INSTALLATION, OPERATION & MAINTENANCE MANUAL

MODEL: FS-10AS-CPI
CAPACITY: 8,000 Lbs
TIPS TO THE INSTALLER

MODEL: FS-10AS-CPI
CAPACITY: 8,000 LBS

Follow this check list to insure a satisfactory installation.

1. Read through the installation instructions completely before starting the job.

2. The hydraulic cylinder must be installed 3/8 of an inch above the finished floor grade.

3. The (12) bolts on top of cylinder assembly must be torque down to 110 ft/lbs. after installation. See Fig.4 on Dwg.128099.

4. The cylinder must be filled with oil prior to raising the lift the first time. (See step #6 of installation instructions). To fill within 5 inches of the top means you will need 34 imp. gal. (41 U.S. gal.) of light hydraulic oil, viscosity 150 SSU at 100°F, with rust and anti-foam inhibitors. Required air, 137 PSI MIN. working pressure with 80 imp. gal. (96 U.S. gal.) reservoir.
SPECIFICATIONS

Capacity: 8,000 lbs. – Max. 2,000 lbs per adapter/arm.

Height of Lift Pads, Lowered: 3-1/2”.

Height of Lift Pads, Raised: 8-1/2”.

Arm retracted length: 30”.

Arm extended length: 44”.

Stroke: 68”.

Superstructure: Frame Contact, Swivel Arm.

Control: Air control valve: ½” NPT.

Air Supply Required: 137 psi (min).
SAFETY INSTRUCTIONS

1. Read all instructions.
2. Inspect lift daily. Do not operate if it malfunctions or problems have been encountered.
3. Never attempt to overload the lift. The manufacturer’s rated capacity is shown on the identification label on top of the superstructure. Do not tie down the air control valve in either “intake” or “exhaust” side.
4. Only trained and authorized personnel should operate the lift. Do not allow customers or bystanders to operate the lift or be in the lift area.
5. Position the lift support pads to contact the vehicle manufacturer’s recommended lifting points. Raise the lift until the pads contact the vehicle. Check pads for secure contact with the vehicle, then raise the lift to the desired working height.
6. Some pickup trucks may require an optional truck adapter to clear running boards or other accessories. Note: Always use all 4 arms to raise and support vehicle.
7. Caution! Never work under the lifts unless the mechanical safety locks are engaged.
8. Note that the removal or installation of some vehicle parts may cause a critical load shift in the center of gravity and may cause the vehicle to become unstable. Refer to the vehicle manufacturer’s service manual for recommended procedures.
9. Always keep the lift area free of obstructions and debris. Grease and oil spills should always be cleaned up immediately.
10. Never raise vehicle with passengers inside.
11. Before lowering check area for any obstructions.
12. Before driving vehicle over the lift, position the arms to the drive-over position to ensure unobstructed clearance. Do not hit or run over as this could damage the lift and/or vehicle.
13. Before removing the vehicle from the lift area, position the arms to the drive-over position to prevent damage to the lift and/or vehicle.
14. Care must be taken as burns can occur from touching hot parts.
15. To reduce the risk of fire, do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).
16. Adequate ventilation should be provided when working on operating internal combustion engines.
17. Keep hair, loose clothing, fingers, and all parts of body away from moving parts.
18. Use only as described in this manual. Use only manufacturer’s recommended attachments.
19. Always wear safety glasses. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

SAVE THESE INSTRUCTIONS
LIFTING THE VEHICLE

Before you lift any vehicle, you have to know how to find its center of gravity. The center of gravity is the point between the front and rear of the vehicle where the weight is distributed equally.

Each vehicle you lift will have a different center of gravity due to:

- Wheel base.
- Location of drive train.
- And other factors.

In most cases, the center of gravity on rear wheel drive passenger cars is below the driver seat. On front wheel drive passenger cars the center of gravity is slightly in front of the driver’s seat. The lifting pads should be positioned according to the vehicle manufacturer’s instructions – if these instructions are not available, or if the designed lift points have been altered or damaged in any way, contact your supervisor or vehicle manufacturer’s representative for instructions. Keep the center of gravity of the vehicle equally spaced between the lifting pads. Be aware that the center of gravity shifts if major vehicle components are removed.
OPERATING INSTRUCTIONS

CAUTION: DO NOT OPERATE LIFT BEFORE IT HAS BEEN FILLED WITH HYDRAULIC OIL.

BE CERTAIN THAT AIR VALVE IS IN NEUTRAL AND THE OIL FILL PLUG IS TIGHT.

TO RAISE LIFT:

1. Drive vehicle over lift.
2. Position arms and sleeves so that pick up pads are under the pick up points of the frame of vehicle.
3. Move lever of air control valve slowly to the “intake” position to have pick up pads contact frame of the vehicle. Re-check pick up pads are in proper contact.
4. Position lever of air control valve to the “intake” position. Release lever when piston is six to eight inches from the desired working height. If lift is not taken to the top of its stroke, place locking pin in non-rotator bar.

TO LOWER LIFT:

1. Raise the post off lock latch and manually disengage.
2. Hold lever or air control valve in the “exhaust” position until the hoist superstructure is touching the floor.
3. Move superstructure arms out of the way of the vehicle wheels.
4. Drive vehicle off lift.
MAINTENANCE INSTRUCTIONS

1. Place all hoists in full down position.

2. If oil drop of two inches or greater occurred report finding the Plant Maintenance Control.

3. Add approved oil if required.

4. Record amount of oil added.

5. Remove any accumulated grease and dirt from each cylinder packing area.

6. Clean area around post with wet vacuum and broom.

7. Clean out locking leg area. Lubricate the arm contact points with light grease.

8. Keep all superstructure bolts tight.

9. Always keep superstructure and pickup adapters clean.

10. The hydraulic fluid should be changed once every two years using a good quality ISO 32 hydraulic oil.

11. Every three months check and re-tighten bolts on superstructure. Apply a light coating of grease to the locking leg pipe.

12. Always refer to operation manual when operating lift.

13. Call your distributor of factory direct if you have any questions in operating lift.

14. Visually inspect the latch on the locking leg.

NOTE: ONLY TRAINED LIFT SERVICE PERSONNEL ARE PERMITTED TO REPLACE WORN OR BROKEN PARTS.
INSTALLATION INSTRUCTIONS

1. Prior to the initial excavation, determine the exact hoist location and make sure the proper working space and clearance is available. For suggested dimensions, see typical garage layout, drawing 125682. Check the ceiling clearance—normally 12'-0" is adequate.

The excavation should be made to a depth of approximately 102-1/4" and about 40" in diameter. See drawing 125682.

A concrete footing approximately 24" in diameter and at least 6" should be poured at the bottom of the excavation. The top of the footing must be 96-1/4" minimum below the finished floor grade. See drawing 125682.

2. Attach the welded bracket of the non-rotator to the underside of the cylinder flange with two 3/8" x 3/4" long hex bolts and washers. Slide down the second bracket to the mounting plate of the cylinder and attach it with two 3/8" x 1-1/2" long hex bolts, nuts, and four washers. (MAKE SURE NON-ROTATOR IS PARALLEL AND PLUMB TO CYLINDER CASING). Install a suitable length of ½" air line pipe at the cylinder bottom connection. See drawing 128099.

3. Fasten rope, cable or chain to the cylinder and lower into the excavation. Set the top of the cylinder 3/8" above the finished floor grade.

IMPORTANT: BE CERTAIN THAT THE NON-ROTATOR HOUSING IS BOLTED TO THE CYLINDER CASING AND POSITIONED AT RIGHT ANGLES TO THE FLOW OF TRAFFIC.

Stretch a string from side to side of the installation, so that the string passes over the center point of cylinder and non-rotator housing. This string must be right angles to the flow of traffic.

Make sure that the ½" air pipe is installed at the cylinder bottom connection. Block hoist into position. Using at least a 3 feet level, check for plumb at top of cylinder. Check in both directions, when satisfied with both plumb and blocking, pour at least 6" of concrete grout in the bottom of the hole. Allow the concrete to harden, then re-check that the hoist is PLUMB and FIRMLY BLOCKED.

Remove shipping strap. Install ½" air line pipe with suitable fittings to a point of convenient location for the ½" air control valve. Use a good grade of oil-resistant sealant on all pipe joints. It is important all pipe joints be checked for leaks.

4. Backfill excavation with clean, dry sand to a 6" minimum from the top of cylinder. Install 3" drain in floor. Pour floor and maintaining surface 3/8 of an inch below the cylinder top and sloping towards the drain. Allow floor to harden.
5. To maintain capacity and lifting speed, a suitable compressor with 150 to 175 psi pressure rating, complete with an 80 imp. gal. (96 U.S. gal) air reservoir is recommended.

6. Fill and test system as follows:
   - Move lever of air control valve to “Exhaust” position.
   - Remove air bleed screw from bleeder plug.
   - Remove oil fill plug.
   - Fill piston gradually with oil to high mark on gauge stick. Light grade hydraulic oil, viscosity 150 SSU at 100 degree F, with rust and anti-foam inhibitors. Approximately 34 imp. gal. (41 U.S. gal) are required.
   - Replace oil fill plug.
   - Replace air bleed screw in bleeder plug.
   - Move lever of air control valve to “intake”(UP) position and admit air gradually in the system until the piston rises approximately 3 feet above the floor, return lever to neutral.
   - To bleed hoist, open, BUT DO NOT REMOVE the air bleed screw. When a steady flow of oil appears, tighten air bleed screw.
   - Lower piston and re-check the oil level on gauge stick. Add oil if required.
     Caution: Always have lever of air control valve in “exhaust” position when removing oil plug.
   - Test installation by maintaining full working pressure (not to exceed 150 psi) in system with piston fully extended.

7. Raise lift approximately 2'-0”, position and bolt bolster on piston with (4) 7/8” socket head cap screw. Bolt non-rotator to bolster with one 1” hex bolt. See drawing 128086.

8. Assemble the arms and sliding sleeves. See drawing 128086.

9. Install wheel locator plate with (4) 3/8” x 1-1/2” long drive pins. See drawing 125682.
FS-10AS
PART LIST

ITEM QTY PART# DESCRIPTION

Semi-Hydraulic
1 1 CYLINDER ASS’Y
2 1 CYLINDER CASING ONLY
3 1 PLUNGER ASS’Y
4 1 FILL PLUG

Full Hydraulic
1 1 CYLINDER ASS’Y
2 1 CYLINDER CASING ONLY
3 1 PLUNGER ASS’Y

CONTROL Semi-Hydraulic
6 1 AIR EXHAUST MUFFLER
7 1 1/2” AIR VALVE(NON-LOCK)

CONTROL Full Hydraulic
6 1 AIR EXHAUST MUFFLER
8 1 1/2” AIR VALVE(DOUBLE-LOCK)
9 1 1” OIL VALVE

COMMON PARTS
10 1 BOLSTER ASS’Y
11 4 SWIVEL ARMS
12 4 PAD AND SLEEVE ASS’Y (STD)
13 1 WHEELSTOP
14 4 3/8 DRIVE PINS
15 4 SOCKET HD CAP SCREW, 7/8 x 2-1/2
16 4 SPRING PIN, 1/2 x 2-1/2
17 4 SPRING PIN, 5/16 x 2-1/2
18 4 HEX BOLT, 1/2 x 1-1/4
19 4 WASHER
20 4 OFFSET ARM
21 4 PAD AND SLEEVE ASS’Y (SHORT)

NON-ROTATOR
22 1 HEX BOLT, 1 x 3
23 1 NON-ROTATOR CASING
24 1 NON-ROTATOR PLUNGER (AUTO V-LEG)
25 1 NON-ROTATOR PLUNGER (MANUAL)
26 1 NON-ROTATOR PLUNGER (K-LEG)
27 1 SAFETY BAR
28 1 WASHER

A MAY/06 B APR/07 C OCT/07 TITLE PART LIST

SCALE NTS NEXT ASSY.
BY KL DATE JUL 29/04

A2 8

PART FS-10 (8,000 LBS)

Dwg.

1 128087
GENERAL PLUNGER REPACKING

Removal of Plunger "One Piece" Seal

A. With hoist in lowered position and air valve in exhaust position, remove bolster, air vent plug and all 5/8" hex bolts in top cylinder wiper seal cover. (See Fig. 1)

B. Remove wiper seal cover and gasket. Pull out bearing sleeve, including "One Piece" seal with two 3/4"-10 NC eye bolts in two tapped holes in bearing sleeve. Remove O-ring and gasket. Inspect two UHMW wear strips inside the bearing sleeve, replace if necessary. (See Fig. 2 & 3)

Replacement of "One Piece" Seal

1. Clean cylinder flange surface, bearing sleeve and wiper seal cover. Place new gasket in position. Be sure gasket is perfectly flat. Place new O-ring into bearing sleeve, use heavy grease to hold O-ring in place. Replace bearing sleeve. (See Fig. 4)

2. Apply thin coat of hydraulic oil around plunger for new seal installation. Position new "One Piece" seal onto plunger. Use wiper seal cover as a jig to apply even pressure on "One Piece" seal until wiper seal cover contacts bearing sleeve. (See Fig. 5)

3. Make sure new seal is properly seated. Align wiper seal cover to bearing sleeve, replace all 5/8" hex bolts and tighten down evenly to 110 ft./lb. torque. (See Fig. 6)

4. Replace "air vent" plug, bleed air from cylinder and tighten vent plug.

5. Check oil level in reservoir. For Semi-Hydraulic hoist, remove fill plug and add oil until oil level is slightly below air line tube. For full hydraulic hoist, check fill plug gauge on oil tank and fill to proper level.

6. After a week of operation, retighten all 5/8" hex bolts.

HYDRAULIC OIL

For best results use Hydraulic Oil with viscosity of 150 S.S.U. at 100°F, containing corrosion, rust, oxidation and foam inhibitors (ISO 32).

Listed below are sample brands which fall in the above category and can, therefore, be recommended:

- Castrol Oil - Castrol Hydraulic
- Imperial Oil - Teressio 32
- Pennsylvania Oil - Merit SD
- Quaker State - HD-10
- Shell Oil - Telhus 32
- Texaco - Rando Oil 32

For all oil companies not listed, use their hydraulic oil equivalent to the above specifications.
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<thead>
<tr>
<th>TROUBLE</th>
<th>PROBABLE CAUSE</th>
<th>ACTION TO BE TAKEN</th>
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</thead>
<tbody>
<tr>
<td>Hoist raises unattended.</td>
<td>Air valve leaking on inlet side.</td>
<td>1) Adjust tension on inlet side. Looseing nut on valve.</td>
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<tr>
<td></td>
<td></td>
<td>2) Pipe turnings other foreign matter under valve seal.</td>
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<tr>
<td></td>
<td></td>
<td>Remove valve stem, replace or reverse seal.</td>
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<tr>
<td>Hoist lowers unattended.</td>
<td>a) Air valve leaking on exhaust side.</td>
<td>1) &amp; 2) Follow the instruction above, but apply them to the exhaust side of valve.</td>
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<tr>
<td></td>
<td>b) Detergent oil foaming.</td>
<td>3) Drain tank and fill with recommended fluid.</td>
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<tr>
<td></td>
<td>c) Leaking fill plug.</td>
<td>4) Clean gasket and seating surfaces under fill plug and tighten.</td>
</tr>
<tr>
<td>Oil blows out exhaust.</td>
<td>a) Detergent oil foaming.</td>
<td>1) Drain tank, refill with recommended fluid.</td>
</tr>
<tr>
<td></td>
<td>b) Leaks at bottom of airline tube.</td>
<td>2) Drain compressor, if water content of oil reservoir is excessive or causing piston discolouration, drain oil, refill with recommended fluid.</td>
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<tr>
<td></td>
<td></td>
<td>3) Replace airline tube.</td>
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<td></td>
<td>NOTE: Drain compressor every morning before using hoist.</td>
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<tr>
<td>Hoist jumping while raising or lowering.</td>
<td>a) low on oil.</td>
<td>1) Exhaust air completely, fill with recommended fluid to proper level.</td>
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<td></td>
<td>b) Air locked in.</td>
<td>2) Bleed air from system by loosening bleed plug in wiper casing. Operate hoist through full cycle several times until oil only emerges from bleed plug orifice. Tighten plug.</td>
</tr>
<tr>
<td>Hoist not raising.</td>
<td>a) No air supply.</td>
<td>1) Check compressor, fuses, etc. Check air dock at compressor on line to hoist.</td>
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<tr>
<td></td>
<td>b) Low on oil.</td>
<td>Check air lines for leaks.</td>
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<tr>
<td></td>
<td>c) Float stuck at bottom of fill pipe tube.</td>
<td>2) This would apply if a Low-Oil Control device is used. Check fluid level, refill.</td>
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<tr>
<td></td>
<td>d) Obstruction in orifice at outlet at bottom of fill pipe tube.</td>
<td>3) Remove float and examine for damage.</td>
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<td></td>
<td></td>
<td>4) Foreign object ie, coins, bottle caps, or oil plug lodged at bottom of fill pipe must be removed.</td>
</tr>
<tr>
<td>Hoist slow rising and lowering.</td>
<td>a) Insufficient air pressure.</td>
<td>1) Check compressor.</td>
</tr>
<tr>
<td></td>
<td>b) Pipeline clogged or too small.</td>
<td>2) Check piping.</td>
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<tr>
<td></td>
<td>c) Oil too heavy.</td>
<td>3) Add proper oil.</td>
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# WARRANTY ACTIVATION INFORMATION

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
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</thead>
<tbody>
<tr>
<td>Lift Model</td>
<td></td>
</tr>
<tr>
<td>Cylinder Serial Number(s)</td>
<td></td>
</tr>
<tr>
<td>Date of Installation</td>
<td></td>
</tr>
<tr>
<td>Name &amp; Address of Installer</td>
<td></td>
</tr>
<tr>
<td>Name &amp; Address of Purchaser</td>
<td></td>
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<tr>
<td>Name of Authorized Signer</td>
<td></td>
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<tr>
<td>Authorized Signer Signature</td>
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</tbody>
</table>
1. **GENERAL.** The terms and conditions of sales order outlined herein shall apply to the sale by SVI INTERNATIONAL, INC. (hereinafter referred to as “Company”) of the items described on the facing page (hereinafter referred to as “Merchandise”) to Purchaser.

2. **DELIVERY.** Delivery shall be deemed to be complete when the Merchandise has been shipped F.O.B. Company’s plants in Aurora, Illinois; Duarte, California; and Baltimore, Maryland (“Company’s plants”). Shipments are subject to delays from causes or contingencies beyond the reasonable control of the Company. When otherwise not specified, shipments will be made in standard containers via carrier which, in the judgment of the Company, will result in the most practical method. Title and right of possession will pass to the Purchaser upon receipt by the carrier at the shipping point. If a customer of the Company specifies a specific carrier’s method of shipment (i.e. UPS Next Day Air) and that carrier does not perform to the customer’s expectations, freight credit to a customer’s account will not be issued unless the Company can first obtain a credit.

3. **RISK OF LOSS.** Identification of the Merchandise under Uniform Commercial Code (hereinafter referred to as “UCC”) Section 2-501 shall take place at the moment of shipment F.O.B. Company’s plants. Risk of loss shall pass to the Purchaser when the Merchandise is shipped from the Company’s plants.

4. **TITLE.** Title to the merchandise shall transfer to the Purchaser when the Merchandise is shipped from the Company’s plants.

5. **WARRANTIES.** The Company guarantees its products to be free from defects in workmanship and raw materials for a period of one year from date of purchase. This warranty is in lieu of any and all Warranties including those of MERCHANTABILITY and FITNESS for any purpose. **Our liability for breach of any and all warranties is limited to refunding our invoice price of the product, or at our option, replacement of the material free of charge including transportation charges but not the cost of labor or consequential damages.**

6. **SETOFF.** All claims for money due or to become due from the Company shall be subject to deduction by the Company for any setoff or counterclaim arising out of this or any other claims of the Company or its affiliated companies, whether such setoff or counterclaim arose before or after any assignment by Purchaser.

7. **INDEMNIFICATION.** Purchaser agrees to indemnify the Company and hold it harmless from and against all claims, liability, loss, damage or expense, including reasonable counsel fees, arising from or by reason of any modifications or alterations made by Purchaser. If a customer of the Company modifies or alters any part, in any manner whatsoever, or uses any part in departure from recommended performance specifications, said customer agrees to indemnify and hold the Company harmless from and against all liability and expenses based on damage to property or injury to or death of any person arising out of or attributable to such modified or altered part. **Further, the Company will not accept any such modified or altered part for credit to a customer’s account.**

8. **FREIGHT POLICY.** Freight charges on individual orders less than $2,500 in net value are prepaid and added to invoice or collect F.O.B. shipping point. Freight charges (standard ground service and continental US only) on individual orders more than $2,500 net value are paid by the Company F.O.B. shipping point. Note: customers with C.O.D. terms are responsible for all carrier C.O.D. fees regardless of order net value.

9. **RETURN POLICY.** An RGA Form is included with every order. If you did not get an RGA form, the part is non-returnable. All parts must be returned freight prepaid and the shipment must include a letter of explanation giving the specific reason for return including details as to the conditions under which the part or parts operated. Note: parts returned freight collect or without written explanation may be refused. Parts are non-returnable after 90 days from the date of invoice.

10. **RESTOCK CHARGE.** Returns are subject to up to twenty-five (25%) restocking charge. Refusals are subject to the same restocking charge plus the cost of outbound and return freight charges and/or fees incurred by the Company due to shipment refusal.

11. **PRICES AND PAYMENTS.** All prices are subject to change without notice. All prices are F.O.B. shipping point. The Company standard terms are net 30 days, C.O.D. company check, C.O.D. cash, VISA, Mastercard, Discover or American Express. However, if in the judgment of the Company, the financial condition of the Purchaser at any time does not justify shipment according to standard terms of payment, the Company may require full or partial payment in advance.

12. **INTERPRETATION.** This sales order is intended by the parties as a complete and exclusive statement of the terms of their agreement. It supersedes all prior agreements, written or oral. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any terms used in this sales order. Acceptance or acquiescence in a course of performance rendered under this purchase order shall not be relevant to determine the meaning of this sales order even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity for objection. Whenever a term defined by the UCC is used in this sales order the definition contained in the UCC shall control.

13. **MODIFICATION.** This sales order can be modified or rescinded only by a writing signed by both parties.

14. **WAIVER.** No claim or right arising out of a breach of this sales order can be discharged in whole or in part by a waiver or renunciation of the claim or right unless such waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party.

15. **ASSIGNMENT.** No right or interest in this sales order shall be assigned by either party without the written consent of the other and no delegation of any obligation owed, or of the performance of any obligation by either the Company or Purchaser shall be made without the written consent of the other party.

16. **TIME TO PERFORM AND BRING ACTION.** Time is of the essence of this sales order. Any action for breach of this sales order shall be commenced within two (2) years after the cause of action has accrued. Any party who loses any litigation shall reimburse the other party for costs including reasonable attorneys fees. The exclusive jurisdiction for any legal action shall be the Circuit Court of Kane County, Illinois.

17. **APPLICABLE LAW.** This sales order shall be governed by the UCC of Illinois as effective and in force on the date of this sales order.