

THE
BARRETO
MODEL 912
HYDRAULIC TRENCHER

CONGRATULATIONS!

You are now the proud owner of the BARRETO Model 912 trencher. Please take a moment of your time to look over the following information. Familiarize yourself with the trencher, its characteristics, and method of operation. Pay particular attention to the safety and operating instructions.

If you have any questions or need any replacement parts in the future, please contact us at your convenience. Our toll-free phone number, fax and email are listed below.

THANK YOU for your patronage and confidence in BARRETO equipment.

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912 TRENCHER ASSEMBLY INSTRUCTIONS

1. Remove trencher from shipping crate.
2. Install boom onto boom pivot/mount. Push boom on as far as it will go. Be sure adjuster screw is backed out.

SERVICE INFORMATION

1. Your trencher should arrive with 10 gallons of hydraulic fluid in the tank. Check reservoir level using sight glass on the right side of the tank. If required, add to reservoir with tractor transmission hydraulic oil. (Shell DONAX TD FLUID or comparable.)
2. Recheck oil level after trencher has been run and oil has circulated through wheel and chain motors. Routinely check level thereafter.
3. Change hydraulic oil filter after the first 50 hours of use. Change it every 200 hours thereafter.
4. Add 1 quart of hydraulic oil to reservoir with each filter change.
5. Check all hydraulic fittings for leaks and tighten if necessary.
6. The grease zerk on chain shaft housing should be greased after every 4 to 8 hours of use. The grease zerk in the front wheel should be greased after every 8 hours of use.
7. Grease zerks on cylinder rod end and boom pivot should be greased daily.
8. Grease zerks on each side of the boom cylinder and on front wheel hub should be greased once a week
9. Grease zerks on the wheel hubs and hub lock screws should be greased and freewheeled once a week or so, depending upon free wheel use.

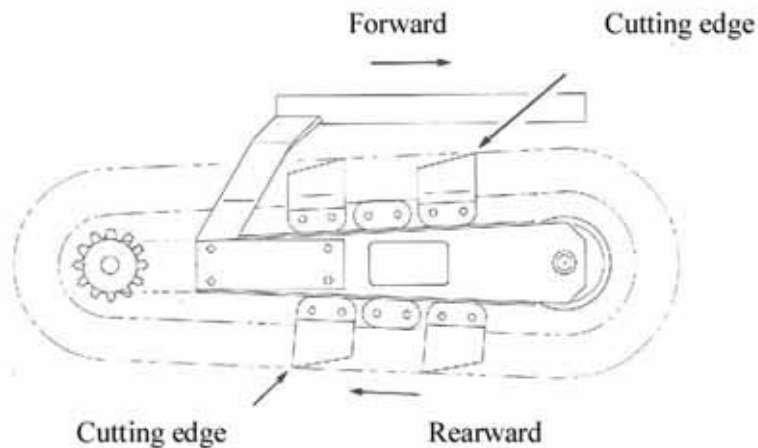
(See page 10 for illustrations of lubrication points.)

IMPORTANT: The engine on the Barreto trencher is normally serviced prior to shipping. However, shipping regulations may prohibit shipping with fuel or oil in the machine. Check levels and add oil and fuel as required before starting engine. Service engine according to the engine manual before starting.

WARNING: Running the trencher without hydraulic oil will cause serious damage to the hydraulic pump. **INSURE THAT THE RESERVOIR OIL LEVEL IS TO THE SIGHT GLASS BEFORE STARTING THE MACHINE.**

CHAIN INSTALLATION

1. Slide chain under sprocket, with teeth in the correct cutting direction. Properly installed, the cutting edges of the chain will face forward on the top of the boom and rearward on the bottom of the boom (see diagram below).
2. Push digging boom control lever forward to lower boom onto the chain.
3. Wrap chain around boom and sprocket. Install chain master link or link pin.
4. Use boom adjuster screw to tighten chain. Chain should have enough slack to allow approximately 1" to 2" of space between middle of boom and chain when boom and chain are straight out in a horizontal position.
5. Tighten adjuster screw locknut.



912 TRENCHER OPERATING INSTRUCTIONS

READ SAFETY INSTRUCTIONS BEFORE OPERATING!

Be sure that the engine oil, fuel and hydraulic oil are at proper levels before starting the engine.

STUDY AND UNDERSTAND CONTROLS BEFORE BEGINNING OPERATION.

1. **FREE WHEELING HUBS:** To engage either hub, turn the lock pin handle in (clockwise). This allows the spring-loaded pin to engage. Repeat for the other wheel. Push the trencher a bit if necessary until each pin finds a hole to drop into. The hubs are now locked. Disengaging one hub makes it much easier to turn the trencher when transporting under power.
2. **ENGINE IGNITION:** Must be in ON position to start the engine. Move to OFF position to stop the engine.
3. **ENGINE THROTTLE:** Controls engine speed. Operate at full throttle.
4. **CLUTCH LEVER:** Squeeze to activate the Wheel Drive and Dig Chain. All motion stops when the lever is released. It is located on the left handlebar.
5. **WHEEL DRIVE CONTROL:** Controls travel direction and speed. Very slow speed is required for trenching in most conditions. Begin trenching with the wheel control in neutral. Then adjust the reverse speed when trenching. **NOTE:** Be sure operator understands that the machine moves BACK when trenching, not forward.
6. **DIG CHAIN ON/OFF CONTROL:** To trench, hold lever in ON position while clutch lever is activated. The ON/OFF lever will stay in position as long as the clutch lever is held. This automatically will activate the CHAIN FORWARD/REVERSE LEVER to FORWARD position.
7. **CHAIN FORWARD/REVERSE LEVER;** Use this lever to reverse chain to help clear debris from the chain. The clutch lever must be released to put the chain lever in reverse.
8. **DIGGING BOOM CONTROL:** Pull to raise the digging boom and push to lower the boom. During normal operation you will hear a relief valve working.

GETTING STARTED:

1. Start and warm up engine.
2. Put Wheel Drive control in neutral.
3. One wheel hub may be disengaged (free wheeling) for easier steering before driving machine to work location.
4. Squeeze the clutch lever and change the Wheel Direction Control to desired speed and direction.
5. Adjust the wheel speed and navigate the trencher to the starting position. The trencher is designed to dig toward the operator (with the Wheel Drive Control in reverse). With this in mind, position the machine to start the trench.

TRENCHING PROCEDURE:

1. Put Wheel Drive Direction Control in neutral
2. Be sure both hubs are engaged.
3. Have engine at full throttle (forward).
4. Hold Dig Chain On/Off Control in On position.
5. Squeeze the clutch lever.
6. Slowly lower the digging boom until the desired trench depth is achieved.
7. Put Wheel Drive Control in reverse. Start at slow speed.
8. Adjust the wheel speed until a workable speed is reached. Use a very slow speed for trenching and adjust for soil conditions as necessary. If objects such as rocks or roots jam in the chain, release the clutch lever, then reverse the chain to dislodge the debris. If necessary move the trencher forward a few inches and trench the area again.

BARRETO HYDRAULIC TRENCHER SAFETY INSTRUCTIONS

- **READ SAFETY AND OPERATING INSTRUCTIONS BEFORE OPERATING!**
- **USE COMMON SENSE AND PLENTY OF IT!**
- Do not leave trencher unattended with the engine running.
- Always leave trencher parked on a level surface, and lock the hubs.
- The **SAFETY CLUTCH LEVER** on the left handle bar is for operator protection. **DO NOT TAPE DOWN LEVER** or otherwise by-pass this safety feature.
- Objects may become airborne while operating trencher. Wear safety goggles and a hard hat while operating or observing!
- Digging chain, auger and other moving parts can cut off arms, legs, or fingers. **STAY CLEAR!**
- Buried cables or gas lines can cause serious injury or death if struck with dig chain. Contact local agencies for location before digging.
- Fuel exhaust and fuel fumes can cause illness or death. Operate outdoors and avoid breathing exhaust and fumes.
- Fuel fumes can catch fire or explode. Do not smoke or operate near flames or sparks.
- Hydraulic oil is under extreme pressure and can get under skin and burn or poison. Check for leaks with cardboard.
- Muffler and engine get hot enough to cause serious burns. Do not touch until cool.

BARRETO MANUFACTURING, INC. EQUIPMENT WARRANTY

Barreto Manufacturing, Inc. warrants all BARRETO equipment to be free of defects in material and workmanship for a period of one (1) year, dating from delivery to the original user.

This Warranty is in lieu of all other warranties, whether written or implied, and is limited to:

1. Replacement of parts returned to the dealer and/or factory and determined defective upon inspection. (Replacement for parts to dealers shall be at dealer cost plus shipping charges.)
2. Time for pick-up and/or delivery, transportation or service calls by dealers is excluded. Manufacturer reserves the right to determine reasonable time required for repair.

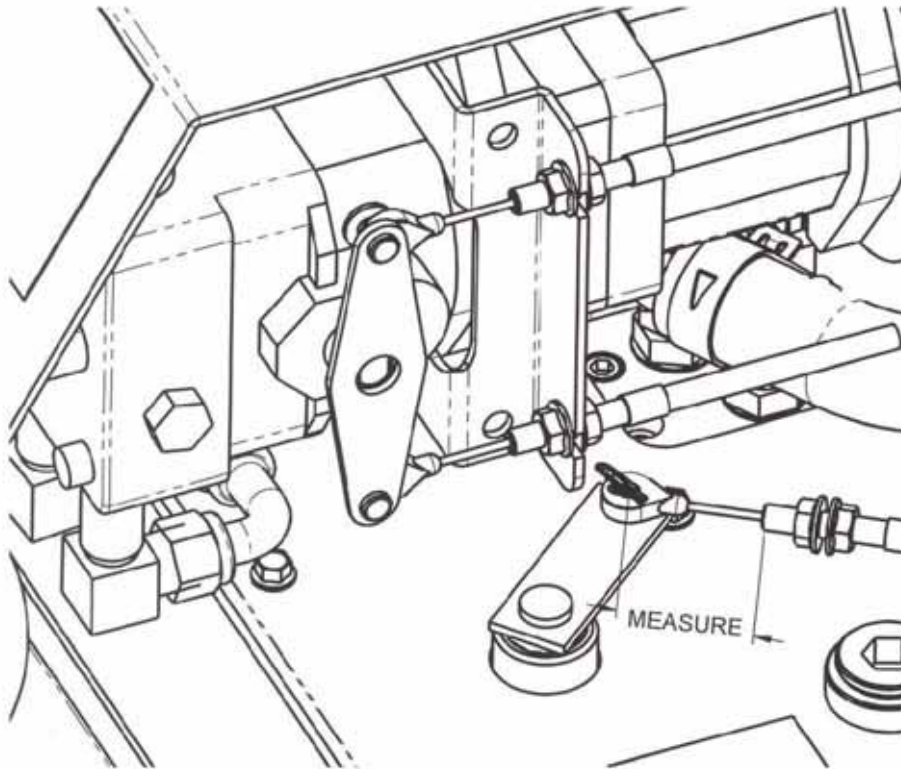
Warranty does not apply to damage caused by abuse or neglect. Time and materials required for normal maintenance and service are also excluded from warranty coverage.

Engines, engine accessories and tires are warranted by the original manufacturers and are not covered by the Barreto Equipment Warranty.

WHEEL DRIVE VALVE CABLE ADJUSTMENT

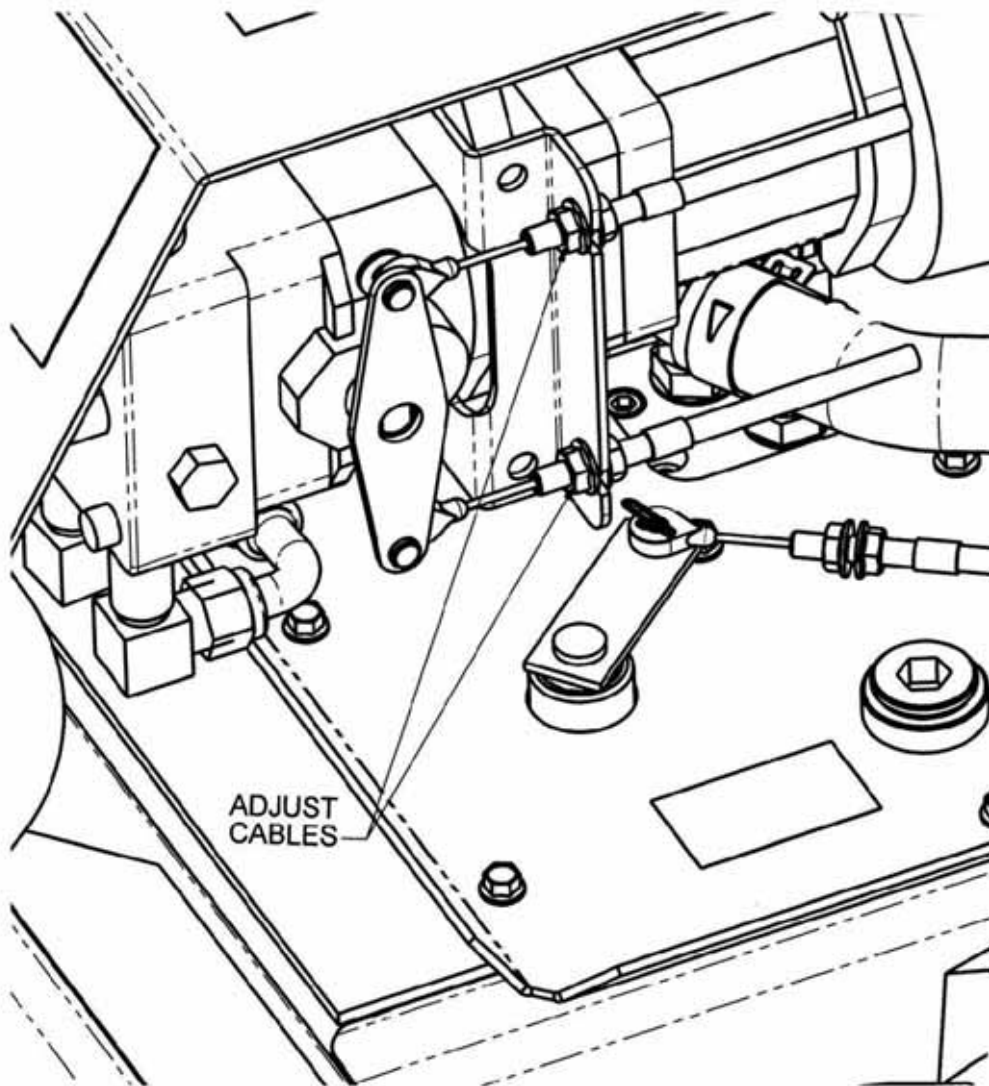
The clutch cable and lever must have some free play. The cable will stretch and occasionally needs adjustment.

1. Rotate the actuator arm clockwise, by hand, to take up any free play. Measure the distance from the pin of the actuator arm to the end of the cable housing.
2. Pull the clutch lever all the way up until it touches the handle bar grip. With the lever pulled up, again measure the distance from the pin of the lever to the cable housing. Calculate the difference.
3. Adjust the cable for $7/16''$ to $1/2''$ movement of the actuator arm at the pin. Do not include any lever free play in the measurements.



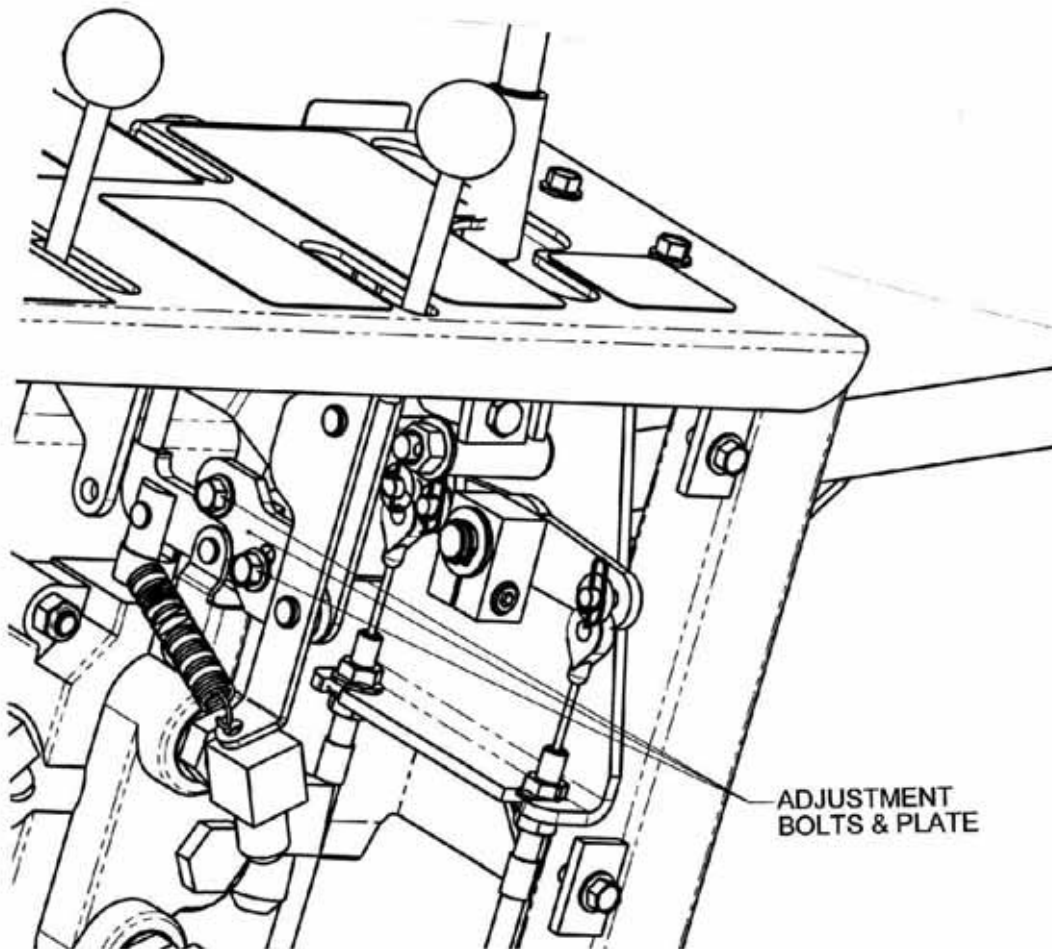
WHEEL DRIVE NEUTRAL ADJUSTMENT

The speed control cables may need to be adjusted after some use. If the machine creeps while the speed control is in neutral, the speed cables will need adjustment. Adjust the cables to bring the pump cable arm to the neutral position (vertical) when the speed control also is in neutral. Adjust the cables to eliminate slack, but do not over tighten them so they are extremely tight against each other.



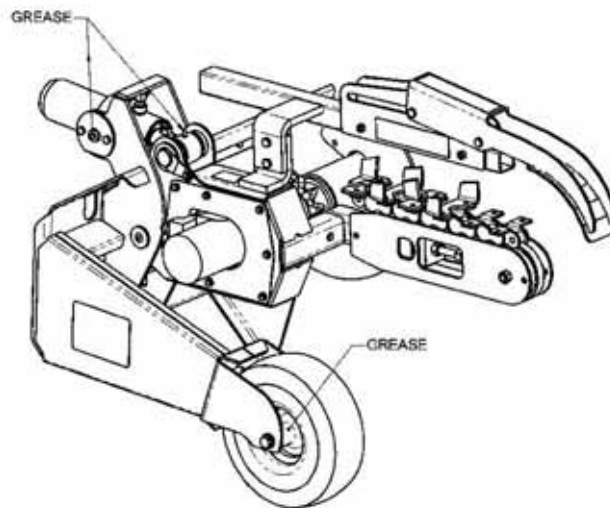
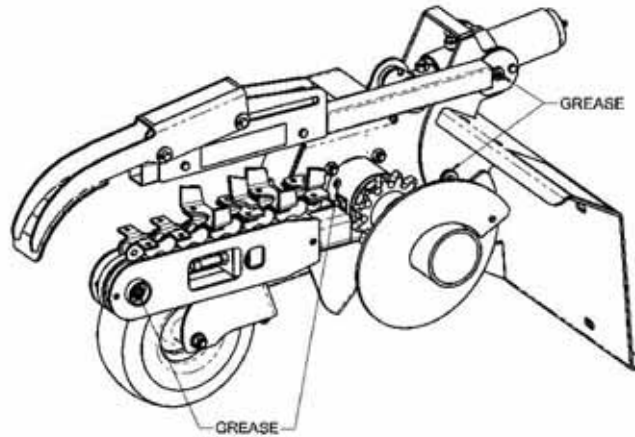
CHAIN VALVE ADJUSTMENT

The chain valve control should be adjusted to completely activate the chain valve when the dig chain control is in 'ON' position. To check this adjustment, put the chain on/off control in ON position (with engine stopped). Pull the clutch lever on left handlebar up until it touches the handgrip. While holding clutch lever up, push on the chain forward/neutral/reverse lever. It should be at the end of its stroke, thus not move down any more. If the chain F/N/R lever can be pushed down more, the valve spool lever should be adjusted. To adjust, remove back cover from the control panel. Loosen the 2 bolts on valve lever and rotate the lever plate down about 1/16". Re-tighten the bolts and check the lever stroke. Adjust so the valve lever comes to the end of its stroke just as the clutch lever touches the handgrip when chain valve control is in ON position.



Daily Lubrication Requirements

Be sure to grease all lubrication points as outlined on page 2 of this manual.



912 TRENCHER TROUBLE SHOOTING GUIDE

CAUTION!! Always use extreme care when trouble shooting or making adjustments on trencher. Stay clear of chain and auger when engine is running. Stop engine before disassembling any component.

A. Entire hydraulic system does not operate and the engine is not under load.

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|---|--|
| 1. Broken or improperly adjusted clutch (actuator) cable. | See clutch cable and actuator arm adjustment. Adjust or replace cable. |
| 2. Low hydraulic oil in tank | Add oil until it shows in sight gauge. |
| 3. Hydraulic pump-to-engine coupler has slipped. | Check for wear and replace both coupler halves and rubber spider, as needed. |

B. Engine lugs down or dies and wheels and chain do not turn.

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|--|--|
| 1. Rocks or other obstructions stopping chain. | Reverse chain momentarily to free it from obstruction. Raise boom and stop chain. See if obstruction can be removed from trench. |
| 2. Trenching depth or speed too great for soil conditions. | Decrease ground speed or trenching depth. |
| 3. Engine improperly tuned or maintained. | See engine manual and correct as needed. |
| 4. Low oil alert causes engine to shut down. | This may occur when trenching on hills. Level trencher, check oil and allow oil alert to reset. |
| 5. Engine losing power due to wear. | See engine manual. |

912 TRENCHER TROUBLE SHOOTING GUIDE (Continued)

CAUTION!! Always use extreme care when trouble shooting or making adjustments on trencher. Stay clear of chain and auger when engine is running. Stop engine before disassembling any component.

C. Chain fails to rotate, but wheel drive works.

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|--|--|
| 1. Chain motor worn | Rebuild motor or replace with exchange motor. |
| 2. Chain Control Relief Valve Malfunctioning | Adjust Relief Valve to 2200 psi or replace relief spring if needed |

D. Wheels fail to turn, but chain rotates.

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|--|---------------------------------------|
| 1. Hubs unlocked. | Lock the hubs |
| 2. Wheel axle key sheared | Replace key and other parts as needed |
| 3. Wheel Drive Valve not fully activated | Adjust valve cable as shown on page 7 |
| 4. Speed Cable broken or disconnected | Replace or re-connect cable |
| 5. Pump Cable Lever loose on shaft | Tighten setscrew on Pump Lever |

E. Oil leaks in hydraulic system.

- | | |
|------------------------------------|--|
| 1. Fittings are loose | Tighten fittings on hoses and adapters |
| 2. Worn or broken hoses | Replace damaged hoses |
| 3. Oil around chain motor or shaft | Inspect motor for leaking shaft seal. Rebuild motor or replace with exchange motor |

912 TRENCHER TROUBLE SHOOTING GUIDE (Continued)

CAUTION!! Always use extreme care when trouble shooting or making adjustments on trencher. Stay clear of chain and auger when engine is running. Stop engine before disassembling any component.

F. Foaming hydraulic oil coming from breather hose.

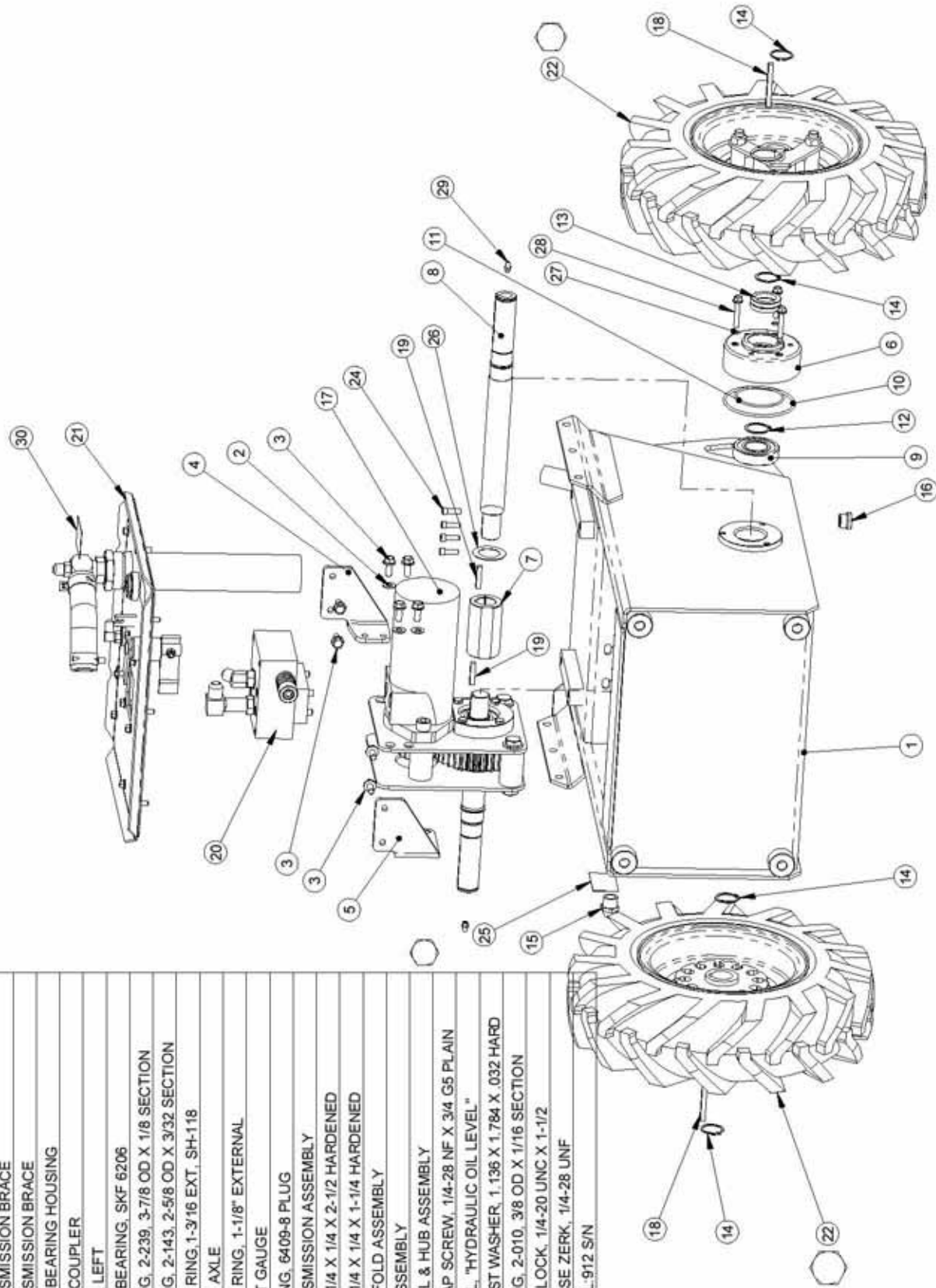
- | | |
|-------------------------|--|
| 1. Improper oil used. | Verify that hydraulic oil used had antifoaming additives. Recommended oil is tractor hydraulic. (Shell Donax TD or comparable) |
| 2. Air leaking into oil | Inspect and tighten fittings and clamps on pump and hoses |

G. Boom does not lift, or does not lower into ground.

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| 1. Boom lift relief valve malfunctioning | Adjust relief to 500 psi. This may require a replacement spring in valve |
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REF. QTY.	PART NO.	DESCRIPTION
1	10232	BODY
2	05068	WASHER, 5/16 SAE ZINC
3	05140	WHIZ LOCK, 5/16 x 3/4
4	10238	TRANSMISSION BRACE
5	10240	TRANSMISSION BRACE
6	10174	AXLE BEARING HOUSING
7	03014TR	AXLE COUPLER
8	10231	AXLE, LEFT
9	03280	BALL BEARING, SKF 6206
10	10602	O-RING, 2-239, 3-7/8 OD X 1/8 SECTION
11	10211	O-RING, 2-143, 2-5/8 OD X 3/32 SECTION
12	05034	SNAP RING, 1-3/16 EXT, SH-118
13	03012	SEAL, AXLE
14	05606	SNAP RING, 1-1/8" EXTERNAL
15	03503	SIGHT GAUGE
16	10361	FITTING, 6409-8 PLUG
17	10268	TRANSMISSION ASSEMBLY
18	05199	KEY, 1/4 X 1/4 X 2-1/2 HARDENED
19	05018	KEY, 1/4 X 1/4 X 1-1/4 HARDENED
20	00249	MANIFOLD ASSEMBLY
21	00267	LID ASSEMBLY
22	00256 R1	WHEEL & HUB ASSEMBLY
24	05235	SH CAP SCREW, 1/4-28 NF X 3/4 G5 PLAIN
25	03040-57	DECAL, "HYDRAULIC OIL LEVEL"
26	03008	THRUST WASHER, 1.136 X 1.784 X .032 HARD
27	10623	O-RING, 2-010, 3/8 OD X 1/16 SECTION
28	10622	WHIZ LOCK, 1/4-20 UNC X 1-1/2
29	05044	GREASE ZERK, 1/4-28 UNF
30	04440-08	DECAL-912 S/N

03046 OPTIONAL WIDE TIRE, RIGHT
03047 OPTIONAL WIDE TIRE, LEFT



TITLE: BODY ASSEMBLY

PRODUCT LINE: TRENCHER 912

SCALE: 1:8

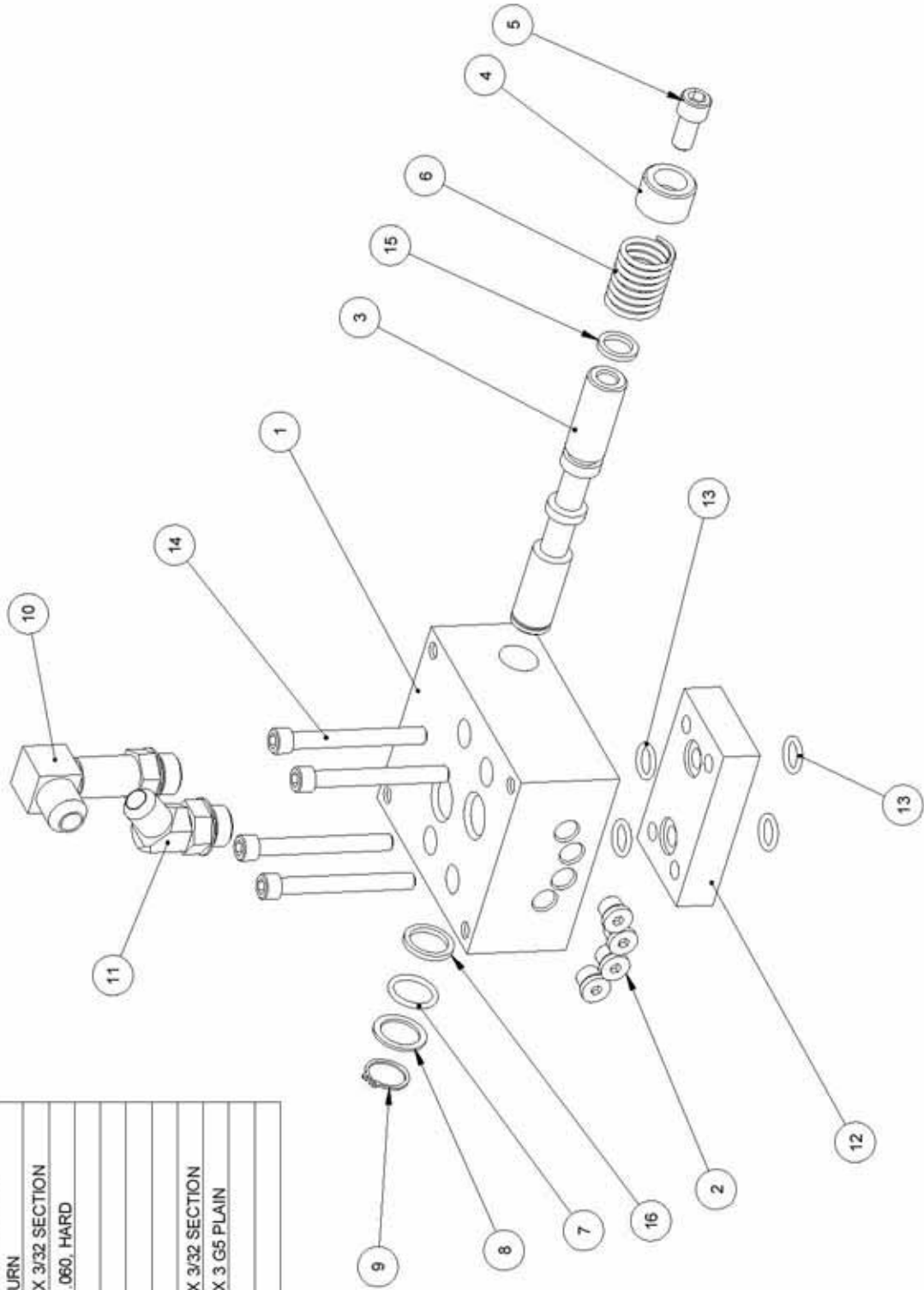
SHEET 1 OF 1

DATE: 3/11/04

DWG# 00247

BARRETO

REF. QTY.	PART NO.	DESCRIPTION
1	02200	MANIFOLD, WHEEL MOTOR
2	03300	FITTING, 6409-4 PLUG
3	02201	SPOOL, DRIVE DUMP
4	10236	SPOOL SPACER
5	10237	SH CAP SCREW, 3/8-16 NC X 3/4 G5 PLAIN
6	03055	SPRING, VALVE SPOOL RETURN
7	03225	O-RING, 2-116N70, 15-16 OD X 3/32 SECTION
8	03200	THRUST WASHER, .75 X 1 X .060, HARD
9	05216	SNAP RING, 3/4 EXTERNAL
10	04533	FITTING, 6801-8-8-LL
11	04210	FITTING, 6802-8-8
12	02203CT	MANIFOLD SPACER
13	03226	O-RING, 2-112N70, 11/16 OD X 3/32 SECTION
14	05238	SH CAP SCREW, 5/16-18 NC X 3 G5 PLAIN
15	10614	QUAD RING #4-113
16	10470	QUAD RING #4-116



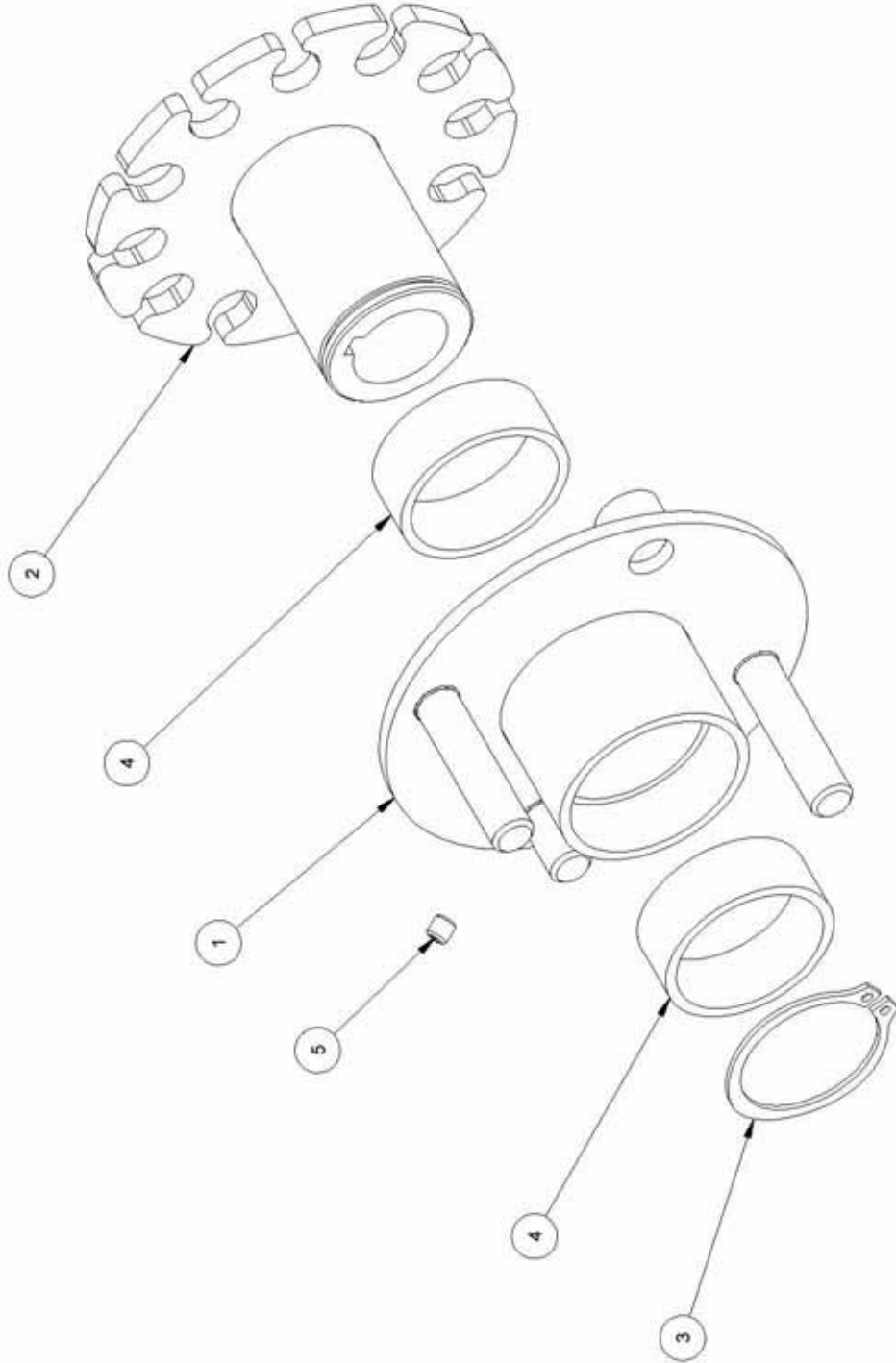
BARRETO

TITLE: MANIFOLD ASSEMBLY

PRODUCT LINE: TRENCHER 912 DATE: 3/10/04

SCALE: 1:3 SHEET 1 OF 1 DWG# 00249

REF. QTY.	PART NO.	DESCRIPTION
1	10425	HUB, FREE WHEELING
2	02269	WHEEL HUB
3	05610	SNAP RING, SH-175, 1-3/4" EXTERNAL
4	03168	BUSHING, SLEEVE, NYLON, IGUS MSI-2832-12
5	05143	SET SCREW, .25 NF X .25 CUP



BARRETO

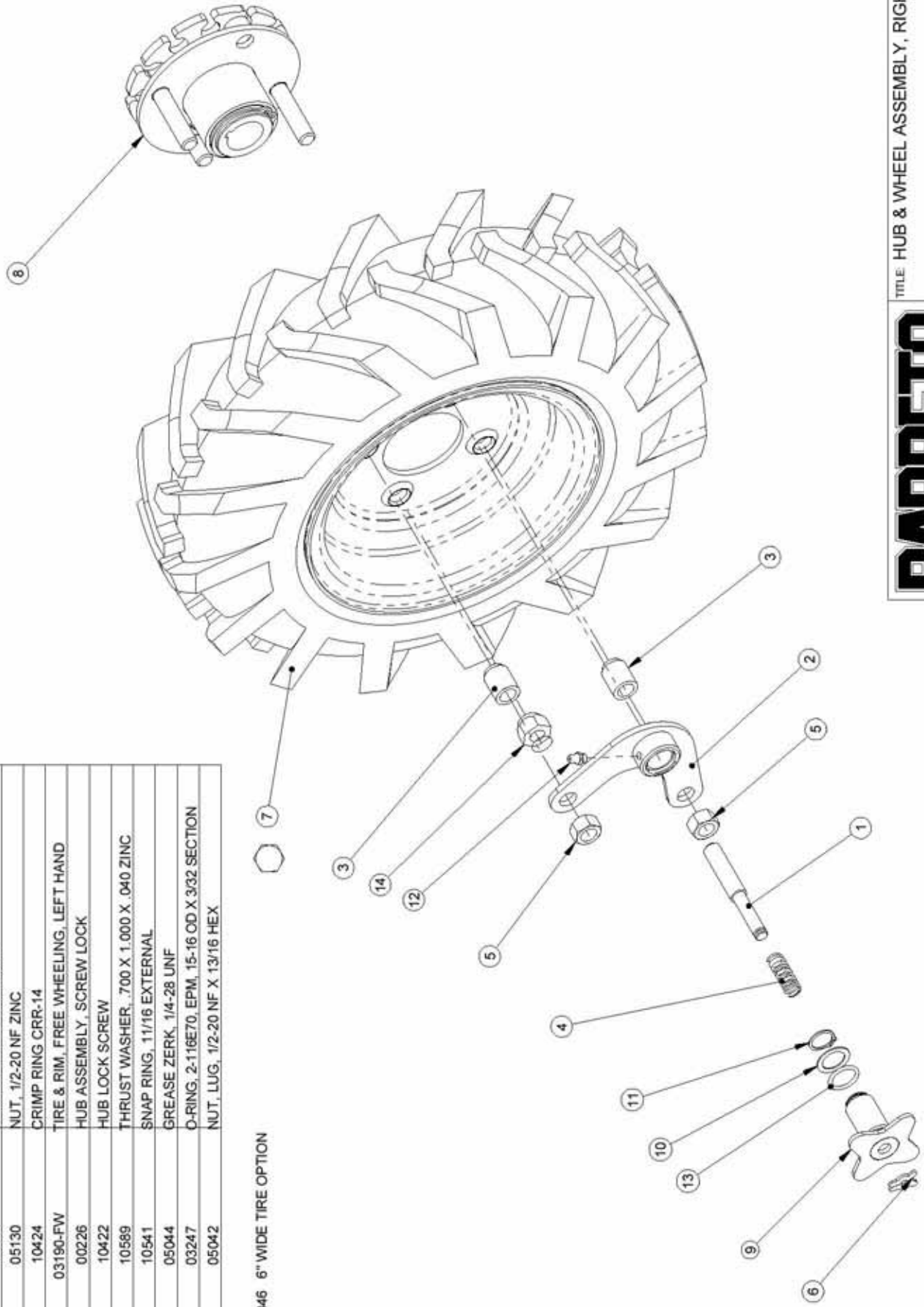
TITLE: HUB ASSEMBLY, SCREW LOCK

PRODUCT LINE: TRENCHER 912 DATE: 3/23/04

SCALE: 1:2 SHEET 1 OF 1 DWG# 00226

REF. QTY.	PART NO.	DESCRIPTION
1	10419	HUB LOCK PIN
2	10421	LOCK PIN PLATE
3	10423	SPACER, HUB LOCK
4	10452	SPRING LEE LC-051G-9MW
5	05130	NUT, 1/2-20 NF ZINC
6	10424	CRIMP RING CRR-14
7	03190-FW	TIRE & RIM, FREE WHEELING, LEFT HAND
8	00226	HUB ASSEMBLY, SCREW LOCK
9	10422	HUB LOCK SCREW
10	10589	THRUST WASHER, .700 X 1.000 X .040 ZINC
11	10541	SNAP RING, 11/16 EXTERNAL
12	05044	GREASE ZERK, 1/4-28 UNF
13	03247	O-RING, 2-116E70, EPM, 15-16 OD X 3/32 SECTION
14	05042	NUT, LUG, 1/2-20 NF X 13/16 HEX

03046 6" WIDE TIRE OPTION



BARRETO

TITLE HUB & WHEEL ASSEMBLY, RIGHT

PRODUCT LINE TRENCHER 912

DATE 3/12/04

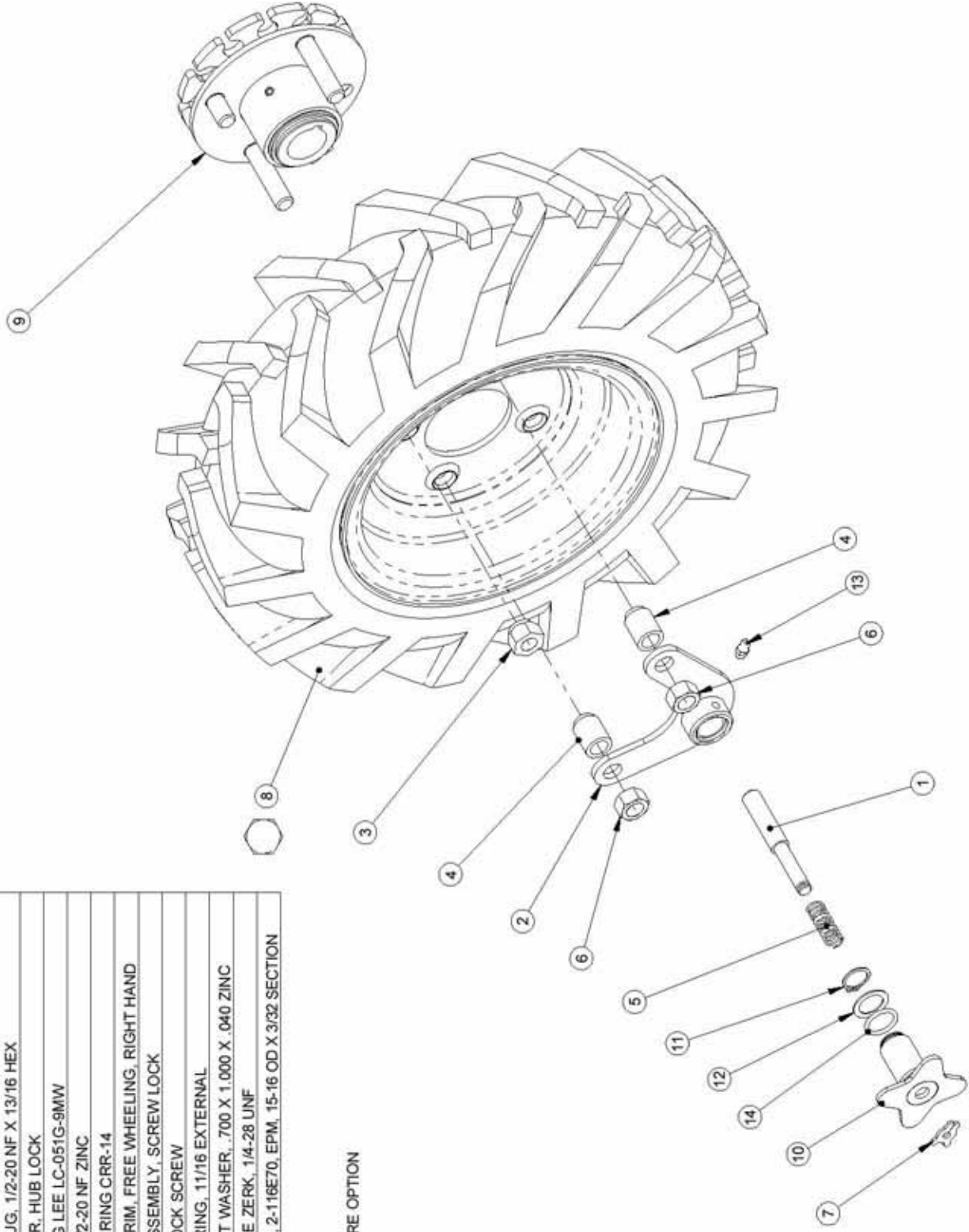
SCALE 1:4

DWG# 00225

SHEET 1 OF 1

REF. QTY.	PART NO.	DESCRIPTION
1	10419	HUB LOCK PIN
2	10421	LOCK PIN PLATE
3	05042	NUT, LUG, 1/2-20 NF X 13/16 HEX
4	10423	SPACER, HUB LOCK
5	10452	SPRING LEE LC-05TG-9MW
6	05130	NUT, 1/2-20 NF ZINC
7	10424	CRIMP RING CRR-14
8	03191-FW	TIRE & RIM, FREE WHEELING, RIGHT HAND
9	00226	HUB ASSEMBLY, SCREW LOCK
10	10422	HUB LOCK SCREW
11	10541	SNAP RING, 11/16 EXTERNAL
12	10589	THRUST WASHER, .700 X 1.000 X .040 ZINC
13	05044	GREASE ZERK, 1/4-28 UNF
14	03247	O-RING, 2-116E70, EPM, 15-16 OD X 3/32 SECTION

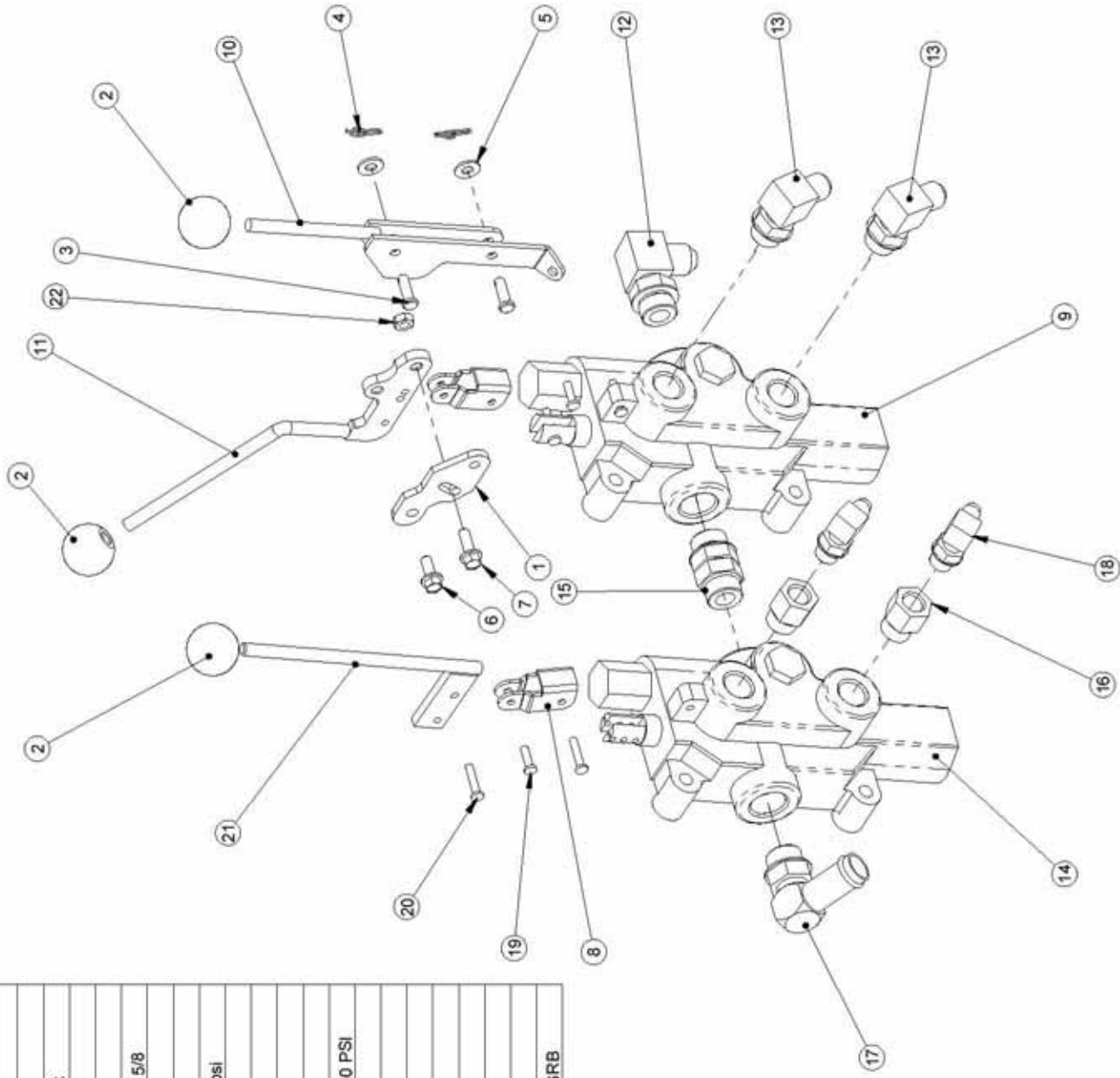
03047 6" WIDE TIRE OPTION



BARRETO

TITLE HUB & WHEEL ASSEMBLY, LEFT
 PRODUCT LINE TRENCHER 912 DATE 3/12/04
 SCALE 1:4 DWG# 00227
 SHEET 1 OF 1

REF. QTY.	PART NO.	DESCRIPTION
1	10337	VALVE ROCKER
2	03026	KNOB, 5/16-NC
3	10345	CLEVIS PIN, 1/4 X 3/4 ZINC
4	05038	RUE RING COTTER #8
5	05081	WASHER, 1/4 SAE ZINC
6	05069	WHIZ LOCK, 1/4-20 UNC X 5/8
7	05049	WHIZ LOCK, 1/4 X 3/4
8	03509	VALVE LINK W/PINS
9	04513-M	VALVE RD-2508-M4, 2200 psi
10	10335	VALVE ENGAGE LEVER
11	10330	VALVE LEVER
12	04211	FITTING, 6801-8-10
13	04554	FITTING, 6801-8-8
14	04512-M	VALVE RD-2508-T4, 500-650 PSI
15	04521	FITTING, 6407-10-10
16	04529	FITTING, 6410-8-6
17	04523	FITTING, 4601-12-10
18	04527-01	FITTING, 6801-4-6
19	03509S	LEVER PIN
20	03509L	SPOOL PIN
21	10553	CYLINDER VALVE LEVER
22	10773	NUT, GRIPCO, 1/4-20 NC GRB



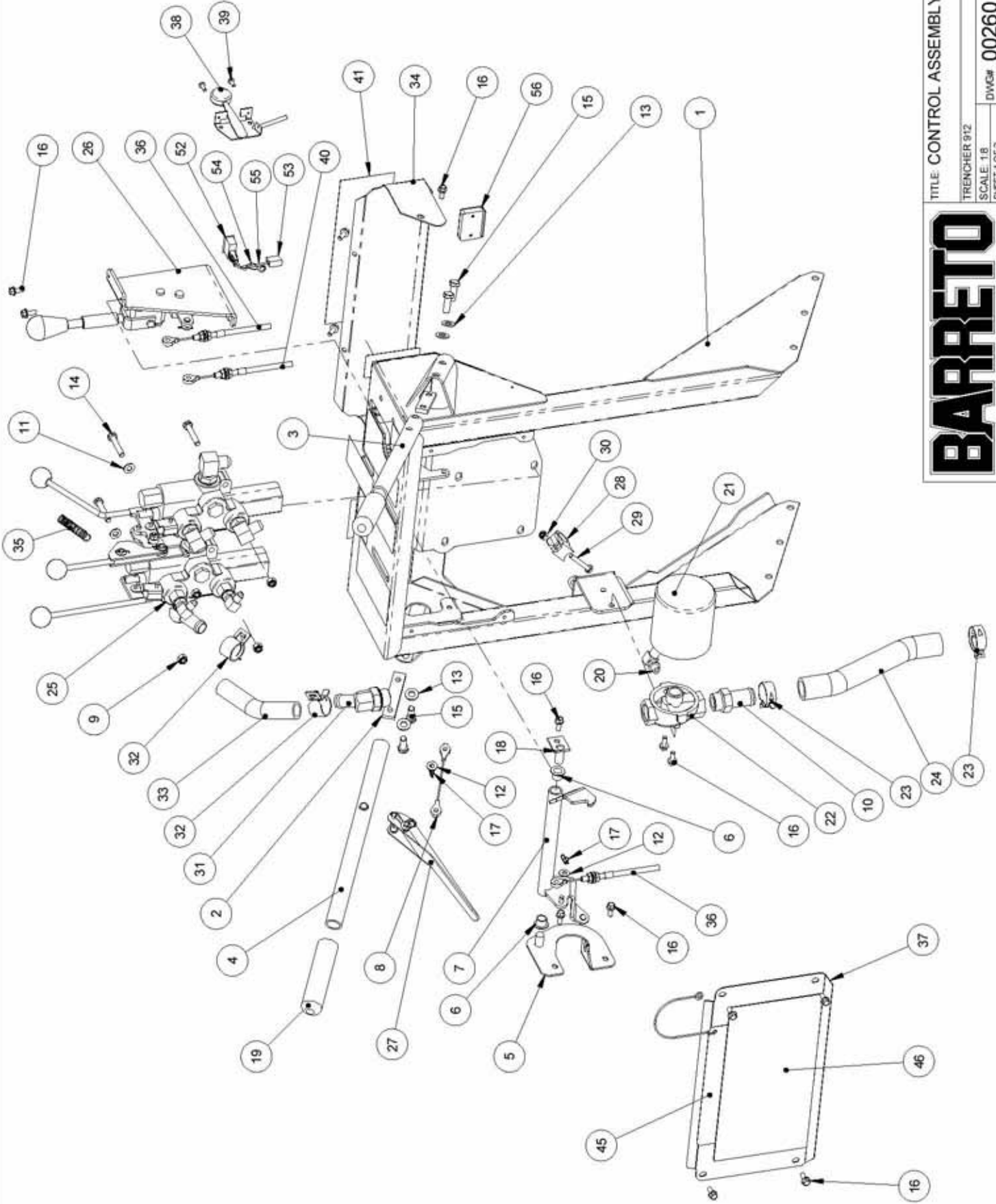
TITLE CONTROL VALVE ASSEMBLY

PRODUCT LINE TRENCHER 912 DATE 8/24/04

SCALE 1:4 DWG# 00259

SHEET 1 OF 1

BARRETO



TITLE: CONTROL ASSEMBLY

TRENCHER 912

DATE: 3/19/04

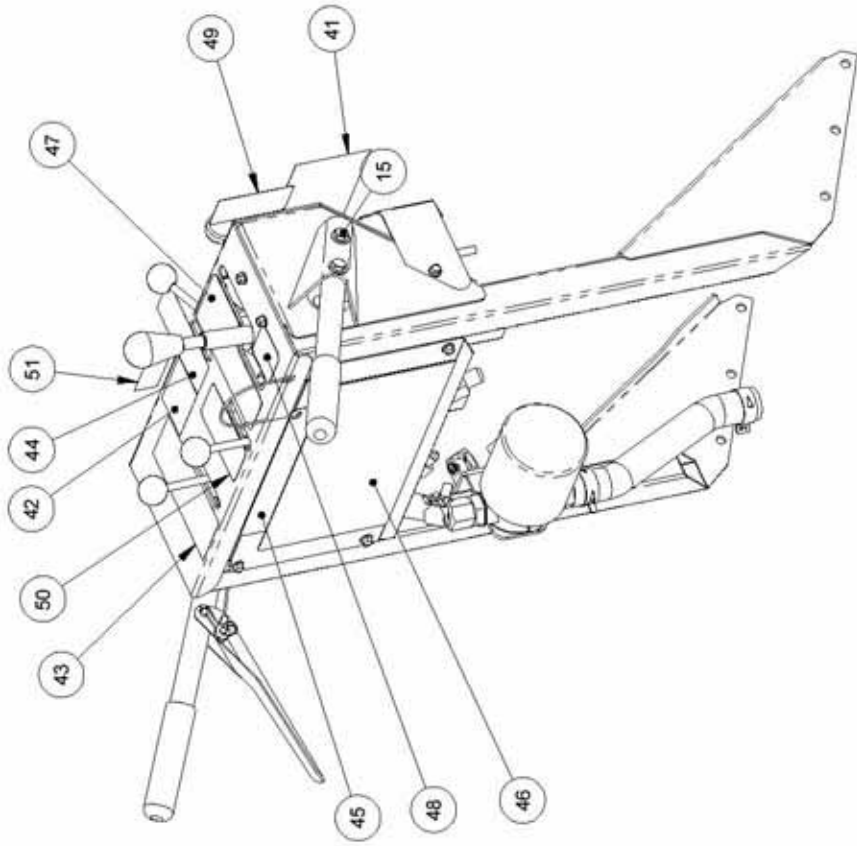
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DWG# 00260

SHEET 1 OF 2

BARRETO

REF. QTY.	PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
1	10327	CONTROL POD	48	1 04440-07 DECAL: REV/TRENCH SYMBOL
2	01403	HANDLE BAR SLUG	49	1 04440-05 DECAL: ENGINE SYMBOL
3	01402-R+	HANDLE BAR, RH	50	1 04440-04 DECAL: DIG CHAIN ON/OFF
4	01402-L+	HANDLEBAR, LEFT	51	1 03341-07 DECAL: "IGNITION OFF/ON"
5	10332	LINK PIVOT	52	1 06420 ROCKER SWITCH, IGNITION OFF/ON
6	03501	BUSHING, IGUS MFI-0810-08	53	1 03806 QUICK-SPLICE
7	10331	VALVE LINKAGE	54	1 06421 GROUND WIRE, IGNITION SWITCH
8	03505	CABLE, 4-1/2"	55	1 10603 IGNITION WIRE, 912
9	05273	NUT, NYLOCK, 5/16-18 NC ZINC	56	1 03009 HOUR METER - COMPLETE KIT
10	04217	FITTING, 4604-16-12		
11	05068	WASHER, 5/16 SAE ZINC		
12	05081	WASHER, 1/4 SAE ZINC		
13	05101	WASHER, 3/8 SAE ZINC		
14	05054	HH CAP SCREW, 5/16-18 NC X 1-3/4 G5 ZINC		
15	05059	HH CAP SCREW, 3/8-16 NC X 1 G5 ZINC		
16	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC		
17	05038	RUE RING COTTER #8		
18	10346	LINKAGE PIVOT		
19	03032	HANDLE BAR GRIPS (SOLD IN PAIRS)		
20	04526-01	FITTING, 6801-6-4		
21	03951	FILTER, HYDRAULIC OIL, WTH BY-PASS		
22	04212-OR-TR	OIL FILTER MOUNT		
23	05225	CLAMP, 1-1/2" HOSE, CTB-35 ST		
24	10367	HOSE, RETURN		
25	00259	CONTROL VALVE ASSEMBLY		
26	00273	SPEED LEVER ASSEMBLY		
27	01503K	CLUTCH LEVER KIT		
28	06423	STARTER GROMMET		
29	05556	HH CAP SCREW, 1/4-20 NC X 1-3/4 G5 ZINC		
30	05096	NUT, NYLOCK, 1/4-20 NC ZINC		
31	10362	FITTING, 4603-12-12		
32	05008	CLAMP, 1" HOSE, CTB-29		
33	10368	RETURN HOSE		
34	10534	HOSE COVER		
35	10548	SPRING LEE LE-055E-6MW		
36	03514	CABLE, 40"		
37	10549	BACK COVER		
38	03515-T	THROTTLE CABLE		
39	05233	SCREW #10-24 X 1/2 PPH		
40	03045	CABLE, 47"		
41	03040-02	DECAL, "BARRETO", 3-1/2 X 11-1/4		
42	03341-24	DECAL, WARNING - NO PARKING		
43	03341-12	DECAL, DIGGIN BOOM, UP-DOWN		
44	04430-05	DECAL, DIG CHAIN FWD-N-REV		
45	04440	INSTRUCTION SHEET W/CABLE		
46	10590	INSTRUCTION SHEET HOLDER		
47	04440-06	DECAL, WHEEL DRIVE F-N-R		



BARRETO

TITLE CONTROL ASSEMBLY

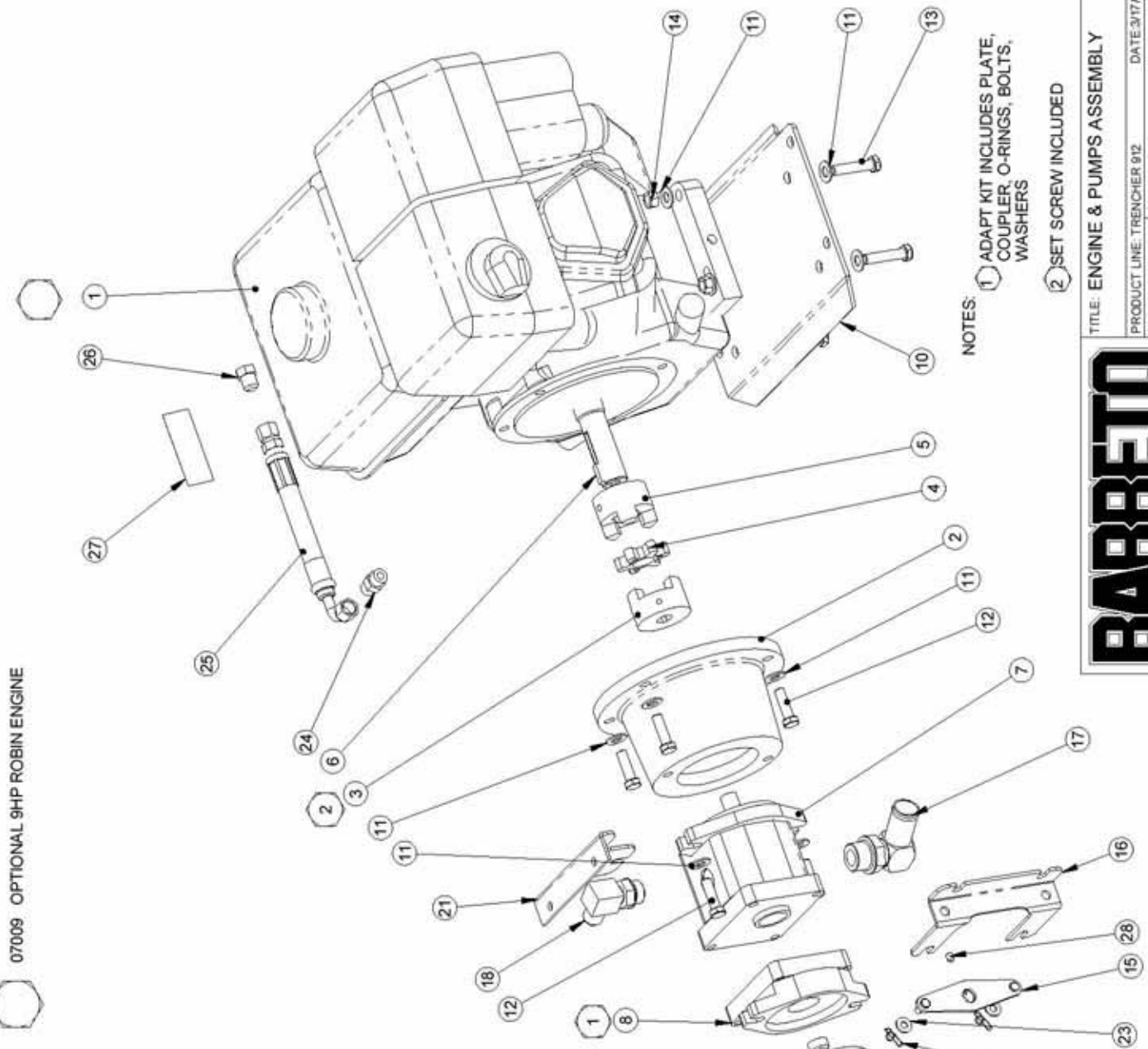
PRODUCT LINE TRENCHER 912
 SCALE 1:8
 SHEET 2 OF 2

DWG# 00260

DATE 3/19/04

REF. QTY.	PART NO.	DESCRIPTION
1	07006	ENGINE, 9 HP HONDA GX270
2	02016	PUMP ADAPTER
3	03021	JAW COUPLER, PUMP, 5/8" BORE
4	03022	SPIDER, RUBBER
5	03023	JAW COUPLER, 1" BORE L095
6	05014	KEY, 1/4 X 1/4 X 3/4
7	04507	PUMP SNP2-8.5-HSTAT
8	04504	ADAPT PLATE KIT
9	04506	PG HYDROSTAT PUMP .63 CI
10	10242	ENGINE MOUNT PLATE
11	05101	WASHER, 3/8 SAE ZINC
12	06091	HH CAP SCREW, 3/8-16 NC X 1-1/4 G5 ZINC
13	05121	HH CAP SCREW, 3/8-16 NC X 1-3/4 G5 ZINC
14	05269	NUT, 3/8-16 NC GRB ZINC
15	10339	PUMP CABLE ARM
16	10340	CABLE BRACKET
17	04530	FITTING, 4601-16-12
18	04211	FITTING, 6801-8-10
19	04538	FITTING, 6801-6-6
20	04533	FITTING, 6801-8-8-LL
21	10545	PUMP COVER MOUNT
22	05038	RUE RING COTTER #8
23	05081	WASHER, 1/4 SAE ZINC
24	04536	FITTING, 9067-6-12METRIC
25	10588	ENGINE DRAIN HOSE
26	04539	FITTING, 2408-6
27	03341-07	DECAL, "IGNITION OFF/ON"
28	05240	SET SCREW, 6MM, CUP POINT

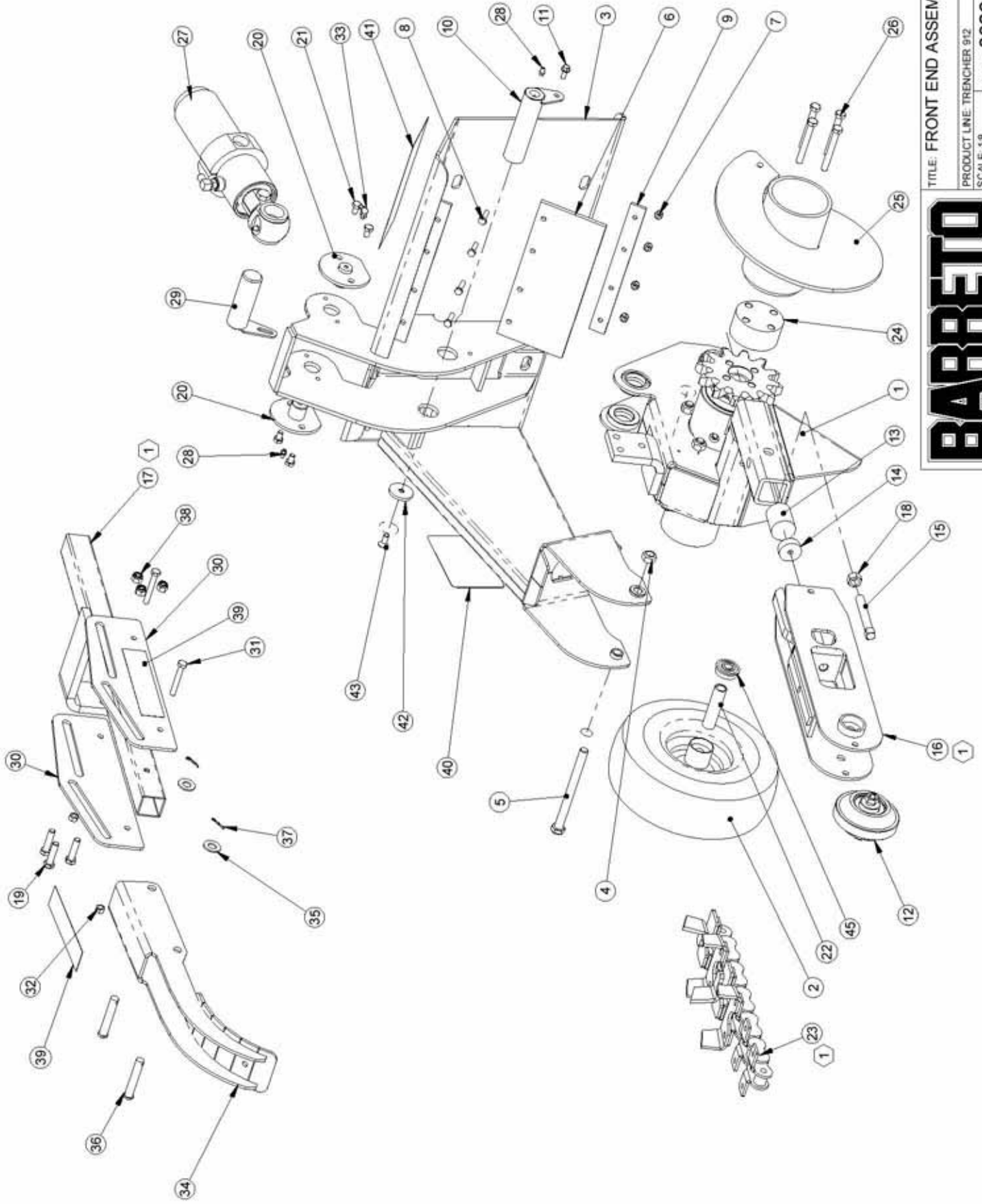
07009 OPTIONAL 9HP ROBIN ENGINE



NOTES:
 1) ADAPT KIT INCLUDES PLATE, COUPLER, O-RINGS, BOLTS, WASHERS
 2) SET SCREW INCLUDED

BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
 PRODUCT LINE: TRENCHER 912 DATE: 3/17/04
 SCALE: 1:6 SHEET 1 OF 1 DWG# 00261



TITLE: FRONT END ASSEMBLY

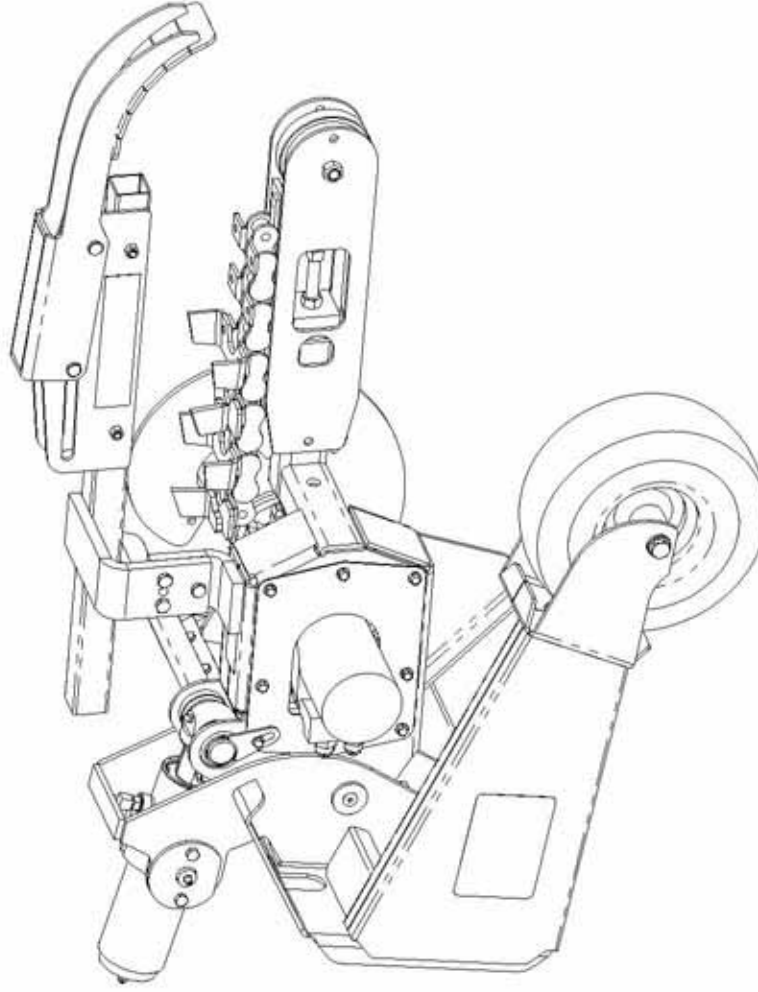
PRODUCT LINE: TRENCHER 912 DATE: 3/17/04

SCALE: 1:8 DWG# 00262

BARRETO

SHEET 1 OF 2

REF. QTY.	PART NO.	DESCRIPTION
1	00264	MOTOR HOUSING ASSEMBLY
2	10347	FRONT TIRE, FLAT FREE
3	10273	FRONT END MOUNT
4	05046	NUT, GRIPCO, 1/2-13 NC G5 ZINC
5	05301	HH CAP SCREW, 1/2-13 NC X 6 G5 ZINC
6	03903	FLAP
7	05096	NUT, NYLOCK, 1/4-20 NC ZINC
8	05237	HH CAP SCREW 1/4-20 NC X 1 G5 ZINC
9	10376	FLAP KEEPER
10	10280	PIVOT PIN
11	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
12	00265	ROLLER ASSEMBLY
13	10270	CUSHION, BOOM
14	10318	CUSHION WASHER
15	10319-F	CHAIN TENSION SCREW
16	10316, 10649, 10865	BOOM OPTIONS - 12", 18", 24"
17	10325, 10650, 10866	BOOM GUARD OPTIONS - 12", 18", 24"
18	10326	NUT, 1/2-13 NC G5 ZINC
19	05092	HH CAP SCREW, 3/8-16 NC X 1-1/2 G5 ZINC
20	10281	CYLINDER PIN
21	05304	HH CAP SCREW, 5/16-18 NC X 1/2 G5 ZINC
22	10458	SPACER, FRONT AXLE
23	CHAIN OPTIONS	CHAIN OPTIONS
24	10286	AUGER SPACER
25	10287	AUGER
26	10568	HH CAP SCREW, 3/8-24 NF X 3 G5 ZINC
27	00271	CYLINDER ASSEMBLY
28	05044	GREASE ZERK, 1/4-28 UNF
29	10546	CYLINDER ROD PIN
30	10564	CRUMBER MOUNT
31	05089	HH CAP SCREW, 5/16-24 NF X 2-1/4 G5 ZINC
32	10462	NUT, GRIPCO, 5/16-24 NF G5 ZINC
33	05307	GREASE ZERK, 1/4-28 UNF 90°
34	10567	CRUMBER ARM
35	05102	WASHER, 1/2 SAE ZINC HARDENED
36	10586	CLEVIS PIN, 1/2 X 2-3/4 ZINC
37	05222	COTTER PIN 1/8 X 3/4
38	05073	NUT, NYLOCK, 3/8-16 NC ZINC
39	04440-02	DECAL; DANGER, BOOM GUARD
40	04440-03	DECAL; 912
41	03341-05	DECAL; DANGER, CHAIN
42	10626	PIVOT PIN WASHER
43	10627	C-SINK HD CAP SCR. 31 X. 75 NC Z
45	10347.50	BEARING, 1/2 BORE



1 CUP CHAIN & SHARK CHAIN OPTIONS:
 12" BOOM, CHAIN, GUARD OPTION
 18" BOOM, CHAIN, GUARD OPTION
 24" BOOM, CHAIN, GUARD OPTION

BARRETO

TITLE: FRONT END ASSEMBLY

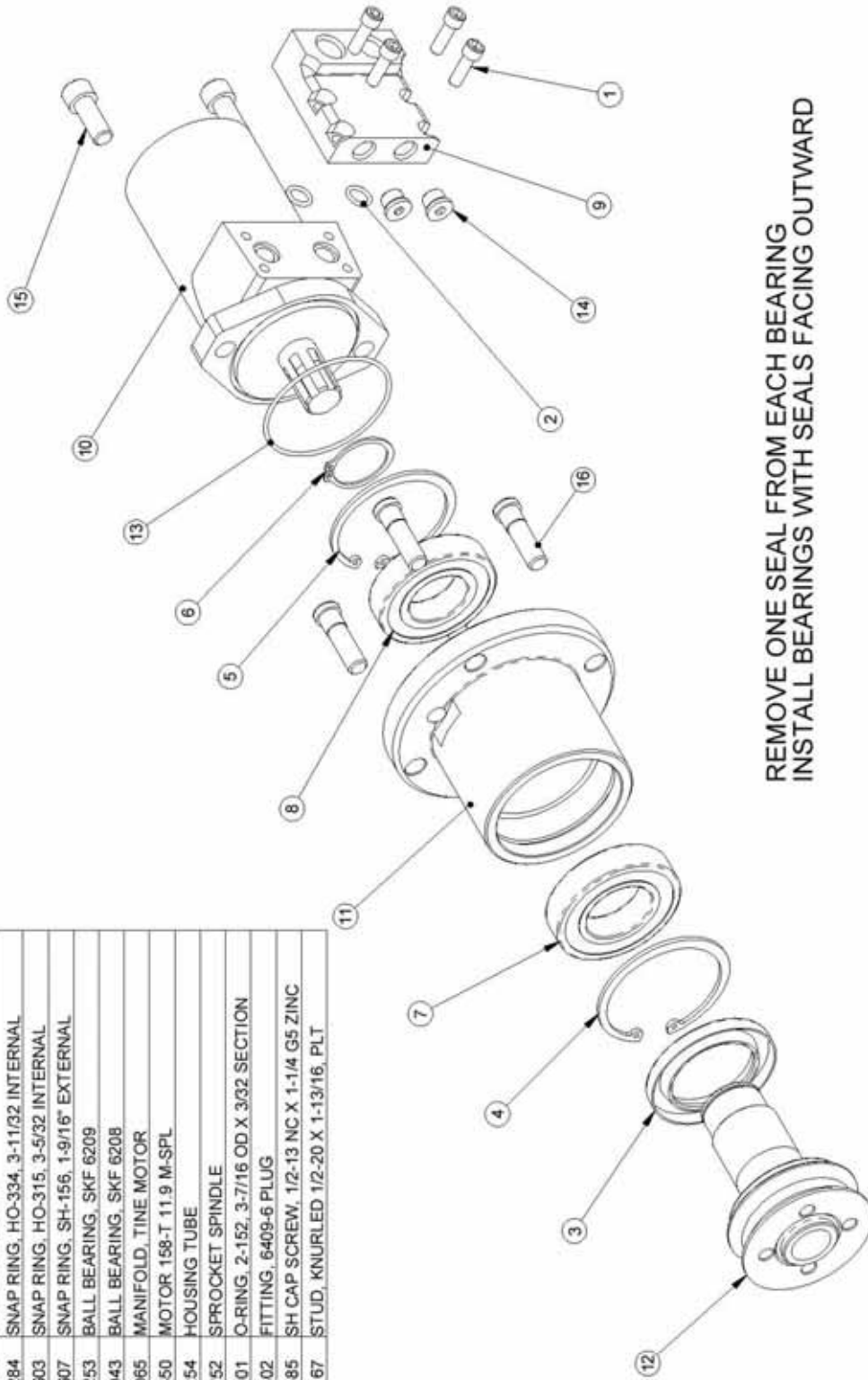
PRODUCT LINE: TRENCHER 912 DATE: 10/21/04

SCALE: 1:8

DWG# 00262

SHEET 2 OF 2

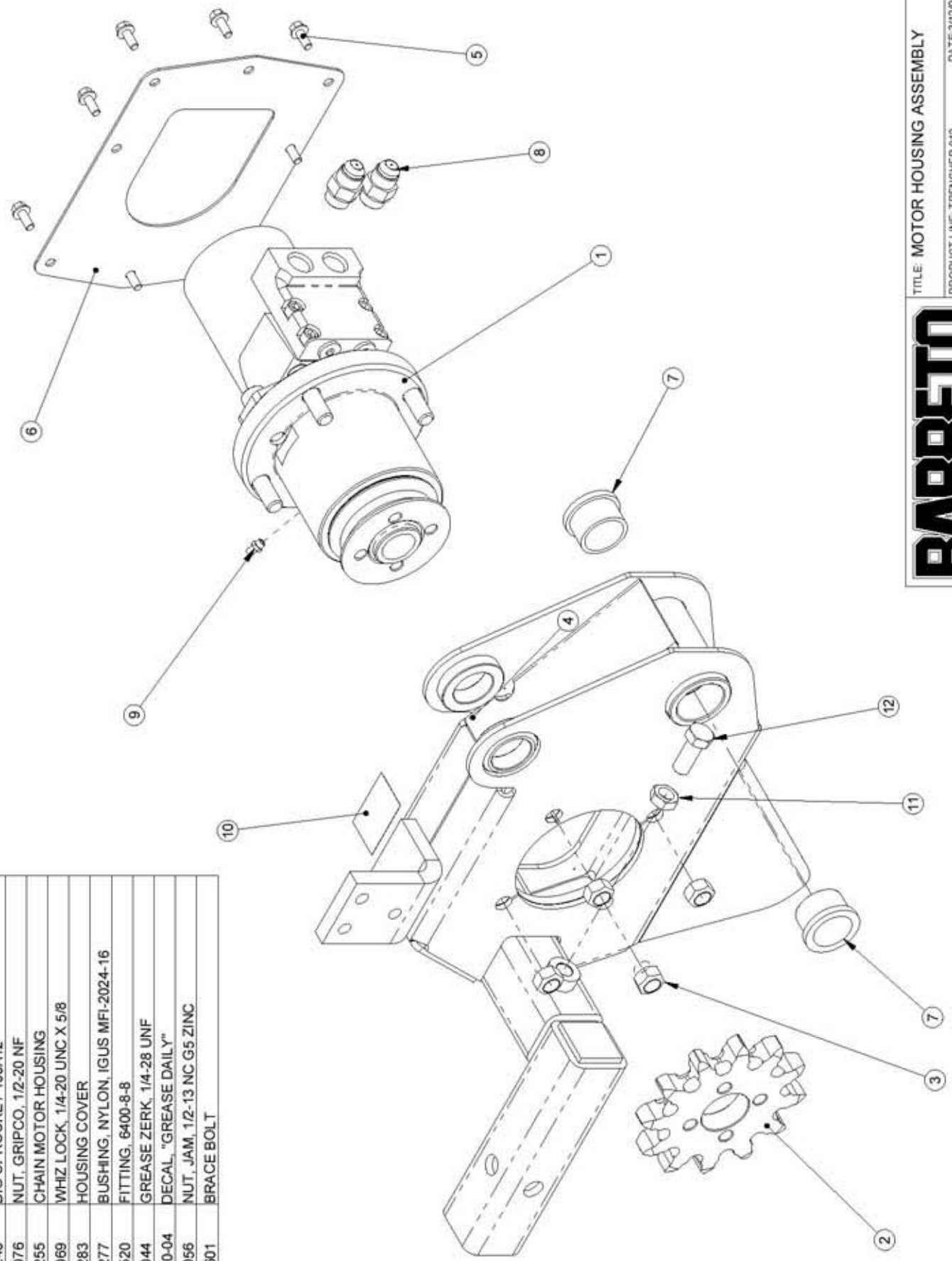
REF	QTY	PART NO.	DESCRIPTION
1	4	05572	SH CAP SCREW, 5/16-18 NC X 1 G5 ZINC
2	2	03226	O-RING, 2-11/2 N70, 11/16 OD X 3/32 SECTION
3	1	10285	SEAL CR22550 PN.
4	1	10284	SNAP RING, HO-334, 3-11/32 INTERNAL
5	1	05603	SNAP RING, HO-315, 3-5/32 INTERNAL
6	1	05607	SNAP RING, SH-156, 1-9/16" EXTERNAL
7	1	10253	BALL BEARING, SKF 6209
8	1	03943	BALL BEARING, SKF 6208
9	1	02065	MANIFOLD, TIME MOTOR
10	1	10450	MOTOR 158-T 11.9 M-SPL
11	1	10254	HOUSING TUBE
12	1	10252	SPROCKET SPINDLE
13	1	03001	O-RING, 2-152, 3-7/16 OD X 3/32 SECTION
14	2	03302	FITTING, 6409-6 PLUG
15	2	05585	SH CAP SCREW, 1/2-13 NC X 1-1/4 G5 ZINC
16	4	05167	STUD, KNURLED 1/2-20 X 1-13/16, PLT



REMOVE ONE SEAL FROM EACH BEARING
 INSTALL BEARINGS WITH SEALS FACING OUTWARD



REF. QTY.	PART NO.	DESCRIPTION
1	00263	MOTOR/SHAFT ASSEMBLY
2	10248	DIG SPROCKET 100A12
3	05076	NUT, GRIPCO, 1/2-20 NF
4	10255	CHAIN MOTOR HOUSING
5	05069	WHIZ LOCK, 1/4-20 UNC X 5/8
6	10283	HOUSING COVER
7	10277	BUSHING, NYLON, IGUS MFI-2024-16
8	04520	FITTING, 6400-8-8
9	05044	GREASE ZERK, 1/4-28 UNF
10	03040-04	DECAL, "GREASE DAILY"
11	11056	NUT, JAM, 1/2-13 NC G5 ZINC
12	10601	BRACE BOLT



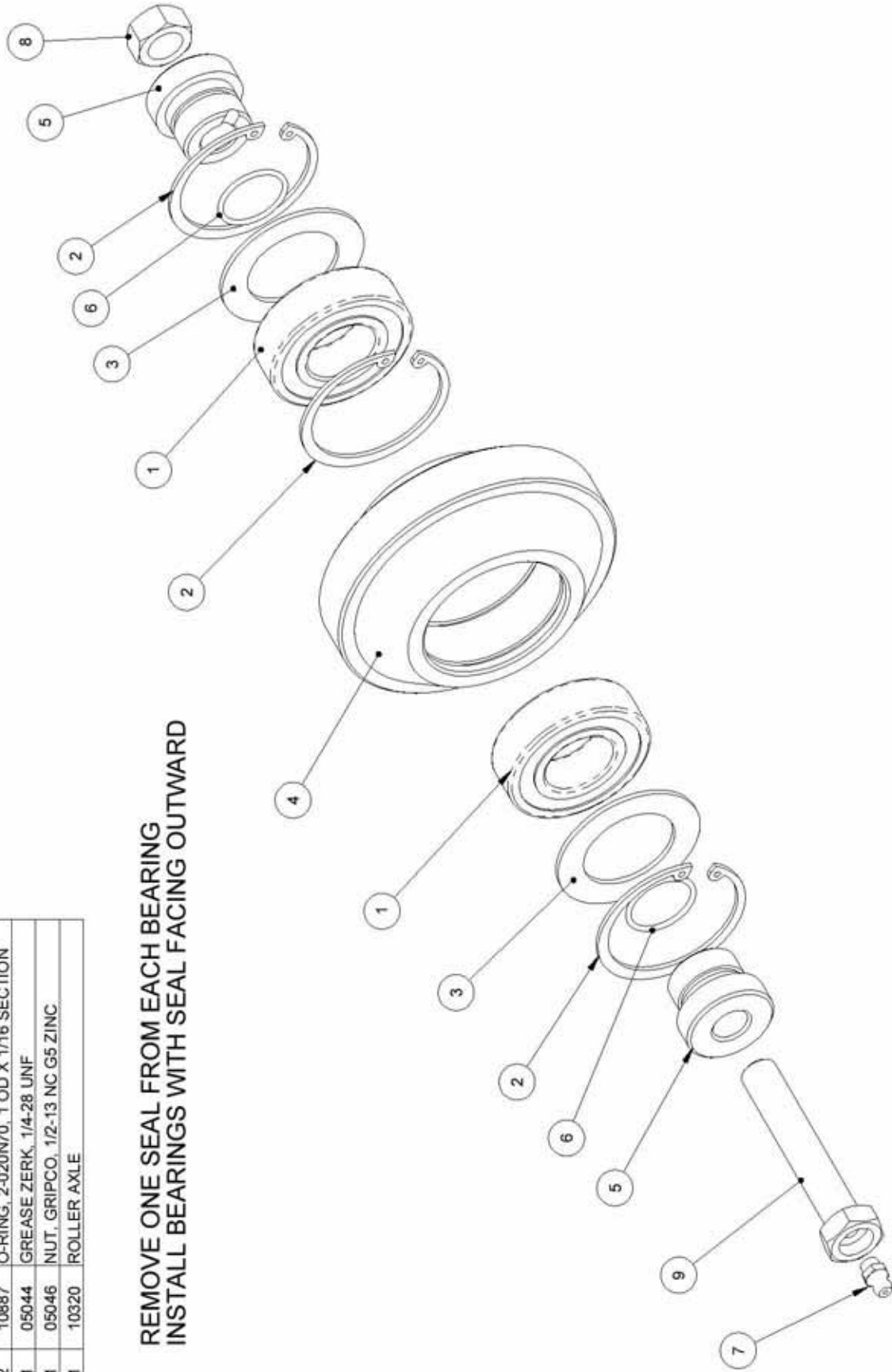
BARRETO

TITLE MOTOR HOUSING ASSEMBLY

PRODUCT LINE TRENCHER 912 DATE 3/12/04
 SCALE 1:4 DWG# 00264
 SHEET 1 OF 1

REF. QTY.	PART NO.	DESCRIPTION
1	2	03043 BALL BEARING, 6205
2	3	05024 SNAP RING, HO-200, 2" INTERNAL
3	2	01026 SHIELD, OUTBOARD BEARING
4	1	10311 CHAIN ROLLER
5	2	10312 ROLLER SPACER
6	2	10887 O-RING, 2-020N70, 1 OD X 1/16 SECTION
7	1	05044 GREASE ZERK, 1/4-28 UNF
8	1	05046 NUT, GRIPCO, 1/2-13 NC G5 ZINC
9	1	10320 ROLLER AXLE

REMOVE ONE SEAL FROM EACH BEARING
 INSTALL BEARINGS WITH SEAL FACING OUTWARD



BARRETO

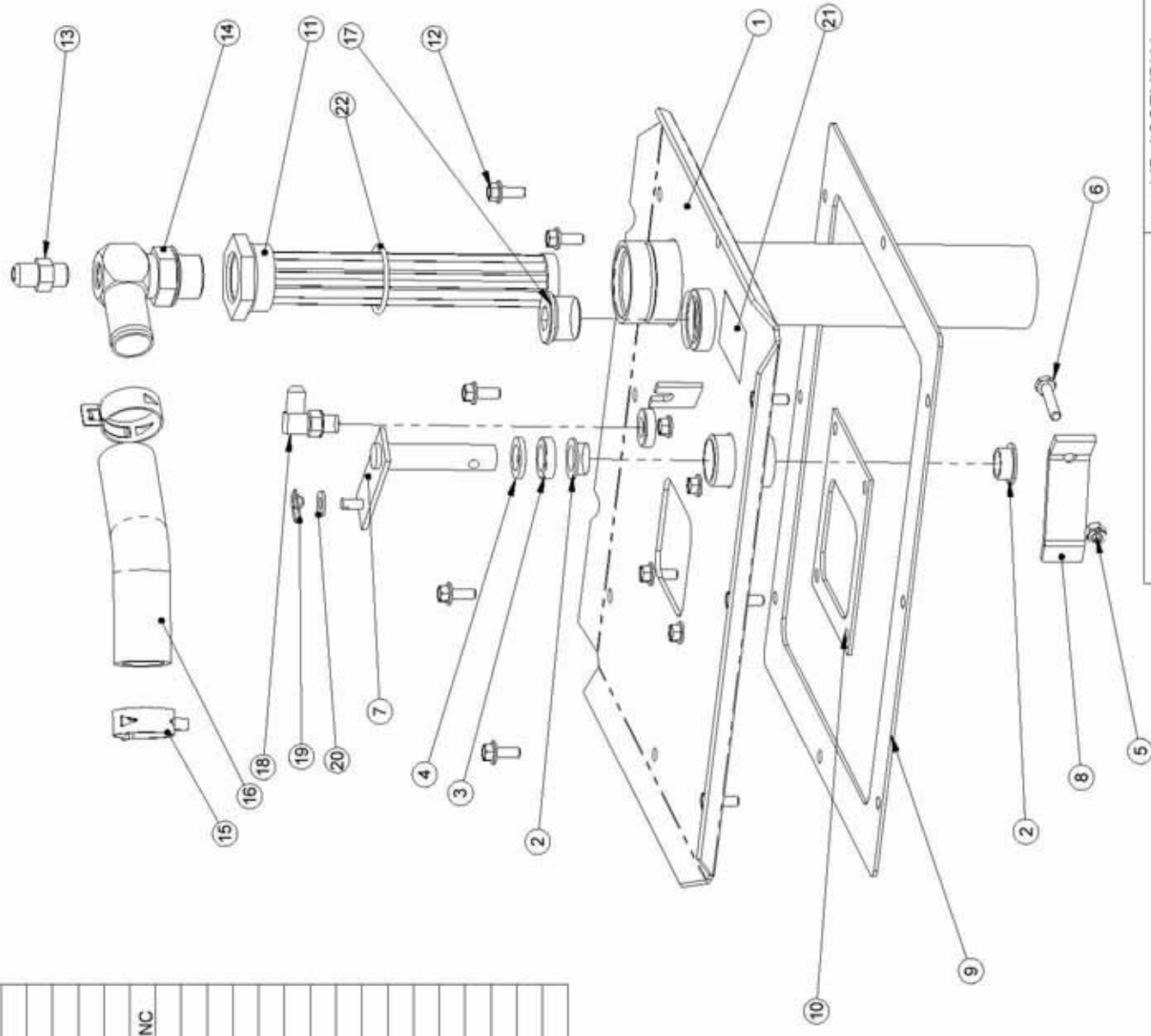
TITLE: CHAIN ROLLER ASSEMBLY

PRODUCT LINE: TRENCHER 912 DATE: 3/11/04

SCALE: 1:2 DWG# 00265

SHEET 1 OF 1

REF. QTY.	PART NO.	DESCRIPTION
1	10243	LID
2	03060	BUSHING, NYLON, IGUS MFI-1012-06
3	03020	SEAL
4	03061	FELT WASHER, 5/8 X 1 X 1/8
5	05096	NUT, NYLOCK, 1/4-20 NC
6	05125	HH CAP SCREW, 1/4-20 NC X 1-1/4 G5 ZINC
7	10244	DUMP VALVE ARM
8	01211	DUMP VALVE LEVER
9	03241	LID GASKET
10	03242	MANIFOLD GASKET
11	10247	SUMP SCREEN #12 O-RING
12	05069	WHIZ LOCK, 1/4-20 UNC X 5/8
13	10401	FITTING, 6400-6-6
14	10364	FITTING, 4601-16-12
15	05225	CLAMP, 1-1/2" HOSE, CTB-35 ST
16	10366	SUCTION HOSE
17	10526	FITTING, 6409-12 PLUG
18	04555	FITTING, 6801-4-4
19	05038	RUE RING COTTER #8
20	05081	WASHER, 1/4 SAE ZINC
21	03040-06	DECAL, "HYDRAULIC OIL ONLY"
22	03293	O-RING, 3-920N90, -20 FITTING



TITLE: LID ASSEMBLY

PRODUCT LINE: TRENCHER 912 DATE: 3/11/04

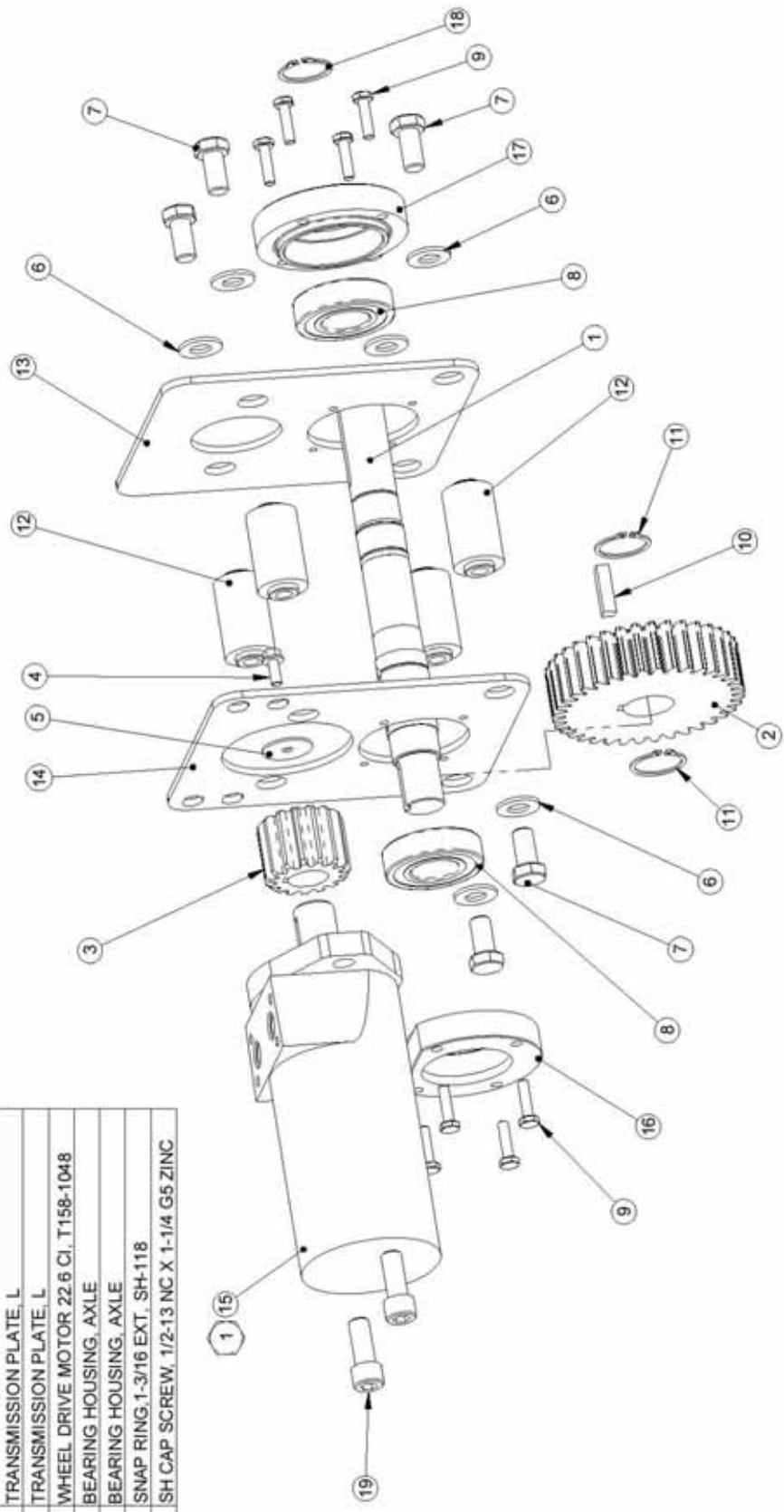
SCALE: 1:4 DWG# 00267

SHEET 1 OF 1



REF.	QTY.	PART NO.	DESCRIPTION
1	1	10230	AXLE, RIGHT
2	1	10063	GEAR, WHEEL DRIVE, 36T X 1-1/4
3	1	02075	GEAR, WHEEL DRIVE MOTOR
4	1	05069	WHIZ LOCK, 1/4-20 UNC X 5/8
5	1	05542	WASHER, 1/4 FENDER PLAIN
6	6	05102	WASHER, 1/2 SAE ZINC HARDENED
7	6	05067	HH CAP SCREW, 1/2-13 NC X 1 G5 ZINC
8	2	03280	BALL BEARING, SKF 6206
9	8	05237	HH CAP SCREW 1/4-20 NC X 1 G5 ZINC
10	1	05015	KEY, 5/16 X 5/16 X 1-1/4
11	2	05214	SNAP RING, 1-1/4" EXTERNAL, SH-125
12	4	10219	GEARBOX SPACER
13	1	10229	TRANSMISSION PLATE, L
14	1	10228	TRANSMISSION PLATE, R
15	1	04502-F	WHEEL DRIVE MOTOR 22.6 CI, T158-1048
16	1	10183	BEARING HOUSING, AXLE
17	1	10235	BEARING HOUSING, AXLE
18	1	05034	SNAP RING, 1-3/16 EXT, SH-118
19	2	05585	SH CAP SCREW, 1/2-13 NC X 1-1/4 G5 ZINC

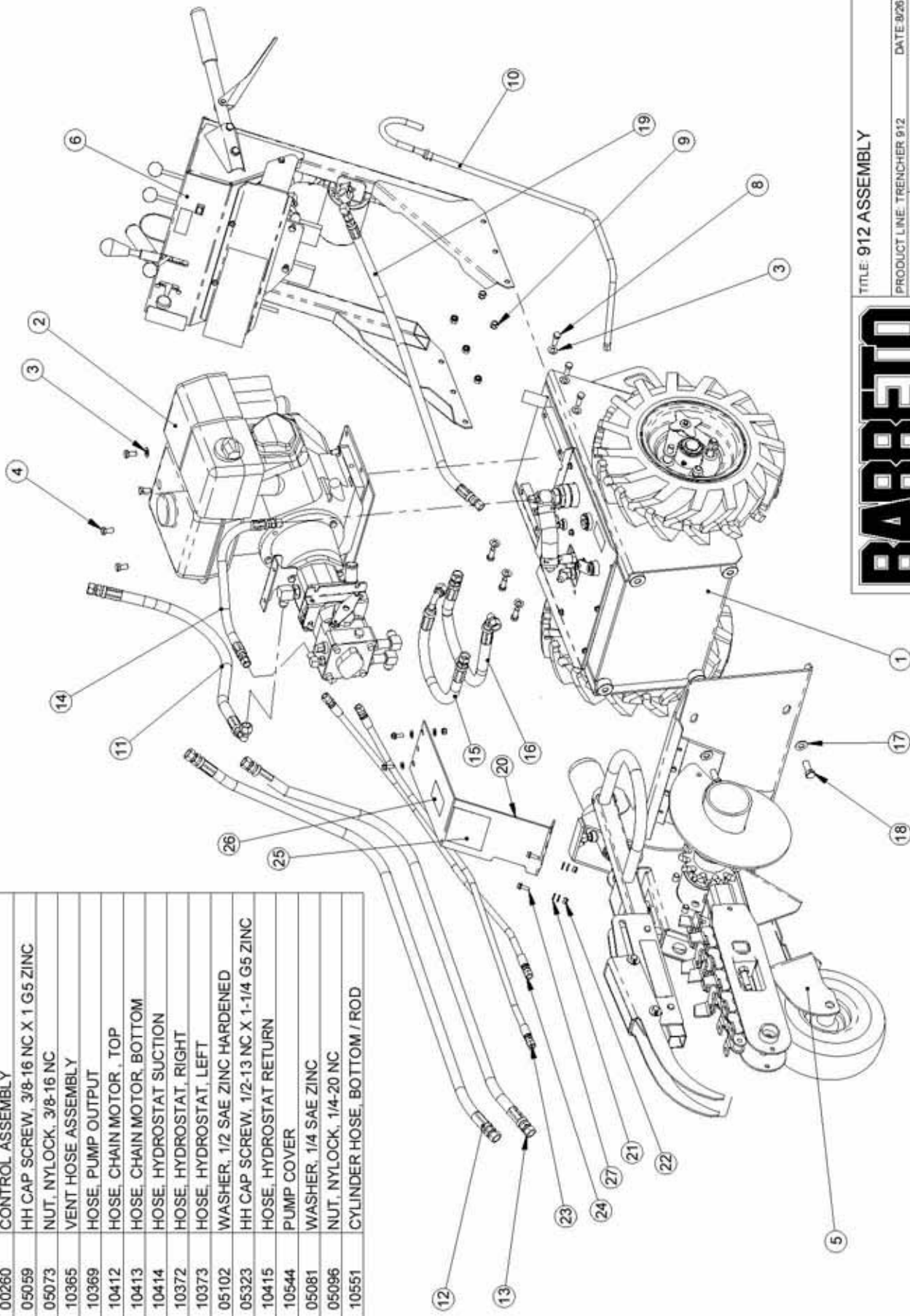
1 KEY SUPPLIED WITH MOTOR
1/4 X 1" WOODRUFF PN 05013



BARRETO

TITLE: TRANSMISSION ASSEMBLY
 PRODUCT LINE: TRENCHER 912 DATE: 3/10/04
 SCALE: 1:4 DWG# 00268
 SHEET 1 OF 1

REF. QTY.	PART NO.	DESCRIPTION	REF. QTY.	PART NO.	DESCRIPTION
1	00247	BODY ASSEMBLY	24	1	CYLINDER HOSE, TOP / PISTON
2	00261	ENGINE & PUMP ASSEMBLY	25	1	DECAL, CAUTION AVOID INJURY
3	05101	WASHER, 3/8 SAE ZINC	26	1	DECAL, "MADE IN USA"
4	05057	HH CAP SCREW, 3/8-16 NC X 3/4 G5 ZINC	27	4	WHIZ LOCK, 1/4 X 3/4
5	00262	FRONT END			
6	00260	CONTROL ASSEMBLY			
8	05059	HH CAP SCREW, 3/8-16 NC X 1 G5 ZINC			
9	05073	NUT, NYLOCK, 3/8-16 NC			
10	10365	VENT HOSE ASSEMBLY			
11	10369	HOSE, PUMP OUTPUT			
12	10412	HOSE, CHAIN MOTOR, TOP			
13	10413	HOSE, CHAIN MOTOR, BOTTOM			
14	10414	HOSE, HYDROSTAT SUCTION			
15	10372	HOSE, HYDROSTAT, RIGHT			
16	10373	HOSE, HYDROSTAT, LEFT			
17	05102	WASHER, 1/2 SAE ZINC HARDENED			
18	05323	HH CAP SCREW, 1/2-13 NC X 1-1/4 G5 ZINC			
19	10415	HOSE, HYDROSTAT RETURN			
20	10544	PUMP COVER			
21	05081	WASHER, 1/4 SAE ZINC			
22	05096	NUT, NYLOCK, 1/4-20 NC			
23	10551	CYLINDER HOSE, BOTTOM / ROD			



BARRETO

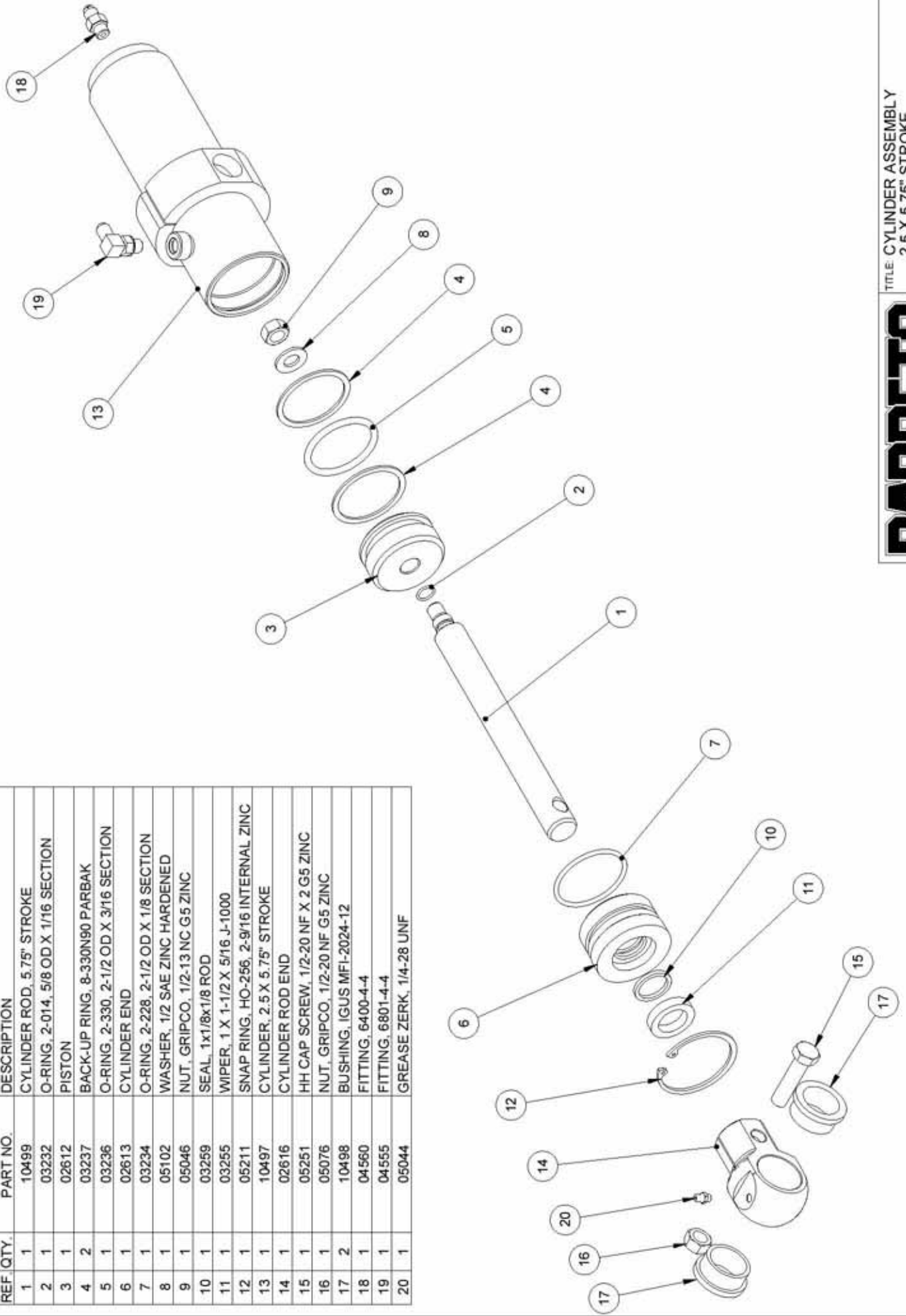
TITLE: 912 ASSEMBLY

PRODUCT LINE: TRENCHER 912 DATE: 9/26/04

SCALE: 1:12 DWG# 00269

SHEET 1 OF 1

REF. QTY.	PART NO.	DESCRIPTION
1	10499	CYLINDER ROD, 5.75" STROKE
2	03232	O-RING, 2-014, 5/8 OD X 1/16 SECTION
3	02612	PISTON
4	03237	BACK-UP RING, 8-330N90 PARBAK
5	03236	O-RING, 2-330, 2-1/2 OD X 3/16 SECTION
6	02613	CYLINDER END
7	03234	O-RING, 2-228, 2-1/2 OD X 1/8 SECTION
8	05102	WASHER, 1/2 SAE ZINC HARDENED
9	05046	NUT, GRIPCO, 1/2-13 NC G5 ZINC
10	03259	SEAL, 1x1/8x1/8 ROD
11	03255	WIPER, 1 X 1-1/2 X 5/16 J-1000
12	05211	SNAP RING, HO-256, 2-9/16 INTERNAL ZINC
13	10497	CYLINDER, 2.5 X 5.75" STROKE
14	02616	CYLINDER ROD END
15	05251	HH CAP SCREW, 1/2-20 NF X 2 G5 ZINC
16	05076	NUT, GRIPCO, 1/2-20 NF G5 ZINC
17	10498	BUSHING, IGUS MFI-2024-12
18	04560	FITTING, 6400-4-4
19	04555	FITTING, 6801-4-4
20	05044	GREASE ZERK, 1/4-28 UNF

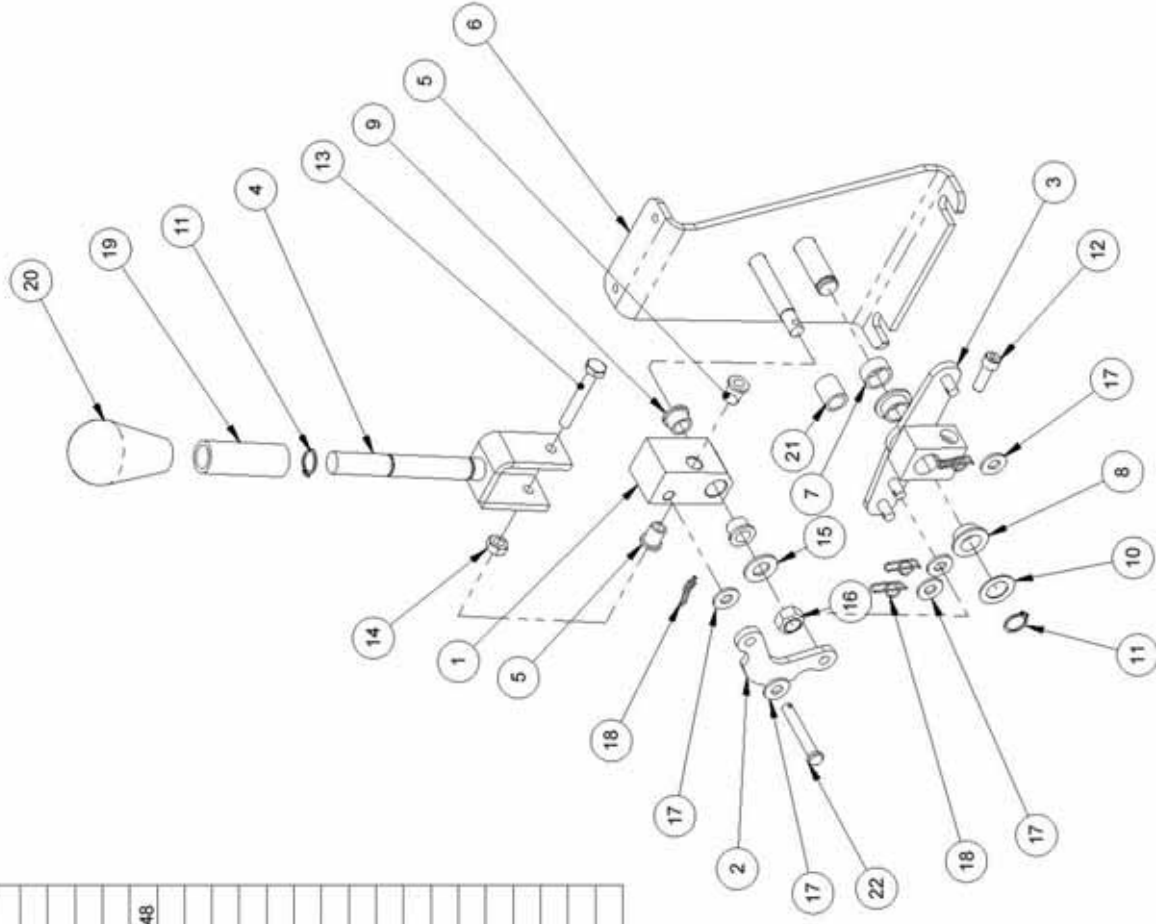


TITLE: CYLINDER ASSEMBLY
 PRODUCT LINE: TRENCHER 912
 SCALE: 1:4
 SHEET 1 OF 1

DATE: 8/26/04
 DWG#: 00271

BARRETO

REF. QTY.	PART NO.	DESCRIPTION
1	10521	SPEED LEVER PIVOT
2	10523	SPEED LINK
3	10519	SPEED CABLE ARM
4	10524	SPEED LEVER
5	03029-04	BUSHING, NYLON, MICRO PLASTICS 12SWS1048
6	10520	SPEED LEVER MOUNT
7	10525	SPACER
8	10100	BUSHING, NYLON, IGUS MFI-0810-05
9	10509	BUSHING, NYLON, IGUS MFI-0608-06
10	10113	THRUST WASHER, .518 X .873 X .030
11	05506	SNAP RING, 1/2" EXTERNAL, SH-50
12	05235	SH CAP SCREW, 1/4-28 NF X 3/4 G5 PLAIN
13	05243	HH CAP SCREW, 1/4-28 NF X 1-3/4 G5 ZINC
14	05266	NUT, GRIPCO, 1/4-28 NF GRB
15	05101	WASHER, 3/8 SAE ZINC
16	05283	NUT, GRIPCO, 3/8-24 NF GRC
17	05081	WASHER, 1/4 SAE ZINC
18	05038	RUE RING COTTER #8
19	10547	SPEED LEVER ROLLER
20	03508	SPEED KNOB
21	11031	SPEED LEVER SPACER
22	03029-02	CLEVIS PIN, 1/4 X 1-5/8



BARRETO

TITLE: SPEED LEVER ASSEMBLY

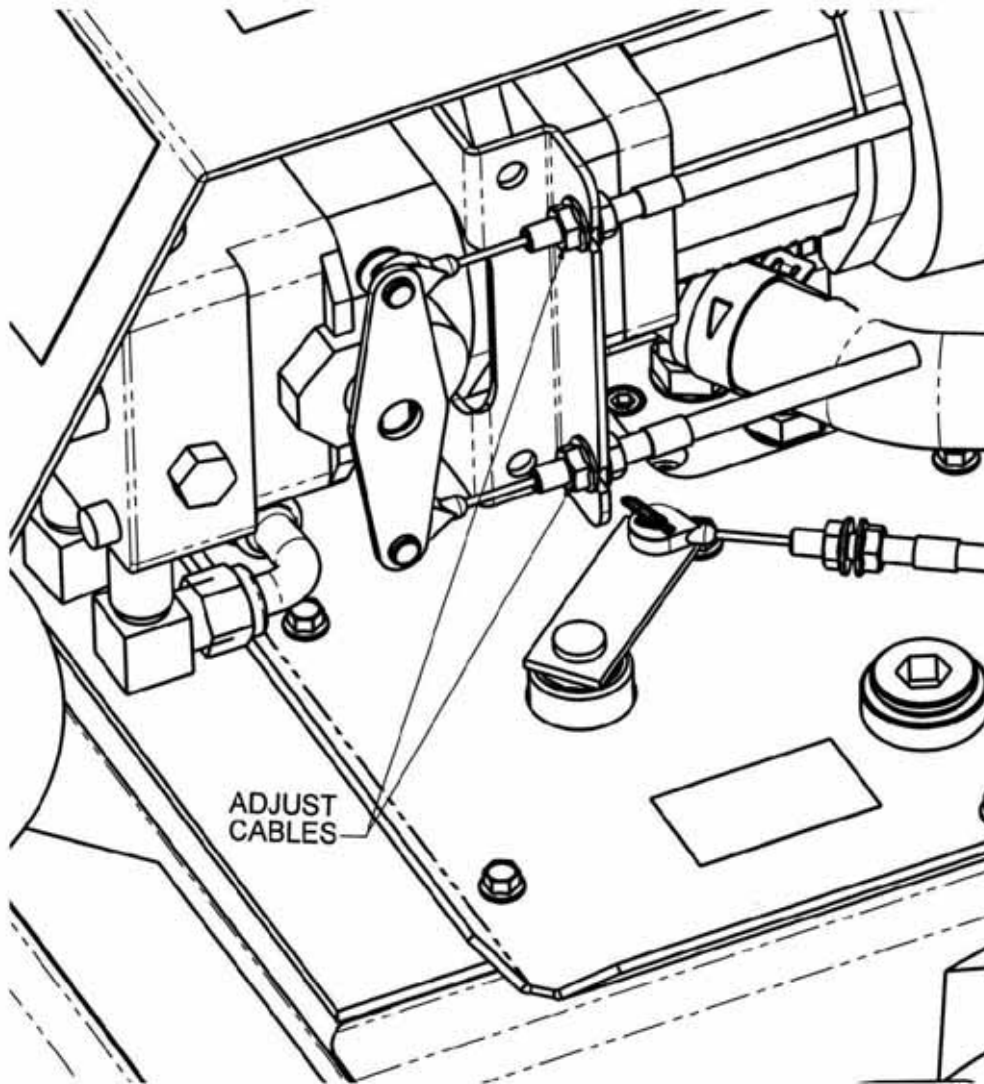
PRODUCT LINE: TRENCHER 912 DATE: 2008

SCALE: 1:4 DWG#: 00273

SHEET 1 OF 1

WHEEL DRIVE NEUTRAL ADJUSTMENT

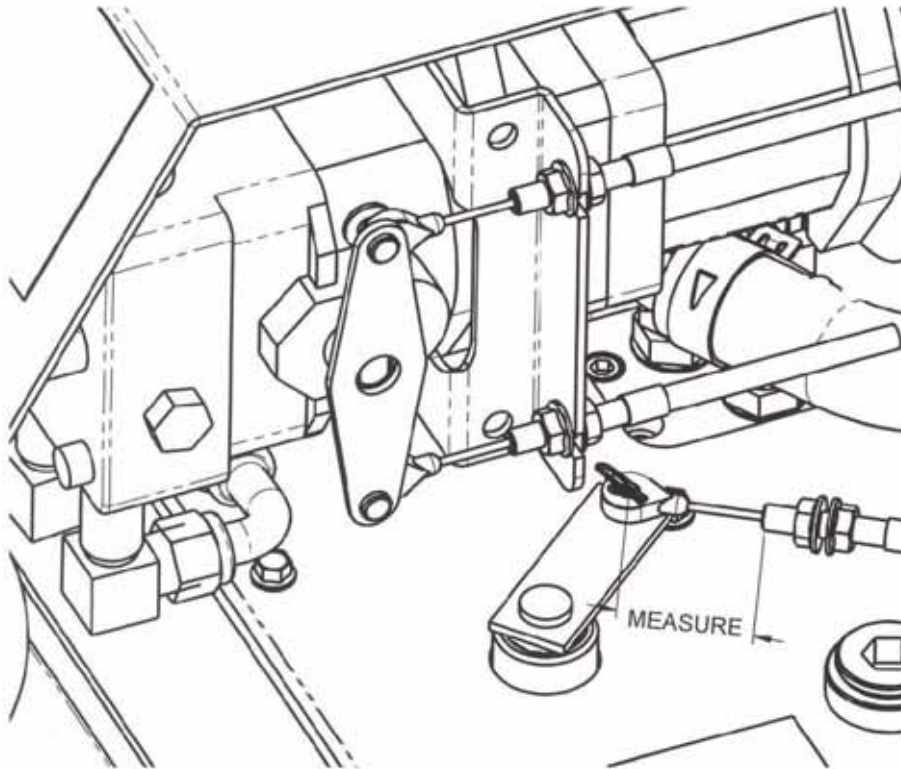
The speed control cables may need to be adjusted after some use. If the machine creeps while the speed control is in neutral, the speed cables will need adjustment. Adjust the cables to bring the pump cable arm to the neutral position (vertical) when the speed control also is in neutral. Adjust the cables to eliminate slack, but do not over tighten them so they are extremely tight against each other.



WHEEL DRIVE VALVE CABLE ADJUSTMENT

The clutch cable and lever must have some free play. The cable will stretch and occasionally needs adjustment.

1. Rotate the actuator arm clockwise, by hand, to take up any free play. Measure the distance from the pin of the actuator arm to the end of the cable housing.
2. Pull the clutch lever all the way up until it touches the handle bar grip. With the lever pulled up, again measure the distance from the pin of the lever to the cable housing. Calculate the difference.
3. Adjust the cable for $7/16''$ to $1/2''$ movement of the actuator arm at the pin. Do not include any lever free play in the measurements.



BARETO
 66408 HWY 203
 LA GRANDE, OR 97850
 (503) 963-7346

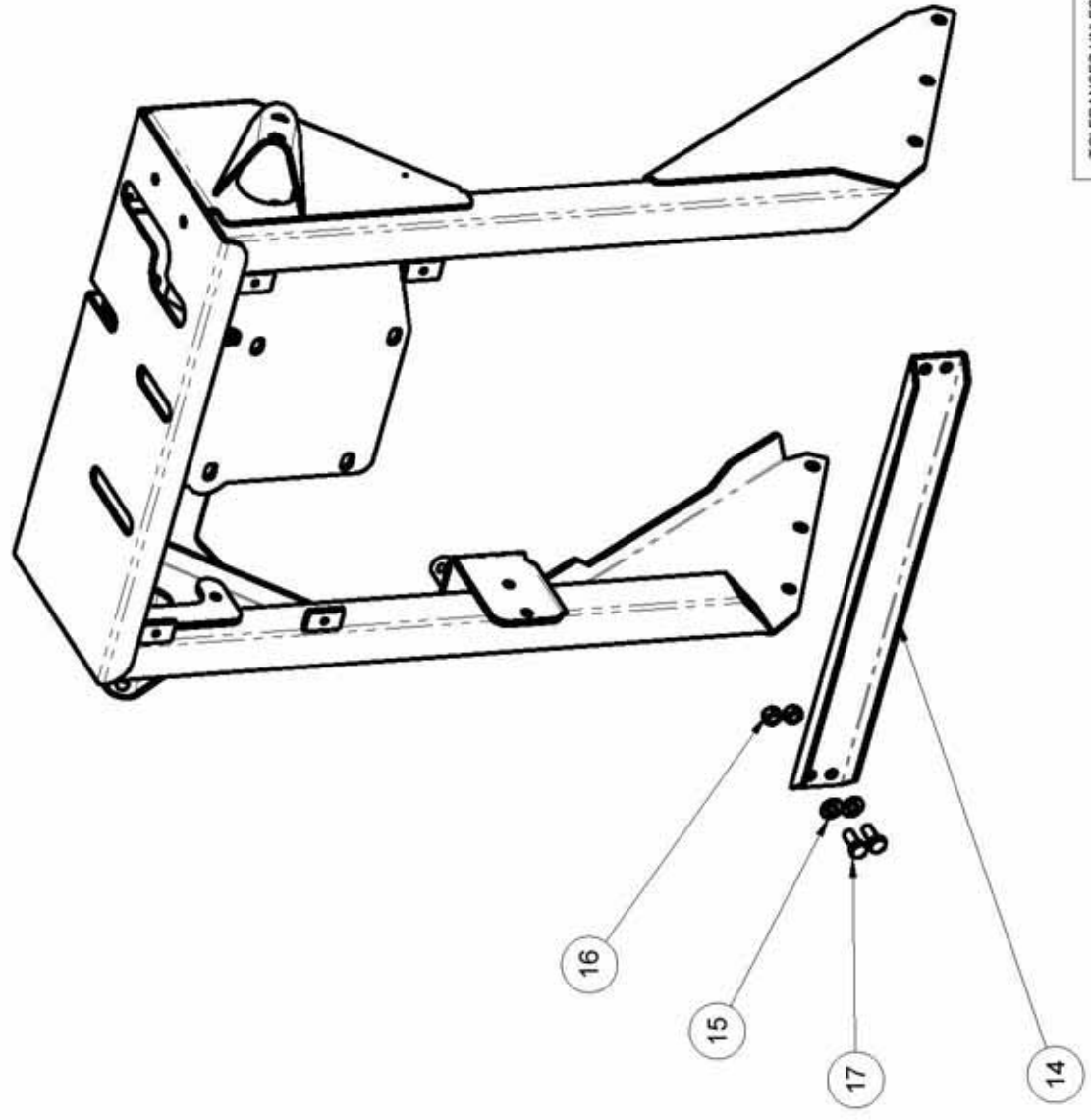
DATE	REV DESCRIPTION	DMN/APE

MASS: 30.67520 POUNDS

NOTES:

1. MATERIAL:

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
14	10733	CONTROL MOUNT BRACE	1
15	05068	WASHER, 5/16 SAE ZINC	4
16	10462	NUT, GRIPCO, 5/16-24 NF	4
17	05052	HH CAP SCREW, 5/16-24 NF X 3/4 G5 ZINC	4



TOLERANCES UNLESS OTHERWISE SPECIFIED

FRACTIONS:	DECIMALS:	ANGLES:
± = ±1/16	X = ±.1	±2°
1/32 = ±1/32	XX = ±.03	
1/64 = ±1/64	XXX = ±.005	

TITLE: CONTROL POD MOUNT BRACE

PRODUCT LINE: TRENCHER 912

SCALE: 1:12

DWG# 10327-BRACE-AS\$Y
 SHEET 1 OF 1

BARRETO

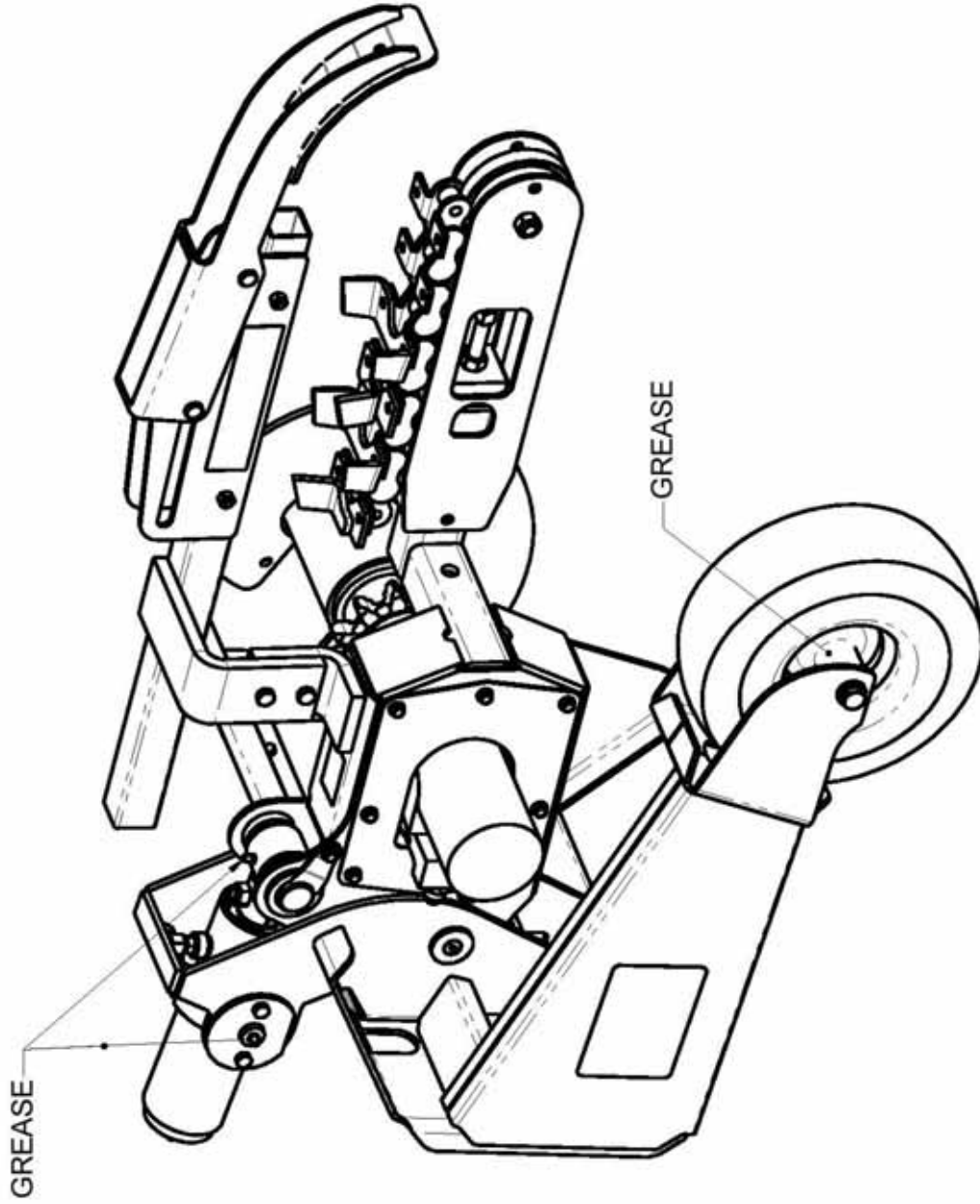
66498 HWY 203
LA GRANDE, OR 97850
(541) 963-7348

DATE	REV/DESCRIPTION	DWN/APP

MASS: 230.5468 POUNDS

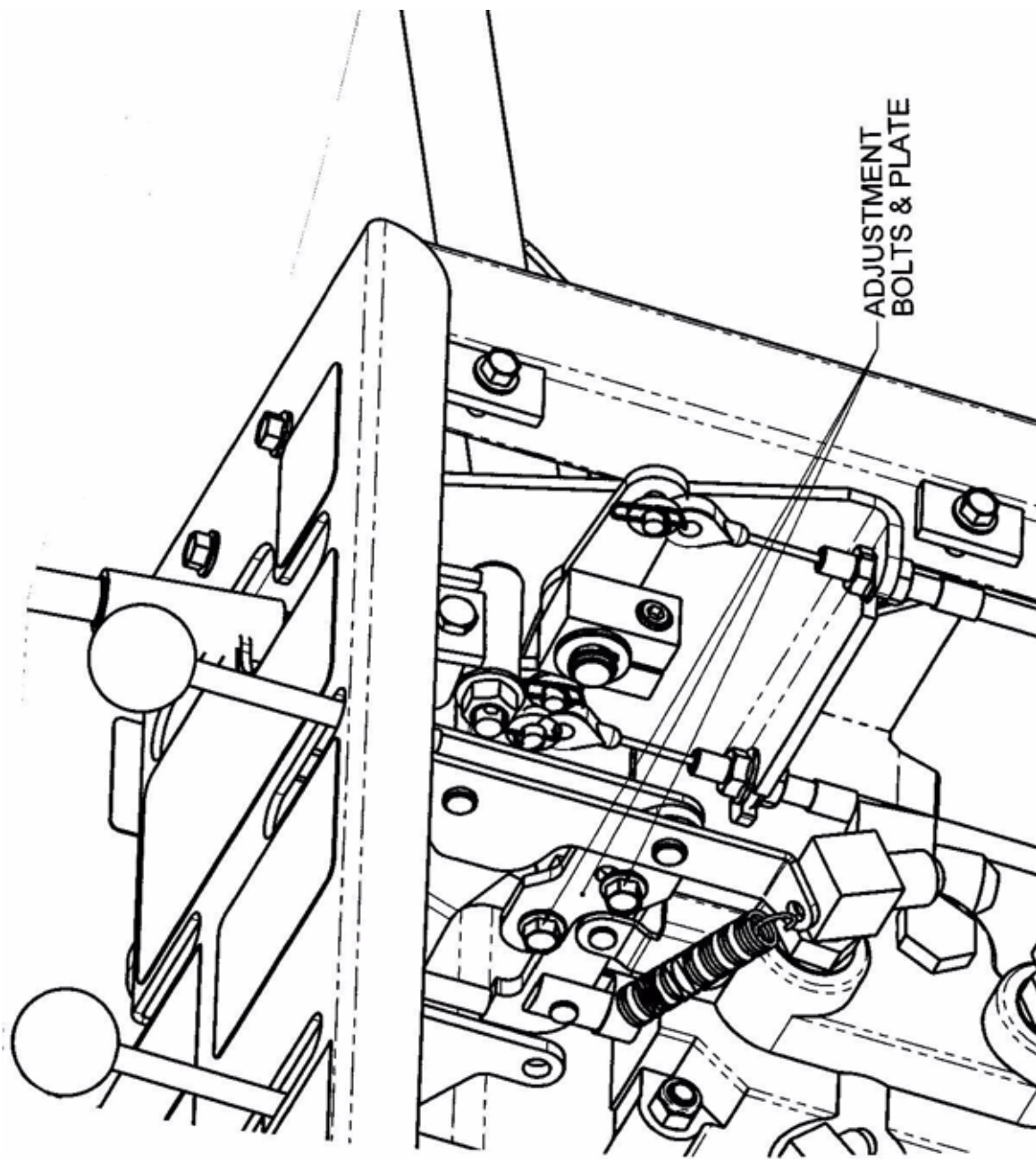
NOTES:

- 1. MATERIAL:

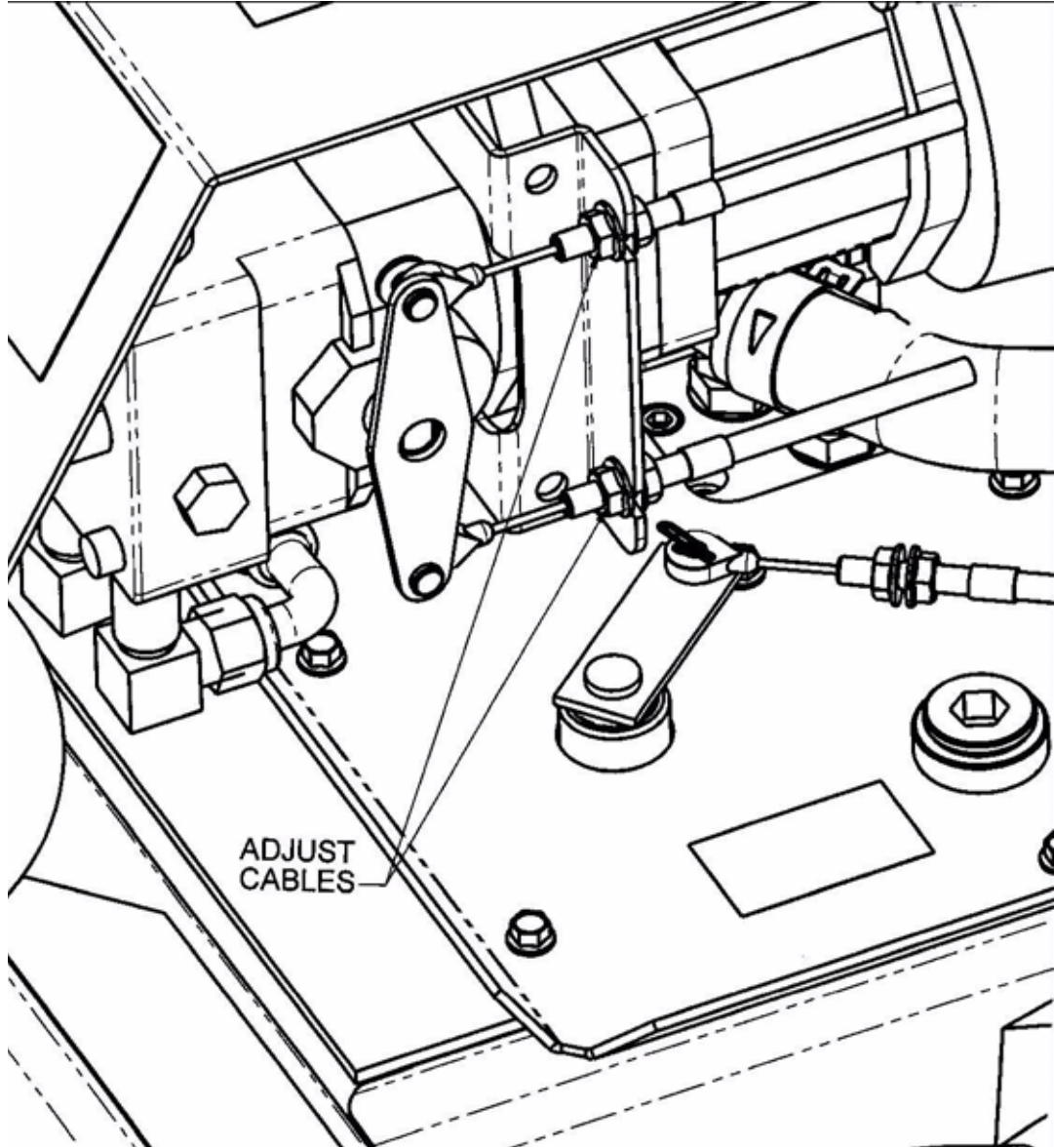


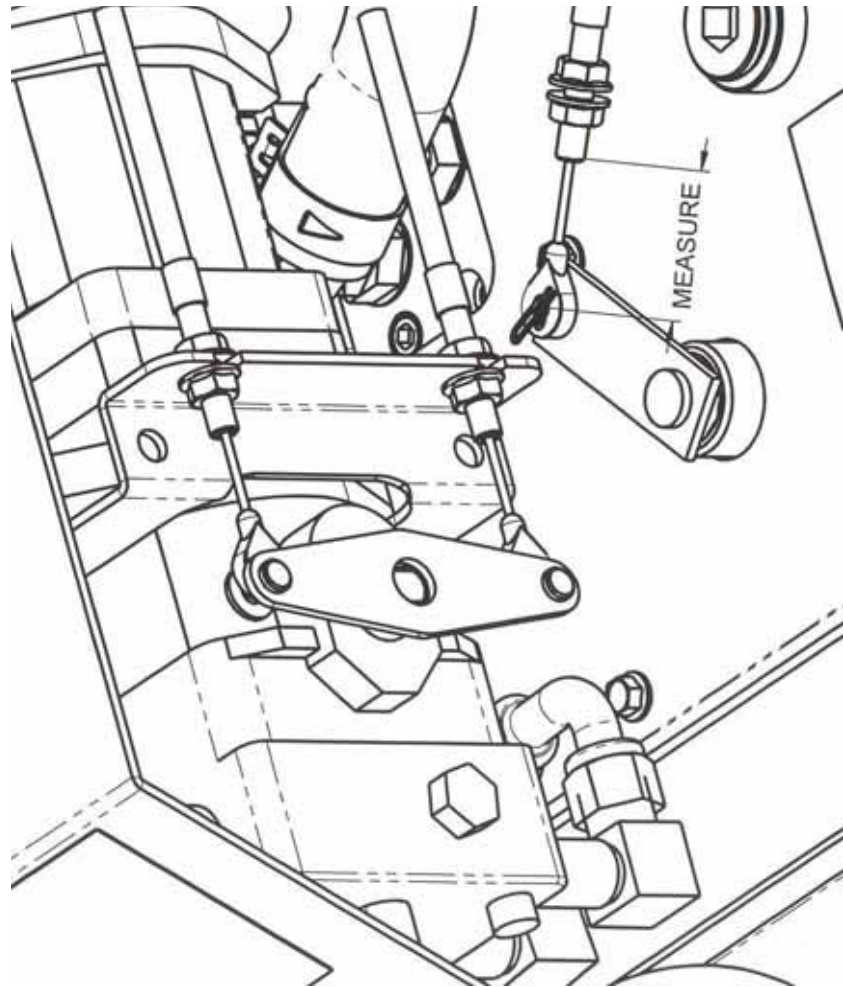
TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS: DECIMALS: ANGLES:
±1/16 = ±0.0625 .X = ±.1 .5°
1/32 = ±0.03125 .XX = ±.03
1/64 = ±0.015625 .XXX = ±.005

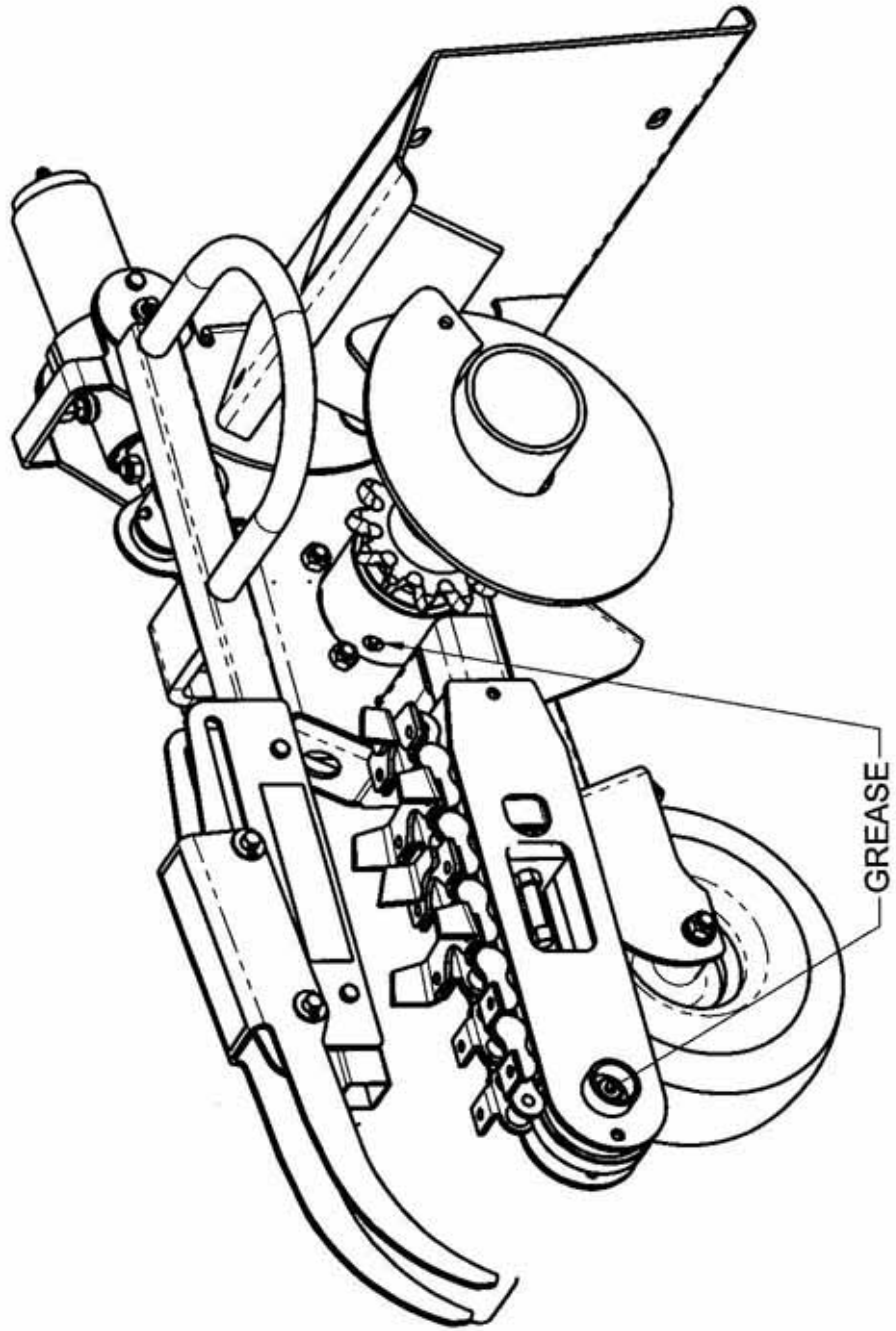
TITLE: X
PRODUCT LINE: X
SCALE: 1:1
SHEET 1 OF 1
DWG# MANUAL-LUBE

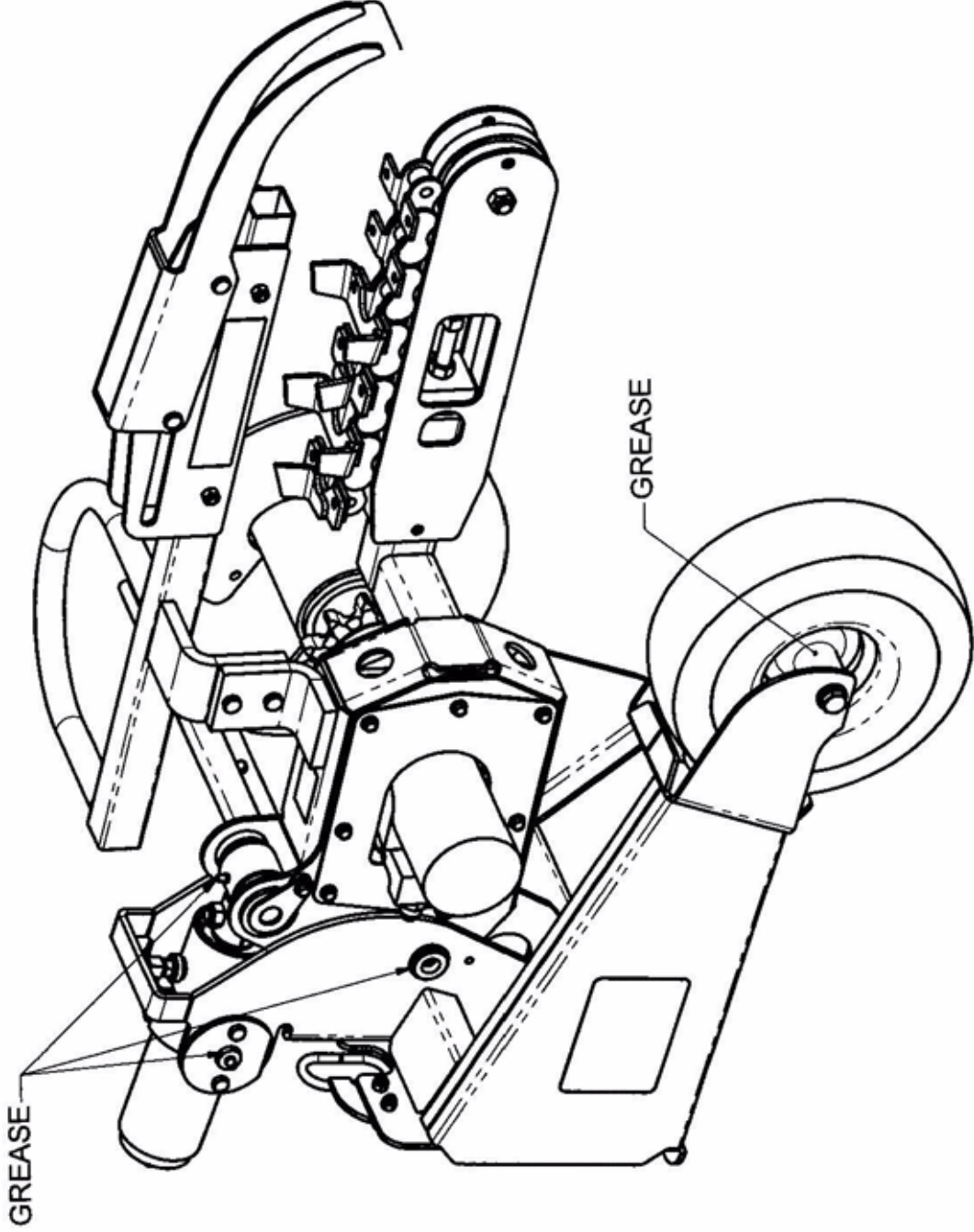


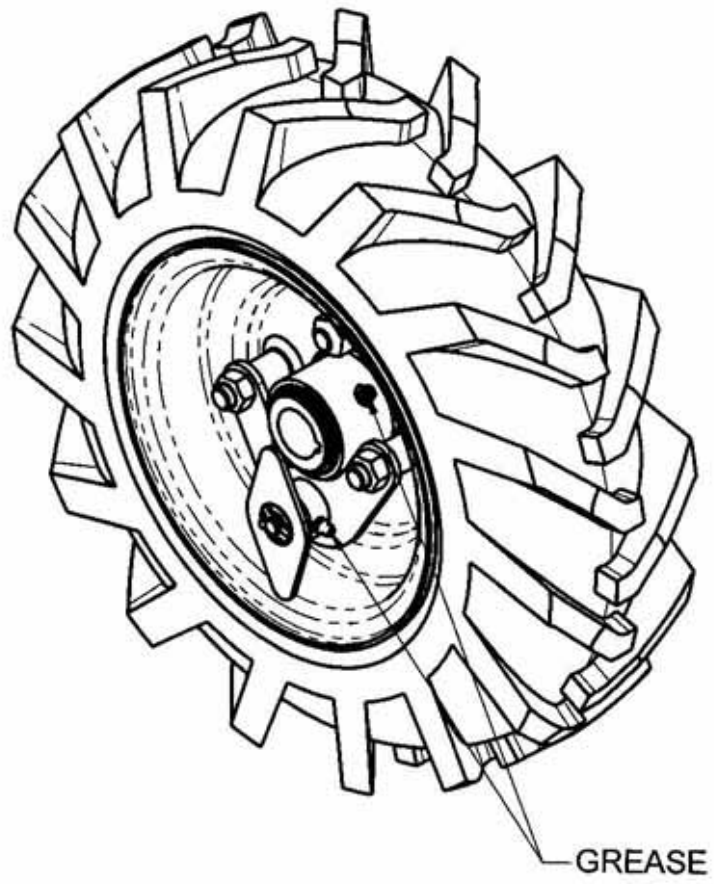
ADJUSTMENT
BOLTS & PLATE











GREASE