# SETTING UP AND OPERATING INSTRUCTIONS AND PARTS LIST

# DAVID BRADLEY

# GARDEN TRACTOR

**MODEL NUMBER 917.5756**

The above number is the Model Number of your David Bradley Garden Tractor. It will be found on a plate attached to the side of the transmission. Always mention the Model Number of your Tractor when communicating with us or when ordering repair parts.

**HOW TO ORDER PARTS**

All parts listed herein may be ordered through any Sears Roebuck and Co. retail or mail order store. In ordering parts by mail from the mail order store which serves the territory in which you live, Selling Prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed acordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

1. The Part Number in this List.
2. The Part Name in this List.
3. The Model Number of your Tractor.

This list is valuable. It will assure your being able to obtain proper parts service at all times. We suggest you keep it with other valuable papers.

**SEARS, ROEBUCK AND CO.**

S96B—1MB—8/50—Craft

## INTRODUCTION

This David Bradley Garden Tractor is the result of 17 years of Garden Tractor experience and 4 years of concentrated engineering. Its adaptability to so many uses and its modern streamlined design make it an outstanding tractor in its field.

The design of this tractor and its equipment permit quick attaching and detaching of the equipment to the tractor.

Although this tractor is simple to operate and care for, it is very important that the instructions as outlined in this manual be studied and followed closely. If satisfactory performance and long service are to be obtained, it is essential that you follow the lubrication chart on Page 9.

Each tractor is given a thorough inspection before shipment, however, it is very important that it be again thoroughly checked at time of receipt, to ascertain if any damage has occurred in transit. Your tractor shipment consists of the following packages:

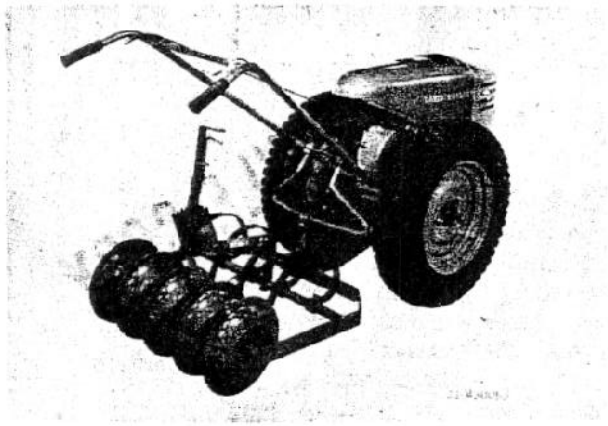
One crate - Number 575X37 - containing transmission, clutch, engine, hubs, engine base plate, and carton of parts.
One carton - Number 575X38 - containing the cowling.
One bundle - Number 575X30 - containing handles, clutch control rod and handle assembly.
Two packages - Number 580X9 - wheels, for rubber tires. OR - Two packages Number 503X49 steel wheels and one bundle Number 575X12 lugs and bolts for steel wheels.

### OPTIONAL EQUIPMENT

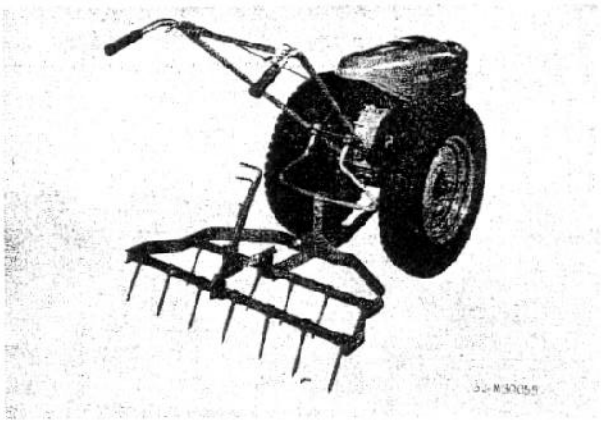
Two packages - Number 484X45 - new 6.00-16 traction grip implement rubber tires and tubes.
Two bundles - Number 530X23 - wheel weights for rubber tire wheels

Sears, Roebuck and Co., reserves the right to make any changes in design and changes or improvements without imposing any obligation to install the same upon its implements heretofore manufactured.

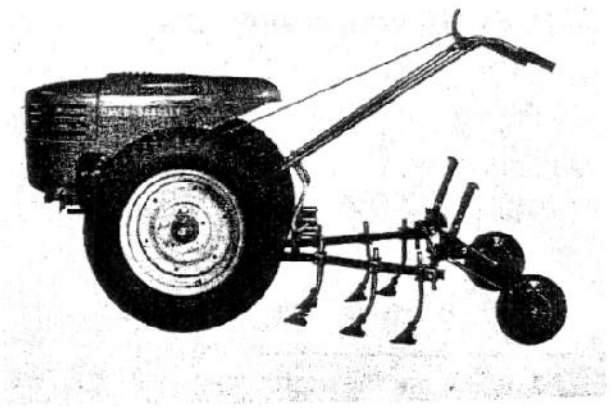
## ATTACHMENTS FOR YOUR DAVID BRADLEY GARDEN TRACTOR



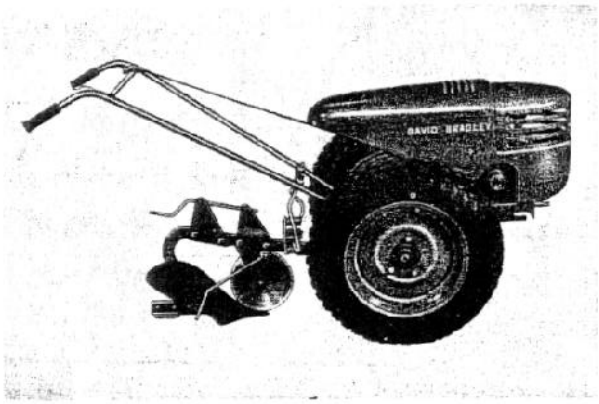
HARROW PACKER



DRAG HARROW



CULTIVATOR

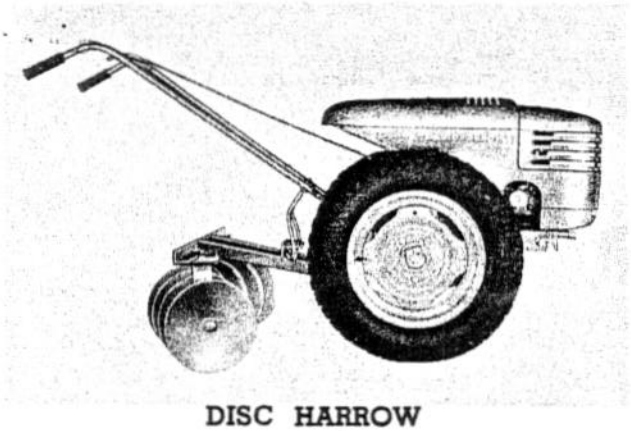



PLOW

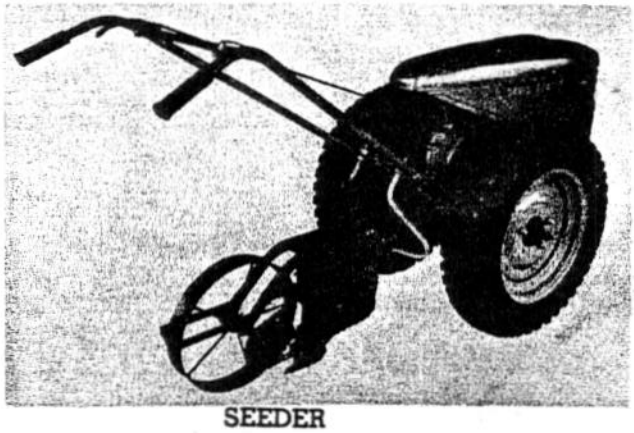
The cultivator, shown above with sweeps can also be purchased with double-pointed shovels. The following cultivating accessories are also available.

1. Pair of weeding hoes for small, tender plants.
2. Extension for 1 wide, 2 medium, or 3 narrow rows.
3. Pair of 5 prong weeders for fine mulching between rows.
4. Pair of hillers for hilling any kind of vegetable.

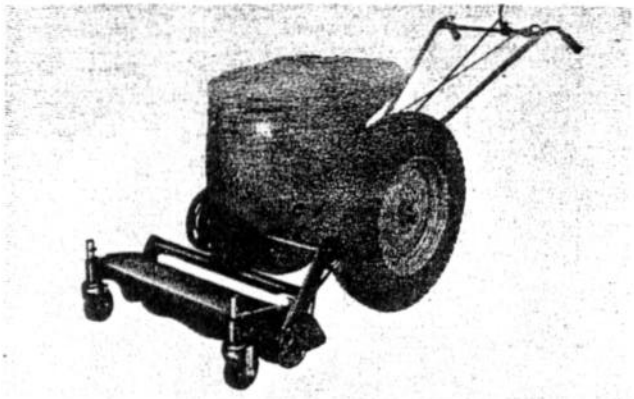
## ATTACHMENTS FOR YOUR DAVID BRADLEY GARDEN TRACTOR, Cont.



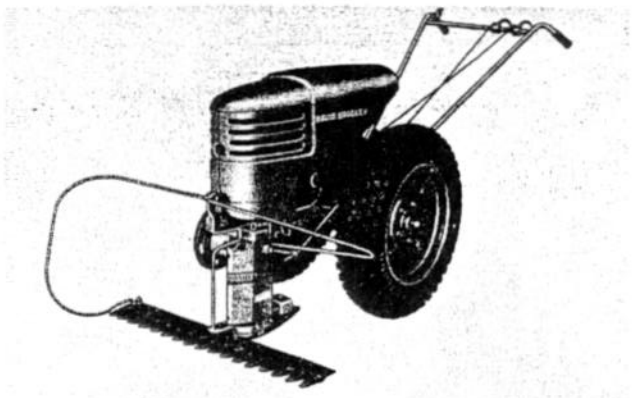
DISC HARROW



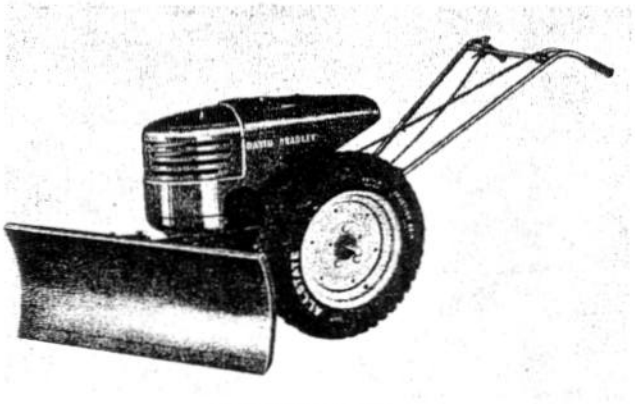
SEEDER



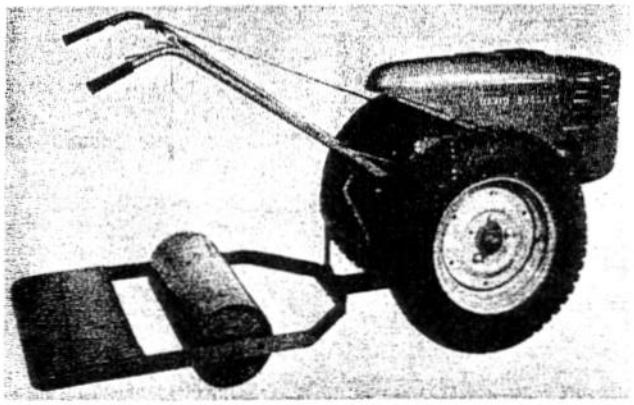
POWER LAWN MOWER



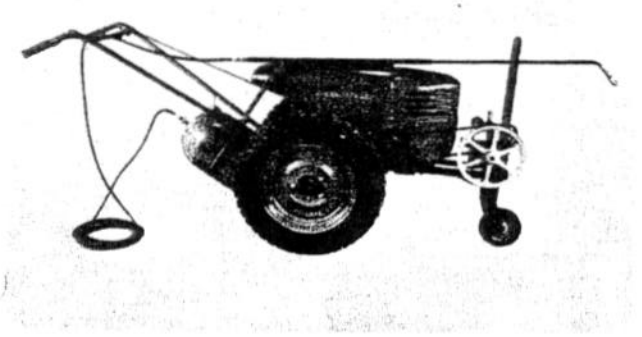
CUTTER BAR MOWER



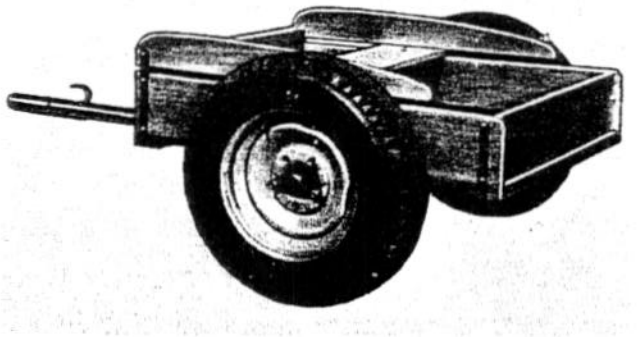
SNOW PLOW



LAWN ROLLER



COMPRESSOR—SPRAYER



CART

## SETTING UP INSTRUCTIONS

Setting-Up and Operating Instructions should be studied very closely before beginning to assemble your tractor. A number at the beginning of a paragraph in the following instructions refers to an arrow in the adjoining figure. When R.H (Right Hand) and L.H. (Left Hand) are used, it should be understood to mean from a position behind and facing the tractor (or direction of travel).

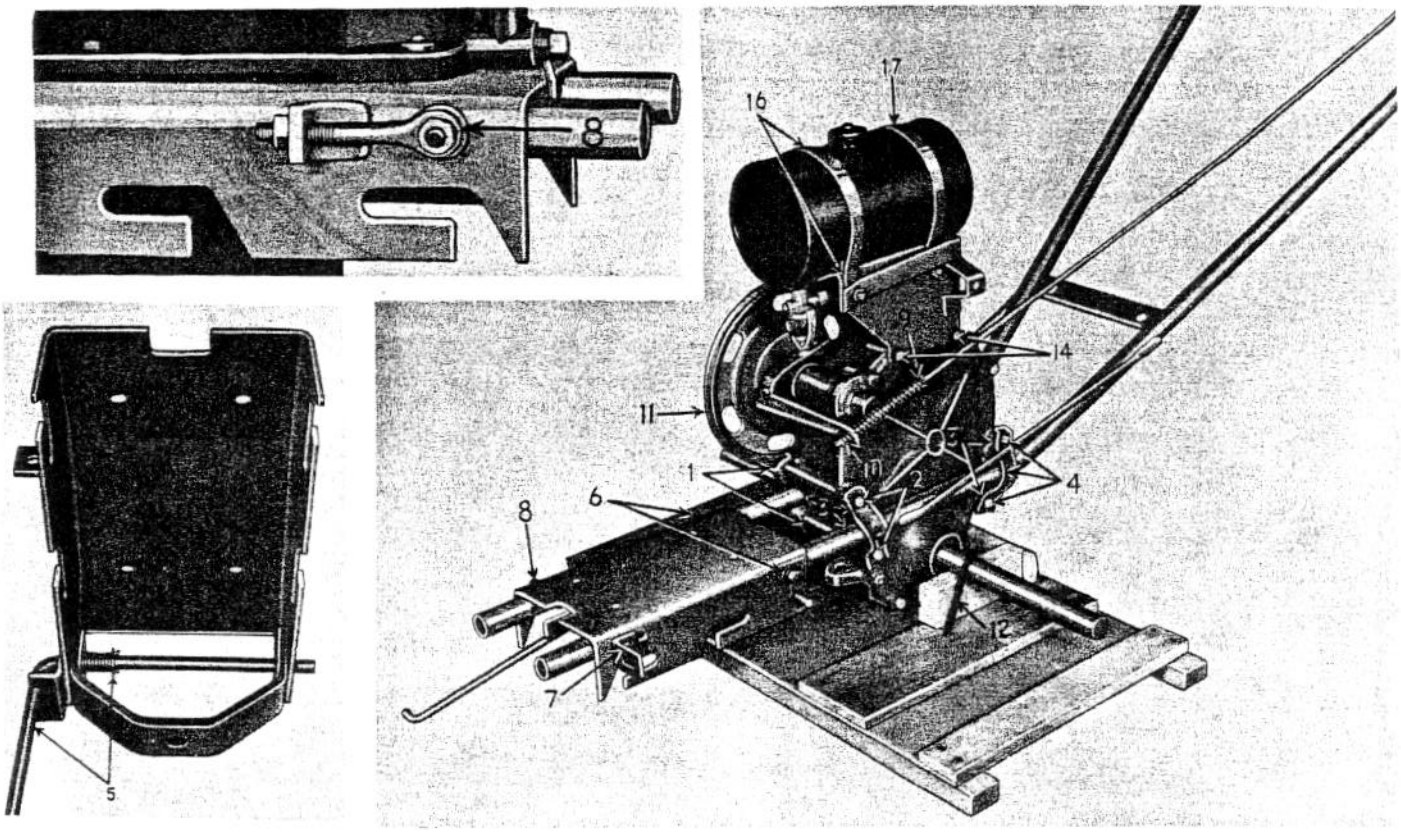


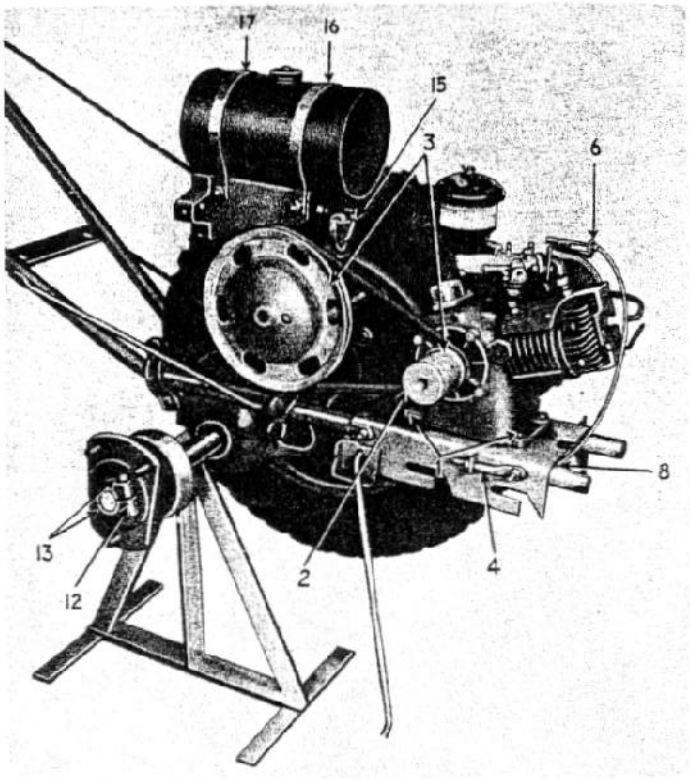

FIGURE A

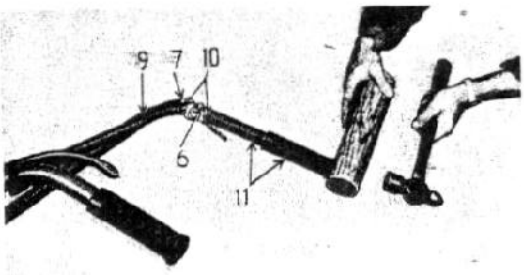
Stand the crate containing the engine,etc., on base to which engine and transmission are bolted. Clip all wires on crate. Remove crate top and sides and set aside all loose parts. Remove the two (2) bolts holding the engine, and lift engine from crate. Save these bolts for future assembly of engine to engine base. Leave transmission attached to crate for ease in assembly.

Cut all wires from handle bundle.

1. Loosen the front handle clamp on the R.H. side of the transmission.
2. Attach the L.H. front handle clamp to transmission--leave bolts loose.
3. Slide front end of handles through handle notches on transmission and on through front handle clamps.
4. Attach R. H. and L. H. rear handle clamps. Match locator pin on handles with center hole on rear handle clamps. Secure clamps with 3/8" x 3/4" hex head cap screws and 3/8" lock washers found in carton of parts.
5. Assemble kick stand to engine base plate with spring, flat washer, and cotter, respectively, as shown in insert.
6. Slide engine base plate in position on front end of handles as shown. Insert hex head cap screws 3/8"x 1-3/4", (head of cap screws to inside) on R.H. and L.H. rear end of engine base plate. Position a flat washer, 7/16" x 1" x 16 gauge, a 3/8" lock washer, and 3/8" hex nut on the end of the cap screws as shown. These standard items are found in the carton of parts. DO NOT TIGHTEN NUTS ON ENGINE BASE PLATE (paragraphs 6, 7, and 8), UNTIL V-BELT IS ON AND CAN BE ADJUSTED.
7. Attach choke bracket on front L. H. side of engine base plate, head of bolt to outside as shown. Use same size cap screw, and lock washer as stated in step No. 6.
8. Attach adjusting bolt and nut to R. H. front cap screw and engine base plate bracket as shown in insert. Use the same size cap screw, and lock washer as stated in step No. 6. Do not draw nut on adjusting bolt up tight.
9. Place spring on end of control rod and insert straight end of spring into hole in control rod, as shown.
10. Remove cotter key from control rod and handle and remove control rod. Thread spring on opposite end of control rod into clutch yoke lever until one (1) complete coil of spring is exposed on outer end of control rod. Replace top end of control rod in handle. Pull handle down to disengaged position.
11. Spin clutch pulley manually. If pulley spins freely without turning transmission shaft, clutch is properly adjusted. Recotter control rod in handle and spread cotter. If pulley does not spin freely thread spring into clutch yoke lever one (1) more complete coil and repeat step No. 10 until clutch is properly adjusted. After proper adjustment has been made, further tightening of this spring into clutch yoke lever will cause the tractor to be difficult to pull backwards.
12. Remove bolt from transmission rear hitch plate and two (2) steel straps from axle to crate on both sides of transmission. Remove and discard crate.

# SETTING UP INSTRUCTIONS, Cont



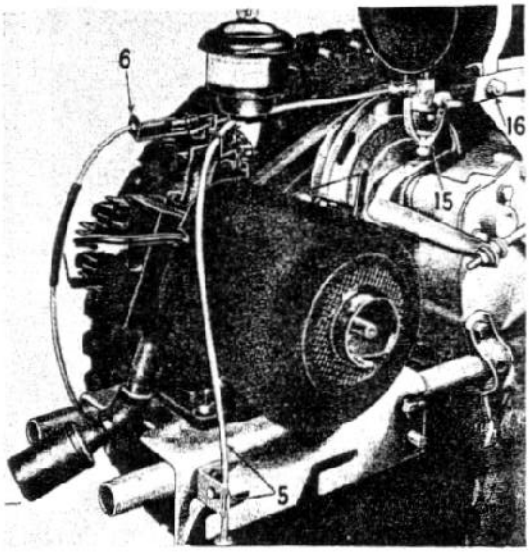




FIGURE B

1. Bolt engine on engine base plate, using the 2 bolts which originally held engine to crate, 2 hex head cap-screws 5/16" x 1-1/2" with hex nuts, and four 5/16" lock washers found in carton of parts.
   NOTE: Engine pulley shaft to R.H. side. (The two L.H. bolts are hidden in Illustration).
2. Place engine pulley key, found in carton of parts, on engine shaft. Slide engine pulley (largest belt groove to engine) on engine shaft and key and secure with Allen Set Screw. Engine pulley and clutch pulley must be kept in line to avoid excessive wear on V-Belt.
3. Slip V-Belt on transmission and engine pulleys.
4. To adjust V-Belt tighten nut on adjusting bolt until belt has one quarter inch sag with slight pressure of thumb on belt.
   Tighten engine base plate nuts securely. (Figure A, Illustrations 6, 7, and 8).
5. Attach choke wire to choke bracket as shown in insert.
6. DO NOT DETACH THROTTLE WIRE FROM ENGINE. The throttle wire was adjusted at the factory.
7. Loosen lock screw holding control wire and unscrew control lever from throttle wire casing.(See insert).
8. Slide this end of wire through hole on the inside, front end of right handle. It may be easier to insert throttle wire if the front R.H. engine base plate bolt is loosened or removed.
9. Slide wire out through hole, on the inside of handle in rear of handle spreader, see insert. A hook made from a piece of wire or a common nail inserted through hole will aid in securing throttle wire.
10. Attach control lever assembly to R.H. handle, as shown in insert.
11. Drive handle grips on rear end of handles. See insert.
12. Place square key, found in carton of parts, in keyway on axle. Slide R.H. hub (R.H. stamped in hub casting) assembly on R.H. side of axle.
13. Slide hubs to desired position on axle and secure clamp by tightening hub clamp bolt.
14. Bolt gas tank bracket to transmission, using 3 remaining cap screws, as shown in Figure A. Two are shown on L.H. side of transmission, the other is hidden in the Illustration on the R.H. side.
15. Mount gas filter on gas tank and place gas tank in position on bracket as shown.
16. Slide one gas tank strap over front end of gas tank. Bolt loosely in place as shown in Figures A and B, with the cowling latch on the L.H. bolt.
17. Slide remaining strap over rear of gas tank and bolt loosely as shown in Figures A and B. The holes in the gas tank bracket are slotted to allow tightening the straps around the tank. Do not tighten bolts until cowling has been installed as given in paragraph 6, Page 6.

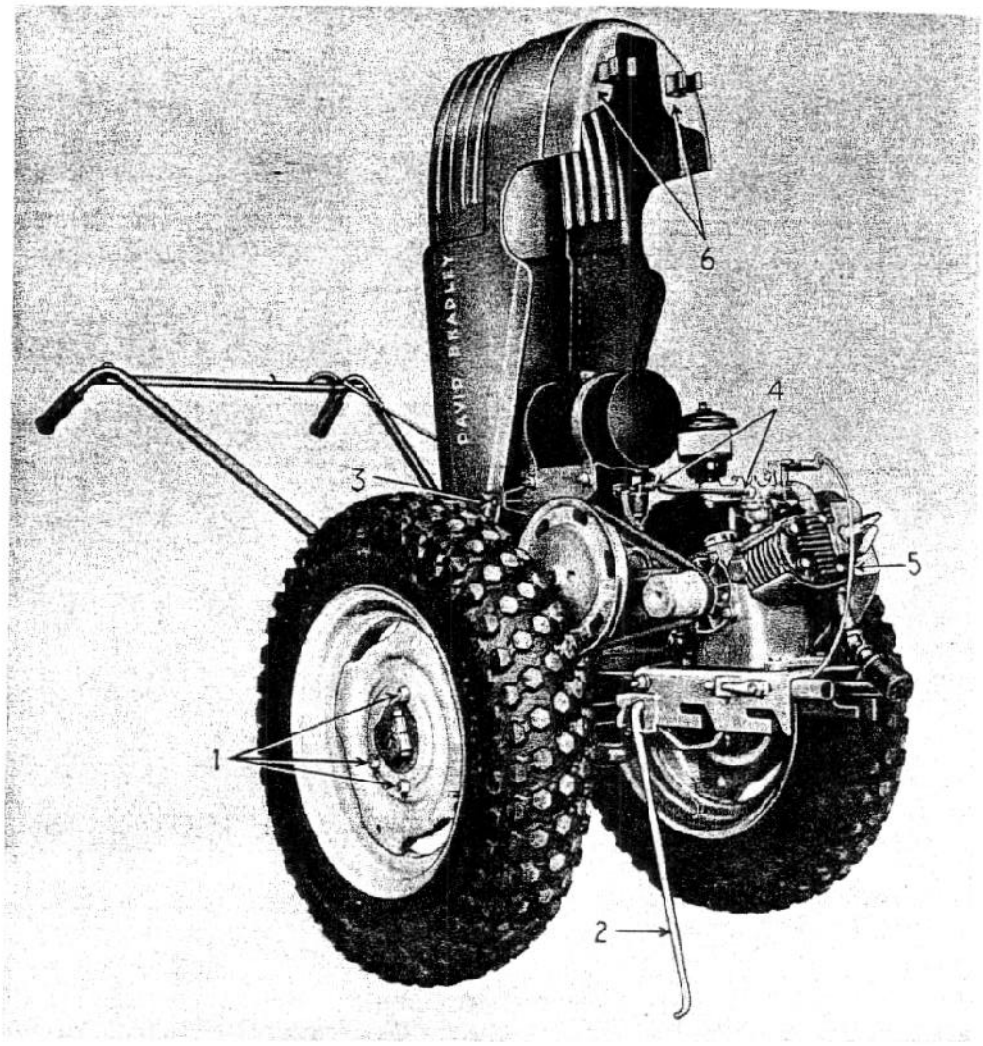



FIGURE C

1. Attach wheels to hubs as shown. (Rubber tire wheels are illustrated but steel wheels are attached in same manner). Nuts can be found in carton of parts.
2. Place support stand in position as shown.
3. Place cowling over motor and transmission. Small holes on each side of cowling must line up with holes in cowling brackets, on rear of gas tank bracket. Slip in rivets, found in carton of parts, and secure with cotter pins. (L.H. side hidden in Illustration). Turn gas tank in straps until gas filler opening aligns with opening in cowling. Then tighten straps around gas tank and tighten bolts securely, Figures A and B, Illustrations 16 and 17.
4. Assemble the Loxit elbow (7079M) in the carburetor, and the Loxit fitting (6697M) in the gas filter. Place one Loxit nut (6696M) on each end of the gas line. Position the gas line in the Loxit elbow and fitting on the carburetor and gas filter. Make sure the gas line is seated all the way into the elbow on the carburetor, then tighten nut into elbow with wrench until positive stopping action is felt. Tube will then be completely flared. Proceed to attach the gas line to the gas filter in the same manner.
5. Fasten muffler as shown, using lock nut against engine. Adjust muffler by turning and use of lock nut so that the cowling clips will fit down over ends of handles and so that muffler will not interfere with mounting of Cutter Bar Mower attachment to tractor.
6. CAUTION: In lifting cowling, place fingers in groove on each side of spring clips underneath cowling on front end. Do not extend fingers beyond metal flange of cowling under edge. Raise the cowling until it rests in the groove of the safety catch. To release the safety catch, press the catch slightly in and lower cowling. Do not hook spark plug wire with hands or cowling while raising the cowling.

Before operating read carefully the Instructions on pages 8 and 9.

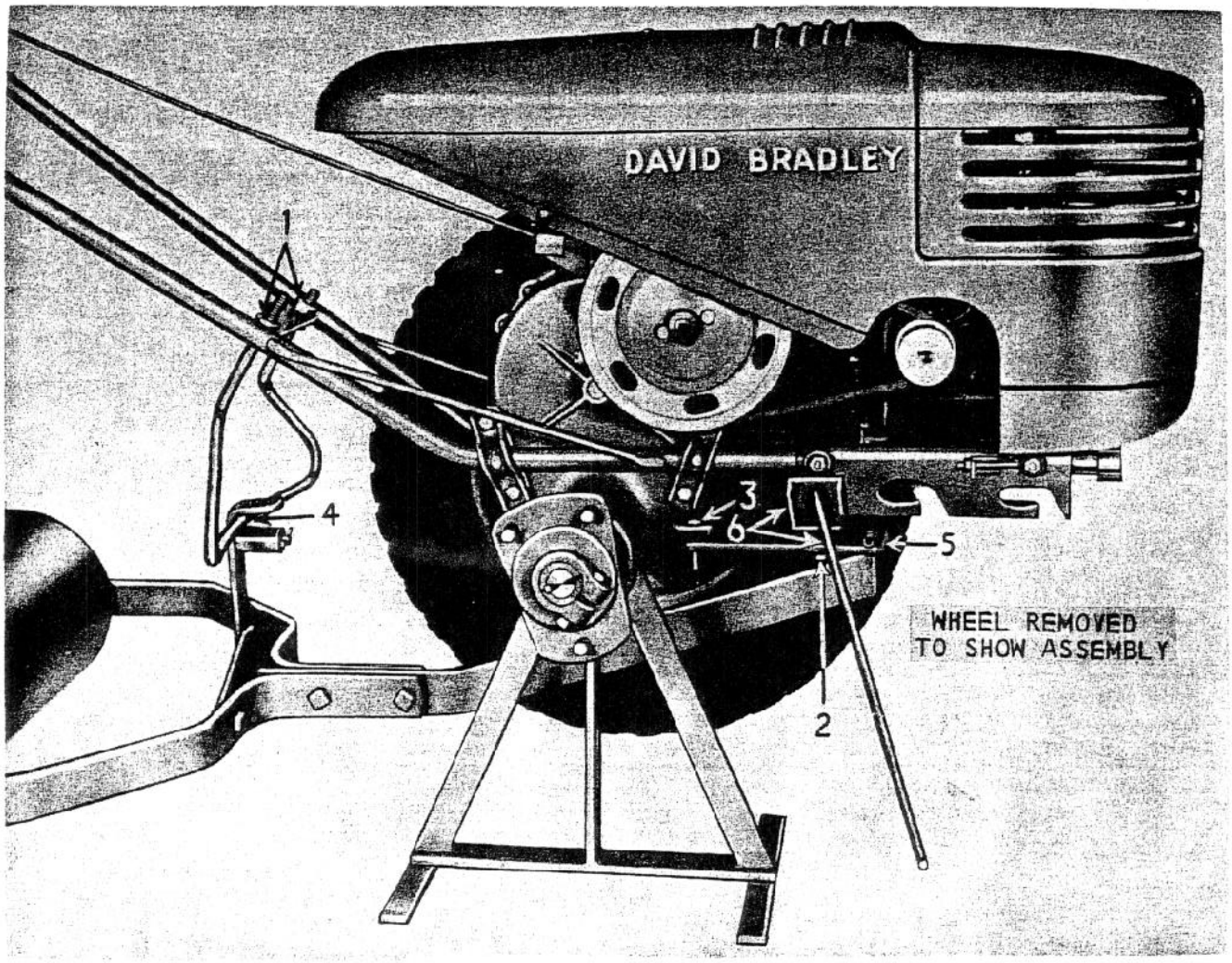



FIGURE D

## INSTRUCTIONS FOR ASSEMBLING HITCH, SADDLE AND PULL TYPE ATTACHMENTS TO TRACTOR

1. Attach saddle to front handle spacer on tractor, as shown. Nuts can be found in carton of parts. Adjusting the nuts up or down raises the handles up or down. Care should be taken to keep saddle parallel with main axle.

2. Attach hitch bar and pin to motor base stirrup by means of a 7/16" x 1-1/4" hex head cap screw and a flat washer, 15/32" x 15/16" found in carton of parts. When it is necessary to make a V-belt adjustment, this cap screw must first be loosened, but retightened securely immediately after adjustment of belt. KEEP THIS CAP SCREW TIGHTENED SECURELY.

3. Attach hitch bar and pin to transmission hitch plate.

4. Pull tractor backward into place on *(Lawn Roller) and tilt handles downward until saddle enters between roller and roller support bracket.

5. Raise drawbar and pin until pin enters hole in hitch bar. Insert spring retainer.

6. Place support stand in traveling position.

*The Lawn Roller was used as an example in the above instructions. The following attachments are also used, in conjunction with the hitch and saddle: Cultivator, Disc Harrow, Drag Harrow, Plow, Harrow Packer, Cart and Seeder.

# OPERATING INSTRUCTIONS

## INSTRUCTIONS BEFORE OPERATION

1. Fill the engine crankcase - See Lubrication Chart on Page 9.
2. Fill the transmission case - See Lubrication Chart on Page 9.
3. Fill the fuel tank with a good grade of clean gasoline. We recommend the use of unleaded or white gasoline, where available. It will increase the time between overhaul jobs. Never mix oil with gasoline. Capacity - 1 gallon.
4. Fill the air cleaner to the oil level mark indicated, using oil of the same viscosity as used in the engine.
5. Lubricate grease fittings on wheel hubs.
6. Check the oil vent on the right side of the transmission below the gas tank to be sure it is open.
7. The oil in the transmission should be changed after the first 150 hours of operation. Thereafter consult the Lubrication Chart for recommended changes.
8. CAUTION: - In lifting cowling, place fingers in groove on each side of spring clip underneath cowling on front end. Do not extend fingers beyond metal flange of cowling under edge.

## HOW TO START AND STOP THE ENGINE

1. Open gasoline shut-off valve mounted under the fuel tank by turning to left or in a counter-clockwise direction.
2. Completely close the carburetor choke by pulling the choke wire.
3. Wind the starter rope around the starter pulley with the knot in the pulley notch. Pull the rope with a quick steady pull to spin the magneto flywheel with choke fully closed to prime the engine. Then open choke about 1/8 and repeat operation.
4. After the engine warms up, gradually open the choke valve by pushing choke lever upward until engine runs smoothly with the choke wide open. Operate the choke the same as you do in an automobile. (A warm engine does not require as much choking as a cold one).
5. To stop the engine, raise the hood and press the stop switch mounted on the cylinder head against the end of the spark plug until the engine stops firing.

## DRIVING THE TRACTOR

To drive the tractor, start the engine. Partially open the hand throttle control so that the engine will develop enough power to pick up the load to be pulled. Carefully engage the clutch by moving the control lever forward until the clutch engages. The tractor is guided by exerting pressure against the steering handles. To stop the tractor, pull the clutch control rod backward until clutch disengages and tractor stops.

To move the tractor backwards, disengage the clutch and pull backwards on the control handles. The clutch should be properly adjusted (see Clutch Adjustment) to allow the tractor to be moved backward.

## ADDED TRACTION

The hitching point of the attachments for the David Bradley Tractor are well ahead of the center line of the driving wheels. This feature gives a maximum tractive effort. However, in extreme cases, where additional traction is necessary, fill tires 100% with a solution of calcium chloride and water, or 40 pound wheel weights can be furnished. One or more weights can be used on each wheel if needed. Added weight is particularly desirable when using the snow plow

## DRIVE PULLEY

Double V-Pulley with flat belt drive in between. One V, or one flat surface always available for doing belt work. When using the tractor for belt work it is advisable to remove the V-Belt which drives the clutch. This will prolong the life of the clutch. On power driven machines the outside V-Pulley drives the attachment such as the Cutter Bar and Power Lawn Mower.

Pulley can be reversed to change ground speed for Cultivating or other drawbar jobs. At governed engine speed of 3260 to 3300 R.P.M., no load, ground travel can be lowered from 2.4 to 2.1 M.P.H. by reversing the pulley, thereby providing more drawbar pull.

If pulley is reversed when using the Cutter Bar Mower, or Power Lawn Mower attachments the speed of ground travel is reduced and the speed of rotation of the driven machine is increased; an ideal situation for tough or heavy going.

## STORAGE

When the tractor is to be stored for a long period of time, clean it thoroughly, removing all dirt and debris. Give all exposed or wearing parts a good coat of grease or rust preventive. Drain gasoline from tank, filter, carburetor and fuel lines to prevent gum deposits. Store Tractor in a clean and dry area.

# MAINTENANCE AND SERVICE

## LUBRICATION CHART

NOTE:- Study this Instruction Book and Maintenance Schedule very closely. Before lubricating the tractor, clean all dirt from fittings and filler plugs. Always use recommended grades of good, clean oil. Always have tractor on level ground for checking oil levels.

| TIME | OPERATION | LOCATION |
|---|---|---|
| STARTING EACH DAY | ENGINE CRANKCASE - Capacity - 1 pint. Starting each day check the oil in the crankcase and fill to the filler plug. Fill with Cross Country or other high grade oil not heavier than SAE No. 30, for operating the engine in temperatures of 32° F. or above. For temperatures of 32° to 0° F. use Cross Country or other high grade oil not heavier than SAE No. 20W. For temperatures of 0° F., or below, use Cross Country or other high grade oil not heavier than SAE No. 10W. Change oil daily under dusty operating conditions. | Oil Filler Plug is located on the R. H. front corner. See engine Instruction Book. |
| | AIR CLEANER- Remove the wing nut and lift cleaner off, wash outside of element and clean bowl. Refill to the indicated oil level with the same grade of oil as used in the crankcase. | |
| | GASOLINE FILTER - - Check for water or foreign material and remove and clean glass bowl, if necessary. | The Gasoline Filter is located directly under the Gas Tank, Figure H. Illustration 17. |
| | FLYWHEEL HOUSING SCREEN AND CYLINDER FINS - Remove any dirt or grass that may have accumulated on the flywheel housing screen or cylinder fins, as this may interfere with the cooling of the engine. Periodically remove the flywheel housing and clean fins thoroughly. | |
| EVERY 5 HOURS | ENGINE CRANKCASE - After each 5 hours of operation check the oil in the crankcase and fill to the Filler Plug. | |
| | HUBS - Use a good grade of Gun Grease, give each drive wheel hub about 2 shots of grease. | Grease Fittings are located in the center of each hub behind the wheel. Figure H, Illustration 1. |
| EVERY 25 HOURS | ENGINE CRANKCASE - Remove the Oil Drain Plug and completely drain the crankcase. DO NOT flush with kerosene or do not remove the engine from the Mounting Frame. Replace the drain plug and refill the proper grade of oil as recommended in this chart under Operations, Starting Every Day. | The Drain Plug is located at the front end of the engine base. See Engine Instruction Book. |
| | TRANSMISSION - Remove the Oil Filler Plug and check oil. Refill as needed so that the oil level comes up to the Filler Plug. | The Filler Plug is located directly above the rear hitch plate at the rear of the transmission. Figure F, Illustration 14. |
| EVERY 30 DAYS | At least once each month, tighten all bolts, capscrews and set screws. Inspect and replace all wearing parts showing excessive wear. | |
| EVERY 500 HOURS | CLUTCH - Lubrication of the Clutch is seldom necessary, however, every 500 hours or once each year it is advisable to place 3 or 4 drops of oil in the center of Clutch Pulley. Be careful not to use an excessive amount as it will seep back to the Clutch Facings and cause slippage. | The Oil cover is located on the Clutch Pulley Hub. Figure E, Illustration 14. |
| | The Thrust Bearing is given a sufficient supply of grease at assembly. However, in abnormal operating conditions (sand or dust) or if the unit is taken apart for other reasons, all parts should be thoroughly washed in gasoline or kerosene with the exception of Clutch Facings, which should not be washed unless covered with oil or grease. The space around the Thrust Bearing should be given an amount of Universal Joint Fibre Grease equal to the size of an ordinary pencil eraser. | The Thrust Bearing is located in the clutch throw-out cup. Figure E, Illustration 8. |
| | CAUTION - DO NOT USE GREASE OR OIL TO EXCESS. It will seep back to the Clutch Facings and cause slippage. | |
| | TRANSMISSION - Capacity 3-1/2 pints. Every 500 hours remove the Drain Plug from the Transmission and drain all oil. Replace Drain Plug and fill to the level of the Oil Filler Plug. Use Cross Country or other High Grade Motor Oil SAE No. 30. | The Drain Plug is located on the left hand lower side of the Transmission Case, directly below the axle, Figure F, Illustration 13. |

## ENGINE

REFER TO ENGINE MANUAL WHICH ACCOMPANIES THE TRACTOR

## CLUTCH

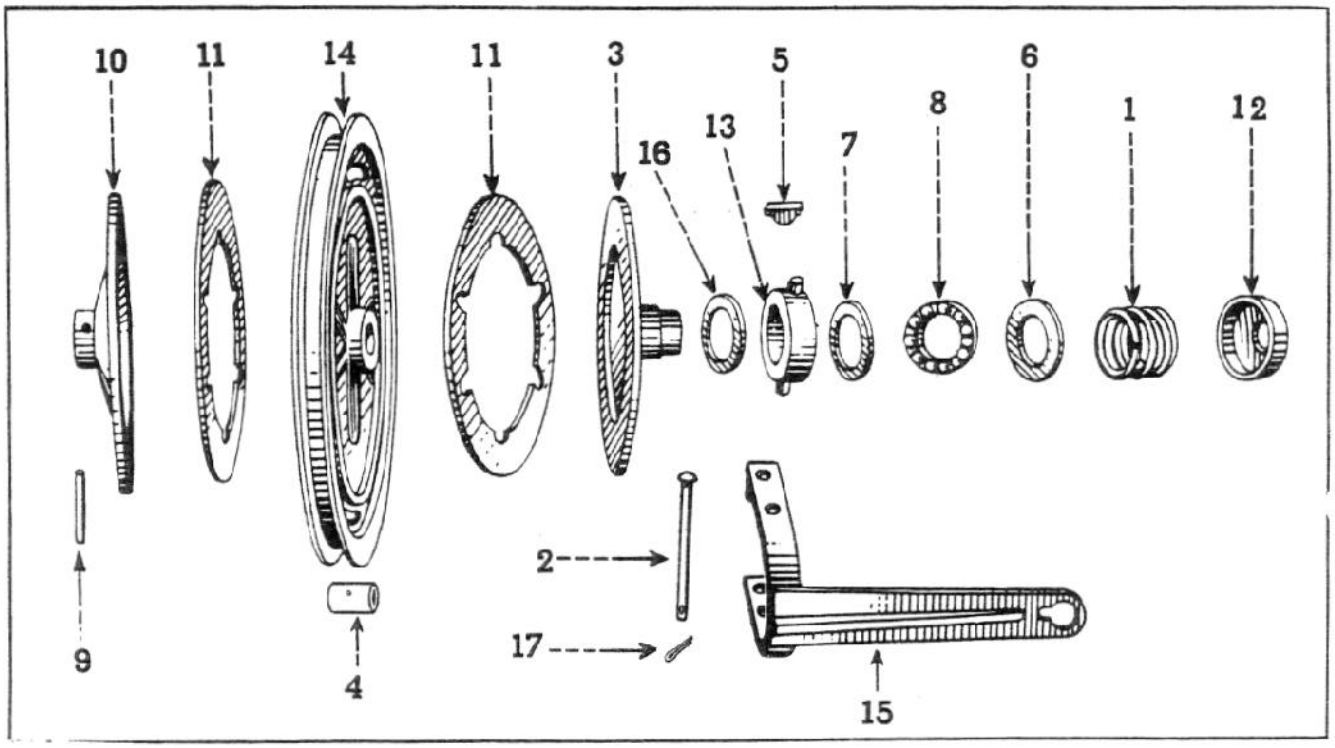



FIGURE E

The clutch of the Bradley tractor is a double plate friction type mounted directly on the transmission input shaft. With average use and care it will last indefinitely. However, extreme roughness, exposure, and carelessness will result in damage, therefore the following instructions are given for adjustment and repair.

### ADJUSTMENT

This clutch is designed with approximately 3/64 of an inch movement between the engaged and disengaged position. This movement is controlled by the clutch control rod and spring, Figure G, Illustrations 19 and 20. When setting up a new tractor or when adjusting a clutch after repair, the control rod and spring should be reassembled and adjusted as given on Page 4 under paragraph 8, 9 and 10.

When using the tractor for belt work it is advisable to remove the V-belt which drives the clutch. This will prolong the life of the clutch.

After the tractor has been in operation for some time, the clutch facings, Figure E, Illustration 11, may become glazed or covered with grease and oil causing slippage. A good wire brushing, applied to the facings will break up the glaze and restore normal operation. In the event a covering of grease or oil causes the slippage, wash the facings in gasoline or kerosene and wipe dry. If this does not correct condition clutch facing should be replaced.

## REPLACEMENT AND REPAIR

The following Illustration Numbers refer to Figure E unless otherwise stated.

## FACINGS

To replace facings:-

1. Disengage clutch.
2. Remove groove pin, Illustration 9.
3. Remove all burrs from the groove pin and shaft.
4. Remove outer Clutch Plate, Facing and Pulley, Illustrations 10, 11 and 14, by sliding from shaft.
5. Thoroughly clean all parts of grease and oil.
6. Using new facings, reverse the above procedure to assemble. Be sure to replace the pulley with the oil cover on the outside. In the event new parts other than facings are required, be very sure that each part slips freely over the input shaft of transmission. These parts are precision made and MUST slide freely. DO NOT FORCE.

## PULLEY BEARING

1. In the event the bronze bearing, Illustration 4, in the clutch pulley, Illustration 14, should need replacing; align the new bearing against the old one. Drive out old bearing using a soft wood block.

## THRUST BEARING

To replace thrust bearing:-

1. Remove facing, using same procedure as outlined under Facings.
2. Slowly engage clutch control rod which will allow the clutch throwout cup, Illustration 13, to slide away from the transmission case.
3. Remove cotter key, Figure G, Illustration 48, from control rod, and screw the rod and spring, Figure G, Illustrations 19 and 20, from the throwout lever and yoke, Figure E, Illustration 15, being sure to observe the number of turns required to remove spring from throwout lever and yoke.
4. Remove pin, Illustration 2, from throwout lever yoke, Illustration 15.
5. Remove inner plate, flat washer, throwout cup, thrust bearing, inner washer, outer washer, hypro key, and spring by sliding parts from input shaft of transmission, Illustrations 3, 16, 13, 8, 7, 6, 5 and 1. (Note - When replacing thrust bearing it is usually desirable to also renew inner and outer washer).
6. To reassemble, first check all new parts to be sure each fits properly on the input shaft, and hypro key.
7. Assemble outer washer, Illustration 7, and thrust bearing, Illustration 8, in the clutch throwout cup, Illustration 13.
8. Place an amount of universal joint fibre grease (equal in size to that of an eraser on an ordinary lead pencil) in the area around the thrust bearing.
9. Insert inner washer, Illustration 6, in place against thrust bearing.
10. Insert spring, Illustration 1, in clutch spring case, Illustration 12, and place clutch throwout cup in position against spring case. Then drop pin, Illustration 2, into place through throwout lever yoke, Illustration 15.
11. Place flat washer, Illustration 16, on inner clutch plate and position inner clutch plate, Illustration 3, by placing right hand on clutch throwout cup and yoke, moving it until inner clutch plate slides into place on hypro key.
12. Replace clutch control rod and spring in throwout lever and yoke and turn spring into throwout lever and yoke the same number of turns as when it was removed.
13. Disengage clutch lever which will allow pulley, facings, and outer plate to be set in place.
14. Drive groove pin in place.
15. Check clutch adjustment and readjust if necessary (See Clutch Adjustment, Page 10).

## TRANSMISSION

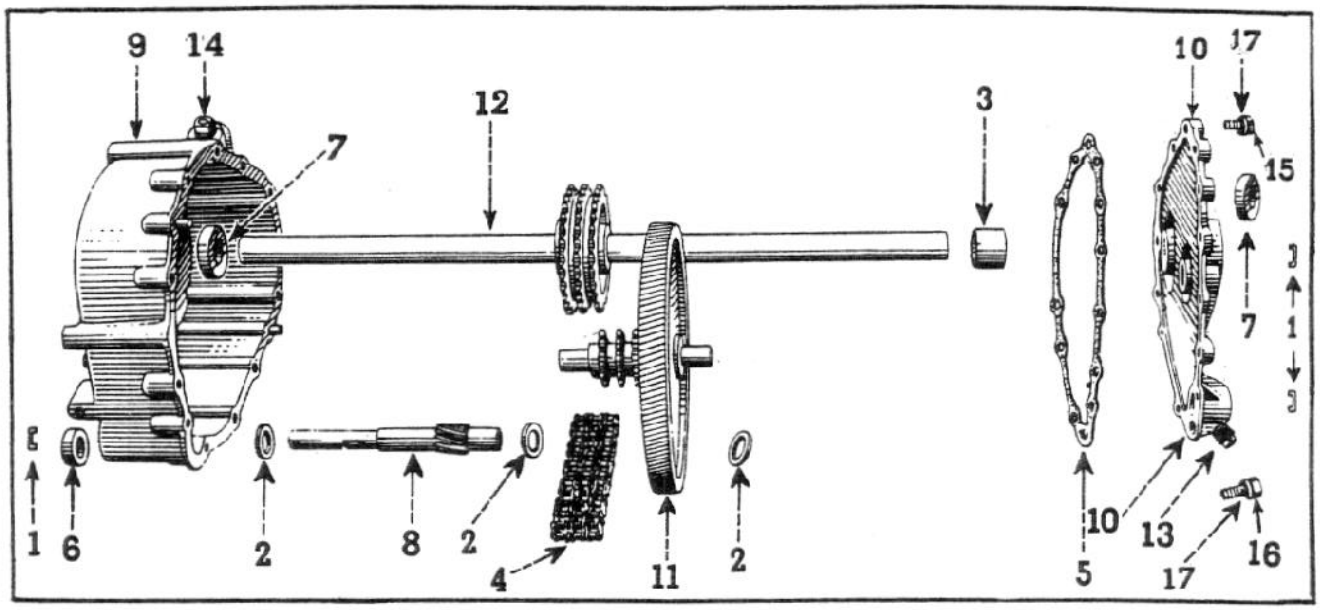



FIGURE F

Field tests and experiments conducted with this Transmission have indicated that its rigid construction will withstand years of satisfactory service with average care and use. Should repairs ever be necessary it is advisable that they be done by a competent trained mechanic.

### ADJUSTMENT

No adjustments are given or are necessary.

### REPLACEMENT AND REPAIR

To repair the transmission, the entire unit must be removed from the tractor. This should be done in a suitable, dry, well lighted service department, preferably by a Sears Roebuck and Co. service man.

1. Remove the two pins holding the hood and remove the hood.
2. Drain all oil from the transmission case.
3. Close shut-off on gasoline filter and remove gasoline line from engine.
4. Remove fuel tank and bracket from transmission by removing two capscrews from left side and one on right side of transmission.
5. Remove throttle control from handle and unscrew control from wire. Pull wire from front end of handles and leave attached to the engine. DO NOT REMOVE WIRE FROM ENGINE.
6. Remove choke control lever from engine.
7. Loosen engine base plate from handles and frame by removing two bolts on each side.
8. Remove V-belt to clutch.
9. Remove engine and base. (Suitable blocking should be used to prevent tipping of entire tractor).

The following Illustration Numbers refer to Figure F.

10. Remove clutch assembly (refer to Replacement and Repair Section on the Clutch).

11. Remove Hitch Bar and Pin from engine base plate and transmission.

12. Remove capscrews from handle clamps (four on each side),and remove handles from transmission case.

13. Remove wheels, hubs, and pawl holders from transmission axle.

14. Clean all grease and dirt from transmission case by washing in gasoline or other solvent. Remove all paint and rust from axles to avoid injury to oil seals in case and cover. Place the transmission on a table or bench.

15. Remove the ten capscrews from the cover and case, Illustrations 15 and 16.

16. Loosen cover, Illustration 10, by lightly tapping with a rubber or brass hammer and slide cover off axle. (The removal of this cover will permit inspection of all internal parts and from inspection the cause of trouble may be determined and necessary repair parts ordered).

## DRIVE CHAIN

The design of this transmission is such that should the drive chain, Illustration 4, break, it does not generally cause the breakage of any other parts. It is natural that the chain should wear or break first. This chain is furnished only in complete assemblies. No links are sold due to the nature of its construction. Should this chain need replacing the following procedure should be followed.

1. Grasp the exposed axle, Illustration 12, and intermediate shaft and sprocket, Illustration 11, in each hand and pull them outward from the case until the axle sprocket clears the case. This will free the inner end of the intermediate shaft.

2. Remove chain from intermediate shaft sprocket, Illustration 11.

3. Remove chain from axle sprocket.

4. Replace chain and reverse procedure to reassemble unit.

5. In reassembly, caution should be used to place thrust washer, Illustration 2, and axle spacer, Illustration 3, in proper position. Always use new gasket, Illustration 5, in reassembly. Reverse procedure as outlined above to reassemble entire tractor. When replacing the engine and base, do not replace the two bolts on the R.H. side of the base plate until the throttle control wire has been threaded into the handle. Insert a screw driver in the upper hole on the handle to enable reaching the wire.

## OTHER INTERNAL PARTS

Close inspection will determine if otner parts need replacing after the transmission case has been opened. Due to the nature of their construction, the axle and sprocket, Illustration 12, and the intermediate shaft, gear and sprocket, Illustration 11, must be replaced as an assembly. These are very easily replaced after the case is opened by simply sliding them out of their respective bearings.

Although the bearings in the case are replaceable, it requires special equipment to install them. Contact your nearest Sears, Roebuck and Co. farm store, or mail order store, who will have the proper equipment.

Oil seals should be inspected and replaced as required. Remove by pressing from case or cover and press new ones in place.

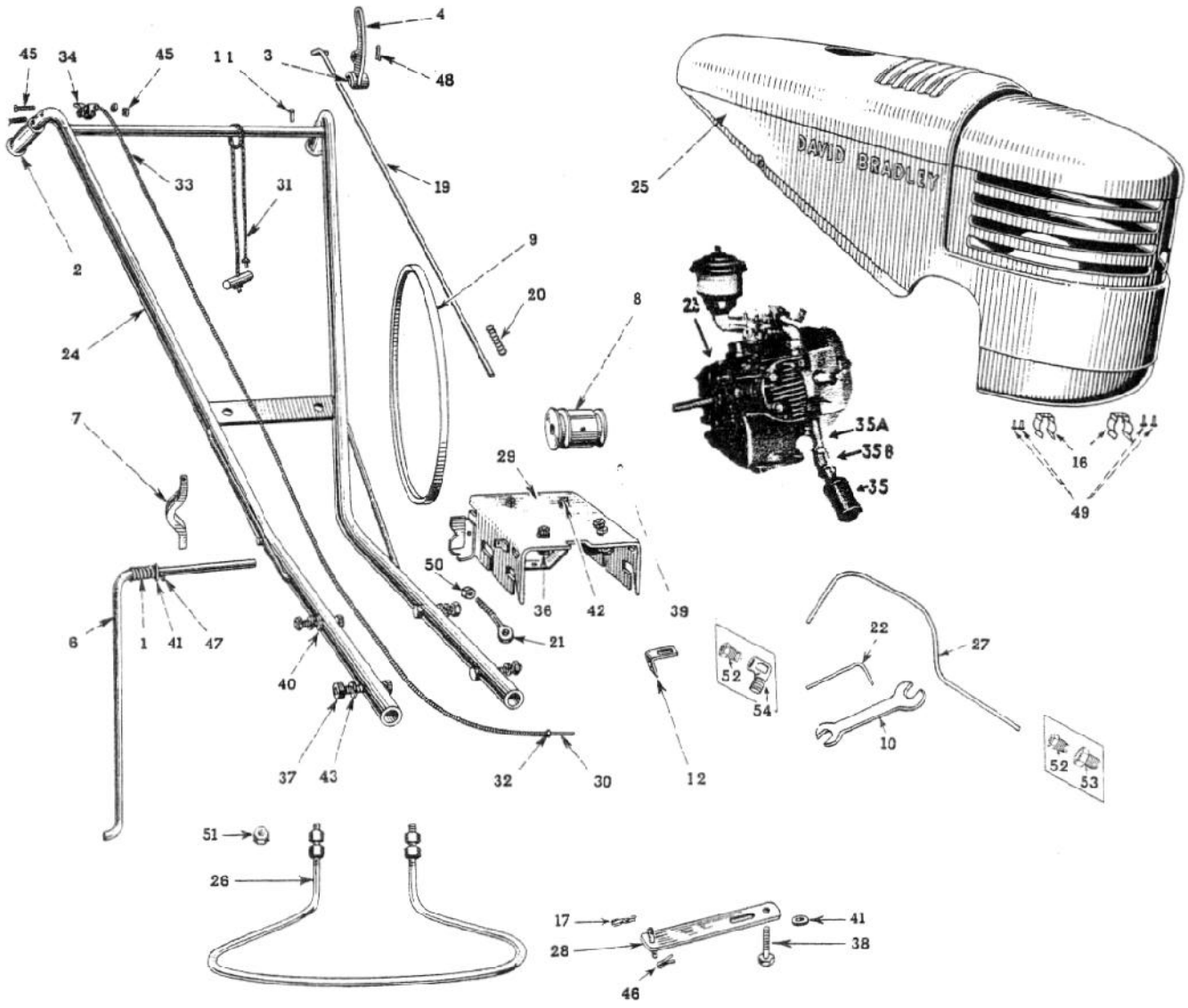



FIGURE G

## ENGINE, HANDLE AND HITCH ASSEMBLY

Bolts, Nuts, Washers, Cotter Pins, etc., of standard dimensions do not carry part numbers. When these standard items are needed in service they should be purchased at the nearest Sears, Roebuck & Co. store or from a local Hardware store.

Each part has been given an illustration number which is used only as a key to find the part number. Do not use the illustration number when ordering repair parts.

# PARTS LIST

## ENGINE AND HANDLE ASSEMBLY

(The following illustration Numbers refer to Figure G)

| Illustration Number | Part Number | Description | Shipping Weight Lbs. | Shipping Weight Oz. |
|---|---|---|---|---|
| 1 | 1543U | Spring for Support Stand | .... | 1 |
| 2 | 2202M | Handle Grip | .... | 5 |
| 3 | 4285M | Control Handle Retainer | .... | 1 |
| 4 | 4290M | Control Handle | .... | 8 |
| 6 | 4293M | Tractor Support Stand | 1 | ... |
| 7 | 4303M | Handle Clamp | .... | 5 |
| 8 | 4315M | Engine Pulley | 2 | 7 |
| 9 | 4322M | Belt | .... | 4 |
| 10 | 4323M | Wrench, Double End | .... | 5 |
| 11 | 4327M | Pin, Drive Lock | .... | 1 |
| 12 | 4330M | Bracket, Choke | .... | 1 |
| 16 | 4787M | Spring Clip | .... | 2 |
| 17 | 4939M | Retainer Spring | .... | 1 |
| 18 | 6504M | Square Key for Engine Pulley | .... | 1 |
| 19 | 6577M | Clutch Control Rod | 1 | 1 |
| 20 | 6579M | Spring for Clutch Control Rod | .... | 1 |
| 21 | 6848M | Adjusting Bolt | .... | 4 |
| 22 | 7755E | Wrench, Allen Set Screw | .... | 1 |
| 23 | | Engine, Complete with Starter Rope and Throttle | | |
| 24 | 575PA7 | Handle Assembly | 16 | 13 |
| 25 | 575PA9 | Cowling, Complete with Clips | 12 | ... |
| 26 | 575PA220 | Saddle with Hex Nuts | 4 | ... |
| 27 | 7080M | Fuel Line | .... | 4 |
| 28 | 575PA235 | Hitch Bar and Pin | 1 | 10 |
| 29 | 575PA236 | Engine Base Assembly | 7 | 8 |
| 30 | ..... | Wire, Control | See Parts Book with Engine | |
| 31 | ..... | Rope, Starter | | |
| 32 | ..... | Lock Nut for Wire Casing | | |
| 33 | ..... | Casing 80 for Control Wire | | |
| 34 | ..... | Control Lever Assembly | | |
| 35 | ..... | Muffler | | |
| 35A | ..... | Exhaust Pipe | | |
| 35B | ..... | Exhaust Elbow | | |
| 36 | ..... | Cap Screw, Hex Head 5/16" x 1-1/2" with Hex Nut | .... | 2 |
| 37 | ..... | Cap Screw, Hex Head 3/8" x 1-3/4" with Hex Nut | .... | 2 |
| 38 | ..... | Cap Screw, Hex Head 7/16" x 1-1/4" | .... | 2 |
| 39 | ..... | Set Screw, Allen 5/16" x 5/8" | .... | 1 |
| 40 | ..... | Washer, Flat 7/16" x 1" | .... | 1 |
| 41 | ..... | Washer, Flat 15/32" x 15/16" x 1/16" | .... | 1 |
| 42 | ..... | Washer, Lock 5/16" | .... | 1 |
| 43 | ..... | Washer, Lock 3/8" | .... | 1 |
| 45 | ..... | Stove Bolt, Oval Head 3/16" x 1-3/8" with Hex Nut | .... | 1 |
| 46 | ..... | Cotter Pin 3/16" x 1-1/4" | .... | 1 |
| 47 | ..... | Cotter Pin 5/32" x 3/4" | .... | 1 |
| 48 | ..... | Cotter Pin 1/8" x 5/8" | .... | 1 |
| 49 | ..... | Rivet, Round Head 3/16" x 3/8" | .... | 1 |
| 50 | ..... | Nut, Hex 3/8" | .... | 1 |
| 51 | ..... | Nut, Hex 5/8" | .... | 1 |
| 52 | 6696M | Loxit Nut | .... | 1 |
| 53 | 6697M | Loxit Fitting | .... | 1 |
| 54 | 7079M | Loxit Elbow | .... | 1 |

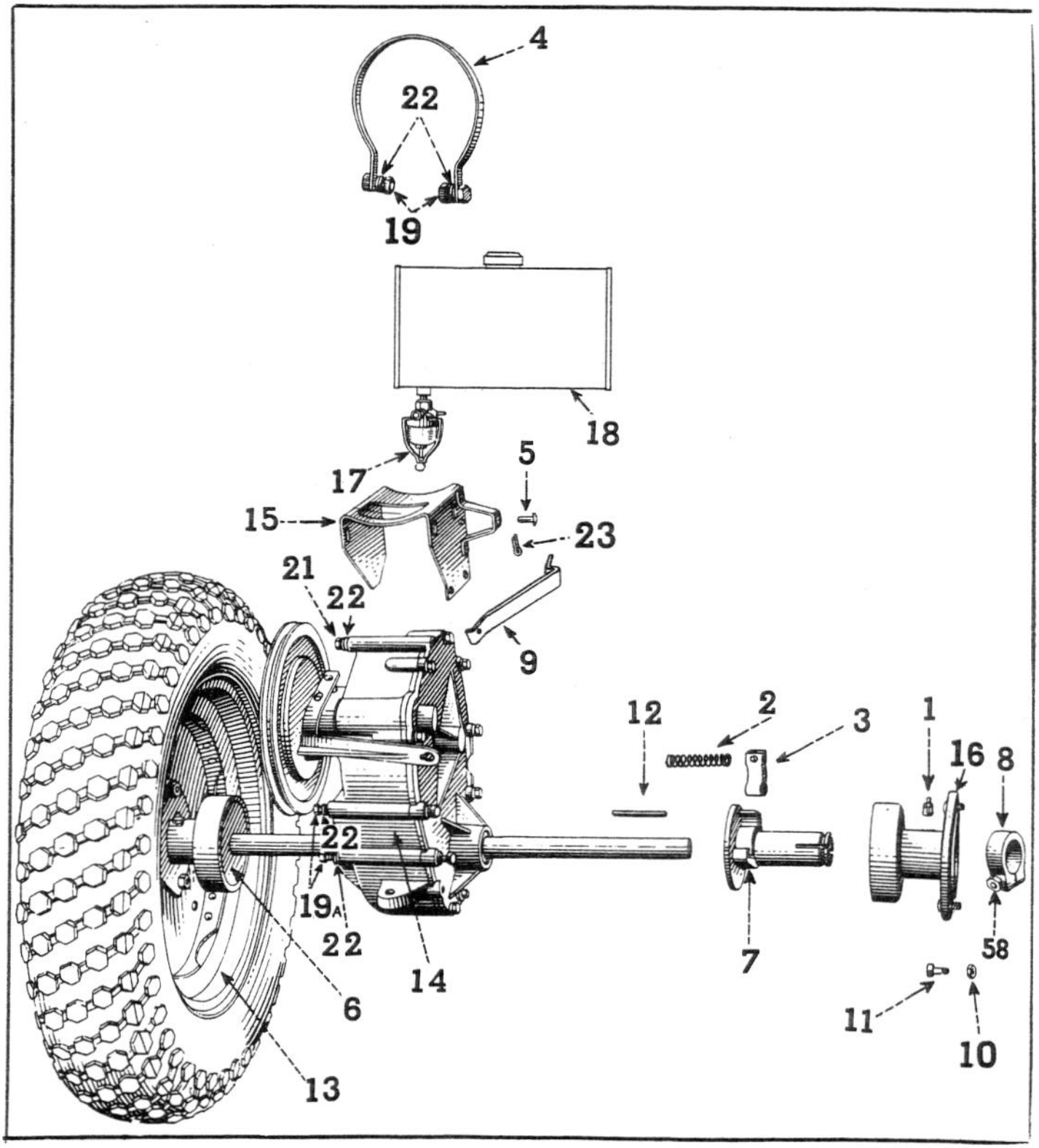



FIGURE H

HUBS, WHEELS AND FUEL TANK ASSEMBLY

# PARTS LIST

## HUBS, WHEELS AND FUEL TANK ASSEMBLY

(The following illustration Numbers refer to Figure H)

| Illustration Number | Part Number | Description | Shipping Weight Lbs. | Shipping Weight Oz. |
|---|---|---|---|---|
| | 219 | Wheel, Steel Demountable. . . . . | 15 | ... |
| 1 | 1610 | Grease Fitting . . . . . | .... | 1 |
| 2 | 1538U | Spring, for Wheel Pawls . . . . . | .... | 1 |
| 3 | 3207M | Pawl. . . . . | .... | 2 |
| .. | 3715M | Lug, for Steel Wheels . . . . . | .... | 4 |
| 4 | 4295M | Fuel Tank Straps. . . . . | .... | 1 |
| 5 | 4307M | Rivet, Drilled W.B.H. . . . . | .... | 1 |
| 6 | 4312M | Pawl Holder, R.H. . . . . | 3 | 1 |
| 7 | 4313M | Pawl Holder, L.H. . . . . | 3 | 1 |
| 8 | 4314M1 | Hub Clamp . . . . . | .... | 11 |
| 9 | 4781M | Latch, Cowling. . . . . | .... | 2 |
| 10 | 4800M | Nut, Hex for Hub Bolt . . . . . | .... | 1 |
| 11 | 4802M | Bolt, Hub . . . . . | .... | 2 |
| 12 | 9396E | Key, Square in Axle Shaft . . . . . | .... | 1 |
| 13 | 580X9 | Wheel, Rubber Tire. . . . . | 16 | ... |
| 14 | 575PA2A | Transmission, less Clutch . . . . . | 52 | 13 |
| 15 | 575PA24 | Fuel Tank Bracket Assembly. . . . . | 1 | 3 |
| 16 | 575PA237 | Hub with Bolts and Nuts . . . . . | 6 | 9 |
| 17 | | Fuel Filter Assembly. . } See Parts Book with Engine | | |
| 18 | | Fuel Tank Assembly. . . } See Parts Book with Engine | | |
| 19 | ..... | Cap Screw, Hex Head 3/8" x 3/4" with Nut. . . . | .... | 2 |
| 19A | ..... | Cap Screw, Hex Head 3/8" x 3/4" less Nut. . . . | .... | 1 |
| 20 | ..... | Cap Screw, Hex Head 3/8" x 2-1/2" with Nut. . . | .... | 2 |
| 21 | ..... | Cap Screw, Hex Head 3/8" x 5/8" . . . . . | .... | 1 |
| 22 | ..... | Washer, Lock 3/8" . . . . . | .... | 1 |
| 23 | ..... | Cotter Pin 1/8" x 5/8". . . . . | .... | 1 |

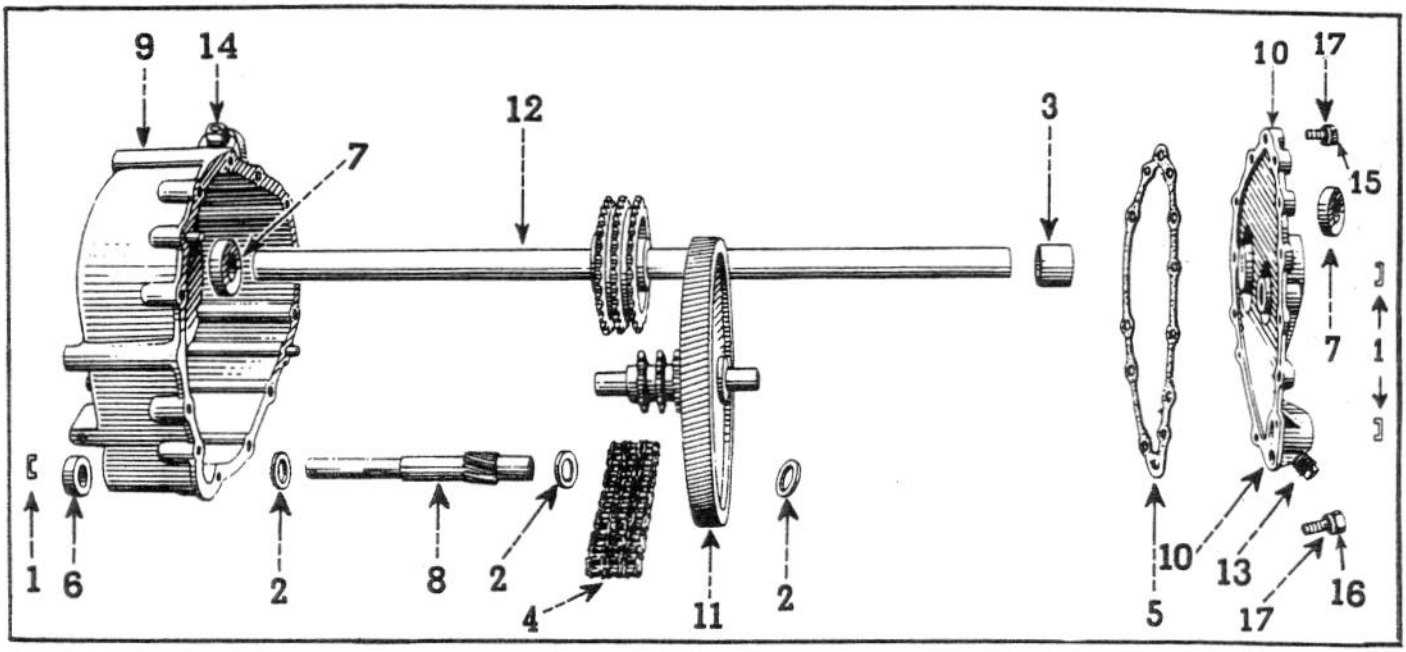



FIGURE I

TRANSMISSION

| Illustration Number | Part Number | Description | Shipping Weight Lbs. | Shipping Weight Oz. |
|---|---|---|---|---|
| 1 | 2103M | Plug, Expansion. . . . . | .... | 1 |
| 2 | 4264M | Washer, Thrust . . . . . | ..... | 1 |
| 3 | 4266M | Spacer, Axle . . . . . | .... | 4 |
| 4 | 4274M | Chain. . . . . | 2 | 4 |
| 5 | 4278M | Gasket, Gear Case. . . . . | .... | 1 |
| 6 | 4279M | Oil Seal, Pulley Shaft . . . . . | .... | 1 |
| 7 | 4280M | Oil Seal, Axle . . . . . | .... | 1 |
| 8 | 6694M | Input Pinion . . . . . | 1 | ... |
| 9 | 575PA3 | Case with Bushing R.H. Not serviced separately Order 575PA90 . . . . . | | |
| 10 | 575PA4 | Cover with Bushing L.H. Not serviced separately Order 575PA90 . . . . . | | |
| 11 | 575PA5 | Intermediate Shaft, Gear and Sprocket. . . . . | 7 | 4 |
| 12 | 575PA6 | Axle and Sprocket. . . . . | 11 | 4 |
| 5-9-10 15-16-17 | 575PA90 | Transmission Case and Cover Complete with Bearings, Gasket, 4 Cap Screws and Lockwashers | 30 | 2 |
| 13 | ..... | Plug, Pipe 1/4". . . . . | .... | 1 |
| 14 | ..... | Plug, Pipe 1/2". . . . . | .... | 2 |
| 15 | ..... | Cap Screw, Hex Head 3/8" x 1-1/8". . . . . | .... | 1 |
| 16 | ..... | Cap Screw, Hex Head 3/8" x 1-3/4". . . . . | .... | 2 |
| 17 | ..... | Washer, Lock 3/8". . . . . | .... | 1 |

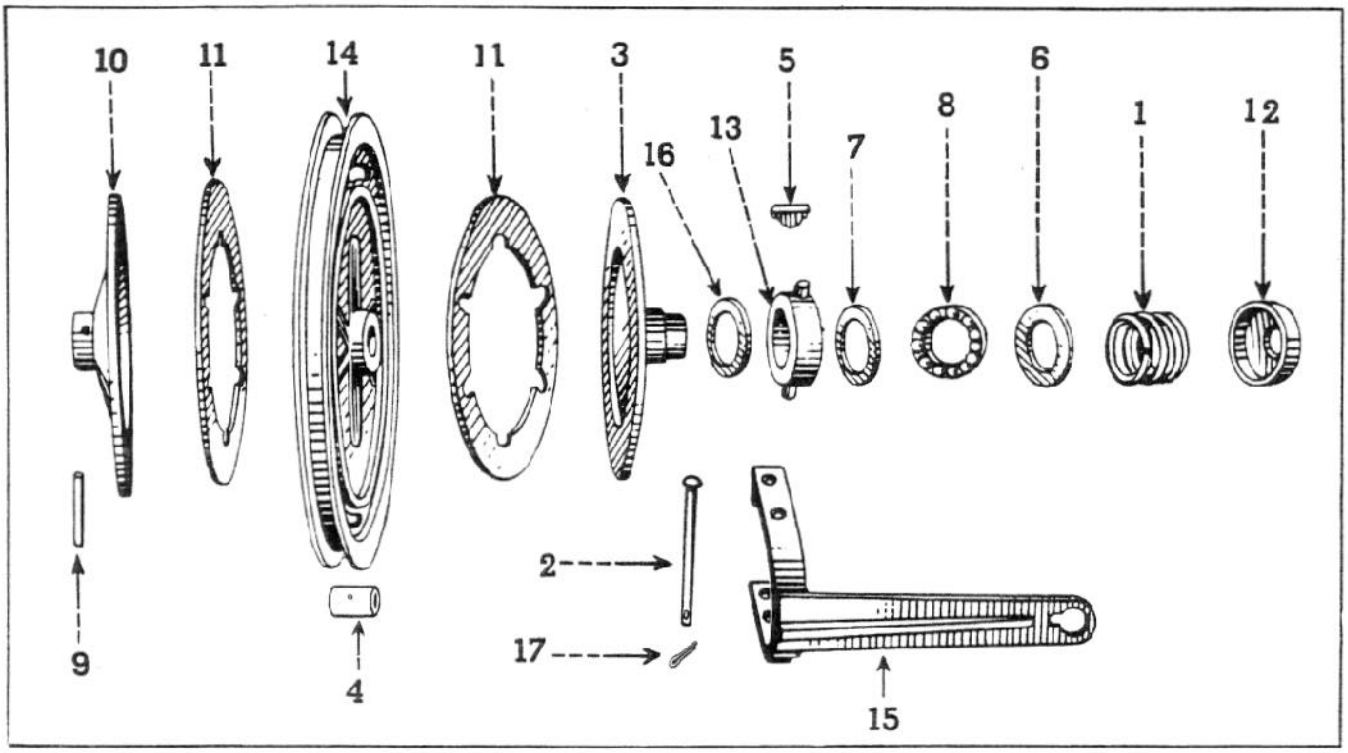



FIGURE 1

CLUTCH

| Illustration Number | Part Number | Description | Shipping Weight Lbs. | Shipping Weight Oz. |
|---|---|---|---|---|
| 1 | 1919U | Spring | .... | 1 |
| 2 | 4306M | Rivet, Drilled R.H. | .... | 1 |
| 3 | 4309M | Clutch Plate, Inner | 1 | 8 |
| 4 | 4316M | Pulley Bearing | .... | 2 |
| 5 | 4325M | Key, Hypro | .... | 1 |
| 6 | 4864M | Clutch Washer, Inner | .... | 1 |
| 7 | 4865M | Clutch Washer, Outer | .... | 1 |
| 8 | 4866M | Clutch Throwout Thrust Bearing | .... | 1 |
| 9 | 4865M | Groove Pin | .... | 1 |
| 10 | 4866M | Clutch Plate, Outer | 1 | 8 |
| 11 | 6272M | Clutch Facing | .... | 2 |
| 12 | 575PA23 | Clutch Spring Case and Washer | .... | 5 |
| 13 | 575PA28 | Clutch Throwout Cup and Pin | .... | 3 |
| 14 | 575PA215 | Pulley and Bushing (casting No. 6271M1) | 1 | 12 |
| 15 | 575PA240 | Clutch Throwout Lever and Yoke | .... | 10 |
| 16 | ..... | Washer, Flat 1-5/16" x 1-3/4" x 1/16" | .... | 1 |
| 17 | ..... | Cotter Pin 3/32" x 1/2" | .... | 1 |