





FORMULA MIXER

Models F355 • F470 • F585 • F700 • F815 • F1015 • F1215



Owner / Operator's Manual



1.0 IMPORTANT INFORMATION

The serial number plate is located on the left hand side of the mixing tub. Please enter the model, serial number and additional information in the space provided for future reference.



Model No.

Mixer Serial No.

Trailer Serial No.

Date of Purchase

Dealership

Dealership Phone No.



Always use your serial number when requesting information or when ordering parts.

HOW TO READ YOUR SERIAL NUMBER



MIXER

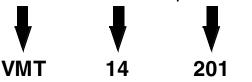
EXAMPLE: 14VM0700201

TRAILER (Model F700-F1215)

EXAMPLE: VMT14201



Vertical Mixer Trailer / Model Year / Sequence Of Build



Model Year / Vertical Mixer / Model / Sequence Of Build



Meyer Manufacturing Corporation 574 West Center Avenue Dorchester, WI 54425 Phone: 1-800-325-9103

Fax: 715-654-5513 Email: sales@meyermfg.com Website: www.meyermfg.com







2.0 PRE-DELIVERY & DELIVERY CHECK LIST

PB Mixer Check List

Meyer Manufacturing Corporation

Phone: 715-654-5132 • Toll-Free: 1-800-325-9103 • P.O. Box 405 • Dorchester, WI 54425

This Pre-Delivery & Delivery Check List must be gone through by the Selling Party and the Customer to validate the Owner's Registration Form.

PRE-DELIVERY CHECK LIST

After the New Meyer Mixer has been completely set-up, check to be certain it is in correct running order before delivering it to the customer.

The following is a list of points to inspect:

Check off each item as you have made the proper adjustments and found the item operating satisfactorily. Any adjustments made, MUST be according to specifications defined in this manual.

according to specifications defined in this manual.
All shields and guards are in place and securely fastened.
All PTO shields turn freely.
All bolts and other fasteners are secure and tight.
All mechanisms operate trouble free.
All grease fittings have been lubricated, gear boxes filled to proper levels, and all roller chains are oiled. See "Lubrication" section of this manual.
Cross Conveyor Belt or Chain are at proper tension. See "Adjustments" section in this manual.
All decals are in place and legible.

DELIVERY CHECK LIST

The following check list is an important reminder of valuable information that MUST be passed on to the customer at the time the unit is delivered.

Check off each item as you explain it to the customer.

Explain to the customer that pre-delivery check list was fully completed.
Give customer the Owner & Operator's Manual. Instruct to read and completely understand its contents BEFORE attempting to operate the mixer.
Explain and review with customer the New Meyer mixer manufacturer's warranty.
Show the customer where to find the serial number on the implement.
Explain and review with the customer "Safety Precautions" section of this manual.
Explain and review with customer the proper "Start-up and Operating Procedures" sections of this manual.
Explain and review with customer the recommended loading and unloading procedures.
Demonstrate the start-up and shutdown controls, proper hydraulic hose storage and tip holder used to keep system clean from contaminants.
Explain the importance of cross conveyor chain or belt tension, and the need to watch and tighten during the break-in period.
Explain that regular lubrication and proper adjustments are required for continued proper operation and long life of the mixer. Review with the customer the "Lubrication" and "Adjustments" sections of this manual.
Fully complete this "PRE-DELIVERY &



Meyer Manufacturing Corporation

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Email: sales@meyermfg.com Website: www.meyermfg.com

3.0 INTRODUCTION

Congratulations on your purchase of a new Meyer farm equipment product. Undoubtedly you have given much consideration to your purchase and we're proud that you have selected Meyer. Pride in craftsmanship, engineering and customer service have made Meyer products the finest in the farm equipment industry today.

There is no substitute for quality. That is why thousands of people like you have purchased Meyer farm equipment. They felt it was the best equipment to serve their farming needs, now and in years to come. We ask that you follow our policy of "safety first", and we strongly suggest that you read through the Operator's & Parts manual before operating your Meyer farm equipment. Meyer Manufacturing Corporation wants to thank you for not compromising quality. We are determined to offer excellence in customer service as well as provide you with the very best value for your dollar.

Sincerely,

All Employees of
MEYER MANUFACTURING CORPORATION

When the PTO is referred to, it means power takeoff from the tractor.

The formula mixer may be referred to as mixer, implement, equipment or machine in this manual.



IMPORTANT: You are urged to study this manual and follow the instructions carefully. Your efforts will be repaid in better operation and service as well as a savings in time and repair expense. Failure to read this manual and understand the machine could lead to serious injury. If you do not understand instructions in this manual, contact either your dealer or Meyer Manufacturing Corp. at Dorchester, WI 54425.



WARRANTY: At the front of this manual is the <u>Owner's Registration Form</u>. Be sure your dealer has completed this form and promptly forwarded a copy to Meyer Manufacturing to validate the manufacturer's warranty. The product model and serial number are recorded on this form and on the inside of the front cover for proper identification of your Meyer equipment by your dealer and the manufacturer when ordering repair parts. The serial number is stamped in the front left-hand side of the mixing tub. On F700 model and larger the Trailer has a serial number located on the left hand side of the hitch.

Manufacturer's Statement: Meyer Manufacturing Corporation reserves the right to make improvements in design, or changes in specifications at any time, without incurring any obligation to owners of units previously sold. This supersedes all previous published instructions.

FEATURES

DESCRIPTION	F355	F470	F585	F700	F815	F1015	F1215
Twin Mixing Augers	STD	STD	STD	STD	STD	STD	STD
Replaceable Scrapers	STD	STD	STD	STD	STD	STD	STD
Hardened Knives	STD	STD	STD	STD	STD	STD	STD
Hay Stops	STD	STD	STD	STD	STD	STD	STD
Ladder	STD	STD	STD	STD	STD	STD	STD
Jack Stand	STD	STD	STD	STD	STD	STD	STD
Torque Disconnect PTO's	STD	STD	STD	STD	STD	STD	STD
2-Speed Split Drive Gearbox (Electric Shift)	N/A	N/A	STD	STD	STD	STD	STD
Straight Drive	STD	STD	N/A	N/A	N/A	N/A	N/A
Heavy -Duty Gearboxes	STD	STD	STD	STD	STD	STD	STD
Single Axle Trailer	STD	STD	OPT	OPT	OPT	OPT	OPT
Tandem Axle Trailer	N/A	N/A	STD	STD	STD	STD	STD

OPTIONS

DESCRIPTION	F355	F470	F585	F700	F815	F1015	F1215
Side Discharge Door Right/Left	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Front Discharge Door	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Rear Discharge Door	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Front Cross Conveyor	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Side Door Conveyor	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Viewing Platform	N/A	N/A	N/A	N/A	OPT	OPT	OPT
Slide Tray	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Safety Chain	OPT	OPT	OPT	OPT	OPT	OPT	OPT
2-Speed Split Drive Gearbox (Manual Shift)	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Magnets	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Hay-Retention Ring	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Capacity Belt Extension	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Hardened Knives (Additional)	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Tank Liner	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Baffle Liner	OPT	OPT	OPT	OPT	OPT	OPT	OPT

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4/2014

MEYER FORMULA MIXER

- I. The "Owner's Registration Form" must be completed in full and promptly returned to Meyer Mfg. Corp. for this warranty to become both valid and effective. All warranties on New Meyer Mixers shall apply only to the original retail customer from an authorized Meyer Mfg. Corp. dealership.
- II. This warranty shall <u>not</u> apply to any Meyer Mixer which has been subjected to misuse, negligence, alteration, accident, <u>incorrect</u> operating procedures, has been used for an application not designed for or pre-authorized by Meyer in writing, has had the serial numbers altered, or which shall have been repaired with parts other than those obtained through Meyer Mfg. Corp. Meyer is not responsible for the following: Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow the operator's manual recommendations or normal maintenance parts and service. Meyer is not responsible for rental of replacement equipment during warranty repairs, damage to a power unit (including but not limited to a truck or tractor), loss of earnings due to equipment down time, or damage to equipment while in transit to or from the factory or dealer.
- III. Meyer Mfg. Corp. warrants New Meyer Mixer to be free from defects in material and workmanship under recommended use and maintenance service, as stated in the operator's and parts manuals, as follows:
 - A. Meyer Mfg. Corp. will repair or replace F.O.B. Dorchester, WI, as Meyer Mfg. Corp. elects, any part of a new Meyer Mixer which is <u>defective in material or workmanship</u>:
 - Without charge for either parts or labor during the first (1) year from purchase date to the original retail customer.
 - B. In addition to the above basic warranty, Meyer Mfg. Corp. will repair or replace F.O.B. Dorchester, WI as Meyer Mfg. Corp. elects:
 - i. Any part of the following which is defective in material or workmanship (not neglect to recommended use and service) with a "pro-rated" charge for parts only (not labor) during the stated time period from date of purchase to the original retail customer. 1st year 100%, 2nd year 100%, 3rd year 50%, 4th year 25%, 5th year 10%
 - a. The Formula Mixer Planetary Gearbox. Meyer Part #'s 119-16-13.4-1, 119-18-13.92-1, 119-21-25.57-1, 119-32-24.8-1.
- IV. COMMERCIAL USE: Coverage as in paragraph III.A.i. only, except warranty coverage is for (90) days for parts and labor to the original commercial retail customer.
- V. Repairs eligible for labor warranty must be made by Meyer Mfg. Corp. or an authorized Meyer dealership. The original retail customer is responsible for any service call and/or transportation of the mixer to the dealership or the factory for warranty service.
- VI. Except as stated above, Meyer Mfg. Corp. shall not be liable for injuries or damages of any kind or nature, direct, consequential, or contingent, to persons or property. This warranty does not extend to loss of crop or for any other reasons.
- VII. No person is authorized to give any other warranties or to assume any other obligation on Meyer Mfg. Corp.'s. behalf unless made or assumed in writing by Meyer Mfg. Corp. This warranty is the sole and exclusive warranty which is applicable in connection with the manufacture and sale of this product and Meyer Mfg. Corp.'s responsibility is limited accordingly.

Purchased Product Warranty:

This warranty does not apply to component parts not manufactured by Meyer such as but not limited to wheels, tires, tubes, PTO shafts, clutches, hydraulic cylinders, scales, tarps, etc.



5.0 SAFETY

Meyer Mfg. Corp. equipment is manufactured with operator safety in mind. Located on the equipment are various safety signs to aid in operation and warn of hazardous areas. Pay close attention to all safety signs on the equipment.

Carefully follow the operating and maintenance instructions in this manual and all applicable safety laws. Failure to follow all safety procedures may result in serious injury or death.

Before attempting to operate this equipment, read and study the following safety information. In addition, make sure that every individual who operates or works with the equipment, whether family member or employee, is familiar with these safety precautions.

Meyer Mfg. Corp. provides guards for exposed moving parts for the operator's protection; however, some areas cannot be guarded or shielded in order to assure proper operation. The operator's manual and safety signs on the equipment itself warn you of hazards and must be read and observed closely!



This symbol is used to call attention to instructions concerning personal safety. Be sure to observe and follow these instructions. Take time to be careful!



The signal word DANGER on the machine and in the manual identifies a hazardous situation which, if not avoided, <u>WILL</u> result in death or serious injury.



The signal word WARNING on the machine and in the manual indicates a potentially hazardous situation which, if not avoided, <u>COULD</u> result in death or serious injury.



The signal word CAUTION on the machine and in the manual indicates a potentially hazardous situation which, if not avoided, <u>MAY</u> result in minor or moderate injury. It may also be used to alert against unsafe practices.



This notice identifies procedures which must be followed to avoid damage to the machine.

Danger, Warning, Caution, and instructional decals and plates are placed on the equipment to protect anyone working on or around this equipment, as well as the components of the equipment. All personnel operating or maintaining this equipment must familiarize themselves with all Danger, Warning, Caution, and instructional decals and plates.

5.1 SAFETY PRECAUTIONS





All individuals who will operate this equipment must read and completely understand this Operator's And Parts Manual. Operator must have instructions before operating the machine. Untrained operators can cause injury or death.

- DO NOT allow anyone to operate, service, inspect or otherwise handle this equipment until all operators have read and understood all of the instructional materials in this Operator's And Parts Manual and have been properly trained in its intended usage.
- For an operator to be qualified, he or she must not use drugs or alcohol which impair alertness or coordination while working. An operator who is taking prescription drugs must get medical advice to determine if he or she can safely operate a machine and the equipment.
- Make sure all personnel can READ and UNDERSTAND all safety signs.
- DO NOT allow minors (children) or inexperienced persons to operate this equipment.
- DO NOT operate until all shields and guards are in place and securely fastened.
- DO NOT step up on any part of the equipment that is not designated as a ladder or viewing platform at any time.
- DO NOT adjust, clean or lubricate while the equipment is in motion.
- Inspect when first delivered and regularly thereafter; that all connections and bolts are tight and secure before
 operating.
- Know how to stop operation of the equipment before starting it!
- Make certain everyone is clear of the equipment before applying power.
- Keep hands, feet and clothing away from moving parts. Loose or floppy clothing should not be worn by the operator.
- Observe all applicable traffic laws when transporting on public roadways (where legal to do so). Check local laws for all highway lighting and marking requirements.
- Shut off and lock out power before adjusting, servicing, maintaining or clearing an obstruction from this machine. (See
 5.3 SHUTOFF & LOCKOUT POWER on page 24.)
- Always enter curves or drive up or down hills at a low speed and at a gradual steering angle.
- Never allow riders on either tractor / truck or equipment.
- Keep tractor / truck in a lower gear at all times when traveling down steep grades.
- Stay away from overhead power lines. Electrocution can occur without direct contact.
- Use only properly rated undercarriage and tires.

Safety Precautions For Tractor Towed Units:

- Do not exceed 20 mph (32 kph). Reduce speed on rough roads and surfaces.
- Always install a SMV emblem on pull-type equipment when transporting on roadways and keep clean and bright.
- Always yield to oncoming traffic in all situations and move to the side of the road so any following traffic may pass.

Safety Precautions For Truck Mounted Units:

• Comply with state and local laws governing highway safety and movement of machinery on roadways.

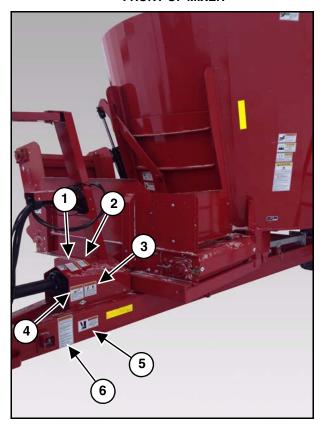
Safety Precautions For Hydraulic System:

- Check hydraulic tubes, hoses and fittings for damage and leakage. Never use hands to check for leaks. Hydraulic tubes and hoses must be properly routed and have adequate support and secure clamps. Tighten or replace any parts that show leakage.
- Always clean fluid spills. Do not use gasoline or diesel fuel for cleaning parts. Use commercial nonflammable solvents.



Read all safety signs on the equipment and in this manual. Keep all safety signs clean and replace any damaged or missing safety signs before operating the equipment. Do Not remove any safety signs. Safety signs are for operator protection and information.

FRONT OF MIXER





PART NO. 46-0004-2



PART NO. 46-3600-9



To prevent serious injury or death:

- Read and understand owner's manual before using. Review safety precautions annually.
- No riders allowed when transporting.
- Securely attach to towing unit. Use a high strength appropriately sized hitch pin with a mechanical retainer and attach safety chain.
- Do not exceed 20 mph (33 kph). Slow down for corners and rough terrain.
- Do not drink and drive.
- Before moving running gear, be sure required lights and reflectors are installed and working.
- Before maintenance or repair, stop vehicle, set parking brake, and remove ignition key.
- Place safety stands under frame and chock wheels before working on tires or running gear.
- Maintain wheel bolts at torque as recommended in the manual.
- If equipped with brakes, maintain proper adjustment.







PART NO. 46-0800-7



PART NO. 46-0800-6



PART NO. 46-3600-6

FRONT OF MIXER





PART NO. 46-0001-22



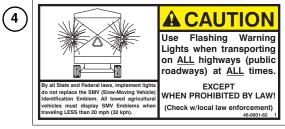
PART NO. 46-0001-213



PART NO. 46-8500-7

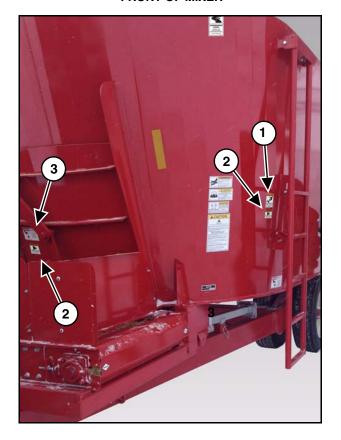


PART NO. 46-0001-35



PART NO. 46-0001-62

FRONT OF MIXER





PART NO. 46-0001-210



PART NO. 46-0001-205

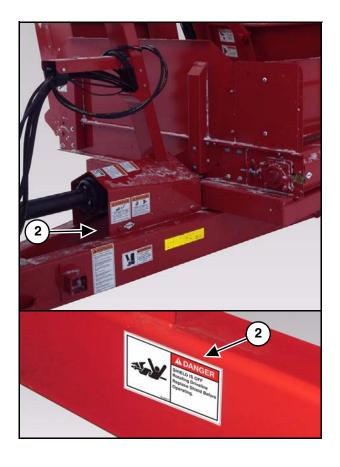


PART NO. 46-0001-208

(3)

LEFT SIDE OF MIXER







PART NO. 46-0001-211 (Located under mixing tub)

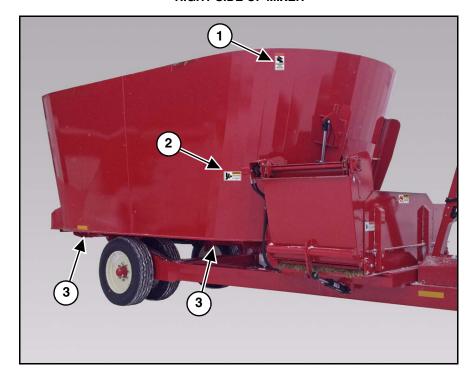


PART NO. 46-0001-212



PART NO. 46-3600-2 (Located on trailer frame underneath housing)

RIGHT SIDE OF MIXER





PART NO. 46-0001-213

(3)



PART NO. 46-0001-211 (Located under mixing tub)

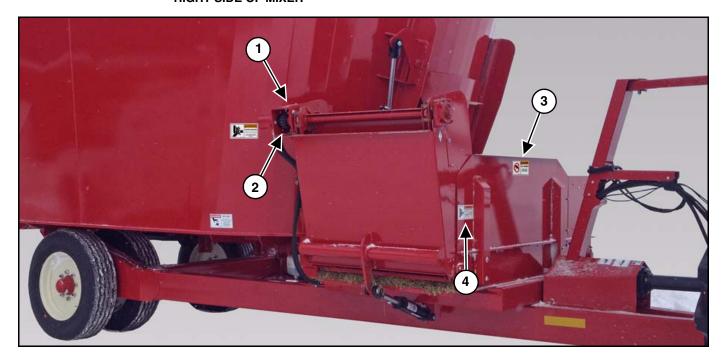


PART NO. 46-0001-212



PART NO. 46-0001-206 (Both sides on some models)

RIGHT SIDE OF MIXER



1



PART NO. 46-0001-4 (Located on top of shield)



2

PART NO. 46-0001-207 (Located under shield)



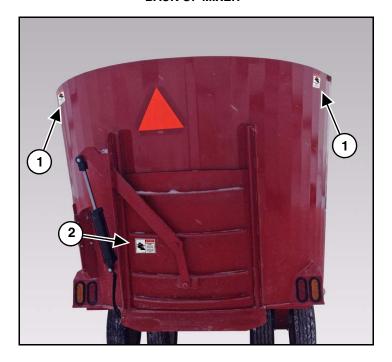


PART NO. 46-0001-209



PART NO. 46-0001-205

BACK OF MIXER





PART NO. 46-0001-213



PART NO. 46-0001-208





PART NO. 46-0001-205

LEFT SIDE OF MIXER





PART NO. 46-0001-209



PART NO. 46-0001-206 (Both sides on some models)

5.3 SHUTOFF & LOCKOUT POWER

Any individual that will be adjusting, servicing, maintaining, or clearing an obstruction from this machine needs to ensure that this machine stays safely "OFF" until the adjustment, service, or maintenance has been completed, or when the obstruction has been cleared, and that all guards, shields, and covers have been restored to their original position. The safety of all individuals working on or around this machine, including family members, are affected. The following procedure will be referred to throughout this manual, so be familiar with the following steps.

5.3.1 Shutoff & Lockout Power Recommendations

1. Think, Plan and Check

- a. Think through the entire procedure and identify all the steps that are required.
- b. **Plan** what personnel will be involved, what needs to be shut down, what guards / shields need to be removed, and how the equipment will be restarted.
- c. **Check** the machine over to verify all power sources and stored energy have been identified including engines, hydraulic and pneumatic systems, springs and accumulators, and suspended loads.
- 2. **Communicate** Let everyone involved, including those working on or around this machine, that work is being done which involves keeping this machine safely "OFF".

3. Power Sources

- a. **LOCKOUT -** Shut off engines and take the key, or physically lock the start/on switch or control. Disconnect any power sources which are meant to be disconnected (i.e. electrical, hydraulic, and PTO of pull-type units).
- b. TAGOUT Place a tag on the machine noting the reason for the power source being tagged out and what work is being done. This is particularly important if the power source is not within your sight and/or will need to be isolated for a longer period of time.
- **4. Stored Energy -** Neutralize all stored energy from its power source. Ensure that this machine is level, set the parking brake, and chock the wheels. Disconnect electricity, block moveable parts, release or block spring energy, release pressure from hydraulic and pneumatic lines, and lower suspended parts to a resting position.
- 5. **Test -** Do a complete test and personally double check all of the above steps to verify that all of the power sources are actually disconnected and locked out.
- 6. Restore Power When the work has been completed, follow the same basic procedures, ensuring that all individuals working on or around this machine are safely clear of the machine before locks and tags are removed and power is restored.



It is important that everyone who works on this equipment is properly trained to help ensure that they are familiar with this procedure and that they follow the steps outlined above. This manual will remind you when to Shutoff & Lockout Power.

6.0 PRE-OPERATION



DO NOT allow anyone to operate, service, inspect or otherwise handle this equipment until all operators have read and understand all of the instructional materials in this Operator's And Parts Manual and have been properly trained in its intended usage.

Verify that the equipment is securely fastened to the tractor.

Verify that all electrical / hydraulic connections and bolts / hardware are tight and securely fastened before operating the equipment.

Always keep all shields and guards in place and securely fastened.

Keep hands, feet and clothing away.

Wear safety glasses to prevent eye injury when any of the following conditions exist:

- When fluids are under pressure.
- Flying debris or loose material is present.
- Tools are being used.

Failure to heed may result in serious personal injury or death.

6.1 PRODUCT INSPECTION



Hydraulic fluid escaping under pressure can have sufficient force to cause injury. Keep all hoses and connections in good serviceable condition. Failure to heed could result in serious personal injury or death.



Check that all gear cases and oil bath enclosures contain oil and that bearings and joints have been greased. (See maintenance section).

6.1.1 General Inspection



Inspect the mixer, chassis, axles, spindles, tires, hitches & all safety shielding, safety signs and safety lighting regularly. These parts if not watched closely, could pose potential injury or death. If any part is found in need of repair, follow the SHUTOFF & LOCKOUT POWER recommendations and have qualified personnel repair immediately.

Check to be sure that the gearcases contain oil and that bearing and joints have been greased. See Lubrication section for more information.

- 1. Check the mixer for proper assembly, adjustment and lubrication. Check the machine for proper oil supply. If unit is equipped with a front or side conveyor, oil the apron chains and check to be sure all bolts and set screws are tight.
- 2. Make sure that all guards and shields are in place, secured and functioning as designed.
- 3. Check for and remove any foreign objects in the mixing chamber and discharge opening.
- 4. Check that all hardware is in place and is tight.
- 5. Watch for any cracks that may have developed in the welds. If found, have qualified personnel repair immediately.
- 6. Check the hitch for proper location and alignment and clamp load of attaching bolts. If the upper clevis bar becomes excessively worn, the hitch assembly should be turned over so the unworn hitch bar is on top. Replace if both bars are worn. Worn or damaged parts, particular bolts should be replaced before failure.

6.1.2 Before Loading The Formula Mixer

Before loading the mixer, check the following items:

- 1. Check to see that the discharge door is closed.
- 2. Be sure no one is inside mixer.
- 3. Test run the mixer.
 - a. Make sure the mixer is empty, then start the mixer.
 - b. Run the mixer and front conveyor (or chain and slat) if equipped for at least five minutes at 3/4 of rated PTO RPM.
 - c. Raise and lower the door several times.
 - d. Disengage the machine, turn off the tractor engine, and then remove the driveline.
 - e. Check the drive components to be sure they are not abnormally hot.

6.2 LIGHT HOOK-UP

NOTE: The lighting system provided is intended for being transported by an agricultural tractor.

Ensure that lights and indicators are clean and in good working order. When attaching to a towing vehicle other than a tractor always check lighting for proper operation as wiring may vary. Connect to the standardized 7-pin socket located at the back of the tractor.

Color	Function	SAE Terminal	SAE Connector
Red	Ground	1	
	Not Used	2	
Yellow	Left Turn & Hazard	3	
	Not Used	4	4
Green	Right Turn & Hazard	5	
Brown	Tail Lights	6	
	Auxiliary Power	7	
			Viewed From Back

NOTE: The brake wire should only be connected to the #4 terminal if the #4 terminal on the tractor is confirmed to be a brake light terminal. If the tractor does not have a brake light terminal, cap / seal off the end of the brake wire of the implement (secure to other wires).

6.3 HYDRAULIC HOOK-UP

Pull Type: Requires 25 GPM @ 3000 PSI.

Call the factory if additional information is needed.



Do not exceed maximum PSI or a motor failure could result.



Hydraulic fluid escaping under pressure can have sufficient force to cause injury. Keep all hoses and connections in good serviceable condition. Failure to heed could result in serious personal injury or death.

6.4 PTO DRIVELINE



Shutoff and lockout power before adjusting, servicing, maintaining, or clearing an obstruction from this machine. Failure to heed may result in serious personal injury or death.



Do not operate without PTO guard on implement and tractor. Maintain PTO drive shaft guard tubes in good operating condition. Replace them if damaged and not turning freely. Failure to heed may result in serious personal injury or death.

The tractor half of the PTO drive shaft assembly must be locked securely to the tractor output shaft and the implement half of the PTO drive shaft assembly must be locked securely to the mixer drive line.

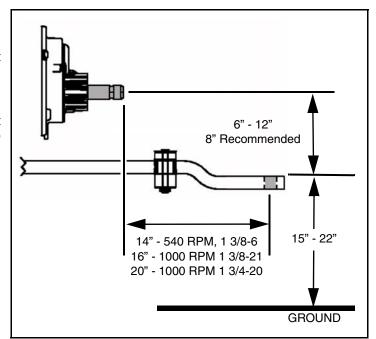
See your PTO Installation, Service, and Safety Instruction Manual for additional PTO details. Call the factory for a replacement manual at 1-800-325-9103.

See your ADMA Safety Manual for further safety situations and precautions that you should familiarize yourself and those that may be operating this equipment. Call the factory for a replacement manual at 1-800-325-9103.

6.4.1 Drawbar

This mixer may be either 540 or 1000 RPM depending on the model. Do not operate 540 RPM implements at 1000 RPM, or 1000 implements at 540 RPM.

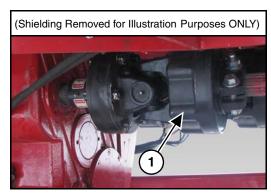
Set your tractor drawbar to conform to the standard dimensions as shown. An improperly located hitch point may cause damage to the universal joints of the PTO drive shaft. This will ensure that the PTO drive shaft will not be over extended.



6.4.2 Torque Disconnect (F585-F1215 Models)

When the torque overcomes the spring force within the torque disconnect (Item 1), the pawls pull away from the ratchet. This may occur when mixing or unloading a heavy mix or if an obstruction has lodged within the mixer. This is to protect the driveline from damage.

To reset the torque disconnect, throttle the tractor down and the pawls will automatically re-engage.



6.4.3 Shear Bolt PTO, Primary (F355/F470)

The primary driveline on the F355 & F470 has a shear bolt design. When the torque reaches its maximum load, the shear bolt will shear to protect the system. Replace the 3/8"-16 x 1" grade 5 shear bolt and 3/8-16 locknut to reset the PTO.

6.5 HITCHING TO TRACTOR

Before hitching to the tractor, make sure that there is sufficient ballast on the front axle of the tractor.

Depending on conditions, the ballast weight needs to be adjusted to optimize tractor drive. The front axle load must never, under any circumstances, be less than 20% of the tractor's unladen weight.

Move to the operator's position, start the engine and release the parking brake.



Do not allow anyone to stand between the tongue or hitch and the tractor when backing up to the equipment.

Move the tractor in front of the mixer. Slowly move the tractor backwards towards the mixer and align the drawbar with the implement's hitch.



Keep hands, legs and feet from under tongue and hitch until jack is locked into place.

NOTE: Lower or raise the mixer jack to properly align the drawbar and hitch.

Fasten the mixer hitch to the tractor drawbar with a properly sized hitch pin with safety retainer. (Reference ANSI/ASABE AD6489-3 Agricultural vehicles - Mechanical connections between towed and towing vehicles - Part 3: Tractor drawbar.)

Connect the tractor half of the PTO drive shaft assembly. The PTO must be locked securely to the tractor output shaft and the implement half of the PTO drive shaft assembly must be locked securely to the mixer drive line.

Before operation and after hitching the tractor to the implement, connect the hydraulic hoses (if applicable) and light cord to the tractor. Place the jack into the storage position. (See 6.5.1 Jack Storage on page 30.)

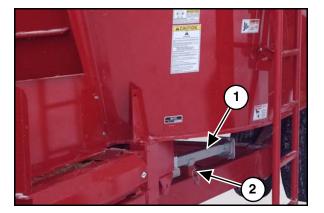


Keep hands, legs and feet from under tongue and hitch until jack is locked into place.

After hitching the mixer to the tractor.

Using the handle, raise the jack off the ground and remove the pin. Move the jack (Item 1) to the storage mount under the left hand side of the mixing tub. Reinstall the pin (Item 2) to lock the jack into the transport position.

NOTE: Keeping jack stored in proper position will keep it from getting damaged during transportation.



6.6 START-UP AND SHUT-DOWN



DO NOT allow anyone to operate, service, inspect or otherwise handle this equipment until all operators have read and understand all of the instructional materials in this Operator's And Parts Manual and have been properly trained in its intended usage.

Before operating the equipment, look in all directions and make sure no bystanders, especially small children are in the work area.



Shutoff and lockout power before adjusting, servicing, maintaining, or clearing an obstruction from this machine. Failure to heed may result in serious personal injury or death.



Always keep all shields and guards in place and securely fastened.

Keep hands, feet and clothing away.

6.6.1 Start-Up

Before Loading The Mixer:

Enter the tractor and start the engine.

Check to see that the discharge door is closed.

Be sure no one is inside the mixer.

Test run the mixer.

- a. Make sure the mixer is empty, then start the mixer.
- b. Slowly engage the PTO and operate at idle speed.
- c. Run the mixer and front conveyor (or chain and slat) if equipped for at least five minutes at 3/4 of rated PTO RPM.
- d. Raise and lower the door several times.
- e. Disengage the machine, turn off the tractor engine, and then remove driveline.
- f. Check the drive components to be sure they are not abnormally hot.

6.6.2 Shut-Down

Disengage the PTO.

Fully lower all doors.

Park the tractor on a flat, level surface.

Engage the parking brake, stop the engine and exit the tractor.

Remove the driveline and all electrical and hydraulic components.

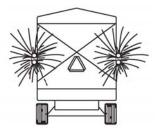
Check drive components to be sure components are not abnormally hot.



AVOID SERIOUS INJURY OR DEATH

- Read and understand owner's manual before using. Review safety precautions annually.
- Before operating the mixer, look in all directions and make sure no bystanders, especially small children are in the work area.
- No riders allowed when transporting.
- Do not drink and drive.
- Before moving, be sure required lights and reflectors are installed and working.
- Before maintenance or repair, stop vehicle, set parking brake, and remove ignition key.
- Place safety stands under frame and chock wheels before working on tires or chassis.
- Maintain wheel bolts at torque as recommended in the manual.
- If equipped with brakes, maintain proper adjustment.





Pull-Type Units

- You must observe all applicable traffic laws when transporting on public roadways. Check local laws for all highway lighting and marking requirements.
- Use flashing warning lights when transporting on ALL highways (public roadways) at ALL times (Tractor towed models) EXCEPT WHEN PROHIBITED BY LAW! (Check w/local law enforcement).
- By all state and federal laws, implement lights do not replace the SMV (Slow-Moving Vehicle) identification emblem. All towed agricultural vehicles must display SMV emblems when traveling LESS than 25 mph (32 kph).
- Check for traffic constantly. Be sure you can see that no one is attempting to pass you and that all traffic is sufficiently clear from you before making any turns.
- Securely attach to towing unit. Use a high strength appropriately sized hitch pin with mechanical retainer and attach safety chain.
- Do not exceed 20 mph (32 kph). Slow down for corners and rough terrain.

Failure to heed may result in serious personal injury or death.







To Prevent Serious Injury Or Death

- Keep hands and body out of the hitch area when attaching towing vehicle.
- Keep body clear of crush point between towing vehicle and load.
- Keep hands, legs and feet from under tongue and hitch until jack is locked into place.





To Prevent Serious Injury Or Death

- Shift to lower gear before going down steep grades.
- Avoid traveling on slopes or hills that are unsafe.
- Keep towing vehicle in gear at all times.
- Never exceed a safe travel speed (which may be less than 20 MPH.).
- Check that the braking and lighting systems are in good condition. Be sure that the tractor has adequate brakes to stop the loaded mixer.

IMPORTANT

If you will travel on public roads and it is legal to do so, you must know all rules governing such operation. This will include lighting and brake requirements in addition to traffic rules.

NOTE: For Truck Mounted models, an Optional Highway Lighting Package is available to assist in meeting these requirements. See your Meyer Dealer for Details.

6.7.1 Safety Chain

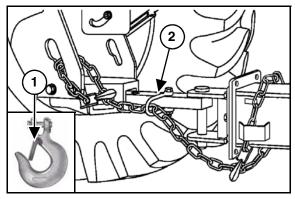


A safety chain must be installed to retain the connection between the tractor (or other towing vehicle) and implement whenever traveling on public roads in case the hitch connection would separate.

The chain must be of adequate size to hold the weight of the loaded mixer. See your ag cart or wagon owner / operator's manual and parts book, which is also available at www.meyermfg.com.

NOTE: If using a grab hook at the end(s) of the chain to secure the chain to itself, a hook latch (Item 1) must be installed.

The length of the safety chain is not to be longer than necessary to turn without interference. If any chain links or attachment hardware are broken or stretched, repair before using. Store chain so it does not corrode or become damaged. Do not use this chain for other implements because the strength and length of the chain may not be adequate. Identify this chain for use on this particular mixer.



NOTE: Do not use the intermediate support (Item 2) as the attaching point.



If you do not have a safety chain, or a replacement safety chain is needed, see your local Meyer dealer who will supply you with the proper chain for your application. Do not operate on public roads until you are able to travel with the safety chain properly installed.

6.7.2 Brake Information

Check that the braking and lighting systems are in good condition. Be sure that the tractor has adequate brakes to stop the mixer.

See your tractor / chassis manual for brake and braking Information.

6.7.3 Tractor Towing Size Requirements

Use the following charts to help calculate the minimum tractor weight when towing without implement brakes. The minimum tractor weight, up to 20 mph (33 kph) needs to be 2/3's of the box Gross Weight (GW). Gross Weight is calculated by the empty weight of the box and undercarriage combined added to the Load Weight. Then take the Gross Weight and multiply it by 0.667 and you will get the Minimum Required Weight of the Tractor. A tractor with this recommended weight for your machine is normally adequate for towing the loaded machine under average conditions. Unit weight will vary depending on door and option selected.

Gross Weight

MIXER WEIGHT, EMPTY (LBS)		UNDERCARRAIGE WEIGHT (LBS)		LOAD (LBS)		GROSS WEIGHT (GW) (LBS)
	+		+		Ш	GW
	+		+		=	
	+		+		Ш	
	+		+		=	

Minimum Required Weight of the Tractor

2/3		GROSS WEIGHT (GW) (LBS)		MINIMUM TRACTOR WEIGHT (LBS)
0.667	х	GW	=	TW
	х		=	

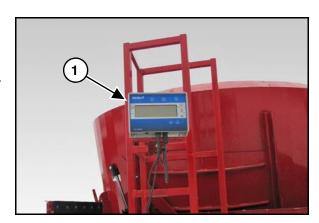
6.8 OPTIONAL EQUIPMENT

Digital Scale Indicator

Refer to scale indicator (Item 1) manufacturer's operator manual for operation and maintenance.

NOTE: Some scale drift may occur after the scale is turned on but should level out within 10 to 15 minutes. Temperature changes may also cause some drifting.

See your Digi-Star manual for additional scale information.





DO NOT allow anyone to operate, service, inspect or otherwise handle this mixer until all operators have read and understand all of the instructional materials in this Operator's And Parts Manual and have been properly trained in its intended usage.

Before operating the mixer, look in all directions and make sure no bystanders, especially small children are in the work area.

Do not climb or step onto the platform or ladder before the parking brake has been applied.

Turn on level ground. Slow down when turning.

Go up and down slopes, not across them.

Keep the heavy end of the machine uphill.

Do not overload the machine.

Check for adequate traction.



7.1 GENERAL

The mixer is designed for blending dairy and beef rations. The mixer performance can vary according to the difference in material, loading sequence, mixing speed and unloading methods. The following guidelines should be understood before operating the mixer.

A new mixer will need an initial run-in period to polish the augers and mixer sides to achieve correct material movement inside the mixer. Until the unit is polished inside the user may experience material spillage, dead spots, or increased horsepower requirements. The load size may need to be reduced until the unit is polished inside.

IMPORTANT

Always operate at the rated PTO speed but DO NOT EXCEED THE RATED PTO SPEED. If the mixer is operated faster than the rated PTO speed the strain on the drive train and mixer is greatly increased.

IMPORTANT

Do not force hay into the auger with loader or any other device.

IMPORTANT

Be aware of the overall size of the mixer to allow clearance through doorways.

7.1.1 Material



Never hand feed material into mixer while it is running. Augers may cut or grab hands, clothing, or material being loaded, causing severe injury. Always stop the tractor's engine before hand loading materials.

Some feed materials will need to be processed alone in the mixer before they can be efficiently mixed with other feed materials.

- Large square or round bales of alfalfa
- Large square or round bales of high moisture content
- Large square or round bales of long mixed grasses, wheat or oat hay and crop residue bales (straw or soybean stubble)
- Very light and bulky feed material

NOTE: Always remove any twine, net, or plastic wrap from bales before loading into mixer.



DO NOT ENTER MIXER CHAMBER WHILE MIXER IS RUNNING! Shut off and lock out power before attempting to clear an obstruction or to perform work inside the mixing chamber. (See 5.3 SHUTOFF & LOCKOUT POWER on page 24.)



Be aware of power lines and other overhead obstructions when loading with a telescopic arm or loader. Failure to obey warnings could cause serious injury or death.



Comply with the safety instructions stipulated in the User Manuals for the operation / handling equipment used for loading the mixer.

Shutoff and lockout power before adjusting, servicing, maintaining, or clearing an obstruction from this machine. Failure to heed may result in serious personal injury or death.

Do not climb or step onto the platform or ladder before the parking brake has been applied.

IMPORTANT

Overloading may cause failure of axles, tires, structural members, hitches, loss of vehicle control. <u>DO NOT</u> exceed maximum gross weight. (See 9.0 SPECIFICATIONS on page 57.)

NOTE: Overloading can have detrimental effects on the integrity of the implement and it's safe use. Overloading will void warranty and increase risk to the operator's safety. Always be aware of your gross weight.

MAXIMUM FORMULA MIXER GROSS WEIGHT						
MODEL	LBS					
F355						
F470						
F585						
F700						
F815						
F1015						
F1215						

MATERIAL ESTIMATED WEIGHT PER CUBIC FOOT						
MATERIAL	LBS / CU.FT.					
Soybeans	47 lbs.					
Cotton Seed (Dry)	20 lbs.					
Corn (Shelled)	45 lbs.					
Corn Silage	30 lbs.					
Haylage 20 lbs.						
Source: S	AE D384.2					

NOTE: Maximum Gross Weight is the lesser value between the implement, chassis, or tires.

When loading material into the mixer with an end-loader, dump the material into the center of the mixer.

- 1. Be sure that mixer is parked on a level surface.
- 2. The tractor should be straight in line with the mixer.
- 3. Completely close the mixer discharge door(s).
- 4. Set hay stops according to the instructions in this manual.
- 5. Enter the tractor and start the engine.
- 6. Engage the PTO / hydraulics.
- 7. Set the tractor engine to operate at approximately 3/4 of rated PTO speed.
- Load baled hay into the center of the mixer.

9. Allow mixer enough time to process the bale before adding other ingredients (4-10 minutes).

NOTE: Processing of long stem forages will continue as other materials are added and mixed. Be careful not to over process these materials before adding other ingredients.

NOTE: Using the mixer two speed shiftable gearbox, roughages can be processed in "Low" or "High" depending on how fast the bale needs to be processed.



When loading from a raised bay or platform, adopt the necessary measures (safety rails, etc.) to avoid people or equipment from falling into the machine.

7.2.1 Loading Steps

NOTE: The loading sequence could vary.

The following is an example of a typical loading sequence:

- 1. Load and process long stemmed materials.
- 2. Load haylage and corn silage.
- 3. Load minerals, proteins, and other small quantity ingredients.
- 4. Load grains, wet and dry commodities, etc.
- 5. Load all liquid fats, water, other liquids. Always load liquids at the center of the mixing chamber.



Load all ingredients as quickly as possible. Allow a final mix time of 3-7 minutes, or whenever the load looks consistently mixed.



Never load long stem bales last. They will not be processed or mixed into the ration and may cause unloading difficulties or spillage.

7.3 MIXING

Normal mixing speed is 3/4 to full PTO speed. Time available to mix, thoroughness of the mix, and ingredients are all factors that must be considered when deciding on when and how fast to operate the mixer.



DO NOT ENTER MIXER CHAMBER WHILE MIXER IS RUNNING! Shut off and lock out power before attempting to clear an obstruction or to perform work inside the mixing chamber. (See 5.3 SHUTOFF & LOCKOUT POWER on page 24.)



Always operate at the rated PTO speed but DO NOT EXCEED THE RATED PTO SPEED. If the mixer is operated faster than the rated PTO speed the strain on the drive train and mixer is greatly increased.



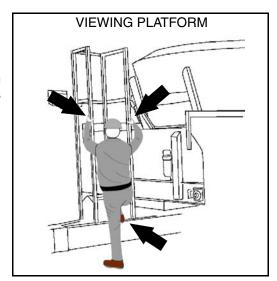
Do not force hay into the auger with loader or any other device.

7.4 PLATFORM OPERATION

Park the tractor on a flat, level surface.

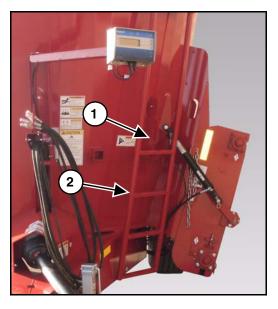
Engage the parking brake.

NOTE: Always maintain a three-point contact at all times when getting on and off the ladder. Use the ladder rails and steps when climbing the ladder.



7.5 FOLDING LADDER

To unfold the ladder, release latch (Item 1) and pull ladder fully out (Item 2). To return ladder to storage position, pull ladder out to "unlock" it and guide the ladder support back up to its original position. Replace latch.



7.6 UNLOADING



Shutoff and lockout power before adjusting, servicing, maintaining, or clearing an obstruction from this machine. Failure to heed may result in serious personal injury or death.



DO NOT ENTER MIXER CHAMBER WHILE MIXER IS RUNNING! Shut off and lock out power before attempting to clear an obstruction or to perform work inside the mixing chamber. (See 5.3 SHUTOFF & LOCKOUT POWER on page 24.)

NOTE: Unload the mixed ration within a short time of mixing. A fully loaded mixer which is bounced over rough terrain or allowed to settle will require more horsepower during start-up.

- 1. Enter the tractor, start the engine, release the parking brake.
- 2. Move the tractor and mixer to the unloading area.
- Be sure that mixer is parked on a level surface.
- 4. The tractor should be straight in line with the mixer.
- 5. Shift hydraulic sliding base discharge into working position, or lower slide tray / incline extension / chain and slat (if equipped).

NOTE: The two speed shiftable gearbox allows you to, shift into "Low" to ease the start of a full load for unloading.

- 6. Enter the tractor and start the engine.
- 7. Using the two speed shiftable gearbox, shift the gearbox into "Low" to ease the start of a full load for unloading.
- 8. Engage the PTO.
- 9. Set the tractor engine to operate at approximately 1/2 of rated PTO speed.
- 10. Open discharge door slowly to adjust the amount of material to be discharged. Adjust door height or conveyor speed for desired flow of feed.
- 11. After the load begins to discharge, increase the tractor RPM to full rated PTO speed to ensure fast and thorough clean out while driving forward along the discharge path.

NOTE: The mixer PTO MUST be stopped before shifting the 2-speed gearbox to prevent damage to the gearbox.

12. The 2-speed gearbox can be shifted into "HIGH" during the unloading process. Stop the PTO prior to shifting. This will help remove any feed remaining on the augers and assist in keeping an even feed flow until the mixer is empty.

NOTE: For Truck Mounted Models, do not operate above the rated 1500 RPM engine speed.

- 13. When finished unloading, reduce engine speed to idle and disengage the PTO / hydraulics.
- 14. Move the mixer forward, away from the unloaded material.
- 15. Park the mixer on a flat, level surface.
- 16. Engage the parking brake, stop the engine and exit the tractor.
- 17. Disconnect the driveline.
- 18. Close the discharge door.
- 19. Shift hydraulic sliding base discharge into storage position, or raise slide tray / incline extension / chain and slat (if equipped).



If any component fails, shut off all power to the mixer and move the mixer to a safe work area. Repair or replace damaged components before proceeding with unloading of the mix.

7.7 UNHOOKING THE TRACTOR



Keep hands, legs and feet from under tongue and hitch until jack is locked into place.

- 1. Park the implement on level ground. Put the tractor controls in neutral, set the parking brake, and turn the engine off before dismounting.
- 2. Place wheel chocks in front and in back of the implement wheels on opposite sides to prevent the implement from rolling after the tractor is unhooked.
- 3. Remove the hydraulic hose ends from the tractor hydraulic ports and secure the hose ends in the key slot holes on the front of the mixer to keep them clean.
- 4. Remove the light cords and any optional equipment connections.
- 5. Remove the jack from the storage mount and reinstall the jack to the mount. Crank the jack down until the hitch lifts off the tractor draw bar.
- 6. Remove the hitch pin.
- 7. Unhook safety chain from tractor drawbar and intermediate support.
- 8. Slowly drive the tractor away from the implement.



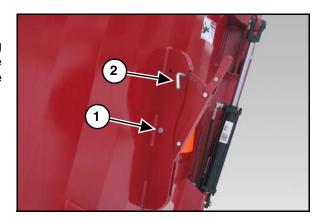
Do not adjust the hay stops while the mixer is running. Moving feed inside the mixer can make the hay stop move suddenly causing injury to the person making the adjustment.



Never operate the mixer without the hay stop lock bolt installed.

7.9.1 Hay Stop Lock Bolt

The hay stop lock bolt (Item 1) prevents the hay stop from rotating past the intended range of operation. If the hay stop bolt and the positioning pin (Item 2) are removed, the hay stop could contact the moving auger and cause damage to the hay stop and auger.



Position	Setting	Material
Α	High	Light and bulky material (dry grasses)
В	Medium High	Alfalfa bales and other forages
С	Neutral	Unrestrained movement of feed
D	Medium Low	Heavier rations
E	Low	Aggressive cutting

Hay Stop Position B Position C Position D Hay Stop Position E

Hay Stop Position B Position C Position D Position E

7.10 MIXER TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE SOLUTIONS
Forage is cut too short	 Reduce the initial processing time. Adjust hay stops to a less aggressive or neutral position. Reduce total loading time. Reduce the mixer RPM to limit aggressiveness in processing. Modify the knife type, quantity, setting or placement.
Spillage is Occurring	 If the machine is equipped with a 2 speed shiftable gearbox, shift into "Low". Reduce load size. Reduce tractor and/or mixer RPM. Make sure machine is level. The load size may need to be reduced until the unit is polished inside. Adjust hay stops to a less aggressive or neutral position. Adjust knives to a less aggressive position. If spillage still occurs, the optional side extensions or hay retention ring may need to be installed.
Requiring High Horsepower	 Reduce load size. Adjust hay stops to a less aggressive or neutral position. The load size may need to be reduced until the unit is polished inside. Modify the knife type, quantity, setting, or placement. If the machine is equipped with a 2 speed shiftable gearbox, shift into "Low".
Dead Spots	 The load size may need to be reduced until the unit is polished inside. The auger scraper may need to be adjusted. (See the Adjustments Section.)
Digital Scale Indicator	 Refer to scale manufacturer's operator manual for operation and maintenance. Some scale drift may occur after the scale is turned on but should level out within 10 to 15 minutes. Temperature changes may also cause some drifting.

8.0 MAINTENANCE

8.1 LUBRICATION



SHUTOFF & LOCKOUT POWER before adjusting, cleaning, lubricating or servicing the machine. (See 5.3 SHUTOFF & LOCKOUT POWER on page 24.)

IMPORTANT

Fluid such as hydraulic fluid, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.

NOTE: When welding do not allow electrical current to flow through bearings, roller chains, or scale weigh bars. Ground the welder directly to the part being welded. Always disconnect the power cord from scale indicator before welding.

NOTE: Always use a good quality lithium based - NLGI #2 grease when lubricating the mixer components.

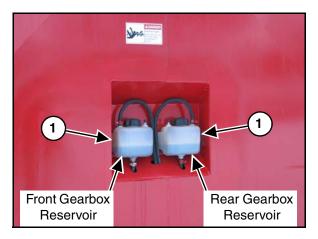
NOTE: Over lubrication is a major cause of bearing failures. Please relubricate conservatively when unsure of bearing requirements.

8.1.1 Daily or every 8-10 loads:

NOTE: See Specifications, Page 49 for proper oil type and capacities.

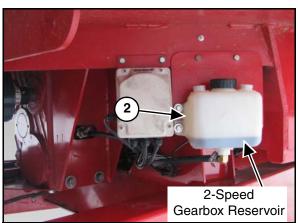
Check the planetary gearbox oil levels daily to prevent abnormal component wear. Add new oil to the reservoir tank (Item 1) if the oil level is not at the oil reservoir mark.

Check for any oil leaks. If leaks occur, eliminate the problem.



Check the 2-speed gearbox oil level daily to prevent abnormal component wear. Add new oil to the reservoir tank (Item 2) if the oil level is not at the oil reservoir mark.

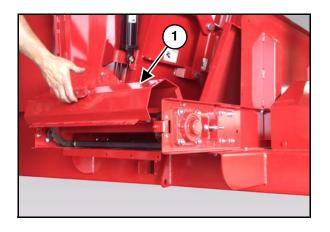
Check for any oil leaks. If leaks occur, eliminate the problem.



8.1.2 Weekly:

Optional Equipment Maintenance (If Equipped)

Clean out under chain return shield (Item 1).



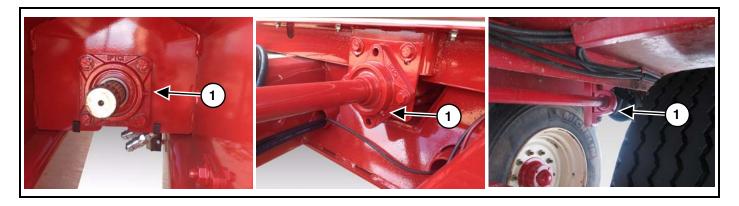
8.1.3 Monthly:

Driveline

NOTE: The number of input bearings will vary depending upon your model mixer.

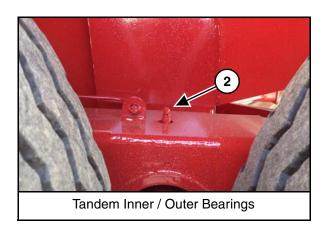
NOTE: Shielding has been removed for illustration purposes only.

Grease all input bearings (Item 1).

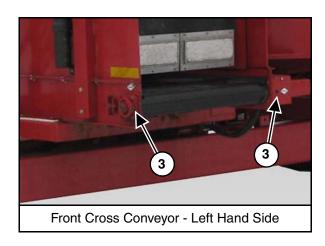


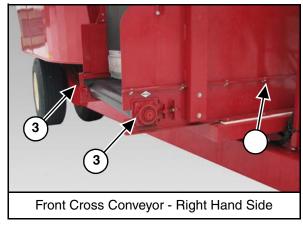
Optional Equipment Maintenance (If Equipped)

Grease the tandem inner / outer bearings (Item 2).



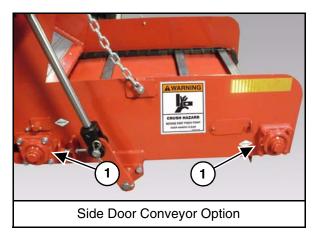
Grease the four (4) front cross conveyor bearings (Item 3).





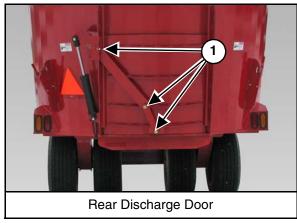
Side Door Conveyor (If Equipped)

Grease the four (4) side door conveyor bearings (Item 1) (both sides).



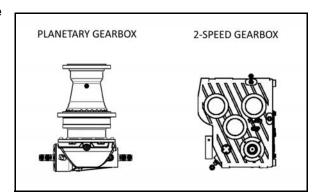
8.1.4 Every 40 hours:

Oil Door Pivots (Item 1).



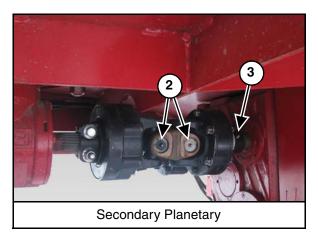
8.1.5 50 hours:

First oil change in the planetaries and 2-speed gearbox. (See page 49).



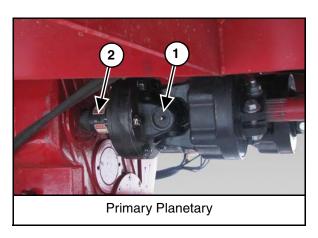
Grease all universal joints (Item 2) and the slide (Item 3).

NOTE: Shielding has been removed for illustration purposes only.



Grease all universal joints (Item 1) and the slide (Item 2).

NOTE: Shielding has been removed for illustration purposes only.

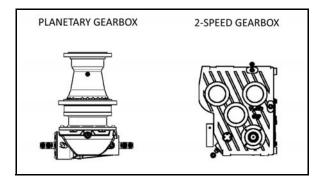


8.1.6 Biannually (500 - 600 hours):

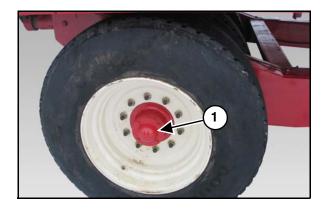
Change oil in the 2-speed gearbox.

8.1.7 Annually (1500 hours):

Change oil in the planetaries and 2-speed gearbox. (See page 49).



Grease the wheel bearings (Item 1).





SHUTOFF & LOCKOUT POWER before adjusting, cleaning, lubricating or servicing the machine. (See 5.3 SHUTOFF & LOCKOUT POWER on page 24.)

IMPORTANT

Fluid such as hydraulic fluid, grease, etc. must be disposed of in an environmentally safe manner. Some regulations require that certain spills and leaks on the ground must be cleaned in a specific manner. See local, state and federal regulations for the correct disposal.

NOTE:

- In order to avoid sludge deposits, change the oil while the gear unit is still warm.
- For an effective oil change, the unit should be flushed with a liquid detergent recommended by the lubricant supplier.
- The mixer should be level when changing gearbox oil.

8.1.8.1 Planetary Gearbox

Draining

All Models: Place a container of sufficient capacity under the gearbox (Item 4).

355 / 470 Models: Drain the planetary by removing the drain plug (Item 5).

585 / 700 / 815 / 1015 / 1215 Models: Drain the planetary by loosening the hose clamp and removing the hose.

All Models: Rinse the bottom hose with clean oil to remove any metal particles or trapped water. Reattach hose, clamp, or drain plug. After the unit is completely drained, reinstall the drain plug or hose and hose clamp.

Front Gearbox Reservoir Rear Gearbox Reservoir

Filling

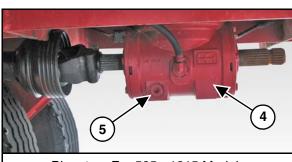
Filling with an oil pump:

Loosen the hose clamp and detach the lower hose (1) on the reservoir (Item 2). Unbolt reservoir and lay so the top hose and reservoir is below the hose used for filling (1).

Connect oil pump to lower hose and fill with oil until the catch basin fills with approximately 2 quarts of oil. Discard this oil if it is dirty. Reattach the lower hose (1) with the hose clamp. Bolt the reservoir back in place. Fill the reservoir to the oil level mark and reinstall the cap (Item 3).



Inspect the reservoirs breather, make sure it is not plugged, and check for leaks.



Planetary For 585 - 1215 Models



	PLANETARY LUBRICATION SPECIFICATIONS					
Model	Part Number	Description	Oil Type	Capacity		
355 / 470	119-16-13.4-1	1600 Planetary 13.4:1	Synthetic ISO 220 Or Equivalent	Approx. 23.5 Quarts		
585 / 700	119-18-13.92-1	1800 Planetary 13.92:1	Synthetic ISO 220 Or Equivalent	Approx. 14.8 Quarts		
815 /1015	119-21-25.67-1	2100 Planetary 25.57:1	Synthetic ISO 220 Or Equivalent	Approx. 18.5 Quarts		
1215	119-32-24.8-1	3200 Planetary 24.8:1	Synthetic ISO 220 Or Equivalent	Approx. 24.3 Quarts		

8.1.8.2 2-Speed Gearbox

Draining

Place a container of sufficient capacity under the gearbox.

Drain the unit by removing the plug from the bottom of the gearbox. After the unit is completely drained, reinstall the plug.

Filling

Remove filler plug and fill with oil. for proper oil type and capacity.

Replace the filler plug.



IMPORTANT

Check the gearbox oil levels regularly to prevent abnormal component wear. Add oil to the reservoir tanks if oil level is not at the oil level mark.

	2-SPEED GEARBOX LUBRICATION SPECIFICATIONS					
Model	Part Number	Description	Oil Type	Capacity		
585 / 700	119-2SP-1.8-2.7-2	1.8 Oil / 2.70:1	Synthetic ISO 220 Or Equivalent	Approx. 12 Quarts		
815 /1015 / 1015HD / 1215	119-2SP-1.0-1.5-2	1.0 Oil / 1.50:1	Synthetic ISO 220 Or Equivalent	Approx. 12 Quarts		

Equivalent Viscosity of ISO-VG Grades at 104°F and SAE Gear Lube Grades

ISO-VG Grade	SAE Gear Lube Grade
46	75W
100	80W-90
220	90
460	85W-140
1500	250

8.2 ADJUSTMENTS



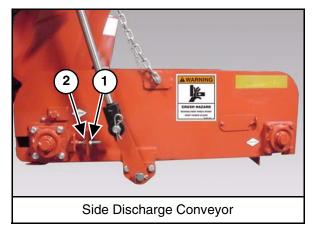
SHUTOFF & LOCKOUT POWER before adjusting, cleaning, lubricating or servicing the machine. (See 5.3 SHUTOFF & LOCKOUT POWER on page 24.)



If work must be done inside the mixer put a protective cover over the auger knives to avoid injury. The hopper and flighting may be slippery. Use caution when stepping on or standing inside the mixer.

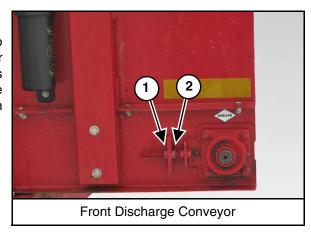
8.2.1 Side Discharge Conveyor

To adjust tension of the chain, loosen the inner nut (Item 1) and either tighten or loosen the outer nut (Item 2) as needed. Count the number of turns you are adjusting so you can adjust the other end. Once you have proper tension, retighten the inner nut (Item 1) on both sides.



8.2.2 Front Discharge Conveyor - Belt

Locate the tighteners on the opposite end of the drive motor. To adjust tension of the belt, loosen the inner nut (Item 1) and either tighten or loosen the outer nut (Item 2). Count the number of turns you are adjusting so you can adjust the other end. Once you have properly adjusted the belt tension, retighten the inner nut (Item 1) on both sides.



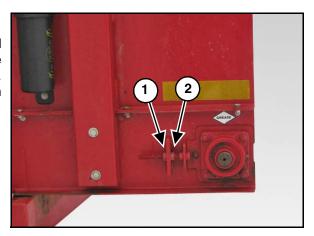
8.2.2.1 Tracking

When tracking properly, the belt assembly should track straight and not rub either side of the conveyor frame.

To adjust tracking of the belt, locate the tightener across from the drive motor. Loosen the inner nut (Item 1) and either tighten or loosen the outer nut (Item 2). Once you have adjusted, retighten the inner nut (Item 1).

8.2.3 Front Discharge Conveyor - Chain

To adjust tension of the chain, loosen the inner nut (Item 1) and either tighten or loosen the outer nut (Item 2) as needed. Count the number of turns you are adjusting so you can adjust the other end. Once you have proper tension, retighten the inner nut (Item 1) on both sides.

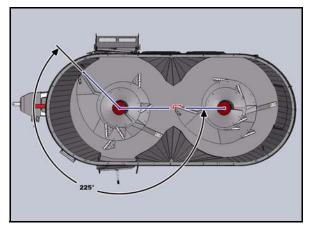


8.2.4 Auger Scraper Bar

Check the auger scraper monthly for proper clearance with the side panel. Clearance should not exceed 1/2". If gap exceeds 1/2", the scraper should be adjusted.

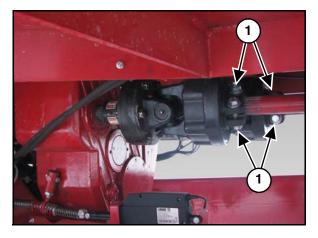
8.2.5 Auger Timing

Auger timing is critical. Whenever disconnecting the PTO to the two speed gearbox or to one of the planetaries, it is critical that the front leading edge be 225° from the rear leading edge when the rear leading edge is pointing to the front auger.



8.2.6 Torque Disconnect Bolts

Check the bolts (Item 1) on the torque disconnect weekly to assure that the bolts are tightened to standard 232 ft. lbs. for an M16 x 2.00 pitch, 10.9 zinc plated fastener.





Shutoff and lockout power before adjusting, servicing, maintaining, or clearing an obstruction from this machine. Failure to heed may result in serious personal injury or death.



If work must be done inside the mixer put a protective cover over the auger knives to avoid injury. The hopper and flighting may be slippery. Use caution when stepping on or standing inside the mixer.

Knives are designed and intended for processing and mixing rations that include long stem forages.

NOTE: Some rations may require adding or removing knives, or changing knife position to obtain the desired result.

8.2.7.1 Knife Removal

Individual knives may be removed from the auger if the ration does not include hay or includes very small amounts of small square bale hay or tub ground hay. Removing knives will decrease the aggressive cutting action on the stem length of the ration and may also reduce horsepower requirements.

8.2.7.2 Adding Knives

If the hay in your ration is not being processed enough or fast enough extra knives may be ordered through your dealer. Adding extra knives will help break down and process materials faster, but may increase the horsepower required to process and mix.

8.2.7.3 Knife Placement

The placement of knives towards the bottom of the auger will process the forage faster and make the stem length shorter but may require more horsepower. Placement of knives higher on the auger will assist in breaking up bales faster after initial loading.

8.2.7.4 Knife Position

"Out" Position

When the knives are in the "out" position they tend to move the long stem hay and lighter bulky materials best in the early stages of processing and mixing. This setting may result in feed spillage in certain materials. Knives placed in this setting are very aggressive in processing feed and will also cause an increase in horsepower requirement.

"In" Position

When the knives are in the "in" position they will slow down the long stem hay and lighter bulky materials in the early stages of processing and mixing. Less spillage will occur due to clearance between the knives. This setting is more desirable for heavy rations with long run time and where over processing can occur. Knives placed in this position are less aggressive in processing feed and will reduce the horsepower requirement.

8.2.7.5 Replacing Damaged or Worn Knives

When knives become worn and rounded on the leading edge their efficiency is greatly reduced. This results in longer processing times and increased horsepower requirements. Refer to your parts manual and contact your Meyer MFG dealer for replacement part ordering.

8.3 STORING THE MIXER

LOCKOUT / TAGOUT the machine / mixer. (See 5.3 SHUTOFF & LOCKOUT POWER on page 24.)

Extended Storage

Sometimes it may be necessary to store your Meyer mixer for an extended period of time. Below is a list of items to perform before storage.

- Fully empty the material from the mixer. (See 7.6 UNLOADING on page 39.)
- Thoroughly clean the mixer inside and outside.
- Remove all material build-up.
- Lubricate the equipment. (See 8.1 LUBRICATION on page 43.)
- Inspect all mixer components for wear or damage. Repair and replace components as necessary.
- Make appropriate adjustments to equipment. (See 8.2 ADJUSTMENTS on page 50.)
- Place hydraulic hoses and 7-pin connector in the storage brackets (if equipped).
- Inspect the hitch and all welds on the equipment for wear and damage.
- Check for loose hardware, missing guards, or damaged parts.
- Check for damaged or missing safety signs (decals). Replace if necessary.
- Touch up all paint nicks and scratches to prevent rusting.
- Place the equipment in a dry protected shelter.
- · Place the equipment flat on the ground.

8.4 RETURNING THE MIXER TO SERVICE

After the Meyer mixer has been in storage, it is necessary to follow a list of items to return the equipment to service.

- Be sure all shields and guards are in place.
- Lubricate the equipment.
- Check tire pressure and that the lug nuts are tight.
- Connect to a tractor and operate equipment; verify all functions operate correctly.
- Check for leaks. Repair as needed.



Before servicing this equipment, ensure that all personnel, including family members are familiar with the equipment and the safety hazards that are present, along with the safety practices that should be observed while working in this equipment.



Inspect the chassis' axles, o-beams, spindles, tires, hitches & all safety shielding, safety signs and safety lighting regularly.

Any individual that will be adjusting, servicing, maintaining, or clearing an obstruction from this machine needs to ensure that this machine stays safely "OFF" until the adjustment, service, or maintenance has been completed, or when the obstruction has been cleared, and that all guards, shields, and covers have been restored to their original position. The safety of all individuals working on or around this machine, including family members, are affected. The following procedure will be referred to throughout this manual, so be familiar with the following steps.

8.5.1 Shutoff & Lockout Power Recommendations

1. Think, Plan and Check

- a. Think through the entire procedure and identify all the steps that are required.
- b. **Plan** what personnel will be involved, what needs to be shut down, what guards / shields need to be removed, and how the equipment will be restarted.
- c. **Check** the machine over to verify all power sources and stored energy have been identified including engines, hydraulic and pneumatic systems, springs and accumulators, and suspended loads.
- 2. **Communicate** Let everyone involved, including those working on or around this machine, that work is being done which involves keeping this machine safely "OFF".

3. Power Sources

- a. **LOCKOUT -** Shut off engines and take the key, or physically lock the start/on switch or control. Disconnect any power sources which are meant to be disconnected (i.e. electrical, hydraulic, and PTO of pull-type units).
- b. TAGOUT Place a tag on the machine noting the reason for the power source being tagged out and what work is being done. This is particularly important if the power source is not within your sight and/or will need to be isolated for a longer period of time.
- 4. Stored Energy Neutralize all stored energy from its power source. Ensure that this machine is level, set the parking brake, and chock the wheels. Disconnect electricity, block moveable parts, release or block spring energy, release pressure from hydraulic and pneumatic lines, and lower suspended parts to a resting position.
- 5. **Test -** Do a complete test and personally double check all of the above steps to verify that all of the power sources are actually disconnected and locked out.
- 6. Restore Power When the work has been completed, follow the same basic procedures, ensuring that all individuals working on or around this machine are safely clear of the machine before locks and tags are removed and power is restored.

IMPORTANT

It is important that everyone who works on this equipment is properly trained to help ensure that they are familiar with this procedure and that they follow the steps outlined above. This manual will remind you when to Shutoff & Lockout Power.

At times parts on this implement will become worn or damaged. Performing repairs on this implement can pose a risk of injury including death. To reduce risk, the party that will be doing the repair should be very knowledgeable of the implement and the equipment that they will be using to do the repair.

- Review the repair so that a plan can be put together and the proper equipment can be used to repair this implement safely and correctly.
- Personal safety equipment may include items such as safety glasses, protective footwear, hearing protection, gloves, fire retardant clothes, etc.



Crushing Hazard

Do Not work under suspended or blocked parts



- The use of hoists and/or supports may be needed to handle heavy components.
- If the implement is being repaired in the field, make sure the parking brake of the tractor is engaged, the implement is on solid and level ground.
- Welding and torching should be done by properly trained individuals who have proven their skills.



Call the factory for any additional details you may need to perform the repair. Some parts may come with instruction sheets to assist in the repair. Instructions sheets may be provided with your parts order, otherwise, if available, instruction sheets can be e-mailed or faxed for you convenience.

NOTE: Be environmentally friendly and dispose of any waste materials properly. Recycle when appropriate.



9.0 SPECIFICATIONS

9.1 MODELS F355, F470, F585

DIMENSIONS	F355	F470	F585
Overall Length - side door / front door	215" / 245"	219" / 249"	270" / 285"
Mixing Chamber Length			212"
Overall Height - Tire Option Used	385 / 65 x 22.5	385 / 65 x 22.5	245 / 70-19.5
Overall Height - Base Machine	84"	98"	97"
Overall Height - Belt Extensions	90"	104"	103"
Overall Height - Hay Retention Ring	90"	104"	103"
Tread Width	98"	98"	87"
Transport Width - front conveyor / side conveyor - w/36" ext.	98" / 110"	98" / 110"	99" / 113"
Max Discharge Reach - Front Cross Conveyor - flat	7"	7"	9"
Max Discharge Reach - Front Cross Conveyor - incline 24"/ 36" / 48" (In Down Position)	17" / 29" / 40"	17" / 29" / 40"	23" / 34" / 45"
Max Discharge Reach - Side Conveyor - 24" / 36" / 48" / 60" / 72" (In Down Position)	22" / 33"/ 45" / 56" / 67"	22" / 33"/ 45" / 56" / 67"	35" / 46" / 57" / 68" / 79"
Max Discharge Reach - Side Slide Tray	5"	5"	21"
Max Discharge Reach - Side Belt Extension	3"	3"	16"
Max Discharge Height - Front Cross Conveyor - flat	26"	26"	32"
Max Discharge Height - Front Cross Conveyor - incline -24" / 36" / 48" (In Down Position)	27" / 30" / 33"	27" / 30" /33"	34" / 37"/40"
Max Discharge Height - Side Conveyor - 24" /36" / 48" / 60" / 72" (In Down Position)	23" / 27" / 31" / 35" / 39"	23" / 27" / 31" / 35" / 39"	32" / 36" / 40" / 44" / 48"
Max Discharge Height - Side Slide Tray	8"	8"	15"
Max Discharge Height - Side Belt Extension	15"	15"	24"

SPECIFICATIONS	F355	F470	F585
Mixing Capacity - no extensions	355 Cu. Ft.	470 Cu. Ft.	585 Cu. Ft.
Mixing Capacity - extensions	400 Cu. Ft.	520 Cu. Ft.	647 Cu. Ft.
Unit Weight - front discharge - pounds	N/A	N/A	N/A
Unit Weight - side discharge - pounds	N/A	N/A	N/A
Maximum Net Load - pounds	12,000	15,600	19,410
Auger Qty.	2	2	2
Auger Diameter	68"	68"	88"
Auger Speed - standard / high speed	27 / 40 RPM	27 / 40 RPM	27 / 40 RPM
Auger - Upper Flighting Thickness	1/2"	1/2"	5/8"
Auger - Lower Flighting Thickness	5/8"	5/8"	5/8"
Auger - Knives - adjustable - per auger	4	5	5
Planetary Drive	straight-drive	straight-drive	split-drive
PTO Drive	540 RPM	540 RPM	1000 RPM
Drive Protection	shear-bolt	shear-bolt	torque-disconnect
Discharge Door Opening - Front	35" x 40"	42" x 40"	42" x 40"
Discharge Door Opening - Side	35" x 40"	42" x 40"	42" x 40"

SPECIFICATIONS	F355	F470	F585
Discharge Door Opening - Rear	35" x 40"	42" x 40"	42" x 40"
Discharge - Conveyor Width - front/side	30" / 36"	30" / 36"	36" / 42"
Discharge - Front Cross Conveyor Travel - left or right	8"	8"	8"
Tub / Trailer - Floor Thickness	1/2"	1/2"	5/8"
Tub / Trailer - Sidewall Thickness	1/4"	1/4"	1/4"
Tub / Trailer - Trailer or Subframe	single-axle	single-axle	single-axle
Tub / Trailer - Spindle Diameter	2 7/8"	2 7/8"	2 3/4"
Tub / Trailer - Scale System	3-point	3-point	4-point
Tongue Weight - % gross	10%	10%	10%
Tractor Requirement - PTO HP	75	90	110

9.2 MODELS F700, F815, F1015 AND F1215

DIMENSIONS	F700	F815	F1015	F1215
Overall Length - front door / side door	273" / 288"	296" / 326"	300" / 330"	304" / 334"
Mixing Chamber Length	217"	254"	261"	269"
Overall Height - Tire Option Used	245 / 70-19.5	385 / 65R x 22.5	385 / 65R x 22.5	385 / 65R x 22.5
Overall Height - Base Machine	107"	105"	117"	130"
Overall Height - Belt Extensions	113"	111"	123"	136"
Overall Height - Hay Retention Ring	113"	111"	123"	136"
Tread Width	87"	105"	105"	105"
Transport Width - front conveyor / side conveyor - w/ 36" ext.	101" / 115"	116" / 131"	117" / 132"	118" / 133"
Max Discharge Reach - Front Cross Conveyor - flat	9"	9"/0"	9"/0"	9"/0"
Max Discharge Reach - Front Cross Conveyor - incline - 24" / 36" / 48" (In Down Position)	23" / 34" / 45"	13" / 25" / 36"	13" / 25" / 36"	13" / 25" / 36"
Max Discharge Reach - Side Conveyor - 24" /36" / 48" / 60" / 72" (In Down Position)	35" / 46" / 57" / 68" / 79"	35" / 46" / 57" / 68" / 79"	35" / 46" / 57" / 68" / 79"	35" / 46" / 57" / 68" / 79"
Max Discharge Reach - Side Slide Tray	21"	18"	18"	18"
Max Discharge Reach - Side Belt Extension	16"	15"	15"	15"
Max Discharge Height - Front Cross Conveyor - flat	32"	41"	41"	41"
Max Discharge Height - Front Cross Conveyor - incline - 24" / 36" / 48" (In Down Position)	32" / 37"/ 40"	41"/ 44"/ 47"	41"/ 44"/47"	41"/ 44"/ 47"
Max Discharge Height - Side Conveyor - 24" / 36" / 48" / 60" / 72" (In Down Position)	32" / 36" / 40" / 44" / 48"	41" / 45" / 49" / 54" / 58"	41" / 45" / 49" / 54" / 58"	41" / 45" / 49" / 54" / 58"
Max Discharge Height - Side Slide Tray	15"	25"	25"	25"
Max Discharge Height - Side Belt Extension	24"	32"	32"	32"

SPECIFICATIONS	F700	F815	F1015	F1215
Mixing Capacity - no extensions	693 Cu. Ft.	818 Cu. Ft.	1016 Cu. Ft.	1215 Cu. Ft.
Mixing Capacity - extensions	760 Cu. Ft.	910 Cu. Ft.	1112 Cu. Ft.	1315 Cu. Ft.
Unit Weight - front discharge - pounds	N/A	N/A	N/A	N/A
Unit Weight - side discharge - pounds	N/A	N/A	N/A	N/A
Maximum Net Load - pounds	22,800	27,300	33,360	39,450
Auger Qty.	2	2	2	2
Auger Diameter	88"	107"	107"	107"
Auger Speed - standard / high speed	27 / 40 RPM			
Auger - Upper Flighting Thickness	5/8"	5/8"	5/8"	5/8" heat treated
Auger - Lower Flighting Thickness	5/8"	3/4"	3/4"	3/4" heat treated
Auger Knives - adjustable - per auger	6	6	7	7
Planetary Drive	split-drive	split-drive	split-drive	split-drive
PTO Drive	1000 RPM	1000 RPM	1000 RPM	1000 RPM
Drive Protection	torque- disconnect	torque- disconnect	torque- disconnect	torque- disconnect

SPECIFICATIONS	F700	F815	F1015	F1215
Discharge - Door Opening - Front	42" x 40"	46" x 40"	46" x 40"	46" x 40"
Discharge - Door Opening - Side	42" x 40"	42" x 40"	42" x 40"	42" x 40"
Discharge - Door Opening - Rear	42" x 40"	46" x 40"	46" x 40"	46" x 40"
Discharge - Conveyor Width - front/side	36" / 42"	36" / 42"	36" / 42"	36" / 42"
Discharge - Front Cross Conveyor Travel - left or right	8"	8"	8"	8"
Tub / Trailer - Floor Thickness	5/8"	3/4"	3/4"	1"
Tub / Trailer - Sidewall Thickness	1/4"	1/4"	1/4"	1/4"
Tub / Trailer - Trailer or Subframe	single-axle	single-axle	single-axle	single-axle
Tub / Trailer - Spindle Diameter	2.75"	3.50"	3.50"	4.50"
Tub / Trailer - Scale System	4-point	4-point	4-point	4-point
Tongue Weight - % gross	10%	10%	10%	10%
Tractor Requirement - PTO HP	110	140	160	200

NOTES

NOTES

MAINTENANCE RECORD

MODEL NO. _____ SERIAL NO. ____

DATE	SERVICE PERFORMED

DATE	SERVICE PERFORMED

Manufactured by:



Meyer Manufacturing Corporation

574 West Center Avenue Dorchester, WI 54425 Phone: 1-800-325-9103 Fax: 715-654-5513

Email: sales@meyermfg.com Website: www.meyermfg.com





Meyer Manufacturing Corporation

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