

FM120/150/180 FINISHING MOWER



Operator's Manual

MechMaxx

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TABLE OF CONTENTS

TABLE OF CONTENTS	1	CONNECTING TO TRACTOR	3
SPECIFICATIONS	1	FIELD USE PREPARATION	4
SAFETY SIGNS	2	FIELD OPERATION	4
INTRODUCTION	3	DISCONNECTING FROM TRACTOR	4
SAFETY INSTRUCTIONS	3	MAINTENANCE	4
OPERATING SAFETY	3	FM120/FM150/FM180 FINISHING MOWER PARTS	5
TRANSPORT SAFETY	3	PARTS LIST	6
SERVICE AND MAINTENANCE SAFETY	3		
OPERATING INSTRUCTIONS	3		


SPECIFICATIONS

Model	FM120	FM150	FM180
Cutting Width	48 in	60 in	72 in
Mowing diameter	0.75 in		
Blade Ground Clearance	0.4 - 4.5 in		
Horsepower	18 – 30 HP	25 – 40 HP	30 – 50 HP
PTO Speed	540 RPM		
PTO Shaft	T5-LF-1000 39-1/4" / 54-3/4"	04B-LF-1200 47-1/4" / 57"	T5-LF-1200 47-1/4" / 57"
Transmission Twin	V Belt		
Hitch Type	Category 1		
Top Link Type	Flotation Style		
Number Of Blades	3		
Product Weight	430 lbs	460 lbs	507 lbs
Overall Size	49*48*33 in	49"X48"X33"	73*48*33 in


SAFETY SIGNS

The rating plate on your machine may show symbols. These represent important information about the product or instructions on its use.

⚠ DANGER ⚠



High Pressure Fluid Hazard.
High pressure fluid leak will pierce skin. Release pressure before working on system.
Detect leaks with wood or cardboard. Wear sturdy gloves and goggles. NEVER use fingers.
Fluid injected in skin must be surgically removed by trained doctor immediately or gangrene will result.
Fluid injected into skin will injure or kill.



⚠ WARNING ⚠

ENGAGE TRACTOR CLUTCH SLOWLY DURING START UP OR DAMAGE WILL OCCUR. KEEP PTO SHAFT WITH 25° OF LEVEL DURING OPERATION.

⚠ WARNING ⚠

To Prevent Serious Injury Or Death:

- Read and understand Operator's manual before using.
- Do not permit riders on the tractor or mower. Never carry child on tractor seat.
- Operate with guards installed and in good condition.
- Operate only with tractor equipped with POPS and seatbelts.
- Keep away from moving parts.
- Stop engine, set brake and wait for all moving parts to stop before dismounting.
- Be sure lights and reflectors required by law are clean and in good working order before transporting.
- Do not allow children to operate mower.
- Travel with SMV and lights that follow local codes.
- Clean debris from mowing area.
- Do not operate in the raised position.
- Support securely before working beneath unit.
- Review safety instructions annually.

⚠ DANGER ⚠



ROTATING DRIVELINE CONTACT CAN CAUSE DEATH KEEP AWAY! DO NOT OPERATE WITHOUT:

- All driveline guards, tractor, and equipment shields in place.
- Drivelines securely attached at both ends.
- Driveline guards that turn freely on driveline.

⚠ WARNING ⚠



Read and understand operators manual before using this machine.

⚠ WARNING ⚠

The PTO driveline MUST be measured and cut (if required) as per the Owner's Manual. Failure to do so will result in damage to both the tractor and the implement.

⚠ CAUTION ⚠



⚠ DANGER ⚠

GUARD MISSING WHEN THIS IS VISIBLE DO NOT OPERATE ENTANGLEMENT HAZARD

⚠ WARNING ⚠



PINCH POINT HAZARD
Keep clear

⚠ WARNING ⚠



HIGH PRESSURE FLUID HAZARD

Relieve pressure before disconnecting lines. Do Not use hands to check for leaks. Consult physician immediately if skin penetration occurs.

⚠ DANGER ⚠

ROTATING KNIVES HAZARD

To prevent serious injury or death from rotating knives:

- DO NOT get under frame when rotor is turning or engine is running. Keep others away.
- Disconnect & lockout power source BEFORE adjusting or servicing.
- Keep hands, feet, hair, and clothing away from moving parts.

⚠ WARNING ⚠



BELT DRIVE: HAND AND ARM ENTANGLEMENT HAZARD.

Do not open or remove safety shields while engine is running.

LIFT POINT



⚠ WARNING ⚠



FLYING OBJECTS HAZARD
Keep clear.

⚠ DANGER! ⚠ STAY BACK 150 FEET AT ALL TIMES

⚠ WARNING! ⚠ DO NOT MOW IN REVERSE OR DAMAGE WILL OCCUR TO YOUR MOWER!

⚠ DANGER ⚠



ROTATING BLADES KEEP HANDS AWAY

⚠ CAUTION ⚠ To avoid Injury or Machine Damage: *Operate only with 540 rpm PTO

540 RPM ONLY

INFORMATION

SAFETY INSTRUCTIONS

Do not attempt to operate the mower until you have read the operator's manual and all the safety signs on the mower.

NOTE: The words Danger, Warning or Caution on the safety signs indicate a hazard or unsafe practice, which could result in injury or death if proper precautions are not taken.

Do not attempt any unauthorized modifications to the mower as this could affect the function or the safety of the mower.

OPERATING SAFETY

1. Keep all safety signs clean and legible at all times. Replace damaged or missing safety signs.
2. Ensure all shields are in place and in good condition before operating.
3. Ensure everyone is clear of the area before operating.
4. Never start or operate the mower except from the operator's station on the power unit.
5. Do not permit riders.
6. Stop engine, set brake, remove key and wait for all moving parts to stop before servicing, adjusting, repairing and unplugging.
7. Never operate over 540 rpm PTO speed.
8. Inspect and clean the cutting area before cutting.
9. Never operate the mower in the raised position.
10. Do not wear loose fitting clothing during operation.
11. Keep hands, feet, clothing and hair away from moving parts.
12. Keep all bystanders away from the unit when it is operating.
13. Check to see that all controls are in neutral before starting the tractor.

TRANSPORT SAFETY

1. Do not transport on a public road without a slow-moving vehicle sign and flashers on the tractor.
2. Never have the mower in operation during transport.
3. Travel speed with a raised mower should be slow enough to maintain stability of the tractor.

SERVICE AND MAINTENANCE SAFETY

1. Stop engine, set brake, remove key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
2. Block up before working beneath unit.
3. Replace all shields removed during servicing before operating.
4. Use heavy leather gloves to handle sharp blades. The safety signs used on the mower must be in well condition and be read clearly.

Replace safety sign immediately if it become damaged, torn, or illegible.

OPERATING INSTRUCTIONS

The Finish Mower is designed to be used on a tractor with a standard category 1 three-point hitch. Using excessive power will shorten the life of the drive train components.

CONNECTING TO TRACTOR

Park the mower and tractor on a level dry area free of debris and foreign objects.

1. Slowly back the tractor up to the mower.
2. Adjust the three-point arms to align with the mower lift pins.
3. Stop the tractor, set the parking brake and remove the ignition key before mounting.
4. With the engine on the tractor shut off, attach the PTO shaft. Both ends of the PTO have a standard 6-spline end with a spring-loaded locking collar.

Turn the round collar at the ends of the PTO clockwise to slide onto the spline shafts. Always check to see that both ends of the PTO shaft are securely attached every time the mower is used. This should always be done with the tractor engine shut off. Attach the safety chains supplied with the PTO shaft, allowing sufficient slack for the driveline during turns and operation.

NOTE: At least one third of the telescoping length of the PTO should overlap when the mower is in operation.

5. Attach the top link on the tractor to the link pin assembled in the upper lift pin bracket. Adjust the turnbuckle on the tractor top link so that the upper lift bracket hangs straight down with the tractor and mower both on level ground.

FIELD USE PREPARATION

1. Park the machine on hard level ground with the mower slightly raised.
2. Adjust the sway blocks or chains on the tractor so the mower is centered between the rear wheels.
3. Adjust the three-point arms to level the mower side to side.
4. Adjust the turnbuckle on the top of the three-point hitch arms to level the mower front and back.
5. Adjust the cutting height using the wheel spacers on the wheel yokes. The spacers should be set at the same height on all four wheels.
6. Check the oil level in the gearbox and add as required.
7. Grease spindle assembly, wheel bearings, wheel pivots and the PTO shaft.
8. Check tightness of belts, bolts and other hardware.
9. Check blades to see if they are damaged. Sharpen or replace blades if necessary. Check that blade bolts are tight.
10. Clear the working area of foreign objects and check that all bystanders are standing clear before starting.
11. Start the tractor with the mower resting on the ground on all four wheels.
12. Slowly engage the PTO and bring the PTO speed up to 540 rpm for cutting.

FIELD OPERATION

1. The mower works best on dry grass. Slower cutting speed and occasional cleaning may be required on damp or wet grass.
2. The PTO must run at the full 540 rpm for a good cut. Slower speeds or double cutting could be required for very high grass.
3. Use a higher blade setting for rough areas to prevent scalping of the surface.
4. Always cut counterclockwise so grass clippings are thrown on the grass already cut. This saves power and wear on the blades.
5. Sharpen blades if grass tears instead of cutting cleanly.
6. Slow down when cutting corners. Turning too sharply on corners can leave a small strip of grass uncut.

DISCONNECTING FROM TRACTOR

1. Park on a firm level area and clean the mower.
2. Lower the mower until the load is off the hitch arms.
3. Disconnect the hitch arms and the PTO shaft.
4. Cover the mower for storage to prevent rust.

MAINTENANCE

1. **GEARBOX:** The gearbox should be filled with SAE 90 oil to the bottom of level plug . Check the mower before using and at regular intervals (approx. every 40 hours). See that this oil level is maintained.
2. **GREASE:** Grease wheel yokes, wheel bushing and PTO u-joints approximately every 8 hours. Before using the mower for the first time, grease wheel bushings until you can see the grease squeezed out at the ends of the wheel hub. Lubricate the telescoping PTO tube and the quick release collars on the ends of the shaft about every 20 hours. Clean all grease fittings before injecting grease and immediately replace any damaged or missing grease fittings. When using the safety chains supplied with the PTO shaft, the shield bearings must be kept lubricated.
3. **SHIELDING:** Always keep all shielding in place and repair or replace if damaged.
4. **BLADES:** When replacing or grinding blades, all three blades must be replaced or reground at the same time to maintain the proper balance in the cutting unit. Block up the mower securely before attempting to remove the blades. Use heavy leather gloves to handle the blades. Be sure to tighten center bolt and lock washer securely when replacing blades.

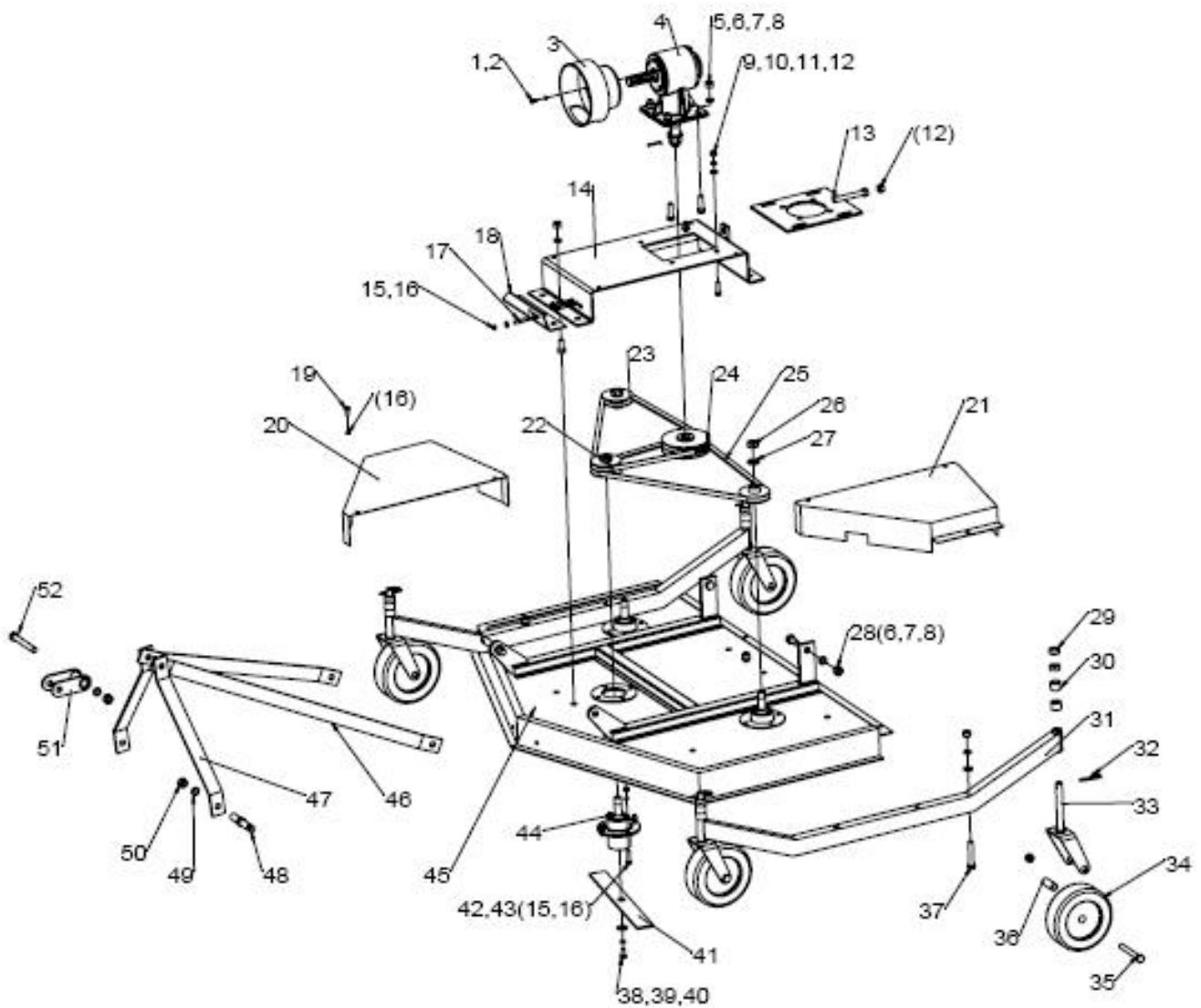
Always replace the lock washer with an extra heavy duty supplied with the spindle

5. **BELTS:** Remove the belt guards to check belt tightness. The center of the belt span should deflect about 10mm with nominal pressure. If the belts slip or are too loose, the bolts holding the gearbox must be loosened.

Use the threaded tightener rod on the gearbox mount to tighten the belts. Lock the rod in place and retighten the gearbox bolts when the belts are properly tightened. Replace belt guards. Changing belts follows the same procedure as given in the preceding paragraph, except you will have to loosen the belts further to remove them.

NOTE: Belts should always be replaced in matched sets.

FM120/FM150/FM180 FINISHING MOWER PARTS



PARTS LIST

REF	DESCRIPTION
1	Bolt M8x16
2	Lock washer 8
3	Cover
4	Gearbox Assembly
5	Bolt M16X50
6	Plain washer 16
7	Lock washer 16
8	Nut M16
9	Bolt M12x40
10	Plain washer 12
11	Lock washer 12
12	Nut M12
13	Gearbox base plate
14	Gearbox mounting
15	Nut M10
16	Plain washer 10
17	Grease hose A/B
18	Hose mounting
19	Bolt M10x20
20	FM150/FM120/FM180 Right cover
21	FM150/FM120/FM180 Left cover
22	Double sheave pulley
23	Single sheave pulley
24	Drive pulley
25	FM150/FM120/FM180 Belt
26	Narrow nut M24x2
27	Lock washer 24
28	Bolt M16X45
29	Short spacer

REF	DESCRIPTION
30	Long spacer
31	FM150/120/180 Axle beam weldment
32	Lock pin 12
33	Yoke weldment
34	Wheel assembly
35	Bolt M16X100
36	Bushing
37	Bolt M16X90
38	Bolt M14X25L
39	Plain washer 14
40	Lock washer 14
41	FM150/FM120/FM180 blade
42	Bolt M10X35
43	Lock washer 10
44	Spindle assembly
45	FM150 Deck weldment
	FM120 Deck weldment
	FM180 Deck weldment
46	FM150 Long pivot bar
	FM120 Long pivot bar
	FM180 Long pivot bar
47	FM150 Short pivot bar
	FM120 Short pivot bar
	FM180 Short pivot bar
48	Lift pin
49	Lock washer 22
50	Nut M22x1.5
51	Upper lift bracket
52	Bolt M16x140

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