

REPAIR PARTS CATALOG OPERATOR'S MANUAL

Brillion

SBT-4
STRIP TILLER



ALL PARTS NOT LISTED ARE STANDARD HARDWARE

BRILLION IRON WORKS, INC.
BRILLION, WISCONSIN

565

SBT-4 SEED BED TILLER

SPECIFICATIONS

I. Tractor Requirements

- A. 70 to 100 H.P. tractor
- B. 540 or 1000 R.P.M. PTO

II. Tilling Units

- A. Four tilling units standard
- B. 6" or 12" tilling width
- C. Row spacing
 - 1. 26" to 40" with 6" width
 - 2. 32" to 40" with 12" width
- D. Maximum tilling depth - 6 inches
 - 1. Controlled with depth adjustment wheels
- E. 18" tine mounting plate diameter
 - 1. Two mounting plates per tilling unit with 6" width.
 - 2. Three mounting plates per tilling unit with 12" width.
- F. Tines Used
 - 1. Four per tilling unit in 6" width.
 - 2. Eight per tilling unit in 12" width.
 - 3. 1/4" x 3" tine
- G. Torque Limiter (slip clutch) on each tilling unit
- H. Floatation
 - 1. Each tilling unit floats individually and follows ground contour individually.
- I. Tilling units hydraulically controlled for raising on turn arounds and for transport
- J. Timken tapered roller bearings - hexagon drive shaft
- K. Triple sealed ball bearings on tine mounting plate drive shaft

III. Frame

- A. Mounts to rear tractor axle.
- B. Straight pull or offset 20".
- C. 4" and 5" boxed channel
- D. Dual trailing wheels
 - 1. Pivotal and 360° castor
 - 2. 14" wheel rim

IV. Transmission and Drive Assembly

- A. Spiral-beveled, gear and pinion, right angle drive
- B. Rated to handle 100 H.P. tractor
- C. 1000 R.P.M. PTO tractors ONLY
- D. 2" hexagon shaft drives tilling units

V. Standard Components

- A. Main frame and drive assembly
- B. Four tilling units
- C. Tool bar for planter
 - 1. 2½" square shaft
- D. Hydraulic cylinders - two
 - 1. For tilling units
 - 2. Planter tool bar

- VI. Provisions for Spraying Equipment (Not standard equipment with units.)
- A. Tanks mount on frame
 - B. Pump driven by roller chain and sprocket from hexagon shaft tiller drive
 - C. Pump mount on frame
 - D. Boom location mounting determined by application of herbicides
 - 1. Boom or broadcast
 - 2. Band
 - 3. Pre-emerge

- VII. Weight
- A. 3400 lbs.
 - 1. Less spray equipment and planters

SETTING UP AND OPERATING INSTRUCTIONS

FOR

SBT-4 RO-TILLER

On the following sheets are illustrations and explanations to help set up and operate this machine.

The Brillion Ro-Tiller is shipped in as few assemblies as possible, to minimize setting up time and labor.

The only setting up required are as follows.

1. Attach the hitch arm assembly to the main frame assembly.
2. Attach the P. T. O. shaft assembly to the input shaft.
3. Attach the axle brackets to the tractor axle.
4. Set the Tiller units to the desired row spacings.
5. Check oil level in drive and tiller housings and grease all lube fittings.

OPERATING INSTRUCTIONS

The tiller lift is controlled with an 8 inch stroke remote hydraulic cylinder, therefore if the planter also requires a remote cylinder the tractor must be equipped with a dual hydraulic control system.

Tilling Depth

The depth of tillage is controlled with a pair of gage wheels on each tiller unit. To change the tilling depth, loosen the capscrews in the gage wheel brackets and raise or lower the gage wheels to obtain the proper tilling depth.

The recommended tilling depth is usually the same as the depth of fertilizer placement.

Slip Clutch

Each tiller unit is equipped with a torque limiting slip clutch to protect both the tiller and tractor when working in stony soil conditions.

To adjust the slip clutch, loosen the set screws in the adjusting nut and tighten the nut to increase the torque setting or loosen it to decrease the torque.

It is important to maintain the proper clutch setting. If the slip clutch setting is too low, it will slip excessively. If the setting is too high, it will not slip even when a stone or other solid object is hit and will not provide any protection for the tiller or tractor.

LUBRICATION

Regular and systematic lubrication is the best assurance against breakdowns and delays. It will help you to get better service from your Ro-Tiller and will avoid many costly repairs.

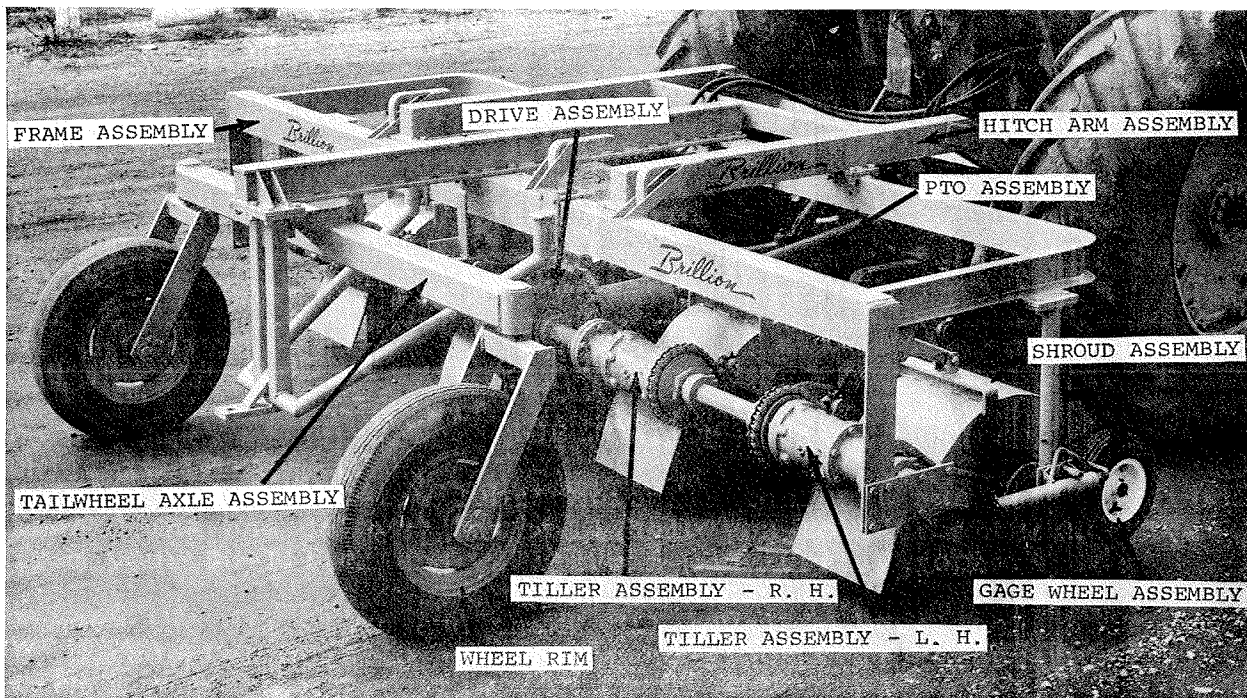
Remove the oil plugs and check oil level in bevel gear housing, B. G. adapter housing and tiller housings. If necessary, fill with S.A.E. 90 E.P. oil.

Grease lube fittings every 5 hours of operation with a S.A.E. multipurpose grease.

1. Gage Wheels (1 lube fitting in each wheel)
2. PTO Shaft (3 lube fittings)
3. Tiller lift shaft (3 lube fittings)

CAUTION

Do not make adjustments, repairs or lubricate the machine while it is in motion.



FRAME, DRIVE & TILLER ASSEMBLY

Part No.	Description
2D-418	Frame Assembly
2D-275	Drive Assembly
2D-593	Tiller Assembly - R.H.
2D-594	Tiller Assembly - L.H.
2D-595	Shroud Assembly
2D-387	Tube Arm Assembly
2D-391	Lift Bracket Assembly
2D-396	Tiller Lift Shaft
2D-412	Idler Bracket Assembly
2D-481	Gage Wheel Assembly - R.H.
2D-482	Gage Wheel Assembly - L.H.
4C-758	Top Bearing Assembly
4C-778	Bottom Bearing
2D-301	Torque Limiter
3D-476	Sprocket, 80A27, 4.000 Dia. Bore
2D-395	Clamp, Tiller Lift Shaft to Lift Bracket
2D-419	Hexagon Shaft, 2" x 141-3/4 Long
2D-420	Flange Bearing, Fafnir Bearing to Frame
2D-421	End Plate, Flange Bearing to Frame
2D-422	Clamp, Hex Shaft
2D-423	Roller Chain, #80 - 63 Links
2D-447	Hydraulic Cylinder, 3 1/2 Bore x 8" Stroke
2D-448	Hose Assembly, 48" Long
2D-449	Hose Assembly 60" Long
2D-450	Spacer, 1/2 Long
2D-596	Spacer, 6" Long
1D-423	Capscrew 3/4-10 NC x 1-3/4 Long, Grade 5
1C-211	Lockwasher 3/4"
5C-460	Capscrew 5/8 - 11 NC x 2" Long, Grade 5
2C-399	Capscrew 5/8 - 11 NC x 1 1/2 Long
1C-392	Nut 5/8 - 11 NC, Hex.
1B-166	Lockwasher 5/8"
5C-907	Washer 5/8" - S.A.E.
1C-270	Capscrew 1/2 - 13 NC x 4" Long
8C-528	Capscrew 1/2 - 13 NC x 3" Long, Grade 5
1C-265	Capscrew 1/2 - 13 NC x 2 1/2 Long
1C-234	Capscrew 1/2 - 13 NC x 2" Long
1C-216	Capscrew 1/2 - 13 NC x 1-3/4 Long
8C-527	Capscrew 1/2 - 13 NC x 1 1/2 Long, Grade 5
1C-390	Nut 1/2 - 13 NC, Hex.
5C-392	Locknut 1/2 - 13 NC, Stover
1C-109	Lockwasher 1/2"
9C-134	Washer 1/2" - S.A.E.

TAILWHEEL AXLE ASSEMBLY

2D-501	Fork Bracket Assembly
2D-506	Fork Weldment
2D-510	Axle Assembly
2D-513	Hub Assembly
3C-656	Bearing Cone, Timken #13686
3C-657	Bearing Cup, Timken #13621
5C-566	Bearing Cone, Timken #13687
5C-897	Bearing Cone, Timken #14123A
5C-613	Seal, C/R 277 HDR 23
5C-896	Seal, C/R 277 HDR 124
2D-514	Spacer, 3" Long
4C-488	Washer 7/8" - S.A.E.
6C-406	Washer 1-1/4" - S.A.E.
4C-839	Nut 7/8 - 14 NF, Slotted Hex
2D-515	Nut 1-1/4 - 12 NF, Slotted Hex
1C-205	Cotter Pin 5/32 x 1 1/2 Long
6C-468	Cotter Pin 3/16 x 2" Long
2D-516	Hub Cap
2D-517	Wheel Bolt 9/16 - 18 UNF
1D-734	Wheel Rim - 14"

PTO SHAFT ASSEMBLY

2D-528	Shaft & Joint Assembly
2D-529	Tube & Joint Assembly
1D-239	Bolt 5/16 - 18 NC x 3" Long, Grade 5
9C-986	Locknut 5/16 - 18 NC, Stover

TILLER ASSEMBLY R. H. - 12" WIDTH

2D-588	Shaft & Plate Weldment - R.H.
2D-569	Housing Extension
2D-289	Hub
2D-290	Lift Arm Housing
2D-291	Lift Arm
2D-292	Coulter 18" Dia. - Notched
2D-293	Bearing Cup, Timken 27620
2D-294	Bearing Cone, Timken 27687
2D-295	Bearing Assembly Fafnir 1115KPP2
2D-296	Shim .005 Thick
2D-297	Shim .0075 Thick
2D-298	Shim .020 Thick
2D-299	Sprocket 80B14, 1.750 Dia. Bore
9C-850	Seal Federal - Mogul 25017
6C-257	Key 3/8 Square x 1-11/16 Long
1C-330	Capscrew 1/2 - 13 NC x 2 1/4 Long
1C-216	Capscrew 1/2 - 13 NC x 1-3/4 Long
1C-390	Nut 1/2 - 13 NC, Hex
1C-109	Lockwasher 1/2"
1C-232	Capscrew 3/8 - 16 NC x 1 1/4 Long
1C-277	Nut 3/8 - 16 NC, Hex.
1C-183	Lockwasher 3/8"

4C-837
2D-304

Plug 3/8 - 18 NPT
Retaining Ring National - XSC-160

TILLER ASSEMBLY L. H. - 12" WIDTH

Same as R. H. Tiller Assembly, except use 2D-589
Shaft & Plate Weldment - L. H.

SHROUD ASSEMBLY

2D-574	Shroud Weldment
2D-597	Angle Strap
2D-598	Deflector
1C-232	Capscrew 3/8 - 16 NC x 1 1/4 Long
1C-277	Nut 3/8 - 16 NC, Hex
1C-183	Lockwasher 3/8"
1C-182	Washer 3/8" Std. Flat

GAGE WHEEL ASSEMBLY - R. H.

2D-483	Bracket Weldment - R. H.
2D-893	Wheel Assembly
2C-458	Washer 3/4" S.A.E.
1C-205	Cotter Pin 5/32 Dia. x 1 1/2 Long

GAGE WHEEL ASSEMBLY - L. H.

Same as R. H. Gage Wheel Assembly, except use 2D-484
Bracket Weldment

IDLER SPROCKET ASSEMBLY

2D-413	Bracket Weldment		
2D-414	Sprocket Assembly	{ 2D-417 2C-331	Sprocket 9 Tooth Bushing
2D-458	Washer 3/4" S.A.E.		
1C-205	Cotter Pin 5/32 Dia. x 1 1/2 Long		

DRIVE ASSEMBLY

9C-828	Bevel Gear Drive Assembly
2D-276	Bevel Gear Drive Adapter Assembly
8C-527	Capscrew $\frac{1}{2}$ - 13 NC x $1\frac{1}{2}$ Long, Grade 5
1C-109	Lockwasher $\frac{1}{2}$ "

BEVEL GEAR DRIVE ADAPTER ASSEMBLY

2D-277	Adapter Housing
2D-278	Adapter Housing Cover
2D-281	Input Shaft
9C-871	Bearing Cup Timken 383A
9C-872	Bearing Cone Timken 385
4C-830	Seal C/R 275A124
9C-863	Seal National 50286
2D-282	Shim .005 Thick
2D-283	Shim .0075 Thick
2D-284	Shim .020 Thick
8C-527	Capscrew $\frac{1}{2}$ - 13 NC x $1\frac{1}{2}$ Long, Grade 5
1C-109	Lockwasher $\frac{1}{2}$ "
4C-837	Plug $\frac{3}{8}$ - 18 NPT
7C-403	Plug $\frac{1}{4}$ - 18 NPT