



M109A2

self-propelled 155 mm howitzer

In WWII, US Army's self-propelled howitzer was all based on tank chassis, up to the Korean War. Advantages of adopting tank chassis could lessen logistics burdens, yet it is also against self-propelled howitzer's needs. Self-propelled howitzers need to supply ammunition through the back door. Generally tank's engine is mounted at rear of the hull, therefore the hull has to be reversed to meet self-propelled howitzer's requirement. The driver's seat needs to be relocated accordingly, likely to be located at combatant compartment, which would limited zone of fire on both sides.

To meet US Army's requirement, a dedicated chassis for self-propelled howitzers project commenced in 1952. This new chassis adopted front-engine and all-welded aluminum armour, and the turret is able to traverse through 360 degrees. By 1958 after changing the engine and howitzer caliber, new designs were designated T195E1 and T196E1, with 105 mm and 155 mm howitzer respectively. They passed tests in 1961 and entered mass production phase in the following year. By 1963, they entered Army services and were designated as M108 and M109 respectively.

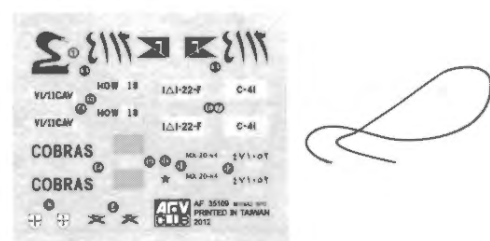
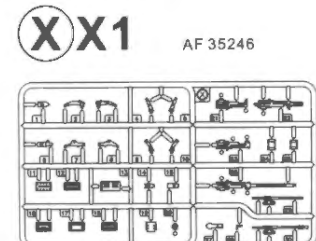
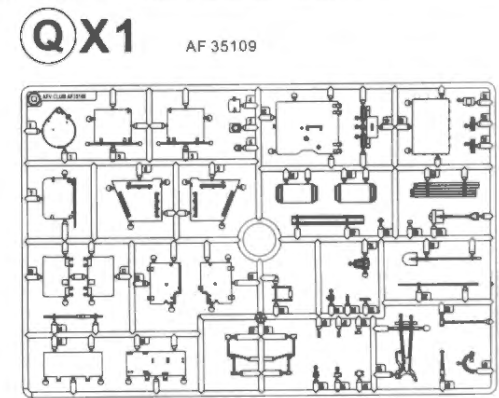
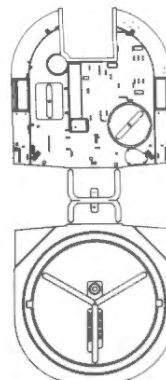
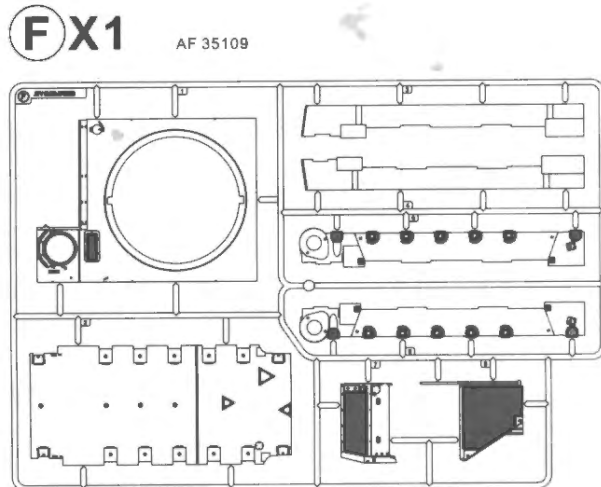
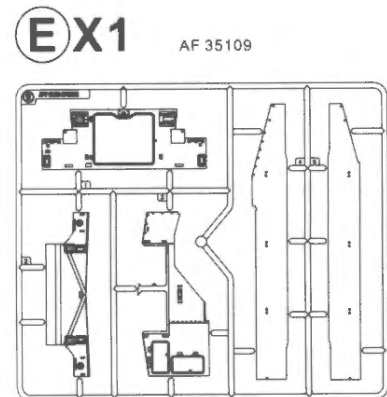
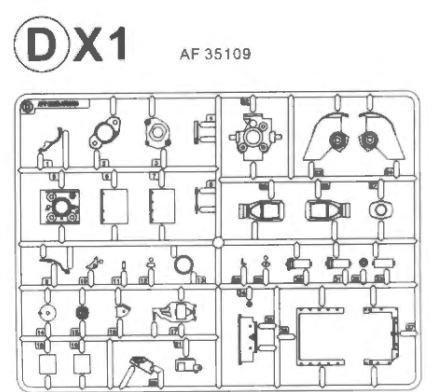
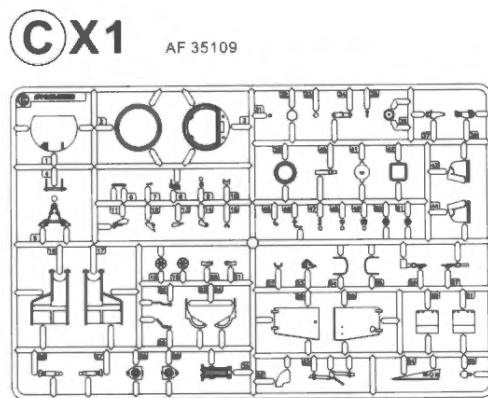
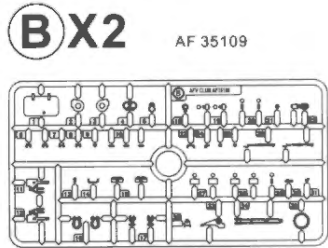
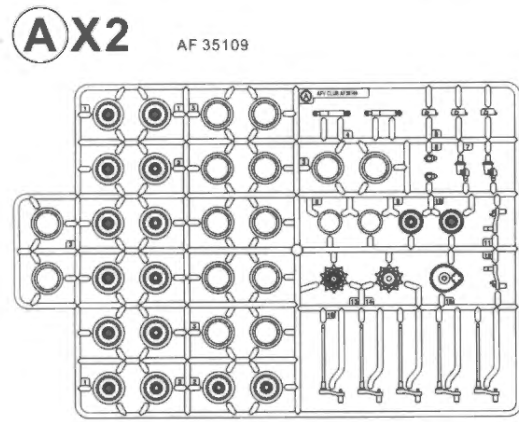
As the US ground forces involved in Vietnam War in 1965, it was realized that M109's operational range needed to be improved. The M126 L/23 howitzer was replaced by M185 L/39 in 1967, which known as M109A1. By 1975, further modifications imposed: modified rear compartment for more rounds (from 28 to 36) as well as modified structure for optical aiming, known as M109A2. More than 7000 M109s have been produced and see services in more than 30 countries. The M109 is truly the backbone of artillery in the Western World.

米陸軍の装備する自走砲は第二次大戦中に発展し、朝鮮戦争までにはすべて戦車の車体をベースにしたものになっていた。自走砲に戦車の車体を利用することは、燃料やパーツの供給といった兵站面で非常に有効であったが、一方で運用には不便な点もあった。自走砲は、弾薬の搭載を後部ドアから行うようになっていた。通常戦車のエンジンは車体後部に位置しており、自走砲として使用するには車体の前後を逆転させる必要がある。そのために操縦席の位置変更の必要から、戦闘室内部に配置されその結果砲の左右の射界を狭めてしまうことにもつながった。

1952年、米陸軍の要求に沿うように、専用の車体を用いた自走砲の開発計画が始まった。新車体は、フロントエンジン、全溶接のアルミニウム装甲を採用し、360度旋回の砲塔を搭載していた。1958年までにエンジンと搭載砲の口径を変更した後、105mm砲搭載のT195E1、155mm砲搭載のT196E1として、型式名称を与えられた。両車は1961年に試験を通過し、翌年量産開始、1963年にそれぞれM108、M109として、配備が開始されて、配備が開始されたのだった。

1965年、米地上軍がベトナム戦争に投入されると、M109の射程距離の不足が明らかとなった。そのため、1967年、搭載していたM126 L/23榴弾砲を、M185 L/39榴弾砲に置き換え、M109A1として採用された。1975年までに、後部弾薬庫を改良して搭載弾数を28発から36発に増強、併せて光学照準器の改良を施した。これが、M109A2である。これまでにM109系列の自走砲は、7000輛以上が生産され、30カ国以上で採用されている。M109系列はまさに西側諸国の砲兵部隊の根幹を担っているのである。

PARTS LIST 零件表



Instructions:

If for some reason, you are not fully satisfied or have questions concerning our product; Please use the form provide, and send it to our nearest representative or mail it directly to our office.

We will deal with that A.S.A.P.



AF 35109 Parts Replacement Form

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| <input type="checkbox"/> AF 35109-A — NT\$ | <input type="checkbox"/> AF 35109-L — NT\$ |
| <input type="checkbox"/> AF 35109-B — NT\$ | <input type="checkbox"/> AF 35109-M — NT\$ |
| <input type="checkbox"/> AF 35109-C — NT\$ | <input type="checkbox"/> AF 35109-N — NT\$ |
| <input type="checkbox"/> AF 35109-D — NT\$ | <input type="checkbox"/> AF 35109-O — NT\$ |
| <input type="checkbox"/> AF 35109-E — NT\$ | <input type="checkbox"/> AF 35109-P — NT\$ |
| <input type="checkbox"/> AF 35109-F — NT\$ | <input type="checkbox"/> AF 35109-Q — NT\$ |
| <input type="checkbox"/> AF 35109-G — NT\$ | <input type="checkbox"/> AF 35109-R — NT\$ |
| <input type="checkbox"/> AF 35109-H — NT\$ | <input type="checkbox"/> AF 35246-X — NT\$ |
| <input type="checkbox"/> AF 35S41-I — NT\$ | <input type="checkbox"/> AF 35246-Y — NT\$ |
| <input type="checkbox"/> AF 35109-J — NT\$ | |
| <input type="checkbox"/> AF 35109-K — NT\$ | |

Reason for replacement: Missing Broken

Signature: _____

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AF 35109 零件補充申請表

申請人姓名地址電話

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| <input type="checkbox"/> AF 35109-A — NT\$ | 300 |
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| <input type="checkbox"/> AF 35109-C — NT\$ | 200 |
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| <input type="checkbox"/> AF 35246-Y — NT\$ | 150 |

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(請填)總計NT\$ _____

零件補充原因:(請於 打)
 原包裝即 遺失或 毀損,
 製作途中 遺失或 毀損,
 其他原因 _____

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二次大戰時美國全履帶式自走砲的發展與其他國家相仿,均是沿用來自戰車的底盤改裝,這種情形一直延續至韓戰期間。沿用戰車底盤的自走砲固然有減輕部分後勤負擔的優點,但是自走砲在運用上經常需要由尾門進出與補充彈藥,這使得一般採取後置引擎布局的戰車底盤,必須以倒轉車體的方式來適應砲兵的需要。如此一來駕駛的位置必須重新考慮,往往被安排在與戰鬥室同一個空間之內,這連帶的也影響了火炮的左右射界。

這樣的設計在1950年代已不能滿足陸軍的需要,1952年起美國陸軍開始為自走榴彈砲研製專屬的底盤,新底盤將採用前置發動機的布局與鋁合金車體,另外還包括了360°旋轉的砲塔。在變更了原始設定的火炮口徑及發動機之後,1958年誕生了採用相同砲塔與底盤的T195E1與T196E1,其火炮口徑分別為105毫米與155毫米。1961年通過了測試,1962年開始量產,1963年賦與它們正式的型號為M108與M109並進入陸軍服役。

在1965年美軍地面部隊開始介入越戰,在實際的戰鬥中體認M109有著射程提升的必要,在1967年開始著手將M109原本的M126 L/23榴彈砲換裝為M185 L/39榴彈砲,型號改稱為M109A1,1975年時為了提高攜帶砲彈的數量,改進了砲塔尾艙,攜彈數由28發增加為36發,並強化瞄準鏡附近的結構成為M109A2。至今M109系列的各型車量已生產超過7000輛以上,並外銷了近30個國家,長期以來堪稱是西方世界的標準自走榴彈砲。

Illustration:圖示說明



Method For Applying Decals:

1. Clean Model Surface With Wet Cloth.
2. Cut Out Of Decal Sheet And Dip Them In Warm Water For 15 Seconds.
3. Place it on proper position on model.
4. Slide off base paper leaving decals On Model With Wet Finger Tip.
5. Move Decals To Exact Position, Push Out Excess Water Under Decal With Soft Cotton Cloth.
6. When Decals Get Dry Then Complete.

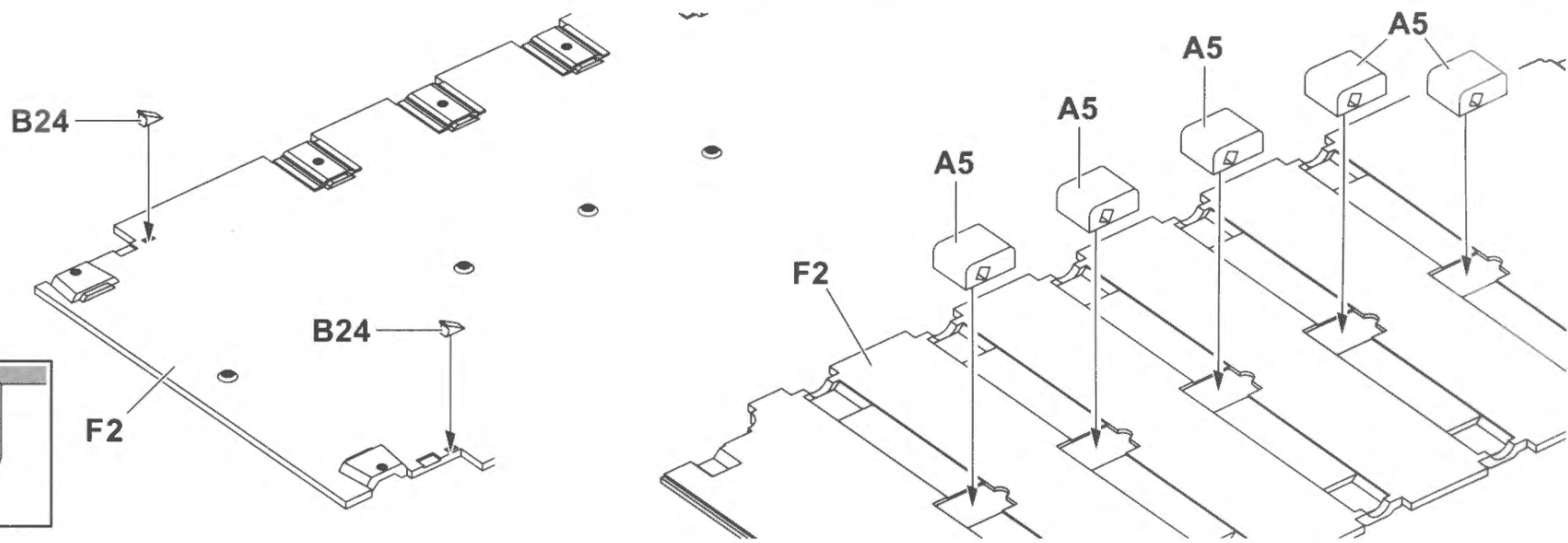
水貼紙使用說明:

1. 將模型表面擦乾淨
2. 將貼紙剪下泡入溫水中浸泡約15秒
3. 將泡濕之貼紙取出置於欲貼處旁
4. 用指尖輕推貼紙表面使其滑出底紙
5. 將貼紙調整至適當位置並輕擦拭水份
6. 待其自然乾燥後即完成

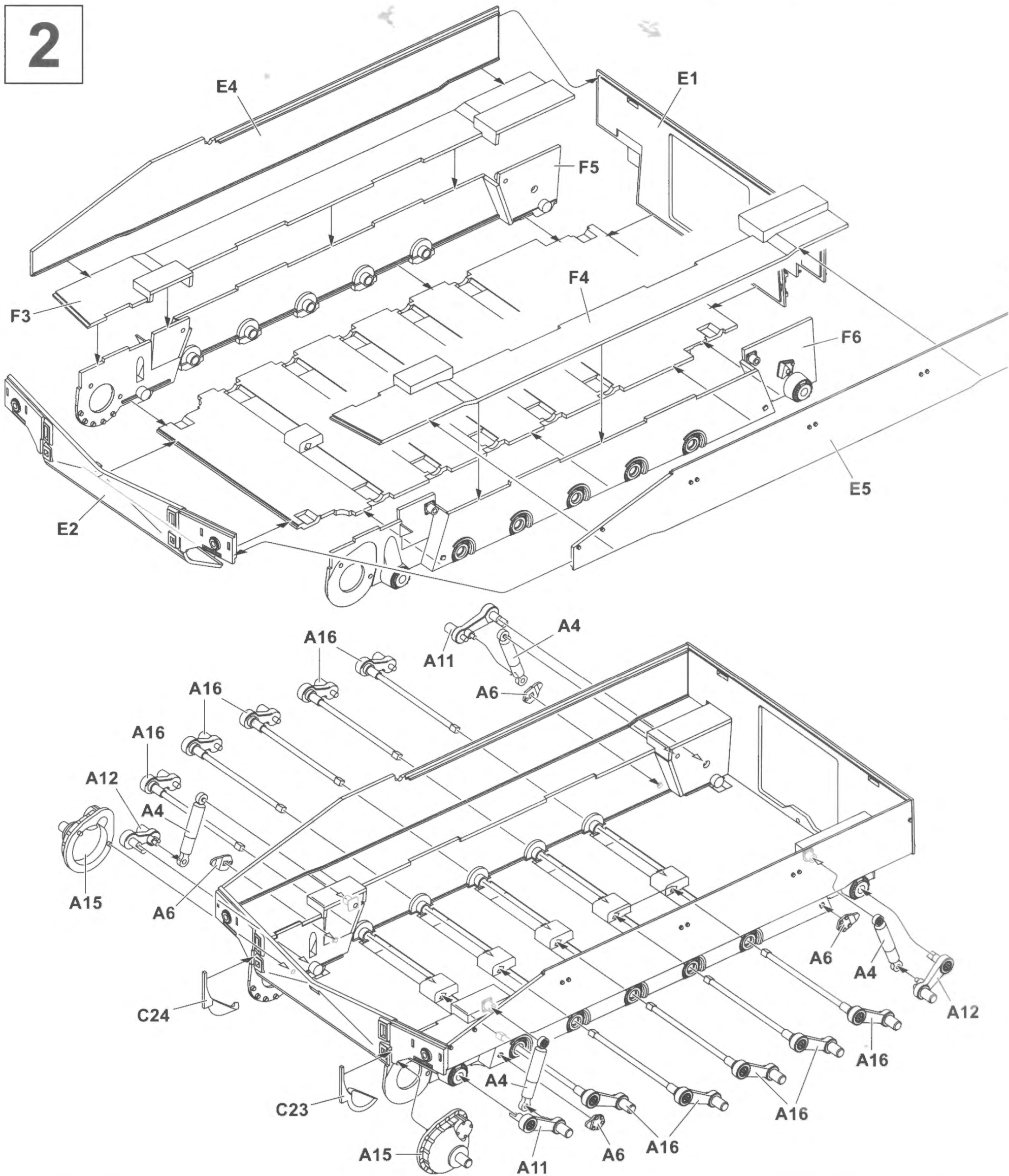
Color list: 塗料表

Color	Brand	Gunze Sangyo			Humbrol	Revell	Lifecolor
		Hobby Color	Mr.Color	Mr.Color Spray			
Black	黑	H2	C2	J2	21	7	LC52
Brass	黃銅	H9	C9	J9	54	92	LC75
Bronze green	青銅綠		TC10				
Clear green	透明綠	H94					
Flat black	消光黑	H12	C33	J33	33	8	LC02
Flat white	消光白	H11	C62	J62	34	05	LC01
Green FS34227	綠	H312	C312		179		H26
Leather brown	皮革棕		TC11				
Olive drab(1)	橄欖綠	H52	C12	J12	155		UA15
Red	紅	H3	C3	J3	19	31	UA90
Sail color	帆布	H85	C45		28		UA099
Silver	銀	H8	C8	J8	11	90	LC07
Steel	黑鐵	H18	C28	J28	53	91	LC26
Tar black	瀝青	H12	TC12	J33	33	8	LC02
Tire black	輪胎黑	H77	C33+C62		85	302	LC02
Wood brown	木棕	H37	C43		169		FS12
Yellow FS33531	黃	H313	C313		168		DR05
RLM79 Sandy brown	黃褐	H66	C19				UA81

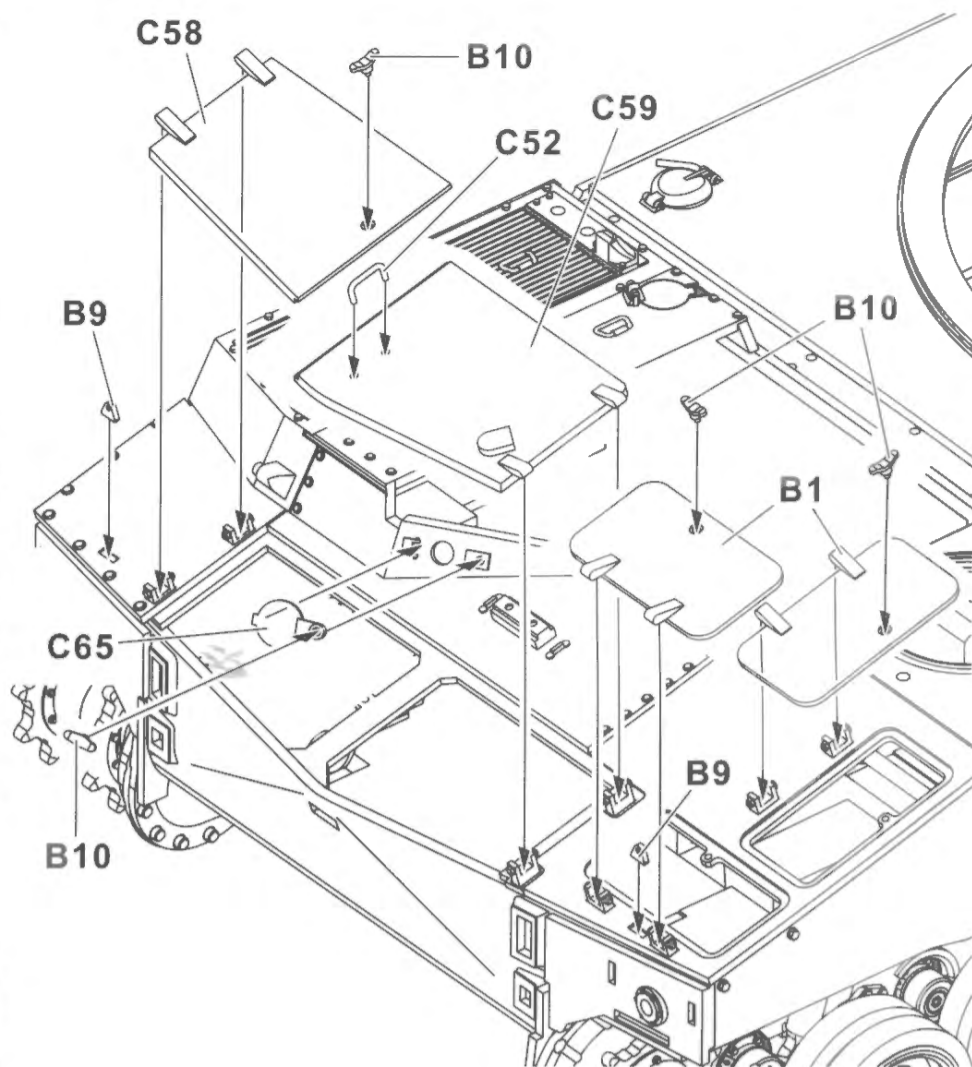
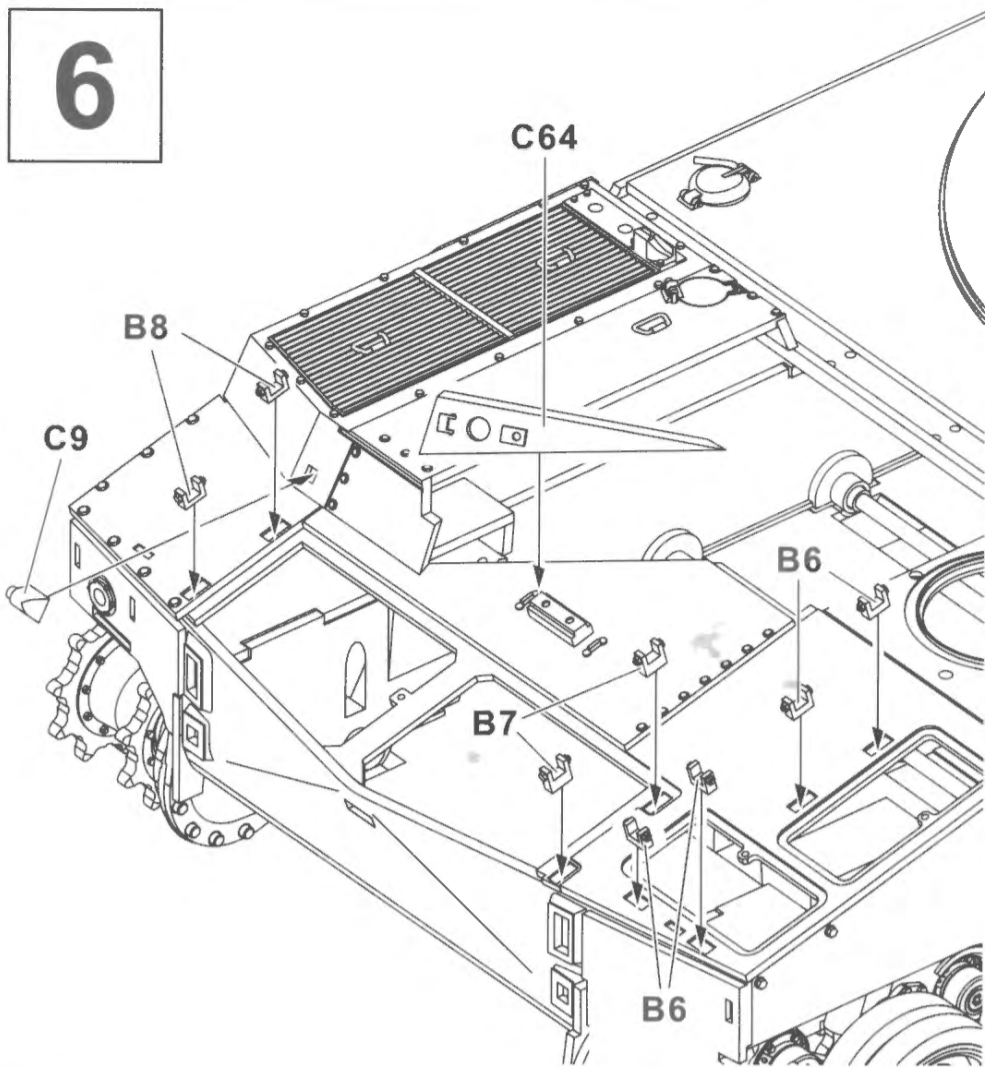
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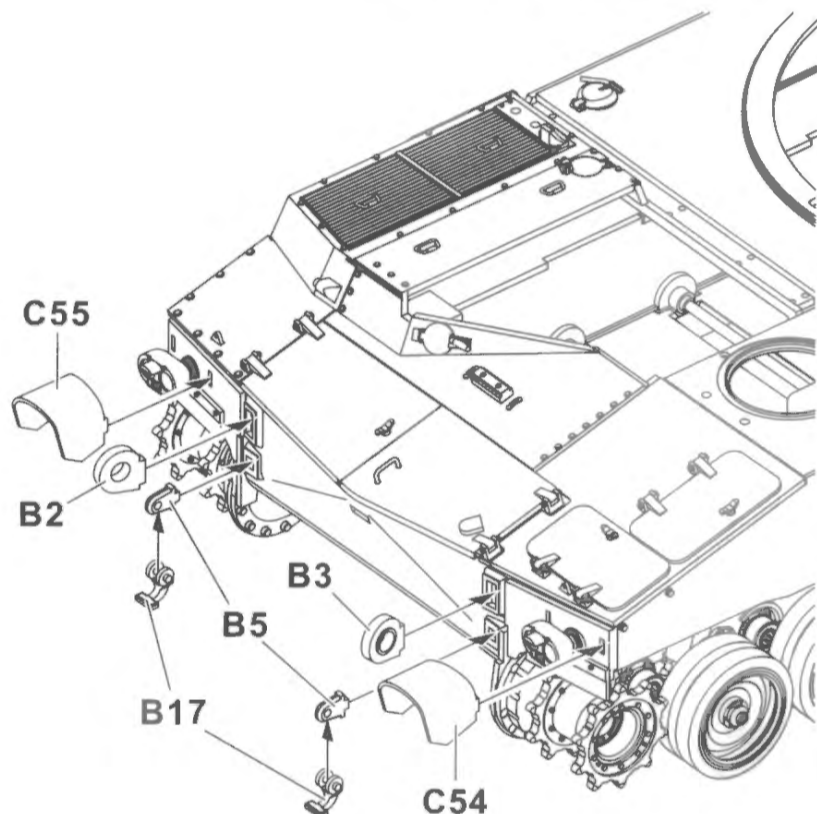
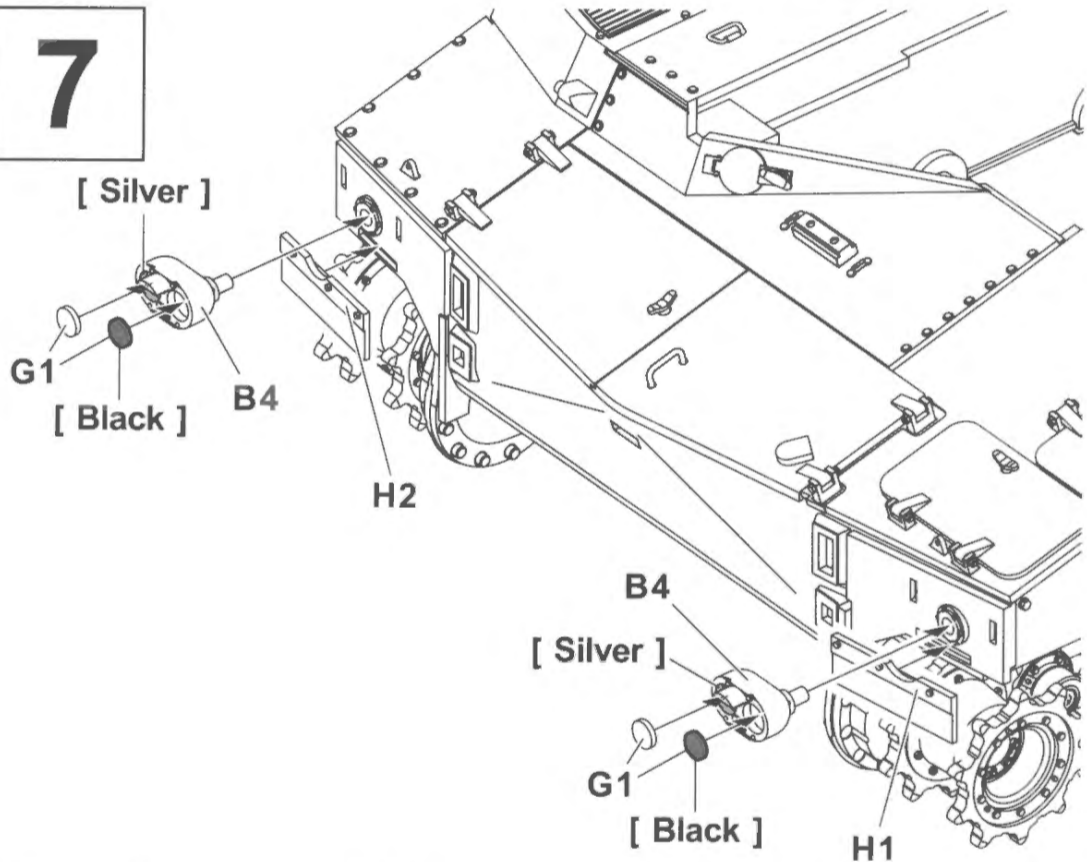
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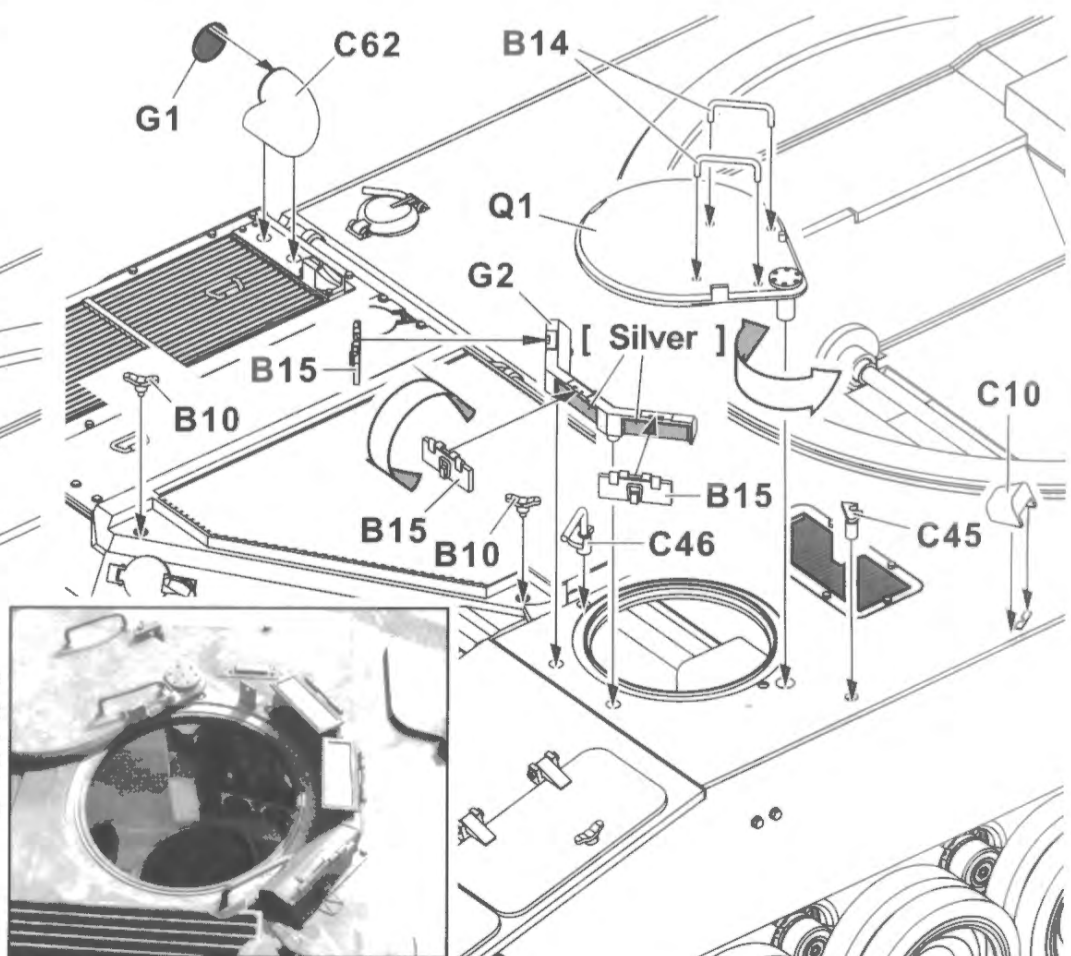
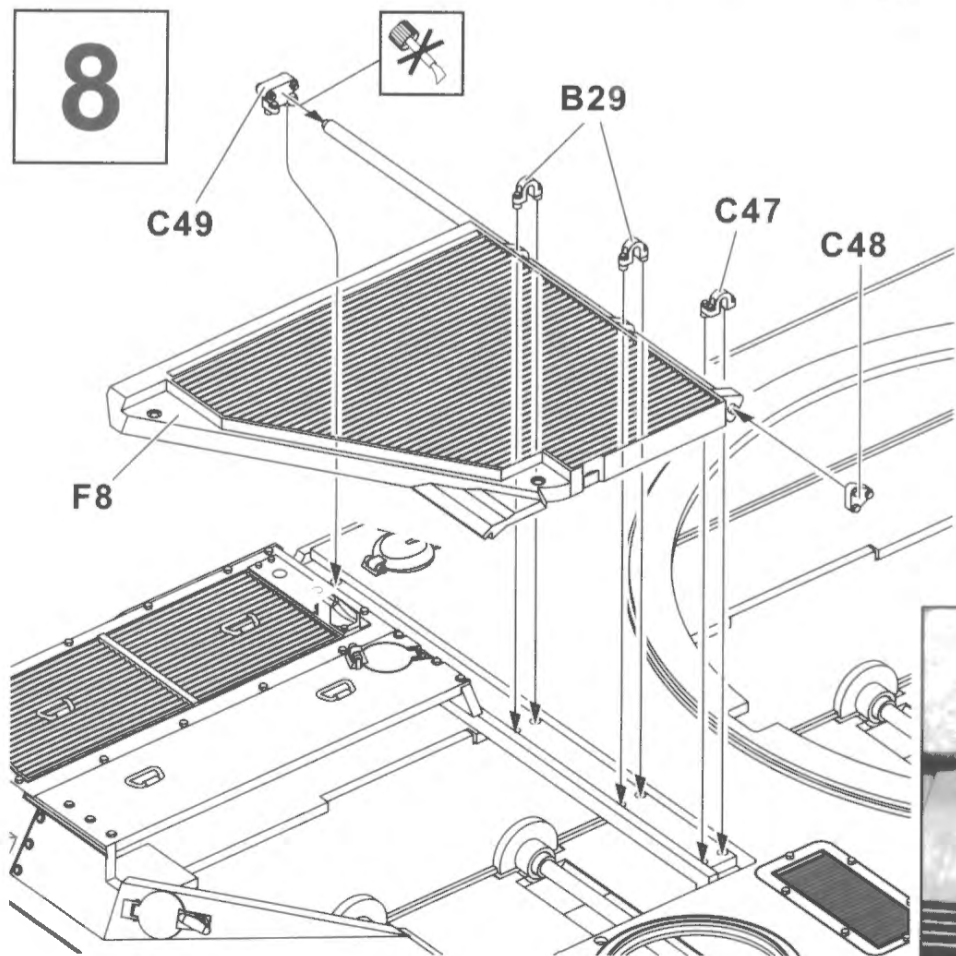
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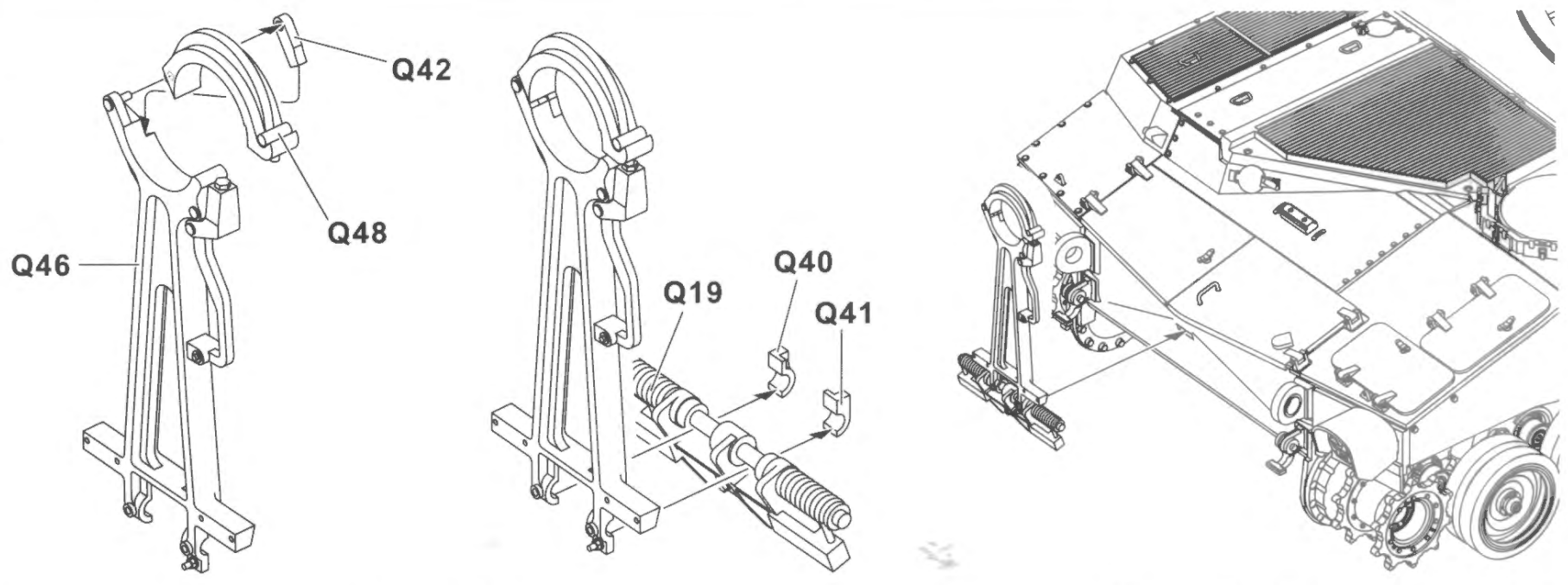
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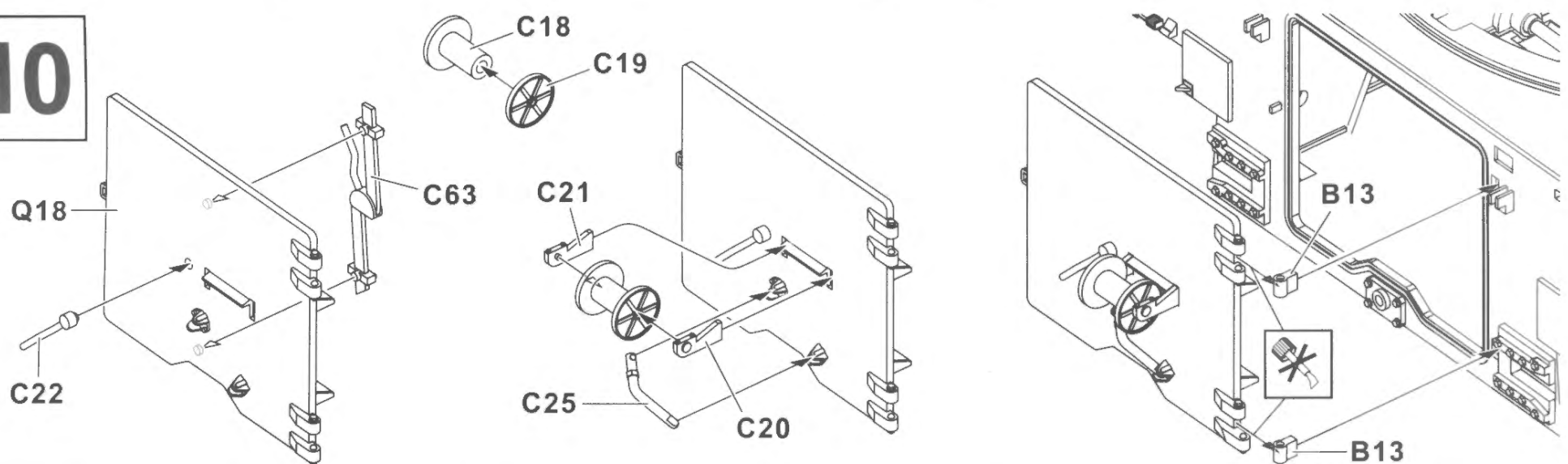
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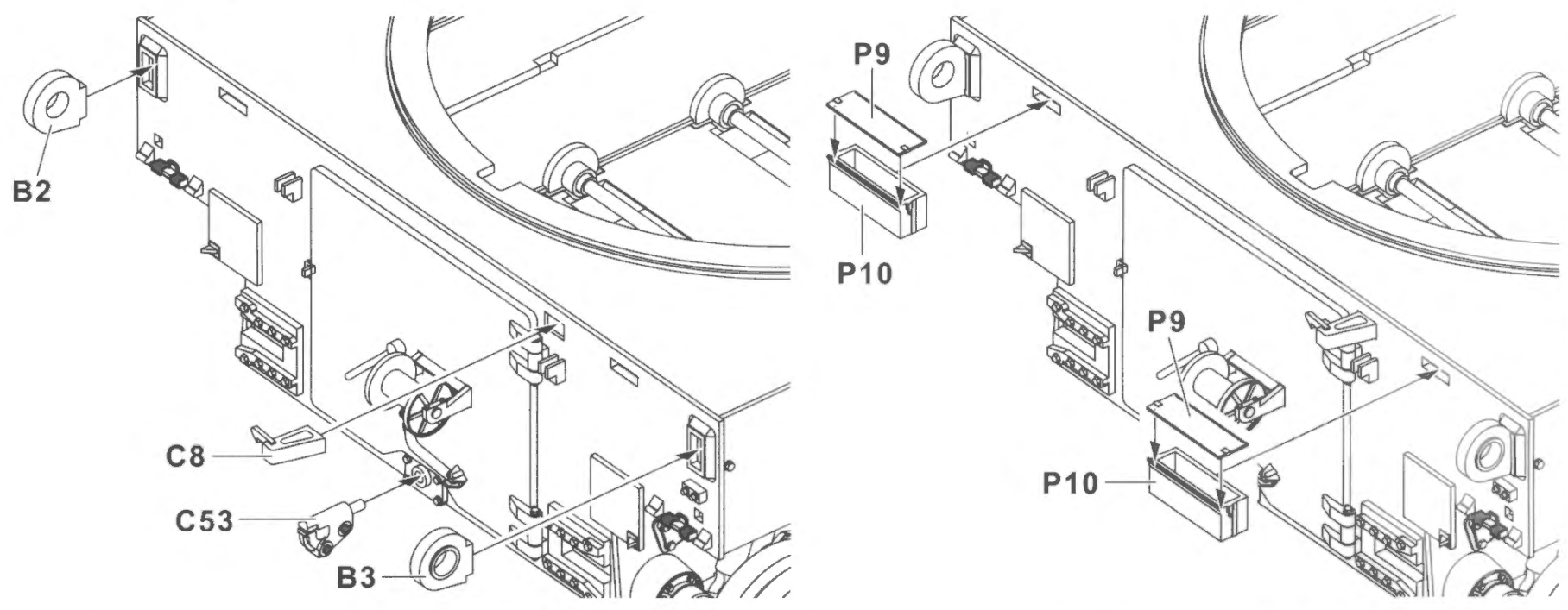
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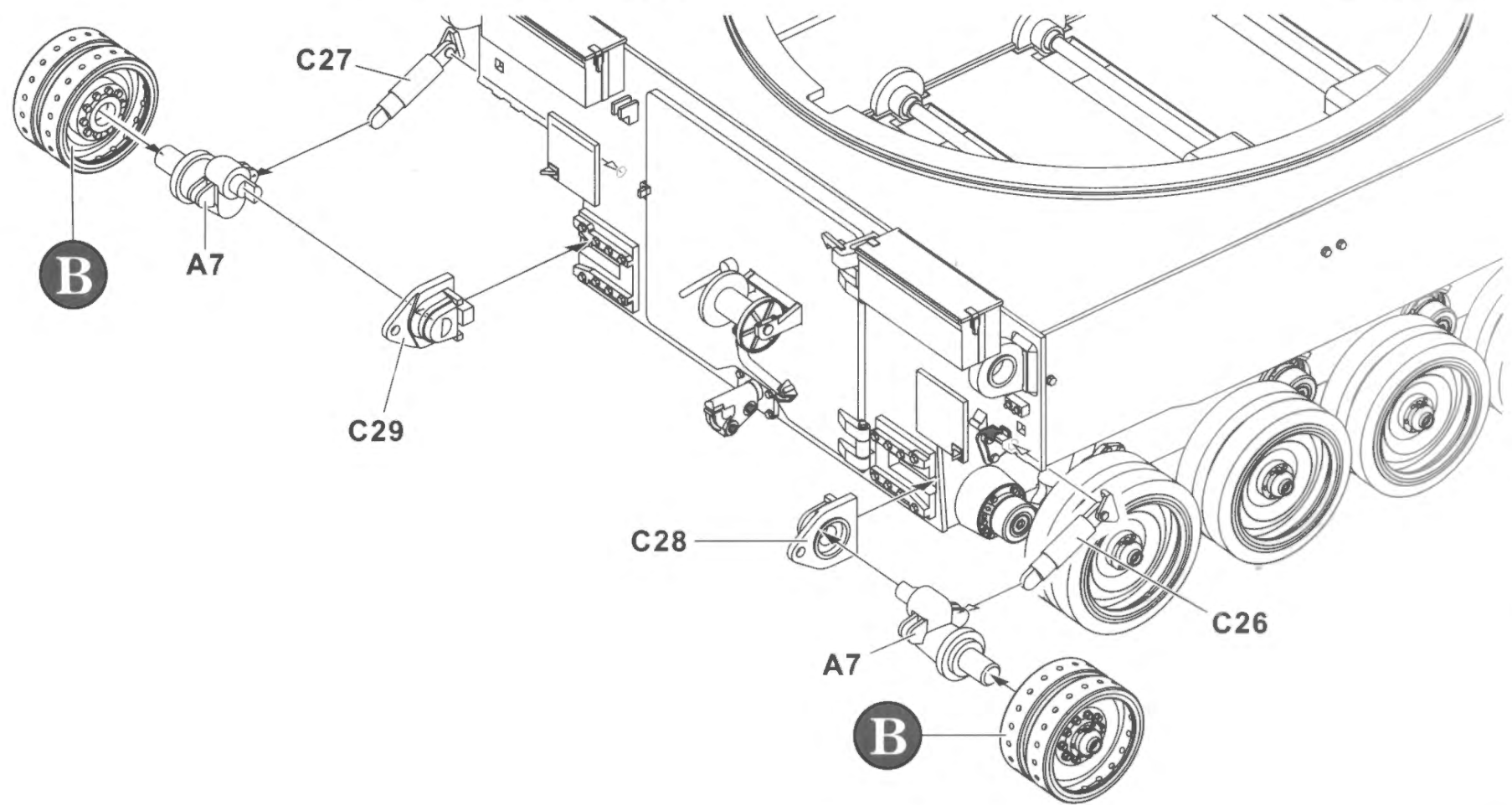
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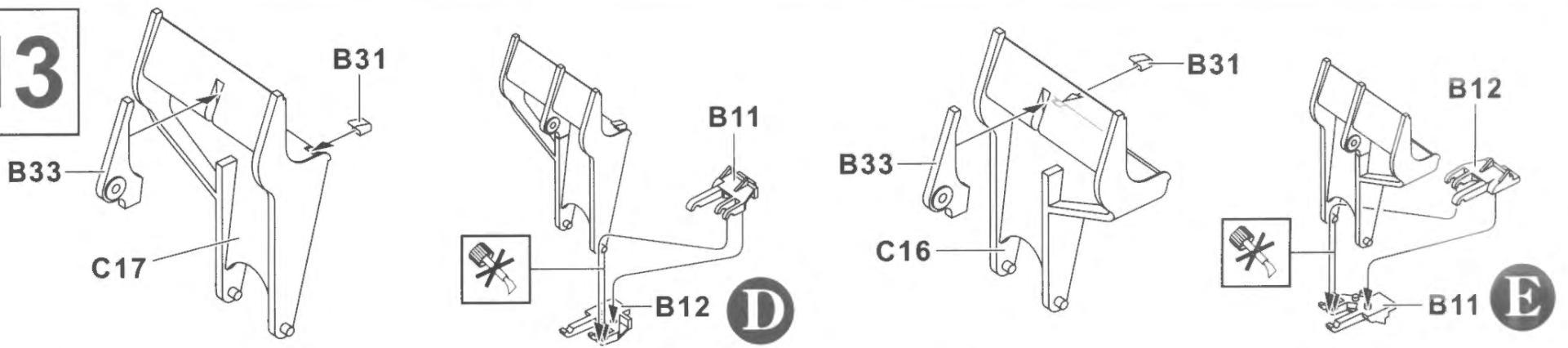
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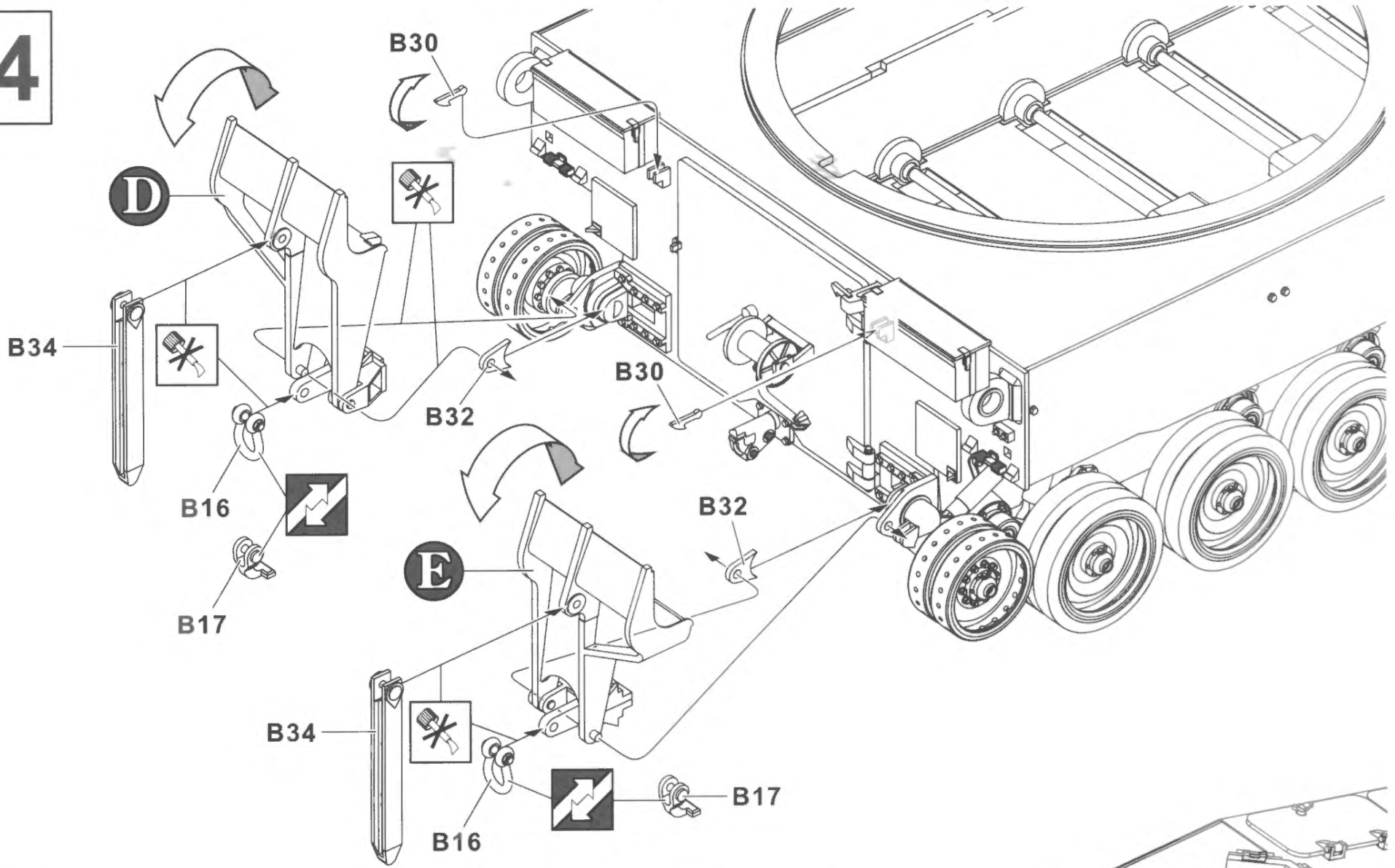
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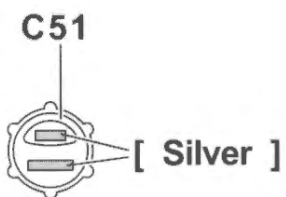
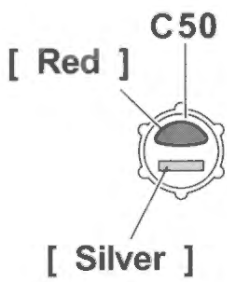
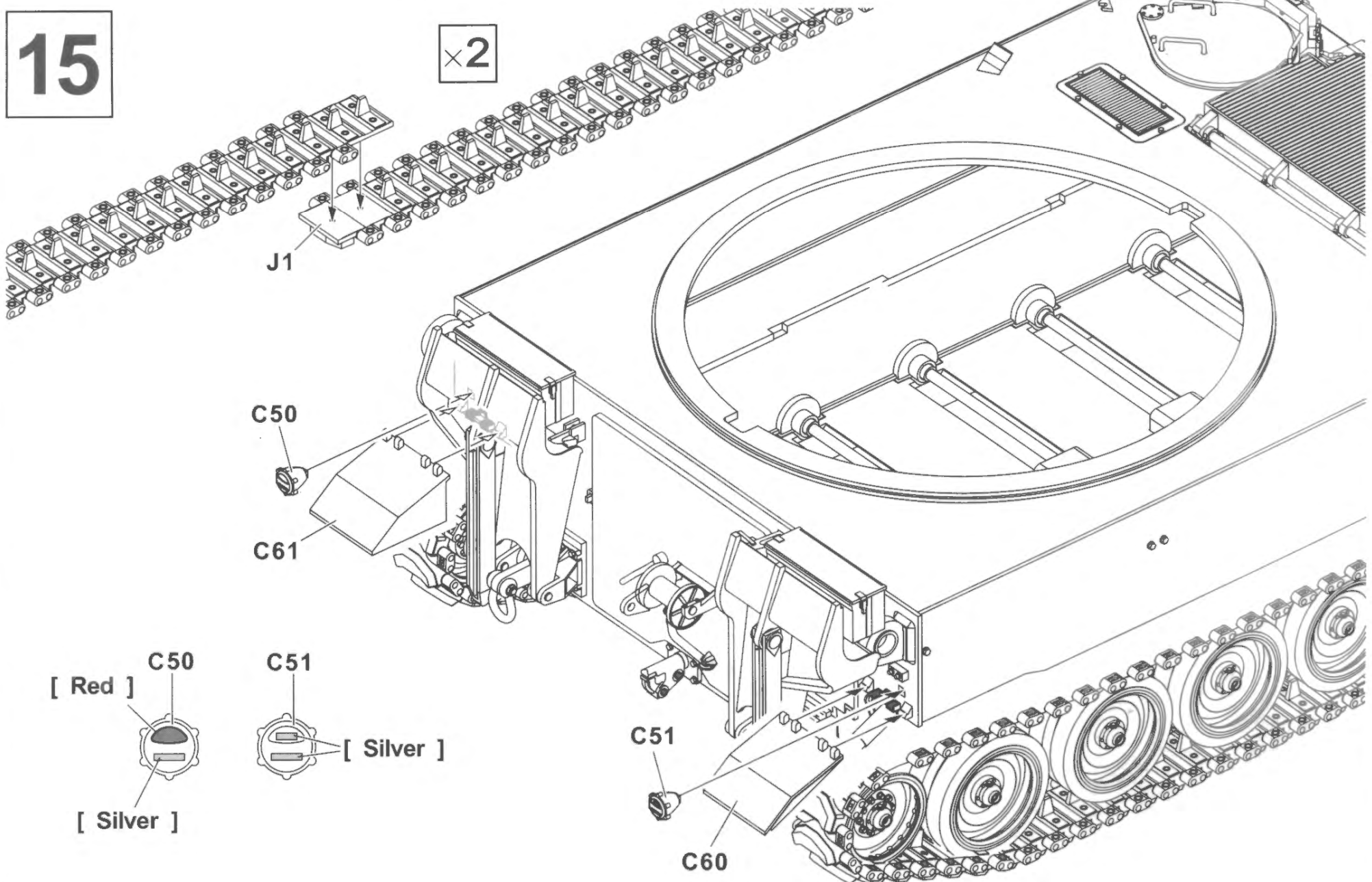
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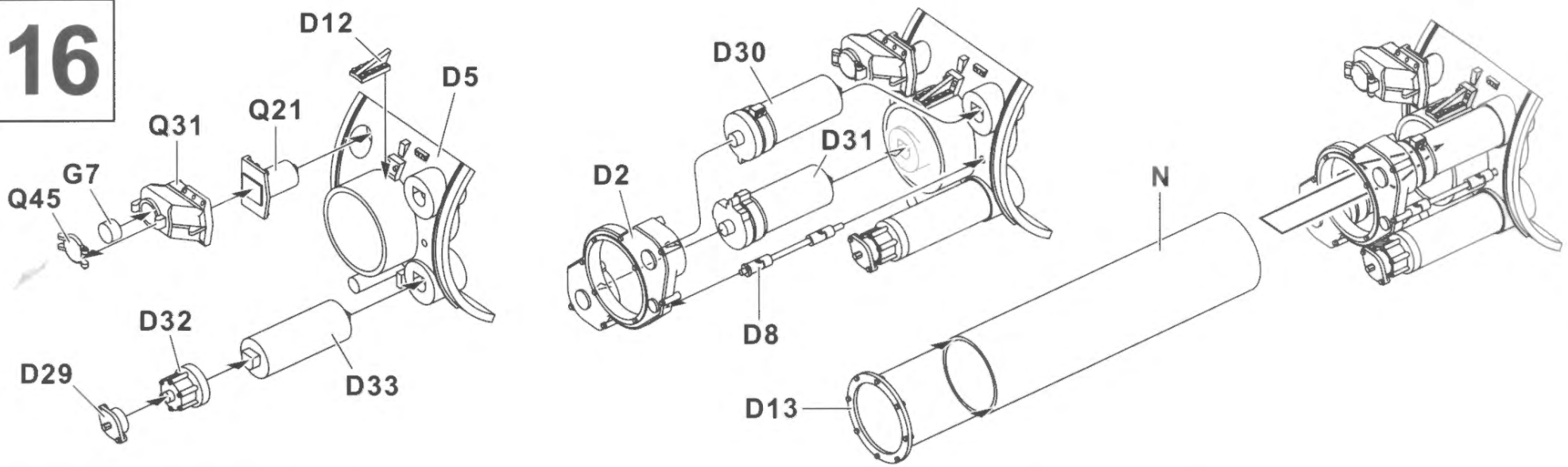
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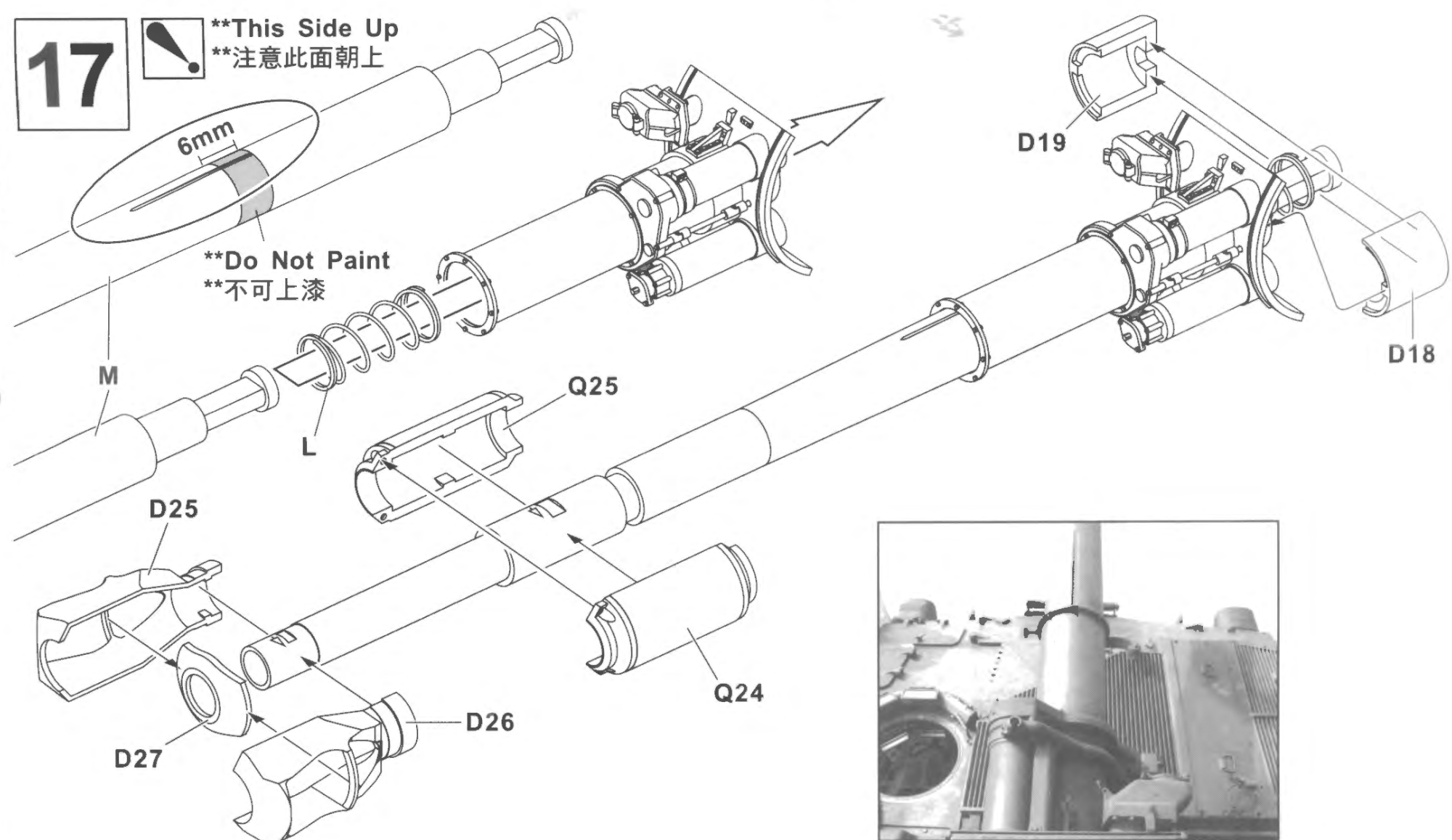


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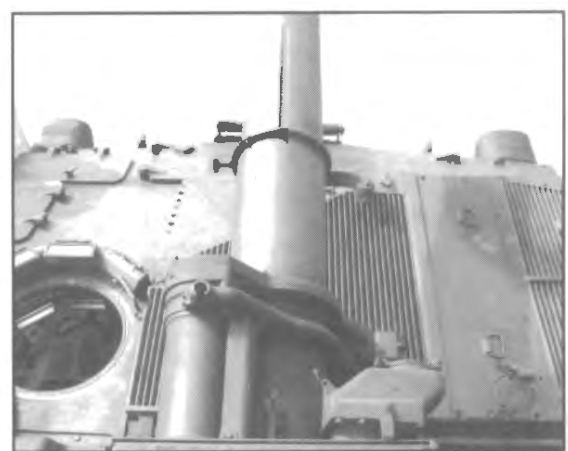
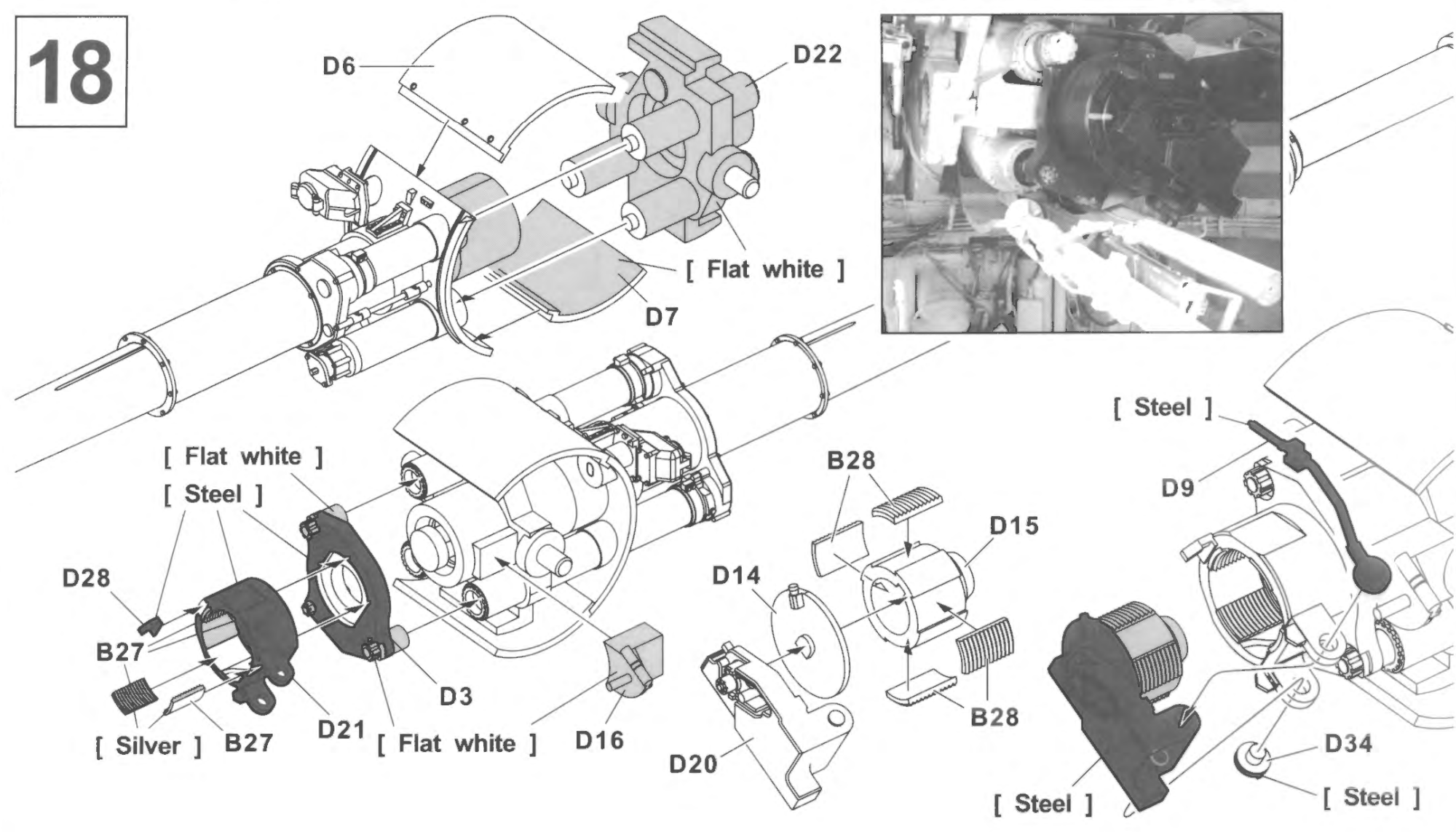


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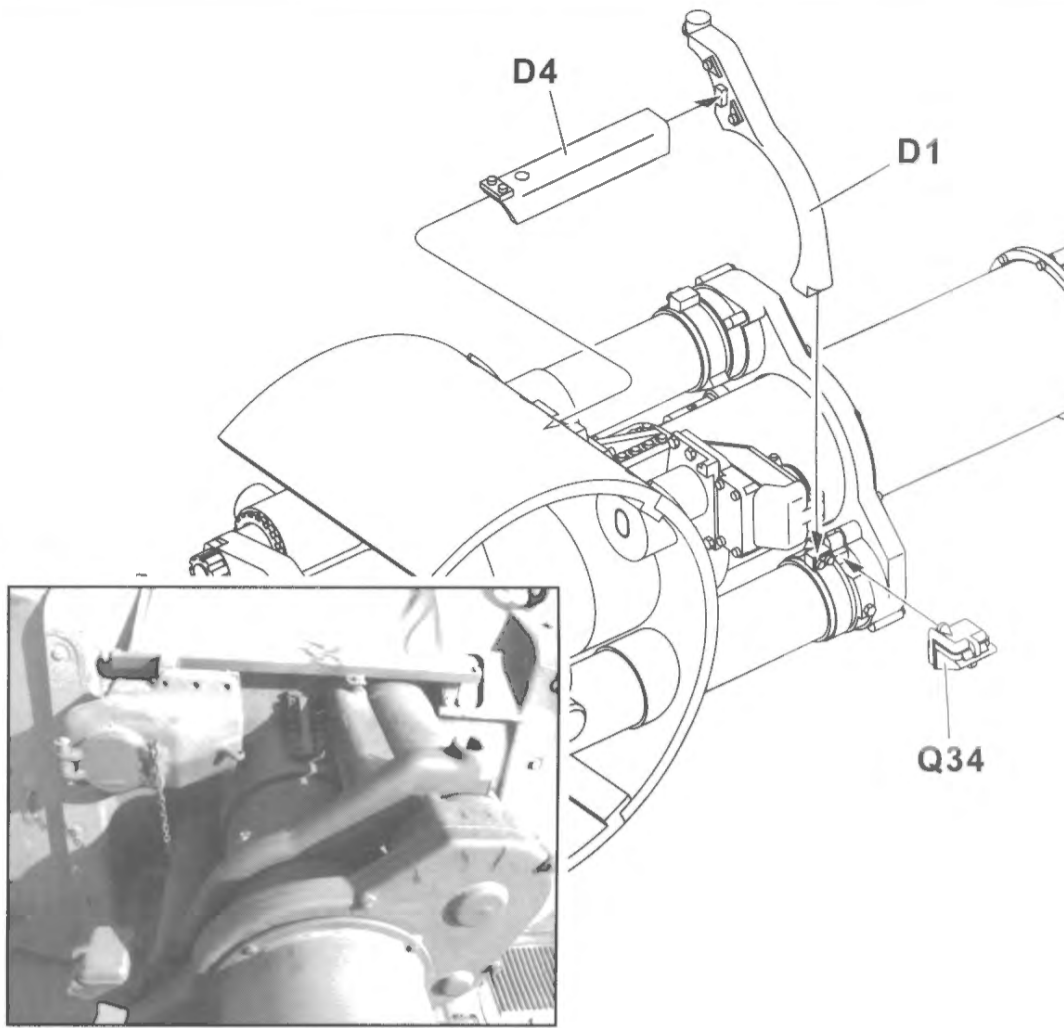
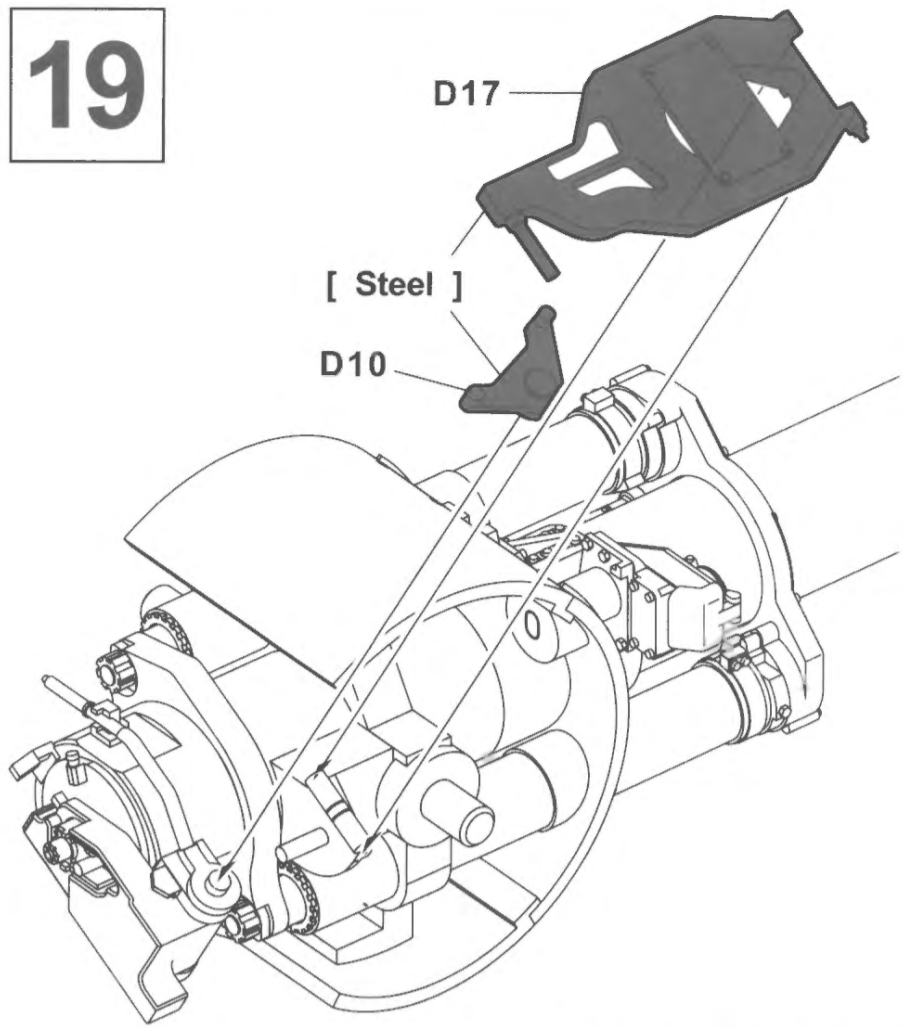
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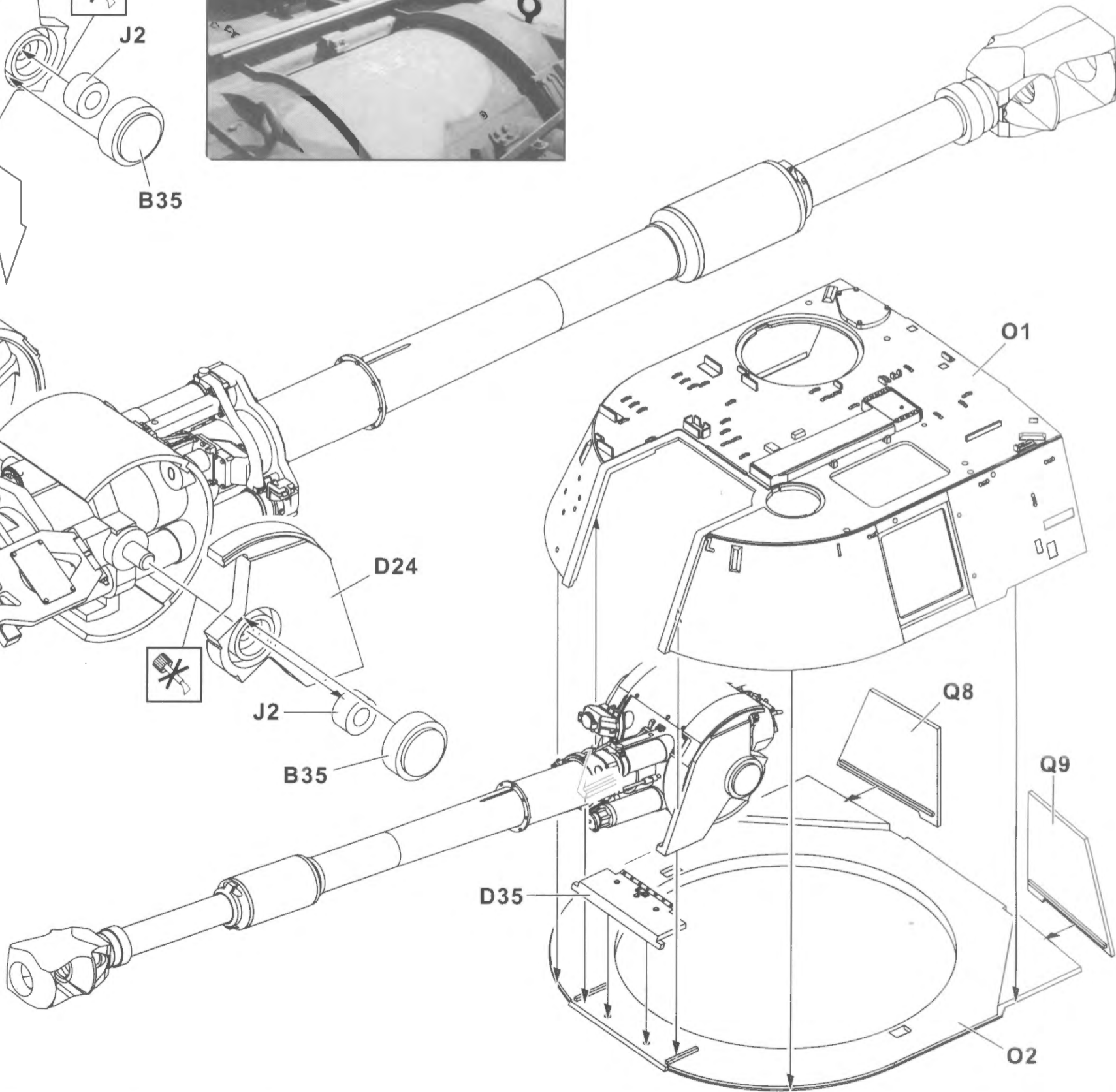
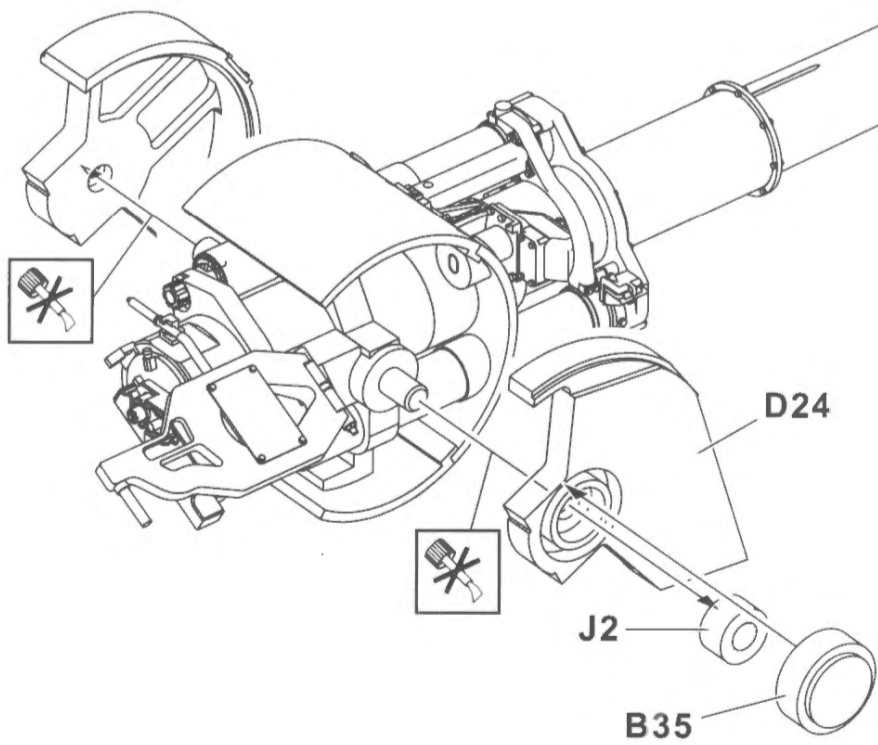
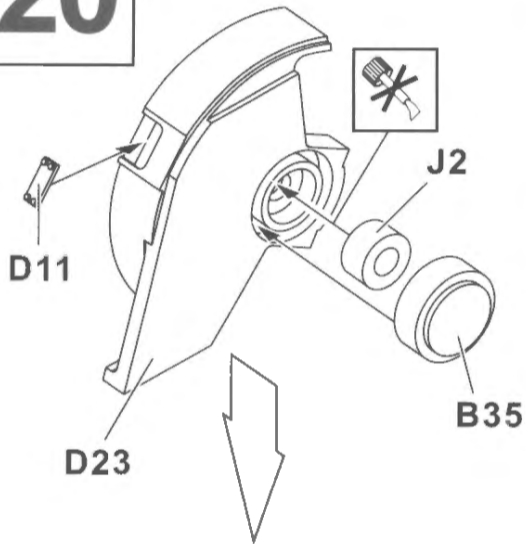
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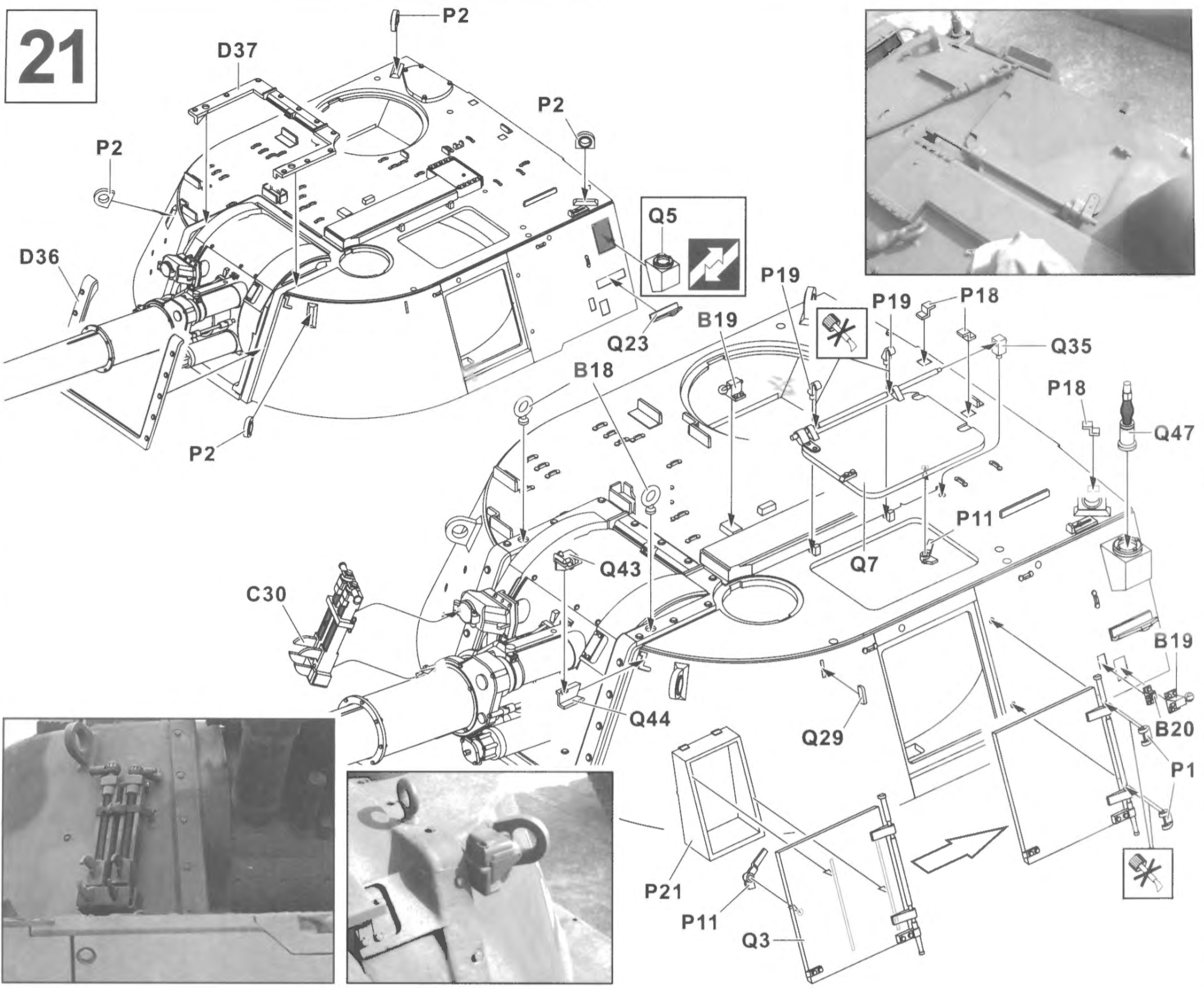
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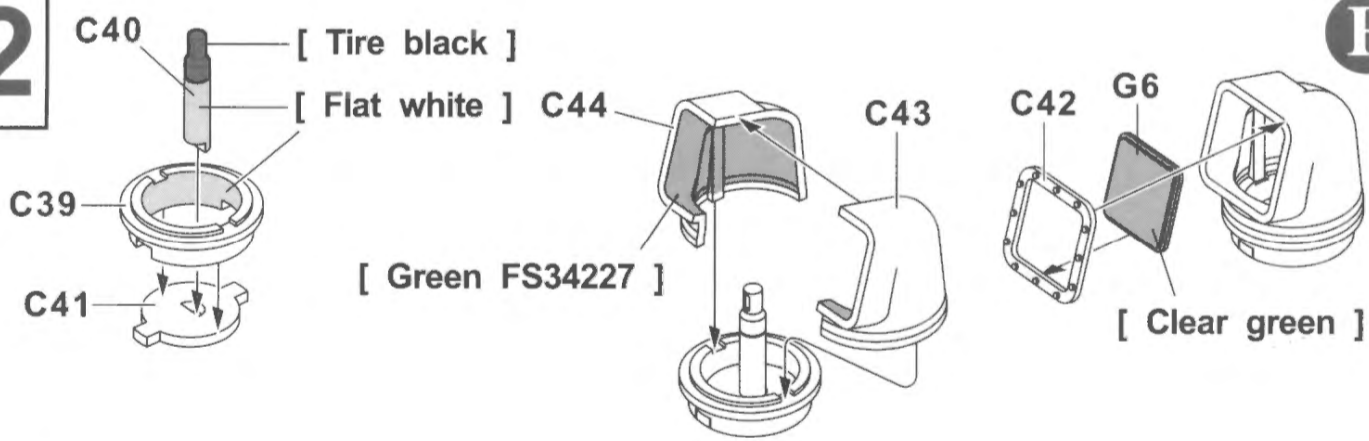
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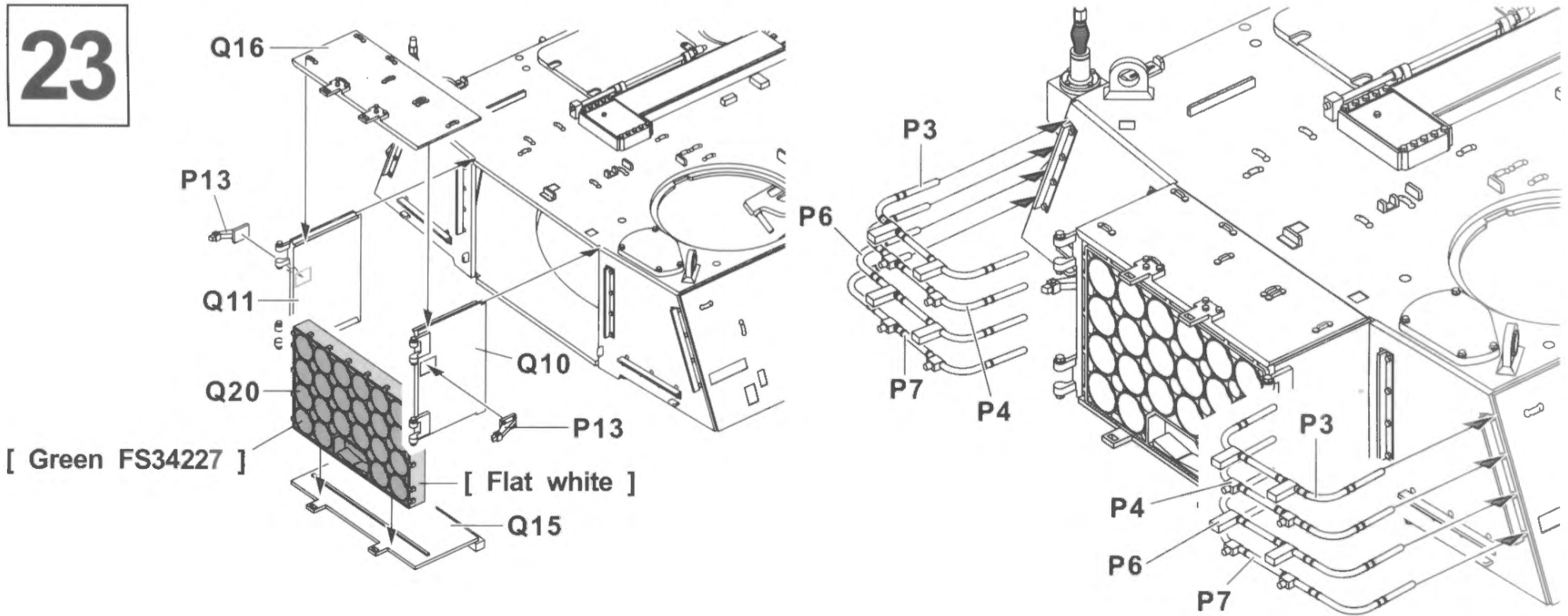
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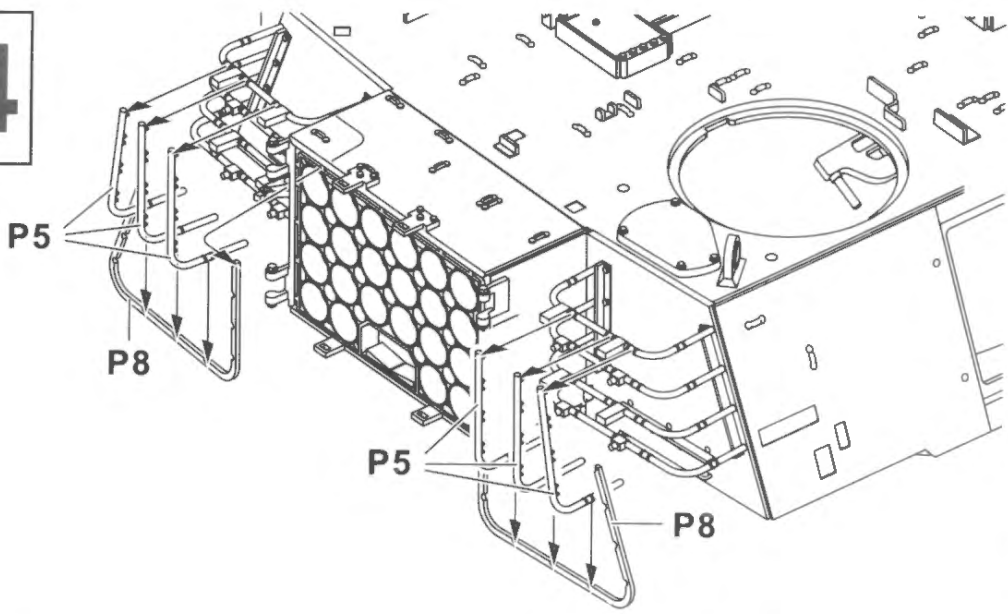
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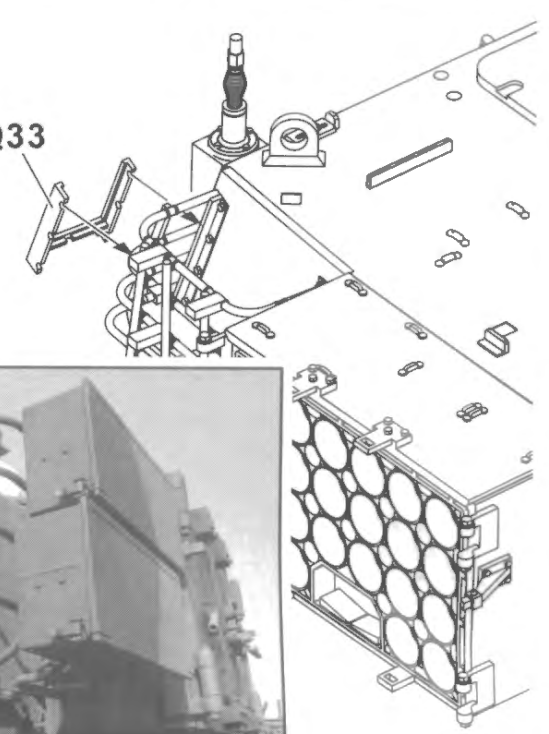
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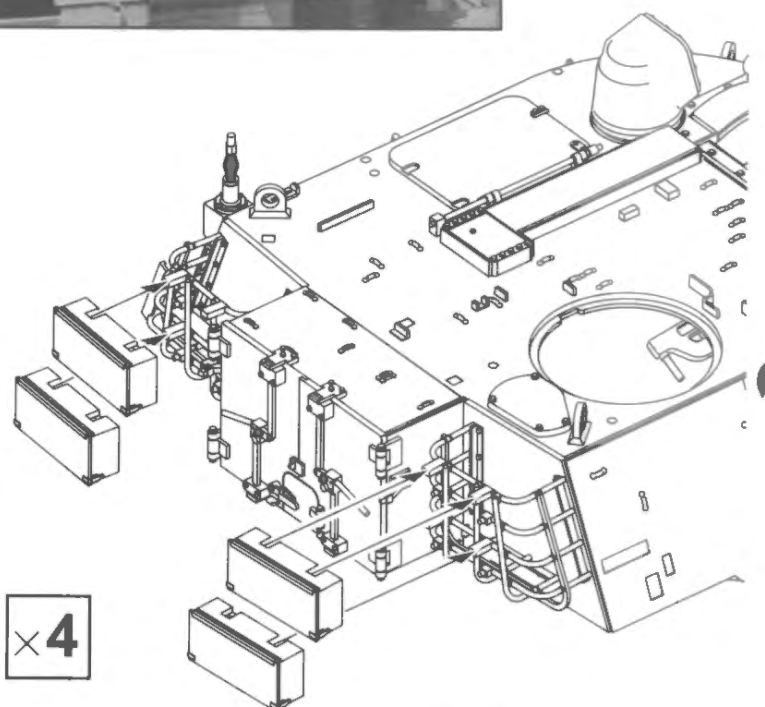
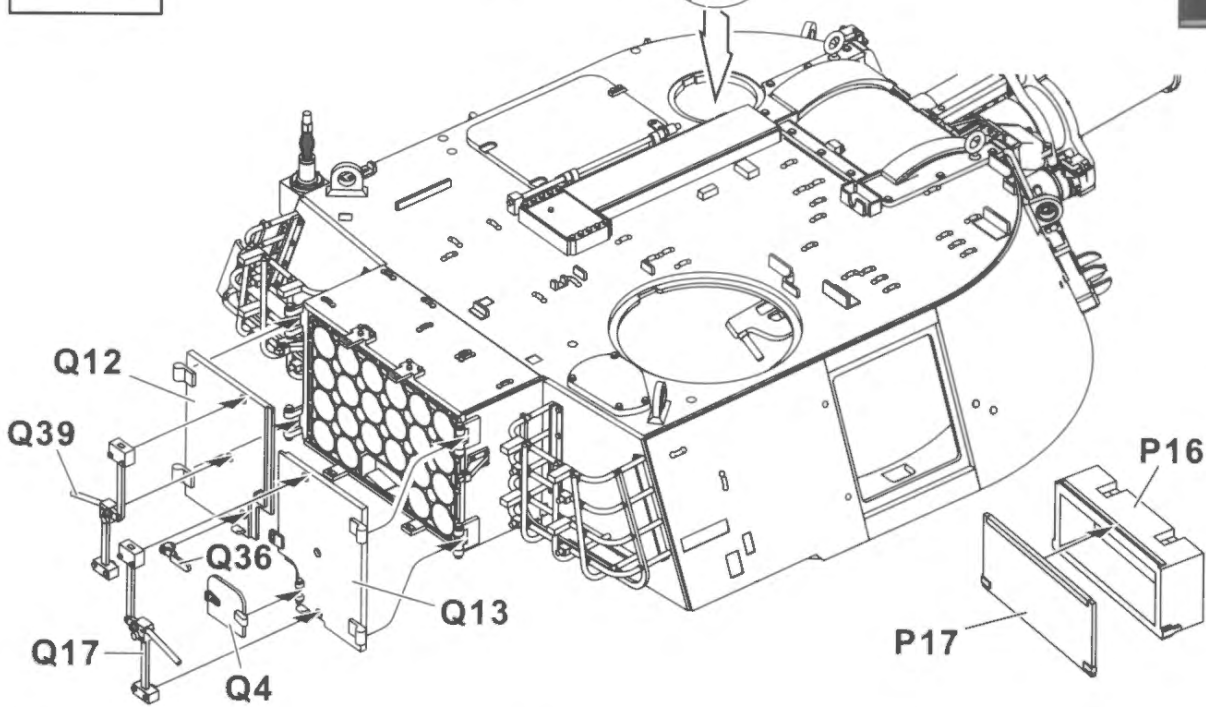
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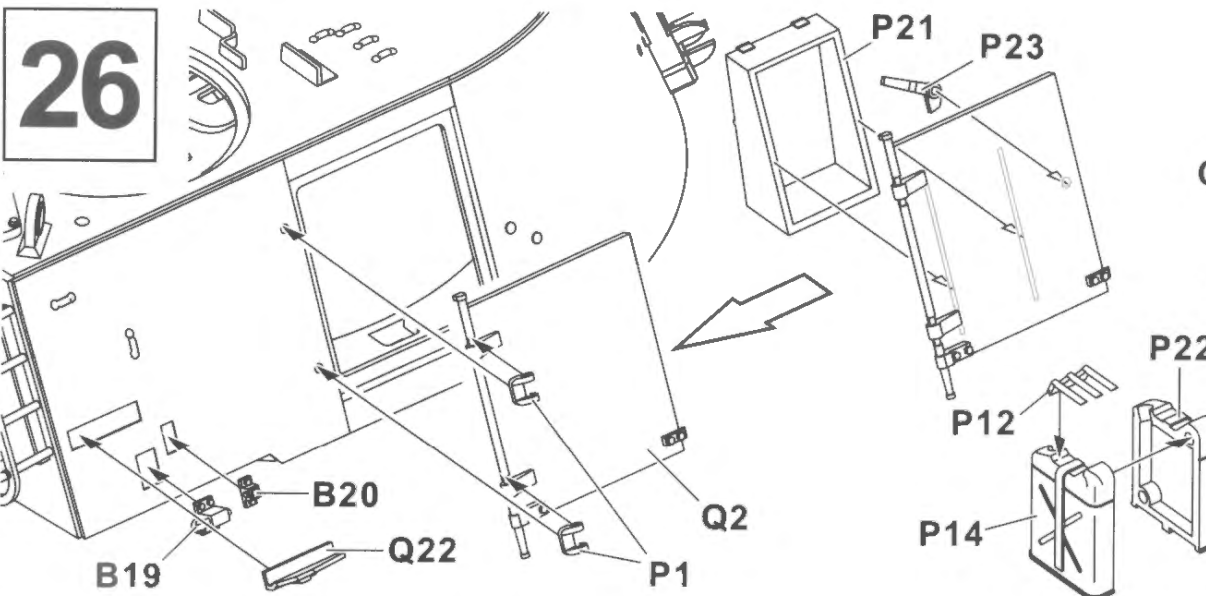
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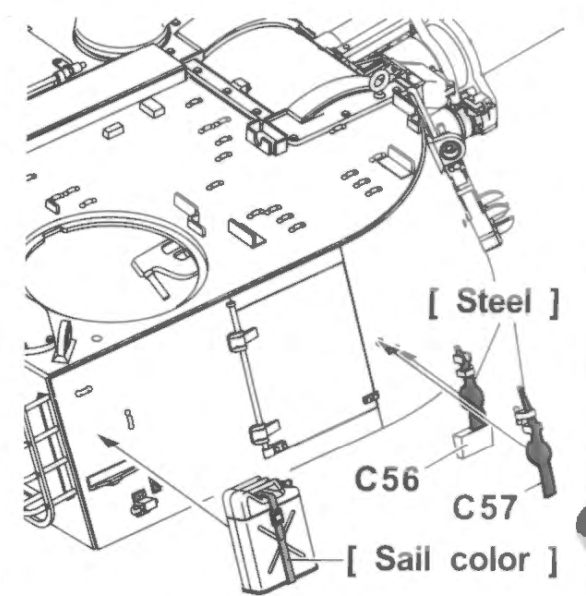
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Q28 Q6

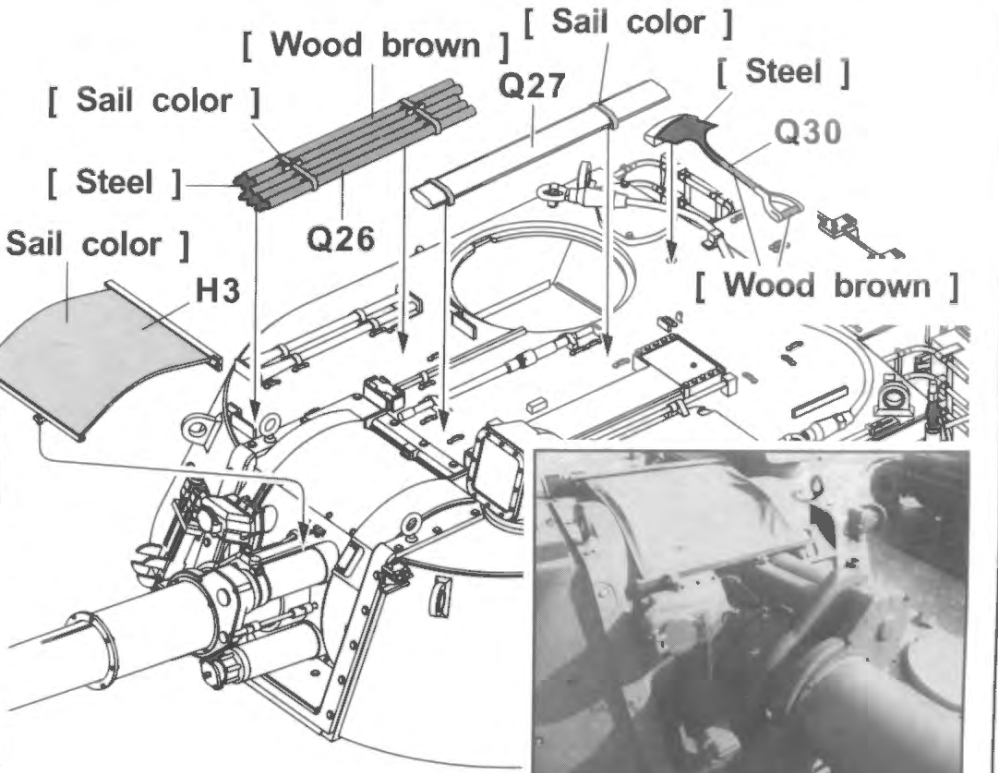
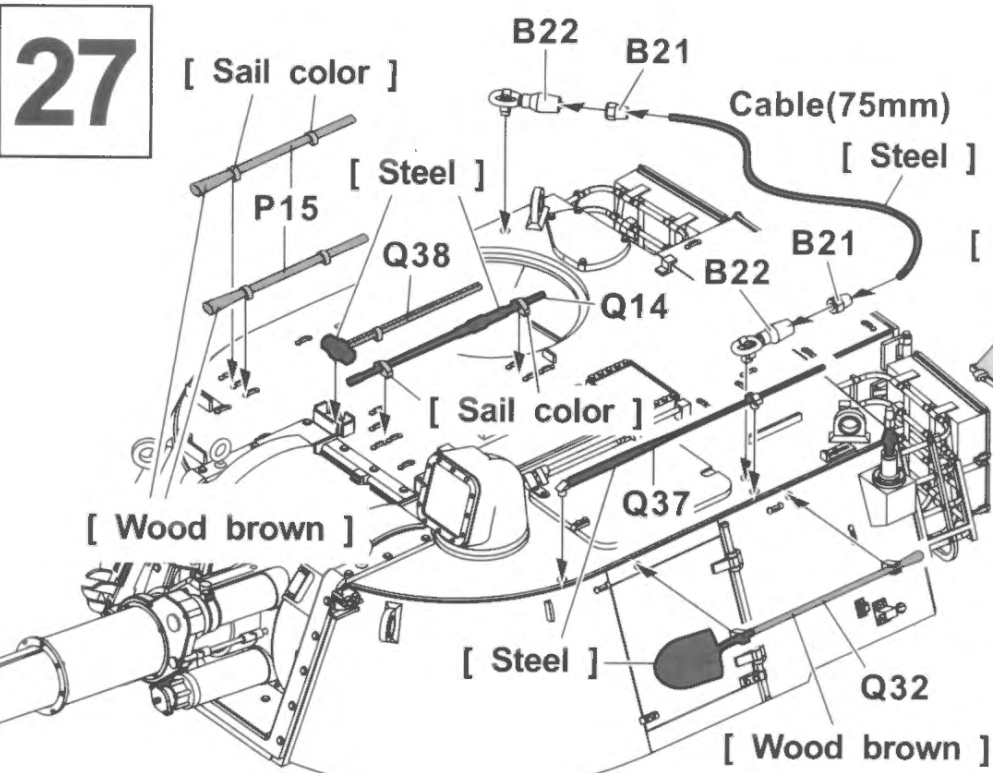


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C56 C57

[Sail color]

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[Wood brown] [Sail color]

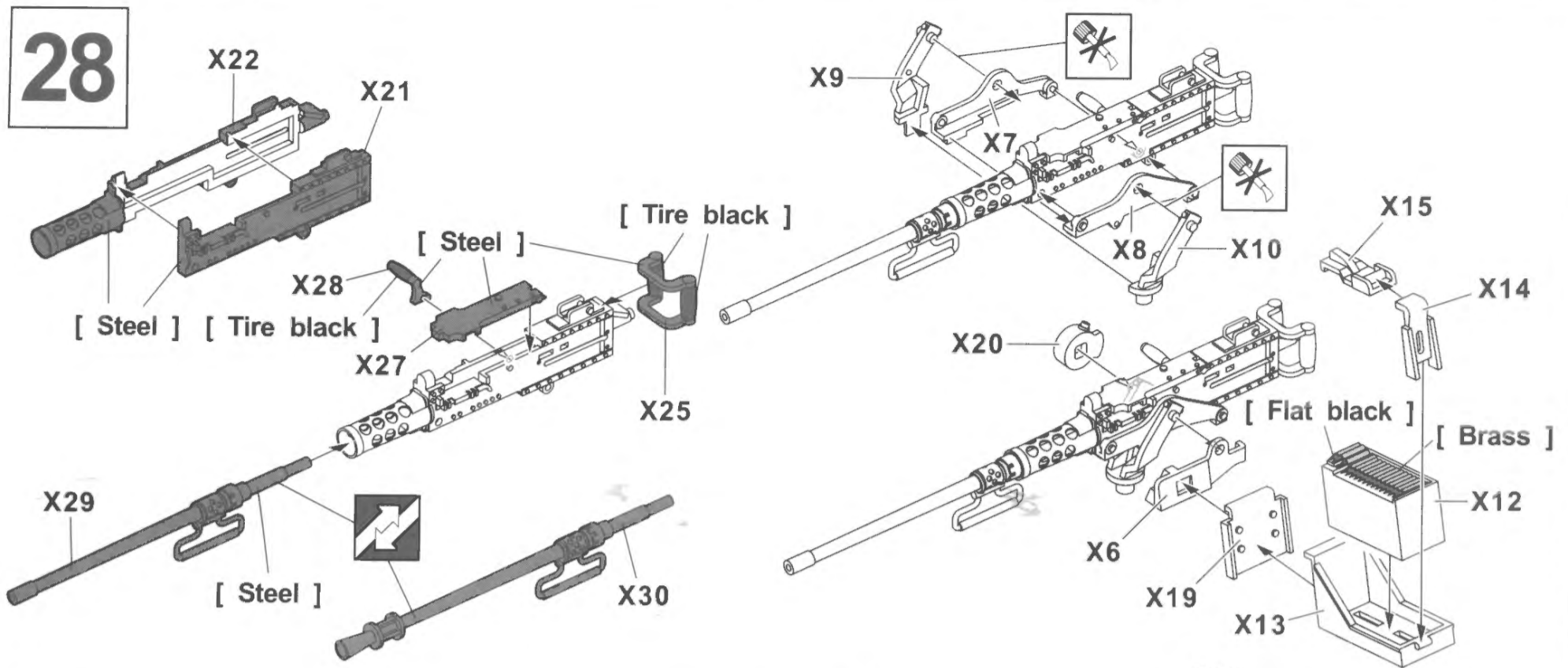
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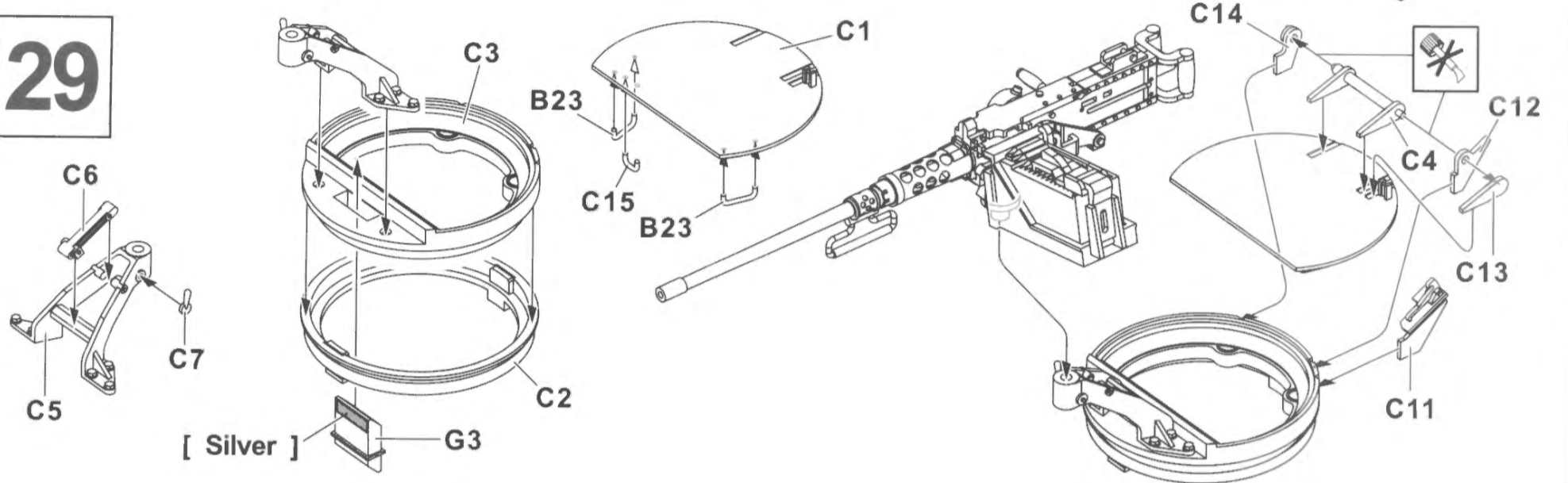
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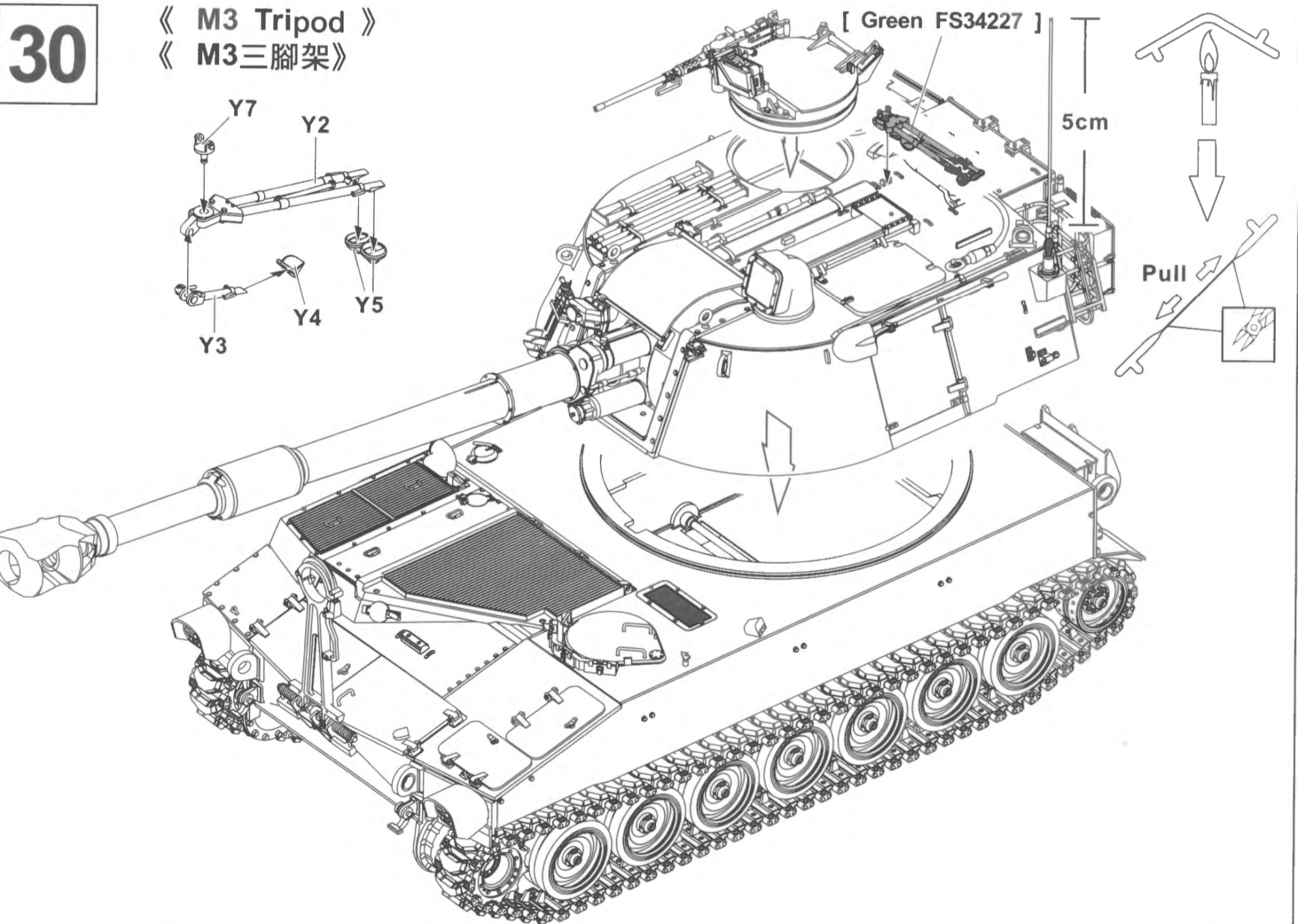


29



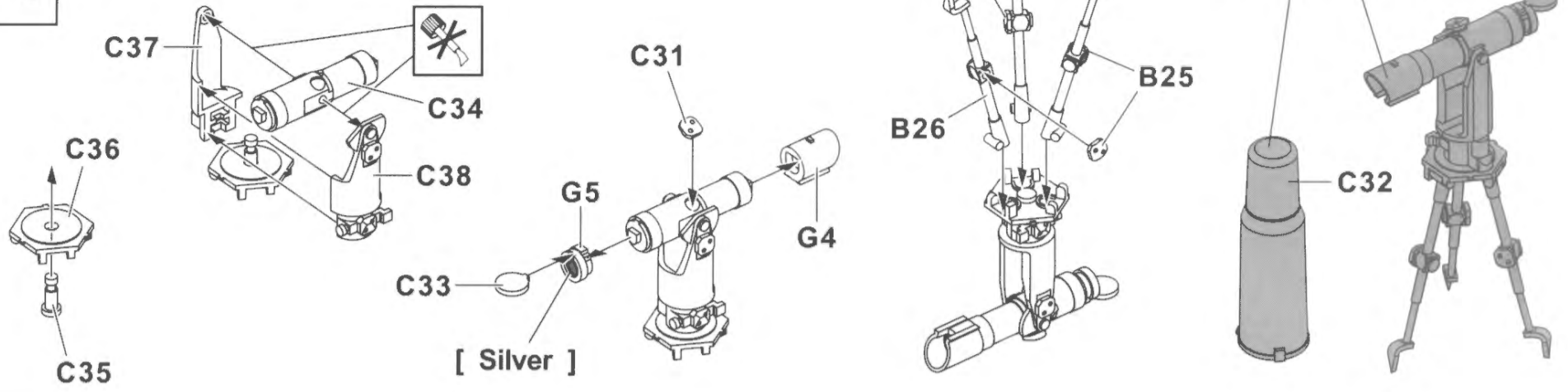
30

《 M3 Tripod 》
 《 M3三脚架 》



31

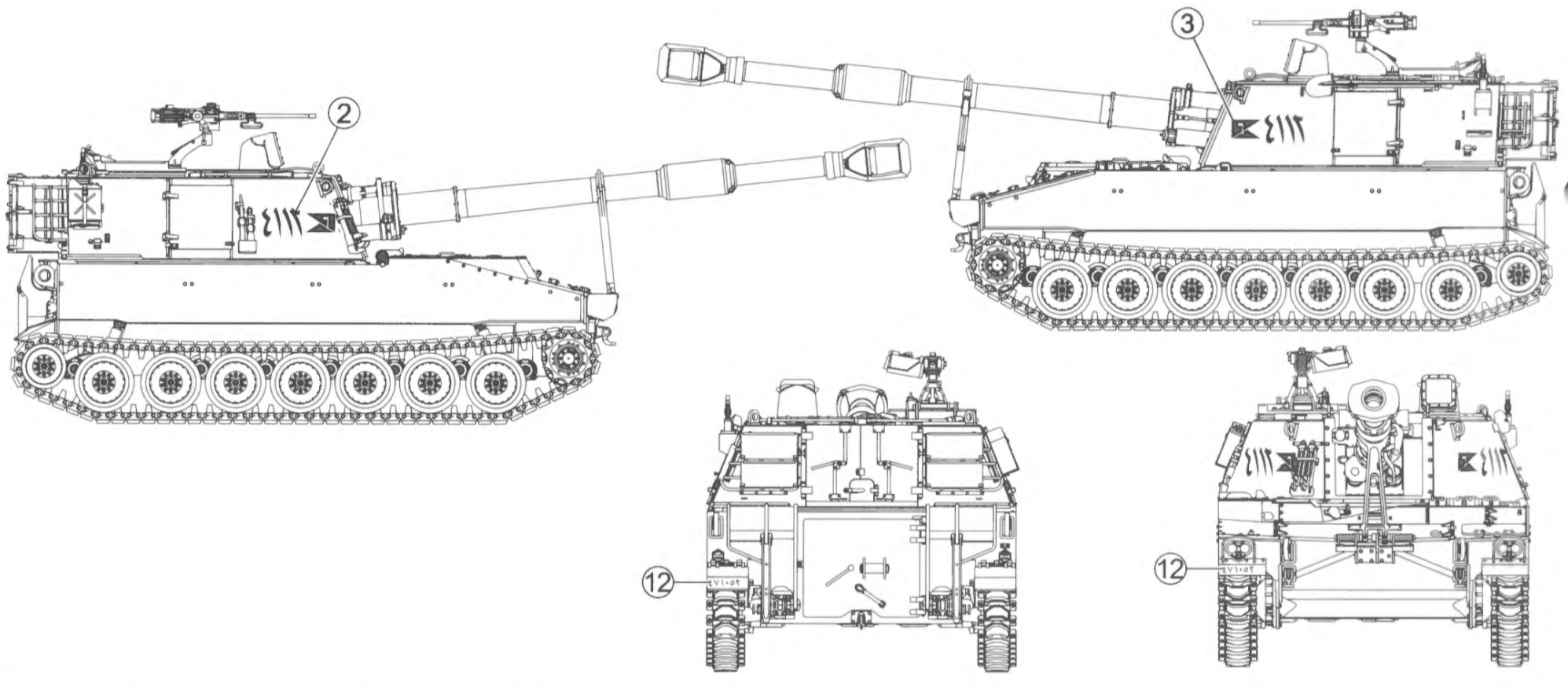
《 M1A1 Collimator aiming device 》
《 M1A1準直儀 》



A

Egyptian Army
埃及陸軍

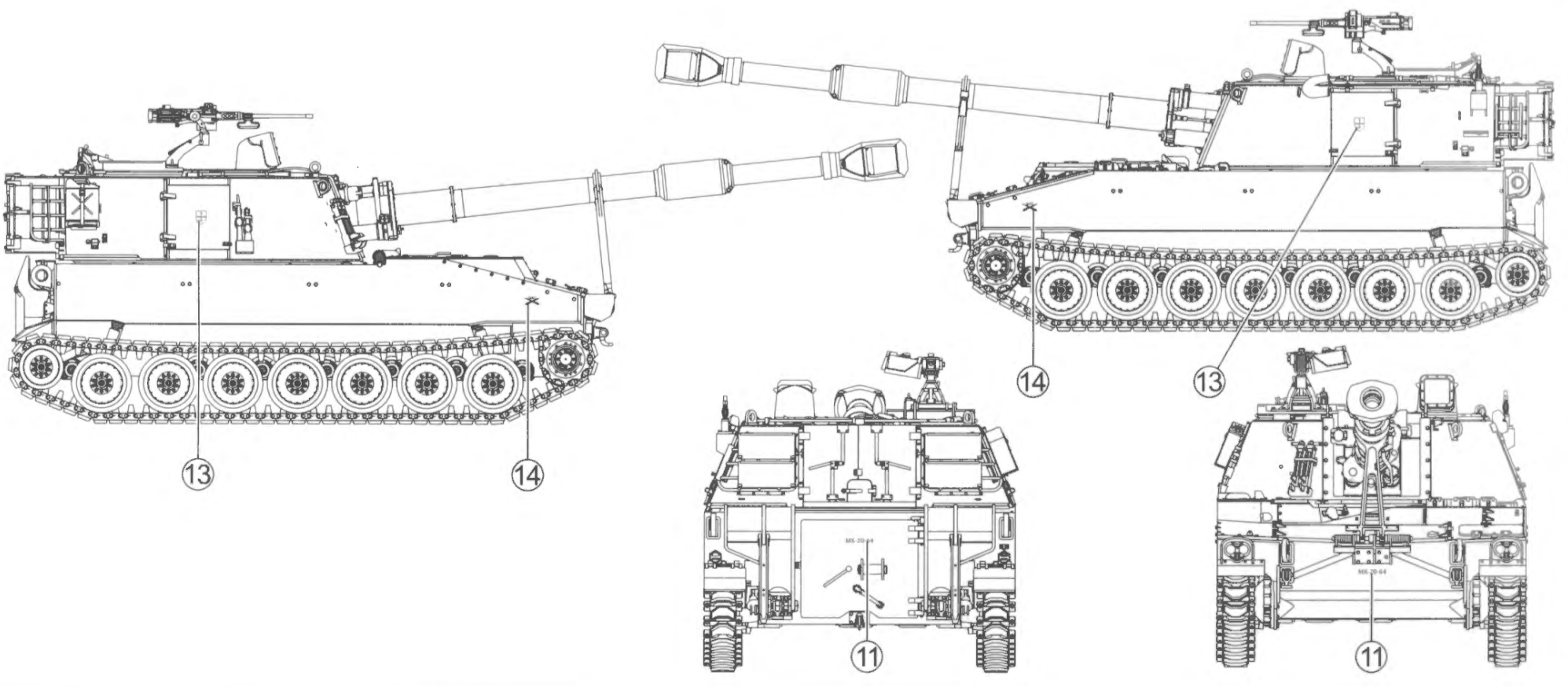
Body Color: Yellow FS33531



B

Portuguese Army
葡萄牙陸軍

Body Color: Olive drab(1)

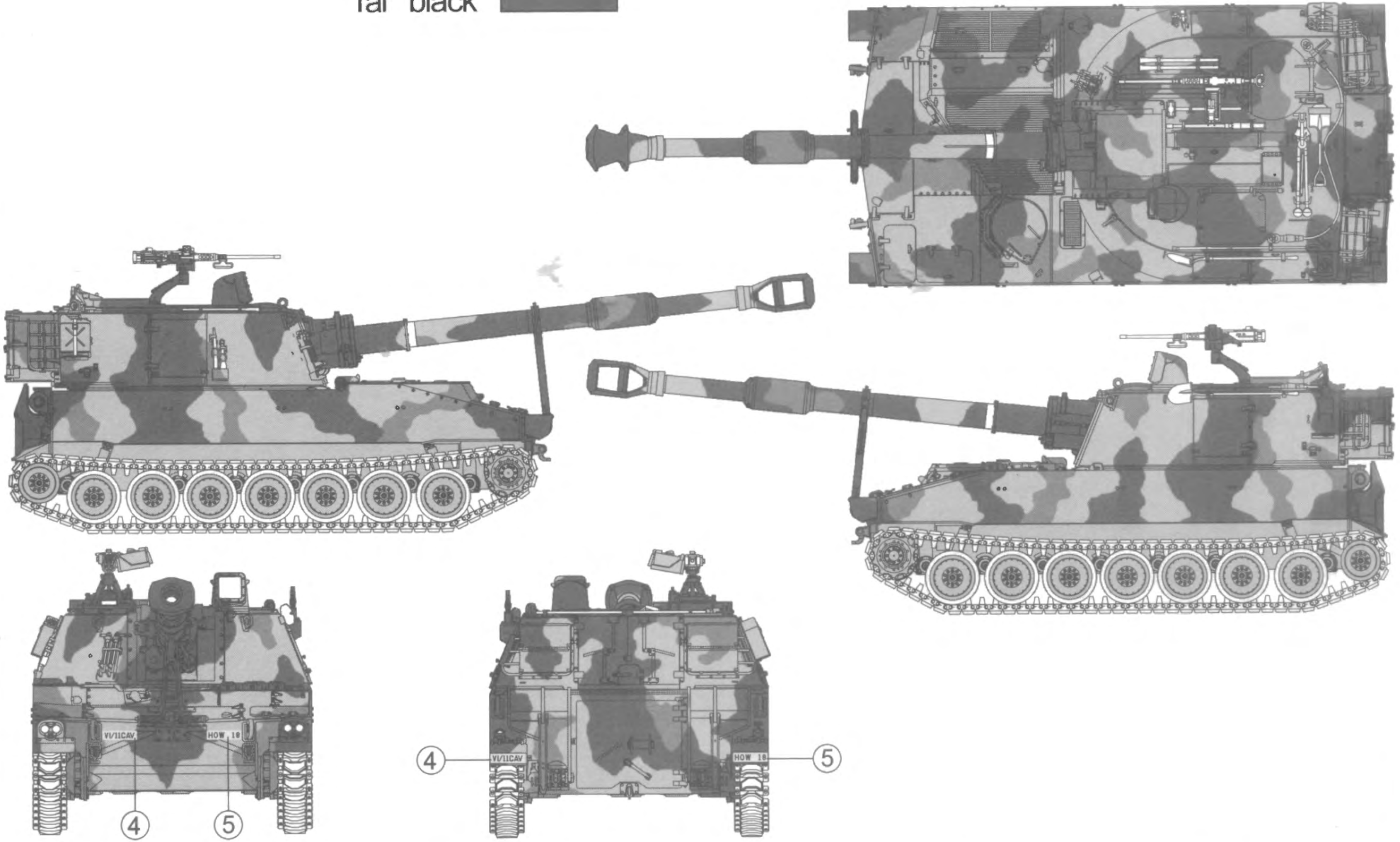


C

U.S. Army
美國陸軍



Body Color: Bronze green
Leather brown
Tar black



D

U.S. Army
美國陸軍



Body Color: Yellow FS33531
RLM79 Sandy brown
Green FS34227
Tar black

