

STANDARD SNOWBLOWER

Operators & Parts Manual



SAFETY PRECAUTIONS

1. Be sure all exposed moving parts such as shafts and adapters are properly guarded and that all coupling devices are securely attached before applying power. Do not use unless all shields are in place.
2. Do not wear loose fitting clothing in the vicinity of any moving parts.
3. Do not exceed recommended ground speed, recommended PTO speed, or recommended horsepower for the unit which you are using.
4. Keep all persons, pets, and livestock away from unit when in use.
5. Do not turn discharge chute towards persons, pets, livestock, or buildings when blower is in operation.
6. Before working on, servicing, or making adjustments to equipment, disengage power, lower unit to ground level, shut off engine, make sure all moving parts have stopped and all pressure in the hydraulic system is relieved.

7. Do not attempt to remove any obstruction from discharge chute until PTO is disengaged and engine is shut off.
8. Do not stand on auger to service any part of blower, as auger may turn causing either, a serious fall; or, the blower fan to rotate, presenting a danger to fingers, hands, or arms in the chute assembly or blower housing.
9. Keep hands and arms away from cables and turner bar of hydraulic hood turner until engine is shut off.
10. Always look to the rear before backing up.
11. Be aware of the presence of people and objects that may be obscured from vision by blowing or drifted snow. Be certain that no children have tunneled into snowbanks which are to be removed. Never let children slide down snowbanks in the vicinity of an operating blower.



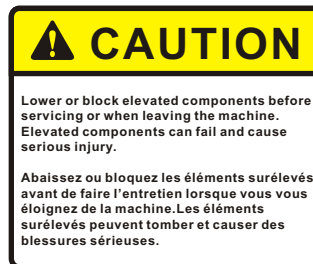
Colour: Red
 Location: Blower Side

Stones or other objects may be thrown great distances by the auger, especially at higher RPMs. Do not stand in front of the blower when it is in operation.

Any debris or stones which are swept into the fan can be thrown great distances. Do not allow any bystanders to stand in the path of the discharge chute.

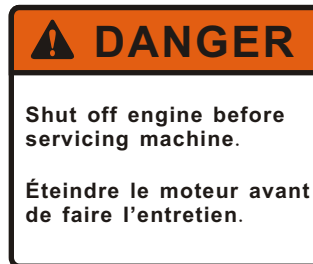
Shields are supplied for your protection. Do not remove shields and do not operate the machine unless all shields are in place.

Do not service, adjust, or repair, until the PTO has been disengaged, the motor shut off, the unit lowered to the ground, and all parts have stopped moving. Any moving part has the possibility of entangling the operator or his clothing, and causing serious injury, dismemberment, or death.



Colour: Yellow
 Location: Blower Back

Do not service, adjust or repair any equipment attached to the three-point hitch hydraulics, without lowering the unit to the ground. If work must be performed underneath the unit, block the unit in a raised position.



Colour: Orange
 Location: Blower Back

Do not attempt any servicing of the blower while the tractor engine is running. If the tractor PTO is accidentally engaged the serviceman could become entangled in moving parts and be seriously injured or killed. Be certain. Be safe. Shut off the engine.



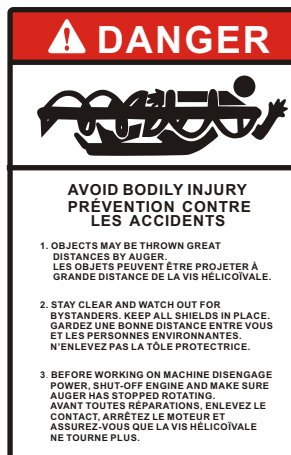
Colour: Red
 Location: PTO Shaft

Never go near any moving parts. Because tractor PTOs may be accidentally engaged, never attempt to lubricate, repair or couple PTO unless tractor engine is shut off. Do not remove shields. Be sure that PTO shield turns freely and independently of the driveline. Do not operate unless all shields are in place. Be sure that PTO shaft is attached securely at both ends before operating.



Colour: Yellow
 Location: Blower Back

Every effort is made to ensure that a well constructed high quality product leaves the manufacturer. Again the dealer inspects and services each unit before it leaves his lot. To keep your blower in good operating condition, please inspect and retighten as necessary any loose nuts or studs after a half hour break in period. Thereafter periodic checks will ensure that your blower remains in top working condition.



Colour: Red
 Location: Blower Side



Colour: Orange
 Location: Blower Side

PRE-SALE SERVICE AND SETUP OF BLOWERS

1. Turn hood to point directly behind blower.(PTO side)
2. Lift hood assembly off and spread a light coat of grease on outside of blower mainframe pipe.
3. Replace hood assembly.
4. Install hood turner as per instructions.
5. Grease shear assembly, auger bearings, and hydraulic hood turner if installed.
6. Check oil level in gearbox.
7. Check all bolts for tightness.
8. Check auger drive chain tension and alignment. Adjust if necessary.
9. Grease PTO universal joints, shield retaining collars, and inner tube of PTO.

OPERATION

1. When attaching the blower make certain all guards are in place.
2. Ensure that the fan and auger rotate freely before connecting PTO shaft to the tractor.
3. Use proper pins and ensure that all connections are secure.
4. Engage the PTO at low engine RPM and slowly increase speed to operating level. Operating speed will vary with snow, weather, and ground conditions.
5. Adjust the top link of the three-point hitch to match the ground and snow conditions. Increasing the length will cause the blower to cut deeper into compacted snow, but may also cause the blower to scrape gravel or stones into the fan, which can be a danger to nearby persons, pets, livestock or buildings. Decreasing the length of the top link causes the blower to ride back on the skid shoes, raising the cutting height, thereby reducing the possibility of scraping gravel or stones into the blower.
6. Adjust the deflector for the distance of throw required. Moving the adjusting bar, to shorten the distance between the pins increases the distance thrown.
7. Be aware of the presence of people and objects that may be obscured from vision by blowing or drifted snow. Be certain that no children have tunnelled into snowbanks which are to be removed. Never let children slide down snowbank in the vicinity of an operating blower.

SERVICE

1. Before servicing or adjusting, disengage the PTO, lower the unit to the ground, and shut off engine.
2. To prevent freezing of hood or other moving parts apply a solution of antifreeze or light oil.
3. Check gearbox oil level on a regular basis. If oil level is low, use a good quality 80W-90 gear oil. Change oil after 50 hours during break-in period. Change after 700-750 hours or yearly.
4. Grease the shear assembly and hydraulic hood turner every five hours of operation.
5. Grease the auger bearings every ten hours of operation.
6. Check auger drive chain tension and alignment. Adjust if necessary.

INSTALLATION INSTRUCTIONS FOR SNOWBLOWER

FOR A BETTER P.T.O. SHAFT & GEARBOX OPERATION

A proper initial installation will give you years of satisfactory service on your equipment. Please read carefully following instructions which have been specially made to help you and make you satisfied with your purchase.

WARNING: Unfortunately, snowblowers will be faced with forgotten or hidden objects under the snow, such as: chain, tires, stones, pieces of wood, etc... In spite of all our efforts, machines are not built to resist all those conditions.

DANGER: TOO BIG TRACTOR

It is dangerous to use a tractor which is too big or too powerful. The tractor will always be able to overload the blower, even if the machine is already at maximum capacity. Tractor being very high, too large angles at P.T.O. universal joints will result, and life of universal joints will be shortened dramatically.

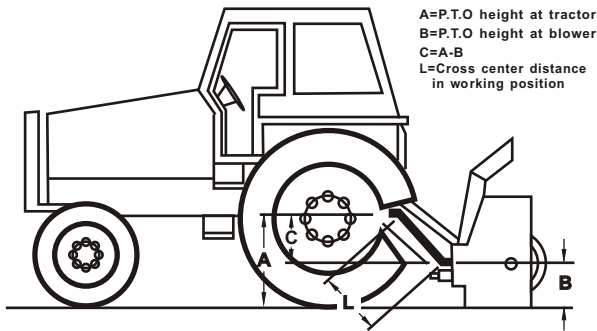
INSTALLATION INSTRUCTIONS FOR SNOWBLOWER-cont'd

P.T.O. SHAFT ANGLES

P.T.O. Shafts are made to transmit power with angles at universal joints. However, these angles should be kept to a minimum. Larger the angle, shorter the life of P.T.O. Take for example a snowblower sold for a tractor capacity of 60-70 H.P., Which would be attached to a 60 H.P. Tractor, operating at maximum capacity (60 H.P. Continuous).

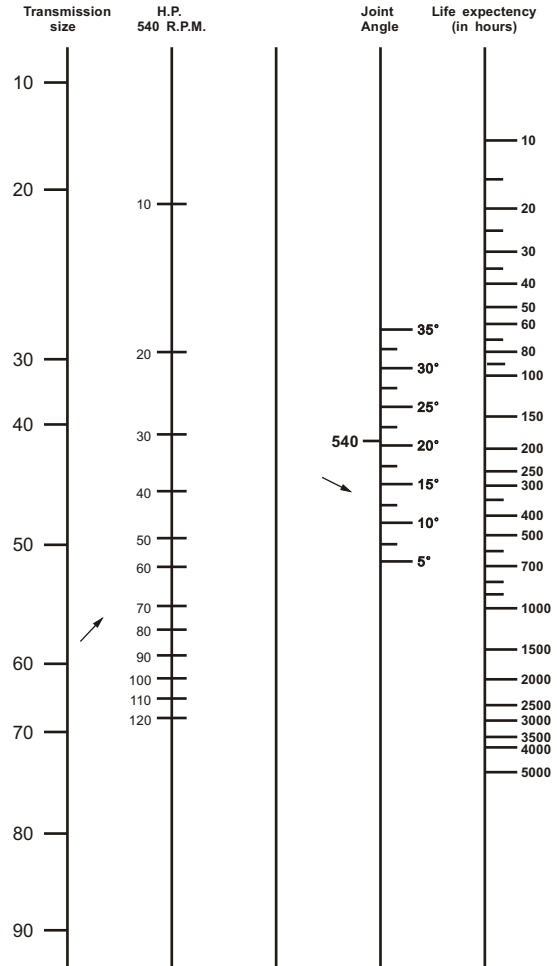
| H.P. | P.T.O. angles | Estimated life in hours |
|---------------|---------------|-------------------------|
| 60@540 RPM | 5° | 450 hours |
| Using #50 PTO | 10° | 195 hours |
| | 15° | 90 hours |
| | 20° | 40 hours |
| | 25° | 20 hours |

HOW TO DETERMINE P.T.O. ANGLE



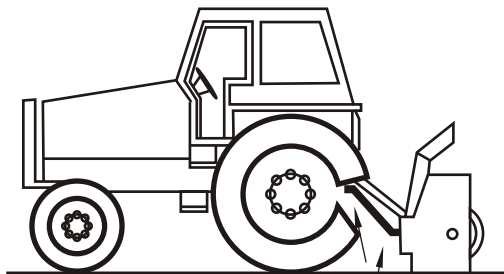
- 1) Lower blower on ground.
- 2) Take measures A, B and L
- 3) Subtract B of A (A-B=C)
- 4) Divide L by C (L/C=F)
- 5) Compare F Factor in table to find P.T.O. angle (interpolate, if necessary).

| F FACTOR | ANGLE |
|----------|-------|
| 6 | 10° |
| 3.75 | 15° |
| 2.75 | 20° |
| 2.15 | 25° |
| 1.75 | 30° |

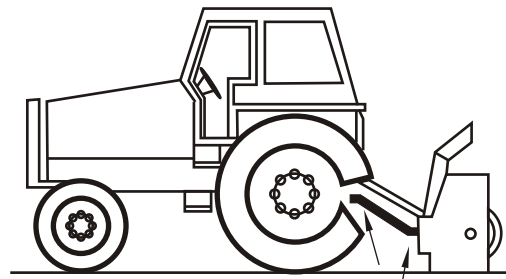


This table is valid only for 540 R.P.M.

Previous examples clearly demonstrate that universal joint angle is directly related with life of P.T.O. In order to reduce angle, it is necessary to increase the distance between snowblower and tractor



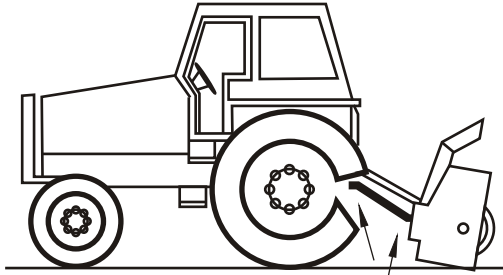
AVOID
Too Large Angles at P.T.O. Joints



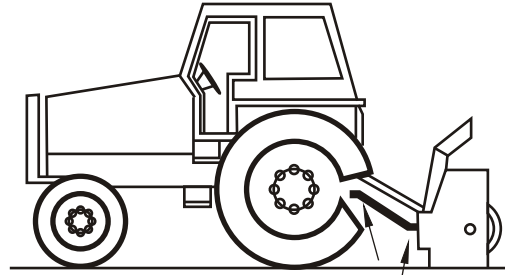
ACCEPTABLE
Reasonable Angles at P.T.O. Joints

If it is impossible to increase the distance between snowblower and tractor, in order to maintain a reasonable angle at P.T.O., It is recommended to use a large size of P.T.O., That is a greater capacity P.T.O. (Please refer to your dealer for more details).

For snowblowers of 100 H.P., an additional gearbox is also available that can be mounted on existing snowblower gearbox, which increased the input shaft height, reducing angle at P.T.O. Joints. This gearbox also has an input speed of 1000 R.P.M., Which greatly increases P.T.O. capacity.



AVOID
Non-Equal Angles at P.T.O. Joints



ACCEPTABLE
Equal Angles at P.T.O Joints

ANGLES AT EACH END OF P.T.O.

A popular habit is to change snowblower angle in order to obtain a better scraping effect. This practice can become harmful to the P.T.O., angle at each end being unequal. There will be a fan speed variation as well as a drastic increase of load on cross and bearings. To Avoid. It is recommended to keep tractor P.T.O. Shaft and snowblower input shaft always parallel.

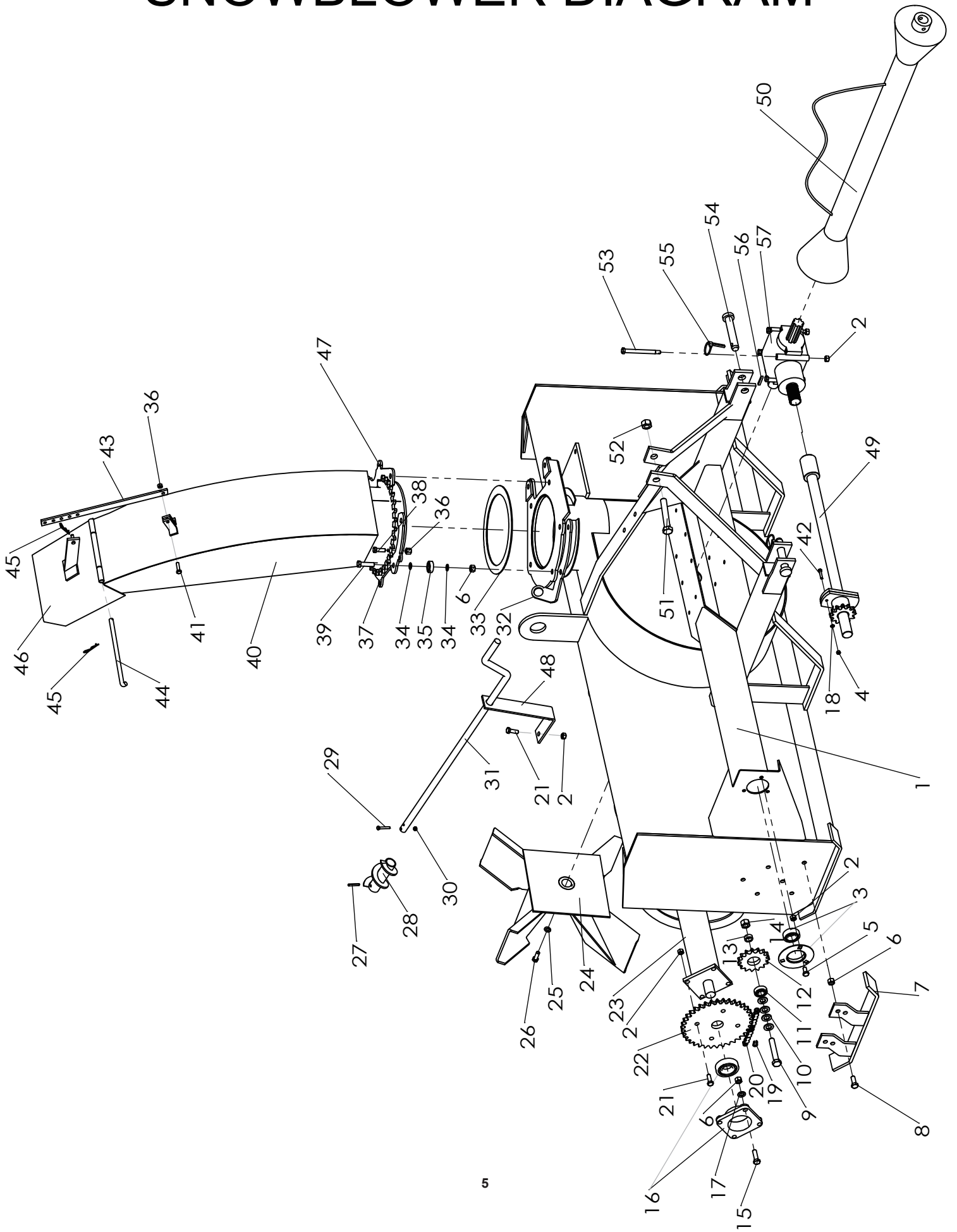
SHEAR BOLTS

Shear bolts are built to break under shocks on the fan or on the auger. However, under certain circumstances, this security is not adequate. Example: A sudden high impact shock on the fan may, in some cases, break the fan shaft without breaking the shear bolt.

If the shear bolt breaks, make sure to always replace it with a same category bolt(grade 8.8). It is necessary to always maintain this bolt very tight, in order to keep the efficiency of the shearing mechanism.

WARNING:The gearbox fan shafts are made with special alloy steel. Moreover, they are case hardened to increase capacity to shock load. These shafts cannot be broken under normal snow loads. However, undesirable objects may enter the fan and either bend or break gearbox shaft. It is understood that gearbox cannot be built to resist every possible overloads, and consequently, gearbox fan shafts will not be replaced under warranty. Therefore, the user of the snowblower must be very careful.

SNOWBLOWER DIAGRAM



SNOWBLOWER PARTS LIST

| Part# | Description | Qty. | Part# | Description | Qty. |
|-------|---------------------------------------|------|-------|--------------------------------------|------|
| 1 | Main Frame | 1 | 30 | Lock Nut M6 | 1 |
| 2 | Lock Nut M10 | 13 | 31 | Hand Crank | 1 |
| 3 | Bearing SAPF-206-20 c/w flange | 1 | 32 | Mounting Plate For Crank Handle | 1 |
| 4 | Nut M6 | 1 | 33 | Nylon Washer | 1 |
| 5 | Bolt M10x20 | 3 | 34 | Special Washer Ø12x0.2 | 10 |
| 6 | Lock Nut M12 | 17 | 35 | Bearing 6202 | 5 |
| 7 | Skid Plate | 2 | 36 | Lock Nut M8 | 3 |
| 8 | Bolt M12x30 | 4 | 37 | Mounting Plate For Chute | 1 |
| 9 | Bolt M16x90 | 1 | 38 | Lock Bolt | 2 |
| 10 | Washer 16 | 4 | 39 | Bolt M12x45 | 5 |
| 11 | Bearing 6203-2RS.5/8 | 1 | 40 | Chute(W/O Deflector) | 1 |
| 12 | Idler Sprocket | 1 | 41 | Bolt M8x30 | 1 |
| 13 | Spacer | 1 | 42 | Bolt M6x30 | 1 |
| 14 | Lock Nut M16 | 1 | 43 | Adjusting Arm | 1 |
| 15 | Bolt M12x40 | 8 | 44 | Deflector Hinge Pin | 1 |
| 16 | Bearing HCFS207-23 C/W Cast Flange | 2 | 45 | Cotter Pin Ø2 | 2 |
| 17 | Washer 12 | 8 | 46 | Deflector | 1 |
| 18 | Lock Washer 6 | 1 | 47 | Lock Plate | 1 |
| 19 | Connector Link #60 | 1 | 48 | Mounting Bracket For Crank Handle | 1 |
| 20 | Roller Chain #60(56-1/2") | 1 | 49 | Cross Shaft | 1 |
| 21 | Bolt M10x30 | 6 | 50 | PTO | 1 |
| 22 | Auger Drive Sprocket | 1 | 51 | Bolt M18x110 | 1 |
| 23 | Auger | 1 | 52 | Lock Nut M18 | 1 |
| 24 | Fan | 1 | 53 | Bolt M10x130 | 4 |
| 25 | Flat Washer 3/8" | 1 | 54 | Hitch Pin Ø22x120 | 2 |
| 26 | Bolt 3/8"x1-1/4" | 1 | 55 | Lock Pin Ø8 | 2 |
| 27 | Lock Pin 6x40 | 1 | 56 | Keystock 1/4 sq.x 1-1/2 | 1 |
| 28 | Turning Screw | 1 | 57 | Gearbox | 1 |
| 29 | Bolt M6x40 | 1 | | | |