

# Operator's/Parts Manual

706/1006  
Seed Box Agitator

# Great Plains

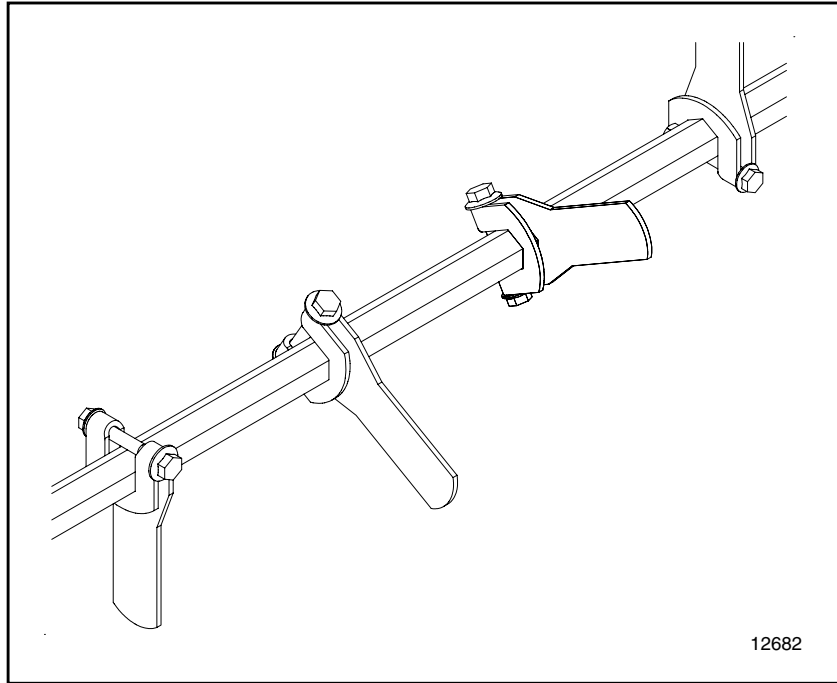
Manufacturing, Inc.

P.O. Box 5060 • Salina, Kansas 67402-5060



Read the Operator's manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

# Great Plains



*Cover illustration may show optional equipment not supplied with standard unit.*

## General Information

### Important Notice

Great Plains Manufacturing, Inc. provides this publication "as is" without warranty of any kind, either expressed or implied, while every precaution has been taken in the preparation of this manual, Great Plains Manufacturing, Inc. assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. Great Plains Manufacturing, Inc. reserves the right to revise and improve its products as it sees fit. This publication describes the state of this product at the time

of its publication, and may not reflect the product at all times in the future.

Printed in the United States of America.

For your convenience, record the serial and model number from your Drill, and the date-of-purchase of the Seed Box Agitator in the Owner's Information area below. Have this information handy when calling a Great Plains Authorized Dealer.

**This Seed Box Agitator Attachment Operator's Manual applies to the Drills listed below:**

**-706/1006 End Wheel No-Till Drill**

### Owner's Information

Name: \_\_\_\_\_

Serial Number \_\_\_\_\_

Address \_\_\_\_\_

Model Number \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Date Purchased \_\_\_\_\_

Phone \_\_\_\_\_

Name of Dealership \_\_\_\_\_

Dealer's Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

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## Using this Manual

For your safety and to help in developing a better understanding of your equipment we highly recommend that you read the operator sections of this manual. Reading these sections not only provides valuable training but also familiarizes you with helpful information and its lo-

cation. The parts sections are for reference only and don't require cover to cover reading. After reviewing your manual store it in a dry, easily accessible location for future reference.

## Introduction

This manual has been prepared to instruct you in the safe and efficient operation of your Seed Box Agitator. Read and follow all instructions and safety precautions carefully.

The parts on your Seed Box Agitator have been specially designed and should only be replaced with genuine Great Plains parts. Therefore, should you require replacement parts go to your Great Plains Dealer.

The right hand and left hand as used throughout this manual is determined by facing in the direction the machine will travel when in use unless otherwise stated.

### Serial Number

The serial number plate is located on the front of the drill frame. It is suggested that the serial number and purchase date also be recorded for your convenience in the space provided at the beginning of this manual.

The serial number provides important information about your attachment and may be required to obtain the correct replacement part. Always use the serial number and model number when sending correspondence or when ordering parts from your Great Plains Dealer.



The SAFETY ALERT SYMBOL indicates that there is a potential hazard to personal safety involved and extra safety precautions must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment; hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

**Watch for the following safety notations through-out your Operators Manual:**

### **DANGER!**

*Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.*

### **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. It may also be used to alert against unsafe practices.*

NOTE: Indicates a special point of information which requires your attention.

## Description of the Seed Box Agitator

The Seed Box Agitator is an option which can be ordered to fit on the 706/1006 Great Plains drill.

The Seed Box Agitator is designed to stir the seed directly above the metering cups. It is intended to cut down on the "bridging" of light fluffy seeds, and help to separate individual soybeans that become sticky from inoculant. **The Seed Box Agitator will not guarantee consistent seeding of hard to meter seeds such as Brome Grass or "bin run" seed that contains crop residue.**

## Section 1 Safety Rules



Most accidents are the result of negligence and carelessness, usually caused by failure of the operator to follow simple but necessary safety precautions. The following safety precautions are suggested to help prevent such accidents. The safe operation of any machinery is a big concern to consumers and manufacturers. Your Drill has been designed with many built-in safety features. However, no one should operate this product before carefully reading this Operators Manual.

### General Operation

1. *Never allow the attachment to be operated by anyone who is unfamiliar with the operation of all functions of the unit. All operators should read and thoroughly understand the instructions given in this manual prior to moving the unit.*
2. *Make sure safety rules are understood before operating machinery or tractor.*
3. *Never permit any persons other than the operator to ride on the tractor.*
4. *Never permit any persons to ride on or stand near the drill while it is in operation.*
5. *Regulate your speed to the field conditions, maintaining complete control at all times.*
6. *After repairing or adjusting, make sure all tools and parts are removed from the implement before attempting to operate it.*
7. *Do not grease or oil machine while it is in operation.*
8. *Loose fitting clothing should not be worn. Loose clothing may get caught in moving parts.*
9. *Never dismount from a moving tractor.*
10. *Do not leave the tractor or the implement unattended with the engine running.*
11. *Do not stand between the tractor and the implement during hitching.*
12. *Detach and store implements in an area where children normally do not play. Stabilize implements by using suitable supports and block wheels.*
13. *Do not store tools or seed bags in the drill box. Never reach into the box of a moving drill. Clothing, hands, or any foreign object may be pulled into the box causing serious injury or death.*

## Section 2 Assembly Instructions & Set-Up

### Torque Values Chart for UNC Threads

Bolt head identification marks are as per grade.

NOTE: Manufacturing marks will vary.

Bolt Size		Grade 2				Grade 5				Grade 8*			
		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters		Foot Pounds		Newton-Meters	
inches	mm	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
1/4"	6.35	5	6	6.8	8.13	9	11	12.2	14.9	12	15	16.3	20.3
5/16"	7.94	10	12	13.6	16.3	17	20.5	23.1	27.8	24	29	32.5	39.3
3/8"	9.53	20	23	27.1	31.2	35	42	47.5	57.0	45	54	61.0	73.2
7/16"	11.11	30	35	40.7	47.4	54	64	73.2	86.8	70	84	94.9	113.9
1/2"	12.70	45	52	61.0	70.5	80	96	108.5	130.2	110	132	149.2	179.0
9/16"	14.29	65	75	88.1	101.6	110	132	149.2	179.0	160	192	217.0	260.4
5/8"	15.88	95	105	128.7	142.3	150	180	203.4	244.1	220	254	298.3	358.0
3/4"	19.05	150	185	203.3	250.7	270	324	366.1	439.3	380	456	515.3	618.3
7/8"	22.23	160	200	216.8	271.0	400	480	542.4	650.9	600	720	813.6	976.3
1"	25.40	250	300	338.8	406.5	580	596	786.5	943.8	900	1080	1220.4	1464.5
1 1/8"	25.58					800	880	1084.8	1193.3	1280	1440	1735.7	1952.6
1 1/4"	31.75					1120	1240	1518.7	1681.4	1820	2000	2467.9	2712.0
1 3/8"	34.93					1460	1680	1979.8	2278.1	2380	2720	3227.3	3688.3
1 1/2"	38.10					1940	2200	2630.6	2983.2	3160	3560	4285.0	4827.4

NOTE: Torque requirements listed above do not apply to self-locking nuts. For self-locking nuts increase the torque requirements listed by 15%.

*Notes:*

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NOTE: While using the following text to install your Agitator, you may need to refer back to the parts section of this manual for more details and for positive identification of related items not mentioned in these instructions.

If your drill is equipped with either a Small Seeds or Fertilizer Attachment, a majority of the drive system is already in place. If this is the case, you can skip the following "Drive Installation" and move on to "Agitator Shaft Installation" on page 7.

## Drive Installation

Working at the front left side of the drill, Figure 2-1, remove the second and third front 1/2"-13 x 1 1/4" long bolts (#1) that join the box to the frame. Install the idlers (#5) 1/2"-13 x 3" long bolts (#20), 1/2" flat washer, 1/2" jam nut & 1/2"-13 flange lock nut (#23) to bracket (#2) as shown.

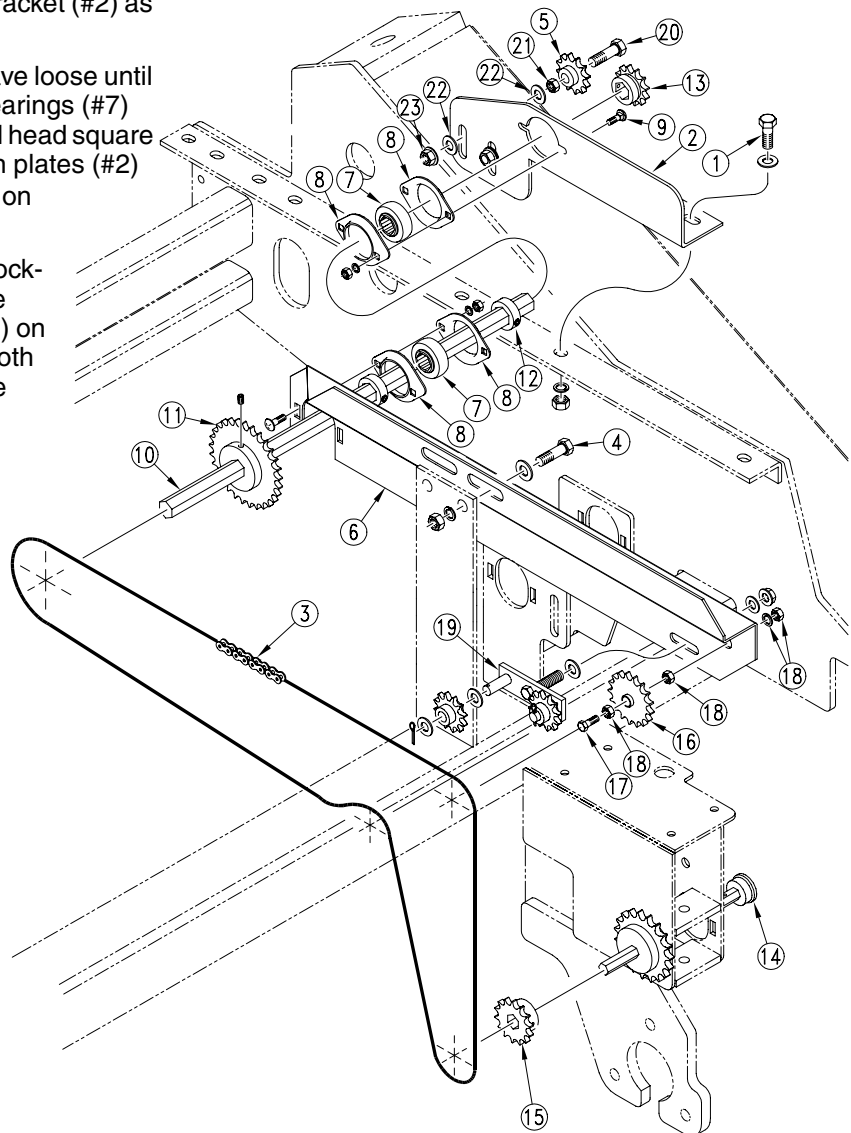
Install bracket (#2) and (#6) as shown. Leave loose until final assembly. Install the 7/8" hex bore bearings (#7) and flangettes (#8) with 5/16"-18 x 1" round head square neck bolts (#9) and hardware as shown on plates (#2) and (#6). Be careful to place the bearings on the side of the plate as illustrated.

Slide the 7/8" hex jackshaft and 7/8" hex locking collars (#12) on the inside between the bearings. Place the 22 tooth sprocket (#11) on the inboard side of the shaft and the 12 tooth sprocket (#13) on the out board side of the shaft.

Add 14 tooth sprocket (#15) to the gearbox driver shaft already installed on the drill.

Attach the 17 tooth idler sprocket (#16) with 5/8"-11 x 3 1/2" bolt (#17), with 5/8" jam nuts (#18) and 5/8" flat washer as shown on plate (#6).

Align the 7/8" hex shaft front to back and level with the drill. Tighten brackets (#2) and (#6). Align sprockets and idlers on plate (#6) and add chain (#3) and route as shown.



Front Auxiliary Drive  
Figure 2-1

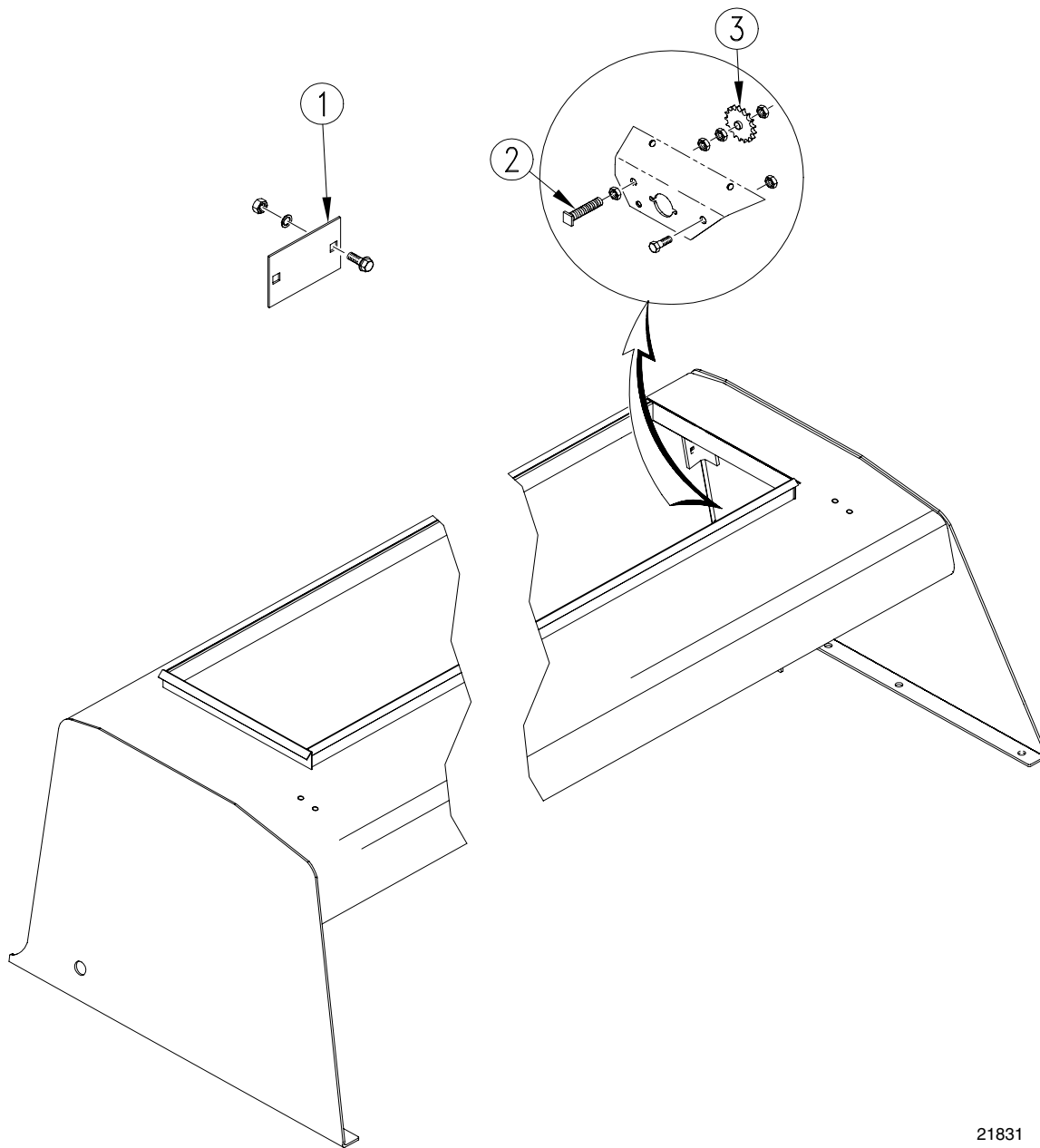
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## Agitator Shaft Installation

Referring to Figure 2-2, remove the bearing cutout covers (#1) saving the 5/16"-18 round head square neck bolts, 5/16" lock washers and 5/16" nuts for reuse in the same location.

If you have a small seeds drill without fertilizer, you will need to remove the current bolt and hardware from the rear hole and install the agitator idler bolt (#2), jam nut, flat washer, and 17 tooth sprocket (#3) into the rear hole of the false end panel on the left hand side of the seed box.



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Box Disassembly  
Figure 2-2

## Section 2 Assembly Instructions & Set-Up

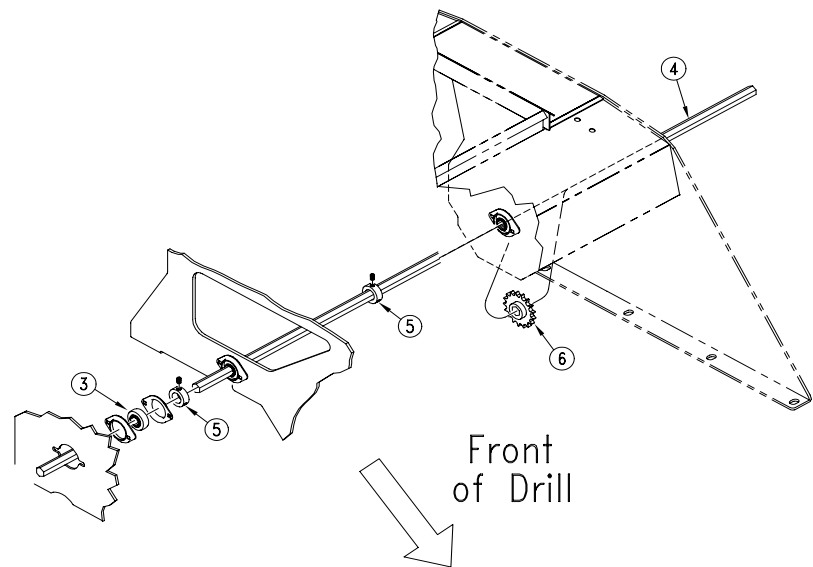
Referring to Figure 2-3. Install bearings and flangettes (#3) in the drill box at both ends and the center dividers using 5/16" x 1 1/4" carriage bolts, 5/16" lock washers and 5/16" nuts. Leave bolts loose. Slide the hex shaft (#4) in from the left-hand side of the drill box and into the first bearing. Slide one locking collar (#5) on the shaft. Continue to slide the shaft into the bearings. Slide the second locking collar (#5) on the shaft and slide the shaft into the last bearing. Leave the locking collars loose at this time. Position the bearings and flangettes (#3) so the shaft is level with the bottom of the seed box and tighten the bolts.

Slide the shaft in until the left end is between the box end and the bearing mount. Allow enough room to install the drive sprocket.

Install the 17-tooth drive sprocket (#6) on the left end of the shaft with the locking hub facing in. Position the sprocket so it aligns with the 12 tooth sprocket (#6) on the 7/8" hex shaft. Secure it in place by tightening the set screws.

Slide the shaft in or out until the drive sprocket lines up with the idler sprocket install on the previous page.

Hold shaft in place and slide the locking collars which were installed on the previous page are pushed up against the two outside bearings. Secure the locking collars in place by tightening the set screws.



**Shaft Installation  
Figure 2-3**

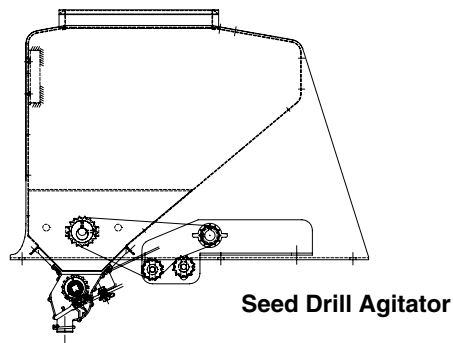
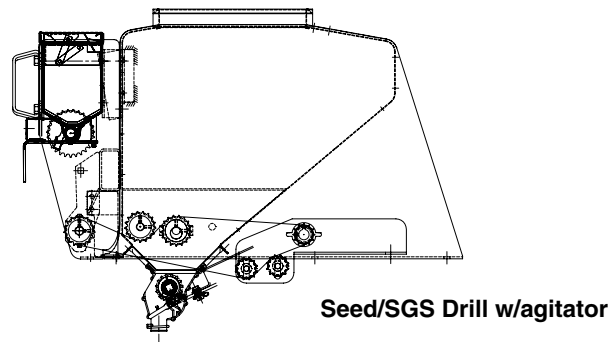
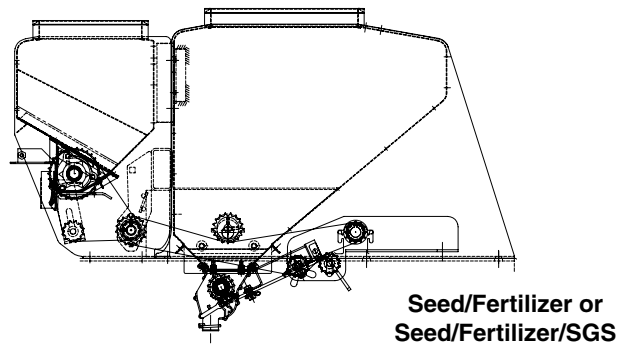
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## Final Drive Connection

Referring to Figure 2-4, thread the drive chains as shown, depending on which drill set up you have.

Align the sprockets, idlers, and chain. Secure all sprockets by setscrews and tighten all idlers to remove excessive chain slack.

When adding an agitator to a Fertilizer or Small Seeds Drill, the existing drive chain may need to be lengthened to accommodate the agitator. Included in the kit for Fertilizer or Small Seeds Drills, is additional chain, chain connector and an offset link to increase the chain length.



Chain Installation  
Figure 2-4

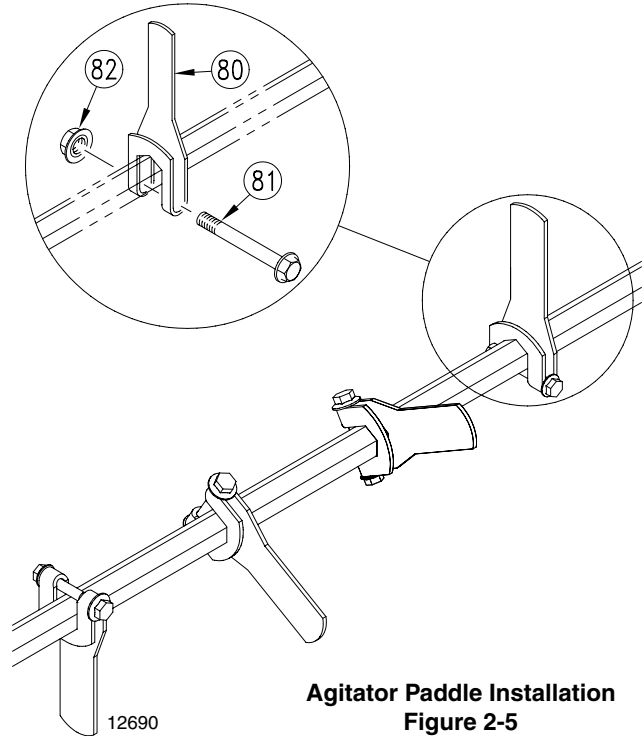
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## Agitator Paddle Installation

Refer to Figure 2-5. Slip one paddle (#80) over the hex shaft directly above a feed cup. Slip a 1/4"-20 x 2" long hex flange bolt (#81) through the paddle and secure with a 1/4" hex flange lock nut (#82). Before tightening a paddle or group of paddles, carefully rotate the drive system to make sure paddles do not hit the tray dividers.

After checking for interference, torque the paddle bolts to 9 ft. lbs. (108 in lbs.)

Install the next paddle over the next feeder cup. Index this paddle 1/6th of a turn by sliding it onto the next set of flats. Continue the installation, using the next set of flats for each paddle. The fully assembled shaft will have a built in spiral when finished.



Agitator Paddle Installation  
Figure 2-5

## Section 3 Maintenance & Lubrication

### Maintenance

Proper servicing and adjustment is the key to the long life of any farm implement. With careful and systematic inspection, you can avoid costly maintenance, time and repair.

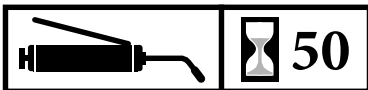
1. After using your attachment for several hours, check all bolts to be sure they are tight.
2. Adjust idlers to remove excess slack from chains. Clean and use chain lube on all roller chains as needed.

### Storage

1. Lubricate and adjust all roller chains.
2. Store the drill inside if possible for longer life.

### Lubrication

#### Lubrication Symbols



Lubrication is required every 50 hours of operation.



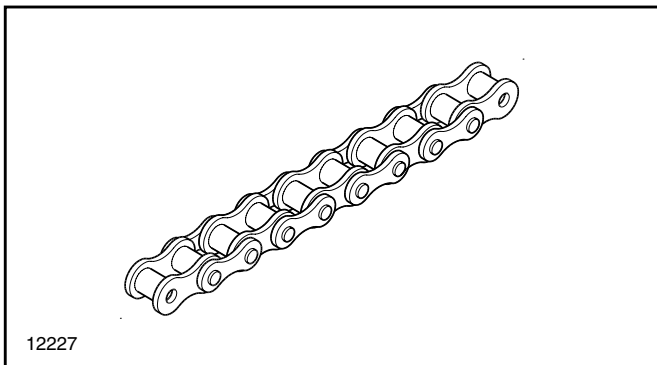
Lubrication is required every 10 hours of operation.



Use a multipurpose spray lube. Use as required. Do not over lubricate.



Lubrication is required.



#### Gauge Wheel to Agitator Roller Chains

(2 chains)

Type of Lubrication: Chain Lube

### Maintenance & Lubrication Record

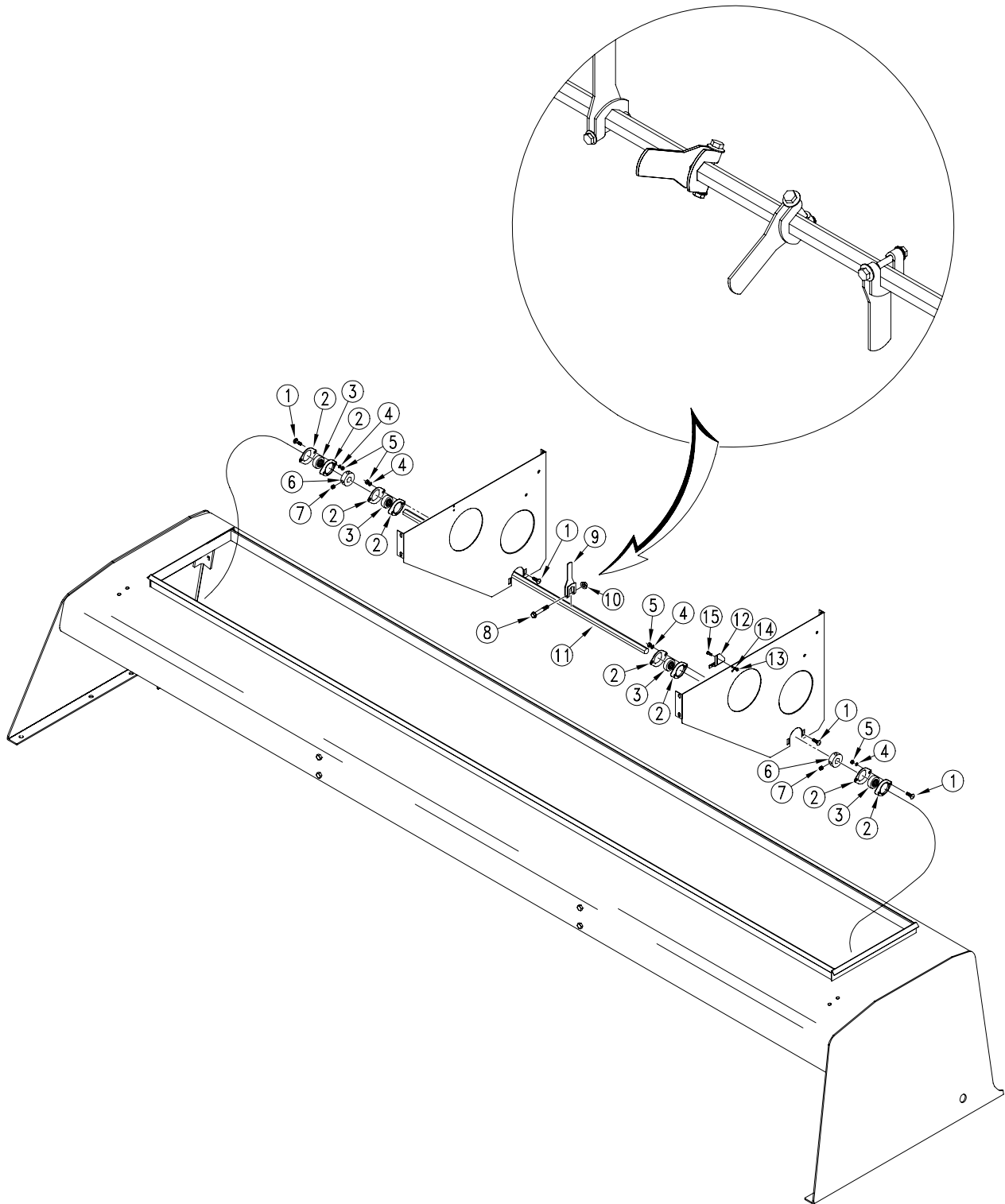
Item to be Serviced	When to Perform	Reference	Date

### Section 4 Troubleshooting

Problem	Solution
<b>Uneven metering</b>	Check for plugging in metering cup. Check to see if seed tubes are plugged. Reduce ground speed. Check for lumps or trash in the material. Screen these out if needed. Check all drive chains, sprockets, keys and pins. The agitator will not guarantee perfect seeding of trashy, wet or sticky material.
<b>Actual metering rate is different than desired</b>	Check tire pressure. Proper inflation is listed in the "Tire Inflation Chart", in the Operator's Manual of the 706/1006. Check gauge wheel size.
<b>Seed box not emptying evenly</b>	Some sections of the box have more metering cups causing that section to run out first.

*Notes:*

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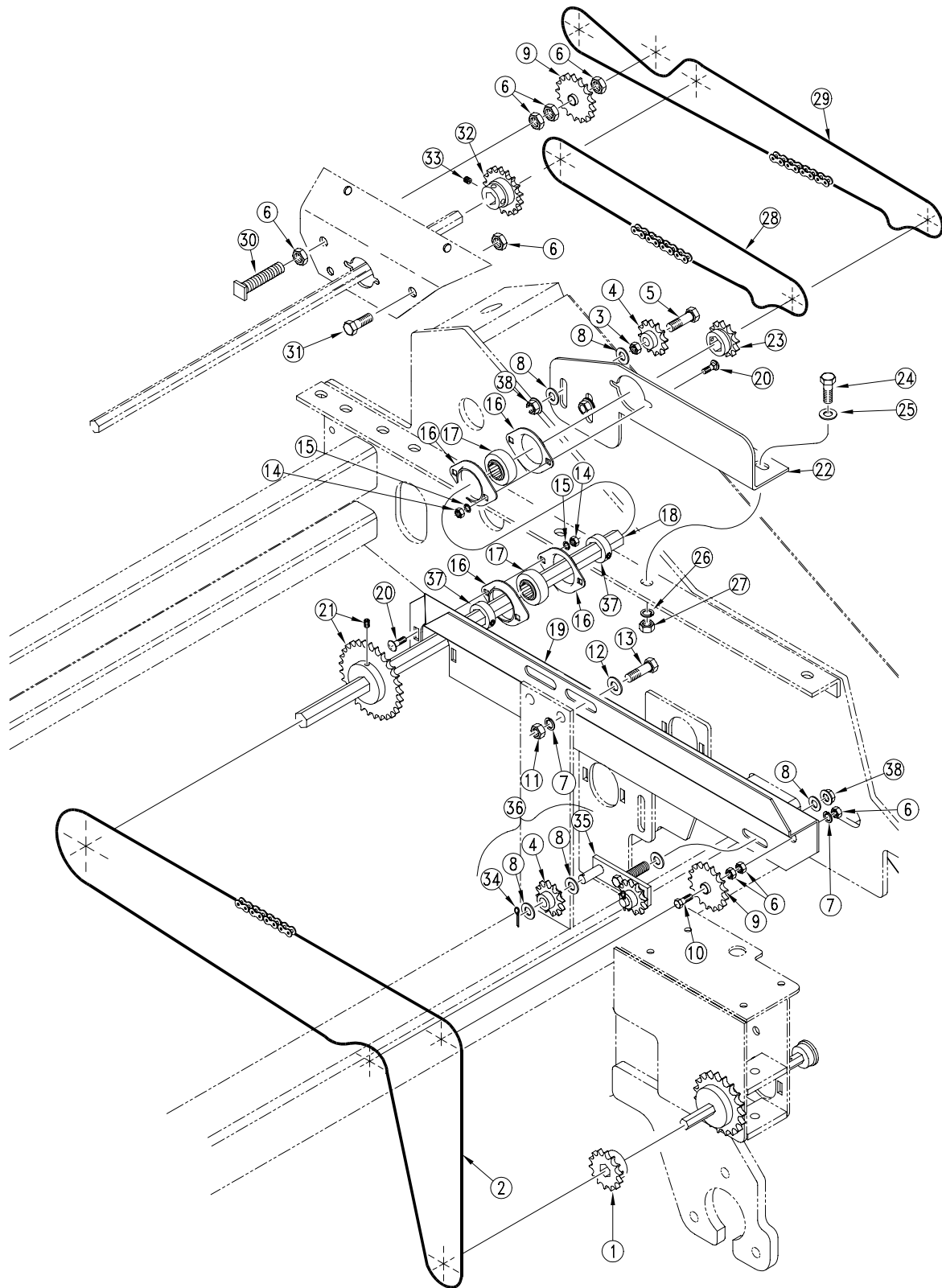


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## Section 5 Box Mount Assembly

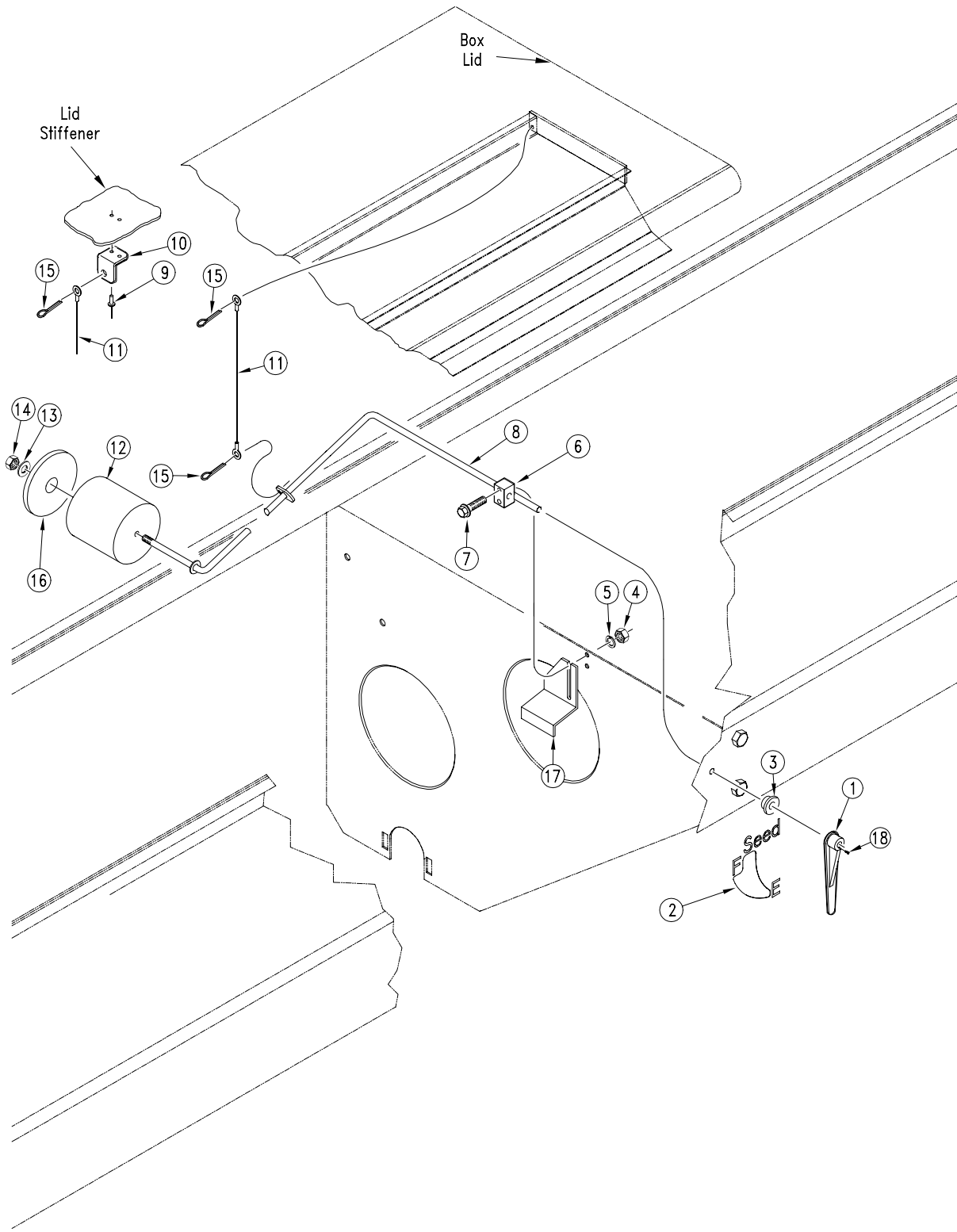
Ref.	Part No.	Part Description
1.	802-282C	RHSNB 5/16-18X1 GR5
2.	822-041C	FLANGETTE 47 MST
3.	822-128C	BEARING 3/4HEX B 47MM SPHER OD
4.	804-009C	WASHER LOCK SPRING 5/16 PLT
5.	803-008C	NUT HEX 5/16-18 PLT
6.	118-494D	LOCK COLLAR 3/4 HEX BORE
7.	801-035C	SCREW SET 5/16-18 SKT KP X 3/8
8.	802-448C	HFSS 1/4-20X2 GR5
9.	118-493D	AGITATOR PADDLE 3/4 HEX
10.	803-088C	NUT HEX LOCK 1/4-20 FLG
11.	118-646D	706 AGITATOR SHAFT
	118-647D	1006 AGITATOR SHAFT
12.	118-498D	SEED FLOAT DOWN FLOAT STOP
13.	803-001C	NUT HEX 10-24 PLT
14.	804-054C	WASHER LOCK #10
15.	801-096C	HFS 10-24 X 1 1/8 PLTD



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## Section 5 Drive Assembly

Ref.	Part No.	Part Description
1.	808-167C	SPKT 40B14 X 3/4 HEX BORE
2.	809-112C	CHAIN RL #40 X 132 PITCHES
3.	803-036C	NUT HEX JAM 1/2-13 PLT
4.	817-025C	NO. 40 12T IDLER SPKT.
5.	802-038C	HHCS 1/2-13X2 1/4 GR5
6.	803-023C	NUT HEX JAM 5/8-11 PLT
7.	804-022C	WASHER LOCK SPRING 5/8 PLT
8.	804-016C	WASHER FLAT 1/2 SAE PLT
9.	808-046C	SPKT 40A17 IDLER
10.	802-436C	HHCS 5/8-11X3 1/2 FTHD
11.	803-021C	NUT HEX 5/8-11 PLT
12.	804-019C	WASHER FLAT 5/8 USS PLT
13.	802-051C	HHCS 5/8-11X1 1/2 GR5
14.	803-008C	NUT HEX 5/16-18 PLT
15.	804-009C	WASHER LOCK SPRING 5/16 PLT
16.	822-032C	FLANGETTE 52 MST
17.	822-119C	BRG.7/8HEX BR 52MM SPHRICAL OD
18.	151-235D	1006 AUXILLARY DRIVE SHAFT
	151-236D	706 AUXILLARY DRIVE SHAFT
19.	133-085D	SGS DRIVE BRACKET
20.	802-282C	RHSNB 5/16-18X1 GR5
21.	808-194C	SPKT 40B22 7/8 HEX BORE & SS
22.	133-086D	SGS REAR DRIVE BRACKET
23.	808-143C	SPKT 40B12 7/8 HEX BORE W/SS
24.	802-091C	HHCS 1/2-13X1 1/2 GR5
25.	804-016C	WASHER FLAT 1/2 SAE PLT
26.	804-015C	WASHER LOCK SPRING 1/2 PLT
27.	803-020C	NUT HEX 1/2-13 PLT
28.	136-024D	CHAIN RL #40 103 PITCHES
29.	136-080D	CHAIN RL #40 105 PITCHES
30.	118-439H	AGITATOR IDLER BOLT 5/8-11
31.	802-050C	HHCS 5/8-11X1 1/4 GR5
32.	118-592H	SPKT 40B17X3/4 HEXBR&LCK COLLR
33.	801-035C	SCREW SET 5/16-18 SKT KP X 3/8
34.	805-064C	PIN COTTER 7/64 X 1 LONG
35.	152-258H	DRIVE IDLER WELDMENT
36.	152-267S	IDLER ASSEMBLY
37.	402-025S	LOCK COLLAR, 7/8 HEX W/ SET SC
38.	803-169C	NUT HEX FLG. LOCK 1/2-13 PLT.



## Section 5 Seed Level Indicator

Ref.	Part No.	Part Description
1.	817-350C	SEED LEVEL INDICATOR
2.	818-392C	DECAL SEED LEVEL, NOTCHED
3.	817-086C	SEED LEVEL BUSHING
4.	803-001C	NUT HEX 10-24 PLT
5.	804-054C	WASHER LOCK #10
6.	817-202C	SEED LEVEL ARM MOUNT
7.	801-085C	SCR RD HD 10-24X1 1/2 LG PLT
8.	118-474H	SEED LEVEL ARM, 6 3/4R. TAB
9.	800-101C	RIVET POP 1/8 .125 AD42BSLF
10.	197-091D	SEED LEVEL CHAIN BRACKET
11.	890-305C	CABLE 3/64 X 11 5/8 W/ EYELETS
12.	197-089D	FOAM FLOAT
13.	804-075C	WASHER FLAT 1/4 USS PLT
14.	803-003C	NUT HEX SS 1/4-20 NYLOCK
15.	805-067C	PIN COTTER 1/8 X 3/4
16.	197-096D	FOAM FLOAT WASHER
17.	118-498D	SEED FLOAT DOWN FLOAT STOP
18.	801-154C	SCR HEX HD SHT MET #8 X 1/2

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