Material in this Guide expands upon the BigFoot BF300 manufacturer’s manual, the *Honda Owner's Manual*, and manufacturers’ manuals for other parts, with significant additions, revisions and explanations based upon the extensive experience of RAPP staff, expert opinion of engineers and other consultants, and alterations that RAPP made to the BigFoot BF300 to improve safety and performance. (Endnote 1, p16)

### Baler Compaction Chamber

**Alignment of the hydraulic fluid cylinders:**

- Check that the ram bumpers (guides) are in place on each of the four corners of the platen, and that spares are in the toolbox. Replace if broken or missing. *(FIGURE 1: RAM BUMPER. FIGURE 2: MISSING RAM BUMPER)*

  **NOTE:** The bumpers are custom made from Nylatron® plastic, cut to size and drilled for these balers. Replacement bumpers can be patterned on the originals or obtained from RAPP.

- Missing or broken bumpers indicate that the main hydraulic cylinders are (or were previously) out of alignment. Cylinders that descend unevenly can break or break off the bumpers, most likely those on the ‘control box’ side of the baler.

- If bumpers are broken or missing, determine if the cylinders are currently out of alignment by raising the plunger to its full height. Observe whether the two cylinders reach the top simultaneously.

- If the cylinders do not reach the top simultaneously, they must be re-aligned: Raise the platen to its full height to activate the hydraulic flow equalizer, located on the right side of the control box. If the equalizer valve is not working properly, contact a hydraulics specialist. *(FIGURE 3: HYDRAULIC FLOW EQUALIZER)*

  → **DO NOT USE** the baler if the cylinders do not realign. Misaligned cylinders could cause the piston rods to bend, leading to a complete failure of the hydraulic system.
Bolts: Check that the four bolts securing the baler to the trailer are tight. (FIGURE 4: BOLTS SECURING BALER TO TRAILER)

Clean:
- Avoid exposure to road salt.
- Sweep out debris.
- Wash out the baling chamber and trailer after exposure to corrosives such as road salt, grime, silage juice.
- Before storing the baler for the winter or other long-term inactivity, wash thoroughly, preferably with a pressure washer.

Door hinges: Lubricate hinges on the baler door with a penetrating oil such as WD-40®.

Ears: Two spring-loaded ears are on the compaction chamber door and two hydraulically operated ears are on the front the baler, near the trailer hitch. (FIGURE 5: PIVOT POINTS & SOCKET HEAD SCREWS OF THE BALER EARS)
• Lubricate all pivot points of the four ears with a lightweight penetrating grease such as 3M™ Multi Purpose Spray Lubricant.

N Problems rotating the ears: If the hydraulically operated ears do not rotate as they should, use a hex key (Allen® wrench) to loosen the two socket head screws at the base of the pivot arm. Push in the ears and re-tighten the socket head screws. (SEE FIGURE 5)

F Fire extinguisher:
• Check that the fire extinguisher is mounted properly in its bracket.
• Check that nothing is blocking access to the fire extinguisher.
• Check pressure: the needle on the pressure gauge should be in the green zone.
• Check that the nozzle is not plugged and that the extinguisher has no dents, leaks, chemical deposits, or other damage.
• Wipe off oil, dirt and corrosive materials.
• Re-pressurize or replace with a dry chemical extinguisher rated for B/C (or A/B/C) fires.

F Hydraulic cylinder guideposts: Apply heavy-weight grease to the interface between the grey vertical guideposts and the hydraulic cylinders (i.e., apply to the inside face of the guideposts). Apply more frequently with more frequent use of the baler.
NOTE: Grease fittings have been installed on the guideposts of some balers.
To grease guideposts on balers without the grease fittings: raise the platen to its full height to expose the lower portion of the posts. Grease this section then lower the platen part way to reach the top section of the posts.

F Moving parts: Lubricate with a penetrating oil, e.g., WD-40® (unless otherwise specified).
**Pins and retainer clips:** Walk around the baler, checking that all of the pins and retainer clips are in place and that the “C”-shaped clips are seated snugly in their pin groove.

→ Do not operate the baler if any clips are missing or improperly seated. (FIGURE 6: IMPROPERLY SEATED CLIP)

Keep spare retainer clips in the toolbox, both the “C”-shaped clips that clamp tightly around the pin and the “R”-shaped clips used with pins that have a shaft drilled through the center. “C”-clips are also known as *poodle rings*; “R”-clips are also called *hitch pin clips*.

**CLIP SPECIFICATIONS:** The “C”-shaped clips are McMaster-Carr heavy duty side-mount external retaining rings, stainless steel, style 2, for a 1” diameter pin (part #94751A782). (FIGURE 7: MCMASTER-CARR STYLE 2, #94751A782, SPECIFICATION SHEET)

Most of the “R”-shaped clips can be replaced with zinc plated or stainless steel clips sized for 1” diameter pins. These clips should be 3 ¾” long x 0.178” wire diameter (McMaster-Carr part #98335A094 can be used).

The “R”-shaped clips on the trailer deck hydraulic cylinder are sized for a 7/8” diameter pin. These clips should be 3” long x .125” wire diameter, also zinc plated or stainless steel.

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**FIGURE 7: MCMASTER-CARR STYLE 2, # 94751A782, SPECIFICATION SHEET**
HONDA ENGINE

Air filter: Remove the engine cover to access the air filter. Blow out dust.
- Replace the air filter after every 200 hours of engine use.

Air intake: Clear debris to enable air flow to the air-cooled engine. (FIGURE 8: HONDA ENGINE AIR INTAKE)

Honda engine battery:
- Powers the hydraulic system that operates the baler plunger, door, and ejection feet.
- Located on the trailer bed near the engine.
- Receives charge by operating the engine.
- During winter and other times when the baler is not used regularly, store the baler in a warm location or remove the battery and store it in a heated area.
  NOTE: Do not store the battery directly on concrete because the concrete can cause a chemical reaction in the battery.
- Charge the Honda engine battery fully before attempting to use it after a period of inactivity.
- If the Honda engine battery does not hold a 12-volt charge:
  - Determine if the problem is with the battery, with the wiring, or with the Honda engine alternator.
  - First attempt to recharge the battery using a trickle charger or jumper cables.
  - Once the engine is started, the alternator on the Honda engine should recharge the battery.
  - If the charge does not hold, check the battery’s “cranking” power at an automotive supply store. The optimal cranking power—CCA or cold cranking amps—should be marked on the battery. If the CCA is inadequate, replace the battery with an equivalent sized 12-volt battery.
  - If the CCA is adequate, the problem is not with the battery. Have a qualified mechanic check that the Honda engine alternator is operating correctly. Inspect the wiring from the alternator to the battery. A multimeter may be needed to identify a fault in the electrical system.

Electrical system: Check that electrical wire connections are secure and well wrapped with electrical tape.

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1 The BF300 has two batteries, each with a different function: In addition to the Honda engine battery discussed here, the trailer hydraulic battery located in the storage box powers the hydraulic system that raises and lowers the trailer.
Engine hour counter: The hour counter, located below the ignition, signals when various parts need to be replaced. (FIGURE 9: HONDA ENGINE HOUR COUNTER & OIL ALERT® WARNING LIGHT)

In addition to recording the number of hours that the engine has operated, the engine hour counter also signals the number of hours that the hydraulic fluid has been used because the hydraulic fluid circulates when the engine is on.

NOTE: The maintenance and replacement schedules are summarized on the last page of this Maintenance & Troubleshooting Guide.

Engine oil: Check the oil level daily. Add 4-stroke SAE 5W-30 or 10W-30 oil as needed to keep the oil level near the maximum line on the dipstick. Keep a spare quart of oil in the toolbox.

Change oil every six months or after 100 hours of engine use. The oil drainage plug is under the oil filter (the blue canister). (FIGURE 10: OIL FILTER AND DRAIN PLUG)

The trailer bed can be in its raised or lowered position to change the engine oil, but it will be easier to collect spent oil with the bed raised. Place a wide pan under the frame of the trailer deck, directly below the drain plug. The plug is located just below the oil filter (blue canister). Remove the plug to allow the oil to drain. Drainage can be facilitated by using the jack to raise the trailer tongue. Because of the baler design, oil will drain onto the frame of the trailer before it drains into the pan, so clean up will be required.

NOTE: Most of the BigFoot BF300 balers in NYS are equipped with Honda engine model GX630, which requires about 1.75 quarts of oil to fill. Others are equipped with Honda engine model GX620, which requires about 1 quart of oil. See the Honda Engine Manual, pages 7-8, for additional information.

Engine oil alert light: A red Oil Alert® warning light—located under the ignition switch—comes on as an indicator that the oil level is too low. If oil drops below a safe level, the engine will shut off, but do not rely on this safeguard. Check regularly. (SEE FIGURE 9)

Engine oil filter: Replace annually or after 200 engine hours.

The oil filter is the blue canister located on the lower left side of the Honda engine.
Fuel filter: Replace annually or after every 300 engine hours. (FIGURE 11: FUEL FILTER)

The fuel filter is the small, clear tube located on the fuel line from the gasoline tank, on the upper left side of the Honda engine. Install the tube with the arrow up, in the direction of the gas flow.

Fuel stabilizer and dry gas:

- **Add fuel stabilizer** to the gas tank each time the tank is filled. STA-BIL® Ethanol Treatment or Marine Formula are recommended.

  Without stabilizer, gasoline stored more than 30 days can gum up and damage the engine. Instructions on the fuel stabilizer container will tell how much stabilizer to add.

- **Dry gas:** Do not add dry gas on a regular basis. Add only as an emergency measure if it is suspected that moisture or ice have gotten into the fuel system, which is most likely to occur in cold weather during periods of wide temperature swings.

  If dry gas is needed, use only isopropyl dry gas. Never use ethanol-based dry gas, which can damage the gaskets and carburetor on the Honda engine and increase the likelihood that the gasoline will gel.

Gasoline: Visually check the gas level in the small, seven-gallon, gray fuel tank on the left side of the trailer bed. Fill with unleaded gas, 87-octane or higher. (FIGURE 12: LOCATION OF GAS TANK)

Muffler: Remove dirt and debris.

Replacement parts: Obtain parts from a Honda engine dealer. The engine model number and serial number will be needed. The serial number is inscribed on a plate just above the engine cooling fins. (FIGURE 13: HONDA ENGINE SERIAL NUMBER PLATE)
Spark plugs: Replace annually or after every 300 engine hours. One of the spark plugs is located at the back of the engine above the blue oil filter and the other is located on the front, behind the ignition. (FIGURE 14: HONDA ENGINE SPARK PLUG; SEE ALSO FIGURE 11)

Hydraulics

Overview: The BigFoot BF300 has two completely separate hydraulic systems: a larger baler hydraulic system that operates the baler plunger, door, and ejection feet and a smaller trailer hydraulic system that raises and lowers the trailer deck. Information about the trailer hydraulic system is in the later section Trailer & Towing. Information about the baler hydraulic system follows here. (PARTS OF THE HYDRAULIC SYSTEM ARE SHOWN IN FIGURES 3, 12, 15, 16, 17, 18)

- The baler hydraulic system includes a Honda engine; a battery that receives its charge from operation of the Honda engine; a black hydraulic pump located near the engine; and a large fluid storage tank with just over 60 gallons capacity, which is about three times as much fluid as is circulating. Fluid runs from the tank through...
tubing to the control box. (FIGURE 15: HYDRAULIC PUMP & MAJOR CONNECTORS.)

- A glycerin-filled **hydraulic fluid pressure gauge** is located on the control box next to the three control levers.
- The **hydraulic fluid hoses** for both hydraulic systems are made of commercial grade rubber reinforced with steel belts and rated at 3000 PSI. Pressure is set at 2500 PSI and should not be exceeded.
  (FIGURE 16: HYDRAULIC FLUID HOSES, RATED 3000 PSI)
- Hydraulic fluid flows from the tank through the hydraulic fluid hoses to the control box. The three levers on the control box operate the baler door, the compaction plunger (ram), and the bale ejection feet.
- Use a qualified hydraulics shop for all **repairs** to the baler hydraulic system.
- **Recycle** spent hydraulic fluid properly. (Qualified hydraulic shops are required to recycle spent fluid.)
- See the following manuals for more information about the hydraulic systems:
  
  Safety recommendations: *Hydraulic System Safety*.
  Technical details:  
  - *Donaldson DYNAMIC™*,
  - *General Purpose Couplings*
  - *Hydraulic Valves*.

**Hydraulic fluid filter**: Replace the filter after every 250 engine hours. This filter is the large white canister located on top of the hydraulic fluid storage tank. Replace with a Donaldson DYNAMIC™ P565059 filter.  
  (FIGURE 17: DONALDSON DYNAMIC P565059 HYDRAULIC FLUID FILTER)

**Hydraulic fluid level**: The gauge—which does double duty as a fluid thermometer—is the clear tube mounted on the front face of the large hydraulic fluid reservoir. If the fluid level is below the mid-point on the gauge, add SureGuard™ AW46 or equivalent (ISO 46) hydraulic fluid to bring the level to the mid-point of the gauge. At this level the tank contains 50 gallons of fluid. Do not fill above the clear glass window on the gauge.  
  (FIGURE 18: FILL LEVEL ON THE HYDRAULIC FLUID GAUGE)

**Hydraulic fluid system shut-off**: Stop the flow of hydraulic fluid from the tank to the cylinders by turning the yellow-handled ball valve on the hydraulic fluid hose perpendicular to the hosing. The system should be shut off only when hydraulic fluid is being drained and replaced or when the unit is disassembled for major repair.  
  (FIGURE 19: YELLOW-HANDED HYDRAULIC FLUID SHUT-OFF VALVE)
Hydraulic hoses: Walk around the baler to check all of the hoses for fraying or leaks. Check for leaks elsewhere in the hydraulic system, such as at the connectors and in the control box.

→ Do not operate the baler with any leaks in the hydraulic system.

NOTE: Fluid on the trailer frame directly below the control box indicates a leak in the controls. Remove the control box cover to pinpoint the source of the leak. Work with a professional hydraulics mechanic to make repairs.

Replace fluid in the baler hydraulic system:
Replace hydraulic fluid in the baler system hydraulic tank after every 500 engine hours or after five years. This process is described below as a routine or partial hydraulic fluid change.

A complete hydraulic fluid change is needed if the fluid has become contaminated, cloudy, or otherwise degraded. This involves draining fluid from the cylinders and from six of the hydraulic hoses (two attached at the top of each cylinder, one at the bottom of each cylinder) as well as from the hydraulic tank. As much as 65 gallons will be drained. The process requires the experience and set-up of a qualified hydraulics shop to prevent spillage and safeguard personnel.

Process of doing a routine or partial hydraulic fluid change:

(1) Shut off the flow of hydraulic fluid from the tank to the cylinders by turning the handle of the yellow-handled ball valve perpendicular to the hydraulic hose. (SEE FIGURE 19)

(2) Use a chemical transfer pump to empty the fluid from the hydraulic fluid tank into a catchment basin sufficient to capture 55 gallons of fluid. Although there are up to 65 gallons in the whole system, there is unlikely to be more than 50 gallons in the hydraulic tank.

(3) To refill:
   a. Level the trailer.
   b. Fill the hydraulic tank with approximately 50 gallons of SureGuard™ AW46 or equivalent (ISO 46) hydraulic fluid.
   c. Add fluid until it registers to the mid-point or higher on the fluid level gauge located on the front of the hydraulic tank. Do not overfill beyond the top of the glass window on this gauge.
(4) Open the yellow-handled ball valve by turning the handle parallel to the hydraulic hose to allow fluid to circulate through the hydraulic system. (See Figure 19)

(5) Start the engine and allow the hydraulic fluid to circulate.

(6) Bleed air out of the system by running the platen up and down multiple times and operating each of the hydraulic controls.

Process of doing a complete hydraulic fluid change:

(1) Have the trailer deck in its raised position.

(2) Start the engine to raise the platen fully.

(3) When the platen is at its maximum height, turn off the engine.

(4) Be certain that the hydraulic system is shut off by turning the handle of the yellow-handled ball valve perpendicular to the hydraulic hose. (See Figure 19)

(4) Use a chain hoist to secure the baler crossbar connecting the two cylinders so that it cannot drop when the hydraulic pressure is released. Attach the ends of a chain to each side of the crossbar. Secure the center of the chain to the hoist.

(5) Drain fluid from the hydraulic fluid tank as described in Step 2 of the routine procedure.

(6) Prepare to disconnect the hydraulic hose that attaches at the top of the large cylinder on the driver’s side of the bale (opposite the bale control box):

(7) Trace the hose to its end at the bottom of the bale chamber on the driver’s side.

(8) Have a 5-gallon bucket ready to collect the fluid that will drain from the hose.

(9) In addition, place a pan on the ground beneath the end of the hose to collect accidental spillage. The pan should have capacity to hold five-gallons.

(10) Disconnect the hose fitting at the bottom of the bale chamber and immediately place the end in the 5-gallon bucket.

    NOTE: Less than one quart of fluid is likely to drain from the hose. However, the 5-gallon bucket and pan are needed in case fluid from the cylinder siphons through the hose.

(11) Prepare to disconnect the two hydraulic hoses that attach at the top of the cylinder on the "passenger" side of the baler (the side with the bale control box).

(12) Trace each hose to its end. One of the hoses goes to the pilot-actuated check valve (located to the left of the control box). The other hose connects under the control box. (Figure 20: PILOT-ACTUATED CHECK VALVE)

(13) Following the same procedure outlined above, have a 5-gallon bucket ready to collect the fluid that will drain from these hoses and a five-gallon capacity pan on the ground beneath the check value to collect accidental spillage.

(14) Disconnect the hose fitting at the check valve and immediately place the end in the five-gallon bucket.

(15) Disconnect the hose fitting under the control box and immediately place the end in the five-gallon bucket.

    NOTE: Less than one quart of fluid is likely to drain from each of these hoses. However, the five-gallon bucket and pan are needed in case fluid from the cylinder siphons through these hoses.

(16) Prepare to disconnect the hydraulic inlet/outlet fitting at the bottom of each of the two large cylinders.
(17) Put a five-gallon capacity pan under the base of each cylinder.

(18) One at a time, disconnect the fittings on the cylinders, allowing the hoses and the fluid in the cylinders to drain into the pan.

    NOTE: Due to the baler design, fluid drains onto the trailer frame and spatters before it drips into the pan.

(19) Up to three gallons of fluid will eventually drain from each cylinder, but may drain slowly until the platen is lowered, as described in the following step.

(20) Use the chain hoist to carefully lower the platen, which will force any remaining fluid out of the cylinders.

Prepare to restart the hydraulic system:

(1) Reconnect all hoses and fittings.

(2) Use a sealant such as Loctite® 5452 at all connection points. Do not use thread tape or thread-sealing putty, which can get into the hydraulic system and cause damage.

(3) Level the trailer.

(4) Fill the tank with approximately 50 gallons of SureGuard™ AW46 or equivalent (ISO 46) hydraulic fluid.

(5) Open the yellow-handled ball valve by turning the handle parallel to the hydraulic hose, which will allow fluid to circulate through the hydraulic system. (SEE FIGURE 19)

(6) Start the engine and allow the hydraulic fluid to circulate.

(7) Bleed air out of the system by running the platen up and down multiple times and operating each of the hydraulic controls.

(8) Check the fluid level gauge. Expect to add an additional 5-10 gallons after the fluid has circulated in order to bring the fluid level to the mid-point or higher on the gauge. Do not fill to a level above what is visible through the glass window on this gauge. (SEE FIGURE 18)
**Paint**

- Sand off rust and apply rust-inhibiting touch-up paint. The original paint was Dupont FastDry Acrylic Enamel SS, Spectramaster DS020 Dark Neutral Gray. Aerosol, composed of the following mix:
  
<table>
<thead>
<tr>
<th>Bench Mix</th>
<th>Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>430-03 H.S. White</td>
<td>62.3</td>
</tr>
<tr>
<td>430-01 H.S. Black</td>
<td>28.4</td>
</tr>
<tr>
<td>430-07 Ochre</td>
<td>4.6</td>
</tr>
<tr>
<td>430-45 Clean Magenta</td>
<td>0.7</td>
</tr>
<tr>
<td>435-96 Binder</td>
<td>153.2</td>
</tr>
</tbody>
</table>

  Paint on the interior of the baling chamber will likely rub off in places due to friction, and then will rust if the baler is not used for a period of time. However, the rust will also rub off with re-use.

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**Trailer, Tires & Towing** *(Towing instructions are in Section 9 of the video and written guides: Transporting the BigFoot BF300.)*

- **Anti-slip grit tape:** Replace worn or missing anti-slip grit tape on the fenders and other surfaces where workers are likely to step. *(FIGURE 21: ANTI-SLIP GRIT TAPE ON FENDER)*

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**Battery:**

- The trailer hydraulic battery powers the hydraulic system that raises and lowers the trailer. This battery is located on the right side of the storage box.

- The trailer hydraulic battery draws its charge from the electrical connection with the tow vehicle. If the trailer has not traveled much distance since the battery was last used, it may not have sufficient charge. NOTE: the battery will run down if the trailer is unhooked from the tow vehicle and left idle for any length of time.

- **Recharge the battery** by plugging the trickle charger mounted on the right side of the storage box into an electric outlet. A depleted battery will take several days to recharge. *(FIGURE 22: TRICKLE CHARGER/MAINTAINER)*

- If the trailer hydraulic battery does not hold a 12-volt charge:
  - Determine if the problem is with the battery or with the wiring.
First attempt to recharge the battery using the trickle charger or jumper cables.

If the charge does not hold, check the battery “cranking” power at an automotive supply store. The optimal cranking power—CCA or cold cranking amps—should be marked on the battery. If the CCA is inadequate, replace the battery with an equivalent-sized deep cycle, marine grade, 12-volt battery.

If the CCA is adequate, the problem is not with the battery. Have a qualified mechanic inspect the wiring on the tow vehicle’s tow package to be sure that it is wired to recharge the battery.

Grease and lubricate: Lubricate the trailer hitch mechanism and sleeve with a light penetrating grease or with a penetrating oil such as WD-40®. The penetrating oil should be used on other moving parts as well.

Hydraulic fluid system to raise and lower the trailer bed:

(Figure 22: Components of the Trailer Hydraulic Fluid System and Figure 23: Controller for Trailer Hydraulic System)

- The trailer hydraulic fluid system controls the lifting and lowering of the trailer bed. All components of the system are located in the right side of the storage box: the hand held controller, hydraulic fluid pump, 2-gallon hydraulic fluid tank, and battery. The “up”/“down” buttons on the hand-held control device move a piston rod located at the front end of the trailer that raises and lowers the trailer bed.
- Frequently check the fluid level in the two-gallon tank, adding additional fluid as needed.
- SureGuard™ AW68 or equivalent (ISO 68 standards) hydraulic fluid is recommended by the manufacturer. However, if changing the baler hydraulic system fluid at the same time, SureGuard™ AW46, or equivalent (the hydraulic fluid recommended for the baler hydraulic system) can be used.
- Replace trailer deck hydraulic fluid after five years or if it has become degraded.
  - Secure the trailer deck in its raised position, with trailer-bed locking pin and R-clip in place.
  - (Figure 24: Trailer-Bed Locking Pin)
  - Have a bucket available to collect the fluid (≥ three-gallon capacity).
  - Use a fluid chemical extractor to drain the fluid from the hydraulic tank into the bucket.
  - Position a catchment bucket below the trailer deck hydraulic cylinder (at the end closer to the bale chamber and further from the hitch).
  - Disconnect the hydraulic hose from the end of the cylinder. Place the hose securely in the catchment bucket. Be prepared to collect fluid flowing from both the cylinder and the hose.
  - Re-attach the hydraulic hose to the hydraulic cylinder.
  - Fill the small hydraulic fluid tank (located in the storage box) with two gallons of fluid.
**Tires** (specifications and procedure for replacing):
- BigFoot BF300 balers use ST205/75R15 Load Range D trailer tires.
- Worn or flat tires should be replaced by a professional tire shop, if possible.
- **Replacing a tire on the road:**
  - Keep the trailer hitched to the tow vehicle.
  - The bottle jack provided by the manufacturer does not alone provide sufficient stability or lift to change a flat tire, so do one of the following:
    - With the trailer bed in the raised position, drive the good tire—the one on the same side as the flat tire—onto a 4” wood ramp to get sufficient elevation to change the bad tire.
    - Fully lower the trailer bed so that it can provide most of the lift. Then, place the bottle jack that is in the BigFoot 300 toolbox under the frame of the trailer near the tire to be changed to further elevate the trailer.

**Tires, pressure:** Maintain the pressure indicated on the sidewall of the tires.

**Tires, spare:** Check that the trailer is carrying a spare tire and that it has adequate pressure.

**Tire wear:** Check for excessive wear on the tires. Rotate or replace the tires as needed.

Under-inflation is the most common cause of tire wear.

**Excessive wear on the front tires may be due to use of a tow vehicle ball hitch that is too low for the BigFoot trailer. Most trucks require a 1” raised ball hitch.**

Do not use a drop hitch. (FIGURE 25: RAISED BALL HITCH)

Sharp turns cause excessive wear on the rear tires.

**Trailer drop deck wheel channels:** Spray a lightweight, non-dirt attracting, lubricant in the tracks, *e.g.*, WD-40® Water Resistant Silicone Lubricant or 3M™ Silicone Lubricant Plus. (FIGURE 26: TRAILER DECK WHEEL CHANNELS)
**Trailer wheel bearings:** Remove each wheel and bearing cover. Fill both the inner and outer bearings on each axle with automotive wheel-bearing grease.

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**WHAT NOT TO DO**

**Design changes:** Do not make any changes to the baler without consulting with and receiving approval from the NYS Recycling Agricultural Plastics Project (RAPP). In particular, do not remove the protective guards over the control box, the door safety chain latch, or the weather shield in front of the engine. The hydraulic line protective sleeve on the two hydraulic hoses to the left of the control box must remain in place or be reinstalled if removed during maintenance.

**Remove baler from the trailer:** the baler should only be removed from the trailer by a professional welding/fabrication shop in order to perform rare, heavy-duty maintenance, such as repairing sheet metal on the baler wall, or doing body work following an accident. In such cases, follow these steps to remove the baler from the trailer:

1. Lower the trailer bed to the ground.
2. Be sure the plunger is in the down position.
3. Disconnect the battery from the engine by removing the clamps around the battery posts.
4. Shut off the flow of hydraulic fluid by turning the yellow handle on the ball valve perpendicular to the hose. This handle is located on the “passenger” side of the hydraulic reservoir.
5. Disconnect the hydraulic hoses attached to the baler and plug any open hydraulic hoses to prevent spillage or infiltration of air or trash.
6. Remove the four bolts at the base of the unit that secure the baler to the trailer bed.
7. The manufacturer recommends removing the baler by placing chains around both support beams and lifting from the center where the chains come together. The prongs of a fork truck can be used instead of chains.
8. Place the baler on a solid surface to perform repairs.

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**THE FOLLOWING APPLIES TO ALL BALERS OWNED BY NYS DEC AND/OR OPERATED AS PART OF THE NYS RECYCLING AGRICULTURAL PLASTICS PROJECT (RAPP):**

The baler manager must notify and receive approval from the NYS Recycling Agricultural Plastics Project (RAPP) and/or from the NYS Department of Environmental Conservation (NYS DEC) prior to undertaking work to remove the baler from the trailer or make changes to the structure or design of the baler.

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**ENDNOTE:**

1. **RAPP alterations to the BF300s** operating under its auspices include installing:
   - a safety chain as backup to the hydraulic door latch;
   - a metal hood over the control box and a metal shield at the front of the trailer to protect the engine and exhaust from the elements and from road grit and moisture;
   - an elbow to the exhaust pipe to deflect emissions away from the operator and prevent road grit and moisture from being driven into the exhaust pipe during travel;
   - 1" horizontal extenders on front and back of the ram platen to prevent billowing plastic from blocking wire channels;
   - protective jackets around the two hydraulic hoses above the hydraulic control box to reduce operator risk;
   - a trailer jack with 5000-lb lift and 8000-lb static load capacity to replace an inadequate trailer jack.
## BIGFOOT BF300 MAINTENANCE SCHEDULE CHECKLISTS

### Check Daily Prior to Using BigFoot:

- **Baler Compaction Chamber**
  - Alignment of the hydraulic fluid cylinders
  - Bolts
  - Pins & retainer clips
- **Honda Engine**
  - Air filter
  - Air intake
  - Electrical system
  - Engine oil
  - Gasoline
  - Muffler
- **Hydraulics**
  - Hydraulic fluid level
  - Hydraulic hoses
- **Trailer and Towing**
  - Spare tire
  - Tire pressure
  - Tire wear

### Check Frequently:

- **Baler Compaction Chamber**
  - Clean
  - Fire extinguisher
  - Hydraulic cylinder guideposts
  - Moving parts
- **Honda Engine**
  - Engine hour counter
  - Engine oil alert light
  - Fuel stabilizer
- **Trailer and Towing**
  - Grease and lubricate
  - Hydraulic fluid system

### Annual or Other Specified Maintenance Schedule:

- **Baler Compaction Chamber**
  - Door hinges
  - Ears
- **Honda Engine**
  - Air filter: replace after every 200 hours of engine use
  - Engine oil: change every 6 months or every 100 hours of engine use
  - Engine oil filter: replace annually or after 200 hours of engine use
  - Fuel filter: replace annually or every 300 hours engine use
  - Spark plugs: replace annually or every 300 hours engine use
- **Hydraulics**
  - Hydraulic fluid filter: replace every 250 hours engine use
  - Baler hydraulic fluid: replace after 5 years or if degraded
- **Trailer and Towing**
  - Trailer hydraulic fluid: replace fluid every 5 years or if degraded
  - Trailer drop deck wheel channels
  - Trailer wheel bearings

### Replace/Maintain as Needed

- **Baler Compaction Chamber**
  - Clean
  - Fire extinguisher
  - Problem rotating ‘ears’
- **Honda Engine**
  - Battery
  - Dry gas
  - Replacement parts
- **Hydraulics**
  - Hydraulic fluid shut-off
  - Replace hydraulic fluid
- **Paint**
  - Anti-slip grit tape
  - Replace hydraulic fluid
  - Tires
  - Trailer battery

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Maintenance lists are in alphabetic order within each section:
- Check Daily Prior to Using BigFoot
- Check Frequently
- Annual or Other Specified Maintenance Schedule
- Replace/Maintain as Needed