

Operator's Manual

Flail Mowers

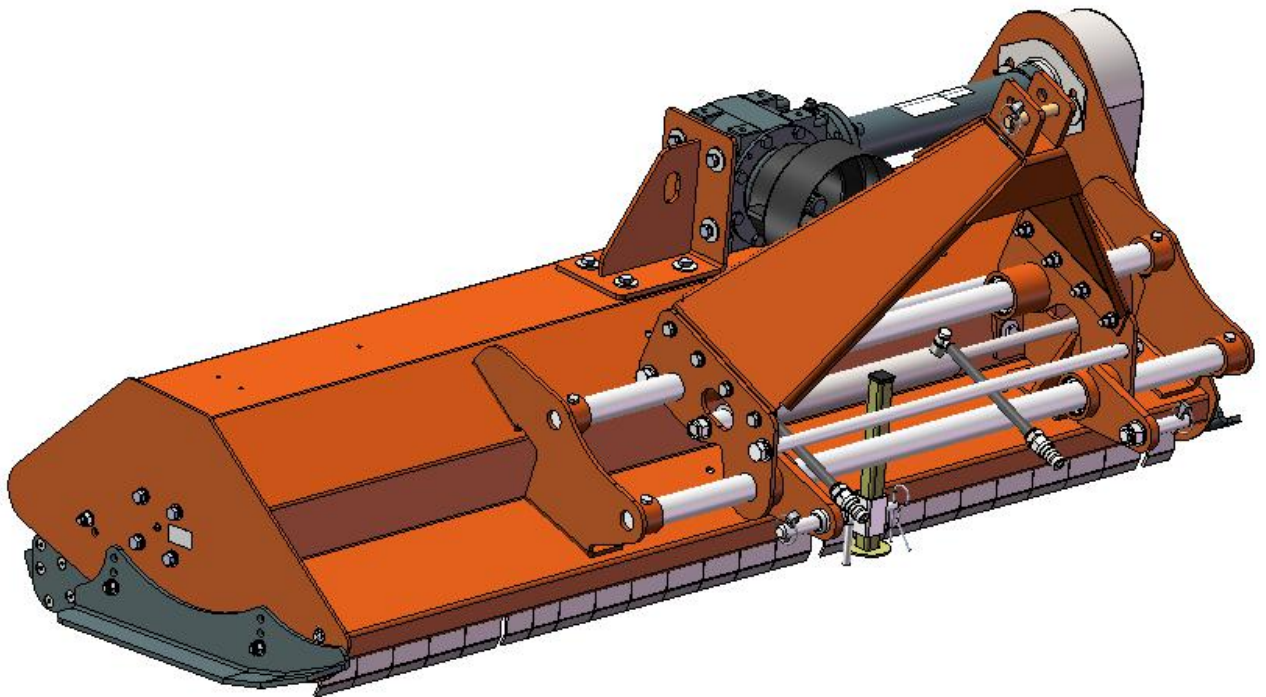
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Read the Operator's Manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception your life and the lives of others depend on it!

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These are common practices that may or may not be applicable to the products described in this manual.

Safety at All Times

Thoroughly read and understand the instructions given in this manual before operation. Refer to the "Safety Label" section, read all instructions noted on them.

Do not allow anyone to operate this equipment who has not fully read and comprehended this manual and who has not been properly trained in the safe operation of the equipment.

- ▲ Operator should be familiar with all functions of the unit.
- ▲ Operate implement from the driver's seat only.
- ▲ Make sure all guards and shields are in place and secured before operating implement.
- ▲ Do not leave tractor or implement unattended with engine running.
- ▲ Dismounting from a moving tractor could cause serious injury or death.
- ▲ Do not allow anyone to stand between tractor and implement while backing up to implement.
- ▲ Keep hands, feet, and clothing away from power-driven parts.
- ▲ Wear snug fitting clothing to avoid entanglement with moving parts.
- ▲ Watch out for wires, trees, etc., when raising implement. Make sure all persons are clear of working area.
- ▲ Turning tractor too tight may cause implement to ride up on wheels. This could result in injury or equipment damage.
- ▲ Do not carry passengers on implement at any time.



Look For The Safety Alert Symbol

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

Be Aware of Signal Words

A Signal word designates a degree or level of hazard seriousness. The signal words are:

⚠ DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

⚠ WARNING

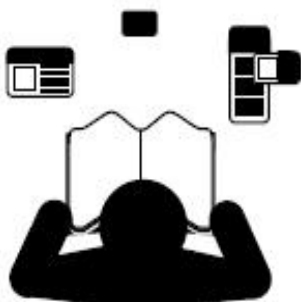
Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

For Your Protection

- ▲ Thoroughly read and understand the "Safety Label" section, read all instructions noted on them.



Shutdown and Storage

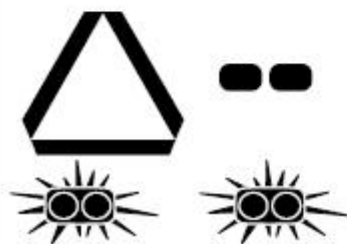
- ▲ Lower machine to ground, put tractor in park, turn off engine, and remove the key.
- ▲ Detach and store implements in a area where children normally do not play. Secure implement by using blocks and supports.



These are common practices that may or may not be applicable to the products described in this manual.

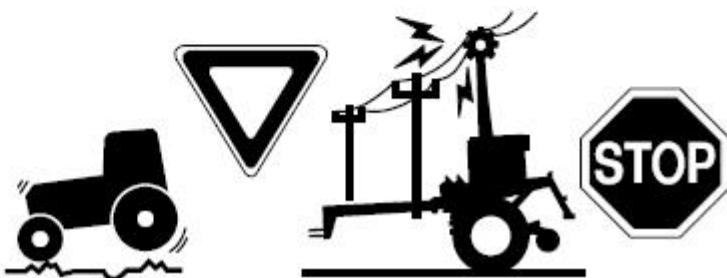
Use Safety Lights and Devices

- ▲ Slow moving tractors, self-propelled equipment, and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- ▲ Flashing warning lights and turn signals are recommended whenever driving on public roads.



Transport Machinery Safety

- ▲ Comply with state and local laws.
- ▲ Maximum transport speed for implement is 20 mph. **DO NOT EXCEED.** Never travel at a speed which does not allow adequate control of steering and stopping. Some rough terrain require a slower speed.
- ▲ Sudden braking can cause a towed load to swerve and upset. Reduce speed if towed load is not equipped with brakes.
- ▲ Use the following maximum speed - tow load weight ratios as a guideline:
 - 20 mph** when weight is less than or equal to the weight of tractor.
 - 10 mph** when weight is double the weight of tractor.
- ▲ **IMPORTANT:** Do not tow a load that is more than double the weight of tractor.



Practice Safe Maintenance

- ▲ Understand procedure before doing work. Use proper tools and equipment, refer to Operator's Manual for additional information.
- ▲ Work in a clean dry area.
- ▲ Lower the implement to the ground, put tractor in park, turn off engine, and remove key before performing maintenance.
- ▲ Allow implement to cool completely.
- ▲ Do not grease or oil implement while it is in operation.
- ▲ Inspect all parts. Make sure parts are in good condition & installed properly.
- ▲ Remove buildup of grease, oil, or debris.
- ▲ Remove all tools and unused parts from implement before operation.



These are common practices that may or may not be applicable to the products described in this manual.

Prepare for Emergencies

- ▲ Be prepared if a fire starts.
- ▲ Keep a first aid kit and fire extinguisher handy.
- ▲ Keep emergency numbers for doctor, ambulance, hospital, and fire department near phone.



Wear Protective Equipment

- ▲ Wear protective clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- ▲ Prolonged exposure to loud noise can cause hearing impairment or hearing loss. Wear suitable hearing protection such as earmuffs or earplugs.
- ▲ Operating equipment safely requires the full attention of the operator. Avoid wearing radio headphones while operating machinery.



Avoid High Pressure Fluids Hazard

- ▲ Escaping fluid under pressure can penetrate the skin causing serious injury.
- ▲ Avoid the hazard by relieving pressure before disconnecting hydraulic lines or performing work on the system.
- ▲ Make sure all hydraulic fluid connections are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- ▲ Use a piece of paper or cardboard, NOT BODY PARTS, to check for suspected leaks.
- ▲ Wear protective gloves and safety glasses or goggles when working with hydraulic systems.
- ▲ If an accident occurs, see a doctor immediately. Any fluid injected into the skin must be treated within a few hours or gangrene may result.



Keep Riders Off Machinery

- ▲ Riders obstruct the operator's view, they could be struck by foreign objects or thrown from the machine.
- ▲ Never allow children to operate equipment.



Tire Safety

- ▲ Tire changing can be dangerous and should be performed by trained personnel using the correct tools and equipment.
- ▲ When inflating tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- ▲ When removing and installing wheels, use wheel handling equipment adequate for the weight involved.



Safety labels

Your Flail Mower comes equipped with all safety labels in place. They were designed to help you safety operate your implement. Read and follow the directions.

1. Refer to this section for proper label placement.

Replace all damaged or missing labels. Order new labels from your nearest dealer.

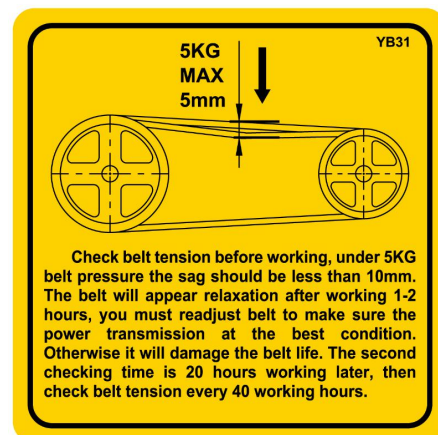
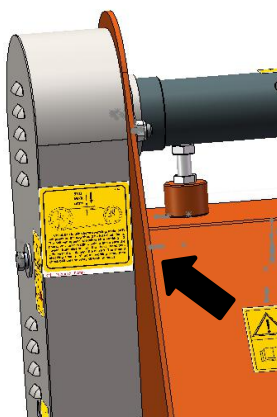
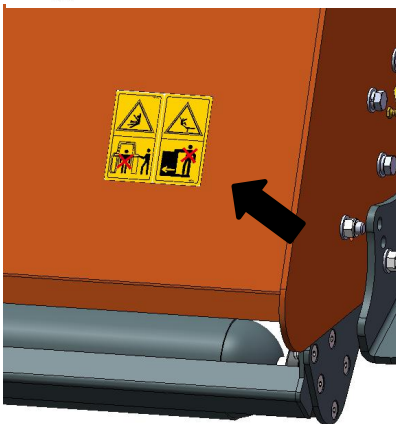
2. Some new equipment installed during repair requires safety labels to be affixed to the replaced component as specified by manufacturer. When ordering new components

make sure the correct safety labels are included in the request.

3. Refer to this section for proper label placement.

To install new labels:

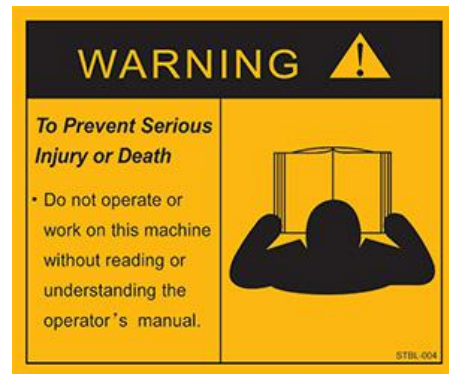
- Clean the area the label is to be placed.
- Spray soapy water on the surface where the label is to be placed.
- Peel backing from label. Press firmly onto the surface.
- Squeeze out air bubbles with the edge of a credit card or with a similar type straight edge.



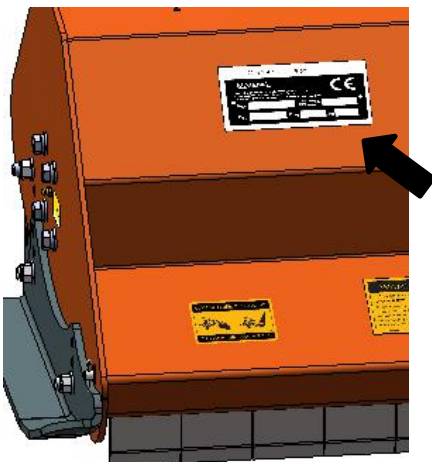
Important Safety Information



Danger: Rotating blades Both sides

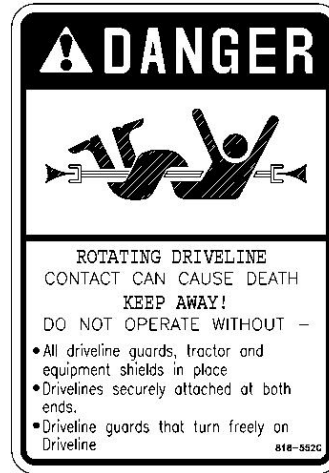
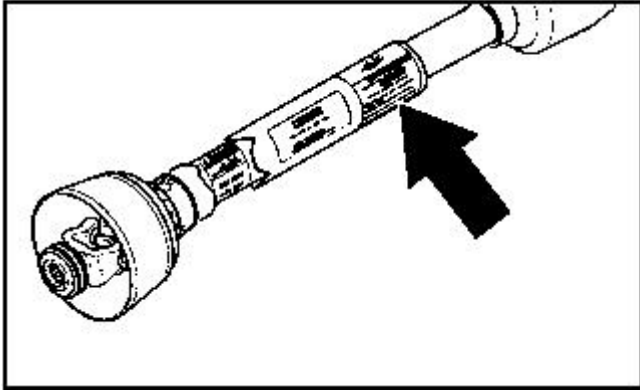


reading

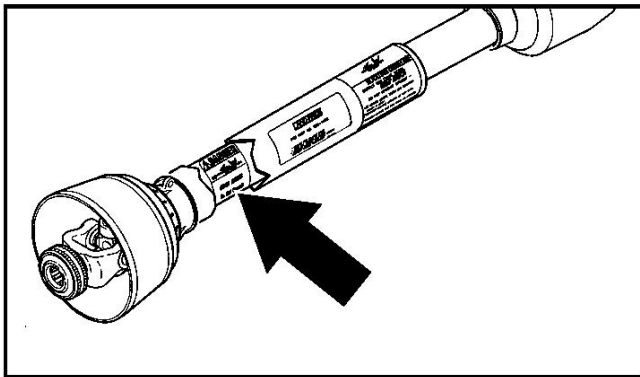


Nameplate

Important Safety Information



Danger: Rotating Driveline



Danger: Guard Missing

Important Safety Information

Introduction

We welcome you to the growing family of new product owners.

This Flail Mower has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from this machine.

Application

The heavy duty EF & DP Series Flail Mowers are designed and built to provide excellent cutting performance on gently sloping or slightly contoured right-of ways, fields, municipal greening, straw pulverization.

EF heavy duty series has 3 models available according to the existence of the hydraulic system :With the hydraulic system 1000mm, 1100mm, 1200mm, 1300mm, 1400mm, 1500mm, 1600mm, 1700mm, 1800mm, 1900mm cutting width and without the hydraulic 1000mm, 1100mm, 1200mm, 1300mm, 1400mm, 1500mm, 1600mm, 1700mm, 1800mm, 1900mm , 2000mm, 2200mm cutting width, cutting angle, displacement, three point suspension, equipped with a 20HP to 75HP tractor.

All models equipped with fine cutting knives will perform extremely well cutting material up to 1" in diameter or provide a very respectable quality of cut for fields, bushes and straw.

All models also can be equipped with forged hammer knives and heavy duty brush rake teeth to make them well suited for nursery and agricultural applications where heavy grass, brush, pruning, saplings, small stumps, corn stocks, and other row crop debris are present. The rake teeth will gather and aggressively force material into the rotor hammer knives for a more complete pulverization.

Using This Manual

- This Operator's Manual is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.
- The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.
- To order a new Operator's or Parts Manual contact your authorized dealer.

Terminology

"Right" or "Left" as used in this manual is determined by facing the direction the machine will operate when used unless otherwise stated.

Definitions

IMPORTANT: A special point of information related to the following topic. Our intention is this information must be read & noted before continuing.

NOTE: A special point of information that the operator should be aware of before continuing.

Owner Assistance

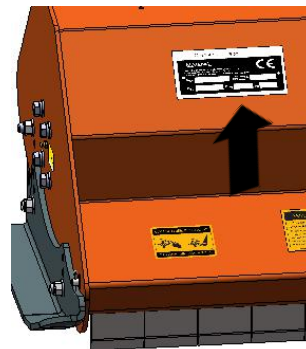
The Online Warranty Registration or Warranty Registration card should be completed by the dealer at the time of purchase. This information is to necessary provide you with quality customer service.

The parts on your Flail Mower have been specially designed by MT and should only be replaced with genuine MT parts. Contact a MT dealer if customer service or repair parts are required. Your MT dealer has trained personnel, repair parts, and equipment needed to service the implement.

Serial Number

Model No. _____ Serial No. _____

For quick reference and prompt service, record model and serial number in the spaces provided above and again on warranty page 40. Always provide model and serial number when ordering parts and in all correspondences with your MT dealer. Refer to Figure 1 for location of your serial number plate.



Serial Number Plate Location
Figure 1

Further Assistance

Your dealer wants you to be satisfied with your new Mowers.

If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss the matter with your dealership service manager making sure that person is aware of any problems you may have and has had the opportunity to assist you.
2. If you are still not satisfied, seek out the owner or general manager of the dealership, explain the problem, and request assistance.
3. For further assistance write to:

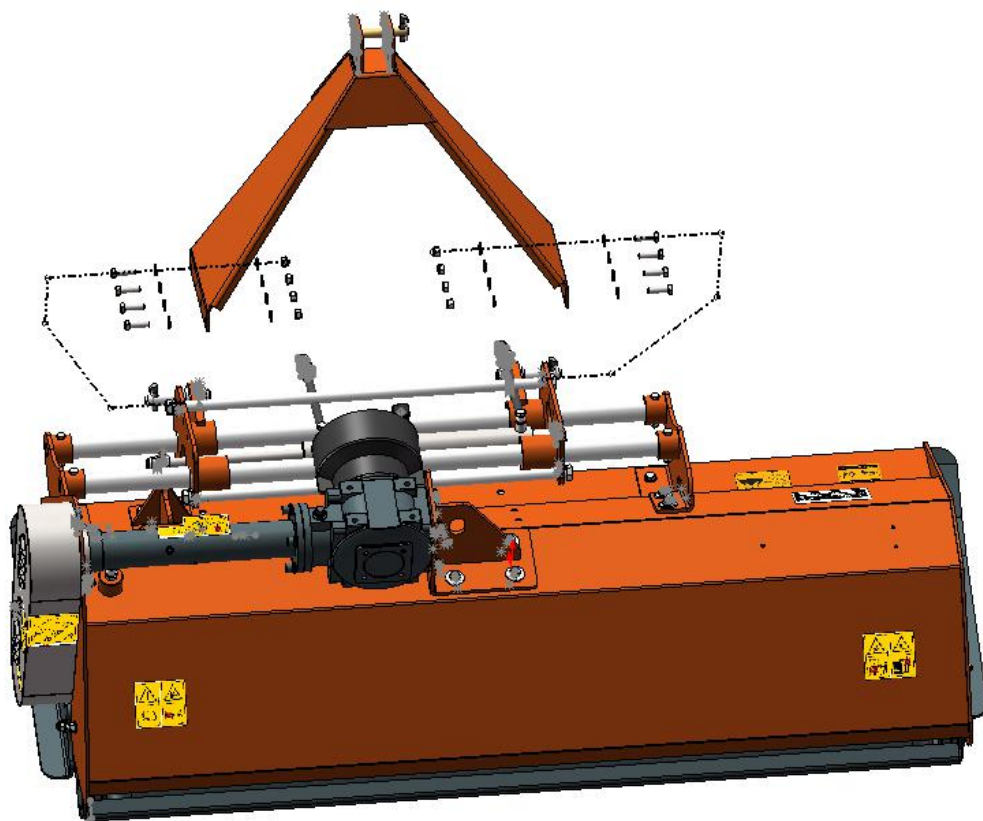
Torque Requirements

Refer to “Torque Values Chart for Common Bolt Sizes” on page 51 to determine correct torque values when tightening hardware.

Hitch Assembly

Refer to “Page No.1” on page 23

The hitch has already assembled with machine body.



Hitch Assembly
Figure 1-1

Section 1: Assembly & Set-up

Tractor Requirements

Tractor horsepower and hitch category should be within the range noted below. Tractors outside the horsepower range must not be used. The lower 3-Point arms must be stabilized to prevent side-to-side movement. Most tractors have sway blocks or adjustable chains for this purpose.

Horsepower Rating20-75HP

Hitch Type 3-Point Cat. II

Rear PTO Speed540 RPM

Tractor Weight See Important Note

Tractor Hook-up

Refer to Figure 1-2:

1. Be certain tractor draw bar does not interfere. Move draw bar ahead or remove if required. Draw bar should also be checked for clearance when unit is raised for the first time.
2. Remove all three clevis hitch pins.

3. Align ball swivels in the tractor's lower 3-Point arms with pin holes in the lower hitch clevises of the Mowers . Insert hitch pins and secure with hair pin cotters.

4. Align the top center link with the center hitch Clevis of the Mowers.

Insert hitch pin and secure with hair pin cotter.

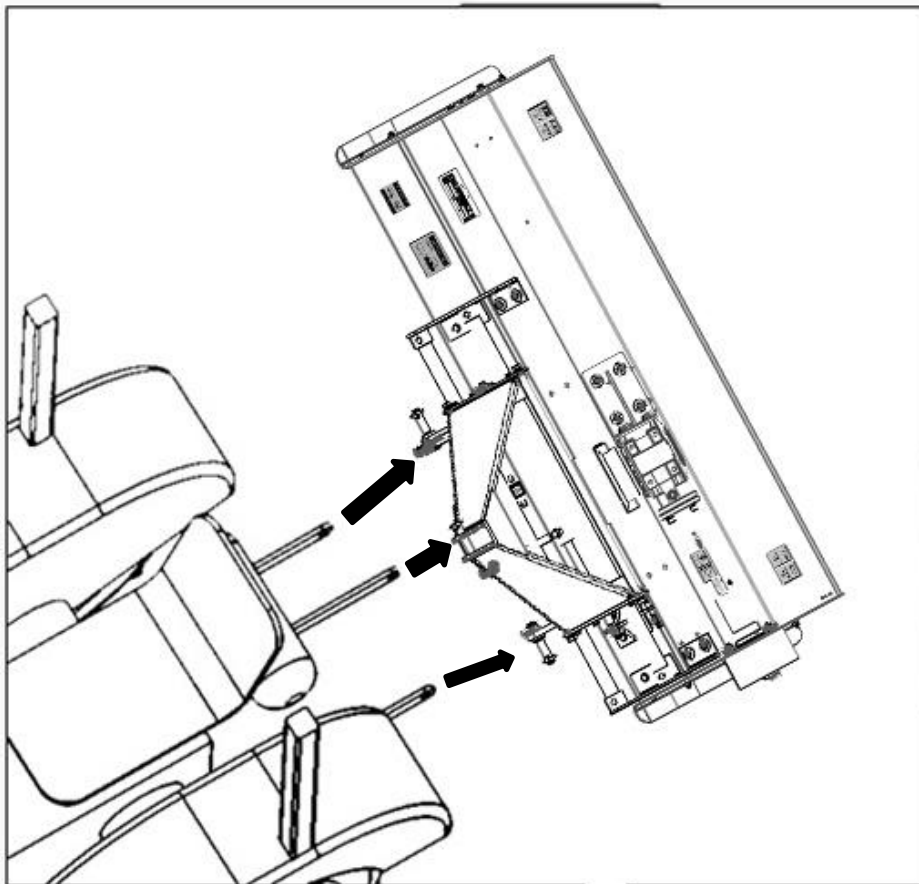
5. With tractor's 3-Point controls, lift Mowers up 1 to 2 inches and then raise jack stands fully up. Secure stands with jack pins and hair pin cotters.

6. Level Mowers by adjusting lower 3-Point arms and upper center link. Refer to **"Leveling the Mowers"** on page 16.

Driveline Installation

! DANGER

Do not engage tractor PTO while hooking-up and unhooking driveline or stand near a rotating driveline. A person's body and/or clothing can become entangled



Tractor Hook-Up
Figure 1-2

Section 1: Assembly & Set-up

Driveline installation

Refer to Figure 1-3:

1. Park tractor on a level surface. Slowly engage tractor 3-Point lift lever to raise Mowers until gearbox shaft is in line (level) with tractor PTO shaft.
2. Support Mowers deck at this height with support jacks or blocks to keep Mowers from drifting down.
3. Place gear selector in park, set park brake, shut tractor off, and remove switch key.
4. Slide inner yoke (implement end) of driveline onto the gearbox. Secure driveline with yoke locking device.
5. Slide outer yoke of driveline over the tractor PTO shaft. Secure driveline with yoke locking device.
6. If driveline does not fit between tractor and gearbox, skip to instructions to **“Shorten Driveline Length”** on this page.
7. The driveline should now be moved back and forth to ensure both ends are secured to the tractor and poultry litter crusher PTO shafts. Reattach any end that is loose.
8. Hook driveline safety chain on the tractor end of driveline to the tractor. Re-latch safety chain to the driveline shield.
9. Hook driveline safety chain on the Mowers end of driveline to the Mowers frame. Re-latch safety chain to the driveline shield.

Check Driveline Collapsible Length

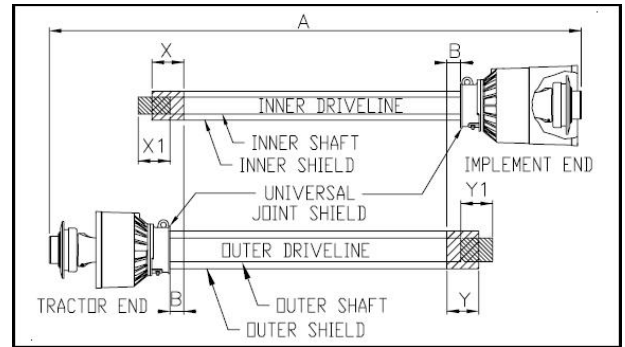
IMPORTANT: Two small chains are supplied with the driveline. To keep driveline shields from rotating, these chains must be attached to the outer and inner driveline shields and to the Mowers and tractor.

IMPORTANT: A driveline that is too long will bottom out causing structural damage to the tractor and Mowers. Always check driveline collapsible length during initial setup and when connecting to a different tractor. More than one driveline may be required to fit all applications.

1. Make sure driveline is properly installed and level before checking driveline collapsible length. (Refer to **“Driveline Installation”** on page 10 if needed.)

Refer to Figure 1-3:

2. With driveline level, measure 1" (**“B”** dimension) back from universal joint shield to end of outer driveline shield. If measurement is 1" or more, skip **“Check Driveline Extended Length”** on page 12. If measurement is less than 1", then continue with **“Shorten Driveline Length”** on this page.



Driveline Shortening Figure 1-3

Shorten Driveline Length

Refer to Figure 1-3:

1. Un-hook driveline from tractor PTO shaft and pull outer and inner drivelines apart.
2. Reattach outer driveline to tractor PTO shaft. Pull on inner and outer drivelines to be sure universal joints are properly secured.
3. Hold inner and outer drivelines parallel to each other:
 - a. Measure 1" (**“B”** dimension) back from outer driveline universal joint shield and make a mark at this location on the inner driveline shield.
 - b. Measure 1" (**“B”** dimension) back from the inner driveline universal joint shield and make a mark at this location on the outer driveline shield.
4. Remove driveline from tractor and gearbox shafts.
5. Measure from end of inner shield to scribed mark (**“X”** dimension). Cut off inner shield at the mark. Cut same amount off the inner shaft (**“X1”** dimension).
6. Measure from end of outer shield to scribed mark (**“Y”** dimension). Cut off outer shield at the mark. Cut same amount off the outer shaft (**“Y1”** dimension).
7. Remove all burrs and Crushings.
8. Check drive line extend length next.

Section 1: Assembly & Set-up

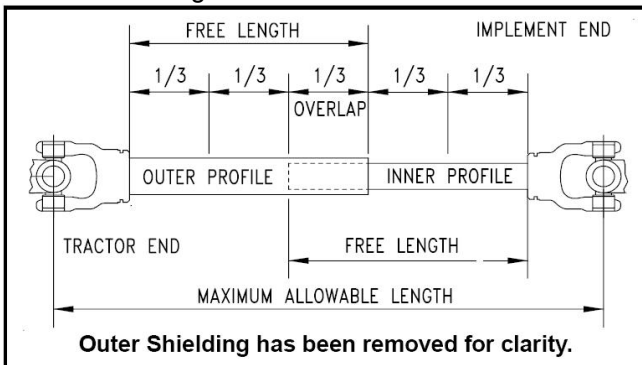
Check Driveline Extended Length

Refer to Figure 1-4:

Make sure driveline collapsible length is acceptable. If needed, refer to “**Check Driveline Collapsible Length**” on page 11 instructions on this page.

The driveline maximum allowable length must, when fully extended, have a minimum overlap of the profile tubes by not less than 1/3 the free length with both inner and outer profile tubes being of equal length.

1. Apply multi-purpose grease to the inside of the outer shaft and reassemble the driveline.
2. Assemble driveline profiles together with 1/3 overlapping of inner and outer profile tubes. Once assembled, measure and record the maximum allowable length shown below for future reference.



Driveline Maximum Extended Length

Figure 1-4

3. Attach inner driveline yoke to the Mowers gearbox shaft. Attach outer driveline yoke to the tractor's PTO shaft.
4. Move yoke ends of driveline back and forth to ensure they are secured to the tractor and Mowers shafts. Reattach any end that is loose.

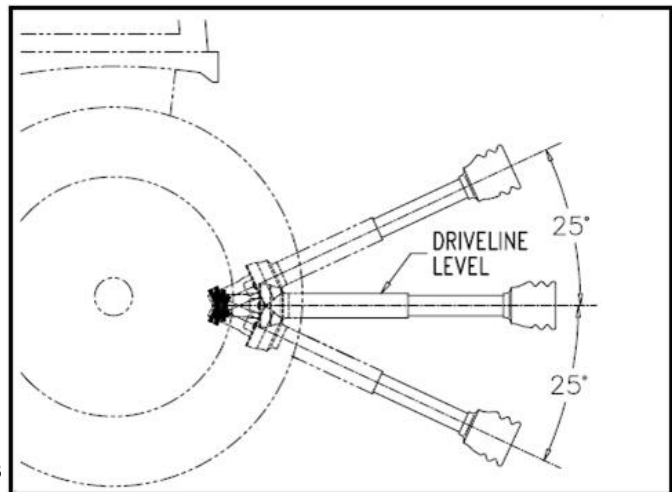
IMPORTANT: Small chains are supplied with the driveline. They must be attached to the inner and outer driveline shields and to the Mowers and tractor to restrict shield rotation.

5. Hook driveline safety chain on the tractor end of driveline to the tractor. Re-latch safety chain to the driveline shield.
6. Hook driveline safety chain on the Mowers end of driveline to the Mowers frame. Re-latch safety chain to the driveline shield.
7. Start tractor and raise Mowers just enough to remove blocks.

8. Slowly engage tractor hydraulic 3-Point control lever to lower Mowers. Check for sufficient drawbar clearance. Move drawbar ahead, aside or remove if required.
9. Raise and lower implement to find maximum extended driveline length. Check to make certain that the driveline overall length does not exceed the maximum recorded length in step 2.
10. If needed, set tractor 3-Point lift height to keep driveline from exceeding maximum allowable length.

Check Driveline Interference

Refer to Figure 1-5:



Maximum PTO Driveline Movement During Operation

Figure 1-5

1. Slowly engage tractor hydraulic 3-Point control lever to lower Mowers while checking for sufficient drawbar clearance. Move drawbar ahead, aside, or remove if required.
2. Raise and lower implement to find maximum extended driveline length. Check to make certain the driveline does not exceed the maximum allowable length and 25° up or down.
3. If needed, set tractor 3-Point lift height to keep driveline from exceeding the maximum allowable length and 25° up.

Section 2: Operating Instructions

Pre-Start Checklist

Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training involved in the operation, transport, storage, and maintenance of the Mowers. Therefore, it is absolutely essential that no one operates the poultry litter Crusher without first having read, fully understood, and become totally familiar with the Operator's Manual. Make sure the operator has read and paid particular attention to:

- **Important Safety Information**, page 1
- **Section 1: Assembly & Set-up**, page 9
- **Section 2: Operating Instructions**, page 13
- **Section 3: Adjustments**, page 16
- **Section 4: Maintenance & Lubrication**, page 18

Make sure the operator has completed the Operating Checklist below.

✓	Check	Page No.
	Read and follow all Safety Information carefully. Refer to "Important Safety Information".	Page 1
	Make sure all guards and shields are in place. Refer to "Important Safety Information".	Page 1
	Read and follow 3-Point hook-up & preparation instructions. Refer to "Assembly & Set-up".	Page 9
	Read and made all required adjustments. Refer to "Section 3: Adjustments".	Page 16
	Read and follow all operating procedures. Refer to "Section 2: Operating Instructions".	Page 13
	Read and follow all Maintenance Instructions. Refer to "Section 4: Maintenance & Lubrication".	Page 18
	Read and follow all Lubrication Instructions. Refer to "Lubrication Points".	Page 19
	Make sure all gearboxes are properly lubricated. Refer to Gearbox Lubrication lubrication.	Page 19
	Check Mowers initially and periodically for loose bolts and pins. Be sure all lock nuts and bolts are tight. Especially make sure blade bolts are tight. Refer to "Torque Values Chart for Common Bolt Sizes".	Page 51

Tractor Shut Down Procedure

It is essential that the tractor be shut down as noted below before making any inspections, maintenance and/or repairs to the tractor and/or Mowers.

1. Park tractor on a level surface.
Don't work under or around an implement parked on a steep incline.
2. Place tractor in park and set park brake.
3. Disengage PTO if operating.
4. Shut engine off and remove switch key.
5. Wait for PTO to come to a complete stop before dismounting tractor.
6. Wear safety glasses.

Transporting

! CAUTION

When traveling on public roads whether at night or during the day, use accessory light and devices for adequate warning to operators of other vehicles. Comply with all federal, state, and local laws.

1. When raising Mowers to transport position, be sure driveline does not contact tractor or Mowers. Adjust and set tractor's 3-Point lift height so that the driveline does not contact Mowers deck in the fully raised position.
2. Be sure to reduce tractor ground speed when turning, leaving enough clearance so that the Mowers does not contact obstacles such as buildings, trees, or fences.
3. Select a safe ground travel speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass safely.
4. When traveling over rough or hilly terrain, shift tractor to a lower gear.

Safety Information

! DANGER

Do not engage tractor PTO while hooking-up and unhooking the driveline or while someone is standing near the driveline. A person's body and/or clothing can become entangled in the driveline resulting in serious injury or death.

! DANGER

Mowers s have the ability to discharge objects at high speeds if guards and safety shields are not in place and closed.

! DANGER

Gearbox and driveline shields must be secured in place when operating the Mowers to avoid injury or death from entanglement in rotating drivelines.

! DANGER

Do not operate a broken or bent driveline. Such a driveline can brake apart while rotating at high speeds causing serious injury or death. Always remove Mowers from service until damaged driveline is repaired or replaced.

! DANGER

Never carry a person on the Mowers. A rider can fall or become entangled in the machine causing serious injury or death.

Section 2: Operating Instructions

! DANGER

Do not operate and/or travel across steep inclines where a tractor can roll-over resulting in serious injury or death. Consult your tractor's manual for acceptable inclines the tractor is capable of traveling across.

! DANGER

Do not use Mowers to lift or carry objects. Lifting and/or carrying objects can result in damage to the Mowers, serious bodily injury, or death.

! DANGER

Do not use Mowers as a working platform. The Mowers is not properly designed or guarded for this. Using the Mowers as a working platform can cause serious injury or death.

! WARNING

Always disengage PTO, engage parking brake, shut tractor engine off, remove switch key, and wait for blades to come a complete stop before dismounting from tractor.

! WARNING

The G.OS is designed to cut grass and brush up to 1" diameter and yet cut up to 2" diameter brush. Using this Mowers for another type of work can damage the Crushing components, drive components, Mowers frame, and tractor.

! CAUTION

Do not over speed PTO or machine damage may result. This Mowers is designed to be used only with a tractor having a 540 RPM rear PTO.

Working Instructions

1. Clear area to be worked of objects and debris that might be picked up and thrown by the Mowers blades. Do not use Mowers on stony ground.
2. Make the following machine checks before operating the Mowers .
 - All hook-up pins should be secured.
 - All shields should be in place and secured.
 - All bolts and lock nuts should be present and tight.
 - Make sure the blades are not be broken or loose.

Operating Instructions

Proper servicing and adjustments are the key to the long life of any machine. With careful and systematic inspection of the Mowers, costly maintenance, time, and repair can be avoided.

! Before beginning to work, the following inspection and checks should be performed:

1. Check oil level in gearbox. Refer to "Gearbox Lubrication" on page 19.
2. Check that all plugs in gearbox have been replaced and tightened properly.
3. Be sure all Mowers blades, bolts, and lock nuts are tight.
4. Be certain all guards and shields are in place and secure.
5. Grease driveline shaft and all other grease fittings.
6. Clear area to be worked of rocks, branches, and other foreign objects. Do not use Mowers on stony ground.
7. Lower Mowers to ground. Set tractor throttle at approximately 1/4 open. Engage PTO to start blades rotating.
8. Operate with 540 rpm PTO tractor. At first begin working at a slow forward speed and shift up until the desired speed is achieved maintaining 540 rpm PTO. The rotor blades will cut better at full blade speed than at reduced throttle.
9. After working the first 50 feet, stop and check to see that the Mowers is adjusted properly.
10. Do not make sharp turns or attempt to back up while Mowers is on the ground.
11. Never work close to or on steep slopes.
12. Do not engage PTO with Mowers in the fully raised position. Do not engage PTO at full throttle.
Do not lift Mowers with PTO engage.
13. Do not allow anyone including yourself near the Mowers when it is operating.
14. Periodically check for foreign objects wrapped around the rotor shaft and remove them after disengaging PTO, turning off tractor, and removing ignition key.

General Operating Instructions

Now that you have familiarized yourself with the Operator's Manual, completed the Operators Checklist, properly attached your Mowers to your tractor, made the right offset or center adjustments, and preset your Crushing height, you're almost ready to begin using your MT **EF & DP** series Flail Mowers

It's now time to do a running operational safety check. If at any time during this safety check you detect a malfunction in either the Mowers or tractor shut the tractor off immediately, remove the key, and make necessary repairs or adjustments before continuing on.

Make sure the tractor's park brake is engaged, the tractor's PTO is disengaged, and the Mowers is resting on the ground. Start the tractor and then back the tractor throttle off till the engine is at low idle. With the tractor's rear hydraulic lift control lever, raise the Mowers to transport position making sure that the PTO shaft is not in a bind and does not come in contact with the Mowers frame. Lower the unit to Crushing position and, with the tractor still at low idle, engage the PTO. If everything is running smoothly at this point increase the engine rpm until the tractor's engine reaches full PTO operating speed which will be 540 rpm. Slowly raise the cutter to transport height to make sure the driveline does not bind or chatter. Then return the engine to low idle, disengage PTO, and position the adjustable stops on the tractor's hydraulic lift lever control console so the cutter can be consistently returned to the same Crushing and transport height.

You should now be ready to move to the Crushing site to begin working. You should have inspected and should only be Crushing in an area you are familiar with which is relatively free of debris and unseen objects. Never assume an area is clear. In the event you do strike an object, stop the tractor and Mowers immediately to inspect the rotor and make any necessary repairs before resuming operation. It pays to inspect a new area and to develop a plan before you cut.

Normal working speed will be between 2-5 mph and you will need to maintain tractor PTO speed to produce a clean cut so make a tractor gear and range selection that

will maintain this combination. Generally the quality of cut of will be better at lower ground speeds and Crushing denser ground cover or heavier brush may create the need to slow down. Always cut downward on slopes and avoid crossing the face of steep slopes. Avoid sharp drops and cross diagonally through dips to prevent hanging up the tractor and Mowers . Slow down in turns and avoid sharp turns if at all possible. Remember to look back often.

Now you're prepared and well briefed so let's begin Cutting. Reduce the tractor's engine rpm, make sure the Mowers is on the ground and in Crushing position, engage the PTO, raise the engine rpm to the appropriate PTO speed, and begin working. Operators must plan ahead and choose a Crushing route that allows safe turns. Try increasing or decreasing ground speed to determine the effect on quality of cut. With a little practice you will be pleased with what you and your MT Mowers can do.

Section 3: Adjustments

! CAUTION

Engage parking brake, shut off tractor, remove key, and disengage PTO before making any adjustments!

! CAUTION

Ensure Mowers with special supports if it is necessary to lift Mowers off the ground to make adjustments! If not supported, the Mowers could fall causing serious injury to those present.

Leveling the Mowers

Level adjustments are made at the tractor's 3-Point lower arms and top center link.

1. Park tractor and Mowers on a flat level surface.
2. Slowly raise Mowers with the tractor's Hydraulic 3-Point lift until the unit is about 1 to 2" above the ground.
3. Ensure that the lower arms are stabilized to prevent excessive side movement.
4. Place a spirit level on the top cover running from left to right and adjust one of the lower 3-Point arms up or down until the Mowers is level from left to right.
5. Adjust tractor's top center link to place the upper hitch pin vertically above or slightly behind the lower hitch pins.
6. Slowly operate the tractor's 3-Point hydraulic control up and down to check for clearance between the tires, frame, drawbar, etc.

Belt Tension Adjustment

! WARNING

Excessive tension on the belt may lead to premature failure of belt and drive components. Excessive tension on the belt may also lead to a safety hazard to the operator or bystanders.

The Belt tension should be checked after the first 20 hours of use and every 40 hours thereafter.

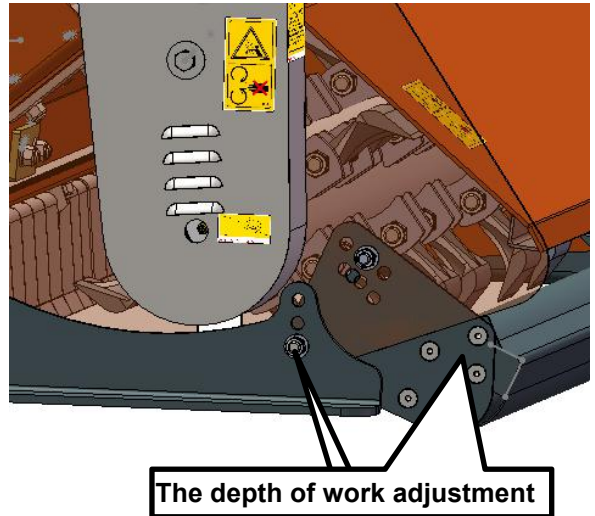
1. Check belt tension by applying approximately 22 pounds of pressure half way between the pulleys. The belt should deflect approximately 3/8".
2. Belt tension can be adjusted at the belt tension bolt. Turn belt tension bolt until desired belt tension is achieved.
3. Loosen gearbox mounting bolts and move gearbox until Mowers driveline is running straight (parallel) with the Flail Mo

Crushing Height Adjustment

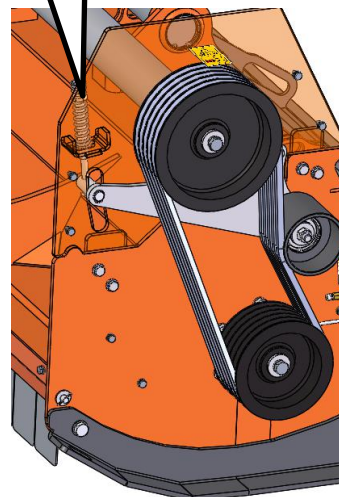
The machines cutting height depends upon the position of Adjustment plate.

1. Remove bolts that fix the roller height on both sides.
2. Lift or lower both sides of roller in equal measurements.
3. Replace bolts and re-tighten to the proper torque.
4. Inspect blades to make sure they do not touch the ground. blades that come in contact with the ground will wear quickly. If necessary, readjust Crushing height

to keep blades from touching the ground.



Belt Tension Bolt



Section 3: Adjustments

Rotor blade Replacement

Frequently check rotor blades to make sure they are in good working condition and properly secured to the rotor. Replace worn or damaged parts with new blades.

IMPORTANT:

Make sure that the replacement of blade with other same weight. This will be a balance of rotor spinning.

IMPORTANT:

The replaced blade must be the original factory accessories

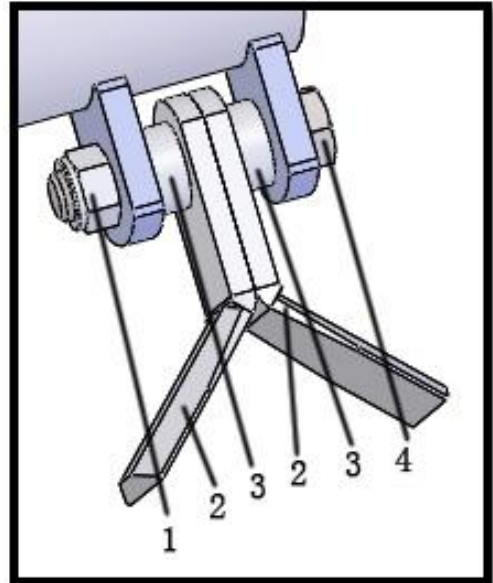
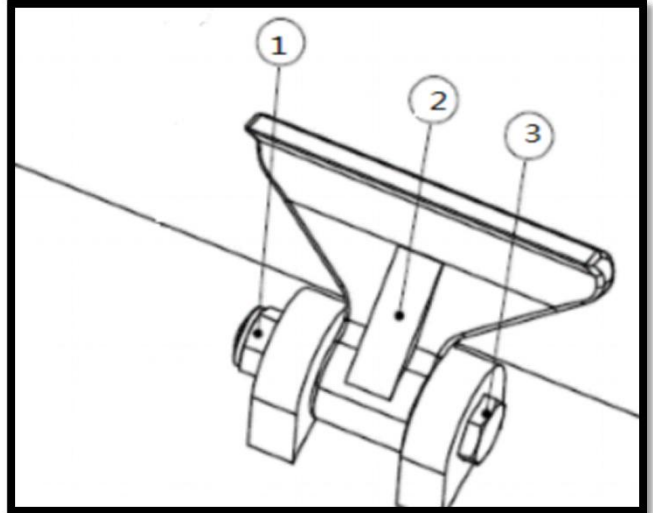
The blade have a Crushing edge on both the leading and trailing edges. When the leading edge wears out, turn existing pair of blade around 180 degrees and reinstall. Replaced blade should be the same length as existing part to maintain rotor balance.

EF series Blade Replacement for hammer blades

1. Remove nut(#1), bolt (#3).
2. Remove existing blades (#2) and reinstall new blade.
3. Install blade with existing bolt, washers, and locknut .
4. Tighten locknut with correct torque.

EF series Blade Replacement for Y type blades

1. Remove nut(#1), bolt (#4), and washers (#3).
2. Remove existing blades (#2) or turn existing pair of blade around 180 degrees and reinstall.
3. Install blade with existing bolt, washers, and locknut .
4. Tighten locknut with correct torque.



Section 4: Maintenance & Lubrication

Storage

It is good practice to clean off any dirt and grease that may have accumulated on the Mowers and to inspect and make necessary repairs before parking the unit at the end of the working season and for long periods. This will help ensure that the Mowers will be ready for use the next time you hook-up to it.

! DANGER

Always disconnect main driveline from tractor PTO and secure Mowers in the up position with solid supports before servicing underside of the Mowers .

1. Remove any dirt and grease that may have accumulated on the Mowers and moving parts Scrape off compacted dirt from under the hood and then wash the surface thoroughly with a garden hose.
2. Check rotor blade and blade bolts for wear and replace if necessary. See “**Rotor blade Replacement**” on page 17.
3. Inspect Mowers for loose, damaged, or worn parts and adjust or replace as needed.
4. Repaint parts where paint is worn or scratched to prevent rust. Ask your dealer for MT aerosol touch-up paint It are also available in touch-up bottles with brush, quarts, and gallon sizes by adding TU, QT, or GL to the end of the aerosol part number.
5. Replace all damaged or missing labels.
6. A light coat of oil or grease may also be applied to areas where paint has worn off to minimize oxidation.
7. Lubricate as noted under “**Lubrication Points**” on page 19.
8. Store equipment on a level surface in a clean, dry place. Inside storage will reduce maintenance and make for a longer mower life. Position the unit on a flat surface with jack stands lowered to a suitable 3-Point height. Ensure that the main frame is stable.
9. Store driveline end off the ground.

Section 4: Maintenance & Lubrication

Lubrication Points

Lubrication Legend



Multi-purpose spray lube



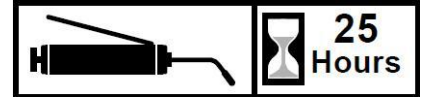
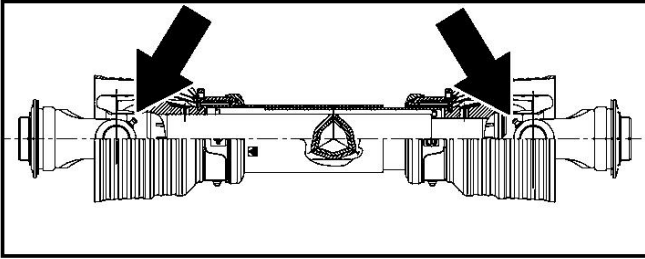
Multi-purpose grease lube



Multi-purpose oil lube

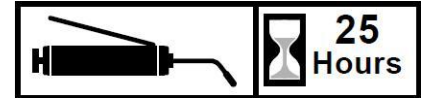
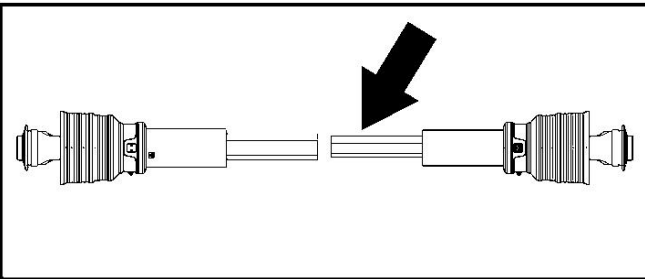


Intervals in hours at which lubrication is required



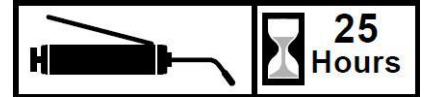
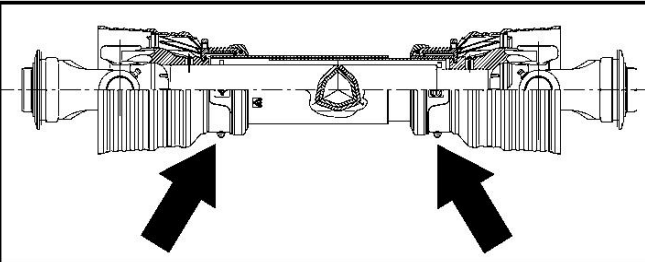
Driveline Shaft U-Joints

Type of Lubrication: Multi-purpose Grease
Quantity - 4 to 8 Pumps



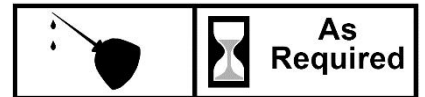
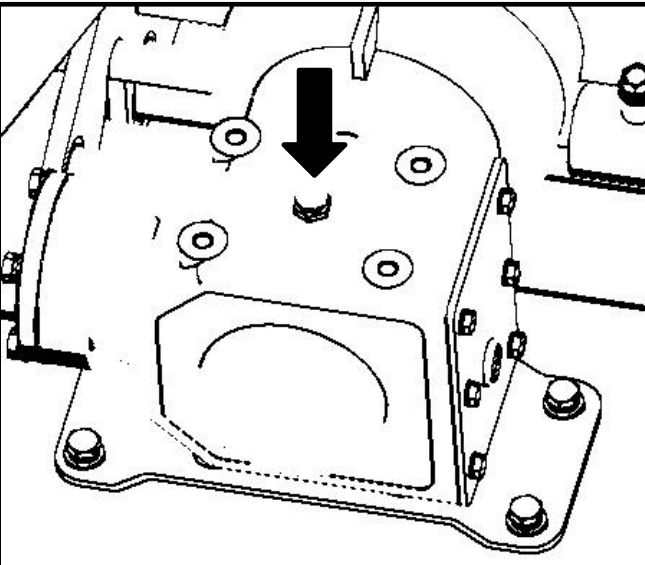
Driveline Profiles

Type of Lubrication: Multi-purpose Grease
Quantity - Clean & coat inner profile tube of driveline with a light film of grease and then reassemble.



Inner Tube Bearings

Type of Lubrication: Multi-purpose Grease
Quantity - As Required



Gearbox Lubrication

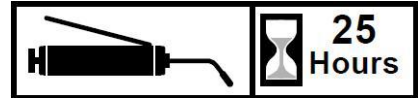
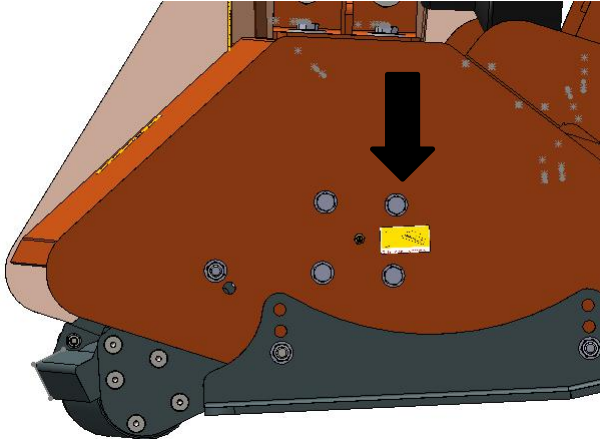
Type of Lubrication: SAE EP 90W Gear Lube

Add visual to the center of the gear oil
Reinstall plugs and tighten.

Do not overfill!

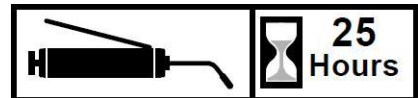
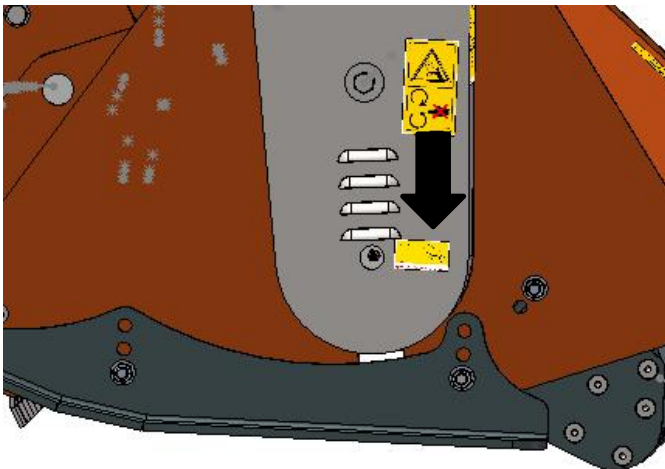
Should your gearbox require service, take it to your MT dealer.

Section 4: Maintenance & Lubrication



The shaft end bearing

Type of Lubrication: Multi-purpose Grease



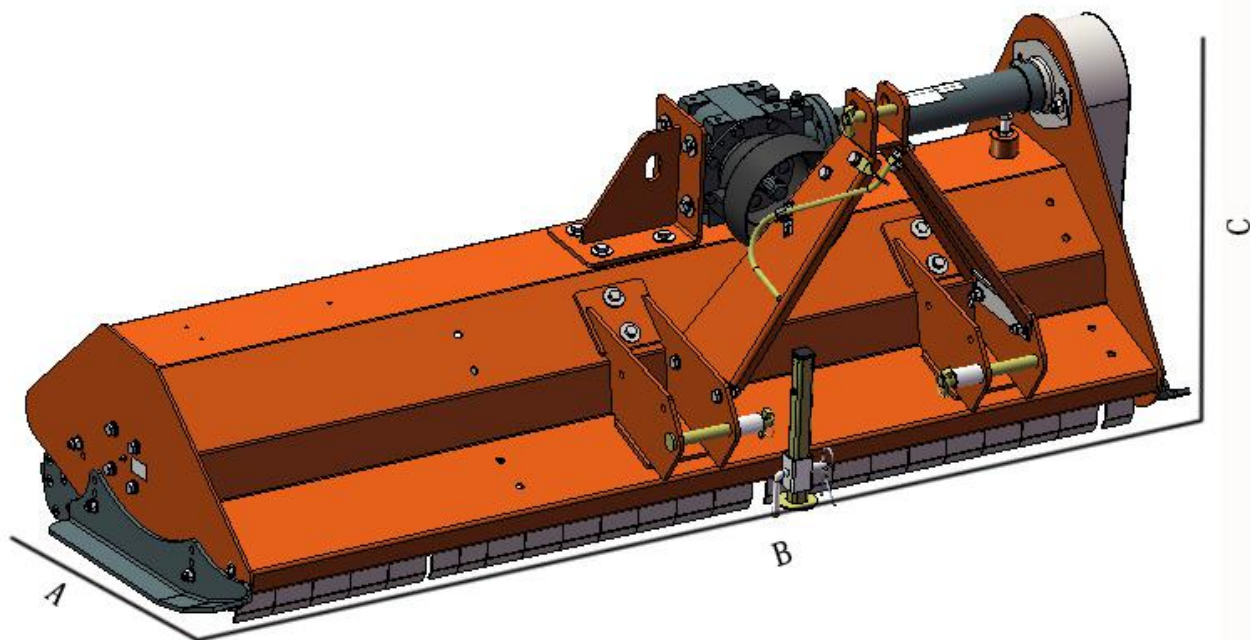
The shaft end bearing













Type of Lubrication: Multi-purpose Grease

Section 5: Features & Benefits

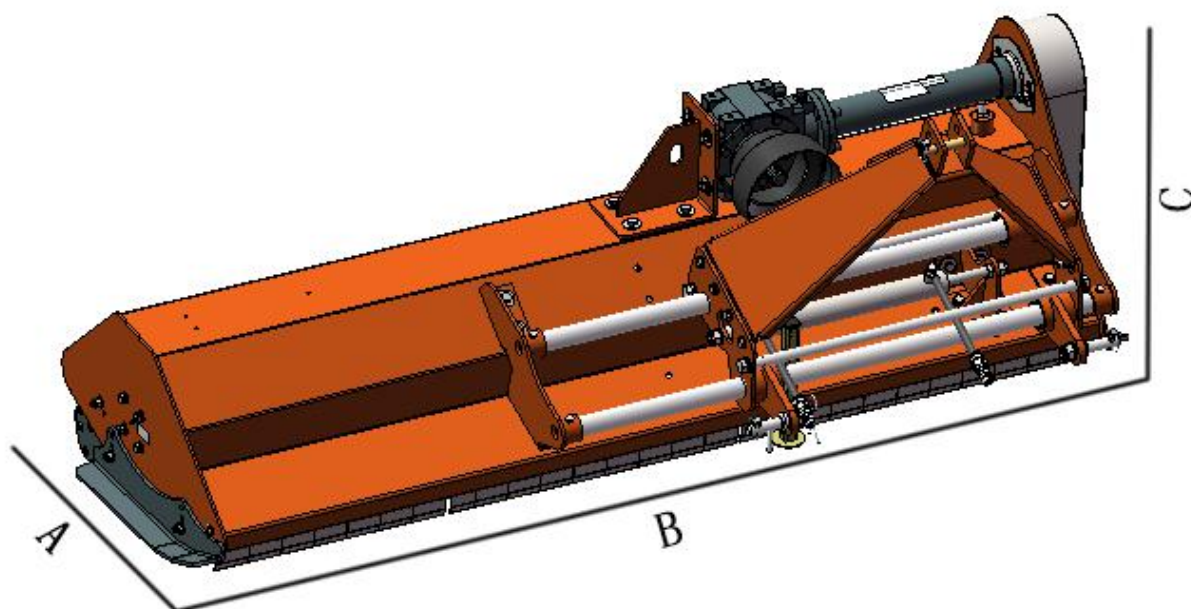
Features	Benefits
Cutting width	100cm-110cm-120cm-130cm-140cm-150cm-160cm-170cm-180cm-190cm, a good cutting width for many applications.
20-50HP Gearbox Rating	Fits a large array of consumer, municipality, and landscape of tractors.
3-Point screw type hitch can be	Easily offset the hitch for a closer cut alongside buildings, fences, roadsides, and for getting
Hydraulic cylinder displacement	Through the hydraulic cylinder convenient swing mower to cut the scope, and effectively avoid obstacles
Two year gearbox warranty	The gearbox is designed tough to withstand the rigors of flail mowing.
540 RPM cast iron gearbox with Reverse running clutch	Enables the rotor to free swing to a stop when the tractor PTO has been turned off.
60mm Cutting height	Variable cutting heights for many uses.Lowest cutting height allows for scalping in grasses such as Bermuda prior to overseeding.
Fine cutting knives	Heavy enough to cut 20mm material, yet fine enough to groom a yard.
Forged hammer knives	Forged hammers are just right for chopping up pruning up to 40mm thick, but will also groom grass in a very acceptable manner.
Reverse rotor rotation	Brings the cut material up and over which allows it to be dispersed more evenly.
High knife tip speed	Knife tip speed of 30.3 m/s for cleaner cut.
2-3 - "SPB" Section belts	"SPB" Section belts have more surface to pulley contact and fits deeper in the groove.
6mm/8mm hood panel thickness	Allows the mowers to handle rough conditions.
Height adjusting roller	Rear height adjusting roller with greaseable bearings and tapered ends to prevent gouging during turns.
Standard scrapers on rear height adjusting roller	Keeps roller clean for consistent cutting height.















Section 6: detailed parameters



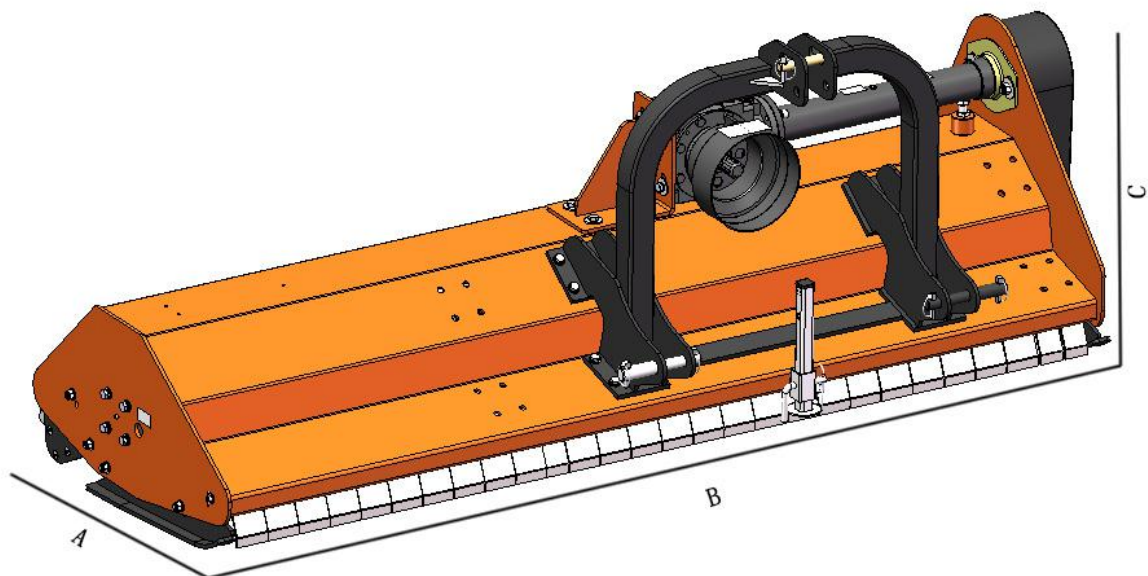
Model	A	B	C													
	cm	cm	cm	cm	RPM	A mm	B cm	V m/s	HP	N	N	PTO	CAT	N	kg	HP
EF105	796	116	820	100	1669	108	347	30.3	50	32	16	540	I II	2	180	20-55
EF115		126		110						40	20					
EF125		136		120						40	20					
EF135		146		130						48	24					
EF145		156		140						48	24					
EF155		166		150						48	24					
EF165		176		160						56	28					
EF175		186		170						56	28					
EF185		196		180						64	32					
EF195		206		190						64	32					

Section 6: detailed parameters



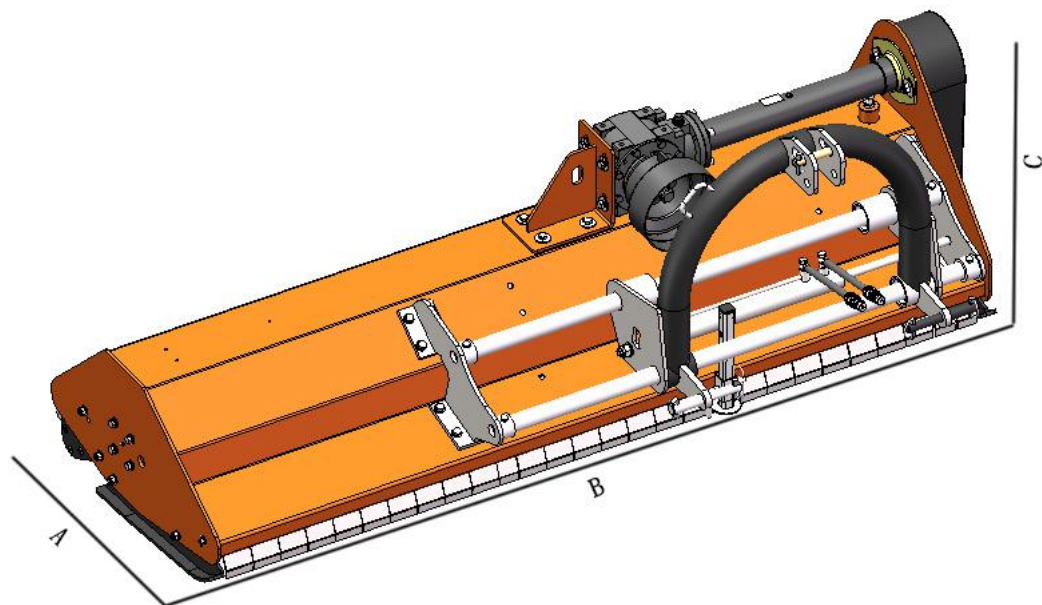
Model	A	B	C							
	cm	cm	cm	cm	cm	cm	cm	CAT	N	
EFH105	1014	118	917	100	57	61	74	44	I II	
EFH115		128		110	57	71	74	54		
EFH125		138		120	57	81	74	64		
EFH135		148		130	57	91	74	74		
EFH145		158		140	57	101	74	84		
EFH155		168		150	57	111	74	94		
EFH165		178		160	57	121	74	104		
EFH175		188		170	57	131	74	114		
EFH185		198		180	57	141	74	124		
EFH195		208		190	57	151	74	134		
Model										
	RPM	A mm	B cm	V m/s	HP	N	N	PTO	kg	HP
EFH105	1669	108	347	30.3	50	32	16	540	198	20-55
EFH115						40	20		218	
EFH125						40	20		238	
EFH135						48	24		258	
EFH145						48	24		278	
EFH155						48	24		298	
EFH165						56	28		318	
EFH175						56	28		338	
EFH185						64	32		358	
EFH195						64	32		378	


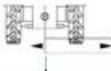
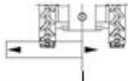










Section 6: detailed parameters



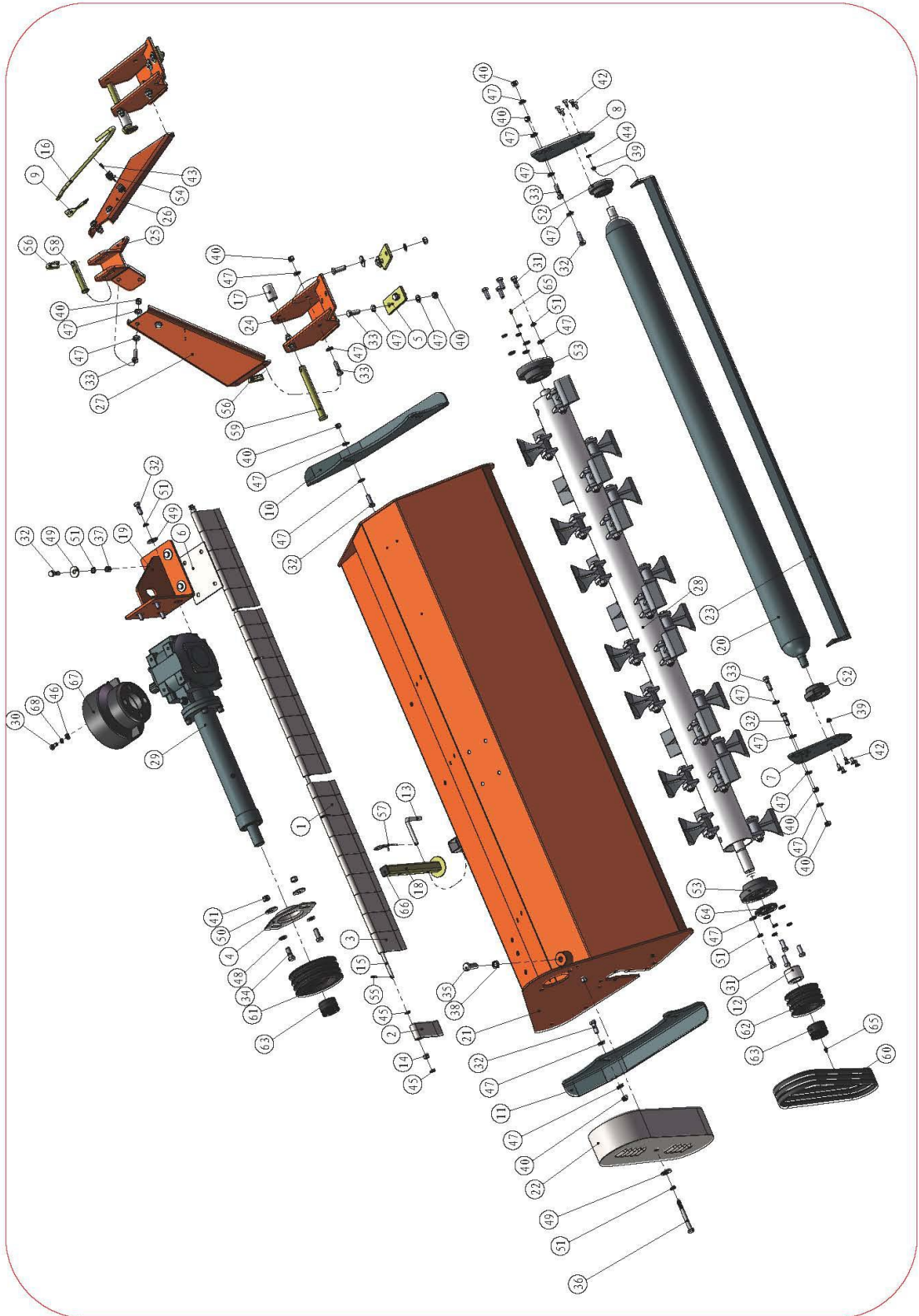
Model	A	B	C												
	cm	cm	cm	cm	RPM	A mm	B cm	V m/s	HP	N	PTO	CAT	N	kg	HP
DP175	829	190	897	170	2295	108	347	41.7	50	28	540	I II	4	334	35-75
DP195		210		190										364	
DP205		220		200										379	
DP225		240		220										409	

Section 6: detailed parameters



Model	A	B	C							
	cm	cm	cm	cm	cm	cm	CAT	N		
DPS175	953	190	877	170	59	131	106	84	I II	4
DPS195		210		190	59	151	106	104		
DPS205		220		200	59	161	106	114		
DPS225		240		220	59	181	106	134		
Model										
	RPM	A mm	B cm	V m/s	HP	N	PTO	kg	HP	
DPS175	2295	108	347	41.7	50	28	540	365	35-75	
DPS195						32		405		
DPS205						36		425		
DPS225						36		465		

Part List1



Page No.1

NO.	E10 code	specification	Name	Qty	Model
1	2000000016	EF175-108A	Notched baffle	1	105Model/115Model/125Model
				2	135Model/145Model/155Model
2	2000000017	EF175-109	baffle	1	105Model/135Model
				3	115Model/145Model/195Model
				2	125Model/155Model/185Model
				4	175Model
3	2000000018	EF175-108	baffle	12	105Model/115Model
				14	125Model
				15	135Model/145Model
				17	155Model/165Model
				18	175Model
				21	185Model
22	195Model				
4	2000000020	EF175-101	connecting plate	1	
5	2000000021	EF175-113	scaleboard	4	
6	2000000027	EF175-118	plate of gearbox seat	1	
7	2000000062	EF175-111	left roller cylinder	1	
8	2000000063	EF175-112	right roller cylinder	1	
9	2000000064	EF175-106	Hook support plate	1	
10	2000000065	EF175-129	chute board	1	
11	2000000066	EF175-130	Pulley cover side board	1	
12	2010000015	EF175-103	bushing	1	
13	2010000017	EF175-116	foot pin	1	
14	2010000018	EF175-117	Baffle partition sleeve	2	
15	2010000035	EF105-110	Baffle shaft	1	105Model
	2010000036	EF115-110		1	115Model
	2010000037	EF125-110		1	125Model
	2010000038	EF135-110		1	135Model
	2010000039	EF145-110		1	145Model
	2010000040	EF155-110		1	155Model
	2010000041	EF165-110		1	165Model
	2010000042	EF175-110		1	175Model
	2010000043	EF185-110		1	185Model
	2010000044	EF195-110		1	195Model
16	2010000046	EF175-115	peg	1	
17	2010000049	EF175-114	pipe sleeve	2	
18	2020000032	EF175-023	Foot weldment	1	
19	2020000033	EF175-024	gearbox Mounting plate	1	
20	2020000106	EF105-012	Drum weldment	1	105Model
	2020000107	EF115-012		1	115Model
	2020000108	EF125-012		1	125Model
	2020000109	EF135-012		1	135Model
	2020000110	EF145-012		1	145Model
	2020000111	EF155-012		1	155Model
	2020000112	EF165-012		1	165Model
	2020000113	EF175-012		1	175Model
	2020000114	EF185-012		1	185Model
	2020000115	EF195-012		1	195Model

Page No.2

NO.	E10 CODE	Specification	name	QTY	Model
21	2020000116	EF105-011-T	support weldment	1	105Model
	2020000117	EF115-011-T		1	115Model
	2020000118	EF125-011-T		1	125Model
	2020000119	EF135-011-T		1	135Model
	2020000120	EF145-011-T		1	145Model
	2020000121	EF155-011-T		1	155Model
	2020000122	EF165-011-T		1	165Model
	2020000123	EF175-011-T		1	175Model
	2020000124	EF185-011-T		1	185Model
	2020000125	EF195-011-T	1	195Model	
22	2020000136	EF175-014	Pulley housing weldment.	1	
23	2020000139	EF105-016	Scraper weldment	1	105Model
	2020000140	EF115-016		1	115Model
	2020000141	EF125-016		1	125Model
	2020000142	EF135-016		1	135Model
	2020000143	EF145-016		1	145Model
	2020000144	EF155-016		1	155Model
	2020000145	EF165-016		1	165Model
	2020000146	EF175-016		1	175Model
	2020000147	EF185-016		1	185Model
	2020000148	EF195-016	1	195Model	
24	2020000149	EF175-017	connection plate weldment	2	
25	2020000150	EF175-020	Boom weldment	1	
26	2020000152	EF175-021	Left joint arm weldment	1	
27	2020000153	EF175-022	Right joint arm weldment	1	
28	2090000062		common blades shaft +hammer blade	1	105Model
	2090000065			1	115Model
	2090000068			1	125Model
	2090000071			1	135Model
	2090000074			1	145Model
	2090000077			1	155Model
	2090000080			1	165Model
	2090000083			1	175Model
	2090000086			1	185Model
	2090000089		1	195Model	
29	2090000093		EF transmission assembly	1	105Model
	2090000094		EF transmission assembly	1	135Model
30	3040100041	GB/T 5783-2000	Hexagon-head bolt M10*20	2	
31	3040100067	GB/T 5783-2000	Hexagon-head bolt M12×30	8	
32	3040100069	GB/T 5783-2000	Hexagon-head bolt M12×35	12	
33	3040100071	GB/T 5783-2000	Hexagon-head bolt M12×40	18	
34	3040100091	GB/T 5783-2000	Hexagon-head bolt (M14)×35 (8. 8级)	2	
35	3040200034	GB/T 5786-2000	Hexagon headboltM16×1.5x45	1	
36	3040300035	GB/T 5782-2000	hexagonal bolt M12×110	1	
37	3050100007	GB/T 41-2000	hex nutM12	4	

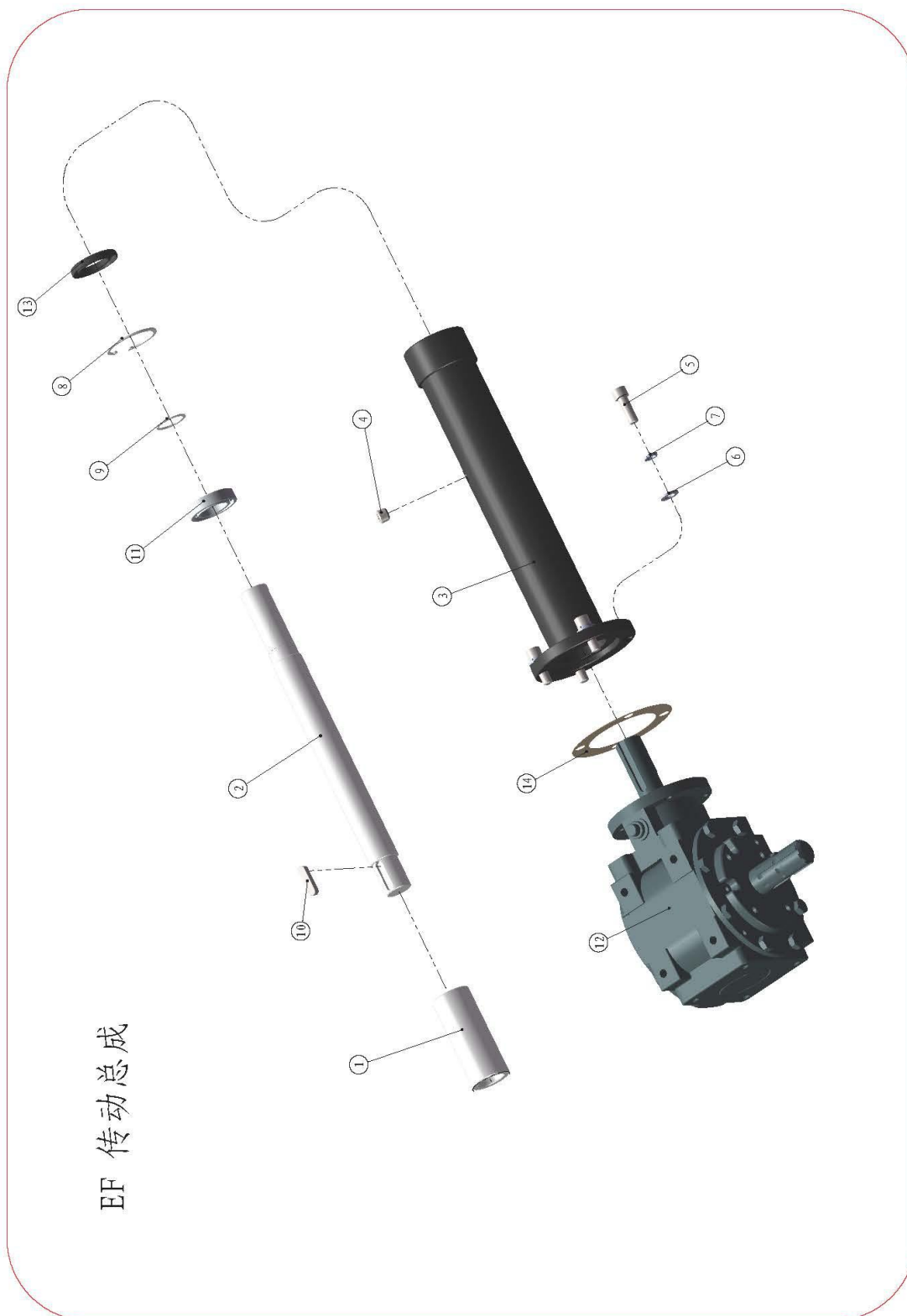
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NO.	E10 code	specifications	Name	Qty	Model
38	3050400006	GB/T 6173-2000	hexagonal thin-nut fine tooth M16x1.5	1	
39	3050500003	GB/T 889.1-2000	lock nut M8	2	
40	3050500007	GB/T 889.1-2000	lock nut M12	22	
41	3050500008	GB/T 889.1-2000	lock nut M14	2	
42	3060200018	GB/T 70.3-2000	Inner hexagonal head screw M8×20	10	
43	3070100003	GBT12618.2-2006	Open type flat round head core-pulling rivets4×15	4	
44	3080100004	GB/T 95-2002	plain washer 8×1.6	2	
45	3080100005	GB/T 95-2002	plain washer 10×1	20	105Model
				21	115Model
				23	125Model
				24	135Model
				25	145Model
				26	155Model
				27	165Model
				29	175Model
				30	185Model
			32	195Model	
46	3080100006	GB/T 95-2002	plain washer 10×2	2	
47	3080100007	GB/T 95-2002	plain washer 12×2.5	48	
48	3080100008	GB/T 95-2002	plain washer 14×2.5	2	
49	3080200010	GB/T 96.2-2002	large washer 12×3	13	
50	3080200011	GB/T 96.2-2002	large washer 14×3	2	
51	3080500009	GB/T 93-1987	Elastic pad 12	17	
52	3100700006	UCC205-B	Bearing seatUCC205-B-Reverse loading	2	
53	3100700008	UCC207	Bearing seatUCC207	2	
54	3119900002	EF175-124	elastic card	2	
55	3120100075	GB/T 91-2000	splitpin3.2×25	2	
56	3120400007	11*45	Lock pin-colored zinc	3	
57	3120400008	3.5	R pin-colored zinc	1	
58	3120500009	EF175-119	upper suspension pin	1	
59	3120500010	EF175-120	lower suspension pin	2	
60	3160300016		belt	2	105Model 115Model 125Model 135Model 145Model
				3	155Model 165Model 175Model 185Model 195Model
61	3160400033	EF175-125 A	large belt pulley 2	1	105Model 115Model 125Model 135Model 145Model
	3160400034	EF175-125	large belt pulley 3	1	155Model 165Model 175Model 185Model 195Model

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NO.	E10 code	specifications	Name	Qty	Model
62	3160400035	EF175-126 A	Two grooves of small pulley	1	105Model 115Model 125Model 135Model 145Model
	3160400036	EF175-126	Three grooves of small pulley	1	155Model 165Model 175Model 185Model 195Model
63	3160500001	Z3A-35-60	rising sleeve 35x60	2	
64	3170100046	GB/T 13871.1-2007	TC seal 55x80x8	1	
65	3170400003	JB/T 7940.1-1995	Straight through pressure filling cupM8X1	2	
66	3210200006	EF175-121	Square pipe plug	1	
67	3210300014	EF175-127	dust guard	1	
68	3080500008	GB/T 93-1987	Elastic pad 10	2	

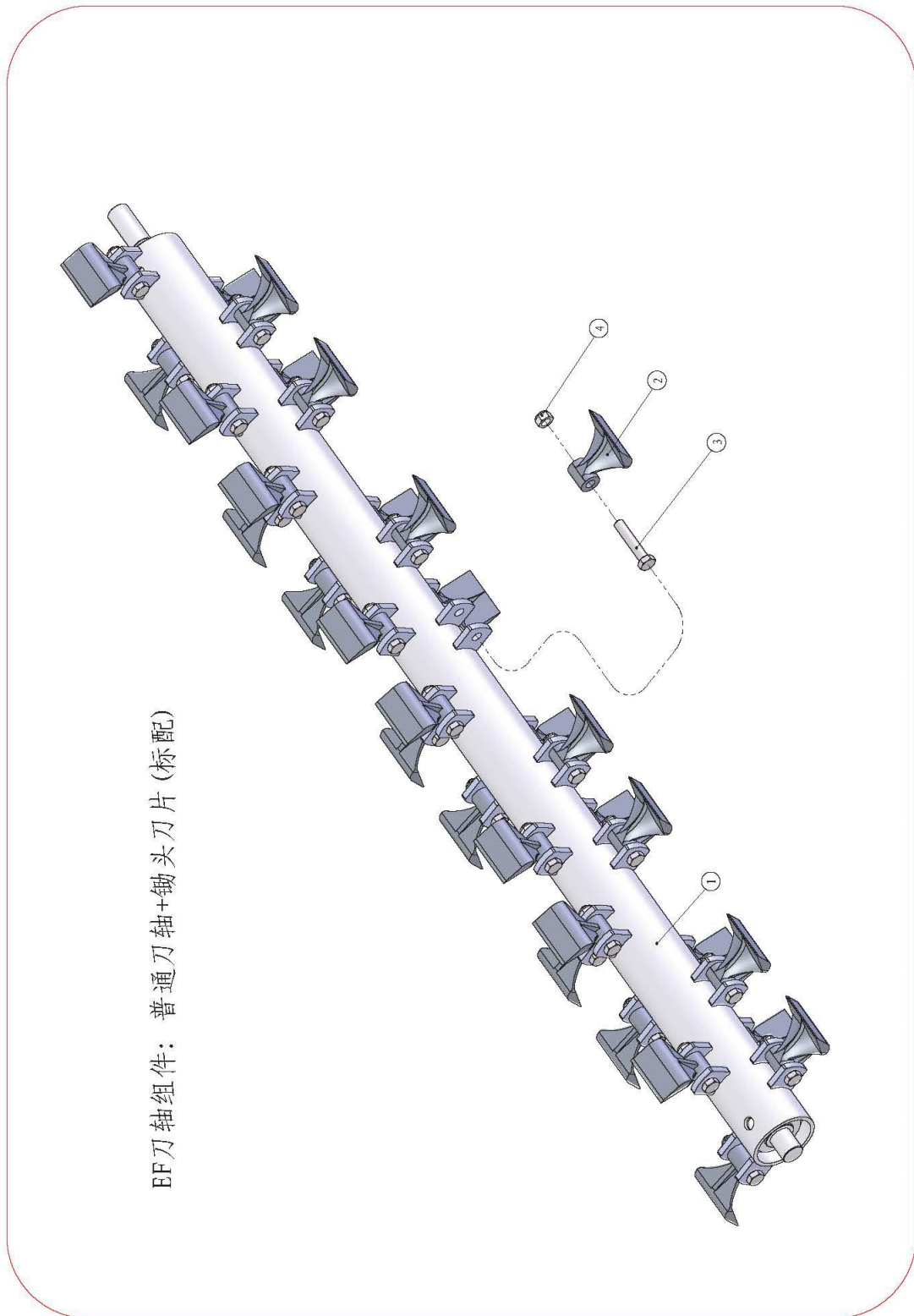
Part List 2



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NO.	E10 code	specifications	Name	Qty	Model
1	2010000016	EF175-105	axle sleeve	1	
2	2010000048	EF125-104-T	connecting shaft	1	105model 115model 125model
	2010000047	EF175-104-T	connecting shaft	1	135model 145model 155model 165model 175model 185model 195model
3	2020000138	EF125-015	shift pipe sleeve weldment	1	105model 115model 125model
	2020000137	EF175-015	shift pipe sleeve weldment	1	135model 145model 155model 165model 175model 185model 195model
4	3040600001	JBZQ4446-1997	Hexagonal plug in conical pipe thread R3 / 8×12	2	
5	3060100056	GB/T 70.1-2000	Hexagon socket head screw M12×35	4	
6	3080100007	GB/T 95-2002	plain washer 12×2.5	4	
7	3080500009	GB/T 93-1987	elastic pad 12	4	
8	3080600038	GB 893.1-86	circlip for hole A型62	1	
9	3080700023	GB 894.1-86	circlip for shaft A型35	1	
10	3090100009	GB / T1096-2003	flat key A型10×40	1	
11	3100100021	GB/T 276-94	bearing 6007	1	
12	3160100014	XH50.300Z.02W	EF-50HP JCTT gearbox-black	1	
13	3170100010	GB/T 13871.1-2007	TC seal 35x62x8	1	
14	3170500001	90x135x0.5	Transmission shaft tube paper pad	1	

Part List 3

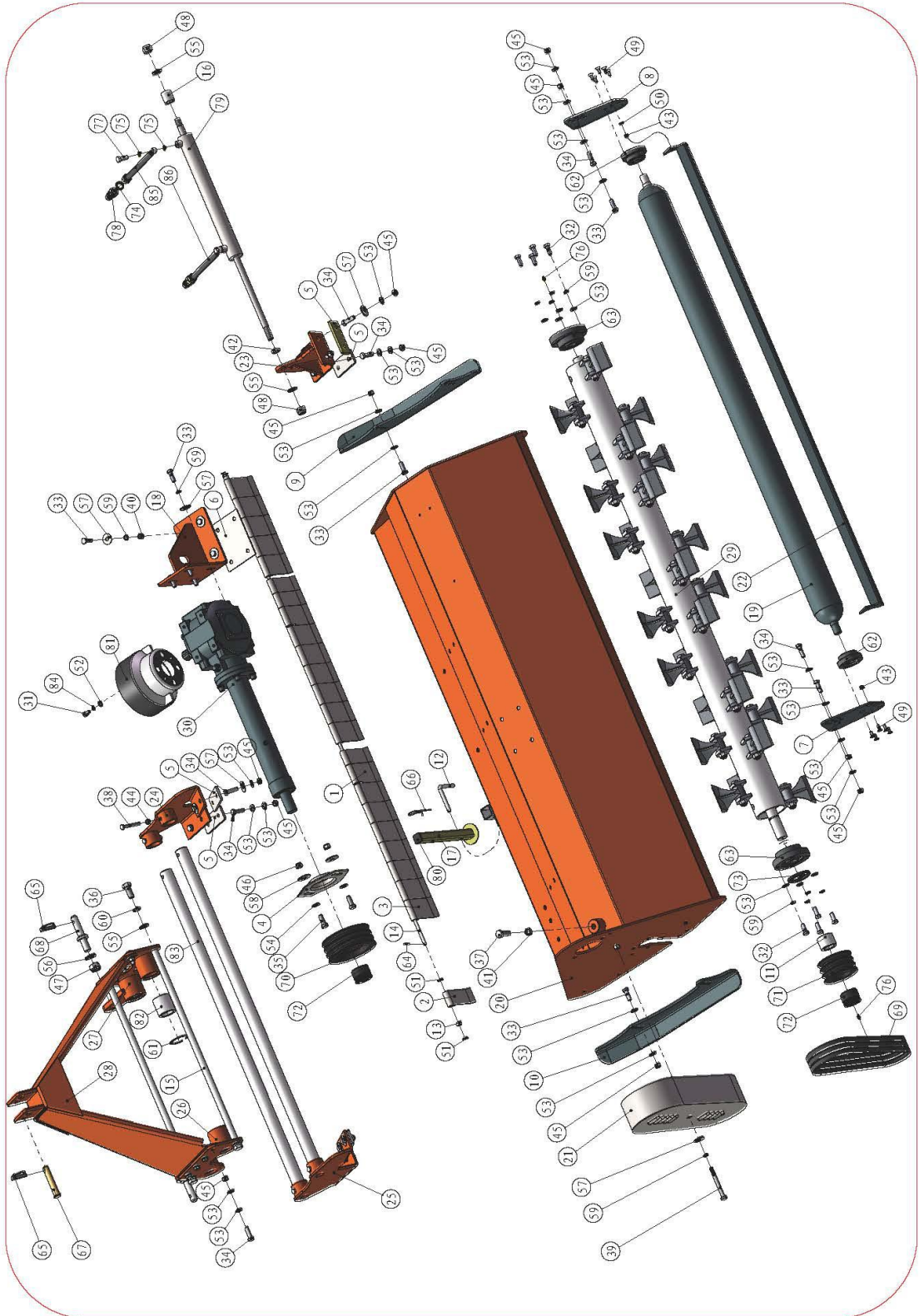


EF刀轴组件：普通刀轴+锄头刀片（标配）

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N0.	E10 code	specifications	Name	Qty	Model
1	2020000126	EF105-013	blade shaft weldment	1	105model
	2020000127	EF115-013			115model
	2020000128	EF125-013			125model
	2020000129	EF135-013			135model
	2020000130	EF145-013			145model
	2020000131	EF155-013			155model
	2020000132	EF165-013			165model
	2020000133	EF175-013			175model
	2020000134	EF185-013			185model
	2020000135	EF195-013			195model
2	3220100025	EFB175-139	hammer blade	16	105model
				20	115model
				20	125model
				24	135model
				24	145model
				24	155model
				28	165model
				28	175model
				32	185model
				32	195model
3	3040300058	GB/T 5782-2000	Half thread hexagon bolt M16×80	16	105model
				20	115model
				20	125model
				24	135model
				24	145model
				24	155model
				28	165model
				28	175model
				32	185model
				32	195model
4	3050500009	GB/T 889.1-2000	lock nut M16	16	105model
				20	115model
				20	125model
				24	135model
				24	145model
				24	155model
				28	165model
				28	175model
				32	185model
				32	195model

Part List4



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NO.	E10 code	specifications	Name	Qty	Model
1	2000000016	EF175-108A	Notched baffle	1	105model 115model 125model
				2	135model 145model 155model 165model 175model 185model 195model
2	2000000017	EF175-109	baffle	1	105model 135model
				3	115model 145model 195model
				2	125model 155model 185model
				4	175model
3	2000000018	EF175-108	baffle	12	105model 115model
				14	125model
				15	135model 145model
				17	155model 165model
				18	175model
				21	185model 195model
4	2000000020	EF175-101	connecting plate	1	
5	2000000021	EF175-113	cleading	7	
6	2000000027	EF175-118	Lower mounting plate of gearbox seat	1	
7	2000000062	EF175-111	Drum left connecting plate	1	
8	2000000063	EF175-112	Drum right connecting plate	1	
9	2000000065	EF175-129	chute board	1	
10	2000000066	EF175-130	Pulley cover side board	1	
11	2010000015	EF175-103	bushing	1	
12	2010000017	EF175-116	foot pin	1	
13	2010000018	EF175-117	Baffle partition sleeve	2	
14	2010000035	EF105-110	Baffle shaft	1	105model
	2010000036	EF115-110		1	115model
	2010000037	EF125-110		1	125model
	2010000038	EF135-110		1	135model
	2010000039	EF145-110		1	145model
	2010000040	EF155-110		1	155model
	2010000041	EF165-110		1	165model
	2010000042	EF175-110		1	175model
2010000043	EF185-110	1	185model		
2010000044	EF195-110	1	195model		
15	2010000054	EFH175-102	stay tube	2	
16	2010000055	EFH175-101	cylinder spacer	1	
17	2020000032	EF175-023	foot-supporting weldment	1	
18	2020000033	EF175-024	Gearbox mounting plate weldment	1	
19	2020000106	EF105-012	Drum weldment	1	105model
	2020000107	EF115-012		1	115model
	2020000108	EF125-012		1	125model
	2020000109	EF135-012		1	135model
	2020000110	EF145-012		1	145model
	2020000111	EF155-012		1	155model
	2020000112	EF165-012		1	165model
	2020000113	EF175-012		1	175model
	2020000114	EF185-012		1	185model
2020000115	EF195-012	1	195model		

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NO.	E10 code	specifications	Name	Qty	Model
20	2020000116	EF105-011-T	Support weldment	1	105model
	2020000117	EF115-011-T		1	115model
	2020000118	EF125-011-T		1	125model
	2020000119	EF135-011-T		1	135model
	2020000120	EF145-011-T		1	145model
	2020000121	EF155-011-T		1	155model
	2020000122	EF165-011-T		1	165model
	2020000123	EF175-011-T		1	175model
	2020000124	EF185-011-T		1	185model
2020000125	EF195-011-T	1	195model		
21	2020000136	EF175-014	pulley cover weldment	1	
22	2020000139	EF105-016	scraper weldment	1	105model
	2020000140	EF115-016		1	115model
	2020000141	EF125-016		1	125model
	2020000142	EF135-016		1	135model
	2020000143	EF145-016		1	145model
	2020000144	EF155-016		1	155model
	2020000145	EF165-016		1	165model
	2020000146	EF175-016		1	175model
	2020000147	EF185-016		1	185model
2020000148	EF195-016	1	195model		
23	2020000187	EFH175-011	Cylinder seat weldment	1	
24	2020000188	EFH175-012	Left connecting frame weldment	1	
25	2020000189	EFH175-013	Right connecting frame weldment	1	
26	2020000190	EFH175-014	Right slipper hanging plate weldment	1	
27	2020000191	EFH175-015	left slipper hanging plate weldment	1	
28	2020000192	EFH175-016	hitch weldment	1	
29	2090000062		common blade shaft + hammer blades	1	105model
	2090000065			1	115model
	2090000068			1	125model
	2090000071			1	135model
	2090000074			1	145model
	2090000077			1	155model
	2090000080			1	165model
	2090000083			1	175model
	2090000086			1	185model
2090000089		1	195model		
30	2090000093		EF drive assembly 1	1	105model 115model 125model
	2090000094		EF drive assembly 2	1	135model 145model 155model 165model 175model 185model 195model
31	3040100041	GB/T 5783-2000	full thread hexagon head bolt M10×20	2	
32	3040100067	GB/T 5783-2000	full thread hexagon head bolt M12×30	8	
33	3040100069	GB/T 5783-2000	full thread hexagon head bolt M12×35	12	
34	3040100071	GB/T 5783-2000	full thread hexagon head bolt M12×40	24	
35	3040100091	GB/T 5783-2000	full thread hexagon head bolt (M14)×35 (8. 8级)	2	
36	3040100129	GB/T 5783-2000	full thread hexagon head bolt (M18)×40	4	
37	3040200034	GB/T 5786-2000	Hexagonal head bolt fine tooth full thread M16×1.5x45	1	
38	3040300010	GB/T 5782-2000	Half thread hexagonal boltM10×70	4	
39	3040300035	GB/T 5782-2000	Half thread hexagonal boltM12×110	1	
40	3050100007	GB/T 41-2000	hexagon nut M12	4	

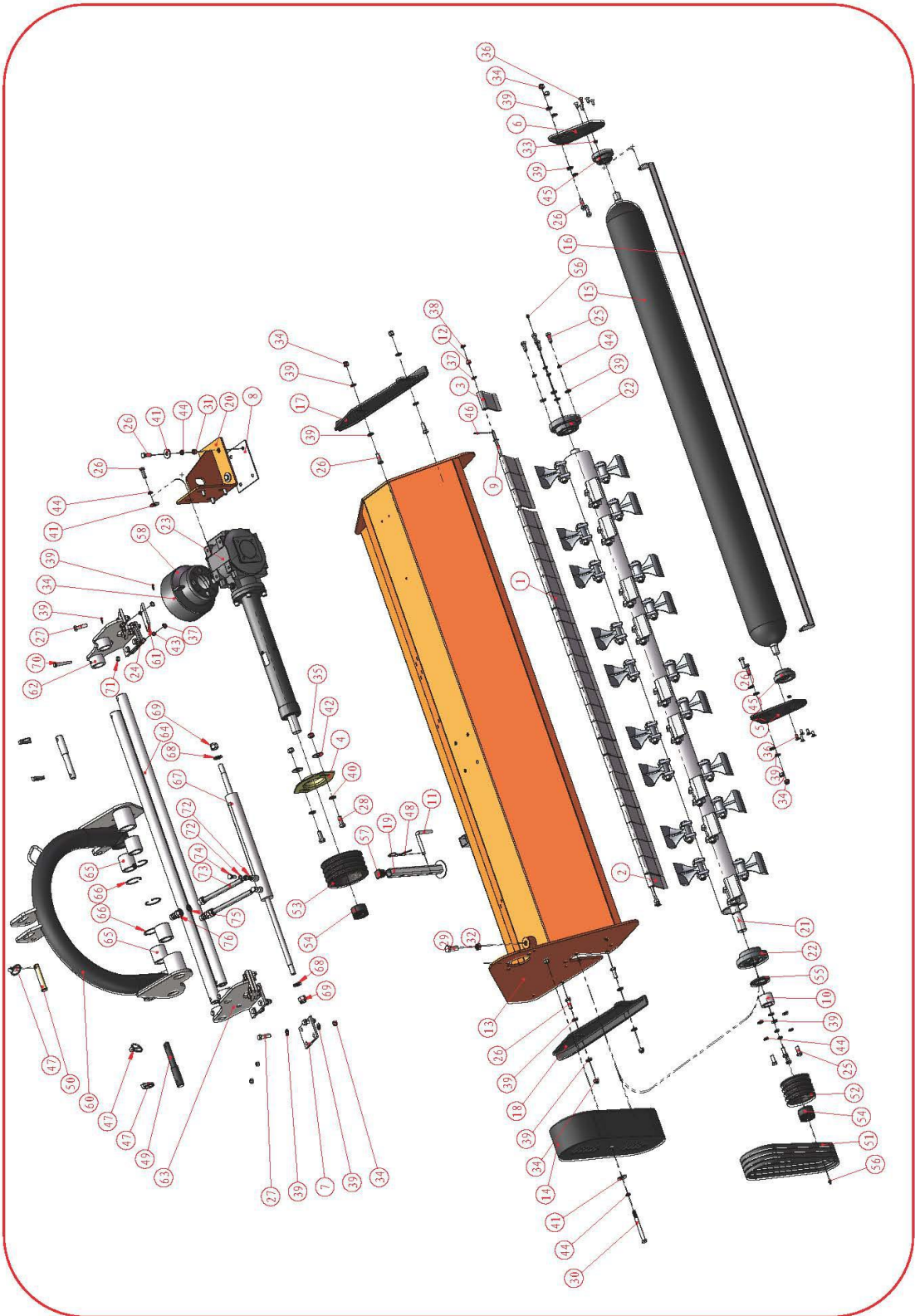
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NO.	E10 code	specifications	Name	Qty	Model
41	3050400006	GB/T 6173-2000	fine-toothed hexagon thin nut M16x1.5	1	
42	3050400007	GB/T 6173-2000	fine-toothed hexagon thin nut (M18)x1.5	1	
43	3050500003	GB/T 889.1-2000	lock nutM8	2	
44	3050500004	GB/T 889.1-2000	lock nutM10	4	
45	3050500007	GB/T 889.1-2000	lock nutM12	28	
46	3050500008	GB/T 889.1-2000	lock nutM14	2	
47	3050500012	GB/T 889.1-2000	lock nutM22	2	
48	3050600008	GB/T 889.2-2000	fine-toothed lock nutM18*1.5	2	
49	3060200018	GB/T 70.3-2000	inner hexagon screw M8×20	10	
50	3080100004	GB/T 95-2002	plain washer 8×1.6	2	
51	3080100005	GB/T 95-2002	plain washer 10×1	20	105model
				21	115model
				23	125model
				24	135model
				25	145model
				26	155model
				27	165model
				29	175model
				30	185model
32	195model				
52	3080100006	GB/T 95-2002	plain washer 10×2	2	
53	3080100007	GB/T 95-2002	plain washer 12×2.5	58	
54	3080100008	GB/T 95-2002	plain washer 14×2.5	2	
55	3080100010	GB/T 95-2002	plain washer 18×3	6	
56	3080100012	GB/T 95-2002	plain washer 22×3	2	
57	3080200010	GB/T 96.2-2002	large washer 12×3	15	
58	3080200011	GB/T 96.2-2002	large washer 14×3	2	
59	3080500009	GB/T 93-1987	elastic pad 12	17	
60	3080500012	GB/T 93-1987	elastic pad 18	4	
61	3080600037	GB 893.1-86	circlip for hole A型60	4	
62	3100700006	UCC205-B	bearing seat UCC205-B-反装带油嘴	2	
63	3100700008	UCC207	bearing seat UCC207	2	
64	3120100075	GB/T 91-2000	open type pin3.2×25	2	
65	3120400007	11*45	lock pin -colored zinc	3	
66	3120400008	3.5	R pin-colored zinc	1	
67	3120500009	EF175-119	Upper suspension pin	1	
68	3120500011	EFH175-105	lower suspension pin	2	
69	3160300016	BX-1016	belt	2	105model
					115model
					125model
				3	135model
					145model
					155model
70	3160400033	EF175-125 A	large pulley	1	115model
					125model
					135model
					145model
					155model
70	3160400034	EF175-125	large pulley	1	165model
					175model
					185model
					195model

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NO.	E10 code	specifications	Name	Qty	Model
71	3160400035	EF175-126 A	small pulley2	1	105model 115model 125model 135model 145model
	3160400036	EF175-126	small pulley3	1	155model 165model 175model 185model 195model
72	3160500001	Z3A-35-60	rising sleeve 35x60	2	
73	3170100046	GB/T 13871.1-2007	TC seal 55x80x8	1	
74	3170300006	BS/A21.50(G1/2)	Combined washer (automatic centering)	2	
75	3170300010	M12	Combined washer	4	
76	3170400003	JB/T 7940.1-1995	Straight-through type pressure oil filling cup M8X1	2	
77	3180300006	M12X1.25X32	bolt	2	
78	3180500001	G1 / 2	Quick change connector(convex)	2	
79	3181300028	EFH175-017	sliding cylinder	1	
80	3210200006	EF175-121	squre plug	1	
81	3210300014	EF175-123	dust guard	1	
82	3210500006	EFH175-103	nylon sleeve	4	
83	3230100013	EFH125-104	guideway L=1018	2	105model 115model 125model
	3230100014	EFH175-104	guideway L=1218	2	135model 145model 155model 165model 175model
	3230100004	EFH195-104	guideway L=1218镀铬	2	185model 195model
84	3080500008	GB/T 93-1987	elastic pad 10	2	
85	3180200251	BCS170-016	tube L1500	1	
86	3180200252	BCS170-016	tube L1900	1	

Part List5



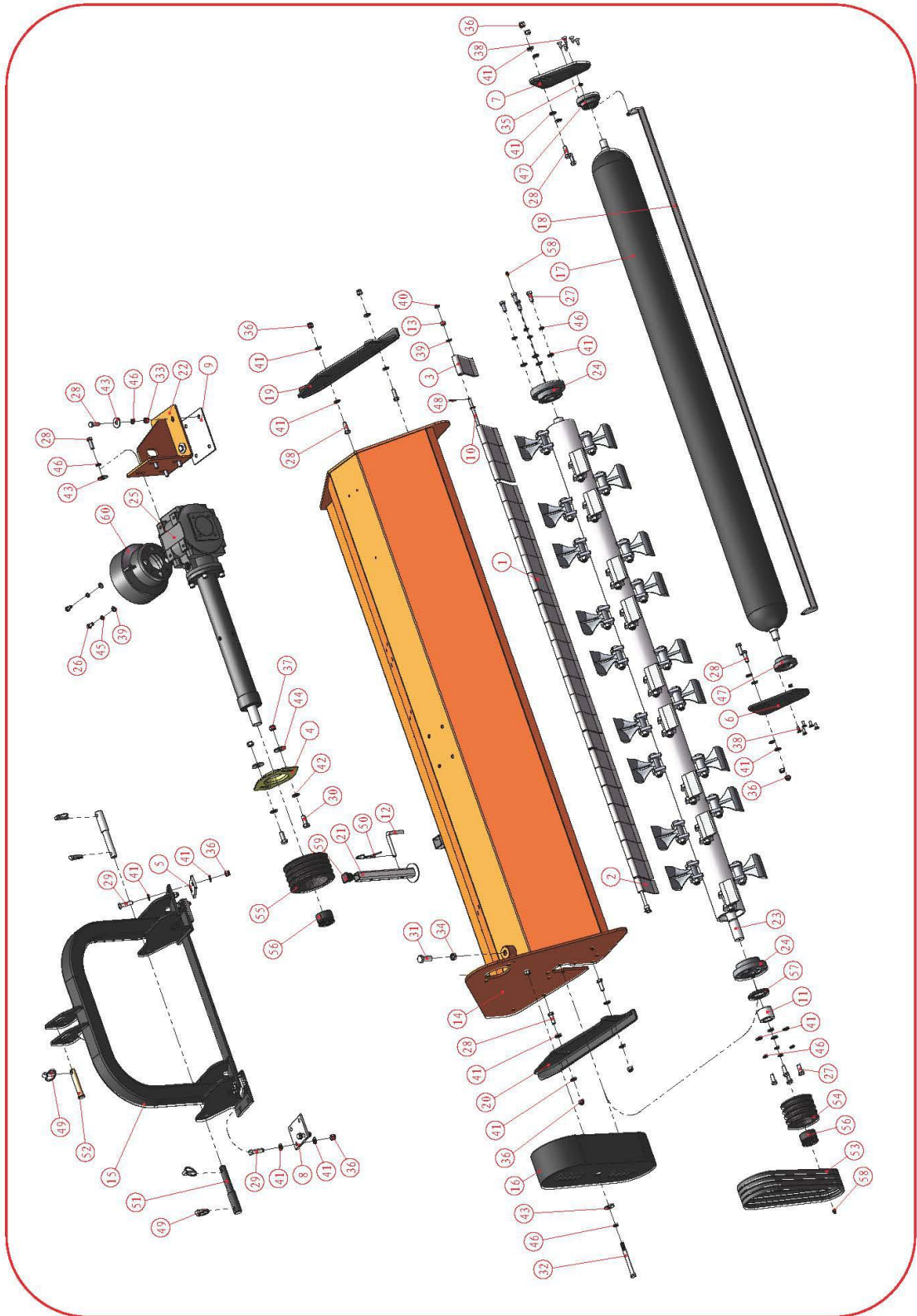
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NO.	E10 code	specifications	Name	Qty	Model
1	2000000016	EF175-108A	notched baffle	2	
2	2000000017	EF175-109	baffle	3	
3	2000000018	EF175-108	baffle	23	
2	2000000017	EF175-109	baffle	3	175model 205model 225model
				4	195model
3	2000000018	EF175-108	baffle	19	175model
				21	195model
				23	205model
				26	225model
4	2000000020	EF175-101	connecting plate	1	
5	2000000024	DP205-101	drum left connecting plate	1	
6	2000000025	DP205-105	drum right connecting plate	1	
7	2000000026	DPS205-108	lining plate2	2	
8	2000000027	EF175-118	Lower mounting plate of gearbox seat	1	
9	2010000010	DP175-106	baffle shaft	1	175model
	2010000011	DP195-106		1	195model
	2010000012	DP205-106		1	205model
	2010000013	DP225-106		1	225model
10	2010000015	EF175-103	liner bushing	1	
11	2010000017	EF175-116	foot pin	1	
12	2010000018	EF175-117	Baffle partition sleeve	2	
13	2020000015	DP175-011-T	hood cover weldment	1	175model
	2020000016	DP195-011-T		1	195model
	2020000017	DP205-011-T		1	205model
	2020000018	DP225-011-T		1	225model
14	2020000020	DP205-014	pulley cover weldment	1	
15	2020000021	DP175-015	Drum weldment	1	175model
	2020000022	DP195-015		1	195model
	2020000023	DP205-015		1	205model
	2020000024	DP225-015		1	225model
16	2020000025	DP175-016	scraper weldment	1	175model
	2020000026	DP195-016		1	195model
	2020000027	DP205-016		1	205model
	2020000028	DP225-016		1	225model
17	2020000030	EF175-018	Left sliding rail welment	1	
18	2020000031	EF175-019	Left sliding rail welment	1	
19	2020000032	EF175-023	support weldment	1	
20	2020000033	EF175-024	Gearbox mounting plate weldment	1	
21	2090000019		DP175 common blade shaft+hammer blades	1	175model
	2090000022		DP195common blade shaft+hammer blades	1	195model
	2090000025		DP205common blade shaft+hammer blades	1	205model
	2090000028		DP225common blade shaft+hammer blades	1	225model
22	3100700008	UCC207	bearing seatUCC207	2	
23	2090000154		DP transmission assembly	1	
24	3040100041	GB/T 5783-2000	Hexagon bolt full-thread M10×20	2	
25	3040100067	GB/T 5783-2000	Hexagon bolt full-threadM12×30	8	
26	3040100069	GB/T 5783-2000	Hexagon bolt full-threadM12×35	16	
27	3040100072	GB/T 5783-2000	Hexagon bolt full-threadM12×45	16	
28	3040100091	GB/T 5783-2000	Hexagon bolt full-thread(M14)×35(8. 8级)	2	
29	3040200034	GB/T 5786-2000	Hexagon bolt full-thread fine-toothed M16×1.5x45	1	
30	3040300037	GB/T 5782-2000	half-thread hexagon bolM12×130	1	
31	3050100007	GB/T 41-2000	hexagon nut M12	4	
32	3050400006	GB/T 6173-2000	hexagonal thin-nut fine tooth M16x1.5	1	

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NO.	E10 code	specifications	Name	Qty	Model
33	3050500003	GB/T 889.1-2000	lock nutM8	3	
34	3050500007	GB/T 889.1-2000	lock nutM12	24	
35	3050500008	GB/T 889.1-2000	lock nutM14	2	
36	3060200018	GB/T 70.3-2000	inner hexagon screw M8×20	10	
37	3080100005	GB/T 95-2002	plain washer 10×1	26	175model
	3080100005	GB/T 95-2002	plain washer 10×1	29	195model
	3080100005	GB/T 95-2002	plain washer 10×1	30	205model
	3080100005	GB/T 95-2002	plain washer 10×1	33	205model
38	3080100006	GB/T 95-2002	plain washer 10×2	3	
39	3080100007	GB/T 95-2002	plain washer 12×2.5	56	
40	3080100008	GB/T 95-2002	plain washer 14×2.5	2	
41	3080200010	GB/T 96.2-2002	large washer 12×3	9	
42	3080200011	GB/T 96.2-2002	large washer 14×3	2	
43	3080500008	GB/T 93-1987	elastic washer10	2	
44	3080500009	GB/T 93-1987	elastic washer12	17	
45	3100700006	UCC205-B	bearing seat UCC205-B-反装带油嘴	2	
46	3120100075	GB/T 91-2000	open type pin 3.2×25	2	
47	3120400007	11*45	lock pin-colored zinc	5	
48	3120400008	3.5	R pin -colored zinc	1	
49	3120500008	DP205.110	lower suspension pin	2	
50	3120500009	EF175-119	upper suspension pin	1	
51	3160300016	BX-1016	belt	4	
52	3160400031	DP205-103	small pulley	1	
53	3160400032	DP205-104	large pulley	1	
54	3160500001	Z3A-35-60	rising sleeve 35x60	2	
55	3170100046	GB/T 13871.1-2007	TC seal 55x80x8	1	
56	3170400003	JB/T 7940.1-1995	Straight-through type pressure oil filling cup M8X1	2	
57	3210200006	EF175-121	square plug	1	
58	3210300014	EF175-127	dust guard	1	
59	3250100136	YB001	51.5*27.5 label	2	
60	2020000034	DPS205-012	hitch weldment	1	
61	2000000022	DPS205-107	cleading 1	2	
62	2020000035	DPS205-017	guideway left support seat weldment	1	
63	2020000036	DPS205-018	guideway right support seat weldment	1	
64	3230100002	DPS205-101	guideway tube	2	
65	3210500006	EFH175-103	nylon sleeve	4	
66	3080600037	GB 893.1-86	circlip for hole A型60	4	
67	3181300027	DP205-102	hydrolic-cylinder	1	
68	3080100010	GB/T 95-2002	plain washer 18×3	2	
69	3050500010	GB/T 889.1-2000	lock nutM8	2	
70	3040300010	GB/T 5782-2000	half-thread hexagon boltM10×70	4	
71	3050500004	GB/T 889.1-2000	lock nutM10	4	
72	3170300010	M12	combined washer	4	
73	3180200252	BCS170-016	oil pipeL1900	2	
74	3180300006	M12X1.25X32	bolt	2	
75	3170300006	BS/A21.50(G1/2)	Combined washer	2	
76	3180500001	G1 / 2	quick change connector(convex)	2	

Part List6



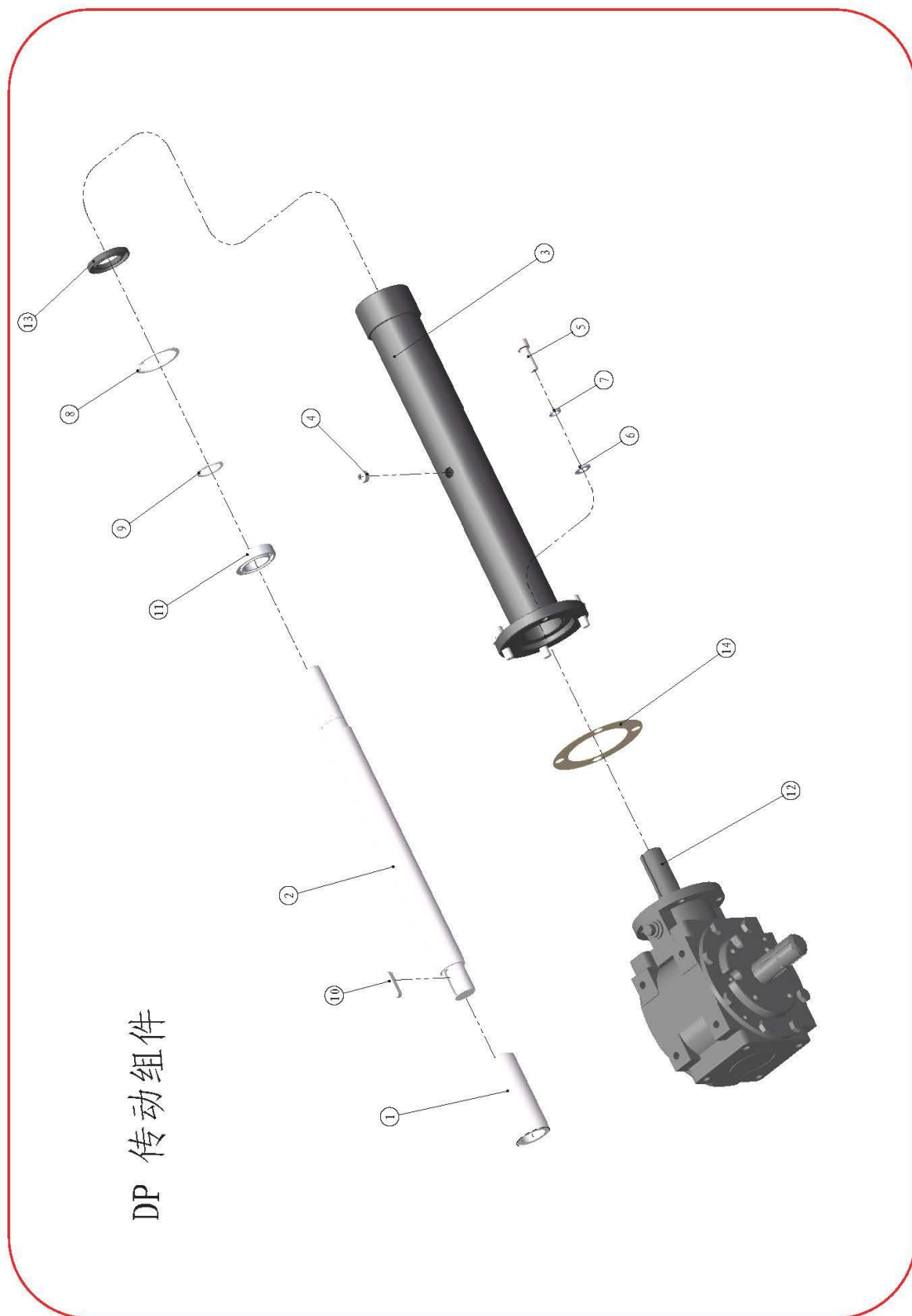
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NO.	E10 code	specifications	Name	Qty	Model
1	2000000016	EF175-108A	notched baffle	2	
2	2000000017	EF175-109	baffle	3	
				4	
3	2000000018	EF175-108	baffle	19	175model 205model 225model
				21	195model
				23	175model
				26	195model
4	2000000020	EF175-101	connecting plate	1	205model
5	2000000021	EF175-113	cleading	2	225model
6	2000000024	DP205-101	drum left connecting plate	1	
7	2000000025	DP205-105	drum right connecting plate	1	
8	2000000026	DPS205-108	lining plate2	2	
9	2000000027	EF175-118	Lower mounting plate of gearbox seat	1	
10	2010000010	DP175-106	baffle shaft	1	
	2010000011	DP195-106		1	175model
	2010000012	DP205-106		1	195model
	2010000013	DP225-106		1	205model
11	2010000015	EF175-103	liner bushing	1	225model
12	2010000017	EF175-116	foot pin	1	
13	2010000018	EF175-117	Baffle partition sleeve	2	
14	2020000015	DP175-011-T	hood cover weldment	1	
	2020000016	DP195-011-T		1	175model
	2020000017	DP205-011-T		1	195model
	2020000018	DP225-011-T		1	205model
15	2020000019	DP205-012	hitch weldment	1	225model
16	2020000020	DP205-014	pulley cover weldment	1	
17	2020000021	DP175-015	Drum weldment	1	175model
	2020000022	DP195-015		1	195model
	2020000023	DP205-015		1	205model
	2020000024	DP225-015		1	225model
18	2020000025	DP175-016	scraper weldment	1	175model
	2020000026	DP195-016		1	195model
	2020000027	DP205-016		1	205model
	2020000028	DP225-016		1	225model
19	2020000030	EF175-018	Left sliding rail welment	1	
20	2020000031	EF175-019	Left sliding rail welment	1	
21	2020000032	EF175-023	support weldment	1	
22	2020000033	EF175-024	Gearbox mounting plate weldment	1	
23	2090000019		DP175 common blade shaft+hammer blades	1	175model
	2090000022		DP195common blade shaft+hammer blades	1	195model
	2090000025		DP205common blade shaft+hammer blades	1	205model
	2090000028		DP225common blade shaft+hammer blades	1	225model
24	3100700008	UCC207	bearing seatUCC207	2	
25	2090000154		DP transmission assembly	1	
26	3040100041	GB/T 5783-2000	Hexagon bolt full-thread M10×20	2	
27	3040100067	GB/T 5783-2000	Hexagon bolt full-threadM12×30	8	
28	3040100069	GB/T 5783-2000	Hexagon bolt full-threadM12×35	16	
29	3040100072	GB/T 5783-2000	Hexagon bolt full-threadM12×45	8	
30	3040100091	GB/T 5783-2000	Hexagon bolt full-thread(M14)×35(8. 8级)	2	

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NO.	E10 code	specifications	Name	Qty	Model
31	3040200034	GB/T 5786-2000	Hexagonal head bolt fine tooth full thread M16×1.5x45	1	
32	3040300037	GB/T 5782-2000	Half thread hexagonal bolt M12×130	1	
33	3050100007	GB/T 41-2000	hexagon nut M12	4	
34	3050400006	GB/T 6173-2000	fine-toothed hexagon thin nut M16x1.5	1	
35	3050500003	GB/T 889.1-2000	lock nut M8	3	
36	3050500007	GB/T 889.1-2000	lock nut M12	16	
37	3050500008	GB/T 889.1-2000	lock nut M14	2	
38	3060200018	GB/T 70.3-2000	inner hexagon screw M8×20	10	
39	3080100005	GB/T 95-2002	plain washer 10×1	26	175 model
	3080100005	GB/T 95-2002		29	195 model
	3080100005	GB/T 95-2002		30	205 model
	3080100005	GB/T 95-2002		33	205 model
40	3080100006	GB/T 95-2002	plain washer 10×2	3	
41	3080100007	GB/T 95-2002	plain washer 12×2.5	40	
42	3080100008	GB/T 95-2002	plain washer 14×2.5	2	
43	3080200010	GB/T 96.2-2002	large washer 12×3	9	
44	3080200011	GB/T 96.2-2002	large washer 14×3	2	
45	3080500008	GB/T 93-1987	elastic pad10	2	
46	3080500009	GB/T 93-1987	elastic pad12	17	
47	3100700006	UCC205-B	bearing seat UCC205-B-反装带油嘴	2	
48	3120100075	GB/T 91-2000	open type pin 3.2×25	2	
49	3120400007	11*45	lock pin -colored zinc	5	
50	3120400008	3.5	R pin-colored zinc	1	
51	3120500008	DP205.110	Upper suspension pin	2	
52	3120500009	EF175-119	lower suspension pin	1	
53	3160300016	BX-1016	belt	4	
54	3160400031	DP205-103	small pulley	1	
55	3160400032	DP205-104	large pulley	1	
56	3160500001	Z3A-35-60	rising sleeve 35x60	2	
57	3170100046	GB/T 13871.1-2007	TC seal 55x80x8	1	
58	3170400003	JB/T 7940.1-1995	Straight-through oil injection cup M8X1	2	
59	3210200006	EF175-121	Square plug	1	
60	3210300014	EF175-127	dust guard	1	

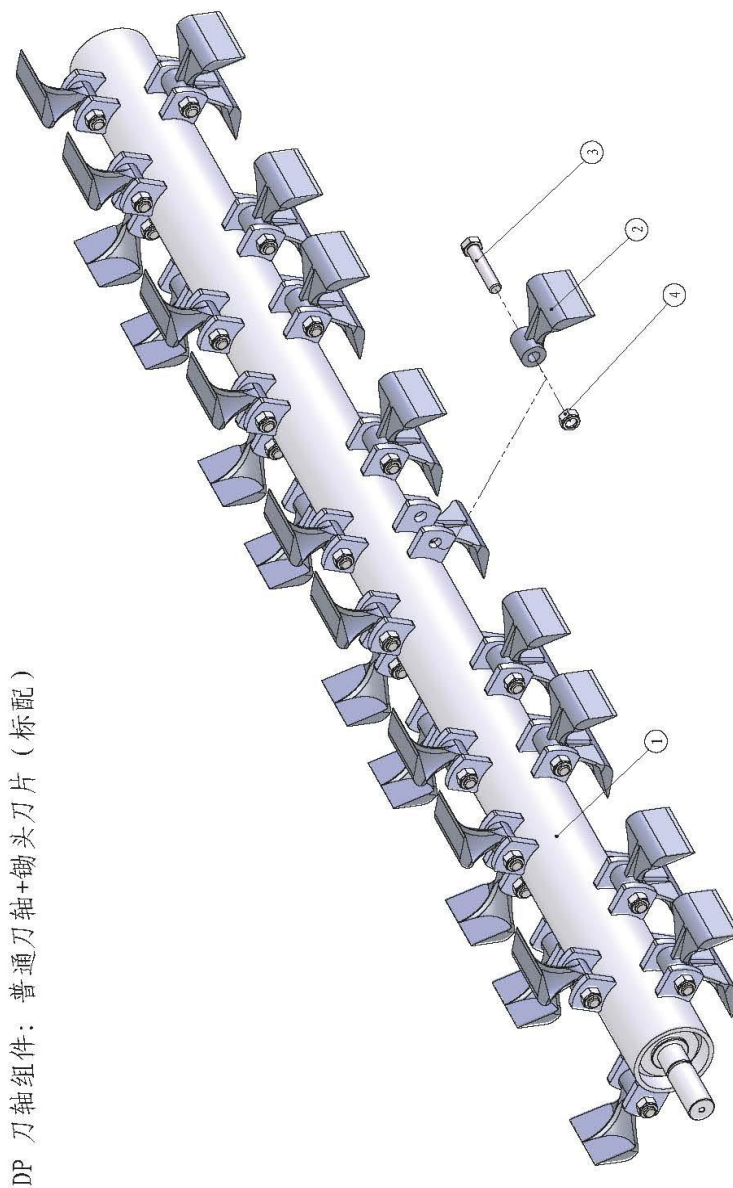
Part List7



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NO.	E10 code	specifications	Name	Qty	Model
1	2010000016	EF175-105	axle sleeve	1	
2	2010000021	DPS205-104-T	connecting shaft	1	
3	2020000029	DPS205-019	shaft sleeve weldment	1	
4	3040600001	JBZQ4446-1997	Hexagonal plug in conical pipe thread R3 / 8×12	2	
5	3060100056	GB/T 70.1-2000	innner hexagon screw M12×35	4	
6	3080100007	GB/T 95-2002	plain washer 12×2.5	4	
7	3080500009	GB/T 93-1987	elastic pad 12	4	
8	3080600038	GB 893.1-86	circlip for hole A type 62	1	
9	3080700023	GB 894.1-86	circlip for axle A type 35	1	
10	3090100009	GB / T1096-2003	ordinary flat key A type 10×40	1	
11	3100100021	GB/T 276-94	bearing 6007	1	
12	3160100014	XH50.300Z.02W	EF-50HP gearbox-black	1	
13	3170100010	GB/T 13871.1-2007	TC seal 35x62x8	1	
14	3170500001	90x135x0.5	Driveshaft Tube Paper Pad	1	

Part List8



DP 刀轴组件：普通刀轴+锄头刀片（标配）

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NO.	E10 code	specifications	Name	Qty	Model
1	2020000041	DP175-013	blades shaft	1	175model
	2020000042	DP195-013			195model
	2020000043	DP205-013			205model
	2020000044	DP225-013			225model
2	3220100025	EFB175-139	hammer blade	28	175model
				32	195model
				36	205model
				36	225model
3	3040300058	GB/T 5782-2000	Half thread hexagonal bolt M16×80	28	175model
				32	195model
				36	205model
				36	225model
4	3050500009	GB/T 889.1-2000	lock nut M16	28	175model
				32	195model
				36	205model
				36	225model

Section 8: Troubleshooting

Problem	Solution
<p>! CAUTION <i>Do not try to clean rear discharge area when Mowers is running. Bodily harm may occur!</i></p>	
Belt slipping	Unplug and clean Mowers deck.
	Remove belt guard shields and clean sheaves.
	Replace belt
Patches of uncut to land	Mow at full throttle (540 PTO rpm), check PTO speed, and tractor engine.
	Shift transmission to a lower gear.
	Tighten belts.
Excessive vibration	Replace missing blades.
	Replace drive belt.
	Replace pulleys or align.
	Remove belt guard shields & clean debris from belt area & sheaves.
Gearbox noisy	Check lubricant level.
blades scalping grass	Raise Crushing height by adjusting .
	Change broken pattern.
	Reduce speed turns.
Uneven cut	Shift to a lower gear.
	Level Mowers .
	Replace missing blades or hammers
Tractor loaded down by Mowers	Mow at full throttle (540 PTO rpm).
	Shift to a lower gear.
	Clean Mowers .

Section 9: Torque Values Chart

Torque Values Chart for Common Bolt Sizes													
Bolt Size (Inches)	Bolt Head Identification						Bolt Size (Metric)	Bolt Head Identification					
	Grade 2		Grade 5		Grade 8			Class 5.8		Class 8.8		Class 10.9	
in-tpi ¹	N·m ²	ft-lb ³	N·m	ft-lb	N·m	ft-lb	mm x pitch ⁴	N·m	ft-lb	N·m	ft-lb	N·m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4" - 12	750	555	1680	1240	2730	2010							
1 3/8" - 6	890	655	1990	1470	3230	2380							
1 3/8" - 12	1010	745	2270	1670	3680	2710							
1 1/2" - 6	1180	870	2640	1950	4290	3160							
1 1/2" - 12	1330	980	2970	2190	4820	3560							

¹ in-tpi = nominal thread diameter in inches-threads per inch
² N·m = newton-meters
³ ft-lb= foot pounds
⁴ mm x pitch = nominal thread diameter in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.