

SAFETY FIRST



FARM AND INDUSTRIAL EQUIPMENT INSTITUTE SAFETY ALERT SYMBOL.
This symbol is used preceding all **CAUTION** (a general safety reminder), **WARNING** (denotes a potential hazard) and **DANGER** (denotes a potential injury) notices!

Most farm accidents, like industrial, home and highway accidents, are caused by the failure of some individuals to observe simple and fundamental safety rules or precautions. For this reason farm accidents, just as other types of accidents, can be prevented by recognizing the causes of accidents and doing something about them before an accident occurs.

Regardless of the care used in the design and construction of farm equipment, there are many points that cannot be completely safeguarded without interfering with accessibility and efficient operation.








A careful operator is the best insurance against an accident.

The complete observance of one simple rule would prevent many thousand serious injuries each year. That rule is **“NEVER ATTEMPT TO CLEAN, OIL OR ADJUST A MACHINE WHILE IN MOTION.”**

NATIONAL SAFETY COUNCIL

BEFORE ATTEMPTING TO OPERATE YOUR NEW BUNK SWEEPER BE SURE TO READ THIS OWNERS MANUAL AND FAMILIARIZE YOURSELF WITH THE MACHINE!! OBSERVE THE FOLLOWING PRECAUTIONS FOR SAFE OPERATION OF THIS MACHINE!!

SAFETY TIPS

-  **Keep Hands, Feet and Clothing away from PTO Shaft!**
-  **DO NOT climb on or enter machine while in operation**
-  **DO NOT make high speed maneuvers with the machine**
-  **Disengage PTO and remove key before servicing**
-  **Keep ALL Shields in place**
-  **DO NOT allow riders on outside of vehicle**
-  **DO NOT attempt to clean, oil or adjust machine while in motion**



INTRODUCTION

Through years of research and development Mohrlang Manufacturing has designed this bunk sweeper to give superb high speed sweeping and cleaning of bunks, with minimum maintenance.

Yet to maintain the maximum efficiency of the machine, it is important to know the operational characteristics and limitations. It is also important to recognize probable causes of problems, should they occur.

GENERAL SPECIFICATIONS

HYDRAULIC TANK

CAPACITY maximum 40 GAL
..... operating 35 GAL

BRUSH REVOLUTIONS..... 318 RPM

WEIGHT 1610 LBS.

BEARINGS All bearings relubricable

DRIVE Roller Chain and Hardened Sprockets with Oil Bath
Fill to oil plug at bottom of box.

SAFETY REMINDERS

1. Never operate sweeper with persons near or riding on equipment.
2. Always keep guards in place.
3. Turn off tractor and put leg stands in place before working on any part of the bunk sweeper.
4. Stand clear of PTO and brushes while unit is operating. Materials being swept can travel far and at a high rate of speed, use caution while operating.
5. Keep all safety signs in place.
6. Stand clear of pinch points, such as hydraulic cylinders, turning parts and lifting mechanisms.
7. Always put hydraulics in neutral when parking and dismounting tractor.
8. Release hydraulic pressure when disconnecting any of the hydraulic hoses.

INSTALLATION

1. Attach bunk sweeper to the tractor three point hitch. For ease of hook-up a category II or III quick hitch is recommended. After hooking up to tractor raise all leg stands and secure them for transportation.
2. Attach PTO drive line to tractor PTO and hook-up hydraulic hoses to the remote outlets on the tractor.
3. Make sure oil is visible in sight gage on hydraulic tank at all times. If oil is not visible when machine is running STOP EQUIPMENT IMMEDIATELY AND FILL TANK. Keep oil clean and free of water at all times.

OPERATION

1. **Engaging the Sweeper:** Power is obtained from the PTO on the tractor. PTO control is usually a lever in the tractor cab and is generally an on/off device.



CAUTION: Avoid High Engine RPM engagement of the PTO to avoid drive train damage. Engagement speed should not exceed 1000 RPM.

2. Normal sweeper operation should be no more than 1000 rpm PTO speed.
3. Be sure to match the proper tumbler shaft to the tractor PTO (1000 rpm).



CAUTION: Keep tumbler shaft well lubricated so it can slide during operation to prevent damage to drive train.



Do not clean, adjust, or grease while sweeper is running.



Keep body and clothing away from moving parts, whether or not sweeper is operating.



Keep all shields and doors in place, except for servicing.



FAILURE TO HEED MAY RESULT IN SERIOUS INJURY.

4. Brush head direction and boom height is adjusted by using the hydraulic levers in the tractor cab.
5. Brush should be turned into the feed pen slightly during operation to allow materials to be swept into the pen and not into the feed alley.
6. Brush should be placed into bunk so it is just touching the bunk floor and there should be a slight flex in the brush bristles.
7. Ground speed should be determined by feed bunk conditions. Brush speed should be at least run at a PTO speed of 1000 rpm.

TROUBLESHOOTING

Brush will not rotate.

Check PTO engagement.
Check chain drive.
Check pump and motor.

Bearing Failure.

Bearing failure is most generally caused
by lack of lubrication or over lubrication.

Hydraulic System Inoperative.

Check oil level.
Check valve bypass pressure.
Check tractor hydraulic system.

MAINTENANCE

CHAIN AND SPROCKETS:

Be sure to keep the oil and the inside of the oil bath as clean as possible. Dirt and grime in the oil bath will greatly reduce the life of the chain and sprockets.

BEARING REPLACEMENT:

When installing a new bearing, polish the shaft so it takes only light tapping to slide the bearing into position. **DO NOT FORCE BEARING ON WITH A LARGE HAMMER.** To do so will cause premature bearing failure.

LUBRICATION:

Refer to the lubrication chart for proper lubricant and intervals.

BRUSH REPLACEMENT:

To replace brushes, remove four bolts and slide outer wheel assembly off of the inner wheel assembly. Remove old brushes and install the first six brushes on the inner wheel assembly and then the last two brushes on the outer wheel assembly. Re-install the outer wheel assembly to the inner and tighten the four bolts down.

LUBRICATION

| ITEM | LUBRICANT | INTERVAL |
|------------------|------------------------|-------------------|
| All Bearings | All Purpose Gun Grease | 100 Hours |
| Hydraulic System | Hydraulic or ATF Oil | Check once a week |
| Tumbler Shaft | All Purpose Gun Grease | 100 Hours |
| Oil Bath Drive | 10w40 Oil | Check once a week |

850000L & 851000R

SWEEPER ASSEMBLY (left & right drive)

| ITEM NO. | PART NO. | DESCRIPTION | QTY. |
|----------|------------------------|-------------------------------|------|
| 1. | 8510000L | FRAME ASSEMBLY, LEFT | 1 |
| | 8510000R | FRAME ASSEMBLY, RIGHT | 1 |
| 2. | 85150000 | HYDRAULIC TANK ASSEMBLY | 1 |
| 3. | 85200000 | DRIVE ARM ASSEMBLY | 1 |
| 4. | 25TL12 | 2 1/2 X 12 HYDRAULIC CYLINDER | 1 |
| 5. | 40TL16 | 4 X 16 HYDRAULIC CYLINDER | 1 |
| 6. | 85140000 | LEG ASSEMBLY | 1 |
| | | HYDRAULIC TANK LEG ASSEMBLY | |
| 7. | | FRAME LEG ASSEMBLY | 1 |
| 8. | | DRIVE ARM LEG ASSEMBLY | 1 |
| 9. | 85300000 | DRIVE FRAME ASSEMBLY | 1 |
| 10. | 85304000 | STEERING SHAFT CAP | 1 |
| 11. | 1-8 HEX | 1" NUT | 1 |
| 12. | 01-100320PW21 | 32X10 ROTARY BRUSH WAFER | 16 |
| 13. | 85400000 | OUTER WHEEL ASSEMBLY | 2 |
| 14. | 1/2 X 2 1/4 BOLT | HEX HEAD BOLT | 8 |
| 15. | 85125000 | DRIVE ARM PIN ASBY. | 1 |
| 16. | 85122000 | BOTTOM HITCH PIN | 2 |
| 17. | 3/8-7/16X1 7/8 | HAIRPIN | 10 |
| 18. | 10649000 | CABLE PIN ATTACHMENT | 10 |
| 19. | 85119000 | LEG STAND PIN | 10 |
| 20. | 85123000 | TOP HITCH PIN | 1 |
| 21. | P5000-A-586-AD-NQ20-00 | PERMCO PUMP BI-ROTATIONAL | 1 |
| 22. | 104-1027-006 | HYDRAULIC MOTOR | 1 |
| 23. | 10519000 | LIFT BRACKET | 3 |

85150000

HYDRAULIC TANK ASSEMBLY (left & right drive)

| ITEM NO. | PART NO. | DESCRIPTION | QTY |
|-----------------|-----------------|--------------------|------------|
| 1. | 85151000 | TANK FRONT | 1 |
| 2. | 85152000 | TANK BACK | 1 |
| 3. | 85154000 | TANK MOUNT STRAP | 2 |
| 4. | 3/8 PLUG | 3/8" PLUG | 1 |
| 5. | 31061 | BREATHER CAP | 1 |
| 6. | B1559-1 | SIGHT GAGE | 1 |
| 7. | 60715000 | HANDLE OIL TANK | 2 |

8530000L

DRIVE FRAME ASSEMBLY (left & right drive)

| ITEM NO. | PART NO. | DESCRIPTION | QTY |
|----------|------------------|------------------------------|-----|
| 1. | 85301ASB | DRIVE FRAME SUB ASSEMBLY | 1 |
| 2. | 8531ASBY | MOTOR MOUNT PLATE ASSEMBLY | 1 |
| 3. | 85311ASB | OIL FILL PLATE ASSEMBLY | 1 |
| 4. | 85400000 | OUTER WHEEL ASSEMBLY | 2 |
| 5. | 85450000 | INNER WHEEL ASSEMBLY | 2 |
| 6. | RC60 CHAIN | 60 PITCH CHAIN, 40 1/2 LINKS | 1 |
| 7. | 60B14-1 1/4 | 1 1/4 BORE SPROCKET | 1 |
| 8. | 60B14 1 3/8 | 60B14 1 3/8, 5/16 KEY | 1 |
| 9. | 5/16 X 3/4 BOLT | 5/16 X 3/4 HEX BOLT | 4 |
| 10. | 5/16 LOCK | 5/16 LOCK WASHER | 4 |
| 11. | 7/16 FLAT | 7/16 FLAT WASHER | 4 |
| 12. | 7/16 LOCK | 7/16 LOCK WASHER | 4 |
| 13. | 7/16 NUT | 7/16 HEX NUT | 4 |
| 14. | 1/2 FLAT | 1/2 WASHER | 8 |
| 15. | 1/2 LOCK | 1/2 LOCK WASHER | 8 |
| 16. | 1/2 X 2 1/4 BOLT | 1/2 X 2 1/4 HEX BOLT | 8 |
| 17. | 85322000 | SPACER #1, OIL FILL SIDE | 1 |
| 18. | 85321000 | SPACER #2, MOTOR SIDE | 1 |

85460000

BRUSH ASSEMBLY (left & right drive)

| ITEM NO. | PART NO. | DESCRIPTION | QTY |
|-----------------|------------------|----------------------|------------|
| 1. | 02-M100320PWC | BRUSHES | 16 |
| 2. | 1/2 FLAT | 1/2 FLAT WASHER | 8 |
| 3. | 1/2 LOCK | 1/2 LOCK WASHER | 8 |
| 4. | 1/2 X 2 1/4 BOLT | 1/2 X 2 1/4 BOLT | 8 |
| 5. | 85400000 | OUTER WHEEL ASSEMBLY | 2 |
| 6. | 85450000 | INNER WHEEL ASSEMBLY | 2 |
| 7. | 85461000 | 1 1/2" WHEEL SPACER | 2 |
| 8. | SH 1 3/8 | 1 3/8 BUSHING | 2 |



85470000

HYDRAULIC ASSEMBLY

BUNK SWEEPER

| ITEM NO. | PART NO. | DESCRIPTION | QTY. |
|----------|------------------------|----------------------------------|------|
| 1. | 1 1/2 EL | HYDRAULIC ELBOW 1 1/2" 90 DEGREE | 1 |
| 2. | 1 1/2 HD NIPP | 1 1/2 HD NIPP | 1 |
| 3. | 1 1/2 ST EL | ELBOW ST 90 DEGREE 1 1/2" | 1 |
| 4. | 1 1/2 SUCTION | HYDRAULIC SUCTION HOSE 100 | 2.4 |
| 5. | 1 1/2X4 NIPP | HYDRAULIC NIPPLE 1 1/2 X 4" | 1 |
| 6. | 1 1/4X3/4 BUSH | BUSHING HEX 1 1/4 X 3/4" | 1 |
| 7. | 1 EL | ELBOW 90 DEGREE 1" | 1 |
| 8. | 1 ST EL | ELBOW STREET 1" 90 DEGREE | 1 |
| 9. | 1 TEE | TEE PIPE 1" | 1 |
| 10. | 1/2X3/8 BUSH | HYDRAULIC HEX BUSHING 1/2 X 3/8 | 2 |
| 11. | 1X3/4 BUSH | HYDRAULIC HEX BUSHING 1 3/4 | 5 |
| 12. | P5000-A-586-AD-NQ20-00 | PERMCO PUMP BI-ROTATIONAL | 1 |
| 13. | 25TL12 | HYDRAULIC CYLINDER 2 1/2 X 12 | 1 |
| 14. | 3/4 CL NIPP | HYDRAULIC CLOSE NIPPLE 3/4 | 5 |
| 15. | 40TL16 | HYDRAULIC CYLINDER 4 X 16 | 1 |
| 16. | 85471000 | HOSE 3/8 X 264" | 1 |
| 17. | 85472000 | HOSE 3/8 X 252" | 1 |
| 18. | 85473000 | HOSE 3/8 X 132" | 2 |
| 19. | 85474000 | HOSE 3/4 X 111" | 1 |
| 20. | 85475000 | HOSE 3/4 X 210" | 2 |
| 21. | 85476000 | HOSE 3/4 X 72" | 1 |
| 22. | 85477000 | HOSE 3/4 X 48" QDC | 1 |
| 23. | 85479000 | 1 X 5 NIPPLE | 1 |
| 24. | 86311 | HYDRAULIC 12MP-12FPX | 4 |
| 25. | 86319 | HYDRAULIC 6MP-6FPX | 4 |
| 26. | 86972 | HYDRAULIC 10MB-12FPX | 2 |
| 27. | FD45-1002-12-12 | QUICK DISCONNECT MALE HALF | 2 |
| 28. | FD45-1003-12-12 | QUICK DISCONNECT FEMALE HALF | 2 |
| 29. | FSP107-1LDNN | HYDRAULIC FILTER | 1 |
| 30. | HBV 150 | 1 1/2 BALL VALVE | 1 |
| 31. | HCN150 | 1 1/2" PIPE TO HOSE ADAPTER | 2 |
| 32. | K-RPL-100 | K100 VALVE BODY | 1 |
| 33. | LI-20-20P-30 | FLANGE 1 1/4" PIPE | 1 |

34. LI-24-24P-30 HYD. FLANGE 1 1/2" PIPE

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85480000

DRIVELINE ASSEMBLY

BUNK SWEEPER

| ITEM NO. | PART NO. | DESCRIPTION | QTY. |
|----------|----------|---|------|
| 1. | 102-1421 | 1 3/8 21 SPLINE 14 SERIES QUICK CONNECT | 1 |
| 2. | 14011448 | 140 SERIES DRIVELINE | 1 |
| 3. | 200-1400 | 14 SERIES CROSS & BRG KIT | 2 |
| 4. | 800-1420 | 14 SERIES 1 1/4 RD YOKE | 1 |

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