Loosen the two top bolts securing the gearbox to the pivot stand (bolts have the flat washers). Loosen only enough to slide the belt guard behind the washers (See illustration below). Snug the bolts to hold the belt guard in place and insert two spacer tube in between the belt guard and pivot stand (See illustration below). Secure the tubes using the 1/4" x 4-1/2" bolts and nylon locknuts provided. Tighten all belt guard hardware.
2. Install the 11" driven sheave, bushing and 3/8" x 1-1/2" sq. key onto the gearbox shaft. Slide the sheave as close to the back of the belt guard as possible without contacting the guard. Secure sheave into place.
3. Using the chart below, mount the electric motor into the appropriate mount holes as determined by the motor's horsepower (kw) rating. Install motor pulley and using a straight edge on the face of the pulleys, align both pulleys and secure into place.
Install drive belts. Adjust belt tension as detailed in the Maintenance Section of this manual.
4. Use two 3/8" x 3/4" bolts, lock washers and non-lock nuts to secure the belt guard door in the closed position.
5. Route the electrical cord through the cord holder and connect cord to motor. Refer to manual that came with the sweep system for more information on routing the cord to the power source.

IMPORTANT! Electric motors and controls shall be installed by a qualified electrician and must meet the standards set by the National Electrical Code and all local and state codes.

6. After motor has been properly connected, install motor cover. Secure to motor mount plate using 1/2" x 1-3/4" bolts and lock washers.



Bin Dia.	Motor Size HP (kW)	Motor Frame Size	Bolt Dia. Req'd.	Mount in Holes Marked (•)											
				A1	A2	A3	A4	A5	A6	A7	A8	A9	A10		
36' to 40'	7.5 hp (5.5 kW)	213T	3/8"	•	•	•	•								
42' to 49'	10 hp (7.5 kW)	215T	3/8"	•	•			•	•						
54' to 78'	15 hp (11 kW)	254T	3/8"								•	•	•	•	
80' to 105'	20 hp (15 kW)	256T	1/2"								•	•	•	•	

Lubrication & Maintenance
General Maintenance Information

WARNING! Shut off power and lockout before attempting to adjust, service, clean or repair the auger or any of its components.

Keep hands, feet and clothing away from moving parts.

Make sure all safety devices, shields and guards are in place and functional. Immediately replace any that are damaged or missing.

Never rely solely on mechanical or hydraulic jacks for support. Use jack stands or equivalent for support.

For economical and efficient operation of your auger, maintain regular and correct lubrication, maintenance and service schedules. Neglect leads to reduced efficiency, excessive wear and needless down time.

Any parts needing replacement should be replaced with parts of the same type and size. **Do Not modify or alter any of the auger components.**

Guards

Check the guards to see if they are properly adjusted and securely fastened. Guards should not contact any moving parts and should be kept closed and in place during auger operation.

Immediately replace any guard that has become worn or damaged.

BELT ADJUSTMENT

WARNING! A main power disconnect switch that can be locked in only the "OFF" position shall be provided. This shall be locked whenever work is being done on the auger.

Shut off power and lockout whenever cleaning or servicing the auger.

Belt adjustment is the same for both the 1012 and the 1214 Klean Sweeps.

- Check belts frequently for frating, cracking or other damage. Replace as necessary.
- Check belts for proper tension. Belts should deflect approximately 9/16" (14 mm) when firmly pressed in the center of the span between the two sheaves.

1. To adjust belt tension:

- loosen the 3/4" nut on the threaded adjustment rod located beneath the motor mount plate
- using the adjustment nuts, adjust the threaded rod until proper belt tension has been achieved, retighten 3/4" nut against bottom of plate to lock adjustment rod into place.

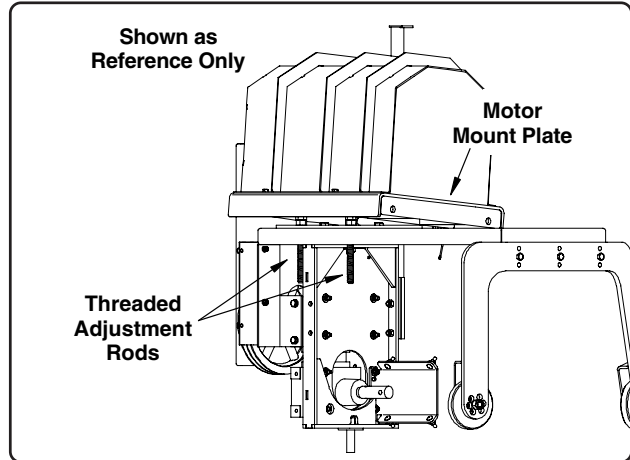


Fig. 3

Gearboxes

The 1012 Klean Sweep gearboxes are shipped with oil already installed.

It is recommended to check oil level **before** operation to ensure level is correct (See Fig. 4).

1012 Klean Sweep Gearboxes

1. To check oil level:

- remove the plug from the side of the gearbox. Oil should flow from the opening, if additional oil is needed, add oil into the same opening until oil begins to flow out.

Capacity: approx. 23 oz. (.680 l) ea.

For temperature ranges of 40°F to 120°F (4.4°C to 48.9°C) use only an **SAE 80W-90** non-foaming multipurpose gear oil. Extra pressure additives may be of some value in severe applications.

For temperature ranges below 40°F (4.4°C) use an **SAE 80W gear oil.**

1012 Klean Sweep Gearboxes (con't.)

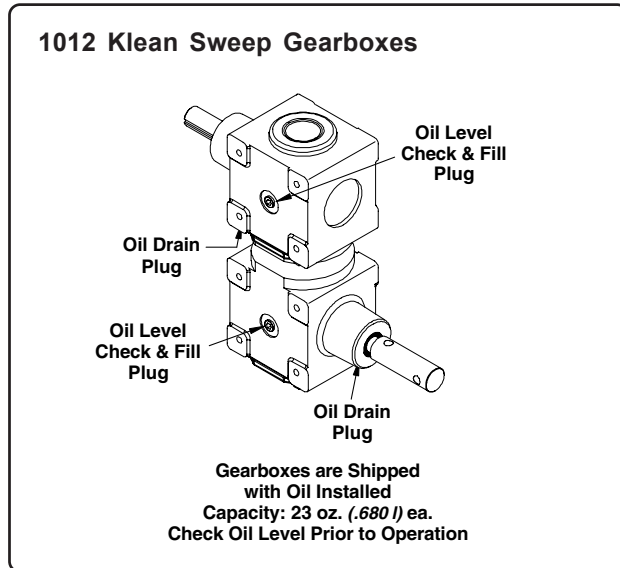


Fig. 4

1214 Klean Sweep Gearbox 4:1 Reducer



WARNING! Never attempt to clean, adjust or lubricate a machine that is in operation.



Always shutdown and lockout the power source to all power driven equipment before servicing, repairing or maintaining any auger components.

IMPORTANT! The 1214 Klean Sweep 4:1 reducer gearbox is shipped without oil. Oil needs to be added before operation.

Even under normal working conditions, oil still has a tendency to dissipate. Periodically check oil level and maintain proper level.

1. With the gearbox in the upright position:

- remove the level check plug shown in Fig. 5.
- remove one of the plugs from the top of the gearbox, this will be used as the fill opening.
- add approx. **32 oz. (9.6 ml)** of an **SAE 80W90** weight oil through the plug opening on the top of the gearbox (a small funnel, pipe nipple or syringe type tool can be used to add the oil).

- Watch the oil level check opening. When oil begins to leak from the opening stop adding oil. **Do Not overfill.** Additional oil may damage the seals or be forced through the vent plug.

2. Replace the level check plug once oil level has been established.

Discard the plug removed from the top of the gearbox fill opening and install the vent plug shipped separately with the gearbox.

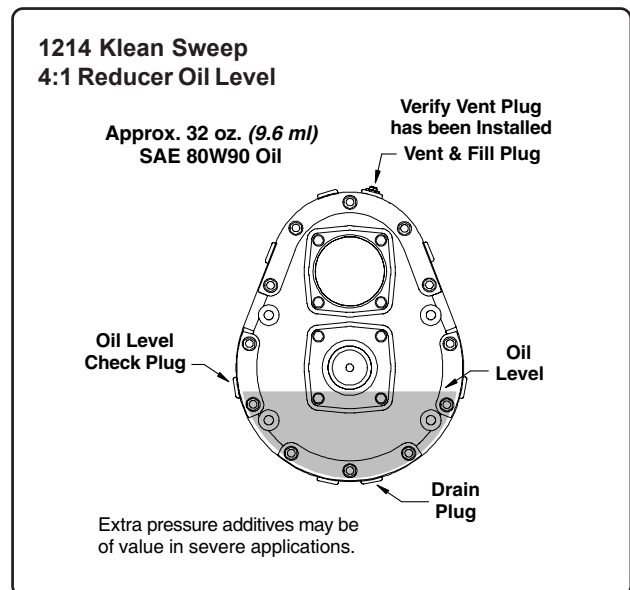
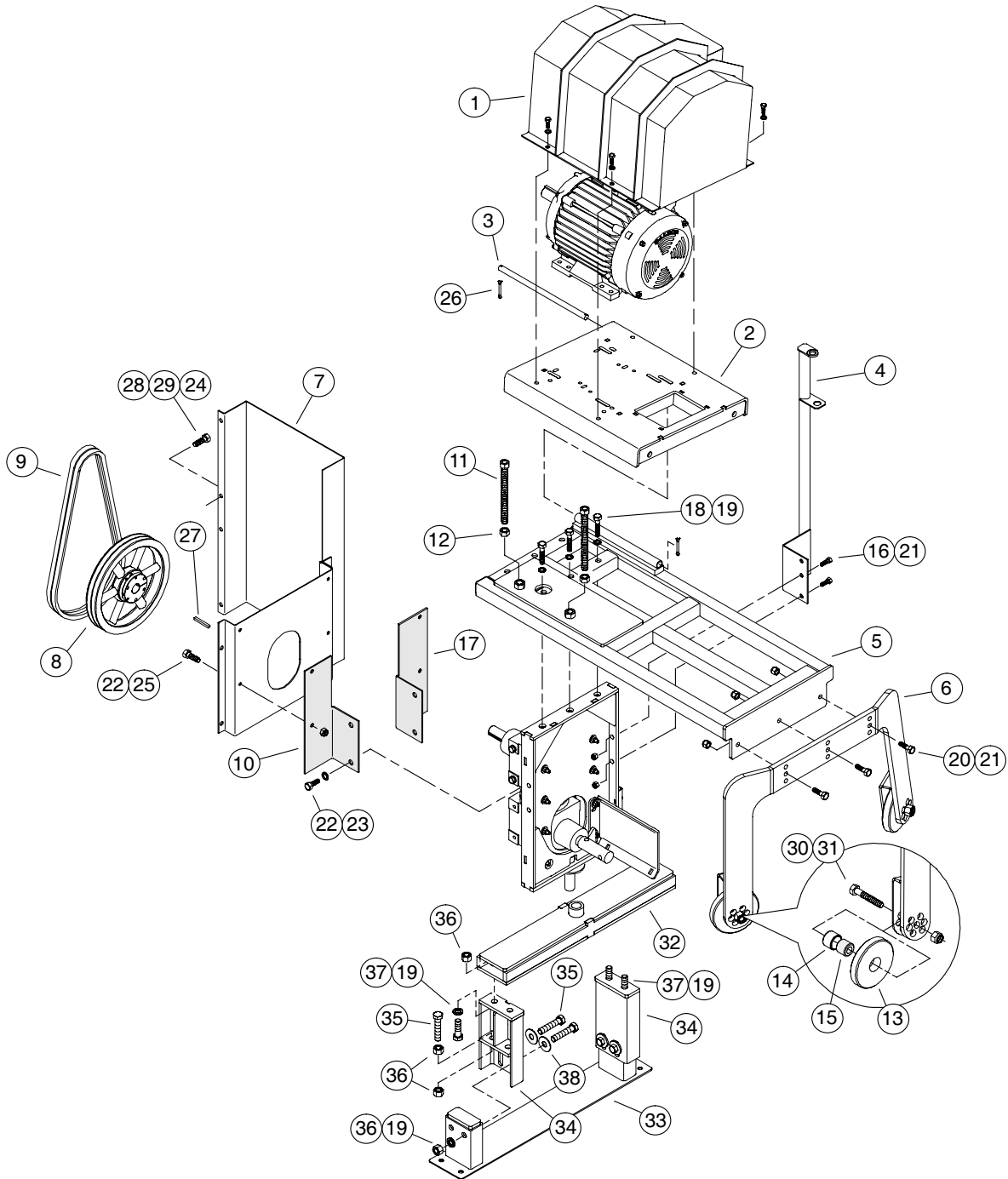


Fig. 5

Parts List
Drive Components for
1012 Series Commercial Klean Sweep



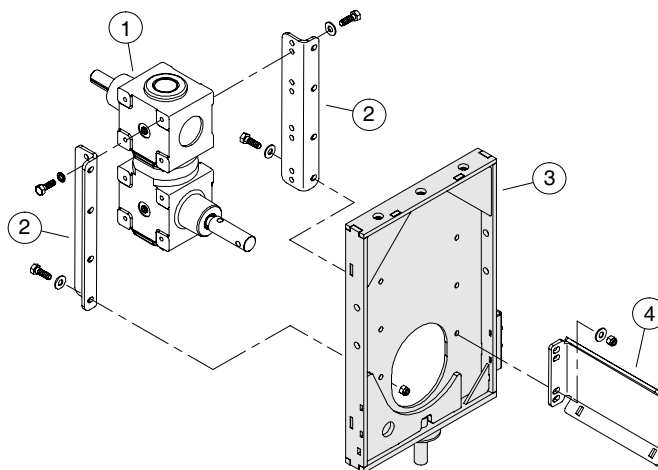
Drive Components 1012 (con't.)

Drive Components for
1012 Series Commercial Klean Sweep

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	1050112	Cover, Motor, f/ 1012 Klean Sweep	17	1052093	Bracket, Belt Guard Mount (short)
2	1051518	Plate, Motor Mount	18	33278	Bolt, 5/8-11 x 3-1/4" G5 PLT
3	1018789	Pivot Shaft f/ Motor Mount Plate	19	D1171	Washer, 5/8" Lock PLT
4	1018804	Holder, Electric Cord	20	33247	Bolt, 1/2-13 x 1-3/4 G5 PLT
5	1052015	Tube Weldment f/ Klean Sweep w/ Solid Pivot	21	33138	Nut, 1/2-13 Nylon Lock PLT
6	1052018	Wheel Bracket f/ Klean Sweep	22	33046	Bolt, 5/16-18 x 1" G5 PLT
7	1046542	Belt Guard f/ 1012 Klean Sweep	23	33144	Washer, 5/16" Lock PLT
8	3237A1	Sheave, 2B QD 12.4" f/ 24' to 55' dia, Bins	24	D1149	Nut, 3/8-16 Non-Lock PLT
(8)	3246A1	Sheave, 3B QD 12.4" f/ 60' to 90' dia, Bins	25	33135	Nut, 5/16-18 Nylon Lock PLT
(8)	3072A1	Bushing, QD SK 1.25" bore	26	3337A1	Cotter Pin, 3/16" x 1 1/2" long
9	40120	Belt, B-57 f/ 3 & 5 hp motors (f/ 2.2 & 4 kw motors)	27	4045A1	Key, 1/4" sq. x 2" long
(9)	1023004	Belt, B-59 f/ 7.5 & 10 hp motors (f/ 5.5 & 7.5 kw motors)	28	33309	Bolt, 3/8-16 x 3/4" G5 PLT
10	1052094	Bracket, Belt Guard Mount (Ing)	29	D1150	Washer, 3/8" Lock PLT
11	6676A1	Rod, Threaded Adjustment	30	33112	Bolt, 3/4-10 x 3" G5 PLT
12	D1152	Nut, 3/4-10 Non-Lock	31	33140	Nut, 3/4-10 Nylon Lock PLT
13	BU-0500263	Guide Wheel f/ Klean Sweep	32	1051941	Mount, Upper Klean Sweep Pivot
14	BU-0500265	Bushing, 1.75" O.D. x 1.25" long	33	1051935	Base f/ Adjustable Pivot
15	1051706	Wheel Axle Support	34	1051984	Adjustable Weldment f/ Pivot Mount
16	1002227	Bolt, 1/2-13 x 1-1/2" G5 PLT	35	1002235	Bolt, 5/8-11 x 3" G5 PLT
			36	D1170	Nut, 5/8-11 Non-Lock PLT
			37	33244	Bolt, 5/8-11 x 2" G5 PLT
			38	33026	Washer, 5/8" Flat PLT

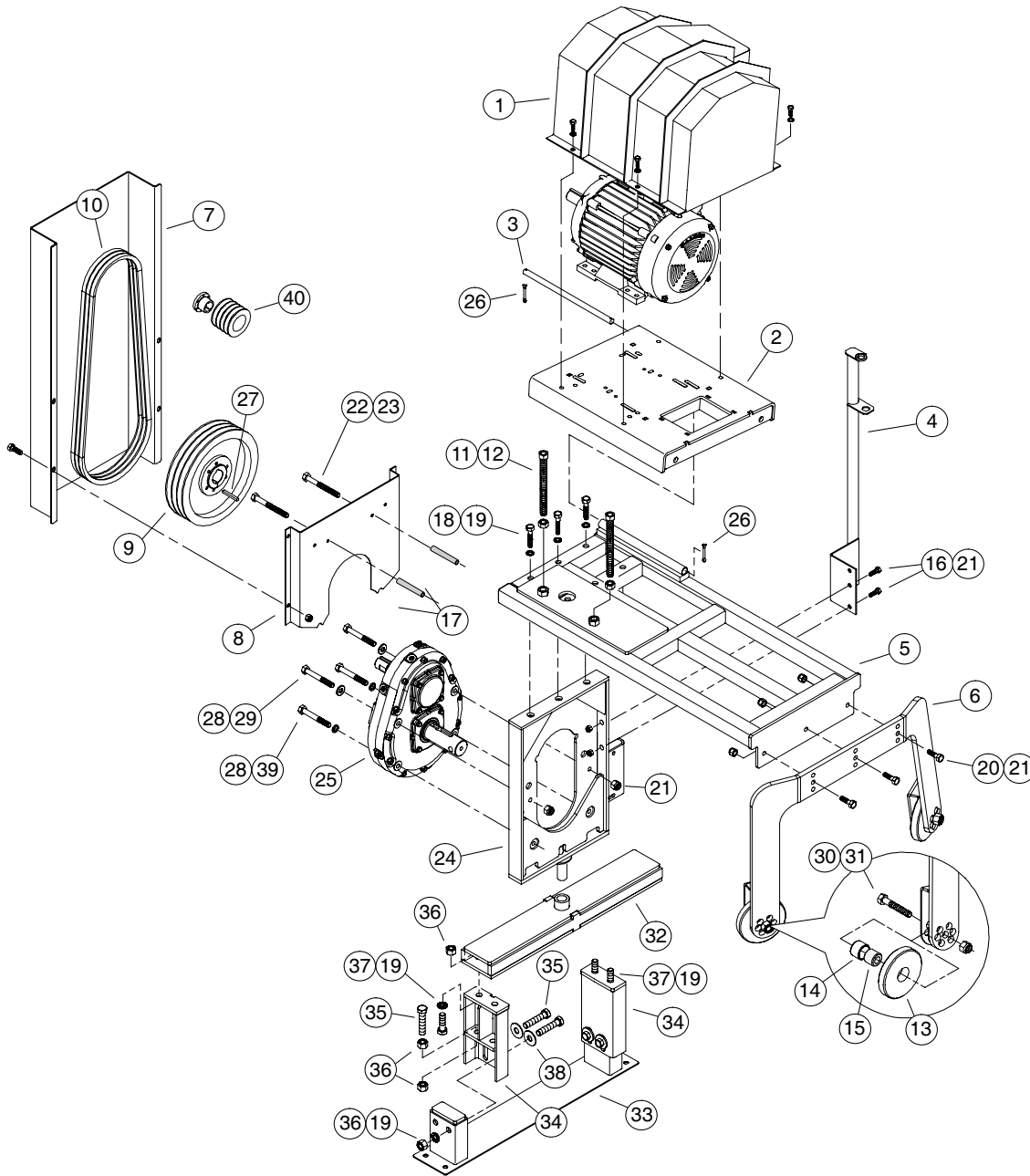
1012 Klean Sweep
Gearbox Mounting Components

Ref. No.	Part No.	Description
1	1046246	Gearbox, 2.25:1 ratio, 4000 Series
2	1046534	Angles, Gearbox Mount
3	1052092	Solid Pivot Weldment f/ 1012 Klean Sweep
4	1046546	Plate, Shield-to-Reducer Mount



Parts List

Drive Components for
1214 Series Commercial Klean Sweep
w/ 4:1 Ratio Gear Drive Reducer



Drive Components 1214 (con't.)

**Drive Components for
1214 Series Commercial Klean Sweep
w/ 4:1 Ratio Gear Drive Reducer**

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	1050112	Cover, Motor, f/ 1214 Klean Sweep	20	33247	Bolt, 1/2-13 x 1-3/4 G5 PLT
2	1051518	Plate, Motor Mount	21	33138	Nut, 1/2-13 Nylon Lock PLT
3	1018789	Pivot Shaft f/ Motor Mount Plate	22	1002211	Bolt, 1/4-20 x 5" G5 PLT
4	1018804	Holder, Electric Cord	23	4003	Nut, 1/4" Nylon Lock PLT
5	1052015	Tube Weldment f/ Klean Sweep w/ Solid Pivot	24	1052007	Solid Pivot Weldment (f/ 1214 Klean Sweep)
6	1052018	Wheel Bracket f/ Klean Sweep	25	1025519-1	Reducer, 4:1 Gear Drive
7	1052172	Belt Guard, Front (f/ 1214 Klean Sweep)	26	3337A1	Cotter Pin, 3/16" x 1 1/2" long
8	1052171	Belt Guard, Back (f/ 1214 Klean Sweep)	27	4049A1	Key, 3/8" sq. x 1*1/2" long
9	3271A1	Sheave, 3B QD 11"	28	4917	Bolt, 1/2-13 x 5" G5 PLT
10	40125	Belt, B-68	29	33025	Washer, 1/2" Flat PLT
11	6676A1	Rod, Threaded Adjustment	30	33250	Bolt, 3/4-10 x 4" G5 PLT
12	D1152	Nut, 3/4-10 Non-Lock	31	33140	Nut, 3/4-10 Nylon Lock PLT
13	BU-0500263	Guide Wheel f/ Klean Sweep	32	1051941	Mount, Upper Klean Sweep Pivot
14	BU-0500265	Bushing, 1.75" O.D. x 1.25" long	33	1051935	Base f/ Adjustable Pivot
15	1051706	Wheel Axle Support	34	1051984	Adjustable Weldment f/ Pivot Mount
16	1002227	Bolt, 1/2-13 x 1-1/2" G5 PLT	35	1002235	Bolt, 5/8-11 x 3" G5 PLT
17	1011901	Spacer Tube, 3-3/4" long (f/ 1214 Klean Seep)	36	D1170	Nut, 5/8-11 Non-Lock PLT
18	33278	Bolt, 5/8-11 x 3-1/4" G5 PLT	37	33244	Bolt, 5/8-11 x 2" G5 PLT
19	D1171	Washer, 5/8" Lock PLT	38	33026	Washer, 5/8" Flat PLT
			39	D1143	Washer, 1/2" Lock PLT
			40	3267A1	Sheave, 5.6" P.D. 3B

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