

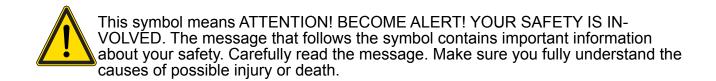


Art's-Way Manufacturing Co., Inc.

Model 5300 Combination Front/Rear Unload Forage Box

Operator's Manual & Illustrated Parts List MP16.22030

Issued September 2016



IF THIS MACHINE IS USED BY AN EMPLOYEE, IS LOANED, OR IS RENTED, MAKE SURE THAT THE OPERATOR UNDERSTANDS THE TWO INSTRUCTIONS BELOW.

BEFORE THE OPERATOR STARTS THE ENGINE:

GIVE INSTRUCTIONS TO THE OPERATOR ON SAFE AND CORRECT USE OF THE MACHINE. MAKE SURE THE OPERATOR READS AND UNDERSTANDS THE OPERATOR'S MANU-AL FOR THIS MACHINE.

AWARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH.

BEFORE STARTING THE ENGINE, DO THE FOLLOWING:

- 1. READ THE OPERATOR'S MANUAL.
- 2. READ ALL SAFETY DECALS ON THE MACHINE.
- 3. CLEAR THE AREA OF OTHER PERSONS.

4. LEARN AND PRACTICE SAFE USE OF MACHINE CONTROLS IN A SAFE AND CLEAR AREA BEFORE YOU OPERATE THIS MACHINE ON A JOB SITE.

It is your responsibility to observe pertinent laws and regulations and to follow manufacturer's instructions on machine operation and maintenance.

See your Authorized Art's-Way Manufacturing Co., Inc. dealer or Art's-Way Manufacturing Co., Inc. for additional operator's manuals, illustrated parts catalogs, and service manuals.

TO THE OWNER

Congratulations on the purchase of your new Art's-Way Combination Front/Rear Unload Forage Box. You have selected a top quality machine that is designed and built with pride to ensure you have many years of efficient and reliable service.

people have worked the design. production. deliverv of this Manv on and Combination Front/Rear Unload Forage Box. The information in this manual is based on the knowledge, study, and experience through years of specializing in the manufacturing of farm machinery. This manual is designed to provide you with important information regarding safety, maintenance, and machine operation so you can and will get the best possible performance from your Combination Front/Rear Unload Forage Box.

Even if you are an experienced operator of this or similar equipment, we ask that you read this manual before operating this Combination Front/Rear Unload Forage Box. The way you operate, adjust, and maintain this unit will have much to do with its successful performance. Any further questions you may have about this product of Art's-Way equipment should be directed to your local Art's-Way dealer or to Art's-Way Manufacturing Co., Inc. Armstrong, Iowa, 50514, (712) 864-3131.

SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE WITHOUT NOTICE

Art's-Way Manufacturing Co., Inc. is continually making product improvements. In doing so, we reserve the right to make changes and/or add improvements to our products without obligation for the equipment previously sold.

Modifications to this Combination Front/Rear Unload Forage Box may affect the performance, function, and safety of its operation. Therefore, no modifications are to be made without the written permission of Art's-Way Manufacturing Co., Inc. Any modification made without the written permission of Art's-Way Mfg. Co. Inc. shall void the warranty of this product.

In the interest of continued safe operation of this Combination Front/Rear Unload Forage Box, pay particular attention to the safety alert symbol(s) throughout this manual.

Art's-Way Manufacturing Co., Inc. STATEMENT OF PRODUCT LIABILITY

Art's-Way Manufacturing Co., Inc. recognizes its responsibility to provide customers with a safe and efficient product. Art's-Way Manufacturing Co., attempts to design and manufacture its products in accordance with all accepted engineering practices effective at the date of design. This statement should not be interpreted to mean that our products will protect against the user's own carelessness or failure to follow common safety practices nor will Art's-Way Manufacturing Co., be liable for any such act. In addition, Art's-Way Manufacturing Co., assumes no liability for any altered product or any modified product by users or anyone other than an authorized dealer.

IMPORTANT WARRANTY INFORMATION

The warranty for this Combination Front/Rear Unload Forage Box appears on page 6 of this manual. In order to establish proper warranty registration, the Warranty Registration must be completed and returned to the factory. Failure to comply with this requirement will result in invalidating the warranty!

LIMITATIONS OF THIS MANUAL

This manual contains operating instructions for your 5300 Combination Front/Rear Unload Forage Box only. Any mention of other machinery in this manual other than the 5300 Combination Front/Rear Unload Forage Box is for reference only. This manual does not replace nor is it to be used for any machinery that may be attached to or used in conjunction with the 5300 Combination Front/Rear Unload Forage Box.

PARTS & SERVICE

As the purchaser of your new forage box, it is very important to consider the following factors:

A. Original Quality

B. Availability of Service Parts

C. Availability of Adequate Service Facilities

Art's-Way Manufacturing Co., Inc. has an excellent dealership network ready to answer any questions you may have about your forage box. Parts for your machine may be ordered through our dealers. When placing a parts order, please have the **model** and **serial number** ready. This will allow the dealer to fill your order as quickly as possible.

For your convenience, we have provided this space for you to record your model number, serial number, and the date of purchase, as well as your dealer's name and address.

| o o Art's Way Since 1956 |
|--|
| SERIAL NO. |
| MODEL NO. |
| Manufactured by Art's Way Manufacturing Co., Inc. Armstrong IA USA Ö |

TABLE OF CONTENTS

| TO THE OWNER | 1 |
|--|-----|
| SPECIFICATIONS AND DESIGN ARE SUBJECT TO CHANGE WITHOUT NOTICE | 1 |
| Art's-Way Manufacturing Co., Inc. STATEMENT OF PRODUCT LIABILITY | 1 |
| IMPORTANT WARRANTY INFORMATION | 1 |
| LIMITATIONS OF THIS MANUAL | 1 |
| PARTS & SERVICE | 2 |
| TABLE OF CONTENTS | 3-5 |
| LIMITED WARRANTY | 6 |
| SAFETY FIRST | 7 |
| NOTICES OF DANGER, WARNING, AND CAUTION | 7 |
| Safety Instructions | 8 |
| GENERAL | 8 |
| BEFORE OPERATING | 9 |
| DURING OPERATION | 9 |
| MAINTENANCE SAFETY | 9 |
| HYDRAULIC SAFETY | 10 |
| TRANSPORTATION SAFETY | 10 |
| STORAGE SAFETY | 10 |
| TIRE SAFETY | 11 |
| ASSEMBLY SAFETY | 11 |

| TABLE OF CONTENTS | |
|---|------|
| <u>NAME</u> | PAGE |
| SAFETY PRECAUTIONS | 14 |
| OPERATING EQUIPMENT | 16 |
| PTO ASSEMBLY | 52 |
| FRONT DRIVE ASSEMBLY, LEFT SIDE UNLOAD | 54 |
| FRONT DRIVE ASSEMBLY, LEFT SIDE UNLOAD, (CONTINUED) | 56 |
| SIDE DRIVE ASSEMBLY | 58 |
| SIDE DRIVE ASSEMBLY, (CONTINUED) | 60 |
| GEARBOX ASSEMBLY (MILLER PRO) | 62 |
| GEARBOX ASSEMBLY (MILLER PRO), (CONTINUED) | 64 |
| GEARBOX ASSEMBLY (ART'S WAY) | 66 |
| GEARBOX ASSEMBLY (ART'S WAY), (CONTINUED) | 68 |
| CONTROL SYSTEM ASSEMBLY, LEFT SIDE UNLOAD | 70 |
| OUTFEED EXTENSION & HOLD DOWNS ASSEMBLY | 72 |
| SHIELDING, SAFETY BAR, SIDE EXTENSION, & ASSORTED ASSEMBLY | 74 |
| SHIELDING, SAFETY BAR, SIDE EXTENSION, & ASSORTED ASSEMBLY, (CONTINUED) | 76 |
| REAR DRIVE SYSTEM ASSEMBLY, MECHANICAL | 78 |
| REAR DRIVE SYSTEM ASSEMBLY, MECHANICAL, (CONTINUED) | 80 |
| REAR DRIVE SYSTEM ASSEMBLY, HYDRAULIC | 82 |
| REAR DRIVE SYSTEM ASSEMBLY, HYDRAULIC, (CONTINUED) | 84 |
| RIGHT ANGLE GEAR BOX ASSEMBLY | 86 |
| FRAME & APRON TAKEUP ASSEMBLY | 88 |
| FRAME & APRON TAKEUP ASSEMBLY, (CONTINUED 1) | 90 |
| FRAME & APRON TAKEUP ASSEMBLY, (CONTINUED 2) | 92 |
| SIDES AND ROOF ASSEMBLY | 94 |
| SIDES AND ROOF ASSEMBLY, (CONTINUED 1) | 96 |
| SIDES AND ROOF ASSEMBLY, (CONTINUED 2) | 98 |
| REAR DOOR & SHIELDS ASSEMBLY | 100 |
| REAR DOOR & SHIELDS ASSEMBLY, (CONTINUED) | 102 |
| HYDRAULIC DRIVE KIT, (ACCESSORY ONLY) | 104 |
| DECAL LOCATION | 106 |
| TRANSPORT LIGHTS & WIRING | 108 |
| SEAL KIT | 110 |
| 30" OUTFEED EXTENSION, (OPTIONAL) | 112 |
| 30" OUTFEED EXTENSION, (OPTIONAL), (CONTINUED) | 114 |
| RISER BLOCKS, (OPTIONAL) | 116 |
| ROOF RAFTERS FOR FORAGE BOXES LESS ROOFS | 118 |
| RECEIVER BOX STIFFENER TUBE | 120 |
| SIDE EXTENSIONS, (OPTIONAL) | 122 |
| FOURTH BEATER, (OPTIONAL) | 124 |
| TRUCK MOUNT SADDLE | 126 |
| CONTROL SYSTEM, TRUCK MOUNT, LEFT SIDE UNLOAD, (OPTIONAL) | 128 |

| TABLE OF CONTENTS | |
|--|-----|
| CONTROL SYSTEM, TRUCK MOUNT, LEFT SIDE UNLOAD, (OPTIONAL), (CONTINUED) | 130 |
| | |
| | |





LIMITED WARRANTY FOR NEW ART'S WAY MANUFACTURING CO. FARM MACHINERY (U.S. ONLY)

- A. GENERAL PROVISIONS: Art's Way Manufacturing Co., Inc. (Art's Way Mfg.) warrants the products it sells to be free from defects in material and workmanship for the periods of time set forth in the Warranty Table below. Art's Way Mfg. obligation and liability under this limited warranty, is to repair or replace (at Art's Way Mfg. option) any part(s) that upon manufacture were defective in material or workmanship. Warranty service shall be performed by an authorized Art's Way Mfg. dealer or authorized service center and will be completed using Art's Way Mfg. supplied parts. Parts supplied by Art's Way Mfg. are shipped F.O.B. Art's Way. The original purchaser shall be responsible for service calls and transportation of the farm machinery to and from their dealer or service center. The original purchaser is also responsible for any repair service, parts, and labor on repairs made to the farm machinery at the time the warranty service was being performed.
- B. SECURING WARRANTY SERVICE: The original purchaser must (1) contact their authorized dealer and report the break-down. (2) The authorized dealer shall provide objective evidence of the farm machinery's warranty status to Art's Way Mfg. (3) The authorized dealer shall provide all documentation to Art's Way Mfg. which supports that the farm machinery was thoroughly inspected prior to set-up and delivery to the original purchaser. (4) The original purchaser shall make the farm machinery available to their Art's Way Mfg. authorized dealer and/or Art's Way Mfg. authorized service center within 30 days of the reported break-down. All parts or assemblies replaced under the limited warranty must be held for inspection for ninety (90) days, or until credit has been issued, or a claim has been returned to a dealer. When a claim is returned to a dealer with instructions to return and/or hold the part(s) for inspection, parts must be handled as instructed or the claim may be denied.
- C. SPARE PARTS WARRANTY: Art's Way Mfg. warrants that it will replace or repair (excluding labor) as Art's Way Mfg. elects, without charge, any genuine spare part purchased from Art's Way Mfg. which is defective in material or workmanship within ninety (90) days of the date of installation. This warranty applies to parts that, in Art's Way Mfg. judgement, prove to be defective in either material or workmanship. All parts to be shipped F.O.B. Art's Way Mfg. All spare parts replaced under the spare parts warranty must be held for inspection for ninety (90) days or until credit has been issued, or a claim has been returned to a dealer. When a claim is returned to a dealer with instructions to return and/or hold the part(s) for inspection, parts must be handled as instructed or the claim may be denied.
- D. LIMITATIONS: Art's Way Mfg. Limited Warranty does not extend coverage to product being used in a commercial application (i.e. rented equipment). Art's Way Mfg. Limited Warranty does not extend to parts and elements not manufactured by Art's Way Mfg., and which carry the warranty of another manufacturer. Art's Way Mfg. makes no other warranty expressed or implied and makes no warranty of merchantability or fitness for any particular purpose beyond that expressly stated in this warranty. Art's Way Mfg. liability is limited to the terms set forth in this warranty and does not include any liability for direct, indirect, incidental or consequential damages or expenses of delay and Art's Way Mfg. liability is limited to the repair and replacement of defective parts as set forth herein. Any improper use and/or maintenance, including operation after the discovery of defective or worn parts, operation beyond the rated capacity, substitution of parts not approved by Art's Way Mfg. or any alteration or repair by others than the authorized Art's Way Mfg. dealer or authorized service center which affect the product materially and adversely, shall void the warranty. No dealer, employee or representative is authorized to change this warranty in any way or grant any other warranty unless such change is made in writing and signed by an officer of Art's Way Mfg. Some states do not allow limitations on how long an implied warranty lasts or exclusions or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you the specific legal rights, and you may have other rights that vary from state to state.

NOTE: As of April 1, 2015, all previously distributed information concerning the limited warranty coverage of any Art's Way Manufacturing Company, Inc. manufactured product is to be considered null and void and replaced by this document.

| Art's Way Mfg. Farm Machinery | Warranty Coverage |
|---|--|
| Grinder / Mixer – Model 6520, 6530, 6140, 6105, and Portable and Stationary | 1 (one) Year from Date of Delivery to Original Purchaser |
| equipment | |
| Manure Spreader | 1 (one) Year from Date of Delivery to Original Purchaser |
| Graders and Land Planes | 1 (one) Year from Date of Delivery to Original Purchaser |
| Beet Harvesting Machinery | 1 (one) Harvest Season from Date of Delivery to Original |
| | Purchaser |
| Shredders – Model 180C and 240C | 1 (one) Year from Date of Delivery to Original Purchaser |
| Plows | 1 (one) Year from Date of Delivery to Original Purchaser |
| Forage Blowers – Model 1060 and 2060 | 1 (one) Year from Date of Delivery to Original Purchaser |
| Forage Boxes/Receivers – Model 5300 and 1250 | 1 (one) Year from Date of Delivery to Original Purchaser |
| Rakes | 1 (one) Year from Date of Delivery to Original Purchaser |
| Dump Boxes | 1 (one) Year from Date of Delivery to Original Purchaser |
| Augers | 1 (one) Year from Date of Delivery to Original Purchaser |
| Running Gear | 1 (one) Year from Date of Delivery to Original Purchaser |
| Snow Blowers | 1 (one) Year from Date of Delivery to Original Purchaser |
| Harvester Reel | 1 (one) Year from Date of Delivery to Original Purchaser |

Effective 1 April 2015

SAFETY FIRST

SAFETY INSTRUCTIONS

"A careful operator is the best insurance against an accident." Quote from the National Safety Council.

Most accidents can be prevented if the operator:

- 1. Fully understands how the machine functions.
- 2. Can anticipate situations which may produce problems.
- 3. Can make necessary corrections before problems develop.

THIS SYMBOL MEANS ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



- Universal Safety Alert Symbol

The American Society of Agricultural Engineers has adopted the Universal Safety Alert Symbol as a way to identify areas of potential danger if the equipment is not operated correctly. Please be alert whenever you see this symbol in the manuals or on your forage box.

Art's-Way Manufacturing Co., Inc. strives to make our equipment as safe as possible. The Art's-Way 5300 Combination Front/Rear Unload Forage Box conforms to applicable safety standards at the time of manufacturing. A safety conscious equipment operator makes an effective accident-prevention program complete. Safety features and instructions for the forage box are detailed in the Safety Guidelines section of this Operator's Manual. It is the responsibility of the owner to ensure that all operators read and understand the manual before they are allowed to operate the combo forage box. (Occupational Safety and Health Administration (OSHA) regulations 1928.57).

NOTICES OF DANGER, WARNING, AND CAUTION

Signal Words: Note the use of signal words **DANGER**, **WARNING**, and **CAUTION** on the forage box and in this manual. The appropriate signal word for each has been selected using the following guidelines:

A DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

ACAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

SAFETY INSTRUCTIONS

Safety instructions (or equivalent) signs indicate specific safety-related instructions or procedures.

Note: Contains additional information important to a procedure and will be found within the regular text body of this manual.

SAFETY INSTRUCTIONS

GENERAL

Most work related accidents are caused by failure to observe basic safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations before an accident occurs. As you operate and maintain the combo forage box you must be alert to potential hazards. You should also have the necessary training, skills, and tools to perform any assembly procedure.

Improper operation and/or maintenance of this unit could cause a dangerous situation that results in injury or death.

Do not use this unit until you read and understand the information contained in this manual. Do not use this equipment for anything other than its intended purpose.



Safety precautions and warnings are provided in this manual and on the unit. If these hazard warnings are not heeded, bodily injury or death could occur to you or to other persons.

Art's-Way Manufacturing Co., Inc. cannot anticipate every possible might circumstance that involve a potential hazard. The warnings in this manual and on the product are, therefore, not all-inclusive. lf a method of operation not specifically recommended by us is used, you must satisfy yourself that it is safe for you and for others. You should also ensure that the unit will not be damaged or be made unsafe by the methods that you choose.

The information, specifications, and illustrations in this manual are based on the information that was available at the time this material was written and can change at any time.

Safety Alert Symbols

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

This manual contains DANGERS, WARNINGS, CAUTIONS, NOTICES, SAFETY INSTRUCTIONS, and NOTES which must be followed to prevent the possibility of improper service, damage to the equipment, personal injury, or death. The following key words call the readers attention to potential hazards.

Hazards are identified by the "Safety Alert Symbol" and followed by a signal word such as "DANGER", "WARNING", or "CAUTION".

SAFETY INSTRUCTIONS

Remember:

"The Best Operator is a Safe Operator"

ACAUTION

Read and understand the operator's manual and all the safety decals before operating the forage box. Review all safety instructions with all operators annually.

BEFORE OPERATING

SAFETY INSTRUCTIONS



Do not wear loose fitting clothing as it may catch in moving parts.



Make sure all guards and shields are installed, including the tractor power takeoff (PTO) master shield, before starting or operating the forage box.



Be sure that the correct implement driveline parts are used and that they are properly secured.

Lower the lifter wheels when the forage box is not in use.

Install safety chain when attaching the forage box to the tractor.



Clear the area of bystanders, especially children, when making repairs, adjustments, or performing maintenance on the forage box.



Do not allow riders.

Put all tractor and machine controls in "neutral" and disengage the PTO before starting. Follow the starting instructions according to the OEM tractor manual.



Operate the forage box only while seated on the tractor seat.



Make sure the unit is adequately supported with safety blocks or safety stands when changing tires or performing maintenance.

DURING OPERATION

ACAUTION



Entanglement Hazard Keep hands, feet, hair, and clothing away from moving parts. Wait for all movement to

stop before approaching equipment. Before making adjustments:

- 1. Shut off the tractor,
- 2. Set parking brake,
- 3. Put machine in neutral, and
- 4. Remove key while making adjustments.



Keep all shields and guards in place and in good working condition.

Kee awa ope

Keep all bystanders, especially children, away from the forage box while in operation.



Do not allow riders while the forage box is in operation.



Do not attempt to unclog, clean, or adjust the forage box while it is running.



Stay away from overhead power lines. Electrocution can occur even without direct contact.



Keep all hydraulic lines, fittings, and couplers tight and free of leaks. (Refer to Safety Guidelines – Hydraulic Safety).



Use caution when ascending or descending on the forage box. Wet shoes or boots are slippery.

MAINTENANCE SAFETY

SAFETY INSTRUCTIONS

Follow all operating, maintenance, and safety instructions found in this Manual.



Before servicing, adjusting, repairing, or unclogging the machine, always make sure the tractor engine is stopped,

key in your pocket, the machine is lowered to the ground, all controls are placed in neutral, the parking brake is set, and all the moving parts have stopped.



Use sufficient tools, jacks, and hoists that have the capacity for the job.



Use support blocks or safety stands when changing tires or performing maintenance.



Follow good shop practices of keeping the service area clean and dry, and use adequate light for the job at hand.



Before applying pressure to the hydraulic system, make sure all lines, fittings, and couplers are tightly secured and in good condition.



Make sure all shields/guards are in place and properly secured when performing maintenance.

HYDRAULIC SAFETY

SAFETY INSTRUCTIONS

Follow all operating, maintenance, and safety instructions found in this Manual.

| Make | sure | compo | nents | in |
|--------------------------------------|-----------|--------|-------|------|
| the | hydraulic | system | are | kept |
| clean and in good working condition. | | | | |



Relieve pressure from the hydraulic system before servicing or disconnecting from the tractor.



Keep all hydraulic lines, fittings, and couplers tightly secured and free of leaks.



Replace any worn, cut, abraded, flattened, or crimped hoses.



Do not make any temporary repairs to the hydraulic lines, fittings, or hoses using tape, clamps, or cement. The hydraulic system operates under extremely high

pressure and temporary repairs may fail suddenly and create a hazardous/dangerous situation.



Wear proper hand and eye protection when searching for а high-pressure hydraulic leak. Use a piece

of wood or cardboard as a backstop instead of hands to identify and isolate a leak. If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop if hydraulic fluid penetrates the surface of the skin.



Before applying pressure to the system, make sure all components are tight and that the hydraulic lines, hoses, and couplings are not damaged.

TRANSPORTATION SAFETY

SAFETY INSTRUCTIONS

Follow all operating and safety instructions found in this manual when transporting this equipment.

Make sure the forage box complies with all local regulations regarding transporting equipment on public roads and highways.



Make sure the Slow Moving Vehicle (SMV) emblem and all lights and reflectors required by local highway and transportation authorities are properly in place, clean, and clearly visible to traffic.



Do not allow riders on any machinery during transport.

Make sure the forage box is securely attached to the tractor and install a safety chain to the forage box.

Make sure the tractor brake pedals are latched together.

Do not exceed 20 mph (32 km/h) when transporting the forage box. Always reduce speed on rough roads and surfaces, or when going down inclines.

Use caution when turning and always use the turn signals on the tractor to indicate your turning intentions to the other traffic.

The weight of the trailed machine should NEVER exceed the weight of the towing vehicle.

Check all clearances carefully whenever the machine is towed.

Lower the elevator into the transport position before transporting the forage box on the highway



Stay away from overhead obstructions and power lines during transport. Electrocution can occur even without direct contact.

STORAGE SAFETY

SAFETY INSTRUCTIONS

Follow all operating and safety instructions found in this manual when storing this equipment.



Store the forage box in an area away from human activity.



Do not permit children to play on or around the stored machine at any time.

Make sure that the forage box is stored in an area with a firm and level base to prevent the machine from tipping or sinking into the ground.



Block the wheels to prevent the machine from rolling.

TIRE SAFETY

SAFETY INSTRUCTIO<u>NS</u>

Follow all operating and safety instructions found in this manual when working around tires.

Have only a qualified tire dealer or tire repair service perform tire repairs.

Do not attempt to install a tire on a wheel or rim unless you have the proper equipment and experience to do the job.

Do not substitute tires with a lesser road rating and/or capacity for the original equipment tires.

AWARNING

Explosive Force Hazard Tire replacement, repair, and/or maintenance should be done by a qualified tire dealer or qualified repair service.

Failure to follow proper procedures when installing a tire on a wheel or rim can produce an explosive force that will result in serious injury or death.

Do not attempt to install a tire without proper equipment and experience to perform the job.

ASSEMBLY SAFETY

SAFETY INSTRUCTIONS

Follow all assembly, operating, and safety instructions found in this manual when assembly this equipment.



Use adequate manpower to perform assembly procedures safely.

Assemble the forage box in an area with sufficient space to maneuver the largest components and allow easy access to all sides of the machine.



Use only forklifts, lift cranes, jacks, and tools with sufficient capacity for the loads.



Do not allow spectators, especially children, in the working area.

THIS PAGE LEFT INTENTIONALLY BLANK

SECTION 1: OPERATOR'S MANUAL

SAFETY PRECAUTIONS

SAFETY PRECAUTIONS



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



DANGER

"DANGER" indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



WARNING

"WARNING" indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION

"CAUTION" indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also alert against unsafe practices.

BEFORE you attempt to operate this forage box, read and study the following safety information. In addition, MAKE SURE that every individual who operates or works with this equipment, whether family member or employee, is familiar with these safety precautions. Miller- St. Nazianz 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 DECALS on the machine itself warn you of dangers and SHOULD BE READ AND OBSERVED CLOSELY.

POWER SOURCE SHUTDOWN PROCEDURE

Before cleaning, unclogging, adjusting, lubricating or servicing this machine:

- 1. Disengage the tractor PTO.
- 2. Shut off the tractor engine, remove the starter key and take it with you.
- 3. Wait for the all machine motion to stop.
- 4. Remove the telescoping PTO driveline and ALL power connections from the tractor.

Failure to follow these precautions could result in death or serious injury.

Some photographs used herein may show doors, guards and shields opened and removed. BE SURE that all doors, guards and shields are fastened in their proper position before machine is operated.



Do not unclog, adjust, lubricate or service the forage box unless the "Power Source Shut Down Procedure" (Page 3) has been performed.

KNOW how to stop the unloading unit of the forage box before starting it!

BE SURE the locking device on the telescoping PTO drive shaft is engaged onto the tractor PTO shaft groove before starting the tractor engine!

BE SURE all guards, doors and shields are in place and properly secured before starting the tractor engine!

KEEP hands, feet and clothing away from chains, augers and PTO when they are moving!

DO NOT connect a 1000 RPM tractor PTO shaft onto this unit!

DO NOT use a PTO adapter!

DO NOT allow minors to be near the machine unless properly

supervised!

KEEP the forage box away from power lines. Contact with electrical lines may result in serious injury or death by electrocution!

USE ONLY properly rated running gear and tires!

ALWAYS engage the tractor parking brake before proceeding to unload the forage box!

CHECK operation of the emergency clutch and of the activating mechanisms, safety bar and safety cable frequently, to insure that they are functioning properly!

BE SURE the rotating shields that are on the telescoping PTO drive shaft turns freely before starting the tractor engine!

DO NOT wear loose or baggy clothing when operating this unit!

DO NOT allow people other than a qualified operator near the unit!

DO NOT exceed a maximum towing speed of 20 MPH (32 KP H) while transporting the forage box!

DO NOT use PTO or PTO guard as a step!

Art's-Way Manufacturing Co., Inc..

OPERATING EQUIPMENT

OPERATING AND SAFETY EQUIPMENT



Become familiar with and know how to use all SAFETY DEVICES and controls BEFORE attempting to operate this equipment. Know how to stop the unit BEFORE starting it!

<u>Shields</u>



DO NOT operate this equipment unless ALL shields are properly secured in place!

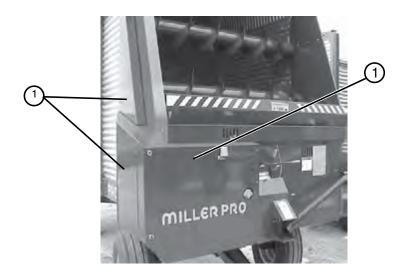


Do not unclog, adjust, lubricate or service the forage box unless the "Power Source Shut Down Procedure" (Page 3) has been performed.

Wherever possible and without affecting machine operation, shields have been used on this forage box to protect potentially hazardous areas. In many places, decals are also provided to warn of potential dangers as well as to display special operating procedures. Refer to Safety Label Location section. Page 10

Hinged Shields Figure 1-#1

Hinged Shields have been provided over the transmission, beater drive chains and front roller chain drive. These can be opened for lubrication, adjustment and/or service access when required. Shields should be inspected and cleaned periodically to avoid material build up.



Emergency Clutch Bar and Cable Figure 2- #2 & #3

IN AN EMERGENCY, PUSH THE SAFETY BAR OR PULL THE SAFETY CABLE TO TRIP THE SAFETY/CROSS CONVEYOR CLUTCH AND STOP THE CROSS CONVEYOR, AUGERS AND MAIN APRONS.



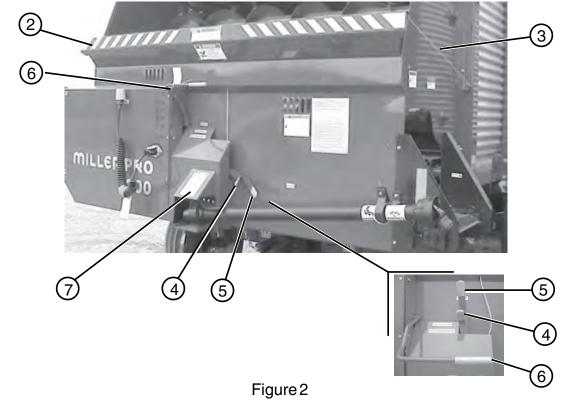
EMERGENCY STOP DOES NOT STOP THE FORAGE BOX DRIVE SYSTEM WHEN BEING OPERATED AS A REAR UNLOAD.

To trip the safety/cross conveyor clutch, either push the safety bar (Figure 2-#2) which spans across the front of the unloading unit or pull the safety cable (Figure 2-#3) which runs over the outfeed. To reset, rotate safety/cross conveyor clutch lever into "RUN" position.

Safety/Cross Conveyor Clutch Figure 2-#4

The safety/cross conveyor clutch allows clearing of the cross conveyor without operation of the augers or main aprons. This clutch also functions as a safety reset and is disengaged by pushing the safety push bar or pulling the safety cable on the side of the box. (Figure 2-#2 & #3)

To reset, return the safety/cross conveyor clutch handle to the "run" position.



Main Clutch Figure 2-#5

The main clutch lever is provided for stopping and starting the augers and main aprons.

The main clutch is engaged when the lever is in the "run" position. To disengage the clutch, move the lever to the "stop" position.

Use of the main clutch lever during unloading is further explained in the Operating Instructions section of this manual. Page 20.



DISENGAGING THE MAIN CLUTCH DOES NOT STOP THE CROSS CONVEYOR. TO STOP THE CROSS CONVEYOR, THE EMERGENCY PUSH BAR OR CABLE MUST BE TRIPPED OR SAFETY/CROSS **CONVEYOR CLUTCH TURNED TO THE STOP POSITION!**

Main Apron Shift Lever Figure 2-#6

The shift lever is used only to adjust the feeding rate of the main aprons. It is marked with seven positions:

1, Neutral (N); 2, Neutral (N); 3, Neutral (N); and 4 (Sweep).

CAUTION: The fourth or sweep speed should only be used at the end of the load for clean-out and not for normal unloading operation.

Front PTO Guard Figure 2-#7

A guard is provided over the input drive universal joint on the front of the unloading unit.



Rotating PTO Guard Figure 3-#8

The telescoping PTO shaft, between the forage box and the tractor, is equipped with a rotating shield.



BE SURE THE ROTATING PTO SHIELD TURNS FREELY BEFORE STARTING THE TRACTOR ENGINE!

Manual No. MP16.22030

PTO Transport Bracket Figure 3-#9

A bracket is provided on the front of the unloading unit to conveniently hold the telescoping PTO drive shaft during transport.

To safeguard the telescoping PTO drive shaft, be sure to shut off the tractor engine and disconnect the drive shaft from the PTO shaft and place it into the bracket when transporting or filling the forage box.

Hinged Shields Figure 4

Hinged shields have been provided over the apron takeup and rear roller chain drive. These can be opened for lubrication, adjustment and /or service access when required. Shields should be inspected and cleaned periodically to avoid material build up. The rear shield should be raised and pinned in the open position for servicing, Figure 4 #A. Return the pins to the storage position when finished, Figure 4 #B.



DO NOT LUBRICATE, ADJUST AND/OR SERVICE UNLESS TRACTOR PTO IS DISENGAGED AND TRACTOR ENGINE IS SHUT OFF!

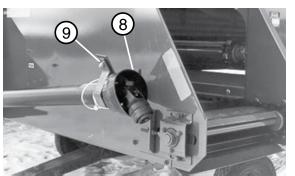
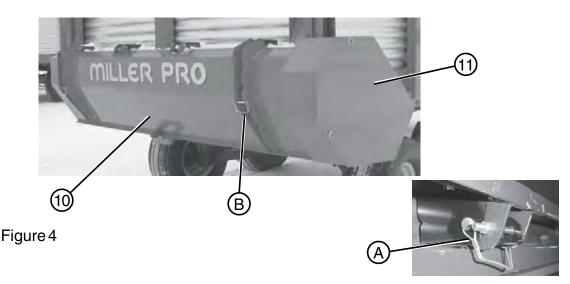


Figure 3



Art's-Way Manufacturing Co., Inc..

Manual No. MP16.22030

Unloading Operation - Left Hand Unload

Because forage blowers load from the right side (as viewed from behind), a left hand forage box will be stationed next to the forage blower so that the controls on the forage box as well as those on the blower and the blower tractor easily can be reached from the Operator's Position. See the line drawing (Figure 5).

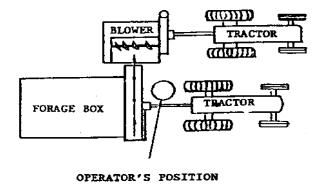


WARNING

DO NOT STEP OVER PTO SHAFT!

DO NOT WALK OR CLIMB BETWEEN FORAGE BOX OUTFEED AREA AND BLOWER WHEN EITHER FORAGE BOX OR BLOWER IS OPERATING!

DO NOT TAKE A SHORT CUT!



LEFT HAND UNLOAD

Figure 5

SAFETY LABEL LOCATION

Each Forage Box has been produced and assembled with the operator's safety in mind. As a reminder to the operator of proper operation of the machine, several labels of warning and instruction have been attached. Information on labels is, by necessity less than in the operator's manual. Do not depend solely on the labels for safe and proper operation. Use your operator's manual.

DO NOT REMOVE ANY OF THESE LABELS. THEY ARE FOR YOUR PROTEC-TION! TAKE NOTE OF THEIR MESSAGES AND OBSERVE!

PERIODICALLY CHECK ALL LABELS AND REPLACE ANY THAT ARE MISS-ING, WORN, OR ILLEGIBLE. WHEN REPLACING, CLEAN MACHINE SURFACE THOROUGHLY USING SOAP AND WATER OR CLEANING SOLVENT TO REMOVE DIRT AND GREASE. CONTACT YOUR DEALER OR MILLER-ST. NAZIANZ AT 920-773-2121 IF ANY LABELS ARE NOT UNDERSTOOD!

THE MILLER FORAGE BOX WAS DESIGNED AS A FORAGE BOX. DO NOT USE FOR OTHER PURPOSES!

REPLACE ALL WORN, DAMAGED, UNUSABLE OR MISSING SAFETY SHIELDS AND GUARDS. CONTACT YOUR DEALER!

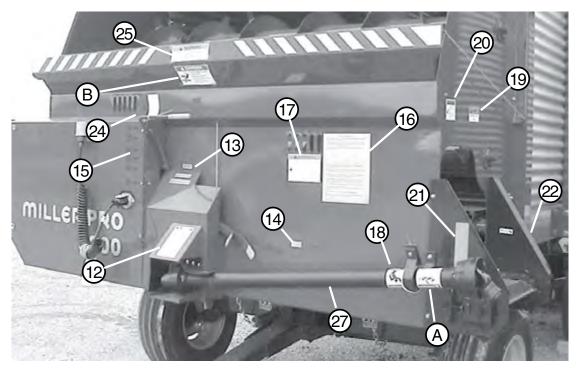


Figure 7

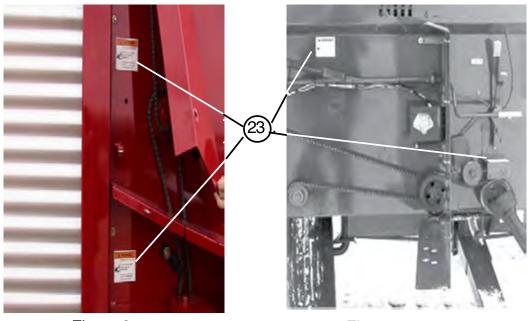
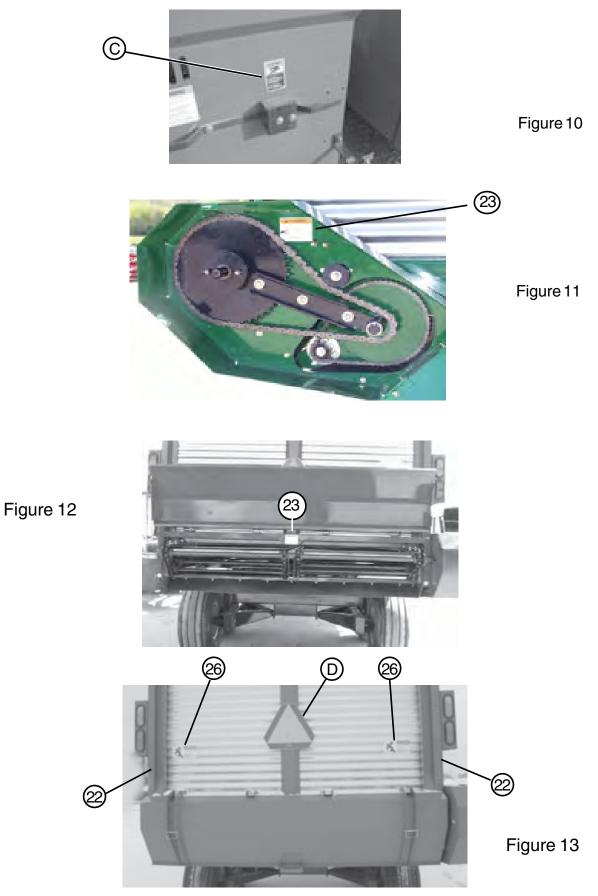


Figure 8

Figure 9

| Ref. No | . Part No. | Description |
|---------|------------|--|
| 12 | 16.20177 | WARNING - ROTATING PTO KEEP YOUR BODY AND |
| | | CLOTHING AWAY |
| 13 | 01.77770 | STOP |
| 14 | 01.77760 | RUN |
| 15 | 16.20195 | SHIFT QUADRANT 5300 (LEFT HAND) |
| 16 | 16.20210 | OPERATING INSTRUCTIONS - 5300 |
| 17 | 16.20178 | CAUTION - BEFORE YOU OPERATE THIS EQUIPMENT |
| 18 | 329594B2 | DANGER - ROTATING DRIVELINE |
| 19 | 01.77810 | EMERGENCY STOP PULL |
| 20 | 16.20181 | WARNING - ROTATING PARTS INSIDEKEEP YOUR BODY |
| | | AND CLOTHING AWAY |
| 21 | 907220 | AMBER REFLECTOR (2 on each side, not shown) |
| 22 | 907219 | RED REFLECTOR |
| 23 | 16.20179 | WARNING - REPLACE ALL SHIELDS BEFORE OPERATING |
| 24 | 16.20196 | DECAL, 4TH GEAR (LEFT HAND) |
| 25 | 01.77740 | EMERGENCY STOP - PUSH |
| 26 | 16.10552 | DECAL, DANGER DOOR |
| 27 | 17.00165 | DECAL, DANGER (INSIDE IMPLEMENT INPUT DRIVELINE) |
| | 907228 | PTO MANUAL |
| А | 16.20980 | DECAL, 540 RPM, DANGER |
| В | 16.21200 | DECAL, ENTANGLEMENT DANGER |
| С | 21.09024 | DECAL, HYDRAULIC FLUID PRESSURE WARNING |
| D | 907224 | SMV W/STEEL BACKING |





1 Reg'd

19



IT WILL OPEN SUDDENLY WITHOUT

2 Reg'd

#26

WARNING!

WARNING

ROTATING PARTS INSIDE. KEEP YOUR BODY AND CLOTHING

FAILURE TO HEED COULD RESULT IN

DEATH OR SERIOUS

20

1 Req'd

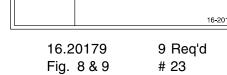
16.20181

AWAY.

INJURY.

MAXIMUM OPERATING SPEED 540 RPM **OVERSPEED CAN CAUSE** SEVERE INJURY OR DEATH DO NOT OPERATE WITH- 1000 RPM TRACTOR PTO TRACTOR PTO ADAPTER 1 Req'd Figure 7 # A





16.20181 Figure 7

16.10552

Figure 13

Manual No. MP16.22030





17.00165 1 Req'd Figure 7 #27

Art's-Way Manufacturing Co., Inc..



1 Req'd 21.09024 Figure 10 # C Hydraulic Drive Only

Manual No. MP16.22030

SET-UP INSTRUCTIONS

SMV Emblem

A Slow Moving Vehicle (SMV) Emblem is supplied with the forage box.

Mounting Forage Box to Miller Pro Running Gear

| Combo Boxes Box Length | : <u>Running Gear</u> | <u>A Dimension</u> | B Dimension |
|---------------------------|-------------------------------------|----------------------------|----------------------------|
| 18' 18' 20' | 6 - Wheel 4 - Wheel 6 - Wheel | 139.50 147.00 162.00 | 139.00 146.50 161.50 |
| 20' | 4 - Wheel | 169.50 | 169.00 |

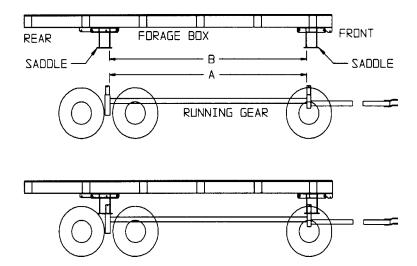
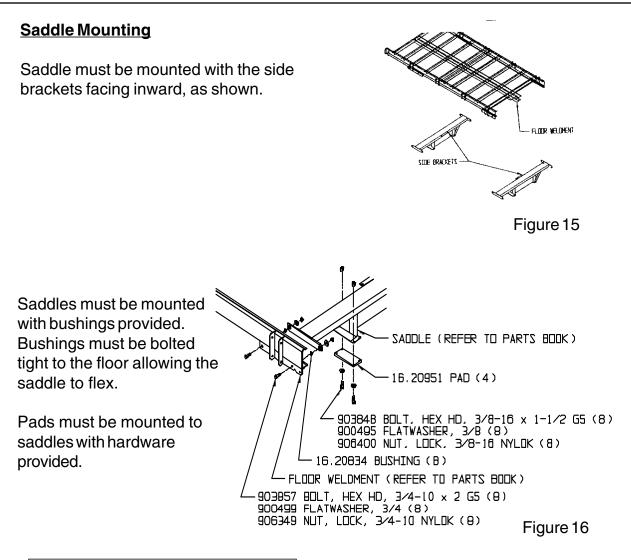
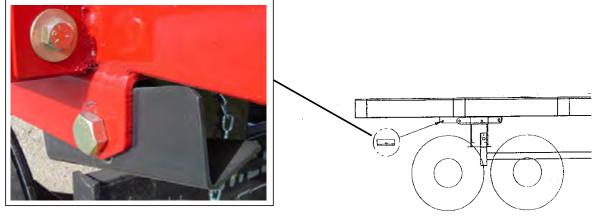


Figure 14

- **NOTE:** B Dimension <u>DOES NOT</u> center forage box saddles on running gear bolster but are biased to prevent movement.
- **NOTE:** Be sure the forage box is assembled to a running gear per included setup instructions or warranty may not apply.





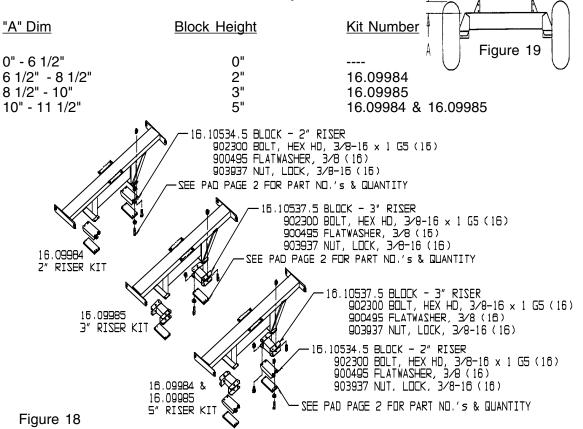
Tandem Tire Bracket

If you mount the box on a running gear equipped with tandems, you must bolt the tandem tire bracket into place (1 per side).

Art's-Way Manufacturing Co., Inc..

Mounting Forage Box to Running Gear

The forage box may require a riser kit when mounted to a running gear with larger tires. Check the chart to determine if it is necessary to order a kit.



Cross Conveyor Apron

On some units the outfeed extension is shipped loose. Proper setup requires this be attached with the existing 6-3/8" bolts, lockwashers & nuts. The PTO bracket is located on the middle 3/8" bolt in front. The flange on the return pan must be inside the unit as shown.

Proper tension on the cross conveyor apron is obtained when apron slats are first touching the return pan about 3' inside the outfeed opening. Adjust the right and left tighteners so both side chains are tightened equally. To adjust the apron, loosen the 3/8" nuts #28A, and then loosen the outer jam nut #28 on the adjusting stud and turn the inner adjusting nut #29 until the proper tension is achieved, then retighten the jam nuts and 3/8" nuts #28A.



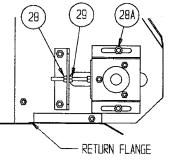


Figure 20 Art's-Way Manufacturing Co., Inc.

Assembly routing of tie down chains between front saddle of forage box and front bolster of running gear.

- 1. Install two chains as shown, being sure to slide chains over small brackets on the saddle, and leaving a 2"-3" gap between the bottom bolster of the running gear and chain.
- 2. Connect each chain together, using 7/16" x 2" Hex head bolt and 7/16" lock nut.





Art's-Way Manufacturing Co., Inc..

Manual No. MP16.22030

Assembly routing of tie down chains between rear saddle of forage box and rear bolster of running gear.

- 1. Install two chains as shown, being sure to slide chains over small brackets on the saddle, and leaving a 2"-3" gap between the bottom bolster of the running gear and chain. NOTE: If mounting the forage box onto a trailer the chains should be tight.
- 2. Connect each chain together, using 7/16" x 2" Hex head bolt and 7/16" lock nut.





OPERATION INSTRUCTIONS

Loading

The forage box load should be filled evenly so as to provide for even feeding into the unloading unit.

Do not fill the cross feed unloading area with crop to get extra capacity. Although overloading devices are provided as a protection, overloading puts unnecessary pressure and strains on the cross conveyor and auger drive.

Place the telescoping PTO drive shaft in the transport bracket during loading and transporting the forage box.

way

NEVER EXCEED A MAXIMUM TOWING SPEED OF 20 MPH (32 KPH) WHEN TRANSPORTING THE FORAGE BOX!

The telescoping PTO connection MUST be disconnected from the tractor when the forage box is being towed. Use the transport bracket provided for convenient storage of the drive shaft during transporting.

Capacity

The capacity of your forage box depends on the size of the box, the strength of the main apron chain, and the rating of the wagon gear and tires. The recommended maximum loads below are assuming running gear and tires are adequately rated for both the crop load and the weight of the forage box.

| Recommended Forage Box Maximum Loads | | | |
|--------------------------------------|-------------------|-----------------------------|---------------------------------|
| Model | <u>Chain</u> | Maximum <u>Crop Load</u> | Weight <u>(Approx.)*</u> |
| 5300 - 18' | 667H Pintle (Std) | 9.0 ton | 2.25 ton |
| 5300 - 18' | 667X Pintle (Opt) | 9.5 ton | 2.25 ton |
| 5300 - 20' | 667H Pintle (Std) | 10.0 ton | 2.50 ton |
| 5300 - 20' | 667X Pintle (Opt) | 10.5 ton * Weight includes | 2.50 ton three augers and roof. |

Transporting

The outfeed apron extension has been equipped with an amber reflector on front and a red reflector to the rear. There are 2 amber reflectors on each side of the forage box. Red reflectors also are attached to the rear of the forage box.

There are also red and amber transport lights at the rear on each side of the box. The plug for the light cord is mounted in the front shield. For your safety, and the safety of others, it is recommended that the transport lights are used when traveling public roadways.

Tractor Connections



WARNING

- Use ONLY a 540 RPM tractor PTO shaft.
- Do not connect to 1000 RPM PTO or use an adapter. PTO damage and risk of entanglement may result.

The following tractor hookup provisions should be made: Figure 21

The hitch point of the tractor drawbar should be set at least 14" behind the end of the PTO shaft.

The hitch point of the tractor drawbar should be set at least 5" but not more than 12" below the tractor PTO shaft.

The hitch point of the tractor drawbar should be at least 13" but not more than 20" above the ground.

The hitch point of the tractor drawbar and PTO should be on the same vertical plane.

After the proper tractor drawbar/PTO shaft alignments are established, make the telescoping PTO drive shaft connection.

PTO Attachment Procedure Figure 22

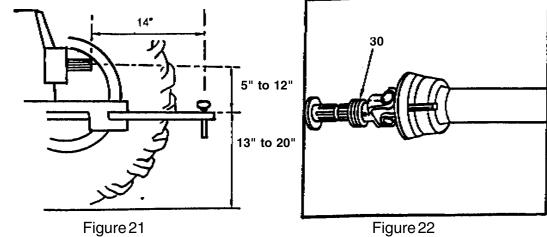
On units with plastic (two piece) locking ring, moving the ring, #30, back (away from the tractor) releases the retaining balls.



THE ROTATING PTO FRONT HALF PTO JOINT MUST BE GUARDED BY THE TRACTOR MASTER PTO SHIELD PROVIDED BY THE TRAC-TOR MANUFACTURER. TO AVOID **INJURY BE SURE TO HAVE IT INSTALLED BEFORE OPERATION!**



BE SURE THE TELESCOPING PTO DRIVE SHAFT LOCKING DEVICE IS POSITIVELY ENGAGED INTO THE **TRACTOR PTO SHAFT BEFORE** STARTING TRACTOR ENGINE!



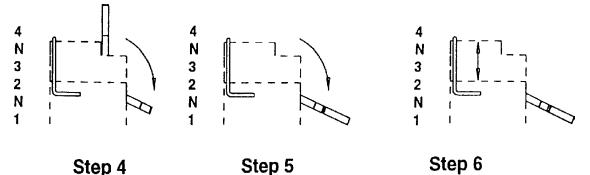
Art's-Way Manufacturing Co., Inc.



DO NOT ALLOW ANYONE TO OPERATE THIS EQUIPMENT WHO HAS NOT BEEN TRAINED IN ITS SAFE OPERATION!

FRONT UNLOADING

- 1. Before unloading the forage box, park the box on level ground for unloading, if possible, engage the tractor parking brake and shut off the tractor engine.
- 2. Be sure <u>safety/cross conveyor clutch</u> is in the "stop" position and the shift lever in the "neutral" position. To avoid undue strain on drive mechanism never start unloading with <u>shift lever</u> in gear or <u>safety/cross conveyor clutch</u> in "run".
- 3. Connect <u>telescoping PTO drive shaft</u> to tractor. Engage locking device in groove on tractor PTO shaft.



- 4. Start tractor engine. Set throttle at idle and engage the PTO. Engage the <u>safety/cross conveyor clutch</u> to clean out crop on the cross conveyor.
- 5. Place the <u>main clutch</u> in the "run" position to start the augers. If the cross conveyor chamber becomes full, switch the <u>main clutch</u> to "stop" until area clears. Return clutch to "run" and repeat procedure until augers are clear of crop.
- 6. Move the <u>shift lever</u> from neutral to unload (1,2, or 3) to start the main unloading aprons. Do not force <u>shift lever</u> from neutral into gear. To shift from neutral to unload (1,2, or 3) the unit should be running and the drive clutch engaged (run).
- 7. Proceed to unload the forage box. Unloading speed can be varied by using the tractor throttle or selecting an alternate unloading speed. It may be necessary to disengage the <u>main clutch</u> to allow shifting. It may also be necessary to re-engage the <u>main clutch</u> to complete the shift. Do not use sweep speed (4) for unloading. Do not exceed a PTO speed of 400 RPM.

- 8. After the crop falls back move the <u>shift lever</u> into sweep (4) for faster cleanout. It may be necessary to disengage the <u>main clutch</u> to allow shifting from an unload speed (1,2, or 3) to sweep (4).
- 9. After unloading return the <u>shift lever</u> to neutral before stopping the PTO.
- 10. Disengage tractor PTO and shut off tractor engine. Disconnect telescoping PTO drive shaft from the tractor and place in PTO transport bracket.



DO NOT ALLOW ANYONE TO OPERATE THIS EQUIPMENT WHO HAS NOT BEEN TRAINED IN ITS SAFE OPERATION!



EMERGENCY STOP DOES NOT STOP THE FORAGE BOX DRIVE SYSTEM WHEN BEING OPERATED AS A REAR UNLOAD.

Rear Unloading-Mechanical

- A. Before unloading the Forage Box, park the box on level ground, if possible, engage the tractor parking brake, and turn off the tractor engine.
- B. Connect telescoping PTO drive shaft to tractor. Engage the locking device in the groove on the tractor PTO shaft.
- C. Start the tractor engine. Set throttle at idle and engage the PTO. Once load has started moving and the door is open, increase your throttle to desired speed. Never exceed 540 RPM.
- D. You may have to drive ahead to allow full cleanout & door closure.
- E. Engage the parking brake, disengage the tractor PTO and shut off the tractor engine. Disconnect the telescoping PTO driveshaft from the tractor and place it in the transport bracket.
- F. Check the door to be sure the latches are engaged.

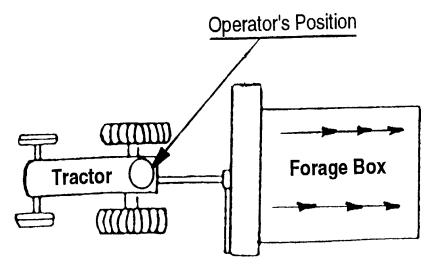


EMERGENCY STOP DOES NOT STOP THE FORAGE BOX DRIVE SYSTEM WHEN BEING OPERATED AS A REAR UNLOAD.

Rear Unloading-Hydraulic

- A. Before unloading the forage box, park the box on level ground, if possible, engage the tractor parking brake, and turn off the tractor engine.
- B. Connect the hydraulic lines to the hydraulic output couplers on the tractor.
- C. Start the tractor engine and engage the hydraulics. If the load does not move, reverse the hydraulic flow with the tractor lever. The forage box has been equipped with a check valve to ensure proper motor rotation.
- D. Once load has started moving, you may have to drive ahead to allow full cleanout and door closure.
- E. Engage the parking brake and disengage the hydraulics and shut off the tractor engine. Disconnect the hydraulic lines from the hydraulic output couplers on the tractor and place them in the storage position.
- F. Check the door to be sure the latches are engaged.

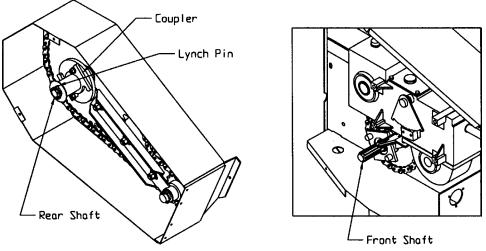
Operator's Position - Rear Unloading



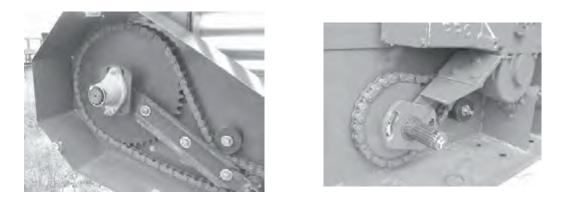
Art's-Way Manufacturing Co., Inc..

Shifting the Drive Coupler From Rear Unload To Front Unload

- 1. Set parking brake and shut off the tractor engine.
- 2. Remove the lynch pin & washer from the shaft with coupler in the rear of the box.
- 3. Slide the coupler off the shaft and go to the front.
- 4. Remove the lynch pin and washer from the front shaft.
- 5. Slide the coupler onto the front shaft and replace the lynch pin and washer.
- 6. Replace washer and lynch pin onto the rear shaft.
- 7. To shift from front unload to rear unload just reverse the above procedure.



S/N 16.06153 & Before



S/N 16.06154 & After Figure 23

LUBRICATION



Do not unclog, adjust, lubricate or service the forage box unless the "Power Source Shut Down Procedure" (Page 3) has been performed.

Sufficient oil and grease will prevent excessive part wear and early failure. Lubricate according to instructions.

Main Apron and Beater Drive Gearbox

The gearbox oil level should be checked every 50 loads. Use No. 85W140 or No. 90 gearlube if oil is needed, add through plug in top cover. Figure 24-#31

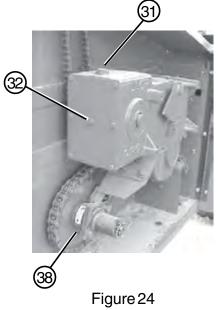
The gearbox oil level should be up to the check level plug in the gearbox rear cover. Figure 24-#32

Grease and Oil

Most grease fittings are a standard style 1/4" - 28 commonly found on farm implements and automotive equipment. A good grade of lithium base grease should be used.

Safety/Cross and Main Clutch Handles

If handle movement becomes hard, remove nuts (Figure 25-#33) and coat pivot bolt with grease and reinstall.

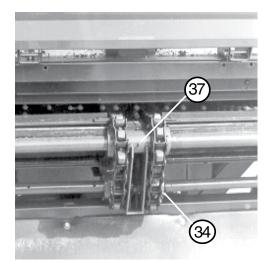


Art's-Way Manufacturing Co., Inc..

Figure 25 Manual No. MP16.22030



Figure 26



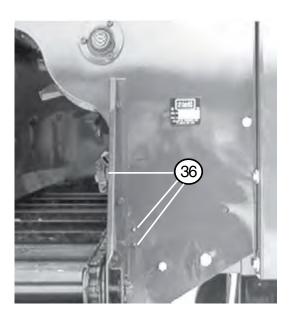


Figure 28

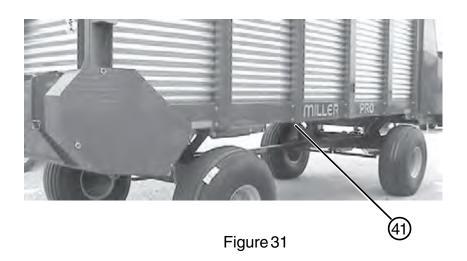
Ref. **Description** No. <u>Qty</u> 34 8 **Rear Idler** Sprockets 35 2 **Driveline Joints** 3 Front Main Apron 36 Bearings **Rear Main Apron** 3 37 Bearings 1 **Outer Apron Shaft** 38 Support (Fig. 24) 2 **Rear Drive Outer** 39 Bearings (Fig. 32) Sprocket Bearing 40 1 41 1 **Center Shaft Bearing** (Fig. 31) 1 Sprocket Cluster 42 Bearings (Fig.32) (Hydraulic Drive Only)

Periodic oiling of all drive chains and conveyor chains will assure longer life.

The main apron chains do not require lubrication.

38

Manual No. MP16.22030



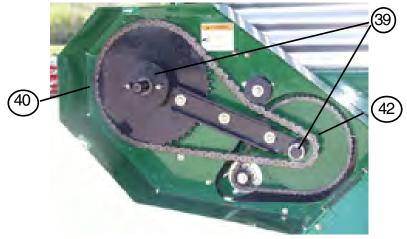
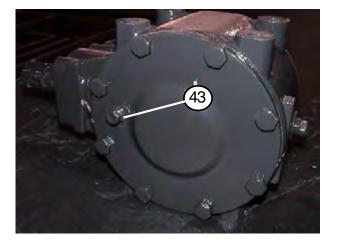


Figure 32 HYDRAULIC REAR UNLOAD SHOWN

<u>Right Angle Gearbox</u>

The gearbox oil levels should be checked every 50 loads. Use No. 85W140 or No. 90 gearlube if oil is needed, add through plug (Fig.33 #43) in the gearbox side cover.

The gearbox oil level should be up to the check level plug in the gearbox side cover.



39

ADJUSTMENTS

Do not unclog, adjust, lubricate or service the forage box unless the "Power Source Shut Down Procedure" (Page 3) has been performed.

Main Apron Figure 34

The main unloading aprons should be kept at proper tension at all times. On a new forage box tension should be checked every 5 loads until any excess slack has been taken up and during normal lubrication thereafter.

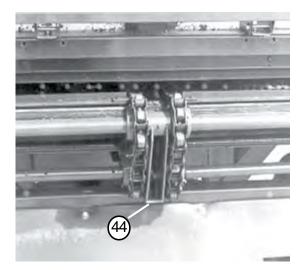
To obtain proper tension adjustments open rear access shield. Pin the rear shield in the raised position when adjusting the main apron. Return the pins to the storage positions when finished. Take up any excess slack evenly with the (4) tightener bolts #44 (2 outside bolts not shown) provided until the slats lift 1/2" off the return flanges 5 feet from the back of the forage box, Figure 31 #41.



CLOSE THE REAR SHIELD BEFORE STARTING THE UNLOADING MECHANISM!

Cross Conveyor Apron Figure 35

The cross conveyor apron should be kept at proper tension at all times. Proper tension on the cross conveyor apron is obtained when apron slats are first touching the return pan about 3' inside the outfeed opening. Adjust the right and left tighteners so both side chains are tightened equally. To adjust the apron, loosen the 3/8" nuts #45, and then loosen the outer jam nut #46 on the adjusting stud and turn the inner adjusting nut #47 until the proper tension is achieved, then retighten the jam nuts and 3/8" nuts #45.



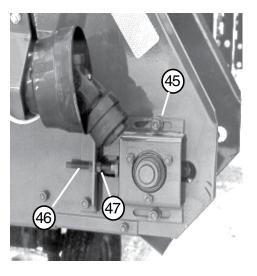


Figure 35 Art's-Way Manufacturing Co., Inc.

Front Drive Chain Figure 36

Open front shield for access. The front chain is tensioned by a spring loaded idler.

To adjust tension, tighten the hex nut #48 on the rod to compress the spring to 6 inches.



Safety/Cross Conveyor and Main Drive Clutch Figure 36

The safety/cross conveyor clutch and main drive clutch rod linkage is factory adjusted and should not require regular adjustment. Should the belt on either one not drive, additional tension can be applied by tightening the nuts #49 & #50 to increase spring tension.

IMPORTANT: MAXIMUM BELT LIFE IS ASSURED BY APPLYING ONLY THE MINIMUM AMOUNT OF TENSION NECESSARY TO DRIVE!



CLOSE THE FRONT COVER BEFORE STARTING THE UNLOADING MECHANISM!



Figure 36

Apron Drive Chain Figure 37

The apron drive chain is properly adjusted when all slack has been removed. To adjust the tension, loosen the nut holding the steel tightener assembly #51 and move the tightener in until proper tension is obtained and then retighten the nut.

Beater Drive Chains Figure 37

The beater drive chain is properly adjusted when all slack has been removed. To adjust the tension, loosen the nut holding the plastic tightener assembly #52 and move the tightener in until proper tension is obtained and then retighten the nut.

CAUTION: Periodic cleaning of inside of Transmission Side Door may be required.



CLOSE THE TRANSMISSION SIDE DOOR BEFORE STARTING THE UNLOADING MECHANISM!





Do not unclog, adjust, lubricate or service the forage box unless the "Power Source Shut Down Procedure" (Page 3) has been performed.

Rear Apron Drive Chain

Figure 39

The apron drive chain is properly adjusted when all slack has been removed. To adjust the tension, loosen the nut holding the tightener assembly #53 and move the tightener in until proper tension is obtained and then retighten the nut.

Hydraulic Drive Chain

Figure 39

The hydraulic drive chain is properly adjusted when all the slack has been removed. To adjust the tension, loosen the 4-bolts #54 holding the motor in position. Slide the motor, in the slots, in the direction to tighten to the chain. Torque the 4-bolts #54 to proper torque.

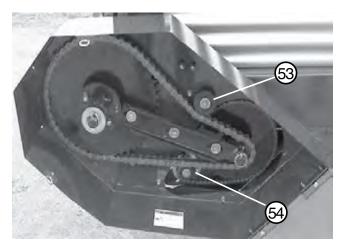


Figure 39 HYDRAULIC REAR UNLOAD SHOWN

Shear Bolts

A spare set of shear bolts have been supplied with the forage box. They are located inside the rear drive shield. Shear bolts may be purchased at your local Miller Pro Parts Dealer. The proper bolts to use are: 3/8"-16 x 1-3/8" Grade 9, Part #16.20659 (S/N 16.06153 & Before) 3/8"-16 x 2" Grade 9, Part #09.71303 (S/N 16.06154 & After)

Fasteners

Retighten all fasteners every 50 loads or as required.

Art's-Way Manufacturing Co., Inc..

Storage

For off- season storage the following procedures are recommended:

- 1. Remove all crop material from the floor, cross conveyor, front door, emergency clutch housing and transmission side door.
- 2. Remove cleanout pan provided in the non-outfeed side of the forage box. Remove debris and buildup. Be sure to replace this pan before resuming operation.



Clean out pan must be replaced before operation.

- 3. Lubricate all grease points and check gearbox oil level.
- 4. Oil all chains outfeed apron, front drive chain, main apron drive chains and metering auger drive chains.
- 5. Run the forage box for several minutes to distribute lubrication.
- 6. Store inside.

OPTIONS AND ACCESSORIES

| MILLER ITEM NO. | DESCRIPTION |
|-----------------|--|
| | |
| 16.09990 | Motor and control unit with mounting plate and lock pin. |
| 16.09970 | Adaptor coupler and drive mounting weldment. (<i>One required per forage box.)</i> |
| 16.10454 | Seal Kit, Cross Conveyor |
| 16.20925 | 18" fold-up outfeed extension, complete with chain and attaching hardware. |
| 16.21029 | 18' Side Extension Kit |
| 16.21031 | 20' Side Extension Kit |
| 16.21019 | Fourth Beater Kit (requires side extension) |
| 16.21059 | Roll Tarp, Electric (w/o side extensions) |
| 16.21060 | Roll Tarp, Electric (w/Side Extensions) |
| | |
| | DestOntions |
| 16.20823 | Roof Options <u>Rafters Only</u> Rafters (3) (to utilize complete roof removable feature). IMPORTANT: If roof is removed a side stiffener kit or side extension kit must be added. |
| | |

THIS PAGE LEFT INTENTIONALLY BLANK

TORQUE SPECIFICATIONS

NOTE: Use these torque values when tightening hardware (excluding: locknuts and self-tapping, thread forming and sheet metal screw) unless specified otherwise.

All torque values are in lb-ft except those marked with an * which are lb-in (for metric torque value nm, multiply lb-ft value by 1.355 or lb-in value by 0.113).

| Unified | Grade 2 | 2 () | Grade 8 | 5 () | Grade | 3 €} |
|-----------------------|----------|-------|------------------|----------|-------------------|----------|
| National Thread | Dry | Lubed | Dry | Lubed | Dry | Lubed |
| 8-32 | 19* | 14* | 30* | 22* | 41* | 31* |
| 8-36 | 20* | 15* | 31* | 23* | 43* | 32* |
| 10-24 | 27* | 21* | 43* | 32* | 60* | 45* |
| 10-32 | 31* | 23* | 49* | 36* | 68* | 51* |
| 1/4-20 | 66* | 50* | 9 | 75* | 12 | 9 |
| 1/4-28 | 76* | 56* | 10 | 86* | 14 | 10 |
| 5/16-18 5/16-24 | 11 12 | 9 | 17 19 | 13 14 | 25 | 18 20 |
| 3/8-16 | 20 | 15 | 30 | 23 | 45 | 35 |
| 3/8-24 | 23 | 17 | 35 | 25 | 50 | |
| 7/16-14 | 32 | 24 | 50 | 35 | 70 | 55 |
| 7/16-20 | 36 | 27 | 55 | 40 | 80 | 60 |
| 1/2-13 | 50 | 35 | 75 | 55 | 110 | 80 |
| 1/2-20 | 55 | 40 | 90 | 65 | 120 | 90 |
| 9/16-12 | 70 | 55 | 110 | 80 | 150 | 110 |
| 9/16-18 | 80 | 60 | 120 | 90 | 170 | 130 |
| 5/8-11 | 100 | 75 | 150 | 110 | 220 | 170 |
| 5/8-18 | 110 | 85 | 180 | 130 | 240 | 180 |
| 3/4-10 | 175 | 130 | 260 | 200 | 380 | 280 |
| 3/4-16 | 200 | 150 | 300 | 220 | 420 | 320 |
| 7/8-9 | 170 | 125 | 430 | 320 | 600 | 460 |
| 7/8-14 | 180 | 140 | 470 | 360 | 660 | 500 |
| 1-8 | 250 | 190 | 640 | 480 | 900 | 680 |
| 1-14 | 270 | 210 | 710 | 530 | 1000 | 740 |
| Metric | Grade 8 | .8 😱 | Grade 10.9 (1.9) | | Grade 12.9 (12.9) | |
| Course Thread | Dry | Lubed | Dry | Lubed | Dry | Lubed |
| M6-1 | 8 | 6 | 11 | 8 | 13.5 | 10 |
| M8-1.25 | 19 | 14 | 27 | 20 | 32.5 | 24 |
| M10-1.5 | 37.5 | 28 | 53 | 39 | 64 | 47 |
| [•] M12-1.75 | 65 | 48 | 91.5 | 67.5 | 111.5 | 82 |
| M14-2 | 103.5 | 76.5 | 145.5 | 108 | 176.5 | 131 |
| M16-2 | 158.5 | 117.5 | 223.5 | 165.5 | 271 | 200 |

Art's-Way Manufacturing Co., Inc..

TIGHTEN HYDRAULIC FITTINGS

CAUTION:

Escaping fluid under pressure can penetrate the skin caus ing serious injury. Relieve pressure before disconnecting hydraulic or other lines. Tighten all connections before applying pressure. Keep hands and body away from pin holes and nozzles which eject fluids under high pressure. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

Tightening Flare Type Fittings*

- 1. Check flare and flare seat for defects that might cause leakage.
- 2. Align hose end with fitting before tightening.
- 3. Lubricate connection and hand tighten swivel nut until snug.
- 4. To prevent twisting the hose, use two wrenches. Place one wrench on the hose end body and with the second wrench, tighten the swivel nut to the torque shown in this chart.
- * Torque values shown are based on lubricated connections as in reassembly.

| Tube Size OD | Nut Size Across Flats | Torque | • Value* | Tui Tiq (Afte | nmended rns To ghten r Finger tening) |
|--------------------|-----------------------------|--------|----------|---------------------|---|
| (ln.) | (ln.) | (Nm) | (lb-ft) | (Flats) | (Turns) |
| 3/16 | 7/16 | 8 | 6 | 1 | 1/6 |
| 1/4 | 9/16 | 12 | 9 | 1 | 1/6 |
| 5/16 | 5/8 | 16 | 12 | 1 | 1/6 |
| 3/8 | 11/16 | 24 | 18 | 1 | 1/6 |
| 1/2 | 7/8 | 46 | 34 | 1 | 1/6 |
| 5/8 | 1 | 62 | 46 | 1 | 1/6 |
| 3/4 | 1-1/4 | 102 | 75 | 3/4 | 1/8 |
| 7/8 | 1-3/8 | 122 | 90 | 3/4 | 1/8 |

TIGHTEN HYDRAULIC FITTINGS continued

Tightening O-Ring Fittings*

- 1. Inspect O-ring and seat for dirt or obvious defects.
- 2. On angle fittings, back the locknut off until washer bottoms out at top of groove.
- 3. Hand tighten fitting until backup washer or washer face (if straight fitting) bottoms on face and O-ring is seated.
- 4. Position angle fittings by unscrewing no more than one turn.
- 5. Tighten straight fittings to torque shown.
- * Torque values shown are based on lubricated connections as in reassembly.

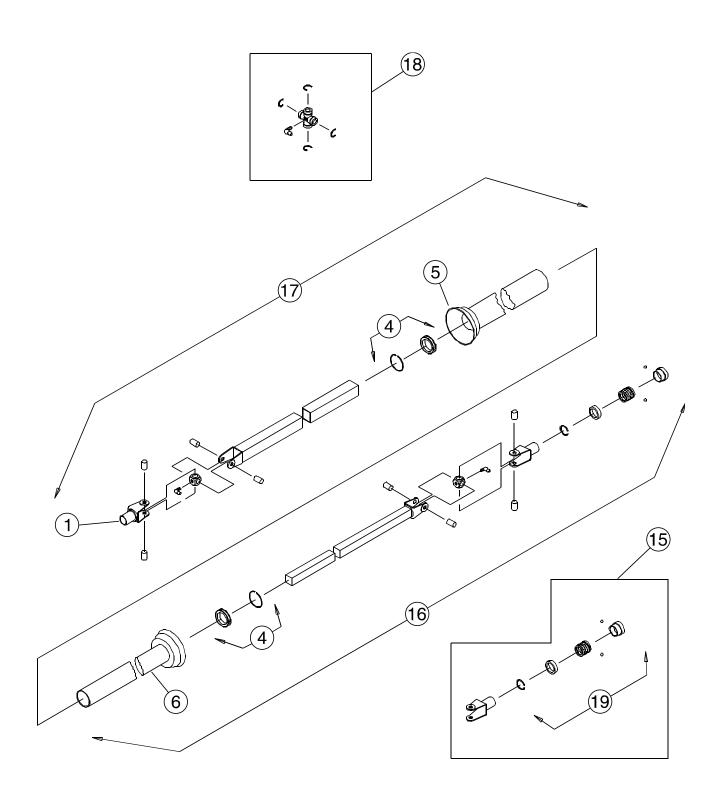
| Thread Size | Nut Size Across Flats | Torque | Value* | Tur Tig (Aftei | nmended ns To ghten r Finger tening) |
|----------------|-----------------------------|--------|---------|----------------------|--|
| (ln.) | (ln.) | (Nm) | (lb-ft) | (Flats) | (Turns) |
| 3/8 | 1/2 | 8 | 6 | 2 | 1/3 |
| 7/16 | 9/16 | 12 | 9 | 2 | 1/3 |
| 1/2 | 5/8 | 16 | 12 | 2 | 1/3 |
| 9/16 | 11/16 | 24 | 18 | 2 | 1/3 |
| 3/4 | 7/8 | 46 | 34 | 2 | 1/3 |
| 7/8 | 1 | 62 | 46 | 1-1/2 | 1/4 |
| 1-1/16 | 1-1/4 | 102 | 75 | 1 | 1/6 |
| 1-3/16 | 1-3/8 | 122 | 90 | 1 | 1/6 |
| 1-5/16 | 1-1/2 | 142 | 105 | 3/4 | 1/8 |
| 1-5/8 | 1-7/8 | 190 | 140 | 3/4 | 1/8 |
| 1-7/8 | 2-1/8 | 217 | 160 | 1/2 | 1/12 |

Art's-Way Manufacturing Co., Inc..

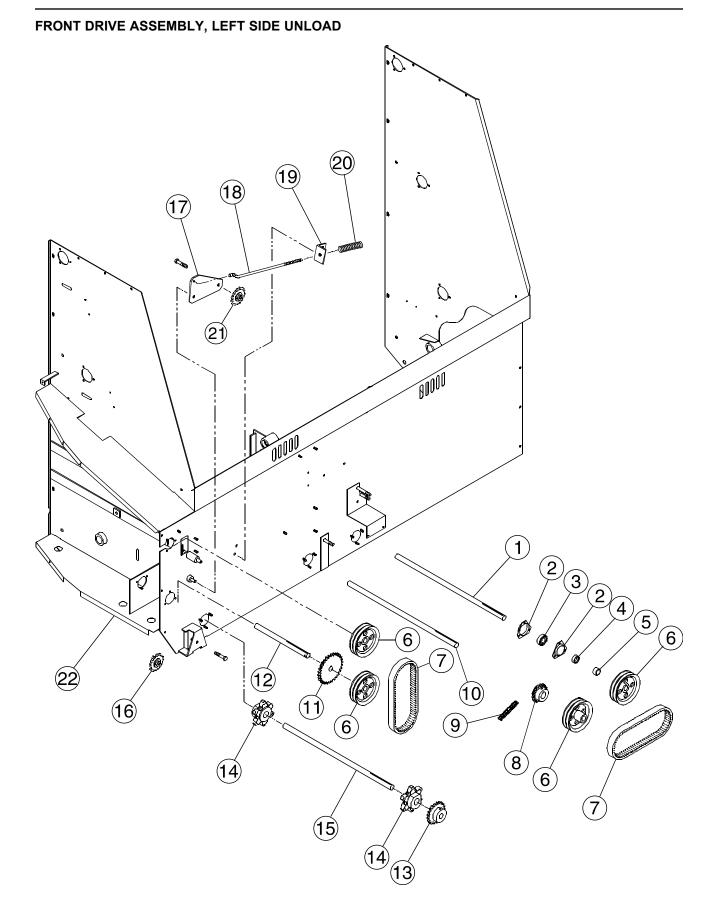
THIS PAGE LEFT INTENTIONALLY BLANK

SECTION 1: ILLUSTRATED PARTS LIST

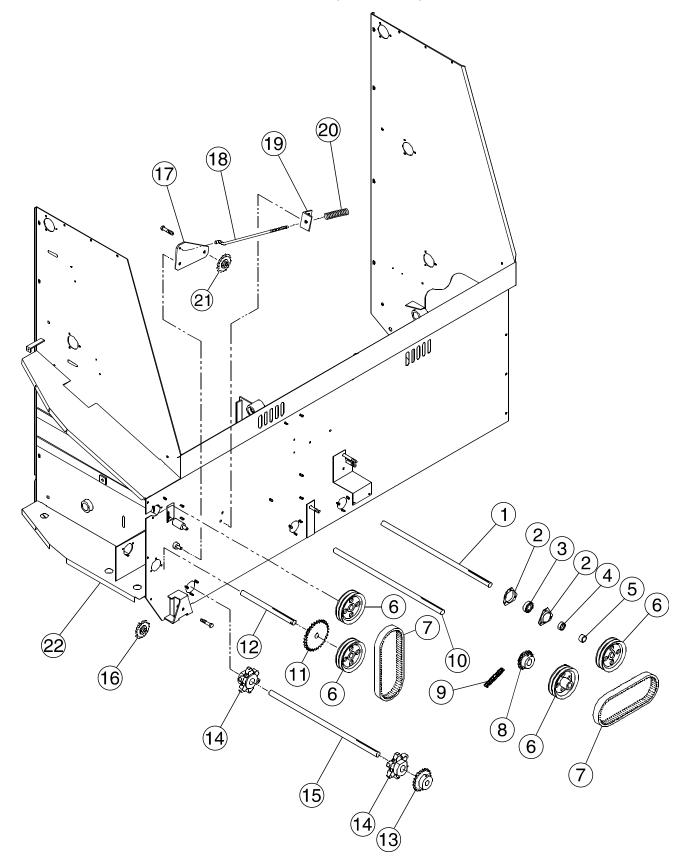
PTO ASSEMBLY



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| 1 | MP16.20967 | END YOKE | 1 |
| 4 | MP906549 | NYLON BEARING AND RETAINER - 2.75" | 2 |
| 5 | MP16.20965 | INNER SHIELD (PLASTIC) | 1 |
| 6 | MP16.20964 | OUTER SHIELD (PLASTIC) | 1 |
| 15 | MP907534 | YOKE W/LOCK ASSEMBLY, PLASTIC | 1 |
| 16 | MP16.20961 | JOINT & SHAFT HALF WITH GUARD | 1 |
| 17 | MP16.20962 | JOINT & TUBE HALF WITH GUARD | 1 |
| 18 | MP700235 | CROSS KIT | 2 |
| 19 | MP906195 | QUICK LOCK REPAIR KIT (PLASTIC COLLAR) | 1 |
| - | MP16.20927 | PTO COMPLETE | - |



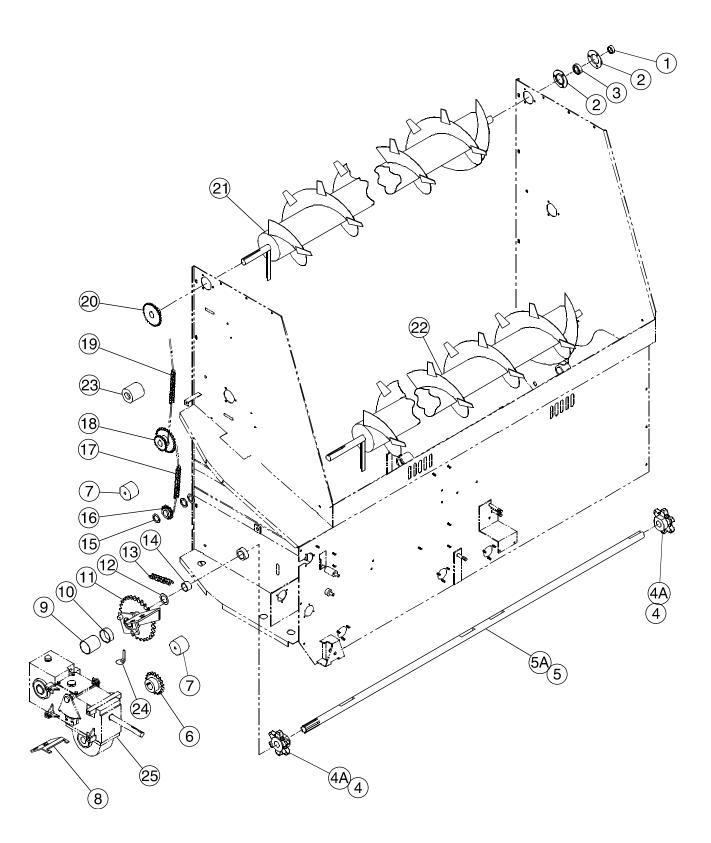
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| | MP16.10470 | SHAFT, PTO DRIVE | 1 |
| 1 | MP01.74158 | PIN, SPIRAL, 5/16 X 1 1/2 | 2 |
| | MP900549 | KEY, SQUARE, 1/4 X 1 3/4 | 2 |
| | MP14.77107 | FLANGETTE, 1 TRIANGULAR 3 HOLE | 18 |
| 2 | MP09.71112 | BOLT, HEX, WASHER HD THRD FRM, 5/16-18 X 3/4 | 3 |
| 2 | MP900503 | LOCKWASHER, 5/16, MED | 27 |
| | MP900365 | NUT, 5/16-18 | 27 |
| 3 | MP01.77500 | BEARING, 1 SPHERICAL W/ COLLAR | 9 |
| 4 | MP900633 | COLLAR, 1 LOCK | 9 |
| 5 | MP16.10239 | SPACER, 1.05 X 1.31 X .64 | 1 |
| 6 | MP16.10196 | PULLEY DRIVE BB6.25 | 4 |
| 0 | MP900444 | SCREW, SET, 3/8-16 X 3/8 | 8 |
| 7 | MP01.76000 | BELT, TORQUE TEAM | 2 |
| 8 | MP16.20878 | SPROCKET, 50C19 1 | 1 |
| 9 | MP16.20892 | CHAIN #50 160P | 1 |
| 10 | MP16.10184 | SHAFT, PTO DRIVEN | 1 |
| 10 | MP01.73240 | KEY, SQUARE, 1/4 X 3 1/2 | 1 |
| 11 | MP16.10199 | SPROCKET, 50B30 1 | 1 |
| 12 | MP16.10157 | SHAFT, JACK | 1 |
| 12 | MP01.73240 | KEY, SQUARE, 1/4 X 3 1/2 | 1 |
| | MP16.20877 | SPROCKET, 50B23 1 | 1 |
| 13 | MP900548 | KEY, SQUARE 1/4 X 1/2 | 1 |
| | MP900441 | SCREW, SET, 5/16-18 X 5/16 | 2 |
| 14 | MP01.60160 | SPROCKET, DRIVE 8 TOOTH | 2 |
| 14 | MP01.74170 | PIN, SPIRAL, 5/16 X 2 1/2 | 2 |
| 15 | MP16.20879 | SHAFT, OUTFEED DRIVE | 1 |



FRONT DRIVE ASSEMBLY, LEFT SIDE UNLOAD, (CONTINUED)

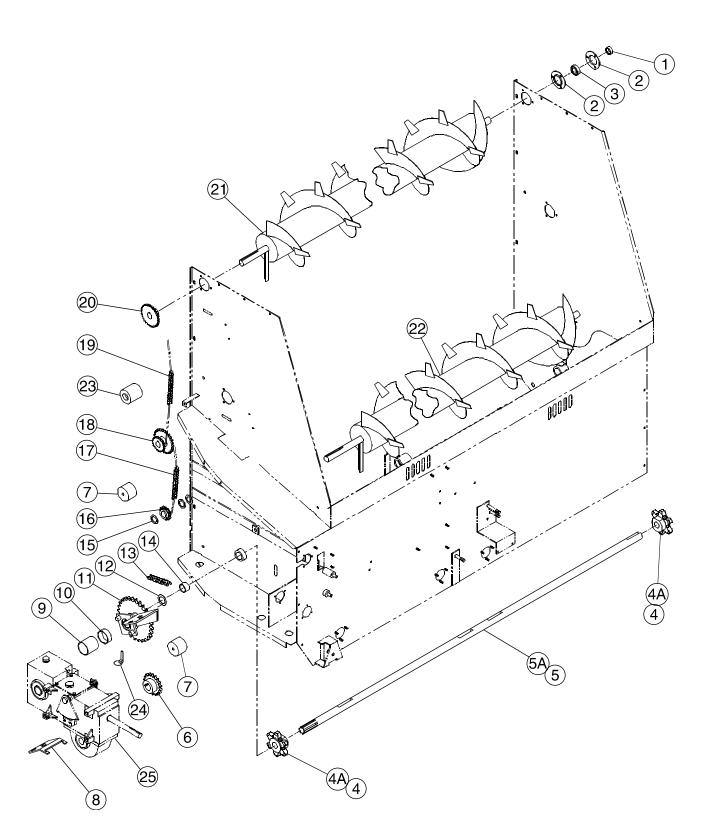
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| | MP01.76300 | SPROCKET, IDLER | 1 |
| 16 | MP901341 | BOLT, HEX, 1/2-13 X 2-1/2 GR 5 | 1 |
| 10 | MP900497 | FLATWASHER, 1/2 | 1 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK | 1 |
| | MP16.20931 | BAR, CHAIN TENSIONER | 1 |
| 17 | MP900497 | FLATWASHER, 1/2 | 1 |
| | MP902194 | NUT LOCK, 1/2-13 TOPLOCK | 3 |
| | MP16.20932 | ROD, CHAIN TENSIONER | 1 |
| 18 | MP900495 | FLATWASHER, 3/8 | 1 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| | MP16.20929 | ANGLE, CHAIN TENSIONER | 1 |
| 19 | MP902300 | BOLT, HEX, 3/8-16 X 1, GR 5 | 2 |
| 19 | MP900495 | FLATWASHER, 3/8 | 2 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 2 |
| 20 | MP01.73890 | SPRING | 1 |
| | MP01.76300 | SPROCKET, IDLER | 1 |
| 21 | MP901341 | BOLT, HEX, 1/2-13 X 2 1/2 GR 5 | 1 |
| 21 | MP900497 | FLATWASHER, 1/2 | 2 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK | 1 |
| | MP16.20975 | UNIT SHELL ASSEMBLY, LSU (INCLUDES DECALS) | 1 |
| | MP902928 | BOLT, HEX, 1/2-13 X 1-1/4, GR 5 | 2 |
| | MP900506 | LOCKWASHER, 1/2, MED | 2 |
| 22 | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK | 2 |
| | MP09.71113 | BOLT, HEX, WASHER, HD THRD FRM, 5-16-18 X 1 | 10 |
| | MP300439B1 | FLATWASHER, 5/16, FENDER 18 GA | 10 |
| | MP900494 | FLATWASHER, 5/16 | 10 |
| | MP903936 | NUT, LOCK, 5-16-18, TOPLOCK | 10 |
| - | MP16.20139 | CLEANOUT COVER (NOT SHOWN) | 1 |

SIDE DRIVE ASSEMBLY

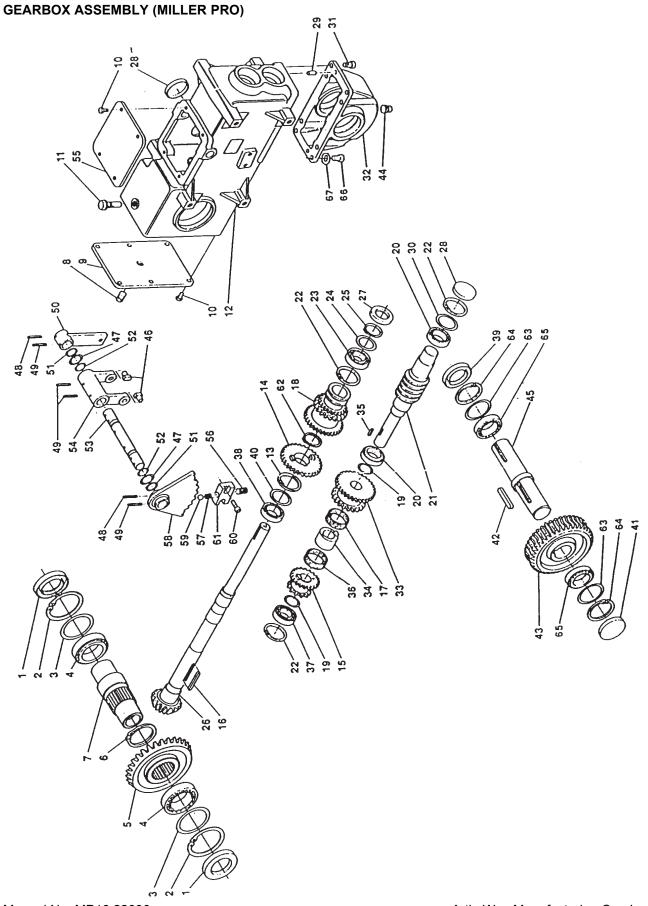


| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 1 | MP900672 | COLLAR, 1-1/4 LOCK | 5 |
| | MP01.77580 | FLANGE, 1-1/4 BEARING | 10 |
| 2 | MP09.71251 | BOLT, HEX, WASHER HD THRD FRM, 3/8-16 X 3/4 | 15 |
| 2 | MP900504 | LOCKWASHER, 3/8, MED | 15 |
| | MP900366 | NUT, 3/8-16 | 15 |
| 3 | MP01.77560 | BEARING, 1-1/4 SPHERICAL W/COLLAR | 5 |
| | MP05.60104 | SPROCKET, DRIVE 6 TOOTH WITH KEYWAY | 4 |
| 4 | MP907543 | KEY, SQUARE, 3/8 X 2-1/4 ROUND ENDS | 4 |
| | MP906559 | SCREW, SET, 3/8 X 3/8 | 8 |
| 5 | MP16.20986 | SHAFT, APRON DRIVE WITH KEYWAYS | 1 |
| 5 | MP01.73266 | KEY, SQUARE, 3/8 X 3 | 2 |
| 6 | MP16.10667 | SPROCKET, 80B14 1-1/2 | 1 |
| | MP26.00020 | CHAIN TIGHTENER | 2 |
| | MP907054 | BOLT, CARRIAGE, 1/2-13 X 3-1/2 | 2 |
| 7 | MP900497 | FLATWASHER, 1/2 | 2 |
| | MP900506 | LOCKWASHER, 1/2, MED | 2 |
| | MP900369 | NUT, 1/2-13 | 2 |
| 8 | MP16.10622 | BRACKET, GEARBOX | 1 |
| 9 | MP16.10654 | SPACER, 1.50 X 2.00 X 2.88 | 1 |
| | MP16.10628 | BUSHING, 2-1/2 X 2-3/4 X 15/16 | 1 |
| | MP902928 | BOLT, HEX, 1/2-13 X 1-1/4, GR 5 | 3 |
| 10 | MP900497 | FLATWASHER, 1/2 | 3 |
| 10 | MP900506 | LOCKWASHER, 1/2, MED | 3 |
| | MP900369 | NUT, 1/2-13 | 3 |
| | MP905081 | FITTING, GREASE, 1/4-28 X 3/4 | 1 |

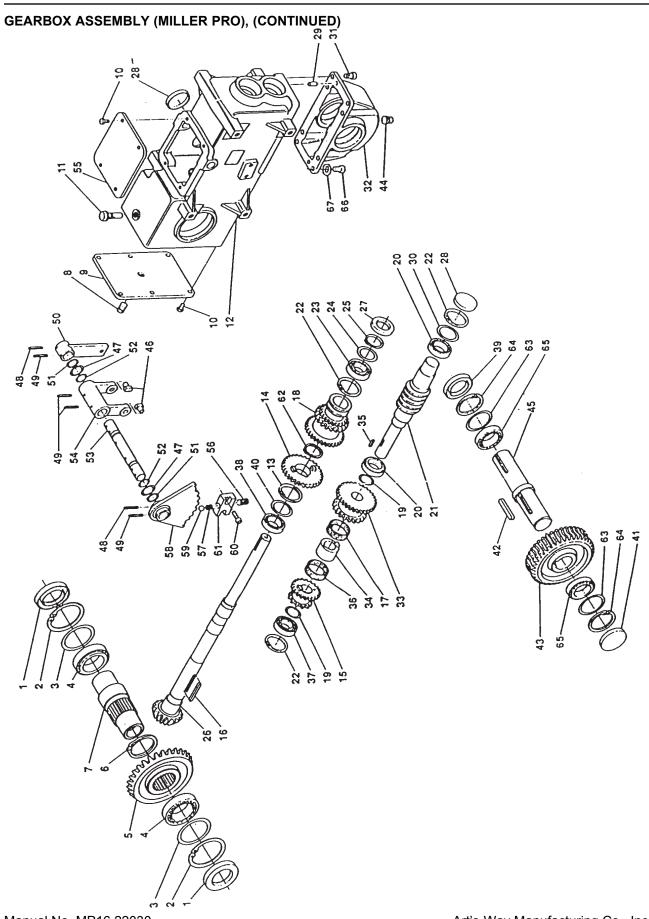




| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| | MP16.20298 | SPROCKET ASSEMBLY, 28T | 1 |
| | MP902928 | BOLT, HEX, 1/2-13 X 1-1/4 GR 5 | 3 |
| 11 | MP900497 | FLATWASHER, 1/2 | 6 |
| 11 | MP900506 | NUT, 1/2-13 | 3 |
| | MP905081 | FITTING, GREASE, 1/4-28 X 3/4 | 1 |
| | MP16.10517 | RETAINING RING, 1-3/8 EXTERNAL | 1 |
| 12 | MP09.70986 | FLATWASHER, 1 1/2 X 2 1/4 X 14 GA | 3 |
| 13 | MP16.10674 | CHAIN 80 50P | 1 |
| 14 | MP01.76445 | BUSHING, 1 1/2 X 1 3/4 X 1 | 2 |
| 15 | MP09.70985 | FLATWASHER, 1 1/4 X 1 7/8 X 14 GA | 3 |
| 16 | MP16.10193 | SPROCKET, 50B19 1 1/4" | 1 |
| 17 | MP16.20950 | CHAIN, #50 100P | 1 |
| 18 | MP16.20881 | SPROCKET 50B28 40B19 1 1/4" | 1 |
| 19 | MP16.20089 | CHAIN, #40 124P | 1 |
| 20 | MP16.10240 | SPROCKET, 40B29 1.25 | 1 |
| | MP16.20034 | BEATER WELDMENT DRIVEN | 2 |
| 21 | MP01.73250 | KEY, SQUARE, 5/16 X 1-1/2 | 2 |
| | MP900971 | RETAINING RING, 1-1/4 EXT | 4 |
| | MP16.20033 | BEATER WELDMENT DRIVE | 1 |
| | MP16.10167 | KEY, SQUARE, 5/16 X 1 | 1 |
| 22 | MP16.10156 | KEY, SQUARE, 5/16 X 6 | 1 |
| | MP09.70985 | FLATWASHER, 1 1/4 X 1 7/8 X 14 GA | 4 |
| | MP900971 | RETAINING RING, 1-1/4 EXT | 4 |
| | MP26.00021 | TENSIONER | 1 |
| | MP907054 | BOLT, CARRIAGE, 1/2-13 X 3-1/2 | 2 |
| 23 | MP900497 | FLATWASHER, 1/2 | 3 |
| | MP900506 | LOCKWASHER, 1/2, MED | 3 |
| | MP900369 | NUT, 1/2-13 | 3 |
| 24 | MP16.10451 | LYNCH PIN | 1 |
| 25 | MP16.10662 | GEAR BOX - 4 SPEED (MILLER PRO OR ART'S WAY) | 1 |



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---------------------------------|------|
| 1 | MP16.10275 | SEAL, DOUBLE LIP | 2 |
| 2 | MP16.10276 | SNAP RING | 2 |
| 3* | MP16.10277 | SHIM KIT | 2 |
| 4 | MP16.10278 | BEARING | 2 |
| 5 | MP16.10279 | GEAR | 1 |
| 6 | MP16.10280 | SNAP RING | 1 |
| 7 | MP16.10281 | SLEEVE | 1 |
| 8 | MP16.10523 | PLUG | 1 |
| 9 | MP16.10282 | COVER | 1 |
| 10 | MP16.10283 | BOLT | 10 |
| 11 | MP16.10284 | PLUG, OIL FILLER | 1 |
| 12 | MP16.10285 | CASING | 1 |
| 13 | MP16.10512 | SNAP RING | 1 |
| 14 | MP16.10286 | GEAR | 1 |
| 15 | MP16.10287 | GEAR | 1 |
| 16 | MP16.10288 | KEY, PARALLEL | 1 |
| 17 | MP16.10289 | SPRING | 1 |
| 18 | MP16.10290 | GEARS | 1 |
| 19 | MP16.10291 | SHIM | 2 |
| 20 | MP16.10503 | BEARING | 2 |
| 21 | MP16.20588 | SHAFT, WORM W/8 X 7 X 38 KEYWAY | 1 |
| 22 | MP16.10504 | SNAP RING | 3 |
| 23 | MP16.10293 | BEARING | 1 |
| 24* | MP16.10294 | SHIM KIT | 1 |
| 25 | MP16.10295 | SNAP RING | 1 |
| 26 | MP16.10296 | SHAFT, PINION | 1 |
| 27 | MP16.10297 | SEAL, OIL | 1 |
| 28 | MP16.10505 | САР | 2 |
| 29 | MP16.10511 | PIN, SPRING | 2 |
| 30* | MP16.10506 | SHIM KIT | 1 |
| 31 | MP16.10524 | BOLT | 6 |
| 32 | MP16.10735 | CASING | 1 |
| 33 | MP16.10298 | GEAR | 1 |
| 34 | MP16.10299 | BUSH | 1 |
| 35 | MP16.20589 | KEY, 8 X 7 X 30 W/SQ ENDS | 1 |
| 36 | MP16.10304 | SPRING | 1 |

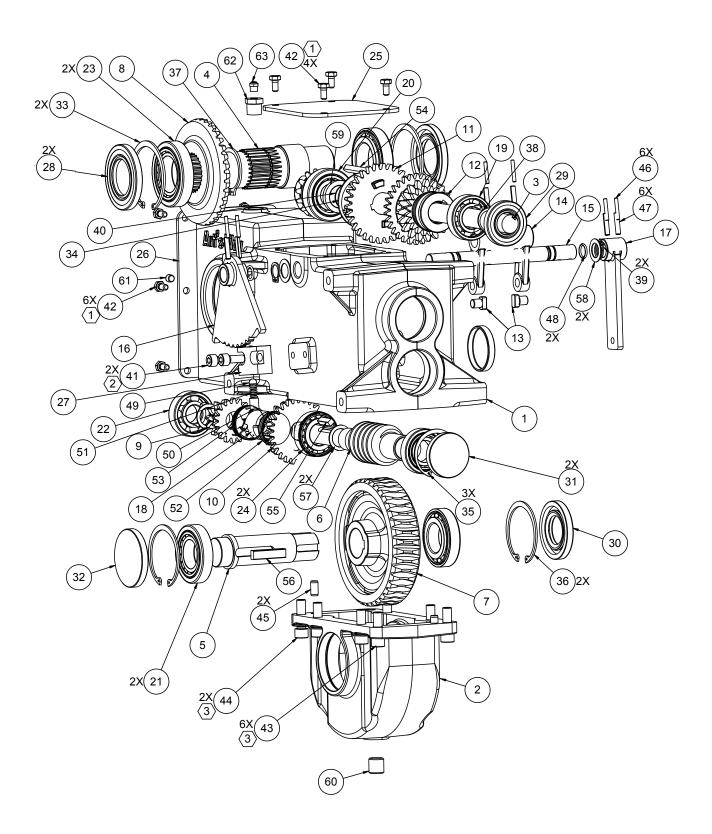


Manual No. MP16.22030

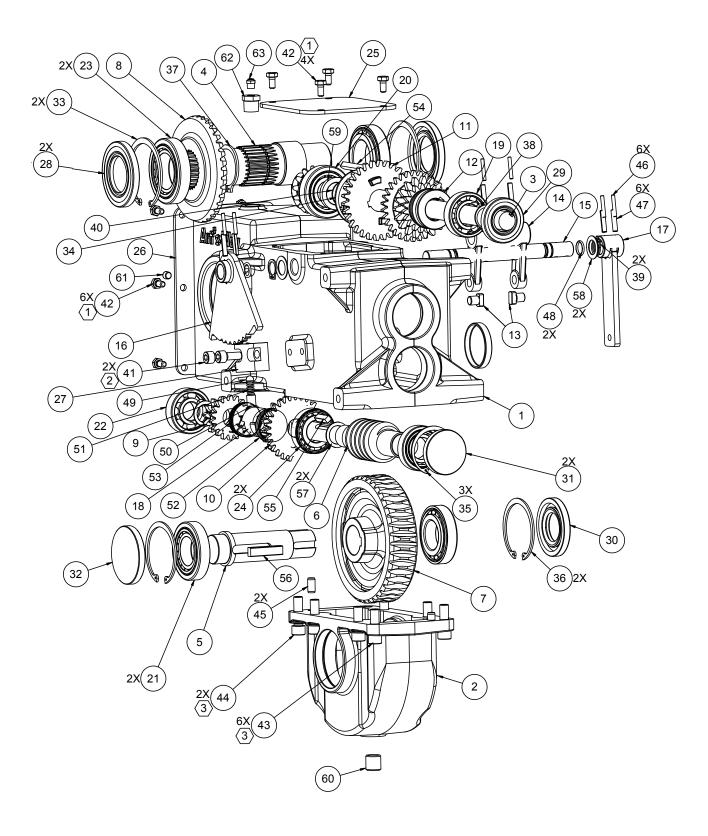
Art's-Way Manufacturing Co., Inc.

| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| 37 | MP16.10305 | BEARING | 1 |
| 38 | MP16.10507 | BEARING | 1 |
| 39 | MP16.10725 | SEAL, DOUBLE LIP | 1 |
| 40* | MP16.10509 | SHIM KIT | 1 |
| 41 | MP16.10726 | САР | 1 |
| 42 | MP16.10737 | KEY, PARALLEL | 1 |
| 43 | MP16.10727 | GEAR | 1 |
| 44 | MP16.10526 | PLUG | 1 |
| 45 | MP16.10728 | SHAFT (LSU) | 1 |
| 46 | MP16.10309 | PAD | 2 |
| 47* | MP16.10310 | SHIM KIT | 2 |
| 48 | MP16.10311 | PIN, SPRING | 6 |
| 49 | MP16.10312 | PIN, SPRING | 6 |
| 50 | MP16.10313 | LEVER | 1 |
| 51 | MP16.10314 | SNAP RING | 2 |
| 52 | MP16.10315 | O-RING | 2 |
| 53 | MP16.10316 | STAFF | 1 |
| 54 | MP16.10317 | FORK | 1 |
| 55 | MP16.10318 | COVER | 1 |
| 56 | MP16.10319 | BOLT | 1 |
| 57 | MP16.10320 | SPRING | 1 |
| 58 | MP16.10321 | LEVER | 1 |
| 59 | MP16.10322 | BALL | 1 |
| 60 | MP16.10323 | BOLT | 2 |
| 60 | MP16.10736 | BOLT | 2 |
| 61 | MP16.10324 | DETENT | 1 |
| 62 | MP16.10325 | SNAP RING | 1 |
| 63* | MP16.10730 | SHIM KIT | 2 |
| 64 | MP16.10731 | SNAP RING | 2 |
| 65 | MP16.10732 | BEARING | 2 |
| 66 | MP09.72902 | BOLT | 2 |
| 67 | MP09.73200 | WASHER | 2 |
| - | MP16.10738 | MASTER SHIM KIT - INCLUDES REF 3, 24, 30, 40, 47, & 63 | - |

GEARBOX ASSEMBLY (ART'S WAY)



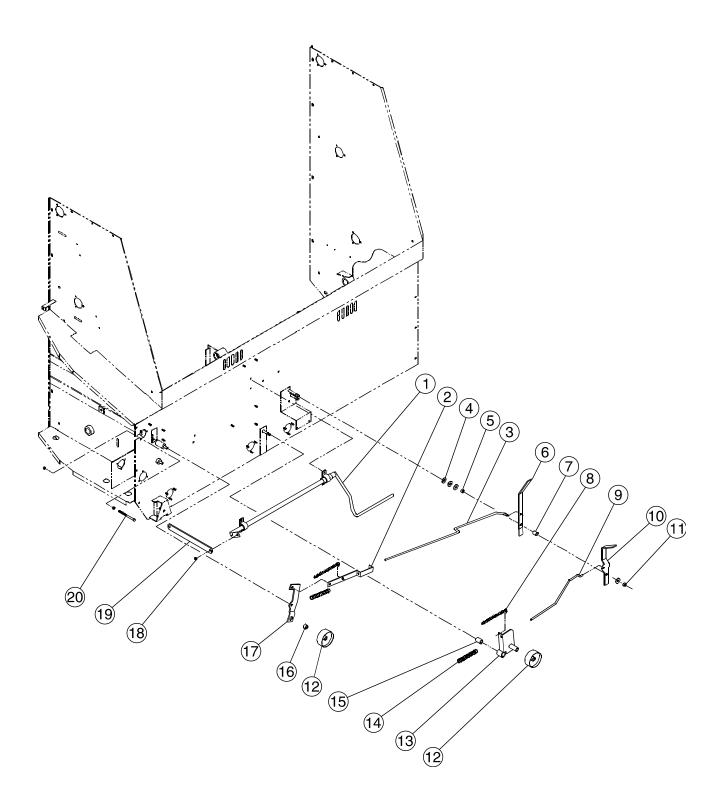
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|-------------------------|------|
| 1 | 620000 | HSG, MACH MAIN | - |
| 2 | 620010 | HSG,MACH, WHEEL COVER | - |
| 3 | 620020 | SUBA,INPUT SHAFT/GEAR | - |
| 4 | 620030 | SHAFT, OUTPUT | - |
| 5 | 620040 | SHAFT, WORM, OUTPUT | - |
| 6 | 620050 | GEAR, WORM/SHAFT 40:1 | - |
| 7 | 620060 | GEAR, WORM WHEEL 40:1 | - |
| 8 | 620070 | GEAR, BEVEL, 35T 2.53:1 | - |
| 9 | 620080 | GEAR, SPUR12T/18T | - |
| 10 | 620090 | GEAR, SPUR17/29T 1 | - |
| 11 | 620100 | GEAR, SPUR 30T 2.5 | - |
| 12 | 620110 | SUBA,GEAR/GEAR | - |
| 13 | 620120 | FOOT, SHIFT, YOKE | - |
| 14 | 620130 | YOKE, MACH, SHIFTER | - |
| 15 | 620140 | SHAFT, SHIFTER | - |
| 16 | 620150 | SUBA,SHIFTER, DETENT | - |
| 17 | 620160 | ASSY, LEVER, SHIFTER | - |
| 18 | 620170 | SHIFTER DOG | - |
| 19 | 620180 | BRG, BALL 6206C3 | - |
| 20 | 620190 | BRG, CUP/CONE 30306M | - |
| 21 | 620200 | BRG, CUP/CONE 30208M | - |
| 22 | 620210 | BRG, BALL 6305 C3 | - |
| 23 | 620220 | BRG, CUP/CONE 30210M | - |
| 24 | 620230 | BRG, CUP/CONE 30206M | - |
| 25 | 620240 | PLATE, COVER | - |
| 26 | 620250 | PLATE, MACH, COVER | - |
| 27 | 620260 | BLOCK, DETENT | - |
| 28 | 620270 | SEAL, 50-90-10MM | - |
| 29 | 620280 | SEAL, 30-62-10MM | - |
| 30 | 620290 | SEAL, 40-80-10MM | - |
| 31 | 620300 | SEAL, ENDCAP 62-10MM | - |
| 32 | 620310 | SEAL, ENDCAP 80-10MM | - |



GEARBOX ASSEMBLY (ART'S WAY), (CONTINUED)

| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|------------------------|------|
| 33 | 620320 | RET RNG, INT DI300-09 | - |
| 34 | 620330 | RET RNG, INT DI300-072 | - |
| 35 | 620340 | RET RNG, INT DI300-062 | - |
| 36 | 620350 | RET RNG, INT DI300-08 | - |
| 37 | 620360 | RET RNG, EXT D1400-055 | - |
| 38 | 620370 | RET RNG, EXT D1400-03 | - |
| 39 | 620380 | RET RNG, EXT D1400-02 | - |
| 40 | 620390 | RET RNG, EXT D1460-03 | - |
| 41 | 620400 | BOLT, M10-1.5X25 | - |
| 42 | 620410 | BOLT, M8-1.25X16 | - |
| 43 | 620420 | BOLT, M12-1.75X35 | - |
| 44 | 620430 | BOLT, M12-1.75X40 | - |
| 45 | 620440 | PIN, DOWEL, 10X2 | - |
| 46 | 620450 | PIN, SPRING SLOTTED 4 | - |
| 47 | 620460 | PIN, SPRING SLOTTED | - |
| 48 | 620470 | SEAL, O-RING | - |
| 49 | 620480 | BALL, STEEL ROUND 10MM | - |
| 50 | 620490 | SCREW, SET M12-1.75X16 | - |
| 51 | 620500 | SPRING, COMPRESSION | - |
| 52 | 620510 | SPRING, TORSION, LH | - |
| 53 | 620520 | SPRING, TORSION, RH | - |
| 54 | 620530 | KEY, 8X7X70MM | - |
| 55 | 620540 | KEY, 8X7X30MM | - |
| 56 | 620550 | KEY, 8X7X48MM | - |
| 57 | 620560 | SPACER, 1.380 X 1.000 | - |
| 58 | 620570 | SPACER, 1.250 X .0800 | - |
| 59 | 620580 | SPACER, 1.750 X 1.183 | - |
| 60 | 620590 | 2-14 NPT SCHD W/3M | - |
| 61 | 620600 | 8-27 NPT SCHD W/3M | - |
| 62 | 620610 | 1/2 NPT TO 1/8 NPT | - |
| 63 | 620620 | 8-27 NPT VENT 5PSI | - |
| 64 | 620630 | LUBE/EP 80W90 | - |

CONTROL SYSTEM ASSEMBLY, LEFT SIDE UNLOAD



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---------------------------------|------|
| | MP16.20098 | SHAFT, ASSEMBLY, CONTROL | 1 |
| 1 | MP900494 | FLATWASHER, 5/16 | 1 |
| | MP900503 | LOCKWASHER, 5/16, MED | 4 |
| | MP900365 | NUT, 5/16-18 | 4 |
| | MP16.10192 | GRIP, HANDLE | 1 |
| | MP16.10245 | BRACKET, SPRING ADJUSTMENT | 1 |
| | MP902300 | BOLT, HEX, 3/8-16 X 1, GR5 | 1 |
| 2 | MP900495 | FLATWASHER, 3/8 | 1 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| | MP16.20097 | ROD, BEATER CLUTCH | 1 |
| 3 | MP900495 | FLATWASHER, 3/8 | 1 |
| | MP903937 | NUT, LOCK, 3/8-16, TOPLOCK | 1 |
| 4 | MP900497 | FLATWASHER, 1/2 | 4 |
| 5 | MP900369 | NUT, 1/2-13 | 1 |
| | MP16.20093 | HANDLE, BEATER CLUTCH | 1 |
| 6 | MP01.73960 | GRIP, CLUTCH HANDLE | 1 |
| 7 | MP16.20190 | BUSHING, .54 X .84 X 1.00 | 1 |
| 8 | MP16.20118 | SPRING, EXT054 X .56 X 8.50 | 2 |
| | MP16.20096 | ROD, SAFETY CLUTCH | 1 |
| 9 | MP900495 | FLATWASHER, 3/8 | 1 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| | MP16.20092 | HANDLE, SAFETY CLUTCH | 1 |
| 10 | MP01.73960 | GRIP, CLUTCH HANDLE | 1 |
| 11 | MP901650 | NUT, LOCK, 1/2-13 CENTER LOCK | 1 |
| 12 | MP01.76340 | PULLEY, IDLER | 2 |
| | MP16.20094 | LEVER ASSY, IDLER | 1 |
| | MP904635 | BOLT, HEX, 5/8-11 X 3 1/2, GR 2 | 1 |
| 13 | MP902193 | NUT, LOCK, 5/8-11 CENTER LOCK | 1 |
| | MP900497 | FLATWASHER, 1/2 | 1 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK | 1 |
| 14 | MP01.73890 | SPRING, CLUTCH CONTROL | 2 |
| 15 | MP16.10260 | SPACER, .56 X 1.00 X 1.53 | 1 |
| 16 | MP16.10364 | SPACER, .66 X 1.00 X .62 | 1 |
| | MP16.10231 | STRAP, IDLER | 1 |
| | MP904253 | BOLT, HEX, 5/8-11 X 2 | 1 |
| 17 | MP902193 | NUT, LOCK, 5/8-11, CENTER LOCK | 1 |
| | MP900497 | FLATWASHER, 1/2 | 1 |
| | MP901650 | NUT, LOCK, 1/2-13 CENTER LOCK | 1 |
| | MP16.10195 | SPACER, .36 X .62 X .33 | 2 |
| | MP902859 | BOLT, HEX, 5/16-18 X 1 | 2 |
| 18 | MP900494 | FLATWASHER, 5/16 | 2 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 2 |
| 19 | MP16.10229 | ROD, TRANSMISSION | 1 |
| | MP904130 | BOLT, HEX, 3/8-16 X 5 | 1 |
| 20 | MP900366 | NUT, 3/8-16 | 2 |

Manual No. MP16.22030

1) 2 3 6 4 (11) Ø Ó 5 6 7 5 8 NQ (13) (10) 9 Ò \mathcal{O} (15)(14)

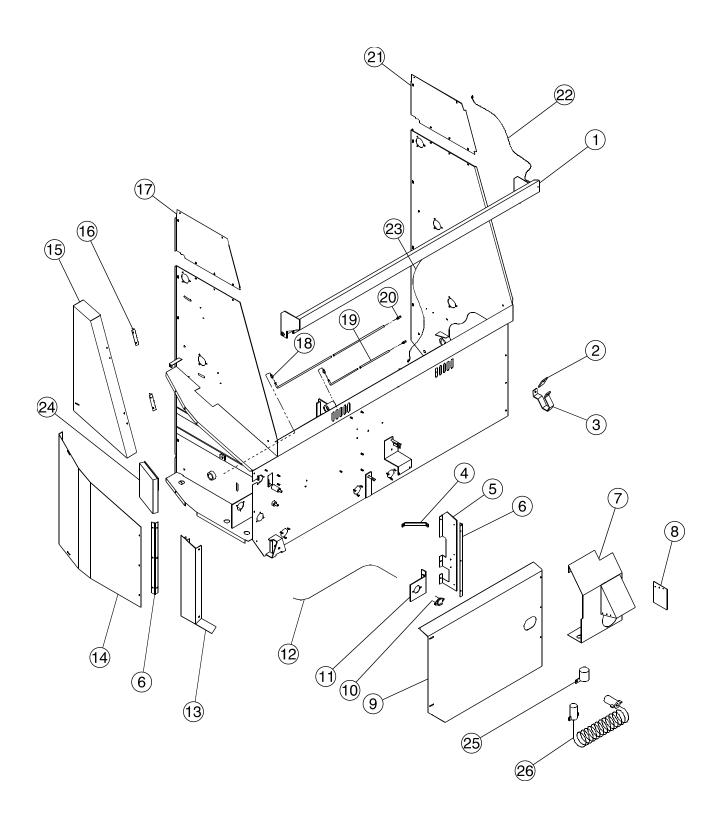
Manual No. MP16.22030

Art's-Way Manufacturing Co., Inc.

OUTFEED EXTENSION & HOLD DOWNS ASSEMBLY

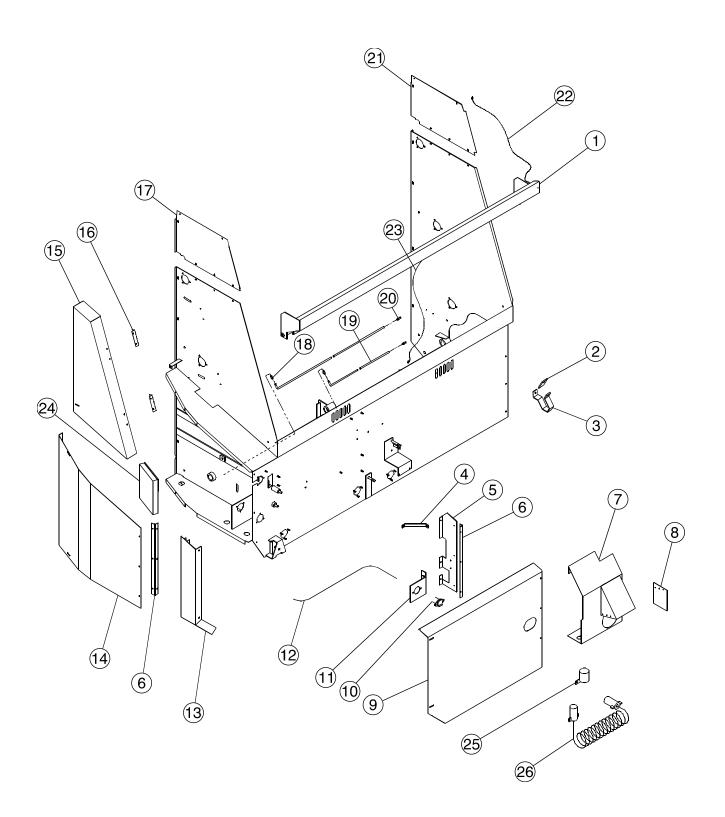
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|------------------------------------|------|
| | MP16.20091 | OUTFEED EXTENSION, REAR | 1 |
| 4 | MP902364 | BOLT, HEX, 3/8-16 X 3/4 | 3 |
| 1 | MP900504 | LOCKWASHER, 3/8, MED | 3 |
| | MP900366 | NUT, 3/8-16 | 3 |
| 2 | MP16.20863 | OUTFEED EXTENSION PAN WELDMENT | 1 |
| 3 | MP16.20187 | SHAFT, OUTFEED IDLER | 1 |
| | MP16.20090 | OUTFEED EXTENSION, FRONT | 1 |
| | MP902364 | BOLT, HEX, 3/8-16 X 3/4 | 1 |
| 4 | MP900397 | BOLT, HEX, 3/8-16 X 1 SPECIAL | 2 |
| | MP900504 | LOCKWASHER, 3/8, MED | 3 |
| | MP900366 | NUT, 3/8-16 | 3 |
| 5 | MP14.77107 | FLANGETTE, 1" TRIANGLE LR 3 HOLE | 4 |
| 6 | MP01.77500 | BEARING, 1 SPHERICAL W/LOCK COLLAR | 2 |
| | MP16.20007 | TAKEUP BRACKET, OUTFEED | 2 |
| | MP905354 | BOLT, CARRIAGE, 3/8-16 X 3/4 | 4 |
| 7 | MP900494 | FLATWASHER, 5/16 | 4 |
| | MP900504 | LOCKWASHER, 3/8, MED | 4 |
| | MP900366 | NUT, 3/8-16 | 4 |
| 0 | MP901759 | BOLT, CARRIAGE, 3/8-16 X 4 | 2 |
| 8 | MP900366 | NUT, 3/8-16 | 6 |
| 9 | MP900633 | COLLAR, 1" LOCK | 2 |
| | MP16.20006 | PLATE, TAKEUP, OUTFEED | 2 |
| 10 | MP905354 | BOLT, CARRIAGE, 3/8-16 X 3/4 | 4 |
| 10 | MP900504 | LOCKWASHER, 3/8, MED | 4 |
| | MP900366 | NUT, 3/8-16 | 4 |
| 44 | MP01.60500 | ROLLER, APRON | 2 |
| 11 | MP01.74140 | PIN, ROLL, 1/4 X 3 | 2 |
| | MP16.10173 | RETURN, OUTFEED EXTENSION | 1 |
| 10 | MP903689 | BOLT, CARRIAGE, 5/16-18 X 3/4 | 2 |
| 12 | MP900503 | LOCKWASHER, 5/16, MED | 2 |
| | MP900365 | NUT, 5/16-18, NC | 2 |
| | MP16.10204 | APRON OUTFEED ASSY | 1 |
| 10 | MP01.75810 | SLAT, W/ATTACHING LINKS | - |
| 13 | MP900709 | LINK, CA550 OFFSET | - |
| | MP900703 | LINK, CA550 CONNECTOR | - |
| | MP16.10805 | COVER, CROSS CONV, FRONT | 1 |
| 4.4 | MP903690 | BOLT, CARRIAGE, 5/16-18 X 1 | 4 |
| 14 | MP900503 | LOCKWASHER, 5/16, MED | 4 |
| | MP900365 | NUT, 5/16-18, NC | 4 |
| | MP16.20867 | HOLD DOWN, CROSS CONV, REAR | 1 |
| 4 5 | MP903690 | BOLT, CARRIAGE, 5/16-18 X 1 | 4 |
| 15 | MP900503 | LOCKWASHER, 5/16, MED | 4 |
| | MP900365 | NUT, 5/16-18, NC | 4 |

SHIELDING, SAFETY BAR, SIDE EXTENSION, & ASSORTED ASSEMBLY



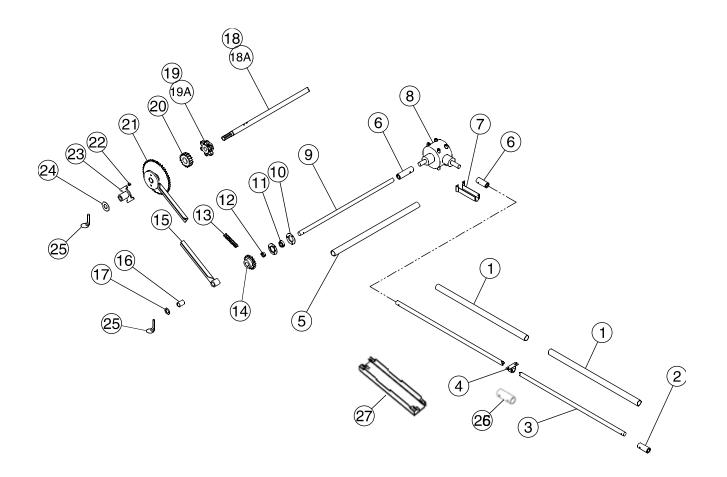
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| | MP16.20416 | SAFETY PUSH BAR ASSY (INCLUDES DECALS) | 1 |
| 1 | MP902364 | BOLT, HEX, 3/8-16 X 3/4 | 2 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 2 |
| | MP16.10225 | FLAP, HANGER | 1 |
| 0 | MP902300 | BOLT, HEX, 3/8-16 X 1, GR5 | 1 |
| 2 | MP900495 | FLATWASHER, 3/8 | 1 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| 3 | MP16.21023 | HANGER, PTO | 1 |
| | MP16.20183 | GUSSET, FRONT SHIELD | 1 |
| 4 | MP900494 | FLATWASHER, 5/16 | 1 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 1 |
| | MP16.20104 | BULKHEAD, FRONT SHIELD | 1 |
| 5 | MP900503 | LOCKWASHER, 5/16, MED | 3 |
| | MP900365 | NUT, 5/16-18, NC | 3 |
| | MP16.20145 | HINGE, SHIELD | 2 |
| 0 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 6 |
| 6 | MP900503 | LOCKWASHER, 5/16, MED | 6 |
| | MP900365 | NUT, 5/16-18, NC | 6 |
| | MP16.20442 | PTO SHIELD WELDMENT (INCLUDES DECALS) | 1 |
| _ | MP900382 | NUT, CAGE, 5/16-18 | 2 |
| 7 | MP09.71121 | BOLT, HEX, 5/16-18 X 1 TAPTITE THREAD FORMING | 2 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 TAPTITE THREAD FORMING | 2 |
| | MP01.73980 | FLAP, PTO | 2 |
| 8 | MP01.74570 | RIVET, POP, 3/16 LG HD SBS64L | 6 |
| | MP16.20968 | FRONT SHIELD ASSY (INCLUDES DECALS) | 1 |
| | MP904863 | BOLT, HEX, 1/4-20 X 3/4 | 3 |
| 9 | MP900502 | LOCKWASHER, 1/4, MED | 3 |
| | MP900363 | NUT, 1/4-20 | 3 |
| | MP16.10750 | DECAL, CLIP | 2 |
| | MP16.20213 | SOCKET, 7 POLE | 1 |
| 10 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 2 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| | MP16.20204 | BRACKET, LIGHT SOCKET | 1 |
| 11 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 , TAPTITE THREAD FORMING | 2 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| | MP16.20794 | WIRING HARNESS 20' | 1 |
| 12 | MP16.20337 | WIRING HARNESS 18' | 1 |
| | MP16.20106 | SIDE SHIELD | 1 |
| | MP900494 | FLATWASHER, 5/16 | 5 |
| 13 | MP900503 | LOCKWASHER, 5/16, MED | 3 |
| | MP900365 | NUT, 5/16-18, NC | 3 |
| | MP906492 | LATCH, DOOR | 2 |

SHIELDING, SAFETY BAR, SIDE EXTENSION, & ASSORTED ASSEMBLY, (CONTINUED)



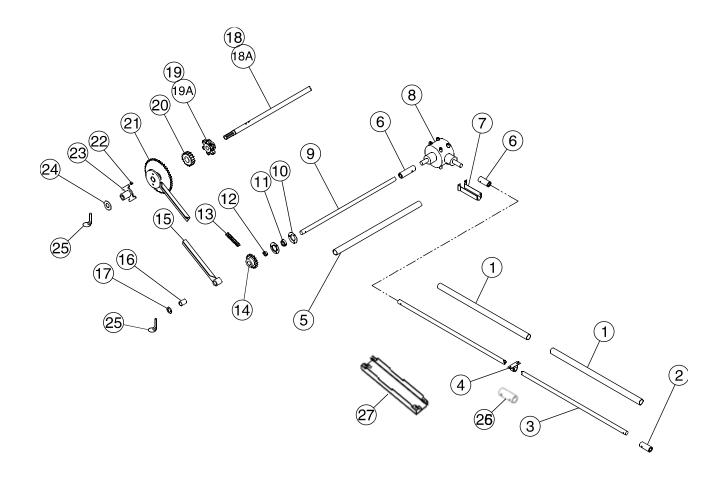
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| | MP16.20107 | TRANSMISSION SHIELD | 1 |
| | MP904863 | BOLT, HEX, 1/4-20 X 3/4 | 3 |
| 4.4 | MP900502 | LOCKWASHER, 1/4, MED | 3 |
| 14 | MP900363 | NUT, 1/4-20 | 3 |
| | MP906492 | LATCH, DOOR | 2 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| | MP16.20108 | BEATER SHIELD | 1 |
| | MP904863 | BOLT, HEX, 1/4-20 X 3/4, THREAD FORMING | 4 |
| 45 | MP900502 | LOCKWASHER, 1/4, MED | 4 |
| 15 | MP900363 | NUT, 1/4-20 | 4 |
| | MP906492 | LATCH, DOOR | 1 |
| | MP900494 | FLATWASHER, 5/16 | 1 |
| | MP16.20144 | HINGE, BEATER SHIELD | 2 |
| 16 | MP902364 | BOLT, HEX, 3/8-16 X 3/4 | 2 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 2 |
| | MP16.20202 | EXTENSION, SIDE, RIGHT SIDE | 1 |
| | MP09.71121 | BOLT, HEX, 5/16-18 X 1, TAPTITE THREAD FORMING | 3 |
| 17 | MP900494 | FLATWASHER, 5/16 | 3 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 3 |
| 18 | MP01.73043 | FITTING, BRASS TUBING PLAIN | 2 |
| 19 | MP11.14300 | 1/8" OD REFRIG TUBING | - |
| | MP01.73042 | FITTING, BRASS TUBING TAPPED | 2 |
| 20 | MP905081 | FITTING, GREASE, 1/4-28 X 3/4 | 2 |
| | MP16.20203 | EXTENSION, SIDE, LEFT SIDE | 1 |
| | MP09.71121 | BOLT, HEX, 5/16-18 X 1 TAPTITE THREAD FORMING | 3 |
| 21 | MP900494 | FLATWASHER, 5/16 | 3 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 3 |
| | MP11.77120 | CABLE, 3/32 7 X 7 VINYL | - |
| 22 | MP01.73844 | SLEEVE, CABLE | 2 |
| | MP11.77120 | CABLE, 3/32 7 X 7 VINYL | - |
| | MP01.73850 | STOP, CABLE 3/32 | 2 |
| | MP16.20176 | EYEBOLT, #10-24 X 1 | 1 |
| 23 | MP900616 | NUT, #10-24 | 1 |
| | MP900617 | LOCKWASHER, #10 | 1 |
| | MP903834 | FLATWASHER, #10 SAE | 2 |
| | MP16.20260 | CASE, OPERATOR'S MANUAL-BOX | 1 |
| 24 | MP904602 | RIVET, POP, 3/16 SBS64 | 2 |
| | MP09.73301 | FLATWASHER, 3/16, RIVETING ZNC | 2 |
| | MP16.20165 | HOLDER, PLUG STORAGE | 1 |
| 25 | MP904863 | BOLT, HEX, 1/4-20 X 3/4, GR 5 | 2 |
| | MP904092 | NUT, LOCK, 1/4-20, NYL INS | 2 |
| 26 | MP16.20214 | CABLE, COIL, 12', 7 WIRE | 1 |

REAR DRIVE SYSTEM ASSEMBLY, MECHANICAL



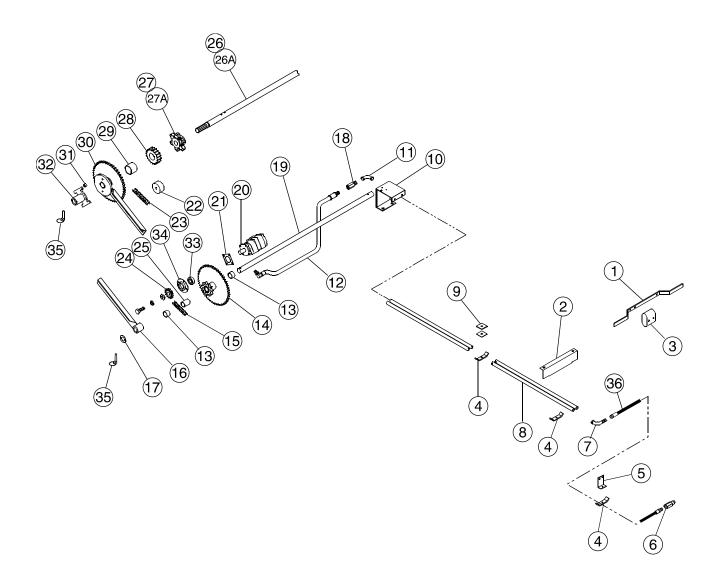
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| | MP16.20361 | SHIELD, CENTER SHAFT (18' ONLY) | 2 |
| 1 | MP16.20798 | SHIELD, CENTER SHAFT (20' ONLY) | 2 |
| | MP16.21290 | SHIELD, CENTER SHAFT (24' ONLY) | 2 |
| 2 | MP16.10460 | COUPLER, 1-1/4 - 1.0 SHAFT | 1 |
| | MP16.20162 | SHAFT, CENTER COMBO (18' ONLY) | 1 |
| 3 | MP16.20797 | SHAFT, CENTER COMBO (20' ONLY) | 1 |
| | MP16.21289 | SHAFT, CENTER COMBO (24' ONLY) | 2 |
| | MP16.10710 | BEARING, PILLOW BLOCK | 1 |
| | MP16.10710 | BEARING, PILLOW BLOCK (24' ONLY) | 2 |
| 4 | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 2 |
| 4 | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK (24' ONLY) | 4 |
| | MP900397 | BOLT, HEX, 3/8-16 X 1 SPECIAL | 2 |
| | MP900397 | BOLT, HEX, 3/8-16 X 1 SPECIAL (24' ONLY) | 4 |
| 5 | MP16.10500 | SHIELD, CROSS SHAFT | 1 |
| | MP16.10459 | COUPLER, 1-1/4" SHAFT | 2 |
| <u> </u> | MP900441 | SCREW, SET, 5/16-18 X 5/16 | 5 |
| 6 | MP01.73250 | KEY, SQUARE, 5/16 X 1-1/2 | 3 |
| | MP904847 | PIN, SPIRAL, 5/16 X 2 HD | 1 |
| | MP16.10348 | GUARD, COUPLER REAR | 2 |
| 7 | MP09.73804 | BOLT, HEX, M8-1.25 X 25 | 5 |
| | MP09.73005 | LOCKWASHER, M8 | 5 |
| | MP16.10327 | GEARBOX, REAR UNLOAD/COMBO | 1 |
| 8 | MP902930 | BOLT, HEX, 1/2-13 X 1 | 4 |
| | MP900506 | LOCKWASHER, 1/2, MED | 4 |
| | MP16.20391 | SHAFT, CROSS | 1 |
| 9 | MP16.10451 | PIN, LYNCH, 7/16 | 1 |
| | MP01.77580 | FLANGE, 1-1/4" BEARING | 2 |
| | MP902300 | BOLT, HEX, 3/8-16 X 1 GR 5 | 3 |
| 10 | MP900495 | FLATWASHER, 3/8 | 3 |
| | MP900504 | LOCKWASHER, 3/8 MED | 3 |
| | MP900366 | NUT, 3/8-16 | 3 |

REAR DRIVE SYSTEM ASSEMBLY, MECHANICAL, (CONTINUED)



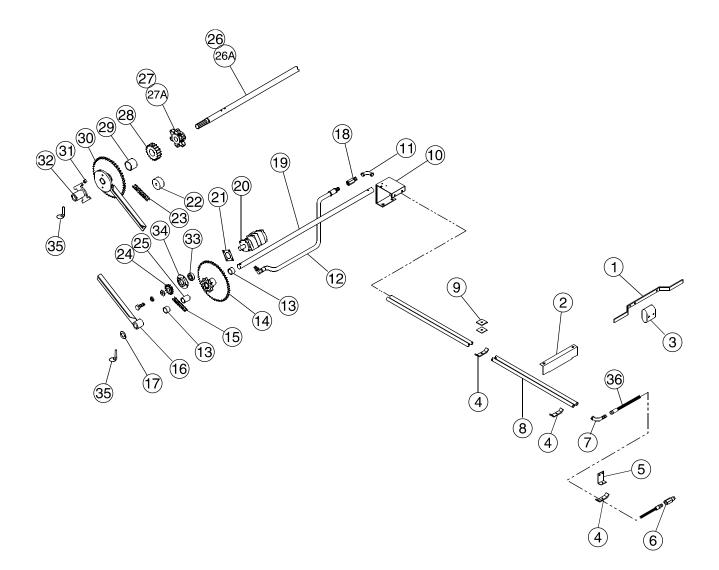
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| 11 | MP01.77560 | BEARING, 1-1/4 SPHR W/COLLAR | 1 |
| 12 | MP900672 | COLLAR, 1-1/4" LOCK | 1 |
| 13 | MP16.10673 | CHAIN, 8072P | 1 |
| | MP16.10669 | SPROCKET, 80B12 1-1/4 | 1 |
| 14 | MP01.73250 | KEY, SQUARE, 5/16 X 1-1/2 | 1 |
| | MP900441 | SETSCREW, 5/16 X 5/16 HHDCP | 2 |
| 15 | MP16.20393 | OUTER BEARING WELDMENT, 1-1/4 | 1 |
| 15 | MP905081 | FITTING, GREASE, 1/4-28 X 3/4 | 1 |
| 16 | MP01.76415 | BUSHING, 1-1/4 X 1-1/2 X 1 | 1 |
| 17 | MP09.70985 | FLATWASHER, 1-1/4 X 1-7/8 | 1 |
| | MP16.20987 | SHAFT, APRON, REAR WITH KEYWAYS | 1 |
| 10 | MP09.73300 | BUSHING, MACHINE, 1-3/8 X 2-1/8 X 14 GA. | 1 |
| 18 | MP16.10517 | RING, RETAINING, 1-3/8 EXT. | 1 |
| | MP16.10451 | PIN, LYNCH, 7/16 | 1 |
| | MP05.60104 | SPROCKET, DRIVE 6 TOOTH WITH KEYWAY | 4 |
| 19 | MP907543 | KEY, SQUARE. 3/8 X 2-1/4 ROUND ENDS | 4 |
| | MP906559 | SETSCREW, 3/8 X 3/8 SKTHDCP | 8 |
| 20 | MP16.20164 | HUB, LATCH | 2 |
| 20 | MP01.74250 | PIN, SPIRAL, 3/8 X 2-3/4 | 2 |
| 21 | MP16.20630 | SPROCKET ASSY, 48T #80 | 1 |
| 21 | MP09.72606 | FITTING, GREASE, 1/4-28 X 1 | 1 |
| | MP16.10452 | SPACER, .40 X .75 X .50 | 2 |
| 22 | MP16.20659 | BOLT, HEX, 3/8-16 X 1-3/8 GR 9 | 2 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 2 |
| 23 | MP16.10395 | COUPLER ASSY | 1 |
| 24 | MP16.10646 | FLATWASHER, 1-3/8 X 1/16 X .10 | 1 |
| 25 | MP16.10451 | PIN, LYNCH, 7/16 | 2 |
| 26 | SD201147 | COUPLER, SHAFT CENTER COMBO (24' ONLY) | 1 |
| 26 | U10300154 | PIN, ROLL 3/8 X 2 ZN (24' ONLY) | 2 |
| 27 | MP16.21292 | SHIELD, CENTER SHAFT SPLICE COMBO (24' ONLY) | 1 |

REAR DRIVE SYSTEM ASSEMBLY, HYDRAULIC



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---------------------------------------|------|
| | MP16.20465 | BRACKET, HOSE HOLDER | 1 |
| 4 | MP902364 | BOLT, HEX, 3/8-16 X 3/4 | 1 |
| 1 | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| | MP900495 | FLATWASHER, 3/8 | 1 |
| 2 | MP16.20480 | BRACKET, PIPE HANGER | 1 |
| | MP16.20958 | PROTECTOR, HYDRAULIC TIP | 1 |
| 2 | MP902831 | BOLT, HEX, 3/8-16 X 3 | 2 |
| 3 | MP900495 | FLATWASHER, 3/8 | 2 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 2 |
| | MP19.800144 | CLAMP | 3 |
| 4 | MP16.10228 | WASHER, SQUARE, .53 X 2.00 X .18 | 2 |
| 4 | MP901893 | BOLT, HEX, 5/16-18 X 2 | 3 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 3 |
| - | MP16.20481 | BRACKET, HOSE HOLDER | 1 |
| 5 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 2 |
| 6 | MP07.19044 | MALE PIONEER, 1/2 COUPLER | 2 |
| 7 | MP05.78023 | ELBOW, 1/2, 90° STREET, GALVANIZED | 2 |
| | MP16.20454 | TUBE, HYDRAULIC 206" (18' ONLY) | 2 |
| 8 | MP16.20519 | TUBE, HYDRAULIC 230" (20' & 24' ONLY) | 2 |
| | MP16.31000 | TUBE, HYDRAULIC 42" (24' ONLY) | 2 |
| 9 | MP16.10228 | WASHER, SQUARE, .53 X 2.00 X .18 | 2 |
| | MP16.20463 | BRACKET, JACK SHAFT | 1 |
| | MP902928 | BOLT, HEX, 1/2-13 X 1-1/4 GR 5 | 2 |
| | MP900506 | LOCKWASHER, 1/2 MED | 2 |
| 10 | MP900369 | NUT, 1/2-13 | 2 |
| 10 | MP09.71121 | BOLT, HEX, 5/16-18 X 1, WASHER HEAD | 2 |
| | MP900497 | FLATWASHER, 5/16 | 4 |
| | MP900503 | LOCKWASHER, 5/16 MED | 2 |
| | MP900365 | NUT, 5/16-18 NC | 2 |
| 11 | MP16.20460 | FITTING, HYDRAULIC, 1/2 PIPE ELBOW | 2 |
| | MP16.20458 | HOSE ASSEMBLY, 45" | 2 |
| 12 | MPH434289 | CLAMP, HOSE | 1 |
| | MP09.71113 | BOLT, HEX, 5/16-18 X 1 | 1 |
| 13 | MP16.20456 | SPACER, 1.38 X 1.66 X 1.00 | 2 |
| | MP16.20445 | SPROCKET ASSEMBLY, 50A57 80A12 | 1 |
| 14 | MP905081 | FITTING, GREASE, 1/4-28 X 3/4 | 1 |
| 15 | MP16.20448 | CHAIN, #50 66P | 1 |
| | MP16.20393 | OUTER BEARING WELDMENT, 1-1/4 | 1 |
| | MP902928 | BOLT, HEX, 1/2-13 X 1-1/4 GR 5 | 3 |
| 40 | MP900497 | FLATWASHER, 1/2 | 6 |
| 16 | MP900506 | LOCKWASHER, 1/2 MED | 3 |
| | MP900369 | NUT, 1/2-13 | 3 |
| | MP905081 | FITTING, GREASE, 1/4-28 X 3/4 | 1 |
| 17 | MP09.70985 | FLATWASHER, 1-1/4 X 1-7/8 | 1 |

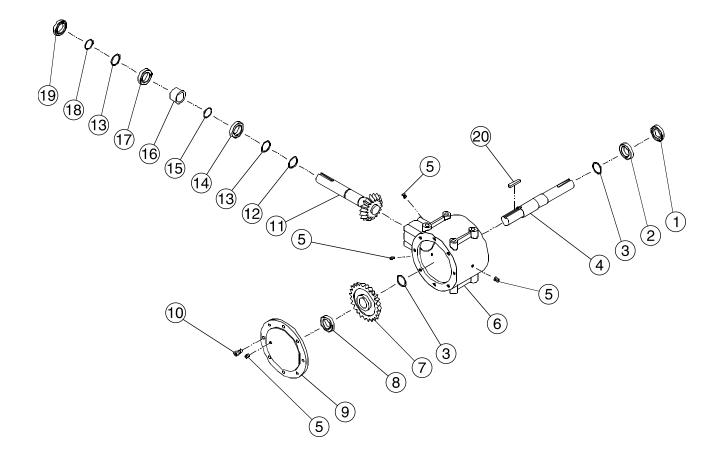
REAR DRIVE SYSTEM ASSEMBLY, HYDRAULIC, (CONTINUED)



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 18 | MP05.75170 | VALVE, CHECK IN-LINE, ONE-WAY | 1 |
| | MP16.20483 | SHAFT, COMBO HYDRAULIC JACK | 1 |
| 19 | MP16.10451 | PIN, LYNCH, 7/16 | 1 |
| 19 | MP09.74201 | U-BOLT, 1/4 X 1-1/4 X 2-1/4 | 1 |
| | MP900502 | LOCKWASHER, 1/4 MED | 2 |
| | MP01.82214 | MOTOR, HYD - 10.0 CID (18' ONLY) | 1 |
| | MP16.10758 | MOTOR, HYD 14 (WHITE) - 15.5 CID (20' ONLY) | 1 |
| | MP033503 | SEAL KIT (WHITE) | 1 |
| | MP902300 | BOLT, HEX, 3/8-16 X 1 | 4 |
| 20 | MP900495 | FLATWASHER, 3/8 | 4 |
| | MP900504 | LOCKWASHER, 3/8, MED | 4 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 1 |
| | MP900503 | LOCKWASHER, 5/16, MED | 1 |
| | MP907057 | FLATWASHER, 3/8 X 1-1/4 | 1 |
| 21 | MP16.20464 | PLATE, MOTOR | 1 |
| | MP1544585C1 | CHAIN TENSIONER | 1 |
| | MP903635 | BOLT, CARRIAGE, 1/2-13 X 2-1/2 | 1 |
| 22 | MP900497 | FLATWASHER, 1/2 | 1 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK | 1 |
| 23 | MP16.10673 | CHAIN, #80 72P | 1 |
| | MP16.20523 | SPROCKET, 50C13 | 1 |
| 24 | MP901661 | KEY, SQUARE, 1/4 X 9/16 | 1 |
| 25 | MP01.76415 | BUSHING, 1-1/4 X 1-1/2 X 1 | 3 |
| | MP16.20987 | SHAFT, APRON, REAR WITH KEYWAYS | 1 |
| | MP09.73300 | BUSHING, MACHINE, 1-3/8 X 2-1/8 X 14 GA. | 1 |
| 26 | MP16.10517 | RING, RETAINING, 1-3/8 EXT. | 1 |
| | MP16.10451 | PIN, LYNCH, 7/16 | 1 |
| | MP05.60104 | SPROCKET, DRIVE 6 TOOTH WITH KEYWAY | 4 |
| 27 | MP907543 | KEY, SQUARE. 3/8 X 2-1/4 ROUND ENDS | 4 |
| | MP906559 | SETSCREW, 3/8 X 3/8 SKTHDCP | 8 |
| | MP16.20164 | HUB, LATCH | 2 |
| 28 | MP01.74250 | PIN, SPIRAL, 3/8 X 2-3/4 | 2 |
| | MP01.76442 | BUSHING, 1-1/2 X 1-3/4 X 3/4 | 1 |
| 29 | MP01.76445 | BUSHING, 1-1/2 X 1-3/4 X 1 | 1 |
| | MP16.20630 | SPROCKET, 48T #80 | 1 |
| 30 | MP09.72606 | FITTING, GREASE, 1/4-28 X 1 | 1 |
| | MP16.10452 | SPACER, .40 X .75 X .50 | 2 |
| 31 | MP16.20659 | BOLT, SPECIAL, 3/8-16 X 1-3/8 | 2 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 2 |
| 32 | MP16.10395 | COUPLER ASSEMBLY | 1 |
| 33 | MP16.10646 | FLATWASHER, 1.38 X 3-1/16 X .10 | 1 |
| | MP16.20525 | BEARING, BALL, 1.0 X 52 X 15 | 1 |
| 34 | MP16.20524 | FLANGE, BEARING | 1 |
| 35 | MP16.10451 | PIN, LYNCH, 7/16 | 2 |
| 36 | MP16.20477 | HOSE ASSEMBLY 152" | 2 |

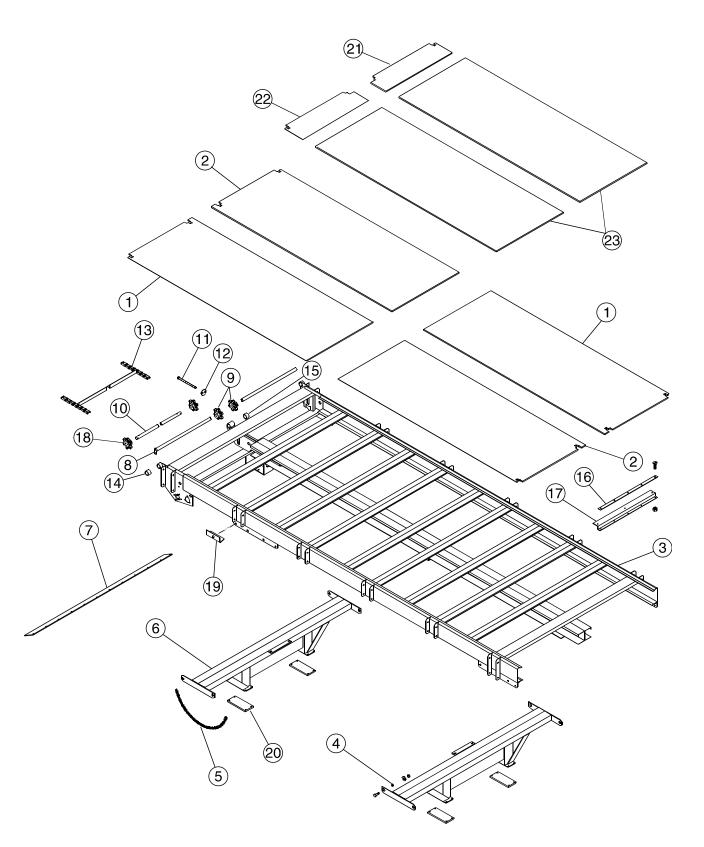
Manual No. MP16.22030

RIGHT ANGLE GEAR BOX ASSEMBLY



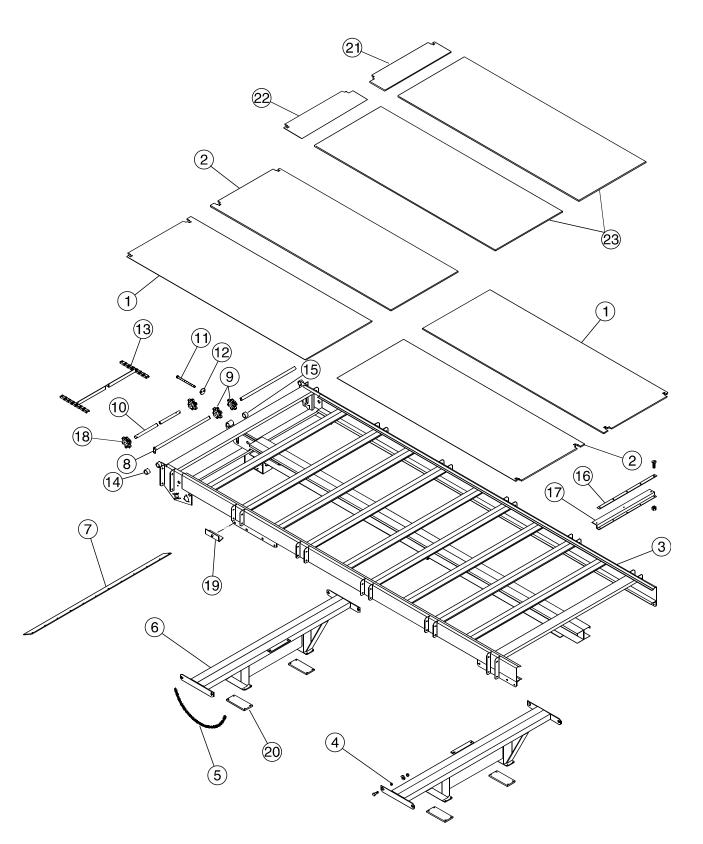
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|-------------------------------------|------|
| 1 | MP16.10579 | SEAL, OIL | 1 |
| 2 | MP16.10580 | BEARING | 1 |
| 3 | MP16.10581 | SHIM KIT | 1 |
| 4 | MP16.10578 | SHAFT | 1 |
| 5 | MP16.10583 | PLUG | 4 |
| 6 | MP16.10585 | CASING | 1 |
| 7 | MP16.10584 | GEAR | 1 |
| 8 | MP16.10588 | BEARING | 1 |
| 9 | MP16.10587 | COVER | 1 |
| 10 | MP09.73805 | BOLT, HEX, M10-1.25 X 25 GR 8.8 ZNC | 8 |
| 11 | MP16.10592 | SHAFT, PINION | 1 |
| 12 | MP16.10596 | SHIM | 1 |
| 13 | MP16.10591 | SHIM KIT | 2 |
| 14 | MP16.10595 | BEARING | 1 |
| 15 | MP16.10512 | RETAINING RING, 72 INT PIN | 1 |
| 16 | MP16.10589 | SPACER | 1 |
| 17 | MP16.10590 | BEARING | 1 |
| 18 | MP16.10594 | SNAP RING | 1 |
| 19 | MP16.10593 | SEAL, OIL | 1 |
| 20 | MP16.10582 | KEY, PARALLEL | 1 |
| - | MP16.10327 | COMPLETE GEAR BOX ASSEMBLY | 1 |

FRAME & APRON TAKEUP ASSEMBLY



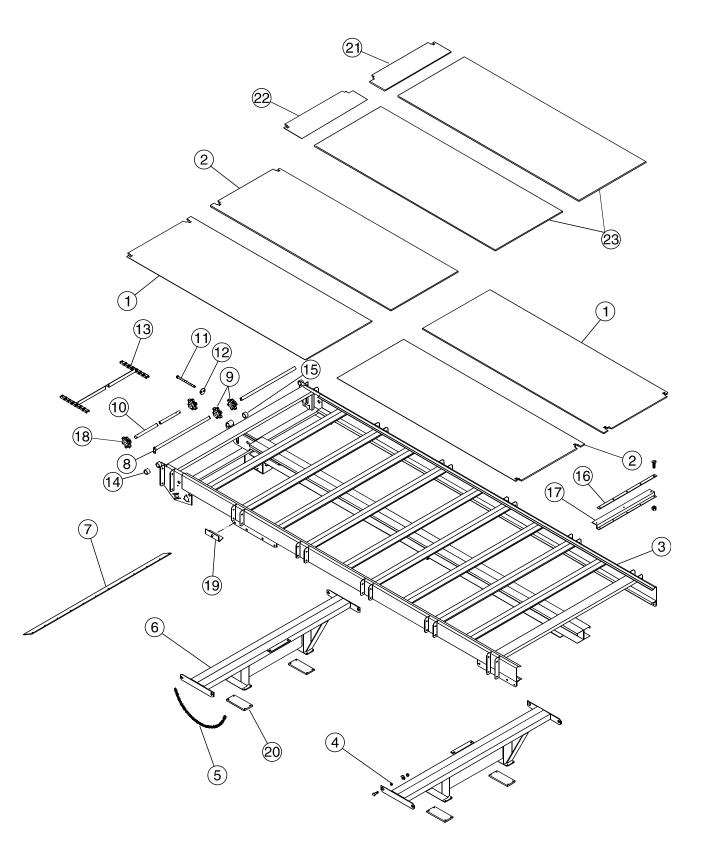
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| | MP16.20159 | PANEL, FLOOR, COMBO, LEFT FRONT/RIGHT REAR (18' ONLY) | 2 |
| | MP16.20159 | PANEL, FLOOR, COMBO, LEFT FRONT (20' ONLY) | 1 |
| | MP16.21310 | PANEL, FLOOR, COMBO, LEFT FRONT (24' ONLY) | 1 |
| | MP09.71007 | SCREW, PHILLIPS HD W/WOOD WING | 28 |
| | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (18' ONLY) | 12 |
| 1 | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (20' ONLY) | 6 |
| | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (24' ONLY) | 6 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (18' ONLY) | 12 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (20' ONLY) | 6 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (24' ONLY) | 6 |
| | MP16.20160 | PANEL, FLOOR, COMBO, RIGHT FRONT/LEFT REAR (18' ONLY) | 2 |
| | MP16.20160 | PANEL, FLOOR, COMBO, RIGHT FRONT (20' ONLY) | 1 |
| | MP16.21309 | PANEL, FLOOR, COMBO, RIGHT FRONT (24' ONLY) | 1 |
| | MP09.71007 | SCREW, PHILLIPS HD W/WOOD WING | 28 |
| • | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (18' ONLY) | 12 |
| 2 | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (20' ONLY) | 6 |
| | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (24' ONLY) | 6 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (18' ONLY) | 12 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (20' ONLY) | 6 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (24' ONLY) | 6 |
| | MP16.21073 | FLOOR ASSY COMBO INCLUDES YELLOW REFLECTORS (18' ONLY) | 1 |
| | MP16.21074 | FLOOR ASSY COMBO INCLUDES YELLOW REFLECTORS (20' ONLY) | 1 |
| | MP16.21360 | FLOOR ASSY COMBO INCLUDES YELLOW REFLECTORS (24' ONLY) | 1 |
| | MP902928 | BOLT, HEX, 1/2-13 X 1-1/4 GR 5 (18' ONLY) (FOR SIDE STAKE MOUNTING) | 48 |
| | MP902928 | BOLT, HEX, 1/2-13 X 1-1/4 GR 5 (20' ONLY) (FOR SIDE STAKE MOUNTING) | 56 |
| 3 | MP902928 | BOLT, HEX, 1/2-13 X 1-1/4 GR 5 (24' ONLY) (FOR SIDE STAKE MOUNTING) | 58 |
| 5 | MP900497 | FLATWASHER, 1/2 (18' ONLY) (FOR SIDE STAKE MOUNTING) | 48 |
| | MP900497 | FLATWASHER, 1/2 (20' ONLY) (FOR SIDE STAKE MOUNTING) | 56 |
| | MP900497 | FLATWASHER, 1/2 (24' ONLY) (FOR SIDE STAKE MOUNTING) | 58 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK (18' ONLY) (FOR SIDE STAKE MOUNTING) | 48 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK (20' ONLY) (FOR SIDE STAKE MOUNTING) | 56 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK (24' ONLY) (FOR SIDE STAKE MOUNTING) | 58 |
| 4 | MP16.20834 | BUSHING, .76 X 1.00 X .437 | 8 |
| | MP01.77040 | CHAIN, BOLSTER TIE DOWN | 4 |
| 5 | MP906004 | BOLT, HEX, 7/16-14 X 2 | 4 |
| | MP904526 | NUT, 7/16-14 | 4 |
| | MP16.20835 | SADDLE WELDMENT RU | 2 |
| | MP16.21333 | SADDLE WELDMENT RU (24' ONLY) | 2 |
| | MP903857 | BOLT, HEX, 3/4-10 X 2 GR 5 | 10 |
| 6 | MP900499 | FLATWASHER, 3/4 | 10 |
| 0 | MP906349 | NUT, LOCK, 3/4-10 NYLOCK | 10 |
| | MP903695 | BOLT, CARRIAGE, 1/2-13 X 1-1/4 | 2 |
| | MP900497 | FLATWASHER, 1/2 | 2 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK | 2 |





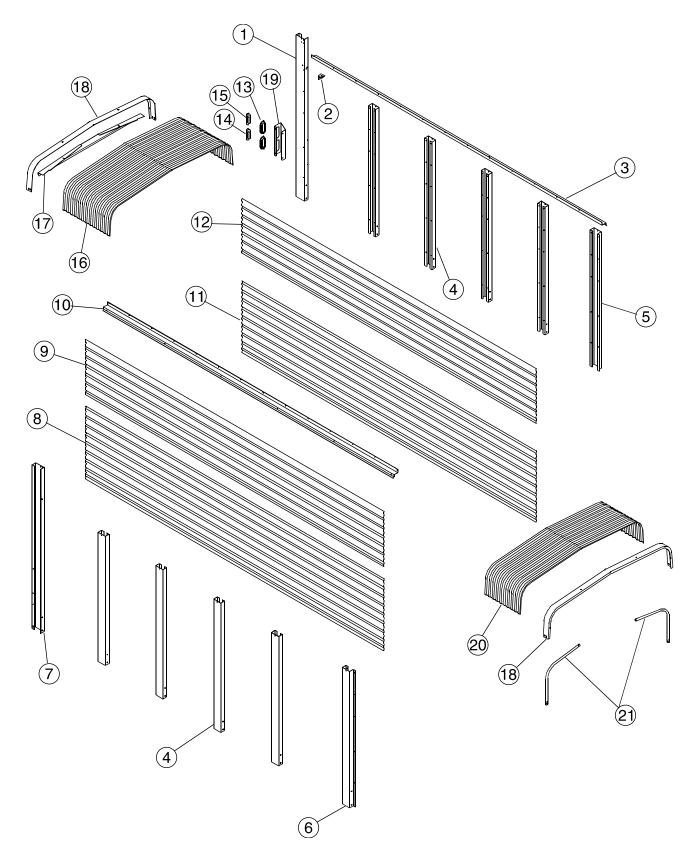
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| | MP16.20363 | FLAP, RUBBER | 1 |
| 7 | MP09.71113 | BOLT, HEX, 5/16-18 X 1, TAPTITE THREAD FORMING | 11 |
| | MP900494 | FLATWASHER, 5/16 | 11 |
| | MP16.20174 | IDLER SHAFT WELDMENT | 1 |
| | MP903277 | BOLT, HEX, 5/16-18 X 3/4 GR 5 | 1 |
| 8 | MP900503 | LOCKWASHER, 5/16 MED | 1 |
| | MP900365 | NUT, 5/16-18 NC | 1 |
| 9 | MP16.20534 | SPROCKET, IDLER, 6 TOOTH | 4 |
| 10 | MP16.20084 | SHAFT, APRON IDLER | 2 |
| | MP09.71621 | BOLT, HEX, 1/2-13 X 5 TAP | 4 |
| 11 | MP16.20621 | STRAP, LONG 2-3/4 | 1 |
| | MP16.20620 | STRAP, SHORT 1-1/2 | 2 |
| 12 | MP16.20200 | WASHER, SPECIAL | 1 |
| | MP16.20135 | APRON, 667H PINTLE, COMBO STANDARD (18' ONLY) | 2 |
| | MP16.20413 | APRON, 667X PINTLE, COMBO OPTIONAL (18' ONLY) | 2 |
| | MP16.20735 | APRON, 667H PINTLE, COMBO STANDARD (20' ONLY) | 2 |
| | MP16.20803 | APRON, 667X PINTLE, COMBO OPTIONAL (20' ONLY) | 2 |
| | MP16.21453 | APRON, 667X PINTLE, COMBO STANDARD (24' ONLY) | 2 |
| 10 | MP61.79140 | CONNECTOR LINK, 667H | - |
| 13 | MP901155 | ATTACHING LINK, 667H | - |
| | MP61.79170 | RIVET | - |
| | MP61.79121 | 667H SLAT W/ATTACHING LINK & PINS | - |
| | MP61.79125 | 667X SLAT W/ATTACHING LINK & PINS | - |
| | MP61.79340 | CONNECTOR LINK, 667X | - |
| | MP905426 | ATTACHING LINK, SLAT, 667X | - |
| 14 | MP16.20374 | BUSHING, 1-1/2 X 1-3/4 X 1-1/2 | 2 |
| 15 | MP01.76445 | BUSHING, 1-1/2 X 1-3/4 X 1 | 2 |
| | MP16.20625 | WEAR STRIP | 2 |
| 16 | MP901798 | SCREW, MACHINE, FLAT HEAD, 1/4 X 3 | 10 |
| | MP901651 | NUT, LOCK, 1/4 | 10 |
| | MP16.20619 | BRACKET, HOLD DOWN | 2 |
| 17 | MP906540 | BOLT, CARRIAGE, SHORT NECK, 3/8-16 X 2 | 10 |
| 17 | MP900504 | LOCKWASHER, 3/8 | 10 |
| | MP900366 | NUT, 3/8-16 | 10 |
| 18 | MP01.60120 | SPROCKET, IDLER, 6 TOOTH | 4 |



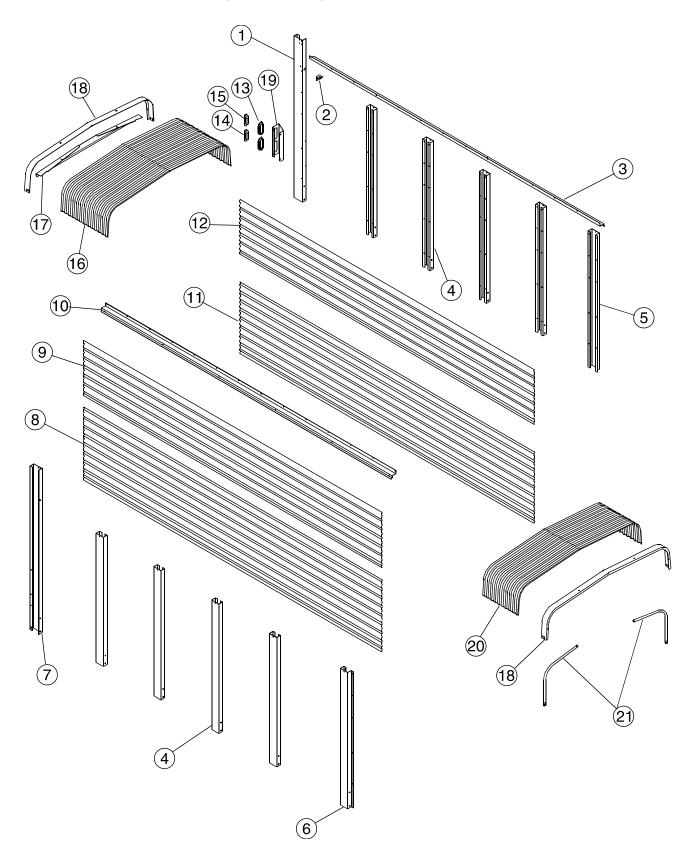


| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| | MP16.20287 | TANDEM BRACKET (FOR RUNNING GEAR WITH TANDEM WHEELS ONLY) | 2 |
| 40 | MP900385 | BOLT, HEX, 3/4-10 X 2 | 2 |
| 19 | MP900449 | FLATWASHER, 3/4 | 2 |
| | MP906349 | NUT, LOCK, 3/4-10 NYLOCK | 2 |
| | MP16.20951 | PAD, SADDLE | 4 |
| 20 | MP903848 | BOLT, HEX, 3/8-16 X 1-1/2 | 8 |
| 20 | MP900495 | FLATWASHER, 3/8 | 8 |
| | MP906400 | NUT, LOCK, 3/8-16 NYLON | 8 |
| | MP16.20792 | PANEL, FLOOR, COMBO LEFT REAR (20' ONLY) | 1 |
| 21 | MP09.71007 | SCREW, PHILLIPS HD W/WOOD WING (20' ONLY) | 6 |
| 21 | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (20' ONLY) | 6 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (20' ONLY) | 6 |
| | MP16.20793 | PANEL, FLOOR, COMBO RIGHT REAR (20' ONLY) | 1 |
| 22 | MP09.71007 | SCREW, PHILLIPS HD W/WOOD WING (20' ONLY) | 6 |
| 22 | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (20' ONLY) | 6 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (20' ONLY) | 6 |
| | MP16.20791 | PANEL, FLOOR, COMBO CENTER (20' ONLY) | 2 |
| | MP16.21311 | PANEL, FLOOR, COMBO CENTER (24' ONLY) | 2 |
| | MP09.71007 | SCREW, PHILLIPS HD W/WOOD WING (20' ONLY) | 14 |
| 23 | MP09.71007 | SCREW, PHILLIPS HD W/WOOD WING (24' ONLY) | 18 |
| 23 | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (20' ONLY) | 12 |
| | MP907624 | SCREW, FHSCS, 5/16-18 X 1-1/2 (24' ONLY) | 16 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (20' ONLY) | 12 |
| | MP907625 | NUT, NYLON LOCK, FLANGE, 5/16-18 (24' ONLY) | 16 |

SIDES AND ROOF ASSEMBLY



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 1 | MP16.20148 | STAKE, REAR, LEFT SIDE RU | 1 |
| 2 | MP16.20349 | CLIP, SILL | 2 |
| | MP09.71121 | BOLT, HEX, WASHER HD, 5/16-18 X 1 | 4 |
| | MP900494 | FLATWASHER, 5/16 | 4 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 4 |
| | MP16.20351 | SILL, ROOF, COMBO LEFT SIDE (18' ONLY) | 1 |
| | MP16.20780 | SILL, ROOF, COMBO LEFT SIDE (20' ONLY) | 1 |
| • | MP16.21278 | SILL, ROOF, COMBO LEFT SIDE (24' ONLY) | 1 |
| 3 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (18' ONLY) | 6 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (20' ONLY) | 7 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (24' ONLY) | 9 |
| | MP16.20002 | STAKE, MID (18' ONLY) | 8 |
| 4 | MP16.20002 | STAKE, MID (20' ONLY) | 10 |
| | MP16.21342 | STAKE, MID (24' ONLY) | 16 |
| 5 | MP16.20003 | STAKE, FRONT, LEFT SIDE | 1 |
| 6 | MP16.20004 | STAKE, FRONT RIGHT SIDE | 1 |
| 7 | MP16.20147 | STAKE, REAR, RIGHT SIDE RU | 1 |
| | MP16.20157 | SIDE, LOWER RIGHT SIDE, COMBO (18' ONLY) | 1 |
| | MP16.20789 | SIDE, LOWER RIGHT SIDE, COMBO (20' ONLY) | 1 |
| | MP16.21317 | SIDE, LOWER RIGHT SIDE, COMBO (24' ONLY) | 1 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (18' ONLY) | 18 |
| 8 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (20' ONLY) | 21 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (24' ONLY) | 27 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. (18' ONLY) | 18 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. (20' ONLY) | 21 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. (24' ONLY) | 27 |
| | MP16.20155 | SIDE, UPPER RIGHT SIDE, COMBO (18' ONLY) | 1 |
| | MP16.20787 | SIDE, UPPER RIGHT SIDE, COMBO (20' ONLY) | 1 |
| | MP16.21318 | SIDE, UPPER RIGHT SIDE, COMBO (24' ONLY) | 1 |
| 9 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 12 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (24' ONLY) | 18 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. | 12 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. (24' ONLY) | 18 |
| | MP16.20350 | SILL, ROOF, COMBO RIGHT SIDE (18' ONLY) | 1 |
| | MP16.20783 | SILL, ROOF, COMBO RIGHT SIDE (20' ONLY) | 1 |
| 40 | MP16.21285 | SILL, ROOF, COMBO RIGHT SIDE (24' ONLY) | 1 |
| 10 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (18' ONLY) | 6 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (20' ONLY) | 7 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (24' ONLY) | 9 |



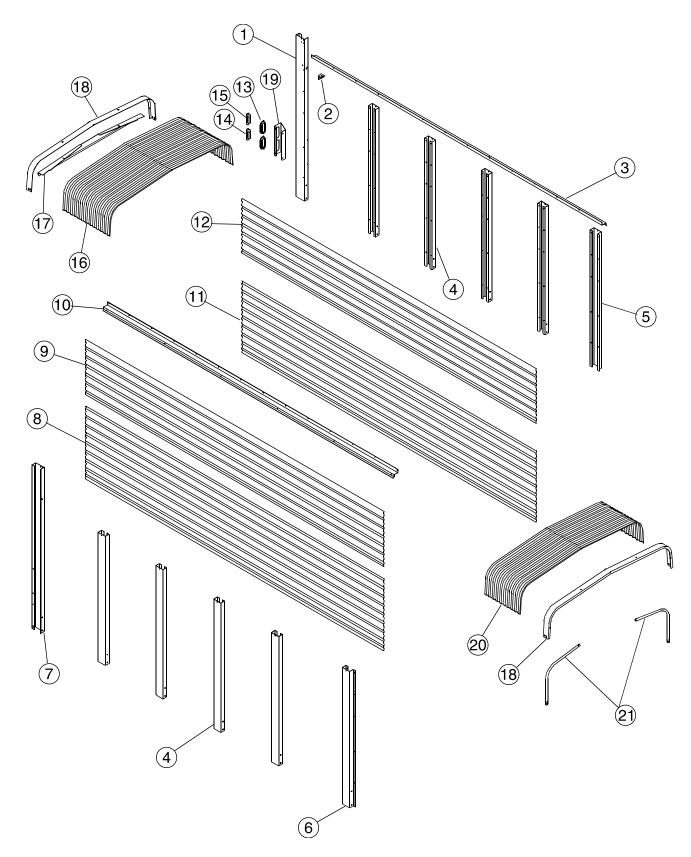
SIDES AND ROOF ASSEMBLY, (CONTINUED 1)

ITEM NO. PART NUMBER

QTY.

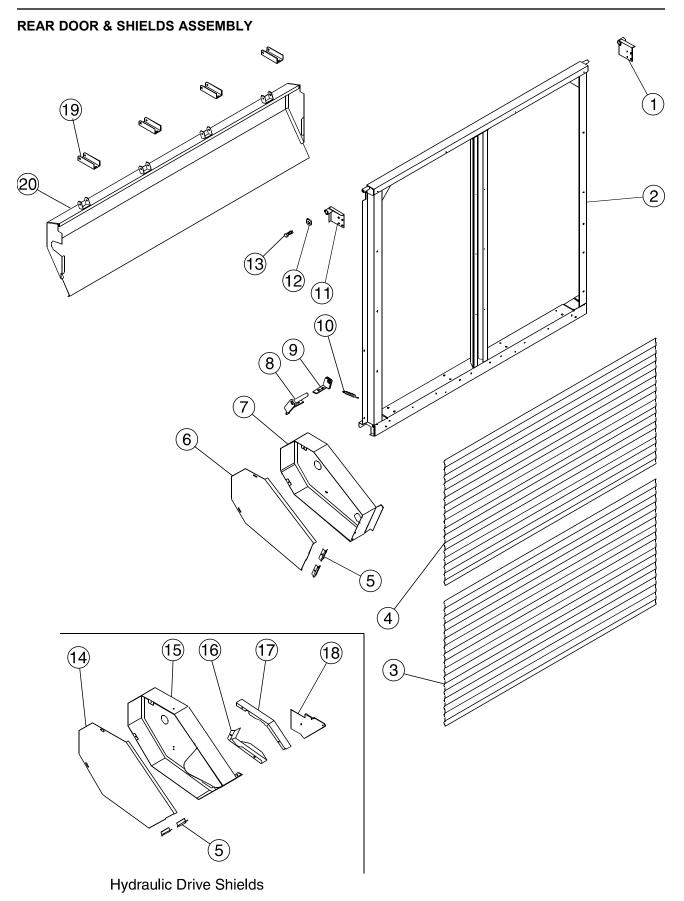
| 11 | MP16.20158 | SIDE, LOWER LEFT SIDE, COMBO (18' ONLY) | 1 |
|----|------------|--|----|
| | MP16.20790 | SIDE, LOWER LEFT SIDE, COMBO (20' ONLY) | 1 |
| | MP16.21319 | SIDE, LOWER LEFT SIDE, COMBO (24' ONLY) | 1 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (18' ONLY) | 18 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (20' ONLY) | 21 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (24' ONLY) | 27 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. (18' ONLY) | 18 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. (20' ONLY) | 21 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. (24' ONLY) | 27 |
| | MP16.20156 | SIDE, UPPER LEFT SIDE, COMBO (18' ONLY) | 1 |
| | MP16.20788 | SIDE, UPPER LEFT SIDE, COMBO (20' ONLY) | 1 |
| | MP16.21322 | SIDE, UPPER LEFT SIDE, COMBO (24' ONLY) | 1 |
| 12 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 12 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 (24' ONLY) | 18 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. | 12 |
| | MP300439B1 | FLATWASHER, 5/16 FENDER 18 GA. (24' ONLY) | 18 |
| 13 | MP16.20193 | GROMMET, LIGHT, B421-18 | 4 |
| 14 | MP16.20192 | LIGHT, RED, M421-R | 2 |
| 15 | MP16.20191 | LIGHT, AMBER, M421-A | 2 |
| | MP16.20066 | PANEL, ROOF SHEET (STANDARD) | 7 |
| | MP16.20779 | PANEL, ROOF SHEET (OPT. 4" ROOF EXTENSION) | 7 |
| 16 | MP09.71121 | BOLT, HEX, WASHER HD, 5/16-18 X 1 | 38 |
| 10 | MP300439B1 | FLATWASHER, 5/16, FENDER 18 GA. | 38 |
| | MP900494 | FLATWASHER, 5/16 | 12 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 38 |
| 17 | MP16.20690 | PANEL, SHORT FILLER, VENTED (STANDARD) | 1 |
| 17 | MP16.20691 | PANEL, FILLER, VENTED (OPT. 4" ROOF EXTENSION) | 1 |

DESCRIPTION

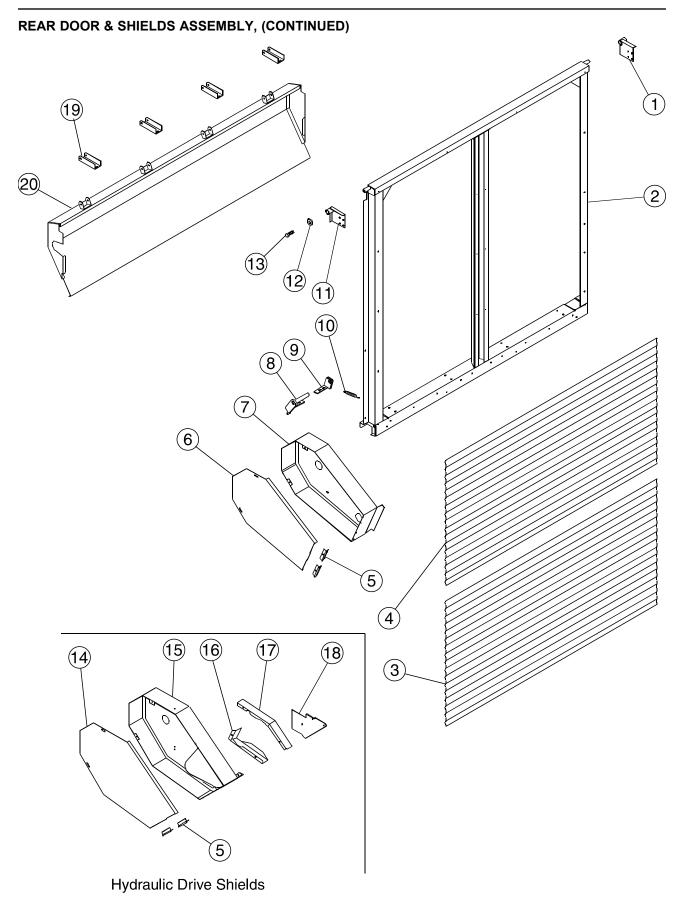


SIDES AND ROOF ASSEMBLY, (CONTINUED 2)

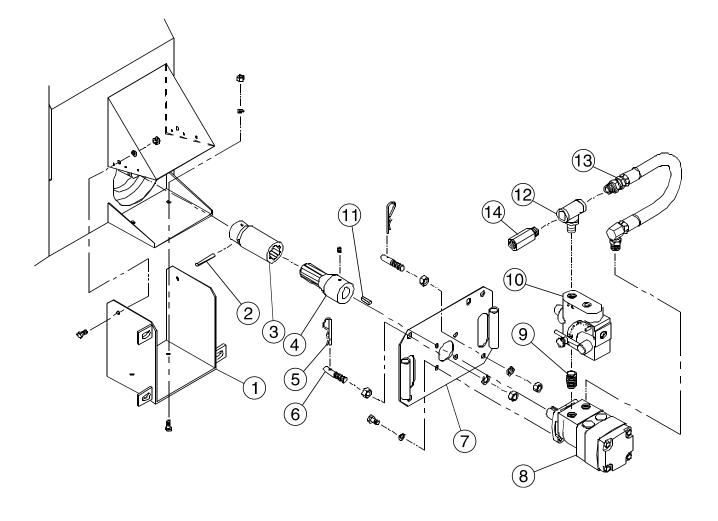
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| | MP6.20427 | PROTECTOR, ROOF EDGE (STANDARD) (18' ONLY) | 2 |
| | MP16.20330 | PROTECTOR, ROOF EDGE - REAR (STANDARD) (20' & 24') | 1 |
| | MP16.20427 | PROTECTOR, ROOF EDGE - FRONT (STANDARD) (20' & 24') | 1 |
| | MP16.20371 | PROTECTOR, ROOF EDGE (OPT. 4" ROOF EXTENSION) (18' ONLY) | 2 |
| | MP16.20371 | PROTECTOR, ROOF EDGE - FRONT (OPT. 4" ROOF EXTENSION) (20' & 24') | 1 |
| 18 | MP16.20372 | PROTECTOR, ROOF EDGE - REAR (OPT. 4" ROOF EXTENSION) (20' & 24') | 1 |
| | MP09.71122 | BOLT, HEX, 5/16-18 X 1-1/4 | 6 |
| | MP09.71121 | BOLT, HEX, WASHER HEAD, 5/16-18 X 1 | 2 |
| | MP300439B1 | FLATWASHER, 5/16, FENDER 18 GA. | 4 |
| | MP900494 | FLATWASHER, 5/16 MED | 6 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 8 |
| | MP16.20450 | BRACKET, LIGHT | 2 |
| | MP09.71121 | BOLT, HEX, WASHER HEAD, 5/16-18 X 1 | 4 |
| 19 | MP09.71113 | BOLT, HEX, 5/16-18 X 1 | 4 |
| 19 | MP900494 | FLATWASHER, 5/16 MED | 8 |
| | MP900503 | LOCKWASHER, 5/16 MED | 4 |
| | MP900365 | NUT, 5/16-18 NC | 4 |
| 20 | MP16.20331 | PANEL, ROOF SHEET - HALF (STANDARD) (20' ONLY) | 1 |
| 20 | MP16.20776 | PANEL, ROOF SHEET - HALF (OPT. 4" ROOF EXTENSION) (20' ONLY) | 1 |
| | MP16.20680 | TUBE, FRONT ROOF PROTECTOR (OPT. 4" ROOF EXTENSION) | 2 |
| 21 | MP900494 | FLATWASHER, 5/16 | 4 |
| 21 | MP903829 | BOLT, HEX, 5/16-18 X 1-3/4 GR 5 | 4 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 4 |



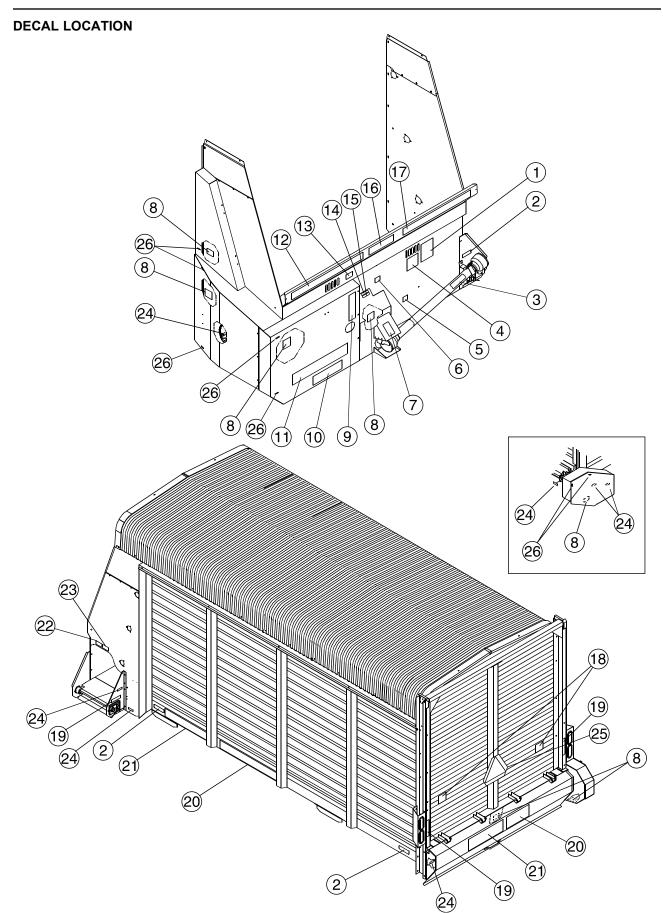
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| 1 | MP16.20173 | HINGE WELDMENT LEFT SIDE RU | 1 |
| | MP900397 | BOLT, HEX, 3/8-16 X 1 | 4 |
| | MP900495 | FLATWASHER, 3/8 | 4 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 4 |
| 2 | MP16.20484 | TAILGATE WELDMENT (INCLUDES DECALS) | 1 |
| 3 | MP16.10721 | REAR PANEL ASSY (INCLUDES DECALS) | 1 |
| | MP16.10437 | PANEL, REAR DOOR | 1 |
| | MP09.71121 | BOLT, HEX WASHER HD, 5/16-18 X 1 | 16 |
| 4 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 10 |
| 4 | MP300439B1 | FLATWASHER, 5/16, FENDER 18 GA | 19 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 16 |
| | MP16.20144 | HINGE, BEATER SHIELD | 2 |
| 5 | MP09.71251 | BOLT, HEX, 3/8-16 X 3/4 | 2 |
| | MP903937 | NUT, HEX, 3/8-16 TOPLOCK | 2 |
| 0 | MP16.20236 | SHIELD, DOOR (MECHANICAL DRIVE ONLY) | 1 |
| 6 | MP906492 | LATCH, DOOR | 2 |
| | MP16.20660 | SHIELD, REAR WLDT. (INCLUDES DECALS) (MECHANICAL DRIVE ONLY) | 1 |
| | MP903277 | BOLT, HEX, 5/16-18 X 3/4 GR 2 | 3 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| - | MP900503 | LOCKWASHER, 5/16, MED | 3 |
| 7 | MP900365 | NUT, 5/16-18 NC | 3 |
| | MP904863 | BOLT, HEX, 1/4-20 X 3/4 GR 5 | 4 |
| | MP900502 | LOCKWASHER, 1/4, MED | 4 |
| | MP900363 | NUT, 1/4-20 | 4 |
| | MP16.20229 | LATCH, WELDMENT, RIGHT HAND | 1 |
| | MP16.20230 | LATCH, WELDMENT, LEFT HAND | 1 |
| 8 | MP902859 | BOLT, HEX, 5/16-18 X 1 | 4 |
| | MP900494 | FLATWASHER, 5/16 | 8 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 4 |
| | MP16.20359 | STOP, LATCH WELDMENT RIGHT HAND | 1 |
| 9 | MP16.20360 | STOP, LATCH WELDMENT LEFT HAND | 1 |
| 10 | MP16.20390 | SPRING, EXTENSION, .085 X .75 X 2.6 | 2 |
| | MP16.20172 | HINGE WELDMENT RIGHT SIDE RU | 1 |
| 44 | MP900397 | BOLT, HEX, 3/8-16 X 1 | 4 |
| 11 | MP900495 | FLATWASHER, 3/8 | 4 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 4 |



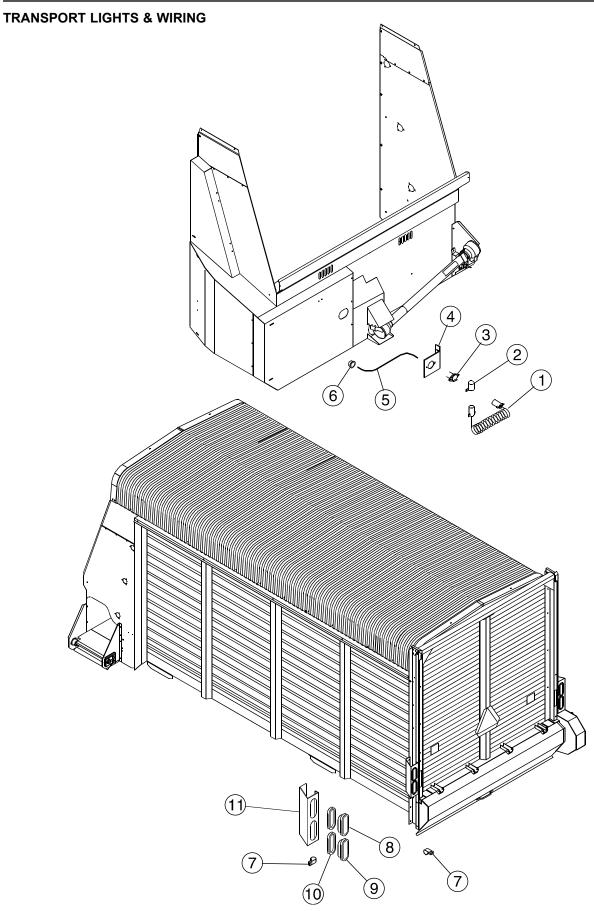
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 12 | MP907057 | FLATWASHER, 3/8, FENDER HVY | 2 |
| 13 | MP900397 | BOLT, HEX, 3/8-16 X 1 | 2 |
| | MP900504 | LOCKWASHER, 3/8, MED | 2 |
| 14 | MP16.20347 | SHIELD, DOOR (HYDRAULIC DRIVE ONLY) | 1 |
| 14 | MP906492 | LATCH, DOOR | 2 |
| | MP16.20661 | SHIELD, REAR WLDT. (INCLUDES DECALS) (HYDRAULIC DRIVE ONLY) | 1 |
| | MP903277 | BOLT, HEX, 5/16-18 X 3/4 GR 2 | 3 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| 15 | MP900503 | LOCKWASHER, 5/16, MED | 3 |
| 15 | MP900365 | NUT, 5/16-18 NC | 3 |
| | MP904863 | BOLT, HEX, 1/4-20 X 3/4 GR 5 | 4 |
| | MP900502 | LOCKWASHER, 1/4, MED | 4 |
| | MP900363 | NUT, 1/4-20 | 4 |
| | MP16.20346 | SHIELD, WRAPPER, LOWER REAR (HYDRAULIC DRIVE ONLY) | 1 |
| 16 | MP903277 | BOLT, HEX, 5/16-18 X 3/4 GR 5 | 2 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 2 |
| | MP16.20345 | SHIELD, WRAPPER, REAR (HYDRAULIC DRIVE ONLY) | 1 |
| 17 | MP903277 | BOLT, HEX, 5/16-18 X 3/4 GR 2 | 2 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 2 |
| | MP16.20449 | SHIELD, WRAPPER, REAR SIDE (HYDRAULIC DRIVE ONLY) | 1 |
| | MP903277 | BOLT, HEX, 5/16-18 X 3/4 GR 2 | 2 |
| 18 | MP09.71251 | BOLT, HEX, 3/8-16 X 3/4 | 1 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 2 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 2 |
| | MP16.20358 | MOUNT, REAR DOOR | 4 |
| | MP902364 | BOLT, HEX, 3/8-16 X 3/4 | 8 |
| 19 | MP900495 | FLATWASHER, 3/8 | 8 |
| | MP900504 | LOCKWASHER, 3/8 MED | 8 |
| | MP900366 | NUT, 3/8-16 | 8 |
| | MP16.20486 | SHIELD, REAR DOOR (INCLUDES DECALS) | 1 |
| 20 | MP904334 | BOLT, HEX, 3/8-16 X 3-3/4 | 4 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 4 |



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| 1 | MP16.10698 | BRACKET ASSY, HYDRAULIC ADAPTER | 1 |
| | MP904464 | BOLT, HEX, 5/16-18 X 1-1/4 | 4 |
| | MP900503 | LOCKWASHER, 5/16 | 4 |
| | MP900365 | NUT, 5/16-18 NC | 4 |
| 2 | MP904847 | PIN, SPIROL, 5/16 X 2 | 1 |
| 3 | MP01.62861 | COUPLER, HYDRAULIC DRIVE | 1 |
| | MP01.62980 | SHAFT, SPLINED, HYDRAULIC DRIVE | 1 |
| 4 | MP900441 | SETSCREW, 5/16 X 5/16, HHDCP | 1 |
| 5 | MP05.73120 | PIN, HAIR, 5/32 X 2-15/16 ZNC | 2 |
| | MP01.73710 | PIN, ALIGNMENT, HYDRAULIC DRIVE | 2 |
| 6 | MP900506 | LOCKWASHER, 1/2, MED | 2 |
| | MP900369 | NUT, 1/2-13 | 4 |
| 7 | MP16.10701 | PLATE ASSY, HYDRAULIC DRIVE | 1 |
| | MP16.10758 | MOTOR, HYDRAULIC 14 - 15.5 CID (HIGH TORQUE, LOW SPEED) | 1 |
| 8 | MP01.82214 | MOTOR, HYDRAULIC - 10 CID 1/2 NPT (LOW TORQUE, HIGH SPEED) | 1 |
| 0 | MP902364 | BOLT, HEX, 3/8-16 X 3/4 | 4 |
| | MP900504 | LOCKWASHER, 3/8, MED | 4 |
| 9 | MP09.74113 | NIPPLE, 1/2, HEX | 1 |
| 10 | MP05.75190 | VALVE, FLOW CONTROL | 1 |
| 11 | MP900546 | KEY, SQ, 1/4 X 1 | 1 |
| 12 | MP09.74135 | TEE, MALE BRANCH, 1/2 NPTF | 1 |
| 13 | MP01.75701 | HOSE, HYDRAULIC DRIVE | 1 |
| 14 | MP05.75170 | VALVE, CHECK | 1 |

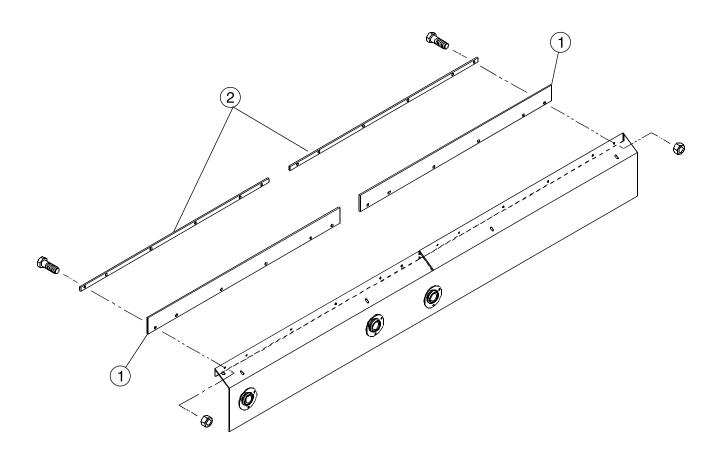


| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--|------|
| 1 | MP16.20178 | DECAL, BEFORE OPERATING | 1 |
| 2 | MP907220 | REFLECTOR, AMBER, 50 MM X 160 MM (STANDARD) | 5 |
| 2 | MP907220 | REFLECTOR, AMBER, 50 MM X 160 MM (WITH OPTIONAL OUTFEED EXT) | 6 |
| 3 | MP329594B2 | DECAL, ROTATING DRIVELINE | 1 |
| 4 | MP16.20210 | DECAL, OPERATING INSTRUCTIONS | 1 |
| 5 | MP01.77760 | DECAL, RUN | 1 |
| 6 | MP01.77770 | DECAL, STOP | 1 |
| 7 | MP16.20177 | DECAL, ROTATING DRIVE LINE | 1 |
| 8 | MP16.20179 | DECAL, SHIELD IS OFF | 6 |
| 9 | MP16.20195 | DECAL, QUADRANT | 1 |
| 10 | MP16.20887 | DECAL, 5300 | 1 |
| 11 | MP16.20205 | DECAL, MILLER PRO | 1 |
| 12 | MP01.77720 | DECAL, SPILL PLATE RIGHT HAND | 1 |
| 13 | MP16.20196 | DECAL, 4TH | 1 |
| 14 | MP16.20212 | DECAL, MAIN APRON/BEATER | 1 |
| 15 | MP16.20211 | DECAL, SAFETY/CROSS CONVEYOR | 1 |
| 16 | MP01.77740 | DECAL, EMERGENCY STOP PUSH | 1 |
| 17 | MP01.77730 | DECAL, SPILL PLATE LEFT HAND | 1 |
| 18 | MP16.10552 | DECAL, DANGER, DOOR | 2 |
| 19 | MP907219 | REFLECTOR, RED, 50 MM X 160 MM (STANDARD) | 3 |
| 19 | MP907219 | REFLECTOR, RED, 50 MM X 160 MM (WITH OPTIONAL OUTFEED EXT) | 4 |
| 20 | MP16.20206 | DECAL, PRO | 2 |
| 21 | MP16.20208 | DECAL, MILLER | 2 |
| 22 | MP16.20181 | DECAL, ROTATING PARTS | 1 |
| 23 | MP01.77810 | DECAL, EMERGENCY STOP PULL | 1 |
| 24 | MP907510 | DECAL, GREASE | 20 |
| | MP907224 | SMV EMBLEM (METAL) | 1 |
| 25 | MP09.71121 | BOLT, HEX, WASHER HD, 5/16-18 X 1 | 2 |
| 20 | MP903936 | NUT, HEX, 5/16-18 TOPLOCK | 2 |
| | MP300439B1 | FLATWASHER, 5/16, FENDER 18 GA | 2 |
| 26 | MP16.10750 | DECAL, CLIP | 7 |



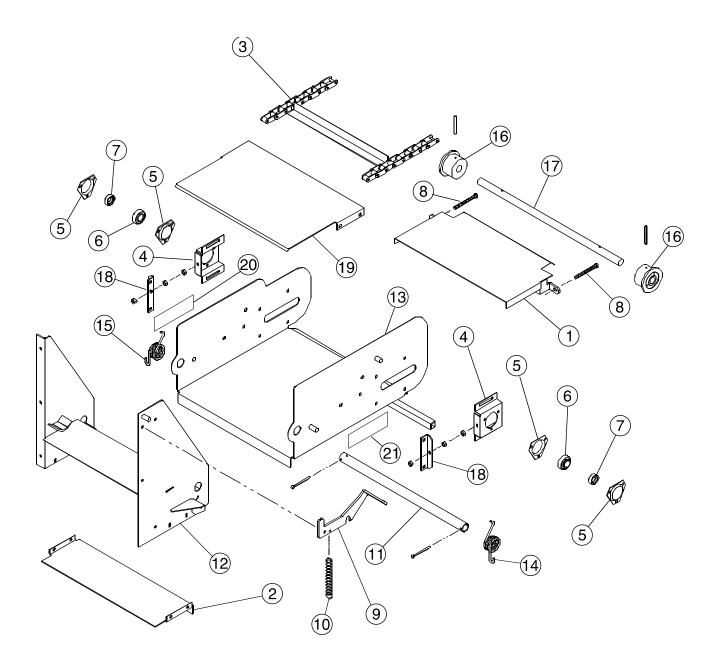
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 1 | MP16.20214 | CABLE, COIL, 15'-7" WIRE | 1 |
| | MP16.20165 | HOLDER, STORAGE PLUG | 1 |
| 2 | MP904863 | BOLT, HEX, 1/4-20 X 3/4 | 2 |
| | MP904092 | NUT, LOCK, 1/4-20 | 2 |
| | MP16.20213 | SOCKET, 7 POLE | 1 |
| 3 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 2 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| | MP16.20204 | BRACKET, LIGHT SOCKET | 1 |
| 4 | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 , TAPTITE THREAD FORMING | 2 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| 5 | MP16.20337 | WIRING HARNESS (18' ONLY) | 1 |
| 5 | MP16.20794 | WIRING HARNESS (20' ONLY) | 2 |
| 6 | MP16.20209 | PLASTIC GROMMET | 3 |
| 7 | MP16.20395 | CLAMP, HOSE, 1/2 ID | 8 |
| 8 | MP16.20191 | LIGHT, AMBER, M421-A | 2 |
| 9 | MP16.20192 | LIGHT, RED, M421-R | 2 |
| 10 | MP16.20193 | GROMMET, LIGHT, B421-18 | 4 |
| | MP16.20450 | BRACKET, LIGHT | 2 |
| | MP09.71121 | BOLT, HEX, WASHER HEAD, 5/16-18 X 1 | 4 |
| 11 | MP09.71113 | BOLT, HEX, 5/16-18 X 1 | 4 |
| | MP900494 | FLATWASHER, 5/16 MED | 8 |
| | MP900503 | LOCKWASHER, 5/16 MED | 4 |
| | MP900365 | NUT, 5/16-18 NC | 4 |

SEAL KIT

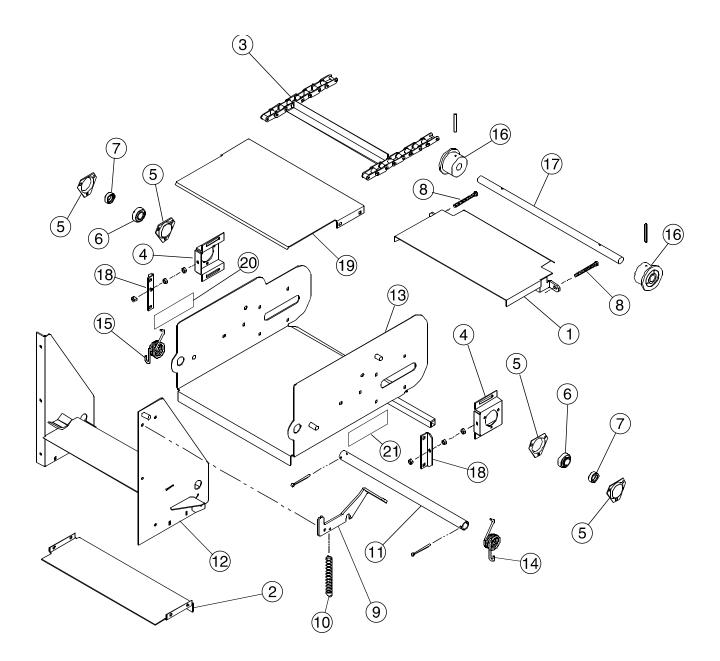


| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|----------------------------|------|
| 1 | MP16.10660 | SEAL, APRON SHAFT | 2 |
| | MP16.10661 | RETAINER, SEAL | 2 |
| 2 | MP904464 | BOLT, HEX, 5/16-18 X 1-1/4 | 12 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 12 |

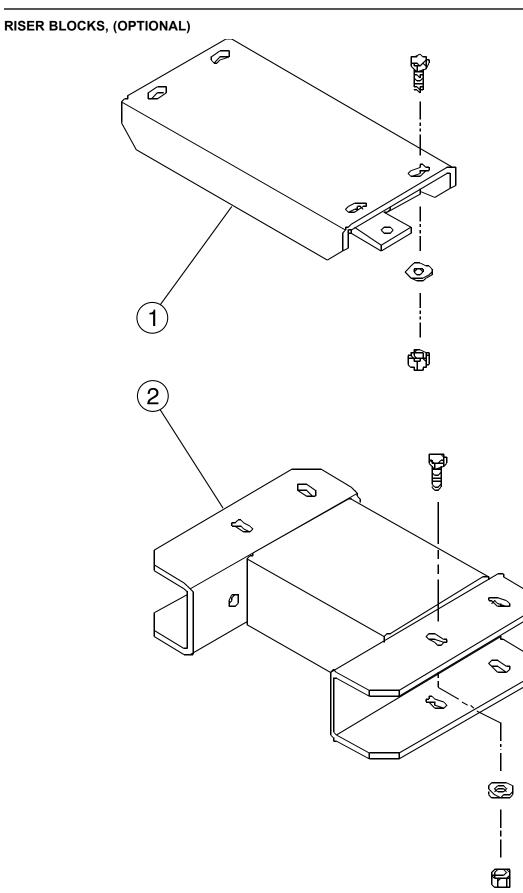




| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|--------------------------------------|------|
| 1 | MP16.20863 | OUTFEED EXTENSION PAN WELDMENT (30") | 1 |
| 0 | MP16.20873 | PAN, RETURN, OUTFEED EXTENSION | 1 |
| | MP905354 | BOLT, CARRIAGE, 3/8-16 X 3/4 | 4 |
| 2 | MP900504 | LOCKWASHER, 3/8 MED | 4 |
| | MP900366 | NUT, 3/8-16 | 4 |
| | MP16.10367 | EXTENSION, APRON ASSEMBLY 30" | 1 |
| 2 | MP900709 | LINK, CA550 OFFSET | - |
| 3 | MP900703 | LINK, CA550 CONNECTOR | 1 |
| | MP01.75810 | SLAT, W/ATTACHING LINKS | - |
| | MP16.20007 | BRACKET, BEARING HOUSING | 2 |
| | MP905354 | BOLT, CARRIAGE, 3/8-16 X 3/4 | 4 |
| 4 | MP900504 | LOCKWASHER, 3/8 MED | 4 |
| | MP900494 | FLAT WASHER, 5/16 | 4 |
| | MP900366 | NUT, 3/8-16 | 4 |
| | MP14.77107 | FLANGETTE, 1 TRIANGULAR 3 HOLE | 4 |
| F | MP903689 | BOLT, CARRIAGE, 5/16-18 X 3/4 | 6 |
| 5 | MP900503 | LOCKWASHER, 5/16 MED | 6 |
| | MP900365 | NUT, 5/16-18 NC | 6 |
| 6 | MP01.77500 | BEARING, 1 SPHERICAL W/COLLAR | 2 |
| 7 | MP900633 | COLLAR, 1 LOCK | 2 |
| 8 | MP901759 | BOLT, CARRIAGE, 3/8-16 X 4 | 2 |
| | MP16.20860 | LATCH, OUTFEED | 1 |
| | MP907285 | BOLT, HEX, 3/8-16 X 1-3/4 | 1 |
| 0 | MP900504 | LOCKWASHER, 3/8 | 1 |
| 9 | MP900366 | NUT, 3/8-16 | 1 |
| | MP900495 | FLAT WASHER, 3/8 | 2 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| | MP313445B1 | SPRING, 6-1/2" EXTENSION | 1 |
| 10 | MP900495 | FLAT WASHER, 3/8 | 6 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| 11 | MP16.20871 | TUBE, PIVOT | 1 |
| 11 | MP900536 | PIN, COTTER 3/16 X 2 | 2 |

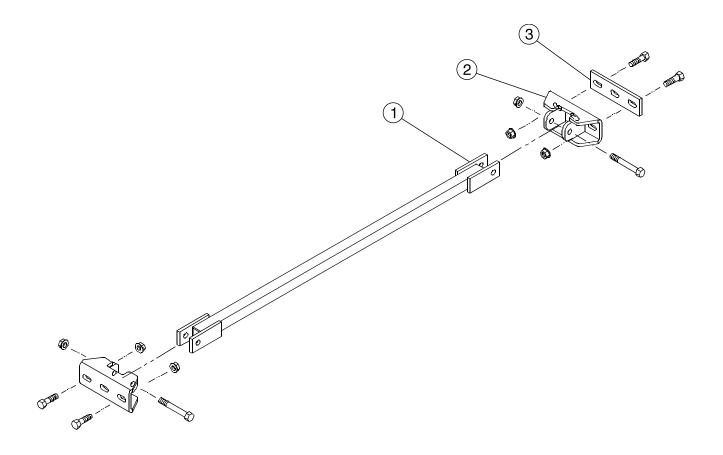


| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| | MP16.20854 | OUTFEED EXTENSION WELDMENT, LEFT SIDE UNLOAD | 1 |
| 12 | MP906397 | BOLT, HEX, 3/8-16 X 1-1/2 TAP | 1 |
| 12 | MP900504 | LOCKWASHER, 3/8 MED | 1 |
| | MP900366 | NUT, 3/8-16 | 1 |
| 13 | MP16.20853 | FRAME, OUTFEED WELDMENT, LEFT SIDE UNLOAD (30") | 1 |
| | MP32.00738 | SPRING, TORSION, LEFT HAND | 1 |
| 14 | MP902930 | BOLT, HEX, 1/2-13 X 1 | 1 |
| | MP907399 | NUT, HEX, FLANGE LOCK 1/2-13 | 1 |
| | MP32.00737 | SPRING, TORSION, RIGHT HAND | 1 |
| 15 | MP902930 | BOLT, HEX, 1/2-13 X 1 | 1 |
| | MP907399 | NUT, HEX, FLANGE LOCK 1/2-13 | 1 |
| 16 | MP01.60500 | ROLLER, APRON | 2 |
| 10 | MP01.74140 | PIN, ROLL, 1/4 X 3 | 2 |
| 17 | MP16.20861 | SHAFT, OUTFEED IDLER | 1 |
| | MP16.20006 | PLATE, TAKE-UP, OUTFEED | 2 |
| 18 | MP905354 | BOLT, CARRIAGE, 3/8-16 X 3/4 | 4 |
| 10 | MP900504 | LOCKWASHER, 3/8 | 4 |
| | MP900366 | NUT, 3/8-16 | 4 |
| | MP16.20870 | PAN, FOLDING, OUTFEED EXTENSION, INNER (30") | 1 |
| 10 | MP905354 | BOLT, CARRIAGE, 3/8-16 X 3/4 | 4 |
| 19 | MP900504 | LOCKWASHER, 3/8 | 4 |
| | MP900366 | NUT, 3/8-16 | 4 |
| 20 | MP907219 | DECAL, RED REFLECTOR 2X9 | 1 |
| 21 | MP907220 | DECAL, YELLOW REFLECTOR 2X9 | 1 |



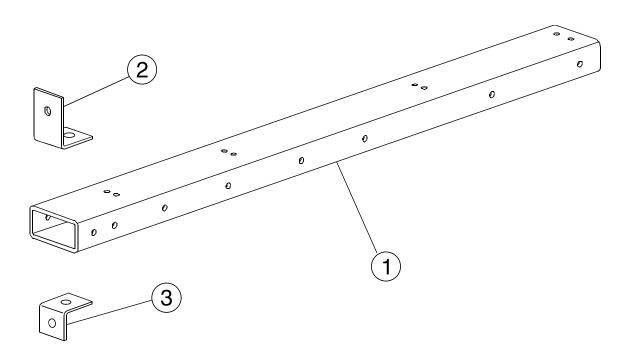
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|-------------------------|------|
| | MP16.10534 | RISER BLOCK WELDMENT 2" | 4 |
| 1 | MP902300 | BOLT, HEX, 3/8-16 X 1 | 16 |
| | MP900495 | FLATWASHER, 3/8 | 16 |
| | MP903937 | NUT, LOCK, 3/8-16 | 16 |
| | MP16.10537 | RISER BLOCK WELDMENT 3" | 4 |
| 2 | MP902300 | BOLT, HEX, 3/8-16 X 1 | 16 |
| 2 | MP900495 | FLATWASHER, 3/8 | 16 |
| | MP903937 | NUT, LOCK, 3/8-16 | 16 |

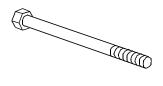
ROOF RAFTERS FOR FORAGE BOXES LESS ROOFS

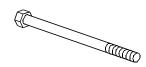


| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| | MP16.20824 | RAFTER WELDMENT (18' ONLY) | 3 |
| | MP16.20824 | RAFTER, WELDMENT (20' ONLY) | 4 |
| 1 | MP904214 | BOLT, HEX, 3/8-16 X 3-1/2 (18' ONLY) | 6 |
| | MP904214 | BOLT, HEX, 3/8-16 X 3-1/2 (20' ONLY) | 8 |
| | MP903437 | NUT, LOCK, 3/8-16 WHIZ (18' ONLY) | 6 |
| | MP903437 | NUT, LOCK, 3/8-16 WHIZ (20' ONLY) | 8 |
| 2 | MP16.20827 | MOUNT, RAFTER (18' ONLY) | 6 |
| 2 | MP16.20827 | MOUNT, RAFTER (20' ONLY) | 8 |
| | MP16.20830 | SHIM (18' ONLY) | 3 |
| | MP16.20830 | SHIM (20' ONLY) | 4 |
| | MP902367 | BOLT, HEX, 3/8-16 X 1-1/4 (LESS ROOF) (18' ONLY) | 12 |
| 2 | MP902367 | BOLT, HEX, 3/8-16 X 1-1/4 (LESS ROOF) (20' ONLY) | 16 |
| 3 | MP903874 | BOLT, HEX, 3/8-16 X 5-1/2 (LESS ROOF W/STIFFENER TUBE) (18' ONLY) | 12 |
| | MP903874 | BOLT, HEX, 3/8-16 X 5-1/2 (LESS ROOF W/STIFFENER TUBE) (20' ONLY) | 16 |
| | MP903437 | NUT, LOCK, 3/8-16 WHIZ (18' ONLY) | 12 |
| | MP903437 | NUT, LOCK, 3/8-16 WHIZ (20' ONLY) | 16 |

RECEIVER BOX STIFFENER TUBE

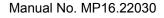






 $\left(\neg \right)$

מתנות

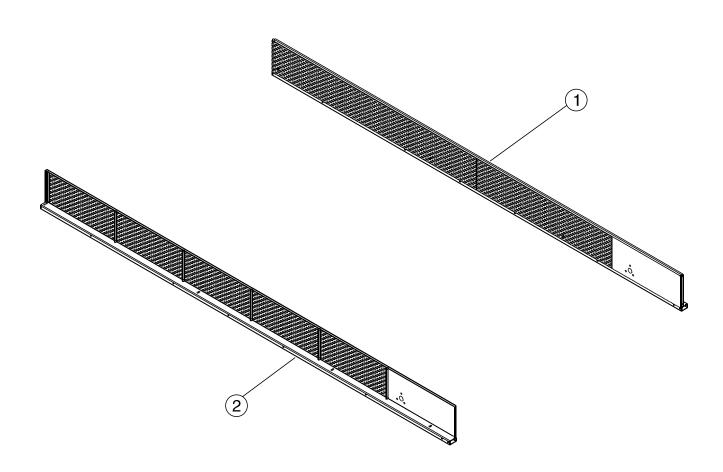


0

6)

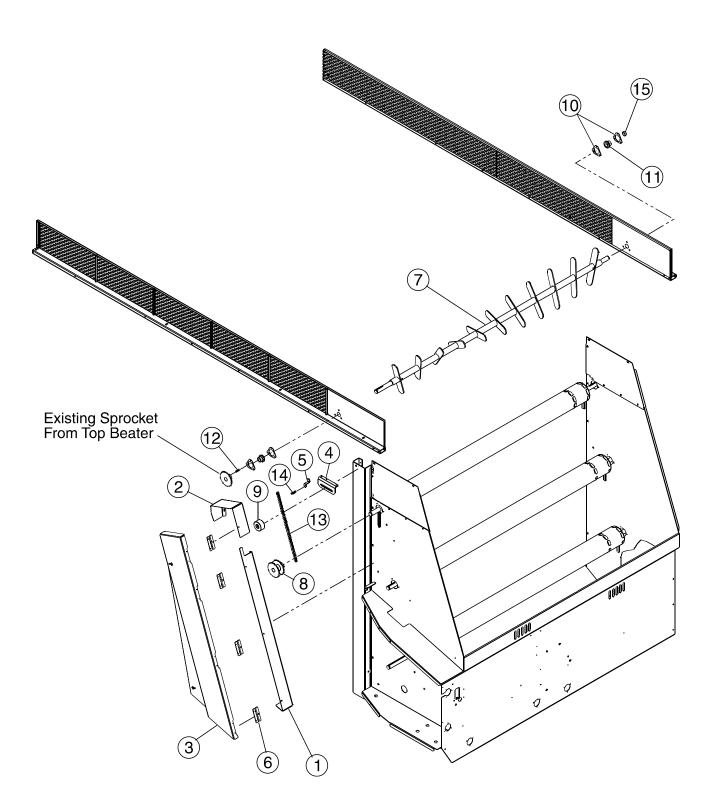
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|-----------------------------------|------|
| 1 | MP16.20663 | STIFFENER TUBE (18' ONLY) | 2 |
| | MP16.20849 | STIFFENER TUBE (20' ONLY) | 2 |
| | MP16.20254 | BRACKET, ANGLE | 2 |
| | MP903874 | BOLT, HEX, 3/8-16 X 5-1/2 | 8 |
| 2 | MP09.71215 | BOLT, HEX, 3/8-16 X 5 | 12 |
| 2 | MP300439B1 | FLATWASHER, 5/16, FENDER 18 GA | 8 |
| | MP902832 | BOLT, HEX, 5/16-18 X 3 | 8 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 20 |
| | MP16.20349 | CLIP, SILL | 2 |
| 3 | MP09.71121 | BOLT, HEX, WASHER HD, 5/16-18 X 1 | 4 |
| | MP900494 | FLATWASHER, 5/16 | 4 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 4 |

SIDE EXTENSIONS, (OPTIONAL)

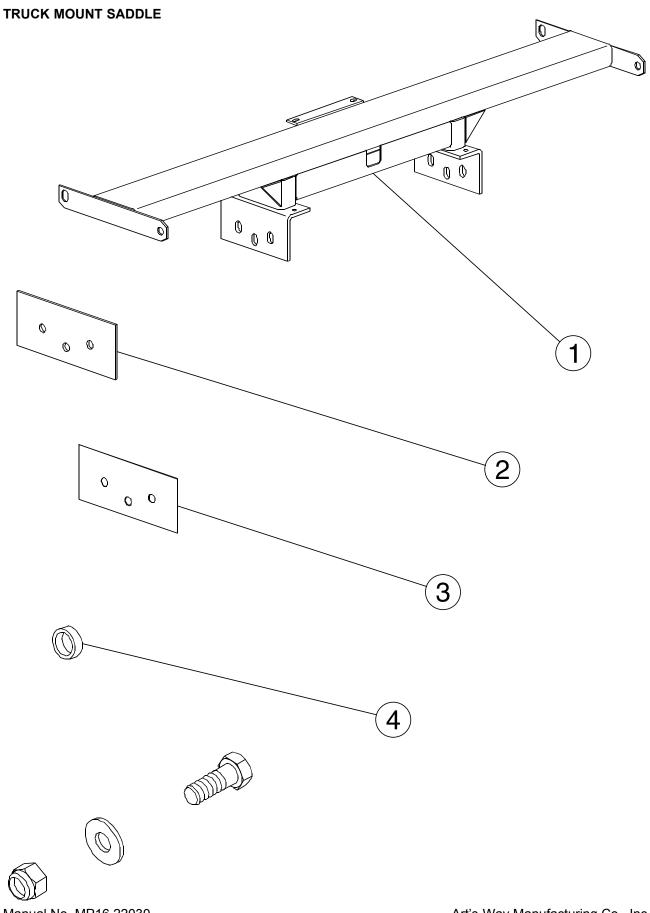


| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---------------------------------------|------|
| | MP16.20844 | SIDE EXTENSION, LEFT SIDE (18' ONLY) | 1 |
| | MP16.20847 | SIDE EXTENSION, LEFT SIDE (20' ONLY) | 1 |
| | MP903874 | BOLT, HEX, 3/8-16 X 5-1/2 | 4 |
| 1 | MP09.71215 | BOLT, HEX, 3/8-16 X 5 | 6 |
| | MP300439B1 | FLATWASHER, 5/16, FENDER 18 GA | 4 |
| | MP902832 | BOLT, HEX, 5/16-18 X 3 | 4 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 10 |
| | MP16.20845 | SIDE EXTENSION, RIGHT SIDE (18' ONLY) | 1 |
| | MP16.20848 | SIDE EXTENSION, RIGHT SIDE (20' ONLY) | 1 |
| | MP903874 | BOLT, HEX, 3/8-16 X 5-1/2 | 4 |
| | MP09.71215 | BOLT, HEX, 3/8-16 X 5 | 6 |
| 2 | MP300439B1 | FLATWASHER, 5/16, FENDER 18 GA | 4 |
| 2 | MP902832 | BOLT, HEX, 5/16-18 X 3 | 4 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 10 |
| | MP900495 | FLATWASHER, 3/8 | 8 |
| | MP902367 | BOLT, HEX, 3/8-16 X 1-1/4 GR 5 | 4 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 4 |

FOURTH BEATER, (OPTIONAL)



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 1 | MP16.21002 | BRACKET, SHIELD, LOWER | 1 |
| | MP09.71251 | BOLT, HEX, WASHER HEAD, 3/8-16 X 3/4 GR 5 | 1 |
| 1 | MP900504 | LOCKWASHER, 3/8 | 1 |
| | MP900366 | NUT, 3/8-16 | 1 |
| | MP16.21003 | BRACKET, SHIELD, UPPER | 1 |
| | MP09.71112 | BOLT, HEX, 5/16-18 X 3/4 | 3 |
| 2 | MP900494 | FLATWASHER, 5/16 | 6 |
| | MP900503 | LOCKWASHER, 5/16 | 3 |
| | MP900365 | NUT, 5/16-18 | 3 |
| | MP16.21001 | SHIELD, 2ND, 3RD & 4TH BEATER | 1 |
| | MP095001 | BOLT, HEX, 1/4-20 X 1/2 GR 5 | 8 |
| 3 | MP900502 | LOCKWASHER, 1/4 | 8 |
| | MP900363 | NUT, 1/4-20 | 8 |
| | MP16.21004 | BRACKET, CHAIN TENSIONER | 1 |
| | MP902832 | BOLT, HEX, 5/16-18 X 3 GR 5 | 2 |
| 4 | MP900503 | LOCKWASHER, 5/16 | 2 |
| | MP900365 | NUT, 5/16-18 | 2 |
| | MP16.21005 | BRACKET, SHIELD MOUNT | 1 |
| _ | MP09.71121 | BOLT, HEX, WASHER HEAD, 5/16-18 X 1 | 1 |
| 5 | MP900503 | LOCKWASHER, 5/16 | 1 |
| | MP900365 | NUT, 5/16-18 | 1 |
| | MP16.20144 | HINGE, BEATER SHIELD | 4 |
| | MP902300 | BOLT, HEX, 3/8-16 X 1 GR 5 | 4 |
| 6 | MP900504 | LOCKWASHER, 3/8 | 4 |
| | MP900366 | NUT, 3/8-16 | 4 |
| 7 | MP16.20998 | BEATER WELDMENT, 4TH | 1 |
| 8 | MP16.21000 | SPROCKET, DOUBLE | 1 |
| | MP40.00213 | SUPPORT, CHAIN | 1 |
| 9 | MP904744 | BOLT, CARRIAGE, 1/2-13 X 2 GR 5 | 1 |
| | MP907399 | NUT, FLANGE LOCK, NYLON, 1/2-13 | 1 |
| | MP01.77580 | FLANGETTE, 62 MM, 3 ROUND | 4 |
| 10 | MP09.71251 | BOLT, HEX, WASHER HEAD, 3/8-16 X 3/4 GR 5 | 6 |
| | MP903437 | NUT, LOCK, 3/8-16 WHIZ | 6 |
| 11 | MP01.77560 | BEARING, SPHERICAL W/COLLAR | 2 |
| 12 | MP01.73250 | KEY, SQUARE, 5/16 X 1-1/2" | 1 |
| 13 | MP16.21018 | CHAIN, ROLLAR, #40 115P | 1 |
| 14 | MP906492 | LATCH, DOOR | 1 |
| 15 | MP900672 | COLLAR, 1-1/4 LOCK | 2 |

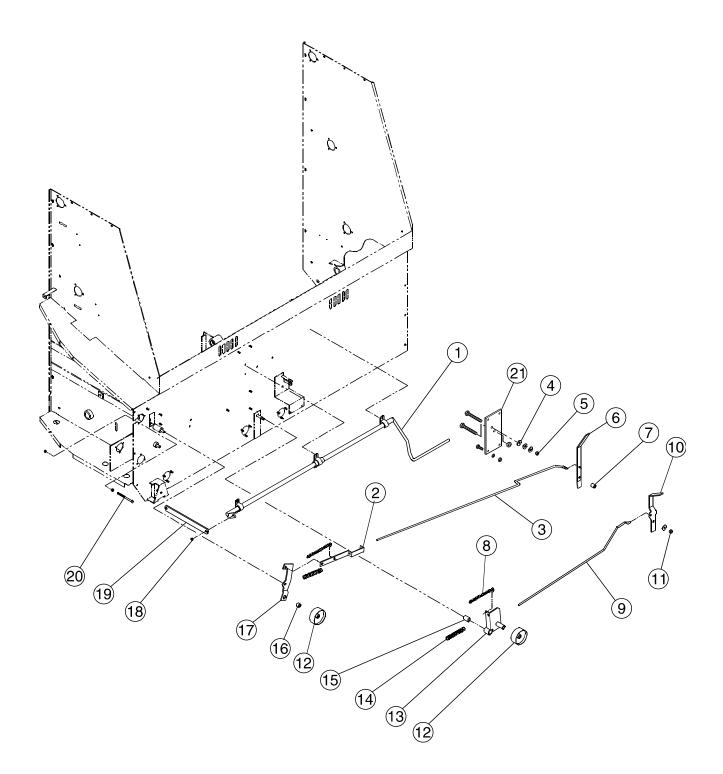


Manual No. MP16.22030

Art's-Way Manufacturing Co., Inc.

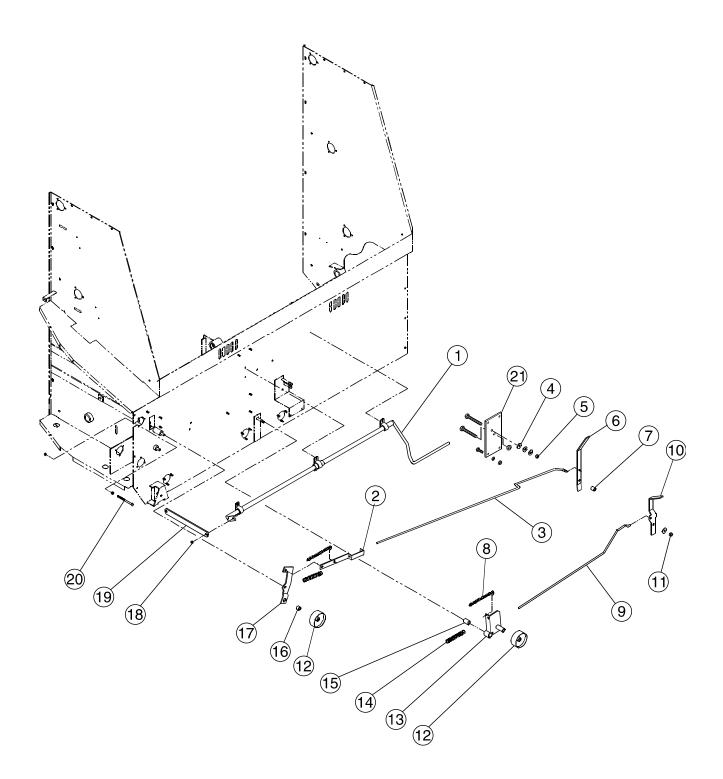
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---------------------------|------|
| | MP16.20837 | SADDLE, TRUCK MOUNT | 2 |
| | MP903423 | BOLT, HEX, 3/4-10 X 2-1/2 | 12 |
| | MP900499 | FLATWASHER, 3/4 | 12 |
| | MP906349 | NUT, LOCK, 3/4-10 NYLOCK | 12 |
| 2 | MP16.20710 | SHIM, 1/4 THICK | 4 |
| 3 | MP16.20711 | SHIM, 1/16 THICK | 4 |
| 4 | MP16.20712 | BUSHING, 3/4 X 1 X 9/16 | 12 |





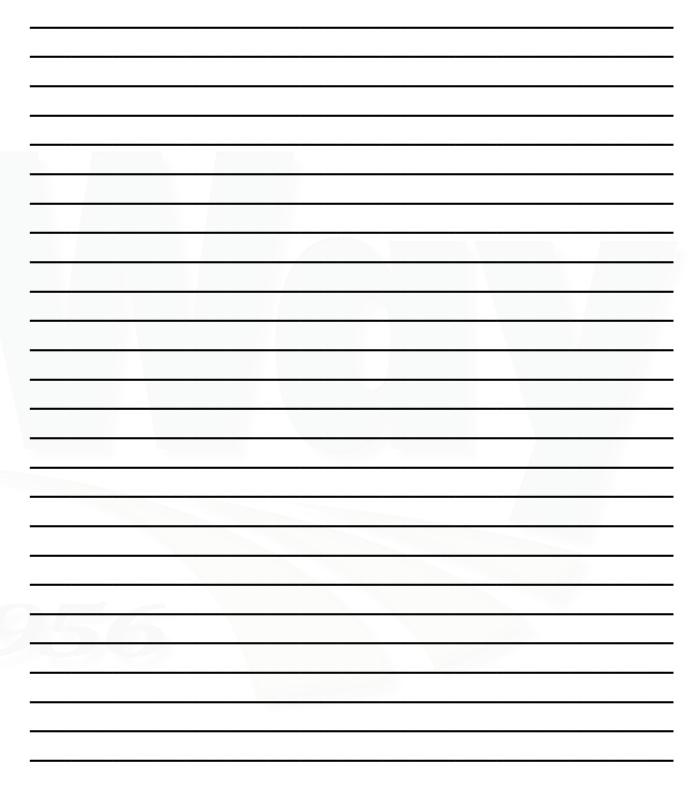
| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|-----------------------------|------|
| | MP16.21033 | SHAFT, ASSEMBLY, CONTROL | 1 |
| | MP900494 | FLATWASHER, 5/16 | 1 |
| 1 | MP900503 | LOCKWASHER, 5/16, MED | 6 |
| | MP900365 | NUT, 5/16-18 | 6 |
| | MP16.10192 | GRIP, HANDLE | 1 |
| | MP16.10245 | BRACKET, SPRING ADJUSTMENT | 1 |
| 2 | MP902300 | BOLT, HEX, 3/8-16 X 1, GR5 | 1 |
| 2 | MP900495 | FLATWASHER, 3/8 | 1 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| | MP16.21035 | ROD, BEATER CLUTCH | 1 |
| 3 | MP900495 | FLATWASHER, 3/8 | 1 |
| | MP903937 | NUT, LOCK, 3/8-16, TOPLOCK | 1 |
| 4 | MP900497 | FLATWASHER, 1/2 | 4 |
| 5 | MP900369 | NUT, 1/2-13 | 1 |
| G | MP16.20093 | HANDLE, BEATER CLUTCH | 1 |
| 6 | MP01.73960 | GRIP, CLUTCH HANDLE | 1 |
| 7 | MP16.20190 | BUSHING, .54 X .84 X 1.00 | 1 |
| 8 | MP16.20118 | SPRING, EXT054 X .56 X 8.50 | 2 |
| | MP16.21036 | ROD, SAFETY CLUTCH | 1 |
| 9 | MP900495 | FLATWASHER, 3/8 | 1 |
| | MP903937 | NUT, LOCK, 3/8-16 TOPLOCK | 1 |
| 10 | MP16.20092 | HANDLE, SAFETY CLUTCH | 1 |
| 10 | MP01.73960 | GRIP, CLUTCH HANDLE | 1 |

CONTROL SYSTEM, TRUCK MOUNT, LEFT SIDE UNLOAD, (OPTIONAL), (CONTINUED)



| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 11 | MP901650 | NUT, LOCK, 1/2-13 CENTER LOCK | 1 |
| 12 | MP01.76340 | PULLEY, IDLER | 2 |
| 13 | MP16.20094 | LEVER ASSY, IDLER | 1 |
| | MP904635 | BOLT, HEX, 5/8-11 X 3 1/2, GR 2 | 1 |
| | MP902193 | NUT, LOCK, 5/8-11 CENTER LOCK | 1 |
| | MP900497 | FLATWASHER, 1/2 | 1 |
| | MP902194 | NUT, LOCK, 1/2-13 TOPLOCK | 1 |
| 14 | MP01.73890 | SPRING, CLUTCH CONTROL | 2 |
| 15 | MP16.10260 | SPACER, .56 X 1.00 X 1.53 | 1 |
| 16 | MP16.10364 | SPACER, .66 X 1.00 X .62 | 1 |
| | MP16.10231 | STRAP, IDLER | 1 |
| | MP904253 | BOLT, HEX, 5/8-11 X 2 | 1 |
| 17 | MP902193 | NUT, LOCK, 5/8-11, CENTER LOCK | 1 |
| | MP900497 | FLATWASHER, 1/2 | 1 |
| | MP901650 | NUT, LOCK, 1/2-13 CENTER LOCK | 1 |
| | MP16.10195 | SPACER, .36 X .62 X .33 | 2 |
| 18 | MP902859 | BOLT, HEX, 5/16-18 X 1 | 2 |
| | MP900494 | FLATWASHER, 5/16 | 2 |
| | MP903936 | NUT, LOCK, 5/16-18 TOPLOCK | 2 |
| 19 | MP16.10229 | ROD, TRANSMISSION | 1 |
| 20 | MP904130 | BOLT, HEX, 3/8-16 X 5 | 1 |
| | MP900366 | NUT, 3/8-16 | 2 |
| | MP16.21037 | PLATE, CONTROL BASE, TRUCK MOUNT CONTROLS | 1 |
| | MP902300 | BOLT, HEX, 3/8-16 X 1 | 4 |
| 21 | MP900504 | LOCKWASHER, 3/8 | 4 |
| | MP900366 | NUT, 3/8-16 | 4 |
| | MP907072 | BOLT, HEX, 1/2-13 X 3-1/2 TAP | 1 |
| | MP900369 | NUT, 1/2-13 | 1 |
| | MP09.71601 | BOLT, HEX, 1/2-13 X 4 TAP | 1 |

| |
|------|
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |









Art's-Way Manufacturing Co., Inc. TECHNICAL MANUALS

Manuals are available from your local dealer or Art's-Way Manufacturing Co., Inc. for the operation, service, and repair of your machine. For prompt convenient service, contact your local dealer for assistance in obtaining the manuals for your machine.

Your local dealer can expedite your order for operator manuals, illustrated parts catalogs, service manuals, and maintenance records.

Always give the Machine Name, Model, and Serial Number so your local dealer can provide the correct manuals for your machine.

Art's-Way Manufacturing Co., Inc. reserves the right to make improvements in design or changes in specifications at any time without incurring any obligation to install them on units previously sold.

Except as expressly authorized, no part of this manual may be reproduced, copied, transmitted, disseminated, downloaded or stored in any storage medium, for any purpose without the express prior written consent of Art's-Way Manufacturing Co., Inc.

ART'S-WAY MANUFACTURING CO., INC. HWY 9 WEST - PO Box 288 Armstrong, IA. 50514 U.S.A

© Copyright 2012 ART'S-WAY MANUFACTURING CO., INC. All Rights Reserved