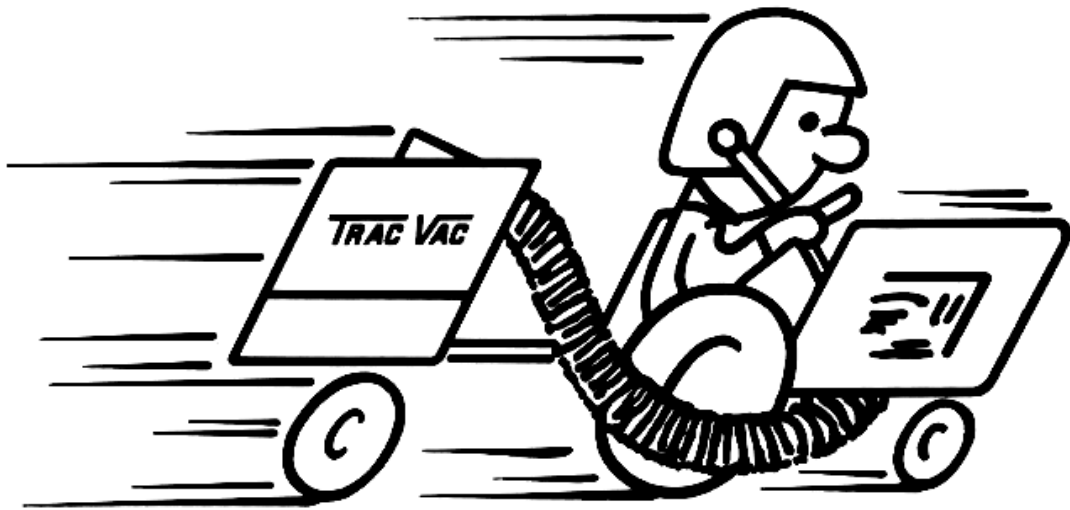


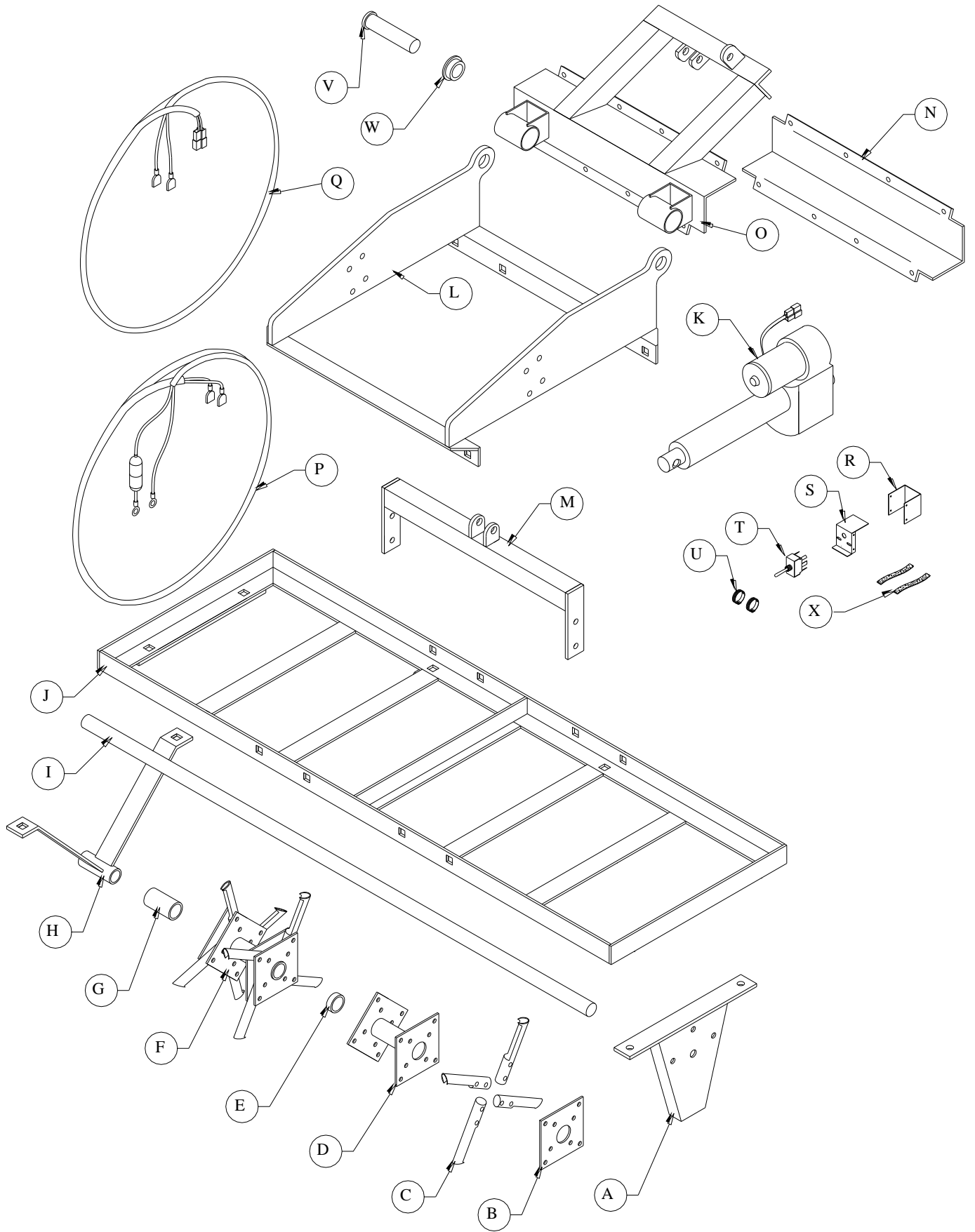
TRAC VAC

FRONT MOUNT AERATOR



Operating and Assembly Manual

**Midwest Equipment Manufacturing, Inc.
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FM 352-4 (TOP CYLINDER) PARTS BREAKDOWN

<u>KEY</u>	<u>PART NO</u>	<u>DESCRIPTION</u>
A	35215	SIDE PLATE
B	35230	TINE PLATE
C	35226	TINE
D	35225	TINE DRUM
E	35228	BUSHING
F	35223	TINE ASSEMBLY (INCLUDES A-E)
G	35233	TINE DRUM SPACER
H	35814	TINE SHAFT SUPPORT (358 ONLY)
I	35232	TINE SHAFT (352)
	35812	TINE SHAFT (358)
J	35210	FRAME, 352
	35810	FRAME, 358
K	35868	LINEAR ACTUATOR
L	35862	FRAME MOUNT, FM AERATOR
M	35863	LOWER CYLINDER MOUNT
N	35850	HALF CHANNEL, LOWER
O	35861	HALF BRACKET, UPPER
P	35858	WIRING HARNESS, BATTERY SIDE
Q	35859	WIRING HARNESS, ACTUATOR SIDE
R	35855	SWITCH COVER PLATE
S	35854	SWITCH MOUNT PLATE
T	H1006	SWITCH
U	35857	BAND CLAMP SWITCH MOUNT
V	28801	CLEVIS PIN, 1" X 4"
W	65032	NYLON BUSHING
X	35860	SELF STICK VELCRO, ½" X 6"
Y	359**	HITCH KIT (TRACTOR SPECIFIC)

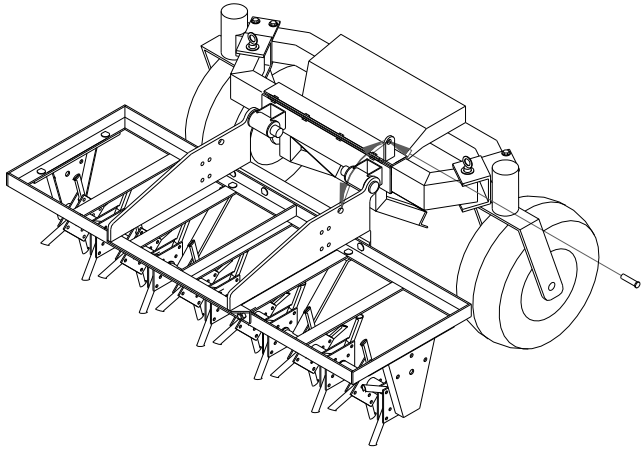


FIG. 7

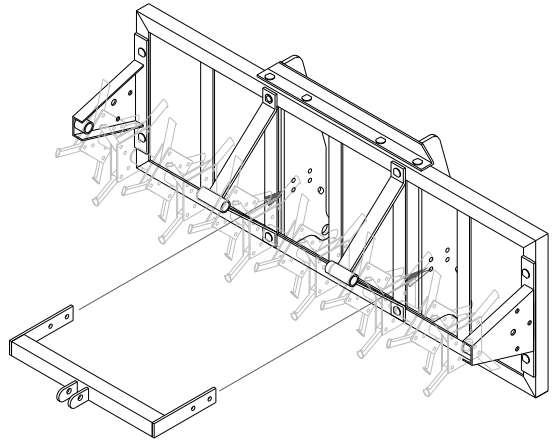


FIG. 8

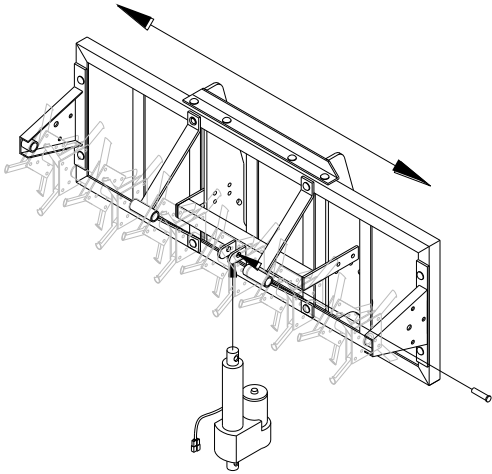


FIG. 9

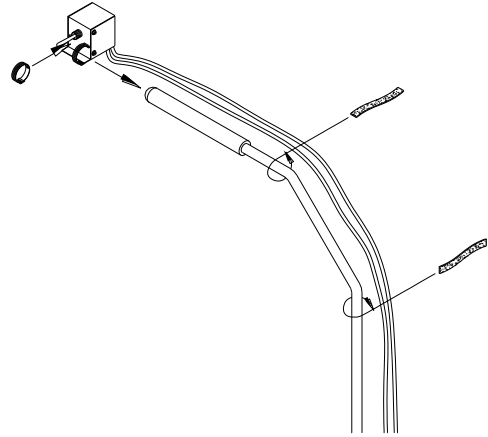
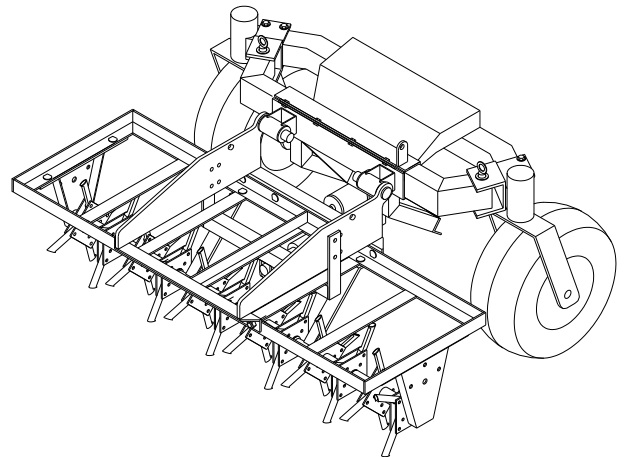
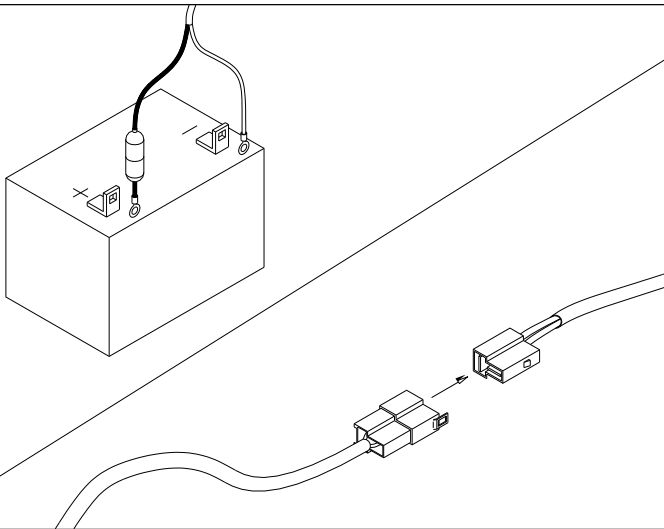


FIG. 10



FM AERATOR INSTALLATION INSTRUCTIONS

1. Install tractor specific mountings according to instructions provided with kit. Do not tighten hardware for mounts, leave them loose.
2. Slip each crosstube into caster arm mounts and pin in place with $\frac{3}{4}$ " pin and hairclip provided. **FIG. 1**
3. Orient half brackets around crosstubes as illustrated and bolt together two halves using eight $\frac{5}{16}$ " x 1" bolts and whizlock nuts. Once again do not tighten, only snug bolts at this time. **FIG. 2**
4. Square up the aerator to the first crossmember of the footpan on tractor, do not try and use the casters to square as most of the commercial midmount mowers have to different length caster arms. Once assembly is squared, tighten hardware to the crosstube mounts, but leave the bolts in the clamp halves loose. **FIG. 3**
5. Remove aerator from its box and attach main pivot frame to it using eight $\frac{1}{2}$ " x $1\frac{1}{4}$ " carriage bolts and whizlock nuts provided, orient round head to the inside of the aerator frame, also note orientation of tines to pivot frame (tines furthest away from mount point of assembly should have the cutouts to the bottom). These eight bolts can be tightened. **FIG. 4 & 5**
6. Attach aerator to tractor mount by slipping arms of main pivot frame around the receiver tubes on half bracket and secure with 1" x 4" clevis pins and $\frac{1}{8}$ " x $1\frac{3}{4}$ " cotter pins. **FIG. 6**
7. Rotate aerator over into transport position and pin in place with $\frac{1}{2}$ " x 2" clevis pin and hairclip cotter pin. **FIG. 7**
8. Slip lower cylinder mount between aerator drums and angle iron frame and around the outside of the pivot arms on main pivot frame that is bolted to the aerator frame. Align holes in arms of main pivot with holes in arms of lower cylinder mount and secure with $\frac{3}{8}$ " x 1" bolts and whizlock nuts. Tighten these bolts also. (Note: there are two bolts patterns on the main pivot frame pivot arms, to determine which set of holes to use measure from the ground up to top of crosstube if your measurement is at or near 19" use hole pattern furthest away from tractor (upper set of holes in transport position). Use the hole-pattern closer to the tractor if that same measurement is at or near 17"(lower set of holes in transport position). **FIG. 8**
9. Center aerator frame on drive-tires of mower. The entire assembly should still be able to slip on the crosstubes because clamp halves are not tightened yet. Pin cylinder onto lower cylinder mount (on aerator) with $\frac{1}{2}$ " x 2" clevis pin and hairclip cotter pin provided. (Note: the extension shaft of the cylinder is the end needed to mount to location. **FIG. 9**
10. Band clamp switch plate to control arm of tractor on a comfortable operating position. The wiring harness must be run at this time. Using the velcro self stick strips secure lines down the control arm, once to the bottom of the control arm choose and appropriate route to the battery and to the cylinder on the aerator and run each line to its destination. Plug cylinder line into cylinder and attach posts to nuts on battery, black to positive, white to negative. **FIG. 10-11**
11. Remove $\frac{3}{8}$ " x 2" clevis pin that is securing the assembly into the transport assembly and rotate aerator back over into operating position, on the ground. **FIG. 12**
12. Pin tractor side of cylinder to half clamp mount using the $\frac{1}{2}$ " x 2" clevis pin and hairclip cotter pin just removed. (Note: cylinder will have to be extended enough to reach this mount point). **FIG. 12**
13. Test operation of unit.

OPERATION OF FM AERATOR

- Your front mount aerator is designed to be used for shallow core aeration.
- Ground speed of 2-3 MPH recommended.
- Turning the mower with the tines penetrating the ground could cause damage to lawn, unit, mower and/or cause personal injury.
- Running in reverse with the tines penetrating the ground will cause damage to the lawn.
- The aerator is designed to use the weight of the mower to penetrate the ground, cinder blocks may be used for weight if extra weight is needed.
- Flip aerator into transport position to trailer.
- To flip aerator into transport position first relieve the load from the cylinder (take all pressure off of the pinpoints so pin can be removed), remove the $\frac{1}{2}$ " x 2" clevis pin from the cylinder mount on the tractor side. For transporting run the cylinder in to the full retract position. Rotate aerator over and pin into transport position with the $\frac{1}{2}$ " x 2" clevis pin just removed from cylinder mount.
- To bring back to operating position, remove the $\frac{1}{2}$ " x 2" clevis pin securing the aerator in the transport position and rotate the unit back around to the operating position. The cylinder will have to be run back out to align the mounting holes on cylinder to mounting holes on half bracket and pin cylinder back to lower mount on aerator.