

OPERATOR'S MANUAL & PARTS LIST



Verti-cutter MODEL VC40

FIRST PRODUCTS INC.
164 Oakridge Church Road
Tifton, Georgia 31794 U.S.A.
Phone (229) 382-4768
1-800-363-8780
Fax (229) 382-0506

Web: www.1stproducts.com Email: Sales@1stproducts.com

INTRODUCTION

Thank you for purchasing the First Products VC-40 Verti-cutter. This piece of equipment has been carefully engineered and manufactured to provide years of reliable service.

The practice of verti-cutting (removing thatch) is a time proven practice in the turf maintenance industry. The First Products VC-40 verti-cutter is one of the most unique and versatile pieces of equipment on the market today. Using a patented swing hitch, the VC-40 allows the operator to turn around obstacles without lifting. This turning feature saves valuable time allowing continuous operation over undulations. In addition a double roller system offers consistent depth control over contours and allows easy depth adjustments in the field without tools. The VC-40 versatility and performance is unmatched.

We recommend that you carefully read the owner's and operator's manual prior to operation. Also ensure that all future operators read this manual and become fully trained before allowing them to use or maintain this equipment. Time spent becoming acquainted with the safe operation, performance, and maintenance of the VC-40 will add longer life and greater satisfaction to your new purchase. *Terminology: "right" or "left" as used in this manual is determined by facing the direction the machine will travel while in use unless otherwise specified.*

This machine is designed with safety in mind. However, if the machine is handled carelessly and not as instructed, it can be a dangerous piece of equipment. Observe all safety information in this manual and decals on the equipment.

The illustrations and data used in the manual were current at the time of printing. The manufacturer reserves the right to make changes or add improvements to its products at any time without incurring any obligation to make such changes to products manufactured previously.

REMEMBER SAFETY IS ALWAYS FIRST !

ATTENTION:

- **Read and understand the instructions and warnings carefully before using this machine.**
- **Read the warranty located on page 16. Fill in the required information on the warranty registration provided, and return it to the address on the front of this manual. The warranty registration must be returned to validate warranty.**

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SAFETY SYMBOLS



This is a standard safety alert symbol meaning **ATTENTION ! BECOME ALERT ! YOUR SAFETY IS INVOLVED !**



CAUTION

Indicates hazardous situation, injury may occur, used to alert against carelessness.



WARNING

Indicates potentially hazardous situation. Death or serious injury may occur if proper procedures are not followed.



DANGER

Indicates most hazardous situation. Death or serious injury will occur if proper procedures are not followed.

OPERATION SAFETY

- **Your Safety Is Always First!** Familiarize yourself with the safety symbols and decals on pages 3 and 4.
- All operators should **read and understand the following sections of this manual** prior to adjusting, maintaining, hitching to, or operating the VC-40: **OPERATION SAFETY, OPERATOR INSTRUCTIONS, PRE-OPERATION CHECKS, MAINTENANCE SAFETY & OPERATOR MAINTENANCE.**
- In addition, remove and read the driveline safety and maintenance manual taped to the driveline shield. After reading the driveline manual, place it inside this manual for reference.
- For the safety and instruction of all operators, keep this manual stored on the unit at all times.
- Only attempt to adjust, maintain, or remove debris from VC-40 when the tractor engine is not running.
- After operating, always disengage the power take off and switch the engine off prior to dismounting from the tractor or other power source and approaching the unit.
- Prior to starting, always inspect operating area for any hazards such as large rocks, steep slopes, low tree branches or wires. Flag objects difficult to see such as irrigation heads and water meters.
- Instruct all people in the work area to stay clear of the operating unit at least 10 feet on the sides and 20 feet on the rear.
- Consult your tractor Operator's Manual regarding operation on slopes. Do not lift the unit while the tractor is moving (or parked) sideways on slopes above 5°. The swing hitch may allow the unit to swing to the downhill side and cause the tractor to roll over. On slopes from 5° to 15° always aim the tractor uphill before lifting the unit. **We do not recommend the unit being used on slopes above 15°.**
- Use extreme care and maintain moderate ground speed when transporting or operating on slopes, over rough surfaces, or close to trees, ditches, and fences.
- Only operate during daylight hours or with good artificial light.
- The Verti-cutter is not equipped for highway use. Be careful of traffic when operating near or crossing roadways.
- Perform all pre-operation checks (page 9) prior to start up.

OPERATOR INSTRUCTIONS

TRACTOR SELECTION AND OPERATION

- The VC-40 is designed to attach to a tractor with a category one three -point hitch, 540 PTO, and a minimum of 20 horsepower (depth of cut determines horsepower required for operation). Check the tractor owner and operator’s manual for lift capacity. The weight of the VC-40 is approximately 800 lbs.
- Before hitching to the VC-40 familiarize yourself with all of the tractors control functions. Be prepared to stop the tractor movement, PTO operation, and the engine quickly in an emergency.

UNDERSTANDING HOW THE SWING HITCH OPERATES (Prior To Hitching To Tractor)

With the swing stand lowered and the swing mast rearward to disengage the swing lock, grasp the hitch pins and rotate the “A” frame to simulate operation in a sharp turn. Release the hitch pins and slowly pull the swing mast forward as it would be pulled by the top link during lifting. Notice how one mast chain tightens causing the “A” frame and unit to realign and the spring on the lock link is compressed to make the swing lock engage upon alignment. Now push the swing mast rearward against the lock link tab to disengage the swing lock and loosen the chains to allow sharp turns again. This demonstrates how the top link of the tractor lift-system switches the VC-40 between the trail and lift modes.

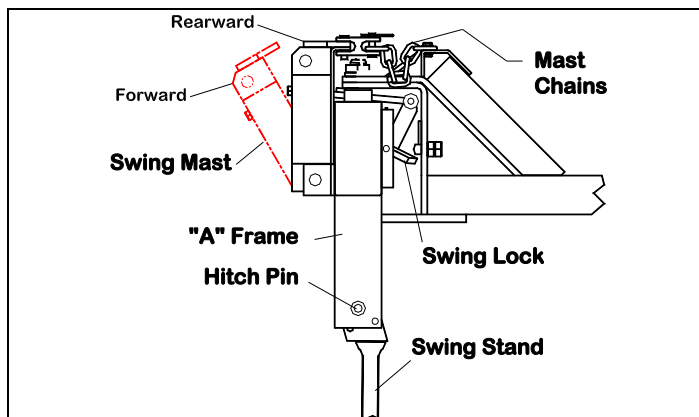


Figure 1. Swing Hitch Operation

CORRECTLY ADJUSTING THE HITCH TO THE TRACTOR

A category one hitch tractor is required with the lower links stabilized. With the VC-40 swing stand lowered connect the lower lift links to the "A" Frame and top link to the swing mast. Push the lift control lever on the tractor to the completely lowered position. Lengthen the adjustable top link until the swing mast closes tight against the "A" Frame. This causes the combined weight of the VC-40 and the tractor hitch components to be transferred to the Double roller.

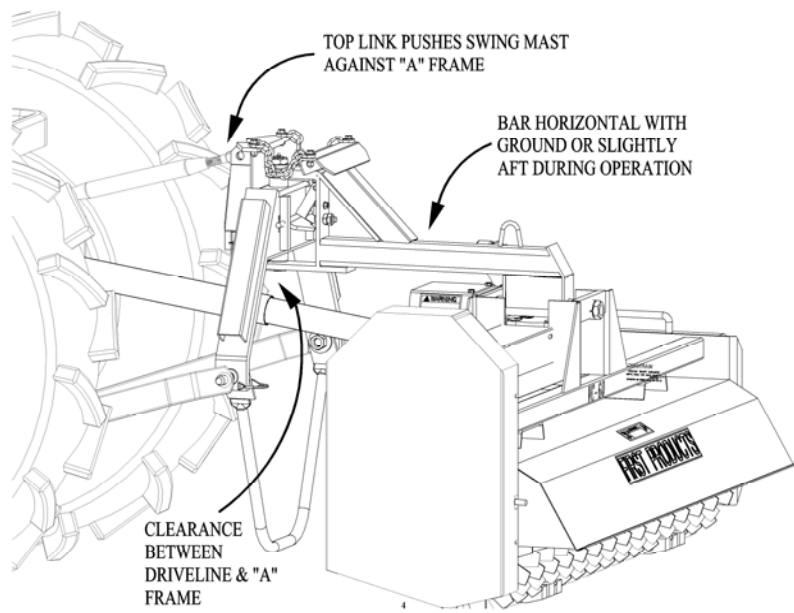


Figure 2. Hitch Adjustment

When the horizontal bar is level with the ground or slightly aft, the hitch is set properly, and insures the unit will center when lifting, allowing gravity to assist the swing chains in aligning the unit with the tractor. After hitch is properly adjusted, operate unit checking for proper clearance between driveline and "A" frame. **NOTE: Always shorten the top link to lift the rear of the VC-40 before driving or backing a tractor and unit up or down load ramps.**

BLADE DEPTH ADJUSTMENT

Depth adjustments are made using the double Roller Adjusters. Always disengage PTO, Lift Machine out of the ground, and place tractor in Park before dismounting. To adjust double rollers, simply remove clip pin, align arm with desired depth position according to the depth gauge, then reinsert clip pin into correct hole.

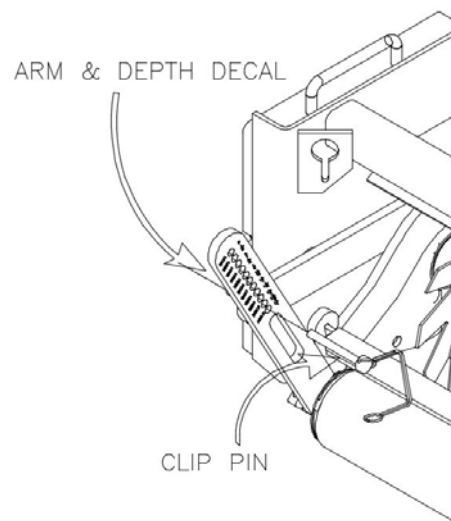


Figure 3: Double Roller Adjuster

LOCKOUT ADJUSTMENT

Full Swing Configuration:

This configuration, as seen in Figure 4, utilizes all seven chain links and is used under most operating conditions. It allows the operator to maneuver around obstacles and lock the Verti-cutter into position when being transported.

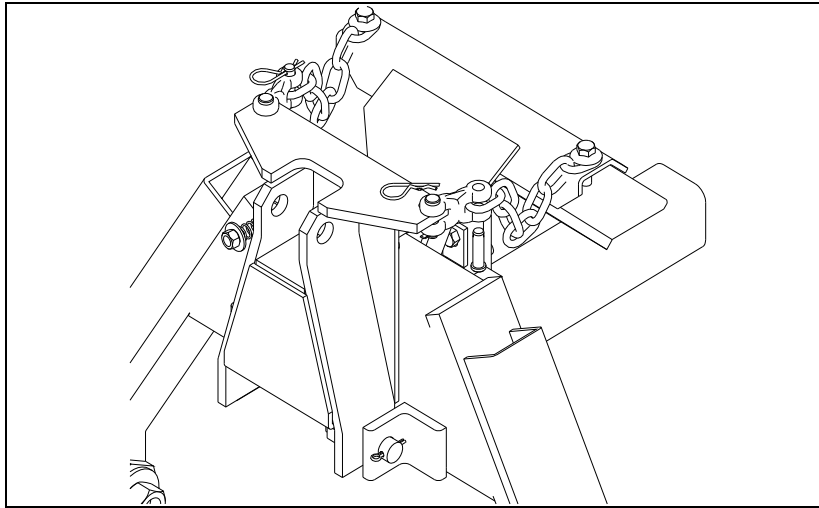


Figure 4. *Full Swing Configuration*

Limited Swing Configuration:

If turf conditions are hard and tough to penetrate, the limited swing configuration may be used in order to prevent the VC-40 from overrunning the tractor. To adjust the Limited Swing Configuration, pull the #6 hairpin cotter and remove the clevis pin. Take up two chain links and pin the chain as seen in Figure 5. Note: Under the Limited Swing Configuration, the VC-40 can not make turns.

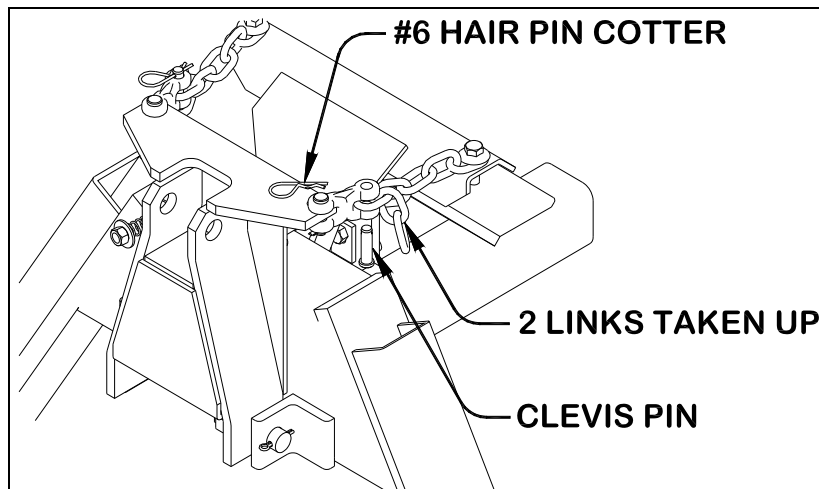


Figure 5. *Limited Swing Configuration*

FIELD OPERATION


- The geometry of tractor lift linkages varies, and a trial run over uneven ground is recommended. Ideally the swing lock will not engage when operating over the crown of a hill and the tractor hitch is always free to float upward at all times. The blades should clear curbs etc., when lifted.
- When lowering the unit for operation reduce the engine speed and engage the PTO prior to the blades contacting the ground otherwise damage to the drive components may occur.
- When lowering for operation, lower slowly until the blades touch the ground. Then swiftly push the lift control lever on the tractor to the completely lowered position to instantly unlock the hitch. This is especially true when lowering the unit in a sharp turn. Failure to do this may cause the swing hitch not to disengage, resulting in damage to the machine and/or turf damage. In the event the unit should fail to unlock for trail mode, stop the tractor and repeat the lowering procedure.

Do not turn the tractor with the Verti-cutter in the ground and the swing lock engaged. Damage to equipment may occur!

- When operating diagonally downhill or transversely (sideways) on a hillside slope above 5° the mast chains will not swing the unit uphill to center and lock on the tractor when the unit is lifted. Occasionally the unit will swing farther to the downhill side of the tractor creating the hazard of tractor roll over. If the tractor ever seems unstable, immediately lower the hitch and steer the tractor uphill or on a more level surface where it will center and lock when lifted.
- Do not back the unit up with the Verti-cutter touching the ground. Always raise the unit, back to desired location, and then lower the machine.
- High tractor ground speeds with deep cutting may cause the VC-40 to overrun the tractor thereby causing the "A" frame to tilt rearward engaging the swing lock. Should this happen change to a lower gear and/or reduce cutting depth. If problem persists, adjust the hitch to the Limited Swing Configuration as seen on page 8.

PRE-OPERATION CHECK LIST

(With the Verti-cutter lowered and the tractor engine switched off...)

- Be sure that the implement is hitched to the tractor properly with all pins in place.
- Pin the swing stand in the up position.
- Be sure the driveline is correctly assembled. (The end stenciled as the tractor end is connected to the tractor and not to the Verti-cutter). Check to see that the end yokes are locked to the tractor PTO and gearbox shafts. Drive shields must turn freely on the driveline. 
- Be sure all safety shields and covers are correctly installed.
- Remove any debris caught in the blades and depth gage shoes.
- Select the desired depth.
- Check gearbox oil level before first operation and every 200 hours of operation thereafter. (Refer to operator maintenance section.)

MAINTENANCE SAFETY

- Read and understand all safety decals prior to performing any maintenance. Replace any safety decals that are not legible.
- Never attempt to clean, adjust, lubricate or perform any maintenance on the Verti-cutter while it is attached to the tractor or any other power source with the engine running or while in the raised position unless safety blocks are inserted under the frame.
- When not attached to the tractor, always use the lifting hook to hoist the machine on to safety blocks for maintenance. (See Figure 6).

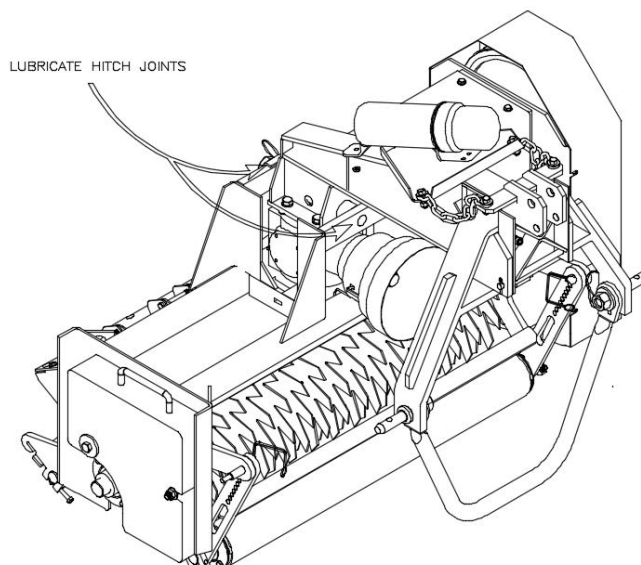


Figure 6. *Lifting Hook/Lubrication*

OPERATOR MAINTENANCE

- Check gearbox oil level before first operation and every 200 hours of operation thereafter. With frame level, remove oil level plug on front left side of gearbox using 5/16" x 6" allen wrench. If required, add 90w-gear oil through plug in top of box until it appears at oil level plug. Replace both plugs securely.
- Grease driveline parts after the number of hours used as shown below (Fig. 7).

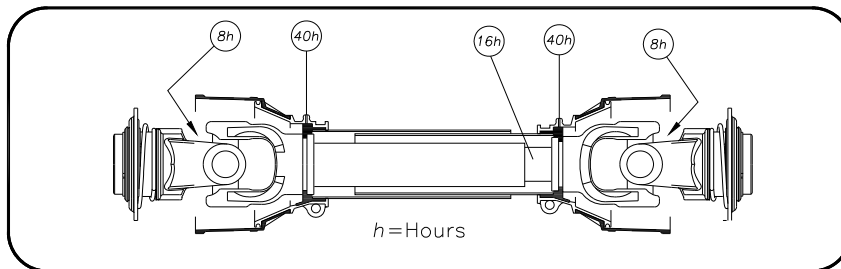


Figure 7. *Drive Line Lube Chart*

- The hitch flex joints at the top of the “A” frame and above the gearbox (Fig. 6) should be lubricated before first operation and weekly thereafter.
- Check belt tension after 4 hrs. of operation and every 40 hrs. thereafter. A heavy thumb (approx. 20 Lbs.) applied to mid-length of belt should deflect about 1/4” to 1/2”.
- The VC-40 shaft bearings are sealed and permanently lubricated requiring no routine maintenance.
- Remove cover from roller adjuster and clean debris out.



CAUTION

BE SURE ALL SHIELDS ARE INSTALLED PRIOR TO RETURNING THIS MACHINE TO SERVICE.

SHOP MAINTENANCE

Bearing Replacement

NOTE: Clean the unit thoroughly with a pressure washer.

1. Connect unit to 3-point hitch tractor. **DO NOT** connect driveline. Lift & lower unit as required. **KEEP HANDS CLEAR WHEN LIFTING & LOWERING.**
2. With unit sitting on floor, remove belt drive cover and jack shaft shield.
3. Loosen the four flange lock nuts holding the stub shaft in position; then lower the spindle hub by turning the 5/8" hex nut until top pulley has lowered enough to remove belts
4. If drive end Bearing is needed to be replaced, continue to next step, otherwise go to step 7-10 for replacing right hand end bearing,
5. Remove Belts, then loosen and remove bolts from the QD Bushing.
6. Insert the bolts into the threaded holes on QD bushing. Slowly screw in each bolt into bushing until pulley is loose. Remove bushing, sheave and key.
7. Remove the Eccentric locking collar from Bearing. Loosen set screw; use a punch to rotate the collar in a clockwise rotation until it is free from bearing. See Figure 8
8. Remove the four bolts from the Flanges and then slide bearing off the shaft.
9. Replace bearing and reinstall.
10. Before locking Eccentric Locking collar on bearing to shaft, Refer to Figure 8 & 9 for correct positioning of shaft assembly in the frame. Lock the Eccentric lock collar to the bearing in counterclockwise rotation.
11. Reinstall pulley and QD Bushing aligning the pulley to the Upper Pulley. Use a straight edge to check for proper alignment.
12. Reinstall belts and tighten by pushing up on the spindle hub with the 5/8" hex nut and then securing stub shaft with the 4 flange lock nuts.
13. Place the shield back on and secure.
14. For the right hand end bearing replacement, following steps 7-10 above.

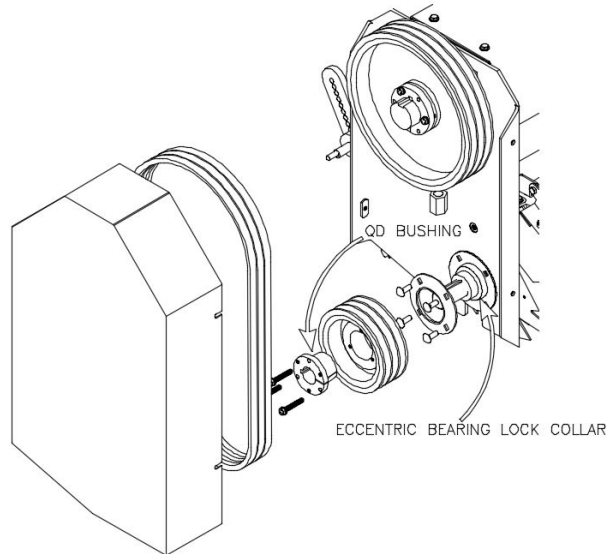


Figure 8. Sheave and Bearing Removal

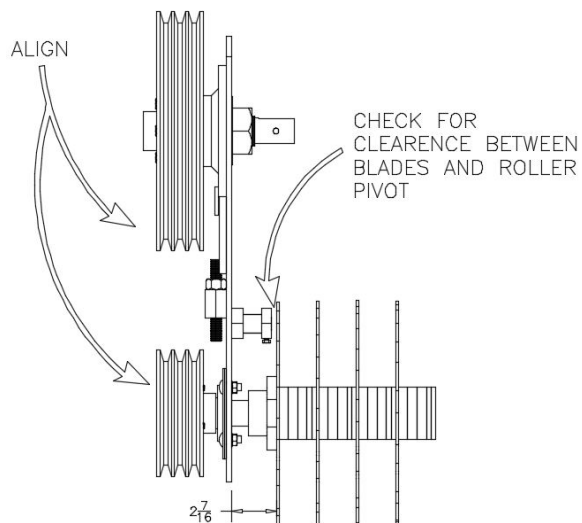


Figure 9. Pulley Alignment and Shaft Positioning

Shaft Removal

1. Adjust the rollers so the adjusters are in a deeper setting allowing the rollers to be further apart from each other.
2. Remove belt cover, belts and pulley on shaft as described in the bearing replacement section.
3. Gently lower the frame just enough to allow the blades to make contact surface with the ground.
4. Remove the Flanges and bearings as described in previous section.
5. Gently raise the frame allowing the shaft to drop and clear the rollers.

Shaft Disassembly and Reassembly

Shaft Disassembly

1. With shaft removed from frame, use the spanner wrench provided and use on drive end of shaft while using a 2-7/16" wrench on other end to loosen the nut.
2. Remove blades and spacers, then clean shaft and inspect for damage.

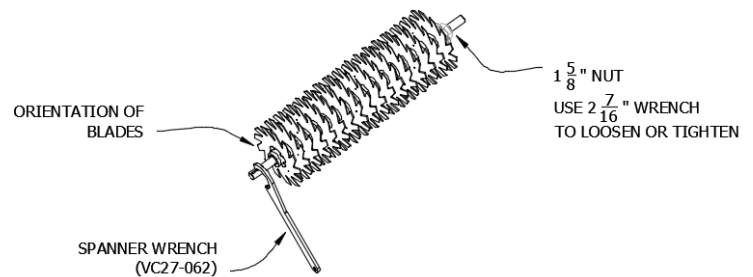


Figure 10. Shaft Disassembly

Shaft Reassembly

1. Before reassembling, refer to the parts book page 23 (VC40 Shaft) and determine what blades and spacing will be used.
2. When stacking blades and spacers on the shaft, refer to next section for Blade Timing.
3. After all blades are stacked, refer to the chart on parts book page 23 to determine if any spacers are needed between the last blade and end shaft spacer.
4. Using the spanner wrench to secure shaft, torque the nut to 600 ft-lbs.
5. When using Carbide blades, use caution not to damage tips.

Shaft Installation

1. With shaft located under frame, gently lower the frame onto shaft
2. Install bearing and flanges and secure shaft to frame.
3. See Figure 9 for proper position of shaft in the mainframe.
4. Install pulley, belts, and shields.

Blade Timing

Blade Part # VC50-040, 049 & 055 (VC50-040 Blade Shown):

1. Stack all the blades so that they all match the same timing mark and blade direction.
2. Once the first blade has been placed on the shaft, note the orientation of the timing mark and rotate the next blade one flat on the hex shaft (Fig. 11).
3. Continue this timing procedure until the shaft is complete.

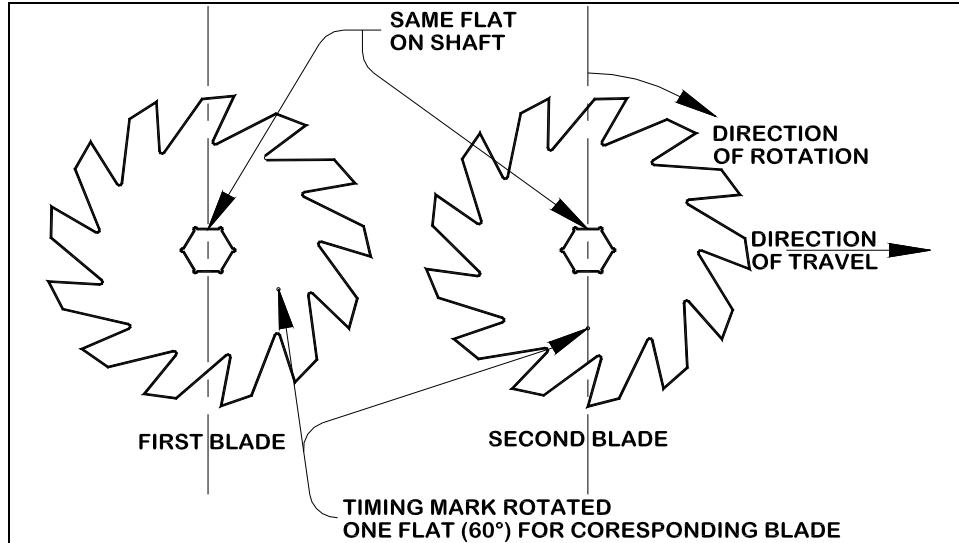


Figure 11. VC50-040 & 049 Timing

**IF THE BLADES ARE NOT TIMED PROPERLY,
THE VERTI-CUTTER WILL NOT OPERATE SMOOTHLY.**

PARKING INSTRUCTIONS

The following instructions are used to properly unhitch the Verti-cutter VC-40 from the tractor and avoid damage to the machine and its components:

1. With machine lifted, unpin the swing stand from its operating position.
2. Swing the stand downward and pin it in the parking position to hold up the front end of the machine when lowered.
3. Unpin the roller adjusters, Refer to Figure 3.
4. Adjust the rollers to the position 0" position on the scale. This is to make sure the blades have no contact with the ground when lowered.
5. Pin the adjusters.
6. Lower Verti-cutter to the ground
7. Detach driveline from tractor and from Verti-cutter.
8. Unpin top link from hitch and then from lower linkages.

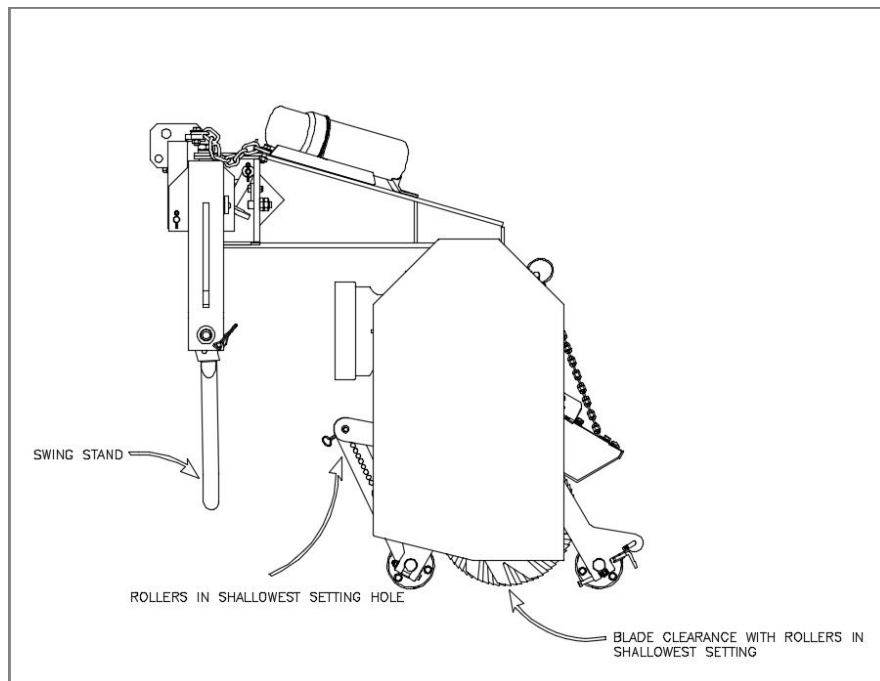


Figure 12. Parking

WARRANTY INFORMATION

ONE YEAR LIMITED WARRANTY

FIRST PRODUCTS INC. WARRANTS THIS PRODUCT TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF TWELVE MONTHS FROM THE ORIGINAL DELIVERY DATE. THIS WARRANTY DOES NOT COVER PARTS CAUSED TO BE DEFICIENT DUE TO NORMAL WEAR, MISUSE, ACCIDENTS, OR LACK OF PROPER MAINTENANCE.

ANY PARTS THOUGHT TO BE DEFECTIVE MUST BE RETURNED TO THE DEALER/DISTRIBUTOR FOR WARRANTY CONSIDERATION JOINTLY WITH FACTORY REPRESENTATIVES. A RETURN AUTHORIZATION NUMBER MUST BE OBTAINED AND CLEARLY MARKED ON ALL PACKAGES OF PARTS REQUIRING RETURN TO THE FACTORY.

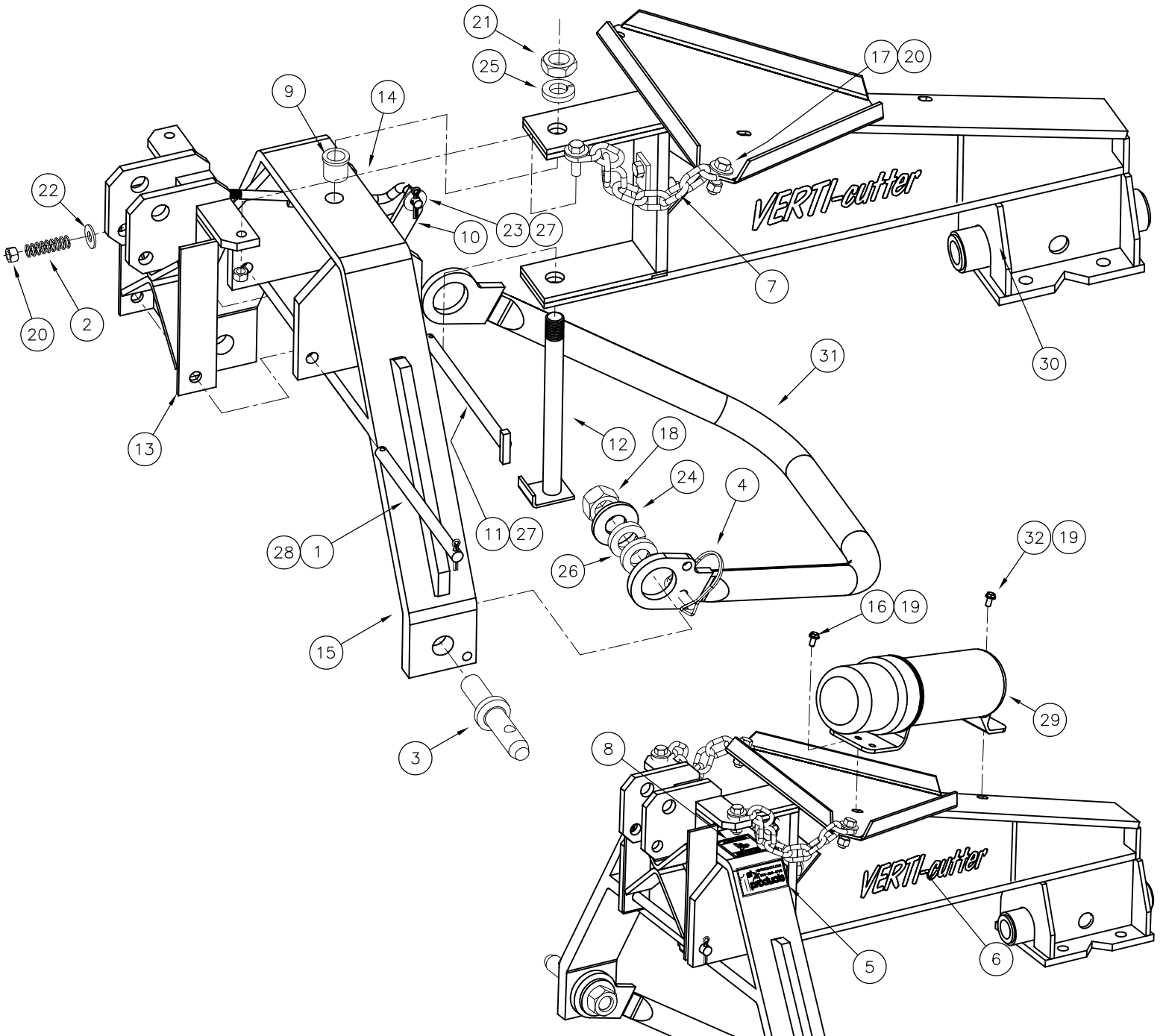
THE OBLIGATION OF FIRST PRODUCTS INC. UNDER THIS WARRANTY SHALL BE EXCLUSIVELY LIMITED TO REPLACEMENT OF PARTS DETERMINED TO BE DEFECTIVE BY FIRST PRODUCTS INC. WITH FREIGHT PREPAID. IN NO EVENT SHALL FIRST PRODUCTS INC. BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THIS PRODUCT.

FIRST PRODUCTS INC. RESERVES THE RIGHT TO MAKE CHANGES OR ADD IMPROVEMENTS TO ITS PRODUCTS AT ANY TIME WITHOUT OBLIGATION TO MAKE SUCH CHANGES OR IMPROVEMENTS ON PRODUCTS SOLD PREVIOUSLY.

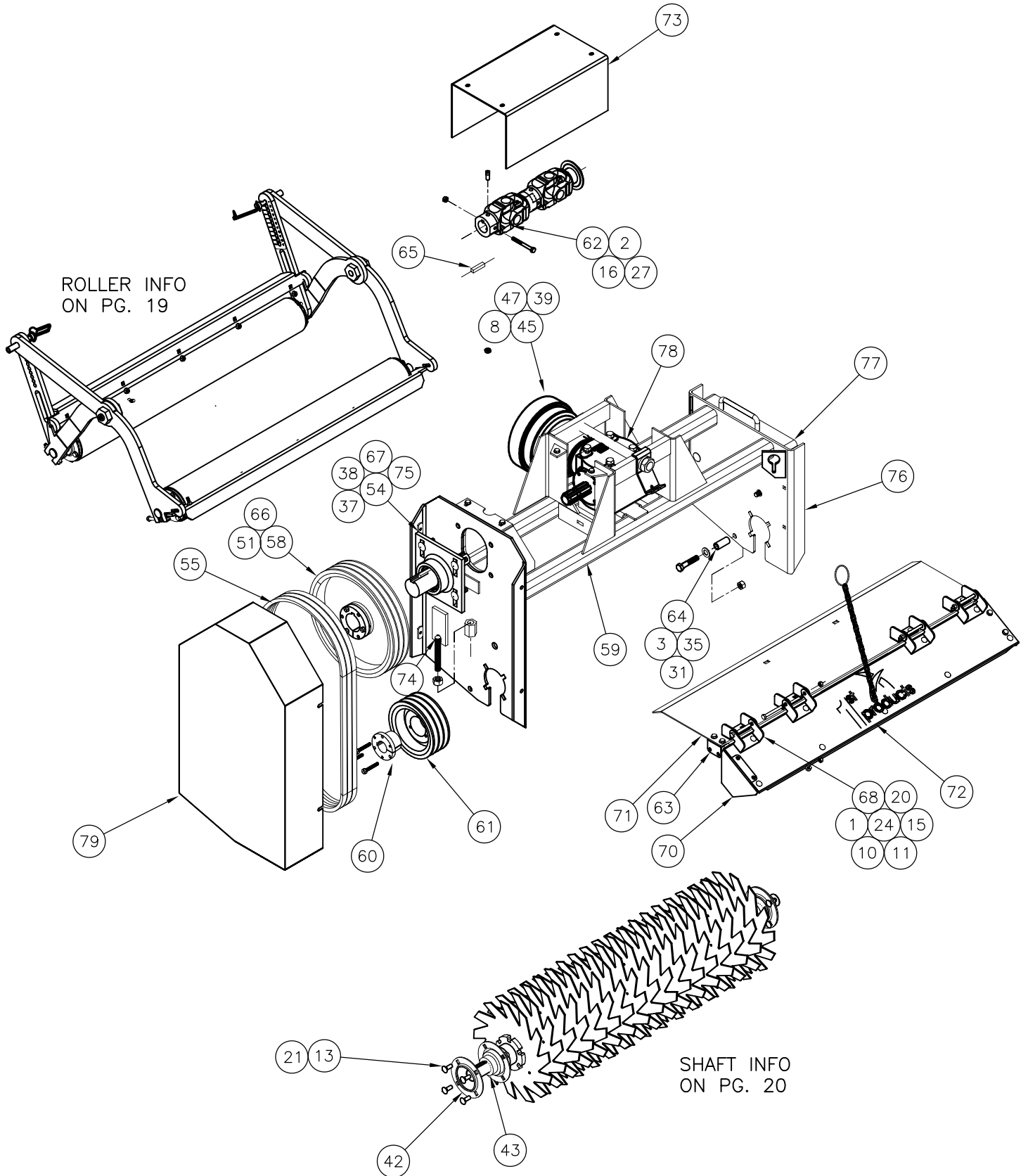
WARRANTY CLAIMS ARE PAID USING A JOB STANDARD (AUTHORIZING MAN HOURS) USING THE APPROPRIATE TIME FRAME ALLOWED FOR EACH PART REPLACED OR LABOR FUNCTIONS PERFORMED. THIS JOB STANDARD LIMITS THE MAN HOURS AUTHORIZED BY TASK. IT DOES NOT SET A SPECIFIC HOURLY RATE BUT LIMITS THE AUTHORIZED MAN HOURS THAT WILL BE PAID BY EACH TASK. MILEAGE IS NOT PAID.

Hitch VC40

| ITEM | PART NO | DESCRIPTION | QTY | ITEM | PART NO | DESCRIPTION | QTY |
|------|-----------------|----------------------------------|-----|------|-----------------|-------------------------|-----|
| 1 | AE26-036 | MAST HINGE ROD - 40L | 1 | 17 | HW05012032G5ZPC | 3/8 X 1 HEX FLG. GR. 5 | 4 |
| 2 | AE50-022 | LOCK SPRING | 1 | 18 | HW20028G5ZPF | 7/8 NF HEX NUT | 2 |
| 3 | AE50-023 | LIFT ARM PIN | 2 | 19 | HW22008G5ZPC | 1/4 FLG. LOCKNUTS | 2 |
| 4 | AE50-040 | 3/8 X 1 1/2 PIN | 1 | 20 | HW24012GBZPC | 3/8 STOVER LOCKNUT | 5 |
| 5 | AE50-059 | SMALL FP DECAL | 2 | 21 | HW25024G5ZPC | 3/4 HEX JAM NUT | 1 |
| 6 | VC50-005 | VERTI-cutter DECAL | 2 | 22 | HW30012TAZP | 3/8 FLAT WASHER | 1 |
| 7 | AE50-069 | 1/4 PROOF COIL CHAIN (9 LINKS) | 2 | 23 | HW31012TAZP | 3/8 SAE FLATWASHER | 1 |
| 8 | AE50-075 | CAUTION PINCH POINT DECAL | 2 | 24 | HW31028TAZP | 7/8 SAE FLAT WASHER | 2 |
| 9 | AE50-120 | 3/4 X 1 FLG. BRG. | 2 | 25 | HW32024G8ZP | 3/4 LOCKWASHER | 1 |
| 10 | AE80-006 | SWING LOCK - 60 | 1 | 26 | HW33028G8ZP | 7/8 HVY. LOCK WASHER | 4 |
| 11 | AE80-011 | LOCK HINGE PIN - 60 | 1 | 27 | HW40004032ZP | 1/8 X 1 COTTER PIN | 2 |
| 12 | AE80-089 | SWIVEL PIN - 40L | 1 | 28 | HW40006040ZP | 3/16 X 1 1/4 COTTER PIN | 2 |
| 13 | AE80-090 | SWING MAST - 40L | 1 | 29 | UA50-009 | OM CANISTER | 1 |
| 14 | AE80-096 | SWING LOCK LINK - 40L | 1 | 30 | VC80-058 | LIGHT VC40 CLEVIS | 1 |
| 15 | UA80-116 | HITCH; UA40 | 1 | 31 | UA80-073 | EXT. SWING STAND - UA40 | 1 |
| | UA80-083 | "A" FRAME - 40 (SER#: 0001-1077) | 1 | 32 | HW01008032G5ZPC | 1/4 X 1 HHCS | 1 |
| 16 | HW01008024G5ZPC | 1/4 X 3/4 HHCS | 1 | | | | |



VC40 FRAME



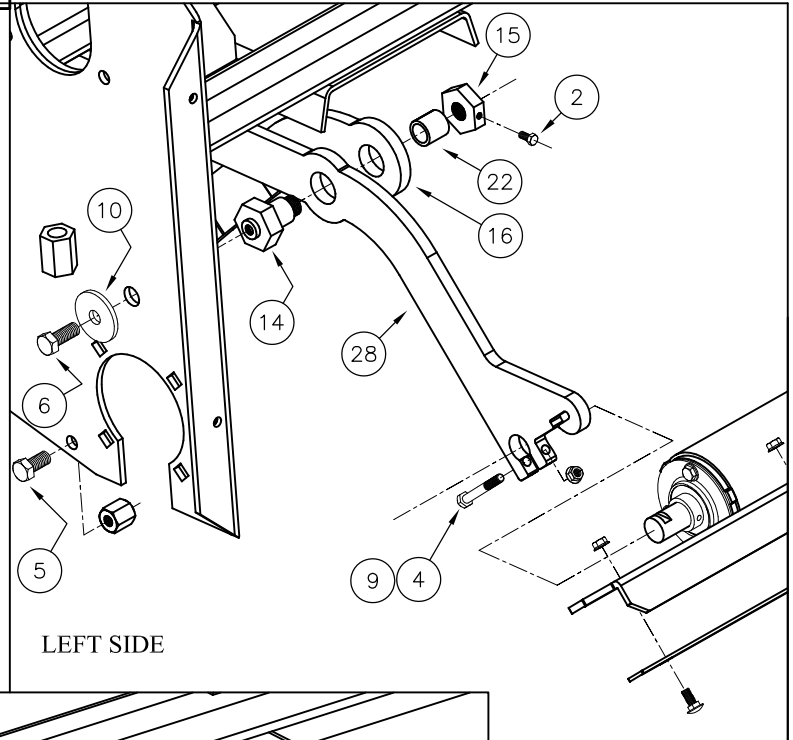
VC40 FRAME

(PARTS LIST)

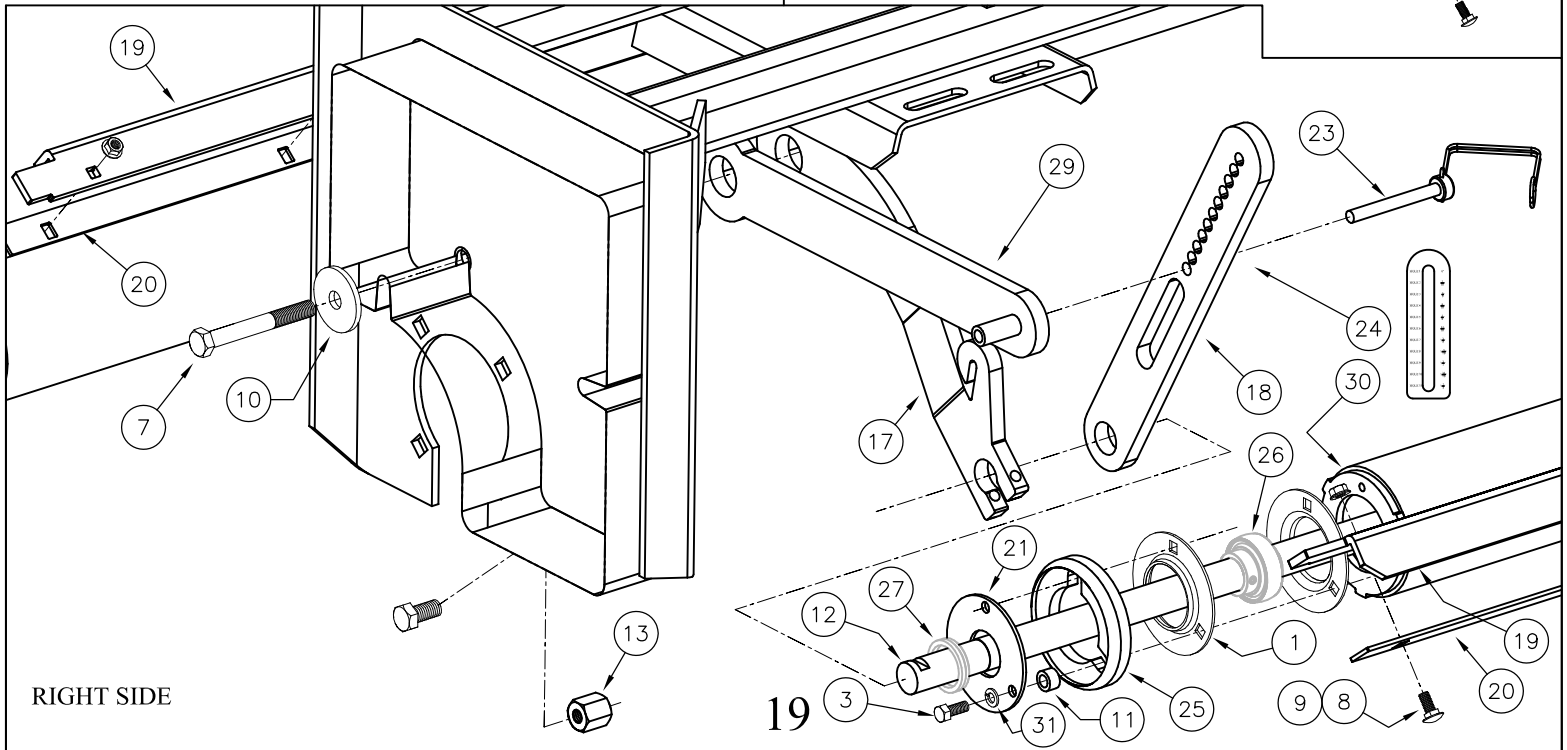
| ITEM | PN# | DESCRIPTION | QTY | ITEM | PN# | DESCRIPTION | QTY |
|------|------------------|-------------------------------|-----|------|----------|------------------------------|-----|
| 1 | HW01010112G5ZPC | 5/16 X 3 1/2 HHCS | 4 | 41 | AE50-114 | DANGER HAZARD DECAL | 1 |
| 2 | HW01010096G5ZPC | 5/16 X 3 HHCS | 1 | 42 | AE50-094 | 72MM X 4 HOLE FLANGE | 4 |
| 3 | HW01016080G5ZPC | 1/2 X 2 1/2 HHCS | 2 | 43 | AG50-013 | 1-3/8 BORE BEARING | 2 |
| 4 | HW01016040G5ZPC | 1/2 X 1 1/4 HHCS | 1 | 44 | SB50-046 | LOGO, FP TURF | 1 |
| 5 | HW01016112G5ZPC | 1/2 X 3-1/2 HHCS | 1 | 45 | SE50-009 | PTO SHIELD 5 7/8 X 5 7/8 | 1 |
| 6 | HW01020080G5ZPC | 5/8 X 2-1/2 HEX HHCS, GR5 | 1 | 46 | SE50-025 | 9/16 ID X 2 OD X 3/16 WASHER | 2 |
| 7 | HW01020112G5ZPC | 5/8 X 3-1/2 HEX HHCS, GR5 | 1 | 47 | SE50-034 | SHAFT CONE WASHER | 1 |
| 8 | HW01M080208.8ZC | M8 X 20 HHCS | 4 | 48 | SE50-036 | KEY RING | 1 |
| 9 | HW01M1203010.9ZC | M12 X 30mm HEX CAPSCREW, 10.9 | 4 | 49 | UA50-002 | REAR RAKE CHAIN | 1 |
| 10 | HW03010016G5ZPC | 5/16 X 1/2 CARRIAGE BOLT | 21 | 50 | WB50-115 | 6" CABLE TIE | 1 |
| 11 | HW03010024G5ZPC | 5/16 X 3/4 CARRIAGE BOLT | 12 | 51 | VC50-0 | 2-1/8 SK BUSHING | 1 |
| 12 | HW03010032G5ZPC | 5/16 X 1 CARRIAGE BOLT | 4 | 52 | VC50-024 | THROWN OBJ./ROLLOVER DECAL | 1 |
| 13 | HW03012032G5ZPC | 3/8 X 1 CARRIAGE BOLT, GR5 | 8 | 53 | VC50-025 | GENERAL WARNING DECAL - VC | 1 |
| 14 | HW03016040G5ZPC | 1/2 X 1 3/4 CARRIAGE BOLT | 4 | 54 | VC50-029 | SPINDLE NUT - 1 5/8-12 NC | 1 |
| 15 | HW06010016G5ZPC | 5/16 X 1/2 HEX FLG. LK. SCREW | 24 | 55 | VC50-038 | BX60 BELT | 3 |
| 16 | HW07010024PLC | 3/8 X 3/4 SQ HEAD SETSCREW | 1 | 56 | VC50-060 | 3/8 X 2 1/2 SWLP | 3 |
| 17 | HW17016288G5ZPC | 1/2 X 9" HEX HEAD TAP BOLT | 1 | 57 | VC50-061 | DECAL; VC60 DEPTH GAUGE | 2 |
| 18 | HW20016G5ZPC | 1/2 HEX NUT | 1 | 58 | VC50-072 | 3B124SK SHEAVE - 12.75 O.D. | 1 |
| 19 | HW20020G5ZPC | 5/8 HEX NUT | 1 | 59 | VC50-073 | VC40 DECAL | 1 |
| 20 | HW22010G5ZPC | 5/16 HEX FLANGE LOCK NUT | 49 | 60 | VC50-075 | 1-3/8 SD BUSHING | 1 |
| 21 | HW22012G5ZPC | 3/8 HEX FLANGE LOCK NUT | 8 | 61 | VC50-076 | 3B64SD SHEAVE | 1 |
| 22 | HW22016G5ZPC | 1/2 FLANGE LOCKNUT | 5 | 62 | VC55-049 | VC40 FLEXIBLE JACK SHAFT | 1 |
| 23 | HW22020G5ZPC | 5/8 HEX FLANGE LOCK NUT | 1 | 63 | VC23-036 | SHIELD CLIP | 2 |
| 24 | HW24010GBZPC | 5/16 STOVER LOCK NUT | 4 | 64 | VC24-052 | 3/4 X 1/2 X 1.688" BUSHING | 2 |
| 25 | HW24016GBZPC | 1/2 STOVER LOCK NUT | 2 | 65 | VC26-013 | 1/2 KEY | 1 |
| 26 | HW24020GBZPC | 5/8 STOVER LOCK NUT | 2 | 66 | VC26-014 | 3/8 KEY | 1 |
| 27 | HW25012G5ZPC | 3/8 JAM NUT | 1 | 67 | VC26-011 | JACK SHAFT SPINDLE | 1 |
| 28 | HW30012TAZP | 3/8" FLAT WASHER | 5 | 68 | VC27-070 | VC60 - SHROUD HINGE | 8 |
| 29 | HW30016TAZP | 1/2" FLAT WASHER | 1 | 69 | VC27-072 | SHIELD CLIP -VC60 | 2 |
| 30 | HW30020TAZP | 5/8 FLAT WASHER, GR5 | 1 | 70 | VC27-073 | SHIELD SIDE - VC60 | 2 |
| 31 | HW31016TAZP | 1/2 SAE FLAT WASHER | 2 | 71 | VC27-102 | VC40 - TOP SHROUD | 1 |
| 32 | HW32016G8ZP | 1/2 LOCK WASHER, GR8 | 4 | 72 | VC27-103 | VC40 - HINGED SHROUD | 1 |
| 33 | HW32024G5ZP | 3/4 LOCK WASHER | 1 | 73 | VC27-127 | VC40 JACK SHAFT COVER | 1 |
| 34 | HW32032G8ZPC | 1" LOCK WASHER | 1 | 74 | VC80-014 | PUSH ROD WELDMENT | 1 |
| 35 | HW34016G5ZP | 1/2 2 WAY LOCK NUT | 2 | 75 | VC80-015 | SPINDLE HUB BASE | 1 |
| 36 | HW40008040ZP | 1/4" X 1-1/4" COTTER PIN | 1 | 76 | VC80-057 | VC40 MAIN FRAME | 1 |
| 37 | AE50-055 | ROTOR BEARING | 1 | 77 | VC80-052 | VC40 WEIGHT | 1 |
| 38 | AE50-029 | 3" SNAP RING - INTERNAL | 2 | 78 | VC81-011 | VC GEAR BOX (1:1) | 1 |
| 39 | AE50-077 | 540 PTO ONLY | 1 | 79 | VC81-016 | BELT COVER & DECALS | 1 |
| 40 | AE50-113 | SWING FRAME WARN. DECAL | 1 | | | | |

VC40 DOUBLE ROLLER

| ITEM | PART NO | DESCRIPTION | QTY | ITEM | PART NO | DESCRIPTION | QTY |
|------|-----------------|-------------------------------|-----|------|-------------|----------------------------|-----|
| 1 | AE50-013 | 52mm X 3 HOLE FLANGE | 8 | 17 | VC27-060 | VC60 - F. ROLLER ARM RIGHT | 1 |
| 2 | HW01008016G5ZPC | 1/4 X 1/2 HHCS | 2 | 18 | VC27-061 | VC60 - GAUGE ARM | 2 |
| 3 | HW01010040G8ZPC | 5/16 1 1/4 GR.8 HHCS | 12 | 19 | VC27-106 | VC40 - SCRAPER FRAME | 2 |
| 4 | HW01010072G5ZPC | 5/16 X 2 1/4 HHCS | 4 | 20 | VC27-107 | VC40 - ROLLER SCRAPER | 2 |
| 5 | HW01016032G5ZPC | 1/2 X 1 HHCS | 2 | 21 | VC27-071 | CAP RETAINER | 4 |
| 6 | HW01016040G5ZPC | 1/2 X 1 1/4 HHCS | 1 | 22 | VC50-059 | VC60 - PIVOT BUSHING | 2 |
| 7 | HW01016128G5ZPC | 1/2 X 4 HHCS | 1 | 23 | VC50-060 | 3/8 X 2 1/2 SWLP | 2 |
| 8 | HW03010024G5ZPC | 5/16 X 3/4 CARRIAGE BOLT | 14 | 24 | VC50-061 | DECAL; VC60 DEPTH GAUGE | 2 |
| 9 | HW22010G5ZPC | 5/16 FLANGE LOCKNUT | 18 | 25 | VC50-062 | 4" ROLLER CAP | 4 |
| 10 | SE50-025 | 9/16 ID X 2 OD X 3/16 WASHER | 2 | 26 | VC50-063 | 25mm SHPERICAL BEARING | 4 |
| 11 | VC24-031 | 3/8 ID X 5/8 OD X 3/8 BUSHING | 12 | 27 | VC50-064 | 1 5/16 V-RING SEAL | 4 |
| 12 | VC26-026 | VC40 - ROLLER SHAFT | 2 | 28 | VC80-033 | VC60 - R. ROLLER ARM LEFT | 1 |
| 13 | VC26-021 | ROLLER ARM STOP | 2 | 29 | VC80-034 | VC60 - R. ROLLER ARM RIGHT | 1 |
| 14 | VC26-022 | VC60 - ROLLER GROUP PIVOT | 2 | 30 | VC80-045 | VC40 - ROLLER | 2 |
| 15 | VC26-023 | PIVOT RETAINER | 2 | 31 | HW32010G5ZP | 5/16 STD. LOCKWASHER | 12 |
| 16 | VC27-059 | VC60 - F. ROLLER ARM LEFT | 1 | | | | |



LEFT SIDE

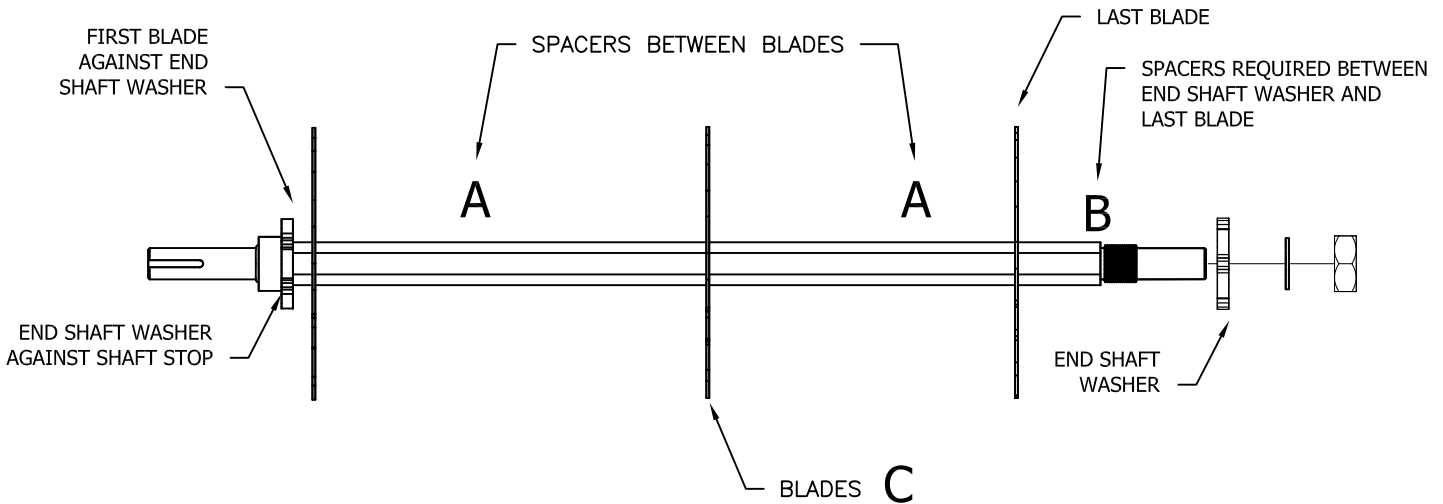


RIGHT SIDE

VC40 SHAFT

| | | |
|------------------------|--------------|----|
| THE VC40 HAS TOTAL OF; | 1/2" SPACERS | 66 |
| | 1/4" SPACERS | 45 |

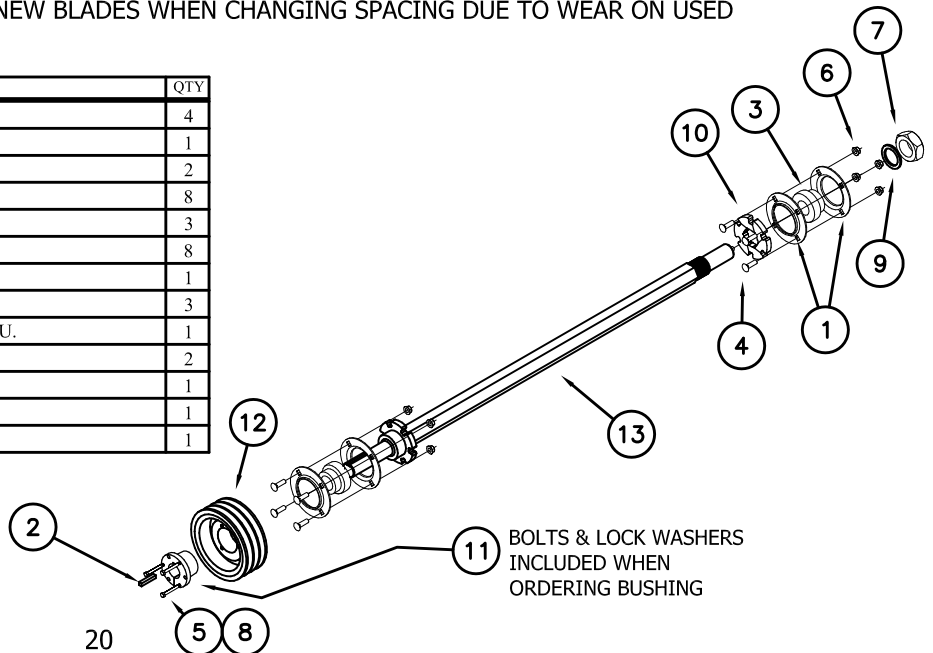
| Blade Spacing | A | | B | | | | C | | |
|---------------|---|-------------|--|-------|-------------|-------|---------------------------|-----------|-----------|
| | Spacers R'QD between Blades for Blade Spacing | | Spacers R'QD between End Shaft Washer and Last Blade | | | | Number of Blades Required | | |
| | 1/2" Spacer | 1/4" Spacer | 1/2" Spacer | | 1/4" spacer | | 16 GA CTB | 10 GA CTB | 10 GA STD |
| | VC27-110 | VC27-109 | VC27-110 | | VC27-109 | | VC50-049 | VC50-055 | VC50-040 |
| | | | 16 GA | 10 GA | 16 GA | 10 GA | | | |
| 1/2" | 1 | 0 | 0 | 0 | 0 | 0 | 63 | 57 | 57 |
| 3/4" | 1 | 1 | 0 | 0 | 0 | 0 | 44 | 41 | 41 |
| 1" | 2 | 0 | 0 | 0 | 0 | 0 | 34 | 32 | 32 |
| 1-1/4" | 2 | 1 | 2 | 1 | 0 | 1 | 27 | 26 | 26 |
| 1-1/2" | 2 | 2 | 1 | 1 | 0 | 1 | 23 | 22 | 22 |
| 1-3/4" | 3 | 1 | 1 | 2 | 1 | 1 | 20 | 19 | 19 |
| 2" | 3 | 2 | 0 | 2 | 0 | 0 | 18 | 17 | 17 |



NOTE: DEPENDING ON BLADE SPACING/BLADES USED, SOME SPACERS WILL BE LEFT. STORE REMAINING SPACERS ON SPARE SPACER MOUNT LOCATED ON GEAR BOX.
 ***RECOMMENDED TO USE NEW BLADES WHEN CHANGING SPACING DUE TO WEAR ON USED BLADES

| ITEM | PART NO | DESCRIPTION | QTY |
|------|-----------------|---------------------------------------|-----|
| 1 | AE50-094 | 72MM X 4 HOLE FLANGE | 4 |
| 2 | AG26-004 | 5/16 X 1-3/4 KEY | 1 |
| 3 | AG50-013 | 1-3/8 BORE BEARING | 2 |
| 4 | HW03012032G5ZPC | 3/8 X 1 CARRIAGE BOLT, GR5 | 8 |
| 5 | HW17008056G8PLC | 1/4 1-3/4 GR 8 HEX HAED TAP BOLT | 3 |
| 6 | HW22012G5ZPC | 3/8 HEX FLANGE LOCK NUT | 8 |
| 7 | HW25052G5PLF | 1 5/8 HEX JAM NUT NF GD5 | 1 |
| 8 | HW32008G5ZP | 1/4 LOCK WASHER | 3 |
| 9 | HW6005207610GPL | 1.625 ID X 2.375 OD X 10 GA MACH. BU. | 1 |
| 10 | VC27-111 | VC40 END SHAFT SPACER | 2 |
| 11 | VC50-075 | 1-3/8 SD BUSHING | 1 |
| 12 | VC50-076 | 3B64SD SHEAVE | 1 |
| 13 | VC80-042 | VC40 SHAFT | 1 |

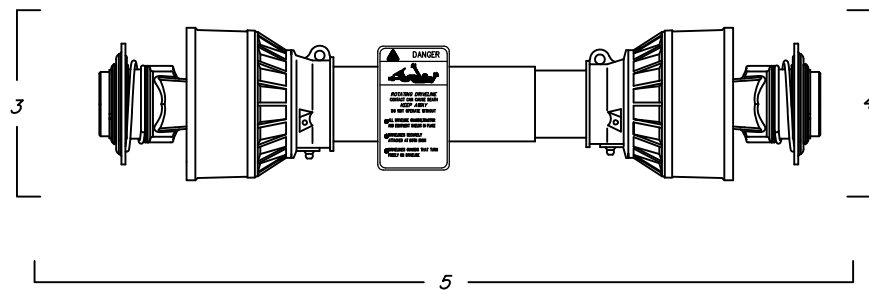
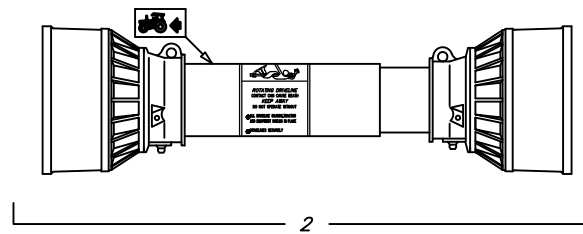
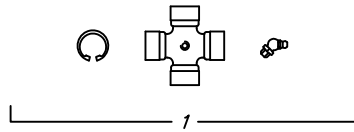
REFER TO THE SHOP MAINTENANCE SECTION FOR STACKING BLADES & INSTALLING SHAFT



TRACTOR DRIVE LINE COMPONENTS

Order No. VC55-042 (Complete Drive Line)

| ITEM NO. | ORDER NO. | DESCRIPTION | QTY. |
|----------|-----------|------------------------|------|
| 1 | VC55-003 | CROSS KIT | 2 |
| 2 | VC55-043 | CPL. SHIELD ASSEMBLY | 1 |
| 3 | VC55-044 | OUTER SHAFT w/ SHIELD | 1 |
| 4 | VC55-045 | INNER SHAFT w/ SHIELD | 1 |
| 5 | VC55-042 | COMPLETE D.L. ASSEMBLY | 1 |



VC40 FLEXIBLE JACK SHAFT

Order No. VC55-049 (Complete Drive Line)

