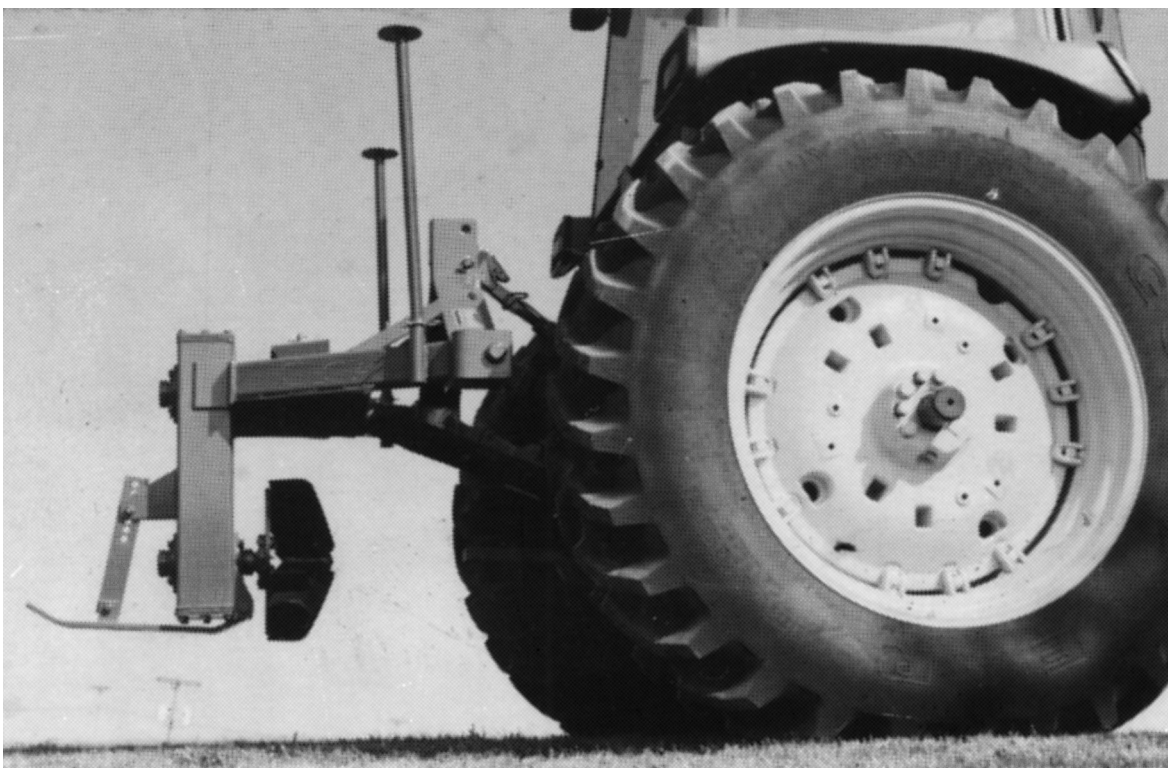




**Model D5P/D10P
Power Ditcher
Operator's and Parts Manual**



LANDOLL COMPANY, LLC

1900 North Street

Marysville, Kansas 66508

(785) 562-5381

800-428-5655 ~ WWW.LANDOLL.COM

Instructions for Ordering Parts

**** Repair parts must be ordered through an Authorized Dealer ****

DEALER INSTRUCTIONS FOR ORDERING PARTS FROM LANDOLL PARTS DISTRIBUTION CENTER

Phone #: 800-423-4320 or 785-562-5381

Fax #: 888-527-3909

Order online: dealer.landoll.com

IDENTIFICATION PLATE

The Identification Plate, which list the model and serial number of the equipment. It is located on the right side of the frame.

SERIAL NUMBER NOMENCLATURE

The serial number for the Power Ditcher is located on the identification plate. The following information will help decode the Landoll serial number:

30D2200100 = xxmysssss

xx	= model series (i.e. "30" for all Agriculture Seeders)
m	= month of manufacture (ex. "D" means April. The letter "I" is not used.)
yy	= last 2 digits of the year manufactured (ex. "22" means 2022)
sssss	= Sequential number used to track warranty and service information



Identification Plate

Manuals for Power Ditcher D5P and D10P

Manual Number	Manual Type
F-1154	Operator's and Parts Manual



DANGER

DO NOT operate or perform any maintenance tasks on this equipment until you have completed the following:

- 1. Receive proper training to operate this equipment safely.**
- 2. Read and understand the operator's manual.**
- 3. Be thoroughly trained on inspection and repair procedures.**

Failure to comply with this warning may result in serious injury or possibly death.

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Introduction and Safety Information

Introduction

This manual provides operating, servicing, and maintenance instructions for the Power Ditcher manufactured by Landoll Company, LLC., Marysville, Kansas 66508.

- CHAPTER 1** Gives basic instructions on the use of this manual and understanding the safety statements.
- CHAPTER 2** Gives product specifications for the trailer, including measurements and component specifications. A Standard Bolt Torque Table is provided to give guidelines for bolt torques to be used when servicing this product.
- CHAPTER 3** Gives instructions for the proper receiving and assembly of the equipment.
- CHAPTER 4** Gives instructions for the proper operation and general maintenance procedures. Improper maintenance will void your warranty.

**IF YOU HAVE ANY QUESTIONS CONTACT:
LANDOLL COMPANY, LLC.
1900 NORTH STREET
MARYSVILLE, KANSAS 66508**

**PHONE # (785) 562-5381 or (800) 428-5655
or
FAX # (888) 527-3909**

- CHAPTER 5 / PARTS MANUAL** Shows the various assemblies, sub-assemblies, and systems. Refer to this chapter when ordering Landoll replacement parts. Order parts from your Landoll dealer.
- WARRANTY** The Warranty Registration form is included with the product documents. Fill it out and mail it within 15 days of purchase.
NOTE: IMPROPER ASSEMBLY, MODIFICATION, OR MAINTENANCE OF YOUR LANDOLL MACHINE CAN VOID YOUR WARRANTY.
- COMMENTS** Address comments or questions regarding this publication to:

**LANDOLL COMPANY, LLC.
1900 NORTH STREET
MARYSVILLE, KANSAS 66508
ATTENTION: PUBLICATIONS - DEPT. 55**

Safety

Understanding Safety Statements

You will find various types of safety information on the following pages and on the machine signs (decals) attached to the vehicle. This section explains their meaning.

The Safety Alert Symbol means **ATTENTION! YOUR SAFETY IS INVOLVED!**

NOTE

Means that failure to follow these instructions could cause damage to the equipment or cause it to operate improperly.

IMPORTANT

Special notice - read and thoroughly understand.

 CAUTION
<p>Caution means serious equipment or other property damage can occur if instructions on this label are not properly followed.</p>

 WARNING
<p>Warning means serious injury or death can occur if safety measures or instructions on this label are not properly followed.</p>

 DANGER
<p>Danger means a life-threatening situation exists. Death can occur if safety measures or instructions on this label are not properly followed.</p>


Location reference: Right and Left designations in this manual are determined by facing the direction the implement will travel during field operation, unless otherwise stated.

NOTE

Make sure you read and understand the information contained in this manual and on the machine signs (decals) before you attempt to operate or maintain this vehicle.

The safety statements contained in this manual relate to the operation of the Model D5P/D10P Power Ditcher.

- Examine safety decals and be sure you have the correct safety decals for the implement. *See Figure 5-5.*
- Keep these signs clean so they can be observed readily. It is important to keep these decals cleaned more frequently than the implement. Wash with soap and water or a cleaning solution as required.
- Replace decals that become damaged or lost. Also, be sure that any new implement components installed during repair include decals which are assigned to them by the manufacturer.
- When applying decals to the implement, be sure to clean the surface to remove any dirt or residue. Where possible, sign placement should protect the sign from abrasion, damage, or obstruction from mud, dirt, oil etc.

 DANGER
<ul style="list-style-type: none"> • Do not allow anyone to ride on the tractor or implement. Riders could be struck by foreign objects or thrown from the implement. • Never allow children to operate equipment. • Keep bystanders away from implement during operation.

Transporting Safety

IMPORTANT

It is the responsibility of the owner/operator to comply with all state and local laws.

- When transporting the implement on a road or highway, use adequate warning symbols, reflectors, lights and slow moving vehicle sign as required. Slow moving tractors and towed implements can create a hazard when driven on public roads. They are difficult to see, especially at night.
- Carry reflectors or flags to mark the tractor and implement in case of breakdown on the road.

Attaching, Detaching and Storage



DANGER

- Do not stand between the tractor and implement when attaching or detaching implement unless both are not moving.
- Store in an area where children do not play.

IMPORTANT

Always store the Power Ditcher with Parking Stands extended to ground and secured with pins, stabilizing the machine.

Maintenance Safety



DANGER

- Stop the tractor and disengage the PTO before making any adjustments. Keep all shields in place.
- Do not make adjustments or lubricate implement while it is in motion.

- Understand the procedure before doing the work.
- Use proper tools and equipment.
- Make sure all moving parts have stopped.
- Block the implement so it will not roll when working on or under it to prevent injury.

Prepare for Emergencies

- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctor, ambulance, hospital, and fire department near the phone.

Protective Equipment

- Wear protective clothing and equipment appropriate for the job. Avoid loose fitting clothing.
- Because prolonged exposure to loud noise can cause hearing impairment or hearing loss, wear suitable hearing protection, such as earmuffs or earplugs.

Standard Specifications

Model Specifications

The D5P/D10P Series Power Ditchers are connected to the tractor PTO shaft by means of a shielded double u-joint. The 2-3/16" diameter alloy steel in-put and out-put shafts are connected by a #80-2 double roller chain drive. The drive system rotates on (4) tri-ply seal ball bearings in a continuous oil bath.

The **D5P18A** has a 22 Tooth In-Put sprocket and a 16 Tooth Out-Put Sprocket. The **D10P18A** has a 16 Tooth In-Put Sprocket and a 22 Tooth Out-Put Sprocket. This combination gives a Cutter Head speed of 740 RPM on both models. (D5P18 @ 540 RPM PTO and D10P18 @ 1000 RPM PTO.)

The entire drive system is inside a 6" x 10" steel case, easily accessible by two removable end plates.

The Cutter Head has (4) heat treated high carbon steel blades with a cutting diameter adjustable from 18" to 20".

The **D5P18A Power Ditcher** is designed for use on tractors with 50 to 110 PTO horsepower and 540 RPM PTO. The **D10P18A Power Ditcher** is designed for use on tractors with 80 to 150 PTO horsepower and 1000 RPM PTO.

NOTE

D10P models can be used with 540 PTO tractors by reversing sprockets and replacing the tractor end PTO yoke.

	Model D5P18A	Model D10P18A	Model D10PH18A
Approximate Weight	525 lbs. (238 kg)	525 lbs. (238 kg)	530 lbs. (240 kg)
PTO RPM	540 RPM	1,000 RPM	1,000 RPM
PTO Coupler Size	1.375 in. (34.9 mm) 6B Spline Drive Shaft	1.375 in. (34.9 mm) 21 Spline Drive Shaft	1.75 in. (44.5 mm) 20 Spline Drive Shaft
Shear Bolt Size	0.375 in. (9.5 mm) Grade 8		
Cutter Head Speed	740 RPM		
Adjustable Cutter Head	18 in. to 20 in. (458 to 508 mm)		
Cutter Blades	(4) Replaceable Heat Treated High-Carbon Steel Blades		
Chain Case	6 in. x 10 in. (152 x 254 mm)		
Chain	Double #80		
Sprockets	16 and 22 Tooth Hardened		
3-PT Hitch	Cat. II, III or Quick Hitch		
Depth of Operation	Depth Skid and Three-Point Adjustable		
Parking Stands	(2) Standard		
Horsepower Requirements	50 to 100 HP (37 to 75 kW)	80 to 150 HP (60 to 112kW)	80 to 150 HP (60 to 112kW)

Figure 2-1: Specifications

General Torque Specifications (rev. 4/97)

Torque Specified in Foot Pounds

This chart provides tightening torques for general purpose applications when special torques are not specified on process or drawing. Assembly torques apply to plated nuts and cap-screws assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used. When fasteners are dry (solvent cleaned) add 33% to as received condition torque. Bolt head identification marks indicate grade and may vary from manufacturer to manufacturer. Thick nuts must be used on grade 8 cap-screws. Use value in [] if using prevailing torque nuts.

UNC SIZE	SAE Grade 2	SAE Grade 5	SAE Grade 8	UNF SIZE	SAE Grade 2	SAE Grade 5	SAE Grade 8
1/4-20	4 [5]	6 [7]	9 [11]	1/4-28	5 [6]	7 [9]	10 [12]
5/16-18	8 [10]	13 [13]	18 [22]	5/16-24	9 [11]	14 [17]	20 [25]
3/8-16	15 [19]	23 [29]	35 [42]	3/8-24	17 [21]	25 [31]	35 [44]
7/16-14	24 [30]	35 [43]	55 [62]	7/16-20	27 [34]	40 [50]	60 [75]
1/2-13	35 [43]	55 [62]	80 [100]	1/2-20	40 [50]	65 [81]	90 [112]
9/16-12	55 [62]	80 [100]	110 [137]	9/16-18	60 [75]	90 [112]	130 [162]
5/8-11	75 [94]	110 [137]	170 [212]	5/8-18	85 [106]	130 [162]	180 [225]
3/4-10	130 [162]	200 [250]	280 [350]	3/4-16	150 [188]	220 [275]	320 [400]
7/8-9	125 [156]	320 [400]	460 [575]	7/8-14	140 [175]	360 [450]	500 [625]
1-8	190 [237]	480 [506]	680 [850]	1-14	210 [263]	540 [675]	760 [950]
1-1/8-7	270 [337]	600 [750]	960 [1200]	1-1/8-12	300 [375]	660 [825]	1080 [1350]
1-1/4-7	380 [475]	840 [1050]	1426 [1782]	1-1/4-12	420 [525]	920 [1150]	1500 [1875]
1-3/8-6	490 [612]	1010 [1375]	1780 [2225]	1-3/8-12	560 [700]	1260 [1575]	2010 [2512]
1-1/2-6	650 [812]	1460 [1825]	2360 [2950]	1-1/2-12	730 [912]	1640 [2050]	2660 [3325]
1-3/4-5	736 [920]	1651 [2063]	2678 [3347]	1-3/4-12	920 [1150]	2063 [2579]	3347 [4183]

METRIC:

Coarse thread metric class 10.9 fasteners and class 10.0 nuts and through hardened flat washers, phosphate coated, Rockwell "C" 38-45. Use value in [] if using prevailing torque nuts.

Nominal thread diameter (mm)	Newton Meters (Standard Torque)	Foot Pounds (Standard Torque)	Nominal Thread Diameter (mm)	Newton Meters (Standard Torque)	Foot Pounds (Standard Torque)
6	10 [14]	7 [10]	20	385 [450]	290 [335]
7	16 [22]	12 [16]	24	670 [775]	500 [625]
8	23 [32]	17 [24]	27	980 [1105]	730 [825]
10	46 [60]	34 [47]	30	1330 [1470]	990 [1090]
12	80 [125]	60 [75]	33	1790 [1950]	1340 [1450]
14	125 [155]	90 [115]	36	2325 [2515]	1730 [1870]
16	200 [240]	150 [180]	39	3010 [3210]	2240 [2380]
18	275 [330]	205 [245]	-----	-----	-----

Table 2-1: General Torque Specifications

Hydraulic Fitting Torque Specifications

Torque Specified in Foot Pounds - 37° JIC, ORS, & ORB (REV. 10/97)

This chart provides tightening torques for general purpose applications when special torques are not specified on process or drawing. Assembly torques apply to plated nuts and capscrews assembled without supplemental lubrication (as received condition). They do not apply if special graphite moly-disulfide or other extreme pressure lubricants are used. When fasteners are dry (solvent cleaned) add 33% to as received condition torque. Bolt head identification marks indicate grade and may vary from manufacturer to manufacturer. Thick nuts must be used on grade 8 capscrews. Use value in [] if using prevailing torque nuts.

Parker Brand Fittings			
Dash Size	37 Degree JIC	O-Ring (ORS)	O-Ring Boss (ORB)
-4	11-13	15-17	13-15
-5	14-16	-----	21-23
-6	20-22	34-36	25-29
-8	43-47	58-62	40-44
-10	55-65	100-110	58-62
-12	80-90	134-146	75-85
-16	115-125	202-218	109-121
-20	160-180	248-272	213-237
-24	185-215	303-327	238-262
-32	250-290	-----	310-340
Gates Brand Fittings			
Dash Size	37 Degree JIC	O-Ring (ORS)	O-Ring Boss (ORB)
-4	10-11	10-12	14-16
-5	13-15	-----	-----
-6	17-19	18-20	24-26
-8	34-38	32-40	37-44
-10	50-56	46-56	50-60
-12	70-78	65-80	75-83
-14	-----	65-80	-----
-16	94-104	92-105	111-125
-20	124-138	125-140	133-152
-24	156-173	150-180	156-184
-32	219-243	-----	-----
Aeroquip Brand Fittings			
Dash Size	37 Degree JIC	O-Ring (ORS)	O-Ring Boss (ORB)
-4	11-12	10-12	14-16
-5	15-16	-----	16-20
-6	18-20	18-20	24-26
-8	38-42	32-35	50-60
-10	57-62	46-50	75-80
-12	79-87	65-70	125-135
-14	-----	-----	160-180
-16	108-113	92-100	200-220
-20	127-133	125-140	210-280
-24	158-167	150-165	270-360
-32	245-258	-----	-----

Table 2-2: Hydraulic Fitting Torque Specifications

Assembly Instructions

Receiving the Power Ditcher

IMPORTANT

Make sure Parking Stands are locked and machine is stable before removing shipping straps.



WARNING

1. Wear personal protective equipment (PPE) such as, but not limited to, protection for eyes, lungs, ears, head, hands and feet when operating, servicing or repairing equipment.
2. Use lift crane, jack, tackle or fork lift truck to lift heavy parts and assemblies.
3. Keep clear of parts which may move or drop when removing shipping straps or brackets.
4. If machine requires blocking up, use blocking material of adequate strength and in good condition. Blocks must be on a smooth dry surface.
5. Never place an part of your body under blocked-up assemblies.
6. If welding or flame-cutting is required, be sure no flammable materials are in the area. Also, clear bystanders from area.

Assembly Instructions

1. The D5P18A and D10P18A Series Power Ditcher is completely assembled at the factory, except for the Universal Drive Shaft which is wired to the "A" frame.
2. Thoroughly clean the end of the Drive Shaft and attach it to the input shaft of the Ditcher with a 7/16" x 1" hex bolt, lock washer and special flat washer and with two 3/8" x 2-1/2" grade 8 shear bolts and locknuts.
3. The Power Ditcher is now fully assembled and ready for attachment to the tractor.



WARNING

1. Be sure all nuts, bolts, other fasteners and hydraulic fittings are properly tightened. Refer to the bolt torque chart.
2. Be sure all safety guards and safety locking devices are in place and function properly.



CAUTION

Before operating the machine, be sure to read the safety and operation sections of this manual.

Assembly Overview

Part Identification: *See Figures 3-1 and 3-2.*

1. Parking Stands
2. Shear Flange Safety Shield
3. Shielded Drive Shaft
4. All Welded Main Frame and Chain Case
5. Adjustable Hardened High Carbon Steel Blades
6. Cat. II or III Standard or Quick Coupler Hitch
7. Removable End Plates for Ease of Service
8. Adjustable Skid for Depth Control
9. Safety Collars on Input and Output Shafts
10. Chain Adjustment

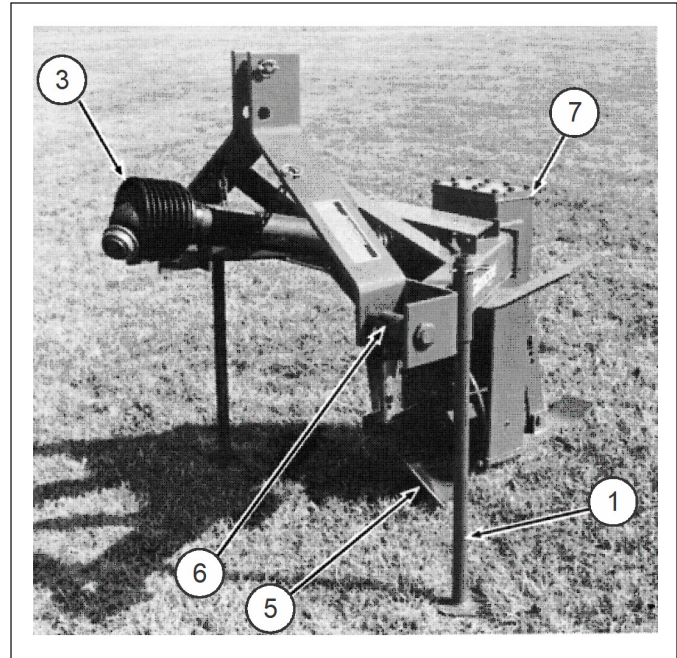


Figure 3-1: D5P/D10P Power Ditcher

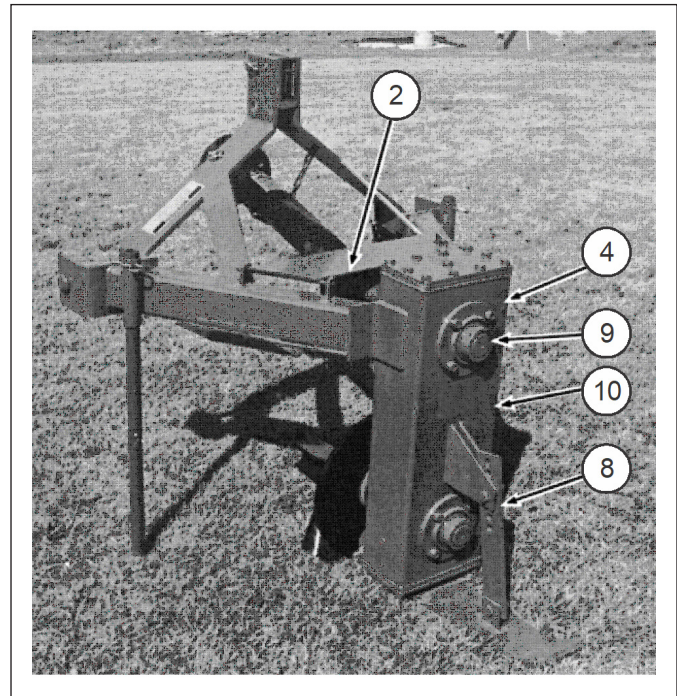


Figure 3-2: D5P/D10P Power Ditcher

Operation and Maintenance

Operation

The Landoll D5P/D10P Power Ditcher is a ditching machine for controlling field water drainage by improving water run-off conditions. The Power Ditcher can make shallow trenches for irrigation and be used to build fire lanes.

Keep this manual handy for future reference. If you have any questions, contact a Landoll dealer. A Landoll dealer has qualified service technicians and genuine Landoll replacement parts to keep the machine in top operating condition. This manual should remain with the machine when sold.

This manual was prepared from the latest product information available at publication time. The Company reserves the right to make changes at any time without notice.



CAUTION

1. Remove tractor start key when tractor and implement will be unattended.
2. Never leave unattended equipment in the raised position. Lower unattended equipment to the ground.
3. Do not leave tractor or implement unattended with tractor engine running.



DANGER

Never allow anyone to ride on this equipment.



CAUTION

1. Avoid injury or fatal accidents. Read these safety precautions completely and carefully! Utilize these instructions when operating your machine.
2. The operator should be a responsible adult familiar with farm machinery and trained in this machine's operations. Do not allow persons to operate this machine until they have read this manual and have developed a thorough understanding of the safety precautions and of how the machine works.
3. To prevent injury or death, use a tractor equipped with a roll-over protection structure (ROPS) and seat belt. Do not paint over, remove or deface any safety decals on your equipment. Observe all safety decals and follow the instructions on them.
4. Remember! Your best insurance is a careful and responsible operator. If there is any portion of this manual or of the machine's operation you do not understand, contact your local authorized Landoll dealer.

OPERATION AND MAINTENANCE



WARNING

1. Do not clean, adjust or service when the machine is in motion.
2. All hydraulically or mechanically elevated components must be blocked to prevent accidental lowering or must be lowered to the ground when adjustments or repairs are made.
3. Properly tighten all mounting hardware. see bolt torque chart.
4. Periodically inspect all moving parts for wear and replace with only authorized service parts if any excessive wear is present. If safety decals are missing, illegible, or damaged, they should be replaced.



DANGER

Clear the area of bystanders before starting operation.



CAUTION

1. Avoid sharp turns using brakes. drive slowly over rough ground, side hills and around curves to avoid tipping.
2. Always shut off tractor, shift to “park” position (or shift to neutral), set brakes and cycle hydraulic levers before dismounting tractor or working around the machine.



CAUTION

1. Wear personal protective equipment (PPE) such as, but not limited to, protection for eyes, lungs, ears, head, hands and feet when operating, servicing or repairing equipment. Do not wear loose clothing or jewelry as it may entangle or catch on moving parts.
2. Never use your hands to locate a hydraulic leak. Use a piece of wood or cardboard. Hydraulic fluid escaping under pressure can penetrate the skin causing serious injury.
3. Openings in the skin and minor cuts are susceptible to infection from hydraulic fluid. If injured by escaping fluid, see a doctor at once. without immediate medical treatment, serious infection can occur.
4. Comply with your state and local laws governing highway safety, lighting & marking, and the movement of farm machinery on public roads.
5. Always drive at a reasonable speed to maintain control of the equipment. do not tow at speeds in excess of 20 mph.
6. Be a safe and courteous operator.



CAUTION

Keep safety decals free of dirt and grime.

Operation and Adjustments

WARNING

Stop the tractor and disengage the PTO before making any adjustments. Keep all shields in place.

- The Power Ditcher should be lifted from the ground and the Parking Stands raised and secured with the Hair Pin Clips. If the tractor is equipped with a float position on the 3-PT Lift, this should be used. This will allow the skid to control the depth of cut.
 - To get a **deeper ditch**, raise the skid by means of the adjusting bar at the rear of the chain case.
 - To get a more **shallow ditch**, lower the skid by means of the adjusting bar.
- The cutting diameter may be adjusted by moving the location of the blades on the Cutter Head. Location in the inside set of holes will give an 18" diameter cut. Locating the blades in the outside set of holes will give a 20" diameter cut.
- Raise and lower the Ditcher slowly to check engagement of the drive shaft. At least 6" of the square shaft should be engaged in the tubular portion of the drive shaft. Also check to be sure the drive shaft will not hit the tractor drawbar and is not binding when rotated. Be sure the Safety Shield is secured over the Shear Flange.
- The Ditcher should be lowered just above the ground and the PTO engaged.

IMPORTANT

The PTO should not be engaged with the blades resting on the ground. This sudden shock could result in broken shear bolts, chain or drive shaft.

After the Cutter Head has started rotating, set the engine speed for 540 or 1000 RPM PTO speed. Start the forward motion of the tractor and lower the Ditcher into the ground. Forward speed and depth of cut should be matched to soil conditions.

- When backing or turning, the Ditcher should be raised to clear the ground. The Ditcher should never be raised to maximum height with the PTO engaged.

Attaching to the Tractor

WARNING

Stop the tractor and disengage the PTO before making any adjustments. Keep all shields in place.

- Both the D5P18A and D10P18A Power Ditchers are designed for use on a Category II or III 3-PT Linkage or a Category II or III Quick Coupler. *See Figure 4-1.*

A **Category II 3-PT Linkage** attaches to the upper top hole with 1" diameter top pin. The lower links fit the 1-1/8" diameter portion of the lower hitch pins.

A **Category II Quick Coupler** is attached to the lower top hole using the 1" diameter top pin and 1-1/2" O.D. bushing. The lower hitch attaches to the lower hitch pins using the 1-7/16" O.D. bushing over the 1-1/8" diameter portion of the pin with the 2" O.D. spacer over the 1-7/16" diameter portion of the pin.

A **Category III 3-PT Linkage and Quick Coupler** attaches in the upper top hole with the 1" diameter top pin and the 1-1/4" O.D. bushing. The lower links fit the 1-7/16" diameter portion of the lower hitch pins with the 1-7/16" O.D. bushing and the 2" O.D. spacer both located over the 1-1/8" diameter portion of the hitch pin.

All pins should then be secured with the klik pins.

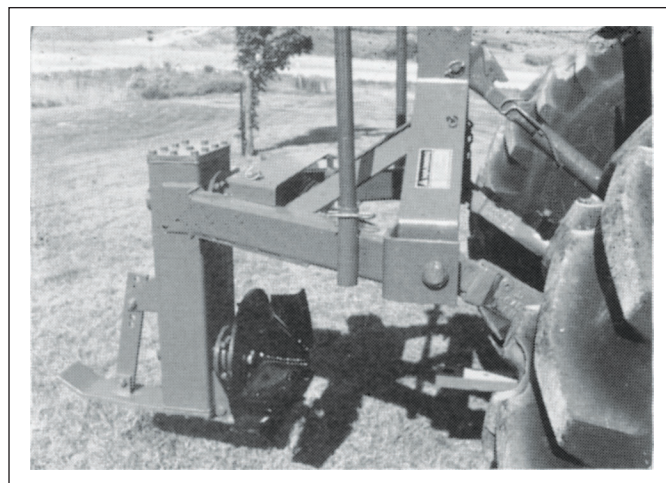


Figure 4-1: D5P/D10P Tractor Attachment

OPERATION AND MAINTENANCE

2. The yoke of the Universal Drive Shaft is then attached to the PTO shaft of the tractor and secured with the bolt and nut in the yoke on the D10P18A, 1000 RPM, drive shaft and with the slip pin in the yoke on the D5P18A, 540 RPM driveshaft.
3. The tractor's top lift link should be extended or retracted until the Chain Case is vertical when lowered to the normal operating position. The

Universal Drive Shaft must have an equal offset in each joint. **See Figure 4-2.** As an example, if the front joint is offset 6 degrees the rear joint must also have a 6 degree offset. Should the rear joint be offset 4 degrees or 8 degrees the Cutter Head will not run at a constant speed and will vibrate excessively. Operating the Ditcher in this condition will cause Drive Shaft, shear bolt and chain failures.

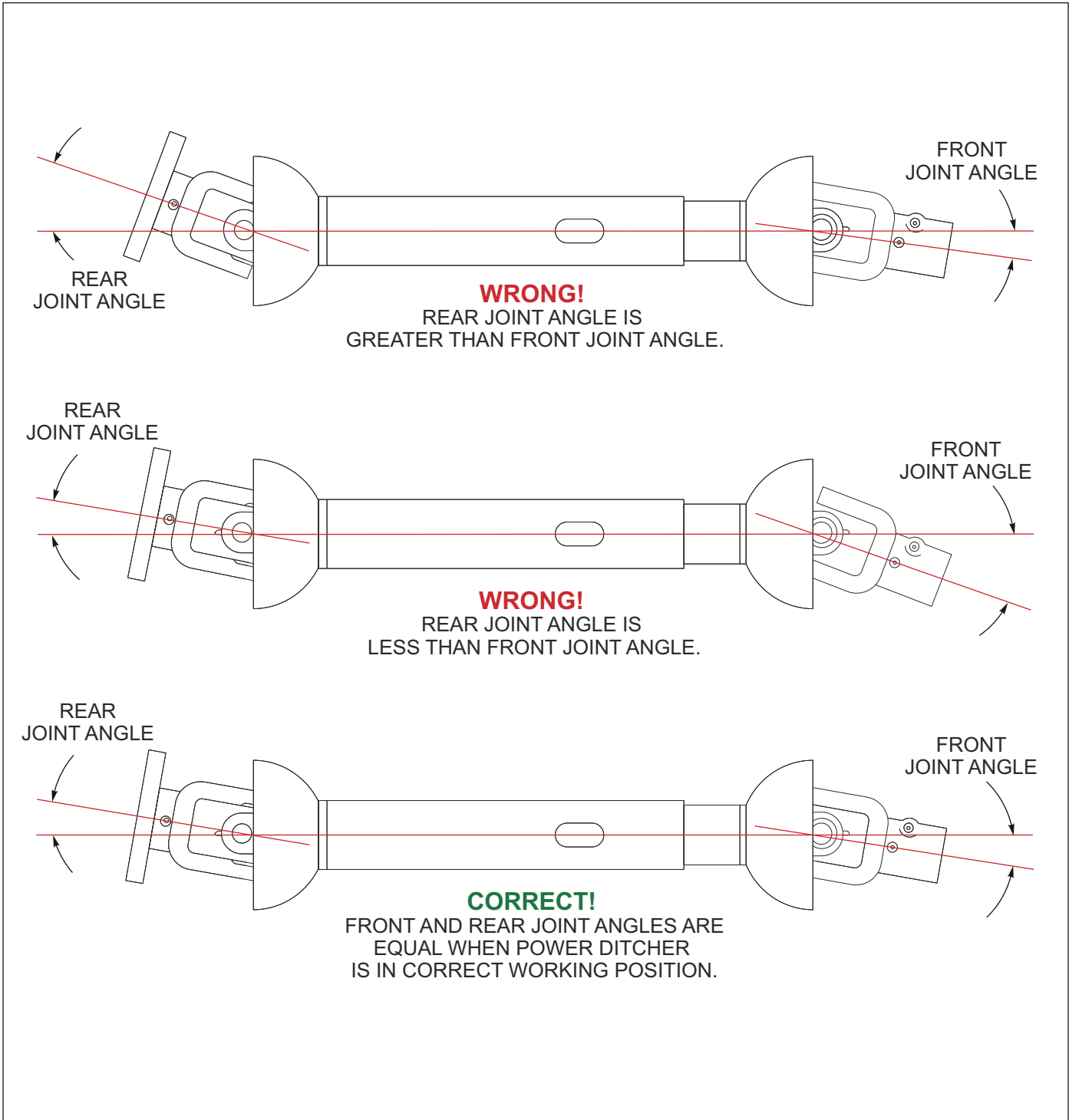


Figure 4-2: D5P/D10P Attachment to Tractor

Lubrication



WARNING

Do Not lubricate machine while machine is in motion. If any guards are removed for lubricating, they must be replaced before operating.



WARNING

All hydraulically or mechanically elevated components must be blocked to prevent accidental lowering or must be lowered to the ground when adjustments or repairs are made.



WARNING

Before working on this machine, disengage tractor PTO, shut off tractor and allow all moving parts to come to a complete stop.



WARNING

Replace all shields and guards after servicing and before starting machine. Always keep all safety shields in place when operating machine.

1. Proper lubrication of your machine is instrumental in obtaining optimum performance and extended life. Neglect leads to needless breakdowns and unnecessary expenses.
2. Check oil level at the check plug on the chain housing when the Power Ditcher is in an upright position. Oil should be level with the plug hole. The chain housing was filled to the proper level at the factory with one quart of SAE 90 oil or equivalent. A similar grade should be used for replacement.
3. Lubricate the Drive Shaft with a good grade of Lithium Soap Base Grease every 25 to 50 hours of operation *See Figure 4-3*. Remove the male end of the drive shaft and pack tube with a generous amount of grease. The drive shaft has four grease fittings.

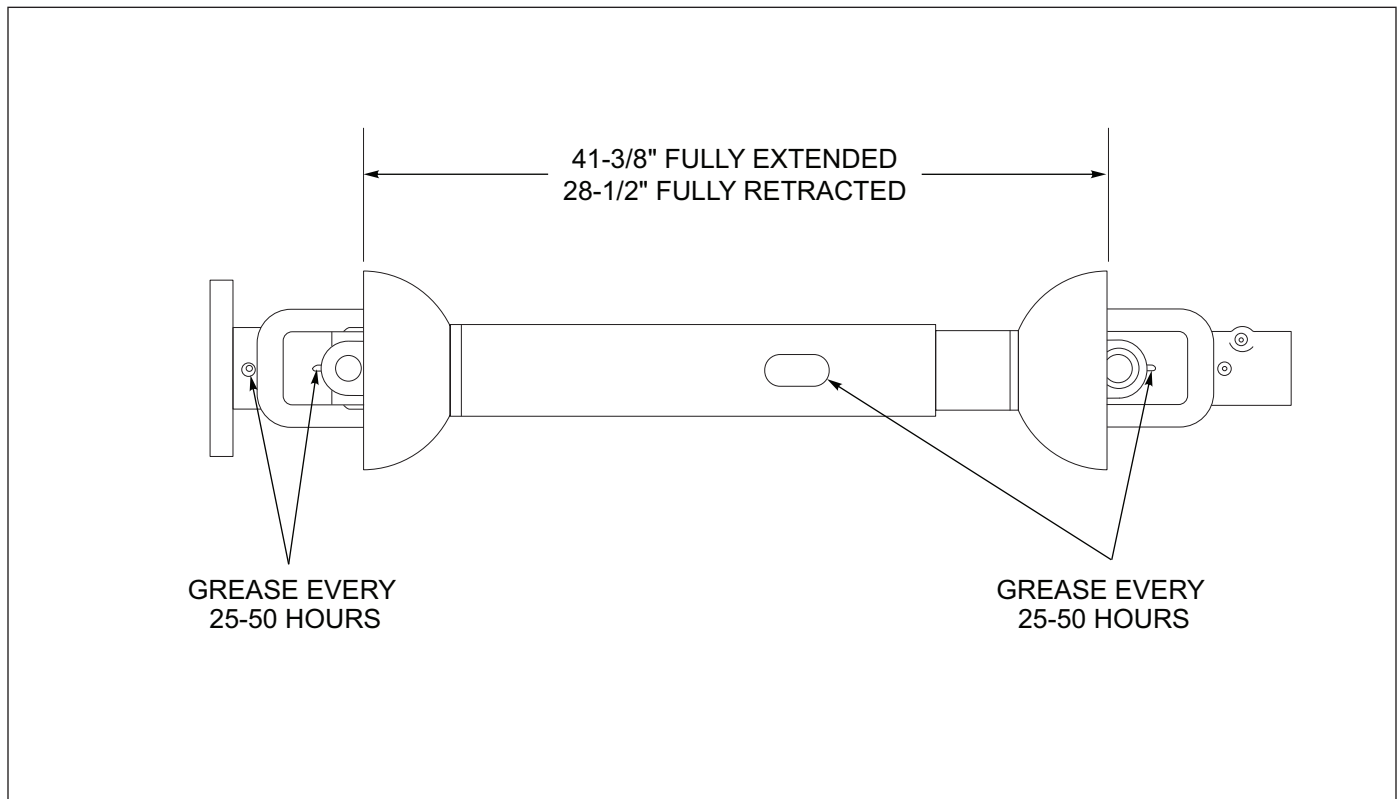


Figure 4-3: Drive Shaft Lubrication

Maintenance



WARNING

Do not clean, adjust or service when machine is in motion.



WARNING

All hydraulically or mechanically elevated components must be blocked to prevent accidental lowering or must be lowered to the ground when adjustments or repairs are made.



WARNING

Before working on this machine, disengage tractor PTO, shut off tractor and allow all moving parts to come to a complete stop.



WARNING

Replace all shields and guards after servicing and before starting machine. Always keep all safety shields in place when operating machine.

Chain Adjustment

1. The chain adjusting bolt is located on the right hand side of main frame. Tighten to “finger tight” in order to remove excess chain slack. Do not over tighten.
2. Secure by tightening jam nut.

Shear Bolts

1. The Power Ditcher has two 5/16" x 1-3/4" grade 8 shear bolts secured with locknuts. They are located in the flange of the main drive shaft at the PTO.

Parts List

Frame Assembly

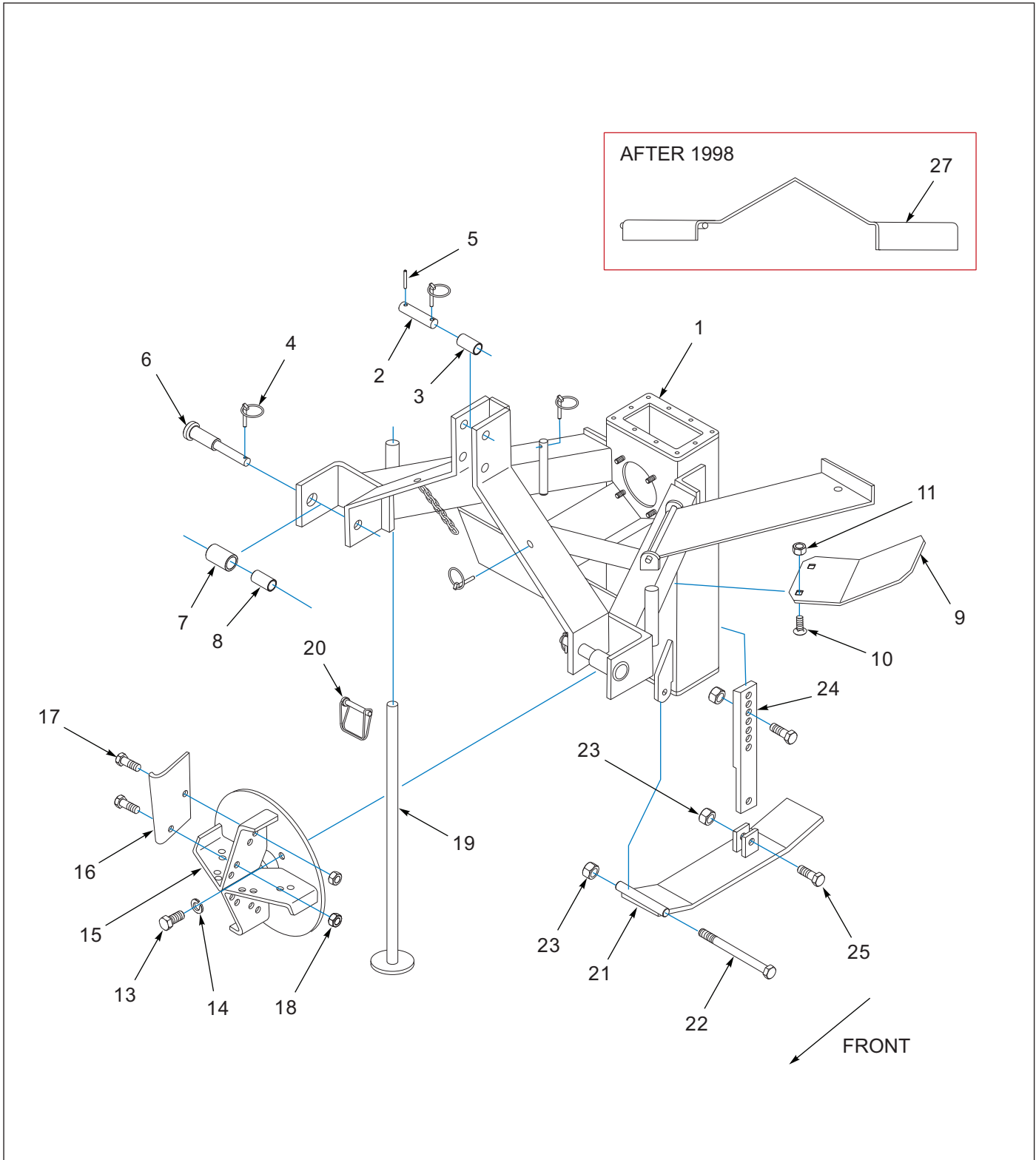


Figure 5-1: Frame Assembly

Frame Assembly

ITEM	PART NUMBER	DESCRIPTION	QTY
1	E0908	MAIN FRAME WLDMT	1
2	E7397	PIN,ZINC PLATE,D5P/D10P (1 X 4-3/8)	1
3	E6570	BUSHING,BLACK,D5P/D10P (1-1/4" X 2)	1
4	E10317	KLIK PIN - 1/4" (1/4 X 1-3/4)	5
5	W933232	SPRING PIN, SLTD 5/16 X 2	1
6	E0911	PIN WLDMT ZINC PLATE D5P/D10P (HITCH PIN)	2
7	E100673	SPACER,D5P/D10P (2 X 2-3/4)	2
8	E100640	BUSHING, D4P/D5P/D10P (1-7/16 X 2-3/4)	2
9	E100699	PLATE,DEFLECTOR,BLACK	1
10	1-654-010070-03	SCREW RDHD SQNK1/2-13X1-1/2	2
11	1-512-010005-09	NUT,HEX,SLFLKG, 1/2-13 GRB	3
12	EPA74013	CUTTER HEAD ASSY,BLK,D5P/D10P (INCL. ITEMS 15-18) (SEE PAGE 5-6)	1
13	1-654-010059-03	SCREW 5/8-11UNCX1-1/2 HXCP G	4
14	1-861-010034-15	WASHER,LKG,HLCL SPR,5/8	4
15	E0938	CUTTER HEAD WELD 16 OD	1
16	E100662-D	BLADE, 2 HOLES, BLACK	4
17	1-654-010056-03	SCREW 1/2-20UNFX1-1/2	8
18	E10498	NUT HEX LOCK 1/2-20	8
19	E0939	STAND WLDMT,PARKING,BLACK	2
20	516-22PTL	RETAINING PIN	2
21	E0937	SKID WLDMT,BLACK,D4P/D5P/D10P	1
22	171892	SCREW, HEX HEAD CAP 5/8-11 X 9	1
23	103-0625	NUT, ESNA 5/8	3
24	E100648	BAR,ADJUSTING,BLACK (1/2 X 1-1/2 X 15-1/2)	1
25	1-654-010059-07	SCREW HX CP 5/8-11UNCX2-1/2G5	2
26	1-796-010001	TIE WIRE 22 PLASTIC (22") (NOT SHOWN)	AR
27	366575	SHIELD	1
28	101386	PIN, COTTER, 1/8X1 (NOT SHOWN) (MOUNTS IN PIVOT ROD ON P/N 366575, ITEM 27)	1

Chain Case Assembly

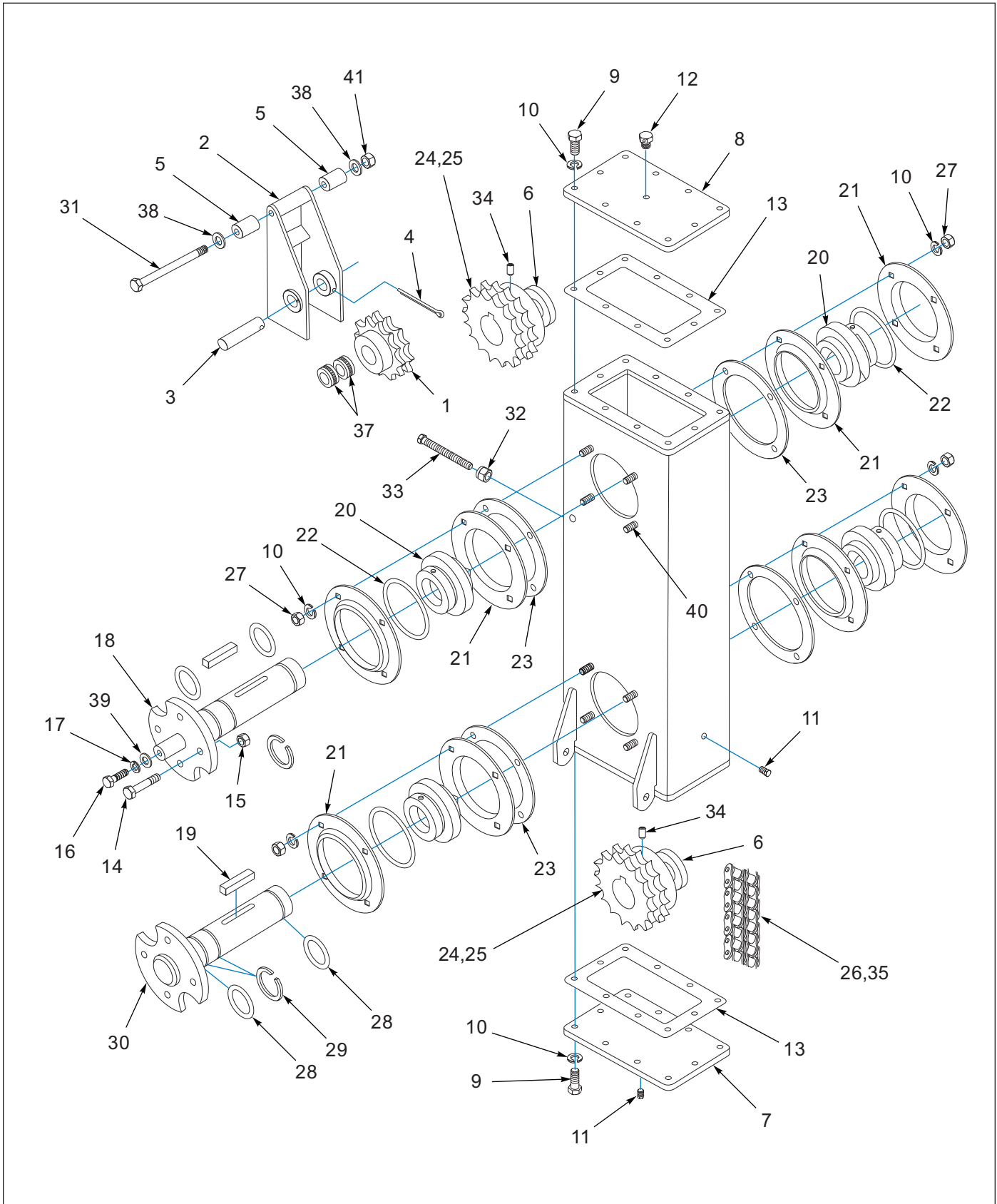


Figure 5-2: Chain Case Assembly

Chain Case Assembly

ITEM	PART NUMBER	DESCRIPTION	QTY
1	366758	SPROCKET FIN BORE	1
2	1A64139	IDLER W ASM	1
3	1D67947	PIN IDLER 1 X 3-5/8	1
4	W932022-4	COTTER PIN 1/8 X 2-1/2	1
5	1D69249	SPCR IDLR 9/16 ID,15/16 LG (SPACER IDLER)	2
6	1D69248	SPCR SPKT,2.200 ID,5/16 THK (SPACER, SPROCKET)	2
7	E100616	PLATE END BLACK	1
8	EPA74009	PLATE WLDMT TOP	1
9	1-654-010055-01	SCR,HX CP 1/2-13UNCX1 GR5	20
10	1-861-010034-13	WASHER, LKG HLCL SPR, 1/2	36
11	W941049	PIPE PLUG 3/8 HEX C	2
12	E11293AGCO	PLUG BREATHER (3/8)	1
13	E11359AGCO	GSKT 6 X 10,1/16 THK (FRAME GASKET)	2
14	W907051-4	CAPSCREW 3/8-16 X 2 GR 8	2
15	1-512-010005-05	NUT, HEX, SLFLKG GRB 3/8-16	2
16	E10602	HCS 7/16-20 NFXI GRADE 2	1
17	1-861-010034-12	WASHER,LOCKING HLC SPG 7/16	1
18	116610	SHAFT WLDMT,INPUT,BLK,D5/10P (INPUT SHAFT)	1
19	E11295AGCO	KEY 1/2 X 2-1/2	2
20	E11381AGCO	ADPTR BRG&COLLAR, 2-3/16ID	4
21	E10905AGCO	FLANGE 6-9/16 OD,4 SQ HOLES	8
22	E11329AGCO	O-RING 4-1/4 OD,3-7/8 ID(3/16)	4
23	E11328AGCO	GASKET FLANGETTE 6 9/16 OD	4
24	E11375AGCO	SPROCKET DBLE #80 16 TOOTH (D10P SPROCKETS, TOP = E11375AGCO, BOTTOM = 11376AGCO) (D5P SPROCKETS, TOP = 11376AGCO, BOTTOM = E11375AGCO)	1
25	E11376AGCO	SPROCKET DBLE #80 22 TOOTH (D10P SPROCKETS, TOP = E11375AGCO, BOTTOM = 11376AGCO) (D5P SPROCKETS, TOP = 11376AGCO, BOTTOM = E11375AGCO)	1
26	7650-57	ROLLER CHAIN #80-2 (57 PITCHES)	1
27	1-512-010007-09	NUT, HEX 1/2-13 GR2 ZP	16
28	E11979	O RING 2-1/8 OD,2 ID(1/16 DIA)	4
29	7064-8	RING RETAINING EXTERNAL	4
30	E20364	SHAFT WLDMT,OUTPUT,BLK,D5/10P	1
31	W908182-4	SCREW 1/2-13X7 HEX HEAD CAP	1
32	1-511-010001-05	NUT HEX JAM 1/2-13	1
33	W909576-4	SET SCREW 1/2-13 X 3 SQ HD CP	1
34	W909902	SET SCREW HDLS 1/2-13 X 1/2	3
35	7223-5	CONN. LINK 80-2 ROLL CHAIN	1
36	E12017	WASHER, BOLT (NOT SHOWN)	18
37	7458-3	NDL BRG 1 ID 3/4 LG,1-1/4 OD (ROLLER BEARING - NEEDLE TYPE)	2
38	1-861-010032-14	WASHER, FLAT 1/2" N ZP/CD	2
39	1-861-010032-15	WASHER, FLAT 1/2 W ZP/CD	1
40	E10747	CARRIAGE SCREW 1/2 X 1 1/2	16
41	1-512-01005-09	NUT,HEX,SLFLKG, 1/2-13 GRB	1

Power Take-Off (PTO) Drive Shaft

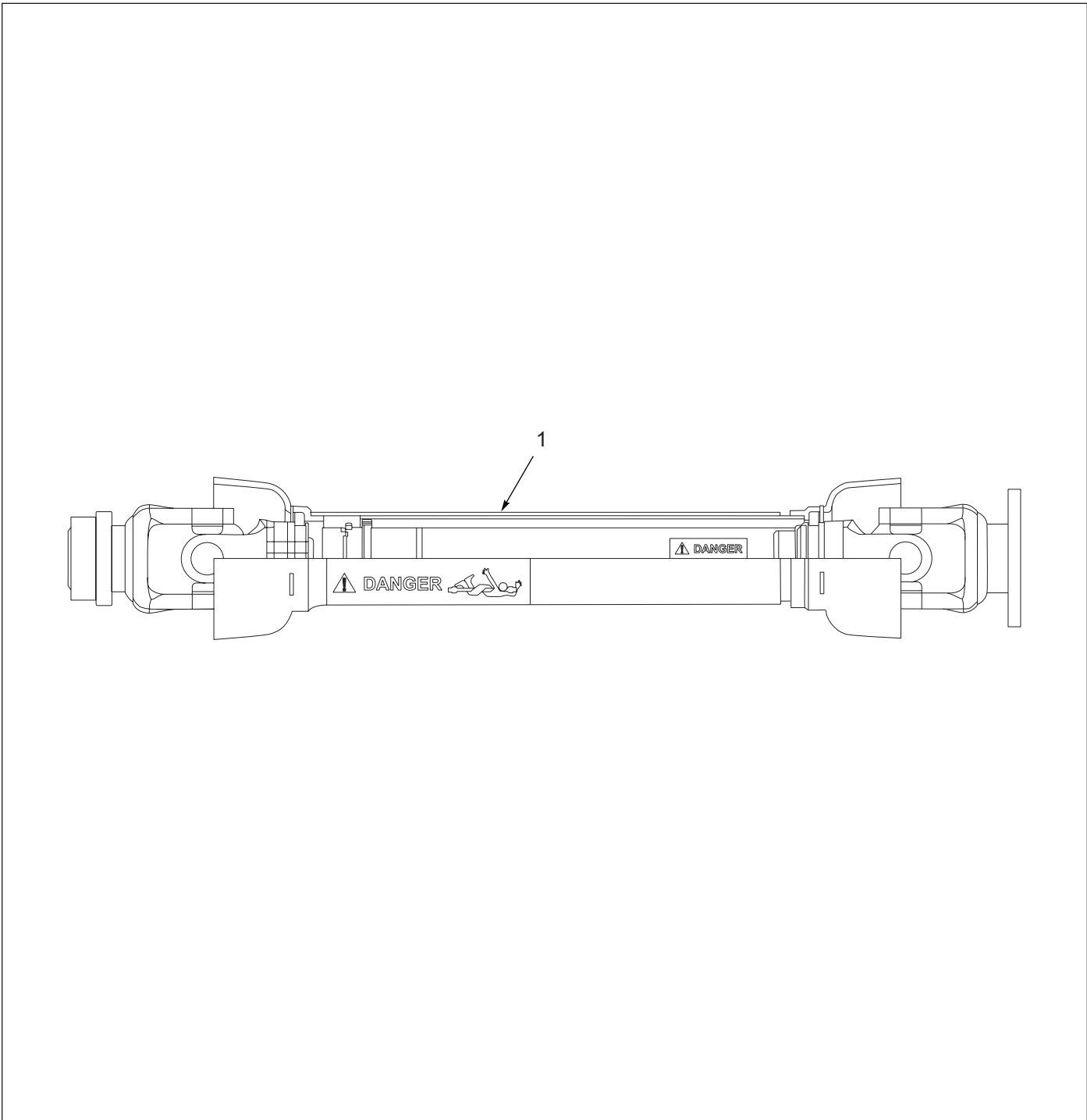


Figure 5-3: PTO Drive Shaft

Power Take-Off (PTO) Drive Shaft

ITEM	PART NUMBER	DESCRIPTION	QTY
1	157856	PTO 540 D5P18A (1-3/8" COUPLER SIZE)	1
1	157169	PTO 1000-21T TRAC YOKE,D10P18 (1-3/8" COUPLER SIZE)	1
1	157168	PTO 1000-20T TRAC YOKE,D10PH18 (1-3/4" COUPLER SIZE)	1
2	165093	PTO REPAIR KIT (NOT SHOWN)	1

Cutter Head Assembly

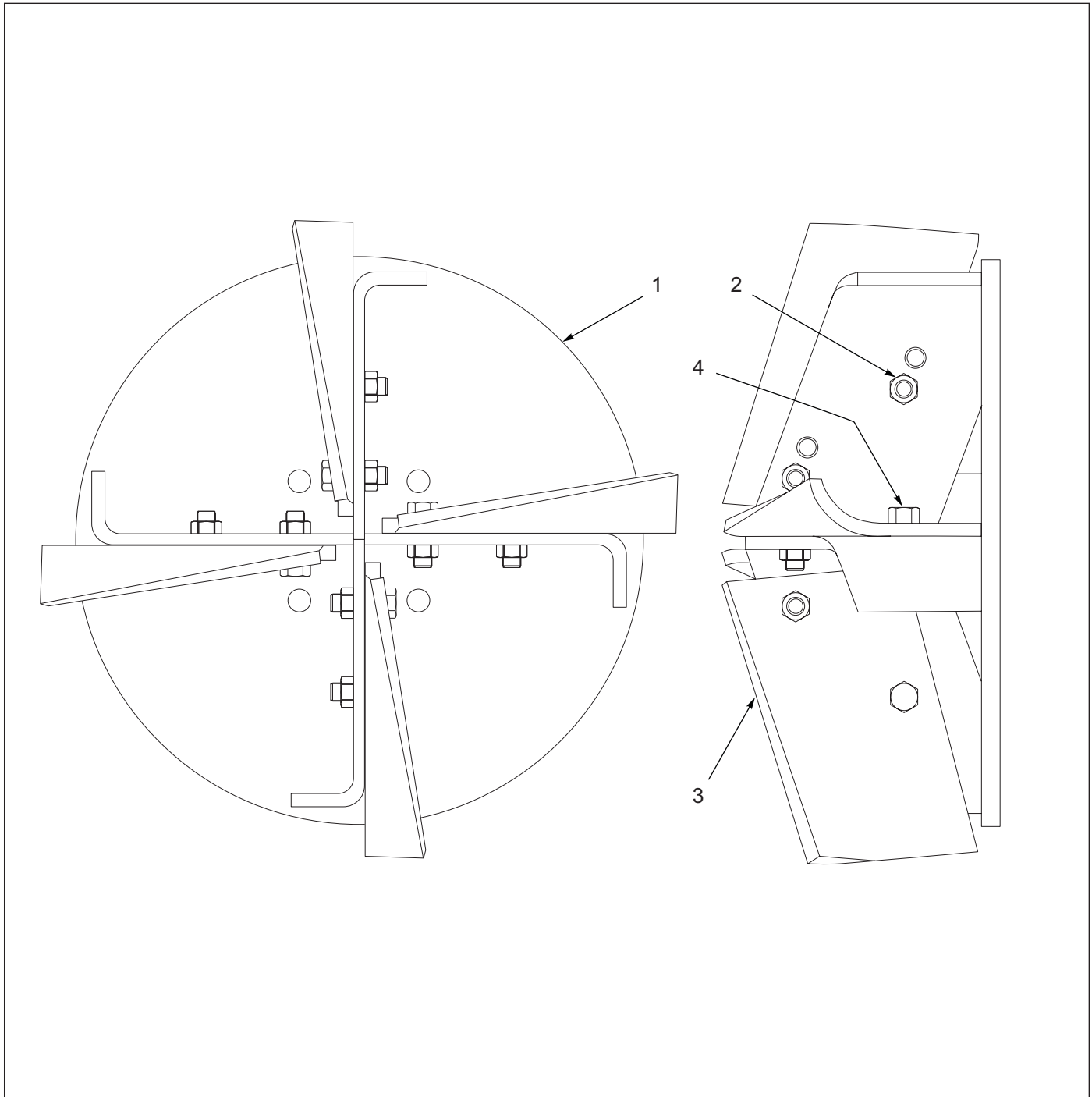


Figure 5-4: Cutter Head Assembly

Cutter Head Assembly

ITEM	PART NUMBER	DESCRIPTION	QTY
	EPA74013	CUTTER HEAD ASSY,BLK,D5P/D10P	1
1	E0938	CUTTER HEAD WELD 16 OD	1
2	E10498	NUT HEX LOCK 1/2-20	8
3	E100662-D	BLADE, 2HOLES, BLACK	4
4	1-654-010056-03	SCREW 1/2-20UNFX1-1/2	8

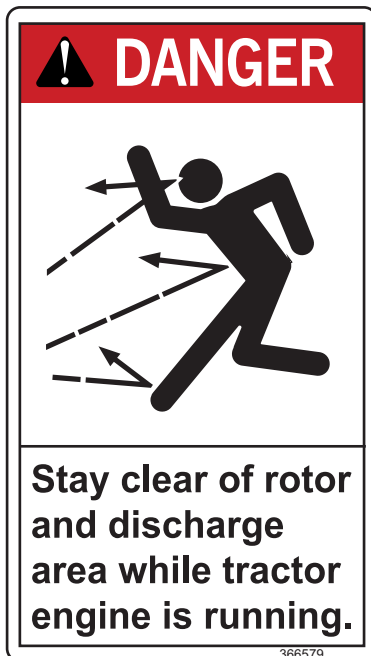
Decals



ITEM 2
017805



ITEM 2
017806



ITEM 3 - 366579



ITEM 4
1-573-01006



ITEM 6
141259



ITEM 5
366578



ITEM 7 - 162616



ITEM 7 - 162617



ITEM 8
2-573-010198



ITEM 9
7169-380

Figure 5-5: Decals

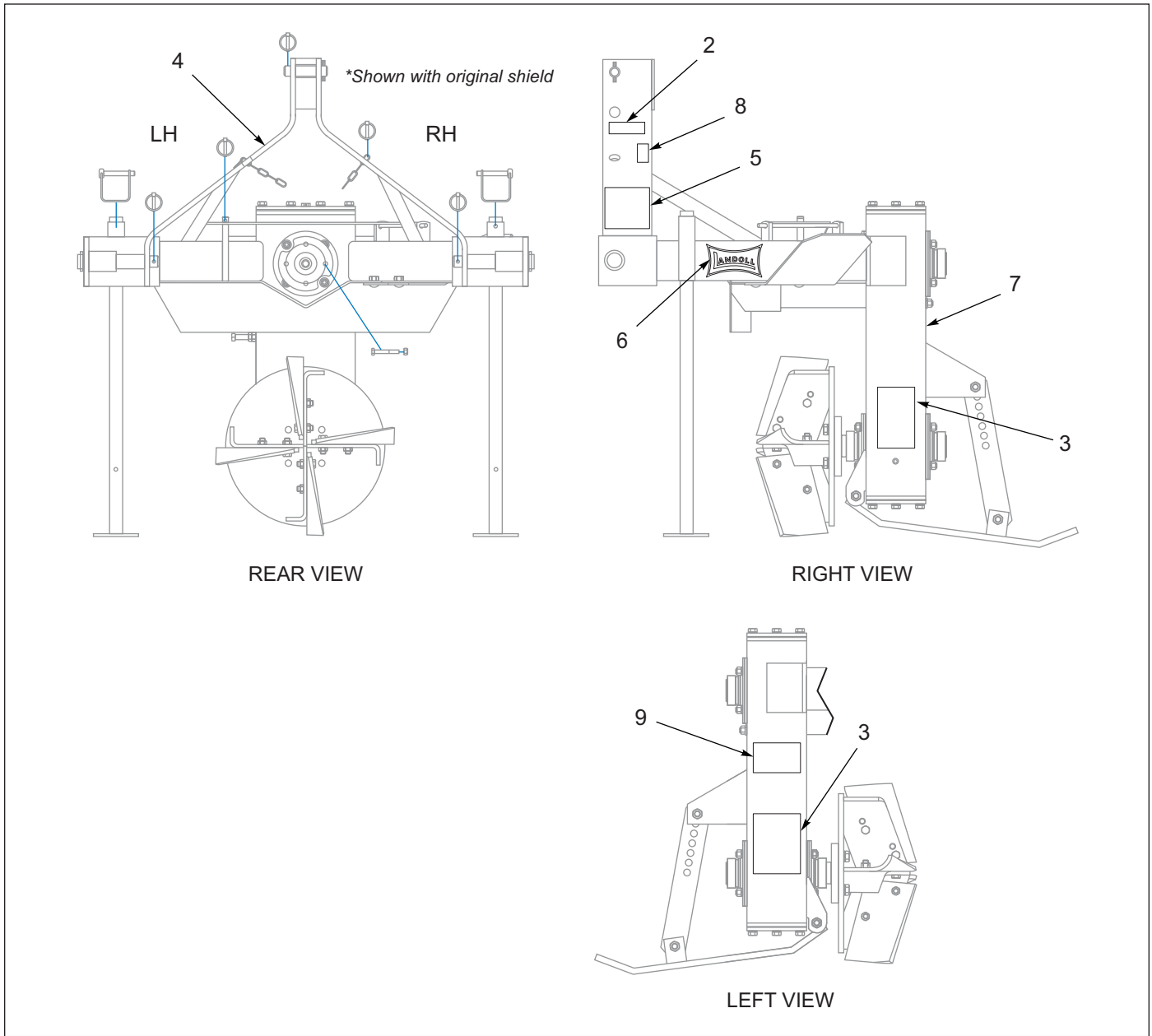


Figure 5-6: Decal Location

Decals

ITEM	PART NUMBER	DESCRIPTION	QTY
1	10036	FASTENER, SERIAL NO. PLATE (HARDWARE FOR ITEM 4)	2
2	017805	DECAL, WARNING (D5P)	1
2	017806	DECAL, WARNING (D10P)	1
3	366579	DECAL, DANGER	2
4	1-573-010006	PLATE, NAME	1
5	366578	DECAL, WARNING	1
6	141259	DECAL, LANDOLL YELLOW	2
7	162616	DECAL, MODEL D5P	1
7	162617	DECAL, MODEL D10P	1
8	2-573-010198	DECAL, MEMBER FEMA	1
9	7169-380	DECAL, CHAIN ADJUSTMENT	1

Glossary

For clarity this glossary of industry standard abbreviations and their definitions are provided. For additional information, see instruction on the inside front cover or the last page of this manual.

A

ASM Assembly

B

BATT Battery
BHSC Button Head Socket Cap
BLK Black

C

CB Carriage Bolt
CONN Connector
CRG Carriage
CTSK Countersunk
CTWT Counterweight
CVR Cover
CYD Cylinder

D

DBL Double
DIA Diameter

E

ENCLSD Enclosed

F

FHCS Flanged Head Cap Screw
FHHCS Flanged Hex Head Cap Screw
FL OR FLG Flange
FLT Flat

G

GA Gauge

H

HHCS Hex Head Cap Screw
HCS High Carbon Steel
HD Head
HLCL Helical
HCSKT Hex Socket
HSFC Hex Socket Flat Countersunk
HYD Hydraulic

I

ID Inside Diameter

L

LH Lefthand
LKG OR LOCK Locking
LWR Lower

M

MANF Manifold
MNT Mount

N

NRW Narrow
----- Not Serviced Separately

O

OD Outside Diameter
OHG Overhead Guard
ORFS OR ORS O-Ring Seal
ORP OR ORB O-Ring Boss

P

P-STEER Power Steering
PTFE Polytetrafluoroethylene (Teflon)

GLOSSARY

R

RH Righthand
RND Round

S

SER Series
SHCS Socket Head Cap Screw
SHLD Shield
SKT Socket
SLFLKG Selflocking
SOC Socket
SPDT Single Pole Double Throw
SPR Spring
SQ Square
SRTD Serrated
SSCR Setscrew
SST Stainless Steel
STD Standard

U

UPR Upper

W

WHL Wheel
WLD OR WLDMT Weldment

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W909576-4 5-4
W909902 5-4
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Instructions for Ordering Parts

**** Repair parts must be ordered through an Authorized Dealer ****

DEALER INSTRUCTIONS FOR ORDERING PARTS FROM LANDOLL PARTS DISTRIBUTION CENTER

Phone #: 800-423-4320 or 785-562-5381

Fax #: 888-527-3909

Order online: dealer.landoll.com

IDENTIFICATION PLATE

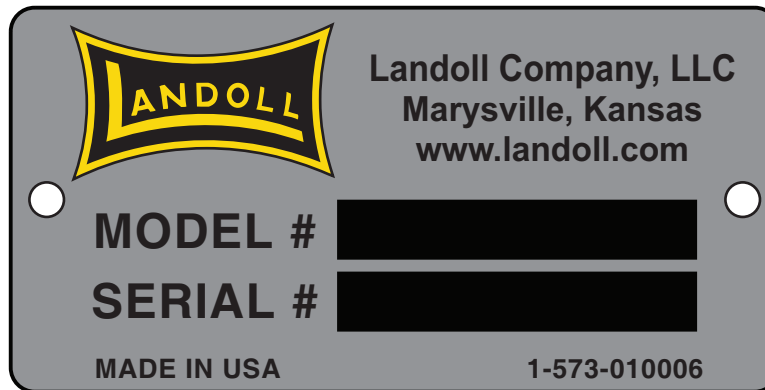
The Identification Plate, which list the model and serial number of the equipment. It is located on the right side of the frame.

SERIAL NUMBER NOMENCLATURE

The serial number for the Power Ditcher is located on the identification plate. The following information will help decode the Landoll serial number:

30D2200100 = xxmysssss

xx	= model series (i.e. "30" for all Agriculture Seeders)
m	= month of manufacture (ex. "D" means April. The letter "I" is not used.)
yy	= last 2 digits of the year manufactured (ex. "22" means 2022)
sssss	= Sequential number used to track warranty and service information



Identification Plate

Manuals for Power Ditcher D5P and D10P

Manual Number	Manual Type
F-1154	Operator's and Parts Manual

Document Control Revision Log:

Date	Form #	Improvement(s): Description and Comments
03/2001	F-351-0301	Operator's Manual
02/2002	F-353-0202	Parts Manual
04/2011	F-351-0411	Operator's Manual
04/2011	F-353-0411	Parts Manual
04/2023	F-1154-2304	Revise Manual, Combined Operator's and Parts Manual, New Template *Revised Format "Year/Month"



Intertek

Equipment from Landoll Company, LLC is built to exacting standards ensured by ISO 9001 registration at all Landoll manufacturing facilities.

Model D5P/D10P

Operation's and Parts Manual

Re-Order Part Number F-1154

LANDOLL COMPANY, LLC

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Marysville, Kansas 66508

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