

JDM-102 1:14 Hydraulic Crane Model



EXPERIENCE HYDRAULIC MODEL CHARM EXTREMELY

1/14 Hydraulic Truck Mounted Crane Model



Net weight: 5kg (including packing material)

Material: Aluminum alloy construction. Hydraulic pump and hydraulic valve are made from chrome steel. Hydraulic cylinder is made from stainless steel and brass.

Height after folding: 300mm

Width of front feet: 190mm(Folded), 750mm(Extended)

Width of rear feet: 190mm(Folded), 415mm(Extended)

Maximum lifting force:

- 3KG maximum for the longest arm,
- 3.8KG maximum after folding the 6th section of the arm,
- 4.8KG maximum after folding the 5th section of the arm,
- 6KG maximum after folding the 4th section of the arm.

Maximum lifting radius: 900mm

Maximum lifting height: 1090mm

Action arm turning angle (left/right): 270 degrees

Remote control: 5 channels minimum for crane model and at least 9 channels for 1:14 truck model.

Hydraulic pump ESC: 40A Brushless ESC

Voltage of power: 12V, it needs additional XT60 connectors for the battery.

Hydraulic pump: power flow 0.8L / MIN, rated pressure 2.5MPA
(As a default, the hydraulic system uses #32 hydraulic oil)

Reversing valve: 4 tiny reversing valves with middle-oil-return

Oil tank: Material aluminum alloy. 150ML #32 hydraulic oil will need to be added. Please turn on the pump while adding the oil.

Servo: 4 servos required. You can reference the following specifications of our DMC809 metal servo (No servos included with standard kit):

Size: 23mm*12mm*27mm

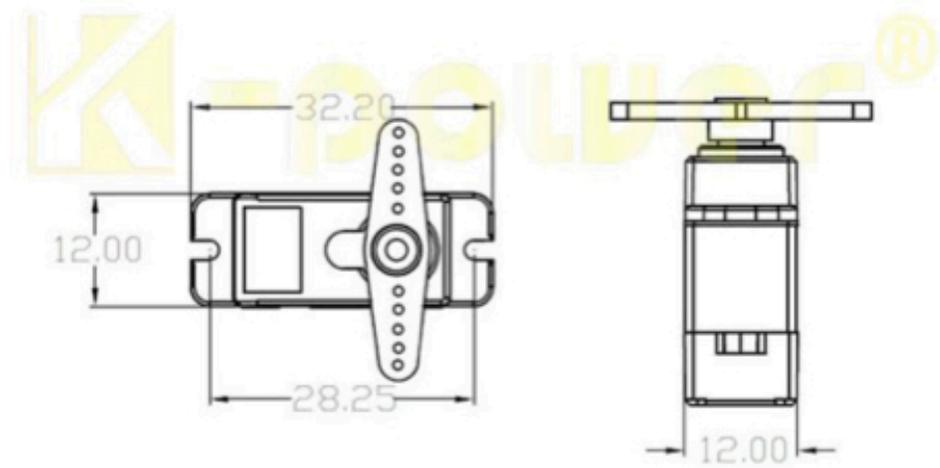
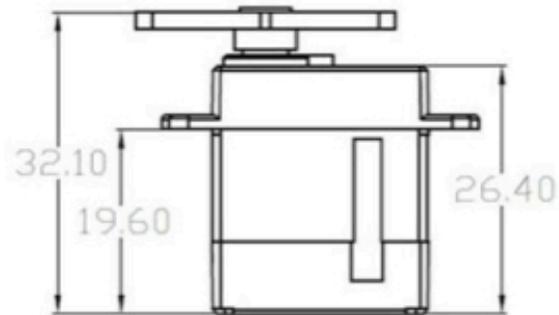
Torsion power: 3.0kg-cm/4.8V (better bigger)

3.8kg-cm/6.0V

Speed: 0.08sec/60°/4.8V

0.07sec/60°/6.0V

Voltage: 4.8-6.0V



IS09001:2008 Authorized Enterprise

Crane Parts List





71 72 73 74 75 76 77



78 79 80 81 82 83 84



85 86 87 88 89 90 91



92 93 94 95 96 97 98



99 100 101 102 103 104 105



106 107 108 109 110 111 112



113 114 115 116 117 118



119 120

No.	Name	Quantity
1	D079	28x
2	D077-1	20x
3	D077	2x
4	D087	1x
5	D086	1x
6	D085	1x
7	D078	1x
8	M3 black nut	3x
9	M3*4 screws	4x
10	M4*5 screws	1x
11	Flat head M3*6	12x
12	Flat head M3*25	2x
13	2.5 E-clip	4x
14	5.0 E-clip	2x
15	M2*4 socket head	53x
16	M3*5 socket head	4x
17	M3*8 socket head	12x
18	M4*8 socket head	4x
19	M4*5 socket head	6x
20	M2*16 socket head	4x
21	M3*16 socket head	4x
22	M3*40 socket head	2x

No.	Name	Quantity
23	M3*14 socket head	8x
24	M3*10 socket head	2x
26	M3*6 socket head	4x
27	M2*6 socket head	8x
28	M2*5 button head	4x
29	M2*3 button head	9x
30	M3*3 button head	19x
31	M3*4 button head	4x
32	M3*6 button head	8x
33	M3*10 button head	5x
34	D073	4x
35	D090	2x
36	D006	2x
37	D007	1x
38	D022	2x
39	D023	2x
40	D038	2x
41	D045	1x
42	D068	1x
43	D029 D10d6.1L1.0mm	4x
44	D028 D10d6.1L2.5mm	2x
45	D031 D8d6.1L4.5mm	2x

No.	Name	Quantity
46	D030 D8d6.1L5.9mm	2x
47	D069 D13d6.1L3.6mm	2x
48	D027	8x
49	D014	1x
50	D021 D6L31.6mm	2x
51	D034 D6L33mm	2x
52	D035 D6L40.6mm	2x
53	D024 D6L20mm	1x
54	D070 D6d3.3L17mm	2x
55	D025 D6L24mm	1x
56	D046 D3L12mm	1x
57	D071	1x
58	D047	1x
59	D058-2L	2x
60	D058-2R	2x
61	D058-1	2x
62	D058-3	4x
63	D058-4	4x
64	D058-5	4x
65	D058-1	2x
66	D060	2x
67	D042	1x

No.	Name	Quantity
68	D044	1x
69	D037	1x
70	D040	1x
71	D067	1x
72	D072	1x
73	D076	1x
74	D065	1x
75	D074	1x
76	D066	1x
77	D075	1x
78	D083 M6x30mm Nylon pipe	1x
79	Metal servo	4x
80	D049	1x
81	D050	1x
82	D043	1x
83	D039	1x
84	D041	1x
85	D052	1x
86	D051	1x
87	D002	2x
88	D063	2x
89	D056	2x

No.	Name	Quantity
90	D057	2x
91	D055	2x
92	D061	1x
93	D062	1x
94	D026	1x
95	D005	1x
96	D018	1x
97	D015	1x
98	D013	1x
99	D003	1x
100	D017	2x
101	D019R	1x
102	D016	2x
103	D033	1x
104	D053	2x
105	D012	1x
106	D054	1x
107	D004	2x
108	D001	1x
109	D020	1x
110	D048	1x
111	D019L	1x

No.	Name	Quantity
112	D008-1	2x
113	D008-2	1x
114	D009	1x
115	D010	1x
116	D081 M4 hard pipe 70cm D4d2.5	1x
117	D084 M3 hard pipe 70m D3.2d2.2	1x
118	D082 M4x80cm soft pipe	1x
119	D041	1x
120	D091	1x

Crane Manual Contents

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Arm assembly.....	60
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Front feet kit assembly.....	129
Adjustment to servo middle point.....	140
Adjustment to servo.....	145

Step 3



Let 88 slide into 92

Step 4



Turn assembly over

Step 5



Removed one #31 screw

Step 6



Install screw with 2.0mm hex driver

Step 7



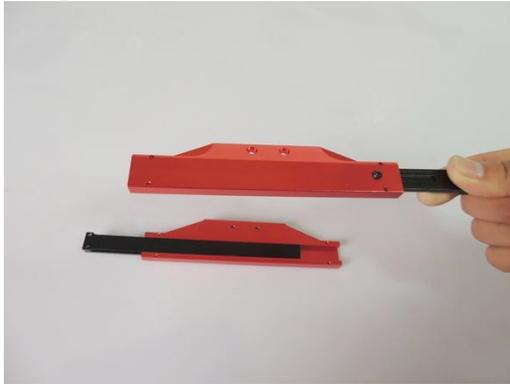
Finished end assembly

Step 8



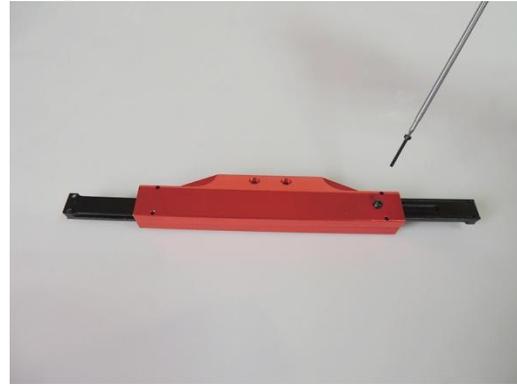
Repeat previous steps one more time

Step 9



Put the assembled together

Step 10



Assemble two sides, using one of 20

Step 11



Use 1.5mm hex screwdriver

Step 12



Example

Step 13



Use screw 20

Step 14



Use 1.5mm hex screwdriver

Step 15



Copy above steps, make 20 units

Step 16



Take out 62 and 63

Step 17



Assemble 62 and 63

Step 18



Assembled

Step 19



Make 2 units

Step 20



Take out 34 and 59

Step 21



Put 62 and 63 into 34

Step 22



Example

Step 23



Put them into 59

Step 24



Push the inner small shaft out

Step 25



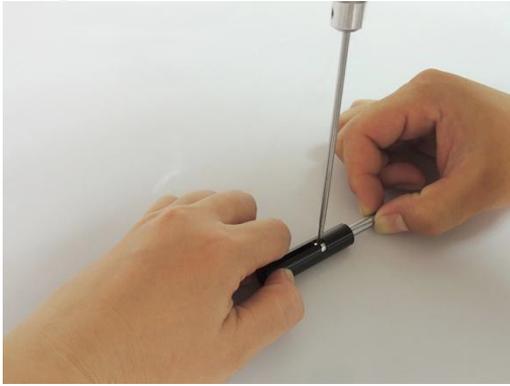
Take one of 9

Step 26



Use 1.5mm hex screwdriver

Step 27



Use screwdriver

Step 28



Assembled

Step 29



Copy above steps to make another one

Step 30



Take out 65

Step 31



Install 65

Step 32



Assembled

Step 33



Copy above steps to make another one

Step 34



Take out 64

Step 35



Take one of 11

Step 36



Use 2mm hex screwdriver

Step 37



Install screw

Step 38



Assembled

Step 39



Copy above steps to make another one

Step 40



Take out 66

Step 41



Install 66

Step 42



Assemble in 15.5mm

Step 43



Assemble 2 units

Step 44



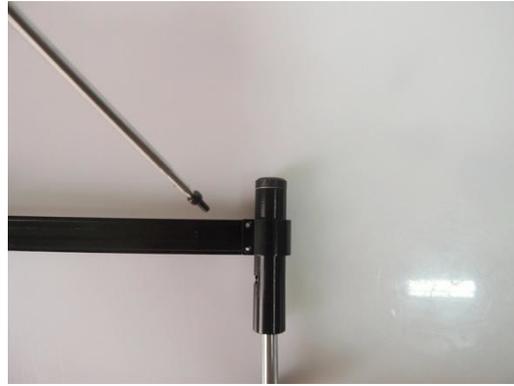
Take out 15

Step 45



Pull out 88

Step 46



Use 1.5mm hex screwdriver

Step 47



Install

Step 48



Assembled

Step 49



Take out 15

Step 50



Turn over, assemble back side

Step 51



Assemble 4 units of 15

Step 52



Repeat steps to make one more

Step 53



Pull out two ends

Step 54



Prepare grease

Step 55



Apply grease on the left side

Step 56



Apply grease on the right side

Step 57



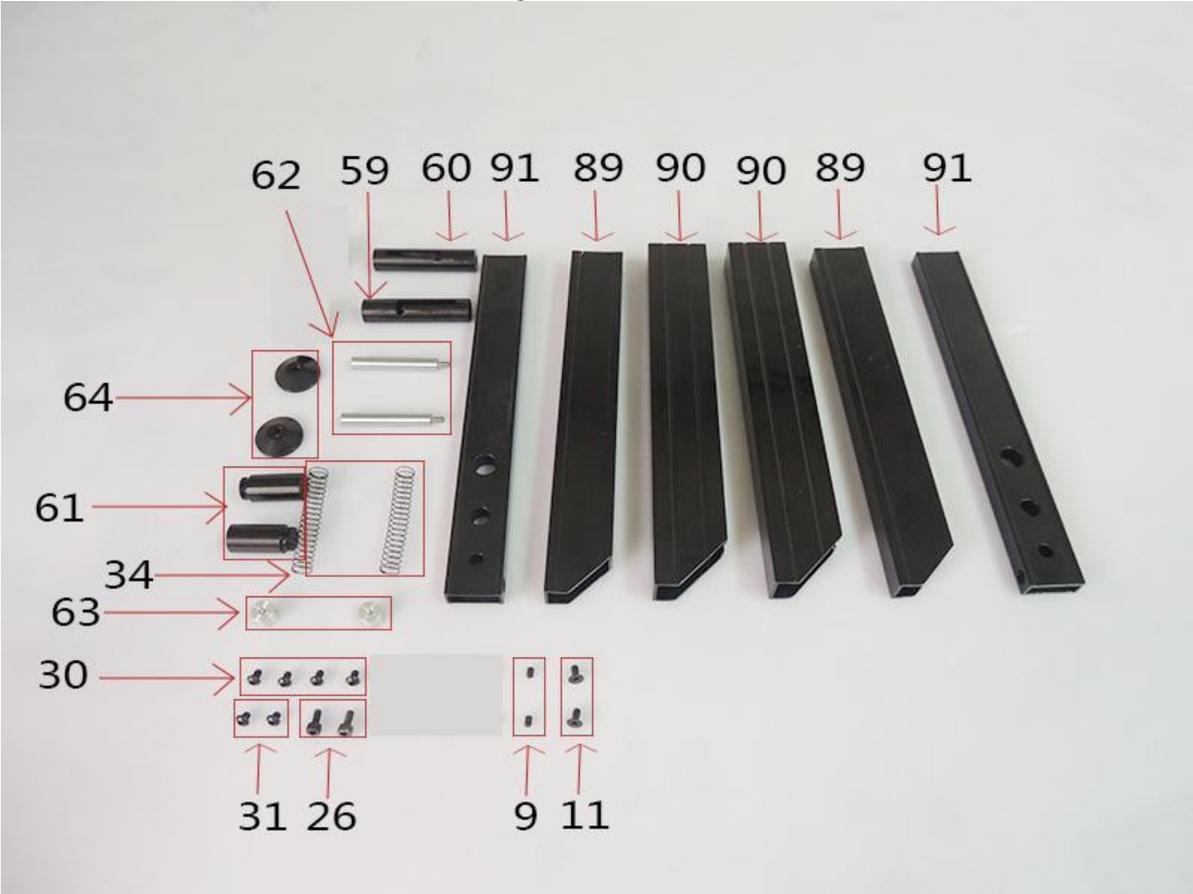
Turn over, apply to other side

Step 58



Take out 2 of 21

Front Feet Assembly



Step 1



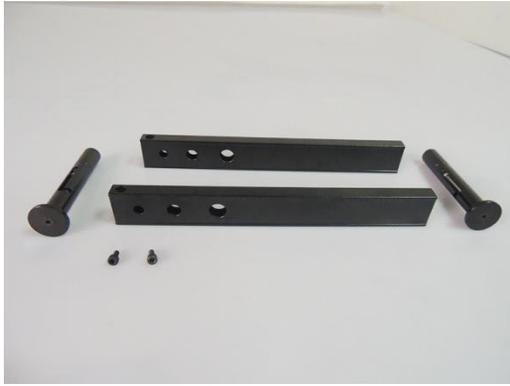
Repeat steps 16-24 and make 2 feet, then take out 2 of 61

Step 2



Assemble 2 units of 61

Step 3



Take out 2 of 91 and 2 of 26

Step 4



Use 2.5mm hex screwdriver

Step 5



Put 26 inside

Step 6



Assemble

Step 7



Assemble one side

Step 8



Assemble two sides

Step 9



Take out one of 89

Step 10



Connect together

Step 11



Take out 30

Step 12



Use 2.0mm hex screwdriver to install 30

Step 13



Assemble

Step 14



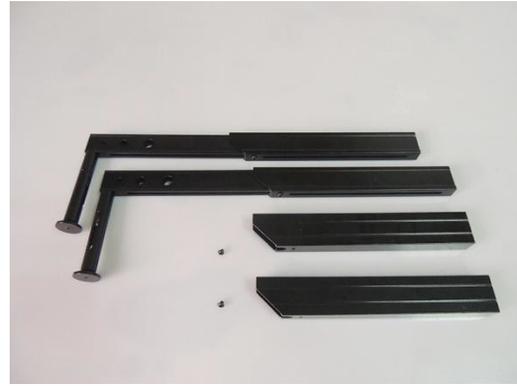
Assembled

Step 15



Assemble 2 units

Step 16



Take out 2 of 90 and 2 of 31

Step 17



Put 90 inside

Step 18



Use 2.0mm hex screwdriver to install 31

Step 19



Assemble

Step 20



Assembled

Step 21



Assemble 2 units

Step 22



Extend

Step 23



Take out grease

Step 24



Apply grease

Step 25



Apply grease

Chassis Assembly

Step 1



Take out 2 of 87, 2 of 33 and 1 of 108

Step 2



Use 2.0mm hex screwdriver to install 33

Step 3



Install

Step 4



Install one side

Step 5



Use 2.0mm hex screwdriver to install 33

Step 6



Assemble two sides

Step 7



Take out 99 and 4 of 26

Step 8



Install 99

Step 9



Put 99 down, use 2.5mm hex screwdriver to install 26

Step 10



Assemble

Step 11



Use 2.5mm hex screwdriver to install 26

Step 12



Assemble

Step 13



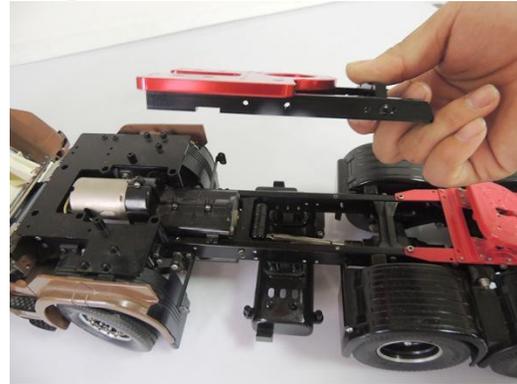
Assembled

Step 15



Take out 2 of 21 and 23

Step 16



Put the assembled on the truck

Step 17



Align

Step 18



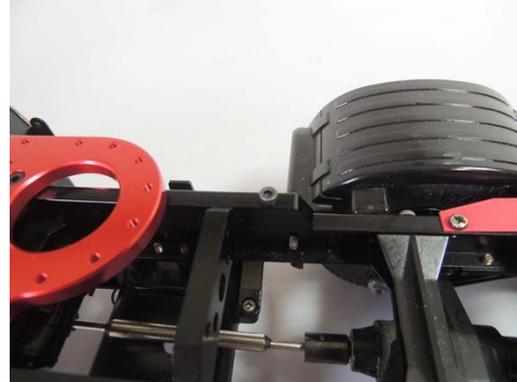
Use 2.5mm hex screwdriver to install 23

Step 19



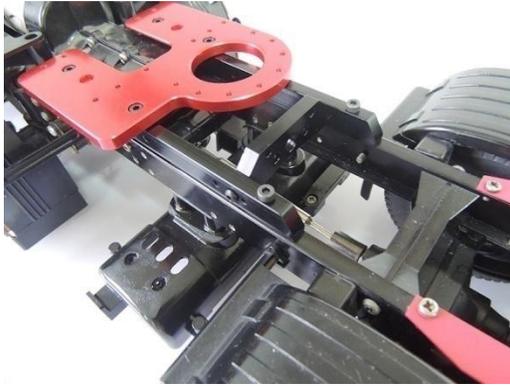
Assemble

Step 20



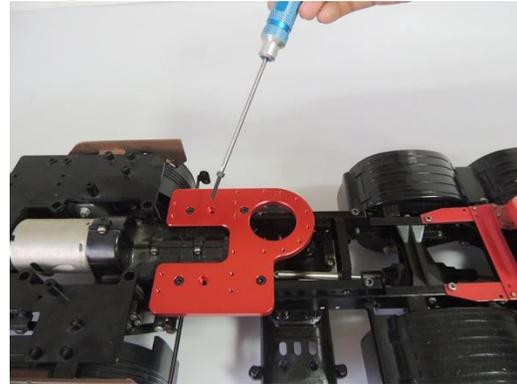
Assembled

Step 21



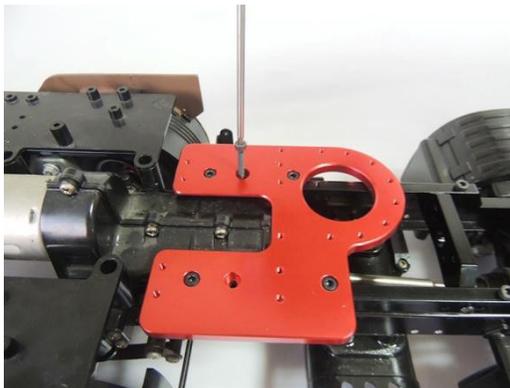
Use same assembly way to assemble another 23

Step 22



Use 2.5mm hex screwdriver to install 21

Step 23



Assemble

Step 24



Assembled

Step 25



Use same assembly steps to assemble another 21

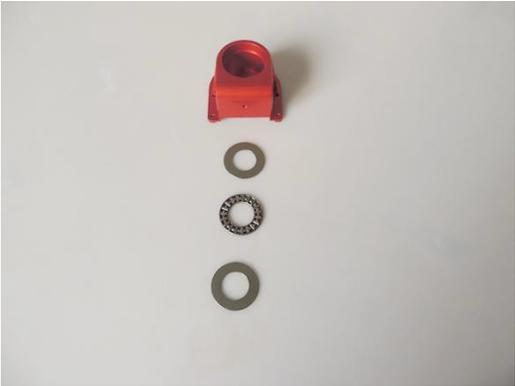


For some special Tamiya chassis, please check the tips in the picture.

Bottom Turning Table Assembly



Step 1



Take out 95, 113 and 2 of 112

Step 2



Put one of 112 into 95

Step 3



Then put 113

Step 4



Take out grease

Step 5



Apply grease

Step 6



Put another 112 into 95

Step 7



Take out 106

Step 8



Put 106 in the middle keep balance

Step 9



Take out 105

Step 10



Then put 105

Step 11



Take out 115

Step 12



Then put 115 on the top

Step 13



Use hands to press

Step 14



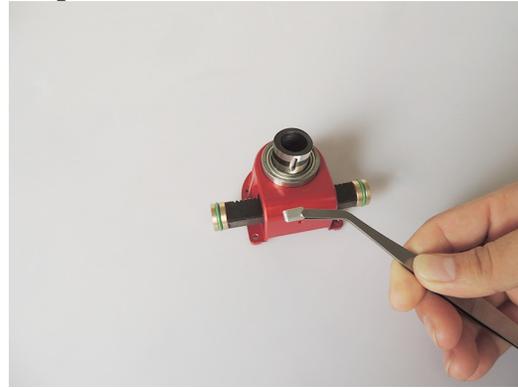
Press down, make sure the key way is in the middle position

Step 15



Take out 49

Step 16



Assemble the small part

Step 17



Place it in the key way

Step 18



Turn over, take out 114

Step 19



Put it on

Step 20



Use hands to press it down

Step 21



Assembled

Step 22



Take out 37

Step 23



Dent side toward gear direction

Step 24



Place it as shown in picture

Step 25



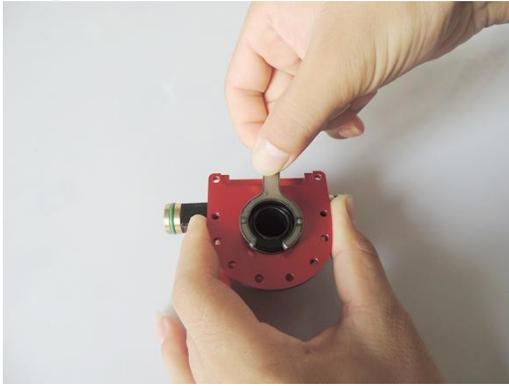
Use hands to press it down

Step 26



Take out special wrench (Can replace w/ maximum M16 L-plier)

Step 27



Lock it

Step 28



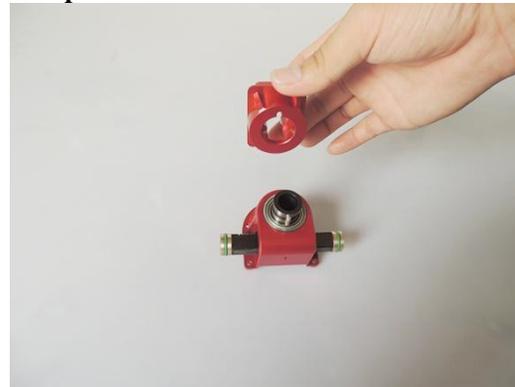
Assembled

Step 29



Take out 98

Step 30



Align the position between
key way and key

Step 31



Then place it on the top

Step 32



Use hands to press it down

Step 33



Assembled

Step 34



Take out 10

Step 35



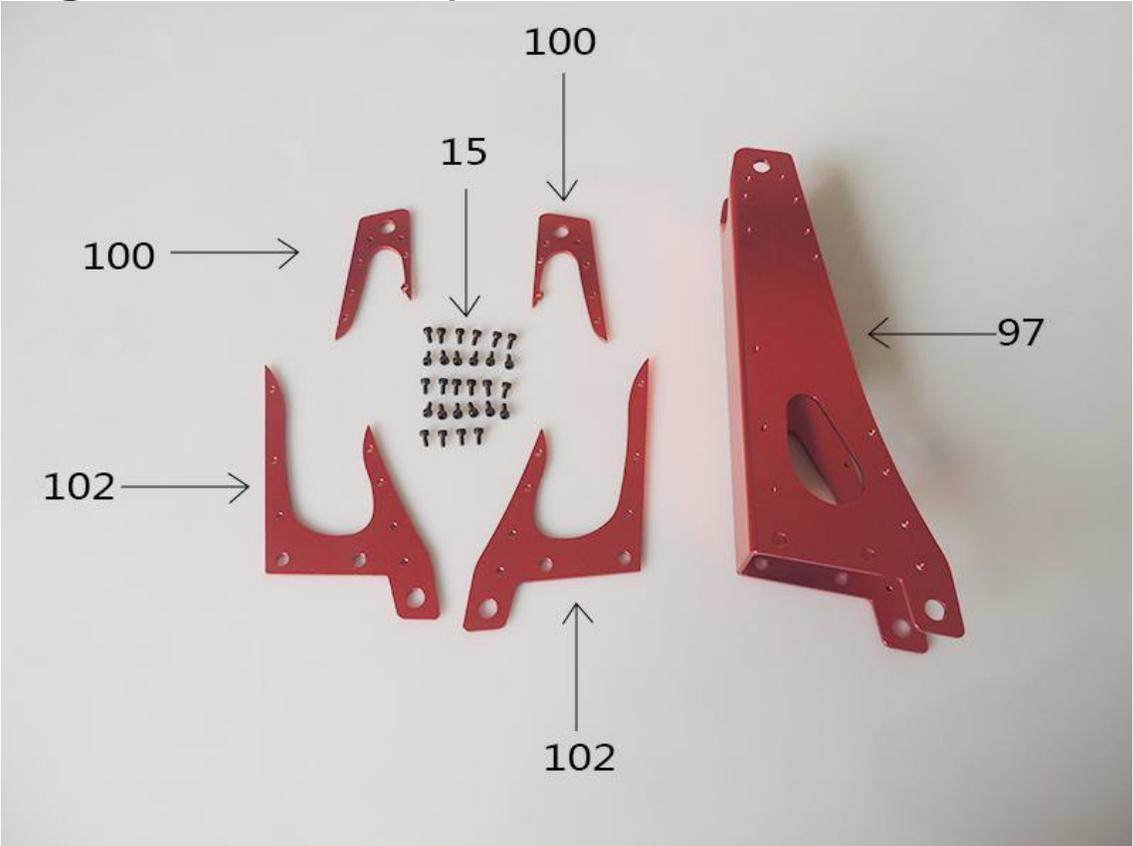
Use 2mm screwdriver to install it

Step 36



Assembled

Big Arm Assembly



Step 1



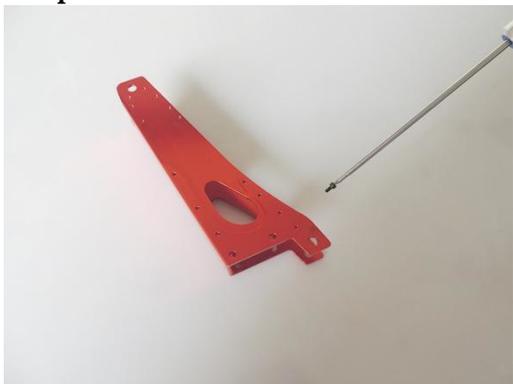
Take out 97 and one of 102

Step 2



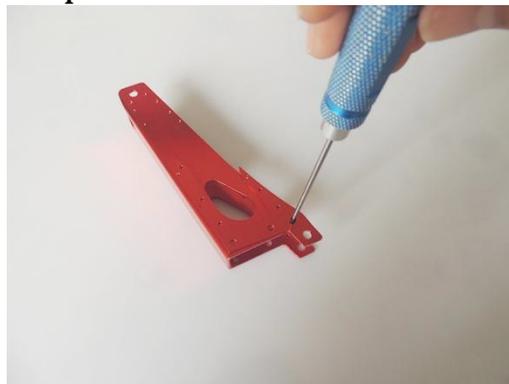
Put 102 on the 97

Step 3



Use 1.5mm screws driver to install 15

Step 4



Install

Step 5



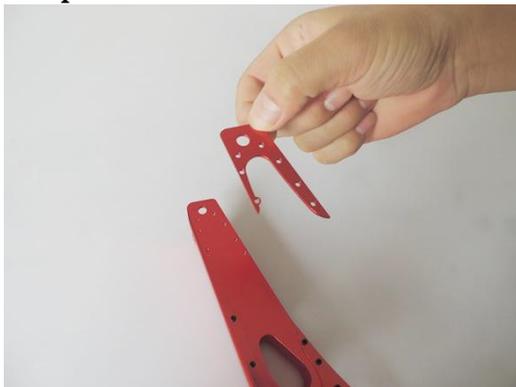
Assembled

Step 6



Copy above steps to assemble all other 15

Step 7



Take out 100

Step 8



Put it on the 97

Step 9



Use 1.5mm screwdriver to install 15

Step 10



Assembled

Step 11



Copy above steps to assemble all other 15

Step 12



Assemble other side

Step 13



Take out 4 of 18

Step 14



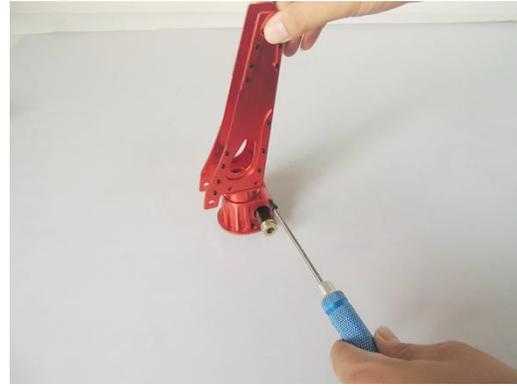
Align the position

Step 15



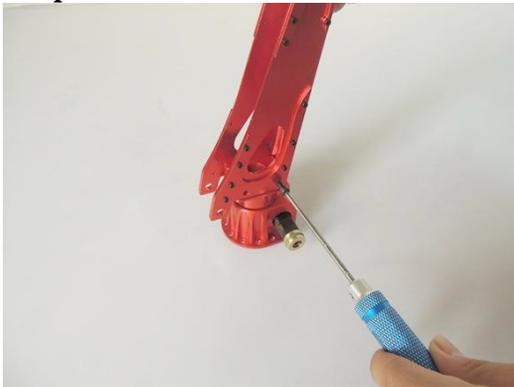
Put the big arm on

Step 16



Use 3mm screwdriver to install 18

Step 17



Install

Step 18



Assembled

Step 19



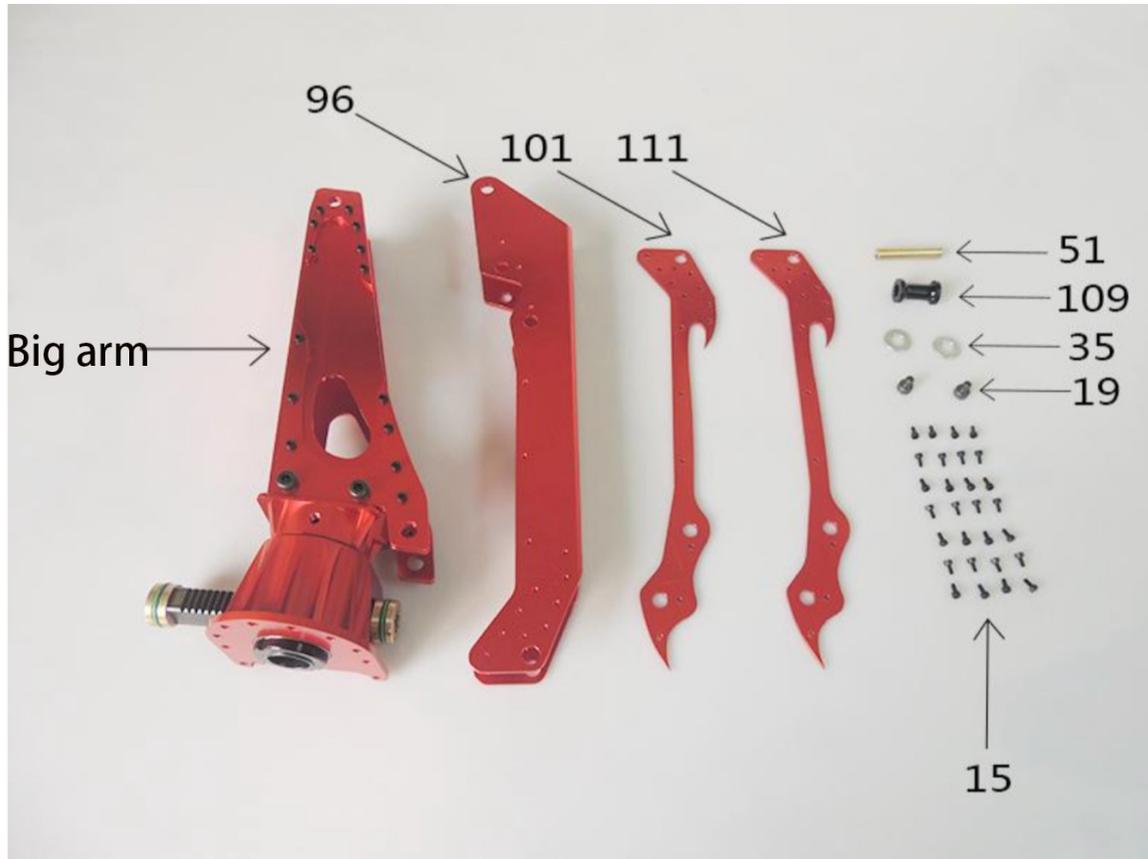
Assemble another 18

Step 20



Assemble other side

Small Arm Assembly



Step 1



Take out 96 and one of the 101

Step 2



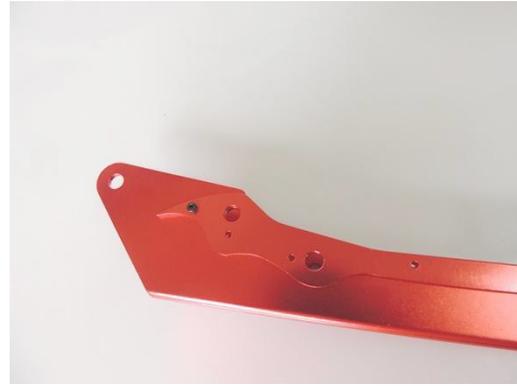
Put 101 on the 96

Step 3



Use 1.5mm screwdriver
to install 15

Step 4



Assembled

Step 5



Copy above steps to assemble
Other side

Step 6



Assemble other side

Step 7



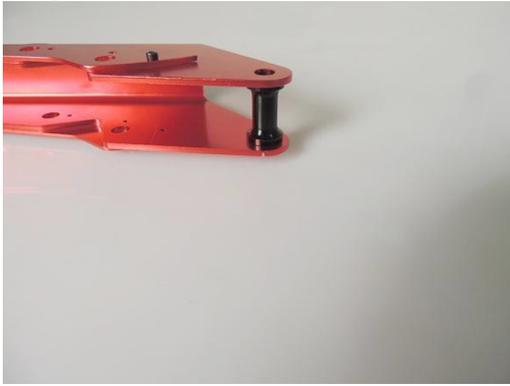
Take out big arm, small, 51 19,
109, 35

Step 8



Take out 109

Step 9



Hook it in the small arm

Step 10



Take out 2 of 35

Step 11



Use hand to fix it

Step 12



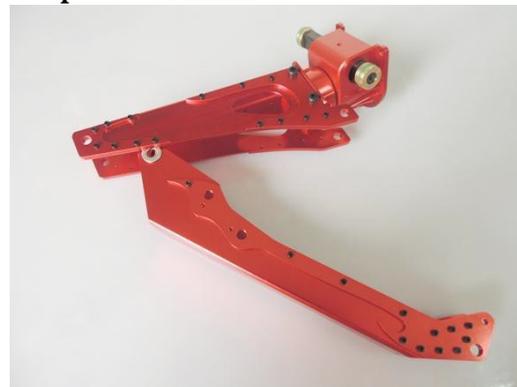
Continue fixing

Step 13



Be ready to hook it into big arm

Step 14



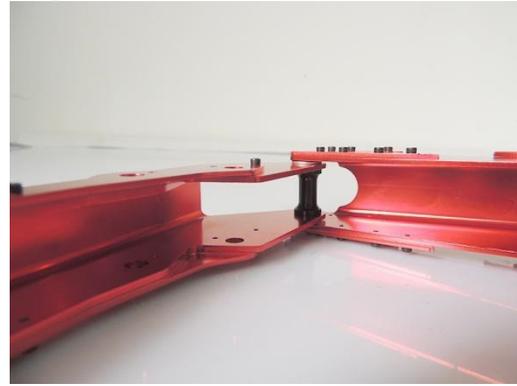
Hook it inside

Step 15



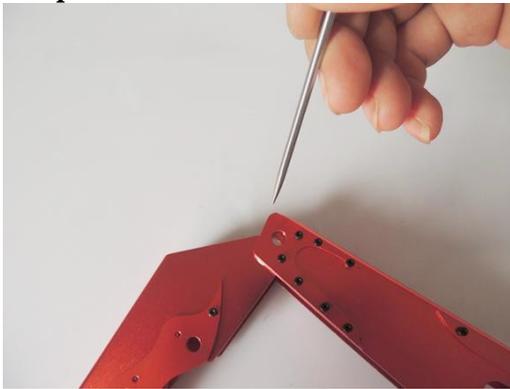
Assembled

Step 16



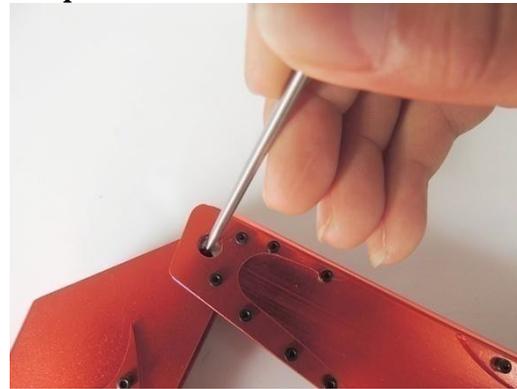
Assembled

Step 17



Use sharp tool to align the holes' position

Step 18



Aligning

Step 19



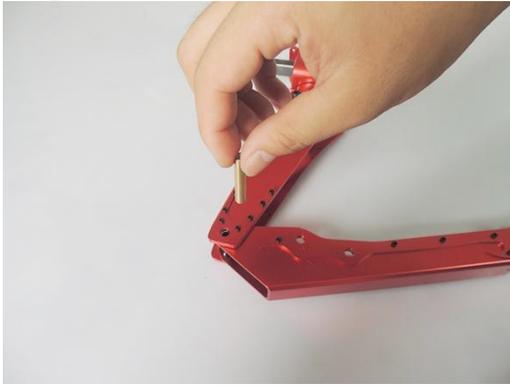
Continue aligning

Step 20



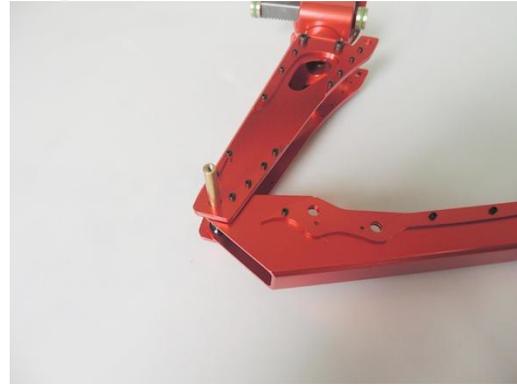
Until all holes are aligned

Step 21



Take out 51

Step 22



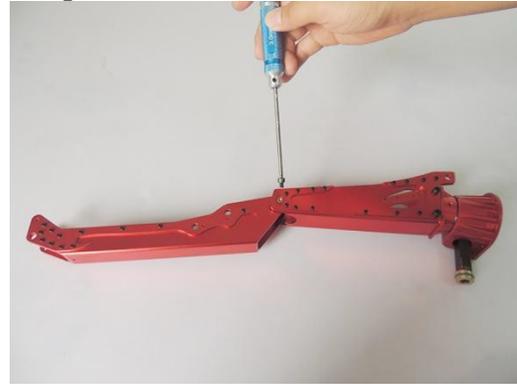
Insert in the hole

Step 23



Insert it fully

Step 24



Use 3mm screwdriver to
install 19

Step 25



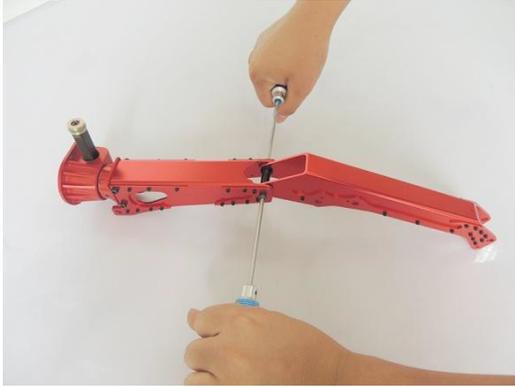
Assembled

Step 26



Turn over

Step 27



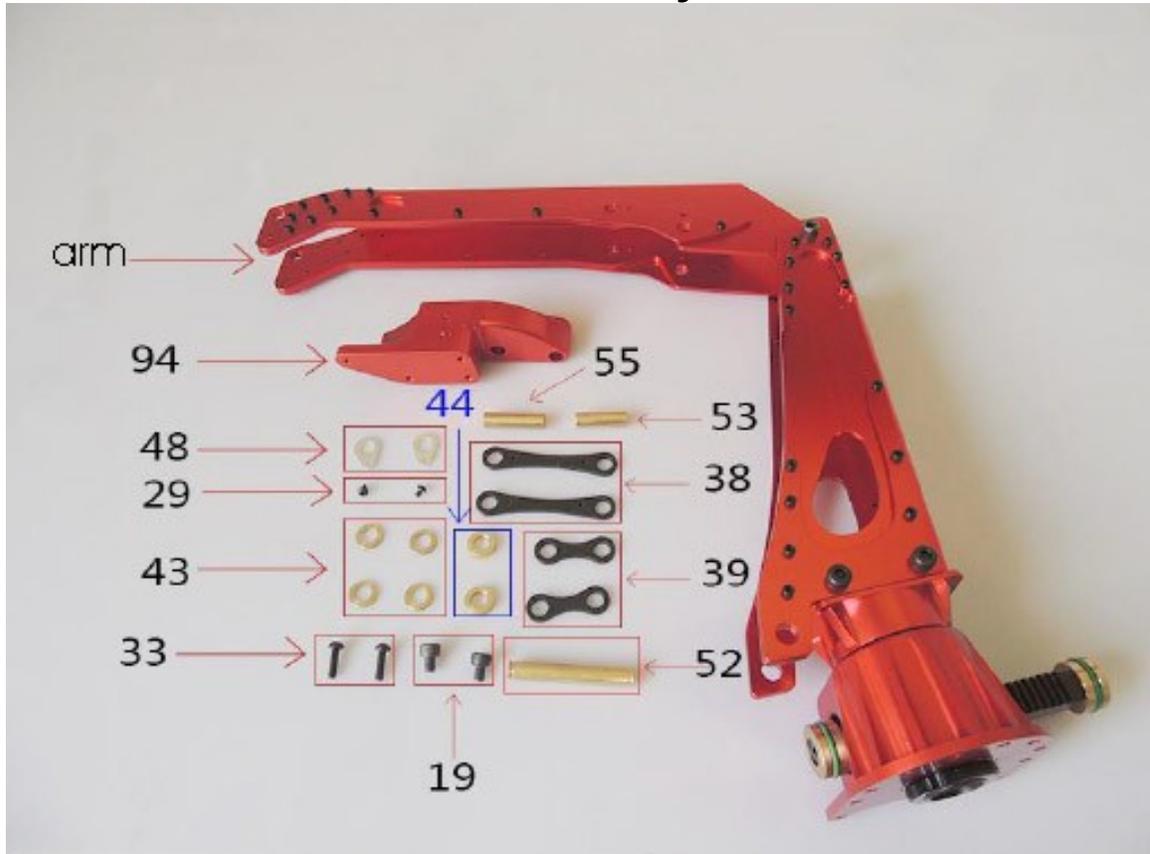
Fix

Step 28



Assembled

Arm Connection Assembly



Step 1



Take out 94 and one of 53

Step 2



Put 53 into the hole of 94

Step 3



Press in

Step 4



Assembled

Step 5



Take out 2 of 43

Step 6



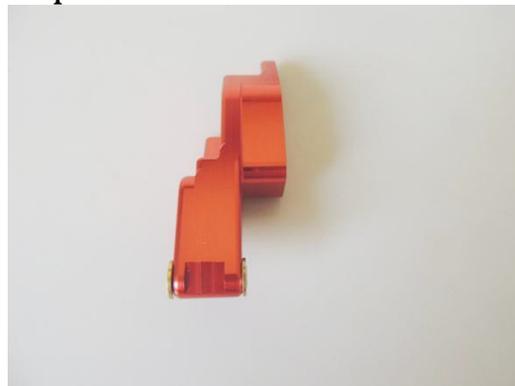
Assemble one side

Step 7



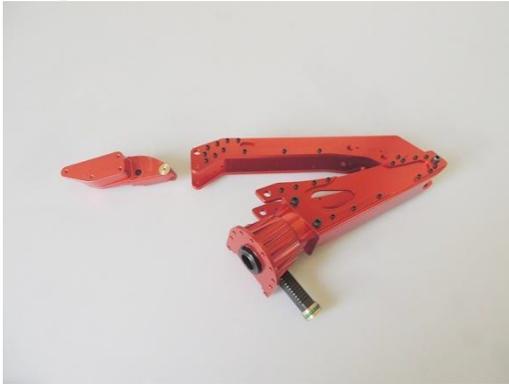
Turn over, assemble other side

Step 8



Assembled

Step 9



Take out the assembled arm

Step 10



Hook it in

Step 11



Assembled

Step 12



Take out one of 33, use 2mm hex screwdriver to install

Step 13



Assembled

Step 14



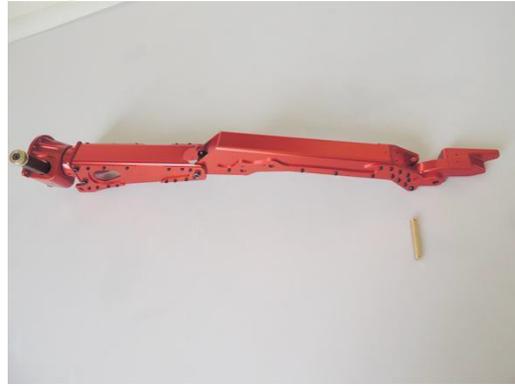
Turn over, assemble other side

Step15



Assembled

Step16



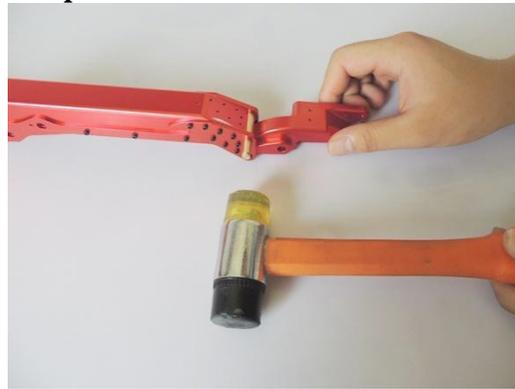
Take out 52

Step17



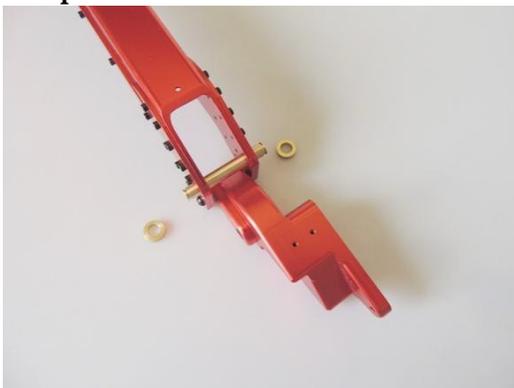
Insert 52 into the hole

Step18



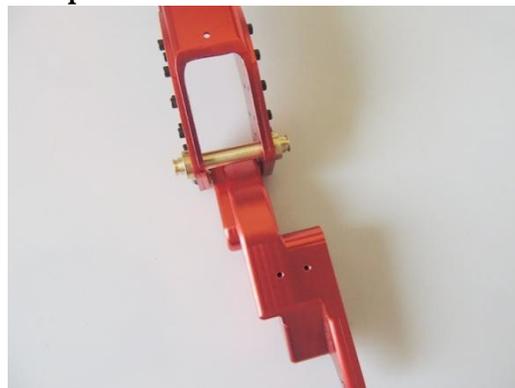
Use rubber hammer to
press it in

Step19



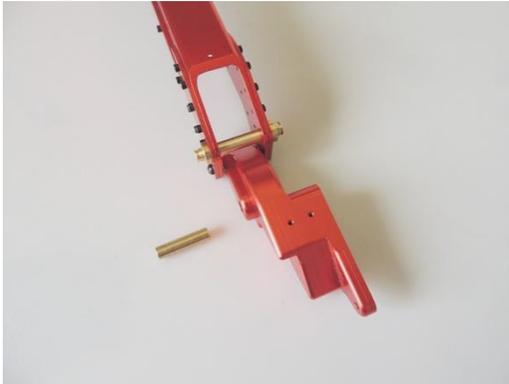
Take out 2 of 44

Step 20



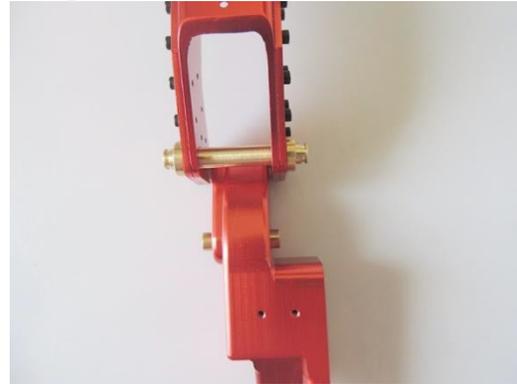
Install at two sides

Step 21



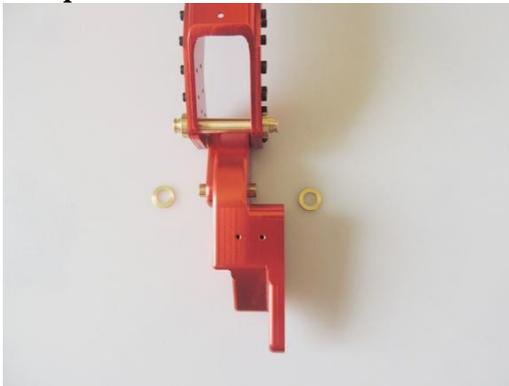
Take out 55

Step 22



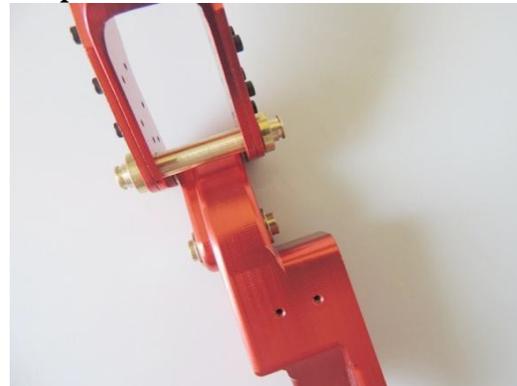
Press in

Step 23



Take out 2 of 43

Step 24



Install at the two sides of 55

Step 25



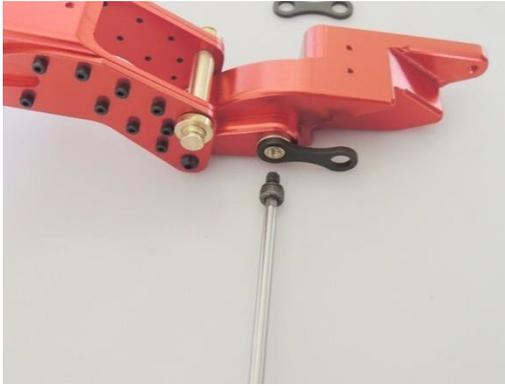
Take out 2 of 39

Step 26



Assembled

Step 27



Use 3mm screwdriver to install

Step 28



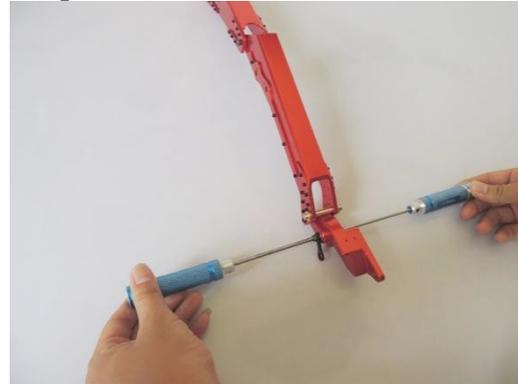
Assembled

Step 29



Install at two sides

Step 30



Fix again

Step 31



Take 2 from each of 38, 48, 29

Step 32



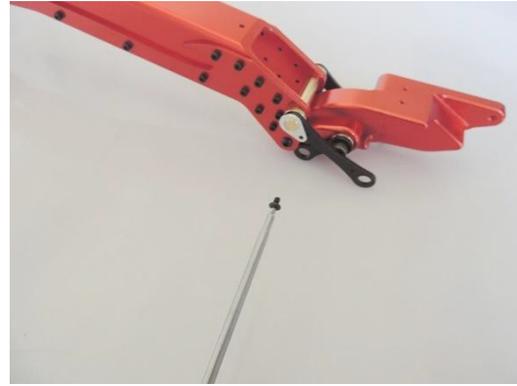
Install 38

Step 33



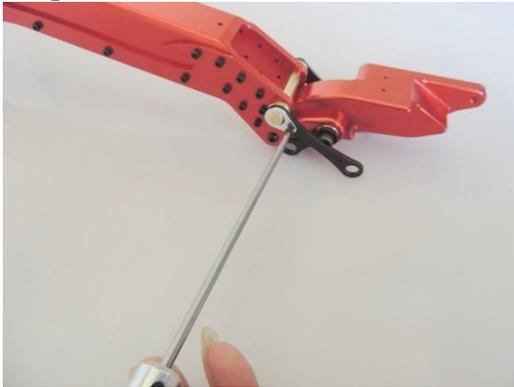
Install 48

Step 34



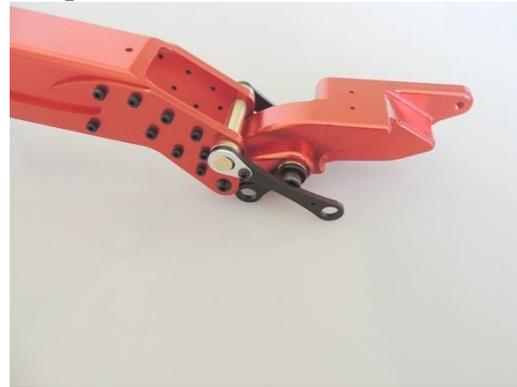
Use 1.5mm screwdriver to install 29

Step 35



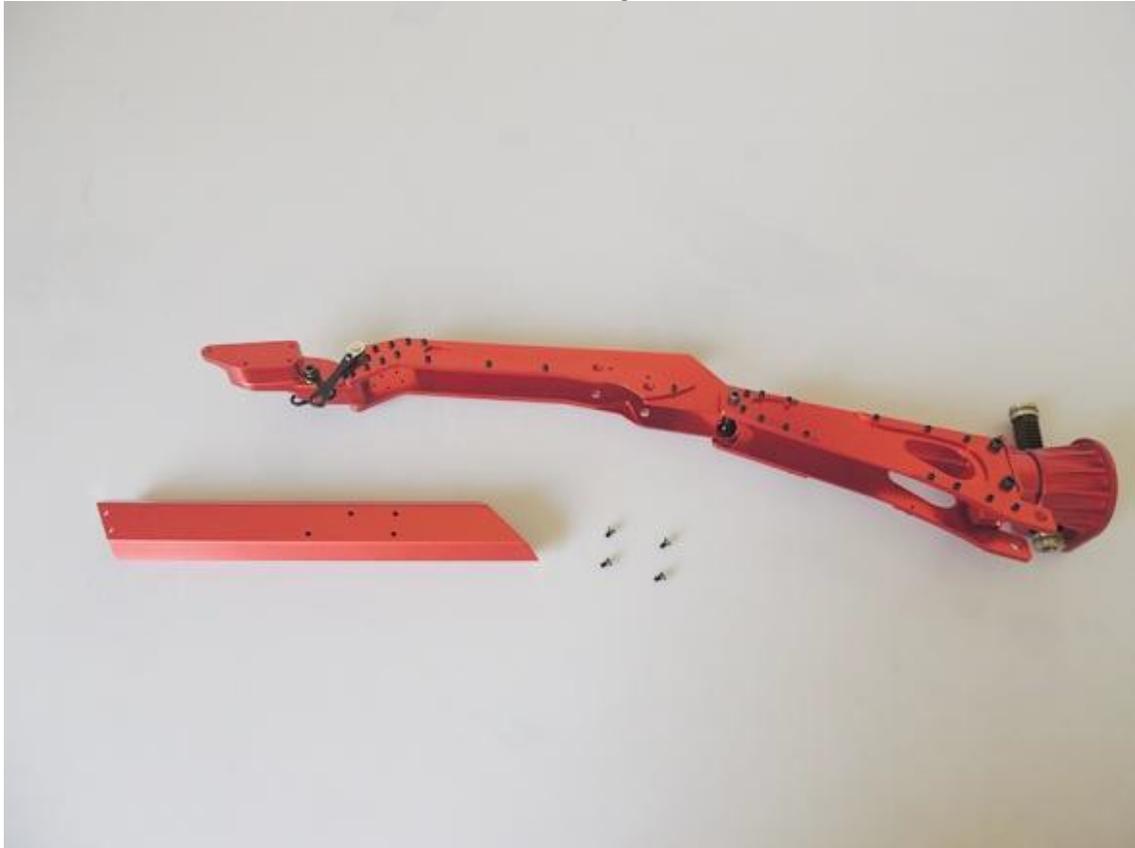
Install

Step 36



Assemble two sides

The Third Arm Assembly

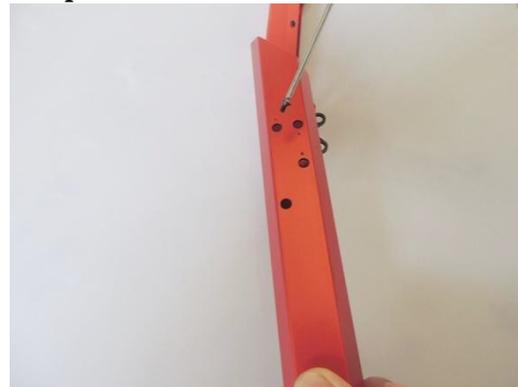


Step 1



Take out 119

Step 2



Use 2mm screwdriver to install 11 (Please use thread lock)

Step 3



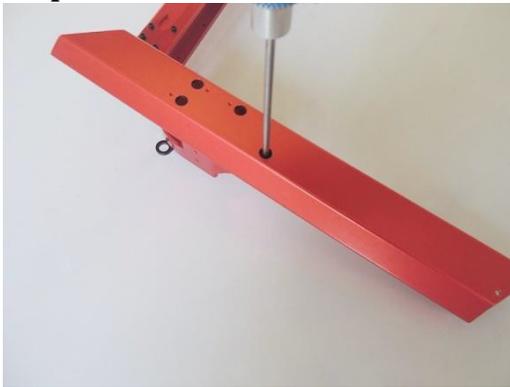
Put it in

Step 4



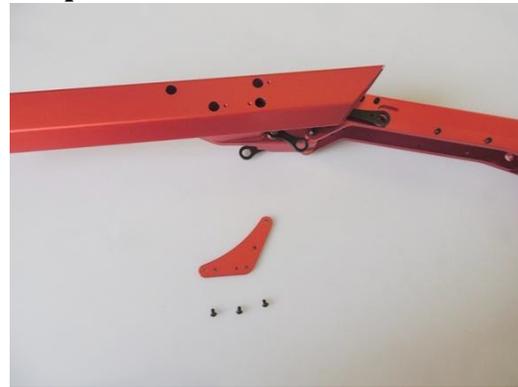
Install

Step 5



Copy above steps to assemble another 4 of 11

Step 6



Take out one of 103 and 3 of 29

Step 7



Put 103

Step 8



Use 2mm screwdriver to install 29

Step 9



Assembled

Step 10



Assemble 3 of 2 9

Step 11



Take out one of 29

Step 12



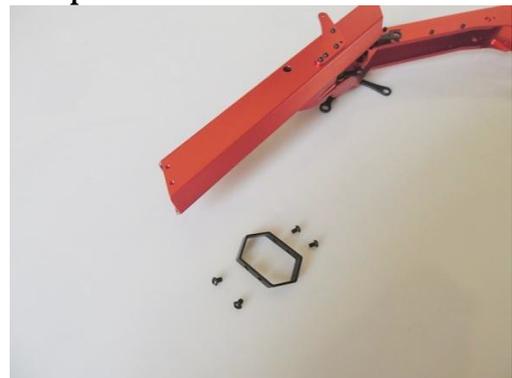
Use 2mm screwdriver to install 29

Step 13



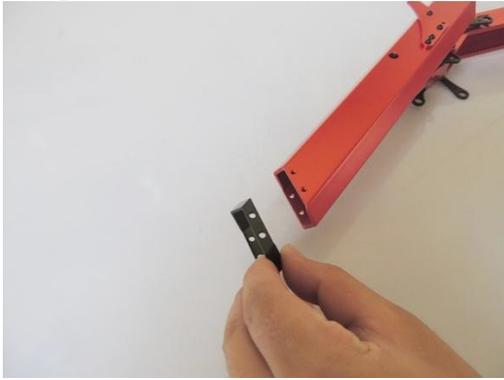
Assembled

Step 14



Take out 1 of 69 and 4 of 30

Step 15



Take 69

Step 16



Put it on

Step 17



Use 2mm screwdriver to
install 30

Step 18



Assemble one side

Step 19



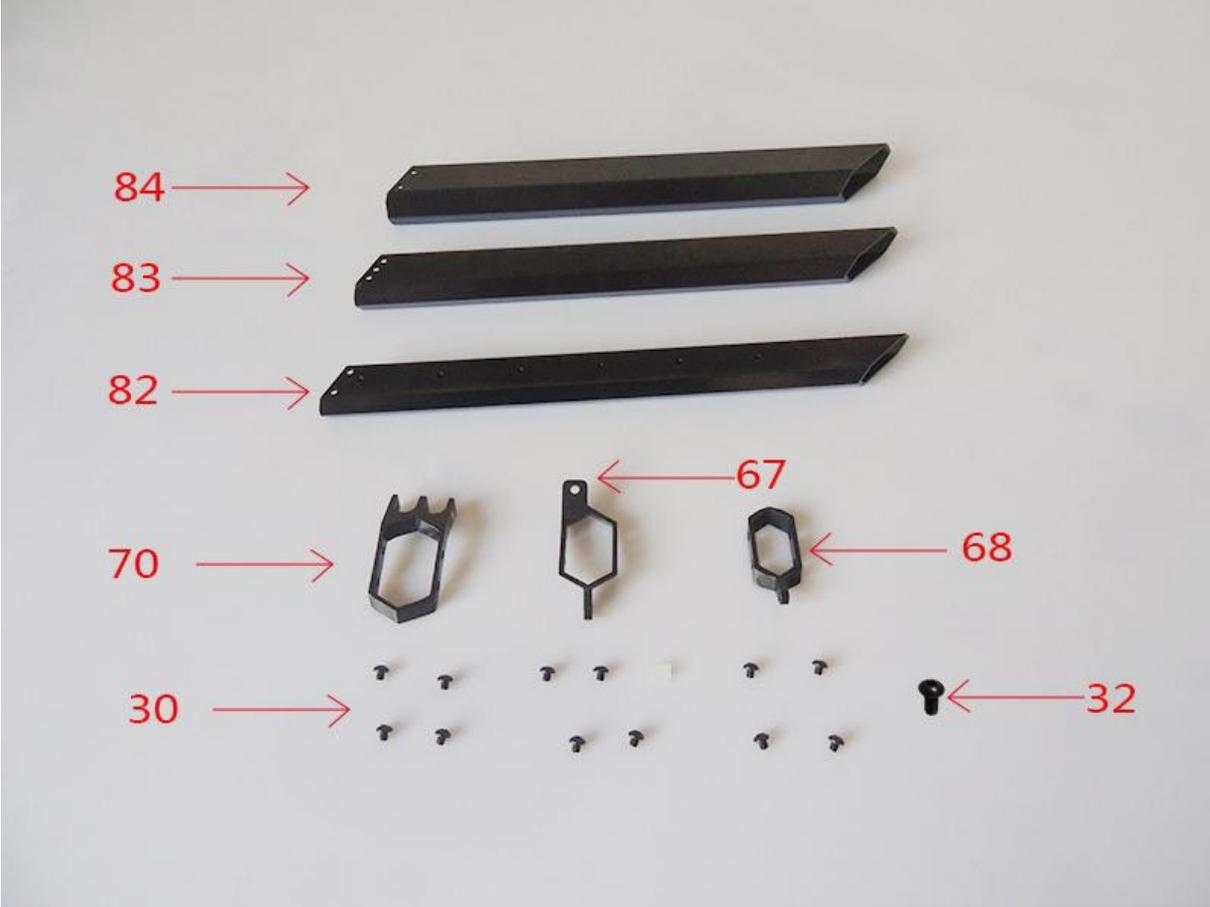
Turn over, assemble other
side

Step 20



Assembled

The Forth, Fifth And Sixth Arm Assembly



Step 1



Take out 68 and 82

Step 2



Put 68 into 82

Step 3



Use 2mm screwdriver to install 30

Step 4



Assemble one side

Step 5



Assemble two sides

Step 6



Take out 67 and 83

Step 7



Put 67 into 83

Step 8



Use 2mm screwdriver to install 30

Step 9



Assemble one side

Step 10



Assemble two sides

Step 11



Take out 70 and 84

Step 12



Put 70 into 84

Step 13



Use 2mm screwdriver to
install 30

Step 14



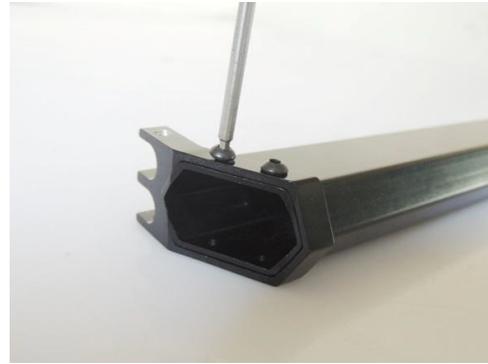
Assemble one side

Step 15



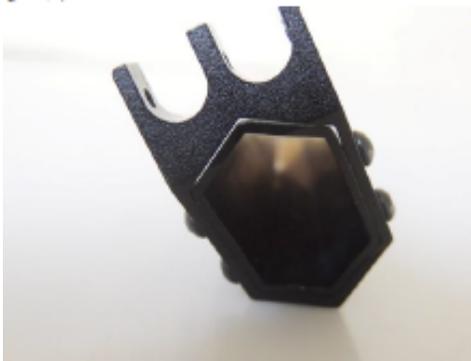
Use 2.0mm wrench to install 30

Step 16



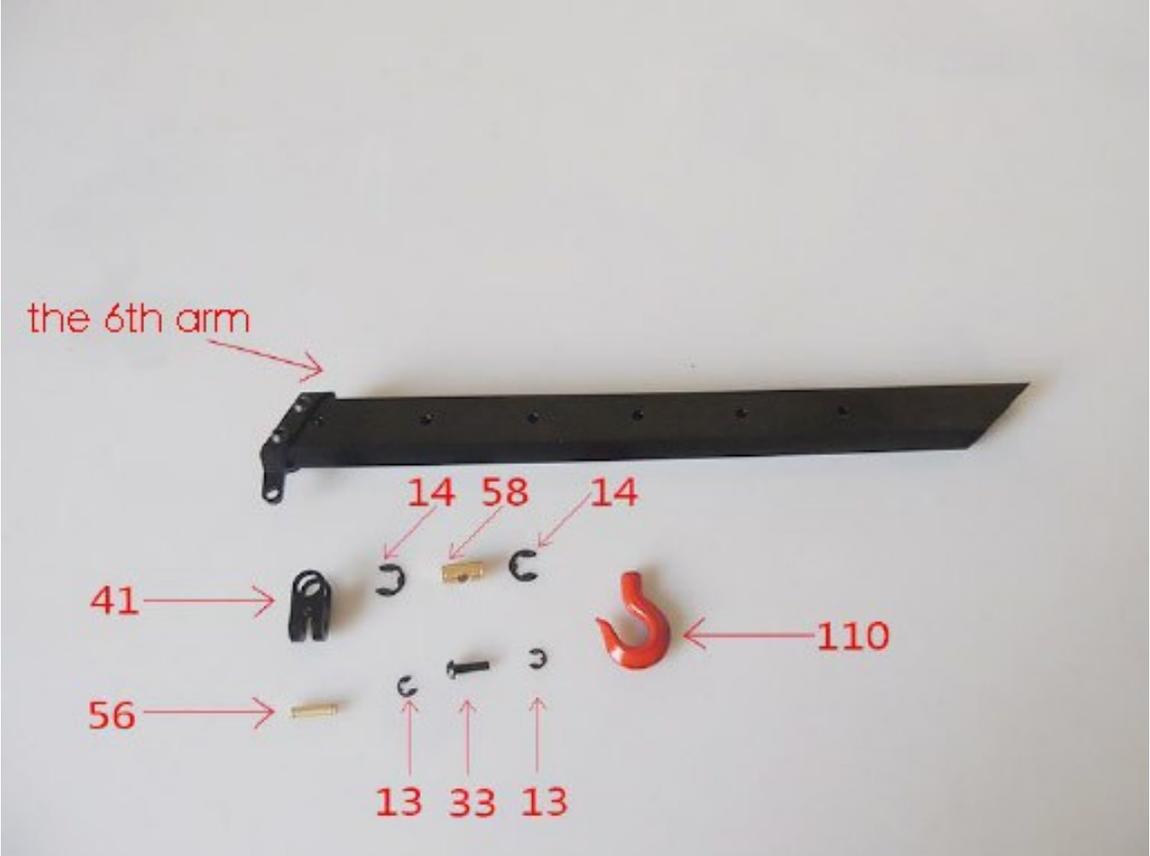
Install one side

Step 17



Install two sides

Hook Assembly



Step 1



Take out 58 and 41

Step 2



Put 58 into 41

Step 3



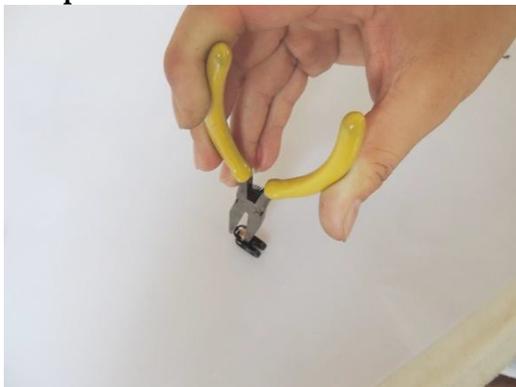
Take out 2 of 14

Step 4



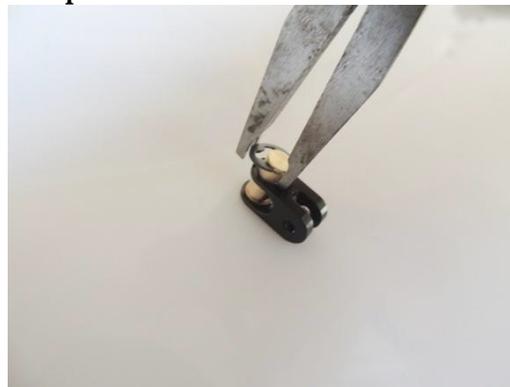
Put 14 on the installation position

Step 5



Use pliers to pinch

Step 6



Pinch tightly

Step 7



Pinch again

Step 8



Assembled

Step 9



Use the same way to assemble other side

Step 10



Take out the sixth arm and 2 of 13

Step 11



Take out 56

Step 12



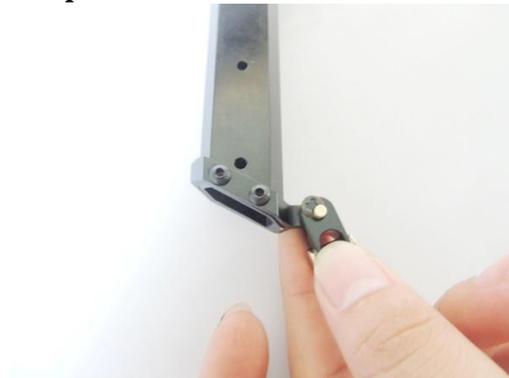
Insert

Step 13



Assembled

Step 14



Put on one of 13

Step 15



Use pliers to pinch

Step 16



Assembled

Step 17



Take out 33 and 110

Step 18



Apply little thread lock
on the screw

Step 19



Assemble it on

Step 20



Turn

Step 21



Assembled

Arm Assembly

Step 1



Take out the sixth, fifth and fourth arm

Step 2



Take out the sixth and fifth arm and one of 32

Step 3



Put them in a same direction

Step 4



Put it in

Step 5



Merge together

Step 6



Use 2mm screwdriver to install 32

Step 7



Install

Step 8



Assembled

Step 9



Take out the forth arm

Step 10



Put it in

Step 11



Merge together

Step 12



Take out the assembled arm kit

Step 13

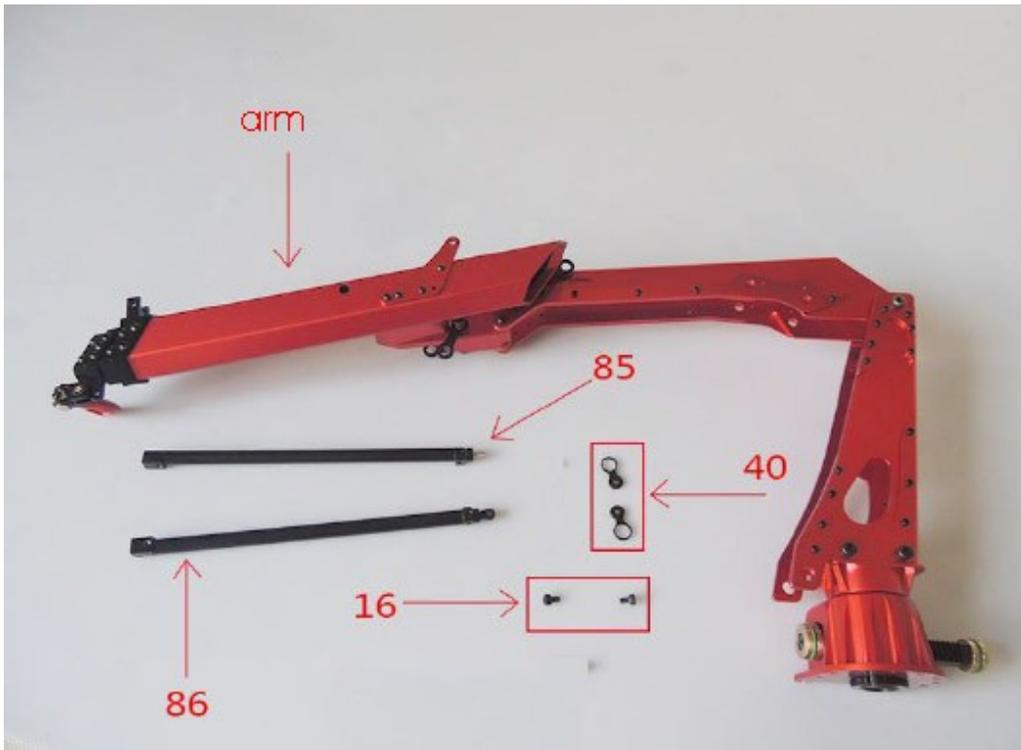


Put it in

Step 14



Assemble together



Step 15



Take out 85, 86 and 2 of 40

Step 16



Put 40 into 86

Step 17



Insert

Step 18



Take out 85

Step 19



Use 3mm screwdriver to install 16

Step 20



Install

Step 21



Assembled

Step 22



Take out one of 40

Step 23



Install other end

Step 24



Use 3mm screwdriver
to install 16

Step 25

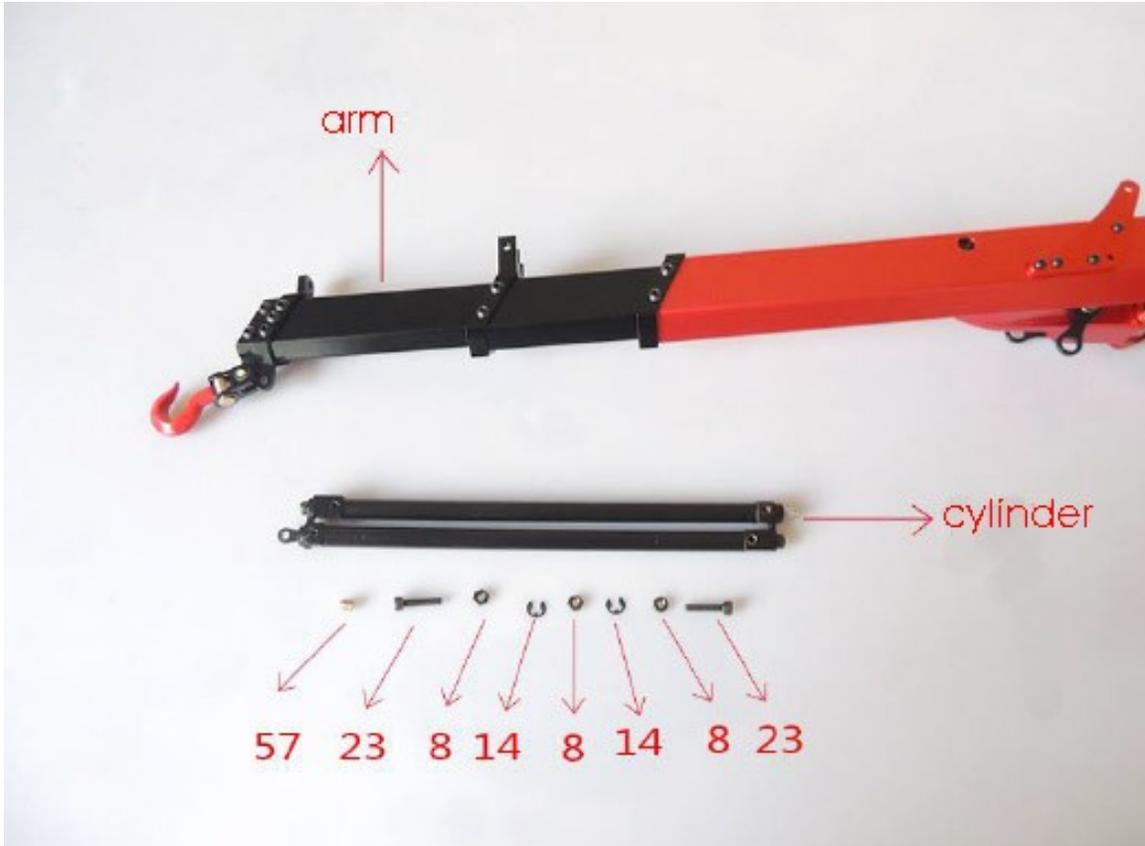


Assembled

Step 26



Assembled of two ends



Step 27



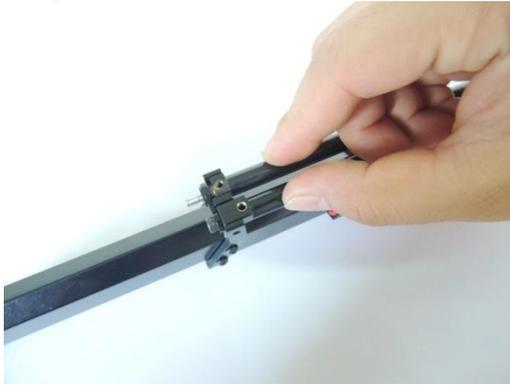
Take out arm and cylinder

Step 28



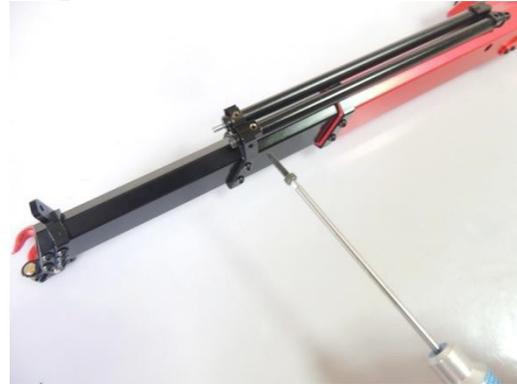
Put the cylinder on the forth arm

Step 29



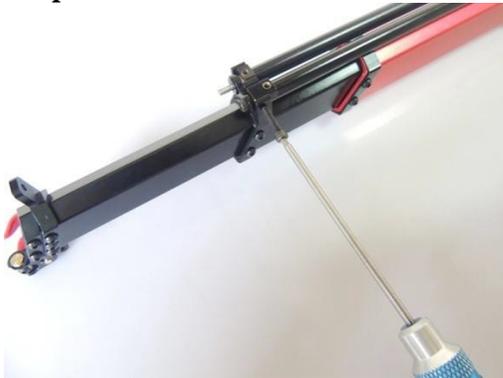
Align

Step 30



Use 2.5mm screwdriver to install 23

Step 31



Lock tightly

Step 32



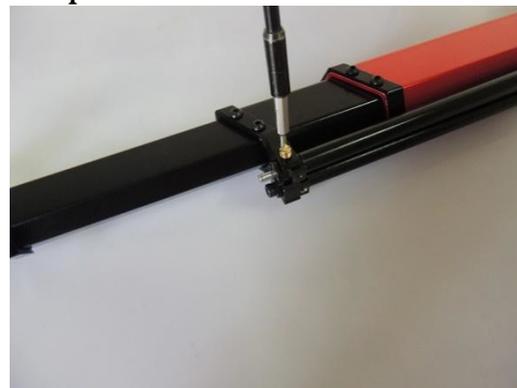
Assembled

Step 33



Use flat-blade screwdriver to install 57

Step 34



Lock tightly

Step 35



Assembled

Step 36



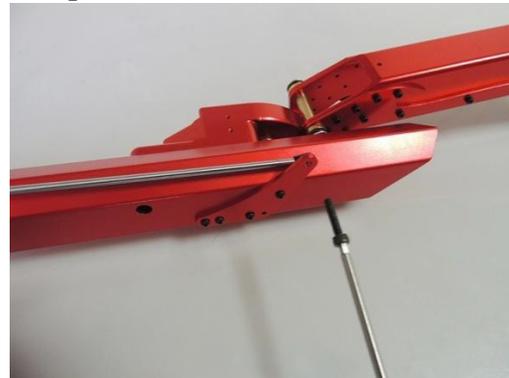
Pull 86 cylinder

Step 37



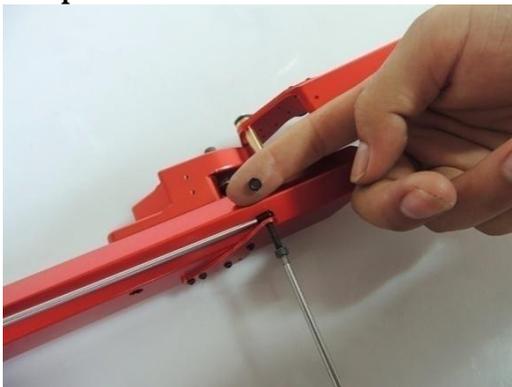
Find proper position

Step 38



Take out one of 23

Step 39



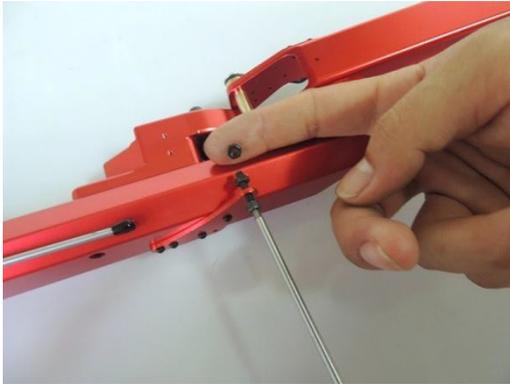
Take out one of 8

Step 40



Install

Step 41



Take out one more of 8

Step 42



Install

Step 43



Pull out 86

Step 44



Put in the correct holes accordingly

Step 45



Take out the third 8

Step 46



Use 5.5mm nut driver or pliers to lock tightly

Step 47



Assembled

Step 48



Pull 85 cylinder

Step 49



Take out one of 13

Step 50



Put it on

Step 51



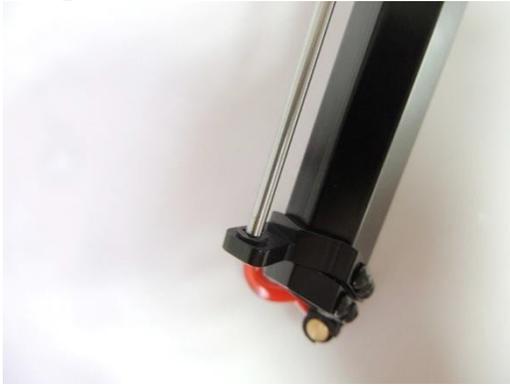
Use pliers to pinch

Step 52



Assembled

Step 53



Find proper position

Step 54



Take out one more 13

Step 55



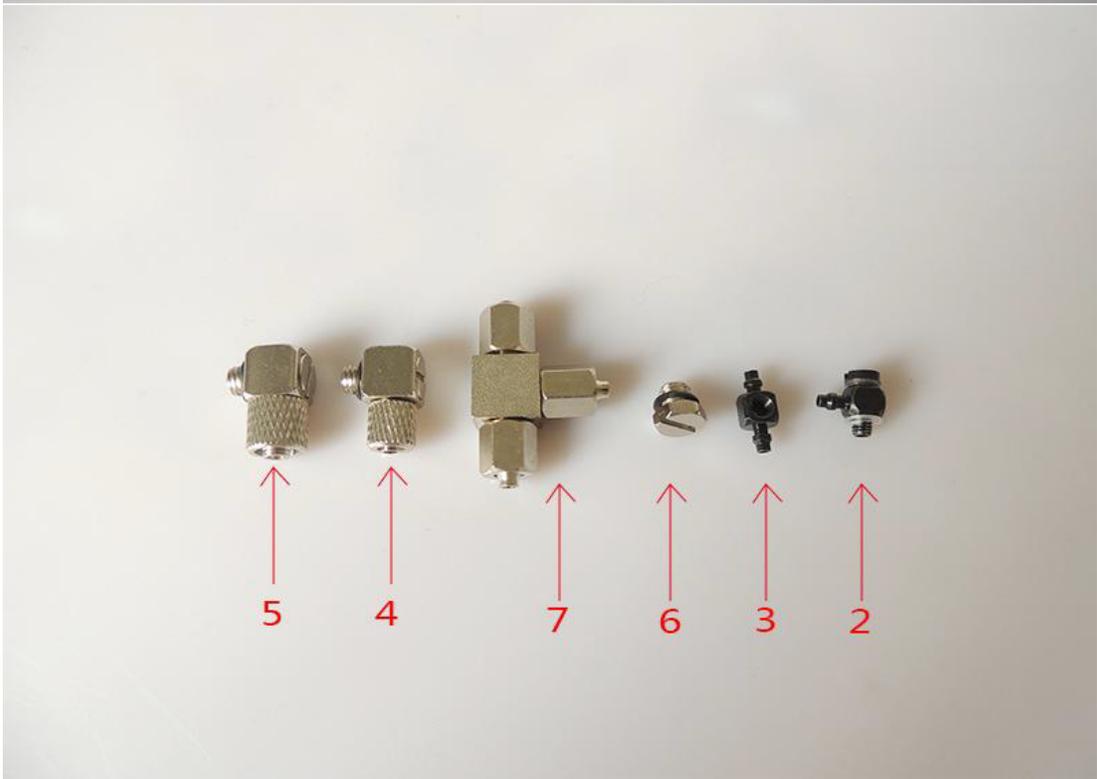
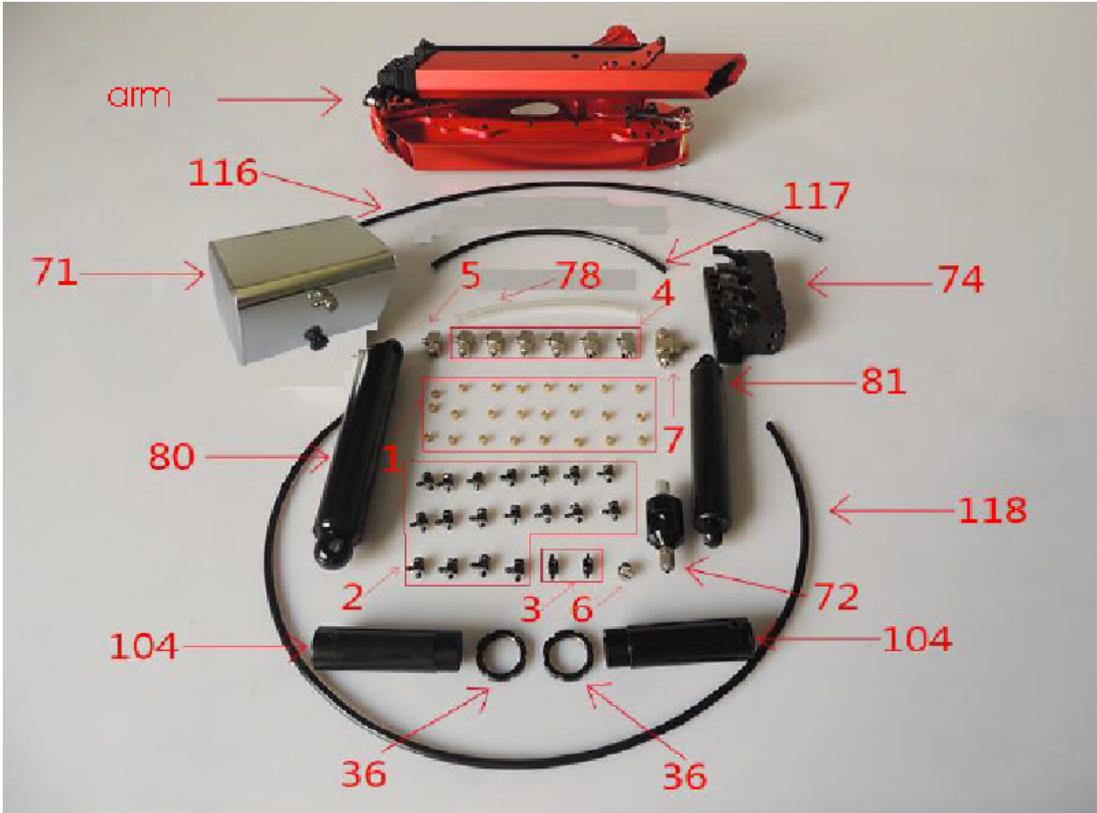
Use pliers to pinch

Step 56



Assembled

Oil Route Assembly



Step 1



Take out 1 of 2 and 1 of 3

Step 2



Take out WD5050 thread lock

(Note: Thread lock should only be applied on the thread. Avoid getting it in the nozzles. If it drops on nozzles, use water to clean to avoid failure)

Step 3



Apply thread on the 2

Step 4



Take 3

Step 5



Insert

Step 6



Apply thread lock again

Step 7



Assemble two

Cylinder For Hook



Step 1



Take out thread lock

Step 2



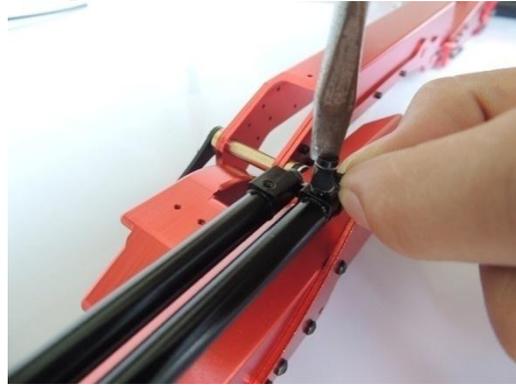
Apply thread lock

Step 3



Use flat-blade screwdriver to install 2 onto cylinder

Step 4



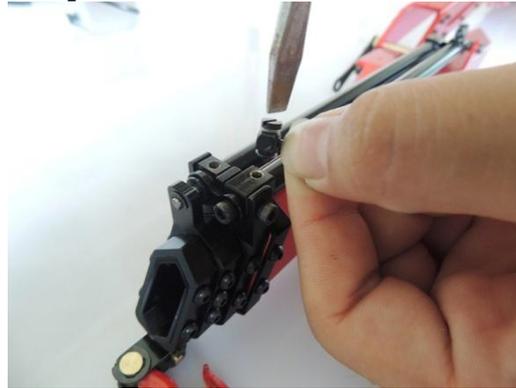
Install

Step 5



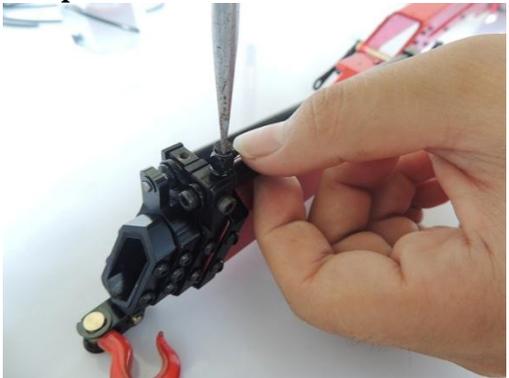
Assembled

Step 6



Use flat-blade screwdriver to install 2 onto cylinder

Step 7



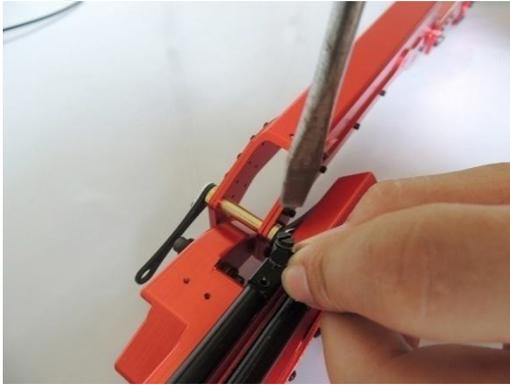
Install

Step 8



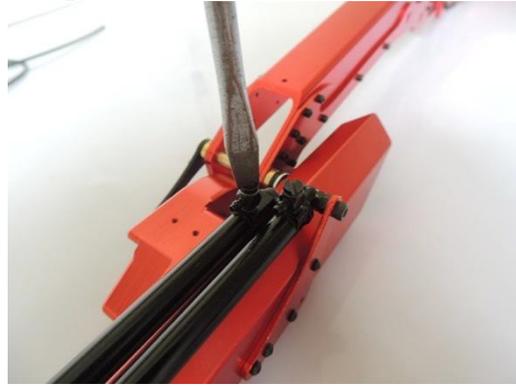
Assembled

Step 9



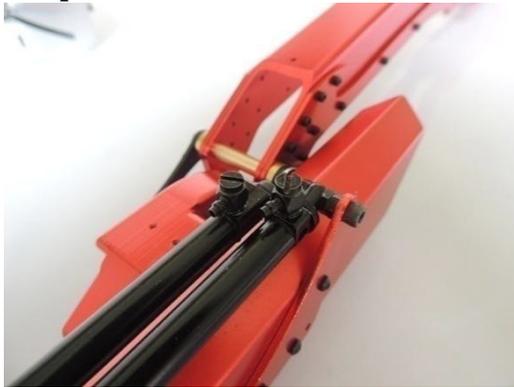
Assemble one more 2

Step 10



Install

Step 11



Assembled

Step 12



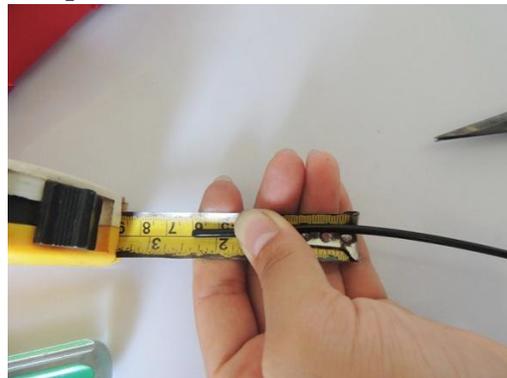
Assemble one more

Step 13



Assembled

Step 14



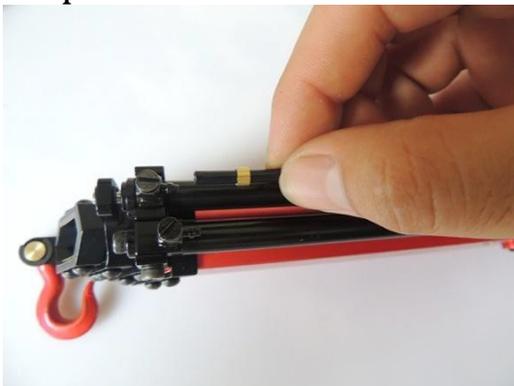
Cut 6cm of 117

Step 15



Get it through 1 (Bushings have a chamfering on one end. The chamfering end must be installed towards the nozzle direction to avoid tube from bursting. Follow the same method for next following assemblies).

Step 16



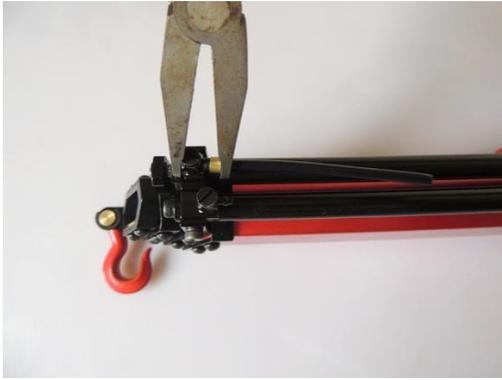
Install

Step 17



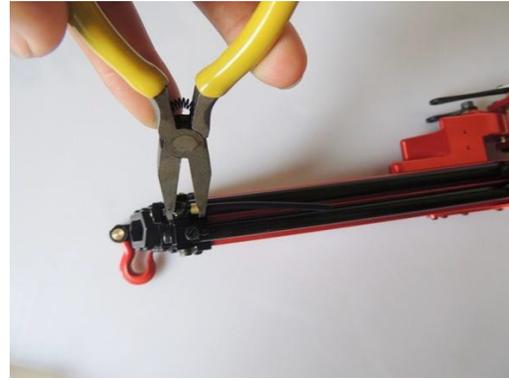
Assembled

Step 18



Use pliers to pinch

Step 19



Pinch tightly

Step 20



Pinch in other direction

Step 21



Cut 9cm of 117

Step 22



Get it through 1, then install according to nozzles position

Step 23



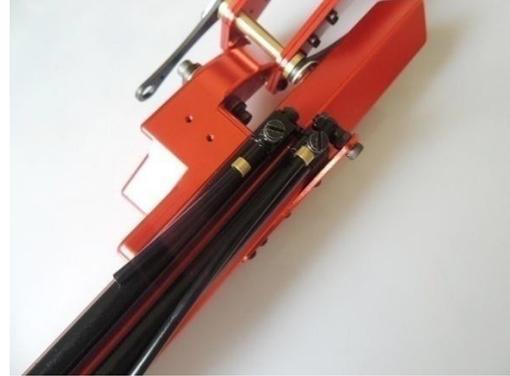
Use pliers pinch tightly

Step 24



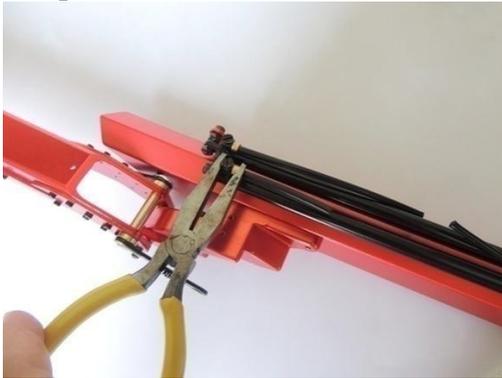
Cut 5cm of 117

Step 25



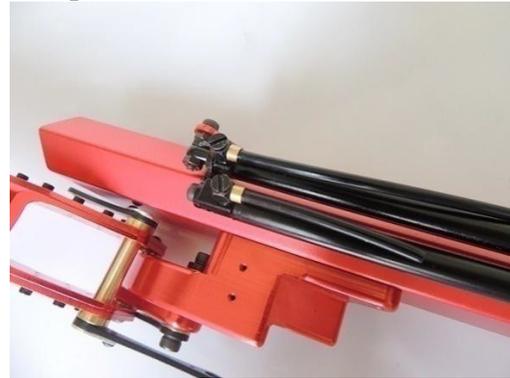
Get it through 1, then install according to nozzles position

Step 26



Use pliers pinch tightly

Step 27



Assembled

Step 28



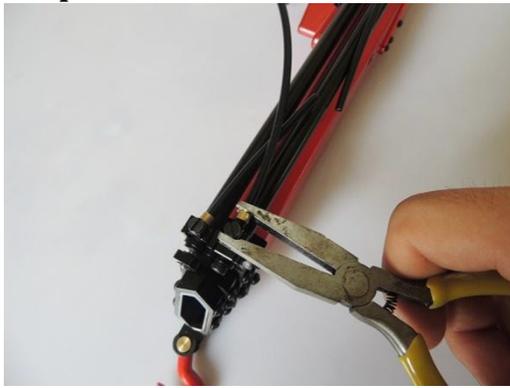
Cut 10cm of 117

Step 29



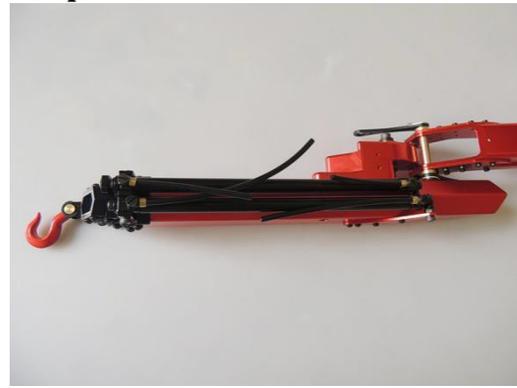
Get it through 1, then install according to nozzles position

Step 30



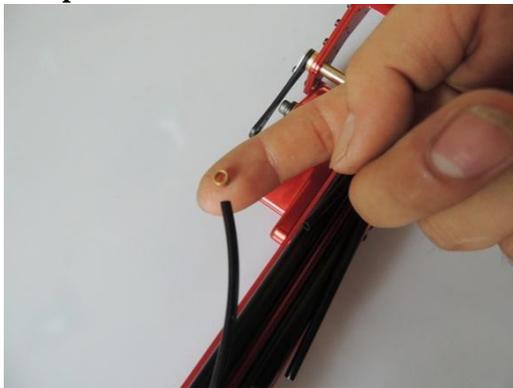
Use pliers to pinch

Step 31



Assembled

Step 32



Take out 1

Step 33



Get it through

Step 34



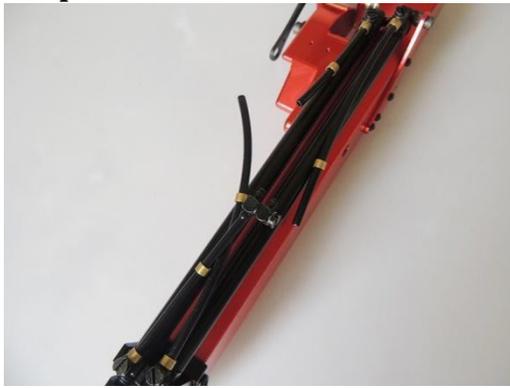
Put the bush into the oil tube

Step 35



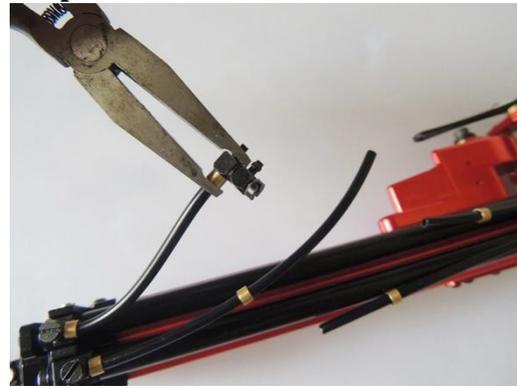
Take out the assembled 2 and 3

Step 36



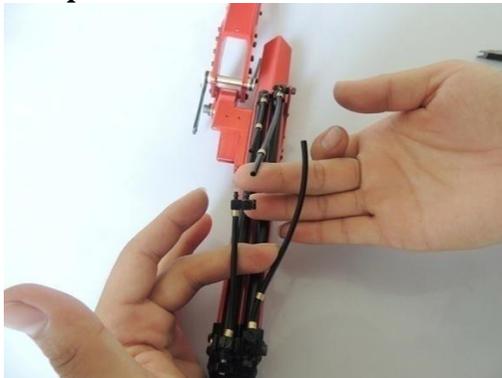
Install

Step 37



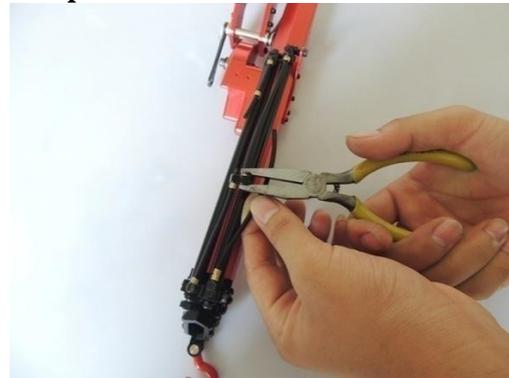
Use pliers to pinch tightly

Step 38



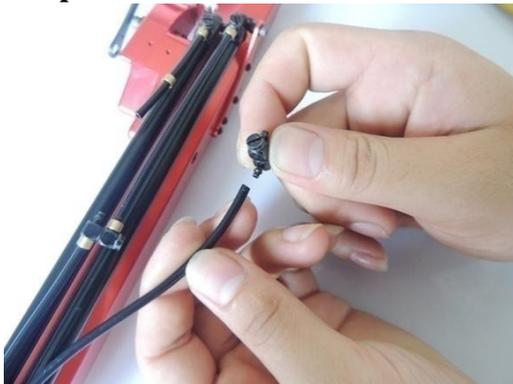
Install one end

Step 39



Install other end

Step 40



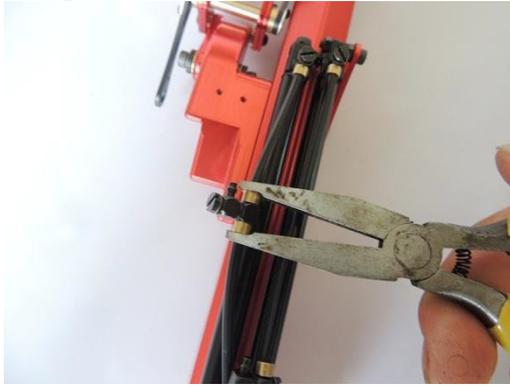
Take out 2 and 3

Step 41



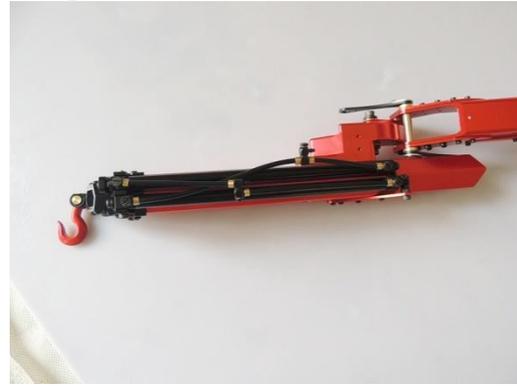
Use pliers to pinch tightly

Step 42



Pinch other end

Step 43



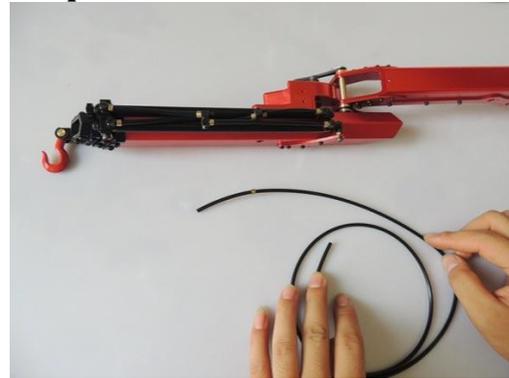
Assembled

Step 44



Cut 90cm of 117

Step 45



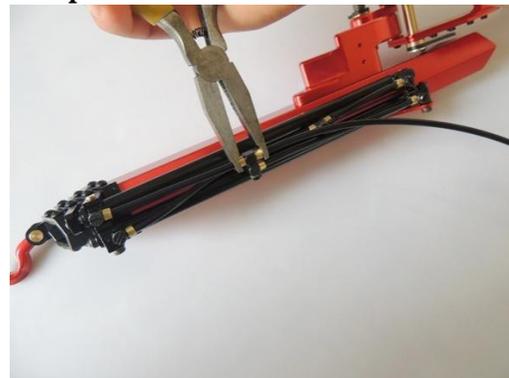
Cut the tube

Step 46



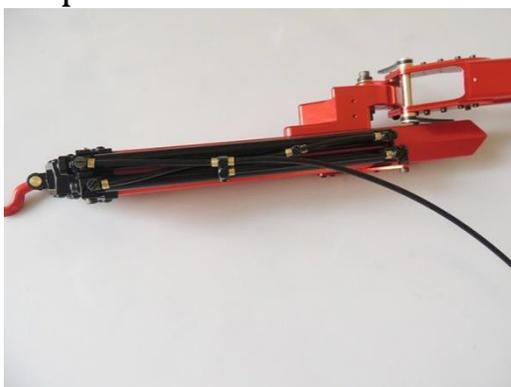
Get it through 1, then install according to nozzles position

Step 47



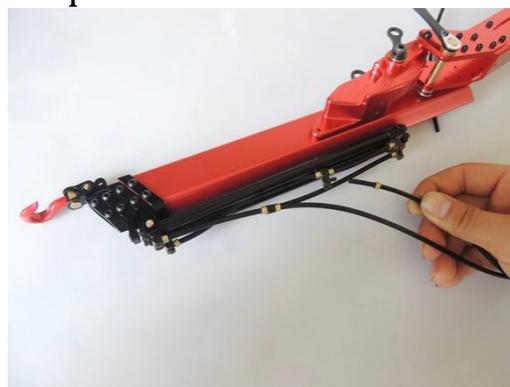
Use pliers to pinch tightly

Step 48



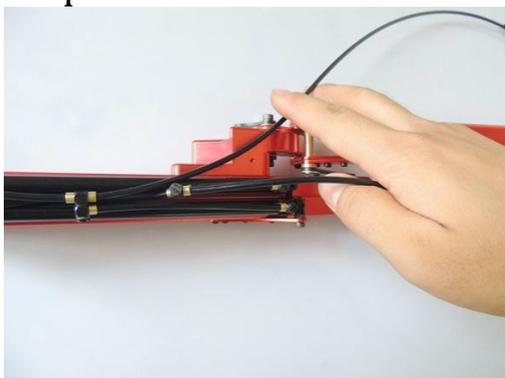
Assembled

Step 49



Cut 90cm of 117, use the above steps to assemble

Step 50



Assembled

Step 51



Take out 42 and 27

Step 52



Use 1.5mm screws driver to install 27

Step 53



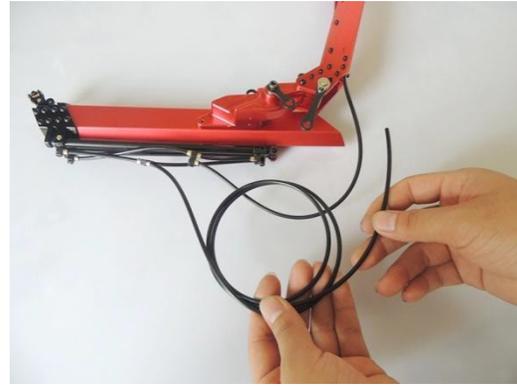
Assembly of back side

Step 54



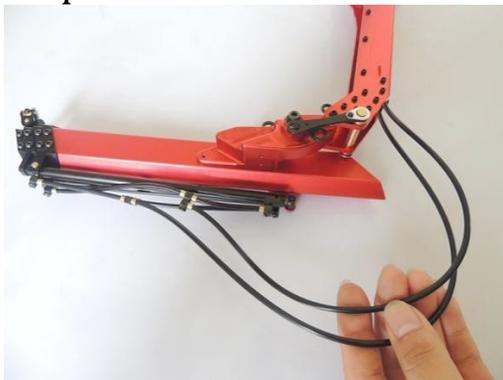
Assembly of front side

Step 55



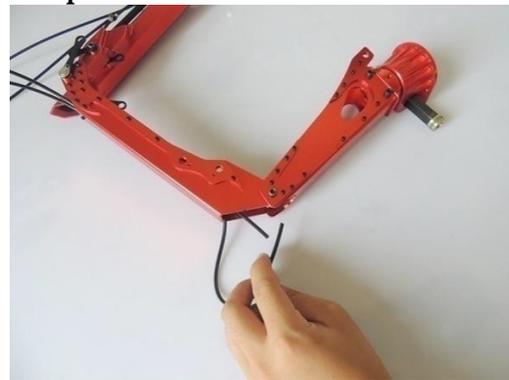
Assembled

Step 56



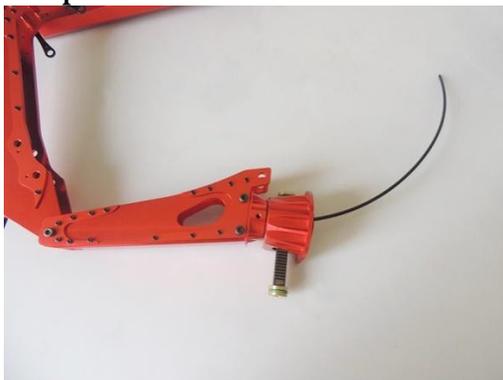
Get it through

Step 57



Pull out

Step 58



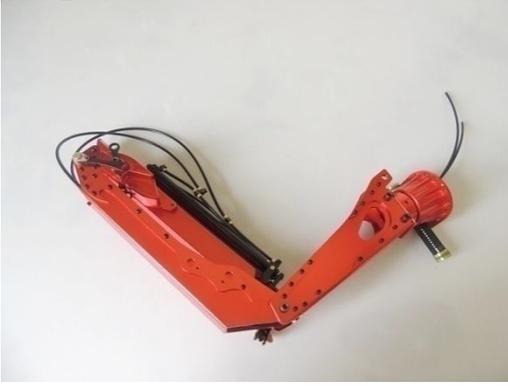
Pull out one tube

Step 59



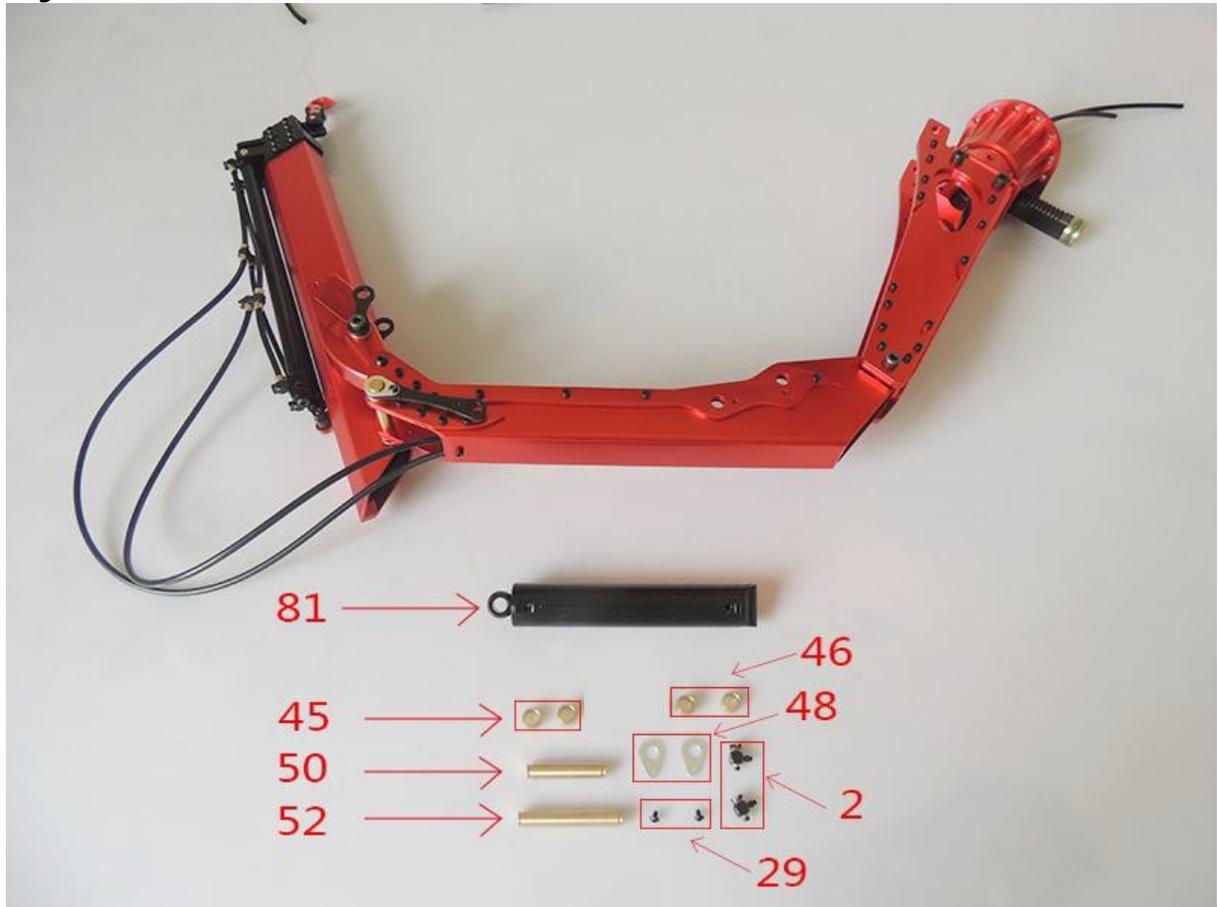
Pull out one more

Step 60



Pull out two tubes (Note: These two tubes are used for hook, please make a mark for future assembly)

Cylinder For Middle Arm



Step 1



Take out 81 and 2 of 2

Step 2



Use flat-blade screwdriver to install

Step 3



Assembled

Step 4



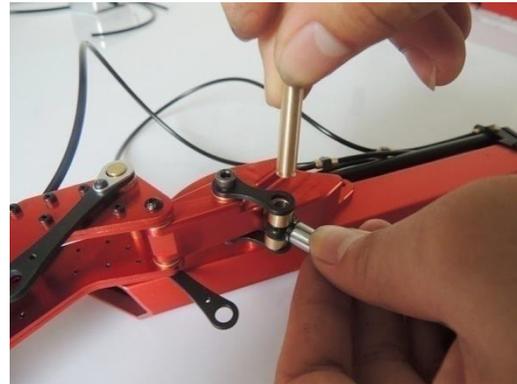
Assemble two units

Step 5



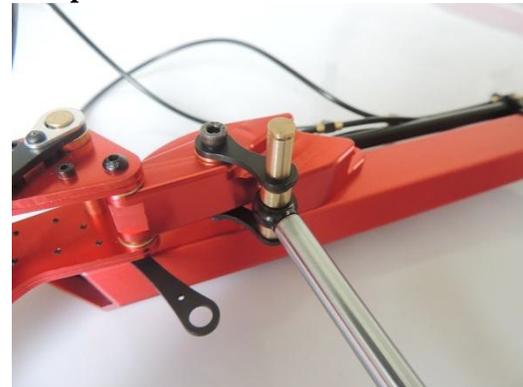
Take out 2 of 46

Step 6



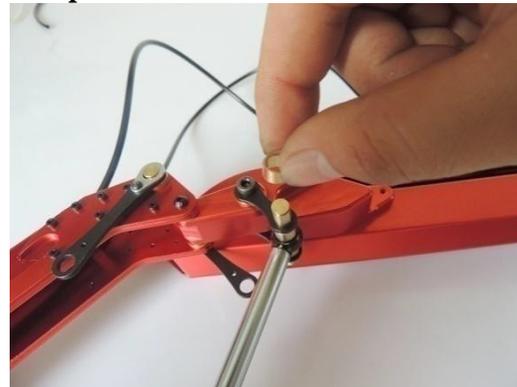
Take out 52

Step 7



Insert in

Step 8



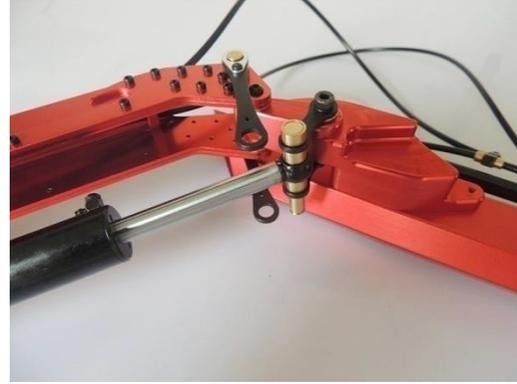
Take out another 45

Step 9



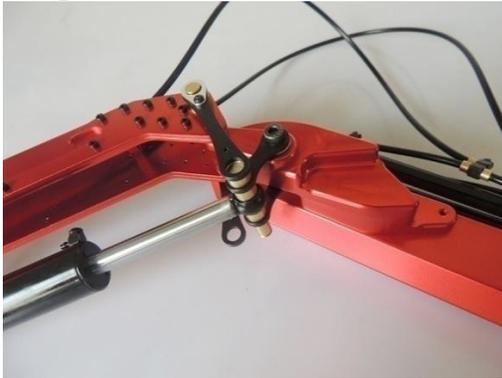
Put it on

Step 10



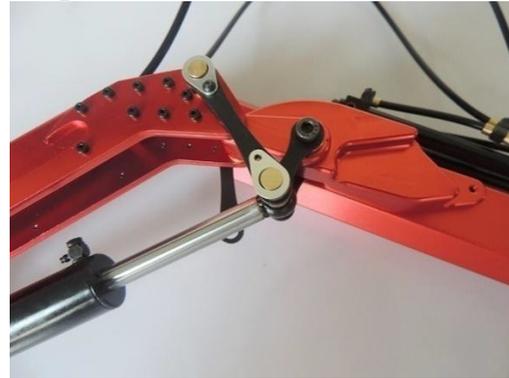
Assembled

Step 11



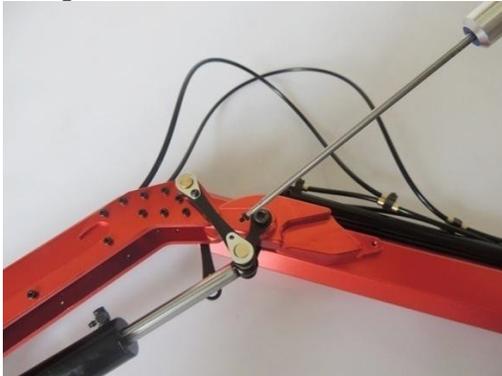
Adjust as shown

Step 12



Put one of 48 on

Step 13



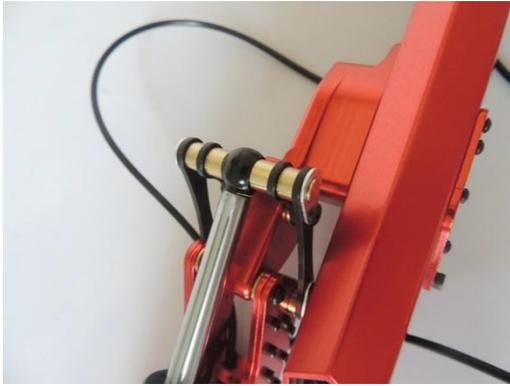
Use 1.5mm screws driver to
Install 29

Step 14



Assemble

Step 15



Assemble two sides

Step 16



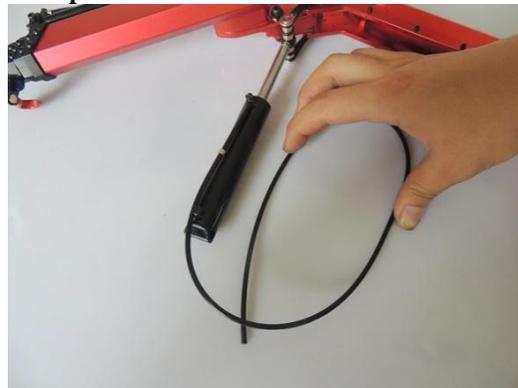
Cut 60cm of 117

Step 17



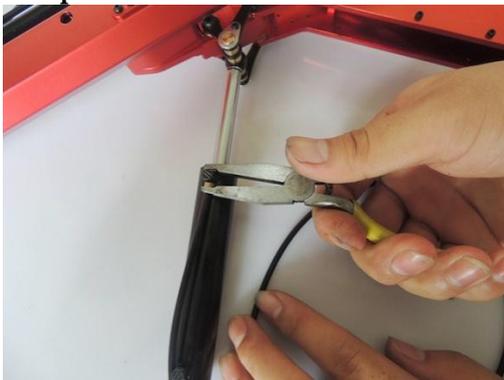
Get 1 through, then assemble

Step 18



Get the tube through

Step 19



Use pliers to pinch tightly

Step 20



Assembled

Step 21



Cut 50cm of 117

Step 22



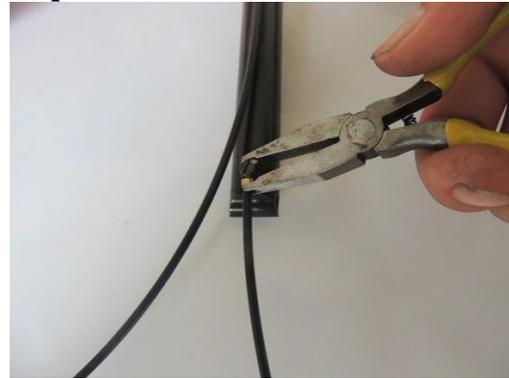
Get 1 through the oil tube

Step 23



Insert

Step 24



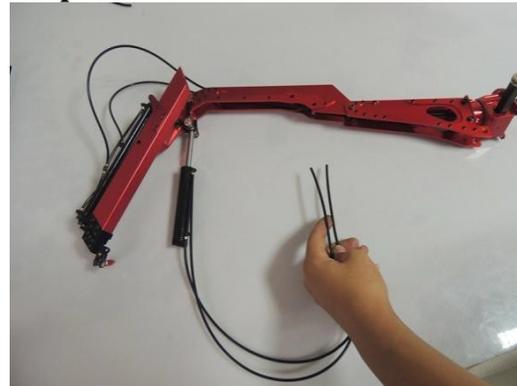
Use pliers to pinch tightly

Step 25



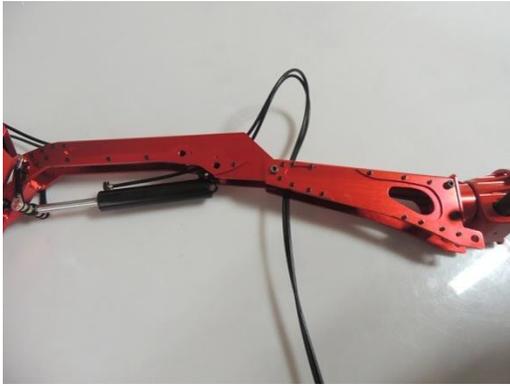
Assembled

Step 26



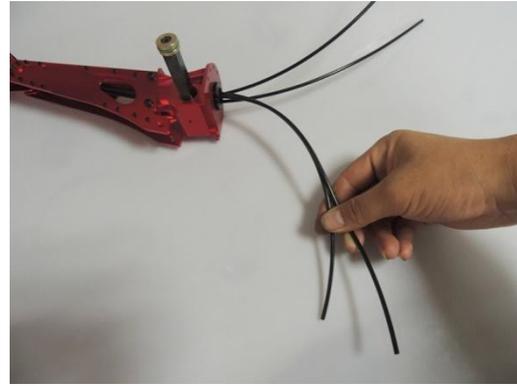
Pull out two tubes

Step 27



Get them through

Step 28



Then pull out (Note: These two tubes are used for middle arm, please make a mark for future)

Step 29



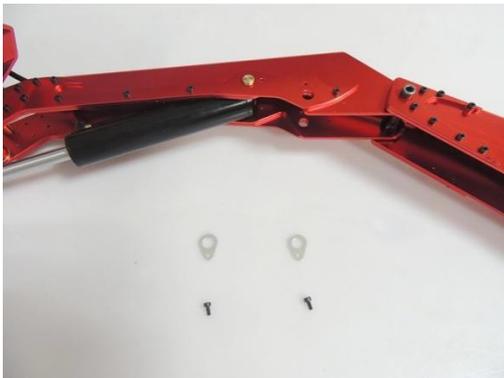
Take out one of 50

Step 30



Insert in

Step 31



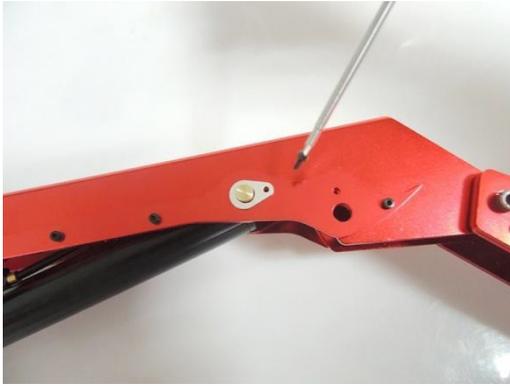
Take out two of 48 and two of 49

Step 32



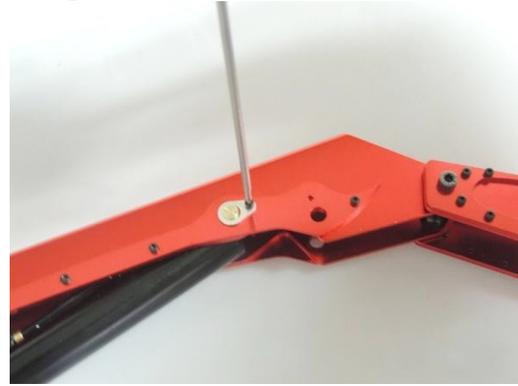
Put 48 on

Step 33



Use 1.5mm screwdriver to install 29

Step 34



Install

Step 35



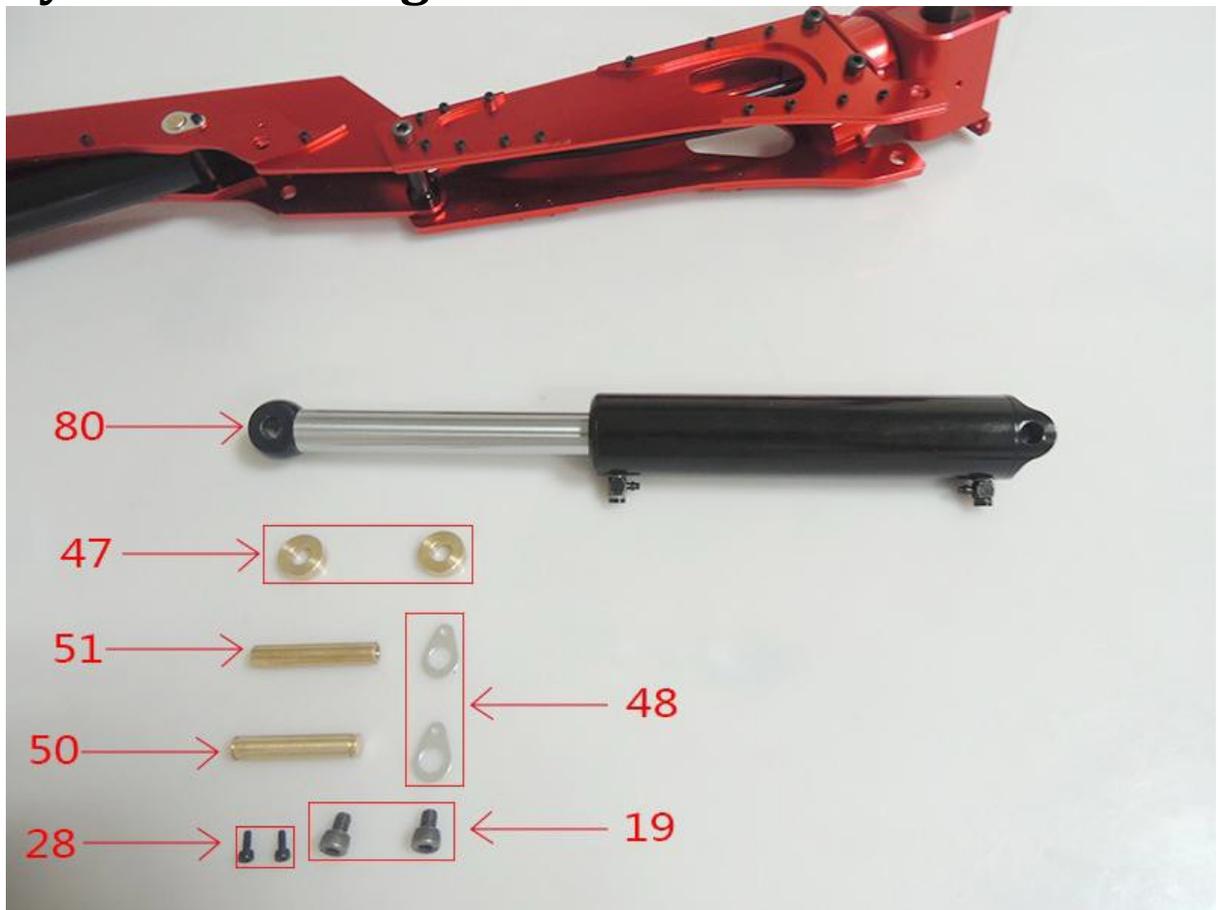
Assembled

Step 36



Assemble other side

Cylinder For Big Arm



Step 1



Take out one of 80 and two of 2

Step 2



Use flat-blade screwdriver to install 2

Step 3



Assembled

Step 4



Use flat-blade screwdriver to install another 2

Step 5



Assembled

Step 6



Cut 33cm of 117

Step 7



Get 1 through the tube, then put it into the nozzle

Step 8



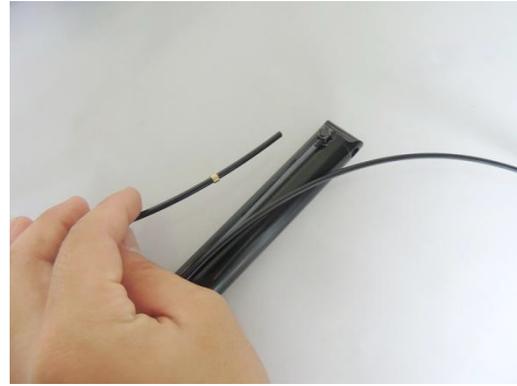
Use pliers to pinch tightly

Step 9



Cut 40cm of 117

Step 10



Get 1 through the tube, then put it into the nozzle

Step 11



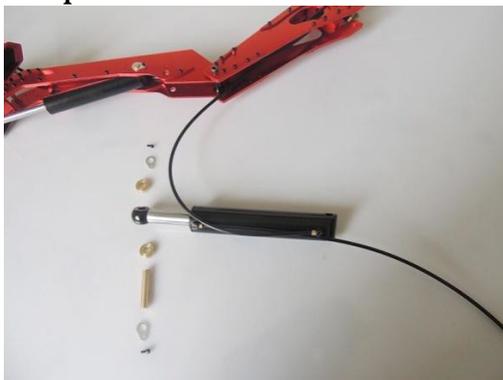
Use pliers to pinch tightly

Step 12



Assemble two oil tubes

Step 13



Take out two of 28, 48, 4 and one of 50

Step 14



Take out two of 47

Step 15



Put 47 in the correct position, then take out 50

Step 16



Press down

Step 17



Put inside

Step 18



Press it down

Step 19



Take out one of 48 and put it in the correct position

Step 20



Use 1.5mm screwdriver to install 29

Step 21



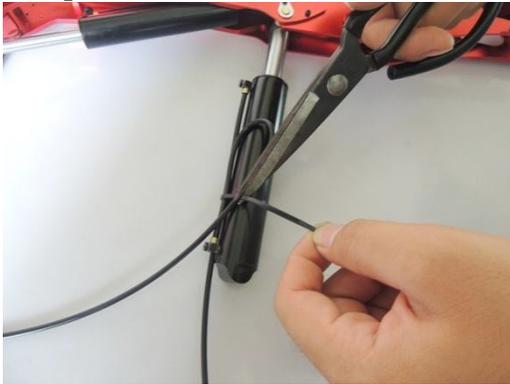
Assembled

Step 22



Take out one of cable tie

Step 23



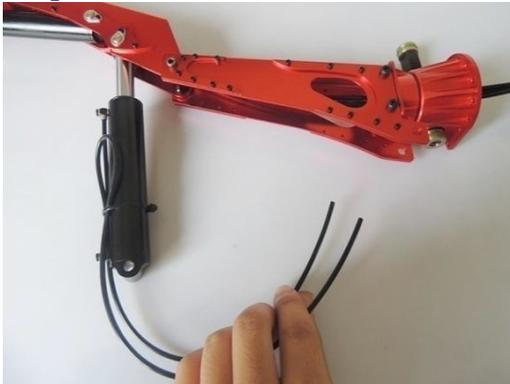
Choose a proper position
(Don't tie too tightly to avoid tube burst)

Step 24



Assembled

Step 25



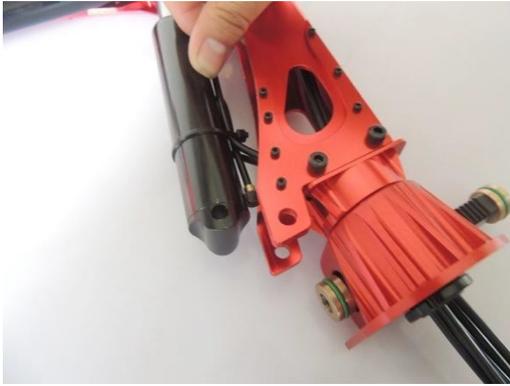
Take out the two assembled
oil tubes

Step 26



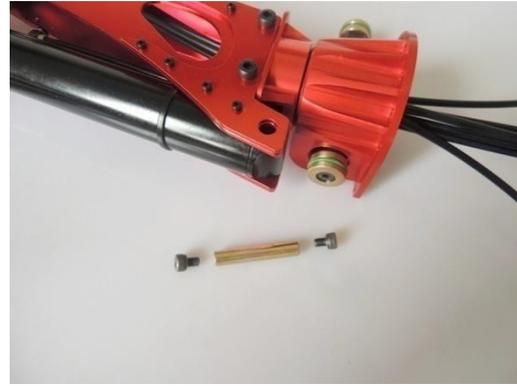
Put them into the proper
position (Note: These two tubes are used
for big arm, please mark for future reference)

Step 27



Assembled

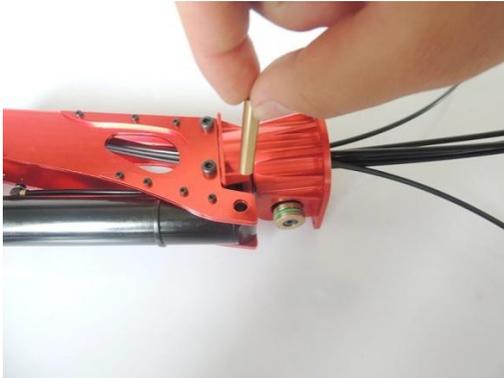
Step 28



Take out the two of 19 and
one of 51

Step 30

Step 29



Take out 51, put it at a
proper position



Put it there

Step 31



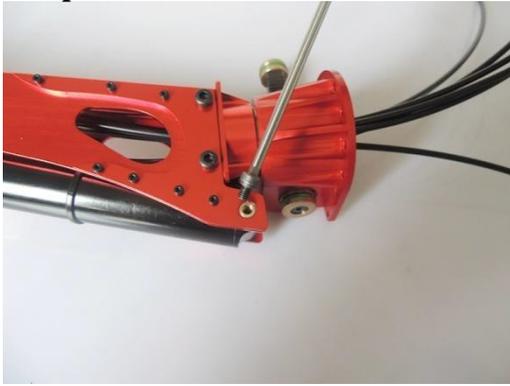
Assembled after pressing it
in

Step 32



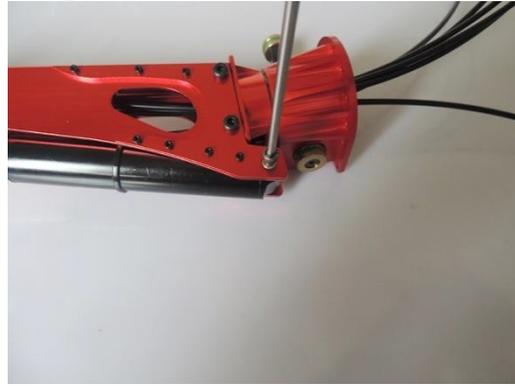
Assembled

Step 33



Use 3.0mm screwdriver to install 19

Step 34



Install

Step 35



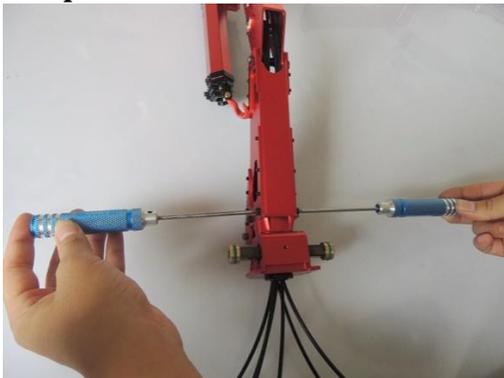
Use 3.0mm screwdriver to install 19

Step 36



Install

Step 37

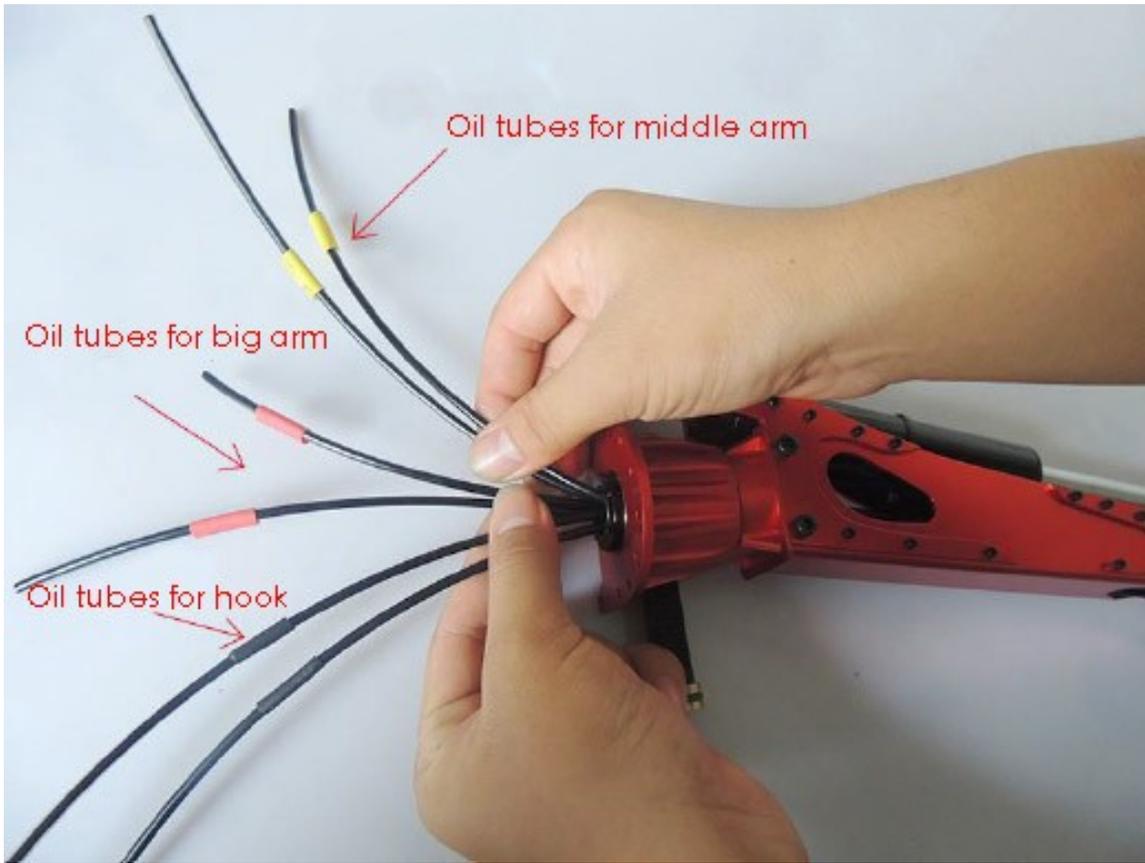


Use screwdrivers to fix again

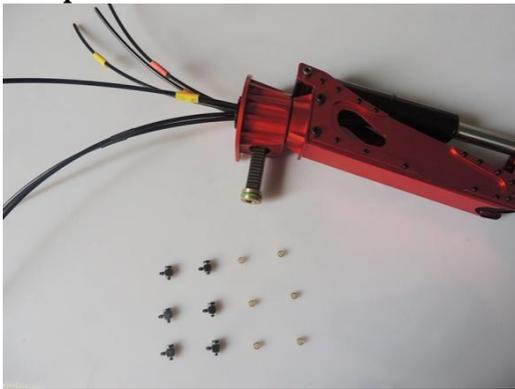
Step 38



Use cable tie to tie the oil tube

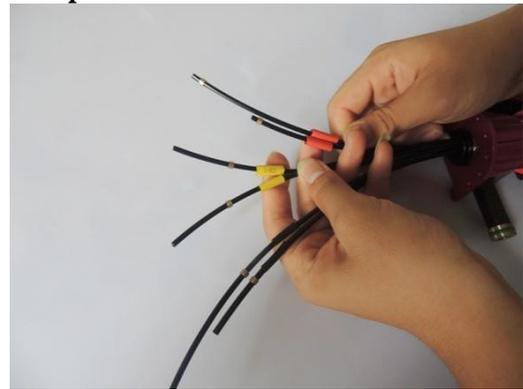


Step 39



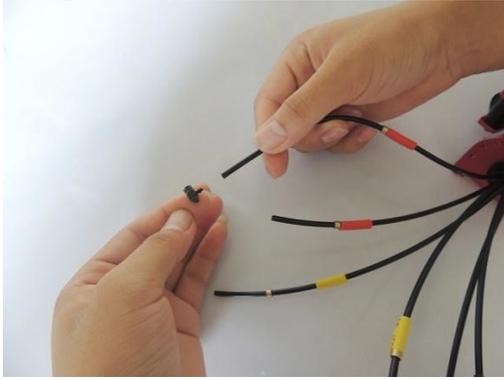
Take out 6 of 1 and 6 of 2

Step 40



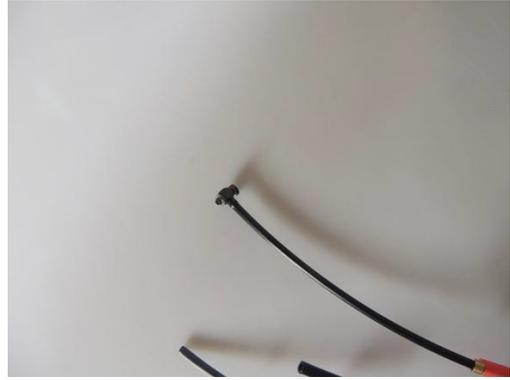
Get 1 through the tubes

Step 41



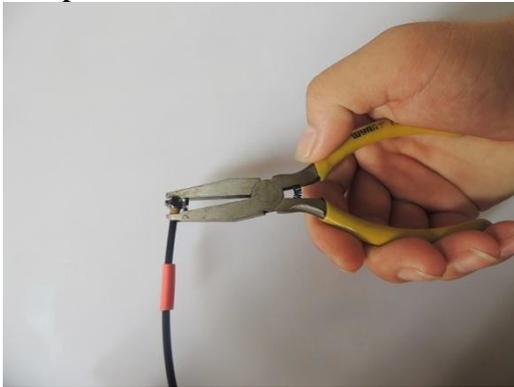
Take out 2

Step 42



Insert

Step 43



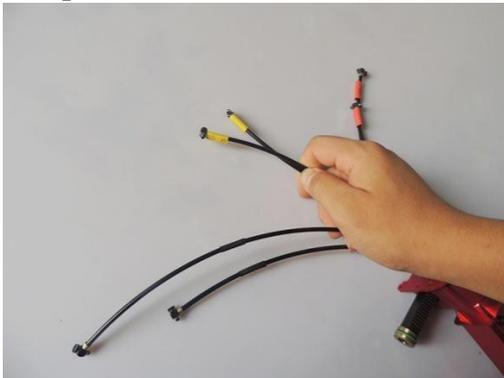
Use pliers to pinch tightly

Step 44



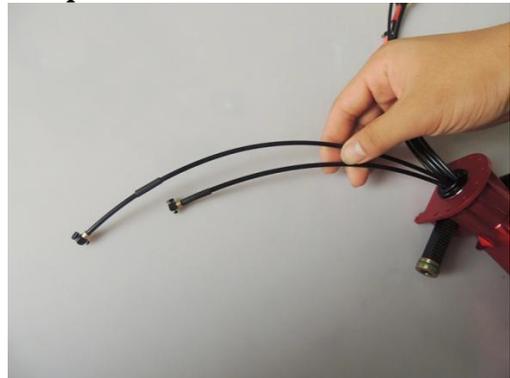
Assemble oil tubes for big arm

Step 45



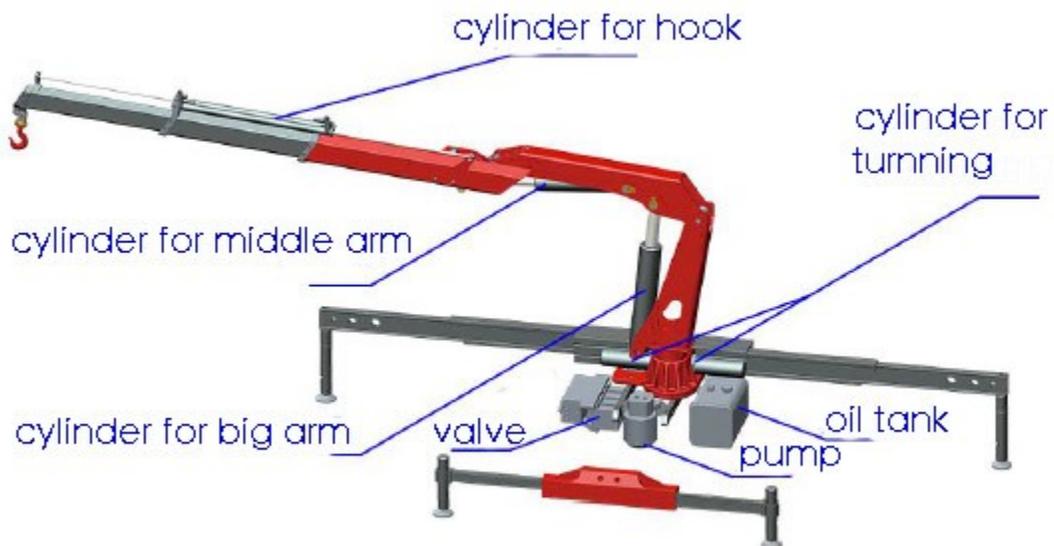
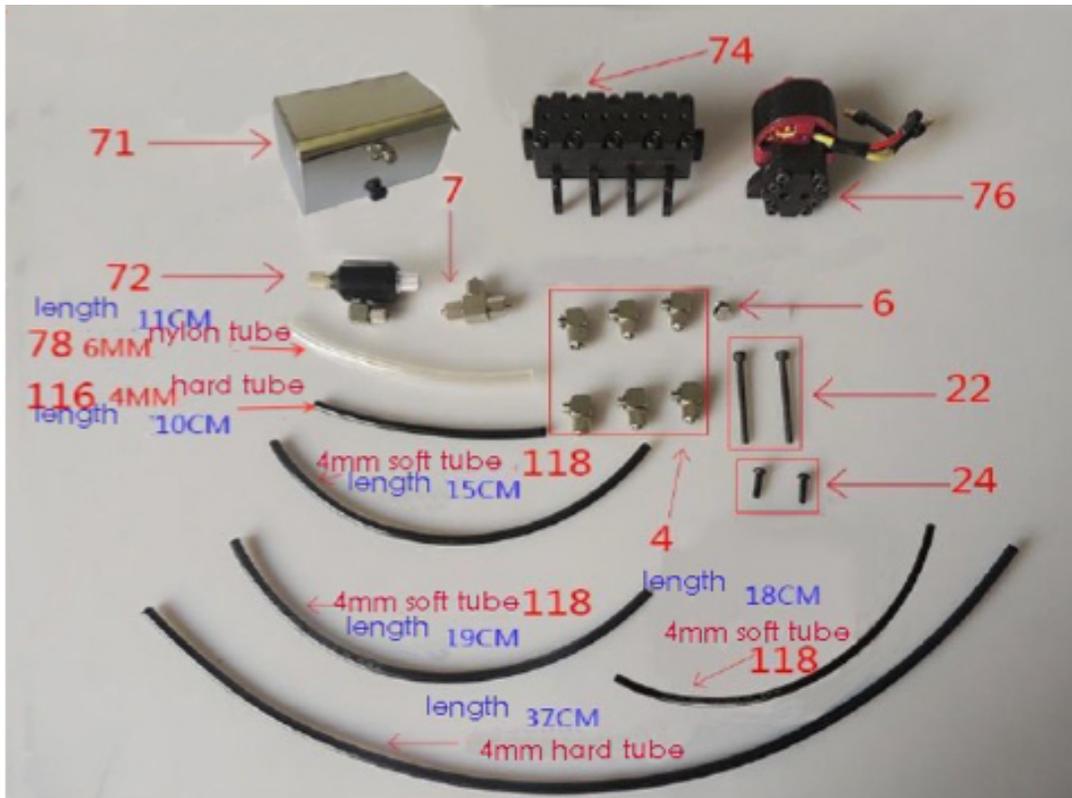
Assemble oil tubes for middle arm

Step 46



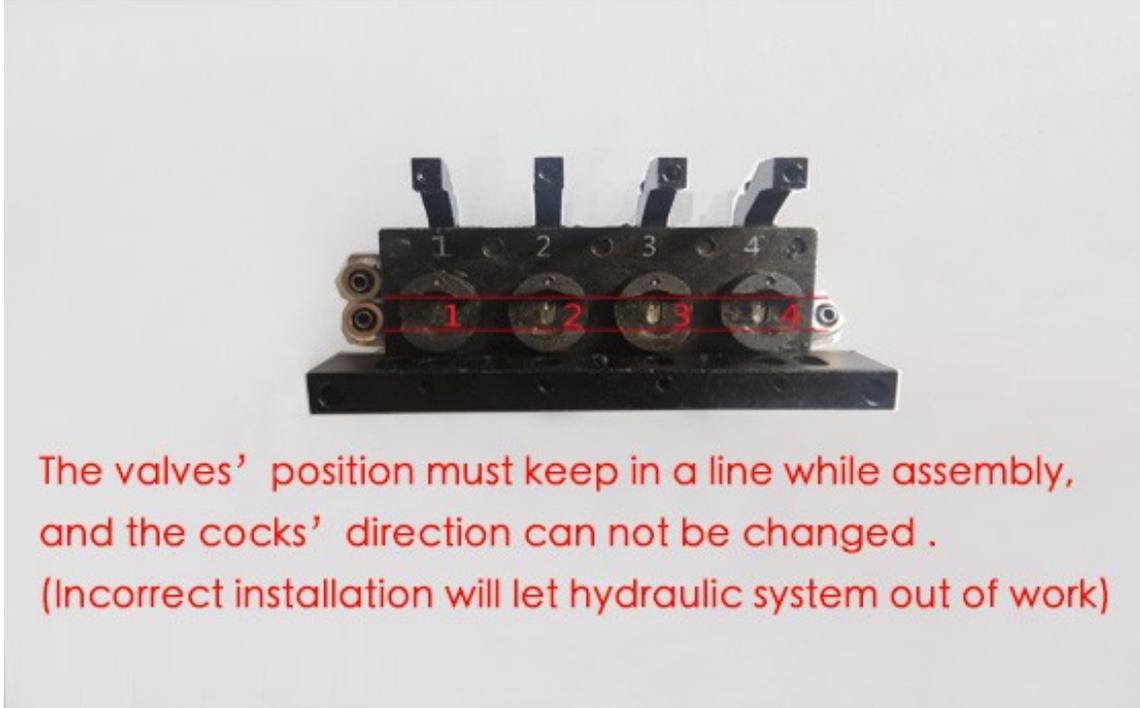
Assemble oil tubes for hook

Hydraulic Oil Route



Installation And Adjustment Of The Valves And Servo

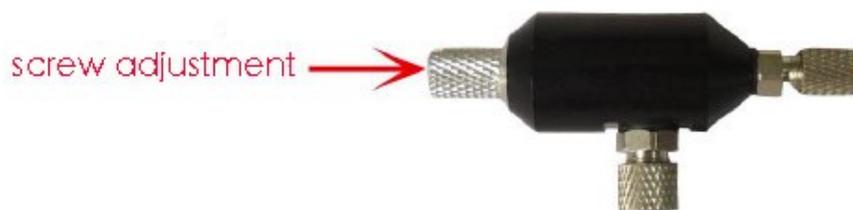
The valves' position must keep at a horizontal position while assembly and the cocks' direction can't be changed (Incorrect installation will let hydraulic system out of work).



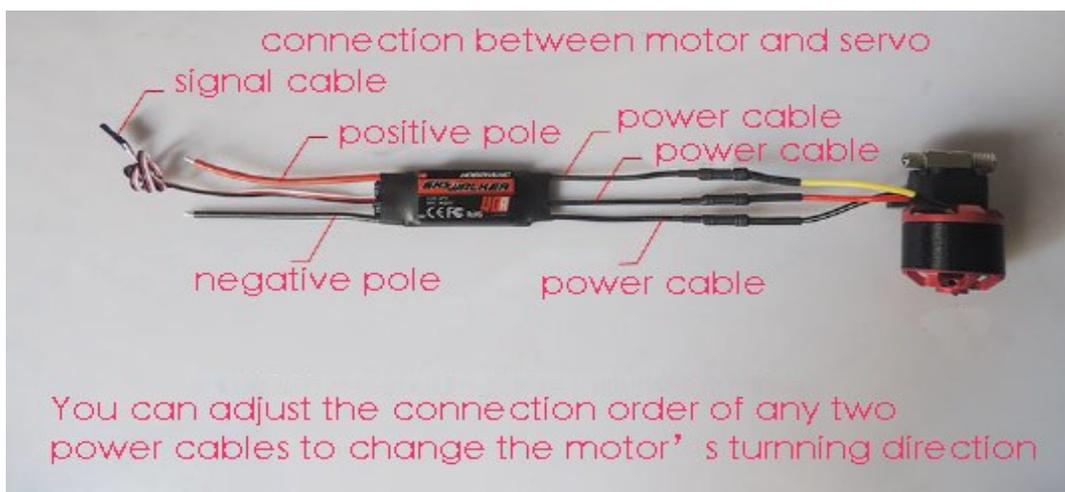
Before installing servos, please connect and turn on the remote control and receiver first to adjust the cocks to the middle position. If servos arms are not at the horizontal position after cocks come back to the middle position, please use tiny-adjustment function to adjust.

Adjustment Of Relief Valve

Adjustment of relief valve screw tension can control the working pressure of the entire hydraulic system. Adjustment method, at first adjust the screw to the outermost edge (Not twist off completely, make sure there is a connection between the screw and the thread), then adjust the screw clockwise, 3 degrees for each time, then the system pressure will be increased. Continue adjusting till the longest arm can lift 2KG objects (Or 3 bottles of mineral water). (Remember that don't adjust to the largest power, which may cause tube burst). Anti-clockwise adjustment of this relief valve screw can reduce system pressure (The lower the pressure the more power saved, the longer system working life will be).



clockwise for higher pressure, anti-clockwise for lower pressure



You can adjust the connection order of any two power cables to change the motor's turning direction

Step 1



Take out 74 and 6

Step 2



Use flat-blade screwdriver to install 6

Step 3



Take out one of 4 and one piece of 10cm 116

Step 4



Assemble like this

Step 5



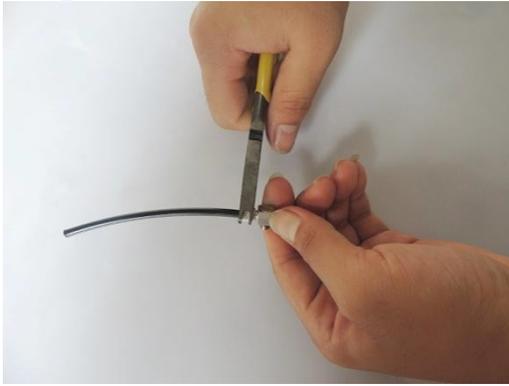
Connect

Step 6



Assembled

Step 7



Use pliers to pinch tightly

Step 8



Assembled

Step 9



Take out the flat-blade screwdriver

Step 10



Assemble

Step 11



Assembled

Step 12



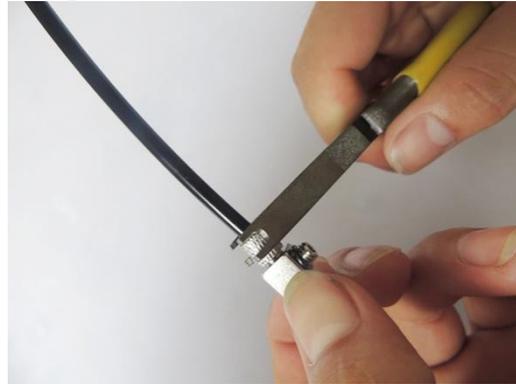
Take out one of 4 and one piece of 37cm 116

Step 13



Assembled

Step 14



Use pliers to pinch tightly

Step 15



Assembled

Step 16



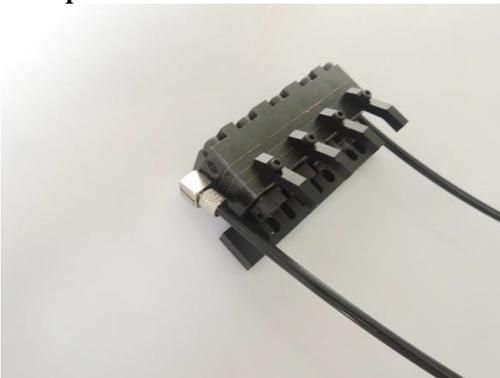
Put the assembled oil tubes at the two sides of 74

Step 17



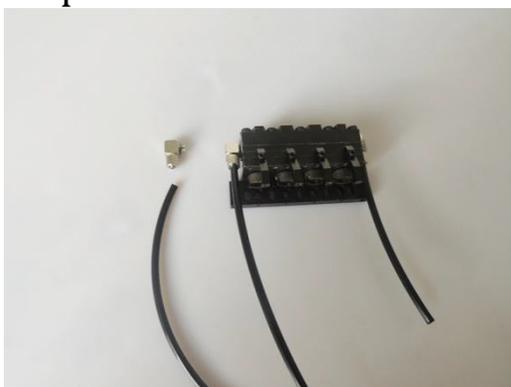
Use flat-blade screwdriver to assemble

Step 18



Assembled

Step 19



Take out one of 4 and one piece of 18cm 118

Step 20



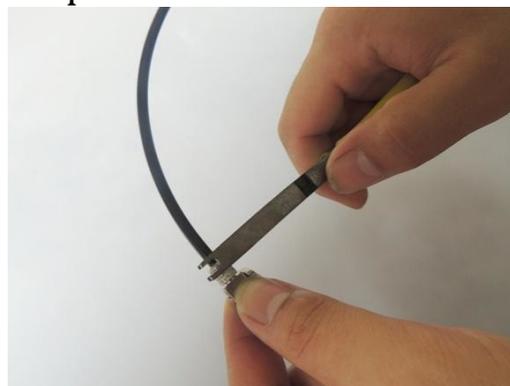
Connect with 4

Step 21



Assembled

Step 22



Use pliers to pinch tightly

Step 23



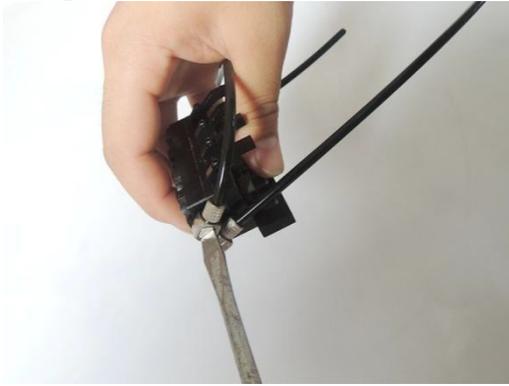
Assembled

Step 24



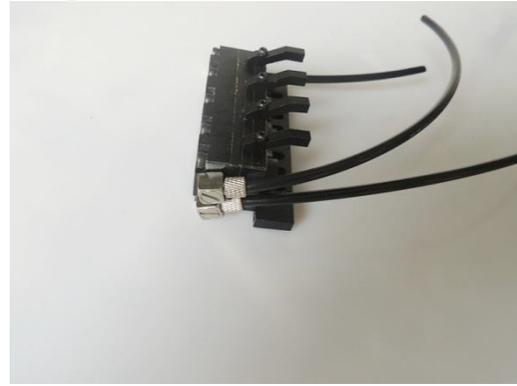
Prepare for assemble

Step 25



Use flat-blade screwdriver to assemble

Step 26



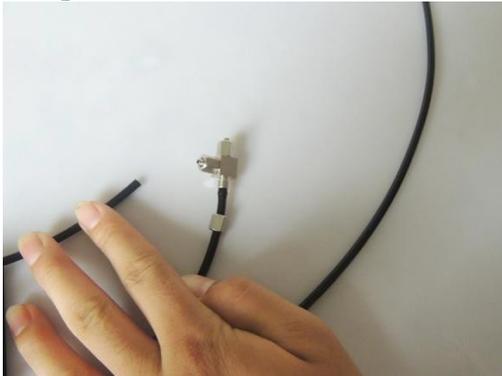
Assembled

Step 27



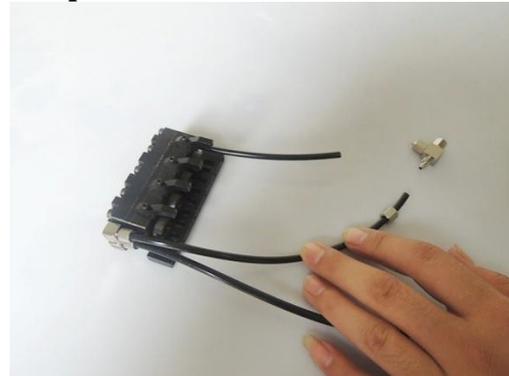
Take out one of 7 and 72, one piece of 19cm 118 and one piece of 15cm 118

Step 29



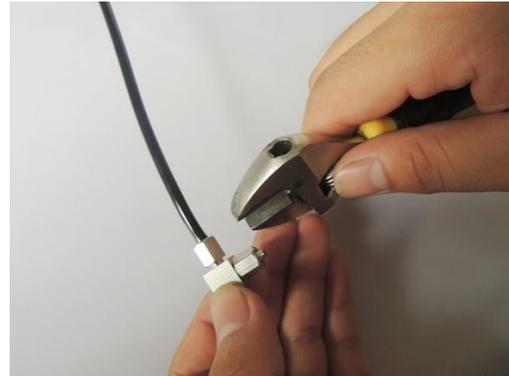
Assemble

Step 28



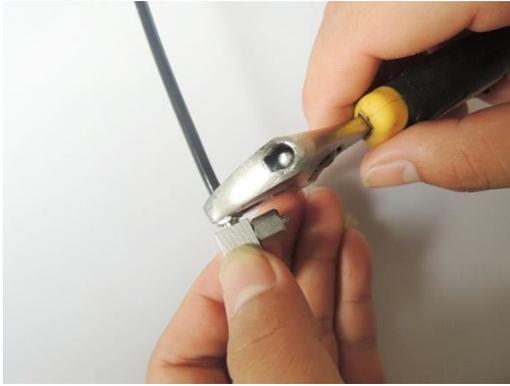
Take out one of 7

Step 30



Twist with an adjustable wrench

Step 31



Assemble

Step 32



Assembled

Step 33



Take out one piece of 19cm
118

Step 34



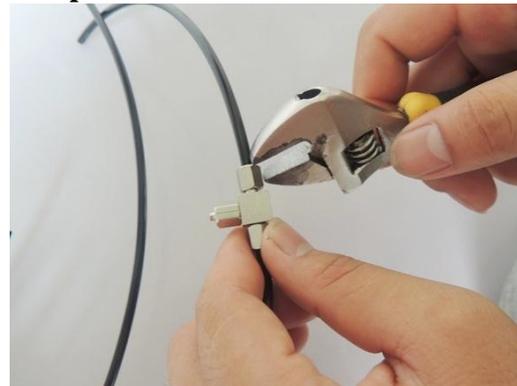
Connect

Step 35



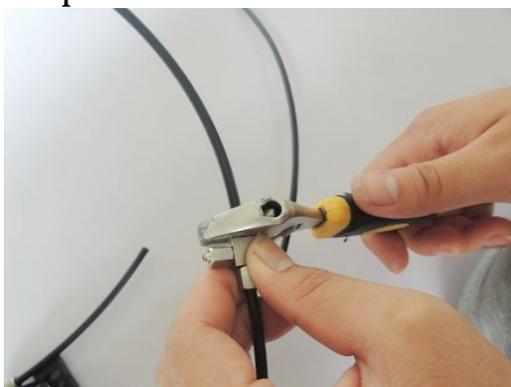
Assembled

Step 36



Fix with an adjustable wrench

Step 37



Twist

Step 38



Assembled

Step 39



Take out one of 72

Step 40



Put it at a proper position

Step 41



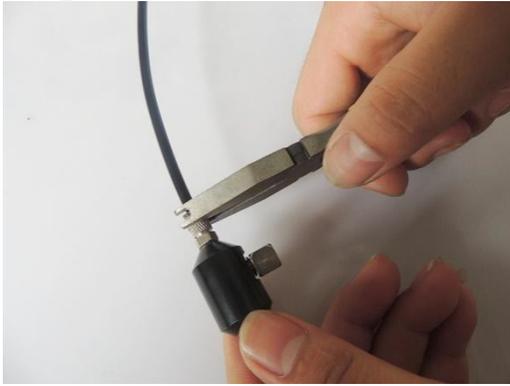
Connect

Step 42



Assembled

Step 43



Use pliers to pinch tightly

Step 44



Assembled

Step 45



Take out one of 4

Step 46



Connect

Step 47



Use flat-blade screwdriver to fix 72 tightly.

Step 48



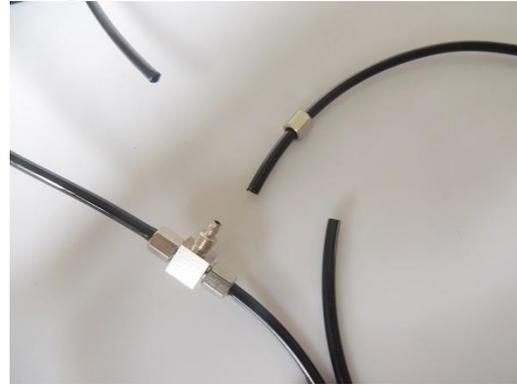
Assembled

Step 49



Take out one piece of 15cm
118

Step 50



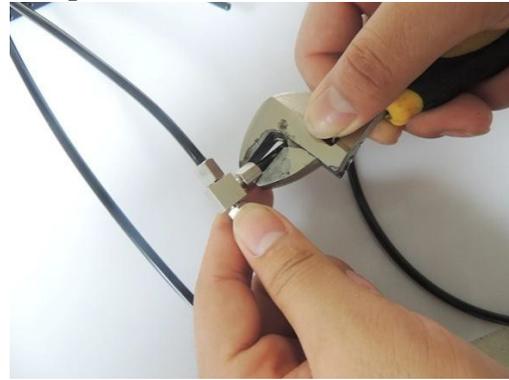
Assemble it with 7

Step 51



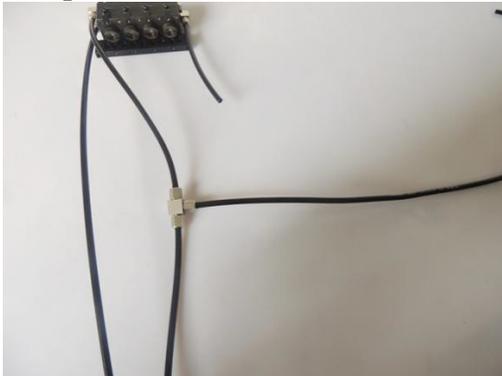
Connect

Step 52



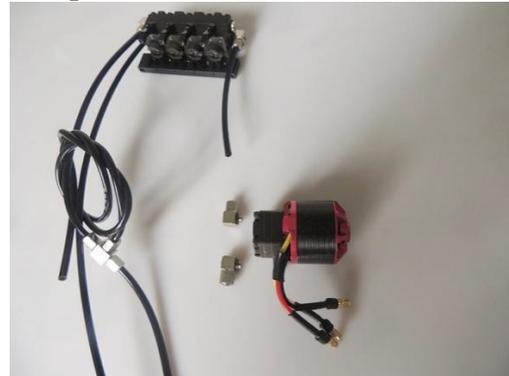
Fix with an adjustable wrench

Step 53



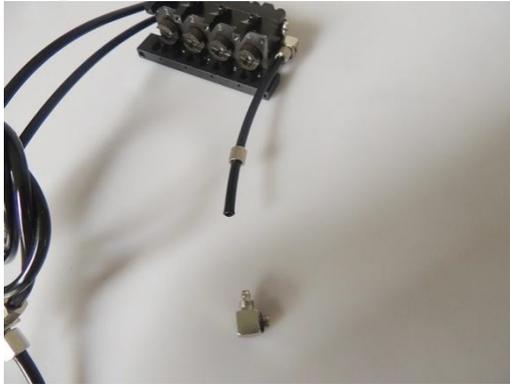
Assembled

Step 54



Take out two of 4 and one of 7 6

Step 55



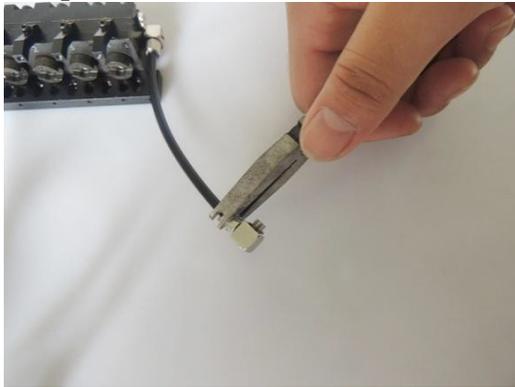
Take out one of 4

Step 56



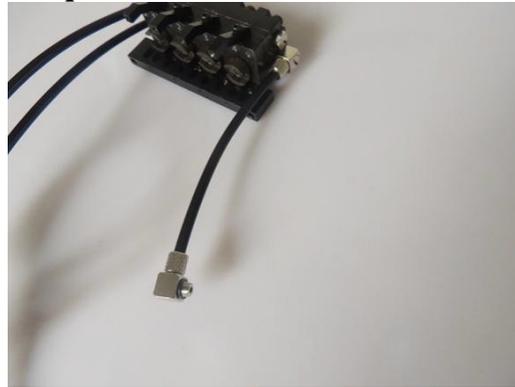
Connect

Step 57



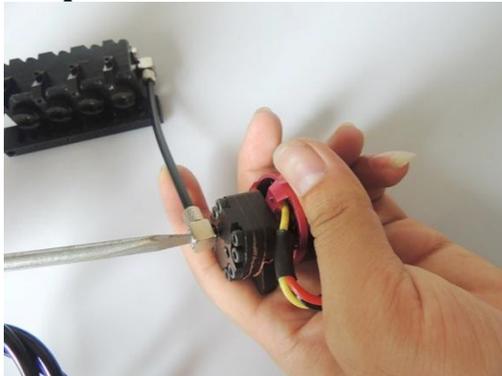
Use pliers to pinch tightly

Step 58



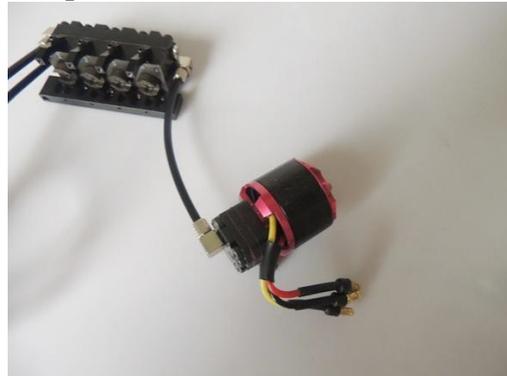
Assembled

Step 59



Take out 76, and use flat-blade screwdriver to install

Step 60



Assembled

Step 61



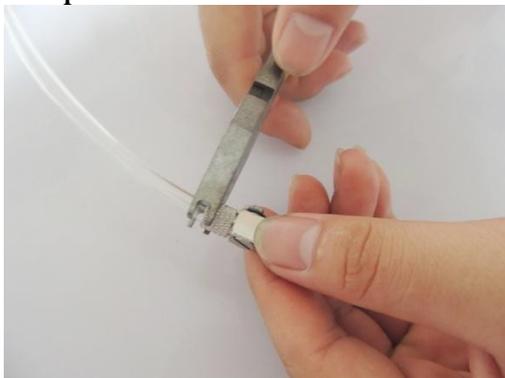
Take out one of 4 and one piece of 11cm 78

Step 62



Connect

Step 63



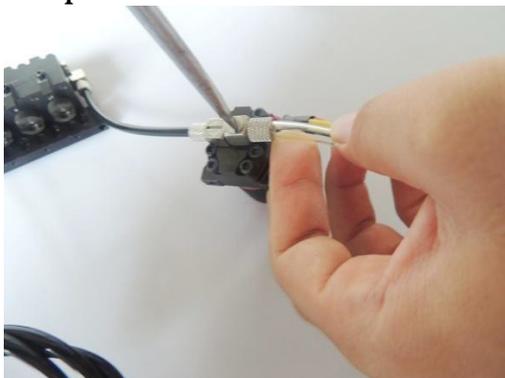
Use pliers to pinch it

Step 64



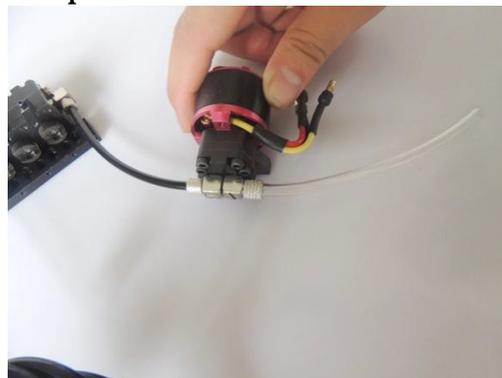
Assembled

Step 65



Use flat-blade screwdriver to install

Step 66



Assembled

Step 67



Take out 71

Step 68



Take out one of 4, and one piece of 11cm 78

Step 69



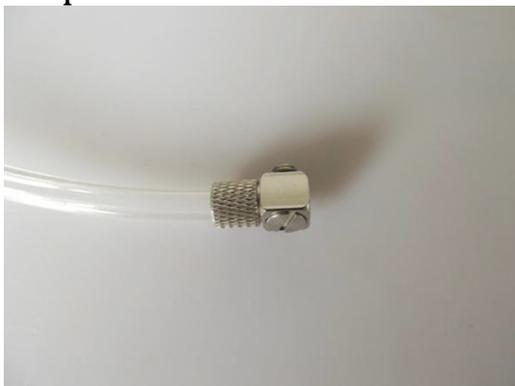
Assembled

Step 70



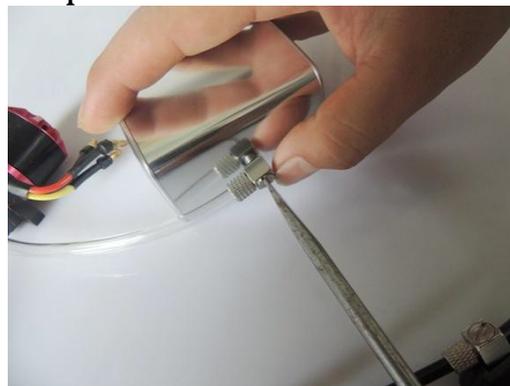
Use pliers to pinch tightly

Step 71



Assembled

Step 72



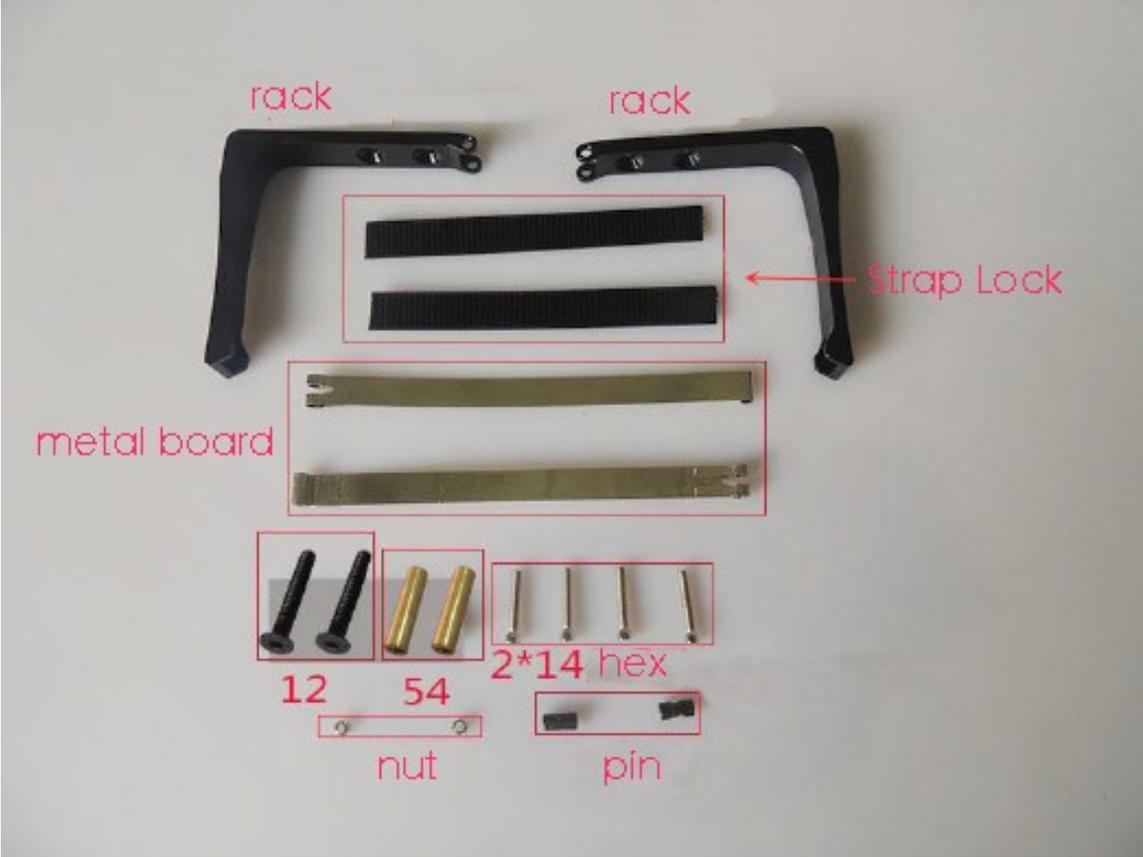
Use flat-blade screwdriver to fix

Step 73



Assembled

Oil Tank Kit Assembly



Step 1



Take out one of racks, metal boards, hex screws and nuts

Step 2



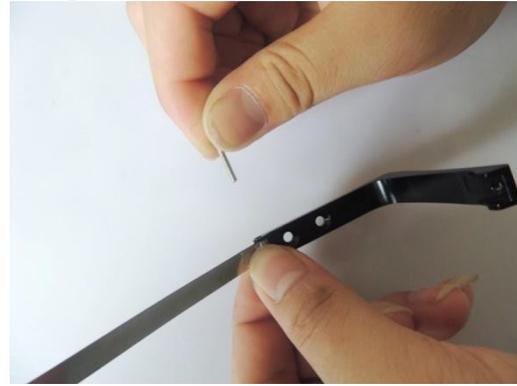
Take out one of racks and metal boards

Step 3



Put inside

Step 4



Take out one of hex screws

Step 5



Put inside

Step 6



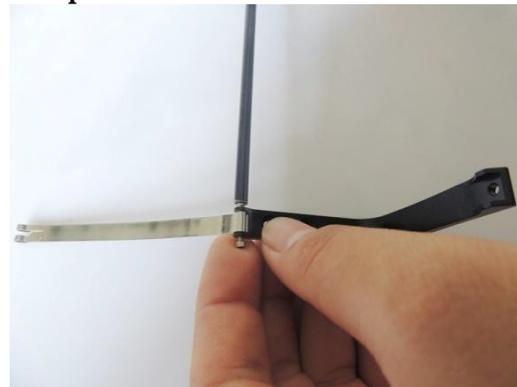
Assembled

Step 7



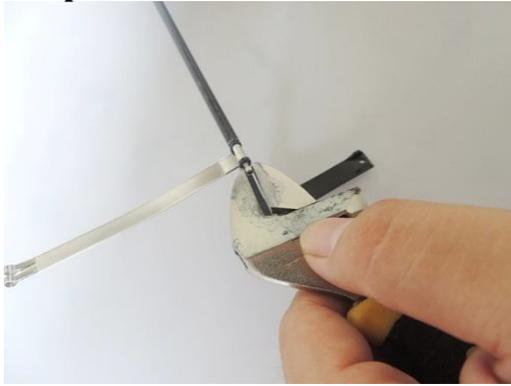
Take out one of nuts

Step 8



Use 2.5mm screwdriver to install

Step 9



Fix with an adjustable wrench

Step 10



Assembled

Step 11



Take out one of pins

Step 12



Put it in

Step 13



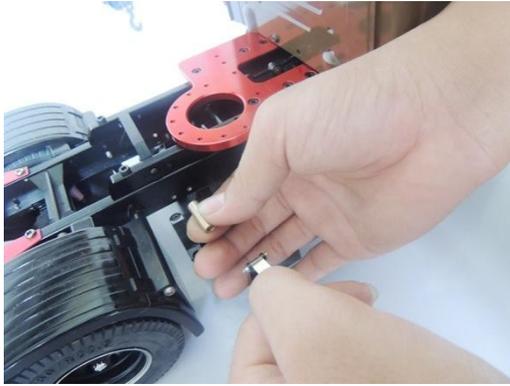
Assembled

Step 14



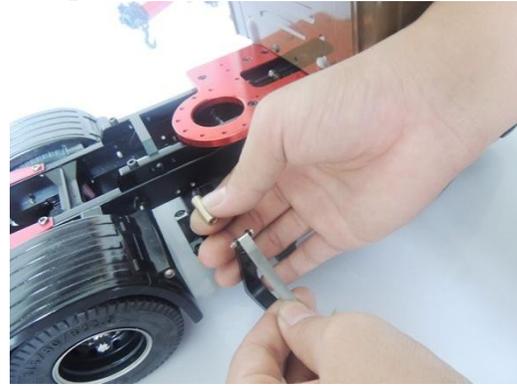
Take out two of 12 and two of 54

Step 15



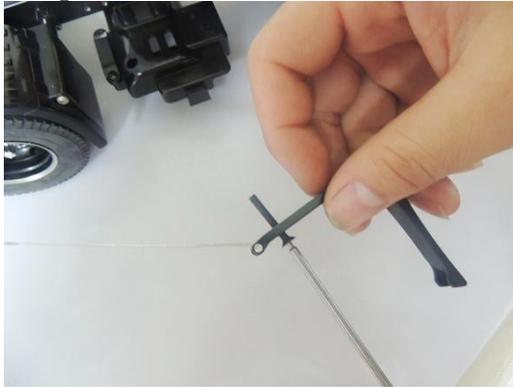
Take out one of 54

Step 16



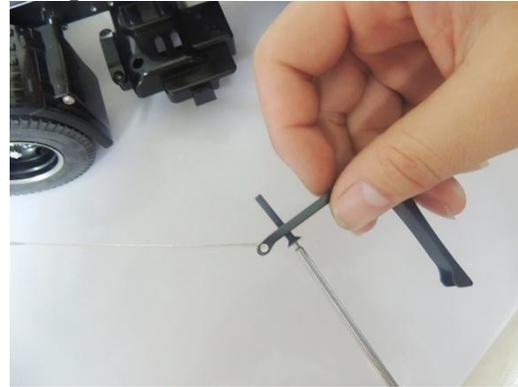
Assemble

Step 17



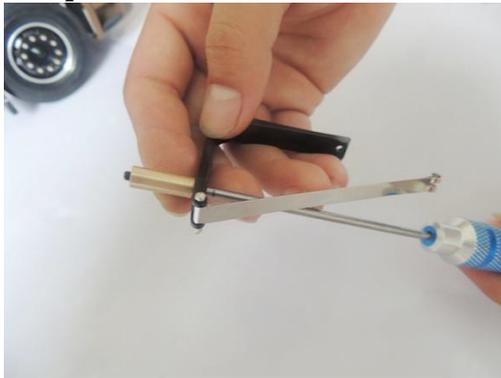
Take out one of 12

Step 18



Use 2.0mm screwdriver to install 12

Step 19



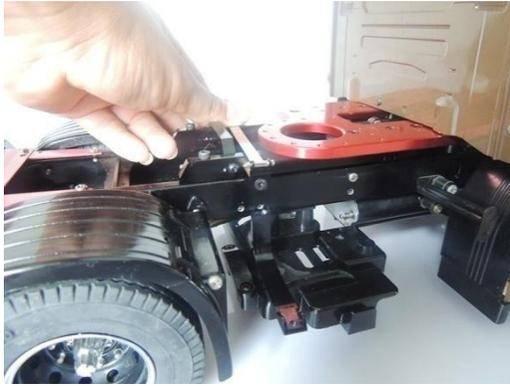
Put it in 54

Step 20



Assemble

Step 21



Assembled

Step 22



Assemble another one

Step 23



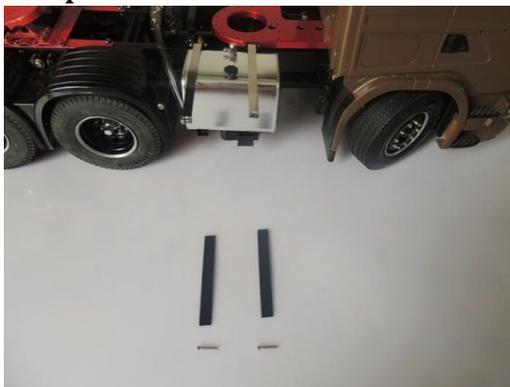
Take out hydraulic oil route

Step 24



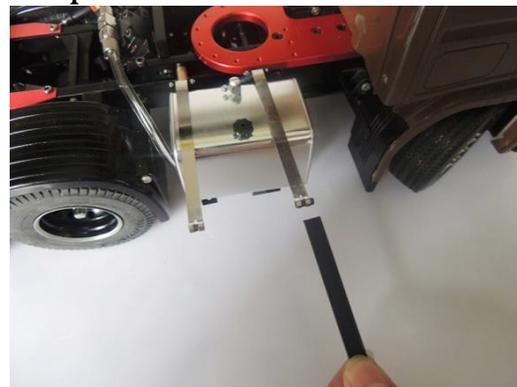
Put the oil tank at a proper position

Step 25



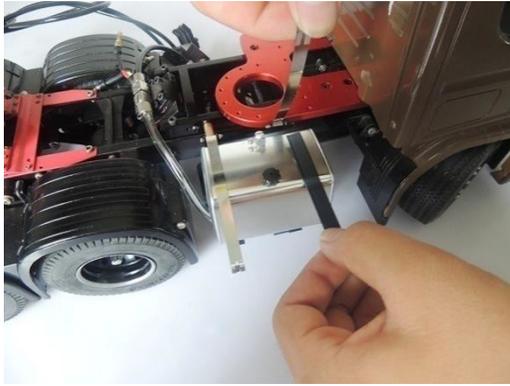
Take out two of strap locks and two of hex screws

Step 26



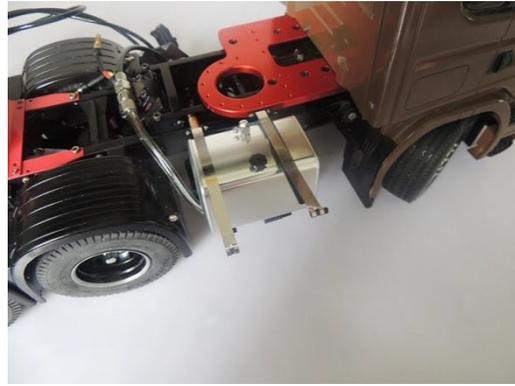
Take out one of strap locks

Step 27



Put it on the oil tank

Step 28



Put down the metal board

Step 29



Bent it down

Step 30



Put it at a proper position

Step 31



Use 2.0mm screwdriver to install 12

Step 32



Assemble

Step 33



Assemble

Step 34



Assembled

Step 35



Assemble two units

Step 36



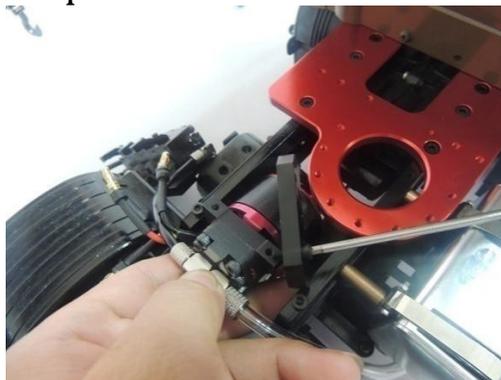
Take out 108 and two of 24

Step 37



Use 2.5mm screwdriver to install 24

Step 38



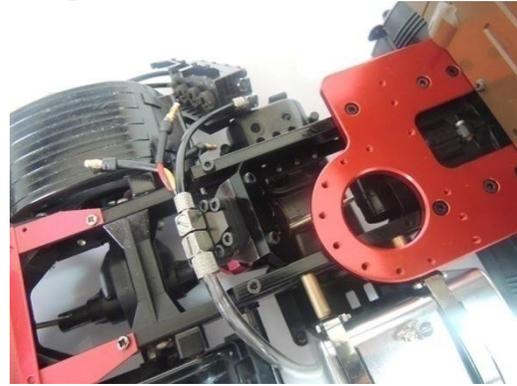
Install it at a proper position

Step 39



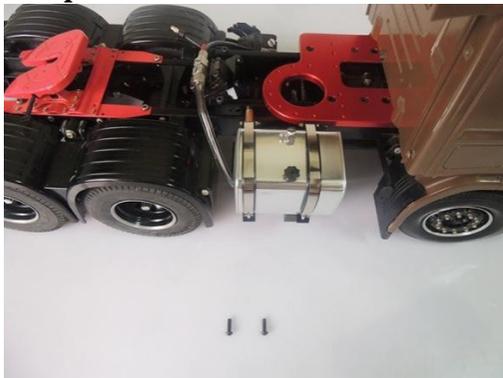
Assembled

Step 40



Assembled after installing two units

Step 41



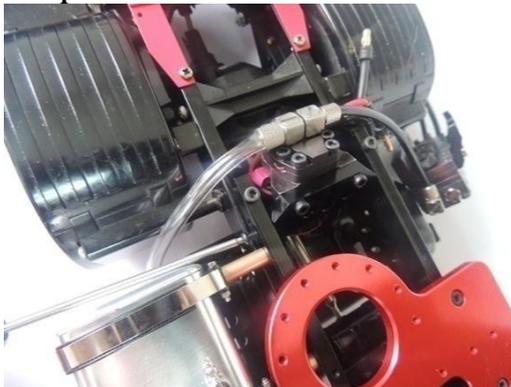
Take out two of 22

Step 42



Use 2.0mm screwdriver to install 22

Step 43



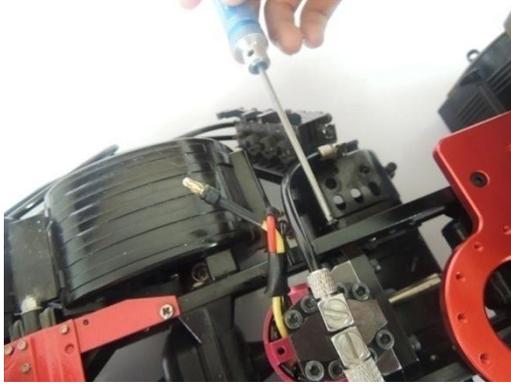
Assemble

Step 44



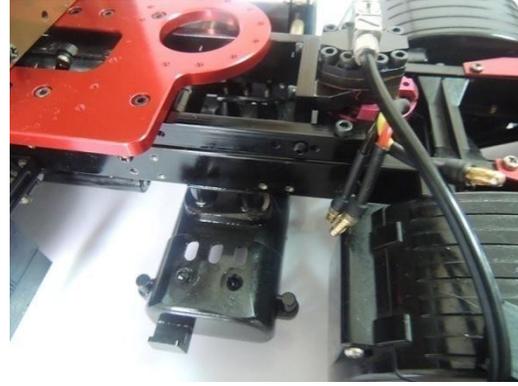
Use 2.0mm screwdriver to install another 22

Step 45



Assemble

Step 46



Assembled

Front Feet Kit Assembly



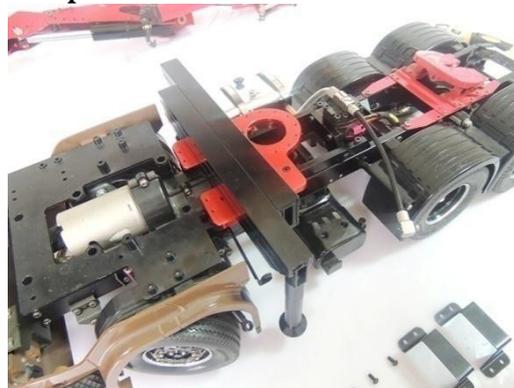
Take out two feet, two of 107 and eight of 32

Step 1



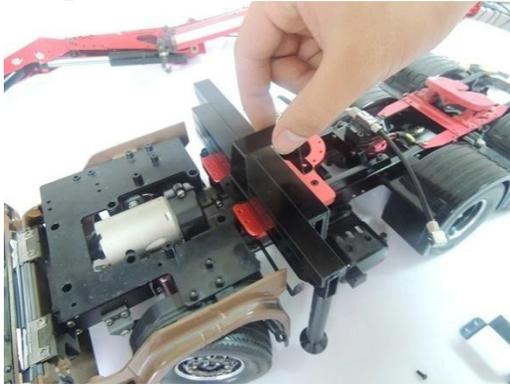
Take out two feet

Step 2



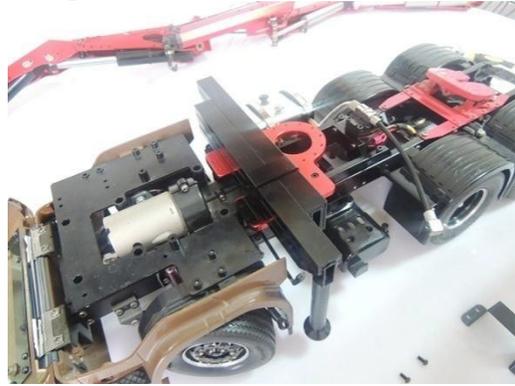
Put them in proper position

Step 3



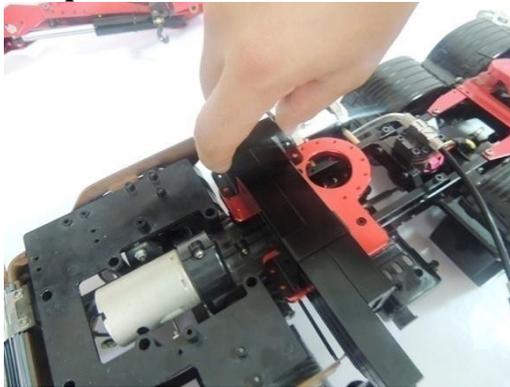
Take out one of 107

Step 4



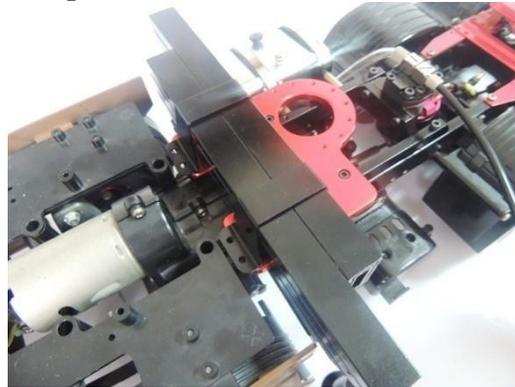
Put it at a proper position

Step 5



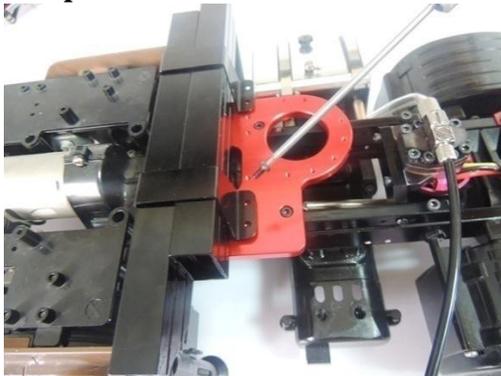
Take out one more of 107

Step 6



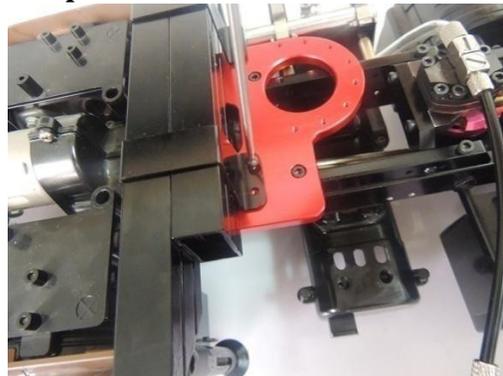
Put it in proper position

Step 7



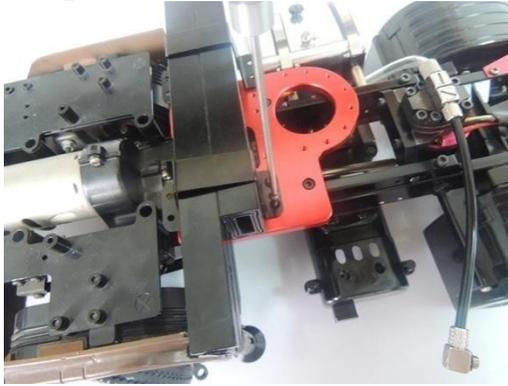
Use 2.0mm screwdriver to
install 22

Step 8



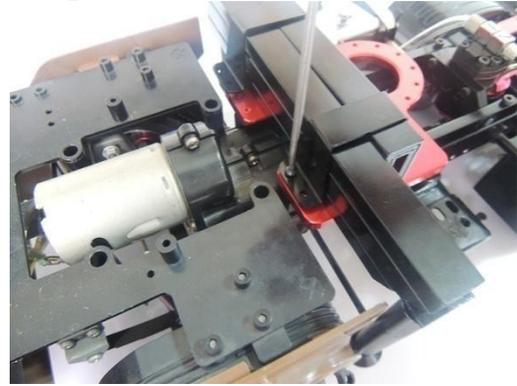
Assembled

Step 9



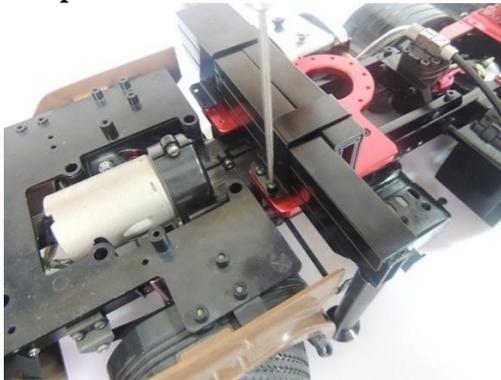
Install another 32

Step 10



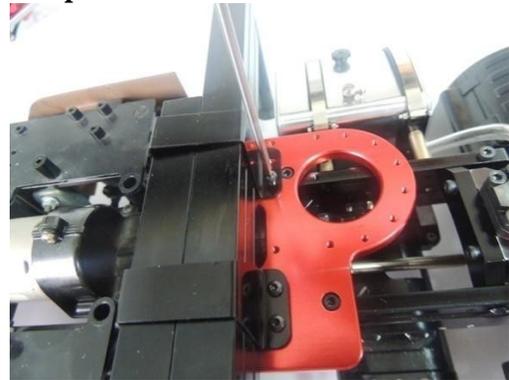
Install the third 32

Step 11



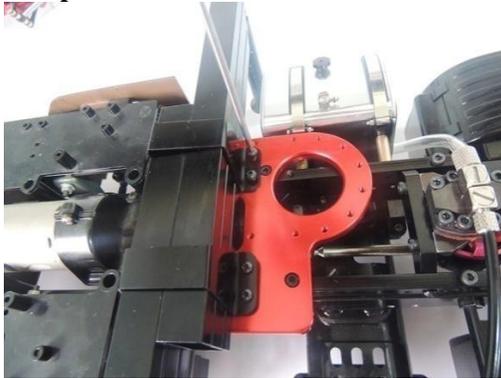
Install the fourth 32

Step 12



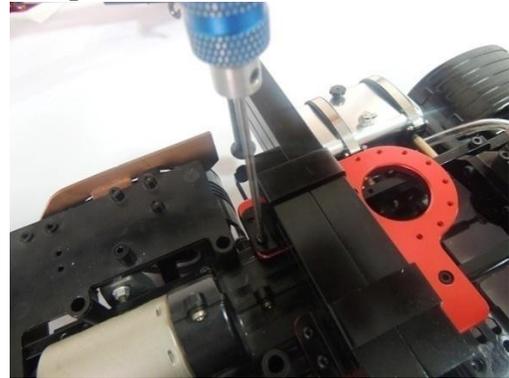
Use 2.0mm screwdriver to install 22

Step 13



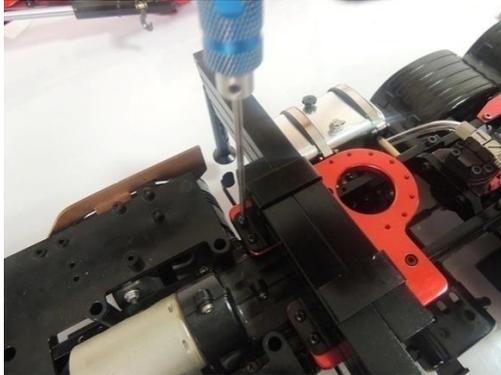
Use 2.0mm screwdriver to install 22

Step 14



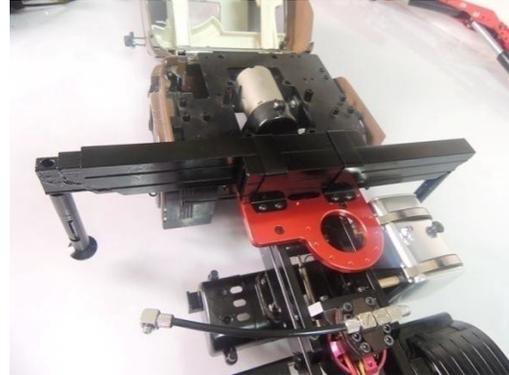
Use 2.0mm screwdriver to install 22

Step 15



Use 2.0mm screwdriver to install 22

Step 16



Assembled after holding feet

Step 17



Assembled after and extending feet

Step 18



Take out one arm height of 17

Step 19



Take out one arm

Step 20



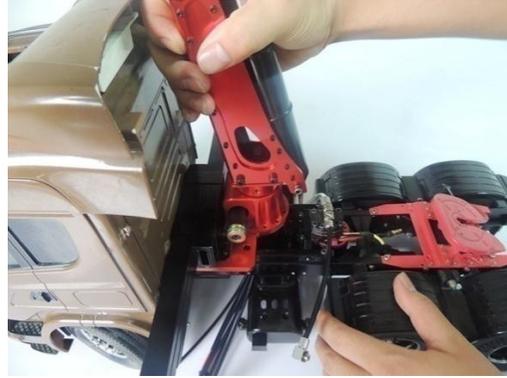
Put oil tube into the hole
(Be careful to avoid damaging the oil tube)

Step 21



Align and hold

Step 22



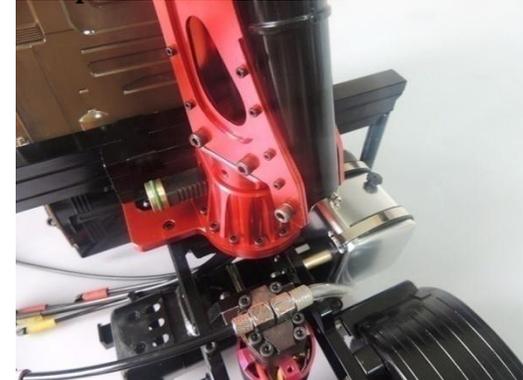
Use 2.5mm screwdriver to install 17

Step 23



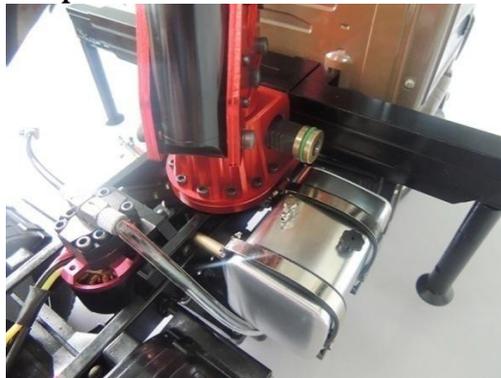
Assemble

Step 24



Assembled

Step 25



Install eight of 17

Step 26



Assembled

Step 27



Take out two of 36 and two of 104

Step 28



Take out one of 36 and 104

Step 29



Connect

Step 30



Assembled

Step 31



Assemble two units

Step 32



Take one out

Step 33



Put it on

Step 34



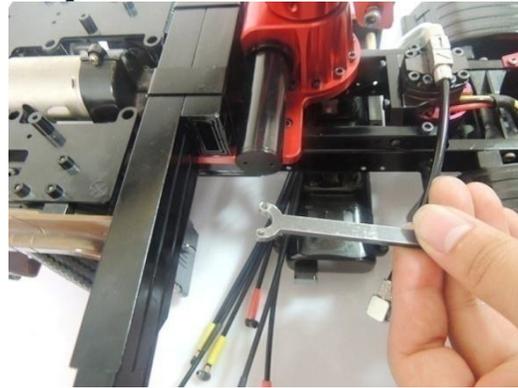
Use special wrench

Step 35



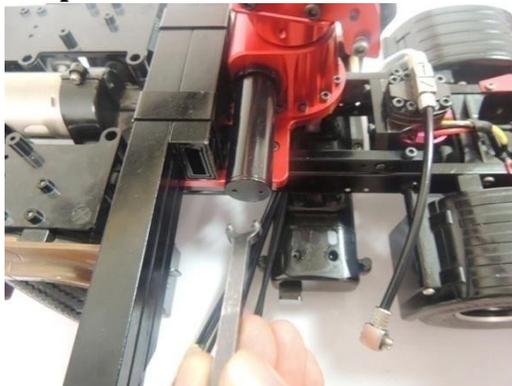
Twist

Step 36



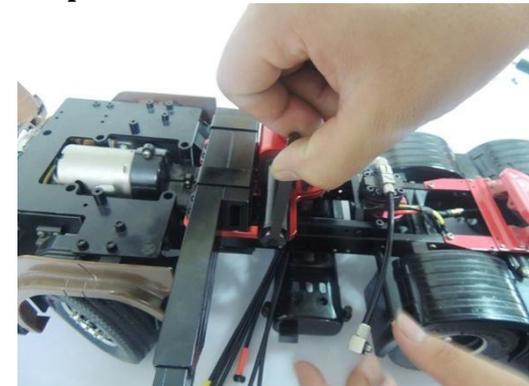
Use special wrench again

Step 37



Put it at a proper position

Step 38



Twist tightly

Step 39



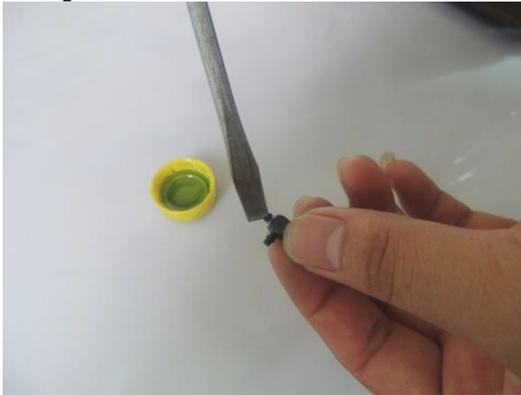
Assemble two sides

Step 40



Take out two of 2

Step 41



Take out WD5050 thread lock

(Note: Thread lock can only be applied on the thread and can't be dropped in nozzles. If it drops in nozzles, use water to clean it to avoid tube burst)

Step 42



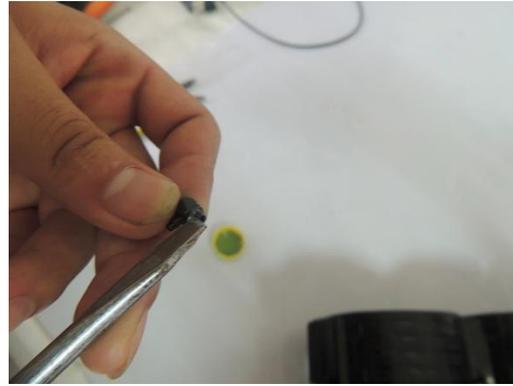
Use flat-blade screwdriver to install

Step 43



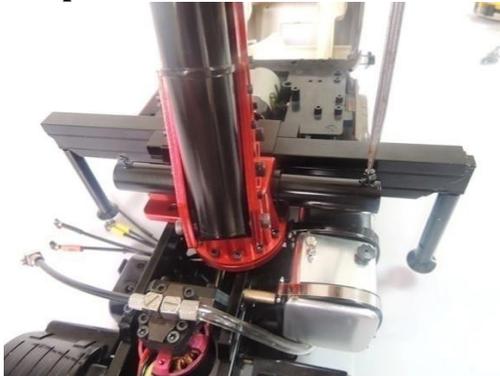
Assembled

Step 44



Apply thread lock again

Step 45



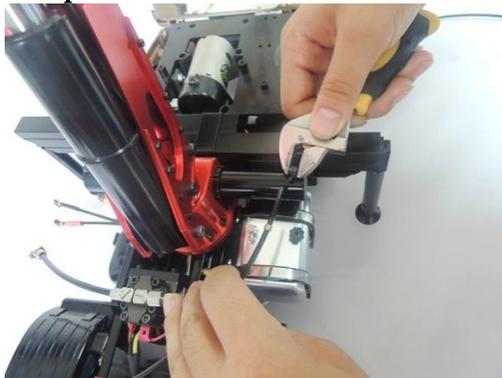
Install

Step 46



Assembled

Step 47



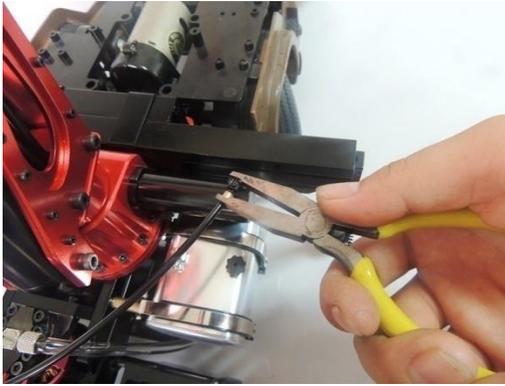
Take out one piece of 33cm
117

Step 48



Install as shown

Step 49



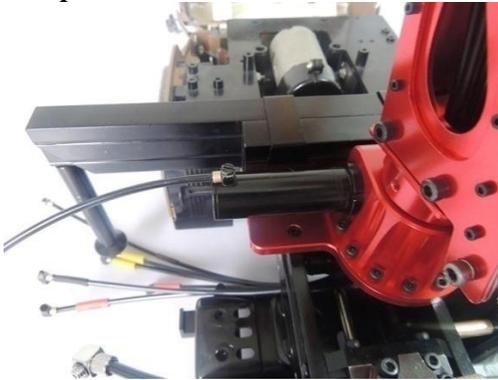
Then use pliers to pinch it

Step 50



Assembled

Step 51



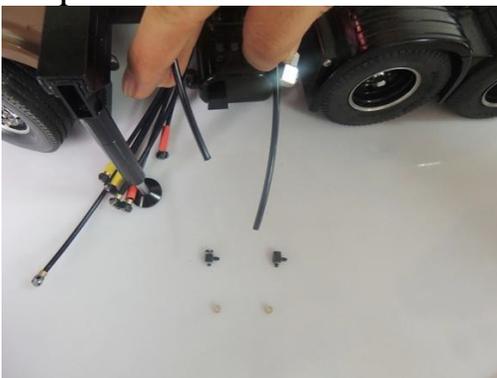
Install another 40cm 117

Step 52



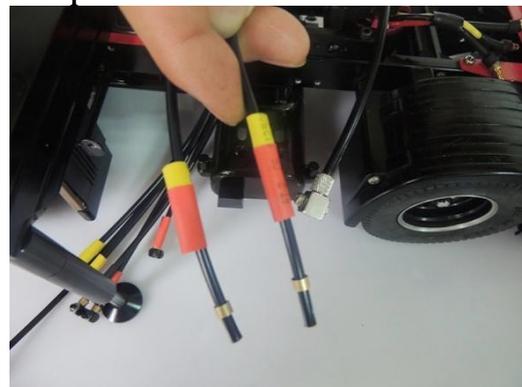
Assembled

Step 53



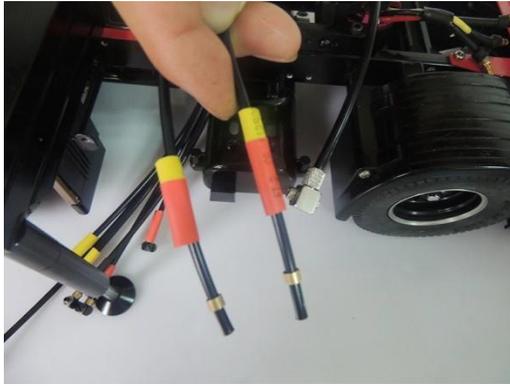
Take out two of 1 and two of 2

Step 54



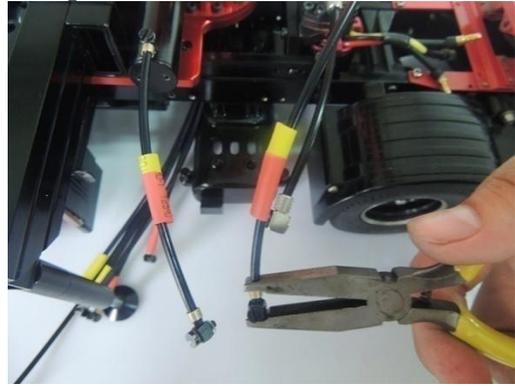
Get 1 through two tubes

Step 54



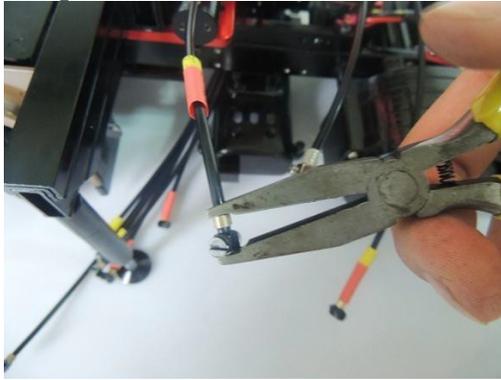
Get 1 through two tubes

Step 55



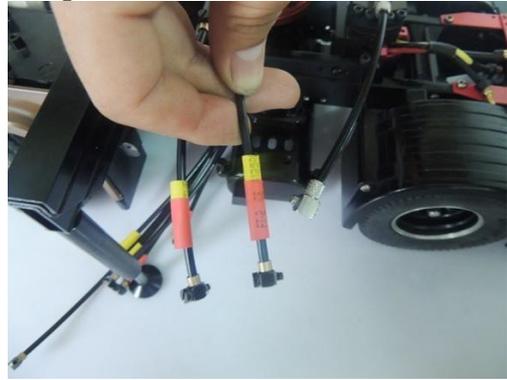
Install two of 2, and use pliers to pinch tightly

Step 56



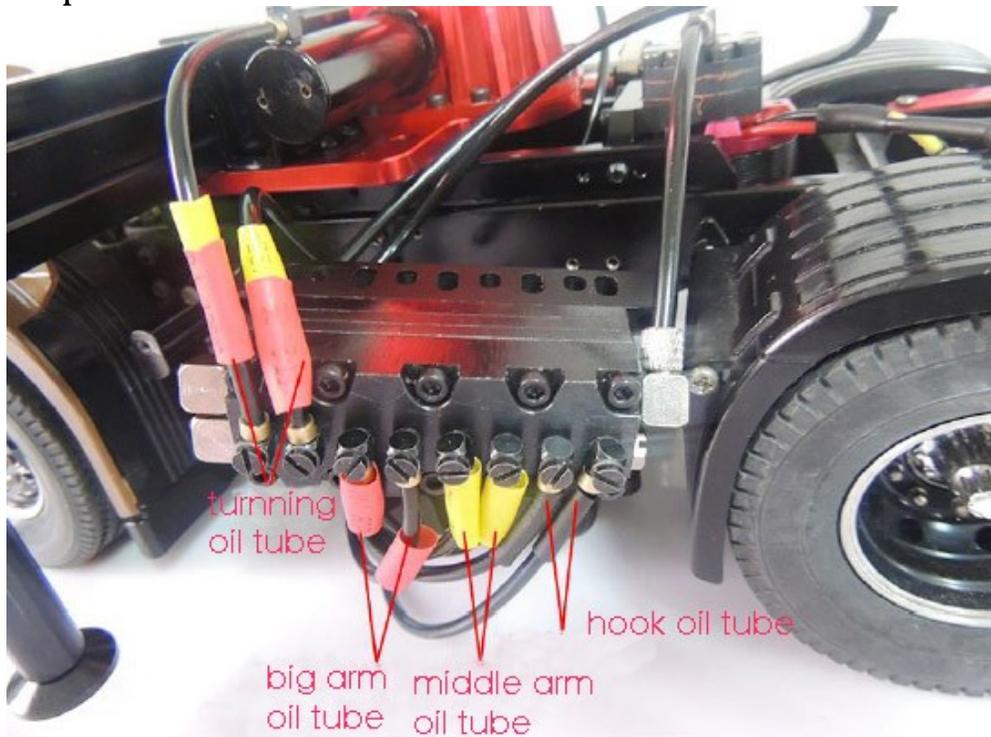
Pinch tightly

Step 57



Assembled

Step 58



Step 59



Take out the unconnected tube from the three tubes

Step 60



Install the tube on the oil tank like shown

Adjustment To Servo Middle-point



Step 1



Take out a remote control
(Purchase separately)

Step 2



Open

Step 3



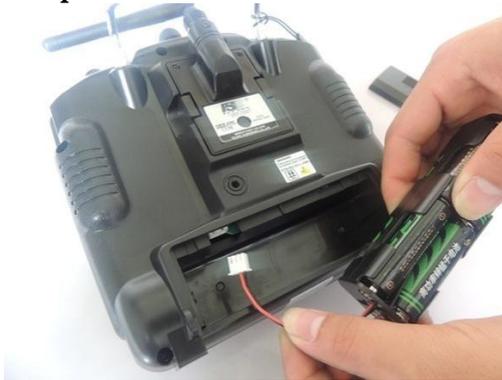
Take out the battery tray

Step 4



Put batteries

Step 5



Put inside

Step 6



Connect power cables
(Note: The cable of positive pole (Red line) must be in the middle position)

Step 7



Assemble

Step 8



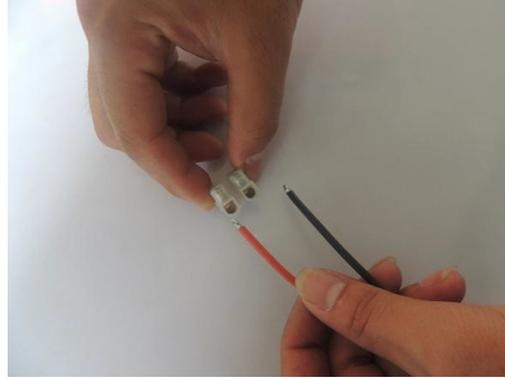
Cover it

Step 9



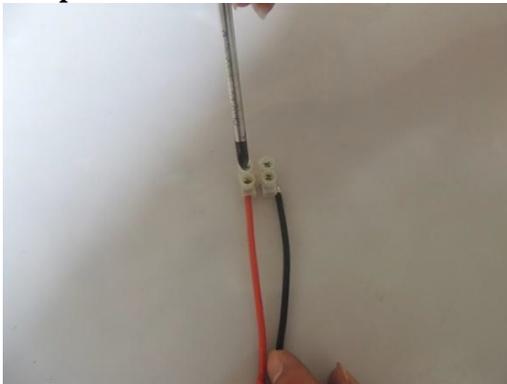
Take out the ESC

Step 10



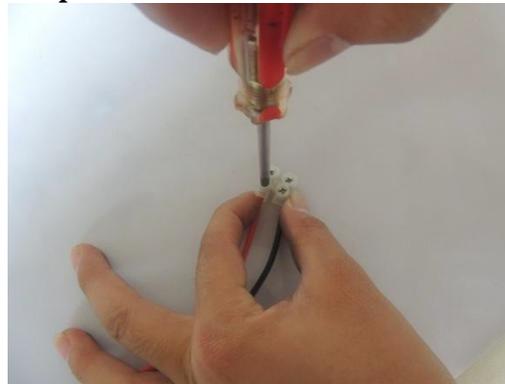
Connect the power cable

Step 11



Use screwdriver to install

Step 12



Use screwdriver to install

Step 13



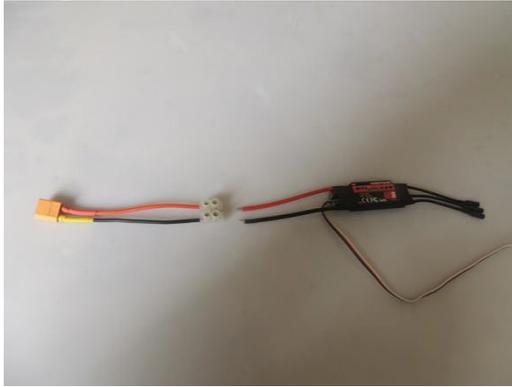
Use screwdriver to install

Step 14



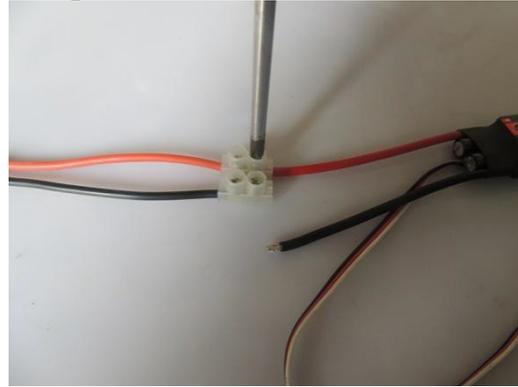
Assembled

Step 15



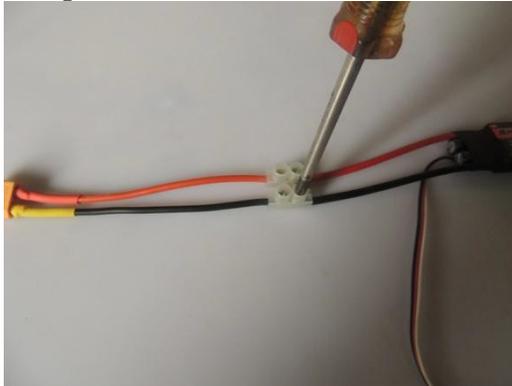
Then install ESC

Step 16



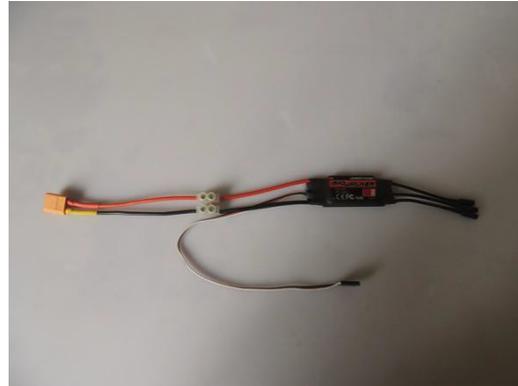
Use screwdriver to install

Step 17



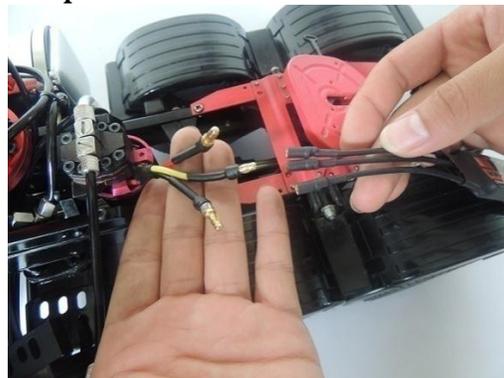
Use screwdriver to install

Step 18



Assembled

Step 19



Take out ESC and pump

Step 20



Install power cable

Step 21



Take out remote control

Step 22



Turn on the switch

Step 21



Take out remote control

Step 22



Turn on the switch

Adjustment To Servo



Step 1



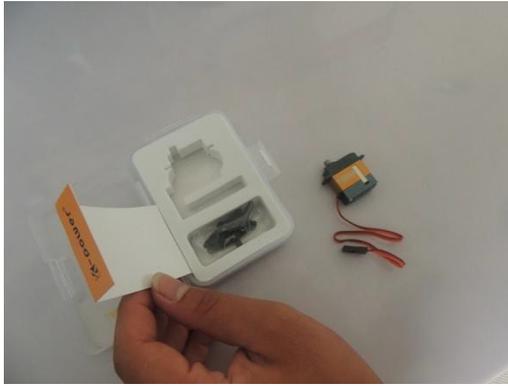
Take out servo (Purchase separately)

Step 2



Open

Step 3



Take it out

Step 4



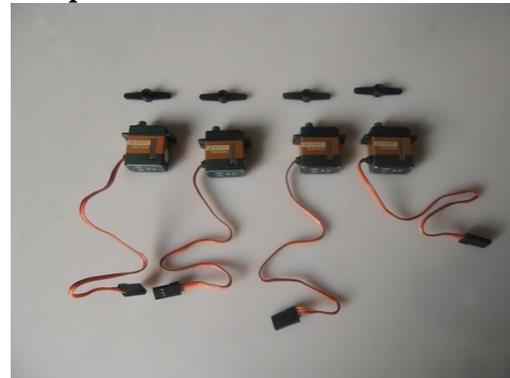
Take out parts

Step 5



Take out all accessories

Step 6



Take out all accessories needed

Step 7



Take out a servo

Step 8



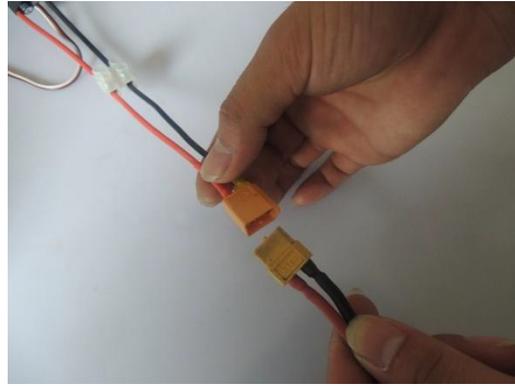
Turn on the remote control
(Different remote control types have different operation methods. Please read your remote control manual carefully)

Step 9



Keep it on

Step 10



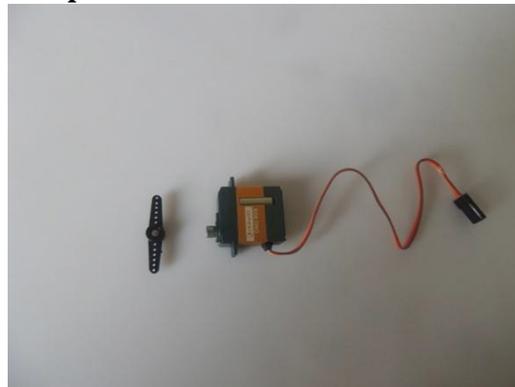
Connect the power

Step 11



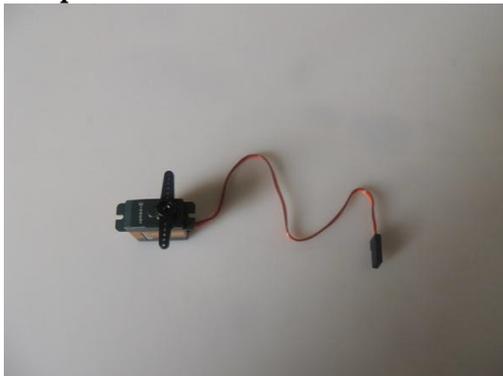
Connect

Step 12



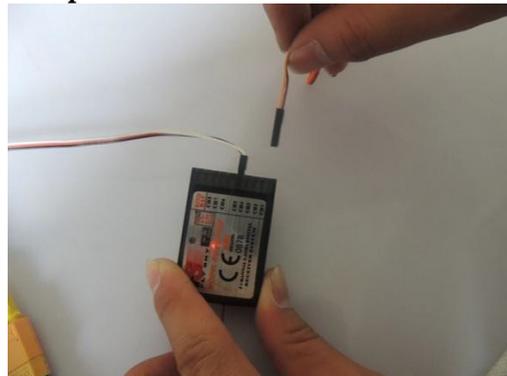
Take out servo parts

Step 13



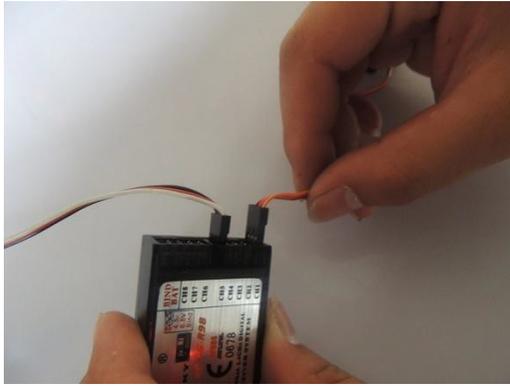
Install the servo arm

Step 14



Connect the channels

Step 15



Insert

Step 16



Adjust the servo to the left and right, up and down to make sure servo works normally. All servos should be checked like this.

Step 17



Try to keep the servo arm in the horizontal position as shown

Step 18



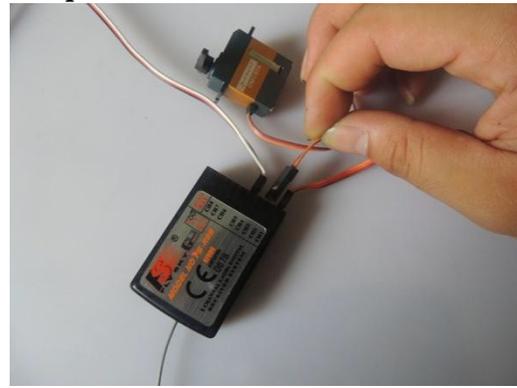
No additional adjustment required if it stays in horizontal position. Otherwise, you will need to adjust the button under the rocker towards left or right till the servo arms remains in the horizontal position.

Step 19



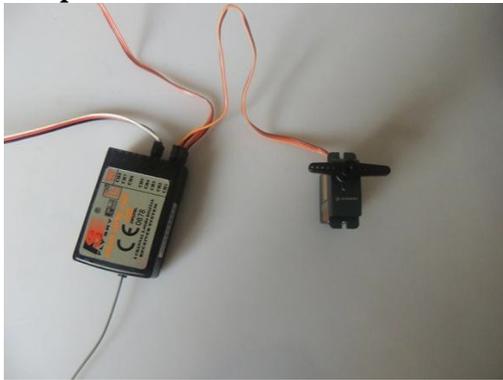
Adjust the servo

Step 20



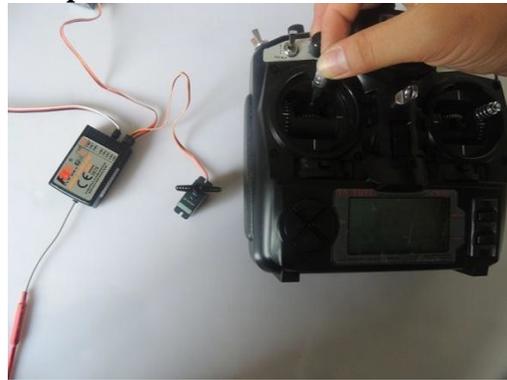
Install the second servo

Step 21



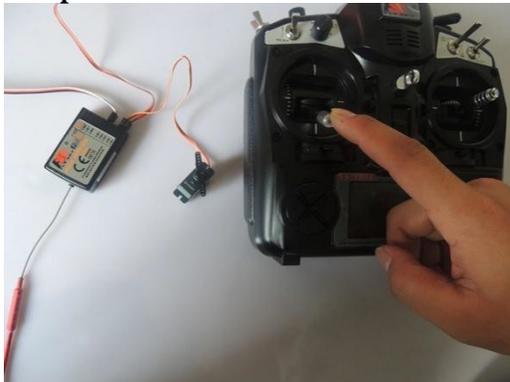
Connect

Step 22



Adjust the servo up

Step 23



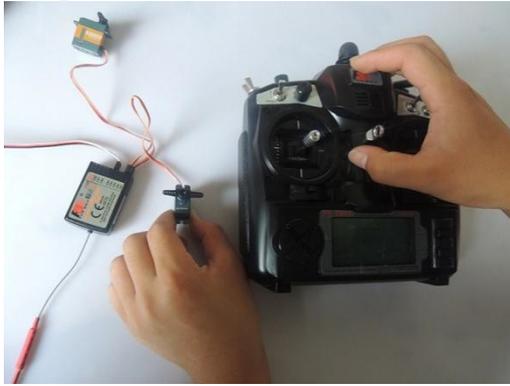
Adjust the servo down

Step 24



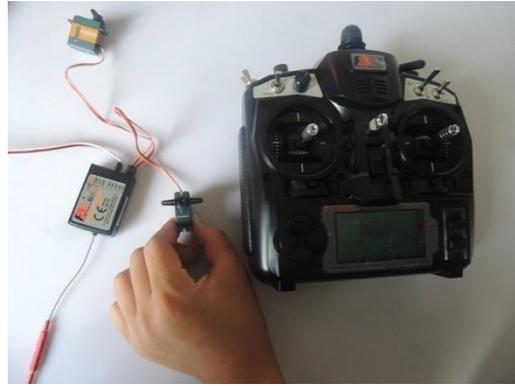
Adjust the servo (Using the same method. Pull the adjustment button left and right, up and down)

Step 25



Press this position

Step 26



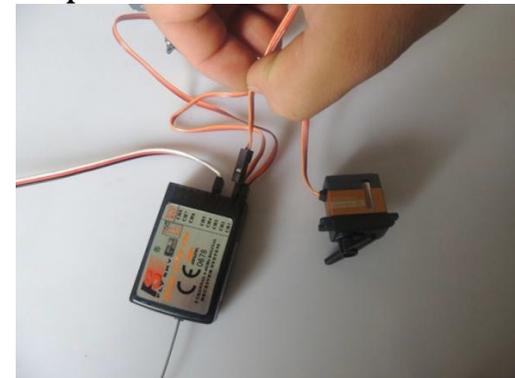
Adjust again

Step 27



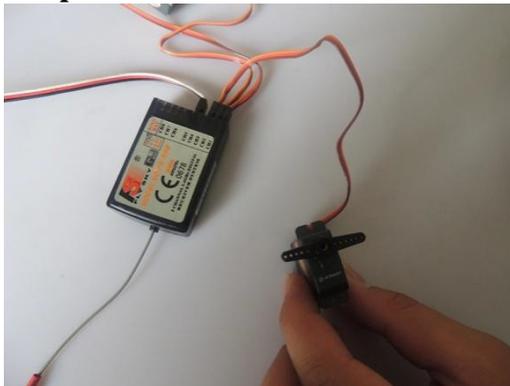
Press this position again

Step 28



Install the third servo

Step 29



Connect

Step 30



Adjust the servo up

Step 31



Adjust the servo (Using the same method)

Step 32



Press down

Step 33



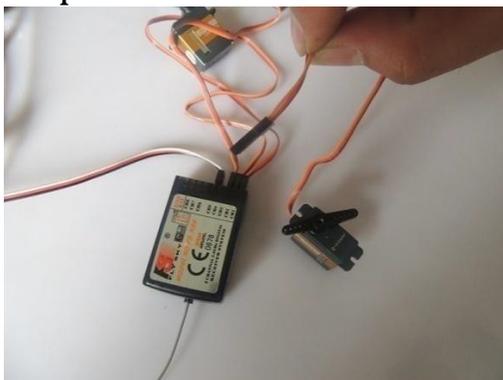
Adjust the servo

Step 34



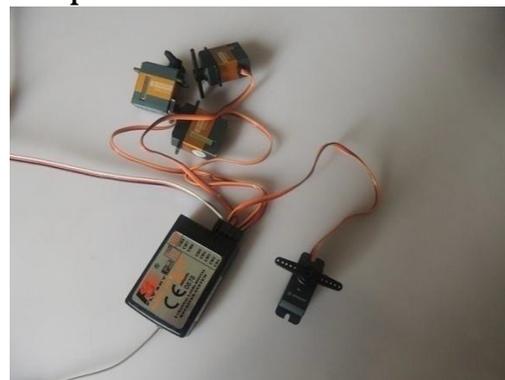
Press this part

Step 35



Install the fourth servo

Step 36



Connect

Step 37



Adjust the servo to the left

Step 38



Adjust the servo to the right

Step 39



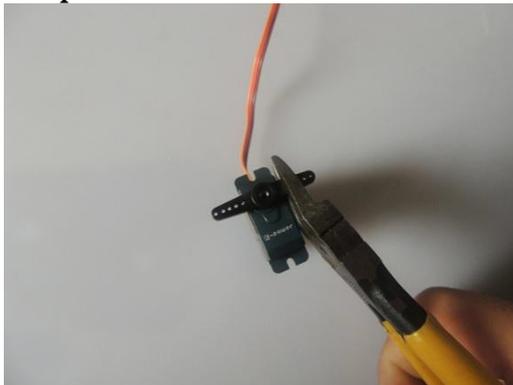
Adjust the servo then press part as shown

Step 40



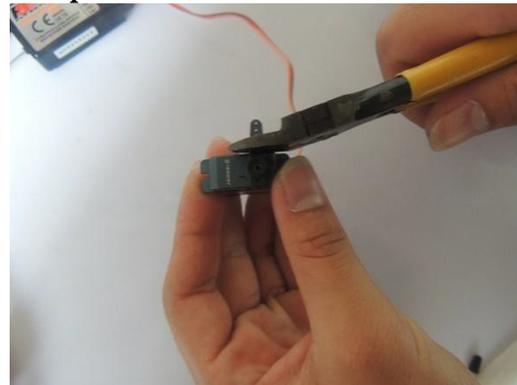
Press

Step 41



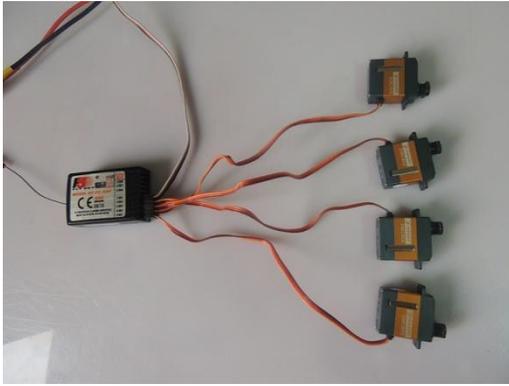
Use pliers to cut the arm

Step 42



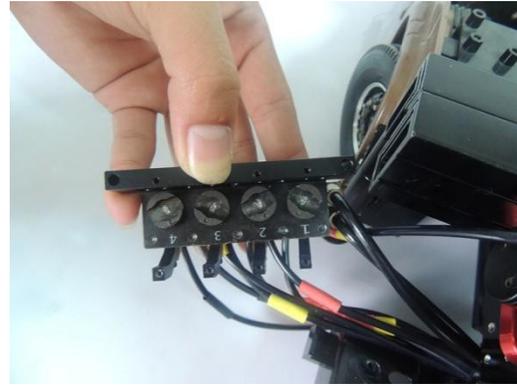
Cut off two sides of the arm

Step 43



Cut all servos arms

Step 44



Take out the valve

Step 45



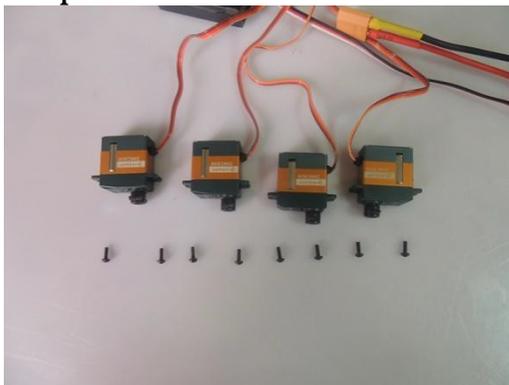
Use tool to adjust

Step 46



Correct position after adjustment (Please view the Hydraulic System image)

Step 47



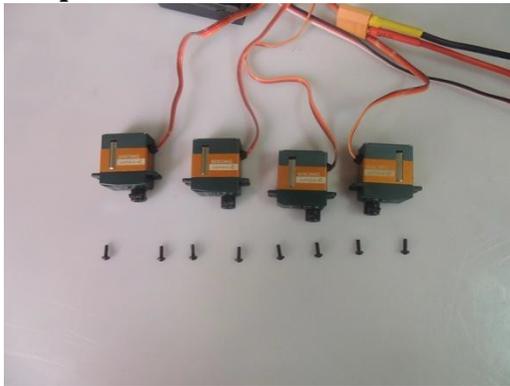
Take out eight of 27

Step 48



Double adjust the servo to ensure horizontal position for smooth operation. Please operate this way during future use, as required.

Step 47



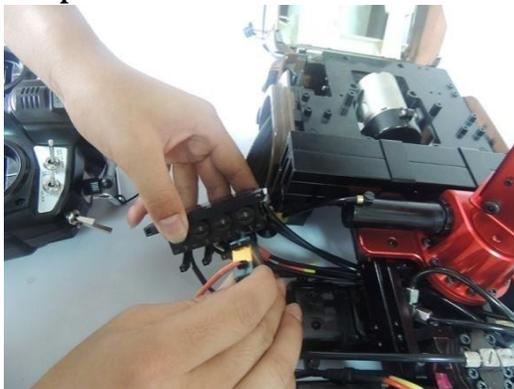
Take out eight of 27

Step 48



Double adjust the servo to ensure horizontal position for smooth operation. Please operate this way during future use, as required.

Step 49



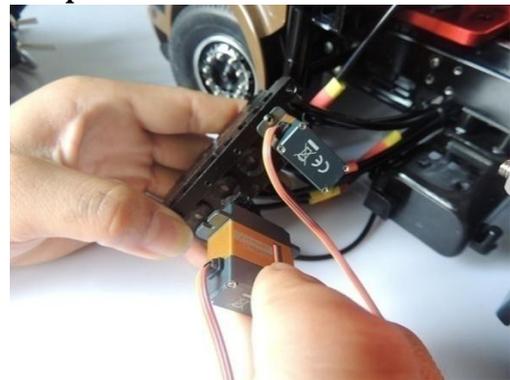
Install servo

Step 50



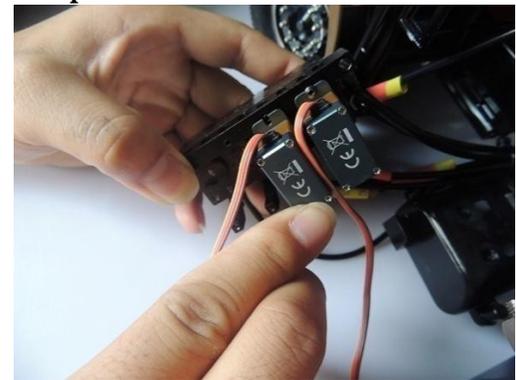
Use 1.5mm screwdriver to install 27

Step 51



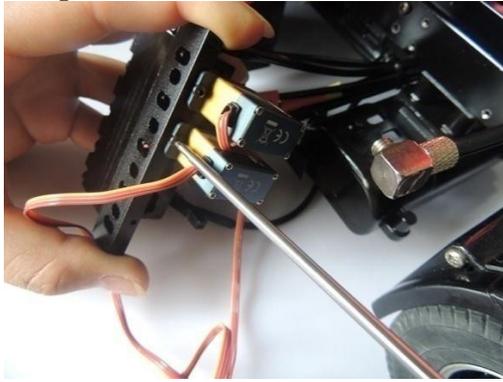
Install the second servo

Step 52



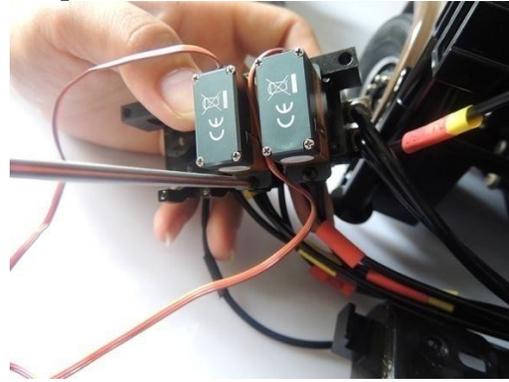
Install

Step 53



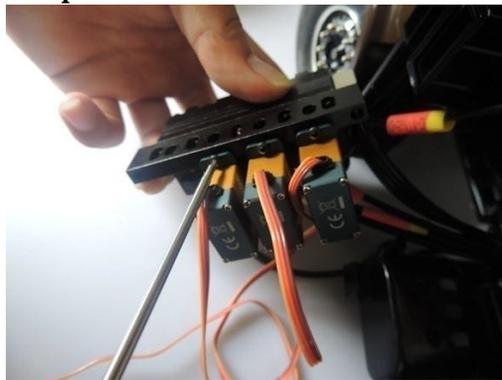
Use 1.5mm screwdriver to install 27

Step 54



Assembled

Step 55



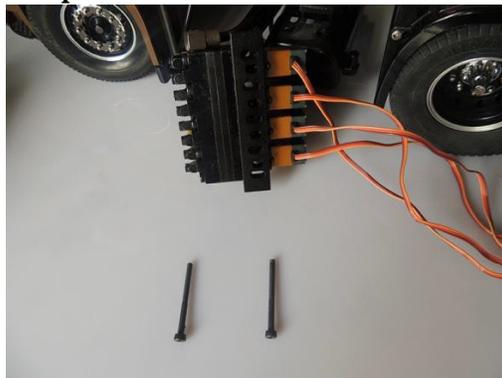
Install the third servo

Step 56



Install the fourth servo

Step 57



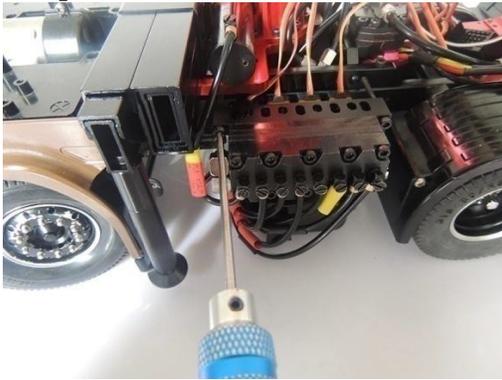
Take out two of 22
(Install these two screws
then uninstall the nozzle for
easier assembly)

Step 58



Use 2.5mm screwdriver to
install one of 22

Step 59



Use 2.5mm screwdriver to install another 22

Step 60



Assembled

Step 61



Take out rear feet and two of 21

Step 62



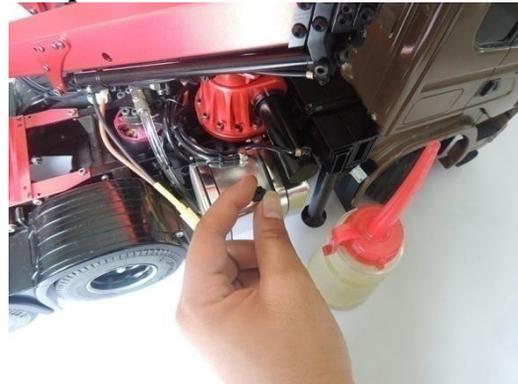
Use 2.5mm screwdriver to install 21

Step 63



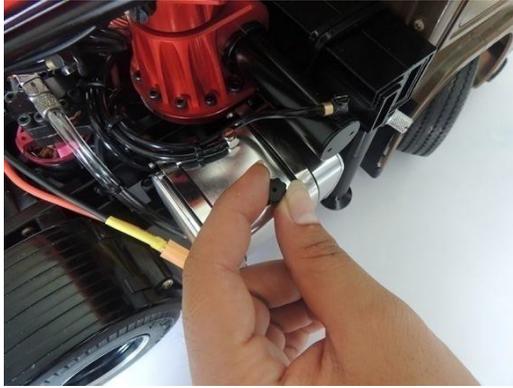
Assembled

Step 64



Take out hydraulic oil

Step 65



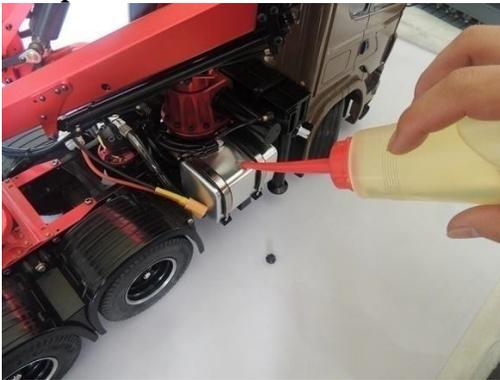
Open the oil tank

Step 66



Opened

Step 67



Add 150ML hydraulic oil then close the cap (Turn on the pump while adding hydraulic oil).



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