

Operator's Manual

Congratulations:

You have just purchased one of the most versatile machines on the market. With reasonable care and service it should give long and satisfactory service.

Any mechanical device can be potentially dangerous if not used properly. No accident prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the equipment. Study this operator's manual to learn the operation of the controls and observe all safety precautions. Only use this machine for the purpose it is intended. By following these instructions and safety precautions you should enjoy many hours of trouble-free operation.

Snapper Mower

MODELS V-21XP – V-21XPS

SNAPPER MOWER GUARANTEE

All Snapper Mowers are guaranteed for normal use to the original purchaser against defective workmanship and material. This guarantee extends for one year from purchase date on mowers not used commercially, and for one month on mowers that are used commercially.

We will replace or repair without charge any part or parts returned to us during the guarantee period, with transportation charges prepaid, that our inspection shows to have been defective in workmanship or material when shipped from the factory.

This guarantee is void if the parts in question have been altered or damaged by accident, abuse, neglect, improper adjustment, lack of lubrication or normal wear. This guarantee does not cover engines, tires, tubes, batteries and belts which are guaranteed separately by their manufacturers.

No other guarantee, expressed or implied, is made by the Company which retains the right to change specifications without notice or obligation.

WARNING: Use of replacement parts other than genuine Snapper parts may impair the safety of your mower and may void our warranty.

IMPORTANT: This guarantee is void unless the guarantee card attached is filled out completely and mailed to the Factory within 10 days of the date mower was purchased.

IT IS THE POLICY OF McDONOUGH POWER EQUIPMENT, INC. TO IMPROVE ITS PRODUCTS WHENEVER IT IS POSSIBLE AND PRACTICAL TO DO SO. WE RESERVE THE RIGHT TO MAKE CHANGES OR ADD IMPROVEMENTS AT ANY TIME WITHOUT INCURRING ANY OBLIGATION TO MAKE SUCH CHANGES ON PRODUCTS MANUFACTURED PREVIOUSLY.

McDONOUGH POWER EQUIPMENT, INC.

McDONOUGH, GA., U. S. A., 30253

ASSEMBLY, OPERATION AND SERVICE INSTRUCTIONS FOR

V-21XP and V-21XPS SNAPPER MOWER

REFER TO PICTURE "C" OF PART LIST

INSTALLATION OF HANDLES:

NOTE: From the rear of mower, the lower pivoting handle No. 35 should be attached with handle bracket No. 50 to the right hand side of mower.

1. Place lower pivoting handle No. 35 in groove of lower stationary handle No. 38 which is already mounted on mower deck. Place a 1/4-20 x 1 1/2 carriage bolt No. 29 with head of bolt to the inside of handle and secure with a 3/4 internal tooth lock washer No. 26 and a 1/4-20 hex nut No. 25.
2. Attach bracket L. H. No. 55 to lower handle with a sheet metal screw No. 56 as shown.
- NOTE: Long leg of upper handle No. 27 is attached to left side of lower handle No. 35.
3. Attach upper handle No. 27 to lower handle No. 35 with a 1/4-20 x 1 1/2 carriage bolt No. 29 with head of bolt to the inside of lower handle. Place a spacer No. 30 in hole in upper handle and secure with a fender washer No. 33 and a hex nut No. 25.
4. Lift upper handle and align holes in upper handle with holes in handle bracket No. 50 and push a 1/4-20 x 3/4 carriage bolt No. 46 through holes from the bracket side and secure with a 3/4 internal tooth lock washer No. 26 and 1/4-20 hex nut No. 25.
5. Mount throttle control No. 28 to the outside of upper handle with a 1/4-20 x 1 1/2 carriage bolt No. 29 and secure with a 3/4 internal tooth lock washer No. 26 and a hex nut No. 25. Apply slight finger pressure to the head of carriage bolt to cause the bolt head to seat itself in handle.
6. Place long end of shift rod No. 31 in wear block No. 22, then align hole of wear block with hole in shift handle No. 23. Place friction washer No. 44 on the rod with the flat side next to shift detent-- No. 55, seat cone spring No. 54 over friction washer and press flat washer No. 53 on cone spring to place cotter pin No. 52 in hole in shift rod.
7. Place the other end of shift rod in wear block No. 107 after you have aligned hole in wear block with hole in bell crank No. 67 and place cotter pin No. 47 in shift rod.
8. Place release rod No. 46 in the rear hole in the transmission release bracket No. 108 from the belt side and secure with a cotter pin No. 47.

NOTE: To insert release rod in handle bracket, set cutting height as stated in instructions and place release rod in matching letter hole and secure with hair pin No. 52. Example: Wheel in notch "B", release rod in hole "B".

INSTALLATION OF GRASS CATCHER: Figure 1

1. Disconnect spark plug wire.
2. Place front bag support (roll bar) with off-set side on right hand side into slots in rear wheel brackets. Top part will lay down close to engine. Raise up allowing ends to drop through slots into holes below.
3. Place plastic bag chute onto deck with stud nearest to "CAUTION" note passing through hole in chute. Make sure captive carriage bolt drops into slot in the bracket next to the right front wheel. Place half ring clamp with slotted end to rear over the front stud. Fasten with three 5/16" wing nuts and tighten securely.
4. Slip the ends of the 3-1127 front wire through the front flap of the bag and hook over the roll bar as shown in figure 4. Slip the ends of the 3-1128 rear wire in the rear flap and hook over the top section of the lower handle pivoting. If top of bag is not taut, remove and shift front and rear wires to inboard flaps and replace. Now slip inlet neck of the bag over bag chute as far as possible. Do not allow side of bag to block discharge opening of chute. Stop engine and empty bag of grass clippings at rear opening before bag is over filled or bag chute will become clogged. **NEVER ATTEMPT TO CLEAR BAG CHUTE IF CLOGGED UNLESS ENGINE IS STOPPED AND SPARK PLUG WIRE IS DISCONNECTED.**

INSTALLATION OF SIDE CHUTE: Figure 2

1. Disconnect spark plug wire.
2. Remove grass catcher in reverse sequence of above installation.
3. Grip metal side chute with both hands and slip large slotted hole over mounting key on the deck. Slightly squeeze together and slip captive carriage bolt into slot in bracket at right front wheel while holding the slotted hole on the deck key.
4. Use one of the half clamps to hold the top down at the front

SAFETY PRECAUTIONS

Remember, a careful operator always is the best insurance against an accident.

Study this Operator's Manual, become familiar with the controls and how the mower operates. Learn to stop the mower quickly.

Never tamper with the safety interlock switch mounted near the oil fill plug which is provided to prevent the engine from running unless either the side chute or grass bag chute is in place.

Before starting clear area of debris.

Never attempt to adjust cutting height unless engine is stopped.

Always stop engine before opening or removing grass bag.

Operate the engine at the lowest speed that will cut satisfactorily.

Stop and check for breakage and repair any damage after striking foreign objects.

Make sure that shift rod is in matching notch and hole before operating mower.

Give complete and undivided attention to the job at hand.

Never allow children to operate the mower.

Instruct individuals to stay away from the mower while it is in operation.

Set mower at highest cutting height when mowing in rough ground or tall weeds.

Use caution when operating the mower on uneven terrain. Maintain good footing.

Mow slopes from side to side, rather than up and down.

When mowing, never discharge clippings toward windows and doorways.

Mow only in daylight or in good artificial light.

Do not operate mower with guards removed.

Stop the engine whenever you leave the mower even for a moment.

Do not crank or operate engine where exhaust fumes can collect.

Fill gas tank outdoors, but never while engine is running or while engine is hot. Avoid spilling. Always use an approved gasoline can.

WITH THESE SAFETY PRECAUTIONS IN MIND, WE CAN NOW PROCEED TO ASSEMBLY OF THE MOWER.

stud. Use the extra half round clamp that was not used with the grass catcher to go over the rear stud and into the small slot in the side chute. Fasten with three 5/16" wing nuts and tighten securely.

ENGINE CARE AND OPERATION:

1. FILL ENGINE WITH OIL BEFORE CRANKING.
2. Refer to engine manual furnished with this packet for instructions, to oil, fuel, and maintain the engine properly.
3. NEVER PLACE MOWER ON ITS LEFT HAND SIDE WITH SPARK PLUG POINTED DOWNWARD AS THIS WILL ALLOW THE ENGINE OIL TO RUN OUT THROUGH THE VALVE TAPPET VENT. If left too long, oil could also leak past the piston into the cylinder.

LUBRICATION:

1. Change oil as specified in the engine manual.
2. Occasionally put a few drops of oil on all movable parts.
3. The ball bearing wheels have been factory greased and should

- not be greased unless removed.
4. Transmission assembly is pre-lubricated with 4 ounces of Snapper "OO" Grease, Part No. 1-1050. To check grease, remove 1-1133 plug and see if grease is on Part No. 5-0305 input gear assembly. If not then add grease to transmission, and replace plug. The grease should be checked every 10 hours of operation.

ADJUSTING CUTTING HEIGHT:

1. This mower has solid through axles, front and rear, to give superior strength and wheel alignment. Thus with the through axle design, it is necessary to walk the height latches one notch at a time when it is desired to change the cutting height. NEVER UNLATCH BOTH SIDES AT THE SAME TIME.
2. When adjusting rear wheel height, remove release rod from handle bracket first, then release latch and move to desired position. Place release rod back into matching hole. Example: Latch in notch "B", release rod in hole "B".
3. When changing cutting height, make sure that all latches are in matching slots. This results in the cutting blade being slightly higher in the rear to eliminate drag.

REFER TO PICTURES BELOW FOR PROPER INSTALLATION OF GRASS CATCHER AND SIDE CHUTE

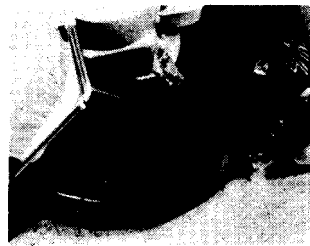


FIGURE 1

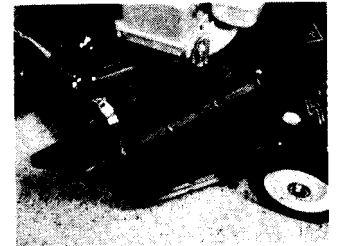


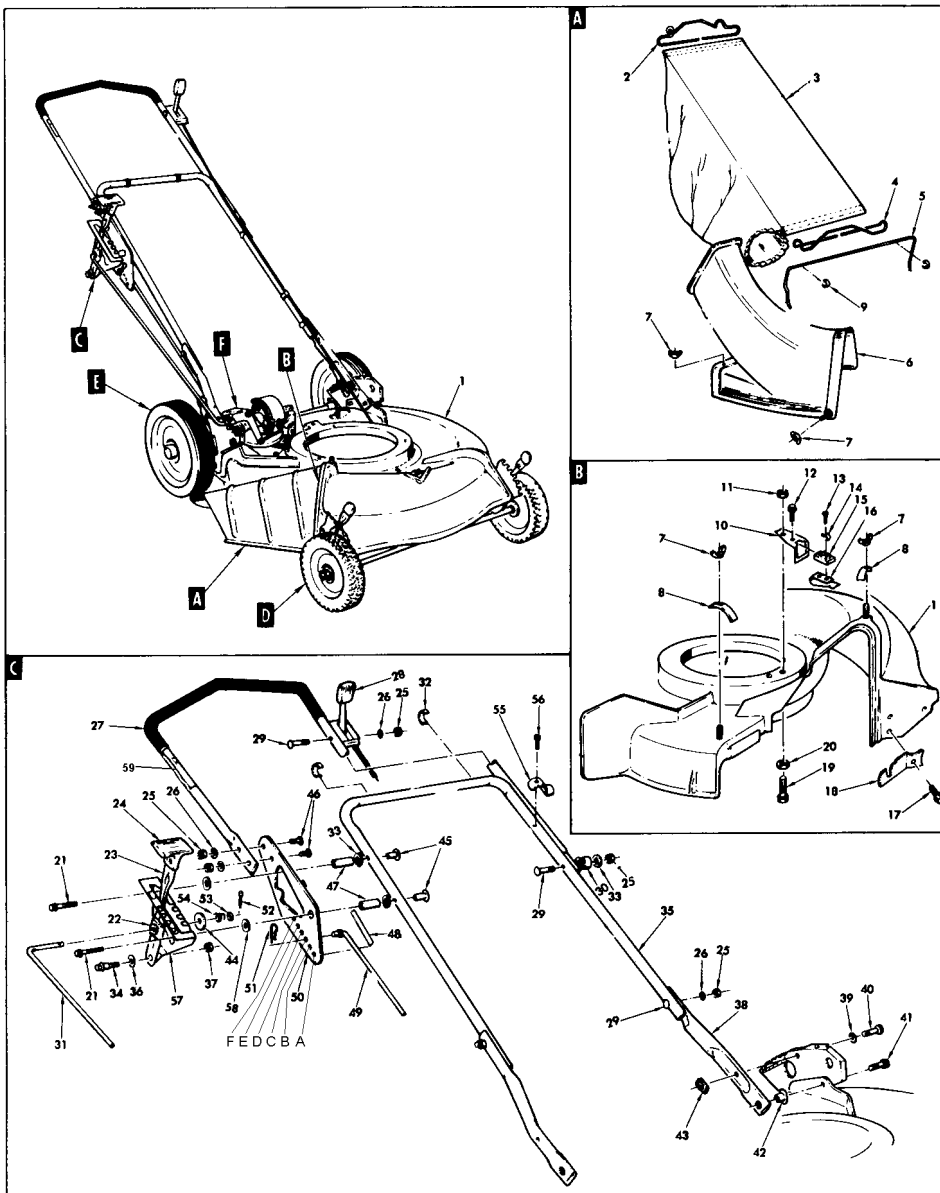
FIGURE 2

OPERATING TIPS

1. SNAPPER V-21XP will cut either forward or backward. However, due to the set of the blade, slightly less power is required for forward cutting than for reverse cutting.
2. To turn at end of row, push down on handle bars to raise front wheels off of the lawn. This permits turning on the back wheels only and saves scuffing the lawn.
3. For cutting on slopes, it is usually best to move side to side only — not up and down hill.
4. When vacuuming a paved walk or driveway, first lower deck to lowest position. It is then best to run V-21XP forward along the extreme left hand side of the area to be cleaned. This will pick up some litter and windrow some litter to the right of the first swath.
5. To prolong the life and usefulness of your mower, it is a good practice to wash out all the grass that may be sticking to the underside of the deck.

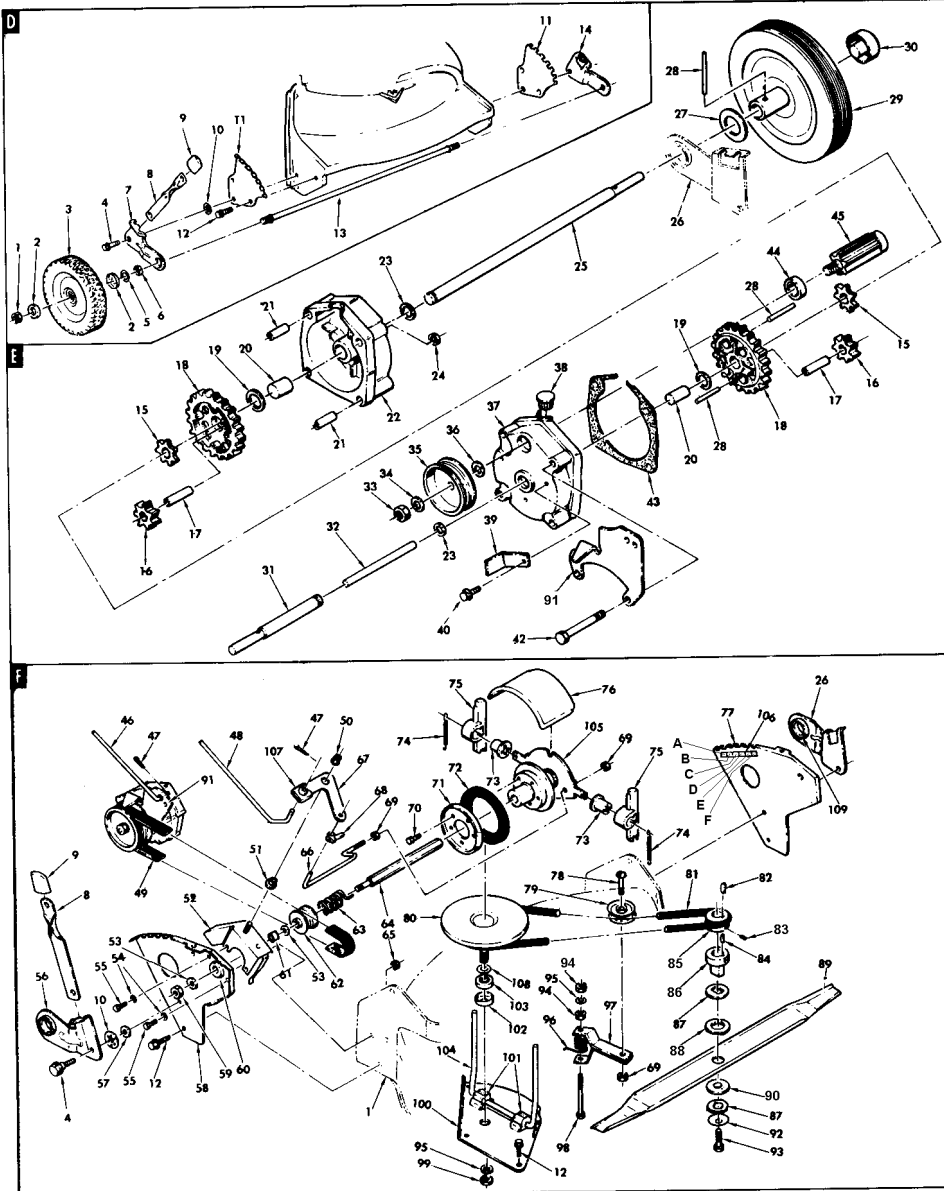
PARTS LIST — V-21XP

No.	Part No.	Description	Qty.
1.	5-0297	Deck Assembly	1
2.	3-1128	Rear Wire	1
3.	1-1098	Grass Bag	1
4.	3-1127	Front Wire	1
5.	3-7305	Roll Bar	1
6.	5-0293	Bag Chute Assembly	1
7.	9-0375	5/16-18 Wing Nut	4
8.	3-1123	Clamp	2
9.	1-1780	Nylon Ring	2
10.	3-1029	Ground Strap, V-21XP	1
10.	3-1144	Ground Strap, V-21XPS	1
11.	9-0222	5/16-24 Hex Lock Nut	1
12.	9-0307	10-24 x 1/2 SEMS CS	1
13.	9-0379	10-18 x 3/4 Screw	1
14.	9-0385	Tab Washer	1
15.	1-0952	Insulator	1
16.	1-0975	Interlock	1
17.	9-0361	5/16-18 x 5/8 SEMS	1
18.	3-1124	Side Bracket	1
19.	9-0359	5/16-24 x 1 1/8 CS	1
		Grade 5	1
20.	9-0188	5/16 SAE Flat Washer	1
21.	9-0012	Hex Hd. Mach. Screw	2
22.	1-1116	Wear Block	1
23.	3-1008	Shift Handle	1
24.	1-0957	Shift Knob	1
25.	9-0063	1/4-20 Hex Nut	6
26.	9-0055	1/4 Internal Tooth lock washer	5
27.	5-0619	Upper Handle Ass'y.	1
28.	1-8067	Throttle Control	1
29.	9-0000	1/4-20 x 1 1/2 Car. Bolt	4
30.	1-1798	Spacer	1
31.	3-7326	Shift Rod	1
32.	1-0996	Ring, Nylon	2
33.	1-1763	Fender Washer	1
		1 x 5/16 x 1/16	4
34.	1-1078	5/16 Shoulder Screw	1
35.	3-9557	Lower Handle Pivoting	1
36.	1-1079	Spring Washer	1
37.	9-0197	5/16-18 Jam Nut	1
38.	3-7333	Lower Handle Stationary	2
39.	9-0189	5/16 Internal-External tooth lock washer	2
40.	9-0368	5/16-18 x 3/4 HHWFCS ST.	2
42.	9-0388	5/16-18 Dot "T" Nut	2
43.	1-0974	5/16-24 Weld Nut	2
44.	1-1114	Friction Washer	1
45.	1-1803	Tee Nut, R.B.	2
46.	9-0074	1/4-20 x 3/4 Carriage	2
47.	1-1800	Spacer	2
48.	1-1810	Decal	1
49.	1-1799	Rod Release	1
50.	3-9556	Bracket, Handle	1
51.	1-1714	Hair Pin, plated	1
52.	9-0365	Cotter Pin, 1/8 x 3/4	1
53.	9-0122	3/8 SAE Washer	1
54.	1-0946	Shift Spring	1
55.	3-1734	Bracket, Handle L.H.	1
56.	9-0363	Screw, 10-18	1
57.	3-1009	Defent	1
58.	9-0055	1/4 SAE Washer	2
59.	1-1811	Handle Decal	1



No.	Part No.	Description	Qty.	No.	Part No.	Description	Qty.	No.	Part No.	Description	Qty.
1.	9-0377	7/16-20 Jam Lock Nut	2	27.	1-0935	3/4 Washer	2	52.	4-7352	Bell Crank Str.	1
2.	3-1121	Hub Cap, Front	4	28.	1-0172	3/16 x 1 1/8 Roll Pin	4	53.	1-1731	BelleVue Washer	2
3.	1-0183	Front Wheel, 7 x 1.50	2	29.	1-0945	Rear Wheel	2	54.	9-0051	1/4 SAE WASHER	2
4.	1-1078	5/16 Shoulder Screw	4	30.	1-1113	Plastic Hub Cap	2	55.	9-0362	1/4-20 x 5/8 SEMS	2
5.	1-1079	Spring Washer	2		5-0262	Short Axle Assembly	1	56.	3-1018	Wheel Arm, Rear R. H.	1
6.	1-1103	Spacer	1	31.	2-1130	Short Axle	1	57.	9-0188	5/16 SAE Washer	2
7.	3-1017	Wheel Arm, Front R. H.	1	15.	2-1116	Differential Gear, 12T, 12P	1	58.	3-7308	Rear Bracket, R. H.	1
8.	1-0921	Height Latch	4	32.	2-1132	Pin	1	59.	9-0289	3/8-24 Hex Lock Nut	1
9.	1-1093	Grip	4	33.	9-0394	7/16-20 Hex Nur	1	60.	1-0756	Ball Bearing	1
10.	1-1791	Push Nut	4	34.	1-1079	Spring Washer	1	61.	1-1726	Flex Bushing	1
11.	3-7300	Front Bracket	2	35.	1-0936	Polly "V" Pulley	1	62.	2-1114	Polly "V" Pulley	1
12.	9-0361	5/16-18 x 5/8 SEMS	5	36.	1-1724	Spring Washer	1	63.	1-1118	Rev KO Spring	1
13.	2-1119	Front Axle	1		5-0268	Inboard Housing Assembly	1	64.	2-1117	Hex Shaft	1
14.	3-1016	Wheel Arm, Front L. H.	1	37.	1-8048	Inboard Housing	1	65.	9-0197	5/16-18 Hex Jam Nut	4
	5-0263	Long Axle Assembly	1	38.	1-1133	Plug	1	66.	1-0930	Clutch Rod	1
15.	2-1116	Differential Gear, 12T, 12P	1	39.	3-1289	Belt Guide	1	67.	3-1015	Bell Crank	1
25.	2-1131	Long Axle	1	40.	9-0362	1/4-20 x 5/8 HWST	1	68.	1-0937	Cluth Rod Clip	1
16.	2-1115	12 Tooth, 12 Pitch Gear	2	41.	3-7340	Transmission Release Bracket	1	69.	9-0303	1/4-28 Hex Lock Nut	2
17.	1-1110	Shaft	2					70.	9-0307	10-24 x 1/2 SEMS	5
18.	1-0919	46 Tooth, 12 Pitch Gear	2	42.	9-0487	1/4-28 x 3 1/4 HHCS	4	71.	3-1013	Tire Plate	1
19.	2-0938	Thrust Washer	2	43.	1-1774	Gasket	1	72.	1-0927	Tire	1
20.	1-0932	Bearing	2	44.	1-1767	Ball Bearing	1	73.	1-1115	Pivot Bearing	2
21.	1-0826	Roll Pin	2	45.	5-0305	Input Gear Assembly	1	74.	1-1126	Clutch Spring	1
	5-0269	Outboard Housing Ass'y.	1	46.	1-1799	Release Rod	1	75.	1-1109	Slide Block	2
22.	1-8050	Outboard Housing	1	47.	9-0365	1/8 x 3/4 Cotter Pin	2	76.	1-1119	Cover	1
23.	1-1179	Seal	2	48.	1-1801	Shift Linkage	1	77.	3-7309	Rear Bracket, L. H.	1
24.	9-0303	1/4-28 Hex Lock Nut	4	49.	1-1117	200J6 Polly "V" Belt	1	78.	9-0387	1/4-28 x 1 1/2 FHMS	1
25.	2-1131	Long Axle	1	50.	1-0969	5/16-24 Flanged Lock Nut	1	79.	1-0948	Idler Pulley	1
26.	3-1019	Wheel Arm, Rear L.H.	1	51.	1-1114	Friction Washer	1	80.	5-0301	Drive Disc Assembly	1
								81.	1-0849	3L 255 "V" Belt	1
								82.	1-0783	Hi Pro Key	1
								83.	9-0471	1/4-20 x 5/16 SKT. Head Set Screw	1
								84.	1-0008	Key	1
								85.	2-1170	Engine Pulley	1
								86.	2-1018	Shock Clutch	1
								87.	3-1122	Clutch Washer	2
								88.	1-1796	Fibre Washer	1
								89.	1-8065	Cutter Bar	1
								90.	1-1102	Fibre Washer	1
								91.	3-7340	Transmission Release Brkt.	1
								92.	1-1132	Clutch Washer	2
								93.	9-0167	3/8-24 x 2 GR. 5 Cap Screw	1
								94.	9-0289	3/8-24 Hex Lock Nut	2
								95.	9-0390	3/8 Internal Tooth Lock Washer	2
								96.	1-0947	Idler Spring	1
								97.	3-1006	Idler Arm	1
								98.	9-0174	3/8-24 x 3 HHCS	1
								99.	9-0155	3/8-24 Hex Nut	2
								100.	3-7310	Disc Plate	1
								101.	1-0955	Pillow Block	1
								102.	3-1122	Bearing Shield	1
								103.	1-1032	Felt Seal	1
								104.	1-1112	Shift Fork	1
								105.	5-0300	Driven Disc Assembly	1
								106.	1-1810	Decal	2
								107.	1-1116	Wear Block	1
								108.	9-0122	3/8 SAE Washer	2
								109.	1-0953	Bearing	2

5-0620 TRANSMISSION ASSEMBLY



84.	1-0008	Key	1
85.	2-1170	Engine Pulley	1
86.	2-1018	Shock Clutch	1
87.	3-1122	Clutch Washer	2
88.	1-1796	Fibre Washer	1
89.	1-8065	Cutter Bar	1
90.	1-1102	Fibre Washer	1
91.	3-7340	Transmission Release Brkt.	1
92.	1-1132	Clutch Washer	2
93.	9-0167	3/8-24 x 2 GR. 5 Cap Screw	1
94.	9-0289	3/8-24 Hex Lock Nut	2
95.	9-0390	3/8 Internal Tooth Lock Washer	2
96.	1-0947	Idler Spring	1
97.	3-1006	Idler Arm	1
98.	9-0174	3/8-24 x 3 HHCS	1
99.	9-0155	3/8-24 Hex Nut	2
100.	3-7310	Disc Plate	1
101.	1-0955	Pillow Block	1
102.	3-1122	Bearing Shield	1
103.	1-1032	Felt Seal	1
104.	1-1112	Shift Fork	1
105.	5-0300	Driven Disc Assembly	1
106.	1-1810	Decal	2
107.	1-1116	Wear Block	1
108.	9-0122	3/8 SAE Washer	2
109.	1-0953	Bearing	2

ITEMS NOT SHOWN, V-21 XP

No.	Part No.	Description	Qty.
3-1135		Heat Shield, 3 1/2 HP	1
3-1190		Heat Shield, 4 HP	1
9-0457		Lock Washer	1

ITEMS NOT SHOWN, V-21 XPS

No.	Part No.	Description	Qty.
3-1135		Heat Shield, 3 1/2 HP	1
3-1190		Heat Shield, 4 HP	1
9-0457		Lock Washer	1
1-1167		Switch Key	2
3-1141		Switch Plate	1
1-1770		Battery Assembly	1
1-1789		Battery Charger	1
1-1790		Battery	1
5-7081		Battery Clamp	1
1-1141		Harness Assembly	1