

Operator's Manual



Spray Star 1300 Model 30-500

TeeJet Radion® 8140 1302

TeeJet® 744 1304

TeeJet Radion/DynaJet® 1307/1308

Ag Leader® 1318-AG/1320-AG

SN: 130073

16-July-2026

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Original Instruction

The information contained within this manual was current at the time of printing. Some parts or information is subject to change to ensure the best performance of the machine. **Smithco** reserves the right to make changes in materials or design of the product and its manual at any time without notice.

Thank you for purchasing a **Smithco** product. We welcome you to our growing family of new product owners. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from your **Spray Star 1300**.

This machine is intended for professional maintenance on golf courses, sports turf, and any other area maintained turf and related trails, paths and lots. No guarantee as to the suitability for any task is expressed or implied.

Read this manual and all other manuals pertaining to the **Spray Star 1300** carefully as they contain safety, operating, assembly and maintenance instructions. Failure to do so could result in personal injury or equipment damage.

Keep manuals in a safe place after operator and maintenance personnel have read them. Manuals are available online at <https://manuals.smithco.com/>

Right and left sides are from the operator's seat, facing forward.

All **Smithco** machines have a Serial Number and Model Number. Both numbers are needed when ordering parts. **The machine serial number is located on the right hand frame rail.** Refer to engine manual for placement of engine serial number.

For product and accessory information, help finding a dealer, or to register your product please contact us at www.Smithco.com.

Information needed when ordering replacement parts:

1. Model Number of machine
2. Serial Number of machine
3. Name and Part Number of part
4. Quantity of parts



WARNING

Failure to follow cautious operating practices can result in serious injury to the operator or other persons. The owner must understand these instructions, and must allow only trained persons who understand these instructions to operate this vehicle.

This manual complies with:

ANSI/ASABE AD3600:20115 MAY2016(R2021)

ANSI Z535.6-2011(R2017)

at the time of printing.

For easy access, record your Serial and Model numbers here.

Model Number: _____

Serial Number: _____

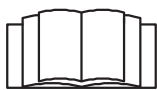
Date of Purchase: _____

Local Distributor: _____

Distributor Phone: _____

SMITHCO CUSTOMER SERVICE 1-800-891-9435

SYMBOLS



Read Operator's
Manual



Engine Stop



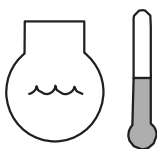
Engine Start



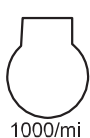
Engine Run



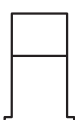
Engine Oil



Water
Temperature



RPM



Gasoline



Diesel



Glow Plug



Hour Meter



Hand Throttle



Choke



Hydraulic
Oil Level



Ground Speed



Park Brake



Park Brake
Release



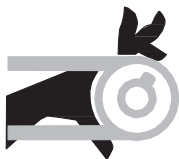
Fast



Slow



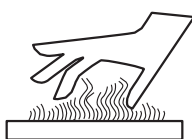
Lift Arm



Moving Parts



Pinch Point



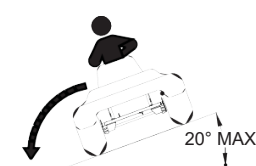
Hot Surface



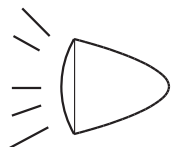
Hydraulic Fluid
Penetration



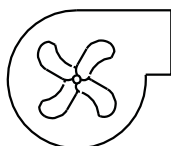
No Riders



Rollover
Danger



Headlamp



Blower



Warning
Danger
Caution



Seat Belt

SAFETY SIGNAL WORDS

Read and understand this manual and all safety signs before operating and maintaining. Review the safety instructions and precautions annually.



This is the safety alert symbol. It is used to alert you to potential physical injury hazards.

Obey all safety messages that follow this symbol to avoid possible injury or death.

Note the use of the signal words DANGER, WARNING and CAUTION with the safety messages. The appropriate signal word for each has been selected using the following guidelines:

	DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	NOTICE is used to address practices not related to physical injury.
	SAFETY INSTRUCTIONS (or equivalent) is used to indicate specific safety-related instructions or procedures.

The meaning of the different signal words as defined by the ANSI Z535.6.

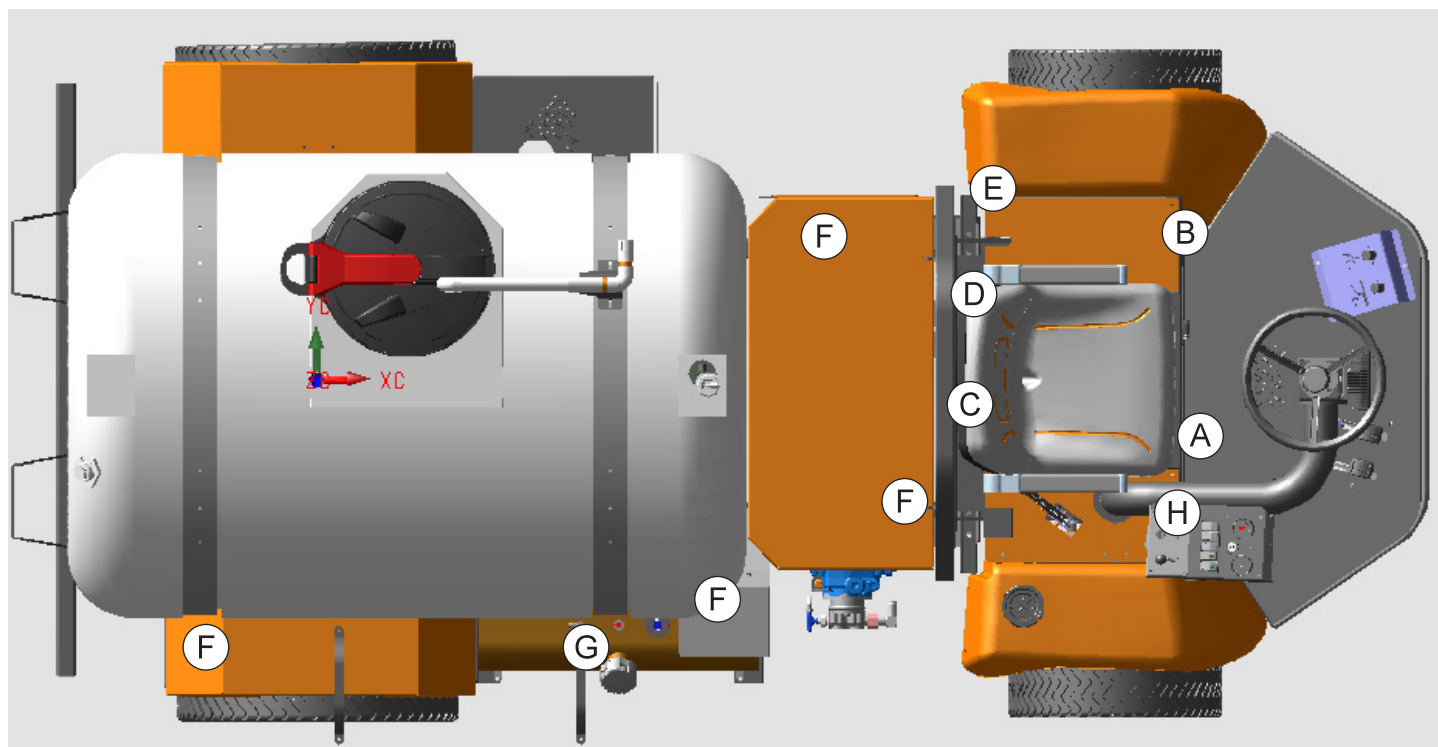
SAFETY DECAL LOCATION



REMEMBER: If Safety Decals have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from your authorized distributor.

This is a list of safety decals located on the Spray Star 1300. Part number, description and location will help in reordering a decals.

A	15-463	Decal Spray Pump
B	25-370	Decal, 88 dBA
C	25-277	Decal, Battery Warning
D	27-093	Decal, Hydraulic Oil
E	25-286	Decal, Pinch Point
F	25-298	Decal, Warning Hot
G	25-307	Decal, Fuel Only
H	30-402	Decal, Control Panel



Improper use or maintenance by the operator/owner can result in injury. To reduce the potential for injury, comply with all safety standards and instructions. Always pay attention to the safety alert symbol.

OPERATOR TRAINING REQUIRED

1. It is your responsibility to read this manual and all other training material carefully.
2. Learn the proper use of the machine, the location and purpose of all the controls, gauges and safety decals before you operate the equipment. Working with unfamiliar equipment can lead to accidents.
3. Do not carry passengers.
4. Do not operate while people, especially children, are near by.
5. Never allow anyone to operate or service the machine or its optional equipment without proper training and instructions. Never allow minors to operate any equipment.
6. The owner of this machine is responsible for training the users.

OPERATION SAFETY

1. Only allow responsible adults, who have been trained, to operate this machine.
2. Wear all the necessary protective clothing and personal safety devices to protect your head, eyes, ears, hands and feet. Operate the machine only in daylight or in good artificial light.
3. Inspect the area where the equipment will be used. Pick up all debris you can find before operating. Beware of overhead obstructions and underground obstacles. Stay alert for hidden hazards.
4. Never operate equipment that is not in perfect working order or without decals, guards, shields, or other protective devices in place.
5. Never disconnect or bypass any switch.
6. Carbon monoxide in the exhaust fumes can be fatal when inhaled, never operate a machine without proper ventilation.
7. Operate machine in open, unobstructed area.
8. Fuel is highly flammable, handle with care. When filling tank stop 1 inch (2.54 cm) from top. Leave room for expansion. **Do not over-fill.**
9. Keep engine clean. Allow the engine to cool before storing and always remove the key.
10. Disengage all drives and set park brake before starting the engine.
11. This machine demands your attention. To prevent loss of control or tipping of the vehicle:
 - A. Use extra caution in backing up the vehicle. Ensure area is clear.
 - B. Do not stop or start suddenly on any slope.
 - C. Reduce speed on slopes and in sharp turns. Use caution when changing directions on slopes.
 - D. Stay alert for holes in the terrain and other hidden hazards.
 - E. Use care when approaching blind corners, shrubs, trees or other objects that could obscure vision.
12. Keep the area of operation clear of all bystanders.
13. Before leaving operator's position:
 - A. Stop machine on a level surface.
 - B. Disengage all drives. Raise booms. Set park brake.
 - C. Shut engine off and remove the key.
 - D. If engine has to run to perform any maintenance, wait for all movement to stop before you clean, adjust or service the machine.
14. Keep hands, feet and clothing away from moving parts.
15. Stop engine before making repairs/adjustments or checking/adding oil to the crankcase.
16. Never use your hands to search for oil leaks. Hydraulic fluid under pressure can penetrate the skin and cause serious injury.
17. Do not operate this machine under the influence of alcohol or other drugs.
18. Slow down and use caution when making turns and crossing roads and sidewalks.
19. Use caution when booms are down as they extend out beyond the center line of the machine.
20. Be aware of overhead object when booms are up in transport position.
21. The spray tank is a confined space, take precaution.
22. Use parts and materials supplied by **Smithco** only. Do not modify any function or part.

ROLLOVER PROTECTION SYSTEM (ROPS)

1. The ROPS is an integral and effective safety device. Keep ROPS on machine at all times and use the seat belt when operating the machine.
2. Be certain the seatbelt can be released quickly in the event of an emergency.
3. Check carefully for overhead clearances (i.e. branches, doorways, electrical wires) before driving under any objects and do not contact them.
4. Keep the ROPS in safe operating conditions. Keep all mounting fasteners tight.
5. Replace a damaged ROPS. **Do not** repair or revise.
6. **Do not** operate without ROPS.

SAFE HANDLING OF FUELS

1. To avoid personal injury or property damage, use extreme care in handling fuels. Fuel is extremely flammable and vapors are explosive.
2. Extinguish all cigarette, cigars, pipes and other sources of ignition.
3. Use only approved fuel container.
4. Never remove fuel cap or add fuel with engine running.
5. Allow engine to cool before refueling.
6. Never store the machine or fuel container where there is an open flame, spark, or pilot light.
7. Never fill fuel containers on machine or trailer. Always place fuel container on the ground away from machine when filling.
8. Remove equipment from truck or trailer and refuel it on the ground. If this is not possible, refuel equipment from fuel container instead of the fuel dispenser nozzle.
9. If fuel is spilled on clothing, change immediately.
10. Fuel is highly flammable, handle with care. When filling tank, stop 1 inch (2.54 cm) from top. Leave room for expansion.
11. Never overfill fuel tank. Replace fuel cap and tightly secure.
12. Clean up oil or fuel spillage.

MAINTENANCE AND STORAGE

1. Disengage all drives, set parking brake, stop engine and remove key. Wait for all movement to stop before adjusting, cleaning or repairing.
2. Clean grass and debris from all drives, mufflers, radiator, cooler and engines to help prevent fires.
3. Let engine cool before storing. Do not store near flame.
4. Park machine on level ground. Set park brake. Never allow untrained personnel to service machine.
5. Use jack stands to support machine when required.
6. Carefully release pressure from components with stored energy.
7. Disconnect battery before making any repairs. Disconnect the negative terminal first and the positive last. Reconnect positive first and negative last.
8. Keep hands and feet away from moving parts. If possible, do not make adjustments with engine running.
9. Charge batteries in an open well ventilated area, away from spark and flame. Unplug charger before connection or disconnecting from battery. Wear protective clothing and use insulated tools.
10. Keep all parts in good working condition and all hardware tightened. Replace all worn and damaged parts.
11. Use parts and materials supplied by **Smithco** only. Do not modify any function or part.

HAULING

1. Use care when loading and unloading machine onto a trailer or truck.
2. Use full width ramps for loading machine onto trailer or truck.
3. Fold booms to upright position so they are resting in the boom nest. Set park brake.
4. Tie machine down securely using straps, chains, or cables. Both front and rear straps should be directed downward and outward.

SPRAY SAFETY

Persons engaged in the handling, preparation or application of chemicals must follow accepted practices to ensure the safety of themselves and others,

1. **WEAR** protective clothing including: gloves, hat, respirator, eye protection and skin covering suitable for protection from chemicals being used.
2. **BATHE** thoroughly after any exposure to chemicals, giving particular attention to eyes, nose, ears and mouth.
3. **CLEAN** equipment and materials in accordance with employer, municipal and state regulations. Use only approved areas and drains.
4. **DISPOSE** of chemicals and rinse solutions by approved and legal means.
5. **PROVIDE** methods and materials for operators to wash eyes and hands immediately during the spraying process.
6. **PROVIDE** methods and materials for control, safe dilution and neutralization of chemical spills during preparation, spraying, transporting and cleanup.
7. Always check and follow the directions and safety warnings of the chemicals to be used.
8. Secure the discharge lines before starting the pump. An unsecured discharge line may whip.
9. Periodically inspect the pump and the system components.
10. Check hoses for weak or worn condition before each use. Make certain that all connections are tight and secure.
11. Do not operate unit with leaks, frayed, kinked hoses or tubing. Repair or replace immediately.
12. Use only pipe, hose and fittings rated for maximum pressure or pressure at which pressure relief valve is set at. When replacing pipe, hose or fittings, use new product.
13. Do not operate an engine in an enclosed area. Be sure the area is well ventilated.
14. Do not use these pumps for pumping water or other liquids for human or animal consumption.
15. Do not pump flammable or explosive fluids such as gasoline, fuel oil, kerosene, etc. Do not use in explosive atmospheres. The pump should be used only with liquids compatible with the pump component materials.
16. Be sure all exposed moving parts are guarded and that all coupling devices are securely attached before applying power.
17. Before servicing, disconnect all power, make sure all pressure in the system is relieved, drain all liquids from the system and flush.
18. Protect pump from freezing conditions by draining liquid and pumping rust inhibiting anti-freeze solution through the system, coating the pump interior.
19. When in transit, stop machine to raise or lower booms. Because of cam system, if booms are raised in transit they can fall forward or backward when coming to a stop or while traveling on uneven terrain.
20. If using simulated speed with a Radion 8140, one needs to change back to ground speed for proper rate control when spraying.

SPECIFICATIONS

WEIGHTS AND DIMENSIONS

Length	160" (4.1m)
Width	72" (1.8m)
Width w/ Booms Open	20' - 260" (6.6m)
	18' - 240" (6.1m)
Height w/ Roll Bar	77" (2.0m)
Height w/ Booms Folded	20' - 96" (2.4m)
	18' - 86" (2.2m)
Wheel Base	68" (1.4m)
Weight Empty	2700 lbs (1225 kg)
Weight Full	5100 lbs (2313 kg)

SOUND LEVEL (DBA)

At ear level	86 dBA
At 30 ft. (9.14 m)	75 dBA

ENGINE

Make	Kubota
Model#	WG1605
Code / Spec#	G-E3-KEA-3
Rated Horsepower	57 hp (42.5 kW)
	@3600RPM
Cooling System	Liquid Cooled
Lubrication System	Full Pressure
Alternator	40 Amp

WHEELS & TIRE

Front:	
Two 22 x 11.00 x 10 Turf; 20 psi (1.4 bar)	
Rear:	
Two 29 x 14.00 x 15 Multi-Trac; 30 psi (2.0 bar)	

SPEED

Infinitely Variable 0-10 m.p.h. (0-18 kph)

BATTERY

Automotive type 22NF - 12 volt	
BCI Group	22NF
Cold Cranking Amps	900 minimum
Ground Terminal Polarity	Negative (-)
Maximum Length	10.25" (26 cm)
Maximum Width	6.88" (17 cm)
Maximum Height	10" (25 cm)

FLUID CAPACITY

Crankcase Oil	See Engine Manual
Radiator	See Engine Manual
Fuel	17 gallon (64.4 liters)
Hydraulic Fluid	10 gallon (37.8 liters)

FLUID GRADE

Engine Oil	
SAE 10W-40 API Service SJ or higher Motor Oil	
Hydraulic Fluid	
SAE 10W-40 API Service SJ or higher Motor Oil	
Coolant Overflow Jug	
1.06 Gal 50/50 mix of coolant(ethylene glycol) and pure water	
Fuel	
Unleaded 87 Octane Gasoline Minimum	

OPTIONAL EQUIPMENT

30-510	Water Meter Kit
30-509	Manual Hose Reel
30-501	Electric Hose Reel
32-518	18' Boom
32-520	20' Boom
30-516	30 Gallon Wash Tank
30-503	Foam Marker
30-006	Fresh Water Tank
15-835	Tank Rinse System
30-515	Chemical Clean load Safe Fill
20-860	Sunshade Canopy

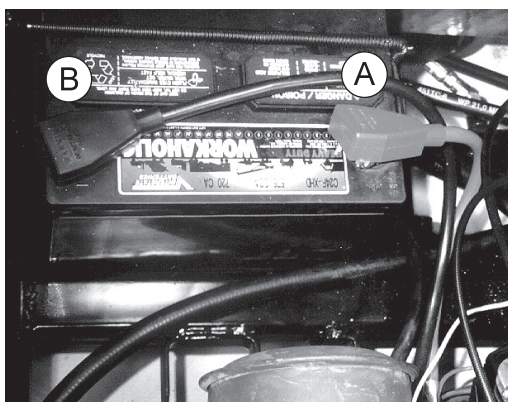
The Spray Star 1300 arrives from **Smithco** setup and ready for service. Freight conditions determine if battery installed.

The spray system is normally shipped attached to the 1300 Prime Mover. If a spray system is to be fitted to a Prime Mover by a dealer or factory, assemble and attach the components in accordance with the parts drawings in the *Spray Star 1300 Parts Manual*.

1. Check the tire pressure. The front tires are 20 psi (1.4 bar) and rear tires are 30 psi (2.0 bar).
2. Battery is located under seat. This is a negative grounding system.

WARNING

Connecting battery cables to the wrong post could result in personal injury and/or damage to the electrical system. Make sure battery and cables do not interfere or rub on any moving part. Connect red positive (+) cable (A) to battery first. When disconnecting remove black negative (-) cable (B) first.



3. Check the hydraulic fluid level in tank, located under the seat. Remove cap and add SAE 10W-40 API Service SJ or higher motor oil if necessary. Fluid level should be about 2-2 1/2" (5-6.4 cm) from the top of the tank when cold. **Do not over-fill.**
4. Fill fuel tank, located on right side, with Unleaded 87 Octane Gasoline Minimum. When filling the fuel tank stop when the fuel reaches 1 inch (2.54cm) from the top. This space is necessary for fuel expansion. **Do not over-fill.**

! DANGER

Fuel is flammable, caution must be used when storing or handling it. Do not fill fuel tank while engine is running or an enclosed area, fumes are explosive and dangerous to inhale.

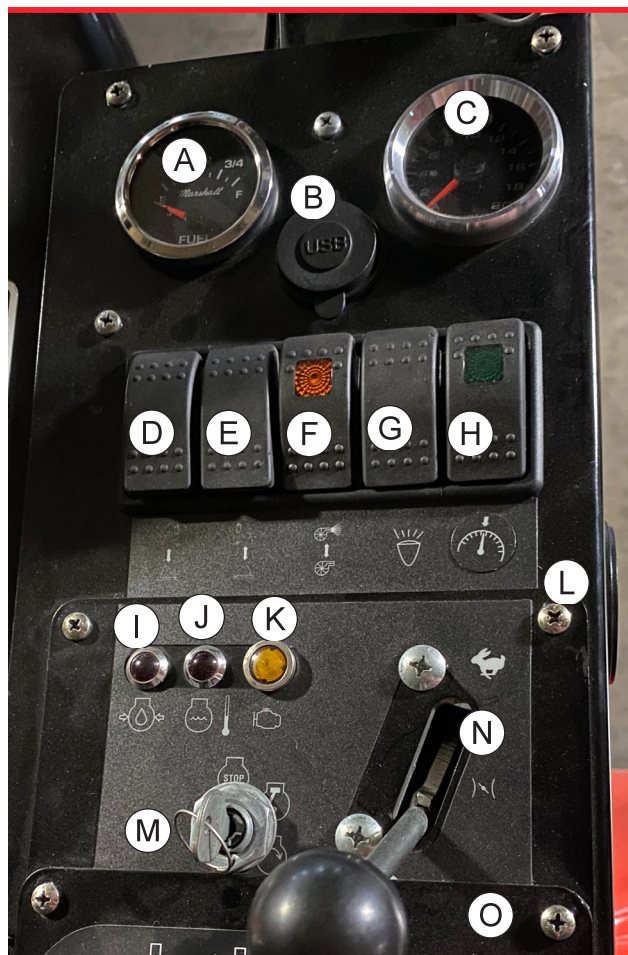
**DO NOT SMOKE while filling the fuel tank.
DO NOT OVERFILL**

5. Machine should be greased before starting, refer to the lubrication section in this manual.
6. Attach the spray boom and any other optional equipment to the prime mover, in accordance with instructions in the *Spray Star 1300 Parts Manual*.
 - A. The nozzles must be the correct distance above the turf.
 - B. The spray boom must operate properly and the outer sections must break away safely if an object is struck by them, they must then return to normal operation position.
7. Be sure to double check boom heights, nozzle spacing and displacement before spraying.
 - A. Along the length of the boom are located some type of spray nozzles, usually spaced 10" (25 cm) or 20" (51 cm) apart. Smithco booms are factory set for 20" (51 cm) high at 20" (51 cm) spacing.
 - B. AgLeader® and Radion® systems are set for 24" (61 cm) high at 10" (25 cm) spacing.
8. Machine is shipped with windshield washer fluid in spray system to prevent freezing. Flush system completely with clear water. Fill tank with water and check the tank straps used to hold the tank in place. If loose, re-tighten.
9. Read operating instructions before starting.

NOTICE

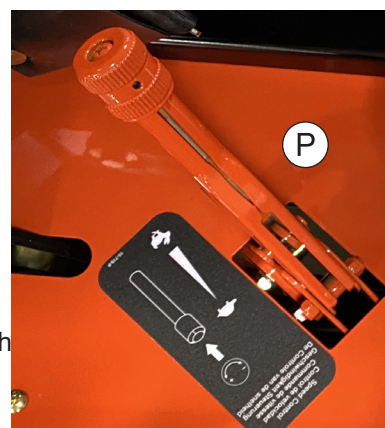
Never allow pump to run dry! The valve on the suction side of the pump (between the pump and tank) must be fully open whenever the pump is operated.

CONTROLS & INSTRUMENTS



- A. **Fuel Gauge** - Electronic fuel gauge indicates level of fuel in tank.
- B. **Dual USB Charging Port** - Standard USB port.
- C. **GPS Speedometer** - The speedometer indicates ground speed of the vehicle in miles per hour and kilometers per hour using GPS technology. The antenna is on top of the ROPs.
- D. **Left Boom Switch** - This rocker switch lifts and lowers the left boom.
- E. **Right Boom Switch** - This rocker switch lifts and lowers the right boom.
- F. **Spray Pump** - This rocker switch turns the spray pump on by pushing on the top and off by pushing on the bottom. Amber light indicates 'On'. **The buzzer sounds if the pump is running dry.**
- G. **Lights** - This rocker switch turns lights on by pushing on the top and off by pushing on the bottom.

- H. **Ground Speed (Cruise) Control** - This rocker switch initiates cruise control by pushing on the top and turning it off by pushing on the bottom. Works with ground Speed Control Foot switch.
- I. **Oil Light** - The oil light should come on when the ignition is on without the engine running and go out when the engine is running. The oil light will light when the oil pressure is low. If oil light should come on, shut engine off immediately and find the cause.
- J. **Engine Temperature Light** - This light indicates when engine temperature is too hot. If temperature light should come on, shut engine off immediately, let engine cool down and find the cause.
- K. **Engine Indicator Light** - Light flashes if there is an engine issue. If light is flashing. Shut off engine and refer to engine manual.
- L. **Hour Meter** - Located on the outside of control panel. The hour meter indicates hours of machine operation. It operates only when the ignition switch is on.
- M. **Ignition Switch** - The ignition switch has three positions: Off - Run - Start. Turn key to start.
- N. **Hand Throttle** - The hand throttle is used to regulate engine speed.
- O. **Low Pressure Buzzer** - Warning alarm when pump has low pressure.
- P. **Spray Boss Control** - Engages and disengages speed boss. Forward is engage and all the way back is disengage. When the lever is engaged it sets a stop for the accelerator. The accelerator pedal must be used to maintain this speed. To adjust speed use the knob on the end of the lever, counter clockwise increases speed and clockwise decreases speed. Disengage the lever and you will have full accelerator pedal range.





- Q. **Ground Speed (Cruise) Control Foot Switch** - When rocker switch is turned on and desired speed is obtained, push foot speed control switch to set cruise. (See page 12).
- R. **Master Boom Switch** - located on the left floorboard is used to override the master switch on the computer console of the **Radion Spray Systems**. By pushing down it will turn on/off the booms. For **TeeJet® Systems**, the master switch on the computer **must be on**.
- S. **Reverse Pedal** - This pedal controls reverse. Press pedal to move machine in reverse.
- T. **Accelerator Pedal** - This pedal controls ground speed. Press pedal to increase speed. Varying the amount of movement of the pedal will vary the ground speed.

WATER TEMPERATURE LIGHT

The engine water temperature light will come on if the water temperature in radiator raises above acceptable degree. If the light comes on, shut off spray pump and idle engine to cool. **See engine manual for service and maintenance.**



WARNING

Do not remove the radiator cap until coolant temperature is well below boiling point. Then loosen cap slightly to the stop position to relieve any pressure, before removing cap completely.

ENGINE INDICATOR LIGHT

The engine lamp lights up to warn the operator that the engine oil pressure has dropped below the prescribed level. If this should happen immediately stop the engine. If light stays on after machine is accelerated more than 1000rpm, immediately stop the engine. **See engine manual for service and maintenance.**

GPS SPEEDOMETER

This machine is equipped with a GPS Speedometer. **Please note** that if the speedometer has been powered off longer than 4 hours, it could take up to 1 minute to acquire signal due to the satellites moving significantly from your location. This is normal. The current draw is extremely low and will have virtually zero impact on a battery's charge. Hot start wire should be connected directly to battery +12volts and should remain powered 100% of the time. When GPS gauge first receives power the needle will sweep full counter clockwise towards 0 mph. Pointer will stay at 0mph and oscillate slightly at zero to indicate the GPS is acquiring satellites. GPS is not yet functional to indicate speed. Once satellites are acquired (15-45 seconds), the pointer will swing full scale and then back toward 0 mph to indicate it is now ready for operation.

LOW PRESSURE ALARM SYSTEM

If air is sucked into the suction side of the pump, as when the tank is emptied, this pressure switch senses the pressure drop and through a transducer, sends a signal to a warning alarm located at the operator's station. This alarm sounding allows the spray tech to shut off the pump before damage can be done to pump by running it dry.

CONTROLS & INSTRUMENTS

MASTER BOOM SWITCH (FOOT SWITCH)

The master boom switch(B) for TeeJet® Radion is located on the left floorboard. It is used in conjunction with the master switch (A) on the computer console of the spray system. When the master switch (A) is on, the floor boom switch (B) will turn on/off the booms. The master switch(A) on the computer **must be on** for the master boom control switch(B) on the floor to work.

GROUND SPEED CONTROL (FOOT SWITCH)

The ground speed control(C) is located on the left floorboard and is used to lock forward speed. The ground speed control does not work the same as an automotive type cruise.

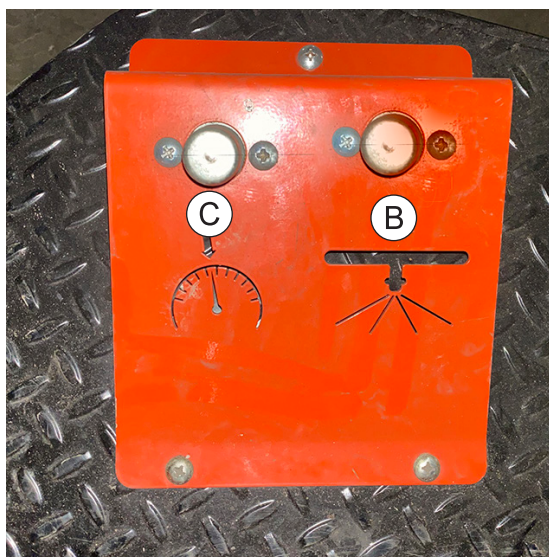
TO ENGAGE:

1. Flip rocker switch 'On' (green light)(D).
2. Obtain desired speed with forward foot pedal.
3. Step on foot switch(C) to lock speed.
4. To disengage -Push foot switch(C) again.



CAUTION

To avoid abrupt stop, place foot on traction pedal before disengaging speed control.



SAFETY INTERLOCK SWITCH

To adjust the interlock switch on the back hydrostatic pump loosen the set screw on the front half of the switch, with the ignition switch OFF. With a continuity tester connected across the switch, it should light with the shift arm centered. Move the shift arm to the right or left and the light should go off. By turning the back half of the switch clockwise it will reduce the amount of travel on the shift arm that is required for the light to remain on. The light must be on **ONLY** with the shift arm centered.

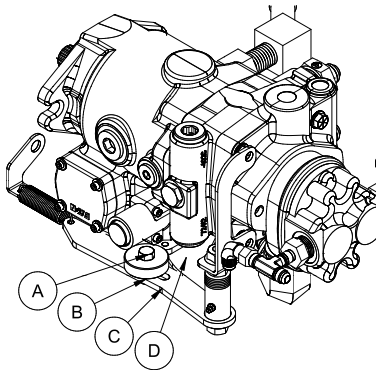
BRAKE RELEASE

Run machine at quarter-throttle minimum, prior to operating traction pedal. This will ensure proper brake release.

WHEEL CREEP

"Creep" is when the engine is running and hydrostatic transmission is in neutral, but due to inadequate alignment, wheels still move. Do the following procedure to stop this motion.

1. Lift up and support machine so rear wheels are off the ground and can turn freely.
2. In the engine compartment, the hydrostatic pump is on the right side. The shift arm (D) is on bottom of the pump. The idler arm (B) has a bearing that rides in the V of the shift arm. Loosen bolt (A).



3. Carefully release pressure from components with stored energy.
4. With engine running, move bearing (B) so it centers on the shift arm (D) and 'wheel creep' stops.
5. Tighten all fasteners and test by using foot pedal linkage to see that 'creep' is removed.
6. Turn engine off and lower machine.

TOWING

Brake must be disengaged for towing. The brake disengage cover is located at the center of the Auburn wheel drive on the rear wheels. To disengage the brake, remove the disengage cover and assemble the disengage cover with the dimple center protruding inward. This will release the brake shaft. **Road speeds must not exceed 20 MPH.** Re-assemble the disengage cover back to its original way when done towing.



WARNING

Machine is in free wheel mode when towing. Machine has no braking capabilities when being towed.

TRANSPORTING

This machine is not allowed on public roads. This machine must be transported via trailer or truck.

1. Use care when loading and unloading machine into a trailer or truck.
2. Use full width ramps for loading machine onto trailer or truck.
3. Raise booms allowing them to rest in the boom nest. Set park brake.
4. Tie machine down securely using straps, chains, or cables. Both front and rear straps should be directed downward and outward.

DAILY OPERATION

Before operating the Spray Star 1300, become familiar with all controls and functions. Also complete all maintenance requirements and read all safety warnings. Knowing the Spray Star thoroughly, how it operates, and by doing the prescribed maintenance steps, you can expect trouble free operation for years to come.

SAFETY

Safety needs to always be the concern of the operator on a moving vehicle or any machine with moving parts.

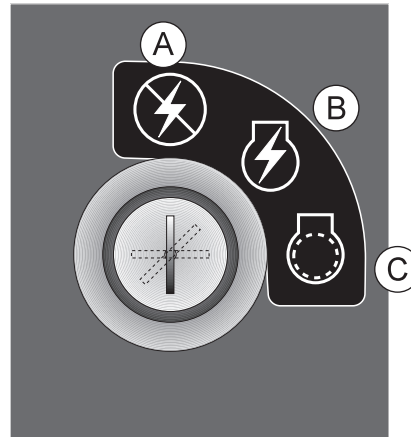
1. Keep all shields and guards in place.
2. Keep the parking brake engaged any time the operator is away from the vehicle or whenever service is performed.
3. Always wear the necessary protective clothing and equipment.
4. Turn engine off when refueling or performing maintenance not specifically requiring engine power.
5. Keep ROPS on machine at all times and use the seat belt when operating the machine.

DAILY CHECKLIST

1. Check the engine oil level and coolant level. Add as needed. **Do not over-fill.** Refer to engine owner's manual for grade and procedure.
2. Tire pressure should be 20 psi (1.4 bar) on front and 30 psi (2.0 bar) on back.
3. Inspect the electrical system and battery cables for loose connections or frayed wiring. Replace any faulty equipment or tighten if loose.
4. Check hardware for loose or missing nuts, bolts, screws, etc., Tighten or replace as needed.
5. This machine is equipped with a Rollover Protection System (ROPS). Check that all bolts holding the ROPS are tight.
6. Inspect hydraulic lines for damage or leaks. Never use hands to inspect for leaks.
7. Check the hydraulic fluid level. The hydraulic fluid tank is located under the seat. The fluid level should be 2"-2½" (5 - 6.4 cm) from the top of the tank when cold. Use only SAE 10W-40 API Service SJ or higher Motor Oil.
8. Inspect the steering, throttle and shift linkages for good hookups and clear travel.

9. Check controls for smooth, proper working operation. Lubricate as needed.
10. Check anti-vibration mounts on engine frame.

STARTING THE ENGINE



1. The ignition switch is located on the control panel. Insert the key (A) and turn clockwise to position (C) until the engine starts. Release the key and it will return to the run position (B).
2. Allow engine to idle and warm up before selecting direction of travel.

STOPPING THE ENGINE

NOTICE

If the engine has been running under high power, let it run at slow idle speed a few minutes to cool the engine down, before turning the ignition switch to the OFF position.

1. Disengage spray pump.
2. Move the throttle lever to "slow" and turn ignition key to the "off" position.
3. Remove the ignition key and engage the park brake.



CAUTION

Never leave the vehicle unattended with the engine running. Always bring the vehicle to a complete stop, engage park brake, turn key off and remove key.

Before using the Spray Star, the operator and spray technician must familiarize themselves with all of the information on chemical spraying.

NOTICE

All testing and calibrating of sprayers is to be done with water, not chemicals. This insures the safety to all involved in performing the calibration operation. Only after all calibration procedures are completed should chemical be added to the sprayer.

HILLSIDE OPERATION

Do not stop or start suddenly on any slope. Be especially cautious when changing direction. **Do not** operate on slopes greater than 10°.

BATTERY

Batteries normally produce explosive gases which can cause personal injury. Do not allow flames, sparks or any ignited object to come near the battery. When charging or working near battery, always shield your eyes and always provide proper ventilation.

Battery cable should be disconnected before using "Fast Charge".

Charge battery at 15 amps for 10 minutes or 7 amps for 30 minutes. Do not exceed the recommended charging rate. If electrolyte starts boiling over, decrease charging.

Always remove grounded (-) battery clamp first and replace it last. Avoid hazards by:

1. Filling batteries in well-ventilated areas.
2. Wear eye protection and rubber gloves.
3. Avoid breathing fumes when electrolyte is added.
4. Avoid spilling or dripping electrolyte.



WARNING

Battery Electrolyte is an acidic solution and should be handled with care. If electrolyte is splashed on any part of your body, flush all contact areas immediately with liberal amounts of water. Get medical attention immediately.

JUMP STARTING

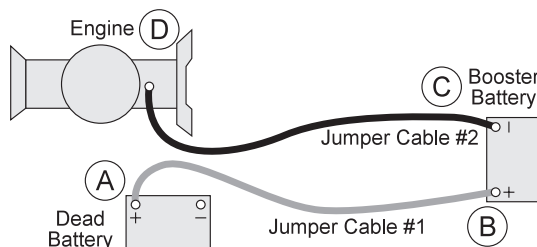


WARNING

Jump Starting - Use of booster battery and jumper cables. Particular care should be used when connecting a booster battery. Use proper polarity in order to prevent sparks.

To jump start (negative grounded battery):

1. Shield eyes.
2. Connect ends of one cable to positive (+) terminals of each battery, first (A) then (B).
3. Connect one end of other cable to negative (-) terminal of "good" battery (C).
4. Connect other end of cable (D) to engine block on unit being started (NOT to negative (-) terminal of battery)



To prevent damage to other electrical components on unit being started, make certain that engine is at idle speed before disconnecting jumper cables.

STORAGE

STORAGE

1. Clean the exterior surfaces of the engine and radiator.
2. Park machine on a flat surface.
3. Set park brake and remove key.
4. May disconnect battery if needed.
5. Store machine in a clean, dry place.

EXTENDED STORAGE

1. Check for any damaged parts or missing decals. Replace as needed.
2. Drain crankcase completely and refill with recommended engine oil or equivalent.
3. Change the oil and filter while the engine is still warm from operation.
4. Lubricate all grease points.
5. Drain the coolant from the radiator. Open the cock at the bottom of the radiator. Leave cock open and hang tag on machine with note reading "No Water" on pressure cap.
6. Clean exterior surface of engine.
7. Disconnect, remove and clean battery. Check electrolyte level. Charge the battery and store in a cool dry place (NOT directly on cement).
8. Flush spray system out. put window washer fluid in tank and circulate through spray system
9. Put blocks or stands under the machine to take weight off tires.

AFTER STORAGE

1. Check for any damaged parts or missing decals. Replace as needed.
2. Lubricate all grease points.
3. Clean exterior surface of engine.
4. Remove all tape and obstructions from exterior or engine surfaces.
5. Charge and replace battery.
6. Check tire pressure.
7. Remove blocks or supports from under the machine.
8. Check engine oil level and coolant level and lubricate all grease points.
9. Fill fuel tank.
10. Check belt tension.
11. Run engine in a well ventilated area approximately 5 minutes before putting the engine under load.
12. If machine was stored with windshield washer fluid in spray system to prevent freezing. Flush system completely with clear water. Fill tank with water and check the tank straps used to hold the tank in place. If loose, re-tighten.

NOTICE

To prevent damage from freezing, pour window washer fluid into spray systems tank and operate pump to circulate mix through gun and hose back to tank. Open boom control to circulate through rest of spray system.

SPRAY TANK AGITATION

Nozzle Diameter	Input to Agitator in gpm	Input to Agitator in L/min	Agitator Pressure in psi	Agitator Pressure in bar	Agitator Output in gpm	Agitator Output in L/min
1/8"	1.9	7.2	25	1.7	6.3	23.8
1/8"	2.7	10.2	50	3.4	10.0	37.9
1/8"	3.8	14.4	100	6.9	15.0	56.8
5/32"	2.8	10.6	25	1.7	7.6	28.8
5/32"	4.2	15.9	50	3.4	12.2	46.2
5/32"	5.5	20.8	100	6.9	17.5	66.2
3/16"	3.6	13.6	25	1.7	9.1	34.4
3/16"	5.6	21.2	50	3.4	14.3	54.1
3/16"	7.9	29.9	100	6.9	18.7	70.8

SPRAYER VALVE SETTINGS AND SPRAY TANK AGITATION

The 3-way valve on the suction side of the pump, between the tank and the pump must be open before pump is engaged. Close this valve only when necessary to clean the filter with spray material in the spray tank.

There is one manual flow control valve on the discharge side of the spray system. This valve controls the agitator. This valve may be opened as much as necessary to provide hydraulic agitation through the quadrajet agitator in the tank bottom. This valve may be partially closed to prevent or reduce foam buildup from the spray materials inside the tank. When the liquid level in the spray tank reaches a certain level (usually 1-25 gallons (3.8-95 Liters) depending on terrain and other conditions) it may be necessary to close the valve in the agitator line in order to prevent loss of suction prime.

If your Spray Star is fitted with a hose reel, there is a second ball valve on the discharge system to supply material to the hose reel.

The Quadrajet agitation system operates with four venturi jets in the tank bottom.

SPRAYER ACCESSORIES

MANUAL HOSE REEL

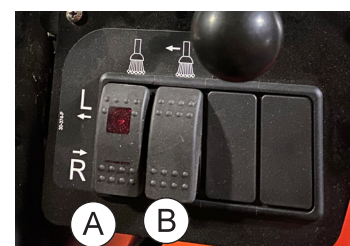
Located at the back of the Spray Star on top of the tank. Open the ball valve located near the manifold valve to allow fluid to flow into the hose reel. Place the lockout pin in the unlocked position by pulling and turning it half a turn, this will allow you to pull out additional hose or to use the handle and wind up the hose. To prevent movement during transport or storage place the lockout pin in the locked position.

ELECTRIC HOSE REEL

Located at the back of the Spray Star on top of the tank. Open the ball valve located near the manifold valve to allow fluid to flow into the hose reel. To unwind hose just pull on the hose to get the desired amount. To wind up the hose make sure the toggle switch is in the ON position, push the momentary push button switch until you have reeled in the amount of hose desired. Turn off the safety switch when not in use.

FOAM MARKER

The controls for the foam marker is located on the bottom of the control panel. The first lighted rocker switch(A) is to turn the foamer on/off. Push down on the bottom of the switch and the light will come on indicating that the foamer is on. Push the top of the rocker to shut off. The second switch(B) designates which boom is dispensing foam. Push the top for the left boom (L) and push the bottom for the right boom (R). Use dial located on the foamer to adjust pressure for the amount of foam that will be dispensed.



MAINTENANCE

CAUTION

Before servicing or making adjustments to machine, stop engine and remove key from ignition.

Use No. 2 General purpose lithium based grease and lubricate every 100 hours. The Spray Star 1300 has 9 grease fittings.

- A. One on the rod end of hydraulic cylinder.
- B. One on each the right and left spindles.
- C. One on each end of tie rod.
- D. One on the centering arm.
- E. One on each of the pedal assemblies.
- F. One on the shift relay.

ELECTRICAL CONNECTIONS

Use dielectric grease on all electrical connections.

AIR CLEANER ON ENGINE

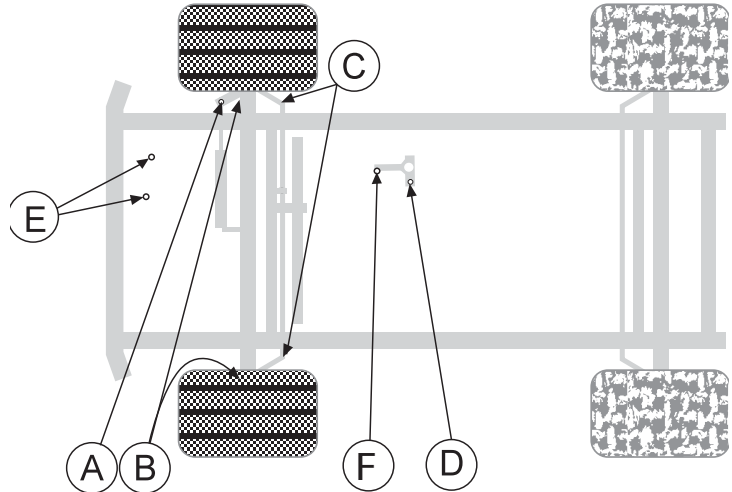
Since the air cleaner on this engine is a dry type, never apply oil to it.

1. Open evacuator valve (see engine manual) once a week to remove large particles of dust and dirt.
2. Wipe the inside of the air cleaner with a cloth if it gets wet or dirty.
3. Avoid touching the element except when cleaning.
4. When dust adheres to the element, gently tap element on flat surface.
5. When carbon or oil adheres to the element, clean according to engine manual.
6. Replace the air cleaner element every year or every 6 months.
7. IMPORTANT - Make sure wing bolt for the element is tight enough. If it is loose, dust and dirt may be sucked in, wearing down the cylinder liner and piston ring, resulting in poor power output.

NOTICE

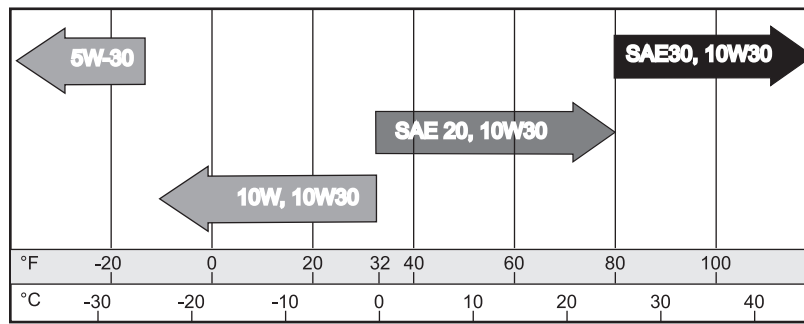
Use all procedures and parts prescribed by the manufacturer's. Read the engine manual before operation.

LUBRICATION



NOTICE

Do not use petroleum solvents, e.g., kerosene, which will cause cartridge to deteriorate. Do not use pressurized air to clean cartridge. Pressurized air can damage cartridge.



Starting Temperature Range Anticipated Before Next Oil Change

ENGINE OIL

Change and add oil according to chart above based on air temperature at the time of operation. Do not overfill. Use a high quality detergent oil classified "For Service use API classification SJ or higher" oil. Use no special additives with recommended oils. Do not mix oil with gasoline.

HYDRAULIC OIL

1. Use SAE 10W-40 API Service SJ or higher motor oil.
2. For proper warranty, change oil the first 50 hours and then every 200 hours or annually, whichever ever is first.
3. Oil level should be 2-2½" (5-6.4cm) from top of the tank when fluid is cold. Do not overfill.
4. After changing oil, run the machine for a few minutes. Check oil level and for leaks.
5. Always use extreme caution when filling hydraulic oil tank or checking level to keep system free of contaminants. Check and service more frequently when operating in extremely cold, hot or dusty conditions.
6. If the natural color of the fluid has become black or smells burnt, it is possible that an overheating problem exists.
7. If fluid becomes milky, water contamination may be a problem.
8. If either of the above conditions happen, change oil immediately after fluid is cool and find the cause. Take fluid level readings when the system is cold.
9. In extreme temperatures you can use straight weight oil. We recommend SAE 30W API Service SG when hot (above 90°F (33°C)) and SAE 10W API Service SJ or higher when cold (below 32°F (0°C) ambient temperature. Use either motor oil or hydraulic oil, but do not mix.
10. Oil being added to the system must be the same as what is already in the tank. Mark the tank fill area as to which type you put in.

TIRE PRESSURE

Caution must be used when inflating a low tire to recommended pressure. Over inflating can cause tires to explode. Front tires should be 20 psi (1.4bar) and rear tires should be 30 psi (2.0bar). Improper inflation will reduce tire life considerably.

SPRAY PUMP WITH BELT

Located to the right of the engine. The belt should have approximately ½" (13mm) of deflection in the center of the top strand.

SERVICE CHART



CAUTION

Before servicing or making adjustments to the machine, stop engine, block wheels and remove key from ignition.

NOTICE

Follow all procedures and **ONLY** use parts prescribed by the manufacturer. Read the engine manual before maintenance.

ITEM	MAINTENANCE PROCEDURE
After the first 8 operating hours	Torque the wheel lug nuts. (64-74 ft/lb (87-100 Nm))
	Change the engine oil filter.
Before each use daily	Check the engine oil level.
	Clean area around muffler and engine.
	Clean area aroundd radiator and fins.
	Check the hydraulic fluid level.
	Check the tire pressure.
	Check condition of hydraulic hoses and fittings.
	Check coolant level.
	Check for oil or water leaks.
After the first 50 hours	Change hydraulic oil filter.
	Change engine oil and filter.
Every 100 hours	Clean or change air filter. ^{1&2}
	Clean fuel filter element. ¹
	Lubricate machine.
	Check the battery fluid level and cable connections..
	Check fan belt tension and damage.
Every 200 hours	Check radiator hoses and clamp bands.
	Change engine oil. ¹
	Change hydraulic oil. ¹
	Check idle speed.
	Replace oil filter cartridge. ¹
	Change hydraulic oil filter. ¹
	Check air intake line. ¹
	Torque the wheel lug nuts. (64-74 ft/lb (87-100 Nm))
Every 500 hours or yearly	Clean water jacket and radiator interior.
Every 1000 hours	Change hydraulic oil. ¹
Every 2 years	Change radiator coolant (L.L.C.)
	Replace radiator hoses and clamp bands.
	Replace fuel hoses and clamps.
	Replace intake air lines.
¹ In dusty conditions or when airborne debris is present, clean more often.	
² Replace after every 6 times of cleaning	

SERVICE CHART

The suggested maintenance checklist is not offered as a replacement for the manufacturer's engine manual but as a supplement. You must adhere to the guidelines established by the manufacturer for warranty coverage. In adverse conditions such as dirt, mud or extreme temperatures, maintenance should be more frequent.

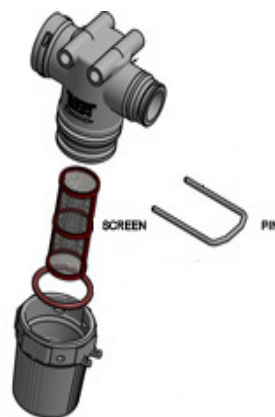
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SPRAYER CLEANING

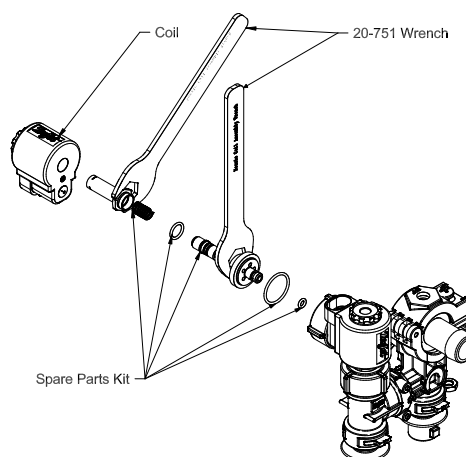
AGITATION LINE STRAINER CLEANING

Agitation line strainer is located below the sprayer filter. This strainer catches impurities that go to the turbo-jet agitation system in the spray tank. It has a quick disconnect pin on it to remove the bowl. **After every use**, remove bowl and clean screen. Replace screen as needed. We recommend a 50 Mesh screen.



DYNAJET® NOZZLE CLEANING

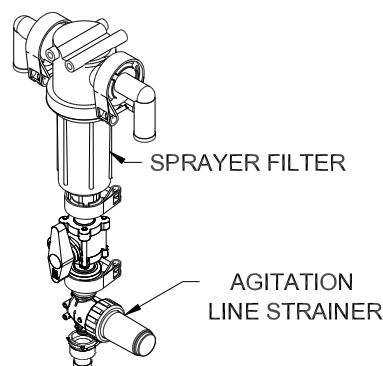
The Nozzle Coil Assembly will need to be taken apart and cleaned on a regular basis. To take apart and clean you will need to use two wrenches provided with the DynaJet® System. Loosen the Nozzle assembly by placing a wrench on the tube assembly and one on the stainless cap. Hold one in place and turn the other wrench to loosen assembly. Once apart, clean with water and check for deteriorating parts. Replace parts as needed by ordering the Spare Parts Kit 20-673-01P.



SPRAYER CLEANING

Empty tank and clean unit thoroughly after each use following these instructions:

1. Turn off 3-way valve and rinse inside of tank thoroughly with clean water, remove cap from valve to drain.
2. Fill tank ten percent full with clean water, Turn 3-way valve on and start pump and discharge water through spray hose or spray boom (with nozzles removed), until empty.
3. Turn off 3-way valve again and rinse tank interior thoroughly. Remove cap from 3-way valve to drain.
4. Rinse exterior of sprayer thoroughly with clean water.
5. This sprayer is equipped with a self cleaning strainer. The strainer uses the excess pump flow to bypass clogging particles back to the spray tank. There is a gap between the tapered inner cylinder and the screen face that causes the inlet fluid to flow at a high velocity past the screen face providing a continuous wash down of particles. For this wash down to occur a minimum of +GPM/23 l/min is required through the bypass line.



NOTICE

All testing and calibrating of sprayers is to be done with water, not chemicals. This insures the safety of all involved in performing the calibration operation. Only after all calibration procedures are completed should chemical be added to the sprayer.

One of the most common causes for faulty-pump performance is corrosion inside the pump. Flush the pump and entire system with a solution that will chemically neutralize the liquid pumped. Mix according to manufacturer's directions. This will dissolve most residue remaining in the pump, leaving the inside of the pump clean for the next use.

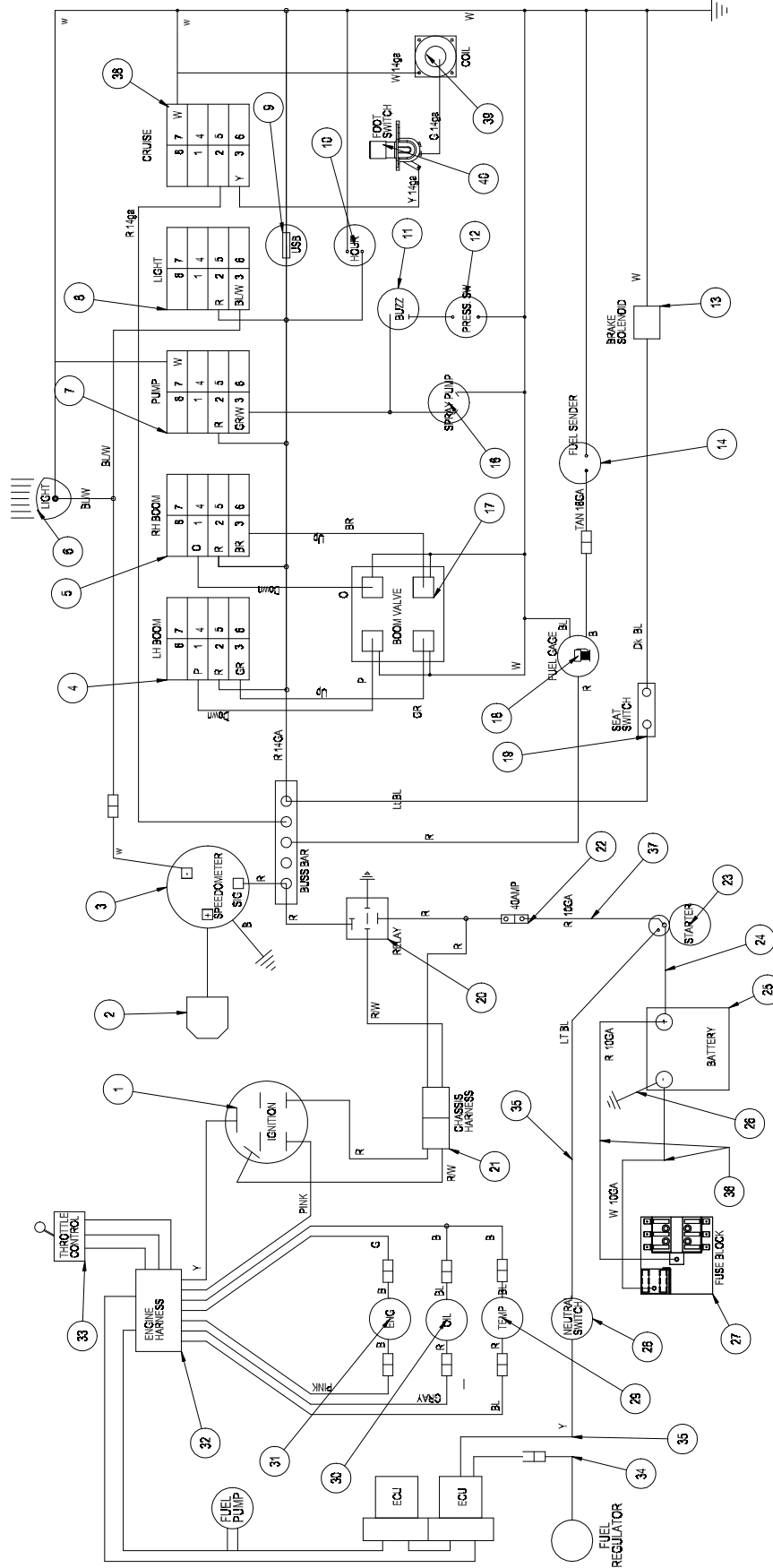
TO PREVENT CORROSION

After cleaning the pump as directed, flush it with a permanent type automobile antifreeze (Prestone, Zerex, etc.) containing a rust inhibitor. Use a 50% solution that is, half antifreeze and half water. Then coat the interior of the pump with a substance which will prevent corrosion such as Fluid Film or WD40. If unit will not be used for an extended period of time, disconnect hoses into and out of the pump, seal openings to the pump with caps or tape. Dispose of fluids according to all federal, state and local regulations.

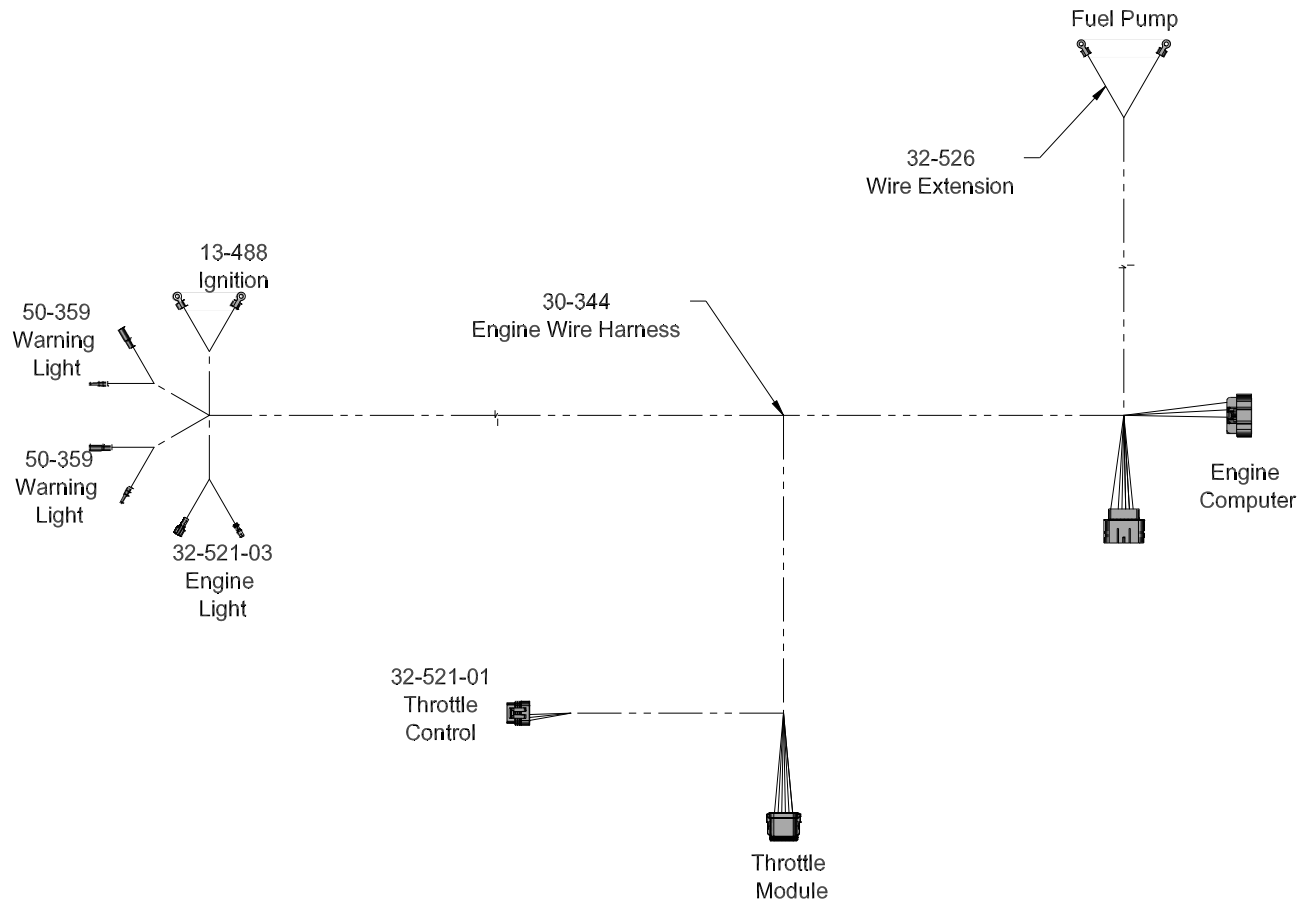
NOTICE

All chemicals and chemical residue must be removed after each use. Dispose of fluids and residue according to all federal, state and local regulations.

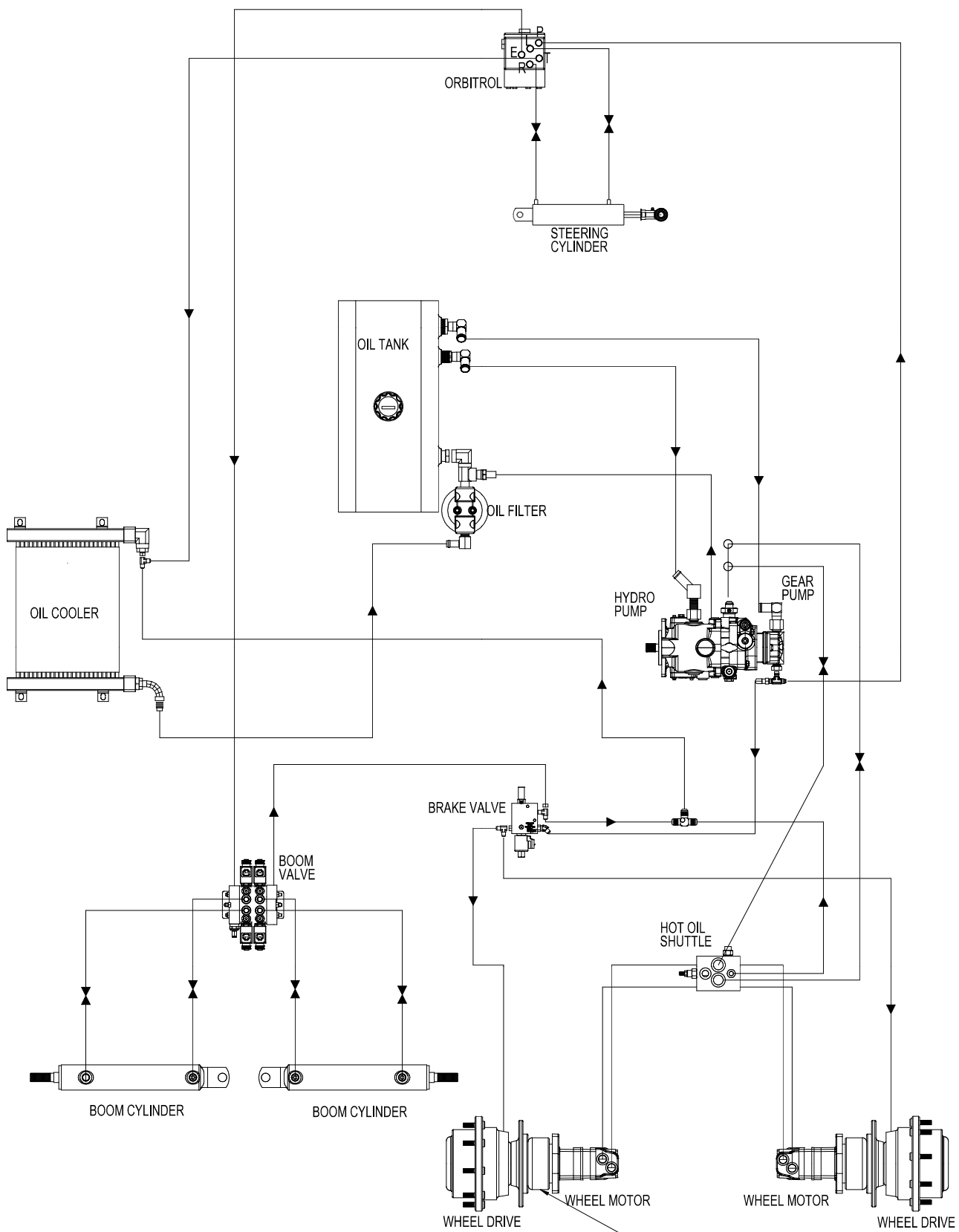
MAIN WIRING DIAGRAM



ENGINE WIRING DIAGRAM



HYDRAULIC DIAGRAM



Diagrams

DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY • ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ • PROHLÁŠENÍ O SHODĚ • OVERENSSTEMMELSESERKLÆRING • CONFORMITEITSVERKLARING • VASTAVUSDEKLARATSIOON • VAATIMUSTENMUKAISUUSVAKUUTUS • DECLARATION DE CONFORMITE • KONFORMITÄTSEKTLÄRUNG • ΑΔΑΦΗ ΣΥΜΜΟΡΦΩΣΗΣ • MEGFELELŐSÉGI NYILATKOZAT • DICHIARAZIONE DI CONFORMITÀ • ATBILSTĪBAS DEKLARĀCIJA • ATITIKTIES DEKLARACIJA • DIKJARAZZJONI TAL-KONFORMITÀ • DEKLARACJA ZGODNOŚCI • DECLARAÇÃO DE CONFORMIDADE • DECLARAȚIE DE CONFORMITATE • VYHLÁSENIE O ZHODE • IZJAVA O SKLADNOSTI • DECLARACIÓN DE CONFORMIDAD • DEKLARATION OM ÖVERENSSTÄMMELSE

Business name and full address of the manufacturer • Търговско име и пълен адрес на производителя • Obchodní jméno a plná adresa výrobce • Producentens firmanavn og fulde adresse • Bedrijfsnaam en volledige adres van de fabrikant • Tootja ärinimi ja täielik aadress • Valmistajan toiminninimi ja täydellinen osoite • Nom commercial et adresse complète du fabricant • Firmenname und vollständige Adresse des Herstellers • Εταιρική και ταχυδρομική διεύθυνση κατασκευαστή • A gyártó üzleti neve és teljes címe • Ragione sociale e indirizzo completo del fabbricante • Uzņēmuma nosaukums un pilna ražotāja adrese • Verslo pavadinimas ir pilnas gamintojo adresas • Isem kummersjali u indirizz sħiħ tal-fabbrikant • Nazwa firmy i pełny adres producenta • Nome da empresa e endereço completo do fabricante • Denumirea comercială și adresa completă a producătorului • Obchodný názov a úplná adresa výrobcu • Naziv podjetja in polni naslov proizvajalca • Nombre de la empresa y dirección completa del fabricante • Tillverkarens företagsnamn och kompletta adress	Smithco Inc. 34 West Avenue Wayne, PA USA 19087-3311
Product Code • Код на продукта • Kód výrobku • Produktkode • Productcode • Toote kood • Tuotekoodi • Code produit • Produktcode • Κωδικός προϊόντος • Termékkód • Codice prodotto • Produkta kods • Produkto kodas • Kodici tal-Prodott • Kod produktu • Código do Produto • Cod produs • Kód výrobku • Oznaka proizvoda • Código de producto • Produktkod	30-500
Machine Name • Наименование на машината • Název stroje • Maskinnavn • Machinenam • Masina nimi • Laitteen nimi • Nom de la machine • Maschinenbezeichnung • Ονομασία μηχανήματος • Gépnév • Denominazione della macchina • Iekārtas nosaukums • Mašinos pavadinimas • Isem tal-Magna • Nazwa urządzenia • Nome da Máquina • Numele echipamentului • Názov stroja • Naziv stroja • Nombre de la máquina • Maskinens namn	Spray Star 1300
Designation • Предназначение • Označení • Betegnelse • Benaming • Nimetus • Tyypimerkintä • Pažymėjimas • Bezeichnung • Χαρακτηρισμός • Megnevezés • Funzione • Apzīmējums • Lithuanian • Denominazzjoni • Oznaczenie • Designação • Specificație • Označenie • Namen stroja • Descripción • Beteckning	Turf Sprayer
Serial Number • Серийн номер • Sériové číslo • Seriennummer • Seriennummer • Seerianumber • Valmistusnumero • Numéro de série • Seriennummer • Σειριακός αριθμός • Sorozatszám • Numero di serie • Sérijsas numurs • Serijos numeris • Numru Serjali • Numer seryjny • Número de Série • Număr de serie • Sériové číslo • Serijska številka • Número de serie • Seriennummer	1300101-1300500
Engine • Двигател • Motor • Motor • Motor • Mootor • Moottori • Moteur • Motor • Μηχανή • Modulnév • Motore • Dzinējs • Variklis • Sahha Netta Installata • Silnik • Motor • Motor • Motor • Motor • Motor	Kubota wg1605
Net Installed Power • Нетна инсталирана мощност • Čistý instalovaný výkon • Installeret nettoeffekt • Netto geïnstalleerd vermogen • Installeeritud netovõimsus • Asennettu nettoteho • Puissance nominale nette • Installierte Nettoleistung • Καθαρή εγκατεστημένη ισχύς • Nettó beépített teljesítmény • Potenza netta installata • Paredzētā tīkla jauda • Grynoji galia • Wisa' tal-Qtugh • Moc zainstalowana netto • Potência instalada • Puterea instalată netă • Čistý inštalovaný výkon • Neto vgrajena moč • Potencia instalada neta • Nettoeffekt	57 kW
Conforms to Directives • В съответствие с директивите • Splňuje podmínky směrnic • Er i overensstemmelse med direktiver • Voldoet aan de richtlijnen • Vastab direktiividele • Direktiivien mukainen • Conforme aux directives • Entspricht Richtlinien • Ακολουθείτε πιστά τις Οδηγίες • Megfelel az irányelveknek • Conforme alle Direttive • Atbilst direktīvām • Atitinka direktyvų reikalavimus • Valutazzjoni tal-Konformità • Dyrektywy związane • Cumprare as Directivas • Respectă Directivile • Je v súlade so smernicami • Skladnost z direktivami • Cumple con las Directivas • Uppfyller direktiv	2006/42/EC; 2000/14/EC Annex VI. Part 1
Conformity Assessment • Оценка за съответствие • Hodnocení plnění podmínek • Overensstemmelsesvurdering • Conformiteitsbeoordeling • Vastavushindamine • Vaatimustenmukaisuuden arviointi • Evaluation de conformité • Konformitätsbeurteilung • Διαπίστωση Συμμόρφωσης • Megfelelőség-értékelés • Valutazione della conformità • Atbilstības novērtējums • Atitikties įvertinimas • Livell tal-Qawwa tal-Foss Imkejjel • Ocena zgodności • Avaliação de Conformidade • Evaluarea conformității • Vyhodnotenie zhodnosti • Ocena skladnosti • Evaluación de conformidad • Bedömning av överensstämmelse	2006/42/EC Annex VIII
Measured Sound Power Level • Измерено ниво на звукова мощност • Naměřený akustický výkon • Målte lydstyrkeniveau • Gemeten geluidsniveau • Mõõdetud helivõimsuse tase • Mitattu äänitehotaso • Niveau de puissance sonore mesuré • Gemessener Schalldruckpegel • Σταθμισμένο επίπεδο ηχητικής ισχύος • Mért hangteljesítményszint • Livello di potenza sonora misurato • Izmērtais skaņas jaudas līmenis • Išmatuotas garso stiprumo lygis • Livell tal-Qawwa tal-Foss Iggarantit • Moc akustyczna mierzona • Nivel sonoro medido • Nivelul măsurat al puterii acustice • Nameranā hladina akustiského výkonu • Izmerjena raven zvočne moči • Nivel de potencia sonora medido • Uppmätt ljudeffektsnivå	86dB(A)Lwa
Guaranteed Sound Power Level • Гарантировано ниво на звукова мощност • Garantovaný akustický výkon • Garanteret lydstyrkeniveau • Gegarandeerd geluidsniveau • Garanteeritud helivõimsuse tase • Taattu äänitehotaso • Niveau de puissance sonore garanti • Garanterter Schalldruckpegel • Εγγυημένο επίπεδο ηχητικής ισχύος • Szavatolt hangteljesítményszint • Livello di potenza sonora garantito • Garantētais skaņas jaudas līmenis • Garantuotas garso stiprumo lygis • Livell tal-Qawwa tal-Foss Iggarantit • Moc akustyczna gwarantowana • Nivel sonoro garantido • Nivelul garantat al puterii acustice • Garantovanā hladina akustiského výkonu • Zajamčena raven zvočne moči • Nivel de potencia sonora garantizado • Garanterad ljudeffektsnivå	88 dB(A)Lwa
Conformity Assessment Procedure (Noise) • Оценка за съответствие на процедурата (Шум) • Postup hodnocení plnění podmínek (hluk) • Procedure for overensstemmelsesvurdering (Støj) • Procedure van de conformiteitsbeoordeling (geluid) • Vastavushindamismenetlus (müra) • Vaatimustenmukaisuuden arviointimenettely (Melu) • Procédure d'évaluation de conformité (bruit) • Konformitätsbeurteilungsverfahren (Geräusch) • Διαδικασία Αξιολόγησης Συμμόρφωσης (Θόρυβος) • Megfelelőség-értékelési eljárás (Zaj) • Procedura di valutazione della conformità (rumore) • Atbilstības novērtējuma procedūra (troksnis) • Atitikties įvertinimo procedūra (garsas) • Procedura tal-Valutazzjoni tal-Konformità (Floss) • Procedura oceny zgodności (poziom hałas) • Processo de avaliação de conformidade (nivel sonoro) Procedura de evaluare a conformității (zgomot) • Postup vyhodnocovania zhodnosti (hluk) • Postopek za ugotavljanje skladnosti (hrup) • Procedimiento de evaluación de conformidad (ruido) • Procedur för bedömning av överensstämmelse (buller)	2000/14/EC Annex VI Part 1
UK Notified Body for 2000/14/EC • Нотифициран орган в Обединеното кралство за 2000/14/EO • Úřad certifikovaný podle směrnice č. 2000/14/EC • Det britiske bemyndigede organ for 2000/14/EF • Engels adviesorgaan voor 2000/14/EG • Ühendkuningriigi teavitatud asutus direktiivi 2000/14/EÜ mõistes • Direktiivin 2000/14/EY mukainen ilmoitettu tarkastuslaitos Isonsa-Britanniassa • Organisme notifié concernant la directive 2000/14/CE • Britische benannte Stelle für 2000/14/EG • Κοινοποιημένος Οργανισμός Ηνωμένου Βασιλείου για 2000/14/EK • 2000/14/EK – egyesült királyságbeli bejelentett szervezet • Organismo Notificato in GB per 2000/14/CE • 2000/14/EK AK registrētā organizācija • JK notifikācijas iestāgs 2000/14/EC • Korp Notifikat tar-Renju Unit għal 2000/14/KE • Dopuszczona jednostka badawcza w Wielkiej Brytanii wg 2000/14/WE • Entidade notificada no Reino Unido para 2000/14/CE • Organism notificat în Marea Britanie pentru 2000/14/CE • Notifikovaný orgán Spojeného královstva pre smernicu 2000/14/ES • Britanski prijavljeni organ za 2000/14/ES • Cuerpo notificado en el Reino Unido para 2000/14/CE • Anmält organ för 2000/14/EG i Storbritannien	Smithco West Inc. 200 West Poplar Avenue Cameron, WI 54822 USA

DECLARATION OF CONFORMITY

Operator Ear Noise Level • Оператор на нивото на доловим от ухото шум • Hladina hluku v oblasti uší operátora • Støjniveau i førers ørehøjde • Geluidsniveau oor bestuurder • Műratase operátori körvas • Melutaso käyttöajan korvan kohdalla • Niveau de bruit à hauteur des oreilles de l'opérateur • Schallpegel am Bedienerohr • Επίπεδο θορύβου σε λειτουργία • A kezelő fülénél mért zajszint • Livello di potenza sonora all'orecchio dell'operatore • Trokšņa līmenis pie operatora auss • Dirbančiojo su mašina patiriamo triukšmo lygis • Livell tal-Floss fil-Widna tal-Operatur • Dopuszczalny poziom hałas dla operatora • Nivel sonoro nos ouvidos do operador • Nivelul zgomotului la urechea operatorului • Hladina hluku pôsobíaca na sluch operátora • Raven hrupa pri užesu upravljalca • Nivel sonoro en el oído del operador • Ljudnivá vid førersens øra	86 dB(A)Lwa (2006/42/EC)
Harmonised standards used • Използвани хармонизирани стандарти • Použité harmonizované normy • Brugte harmoniserede standarder • Gebruikte geharmoniseerde standaards • Kasutatud ühtlustatud standardid • Käytetyt yhdenmukaistetut standardit • Normes harmonisées utilisées • Angewandte harmonisierte Normen • Εναρμονισμένα πρότυπα που χρησιμοποιήθηκαν • Harmonizált szabványok • Standard armonizzati applicati • Izmantotie saskapote standarti • Panaudoti suderinti standartai • Standards armonizzati usati • Normy spójne powiązane • Normas harmonizadas usadas • Standardele armonizate utilizate • Použité harmonizované normy • Uporabljeni usklajeni standardi • Estándares armonizados utilizados • Harmoniserade standarder som används	BS EN ISO 12100 BS EN ISO 13857 BS EN 349: 1993+A1:2008 BS 6356: P8 BS 6356-P5 BS EN ISO 4254-6
Technical standards and specifications used • Използвани технически стандарти и спецификации • Použité technické normy a specifikace • Brugte tekniske standarder og specifikationer • Gebruikte technische standaards en specificaties • Kasutatud tehnilised standardid ja spetsifikatsioonid • Käytetyt tekniset standardit ja eritelmät • Spécifications et normes techniques utilisées • Angewandte technische Normen und Spezifikationen • Τεχνικά πρότυπα και προδιαγραφές που χρησιμοποιήθηκαν • Műszaki szabványok és specifikációk • Standard tecnici e specifiche applicati • Izmantotie tehnikskie standarti un specifikācijas • Panaudoti techniniai standartai ir techninė informacija • Standards u specifikacijonijet techni užati • Normy i specyfikacje techniczne powiązane • Normas técnicas e especificações usadas • Standardele tehnice și specificațiile utilizate • Použité technické normy a specifikácie • Uporabljeni tehnični standardi in specifikacije • Estándares y especificaciones técnicas utilizadas • Tekniska standarder och specifikationer som används	ISO 21299 2002/44/EC ISO 3767-1
The place and date of the declaration • Място и дата на декларацията • Místo a datum prohlášení • Sted og dato for erklæringen • Plaats en datum van de verklaring • Deklaratsiooni väljastamise koht ja kuupäev • Vakuutuksen paikka ja päivämäärä • Lieu et date de la déclaration • Ort und Datum der Erklärung • Τόπος και ημερομηνία δήλωσης • A nyilatkozat kelte (hely és idő) • Luogo e data della dichiarazione • Deklarācijas vieta un datums • Deklaracijos vieta ir data • Il-post u d-data tad-dikjarazzjoni • Miejsce i data wystawienia deklaracji • Local e data da declaração • Locul și data declarației • Miesto a dátum vyhlásenia • Kraj in datum izjave • Lugar y fecha de la declaración • Plats och datum för deklarationen	Smithco West Inc. 200 West Poplar Avenue Cameron, WI 54822 USA 15-Mar-18
Signature of the person empowered to draw up the declaration on behalf of the manufacturer, holds the technical documentation and is authorised to compile the technical file, and who is established in the Community.Подпис на човека, упълномощен да състави декларацията от името на производителя, който поддържа техническата документация и е оторизиран да изготви техническия файл и е регистриран в общността. Podpis osoby oprávněné sestavit prohlášení jménem výrobce, držet technickou dokumentaci a osoby oprávněné sestavit technické soubory a založené v rámci Evropského společenství. Underskrift af personen, der har fuldmagt til at udarbejde erklæringen på vegne af producenten, der er indehaver af dokumentationen og er bemyndiget til at udarbejde den tekniske journal, og som er baseret i nærområdet. Handtekening van de persoon die bevoegd is de verklaring namens de fabrikant te tekenen, de technischedocumentatie bewaart en bevoegd is om het technische bestand samen te stellen, en die is gevestigd in het Woongebied. Ühenduse registrisse kantud isiku allkiri, kes on volitatud tootja nimel deklaratsiooni koostama, kes omab tehnilisdokumentatsiooni ja kellel on õigus koostada tehniline toimik. Sen henkilöön allekirjoitus, jolla on valmistajan valtuutus vakuutuksen laadintaan, jolla on hallussaan teknisetasiakirjat, joka on valtuutettu laatimaan tekniset asiakirjat ja joka on sijoittautunut yhteisöön. Signature de la personne habilitée à rédiger la déclaration au nom du fabricant, à détenir la documentation technique, à compiler les fichiers techniques et qui est implantée dans la Communauté. Unterschrift der Person, die berechtigt ist, die Erklärung im Namen des Herstellers abzugeben, die die technischen Unterlagen aufbewahrt und berechtigt ist, die technischen Unterlagen zusammenzustellen, und die in der Gemeinschaft niedergelassen ist. Υπογραφή ατόμου εξουσιοδοτημένου για την σύνταξη της δήλωσης εκ μέρους του κατασκευαστή, ο οποίος κατέχει την τεχνική έκθεση και έχει την εξουσιοδότηση να ταξινομήσει τον τεχνικό φάκελο και ο οποίος είναι εδριορισμένος στην Κοινότητα. A gyártó nevében meghatalmazott személy, akinek jogában áll módosítania a nyilatkozatot, a műszakidokumentációt őrizi, engedéllyel rendelkezik a műszaki fájllal összehangoltasához, és aki a közösségben letelepedett személy. Firma della persona autorizzata a redigere la dichiarazione a nome del fabbricante, in possesso della documentazione tecnica ed autorizzata a costituire il fascicolo tecnico, che deve essere stabilita nella Comunità. Tās personas paraksts, kura ir pilnvarota deklarācijas sastādīšanai ražotāja vārdā, kurai ir tehniskā dokumentācija, kura ir pilnvarota sagatavot tehnisko reģistru un kura ir atpazīnāta Kopienā. Asmuo, kuris yra gana žinomas, kuriam gamintojas suteikė įgaliojimus sudaryti šią deklaraciją, ir kuris įpasisašė, turi visą techninę informaciją ir yra įgaliotas sudaryti techninės informacijos dokumentą. Il-firma tal-persuna awtorizzata li flassal id-dikjarazzjoni fisem il-fabbrikant, għandha d-dokumentazzjoniteknika u hija awtorizzata li tikkompila l-fajl tekniku u li hija stabbilita fil-Komunità. Podpis osoby upoważnionej do sporządzenia deklaracji w imieniu producenta, przechowującej dokumentację techniczną, upoważnionej do stworzenia dokumentacji technicznej oraz wyznaczonyj ds. wspólnotowych. Assinatura da pessoa com poderes para emitir a declaração em nome do fabricante, que possui a documentação técnica, que está autorizada a compilar o processo técnico e que está estabelecida na Comunidade. Semnătura persoanei împuternicite să elaboreze declarația în numele producătorului, care deține documentația tehnică, este autorizată să compileze dosarul tehnic și este stabilită în Comunitate. Podpis osoby poverenej vystavením vyhlásenia v mene výrobcu, ktorá má technickú dokumentáciu a je oprávnená spracovať technické podklady a ktorá je umiestnená v Spoločenstve. Podpis osebe, pooblašene za izdelavo izjave v imenu proizvajalca, ki ima tehnično dokumentacijo in lahko sestavlja spis tehnične dokumentacije, ter ima sedež v Skupnosti. Firma de la persona responsable de la declaración en nombre del fabricante, que posee la documentación técnica y está autorizada para recopilar el archivo técnico y que está establecido en la Comunidad. Undertecknas av den som bemyndigad att upprätta declarationen å tillverkarens vägnar, innehar den tekniskadokumentationen och är bemyndigad att sammanställa den tekniska informationen och som är etablerad i gemenskapen	2006/42/EC Annex II 1A: 2 John Moore Sales, Director, Owner Moore Turf Care Thieplatz 4 49583 Lienen Germany 23-Sep-19
Certificate Number • Номер на сертификат • Číslo osvědčení • Certifikatnummer • Certificaatnummer • Sertifikaadi number • Hyväksyntänumero • Numéro de certificat • Bescheinigungsnummer • Αριθμός Πιστοποιητικού • Hitelesítési szám • Numero del certificato • Sertifikāta numurs • Sertifikato numeris • Numru tač-Certifikat • Numer certyfikatu • Número do Certificado • Număr certificat • Číslo osvedčenia • Številka certifikata • Número de certificado • Certifikatsnummer	305002026-1

QUICK REFERENCE

REPLACEMENT FILTERS

30-424	Hydraulic Oil Filter Assembly
30-424-01	Replacement Element
32-521-07	Primary Air Filter
32-521-08	Secondary Air Filter
13-488	Key Switch
32-521-04	In-line Fuel Filter Assembly
32-521-05	Muffler Gasket
32-521-10	Tailpipe Gasket

REPLACEMENT BELTS

30-432	Spray Pump V-Belt
30-042-11	Fan Belt

SEAL KITS

34-103	Power Steering Orbital Motor
15-301-01	Seal Kit
15-839	Hydraulic Cylinder (steering)
15-839-01	Seal Kit
13-406	Boom Actuators
14-267	Seal Kit
15-984	Hypro Pump
16-967	Seal Kit
30-099	Auburn Wheel Drive
30-099-01	Seal Kit
30-100	Disc Brake
30-100-01	Lining Kit
30-100-02	O-ring Kit
30-100-03	Bearing Kit
30-101	Wheel Motors
30-101-11	Seal Kit
30-423	Hydrostatic Pump
33-058-01	Seal Kit
76-197	Gear Pump
76-197-08	Seal Kit

FLUIDS

Engine Oil	SAE 10W-40 API Service SJ or higher Motor Oil
Hydraulic Fluid	SAE 10W-40 API Service SJ or higher Motor Oil
Coolant	1.06 Gal 50/50 Antifreeze/water mixture
Fuel	Unleaded 87 Octane Gasoline Minimum

OTHER PARTS

15-818	#75 Fitting O-ring
15-817	#50 Fitting O-ring
16-220	Cover On Spray Tank

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The Smithco Commercial Products Two-Year Limited Warranty

Smithco, Inc. (Smithco) warrants your 2016 or newer Smithco Commercial Product ("Product") purchased after October 1, 2016 to be free from defects in materials or workmanship for the period of time listed below. Where a warrantable condition exists, Smithco will repair the Product at no cost to you including diagnosis, labor (at the Smithco standard labor rate, subject to the Smithco flat rate schedule), and parts.

Warranty Duration is:

- (1) Two years, 1500 operational hours* from the date of delivery to the original purchaser or Five years from the date of original manufacturer of the product, whichever occurs first. (*Products equipped with hour meter).
- (2) Products used in rental situations are covered for 90 days from date of delivery to original user/renter.

Owner Responsibilities:

As the Product owner, you are responsible for required maintenance and adjustments stated in your Owner's Manual. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim. **You are particularly responsible to train all present and future operators of this product on the safe operation of this product at your location.**

Instructions for Obtaining Warranty Service:

You are responsible for notifying the Authorized Smithco Products Distributor from whom you purchased the Product as soon as you believe a warrantable condition exists and not later than 30 days from discovery of the condition.

If you need help locating an Authorized Smithco Distributor, or if you have questions regarding your warranty rights or responsibilities, you may contact us at:

Smithco Product Support Department
200 West Poplar Ave.
Cameron, Wisconsin 54822
Telephone: 800-891-9435 E-Mail: ProductSupport@Smithco.com

Maintenance Parts:

Parts scheduled for replacement as required maintenance ("Maintenance Parts"), are warranted for the period of time up to the scheduled replacement time for that part.

Items/Conditions Not Covered:

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. The items/conditions listed below are not covered by this warranty:



Product failures which result from the use of non-Smithco replacement parts, or from installation and use of add-on, modified, or unapproved accessories are not covered.



Product failures which result from failure to perform required maintenance and/or adjustments are not covered.



Product failures that result from operating the Product in an abusive, negligent or reckless manner are not covered.



This warranty does not apply to parts subject to consumption through use, unless found to be defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to: blades, tines, teeth, scarifiers, rakes, plates, wear plates, castor wheels, tires, batteries, filters, belts, nozzles, etc.



This warranty does not apply to failures caused by outside influence. Items considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved coolants, lubricants, additives, or chemicals, etc.



This warranty does not apply to normal “wear and tear” items. Normal “Wear and Tear” includes, but is not limited to, damage to seats due to wear or abrasion, worn painted surfaces, scratched decals or windows, etc.



Smithco may require the return of failed parts or components in order to determine the validity of any warranty claim.



Smithco will not be obligated to replace components of other manufacturers if inspection by the original component manufacturer indicates that failure was due to normal wear and tear, expected consumption through use or improper care or service.

Other Legal Disclaimers:

The above remedy for product defects through repair or replacement by an authorized Smithco distributor or dealer is the purchaser’s sole remedy for any defect. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

THERE ARE NO OTHER EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH ABOVE. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE ARE LIMITED TO THE DURATION OF THE LIMITED WARRANTIES CONTAINED HEREIN.

Some states may not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

THE SMITHCO COMPANY IS NOT LIABLE FOR INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE USE OF THE PRODUCT, INCLUDING ANY COST OR EXPENSE OF PROVIDING A SUBSTITUTE PRODUCT OR SERVICE DURING PERIODS OF MALFUNCTION OR NON-USE.

Some states may not allow the exclusion of indirect, incidental or consequential damages, so the above exclusion may not apply to you.

Smithco neither assumes, nor authorizes any person to assume for it, any other liability in connection with the sale or use of this product.

