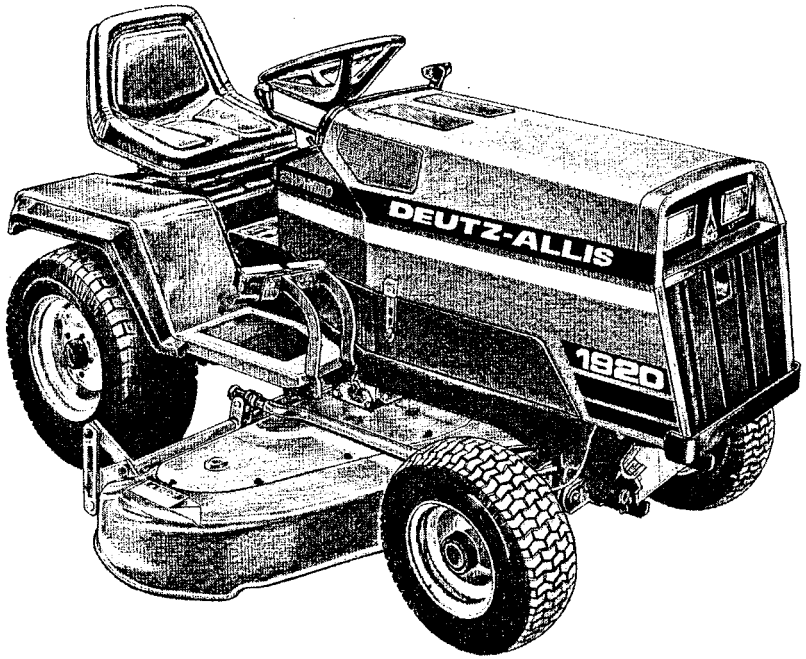
1918 - 1920 TRACTOR

OPERATOR'S MANUAL

DEUTZ ALLIS



Model 1918
1691019

Model 1920
1691020

Mowers
42" 1691009
48" 1690986
60" 1690984
60" 1691339

FILE COPY

Part No. 1700171
12/86

DEALER'S PRE-DELIVERY SERVICE GUIDE

DETAILS OF ITEMS LISTED BELOW ARE COVERED IN THIS MANUAL

CHECK BEFORE OPERATING UNIT

- ☐ Shipping Damage Corrected
- ☐ Fill Battery with Electrolyte & Fully Charge
- ☐ Engine Oil Level Checked (Add When Needed)
- ☐ Hydrostatic Oil Level Checked
- ☐ Transmission Oil Level Checked
- ☐ Check & Tighten Steering Wheel

OIL LEAKS

- ☐ Tractor Operated
- ☐ Check for Oil Leaks After Engine Warms Up
- ☐ Check for Transmission Oil Leaks
- ☐ Check for Hydraulic Oil Leaks

ENGINE

- ☐ Check Timing
- ☐ Check High & Low Idle Speeds
- ☐ Check Governor Response
- ☐ Air Cleaner Properly Installed

COOLING SYSTEM

- ☐ Check Cooling Fins for Damage or Obstruction
- ☐ Check Engine Shrouds for Obstruction

POWER TRAIN

- ☐ Brake & Clutch Adjusted Properly
- ☐ All Belts Adjusted Properly
- ☐ Safety Switches Adjusted Properly
- ☐ P.T.O. Clutch Adjusted Properly
- ☐ Hydrostat Adjusted Properly
- ☐ Unit Operated Properly in all Gears

GENERAL

- ☐ All Grease Fittings Lubricated
- ☐ Front & Rear Tire Pressure Set
- ☐ Traction Operation Checked
- ☐ Appearance of Tractor Checked
- ☐ All Safety & Operational Decals in Place
- ☐ Operator's Manual with Tractors

DEALER'S DELIVERY SERVICE GUIDE

EXPLAIN TO YOUR CUSTOMER THE CARE, SAFE OPERATION AND ADJUSTMENT OF ITEMS LISTED BELOW:

- ☐ **CONTROLS**

OPERATION

- ☐ Starting Engine
- ☐ Stopping Engine
- ☐ Starting Tractor
- ☐ Stopping Tractor
- ☐ Operating with Mower and Other Implements

- ☐ **OPERATOR'S SAFETY PRECAUTIONS**

LUBRICATION & SERVICE

- ☐ Engine Oil
- ☐ Engine Fuel
- ☐ Transmission
- ☐ Grease Fittings
- ☐ Air Cleaner
- ☐ Engine Cooling Fins
- ☐ Battery Care
- ☐ Tire Pressure
- ☐ Service Parts
- ☐ Off-Season Storage

ADJUSTMENTS

- ☐ Seat
- ☐ P.T.O. Clutch
- ☐ Clutch & Brake
- ☐ Belts
- ☐ Mower
- ☐ Other Implements

TO OUR CUSTOMER

The following pages and illustrations are printed to help supply you with the knowledge to better operate and service your new **DEUTZ-ALLIS** equipment.

We are proud to have you as a customer and feel you will be proud to be a **DEUTZ-ALLIS** owner.

Any piece of equipment needs, and must have a certain amount of service and maintenance to keep it in top running condition. We have attempted to cover all the adjustments required to fit most conditions; however, there may be times when special care must be taken to fit a condition.

Study this operator's manual carefully and become acquainted with all the adjustments and operating procedures before attempting to operate your new equipment. Remember, it is a machine and has been designed and tested to do an efficient job in most operating conditions and will perform in relation to the service it receives.

If special attention is required for some conditions, ask your **DEUTZ-ALLIS** Dealer; his Parts and Service Organization will be glad to help and answer any questions on operation and service of your new machine.

ATTENTION! BECOME ALERT!
YOUR SAFETY IS INVOLVED!

This symbol is used to call your attention to safety precautions that should be followed by the operator to avoid accidents. When you see this symbol - Heed Its Warning.

USER'S RESPONSIBILITY

It is the responsibility of the user to read the Operator's Manual and understand the safe and correct operating procedures as pertains to the operation of the product, and to lubricate and maintain the product according to the maintenance schedule in the Operator's Manual.

The user is responsible for inspecting his machine and for having parts repaired or replaced when continued use of the product would cause damage of excessive wear to other parts. It is the user's responsibility to deliver his machine to a Deutz-Allis dealer, for service or replacement of defective parts which are covered by the standard warranty. When requesting warranty service, you must present your copy of delivery record.

If the Dealer is requested by the Customer to travel to another location, or haul the machine to his shop for the purpose of performing a warranty obligation or free inspection, it would be for the Customer's convenience, and the cost for such trips is to be paid for by the Customer. Any arrangement whereby the Dealer agrees to absorb all or a part of the cost of these trips is to be made between the Dealer and the Customer and is to be considered a courtesy to the Customer.

Deutz-Allis does not allow credit for the cost of travel time, mileage, or hauling as a warranty allowance.

WARRANTY. . . . Your Deutz-Allis warranty for any new equipment listed appears on your copy of the Purchase Order signed by you and your selling dealer. You will be required to pay any premium for overtime labor requested by you, any charge for making service calls and for transporting the equipment to and from the place where warranty work is performed. Normal maintenance service and repair work not covered by the warranty during the warranty period and all service after the warranty period will be charged for at the dealer's regular rates and prices. 6/85

THE DEUTZ-ALLIS NEW EQUIPMENT BATTERY SERVICE ADJUSTMENT POLICY FOR LAWN AND GARDEN EQUIPMENT

LIMITED WARRANTY

1. If within a period of 90 DAYS after day of sale to the original user, a Deutz-Allis new equipment battery becomes unserviceable (not merely discharged) in normal use, due to defective material or workmanship, the Deutz-Allis Corporation will replace it with an equivalent new Deutz-Allis battery, without charge, to the original user.

2. If after the expiration of such 90 DAYS but before the expiration of 24 months from date of sale to the original user (each such month being designated herein as a unit of service) a Deutz Allis new equipment battery becomes unserviceable (not merely discharged) in normal use, due to defective material or workmanship, it will be replaced for the original user, in exchange for the unserviceable battery, with an equivalent new Deutz-Allis battery at an adjusted price. This adjusted price shall be determined by applying to the then current retail price of the new battery, the percentage of the maximum (24) units of service which was received from the unserviceable battery.

LIMITATIONS

No-charge replacements or adjustments under this policy may be made by any authorized Deutz-Allis Lawn and Garden Equipment dealer.

This policy does not cover the following:

1. Unserviceability due to abuse or neglect, failure to maintain recommended electrolyte level, fire wreckage, explosion, freezing, the addition to the battery of any chemical or solution other than approved water or battery grade sulfuric acid of proper gravity, the use of a group size smaller than the group size of the original equipment battery, or continued operation of the battery in an undercharged condition (below half charge - 1.190 sp. gr.).

2. Breakage of containers, covers or posts.

3. The cost of transportation, service calls, recharges or the use of rental batteries.

PROOF OF DATE OF PURCHASE IS REQUIRED FOR ALL CLAIMS. DEUTZ-ALLIS CORPORATION WILL HAVE NO OBLIGATIONS UNDER THIS POLICY IF THE DATE CODING ON THE BATTERY IS REMOVED OR DESTROYED. IN NO EVENT WILL DEUTZ-ALLIS CORPORATION BE LIABLE FOR CONSEQUENTIAL DAMAGES.

L & G 7/85

D

Contents

SAFETY RULES 2

DECALS 4

OPERATION 9

- Controls 9
- Checks Before Starting 12
- Starting the Engine 12
- Operation 12
- Stopping 13
- Mower Installation 14
- Operating the Mower 15
- Mower Removal 16

NORMAL CARE 18

- Schedule 18
- Tire Pressure 18
- Grease Fittings/Check Mower Fluid 18
- Oil Pivot Points 19
- Check Transmission Fluid 19
- Clean & Check Battery 20
- Battery Replacement 20
- Charging a Completely Discharged Battery 20
- Jump Start With Auxiliary (Booster) Battery 21
- Clean, Sharpen & Balance Blades 24
- Storage 26
- Starting After Storage 26

TROUBLESHOOTING 28

ADJUSTMENTS 31

- Seat Adjustment 31
- Mower Levelling 32
- Front Clutch Adjustment 33
- Brake Adjustment 34
- Seat Switch Adjustment 35
- Dash Indicator 36
- Headlight Bulb Replacement 36

SPECIFICATIONS 36

PARTS MANUAL 39

Safety Rules

Read these safety rules and follow them closely. Failure to obey these rules could result in loss of control of vehicle, severe personal injury to yourself or bystanders, or damage to property or equipment. The triangle ⚠ in the text signifies important cautions or warnings which must be followed.

- Know the controls and how to stop quickly. READ THIS OPERATOR'S MANUAL and instructions furnished with attachments.
- Do not allow children to operate the machine. Do not allow adults to operate it without proper instruction.
- Do not carry passengers. Do not mow when children and others are around.
- Clear the work area of objects (wire, rocks, etc.) that might be picked up and thrown.
- Disengage all attachment clutches and shift into neutral before attempting to start the engine (motor).
- Disengage power to attachments and stop the engine (motor) before leaving the operator's position.
- Disengage power to attachments and stop the engine (motor) before making any repairs or adjustments.
- Disengage power to attachments when transporting or not in use.
- Take all possible precautions when leaving the vehicle unattended, such as disengaging the power-take-off, lowering the attachments, setting the parking brake, stopping the engine, and removing the key.
- Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never across the face.
- Reduce speed and exercise extreme caution on slopes and in sharp turns to prevent tipping or loss of control. Be especially cautious when changing direction on slopes.
- Stay alert for holes, rocks, and roots in the terrain and other hidden hazards. Keep away from drop-offs.
- Use care when pulling loads or using heavy equipment.
  a. Use only approved drawbar hitch points.
  b. Limit loads to those you can safely control.
  c. Do not turn sharply. Use care when backing.
  d. Use counterweights or wheel weights when suggested in this operator's manual.
- Watch out for traffic when crossing or near roadways.
- When using any attachments, do not direct discharge of material toward traffic, bystanders or allow anyone near the vehicle while in operation.
- Handle gasoline with care — it is highly flammable.

a. Use approved gasoline container.
b. Never remove the fuel cap of, or add gasoline to, a running or hot engine or an engine that has not been allowed to cool for several minutes after running. Never fill the tank indoors and always clean up spilled gasoline.
c. Open doors if the engine is run in the garage — exhaust fumes are dangerous. Do not run the engine indoors.

• Keep the vehicle and attachments in good operating condition, and keep safety devices in place and in working condition.

• Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.

• Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.

• To reduce fire hazard, keep the engine free of grass, leaves, or excessive grease.

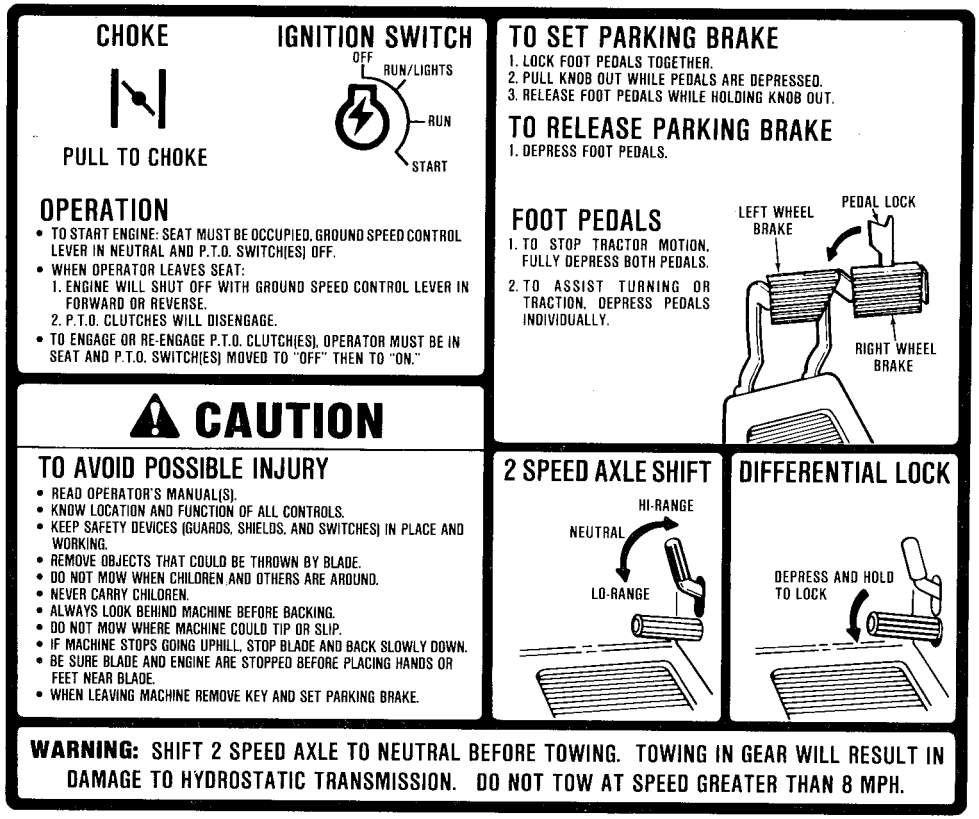
• The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.

• Do not change the engine governor settings or overspeed the engine.

• When using the vehicle with mower, proceed as follows:
a. Mow only in daylight or in good artificial light.
b. Never make a cutting height adjustment while the engine (motor) is running if the operator must dismount to do so.
c. Shut the engine (motor) off when removing the grass catcher or unclogging chute.
d. Check the blade mounting bolts for proper tightness at frequent intervals.

• Under normal usage, the grass catcher bag material is subject to deterioration and wear. Check bag frequently for deterioration and wear and replace worn bags. Check that replacement bags comply with the original manufacturer's recommendations or specifications.

• Disengage power to mower before backing up. Do not mow in reverse unless absolutely necessary and then only after observation of the entire area behind the mower.



20 HP Tractor - Console

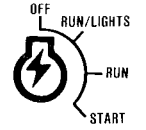
OPERATION

- TO START ENGINE: SEAT MUST BE OCCUPIED, GROUND SPEED CONTROL LEVER IN NEUTRAL AND P.T.O. SWITCH(ES) OFF.
- WHEN OPERATOR LEAVES SEAT:
  1. ENGINE WILL SHUT OFF WITH GROUND SPEED CONTROL LEVER IN FORWARD OR REVERSE.
  2. P.T.O. CLUTCH WILL DISENGAGE.
- TO ENGAGE OR RE-ENGAGE P.T.O. CLUTCH(ES), OPERATOR MUST BE IN SEAT AND P.T.O. SWITCH(ES) MOVED TO "OFF" THEN TO "ON."

CHOKE

PULL TO CHOKE

IGNITION SWITCH



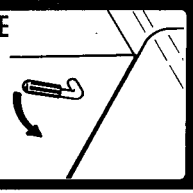
⚠ CAUTION

TO AVOID POSSIBLE INJURY

- READ OPERATOR'S MANUAL(S).
- KNOW LOCATION AND FUNCTION OF ALL CONTROLS.
- KEEP SAFETY DEVICES (GUARDS, SHIELDS, AND SWITCHES) IN PLACE AND WORKING.
- REMOVE OBJECTS THAT COULD BE THROWN BY BLADE.
- DO NOT MOW WHEN CHILDREN AND OTHERS ARE AROUND.
- NEVER CARRY CHILDREN.
- ALWAYS LOOK BEHIND MACHINE BEFORE BACKING.
- DO NOT MOW WHERE MACHINE COULD TIP OR SLIP.
- IF MACHINE STOPS GOING UPHILL, STOP BLADE AND BACK SLOWLY DOWN.
- BE SURE BLADE AND ENGINE ARE STOPPED BEFORE PLACING HANDS OR FEET NEAR BLADE.
- WHEN LEAVING MACHINE REMOVE KEY AND SET PARKING BRAKE.

TRANSMISSION RELEASE VALVE LEVER

1. TO ACTUATE RELEASE VALVE PUSH LEVER DOWN FIRMLY AND HOLD FOR A FEW SECONDS, THEN RELEASE.
2. TRACTOR MAY NOW BE MOVED BY MANUALLY PUSHING OR PULLING.



TO SET PARKING BRAKE

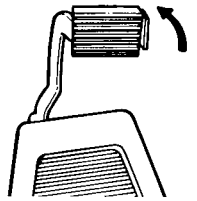
1. PULL KNOB OUT WHILE PEDAL IS DEPRESSED.
2. RELEASE FOOT PEDAL WHILE HOLDING KNOB OUT.

TO RELEASE PARKING BRAKE

1. DEPRESS FOOT PEDAL.

FOOT PEDAL

1. TO STOP TRACTOR MOTION, FULLY DEPRESS PEDAL.



WARNING: DO NOT TOW TRACTOR, DAMAGE WILL RESULT TO HYDROSTATIC TRANSMISSION.

18 HP Tractor - Console

Located on Front PTO Shield

⚠ WARNING

FRONT P.T.O. SHIELD IS PROVIDED TO HELP PREVENT PERSONAL INJURY AND PROTECT BELT DRIVE. KEEP SHIELD IN PLACE WHEN FRONT MOUNTED ATTACHMENTS ARE NOT BEING USED.

Located on Tractor Near Battery

⚠ WARNING

DISCONNECT GROUND ⊖ TERMINAL WHEN WORKING ON ELECTRICAL SYSTEM TO PREVENT SHORT CIRCUIT. TO PREVENT POSSIBLE DAMAGE TO ELECTRICAL COMPONENTS, NEVER DISCONNECT BATTERY WHILE ENGINE IS RUNNING AND BE SURE BATTERY TERMINALS ARE TIGHT BEFORE STARTING ENGINE.

Located on Dash

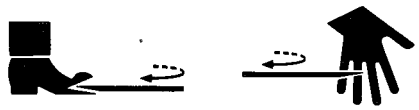
⚠ DANGER

ROTATING CUTTING BLADE

- DO NOT PUT HANDS OR FEET UNDER MOWER DECK WHILE BLADE IS ROTATING.

Located on Mower Deck

⚠ DANGER



ROTATING CUTTING BLADE

- DO NOT OPERATE MOWER WITHOUT DEFLECTOR OR ENTIRE GRASS CATCHER IN PLACE.

Located on Mower Deck

Operation

WARNING

To reduce fire hazard, keep the engine and mower free of grass, leaves and excess grease.

CAUTION

18 HP Tractor

Towing the tractor will cause transmission damage. Do not use another vehicle to push or pull the tractor.

CAUTION

20 HP Tractor

Shift 2-speed axle to neutral before towing. Do not tow faster than 8 MPH; maximum vehicle speed. Towing in gear will result in damage to hydrostatic transmission.

CAUTION

Do not attempt to move the ground speed control lever when the parking brake is set or the service brakes are being applied. Equipment damage will occur.

WARNING

The interlock safety switches are for your safety. Do not attempt to bypass them.

WARNING

Never operate on slopes greater than 30 percent (16.7°) which is a rise of 3 feet (0.91 meters) vertically in 10 feet (3.1 meters) horizontally. Use front and rear wheel weights for slopes greater than 15 percent (8.5°) which is a rise of 1.5 feet (0.45 meters) vertically in 10 feet (3.1 meters) horizontally. See your dealer for wheel weights. Select slow ground speed before driving onto a slope.

CONTROLS

Controls are explained in Figure 1.

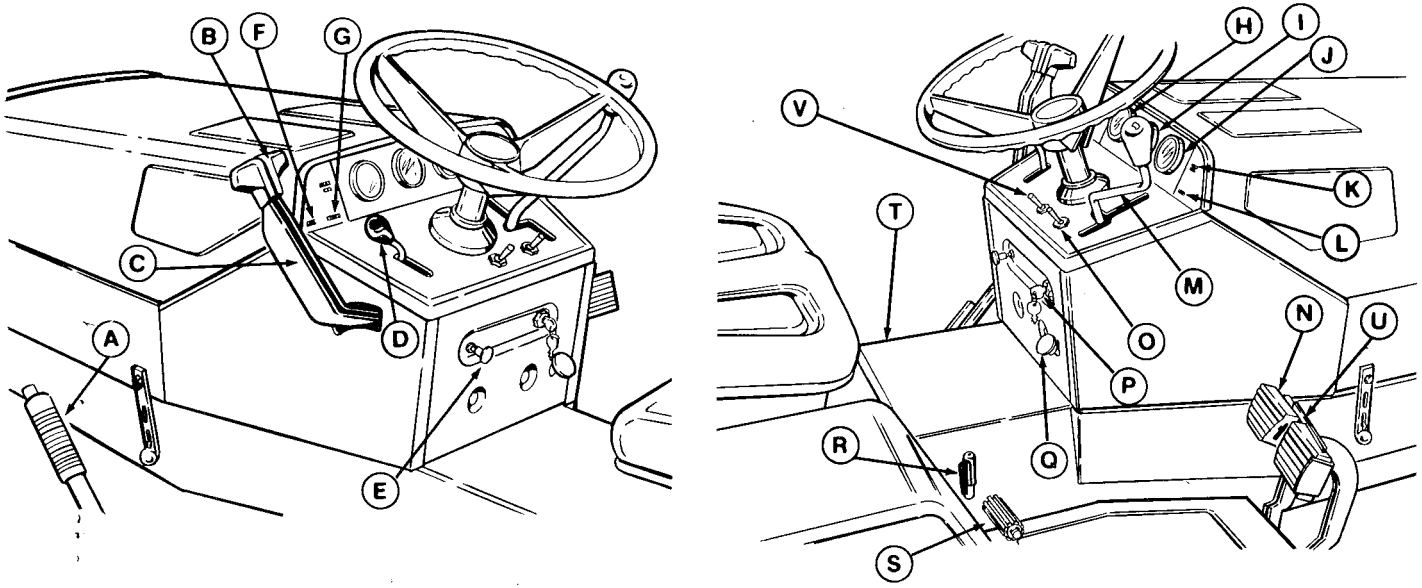


Figure 1. Controls (20 HP Model Shown)

CONTROLS

ITEM	NAME	FUNCTION
A	Mower Height Control Lever	Controls cutting height.
B	Lift Lever, Hydraulic	Lifts and lowers attachment.
C	Lift Lever, Dual (Optional)	Allows simultaneous use of two attachments.
D	Engine Speed	Controls engine speed.
E	Choke	Engages choke for starting.
F	Oil Light	Red light indicates low oil pressure.
G	Neutral Light	Green light indicates ground speed control lever is in neutral.
H	Voltmeter	With engine stopped, shows voltage of battery. With engine running, shows voltage of charging system.
I	Hourmeter	Records operating time.
J	Fuel Gauge	Shows amount of fuel in tank.
K	Front PTO Light	Red light indicates front PTO is engaged.
L	Seat Light	Green light indicates operator is in seat.

ITEM	NAME	FUNCTION
M	Ground Speed Control Lever	Controls forward or reverse ground speeds.
N	Brake Pedals	Stops tractor. 18 HP Model has one pedal; 20 HP Model has two pedals.
O	PTO (Power Take-Off) Switch	Engages and disengages power to attachments.
P	Ignition Switch	Starts and stops engine and lights.
Q	Parking Brake	Holds tractor in stationary position.
R	Two-Speed Axle Shift (20 HP)	Selects high, neutral or low gear range.
S	Differential Lock (20 HP)	Provides traction to both left-hand and right-hand rear axles.
T	Release Valve (18 HP)	Allows tractor to be pushed manually with engine off.
U	Pedal Lock (20 HP)	Locks pedals together.
V	Rear PTO Switch (Optional)	Engages and disengages power to rear attachment.

CHECKS BEFORE STARTING

1. Make sure you have proper wheel or counterweights if required. See the slope warning. Make sure any slopes are within required limits.
2. Check that crankcase is filled to full mark on dipstick. See the engine Operator's Manual for instructions and oil recommendations.
3. Make sure all nuts, bolts, screws and pins are in place and tight.

⚠ WARNING

Gasoline is highly flammable and must be handled with care. Never fill the tank when the engine is still hot from recent operation. Do not allow open flame, smoking or matches in the area. Avoid overfilling and wipe up any spills.

4. Make sure you can reach all controls from operator's position. If not, see Seat Adjustment.
5. Fill the gasoline tank with fresh gasoline. Fill to bottom of filler neck to avoid spillage and overflow. DO NOT mix oil with gasoline. Refer to engine manual for gasoline recommendations.

STARTING THE ENGINE

1. Operator must be seated. Seat light will be green when key is turned to ON.
2. Place ground speed control lever in neutral. Set parking brake. To set, depress pedal(s), pull knob (Q, figure 1) out, then release pedal(s). (On 18, depress one pedal, on 20 HP lock pedals together and depress).
3. PTO switch(es) (O, V) must be in OFF position. PTO light will not be on.
4. Pull choke knob (E) out. Warm engine may not require choke.
5. Place throttle lever (D) approximately 1/4 speed. See engine manual for starting information. If engine is hot, set throttle at half-speed to re-start.
6. Turn key (P) to START to start engine. Push in choke as engine warms up.
7. Allow engine to warm up for a couple of minutes before applying load. Do not idle engine for prolonged periods; carbon buildup may occur.

OPERATION

1. Press pedal(s) (N) to release parking brake.
2. Move ground speed control (M) to forward or reverse to start into motion. The farther lever is moved, the faster the ground speed. Place throttle lever to full engine speed to operate mower.

3. Push the hydraulic control lever (B) forward to lower the attachment. Pull lever back to raise attachment.
4. Use the PTO switch(es) to engage or disengage the attachment. Lift switch, then move forward to engaged position.

NOTE

The following three steps only apply to 20 HP tractors.

5. (20 HP Tractors) Select low or high speed range with the Two-Speed Axle Shift (R). The lowest position is low range, middle is neutral, and highest position is high range.
6. (20 HP Tractors) Depress and hold the Differential Lock to gain more traction. This provides power to both wheels when more power is needed. Use to go straight forward or back only. Tractor returns to normal operation when pedal is released.
7. (20 HP Tractors) The brake pedals can be used to help make sharp turns. For instance, press right-hand pedal to engage right-hand brake to aid a right-hand turn. When driving the tractor at high speed, such as when you are travelling to work area, keep brake pedals locked together. Ground speed is reduced 1/2 speed when pressing one pedal.

NOTE

If operator leaves seat with a PTO engaged, the PTO will disengage. To start PTO again, the PTO must be turned to OFF, then back to ON after operater is re-seated. If operator leaves seat with ground speed control lever in gear, the engine will stop.

STOPPING

1. Move ground speed control (M, figure 1) to neutral or depress both brake pedal(s).
2. Pull PTO switch to OFF.
3. Move throttle to slow position.
4. To set parking brake, depress pedal(s) and then pull out knob (Q). Release pedal(s) while holding knob out. (On 20 HP tractor, latch two pedals together.) To release brake, depress pedal(s).
5. Push hydraulic lift lever forward to lower attachment.
6. Turn ignition key to OFF, and remove it to prevent unauthorized use.

MOWER INSTALLATION

WARNING

Stop engine and remove key. Do not engage PTO until mower is completely installed.

NOTE

Place the mower on hard surface such as concrete.

1. Place mower in low cut position and slide mower under left side of tractor. Note that frame is notched to allow clearance for gear box. Turn wheels full right turn. Lift hitch arms over wheel as necessary.
2. Align the mower hitch with tractor hitch (figure 2).
3. To understand how the mower drive shaft connects, pull locking ring back and notice that balls inside retract. When released, the balls lock into groove in the drive shaft. To connect shaft, proceed as follows.
   a. Place the mower drive shaft barely onto the tractor shaft. Turn the coupler to align the splines.
   b. To push onto the drive shaft, pull locking ring (A, figure 2a) back, and then push shaft on, past the groove.
   c. Grasp the coupler and pull back. The locking ring will snap forward into locked position when balls lock into groove. Also, test by pulling back on coupler; you will not be able to pull off.

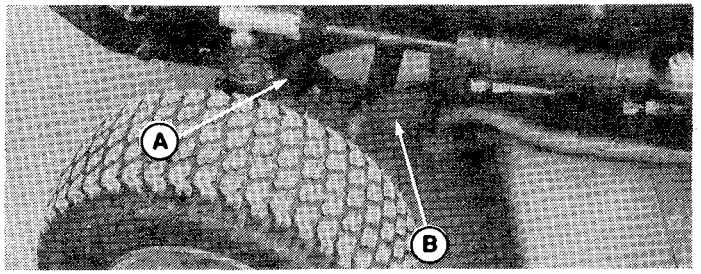


Figure 2. Mower Hitch

A. Tractor Hitch **B. Mower Hitch**

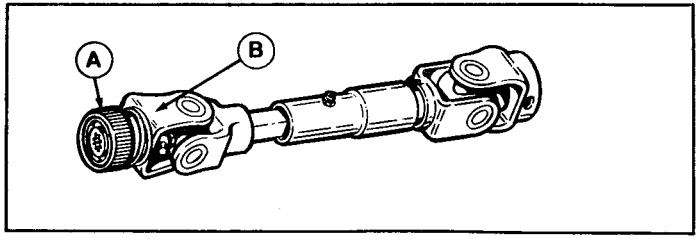


Figure 2A.

A. Locking Ring **B. Coupler**

4. Raise mower to mid-cut position. Hook up the chains (C, figure 3) to the clevis (A) on each side of gear box. Insert pin (B) thru clevis and chain, then install hairpin clip in pin. (Install so clip is toward inside.)
5. Start the engine and turn the front wheels straight ahead. Using hydraulic lift lever, raise mower to full transport position. Shut off the engine.
6. Use the following procedure to connect the two hitch arms (B, figure 2) to the tractor (A) with a pin and hairpin clip on each side.
   a. Using the height control lever, place mower is second notch from high cut position. Grasp the height control lever with your right hand and push rearward. This will raise front of mower to align hitch.
   b. To maneuver mower hitch into tractor hitch channel, place your hand on the quardant brace. When aligned, use your left hand to insert pin thru channel and hitch. Align holes by applying rearward pressure on the height control lever. (Insert pin with holes vertical to aid in clip installation).
   c. Install the pin in the other side and secure with clips. Push clips on fully.
7. Figure 3A shows mower installed, as viewed from right hand side

OPERATING THE MOWER

To travel to work site, raise mower using hydraulic lift lever. At work site, select desired cutting height with control lever (A, figure 1). Press button on top to release and move lever to different notch. Engage mower while ground speed control lever is in neutral.

MOWER REMOVAL

1. Place mower in second notch from high cut position. Raise the mower to transport position, then shut off engine and remove key to prevent accidental starting.
2. Remove pins and clips from hitch. Push back on height control lever to aid removal of pins and to maneuver mowers.
3. Move the lift lever forward, the mower will lower.
4. Disconnect drive shaft by pulling locking ring back and pulling coupler toward rear.
5. With mower in high cut, disconnect chains (figure 3).
6. Place mower in low cut and turn wheels full right. Mower can be removed. Tractor frame is notched for gear box clearance.

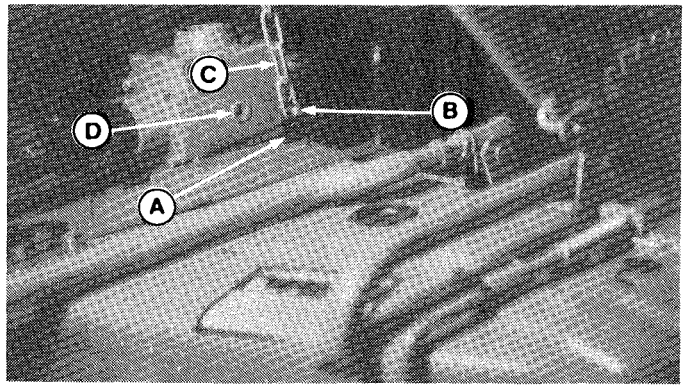


Figure 3.
A. Clevis **C. Chain**
B. Pin **D. Check Plug, Fliud**

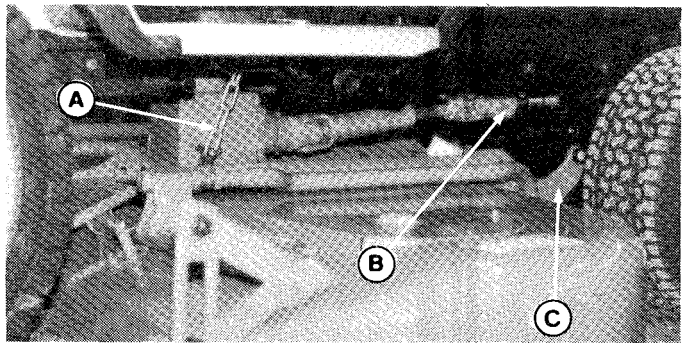


Figure 3A. **A. Chain** **B. Drive Shaft** **C. Hitch**

Schedule				
Care Required	Page	Every 5 Hours	Every 25 Hours	Every 100 Hours *Or Yearly
Check for loose hardware.	—	•		
Clean heat exchanger.	—	•		
Check tires.	18		•	
Grease fittings/Check mower fluid.	18			•
Oil pivot points.	19		•	
Check transmission fluid.	19		•	
Clean and check battery.	20		•	
Clean, sharpen & balance blades.	24			•
SEE ENGINE MANUAL FOR ENGINE CARE (*Or as needed.)				

TIRE PRESSURE

Front tire pressure should be 12 to 15 psi (82 to 103 kPa). Rear tire pressure should be 6 to 8 psi (41 to 55 kPa).

GREASE FITTINGS/CHECK MOWER FLUID

1. **To apply grease,** first wipe off fitting. Then apply 1 or 2 shots of lithium grease, then wipe off excess grease.

Apply grease to following fittings:

a. 3 on the engine drive shaft - one at front (in knuckle) and two at rear (in spline).

b. 2 on manual steering box (manual steering only).

c. 1 on center front axle.

d. 2 on each end of front axle.

e. 1 on each wheel (inside).

f. 1 on foot pedal assembly.

g. 1 on front PTO idler assembly.

h. 1 on mower belt idler. Pry off rubber plug in the left-hand cover to expose fitting.

i. 3 on mower drive shaft (1 on each end - 1 on spline).

2. **Check mower fluid** by removing check plug (D, figure 3) on left hand side of gear box. Fluid should be at bottom of hole when mower is level. Use SAE 85W90 gear oil.

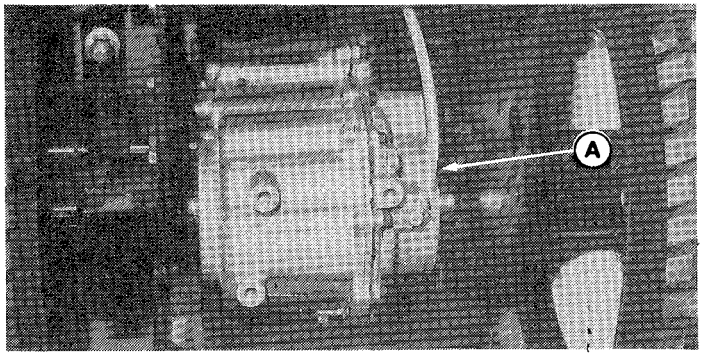


Figure 4. Transmission Fluid Check
A. Fluid Level

OIL PIVOT POINTS

A few drops of engine oil should be placed on the pivot points and moving parts of the tractor and mower. Keep oil off belts and pulleys to prevent belt damage. Place oil at all points where metal parts rub together, such as rods and rod guides, levers, etc. Oil all shaft splines.

CHECK TRANSMISSION FLUID

Check with engine off. Fluid should be visible in tube (A, figure 4) at rear of tractor. Fluid should not extend more than one inch above fitting. To add fluid (Type F Transmission Fluid), raise hood and add at fill tube (A, figure 5).

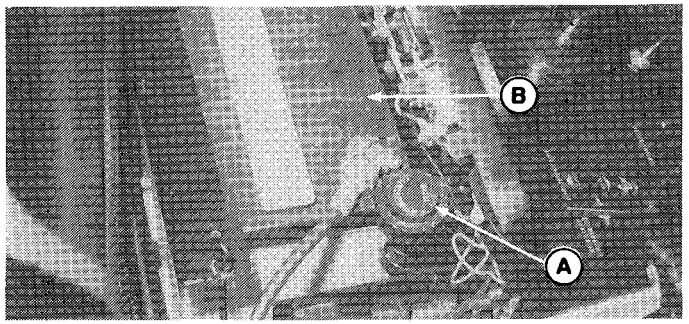


Figure 5. Transmission Fill Tube
A. Fill Tube
B. Battery

CLEAN AND CHECK BATTERY

DANGER

Always disconnect the negative cable FIRST and reconnect it LAST. The positive terminal can easily be shorted to the tractor frame by a wrench or other tool if this is not done. Avoid spilling electrolyte. Keep flames and sparks away from the battery to avoid an explosion. After reconnecting the cables, make sure the cover is in place over the positive terminal.

1. The battery and cables (figure 5) can be cleaned with baking soda and water. Clean the terminals and clamps with a wire brush. Coat the clamps with petroleum jelly to inhibit corrosion.
2. Remove the caps to check the fluid level. The fluid should be even with the split ring full mark. If not, add distilled water.

BATTERY REPLACEMENT

The voltmeter can be used to determine condition of battery. When engine is off, the voltmeter shows battery voltage, which should be 12 volts. When engine is running the voltmeter shows voltage of charging circuit which normally is 13 to 14 volts.

A dead battery or one too weak to start the engine may not mean the battery needs to be replaced. It may, as an example, mean that the alternator is not charging the battery properly. If there is any doubt about the cause of the problem, see your dealer. If you need to replace the battery, proceed as shown in the battery cleaning procedure.

CHARGING A COMPLETELY DISCHARGED BATTERY

1. Be aware of all the safety precautions you should observe during the charging operation. If you are unfamiliar with the use of a battery charger and hydrometer, have the battery serviced by your dealer. For the following procedure, refer to Table A.

WARNING

Do not attempt to charge a frozen battery. Allow the battery to warm to 60° F (15.5° C) before placing on charge.

2. Add water sufficient to cover the plates (fill to the proper level near the end of the charge). If the battery is extremely cold, allow it to warm before adding water because the water level will rise as it warms. In fact, an extremely cold battery will not accept a normal charge until it becomes warm.

3. Always unplug or turn the charger off before attaching or removing the clamp connections.
4. Carefully attach the clamps to the battery in proper polarity (usually red to (+) positive and black to (–) negative).

⚠ CAUTION

Keep open flames and sparks away from the battery; the gasses coming from it are highly explosive. Ventilate the battery well during charging.

5. While charging, periodically measure the temperature of the electrolyte. If the temperature exceeds 125°F (51.6°C), or if violent gassing or spewing of electrolyte occurs, the charging rate must be reduced or temporarily halted to prevent battery damage.
6. Charge the battery until fully charged (i.e. until the specific gravity of the electrolyte is 1.250 or higher **and** the electrolyte temperature is at least 60°F). The best method of making certain a battery is fully charged, but not over charged, is to measure the specific gravity of a cell once per hour. The battery is fully charged when the cells are gassing freely at low charging rate and less than 0.003 change in specific gravity occurs over a three hour period.

JUMP START WITH AUXILIARY (BOOSTER) BATTERY

Jump starting is not recommended. However, if it must be done, follow these directions. Both booster and discharged batteries should be treated carefully when using jumper cables. Follow exactly the procedure that follows, being careful not to cause sparks.

⚠ WARNING

For your personal safety use extreme care when jump starting. Never expose battery to open flame or electric spark — battery action generates hydrogen gas which is flammable and explosive. Do not allow battery acid to contact skin, eyes, fabrics, or painted surfaces. Batteries contain a sulfuric acid solution which can cause serious personal injury or property damage.

1. Both batteries should be of the same Voltage (6, 12, etc.)
2. Position the vehicle with the booster battery adjacent to the vehicle with the discharged battery so that booster cables can be connected easily to the batteries in both vehicles. **Make certain vehicles do not touch each other.**

3. Shield eyes and face from batteries at all times. Be sure vent caps are tight. Place damp cloth over vent caps on both batteries.
4. Connect positive (+) cable to positive post of discharged battery wired to starter or solenoid.
5. Connect other end of same cable to same marked post positive (+) of booster battery.
6. Connect second cable negative (–) to other post of booster battery.
7. MAKE FINAL CONNECTION ON ENGINE BLOCK OF STALLED VEHICLE AWAY FROM BATTERY, STAND BACK.
8. Start the engine of the vehicle with the booster battery. Wait a few minutes, then attempt to start the engine of the vehicle with the discharged battery.
9. If the vehicle does not start after cranking for thirty seconds, STOP PROCEDURE. More than thirty seconds seldom starts the engine unless some mechanical adjustment is made.
10. After starting, allow the engine to return to idle speed, remove the cable connection at the engine or frame. Then remove the other end of the same cable from the booster battery.
11. Remove the other cable by disconnecting at the discharged battery first and then disconnect the opposite end from the booster battery.
12. Discard the damp cloths that were placed over the battery vent caps.

WARNING

Any procedure other than the preceding could result in: (1) personal injury caused by electrolyte squirting out the battery vents, (2) personal injury or property damage due to battery explosion, (3) damage to the charging system of the booster vehicle or the immobilized vehicle.

Do not attempt to jump start a vehicle having a frozen battery because the battery may rupture or explode. If a frozen battery is suspected, examine all fill vents on the battery. If ice can be seen or if the electrolyte fluid cannot be seen, do not attempt to start with jumper cables as long as the battery remains frozen.

WARNING

To avoid engine damage, do not disconnect battery while engine is running. Be sure terminal connections are tight before starting.

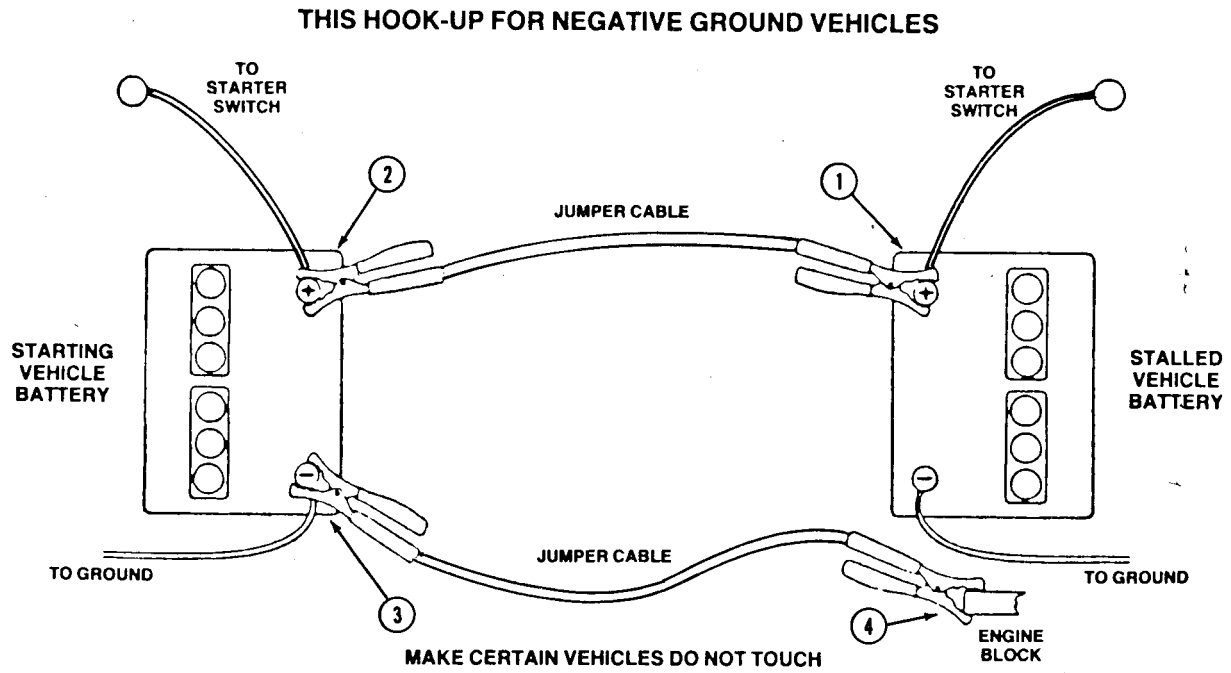


Table A. Jump Starting Diagram

CLEAN, SHARPEN & BALANCE BLADES

1. Remove mower from tractor.
2. Check each of the three blades. Blades should be sharp and free of nicks and dents. If not, sharpen blades as described in remaining steps.

⚠ WARNING

For your personal safety, do not handle the sharp mower blades with bare hands. Careless or improper handling of blades may result in serious injury.

3. To remove blade for sharpening, use wooden block to hold blade while removing its blade mounting capscrew (figure 6).
4. Use a file to sharpen blade to fine edge. Remove all nicks and dents in blade edge. If blade is severely damaged it should be replaced.
5. Balance the blade as shown in figure 7. Center the blade's center hole on a nail lubricated with a drop of oil. A balanced blade will remain level.

⚠ WARNING

For your personal safety, blade mounting capscrews must be installed with the cup washer and spline washer and then securely tightened. Torque blade mounting capscrew to 45 to 55 ft. lbs. (61 to 74.6 N.m).

6. Reinstall each blade with the tabs pointing up toward deck and secure with a capscrew, cup washer, and spline washer. Be sure spline washer hub fits inside blade mounting hole. Use a wooden block to prevent blade rotation (figure 8) and torque capscrews from 45 to 55 ft. lbs. (61 to 74.6 N.m).

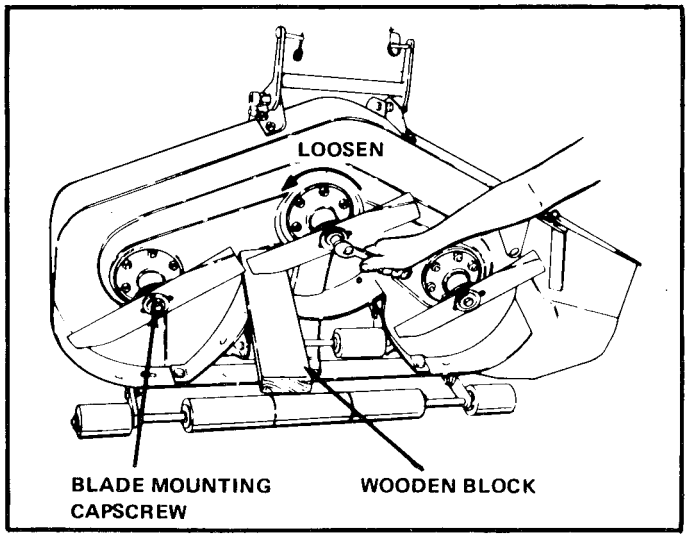


Figure 6. Loosen Blade (Typical Mower Shown)

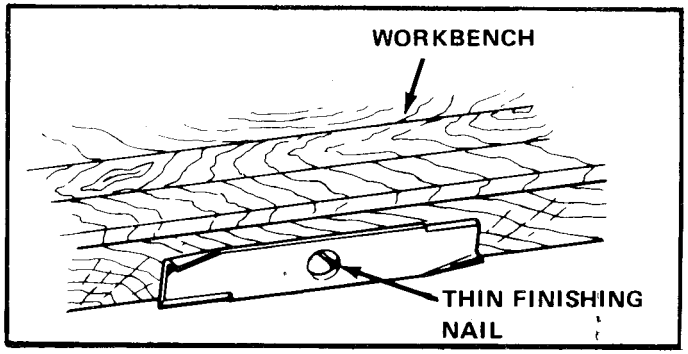


Figure 7. Balance Blade

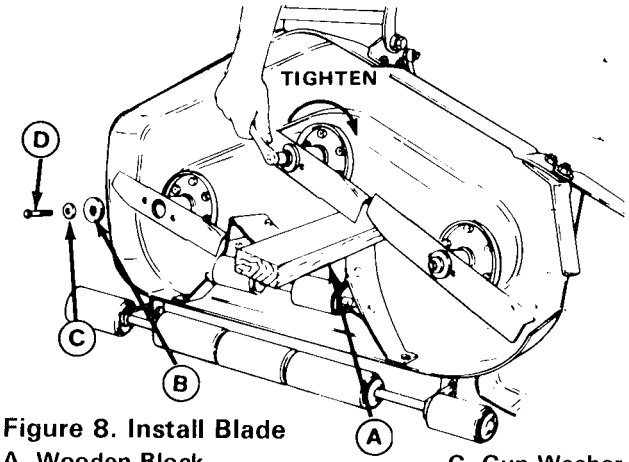


Figure 8. Install Blade

A. Wooden Block
B. Spline Washer
C. Cup Washer
D. Capscrew

STORAGE (TWO MONTHS OR MORE)

1. Prepare the mower for storage as follows:
   a. Remove mower from tractor.
   b. Clean underside of mower.
   c. Coat all bare metal surfaces with paint or light coat of oil to prevent rusting.
   d. Clean, sharpen and balance the blades.
2. Add a gasoline stabilizer to the tank.
3. Drain crankcase oil while engine is hot and refill with a grade of oil that will be required when tractor is used again.
4. Remove spark plug. Pour one ounce of 10W-30 oil into engine through spark plug hole. Crank engine a few times to distribute oil and then reinstall the spark plug.
5. Clean any dirt or grass from cylinder head cooling fins and engine housing and clean air cleaner element.
6. Cover air cleaner and exhaust outlet tightly with plastic or other waterproof material to keep moisture, dirt and insects out of engine.
7. Completely grease and oil tractor as outlined in earlier part of this section.
8. Clean up tractor and apply paint or rust preventive to any areas where paint is chipped or damaged.
9. Be sure the battery is filled to the proper level with water and is fully charged. Battery life will be increased if it is removed and put in a cool, dry place and fully charged about once a month. If battery is left in tractor, disconnect the negative cable.
10. If the tractor is to be stored 6 months or longer block the tractor up off the wheels to relieve weight and keep the tires off a damp floor. Protect the tires from prolonged exposure to direct sunlight.
11. Store the tractor in a dry place indoors.

STARTING AFTER STORAGE

Before starting the tractor after it has been stored, do the following:

1. Remove the blocks from under the tractor.
2. Install the battery (if removed).
3. Unplug the exhaust outlet and air cleaner.
4. Remove spark plug and wipe it dry. Crank the engine a few times to blow excess oil out of the plug hole. Reinstall plug.
5. Fill fuel tank with fresh gasoline. See engine manual for recommendations.
6. Check crankcase oil level, and add proper oil if necessary.

7. Inflate tires to proper operating pressure. Check fluid levels.
8. Start the engine and let it run slowly. DO NOT run at high speed immediately after starting. Be sure to run engine only out of doors or in well ventilated area.

Troubleshooting

For problems not covered in this manual, see your dealer.

WARNING

Before performing maintenance, lower the attachment, shut off engine and remove key, disengage power to attachments and set parking brake.

TROUBLESHOOTING (Tractor)

1. **Engine does not crank.**
   - **A.** Ground speed control lever not in neutral.
   - **B.** PTO lever(s) not disengaged.
   - **C.** Operator not in seat.
   - **D.** Circuit breaker tripped. Wait one minute for automatic reset. If defective, see your dealer.
   - **E.** Wiring loose or broken. Replace broken wires and tighten connections.
   - **F.** Battery discharged or terminals corroded. Clean terminals or have battery charged.
   - **G.** Faulty electrical system.

2. **Engine cranks but does not start.**
   - **A.** Out of gasoline.
   - **B.** Engine flooded. Push in choke and attempt to start. Hold throttle wide open.
   - **C.** Crankcase oil too heavy. See Engine Manual.
   - **D.** Water in gasoline or gasoline is stale. Drain and fill with fresh gasoline.
   - **E.** Faulty engine electrical or fuel system. See Engine Manual or your dealer.

3. **Engine hard to start or runs poorly.**
   - **A.** Fuel mixture too rich. Push in choke. Clean air filter.
   - **B.** Carburetor adjusted incorrectly or engine needs tune up. See Engine Manual or your dealer.
   - **C.** In hot weather, fuel may evaporate from carburetor when shut off, causing engine to run rough for a couple minutes after restarting. Do not shut off. Allow engine to clear itself.

4. **Engine knocks.**
   - **A.** Oil level low. Add oil as required.
   - **B.** Wrong grade of oil. See oil specifcations.
   - **C.** Wrong grade of gasoline. Use fresh, regular grade of gasoline.

5. **Excessive oil consumption.**
   - **A.** Engine running too hot. Clean engine cooling fins and blower screen.
   - **B.** Wrong weight of oil. See oil specifications.
   - **C.** Too much oil in crankcase. Drain excess oil.

6. **Exhaust black or smoky.**
   - **A.** Dirty air filter. Clean or replace.
   - **B.** Choke not open. Push in choke and be sure choke plate opens.
   - **C.** Carburetor adjustment wrong. See Engine Manual or your dealer.

7. Tractor creeps in neutral.

- **A.** Tractor creeps forward or backward with hydrostatic control lever in neutral position. See your dealer for neutral adjustment.

8. Engine runs, but will not drive tractor or lacks power.

- **A.** On 20 HP tractors, 2 speed axle shift in neutral. Place in either low or high range.
- **B.** Transmission oil cold. Allow three minutes for warmup.
- **C.** Transmission fluid low. Add as required. Check for leaks.

9. Brake will not hold.

- **A.** Brake (foot pedal or parking) out of adjustment.
- **B.** Brake lining worn. Replace.

10. Tractor handles poorly.

- **A.** Steering linkage loose (Manual). Tighten any loose connections.
- **B.** Improper tire inflation.
- **C.** Wheels spinning or slipping. Use weight.
- **D.** Driving too fast for land contours. Reduce speed.
- **E.** Steering requires lubrication (Manual).

11. Engine backfires when shut off.

- **A.** Engine backfire may occur when shut off hot. To reduce backfiring, move throttle lever to slow for couple seconds before shutoff.

TROUBLESHOOTING (Mower)

1. Mower will not raise.

- **A.** Lift mechanism not attached or broken. Attach or replace as necessary.
- **B.** Hydraulic lift system faulty. See your dealer.

2. Mower cut is uneven.

- **A.** Mower not leveled properly. Perform "Mower Levelling".
- **B.** Tractor tires not inflated properly. See tractor manual for correct pressures.
- **C.** Missing pin on mower hitch. Install pin.

3. Mower cut is rough looking.

- **A.** Engine speed too slow. Use 3/4 to full throttle.
- **B.** Tractor ground speed too fast. Use slower tractor ground speed.
- **C.** Blades dull and require sharpening.
- **D.** Arbor belt oily or worn. Clean or replace belt as necessary.
- **E.** Mower idler pulley pivot sticking. Check/lubricate as necessary (See Normal Care).
- **F.** PTO slipping. Burnish and check adjustments.
- **G.** Bent blade. Replace.

4. Engine stalls easily with mower engaged.

- **A.** Tractor ground speed too fast. Use low gear or

slower tractor ground speed.

B. Engine speed too slow. Use 3/4 to full throttle.

C. Cutting height set too low when mowing grass. Cut tall grass at maximum cutting height during first pass.

D. Discharge chute jamming with cut grass. Mow grass with discharge pointing toward previously cut area or wait for drier conditions.

5. Excessive mower vibration.

A. Blade mouting capscrews are loose. Torque capscrews to 45-55 ft. lbs. (61 to 74.6 N.m).

B. Mower blades are bent. Replace.

C. Mower blades are out of balance. Remove, sharpen & balance blades.

6. Excessive belt breakage occurs.

A. Loose or rough pulleys. File off rough edges or replace as necessary.

B Incorrect belt. Use belt designed for your mower.

C. Damaged mower pulley. See your dealer.

7. Belt slips.

A. Pulleys or belt greasy or oily. Clean.

B. Belt stretched. Replace belt.

C. Mower idler pulley pivot sticking. Check/lubricate as necessary.

Adjustments

WARNING

Before performing maintenance, lower the attachment, shut off engine and remove key, disengage power to attachments and set parking brake.

SEAT ADJUSTMENT

Adjust the springs for comfort by moving in slot toward front for lighter operator or toward rear for heavier operator. Move the lever (A, figure 9) to loosen and tighten spring.

Adjust the seat forward or back by loosening the two knobs. (B, figure 9).

WARNING

Tighten knobs securely after adjustments to prevent seat from moving.

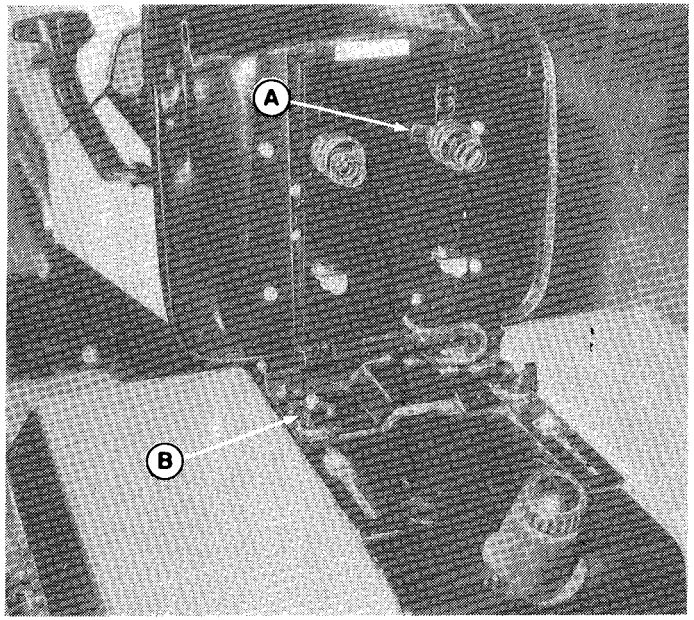


Figure 9. Seat Adjustment
A. Lever
B. Knob

MOWER LEVELLING

1. Position blades parallel to tractor.
2. Make two measurements. Measure from front tip of center blade to ground. Measure from rear tip of either side blade to ground.
3. The front measurement at center blade should be 1/8 to 1/4 inch higher. To adjust, go to step 4.
4. Loosen the jam nut (B, figure 10) on both rods (only one shown). Turn the bolt (C) in to raise front of mower or out to lower front of mower. Be sure to adjust both sides equally.
5. When measurement is correct, tighten the nut (B) securely while holding bolt (C).

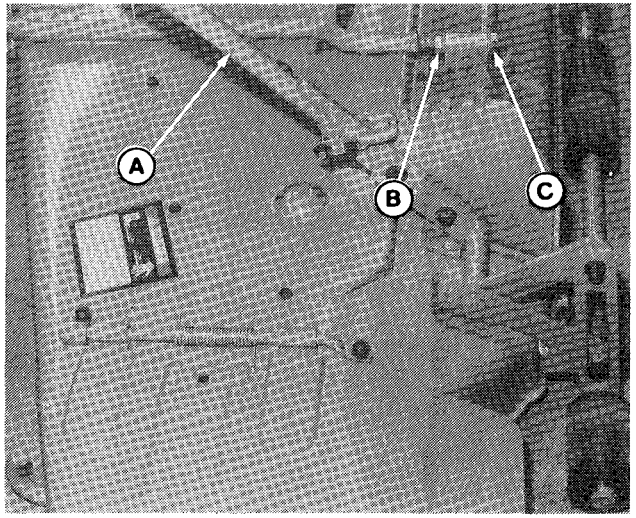


Figure 10.
A. Lever
B. Jam Nut
C. Bolt

FRONT CLUTCH ADJUSTMENT

Burnishing the Clutch

Before the front clutch is used for the first time, it should be burnished as follows. Also, if mower cut is rough looking, the clutch may require burnishing. To burnish, the mower must be installed.

Start the engine and set at full throttle. Turn the front PTO switch to ON position, leave on for 15 seconds, then turn off. Do this ten times to burnish the clutch.

Clutch Adjustment

1. Remove the tractor hood by disconnecting the headlight coupler and then removing two pins and clips.
2. Use a 0.015 to 0.020 feeler gauge to check the front clutch at three places (A, figure 11). Insert the gauge. There should be a slight resistance as gauge is moved in and out of slot. If tight, or loose, go to step 3.
3. Loosen or tighten one of the nuts (B, figure 11) to adjust one of the three places. Loosen nut to increase gap; tighten to decrease gap.
4. After adjusting a nut, check the other two with feeler gauge. Adjustment at one location will change adjustment at other two locations. Make sure all three locations have proper adjustment.

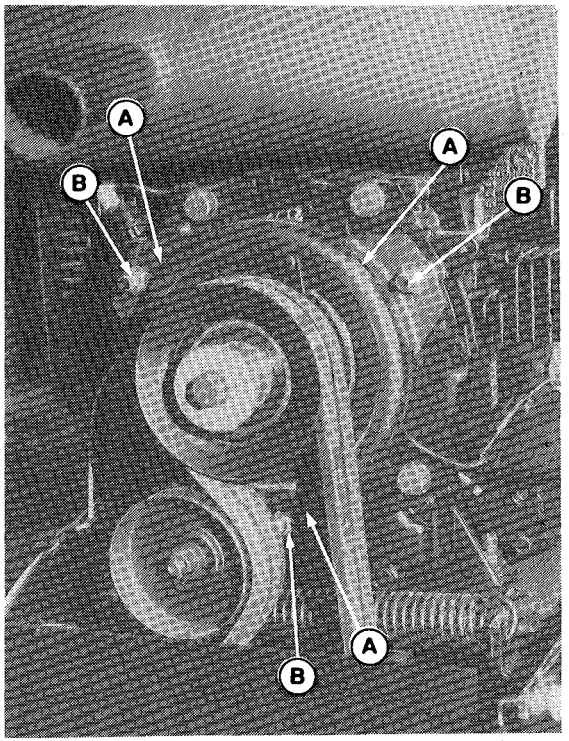


Figure 11. Front Clutch Adjustment
A. Slot
B. Nut

BRAKE ADJUSTMENT

Brake Shoe

NOTE

On 20 H.P. tractors, place 2-speed axle shift in neutral.
On 18 H.P. tractors, engage release valve.

1. Place the tractor on a level surface. Place blocks in front of front wheels.
2. Place a jack under the drawbar, and jack up tractor until rear wheels are off the ground. Place a jackstand under each rear axle so tractor is secure.
3. The brake shoes are adjusted by turning an adjusting star wheel inside the hub.
   a. Remove the rubber plug from the braking plate. Insert a brake tool inside the slot to engage the teeth of the adjusting wheel
   b. Turn the washer down to tighten brake, or up to loosen brake. Turn only one notch at a time and then test by rotating wheel by hand. Adjust the wheel until you cannot turn the tire by hand. Then, loosen the adjusting wheel one notch (turn up one notch).
   c. Install the rubber plug, and check the other rear wheel.

Brake Tension Adjustment

1. Set the parking brake.
2. Measure length of spring as shown in figure 12. Measure along centerline of spring. It should be 1-5/8".
3. Loosen the outer nut, then tighten or loosen the inner nut to attain dimension. When correct, tighten the outer nut while holding inner nut.

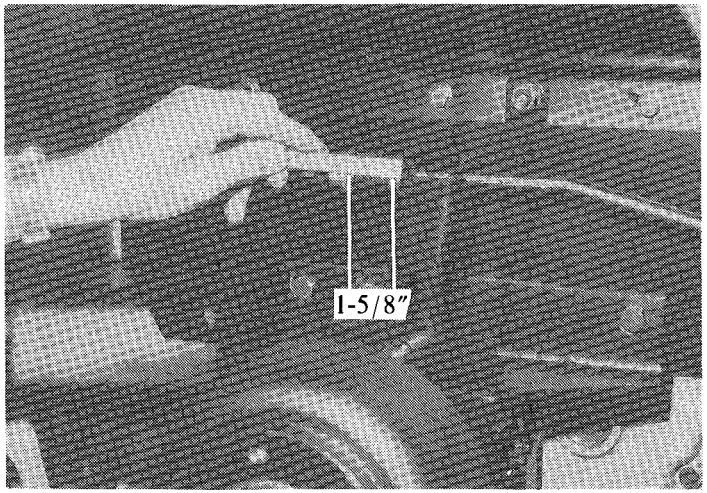


Figure 12. Parking Brake Adjustment - Shown with wheel removed for clarity.

SEAT SWITCH ADJUSTMENT

1. Move both springs to rear of slots and secure.
2. Put enough weight in the seat to attain 2-3/8″ between hinge and fuel tank cover, at rear edge of hinge (figure 13).
3. Loosen the two nuts (A, figure 13) until switch bracket in slot (B) is just free to move.
4. Insert a screwdriver into the slot, and move the switch bracket to top of adjustment range.
5. Turn ignition switch to RUN and plug a test light into plug (A & B, figure 13A) on right-hand side of engine.

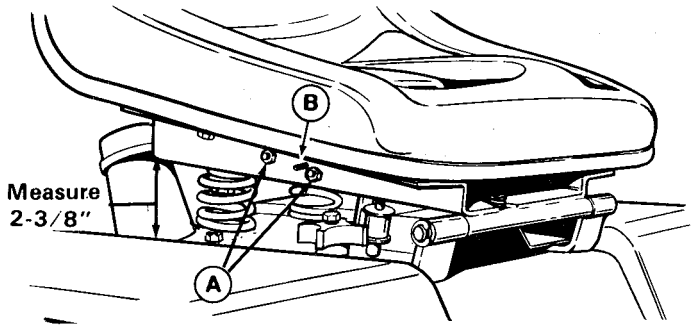


Figure 13. Seat Switch Adjustment
A. Nuts
B. Slot

6. Using screwdriver in slot, slowly adjust the bracket down to point where electrical contact is made. For left-hand switch, test light will light up at contact point. For right-hand switch, the seat light on dash will light up when contact is made. Be sure to adjust both left-hand and right-hand switch.

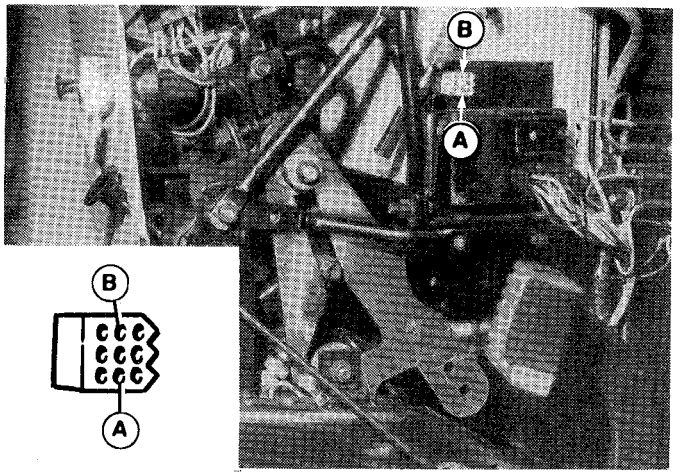


Figure 13A. Test Plug (on right-hand side of engine)
A. positive
B. negative

DASH INDICATOR REPLACEMENT

Raise the hood. Disconnect the rubber strap and lift the plenum. To remove a bulb, turn the socket and pull out.

HEADLIGHT BULB REPLACEMENT

1. Disconnect the two wires from back of headlight. (Note position to reconnect to same terminals).
2. Turn socket to left to disconnect and pull out.
3. Replace the bulb.
4. Align the two tabs and insert socket. Turn to right to lock. Terminals will be at 12 o'clock and 6 o'clock positions.

Specifications

ENGINE

Make: Kohler
Model: Magnum
Horsepower: 18 HP @ 3600 RPM
20 HP @ 3600 RPM
Engine Manufacturer Rating
Cylinder: 2
Bore: 3.125 In. (79.4 mm)
Stroke: 18 HP 2.75 In. (69.85 mm)
20 HP: 3.063 In. (78 mm)
Displacement: 18 HP: 42.18 In. ^{3}(689.2 cc)
20 HP: 47 In. ^{3}(770 cc)
Crankshaft: Horizontal, Cast
Construction: Cast Iron Cylinder Barrels,
Cast Aluminum Crankcase
Electrical System: 15 Amp Flywheel Alternator - Solid State
Regulator - Rectifier
12 Volt Battery, 400 Cold Cranking Amps
90 Min. Res.
Key Ignition Switch
Voltmeter on Instrument Panel
Ignition: Solid State Magneto
Governor: Type: Internal Fly-Weight with External Adjustment
Range: 3475 RPM No Load
Air Cleaner: Type: Dual Element

Crankcase: Breather: Ventilated through Air Cleaner
Lubrication:
18 HP - Full Pressure Lube
20 HP - Full Pressure Lube with Automotive Type Spin Off Oil Filter
Oil Capacity: 18 HP - 3.0 Pints (1.4 L)
20 HP - 3.5 Pints (1.7 L)

Fuel Tank: Material: Non-corrosive Polyethylene
Fuel Level Gauge Dash Mounted
Capacity: 4.2 Gallons

Muffler: Quiet Compact, Low Back Pressure

TRANSMISSION

Type: Hydrostatic Pump and Motor Cooled by Separate Oil Cooler

Pump: Variable Displacement Axial Type

Motor: Fixed Displacement Reversible Axial Type

Hydraulic Fluid: Type F Transmission Fluid
Reservoir: Final Drive Gear Case, 6 Qt. Capacity (5.7 L)
Filter: Cartridge w/25 Micro Rating Full Flow, w/o Anti-Drain Back

Controls: 18 HP: Shock Absorber Dampened Single Lever with Brake Return; Free Wheeling Valve and Latch for Manual Tractor Movement; Neutral Detent with Safety Start Switch.
20 HP: Shock Absorber Dampened Single Lever with Brake Return; Two Range Transmission with Foot Control Differential Lock; Hi Lo Range Control Lever Right Side of Seat; Neutral Detent with Safety Start Switch.

Speed Range @3400 RPM: Continuously Variable, Forward and Reverse, without Clutching or Shifting.

Engine Speed: 18 HP - Forward: 0-8 MPH; Reverse: 0-4.5 MPH
20 HP - Forward: 0-8 MPH; Hi; 0-5.5 MPH - Lo
Reverse: 0-4.5 MPH - Hi; 0-3.25 MPH - Lo

Final Drive: Hardened Spur Gears
Rolling Contact Bearings

Differential: Planetary Bevel Gear

CHASSIS

Frame: Side Rail Construction, Electrically Welded, Heavy Gauge Steel
Power Take-Off Points: Front, Center, Rear (Opt.)
Engine Mounting: ISO - Mounted Above Front Axle
Pivot Point Location: Double Pivoting Heavy Duty Cast Front Axle

Rear Wheels: Pneumatic Inflation Pressure: 6-8 psi (41-55 kPa)
Tire Size: 23 x 10.50-12 Turf Type

Front Wheels: Pneumatic Inflation Pressure: 12-15 psi (82-103 kPa)
Tire Size: 16 x 6.50-8

Accessibility: Hood Tips Forward

Seat: Type: Molded - Foam
Cover: Black Vinyl
Positions: Multiple, with Spring Suspension

Turning Radius: Inside Rear Tire: 26 In.

CONTROLS

Steering: Full Circle 15 In. Steering Wheel System:
Manual: Double Reduction Gear and Sector
Power: Hydrostatic Power Steering

Brake: Location: Right Front
Type: Individual, Internally Expanding
Self-Energizing Automative Style Drum Brake
Parking Brake Lock Standard Equipment

Location: Implement Lift Lever; Left Side (Hydraulic)
Power Take-Off Clutch: Electric, Dash Mounted Toggle Switch
Transmission Control Lever: Right Side
Ignition Key: On Dash Panel
Light Switch: Key Activated
Throttle Lever: On Dash Panel, Left Side
Choke Control: On Dash Panel
Voltmeter: On Dash Panel
Hour Meter: On Dash Panel
Fuel Gauge: On Dash Panel
Parking Brake Lock: Lower Right Side on Dash

DIMENSIONS

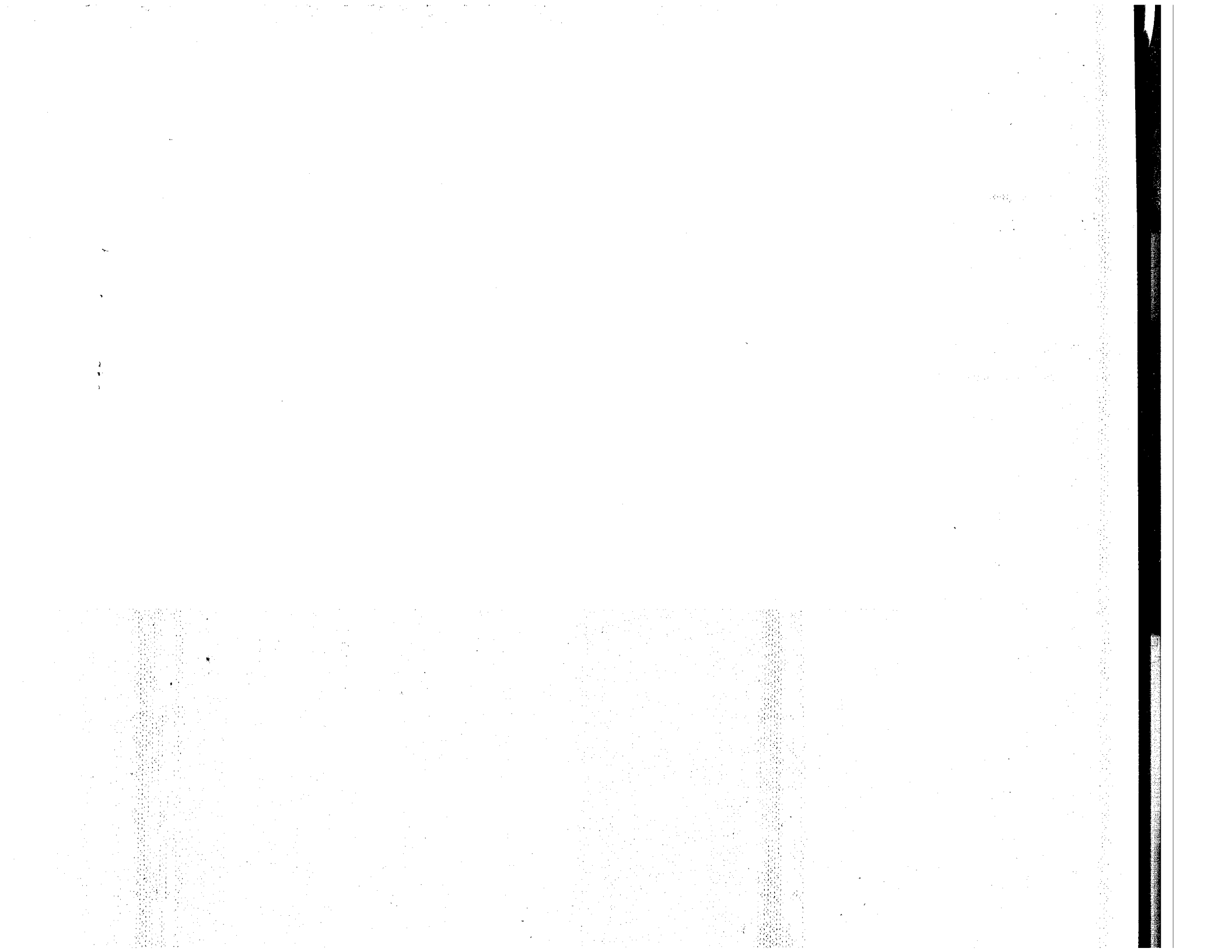
Overall Length: 78 In.
Overall Width: 38¼ In.
Height: To Top of Steering Wheel: 47 In.
Wheel Base: 51 In.
Weight (Aprx.): 18 HP: 825 lbs. (w/48" 1003 lbs.)
20 HP: 873 lbs., (w/48" 1051 lbs; w/60" 1108 lbs.)

TUNE-UP DATA

Spark Plug Type: Champion: RV 15 YC*
(*) Indicated type for areas subject to radio noise limitations

Spark Plug Gap: .025 In.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



DEUTZ-ALLIS Corporation
P.O. Box 933
Milwaukee, WI 53201