

CITY OF INDUSTRY,CA BROOKSHIRE,TX BOLINGBROOK,IL JERSEY CITY,NJ POOLER, GA CONTACT US TEL:447-902-3857 EMAIL:INFO@AUTOKATO.COM

ELECTRO-HYDRAULIC 2-POST LIFT KT-H120D



Read the entire contents of this manual before using this product. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death. Make sure all other operators also read this manual. By proceeding with setup and operation, you agree that you fully understand the contents of this manual and assume full responsibility for product use.

SAFETY INSTRUCTIONS:

(READ THE INSTRUCTIONS ENTIRELY BEFORE OPERATING)

1.Read and understand all instructions and all safety warnings before operating lift.

2. Care must be taken as burns can occur from touching hot parts.

3. Do not operate equipment with a damaged cord or if the equipment has been dropped or damaged until it has been examined by a qualified service person.

4. Do not let a cord hang over the edge of the table, bench, or counter or come in contact with hot manifolds or moving fan blades.

5. If an extension cord is necessary, a cord with a current rating equal to or more than that of the equipment should be used. Cords rated for less current than the equipment may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.

6. Always unplug equipment from electrical outlet when not in use. Never use the cord to pull the plug from the outlet. Grasp plug and pull to disconnect.

7. Let equipment cool completely before putting away. Loop cord loosely around equipment when storing.

8. To reduce the risk , do not operate equipment in the vicinity of open containers of flammable liquids (gasoline).

9. Adequate ventilation should be provided when working on operating internal combustion engines.

10. Keep hair, loose clothing, fingers, and all parts ofbody away from moving parts. Keep feet clear of lift when lowering. Avoid pinch points.

11. DANGER! To reduce the risk of electric shock, do not use on wet surfaces or expose to rain. The power unit used on this lift contains high voltage.

Disconnect power at the receptacle or at the circuit breaker switch before

performing any electrical repairs. Secure plug so that it cannot be accidentally plugged in during service.or mark circuit breaker switch so that it cannot be accidentally switched on during service.

12. Use only as described in this manual.

Use only manufacturer's recommended attachments.

13.ALWAYS WEAR SAFETY GLASSES. Everyday eyeglasses only have impact resistant lenses, they are not safety glasses.

14.Consider work environment. Keep work area clean. Cluttered work areas invite injuries. Keep areas well lit.

15.Guard against electric shock. This lift must be grounded while in use to protect operator from electric chock. Never connect the green power cord wire to a live terminal. This is for ground only.

16.Only trained operators should operate this lift. All non-trained personnel should be kept away from the work area. Never let non-trained personnel come in contact with, or operate lift.

17.DO NOT override self-closing lift controls.

18. Clear area if vehicle is in danger of falling.

19.ALWAYS make sure the safe ties are engaged before attempting to work on or near a vehicle.

21. WARNING! RISK OF EXPLOSION. This equipment has internal arcing or sparking parts which should not be exposed to flammable vapors. This machine should not be located in a recessed area or below floor level.

22. MAINTAIN WITH CARE. Keep lift clean for better and safer

performance. Follow manual for proper lubrication and maintenance

instructions.Keep control handles and /or buttons dry, clean and free from grease and oil.

23.Check for damaged parts.Check for alignment of moving parts, breakage of parts or any condition that may affect operation of lift. Do not use lift if any component is broken or damaged.

24.NEVER remove safety related components from the lift. Do not use lift if safety related components are missing or damaged.

23.STAY ALERT. Use common sense and watch what you are doing. Remember, SAFETY FIRST.

IMPORTANT NOTICE

Do not attempt to install this lift if you have never been trained on basic automotive lift installation procedures.

Never attempt to lift components without proper lifting tools such as forklift or cranes.

Stay clear of any moving parts that can fall and cause injury.

These instructions must be followed to ensure proper installation and operation of your lift. Failure to comply with these instructions can result in serious bodily harm and void product warranty.

Manufacturer will assume no liability for loss or damage of any kind, expressed or implied resulting from improper installation or use of this product.

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1 **Introduction:**

This guide has been made to supply the owner as well the user with the basic instructions for a correct use of the machine. Read this guide carefully before using the machine and following the instructions given by this guide to grant the machine a correct function, efficiency and a long service life.



2 Main technical parameters:

Lifting capacity:	12000lb.
Lifting height:	70in.
Overall height	110in.
Minimum height:	4in.
Lifting time:	50s
Power supply	220V, 3.0kw
Rated oil pressure	18Mpa
Overall weight	1230lb.

3

3 Outline Dimension:





4 The structure and working principle of the machine:

The machine are make up of main and auxiliary column,hydraulic system driving two cylinders, push the wheel,drive the lifting steel chain elevate the pulley (see Figure 1 \sim 2 and figure 3). Four lifting arms are hinged on the pulley, rotate 90 $_{\circ}$, in a swing and sliding telescopic arm to adapt to the different models of the

supporting parts. The lifting arm is provided with a locking mechanism to prevent rotation of the lifting arm . Two pulleys by synchronous wire rope keep up and down. Two pulleys are provided with a mechanical safety device. In the rising as insurance

mechanical keys can automatically enter and disengage from the insurance point, sound crash, as judge mechanical insurance device work normal ornot and two pulley are synchronized or not.



Fig.3 Install steel rope

5 Installation and debugging:

5.1 Installation requirements:

(1)Concrete requirement:4"Min.Thickness/3000PSI

according to chart 5 to dig, Otherwise, according to figure 5 to make the concrete foundation bolt or directly buried anchor bolt M18.

(2)

This lift must be installed on a solid level concrete floor with no more than 3-degrees of slope. A level floor is suggested for proper use and installation.



Fig. 5 Installation

BEFORE INSTALLATION

1. Identify the components and check for shortages.



2. Installation, adjusting and testing operations are to be performed by qualified staffonly.

3. After unloading the lift, place it near the intended installation location. $\frac{8}{8}$

4.Remove the shipping brands and packing materials from the unit. 5.Remove the packing brackets and bolts holding the two columns together.

SPACE REQUIRED

Please refer to the drawing for detailed installation size.

5.2 Installation steps:

PLEASE READ THE FOLLOWING INSTRUCTIONS BEFORE ASSEMBLING THE LIFT

STEP ONE: DETERMINE LOCATION AND MARKS WITH CHALK ON THE FLOOR

1. Determine which side will be the approach side and which side will be the power unit to be mounted.

2. Once the location is selected, use a chalk line to layout a grid for the post locations and make an outline of the posts on the floor at each location.

3. Before proceeding, double check measurements and make certain that the bases of each column are square and aligned with the chalk line.

STEP TWO: MOUNTING TWO COLUMNS, POWER UNIT COLUMN FIRST THEN THE OTHER.

- 1. Drill each anchor hole in the concrete using a rotary hammer drill. To assure full holding power, do not ream the hole or allow drill to wobble.
- 2. After drilling, remove dust thoroughly from each hole and make certain that the column remains aligned with the chalk line during this process
- 3. If shimming is required, insert the shims as necessary under the base plate so that when the anchor bolts are tightened, the columns will be plumb.
- 4. With the shims and anchor bolts in place, tighten by securing the nut to the base then turning. 2-3 full turns clockwise. DO NOT use an impact wrench for this procedure.

5. Position the other column at the designated chalk locations and secure to the floor following the same procedures as outlined in step 1,2,3,4.

STEP THREE: MOUNTING POWER UNIT

Attach the power unit to the power unit column with supplied tools and parts. Fill the reservoir with hydraulic oil.

STEP FOUR: INSTALLING HYDRAULIC HOSE

Install the hydraulic lines as shown in HYDRAULIC CONNECTION, paying careful attention to keep the hoses clean and free ofdebris.

STEP FIVE: INSTALLING THE LIFTING ARMS

Install the swing arms on the carriages using the included pins. Check for proper engagement of the arm lock.

STEP SIX: MAKE THE ELECTRICAL HOOK UP TO POWER UNIT.

WARNING: THE WIRING MUST COMPLY WITH LOCAL CODE. HAVE A

CERTIFIED ELECTRICIAN MAKE THE ELECTRICAL HOOK UP TO THE POWER UNIT.



Fig 6 Installation checking

5.3 Load test

No-load test:

- (1)Full inspection installation before using.
- (2)Press up button, if piston rod can extend explain the motor rotating is right.
- (3) lifting pulley, if the rising chain looses, need to press up button, make the oil cylinder piston rod slowly stretched out to prevent chain extrusion wheel groove. Until the chain is tight.
- (4)Declined, as long as the unlocking handle pull down and no automatic retraction is opened the machinery insurance. Before release lever pulled down to open the insurance, you must first rise to5- 10inches.
- (5)First down the pulley to the lowest, then up the pulley. The crash in the insurance bond should be issued at the same time. If the sound has successively, then stop rising, make the pulley enter into the insurance, observation which pulley first stop

falling (advanced into the insurance), with special socket spanner according to chart 3 tighten the pulley nut, further tightening synchronous wire rope. If necessary, it may be appropriate to relax the other wire rope. Until the crash sound and two pulley enter into insurance basic synchronization. In the heavy load required polyphonic synchronization.

If synchronization is abnormal, do not rise the pulley to the limit position

Heavy load test:

- (1) According to the instructions of the operation, carryout heavy load test
- (2) In accordance with the requirements of polyphonic synchronous pulley
- (3)Full travel rise and down several times, observe whether the hydraulic pipeline leakage or not, mechanical insurance is working properly. The lifting time and lifting height are all in line with the technical parameters, and the test load is over.



Chart 7 Security mechanical

The safety mechanism of the machine is composed of an unlocking plate, a torsion spring, a linkage steel wire rope, a lock tooth plate, etc. the protection function is as follows:

When rise the working table, under the action of the torsion spring , safety lock

keeps working, if have an accident (such as high pressure hose or rope rupture), working table abnormal down, safety lock unlocking plate, which is locked plate teeth stuck, and working table stop decline, to ensure safety.

When the work table fall, first rise work table a little 10-20mm, then pull down the main pillar of unlocking handle, under the action of steel rope ,around the unlocking plate pop-up the tooth groove at the same time, it is get rid of safety lock state. Press the manual unloading handle, the working table is under the action of self weight to down.

6 Hydraulic and electric system:



Check valve: Ensures hydraulic oil does not flow back. Malfunction may result in faster descent of the lifting device, usually caused by impurities. Removing and cleaning the check valve can solve the problem.

Relief valve: Regulates hydraulic pressure. Clockwise adjustment increases pressure, counterclockwise adjustment decreases pressure. When pressing the lift button, if the vehicle cannot be lifted and overflow noise is heard, adjusting the relief valve clockwise can solve the problem

Fig 8 pump station



Fig 9 hydraulic system

Electric system:



	10Electric chart				
	Code				
NO.	name	Name	Model	Quantity	Remarks
1	КМ	AC contactor	CJX2- 1210-AC220V	1	
2	М	Motor	2.2KW	1	
3	F	Insurance	RT18-32-2A	1	
4	DZ	Circuit breaker	DZ108-20-6.3- 10A/380V (DZ108-20- 10- 16A/220V)	1	
5	НК	Combination switch	HZ5-20/4L03	1	

Hydraulic pump station (Fig 8) hanging on the column, hydraulic system see Fig 9, adjust the "relief valve" can change the system pressure (the factory has adjust well), change the lifting capacity (but not adjusted rated oil pressure 21MPa). Press down the manual unloading valve handle can down.

7 **OPERATION**:

WARNING: DO NOT PLACE ANY VEHICLE ON THE LIFT BEFORE TRIAL OPERATION. CYCLE THE UP AND DOWN SEVERAL TIMES TO INSURE LATCHES CLICK TOGETHER AND AIR IS REMOVED FROM THE CYLINDERS.

BEFORE OPERATION

- a. Check all the pipelines and joints before use. The machine only can be used after there is not any leakage.
- b. The lift, if its safety device malfunctions, shall not be used.
- c. The machine shall not lift or lower an automobile if the center of gravity of automobile is not within the supporting range of the supporting device. Otherwise, the manufacturer will not bear any responsibility for the consequence resulted from the operation above mentioned.
- d. The staffor operators shall be in a safe position when the machine lift or lower.
- e. Raise and lower several times to make sure no air in the cylinder. Air inside of the cylinder makes raising not smoothly.

INSTRUCTIONS FOR USE

RAISING THE LIFT

Read operating and safety manuals before using lift.

Before lifting the vehicle, make sure it is neither front nor rear heavy. Center of balance should be midway between adapters.

Adjust swing arms so that the vehicle is positioned with the center of gravity midway between pads.

Use truck adapters as needed. Never exceed 9" of pad height.

NEVER use lift pad assemblies without rubber slip over pads in place.

Raise the vehicle by depressing button until the vehicle just lifts off the ground. Recheck to make sure the vehicle is secure and all locking pins are lock in place.

Raise vehicle to desired height. Lower vehicle onto nearest safety, Always ensure safeties are engaged before any attempt is made to work on or near vehicle.

LOWERING THE LIFT

First raise the lift clear to the safeties.

Release safeties by pulling on the safety handle.

Be sure tool trays, stands or personnel are cleared from under the vehicle. Lower vehicle by activating lowering handle on power unit.

Before removing vehicle from lift; position lift arms and supports to provide an unobstructed exit.NEVER, drive over lift arms.

8 MAINTENANCE:

Check all arm adjusting locks for proper operation.

Check all cables connections, bolts and pins to ensure proper mounting and torque. Visually inspect safeties for proper operation.

Lubricate posts with grease.

Inspect all anchors bolts and tighten ifnecessary.

Check all posts for squareness and plumb.

Inspect all pivot arms pins making sure they are properly secure.

Check equalizer cable tension, and adjust ifnecessary.

If lift is equipped with overhead micro switch, check for proper operation.

If your lift is *not* functioning correctly, you must take it out of service until it is fixed. All repair work must be performed by qualified personnel. If your organization has Lockout/Tagout policies, implement them after connecting the Lift to the power source.

LIFT WILL NOT RAISE

POSSIBLE CAUSE

- 1. Air in oil, (1,2,8, 13)
- Cylinder binding, (9) 2.
- 3. Cylinder leaks internally, (9)
- 4. Motor run backward under pressure, (11)
- Lowering valve leaks, (3,4,6, 10, 11)
 Motor runs backwards, (7, 14, 11)
- 7. Pump damaged, (10, 11)
- 8. Pump won't prime, (1,8, 13, 14,3, 12, 10, 11)
- 9. Relief valve leaks, (10, 11)
- 10. Voltage to motor incorrect, (7, 14, 11)

REMEDY 1. Check for proper oil level	INSTRUCTION The oil level should be up to the bleed screw
	in the reservoir with the lift all the way down.
2. Bleed cylinders	See Installation Manual
3. Flush- Release valve to get rid ofpossible contamination	Hold release handle down and start unit allowing it to run for 15 seconds.
4. Dirty oil	Replace oil with clean Dexron ATF.
5. Tighten all fasteners	Tighten fasteners to recommended torques.
6. Check for free movement of release	If handle does not move freely, replace bracket or handle assembly.
7. Check motor is wired correctly	Compare wiring of motor to electrical diagram on drawing.
8. Oil seal damaged or cocked	Replace oil seal around pump shaft.
9. See Installation Manual	Consult Lift Manufacturer.
10. Replace with new part	Replace with new part.
11. Return unit for repair	Return unit for repair.
12. Check pump-mounting bolts	Bolts should be 15 to 18 ft. lbs.
13. Inlet screen clogged	Clean inlet screen or replace.
14. Check wall outlet voltages and wiring	Make sure unit and wall outlet are wired properly.

MOTOR WILL NOT RUN

POSSIBLE CAUSE

- 1. Fuse blown, (5,2, 1,3,4)
- 2. Limit switch burned out, (1,2,3,4)
- 3. Microswitch burned out, (1,2,3,4)
- 4. Motor burned out, (1,2,3,4,6)
- 5. Voltage to motor incorrect, (2, 1,7)

RE	MEDY	INSTRUCTIONS
1.	Check for correct voltage	Compare supply voltage with voltage on motor name tag. Check that the wire is sized correctly. N.E.C table 310- 12 requires AWG 10 for 25 amps.
2.	Check motor is wired correctly	Compare wiring of motor to electrical diagram on drawing.
3.	Don't use extension cords	According to NEC: The size of the conductors should be such that the voltage drop would not exceed 3% to the farthest outlet for power. * Do not run motor at 115 VAC - damage to the motor will occur.
4.	Replace with new part	Replace with new part.
5.	Reset circuit breaker/ fuse	. Reset circuit breaker/fuse.
6.	Return unit for repair	Return unit for repair.
7.	Check wall outlet voltage and wiring	Make sure unit and wall outlet is wired properly. Motor must run at 208/230 VAC.

LIFT LOWERS SLOWLY OR NOT AT ALL

POSSIBLE CAUSE

- 1. Cylinders binding, (1)
- 2. Release valve clogged, (5,4,2,3)
- 3. Pressure fitting too long, (6)

REMEDY

REMEDY	INSTRUCTIONS
1. See Installation Manual	Consult Lift Manufacturer.
2. Replace with new part	. Replace with new part.
3. Return for repair	Return for repair.
4. Check oil	Use clean 10-WT hydraulic oil or Dexron automatic transmission fluid only. If ATF is contaminated, replace with clean ATF and clean entire hydraulic system.
5. Clean release valve	Wash release valve in solvent and blow out with air.
6. Replace fitting with short thread lead	Replace fitting with short thread lead.

WILL NOT RAISE LOADED LIFT

POSSIBLE CAUSE

- 1. Air in oil, (1,2,3,4)
- 2. Cylinder binding, (5)
- 3. Cylinder leaks internally, (5)
- 4. Lift overloaded, (6,5)
- 5. Lowering valve leaks, (7,8, 1,5,9)
- Motor runs backwards, (10, 12,9)
 Pump damaged, (5,9)
- 8. Pump won't prime, (1,2,3,4,5, 11,9)
- 9. Relief valve leaks, (8,5,9)
- 10. Voltage to motor incorrect, (10, 12,5)

REMED 1. Che	9Y eck oil level	INSTRUCTIONS The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2. Che	ck/Tighten inlet tubes	Replace inlet hose assembly.
3. Oil s	seal damaged or cocked	Replace oil seal and install.
4. Blee	ed cylinders	See Installation Manual.
5. See	Installation Manual	Consult Lift Manufacturer.
6. Che	ck vehicle weight	Compare weight of vehicle to weight limit of the lift.
7. Flus	h release valve	
8. Rep	place with new part	Replace with new part.
9. Ret	urn unit for repair	Return unit for repair.
10. Che	eck motor is wired correctly	Compare wiring of motor to electrical diagram on power unit drawing.
11. Inle	et screen clogged	Clean inlet screen or replace.
12. Che	eck wall outlet voltage and wiring	Make sure unit and wall outlet is wired properly.

IMPORTANT

If a vehicle becomes stranded in the air, follow all operation instructions as shown on pages 33 - 38.

If, after observing that all mechanical locks are released and the lift still fails to move following all standard operating procedures, immediately stop using the lift and contact the factory or a factory-approved service center for further instructions.

LIFT WILL NOT STAY UP

POSSIBLE CAUSE

- 1. Air in oil, (1, 2, 3)
- 2. Check valve leaks, (6)
- 3. Cylinders leak internally, (7)
- 4. Lowering valve leaks, (4, 5, 1, 7, 6)
- 5. Leaking fittings, (8)

REMEDY

REMEDY 1. Check oil level	INSTRUCTIONS The oil level should be up to the bleed screw in the reservoir with the lift all the way down.
2. Oil seal damaged and cocked	Replace oil seal around pump shaft.
3. Bleed cylinder	Refer to Installation Manual.
4. Flush release valve	Hold release handle down and start unit allowing it to run for 15 seconds.
5. Replace with new valve	Replace with new valve.
6. Return unit for repair	Return unit for repair.
7. See Installation Manual	Consult Lift Manufacturer.
8. Check complete hydraulic system for leaks	Tighten all hydraulics fittings and inspects all hoses.

10 Warranty card

Username	Contact num	ber	Date ofpurchase	
Contact add				
Product ID	Serial numb	ber	Invoice number	
Maintenance placename			Warranty phone	

Maintenance record card

Date	Record	Change parts content				broker appendix	
Date	content	Name	Model	specification	quantity	broker	uppendix

Warranty conditions

 $1 \$ Begin from the date of purchase one year, under the normal use condition and the user in accordance with the *《*operation manual*》* require to operate this product failure, our company will give limited free repair.

2 1 In the warranty time need repairs, user holds this warranty cards 1 invoices for free services. Change parts belong to our company.

3 Does not belong to the scope of warranty: a. As transportation, improper use. , base strength is not enough, power supply is not accordance with the stipulate, not accordance with \langle operation manual \rangle caused damage is covered by warranty; b. Exceed the time of free service, provide service need charging as the company cost; c. Easy wear parts do not belong to the scope of warranty.

11 **Exploded diagram**





Part	Name	QTY	Model
number			
1A	Car components	2	
2a	Main Column	1	
2b	Auxiliary Column	1	
3B	Cylinder components	2	
4	Cover hat	2	
5	Chain	2	
6	Wire rope assembly	2	
7	Sprocket	2	
8	Sprocket shaft	2	
9	Rope pulley	6	
10C	Power unit	1	
11	Fixed plate for approach bridge	4	
12	Long oil pipe	1	
13	Main oil pipe	1	
14	Long connector	1	
15	Short connector	2	
16	Approach bridge plate	1	
G1	Shaft snap ring	8	Ø25
G2	Hexagonal bolt	8	M10X35
G3	Flat Washer	8	M10
G4	Spring Washer	8	M10

G5	Hexagonal nut	8	M10
G6	Internal hexagonal bolt	4	M8X15
G7	External hexagonal bolt	4	M8X25
G8	Flat Washer	4	M8
G9	Spring Washer	4	M8
G10	Hexagonal nut	4	M8
18	Unlock Axis	2	
19	Torsion spring sleeve	4	
20	Main Lock	1	
21	Auxiliary lock	1	
22	Torsion spring	1	
23	Release handle	1	
24	Release lower wheel	2	
25	Flat shaft	2	
26	Main rope wheel stand	1	
27	Auxiliary rope wheel stand	1	
A9	Handle ball	1	
G16	Internal hexagonal bolt	6	M6*20
G48	Countersunk bolt	2	M6*14
G55	Halfround head bolt	4	M6*20
G56	Flat Washer	4	M6
28	Rope wheel bolt	2	
29	Unlock upper wheel	2	
30	Unlock steel wire rope	1	



Part number	Name	QTY	Model
A1	Car components	2	
A2- 1	One support arm	4	
A2-2	Two support arm	4	
A3	Support arm pin shaft	4	
A4	Slider	16	
A5	armrest	4	
A6	Scroll cover	4	
A7	Pallet	4	
A8	Locking tooth	4	
A9	Handle ball	4	
A10	Locking rod	4	
A11	External locking tooth	4	
A12	Lock tooth pressure spring	4	
A13	Support arm rubber washer	4	

Part	Name	QTY	Model
number			
A17	Pallet rubber washer	4	
A18	Anti collision rubber washer	2	
G1	Snap ring	4	25
G8	Flat washer	8	8
G16	Internal hexagonal bolt	4	M6*15
G20	Halfround head bolt	8	M6*25
G21	Hexagonal nut	8	M6
G40	Internal hexagonal nut	4	M8*14
G45	Internal hexagonal bolt	8	M8*12
G46	Internal hexagonal bolt	12	M10*20
G47	Countersunk bolt	8	M6*5
G48	Countersunk bolt	8	M6*14
G49	Snap ring	4	40
G50	Flat washer	4	22

The "KT-H120D" below the picture indicate the correct installation steps.







KT-H100@KT-M110 KT-H100@KT-M110











Certificate of conformity

This equipment is qualified to grant leave the factory

Product name: Two post lift

Product ID:

Date of inspection:

Test Technician:

seal