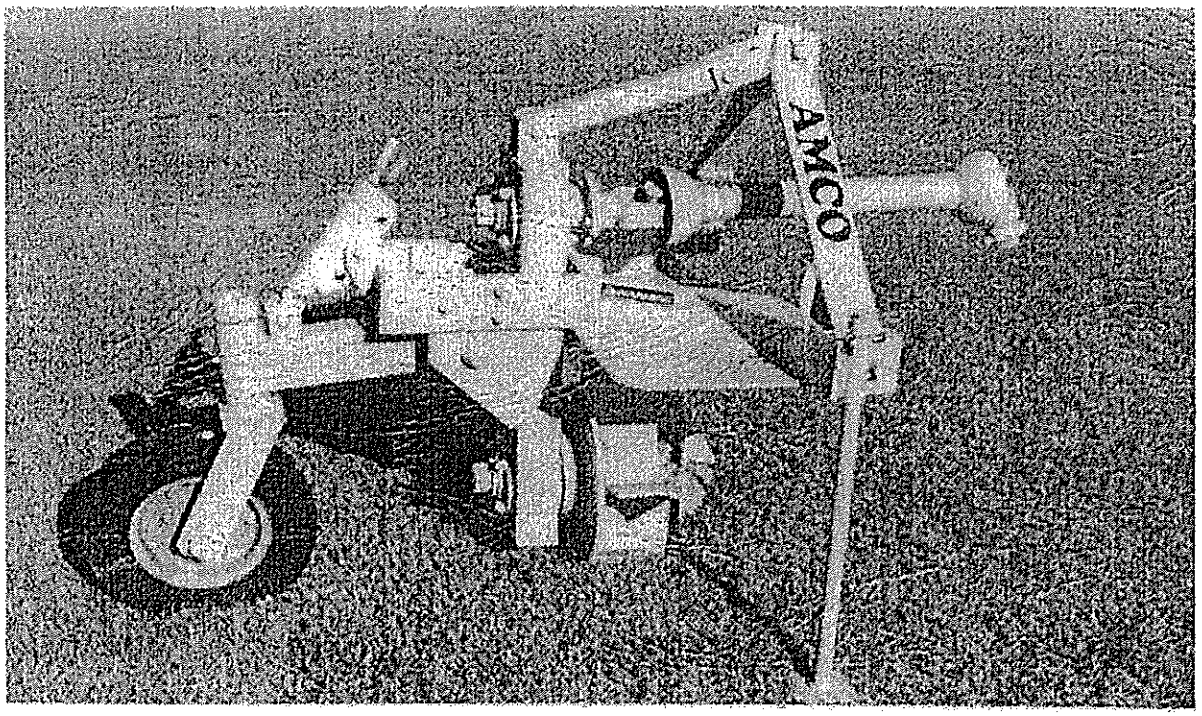
AMCO

PARTS CATALOG

OPERATION * MAINTENANCE * SET-UP INSTRUCTIONS FOR

MODEL PD2-18 AMCO DITCHER



AMCO MANUFACTURING, INC.
800 S. Industrial Parkway * P.O. Box 1107 * Yazoo City, Mississippi 39194
Phone (662) 746-4464, Fax (662) 746-6825, www.amcomfg.com

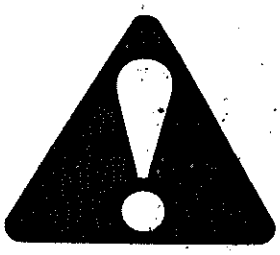
To the Purchaser:

The care you give your new AMCO PD2-18 Power Ditcher will greatly determine the satisfaction and service life you will obtain from it. By observing the instructions and suggestions in this manual, your AMCO PD2-18 Power Ditcher will serve you well for many years. Please furnish this manual to new owners when the Power Ditcher is sold.

As an Authorized AMCO Dealer, we stock Genuine AMCO Parts, which are manufactured with the same precision and skill as the original equipment. Use only approved replacement parts. Our factory-trained staff is kept fully informed of the most efficient methods of servicing AMCO equipment and is ready and able to assist you.

If you should require additional aid or information, contact us.

YOUR AUTHORIZED AMCO DEALER



Look for this symbol to point out important safety precautions. It means ATTENTION! Become alert! Your safety is involved.

To insure efficient and prompt service, please provide the model number and serial number of your AMCO Power Ditcher in all correspondence or contacts.

PRINTED IN USA

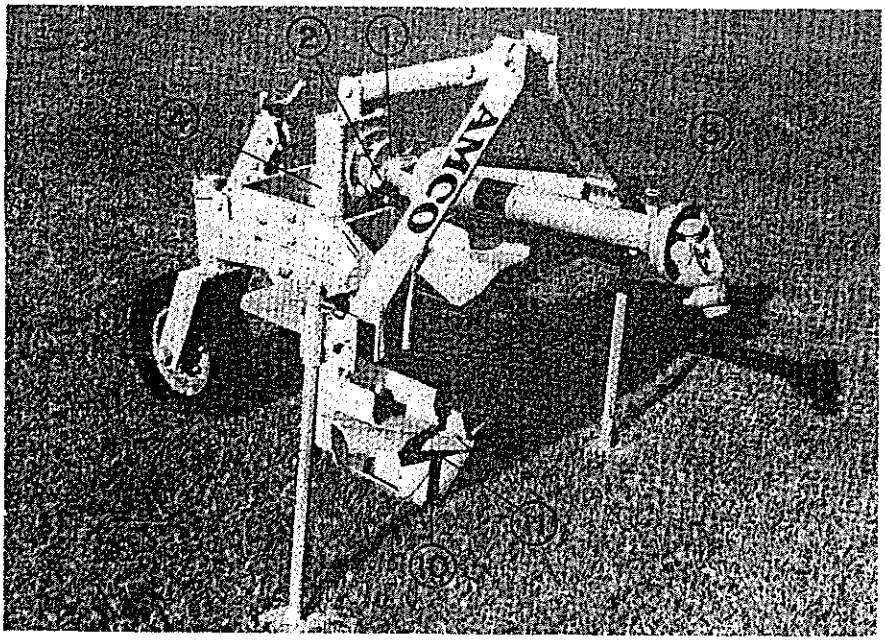
ISSUED AUGUST 1976

Take a moment to meet your new AMCO PD2-18 Power Ditcher.

You will find a machine designed by engineers with imagination as well as intimate knowledge of today's field requirements and working conditions. You will find a machine built by conscientious craftsmen who know what you expect to get out of your equipment and, hence, put the various parts and components together to earn your approval and assure you of satisfaction when you use the machine.

You will find features in this AMCO Power Ditcher not available in any other equipment of a similar nature. AMCO **means** QUALITY!

Please examine the features of this AMCO PD2-18 Power Ditcher that will give you performance in the field.



1 . . . . . Shear Flanges

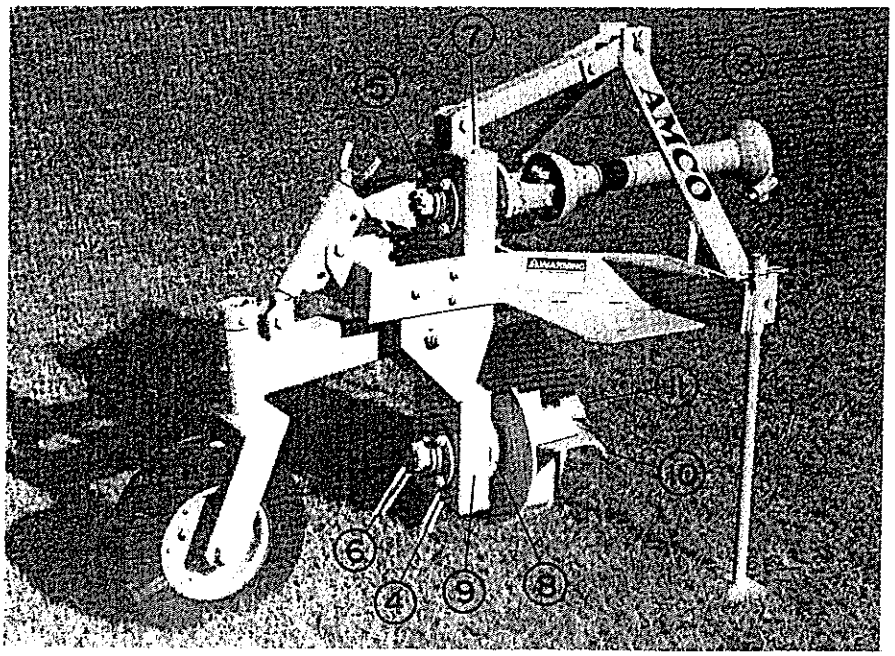
2 . . . . . Hardened Steel Bolts

3 . . . . . Shielded Universal Drive Shaft

4 . . . . . Drive Case

5 . . . . . Bearings and Tri-Ply Seals

6 . . . . . Alloy Steel Shafts



7 . . . . . Drive Case Breather

8 . . . . . Anti-Wrap Ring

9 . . . . . Drive Sprockets

10 . . . . . High Carbon Steel Blades

11 . . . . . Hard Surfaced Cutting Edges

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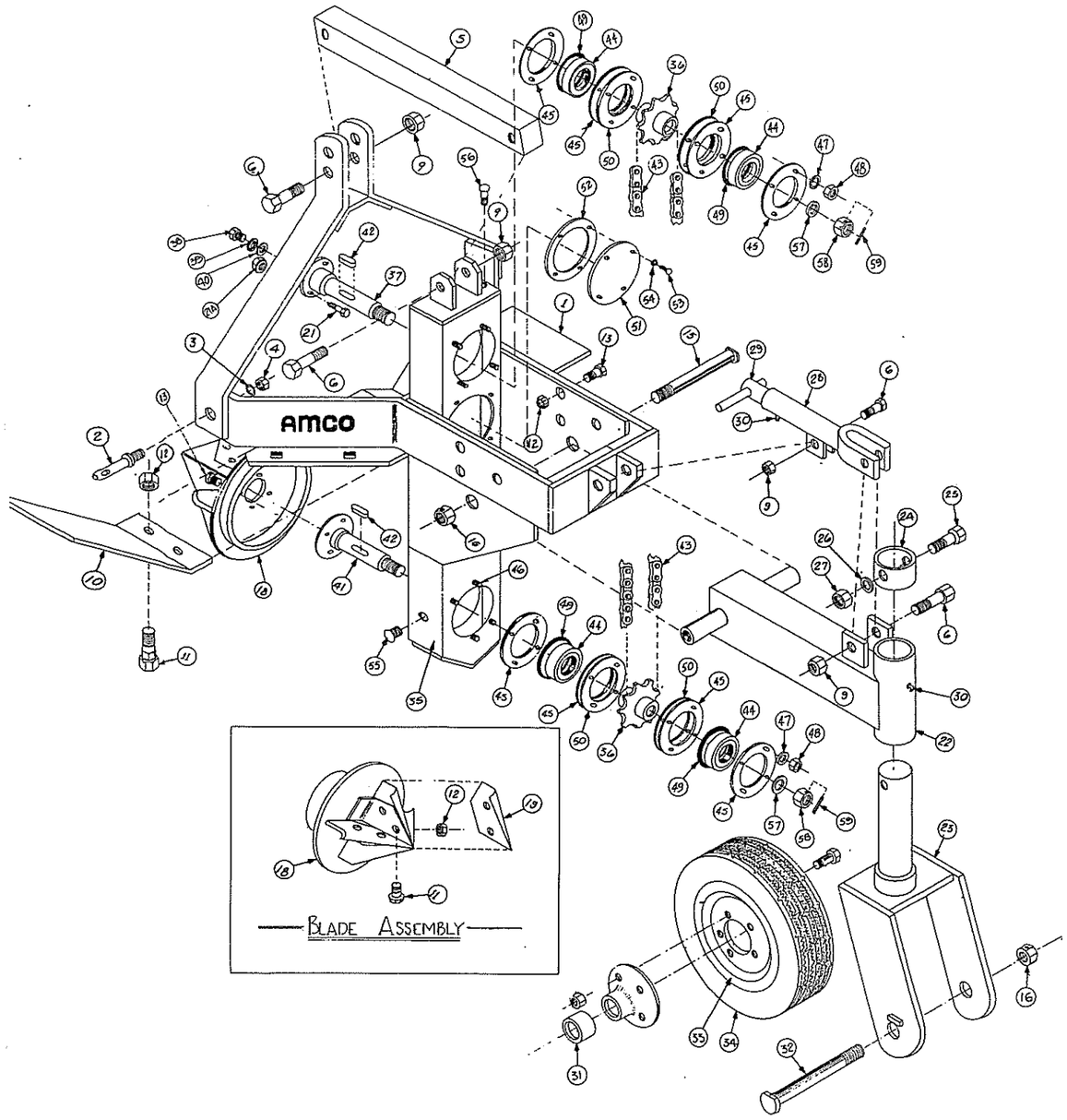
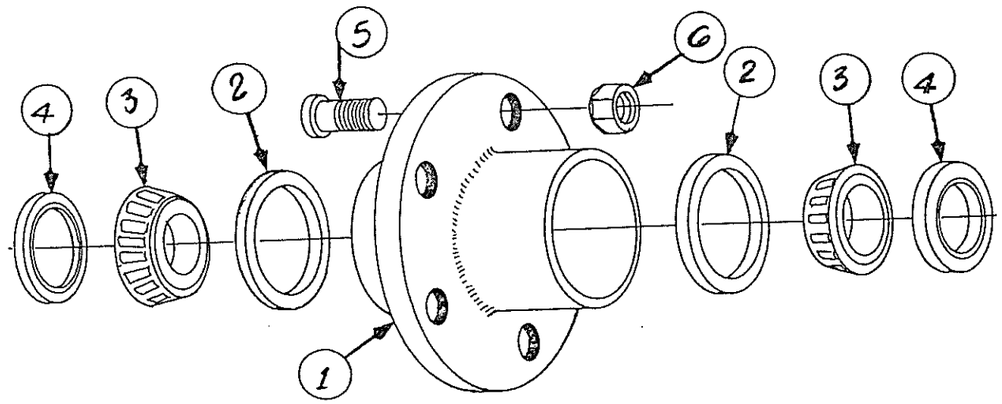
POWER DITCHER



AMCO MODEL PD2-18
POWER DITCHER

Ref. No.	Part No.	Description	No. Required PD-18	No. Required PD2-18
1	022	**Frame** — Three Point Hitch	1	—
1	0143	**Frame** — Three Point Hitch	—	1
2	10339	**Pin** — Link 7/8 NF	2	—
3	10391	**Washer** — Lock 7/8	2	—
4	10406	**Nut** — Hex 7/8 NF	2	—
2	8142	**Pin** — Hitch (lower)	—	2
	6021	**Bushing** — not shown	—	2
5	023	**Post** — Back	1	—
5	8424	**Post** — Back	—	1
6	10851	**Bolt** — Hex 5/8 x 3-1/2 NC, PL	4	4
9	10299	**Nut** — Lock 5/8 NC, PL	4	4
10	8079	**Shield** — Dirt	1	1
11	10708	**Bolt** — Carr 1/2 x 1 NC	2	2
12	10395	**Nut** — Lock 1/2 NC, PL	8	8
13	10785	**Bolt** — Hex 1/2 x 1-1/2 NC, PL	6	6
15	024	**Bolt** — Pivot	1	1
16	10868	**Nut** — Lock 1" NC, PL	1	1
18	025	**Hub** — Blade	1	1
19	8080	**Blade**	4	4
21	10711	**Bolt** — Hex 5/16 x 1-3/4 NF, GR8	2	2
21A	10775	**Nut** — Lock 5/16 NF, PL	2	2
22	026	**Swivel** — Depth Gauge	1	1
23	027	**Swivel** — Wheel	1	1
24	8081	**Retainer Collar**	1	1
25	10773	**Bolt** — Hex 3/8 x 3-1/2 NC	1	1
27	10509	**Nut** — Lock 3/8 NC, PL	1	1
28	0385	**Leg** — Adjusting	—	1
29	1584	**Sleeve** — Guide	1	—
29	0387	**Sleeve** — Guide	—	1
30	11081	**Fitting** — Grease 5/16 Drive in	2	2
31	8109	**Spacer**	2	2
32	028	**Spindle**	1	1
33	10448	**Wheel** (Pair)	1	1
34	10476	**Tire** (laminated)	1	1
35	1928	**Housing** — Chain Drive	1	1
36	1929	**Sprocket** — Upper & Lower	2	2
37	029	**Shaft** — Input	1	1
38	10602	**Bolt** — Hex 7/16 x 1 NF	1	1
39	10619	**Washer** — Lock 7/16	1	1
40	10657	**Washer** — 7/16 Special	1	1
41	030	**Shaft** — Out Put	1	1
42	AI642	**Key** — 1/2 sq. x 1-1/4 Lg.	2	2
43	10746	**Chain** — #80 1" Pitch 58" STD	1	1
44	10771	**Bearing**	4	4
45	10707	**Flangette**	8	8
46	10747	**Bolt** — Carriage 1/2 x 1-1/4 NC Rib	16	16
47	10098	**Washer** — Lock 1/2	16	16
48	10178	**Nut** — Hex 1/2 NC	16	16
49	7864	**Ring** — O	4	4
50	7862	**Gasket** — Flangette	4	4
51	7861	**Plate** — Inspection	1	1
52	7865	**Gasket** — Inspection Plate	1	1
53	10944	**Bolt** — Hex 3/8 x 3/4 NF, PL, GR5	4	4
54	11070	**Washer** — Lock 3/8	4	4
55	AI115	**Plug** — Pipe 3/8 Socket HD	2	3
56	AI165	**Breather**	1	2
57	10077	**Washer** — Cut 1-1/4	2	4
58	10179	**Nut** — Hex 1-3/8 NF Slotted	2	2
59	10772	**Pin** — Roll 1/4 x 2	2	2
	8145	**Pin** — Hitch (upper) not shown	1	1
	8193	**Bushing** — (upper) not shown	1	1
	10317	**Pin** — Klik 1/4 — not shown	3	3
	0145	**Stand** — Parking — not shown	2	2

AMCO MODEL PD2-18 POWER DITCHER
HUB ASSEMBLY



HUB ASSEMBLY

Ref. No.	Part No.	Description	No. Reqd.
1	10408	**Hub** — w/2 Cups and 5 Hub Bolts	1
2	10409	**Cup** — Inner and Outer	2
3	10410	**Cone** — Bearing Inner and Outer	2
4	10411	**Seal** — Grease	2
5	10412	**Bolt** — Hub 7/16 x 1-1/4 NF	5
6	10413	**Nut** — Hub 7/16 NF	5

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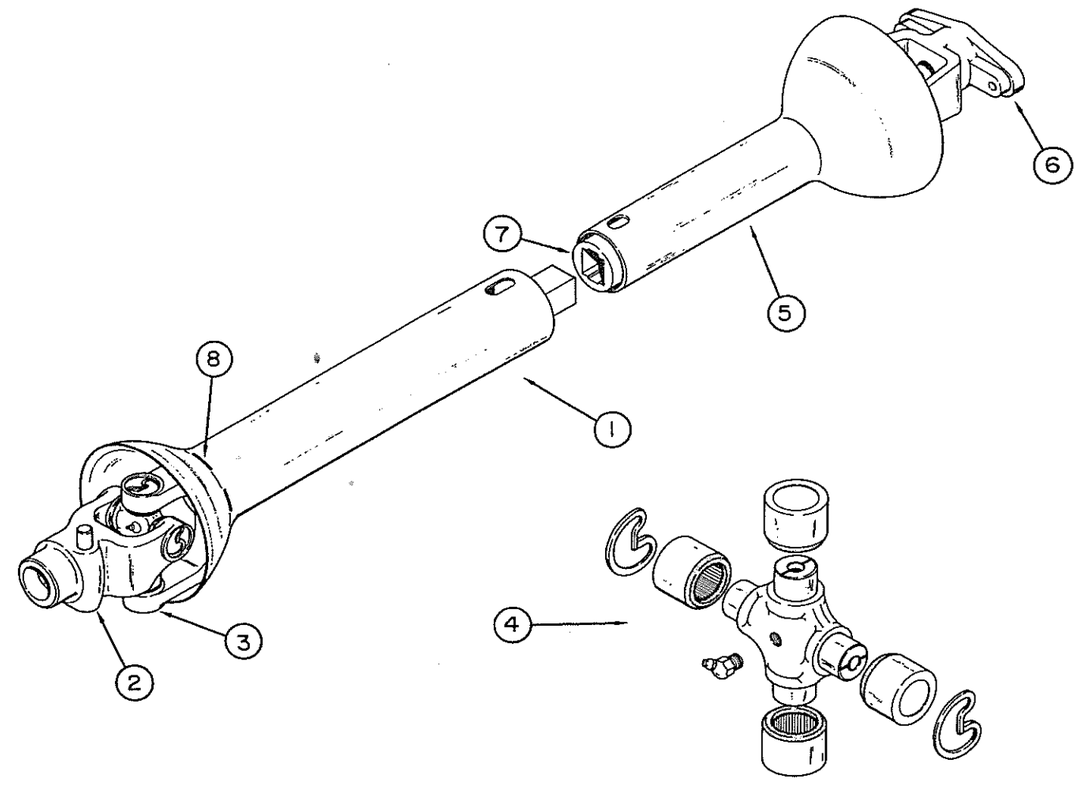
AMCO MODEL PD2-18 POWER DITCHER
UNIVERSAL DRIVE SHAFT



UNIVERSAL DRIVE SHAFT

Ref. No.	Part No.	Description	No. Reqd.
1	AI-368M	**Shaft** — Drive — Male End Complete	1
2	AI-58	**Yoke** — Quick Disconnect 1-3/8"	1
3	AI-364	**Yoke & Square Shaft**	1
4	AI-56	**Kit** — Cross Repair	2
5	AI-368F	**Shaft** — Drive — Female End Complete	1
6	AI-89	**Yoke and Flange**	1
7	AI-363	**Yoke and Tube**	1
8	AI-365	**Kit** — Shield Bearings and Snap Rings	1
	AI-368	**Complete Drive Shaft**	1

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AMCO PD2-18 POWER DITCHER DECALS

(1)

AMCO

(2)

⚠WARNING

LOWER OR BLOCK HYDRAULICALLY OR MECHANICALLY ELEVATED COMPONENTS.
BEFORE SERVICING OR WHEN LEAVING THE EQUIPMENT

(3)

CAUTION

This Power Ditcher and the Universal Drive Shaft are designed for a maximum of 60 PTO Horse Power at 540 RPM. Excessive horse power will cause excessive maintenance cost.

(4)

⚠WARNING

1. ALLOW NO RIDERS ON IMPLEMENT OR TRACTOR.
2. OPERATE AT SAFE DISTANCE FROM BY-STANDERS.
3. KEEP ALL SHIELDS IN PLACE.
4. BE SURE POWER TAKE OFF IS DISENGAGED AND HAS STOPPED ROTATING BEFORE DISMOUNTING FROM TRACTOR.

DECALS

Ref. No.	Part No.	Description	No. Reqd.
1	10948	Decal — AMCO	1
2	11233	Decal — Warning	1
3	10998	Decal — Caution	1
4	10949	Decal — Warning — PTO	1

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Features and Uses

SHEAR FLANGES — The heavy duty 35-R Universal Drive Shaft is connected to the #80 precision roller chain drive housed inside the steel tubing case. All four (4) bearings in the chain drive housing are the same size—1-15/16" diameter—and are guarded by Tri-Ply seals. Both the drive line and the cutter head are mounted on alloy steel shafts. Bearings and shafts within the drive housing are lubricated by continuous oil bath while the equipment is operating. In addition, an anti-wrap ring protects the bearing behind the cutter head. Both sprockets are heat treated for long life. The cutter head blades are made of high carbon steel with hard surfaced cutting edges.

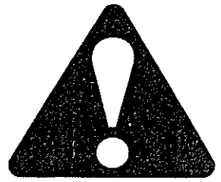
The PD2-18 POWER DITCHER is built to work with tractors of 35 to 60 HP, and is designed for a PTO drive running at 540 RPM.

Use on tractors with over 60 HP will cause excessive maintenance cost!!

YOUR PD2-18 WILL SERVE YOU many ways. You may use it for draining excess standing water...for improving run-off in row crops...for making shallow trenches for laying irrigation pipe...or for building fire lanes. Folks have used PD2-18's like yours for a great many purposes. However you plan to use your AMCO POWER DITCHER, it will serve you EASILY, QUICKLY, DURABLY, INEXPENSIVELY...PROFITABLY!

You will find the AMCO PD2-18 POWER DITCHER is a fine tool for the purposes for which it was built. It will serve you well in many ways if your treat it properly.

Safety Suggestions



Never ride or permit others to ride on the tractor or on the POWER DITCHER.

Only one person—the operator—should be permitted on the tractor platform while tractor and POWER DITCHER are in operation.

Never clean, adjust, or lubricate a POWER DITCHER that is in motion.

All hydraulically elevated components must be blocked or lowered to prevent accidents when adjusting or lubricating the POWER DITCHER. Always lower the POWER DITCHER when it is to stand idle.

By-standers should stand clear of discharge when POWER DITCHER is in operation.

When working on POWER DITCHERS, care should be exercised in handling or tightening bolts near blades to avoid injury.

Always place the POWER DITCHER on a level area when disconnecting the POWER DITCHER from the tractor. Always use the two parking stands.

Never stand between a tractor and machine when hitching unless all the controls are in neutral and the brakes are locked.

Always keep all shields in place.

Remember, a careful operator is always the best insurance against an accident.

OSHA requires that as a farm employer you meet certain safety requirements. Become familiar with and comply with those requirements. Be certain anyone who operates this machine understands all safety related items. If this machine is repainted, be certain new decals are ordered. Decals pertaining to personal safety must be replaced.

Set-Up and Assembly Instructions

The Model PD2-18 Power Ditcher is completely assembled at the factory, except for the universal drive shaft which is wired to the "A" frame. Also a small bag contains a breather cap for the drive case and two (2) heat treated shear bolts 5/16 x 1-3/4".

To assemble the drive shaft, remove the male portion of the drive shaft from the "A" frame and attach it to the female portion.

Thoroughly clean the end of the Drive Shaft and attach it to the input shaft of the Power Ditcher with a 7/16" x 1" Hex Bolt, Lock Washer and Special Flat Washer and with two 5/16" x 1-3/4" Shear Bolts and Lock Nuts.

Install the breather cap in oil filler hole located on top of chain case.

The deflector wing on the left side of your Power Ditcher was mounted for maximum spreading of dirt when it was shipped. You can reverse this deflector to tilt it down, to pile the dirt in a neat windrow, close to the ditch, ready for easy back filling over irrigation pipe and similar uses.

Lubrication

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 (1) quart of Kendall SCL-SAE 80-90 oil or equivalent. A similar grade should be used for replacement.

Lubricate the Drive Shaft with a good grade of Lithium Soap Base Grease every 25 to 50 hours of operation as shown in Figure 1. Remove the male end of the Drive Shaft and pack tube with a generous amount of grease.

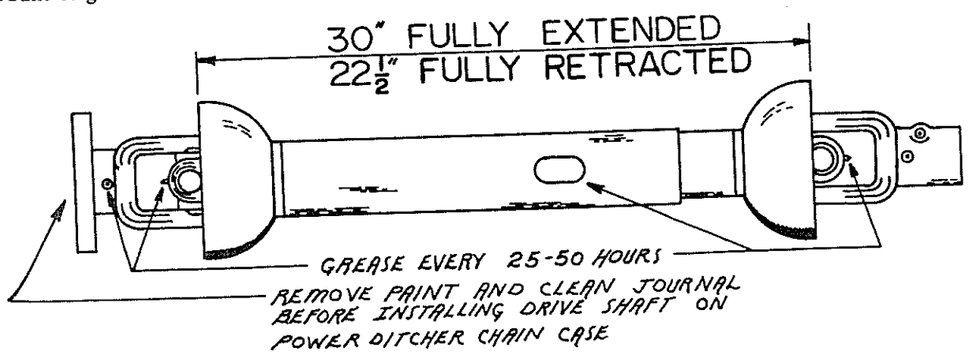


FIG. 1

Attaching and Operation

This Power Ditcher is set up for a Category I or II hitch. Careful attention should be given to mounting the AMCO Power Ditcher to the tractor. The three tractor lift links should be connected to the ditcher with the connecting pins. The Universal Drive Shaft should be connected to the tractor PTO Shaft by slipping the shaft forward until the Quick Disconnect Pin slips into the groove on the tractor PTO Shaft. Periodic cleaning and a few drops of oil on the splined surfaces and on the Quick Disconnect Pin will simplify this operation. Be careful, the Universal Drive Shaft could slip off the tractor PTO Shaft if the Quick Disconnect Pin is not properly seated.

The Parking Stands should be raised and pinned in the raised position. The ditcher should be slowly raised and lowered to check the drive shaft length. At least 4" of the square shaft should be engaged in the tubular portion of the Universal Drive Shaft. Check the Drive Shaft in the fully retracted position to make sure it is not binding and will turn freely.

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 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.

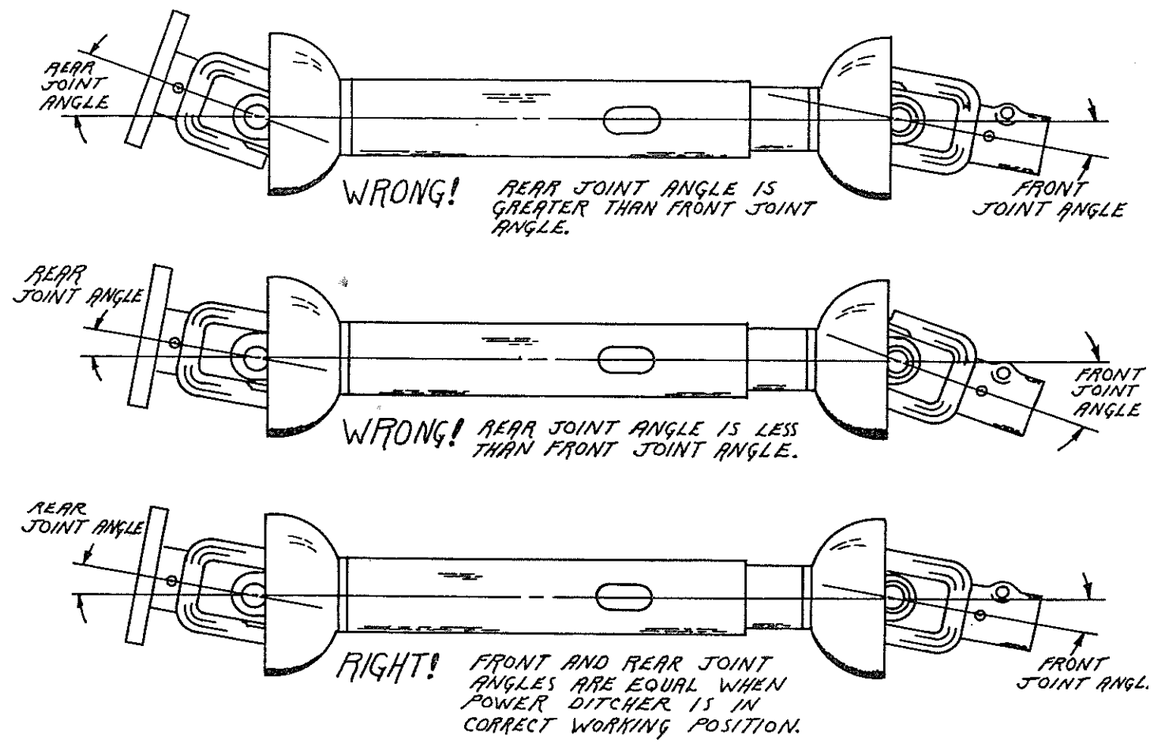


FIG. 2

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

The gauge wheel should be initially set with the bottom of the tire about 1/2" to 1" above the bottom of the blades. This will allow the Ditcher to reach normal cutting depth after a few feet of forward travel. The gauge wheel should then be adjusted as required to hold a uniform cutting depth.

The ditcher should be lowered slightly before engaging the tractor PTO Shaft. The PTO should not be engaged with the ditcher blades resting on the ground. The sudden shock of starting with the blades on the ground will cause Drive Shaft, Shear Bolt, and Chain failures. After the blades start rotating the tractor engine RPM should be set for a 540 RPM PTO speed. The ditcher should be lowered onto the ground and the tractor driven forward. The speed and depth should be matched to the soil conditions. In wet or loose

soil the ditcher will cut a fairly deep ditch at 2 to 2-1/2 MPH. In dry soil or hard soil the travel speed must be greatly reduced. Cutting depth must also be reduced. It may be necessary to make two or more passes to obtain deeper water furrows. In general, keeping engine RPM set for proper PTO speed and avoiding sudden shock loads will greatly reduce down time and field failures. The ditcher should never be raised to maximum height with the PTO engaged. Always reduce engine RPM and raise the Power Ditcher to about 50% of the maximum height while turning.

Maintenance Instructions

I. Daily or Every Ten [10] Hours of Operation:

1. Visually check chain case for oil leaks.
2. Visually inspect for loose or missing bolts.
3. Inspect for loose or damaged blades.
4. Visually inspect entire POWER DITCHER for worn, loose, damaged or missing parts.

II. Weekly or Every Fifty [50] Hours of Operation:

1. Check chain case oil level. Use a good grade of clean 90 weight oil when adding oil.
2. Grease universal drive shaft and depth gauge adjusting screw. Use a good grade of clean No. 2 lithium soap base grease.

III. Every Season or Every 250 Hours of Operation:

1. Clean and repack bearings in depth gauge wheel. Use a good grade of clean wheel bearing grease. Inspect for worn or damaged parts. Replace all worn or damaged parts.
2. Remove oil from chain case and flush case with kerosene or diesel fuel to remove contamination. Replace oil with a good grade of clean 90 weight oil.
3. Inspect chain, sprockets and bearings for wear. Replace worn or damaged parts.
4. Inspect universal drive shaft for worn or damaged parts. Replace worn or damaged parts.
5. Inspect blades for wear. Repair or replace blades if worn or damaged.
6. Thoroughly inspect entire POWER DITCHER for missing, worn or damaged parts. Repair or replace these parts during the "off-season" to assure dependable, trouble-free performance during the rush season.