

## **Mechanical Character Instructions**

### **TOOLS NEEDED**

- File set.
- Super glue.
- 4mm steel or wooden rod.

### **TIPS**

- All parts should be loosely fitting.
- File all holes to allow for easier fit
- Use only small amounts of super glue, too much takes longer to dry.
- Print all the parts first and then assemble. This will ensure that the assembly goes smoother

## **PARTS LIST**

ITEM NO.	PART NUMBER	QTY.
1	support plate back	1
2	support plate front	1
3	large 20 tooth feet center	1
4	large 20 tooth feet	2
5	legs long	2
6	legs short front	1
7	legs short back	1
8	small 12 tooth torso no gear	1
9	small 12 tooth torso	1
10	small 12 tooth	2
11	Spacer	1
12	support pin	1
13	torso short	1
14	wheel	1
15	Arms	2
16	lower leg	2
17	torso	1
18	upper leg	2
19	torso long	1
20	rivet Short	4
21	rivit Knee	2
22	rod	1
23	large 20 tooth Drive	2

# BODY ASSEMBLY

STEP 1

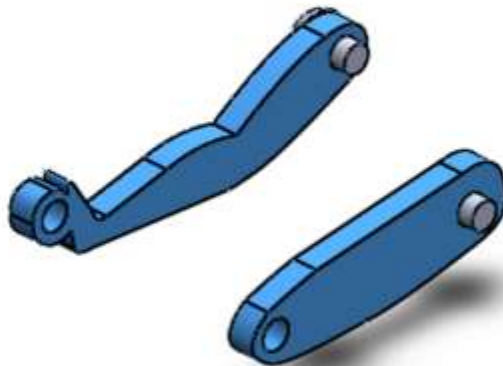
START WITH THE TWO SHORTER  
RIVETS.



# BODY ASSEMBLY

## STEP 2

LOOSELY FIT ONE ARM AND ONE UPPER LEG  
TO THE SHORT RIVETS



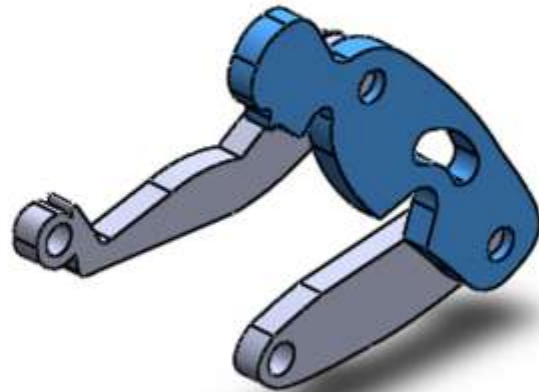
# BODY ASSEMBLY

## STEP 3

FIT THE TORSO AND GLUE THE RIVETS TO THE TORSO.

MAKE SURE THE ARM AND UPPER LEG ARE MOVING LOOSELY.

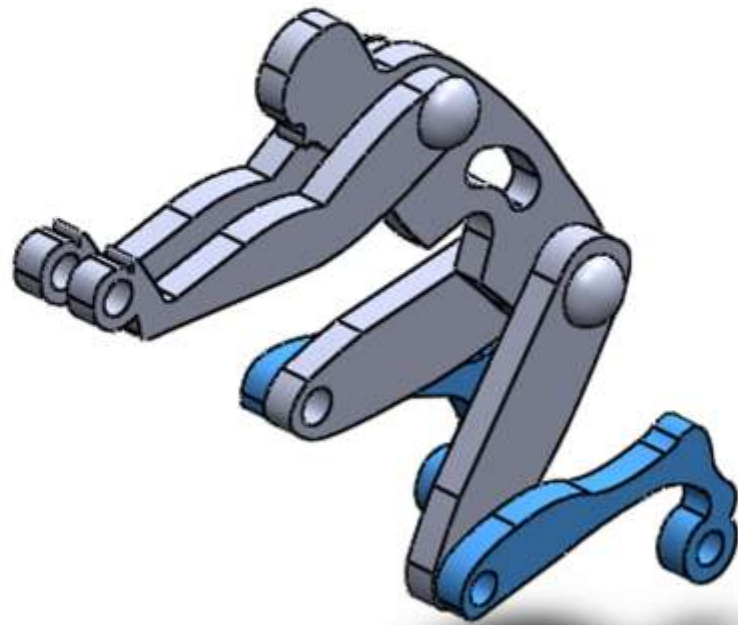
REPEAT THIS STEP FOR THE OPPOSITE SIDE.



# BODY ASSEMBLY

STEP 4

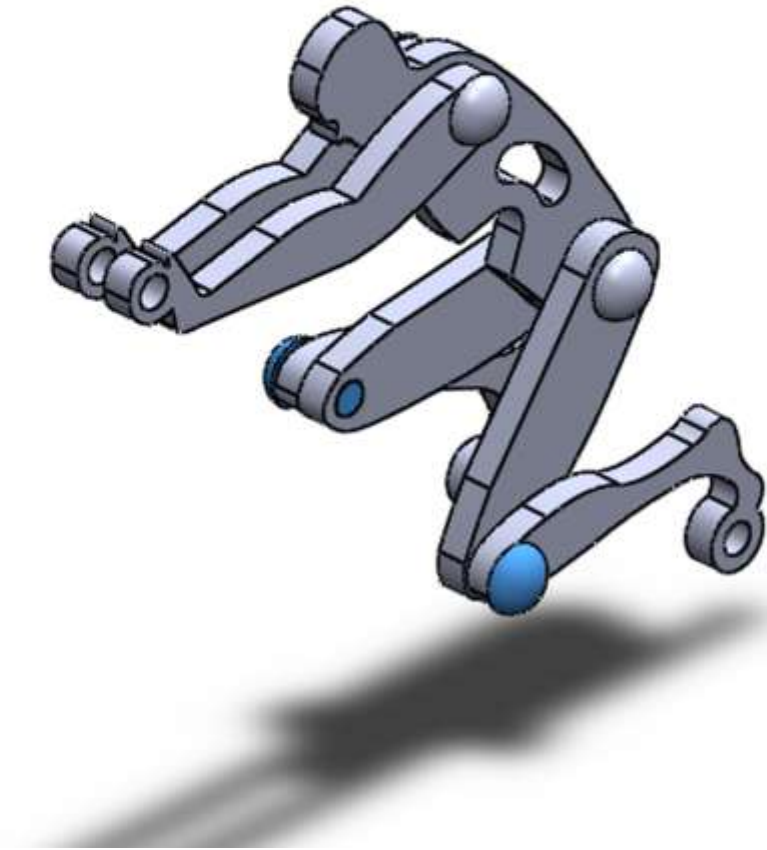
LINE UP THE LOWER LEGS WITH THE HOLES IN THE UPPER LEG



# BODY ASSEMBLY

## STEP 5

PLACE THE TWO LONGER RIVETS AND GLUE ON THE INSIDE OF THE UPPER LEG, ENSURING THAT THE LOWER LEG IS MOVING FREELY



# DRIVE GEAR ASSEMBLY

## STEP 1

YOU WOULD NEED EITHER A WOOD OR STEEL ROD FOR THIS PART AS THE FORCE ACTED ON THIS PART IS TOO WEAK FOR 3D PRINTING. THE ROD NEEDS TO BE ABOUT 64 MM LONG AND 4MM DIAMETER

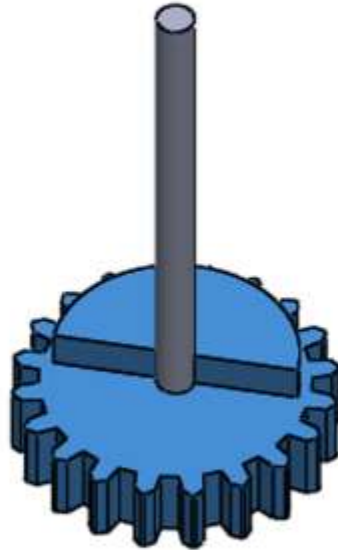




# DRIVE GEAR ASSEMBLY

## STEP 2

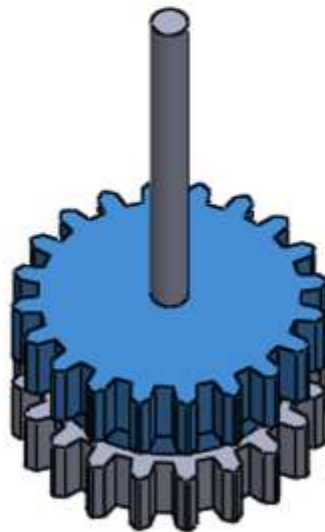
GLUE THE LARGE 20 TOOTH GEAR TO THE ROD. ENSURE THAT THE ROD STANDS OUT THROUGH THE BOTTOM BY 5MM.



# DRIVE GEAR ASSEMBLY

## STEP 3

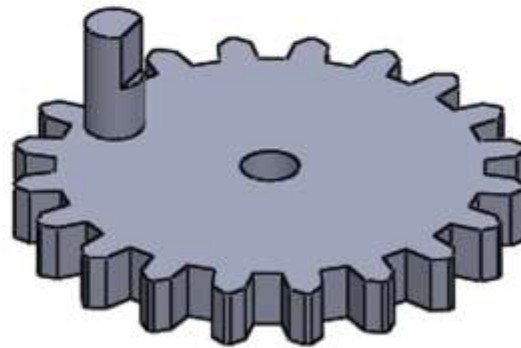
GLUE THE OTHER HALF OF THE LARGE 20 TOOTH GEAR TO THE ROD.



# LEG GEAR ASSEMBLY

## STEP 1

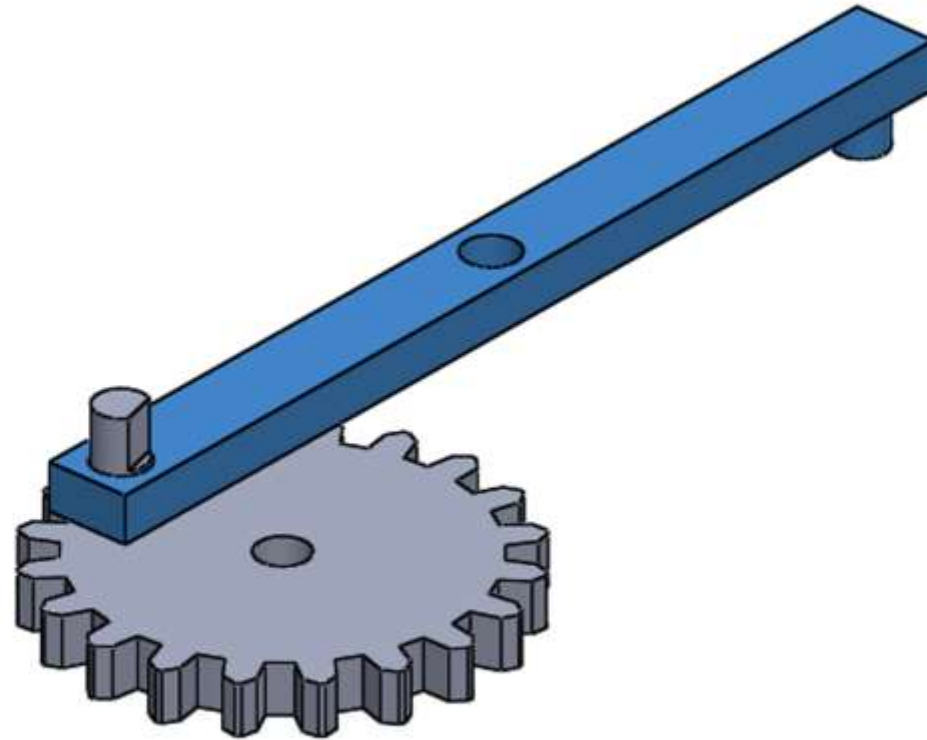
START WITH ONE OF THE LARGE 20 TOOTH FEET GEARS.



# LEG GEAR ASSEMBLY

STEP 2

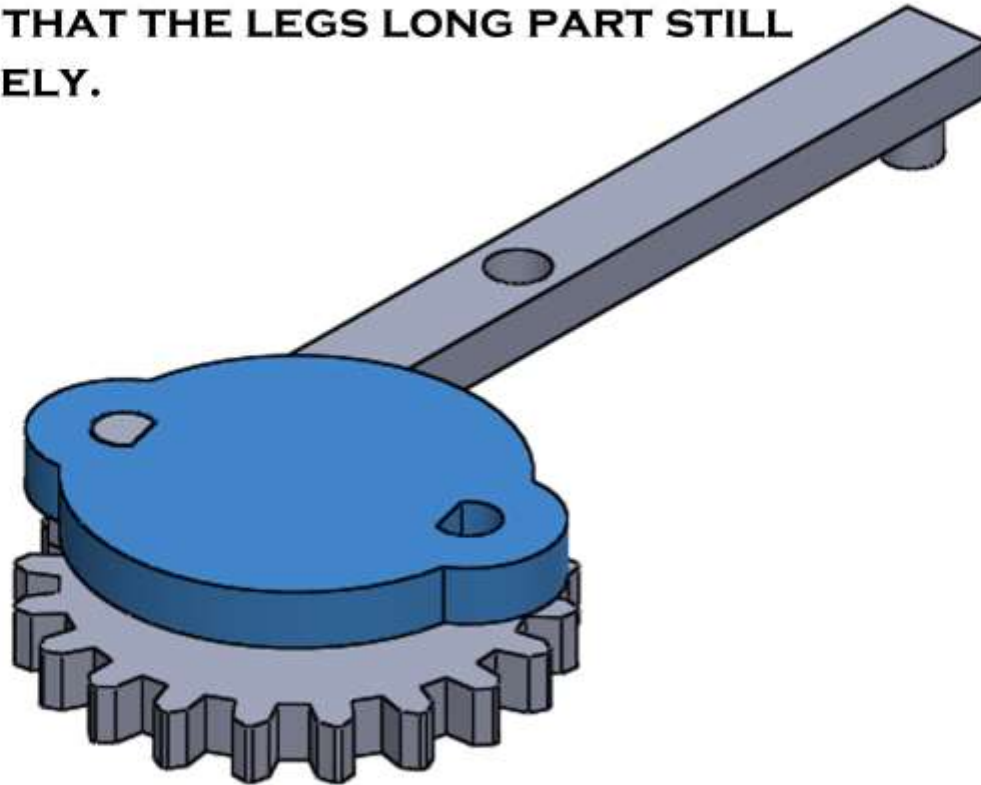
LOOSELY FIT ONE OF THE LEGS LONG PARTS.



# LEG GEAR ASSEMBLY

## STEP 3

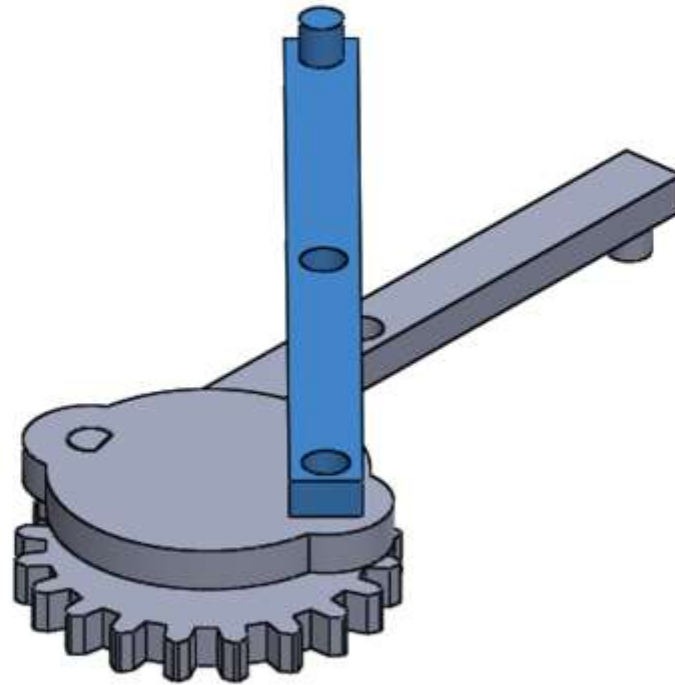
FIT AND GLUE THE LARGE 20 TOOTH CENTER PART. ENSURE THAT THE LEGS LONG PART STILL ROTATES LOOSELY.



# LEG GEAR ASSEMBLY

STEP 4

LOOSELY FIT THE OTHER LEGS LONG PART.

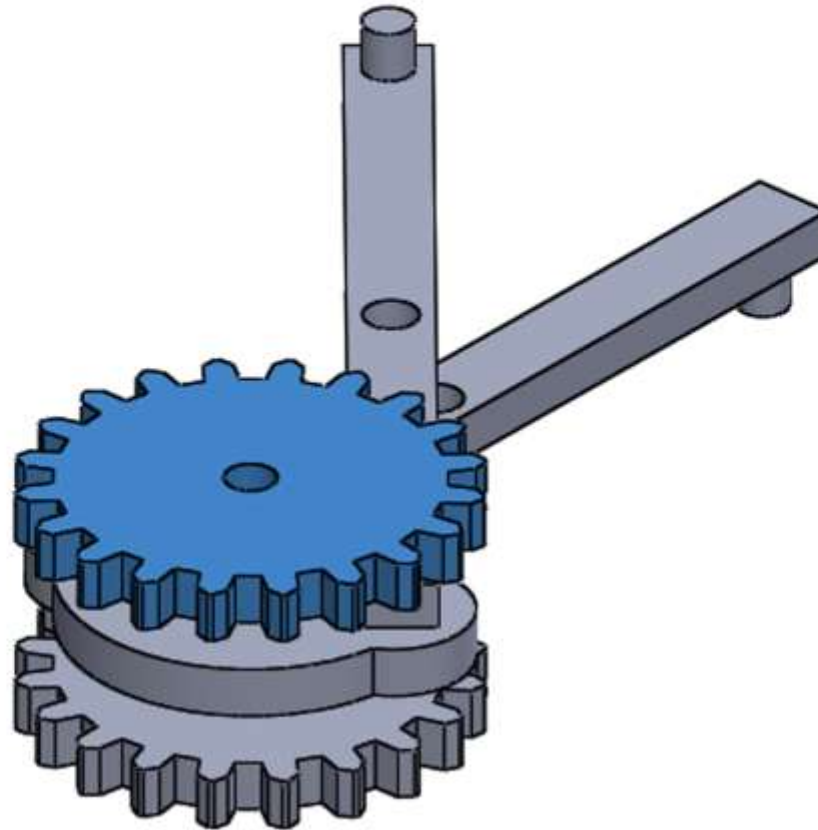


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# LEG GEAR ASSEMBLY

## STEP 5

PLACE AND GLUE THE OTHER LARGE TOOTH GEAR. ENSURE THAT BOTH LEGS LONG PARTS MOVE LOOSELY.



# TORSO GEAR ASSEMBLY

STEP 1

PLACE THE SMALL 12 TOOTH GEAR TORSO.

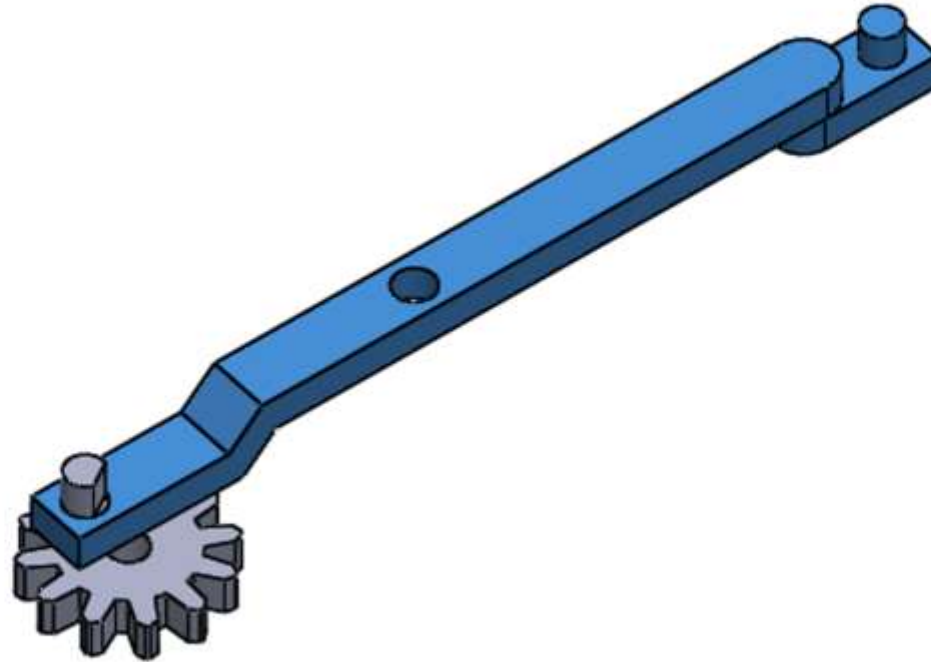




# TORSO GEAR ASSEMBLY

## STEP 2

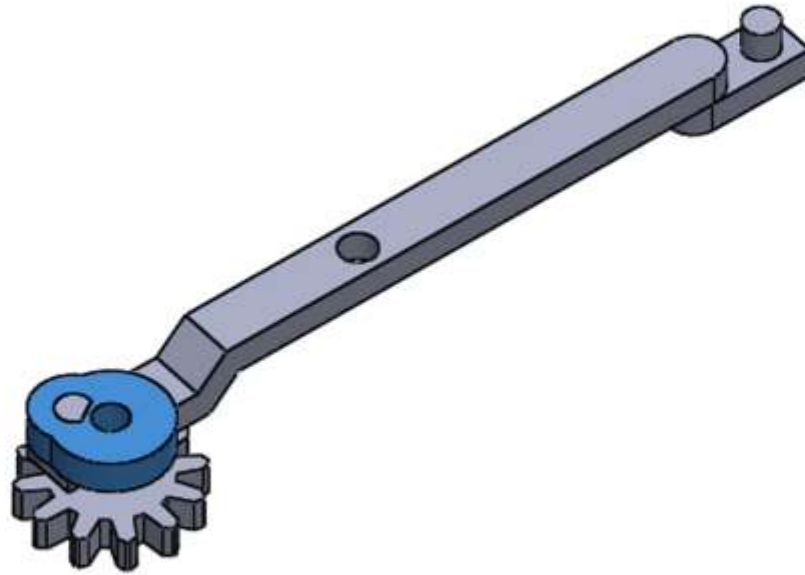
LOOSELY FIT THE TORSO LONG TO THE SMALL 12  
TOOTH TORSO GEAR.



# TORSO GEAR ASSEMBLY

## STEP 3

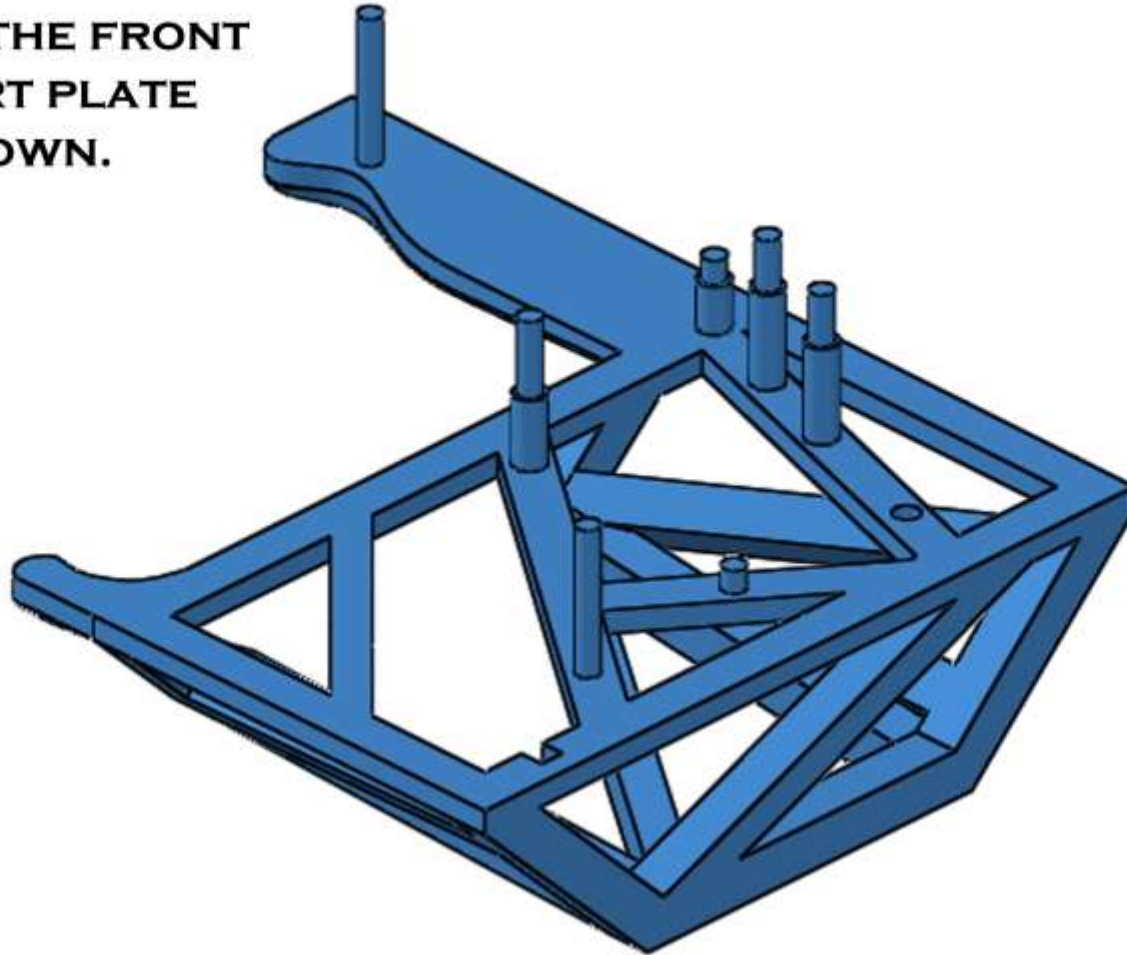
PLACE AND GLUE THE SMALL 12 TOOTH TORSO NO GEAR AND GLUE.  
ENSURE THAT THE TORSO LONG IS MOVING LOOSELY AROUND  
THE GEAR.



# MAIN ASSEMBLY

STEP 1

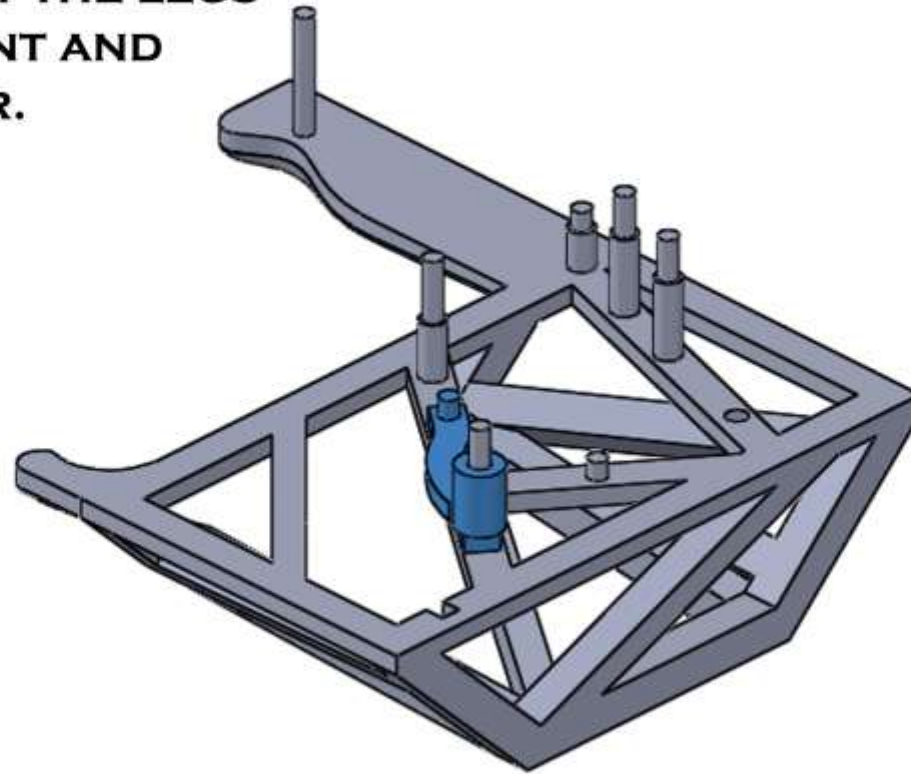
PLACE THE FRONT  
SUPPORT PLATE  
FACE DOWN.



# MAIN ASSEMBLY

## STEP 2

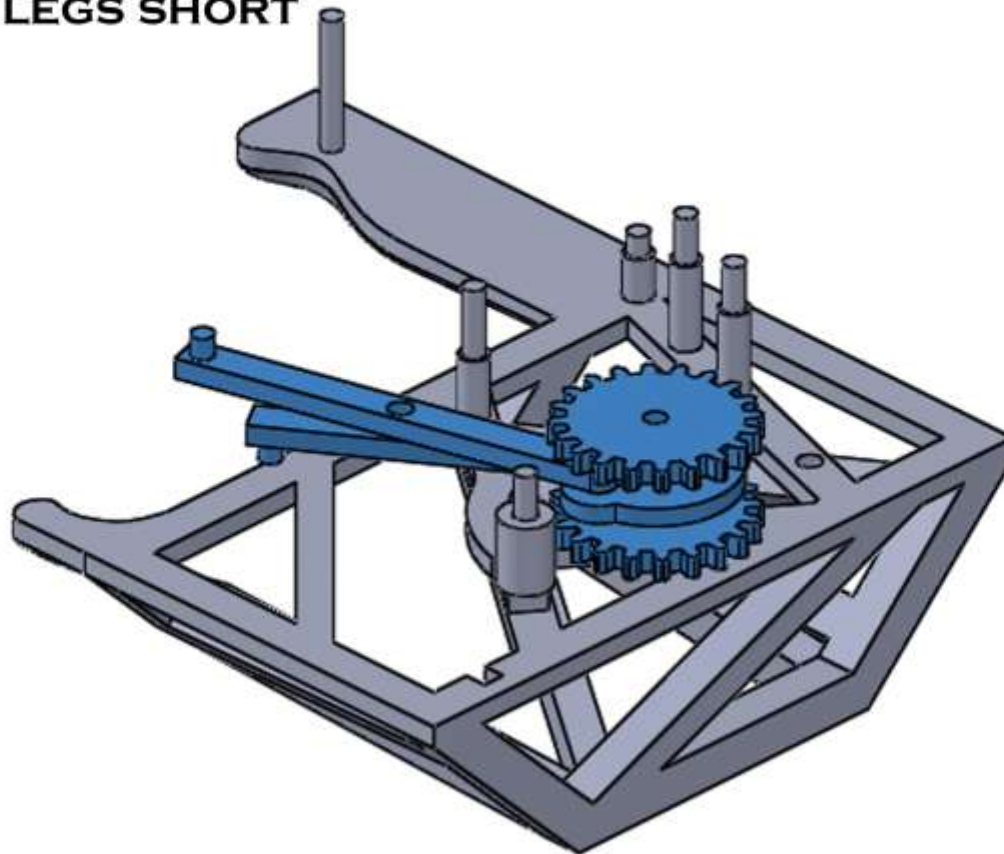
LOOSELY FIT THE LEGS  
SHORT FRONT AND  
THE SPACER.



# MAIN ASSEMBLY

## STEP 3

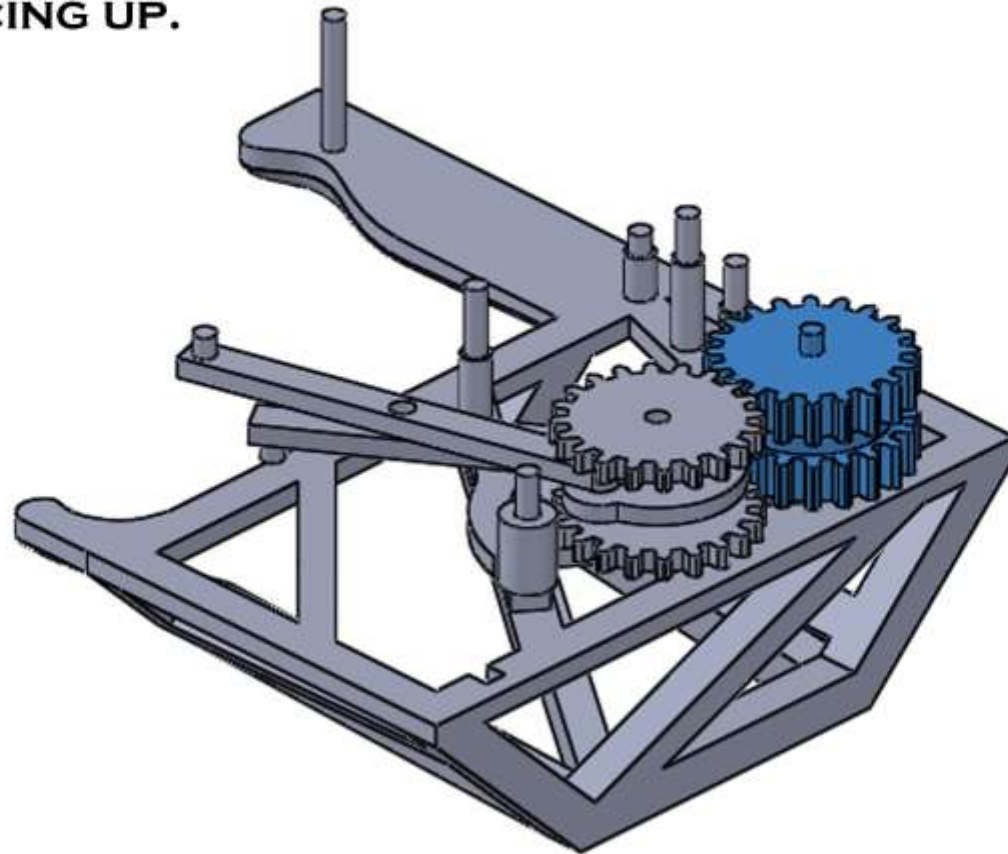
LOOSELY FIT THE LEG GEAR ASSEMBLY. ENSURE THAT YOU ATTATCH IT TO THE LEGS SHORT FRONT.



# MAIN ASSEMBLY

## STEP 4

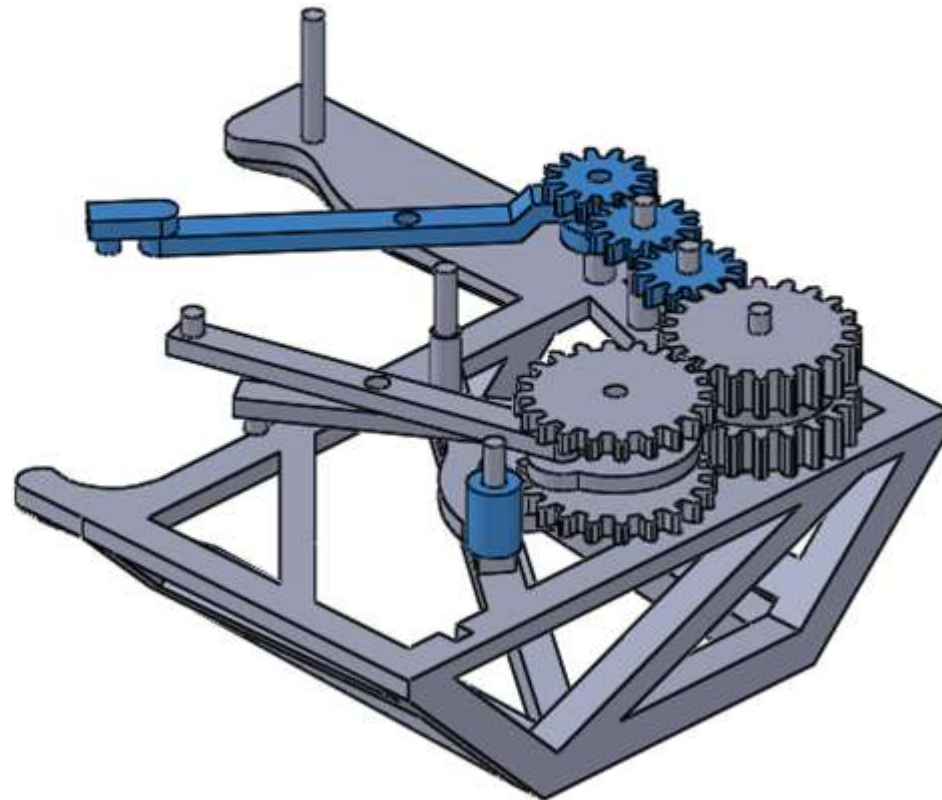
LOOSELY FIT THE DRIVE GEAR ASSEMBLY WITH THE SHORT END OF THE ROD FACING UP.



# MAIN ASSEMBLY

## STEP 5

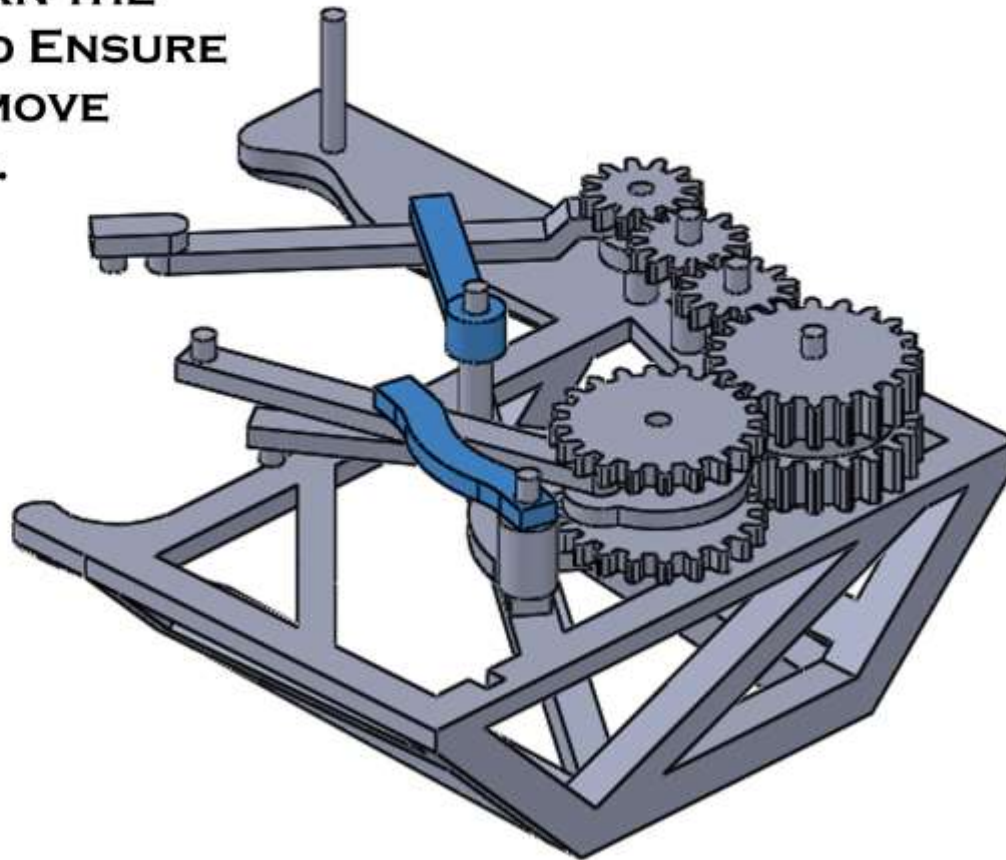
LOOSELY FIT THE TWO SMALL 12 TOOTH GEARS FOLLOWED BY THE TORSO GEAR ASSEMBLY.



# MAIN ASSEMBLY

## STEP 6

LOOSELY FIT THE LEGS SHORT BACK AND THE TORSO SHORT PARTS. TURN THE GEARS AND ENSURE THEY ALL MOVE SMOOTHLY.

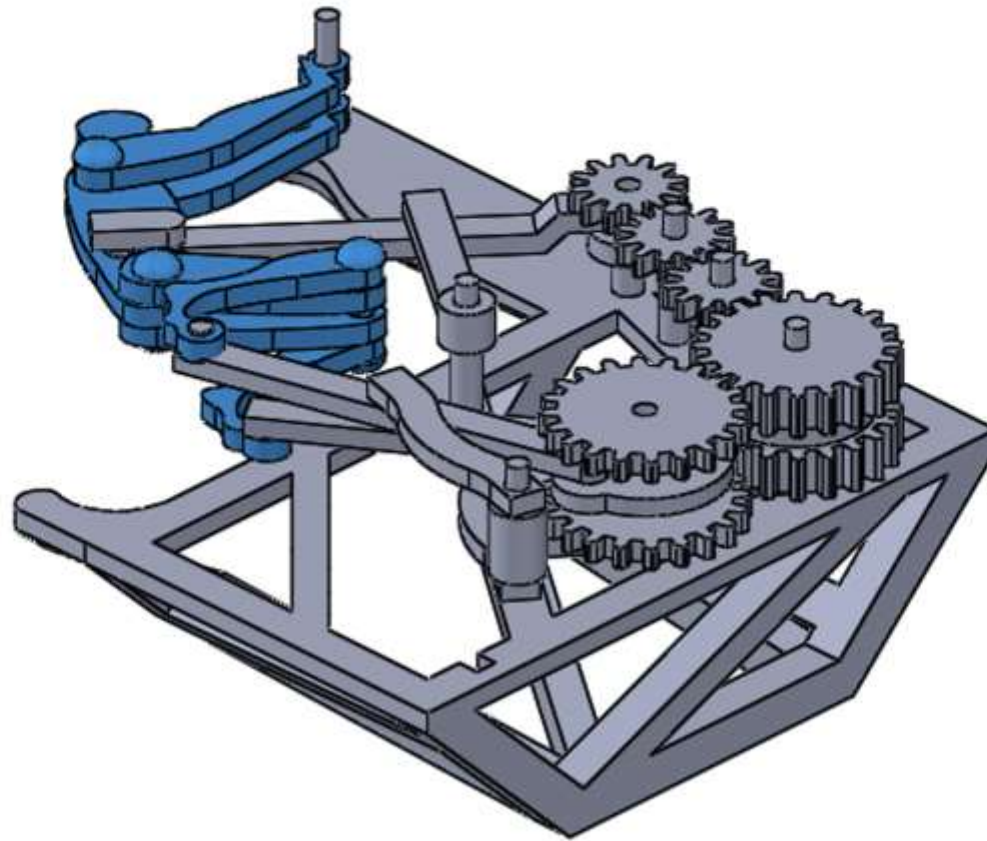




# MAIN ASSEMBLY

STEP 7

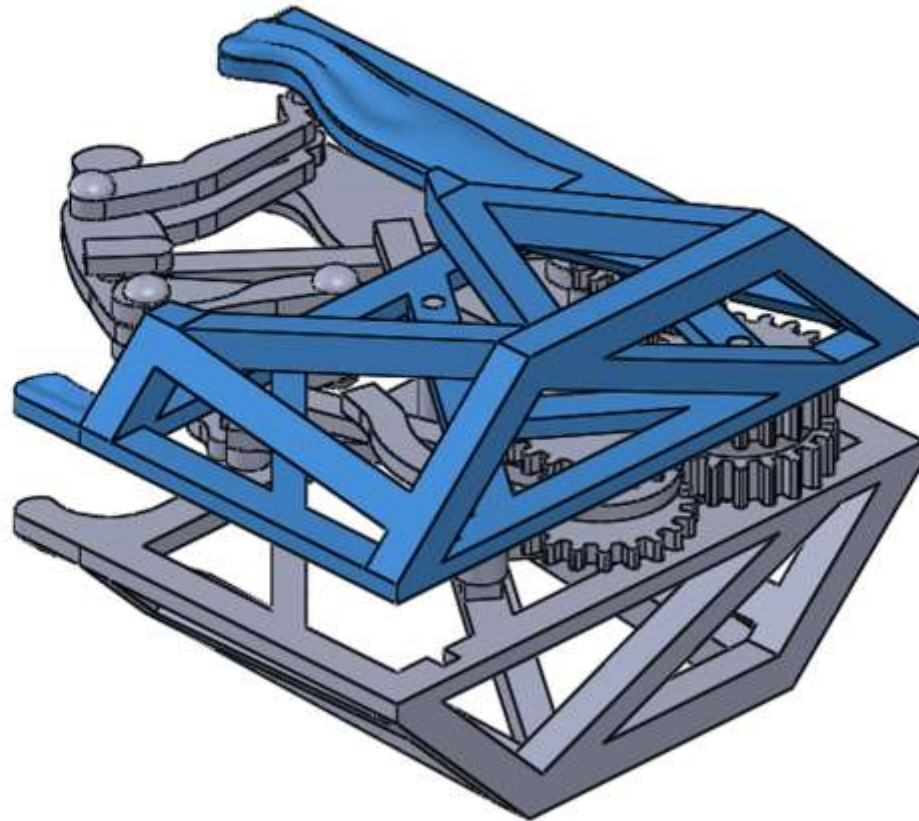
LOOSELY FIT THE BODY TO THE MAIN ASSEMBLY



# MAIN ASSEMBLY

## STEP 8

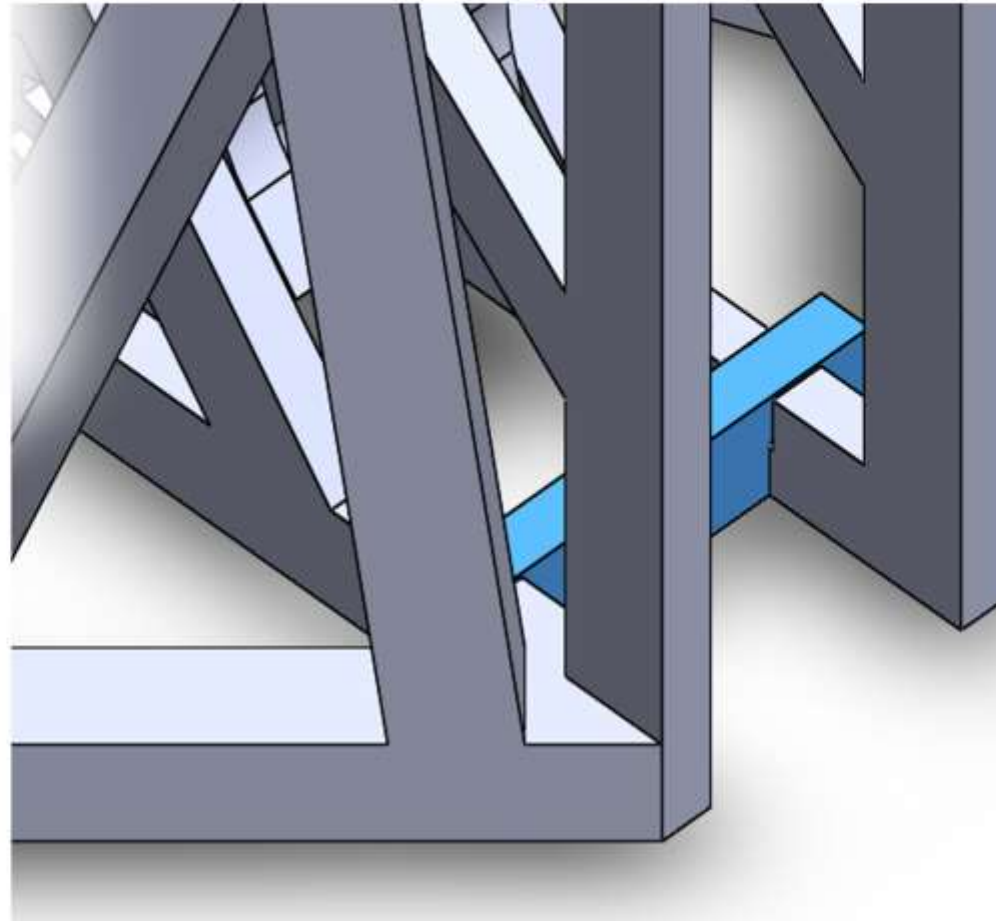
FIT THE BACK SUPPORT PLATE, MOVE THE GEARS TO ENSURE THEY RUN SMOOTHLY. YOU MAY GLUE IT TOGETHER IF DESIRED



# MAIN ASSEMBLY

## STEP 9

**FIT THE SUPPORT PIN FOR EXTRA SUPPORT. THIS TOO CAN BE GLUED IF DESIRED.**



# MAIN ASSEMBLY

## STEP 10

FINALLY GLUE THE WHEEL  
TO THE ROD OF THE  
DRIVE GEAR TO  
COMPLETE THE  
ASSEMBLY.

