

**P-REX:**

**Pioneer Remover/Extractor  
Operator's Manual**



4529 Industrial Parkway  
Cleveland, OH 44135

800-877-1500  
PioneerAthletics.com

## **WARNING**

The engine exhaust from this product contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

### NOTICE OF REQUIREMENT OF SPARK ARRESTER MUFFLER

This equipment may create sparks that can start fires around dry vegetation. California Public Resources Code Section 4442.6 provides that it is unlawful to use or operate an internal combustion engine on any forest-covered, brush-covered, or grass-covered land unless the engine is equipped with a spark arrester maintained in effective working order. A spark arrester is a device constructed of nonflammable materials specifically for the purpose of removing and retaining carbon and other flammable particles over 0.0232 of an inch in size from the exhaust flow of an internal combustion engine that uses hydrocarbon fuels or which is qualified and rated by the United States Forest Service. Other states or federal areas may have similar laws. The Operator Should Contact Local Fire Agencies for Laws or Regulations Relating to Fire Prevention Requirements. THIS EQUIPMENT DOES NOT HAVE A SPARK ARRESTER AND YOU SHOULD CONTACT YOUR AUTHORIZED DEALER FOR THE PURCHASE OF A SPARK ARRESTER.

**Inspect spark arrester daily; replace every 500 hours or as needed.**

**The Engine Owner's Manual provides information regarding the U.S. Environmental Protection Agency (EPA) and the California Emission Control Regulation of emission systems, maintenance and warranty.**

**Keep Engine Owner's Manual with your unit. Should the Engine Owner's Manual become damaged or illegible, replace immediately. Replacements may be ordered per the information found in the Product Information section of the owner's manual.**

**Federal law and California State law prohibit the following acts or the causing thereof:**

- 1. The removal or rendering inoperative by any person other than for purposes of maintenance, repair, replacement, of any device or element of design incorporated into any equipment for the purposes of emissions control prior to or after its sales or delivery to the ultimate purchaser or while it is in use, or**
- 2. The use of the equipment after such device or element of design has been removed or rendered inoperative by any person**

## Table of Contents

GENERAL INFORMATION .....	1
To the New Owner.....	1
Using this Manual .....	1
Warranty Registration .....	1
Model and Serial Number.....	2
Parts and Service .....	2
SAFETY PRECAUTIONS .....	3
Safe Operating Practices.....	3
Safe Operation.....	3
Personal Safety .....	4
Operation.....	4
Using a Ramp .....	5
Slope Operation.....	5
Children .....	7
Service Precautions .....	7
Battery Service Precautions.....	8
Fuel Handling Precautions .....	9
Safety and Instructions Decals.....	10
Top of Deck Clutch Switch Shown .....	10
Safe Operating Practices.....	15
Control Panel .....	15
Controls .....	16
Safety Start Interlock System .....	16
Engine Starting.....	17
Stopping the Engine.....	18
ROPS (Roll Over Protective Structure).....	18
Seat Belt Maintenance .....	20
Possible Damage to ROPS.....	20
ROPS Inspection.....	20
Torque values: .....	20
P-REX Operation .....	21
Driving the P-REX.....	21
Operating Suggestions.....	22
Brush Clutch Operation .....	23
MAINTENANCE & ADJUSTMENTS .....	24
Safe Servicing Practices .....	24
Service Introduction .....	24
Torque Values .....	24
Torque values are given below:.....	24
Tires .....	24
Lubrication.....	25
Electrical System.....	25
Master In-line Fuse .....	25
Hydraulic System .....	25

Hydraulic Oil Heat Exchanger .....	26
Fuel Shut-off Valve .....	28
Fuel Evaporation System Filter .....	28
Engine Oil and Filter.....	28
Engine Air Filter .....	29
Recommended Service Procedure .....	30
Overservicing .....	31
General Engine Maintenance .....	32
Belts .....	32
Seat Adjustment .....	32
Steering Control Lever Adjustment .....	33
MAINTENANCE LOCATOR CHART .....	36
Maintenance Record .....	38
TROUBLESHOOTING.....	39
STORAGE .....	42
General P-REX Preparation for Storage .....	42
Preparation of Engine for Storage .....	42
Preparation of Battery for Storage.....	43
New Season Preparation .....	43

## GENERAL INFORMATION

This manual applies to:

### **Pioneer Athletics P-REX Remover/Extractor**

To the New Owner

Owners and operators **must read** this manual carefully. It contains operation and maintenance information that will help you achieve years of dependable service.

The Engine Owner's Manual, included in the owner's packet, contains engine information that will not be repeated in this manual.

The **owner's responsibilities** include, but are not limited to, making certain that the operators and mechanics:

- read and understand the engine owner's manual before attempting to operate or repair the engine.
- read and understand the P-REX's operator manual and all decals before operating this machine.
- are qualified and physically able individuals, properly trained in the operation and maintenance of this equipment. Before they are allowed to operate or maintain this machine, they **must** be familiar with its safe operation, operator controls, and decals.
- know they are responsible for their own safety as well as the safety of other persons within the vicinity. **Remember**, the operator is responsible for accidents or hazards occurring to other people or their property.
- who cannot read and understand English have this material explained to them.

**IMPORTANT:** As the owner/operator you can prevent accidents. You are responsible for accidents or injuries occurring to yourself, other people or property.

Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.

For more detailed maintenance and adjustment information refer to the proper General Service Manual for your machine. Refer to the Product Literature section of this manual for information on how to obtain this manual.

### Using this Manual

This manual contains general operation information as well as basic adjustment and maintenance information. Since operating conditions vary considerably, all conditions cannot be addressed individually. Through training and experience, operators should develop safe operating practices suitable to most conditions.

Directions used in this manual, for example RIGHT or LEFT, refer to directions when in the operator position and facing forward, unless otherwise stated.

Though current at the time of printing, photographs and illustrations shown may vary slightly from your P-REX due to subsequent production changes. Pioneer Athletics reserves the right to redesign and change the machine as deemed necessary, without notification. If a change has been made to your machine which is not reflected in this manual, contact Pioneer for current information.

### Warranty Registration

**IMPORTANT:** Any unauthorized modification, alteration, or use of non-approved attachments voids the warranty and releases Pioneer from any liability arising from subsequent use of this equipment. Do not use or operate any attachment not approved by Pioneer.

**IMPORTANT:** Damage caused by unauthorized replacement parts is not covered by this warranty. Manufacturer expressly excludes

liability for defects or damage caused by such 'unauthorized' articles or service.

### Model and Serial Number

The serial identification plate, located directly below and to the left of the operator's platform, contains the P-REX's model and serial numbers.

These numbers are required when the unit is registered. They will also assure you of the correct service parts when replacement becomes necessary.

### Parts and Service

Use original replacement parts, or parts that are equivalent in overall performance, that are available from your local dealer. To obtain prompt, efficient service, always provide the following information when ordering parts:

1. Correct part description.
2. Correct part number.
3. Correct model number.
4. Correct serial number.

In some instances, you may be required to provide proof of proper maintenance to be able

to receive warranty credit. This proof may consist of copies of repair orders and/or receipts for replacement parts (fluids, filters, etc.). The hour meter reading at the time of repair and the date the service was completed should also be included.

If an authorized dealer performed the required maintenance, they will have the necessary documentation. If someone other than an authorized dealer did the required maintenance, you may be asked to provide proof that the work was completed.

The Maintenance Record, found elsewhere in this manual, provides you a place to record the service items that have been done on this P-REX. Record the hour meter reading, date, and the service performed.

All warranty repair and service must be handled through an authorized dealer. Arrangements should be made through your local service center.

## SAFETY PRECAUTIONS



This safety alert symbol is used to call attention to a message intended to provide a reasonable degree of **PERSONAL SAFETY** for operators and other persons during the normal operation and servicing of this equipment.



– denotes immediate hazards which **WILL** result in severe personal injury or death.



– denotes a hazard or unsafe practice which **COULD** result in severe personal injury or death.

This manual uses two other words to highlight information:

A. **IMPORTANT** – calls attention to special mechanical information.

B. **NOTE** – emphasizes general information worthy of special attention.

The **owner's responsibilities** include, but are not limited to,

- making certain that the operators and mechanics read and understand this manual and all decals before operating this machine.
- making certain that before the operators and mechanics are allowed to operate or maintain this machine, they must be familiar with its safe operation, operator controls, and decals.
- ensuring that the operators and mechanics know they are responsible for their own

safety as well as the safety of other persons within the vicinity. **Remember**, the operator is responsible for accidents or hazards occurring to other people or their property.

Improper use, adjustment, or maintenance by the operator, mechanic or owner can result in injury or death. Reduce the potential for injuries by following these safety instructions. Pay close attention to the safety alert symbol “⚠” and the instructions that follow it. Failure to comply with these instructions may result in personal injury or death.

**Incorrect usage of this equipment may result in severe injury or death. Personnel operating and maintaining it should be trained in its proper use. They should read this manual completely and thoroughly before attempting to set-up, operate, adjust, or service this equipment.**

### Safe Operating Practices

This product is capable of serious injury. Always follow all safety instructions to avoid serious injury or death.

⚠ Never allow persons to operate this P-REX without proper instruction or allow children to operate the P-REX. Allow only responsible adults who are familiar with these instructions to operate this P-REX.

### Safe Operation

⚠ Evaluate the terrain to determine what is needed to properly and safely perform the job.

Do not use any unauthorized attachment or modify the P-REX

- If any attachment or additional weight is mounted on the rear of the unit, any rapid movement of the control levers in either direction could result in a reaction of the P-REX that can cause serious injury.

◇ Always be alert and inspect area for hazards such as rocks, metal objects and other debris which may be thrown or entangled by P-REX. Remove these objects before working. Watch out for holes or deep depressions.

◇ Always operate P-REX in daylight or with adequate working lights.

◇ Never operate the P-REX when there is a risk for lightning.

### Personal Safety

◇ Always wear long pants and safety shoes with slip-resistant soles when operating this P-REX.

- Do not wear sandals, tennis shoes, sneakers, shorts or any type of loose-fitting clothing as they may get tangled in moving parts.

- Do not wear a towel from the waist, or use a towel as a headband or neck wrap.

- Long hair or jewelry may get tangled in moving parts.

◇ Always wear adequate ear protection, such as ear-plugs. Prolonged exposure to loud noise can cause impairment or loss of hearing.

- Do not wear radios or music headphones while operating. Safe operation requires your full attention.

◇ Always wear safety goggles or safety glasses with side shields when operating.

◇ Do not operate if you are fatigued, sick or while under the influence of alcohol or drugs, if you are pregnant or under 18 years old.

◇ Poor posture or operating for extended periods of time may lead to fatigue or injury, resulting in loss of control. Occasionally, stop and get off the seat to stretch and relax.

### Operation

◇ Always secure the ROPS in the raised position and buckle the seat belt before starting the P-REX.

◇ Never leave a running P-REX unattended. Before leaving the operator's seat for any reason:

- Always stop on level ground.
- Place the steering control levers in the park brake position.
- Stop the engine.
- Remove the ignition key.

◇ Always inspect P-REX for damage after striking a foreign object. If damage is found, repair P-REX immediately.

◇ Always remain seated while operating the P-REX. Only start the engine from the operator's position.

◇ Always keep safety shields and covers in place, except for servicing.

- Never operate the machine with the floor plate cover removed.

◇ Always keep clear of brushes and vacuum during operation.

- Never put hands or feet under any part of the P-REX while it is running.

◇ Follow daily and weekly checklists, making sure hoses are tightly secured and bolts are tightened.

- Never operate a poorly maintained P-REX.

◇ **Clean flammable material from P-REX. Prevent fires by keeping the engine compartment, exhaust area, battery, fuel line, fuel tank and operator's station clean of accumulated trash, infill, and other debris. Always clean up spilled fuel and oil.**



◇ **Prevent fires by keeping the engine and exhaust areas clear. Do not back P-REX into flammable materials.**

- Allow the P-REX, especially the engine, to cool in a well-ventilated area before storing inside a building or other enclosure.

◇ Do not change the engine governor setting or over speed the engine. Operating the engine at excessive speed may increase the hazard of personal injury.

◇ Rapid movement of the steering control levers in either direction could result in a reaction of the P-REX that can cause serious injury.

- Never push forward suddenly on your steering control levers while the P-REX is in rearward motion.
- Never pull back suddenly on your steering control levers while the P-REX is in forward motion.

◇ Always be aware of what is behind the P-REX before backing up. Always look down and behind before and while backing up.

- If working in reverse is unavoidable, push forward slowly on the steering control levers and avoid sudden movement.

◇ Slow down before turning.

◇ Never attempt high speed maneuvering, especially in crowded or congested areas.

◇ Always maintain a safe distance from people and pets when operating. Always stop the P-REX if someone enters the area.

◇ Never carry passengers.

◇ Always observe traffic laws while driving P-REX from one location to another. Watch for traffic when operating near or crossing roadways.

- Use care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.

Using a Ramp

◇ Exercise extreme caution when loading and unloading the P-REX onto a truck or trailer with a ramp.

◇ Use only a single, full width ramp; do not use individual ramps for each side of the unit. Having a full width ramp provides a surface for the P-REX frame to contact if the unit starts to tip backwards. It also reduces the risk of a wheel going off and the P-REX tipping over.

◇ Do not exceed a 15-degree angle between the ramp and the ground or between the ramp and the trailer or truck.

◇ Avoid sudden acceleration when on a ramp.

Slope Operation

**Slopes are a major factor in loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution. REMINDER: Only operate on slopes of 15 degrees or less.**

◇ Use extreme caution when operating on slopes.

- Be extremely careful changing directions on a slope. Slow down.
- Do not operate where the P-REX could slip or tip.
- Turn slowly.
- Turn on the most level part of the slope.
- To maximize traction, it is better to turn the front of the P-REX uphill, rather than downhill. **If drive tires lose traction, steering control is lost which could cause serious injury or death.**
- If it becomes necessary to turn downhill, turn slowly and gradually, if possible.

◇ Do not remove or modify the stabilizer wheels.

◇ Watch for holes, ruts, bumps, rocks or other hidden objects. Uneven terrain could overturn the P-REX.

◇ Remove obstacles such as rocks, tree limbs, etc.

◇ Keep all movement on slopes slow and gradual. Do not make sudden changes in speed or direction.

◇ Avoid starting and stopping on a slope. If tires lose traction, disengage the P-REX brushes and proceed slowly straight down the slope.

◇ Operate a safe distance (minimum of 10 feet) away from drop-offs, retaining walls, drainage ditches, embankments, water, and other types of hazards to avoid a wheel dropping over the edge or to avoid the ground from breaking away. This will reduce the risk of the P-REX suddenly rolling over causing serious injury or death.

◇ Do not tow on slopes. The weight of the towed equipment may cause loss of traction and loss of control.

◇ Do not try to stabilize the P-REX by putting your foot on the ground.

◇ If the P-REX's tires lose traction when operating on slopes, disengage the brushes, place the steering control levers in the park brake position, stop the engine, remove the ignition switch key, and get help.

◇ Never make sudden starts, stops, turns, or reversals of direction, especially when maneuvering on slopes. The steering is designed for sensitive response. Rapid movement of the control levers in either direction could result in a reaction of the P-REX that can cause serious injury.

◇ Never stop suddenly while backing down slopes. This action may result in a reaction of the P-REX that can cause serious physical injury.

◇ The P-REX is not designed to operate horizontally (traverse) on slopes. Be aware of any conditions that may cause the P-REX drive

tires to lose traction resulting in a possible loss of control of the P-REX.

### **Do not operate on slopes greater than 15 degrees.**

Refer to the Slope Guide, when determining the degree of slope.

It is strongly recommended that the operator drive the P-REX off of the slope slowly, using extreme caution, if any sign of loss of traction is detected. Wait until the condition that caused the problem is resolved before attempting to operate on the slope again.

Terrain conditions can affect traction resulting in possible loss of control of the P-REX. Some of the conditions to be aware of are:

- Wet terrain
- Depressions in the ground; i.e., holes, ruts, wash-outs
- Mounds of dirt
- Soil type; i.e., sand, loose dirt, gravel, clay
- Tire pressure

Any attachments mounted to the P-REX will affect the way it handles on a slope. **Nothing should be attached to the P-REX.**

Another consideration for safe movement on slopes is to be aware of what is located at the bottom of the slope. Extreme caution should be used when there is a hazard located at the bottom of the slope. Some examples are:

- Water; i.e., lake, river
- Cliffs, retaining walls
- Roads, highways
- Buildings
- Rocks

These are just a few examples of situations when caution must be used when operating on a slope. There are many other possibilities too numerous to mention. Just remember to always

exercise extreme caution when operating on any slope.

◇ The ROPS may minimize chance of injury or death from rollover. The seat belt **must** be fastened while operating the P-REX equipped with a **ROPS in the raised and secured position. Both retaining pins and hair pins must be installed.** Failure to use a seat belt with ROPS may result in serious injury in the event of a roll over.

## Children

**Tragic accidents can occur if the operator is not alert to the presence of children. Children are attracted to the P-REX. Never assume that children will remain where you last saw them.**

◇ Never leave the P-REX unattended with the ignition key in the switch, especially with children present.

◇ Children or bystanders may be injured if they attempt to move or to operate the P-REX while unattended. Always disengage the brush clutch, place the control levers in park brake position, stop the engine, and remove the ignition key when leaving the operator's seat.

◇ Keep children out of the area and under the watchful care of a responsible adult other than the operator.

◇ Be alert and turn the P-REX off if children enter the area.

◇ Before and while backing, look behind and down for small children.

◇ **Never carry children.** They may fall off and be seriously injured or interfere with safe P-REX operation. Children who have been given rides in the past may suddenly appear in the area for another ride and be run over or backed over by the P-REX.

◇ Never allow children to operate the P-REX.

◇ Use care when approaching blind corners, shrubs, trees, the end of a fence or other objects that may obscure vision.

## Service Precautions

◇ Unless specifically required, **DO NOT** have the engine running when servicing or making adjustments to the P-REX.

- Park the P-REX on level ground.
- Disengage the brush clutch.
- Place the steering control levers in the park brake position.
- Raise the brushes
- Stop the engine.
- Remove the ignition key.
- Disconnect the negative battery cable.
- Wait for all movement to stop before adjusting, cleaning or repairing.
- Repairs or maintenance requiring engine power should be performed by trained maintenance personnel only.
- To prevent carbon monoxide poisoning, operate the engine in a well-ventilated area only.
- Read and observe all safety warnings in this manual.

◇ Before working on or under the deck, make certain the engine cannot be accidentally started.

◇ **Always** keep belt covers on P-REX deck for safety as well as for cleanliness except when changing or checking the belt.

◇ Use a stick or similar instrument to clean under the P-REX making sure that no part of the body, especially arms and hands are under the P-REX.

◇ Always wear adequate eye protection when:

- servicing the hydraulic system.
- servicing the battery.
- changing the P-REX brushes and removing accumulated debris.

◇ Never attempt to make any adjustments or repairs to the P-REX drive system, brushes or any attachment while the P-REX engine is running or brush clutch is engaged. Repairs or maintenance requiring engine power should be performed by trained maintenance personnel only.

◇ Never work under the machine unless it is safely supported with jack stands.

- Make certain machine is secure when it is raised and placed on the jack stands.
- The jack stands should not allow the machine to move when the engine is running and the drive wheels are rotating.
- **Use only certified jack stands.** Use only appropriate jack stands, with a minimum weight rating of 3000 pounds (1360 kg) to block the unit up.
- Use in pairs only.
- Follow the instructions supplied with the jack stands.

◇ Exercise caution when releasing spring tension from any of the belt idlers or when working with any of the lift components.

◇ Do not touch hot parts of machine.

◇ Keep nuts and bolts tight. Keep equipment in good working condition.

◇ Never tamper with safety devices. Check their proper operation regularly.

◇ Use original replacement parts, or parts that are equivalent in overall performance, that are available from Pioneer.

- The P-REX may not comply with the appropriate safety standards if aftermarket parts, accessories, or attachments are used.

## Battery Service Precautions

◇ Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

◇ Charge batteries in a well-ventilated open area, away from sparks and flames. Unplug charger before connecting or disconnecting from battery. Wear protective clothing and use insulated tools.

◇ Avoid skin and clothing contact with battery acid.

- Always wear eye protection when checking the battery. Acid can cause serious injury to skin and eyes. If contact occurs, flush area with clean water and call a physician immediately. Acid will also damage clothing.

- Do not drink the battery electrolyte.

- Do not allow open flame near the battery when charging.

- Hydrogen gas forms inside the battery. This gas is both toxic and flammable and may cause an explosion if exposed to flame. Always **disconnect** the negative (black) battery cable(s) before disconnecting the positive (red) cable(s). Always connect the positive (red) battery cable(s) before connecting the negative (black) cable(s).

- Do not overfill the battery.

- Electrolyte may overflow and damage paint, wiring or structure. When cleaning the battery, use soap and water. Be careful not to get soap and water into the battery. Clean the battery terminals with a solution of four parts water and one part baking soda when they become corroded.

◇ Shorts caused by battery terminals or metal tools touching metal P-REX components can

cause sparks. Sparks can cause a battery gas explosion which will result in personal injury.

- Prevent the battery terminals from touching any metal P-REX parts when removing or installing the battery.
- Do not allow metal tools to short between the battery terminals and metal P-REX parts.

◇ Incorrect battery cable routing could cause damage to the P-REX and battery cables. This can cause sparks which can cause a battery gas explosion which will result in personal injury.

- Always disconnect the negative (black) battery cable(s) before disconnecting the positive (red) cable(s).
- Always connect the positive (red) battery cable(s) before connecting the negative (black) cable(s).

## Fuel Handling Precautions

◇ **To avoid personal injury or property damage, use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive.**

- A fire or explosion from gasoline can burn you and others and can damage property.

◇ Observe the usual gasoline handling precautions:

- Do not smoke while refueling. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
- **Do not remove fuel cap or fill tank with engine running or while engine is hot.** Clean up any gasoline spills.
- If gasoline is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until gasoline vapors have dissipated.
- Keep gasoline away from open flame or spark and store machine away from open

flame or spark or pilot light such as on a water heater or appliances.

- Refuel outdoors. Never refuel or drain the gasoline from the machine indoors.
  - Never attempt to start the engine when there is a strong odor of gasoline fumes present. Locate and correct the cause.
  - Store gasoline in an approved container and keep it out of the reach of children. Never buy more than a 30-day supply of gasoline.
  - Do not fill fuel containers inside a vehicle or on a truck or trailer bed with interior carpets or plastic truck bed liners. Always place gasoline containers on the ground away from your vehicle before filling.
  - When practical, remove the machine from the truck or trailer and refuel the machine with its wheels on the ground. If this is not possible, then refuel such machine on the truck or trailer using a portable container and not a fuel dispenser nozzle. If a fuel dispenser nozzle must be used, keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
  - Never use gasoline for cleaning parts.
  - Read and observe safety precautions elsewhere in this manual.
- ◇ Gasoline is harmful or fatal if swallowed.
- ◇ Avoid prolonged breathing of vapors.
- Long-term exposure to vapors can cause serious injury and illness.
- ◇ Keep gasoline away from eyes and skin.
- Keep face away from nozzle and fuel tank or fuel container opening.
  - If gasoline is spilled on clothing, change clothing immediately.

## Safety and Instructions Decals

The decals are designed to give the operator and mechanic brief daily operational and service information. Use these decals as an extension of this manual. Do not remove or obliterate the decals. Replace unreadable or missing decals.

It is the **owner's responsibility** to make certain that the operators and mechanics read and understand all decals before operating this machine.



Specific safety warning decals are located on the equipment near the immediate areas of potential hazards. Do not remove or obliterate these decals. Replace them if they become non-readable.

The following illustrations show the safety decals that are located on the P-REX. A brief explanation is shown to help the operator understand the decal's meaning.

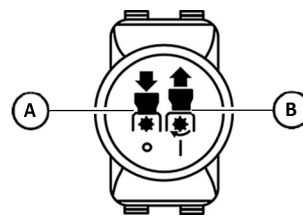


- Read Operator's Manual and Safety Warning Decals before attempting to operate this machine.



- Do not smoke while refueling.
- Do not remove the fuel tank cap or fill tank with engine running or while the engine is hot.
- Allow the P-REX, especially the engine, to cool in a well-ventilated area before storing inside a building or other enclosure.
- Store away from open flame or spark if there is fuel in tank.
- Clean up any gasoline spills.
- Do not refuel while in enclosed trailer or other enclosed areas.
- Maximum of 10% ethanol (E10) in fuel. Fuels with greater than 10% ethanol, (such as E15, E20 and E85) voids warranty. Fuels with greater than 10% ethanol are not approved for use and such use could cause equipment failure and pose a fire hazard.

## Top of Deck Clutch Switch Shown



- A. Brush clutch disengaged (OFF) position
- B. Brush clutch engaged (ON) position

**WARNING**

[Part Number 600899]



- If you lose steering control while operating the machine, place the steering control levers in the park brake position immediately. Inspect the machine and involve your dealer to resolve the problem before continuing to operate.
- If pump belt fails, steering control will be lost. Refer to owner's manual for inspection and replacement intervals and refer to above paragraph for emergency procedures.

**WARNING: Fire!**

[Part Number 601967]



- Clean flammable material from machine. Prevent fires by keeping engine compartment, top of deck, exhaust area, battery, fuel line, fuel tank and operator's station clean of accumulated trash and other debris. Always clean up spilled fuel and oil.

**WARNING: Hot surface!**

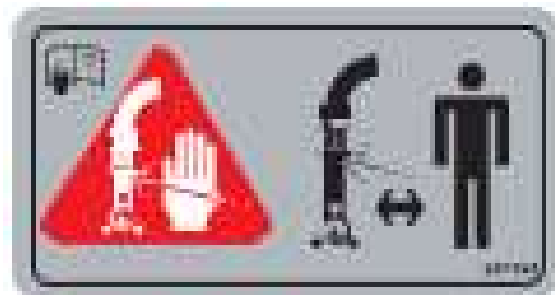
[Part Number 601058]



- Avoid skin contact with hot surface.

**WARNING: Fluid under pressure!**

[Part Number 601968]



- Avoid hydraulic fluid escaping under pressure
- Hydraulic fluid escaping under pressure can penetrate skin.
- Hydraulic fluid escaping under pressure may have sufficient force to penetrate skin and cause serious injury. Foreign fluid injected into the skin must be surgically removed within a few hours by a doctor, familiar with this form of injury, or gangrene may result.
- Before applying pressure to hydraulic system, make sure all connections are tight and all hoses and lines are in good condition.
- Relieve all pressure in the system before disconnecting or working on hydraulic lines.
- To find a leak under pressure, use a piece of cardboard or wood – never use your hands.
- To relieve all pressure in system, lower attachment and turn engine off.

**DANGER: Battery Hazards!**

[Part Number 601815]



- Avoid skin contact with battery acid
- Do not overfill battery.
- Electrolyte may overflow and damage paint, wiring or structure. When cleaning the battery,

use soap and water. Be careful not to get soap and water into the battery. Use soda mixed in water to clean corrosion off the terminals.

- Always wear eye protection when checking the battery, acid can cause serious injury to skin and eyes. If contact occurs, flush area with clean water and call physician immediately. Acid will also damage clothing.
- Do not allow open flame near the battery when charging.
- Hydrogen gas forms inside the battery. This gas is both toxic and flammable and may cause an explosion if exposed to flame. Always remove the negative ground first and replace it last.

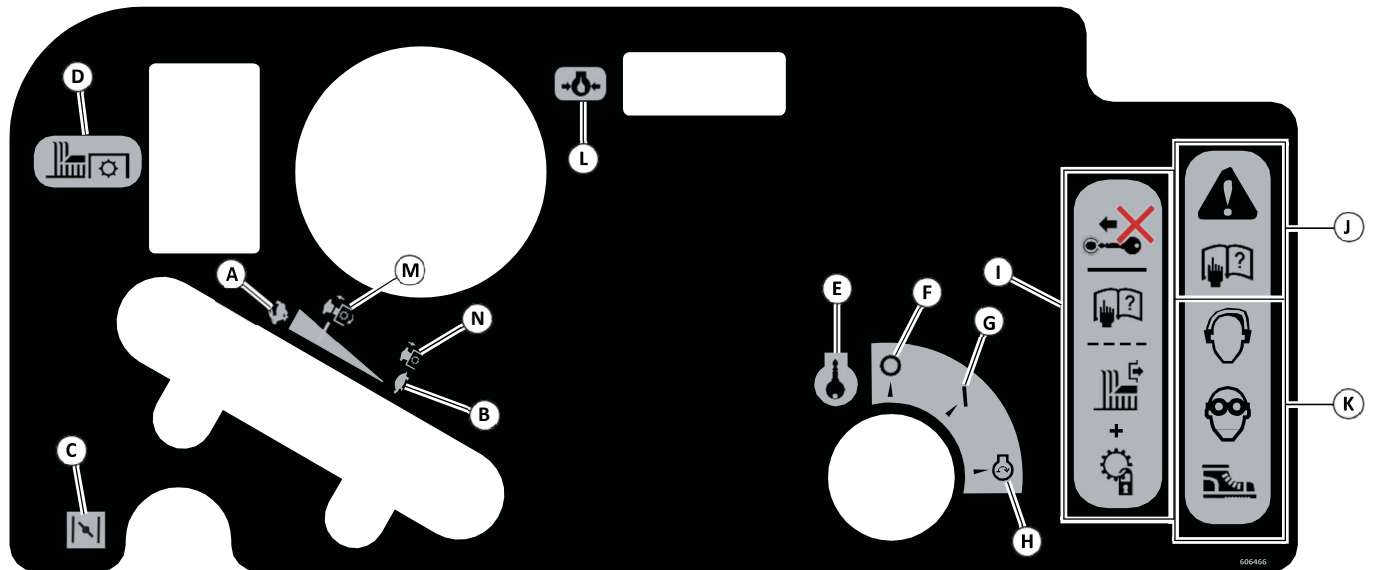
**WARNING: Read Operator's Manual and decals before attempting to operate this machine.**

[Part Number 601635]

		<p><b>WARNING:</b> This structure's protective capability may be impaired by structural damage, overturn, or alteration. If any of these conditions occur, this structure must be replaced.</p>
		<p><b>WARNING: Roll over!</b></p> <ul style="list-style-type: none"> <li>• Avoid crushing, use seat belt.</li> <li>• Do not jump if machine tips.</li> <li>• To minimize chance of injury or death from rollover; keep ROPS in the raised and locked position and use the seat belt.</li> </ul>
		<ul style="list-style-type: none"> <li>• Do not remove ROPS.</li> </ul>
		<ul style="list-style-type: none"> <li>• Never operate machine on a slope with the ROPS folded down (lowered position).</li> <li>• There is no roll over protection when the ROPS is in the lowered position.</li> <li>• Lower the ROPS only when absolutely necessary. Drive slowly and carefully. Raise the ROPS as soon as clearance permits.</li> <li>• Read and follow slopes operation instructions and warnings.</li> <li>• Do not wear seat belt when the ROPS is in the lowered position.</li> </ul>
		<p><b>WARNING: Ejection!</b></p> <ul style="list-style-type: none"> <li>• Always pull from the P-REXhitch.</li> <li>• Do not attach chains or ropes to the ROPS for pulling purposes, as the machine can tip backwards.</li> </ul>



**CONTROL PANEL**  
 [Part Number 606466]

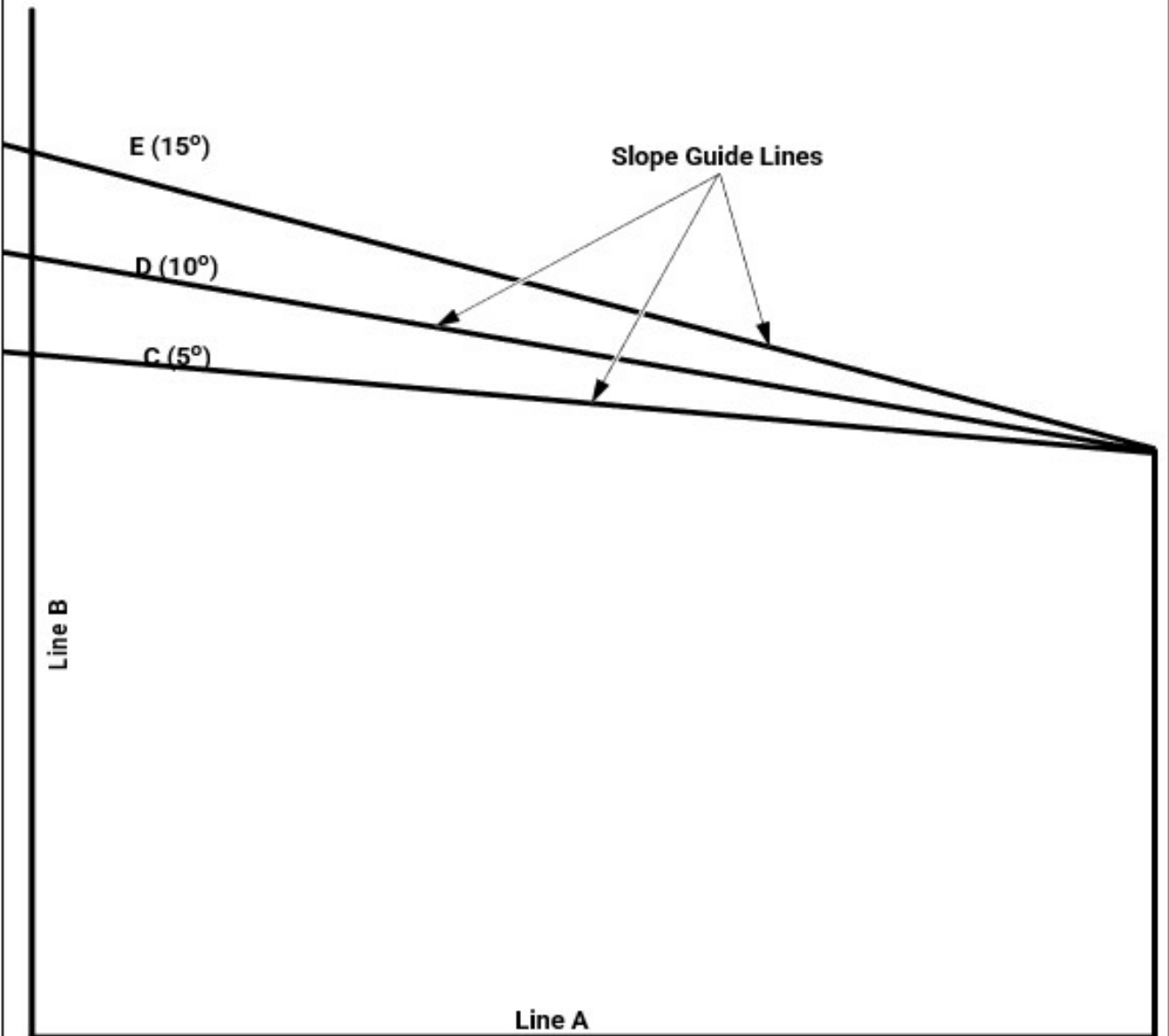


- A. Fast
- B. Slow
- C. Choke
- D. P-REX engage/disengage switch
- E. Ignition switch - insert key
- F. OFF
- G. ON
- H. Engine start position
- I. Before starting the engine:
  - Read Operator's Manual
  - Disengage P-REX brushes
  - Place control levers in park brake position

- J. Read Operator's Manual before attempting to operate this machine.
- K. Wear ear protection, eye protection and safety shoes when operating this equipment.
- L. If warning light comes on, check engine oil.
- M. For maximum electric clutch life engage at 1/2-3/4 throttle position.
- N. For maximum electric clutch life disengage at low throttle position.

### Slope Guide

Use this diagram when determining the degree of slope to be mowed.



1. Hold this sheet of paper in front of you. Make sure that Line A is horizontal.
2. Align Line B with a vertical surface such as pole, tree or building.
3. Fold the paper along the slope guide lines (C, D or E).
4. Align the closest slope guide line with the ground slope. [This will give you a close estimation of the ground slope.]

## OPERATION

### Safe Operating Practices

Refer to the Safety Precautions section of this manual for operational and personal safety information.

### Control Panel

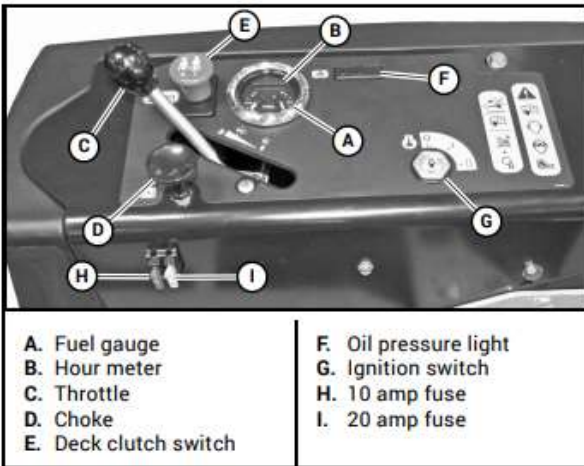


Figure 1

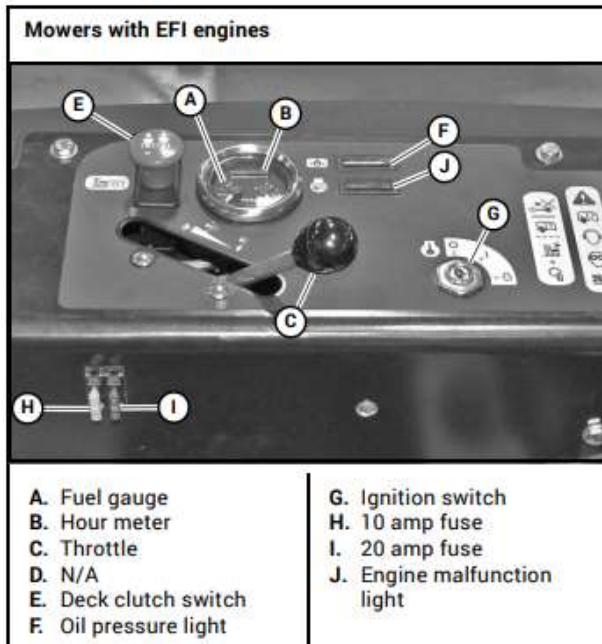


Figure 2

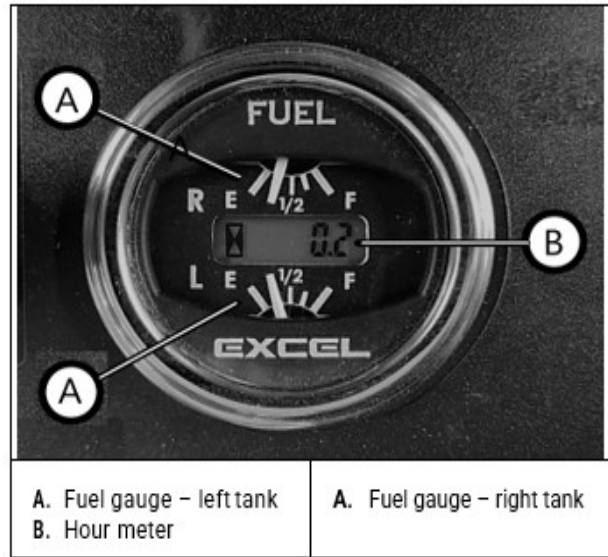


Figure 3

**A. Fuel tank gauge** [Figure 1], [Figure 2] & [Figure 3])— this gauge shows the fuel level for each fuel tank. The right gauge indicates the fuel in the right tank and the left gauge indicates the fuel level in the left fuel tank.

**B. Electronic hour meter** [Figure 1], [Figure 2] & [Figure 3] — registers 1/10 hour increments up to 9,999.9 total hours. It is connected to the ignition switch. It records the accumulative time while the ignition key is switched to the “RUN” position.

**C. Throttle control** [Figure 1] & [Figure 2] — a cable is linked to the engine throttle for controlling engine speed. Move the lever forward to increase engine rpm, move the lever rearward to decrease engine rpm.

**D. Choke control** [Figure 1] — a cable is linked to manually operate the engine choke. When the lever is in the down position, the choke is in the “OFF” (run) position. When the knob is pulled up, the choke is in the “ON” (start) position. Do not operate the machine in the “ON” (start) position.

**NOTE:** The choke control is not used on P-REXs with fuel injected engines.

E. **Brush clutch switch** [Figure 1] & [Figure 2] — this switch engages the brushes. Pull the switch up to engage and push switch down to disengage the clutch.

For additional clutch information refer to the P-REX Brush Operation section of this manual.

F. **Oil pressure light** [Figure 1] & [Figure 2] — this light comes on when the ignition switch is placed in the “RUN” position and stays lit until the engine is running and a safe oil pressure is developed. If the light comes on during operation, shut the engine off immediately and locate and correct the problem.

G. **Ignition switch** [Figure 1] & [Figure 2] — a three position switch: “OFF”, “RUN”, and “START”. With key inserted, rotate it clockwise to the “START” position; release the key when the engine starts, and the switch will automatically return to the “RUN” position.

H. **10-amp fuse** [Figure 1] & [Figure 2] — Ignition system & Safety system - 10 amp

I. **20-amp fuse** [Figure 1] & [Figure 2] — Controller - 20 amp

J. **Engine malfunction light** [Figure 2] — this light comes on when there has been an engine malfunction on P-REXs with electronic fuel injected engines. Refer to the engine owner’s manual for more details.

#### Controls

A. **Steering control levers** [Figure 4] & [Figure 5] — these levers control the P-REX’s speed, direction, stopping, and park brake.



The parking brake may not hold the P-REX if parked on a slope.

Block or chock the machine when parked on a slope.

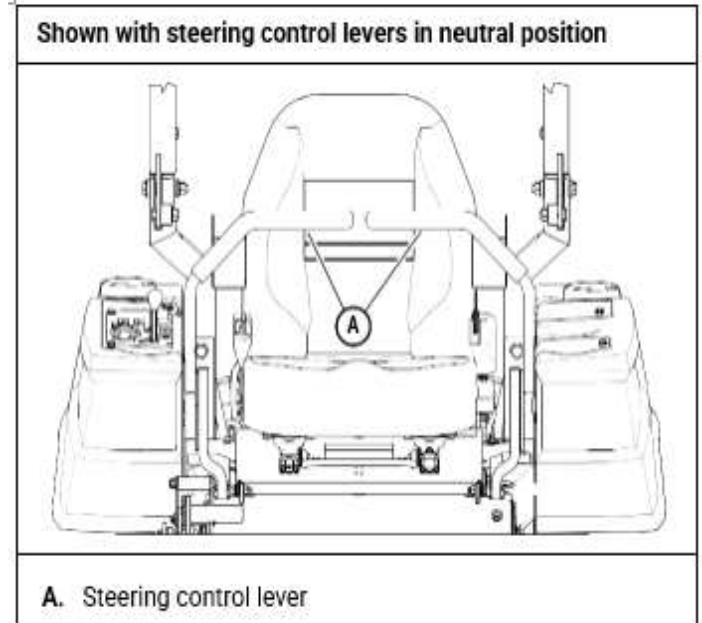


Figure 4

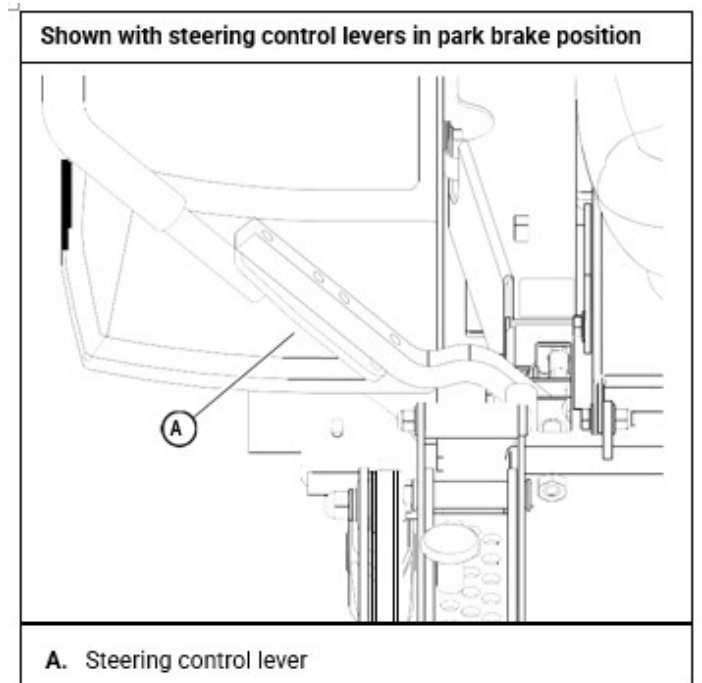


Figure 5

#### Safety Start Interlock System

The P-REX’s safety start interlock system consists of the park brake switches, seat switch, and brush clutch switch.

**IMPORTANT:** Repair this important safety feature immediately if it malfunctions.

This safety feature prevents P-REX runaway or accidental entanglement during operation.

**Check the P-REX's safety start interlock system daily, prior to operation.**

To inspect the system:

1. Sit on the seat when testing the seat switch.
2. Set both steering control levers in the park brake position.
3. Start the engine and allow it to warm up to operating temperature.
4. With the brush clutch switch down and the steering control levers in the park brake position, slowly rise off of the seat. **The engine should continue to run.**
5. With the brush clutch switch up and/or the steering control levers in the neutral position, slowly rise off of the seat. **The engine should stop.**
6. **If the engine fails to stop when:**
  - the brush clutch switch is up, or
  - one or both of the steering control levers is in the up (out of neutral position), and
  - the operator is off the seat, then
  - check the function of the seat switch.Replace the seat switch if it is not operating properly (is not opening or closing) and if the cause cannot be determined.

If you cannot locate the problem contact Pioneer.

<b>▲ WARNING ▲</b>	The safety interlock system should always function per steps 4 and 5. If it does not function properly, correct it immediately. Do not operate machine without a properly functioning seat safety switch.
--------------------	---

## Engine Starting

The P-REX's safety start interlock system is also designed to protect the operator and others from accidental injury due to unintentional engine starting. The engine starting motor will not engage until:

1. Steering control levers are in the park brake position.
2. Brush clutch switch is in the down (OFF) position



The safety interlock system must not be disconnected or bypassed. Doing so could cause the machine to operate unexpectedly resulting in personal injury.

Start the engine by following these steps. If you encounter difficulty, contact Pioneer.

1. Make sure the steering control levers are in the park brake position and the deck clutch switch is disengaged. Start the engine from the operator's position only.
2. Use the choke, if the unit is equipped with one, when the engine is cold, or if a warm engine fails to start within 5 seconds of cranking. Avoid flooding by operating the engine without choking as soon as possible.
3. Set the throttle at approximately the 1/2 open position.
4. Insert the key in the ignition switch and rotate it clock-wise to engage the starting motor. Release the key when the engine starts.

**IMPORTANT:** The engine starter should not be operated for periods longer than 30 seconds at a time. At least two minutes between such cranking periods to protect the starter from overheating and burning-out.

5. As soon as the engine begins to run, check to make certain all engine warning lights are off. If not, stop the engine immediately and check for the cause.
6. Perform the test shown in the Safety Start Interlock System section to make sure the safety start interlock system operates properly.
7. Allow the engine to idle two minutes before advancing the throttle and/or engaging the deck clutch.

### Stopping the Engine

Use the following procedure to shut the engine off.

1. Place the steering control levers in the park brake position.
2. Throttle the engine back to low idle, then disengage the deck clutch. Refer to the P-REX Deck Operation section for more details.
3. Let the engine run at low idle for two minutes.
4. Rotate the ignition key counter-clockwise to the "OFF" position. Remove the key from the switch before leaving the P-REX.

### Moving the P-REX with Stalled Engine

If it becomes necessary to move the P-REX when the engine is inoperative, the hydraulic pumps are equipped with bypass valves. [Figure 6]

Before moving the unit, turn bypass valves counter clock-wise one-half to one revolution. The valve on each hydraulic pump is located near the top and is identified as a hex stud. [Figure 6]

The steering control levers must be placed in the neutral position, to release the park brakes, so that the P-REX can be moved.

Do not tow the machine. Move it by hand or use a winch to load on a trailer for transporting.

When transporting on another vehicle, the P-REX should be facing forward and it must be secured using the tie-down points.

**Always make certain the two bypass valves are returned to their operating position before running the P-REX following repairs.** [Figure 6]



Figure 6

### ROPS (Roll Over Protective Structure)

A ROPS may minimize the chance of injury or death from rollover. A ROPS, when used with a seat belt, is effective in reducing injuries during unit overturn accidents. Overturning the unit without a ROPS or without the ROPS locked in the raised position ([Figure 7]) can result in serious injury or death.

Pivot the two-post ROPS down by removing the right and left hair pins [Figure 8], and pulling out on the spring-loaded pins to allow the machine to operate under low hanging obstructions.

**NOTE:** When the ROPS is locked in the raised position make sure the hair pins are inserted into the holes in the end of the spring-loaded pins.

Do not wear the seat belt when the ROPS is in the lowered position. **Use the ROPS in the**

**“folded” position only when absolutely necessary.**

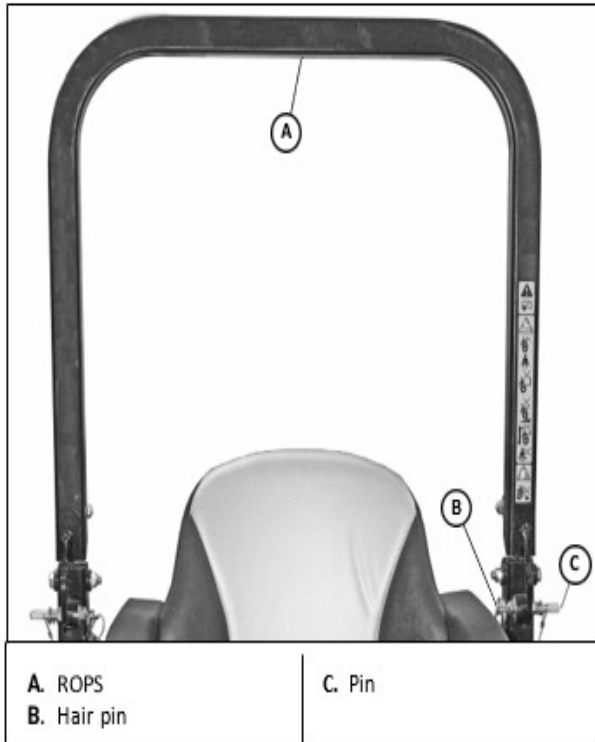


Figure 7

**WARNING** Do not operate the P-REX with the ROPS folded down (lowered position) as a standard operating mode. A folded down ROPS does not provide roll-over protection.

**WARNING** Always wear your seat belt unless the ROPS is folded down. In this case, the seat belt should never be worn.

Always fasten the seat belt during P-REX operation with a ROPS in the “raised/up” position.

To minimize chance of injury or death from rollover:

- Keep ROPS in the raised and locked position and use the seat belt.
- Never operate the machine on a slope with the ROPS folded down (lowered position).
- There is no roll over protection when the ROPS is in the lowered position.
- Lower the ROPS only when absolutely necessary. Drive slowly and carefully. Raise the ROPS as soon as clearance permits. Read and follow slope operation instructions and warnings.
- Do not wear seat belt when the ROPS is in the lowered position or if it is not equipped with one.

**WARNING**

**WARNING**

Do not attach chains or ropes to the ROPS for pulling purposes, as the machine can tip backwards.

Inspect the area prior to operating for proper overhead clearance (guy wires, doorways, etc.).

Do not contact any overhead object with the ROPS.

## Seat Belt Maintenance

Inspect the seat belt system (all seat, seat belt parts, and seat platform) daily prior to operating for signs of any damage. Replace any parts with signs of:

- cuts,
- fraying,
- extreme or unusual wear,
- significant discoloration due to UV exposure,
- dirt or stiffness,
- abrasion to the seat belt webbing,
- damage to the buckle, latch plate or hardware,
- any other problem.

Use soap and water to clean the seat belt. Do not use carbon tetrachloride, naphtha, or other chemical cleaning agents, as these will weaken the webbing. For the same reason, do not bleach or dye the webbing. Replace the seat belt if worn or damaged.

## Possible Damage to ROPS

If the unit has rolled over or the ROPS has been in some other type of accident (such as hitting an overhead object), replace the ROPS to retain the best protection.

Following an accident, check the ROPS, the operator's seat, the seat belt, seat belt mountings and seat platform for possible damage. Before operating the machine, replace all damaged parts.

**IMPORTANT:** Do not attempt to weld or straighten the ROPS.



**The ROPS structure's protective capability may be impaired by structural damage, overturn or alteration.**

- Do not remove or alter any of the ROPS parts.
- Do not attempt to weld or straighten ROPS.
- Failure to adhere to these instructions could result in severe injury or death.
- If the ROPS is replaced, make sure to use the proper hardware and apply the recommended torque values to the attaching bolts.

## ROPS Inspection

Inspect the ROPS after the first 20 hours of operation. Following the initial inspection, check the ROPS after every 500 hours of operation or every six months, whichever comes first.

1. Check the torque of the ROPS mounting bolts [Figure 7]. Tighten the bolts to the correct torques as shown below if necessary.
2. Inspect the operator's seat and the mounting parts for the seat belt. Tighten the bolts to the correct torque as shown below if necessary and replace parts that show wear or damage.
3. Check the seat platform to make sure it is secured properly. Adjust or repair it as necessary.



**Never operate the P-REX with the seat platform improperly secured. The seat platform must be properly secured to prevent the seat from moving/tilting in the event of the P-REX tipping or roll-over.**

Torque values:

	ft-lbs.	N•m
ROPS mounting hardware	73	99
Seat belt mounting hardware	48	65



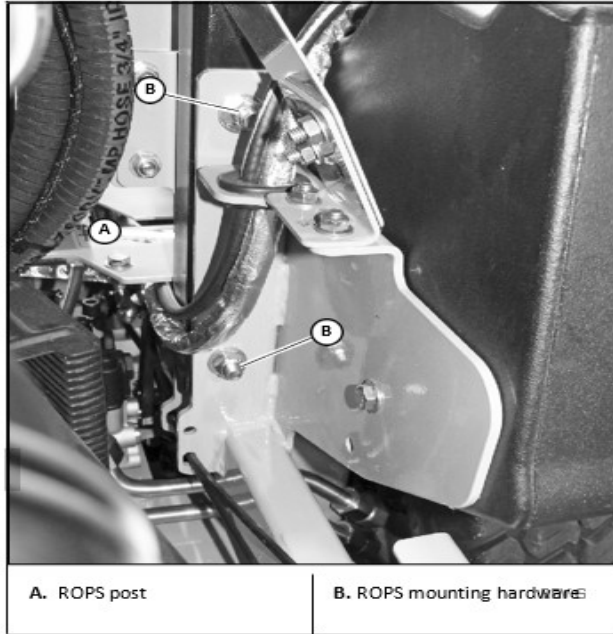


Figure 8

### P-REX Operation

The P-REX features the SmoothTrak™ steering system. The following provides you with detailed information on how to operate the P-REX efficiently.

### Driving the P-REX



Never make sudden stops or reverse direction, especially when maneuvering on a slope. The steering is designed for sensitive response. Rapid movement of the control levers in either direction could result in a reaction of the P-REX that can cause serious injury.

After starting the engine, engage the steering control levers and steer as follows:

**To go forward**, push the steering control levers forward an equal distance. [Figure 9]

**To go in reverse**, pull the steering control levers rearward an equal distance. [Figure 9]

**To turn left**, move the right steering control lever farther forward from neutral than the left steering control lever. [Figure 9]

**To turn right**, move the left steering control lever farther forward from neutral than the right steering control lever. [Figure 9]

**Zero radius turn**, move one steering control lever forward and the other steering control lever back of neutral. This allows the drive wheels to counter-rotate. [Figure 9]

**To stop or decrease speed**, move steering control levers to neutral. When going forward pull back gently on steering control levers. When going in reverse push forward gently on steering control levers.

**For emergency stops**, when traveling forward or rearward, place the steering control levers in the park brake position immediately.



When moving in the rearward direction push forward gently on steering control levers and avoid sudden movement. Any sudden movement could cause the front of the P-REX to come off of the ground resulting in possible loss of control, causing serious injury or death.



Always be aware of what is behind the machine before backing up. Do not mow in reverse unless absolutely necessary. Always look down and behind before and while backing up.

**IMPORTANT:** Damage to the hydraulic system components may occur with rapid movement of the steering controls.

**To increase speed**, increase the steering control lever's distance from neutral. The farther forward the steering control levers are from neutral, the faster the P-REX will travel forward. The farther back the steering control levers are from neutral, the faster the P-REX will go in reverse.

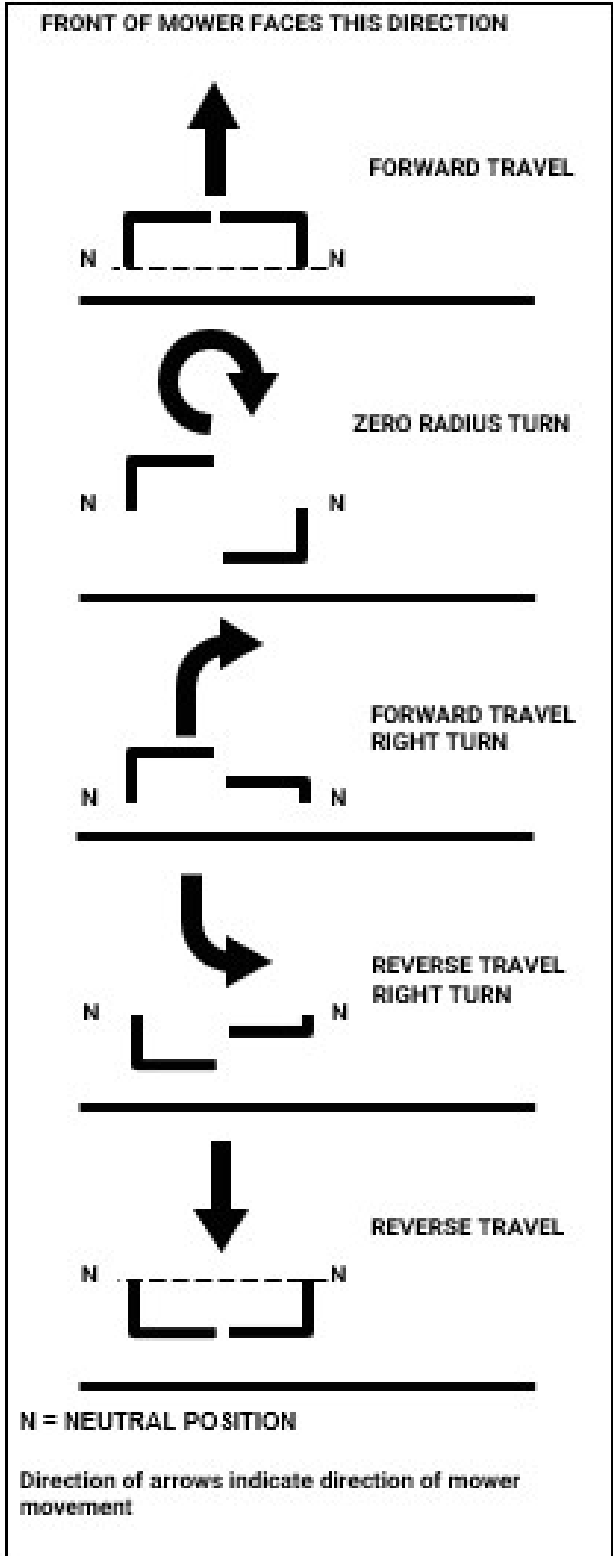


Figure 9

Operating Suggestions

**⚠ DANGER ⚠**

An inexperienced operator should not operate on slopes or on uneven terrain. Before attempting normal speed operation an inexperienced operator should:

- be thoroughly familiar with the proper use and operation of the equipment.
- read the manual completely and thoroughly.
- have attempted slow moving maneuvers.

**⚠ WARNING ⚠**

**If you lose steering control while operating the machine, place the steering control levers in the park brake position immediately. Inspect the machine and involve Pioneer to resolve the problem before continuing to operate.**

**⚠ WARNING ⚠**

The unit's steering control levers are very responsive. For smooth operation, move the levers slowly, avoiding sudden movement. Skill and ease of operation come with practice and experience. The machine can spin very rapidly. Use caution when making turns and slow down before making sharp turns.

Inexperienced operators may have a tendency to oversteer and lose control. Practice slow maneuvers at low engine rpm (idle) on a flat open area before attempting normal speed operation.



Sharp depressions or raised obstacles (such as gutters or curbs) should not be directly approached at high speed in an attempt to “jump” them as the operator could be thrown from the equipment. Approach at a slow speed and angle one drive wheel at the obstruction. Continue at an angle until the wheel clears and then pivot the opposite wheel around.

When turning on soft wet turf, keep both wheels rolling either forward or backward. Pivoting on one stopped wheel can damage turf, especially.

Set the throttle at full rpm for maximum performance. This gives maximum power to the drive wheels when needed. The throttle setting directly controls engine RPM. Use the control levers to control ground speed.

### Brush Clutch Operation

**Before beginning operation, check to make sure the brush clutch switch is engaging and disengaging the brushes properly.**



Make sure that the area around and under the brush is clear and that there are no bystanders in the immediate area before proceeding.

### To check the brush clutch switch:

1. Start the engine and engage the brush clutch.
2. With the clutch switch up (clutch engaged) and the engine running, listen to confirm that the P-REX brushes are rotating.
3. Now, push the deck clutch switch down (clutch disengaged), and with the engine running, listen to confirm that the brushes have stopped rotating.
4. If the P-REX brushes continue to rotate with the switch down, discontinue operation immediately and contact Pioneer.

### Follow these procedures to maximize clutch life:

1. **Engage the clutch** only when the throttle is set at **approximately 2/3 throttle** and there is no load on the brushes. After clutch engagement, advance the engine throttle to full rpm.

Engaging the clutch at high engine rpm or when under heavy load that can cause belts and/or electric clutch to slip, resulting in premature wear or possible damage.

2. **Disengage the clutch** only when the throttle is set at **less than 1/2 throttle**.

Never disengage the clutch with the engine running at high rpm. Setting the throttle to less than 1/2 throttle when disengaging the clutch will help extend clutch life.

**Warranty will not be allowed** for clutches that fail due to improper engagement and disengagement practices.

# MAINTENANCE & ADJUSTMENTS

## Safe Servicing Practices

**Refer to the Safety Precautions section of this manual for more service safety information.**

## Service Introduction

Regular maintenance is the best prevention for costly downtime or expensive, premature repair. The following pages contain suggested maintenance information and schedules which the operator should follow on a routine basis. For more detailed information, refer to the Parts Manual and General Service Manual for this unit.

Remain alert for unusual noises, which could signal a problem. Visually inspect the machine for any abnormal wear or damage. A good time to detect potential problems is while performing scheduled maintenance service. Correcting the problem as quickly as possible is the best insurance.

Clear away heavy build-up of grease, oil and dirt, especially in the engine and hydraulic component areas; minute dust particles are abrasive to close-tolerance engine and hydraulic assemblies.

**Inspect P-REX daily** for debris. The underside of the P-REX will collect a build-up of infill and dirt, especially when infill is wet or has high moisture content. This build-up will restrict air movement which will probably result in a poorer quality of operation. Therefore, it should be removed routinely. To do this it will be necessary to raise and block the deck using jack stands or blocks in the full up position. Scrape the build-up off from underneath.

**IMPORTANT: Seat arm rests** – Place the steering control levers in the park brake position and pivot the arm rests upward before lifting the seat platform to prevent arm rest damage.

Some repairs require the assistance of a trained service mechanic and should not be attempted

by unskilled personnel. Consult Pioneer when assistance is needed.

## Torque Values



Particular attention must be given to tightening the drive wheel lug nuts and spindle bolts. Failure to correctly torque these items may result in the loss of a wheel, which can cause serious damage or personal injury.

Torque values are given below:

	ft-lbs.	N•m
Wheel (lug) nuts	70	95
Wheel motor nut	230	312

**Lug nuts only** - It is recommended that these be checked after the first 2 hours of operation, initially, every 50 hours and following removal for repair or replacement.

For all other torques refer to the P-REX's General Service Manual for standard torque chart.

For engine torque values, refer to the engine owner's manual.

## Tires

It is important for level operation that the tires have the same amount of air pressure. The recommended pressures are:

Drive wheels	29 - 32 psi (200–220 KPa)
Front wheels	25 - 28 psi (172–193 KPa)

If you wish to use non-pneumatic tires on your P-REX, the tire must be an approved tire. Warranty claims will be denied on any P-REX equipped with unapproved non-pneumatic tires.

## Lubrication

Use SAE multi-purpose grease.

## Electrical System

**IMPORTANT: Refer to the Safety section of this manual for detailed battery servicing safety information.**

The electrical system is a 12-volt, negative ground. The recommended battery size is:

Garden tractor BCI group 45 with a 480 or better cranking AMP rating.

A maintenance-free battery is recommended. Otherwise, follow battery manufacturer's maintenance, safety, storing and charging specifications.

### Master In-line Fuse

This P-REX has a master in-line fuse (40 amp) in the electrical system. [Figure 10] This is the main fuse to protect the complete electrical system. It is located next to the starter solenoid which is mounted on the left front of the engine.

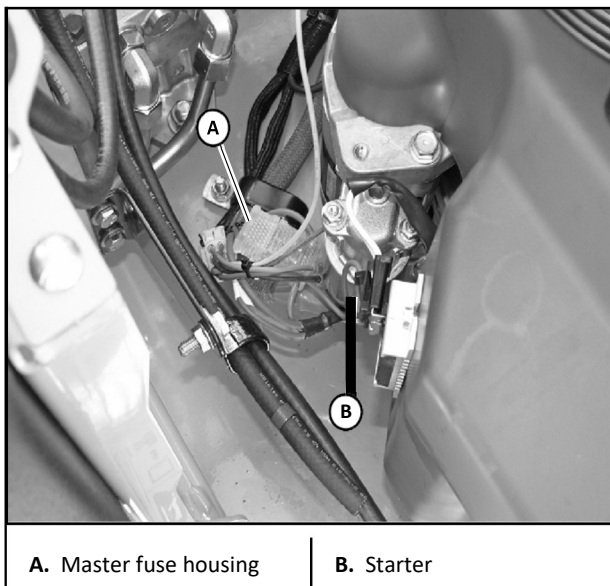


Figure 10

## Hydraulic System

**IMPORTANT:** Never use hydraulic or automatic transmission fluid in this system; use only motor oil as specified. Remember, dirt is the primary enemy of any hydraulic system.



- Hydraulic fluid escaping under pressure may have sufficient force to penetrate skin and cause serious injury. Foreign fluid injected into the skin must be surgically removed within a few hours by a doctor, familiar with this form of injury, or gangrene may result.
- Before applying pressure to hydraulic system, make sure all connections are tight and all hoses and lines are in good condition. To find a leak under pressure, use a piece of cardboard or wood — never use your hands.
- Relieve all pressure in the system before disconnecting or working on hydraulic lines.
- To relieve pressure, lower all attachments and shut off engine.

Check oil level in hydraulic system after every 50 hours of operation or weekly, whichever occurs first. Check more often if system appears to be leaking or otherwise malfunctioning.

Fluid level should be 1" (25.4 mm) from top of reservoir. Use only **15W50 synthetic oil or 20W50 synthetic oil**. Full Synthetic 20W50 Hydrostatic Transmission Oil is recommended. [Figure 11]

**NOTE:** The reservoir will require approximately 3.0 U.S. gallons (11.35 liter) of **15W50 synthetic oil or 20W50 synthetic oil** when replacing the oil after an oil and filter change. **Do not** overfill the reservoir.

Initial system oil and filter change **must** be after the first 50 hours of P-REX operation. Thereafter, replace filter and oil in reservoir **annually or every 500 hours, whichever comes first.**

**IMPORTANT:** It is necessary to drain the system oil from the hydraulic reservoir, using the reservoir drain plug, before removing the hydraulic filter. Replace the drain plug before adding system oil. [Figure 12]

The system filter is located inside the hydraulic reservoir on the underneath side of the tank. **Use an approved filter element only.** When changing the filter use a 15/16" socket. The threads are right hand. [Figure 12]

Refer to the P-REX General Service Manual for complete hydraulic oil and filter change procedures.

### Hydraulic Oil Heat Exchanger

This P-REX is equipped with a hydraulic oil heat exchanger. The heat exchanger coils must be kept clean to ensure that the hydraulic oil is operating within the correct temperature range.

Check and clean the heat exchanger daily and more often in dirty, dusty conditions. [Figure 13]

### Fuel and Evaporative Emissions Control System

**IMPORTANT: Refer to the Safety section of this manual for fuel handling safety information.**

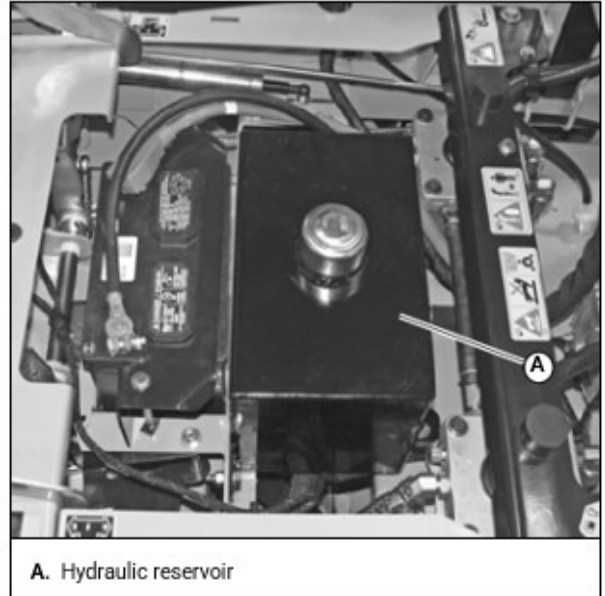


Figure 11

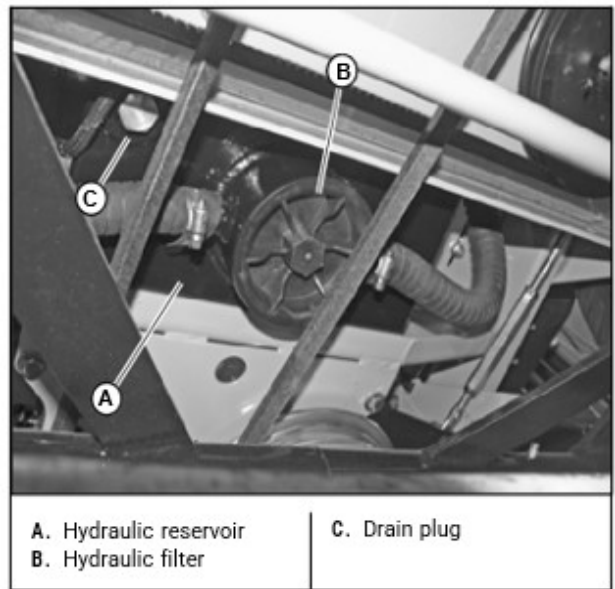


Figure 12

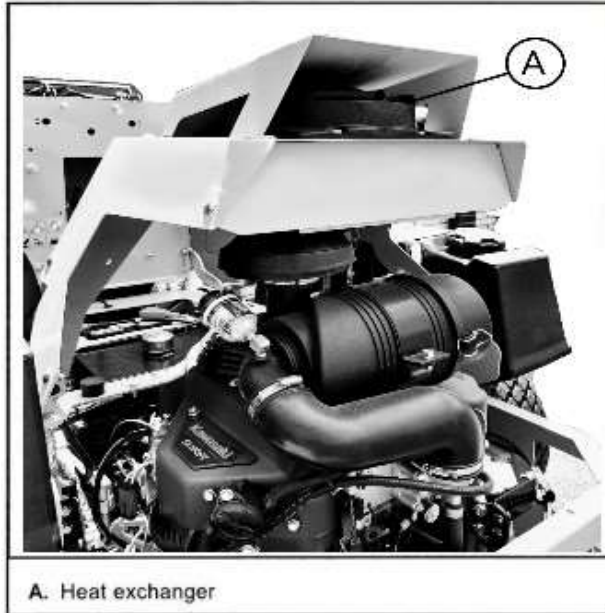


Figure 13

**IMPORTANT:** Refer to the engine owner's manual for additional emissions control information.

Use only approved replacement parts.

Your evaporative emission control system may include parts such as:

- fuel tanks
- fuel lines
- fuel line fittings
- fuel caps
- carbon canisters
- canister mounting brackets
- carburetor purge port connection
- filters
- vapor hoses
- clamps control valves
- control solenoids
- electronic controls
- vacuum control diaphragms
- purge valves
- liquid/vapor separator
- other associated components

The fuel tanks are located in the P-REX's fenders.



Use of replacement parts not equivalent to the original parts may result in system failure and pose a safety hazard.

Park the P-REX on level ground before filling the fuel tank.

Clean the area around the fuel cap before removing the cap. Remove the fuel cap slowly.

When threading the fuel cap onto the filler neck, tighten the cap until it begins to click, then, continue to turn it until at least three clicks are heard.

**IMPORTANT:** Do not overfill the fuel tanks. The fuel tanks should be filled **no higher than the bottom of the fill neck**.

[Figure 14] The fuel system is designed to leave room for the fuel to expand with fuel temperature changes.

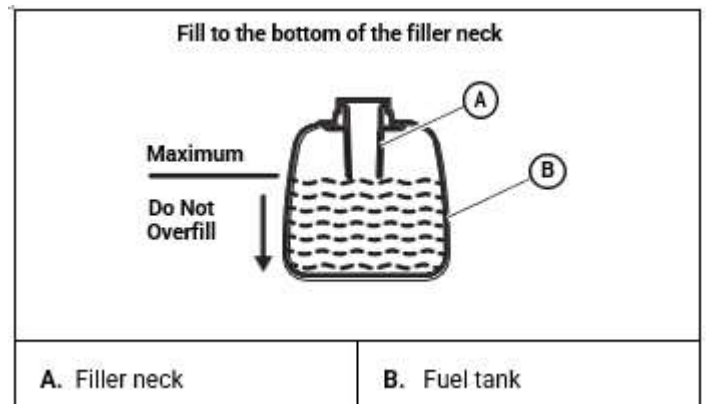


Figure 14



Overfilling the fuel tank may cause:

- Engine damage
- Fire hazard!

Use regular unleaded gasoline with an octane rating of 87 or higher. Maximum of 10% ethanol (E10) in fuel. Fuels with greater than 10% ethanol (such as E15, E20 and E85) voids warranty. Fuels with greater than 10% ethanol are not approved for use and such illegal use could cause equipment failure and pose a fire hazard.

Refer to the Engine Owner's Manual for additional fuel specification requirements.

### Fuel Shut-off Valve

A fuel shut-off valve is located on each P-REX. Close the fuel valve to prevent fuel flow to the engine. The valve's two other positions will allow fuel to be drawn from either one or the other fuel tank. [Figure 15]

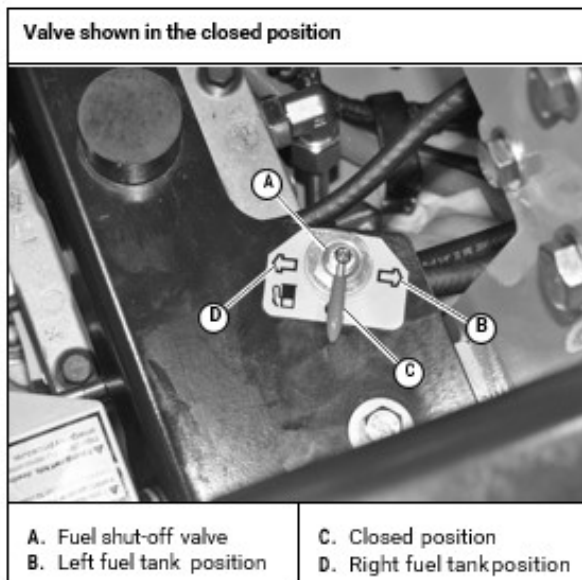


Figure 15

### Fuel Evaporation System Filter

The P-REX has a fuel evaporation system filter. This filter must be checked and replaced every 500 hours or annually whichever comes first. [Figure 16]

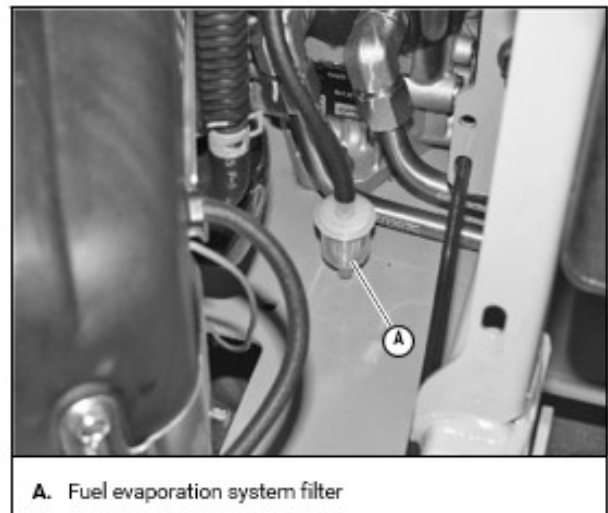


Figure 16

### Engine Oil and Filter



Allow the engine to cool before changing the engine oil. If the engine has been running, use caution when changing the engine oil as it will be very hot. You should wear the appropriate protective gear to avoid being burned or exposed to engine oil.

Check engine oil daily and after every 4 hours of operation. Machine must be setting level when checking oil. Refer to engine manual and maintenance schedule for oil recommendation and capacities.

**Vanguard & Kawasaki Engines** — Change the engine oil and filter after the first 5 hours of operation and per the engine manufacturer's recommendations after that. If P-REX is being operated in extremely dirty conditions, then it is recommended oil be changed more frequently.



**IMPORTANT:** After the new oil filter has been installed, clean up any oil which may have spilled onto the engine plate, engine exhaust system, and muffler guard.

**NOTE:** Place a light film of oil on the oil filter's two O-rings before installing the new filter in the Oil Guard. [Figure 17]

**IMPORTANT:** After the new oil filter has been installed, clean up any oil which may have spilled onto the engine plate, engine exhaust system, and muffler guard.

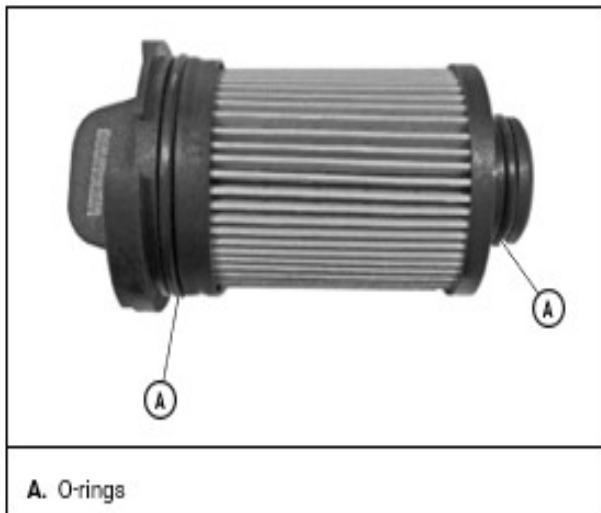


Figure 17

#### Vanguard & Kawasaki engines — Draining the engine oil:

1. Locate the oil drain valve on the engine. [Figure 18] & [Figure 19]
2. Position a suitable oil drain container under the machine below the oil drain valve.
3. Twist the valve counterclockwise to open the valve. Allow 10 minutes for engine oil to adequately drain.
4. After the oil is drained, close the valve by twisting it clockwise.
5. Once the valve is closed, clean up any spilled oil.

**IMPORTANT:** All oil drips or spills must be cleaned off of the engine plate, engine exhaust

system, and muffler guard before operating the machine.

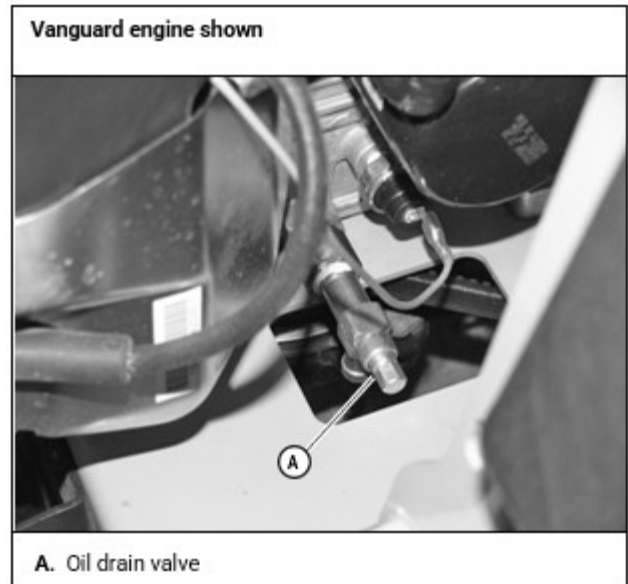


Figure 18

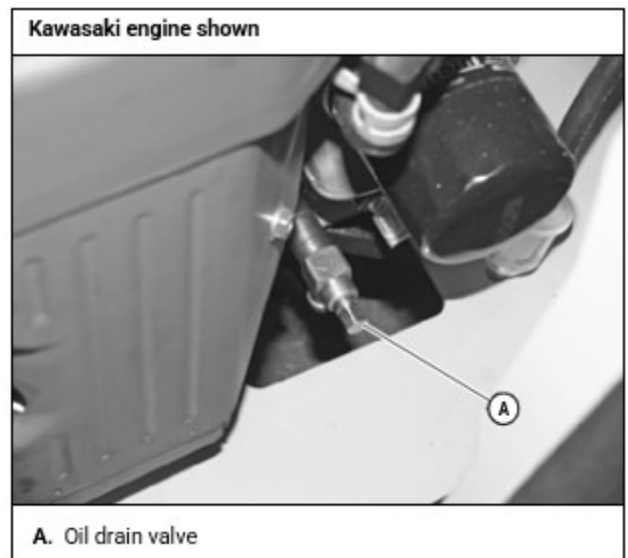


Figure 19

#### Engine Air Filter

Perform engine air filter maintenance per the Maintenance Schedule shown elsewhere in this manual.

A specially designed dry filter is standard equipment on these P-REXs and supplies clean combustion air to the engine. [Figure 20] and [Figure 21].

These P-REXs are equipped with a safety filter. The filter element slides over the safety filter. [Figure 22].

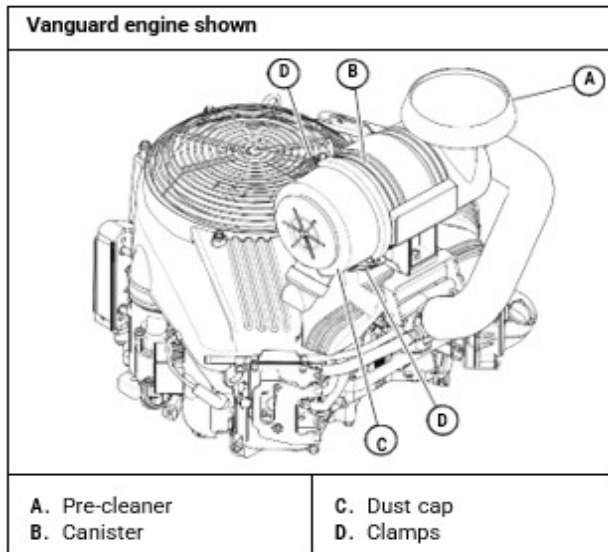


Figure 20

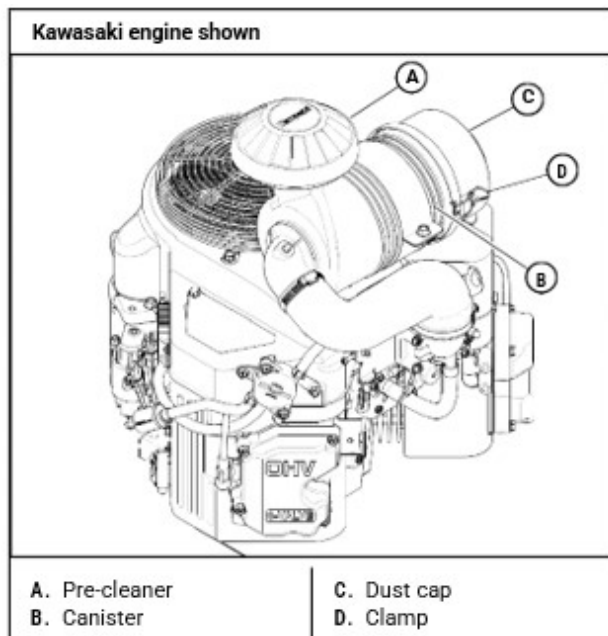


Figure 21

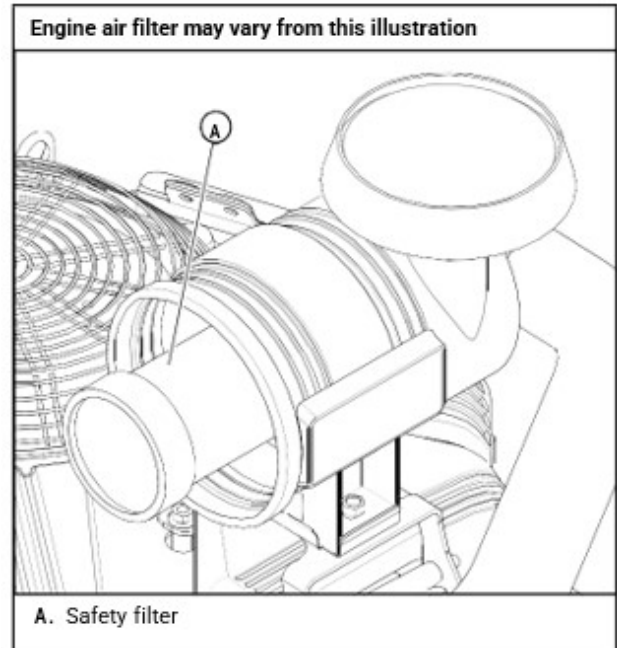


Figure 22

#### Recommended Service Procedure

1. Release clamps and remove element. Clean the air cleaner canister with a damp cloth.
2. Before installing a new element, inspect it by placing a bright light inside and rotating the element slowly, looking for any holes or tears in the paper. Also check gaskets for cuts or tears. Do not attempt to use a damaged element which will allow abrasive particles to enter the engine.
3. Reinstall the dust cap. Make sure it seals all the way around the air cleaner canister, then tighten the clamps. [Figure 20], [Figure 21] and [Figure 22].
4. Check all fittings and clamps periodically for tightness and inspect hoses for holes or cracks.
5. Periodically check the intake hose for signs of ingested dust. Locate and repair the source of ingested dirt.
6. Never operate the machine without an air filter installed.

## Overservicing

Overservicing occurs when an air filter element is removed for cleaning or replacement before it is necessary. Each time the filter is removed a small amount of dirt and dust could fall in the intake system. This accumulated dirt can cause a dusted engine. It only takes a few grams of ingested dirt over the normal service life of an engine to cause a dusted engine.

Do not clean the element, but replace with a new element only. Cleaning used air filter elements, through improper cleaning procedures, can get dust on the inside of the filter causing dirt ingestion and engine failure.

It is important to note that whenever an air filter element is cleaned by any method, the person or company performing the cleaning assumes responsibility for the integrity of the filter from then on. The warranty for air filters expires upon cleaning or servicing in any manner because the condition of the filter after servicing is completely out of the filter manufacturer's control. Therefore, on a dust ingested engine failure, there will be no warranty consideration if the air filter element has been cleaned or serviced in any manner.

A partially dirty air filter element works better than a new element. Therefore, a dirty filter element is not bad for the engine unless it is excessively restricting the air flow and engine performance is affected. The media in the filter must be porous to allow air to pass through it. When dirty air passes through the filter, the dirt plugs some of the holes in the media and actually acts as part of the filter media. When the next round of dirt enters, the first dirt helps filter out even smaller particles making the filter more efficient at stopping dirt from entering the engine. This is referred to as barrier filtration.

At some point the filter media becomes too clogged to allow air to pass.

The operating conditions will determine the frequency of air filter element changing.

## Air Restriction Indicator

These units have an air restriction indicator installed in the air cleaner. [Figure 23] & [Figure 24].

Replace the element whenever the restriction indicator reaches the change filter red line. Check the indicator daily and replace element as needed or annually whichever occurs first.

Reset the indicator by pushing in on the yellow button after each element change. [Figure 23] & [Figure 24].

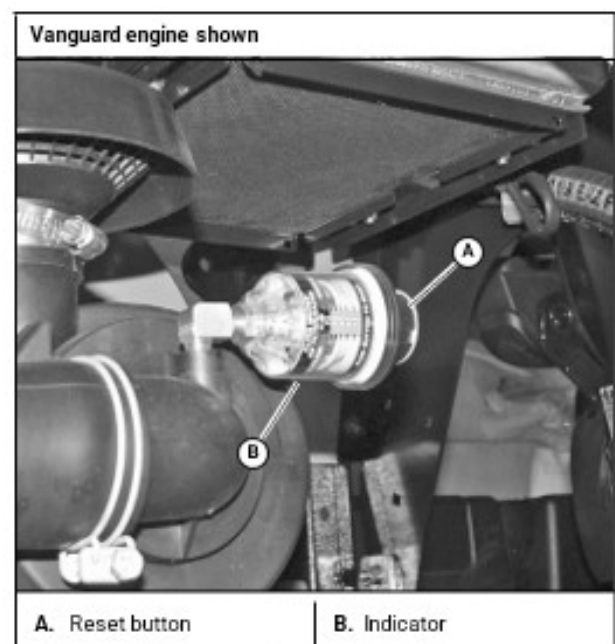


Figure 23

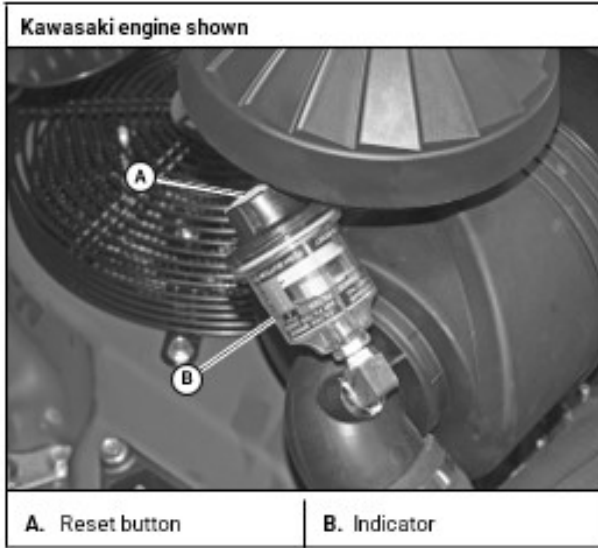


Figure 24

## General Engine Maintenance

Detailed instructions and recommendations for break-in and regular maintenance are specified in the Engine Owner's Manual. Please refer to this manual for engine servicing, lubricating oil levels with quality and viscosity recommendations, bolt torques, etc. The engine warranty is backed by the engine manufacturer. Special attention should be paid to applicable data which will not be duplicated here.

## Belts

Inspect belts frequently for wear and serviceability. Replace a belt that shows signs of:

- severe cuts
- tears
- separation
- weather checking
- cracking
- burns caused by slipping

Slight raveling of belt covering does not indicate failure, trim ravelings with a sharp knife.



If the belt fails, loss of control will occur especially when operating on a slope. **If you lose steering control while operating the machine, place the steering control levers in the park brake position immediately. Inspect the machine and involve Pioneer to resolve the problem before continuing to operate.**

Inspect the belt pulley grooves and flanges for wear. A new belt, or one in good condition, should never run against the bottom of the groove. Replace the pulley when this is the case, otherwise the belt will lose power and slip excessively.

Never pry a belt to get it on a pulley as this will cut or damage the fibers of the belt covering.

Keep oil and grease away from belts, and never use belt dressings. Any of these will destroy the belt composition in a very short time.

## Seat Adjustment

The P-REXs seat can be adjusted four different ways to obtain the most comfortable position:

1. Weight adjusting control [Figure 25]
2. Forward and rearward travel [Figure 25]
3. Back angle control [Figure 25]
4. Armrest [Figure 25]

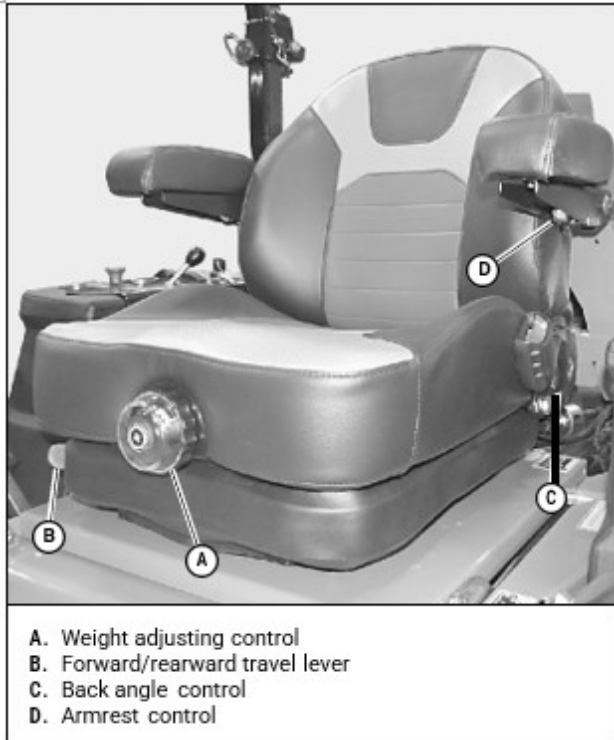


Figure 25

### Steering Control Lever Adjustment

The steering control levers can be adjusted for operator comfort.

To pivot the upper control levers **forward or rearward**, loosen the cap screws that attach the upper control lever the lower lever. Then, pivot the upper control lever. Tighten the cap screws. [Figure 26]

To **lower or raise** the control levers, remove the cap screws. Slide the upper control lever up or down and align the holes in it with the holes in the lower lever. Re-install the cap screws and tighten. [Figure 26]

The steering control levers should be adjusted so that they align with each other when in the neutral position.

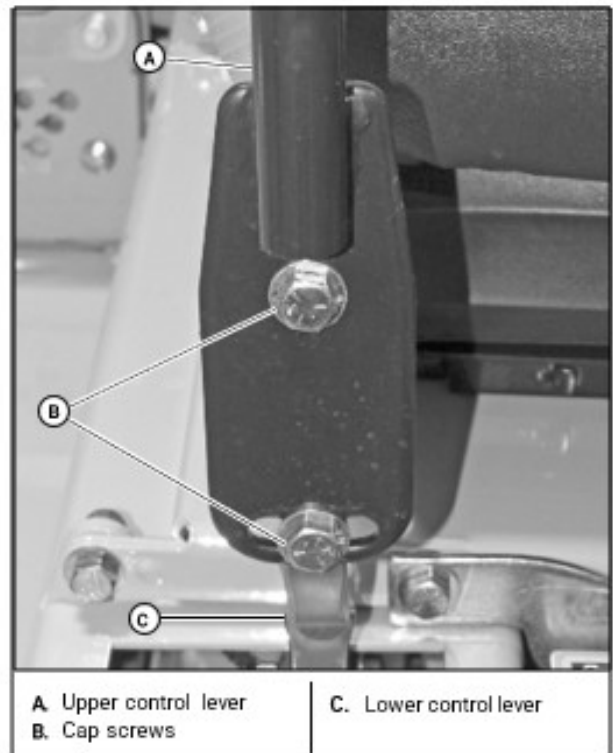


Figure 26

**Maintenance Schedule**  
**[Figure 27], [Figure 28], [Figure 29] & [Figure 30]**

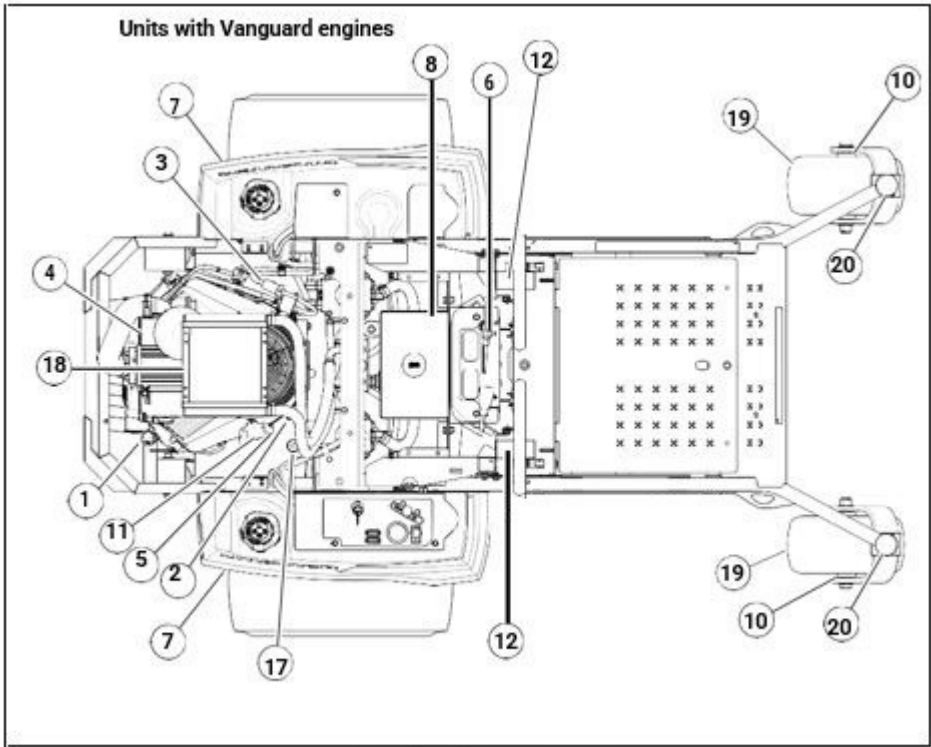
SERVICE AT INTERVALS INDICATED	WEEKLY OR 50 HOURS	MONTHLY OR 100 HOURS	* ANNUALLY OR 500 HOURS
Verify safety start interlock system	Prior to each use		
Visually inspect unit for loose hardware and/or damaged parts	Prior to each use		
Visually inspect tires	Prior to each use		
Check oil level, engine	Prior to each use or every 4 hours		
Clean oil heat exchanger (8)	Prior to each use or every 4 hours		
Check radiator screen (8)	Prior to each use or every 4 hours		
Clean air intake screen (8)	Prior to each use or every 4 hours		
Check fuel level	Prior to each use		
Clean engine and pump compartment	Daily		
Check air cleaner service indicator (8)	Daily		
Replace engine air cleaner element (5) (10)	As needed		
Caster fork tapered bearings (11)	Regular maintenance not required		
Change engine oil and filter (non EFI Oil Guard™ engines) (1) (4)	X		
Clean cylinder and head fins (10)	X		
Check battery connections	X		
Check tire pressure with a gauge	X		
Check hydraulic oil level	X		
Clean engine exterior (10)	X		
Grease pump idler (8)		X	
Grease front wheel bearings (8) (12)		X	
Clean & recap spark plugs (10)		X	
Check belts tension and condition (6)		X	
Check fuel system (7)		X	
Check hydraulic lines		X	
Check fuel valve (7)		X	
Check fuel tank grommets (7)		X	
Tighten lug nuts on wheels (2)		X	
Change engine oil and filter (EFI Oil Guard™ engines) (4) (13)			X
Change fuel filter (7)			X
Clean or replace hydraulic fill cap			X
Change hydraulic filter & oil (3)			X
Grease deck spindle housings			X
Replace spark plugs (10)			X
Check ROPS mounting hardware (9)			X
Replace fuel evaporation system filter (8)			X

NOTES:

1. Initial engine oil change is after 5 hours of operation. Thereafter, change oil after every 40 hours operation. Change more often under dusty or dirty conditions and during hot weather periods.
2. Torque initially and after first 2 hours of operation.
3. Perform initial hydraulic oil and filter change after 50 hours (one week) of operation. Thereafter, change oil and filter annually or every 500 hours whichever comes first. Full Synthetic 20W50 Hydrostatic Transmission Oil is recommended.
4. Change engine oil filter per the engine manufacturer's recommendations. Refer to Engine Owner's Manual for recommendations and other maintenance items.
5. Service more often under dusty or dirty conditions. Use caution when servicing to prevent dust contamination in the engine. Do not clean filter element. Replace with a new one.
6. Drive belt only - Inspect belt every 100 hours and replace if worn or cracking is noticed. Check spring tension adjustment. Check and adjust spring tension after 50 hours of use as outlined in the Hydraulic Pump Belt Adjustment section of the General Service Manual.
7. Check fuel system for any cracks or leaks including, but not limited to, fuel line hoses, fuel valve, vent line hoses, vent valve, vapor valve, carbon canister, and grommets. Replace as needed.
8. More often under dusty or dirty conditions and during hot weather.
9. Inspect ROPS after the first 20 hours of operation and then after every 500 hours of operation or yearly whichever comes first.
10. Refer to engine owner's manual for engine service information.
11. If caster fork tapered bearing seals leak, refer to the General Service Manual for repair procedures.
12. Refer to the General Service Manual to service or repair the tapered wheel bearings.
13. Initial oil change is after 500 hours of operation. Thereafter, change oil after every 500 hours operation. Change more often under dusty or dirty conditions.

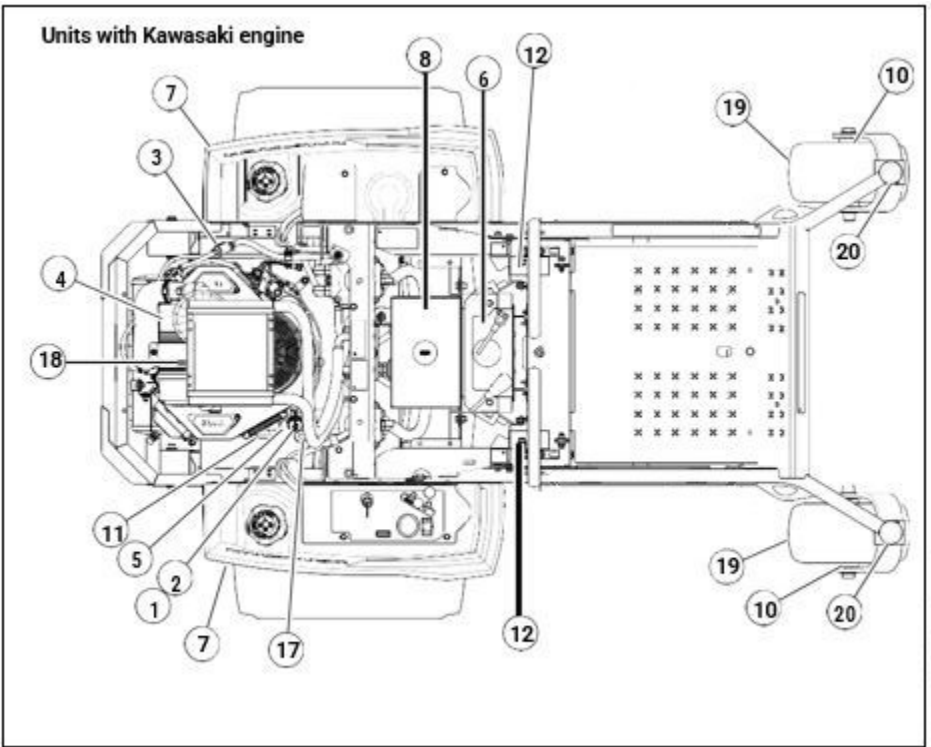
\* After completing maintenance cycle (500 hours), repeat cycle.

# MAINTENANCE LOCATOR CHART



1. Engine Oil Fill
2. Engine Oil Dipstick
3. Fuel Filter
4. Engine Air Cleaner
5. Engine Oil Drain Plug
6. Battery
7. Fuel Tanks
8. Hydraulic Oil Reservoir
9. Hydraulic Oil Filter
10. Front Wheel Bearing Zerks (2)
11. Engine Oil Filter
12. Park Brake Switch
13. Drive Tires
14. Pump Idler Zerk (1)
15. Pump Belt
16. Spindle Housing Zerk (3)
17. Fuel Evaporation System Filter
18. Hydraulic Oil Heat Exchanger
19. Front Wheels Tires
20. Caster Fork Tapered Bearings

Figure 27



1. Engine Oil Fill
2. Engine Oil Dipstick
3. Fuel Filter
4. Engine Air Cleaner
5. Engine Oil Drain Plug
6. Battery
7. Fuel Tanks
8. Hydraulic Oil Reservoir
9. Hydraulic Oil Filter
10. Front Wheel Bearing Zerks (2)
11. Engine Oil Filter
12. Park Brake Switch
13. Drive Tires
14. Pump Idler Zerk (1)
15. Pump Belt
16. Spindle Housing Zerk (3)
17. Fuel Evaporation System Filter
18. Hydraulic Oil Heat Exchanger
19. Front Wheels Tires
20. Caster Fork Tapered Bearings

Figure 28



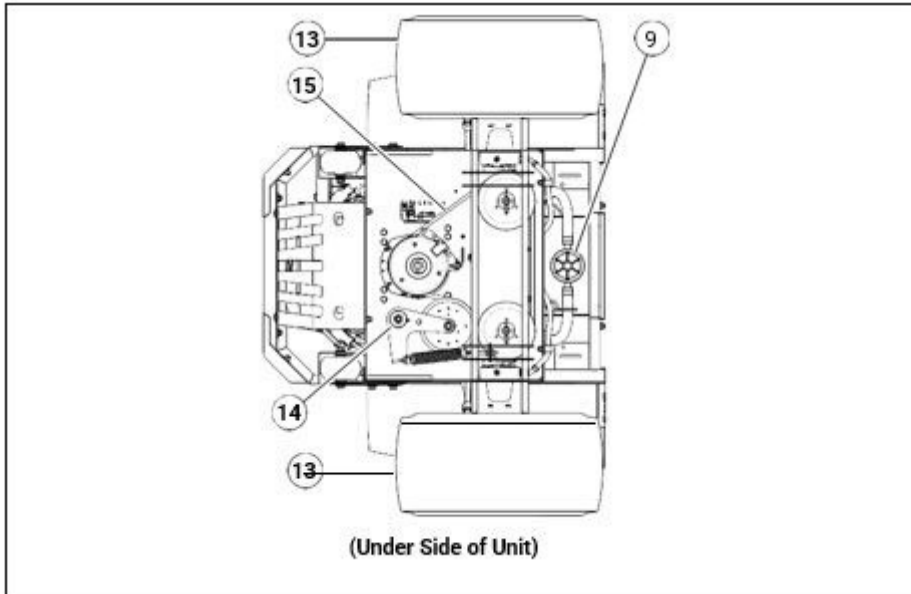


Figure 29

1. Engine Oil Fill
2. Engine Oil Dipstick
3. Fuel Filter
4. Engine Air Cleaner
5. Engine Oil Drain Plug
6. Battery
7. Fuel Tanks
8. Hydraulic Oil Reservoir
9. Hydraulic Oil Filter
10. Front Wheel Bearing Zerks (2)
11. Engine Oil Filter
12. Park Brake Switch
13. Drive Tires
14. Pump Idler Zerk (1)
15. Pump Belt
16. Spindle Housing Zerk (3)
17. Fuel Evaporation System Filter
18. Hydraulic Oil Heat Exchanger
19. Front Wheels Tires
20. Caster Fork Tapered Bearings

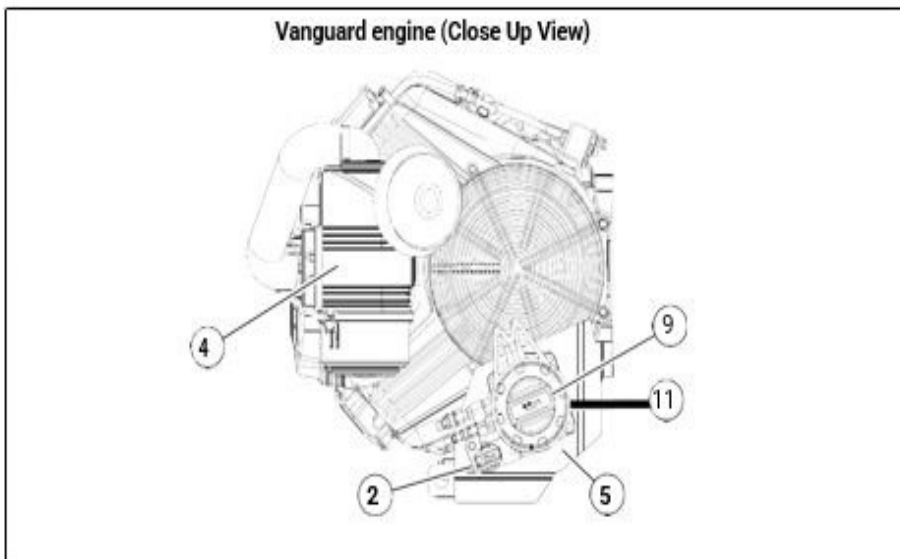


Figure 30

## Maintenance Record

Perform the initial hydraulic system oil and filter change after the first 50 hours of use.

Date:	
Dealer:	
Hour Meter Reading:	
Date:	
Dealer:	
Hour Meter Reading:	
Date:	
Dealer:	
Hour Meter Reading:	
Date:	
Dealer:	
Hour Meter Reading:	
Date:	
Dealer:	
Hour Meter Reading:	

Date:	
Dealer:	
Hour Meter Reading:	
Date:	
Dealer:	
Hour Meter Reading:	
Date:	
Dealer:	
Hour Meter Reading:	
Date:	
Dealer:	
Hour Meter Reading:	
Date:	
Dealer:	
Hour Meter Reading:	

## TROUBLESHOOTING

The majority of operating problems that occur with a system can be traced to improper adjustments or delayed service. A consistently applied preventative maintenance program, as outlined in the Maintenance section of this manual, will prevent many problems. The following chart is designed to help you locate a problem by suggesting probable causes and the recommended solutions.

SYMPTOMS	PROBABLE CAUSES	SUGGESTED REMEDIES
Starting motor does not crank	Steering control levers not in park brake position or switch not adjusted	Place steering control levers in park brake position or re-adjust switch
	Brush clutch switch engaged	Disengage clutch switch
	Weak or dead battery	Recharge or replace
	Electrical connections are corroded or loose	Check the electrical connections
	For additional causes	See engine manual
The engine will not start, starts hard or fails to keep running	No fuel or line plugged	Fill tank or replace line (See Fuel System section for more details)
	Fuel valve is turned off	Open the fuel valve
	There is incorrect fuel in the fuel system	Drain the tank and replace the fuel with the proper type
	There is dirt in the fuel filter	Replace the fuel filter
	Dirt, water or stale fuel in the fuel system	Contact your dealer
	The choke (if equipped) is not on	Move the choke lever to ON
	Numerous	See engine manual
Engine: Runs with continuous misfiring or engine runs unevenly or erratically	Numerous	See engine manual

<b>SYMPTOMS</b>	<b>PROBABLE CAUSES</b>	<b>SUGGESTED REMEDIES</b>
Loss of power or system will not operate in either direction	Restrictions in air cleaner	Service air cleaner
	Hydraulic line blockage	See your dealer
	Internal interference or leakage in wheel motor	See your dealer
	Insufficient hydraulic oil supply	Check level in reservoir
		Check hydraulic pump
	Poor compression	See your dealer
	Steering linkage needs adjustment	Adjust linkage
	Tow valve open	Close tow valve
	The traction drive belt is worn, loose or broken	Install a new traction drive belt
	Air in system	Check filter and fittings
For additional causes	See engine manual	
Air cooled engine over-heating	Air intake screen or cleaning fins clogged	Clean screen and fin
	For additional causes	See engine manual
Low engine oil pressure	Low oil level	Add oil
	Oil diluted or too light	Change oil and check for source of contamination
	Failed oil pump	Contact your dealer
Movement jerky when starting or operates in one direction only	Steering control linkage needs adjustment	Adjust linkage
	Pump or wheel motors faulty	Contact your dealer
	Tow valves not closed completely	Close tow valves

<b>SYMPTOMS</b>	<b>PROBABLE CAUSES</b>	<b>SUGGESTED REMEDIES</b>
Hydraulic system operates hot (oil in reservoir smells rancid)	Low hydraulic oil level	Fill reservoir
	Hydraulic pump faulty	Contact your dealer
	Hydraulic oil heat exchanger clogged	Clean oil heat exchanger core
Unit creeps when steering control levers are in neutral	Steering linkage needs adjustment	Adjust linkage
Unit circles or veers in one direction	Steering linkage needs adjustment	Adjust linkage
	Wheel motors faulty	Contact your dealer
	Tires improperly inflated	Adjust air pressure to 8–12 psi (55–83 KPa)
	Hydraulic pump faulty	Contact your dealer
Unit creeps when parking brake engaged	Steering linkage out of adjustment	Adjust steering linkage
	Brakes need adjustment	Adjust parking brakes
There is abnormal vibration	The engine mounting bolts are loose	Tighten the engine mounting bolts
	The engine pulley, idler pulley or blade pulley is loose	Tighten the appropriate pulley
	The engine pulley is damaged	Contact your dealer
	Spindle bearing is worn or loose	Replace or tighten spindle bearing
Brushes do not rotate	The hydraulic belt is worn, loose or broken	Install a new hydraulic belt
	The hydraulic belt is off the pulley	Install the hydraulic belt and check for a reason
	Electric clutch is not engaging	Check and/or replace 10-amp fuse.

## STORAGE

When storing the unit at the end of the season, the engine, and battery should have the following items serviced before storage.

If the P-REX has been stored for an extended period of time, follow the new season preparation steps before beginning operation.

### General P-REX Preparation for Storage

1. Remove all debris and trash from P-REX unit.

**IMPORTANT:** Wash the machine with a mild detergent and water. Do not pressure wash the machine. Avoid excessive use of water, especially near the control panel and engine.

2. Clean P-REX and touch up all scrapes with touch-up paint.

3. Replace air filter element.

4. Check thoroughly for any worn or damaged parts that need replacing and order them from your dealer.

5. Thoroughly lubricate machine, according to the Maintenance section.

6. Block P-REX up so weight is off tires. Check tire pressure and inflate to proper operating pressure.

NOTE: Do not deflate tires.

7. Perform separate engine and battery preparation as listed below.

8. Store P-REX in a clean, dry place.

### Preparation of Engine for Storage

If the P-REX is to be unused for an extended period of time (30 days or more), the engine will need to be prepared for storage. Use the following procedures before storing the P-REX.

**IMPORTANT:** Refer to the Fuel Handling Precautions section of this manual for

important safety information before proceeding.

1. Add a fuel stabilizer to the fuel system. Refer to the instructions shown on the fuel stabilizer bottle for proper usage. Fuel Stabilizer with Cleaner is recommended. For detailed information consult with your Dealer.

2. Fill the fuel tank(s) with fresh fuel.

**NOTE:** Use non-ethanol fuel if possible.

3. Run the engine for a minimum of 10 minutes.

4. Drain the oil from the crankcase while the engine is still warm.

5. Replace the engine oil filter.

6. Refill with fresh oil of the proper viscosity.

7. Close the fuel shut-off valve (if equipped).

8. Check the oil filler cap and fuel tank cap(s) to make certain they are securely in place.

9. Refer to the engine manual for more information.



To prevent carbon monoxide poisoning, operate the engine in a well-ventilated area only.



Allow the engine to cool before changing the engine oil. Use caution when changing the engine oil as it will be very hot. You should wear the appropriate protective gear to avoid being burned or exposed to engine oil.

## Preparation of Battery for Storage

When the machine is to be unused for long periods, it is best to disconnect the battery and remove it from the unit. At this time perform the following battery maintenance:

1. Remove the battery from machine.

NOTE: Always disconnect the negative (black) battery cable(s) before disconnecting the positive (red) cable(s).

2. Clean the battery, terminals, and cable connectors.
3. Charge the battery, if necessary.
4. Store the battery in a cool, dry place (do not expose to freezing temperatures).
5. Always keep the battery fully charged. Especially important to prevent battery damage when the temperature is below 32°F (0°C).

## New Season Preparation

Before starting the P-REX following post season storage, the following service is required:

1. Clean P-REX, removing trash and dirt accumulation.
2. Check engine oil and hydraulic oil levels.

3. Install fully charged battery and attach the battery cables.

IMPORTANT: Always connect the positive (red) battery cable(s) before connecting the negative (black) cable(s).

4. Fill fuel tank(s) with fresh fuel. Run machine at half speed for 5 minutes, checking operation of steering control levers. Stop engine and check for oil leaks, loose fittings and so forth.
5. Tighten any bolts that have loosened and make sure all hair pins, cotter pins and clevis pins are in place.
6. Install all safety shields and review safety precautions listed in this manual.
7. Check and inflate tires to 8–12 psi (55–83 KPa).
8. Refer to engine manual for more information.



At start of new season always check that fresh oil has been added to machine. If oil is drained at season's end and not replaced, engine damage will result.

## INDEX

Air Restriction Indicator .....	31	Operating Suggestions .....	22
Battery Service Precautions .....	8	Operation .....	4
Belts .....	32	Parts and Service .....	2
Brush Clutch Operation .....	23	Personal Safety .....	4
Children .....	7	Possible Damage to ROPS .....	20
Control Panel .....	15	Preparation of Battery for Storage .....	43
Controls .....	16	Preparation of Engine for Storage .....	42
Driving the P-REX .....	21	P-REX Operation .....	21
Electrical System .....	25	ROPS .....	18
Engine Air Filter .....	29	ROPS Inspection .....	20
Engine Oil and Filter .....	28	Safe Operating Practices .....	3, 15
Engine Starting .....	17	Safe Operation .....	3
Fuel and Evaporative Emissions Control System .....	26	Safe Servicing Practices .....	24
Fuel Evaporation System Filter .....	28	Safety and Instructions Decals .....	10
Fuel Handling Precautions .....	9	Safety Start Interlock System .....	16
Fuel Shut-off Valve .....	28	Seat Adjustment .....	32
General Engine Maintenance .....	32	Seat Belt Maintenance .....	20
General P-REX Preparation for Storage .....	42	Service Introduction .....	24
Hydraulic Oil Heat Exchanger .....	26	Service Precautions .....	7
Hydraulic System .....	25	Slope Guide .....	14
Lubrication .....	25	Slope Operation .....	5
MAINTENANCE LOCATOR CHART .....	36	Steering Control Lever Adjustment .....	33
Maintenance Record .....	38	Stopping the Engine .....	18
Maintenance Schedule .....	34	Tires .....	24
Master In-line Fuse .....	25	To the New Owner .....	1
Model and Serial Number .....	2	Torque Values .....	24
Moving the P-REX with Stalled Engine .....	18	Using a Ramp .....	5
New Season Preparation .....	43	Using this Manual .....	1
		Warranty Registration .....	1



Notes



4529 Industrial Parkway  
Cleveland, OH 44135

800-877-1500  
[PioneerAthletics.com](http://PioneerAthletics.com)