

Revised by DSM

Effective Aug 19/ 2016
BOURGAULT INDUSTRIES Pre-delivery Checklist

SHORTAGES: st all shortages)

Pre-delivery Checklist 7000 SERIES

DATE:			L7550	7550	7700	L7800	7950	71300
DEALERS	HIP:							
ORDER NU	JMBER:			-	1			
SERIAL NU	JMBER:						11	
PRODUCT	ION SCHEDULE:			V			A	
FINAL SPE	CS:							
	REAR TIRES			FRONT TIR	RES			
	710/70R42 Duals 850/80R38 Singles 850/80R38 Duals 900/60R32 Singles 650/75R34 Duals 800/65R32 Duals Tracks IF850/75 R42 Single shoot Double Shoot 5th Tank/Pallet Storage Primary Manifold Auto Section Control Load/Unload System Rate Control		yes yes yes 6 Port yes 12" Auger X30		8 Port	yes yes yes yes separate ASC 10" Auger		and attach) onveyor
	Liquid/NH3 Sectional C Liquid/NH3 Aux Rate C Rear Tow Hitch Auxilary hyd. Plumbing Bag Lift System Bulk Boom System Brakes Weigh System (Scales High Speed 12 cc Fan High Capacity 16.5 cc High Pressure 19cc Fa Metering auger assemi	control g with rear hitch) Motor Fan Motor n Motor	yes Raven yes yes yes yes yes yes yes Main Main	МС	Aux Aux Aux Aux	DJ NH3	LFC RO	
	Tank 1	Tank 2		nk 3		ınk 4		addle Tank)
	UHMW / Steel	UHMW / Steel		/ Steel		/ / Steel		<i>IMW</i>
	HX/1X/2X/LO	HX/1X/2X/LO/NA	HX/1X/2	X/LO/NA	HX/1X	//2X/LO	LO	/ NA

7000 MONITOR #'S and ECU's

ITEM	PART#	SERIAL#			
X30 Monitor	3132-12/6320-95				
CM40 ECU	3132-32				
CM 40 ECU	3132-32				
EM 24 ECU	3132-33				
In Cab Switch Box	3132-26				
Reciever for Hyd valve	3441-12-04				
Remote (1)	3441-12-02				
Remote(2)	3441-12-02				
Bulk Boom Remote	3441-25-02				
Software	e and Firmware Ve	ersions			
ITEM	ITEM 2016 version CHECK				
X30 Monitor	3.20.513				
CM 40 ECU #1	3.10-r,1.1.7				
CM 40 ECU #2	3.10-r,1.1.7				
All EM 24's	0.2.0,.02.0				
A profile should be created with only the second CM 40 learned to that profile.					
Name this profile, "Software Upgrade" so the firmware for the second CM 40 can be recalled and upgraded.					
Profile "Software Upgrade"	' created.	YES NO			

REAR AXLE EXT & SPINDLE		
	Rear	Front
If unit has loadcell spindles ensure cable is routed with no pinching		
Load cell installed with wire to bottom (on L7800 and 71300)		
Load cell installed with wire to top (on all models except L7800 and 71300)		

All Checks Complete:

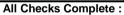
TIRES			
TINES	Rear	Front	
Ensure tread on top of tire points to the rear			
Wheel bolts have been torqued as per decal on cart			
Ensure star pattern is used to tighten all wheel lugs.			
Ensure wheel air pressures are correct as per decal on cart			
Record tire pressures and torques to match decal on tank			
Rear Tires PSI Rear Tires ft/lbs			
Front Tires ft/lbs			

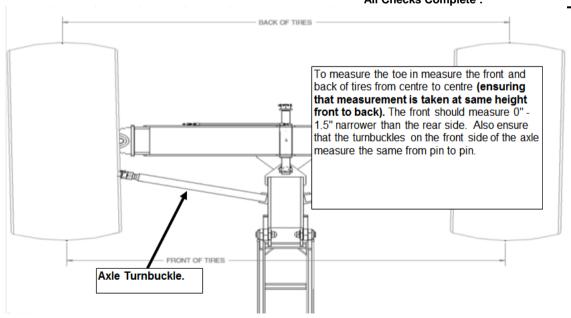
All Checks Complete:

Front Axle (Trailing Models Only)	
Ensure wear pads are installed x2	
Grease lines installed and secured	
Check toe in (see image below)	
Tie rods & jam nuts are installed and tightened	
Load cell installed with wire to top of spindle	
Spindle retainer bolt is only tightened until neoprene washer is contacted	
3 - 50 hr grease decals located on front axle assembly, grease front axle	
All fasteners checked	
All paint damage is repaired	
5TH wear pad in place w/ (2) 50hr grease decals on front of axle (7550) grease fifth wheel	
Max 5th wheel gap front to rear is 1/16"and Max 3/8" gap side to side (7550)	
Fifth wheel lock is in place with fasteners and tight (7550)	

All Checks Complete :

LGD Front & Rear Hitch	
All fasteners are tight	
Axle truss mount 1"x3" Gr8 bolts (x8) are torqued to 600 ± 50 ft.lbs	
Rear tow hitch pin installed w/ 3904-34 decal & lynch pin	
Correct safety chain (80000 lb min) and tag attached to the hitch	
Ensure the wires and hoses are notpinched under the front walk over step	
All Paint Damage repaired	





OPTIONAL WEIGH SYSTEM	
Harnesses routed neatly and secured with wire tires (all wire tires are trimmed)	
Meter head has been mounted to the cart and wires connected	
The leading cart hitch tongue load cell will have the decal to the top	
Follow procedure at the end of PDI to ensure proper calibration and set up #'s	
All Checks Comple	te:
SAFETY LIGHTS	Check Off
Light bars and guards are straight and tightened	
Light bars have been adjusted on the unit after unit has been set up from a haul.	
Safety lights installed and secured	

AUXILIARY LIGHTS & Conveyor Power	Check Off
All fasteners are tightened	
Wiring is neatly routed and properly fastened	
Toggle switch's are secure and two-wire connections tight	

WIRING	Check Off
Harness routed neatly and secured with wire ties (all wire ties are trimmed)	
Excess Cable or harness is tied up out of harms way	
Fan sensors clear the target and wires are secured	
Storage caps are attached to harness	
Nothing pinched in steeing axle or under 5th wheel	
Bin sensor fasteners are tight	

10" CONVEYOR FINAL ASSEMBLY	
Check valve installed in return port of motor and points away from motor	
Ensure all handle grips (X3) are installed	
Broom holder is installed	
Aux. lights installed (2x)	
Wear pad is installed on skid plate	
Skid plate is installed onto conveyor	
Ensure port LA on block is hooked to rod end of lift cylinders so relief works properly	
Spiral wrap covers hoses	
Dents in tube housing < 1/8"	
Fasteners & fittings checked	
Paint damage repaired	
Install screen and insure that both the screen and the grate can be removed easily	
All Checks Complete:	

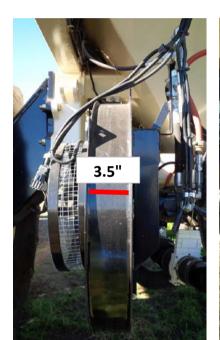
LADDER & CATWALKS	
All top handrail sections fold up & down freely and are easy to return to upright working	
position	
Make sure that ladders move freely (shims added if needed)	
Broom does not interfer with handrails when they are folded down	
Ladder bolts for steps are tightened if adjustments are needed	

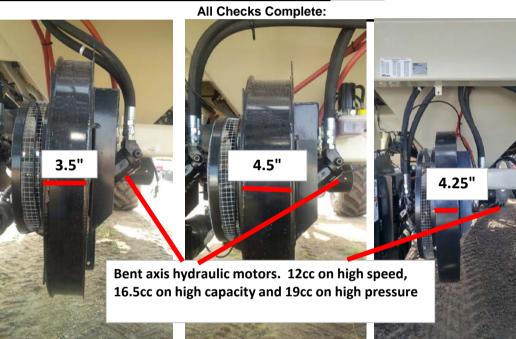
All Checks Complete:

10" AUGER	
UHMW wear strips are installed on the bottom of the transfer hopper, and screw heads do not	
protrude beyond UHMW strips	
Ensure rubber bumpers are installed on hopper, on side closest to the A/S	
Ensure 10" auger gasket is installed	
Ensure cable and hair pins are installed for hopper screen	
Angle drive is greased	
Ensure flighting turns easily by hand	
Transfer hopper extension belting is installed and bolts are tightened	
Discharge hole fully cut in auger	
Dents in Auger housing < 1/16"	
Ensure all handle grips are installed	
AUX. Light installed on auger and wiring is tied to hyd hoses	
Load/Unload Auger arm greased	
(2) 50hr grease decals installed	
Fastners and fittings checked	
Paint damage repaired	
All Checks Complete	• :
12" AUGER	
Grease zerks (3x) in transfer hopper assy are all pointing towards output opening	
Angle drive and bushings in transfer hopper have been greased	
Transfer hopper drive chains tensioned properly, cross augers turn without too much resistance.	
Ensure all handle grips (x3) are installed	
Key has been installed in motor drive shaft and secured with set screw	
Aux. lights installed (2x) and direction pointed as per assembly drawing (6357-08-01)	
All pivot arm bearings, races and seals installed	
Ports on inner arm and outer arm cylinders point down	
Outer arm greased	
50hr grease decal (3902-26 x1) installed on outer arm	
Aux. light installed on front arm	
Rubber pad glued to front and rear saddles	
Hydraulics are hooked up properly, are tight and are routed neatly	
Spiral wrap covers hoses in three places	
Orifices (X6) installed; hyd block (ports HA and HB), inner arm cylinder (both ports), outer arm	
Dents in Auger housing < 1/8"	
3 Auxiliary lights tested and function properly	
Fasteners and fittings checked	
All paint damage fixed on auger assembly	
All Charles Complete	

All Checks Complete :

HYDRAULICS AND FANS	
All hoses are routed neatly	
All fittings are tight	
Hydraulic hoses do not rub on sharp edges, or interfere with moving parts	
Hydraulic hoses are not kinked or too tight	
(Std Fans Only) Check valve(s) installed correctly - closed against pressure line (arrow	
points to front of unit on tow behind and back on leaders)	
(Std Fans Only) Hydraulic hose holder installed on fan(s) to support hoses and fittings	
Case drain sensor installed on main fan - all electric and hydraulic connections tight	
Case drain line is not pinched off anywhere restricting oil flow	
All paint damage on fan(s) repaired	
All fasteners on fan mount(s) are tight	
High Speed - Capacity - Pressure Fan Motor's - Ensure they have 3/4" couplers	
Identification tags are attached to front of hoses	
Fan shield installed	





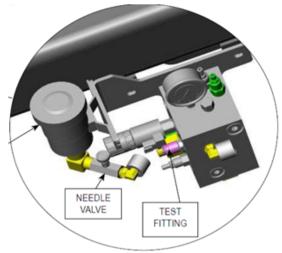
Standard Fan High Speed Fan **High Capacity Fan High Pressure Fan**

METERING AUGERS			Check Off	
Metering auger locations and type. Abbreviations: Flight: High Output = HO, Single Flight = 1X, Double Flight = 2X, Low Output = LO, Type: Steel = S, UHMW = U				
	Flight	Туре		
Tank 1			Order Confirmation has been verified	
Tank 2			Order Confirmation has been verified	
Tank 3			Order Confirmation has been verified	
Tank 4			Order Confirmation has been verified	
			e it has LO auger	
			d on all metering augers	
	•		ghting inside auger housing (remove chain and spin by hand)	
Ratchetii	ng clutch h	nas been	greased	
Hyd mote	ors hooked	d up corr	ectly	
	-		are not excessively long which can cause	
produ	ct to br	idge '	****Very Important****	
Pressuria	zation hos	es prope	rly fitted on metering augers and on tank fittings or plug	
		-	Section completed by:	

DISTRIBUTION SYSTEM	
All clamps are tight	
All paint damage repaired	
All dents in pipes < 1/8"	
Pipes are in line with the fan and parallel to each other	
Calibration Tubes are installed - one per tank	
(Top holes for 7700/7550 & Bottom holes for 7800/7950/71300)	
(TBHD Only) Primary mount adjusted so primary elbows are vertical ±0.5 deg	
(Leader Only) Distribution pipes stick out past rear holder 4-1/2"±1/2"	
All Checks Comple	ete:
CALIBRATION PAILS & STORAGE CONTAINER	
Correct amount of pails included with tank:	
3 tanks metering> 3 pails	
4 tanks metering> 4 pails	
5 tanks metering> 5 pails Two storage locations for pails fastened to transfer lines beneath tank	
·	10.
All Checks Comple	ete:
LID SPECIFICATIONS	
When unlatched the locking handle should rest 4" above lid	
Lid lock engages both lid lock tabs evenly (within 1/8")	
Ensure all lids flange bolts are tight to ensure adequate seal	
Lock Tab bolts are tightened to 50 ft/lbs +	
All Checks Comple	ete:
BRAKES (Drawing next page)	
Calipers centered on brake rotors using shims as per assembly drawing	
Brake lines routed neatly and secured	
Reservoir filled with ATF brake fluid 3/8"-1/2" below filler opening	
Brake system bled of air as per instructions (see following page)	
Hub turns freely after bleeding of brake system	
Caliper bolts are torqued to 185 ft/lb	
Ensure that the brakes are not dragging when not engaged	
Brake rotor bolts torqued to 75 ft/lb	
All fittings tight and no leaks	
All Checks Comple	ete:

Dealer PDI for Brake Bleeding Surge Brake

- Ensure the needle valve at the reservoir on the hitch is closed, and loosen the lid to the reservoir.
- Connect the service pump's (6359-16) "UP" hose to the test fitting on the manifold as shown below. Connect the "DN" hose to the fitting at the air trap located above the front axle, in the W-Truss. NOTE: Prototype manifolds will have the test fitting installed using a tee on the port labelled BRK.



- 3. Switch on the service pump after connecting it to a 12V source.
- At the air trap above the front axle, open the needle valve slightly. This will allow fluid to push
 the air out of the trap and flow back to the service pump's reservoir. Close the needle valve
 again.
- Use a piece of ¼" clear plastic tubing for the following steps to prevent oil from leaking onto brake components while bleeding the calipers. Place one end of the hose on the bleed fitting and the other end in a catch container.
- At the RHS rear wheel, open the bleed fitting on the rearmost caliper. Close the fitting once fluid exits, this should happen quickly as there will be minimal air in the caliper from factory. Repeat the process for the other fitting on that caliper.
- 7. Repeat the above step for the front caliper on the RHS.
- 8. Repeat the previous two steps for the calipers on the LHS of the machine.
- Repeat step 4 to remove any air that may have been caught in the trap during the caliper service.
- 10. Switch off the service pump. Slowly open the needle <u>valve to the reservoir so it is all the way open</u> some fluid may collect in the reservoir while opening the needle valve. Rotate the lockout knob to the locked position and then back again while opening the needle valve.
- 11. Final check:
 - a. Ensure the needle valve at the reservoir is all the way OPEN.
 - b. Ensure the needle valve above the front axle is all the way CLOSED.
 - c. Reinstall cap onto the test fitting after removing the service pump hose.
 - d. Tighten the reservoir lid. Visually check for leaks.

5TH TANK	
5th tank is mounted straight, auger plate parallel to hopper auger plates ±0.5°	
Platform is level, adjust tensionstraps if necessary	
Ensure stair pivot freely and can be locked up	
Handrail fold up & down freely and easy to return to the upright position	
Screen placed inside tank	
All fasteners checked and dotted w/paint marker	
All paint damage is repaired	

All Checks Complete:

Pallet Storage - 7700 / 7950 / L7800	
Handrails fold easily	
Tie-downs and tarp placed into storage compartment	
Catch-links installed on front-side of forward most arm and rear-side of rearward most arm	
All fasteners checked	
All paint damage is repaired	

All Checks Complete:

BAG LIFT SYSTEM	
Hydraulics are hooked up properly, are tight and are routed neatly	
Lift system lifts/lowers smoothly and at an acceptable speed	
Lock pin engages/disengages easily	
Doors on both sides of crate open/close easily	
Mount is aligned so lock pin is centered in lock plate	
1"x9" bolt has been tightened	
Catwalk extension installed and brace removed from handrail	
Torque 5/8 x 2 CRG bolts to 150 +/- 10 FT LB.	
Crate has adequate clearance to tank panels (3")	

All Checks Complete:

NH3 / Liquid wiring	
Harness routed neatly and secured with wire ties (all wire ties are cut)	
Terminals that are not in use are capped	
Ensure the Raven wiring harness ends are correct for Raven system being used	

All Checks Complete:

BULK LIFT SYSTEM	
Lock engages when outer and inner arm are put in storage (figure #1)	
All fasteners are tight and snap rings are installed on pins (figure #2)	
Upper pivot pin is greased	
Hydraulics are hooked up properly, are tight and are routed neatly	
Bulk lift system lifts/lowers and turns smoothly and at an acceptable speed	
Operate the Bulk Boom remote to fully extend and fully retract each of the 3 cylinders	
3441-25-01 RADIO RMT RCVR BULK LFT installed	
3441-25-02 RADIO RMT TRNMTR BULK LFT PKG	
3441-25-03 CHGR CAR 12V MICRO USB PKG	

All Checks Complete:

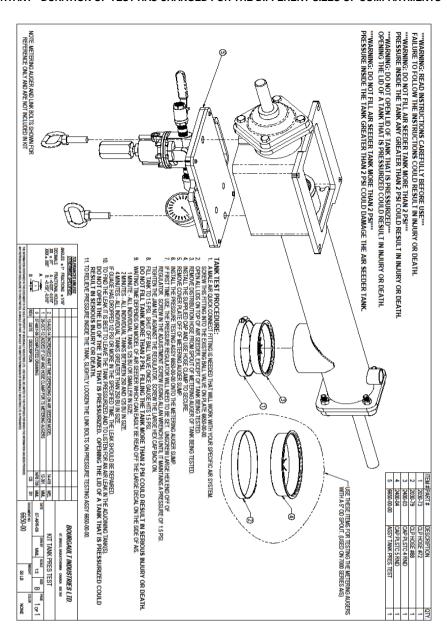




figure #2

figure #1

Hydraulia Cyatam Chaale	
Hydraulic System Check	
Remote correctly switches modes between Fan - Fill - Fill/Cal	
Fan turns in correct direction (clockwise looking into the fan inlet)	
ASC sections function as per testing instructions - refer to ASC PDI for units equipped with ASC	
Tank is free of hydraulic leaks	
Functional Test (follow apropriate website test)	
All fuctional tests are located within the Bourgault website under Monitor training.	
www.bourgault.com/ServiceParts/MonitorTraining	
7000 X30 Apollo Function test - Base unit	
7000 X30 Apollp Function test - Units with Granular Sectional Control	
7000 X30 Apollo Function test - Units with Granular and NH3/Liquid Sectional Control	
ECU Final Check	
Apollo CM40 ECU firmwares are correct	
Apollo EM24 ECU firmware is correct if equipped	
All connectors to ECU's are locked in and properly secured	
Meter auger drive chains in following config: HO/1X - high range, 2X - int range, LO - low range	
Hydraulic valve and motor covers closed and latched	
Electrical and Camera System Check	
Safety, brake and Auxilarily lights function properly	
Optional Weigh System Check	
Weigh system powers on and default SETUP #, CAL#, and SCOREMODE # (follow procedure at end)	
Weigh system communicates to remote and displays delta weight on remote LCD display	
All weights tared out on remote (hold tare button for > 6 secs)	
L/U System Check	
Auger/Conveyor swings freely and hydraulic hoses do not limit the movement	
Front & Rear saddles adjusted so tube is not difficult to engage/disengage, auger/conveyor seats firmly in	
saddles in transport position	
All cotter pins installed in cylinder pins after final adjustment	
Remote functions properly, all auger/conveyor functions move in correct directions and both slow and fast	
auger/conveyor speeds work	
All cotter pins installed in cylinder pins after final adjustment	
(Auger Only) Transfer hopper locks are properly set	
(Auger Only) Hopper flighting spins freely by hand - verify after testing of auger	
(Auger Only) Grip handle is raised into transport position	
PRESSURE TEST	
Follow procedure using pressurization tool on the next page and complete initial pressure test	
Fan run up to 4000 rpm - as shown on monitor	
No leaks around metering auger (special attention to sump and barrel connection)	
No leaks from fan to all transfer line connections	
No leaks around pressurization connections	
No leaks around metering auger to tank seals	
Once tank is blown out, ensure all clean out covers are re-attached and tightened.	
Ensure unit is clean of all foreign debris ie: oil, dirt, filings, shavings, etc.	
Note: For peak performance the tractor high pressure stand by relief setting should be	
around 3200 psi to compensate for the pressure drop across the drill, tank and through the	
couplers	
All Checks Complete:	
7.11 Oncores Complete.	



Topcon Apollo to Bourgault part # cross reference.

Bourgault part #	Topcon part #
3132-12-01	AGA5072
3132-04-03	AGA4073
3132-04-04	AGA4219
3132-17	AGA5478
3132-20	AGA5515
3132-21	AGA5448
3132-22	AGA5510
3132-22-01	10040041-01
3132-23	AGA5339
3132-24	AGA5343
3132-25	AGA5345
3132-26	AGA5504
3132-27	AGA5514
3132-28	AGA5512
3132-29	AGA5517
3132-30	AGA5360
3132-38	AGA5518
3132-38-01	1004454-01
3132-41	AGA5519
3132-42	AGA5520
3132-45	AGA5509
3132-46	AGA5513
3132-54	1004097-01
3132-62	AGA5377
3132-65	AGY1355
3132-66	1004098-01
3132-72	AGA5245
3132-73	AGA5445

Bourgault part #	Topcon part #
3132-74	AGA5446
3132-75	AGK163
3132-76	
3132-78	1004998-01
3132-79	1004997-01
3132-80	1005028-01
3132-81	1005036-01
3132-82	1005037-01
3132-83	1005038-01
3132-87	1004955-01
3132-88	1004987-01
3132-89	1004269-01
3132-96	AGA5179

WEIGH SYSTEM FINAL ASSEMBLY TEST (EZ 2810)

- 1) Ensure the aux harness is plugged into power
- 2) Power on the Digi-Star monitor
- 3) Enter setup number
 - (1) Type "8711" into the keypad, then press the 'Select' button ...



- (2) Indicator shows "setup" briefly then shows a 6 digit number on LCD. This is the current setup number.
- (3) Enter new number if required. (see list below)
- (4) Push the 'Accept' button to save the selection.

Below are the correct SETUP# for each unit:

71300:**147150**

7700/7950: **147110**

L7800: 147090

L7550/7550: 147060

- 4) Enter Calibration Number
 - (1) Type "8712" into the keypad, then press the 'Select' button .



- (2) Indicator shows "setup" briefly then shows a 6 digit number on LCD. This is the current setup number.
- (3) Enter new number if required. (see list below)
- (4) Push the 'Accept' button to save the selection.

Below are the correct CAL# for each unit:

71300: **62135** 7700/7950: **58843**

L7800: 41691 7550: **62667** L7550: 44933

- 5) Set Scoreboard Mode
 - (1) Type "2101" into the keypad, then press the 'Select' button ...



- (2) SCOREM should flash then enter 11.
- (3) Push the 'Accept' button two times to save the selection.

WEIGH SYSTEM FINAL ASSEMBLY TEST (EZ 2810)

6) Set Remote Display

(1) Type "2401" into the keypad, then press the 'Select' button ...

(2) Confirm remote display is set to EZ2.

(if not EZ2 Push the 'Select' button till found)

(3) Push the 'Accept' button save the selection.

7) Zero Output

- (1) Type "2102" into the keypad, then press the 'Select' button ...
- (2) Push and hold the 'Zero' button till beep.

8) Zero Scale

(1) Push and hold the 'Zero' button till zeroed.

9) Confirm the serial port on the weigh system display is enabled: Note: Step 9 is only need if the remote and monitor are not communicating with each other

- (1) Type "90003" into the keypad, then press the 'Select' button
- (2) Push the 'Zero' button 4 times, then press the 'On' button ...
- (3) Push the 'Select' button to confirm the RS232 option is enabled. (if the RS232 option is off push the 'Select' button to enable)
- (4) Push the 'Accept' button to save the selection.

10) Learn/Ensure Kar-Tech Remote is learned

- **11)** Power on Kar-Tech remote and confirm Digi-Star monitor is communicating with remote. Ensure both the remote and Digi-Star display are tared out, have someone stand on cart or pull down on the front saddle arm and confirm that the same weight is being displayed on both the remote and Digi-Star monitor.
- **12)** When weight is removed ensure both the remote display and Digi-Star display return to zero. Ensure all tanks are tared out on remote by holding "Tare" for > 6 secs.
- **13)** Power off remote and Digi-Star display, remove Digi-Star display from tank and package both components in the "components bag" that will be stored in Tank 1. Ensure loose harness connectors are tied up to protect them from shipping damage.