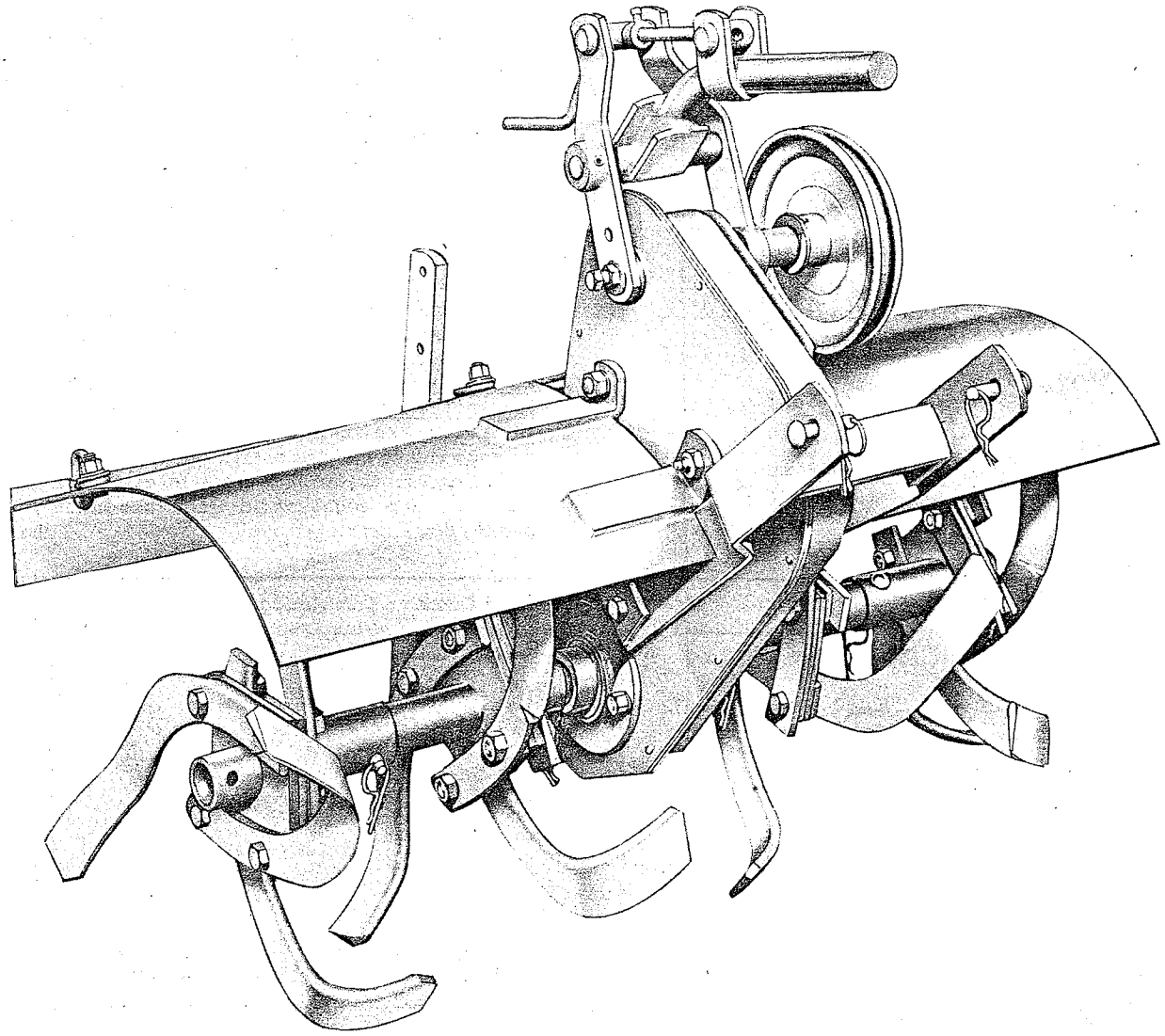
Simplicity®

32" HEAVY DUTY TILLER

Mfr's. No. 191

1963/64
1964/65



SIMPLICITY MANUFACTURING COMPANY / PORT WASHINGTON, WIS.

The 32" Heavy Duty Tiller is shipped from the factory in one carton. Before starting to assemble the tiller, be certain to remove all of the parts from the carton.

Assembly

For ease in assembling the tiller, follow the sequence of steps outlined below :

1. Remove all masking tape from the ends of the tine shaft and the drive pulley shaft of the chain guard assembly.

2. To attach the deflector assembly to the chain guard assembly; remove 2 mounting bolts from each side of the chain guard as shown in figures 1 & 2. Mount the deflector so that the holes in the mounting brackets line up with the holes in the chain guard assembly as shown in figure 3, and replace the mounting bolts in their original holes. Tighten the bolts securely.

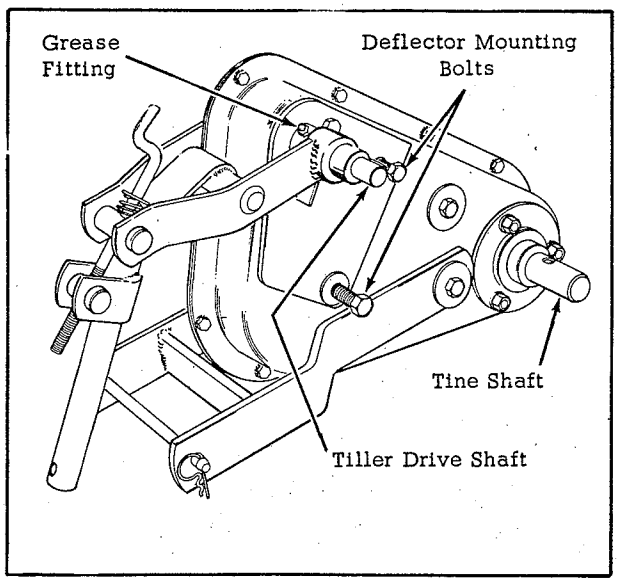


Fig. 1

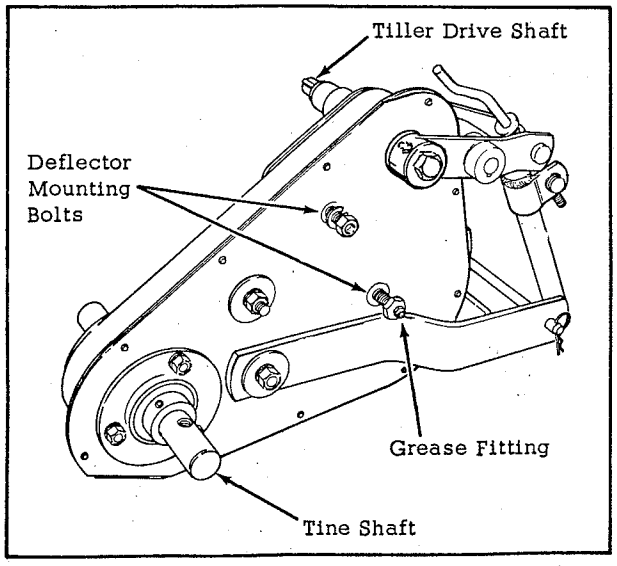


Fig. 2

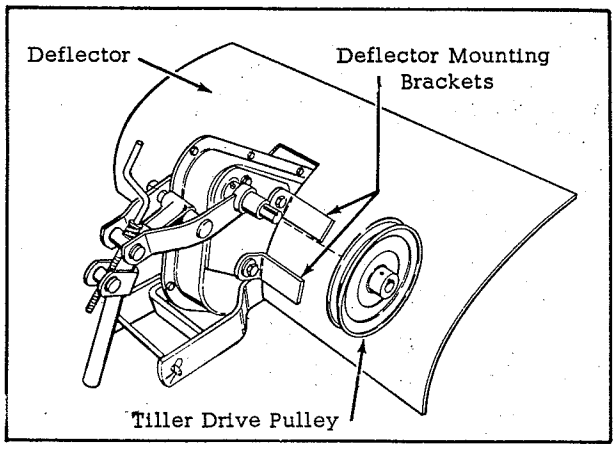


Fig. 3

3. Assemble the left hand inner tine assembly to the left hand outer tine assembly and fasten with a pin and cotter pin. Assemble the right hand inner tine assemble to the right hand outer tine assembly, and fasten with a pin and cotter pin. NOTE: the inner tine assemblies can be identified by the constant diameter of the hub fastened to the tine plate. The long end of this hub is inserted into the long end of the hub of the outer tine assemblies and is fastened as described above.

   CAUTION: As it is possible to mount the tine assemblies incorrectly to the tine shaft, pay particular attention to the following: Assemble the tines to the tine shaft as shown in figure 4 so that the sharp edges of the top tines face toward the front of the tractor. Fasten the tines to the tine shaft with a pin and cotter pin on each end of the tine shaft. When the tines are mounted, check once more to be certain that the sharp edges of all tines face in the correct direction.

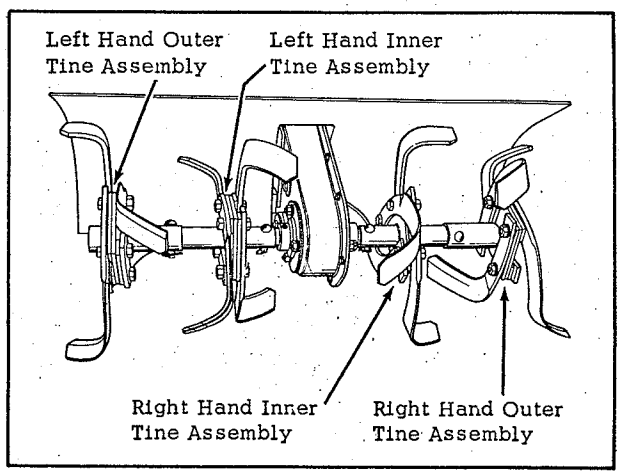


Fig. 4

4. Assemble the tiller drive pulley to the tiller drive shaft as shown in figure 3. The pulley is held in place by a key and set screw and is to be mounted with the hub of the pulley facing away from the chain guard.

Attachment

For ease in attaching the tiller to the tractor, follow the sequence of steps as outlined below.

1. Assemble the tiller mounting bracket to the upper portion of the rear frame of tractor as shown in figure 5, using hex capscrews, lockwashers and hex nuts provided.

2. Position the tiller in back of the tractor and insert the tiller lift bar into the tube of mounting bracket as shown in figure 5. Depress the tractor handles until the mounting bracket is lowered sufficiently to allow the tiller lift bar to slide into the tube. Secure in place with a pin and hair pin cotter.

   Release the tractor handles and the tiller will raise and swing forward. Guide the tiller frame into position on lower mounting points of tractor rear frame, and secure in place with 2 pins and hair pin cotters as shown in figure 5.

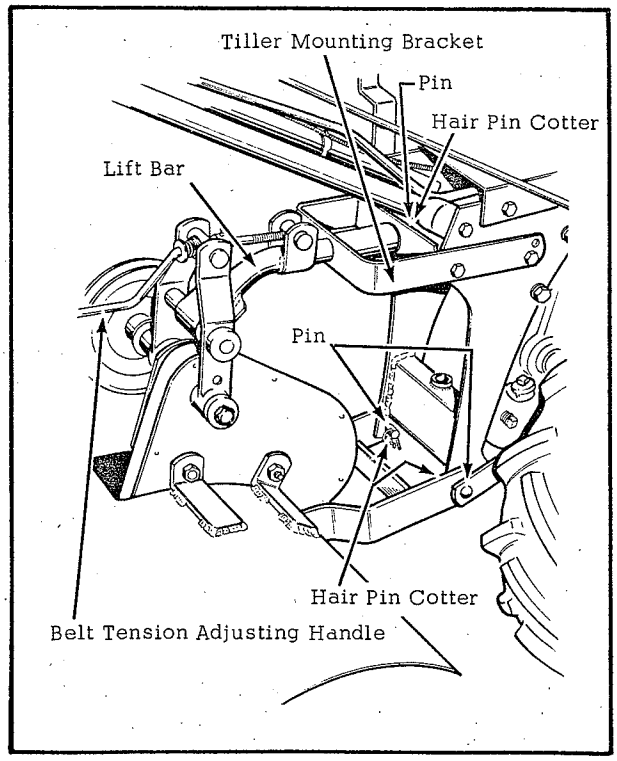


Fig. 5

3. Loosen the set screw on engine pulley. Remove pulley and reinstall in a reversed position, with the larger diameter on outer end of engine shaft. Be certain to replace pulley key in shaft and retighten set screw.

4. Separate the transmission drive pulley from its pulley hub by removing the 3 hex capscrews and lockwashers. Replace this pulley with the tiller drive pulley group as shown on page 8. The 10" pulley is mounted against the pulley hub; and the spacer ring is mounted between the 10" pulley and the 5 1/2" pulley, using hex capscrews 2" long. Install belt guard as shown.

5. Install drive belt from engine pulley to transmission drive pulley, and then install the tiller drive belt as shown in figure 6. Check the pulleys for alignment with each other, and adjust if required. When pulleys are in line, tighten the set screws securely.

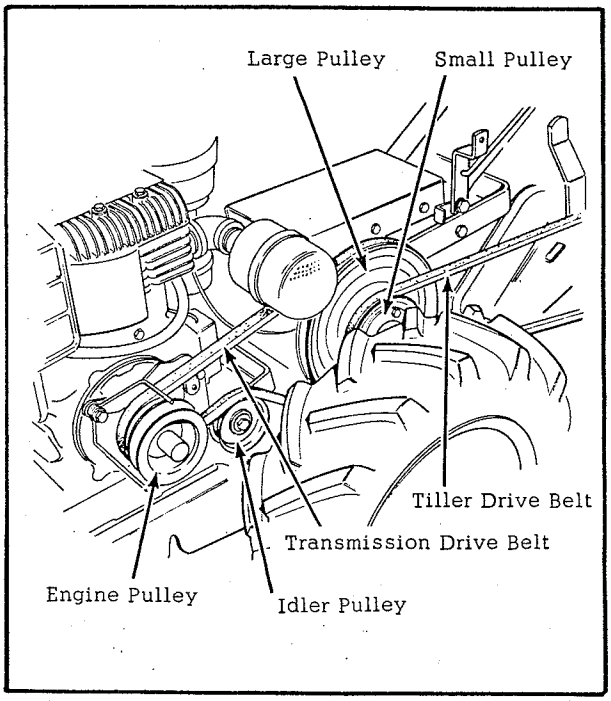


Fig. 6

Belt Tension

The 2 V-belts that transmit power from the engine to the tiller drive shaft are designed and manufactured to provide long and satisfactory service. Because of the special design of these belts, it is urged that you replace them only with genuine replacement belts ordered from your dealer. Consult the parts list for correct part numbers for these belts when replacement is necessary.

Adjustment of tension of the tiller drive belt is regulated by the belt tension adjusting screw shown in figure 5. Turn the handle in a clockwise direction to increase the belt tension and counter-clockwise to decrease tension. The belt should have tension sufficient to transmit power to the tiller drive shaft.

AVOID EXCESSIVE TENSION, as it will cause premature belt failure.

Lubrication

The tiller is lubricated through 3 grease fittings. Two fittings are located on the tiller drive shaft housing and the other is located on the right hand side of the chain guard. See figures 1 & 2. Lubricate these fittings every 3 hours of operation with a good grade of general purpose automotive type grease loaded in a standard grease gun. Be certain to wipe any dirt from the fittings before applying the grease gun. Failure to clean the grease fittings will result in grit being forced into the bearing surfaces along with the grease. Also apply a few drops of lubricating oil to the moving linkages of the tiller from time to time to maintain ease of operation.

TILLER OPERATION

Before starting the tractor engine, place the tiller clutch lever in the disengaged position and raise the tiller above the surface of the ground. With the tractor engine running, engage the tiller clutch and lower the tiller into contact with the ground. As the tiller works into the soil, slowly release the tractor clutch and move ahead. When coming to the end of a row, raise the tiller free of the ground before turning around.

Effective operation of the tiller will depend in a large degree upon the operator. For example; when intending to till a sod area into a seed bed for gardening, it obviously will require several passes over the same path to break the sod and ground into fine particles suitable for a seed bed. Depending upon the nature of the soil, it will be desireable to alter the depth settings for the tiller on succeeding passes until the desired depth is reached. When tilling in soil that has been previously worked, it may be possible to till to the desired depth from the start.

Depth

The depth of tilling is regulated by the position of the depth bar. When the bar is in the raised position, the depth of tilling will be shallow; when the bar is in the lower position, the depth of tilling will be deeper. Try various settings of the depth bar to find a suitable position for your particular requirements. The maximum depth for effective tilling is about 7".

Speed

Soil conditions and depth of tilling will regulate the speed with which the tiller may be effectively operated. For average requirements, set the tractor throttle at 1/2 maximum speed and use a tractor speed slow enough to allow the tiller to work down to the desired depth. As the tiller is designed to float and follow the contours of the surface being tilled it will be necessary to regulate the forward speed to suit the depth of tilling and the condition of the soil being worked.

Moisture

Avoid taking the tiller into wet or soggy ground.

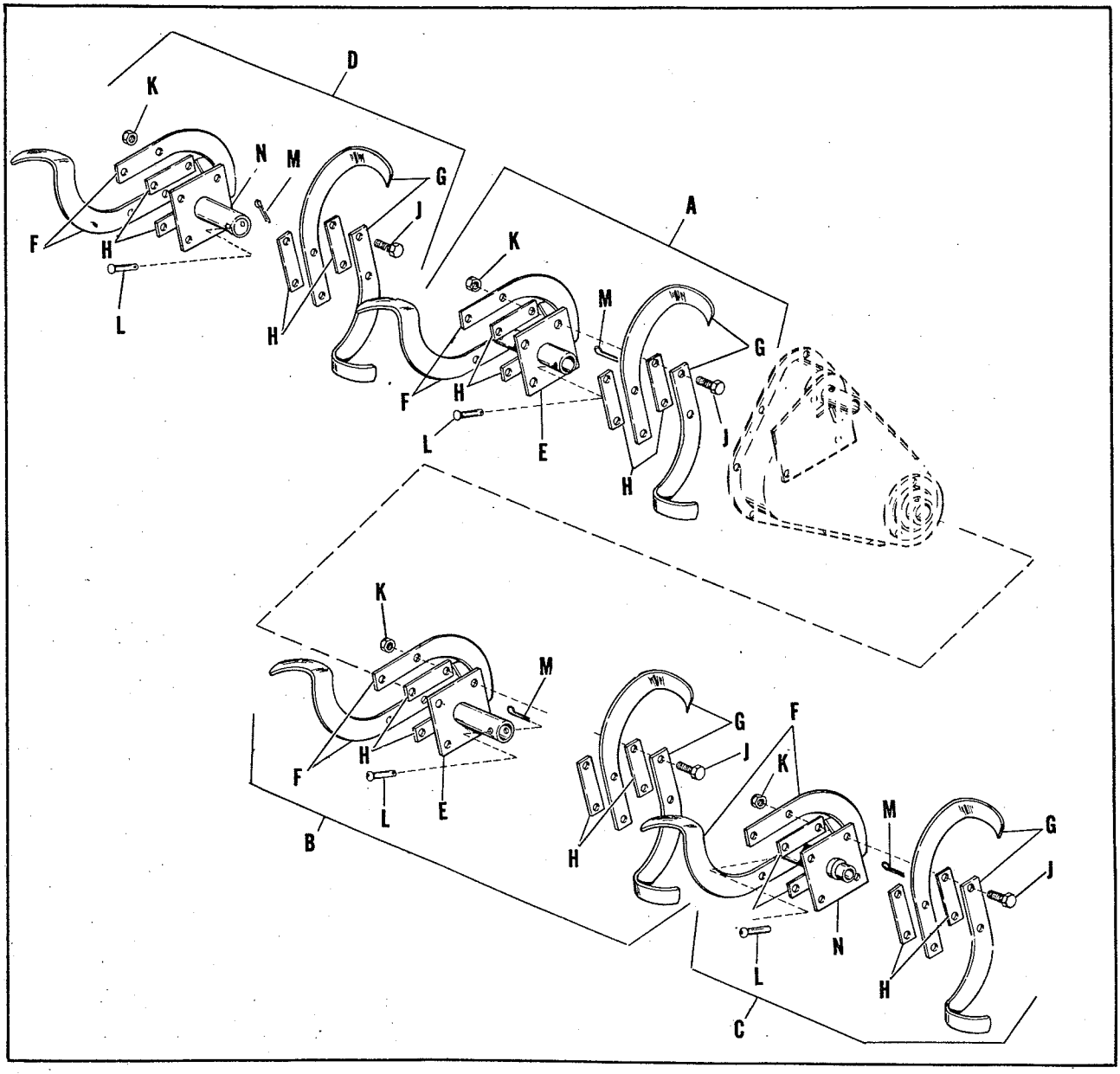
Frequently it happens that wet soil balls up or forms lumps that will be difficult to work up later on, or the tine assemblies may clog with soil or clay.

In extremely hard or dry soil, it may be best to cross till: that is, till first in one direction and then till again at a 90° angle to the original direction.

Tine Extension Set
Mfr. No. 212

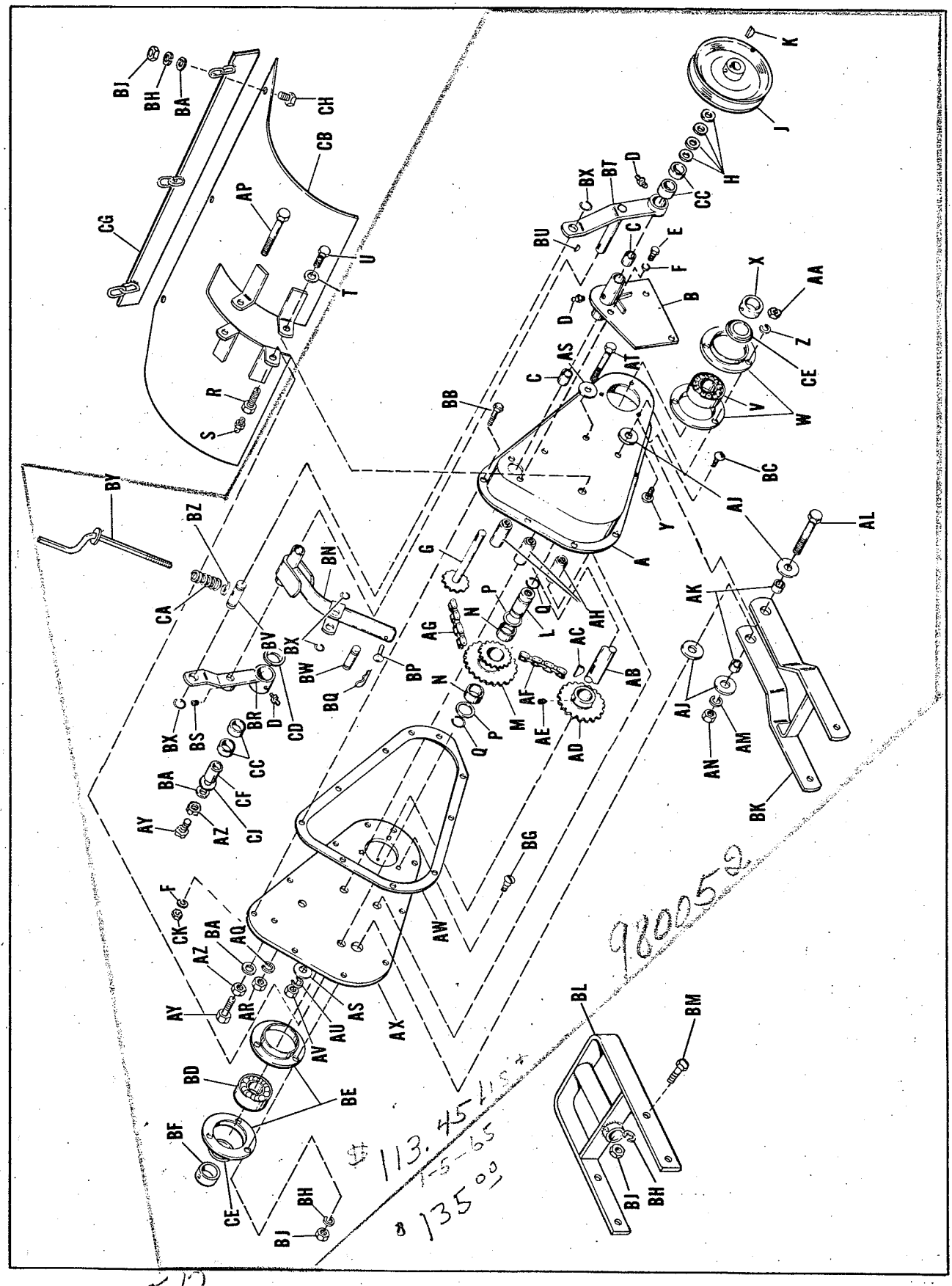
For greater tilling width, a tine extension set is available which increases the width of cut from 32" to 42". The extension tine assemblies are secured to the regular tine assembly hubs by neans of the pins and cotters provided.

TINE ASSEMBLIES



ORDER BY PART NUMBER

Reference Letter	Part No.	Description
A	105159	Blade Assembly, Right Hand Inner Tine
B	105163	Blade Assembly, Left Hand Inner Tine
C	105164	Blade Assembly, Right Hand Outer Tine
D	105165	Blade Assembly, Left Hand Outer Tine
E	105248	Plate Assembly, Tine, Inner
F	8152002	Blade, Tine, Right Hand
G	8152001	Blade , Tine Left Hand
H	105162	Spacer
J	706014	Capscrew, Hex, 7/16"-20 NC x 1 3/4" lg
K	717512	Nut, Lock, Hex, Full, 7/16"-20 NC
L	105249	Pin, Tine Shaft
M	722009	Pin, Cotter, 1/8" diameter
N	105245	Plate Assembly, Tine, Outer


HOUSING GROUP
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HOUSING GROUP

Order by Part Number

Ref. Letter	Part No.	Description
A	105123	Guard Assembly, Chain
B	105127	Support Assembly, Bearing Housing
C	108054	Bearing, Needle
D	727001	Grease Fitting
E	705017	Hex Capscrrew, 5/16"-18NC x 3/4"
F	720001	Lock Washer, 5/16"
G	105189	Drive Shaft Assembly
H	153079	Washer
J	105191	Drive Pulley
K	725003	Woodruff Key
L	105192	Intermediate Spacer
M	105193	Sprocket Assembly
N	105195	Roller Bearing
P	8281014	Washer
Q	105194	Retaining Ring
R	105132	Bolt
S	727002	Grease Fitting
T	719003	Plain Washer, 7/16"
U	706012	Hex Capscrew, 1/2"-20 x 1-3/4"
V	8151071	Bearing
W	8151072	Bearing Flange
X	8151073	Bearing Collar
Y	702003	Carriage Bolt, 3/8"-16 x 3/4" lg.
Z	720002	Lock Washer, 3/8"
AA	717003	Hex Nut, Full, 3/8"-16
AB	105084	Tine Shaft
AC	725503	Hi-Pro Key, 1/4" x 7/8"
AD	8151022	Sprocket
AE	713503	Set Screw, Cup Point, Socket Head, 5/16"-18 x 5/16"
AF	8151015	Rotor Chain #50 chain
AG	105055	Drive Chain
AH	105085	Guard Spacer
AJ	105010	Washer
AK	105133	Spacer
AL	705033	Hex Capscrew, 7/16"-14 x 4-1/2"
AM	720006	Lock Washer, 7/16"
AN	717022	Hex Nut, Full, 7/16"-14
AP	~~705045~~	Hex Capscrew, 7/16"-14 x 4" lg. 715084
AQ	720006	Lock Washer, 7/16"
AR	717022	Hex Nut, Full, 7/16"-14
AS	105010	Washer

Order by Part Number

Ref. Letter	Part No.	Description
AT	705034	Hex Capscrew, 7/16"-14 x 3-3/4" lg.
AU	720006	Lock Washer, 7/16"
AV	717022	Hex Nut, Full, 7/16"-14
AW	105016	Gasket
AX	105229	Plate Assembly
AY	715052	Hex Capscrew, 3/8"-24 x 2-1/2" lg.
AZ	717014	Hex Jam Nut, 3/8"-24
BA	719001	Plain Washer, 3/8"
BB	705012	Hex Capscrew, 5/16"-18 x 5/8" lg.
BC	703005	Carriage Bolt, 5/16"-18 x 5/8" lg.
BD	8151071	Bearing
BE	8151072	Bearing Flange
BF	8151073	Bearing Collar
BG	702003	Carriage Bolt, 3/8"-16 x 3/4" lg.
BH	720002	Lock Washer, 3/8"
BJ	717003	Hex Nut, Full, 3/8"-16
BK	105137	Frame Assembly
BL	105215	Tiller Socket Assembly
BM	705005	Hex Capscrew, 3/8"-16 x 1" lg.
BN	105141	Lift Bar Assembly
BP	118053	Pin
BQ	8161045	Spring Clip
BR	~~105231~~	Lever Assembly, R. Side, Belt Tension 105251
BS	713503	Set Screw, Cup Point, Socket Head 5/16"-18 x 5/16
BT	~~105234~~	Lever Assembly, L.Side, Belt Tension 105253
BU	725002	Key, Woodruff, #6
BV	105153	Upper Pivot
BW	105154	Lower Pivot
BX	154264	Retaining Ring
BY	~~108169~~	Adjusting Screw Assembly 105207
BZ	719002	Washer, Plain, 5/16"
CA	8191047	Spring
CB	105155	Deflector Assembly
CC	105058	Bushing
CD	105238	Thrust Washer
CE	105237	Shield
CF	105236	Adapter
CG	105210	Flap Assembly
CH	705031	Hex Capscrew, 3/8"-16 x 7/8" lg.
CJ	8161199	Washer
CK	717511	Hex Lock Nut, 5/16"-18 NC.

To engage tiller, tighten by adjusting screw assy
To disengage tiller, loosen by adjusting screw assy

CL 105005 Screw
CM 719001 Washer
CN 720002 L. Washer
CO 717003 Nut
} Used to bolt 105251 & 253 together

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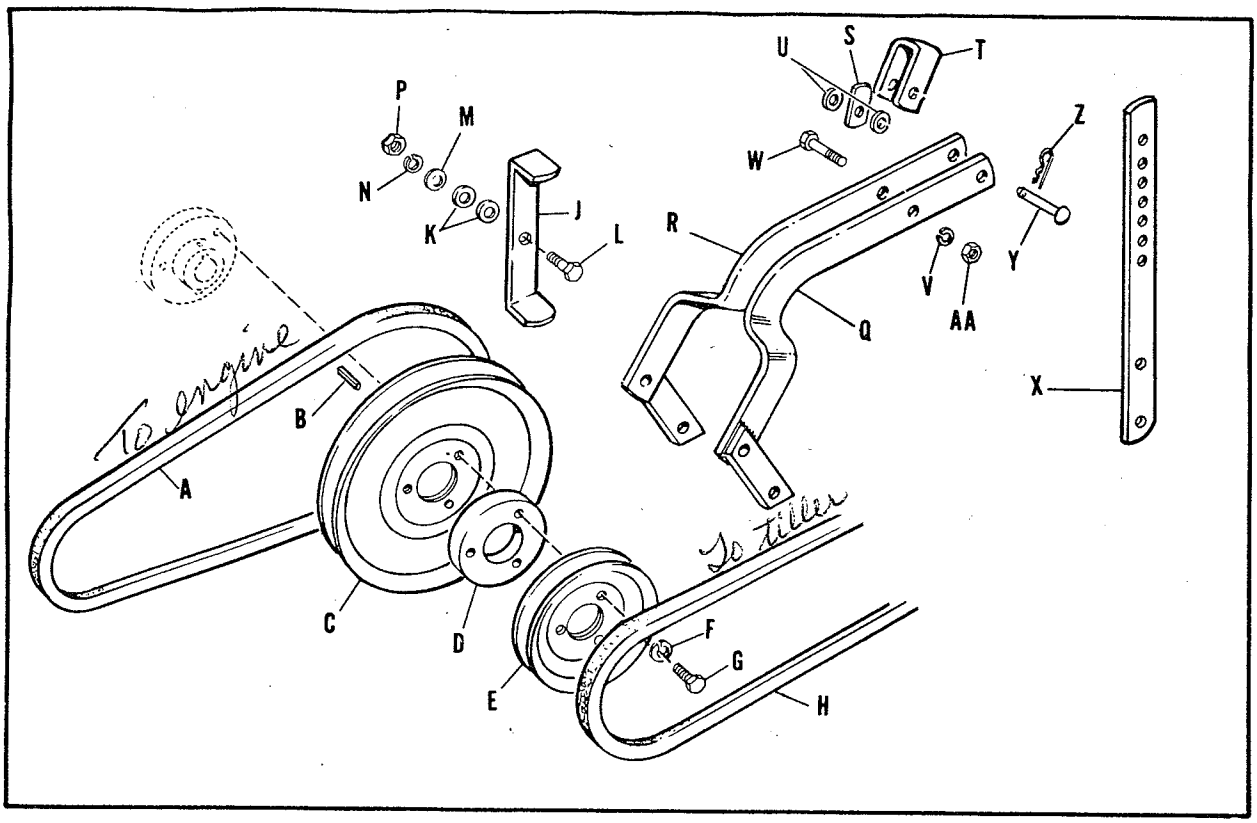
TILLER DRIVE & DEPTH GAGE



Order by Part Number

Reference Letter	Part No.	Description
A	105217	Belt, "V"
B	8061081	Key
C	105171	Pulley, 10"
D	105199	Ring
E	105172	Pulley, 5 1/2"
F	720001	Lockwasher, 5/16"
G	705020	Capscrew, Hex Hd., 5/16"-18 NC x 2" lg.
H	105122	Belt, "V"
J	105208	Guard, Belt
K	8161199	Washer
L	705016	Capscrew, Hex Hd., 3/8"-16 NC x 1 1/4" lg.
M	719001	Washer, Plain, 3/8"
N	720002	Lockwasher, 3/8"
P	717003	Nut, Hex.,Full, 3/8"-16 NC
Q	105219	Beam Assembly, L.H., Depth Gage
R	105218	Beam Assembly, R.H., Depth Gage
S	105200	Lug, Stop
T	105211	Guide
U	719003	Washer, Plain, 7/16"
V	720006	Lockwasher, 7/16"
W	705052	Capscrew, Hex Hd., 7/16"-14 NC x 2 1/4" lg.
X	105092	Bar, Depth
Y	155037	Pin, Round Head
Z	8161045	Clip, Spring
AA	71/022	Nut, Hex, Full, 7/16"-14 NC