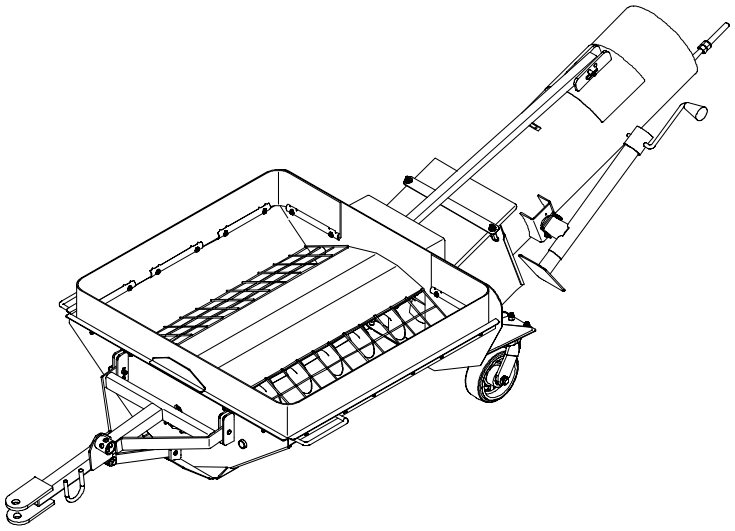
8”, 10” & 13” FLEX BIN HOPPER

OWNER’S & OPERATOR’S MANUAL

Effective November 10, 2017 **Publication No. 1035497**



The Flexible Bin Hopper is to be used *Only* on the following Top Drive Models.
8” x 31’ - 41’, 10” x 31’ - 41’ and 13” x 36’ Top Drives

IMPORTANT! For all 8”, 10” and 13” Top Drive augers with existing electric drive, when using the Flex Hopper it will be necessary to increase electric motor size by another 5 H.P. to maintain proper flight speed.

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POLICIES and PROCEDURES

Prices: Prices in effect at time of shipment will apply. Prices are subject to change without notice. All prices are F.O.B. Clay Center, Kansas. Orders shipped from locations other than Clay Center, Kansas will be subject to additional charges, such as back freight and/or additional freight.

Service Charge: A service charge will be assessed for all past due balances as permitted by state law not to exceed 1-1/2% per month.

Minimum Order: Processing and handling costs necessitate a minimum charge of $15.00 net on all orders.

Back Orders: Back orders will be shipped as they become available. Contact Hutchinson,Mayrath Customer Service for alternative shipping options or if cancellation is desired.

Damaged Goods: It is the consignee's responsibility to check all shipments thoroughly upon receipt of goods. If any damage is discovered, it must be noted on the freight bill of lading before signing. The consignee must make necessary claims against the respective freight line. All damage claims must be submitted within 30 days of delivery receipt.

Shortages: All shortages must be noted at time of delivery. Shortages must be noted on the freight bill of lading before signing. Hutchinson,Mayrath must be advised of all concealed shortages upon discovery. Once notified of concealed shortages Hutchinson,Mayrath will advise corrective action to be taken.

Return of Goods: All returns must be approved by Hutchinson,Mayrath prior to shipment. All return requests will be issued a return authorization number. NO RETURNS WILL BE ACCEPTED WITHOUT A RETURN AUTHORIZATION NUMBER AND PRIOR AUTHORIZATION FROM THE FACTORY. All returns must be shipped prepaid. A 15% restocking charge will be applied to all returned merchandise. Custom Products may not be returned for credit. Only current products in new and salable condition may be returned. No safety devices may be returned for credit.

Modifications: It is the policy of Hutchinson,Mayrath to improve its product whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring the obligation to make such changes, improvements and modifications on any equipment sold previously.

Limited Warranty: (a) For a period of (1) year after receipt of goods by the original consumer buyer, Hutchinson,Mayrath will supply free of charge replacement parts for parts that prove defective in workmanship or material. Defective parts must be returned freight prepaid to a specified Hutchinson,Mayrath location. Only Hutchinson,Mayrath original repair parts may be used for warranty repairs.
(b) This limited warranty does not extend to parts designed to wear in normal operation and be replaced periodically; or to damage caused by negligence, accident, abuse or improper installation or operation.
(c) GOODS NOT MANUFACTURED BY HUTCHINSON,MAYRATH CARRY ONLY THE MANUFACTURER'S WARRANTY.
(d) THIS UNDERTAKING IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

FAILURE TO FOLLOW THE INSTRUCTIONS CONTAINED IN THE OWNER'S & OPERATOR'S MANUALS AND THE ITEMS LISTED BELOW WILL RESULT IN THE VOIDING OF THIS LIMITED WARRANTY.

(1) Improper assembly, including failure to properly install all safety equipment.
(2) Improper installation.
(3) Unauthorized alternations of goods.
(4) Goods operated when obviously in need of repair.
(5) Use of unauthorized repair parts.
(6) Irresponsible operation.
(7) Used to handle materials other than free flowing, nonabrasive and dry materials, as intended.
(8) Damaged through abusive use or accident.

Limitation of Liability: BUYER AGREES THAT IN NO EVENT SHALL HUTCHINSON,MAYRATH HAVE LIABILITY FOR DIRECT DAMAGES IN EXCESS OF THE CONTRACT PRICE OF THE GOODS IN RESPECT OF WHICH CLAIM IS MADE. BUYER FURTHER AGREES THAT IN NO EVENT SHALL HUTCHINSON,MAYRATH ON ANY CLAIM OF ANY KIND HAVE LIABILITY FOR LOSS OF USE, LOSS OF PROFITS, OR FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

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SAFETY

GENERAL SAFETY STATEMENT

This manual was written with the safety of the operator and others who work with the equipment as our prime concern. The instructions presented will help the reader learn **SAFE** day to day work practices. We want you as our partner in safety.

It is your responsibility as an owner, operator or supervisor to know what specific safety requirements and precautions exist and to make these known to all other personnel working with the equipment or in the area, so that they too may safely perform their duties and avoid any potentially hazardous situations.

We suggest the implementation of a Safety Program for all personnel that includes, but is not limited to, the proper use of PPE (personal protective equipment), Fall Protection Systems and Lock Out-Tag Out procedures.

Please remember safety equipment provides important protection for persons around a grain handling system that is in operation. Be sure **ALL** safety shields and protection devices are installed and properly maintained. If any shields or guards are damaged or missing, contact your dealer to obtain the correct items.

Avoid any alterations of the equipment. Such alterations may create a dangerous situation where serious injury or death may occur.

SAFETY ALERT SYMBOL

The safety symbol shown is used throughout this manual to alert you to information about unsafe actions or situations, and will be followed by the word DANGER, WARNING, or CAUTION.

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 property damage.

Watch this symbol - it points out important safety precautions. It means - **ATTENTION! Become alert! Your safety and the safety of others is involved!** Read the message that follows the symbol when a warning is given, be alert to the possibility of personal injury or death.

BE ALERT!
YOUR SAFETY IS INVOLVED

Follow Safety Instructions

Carefully read all safety messages in this manual and safety signs on your machine. Check to ensure all Safety Decals are present and in good condition.

If a decal cannot easily be read for any reason, or has been painted over, replace the decal immediately. Safety decals are offered free of charge, and can be ordered through your Hutchinson/Mayrath dealer or directly from the factory.

Learn how to operate the machine and how to use controls properly.

Keep your machinery in proper working condition. Understand service procedures before doing work. Never lubricate, service or adjust machine while it is in operation.

Keep work area clean, dry and free from of all debris and tools which may cause accidental tripping or falling.

Read and Understand Manual

Understand Service Procedures

Keep Work Area Clean

Prepare for Emergencies

Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.

Keep a first-aid kit and fire extinguisher handy.

Be prepared if a fire starts

First Aid Equipment

Fire Extinguisher

Wear Proper PPE (Personal Protective Equipment)

Some materials can create flying debris when they are filed, cut or drilled. Safety glasses should be worn at all times to protect your eyes from such debris.

Hearing protection should be worn when operating power tools or other power equipment that could be harmful to your hearing.

Gloves should be worn to protect your hands from sharp metal and plastic edges, as well as providing protection from the handling of heavy objects.

Wear steel toe boots to protect your feet from falling debris.

Wear a hard hat to help protect your head from falling objects as well as from accidental bumping.

Use caution when working at elevations greater than four (4) feet *(1.22 m)* above the ground.

Use the appropriate fall protection equipment as set forth by OSHA guidelines and regulations.

A respirator may be needed to prevent breathing potentially toxic fumes and dust, especially when working within a grain bin or storage structure.

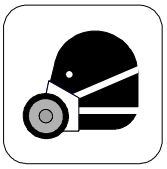
Eye & Hearing Protection

Gloves

Steel Toe Boots

Hard Hat

Fall Protection



Respirator

Operate Electric Motor(s) Properly

Do not operate electric motor equipped units until motor(s) are properly grounded.

Know how to "Shutdown and Lockout" the power source. Shutdown and lockout power source before performing any service, maintenance or adjustments to the unit.

Disconnect power on electrical driven units before resetting motor overloads.

Lockout / Tagout

Electric Shock Hazard

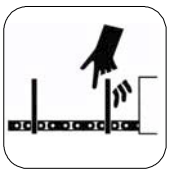
Stay Clear of Moving Parts

Keep all shields, covers and safety devices in place at all times.

Entanglement in moving chains, rotating impeller arms and sprockets will cause serious injury or death.

Wear close fitted clothing. Keep hands, feet and clothing away from moving parts.

Shutdown and lockout power source before making adjustments, cleaning or maintaining the equipment.



Entanglement Hazards

SAFETY

GRAIN BIN SAFETY

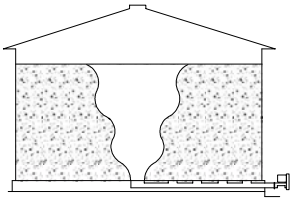
The Flex Hopper is designed to be used with specific Top Drive Models as an alternate means of transferring grain from the inlet end of the auger into grain bins or other storage structures. **Be aware of the dangers inherent in grain bins.**

Consult the grain bin manufacturer's manual for information on the proper loading and unloading of the bins, structural stress analysis, adequate venting and important safety information.

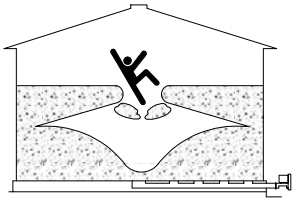
WARNING! Do Not enter the bin if the grain has "Bridged" or has not flowed normally out of the bin, See Example's 1 & 2. The grain may suddenly break loose and bury resulting in suffocation.

Do Not enter the bin unless all power driven equipment has been shut down and locked out.

Never enter the bin unless monitored by another person.



Example 1
(Abnormal Flow)

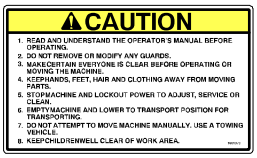


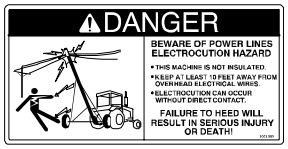
Example 2
("Bridging")

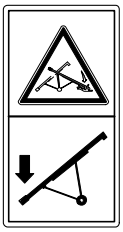
SAFETY DECALS

The following safety decals are located on the various Top Drive Augers that are compatible with the Flex Hopper (decals will vary depending on Top Drive model).

Check to ensure all Safety Decals are present and in good condition. If a decal cannot easily be read for any reason, or has been painted over, replace the decal immediately. Safety decals are offered free of charge, and can be ordered through your Hutchinson/Mayrath dealer or directly from the factory.







OPERATOR QUALIFICATIONS

WARNING

Anyone who will operate or work around this machine shall first read this manual! This manual must be delivered with the equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

Operation of this auger system shall be limited to competent and experienced persons. In addition, anyone who will operate or work around an auger must use good common sense. In order to be qualified, he/she must also know and meet all other requirements, such as:

1. Some regulations specify that no one under the age of 16 may operate power machinery. This includes this auger. It is your responsibility to know what these regulations are in your area or situation.
2. Current OSHA regulations state in part: "At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in safe operation and servicing of all equipment with which the employee is, or will be involved." *
3. Unqualified persons are to stay out of the work area.
4. A person who has not read and understood all operating and safety instructions is not qualified to operate this machine.
5. Persons operating, servicing or repairing equipment that requires above ground work shall be properly secured with the use of "fall protection" equipment as set forth by OSHA guidelines and regulations.

***Federal Occupational Safety & Health Standards for Agriculture Subpart D, Section 1928.57 (a) (6).**

SIGN OFF SHEET

As a requirement of OSHA, it is necessary for the employer to train the employee in the safe operation and safety procedures with this auger. We include this sign off sheet for your convenience and personal record keeping.

Training Sign-Off Sheet

Date	Employer Signature	Employee Signature

RIGHT AND LEFT SIDE DESIGNATION

When referencing the left, right, front or rear of the unit, it is always determined by standing at the inlet end of the auger and looking towards the discharge end.

GENERAL INFORMATION

MACHINE INSPECTION

After delivery of your new flex hopper and/or completion of assembly and before each use, inspection of the machine is mandatory. Use the assembly instructions in this manual as a reference to determine that the hopper is assembled properly. This inspection should include, but not be limited to:

1. Check to see that all guards listed in the assembly instructions are in place, secured and functional.
2. Check all safety signs on main auger and replace any that are worn, missing or illegible. The safety signs are listed in the back of the manual provided with the Top Drive Auger. Safety signs may be obtained from your dealer or ordered from the factory.
3. Are all fasteners tight?

Obtain any needed replacement parts from your dealer and install before using the machine.

DESIGNATED WORK AREA

WARNING! Under no circumstances should persons not involved in the operation be allowed to trespass into the work area.

It shall be the duty of all operator's to see that children and/or other persons stay out of the work areas. Trespassing into the work area by anyone not involved in the actual operation, or trespassing into a hazard area by anyone shall result in immediate shutdown by the operator.

It shall be the responsibility of the operator's to see that the work area has secure footing, is clean and free of all debris and tools which might cause accidental tripping and/or falling. It shall also be their responsibility to keep the work area clean and orderly during the operation.

Before starting the auger, a designated work area should be established and properly marked. Refer to the Owner's & Operator's Manual provided with the Top Drive Auger for detailed instructions.

In the event of an emergency, all operator's shall know how to shutdown and lockout the equipment (Refer to the "Shutdown & Lockout" sections in this manual).

OPERATING PROCEDURES

WARNING! During initial start-up and break-in period, the operator shall be aware of any unusual vibrations or noises that would indicate a need for service or repair.

Keep all safety shields and devices in place. Keep hands, feet, and clothing away from moving parts.

The operator should have a full view of the auger work area and check that all personnel are free from designated work areas before adding power.

It is essential to inspect the drive ***before*** adding power and to know how to shut down in an emergency.

During the operation of your equipment, one person shall be in a position to monitor the operation.

The operator shall have a full view of the work area and check that all personnel are clear of the designated work area ***before*** adding power.

Break-In Information

Any auger when it is new, or after sitting idle for a season should go through a "break-in" period. The auger should be run at partial capacity until several hundred bushels of grain have been conveyed to polish the housing. An auger that has not been polished in this manner requires greater horsepower to operate, and damage to auger can occur.

When the housing has been polished and smooth, the auger can be run at full capacity. Never run the auger empty for any length of time as excessive wear will result.

If at all possible, do not stop or start the auger under load, especially before the housing becomes well polished, as this may cause the auger to "freeze-up."

IMPORTANT! The auger should be frequently checked and serviced to operate freely. Keep all guards and shields in place, replace any that are damaged or missing.

OPERATING PROCEDURES (con't.)

Operating Capacities

The results or capacities of screw conveyors or augers can vary greatly under varying conditions. Different materials, moisture content, amounts of foreign matter, angle of operation, methods of feeding and speed all play a role in the performance of the auger.

Twenty-five percent (25%) moisture could cut capacity back by as much as forty percent (40%) under some conditions. It may be necessary to adjust flight speed to compensate for these materials and conditions.

Flight Speed

Proper flight speed is important for efficient operation of the equipment.

1. If the flight speed is faster than what is recommended, excessive wear will result.
2. If flight speed is too slow, the auger flighting will "load up", high torque will then be required to turn the auger flighting resulting in damage to the auger. Control the amount of grain fed into the hopper through external means (if changing the flight speed is not an option in your particular application).

   Refer to the H.P. charts shown in the Owner's & Operator's manual provided with the Top Drive Auger.

   IMPORTANT! For all 8", 10" and 13" Top Drive augers with <u>existing electric drive</u>, it will be necessary to increase electric motor size by another 5 H.P. to maintain proper flight speed.

Full Load Operation

It is good practice to visually inspect the hopper periodically during the actual operation. You should be alert for unusual vibrations, noises, and the loosening of any fasteners.

IMPORTANT! The u-joint is located exactly in the center of the elbow when assembled at the factory. When working on the unit, be sure the u-joint is in the exact center for smooth operation.

<u>Shutdown / Lockout</u>

WARNING! If the operator must leave the work area, or whenever servicing or adjusting the unit, the auger must be stopped and power source turned off and locked out.

Precaution should be made to prevent anyone from operating the auger when the operator is away from the work area.

Emergency Shutdown

Should the auger be immediately shutdown under load, **disconnect and lockout the power source.**

Clear as much grain from the hopper and auger as you can. When as much grain as possible has been cleared from the hopper, reconnect the power source and clear the auger gradually.

Never attempt to restart the auger when full of grain. Starting the unit under load may result in damage to the auger, such damage is considered abuse and is not covered by warranty.

Normal Shutdown

Make certain that the hopper and incline tube are empty before stopping the unit.

Before the operator leaves the work area, the power source shall be locked out (See "Lockout" below).

Lockout

The power source shall have a main disconnect box that can be locked in only the **"Off"** position. This is what **"shutdown and lockout"** refers to, shut off the main power source and lock the handle or breaker switch in the **"Off"** position.

LUBRICATION & MAINTENANCE

WARNING! Keep all safety shields and devices in place.

Never clean, adjust or lubricate a machine that is in operation.

***Do Not* operate unit without hinged cover closed and strap properly installed.**

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

The hopper should be frequently checked and serviced to operate freely. Keep all guards and shields in place. Replace any that are damaged or lost.

When the hopper has not been used for an extended period of time, it should be run at partial capacity for several hundred bushels to polish the flighting. Greater horsepower is required during this "break-in" period, so be careful not to overload the hopper as damage can occur to the flight or drive.

FLIGHT U-JOINT

The u-joint is located in the coupler box at the front of the hopper (See illustration below). Remove the strap from the hinged cover to gain access to the u-joint.

Lubricate after every **10 hours** of operation using an SAE multi-purpose grease (1 to 2 pumps is usually sufficient). Be sure to close cover and replace strap before operating the unit.

BRONZE FLIGHT BEARING

The hopper flight is supported by bronze-with-graphite bearings which require no lubrication. If the bronze bearing spins inside the retainer, replace the bearing by removing the old one and pressing in a new one.

TROUBLE SHOOTING

Auger Vibration

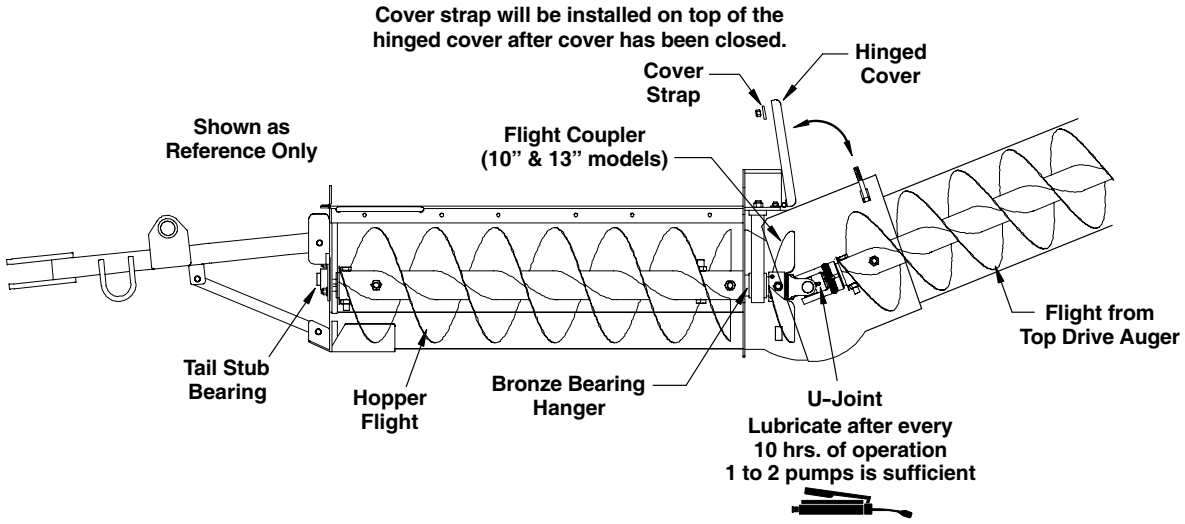
- Damage may have occurred to the auger flighting causing noise (damage usually occurs because of foreign material having been run through the auger). It may be necessary to remove the flighting for inspection.

Low Capacity

- The hopper may not be getting enough grain. Check to make sure the intake is not bridged over restricting flow of the grain.
- The exposed flighting in the hopper should be covered with grain to achieve maximum capacity.
- Check auger speed. Speeds slower than the recommended speed will result in low capacity.

Auger Plugs

- The auger may be getting too much grain, causing "jamming" inside the auger housing.
- The motor may be too small or wired improperly.
- Is the auger free of any foreign material such as sacks, tarp corners etc.? A plug at the discharge end will cause a plug at the inlet end.



HOPPER ASSEMBLY

CAUTION! There are some items in this accessory that are heavy. To avoid personal injury, use assistance when lifting and assembling these parts.

Use proper personal safety gear such as eye, ear and hand protection when working with power tools and metal materials.

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 the assembly procedures, but also makes you aware of what tools, equipment or materials may be needed to complete installation.

1. Remove the intake guard and jack assembly from the Top Drive auger (on 13" models, discard the threaded tensioning rod and its hardware, See illustration below).
2. Remove the existing tail stub from the end of the Top Drive auger flight. Apply anti-seize compound to the tail stub provided with the flex hopper accessory and install the new tail stub.

   Secure the tail stub using the hardware listed below.

   8" Models 1 ea. 7/16" x 3" G8 bolt & side depress locknut

   10" Models 1 ea. 1/2" x 3" G8 bolt & side depress locknut

   13" Models 1 ea. 5/8" x 4" G8 bolt and side depress locknut
3. Apply anti-seize compound to the hopper bearing stub and connect the u-joint to the stub (the 8" model will not use the flight coupler as shown in Fig. 1).

   On 10" & 13" models, apply anti-seize compound to the bearing stub and u-joint/coupler connection, insert the u-joint into the flight coupler and attach both to the bearing stub.

   8" Models will use one (1) 5/16" x 2 1/2" G5 bolt and nylon locknut; **10" Models** and **13" Models** will use one (1) 3/8" x 3 1/2" G8 bolt and side depress locknut.

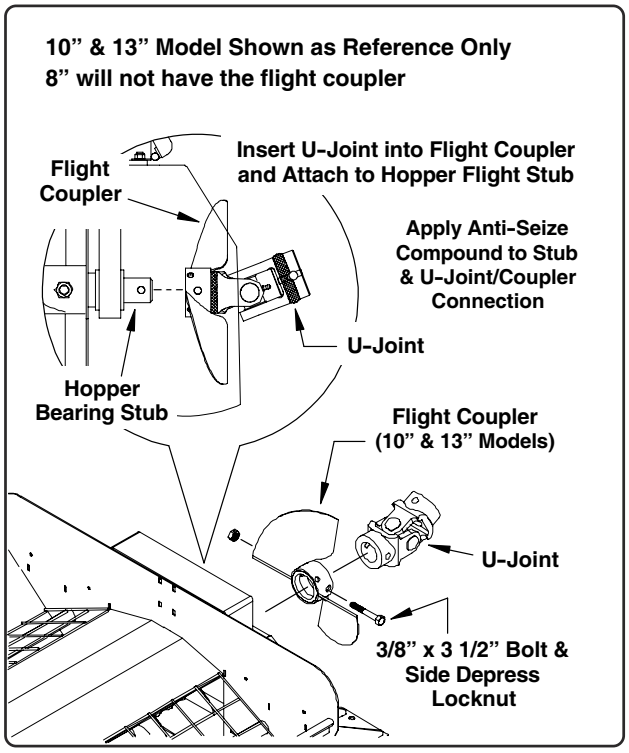
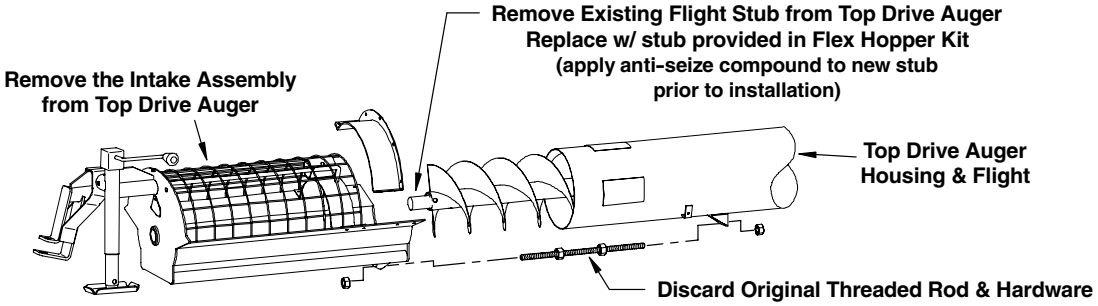


Fig. 1



Install New Stub with:
8" – 7/16" x 3" (G8) Bolt & Side Depress Locknut
10" – 1/2" x 3" (G8) Bolt & Side Depress Locknut
13" – 5/8" x 4" (G8) Bolt & Side Depress Locknut

ASSEMBLY PROCEDURES

HOPPER ASSEMBLY (con't.)

4. Install the connecting band/jackstand mount over the lower end of the Top Drive auger housing (See illustration below).

   On **8" & 10" Models,** slide the connecting band/jackstand mount onto the housing until the stop tab welded to the housing is inserted into the slot on the connecting band/jackstand mount (See illustration below).

   On **13" Models,** slide the connecting/jackstand mount onto the main auger housing so the connecting band is about halfway onto the housing.

5. Secure the connecting band on the **8" and 10" Models** using 3/8" x 1 1/2" bolts, lock washers and non-lock nuts, **Do Not tighten at this time.**

   On **13" Models,** position the backing plates onto the flanges of the connecting band (locate the backing plates accordingly, plate with square holes on bottom flange, plate with round holes on top flange, See illustration below).

   Loosely secure the connecting band and backing plates using 1/2" x 1 3/4" carriage bolts and 1/2" nylon locknuts. **Do Not tighten at this time.**

6. Install the coupler box weldment into the connecting band until the stop tab on the coupler box tube is inserted into the slot on the connecting band/jackstand mount (See illustration below).

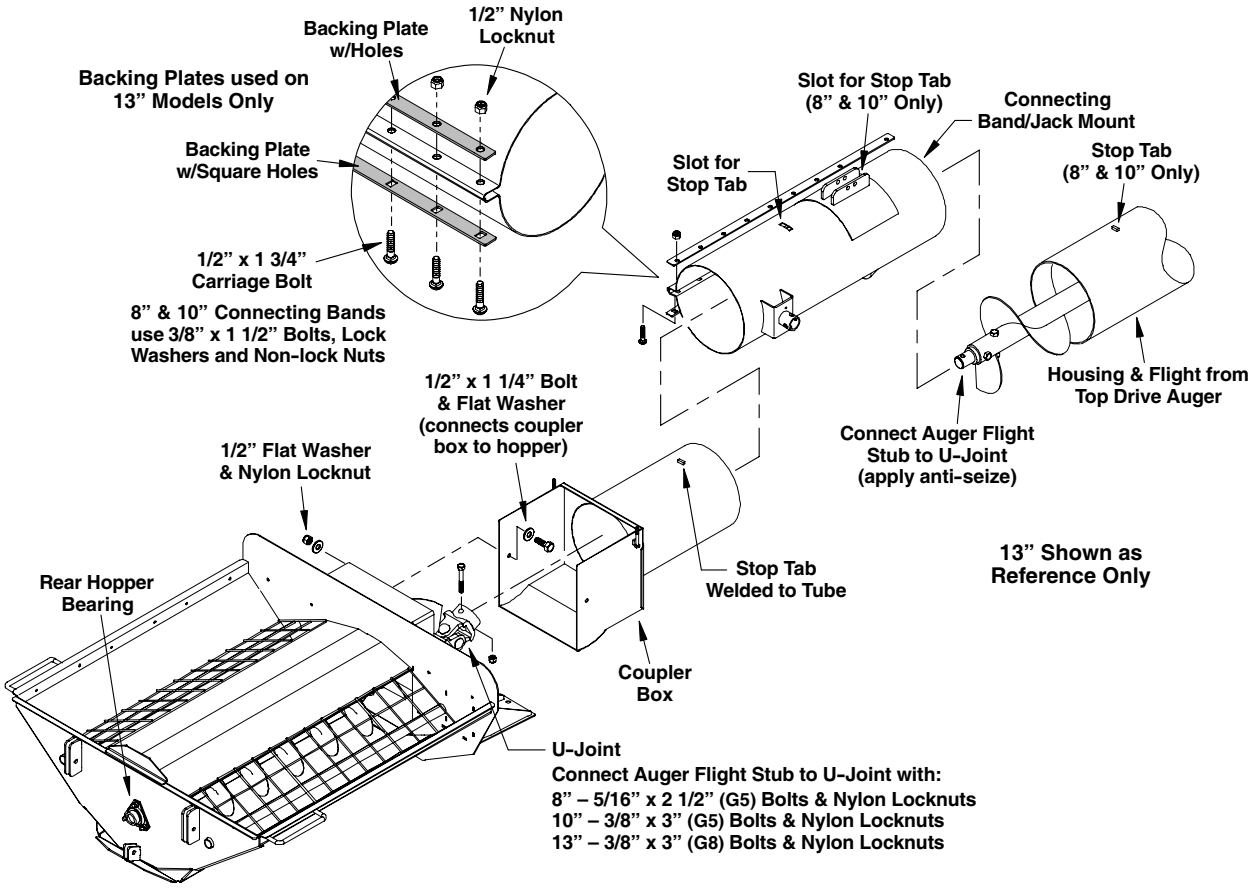
7. Attach the coupler box to the front of the hopper (it may be necessary to guide the flight stub from the auger into the u-joint as the coupler box is being positioned, if so, apply anti-seize compound to the stub prior to installation).

   Secure using two (2) 1/2" x 1 1/4" bolts, four (4) flat washers and two (2) 1/2" nylon locknuts (install bolt heads on the inside, **Do Not** tighten completely, the coupler box must be allowed to pivot).

8. Connect the auger flight stub to the u-joint (apply anti-seize compound to stub prior to installation).

   For **8" Models** secure using one (1) 5/16" x 2 1/2" G5 bolt and nylon locknut, **10" Models** use one (1) 3/8" x 3" G5 bolt and nylon locknut and **13" Models** use one (1) 3/8" x 3" G8 bolt and nylon locknut.

   If it is difficult to install the flight stub into the u-joint, loosen the setscrew and lock collar on the rear hopper bearing. Be sure to tighten collar and setscrew once connection has been made.



HOPPER ASSEMBLY (con't.)

9. Ensure that the flex hopper is level with the auger's undercarriage axle and tighten the connecting band hardware. Tighten the bolts starting with one of the middle bolts and working to one end, then start again on the next middle bolt and tighten to the other end.

   On 13" Models, install a 3/4" non-lock nut onto each end of the threaded tensioning rod far enough so the rod can be inserted through the bracket on bottom of the auger housing and connecting band/jackstand mount.

   Install a 3/4" nylon locknut onto each end of the rod and tighten all nuts to secure rod into place.

10. Bolt the hinged cover to the top of the coupler box using two (2) 5/16" x 1" bolts, flat washers and nylon locknuts. Install the cover strap over the cover and onto the studs welded to the sides of the coupler box. Secure using two (2) 3/8" nylon locknuts.

    Note: When adjusting the angle between the auger and the hopper, the 3/8" nylon locknuts will need to be loosened to allow the lid to slide under the strap. Retighten the nuts once hopper has been positioned.

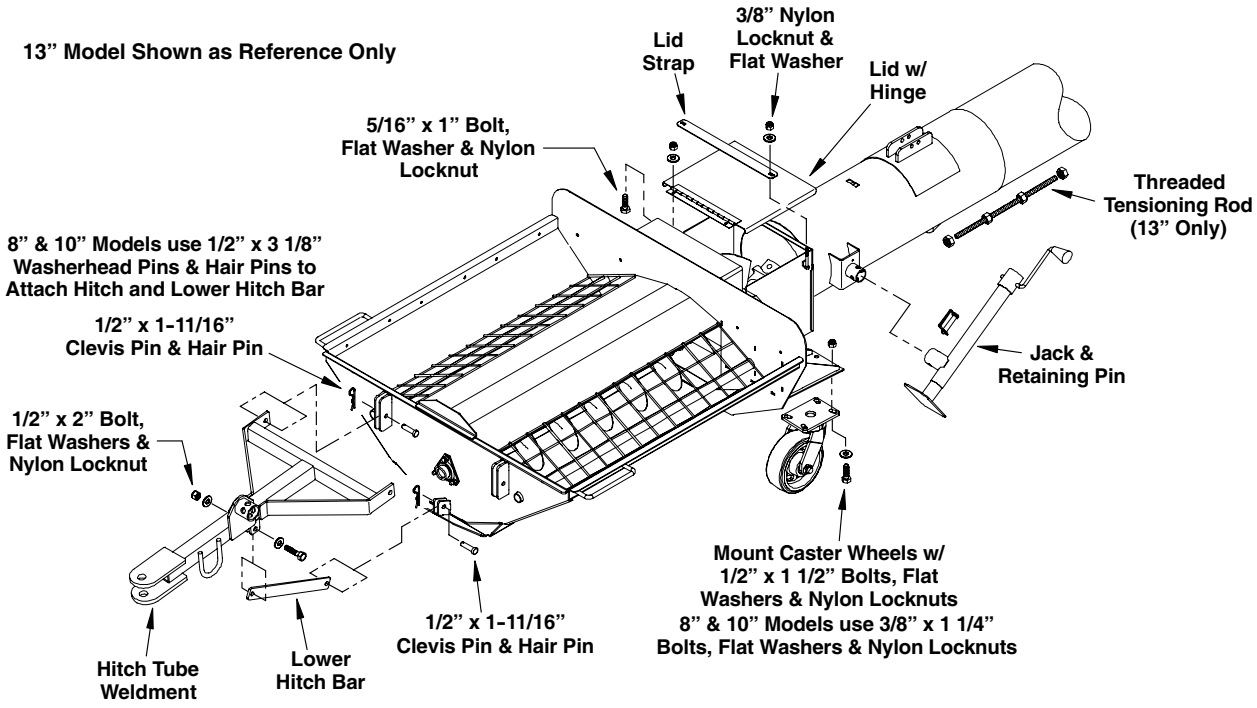
11. Mount the caster wheels to the front of the flex hopper as shown in the illustration below. For 8" & 10" Models, use four (4) 3/8" x 1 1/4" bolts, flat washers and nylon locknuts for each wheel.

    For 13" Models, use four (4) 1/2" x 1 1/2" bolts, flat washers and nylon locknuts.

12. Attach the hitch tube and lower hitch bar to the rear of the flex hopper mounting tabs as shown below. For 8" & 10" Models use the 1/2" x 3 1/8" washerhead pins and hair pins provided (connect lower hitch bar to hitch using the same hardware listed above).

    For 13" Models use three (3) 1/2" x 1-11/16" clevis pins and hair pins to attach the hitch tube and lower hitch bar to the hopper. Secure lower hitch bar to the hitch using one (1) 1/2" x 2" bolt, two (2) 1/2" flat washers and one (1) 1/2" nylon locknut.

13. Mount the jack to the mount tube on the side of the connecting band/jackstand mount and secure with the retaining pin provided.



ASSEMBLY PROCEDURES

HOPPER ASSEMBLY (con't.)

Rubber Belting Assembly

1. Loosely attach each clip to the holes positioned around the upper edge of the flex hopper (the points of each clip should be facing up with the bolt heads to the inside (See illustration below).

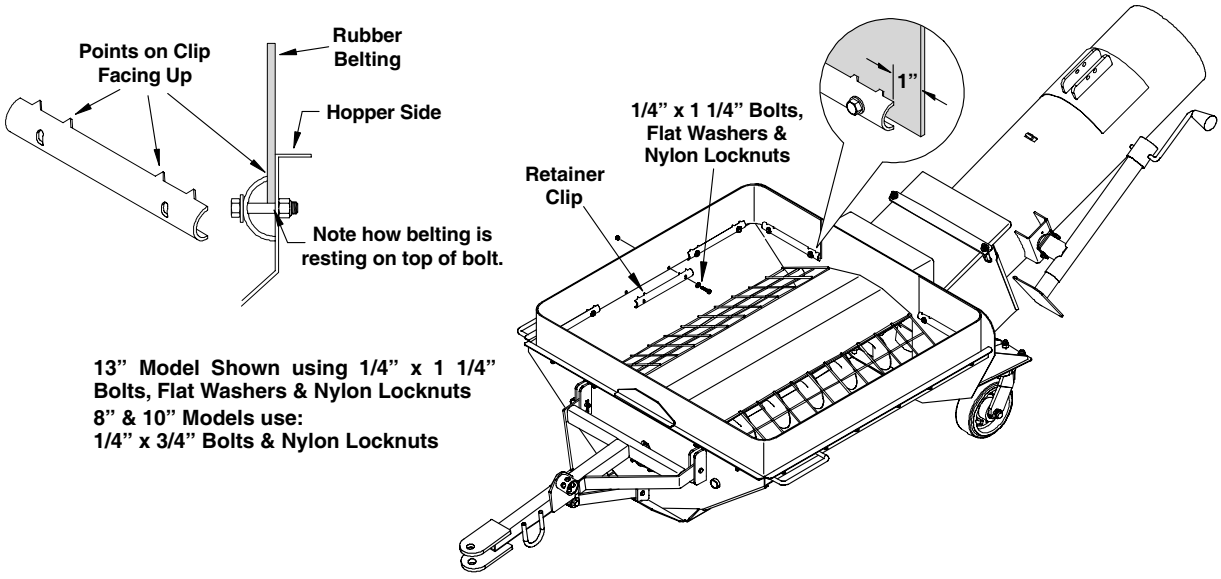
   8" and 10" Models use 8 clips and 1/4" x 1" bolts and nylon locknuts.

   13" Models use 10 clips, 1/4" x 1 1/4" bolts, flat washers and nylon locknuts.

2. Set the belting inside each clip so the belting is between the clip and the hopper side with the edge of the belting resting on the bolts (See illustration).

   The belting does not go completely across the output end of the hopper as shown below. Keep the ends of the belting extended approximately 1" past the edge of the clip and position the belting evenly around the hopper and through the corners.

3. Tighten the bolts to where the clip points draw into the belting and the smooth edge of the clips are in contact with the hopper sides.



Install Transport Bar

1. Position transport bar so the end with one hole is between the mounting tabs located above the hinged cover (See Fig. 2).

   Secure the other end between the mounting tabs on the band-on jackstand mount. Secure using two (2) 1/2" x 3 1/2" washerhead pins and hair pins.

   Note: The hopper must be securely pinned with transport bar before it can be transported.

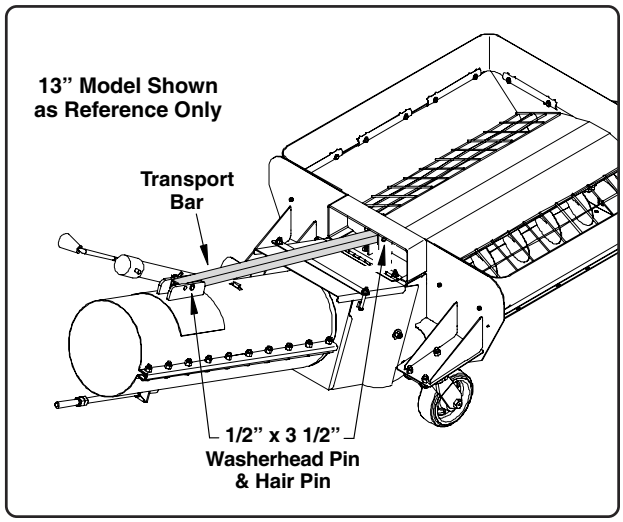


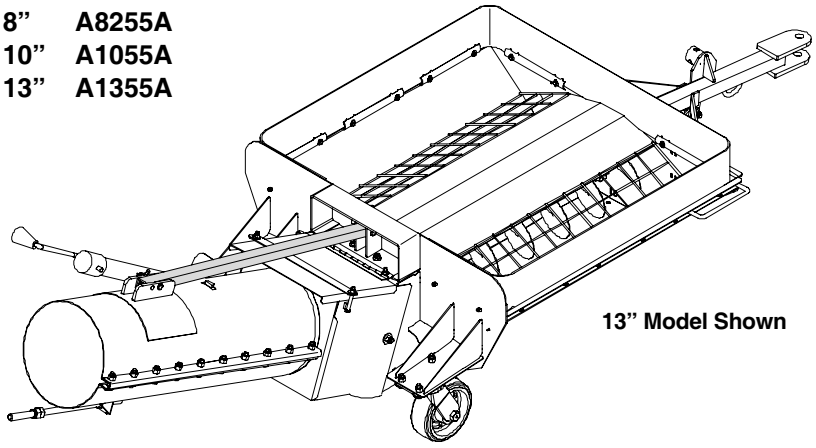
Fig. 2

PARTS LIST TABLE of CONTENT

Flex Hopper

Models:

8" A8255A
10" A1055A
13" A1355A



13" Model Shown

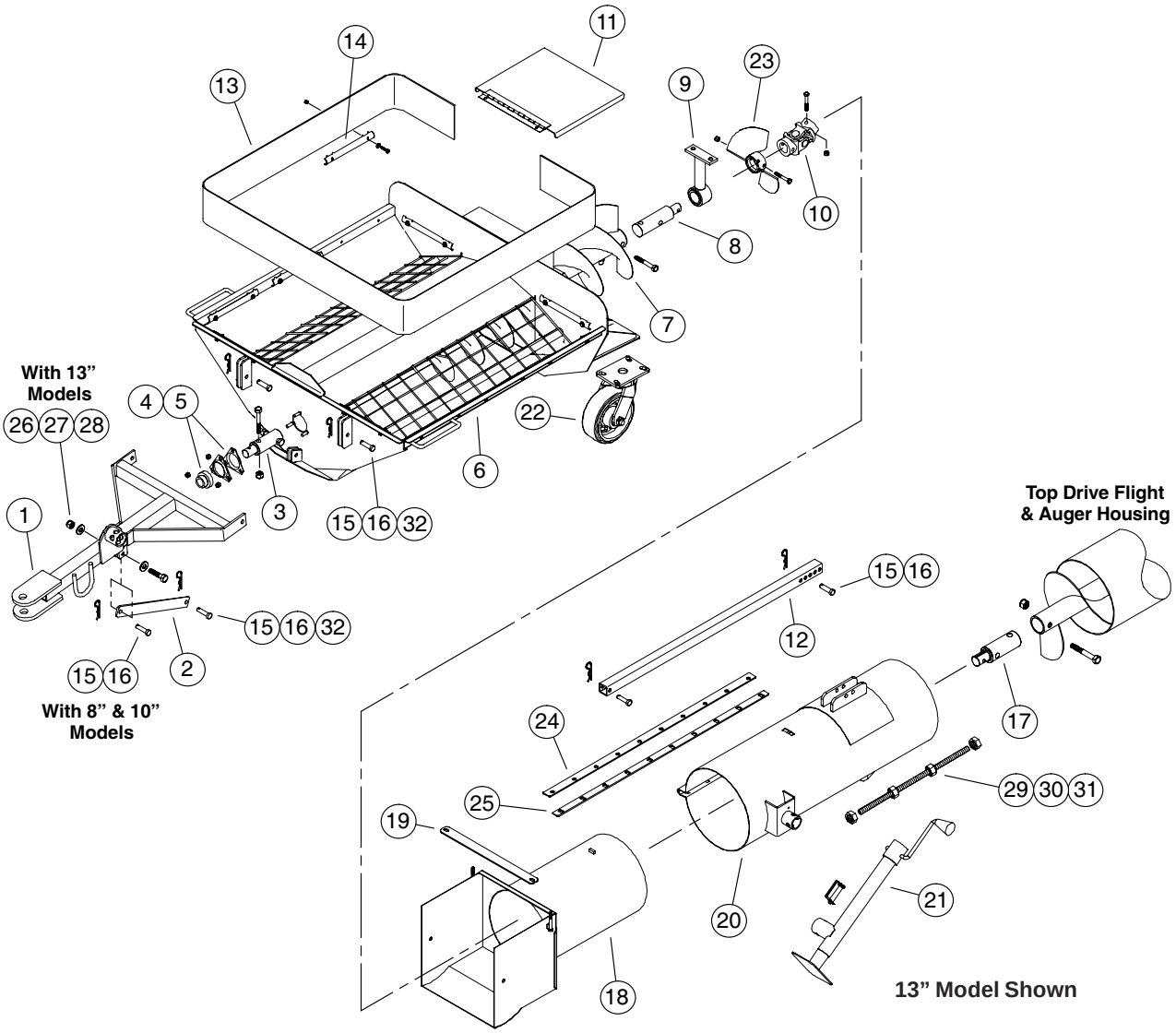
The Flex Bin Hopper is to be used *Only* on the following Top Drive Models.

8" x 31' - 41', 10" x 31' - 41' and 13" x 36' Top Drives

PARTS LIST

FLEX HOPPER

8", 10" and 13" MODELS



FLEX HOPPER
8", 10" and 13" MODELS

Ref. No.	Description	8" Model Part No.	10" Model Part No.	13" Model Part No.
1	Hitch Weldment	1035065	1035065	1035065
2	Lower Hitch Bar	1045642	1045642	1045642
3	Tail Stub f/ Hopper Flight	1024827	1027506	1001297
4	Flangette Bearing	54008	3029A2	3029A2
5	Bearing w/ Setscrews	6382C	1024761	3027A1
6	Bin Hopper	1035209	1035048	1042236
7	Hopper Flight	1035216	1035068	1042142
8	Bearing Stub	552445	1013714	1042237
9	Bearing Hanger	1024825	1027498	1042144
10	U-Joint	6340A	1013676	1013676
11	Lid w/ Hinge	1010333	1010334	1042364
12	Transport Bar	1035279	1035057	1042165
13	Rubber Belting	1035283	1035102	1042170
14	Clips, Rubber Belting	1013680	1013680	1013680
15	Hitch Pin, 1/2" x 3 1/8"	1004275	1004275	1004275
16	Hair Pin, 15/16" x 2"	635164	635164	635164
17	Incline Flight Stub	1035296	1035103	1001297
18	Coupler Box Weldment	1035222	1035105	1042136
19	Strap f/ Hinged Lid	1006464	1010261	1042140
20	Connecting Band/Jackstand Mount	1036174	1035999	1042146
21	Jack Stand	1024776	1024776	1024776
22	Caster Wheel	1036199	1036199	1042816
23	Flight Coupler	- - -	1050214	1041927
24	Backing Plate w/ Round Holes (f/ 13")	- - -	- - -	1036828
25	Backing Plate w/ Square Holes (f/ 13")	- - -	- - -	1036829
26	Bolt, 1/2"-13 x 2" G5 PLT (f/ 13")	- - -	- - -	1002228
27	Washer, 1/2" Flat PLT (f/ 13")	- - -	- - -	33025
28	Nut, 1/2"-13 Nylon Lock PLT (f/ 13")	- - -	- - -	33138
29	Rod, Intake Tensioner (f/ 13")	- - -	- - -	1036432
30	Nut, 3/4"-10 Non-Lock PLT (f/ 13")	- - -	- - -	D1152
31	Nut, 3/4"-10 Nylon Lock PLT (f/ 13")	- - -	- - -	33140
32	Pin, Clevis 1/2" x 1-11/16" (f/ 13")	- - -	- - -	40697

TORQUE CHART

General Torque Specification Table

Use the Following Torques When Special Torques Are Not Given

Note: These values apply to fasteners as received from supplier, dry, or when lubricated with normal engine oil. They do not apply if special graphited or moly-disulphide greases or other extreme pressure lubricants are used. This applies to both UNF and UNC threads.

SAE Grade No.		SAE 2				SAE 5				SAE 8*			
Bolt head identification marks as per grade Note: Manufacturing marks will vary													
Bolt Size		Torque Foot Pounds		Torque Newton-Meters		Torque Foot Pounds		Torque Newton-Meters		Torque Foot Pounds		Torque Newton-Meters	
Inches	Millimeters	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	264	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	696	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

*Thick nuts must be used with Grade 8 bolts

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