THE

BARRETO

MODEL 1824TK - 2324TK

HYDRAULIC TRACK TRENCHER
OWNER'S MANUAL

CONGRATULATIONS!

You are now the proud owner of the BARRETO trencher. The OPERATOR'S MANUAL is attached to the machine. Please study it and this manual to become familiar with the trencher, its characteristics, and method of operation. Pay particular attention to the safety and operating instructions to prevent personal injury or equipment damage.

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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Innovative Equipment Engineered to Last
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Machine Identification Record

Machine model number _____

Machine serial number _____

Engine manufacturer _____

Engine model number _____

Engine serial number _____

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TRENCHER ASSEMBLY INSTRUCTIONS

Upon delivery, check for freight damage and any missing items. If there is damage, notify the carrier and Barreto Manufacturing immediately. Remove trencher from shipping crate.

When documentation refers to “right side” or “left side”, it is relative to the operator’s position with both hands on the handlebars.

Install cushion pad, boom cushion, and boom. **CAUTION!!** The boom is heavy. You may want help to lift it into place. See the exploded view drawing 00368 R1. Push boom on as far as it will go onto the boom mount (part of the chain motor housing weldment). Be sure adjuster screw is backed out.

SERVICE INFORMATION

HYDRAULIC SYSTEM:

- Your trencher should arrive with approximately 14 U.S. gallons (53 liters) of tractor transmission / hydraulic fluid in the tank. Shipping regulations may prohibit shipping with the hydraulic fluid. Check the reservoir level using the sight gauge on the side of the tank. If required, add tractor transmission / hydraulic fluid to the reservoir. For machine use in ambient temperatures between +32°F (0°C) and +90°F (32°C) hydraulic fluid ISO 68 is recommended. If the machine is operated at temperatures below +32°F (0°C) then hydraulic fluid ISO 46 is recommended.
- Recheck oil level after trencher has been run and oil has circulated through the components. Routinely check level thereafter.
- Change hydraulic fluid filter after the first 50 hours of use. Change it every 200 hours thereafter.
- Add approximately one quart (1 liter) of hydraulic fluid to reservoir with each filter change.
- Discard the old filter according to environmental standards in your geographic area.
- Check all hydraulic fittings for leaks and tighten if necessary.

WARNING - Running the trencher without hydraulic fluid will cause serious damage to the hydraulic pump. INSURE THAT THE RESERVOIR FLUID LEVEL IS TO THE SIGHT GAUGE BEFORE STARTING THE MACHINE.

IMPORTANT: If the couplers between the engine and the pump are moved or removed for any reason, it is CRITICAL that they have a 1/16” gap between them when reinstalled. Failure to have this gap will result in rapid wear and failure of your pump!

NOTE: It is very important to move the fuel shutoff lever to the closed position after stopping the engine. Failure to do so could cause fuel to leak down into the cylinder and crankcase. Damage resulting from this will void your engine warranty and not be covered.

IMPORTANT - The engine on the Barreto trencher may or may not have been serviced prior to shipping. Shipping regulations may prohibit shipping with fuel or oil in the engine. Check levels and add oil and fuel as required before starting engine. Service the engine according to the engine owner’s manual before starting.

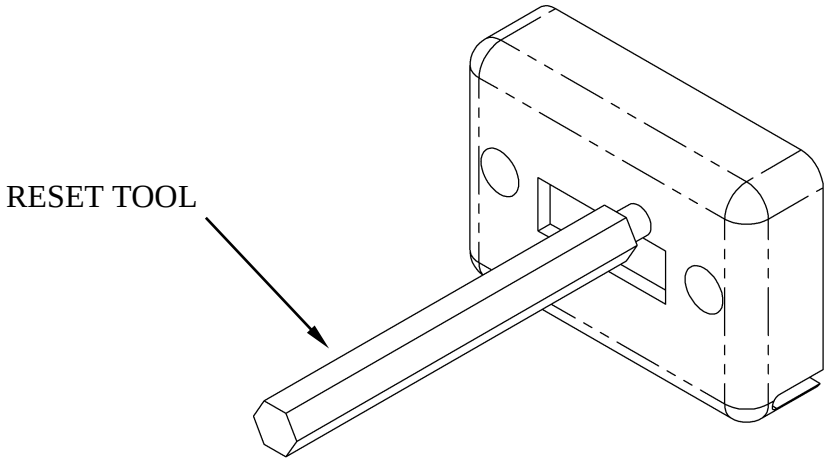
HOUR METER

The **DGI® TACH/HOUR** hour meter tracks the hours of machine operation in order for routine maintenance to be performed on a timely basis.

Your **DGI®** hour meter is pre-set at the **DGI®** factory to go into ***Flash Alert*** mode at 25-hour intervals. Although the engine manufacturer does not require changing engine oil this often, **due to heavy-duty use and extreme conditions inherent to tiller use, Barreto Manufacturing strongly recommends frequent oil changes.**

Refer to this manual for equipment service requirements and to the **Engine Manual** for other engine service requirements.

While ***Flash Alert*** is active, hold the tip of the RESET TOOL (Key Kancel Wand) against the meter as shown. Within several seconds, the display will stop flashing indicating the Service Interval has been reset. If the wand gets lost, a small mechanic's pick-up magnet will work.

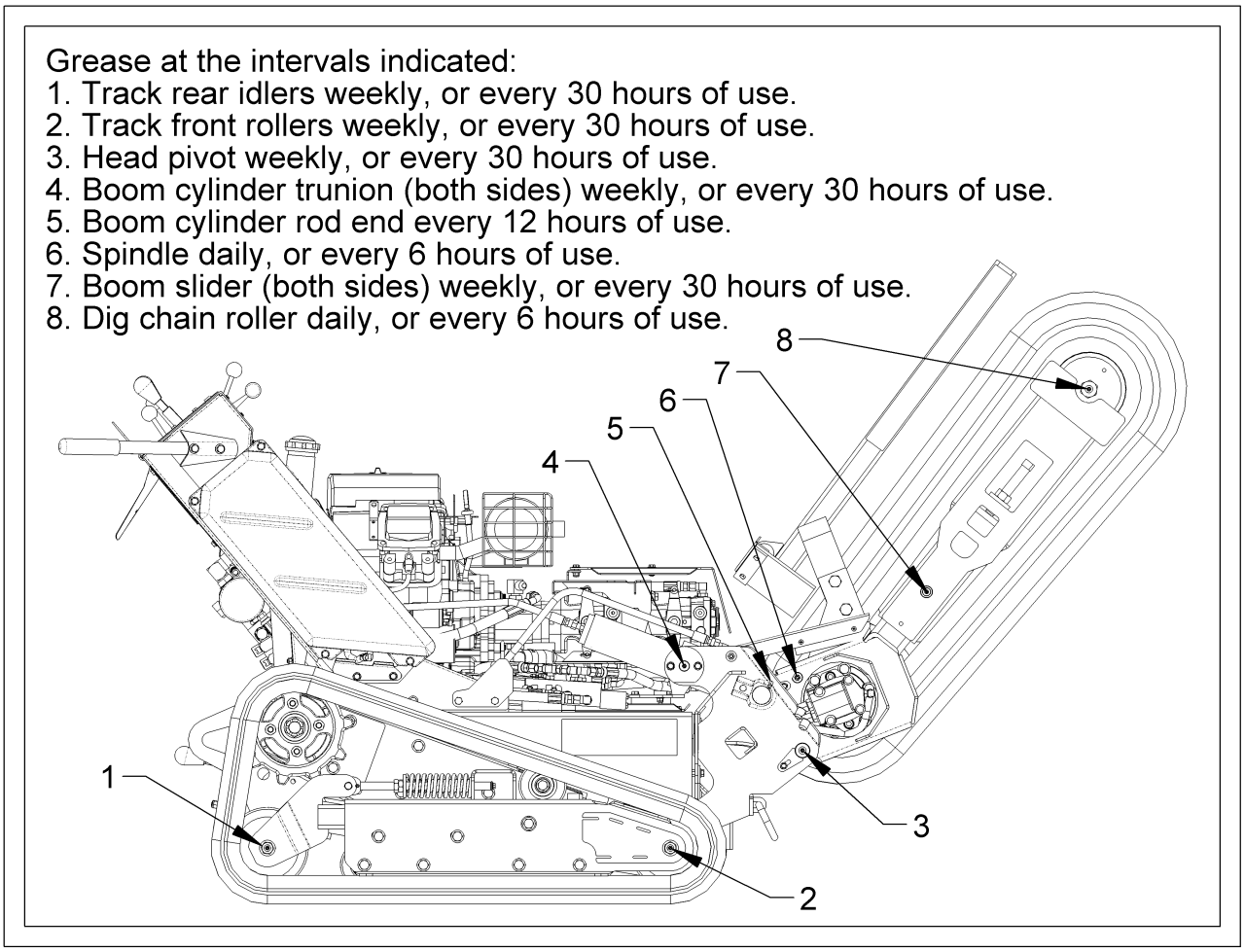


TRENCHER INTENDED USE

This machine is designed for digging trenches in “normal” ground of reasonably soft dirt and stones up to 6” (15cm) in diameter. Ground with larger stones, high clay content, very hard packed, very dry, or in a frozen condition may be unsuitable for normal trenching. Consider using a backhoe or other heavier equipment for such conditions.

LUBRICATION REQUIREMENTS

Grease at the intervals indicated per the illustration of grease lubrication points. There is also a grease diagram decal on the machine.



CHAIN INSTALLATION

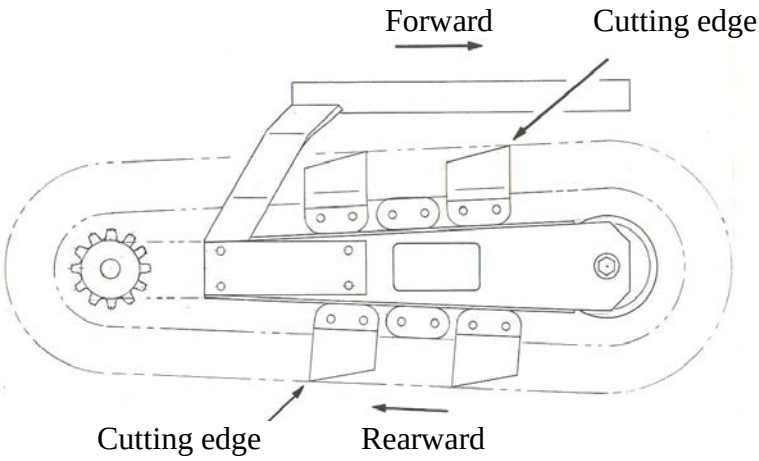
CAUTION!! The chain is quite heavy. You may want help to lift it.

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. Start engine and push digging boom control lever forward to lower boom onto the chain. Stop engine.

3. Wrap chain around boom and sprocket. Install chain master link or link pin and cotter.

4. Use boom adjuster screw to tighten chain. Chain should have enough slack to allow approximately 2" (5cm) of space between middle of boom and chain when boom and chain are straight out in a horizontal position. Tighten adjuster screw locknut.



OPERATOR TRAINING

Rental companies should demonstrate all of the machine operations to each rental customer including:

- Starting up the engine.
- Loading the trencher onto the trailer and securing it for road transport.
- Unloading the trencher from the trailer.
- Trenching procedure - Operation of the trencher.

WARRANTY OF BARRETO MANUFACTURING EQUIPMENT

Barreto Manufacturing, Inc. warrants all BARRETO equipment to free of defects in material and workmanship for a period of one (1) year, dating from the 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 of 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, batteries and tires are warranted by the original manufacturers and are not covered by the Barreto Equipment Warranty. Wear parts such as tiller tines, sprockets, bearings, trencher chain parts including teeth, stump grinder cutting teeth & holders, etc. are also excluded unless it can be determined that a defect has contributed to premature wear.

MAINTENANCE PREPARATION

Only trained & qualified personnel should perform maintenance or repairs of the trencher. Before performing any service, maintenance, adjustments, repairs, or off-season long-term storage, follow the SHUT DOWN PROCEDURE in the OPERATOR'S MANUAL.

Do not touch the engine, muffler, or any of the hydraulic components until cool.

WARNING: Muffler and engine get hot enough to cause serious burns. For the safety of yourself and others, allow enough time for the engine, muffler, and the hydraulic fluid to cool completely before performing any cleaning or maintenance.

Avoid contact with hydraulic fluid.

WARNING: When machine is operating, hydraulic fluid is under extreme pressure and can get under skin and burn or poison.

Read the BATTERY & ELECTRIC STARTER SAFETY INSTRUCTIONS. Disconnect the battery, removing the negative terminal first by loosening the wing nut where the cable end is secured to a post on the trencher frame. When ready to reattach the cables, reconnect the positive terminal first.

If you need to lower the dig chain boom without power, do the following:
1. Position a pan under the trencher to catch hydraulic fluid.
2. Support the boom front end with a hoist or forklift.

WARNING: The boom with dig chain is heavy. Manpower alone is not recommended, but if necessary, use a team of two strong workers to support the boom, and a third worker to loosen the hose.

3. Loosen the hose at the rod end (front) port of the boom cylinder and lower the boom.
4. If it still will not lower, then loosen the hose at the back end port of the boom cylinder.

ROUTINE MAINTENANCE

Routinely check the condition, clean, tighten, repair, or replace as necessary the following:

- Dig chain boom guard
- Muffler guard
- Hydraulic hoses and fittings
- Fuel lines
- Fasteners
- Safety decals

Clean safety decals often using soap and water. **Do not use** abrasive cleaners or solvents such as mineral spirits that may damage the decals. Replace any damaged (unreadable) or missing decals. If you replace a machine part that has one or more decals affixed to it, replace the decals also. Replacement parts and decals can be purchased from Barreto Manufacturing, Inc. When attaching decals, the temperature of the mounting surface must be at least 40°F (5°C) and must be clean and dry.

Service the engine according to the engine owner's manual. Follow the directions for all aspects of service including air filter change, oil level checking, filling, draining, disposal of engine oil, disposal of petrol/gasoline, and off-season long-term storage.

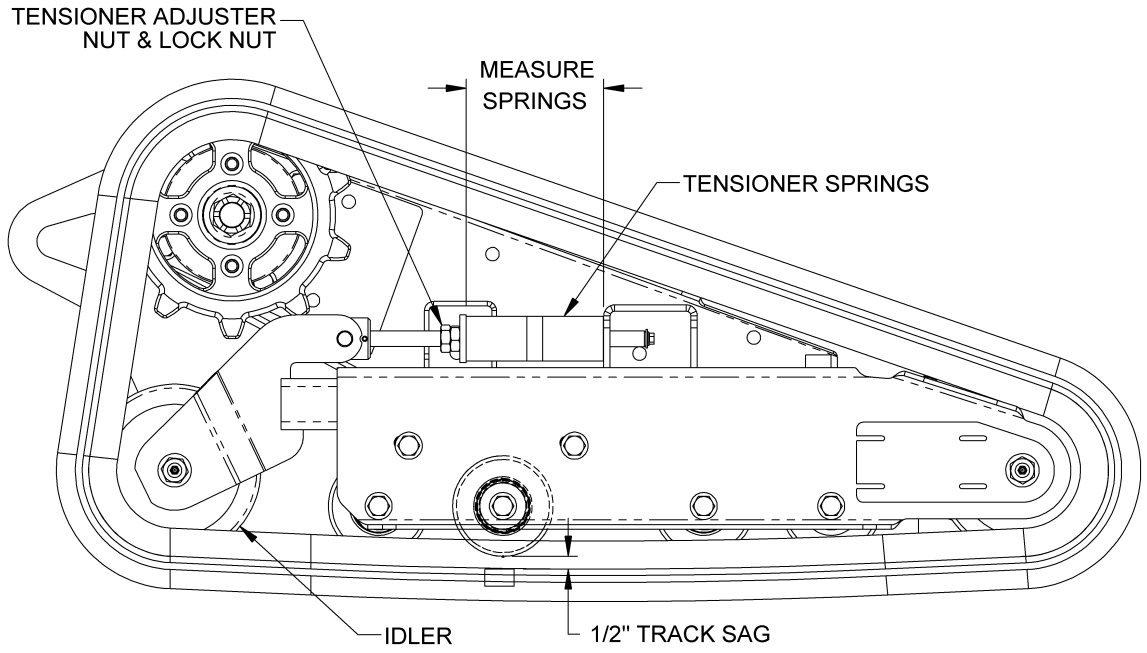
Off-season long-term storage of the trencher can be at any ambient temperature.

TRACK TENSION ADJUSTMENT

Track must be tensioned enough to prevent de-tracking. Too much tension will cause increased wear on roller, sprockets and drive motor bearings. There are two methods of measuring correct tension: Measure the compression of the springs, or measure track sag.

To measure spring compression:

Loosen tension adjuster nut and lock nut completely. Measure free length of springs. Then tighten adjuster nut to compress tension spring pair to a length of 5/8” (16mm) less than free length. Tighten lock nut.



To measure track sag:

Lift the machine and raise the track off the ground. Measure the distance between either one of the central rollers and track metal core bars and adjust track tension to get 1/2” (13mm) track sag.

To remove/replace track:

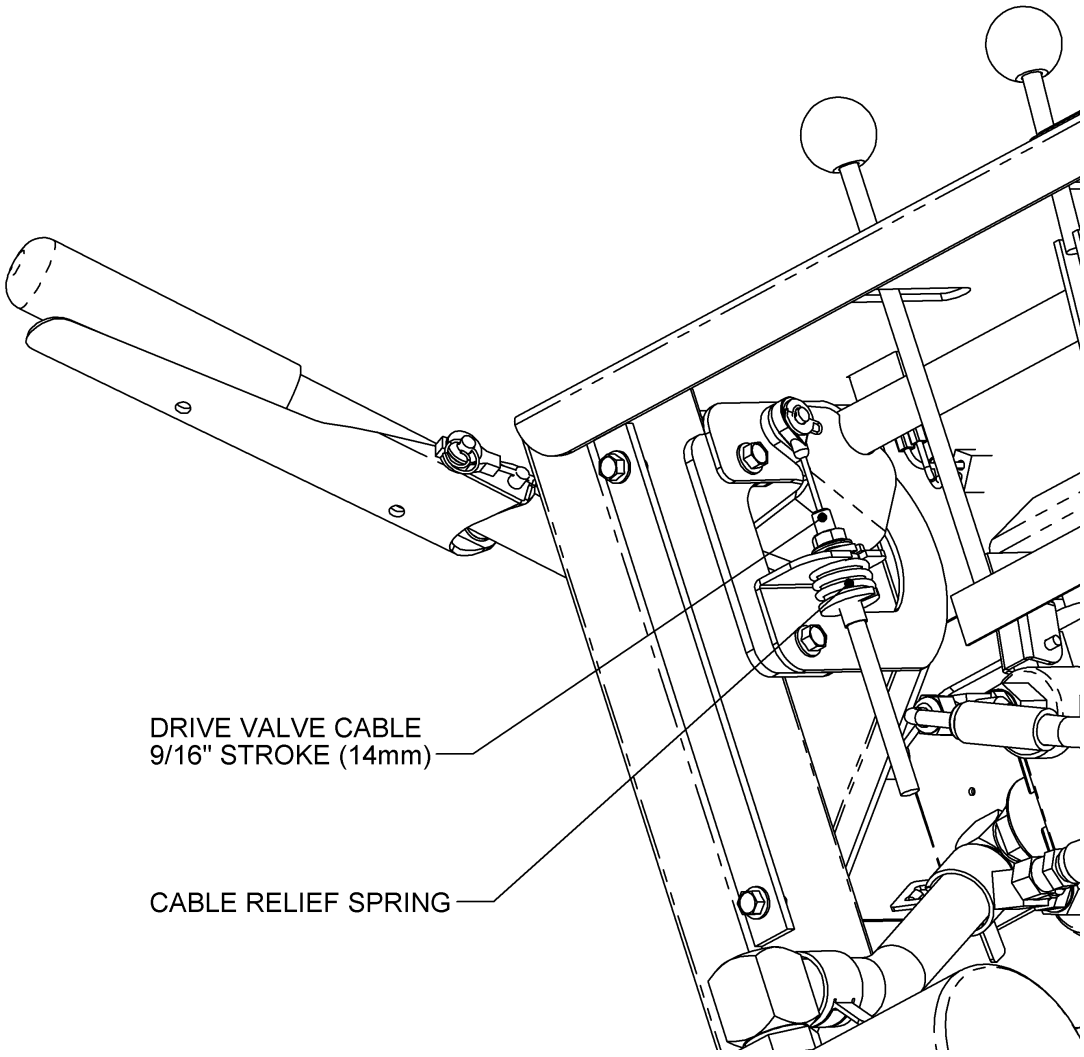
1. Completely loosen tensioner nuts.
2. Retract idler completely.
3. Remove track from idler first, sprocket second, and front roller last.
4. Reverse procedure to replace track.

Adjust track tension per instructions and illustration.

TRACK DRIVE VALVE CABLE ADJUSTMENT

The drive valve cable and lever may wear. The cable stroke should be checked monthly and adjustment made as needed. An insufficient cable / valve stroke will cause the track drive to become weak.

1. Remove cover from back side of control panel.
2. Pull the clutch lever all the way up until it touches the handle bar grip. Measure the valve cable stroke – it should be 9/16” (14mm).
3. Adjust the cable housing nuts to get 9/16” (14mm) cable stroke. Do not include any cable free play in the measurements. The cable relief spring should compress 1/16” to 1/8” (1.6mm to 3.2mm) as the valve and cable reach the end of the stroke. The lower end of the cable may be adjusted if there is not enough adjustment at the upper end (shown).
4. Tighten cable nuts and replace back cover.
5. To see a video on how to do this adjustment, enter the following address into your browser URL window: https://www.youtube.com/watch?v=34B8phRm8m0



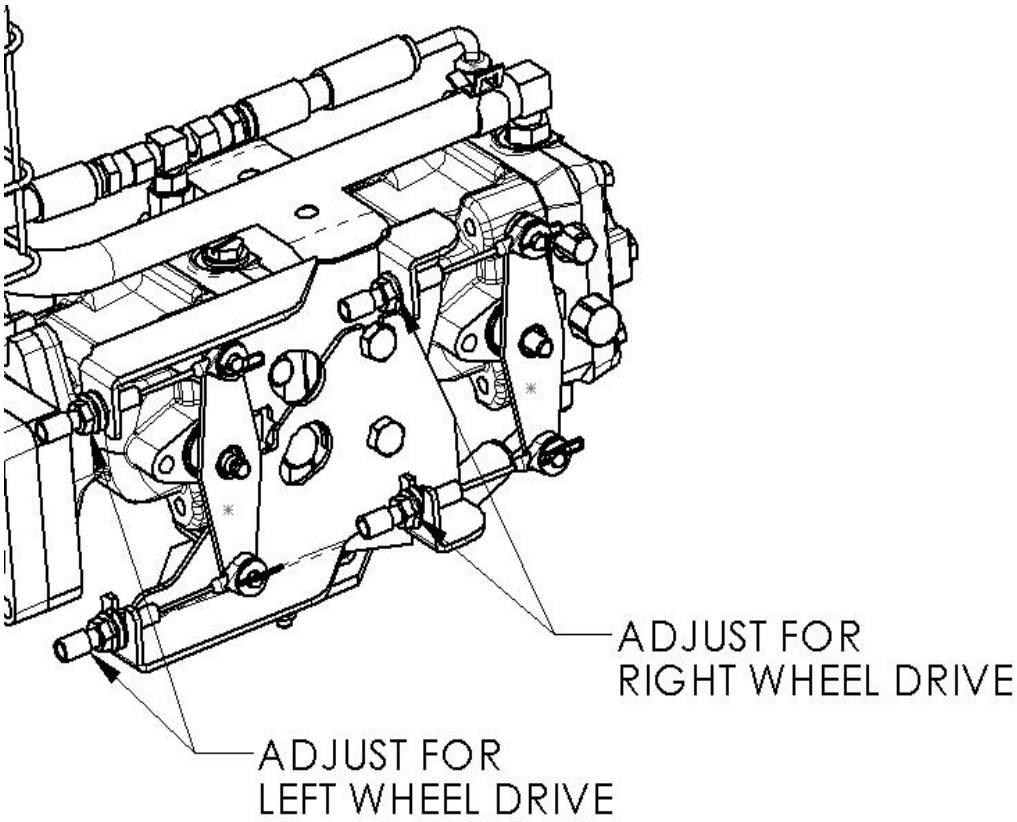
TRACK DRIVE NEUTRAL ADJUSTMENT

The speed control cables may need to be adjusted after some use. If the machine creeps while the T-handle control is in neutral, or if the left and right tracks move at different speeds, the speed cables will need adjustment.

Adjust the cables to bring the pump cable arms to the neutral position (vertical) when the T-handle control is in neutral.

Adjust the cables to eliminate slack, but do not over tighten them so they are extremely tight against each other. The front pump drives the right track, and rear pump drives left track.

The control cables should be adjusted so both tracks are in neutral or move at same speed. Check by starting engine and activating clutch lever with T-handle control in neutral. Adjust cables so both tracks are stationary or creep at same speed.



CHAIN VALVE ADJUSTMENT

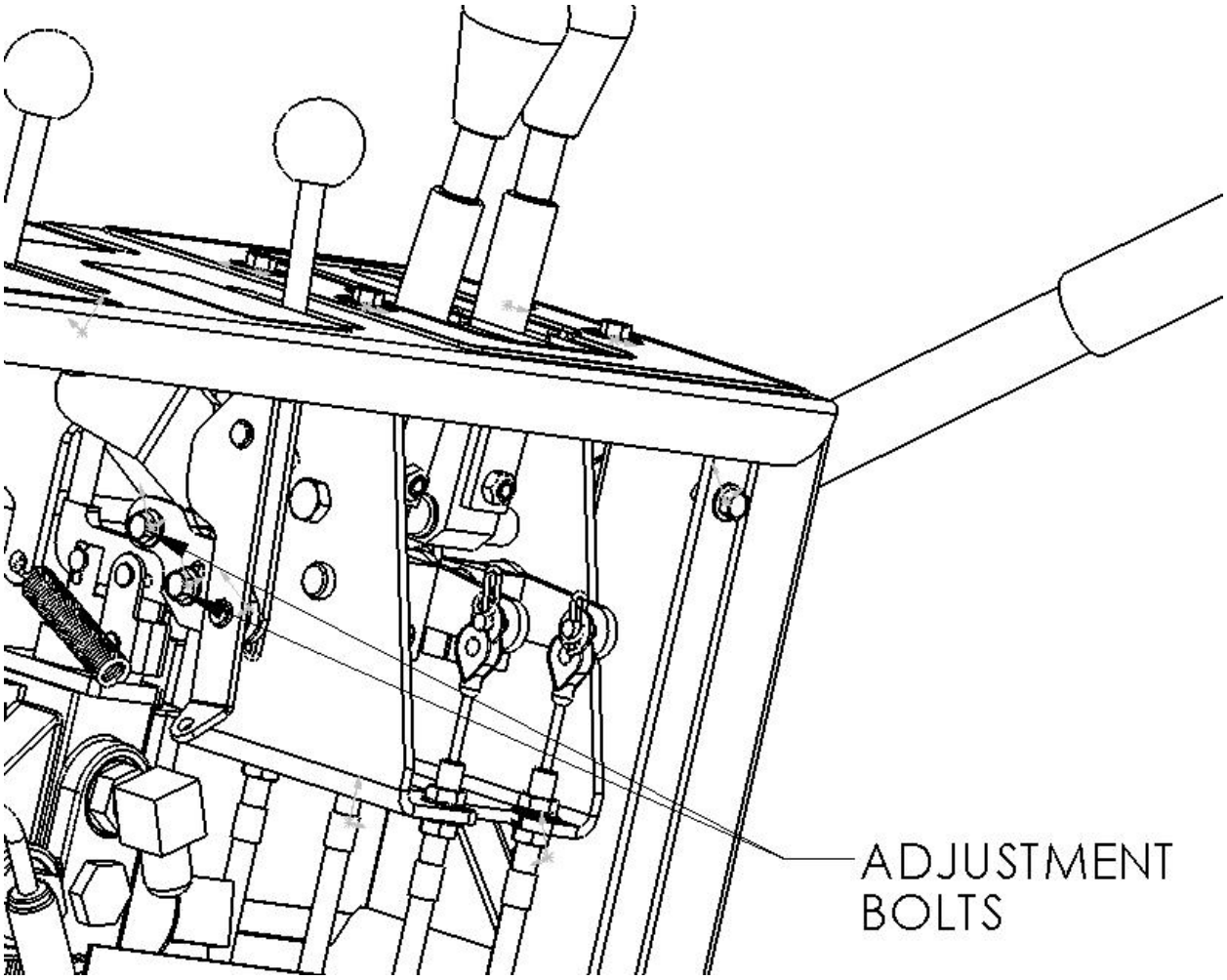
The chain valve control should be adjusted to completely activate the chain valve when the dig chain control is in 'ON' position. To check this adjustment:

1. Put the chain on/off control in ON position (with engine stopped).
2. Pull the clutch lever on left handlebar up until it touches the handgrip.
3. 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 make this adjustment:

1. Remove back cover from the control panel.
2. Loosen the 2 bolts on valve lever and rotate the lever plate down about 1/16" (1.6mm).
3. 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.

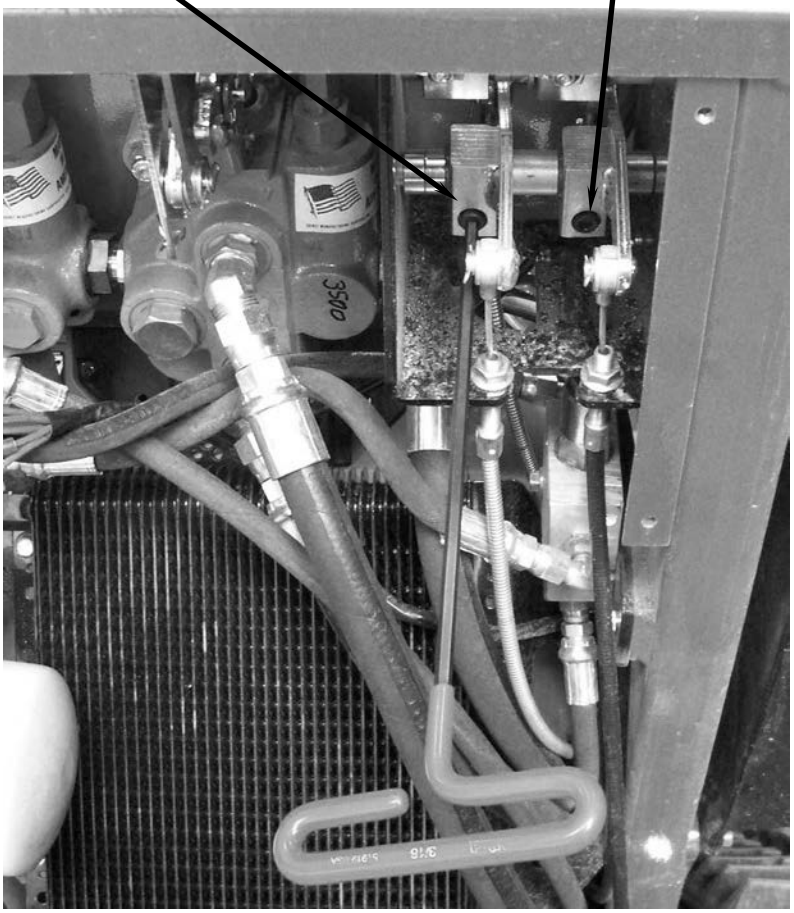


T-HANDLE CONTROL TENSION ADJUSTMENT

To adjust the T-handle control tension, follow these simple instructions.

First take off the back cover.
Look under the T-handle control and you will see a socket head bolt threaded into each cable clamp (see picture). These are the tension clamps.
The socket head bolt is adjusted with a 3/16” hex key.
If you tighten the socket head bolt (turn clockwise), the tension will increase.
If you loosen the socket head bolt (counter-clockwise), the tension will decrease.

LEFT HAND ADJUSTMENT RIGHT HAND



BATTERY MAINTENANCE

Follow the SHUT DOWN PROCEDURE in the OPERATOR'S MANUAL before doing any battery maintenance. For your safety always abide by the following:

Shield entire face, especially your eyes, and wear rubber gloves to avoid acid burns whenever doing anything with the battery. Battery caps must be tightly in place if the battery has removable caps.

WARNING: The battery contains sulfuric acid that can cause blindness and severe burns. Avoid contact with eyes, skin, and clothing. If acid contacts eyes, call 911 immediately and flush eyes with water for 15 minutes or until emergency medical help arrives. If acid contacts skin, flush area with plenty of water. If acid is ingested, drink large quantities of water or milk then follow with milk of magnesia, beaten egg, or vegetable oil, and get medical attention immediately.

Avoid contact with battery components. Wear rubber gloves and wash hands after handling any battery components.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to cause cancer and reproductive harm. Acid can cause blindness and severe burns if leaked from the battery.

Do not charge or jump-start the battery near flames or sparks, or while smoking.

WARNING: Battery fumes are flammable and explosive. Avoid explosion hazard that could blind and burn. Tools and jumper cable clamps can make sparks, so use them with care. Shield eyes and face, and wear rubber gloves.

ELECTROLYTE LEVEL: Check the battery electrolyte level every 25 hours of machine use and if necessary add distilled water following this procedure:

1. Disconnect the battery cables, removing the negative cable first.
2. Remove the battery from the trencher.
3. Clean the battery exterior with paper towels.
4. If the battery posts and cable terminals are corroded, clean them with a wire brush cleaner tool. A solution of four parts water and one part baking soda is helpful.
5. Apply a light coating of grease to the battery terminals to help prevent corrosion.
6. Remove the battery caps.
7. Slowly pour distilled water into each battery cell until the electrolyte level is up to the full line indicated for each cell on the battery. **Do not overfill**. Overflow of electrolyte, which contains sulfuric acid, can cause severe corrosion to the trencher.
8. Reinstall the battery caps tightly in place.
9. Reinstall the battery securely into the trencher.
10. Reconnect the cables. Attach the positive cable first, then the negative one.

BATTERY MAINTENANCE (continued)

BATTERY VOLTAGE LEVEL: Check the voltage level using an appropriate meter. Always keep the battery fully charged and clean to help prolong battery life expectancy, especially when the temperature is below 32°F (0°C). For off-season long-term storage, we recommend removing the battery from the trencher and storing where the ambient temperature remains above freezing.

TO CHARGE THE BATTERY follow this procedure:

1. Disconnect the battery cables, removing the negative cable first.
2. Remove the battery from the trencher.
3. Clean the battery exterior with paper towels.
4. If the battery posts and cable terminals are corroded, clean them with a wire brush cleaner tool. A solution of four parts water and one part baking soda is helpful.
5. Apply a light coating of grease to the battery terminals to prevent corrosion.
6. Check the battery electrolyte level (see procedure above).
7. Insure that the battery caps tightly in place.

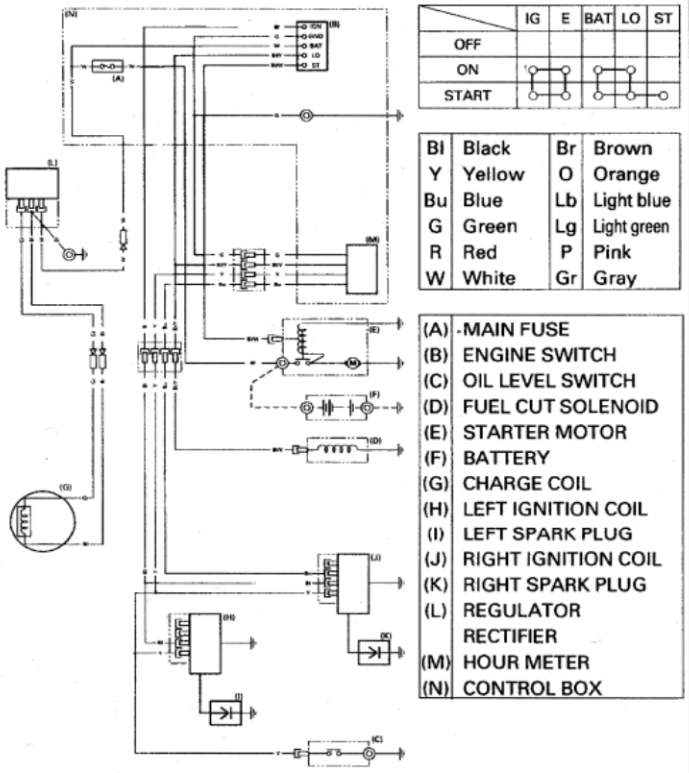
Do not charge the battery near flames or sparks, or while smoking.

WARNING: Battery fumes are flammable and explosive. Avoid explosion hazard that could blind and burn. Tools and jumper cable clamps can make sparks, so use them with care. Shield eyes and face, and wear rubber gloves.

8. Connect a 12-volt DC battery charger and charge at 3 to 4 amperes for 4 to 8 hours. Do not overcharge.
9. When the battery is fully charged, turn off and unplug the charger from the electrical outlet, then disconnect the charger leads from the battery posts.
10. Reinstall the battery securely into the trencher.
11. Reconnect the cables. Attach the positive cable first, then the negative one.

ELECTRICAL SCHEMATIC - HONDA GX630/GX690

2.7 A Charge Coil and With Control Box Type

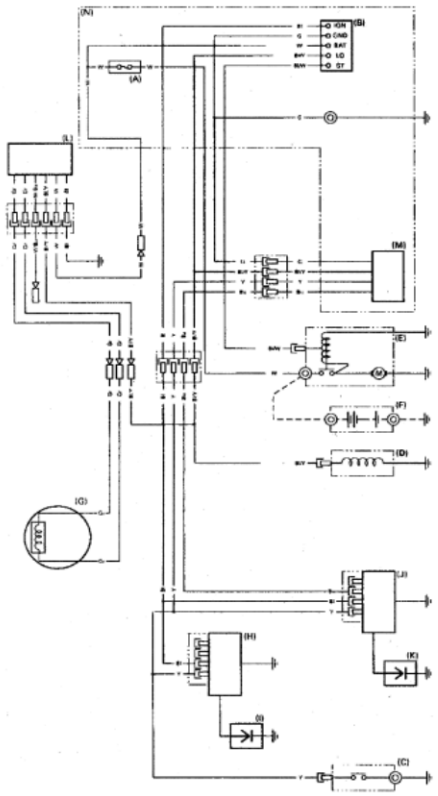


	IG	E	BAT	LO	ST
OFF					
ON					
START					

Bl	Black	Br	Brown
Y	Yellow	O	Orange
Bu	Blue	Lb	Light blue
G	Green	Lg	Light green
R	Red	P	Pink
W	White	Gr	Gray

(A)	MAIN FUSE
(B)	ENGINE SWITCH
(C)	OIL LEVEL SWITCH
(D)	FUEL CUT SOLENOID
(E)	STARTER MOTOR
(F)	BATTERY
(G)	CHARGE COIL
(H)	LEFT IGNITION COIL
(I)	LEFT SPARK PLUG
(J)	RIGHT IGNITION COIL
(K)	RIGHT SPARK PLUG
(L)	REGULATOR RECTIFIER
(M)	HOUR METER
(N)	CONTROL BOX

17 A Charge Coil and With Control Box Type



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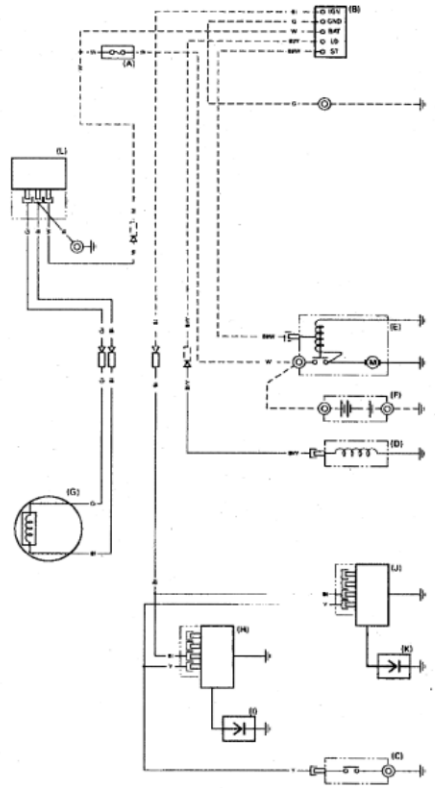

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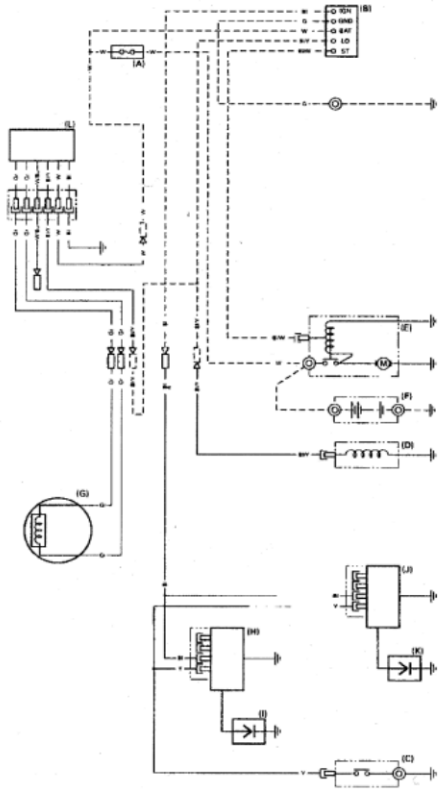
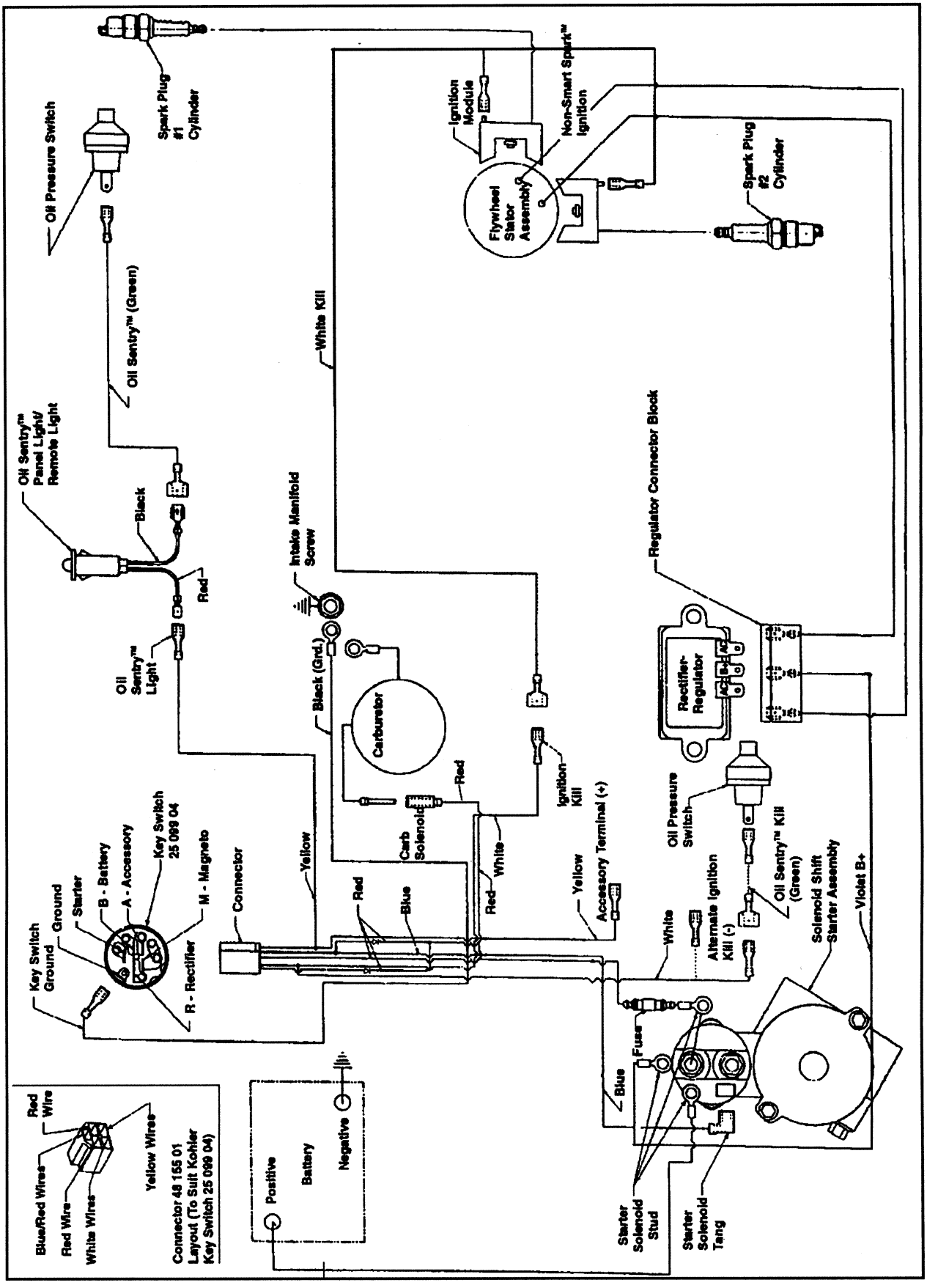
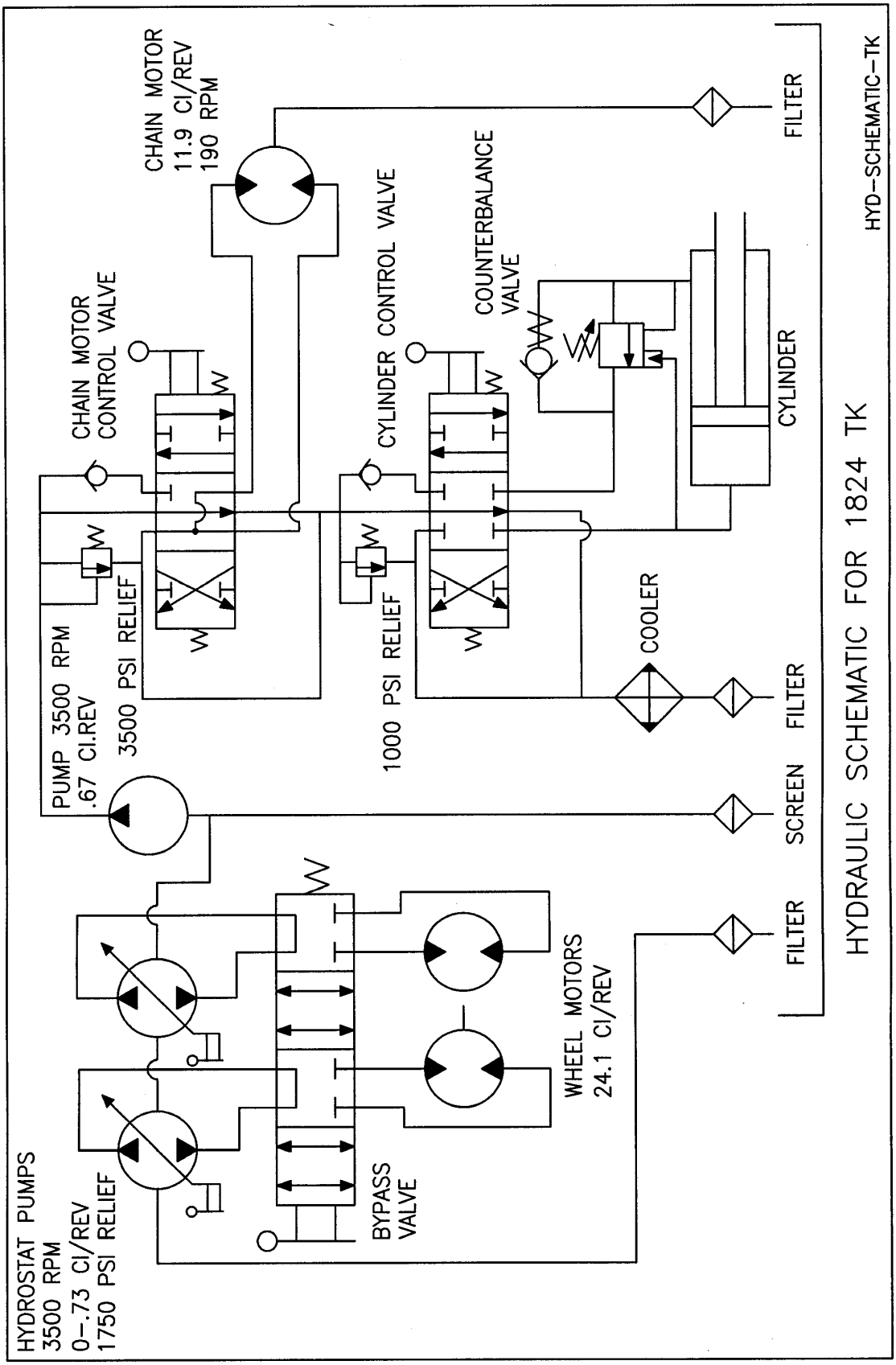


ELECTRICAL SCHEMATIC - KOHLER CH620 & CH680



HYDRAULIC SCHEMATIC



TRACK TRENCHER TROUBLESHOOTING GUIDE

CAUTION!! Always use extreme care when troubleshooting 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.

1. Low hydraulic fluid in tank.	Add hydraulic fluid until it shows in sight gauge.
2. Hydraulic pump-to-engine coupler has slipped.	Check for wear and replace both coupler halves and rubber spider, as needed.
3. Main pump suction leaking air into pump intake.	Check main suction hoses and fittings for leaks and tighten fitting nuts.

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

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.

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

1. Chain motor worn.	Rebuild or replace motor. New motors are available from Barreto Manufacturing.
2. Chain Control Relief Valve malfunctioning.	Adjust Relief Valve to 3500 PSI or replace relief spring if needed.
3. Chain drive pump worn.	Replace pump.
4. Chain valve lever maladjusted.	Adjust as shown in illustration elsewhere in this manual.

D. Tracks fail to turn, but chain rotates.

1. Sprocket key sheared.	Replace key and other parts as needed.
2. Track Drive Valve not fully activated.	Adjust valve cable as shown elsewhere in this manual.
3. Speed cable broken or disconnected.	Replace or re-connect cable.
4. Pump cable lever loose on shaft.	Tighten setscrew on pump lever.

E. Hydraulic fluid leaks in hydraulic system.

1. Fittings are loose.	Tighten fittings on hoses and adapters.
2. Worn or broken hoses.	Replace damaged hoses.
3. Hydraulic fluid around chain motor or shaft.	Inspect motor for leaking shaft seal. Rebuild or replace motor. New motors are available from Barreto Manufacturing.

F. Foaming hydraulic fluid coming from breather hose.

1. Improper fluid used.	Verify that hydraulic fluid used had antifoaming additives. Tractor transmission / hydraulic fluid ISO 68 is recommended for use in temperatures above +32°F.
2. Air leaking into fluid	Inspect and tighten fittings and clamps on pump intake hoses

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

1. Boom lift relief valve malfunctioning.	Adjust relief to 1000 PSI. This may require a replacement spring in valve.
2. Boom cylinder piston seal damaged or rod bent.	Disassemble & replace parts as required.
3. Boom pivot bushing seized.	Disassemble, inspect, clean & replace parts as required.

SPECIFICATIONS

MODEL NUMBERS	1824TK/2024TK	2324TK
DIMENSIONS		
Weight	1625 lb (737.09 kg)	1625 lb (737.09 kg)
Height	52.2” (1.32 m)	52.2” (1.32 m)
Length	92.5” (2.35 m)	92.5” (2.35 mm)
Width	35.5” (901.7 mm)	35.5” (901.7 mm)
ENGINE		
Engines	Kohler CH620 Honda GX630	Kohler CH680 Honda GX690
Fuel	Gasoline	Gasoline
Power: hp (kW) at 3600 RPM	K-18 hp (13.4 kW) H-20.8 hp (15.52 kW)	K-23 hp (17.2 kW) H-22.1 hp (16.49 kW)
Fuel Capacity	3.2 U.S. gallons (12.1 liters)	3.2 U.S. gallons (12.1 liters)
Engine Oil Capacity	1.8 quarts (1.7 liters)	1.8 quarts (1.7 liters)
Electric Start	Standard	Standard
Hour Meter	Standard	Standard
HYDRAULIC SYSTEM		
Reservoir Capacity	14 U.S. gallons (53 liters)	14 U.S. gallons (53 liters)
Oil Cooler	Standard	Standard
TRACK SYSTEM		
Track Width	7.1” (180 mm)	7.1” (180 mm)
Total Ground Contact	482.8” (.312 sq/m)	482.8” (.312 sq/m)
OPERATIONS		
Ground Drive, Forward	190 feet per minute (57.9 m/m)	190 feet per minute (57.9 m/m)
Ground Drive, Reverse	90 feet per minute (27.4 m/m)	90 feet per minute (27.4 m/m)
BOOM / CHAIN OPTIONS		
Depths	24, 30, 36, or 42” (61, 76, 91, or 107cm)	24, 30, 36, 42, or 48” (61, 76, 91, 107, or 122cm)
Widths	4” (102mm) or 6” (152mm)	4” (102mm) or 6” (152mm)
Chain Types	Skip Cup, Double Cup, Rock Rock Combo, Welded Shark, Bolted Shark, Shark Combo	Skip Cup, Double Cup, Rock Rock Combo, Welded Shark, Bolted Shark, Shark Combo

ACCESSORIES

A1570 - Lift eye: for hoisting the trencher

A1575 - Auxiliary Auger: extends removal of dirt to farther from the side of the trench

A1580 - Backfill blade: to fill in trenches

A1390 - Crumber: provides more effective removal of dirt from trench

	Optional on 24, 30, or 36”	Optional on 24, 30, or 36”
	Standard on 42”	Standard on 42” & 48”

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THE

BARRETO

MODEL 1824TK - 2324TK

HYDRAULIC TRACK TRENCHER
OPERATOR'S MANUAL

TRENCHER INTENDED USE

This machine is designed for digging trenches in "normal" ground of reasonably soft dirt and stones up to 6" (15cm) in diameter. Ground with larger stones, high clay content, very hard packed, very dry, or in a frozen condition may be unsuitable for normal trenching. Consider using a backhoe or other heavier equipment for such conditions.

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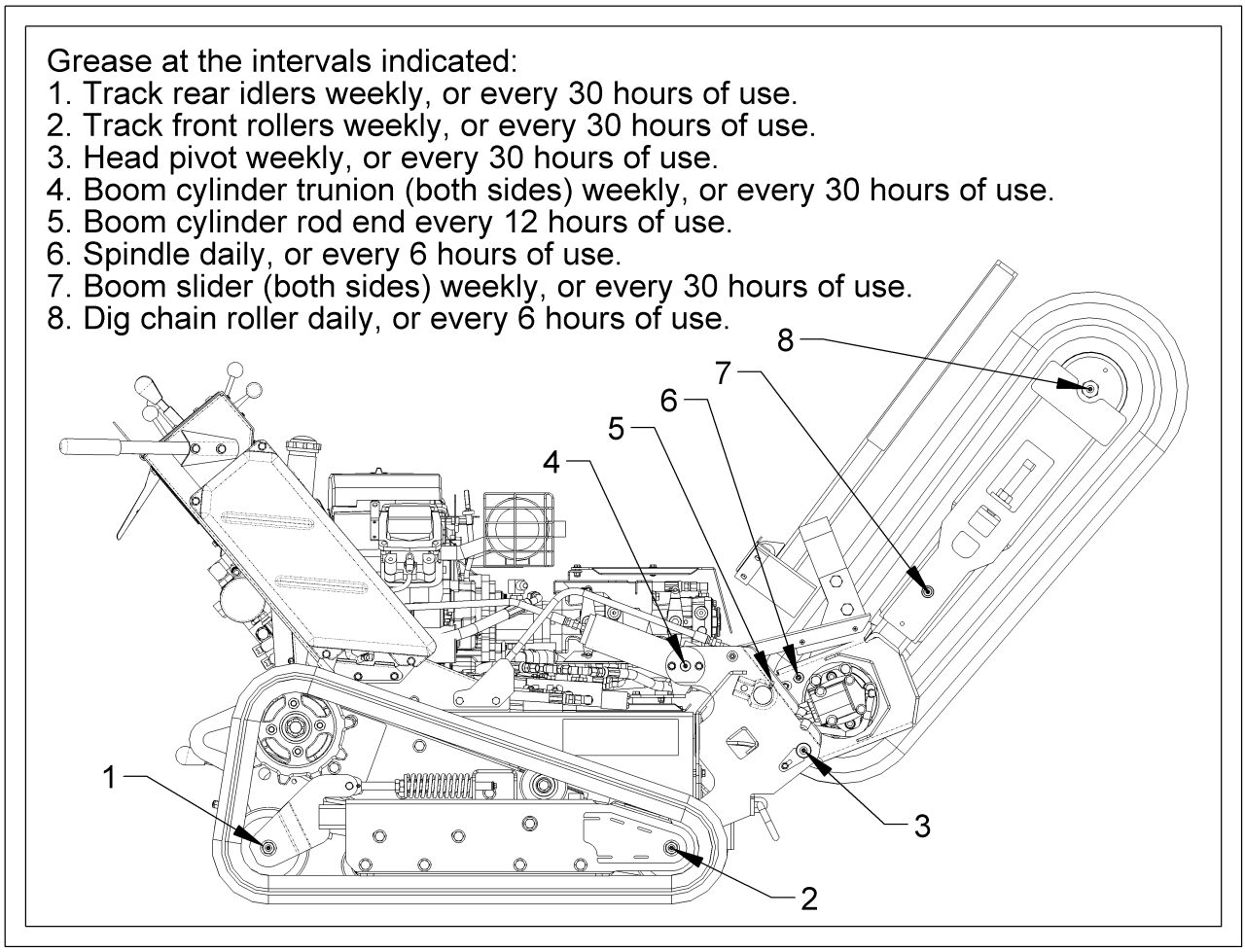
LUBRICATION REQUIREMENTS

Grease at the intervals indicated per the illustration of grease lubrication points. There is also a grease diagram decal on the machine.



SAFETY MESSAGES

General safety messages are listed in this Safety Messages section. Specific safety messages appear as appropriate in this manual where a potential hazard may occur if procedures or instructions are not followed correctly and completely.

SAFETY SYMBOL


This is the international safety alert symbol. This symbol is used in combination with a signal word and written message to warn you of a potential for bodily injury or death.

A signal word "DANGER", "WARNING", or "CAUTION" is used with the safety alert symbol.


DANGER: Imminent hazards, that if not avoided, will result in serious personal injury or death.


WARNING: Potential hazards or unsafe practices, that if not avoided, could result in serious personal injury or death:


CAUTION: Potential hazards or unsafe practices, that if not avoided, could result in minor personal injury, product damage, or property damage.

Safety decals with a signal word "DANGER", "WARNING", or "CAUTION" are affixed to the trencher near specific hazards.

Read this manual and study ALL decals on the trencher before operating the trencher.

SAFETY INSTRUCTIONS OVERVIEW

READ SAFETY AND OPERATING INSTRUCTIONS BEFORE OPERATING!

USE COMMON SENSE AND PLENTY OF IT!

The CLUTCH LEVER on the left handlebar is for the operator's protection. All motion stops when the lever is released.
DO NOT TAPE THE CLUTCH LEVER UP or otherwise by-pass this safety feature.

Call before you dig. If you do not call, you may cause an accident; suffer injuries or death; cause interruption of services; damage the environment; and/or incur project delays. Expect to be held liable for any damages caused, if you fail to call.

DANGER: Buried electric cables or gas lines can cause serious injury or death if struck with dig chain. Always determine location of utilities before trenching.

WARNING: Fiber optic cables convey laser light that can injure your eyesight.

STAY CLEAR of moving parts on the trencher.

DANGER: Digging chain, auger and other moving parts can cut off arms, legs, or fingers. Contact with the digging chain or auger while in operation will cause serious injury or even death.

Wear safety goggles and a hard hat while operating or observing!

WARNING: The dig chain may throw stones and debris.

Wear adequate hearing protection while operating or observing.

WARNING: Exposure to loud noise is cumulative and may permanently damage your hearing.

Wear safety boots and gloves. Wear close-fitting clothing. Contain long hair. Do not wear jewelry. Wear reflective clothing if working near traffic.

Only operate outdoors and avoid breathing engine exhaust and fumes.

WARNING: Engine exhaust contains carbon monoxide gas that is toxic. Breathing it can cause unconsciousness and death.

Adequate lighting is required, daylight or artificial, for safe operation of the trencher.

Allow adequate side and overhead clearances between trencher and buildings, fences, and trees.

WARNING: If the dig chain contacts an object the digging chain can climb upward quickly and tip the trencher toward the operator. Serious injury or death will result by operator contact with the moving chain. The digging chain can suddenly drag the machine forward if the trencher is forced too quickly into the ground or catches on a buried object.

Insure that the CHAIN FORWARD/NEUTRAL/REVERSE LEVER is in NEUTRAL when not actually trenching.

WARNING: Contact with the dig chain or auger while in operation will cause serious injury or even death. The teeth of the dig chain are sharp. Avoid contact even when the chain is not moving.

Avoid inclines if at all possible.

WARNING: Navigating on any incline increases the danger of the trencher losing traction or rolling over, especially if the surface is wet. If you lose control get out of the way immediately to avoid personal injury. Navigation on inclines should be especially slow and turns very gradual. Refer to the incline diagram in the section, “GROUND TRANSPORT”.

Be careful when using the optional backfill blade to fill in trenches.

WARNING: The weight of the trencher or walking near the edge of the trench could cause collapse of the trench wall. If a track goes over the edge of the trench the trencher could suddenly turn over.

Avoid operating adjacent to drop-offs or embankments.

Keep away from tracks to avoid getting crushed.

WARNING: Getting run over by the trencher will cause injury.

Always leave trencher parked on a level surface.

WARNING: Do not park on incline. Move the trencher to a level surface and set the parking brake located behind the left hand track motor. Move the handle down to engage the brake.

Do not leave trencher unattended with the engine running.

Do not operate trencher near any source of flammable dust or vapors.

WARNING: Sparks from the engine exhaust can cause an explosion or fire in a flammable or explosive atmosphere. Fuel fumes can catch fire or explode.

Do not operate trencher near flames or sparks.

WARNING: Fuel fumes can catch fire or explode.

Shut off engine and allow it to cool before refueling.

WARNING: Fuel fumes can catch fire or explode. Do not smoke when refueling. Do not refuel near a source flames or sparks.

Do not touch the engine, muffler, or any of the hydraulic components until cool.

WARNING: Muffler and engine get hot enough to cause serious burns. For the safety of yourself and others, allow enough time for the engine, muffler, and the hydraulic fluid to cool completely before performing any cleaning or maintenance.

SAFETY INSTRUCTIONS OVERVIEW (continued)

Avoid contact with hydraulic fluid.

WARNING: When machine is operating, hydraulic fluid is under extreme pressure and can get under skin and burn or poison.

Keep others away. If the job site is near a road or pedestrian path, warn and divert both motorized traffic and pedestrians. As appropriate, use traffic flag personnel, signs, cones, and lighting devices to insure safety.

WARNING: Someone could step into the trench by accident. Walking near the edge of the trench could cause collapse of the trench wall and possibly cause someone to fall onto the moving chain. Contact with the digging chain or auger while in operation will cause serious injury or even death.

Never allow anybody to ride on the trencher.

Never lift trencher over any person at any time.

WARNING: If trencher should fall it would crush anybody under it.

We recommend having a fire extinguisher suitable for petrol fires in the operating area.

Attachments can change the center of mass and machine operations. Use only Barreto attachments.

BATTERY & ELECTRIC STARTER SAFETY INSTRUCTIONS

Shield entire face, especially your eyes, and wear rubber gloves to avoid acid burns whenever doing anything with the battery. Battery caps must be tightly in place if the battery has removable caps.

WARNING: The battery contains sulfuric acid that can cause blindness and severe burns. Avoid contact with eyes, skin, and clothing. If acid contacts eyes, call 911 immediately and flush eyes with water for 15 minutes or until emergency medical help arrives. If acid contacts skin, flush area with plenty of water. If acid is ingested, drink large quantities of water or milk then follow with milk of magnesia, beaten egg, or vegetable oil, and get medical attention immediately.

Avoid contact with battery components. Wear rubber gloves and wash hands after handling any battery components.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to cause cancer and reproductive harm. Acid can cause blindness and severe burns if leaked from the battery.

Do not charge or jump-start the battery near flames or sparks, or while smoking.

WARNING: Battery fumes are flammable and explosive. Avoid explosion hazard that could blind and burn. Tools and jumper cable clamps can make sparks, so use them with care. Shield eyes and face, and wear rubber gloves.

BATTERY MAINTENANCE is in the OWNER'S MANUAL.

TRENCHER OPERATING INSTRUCTIONS

READ SAFETY INSTRUCTIONS BEFORE OPERATING! Both the SAFETY INSTRUCTIONS and OPERATING INSTRUCTIONS are in this manual and also on a plastic card attached to the machine

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

STUDY AND UNDERSTAND CONTROLS BEFORE BEGINNING OPERATION.

CONTROLS

1. KEYED IGNITION SWITCH: This remote switch is located with the other trencher controls for your convenience. Use it to start and stop the engine equipped with an electric starter. Refer to the ENGINE START UP PROCEDURE.

2. ENGINE: This is the throttle - controls engine speed. Operate at full throttle (all the way forward).

3. CLUTCH LEVER: Located on left handlebar. Squeeze to activate the track drive and dig chain. All motion stops when the lever is released. DIGGING CHAIN control must be held in "ON" position as clutch lever is raised in order to activate Dig Chain.

4. T-HANDLE CONTROL Controls the travel direction and speed after clutch lever is raised.

- Pushing the T-handle forward from the neutral position causes the machine to move forward.
- Pulling the T-handle back from neutral position causes the machine to move backward.
- Moving the T-handle farther from the neutral position increases the speed.
- Steer the trencher by twisting the T-handle to the left or right. This causes the track on one side to rotate at a different speed or direction than the opposite track.
- Very slow speed is required for trenching in most conditions.

NOTE: Be sure operator understands that the machine moves BACK when trenching, not forward.

5. DIG CHAIN ON/OFF CONTROL: To trench, hold lever in ON position while clutch lever is raised. 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.

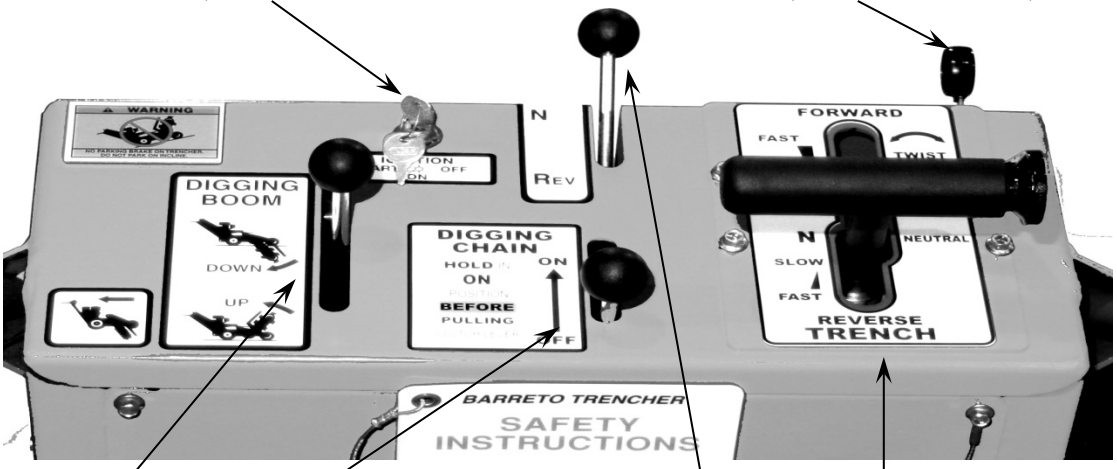
6. CHAIN FORWARD/NEUTRAL/REVERSE LEVER: Use this lever to reverse chain to help clear debris from the chain. The DIG CHAIN ON / OFF lever must be in "OFF" position to put the CHAIN F/N/R lever in reverse.

7. DIGGING BOOM CONTROL: Pull to raise the digging boom and push to lower the boom. During normal operation you will hear the relief valve working.

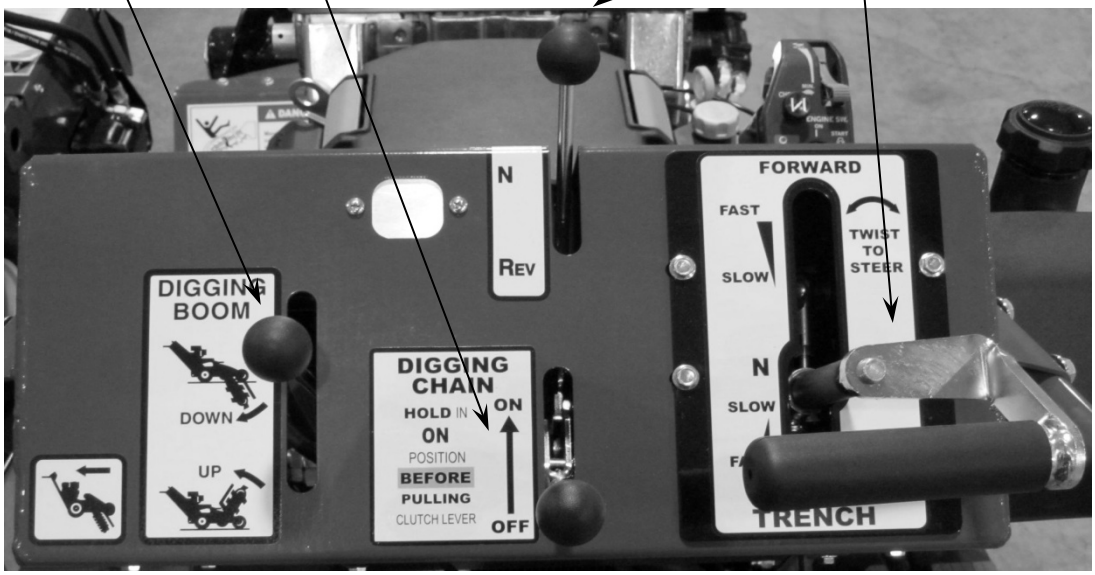
8. PARKING BRAKE: It is located behind the left hand track motor. Move the handle down to engage the brake, and up to disengage it.

KEYED IGNITION SWITCH
(KOHLER ENGINE ONLY)

ENGINE THROTTLE
(KOHLER ENGINE ONLY)



DIGGING BOOM DIGGING CHAIN CHAIN FWD/N/REV T-HANDLE CONTROL



ENGINE CONTROLS

FUEL SHUTOFF VALVE: Must be in OPEN position for engine to run.

CHOKE: Use to aid starting the engine when it is cold.

KEYED IGNITION SWITCH (Kohler Only): This remote switch is located with the other trencher controls for your convenience. Use it to start and stop the engine equipped with an electric starter. Refer to the ENGINE START UP PROCEDURE.

ENGINE: This is the throttle lever (Kohler only). It controls the engine speed. Operate trencher at full throttle (all the way forward).

ENGINE START UP PROCEDURE

Only operate trencher outdoors and avoid breathing engine exhaust and fumes.

WARNING: Engine exhaust contains carbon monoxide gas that is toxic. Breathing it can cause unconsciousness and death. Avoid any areas or actions that expose you to carbon monoxide.

1. Move the CHAIN F/N/R LEVER to NEUTRAL.
2. Move T-HANDLE CONTROL to NEUTRAL.
3. Open the FUEL SHUTOFF VALVE.
4. If the engine is cold, close the CHOKE. Turn choke off (open) after engine warms up enough. To restart a warm engine, leave the choke in the open position.
5. Move the ENGINE THROTTLE to about 1/3 of the way forward.
6. ELECTRIC STARTER: Turn the ignition key to the START position, and hold it there until the engine starts. If the engine fails to start within 10 seconds, release the key, and wait at least 10 seconds before operating the starter again.

NOTICE - *Using the electric starter for more than* 10 *seconds at a time will overheat the starter motor and can damage it.*

When the engine starts, release the key, allowing it to return to the ON position.
Open the CHOKE (turn choke off) after the engine warms up enough.

COLD WEATHER OPERATIONS: Before operating in cold weather, refer to the Engine Owner's Manual for recommended engine oil. Do not spray starting fluid into the air cleaner as engine damage could result. If the machine is operated at temperatures below +32°F (0°C) then changing the hydraulic fluid to ISO 46 is recommended. If you do not want to change the hydraulic fluid but want to operate the machine at temperatures below +32°F (0°C), then do the following:

- Warm up engine at a low speed.
- Gradually increase engine speed, allowing **30 minutes for the hydraulic fluid to warm up**.

Reduce the engine speed if the hydraulic pump whines. Pump noise may indicate a lack of hydraulic fluid flow that could damage the pump.
For frequent starts below 18°F consult your Barreto Manufacturing, Inc. dealer.

GETTING STARTED

1. Start and warm up engine.
2. Insure that the T-handle control is in neutral.
3. Raise the clutch lever and move the T-handle control to achieve desired speed and direction.
4. Adjust the travel speed and navigate the trencher to the starting position. The trencher is designed to dig toward the operator (with the T-handle control in reverse). With this in mind, position the machine to start the trench.

TRENCHING PROCEDURE

1. Put the T-handle control in neutral.
2. Have engine at full throttle (lever forward).
3. Hold Dig Chain On/Off Control in the ON position.
4. Raise the clutch lever.
5. Slowly lower the digging boom until the desired trench depth is achieved. See TRENCHING TIPS for details.
6. Put T-handle control in **reverse**. Start at slow speed. The machine moves BACK when trenching, not forward.
7. Adjust the travel speed until a workable speed is reached. Use a very slow speed for trenching and adjust for soil conditions as necessary. Adjust speed to avoid track spin or engine overloading. 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.

TRENCHING TIPS

THE PLUNGE CUT:

If the boom bounces when lowering it, use a more gradual “boom down” action. A little ground travel toward the operator during the plunge cut may help reduce bounce. Adjust the boom lowering speed for soil conditions as necessary.

Do not overload engine. If the engine lugs down or the digging chain slows down, raise the boom until speed increases, then continue lowering the boom slowly.

Do not attempt to force boom down faster than digging chain can remove material.

SHUT DOWN PROCEDURE

1. Always leave trencher parked on a level surface.

WARNING: Do not park on incline. Move the trencher to a level surface and set the parking brake located behind the left hand track motor, near decal shown. Move the handle down to engage the brake.

2. Move the CHAIN F/N/R LEVER to NEUTRAL.
3. Move the T-HANDLE CONTROL to NEUTRAL.
4. Unless loaded on a trailer, lower the boom to the ground.
5. Reduce the ENGINE THROTTLE to idle.
6. Move the IGNITION KEYED SWITCH to the OFF position to stop the engine, and remove the key.
7. **CLOSE THE FUEL SHUTOFF VALVE.** Failure to close this valve could cause fuel to leak down into the cylinder & crankcase. Damage resulting from this **WOULD NOT** be covered by your engine warranty!

Shut off engine and allow it to cool before refueling.

WARNING: Fuel fumes can catch fire or explode. Do not smoke or allow flames or sparks in the area.

SHUT DOWN PROCEDURE (continued)

Do not touch the engine, muffler, or any of the hydraulic components until cool.

WARNING: Muffler and engine get hot enough to cause serious burns. For the safety of yourself and others, allow enough time for the engine, muffler, and the hydraulic fluid to cool completely before performing any cleaning or maintenance.

JUMP STARTING ENGINE WITH ELECTRIC STARTER

Shield entire face, especially your eyes, and wear rubber gloves to avoid acid burns whenever doing anything with the battery. Battery caps must be tightly in place if the battery has removable caps.

WARNING: The battery contains sulfuric acid that can cause blindness and severe burns. Avoid contact with eyes, skin, and clothing. If acid contacts eyes, call 911 immediately and flush eyes with water for 15 minutes or until emergency medical help arrives. If acid contacts skin, flush area with plenty of water. If acid is ingested, drink large quantities of water or milk then follow with milk of magnesia, beaten egg, or vegetable oil, and get medical attention immediately.

Avoid contact with battery components. Wear rubber gloves and wash hands after handling any battery components.

WARNING: Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to cause cancer and reproductive harm. Acid can cause blindness and severe burns if leaked from the battery.

Do not jump start the battery near flames or sparks, or while smoking.

WARNING: Battery fumes are flammable and explosive. Avoid explosion hazard that could blind and burn. Tools and jumper cable clamps can make sparks, so use them with care. Shield eyes and face, and wear rubber gloves.

Do not jump-start or charge a battery that is frozen or low on electrolyte.

IMPORTANT: Use only a 12-volt system for jump-starting. Never allow the vehicle used to jump-start to contact the disabled machine. If the vehicles contact, a spark may occur when the positive jumper cable is connected or disconnected. If equipped with battery caps, they must be in place and tight to reduce risk of battery explosion.

JUMP STARTING PROCEDURE:

1. Turn ignition switch to OFF.
2. Connect jumper cables in the following order:
   a) Clamp one RED cable end to the discharged battery POSITIVE (+) terminal.
   b) Clamp the other end of the RED cable to the booster battery POSITIVE (+) terminal.
   c) Clamp one BLACK cable end to the booster battery NEGATIVE (-) terminal.
   d) Clamp the other end of the BLACK cable to the frame of machine with the discharged battery, away from battery.
3. Start the engine.
4. Disconnect the cables in reverse order of connection and cover each jumper cable terminal. To avoid sparks near the battery, never disconnect the red jumper cable without first disconnecting the black jumper cable.

GROUND TRANSPORT OF THE TRENCHER

Raise the digging chain boom.

Insure that the CHAIN FORWARD/NEUTRAL/REVERSE LEVER is in NEUTRAL when not actually trenching.

WARNING: Contact with the dig chain or auger while in operation will cause serious injury or even death. The teeth of the dig chain are sharp. Avoid contact even when the chain is not moving.

Use the T-HANDLE CONTROL to control travel direction and speed after the CLUTCH LEVER is raised.

- Pushing the T-handle forward from the neutral position causes the machine to move forward.
- Pulling the T-handle back from neutral position causes the machine to move backward.
- Moving the T-handle farther from the neutral position increases the speed.
- Steer the trencher by twisting the T-handle to the left or right. This causes the track on one side to rotate at a different speed or direction than the opposite track.
- If you are not experienced operating this trencher, a slow ground speed is recommended for your safety.

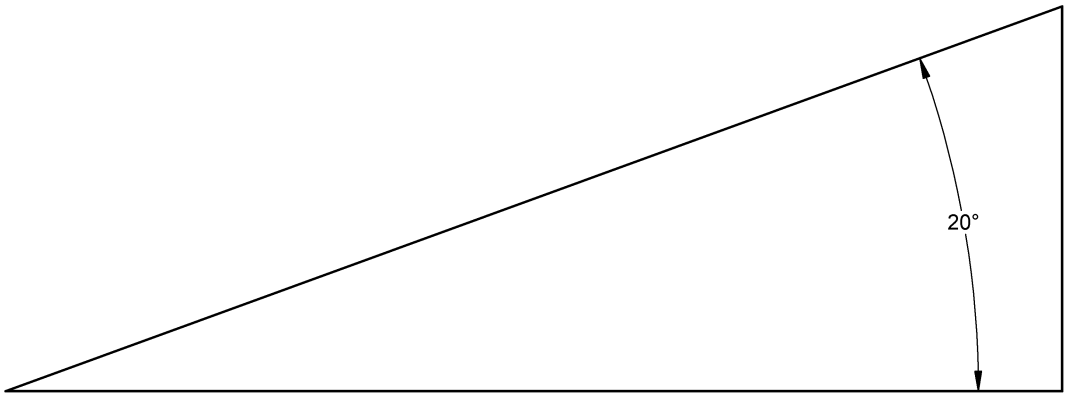
Keep away from tracks to avoid getting crushed.

WARNING: Getting run over by the trencher will cause injury.

Never allow anybody to ride on the trencher.
Never make sudden changes in speed or direction.
Use extra caution on soft or uneven ground.
Avoid operating adjacent to drop-offs or embankments.
Avoid inclines if at all possible. Never use on any incline exceeding the angles shown below.

WARNING: Navigating on any incline increases the danger of the trencher losing traction or rolling over, especially if the surface is wet. If you lose control get out of the way immediately to avoid personal injury. Navigation on inclines should be especially slow and turns very gradual.

A 20° maximum incline is allowed. Honda engines have an Oil Alert system that will automatically stop the engine if tipped more than 20°.



EMERGENCY TOWING

In case of engine failure there is a provision that allows the trencher to be towed a short distance.

The trencher tracks are driven by a set of tandem pumps. The front pump drives right track, and the other pump drives left track. The drive pump by-pass valves may be opened to allow the machine to be towed.

- Set the parking brake if on a slope to prevent rolling. It is located behind the left hand track motor. Move the handle down to engage the brake.

⚠ **WARNING**: Navigating on any slope increases the danger of the trencher losing traction or rolling over, especially if the surface is wet. Stay out of the way to avoid personal injury.

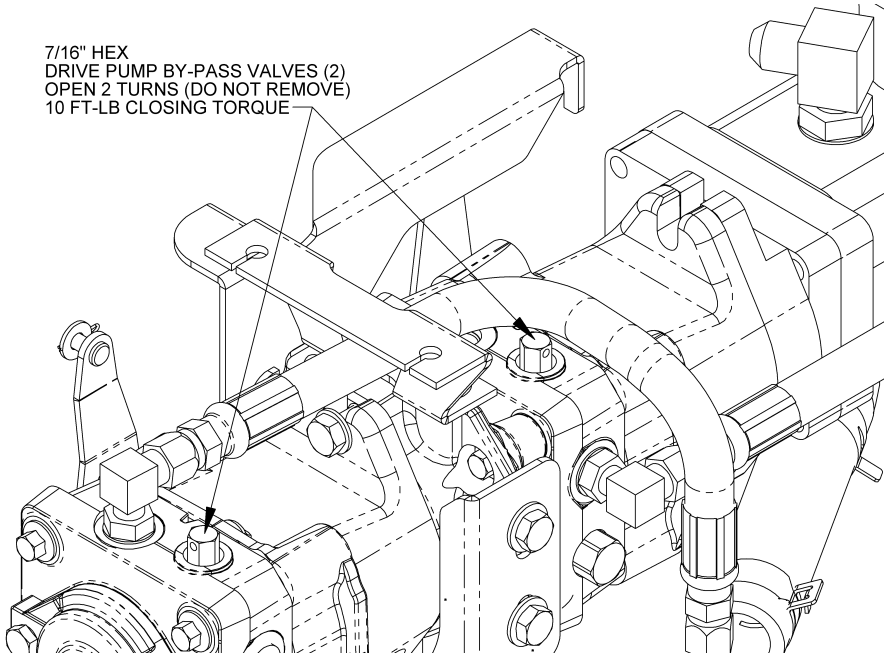
- Loosen (do not remove) the by-pass plugs two complete turns counterclockwise. See diagram for location of plugs.
- Disengage the parking brake by moving the handle up.
- The machine may be towed short distance (1/8 mile or 1/4km) at slow speed, 2 mph or 200 feet per minute maximum (3kph or 60m per min).
- Clutch lever (on left handlebar) must be pulled up and held while towing trencher.
- After towing, close both by-pass valves by closing the plugs with 10 foot-pounds torque.
- Use a trailer or truck for road transport.

If you need to raise the dig chain boom without power, do the following:

1. Loosen the hose at the back port of the boom cylinder and raise the boom end with a hoist or forklift if available.
2. If it still will not lift, then also loosen the hose at the front port of the boom cylinder.

⚠ **WARNING**: The boom with dig chain is heavy. Manpower alone is not recommended, but if necessary, use a team of two strong workers to raise the boom, and a third worker to tighten the hose(s) after the boom us up.

3. Secure the boom in the up position with a strap from the boom end to the handlebars.



ROAD TRANSPORT OF THE TRENCHER

The BEST way to transport the trencher over roads is with the **BARRETO E4X6 TILT BED TRAILER** and the optional **00340 TIE-DOWN KIT**.
Refer to the following checklist before towing:

- Towing vehicle should have a 2" (5cm) ball. Be sure it is in good repair and securely fastened to the vehicle.
- Securely fasten the hitch to the ball by tightening the hitch nut.
- Thread the safety chain through the loop in the hitch nut handle to prevent it from vibrating loose while towing.
- Attach the safety chain to the towing vehicle in such a way that it cannot come off accidentally.
- Check the hitch-to-ball connection after driving a few blocks and re-tighten if necessary.

Always exercise extreme caution and allow extra clearance while towing a trailer. **DRIVE SAFELY!**

LOADING PROCEDURE of the trencher onto the **Barreto E4X6 tilt bed trailer**:

1. Position the tow vehicle and attached trailer on level ground.
2. Unlatch the trailer tilt bed latch pin to tip up the trailer bed. Leave the latch pin where the spring-loaded action will engage the pin with the latch when the bed is leveled again.
3. Line up the trencher with the rear of the trailer. The dig chain should be toward the trailer.
4. Drive the trencher slowly forward onto the trailer bed. As the weight of the trencher reaches the balance point the bed will level itself.

⚠ **WARNING**: Navigating on the inclined trailer bed increases the danger of the trencher tracks losing traction, especially if the bed surface is wet. Stay out of the way to avoid personal injury if you lose control.

5. The chains of the 00340 TIE-DOWN KIT are long enough to adjust for desired trailer tongue weight depending on trencher boom length and type of dig chain, which vary in weight.
6. Loop front chain through D-ring on front of trencher and into keyhole slot in mount.
7. Back up trencher until front chain is tight.
8. Move T-handle control to NEUTRAL.
9. Throttle down and shut off the engine, **then close the fuel shutoff valve.**

Refer to the SHUT DOWN PROCEDURE for details.

10. Loop rear chain through chain loops on rear of trencher and D-rings on trailer.
11. Hook to ratchet load binder and tighten.

The quick link is provided to prevent losing the chain when not in use. Attach it between chain links next to one of the trailer D-rings. Never apply the tie-down load to it.

Check that the trailer tilt bed latch pin is engaged with the latch.

UNLOADING PROCEDURE of the trencher from the **Barreto E4X6 tilt bed trailer**:

1. Position the tow vehicle and attached trailer on level ground.
2. Remove all chains or straps connecting the trencher to the trailer D-rings
3. Start the engine using the ENGINE START UP PROCEDURE.
4. Unlatch the trailer tilt bed latch pin and rotate the latch pin handle to lock it open.
5. Drive the trencher slowly backward. As the weight of the trencher reaches the balance point the trailer bed will tilt up. Continue backward until tracks are completely on the ground.

ROAD TRANSPORT OF THE TRENCHER (continued)

⚠ **WARNING**: Navigating on the inclined trailer bed increases the danger of the trencher tracks losing traction, especially if the bed surface is wet. If you lose control, get out of the way to avoid personal injury.

Move the trailer tilt bed latch pin handle so that the spring-loaded action will engage the pin with the latch when the bed is leveled.

LOADING PROCEDURE of the trencher onto a truck bed using ramps:

1. Position the truck and trencher on level ground.
2. Set up suitable ramps, insuring that they are **secure to the back of the truck bed**.
3. Line up the trencher with the ramps with the dig chain pointing away from the back of the truck. Drive the trencher slowly backward up the ramps onto the truck bed.

⚠ **WARNING**: Navigating on the ramps increases the danger of the trencher tracks losing traction, especially if the surface is wet. Stay out of the way to avoid personal injury if you lose control.

4. Move T-HANDLE CONTROL to NEUTRAL.
5. Throttle down and shut off the engine, **then close the fuel shutoff valve.** Refer to the SHUT DOWN PROCEDURE for details.
6. Chain or strap the trencher to the truck using the two chain loops at the rear of the trencher lower body and D-ring on front of trencher.

UNLOADING PROCEDURE of the trencher from a truck bed using ramps:

1. Position the truck on level ground.
2. Set up suitable ramps, insuring that they are **secure to the back of the truck bed**.
3. Remove all chains or straps connecting the trencher to the truck.
4. Start the engine using the ENGINE START UP PROCEDURE.
5. Drive the trencher slowly down the ramps onto the ground.

⚠ **WARNING**: Navigating on the ramps increases the danger of the trencher tracks losing traction, especially if the surface is wet. Stay out of the way to avoid personal injury if you lose control.

LOADING PROCEDURE of the trencher onto a truck bed using a hoist:

Never attempt to hoist the trencher unless suitable equipment is available to lift and lower machine onto the truck. Using the optional **A1570 LIFT EYE** is the **best way** to hoist the trencher. If using a sling, the minimum required working load limit per sling leg is 1000 lb (450 kg). Minimum sling leg length is 6 ft (2 m).

1. Position the truck and trencher on level ground.
2. Follow the trencher SHUT DOWN PROCEDURE.
3. Hook in the optional A1570 LIFT EYE. Or attach lifting sling legs around both rear tie down loops and around the chain motor housing. Ensure machine weight is evenly distributed, then hoist onto the truck bed.

Never lift trencher over any person at any time.

⚠ **WARNING**: If trencher should fall it would crush anybody under it.

4. Chain or strap the trencher to the truck using the two chain loops at the rear of the trencher lower body and D-ring on front of trencher.

OPERATOR PREPARATION

Each operator must:

- Become familiar with the controls and operation of the trencher, preferably under the supervision of an experienced operator.
- Be at least 18 yrs. of age and be mentally and physically capable of operating the trencher safely.
- Have studied the SAFETY AND OPERATING INSTRUCTIONS in this manual.

PERSONAL PROTECTION: For safety, trencher operator should wear personal protection equipment. Keep observers at a safe distance.

Wear safety eye goggles and a hard hat while operating or observing!

WARNING: The dig chain may throw stones and debris.

Wear safety boots and gloves. Wear close-fitting clothing. Contain long hair. Do not wear jewelry. Wear reflective clothing if working near traffic.

Wear adequate hearing (ear) protection while operating or observing.

WARNING: Exposure to loud noise is cumulative and may permanently damage your hearing.

Declared vibration emission value in accordance with EN 12096: the average measured vibration emission value is 4.7 m/s^2. The uncertainty in the measurement given a 95% confidence interval is 1.1 m/s^2. Safety gloves help to isolate the hands from the vibration, keep them warm and dry, maintain blood circulation, and make operators less susceptible to vibration induced injury.

Hearing protection devices do not all provide the same level of protection. Those that completely surround each ear are better than earplugs. It is important to select a device that is adequate and appropriate for your specific work environment since the peak noise level varies. A local environmental noise specialist may help you to determine the level of hearing protection required.

DECLARED DUAL-NUMBER NOISE EMISSION VALUES in accordance with ISO 4871	
	Operating Mode 1
Measured A-weighted sound power level, L_{WA} (ref. 1pW) in decibels	103.7
Uncertainty, K_{WA}, in decibels	3.0
Measured A-weighted sound pressure level, L_{pA} (ref. 20µPa) at the operator's position in decibels	88.3
Uncertainty, K_{pA}, in decibels	3.0
Values determined according to noise test code given in using the basic standard ISO 3744: 1994	Directive 2000/14/EC Annex IIIB part 54
NOTE - The sum of a measured noise emission value and its associated uncertainty represents an upper boundary of the range of values which is likely to occur in measurements.	

DETERMINE LOCATION OF UNDERGROUND UTILITIES

OSHA CFR 29 1926.651 requires that the estimated location of underground utilities be determined before beginning excavation or an underground drilling operation. When the actual excavation or bore approaches an estimated utility location, the exact location of the underground installation must be determined by a safe, acceptable and dependable method. If any utility cannot be precisely located, the appropriate utility company must shut it off.

Call before you dig. If you do not call, you may cause an accident; suffer injuries or death; cause interruption of services; damage the environment; and/or incur project delays. Expect to be held liable for any damages caused, if you fail to call.

DANGER: Buried electric cables or gas lines can cause serious injury or death if struck with dig chain. Always determine location of utilities before trenching.

WARNING: Fiber optic cables convey laser light that can injure your eyesight.

To locate utilities before trenching call 811 or 1-888-258-0808 (US. or Canada). This free service will provide a "One-Call" number for the geographic area that you select. Before you start any digging project, be sure to call the local One-Call system in your area and any utility company that does not subscribe to the One-Call system. The One-Call representative will notify participating utility companies of your proposed digging activities. Utilities will then mark their underground facilities by using the following international marking codes:

Red	Electric
Yellow	Gas, oil, or petroleum
Orange	Communication, telephone, television
Blue	Potable water
Green/brown	Sewer
White	Proposed excavation
Pink	Surveying

For areas not represented by One-Call Systems International, contact the appropriate utility companies to locate and mark the underground installations. Do not rely on visual evidence of underground utilities such as manhole covers or electrical drop boxes…**CALL!**

811®
Know what's below.
Call before you dig.

WORK SITE ASSESSMENT

Examine the work area for any conditions or obstructions that may inhibit trenching or create a safety hazard for the operator or others. Use the information in this manual combined with good judgment to identify any hazards to avoid.

In addition to calling to DETERMINE LOCATION OF UNDERGROUND UTILITIES (see previous section for details) the operator and/or job foreman should visually inspect the work site. Look for electrical drop boxes; notices of underground placements; manhole covers; recent trenching activity; any evidence of possible underground placements; banks; overhangs; drop-offs; rocks; tree limbs; wire; uneven terrain; any existing trenches or holes; and toxic ground conditions.

Only operate trencher outdoors and avoid breathing engine exhaust and fumes.

WARNING: Engine exhaust contains carbon monoxide gas that is toxic. Breathing it can cause unconsciousness and death.

Do not operate trencher near any source of flammable dust or vapors.

WARNING: Sparks from the engine exhaust can cause an explosion or fire in a flammable or explosive atmosphere. Fuel fumes can catch fire or explode.

Allow adequate side and overhead clearances between trencher and any objects such as buildings, fences, and trees.

WARNING: If the dig chain contacts an object the digging chain can climb upward quickly and tip the trencher toward the operator. Serious injury or death will result by operator contact with the moving chain or auger. The digging chain can suddenly drag the machine forward if the trencher is forced too quickly into the ground or catches on a buried object.

Adequate lighting is required, daylight or artificial, for safe operation of the trencher.

Keep others away. If the job site is near a road or pedestrian path, warn and divert both motorized traffic and pedestrians. As appropriate, erect barriers, use traffic flag personnel, signs, cones, and lighting devices to insure safety.

WARNING: Someone could step into the trench by accident. Walking near the edge of the trench could cause collapse of the trench wall and possibly cause someone to fall onto the moving chain. Contact with the digging chain or auger while in operation will cause serious injury or even death.

MACHINE FUNCTION CHECK: If the operator releases CLUTCH LEVER while the TRACK DRIVE or DIG CHAIN is engaged, these functions should stop. This is intended for your safety and must be maintained in good functional condition. Contact your dealer if anything on the trencher does not function properly.

CONTACT WITH UNDERGROUND UTILITIES

After LOCATING UNDERGROUND UTILITIES and performing the WORK SITE ASSESSMENT, accidental dig chain contact with a buried utility might still occur. If it does, stop digging and call 911 for help.

If you cut a wire or cable, assume that you do not know what kind it is. It may be electrical or any one of several communication lines: telephone, television, or fiber optic. In any case, do not touch it or even look at the ends of it. Stop digging and call 911 for help. Do not dig any more until the appropriate utility company has assessed the situation, taken appropriate action, and informed you that is safe to proceed.

If you strike a pipe, it could be gas, oil, petroleum, water, or sewer. In any case, stop digging, shut off the engine, and evacuate the area immediately. Call 911 for help.

Electrical wires or cables: If you think that you may have severed electrical wires, stop digging and call 911 for help. Keep yourself and other people away from the area.

DANGER: An electric shock could kill you. Assume that any severed wire or cable is HOT with voltage and do not touch it!

Gas lines: If you think that you may have struck a gas line, shut off the engine and evacuate the area immediately. Call 911 for help.

DANGER: A gas explosion could kill you. Sparks will likely occur from the dig chain scraping the metal pipe. If gas leaks out an explosion could easily occur.

Fiber optic cables: If you think that you may have severed a fiber optic cable, do not touch or even look at the ends of it.

WARNING: Fiber optic cables convey laser light that can injure your eyesight. Call 911 for help.

INDEX

THE

MODEL 1824TK - 2324TK

HYDRAULIC TRENCHER EXPLODED VIEWS WITH PART NUMBERS

CONGRATULATIONS!

You are now the proud owner of a BARRETO trencher. The following pages have detailed views of your trencher, along with corresponding part numbers. 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 and parts may be ordered through any of these methods.

Thank you for your patronage and confidence in BARRETO equipment.

Barreto Manufacturing, Inc.
Innovative Equipment Engineered to Last
66498 Highway 203
La Grande, OR 97850
1-800-525-7348
1-541-963-6755 Fax
E-Mail: info@barretomfg.com
Web Site: http://www.barretomfg.com

Machine Identification Record

BARRETO Customer number _____

Machine model number _____

Machine serial number _____

Engine manufacturer _____

Engine model number _____

Engine serial number _____

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	10253	BALL BEARING, SKF 6209
2	1	10685-R1	SPINDLE
3	1	10686	SPINDLE HOUSING
4	1	11310	SNAP RING, SHR-175, 1-3/4" EXT, HEAVY
5	2	10990	BALL BEARING, SKF 6011
6	1	SEAL - 10688	SEAL, TCM 24363OUB
7	1	10284	SNAP RING, HO-334, 3-11/32 INTERNAL
8	1	11341	GREASE SAVER

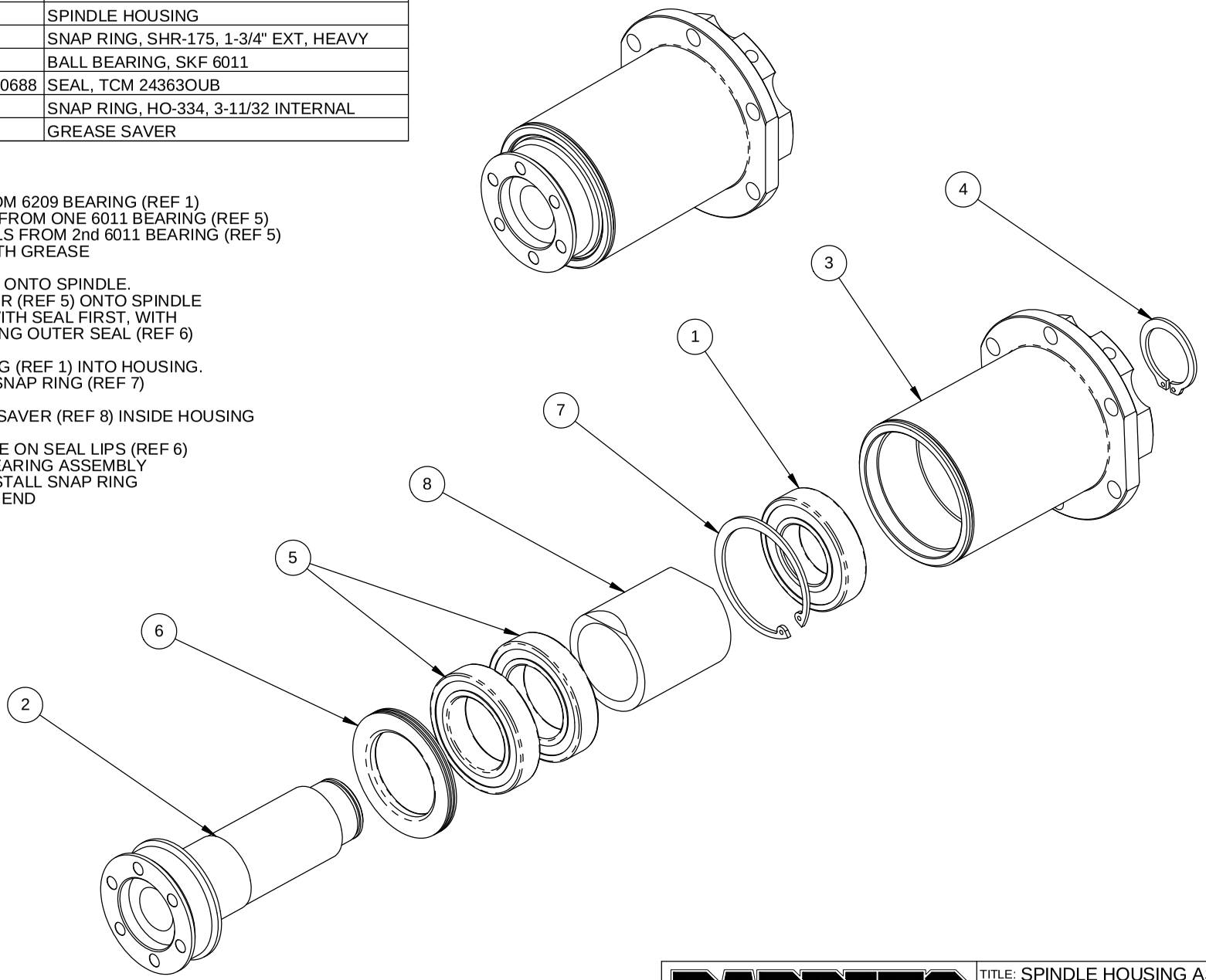
REMOVE SEALS FROM 6209 BEARING (REF 1)
REMOVE ONE SEAL FROM ONE 6011 BEARING (REF 5)
REMOVE BOTH SEALS FROM 2nd 6011 BEARING (REF 5)
PACK BEARINGS WITH GREASE

PRESS SEAL (REF 6) ONTO SPINDLE.
PRESS BEARING PAIR (REF 5) ONTO SPINDLE
INSTALL BEARING WITH SEAL FIRST, WITH
BEARING SEAL FACING OUTER SEAL (REF 6)

PRESS 6209 BEARING (REF 1) INTO HOUSING.
INSTALL INTERNAL SNAP RING (REF 7)

PUT 11341 GREASE SAVER (REF 8) INSIDE HOUSING

PUT PLENTY GREASE ON SEAL LIPS (REF 6)
PRESS SPINDLE / BEARING ASSEMBLY
INTO HOUSING & INSTALL SNAP RING
(REF 4) ON SPINDLE END



BARRETO

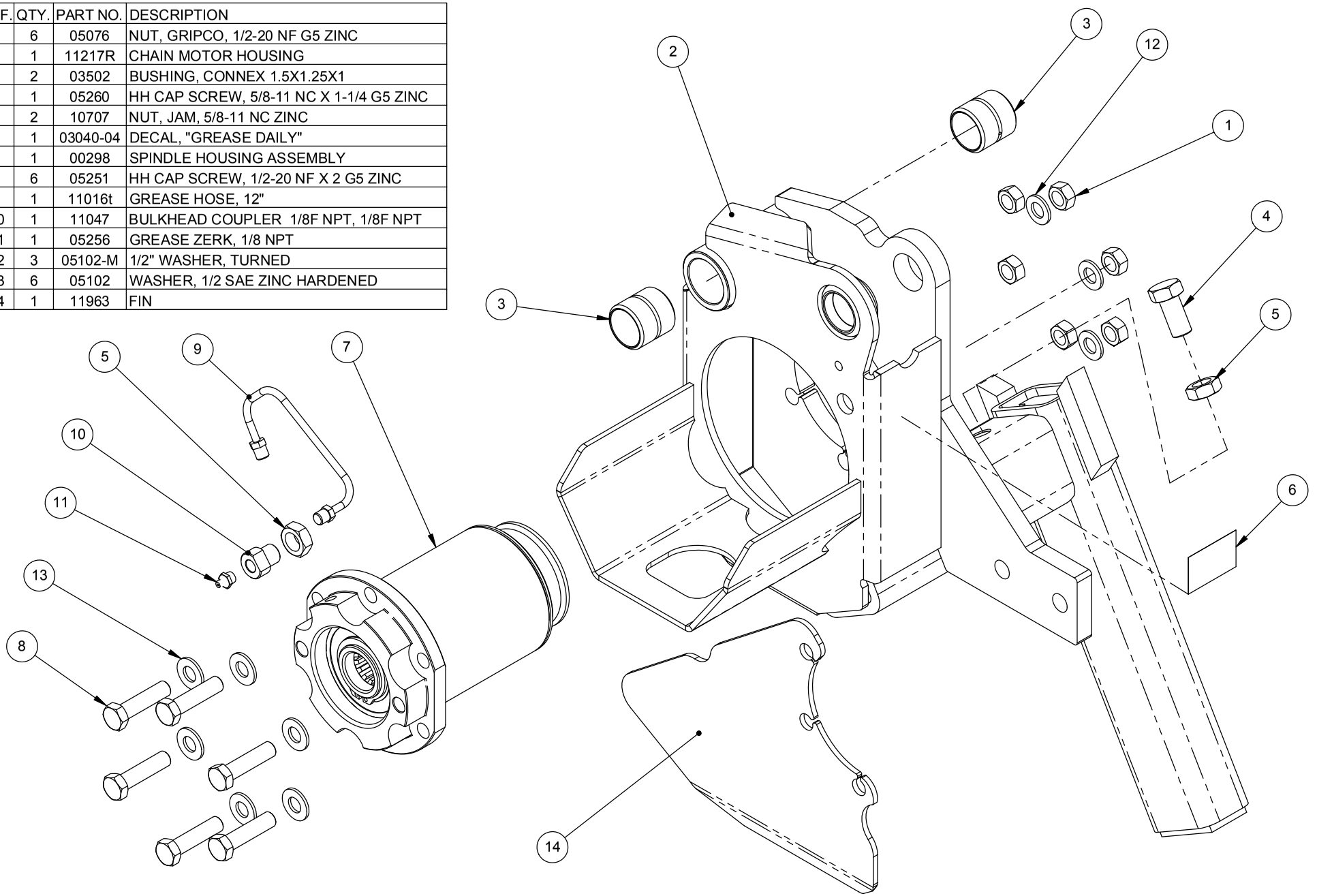
TITLE: SPINDLE HOUSING ASSEMBLY

PRODUCT LINE: 1324 TK , 2324 TK DATE: 04/06

SCALE: 1:4 DWG# 00298

SHEET 1 OF 1

REF.	QTY.	PART NO.	DESCRIPTION
1	6	05076	NUT, GRIPCO, 1/2-20 NF G5 ZINC
2	1	11217R	CHAIN MOTOR HOUSING
3	2	03502	BUSHING, CONNEX 1.5X1.25X1
4	1	05260	HH CAP SCREW, 5/8-11 NC X 1-1/4 G5 ZINC
5	2	10707	NUT, JAM, 5/8-11 NC ZINC
6	1	03040-04	DECAL, "GREASE DAILY"
7	1	00298	SPINDLE HOUSING ASSEMBLY
8	6	05251	HH CAP SCREW, 1/2-20 NF X 2 G5 ZINC
9	1	11016t	GREASE HOSE, 12"
10	1	11047	BULKHEAD COUPLER 1/8F NPT, 1/8F NPT
11	1	05256	GREASE ZERK, 1/8 NPT
12	3	05102-M	1/2" WASHER, TURNED
13	6	05102	WASHER, 1/2 SAE ZINC HARDENED
14	1	11963	FIN



BARRETO

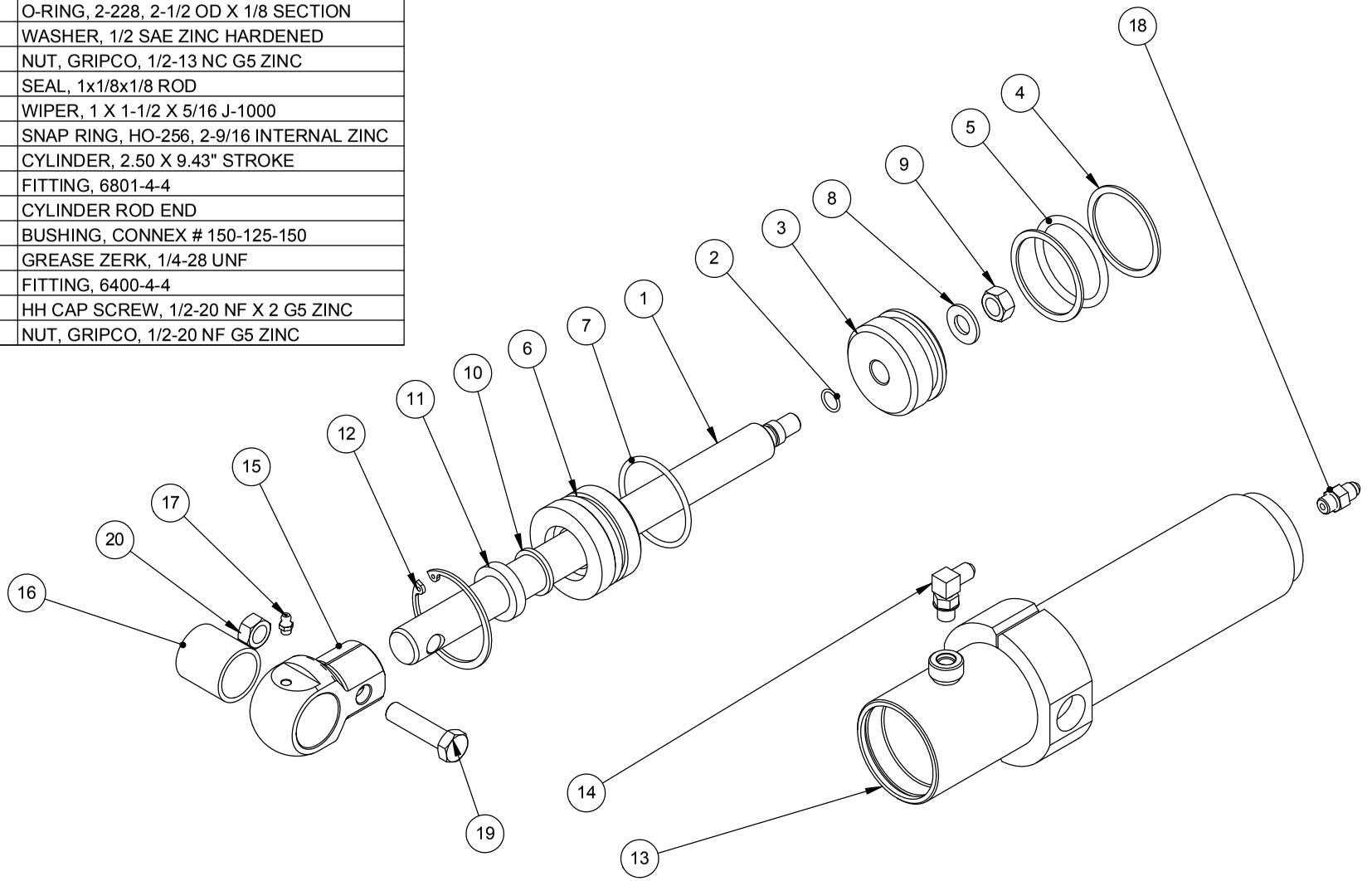
TITLE: MOTOR HOUSING ASSEMBLY
3" BOOM MOUNT

PRODUCT LINE: TRACK TRENCHER DATE:11/06

SCALE: 1:4
SHEET 1 OF 1

DWG# 00299 R1

REF	QTY.	PART NO.	DESCRIPTION
1	1	02701	CYLINDER ROD
2	1	03232	O-RING, 2-014, 5/8 OD X 1/16 SECTION
3	1	02612	PISTON
4	2	03237	BACK-UP RING, 8-330N90 PARBAK
5	1	03236	O-RING, 2-330, 2-1/2 OD X 3/16 SECTION
6	1	02613	CYLINDER END
7	1	03234	O-RING, 2-228, 2-1/2 OD X 1/8 SECTION
8	1	05102	WASHER, 1/2 SAE ZINC HARDENED
9	1	05046	NUT, GRIPCO, 1/2-13 NC G5 ZINC
10	1	03259	SEAL, 1x1/8x1/8 ROD
11	1	03255	WIPER, 1 X 1-1/2 X 5/16 J-1000
12	1	05211	SNAP RING, HO-256, 2-9/16 INTERNAL ZINC
13	1	10704	CYLINDER, 2.50 X 9.43" STROKE
14	1	04555	FITTING, 6801-4-4
15	1	02616	CYLINDER ROD END
16	1	03502	BUSHING, CONNEX # 150-125-150
17	1	05044	GREASE ZERK, 1/4-28 UNF
18	1	04560	FITTING, 6400-4-4
19	1	05251	HH CAP SCREW, 1/2-20 NF X 2 G5 ZINC
20	1	05076	NUT, GRIPCO, 1/2-20 NF G5 ZINC



BARRETO

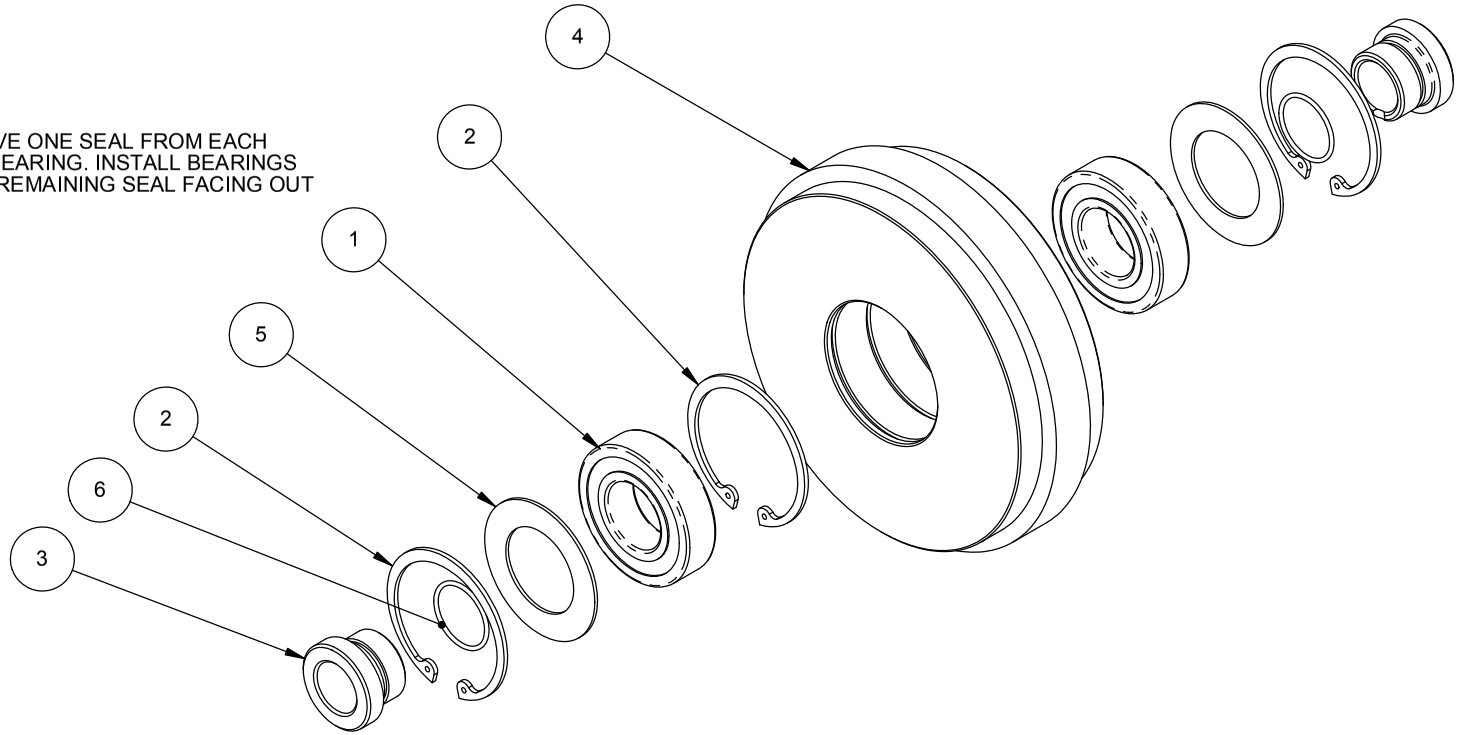
TITLE: CYLINDER ASSEMBLY
2.5 X 9.43" STROKE

PRODUCT LINE: TRACK TRENCHER DATE:11/13/06

SCALE: 1:4 SHEET 1 OF 1 DWG# 00303

REF	QTY.	PART NO.	DESCRIPTION
1	2	03280	BALL BEARING, SKF 6206
2	3	10742	SNAP RING, HO-244, 2-7/16 INTERNAL
3	2	10743	SPACER
4	1	02621-B	CHAIN ROLLER, BALL BRG
5	2	10745	THRUST WASHER, 1.501 X 2.434 X .060 ZINC
6	2	10858	O-RING, 2-023, 1-13/16 OD X 1/16 SECTION

REMOVE ONE SEAL FROM EACH
BALL BEARING. INSTALL BEARINGS
WITH REMAINING SEAL FACING OUT



BARRETO

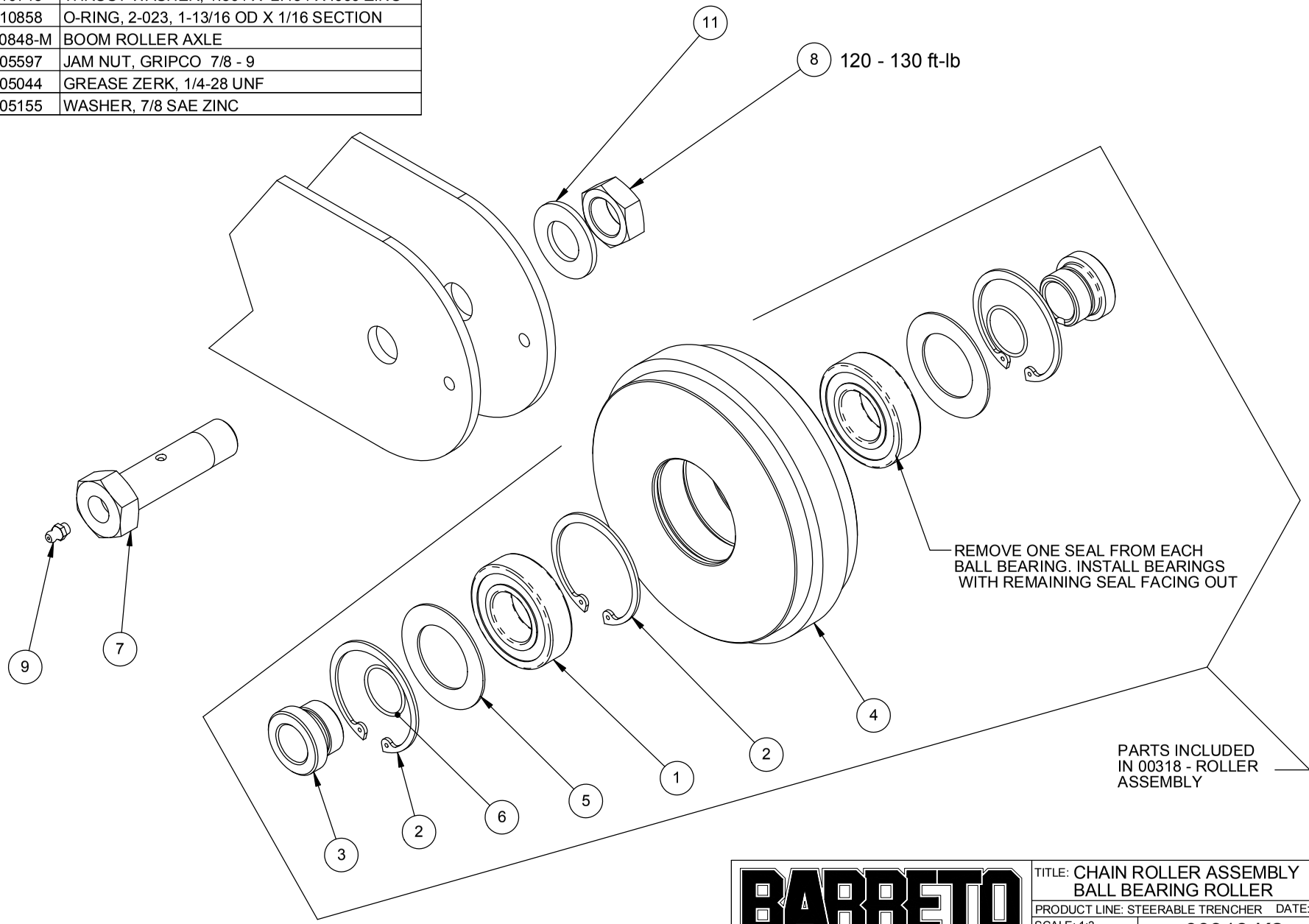
TITLE: CHAIN ROLLER ASSEMBLY
BALL BEARING ROLLER

PRODUCT LINE: COMMON, ST, TK, D DATE:08/05

SCALE: 1:3
SHEET 1 OF 1

DWG# 00318

REF	QTY.	PART NO.	DESCRIPTION
1	2	03280	BALL BEARING, SKF 6206
2	3	10742	SNAP RING, HO-244, 2-7/16 INTERNAL
3	2	10743	SPACER
4	1	02621-B	CHAIN ROLLER, BALL BRG
5	2	10745	THRUST WASHER, 1.501 X 2.434 X .060 ZINC
6	2	10858	O-RING, 2-023, 1-13/16 OD X 1/16 SECTION
7	1	10848-M	BOOM ROLLER AXLE
8	1	05597	JAM NUT, GRIPCO 7/8 - 9
9	1	05044	GREASE ZERK, 1/4-28 UNF
11	1	05155	WASHER, 7/8 SAE ZINC



BARRETO

TITLE: CHAIN ROLLER ASSEMBLY
BALL BEARING ROLLER

PRODUCT LINE: STEERABLE TRENCHER DATE:08/05

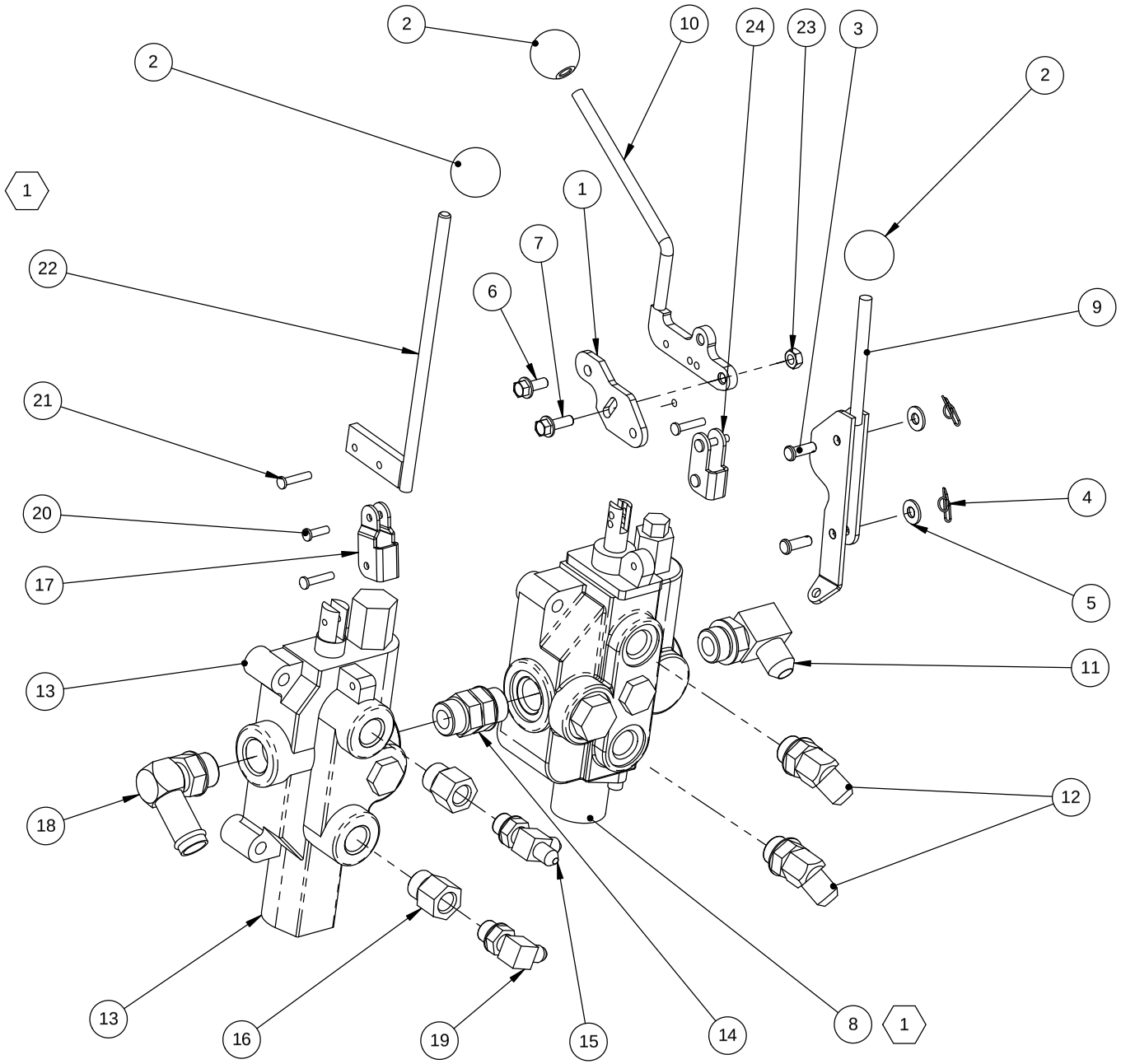
SCALE: 1:3

SHEET 1 OF 1

DWG# 00318-K2

REF	QTY.	PART NO.	DESCRIPTION
1	1	10337	VALVE ROCKER
2	3	03026	KNOB, 5/16-NC
3	2	10345	CLEVIS PIN, 1/4 X 3/4 ZINC
4	2	05038	RUE RING COTTER #8
5	2	05081	WASHER, 1/4 SAE ZINC
6	1	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
7	1	05049	WHIZ LOCK, 1/4-20 NC X 3/4 ZINC
8	1	04509	VALVE, PRINCE RD4100, 3500 PSI
9	1	10335	VALVE ENGAGE LEVER
10	1	10330	VALVE LEVER
11	1	04211	FITTING, 6801-8-10
12	2	04210	FITTING, 6802-8-8
13	1	04512	VALVE RD-2508-T4
14	1	04521	FITTING, 6407-10-10
15	1	04564	FITTING, 6804-4-6-4
16	2	04529	FITTING, 6410-8-6
17	1	03509	VALVE LINK W/PINS
18	1	04523	FITTING, 4601-12-10
19	1	04527-01	FITTING, 6801-4-6
20	1	03509S	LEVER PIN
21	5	03509L	SPOOL PIN
22	1	11205	CYLINDER VALVE LEVER, 8"
23	1	10773	NUT, GRIPCO, 1/4-20 NC G5 ZINC
24	1	03521	VALVE LINK KIT W/ PINS

1 REF. 8
PART NO. 04404 VALVE USED ON 13 AND 16 HORSEPOWER MODELS, 3000 PSI



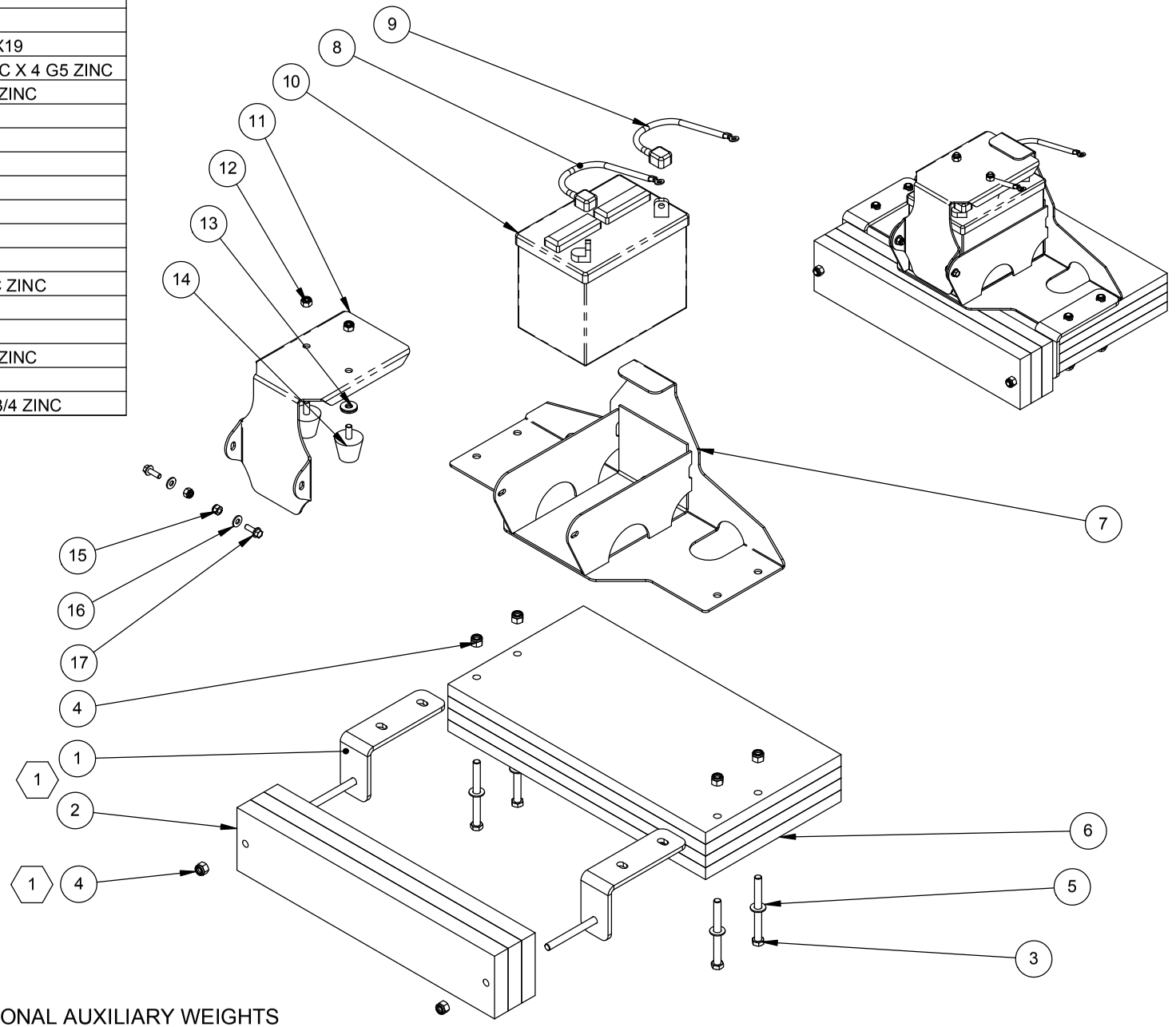
BARRETO

TITLE: VALVE ASSEMBLY

PRODUCT LINE: TRACK TRENCHER DATE: 08/05

SCALE: 1:4 SHEET 1 OF 1 DWG# 00322T

REF	QTY.	PART NO.	DESCRIPTION
1	2	11457	WEIGHT HANGER
2	3	11456	AUXILIARY WEIGHT, 1X4X19
3	4	10757	HH CAP SCREW, 3/8-16 NC X 4 G5 ZINC
4	6	05073	NUT, NYLOCK, 3/8-16 NC ZINC
5	4	05101	WASHER, 3/8 SAE ZINC
6	4	11634	WEIGHT , 3/4 X 10
7	1	11539	BATTERY MOUNT
8	1	11321	BATTERY CABLE, POS
9	1	11322	BATTERY CABLE, NEG
10	1	11537	BATTERY, GT-X U1 300
11	1	11542	BATTERY CAP, W/ PAD
12	2	05273	NUT, NYLOCK, 5/16-18 NC ZINC
13	4	10615	WASHER, 5/16 USS ZINC
14	2	11258	RUBBER BUMPER
15	2	05096	NUT, NYLOCK, 1/4-20 NC ZINC
16	2	05081	WASHER, 1/4 SAE ZINC
17	2	05049	WHIZ LOCK, 1/4-20 NC X 3/4 ZINC



1 PARTS INCLUDED WITH OPTIONAL AUXILIARY WEIGHTS
PART NUMBER A1400 - USED WITH 42" & 48" BOOMS

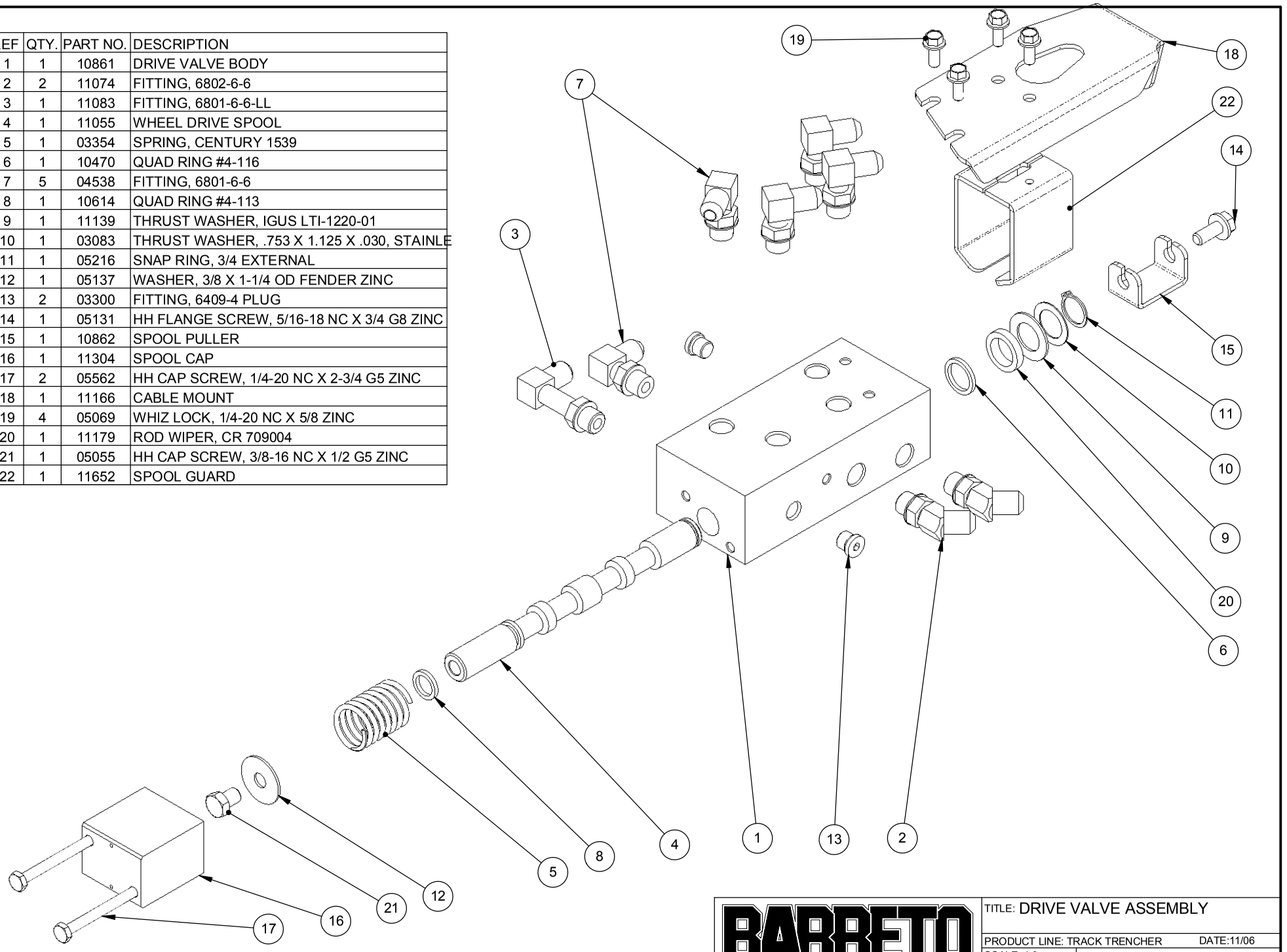
BARRETO

TITLE: BATTERY & WEIGHT OPTIONS

PRODUCT LINE: TRACK TRENCHERS DATE: 11/08

SCALE: 1:8 SHEET 1 OF 1 DWG# 00326

REF	QTY.	PART NO.	DESCRIPTION
1	1	10861	DRIVE VALVE BODY
2	2	11074	FITTING, 6802-6-6
3	1	11083	FITTING, 6801-6-6-LL
4	1	11055	WHEEL DRIVE SPOOL
5	1	03354	SPRING, CENTURY 1539
6	1	10470	QUAD RING #4-116
7	5	04538	FITTING, 6801-6-6
8	1	10614	QUAD RING #4-113
9	1	11139	THRUST WASHER, IGUS LTI-1220-01
10	1	03083	THRUST WASHER, .753 X 1.125 X .030, STAINLE
11	1	05216	SNAP RING, 3/4 EXTERNAL
12	1	05137	WASHER, 3/8 X 1-1/4 OD FENDER ZINC
13	2	03300	FITTING, 6409-4 PLUG
14	1	05131	HH FLANGE SCREW, 5/16-18 NC X 3/4 G8 ZINC
15	1	10862	SPOOL PULLER
16	1	11304	SPOOL CAP
17	2	05562	HH CAP SCREW, 1/4-20 NC X 2-3/4 G5 ZINC
18	1	11166	CABLE MOUNT
19	4	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
20	1	11179	ROD WIPER, CR 709004
21	1	05055	HH CAP SCREW, 3/8-16 NC X 1/2 G5 ZINC
22	1	11652	SPOOL GUARD



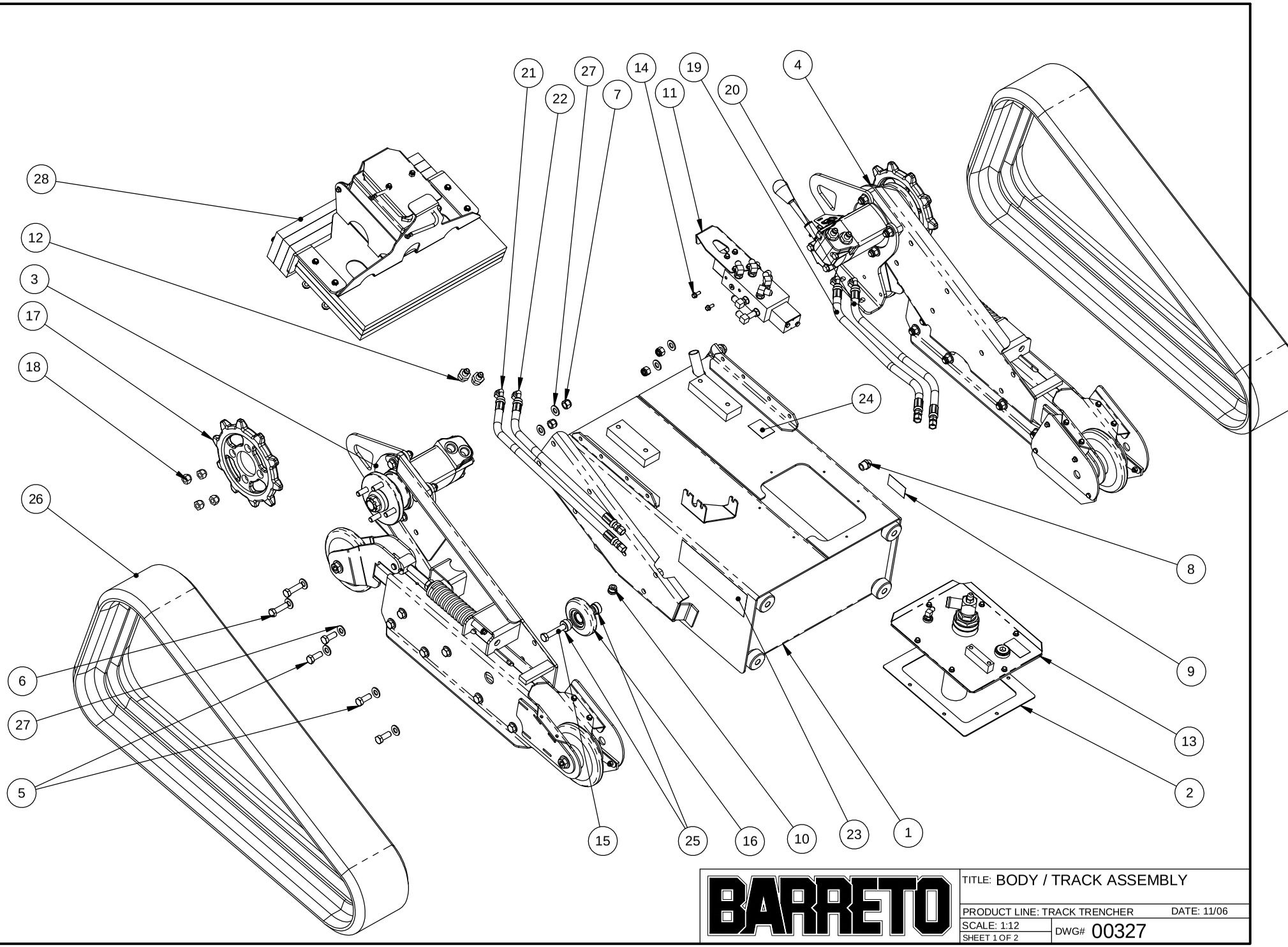
BARRETO

TITLE: DRIVE VALVE ASSEMBLY

PRODUCT LINE: TRACK TRENCHER DATE:11/06

SCALE: 1:3 SHEET 1 OF 1

DWG# 00331



BARRETO

TITLE: BODY / TRACK ASSEMBLY

PRODUCT LINE: TRACK TRENCHER

DATE: 11/06

SCALE: 1:12

SHEET 1 OF 2

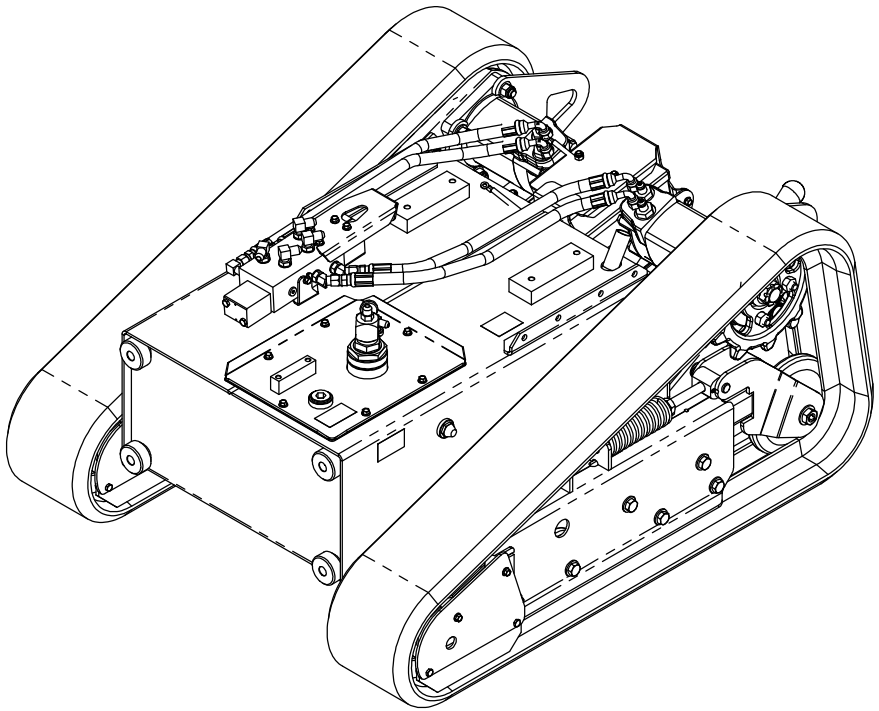
DWG# 00327

REF.	QTY.	PART NO.	DESCRIPTION
1	1	01270	BODY, TRACK TRENCHER
2	1	11178	LID GASKET
3	1	00334	CARRIAGE, RIGHT
4	1	00333	CARRIAGE, LEFT
5	8	05323	HH CAP SCREW, 1/2-13 NC X 1-1/4 G5 ZINC
6	4	05129	HH CAP SCREW, 1/2-13 NC X 1-3/4 G5 ZINC
7	4	05098	NUT, NYLOCK, 1/2-13 NC ZINC
8	1	03503	SIGHT GAUGE
9	1	03040-57	DECAL, "HYDRAULIC OIL LEVEL"
10	1	10361	FITTING, 6409-8 PLUG
11	1	00331	DRIVE VALVE ASSEMBLY
12	4	10800	HYDRAULIC FITTING, 6400-0-6-10
13	1	00373	LID ASSEMBLY
14	3	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
15	2	11447	HH CAP SCREW, 1/2-13 NC X 2-1/2 G5 ZN
16	2	00366	MID ROLLER ASSY
17	2	10874	TRACK SPROCKET
18	8	05042	NUT, LUG, 1/2-20 NF
19	1	11212	HOSE, TRACK DRIVE, LEFT INNER
20	1	11212	HOSE, TRACK DRIVE, LEFT OUTER
21	1	11169	HOSE, TRACK DRIVE, RT OUTSIDE
22	1	11214	HOSE, TRACK DRIVE, RT INNER
23	1	04450-04	DECAL, 1624-TK, OR 04450-03 "1324-TK"
24	1	03341-18	DECAL,TRENCHER S/N
25	4	11155	ROLLER SPACER, SHORT
26	2	10964	TRACK, 180 X 36 X 72
27	16	05102	WASHER, 1/2 SAE ZINC HARDENED
28	1	00326	WEIGHT & BATTERY OPTIONS

Ref# 23 for other models are:

1424TK is p/n 04450-19, 1824TK is p/n 04450-06

2024TK is p/n 04450-17, 2324TK is p/n 04450-13

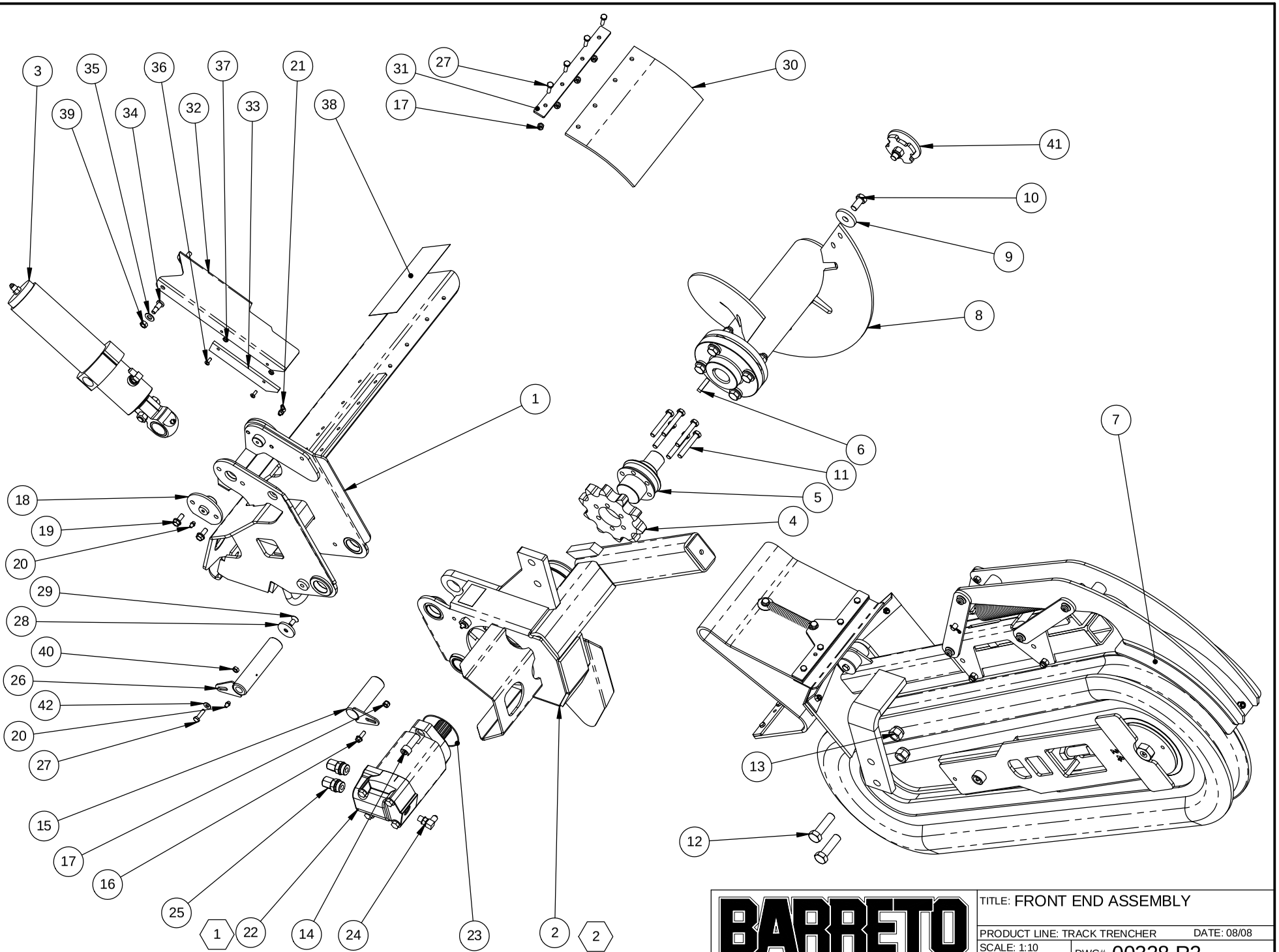


BARRETO

TITLE: BODY / TRACK ASSEMBLY

PRODUCT LINE: TRACK TRENCHER DATE: 11/06

SCALE: 1:12 SHEET 2 OF 2 DWG# 00327



BARRETO

TITLE: FRONT END ASSEMBLY

PRODUCT LINE: TRACK TRENCHER

DATE: 08/08

SCALE: 1:10

SHEET 1 OF 2

DWG# 00328 R2

REF	QTY.	PART NO.	DESCRIPTION
1	1	10850 R4	FRONT END
2	1	00299 R1	MOTOR HOUSING ASSEMBLY
3	1	00303	CYLINDER ASSEMBLY
4	1	02710B	10T SPROCKET
5	1	11219	AUGER DRIVER
6	1	05015	KEY, 5/16 X 5/16 X 1-1/4
7	1	00368 R1	CHAIN / BOOM / GUARD OPTIONS
8	1	00372	AUGER ASSEMBLY
9	1	10037	AUGER KEEPER
10	1	05067	HH CAP SCREW, 1/2-13 NC X 1 G5 ZINC
11	6	05289	HH CAP SCREW, 3/8-24 NF X 2-1/2 G8 ZINC
12	2	05332	HH CAP SCREW, 5/8-11 NC X 2-1/4 G5 ZINC
13	2	05099	NUT, NYLOCK, 5/8-11 NC ZINC
14	2	05586	SH CAP SCREW, 1/2-13 NC X 1-1/2 ZINC
15	1	10546	CYLINDER ROD PIN
16	1	05049	WHIZ LOCK, 1/4-20 NC X 3/4 ZINC
17	5	05096	NUT, NYLOCK, 1/4-20 NC ZINC
18	2	10281	CYLINDER PIN
19	4	05140	WHIZ LOCK, 5/16-18 NC X 3/4 ZINC
20	2	05044	GREASE ZERK, 1/4-28 UNF
21	1	05307	GREASE ZERK, 1/4-28 UNF 90°
22	1	10683	CHAIN MOTOR 11.9 CI
23	1	10689	O-RING, 2-042, 3-3/8 OD X 1/16 SECTION
24	1	04555	FITTING, 6801-4-4
25	2	04557	FITTING, 6802-8-10
26	1	10728-5.4	PIVOT PIN, 5-3/8
27	5	05237	HH CAP SCREW, 1/4-20 NC X 1 G5 ZINC
28	1	10626	PIVOT PIN WASHER
29	1	10627	C-SINK HD CAP SCR .31 X .75 NC Z
30	1	03906	AUGER FLAP
31	2	11962	FLAP CLAMP
32	1	10925	ROD GUARD
33	1	10926	GUARD SLIDER
34	2	05109	BH SHOULDER SCREW, 3/8 X 1/2
35	2	05101	WASHER, 3/8 SAE ZINC
36	2	05233	SCREW #10-24 X 1/2 PPH
37	2	05265	NUT, #10-24 NC
38	1	03341-05	DECAL; DANGER, CHAIN
39	2	05264	NUT, 5/16-18 NC ZINC
40	1	10773	NUT, GRIPCO, 1/4-20 NC G5 ZINC
41	1	11642	AUGER CAP
42	1	05081	WASHER, 1/4 SAE ZINC

2

CHAIN MOTOR SEAL KIT IS P/N 06006.

1 13 HP MODELS USE 9.6 CI CHAIN MOTOR PN 10684
23 HP MODELS USE 14.9 CI CHAIN MOTOR PN 10621

2 EARLY MODELS USE 00299 MOTOR HOUSING ASSEMBLY
CURRENT MODELS USE 00299R MOTOR HOUSING ASSEMBLY

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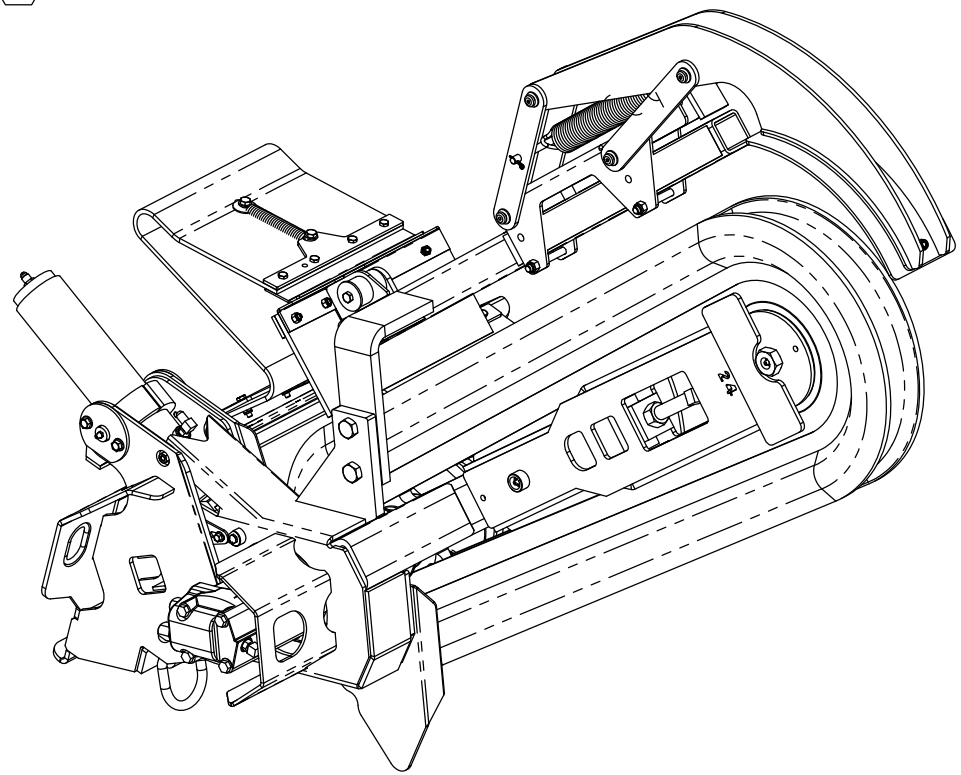
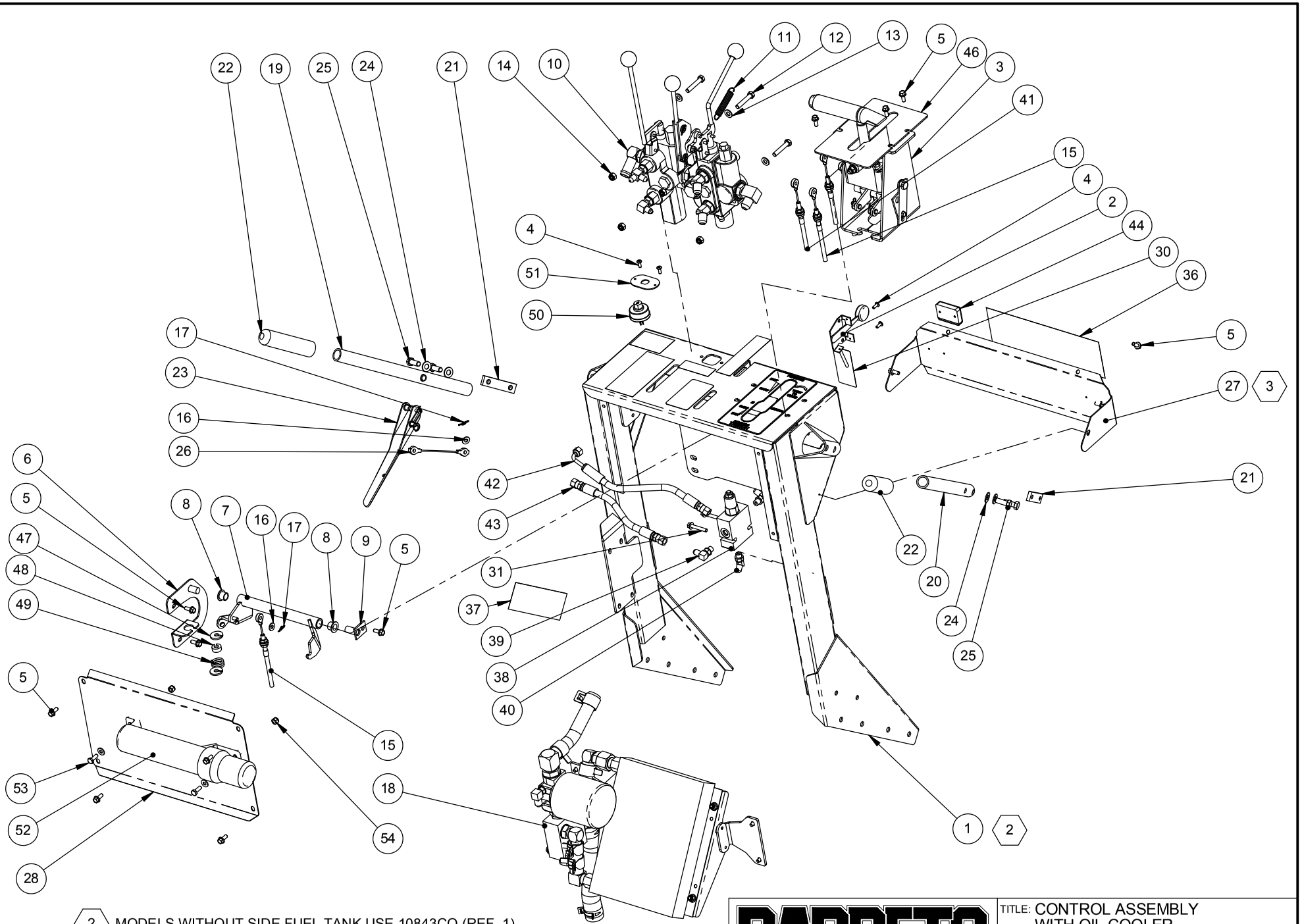


BARRETO

TITLE: FRONT END ASSEMBLY

PRODUCT LINE: TRACK TRENCHER DATE: 11/08

SCALE: 1:10 SHEET 2 OF 2 DWG# 00328 R2



2 MODELS WITHOUT SIDE FUEL TANK USE 10843CO (REF. 1)

3 MODELS WITHOUT SIDE FUEL TANK USE 10774 HOSE COVER (REF. 27)

BARRETO

TITLE: CONTROL ASSEMBLY WITH OIL COOLER

PRODUCT LINE: TRACK TRENCHER, B & S DATE: 03/08

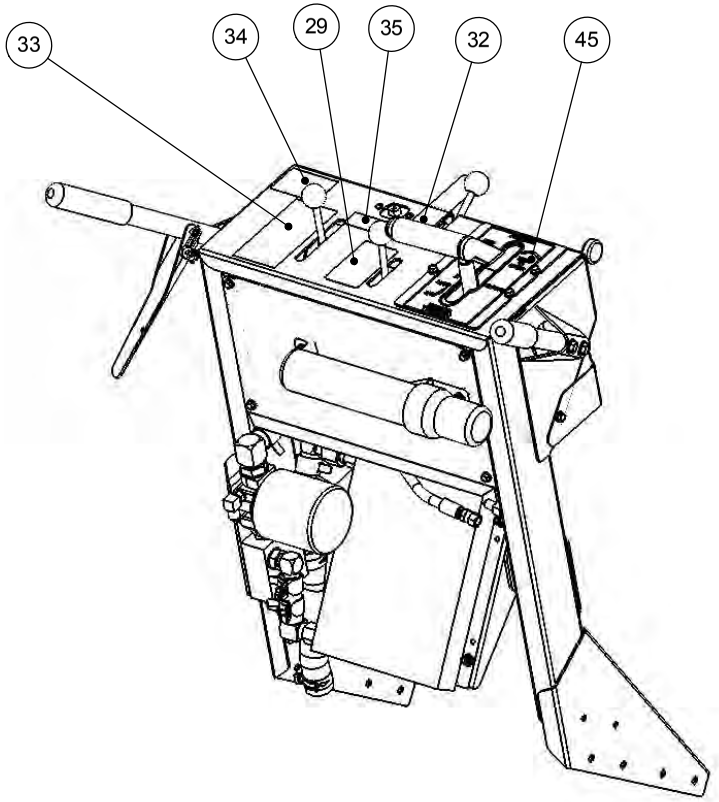
SCALE: 1:10

SHEET 1 OF 2

DWG# 00329CO

REF	QTY.	PART NO.	DESCRIPTION
1	1	10843CO	CONTROL POD, TK W/ COOLER (2)
2	1	03515-T	THROTTLE CABLE
3	1	00362-TK	SPEED LEVER ASSEMBLY, T-HANDLE
4	4	05233	SCREW #10-24 X 1/2 PPH
5	15	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
6	1	11450	LINKAGE MOUNT
7	1	10331	VALVE LINKAGE
8	2	03501	BUSHING, IGUS MFI-0810-08
9	1	10346	LINKAGE PIVOT
10	1	00322T	CONTROL VALVE ASSEMBLY, TRACK
11	1	10548	SPRING LEE LE-055E-6MW
12	4	05054	HH CAP SCREW, 5/16-18 NC X 1-3/4 G5 ZINC
13	4	05068	WASHER, 5/16 SAE ZINC
14	4	05273	NUT, NYLOCK, 5/16-18 NC ZINC
15	3	03549	CABLE, 43"
16	4	05081	WASHER, 1/4 SAE ZINC
17	2	05038	RUE RING COTTER #8
18	1	00457	OIL COOLER ASSEMBLY
19	1	01402-L+	HANDLEBAR, LEFT
20	1	01402-R+	HANDLE BAR, RH
21	2	01403	HANDLE BAR SLUG
22	2	03032	HANDLE BAR GRIPS (SOLD IN PAIRS)
23	1	01503K	CLUTCH LEVER KIT
24	4	05101	WASHER, 3/8 SAE ZINC
25	4	05059	HH CAP SCREW, 3/8-16 NC X 1 G5 ZINC
26	1	11280	CABLE, 5"
27	1	10774	HOSE COVER (3)
28	1	10776	BACK COVER
29	1	04440-04	DECAL; DIG CHAIN ON/OFF
30	1	04440-05	DECAL, ENGINE THROTTLE
31	2	10622	WHIZ LOCK, 1/4-20 NC X 1-1/2 ZINC
32	1	03341-10	DECAL, DIG CHAIN "FWD/N/REV"
33	1	03341-12	DECAL, "DIGGING BOOM, UP-DOWN"
34	1	03341-24	DECAL, "WARNING - NO PARKING BRAKE"
35	1	04450-12	DECAL, "IGNITION, OFF/ON/START"
36	1	03040-02	DECAL, "BARRETO", 3-1/2 X 11-1/4
37	1	03040-11	DECAL, "BARRETO", 2-3/16 X 7-3/8
38	1	04508-R	C-BALANCE VALVE, SINGLE
39	2	04555	FITTING, 6801-4-4
40	1	04218	FITTING, 6802-4-4
41	2	03514	CABLE, 40"
42	1	11561	HOSE, VALVE A / C-BAL PORT 3
43	1	11562	HOSE, VALVE B / C-BAL PORT 2

REF	QTY.	PART NO.	DESCRIPTION
44	1	03009	HOUR METER - COMPLETE KIT
45	1	04450-08	DECAL, SPEED CONTROL
46	1	11317	SPEED SLOT, T HANDLE
47	2	11452	CABLE COLLAR
48	1	11451	PRE-LOAD SPACER
49	1	11453	SPRING CENTURY LL-49
50	1	IGN-SW-B&S	IGNITION SWITCH, B&S
51	1	11627B	IGNITION SWITCH PLATE, BRIGGS
52	1	12090	INSTRUCTION CANISTER
53	2	05554	HH CAP SCREW, 1/4-20 NC X 3/4 G5 ZINC
54	2	05096	NUT, NYLOCK, 1/4-20 NC ZINC



BARRETO

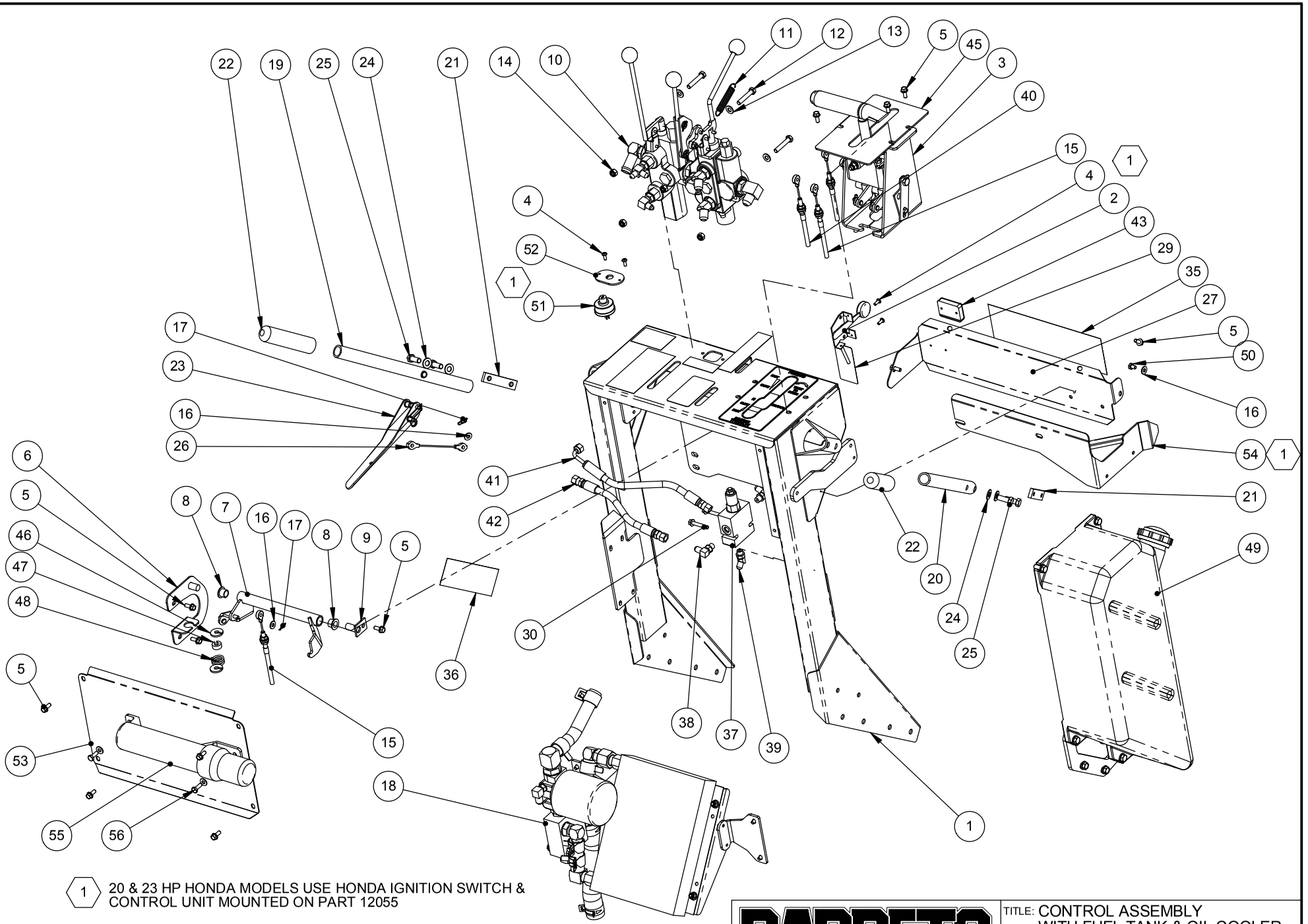
TITLE: CONTROL ASSEMBLY

PRODUCT LINE: TRACK TRENCHER, B&S DATE: 03/08

SCALE: 1:10

SHEET 2 OF 2

DWG# 00329CO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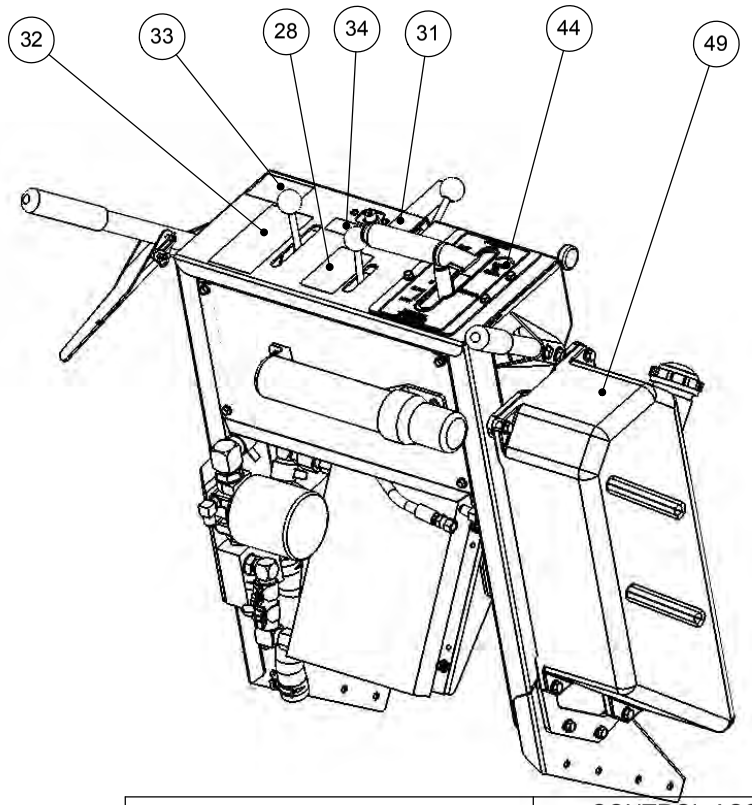
20 & 23 HP HONDA MODELS USE HONDA IGNITION SWITCH & CONTROL UNIT MOUNTED ON PART 12055
BARRETO
TITLE: CONTROL ASSEMBLY WITH FUEL TANK & OIL COOLER
PRODUCT LINE: TRACK TRENCH, KOHLER DATE: 03/08
SCALE: 1:10
SHEET 1 OF 2
DWG# 00329TC

REF	QTY.	PART NO.	DESCRIPTION
1	1	10843TC	CONTROL POD, TRACK
2	1	03515-T	THROTTLE CABLE
3	1	00362-TK	SPEED LEVER ASSEMBLY, T-HANDLE
4	4	05233	SCREW #10-24 X 1/2 PPH
5	14	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
6	1	11450	LINKAGE MOUNT
7	1	10331	VALVE LINKAGE
8	2	03501	BUSHING, IGUS MFI-0810-08
9	1	10346	LINKAGE PIVOT
10	1	00322T	CONTROL VALVE ASSEMBLY, TRACK
11	1	10548	SPRING LEE LE-055E-6MW
12	4	05054	HH CAP SCREW, 5/16-18 NC X 1-3/4 G5 ZINC
13	4	05068	WASHER, 5/16 SAE ZINC
14	4	05273	NUT, NYLOCK, 5/16-18 NC ZINC
15	3	03549	CABLE, 43"
16	5	05081	WASHER, 1/4 SAE ZINC
17	2	05038	RUE RING COTTER #8
18	1	00457	OIL COOLER ASSEMBLY
19	1	01402-L+	HANDLEBAR, LEFT
20	1	01402-R+	HANDLE BAR, RH
21	2	01403	HANDLE BAR SLUG
22	2	03032	HANDLE BAR GRIPS (SOLD IN PAIRS)
23	1	01503K	CLUTCH LEVER KIT
24	4	05101	WASHER, 3/8 SAE ZINC
25	4	05059	HH CAP SCREW, 3/8-16 NC X 1 G5 ZINC
26	1	11280	CABLE, 5"
27	1	11556	HOSE COVER
28	1	04440-04	DECAL; DIG CHAIN ON/OFF
29	1	04440-05	DECAL, ENGINE THROTTLE
30	2	10622	WHIZ LOCK, 1/4-20 NC X 1-1/2 ZINC
31	1	03341-10	DECAL, DIG CHAIN "FWD/N/REV"
32	1	03341-12	DECAL, "DIGGING BOOM, UP-DOWN"
33	1	03341-24	DECAL, "WARNING - NO PARKING BRAKE"
34	1	04450-12	DECAL, "IGNITION, OFF/ON/START"
35	1	03040-02	DECAL, "BARRETO", 3-1/2 X 11-1/4
36	1	03040-11	DECAL, "BARRETO", 2-3/16 X 7-3/8
37	1	04508-R	C-BALANCE VALVE, SINGLE
38	2	04555	FITTING, 6801-4-4
39	1	04218	FITTING, 6802-4-4
40	2	03514	CABLE, 40"
41	1	11561	HOSE, VALVE A / C-BAL PORT 3
42	1	11562	HOSE, VALVE B / C-BAL PORT 2
43	1	03009	HOUR METER - COMPLETE KIT

REF	QTY.	PART NO.	DESCRIPTION	
44	1	04450-08	DECAL, SPEED CONTROL	
45	1	11317	SPEED SLOT, T HANDLE	
46	2	11452	CABLE COLLAR	
47	1	11451	PRE-LOAD SPACER	
48	1	11453	SPRING CENTURY LL-49	
49	1	00456	FUEL TANK ASSEMBLY	
50	1	10913	HH CAP SCREW, 1/4-20 NC X 3/8 G5 ZINC	
51	1	IGN-SW-KOHL	IGNITION SWITCH, KOHLER	1
52	1	11627K	IGNITION SWITCH PLATE	
53	1	10776	BACK COVER	
54	1	12055	HONDA CONTROL MOUNT	1
55	1	12090	INSTRUCTION CANISTER	
56	2	05554	HH CAP SCREW, 1/4-20 NC X 3/4 G5 ZINC	



BARRETO

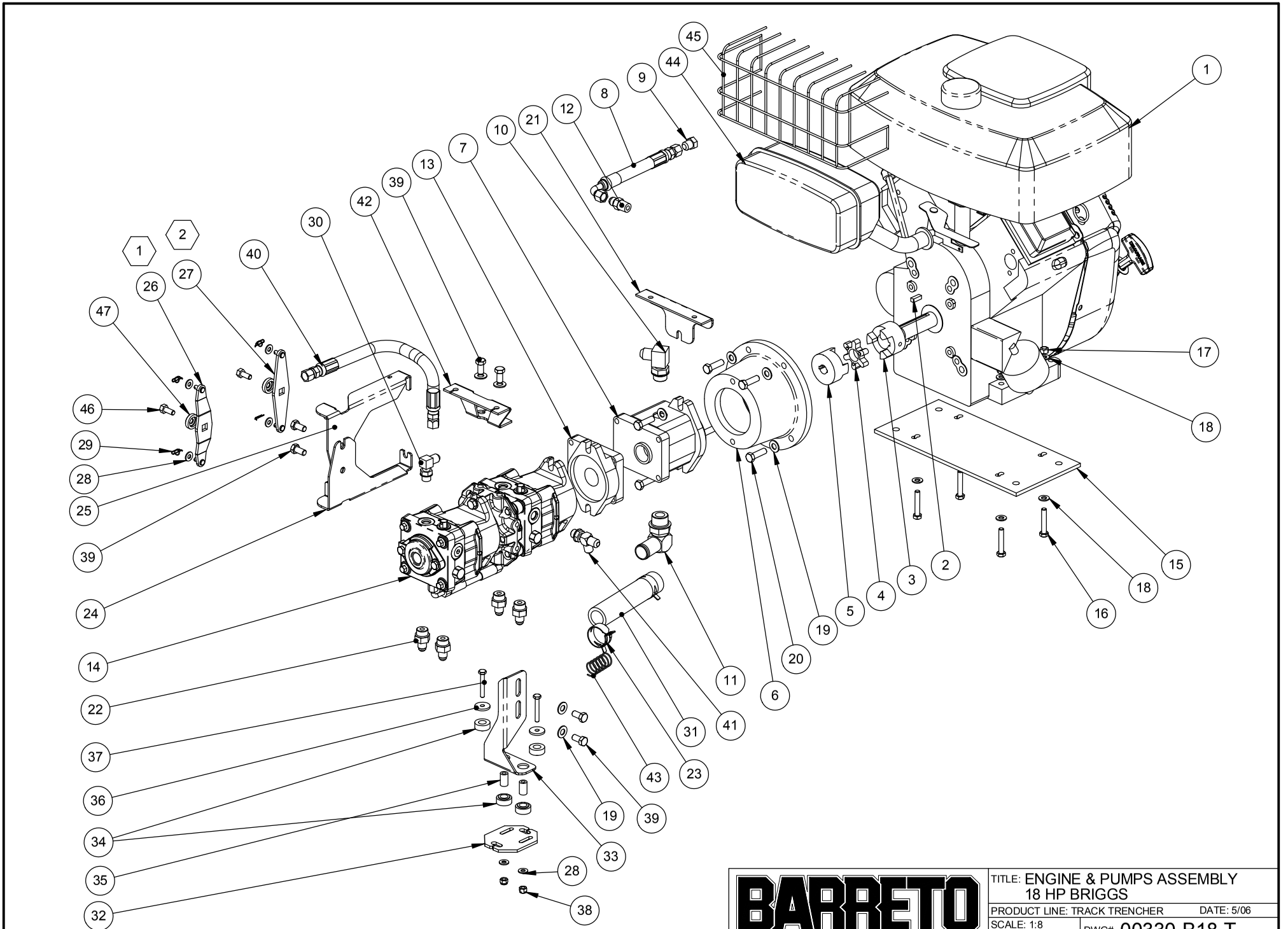
TITLE: CONTROL ASSEMBLY

PRODUCT LINE: TRACK TRENCH, KOHLER DATE: 03/08

SCALE: 1:10

SHEET 2 OF 2

DWG# 00329TC



BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
18 HP BRIGGS

PRODUCT LINE: TRACK TRENCHER DATE: 5/06

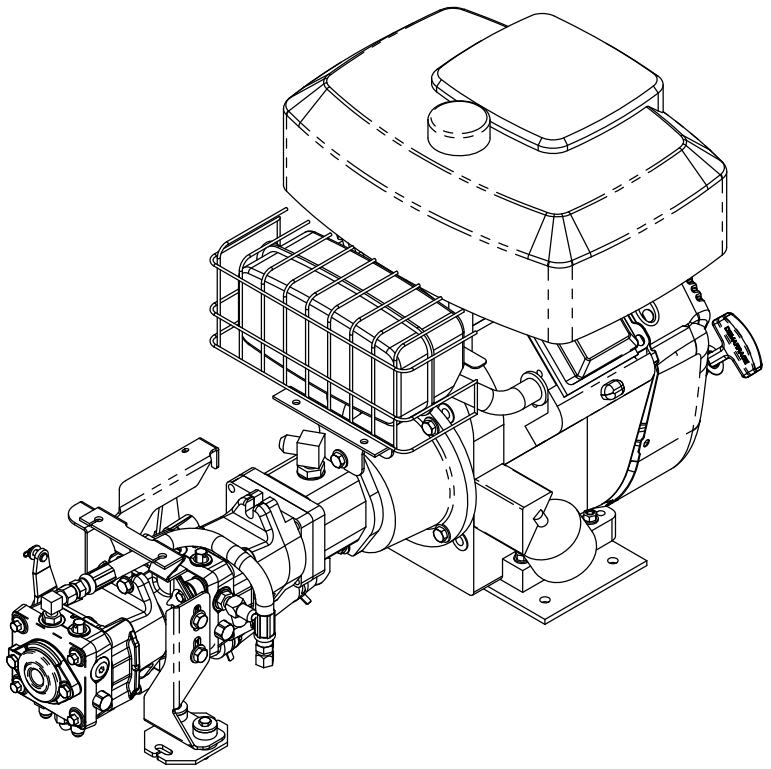
SCALE: 1:8 SHEET 1 OF 2

DWG# 00330-B18-T

REF	QTY.	PART NO.	DESCRIPTION
1	1	07012	ENGINE, 18 HP B&S
2	1	05014	KEY, 1/4 X 1/4 X 3/4
3	1	03023	JAW COUPLER, 1" BORE L095
4	1	11633	SPIDER, HYTREL, L095
5	1	03021	JAW COUPLER, PUMP, 5/8" BORE
6	1	02016	PUMP ADAPTER
7	1	04503	PUMP SNP2-11-HSTAT
8	1	10588	ENGINE DRAIN HOSE
9	1	04539	FITTING, 2408-6
10	1	04211	FITTING, 6801-8-10
11	1	04530	FITTING, 4601-16-12
12	1	10863	HYD ADAPTER 2404-6-6
13	1	04504	ADAPT PLATE KIT
14	1	11335	HYD-STAT, TANDEM TU 12CC
15	1	01218	ENGINE MOUNT PLATE, BRIGGS
16	4	05245	HH CAP SCREW, 5/16-24 NF X 1-3/4 G5 ZINC
17	4	10462	NUT, GRIPCO, 5/16-24 NF G5 ZINC
18	8	05068	WASHER, 5/16 SAE ZINC
19	10	05101	WASHER, 3/8 SAE ZINC
20	6	05091	HH CAP SCREW, 3/8-16 NC X 1-1/4 G5 ZINC
21	1	10545	PUMP COVER MOUNT
22	4	04226	FITTING, 6400-6-8
23	2	05225	CLAMP, 1-1/2" HOSE, CTB-36 ST
24	1	11303-L	CABLE BRACKET
25	1	11303-R	CABLE BRACKET
26	1	11629	CABLE ARM, FRONT, SQ. ①
27	1	11628	CABLE ARM, REAR, SQ. ②
28	6	05081	WASHER, 1/4 SAE ZINC
29	4	05038	RUE RING COTTER #8
30	1	04538	FITTING, 6801-6-6
31	1	10762-B	HOSE, SUMP, B-16
32	1	11111	PUMP SUPPORT MOUNT
33	1	11112	PUMP SUPPORT
34	4	11113	CUSHION
35	2	11114	CUSHION SPACER
36	2	11115	CUSHION WASHER
37	2	05556	HH CAP SCREW, 1/4-20 NC X 1-3/4 G5 ZINC
38	2	05096	NUT, NYLOCK, 1/4-20 NC ZINC
39	6	05057	HH CAP SCREW, 3/8-16 NC X 3/4 G5 ZINC
40	1	11081	HOSE, HYDRO-STAT SUCTION
41	1	04228	FITTING, 6804-6-6-6
42	1	11354	PUMP COVER MOUNT
43	1	04511	SPRING, 1" OD

REF	QTY.	PART NO.	DESCRIPTION
44	1	07000-10	MUFFLER
45	1	07000-11	MUFFLER GUARD
46	2	11632	HEX CAP SCREW, M8 X 1.25
47	2	11675	COLLAR

04503 PUMP SEAL KIT IS P/N 06016.



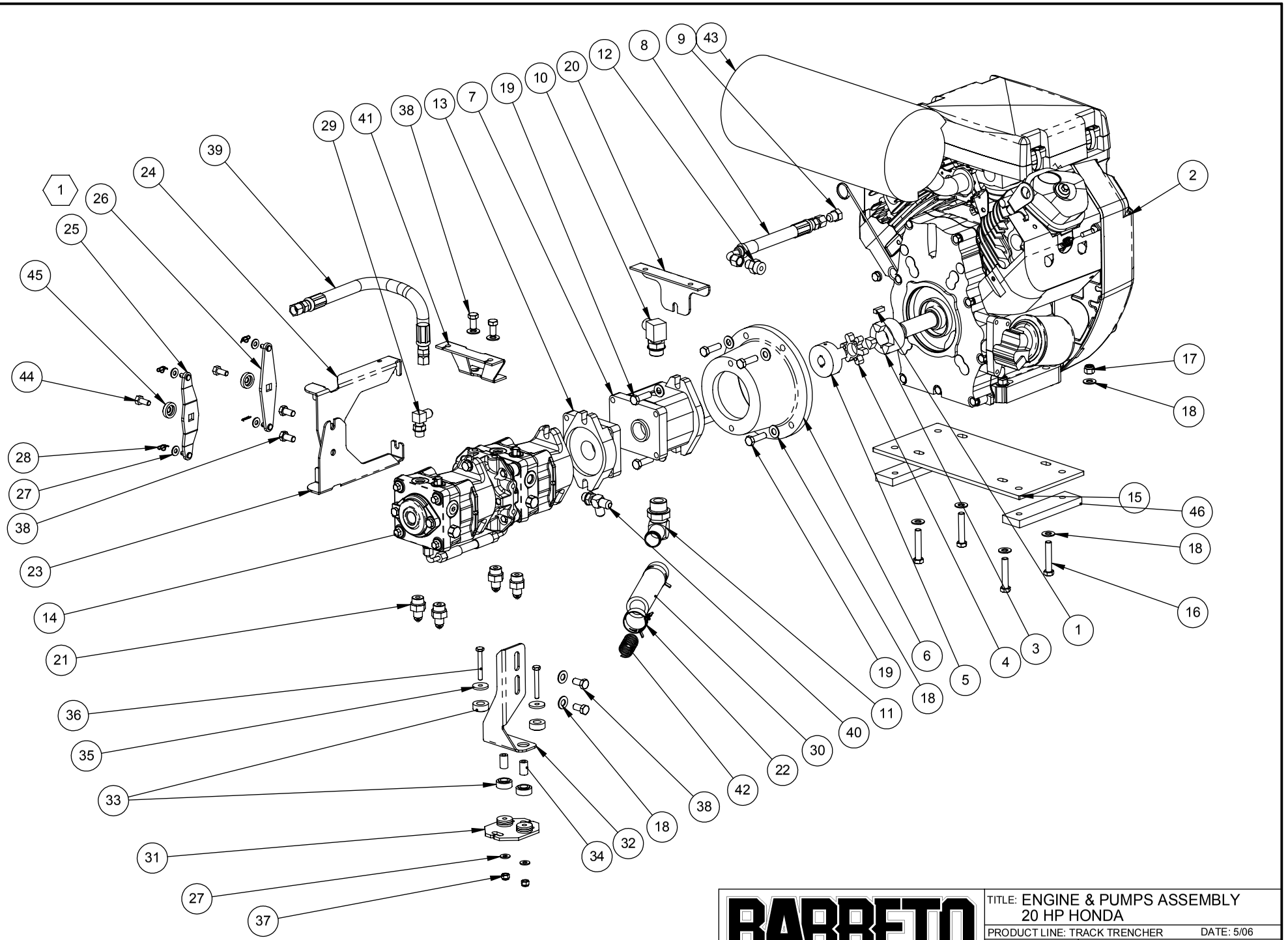
① EARLY MODELS USE CABLE ARMS 11339 & 11340 - FOR
② ROUND CONTROL SHAFT

BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
18 HP BRIGGS

PRODUCT LINE: TRACK TRENCHER DATE: 5/06

SCALE: 1:8 SHEET 2 OF 2 DWG# 00330-B18-T



BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
20 HP HONDA

PRODUCT LINE: TRACK TRENCHER

DATE: 5/06

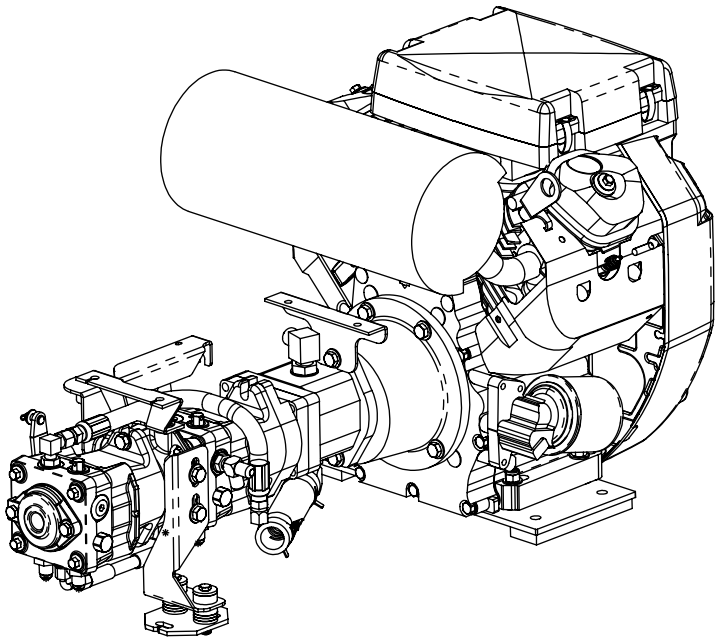
SCALE: 1:8

SHEET 1 OF 2

DWG# 00330-H20-T

REF	QTY.	PART NO.	DESCRIPTION	
1	1	05014	KEY, 1/4 X 1/4 X 3/4	
2	1	07023-DON	ENGINE, 20 HP HONDA GX630, E-START	
3	1	03024	JAW COUPLER, 1-1/8" BORE L095	
4	1	11633	SPIDER, HYTREL, L095	
5	1	03021	JAW COUPLER, PUMP, 5/8" BORE	
6	1	02016	PUMP ADAPTER	
7	1	04503	PUMP SNP2-11-HSTAT	
8	1	10588	ENGINE DRAIN HOSE	
9	1	04539	FITTING, 2408-6	
10	1	04211	FITTING, 6801-8-10	
11	1	04530	FITTING, 4601-16-12	
12	1	04230	FITTING, 9606S-6-S12-20 METRIC	
13	1	04504	ADAPT PLATE KIT	
14	1	11335	HYD-STAT, TANDEM TU 12CC	
15	1	01218-H	ENGINE MOUNT PLATE, HONDA 13 & 18 HP	
16	4	05262	HH CAP SCREW, 3/8-16 NC X 2 G5 ZINC	
17	4	05073	NUT, NYLOCK, 3/8-16 NC ZINC	
18	18	05101	WASHER, 3/8 SAE ZINC	
19	6	05091	HH CAP SCREW, 3/8-16 NC X 1-1/4 G5 ZINC	
20	1	10545	PUMP COVER MOUNT	
21	4	04226	FITTING, 6400-6-8	
22	2	05225	CLAMP, 1" ID HOSE, CTB-35 ST	
23	1	11303-L	CABLE BRACKET	
24	1	11303-R	CABLE BRACKET	
25	1	11629	CABLE ARM, FRONT, SQ.	1
26	1	11628	CABLE ARM, REAR, SQ.	1
27	6	05081	WASHER, 1/4 SAE ZINC	
28	4	05038	RUE RING COTTER #8	
29	1	04538	FITTING, 6801-6-6	
30	1	10762-B	HOSE, SUMP, B-16	
31	1	11111	PUMP SUPPORT MOUNT	
32	1	11112	PUMP SUPPORT	
33	4	11113	CUSHION	
34	2	11114	CUSHION SPACER	
35	8	11115	PUMP CUSHION WASHER	
36	2	05591	HH CAP SCREW, 1/4-20 NC X 2 G5 ZINC	
37	2	05096	NUT, NYLOCK, 1/4-20 NC ZINC	
38	6	05057	HH CAP SCREW, 3/8-16 NC X 3/4 G5 ZINC	
39	1	11081	HOSE, HYDRO-STAT SUCTION	
40	1	04228	FITTING, 6804-6-6-6	
41	1	11354	PUMP COVER MOUNT	
42	1	04511	SPRING, 1" OD	
43	1	07022-1	MUFFLER, 23HP HONDA	
44	2	11632	HEX CAP SCREW, M8 X 1.25	
45	2	11675	COLLAR	
46	2	01219	ENGINE SPACER, 18 HP HONDA	

STANDARD AIR FILTER SHOWN



(1) EARLY MODELS USE CABLE ARMS 11339 & 11340 - FOR ROUND CONTROL SHAFT

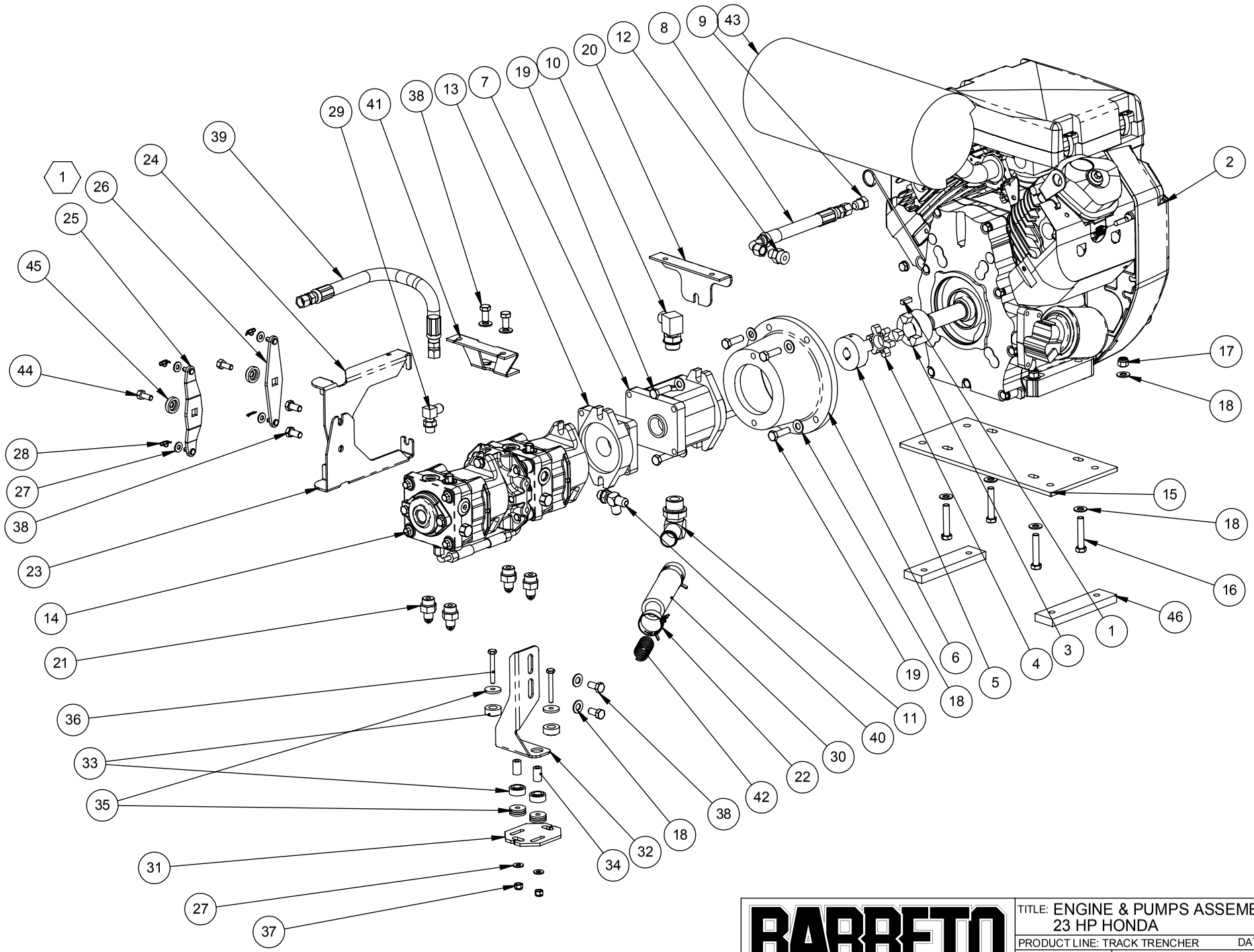
BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
20 HP HONDA

PRODUCT LINE: TRACK TRENCHER DATE: 5/06

SCALE: 1:8
SHEET 2 OF 2

DWG# 00330-H20-T



BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
23 HP HONDA

PRODUCT LINE: TRACK TRENCHER

DATE: 5/06

SCALE: 1:8

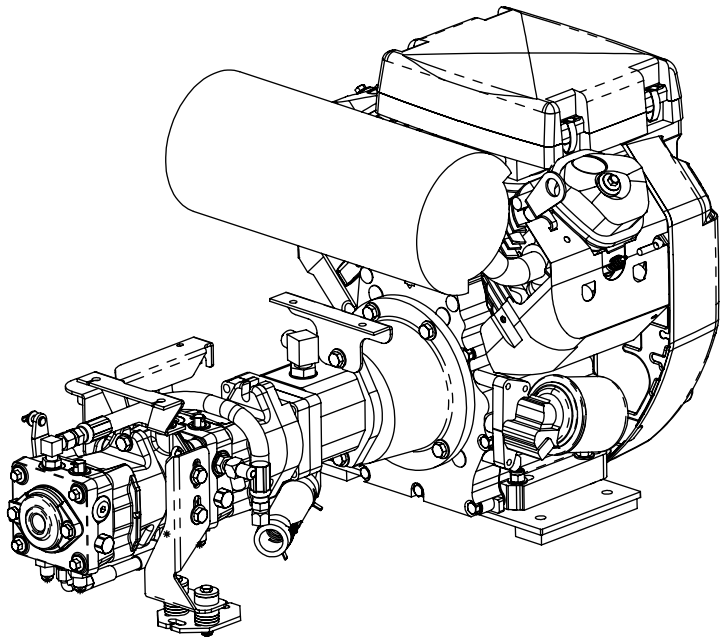
SHEET 1 OF 2

DWG# 00330-H23-T

REF	QTY.	PART NO.	DESCRIPTION
1	1	05014	KEY, 1/4 X 1/4 X 3/4
2	1	07022-DON	ENGINE, 23 HP HONDA GX690, E-START
3	1	03024	JAW COUPLER, 1-1/8" BORE L095
4	1	11633	SPIDER, HYTREL, L095
5	1	03021	JAW COUPLER, PUMP, 5/8" BORE
6	1	02016	PUMP ADAPTER
7	1	04606	PUMP, SNP2-14
8	1	10588	ENGINE DRAIN HOSE
9	1	04539	FITTING, 2408-6
10	1	04211	FITTING, 6801-8-10
11	1	04530	FITTING, 4601-16-12
12	1	04230	FITTING, 9606S-6-S12-20 METRIC
13	1	04504	ADAPT PLATE KIT
14	1	11335	HYD-STAT, TANDEM TU 12CC
15	1	01218-H	ENGINE MOUNT PLATE, HONDA 13 & 18 HP
16	4	05262	HH CAP SCREW, 3/8-16 NC X 2 G5 ZINC
17	4	05073	NUT, NYLOCK, 3/8-16 NC ZINC
18	18	05101	WASHER, 3/8 SAE ZINC
19	6	05091	HH CAP SCREW, 3/8-16 NC X 1-1/4 G5 ZINC
20	1	10545	PUMP COVER MOUNT
21	4	04226	FITTING, 6400-6-8
22	2	05225	CLAMP, 1" ID HOSE, CTB-35 ST
23	1	11303-L	CABLE BRACKET
24	1	11303-R	CABLE BRACKET
25	1	11629	CABLE ARM, FRONT, SQ.
26	1	11628	CABLE ARM, REAR, SQ.
27	6	05081	WASHER, 1/4 SAE ZINC
28	4	05038	RUE RING COTTER #8
29	1	04538	FITTING, 6801-6-6
30	1	10762-B	HOSE, SUMP, B-16
31	1	11111	PUMP SUPPORT MOUNT
32	1	11112	PUMP SUPPORT
33	4	11113	CUSHION
34	2	11114	CUSHION SPACER
35	8	11115	PUMP CUSHION WASHER
36	2	05591	HH CAP SCREW, 1/4-20 NC X 2 G5 ZINC
37	2	05096	NUT, NYLOCK, 1/4-20 NC ZINC
38	6	05057	HH CAP SCREW, 3/8-16 NC X 3/4 G5 ZINC
39	1	11081	HOSE, HYDRO-STAT SUCTION
40	1	04228	FITTING, 6804-6-6-6
41	1	11354	PUMP COVER MOUNT
42	1	04511	SPRING, 1" OD
43	1	07022-1	MUFFLER, 23HP HONDA
44	2	11632	HEX CAP SCREW, M8 X 1.25
45	2	11675	COLLAR
46	2	01219	ENGINE SPACER, 18 HP HONDA

(1)
(1)

STANDARD AIR FILTER SHOWN



(1) EARLY MODELS USE CABLE ARMS 11339 & 11340 - FOR ROUND CONTROL SHAFT

BARRETO

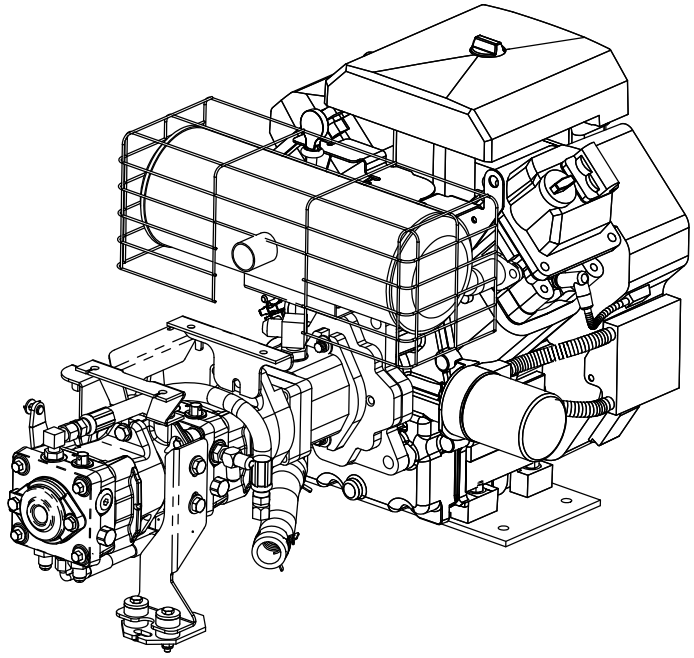
TITLE: ENGINE & PUMPS ASSEMBLY
23 HP HONDA

PRODUCT LINE: TRACK TRENCHER DATE: 5/06

SCALE: 1:8
SHEET 2 OF 2

DWG# 00330-H23-T

REF	QTY.	PART NO.	DESCRIPTION	
1	1	11570	PUMP SNP2-11-HSTAT, SPLINED	
2	1	10588	ENGINE DRAIN HOSE	
3	1	04539	FITTING, 2408-6	
4	1	04211	FITTING, 6801-8-10	
5	1	04530	FITTING, 4601-16-12	
6	1	10863	HYD ADAPTER 2404-6-6	
7	1	04504	ADAPT PLATE KIT	
8	1	11335	HYD-STAT, TANDEM TU 12CC	
9	1	01218-K	ENGINE MOUNT PLATE, KOHLER 18 HP	
10	4	05262	HH CAP SCREW, 3/8-16 NC X 2 G5 ZINC	
11	4	05073	NUT, NYLOCK, 3/8-16 NC ZINC	
12	14	05101	WASHER, 3/8 SAE ZINC	
13	2	05152	FLANGE SCREW 12 PT	
14	4	04226	FITTING, 6400-6-8	
15	2	05225	CLAMP, 1-1/2" HOSE, CTB-36 ST	
16	1	11303-L	CABLE BRACKET	
17	1	11303-R	CABLE BRACKET	
18	1	11629	CABLE ARM, FRONT, SQ.	1
19	1	11628	CABLE ARM, REAR, SQ.	2
20	6	05081	WASHER, 1/4 SAE ZINC	
21	4	05038	RUE RING COTTER #8	
22	1	04538	FITTING, 6801-6-6	
23	1	10762-K	HOSE, SUMP, KOHLER 18	
24	1	11111	PUMP SUPPORT MOUNT	
25	1	11112-KO	PUMP SUPPORT, KOHLER	
26	4	11113	CUSHION	
27	2	11114	CUSHION SPACER	
28	2	11115	CUSHION WASHER	
29	2	05556	HH CAP SCREW, 1/4-20 NC X 1-3/4 G5 ZINC	
30	2	05096	NUT, NYLOCK, 1/4-20 NC ZINC	
31	6	05057	HH CAP SCREW, 3/8-16 NC X 3/4 G5 ZINC	
32	1	11081	HOSE, HYDRO-STAT SUCTION	
33	1	04228	FITTING, 6804-6-6-6	
34	1	11354	PUMP COVER MOUNT	
35	1	04511	SPRING, 1" OD	
36	1	07017-1	MUFFLER & MOUNT PARTS	
37	1	07017	ENGINE, 18 HP KOHLER ESTART	
38	1	07017-2	MUFFLER CAGE	
39	1	10545	PUMP COVER MOUNT	
40	2	11632	HEX CAP SCREW, M8 X 1.25	
41	2	11675	COLLAR	



1 EARLY MODELS USE CABLE ARM 11340 - ROUND CONTROL SHAFT
2 EARLY MODELS USE CABLE ARM 11339 - ROUND CONTROL SHAFT

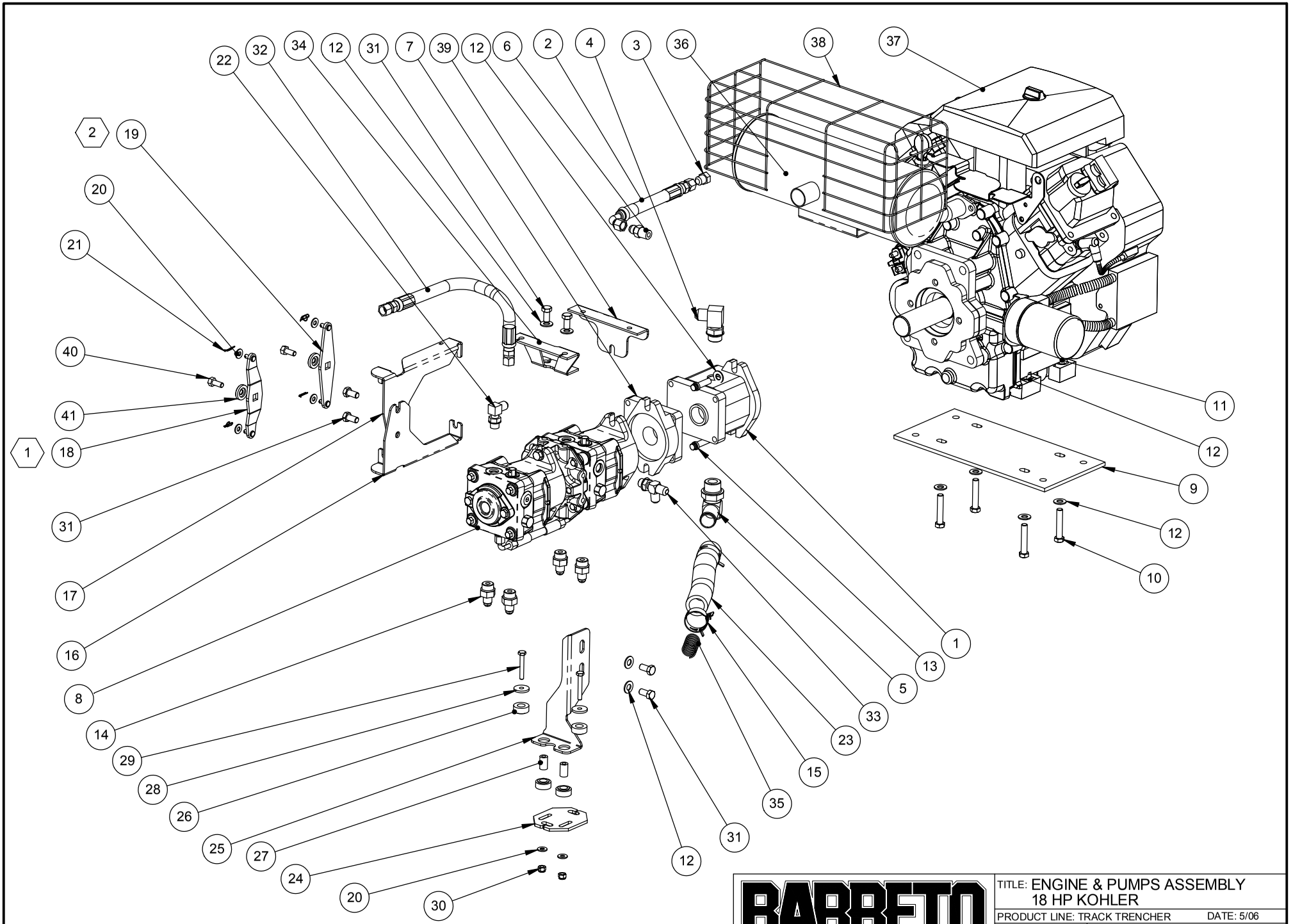
BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
18 HP KOHLER

PRODUCT LINE: TRACK TRENCHER DATE: 5/06

SCALE: 1:8 SHEET 1 OF 2

DWG# 00330-K18-T



BARRETO

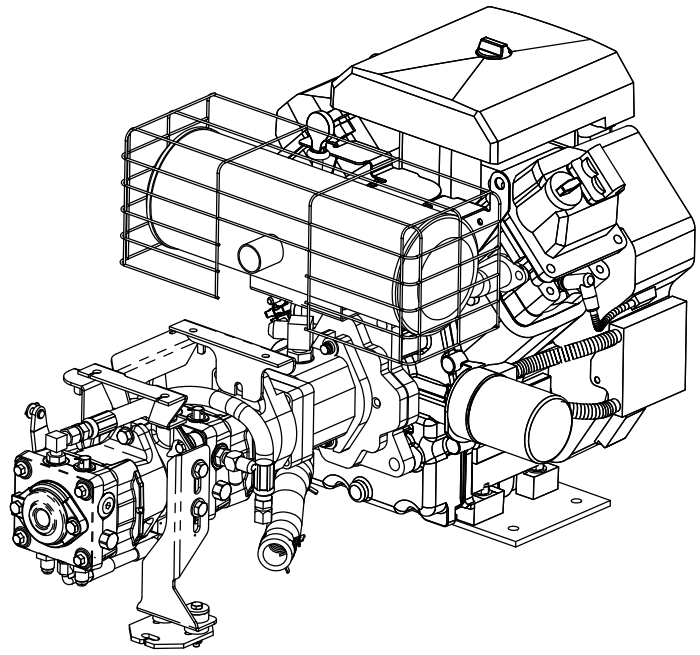
TITLE: ENGINE & PUMPS ASSEMBLY
18 HP KOHLER

PRODUCT LINE: TRACK TRENCHER DATE: 5/06

SCALE: 1:8 SHEET 2 OF 2

DWG# 00330-K18-T

REF	QTY.	PART NO.	DESCRIPTION	
1	1	04579	PUMP SNP2-14-HSTAT, SPLINED	
2	1	10588	ENGINE DRAIN HOSE	
3	1	04539	FITTING, 2408-6	
4	1	04211	FITTING, 6801-8-10	
5	1	04530	FITTING, 4601-16-12	
6	1	10863	HYD ADAPTER 2404-6-6	
7	1	04504	ADAPT PLATE KIT	
8	1	11335	HYD-STAT, TANDEM TU 12CC	
9	1	01218-K	ENGINE MOUNT PLATE, KOHLER 18 HP	
10	4	05262	HH CAP SCREW, 3/8-16 NC X 2 G5 ZINC	
11	4	05073	NUT, NYLOCK, 3/8-16 NC ZINC	
12	14	05101	WASHER, 3/8 SAE ZINC	
13	2	05152	FLANGE SCREW 12 PT	
14	4	04226	FITTING, 6400-6-8	
15	2	05225	CLAMP, 1-1/2" HOSE, CTB-36 ST	
16	1	11303-L	CABLE BRACKET	
17	1	11303-R	CABLE BRACKET	
18	1	11629	CABLE ARM, FRONT, SQ.	1
19	1	11628	CABLE ARM, REAR, SQ.	2
20	6	05081	WASHER, 1/4 SAE ZINC	
21	4	05038	RUE RING COTTER #8	
22	1	04538	FITTING, 6801-6-6	
23	1	10762-K	HOSE, SUMP, KOHLER 18	
24	1	11111	PUMP SUPPORT MOUNT	
25	1	11112-K23	PUMP SUPPORT, KOHLER	
26	4	11113	CUSHION	
27	2	11114	CUSHION SPACER	
28	2	11115	CUSHION WASHER	
29	2	05556	HH CAP SCREW, 1/4-20 NC X 1-3/4 G5 ZINC	
30	2	05096	NUT, NYLOCK, 1/4-20 NC ZINC	
31	6	05057	HH CAP SCREW, 3/8-16 NC X 3/4 G5 ZINC	
32	1	11081	HOSE, HYDRO-STAT SUCTION	
33	1	04228	FITTING, 6804-6-6-6	
34	1	11354	PUMP COVER MOUNT	
35	1	04511	SPRING, 1" OD	
36	1	07017-1	MUFFLER & MOUNT PARTS	
37	1	07019	ENGINE, 23 HP KOHLER ESTART	
38	1	07017-2	MUFFLER CAGE	
39	1	10545	PUMP COVER MOUNT	
40	2	11632	HEX CAP SCREW, M8 X 1.25	
41	2	11675	COLLAR	



1 EARLY MODELS USE CABLE ARM 11340 - ROUND CONTROL SHAFT
2 EARLY MODELS USE CABLE ARM 11339 - ROUND CONTROL SHAFT

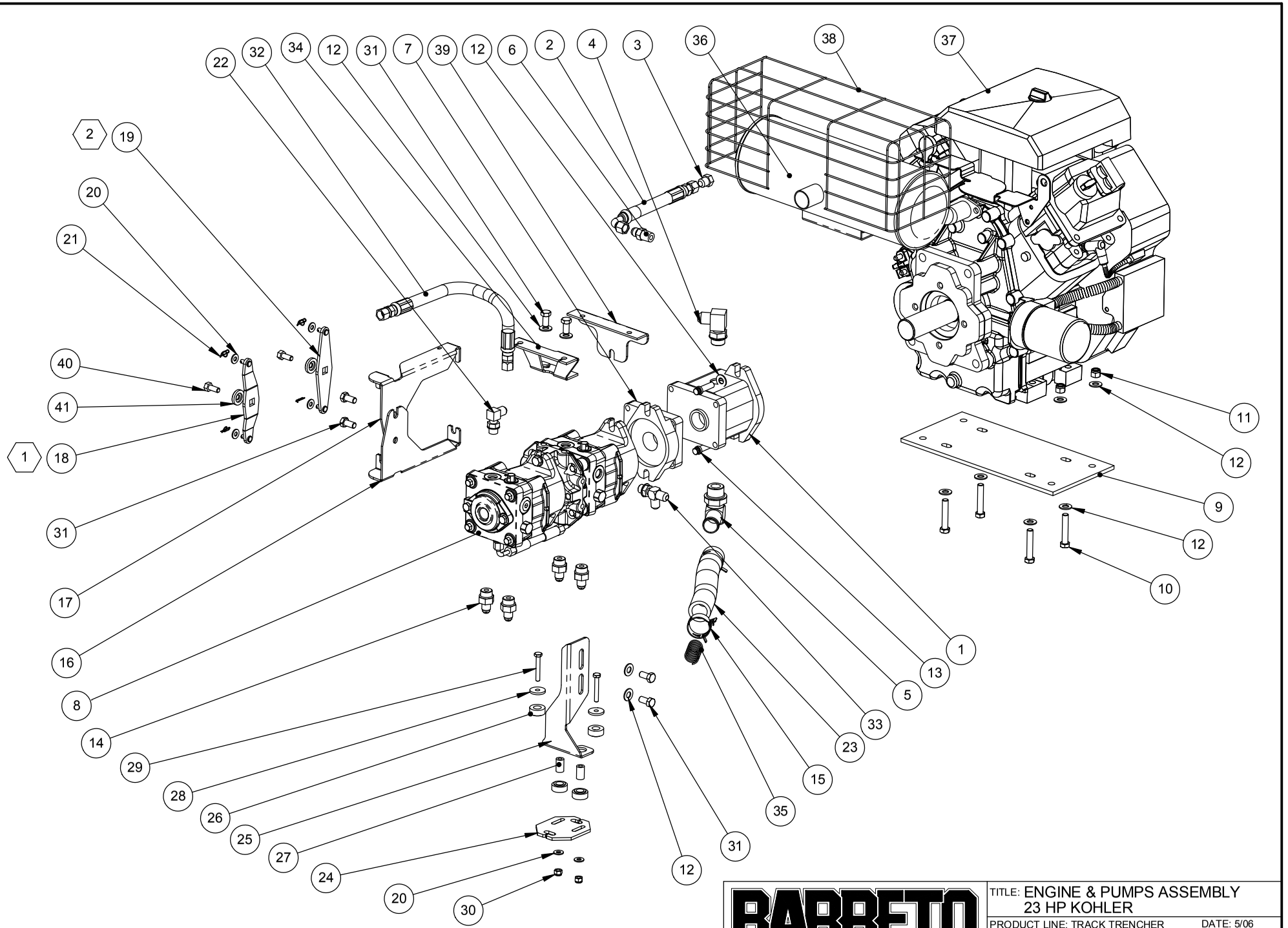
BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
23 HP KOHLER

PRODUCT LINE: TRACK TRENCHER DATE: 5/06

SCALE: 1:8 SHEET 1 OF 2

DWG# 00330-K23-T



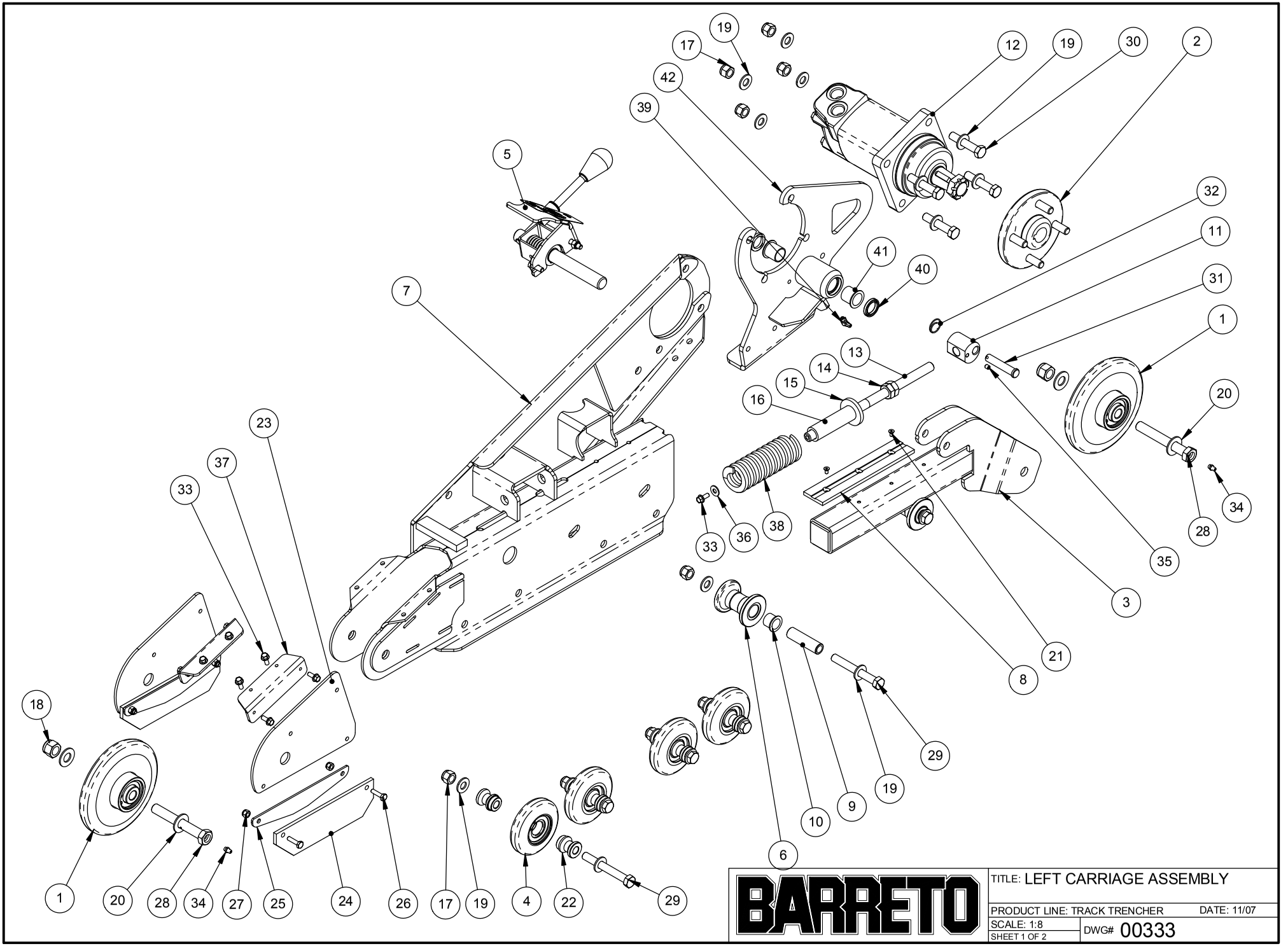
BARRETO

TITLE: ENGINE & PUMPS ASSEMBLY
23 HP KOHLER

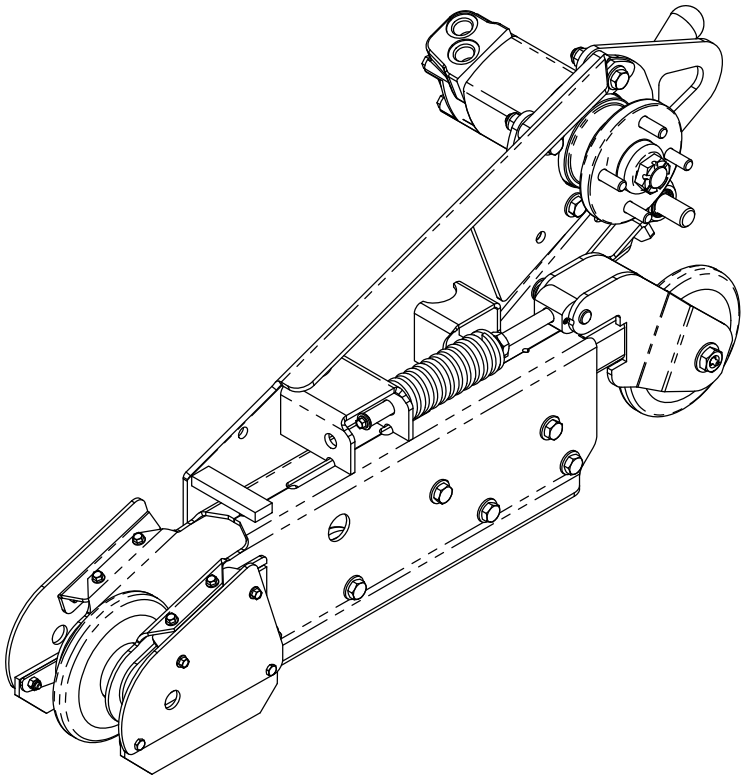
PRODUCT LINE: TRACK TRENCHER DATE: 5/06

SCALE: 1:8 SHEET 2 OF 2

DWG# 00330-K23-T


BARRETO
TITLE: LEFT CARRIAGE ASSEMBLY
PRODUCT LINE: TRACK TRENCHER
DATE: 11/07
SCALE: 1:8
SHEET 1 OF 2
DWG# 00333

REF	QTY.	PART NO.	DESCRIPTION
1	2	00335	IDLER ASSEMBLY
2	1	10827	WHEEL HUB, 1-1/4" TAPERED, SOLID
3	1	10876	IDLER ARM
4	4	00366	MID ROLLER ASSY
5	1	00458	PARK BRAKE ASSEMBLY
6	2	10907	ARM ROLLER
7	1	10849-L	LEFT CARRIAGE
8	1	10910	ARM SLIDER
9	2	10908	SPACER
10	4	10272	BUSHING, IGUS MFI-1214-12
11	1	11156	TENSIONER END
12	1	10845	MOTOR, EATON 24 CI, 105-1060 W/SEAL GARD
13	1	11170	TENSIONER STUD
14	2	10707	NUT, JAM, 5/8-11 NC ZINC
15	1	11157	WASHER, TENSION SPRING
16	1	11470	SPRING GUIDE
17	10	05098	NUT, NYLOCK, 1/2-13 NC ZINC
18	2	05099	NUT, NYLOCK, 5/8-11 NC ZINC
19	20	05102	WASHER, 1/2 SAE ZINC HARDENED
20	4	05272	WASHER, 5/8 SAE ZINC HARDENED
21	2	05084	HEX SOCKET FH CAP SCREW, #10-24 X 3/8
22	8	11144	ROLLER SPACER
23	2	11247	ROLLER GUARD
24	2	11475	FLAP
25	2	11474	FLAP BACKING
26	4	05237	HH CAP SCREW, 1/4-20 NC X 1 G5 ZINC
27	4	05096	NUT, NYLOCK, 1/4-20 NC ZINC
28	2	11490	ROLLER AXLE, 5/8 X 4-1/2"
29	6	05590	HH CAP SCREW, 1/2-13 NC X 4 G5 ZINC
30	4	11447	HH CAP SCREW, 1/2-13 NC X 2-1/2 G5 ZN
31	1	05250	CLEVIS PIN, 1/2 X 2-1/2 ZINC
32	1	05039-7	CIRCLE COTTER, CC-7
33	9	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
34	2	05044	GREASE ZERK, 1/4-28 UNF
35	1	05021	SET SCREW, 1/4-20 UNC X 5/16, CUP POINT
36	1	05078	WASHER, 1/4 USS ZINC
37	2	11251	ROLLER GUARD MOUNT
38	1	11674	SPRING, CENTURY D-1378
39	1	05307	GREASE ZERK, 1/4-28 UNF 90°
40	2	11711	ROD WIPER, .875 X 1.25 X .188
41	2	11680	BUSHING, IGUS LFI-1416-16
42	1	11462-L	WEIGHT MOUNT, E-BRAKE



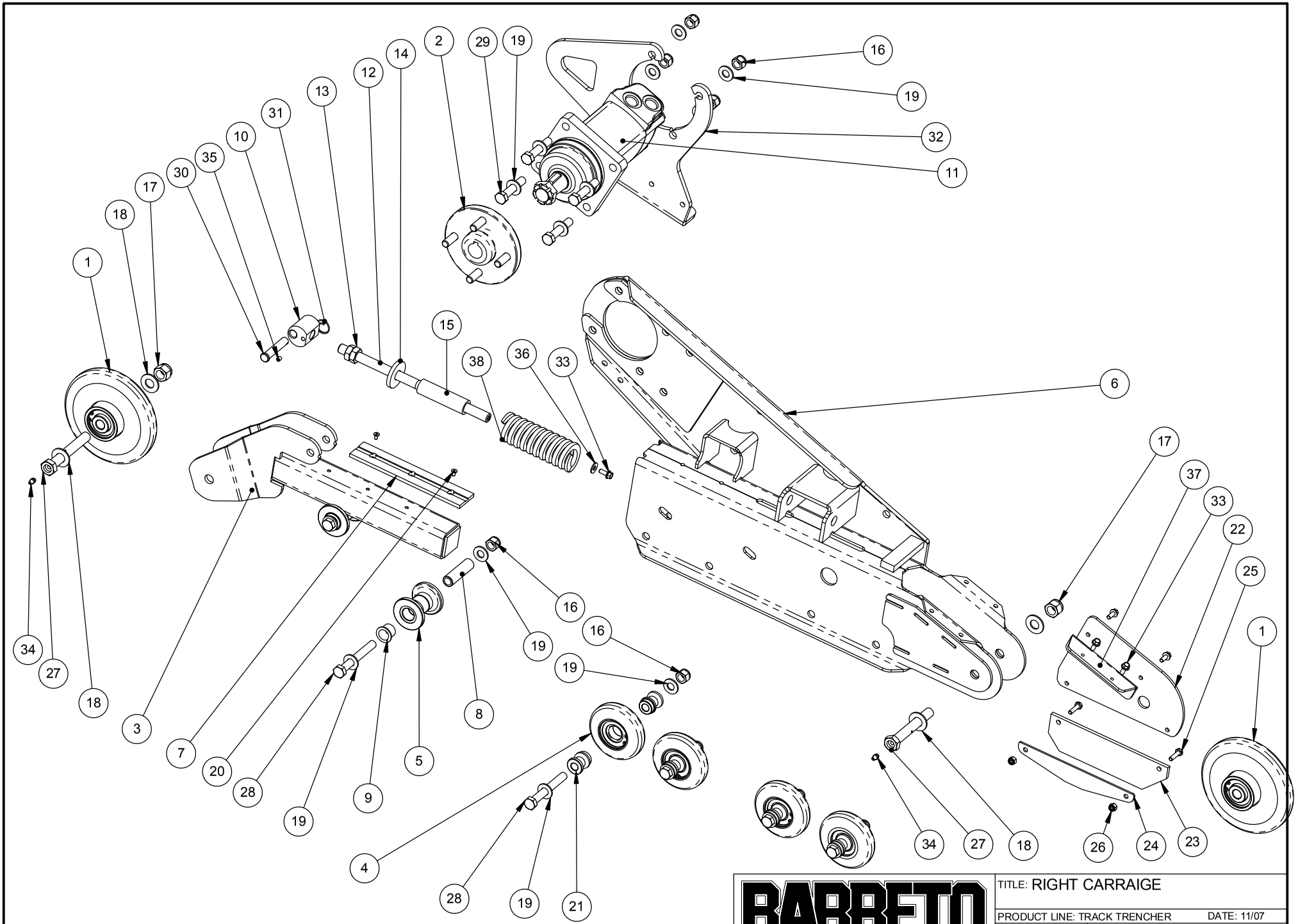
BARRETO

TITLE: LEFT CARRIAGE ASSEMBLY

PRODUCT LINE: TRACK TRENCHER DATE: 11/07

SCALE: 1:8 SHEET 2 OF 2

DWG# 00333



BARRETO

TITLE: RIGHT CARRAIGE

PRODUCT LINE: TRACK TRENCHER

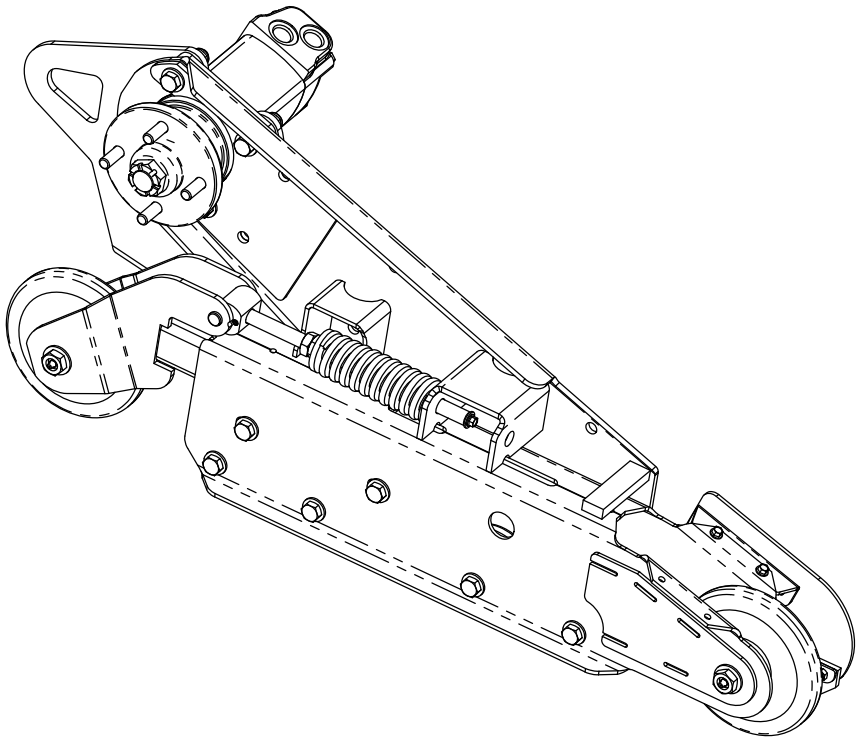
DATE: 11/07

SCALE: 1:8

SHEET 1 OF 2

DWG# 00334

REF	QTY.	PART NO.	DESCRIPTION
1	2	00335	IDLER ASSEMBLY
2	1	10827	WHEEL HUB, 1-1/4" TAPERED, SOLID
3	1	10876	IDLER ARM
4	4	00366	MID ROLLER ASSY
5	2	10907	ARM ROLLER
6	1	10849-R	RIGHT CARRIAGE
7	1	10910	ARM SLIDER
8	2	10908	SPACER
9	4	10272	BUSHING, IGUS MFI-1214-12
10	1	11156	TENSIONER END
11	1	10845	MOTOR, EATON 24 CI, 105-1060 W/SEAL GARD
12	1	11170	TENSIONER STUD
13	2	10707	NUT, JAM, 5/8-11 NC ZINC
14	1	11157	WASHER, TENSION SPRING
15	1	11470	SPRING GUIDE
16	10	05098	NUT, NYLOCK, 1/2-13 NC ZINC
17	2	05099	NUT, NYLOCK, 5/8-11 NC ZINC
18	4	05272	WASHER, 5/8 SAE ZINC HARDENED
19	20	05102	WASHER, 1/2 SAE ZINC HARDENED
20	2	05084	HEX SOCKET FH CAP SCREW, #10-24 X 3/8
21	8	11144	ROLLER SPACER
22	1	11247	ROLLER GUARD
23	1	11475	FLAP
24	1	11474	FLAP BACKING
25	2	05237	HH CAP SCREW, 1/4-20 NC X 1 G5 ZINC
26	2	05096	NUT, NYLOCK, 1/4-20 NC ZINC
27	2	11490	ROLLER AXLE, 5/8 X 4-1/2"
28	6	05590	HH CAP SCREW, 1/2-13 NC X 4 G5 ZINC
29	4	11447	HH CAP SCREW, 1/2-13 NC X 2-1/2 G5 ZN
30	1	05250	CLEVIS PIN, 1/2 X 2-1/2 ZINC
31	1	05039-7	CIRCLE COTTER, CC-7
32	1	11462-R	WEIGHT MOUNT, RIGHT
33	5	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
34	2	05044	GREASE ZERK, 1/4-28 UNF
35	1	05021	SET SCREW, 1/4-20 UNC X 5/16, CUP POINT
36	1	05078	WASHER, 1/4 USS ZINC
37	1	11251	ROLLER GUARD MOUNT
38	1	11674	SPRING, CENTURY D-1378



BARRETO

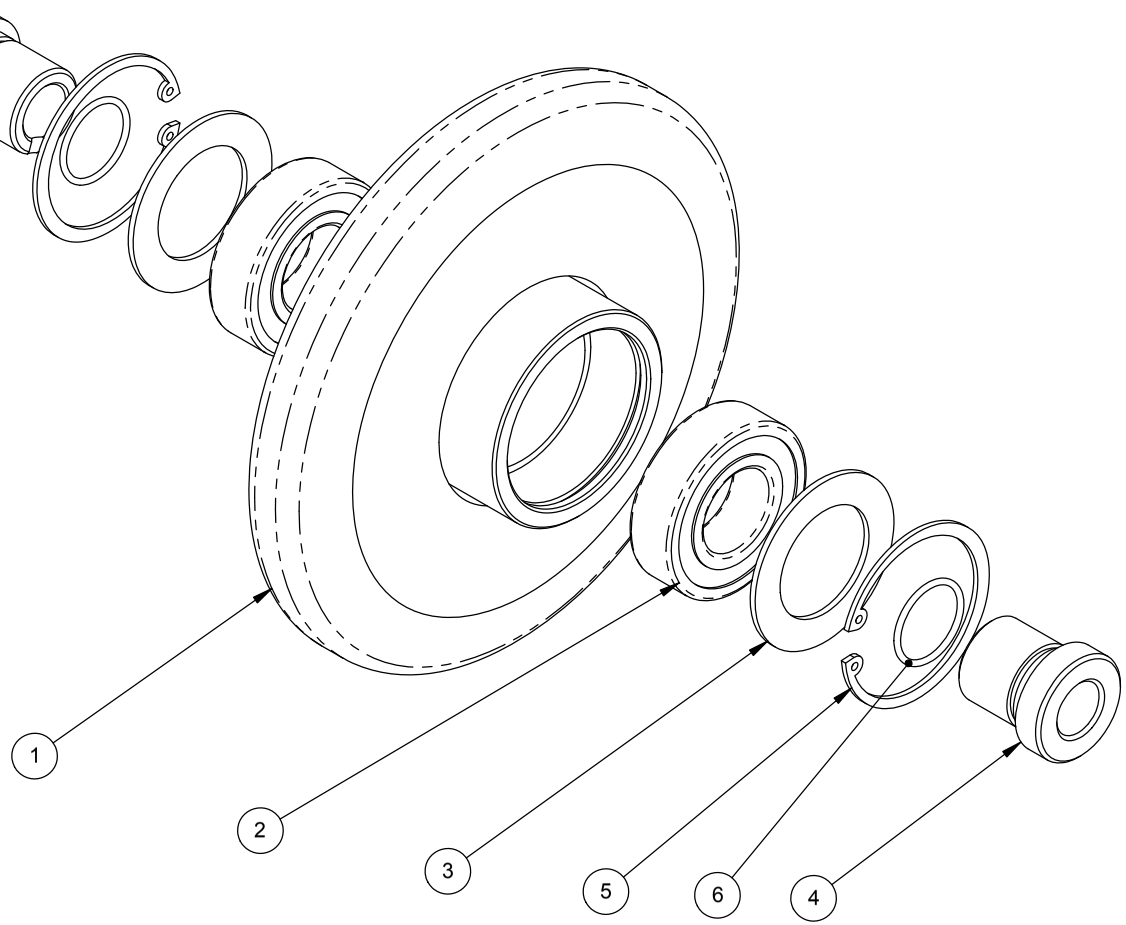
TITLE: RIGHT CARRIAGE

PRODUCT LINE: TRACK TRENCHER DATE: 11/07

SCALE: 1:8 SHEET 2 OF 2

DWG# 00334

REF	QTY.	PART NO.	DESCRIPTION
1	1	10875	IDLER
2	2	03043	BALL BEARING, 6205
3	2	01026	SHIELD, OUTBOARD BEARING
4	2	10878	IDLER SPACER
5	2	05024	SNAP RING, HO-200, 2" INTERNAL
6	2	10887	O-RING, 2-020N70, 1 OD X 1/16 SECTION



BARRETO

TITLE: IDLER ASSEMBLY

PRODUCT LINE: TRACK TRENCHER

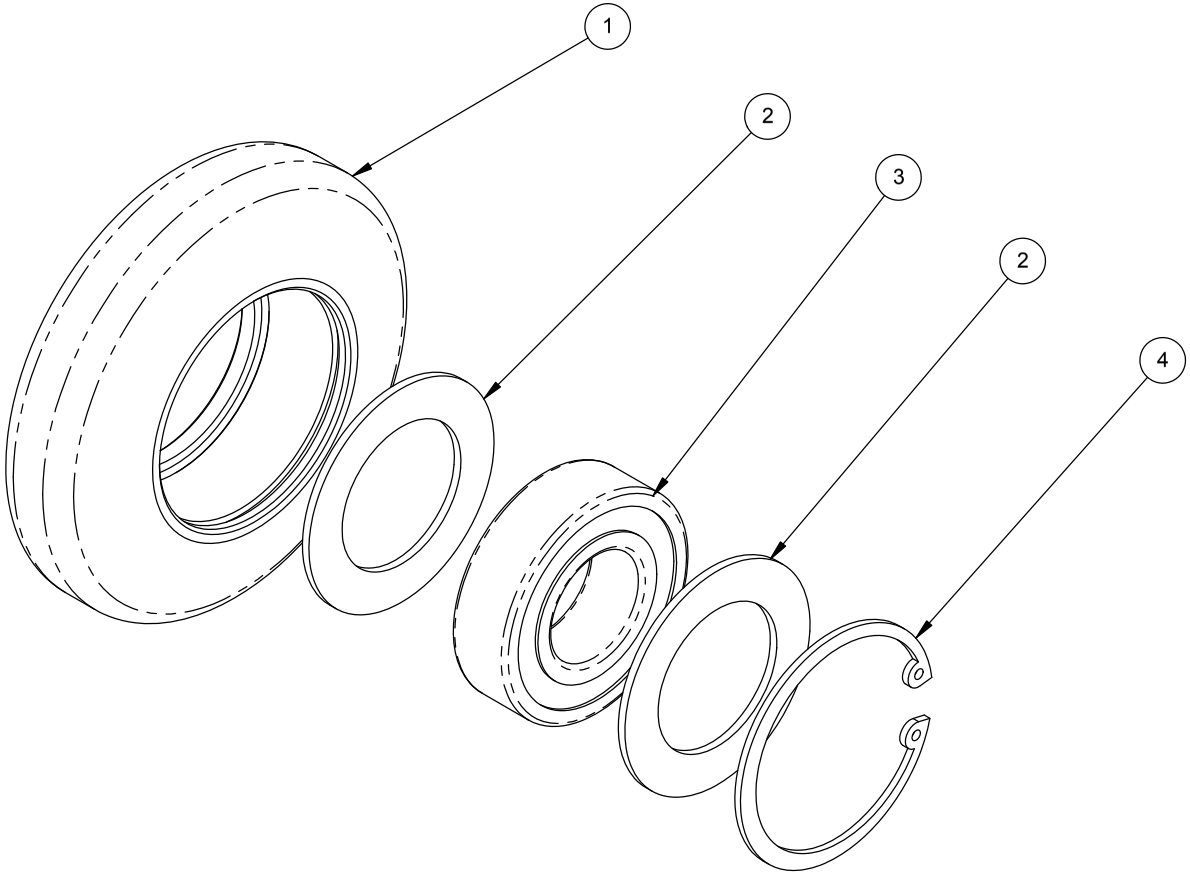
DATE: 11/06

SCALE: 1:2

SHEET 1 OF 1

DWG# 00335

REF	QTY.	PART NO.	DESCRIPTION
1	1	11473	SUPPORT ROLLER
2	2	01026	SHIELD, OUTBOARD BEARING
3	1	03043	BALL BEARING, 6205
4	1	05024	SNAP RING, HO-200, 2" INTERNAL



BARRETO

TITLE: MID ROLLER ASSEMBLY

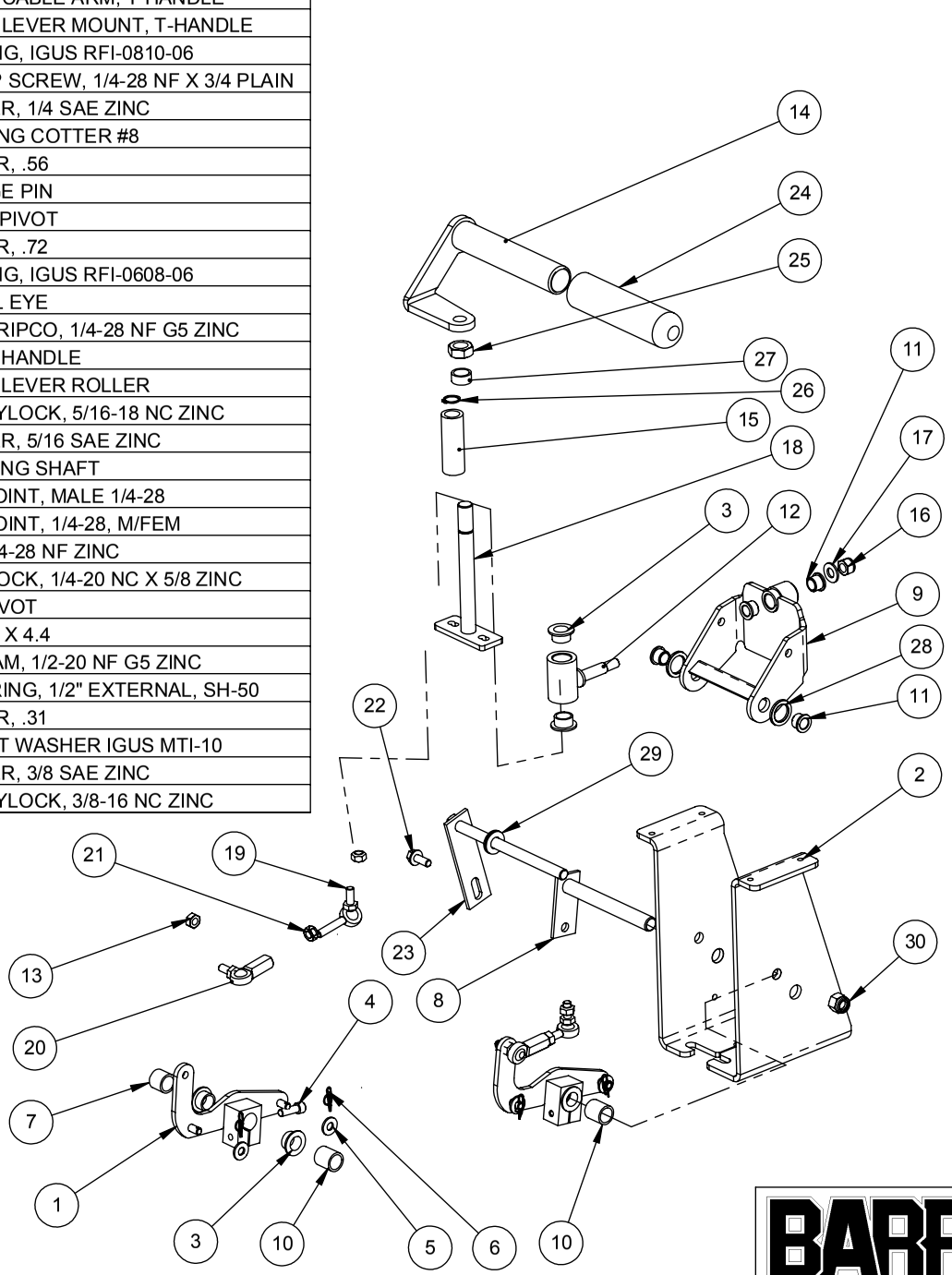
PRODUCT LINE: TRACK TRENCHER DATE: 11/07

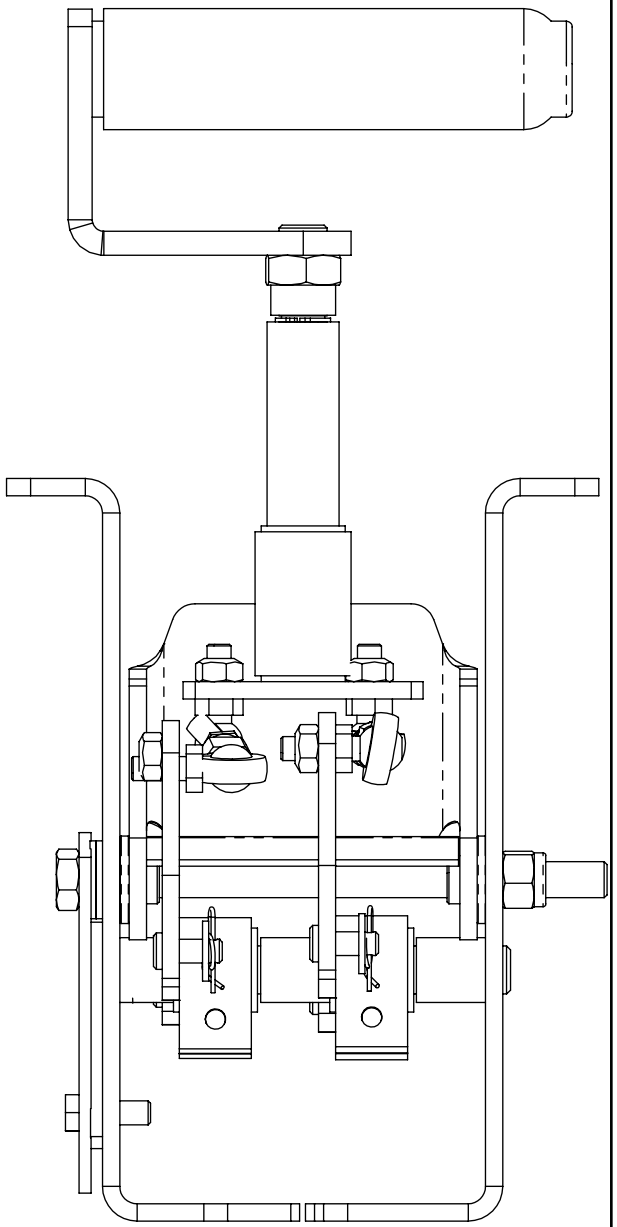
SCALE: 2:3

SHEET 1 OF 1

DWG# 00366

REF	QTY.	PART NO.	DESCRIPTION
1	2	11616	SPEED CABLE ARM, T-HANDLE
2	1	11086-T	SPEED LEVER MOUNT, T-HANDLE
3	6	12078	BUSHING, IGUS RFI-0810-06
4	2	05235	SH CAP SCREW, 1/4-28 NF X 3/4 PLAIN
5	4	05081	WASHER, 1/4 SAE ZINC
6	4	05038	RUE RING COTTER #8
7	1	11314	SPACER, .56
8	1	11090	LINKAGE PIN
9	1	11313	LEVER PIVOT
10	2	11581	SPACER, .72
11	4	10509	BUSHING, IGUS RFI-0608-06
12	1	11315	SWIVEL EYE
13	4	05266	NUT, GRIPCO, 1/4-28 NF G5 ZINC
14	1	11312	SPEED HANDLE
15	1	10547	SPEED LEVER ROLLER
16	1	05273	NUT, NYLOCK, 5/16-18 NC ZINC
17	1	05068	WASHER, 5/16 SAE ZINC
18	1	11316	STEERING SHAFT
19	2	11311	BALL JOINT, MALE 1/4-28
20	2	11353	BALL JOINT, 1/4-28, M/FEM
21	2	05267	NUT, 1/4-28 NF ZINC
22	1	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
23	1	11582	LINK PIVOT
24	1	03032-4.4	GRIP, 1 X 4.4
25	1	05162	NUT, JAM, 1/2-20 NF G5 ZINC
26	1	05506	SNAP RING, 1/2" EXTERNAL, SH-50
27	1	10525	SPACER, .31
28	2	11649	THRUST WASHER IGUS MTI-10
29	2	05101	WASHER, 3/8 SAE ZINC
30	1	05073	NUT, NYLOCK, 3/8-16 NC ZINC





BARRETO

TITLE: SPEED CONTROL ASSEMBLY
T-HANDLE

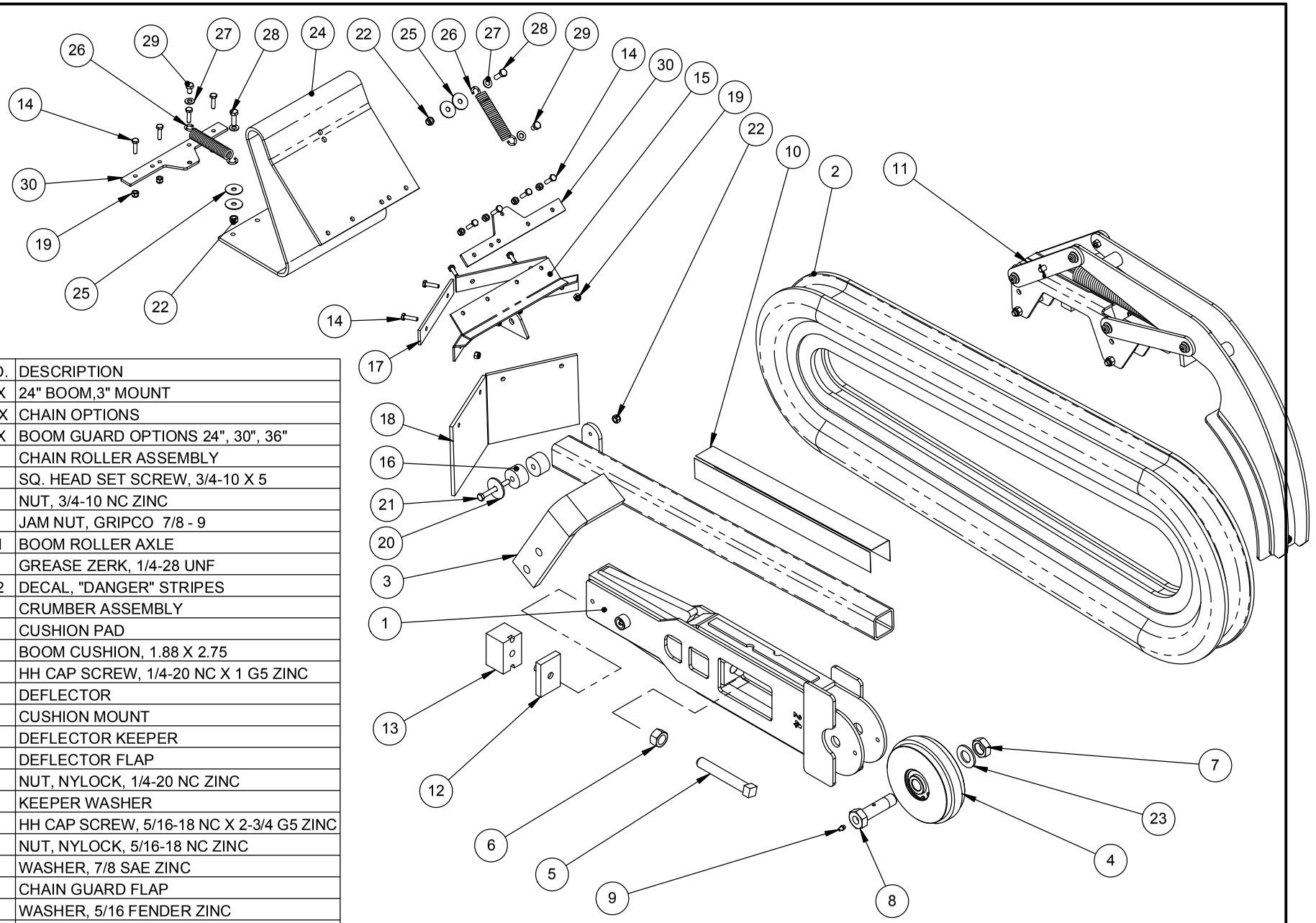
PRODUCT LINE: 1824-TK

DATE: 06/08

SCALE: 1:6

SHEET 1 OF 1

DWG# 00362-TK



REF	QTY.	PART NO.	DESCRIPTION
1	1	01670-XX	24" BOOM,3" MOUNT
2	1	034XX-XX	CHAIN OPTIONS
3	1	11218-XX	BOOM GUARD OPTIONS 24", 30", 36"
4	1	00318	CHAIN ROLLER ASSEMBLY
5	1	05230	SQ. HEAD SET SCREW, 3/4-10 X 5
6	1	05231	NUT, 3/4-10 NC ZINC
7	1	05597	JAM NUT, GRIPCO 7/8 - 9
8	1	10848-M	BOOM ROLLER AXLE
9	3	05044	GREASE ZERK, 1/4-28 UNF
10	3	03341-02	DECAL, "DANGER" STRIPES
11	1	A1390	CRUMBER ASSEMBLY
12	1	11645	CUSHION PAD
13	1	11644	BOOM CUSHION, 1.88 X 2.75
14	12	05237	HH CAP SCREW, 1/4-20 NC X 1 G5 ZINC
15	1	10930	DEFLECTOR
16	2	10929	CUSHION MOUNT
17	2	10931	DEFLECTOR KEEPER
18	2	10932	DEFLECTOR FLAP
19	12	05096	NUT, NYLOCK, 1/4-20 NC ZINC
20	1	01622	KEEPER WASHER
21	1	05065	HH CAP SCREW, 5/16-18 NC X 2-3/4 G5 ZINC
22	3	05273	NUT, NYLOCK, 5/16-18 NC ZINC
23	1	05155	WASHER, 7/8 SAE ZINC
24	1	11961	CHAIN GUARD FLAP
25	4	05541	WASHER, 5/16 FENDER ZINC
26	2	12062	SPRING, CENTURY 5031
27	4	05068	WASHER, 5/16 SAE ZINC
28	2	05315	HH CAP SCREW, 5/16-18 NC X 1 G5 ZINC
29	2	05304	HH CAP SCREW, 5/16-18 NC X 1/2 G5 ZINC
30	2	12064	FLAP HOLDER

BARRETO

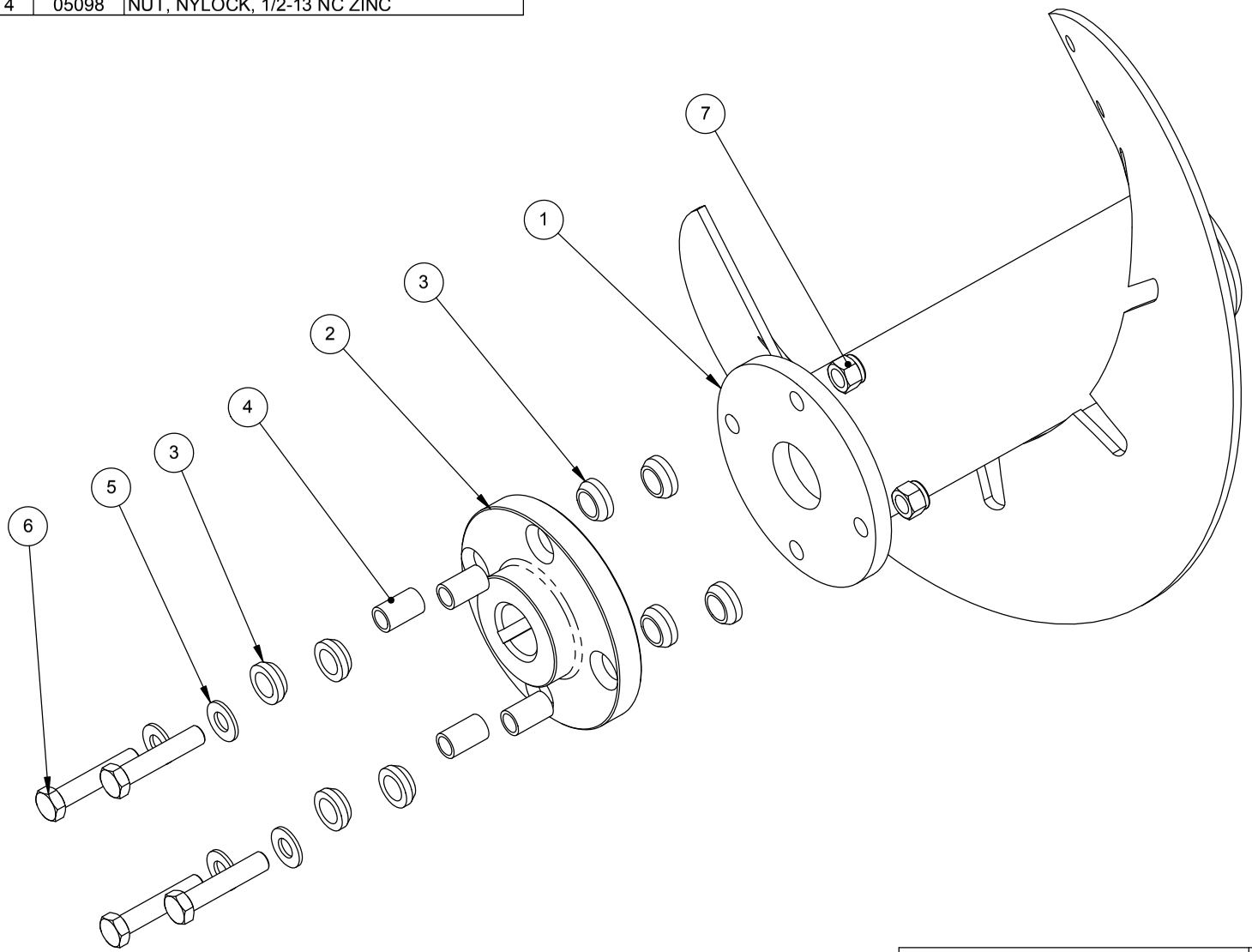
TITLE: CHAIN / BOOM / GUARD OPTIONS

PRODUCT LINE: TRACK TRENCHER DATE: 11/06

SCALE: 1:10 SHEET 1 OF 1

DWG# 00368 R1

REF	QTY.	PART NO.	DESCRIPTION
1	1	11220	AUGER
2	1	11221	CUSHION FLANGE
3	8	10958	RUBBER BUSHING
4	4	10959	BUSHING SPACER
5	4	05102	WASHER, 1/2 SAE ZINC HARDENED
6	4	11447	HH CAP SCREW, 1/2-13 NC X 2-1/2 G5 ZN
7	4	05098	NUT, NYLOCK, 1/2-13 NC ZINC



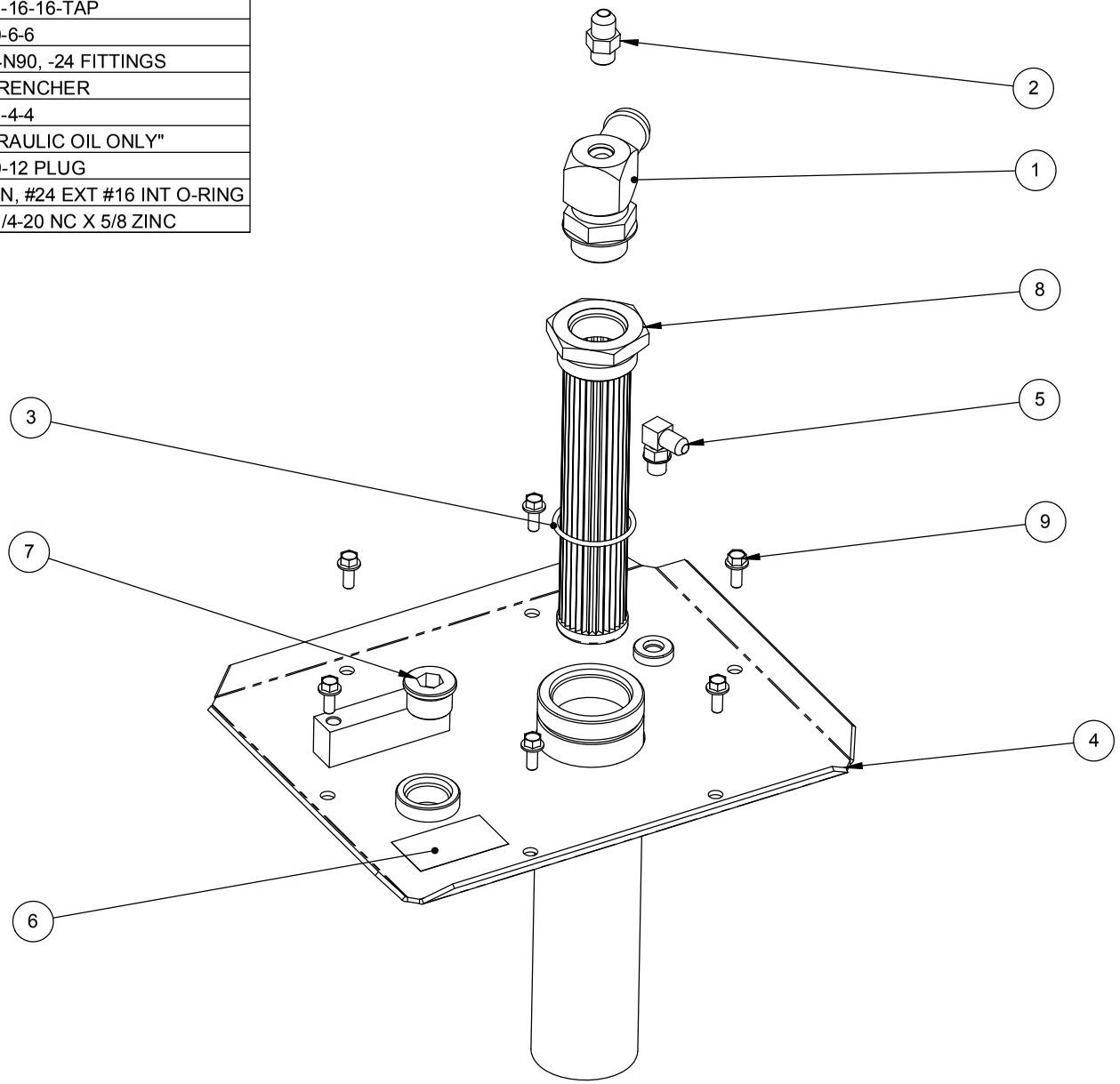
BARRETO

TITLE: AUGER ASSEMBLY

PRODUCT LINE: TRACK TRENCHER DATE:11/06

SCALE: 1:4 SHEET 1 OF 1 DWG# 00372

REF	QTY.	PART NO.	DESCRIPTION
1	1	10680	FITTING, 4601-16-16-TAP
2	1	10401	FITTING, 6400-6-6
3	1	03292	O-RING, 3-924N90, -24 FITTINGS
4	1	10842	LID, TRACK TRENCHER
5	1	04555	FITTING, 6801-4-4
6	1	03040-06	DECAL, "HYDRAULIC OIL ONLY"
7	1	10526	FITTING, 6409-12 PLUG
8	1	10636	SUMP SCREEN, #24 EXT #16 INT O-RING
9	6	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC



BARRETO

TITLE: LID ASSEMBLY

PRODUCT LINE: TRACK TRENCHER

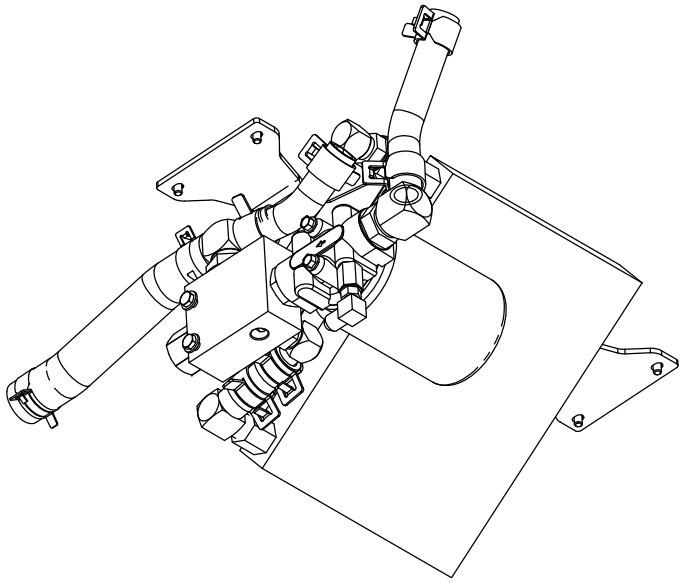
DATE: 11/06

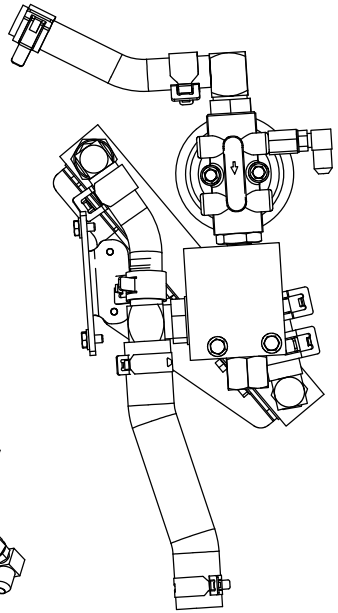
SCALE: 1:4

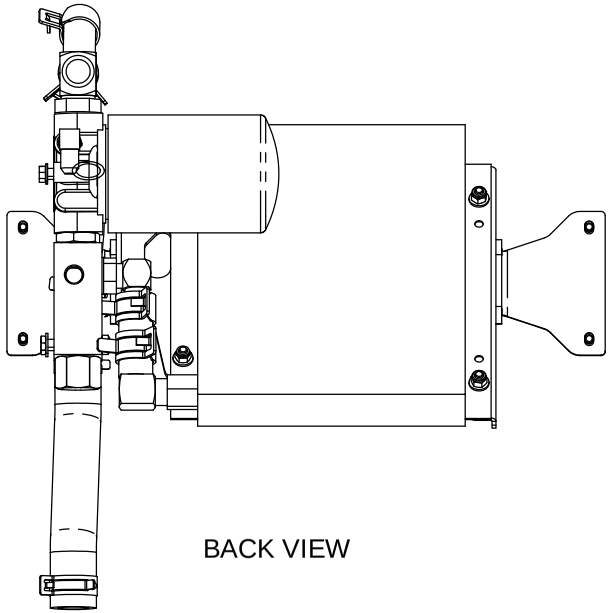
SHEET 1 OF 1

DWG# 00373

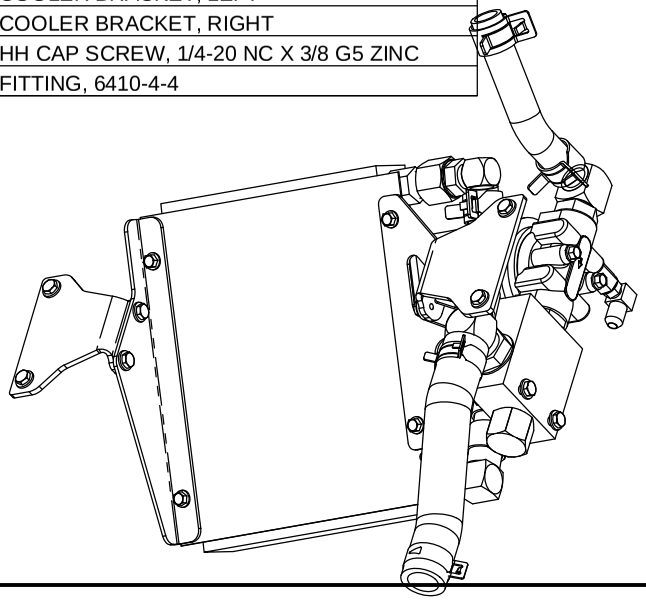
REF	QTY.	PART NO.	DESCRIPTION
1	1	11545	THERMOSTAT VALVE BODY
2	1	04212-OR-TL	FILTER HEAD, #12 O-RING, TAP LEFT
3	1	03952	FILTER, HYDRAULIC OIL, WITH BY-PASS
4	1	11533	OIL COOLER, B&M 70266
5	2	05225	CLAMP, 1-1/2" HOSE, CTB-36 ST
6	1	04202	FITTING, 4601-12-12
7	6	05008	CLAMP, 1" HOSE, CTB-29
8	1	11546	THERMO ADAPTER
9	1	03225	O-RING, 2-116N70, 15-16 OD X 3/32 SECTION
10	1	03075	O-RING, 3-912N90, -12 FITTINGS
11	1	11557	HOSE, VALVE / FILTER
12	1	11558	HOSE, FILTER / TANK
13	1	04227	FITTING, 4501-12-8
14	1	11566	FITTING, 4606-16-12-12
15	2	04523-M	FITTING, 4601-12-10, CUT
16	1	11565	FITTING, 6404-10-8
17	2	05591	HH CAP SCREW, 1/4-20 NC X 2 G5 ZINC
18	2	10773	NUT, GRIPCO, 1/4-20 NC G5 ZINC
19	4	05557	HH CAP SCREW, 1/4-20 NC X 1/2 G5 ZINC
20	1	11560	HOSE, COOLER / THERM
21	1	11559	HOSE, COOLER / THERM
22	6	05069	WHIZ LOCK, 1/4-20 NC X 5/8 ZINC
23	4	05096	NUT, NYLOCK, 1/4-20 NC ZINC
24	1	11544	THERMOSTAT VALVE, CT 1731
25	14	05081	WASHER, 1/4 SAE ZINC
26	1	04526-01	FITTING, 6801-6-4
27	2	11592	MOUNT EAR
28	1	11593	COOLER BRACKET, LEFT
29	1	11594	COOLER BRACKET, RIGHT
30	4	10913	HH CAP SCREW, 1/4-20 NC X 3/8 G5 ZINC
31	1	04220	FITTING, 6410-4-4







BACK VIEW



BARRETO

TITLE: OIL COOLER ASSEMBLY

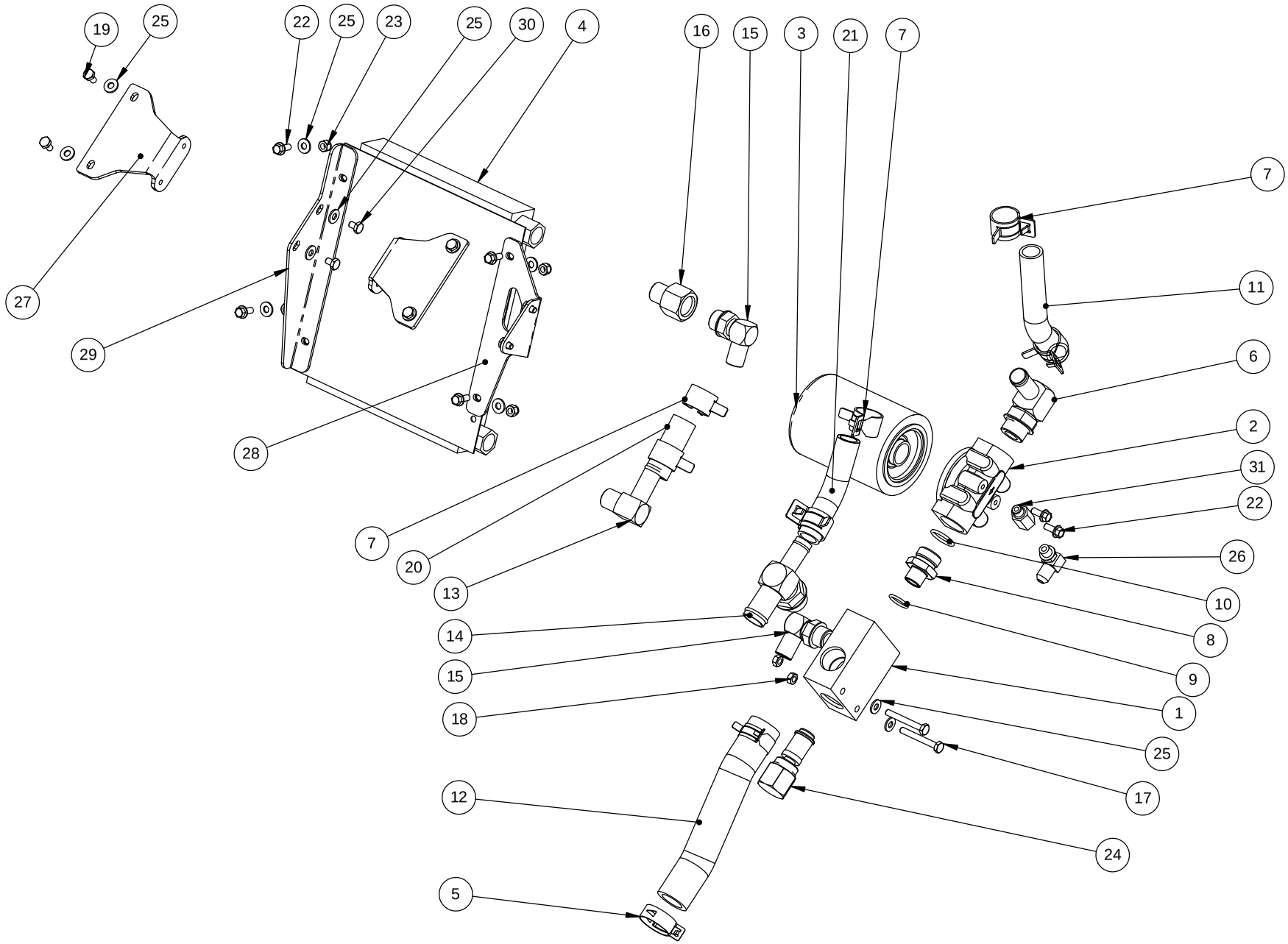
PRODUCT LINE: TRACK TRENCHER

DATE: 03/08

SCALE: 1:6

SHEET 1 OF 2

DWG# 00457



BARRETO

TITLE: OIL COOLER ASSEMBLY

PRODUCT LINE: TRACK TRENCHER

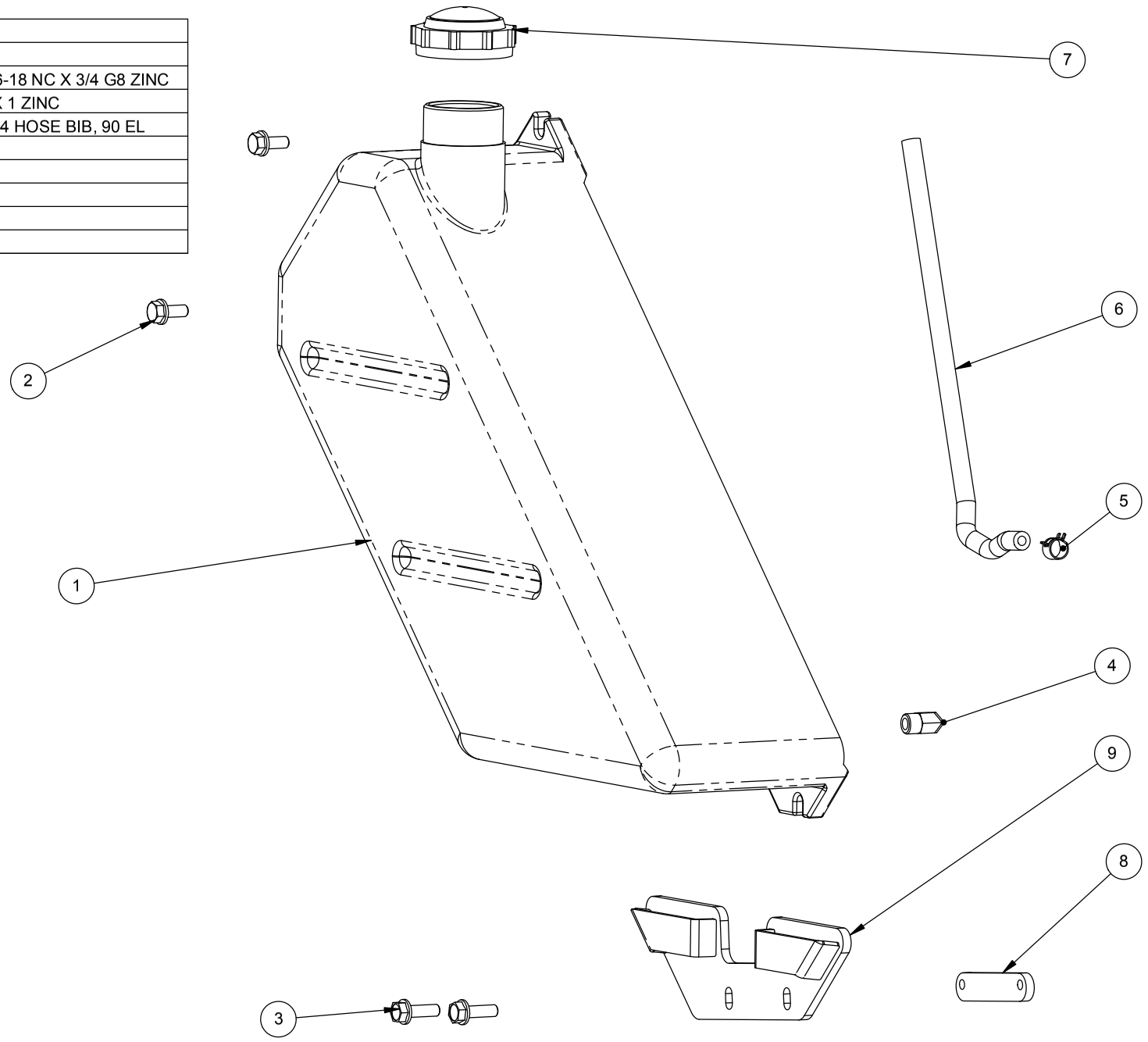
DATE: 03/08

SCALE: 1:6

SHEET 2 OF 2

DWG# 00457

REF	QTY.	PART NO.	DESCRIPTION
1	1	03263N	FUEL TANK, "BARRETO"
2	2	05131	HH FLANGE SCREW, 5/16-18 NC X 3/4 G8 ZINC
3	2	05144	WHIZ-LOCK, 5/16-18 NC X 1 ZINC
4	1	03062-16	FITTING, 1/4 NPT-M TO 1/4 HOSE BIB, 90 EL
5	1	03062-06	CLAMP, 1/4" FUEL LINE
6	1	11563	FUEL HOSE
7	1	03062-12	FUEL TANK CAP, KELCH
8	1	11643	NUT BAR
9	1	11552F	TANK POCKET



BARRETO

TITLE: FUEL TANK ASSEMBLY

PRODUCT LINE: TRACK TRENCHER

DATE: 03/08

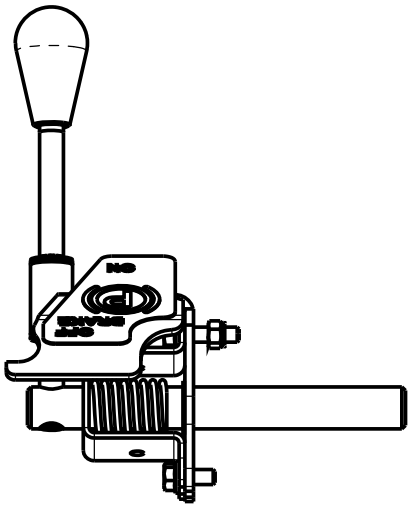
SCALE: 1:4

SHEET 1 OF 1

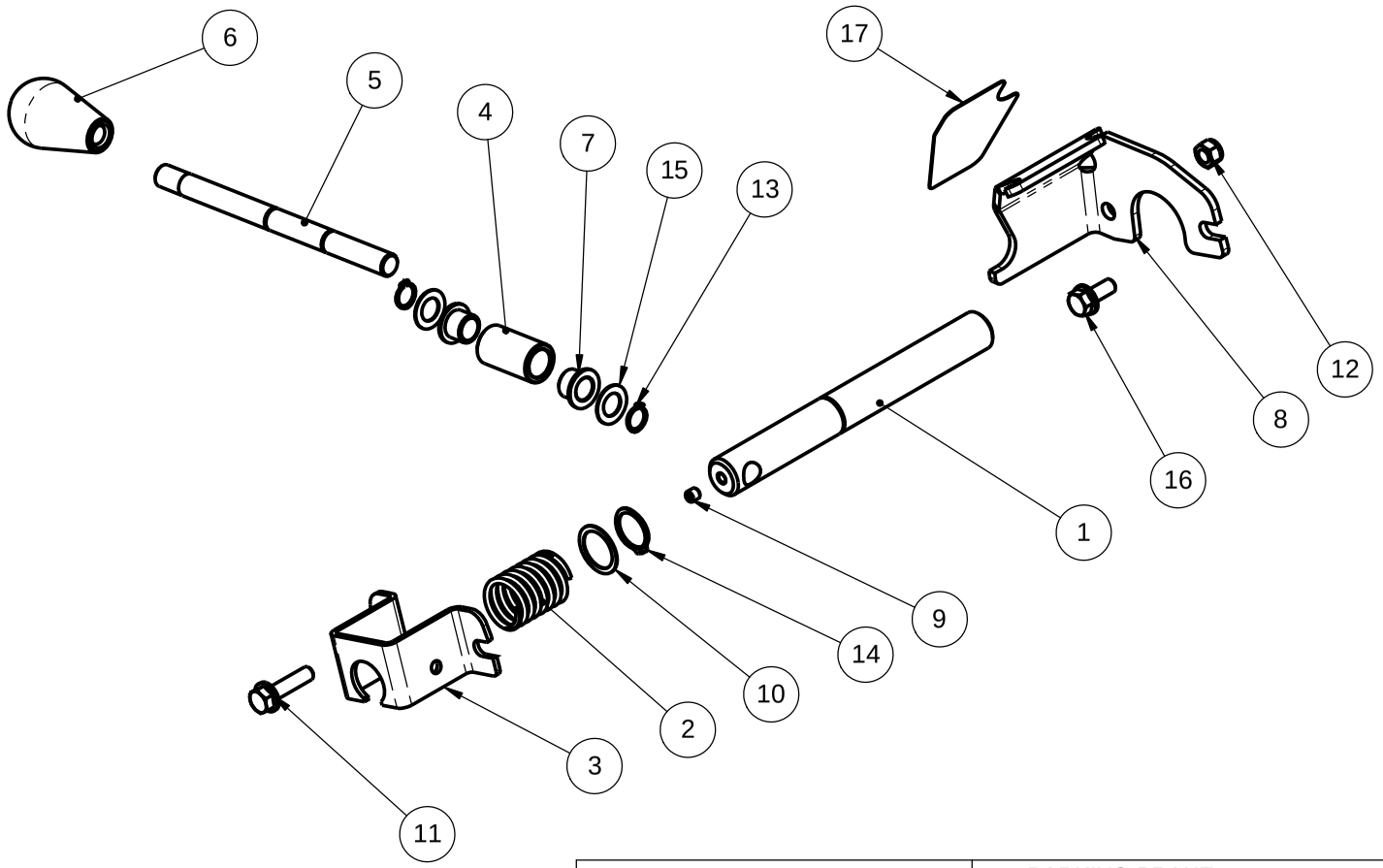
DWG# 00456

REF.	QTY.	PART NO.	DESCRIPTION
1	1	11705	BRAKE PIN
2	1	03354	SPRING, CENTURY 1539
3	1	11707	SPRING BASE
4	1	11708	ROLLER
5	1	11709	PARK LEVER
6	1	03508	SPEED KNOB
7	2	03501	BUSHING, IGUS MFI-0810-08
8	1	11710	CAM PLATE
9	1	05143	SET SCREW .25 NF X .25 CUP
10	1	10300	THRUST WASHER, .880 X 1.123 X .030, HARD
11	1	05138	HH FLANGE SCREW, 5/16-18 NC X 1-1/4 G8 ZINC

REF.	QTY.	PART NO.	DESCRIPTION
12	1	05273	NUT, NYLOCK, 5/16-18 NC ZINC
13	2	05506	SNAP RING, 1/2" EXTERNAL, SH-50
14	1	05602	SNAP RING, SH-87-P, 7/8" EXTERNAL
15	2	10113	THRUST WASHER, .518 X .873 X .030
16	1	05131	HH FLANGE SCREW, 5/16-18 NC X 3/4 G8 ZINC
17	1	04450-16	BRAKE DECAL



FRONT VIEW



BARRETO

TITLE: PARKING BRAKE

PRODUCT LINE: TRACK

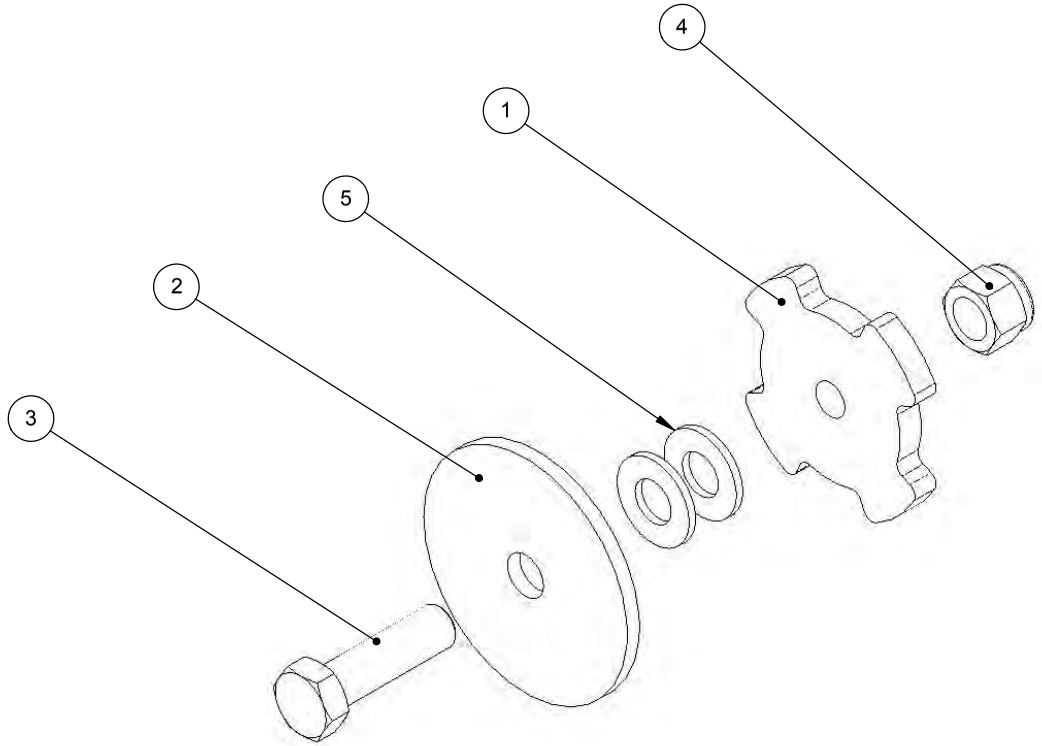
DATE: 02/09

SCALE: 1:4

SHEET 1 OF 1

DWG# 00458

REF	QTY.	PART NO.	DESCRIPTION
1	1	11647	WING NUT
2	1	11641	AUGER CAP
3	1	05129	HH CAP SCREW, 1/2-13 NC X 1-3/4 G5 ZINC
4	1	05098	NUT, NYLOCK, 1/2-13 NC ZINC
5	2	05102	WASHER, 1/2 SAE ZINC HARDENED



BARRETO

TITLE: AUGER CAP

PRODUCT LINE: TRACK TRENCHER

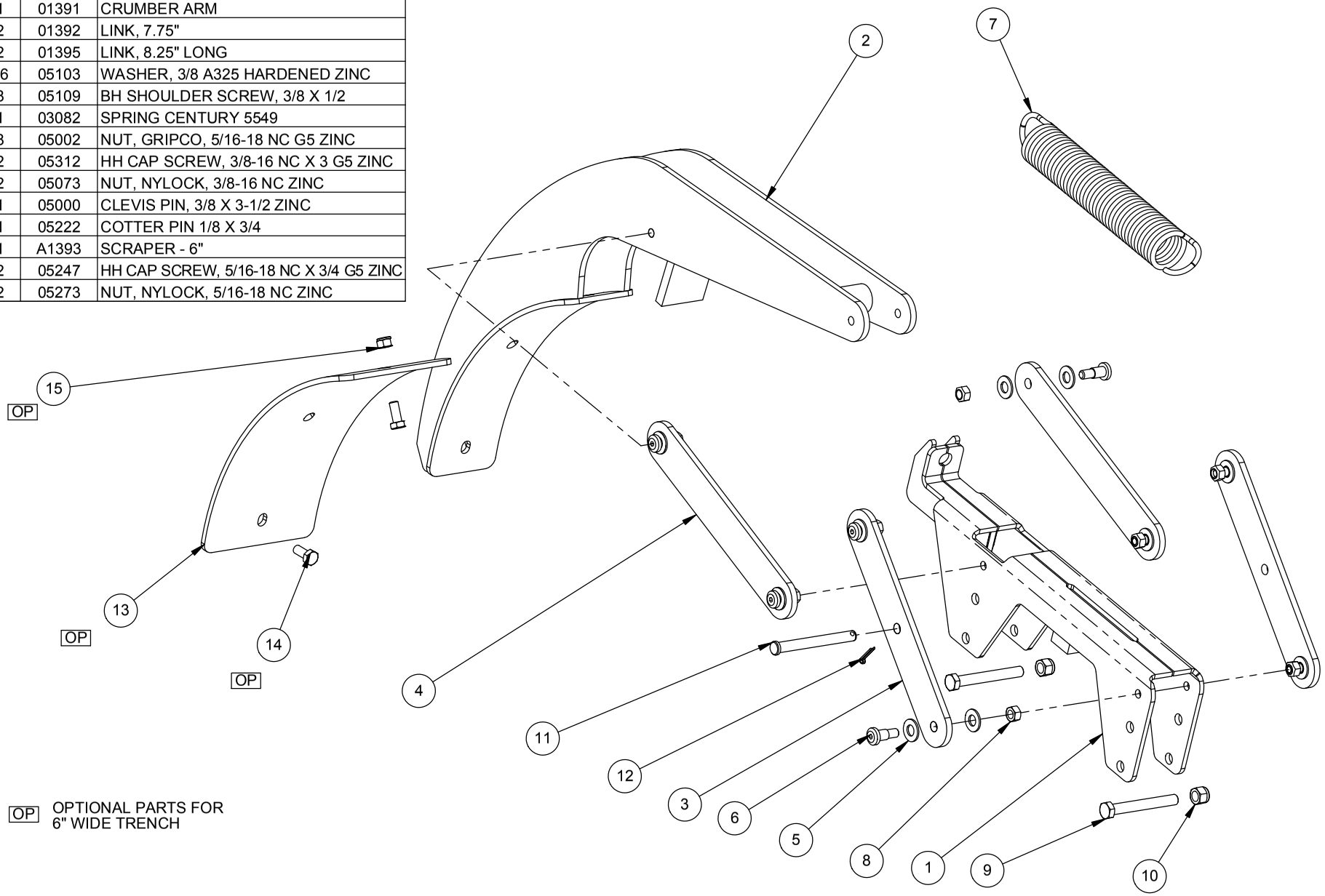
DATE: 08/08

SCALE: 1:2

SHEET 1 OF 1

DWG# 11642

REF	QTY.	PART NO.	DESCRIPTION
1	1	01394 R1	CRUMBER MOUNT
2	1	01391	CRUMBER ARM
3	2	01392	LINK, 7.75"
4	2	01395	LINK, 8.25" LONG
5	16	05103	WASHER, 3/8 A325 HARDENED ZINC
6	8	05109	BH SHOULDER SCREW, 3/8 X 1/2
7	1	03082	SPRING CENTURY 5549
8	8	05002	NUT, GRIPCO, 5/16-18 NC G5 ZINC
9	2	05312	HH CAP SCREW, 3/8-16 NC X 3 G5 ZINC
10	2	05073	NUT, NYLOCK, 3/8-16 NC ZINC
11	1	05000	CLEVIS PIN, 3/8 X 3-1/2 ZINC
12	1	05222	COTTER PIN 1/8 X 3/4
13	1	A1393	SCRAPER - 6"
14	2	05247	HH CAP SCREW, 5/16-18 NC X 3/4 G5 ZINC
15	2	05273	NUT, NYLOCK, 5/16-18 NC ZINC



OP OPTIONAL PARTS FOR 6" WIDE TRENCH

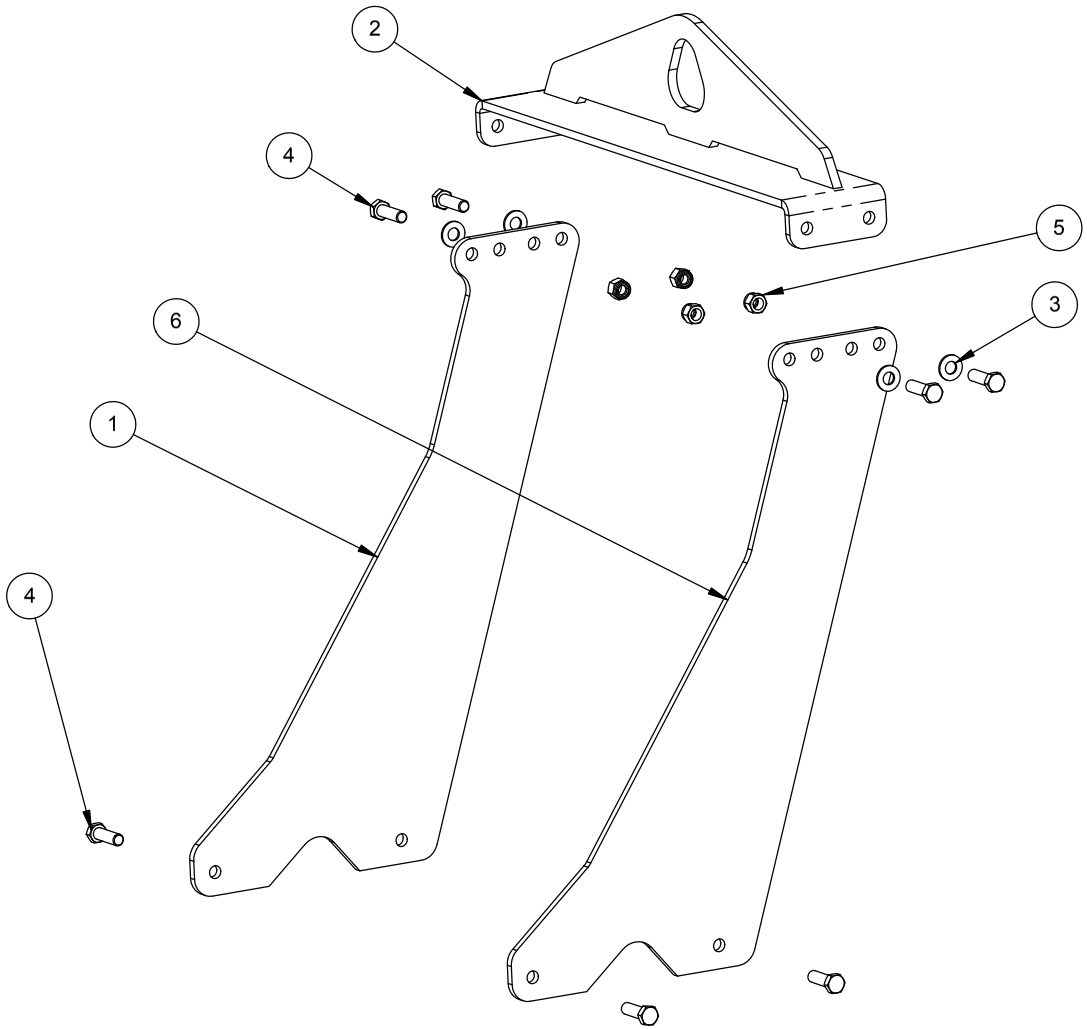
BARRETO

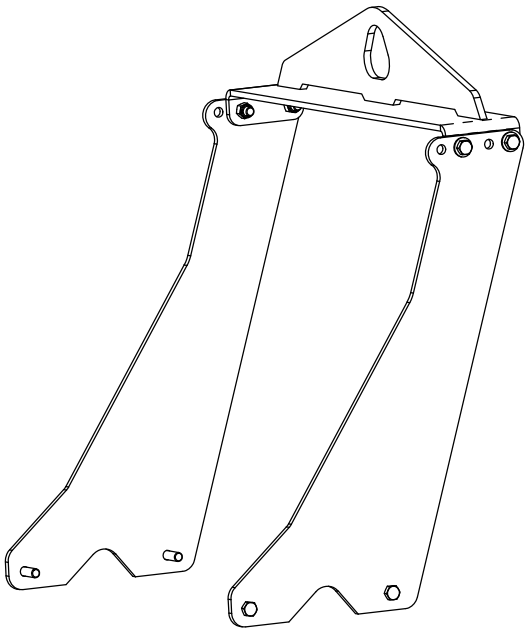
TITLE: CRUMBER ASSEMBLY

PRODUCT LINE: TRENCHER 1324 / 1624 DATE: 3/06

SCALE: 1:5 SHEET 1 OF 1 DWG# A1390

REF	QTY.	PART NO.	DESCRIPTION
1	1	A1570-1	LEFT SIDE PLATE
2	1	A1571	LIFT EYE
3	4	05101	WASHER, 3/8 SAE ZINC
4	8	05091	HH CAP SCREW, 3/8-16 NC X 1-1/4 G5 ZINC
5	4	05073	NUT, NYLOCK, 3/8-16 NC ZINC
6	1	A1570-1R	RIGHT SIDE





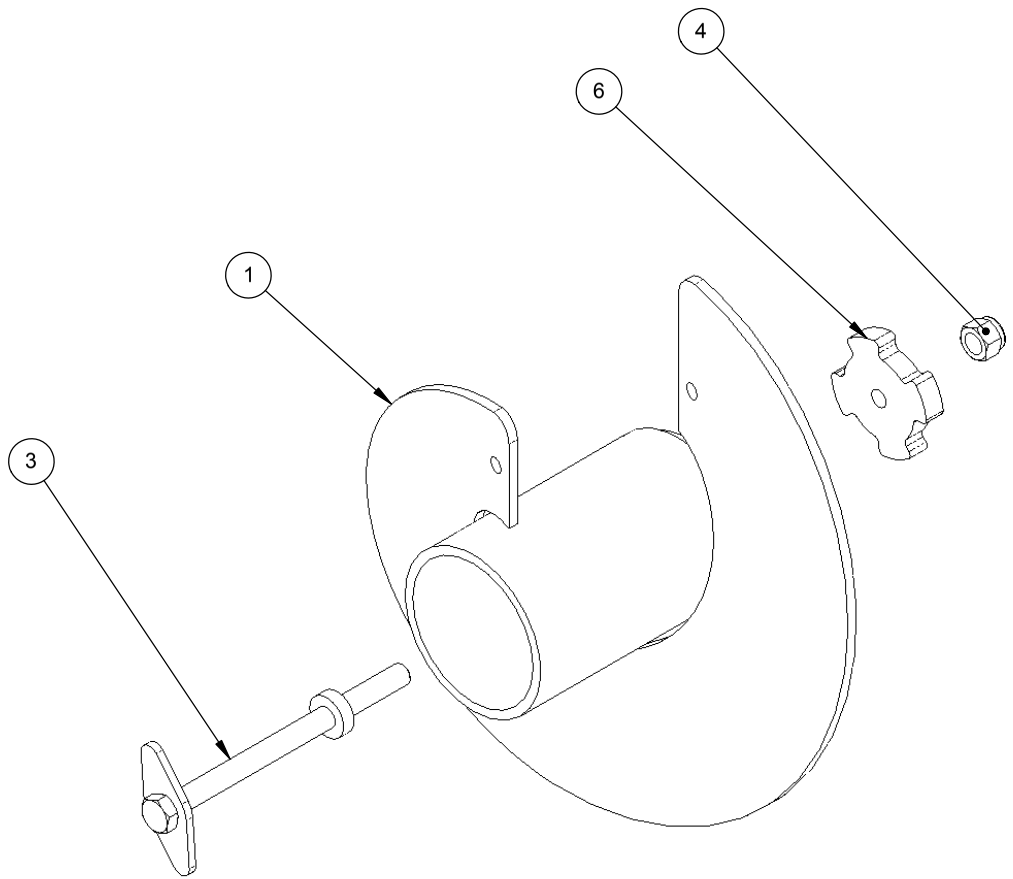
BARRETO

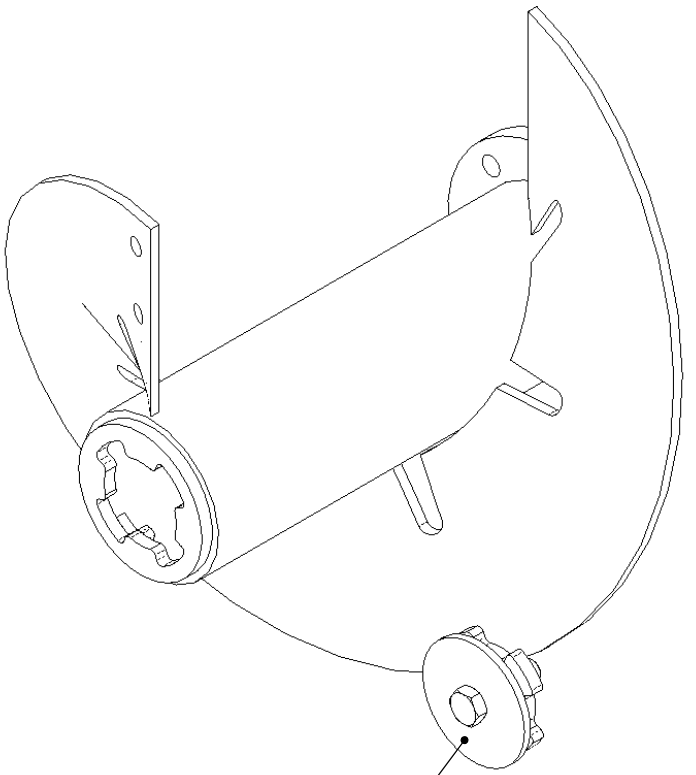
TITLE: LIFT EYE

PRODUCT LINE: TRACK TRENCHER DATE: 07/08

SCALE: 1:8 SHEET 1 OF 1 DWG# A1570

REF	QTY.	PART NO.	DESCRIPTION
1	1	A1576	AUXILIARY AUGER
3	1	A1578	COLLAR BOLT
4	1	05098	NUT, NYLOCK, 1/2-13 NC ZINC
5	1	11642	AUGER CAP
6	1	A1577	WING NUT





REMOVE AUGER CAP
TO INSTALL AUXILIARY AUGER
ASSEMBLY - A1575

BARRETO

TITLE: AUXILIARY AUGER OPTION

PRODUCT LINE: TRACK TRENCHER

DATE: 07/08

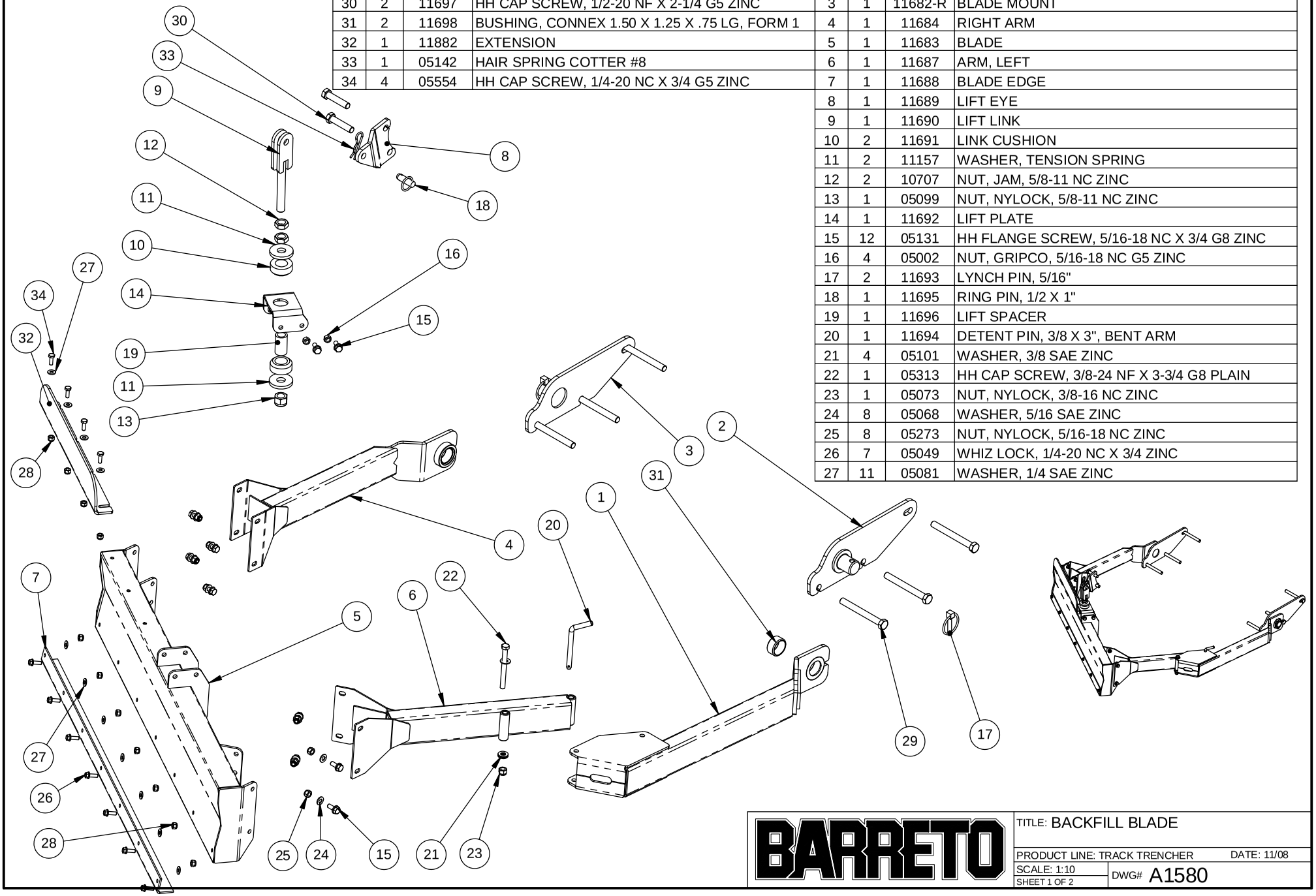
SCALE: 1:4

SHEET 1 OF 1

DWG# A1575

REF	QTY.	PART NO.	DESCRIPTION
28	11	05096	NUT, NYLOCK, 1/4-20 NC ZINC
29	6	05094	HH CAP SCREW, 1/2-13 NC X 4-1/2 G5 ZINC
30	2	11697	HH CAP SCREW, 1/2-20 NF X 2-1/4 G5 ZINC
31	2	11698	BUSHING, CONNEX 1.50 X 1.25 X .75 LG, FORM 1
32	1	11882	EXTENSION
33	1	05142	HAIR SPRING COTTER #8
34	4	05554	HH CAP SCREW, 1/4-20 NC X 3/4 G5 ZINC

REF	QTY.	PART NO.	DESCRIPTION
1	1	11685	SWING ARM
2	1	11682-L	BLADE MOUNT, LEFT
3	1	11682-R	BLADE MOUNT
4	1	11684	RIGHT ARM
5	1	11683	BLADE
6	1	11687	ARM, LEFT
7	1	11688	BLADE EDGE
8	1	11689	LIFT EYE
9	1	11690	LIFT LINK
10	2	11691	LINK CUSHION
11	2	11157	WASHER, TENSION SPRING
12	2	10707	NUT, JAM, 5/8-11 NC ZINC
13	1	05099	NUT, NYLOCK, 5/8-11 NC ZINC
14	1	11692	LIFT PLATE
15	12	05131	HH FLANGE SCREW, 5/16-18 NC X 3/4 G8 ZINC
16	4	05002	NUT, GRIPCO, 5/16-18 NC G5 ZINC
17	2	11693	LYNCH PIN, 5/16"
18	1	11695	RING PIN, 1/2 X 1"
19	1	11696	LIFT SPACER
20	1	11694	DETENT PIN, 3/8 X 3", BENT ARM
21	4	05101	WASHER, 3/8 SAE ZINC
22	1	05313	HH CAP SCREW, 3/8-24 NF X 3-3/4 G8 PLAIN
23	1	05073	NUT, NYLOCK, 3/8-16 NC ZINC
24	8	05068	WASHER, 5/16 SAE ZINC
25	8	05273	NUT, NYLOCK, 5/16-18 NC ZINC
26	7	05049	WHIZ LOCK, 1/4-20 NC X 3/4 ZINC
27	11	05081	WASHER, 1/4 SAE ZINC



BARRETO

TITLE: BACKFILL BLADE

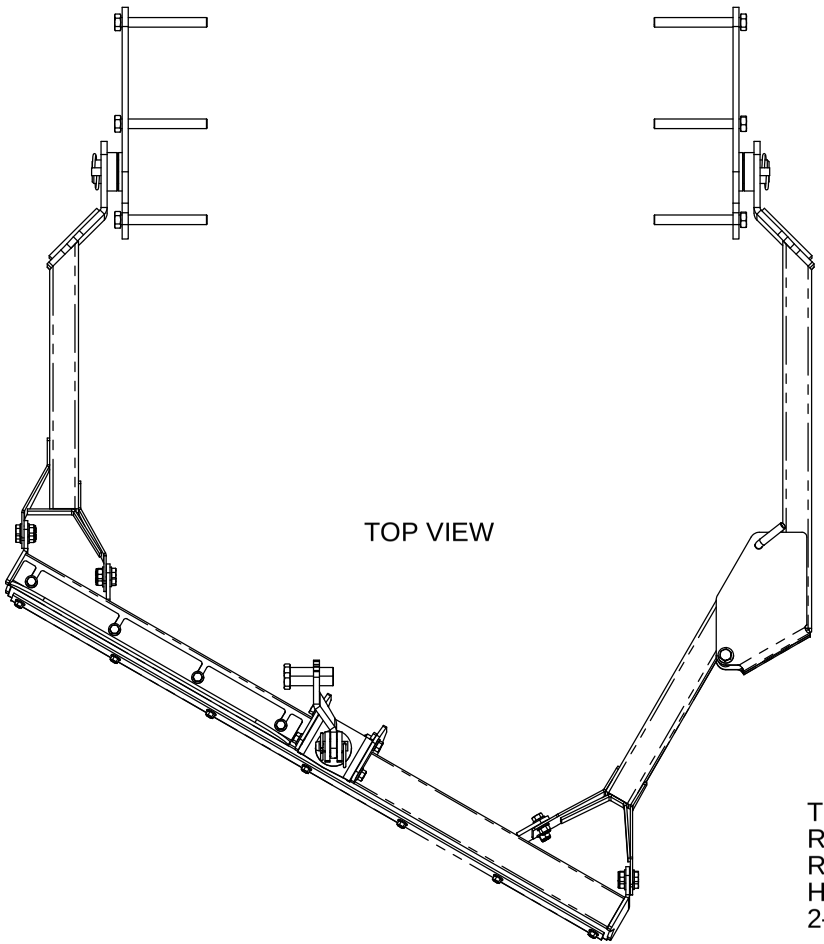
PRODUCT LINE: TRACK TRENCHER

DATE: 11/08

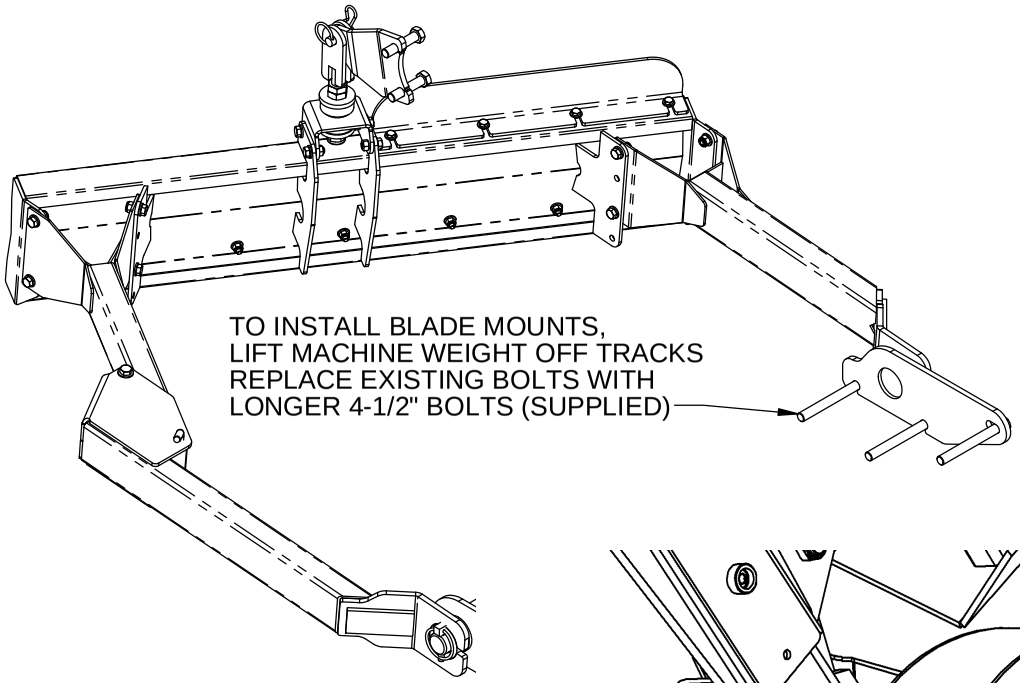
SCALE: 1:10

SHEET 1 OF 2

DWG# A1580

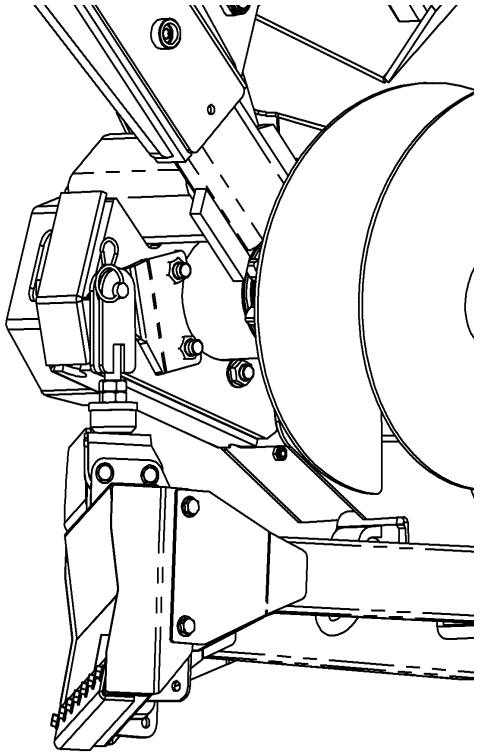


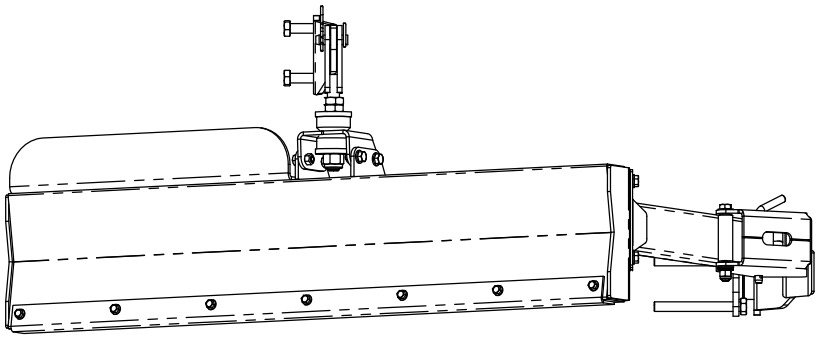
TOP VIEW



TO INSTALL BLADE MOUNTS,
LIFT MACHINE WEIGHT OFF TRACKS
REPLACE EXISTING BOLTS WITH
LONGER 4-1/2" BOLTS (SUPPLIED)

TO INSTALL LIFT EYE,(REF. 8)
REMOVE FIN 11963 (IF INSTALLED)
REPLACE 2 BOLTS IN MOTOR
HOUSING WITH LONGER
2-1/4" BOLTS (SUPPLIED)





BARRETO

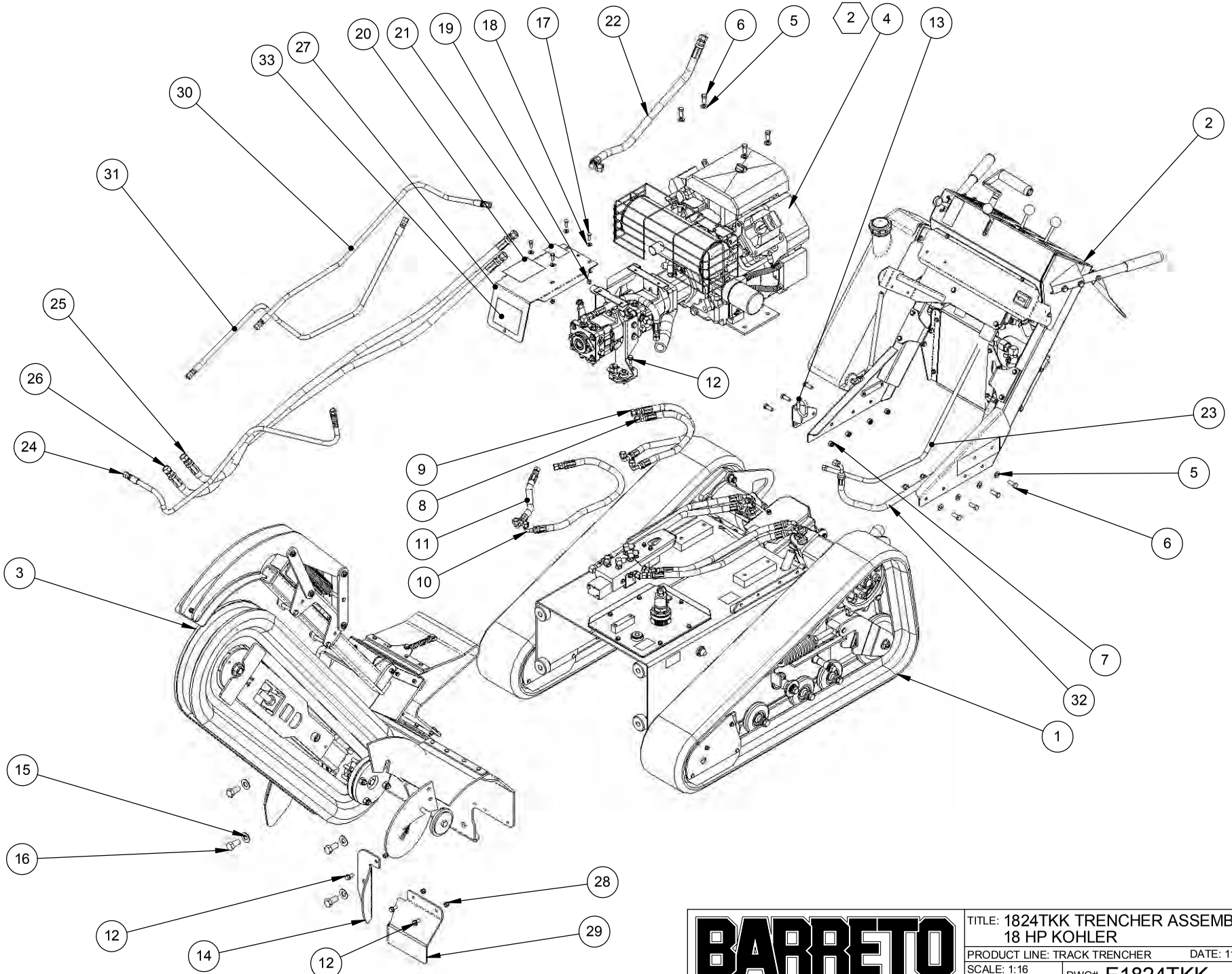
TITLE: BACKFILL BLADE

PRODUCT LINE: TRACK TRENCHER DATE: 11/08

SCALE: 1:10

SHEET 2 OF 2

DWG# A1580



BARRETO

TITLE: 1824TKK TRENCHER ASSEMBLY
18 HP KOHLER

PRODUCT LINE: TRACK TRENCHER DATE: 11/06

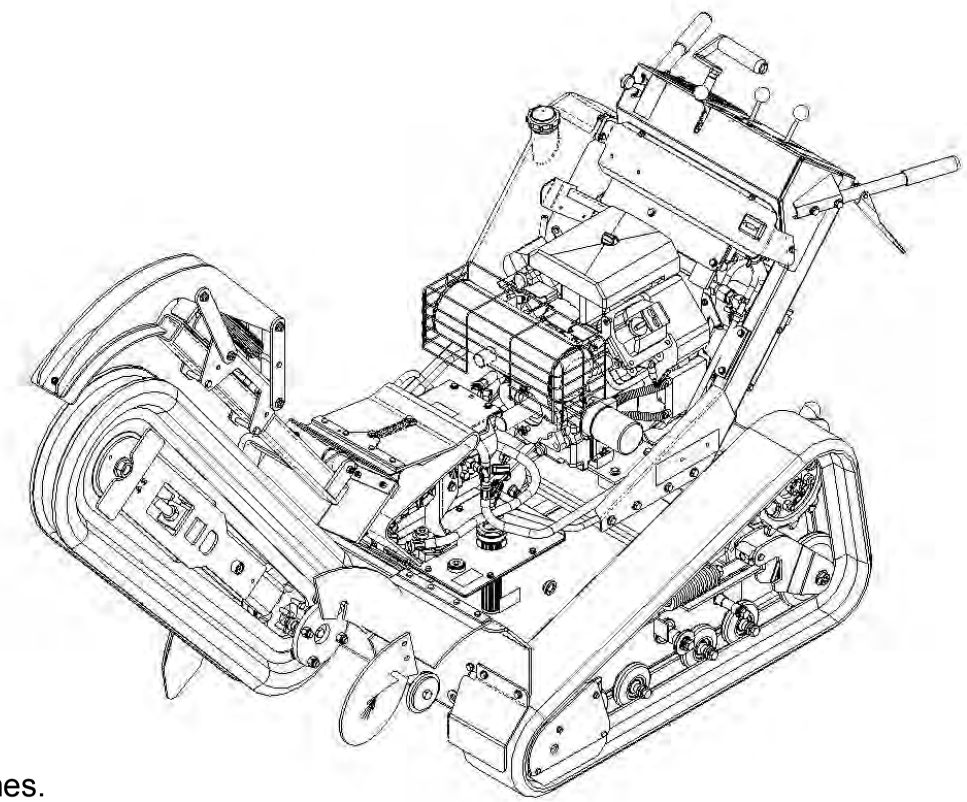
SCALE: 1:16

SHEET 1 OF 2

DWG# E1824TKK

REF	QTY.	PART NO.	DESCRIPTION
1	1	00327	BODY ASSEMBLY
2	1	00329TC	CONTROL POD ASSEMBLY, TRACK
3	1	00328 R2	FRONT END ASSEMBLY
4	1	00330-K18-T	ENGINE / PUMPS ASSEMBLY, KOHLER 18
5	10	05101	WASHER, 3/8 SAE ZINC
6	12	05059	HH CAP SCREW, 3/8-16 NC X 1 G5 ZINC
7	8	05073	NUT, NYLOCK, 3/8-16 NC ZINC
8	1	11184L	HOSE, H-STAT / VALVE, LEFT/RR
9	1	11184R	HOSE, H-STAT / VALVE, RT/REAR
10	1	11242	HOSE, H-STAT / VALVE, LEFT/FR
11	1	11183	HOSE, H-STAT / VALVE, RT/FR
12	5	05131	HH FLANGE SCREW, 5/16-18 NC X 3/4 G8 ZINC
13	1	10835	HOSE KEEPER
14	1	11246	TRACK GUARD
15	4	05272	WASHER, 5/8 SAE ZINC HARDENED
16	4	05260	HH CAP SCREW, 5/8-11 NC X 1-1/4 G5 ZINC
17	4	05554	HH CAP SCREW, 1/4-20 NC X 3/4 G5 ZINC
18	8	05081	WASHER, 1/4 SAE ZINC
19	4	05096	NUT, NYLOCK, 1/4-20 NC ZINC
20	1	03341-04	DECAL, "CAUTION - TO AVOID INJURY"
21	1	03040-01	DECAL, "MADE IN USA"
22	1	11579	HOSE, PUMP OUTPUT
23	1	11239	VENT HOSE ASSEMBLY
24	1	11241	HOSE, CASE DRAIN
25	1	11532	HOSE, VALVE / CHAIN MOTOR 57"
26	1	11243	HOSE, VALVE / CHAIN MOTOR
27	1	11613	PUMP COVER, KOHLER
28	3	05273	NUT, NYLOCK, 5/16-18 NC ZINC
29	1	11527	TRACK COVER
30	1	11577	HOSE, PORT A / CYL PISTON
31	1	11240	HOSE, CYL ROD / C-BAL 1
32	1	11472	HOSE, CASE DRAINS / FILTER
33	1	04450-10	DECAL, GREASE CHART

2 ENGINE OPTIONS: SEE 00330-B18-T : 18 HP BRIGGS & STRATTON
SEE 00330-H20-T : 20 HP HONDA
SEE 00330-K18-T : 18 HP KOHLER
SEE 00330-K23-T : 23 HP KOHLER



Ref# 27 pump cover is p/n 11248 for Honda & Briggs engines.

BARRETO

TITLE: 1824TKK TRENCHER ASSEMBLY
18 HP KOHLER

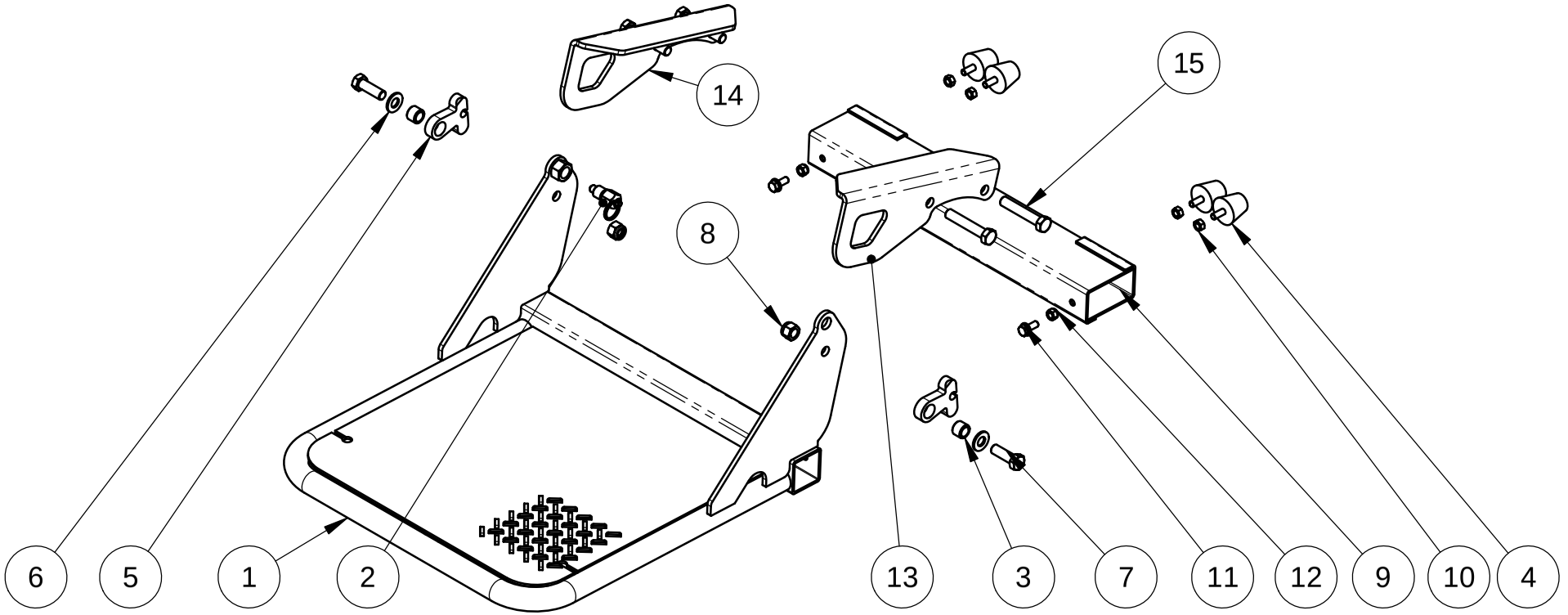
PRODUCT LINE: TRACK TRENCHER DATE: 12/06

SCALE: 1:16 SHEET 2 OF 2 DWG# E1824TKK

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	12237	PLATFORM DECK
2	1	12333	PULL PIN, 5/8 NC X 3/8
3	2	12238	PIVOT BUSHING
4	4	11258	RUBBER BUMPER
5	2	12239	LOCATOR
6	2	05102	WASHER, 1/2 SAE ZINC HARDENED
7	2	05300-01	HH CAP SCREW, 1/2-13 NC X 1-1/2 G5 ZINC
8	2	05098	NUT, NYLOCK, 1/2-13 NC ZINC
9	1	12240	SPACER
10	4	05264	NUT, 5/16-18 NC ZINC
11	2	05131	HH FLANGE SCREW, 5/16-18 NC X 3/4 G8 ZINC
12	2	05273	NUT, NYLOCK, 5/16-18 NC ZINC
13	1	12362-R	TIE DOWN LOOP
14	1	12362-L	TIE DOWN, LEFT
15	4	05257	HH CAP SCREW, 1/2-13 NC X 2-3/4 G5 ZINC

REF. 11 & 9 - SPACER REQUIRED ONLY FOR MACHINES WITHOUT AUXILIARY WEIGHTS

A1585-S INCLUDES SPACER & BOLTS
A1585 DOES NOT INCLUDE SPACER & BOLTS, REF.s 9 & 11



BARRETO

TITLE: RIDE PLATFORM

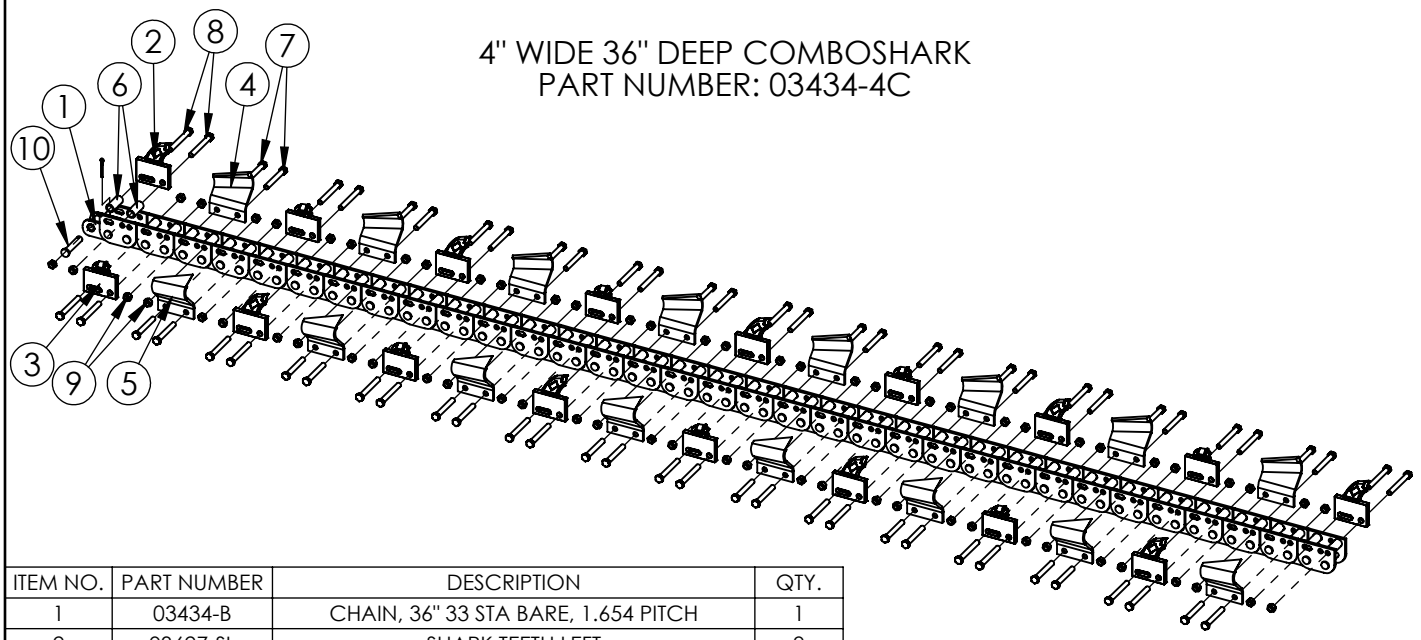
PRODUCT LINE: A1385 OPTION - TK DATE: 4-12

SCALE: 1:8 SHEET 1 OF 1

DWG# A1585-S

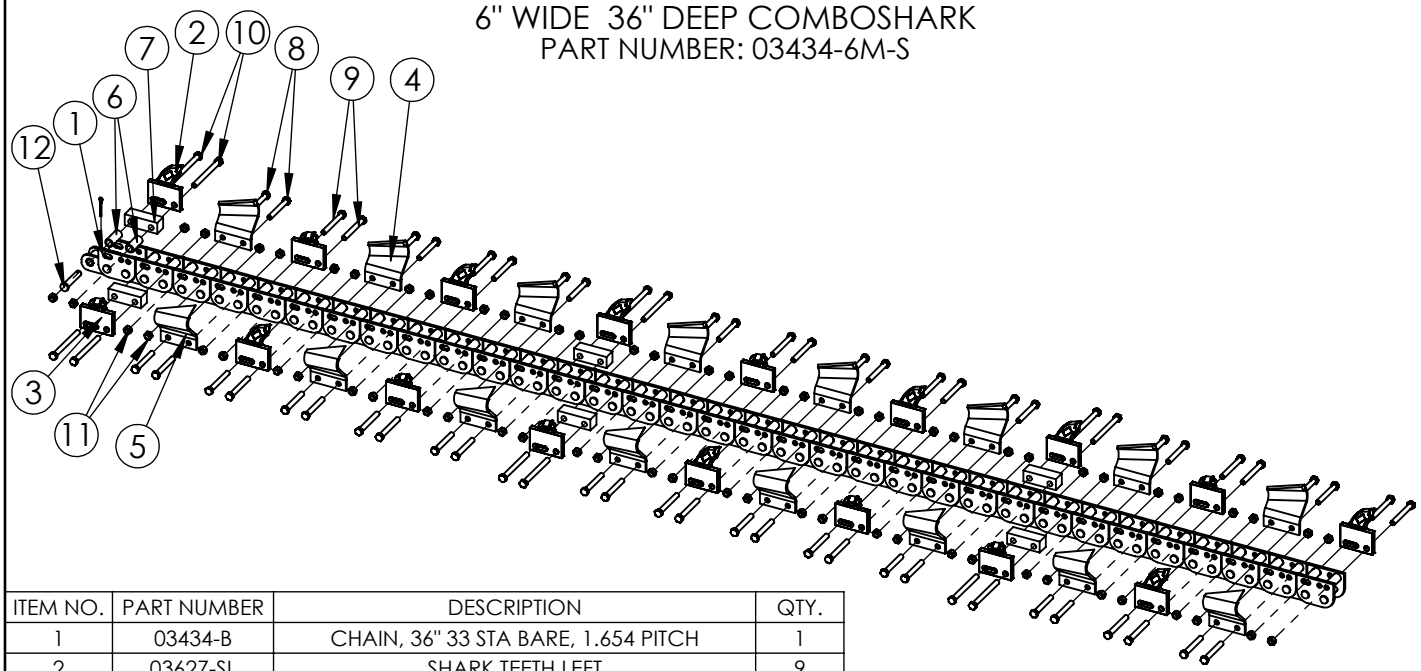
36" DIGGING DEPTH COMBOSHARK CHAINS

4" WIDE 36" DEEP COMBOSHARK
PART NUMBER: 03434-4C



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	03434-B	CHAIN, 36" 33 STA BARE, 1.654 PITCH	1
2	03627-SL	SHARK TEETH LEFT	9
3	03627-SR	SHARK TEETH RIGHT	8
4	03623-L	CUP, LEFT HAND	8
5	03623-R	CUP, RIGHT HAND	8
6	01654	SPACER, TRENCHER CHAIN, 1.545	66
7	05279	HH CAP SCREW, 3/8-24 NF X 2-3/4 G8 ZINC	32
8	05288	HH CAP SCREW, 3/8-24 NF X 3 G8 ZINC	34
9	05283	NUT, GRIPCO, 3/8-24 NF G8 ZINC	66
10	03626	PIN & COTTER	1

6" WIDE 36" DEEP COMBOSHARK
PART NUMBER: 03434-6M-S



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	03434-B	CHAIN, 36" 33 STA BARE, 1.654 PITCH	1
2	03627-SL	SHARK TEETH LEFT	9
3	03627-SR	SHARK TEETH RIGHT	8
4	03623-L	CUP, LEFT HAND	8
5	03623-R	CUP, RIGHT HAND	8
6	01654	SPACER, TRENCHER CHAIN, 1.545	66
7	02604	SPACER, 6" DIG CHAIN	6
8	05279	HH CAP SCREW, 3/8-24 NF X 2-3/4 G8 ZINC	32
9	05288	HH CAP SCREW, 3/8-24 NF X 3 G8 ZINC	22
10	05232	HH CAP SCREW, 3/8-24 NF X 4 G8	12
11	05283	NUT, GRIPCO, 3/8-24 NF G8 ZINC	66
12	03626	PIN & COTTER	1

BARRETO

BARRETO TRENCHER CHAIN TYPES / DESCRIPTION / USE

STANDARD CUP CHAIN (AKA Skip Tooth) -4

This chain has a cup tooth on every other link.

Where to use it

This chain is most effective in loamy soil - soil that is packable into clods. It is also more effective in clay or "gumbo" soil that is sticky and clings to the chain. The space between the cups allows the soil to let go instead of running around with the chain as a slurry which prevents effective digging.

DOUBLE CUP CHAIN -4C

This chain has a cup tooth on every link.

Where to use it

This chain is best for sand and dry, loose soil that has a tendency to fall back into the trench. The extra cups provide for better clean-out.

STANDARD COMBO CHAIN -4M

This chain has an alternating pattern of cup and rock teeth.

Where to use it.

It is designed for areas that have variable soil types. The rock teeth are effective in rocky soil or hard-pan while the cups provide for efficient clean-out. The rock tooth is made up of three parts; a bracket, that is bolted onto the chain, a bullet tip that is inserted into the bracket, and a clip that holds the tip in place. This chain continues to be aggressive even when the cups get rounded. The disadvantage of this chain is that the tips can fall out, especially when the chain reverse feature is used frequently.

COMBO/SHARK CHAIN -4MS

This chain has an alternating pattern of cup and Shark teeth.

Where to use it.

Use this chain in pretty much the same conditions as the standard combo chain. Although not as aggressive, the Shark teeth last longer and do not fall off. This is our most popular chain.

SHARK CHAIN -4S

The teeth on this chain are all Shark teeth that are welded onto the chain. Replacement teeth are not available for this chain.

Where to use it.

This chain can be used in the most adverse soils. It is good in rocky soil, "cliché", limestone, hard-pan and any other hard to dig soils. It does not clean out well in sandy or dry, loose loamy soil. This is not the fastest but it is most durable chain available. It is not uncommon for the teeth to outlast the chain rollers. When the rollers wear out, the complete chain must be replaced.

BOLT-ON SHARK CHAIN -4SB

This chain utilizes a standard chain blank and has Shark teeth that are bolted to the chain blank.

Where to use it.

This chain is good in all the conditions described for the Shark chain. The advantage is the teeth can be removed when the chain wears out and can be used on a new blank. It is not uncommon for the teeth to last through two chains.

ROCK CHAIN -4R

This chain features all rock teeth.
There is a bracket, bullet, and clip at each link.

Where to use it.

This is the most effective chain for hard rocky soil. It is good in all conditions described for Shark chain The disadvantage is the possibility of losing bullets, especially in conditions where the chain reverse feature is used often. As the chain wears and the bullets get rounded, it becomes less effective.

NOTE: ALL CHAINS ARE AVAILABLE IN 6" WIDTHS AS WELL.