

**Precision Air<sup>®</sup> 2355**  
**Precision Air<sup>®</sup> 3445**  
**Precision Air<sup>®</sup> 3555**  
**Precision Air<sup>®</sup> 4465**  
**Precision Air<sup>®</sup> 4585**  
**Precision Air<sup>®</sup> 4765**  
**Precision Air<sup>®</sup> 4955**  
Air Cart

## SERVICE MANUAL

**Part number 47827460**

1<sup>st</sup> edition English

April 2017

**CASE II**  
AGRICULTURE



## **SERVICE MANUAL**

**Precision Air™ 2355, Precision Air™ 3445 , Precision Air™ 3555, Precision Air™ 4465, Precision Air™ 4585, Precision Air™ 4765 , Precision Air™ 4955**

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# INTRODUCTION

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## Safety rules

Precision Air™ Series Air Carts


### Personal safety





This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible death or injury.

Throughout this manual you will find the signal words DANGER, WARNING, and CAUTION followed by special instructions. These precautions are intended for the personal safety of you and those working with you.

Read and understand all the safety messages in this manual before you operate or service the machine.

 DANGER indicates a hazardous situation that, if not avoided, will result in death or serious injury.

 WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.

 CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

**FAILURE TO FOLLOW DANGER, WARNING, AND CAUTION MESSAGES COULD RESULT IN DEATH OR SERIOUS INJURY.**

### Machine safety

**NOTICE:** Notice indicates a situation that, if not avoided, could result in machine or property damage.

Throughout this manual you will find the signal word Notice followed by special instructions to prevent machine or property damage. The word Notice is used to address practices not related to personal safety.

### Information

**NOTE:** Note indicates additional information that clarifies steps, procedures, or other information in this manual.

Throughout this manual you will find the word Note followed by additional information about a step, procedure, or other information in the manual. The word Note is not intended to address personal safety or property damage.

## Safety rules

Precision Air™ Series Air Carts

### WARNING

#### Chemical hazard!

**Wear protective clothing and a face shield when working with chemicals. Do not allow chemicals to contact skin or eyes. Always follow the chemical manufacturer's instructions.**

**Failure to comply could result in death or serious injury.**

W0052A

### WARNING

#### Unexpected machine movement!

**Disengage power, shut down the tractor, and be sure that all moving parts have stopped before servicing, adjusting, cleaning, or unclogging the equipment.**

**Failure to comply could result in death or serious injury.**

W0924A

### CAUTION

#### Escaping fluid!

**Hydraulic fluid or diesel fuel leaking under pressure can penetrate the skin and cause infection or other injury. To prevent personal injury: Relieve all pressure before disconnecting fluid lines or performing work on the hydraulic system. Before applying pressure, make sure all connections are tight and all components are in good condition. Never use your hand to check for suspected leaks under pressure. Use a piece of cardboard or wood for this purpose. If injured by leaking fluid, see your doctor immediately.**

**Failure to comply could result in minor or moderate injury.**

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### General safety rules

Use caution when operating the machine on slopes. Raised equipment, full tanks and other loads will change the center of gravity of the machine. The machine can tip or roll over when near ditches and embankments or uneven surfaces.

Never permit anyone to ride on the machine.

Never operate the machine under the influence of alcohol, drugs or while otherwise impaired.

Pay attention to overhead power lines and hanging obstacles. High voltage lines may require significant clearance for safety.

Hydraulic oil or diesel fuel leaking under pressure can penetrate the skin, causing serious injury or infection.

DO NOT use your hand to check for leaks. Use a piece of cardboard or paper.

Stop engine, remove key and relieve the pressure before connecting or disconnecting fluid lines.

Make sure all components are in good condition and tighten all connections before starting the engine or pressurizing the system.

If hydraulic fluid or diesel penetrates the skin, seek medical attention immediately.

Continuous long term contact with hydraulic fluid may cause skin cancer. Avoid long term contact and wash the skin promptly with soap and water.

Keep clear of moving parts. Loose clothing, jewelry, watches, long hair and other loose or hanging items can become entangled in moving parts.

Wear protective equipment when appropriate.



DO NOT attempt to remove material from any part of the machine while it is being operated or components are in motion.

Make sure all guards, shields and handrails are in good condition and properly installed before operating machine. Never operate the machine with shields removed. Always close access doors or panels before operating the machine.

Dirty or slippery steps, ladders, walkways and platforms can cause falls. Make sure these surfaces remain clean and clear of debris.

A person or pet within the operating area of a machine can be struck or crushed by the machine or its equipment. DO NOT allow anyone to enter the work area.

Raised equipment and/or loads can fall unexpectedly and crush persons underneath. Never allow anyone to enter the area underneath raised equipment during operation.

Review this manual before each season of use.

Never allow anyone unfamiliar, untrained, or complacent to operate the implement.

Use extreme care when cleaning, filling, or adjusting the implement.

DO NOT enter tank unless another person is present.

DO NOT work around rotating equipment. Loose clothing, rings, watches, etc. may get caught and cause serious injury.

### **Air and air hoses**

COMPRESSOR HOSES may move unexpectedly when suddenly disconnected.

USE PROPER air nozzles. Never use compressed air to clean off clothes or otherwise direct it toward yourself.

### **General maintenance safety**

Keep area used for servicing the machine clean and dry. Clean up spilled fluids.

Service machine on a firm level surface.

Install guards and shields after servicing the machine.

Close all access doors and install all panels after servicing the machine.

Do not attempt to clean, lubricate, clear obstructions or make adjustments to the machine while it is in motion or while the engine is running.

Always make sure working area is clear of tools, parts, other persons and pets before you start operating the machine.

Unsupported hydraulic cylinders can lose pressure and drop the equipment causing a crushing hazard. Do not leave equipment in a raised position while parked or during service, unless securely supported.

Incorrect towing procedures can cause accidents. When towing a disabled machine follow the procedure in this manual. Use only rigid tow bars.

Stop the engine, remove key and relieve the pressure before disconnecting or connecting fluid lines.

Stop the engine and remove key before disconnecting or connecting electrical connections.

Replace damage or worn tubes, hoses, electrical wiring, etc.

When welding follow the instructions in the manual. Always disconnect battery before welding on machine. Always wash your hands after handling battery components.

### **⚠️Wheels and tires⚠️**

Make sure tires are correctly inflated. Do not exceed recommended load or pressure. Follow instruction in the manual for proper tire inflation.

Tires are heavy. Handling tires without the proper equipment could cause death or serious injury.

Never weld on a wheel rim with a tire installed. Always remove tire completely from rim prior to welding.

Always have a qualified tire technician service the tires and rims. If a tire has lost all pressure, take the tire and rim to a tire shop or your dealer for service. Explosive separation of the tire can cause serious injury.

### **⚠️ DANGER**

#### **Explosion hazard!**

**Welding to a wheel can create an explosive air and gas mixture. Removing air from the tire or loosening the tire on the wheel (breaking the bead) will NOT eliminate the hazard. ALWAYS remove the tire completely from the wheel before welding.**

**Failure to comply will result in death or serious injury.**

D0033A

## **⚠️Driving on public roads and general transportation safety⚠️**

The Slow Moving Vehicle (SMV) sign must be located at the rear of the implement.

Comply with local laws and regulations.

Use appropriate lighting to meet local regulations.

Make sure Slow Moving Vehicle (SMV) emblem and/or Speed Indicator Symbol (SIS) is visible.

Use safety chains for trailed equipment when provided with machine or equipment.

Lift implements and attachments high enough above ground to prevent accidental contact with road.

When transporting equipment or machine on a transport trailer, make sure it is properly secured. Be sure the SMV or SIS on the equipment or machine is covered while being transported on a trailer.

Be aware of overhead structures or power lines and make sure the machine and/or attachments can pass safely under.

Travel speed should be such that complete control and machine stability is maintained at all times.

Slow down and signal before turning.

Pull over to allow faster traffic to pass.

Follow correct towing procedure for equipment with or without brakes.

## **⚠️Fire and explosion prevention⚠️**

Fuel and oil that is leaked or spilled on hot surfaces or electrical components can cause a fire.

Crop materials, trash, debris, bird nests or flammable material can ignite on hot surfaces.

Always have a fire extinguisher on or near the machine.

Make sure the fire extinguisher(s) is maintained and serviced according to the manufacturer's instructions.

At least once each day and at the end of the day remove all trash and debris from the machine especially around hot components such as engine, transmission, exhaust, battery, etc. More frequent cleaning of your machine may be necessary depending on the operating environment and conditions.

At least once each day, remove debris accumulation around moving components such as bearings, pulleys, belts, gears cleaning fan, etc. More frequent cleaning of your machine may be necessary depending on the operating environment and conditions.

Inspect the electrical system for loose connections or frayed insulation. Repair or replace loose or damaged parts.

Do not expose the machine to flames, burning brush or explosives.

Promptly investigate any unusual smells or odors that may occur during operation of the machine.

## **⚠️General battery safety⚠️**

Always wear eye protection when working with batteries.

Do not create sparks or have open flame near battery.

Ventilate when charging or using in an enclosed area.

Disconnect Negative (-) first and reconnect Negative (-) last.

When welding on the machine, disconnect both terminals of the battery.

Do not weld, grind or smoke near a battery.

Follow manufacturer's instructions when storing and handling batteries.

CALIFORNIA Proposition 65 Warning Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm. Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

Battery acid causes burns. Batteries contain sulfuric acid. Avoid contact with skin, eyes or clothing. Antidote (external): Flush with water. Antidote (eyes): flush with water for 15 minutes and seek medical attention immediately. Antidote (internal): Drink large quantities of water or milk. Do not induce vomiting. Seek medical attention immediately.

Keep out of reach of children and other unauthorized persons.

### **Reflectors and warning lamps**

Flashing amber warning lamps must be used when operating on the public roads.

### **Personal Protection Equipment (PPE)**

Wear personal protective equipment such as hard hat, safety glasses or goggles, heavy gloves, hearing protection, protective clothing, etc.

### **Do not operate tag**

Before you start servicing the machine, attach a 'Do Not Operate' warning tag to the machine in an area that will be visible.

### **Hazardous chemicals**

If you are exposed to or come in contact with hazardous chemicals you can be seriously injured. The fluids, lubricants, paints, adhesives, coolant, etc. required for the function of your machine can be hazardous. They may be attractive and harmful to domestic animals as well as humans.

Material Safety Data Sheets (MSDS) provide information about the chemical substances within a product, safe handling and storage procedures, first aid measures and procedures to be taken in the event of a spill or accidental release. MSDS are available from your dealer.

Before you service your machine check the MSDS for each lubricant, fluid, etc. used in this machine. This information indicates the associated risks and will help you service the machine safely. Follow the information in the MSDS, on manufacturer containers, as well as the information in this manual when servicing the machine.

Dispose of all fluids, filters and containers in an environmentally safe manner according to local laws and regulations. Check with local environmental and recycling centers or your dealer for correct disposal information.

Store fluids and filters in accordance with local laws and regulations. Use only appropriate containers for the storage of chemicals or petrochemical substances.

Keep out of reach of children or other unauthorized persons.

Additional precautions are required for applied chemicals. Obtain complete information from the manufacturer or distributor of the chemicals before using them.

### **Utility safety**

When digging or using ground engaging equipment, be aware of buried cables and other services. Contact your local utilities or authorities, as appropriate to determine the locations of services.

Make sure the machine has sufficient clearance to pass in all directions. Pay special attention to overhead power lines and hanging obstacles. High voltage lines may require significant clearance for safety. Contact local authorities or utilities to obtain safe clearance distances from high voltage power lines.

Retract raised or extended components, if necessary. Remove or lower radio antennas or other accessories. Should a contact between the machine and an electric power source occur the following precautions must be taken: Stop the machine movement immediately. Apply the park brake, stop the engine and remove the key. Check if you can safely leave the cab or your actual position without contact with electrical wires. If not, stay in your position and call for help. If you can leave your position without touching lines, jump clear of the machine to make sure you do not make contact with the ground and the machine at the same time. Do not permit anyone to touch the machine until power has been shut off to the power lines.

### **Electrical storm safety**

Do not operate machine during an electrical storm.

If you are on the ground during an electrical storm, stay away from machinery and equipment. Seek shelter in a permanent, protected structure.

If an electrical storm should strike during operation, remain in the cab. Do not leave the cab or operator's platform. Do not make contact with the ground or objects outside the machine.

### **Mounting and dismounting**

Mount and dismount the machine only at designated locations that have handholds, steps or ladders.

Do not jump off the machine.

Make sure steps, ladders and platforms remain clean and clear of debris and foreign substances. Injury may result from slippery surfaces.

Face the machine when mounting and dismounting.

Maintain a three-point contact with steps, ladders and handholds.

Never mount or dismount from a moving machine.

### **Working at heights**

When the normal use and maintenance of the machine requires working at heights: Correctly use installed steps, ladders and railings. Never use ladders, steps or railings while the machine is moving. Do not stand on surfaces which are not designed as steps or platforms.

Do not use the machine as a lift, ladder or platform for working at heights.

### **Implement safety**

Make sure the implement is connected to a stable device when activating the hydraulics to fold and unfold the wings.

Always make sure the work area within the radius of the wings is clear of other persons before operating the wing lift system.

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## Safety rules - Ecology and the environment

Soil, air, and water quality is important for all industries and life in general. When legislation does not yet rule the treatment of some of the substances that advanced technology requires, sound judgment should govern the use and disposal of products of a chemical and petrochemical nature.

Familiarize yourself with the relative legislation applicable to your country, and make sure that you understand this legislation. Where no legislation exists, obtain information from suppliers of oils, filters, batteries, fuels, anti-freeze, cleaning agents, etc., with regard to the effect of these substances on man and nature and how to safely store, use, and dispose of these substances.

### Helpful hints

- Avoid the use of cans or other inappropriate pressurized fuel delivery systems to fill tanks. Such delivery systems may cause considerable spillage.
- In general, avoid skin contact with all fuels, oils, acids, solvents, etc. Most of these products contain substances that may be harmful to your health.
- Modern oils contain additives. Do not burn contaminated fuels and or waste oils in ordinary heating systems.
- Avoid spillage when you drain fluids such as used engine coolant mixtures, engine oil, hydraulic fluid, brake fluid, etc. Do not mix drained brake fluids or fuels with lubricants. Store all drained fluids safely until you can dispose of the fluids in a proper way that complies with all local legislation and available resources.
- Do not allow coolant mixtures to get into the soil. Collect and dispose of coolant mixtures properly.
- The air-conditioning system contains gases that should not be released into the atmosphere. Consult an air-conditioning specialist or use a special extractor to recharge the system properly.
- Repair any leaks or defects in the engine cooling system or hydraulic system immediately.
- Do not increase the pressure in a pressurized circuit as this may lead to a component failure.
- Protect hoses during welding. Penetrating weld splatter may burn a hole or weaken hoses, allowing the loss of oils, coolant, etc.

### Battery recycling

Batteries and electric accumulators contain several substances that can have a harmful effect on the environment if the batteries are not properly recycled after use. Improper disposal of batteries can contaminate the soil, groundwater, and waterways. CASE IH strongly recommends that you return all used batteries to a CASE IH dealer, who will dispose of the used batteries or recycle the used batteries properly. In some countries, this is a legal requirement.



### Mandatory battery recycling

**NOTE:** *The following requirements are mandatory in Brazil.*

Batteries are made of lead plates and a sulfuric acid solution. Because batteries contain heavy metals such as lead, CONAMA Resolution 401/2008 requires you to return all used batteries to the battery dealer when you replace any batteries. Do not dispose of batteries in your household garbage.

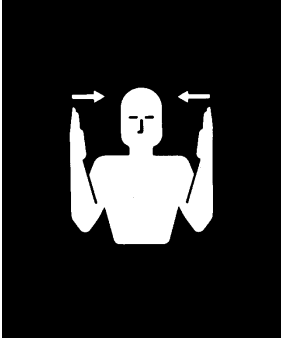
Points of sale are obliged to:

- Accept the return of your used batteries
- Store the returned batteries in a suitable location
- Send the returned batteries to the battery manufacturer for recycling

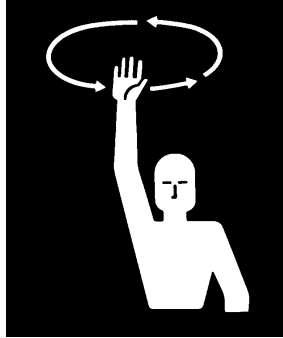
## Hand signals

Precision Air™ Series Air Carts

It is often necessary to communicate using hand signals in agricultural operations when noise or distance inhibit communication by voice. The **ASAE S351** standard illustrates these hand signals, which provide an easy means of communication, particularly in the interest of safety.



**THIS FAR TO GO** - Place palms at ear level facing head and move laterally inward to indicate remaining distance to go.



**COME TO ME** - Raise the arm vertically overhead, palm to the front, and rotate in large horizontal circles.



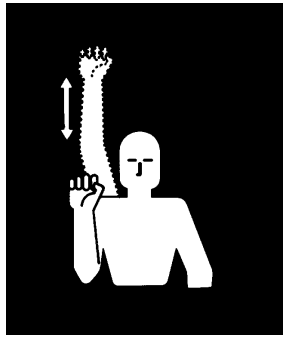
**MOVE TOWARD ME, FOLLOW ME** - Point toward person(s), vehicle(s), or unit(s), beckon by holding the arm horizontally to the front, palm up, and motioning toward the body.



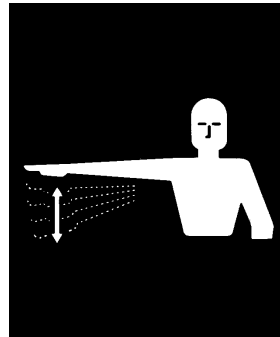
**MOVE OUT, TAKE OFF** - Face the desired direction of movement; hold the arm extended to the ear; then swing it overhead and forward in the direction of desired movement until it is horizontal, palm down.



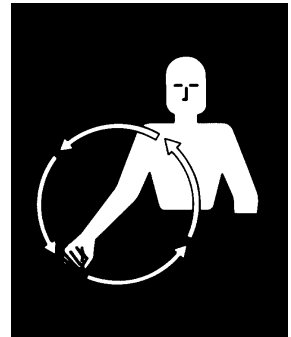
**STOP** - Raise hand upward to the full extent of the arm, palm to the front. Hold that position until the signal is understood.



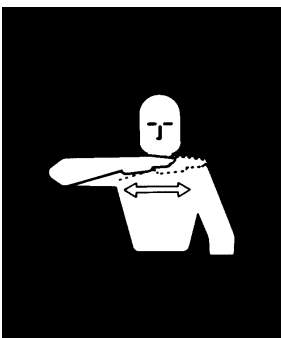
**SPEED IT UP, INCREASE SPEED** - Raise the hand to the shoulder, fist closed; thrust the fist upward to the full extent of the arm and back to the shoulder rapidly several times.



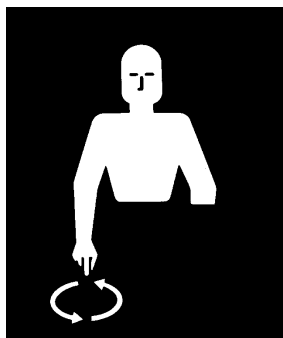
**SLOW IT DOWN, DECREASE SPEED** - Extend the arm horizontally sideways, palm down, and wave arm downward



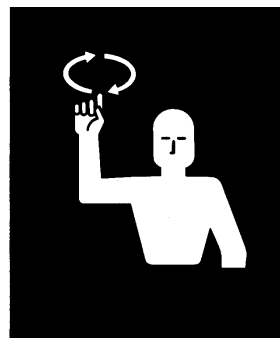
**START THE ENGINE** - Simulate cranking of vehicles by moving arm in circular motion at waist level.



**STOP THE ENGINE** - Draw right hand, palm down, across the neck in a "throat cutting" motion from left to right.



**LOWER EQUIPMENT** - Make circular motion with either hand pointing to the ground.



**RAISE EQUIPMENT** - Make circular motion with either hand at head level.

## Safety signs

The following safety signs are on your machine as a guide for your safety and for the safety of those working with you. Walk around the machine and note the content and the location of all safety signs before you operate your machine.

Keep all safety signs clean and legible. Clean safety signs with a soft cloth, water, and gentle detergent.

**NOTICE:** Do not use solvent, gasoline, or other harsh chemicals. Solvents, gasoline, and other harsh chemicals may damage or remove safety signs.

Replace all safety signs that are damaged, missing, painted over, or illegible. If a safety sign is on a part you or your dealer replaces, make sure that you or your dealer install the safety sign on the new part. See your dealer for replacement safety signs.

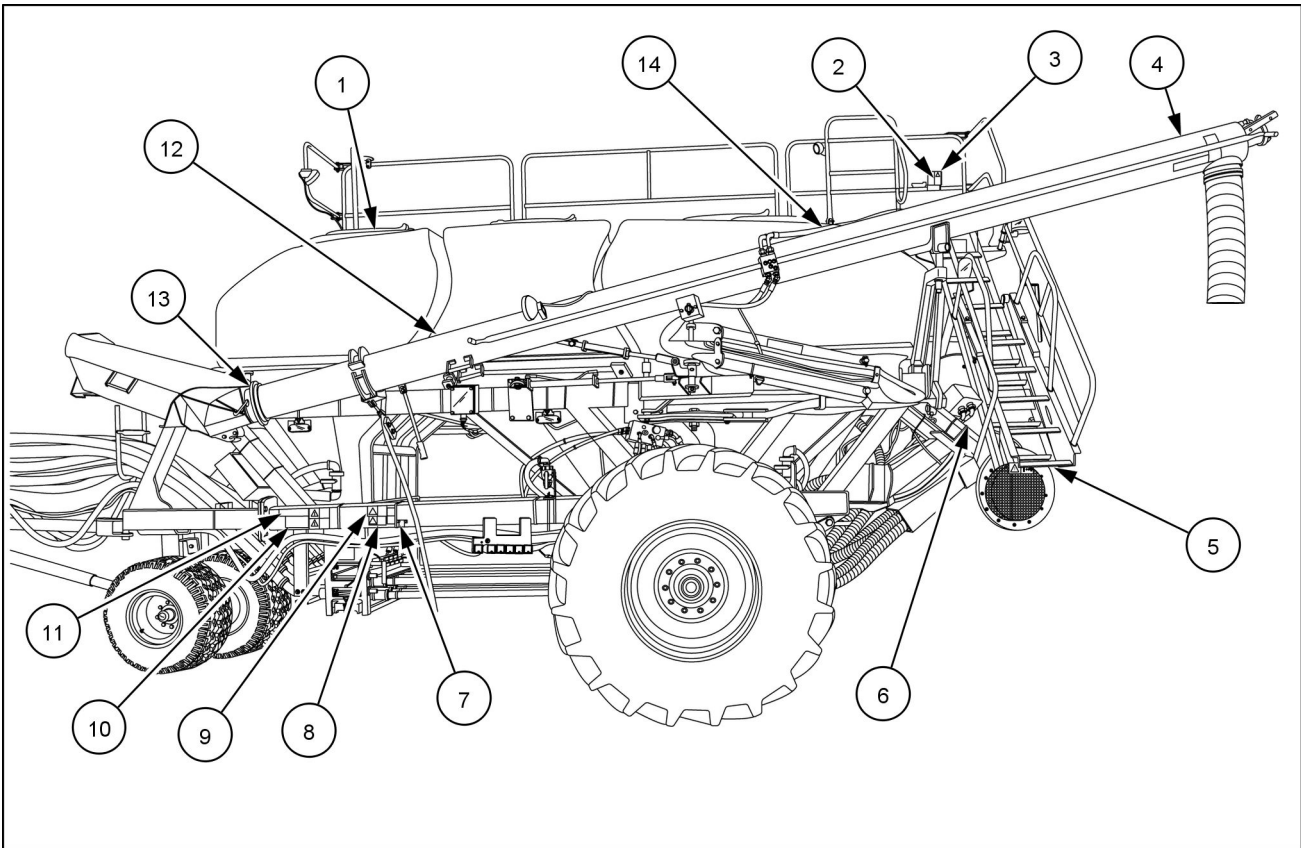


Safety signs that display the “Read operator’s manual” symbol direct you to the operator’s manual for further information regarding maintenance, adjustments, or procedures for particular areas of the machine. When a safety sign displays this symbol, consult the appropriate page of the operator’s manual.



Safety signs that display the “Read service manual” symbol direct you to the service manual. If you doubt your ability to perform service operations, contact your dealer.

**NOTE:** New decals are available from your CASE IH dealer.

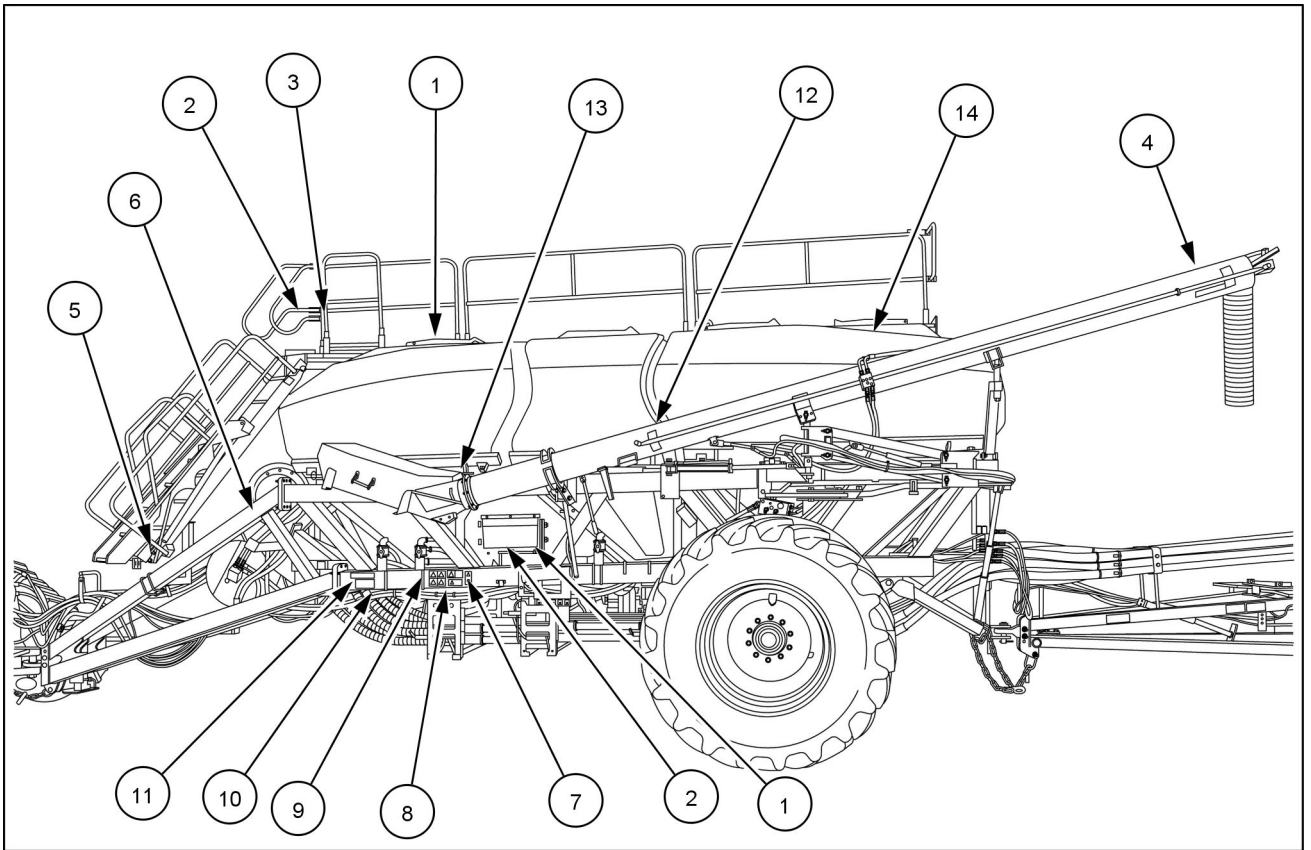


SAIL15SE00440FA 1

**Tow- behind air cart**



INTRODUCTION

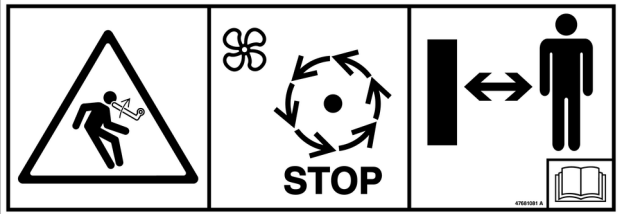


SAIL15SE01087FA 2

**Tow - between air cart with auxiliary tank**

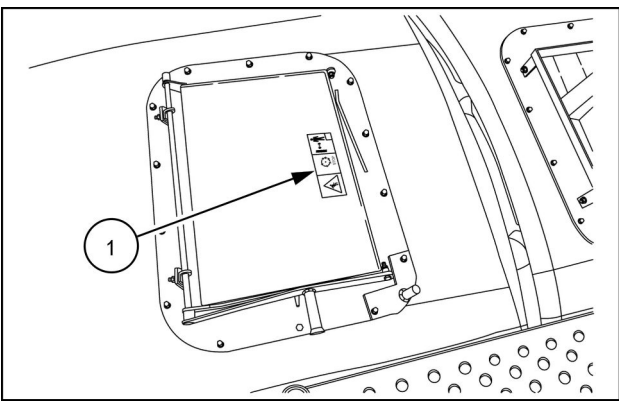
All models

**CAUTION**  
 Pressurized tanks apply considerable force to lids.  
 Never open lids when pressurization fan is operating.  
 Failure to comply could result in minor or moderate injury.  
 Quantity: 1 per tank lid  
 Part number: 47681081



47681081 3

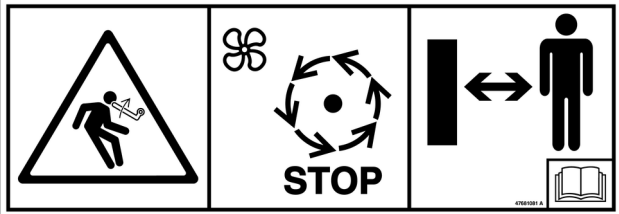
On tank lid (1).



SAIL16SE00397AA 4

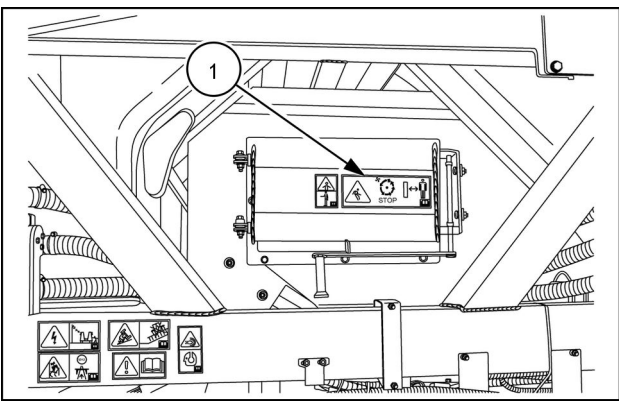
Auxiliary tank models

**CAUTION**  
 Pressurized tanks apply considerable force to lids.  
 Never open lids when pressurization fan is operating.  
 Failure to comply could result in minor or moderate injury.  
 Quantity: 1 per auxiliary tank left side door  
 Part number: 47681081



47681081 5

On tank door (1).



SAIL16SE00049AA 6

All models

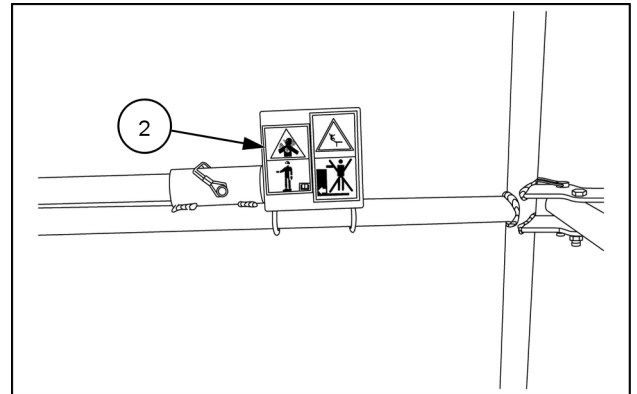
**WARNING**

Stop fan before opening lid. Do not operate fan with lid open. Avoid exposure to airborne chemicals. Dust and fumes will be exhausted if fan is operated with tank lid open. Chemicals may cause eye, skin or breathing problems. Wear face mask, gloves and goggles. Read and follow chemical suppliers safety instructions. Failure to comply could result in death or serious injury.

Quantity: 1  
Part number: 47433182



On platform handrail at top of ladder (2).



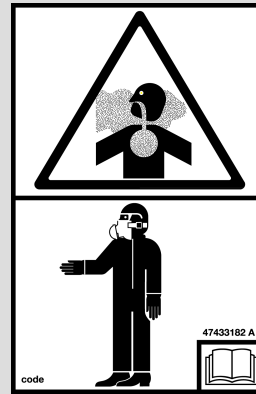
SAIL15SE00396AA 8

Auxiliary tank models

**WARNING**

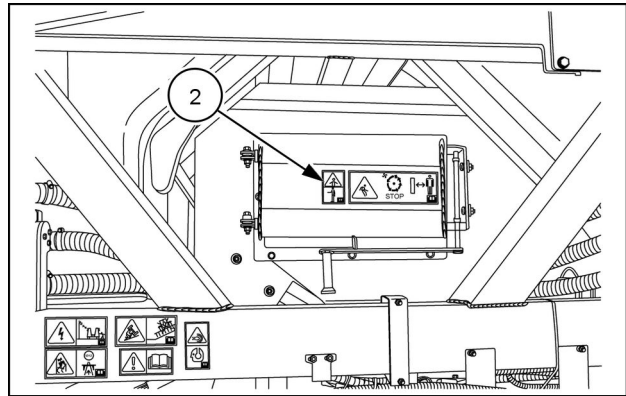
Stop fan before opening lid. Do not operate fan with lid open. Avoid exposure to airborne chemicals. Dust and fumes will be exhausted if fan is operated with tank lid open. Chemicals may cause eye, skin or breathing problems. Wear face mask, gloves and goggles. Read and follow chemical suppliers safety instructions. Failure to comply could result in death or serious injury.

Quantity: 2 on auxiliary tank  
Part number: 47433182



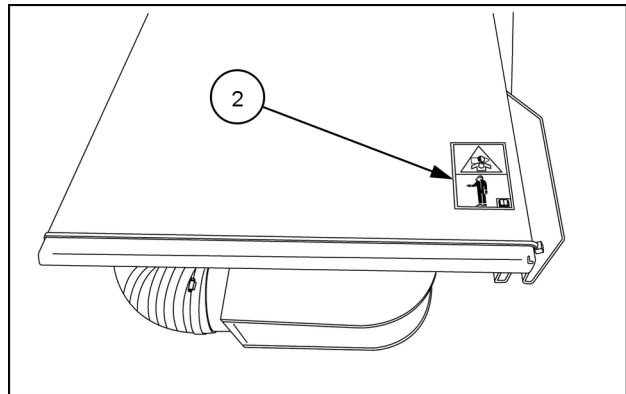
code 47433182 9

On auxiliary tank door (2).



SAIL16SE00049AA 10

On auxiliary tank fill lid (2).



SAIL16SE00080AA 11

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