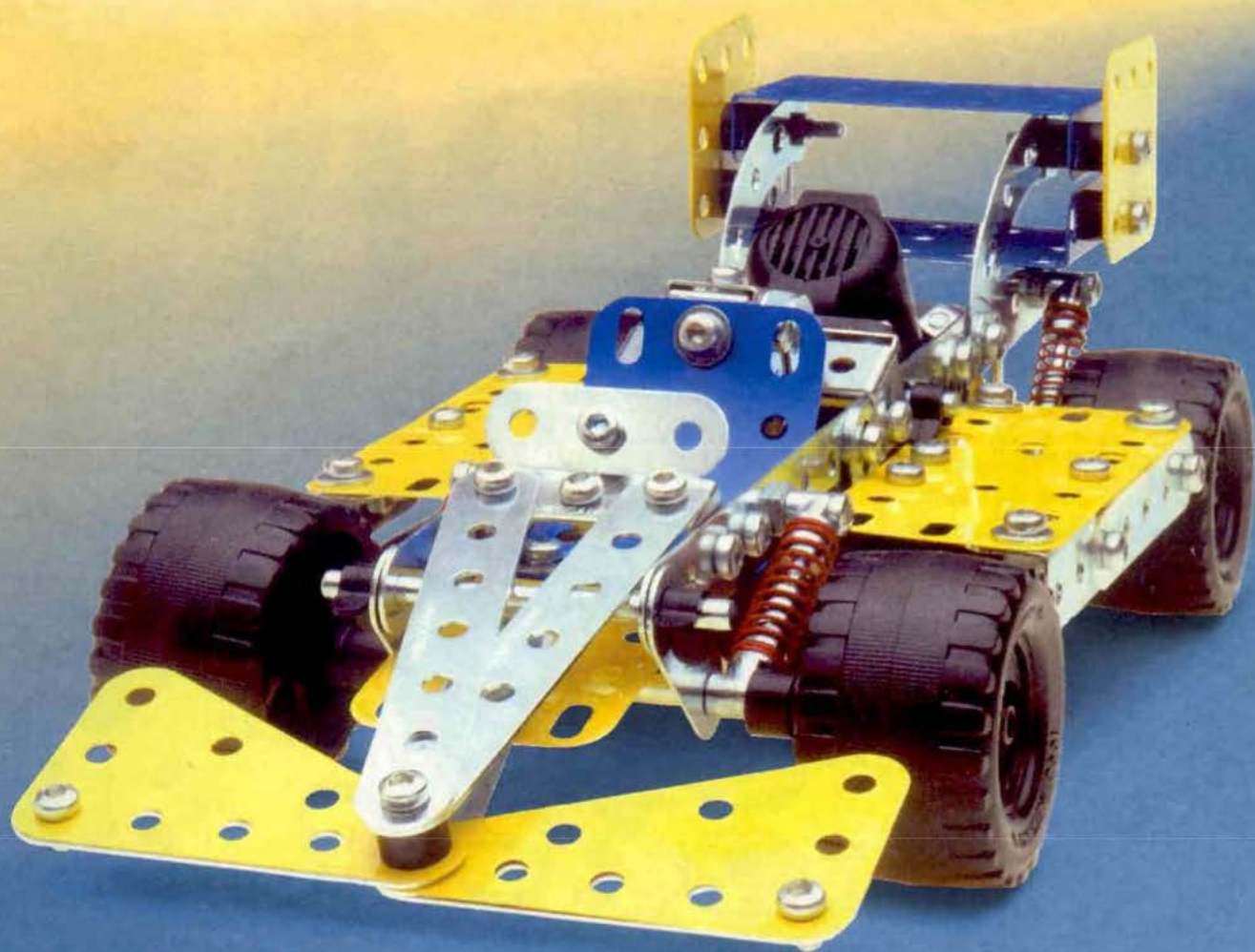
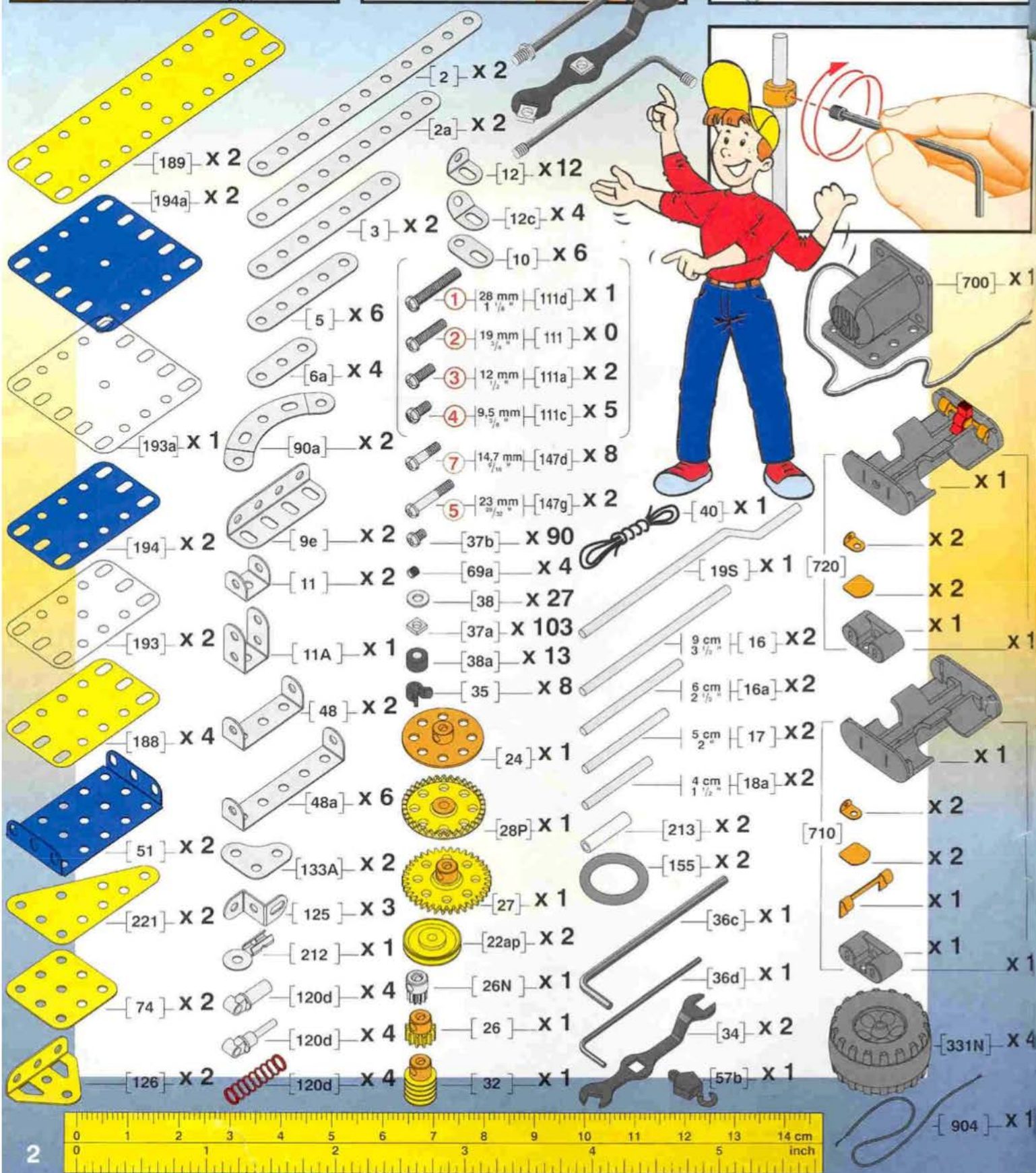
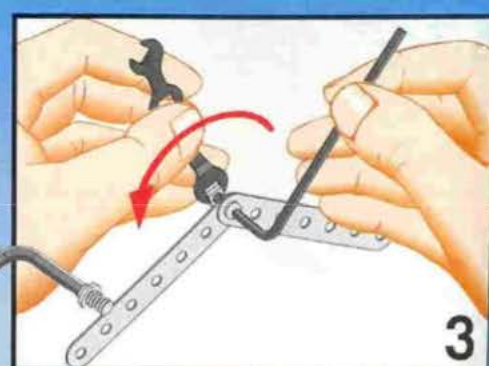
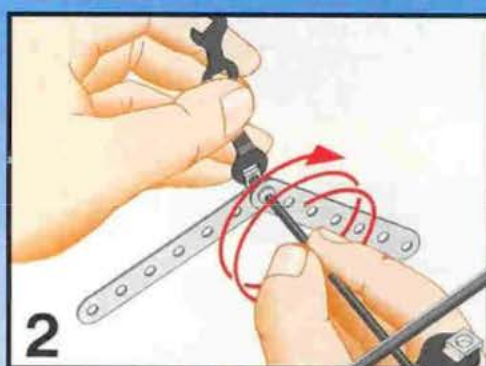
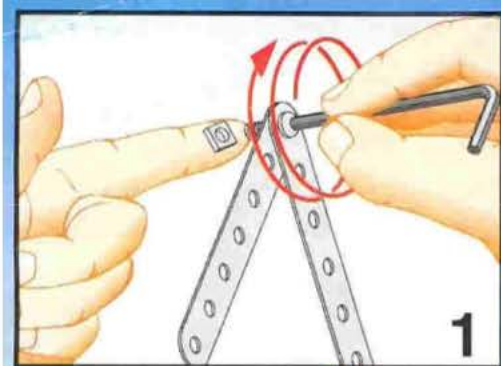


# MECCANO<sup>®</sup> **ERECTOR<sup>®</sup>**



INSTRUCTION  
BOOKLET

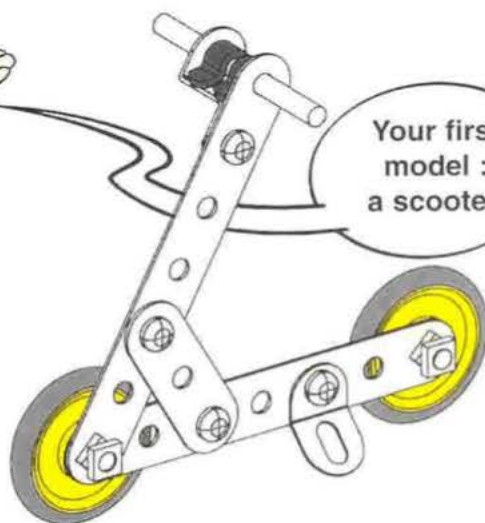
3<sup>★</sup>



Discover the method of assembling with screws and nuts, the tools and their use, the set-up principles, the fun of building working models.

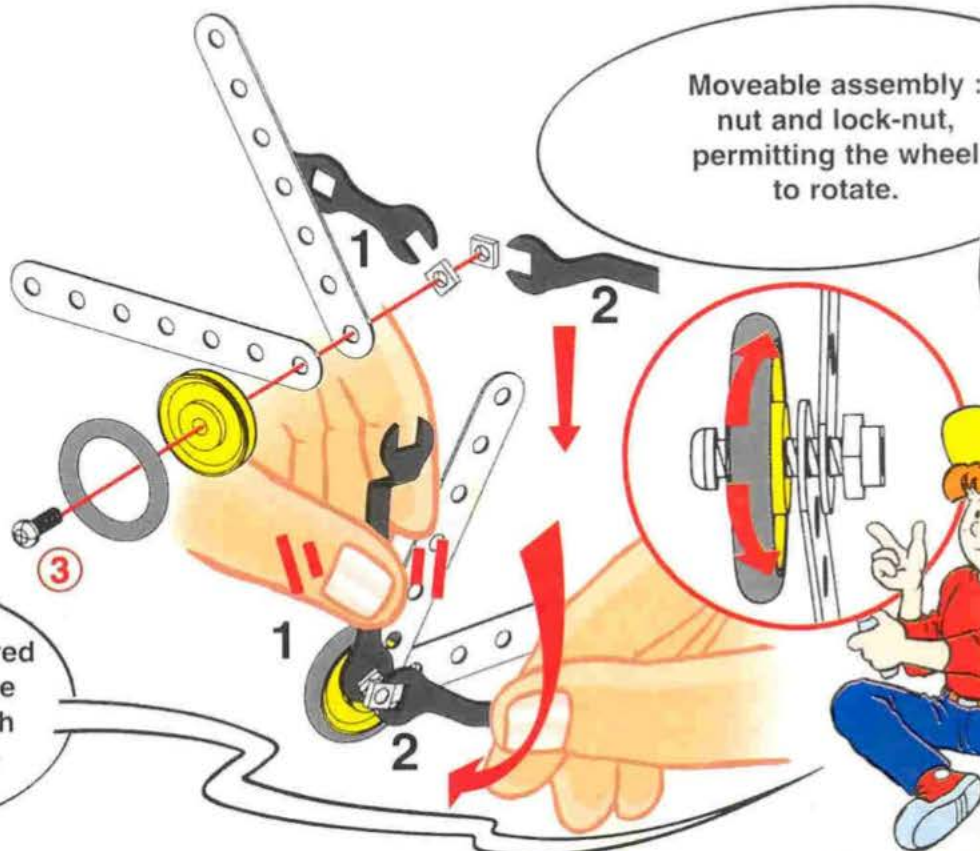
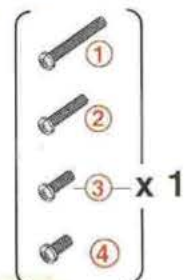
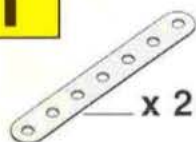
Follow the step by step assembly ; this progression will guide you and you will succeed in making the models.

Choose the necessary parts by following each step.



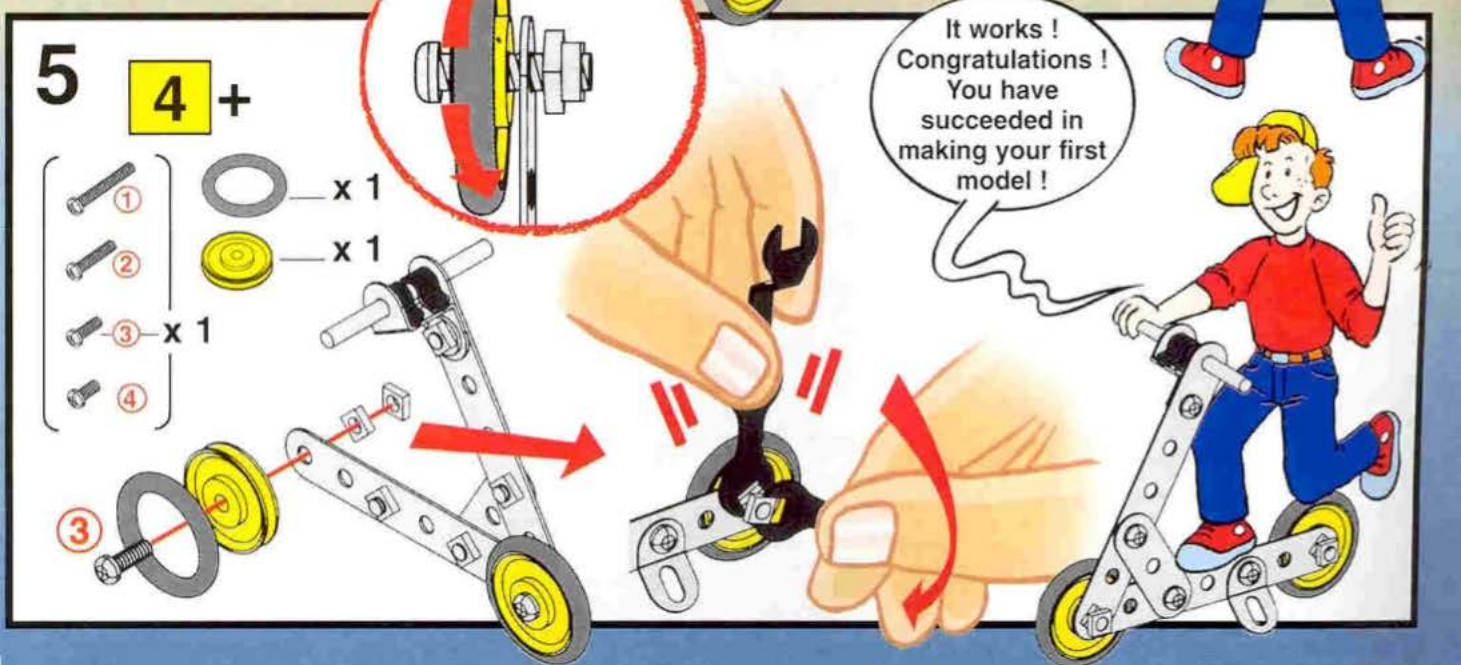
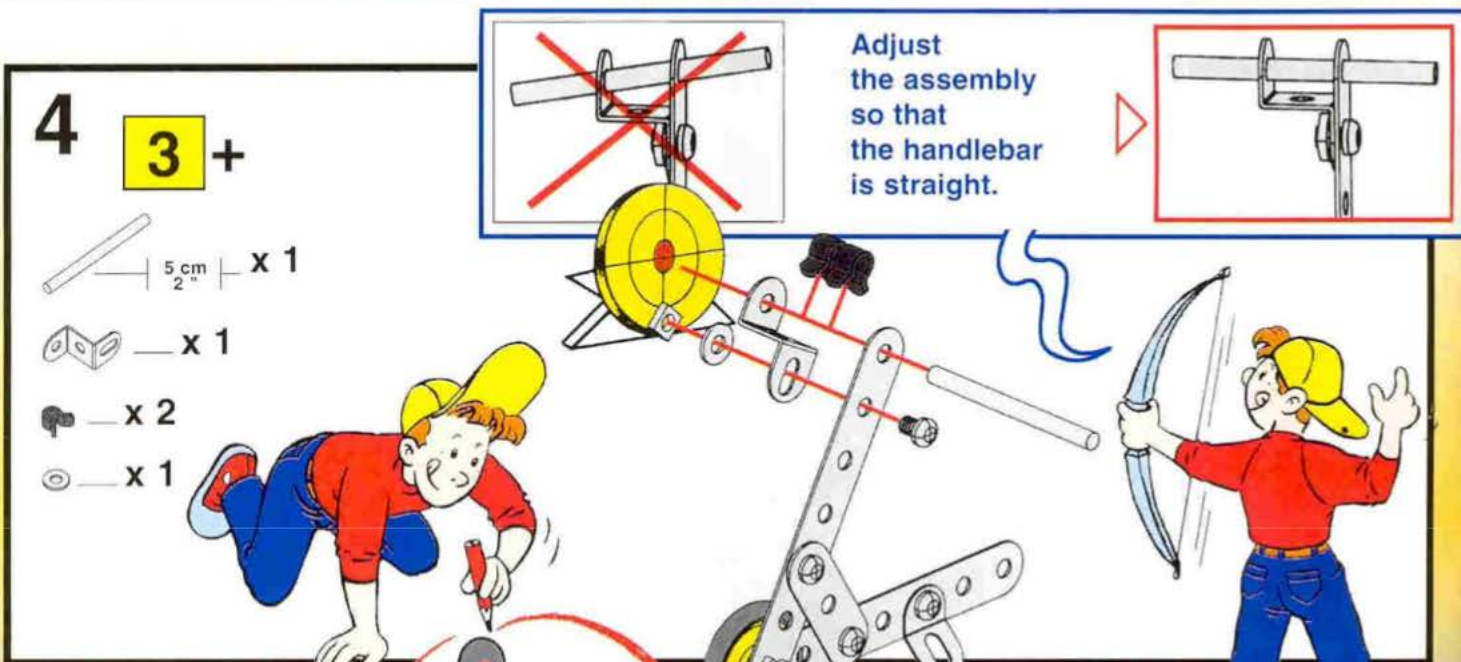
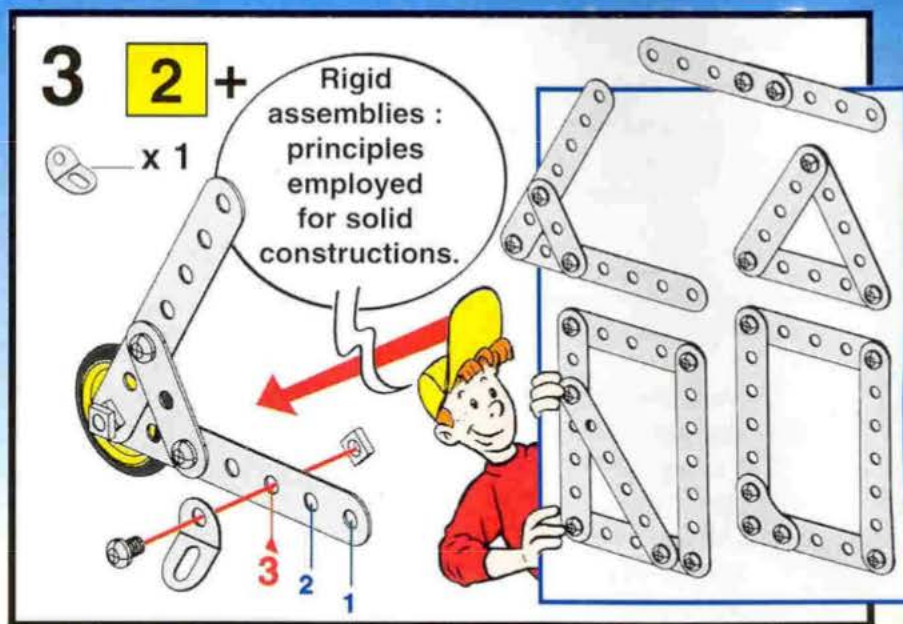
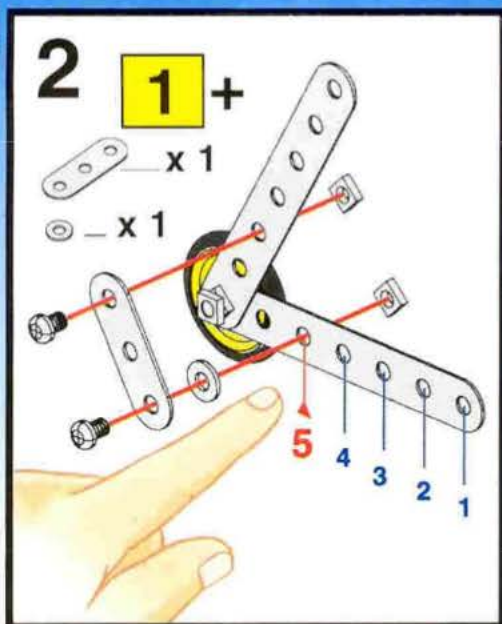
Your first model : a scooter.

1

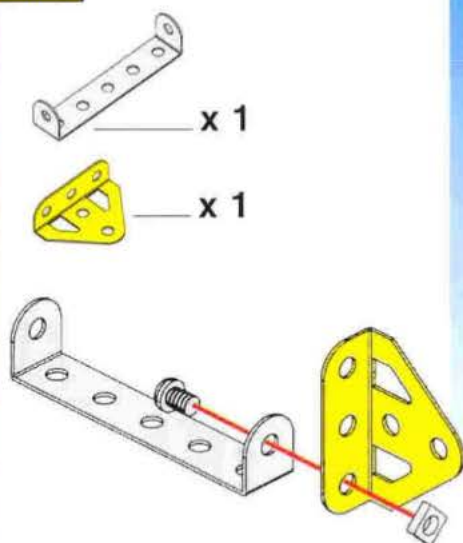


Moveable assembly : nut and lock-nut, permitting the wheel to rotate.

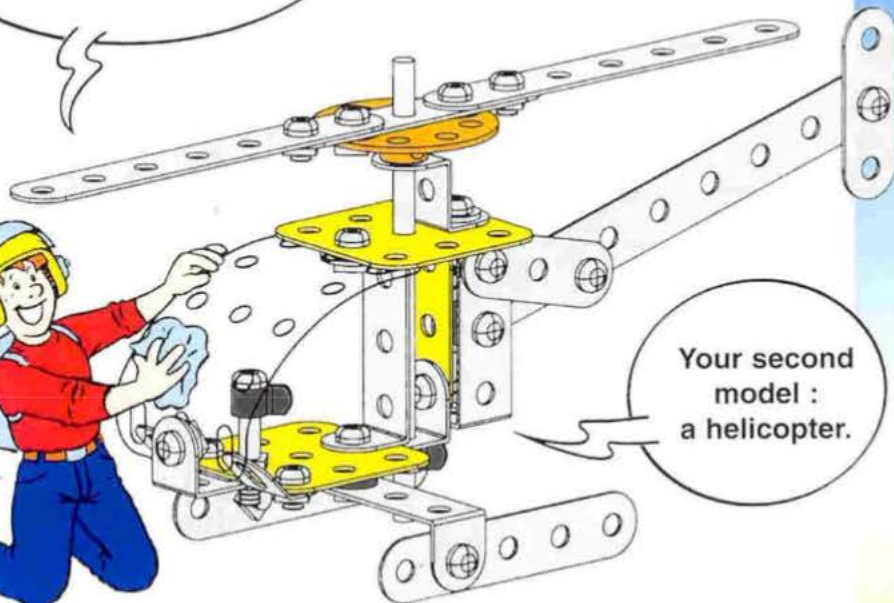
Put them together : the red line shows the order in which to assemble the parts.



# 1



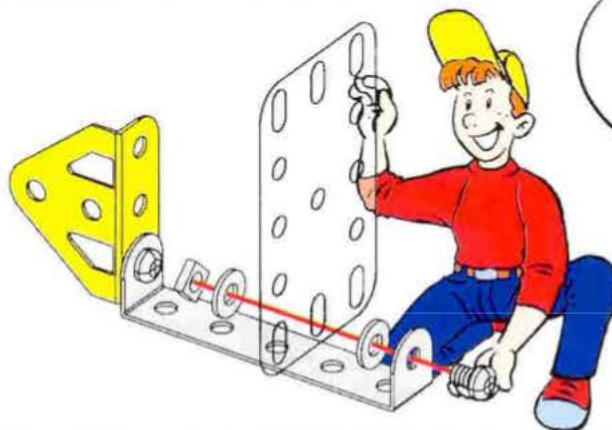
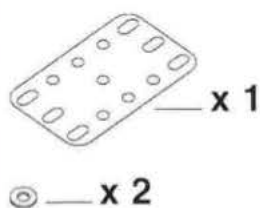
Now, let's fly !  
Construct this model  
following the step by  
step diagrams.



Your second  
model :  
a helicopter.

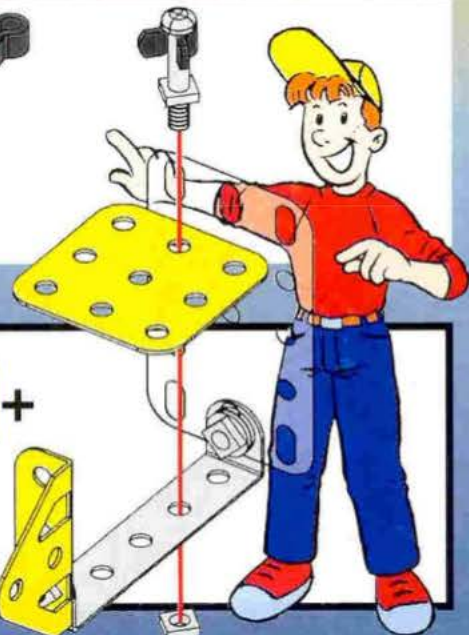
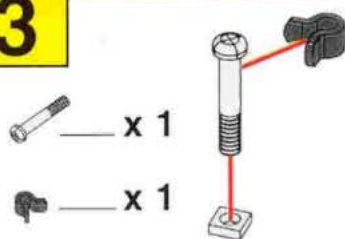
# 2

## 1 +



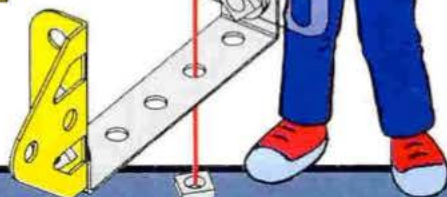
Don't forget the  
washers : they are  
necessary to shim  
the parts.

# 3



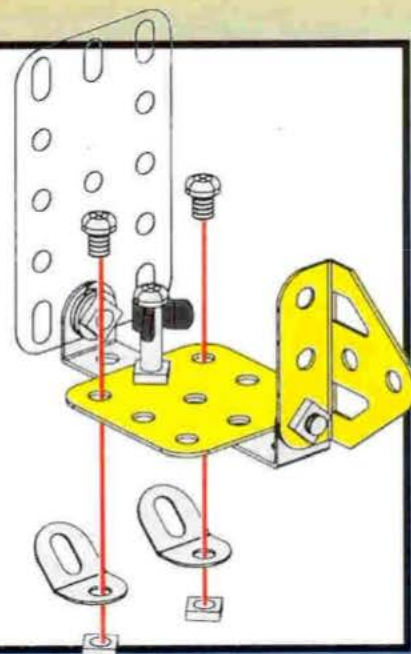
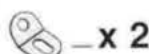
# 4

## 2 + 3 +

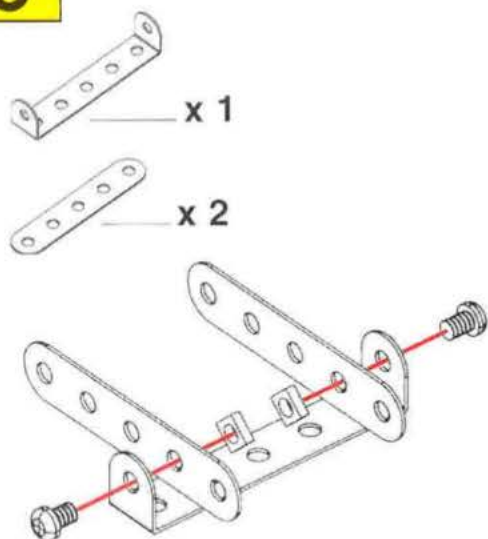


# 5

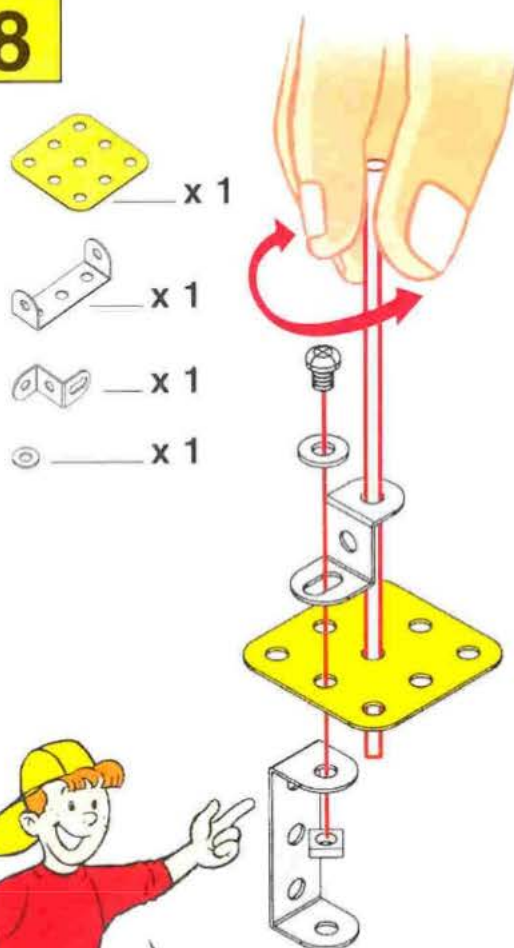
## 4 +



# 6



# 8

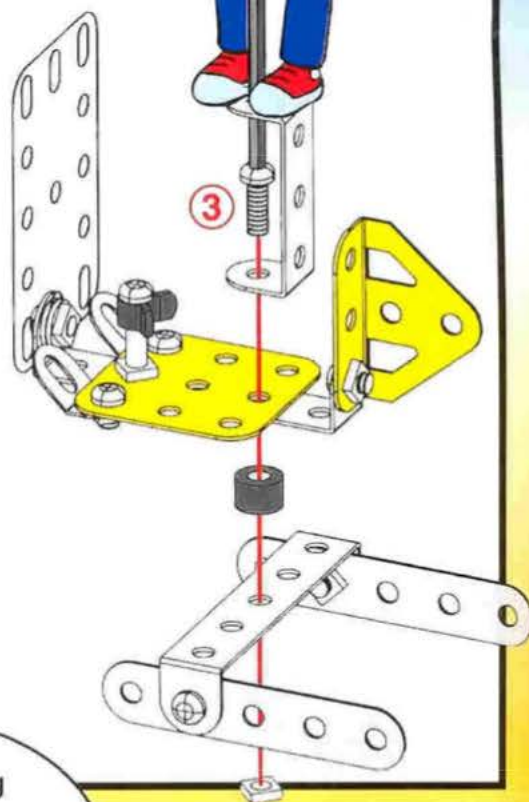
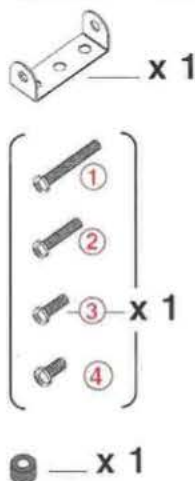


Use an axle for alignment : it will be a guide for an easier setting-up of the parts.

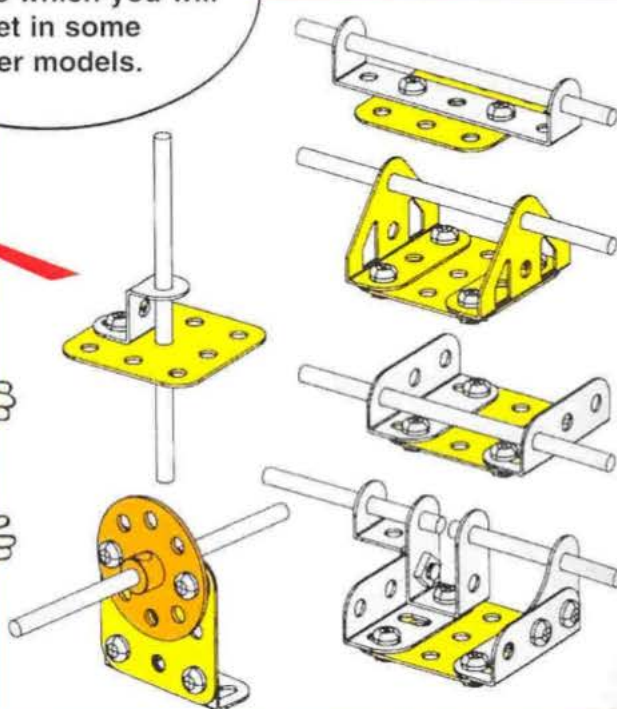
# 7

Easy !  
Put the allen key into the hole for turning screws.

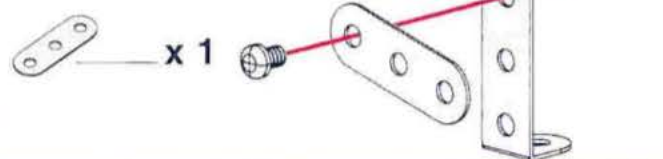
5 + 6 +



Axles or bearing supports : a few examples which you will meet in some other models.



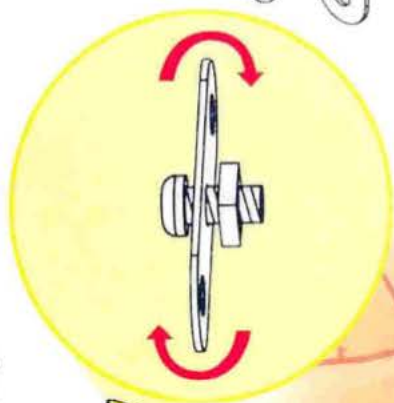
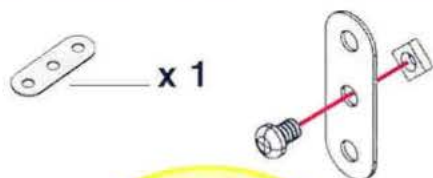
9 8 +



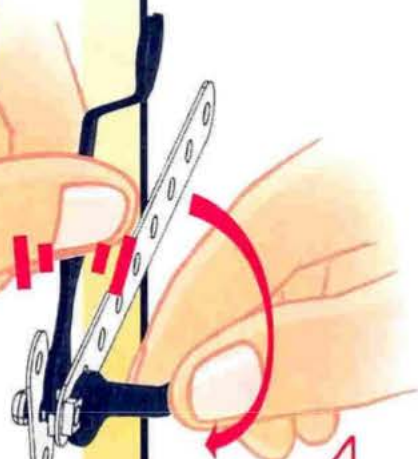
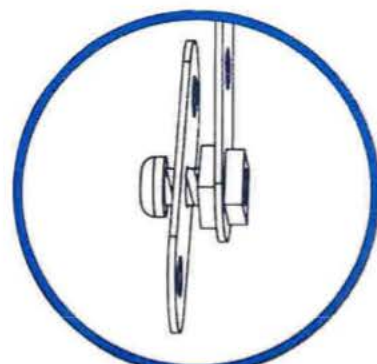
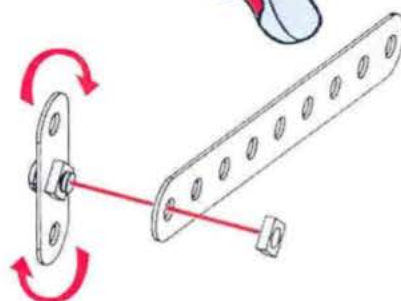
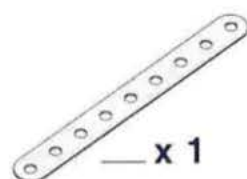
First, insert screws without tightening, as you will have to mount this assembly on some other parts.





10

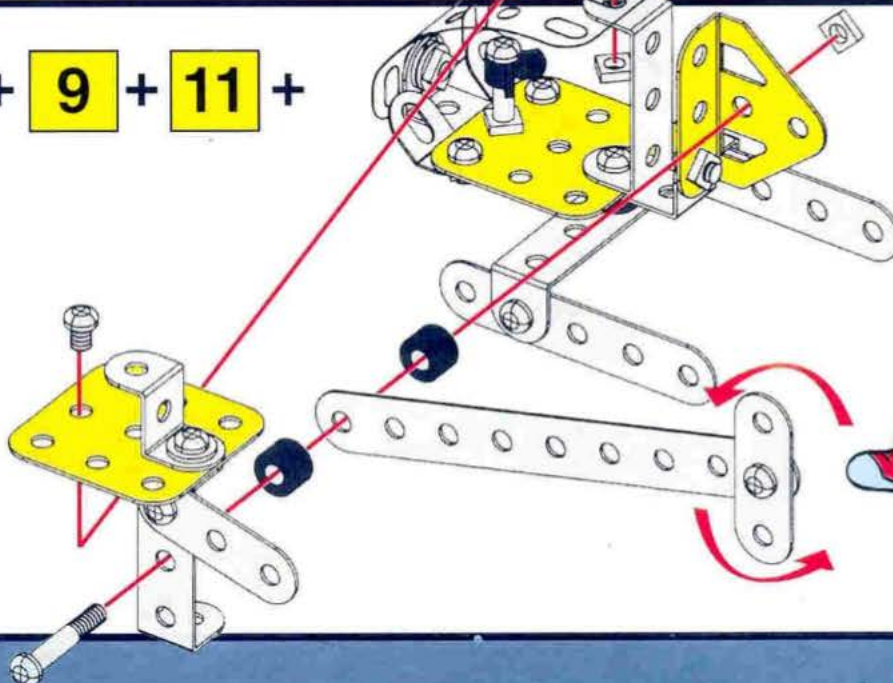


11 10 +



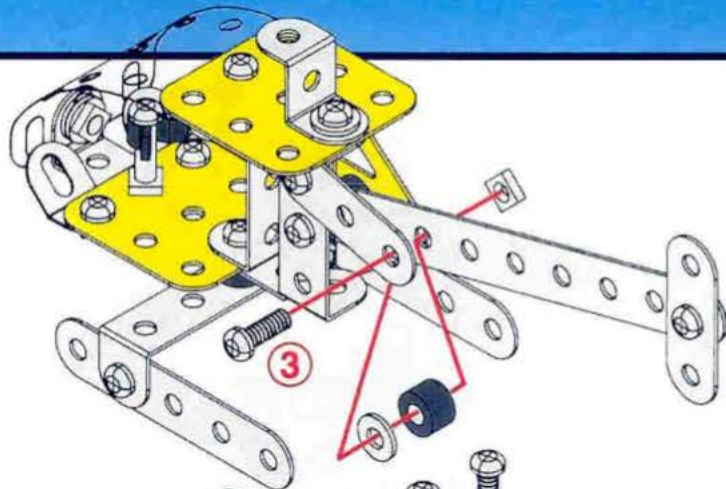
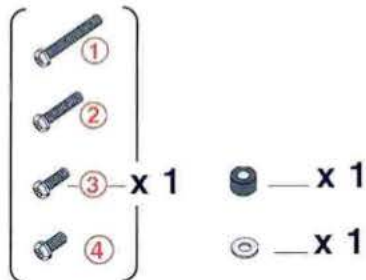
12 7 + 9 + 11 +

-  x 1
-  x 1
-  x 2

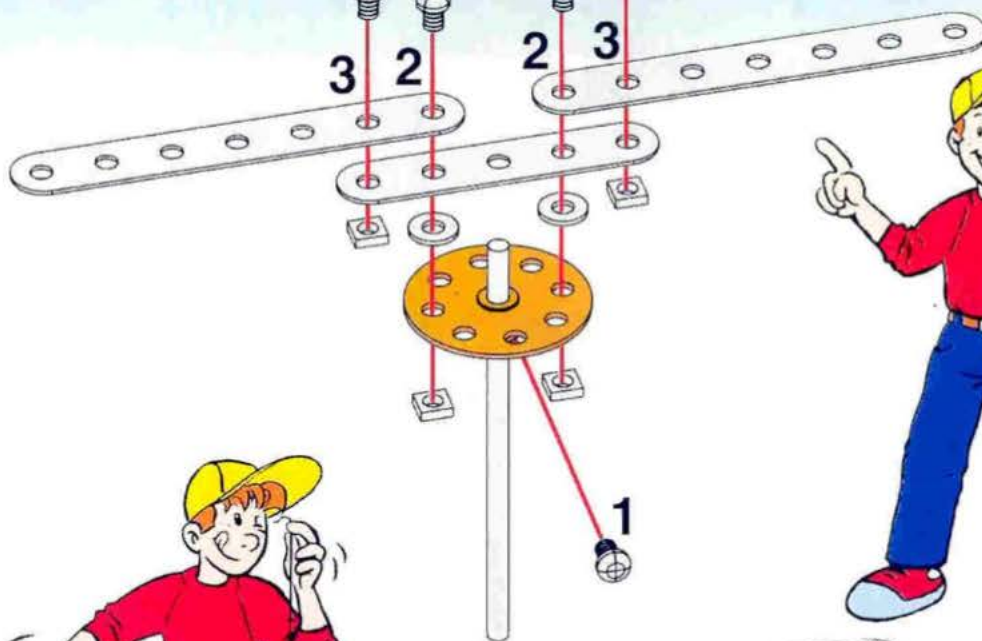
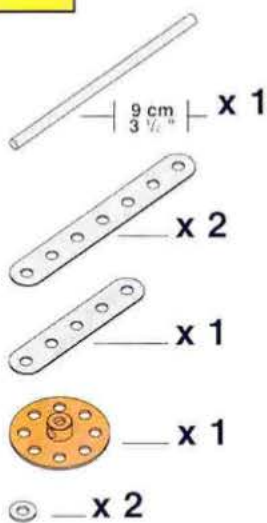


# 13

## 12+



# 14

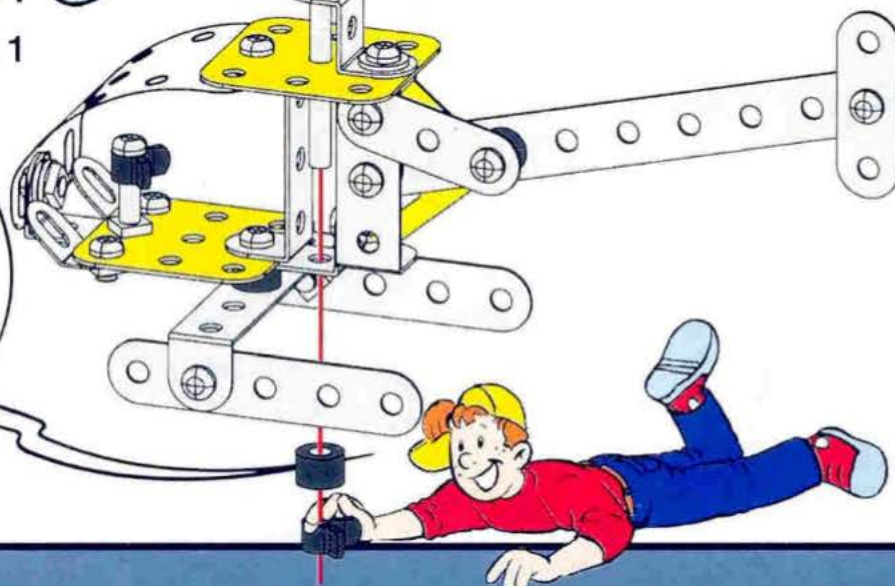


# 15

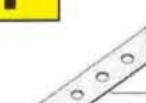


## 13 + 14 +

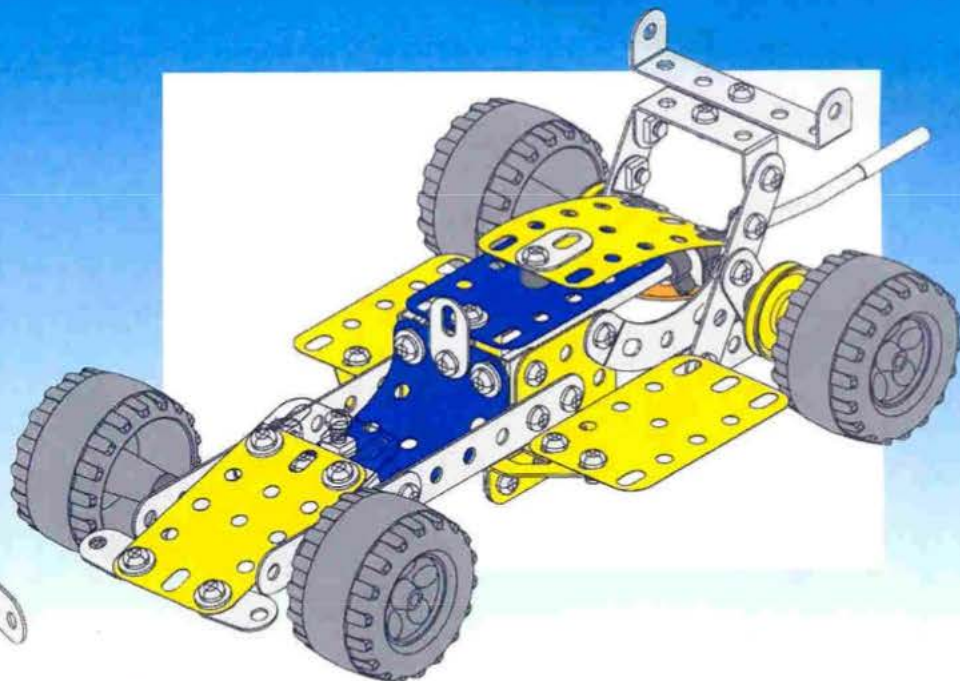
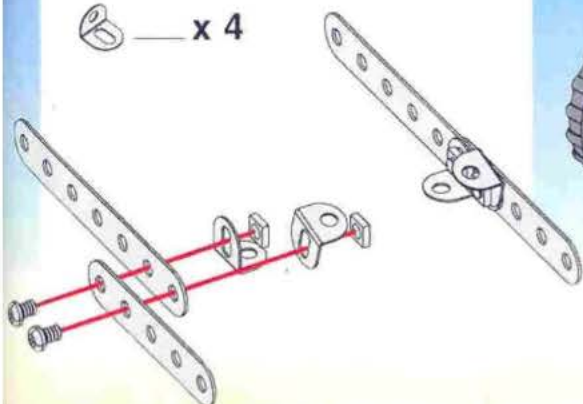
① — x 1  
 ② — x 1

Align, adjust and tighten the screws and nuts. Your helicopter is completed, the blades are rotating, you have done it !




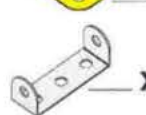
1

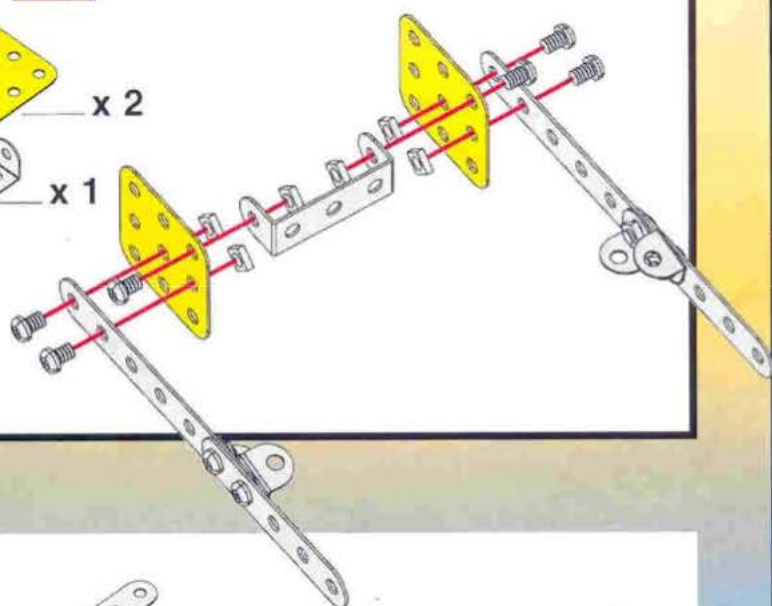
-  x 2
-  x 2
-  x 4



2



1 +


-  x 2
-  x 1

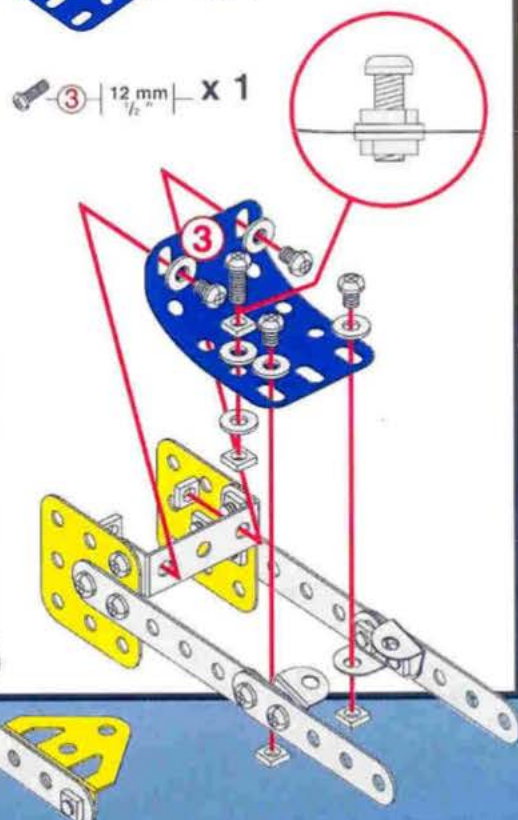


3






2 +

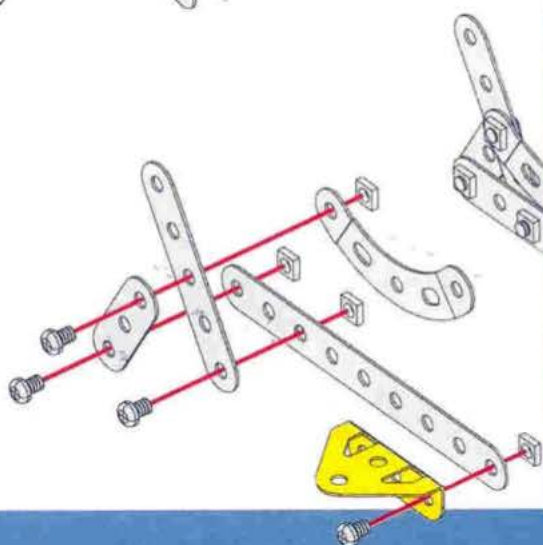
-  x 1
-  x 1

 12 mm x 1



4

-  x 2
-  x 2
-  x 2
-  x 2
-  x 2



[illegible]

**6** **5** +

x 1

x 1


x 1

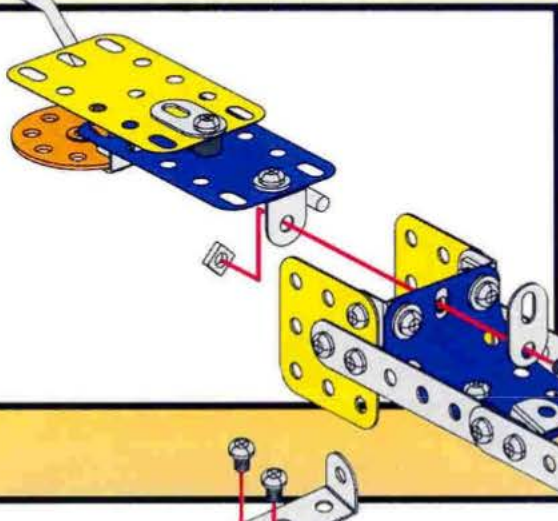
12 mm  $\frac{1}{2}$ " x 1

x 1

7

3 + 6 +

 x 1



**8**

**4 + 7 +**

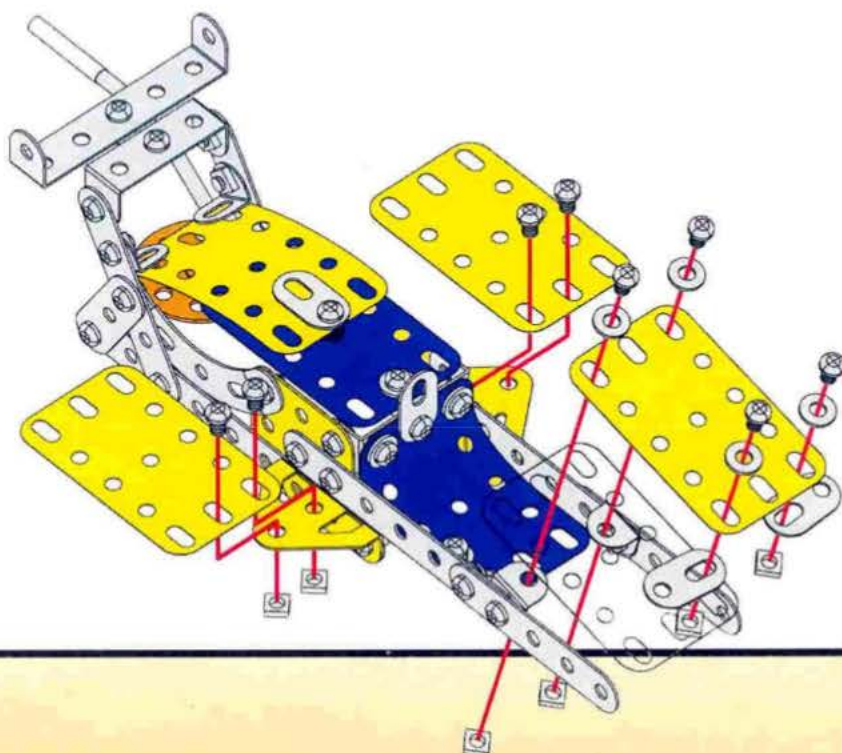
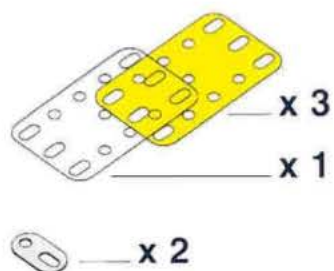
x 1

x 1

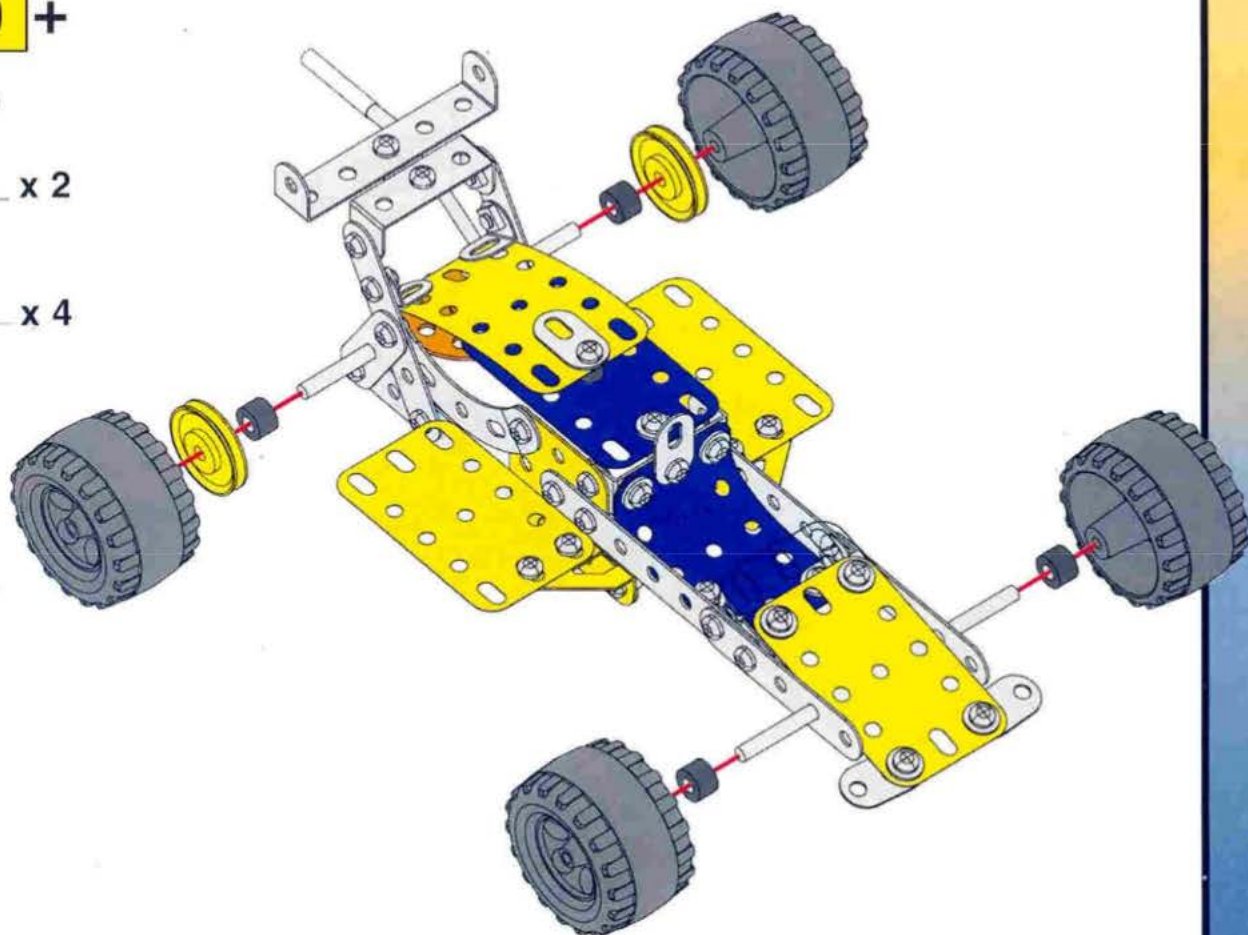
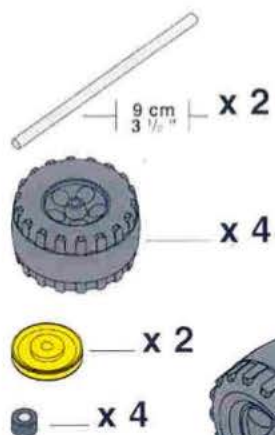
x 1

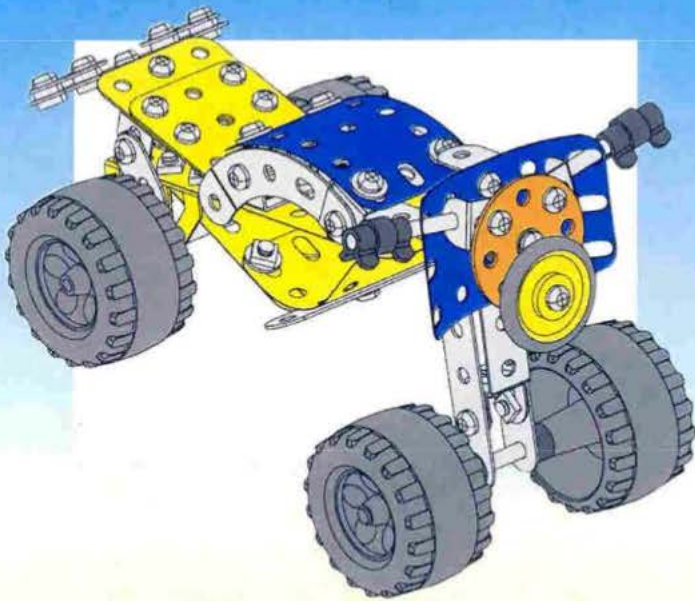
x 2

9 **8** +

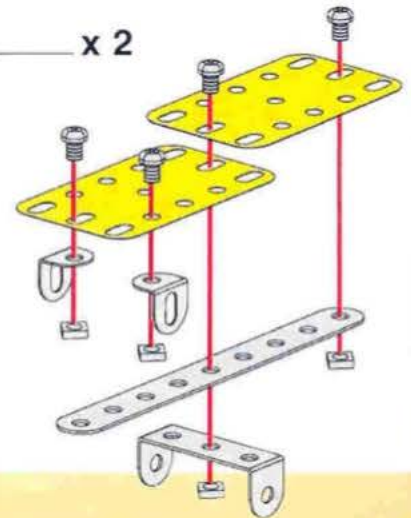
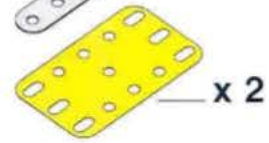
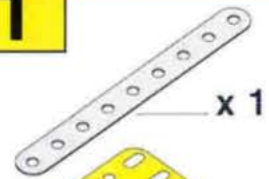


10 **9** +



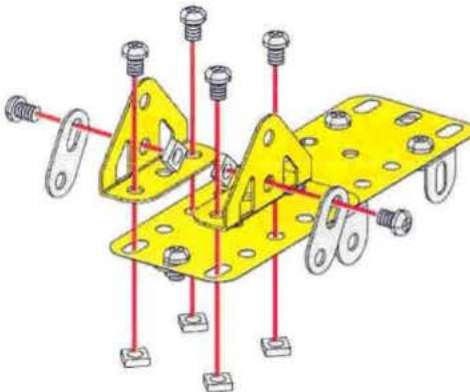
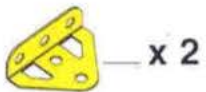


**1**

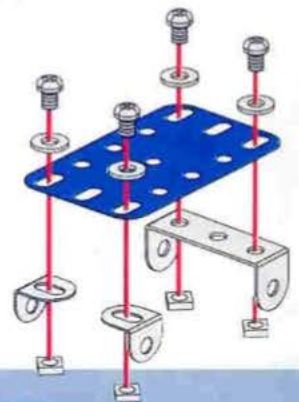


**2**

**1** +

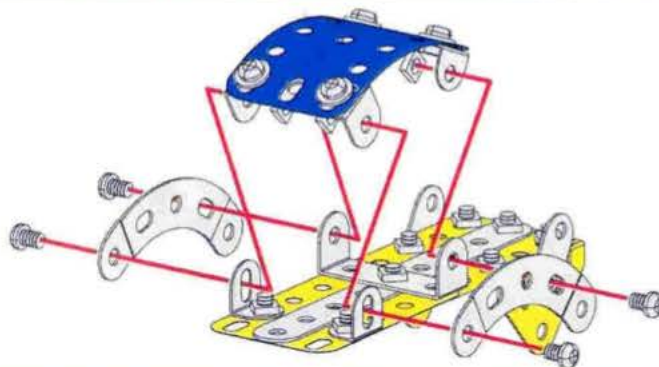








**3**



**4**

**2** + **3** +



 — x 1  
 — x 1  
 — x 1  
 — 23 mm  $\frac{29}{32}$ " — x 1  
 — 12 mm  $\frac{1}{2}$ " — x 1  
 — x 2  
 — x 1

**9** **8** +

x 2

x 1

x 1

x 1

x 1

12 mm x 1/2" x 1

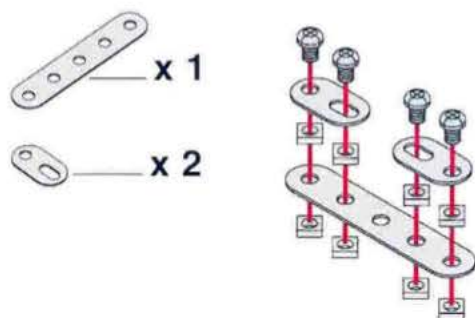
**0**

x 2

x 1

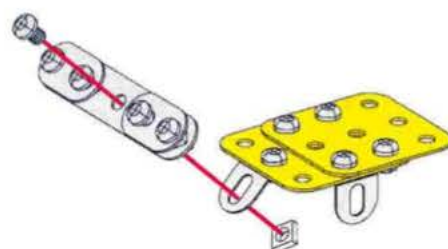
x 2

# 11



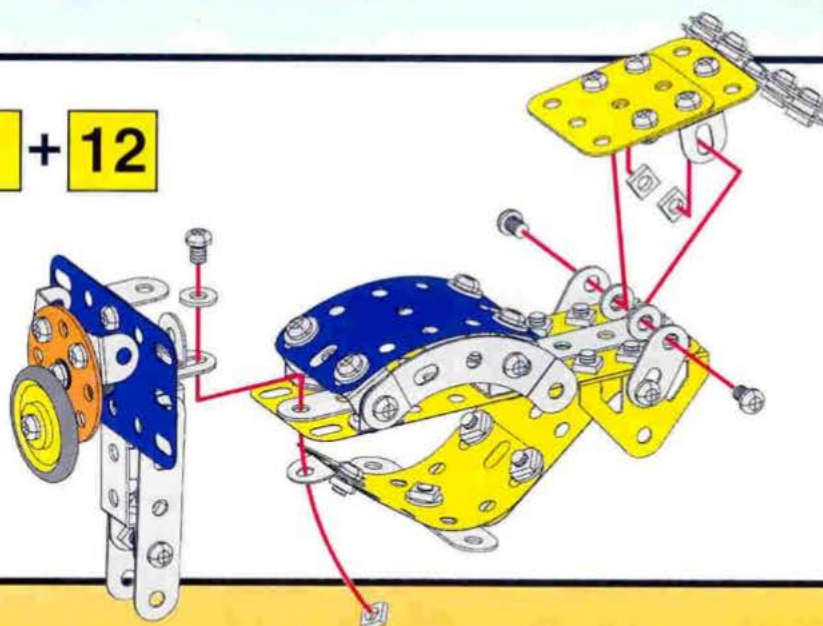
# 12

## 10 + 11



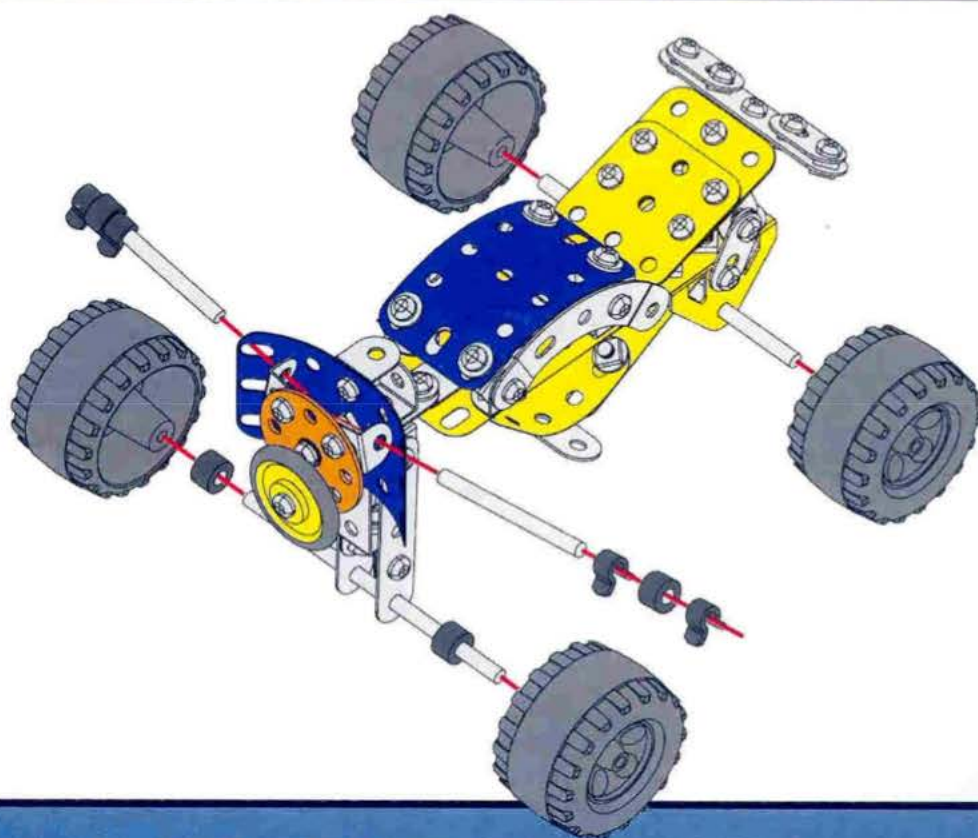
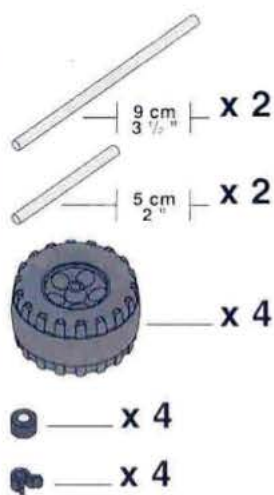
# 13

## 6 + 9 + 12

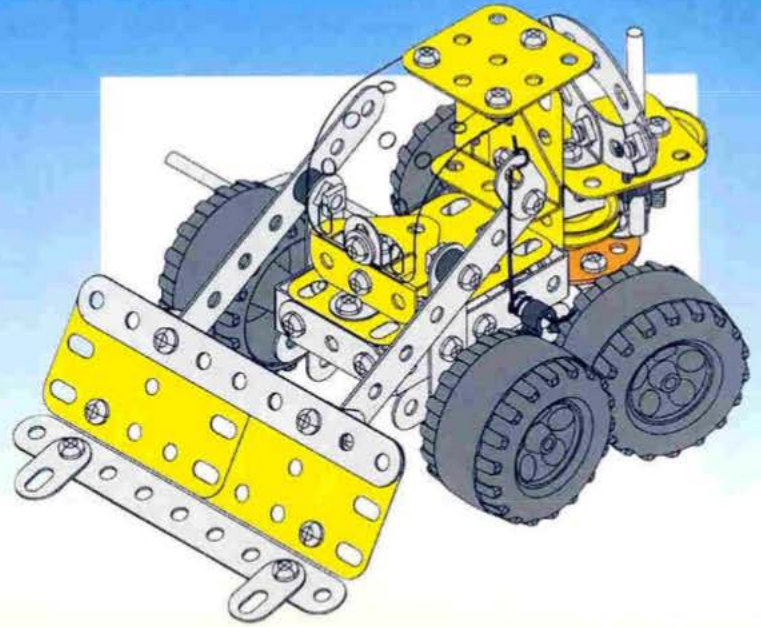
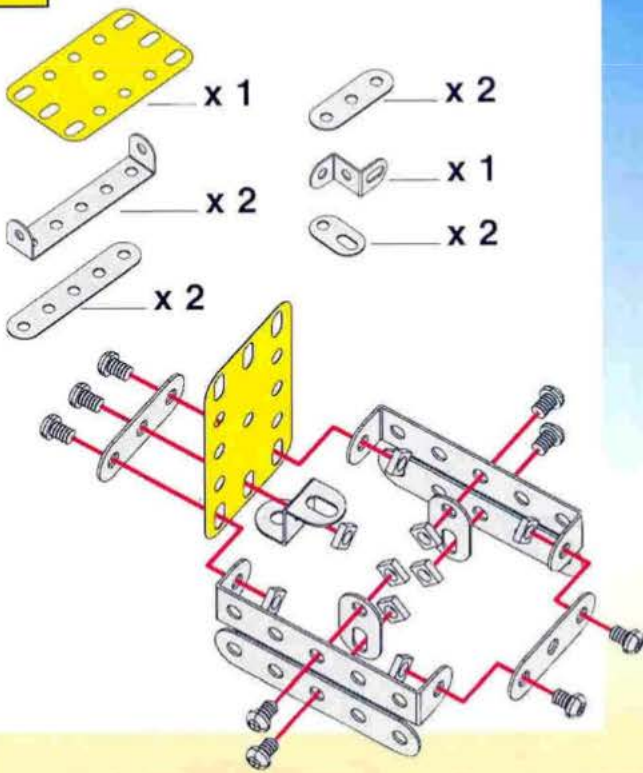


# 14

## 13 +

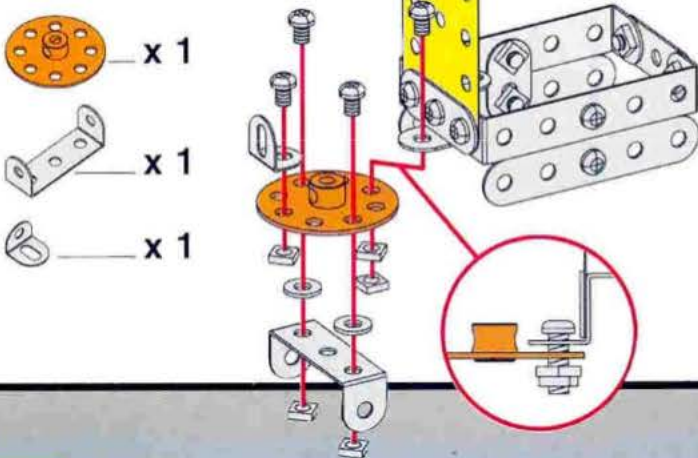


# 1



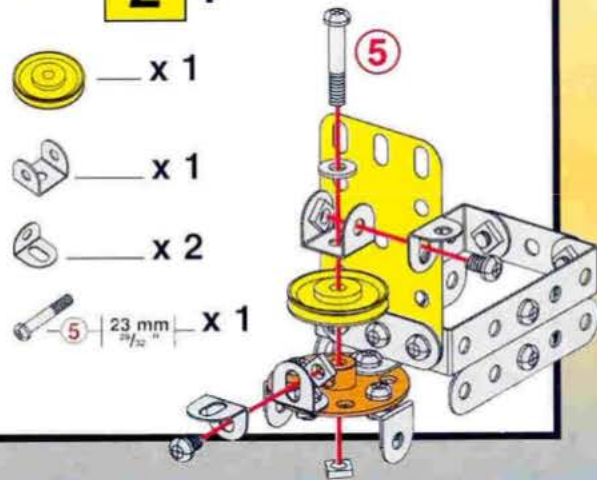
# 2

**1** +

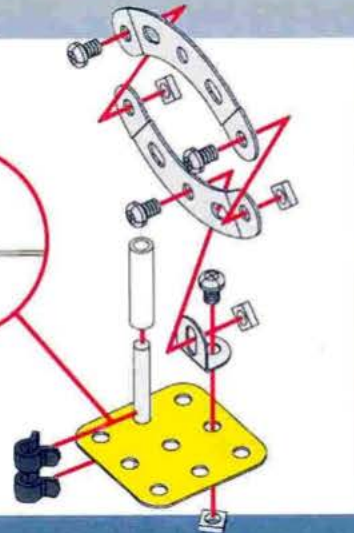
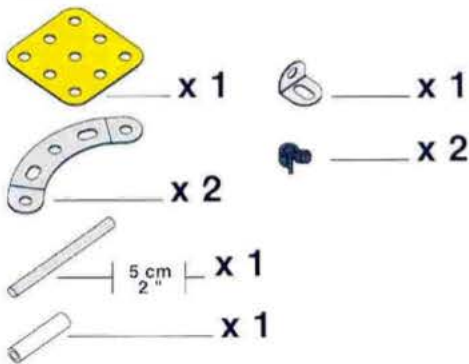


# 3

**2** +



# 4

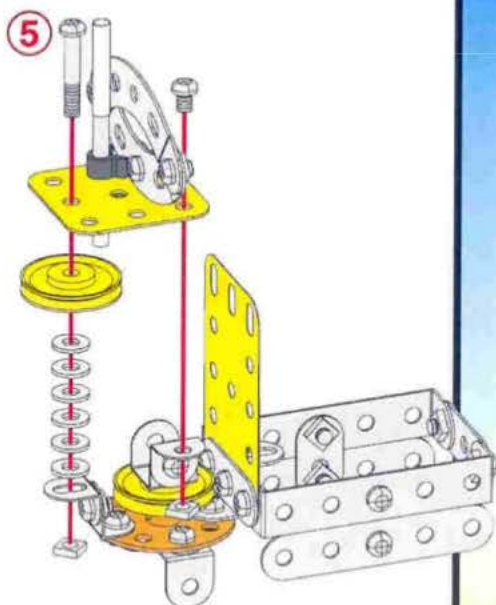


# 5

**3** + **4** +

 x 1


 23 mm x 1



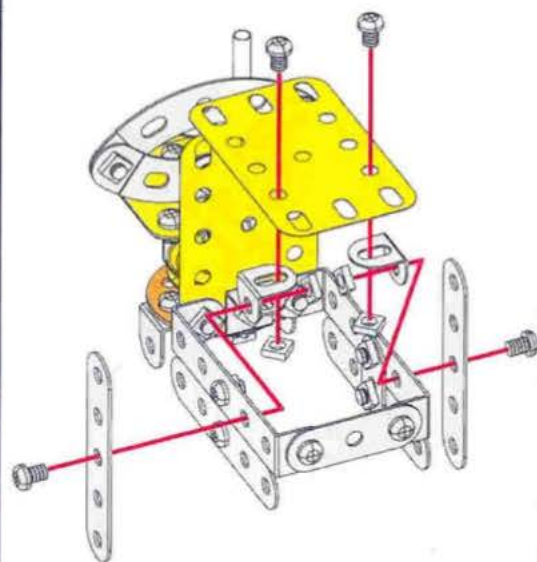
# 6

**5** +

 x 1


 x 2


 x 2

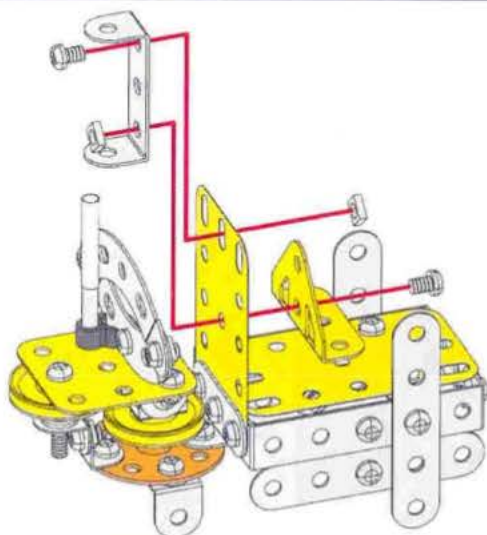


# 7

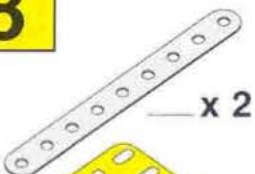
**6** +

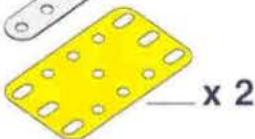
 x 1

 x 1



# 8

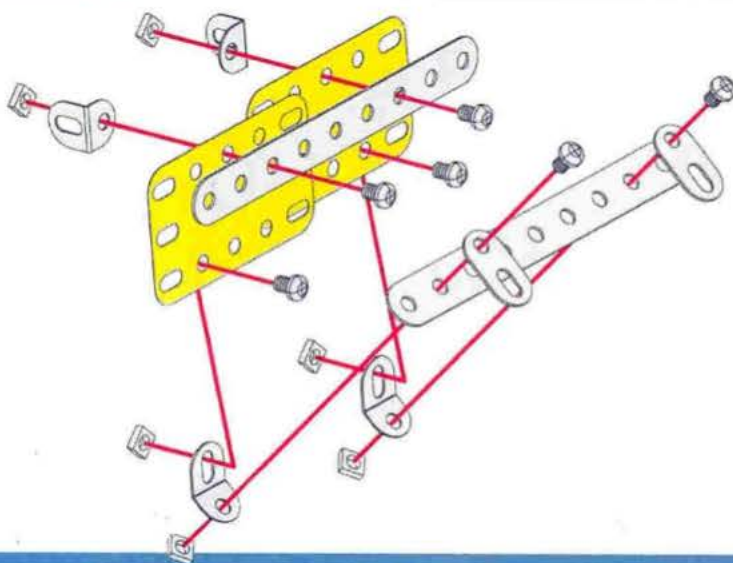
 x 2

 x 2

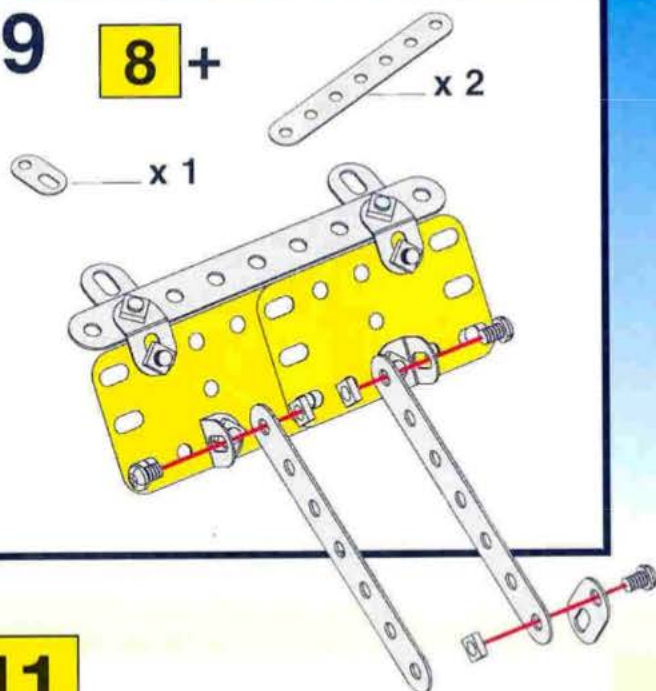
 x 2

 x 2

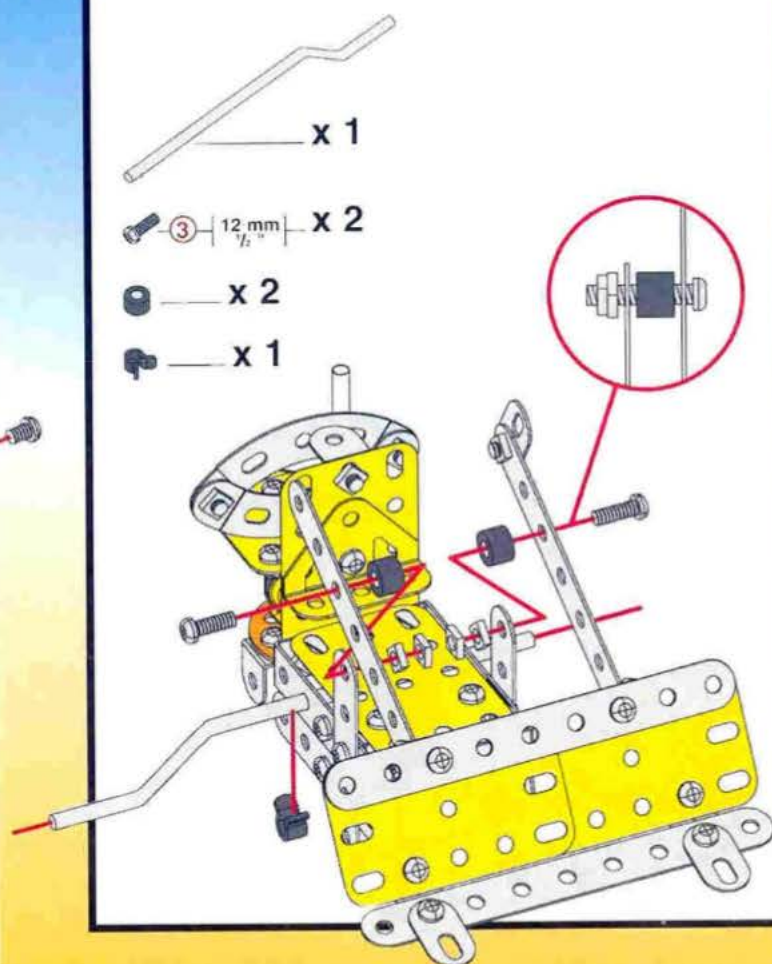
 x 2



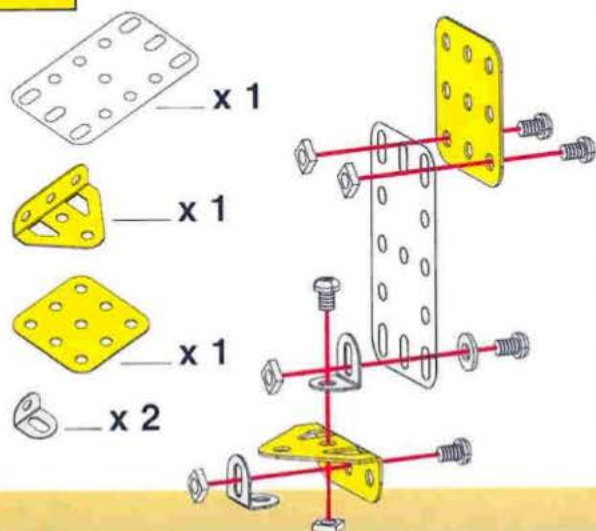
9 **8** +



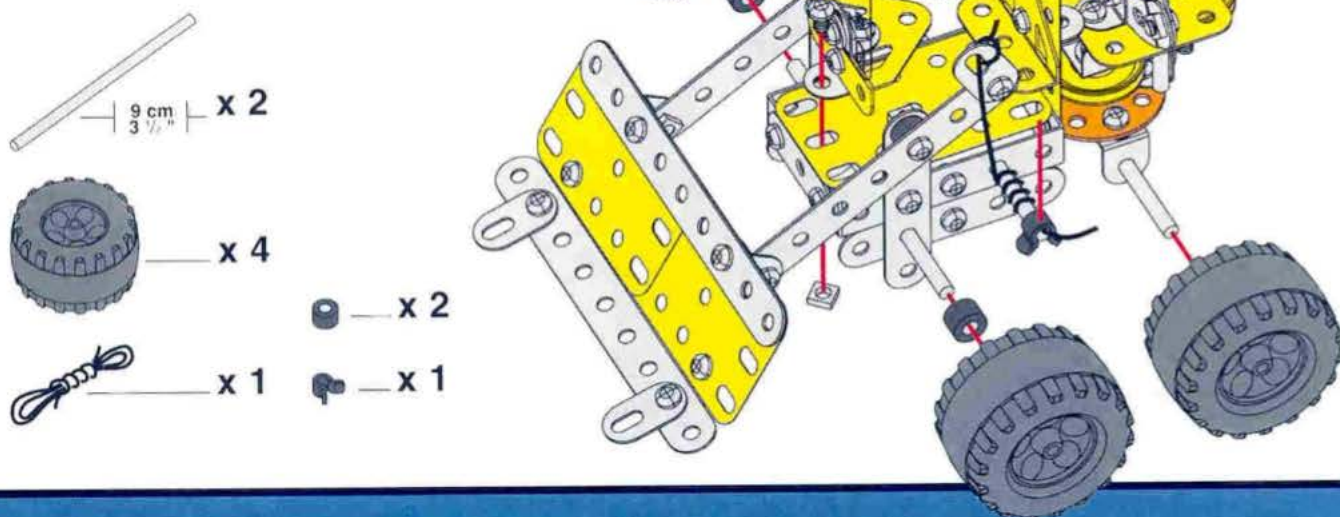
10 **7** + **9** +

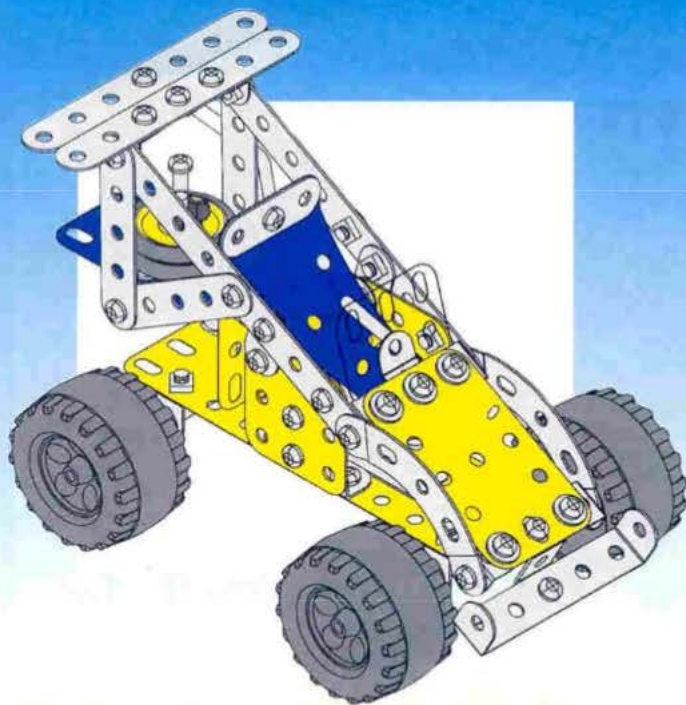


11

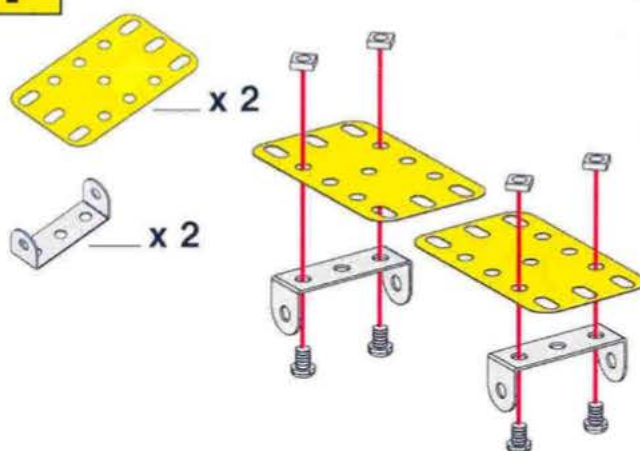


12 **10** + **11** +

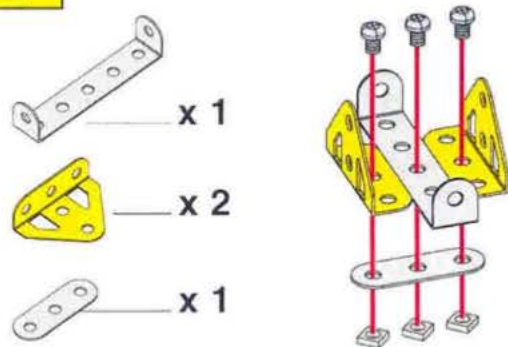




**1**

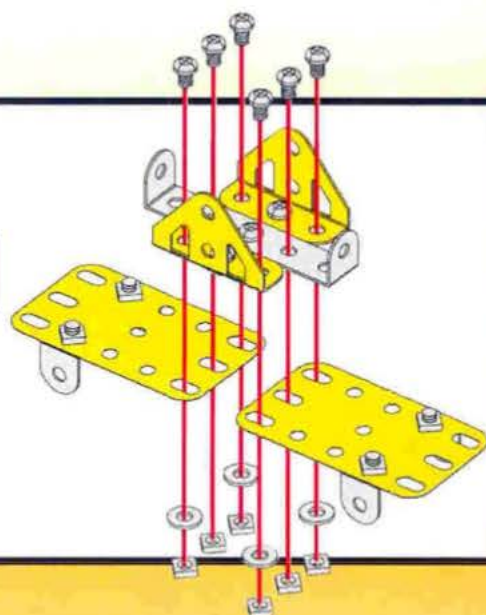


**2**

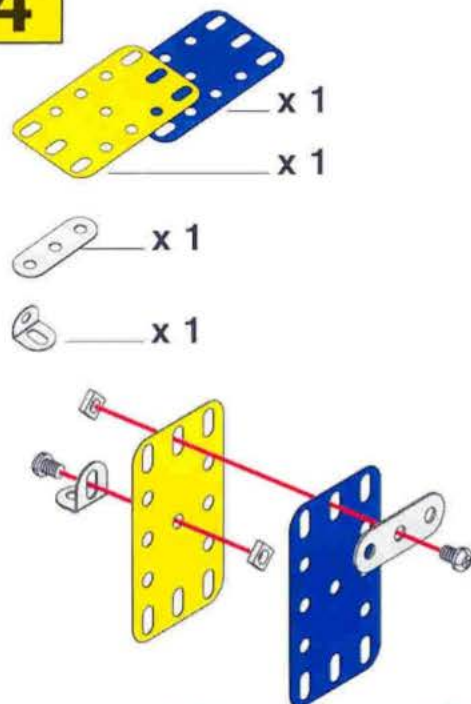


**3**

**1 + 2**

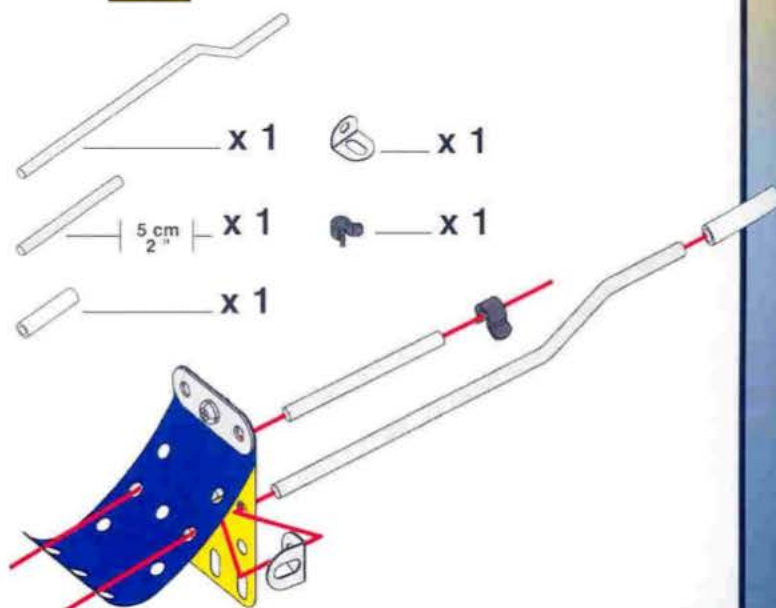


**4**



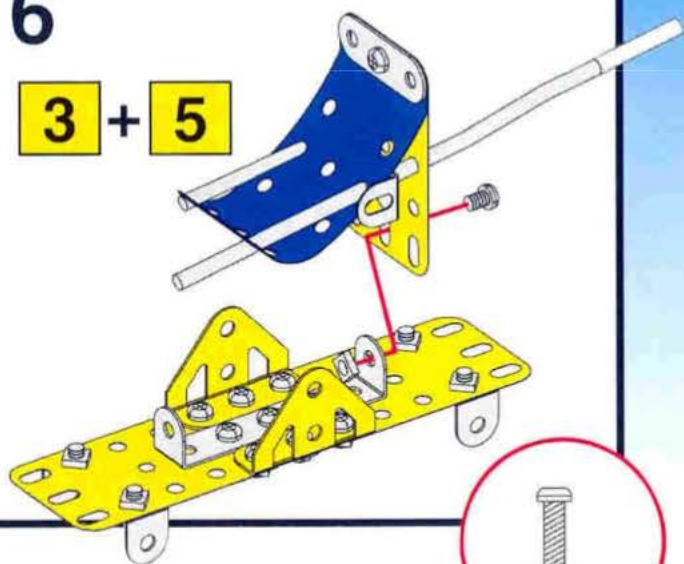
**5**

**4 +**



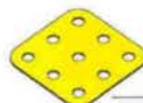

6

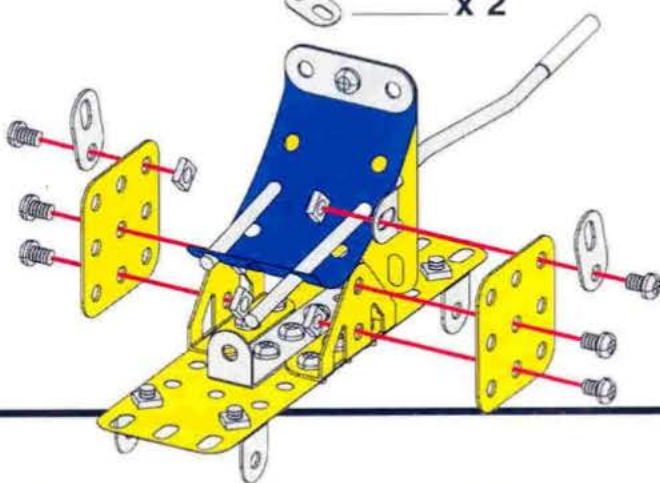
3 + 5



7

6 +

 x 2  
 x 2

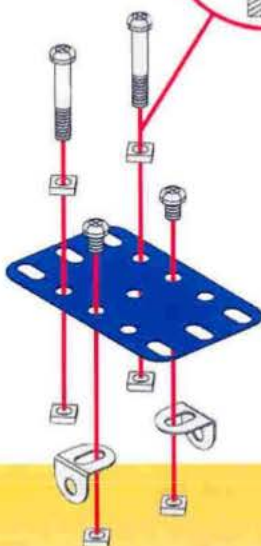


8

 x 1

 5 | 23 mm | x 2

 x 2




9

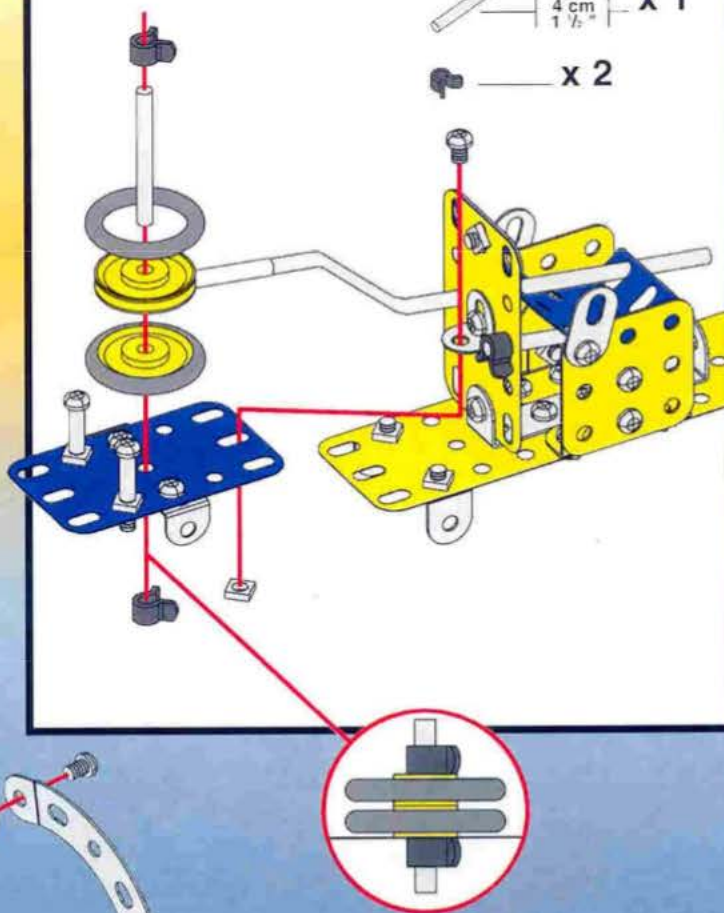
7 + 8 +

 x 2


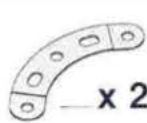

 x 2

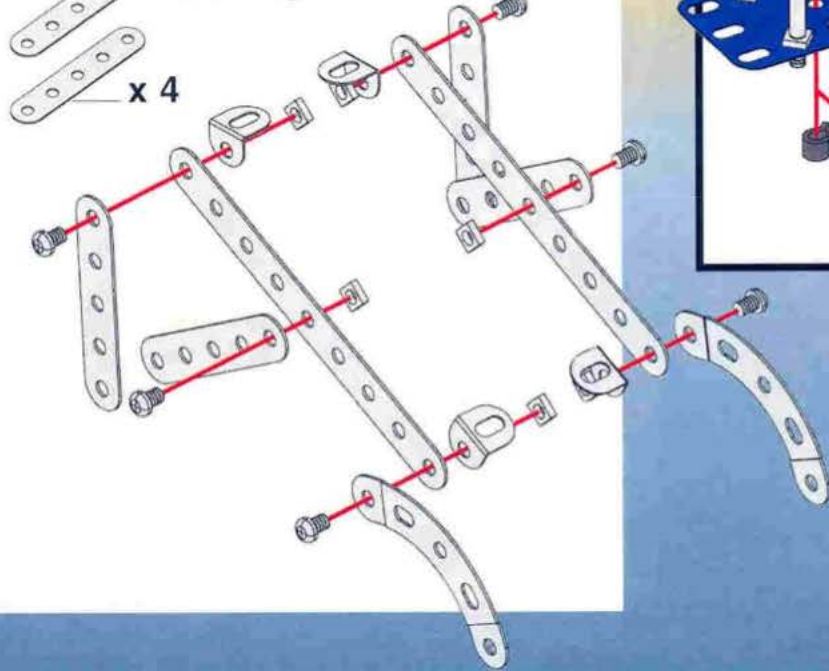
 4 cm | 1 1/2" | x 1

 x 2

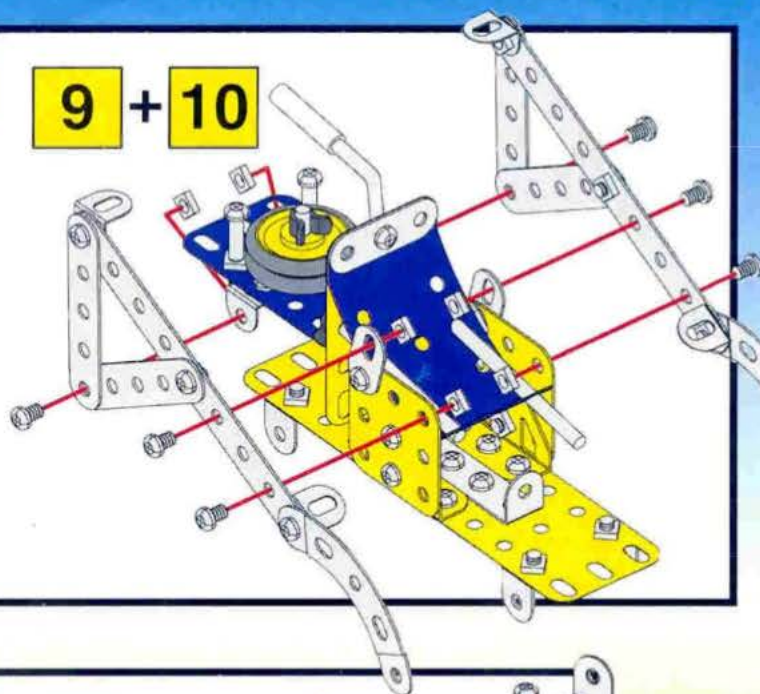


10

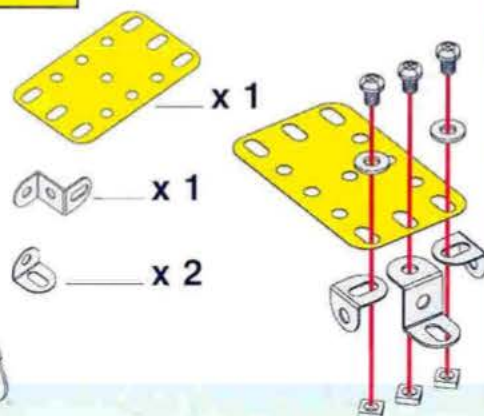
 x 2  
 x 2  
 x 4



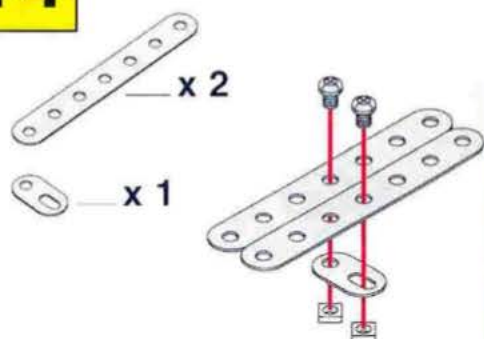
**11** **9 + 10**



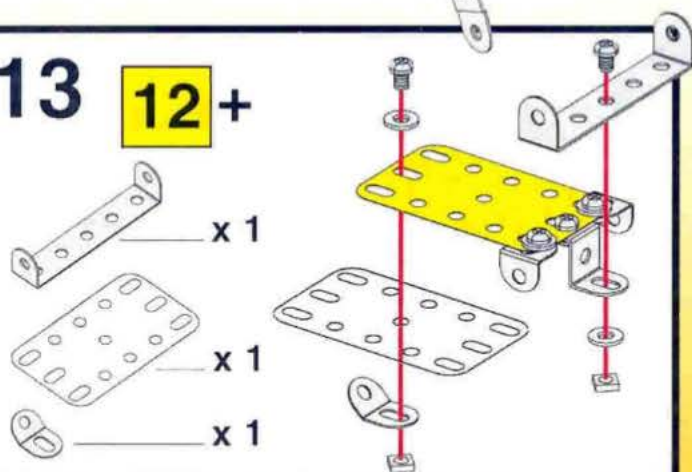
**12**



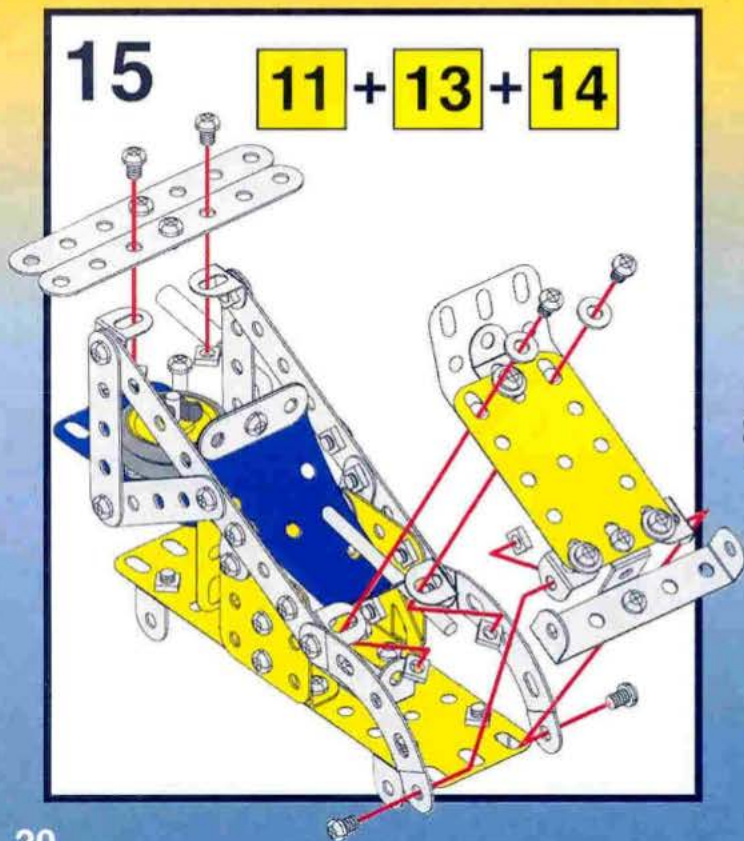
**14**



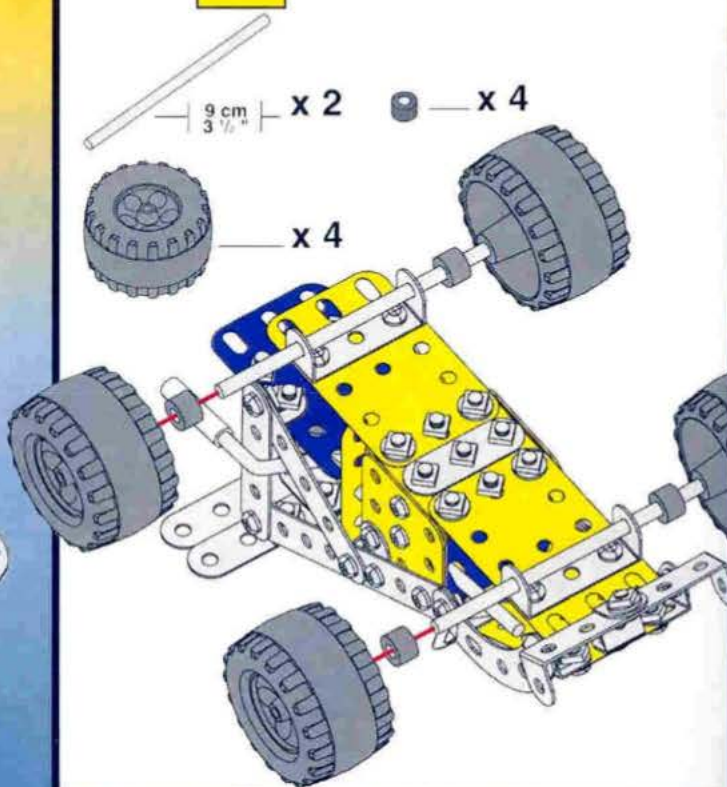
**13** **12 +**



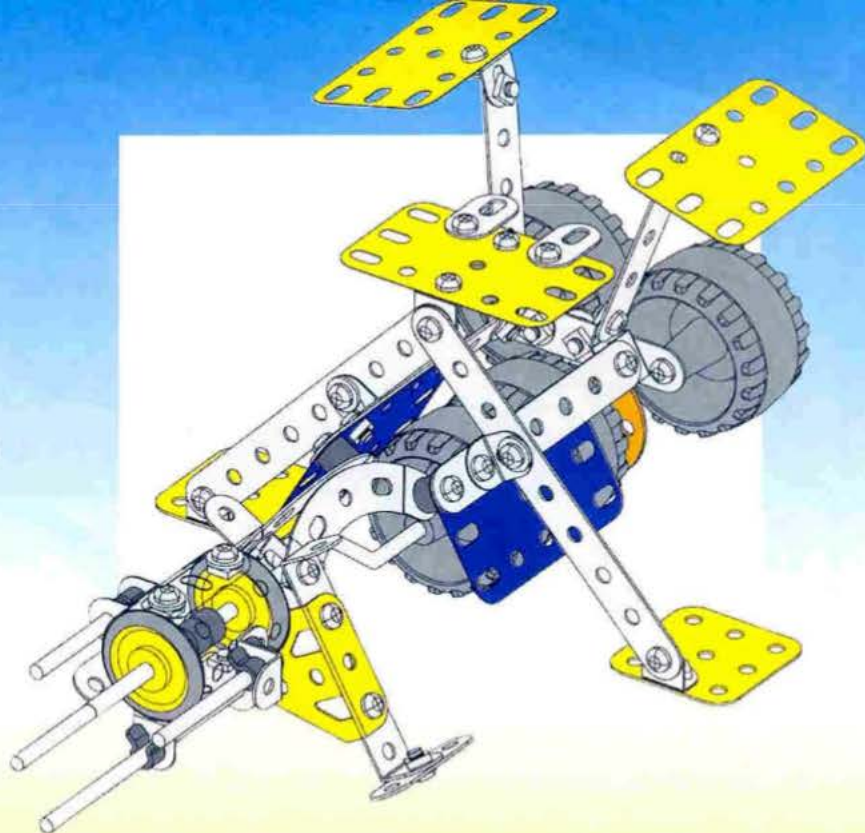
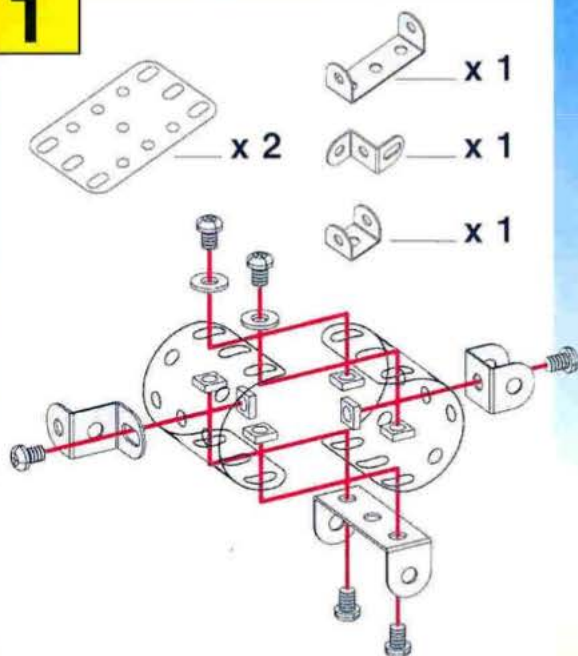
**15** **11 + 13 + 14**



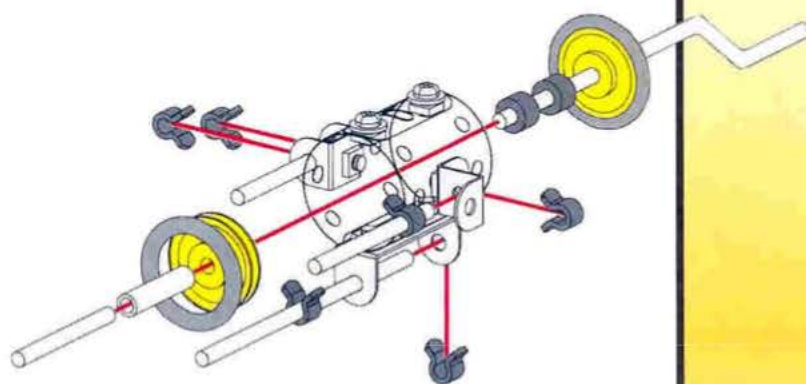
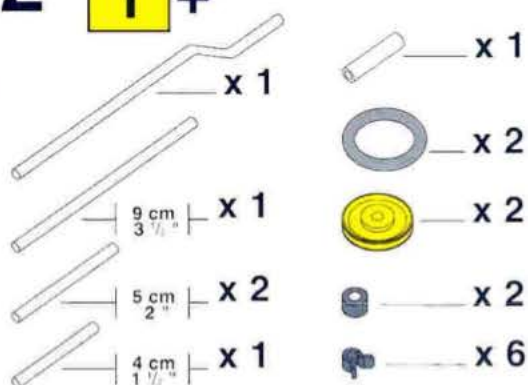
**16** **15 +**



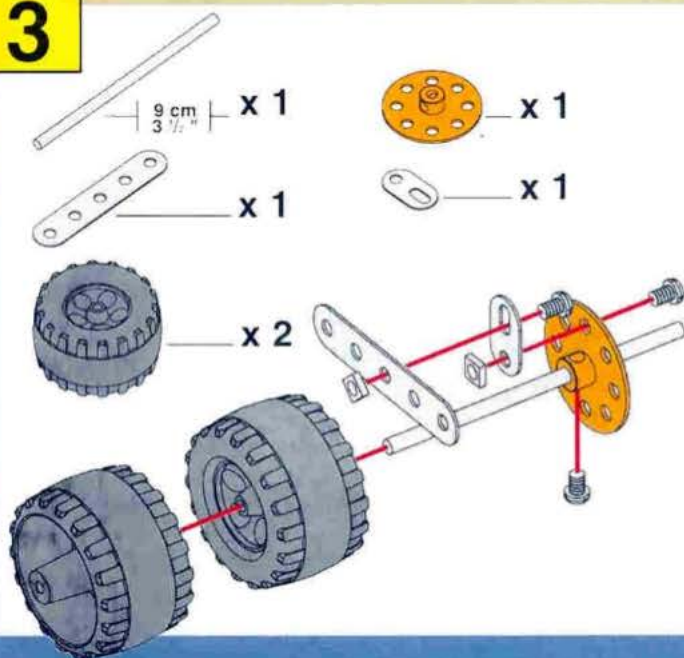
# 1



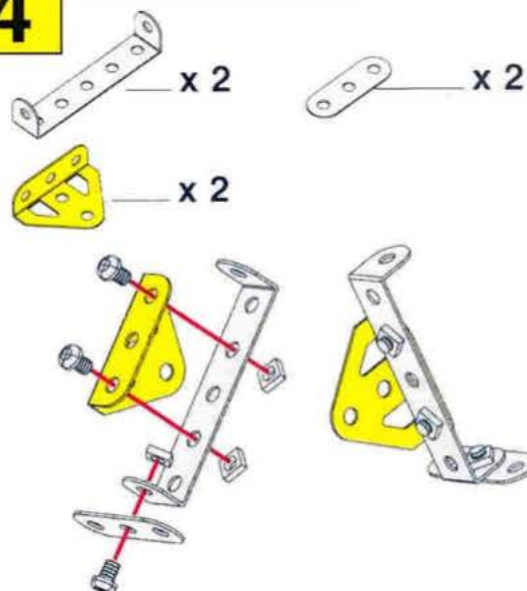
# 2 1 +



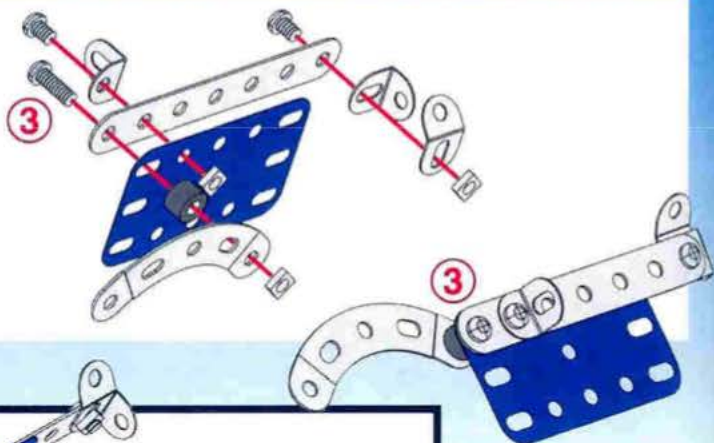
# 3



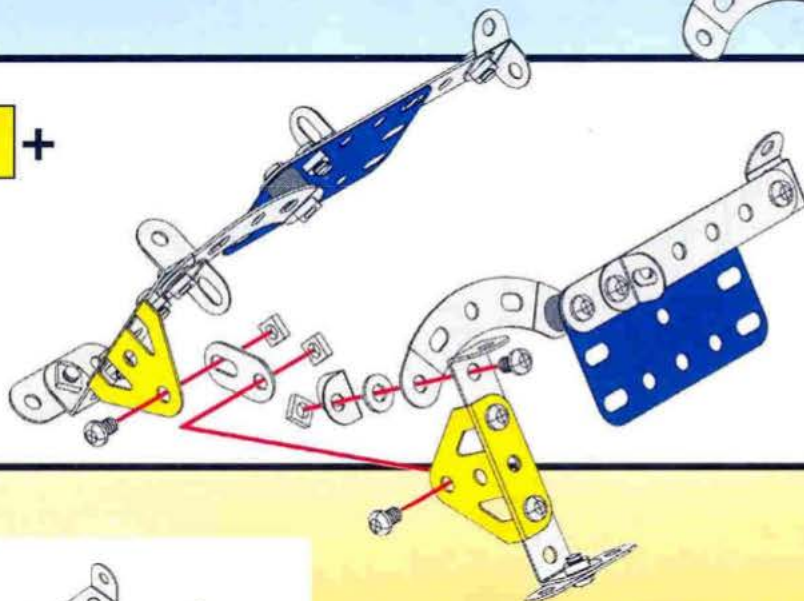
# 4



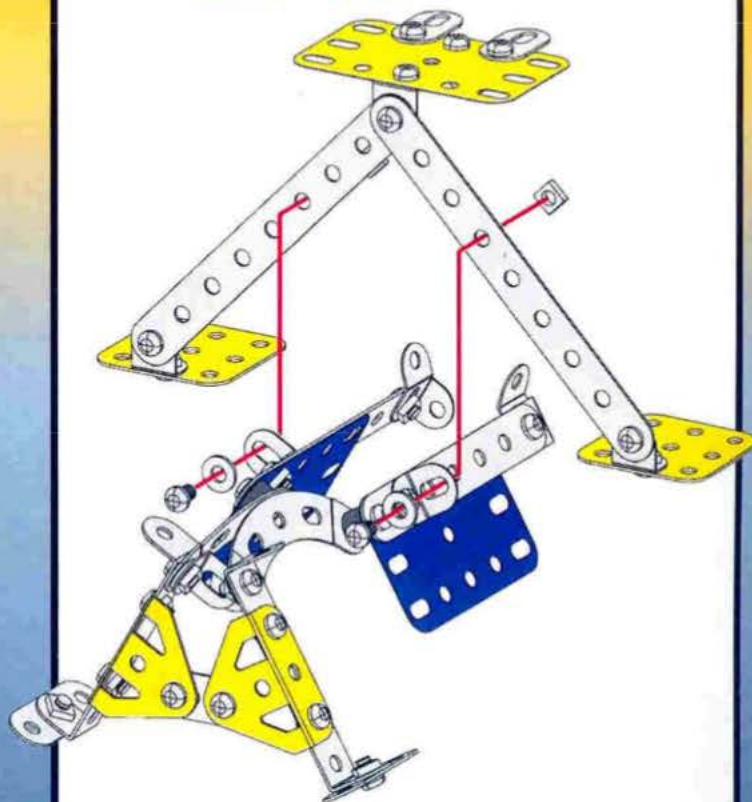
5



4 + 5 +

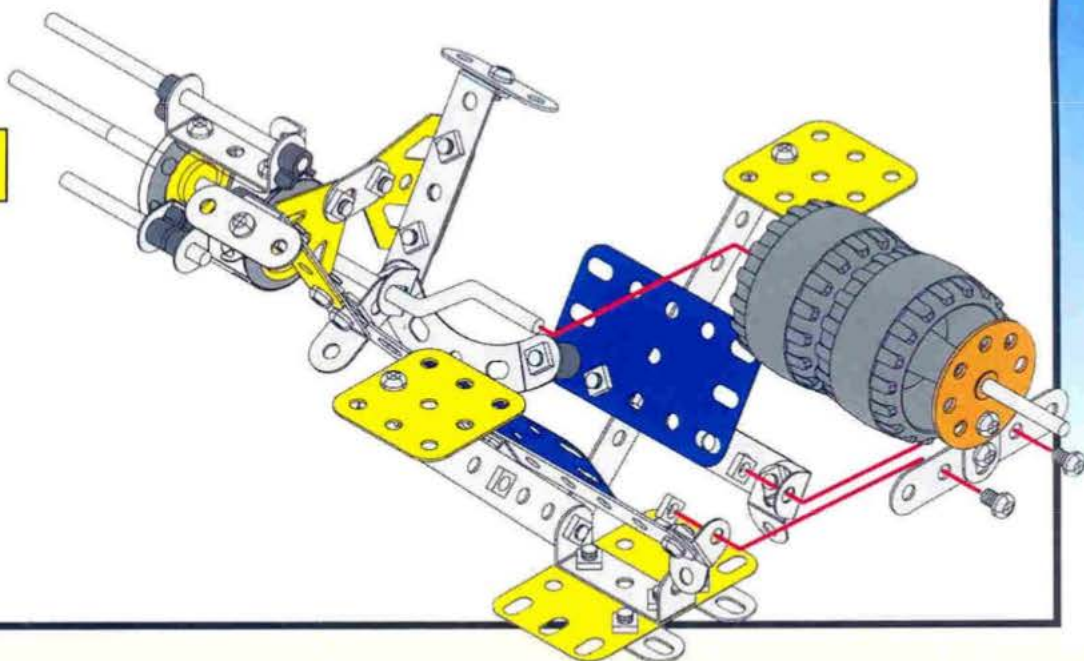


7

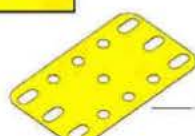


 $6 + 7 +$ 

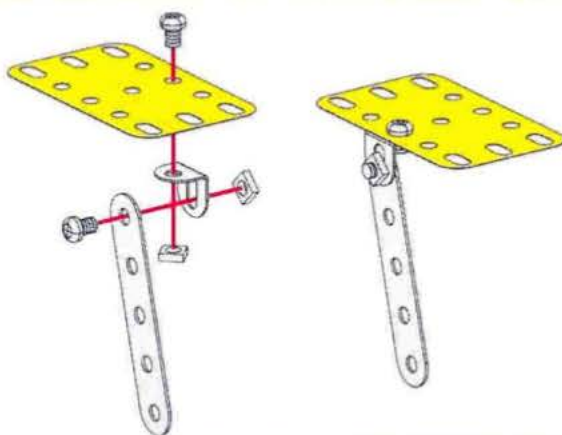
# 9

**2 + 3 + 8**




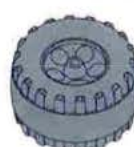
# 10

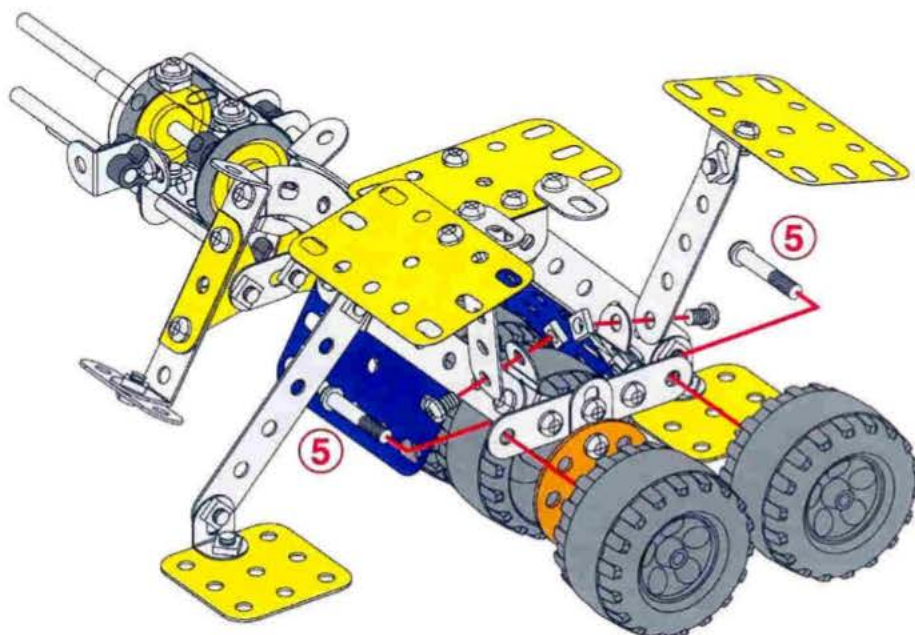
-  x 2
-  x 2
-  x 2



# 11

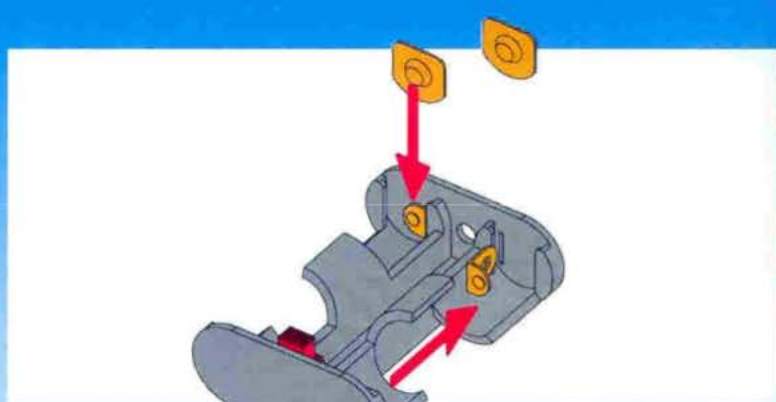
**9 + 10 +**

-  5 | 23 mm | x 2
-  x 2

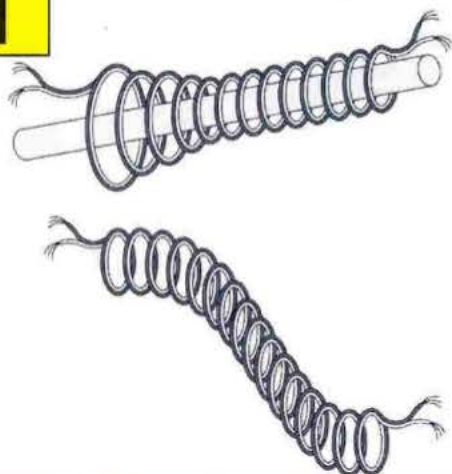


## MOUNTING OF METAL STRIP TO BATTERY PACK

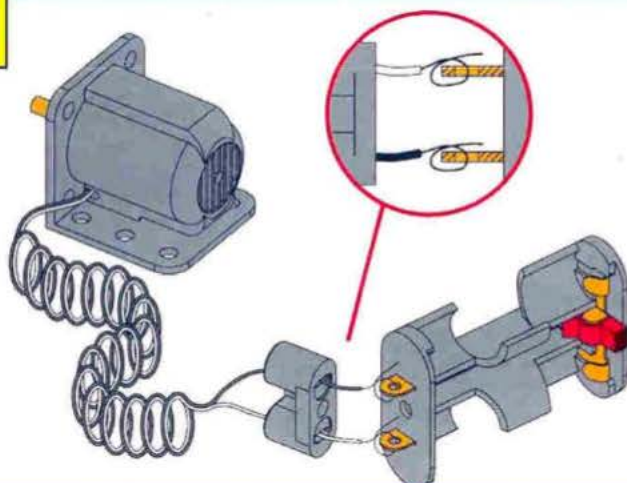
## ELECTRICAL WIRING OF MOTOR TO BATTERY PACK



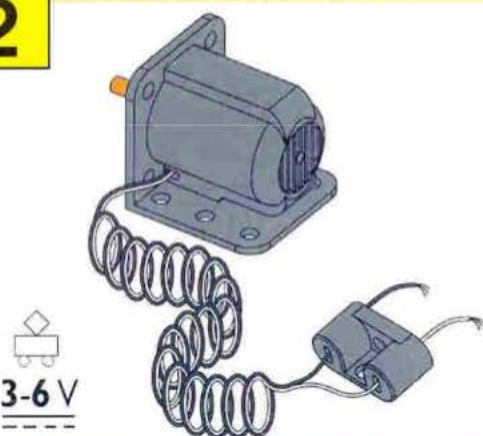
**1**



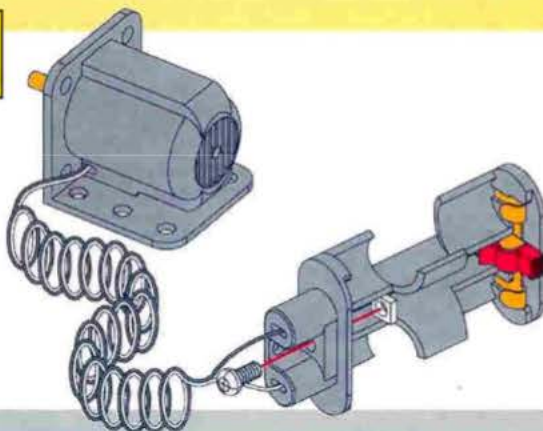
**3**



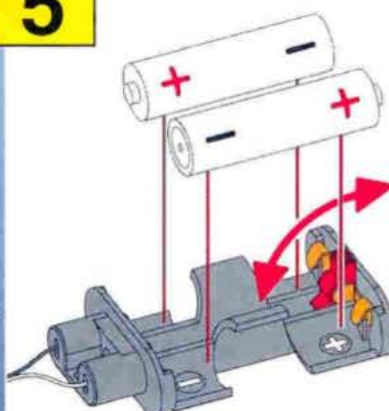
**2**



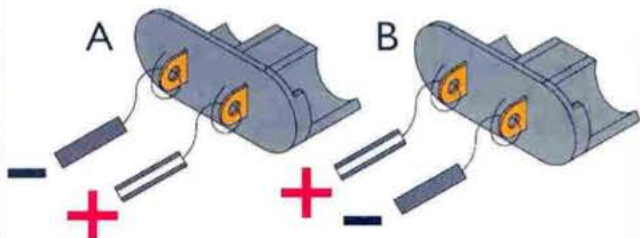
**4**



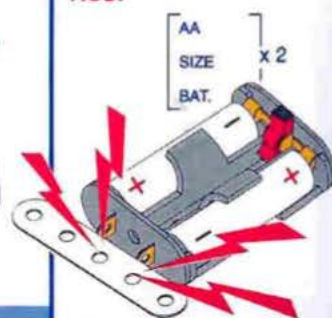
**5**



A : FORWARD ROTATION  
B : BACKWARD ROTATION



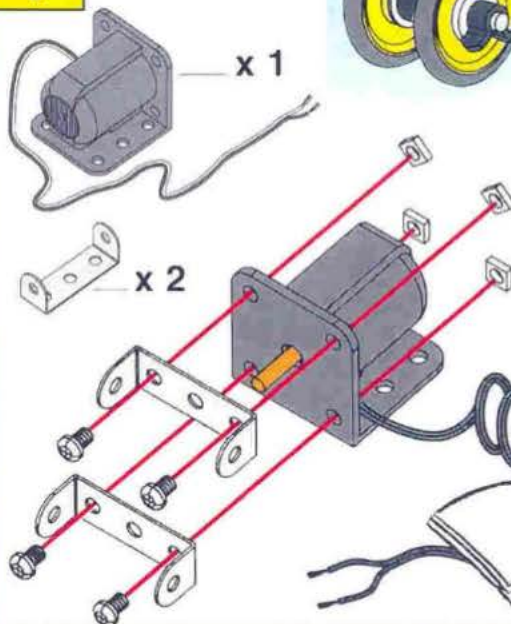
**CAUTION !**  
Touching both  
terminals with  
metal parts  
will ruin batte-  
ries.



Construct this model with basic ERECTOR set 2. You will discover the advantage of the electric motor, which lets this model run by itself.

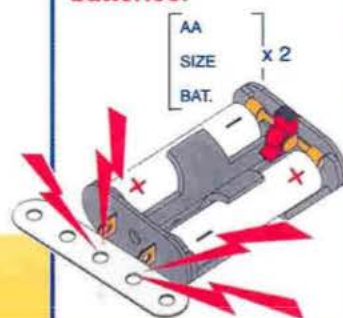
Your first motorised model : a dragster.

1



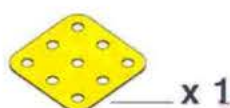
For constructing and adjusting the motor assembly, look at the instruction manual number 2, page 3 !  
...It will give you the setting-up instruction step by step.

**CAUTION !**  
Touching both terminals with metal parts will ruin batteries.



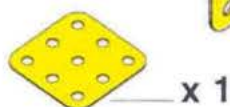
2

1 +



3

2 +

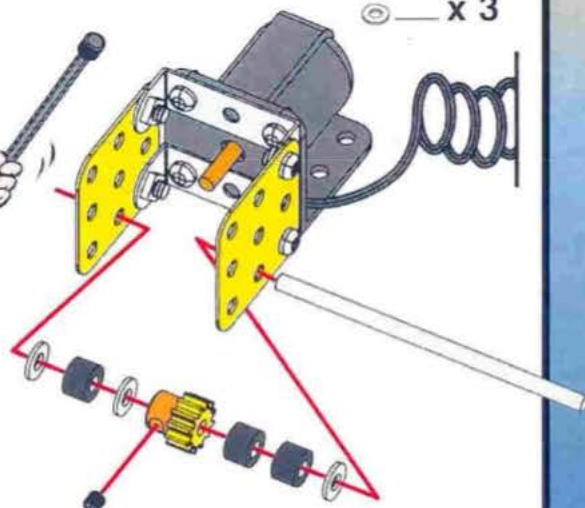


4

3 +



- x 1
- x 1
- x 3
- x 3

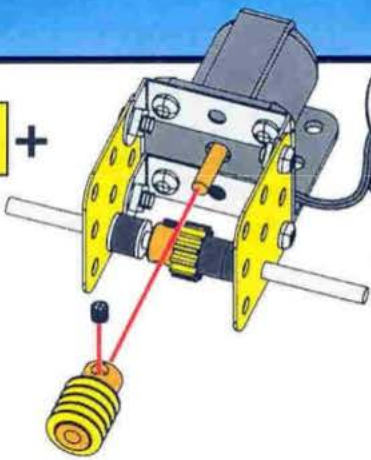


5

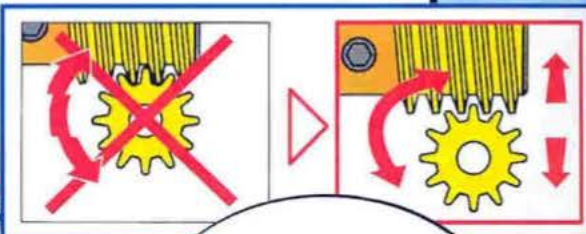
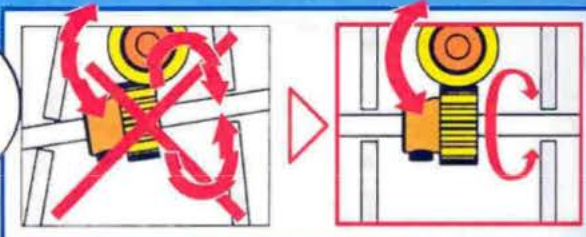
4 +

 x 1

 x 1



Align the axles so that the gears rotate freely.



Adjust the gears, leaving some space between the teeth (just enough to prevent binding).




6

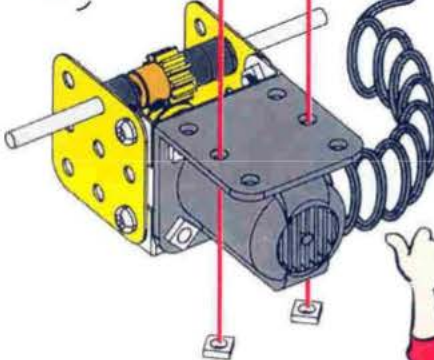
 x 1



7

5 + 6 +


-  ①
-  ②
-  ③
-  ④ x 1

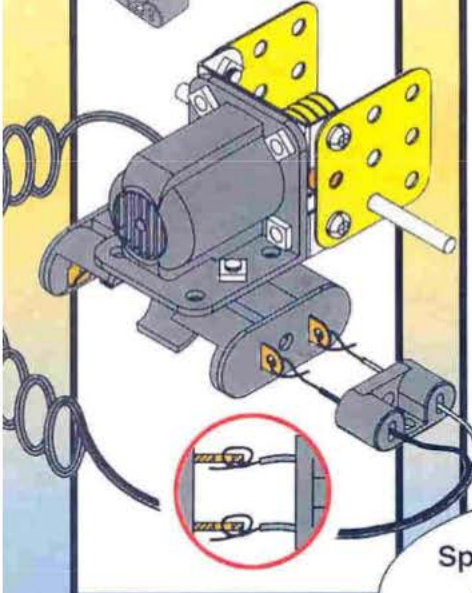


Speed reduction by gears. Reducing speed increases power : some examples which you will use in other constructions.

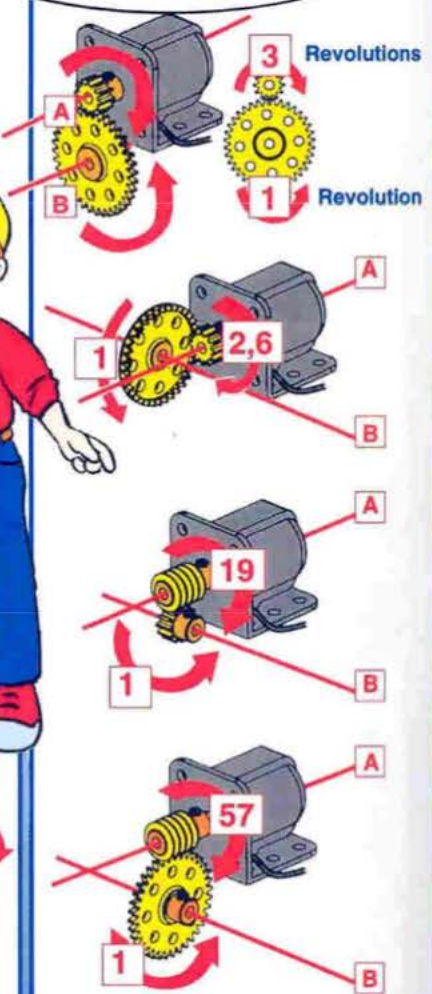
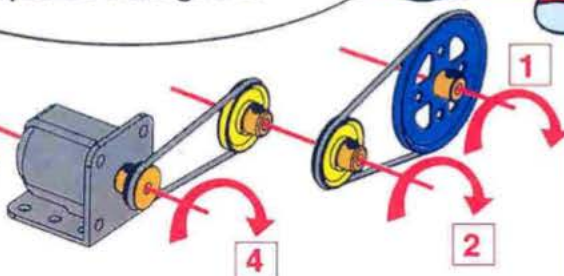
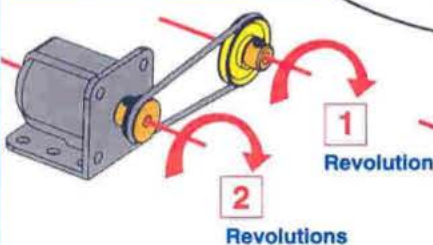
8

7 +

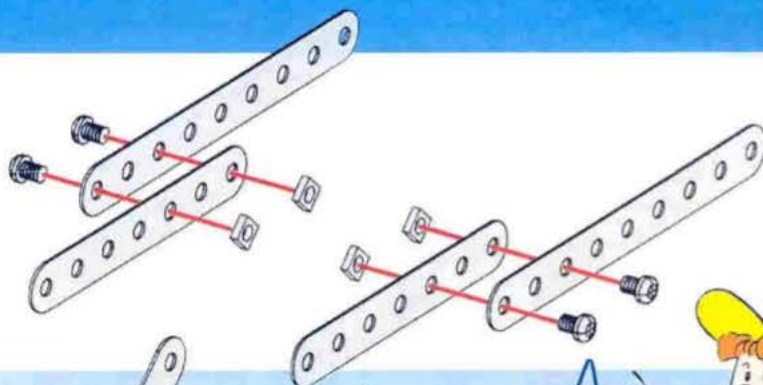
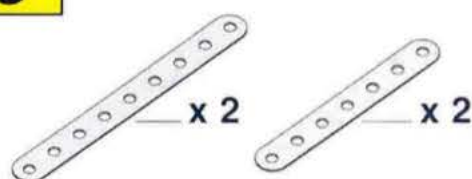
 x 1



Speed reduction by drive belts : another driving system for different uses. More flexible and quieter than gears.

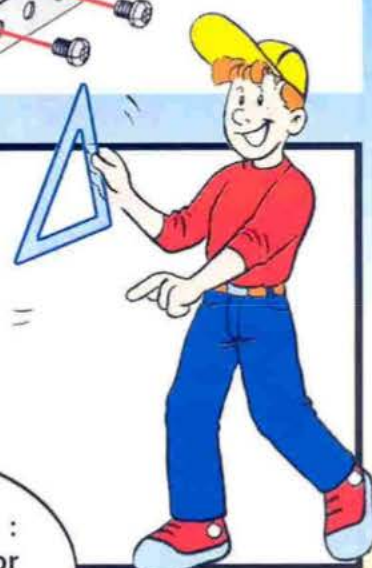
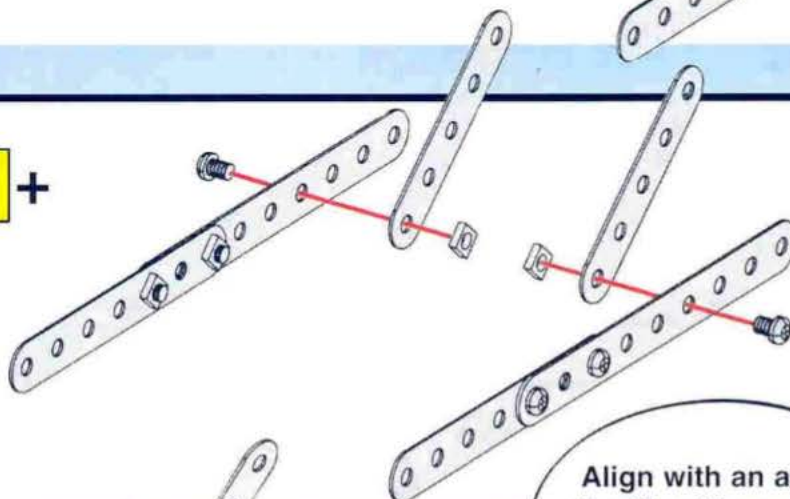


# 9



# 10

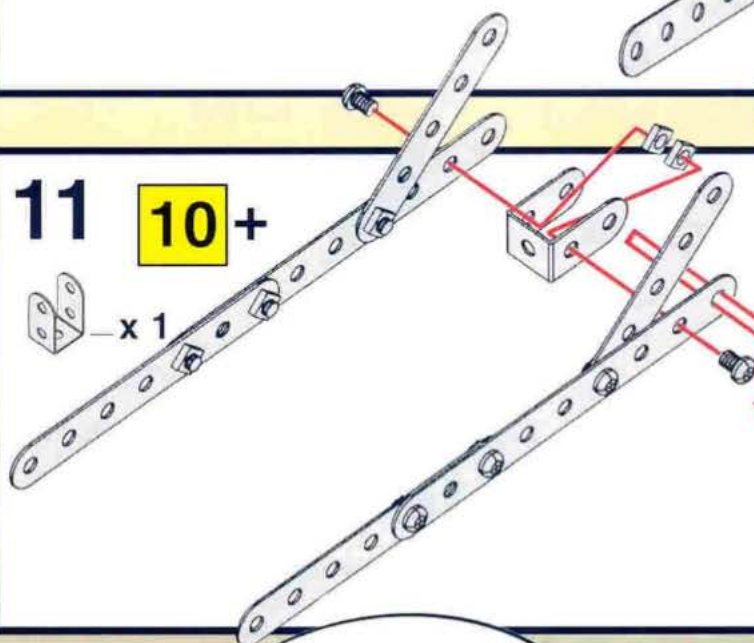
## 9 +



Align with an axle :  
it will guide you for  
easy adjustment of  
the parts.

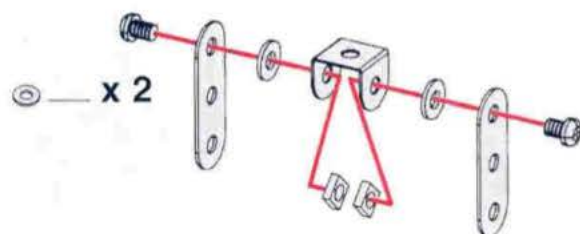
# 11

## 10 +



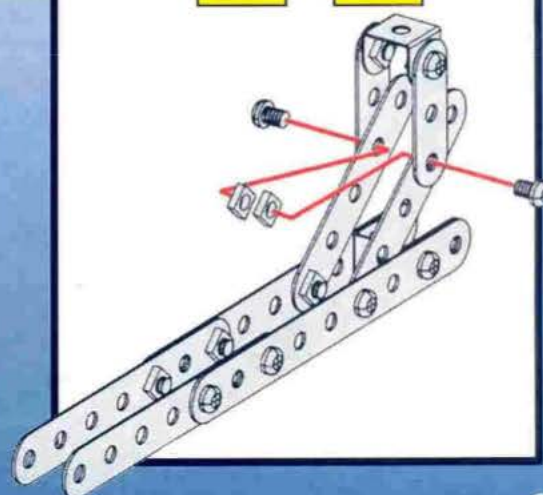
# 12

Don't forget the  
washers : they are  
important for the  
correct running of  
your model



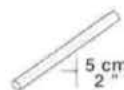
# 13

## 11 + 12

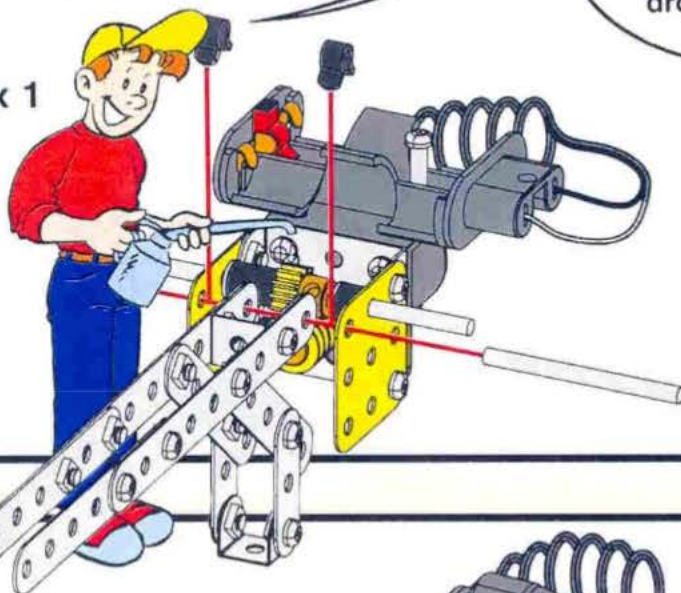


# 14

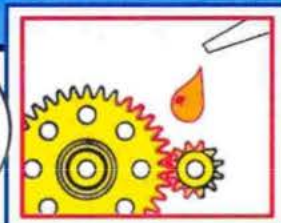
**8 + 13 +**

  $\frac{5\text{ cm}}{2}$  x 1

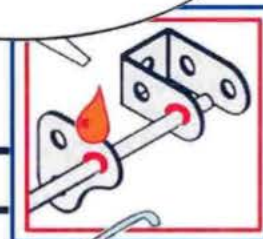
 x 2



Oil the gears. They will run better and not wear out. One drop is enough.




Oil the axles or bearing supports. Your model will run faster and stay in good mechanical condition.

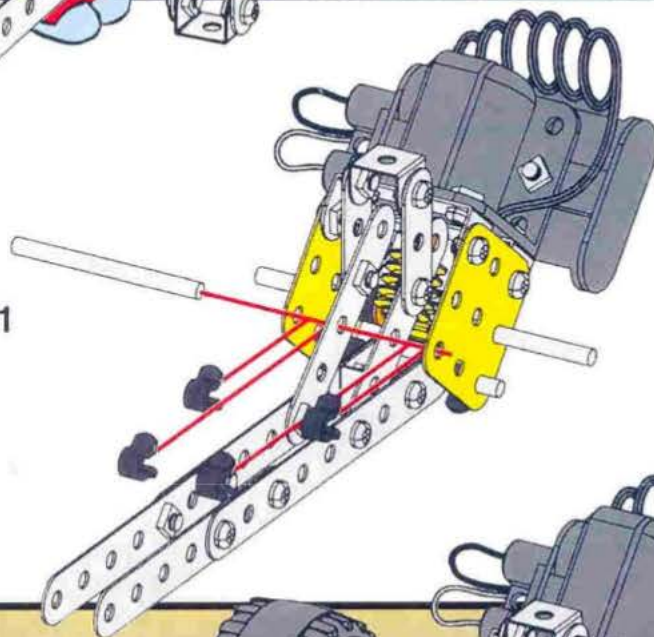


# 15

**14 +**

  $\frac{5\text{ cm}}{2}$  x 1


 x 4



You have succeeded in making a super dragster! Have fun!

# 16

**15 +**

 x 2

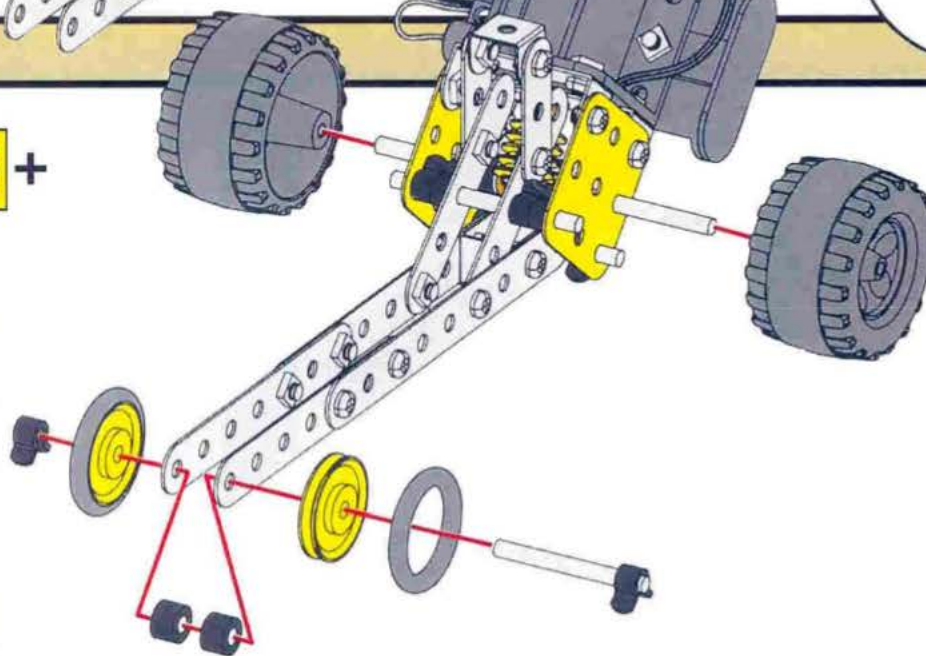
 x 2

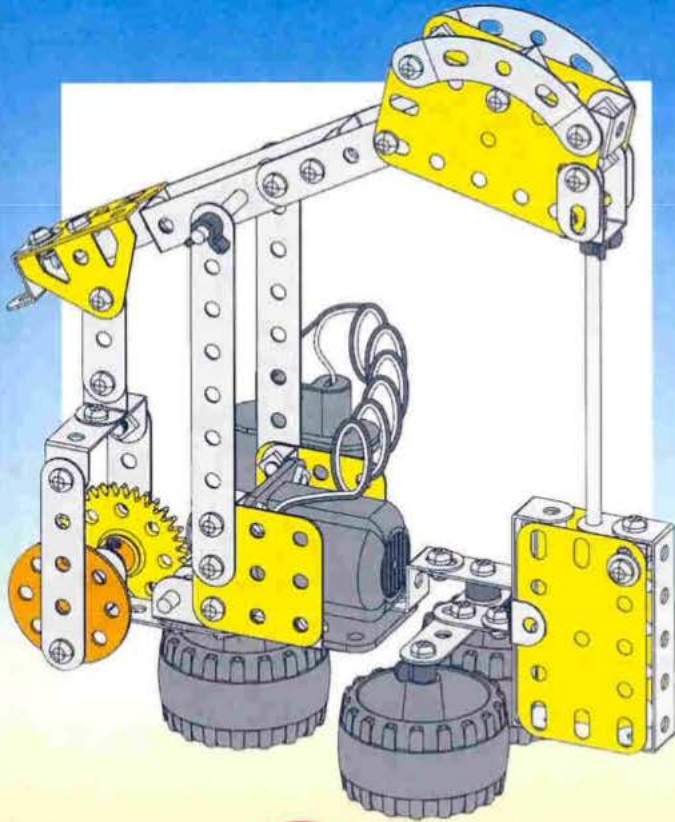
 x 2

  $\frac{4\text{ cm}}{1\frac{1}{2}}$  x 1

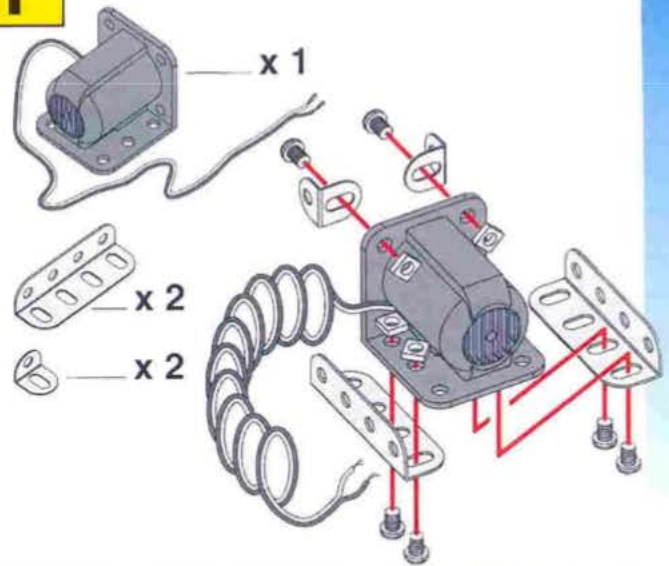
 x 2

 x 2

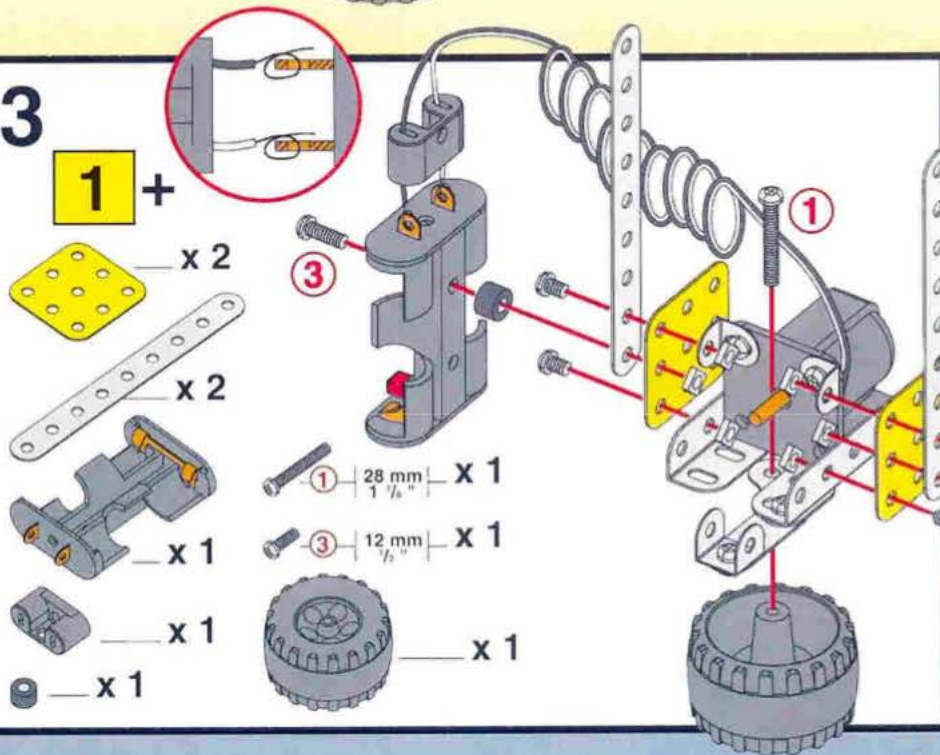




**1**

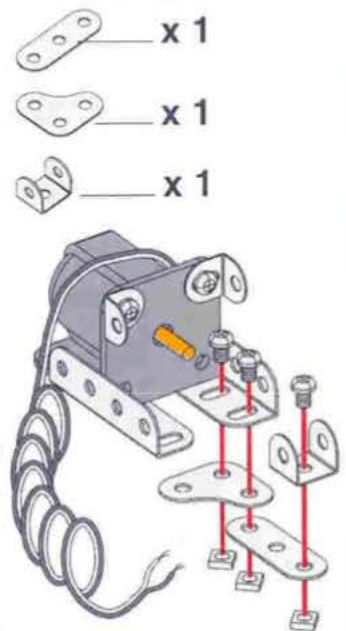


**3**



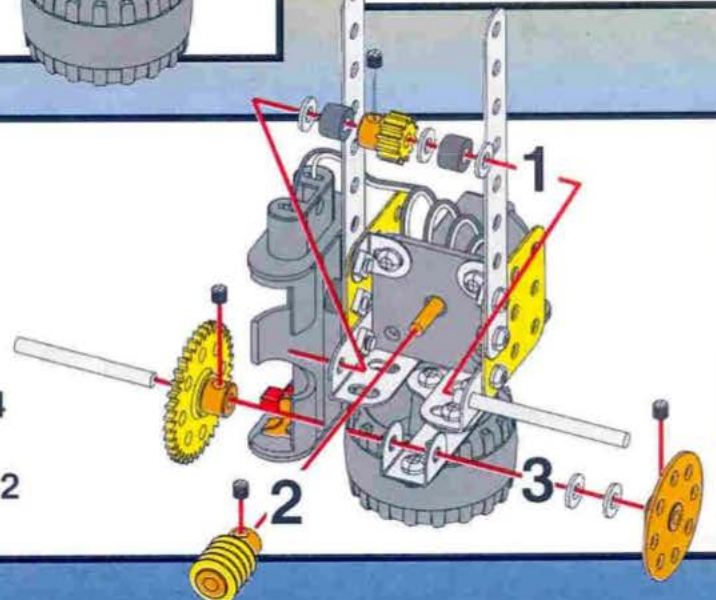
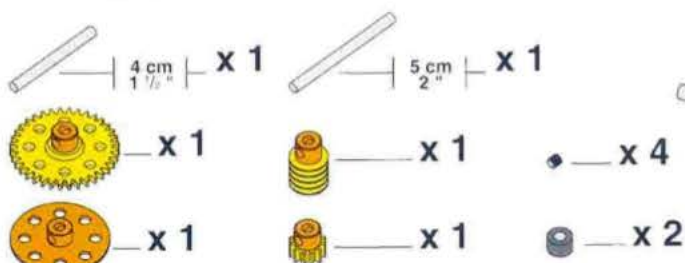
**2**

**1** +






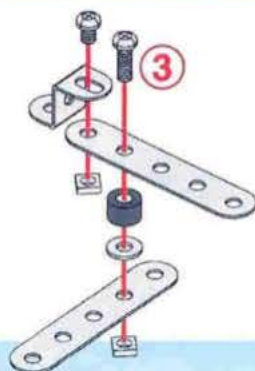
**4**

**1** +






5

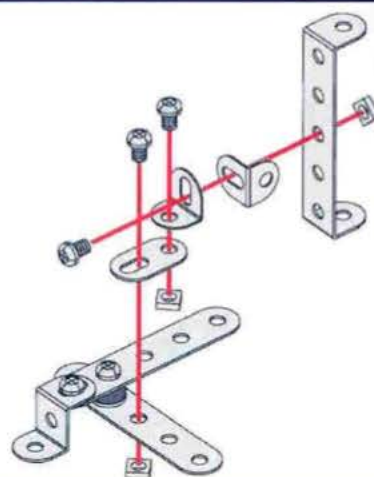
-  x 2
-  x 1
-  x 1
-  x 1







6

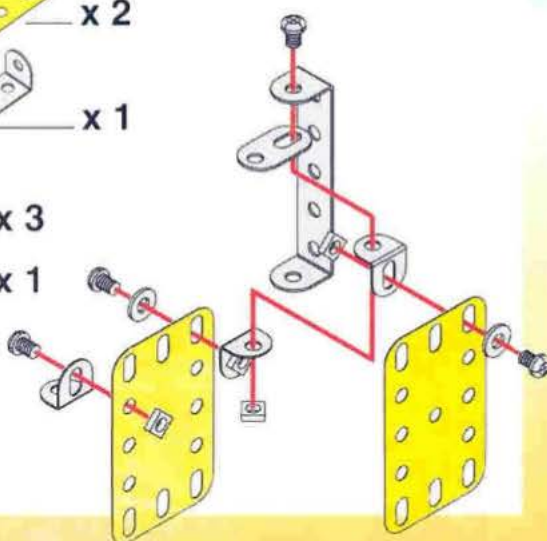
5 +

-  x 1
-  x 2
-  x 1



7

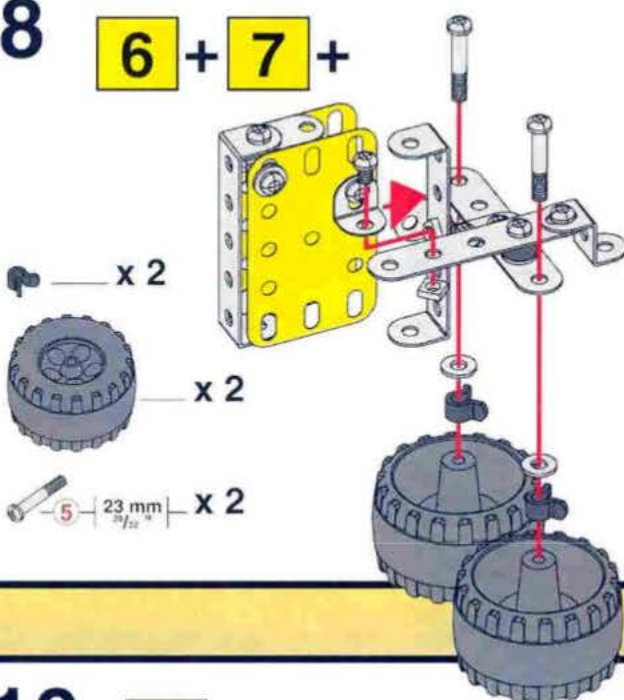
-  x 2
-  x 1
-  x 3
-  x 1







8

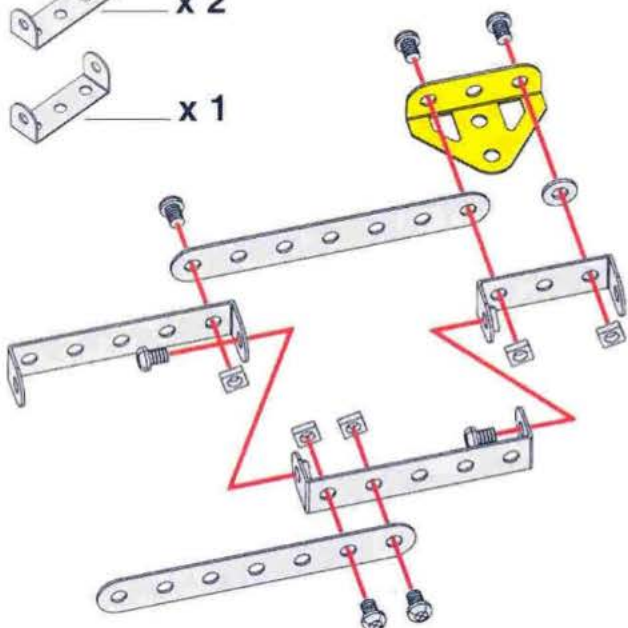
6 + 7 +

-  x 2
-  x 2
-  x 2







9

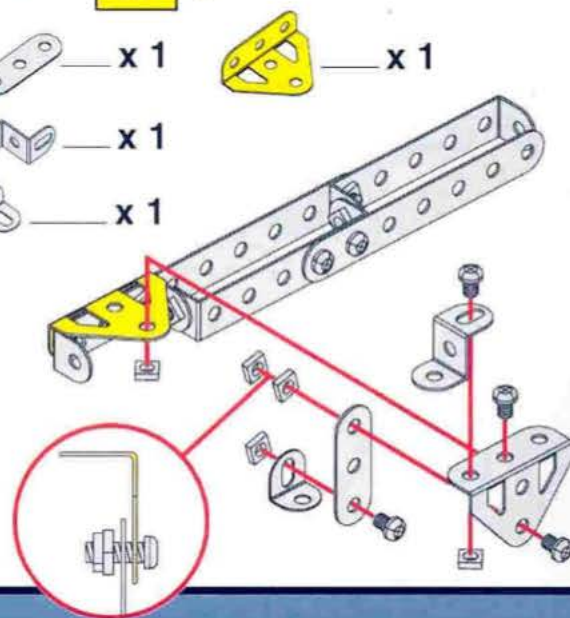
-  x 2
-  x 2
-  x 1
-  x 1



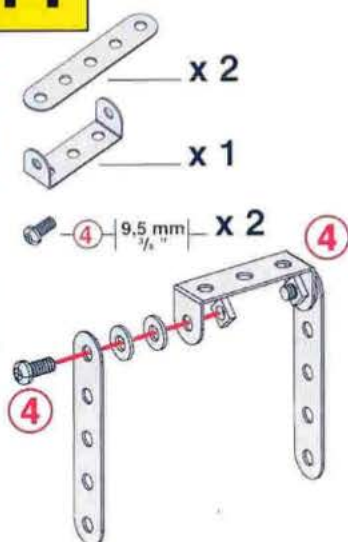
10

9 +

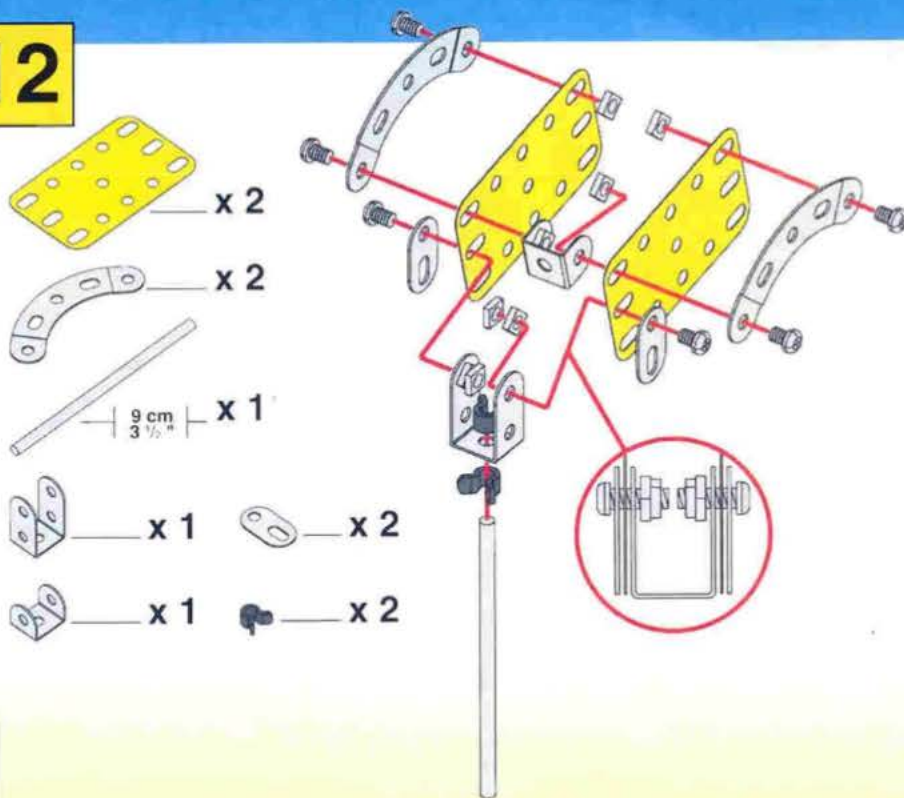
-  x 1
-  x 1
-  x 1
-  x 1



# 11

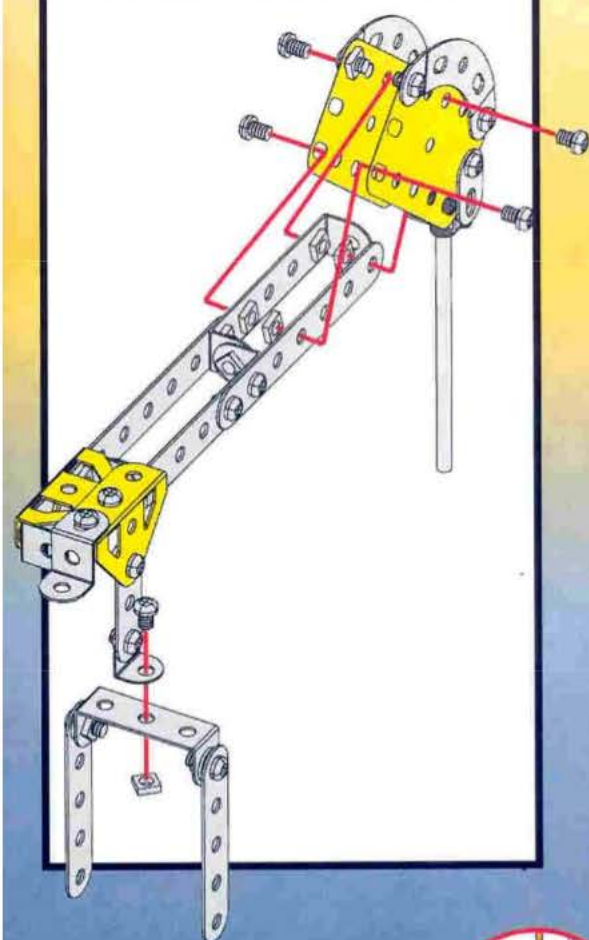


# 12



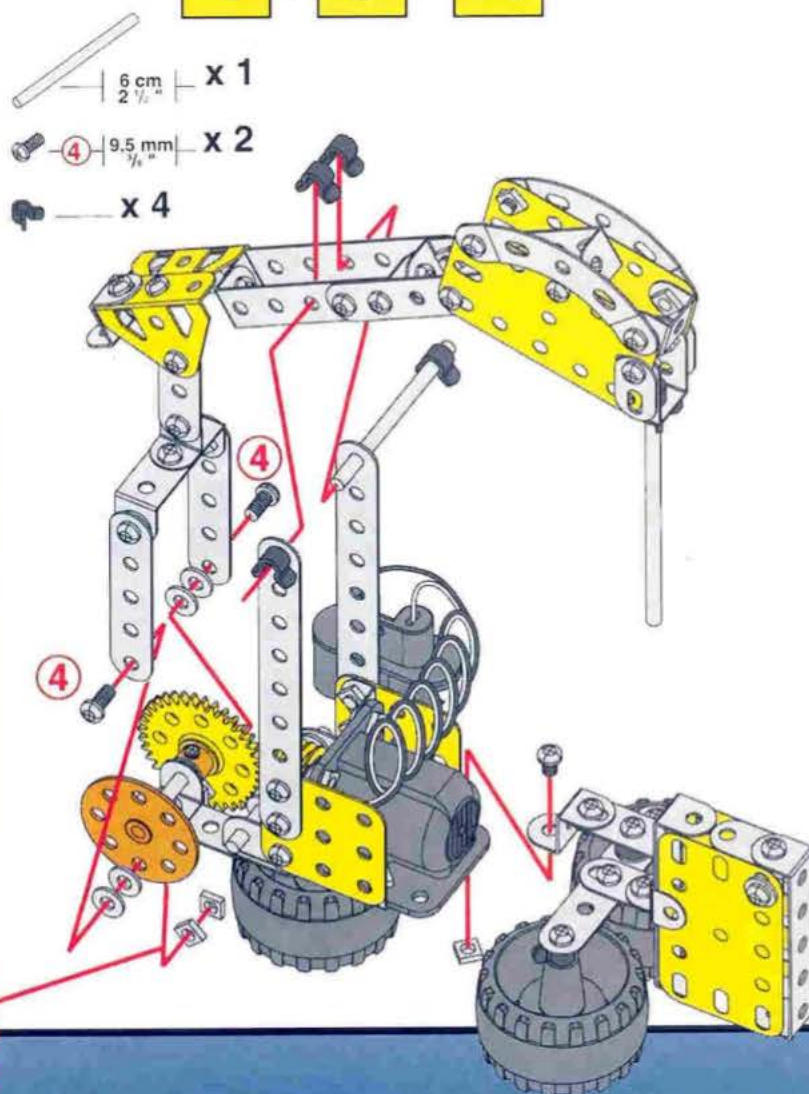
# 13

10 + 11 + 12

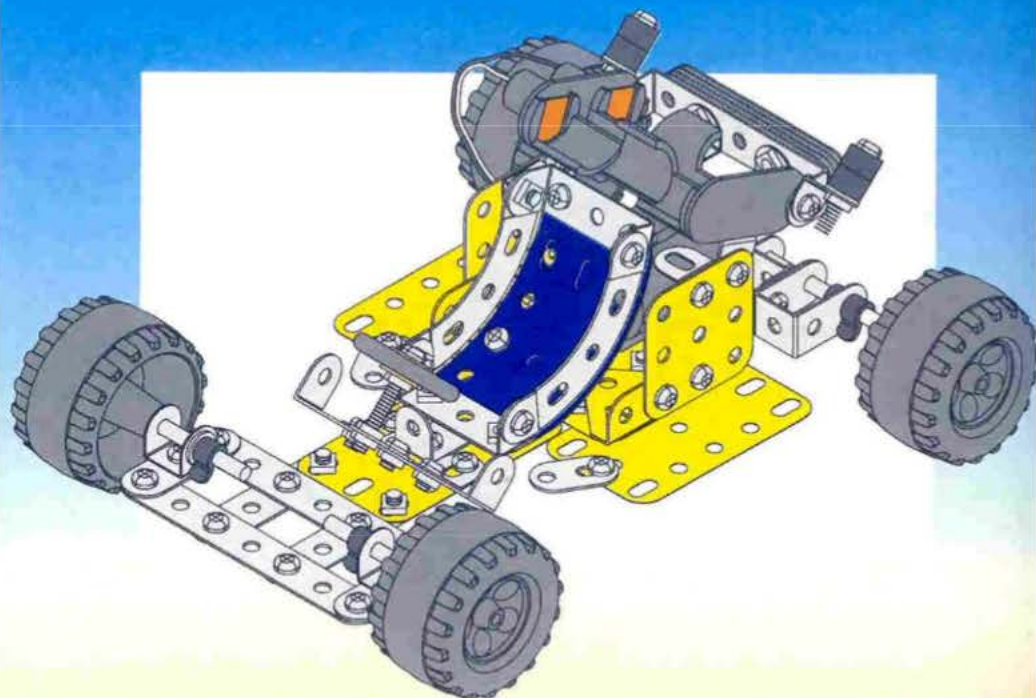
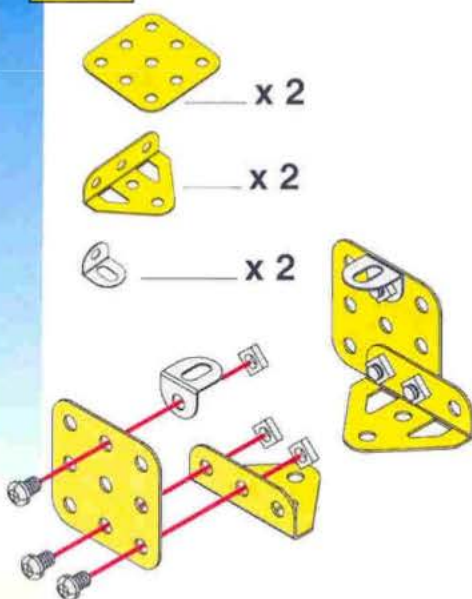


# 14

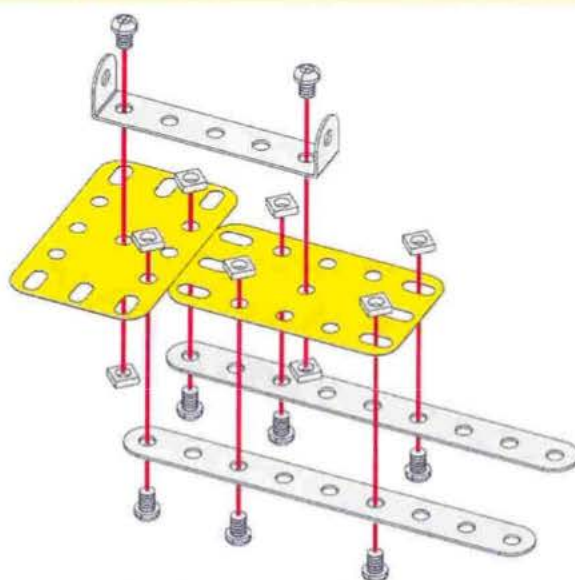
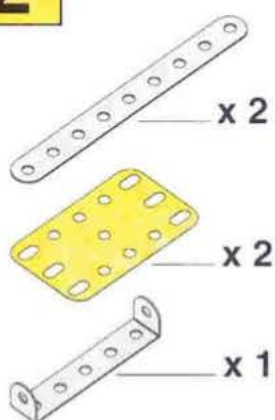
4 + 8 + 13 +



1

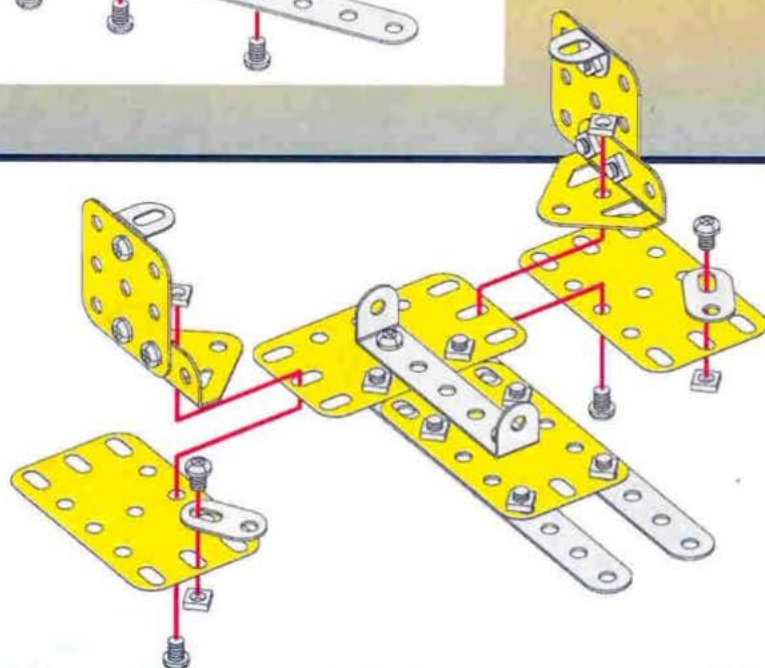
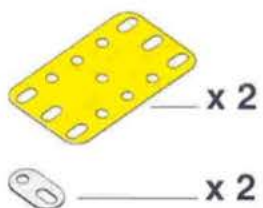


2

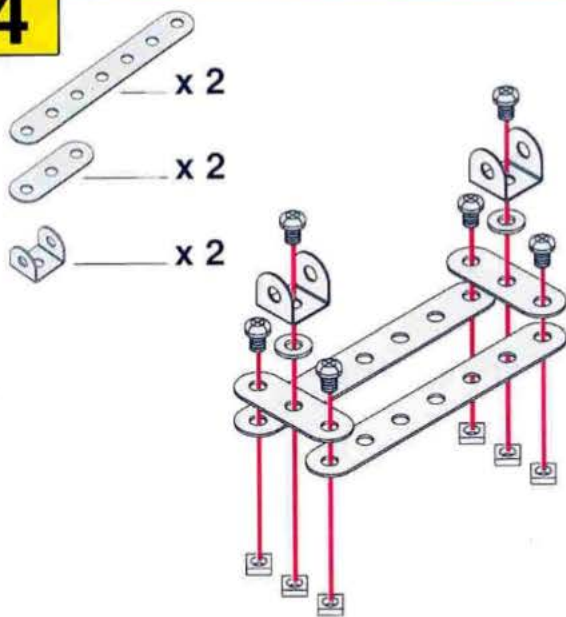


3

1 + 2 +

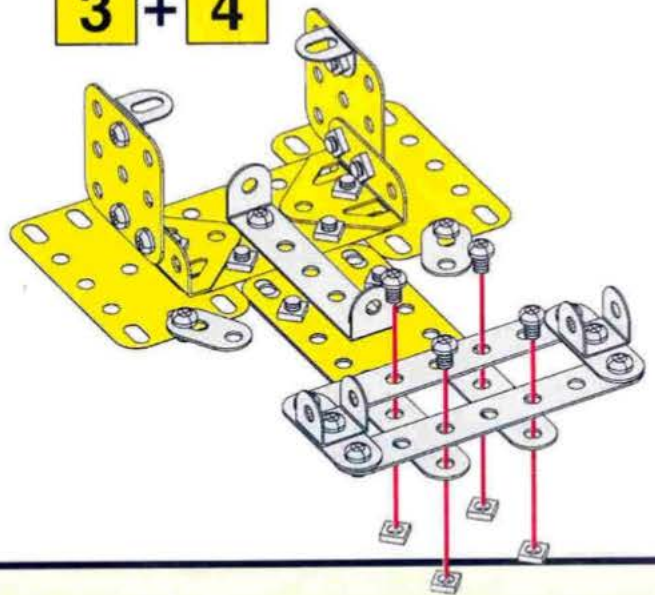


4

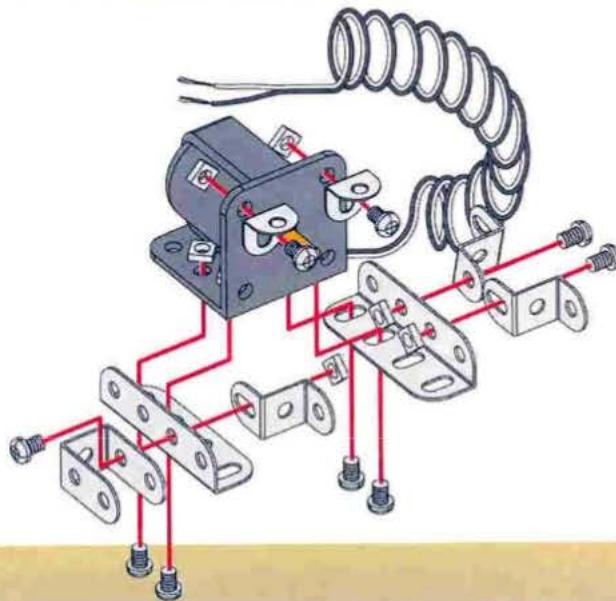
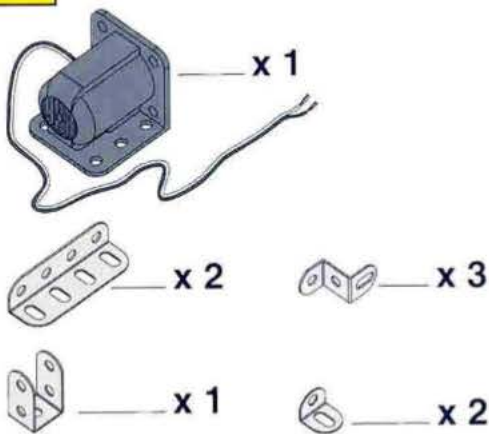


5

3 + 4

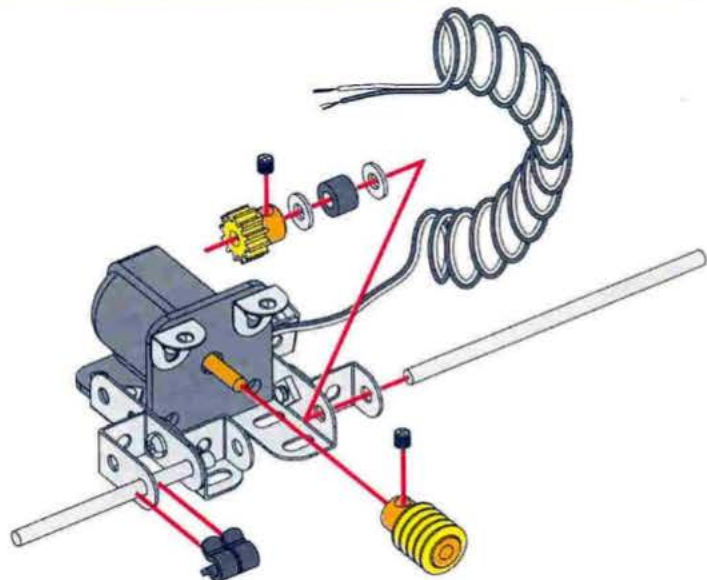
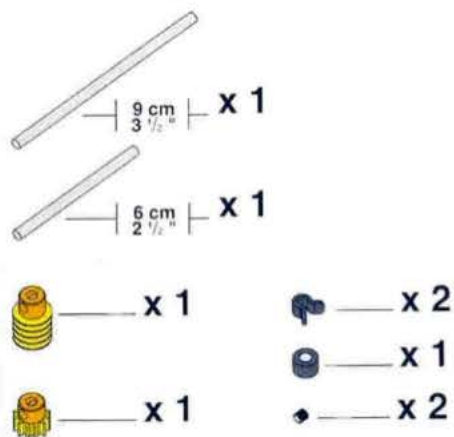


6

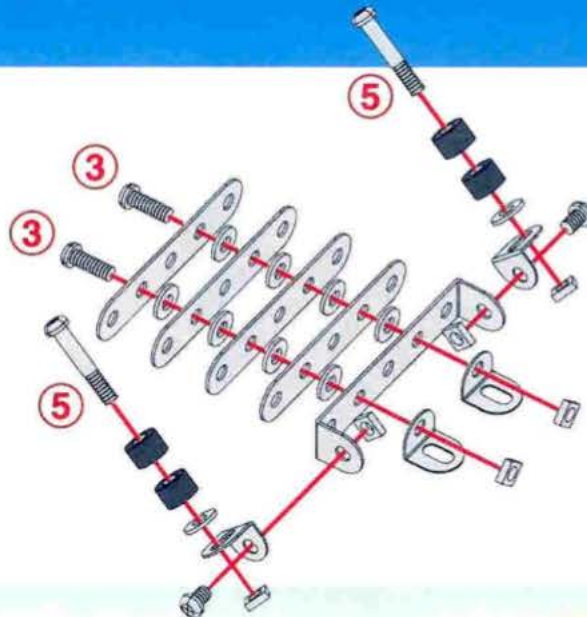
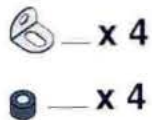
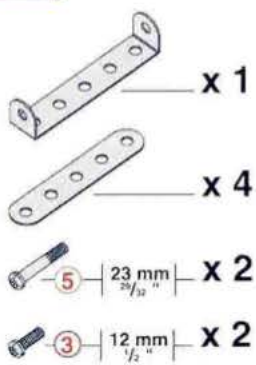


7

6 +

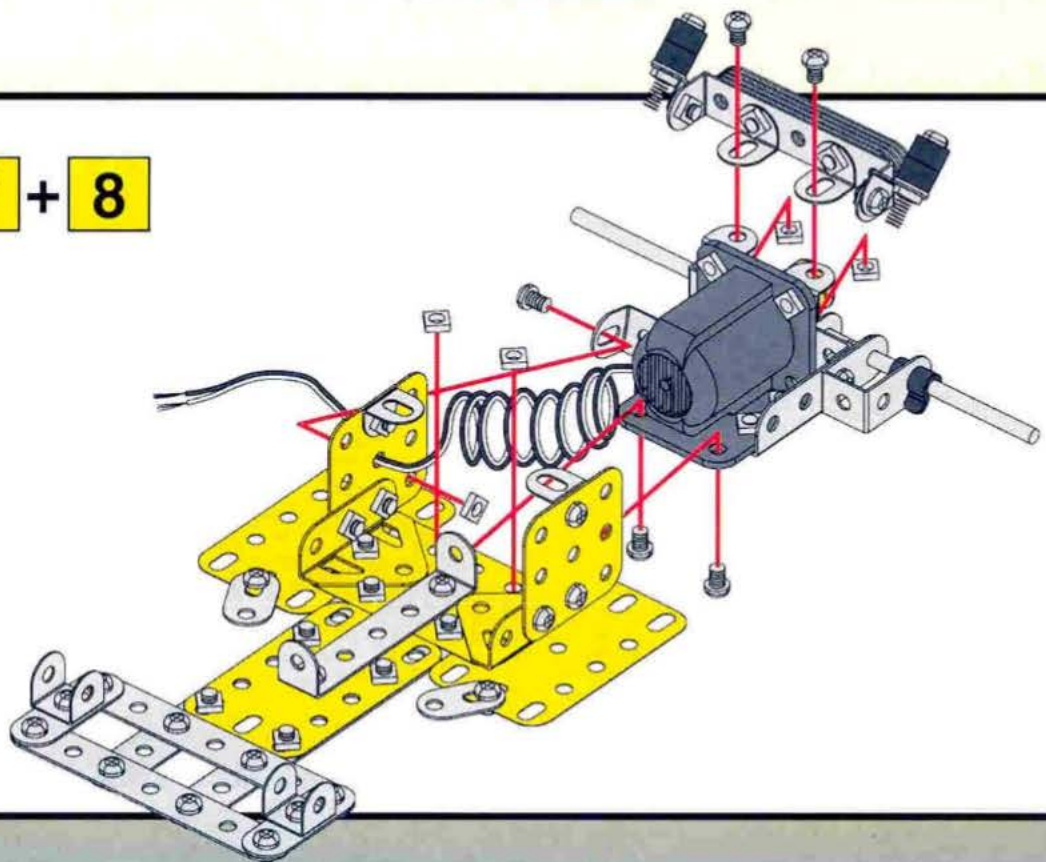


# 8

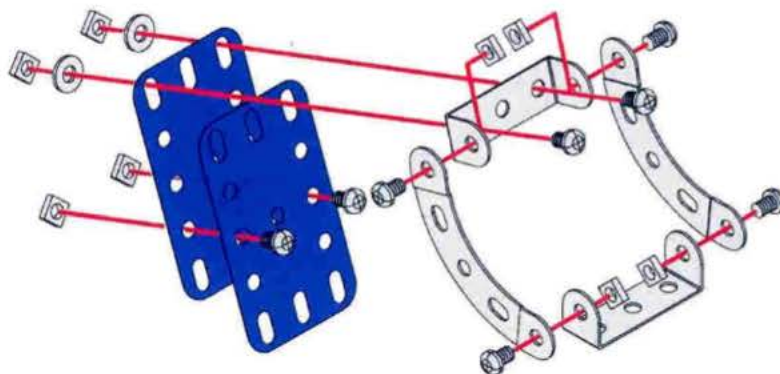
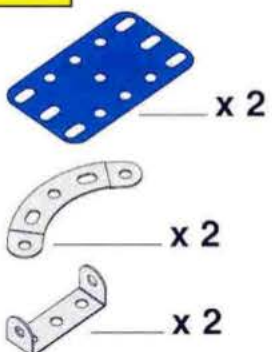


# 9

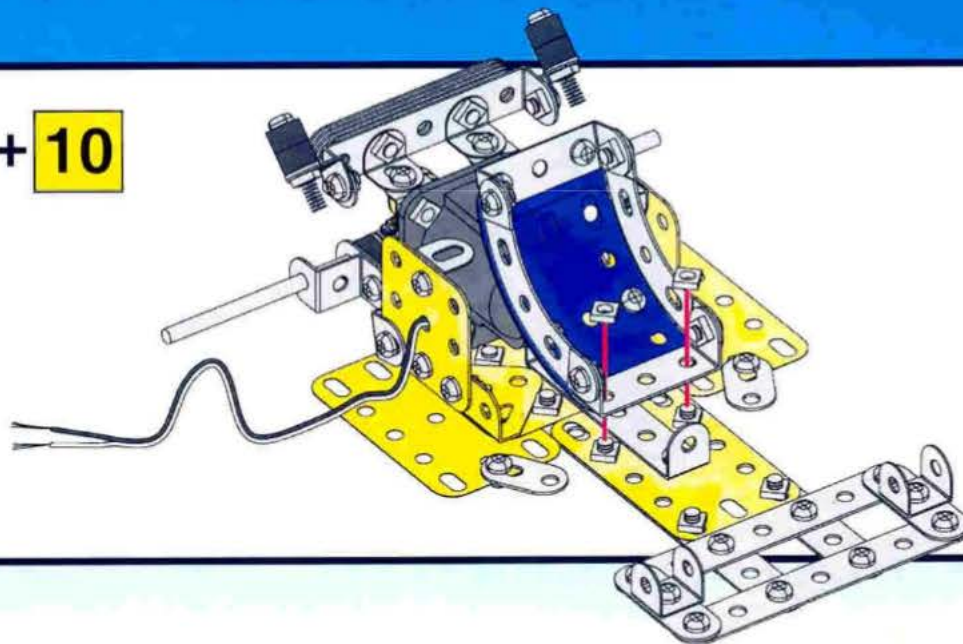
5 + 7 + 8



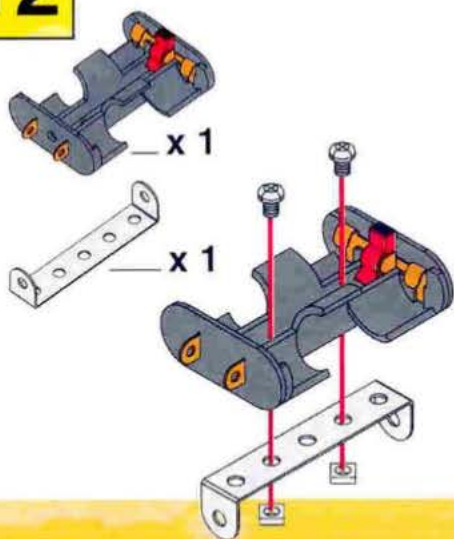
# 10



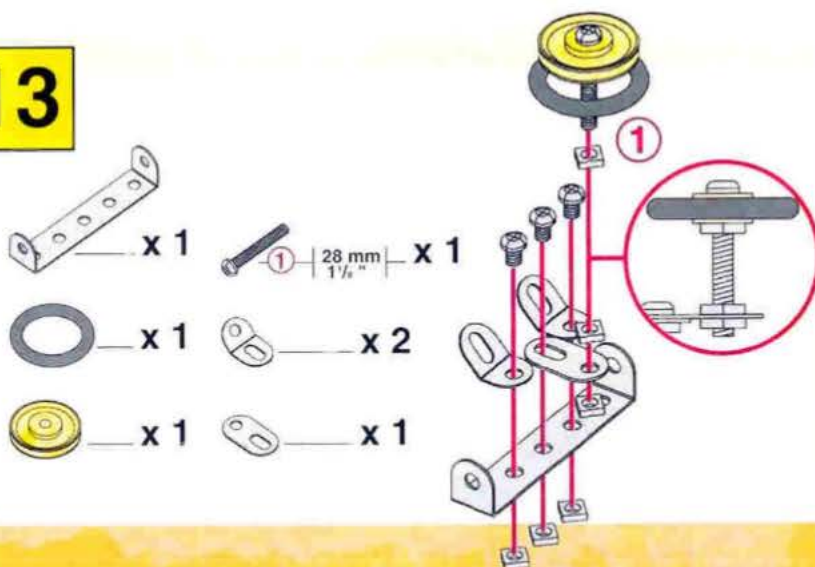
11 9 + 10



12

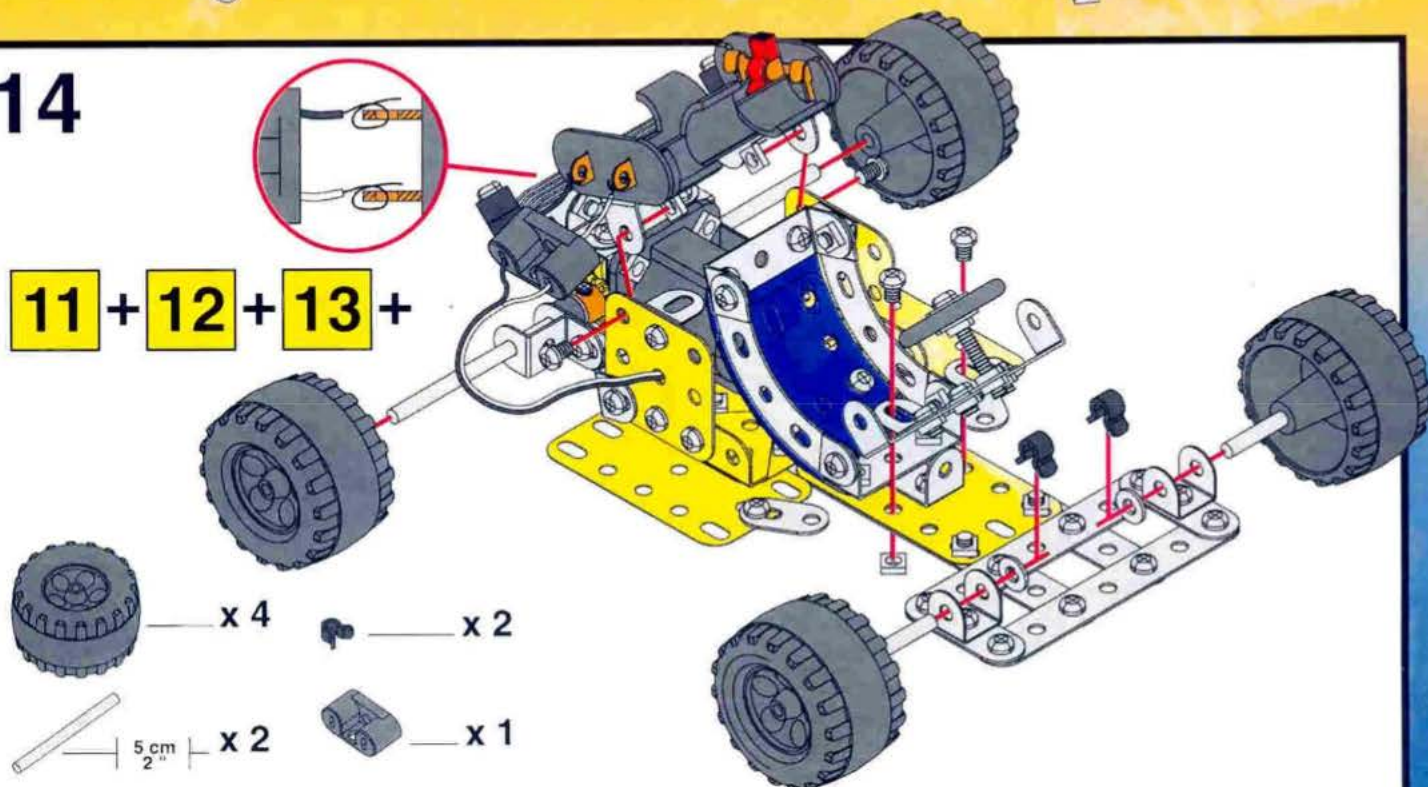


13

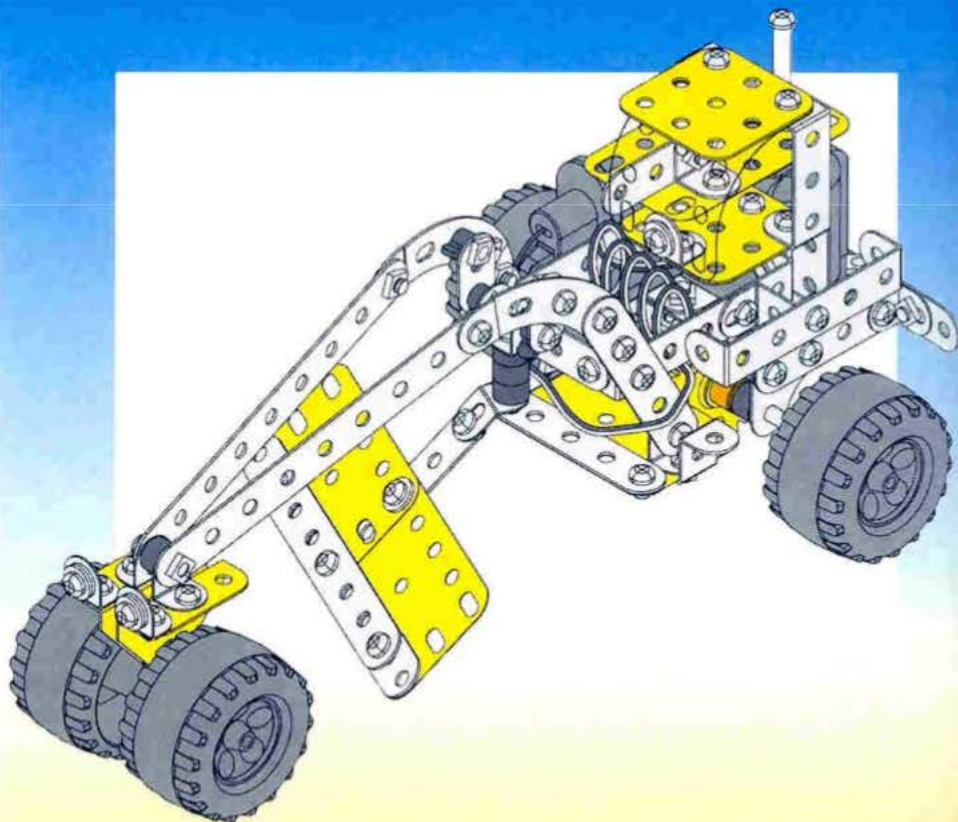
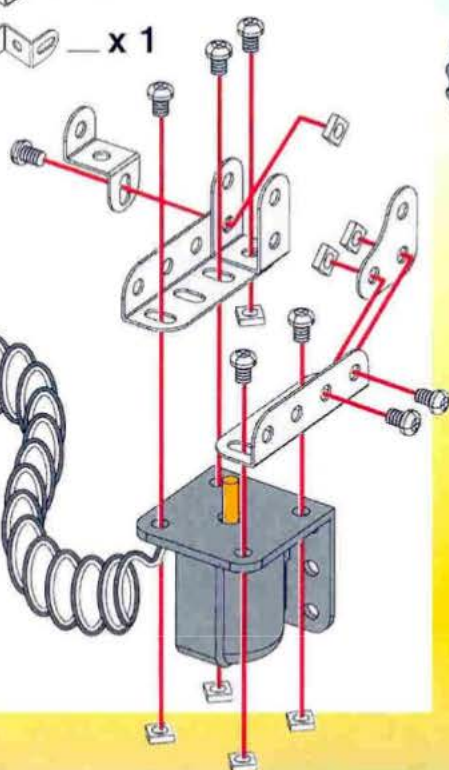
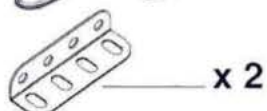
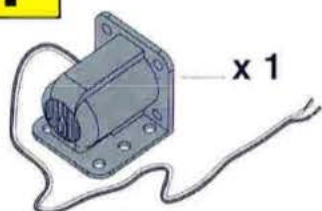


14

11 + 12 + 13 +

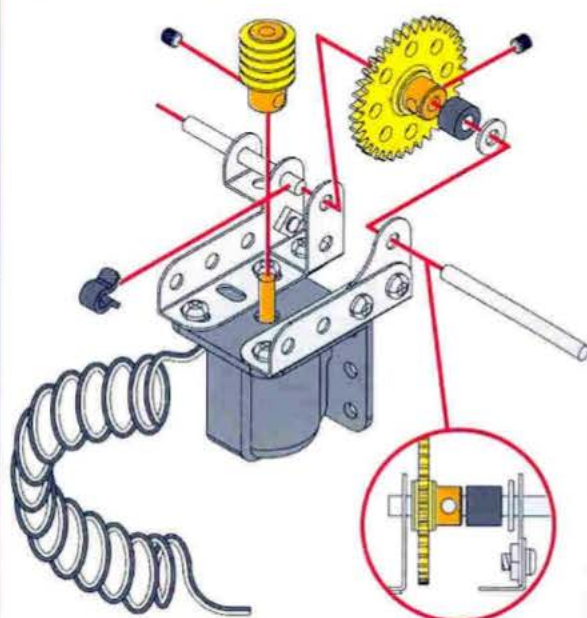
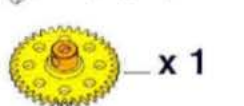
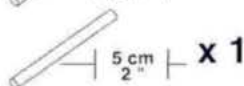
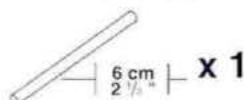


# 1



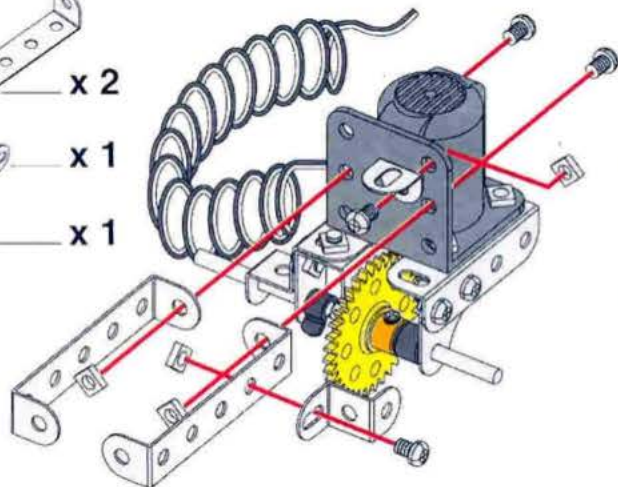
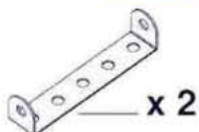
# 2

# 1+

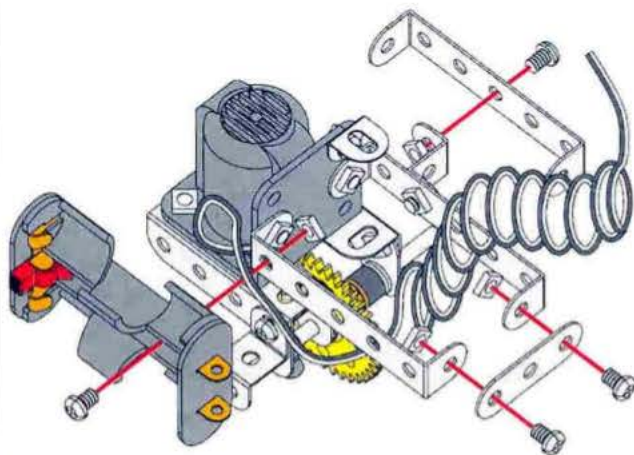
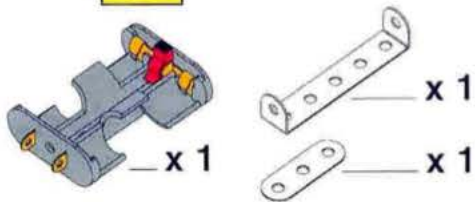


# 3

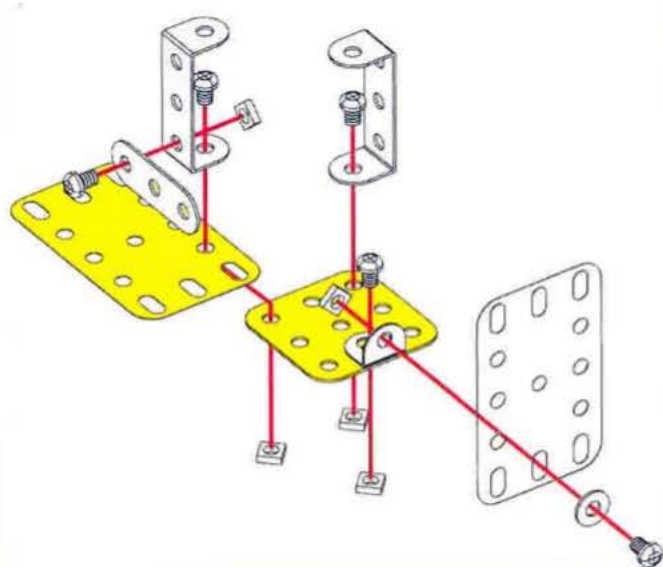
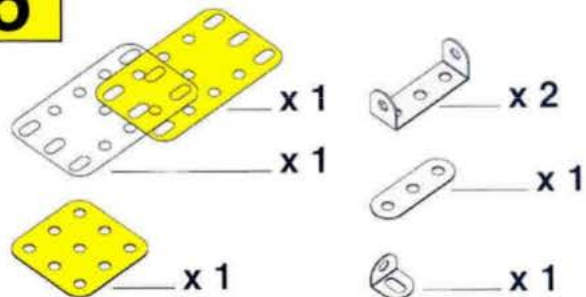
# 2+



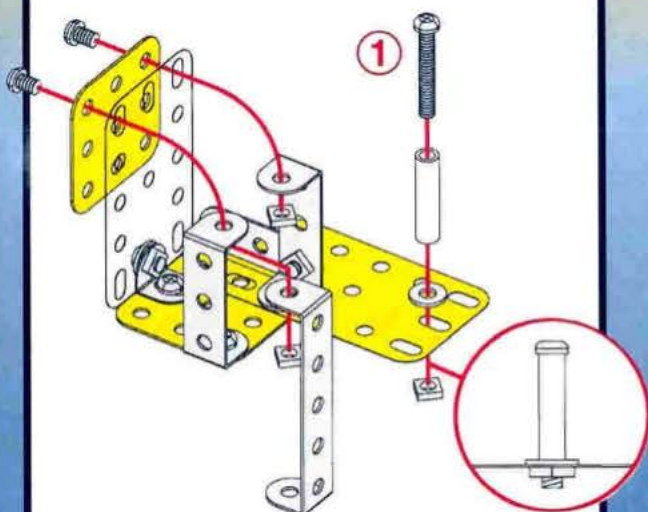
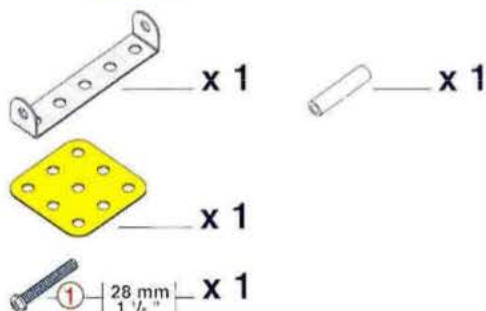
4 **3** +



5

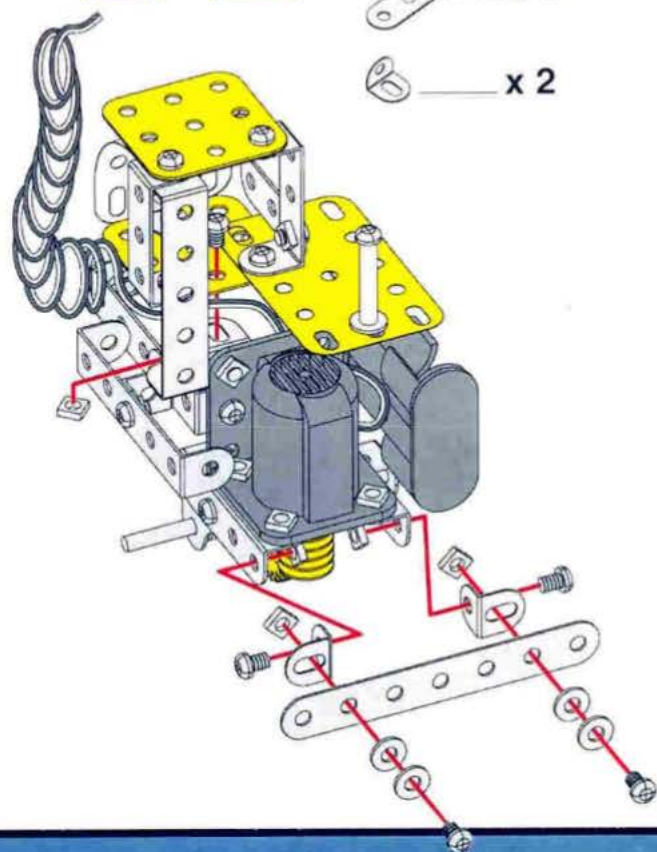
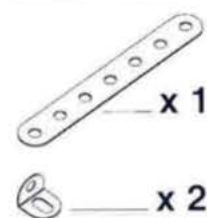


6 **5** +

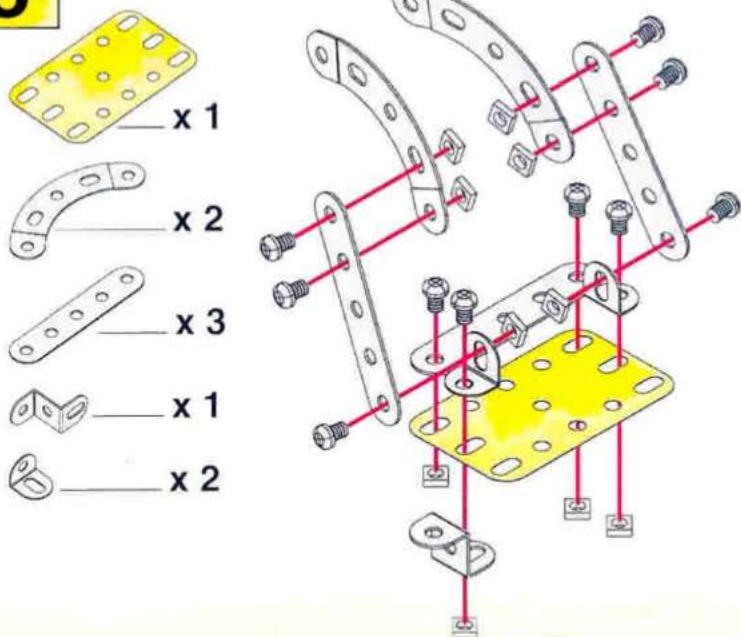


7

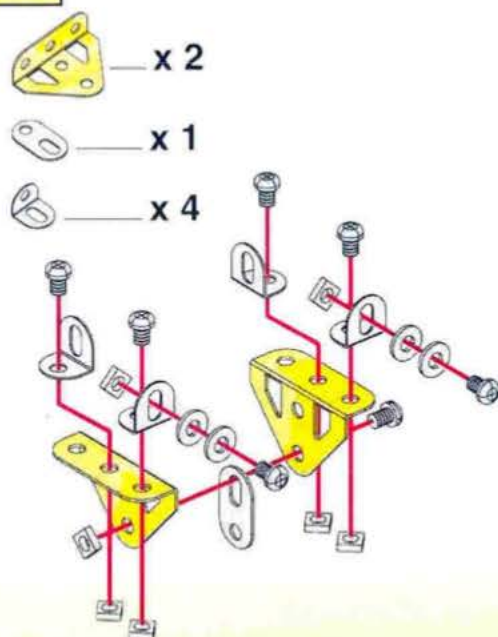
**4** + **6** +



# 8

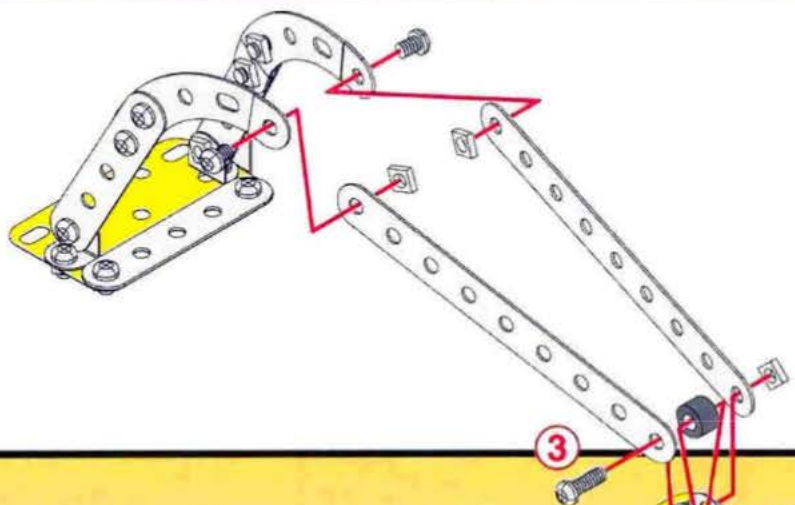
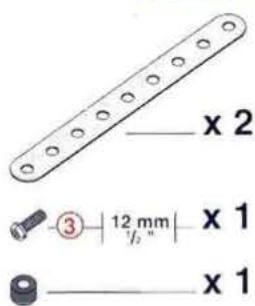


# 9

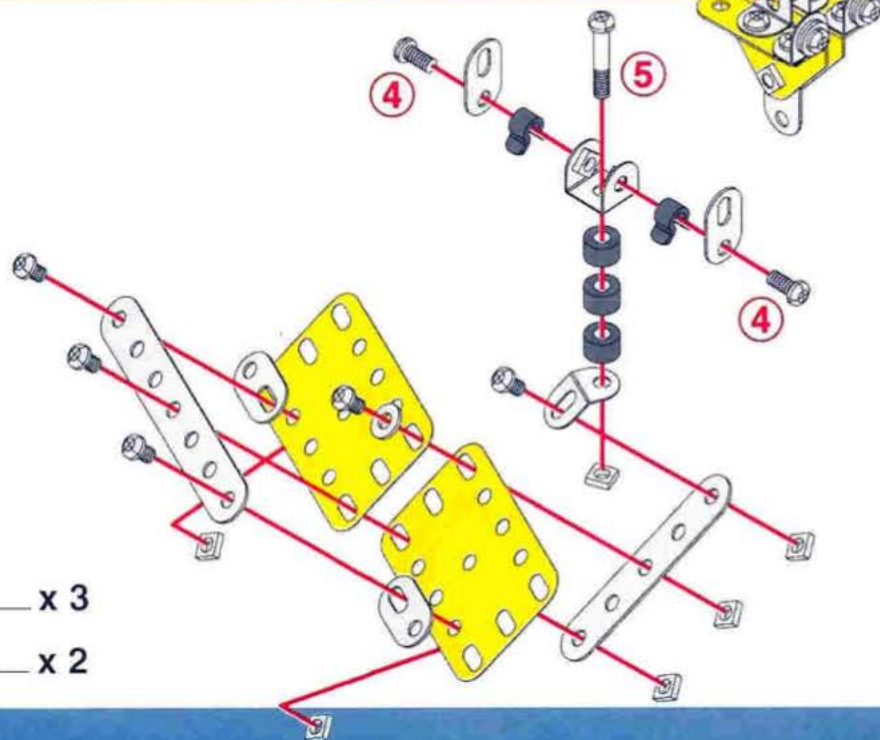
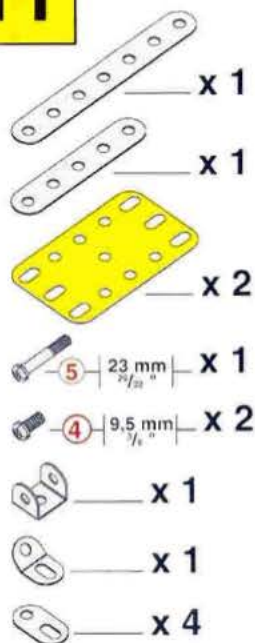


# 10


**8** + **9** +



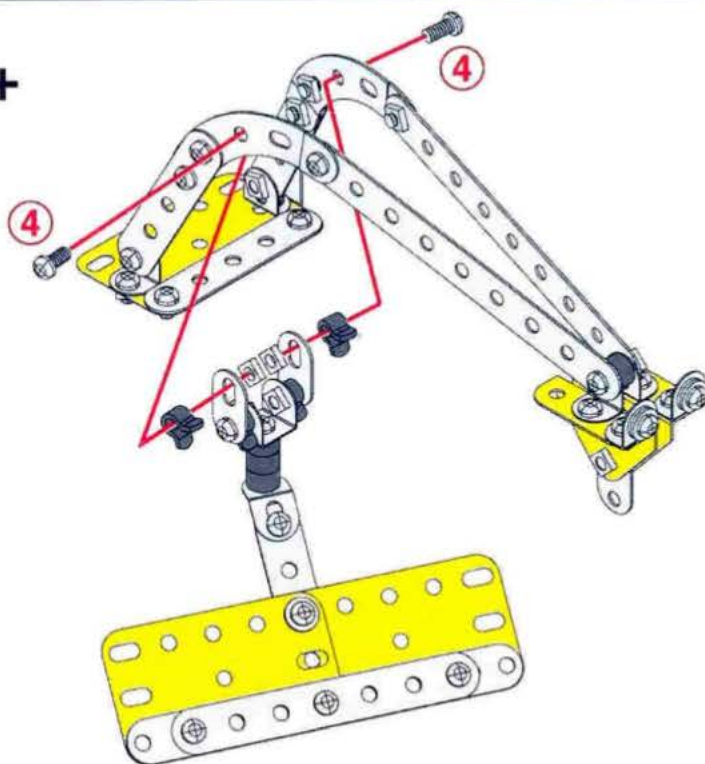
# 11



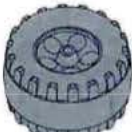
# 12 10 + 11 +


 4 | 9.5 mm | x 2

 x 2

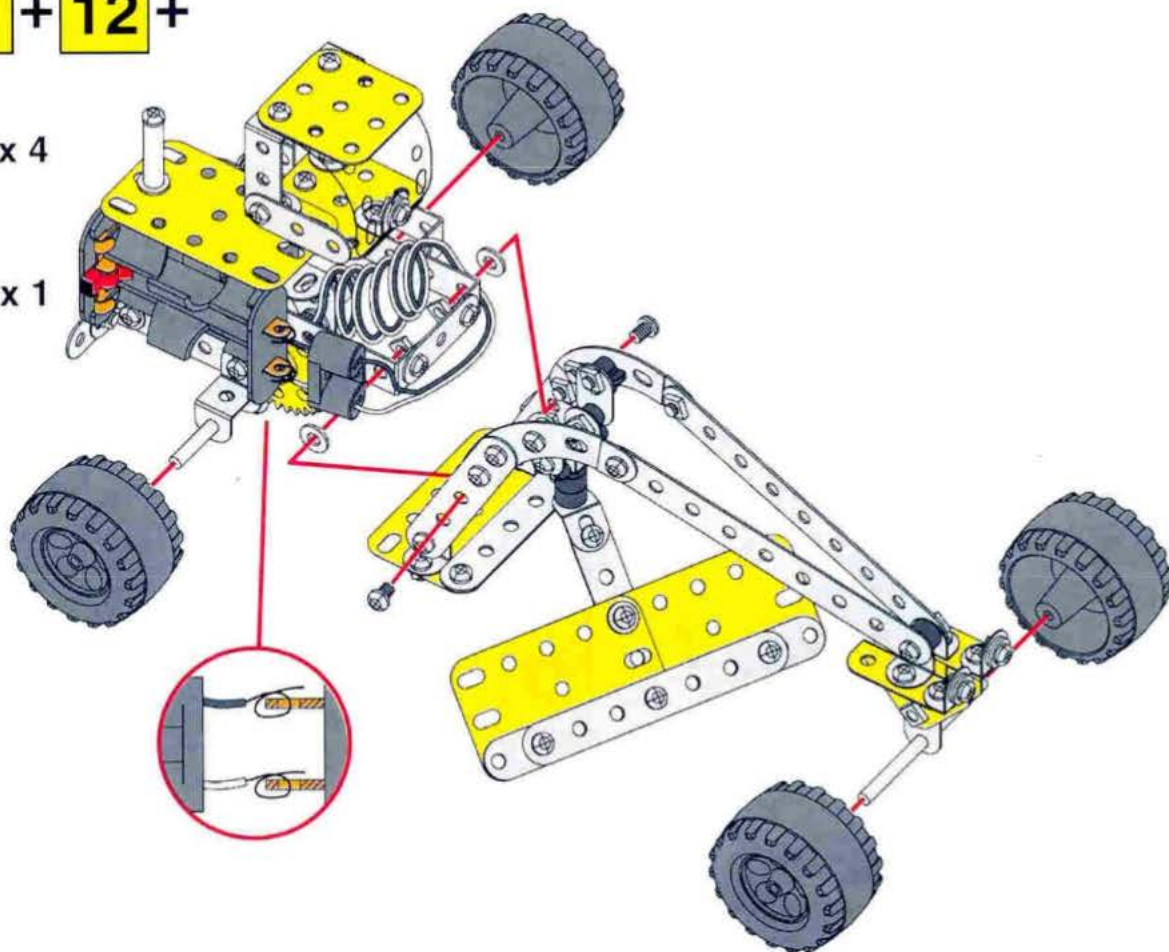


# 13 7 + 12 +

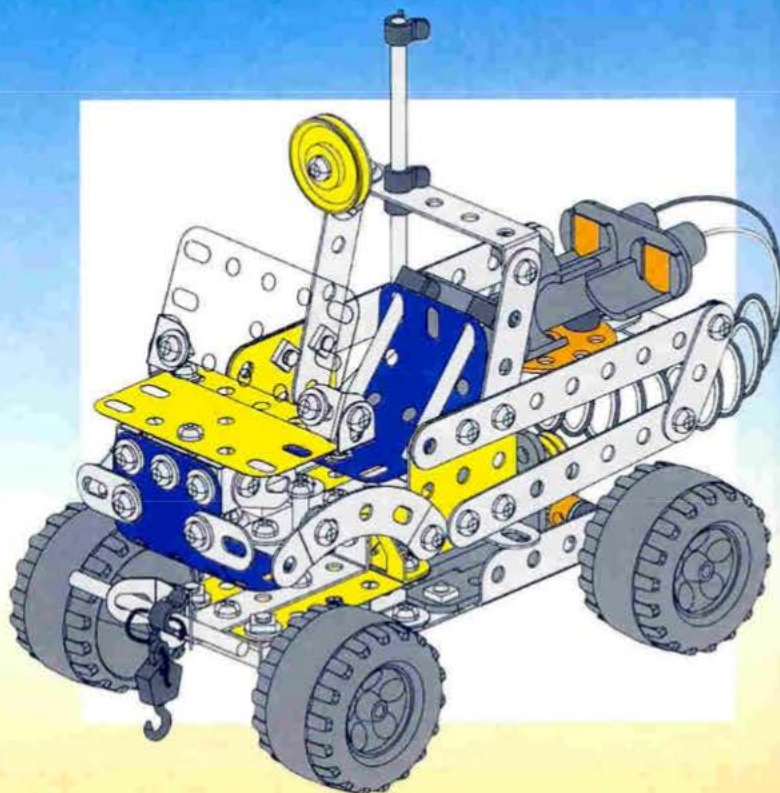
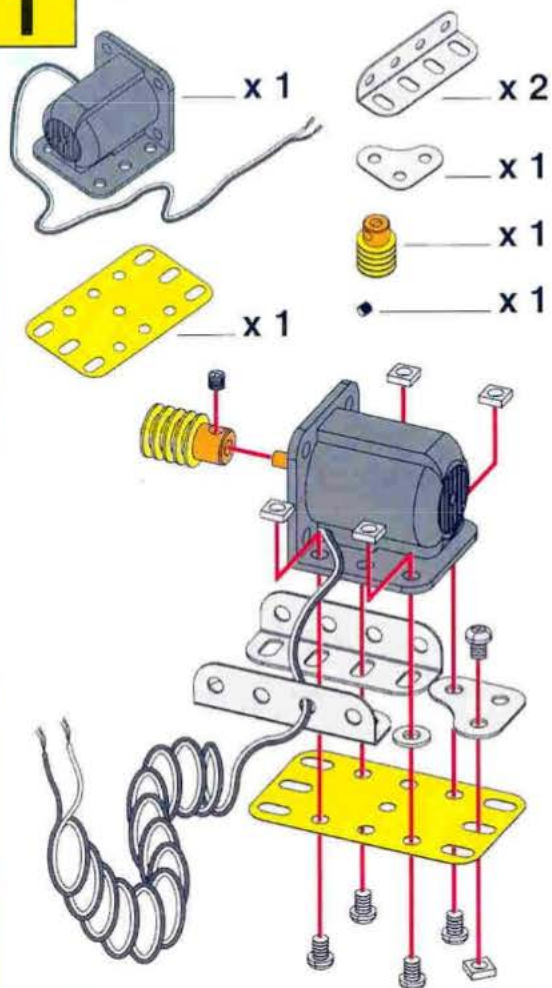
 x 4

 5 cm | 2 | x 1

 x 1

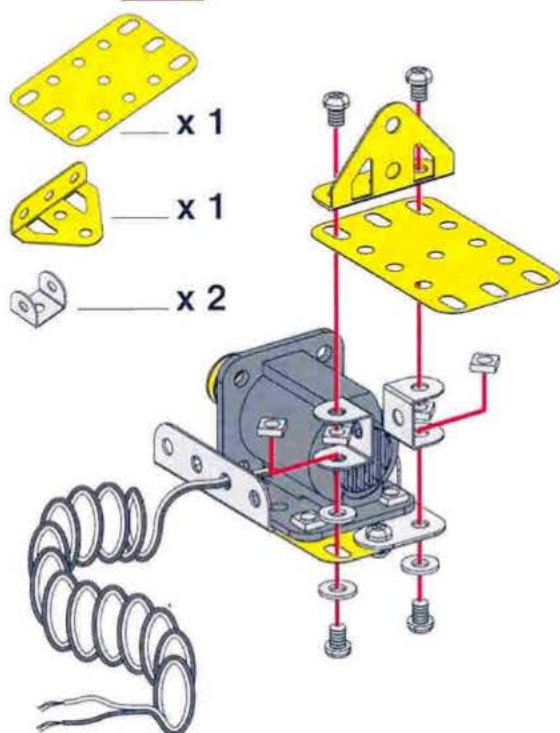


1



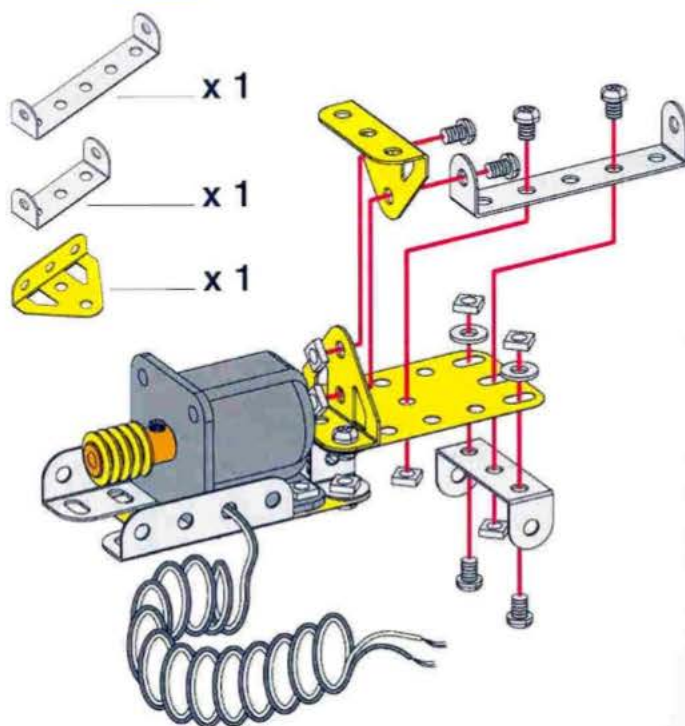
2

1 +

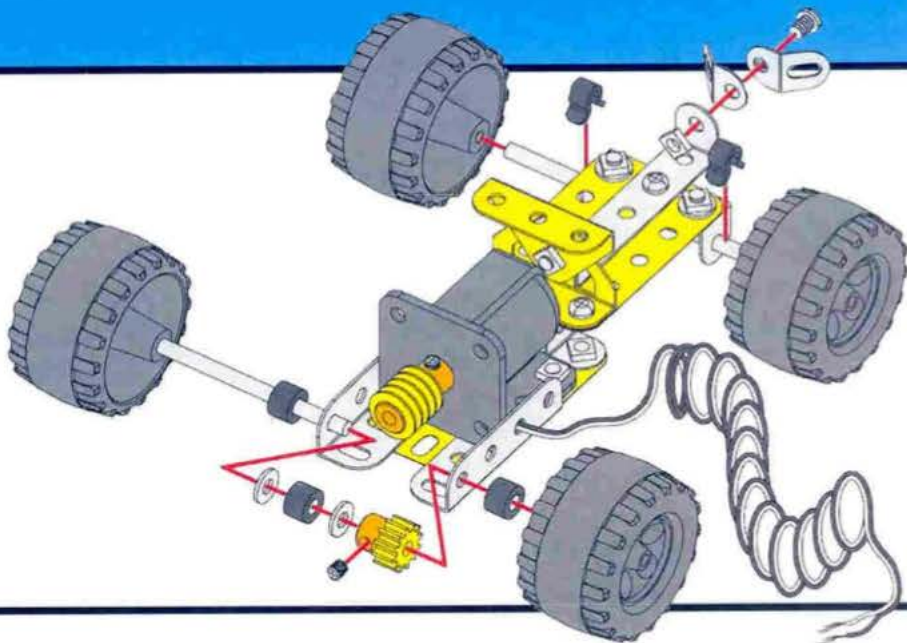
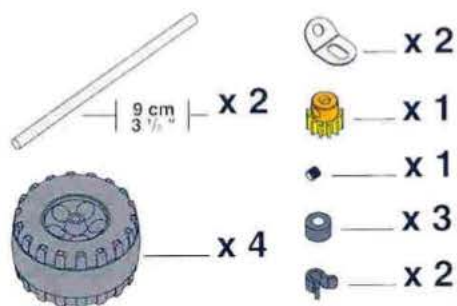


3

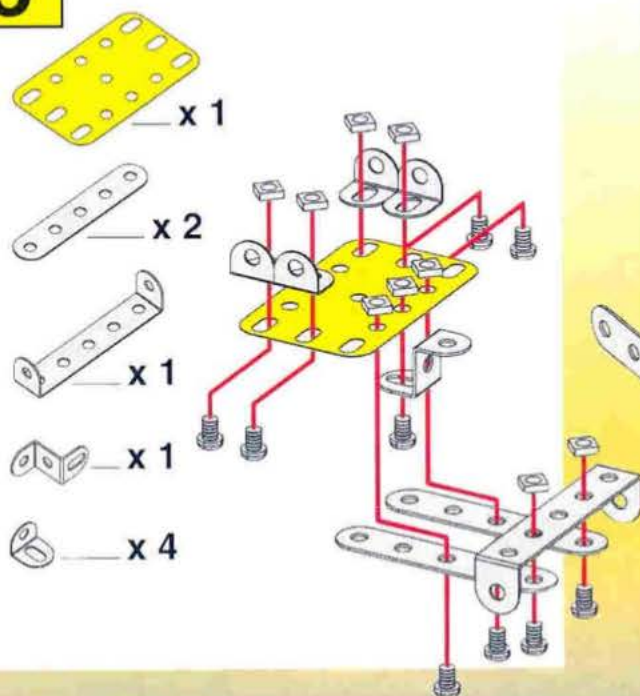
2 +



4 **3** +

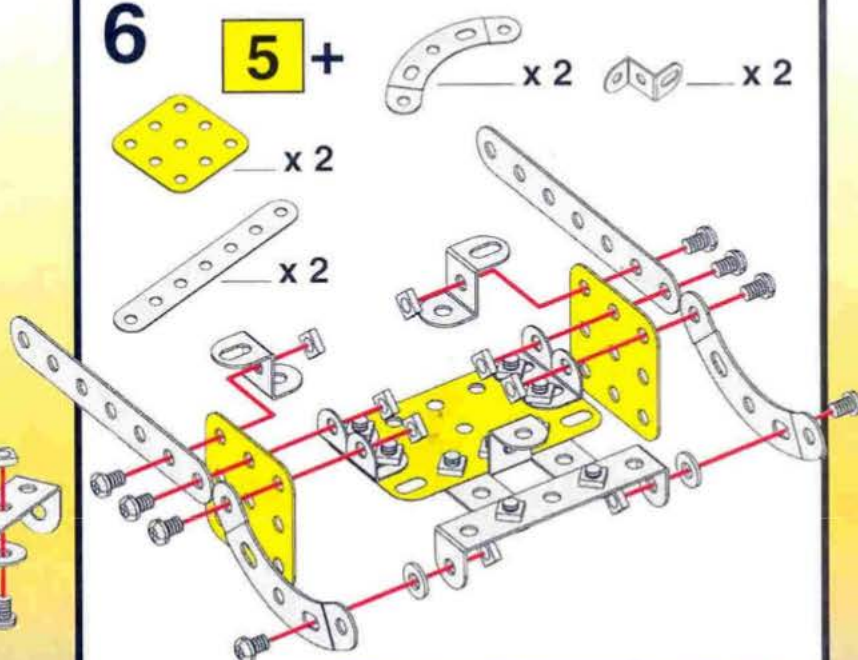


5

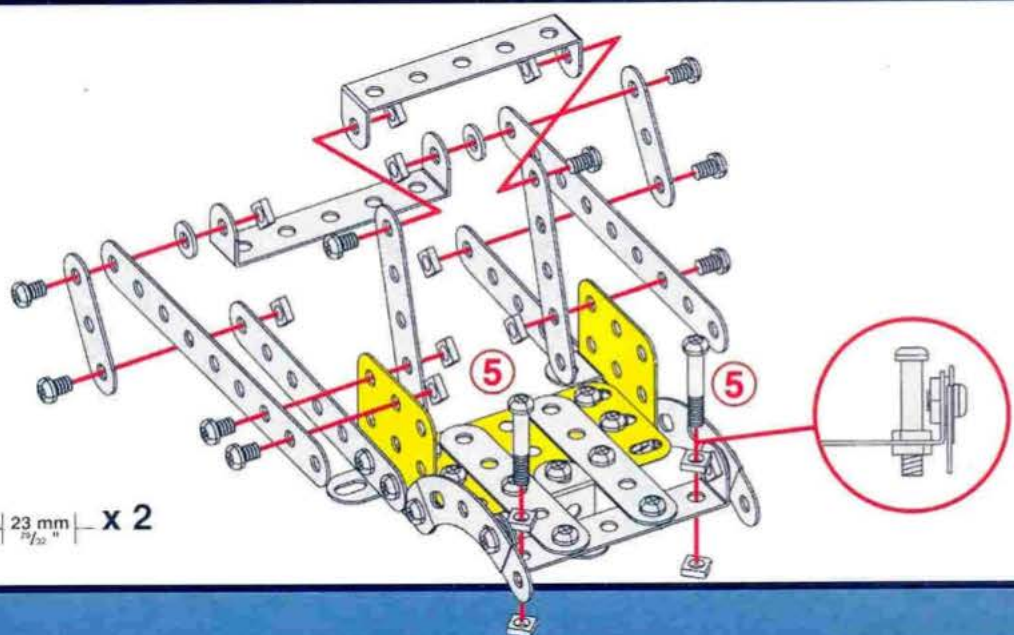
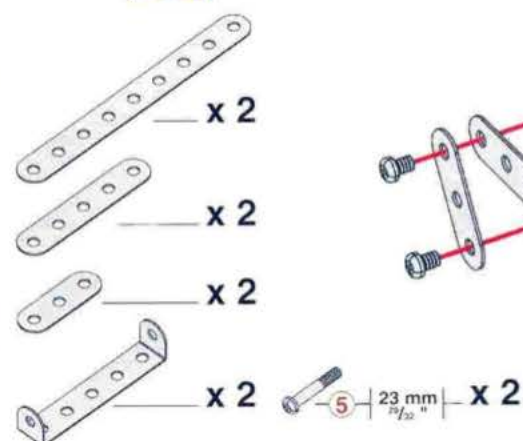


6

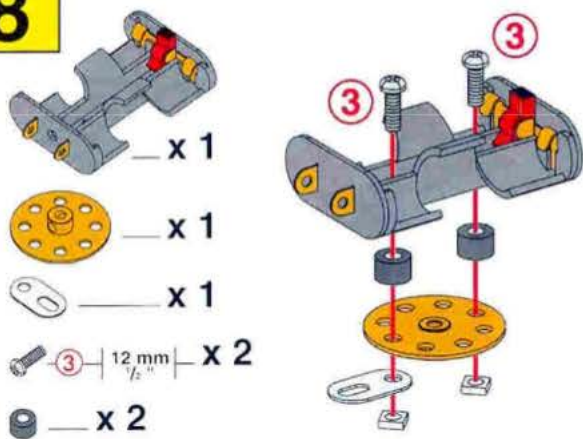
**5** +



7 **6** +



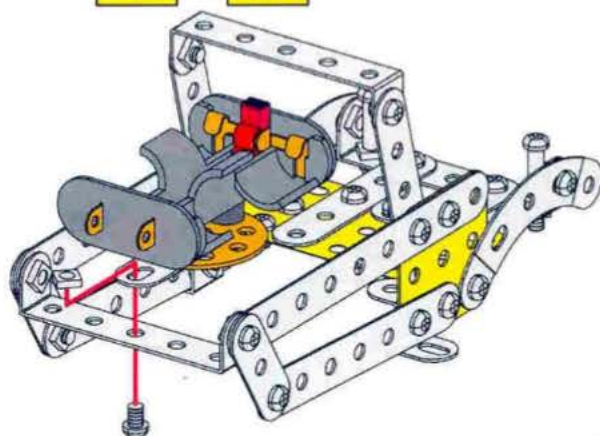
8



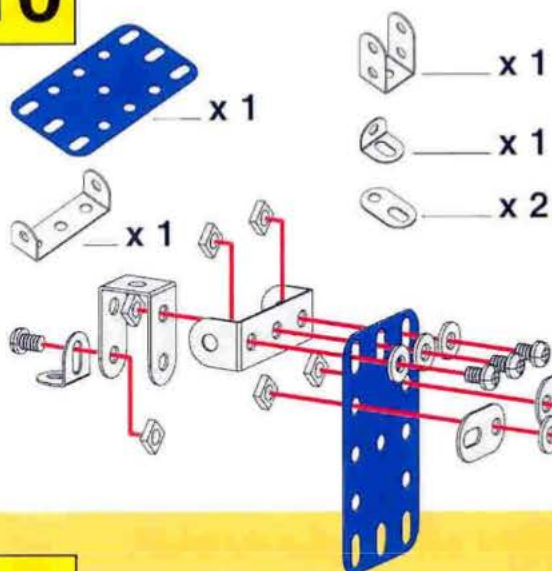
9

7

8



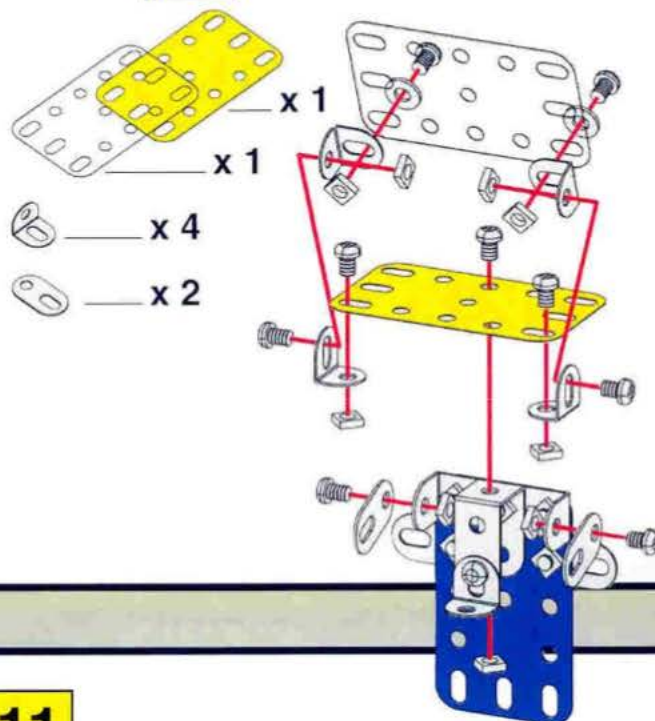
10



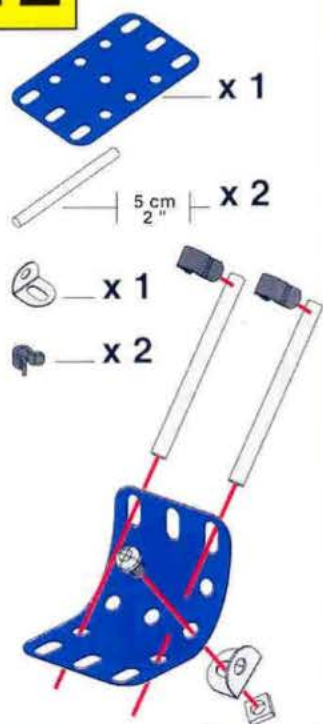
11

10

+



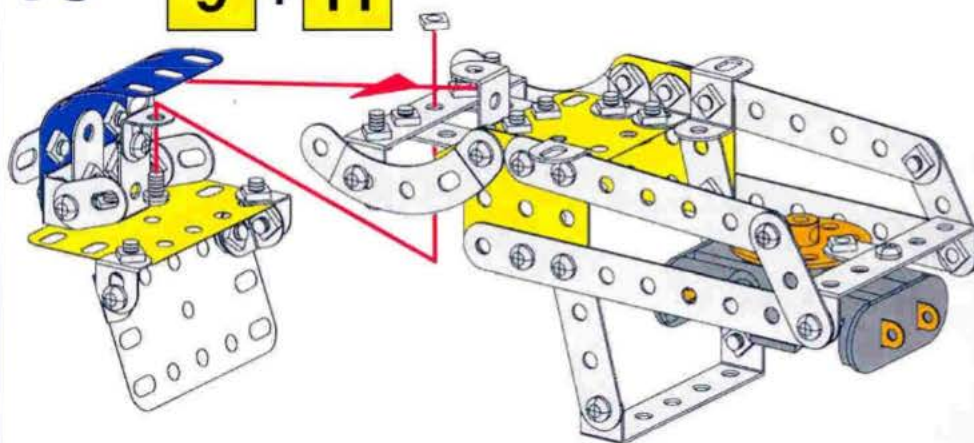
12



13

9

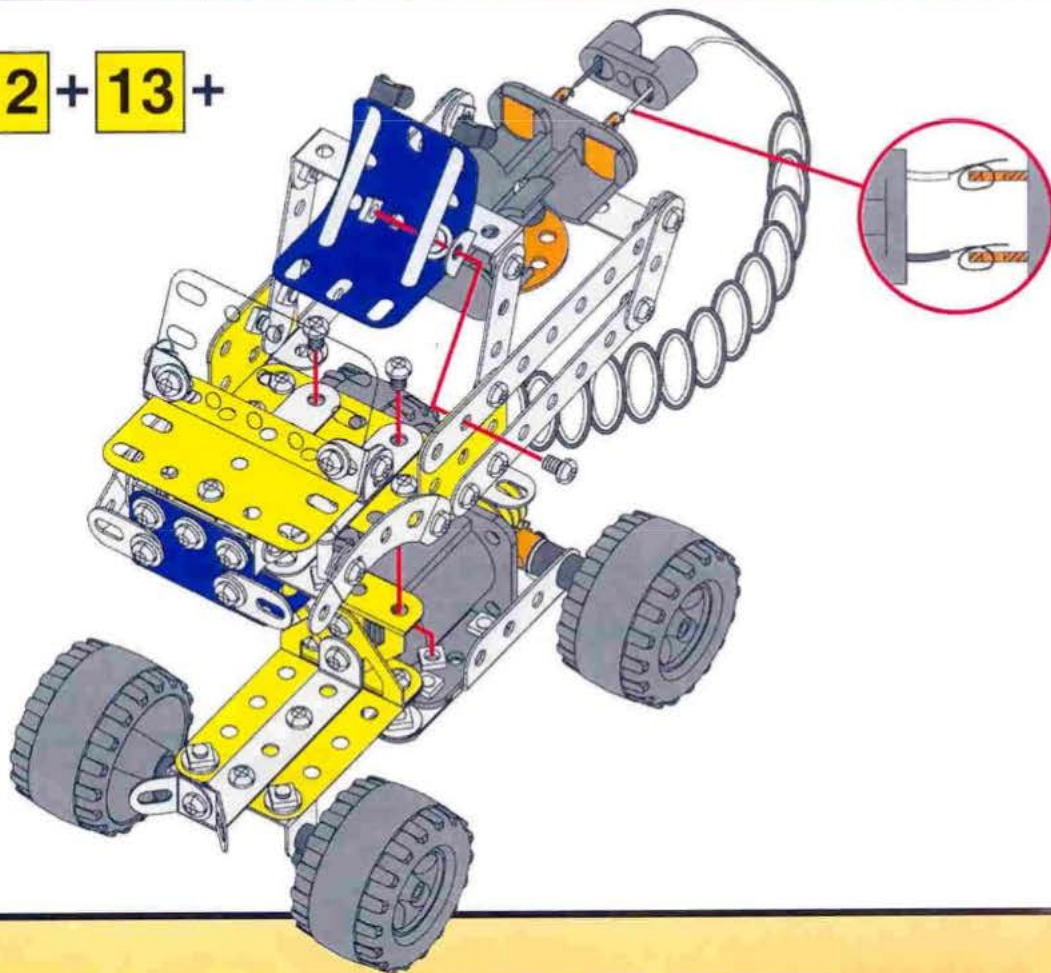
+ 11



# 14

**4 + 12 + 13 +**


 x 1



# 15

**14 +**

 x 1


  $\frac{6 \text{ cm}}{2 \frac{1}{2}}$  x 1

 x 1

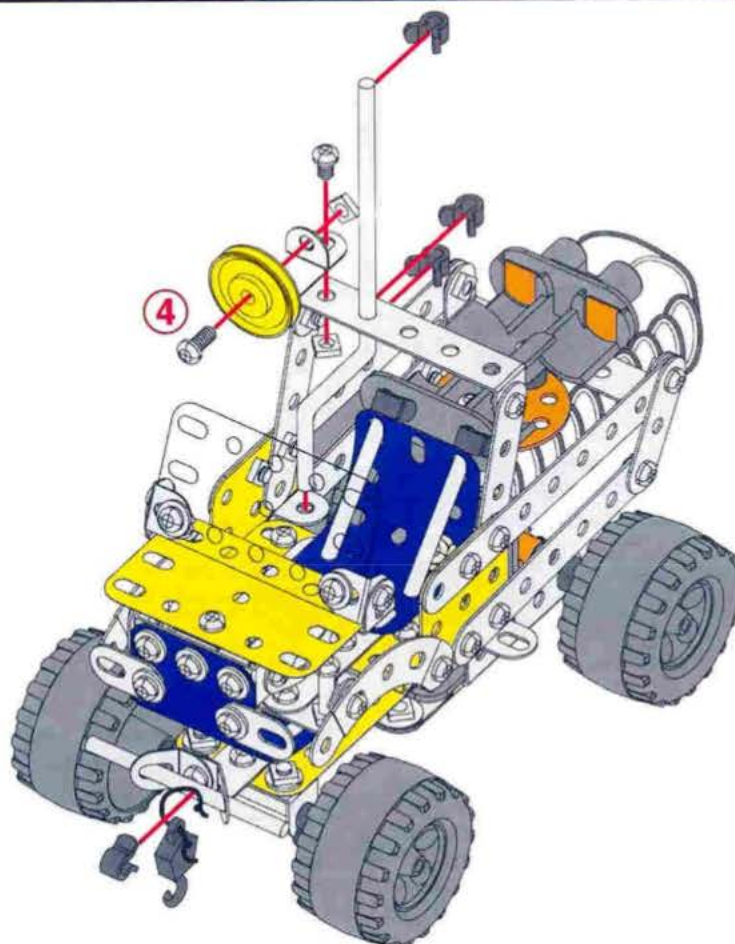
 x 1

 x 1

 x 1

  $\frac{9.5 \text{ mm}}{2 \frac{1}{2}}$  x 1

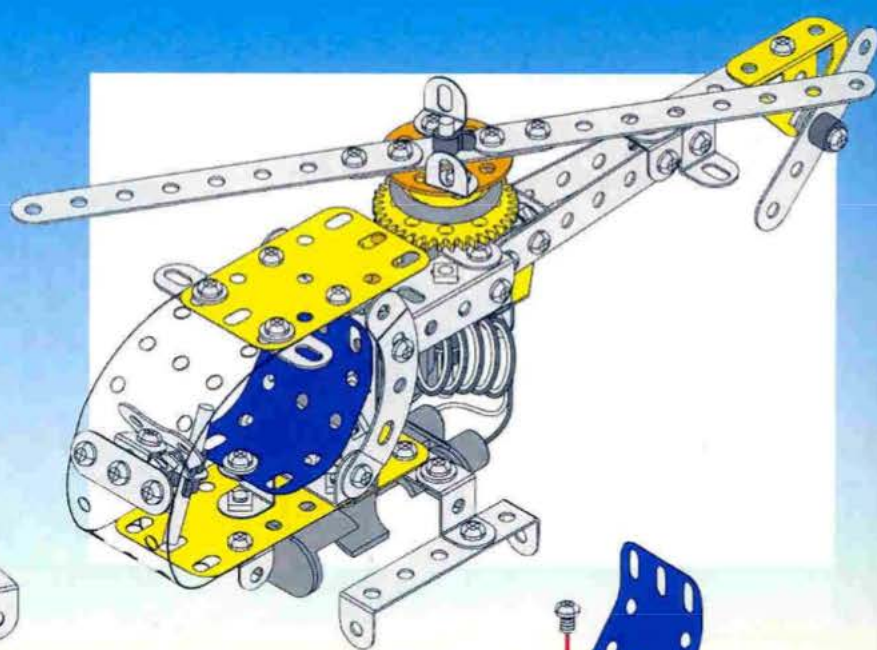
 x 4



This diagram shows an exploded view of a mechanical assembly. The components are as follows:

- x 1**: A yellow square plate with 8 holes (4 in the center, 4 around the perimeter).
- x 2**: A long, thin, light-colored rectangular plate with 4 holes.
- x 1**: A light-colored L-shaped bracket with one hole.
- x 2**: A light-colored L-shaped bracket with one hole.

The assembly is shown with red lines indicating the alignment of the parts. The yellow plate (x1) is positioned at the top, connected to the long plate (x2) by two vertical rods. The long plate (x2) is supported by two L-shaped brackets (x2) at its ends, which are connected to the yellow plate (x1) by two vertical rods. The long plate (x2) also has two small square blocks at its ends, which are connected to the yellow plate (x1) by two vertical rods.



**3** **2** +

— x 1

— x 1

— x 1

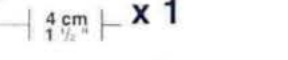
— x 2

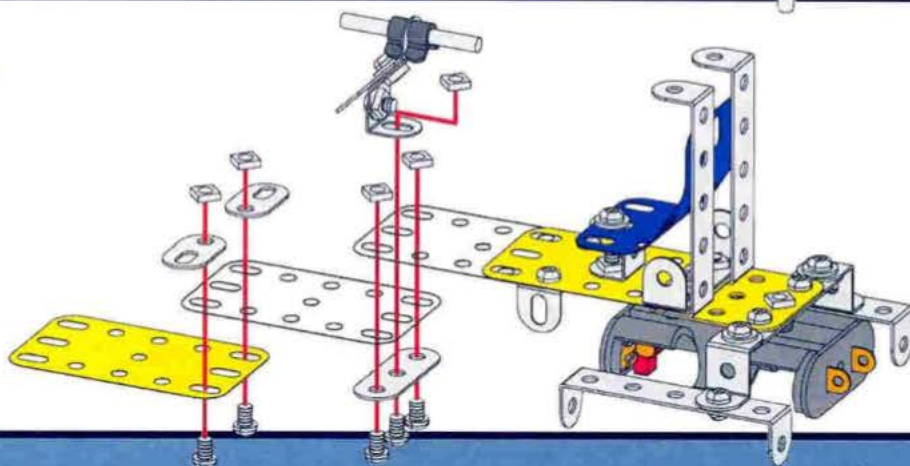
— x 2

— x 2

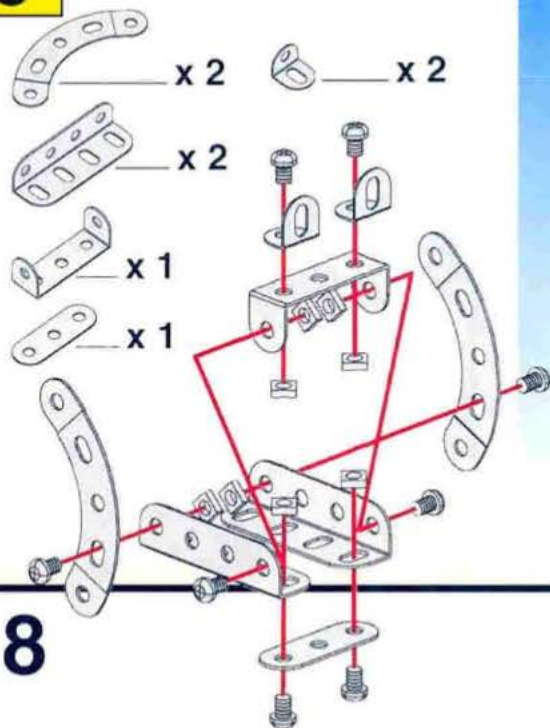
12 mm

x 2



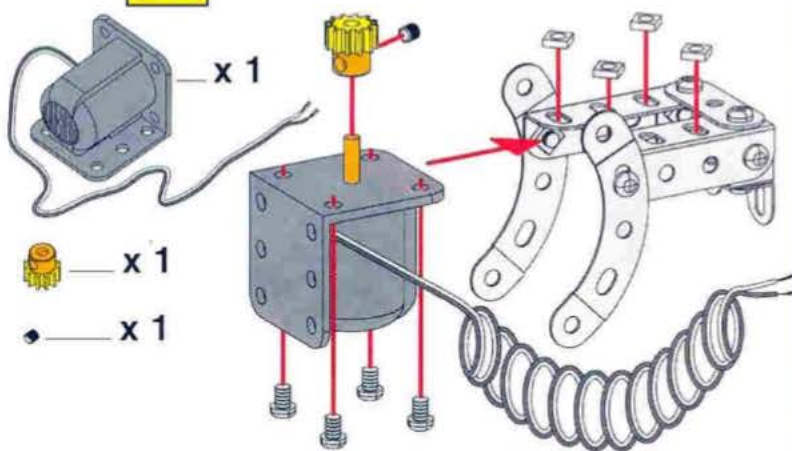


# 6



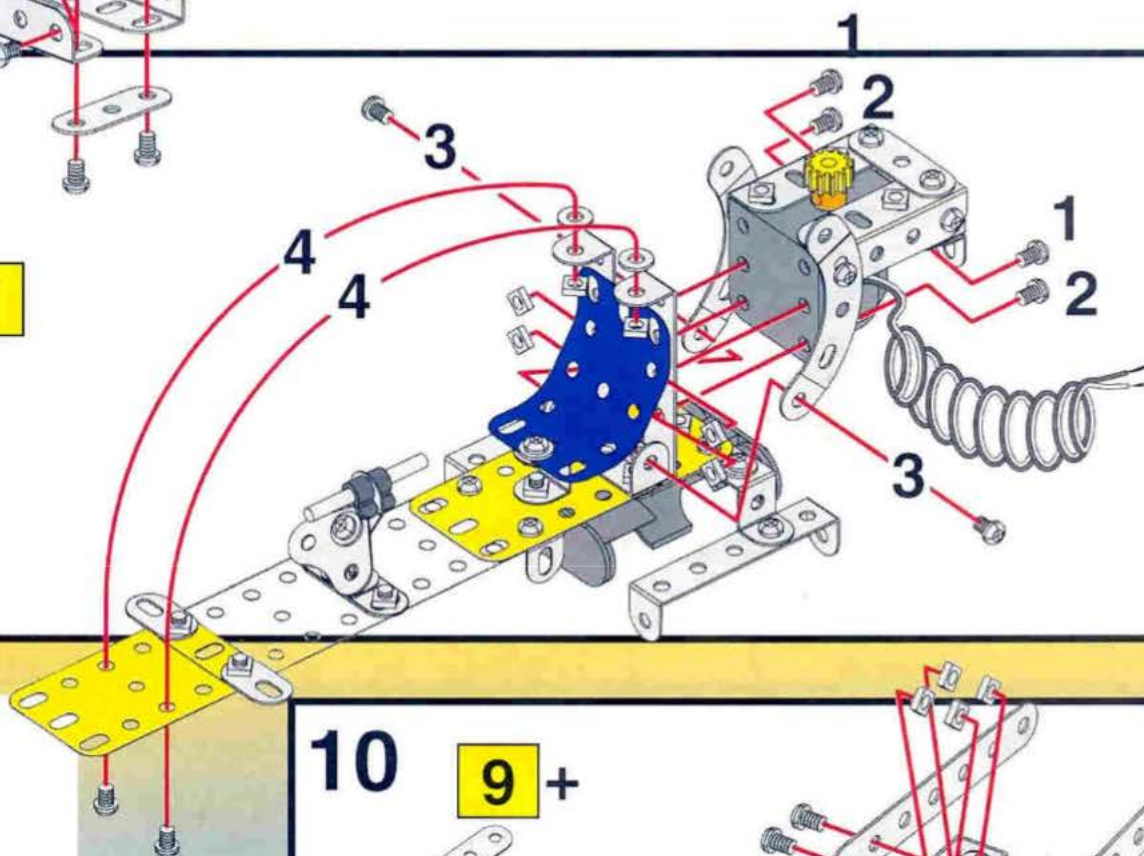
# 7

# 6 +

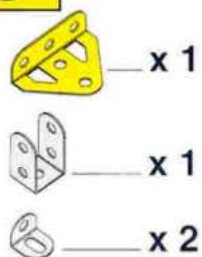


# 8

# 5 + 7

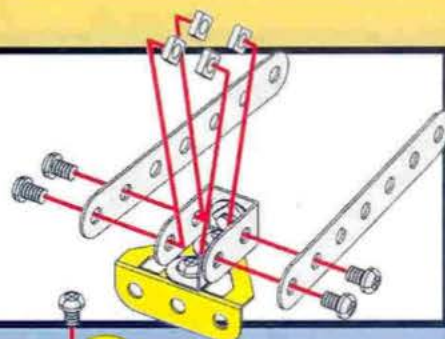
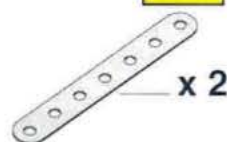


# 9

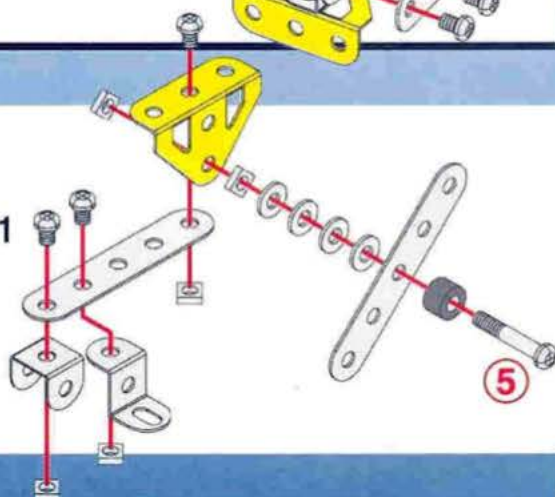
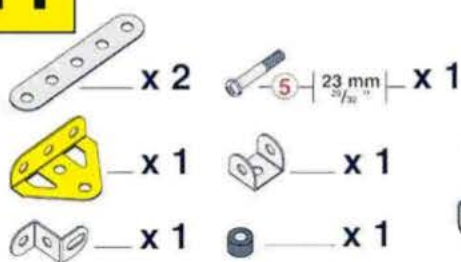


# 10

# 9 +

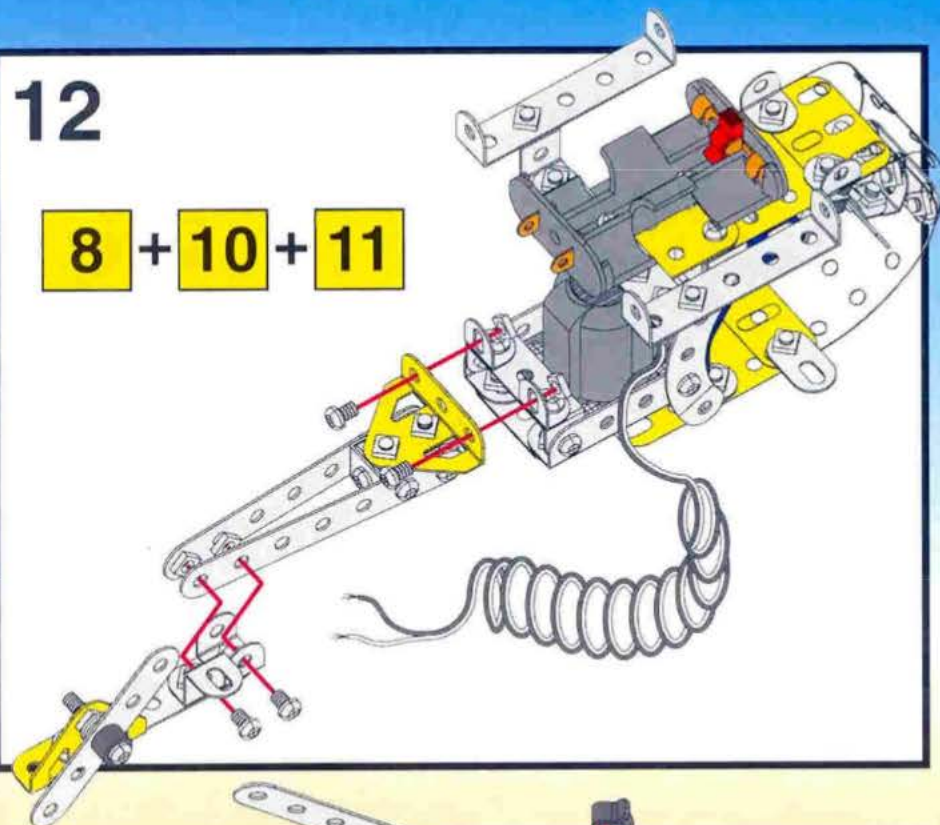


# 11

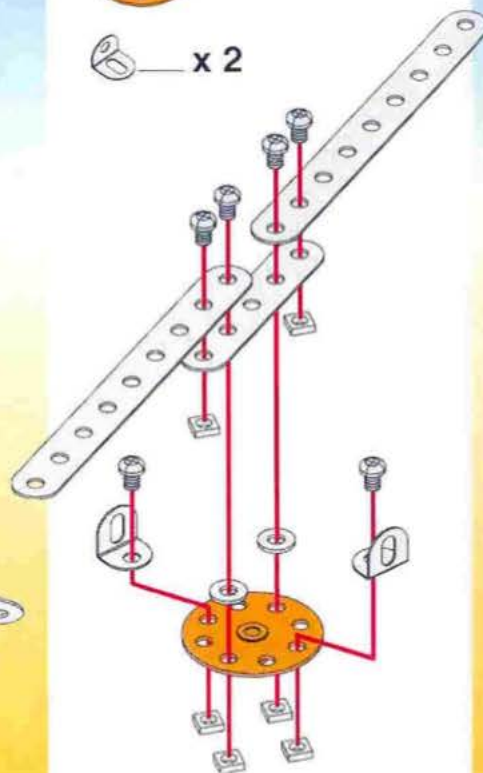


# 12

8 + 10 + 11

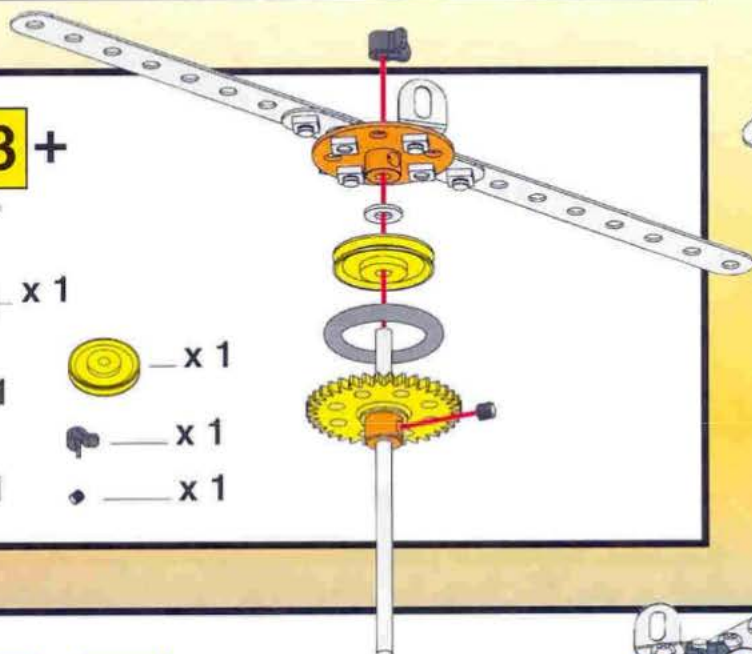
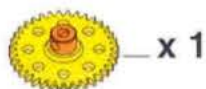
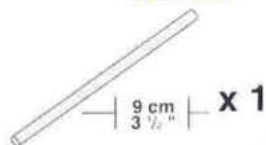


# 13



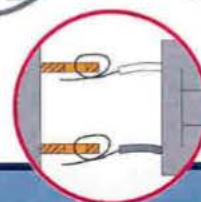
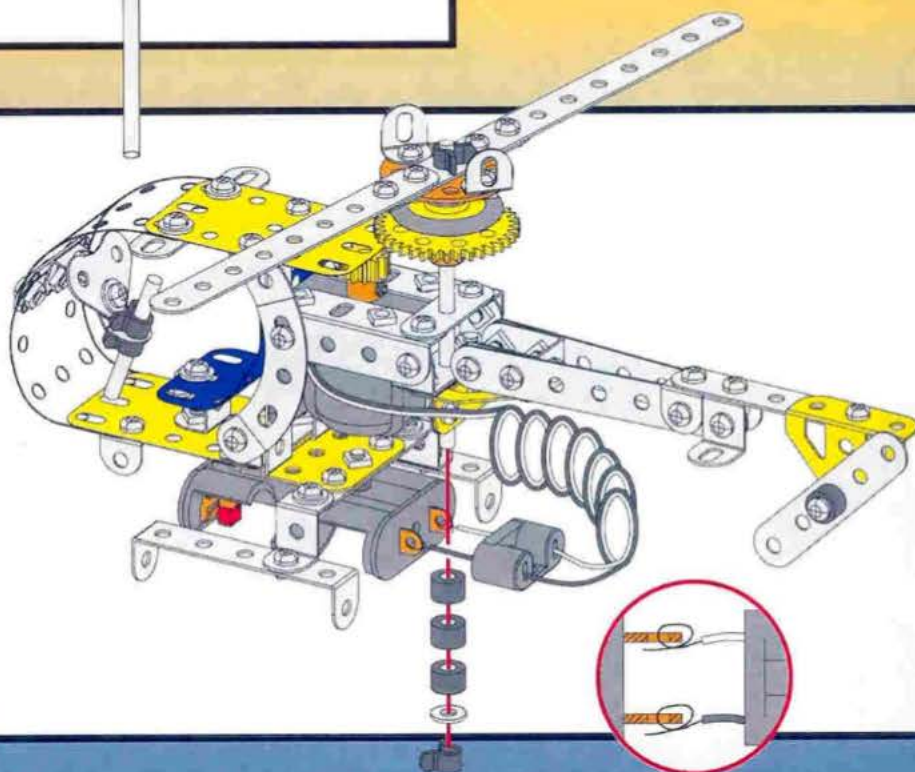
# 14

13 +



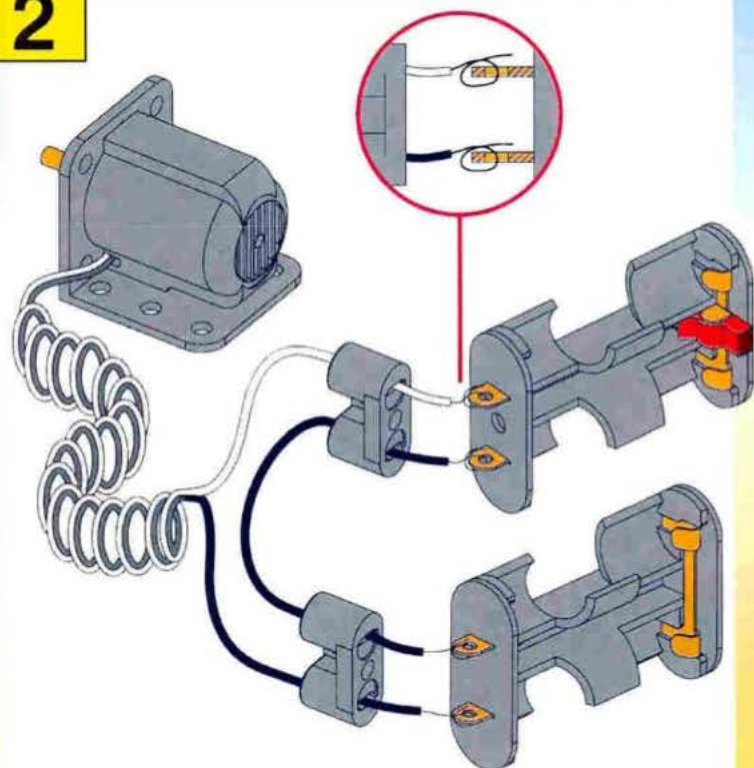
# 15

12 + 14 +



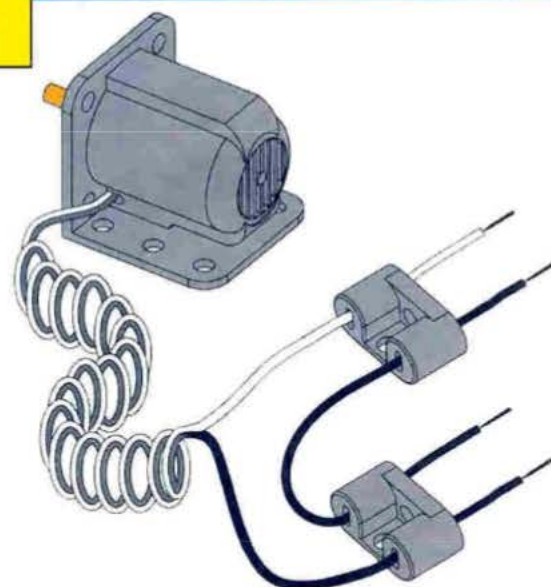
# ELECTRICAL WIRING OF MOTOR TO BATTERY PACK

2

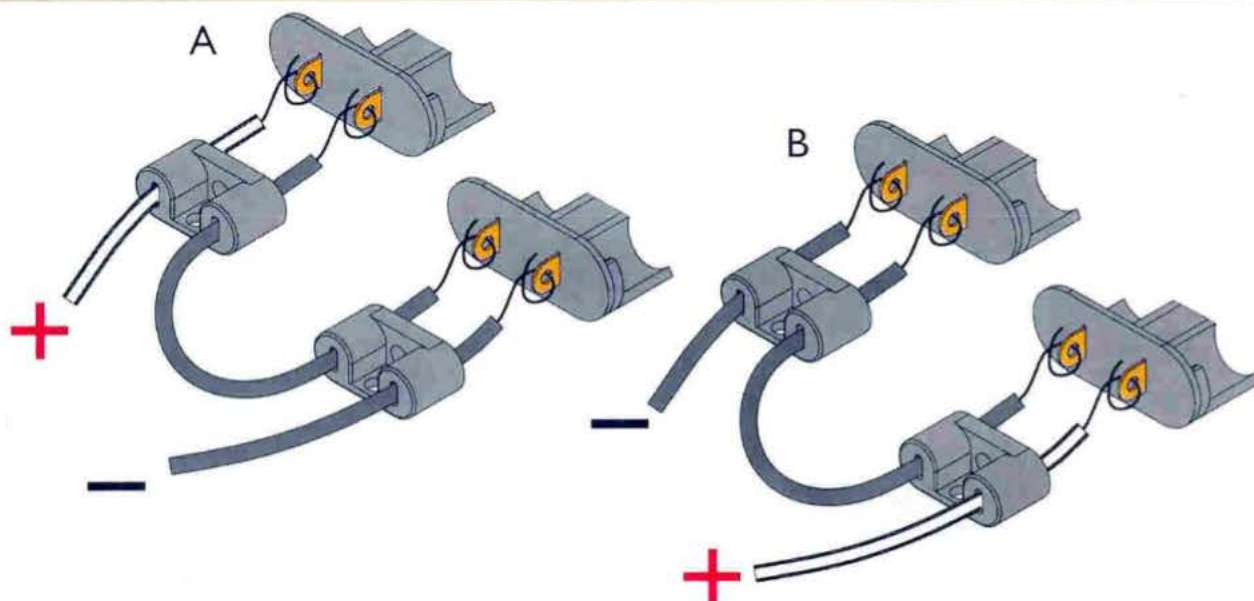
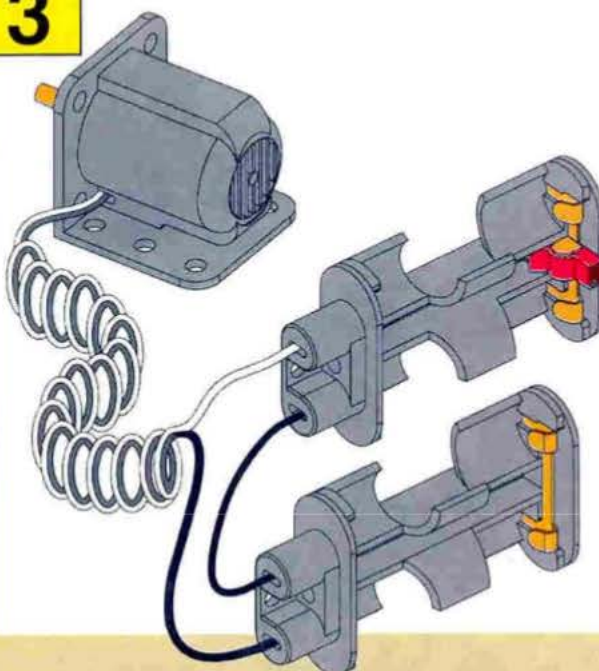


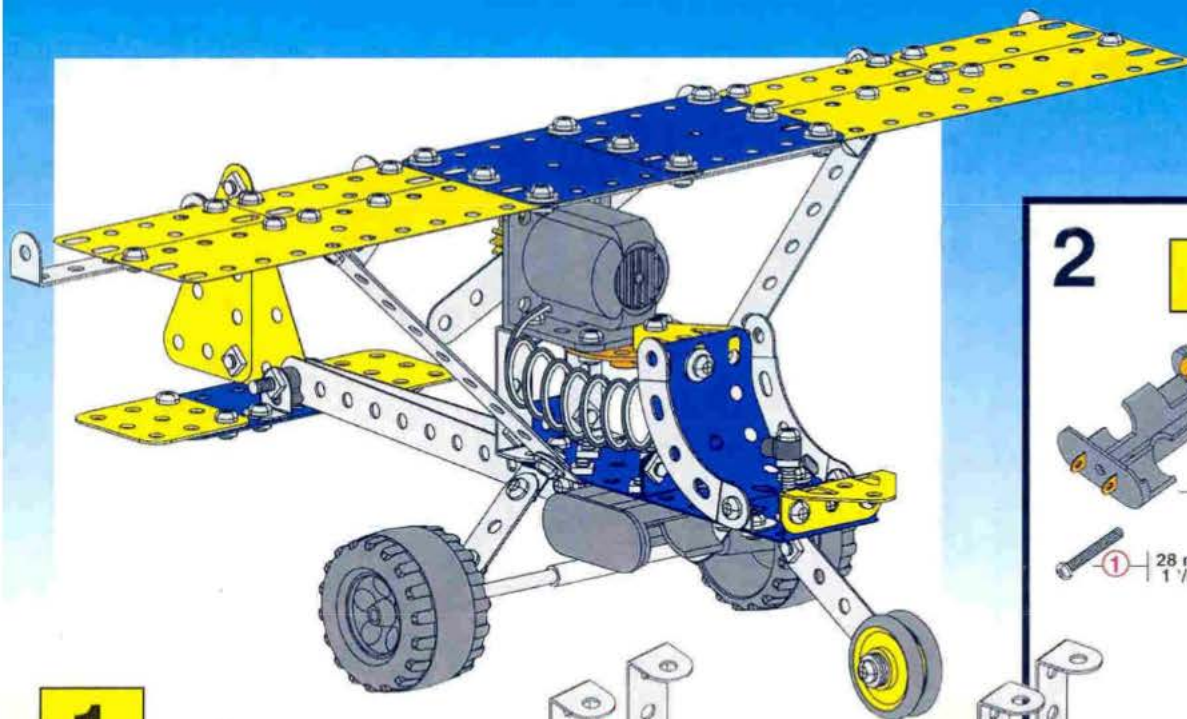
A : FORWARD ROTATION  
B : BACKWARD ROTATION

1








3









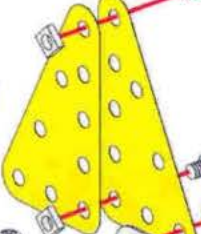
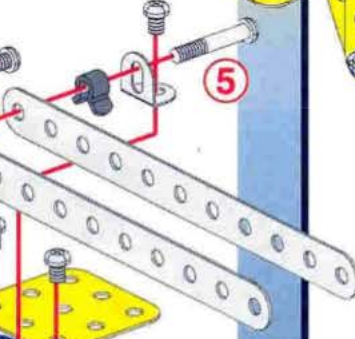







**1**

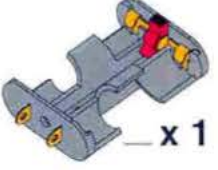




-  x 2
-  x 2
-  x 1
-  x 2
-  x 2

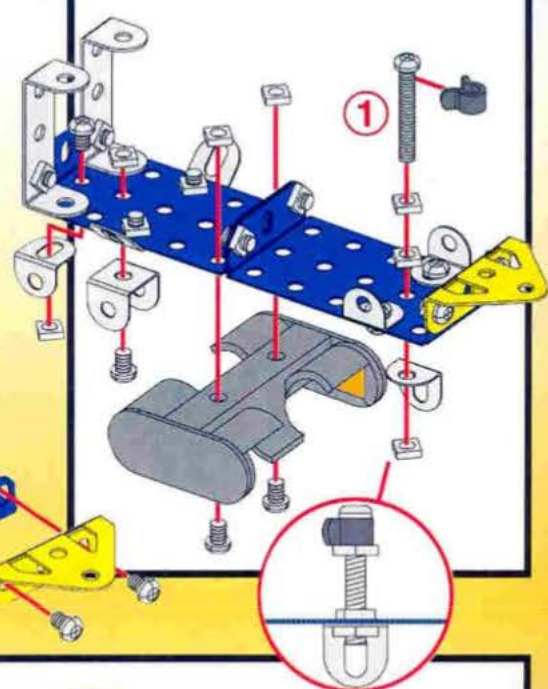
**3**

-  x 2
-  x 1
-  x 1
-  x 2
-  x 2
-  x 2
-  x 1
-  x 2
- 
- 
- 
- 
- 

**2**

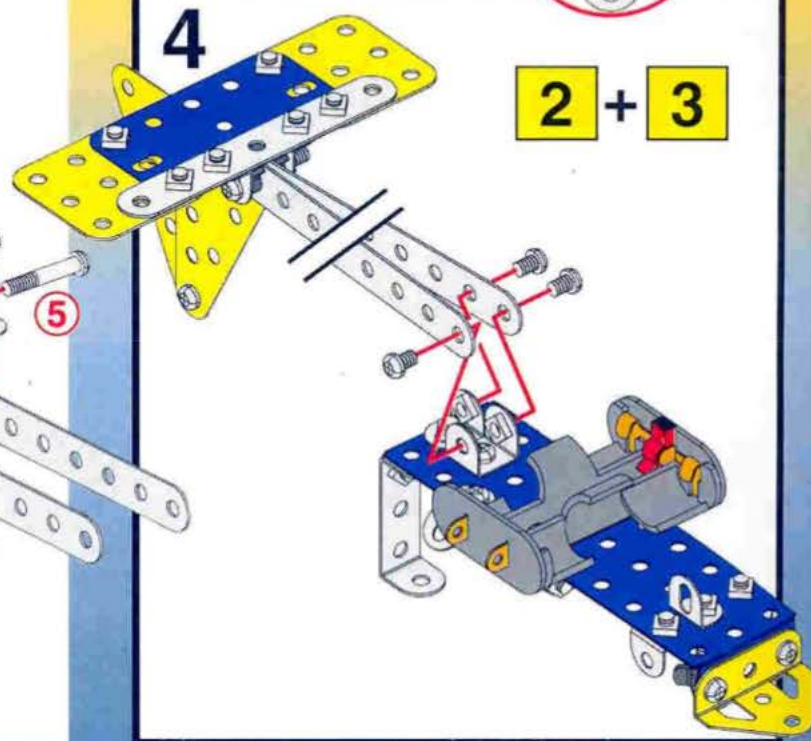
**1** +


-  x 1
-  x 1
-  x 2
-  x 1
-  x 1





**4**


**2** + **3**



 x 1

 x 1

 x 2



9

x 2

x 4

x 2

x 4

x 2

x 2

x 4

[illegible]




**8** **4 + 6 + 7 +**

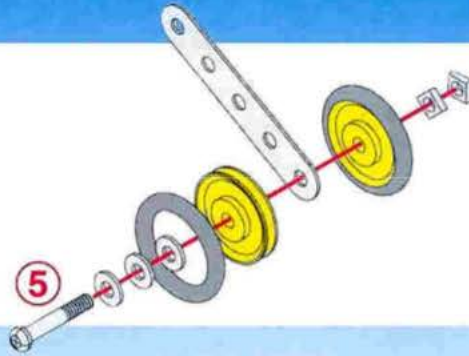
— x 1

— 12 mm  $\frac{1}{2}$  — x 2

— x 2






# 10

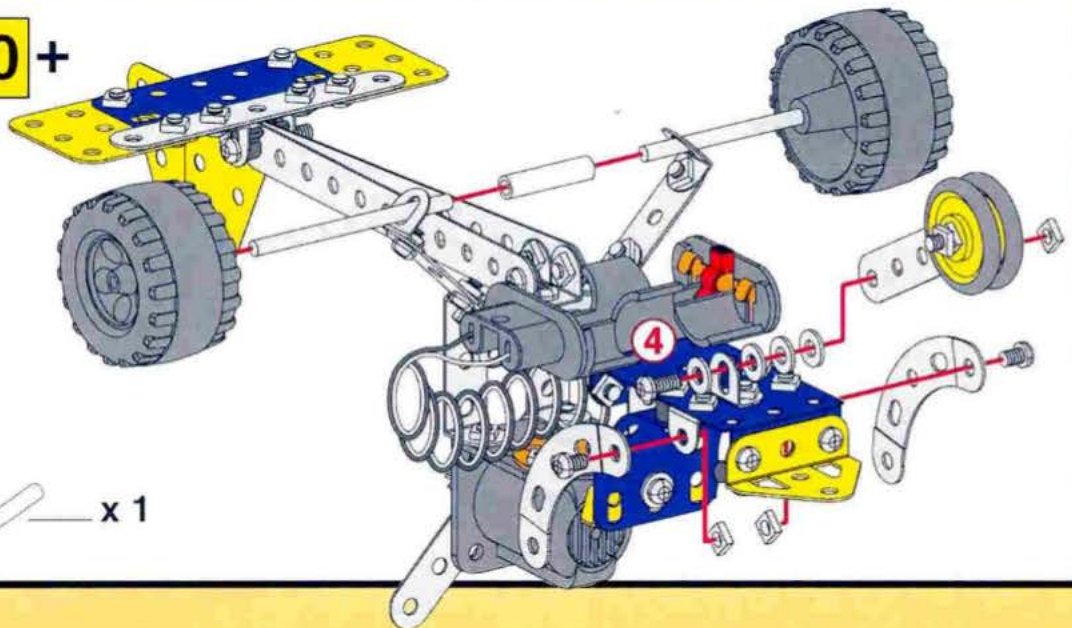
-  x 1
-  x 2
-  x 1
-  x 2



# 11

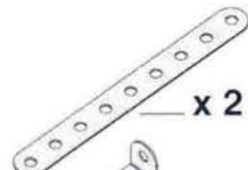
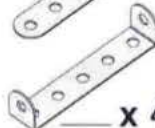

## 8 + 10 +

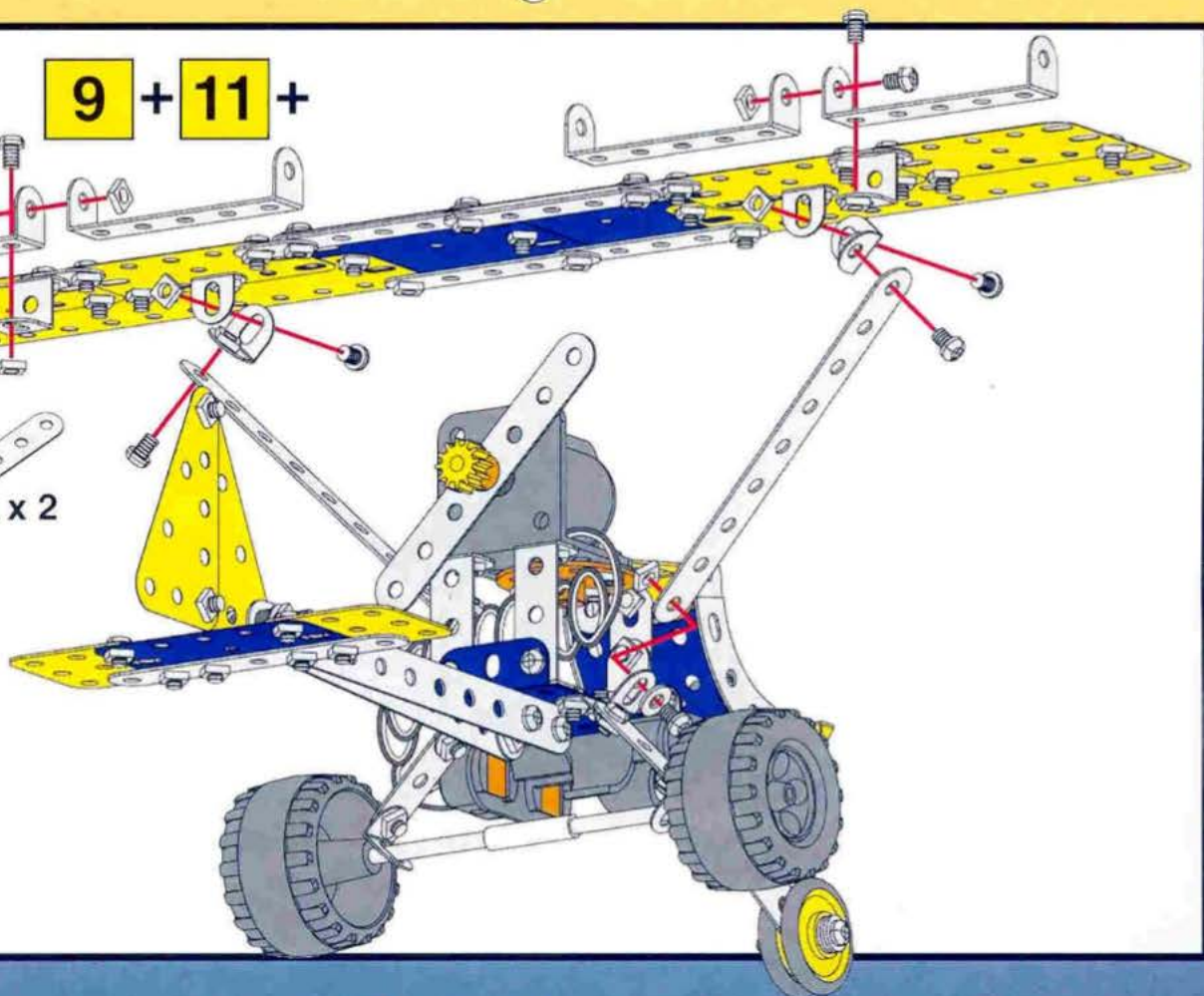
-  x 2
-  x 2
-  x 2
-  x 1
-  x 1



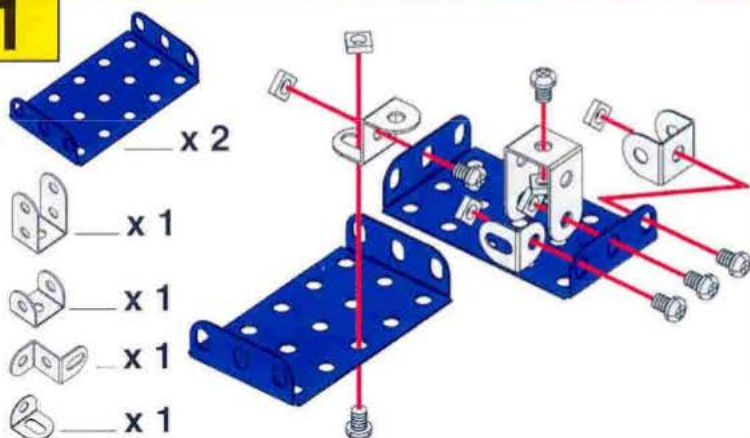
# 12

## 9 + 11 +

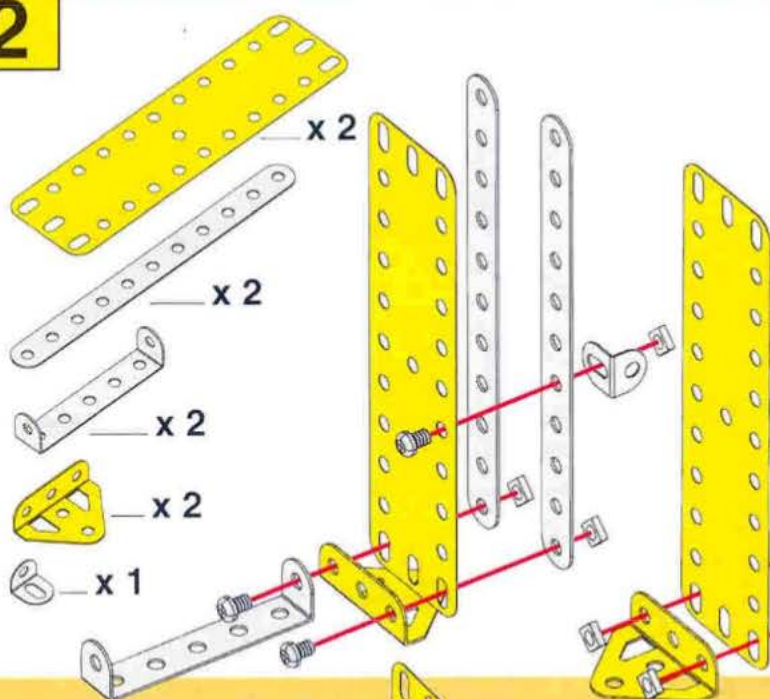
-  x 2
-  x 4
-  x 2



1

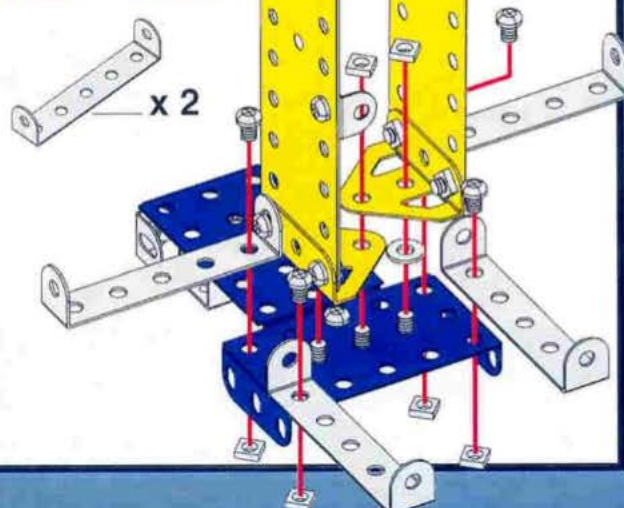


2

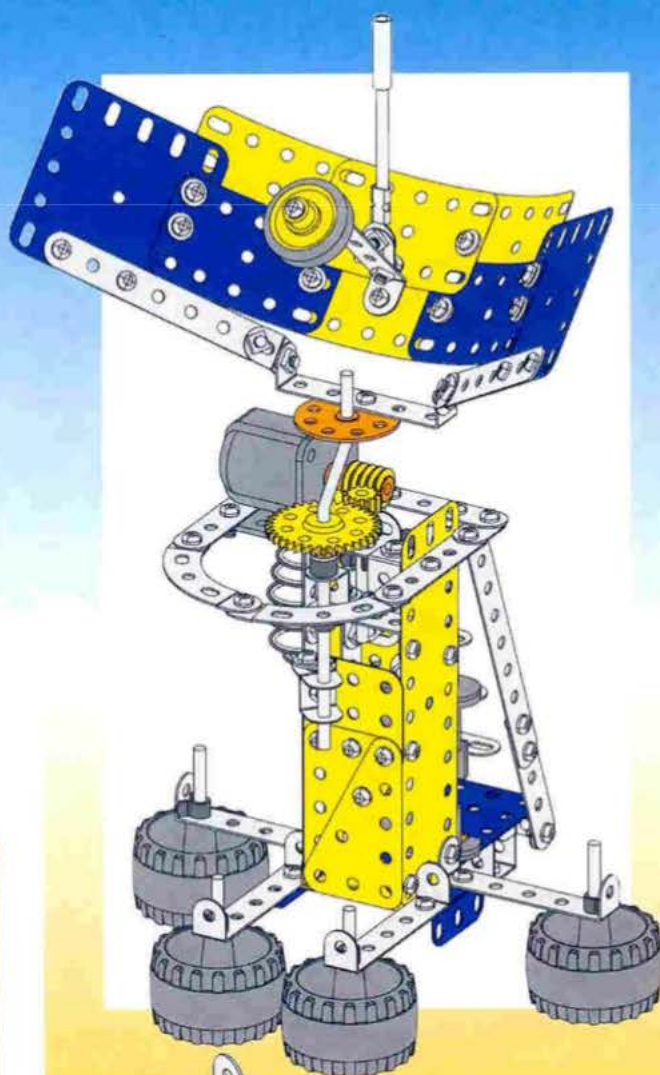
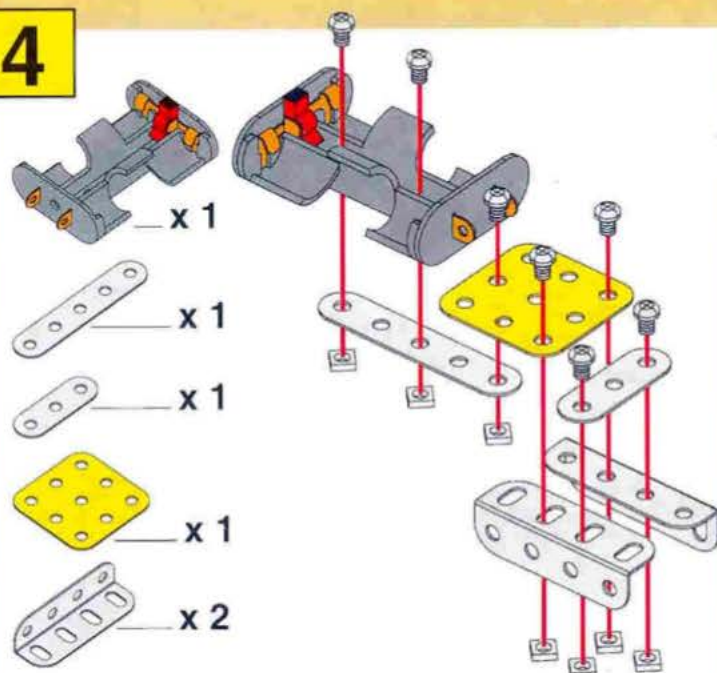


3




1 + 2 +

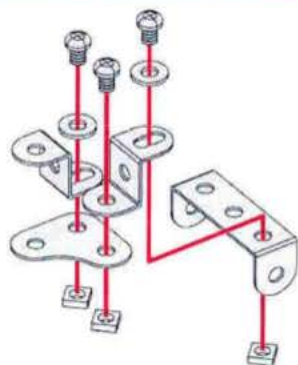


4

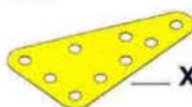
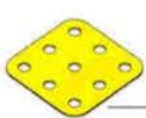
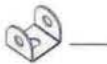



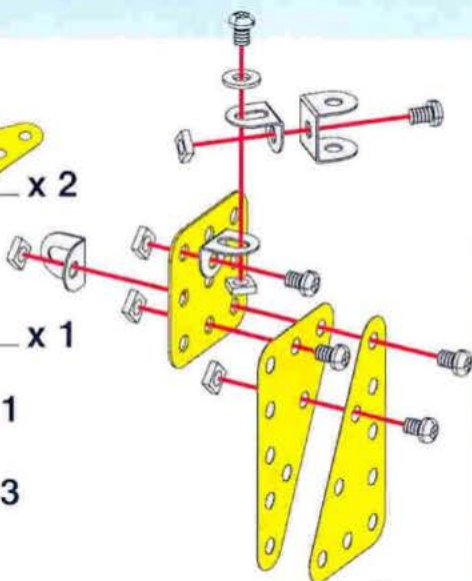
5

-  x 1
-  x 1
-  x 2



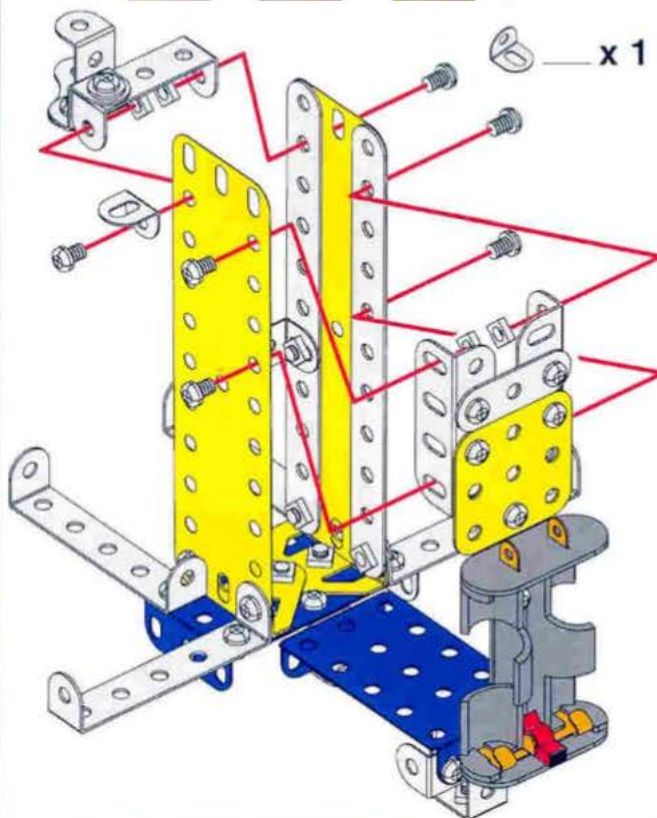
7

-  x 2
-  x 1
-  x 1
-  x 3










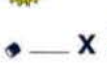

6

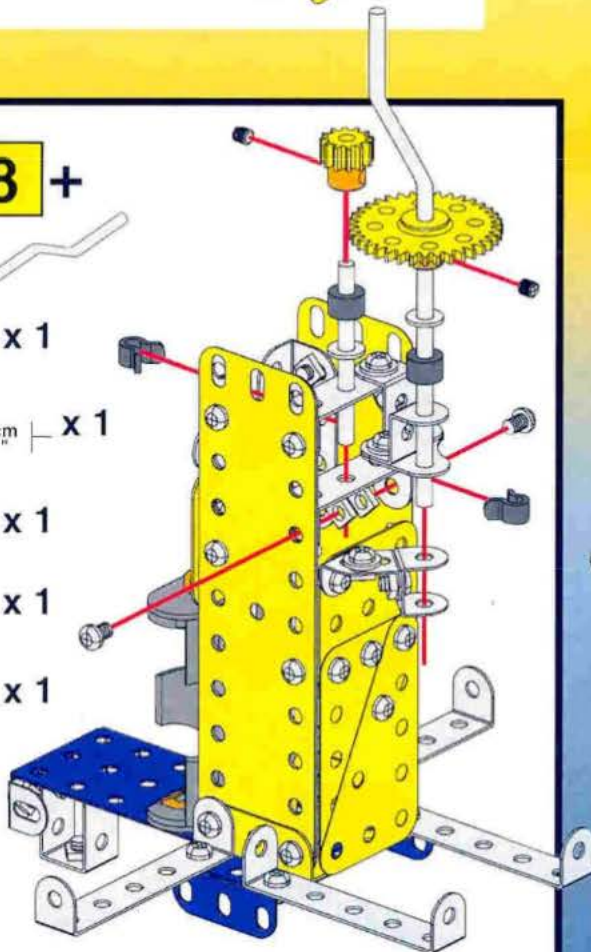
3 + 4 + 5 +



9

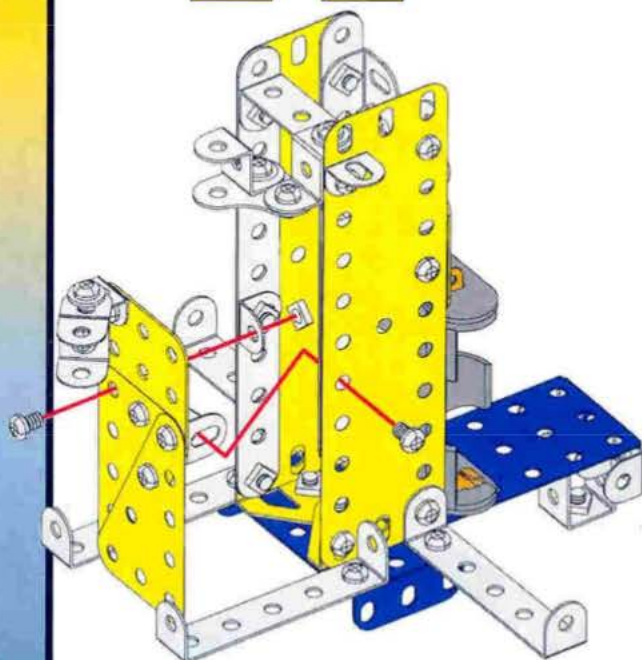
8 +

-  x 1
-  5 cm 2" x 1
-  x 1
-  x 1
-  x 1
-  x 1
-  x 2
-  x 2
-  x 2

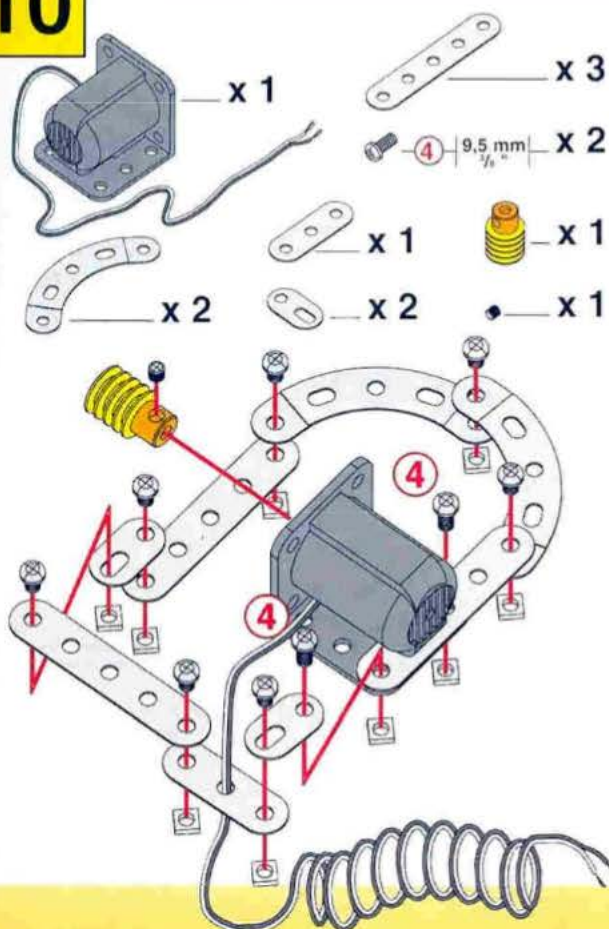


8

6 + 7

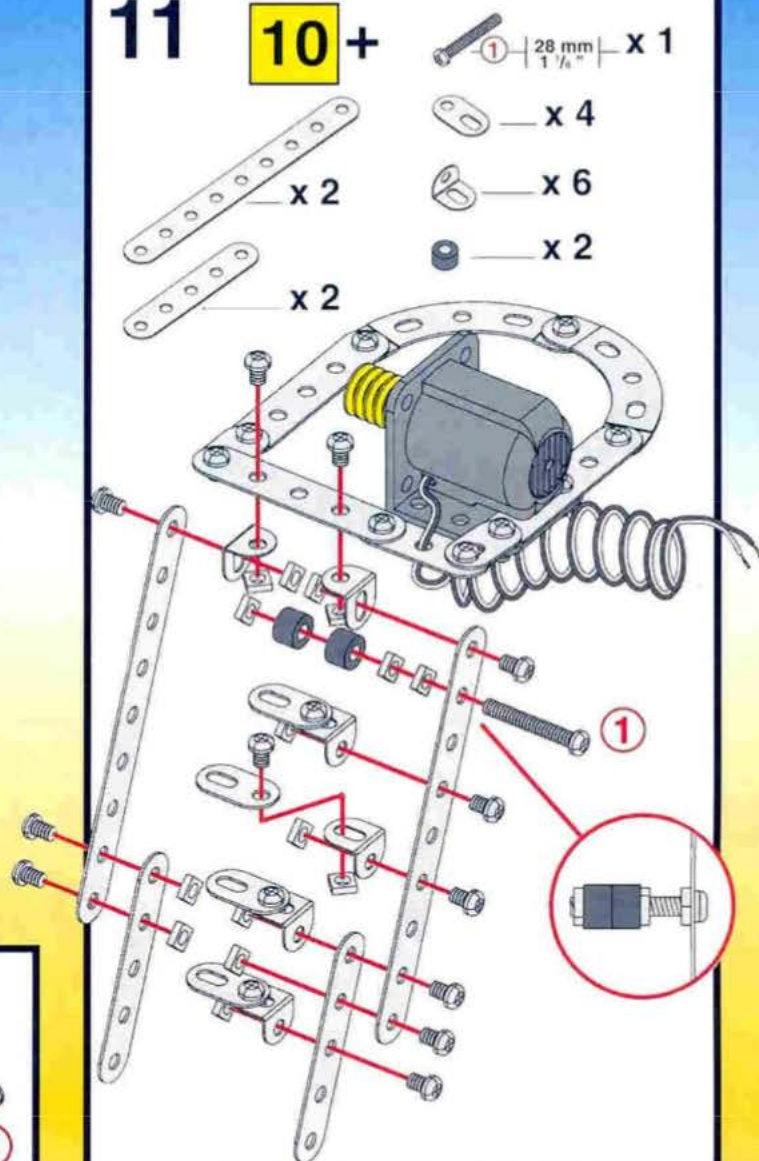


# 10



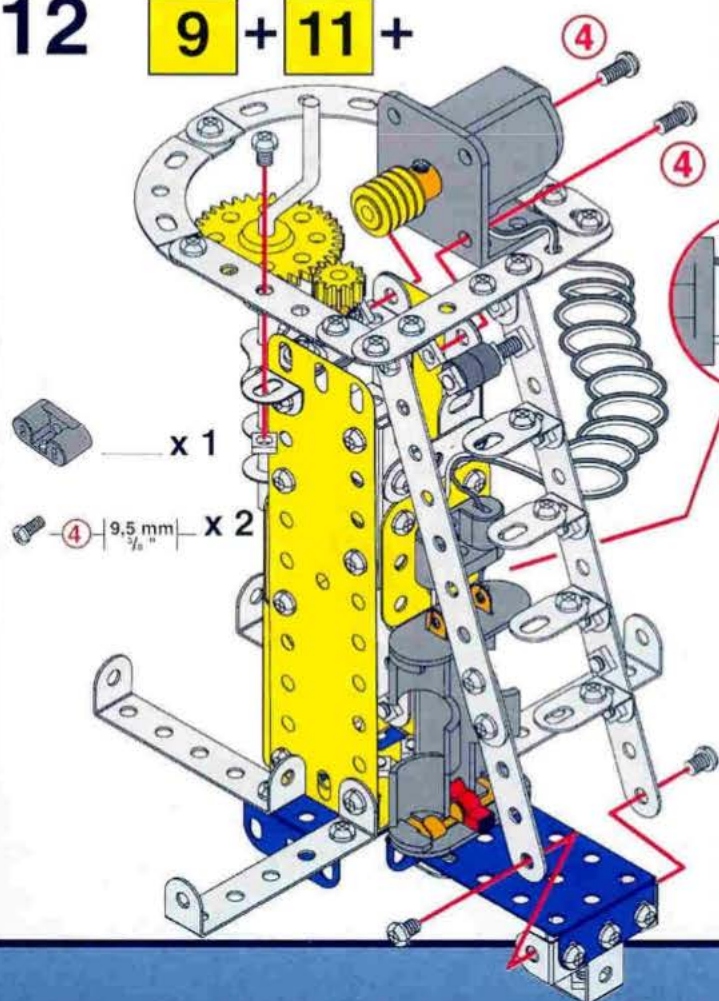
# 11

## 10 +

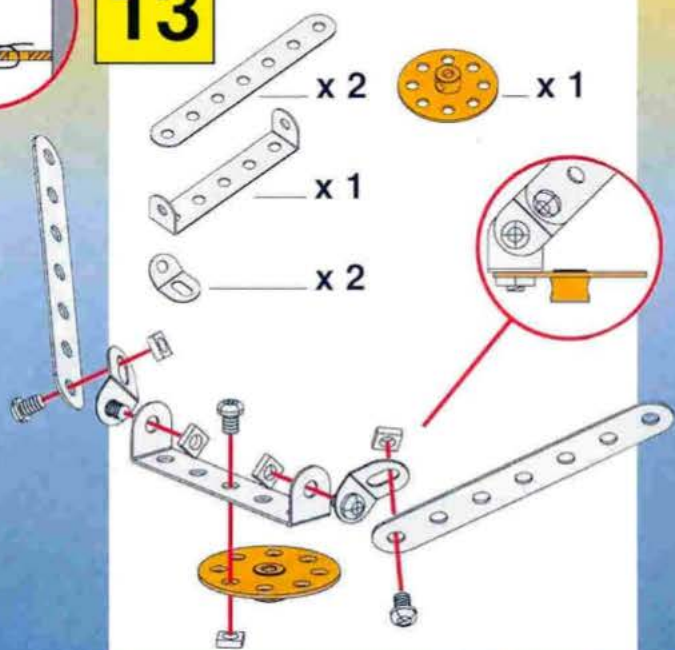


# 12

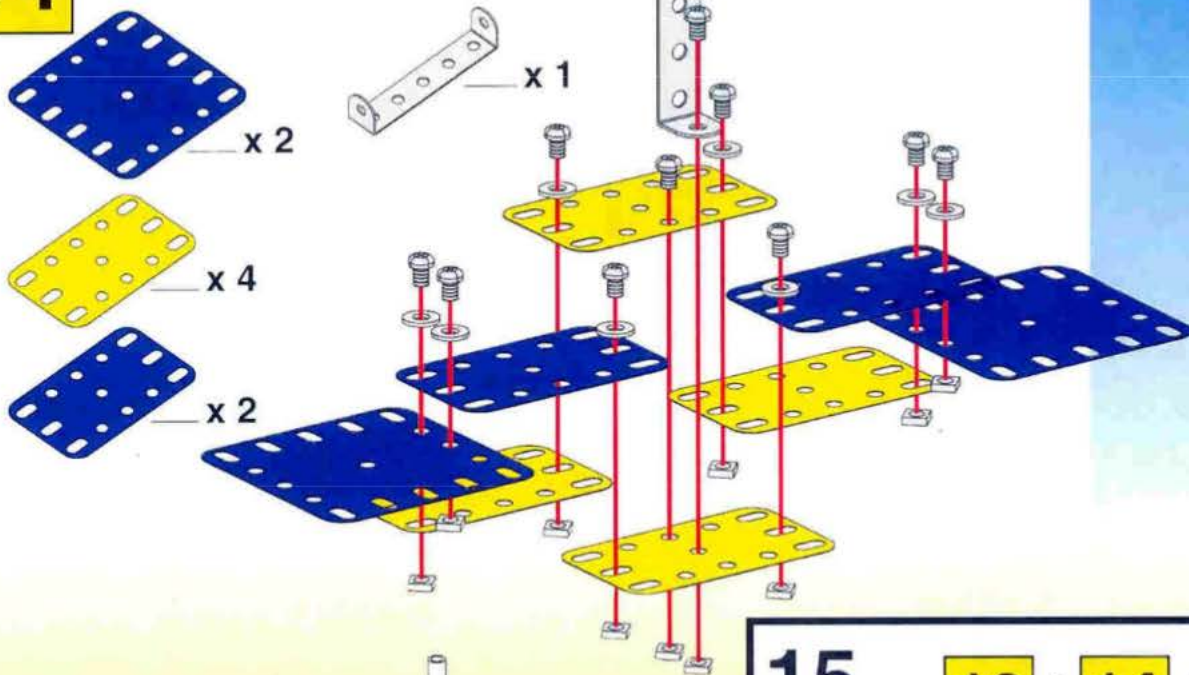
## 9 + 11 +



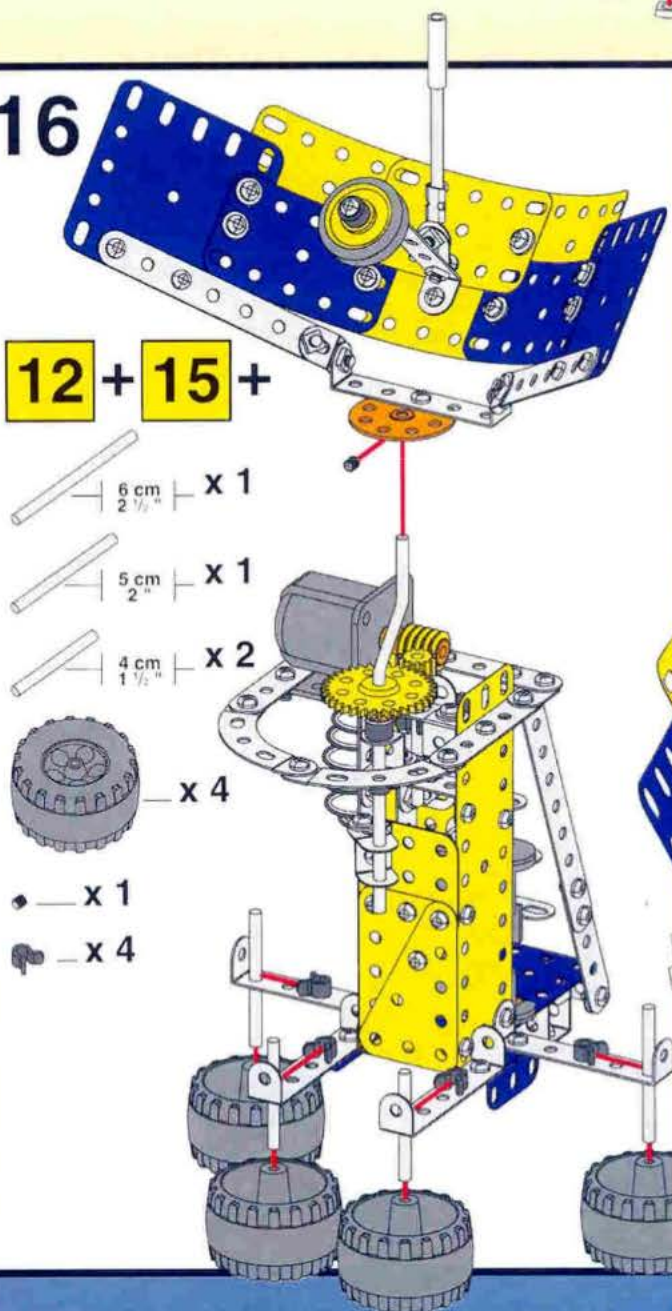
# 13



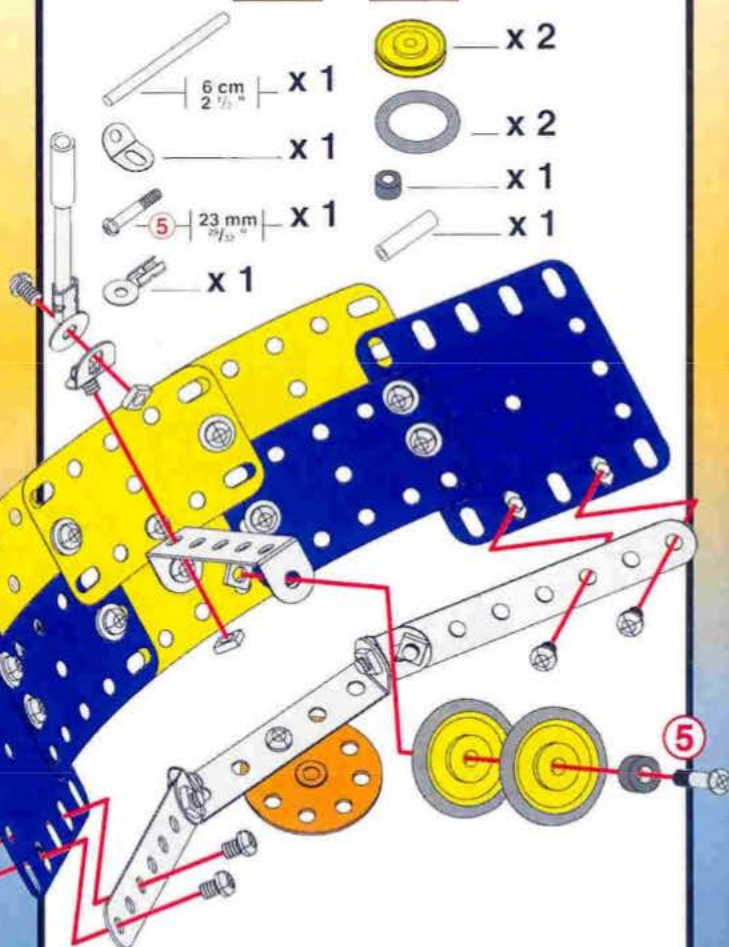
14



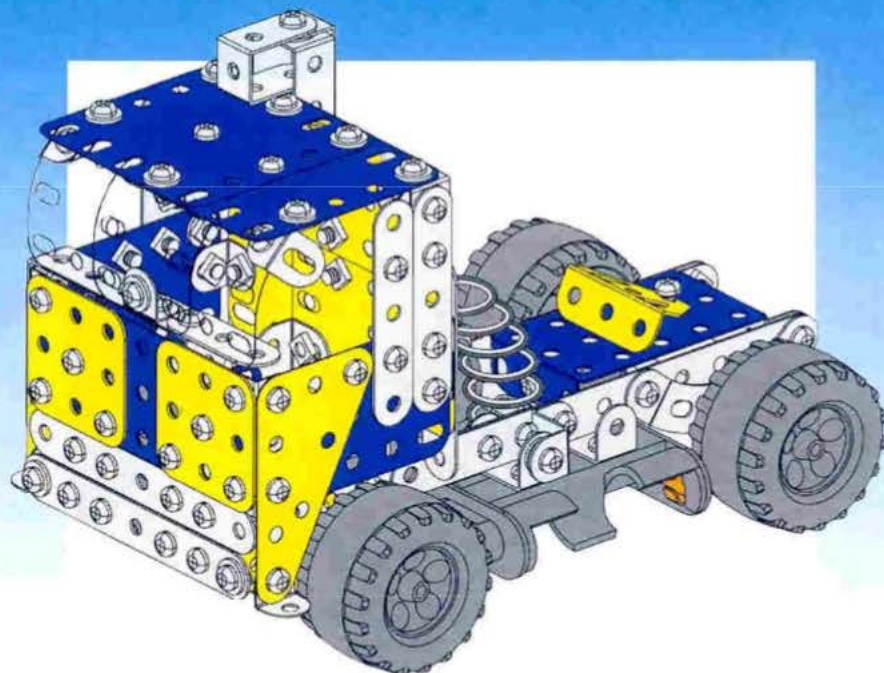
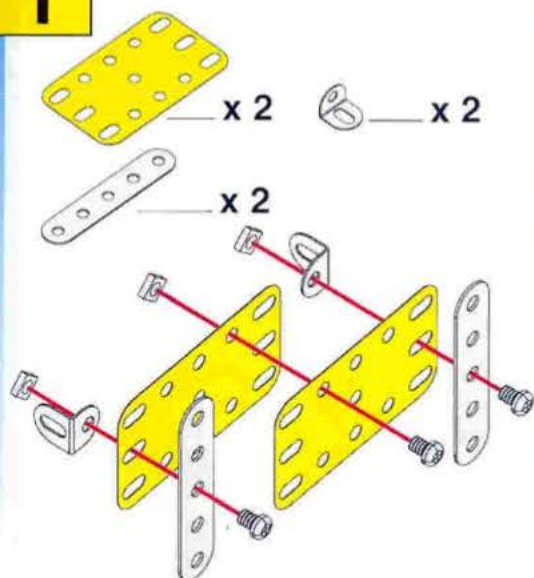
16



15

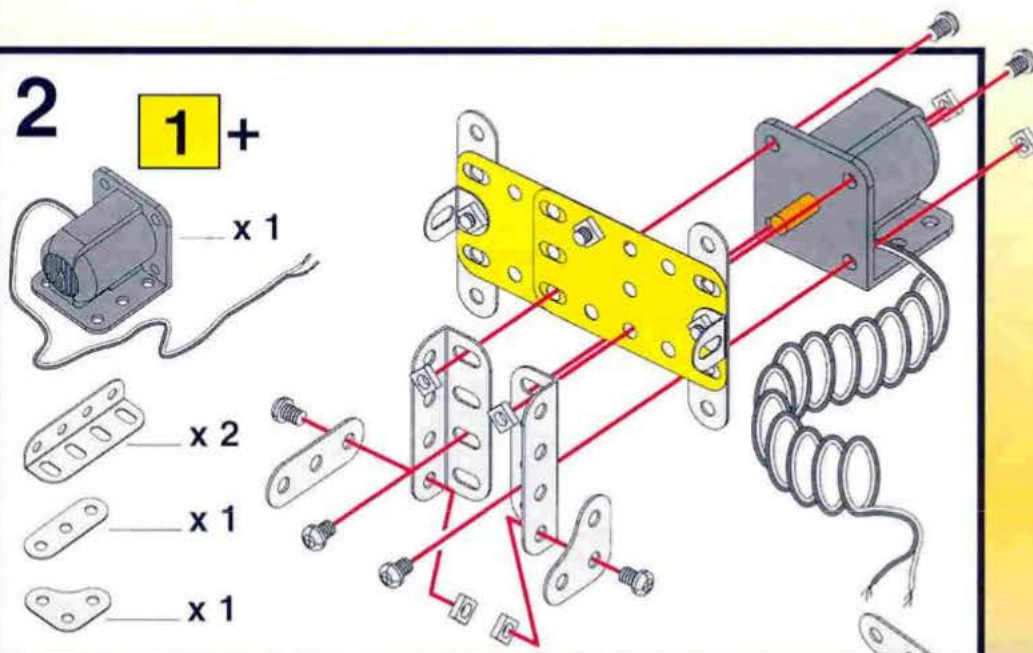
 $13 + 14 +$ 

1

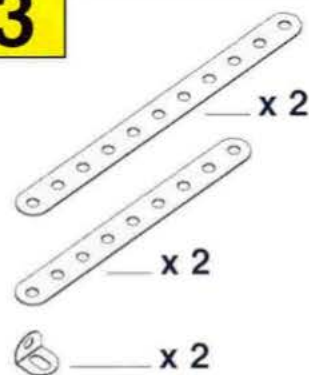


2

1 +

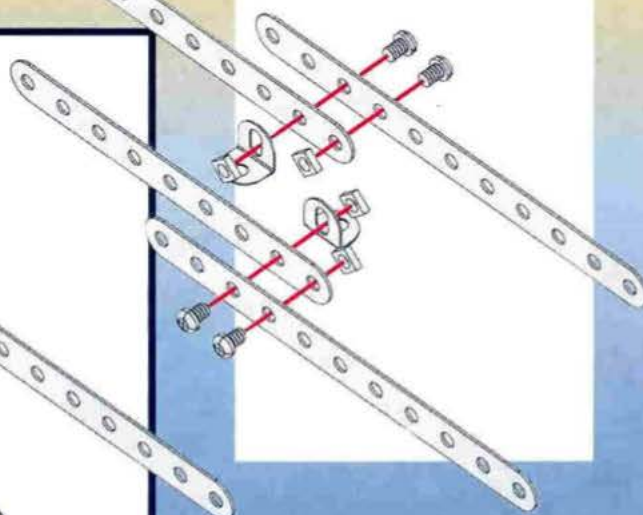
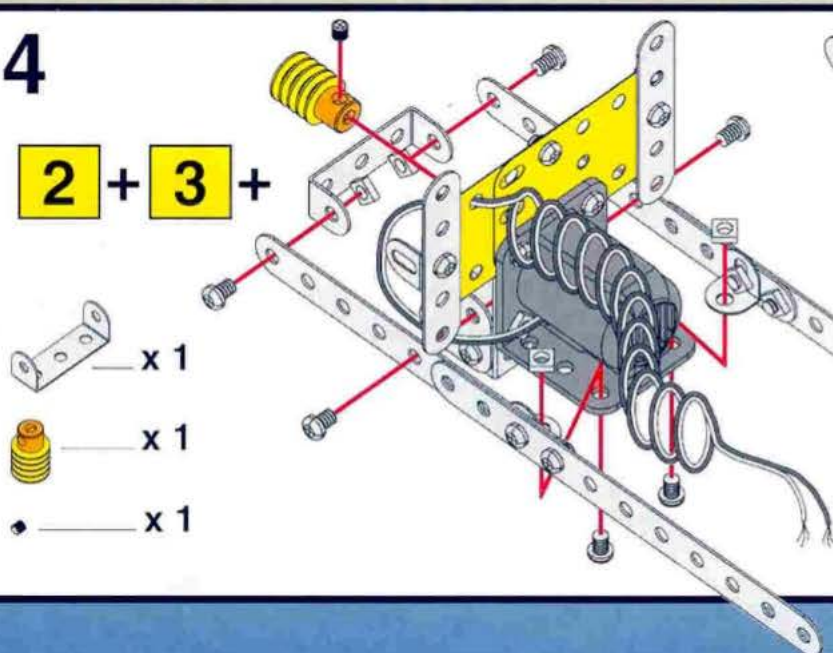


3

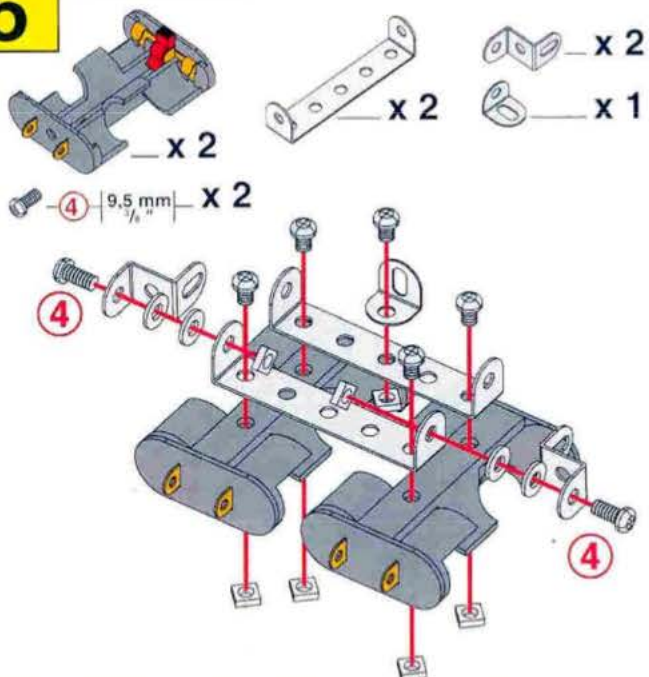


4

2 + 3 +



# 5

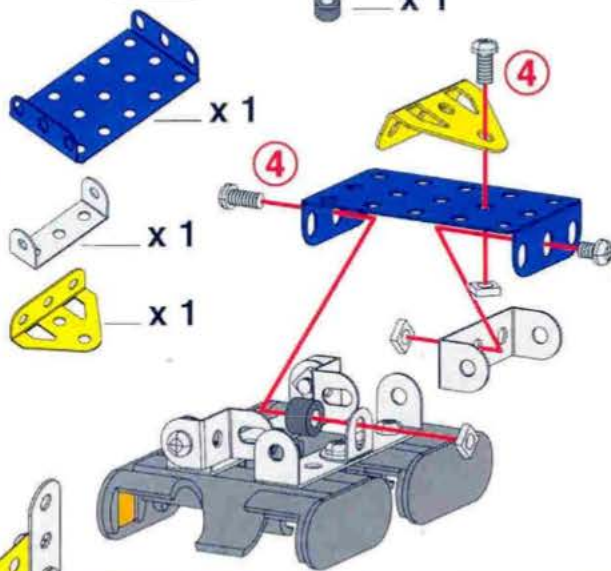


# 6

# 5

# +

Red screw (4) 9.5 mm x 2  
 Grey bush: x 1



# 7

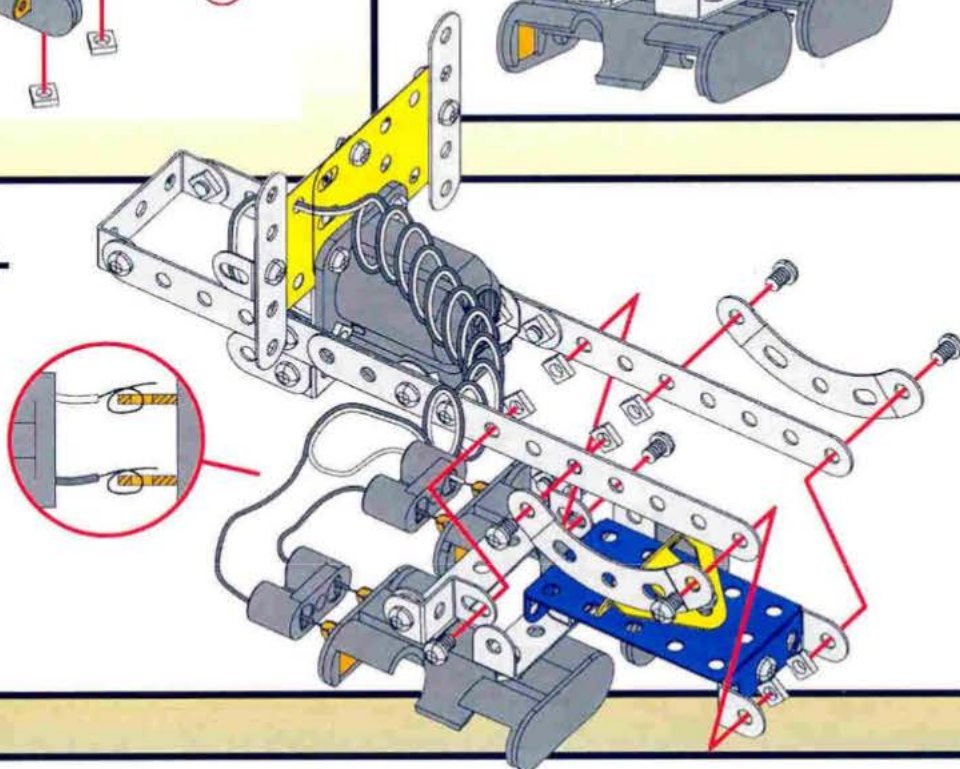
# 4

# +

# 6

# +

White curved beam: x 2  
 Grey motor housing: x 2

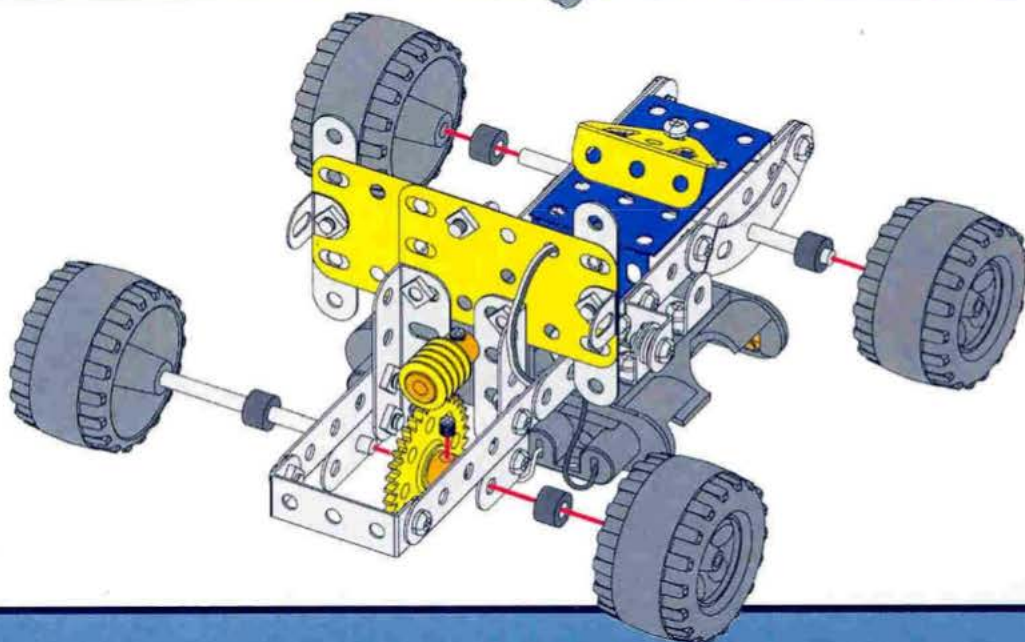


# 8

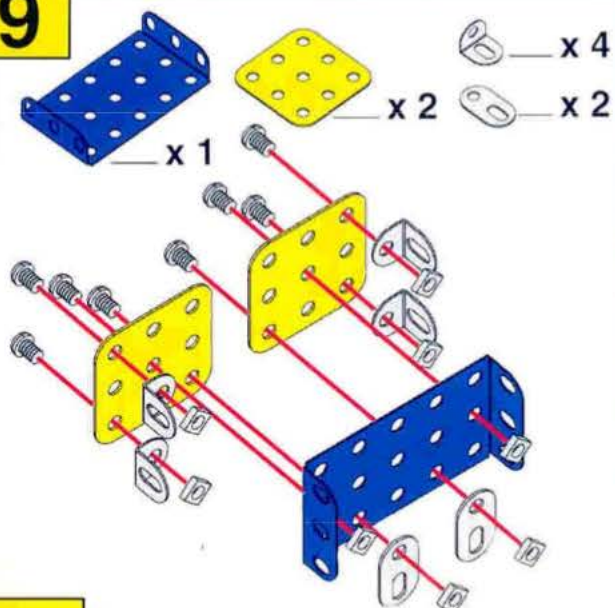
# 7

# +

White beam (9 cm / 3 1/2"): x 2  
 Yellow gear: x 1  
 Grey gear: x 4  
 Grey bush: x 4  
 Red screw: x 1

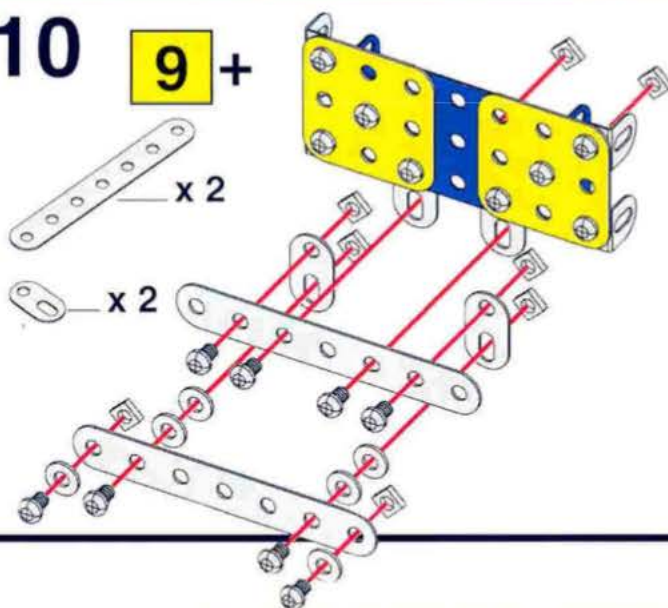


9

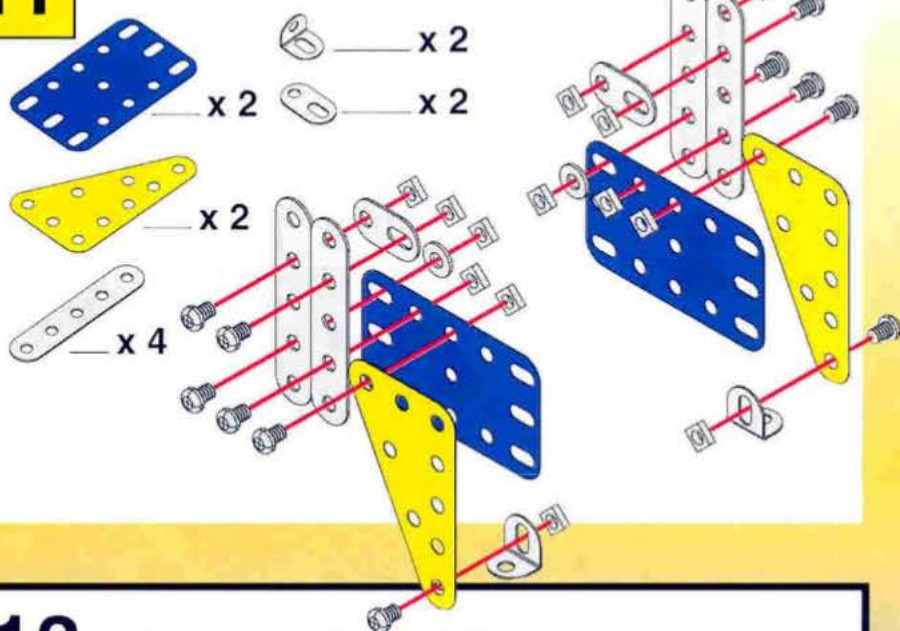


10

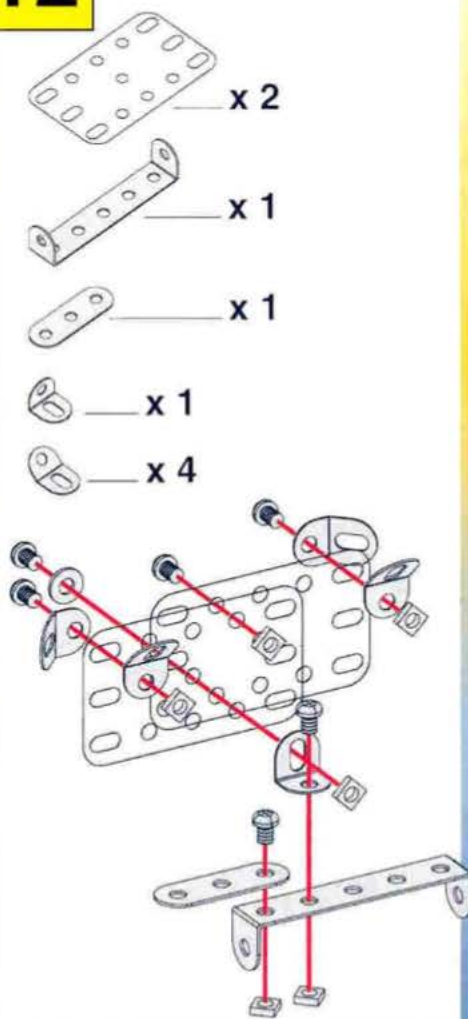
9 +



11

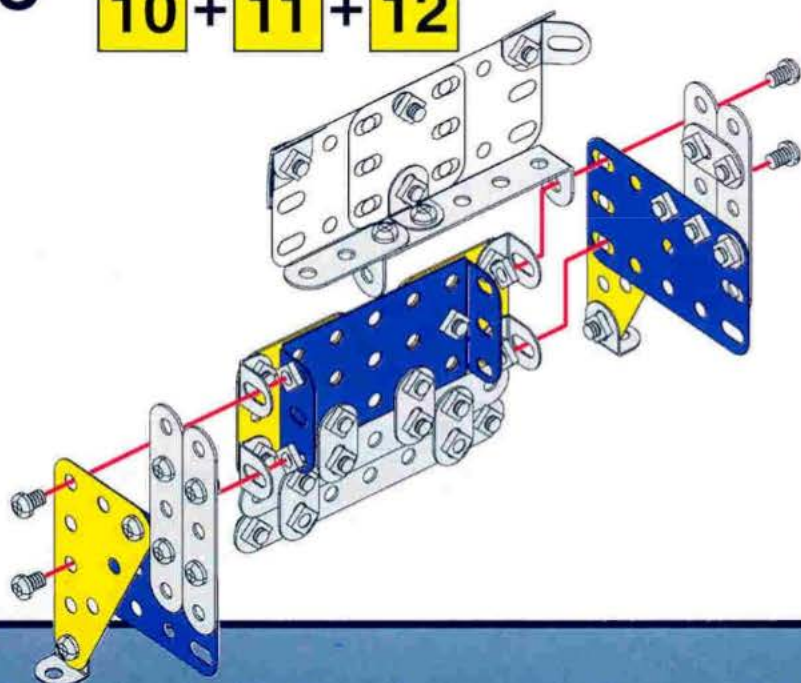


12

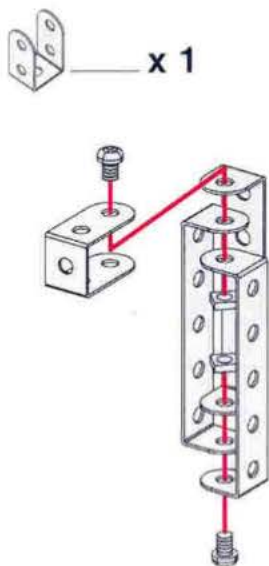
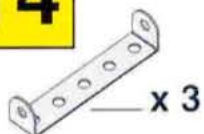


13

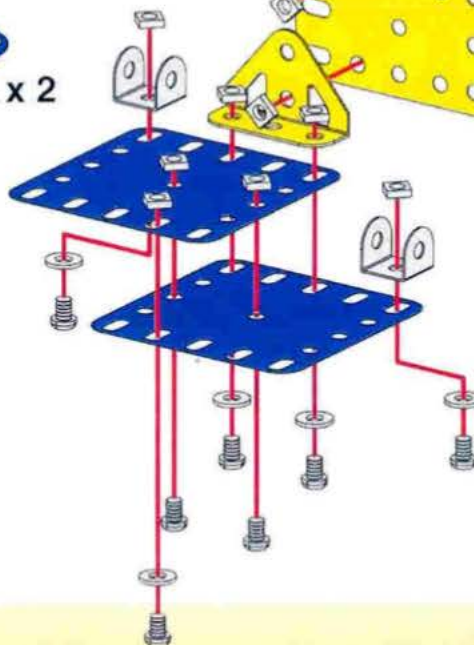
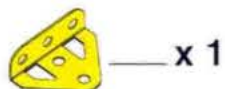
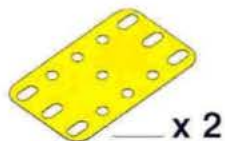
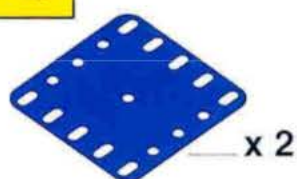
10 + 11 + 12



14



15



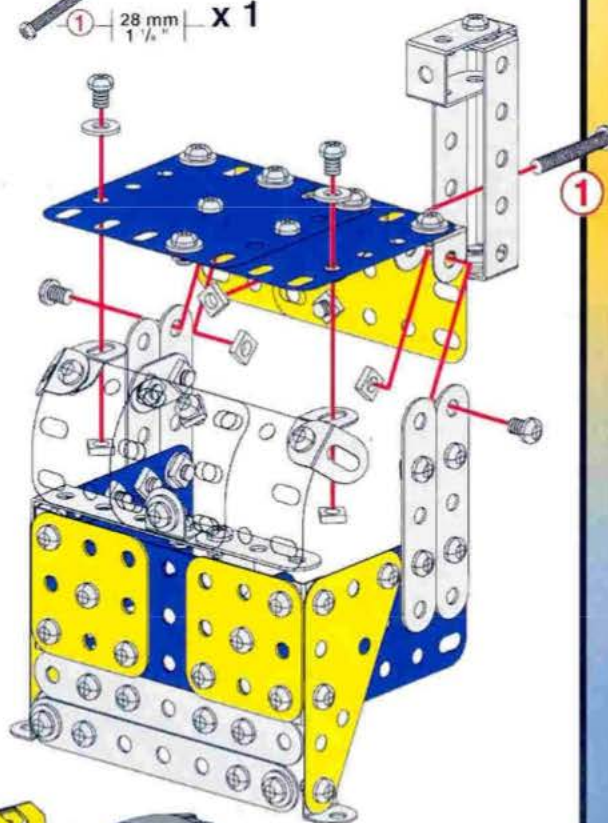
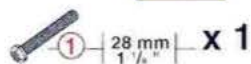
16

13

14

15

+

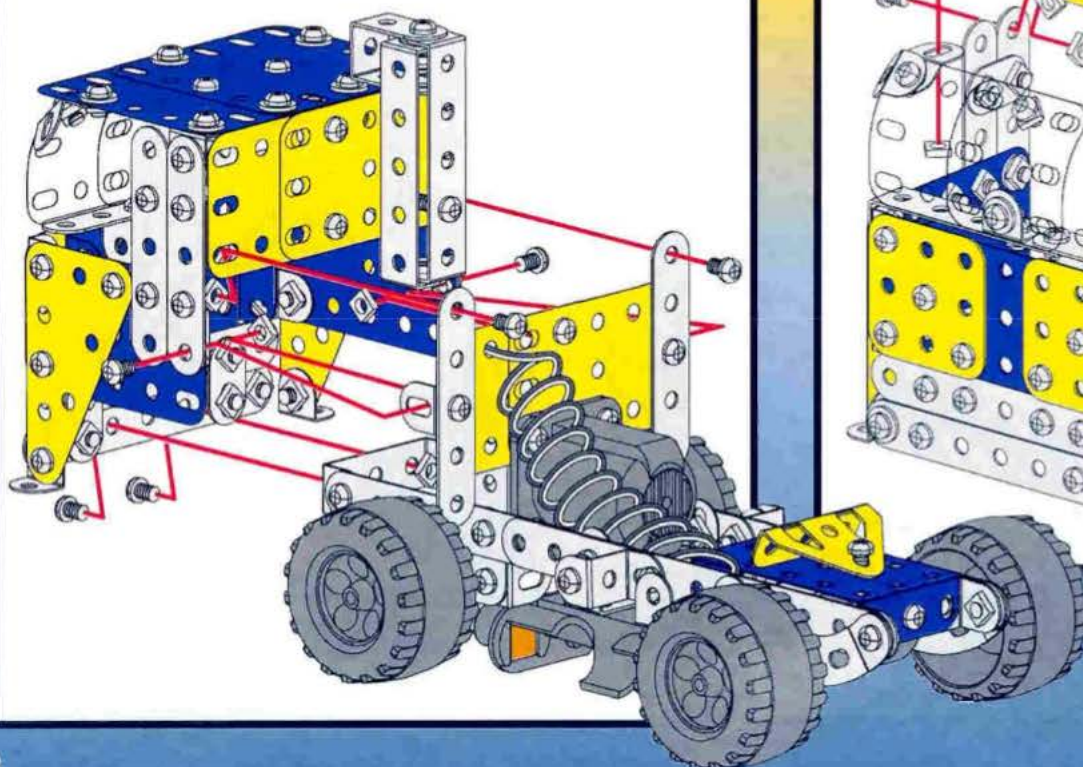


17

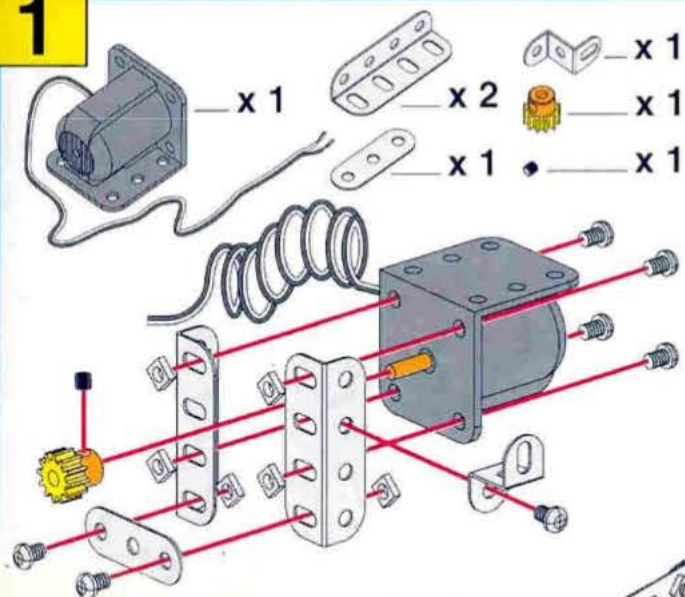
8

+

16

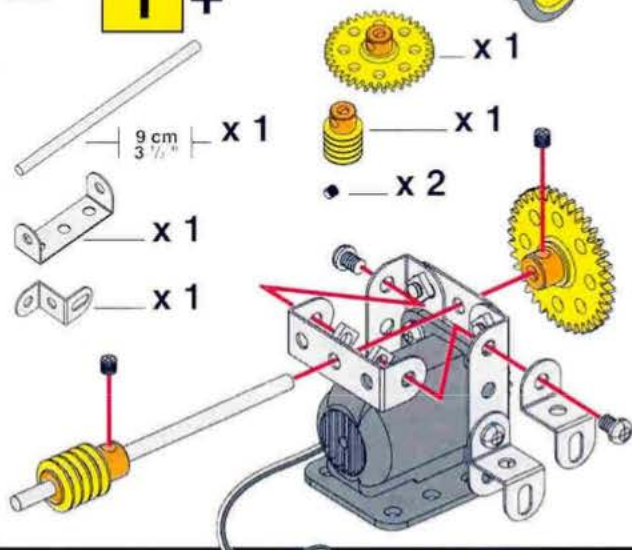


1



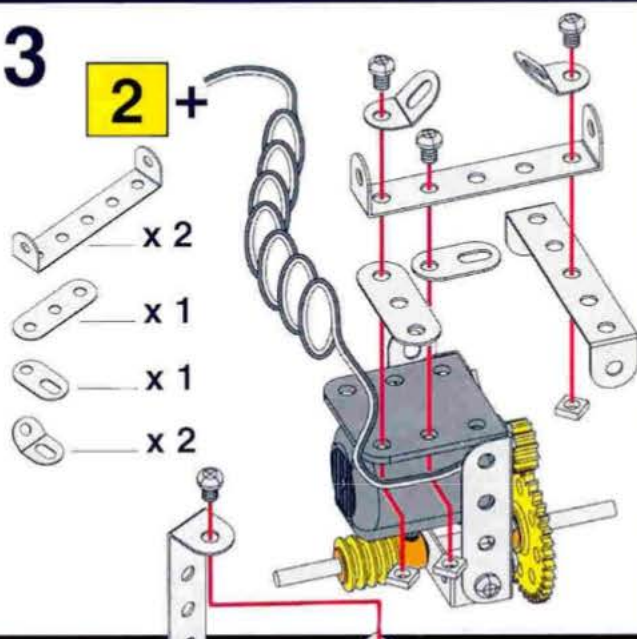
2

1 +



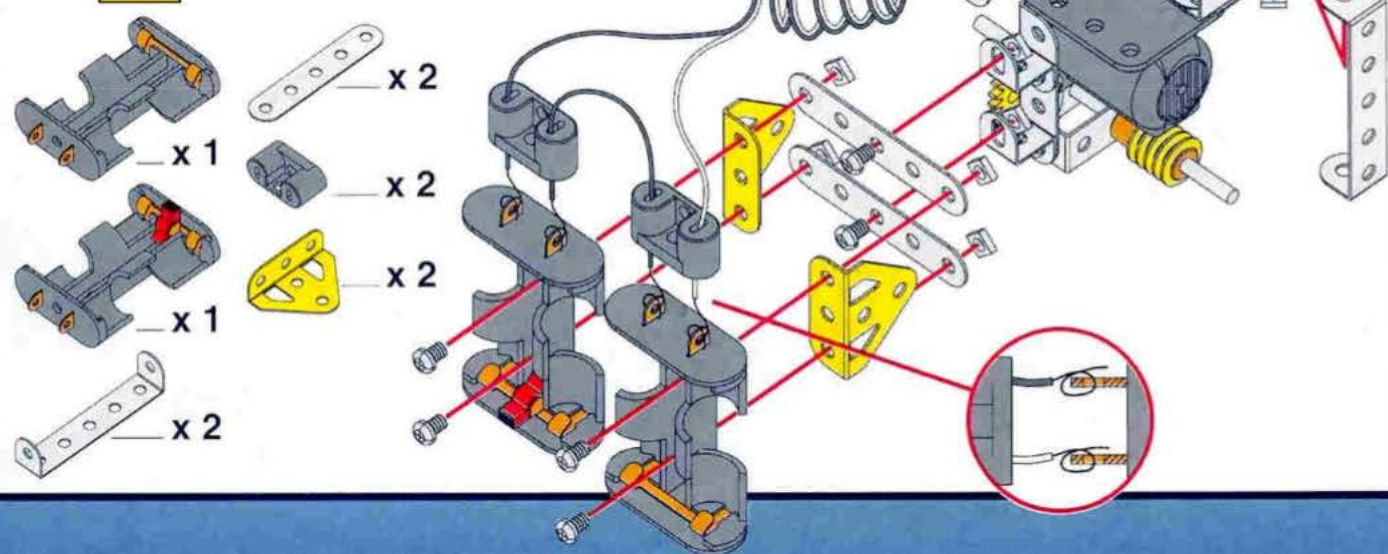
3

2 +

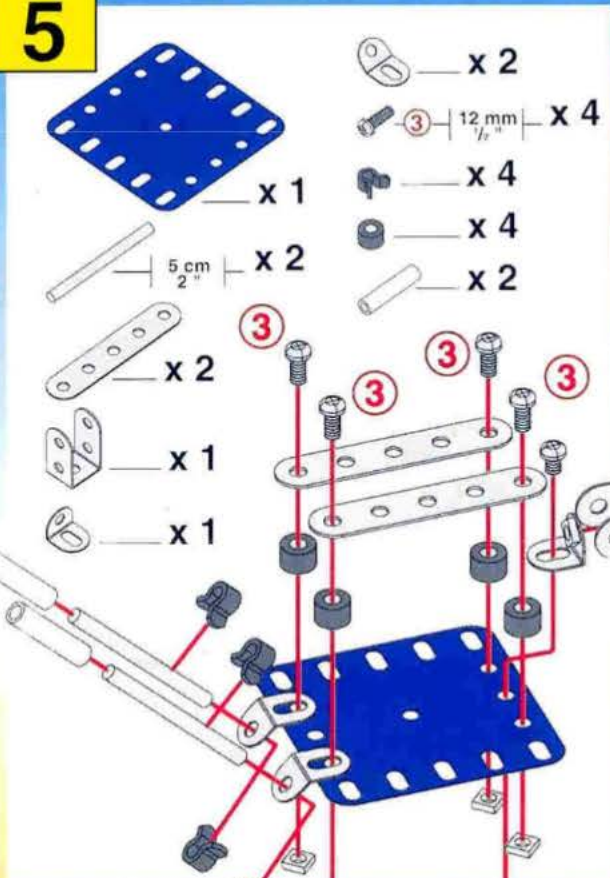


4

3 +



5

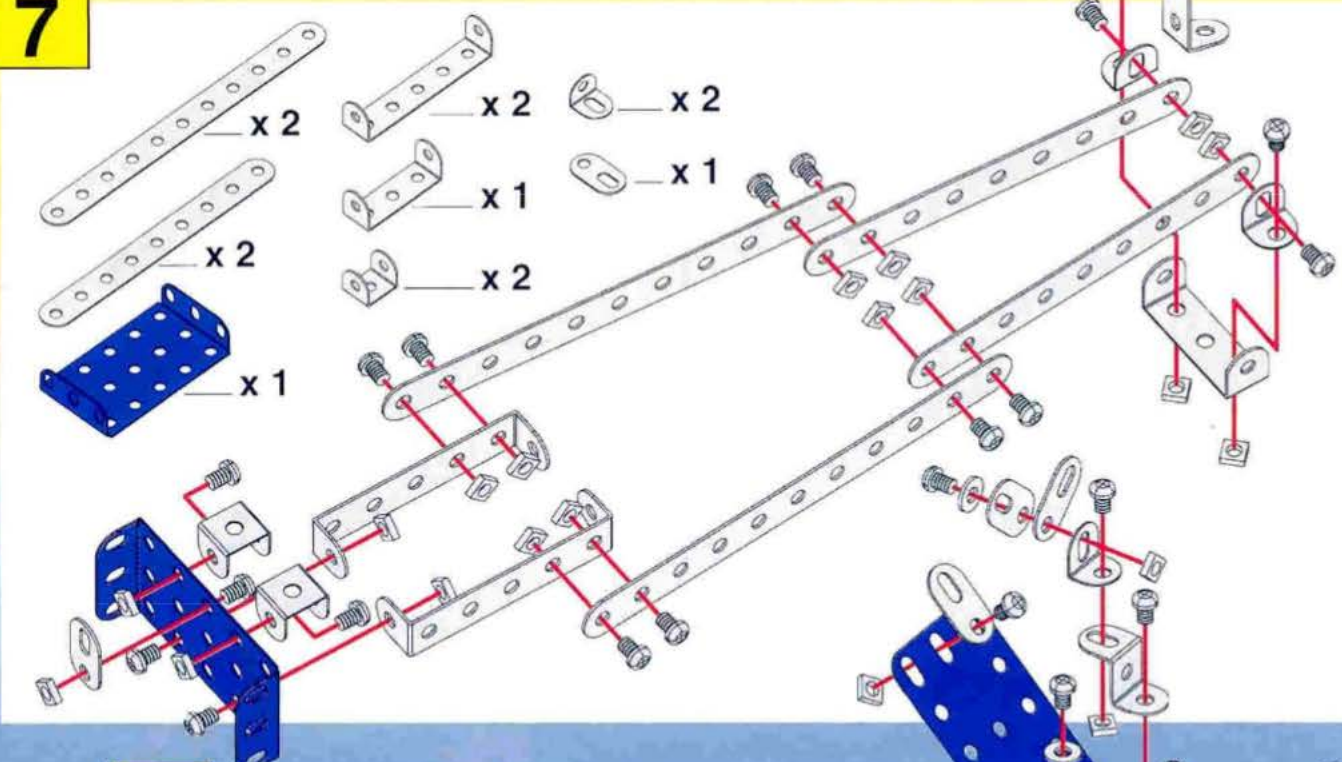


**6** **4 + 5 +**

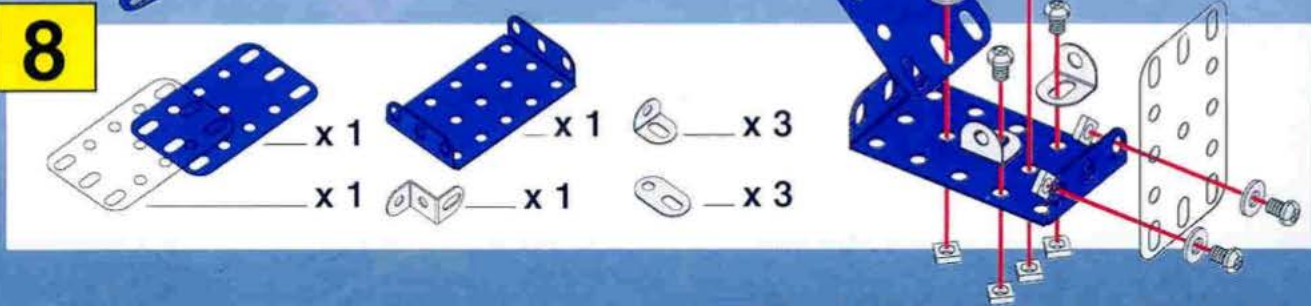
x 1 x 2

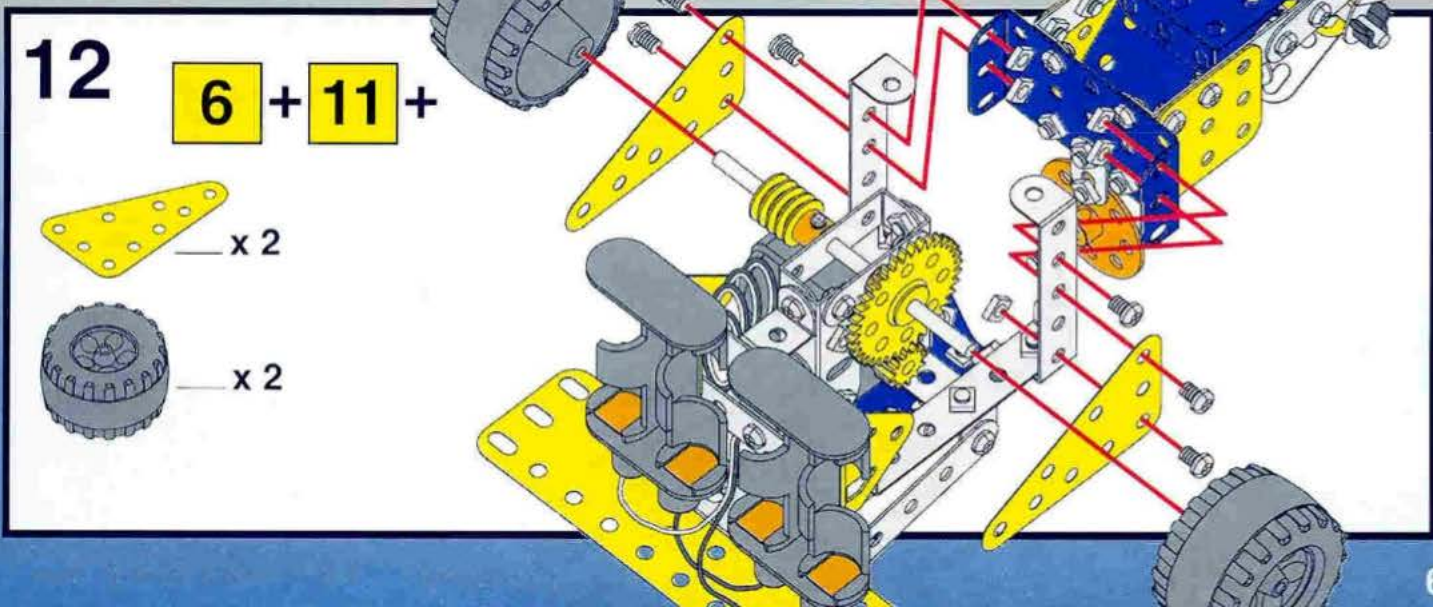
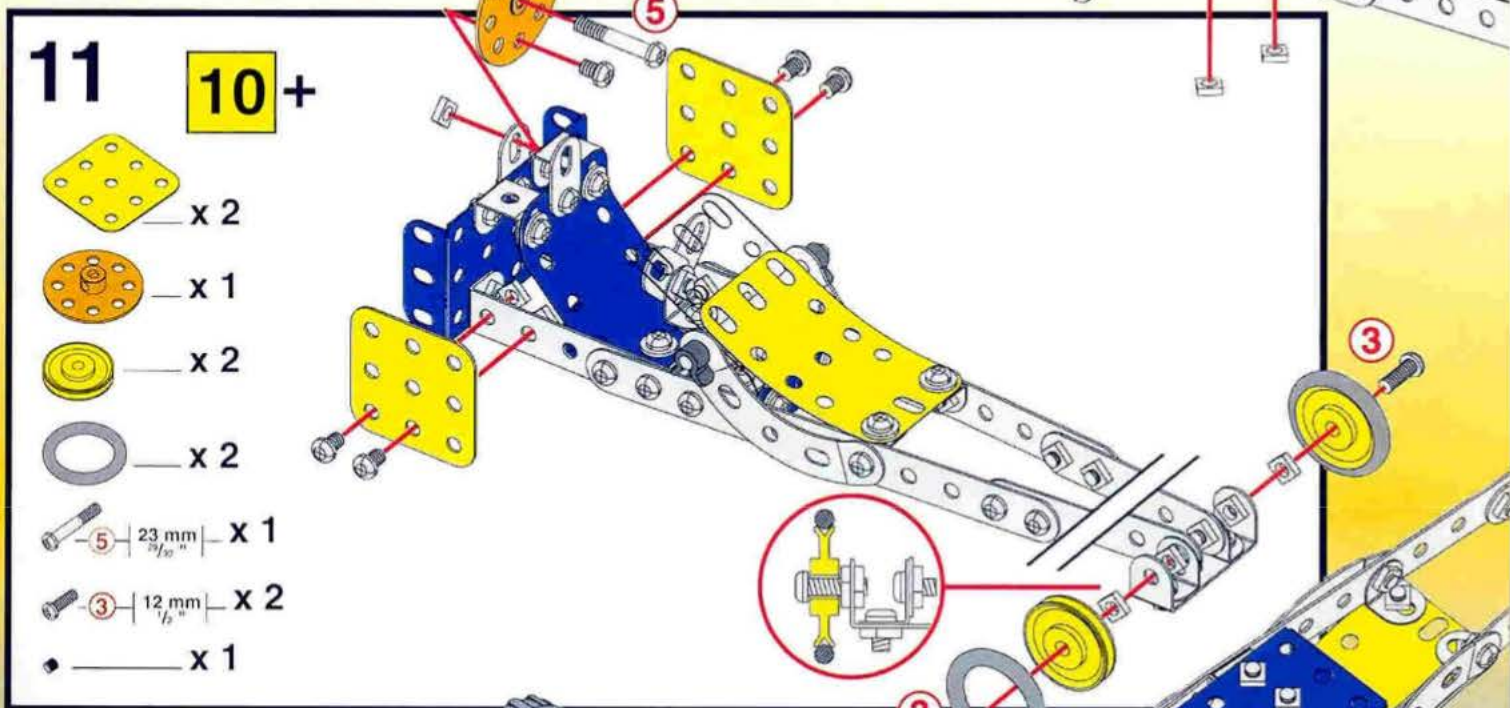
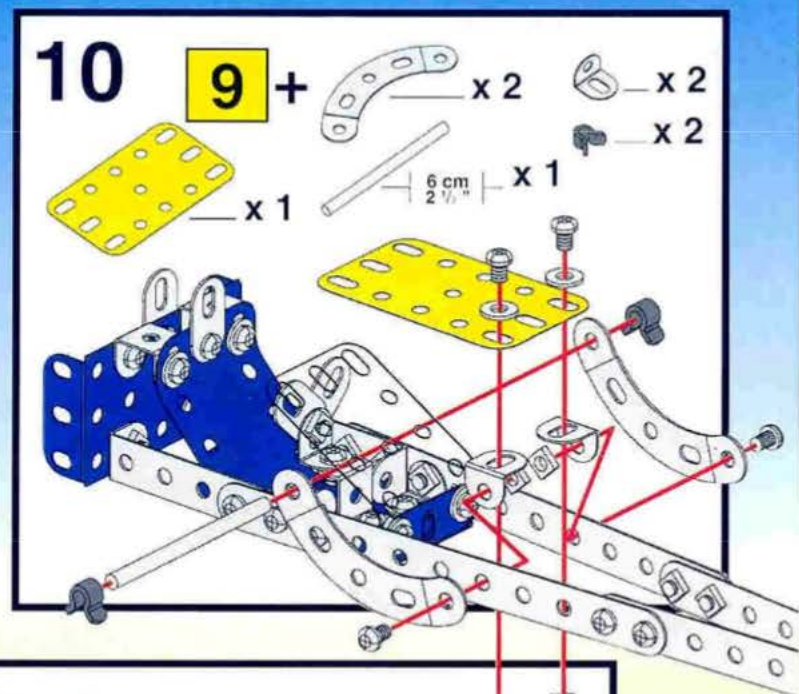
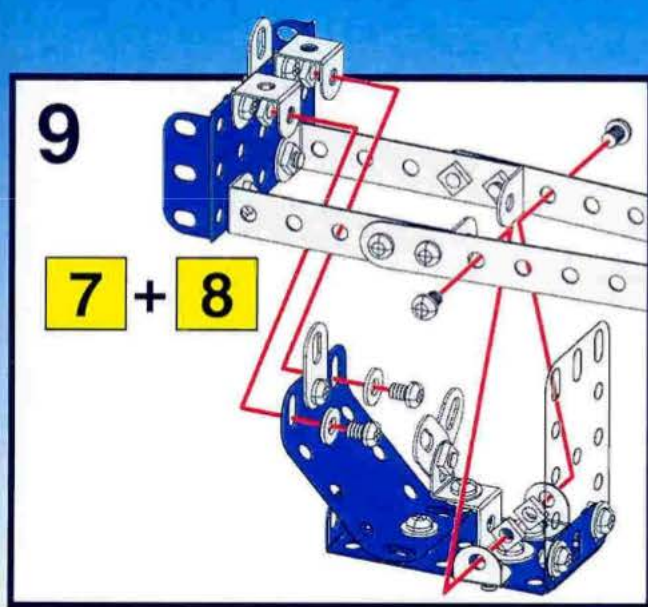
x 1 x 2

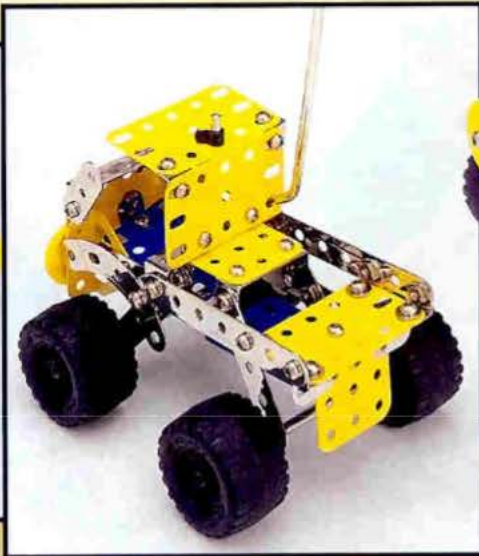
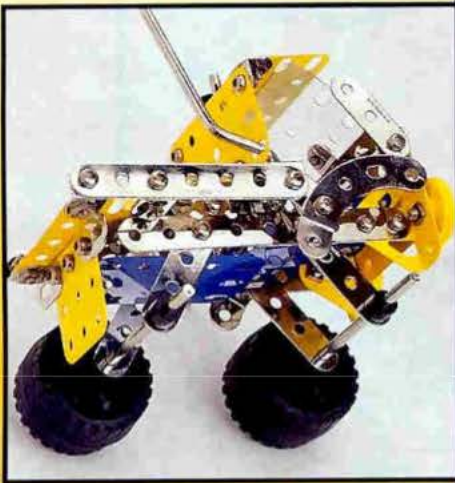
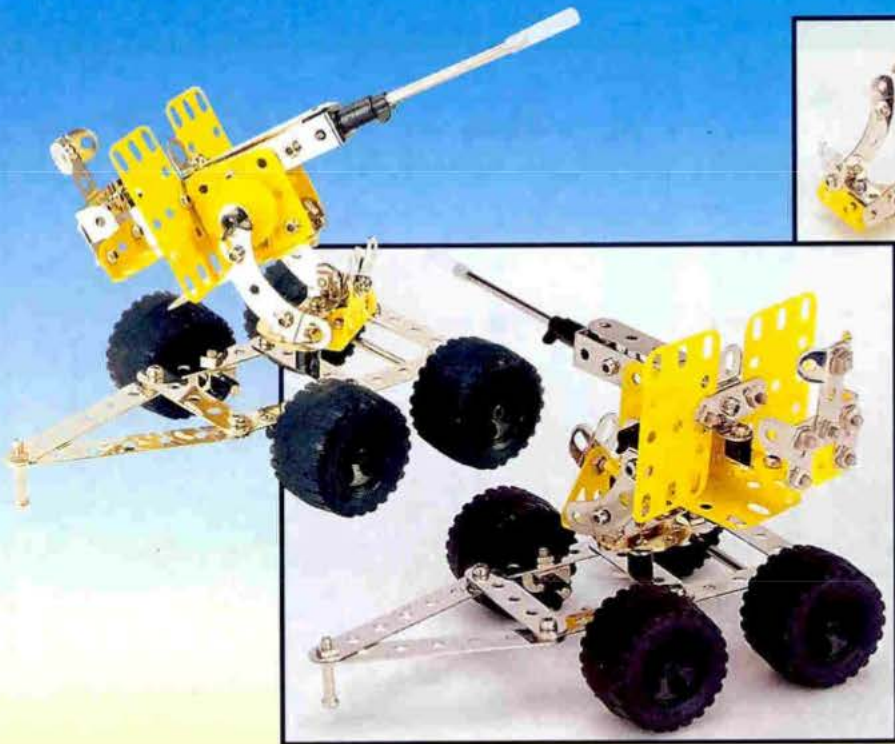
7

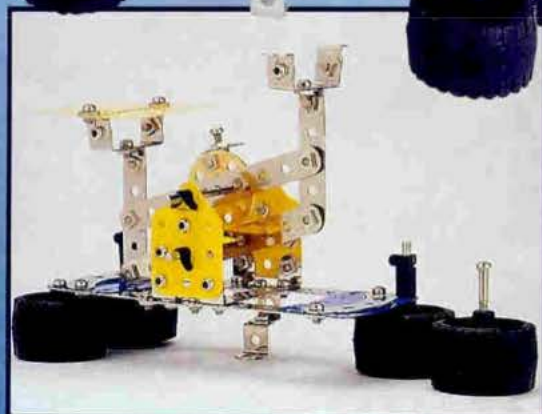
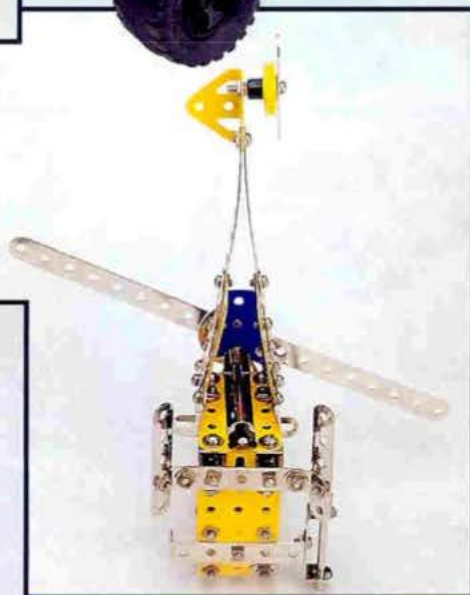
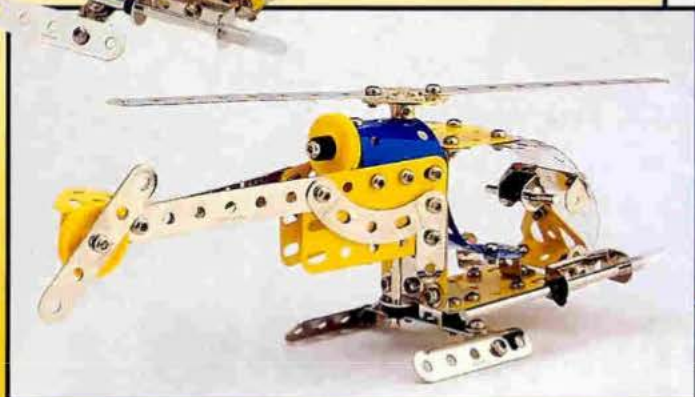
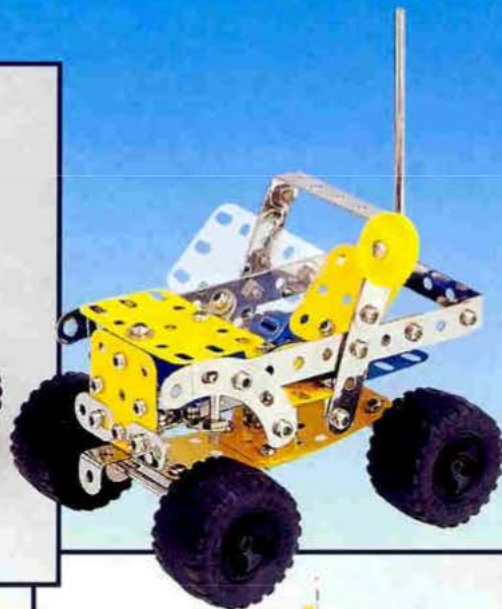
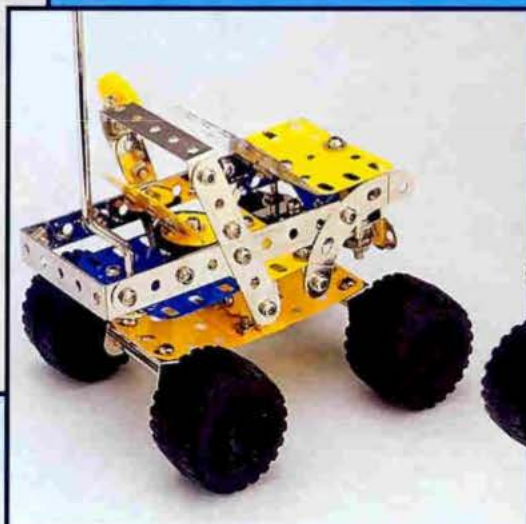


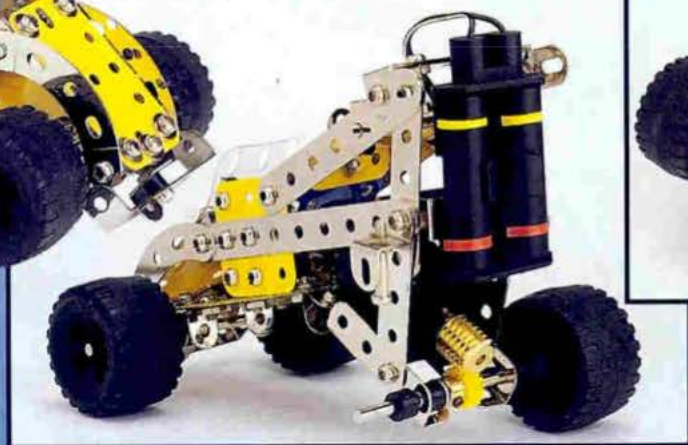
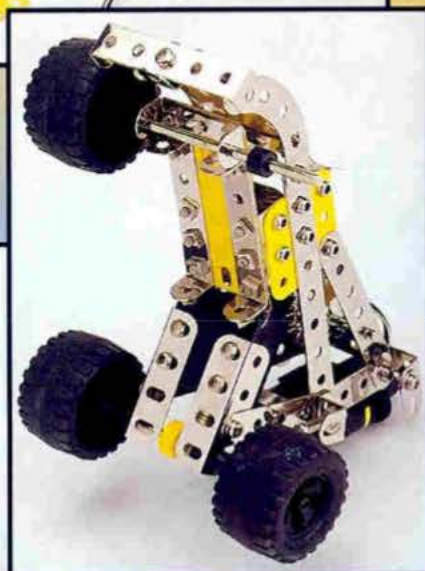
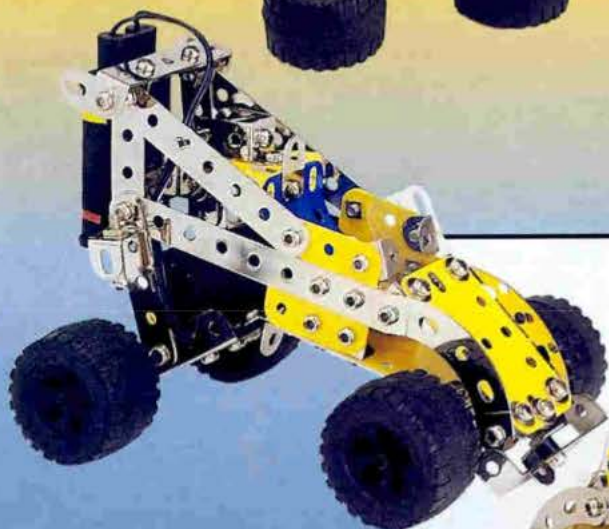
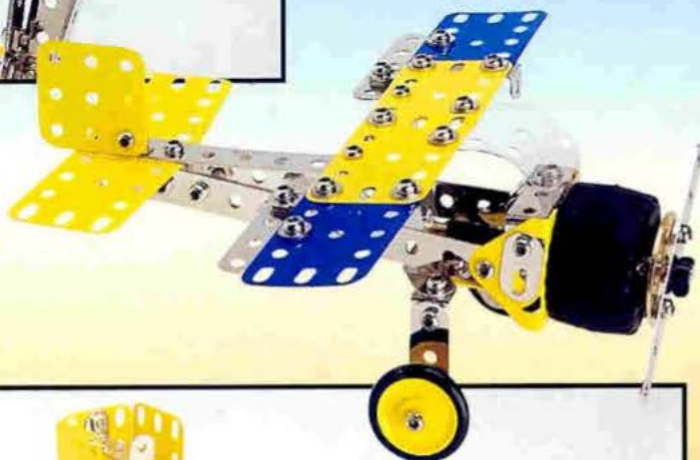
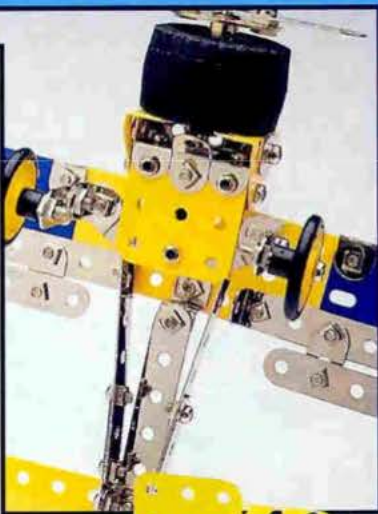
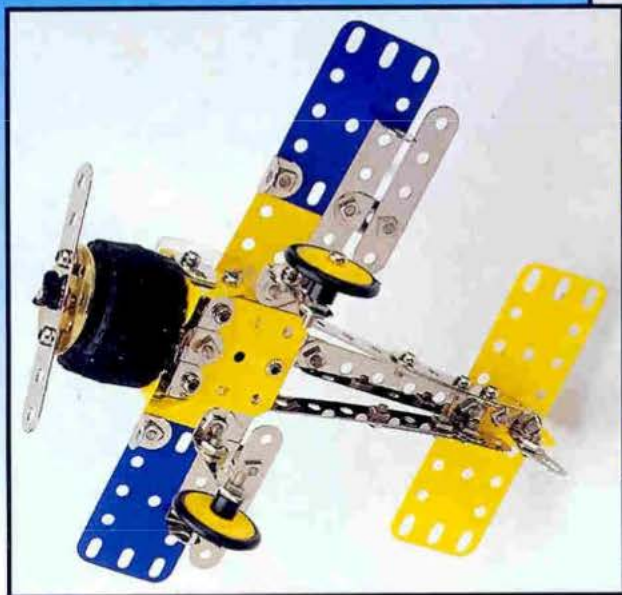
8

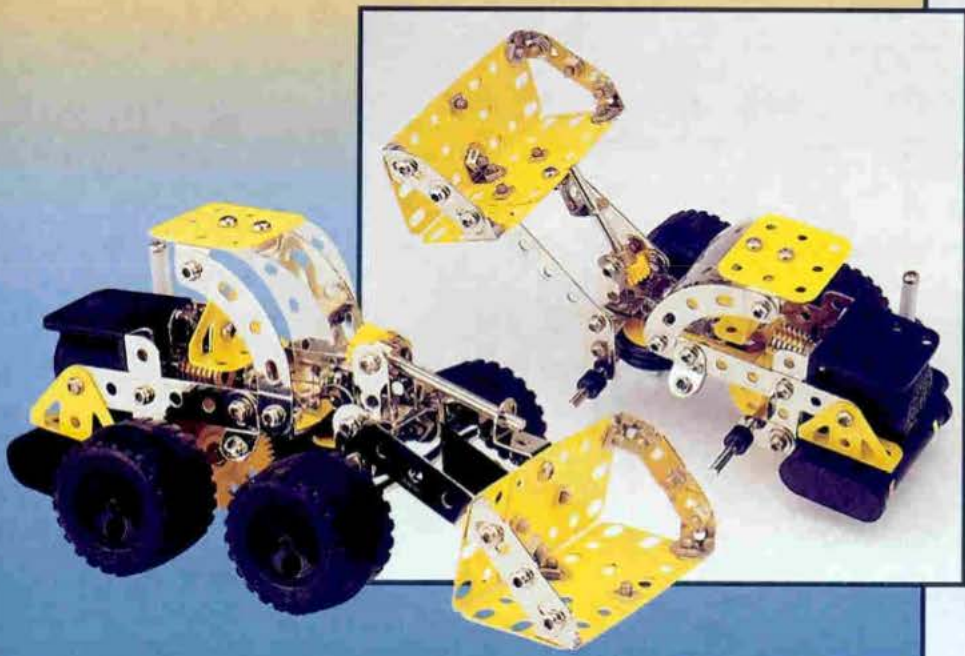
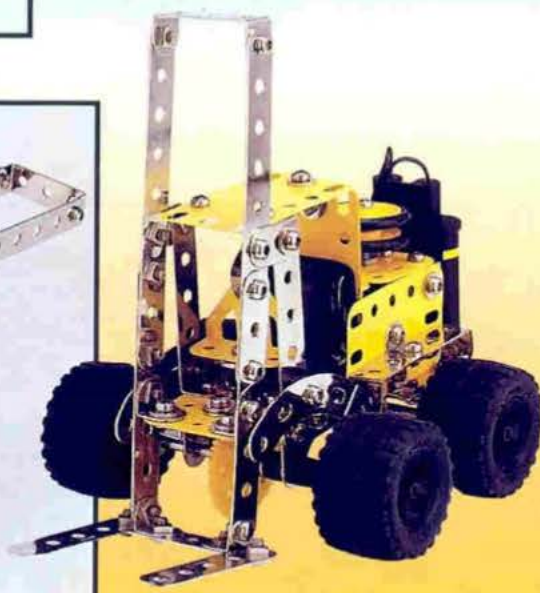
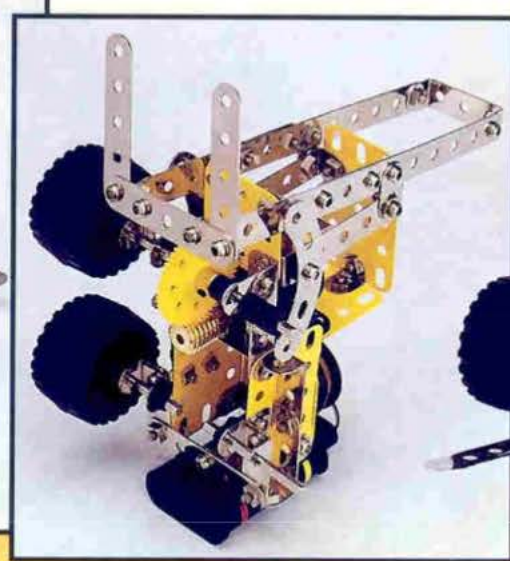
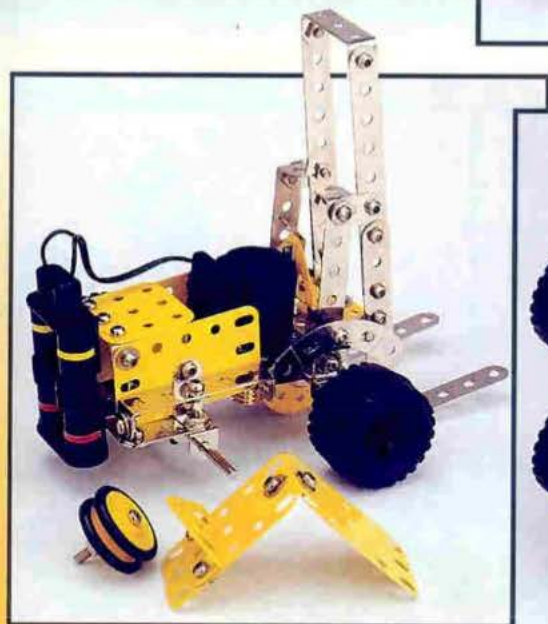
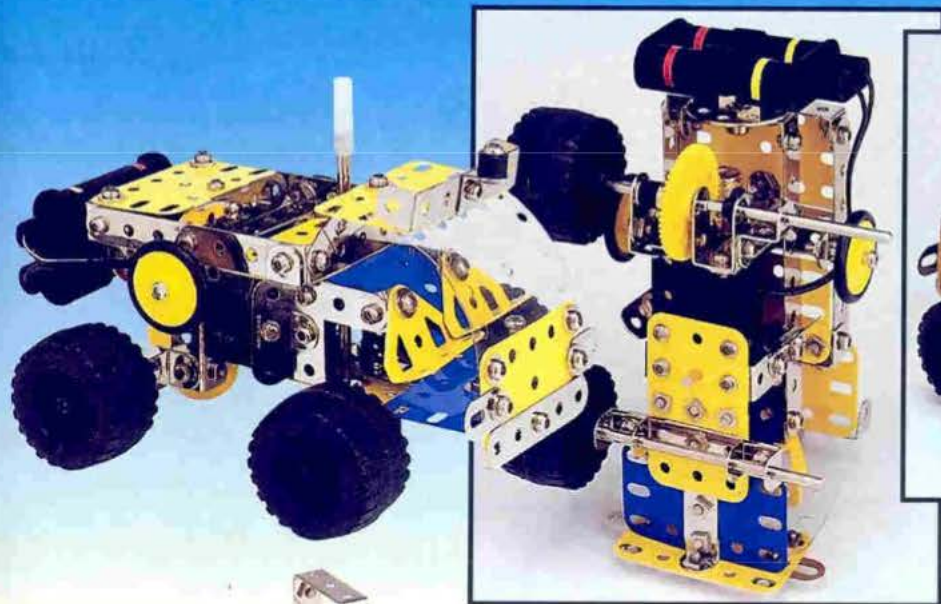


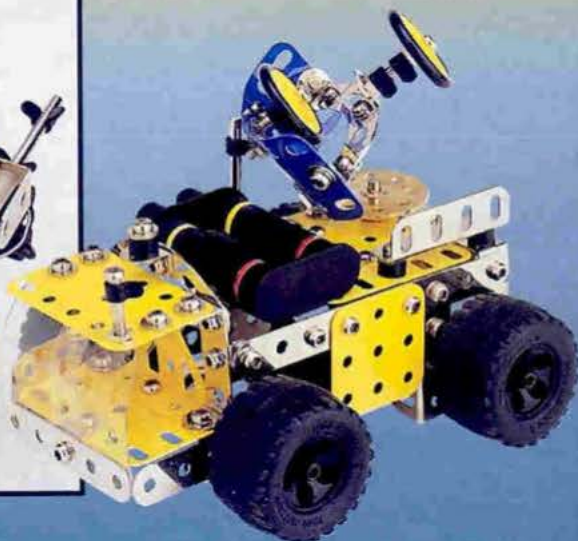
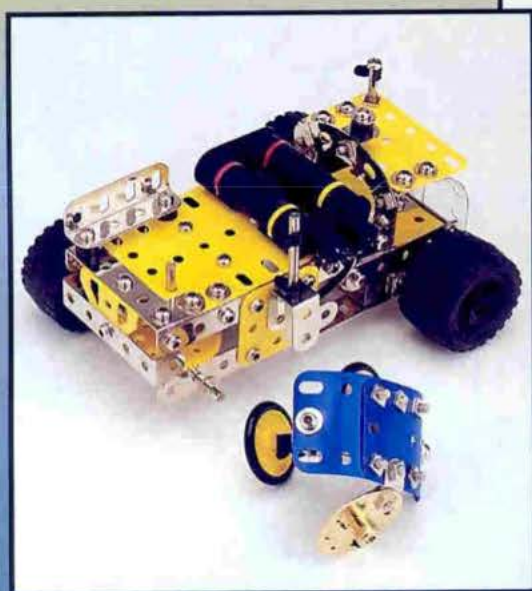
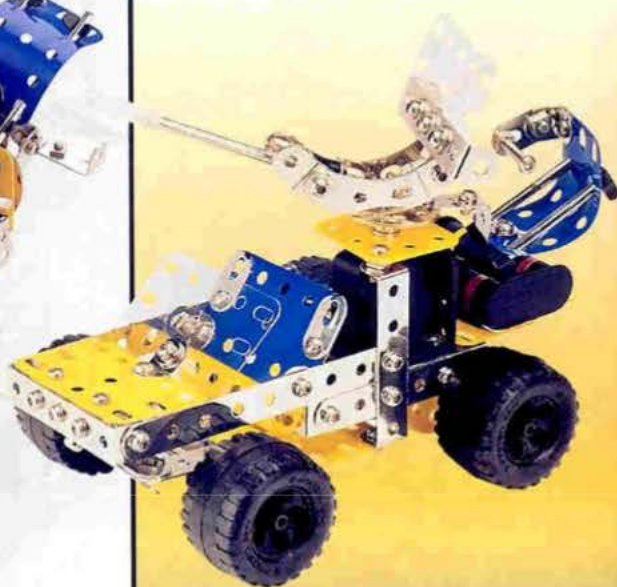
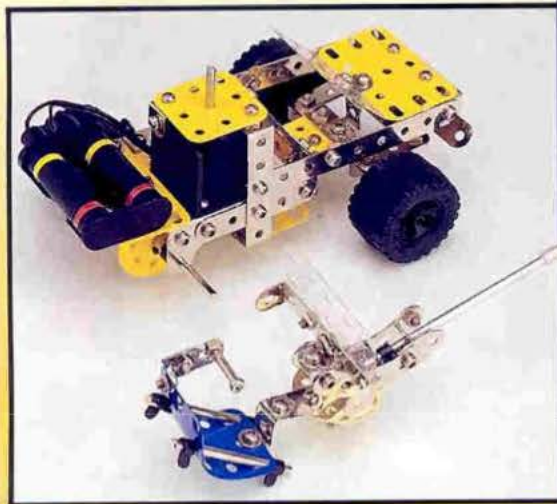
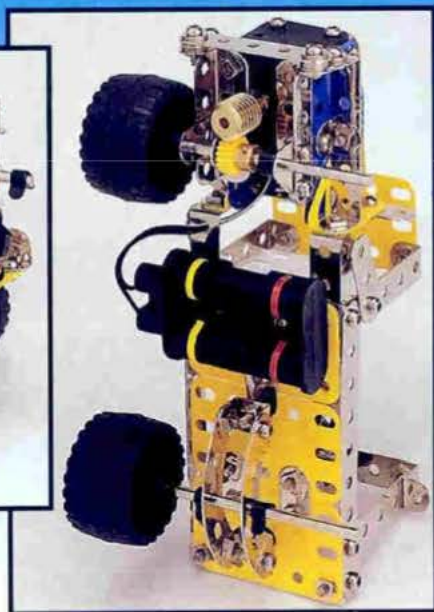


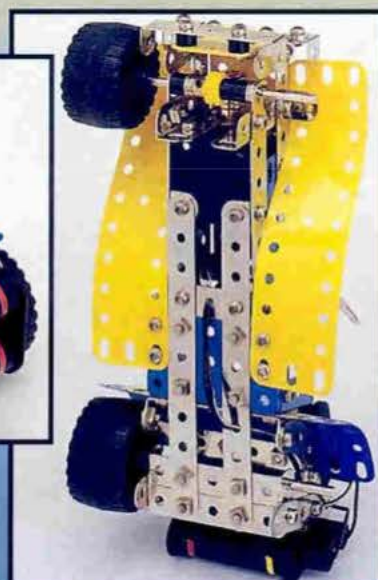
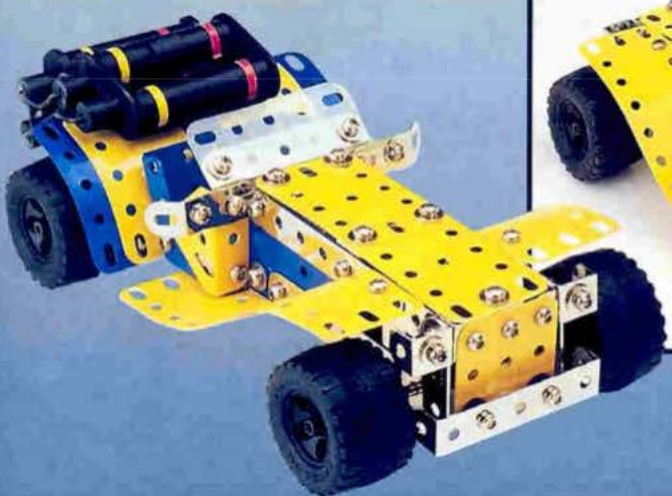
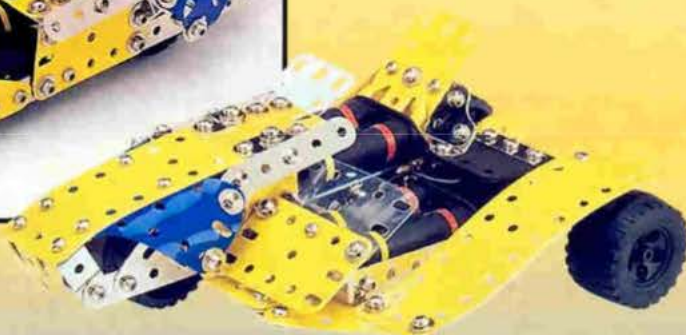
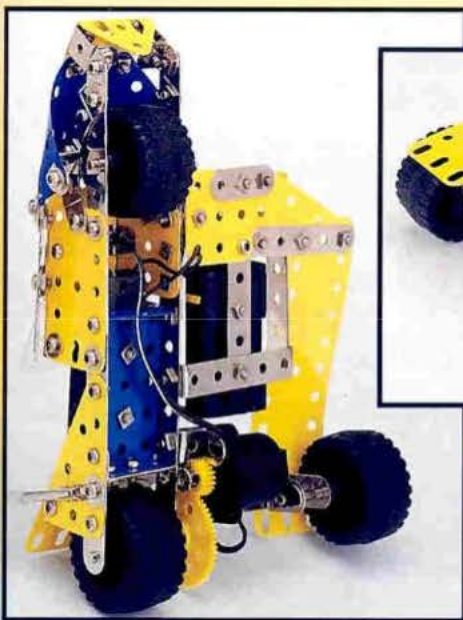
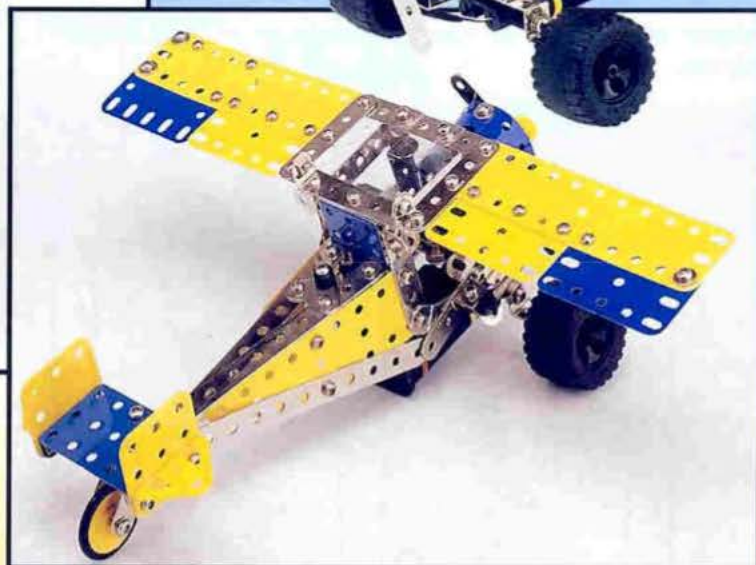
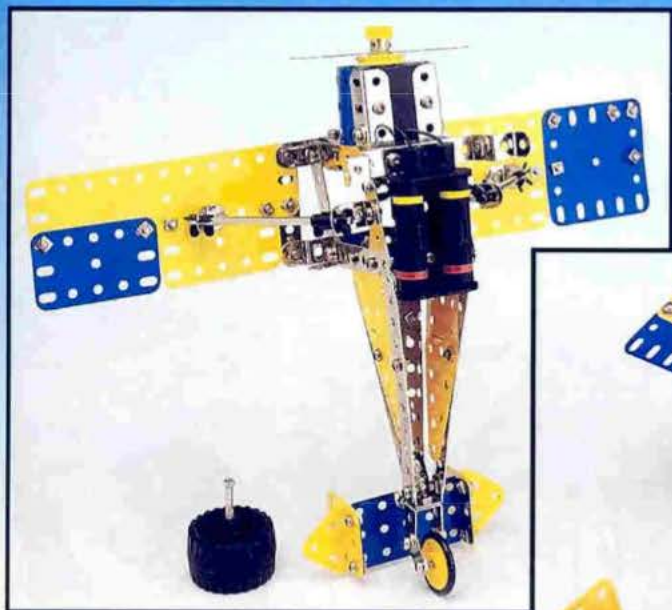






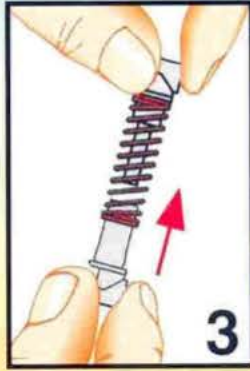
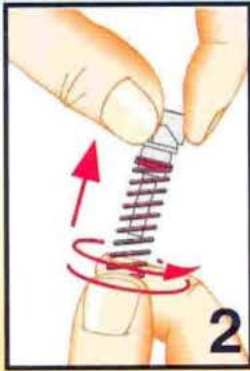
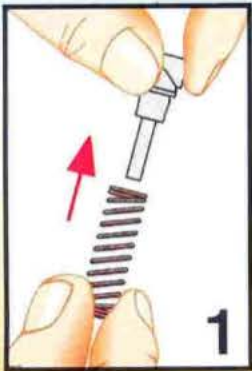
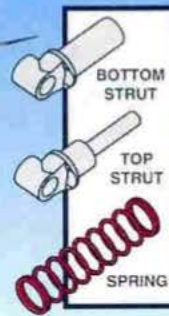






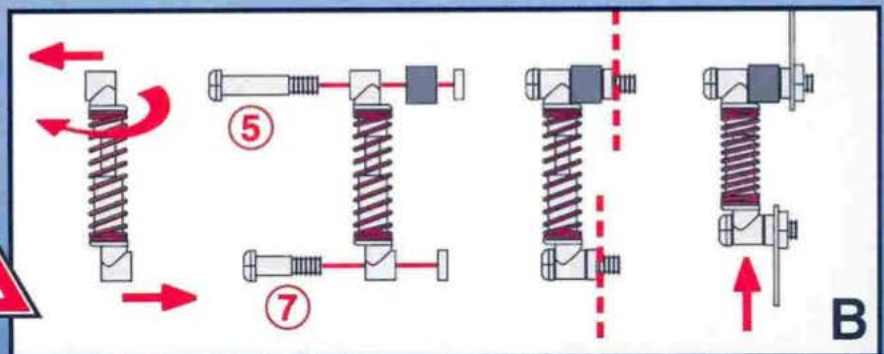
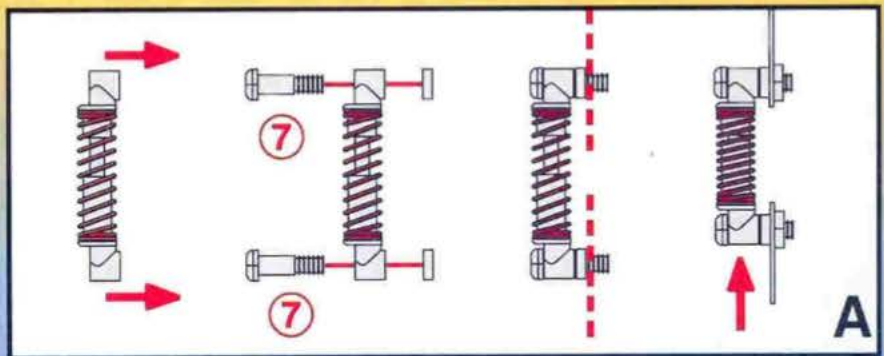
## SHOCK ABSORBERS

1. Insert top strut into spring.
2. Push up spring and turn until it stops against shoulder of top strut.
3. Insert bottom strut into spring as shown.
4. Push bottom strut against spring and turn until it stops against shoulder.

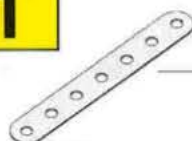

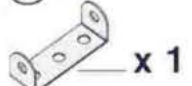




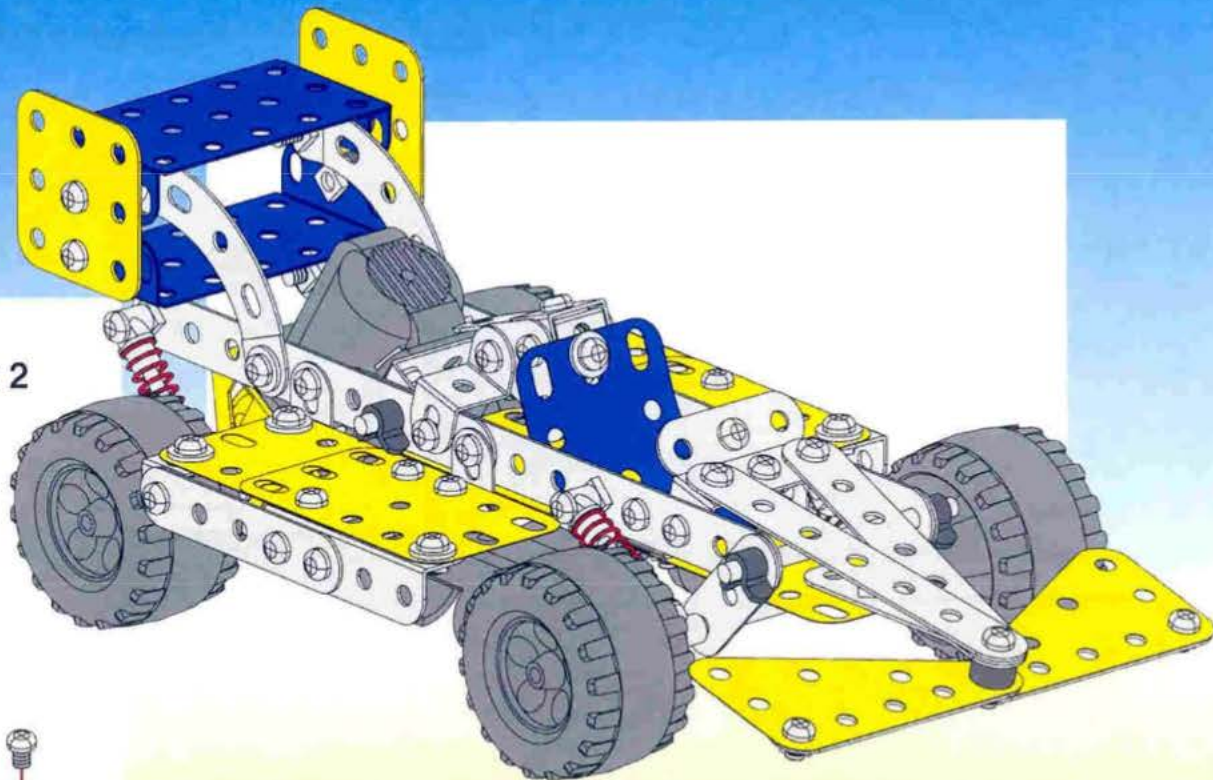
## INSTALLATION OF SHOCK ABSORBERS ON MODELS

- A. If mounting points are in alignment use short pivot bolts and lock nuts as shown.
- B. If mounting points are offset rotate one end of shock absorber and use long pivot bolts and spacers to line up parts.





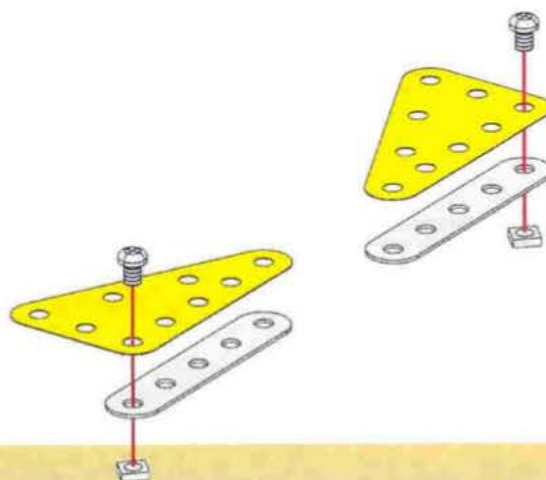
# 1

-  — x 2
-  — x 1
-  — x 1
-  — x 1
-  — x 2

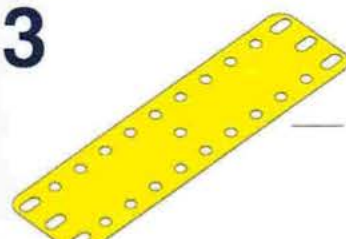

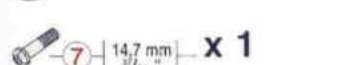



# 2

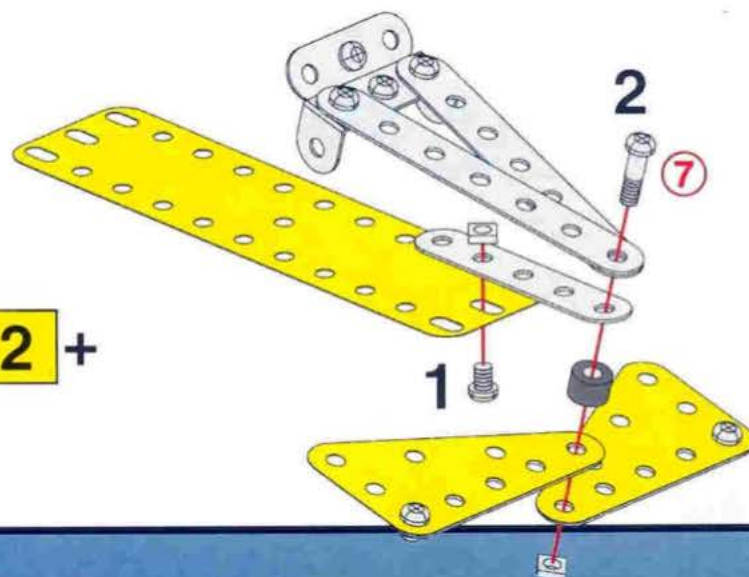
-  — x 2
-  — x 2



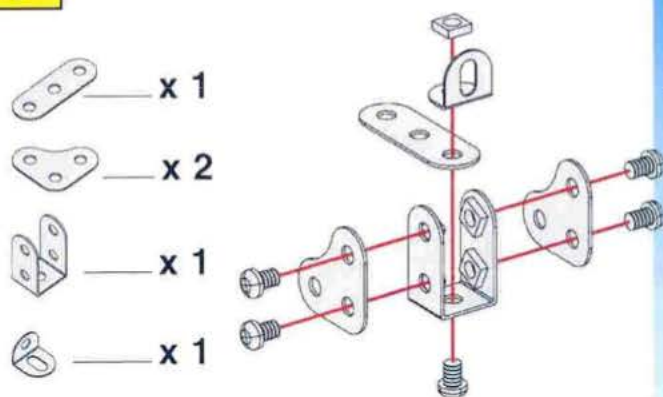
# 3

-  — x 1
-  — x 1
-  — x 1
-  — x 1

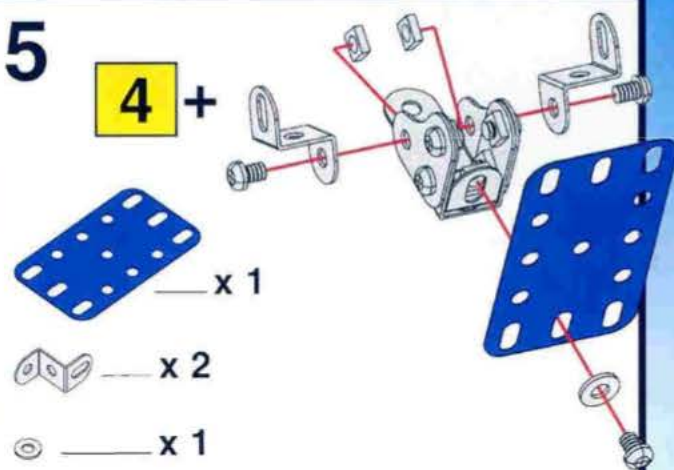
**1** + **2** +



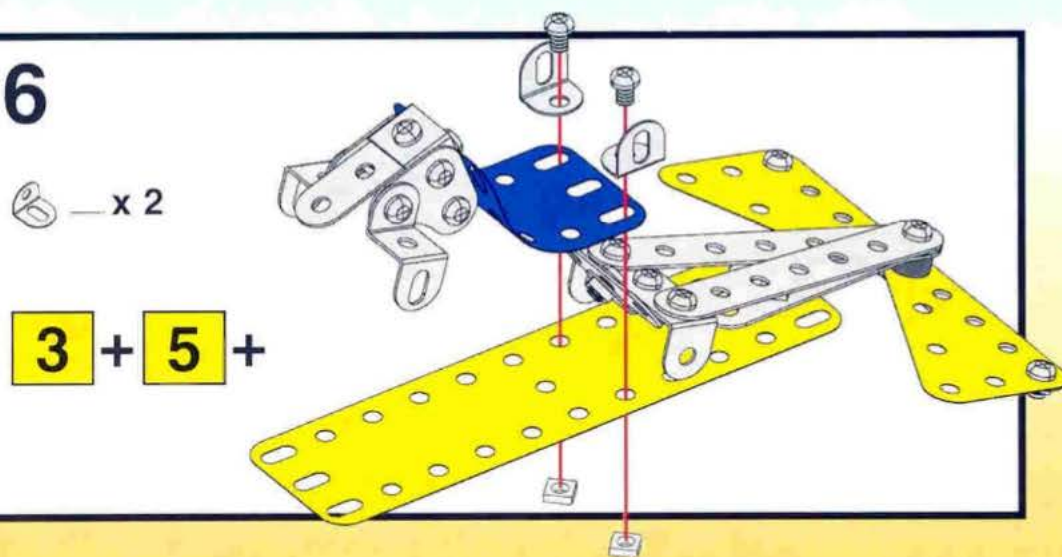
4



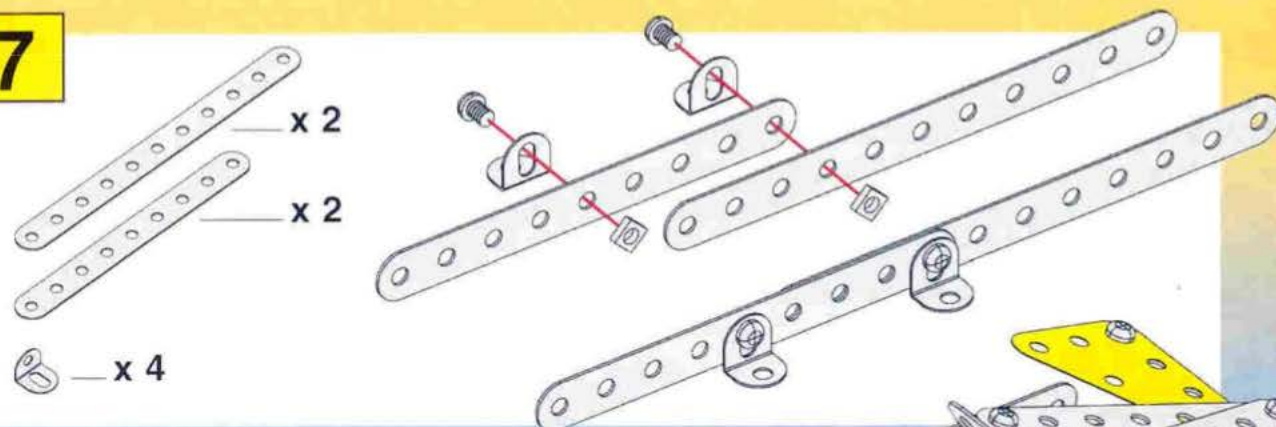
5



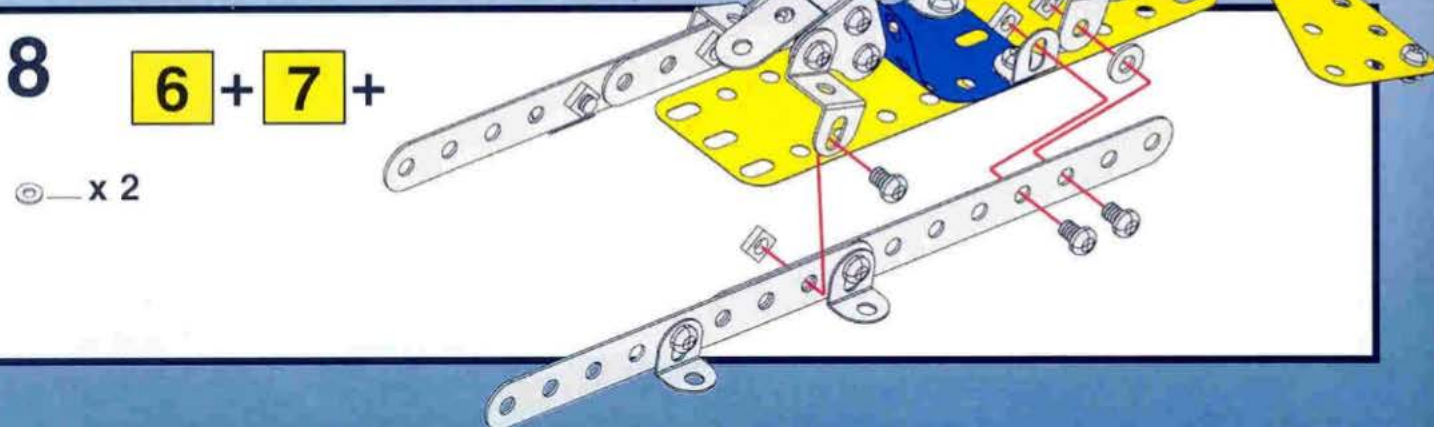
6



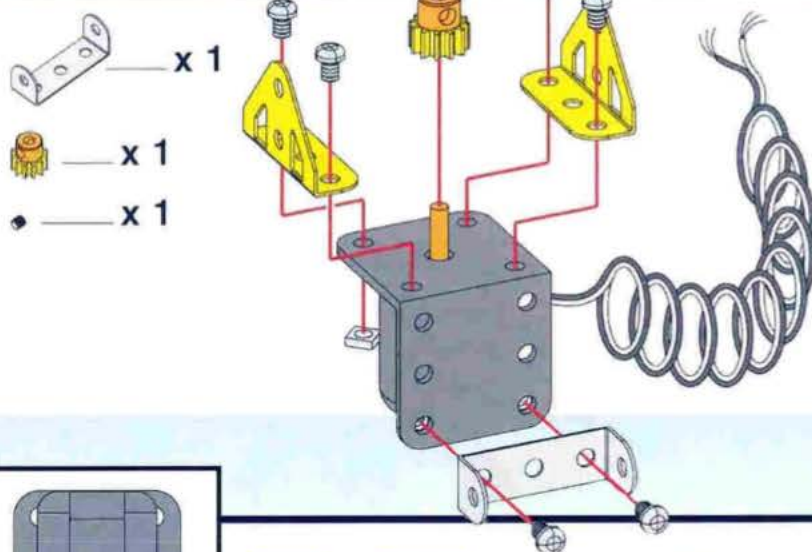
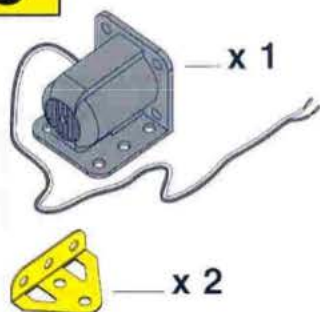
7



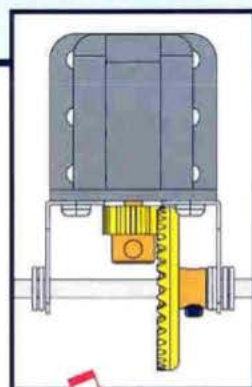
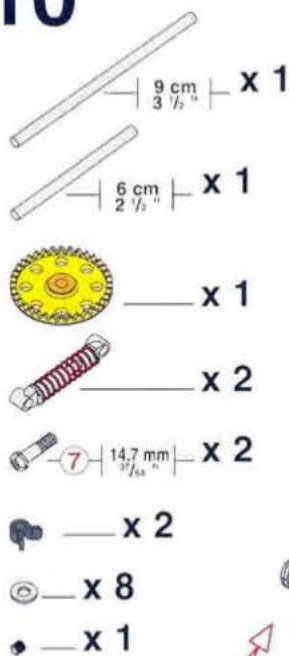
8



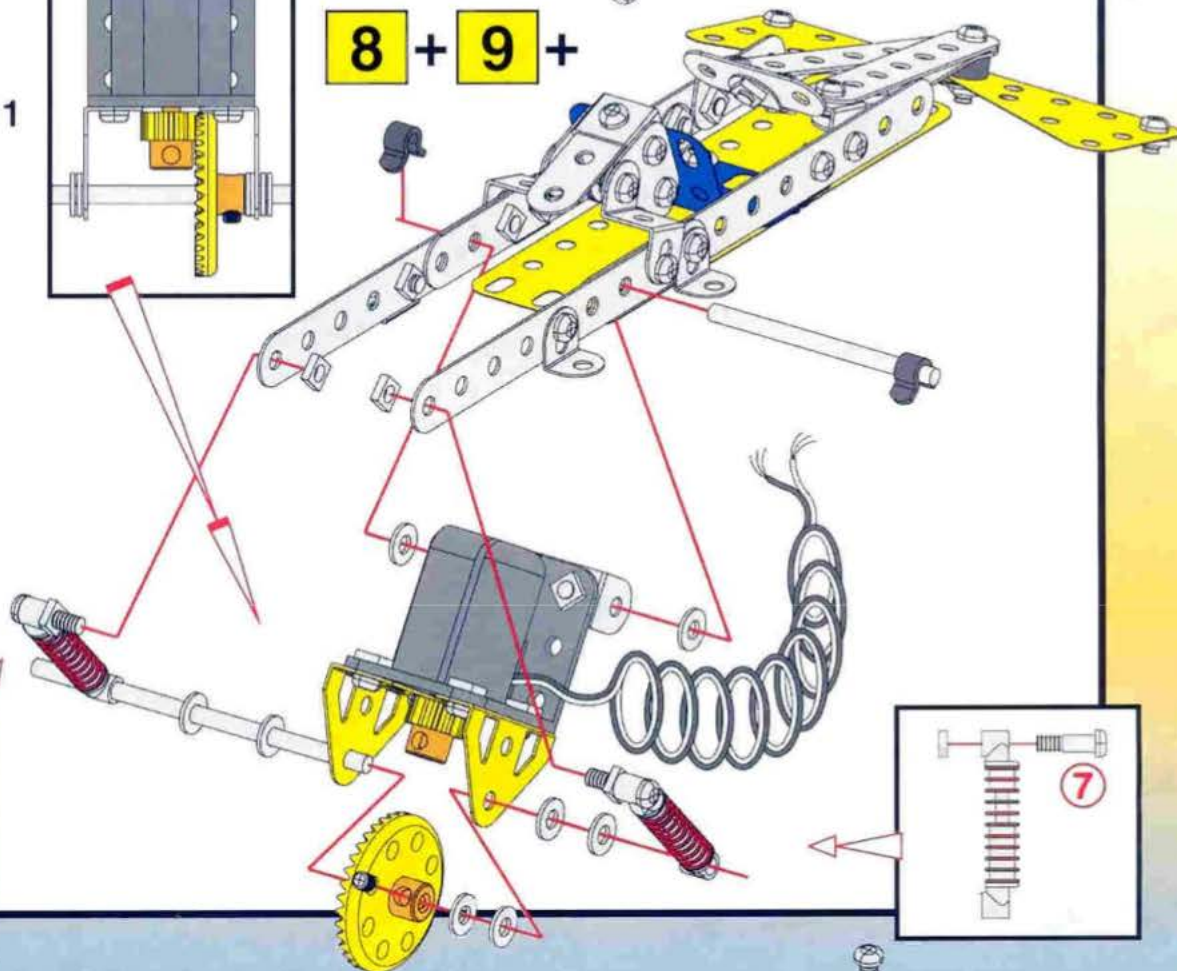
9



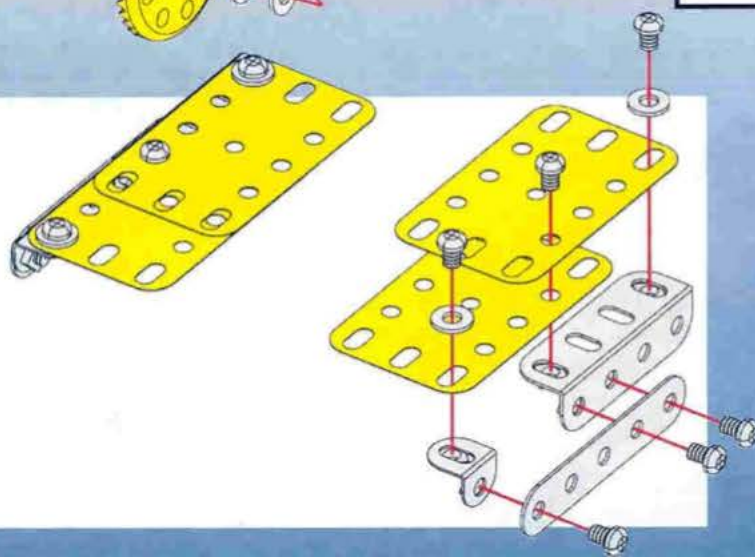
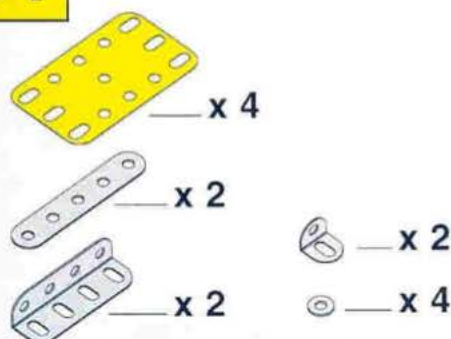
10



8 + 9 +

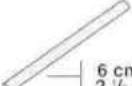







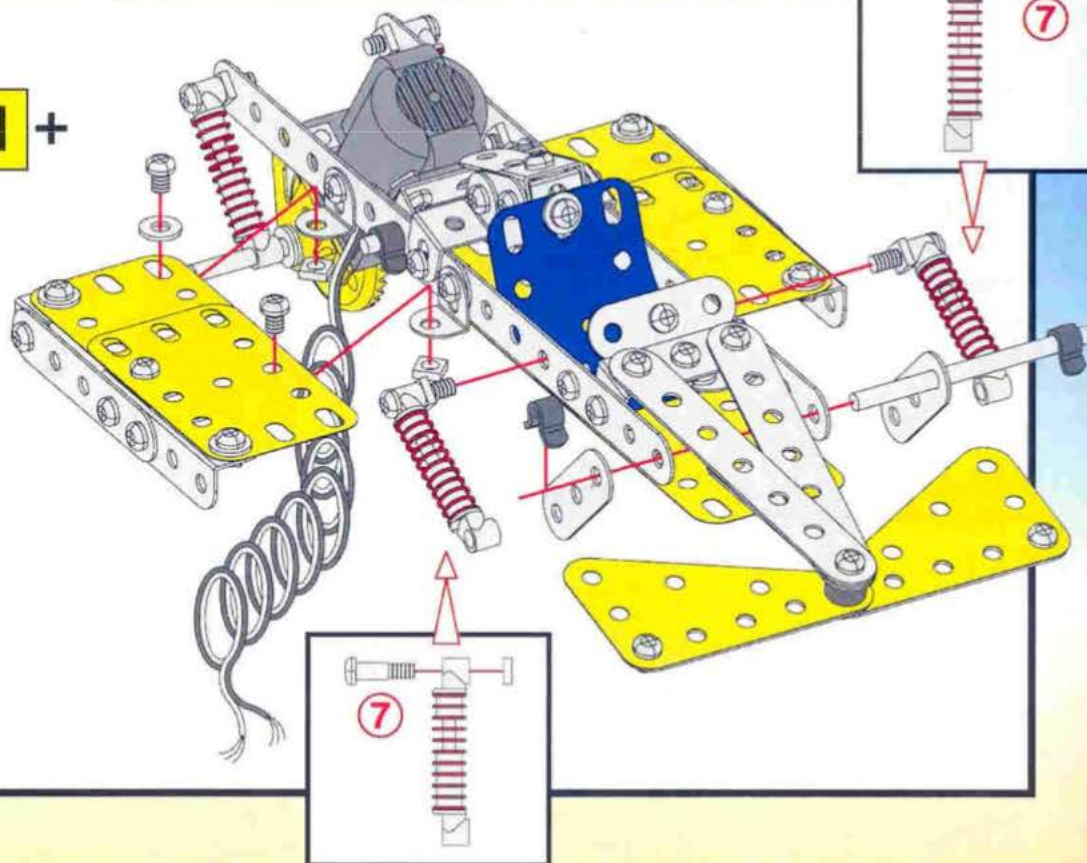
11








# 12

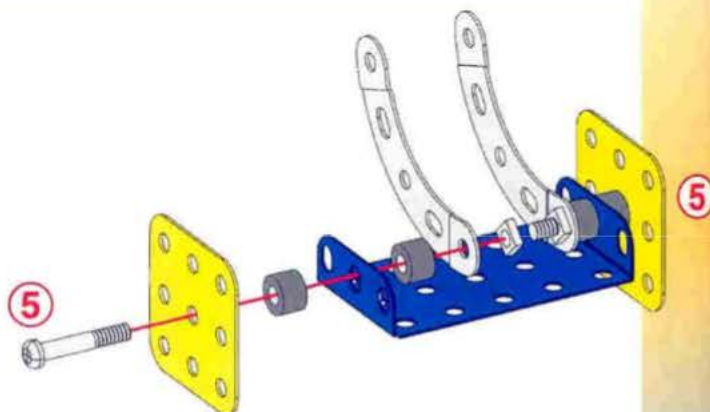
10 + 11 +

-  6 cm  $2\frac{1}{2}$ " x 1
-  x 2
-  x 2
-  x 2
-  x 2
-  7 14.7 mm  $\frac{11}{16}$ " x 2






# 11

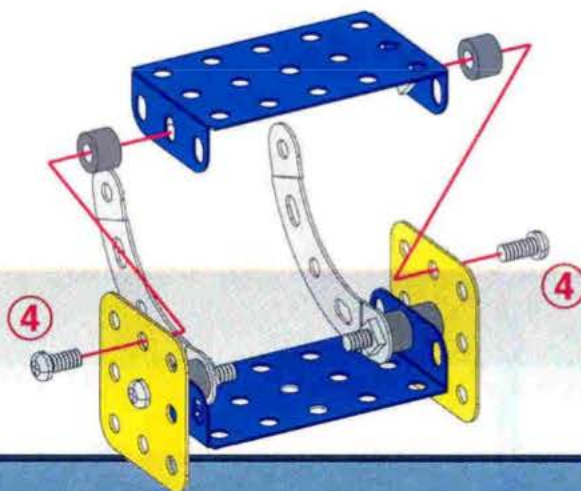
-  x 1
-  x 2
-  x 2
-  5 23 mm  $\frac{9}{16}$ " x 2
-  x 4



# 14

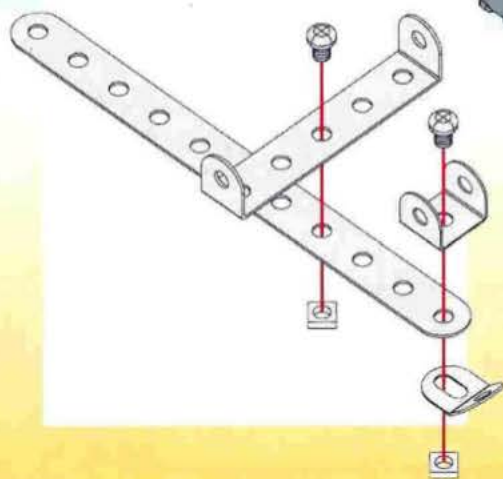
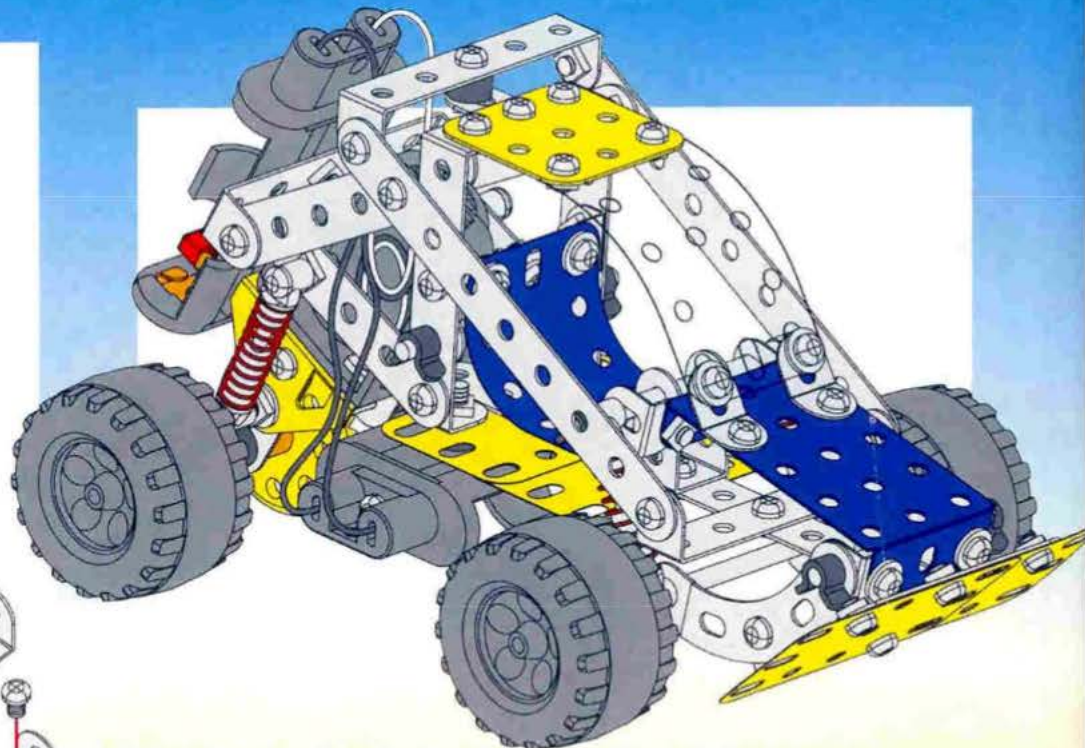
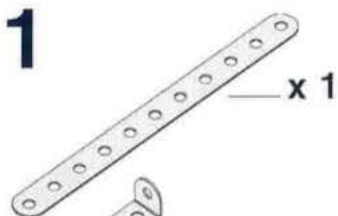
13 +

-  x 1
-  4 9.5 mm  $\frac{3}{8}$ " x 2
-  x 2

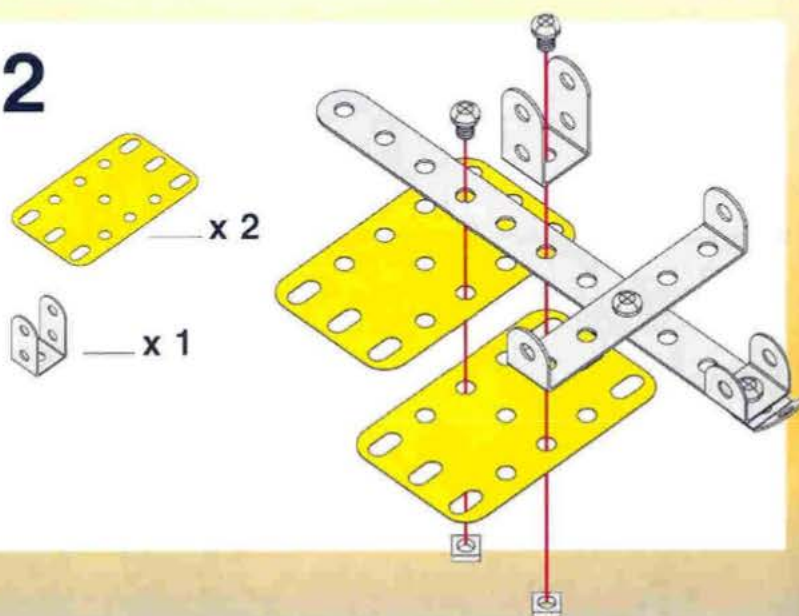




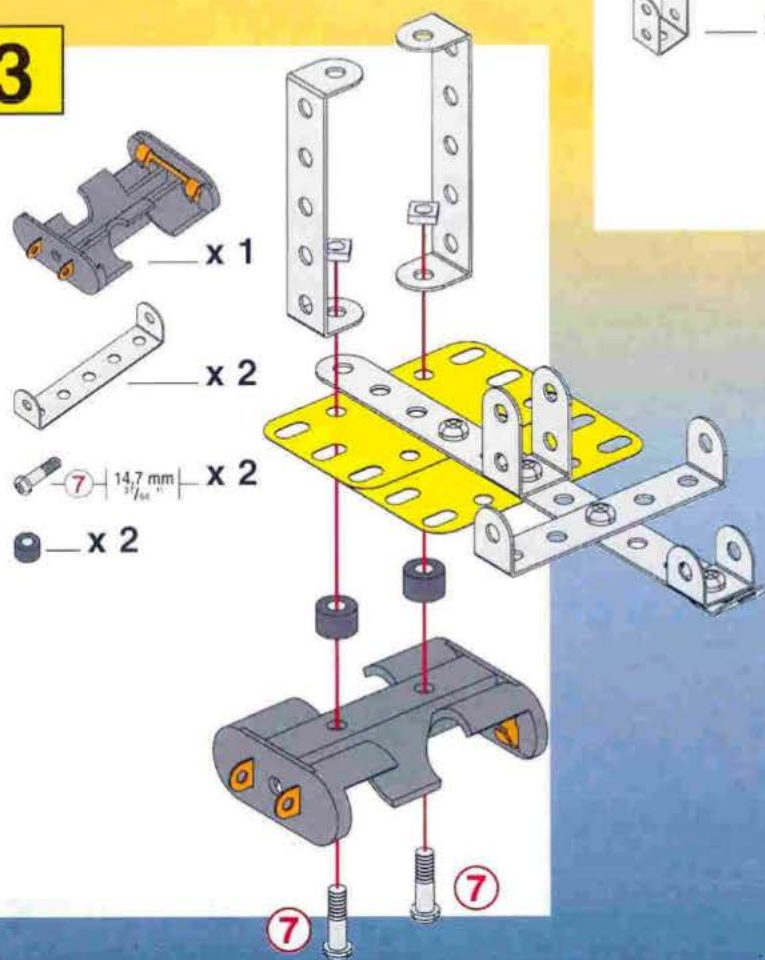
# 1



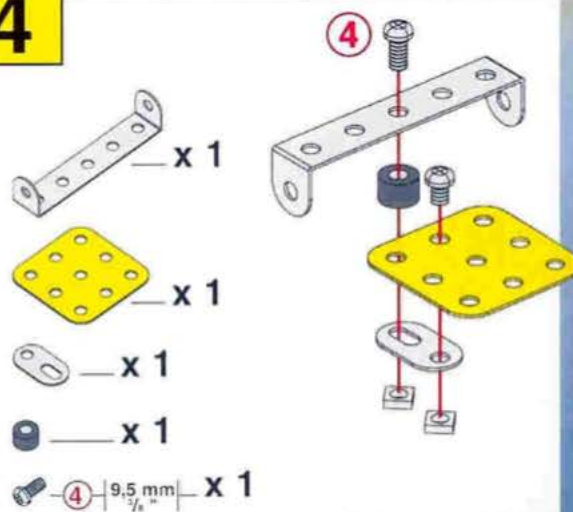
# 2



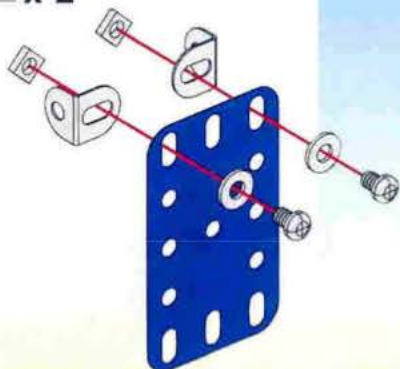
# 3



# 4

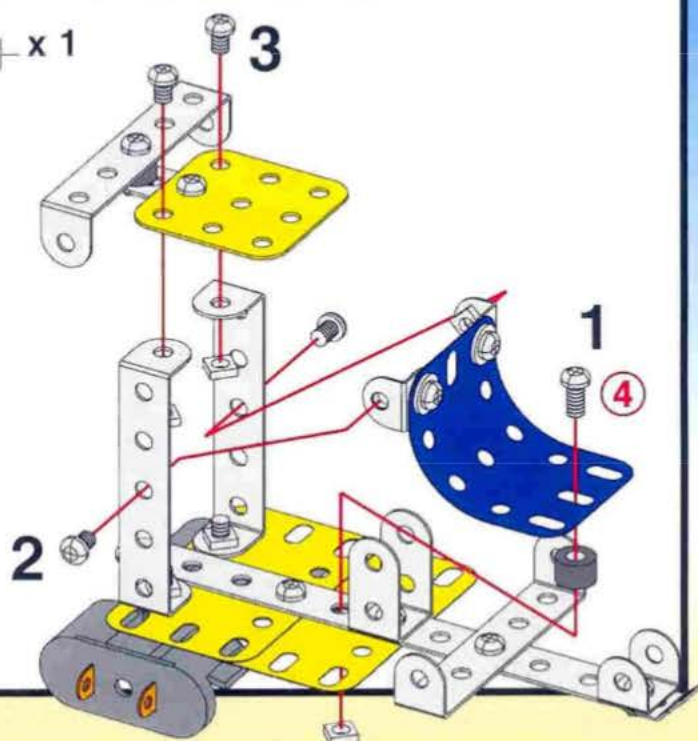
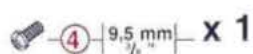


# 5

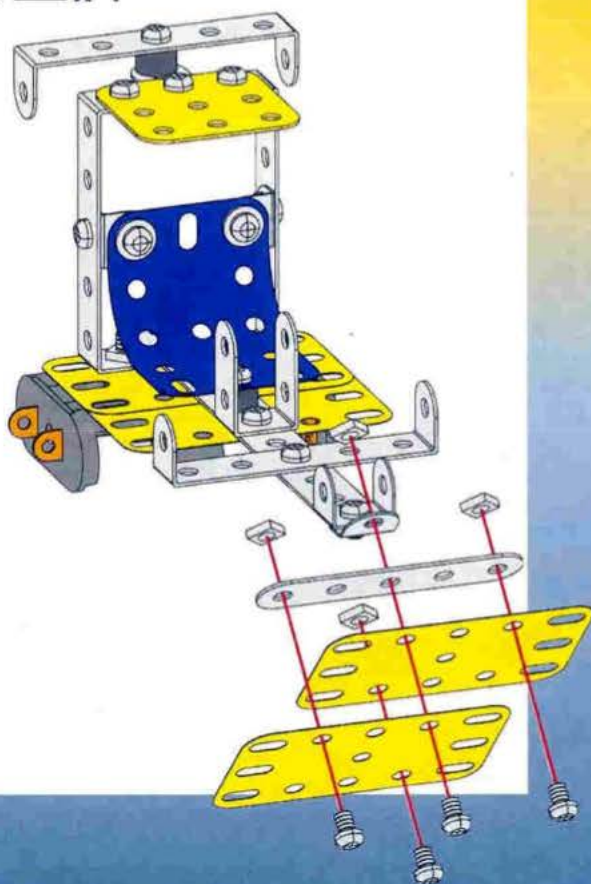


# 6

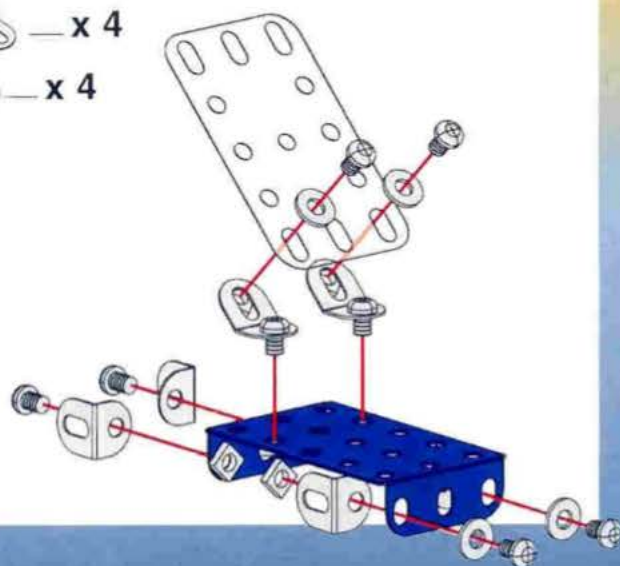
3 + 4 + 5 +



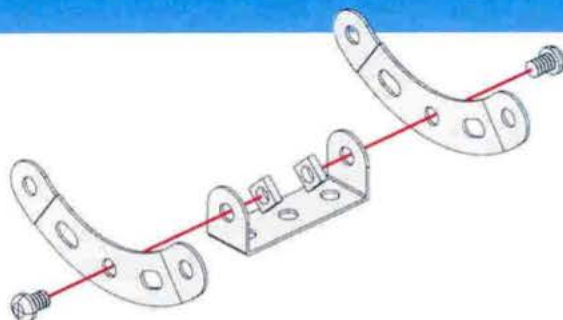
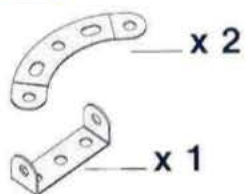
# 7



# 8

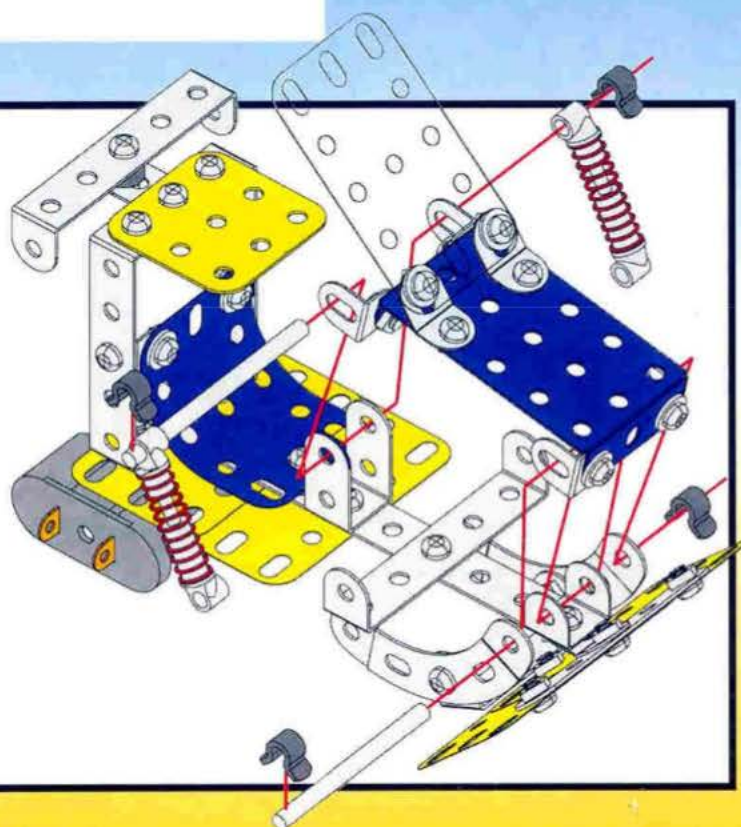
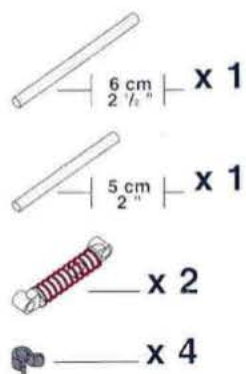


9

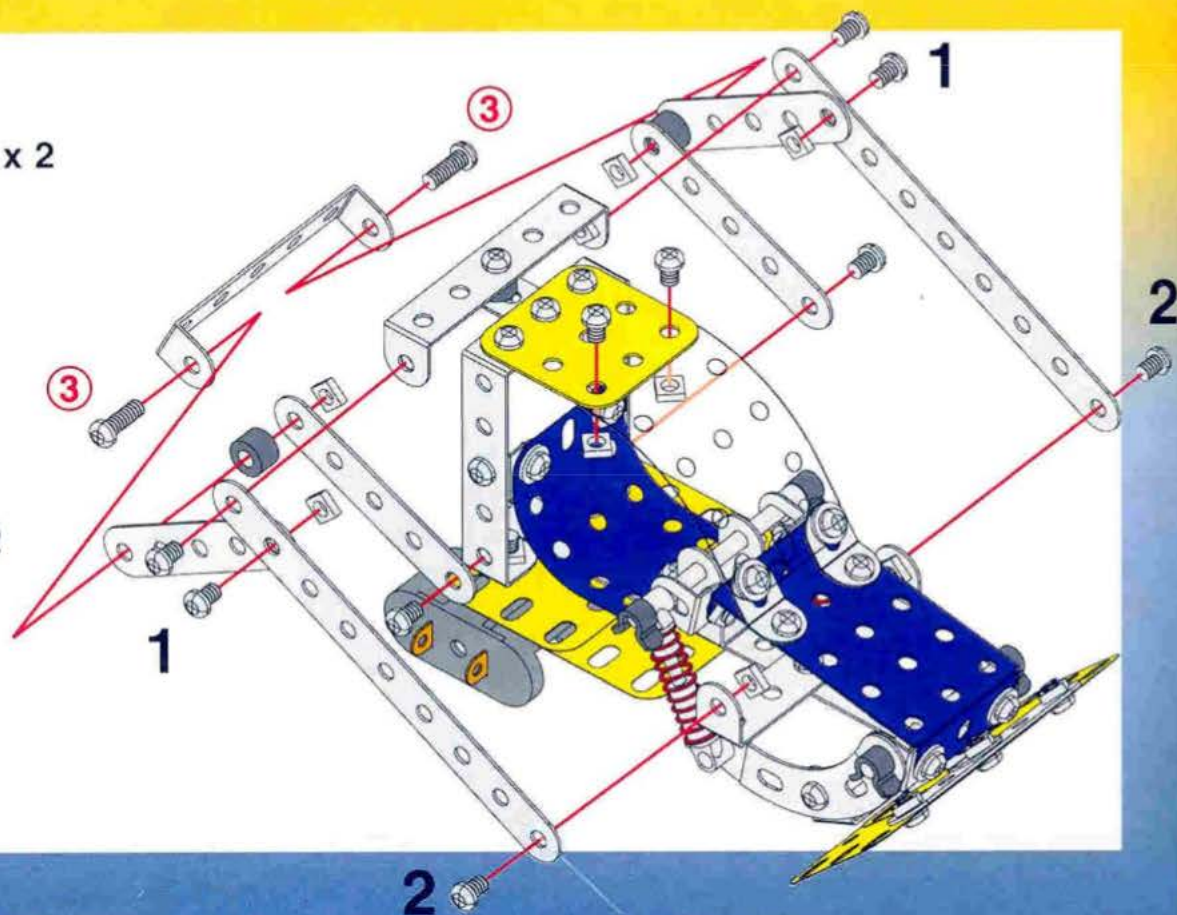
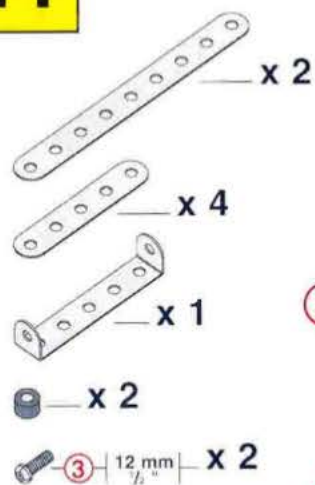


10






7 + 8 + 9 +

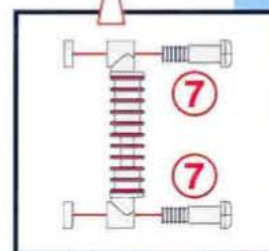
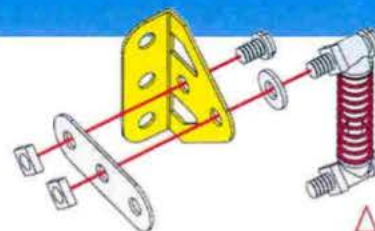
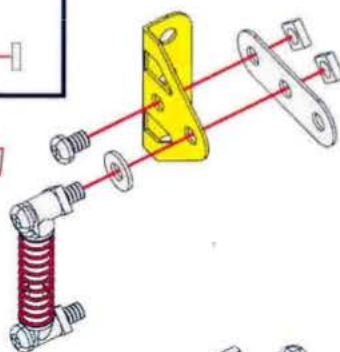
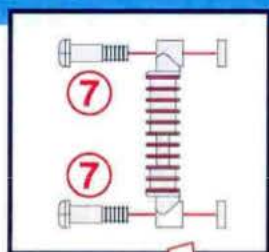


11

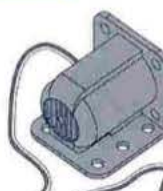





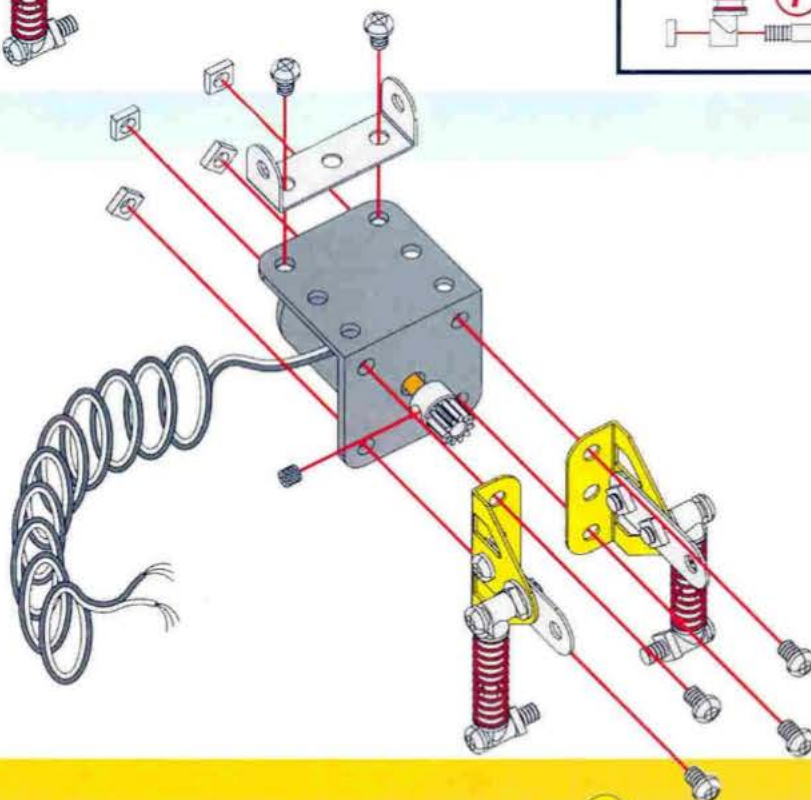
# 12

-  x 2
-  x 2
-  x 2
-  14,7 mm x 4
-  x 2





# 13

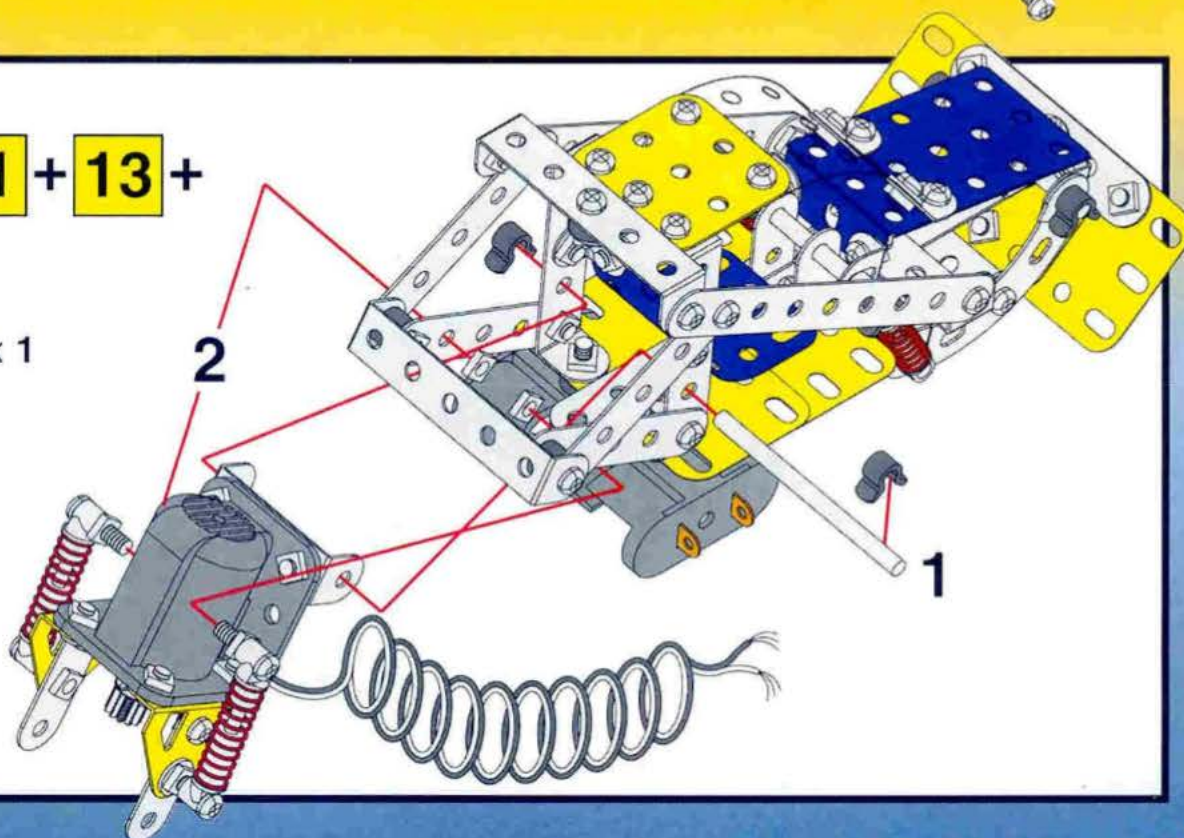
-  x 1
-  x 1
-  x 1
-  x 1



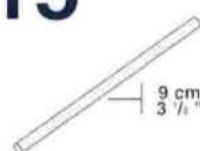
# 14


11 + 13 +

-  6 cm x 1
-  x 2



# 15

  $\frac{9\text{ cm}}{3\frac{1}{2}''}$  x 2

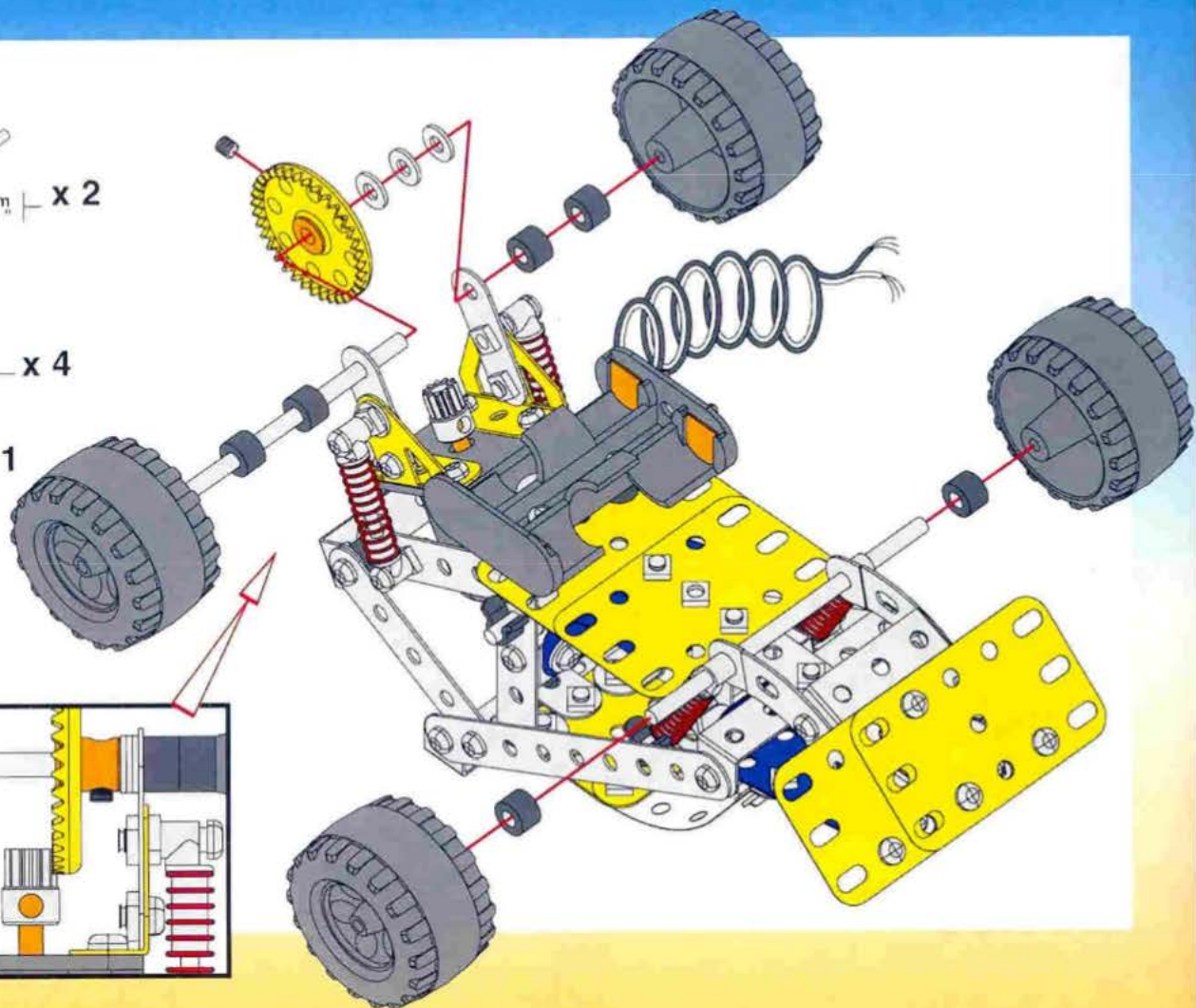
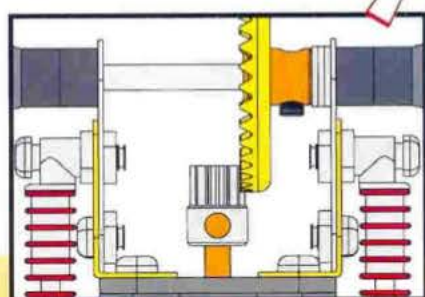
 x 4

 x 1

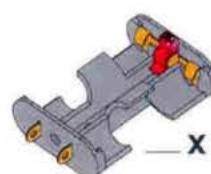
 x 3

 x 6

 x 1




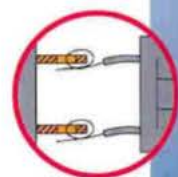
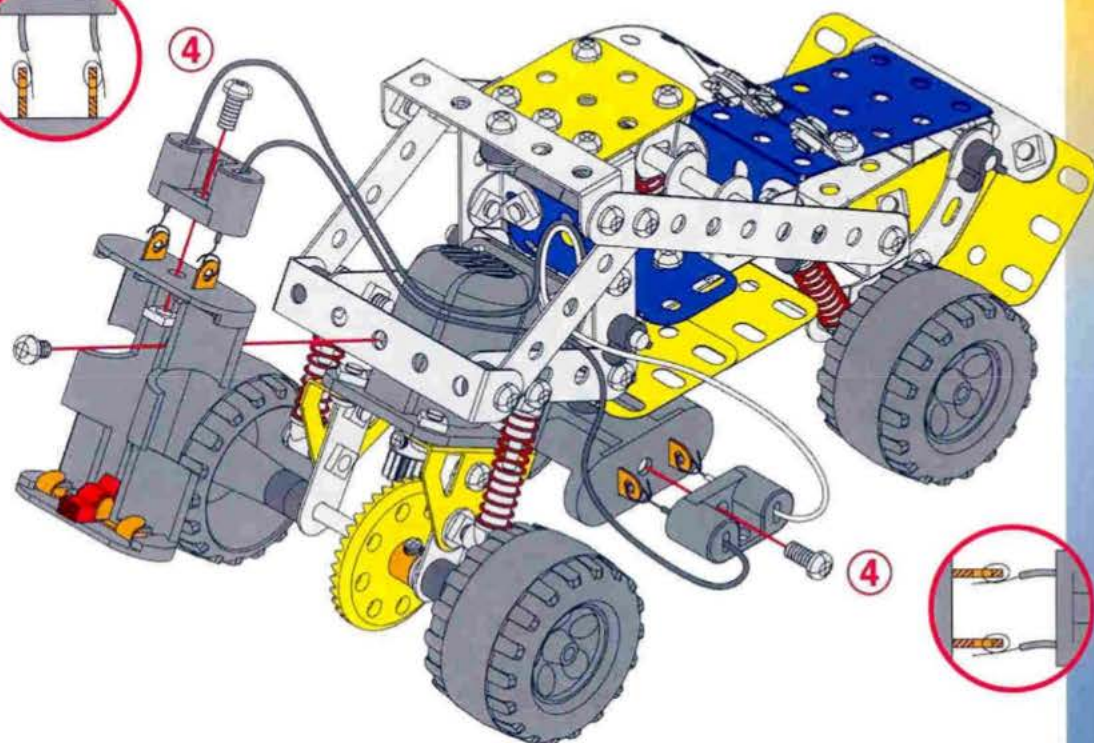
# 16

 x 1

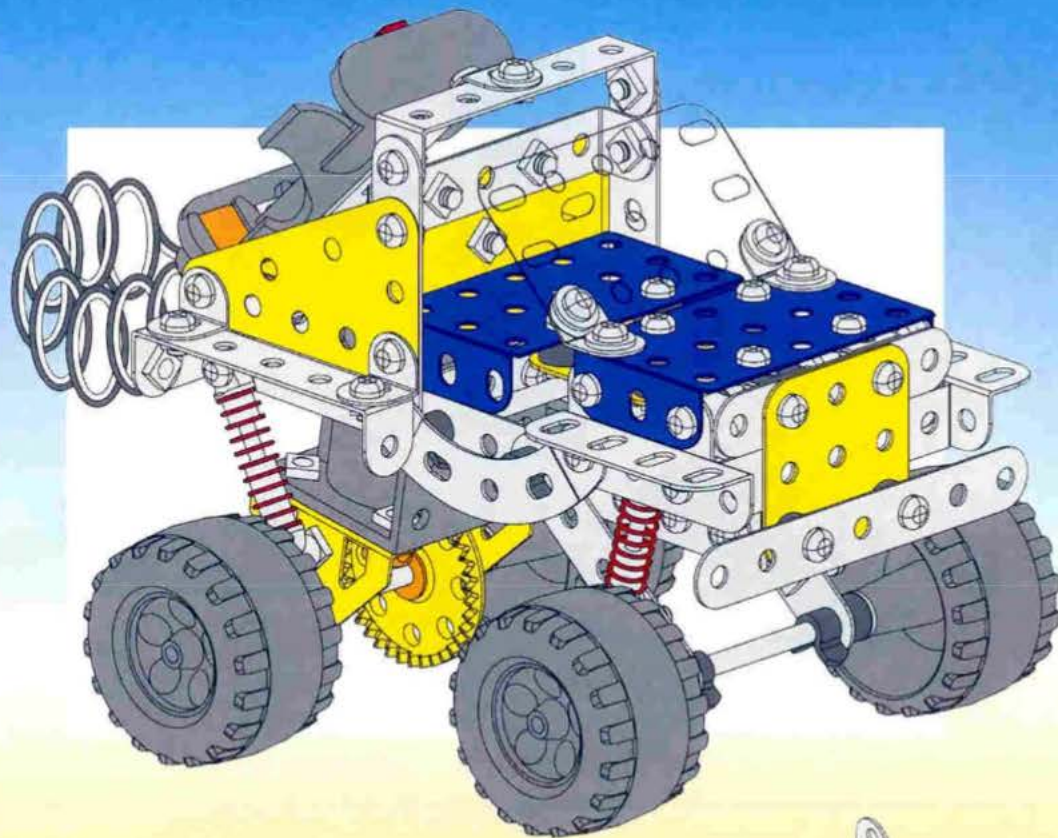
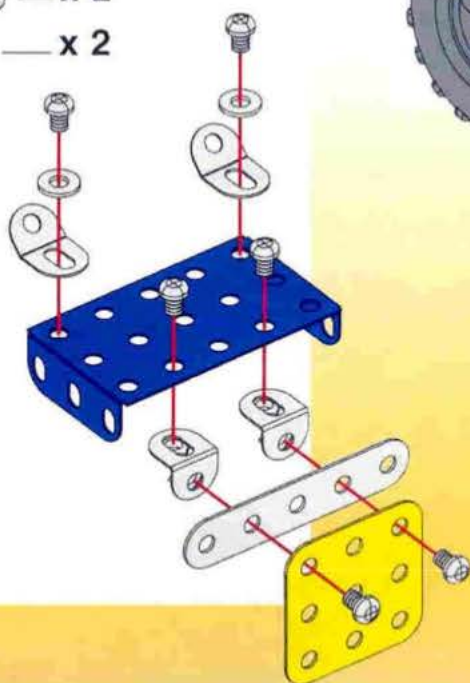
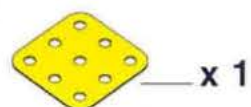
 x 1

 x 2

  $\frac{9.5\text{ mm}}{3\frac{7}{8}''}$  x 2

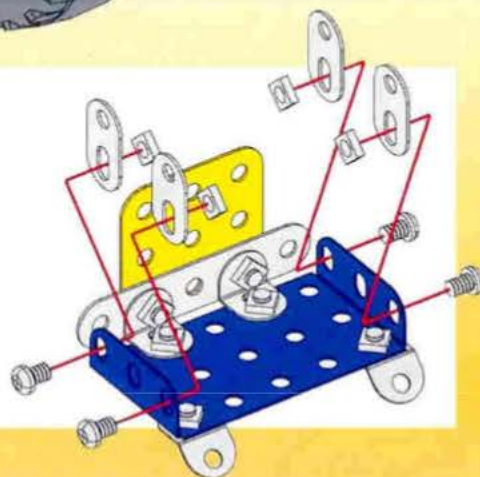


# 1

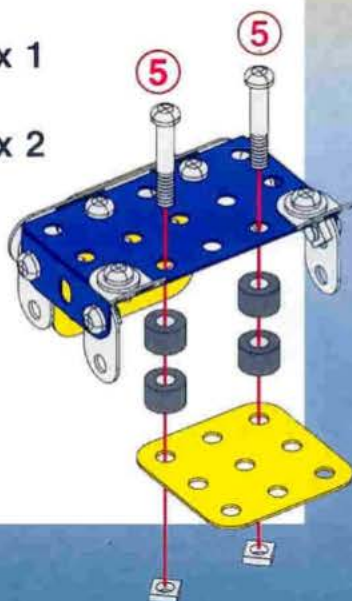
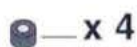
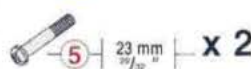
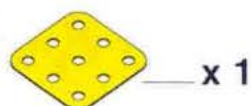


# 2

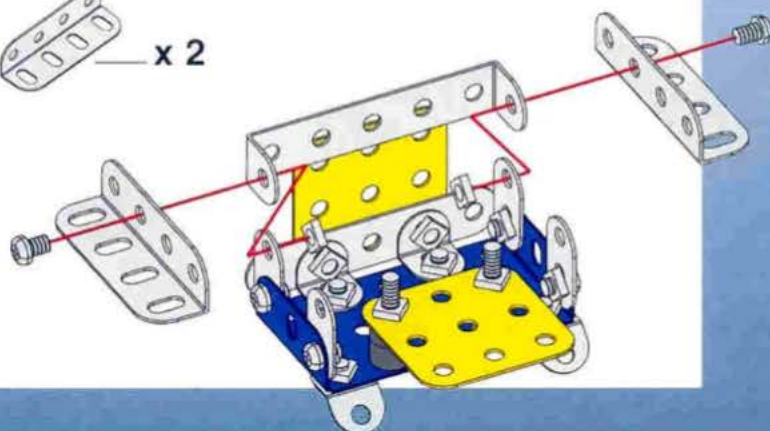
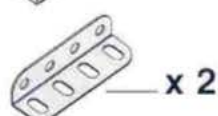
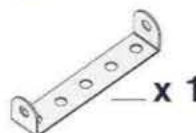
— x 4



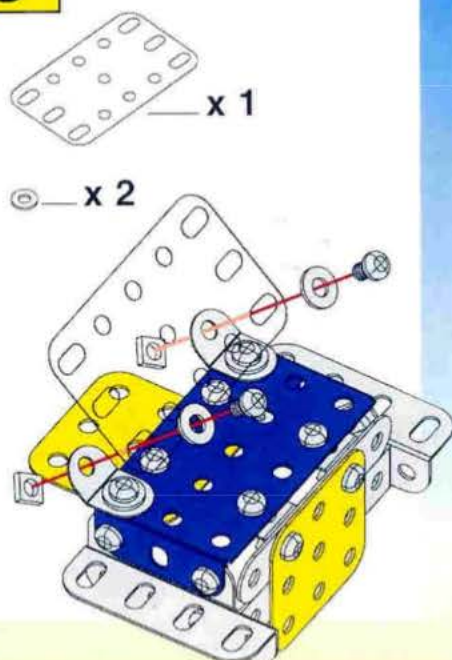
# 3



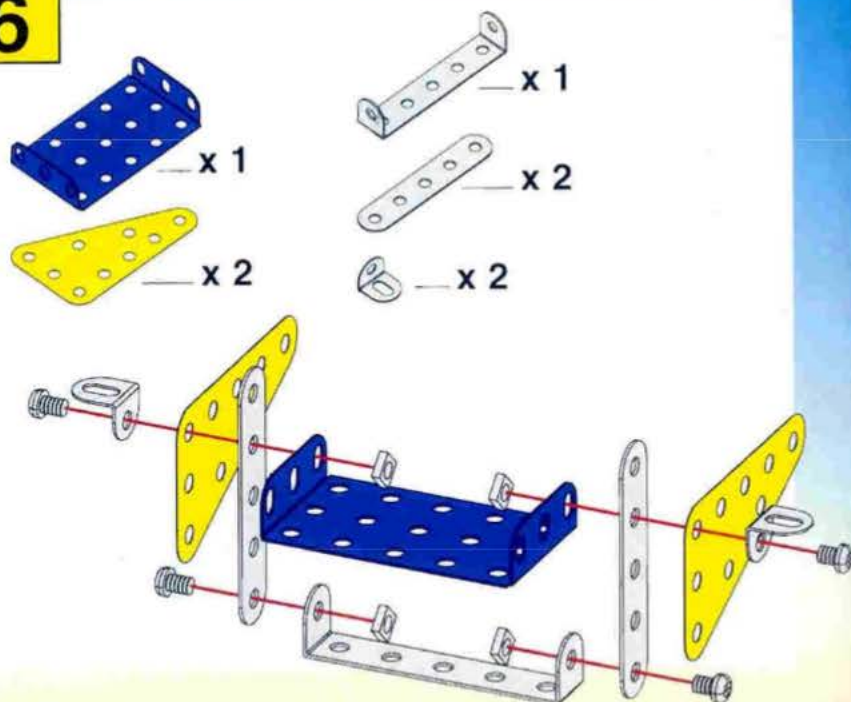
# 4



5



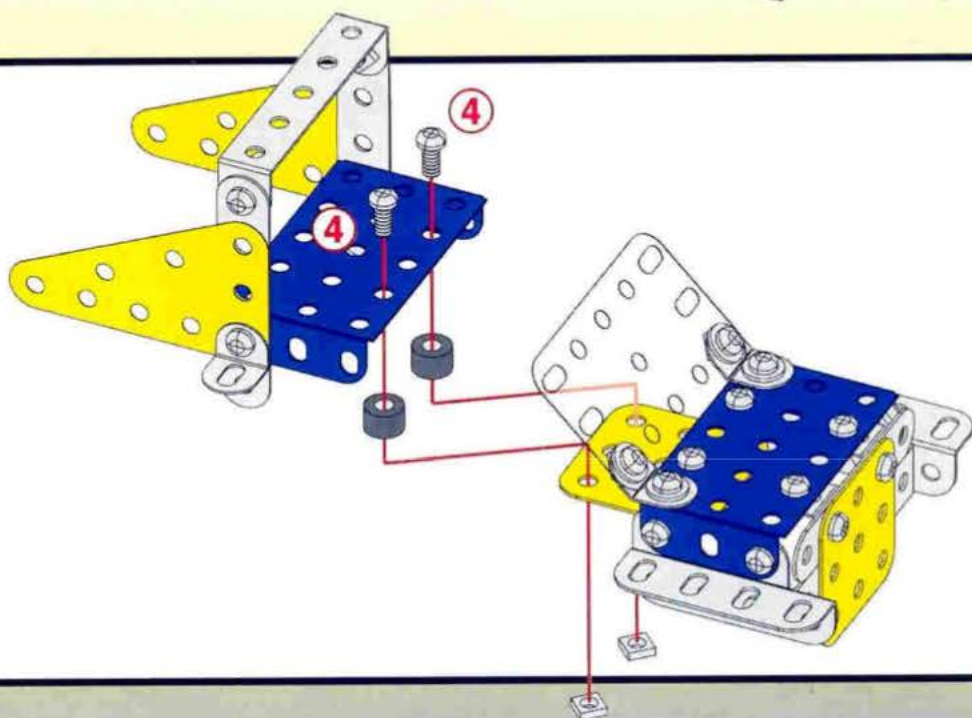
6



7

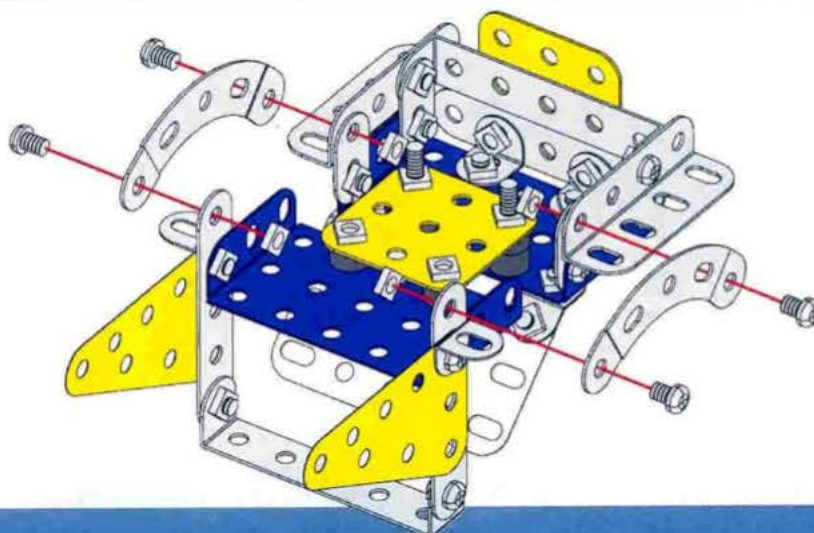
5 + 6 +

4 | 9.5 mm |  $\frac{1}{4}$ " x 2  
 2 x 2

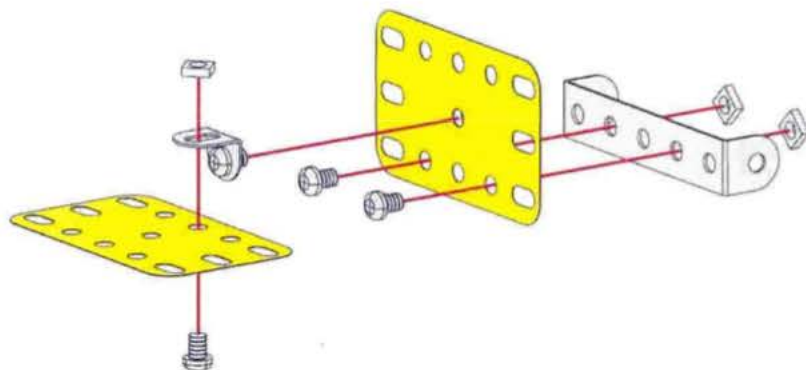
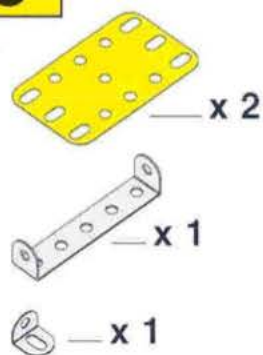


8

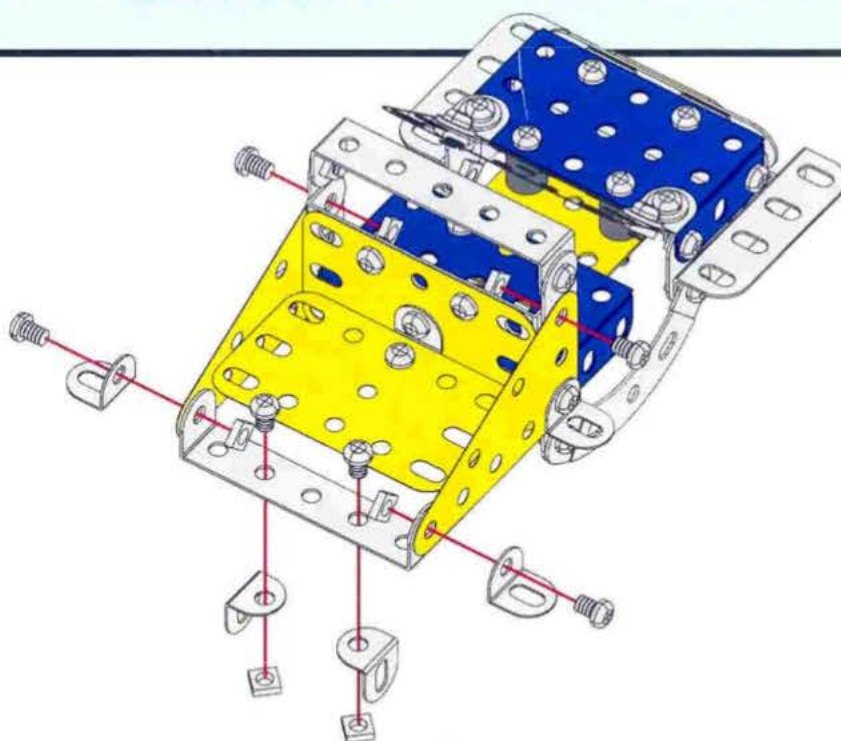
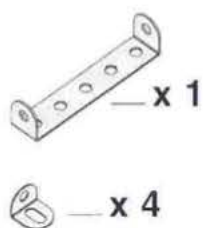
2 x 2



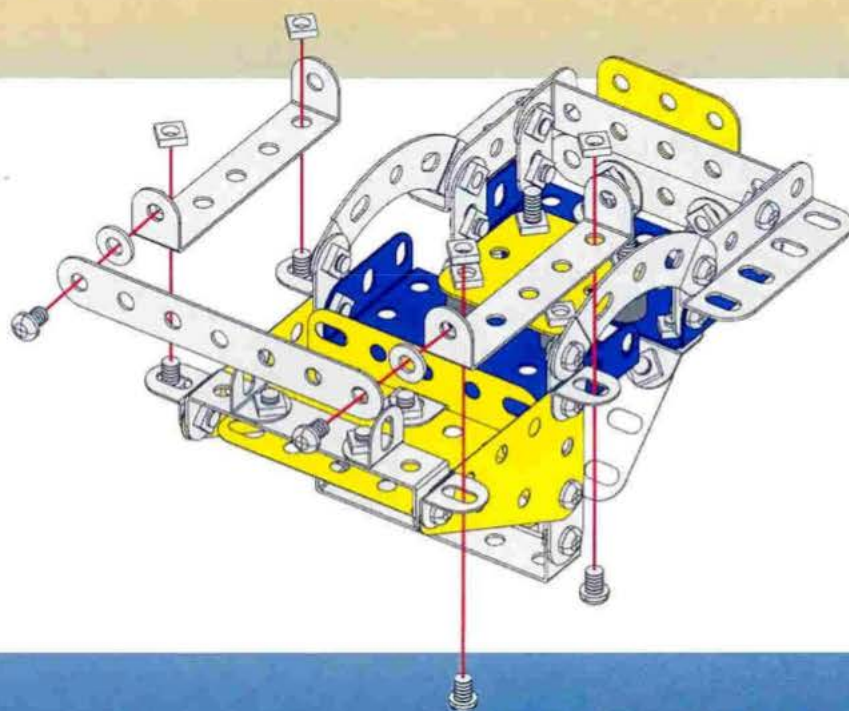
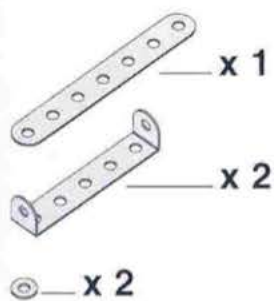
9



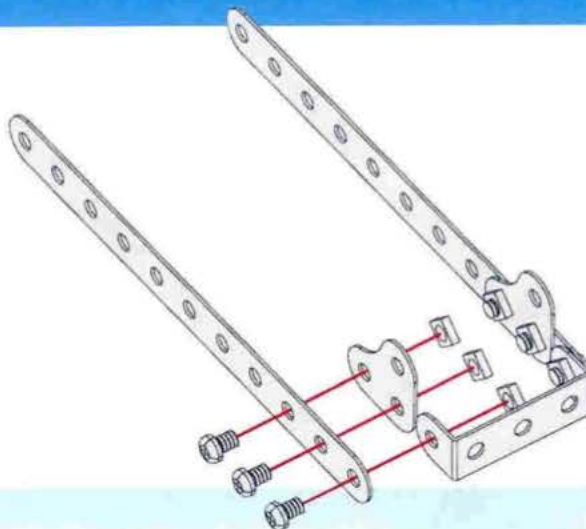
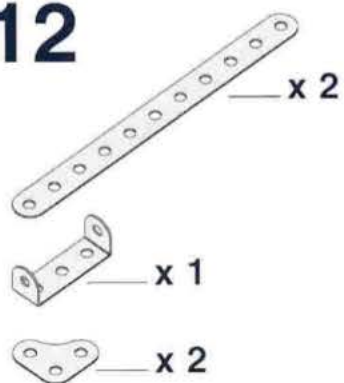
10



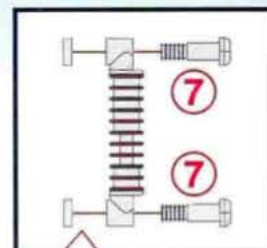
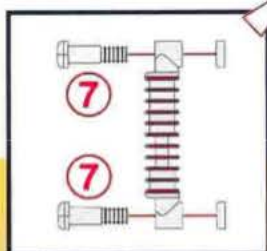
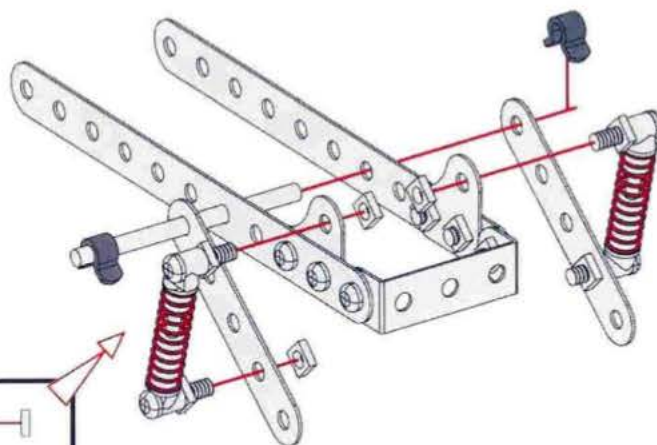
11



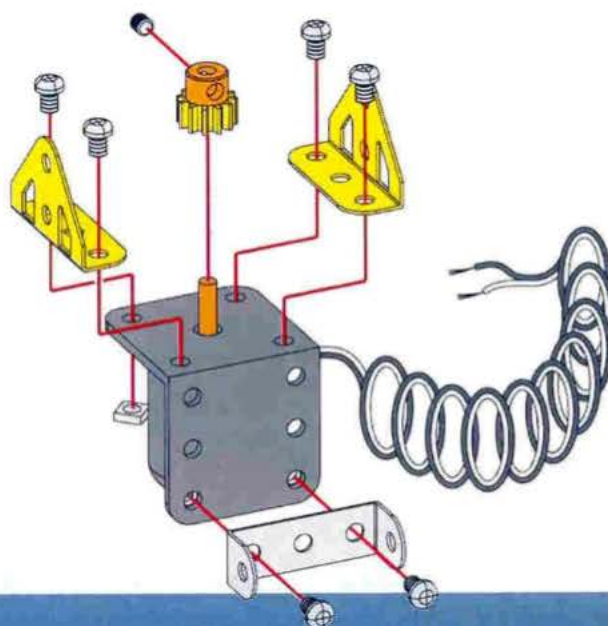
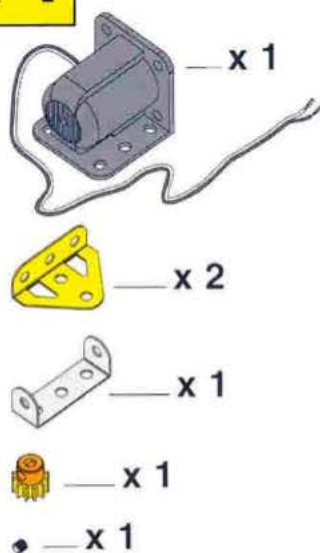
# 12



# 13




# 14

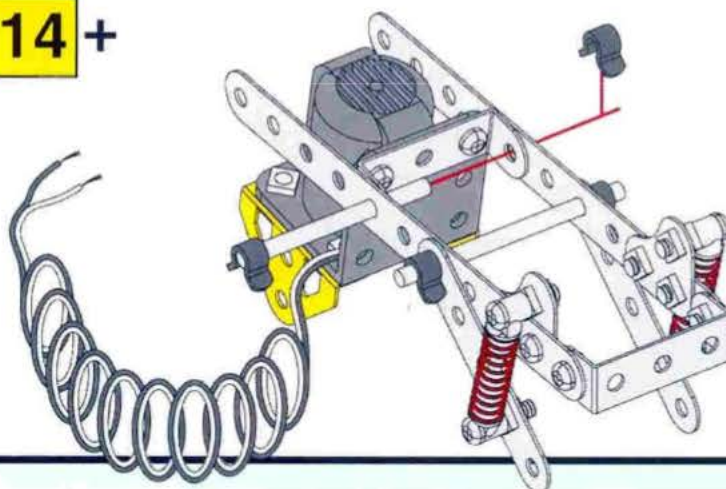


# 15

**13** + **14** +


 5 cm  
x 1

 x 2




# 16

**11** + **15** +

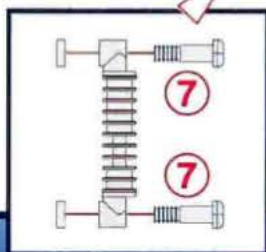
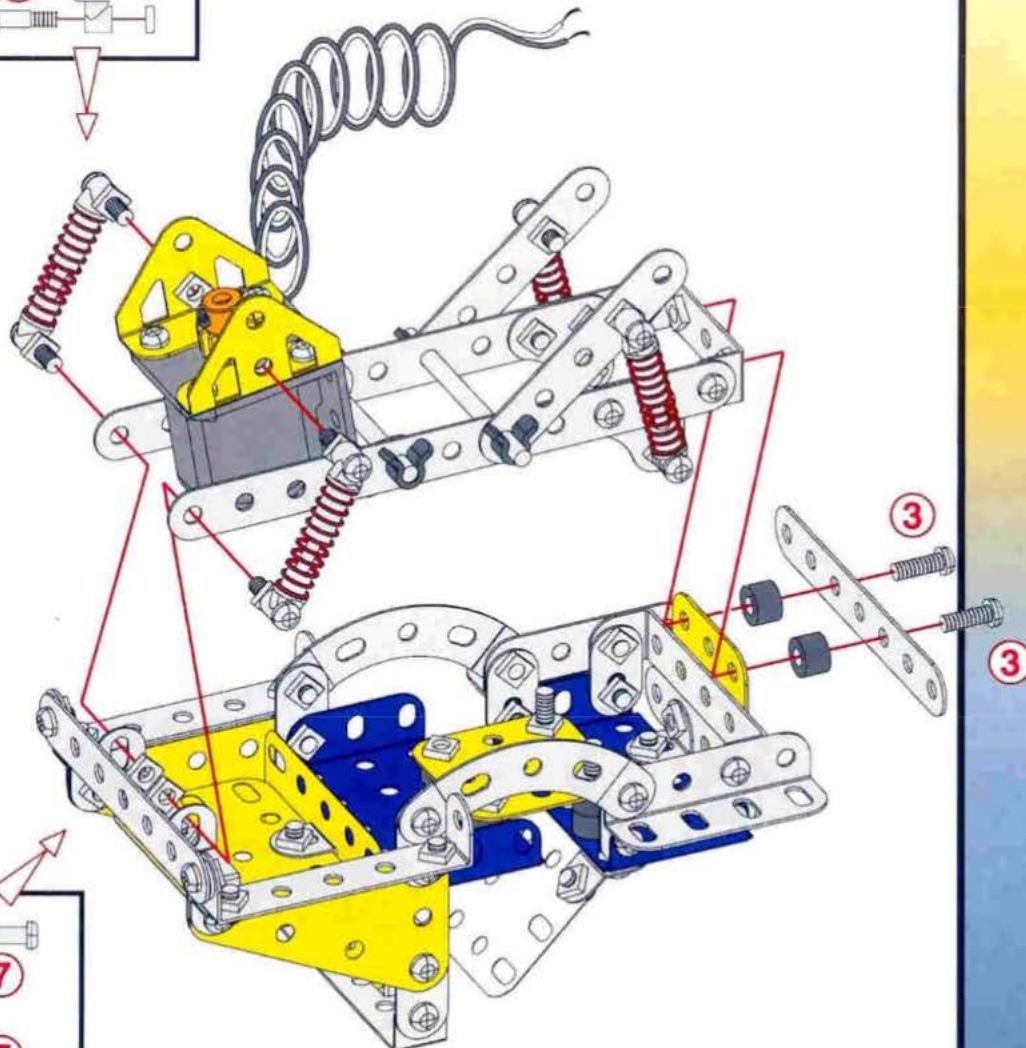
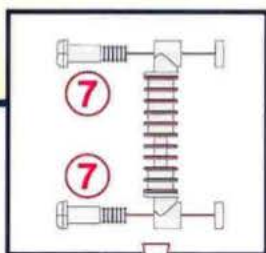
 x 1

 x 2

 14,7 mm  
x 4

 12 mm  
x 2

 x 2



# 17

9 cm  
3 1/8" x 2

x 4

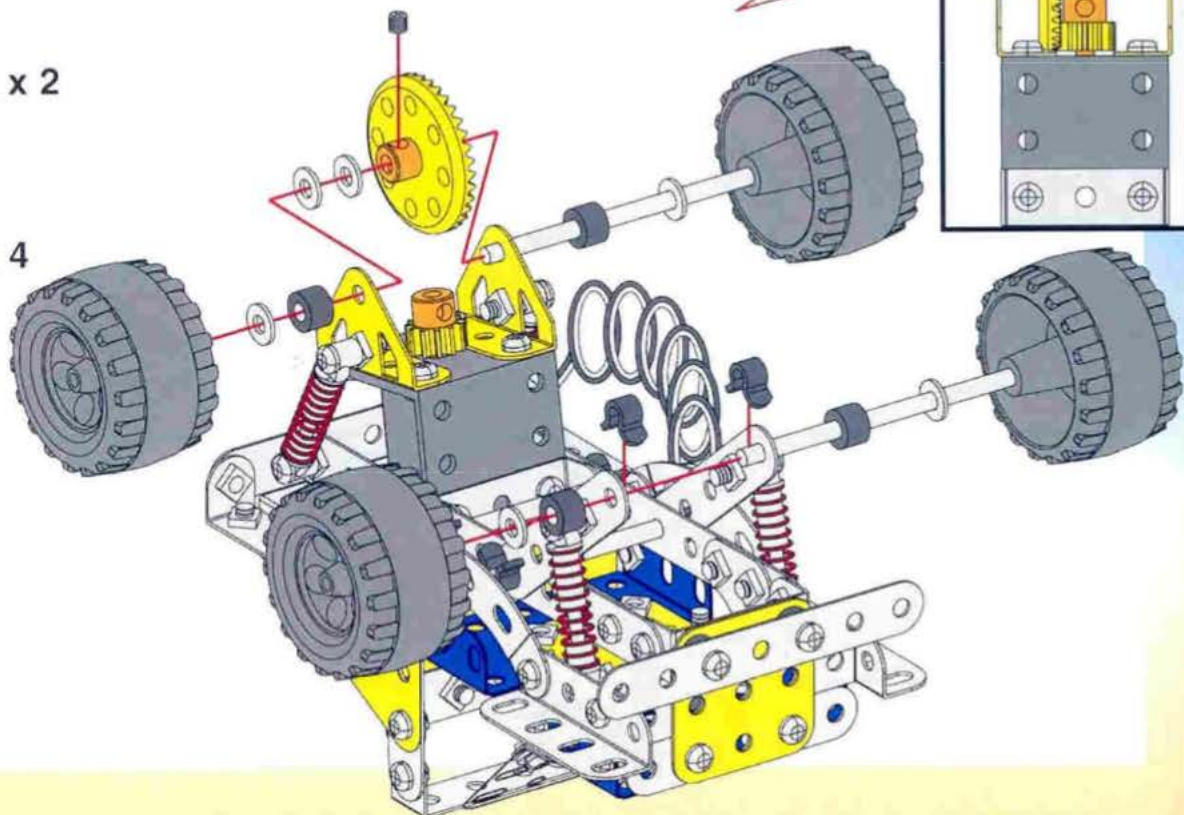
x 1

x 2

x 6

x 4

x 1

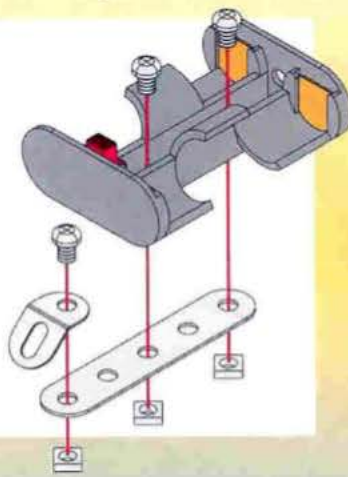


# 18

x 1

x 1

x 1



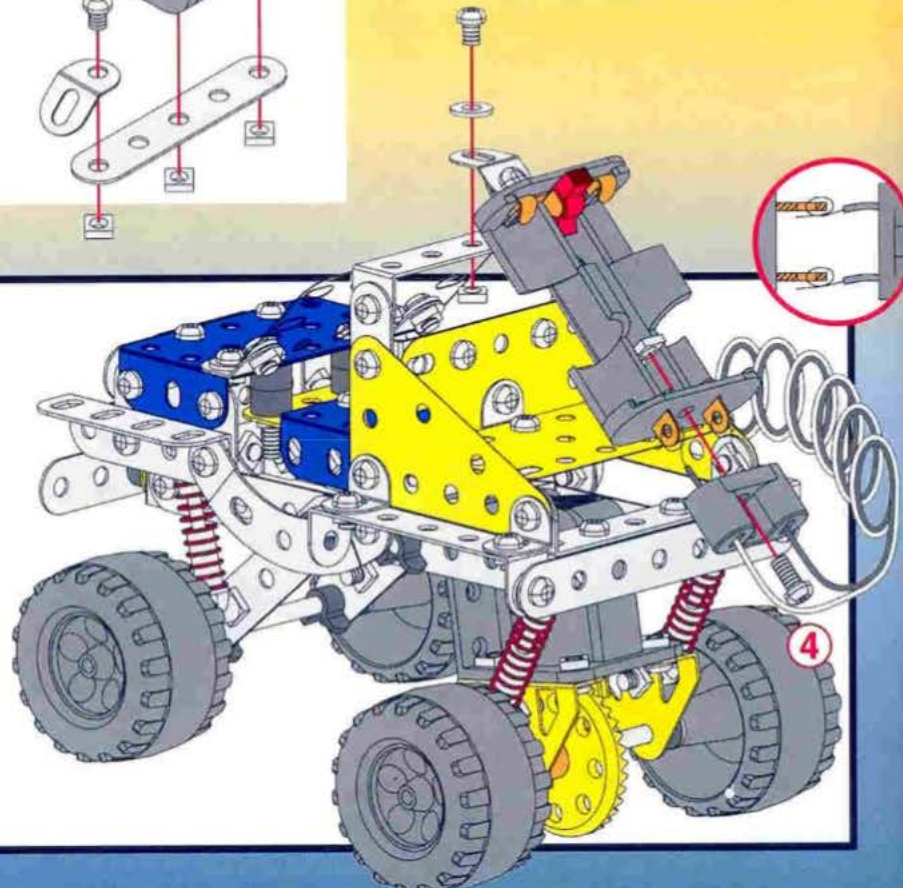
# 19

17 + 18 +

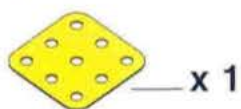
x 1

9.5 mm  
3/8" x 1

x 1



# 1



x 1



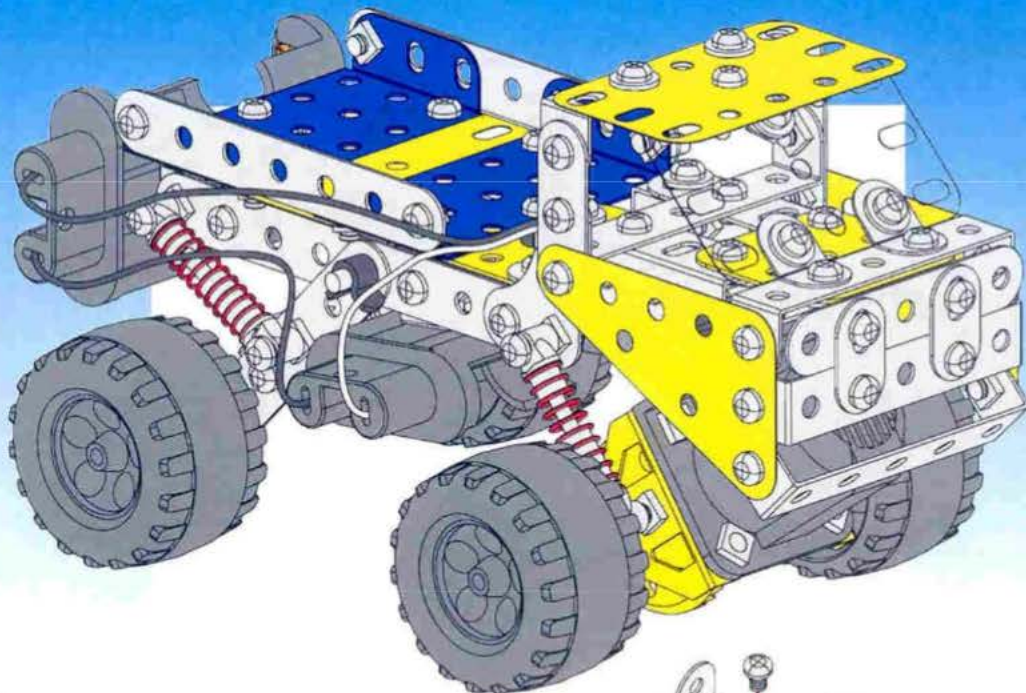
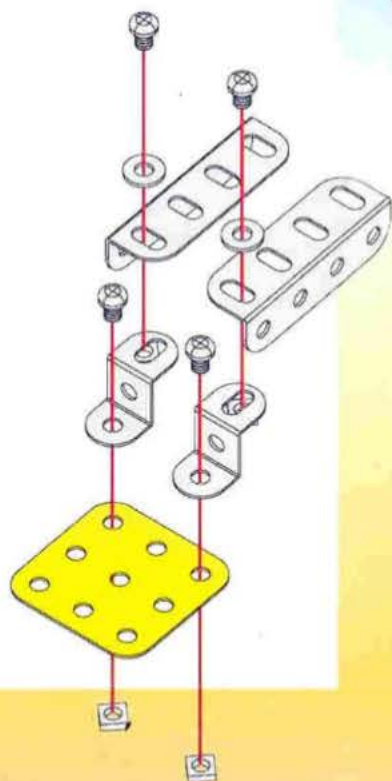
x 2



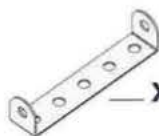
x 2



x 2



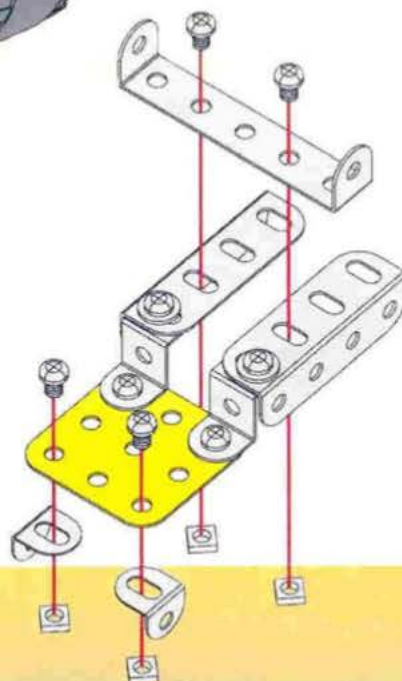
# 2



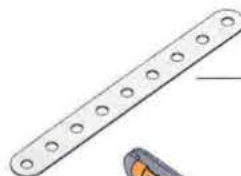
x 1



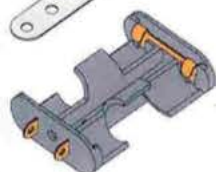
x 2



# 3



x 2



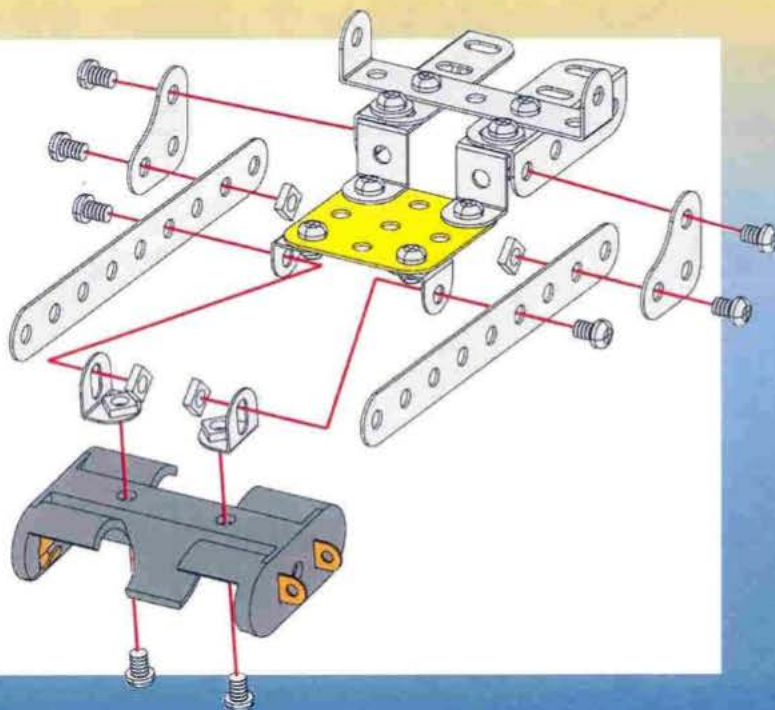
x 1



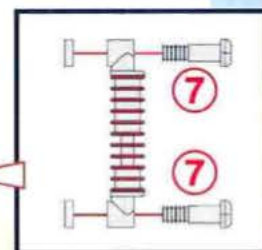
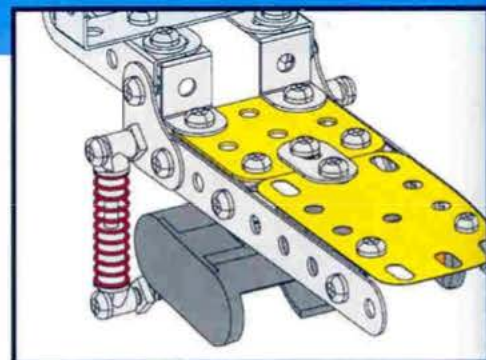
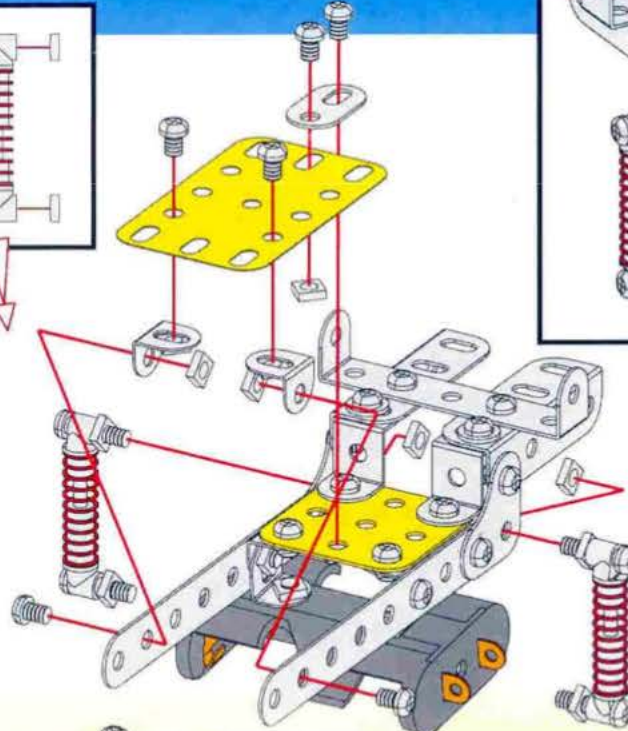
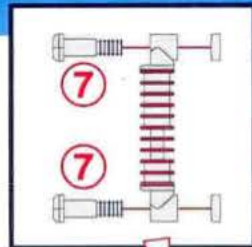
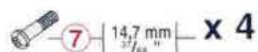
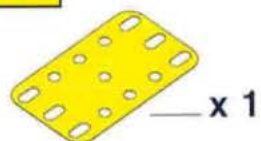
x 2



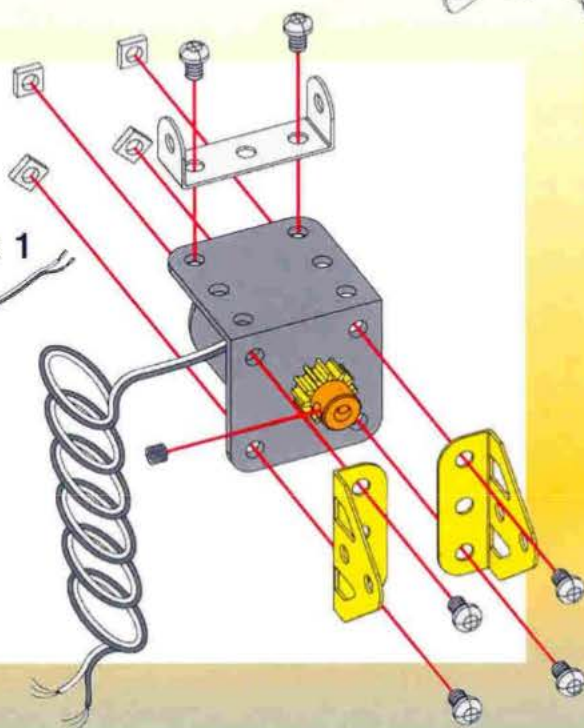
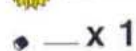
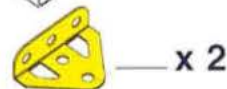
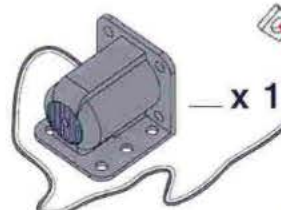
x 2



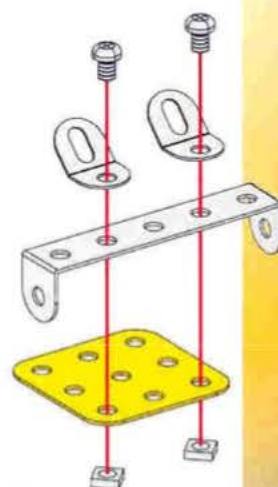
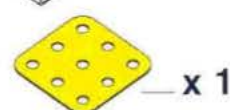
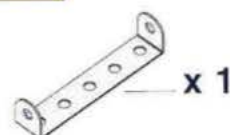
4



5

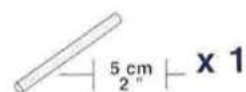


6

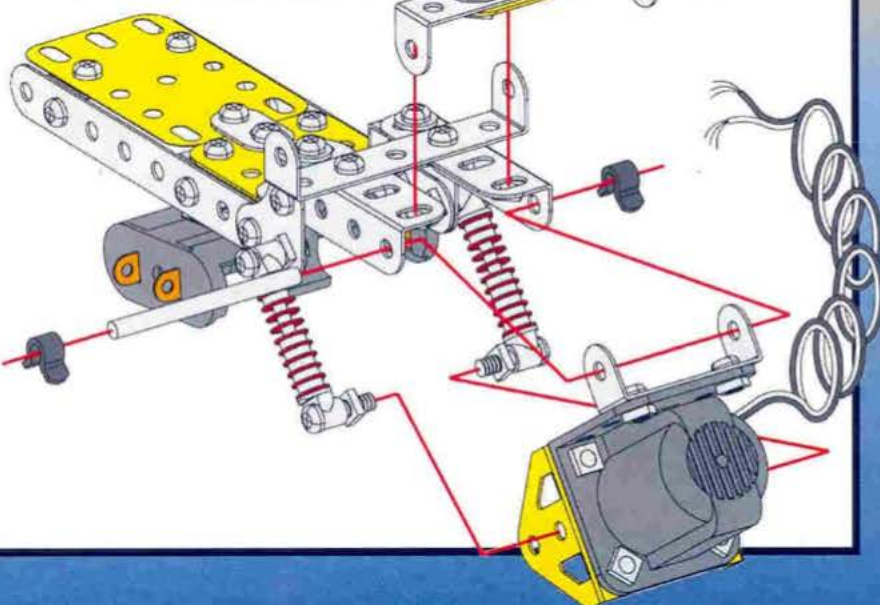


7

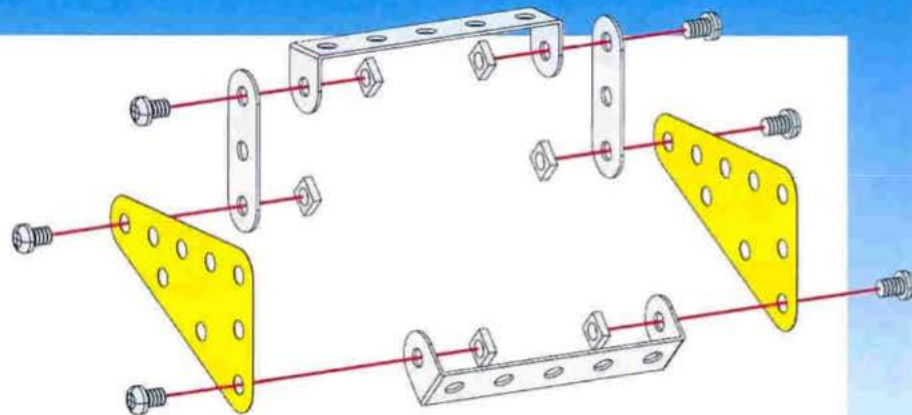
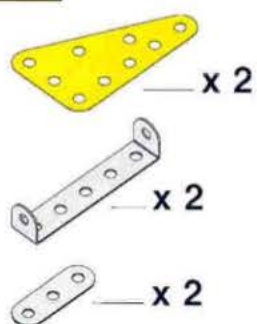
4 + 5 + 6 +



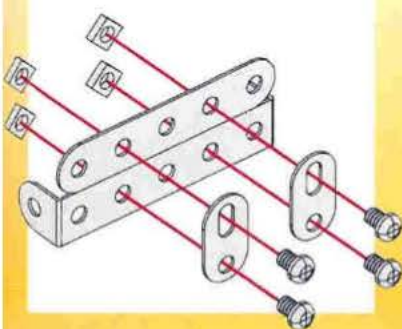
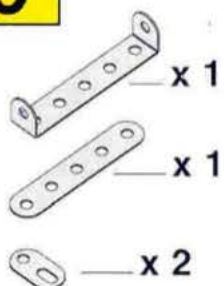
2



8

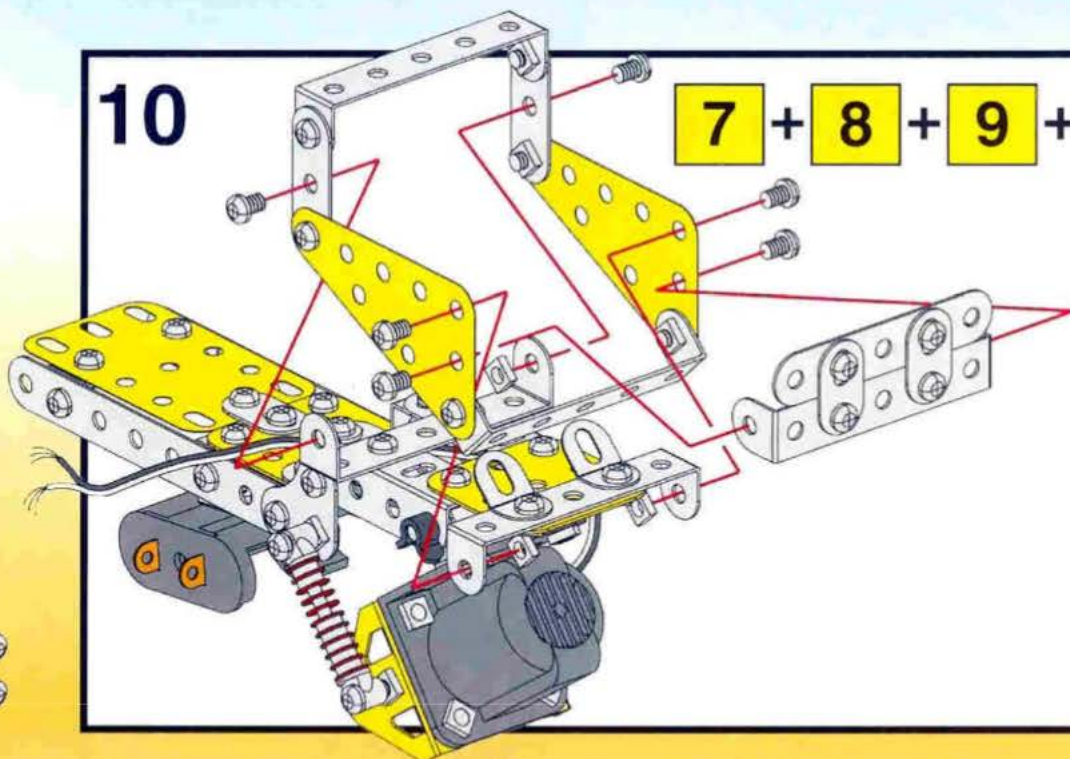


9

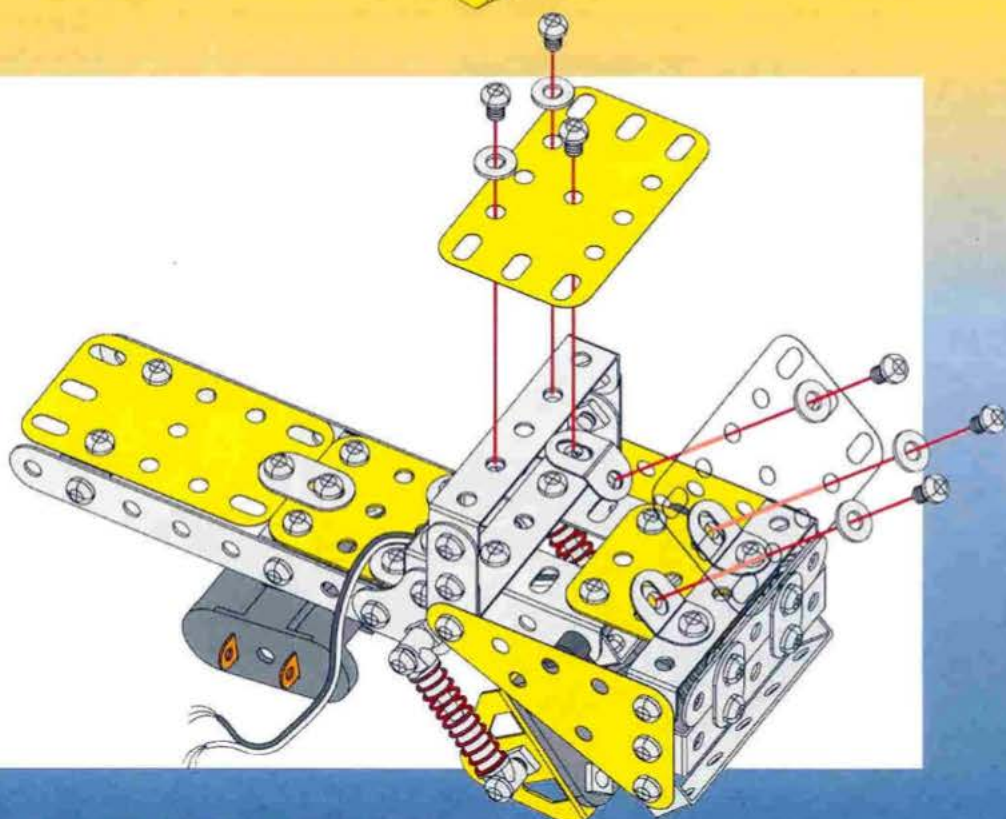
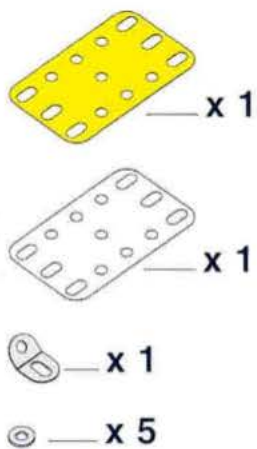


10

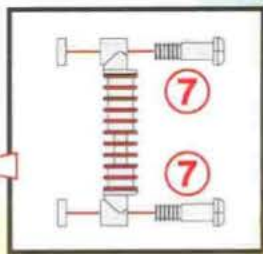
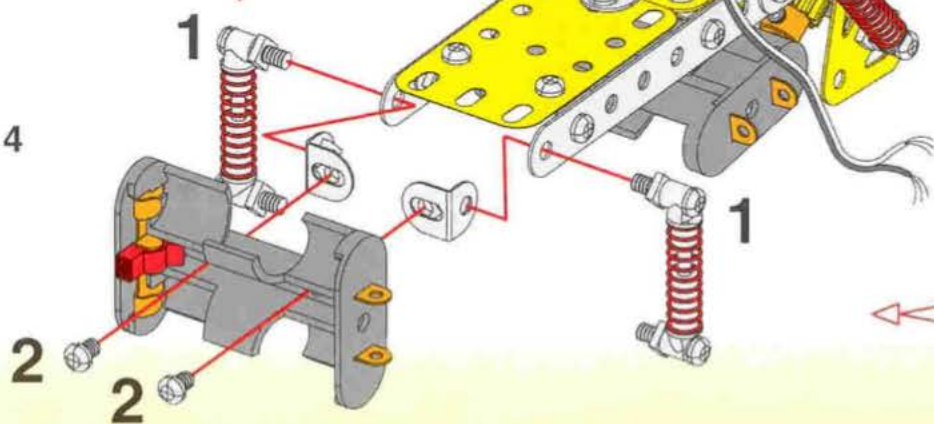
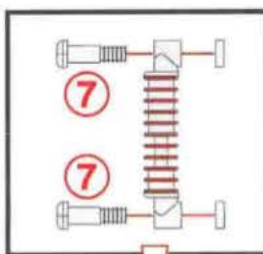
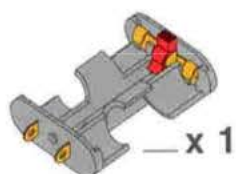
7 + 8 + 9 +



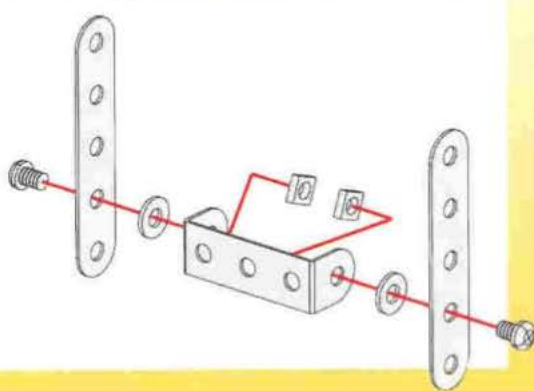
11



# 12

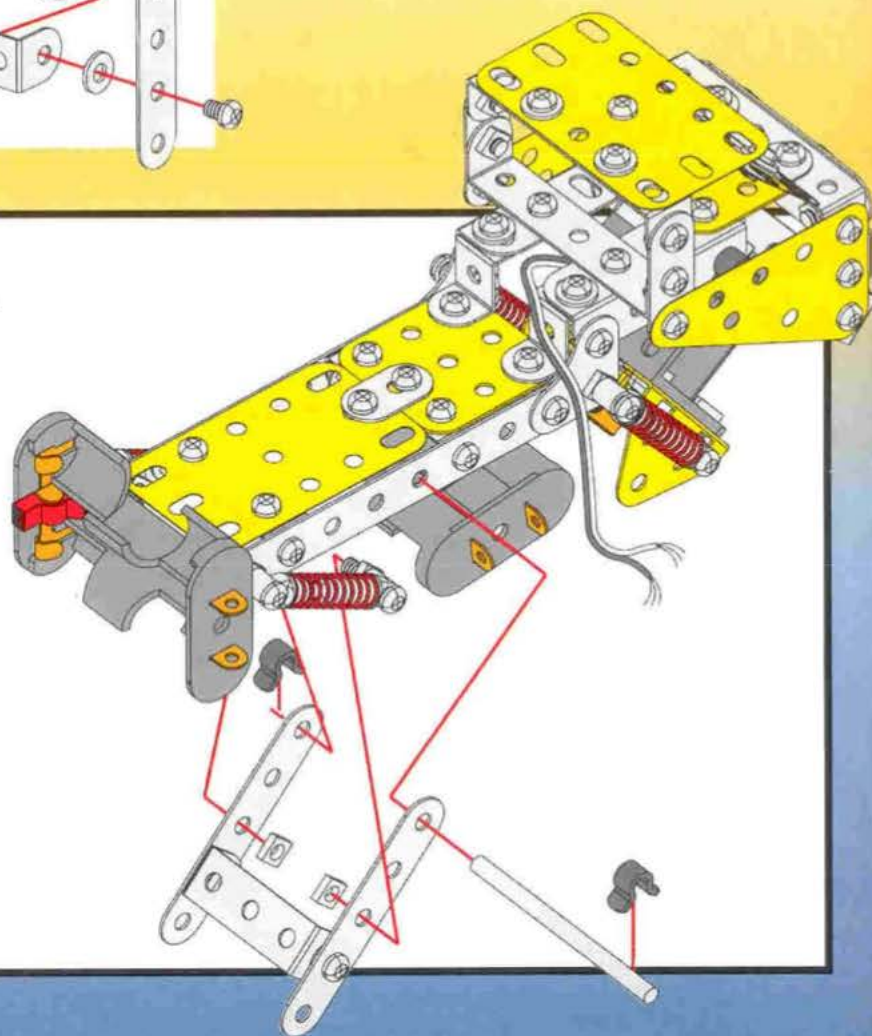
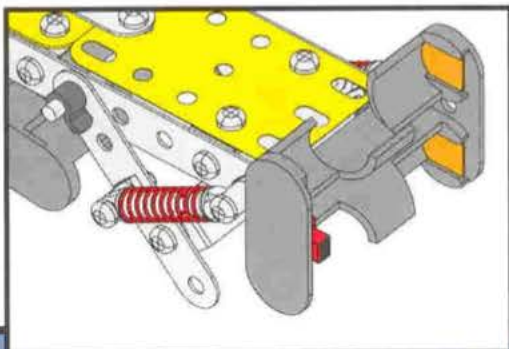
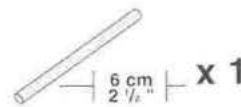


# 13

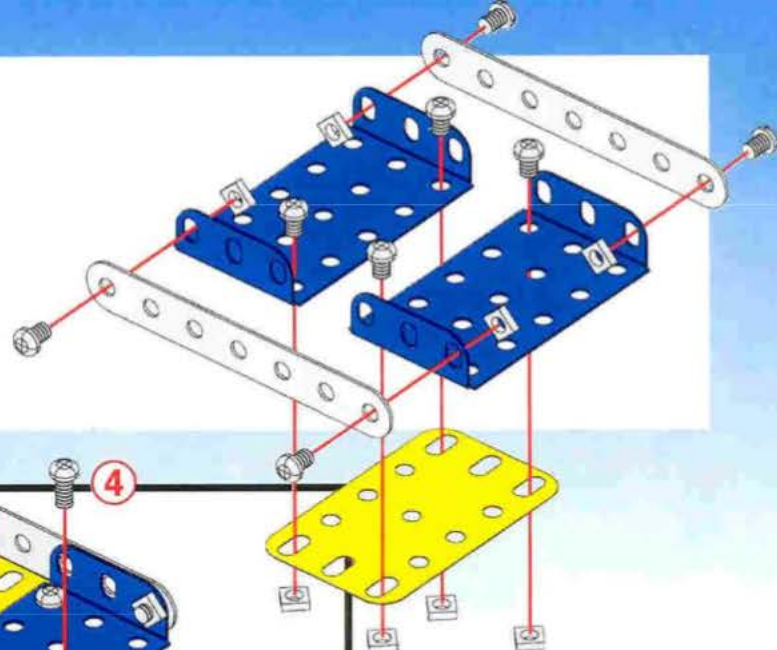
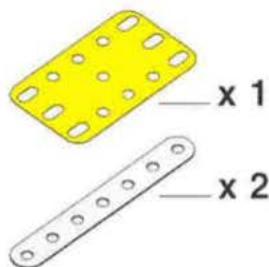
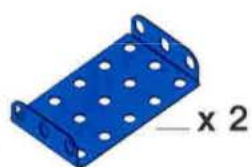


# 14

12 + 13 +

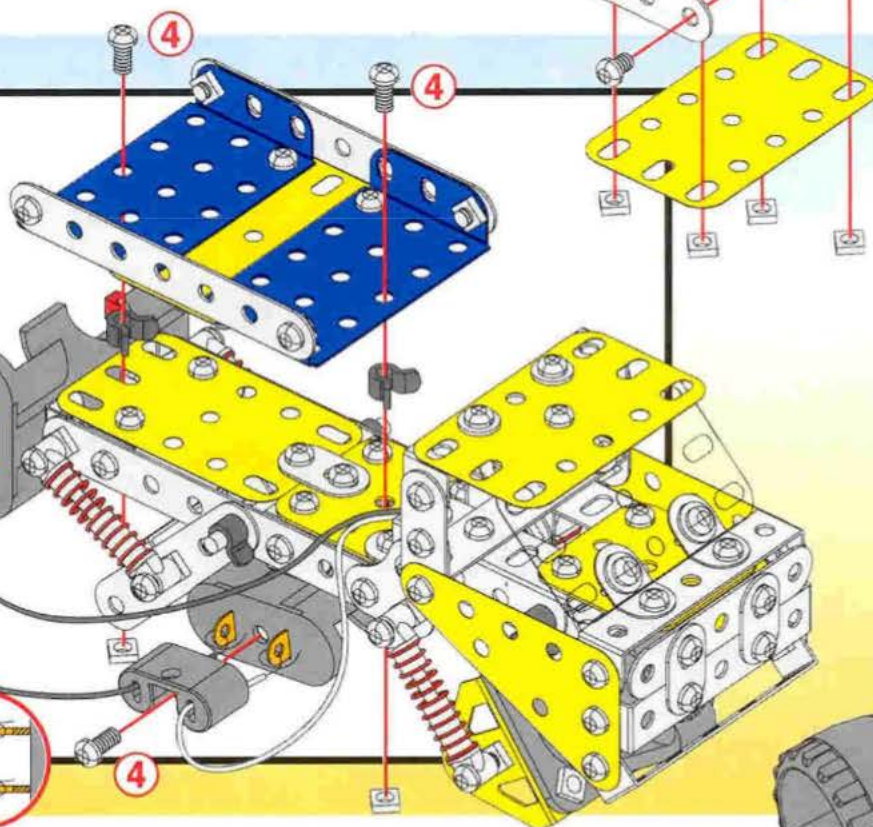
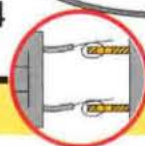
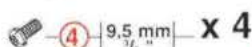


# 15

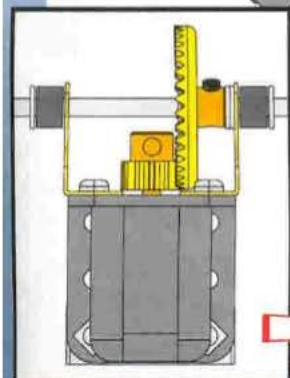
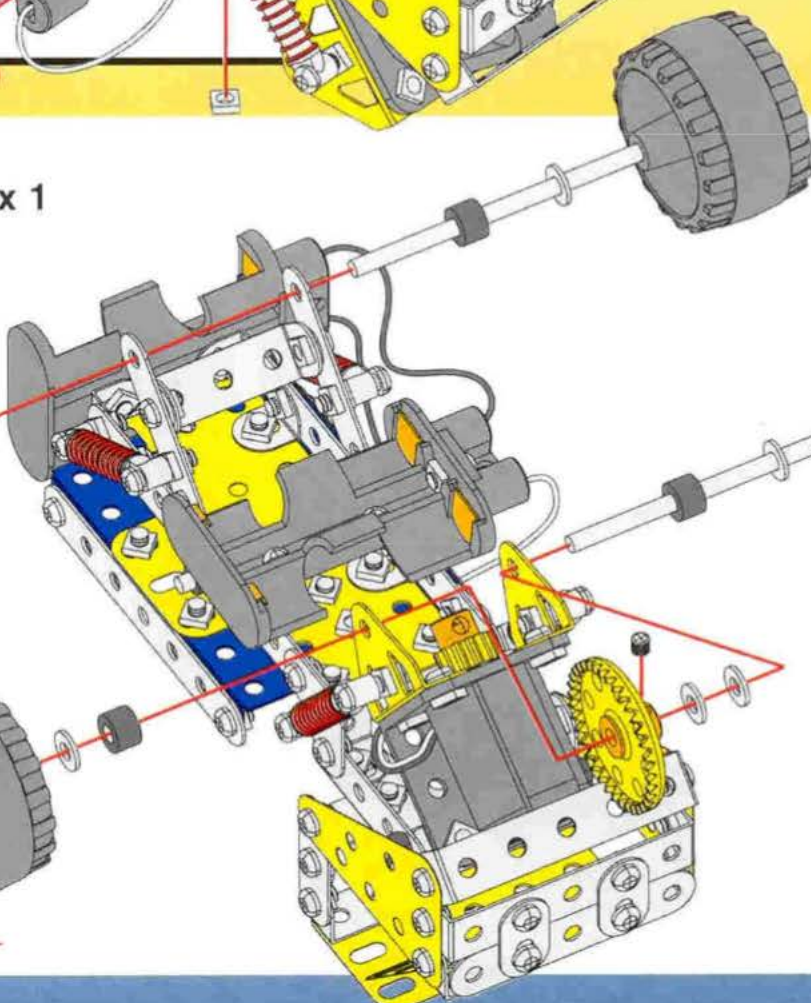
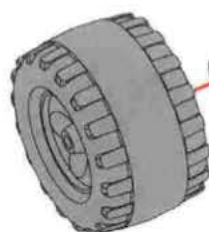
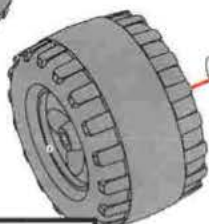
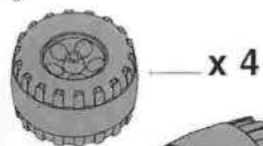
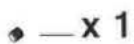
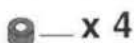
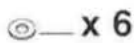
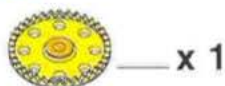
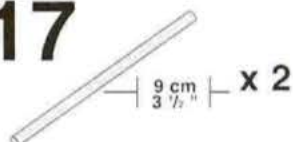


# 16

14 + 15 +

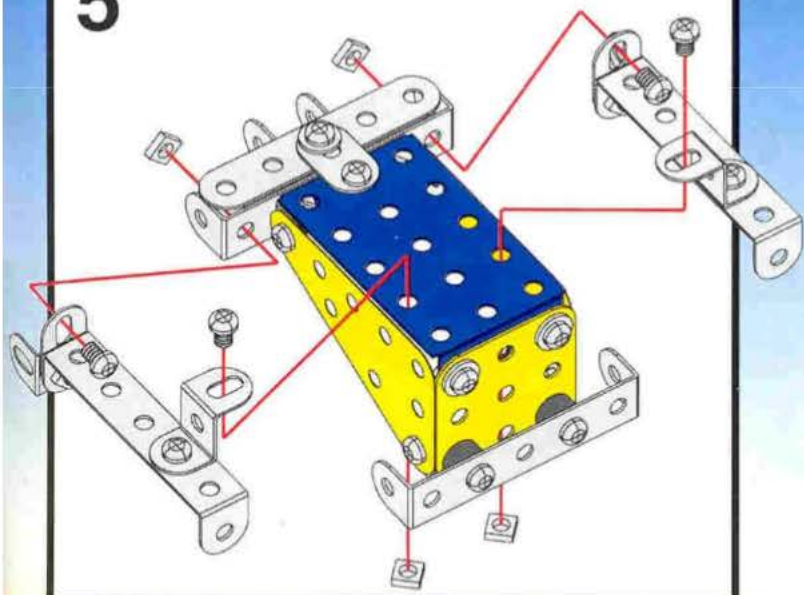


# 17







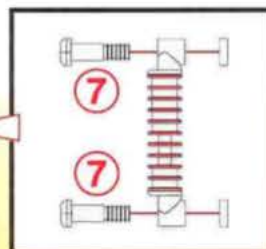
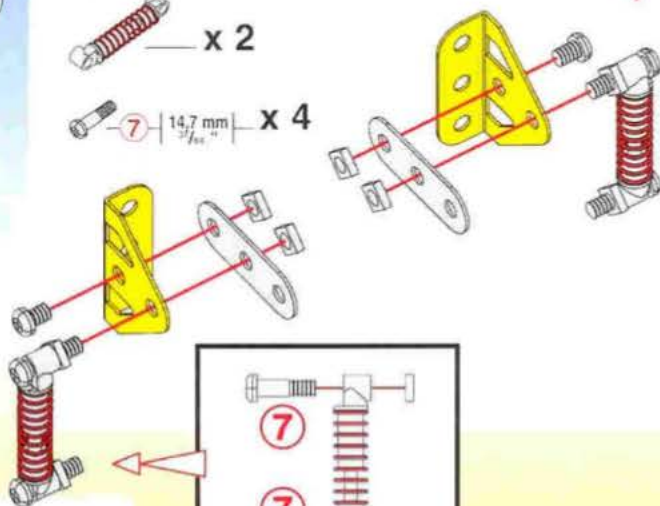
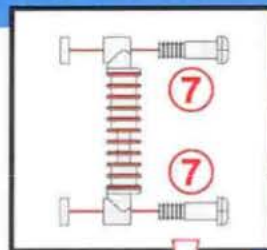
③

# 5

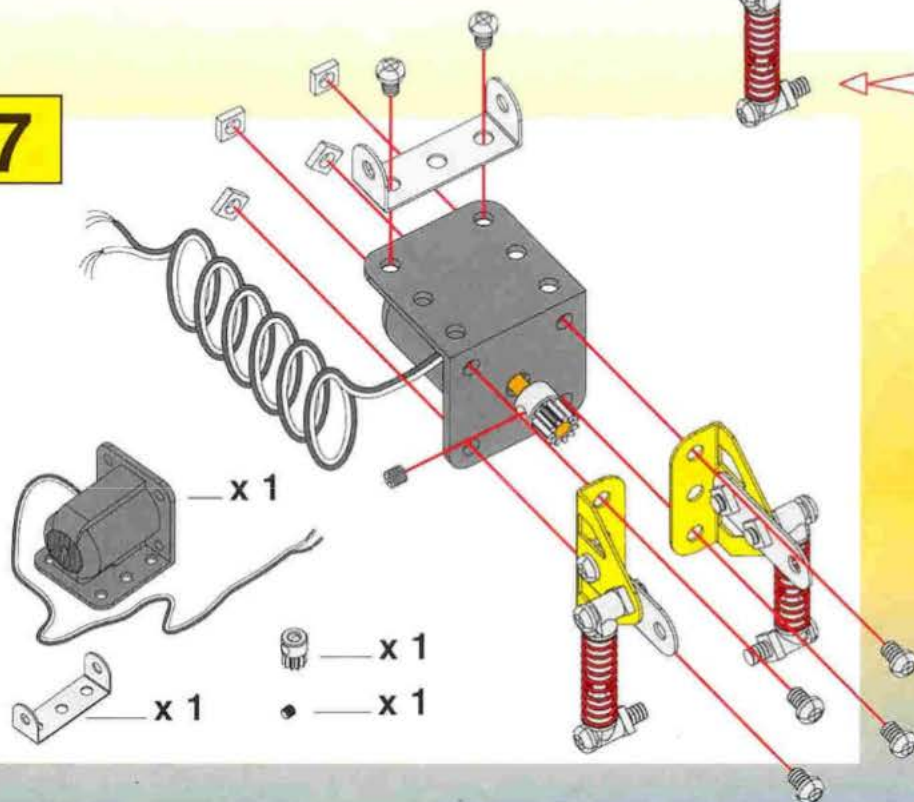


# 6

-  — x 2
-  — x 2
-  — x 2
-  — 7 | 14,7 mm | x 4





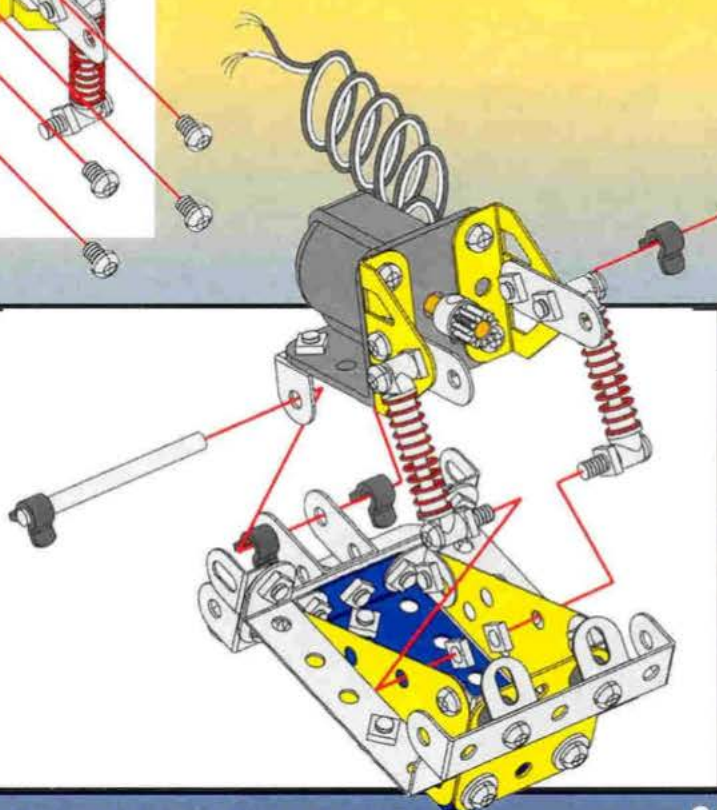
# 7



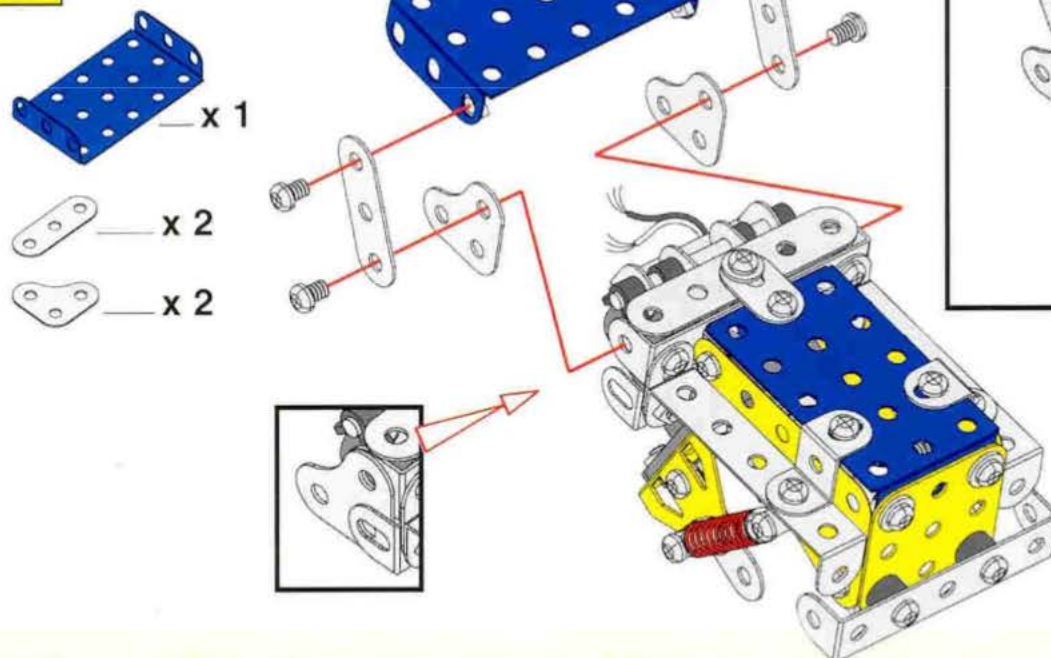
# 8

**5 + 7 +**

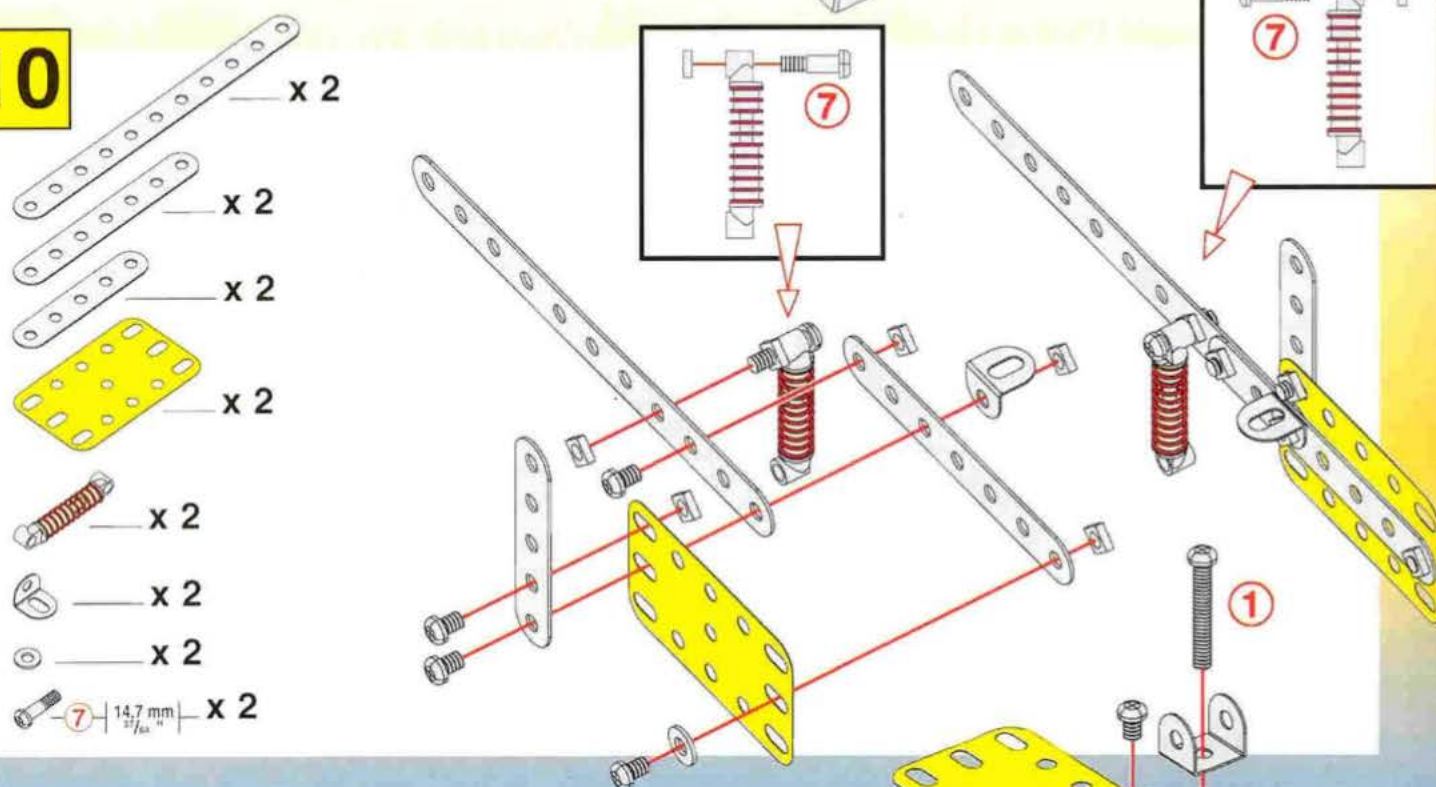
-  — 5 cm | x 1
-  — x 4



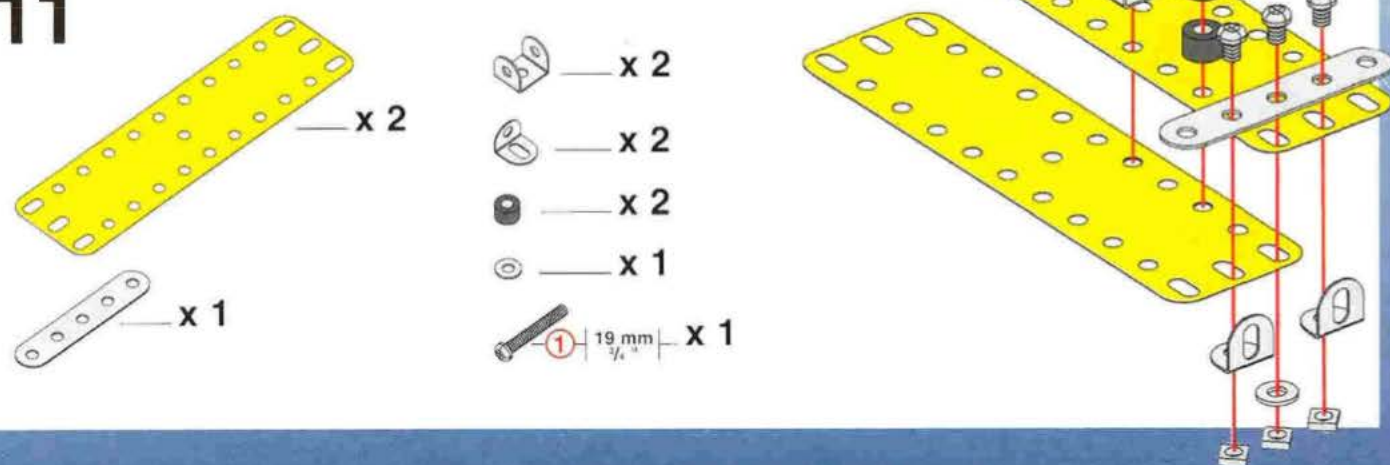
# 9





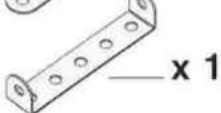





# 10

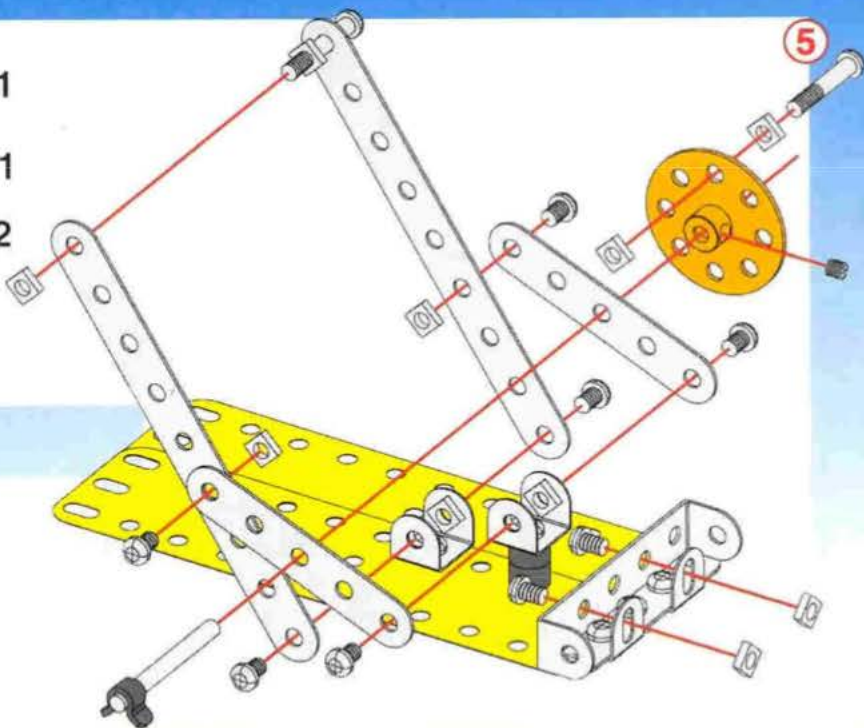


# 11

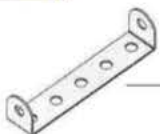
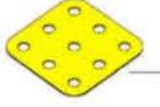
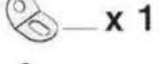
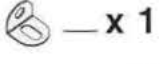

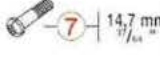


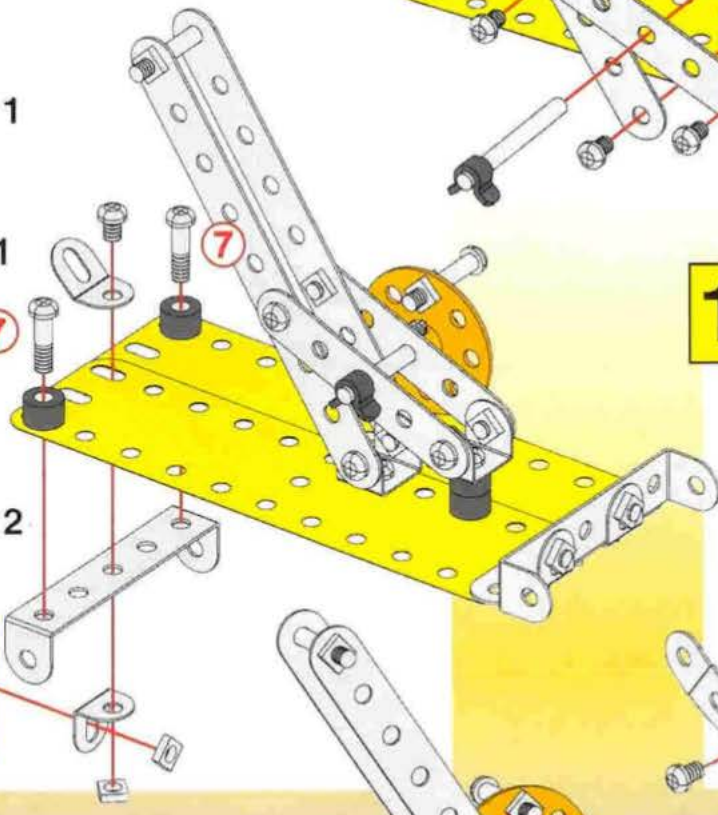
# 12

-  x 2
-  x 2
-  x 1
-  x 1
-  4 cm  $1\frac{1}{2}$ " x 1
-  23 mm  $\frac{23}{32}$ " x 2
-  x 1
-  x 1


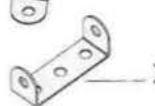


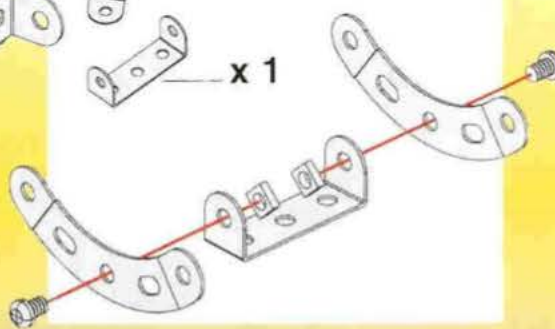
# 13

-  x 1
-  x 1
-  x 1
-  x 1
-  x 2
-  7 mm  $\frac{7}{16}$ " x 2


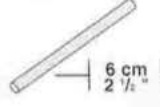




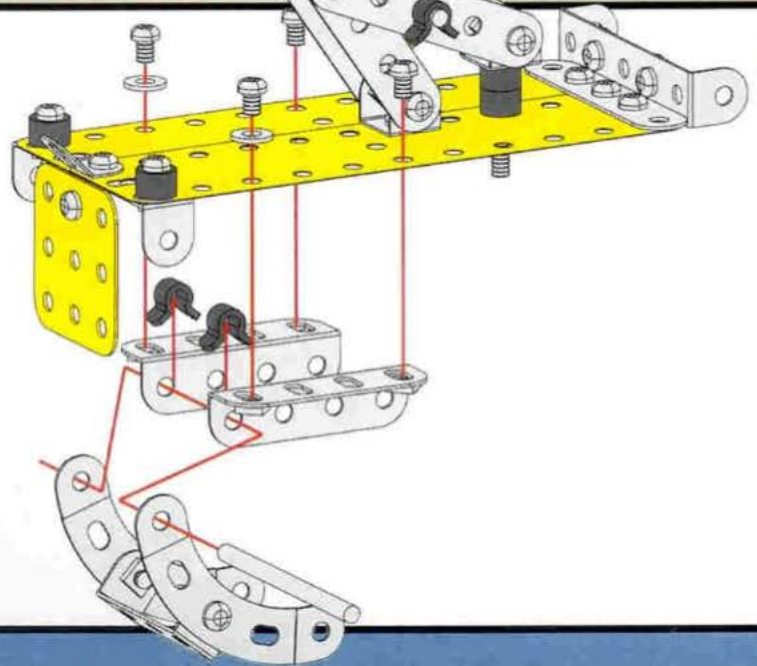
# 14

-  x 2
-  x 1



# 15

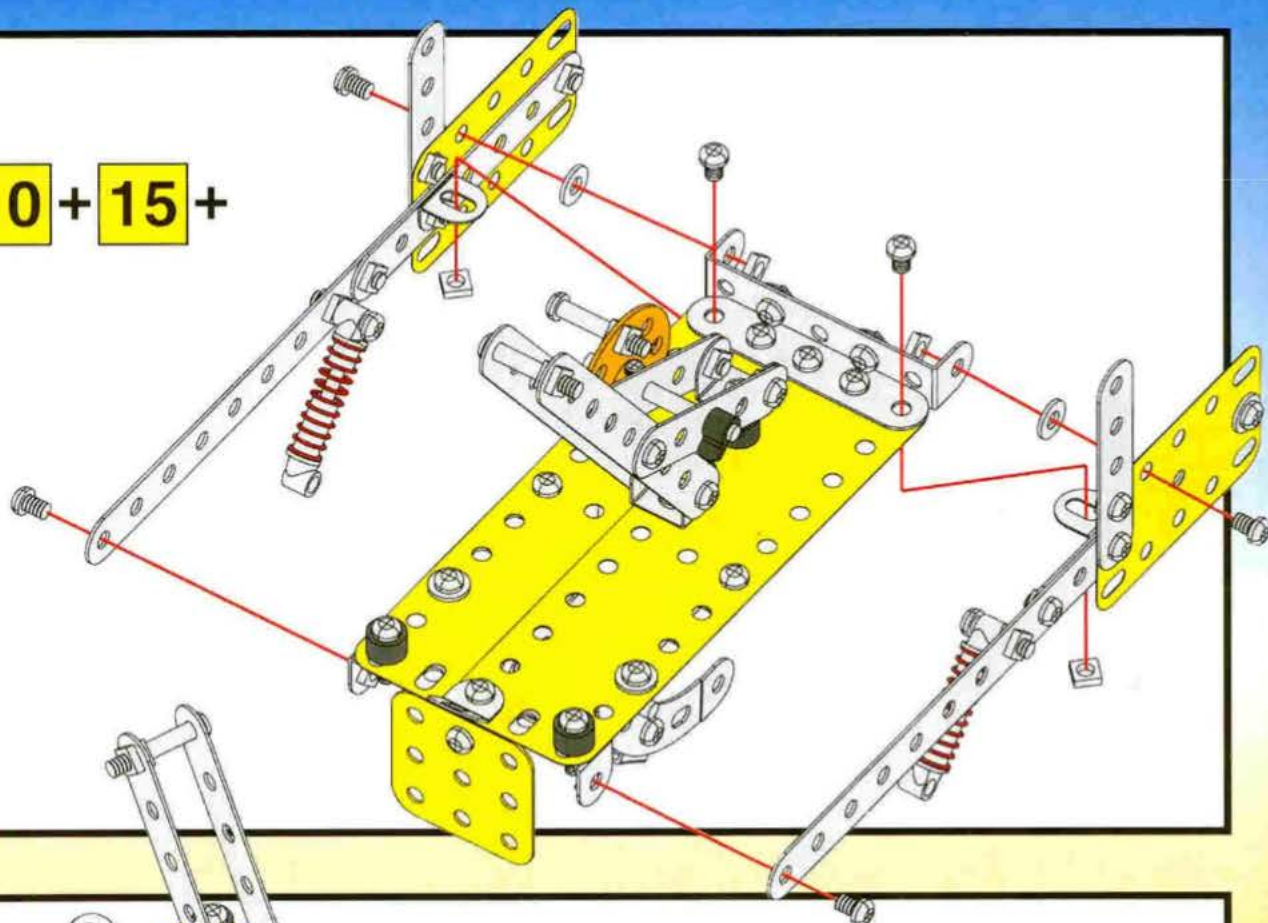
-  x 2
-  6 cm  $2\frac{1}{2}$ " x 1
-  x 2
-  x 2



# 16

10 + 15 +

— x 2

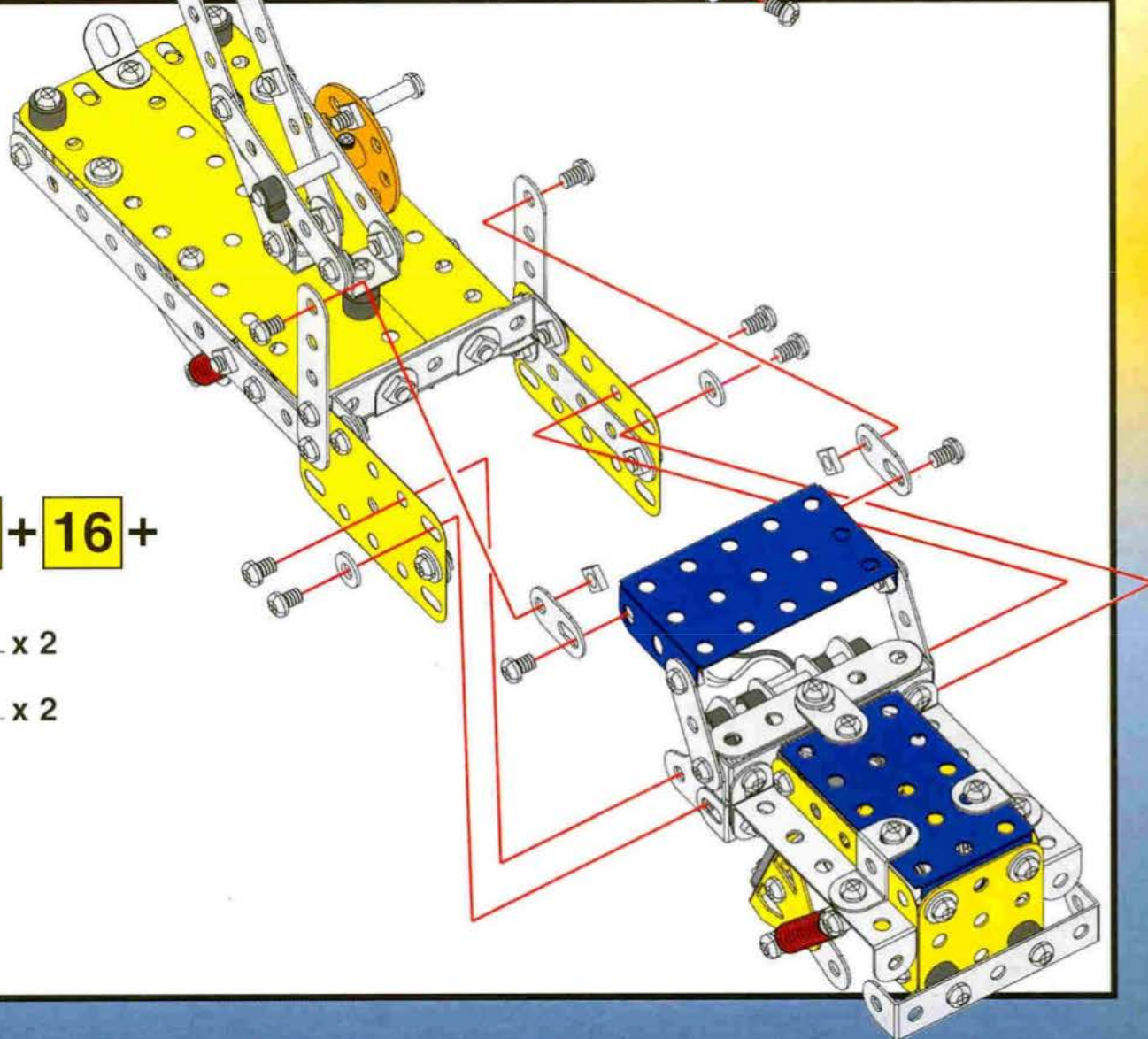


# 17

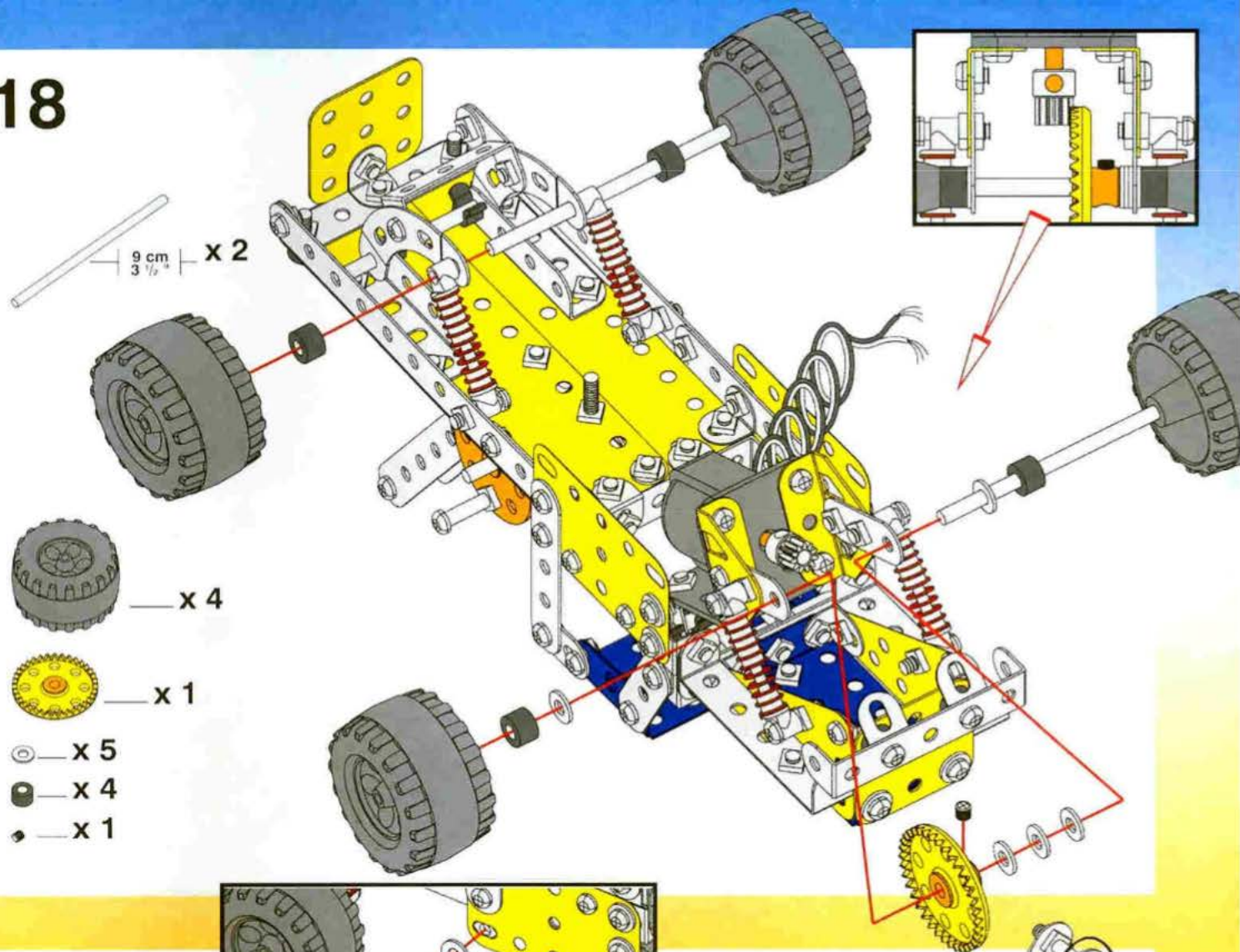
9 + 16 +

— x 2

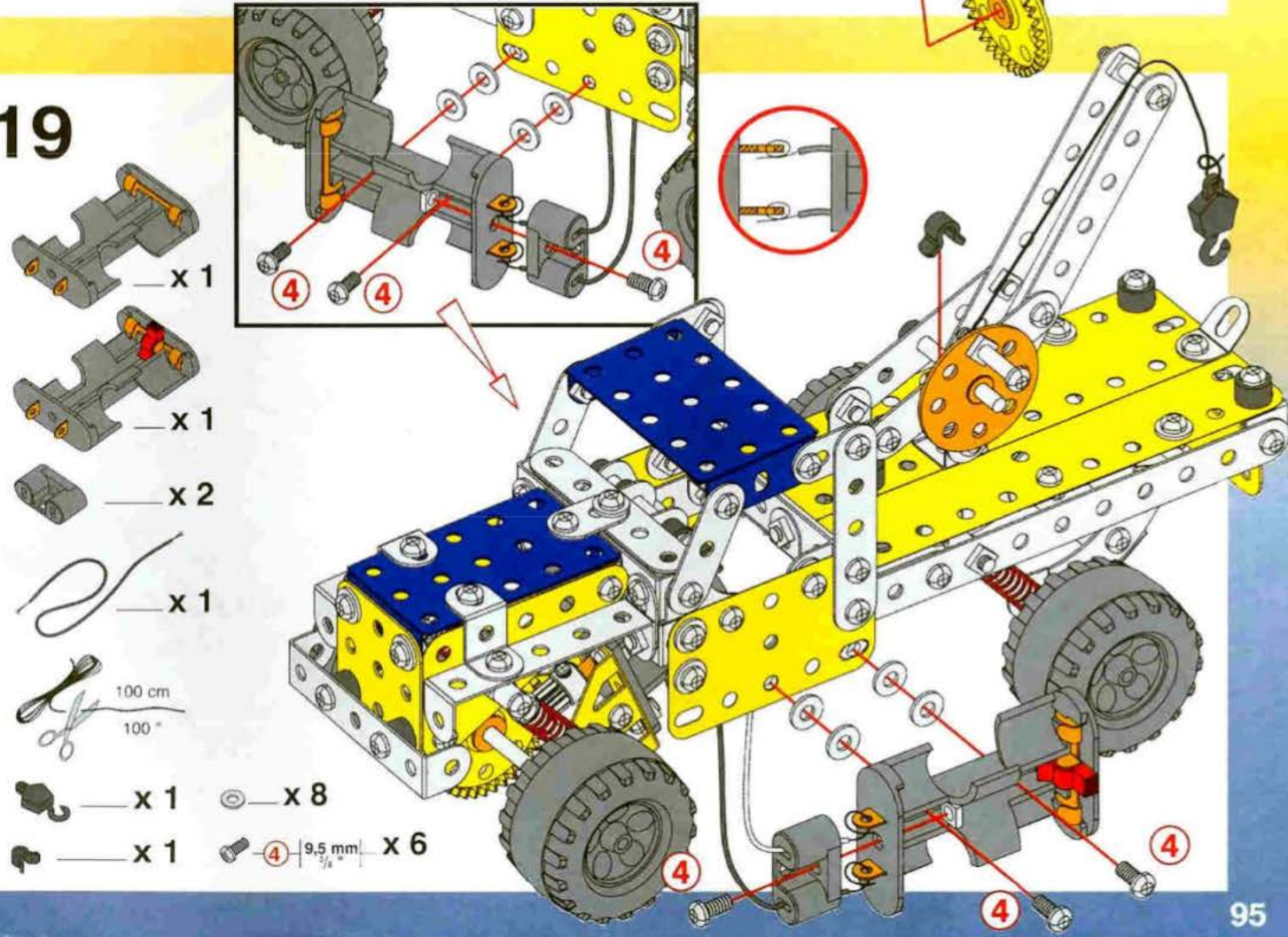
— x 2



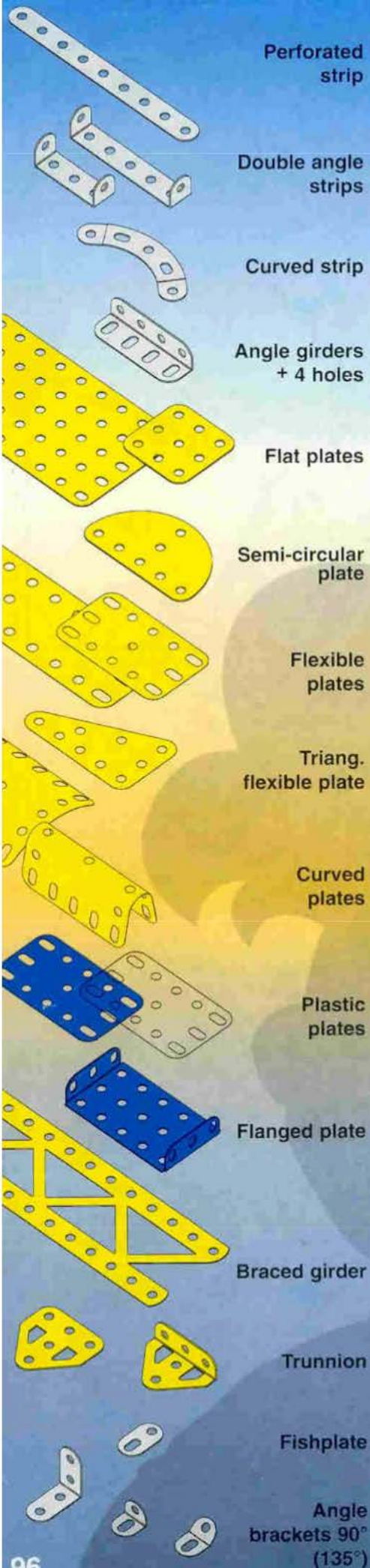
# 18



# 19



# GLOSSARY of PARTS



Perforated strip

Double angle strips

Curved strip

Angle girders + 4 holes

Flat plates

Semi-circular plate

Flexible plates

Triang. flexible plate

Curved plates

Plastic plates

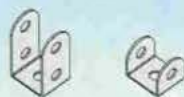
Flanged plate

Braced girder

Trunnion

Fishplate

Angle brackets 90° (135°)



Double brackets



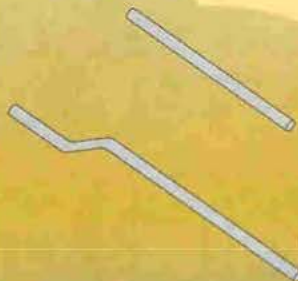
Reversed angle bracket



Double bent strip



Corner bracket



Axle rod

Crank handle



Rod and strip connector



Pinion 19 teeth



Gear 57 teeth



Contrate gear



Worm gear



Bush wheel



Pulleys



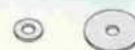
Driving band



Set collar



Spring clip



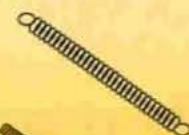
Washers



Spacer



Compression spring



Tension spring



Threaded rod



Threaded peg



Stud bolt



Set screw



Allen screw



Square nut



Open ended wrench



Allen key