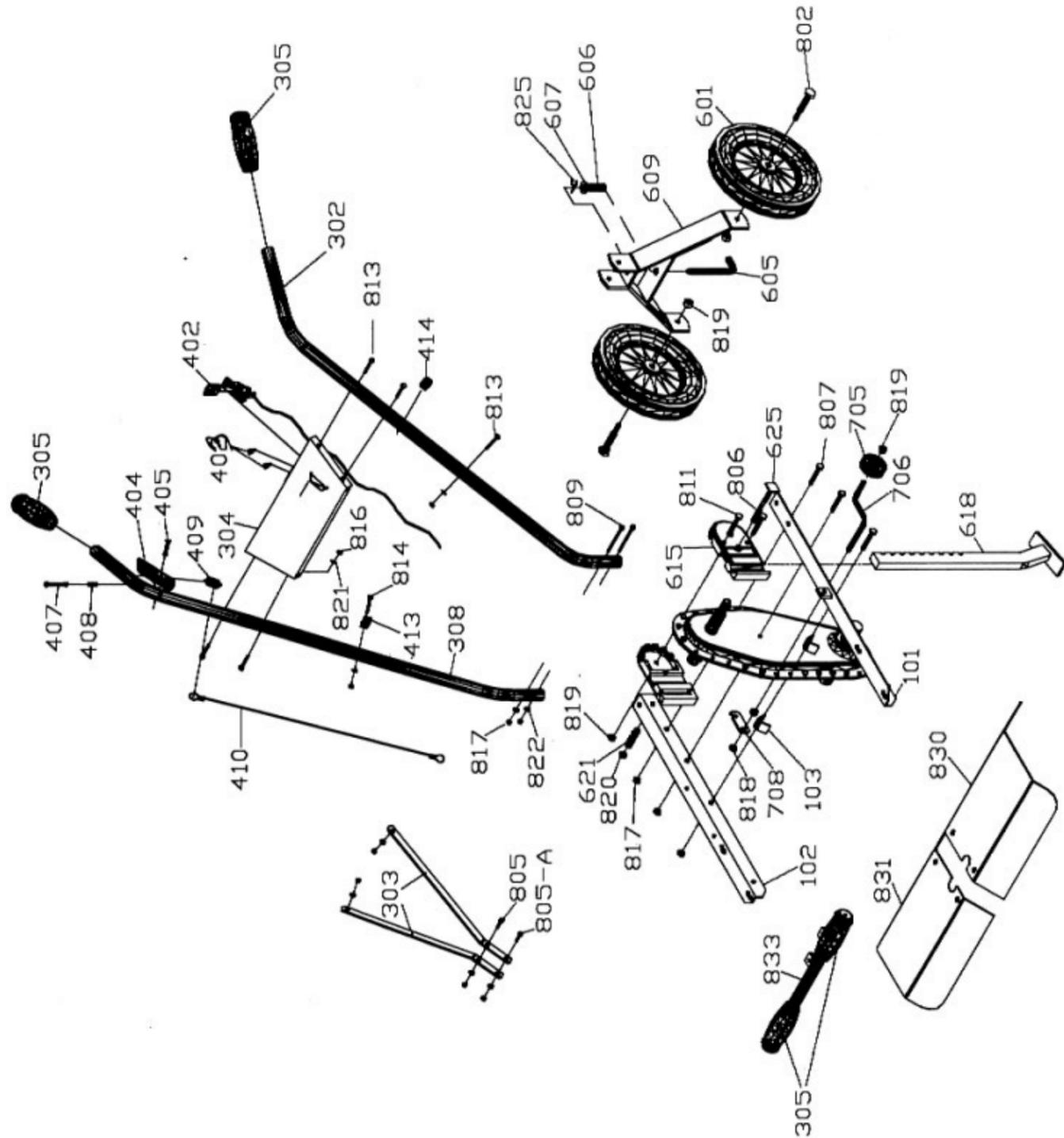


FRAME ASSEMBLY



OPERATION



BEFORE USING THIS MACHINE CHECK THE ASSEMBLY INCLUDING THE HANDLE AND CONTROLS. MAKE SURE ALL FASTENERS ARE TIGHT. MAKE SURE THE THROTTLE AND OTHER CONTROLS WORK CORRECTLY.



BEFORE STARTING THIS TILLER, BE FAMILIAR WITH ALL OPERATING CONTROLS. KNOW HOW TO DISENGAGE TINES, STOP FORWARD MOVEMENT AND SHUT OFF ENGINE.

OPERATING CONTROLS

Throttle Control Lever

The throttle control lever, located on the left side of the handle controls engine speed. When starting, place control lever in center position. Then adjust to desired speed. To stop engine move throttle control lever to rear position. Push stop switch at spark plug.

Clutch Lever

The clutch is disengaged when clutch is away from handle grip. To engage clutch, squeeze clutch lever to handle.

Operating Instructions

Before operating the machine, become familiar with the operating instructions and safety suggestions in this manual. Operate the machine in an open area to get the "feel" of the machine and its controls.

Starting and Stopping the Engine

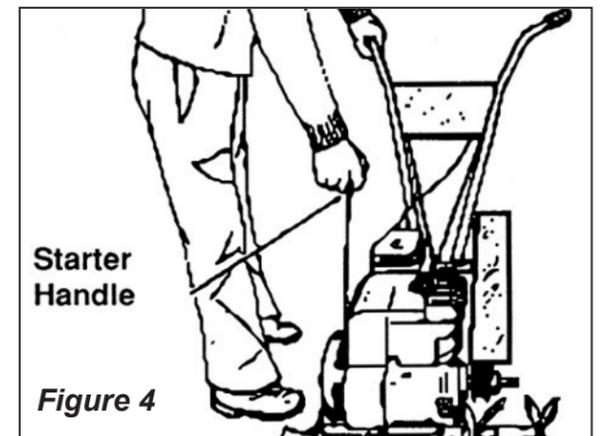
Before starting the engine check that all bolts are tight, and that the tiller is assembled properly. Review Safety suggestions and Operating Instructions for safe and proper use of the tiller.

Pre Start

1. Check the spark plug for proper connection on the spark plug.
2. Fill the fuel tank with clean, fresh, regular gasoline from an approved container.
3. Check the oil for proper level. Refer to engine owner's manual for correct grade and quantity and directions.
4. Make certain clutch lever is in disengaged position.

Starting Procedure

1. Move throttle control lever to center position.
2. Manually open choke. Hold the handle with your left hand while pulling the starter rope with your right. Pull the rope out slowly until the engine reaches the start of the compression cycle (the rope will pull slightly harder at this point). Then allow the rope to retract fully.
3. Pull the rope with a continuous full arm stroke. Keep a firm grip on the starter handle and let the rope rewind slowly. Do not let the handle snap back against the starter.



DANGER

To avoid possible serious bodily injury, keep hands and feet away from tines and v-belt before and after starting engine.

4. Repeat steps Number 2 and 3 above until the engine starts. If the engine fails to start after 3 pulls on the rope, repeat Step 1 above as necessary. Close choke after engine has responded.

5. As the engine warms up, move the throttle lever to desired position. Allow engine warm-up period before operating tiller.

NOTE: A warm engine may start without choking. Do not use the choke if engine is hot.

Stopping Engine

1. Move the throttle control to rear position.
2. Push stop switch at spark plug.
3. Disconnect the wire from the spark plug to prevent accidental starting of the machine while it is unattended.

OPERATION OF THE CHAIN DRIVE TILLER

1. When the ground is hard (especially during spring and fall plowing), place wheels in up position by pulling spring loading pin and lifting wheels. Release pin. For weeding or cultivating, wheels may be left down if you prefer.
2. Adjust the drag stake for comfortable operation. This is done by depressing pin, and sliding the drag stake up or down. The drag stake should be set so that when it is firmly in the ground, and your hands are on the tiller handle, your arms hand comfortably with the elbows slightly bent.
3. Move throttle control to center position. Start the engine and allow it to warm up, then set the throttle at about half speed. After you have become more familiar with the tiller, you may want to run the engine a little faster.
4. Press down firmly on the handles, and then squeeze the clutch lever. The tines will begin to turn, but the tiller should not move forward. If it does, don't pull backwards - merely press down harder on the handle.

	DANGER
<p>To prevent personal injury, the chain drive must disengage immediately when clutch lever is released. If it does not, stop the tiller, adjust belt and cable tension as described in Adjustments section of this manual. Never leave the tiller unattended with the engine running. Children are attracted to a running tiller and could be injured if struck by the rotating tines.</p>	

	WARNING
<p>Keep hands clear of belt and tines while engine is running. Never attempt to adjust or clean tines while engine is running, at risk of severe injury.</p>	

When you find the right amount of downward pressure so that the tines are digging and tiller is not moving forward, release the pressure slightly. As you release it you'll notice the tiller beginning to move forward.

The whole tilling operation is controlled by the amount of pressure you put on the drag stake. Do not fight the tiller. Stand between the handles and press down to go slower and dig deeper, and release the downward pressure to move forward faster. In normal soil, the actual up and down movement of the handles will be no more than an inch or two.

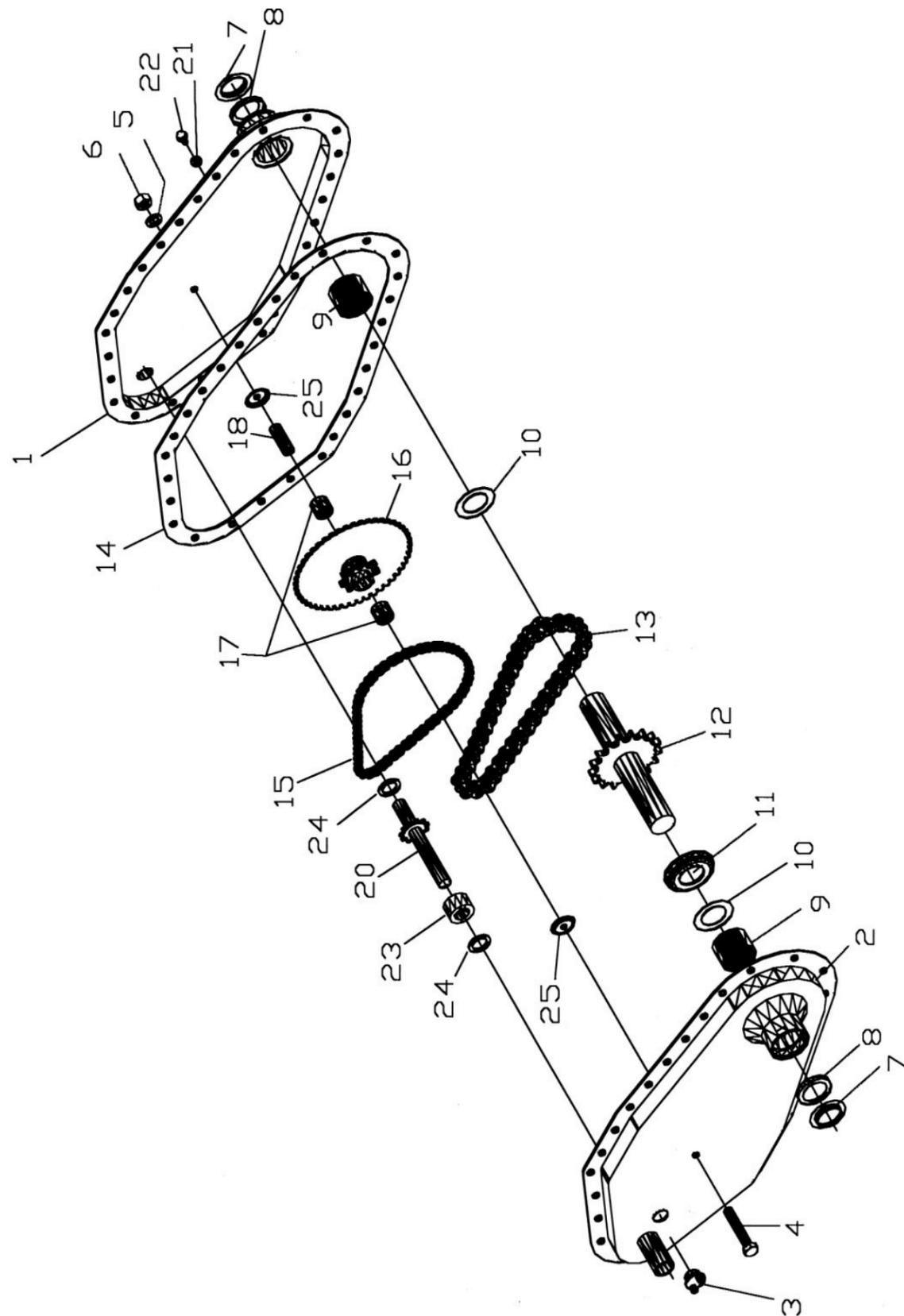
TRANSPORT

To transport tiller from garden to storage area, lift the handles until the drag stake is above ground level, set the engine throttle at slow speed and walk the tiller on the tines.

TRANSMISSION 130400			
REF #	PART #	QUAN.	DESCRIPTION
1	130693	1	Left hand Case Assembly
2	130692	1	Right Hand Case Assembly
3	359312	1	Oil Fill Plug
4	400201	1	5/16" x 2 3/4" Bolt
5	455041	1	5/16" Washer
6	443106	1	5/16" Nut
7	359306	2	Dust Shield
8	359305	2	Oil Seal
9	359304	2	Bearing, Needle
10	359313	AR	Washer
11	359303	1	Spacer
12	162038	1	Shaft and Sprocket Assembly
13	359302	1	Chain
14	336675	1	Gasket
15	359296	1	Chain
16	162023-A	1	Idler Sprocket Cluster
17	359297	2	Input Bearing
18	359298	1	Bushing, Idler Cluster
20	162037	1	Input Shaft/Sprocket
21	359339	1	Washer Rubber Seal
22	408883	1	1/4" x 1/2" Screw
23	359351	1	Input Shaft Spacer
24	455049	AR	Shim Washer 41/64 x 1 x .0625
	455062	AR	Shim Washer 41/64 x 1 x .032
25	359299	2	Transmission Washer

***AR -- As Required**

TRANSMISSION



OPERATING TIPS

To acquire the knack of letting the tiller do the work without effort on the part of the operator, we offer the following suggestions:

1. Adjust drag stake so the handles are at such a height that your arms hang straight down to contact them. Rear wheels should be raised for deep tillage or ease of turning in confined areas.
2. Operate the tiller at about 3/4 throttle.
3. Don't hurry the job - proceed at a slow walk - give the machine time to do its job.
4. Concentrate on keeping your arms relaxed (There is a natural tendency for any beginner to tense up.). Operation actually takes very little effort. Let the tiller do the work.
5. When tilling on sloping ground, turn the front of the machine uphill to sufficiently counteract the tendency to run down hill.
6. For best results, operate at reduced throttle settings when the ground is extremely hard or rough.
7. When cultivating, raise the drag stake until the handles are the proper height as described in Item 1 or set rear wheels in position. Proceed at a slow walk, watching the rotors as it tills along the row.
8. TIGHTEN ALL NUTS AND BOLTS PERIODICALLY.

TILLING PATTERNS

Whenever possible till the soil in the direction in which the planting or rows will run. If the soil is extremely hard and dry, it may be advisable to till across the plot on the first digging and then obtain the depth you want by tilling in the direction the planting will be done.

ADJUSTMENTS

TINE ADJUSTMENT

The standard tilling width is 26" with both inner and outer tine assemblies mounted. Tilling width is 14" with outer assemblies removed.

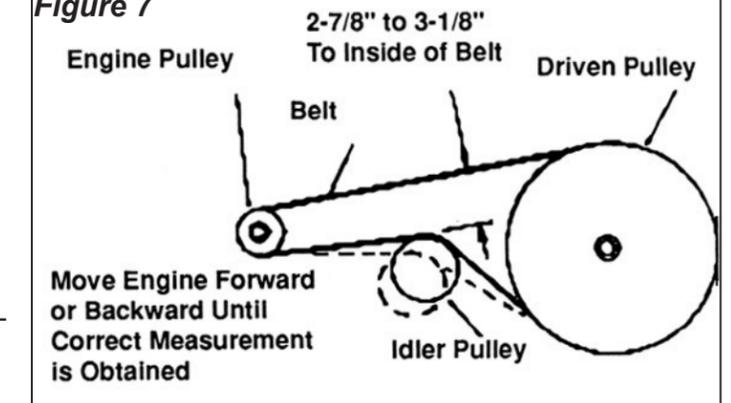
To remove outer tine assemblies from inner tine assemblies, remove pin clip from clevis pin. Slide clevis pin out and remove outer tine assembly. Extension tines provide a tilling width of up to 38".

CLUTCH ADJUSTMENT

Proper clutch adjustment is very important. Minor adjustments, if needed, can be made by using the links on the clutch cable chain only. However, the friction type clutch may need further adjustment as the "V" belt stretches. Adjust as follows:

1. Remove belt guard.
2. Loosen 4 engine mount bolts. Slide engine forward or backwards as required.
3. Unhook clutch cable from load spring.
4. Push upward on idler pulley to take all slack from the drive belt. Distance between the inside of belt at the idler pulley should be between 2 7/8" and 3 1/8".

Figure 7



DANGER

To avoid possible serious bodily injury, when performing any adjustment remove the spark plug wire and place the wire away from the plug to prevent accidental starting.