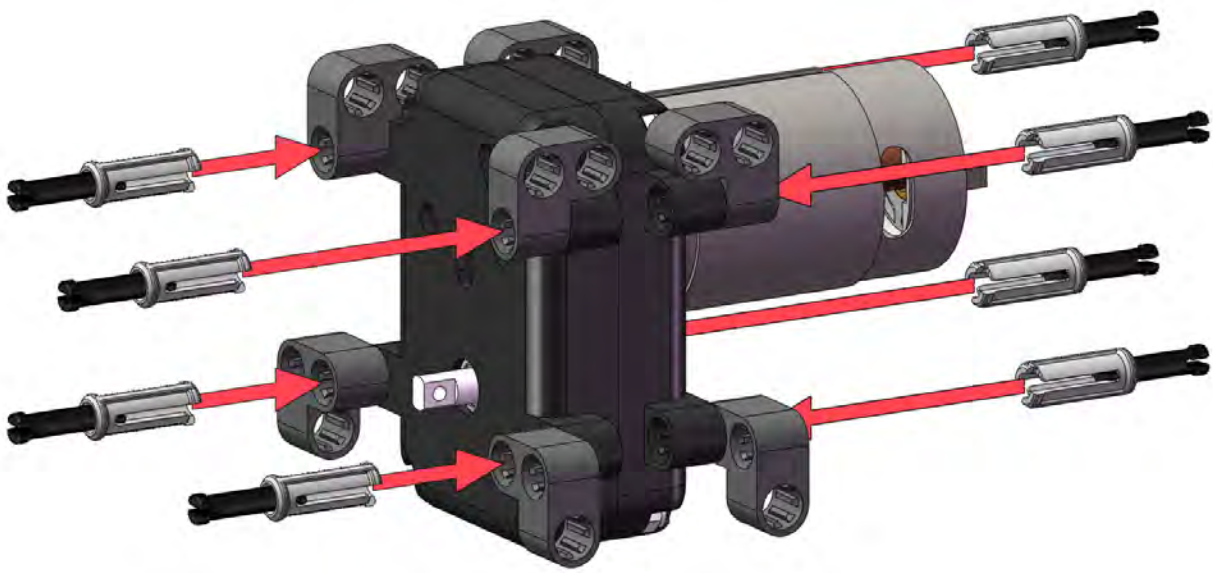
# 4x4 SUPER CRAWLER

# 01

**x8**
*TRANSITION*

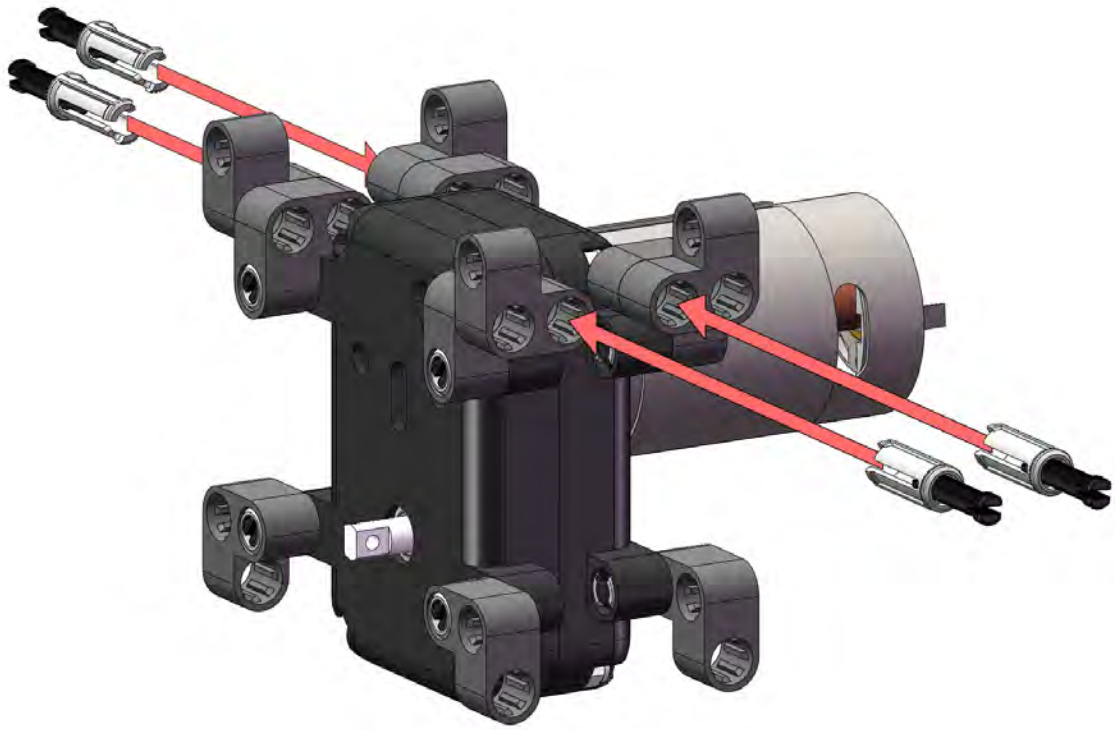
**x8**
*2-LOCK*



# 02

**x4**
*TRANSITION*

**x4**
*2-LOCK*



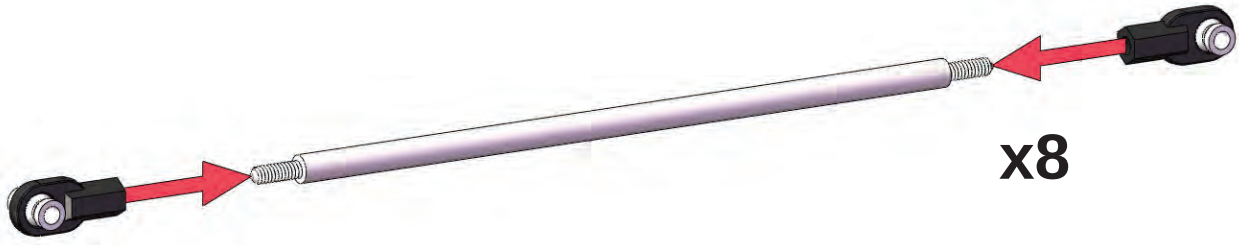
# 03

**x8**
*4.8" FOUR LINK ARM*

**x16**
*ROD END*

**x16**
*ROD END BALL*

**x16**



**x8**

# 04

**x4**
*11-BEAM*

**x4**
*7-BEAM*

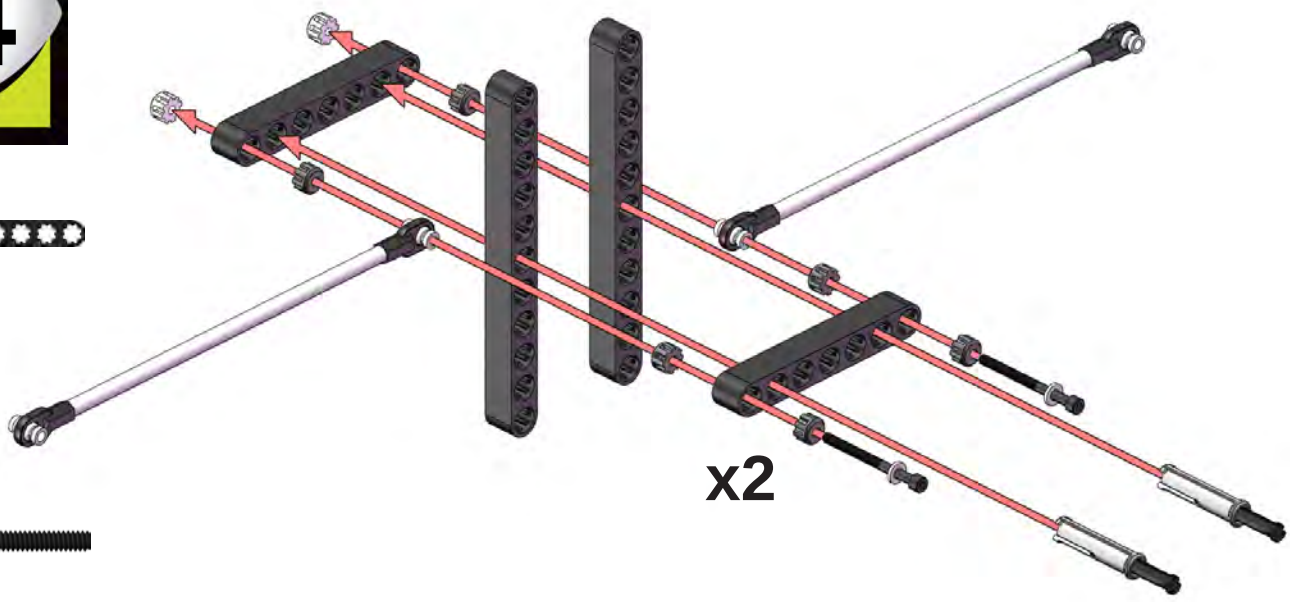
**x4**
*3-LOCK*

**x4**
*#4-40 x 1-3/8" SCREW*

**x4**
*#4 WASHER*

**x12**
*CLEARANCE THREAD ADAPTER*

**x4**
*INTERFERENCE THREAD ADAPTER*

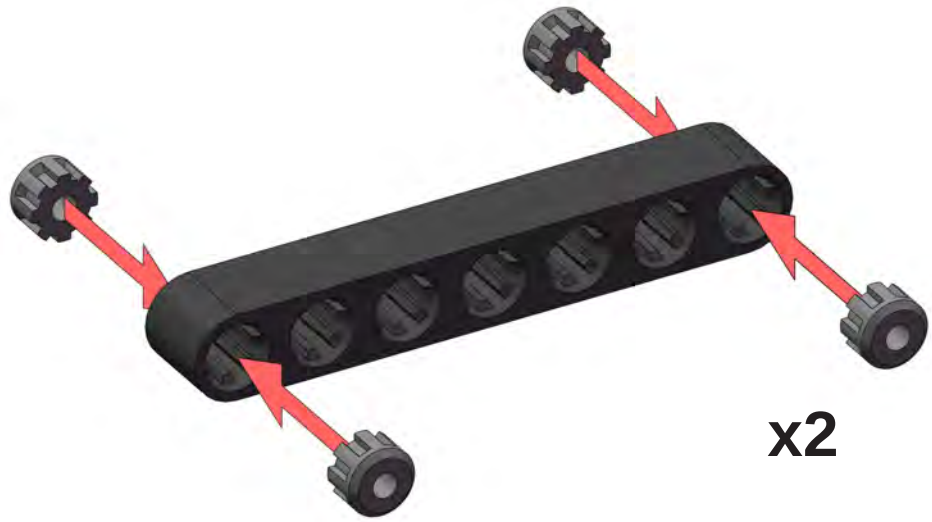


**x2**

# 05

**x2**
*7-BEAM*

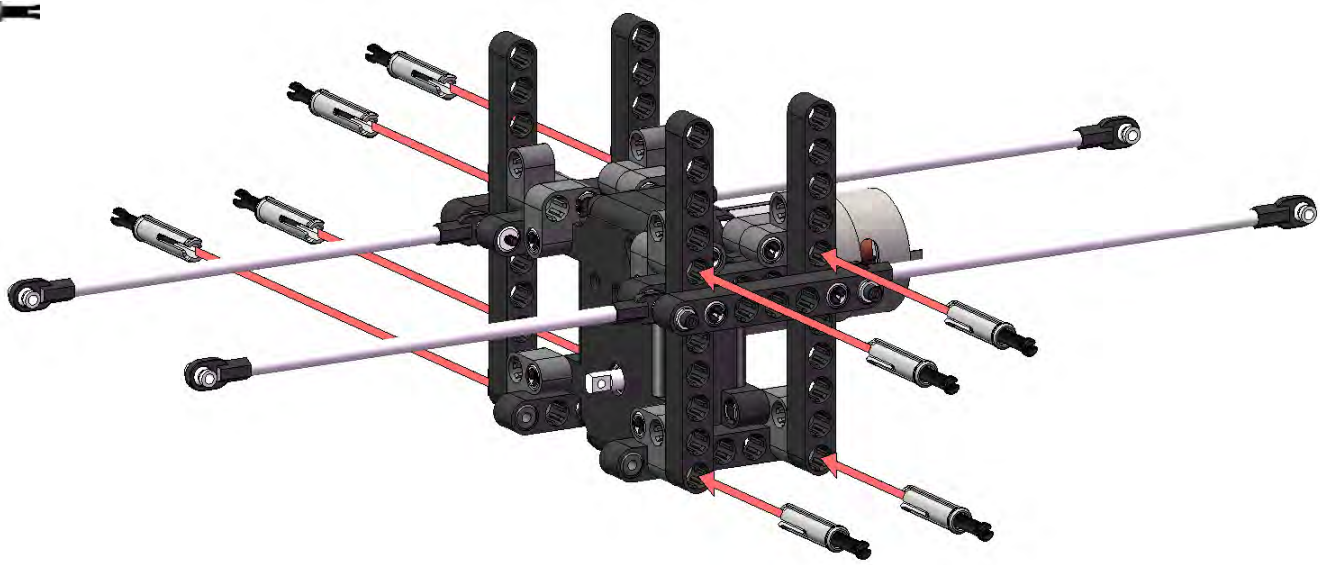
**x8**
*CLEARANCE THREAD ADAPTER*



**x2**

# 06

**x8**
*3-LOCK*



# 07

**x2**
*13-BEAM*

**x2**
*BATTERY CAP*

**x4**
*TRANSITION*

**x6**
*2-LOCK*

**x2**

# 08

**x4**
*11-BEAM*

**x4**
*10-BEAM*

**x4**
*90mm SHOCK*

**x2**
*2.0" THREAD COLLAR*

**x4**
*#4-40 x 1-3/8" SCREW*

**x4**
*SHOCK MOUNT*

**x4**
*ROD END BALL*

**x4**
*#4 WASHER*

**x16**
*CLEARANCE THREAD ADAPTER*



**x4**

**x2**

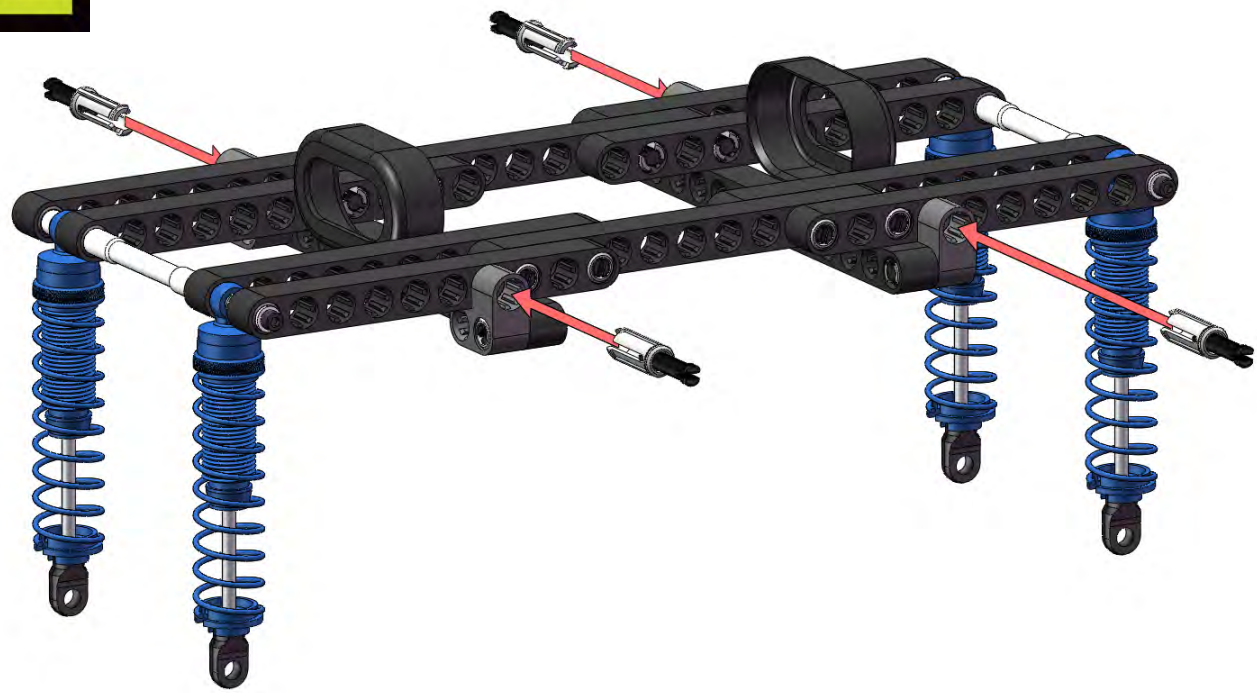
# 09

**x2**
*11-BEAM*

**x8**
*3-LOCK*

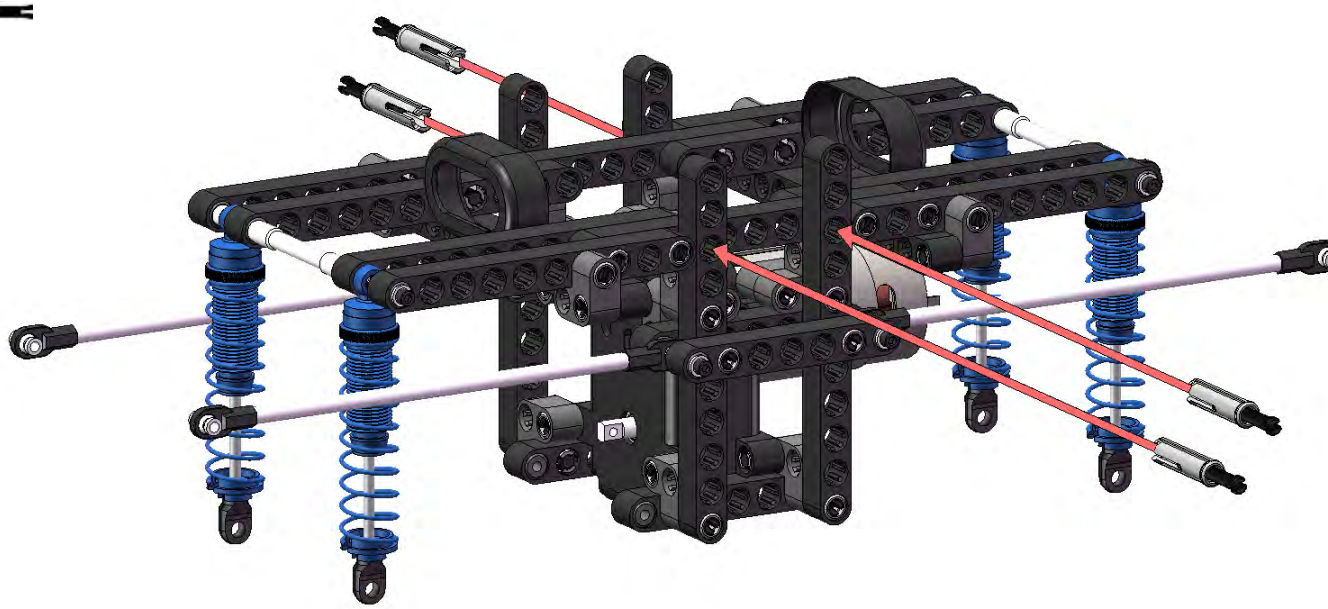
# 10

**x4**
*2-LOCK*



# 11

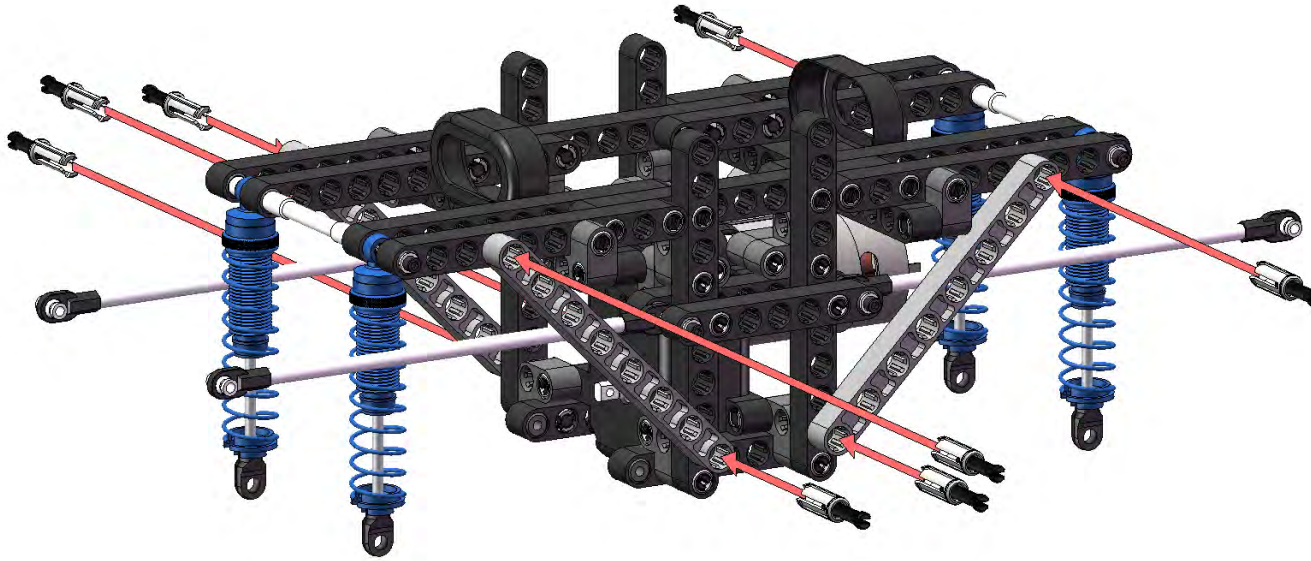
**x4**
*3-LOCK*



# 12

**x4**
*8-45 BEAM*

**x8**
*2-LOCK*



# 13

**x2**
*DUAL TRANSITION*

**x1**
*#4-40 x 1-3/8" SCREW*

**x1**
*#4 WASHER*

**x3**
*CLEARANCE THREAD ADAPTER*

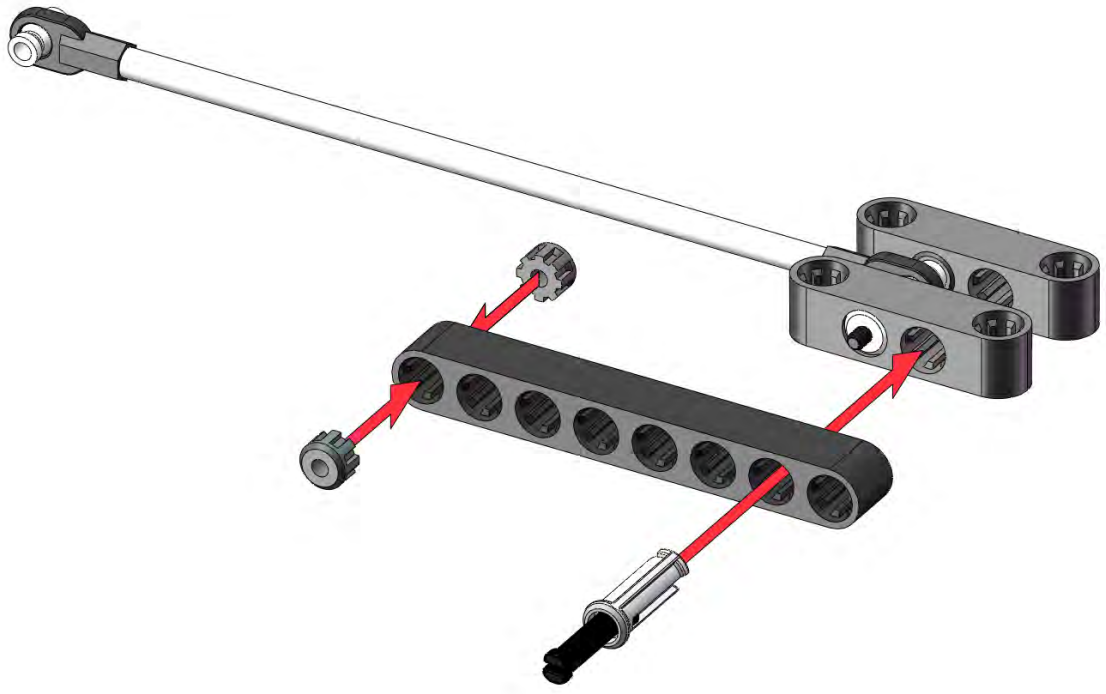
**x1**
*INTERFERENCE THREAD ADAPTER*

# 14

**x1**
*8-BEAM*

**x1**
*2-LOCK*

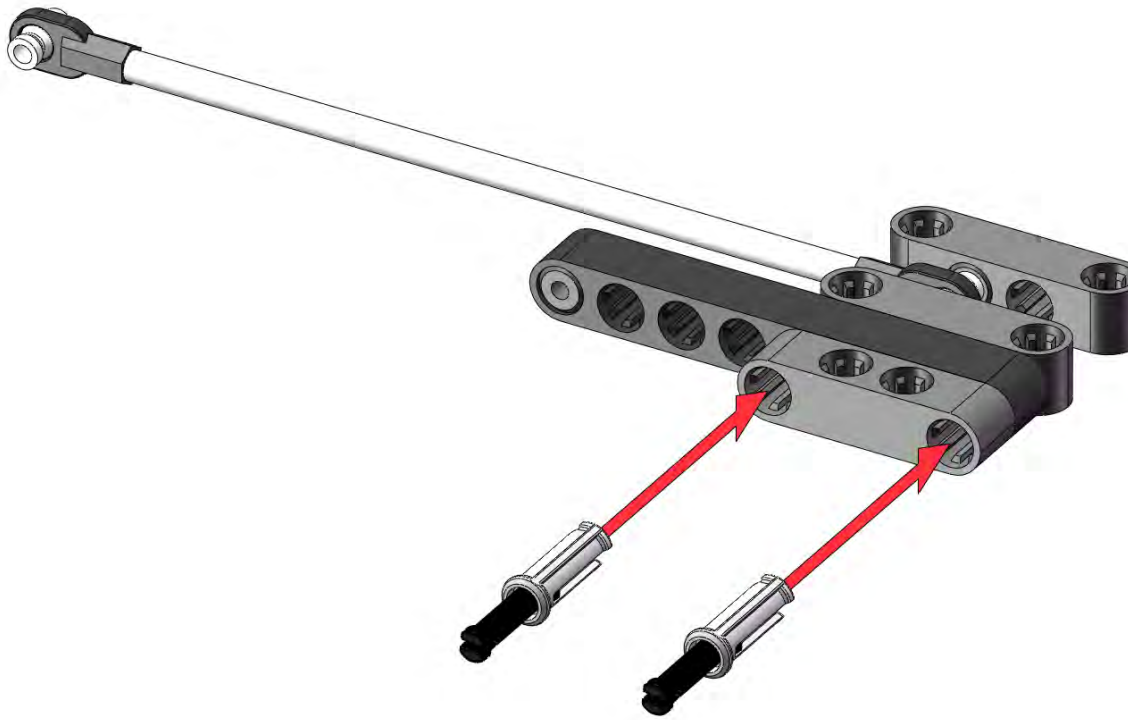
**x2**
*CLEARANCE THREAD ADAPTER*



# 15

**x1**
*DUAL TRANSITION*

**x2**
*2-LOCK*



## x4 REPEAT STEPS 13-15

# 16

**x2**
*1.2" THREAD COLLAR*

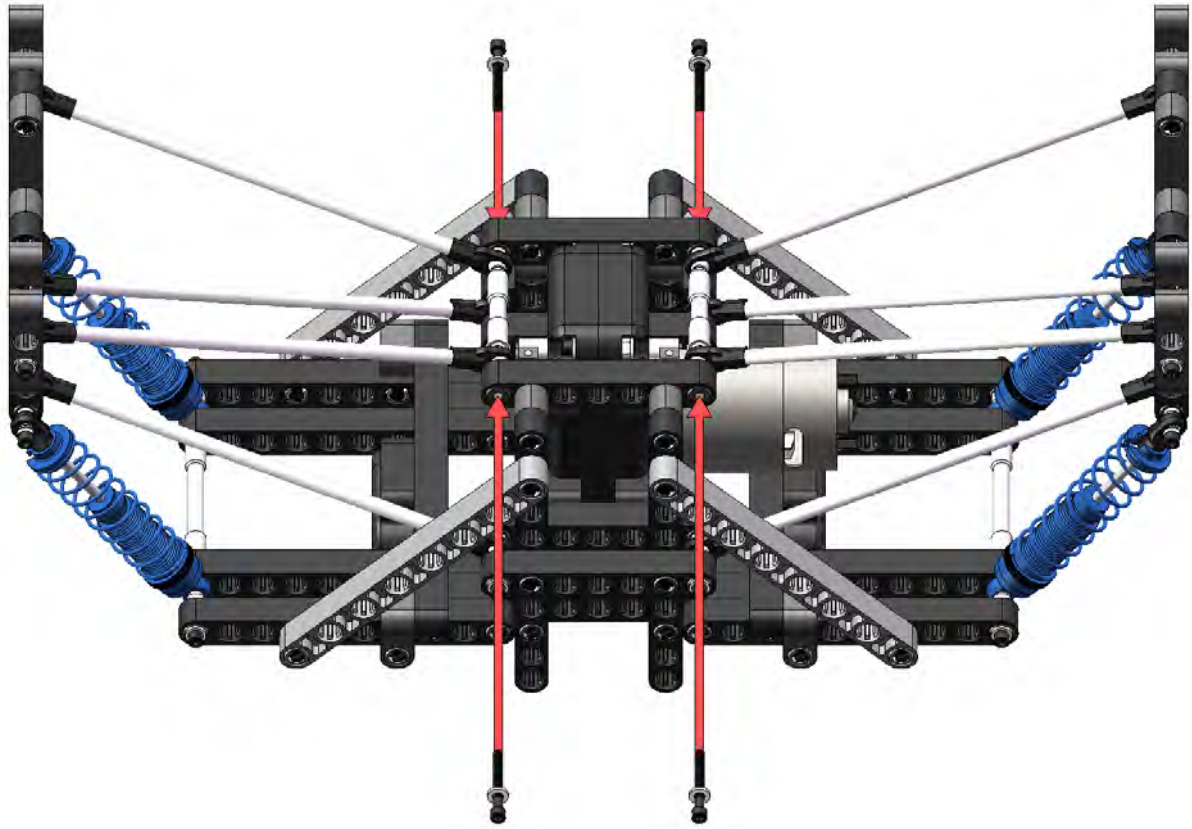
**x4**
*#4-40 x 1-3/8" SCREW*

# 17

**x2**
*1.2" THREAD COLLAR*

**x4**
*#4-40 x 1" SCREW*

**x4**
*#4 WASHER*



# 18

**x2**
*13-BEAM*

**x4**
*9-BEAM*

**x4**
*2-LOCK*

# 19

**x4**
*3-45 BEAM*

**x4**
*TRANSITION*

**x4**
*3-LOCK*

**x2**

# 20

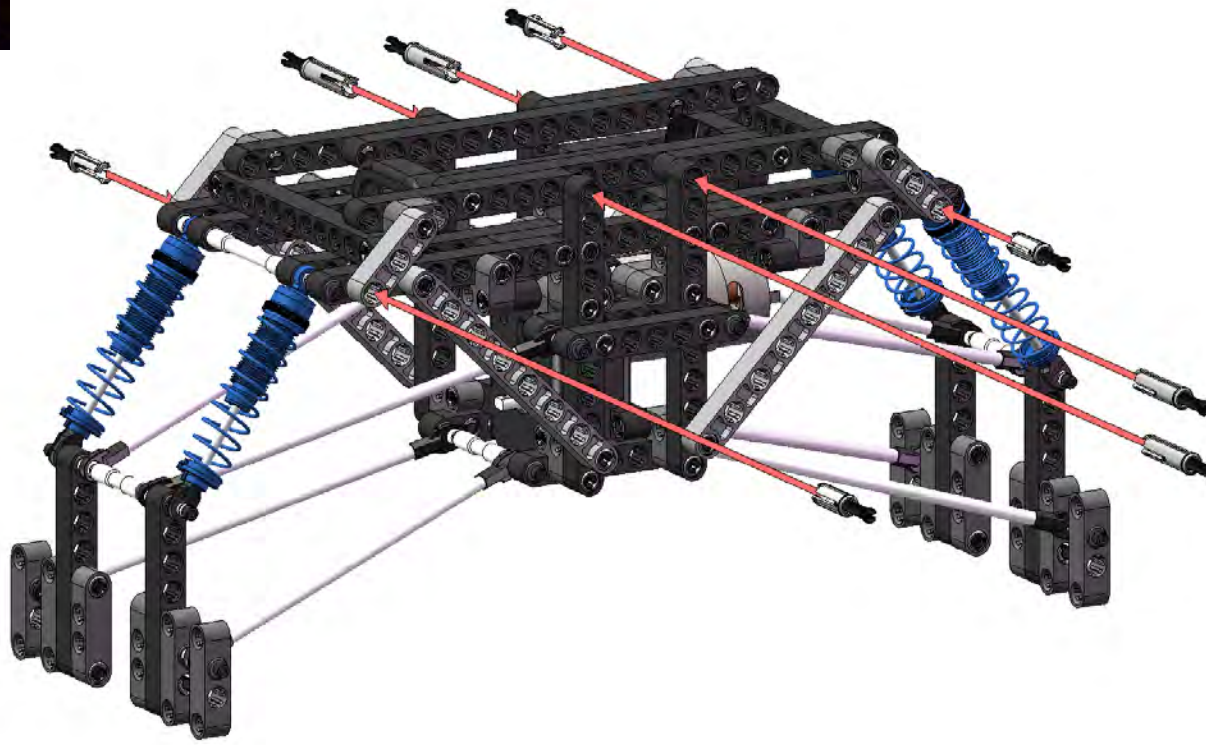
**x2**
*11-BEAM*

**x4**
*2-LOCK*

# 21

**x4**
*3-LOCK*

**x4**
*2-LOCK*

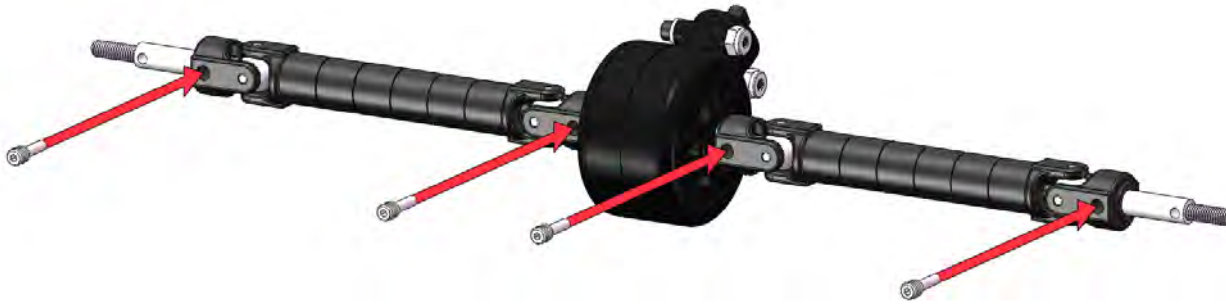


# 22

**x2**
*6-DRIVELINE*

**x2**
*M5 WHEEL END SHAFT*

**x4**
*U-JOINT SET SCREW*

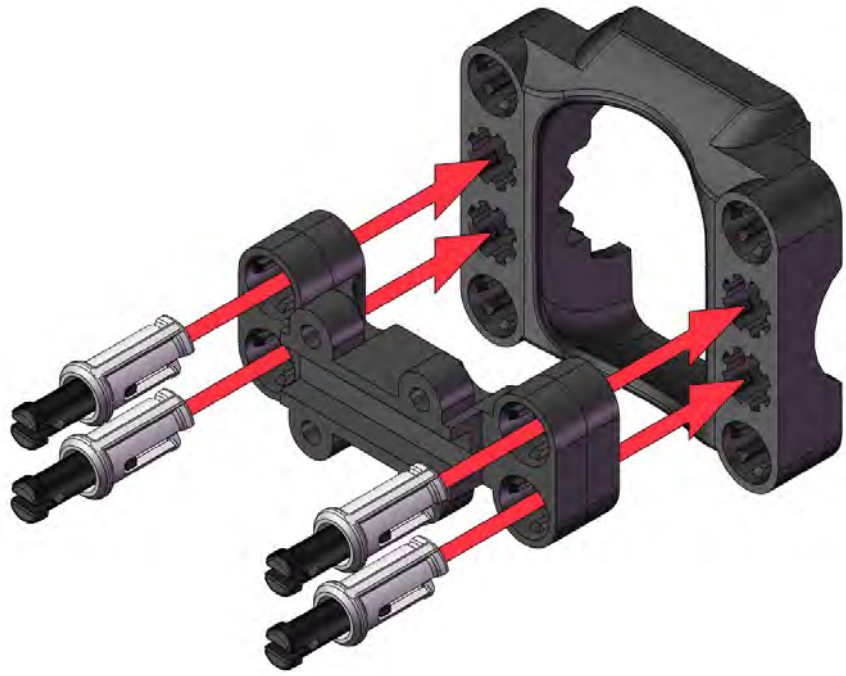


# 23

**x1**
*AXLE HOUSING*

**x1**
*STEERING BRACKET*

**x4**
*1.5-LOCK*

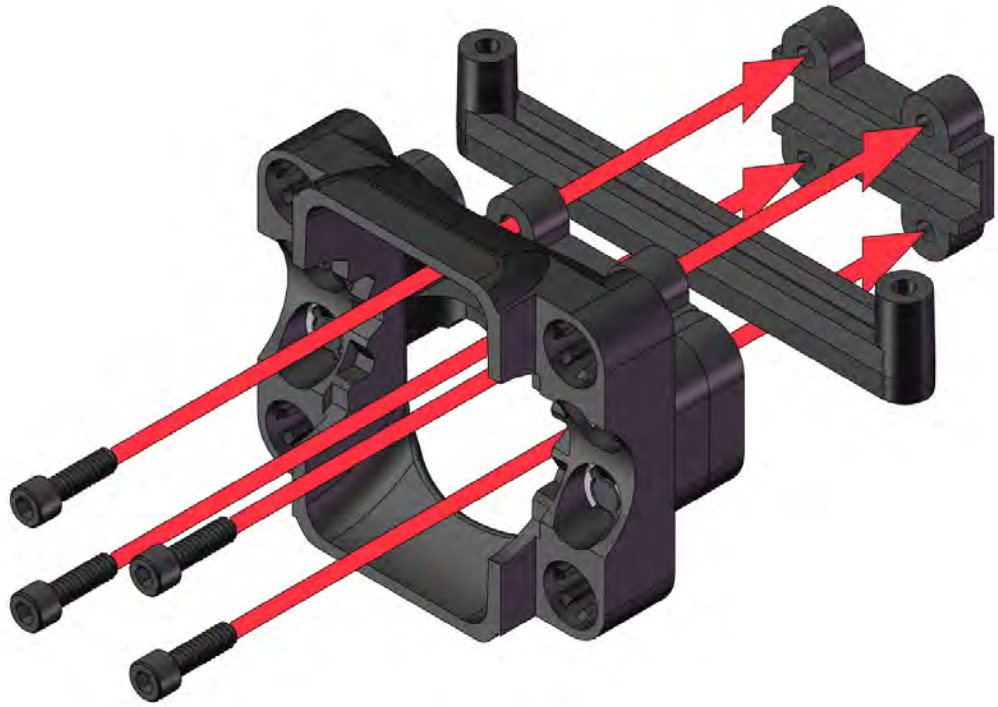


# 24

**x1**
*STEERING BAR*

**x1**
*STEERING PLATE*

**x4**
*#4-40 x 3/8" SCREW*



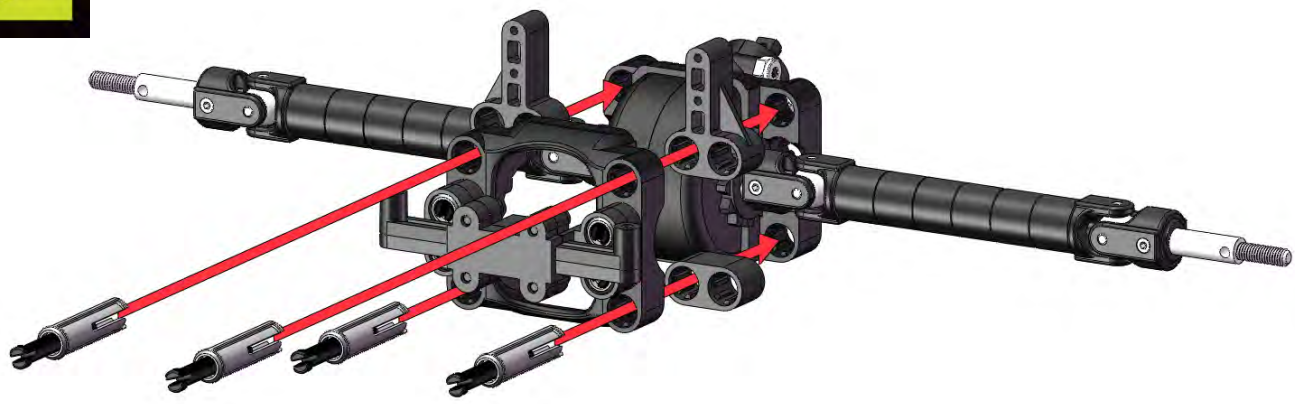
# 25

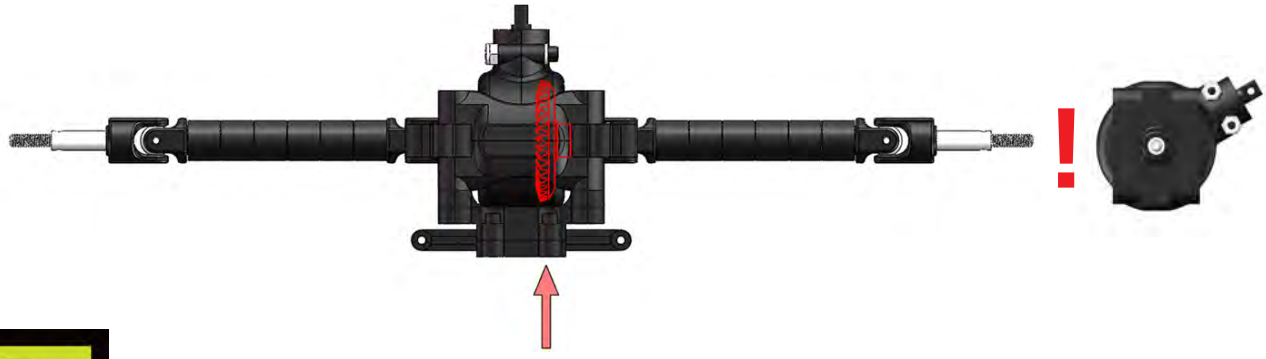
**x1**
*AXLE HOUSING*

**x2**
*SERVO MOUNT*

**x2**
*2-BEAM*

**x4**
*3-LOCK*



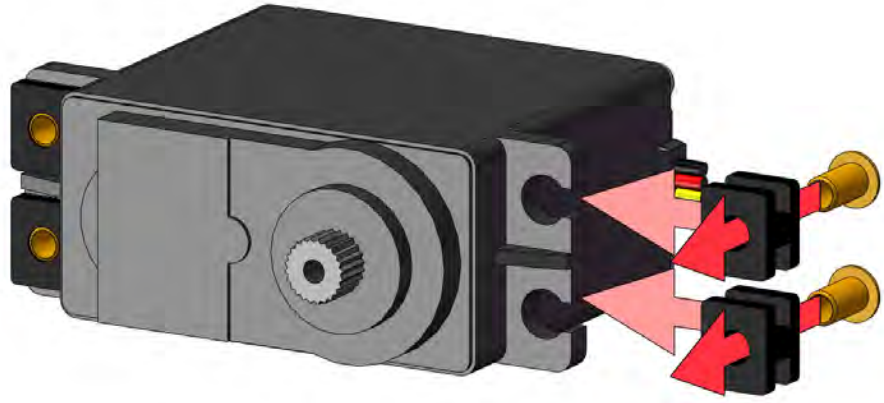


# 26

**x1**
*HS-485HB SERVO*

**x4**
*SERVO BUSHING*

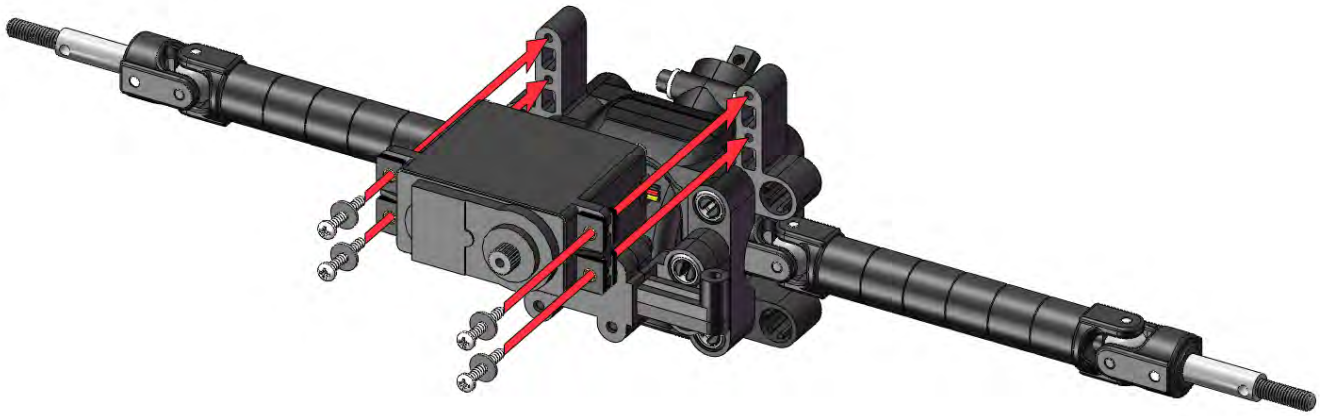
**x4**
*SERVO BUSHING SLEEVE*



# 27

**x4**
*#2-32 x 5/8" SCREW*

**x4**
*#2 WASHER*



# 28

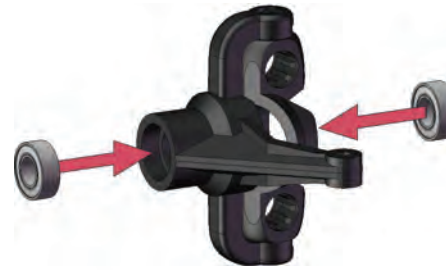
**x8**
*9-BEAM*

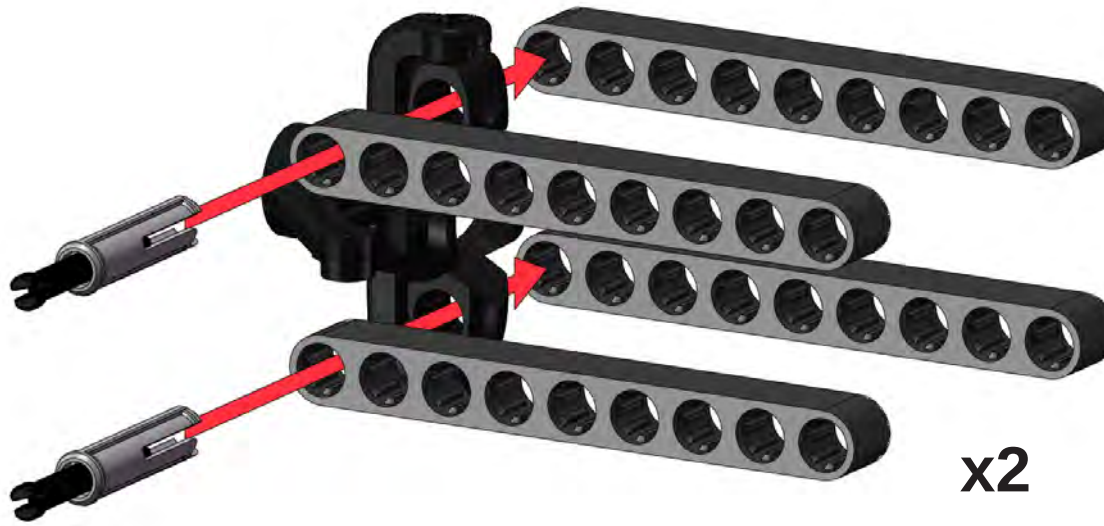
**x2**
*FRONT WHEEL HUB*

**x2**
*FRONT WHEEL KNUCKLE*

**x4**
*3-LOCK*

**x4**
*6x12x4mm BEARING*



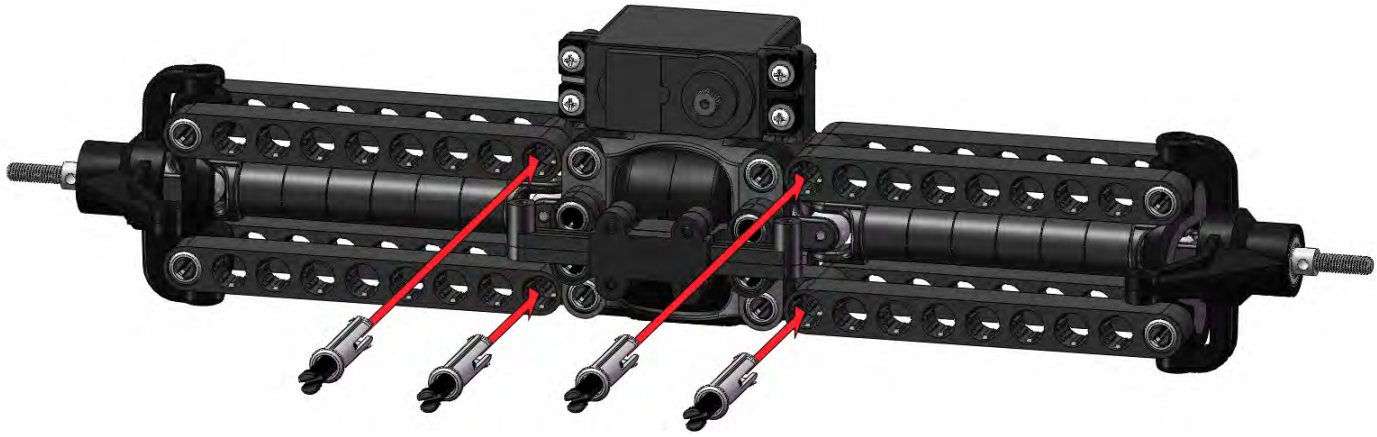


**x2**

# 29

# 30

**x4**
*3-LOCK*



# 31

**x2**
*3-45 BEAM*

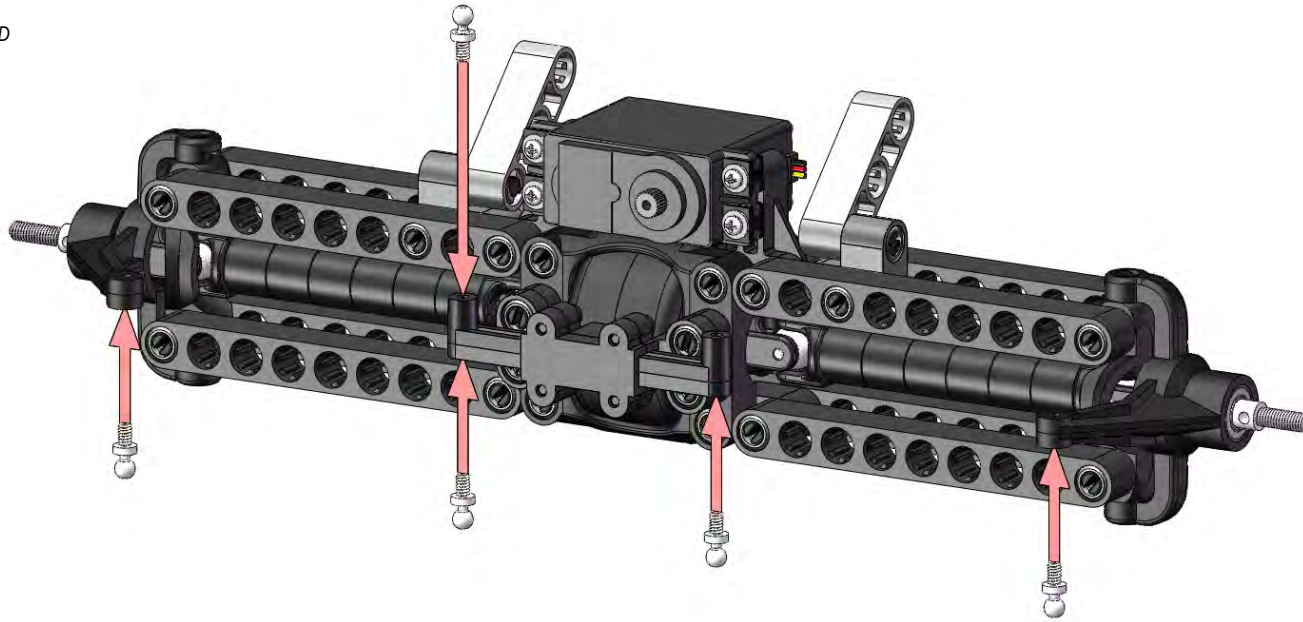
**x2**
*TRANSITION*

**x2**
*3-LOCK*

**x2**
*2-LOCK*

# 32

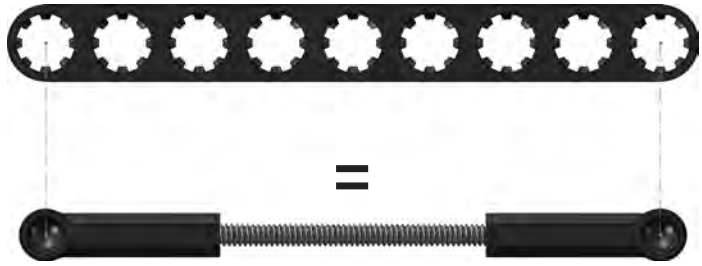
**x5**
*3/16" BALL STUD*



# 33

**x2**
*#4-40 x 2-3/4" THREAD ROD*

**x4**
*23mm BALL CUP*

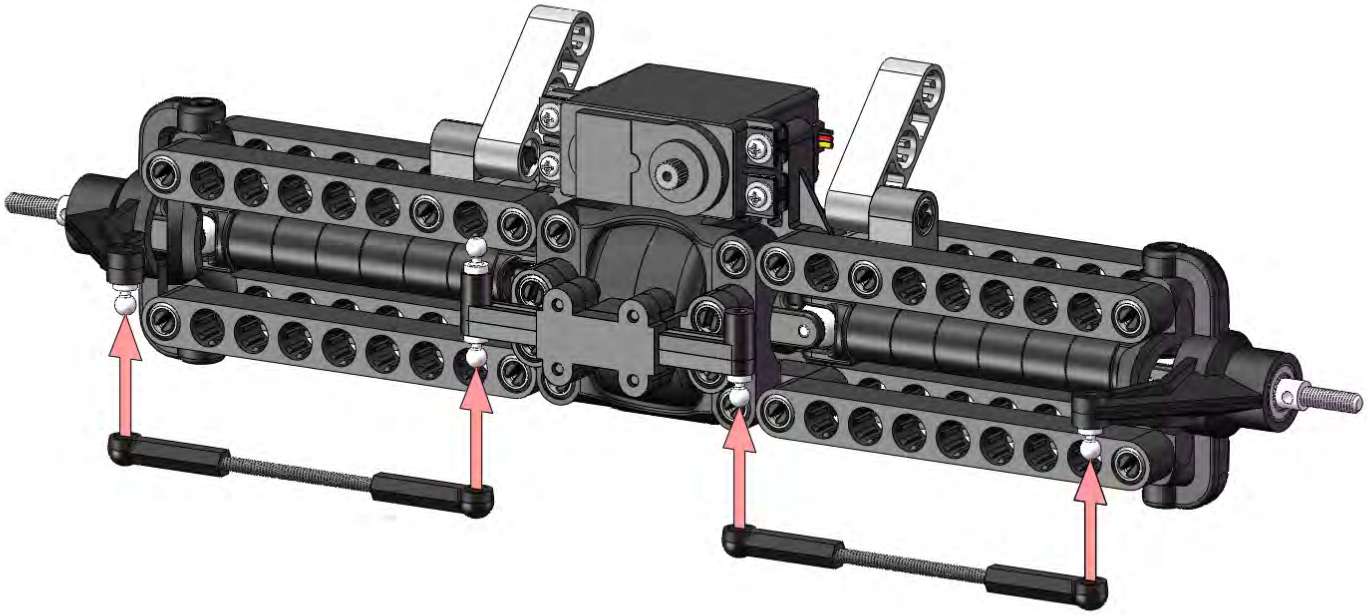


**1:1 SCALE**

**=**

**x2**

# 34



# 35

**x1**
*#4-40 x 1" THREAD ROD*

**x2**
*18mm BALL CUP*

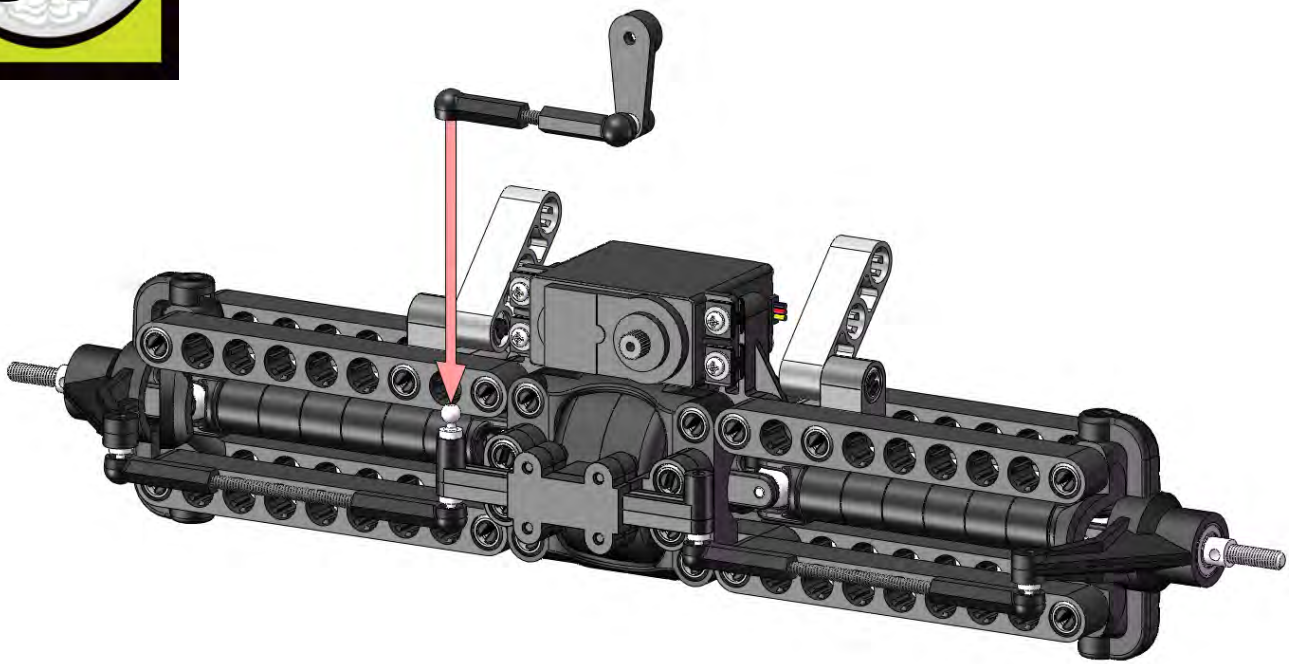
**= 1:1 SCALE**

# 36

**x1**
*STEERING SERVO HORN*

**x1**
*3/16" BALL STUD*

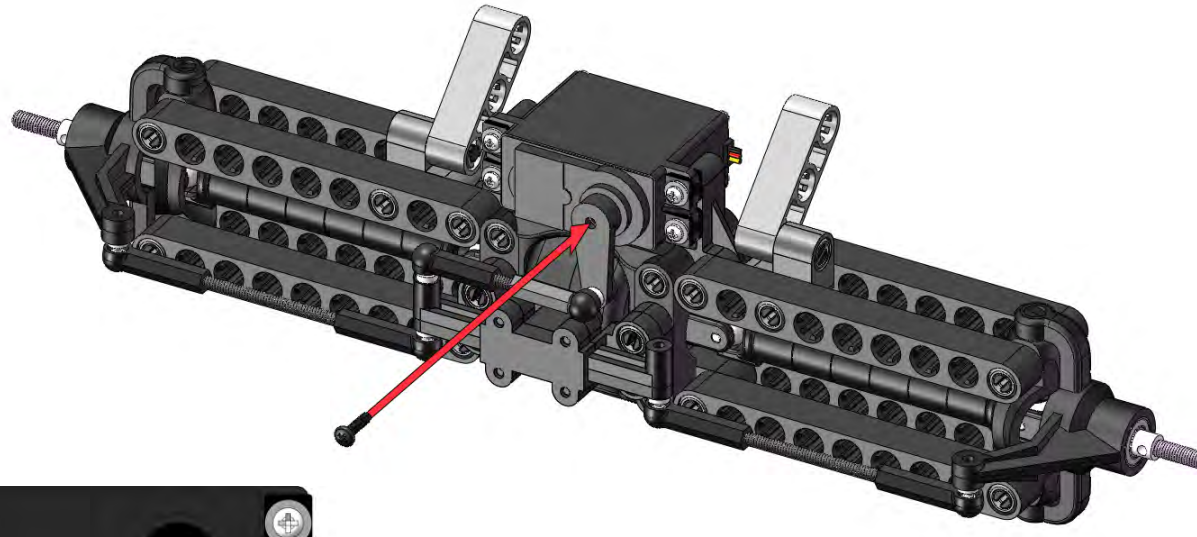
# 37

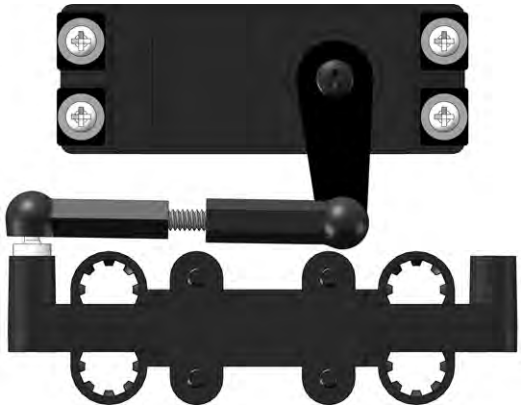


**NOTE:** REFER TO RADIO CONTROL SYSTEM INSTRUCTION MANUAL FOR PROPER SERVO SET-UP AND ADJUSTMENT

# 38

**x1**
*SERVO HORN SCREW*

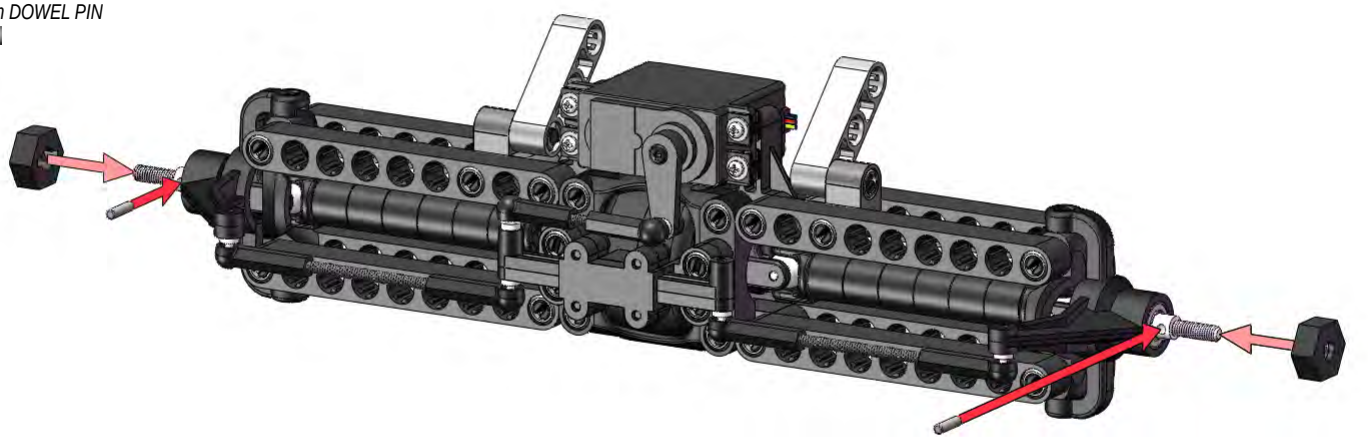




# 39

**x2**
*14mm WHEEL NUT*

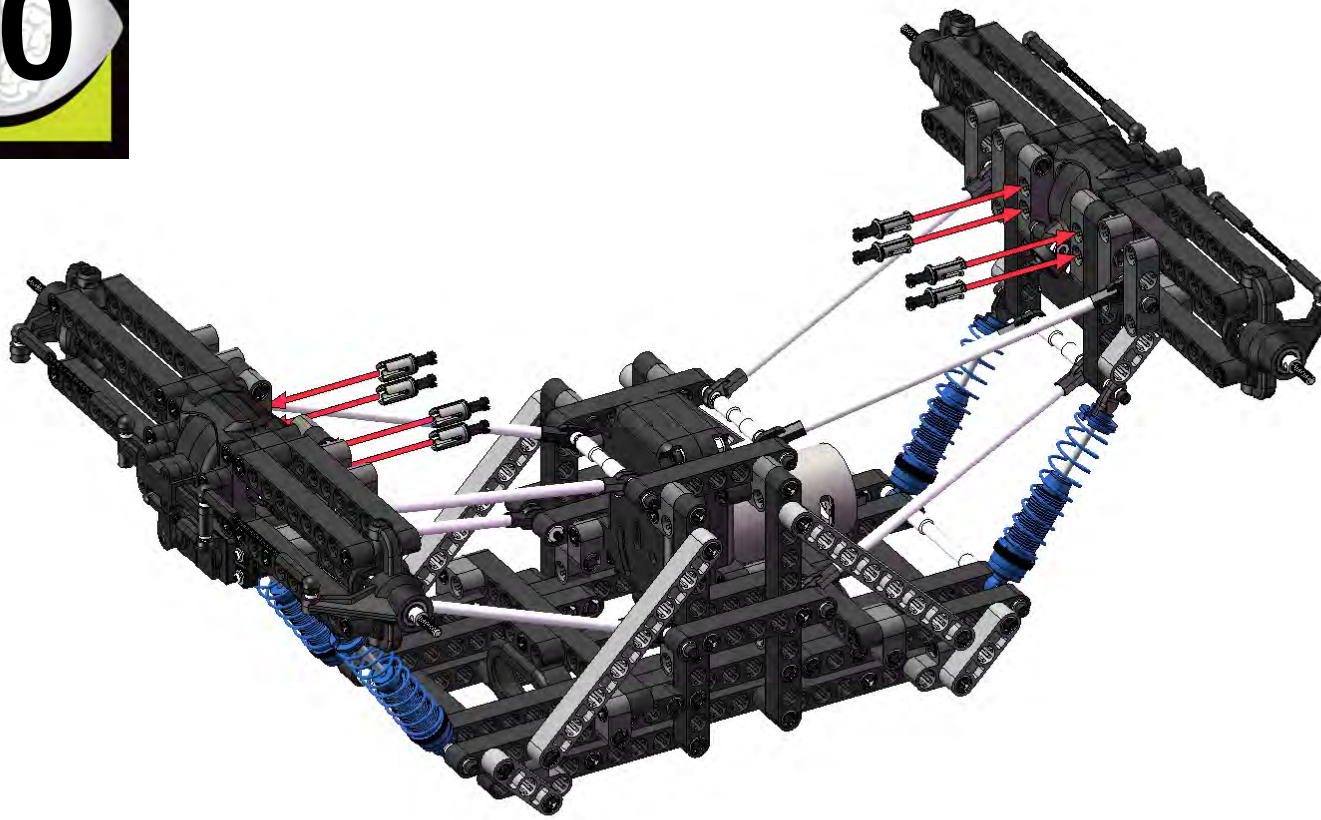
**x2**
*2.5x10mm DOWEL PIN*



## x2 REPEAT STEPS 22-39

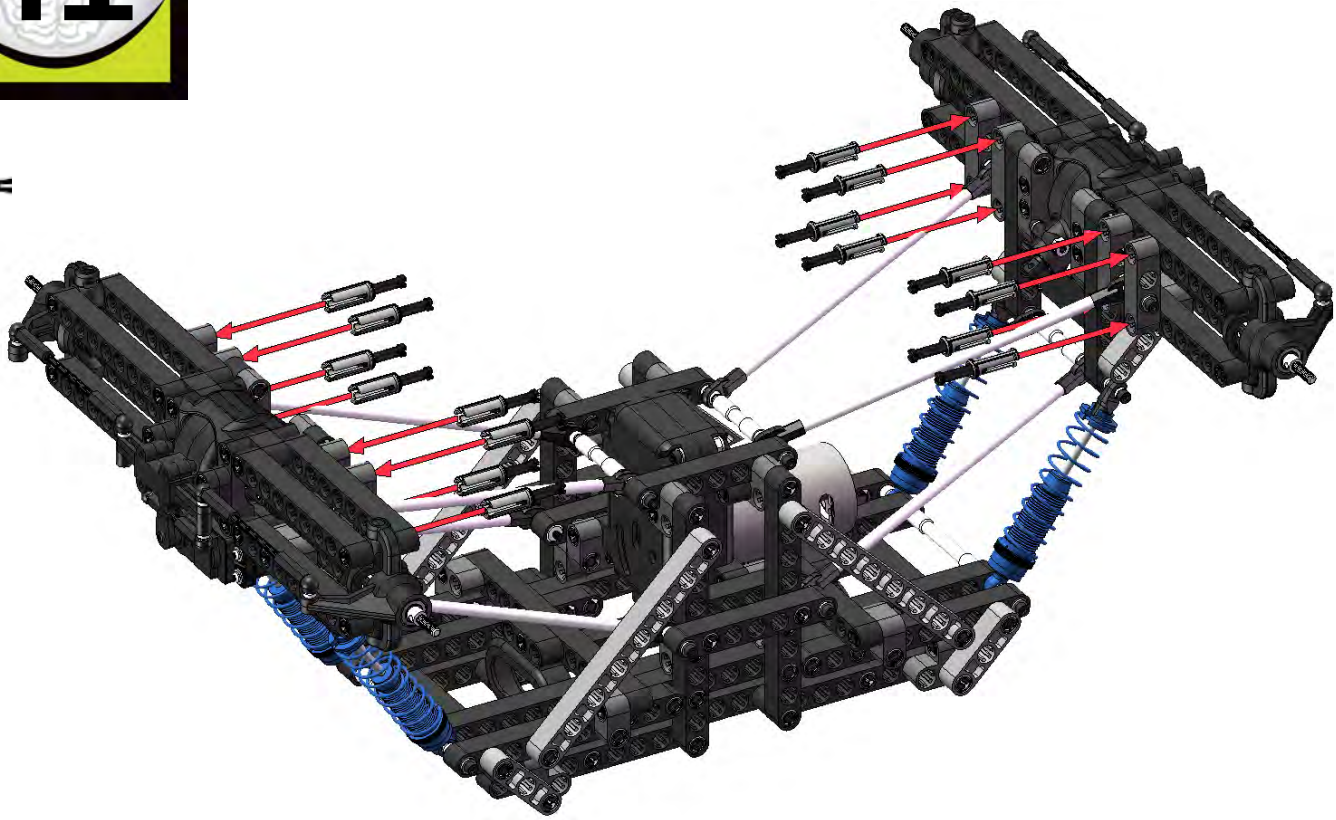
# 40

**x8**
*1.5-LOCK*



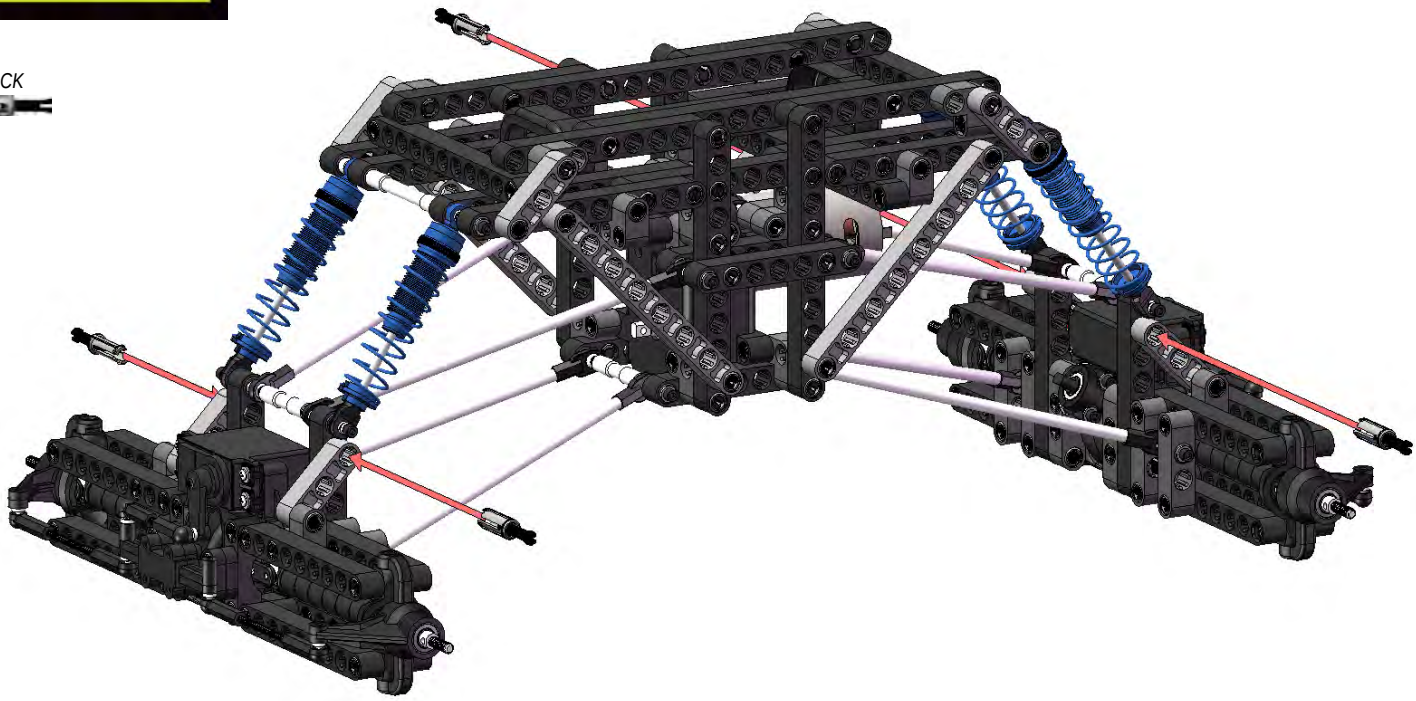
# 41

**x16**
*2-LOCK*



# 42

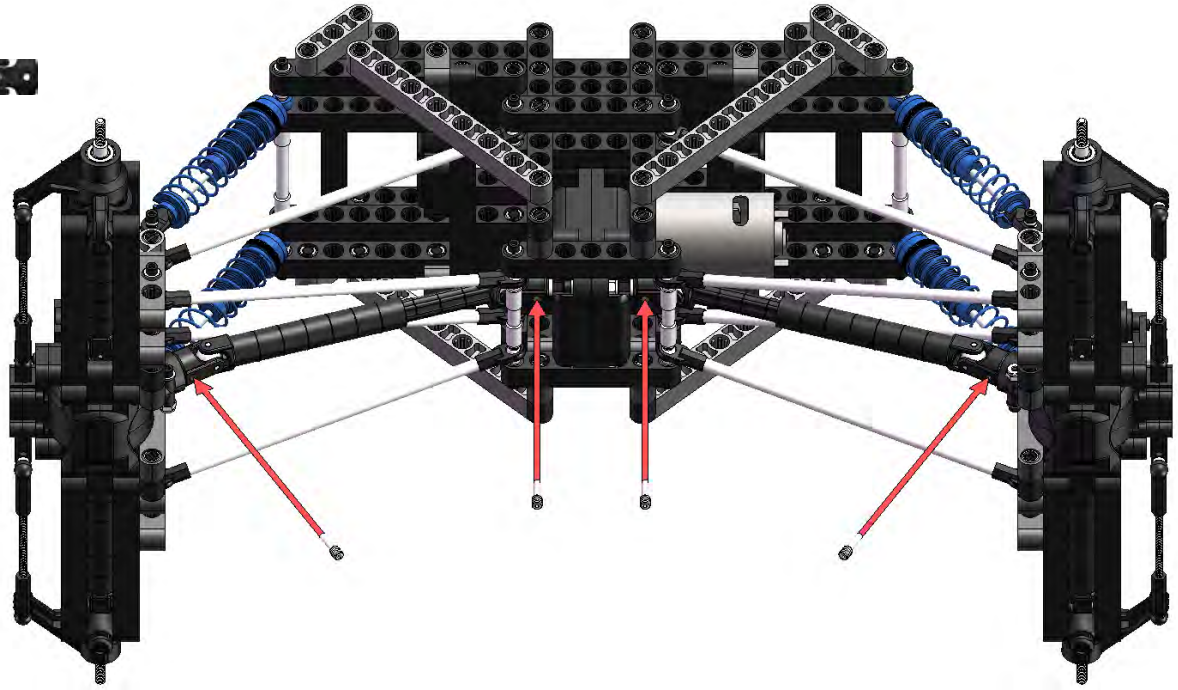
**x4**
*2-LOCK*



# 43

**x2**
*7-DRIVELINE*

**x4**
*U-JOINT SET SCREW*



# 44

**x4**
*BADLANDS 3.8" TIRE & DESPERADO WHEEL*

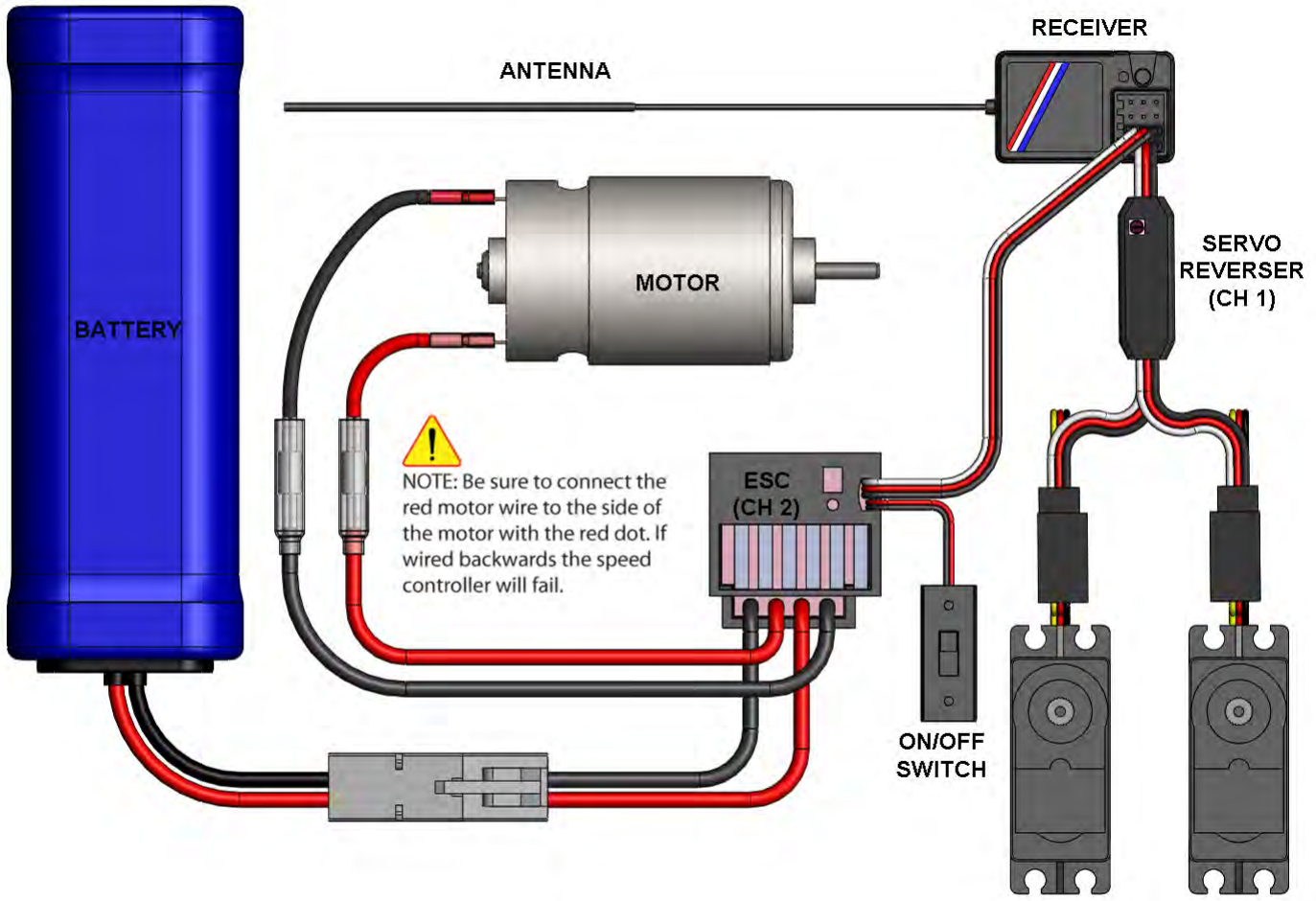
**x4**
*M5 WASHER*

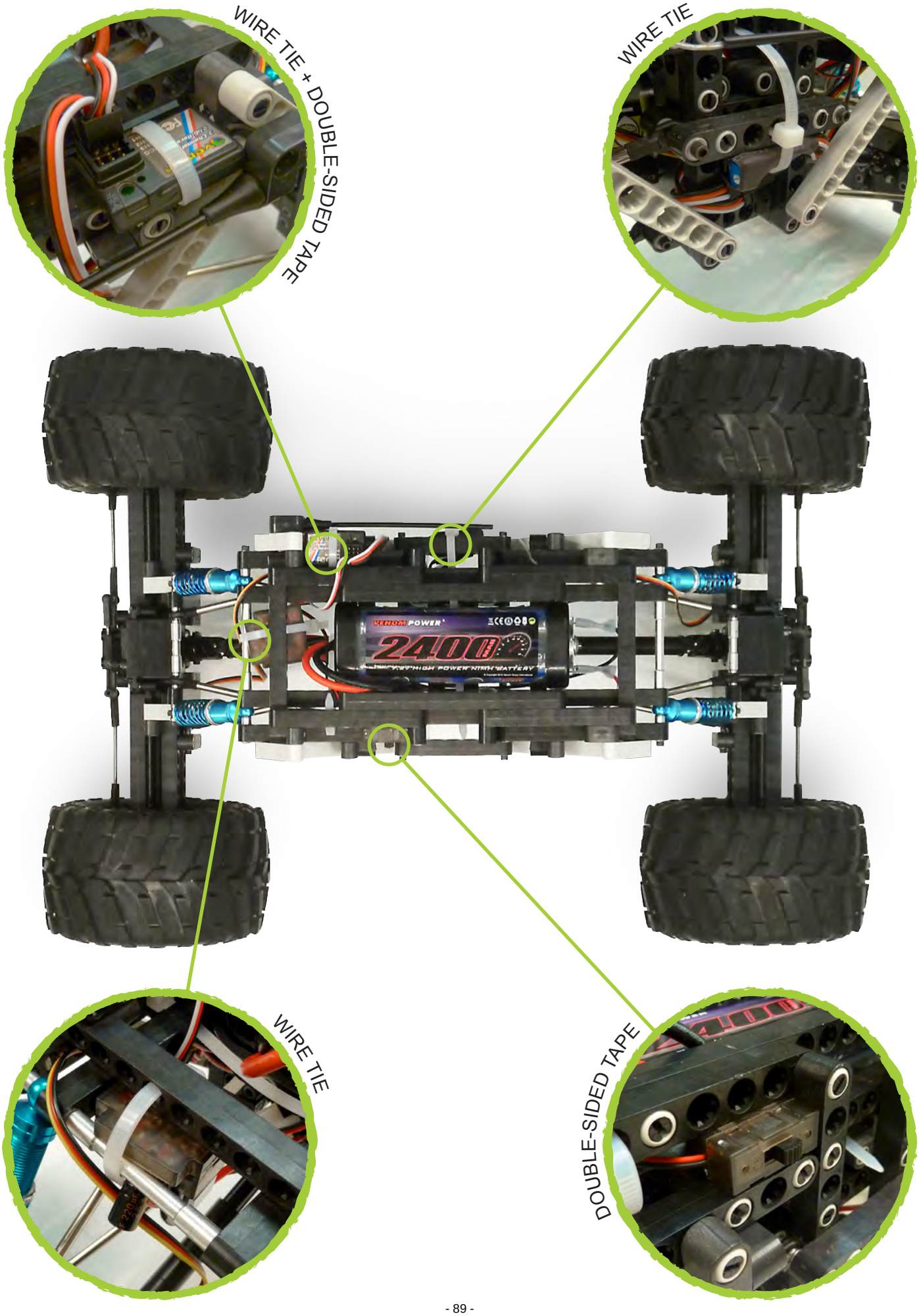
**x4**
*M5 NUT*

**REFER TO RADIO TRANSMITTER MANUAL AND FOLLOWING DIAGRAMS FOR PROPER INSTALLATION AND SET-UP.**

**USING THE WIRE TIES AND DOUBLE-SIDED TAPE PROVIDED, PLACE THE ELECTRONIC COMPONENTS ON THE FRAME SO THAT THEY ARE SECURE AND OUT OF THE WAY OF MOVING PARTS.**

**BATTERY mAh_____÷CHARGER mA_____= ESTIMATED CHARGE TIME (IN HOURS)**




WIRE TIE + DOUBLE-SIDED TAPE
WIRE TIE
WIRE TIE
DOUBLE-SIDED TAPE

# TROUBLESHOOTING GUIDE

| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| ***Wheels rotate backwards when forwards throttle is applied.*** | 1) One or more of your differentials are installed upside down. | 1)Check the assembly instructions to make sure the differentials were installed correctly. |
| | 2) The motor is spinning the wrong direction. | 2) Check that the wires from the ESC to the motor are connected properly. |
| | 3) The motor case was installed with the motor facing opposite of what the instructions show. | 3) Check the assembly instructions to make sure the motor case was installed correctly. |
| | 4) The "throttle" switch on your remote control may be switched to reverse. | 4) Flip the switch to normal. |
| ***Front wheels rotate opposite of rear wheels when driving.*** | 1) One of your differentials are installed upside down. | 1) Check the assembly instructions for proper installation of the differentials. |
| ***Vehicle doesn't drive in a straight line with the steering channel centered.*** | 1) Your steering trim is not centered. | 1) Center your steering trim. |
| | 2) Your servo horn was not installed on the servo while it was centered. | 2) Remove the screw that retains the servo horn, then remove the servo horn. Turn the remote control on, center the trim on the remote, turn the vehicle on. Then reinstall the servo horn as the instructions show. |
| | 3) The linkages that connect your steering bar to the front wheel knuckles are not the proper length or do not match each other. | 3) Remove the linkages and check that they are the length indicated in your instructions. |
| | 4) The "Y"harness for four wheel steering is not centered. | 4) Follow step 2 for front and rear servo, making sure when you center the trim on the remote to also center the trim on the "Y"harness. |
| ***Servo does not operate when steering is applied.*** | 1) Servo cable is plugged in upside down. | 1) Check that the cable is plugged in according to the wiring polarity guide. |
| ***Servo steers only one direction or farther one way than the other.*** | 1) Servo horn is not centered on the servo properly. | 2) Remove the screw that retains the servo horn, then remove the servo horn. Turn the remote control on, center the trim on the remote, turn the vehicle on. Then reinstall the servo horn as the instructions show. |
| ***Vehicle has become under powered or sluggish.*** | 1) Charge level of vehicle battery has dropped below useable level. | 1) Remove battery from vehicle and charge with the recommended charger. Always follow proper safety procedures when charging a battery. |
| ***Vehicle stops unexpectedly or doesn't respond to remote.*** | 1) Charge level of remote control batteries have dropped below useable level. | 1) Check the remote control low battery indicator, if necessary replace or recharge batteries. Always follow proper safety procedures when charging a battery. Never recharge alkaline batteries. |
| | 2) A wire may have come loose from the receiver. | 2) Check that the wires are all properly plugged in and in good condition. |
| ***Vehicle does not move forward or reverse when throttle is applied but audible tone comes from motor*** | 1) Something has become bound up in the drivetrain. | 1) Check the drivetrain from motor to wheels for foreign objects and debris. Removing the drivelines that connect the motor case to the differential(s) then trying to spin the wheels will allow you to more easily locate the issue. |
| ***Motor spins freely when throttle is applied but vehicle doesn't move.*** | 1) Gear mesh in motor case was not properly set. | 1) Check that the gear mesh was set according to the instructions. Gears should be about the thickness of this sheet of paper apart for proper mesh. |
| | 2) Pinion set screw was not Properly tightened. | 2) Check that the pinion set screw was tightened according to the instructions. |

# ARDUINO TROUBLESHOOTING GUIDE

| PROBLEM | CAUSE | SOLUTION |
|---|---|---|
| ***Vehicle is not behaving as programmed.*** | 1) Charge level of vehicle battery has dropped below useable level. | 1) Remove battery from vehicle and charge with the recommended charger. Always follow proper safety procedures when charging a battery. |
| | 2) Inputs (sensors) or Outputs (servos, ESC, etc) are wired improperly. | 2) Check that each device connected to the Arduino Sensor Shield is plugged in properly. Both in polarity and into the proper port the program states. |
| | 3) Sensor is malfunctioning. | 2) Check #2, Connect Arduino to computer using USB cable, run the calibration program for each sensor on the vehicle. If the sensor value is not present, uncharacteristic or erratic the sensor may need to be replaced. |
| ***Serial port "COM_" not found.*** | 1) The Arduino is not connected to the computer. | 1) Connect the supplied USB cable and try again. |
| | 2) The proper serial port was not selected in the Arduino Program. | 2) Disconnect, re-connect the USB Cable then go to Tools > Serial Port then select the Arduino Uno. |
| ***Light on Ping))) sensor is not cycling.*** | 1) The Ping))) sensor is not wired properly. | 1) Check the wiring polarity guide for proper installation. |
| | 2) The Ping))) sensor in not connected to the proper port. | 2) Check that the sensor is plugged into the port stated in the code. |
| ***QTI sensors not detecting line.*** | 1) The QTI sensor is not wired properly. | 1) Check the wiring polarity guide for proper installation. |
| | 2) The QTI sensor in not connected to the proper port. | 2) Check that the sensor is plugged into the port stated in the code. |
| ***Power light on Arduino Sensor Shield doesn't turn on when ESC is powered on.*** | 1) One of the connections to the Sensor Shield is shorted. | 1) Check that each device connected to the Arduino Sensor Shield is plugged in properly. Both in polarity and into the proper port the program states. If the problem persists disconnect one sensor at a time till the faulty connection (sensor, servo, ESC etc.) is found, then replace. |
| | 2) No power source is connected to the Arduino. | 2) Check to make sure that it is either plugged into your computer with the USB cable or that you are using a charged battery and the ESC cable is properly connected. |

http://arduino.cc/en/Guide/Troubleshooting



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