Set up and Service Manual

ALLIED TANK ATTACK

Please read this manual before operating your game.

Please keep this manual in good condition for future reference.

in joy

Injoy Motion

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Need parts or service, please contact us:

Injoy Motion Corp.

Technical support: +886-2-2267-6317

Fax: +886-2-2267-5906

E-mail: support@injoymotion.com

Note:
- The product specifications are subject to change without notice.
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SGS

VERIFICATION OF COMPLIANCE
to the requirements of
EMC Directive 2004/108/EC

Verification Report No.	:	RD/2013/70013C
Representative Model	:	PROJECT X-PHER AIR TWIN
Series Model(s)	:	X AIR TWIN-Z (X=ALLIED TANK ATTACK, PROJECT X-PHER, TOP GUNNER; Z=1, 2, 4)
Product Name	:	AIR Series Motion Simulator
Applicant	:	Injoy Motion Corp.
Address of Applicant	:	48, Yongping Street, Tucheng District, New Taipei City 236, Taiwan
Test Report Number	:	RD/2013/70013
Date of Issue	:	July 26, 2013
Applicable Standards	:	SGS Onsite Test Standard: 2012 EN 61000-6-2: 2005, EN 61000-6-4: 2009

Conclusion

In the opinion of SGS, the equipment complies with the principle requirement of the above standards and following directive:

Electromagnetic Compatibility Directive 2004/108/EC

Note: The verification is only valid for the equipment and configuration tested and in conjunction with the test data described in the Test Report.
The CE mark as shown below can be used, under the responsibility of the manufacture, after completion an EC Declaration of Conformity and compliances with all relevant EC Directives.

Authorized Signatory:

Jason Lin

SGS TAIWAN LTD.
Jason Lin
Technical Manager

CE

ASP

ADVANCED SAFETY PRODUCT
ASP TECHNOLOGY CORP

8F.-1,No.1, Zhongzheng Rd., Tucheng Dist., New Taipei City 23670, Taiwan(R.O.C.)
TEL:886-2-22613919, FAX:886-2-22613918, E-mail:ASP.twn@gmail.com

VERIFICATION OF CONFORMITY

We Hereby Certify that

The following mentioned product has been tested in typical configuration by ASP.

Applicant:

INJOY MOTION CORP.
NO. 48, YONGPING ST., TUCHENG DIST.,
NEW TAIPEI CITY 236, TAIWAN(R.O.C.)

Product Type:

AIR SERIES MOTION SIMULATOR

Model Name:

X AIR TWIN-Z
(X=TOP GUNNER, PROJECT X-PHER, ALLIED TANK ATTACK; Z=1, 2, 4)

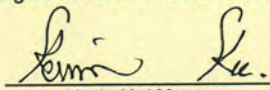### Is in compliance with the European Council Directive 2006/95/EC.

The submitted samples comply with the requirements of the following standard(s):

EN 60950-1:2006+A12:2011

CE

This verification refers only to the units submitted for test. The CE mark as shown above can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives.

Signed for and on behalf of ASP Technology Corp.

Kevin Ku/ Manager.
ASP Technology Corp.

Oct. 14, 2013
Date.

The technical report issued by ASP will support you affix the CE marking.

TCF No.: 3731

Verification Of Conformity

Index

1. General Information

1.1 Safety Notes

Please read the following instructions carefully before using the game.

Using separate power supply for this machine

Handling with care
The game contains glass and fragile electronic equipment, should be very careful when handling

Be sure to turn off the power before maintenance

Earth Connection
To avoid electrical shock! Please use earth connection.

Using connectors properly
Check direction before connect

Move PC with care

1.2 Specifications

| Installed Dimensions (LxWxH)	151x228x214cm
Approximate Weight	637kgs
Voltage & Power Requirement	AC 220VAC, 50/60Hz, 2000W

Note: The power cord should be connected to a dedicated 15A/220V circuit. No other game should share the circuit with this game.

2. Installation

2.1 Checklist

Item (For 1 machine)	Q'ty
TV cabinet (monitor base)	1
Cockpit (seat base)	1
Head Light	1
Service manual (with CD)	1
Other parts kit (plug adapter, keys)	1

Note: This machine must be installed indoor, need to maintain a distance of 1 m from the wall. Make sure the unit stands are placed flat on the ground and the machine is not moving when playing.
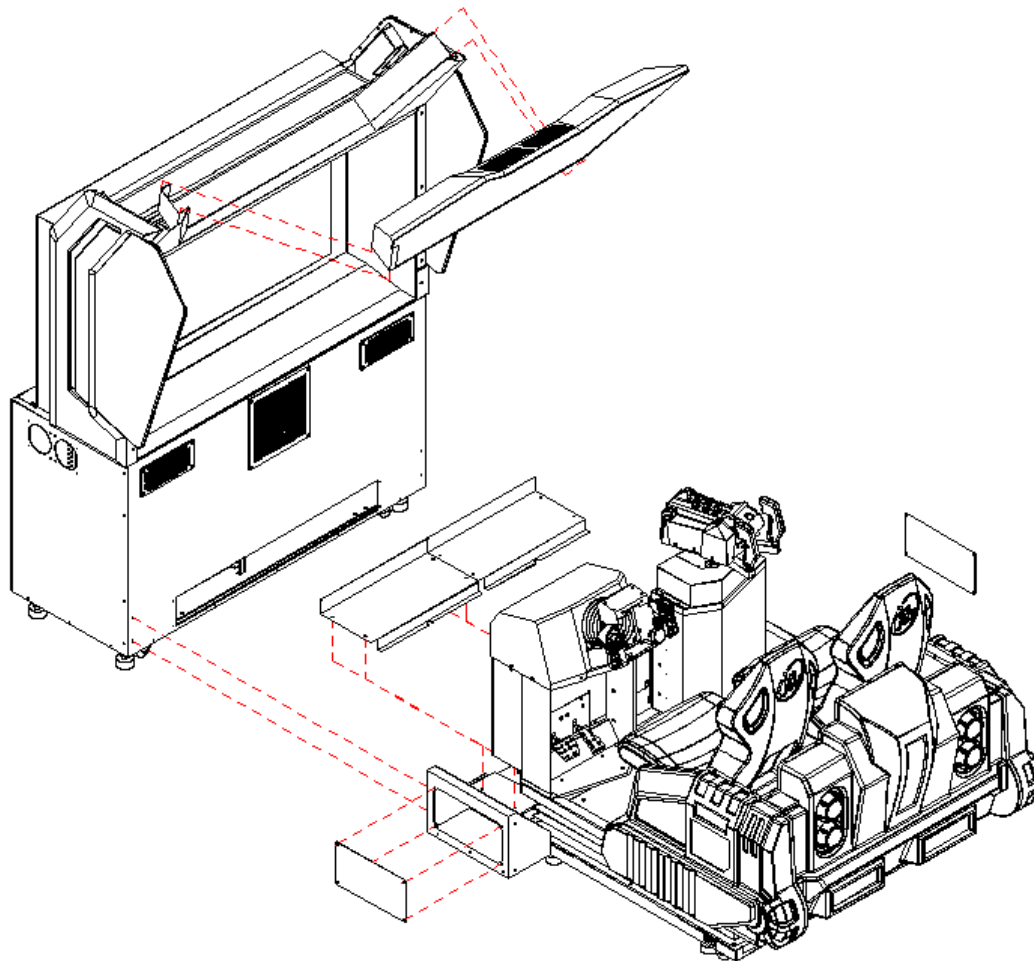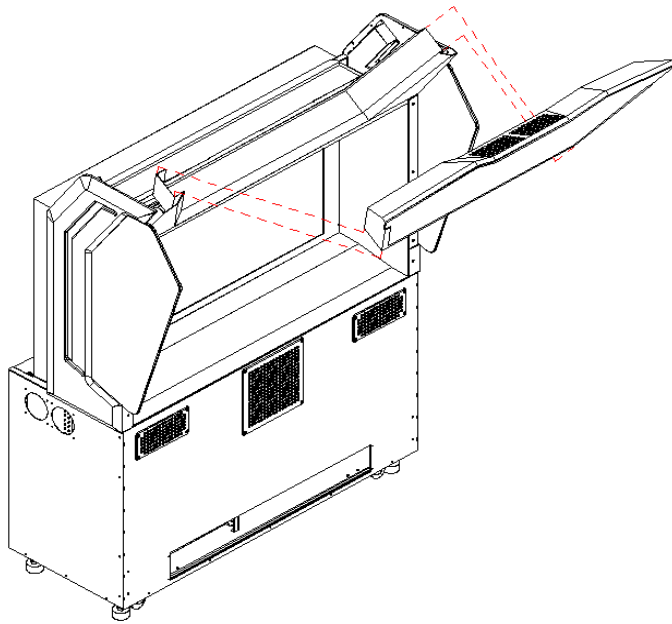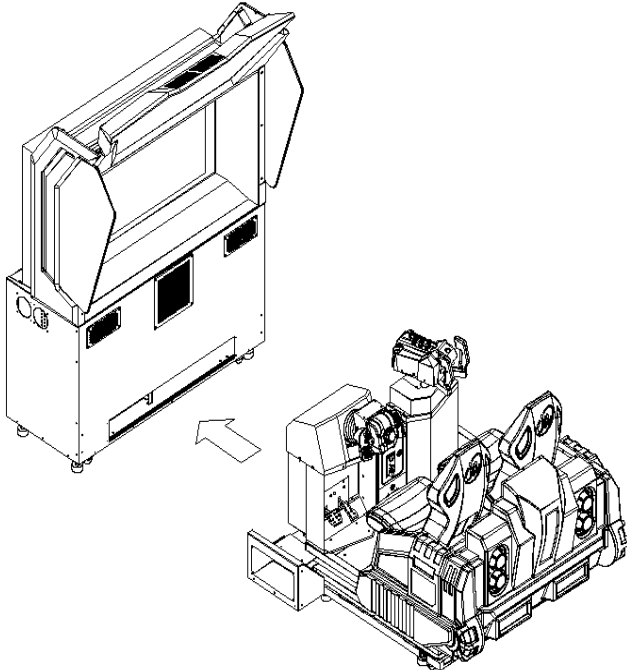

Assembly Diagram

2.2 Installation

Step1： Inspect the exterior of the cabinet for any damage.

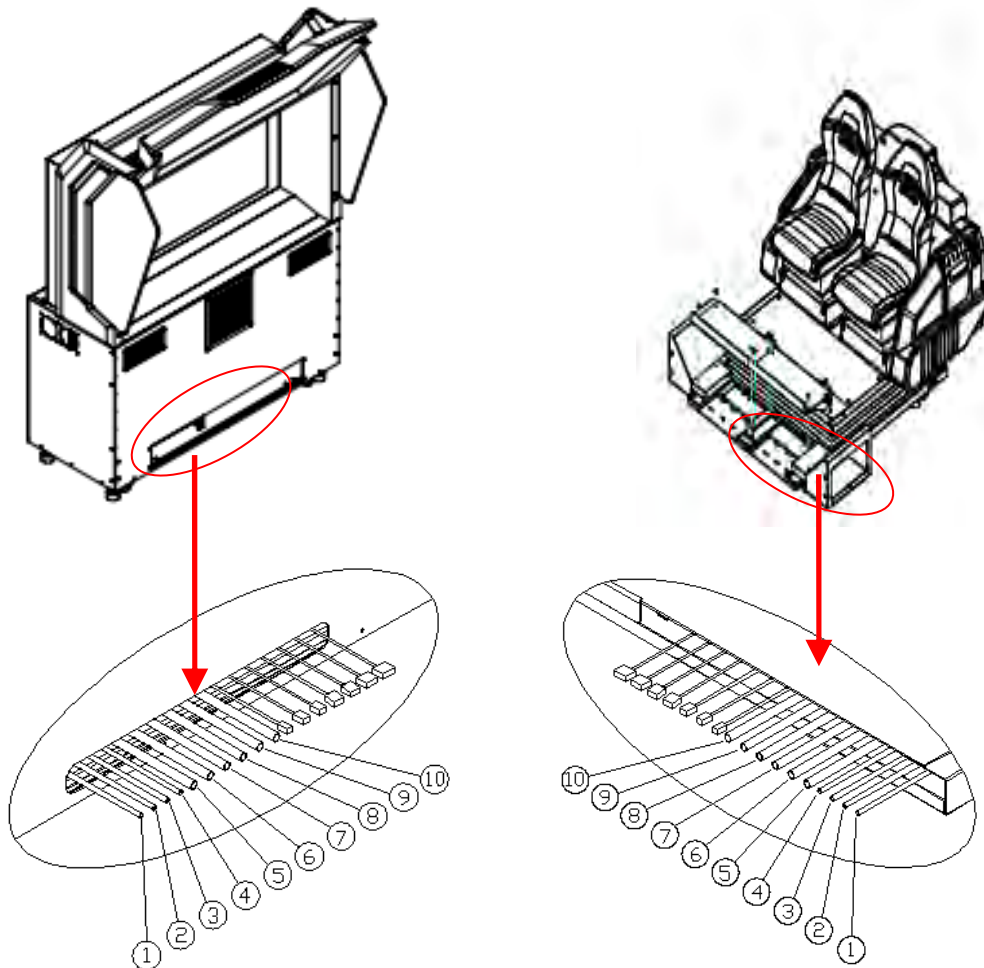**Step2**： Find headlight set and install the headlight carefully.

Carefully move the TV cabinet (monitor base) close to the Cockpit (seat base).

Step3: Collecting the air tubes to the connector box

Move the Cockpit close to TV cabinet, and collect the tubes①~⑩ from TV cabinet to the **connector box** on Cockpit left hand side according to the same color and size.

|			
①	ψ6 Black Tube	⑥	ψ10 Orange Tube
②	ψ6 Orange Tube	⑦	ψ10 Blue Tube
③	ψ6 Blue Tube	⑧	ψ10 Red Tube
④	ψ6 No-color Tube	⑨	ψ10 No-color Tube
⑤	ψ10 Black Tube	⑩	ψ10 Transparent-Blue Tube
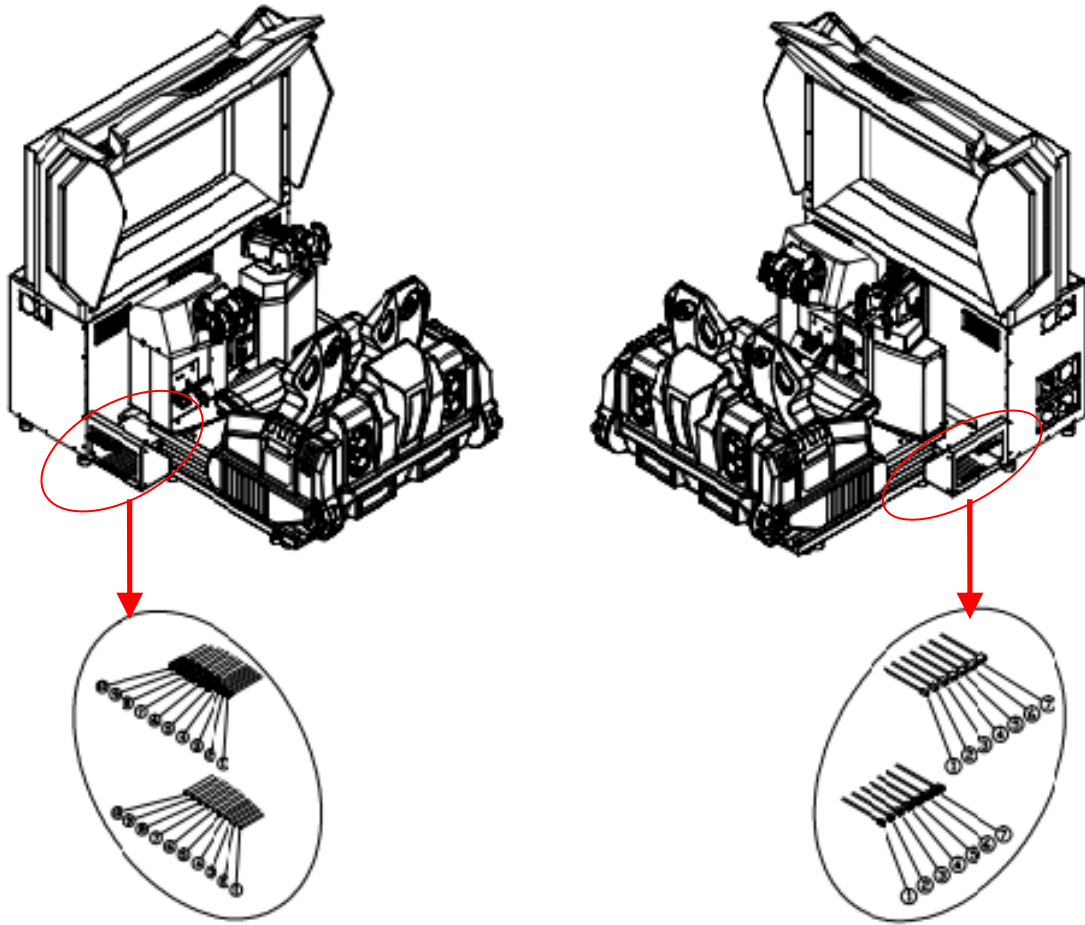
Step4： Collect the connectors ①~⑦ from TV cabinet to the **connector box** on Cockpit right hand side by the same pin-number and the same name tag.
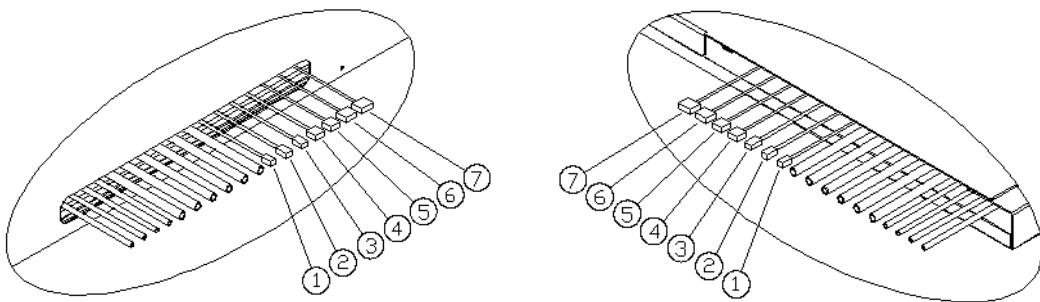
| Number	Shape	Pin	Tag name
①		4	SysGH
②		6	Coin Power
③		6	BL
④		8	Coin EX
⑤		8	START
⑥		14	VR
⑦		16	BTN&SB

Step5: Move the cockpit close to TV cabinet. Use two front screws to fasten the left/right corner plate. Use two side screws in each **connector box** to mount the cockpit. **Watch out each connector and tube when connecting the monitor base and the cockpit. Do not bend the tube or wire under any metal piece.**
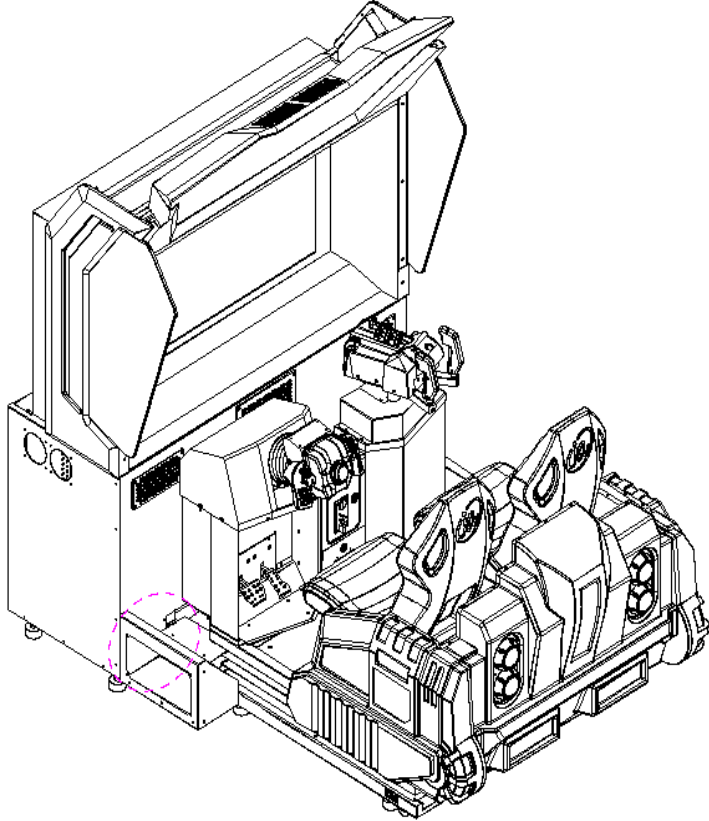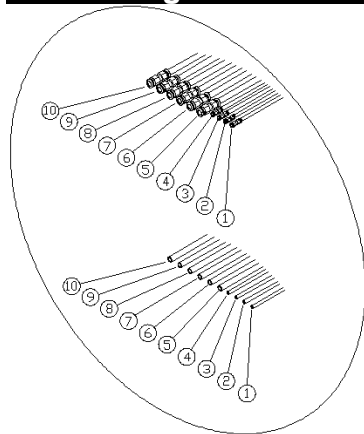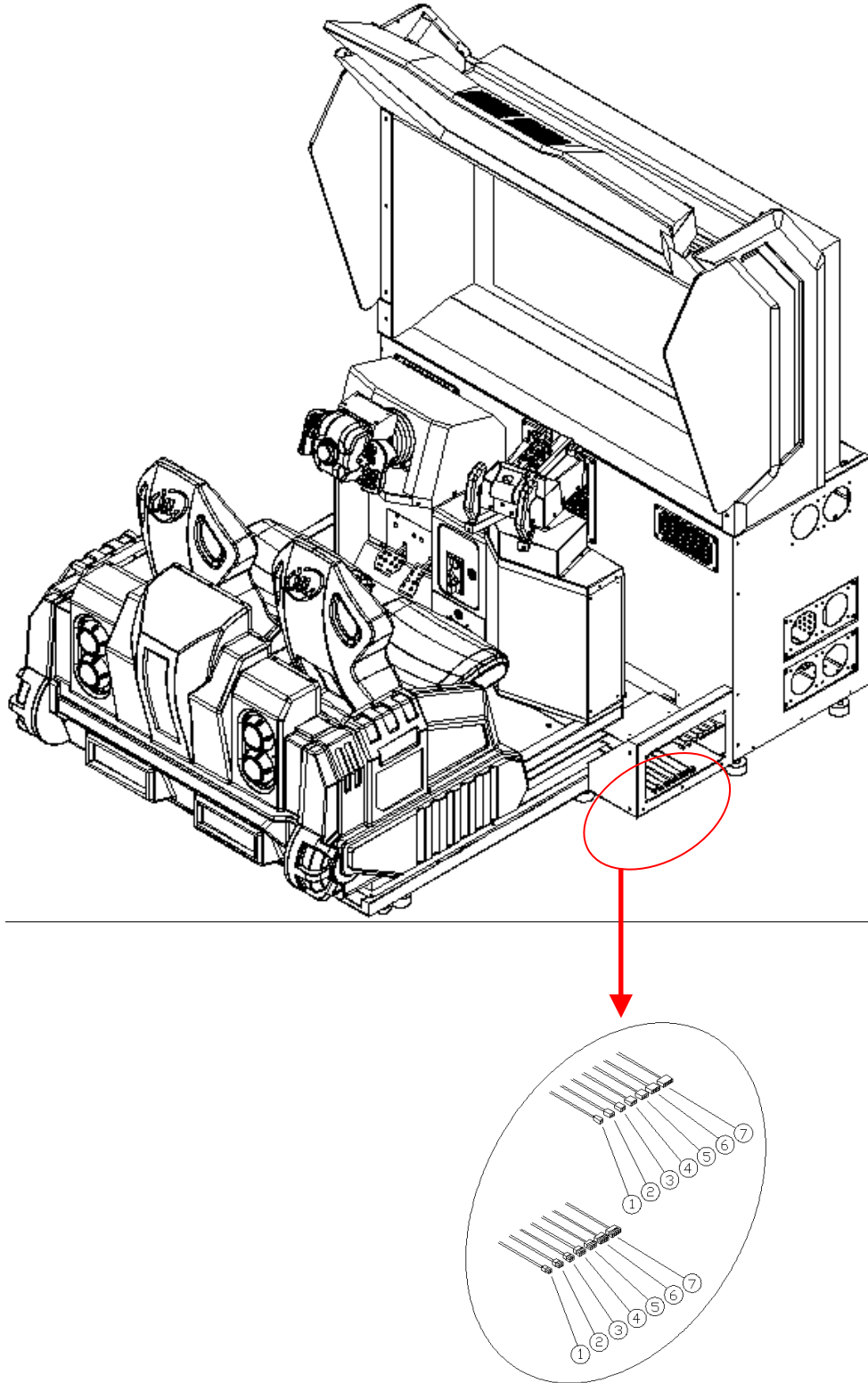

Side screws and front screw:
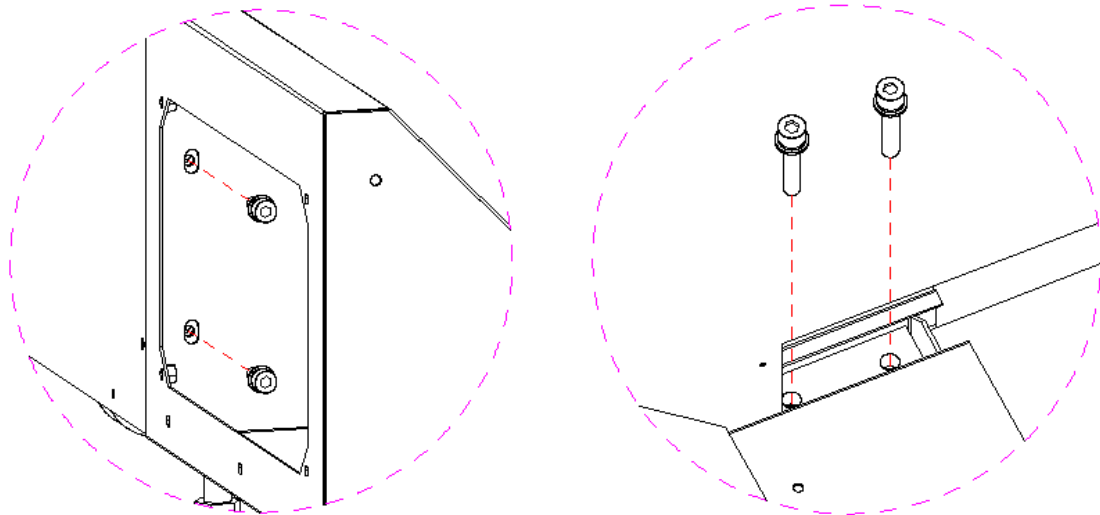
Step6： Connect the air tubes①~⑩ in the **connector box** on Cockpit left hand side by the same color, do not mix the orange color with the red color tubes.
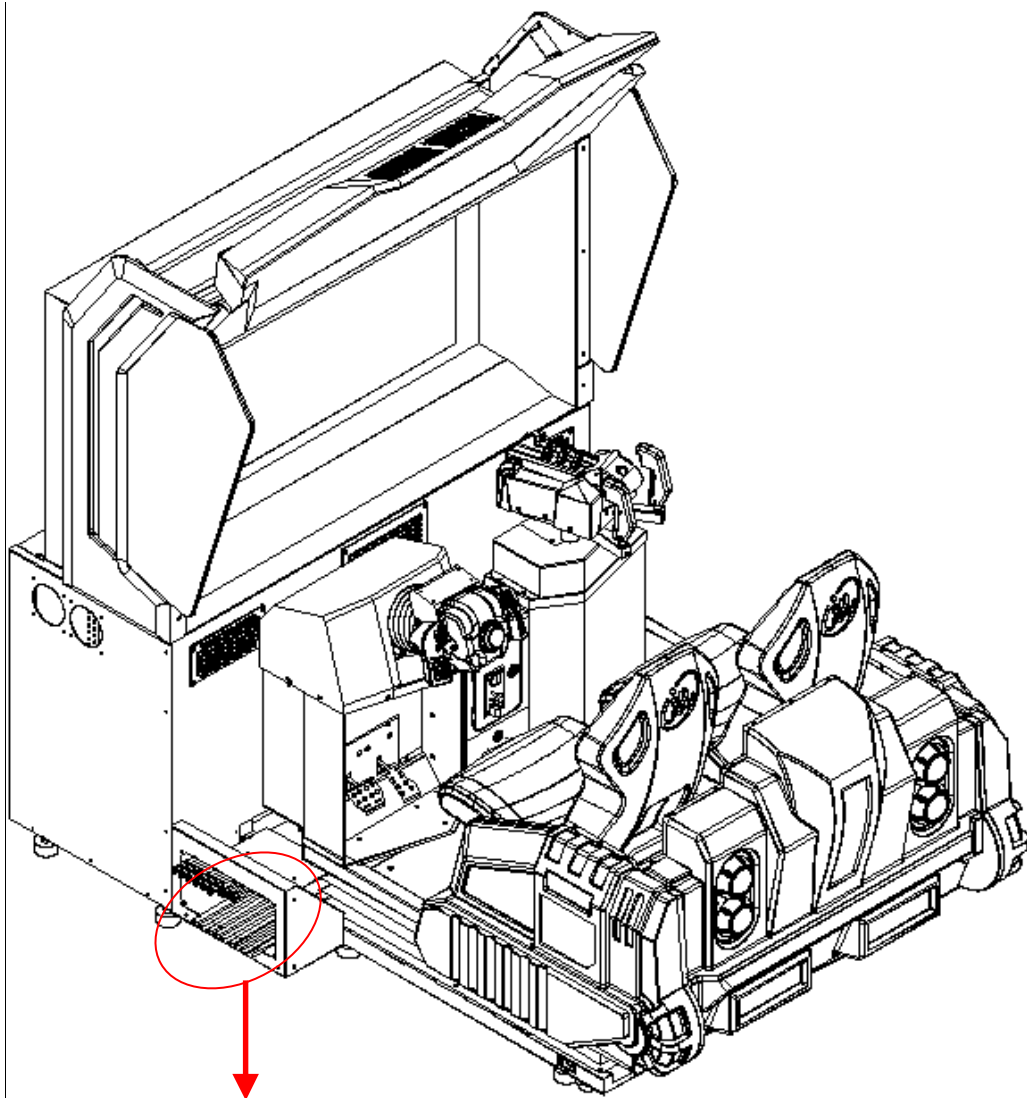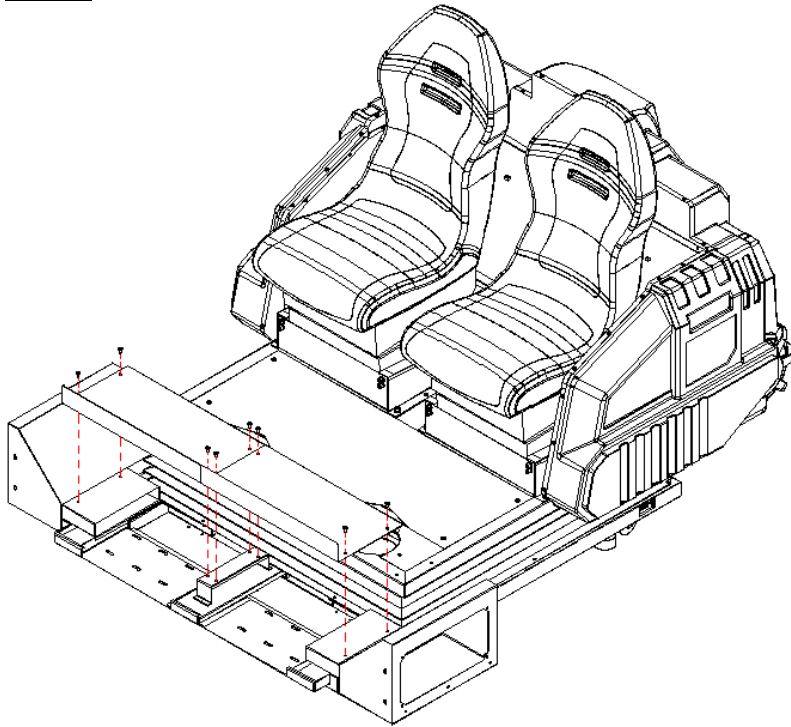

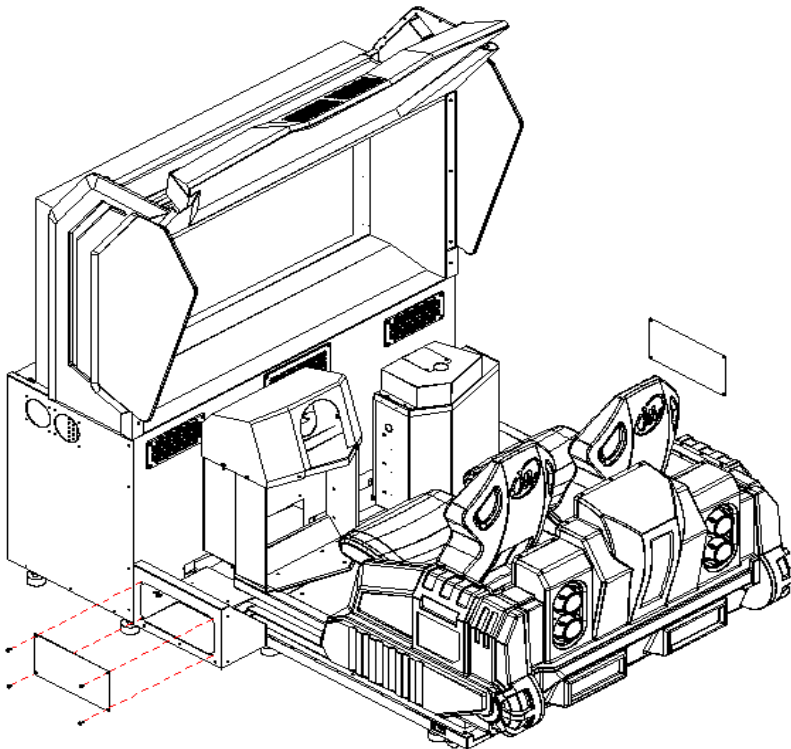**Connecting air tubes in the connector box**

Step7: Connect the cables ① ~ ⑦ in the **connector box** on Cockpit right hand side by the same pin-number and the same name tag.
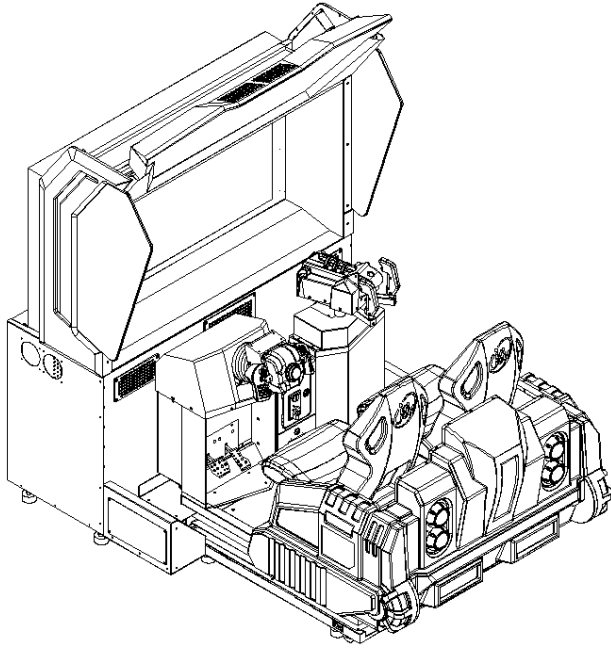
Step8： Attach the cover plate to the cable base, and use the screws to fix it.

Step9： Attach the cover plates to the connector boxes, and use the screws to fix it.

Step10： Assembly done.

Step11： Move the machine to the installation site, check that the width of the pathway need to be more than 1m.

Step12： When the machine is in it's final position, adjust the unit stands with the spanner, so that all casters are raised from the floor. Then fix the lock nut with the spanner to ensure the stands do not move.
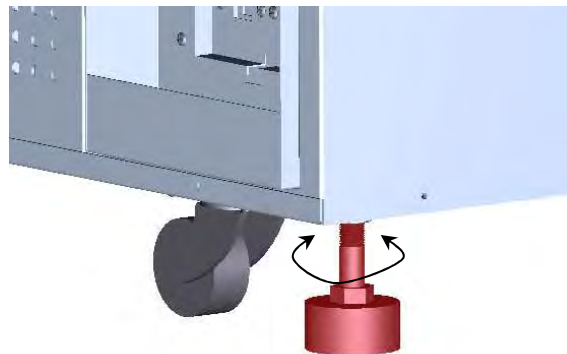
Step13： Connect the AC power cord from the cabinet to the AC wall outlet.

⚠ Caution	1. The power cord should be connected to a dedicated 15A/220V circuit. 2. No other game should share the circuit with this game

Coin Acceptor Setting

Step14： Pull up the slider of the coin acceptor and insert the coin into the coin acceptor. Release the slider to fix the coin acceptor.
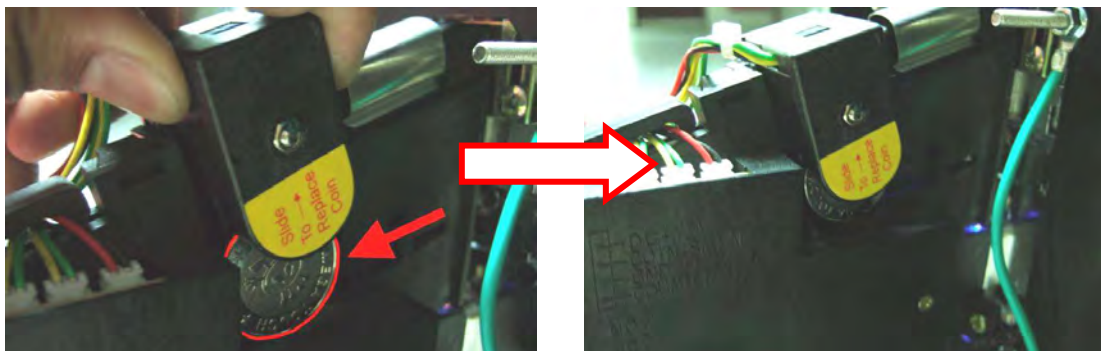

Step15： Check the Coin Acceptor Setting. (Select "NO" on top switch, "SLOW" on bottom switch)

Placement for external plate

Step16： Put a plate on the floor and right under the drain valve hole. The air compressor tank drains water after machine power off. So it is suggested to put a container on the floor and right under the drain valve to catch the water. Generally, a plastic plate around 25x20x3 cm (LxWxH) is suggested.

Plate
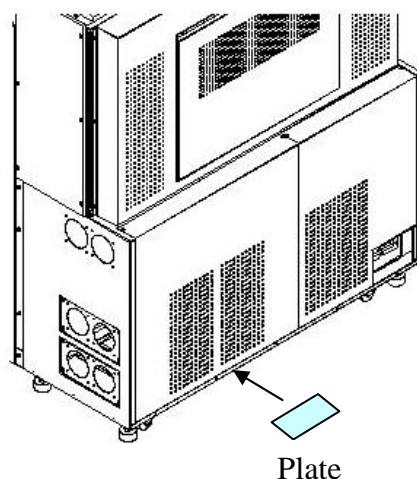
3. Game setting (Operator menu)

To access Operator Menu, after the Power is switched ON and the screen shows "insert coin", find the red operator menu switch located inside the coin box, switch it to "I" position to enter.
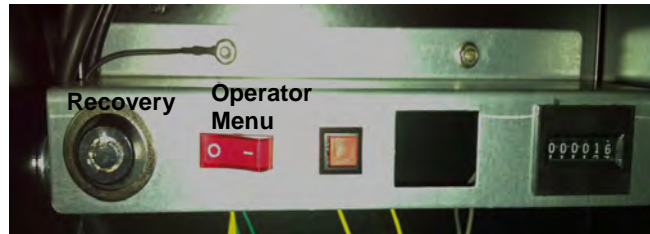
Then you will see below screen.

3.1 Coin Options

1. **"*Coins per Play*"** allows you to set how many coins it will take for a player to start a game. The factory default setting value is 4 coins per play.

2. **"*Coins per Continue*"** allows you to charge a different price for continue-play from the first game play. The factory default setting value is 4 coins per play.

3. **"*Currency Type*"** is not to select the currency of a country, but allows selection of the forms of currency

4. **"*Coins per Pulse (Coin Acceptor 1)*"** allows you to adapt different currency acceptors. The default value is 1.

5. **"*Coins per Pulse (Coin Acceptor 2)*"** allows you to adapt different currency acceptors. The default value is 1.

3.2 Game Options

1. "*Continue Timer Length*" no function.

2. "*Game Show Operation" - Enable* sets free game play. Click "+" or "-" button to "Enable" or "Disable" this function.

3.3 Joystick Setting (Yoke Controller Setting)

Replacing the yoke, accelerator or the brake pedal potentiometer may refer to screen values to install. If the potentiometer values set exceed the safe range or dead zone after installation, the screen will show the error. Please re-set the potentiometer values within the safe range.

To calibrate the Joystick (Yoke and Machine Gun), follow the directions on the screen and go through the steps below.

Step1. Follow the directions on the screen; Hold the "Calibrate" button on the joystick (Gun) to calibrate the yoke, machine gun, pedal and brake. Release the Brake and Pedal.
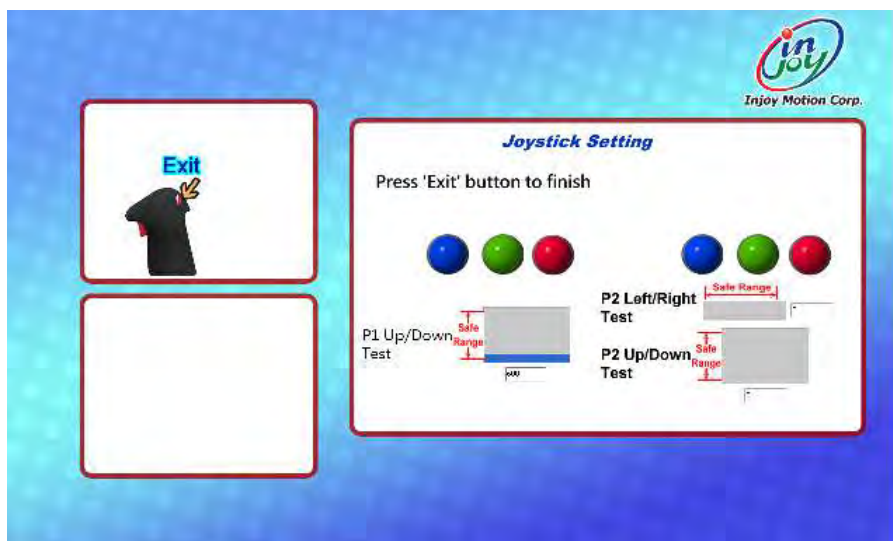
Step2. Follow the directions on the screen, Release the joystick (Gun), then press "Next" button.

Step3. Follow the directions on the screen, turn the joystick (Gun) Up/down, Left/Right, move the yoke up/down and then press "Next" button.
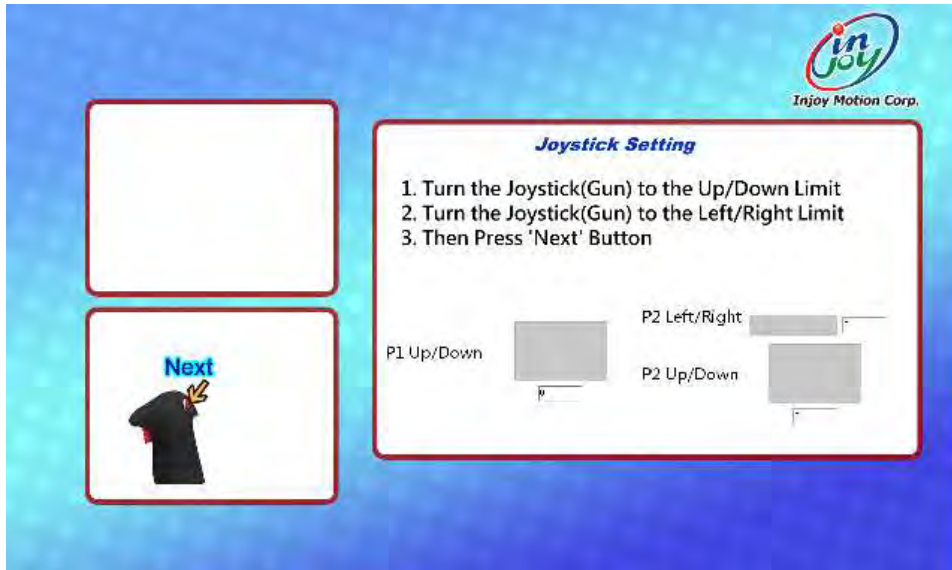
Step4. Follow the directions on the screen, after finish the calibration, press "Exit" button to finish.

3.4 Volume setting

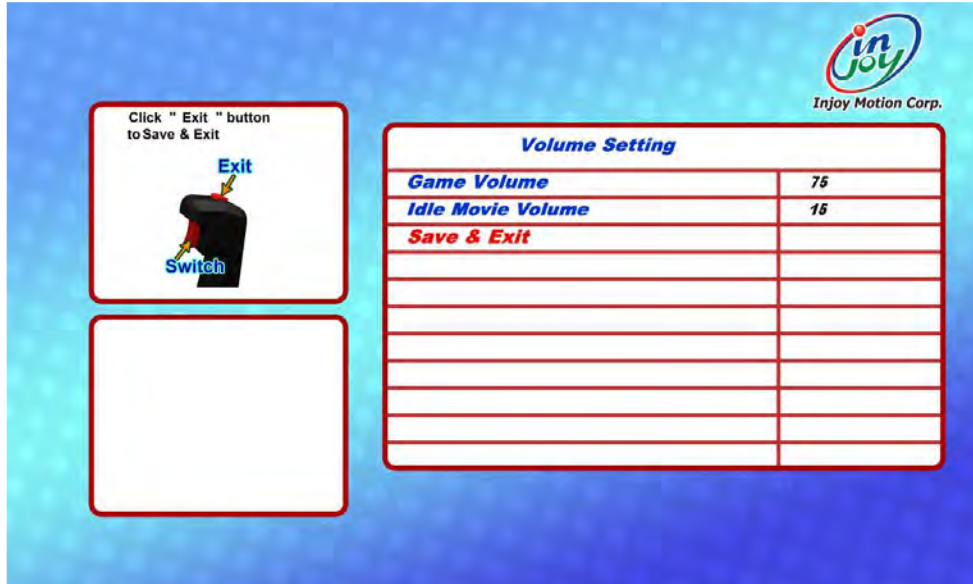"Game Volume" can adjust the system volume, suggestion 75~85.
"Idle Movie Volume" can adjust Idle Movie volume, suggestion 15~35.

3.5 Device Test

After entering device test, all airbags will be aerated，and we can check their conditions.

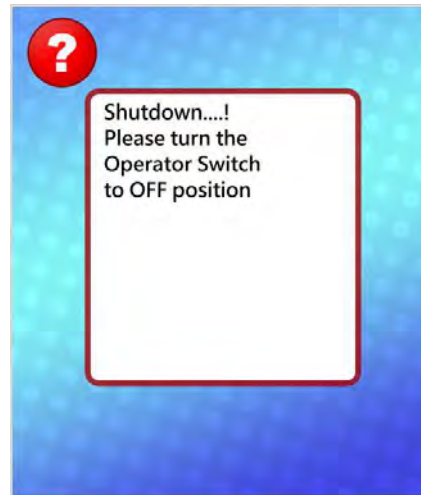| Normal(Full)	Broken(Soft)

Check if all device (coin accepter, emergency stop button, left seat belt, right seat belt, gun effect) work properly as well.
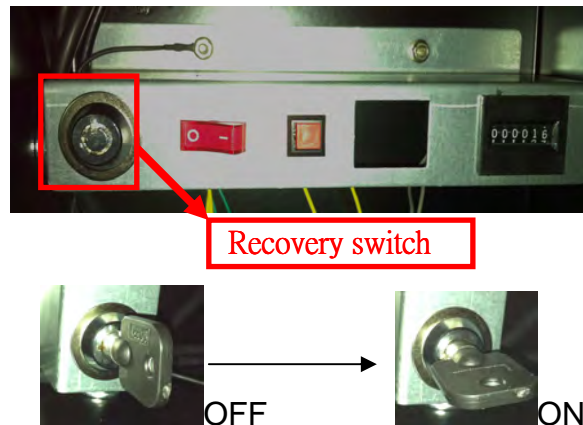

3.6 Save & Exit

After the setup is completed, please select "Save & Exit", and then select "Yes". Lastly, switch the red operator menu switch back to "O" position and turn off the machine. Then wait for 30secs and turn on machine power.

3.7 System Recovery

Recovery switch

OFF → ON

Step1：When the screen shows "insert coin", Use the key specified for recovery switch and turn it right.

Step2：Turn the machine off, wait for 30 seconds

Step3：Turn on the power, and you will see the screen as below. When recovery is in progress, do not turn off the power, or the system will be destroyed permanently.
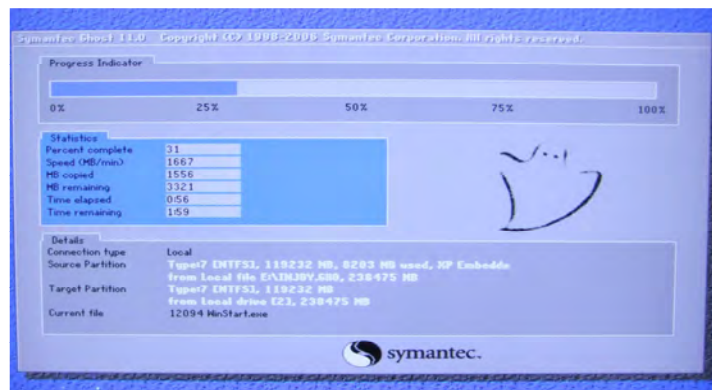
Step4：If success, will see screen as below.
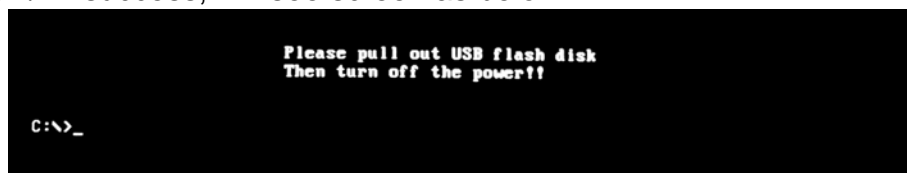
Step5：Turn the key left and take it out.

Step6：Turn the machine off, wait for 30 seconds

Step7：Turn on the power. <Finish>

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4. Trouble shooting
4.1 Error code

EC001

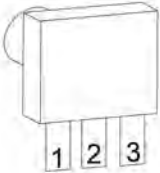| Description	The steering wheel (Yoke Controller) fails in automatic calibration. (The steering wheel (Yoke Controller) does not rotate.)	
		Troubleshooting
1. Check out if the belt is broken or come off.	1. If the belt is come off, please check out the reason. 2. If the belt is broken or wear out, please replace it with the new one with the same specifications.	
2. Check out if the 24V power supplier is out of work.	1. Check out if the cockpit card connector is off. 2. Replace the 24V power supplier.	
3. Check out if the 24V power is connected to the cockpit card. 4. Check out if the cockpit card has output when the machine is booting up.	1. If there is a 24VDC power connected to the cockpit card but there is no output to the motor, please replace the cockpit card. 2. If a voltage is transmitted to the motor and the motor does not rotate, please change the motor.	
5. The cockpit card is out of order.	Replace the cockpit card	

EC002

Description	The automatic calibration of the steering wheel (Yoke Controller) is done, but the value is wrong.	
Check steps		Troubleshooting
1. Check out if the potentiometer pins of the steering wheel (Yoke Controller) are connected inversely. (Measure the potentiometer resistance values on feet 2 and 3 with an electric meter. The potentiometer resistance increases as the steering wheel moves clockwise, and decreases as the steering wheel moves counterclockwise.) 1 2 3		If the changes in the potentiometer resistance are reversed, please swap foot 1 and foot 3. If there is no change in the potentiometer resistance, please replace the potentiometer.
2. The cockpit card breaks down.		Replace the cockpit card.

EC003

Description	The cockpit card can not be recognized.	
Check steps	**Troubleshooting**	
1. Check out if the USB port of the IPC motherboard is out of order.	Replace the USB connector to the other USB port.	
2. Check out if the USB signal line malfunctions.	Replace the USB signal line.	
3. The cockpit card malfunctions.	Replace the cockpit card.	

EC004

Description	The communication of the Cockpit Card USB is disrupted.	
Check steps	**Troubleshooting**	
1. Check out if the USB signal line malfunctions.	Change the USB signal line and check out if the ground wire of the motor is fixed on the plate.	
2. The cockpit card malfunctions.	Replace the cockpit card.	

EC005

Description	Pedal calibration error	
Check steps	**Troubleshooting**	
1. Use an electric meter to check out if the pedal potentiometer exceeds the dead zone. (The resistance value varies from maximum to minimum or from minimum to maximum when the pedal is press.)	Make sure the pedal potentiometer does not exceed the dead zone, re-enter the game operation menu to calibrate again.	
2. Use an electric meter to check out if the pedal potentiometer is normal. (The resistance value will increase or decrease when the pedal is pressed.)	Change the potentiometer of the pedal, and enter the game operation menu to calibrate again.	

EC006

Description	Brake calibration error	
Check steps	**Troubleshooting**	
1. Use an electric meter to check out if the brake potentiometer exceeds the dead zone. (The resistance value varies from maximum to minimum or from minimum to maximum when the pedal is press.)	1. Make sure the brake potentiometer does not exceed the dead zone, re-enter the game operation menu to calibrate again. 2. Change the brake potentiometer, and enter the game operation menu to calibrate again.	
2. Use an electric meter to check out if the brake potentiometer is normal.	Change the brake potentiometer, and enter the game operation menu to calibrate again.	

(The resistance value will increase or decrease when the pedal is press.)	

EC007

Description	Automatic calibration of the steering wheel (Yoke Controller) fails.	
Check steps		Troubleshooting
1. Use an electric meter to check out if the wheel potentiometer is normal. (The resistance value will increase or decrease when the steering wheel turns left and right.)		Replace the wheel potentiometer. (Please note if the wheel potentiometer exceed the dead zone the wheel potentiometer is to be replaced.)
2. The cockpit card malfunctions.		Replace the cockpit card.

EC008

Description	Joystick (Yoke Controller) calibration fails, up/down potentiometer error	
Check steps		Troubleshooting
1. up/down potentiometer exceed the dead zone.		Adjust the up/down potentiometer. (Please note if the potentiometer exceed the dead zone, enter the OP menu and calibrate the joystick again..)
2. up/down potentiometer broken		Replace the potentiometer, Enter the OP menu and calibrate the joystick again.

4.2 General issues

Problem	Solution
No power	Make sure the power connector is connected and have correct voltage. Make sure all switches are "ON".
	Check the distribution switch is "ON".
PC can not recognize token	Reconnect the token and restart.
	Change token to another USB port.
	Contact Injoy Motion Corp. to change token.
PC shut down suddenly	Using a separate power supply
	Make sure the computer power cord and switch work properly.
	Reconnect RAM, VGA card
	Change the PC power supply.
PC Crash	Restart the PC.
Machine overheat	Check all fans work properly.
	Ensure no objects block the vents.
Can not insert coin	Remove stuck coins.
	Go to operator menu check coin setting.
	Reinstall reference coin.
Can not recover system	Make sure recover USB disk is connect to the PC.
	Contact Injoy Motion Corp. to change the Hard Disk.
Can not enter operator menu	Check wire connecting between cockpit card and OP switch.
	Recover the system
	Contact Injoy Motion Corp. to change the cockpit card.
Free Key not functional	Check wire connecting.
	Contact Injoy Motion Corp. to change the cockpit card.

4.3 Display

Problem	Solution
No screen	Update graphic card's driver.
	Check the connection for the monitor.
	Clean and reconnect the graphic card.
	Contact Injoy Motion Corp. to change the graphic card.
	Contact Injoy Motion Corp. to change the LCD.
No screen and no sound	Check the power cord and power switch on the PC.
	Take out the PC and test it on the desk with external monitor and keyboard.
	Contact Injoy Motion Corp. for more information.
White screen	Make sure USB cable between cockpit card and pc is well connected.
Lag problem	Update graphic card's driver and restart the PC.
	Contact Injoy Motion Corp. to change the graphic card.
Resolution is not right	Change resolution to1280x768.
LCD abnormal	Contact Injoy Motion Corp. to change the LCD.

4.4 Sound

Problem	Solution
No sound in game	Go to operator menu and change *Volume Setting*. Adjust amplifier volume.
	Check the connection for audio amplifier and speaker.
	Contact Injoy Motion Corp. to change the audio amplifier.
Poor sound in game	Contact Injoy Motion Corp. to change the audio amplifier.
air leak could be heard	Listen carefully to the air compressor, air bags, tubes, drain valve and water filter to find out where's air leak. Then check if the connection is loose or something broken.
	Put your hand under the control cabinet, right under the drain valve and water filter to feel if there's air leak.

4.5 Control

Problem	Solution
START / VIEW Button failure	Change micro switch.
	Check wire connecting.
	Contact Injoy Motion Corp. to change the cockpit card.
Wheel failure	Check motor wire connecting.
	Contact Injoy Motion Corp. to change the motor.
	Change the potentiometer.
	Contact Injoy Motion Corp. to change the cockpit card.
Gear not working	Check wire connecting and micro switches.
	Contact Injoy Motion Corp. to change the cockpit card.
Pedal and brake not working	Go to operator menu to check pedal setting and do calibration.
	Change the potentiometer.
	Contact Injoy Motion Corp. to change the cockpit card.
Airbag not working in the game.	Go to operator menu device test and check if all airbags work fine.
	Make sure the power switch of the air compressor is ON.
	Check if air compressor works properly.
	Check the 12V on the SSR card near the cockpit card.
	Contact Injoy Motion Corp. to change air compressor or SSR card.

4.6 Link

Problem	Solution
Can not link	Make sure cable is good. Contact Injoy Motion Corp. to Change the cable.
	Make sure no duplicate IP address.
	Make sure no duplicate computer name.
	Make sure all software is the same version.

Main Parts
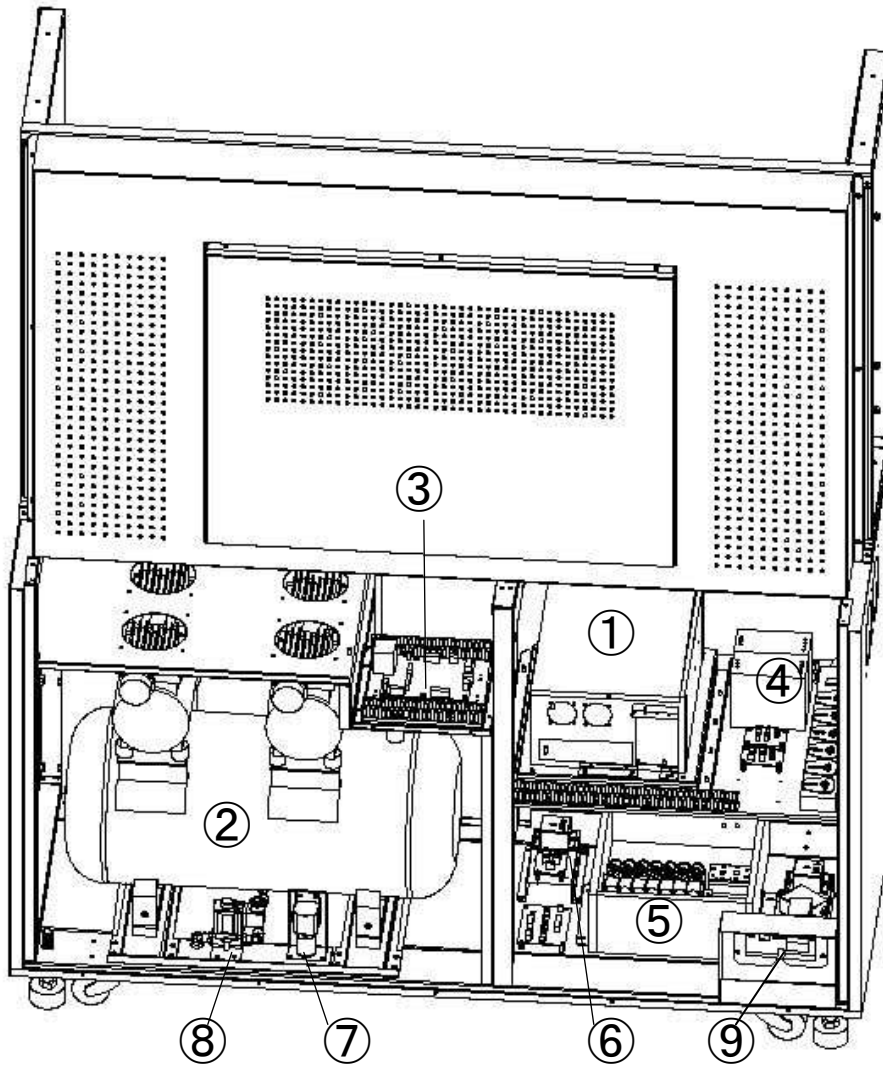
①	PC	⑥	Air control card
②	Air compressor	⑦	Water filter
③	Cockpit card	⑧	Drain valve
④	Power supply	⑨	Input AC power
⑤	Pneumatic valve		

4.6 Technical Support

Service center: Injoy Motion Corp.

Phone: +886-2-2267-6317

Fax: +886-2-2267-5906

Time: 9:00AM~6:00PM (GMT+8), Monday to Friday

E-mail: support@injoymotion.com

When you contact technical support, please provide the following information so that we can understand the situation and solve your problem as soon as possible, thank you for your cooperation:

1、Machine serial number _____

2、Software version _____

3、Error code _____

4、Problem Description _____

5、Any changes to the system _____

Appendix A: How to change potentiometer in pedal module

Pedal module:
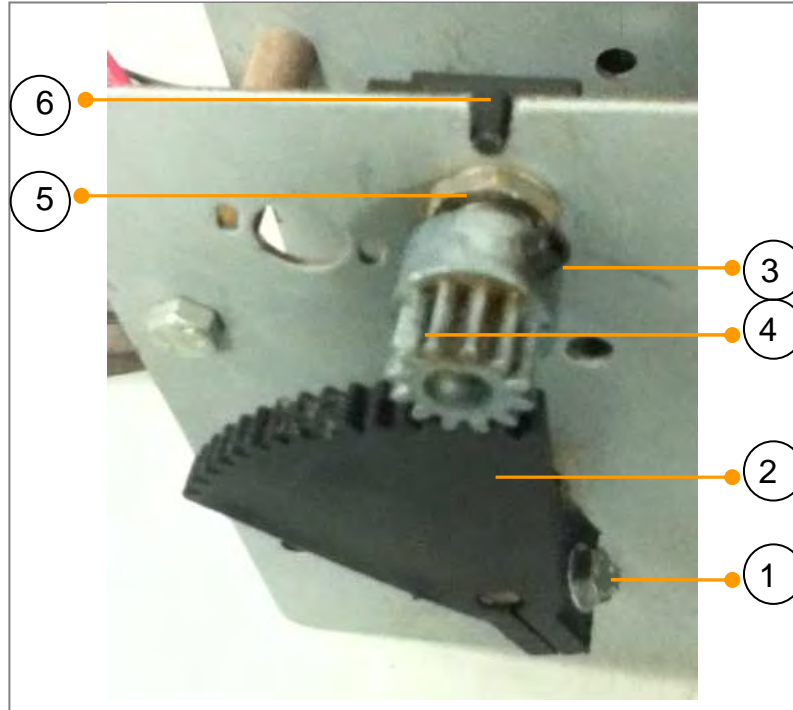
1. Remove potentiometer:

Step1: Loosen and remove screw①.
Step2: Take off gear②.
Step3: Loosen screw③.
Step4: Take off gear④.
Step5: Loosen and remove the washer⑤.
Step6: Take out potentiometer⑥.

2. Install potentiometer:

Step1: Put in potentiometer⑥.
Step2: Placed Washer⑤ and fix it.
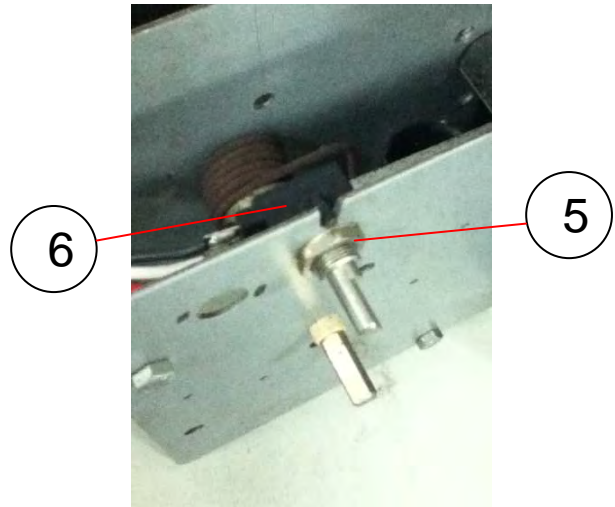
Step3: Use meter to measure resistance value between pin2 and pin3 of the
potentiometer，and make sure 1.6Kohm for pedal, 2.6Kohm for brake.
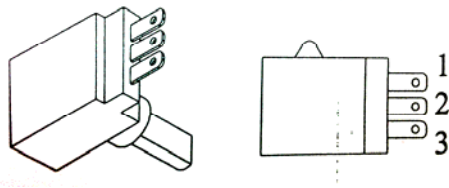
Step4: Install gear④.
Step5: Fix screw③.
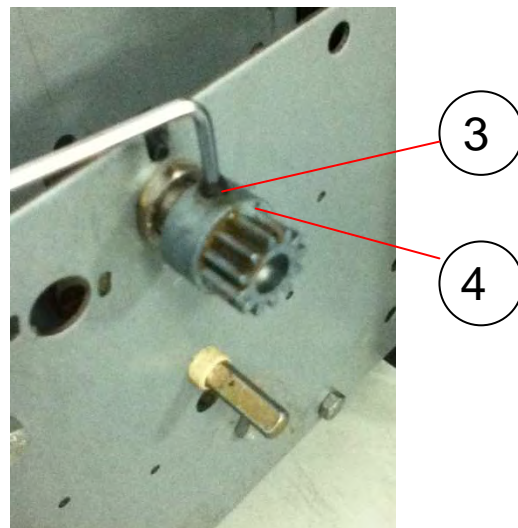
Step6: Install gear②，and make sure gear④ close to second tooth of the gear②.
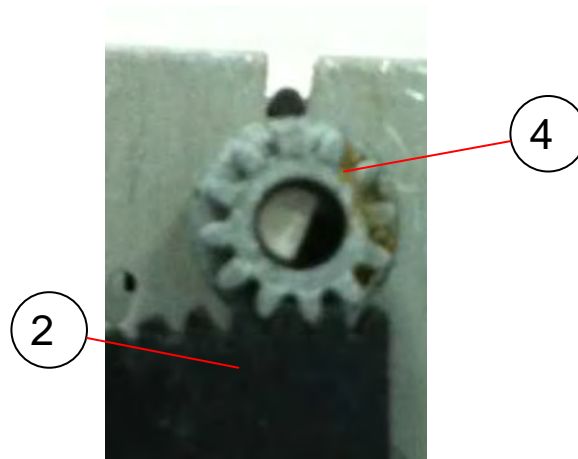
Step7: Install screw① and fix it.
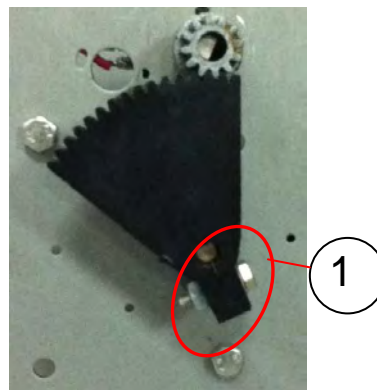
Step8: Use meter to measure resistance value between pin2 and pin3 of the potentiometer. <Finish>

Release accelerator should be 1.6 Kohm
Press the accelerator should be 3.2 Kohm

Release the brake should be 2.6 Kohm
Press the brake should be 3.5 Kohm
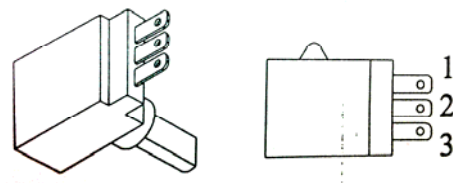
Appendix B: How to connect tubes

1. Insert

A. Insert the tube to the end.
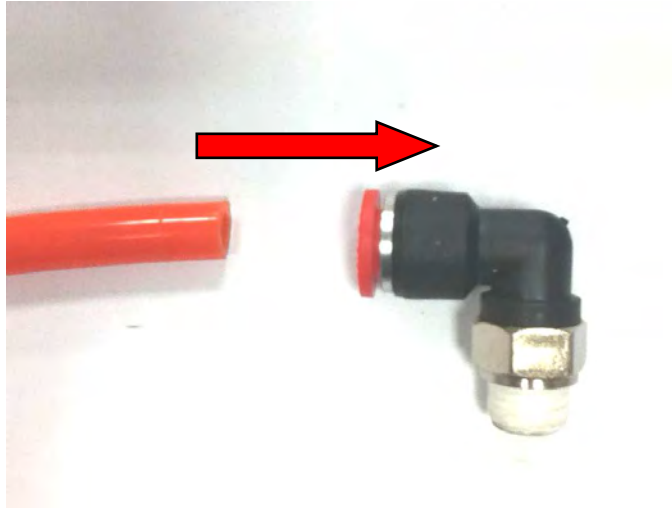
B. Finish

2. Pull out
A. Push the releasing ring in the front of the quick coupler.

B. Pull out the tubes
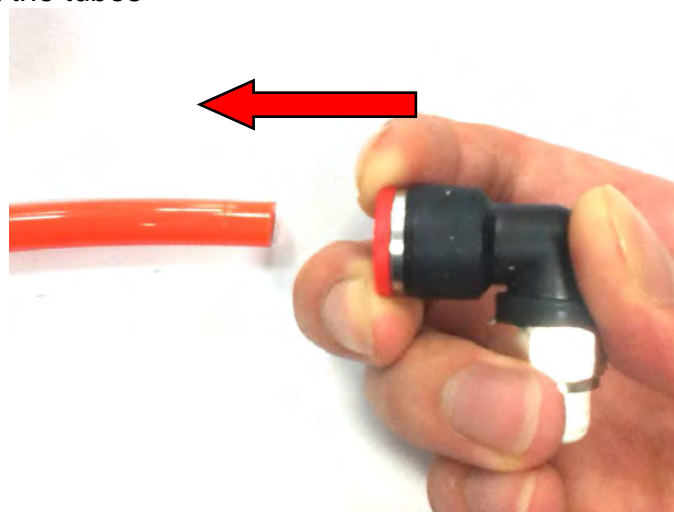
Appendix C: Clean the two-way drain valve
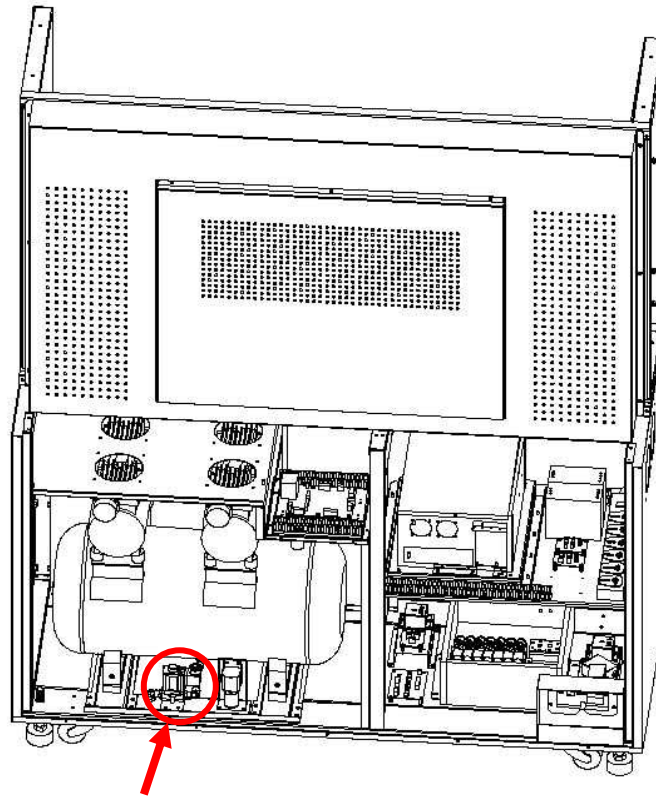
Two-way drain valve

Follow the steps below to clean the pathway inside the drain valve:

1. Remove the metal piece

2. Remove the body-part

3. Remove 4 screws

4. Remove the core-part

5. Clean the two-way valve inside

6. Install the core-part

7. Install 4 screws

8. Install the body-part

9. Install the metal piece <Finish>

Appendix D: How to change airbag

A. Introduction   B. Change Airbag no.1~4   C. Change Airbag no.5

A. Introduction

Front：Airbag no.1

Right: Airbag no.4

Mid: Airbag no.5

Back: Airbag no.2

Left: Airbag no.3

①Airbag screws

②Fixation screws

③ Airbag screws

④ Quick coupler
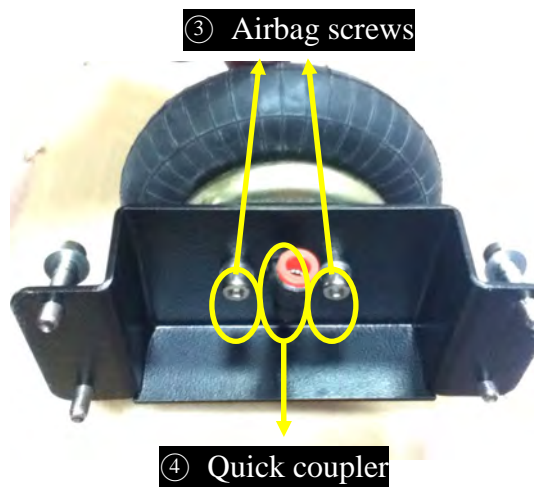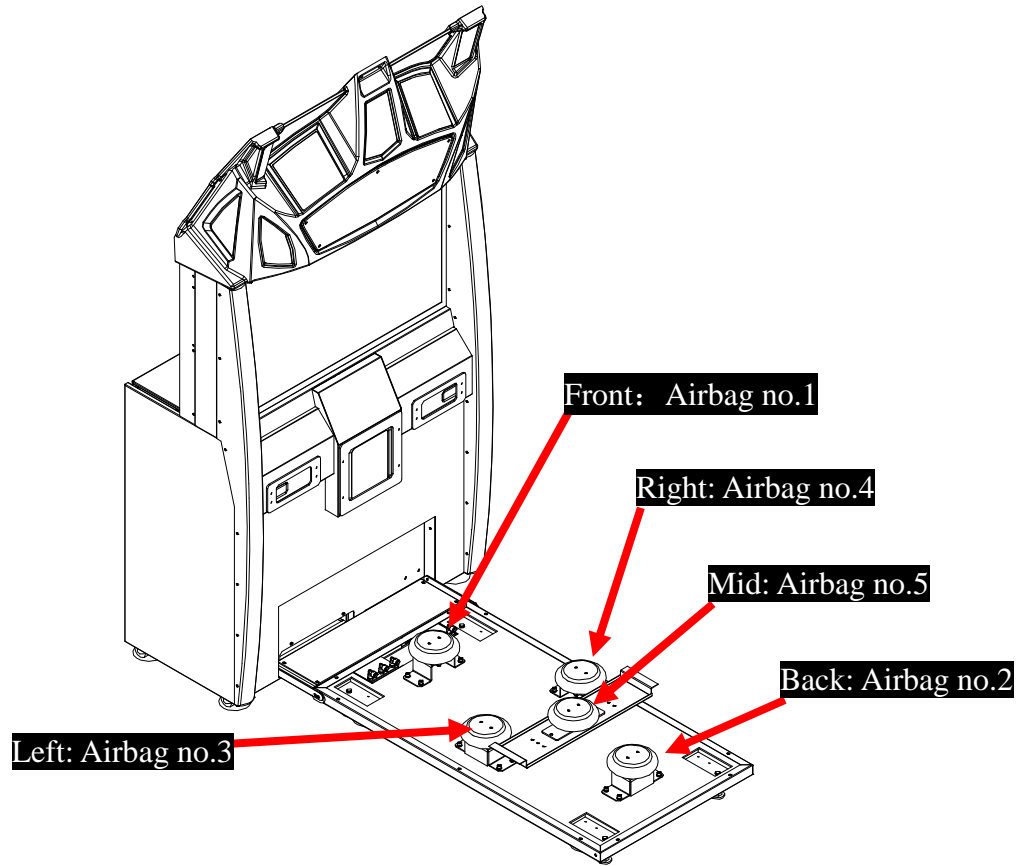
B. Change Airbag no.1~4（**Take changing airbag no. 3 for example**）

Step1：Use solid object to support the motion base.
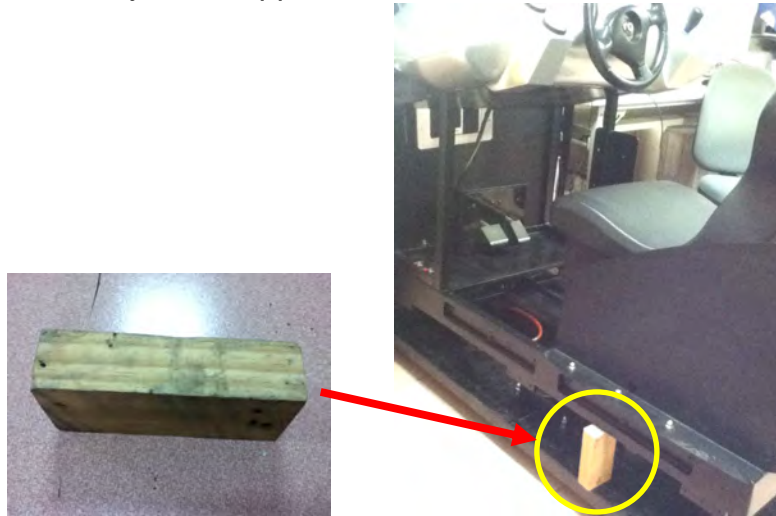
Step2：Remove 2 airbag screws.
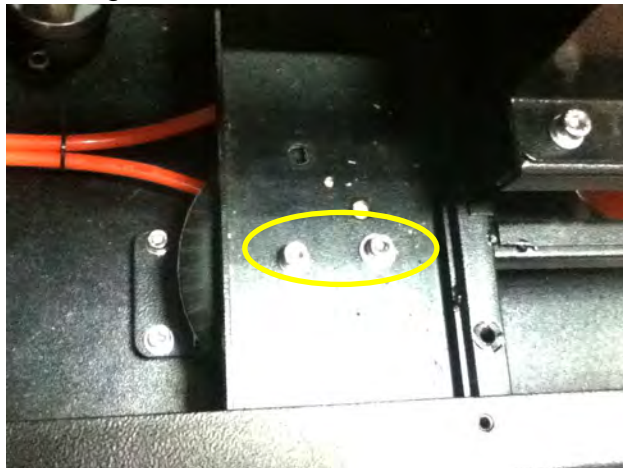
Step3：Remove 4 fixation screws.

Step4：Remove the tube（refer to Appendix B）.
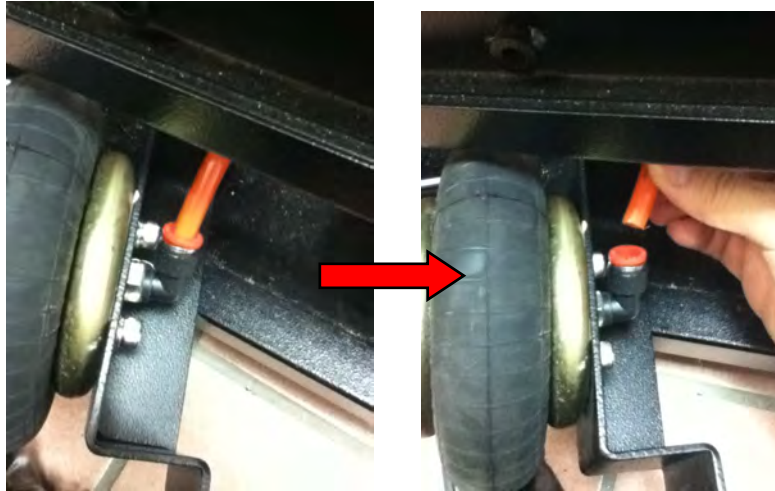
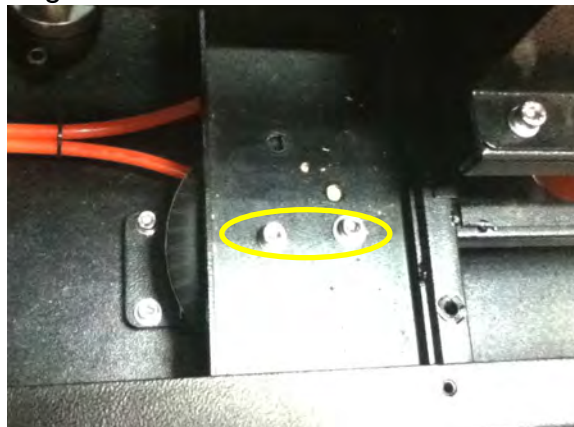Step5：Remove 2 airbag screws and quick coupler.

Step6：All Components are as below.
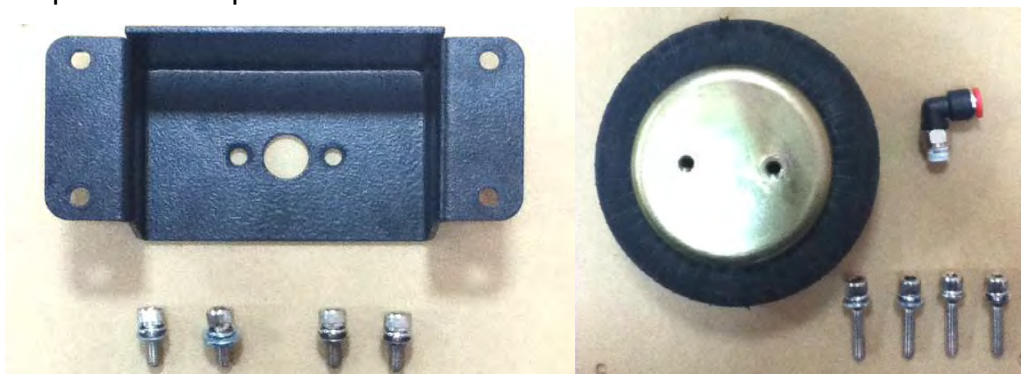
Step7：After change airbag, tighten 2 airbag screws and quick coupler.
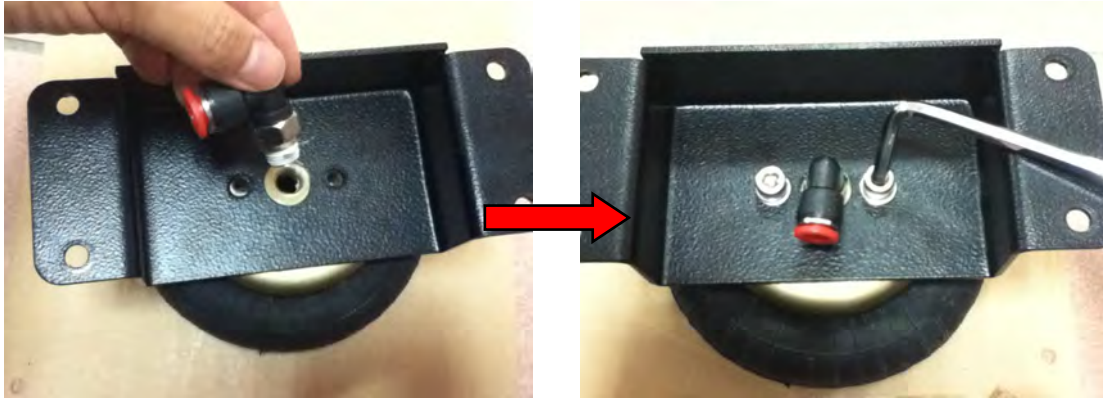
Step8：Install 4 fixation screws.
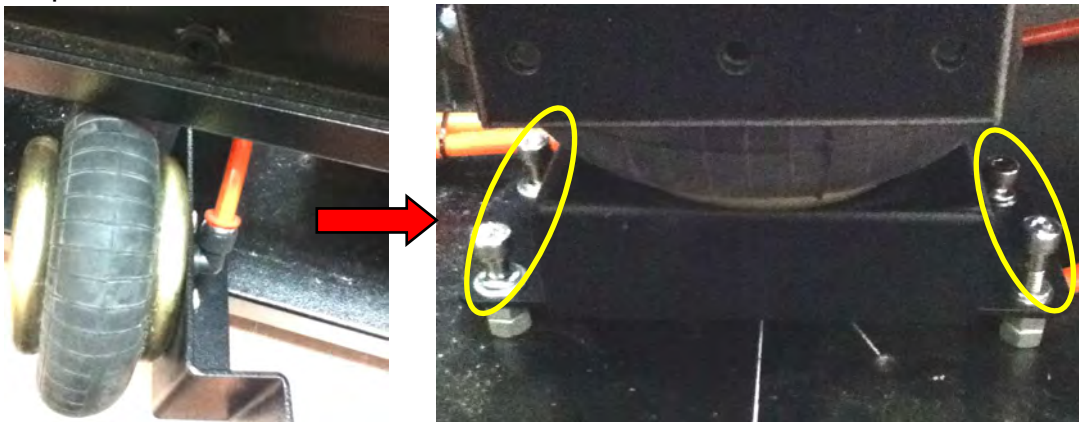
Step9：Install 2 airbag screws. <Finish>

C. Change Airbag no.5

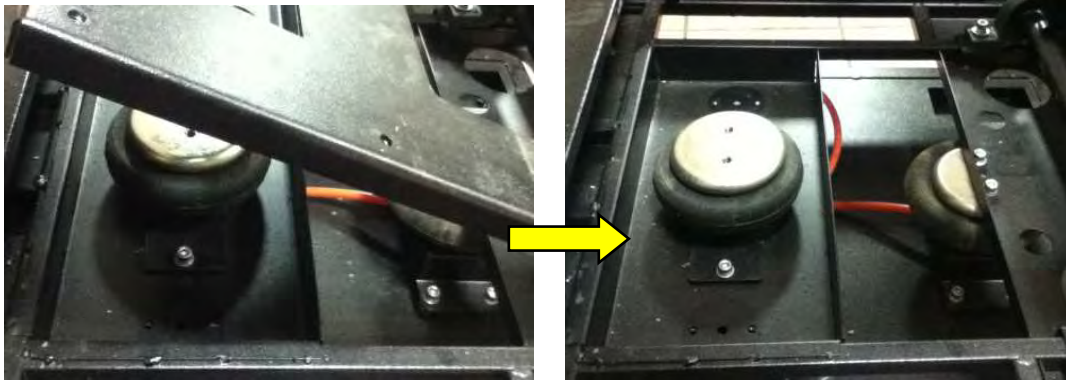Step1：Remove 4 seat fixation screws.
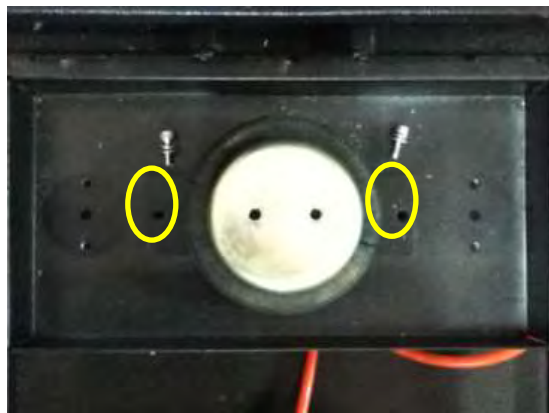

（Left）　　　　　　　　　　（Right）

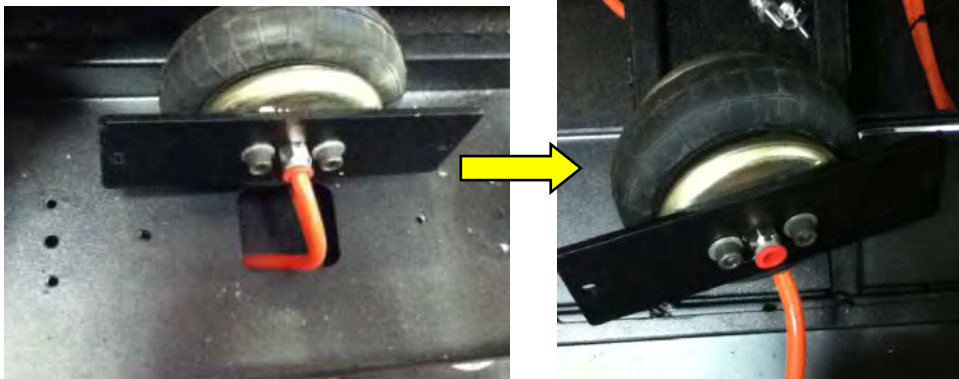Step2：Remove the seat.

Step3：Remove 2 airbag screws.

Step4：Open the seat base, and find the airbag 5.

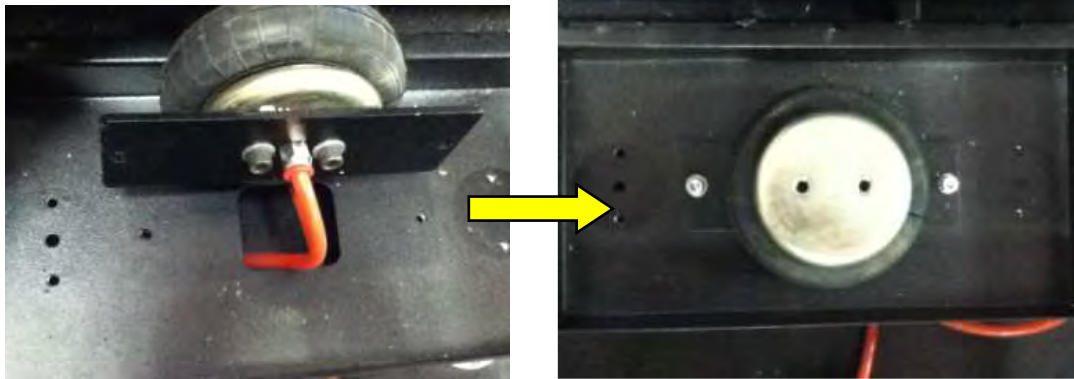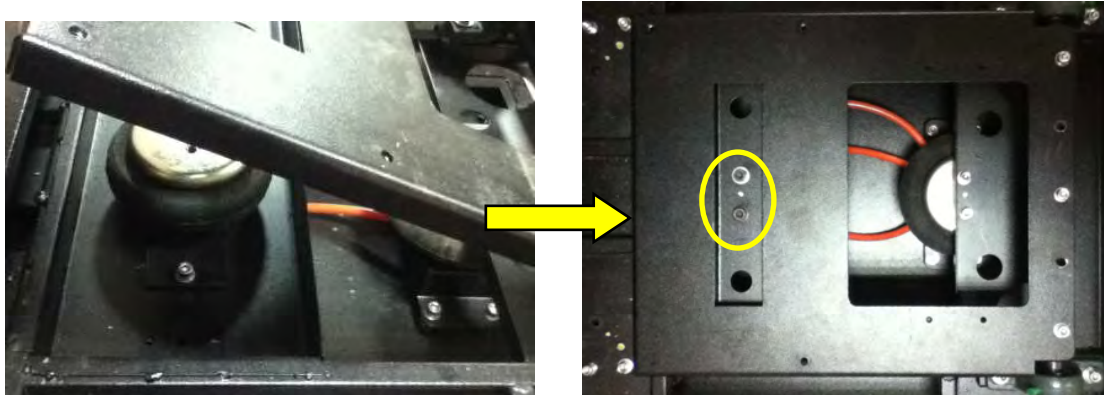Step5：Remove 2 fixation screws.

Step6：Remove the tube and screws, and change airbag.

Step7：After changing, lock 2 airbag screws, tube, and 2 fixation screws.
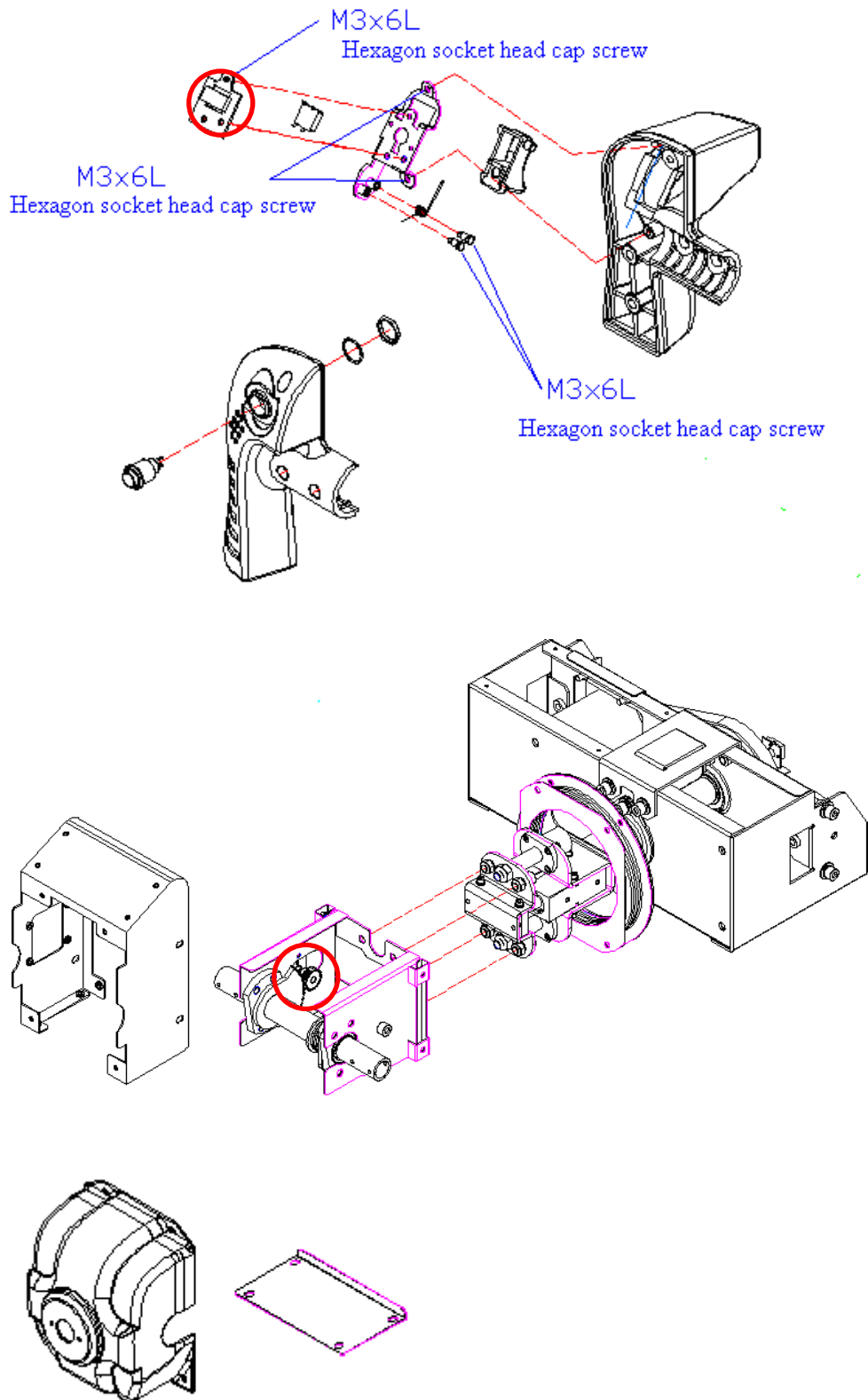

Step8：Cover the seat base, tighten 2 airbag screws.

Step9：Install the seat back. <Finish>

Appendix E: The assembly of the Yoke controller

M3×6L
Hexagon socket head cap screw

M3×6L
Hexagon socket head cap screw

M3×6L
Hexagon socket head cap screw

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