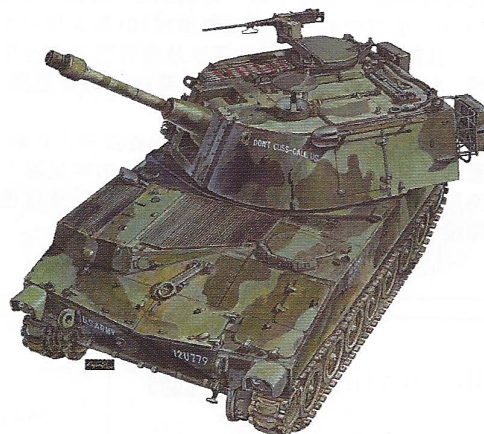


M108

105mm

Self propelled howitzer



Since WWII, the self-propelled guns in the United States Army inventory have been developed from tank chassis. Operationally, such chassis could not fulfill the requirements for mounting a howitzer. Moreover, they lacked armor protection for its crew.

At the end of WWII, the Cold War heightened. In response, the Army expressed a need for new, fully armored, tracked type, self-propelled artillery during a meeting in Washington in January of 1952. Development of such concept commenced soon after the meeting. The design consisted an aluminum-alloyed chassis with amphibious capability and a turret with 360° traverse which carried either a 110mm or a 156mm barrel. Two variants differing only in armament were designated T195 and T196. The barrel sizes were later replaced with the more traditional 105mm and 155mm, respectively.

The T196E1 with a 155mm barrel and officially designated the M109 began production in 1961 following improvements to both its diesel power train and suspension systems.

Production of the M108, with the 105mm barrel, began in 1962 replacing the M52 in active service. Tactically, the M108 filled the gap with regards to firing range that existed between the M109 and a mobile howitzer.

The M108 received its baptism of fire in Vietnam in 1966, but it was soon discovered that its mobility wasn't comparable to artillery carried and transported by helicopter. However, with a 360° traversing turret and armor protection, the M108s became fire support on military bases. By 1970, the U.S Army started a gradual withdrawal of the M108 from Vietnam such that by 1974 the M108s were completely withdrawn from service. The type was then supplied to allied nations thereby continuing its service life.

Text Edited by
John D. Miller, Ph.D.
CEO Model Paint Solutions.com

第二次世界大戦以来、米軍の自走砲は戦車のシャーシをもとに開発されました。運用上、このタイプの自走砲は榴弾砲を取り付けるための要件を満たしていませんでした。さらに、装甲も乗組員の安全を守るのに十分とは言えませんでした。

第二次世界大戦終了後、東西間の冷戦が激化しました。1952年1月にワシントンD.C.で開催された会議の中で、米国陸軍代表者は完全装甲履帯式自走砲の必要性を訴えた。会議の後、概念研究が行われ、新型の自走砲は新しく開発したアルミニウム合金製のシャーシを採用し、浮遊機器の設置により水陸両用作戦に投入できるようになりました。360度回転できる砲塔は、110mm口径もしくは156mm口径の大砲を搭載することができ、それぞれT195とT196と命名されました。しかしすぐに従来の105mmと155mmの大砲に置き換えられました。

ディーゼルエンジンの交換とサスペンションの改良後、155mm口径のT196E1は1961年に量産を開始し、正式にM109を名付けられた。105mm口径のM108は現役のM52に代わって1962年に量産が始まりました。M108は戦術的に、M109と牽引式迫撃砲の間に存在した射程のギャップを埋めました。

1966年、米軍のM108はベトナム戦争で初めて戦闘に投入されたが、すぐに配備面の機動性がヘリコプターで運ばれる大砲ほどよくないことがわかりました。しかし、360度の旋回砲塔と装甲の保護により、M108は軍事基地に配備し、野戦部隊に火力支援を提供しました。その後、一部のM108はベトナムにいたオーストラリア軍に貸し出されました。1970年、米軍のM108は徐々にベトナムから撤退し、1974年にはすべてのM108が米軍からも除隊されたが、供給先である同盟国での使用は継続していきました。

二次大戰以來，美國軍隊使用由戰車底盤發展而來的自走砲。這種底盤的自走砲在運用上未必能滿足發射榴彈的需要，通常也沒有足夠的裝甲來保護乘員的安全。

二戰結束後，東西方冷戰持續加劇。1952年1月，美國陸軍代表在華盛頓特區的一場會議中，反應了對全裝甲包覆的履帶式自走砲需求迫切的態度。會議之後隨即展開概念研究，新型自走砲採用全新鋁合金材質底盤，在安裝了浮渡設備後能夠進行兩棲作戰。能夠360°旋轉的砲塔，可選擇搭載110毫米與156毫米兩種口徑火炮，分別被命名為T195與T196。但很快的，火炮被更換成105毫米與155毫米兩種傳統的口徑。

在經過更換柴油發動機以及進行懸吊的改良後，155毫米口徑的T196E1在1961年開始量產，被賦與了M109的正式型號。105毫米口徑的M108的量產在1962年展開，用來取代服役中的M52。在戰術上M108用來填補M109與車載迫擊砲兩者在射程之間的空隙。

1966年，美軍的M108在越南首度投入作戰，但很快的便發現在部署的機動性上，不如由直升機吊掛的牽引火炮。但憑藉著360°旋轉的砲塔，與完整的裝甲保護，M108被安排在火力基地中使用，為野戰部隊提供火力支援。稍後，部分美軍的M108也租借給在越南的澳大利亞軍隊使用。1970年，美軍的M108陸續自越南撤出，1974年全數M108自美軍中除役，並轉交海外盟邦繼續使用。

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

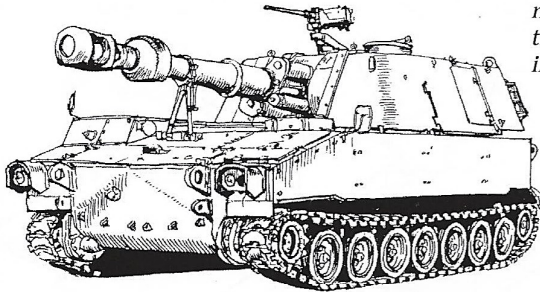
Color list: 塗料表

Color	Brand	GSI Creos			Humbrol	AV Vallejo	Lifecolor
		Hobby Color	Mr.Color	Mr.Color Spray			
Black	黑	H2	C2	S2	21	70861	LC52
Brass	黃銅		C219		54	70801	LC75
Desert sand FS30279	沙漠				250	71140	UA89
Duck egg green	鴨蛋綠	H74	C26		23	71009	UA96
Flat black	消光黑	H12	C33	S33	33	70950	LC02
Flat red	消光紅	H13			73	70957	LC06
Flat white	消光白	H11	C62	S62	34	70919	LC01
Green FS34079	綠	H309	C309		195		UA52
Green FS34092	綠	H302	C302		149		UA08
Olive drab(2)	橄欖褐	H78	C38	S38	66	71043	UA106
Olive drab FS34087	橄欖褐	H304	C304		155	71043	UA03
Red	紅	H3	C3	S3	19	70926	LC56
Sail color	帆布	H85	C45		28		UA099
Silver	銀	H8	C8	S8	11	70997	LC74
Steel	黑鐵	H18	C28	S28	53	77712	LC76
Tire black	輪胎黑	H77	C137		85	70950	LC02
Wood brown	木棕	H37	C43		186	70876	UA85

M109 155mm self-propelled howitzer forms the backbone of US Army artillery units.

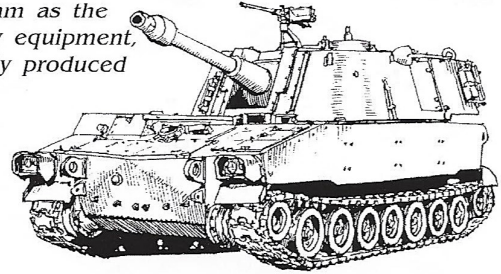
M109 (1962)

The maximum range 14,600 meters.



M108 105mm self-propelled howitzer (1963)

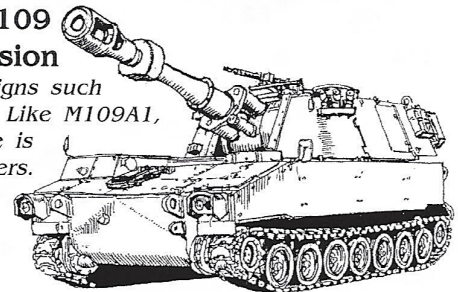
Share the same chassis and turret as M109
US Army use 155mm as the mainstream artillery equipment, therefore M108 only produced in small numbers.



M109

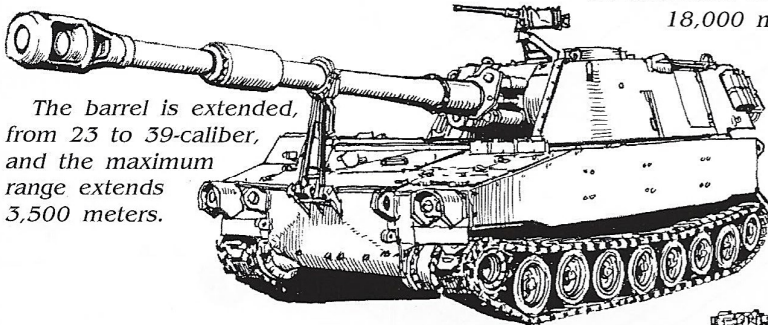
West German Army version

Distinguished by unique designs such as short barrel, and lock bolt. Like M109A1, its maximum range is 18,000 meters.



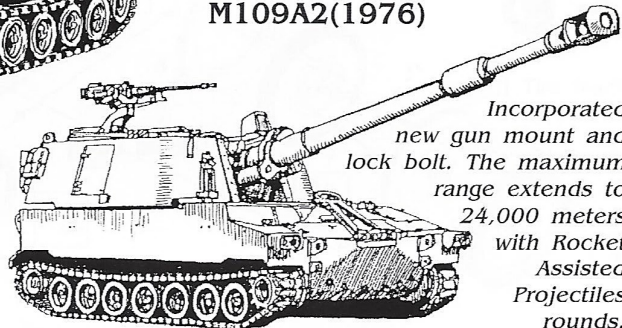
M109A1 (1970)

The barrel is extended, from 23 to 39-caliber, and the maximum range extends 3,500 meters.



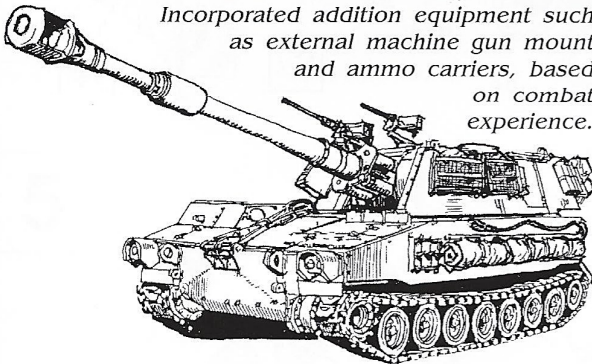
M109A2(1976)

Incorporated new gun mount and lock bolt. The maximum range extends to 24,000 meters with Rocket Assisted Projectiles rounds.



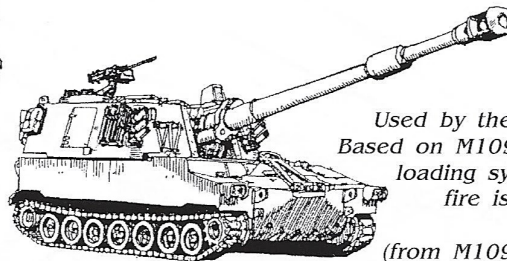
M109AL Israeli Army version

Incorporated addition equipment such as external machine gun mount and ammo carriers, based on combat experience.



PzH74

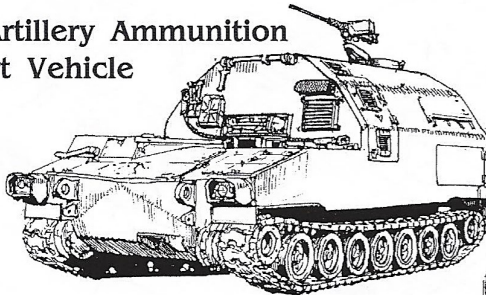
Used by the Swiss Army. Based on M109A1 with new loading system, rate of fire is improved to 6 rpm (from M109A1's 4 rpm).



M992

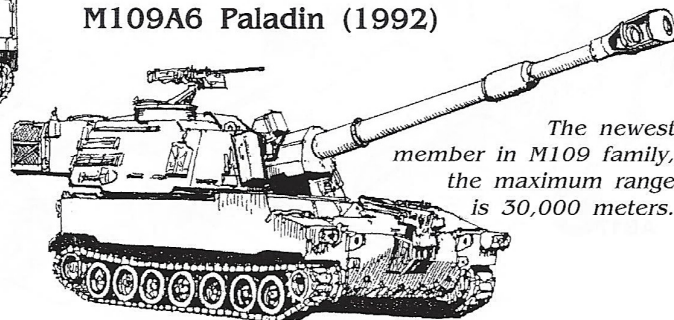
Field Artillery Ammunition Support Vehicle

It can transfer 8 round per minute to M109 through its back door.



M109A6 Paladin (1992)

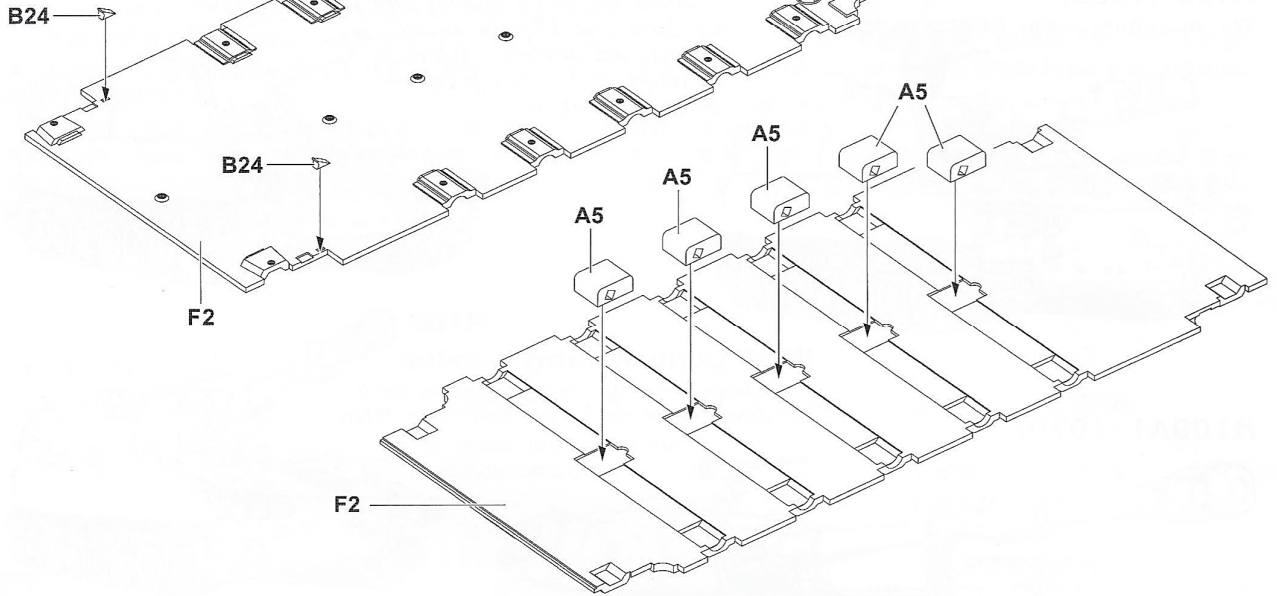
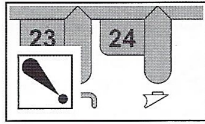
The newest member in M109 family, the maximum range is 30,000 meters.



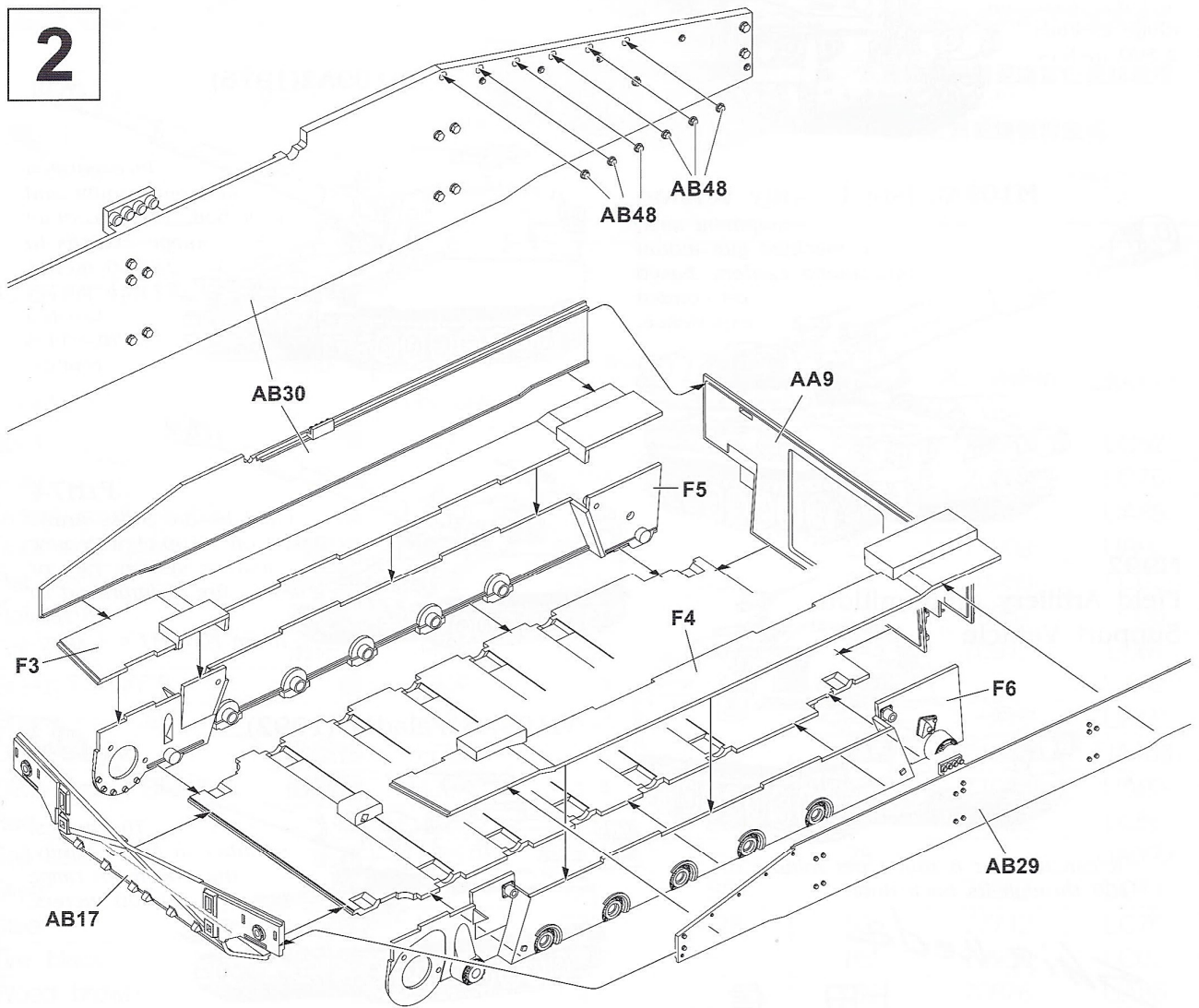
Shin. ueda

上田 信

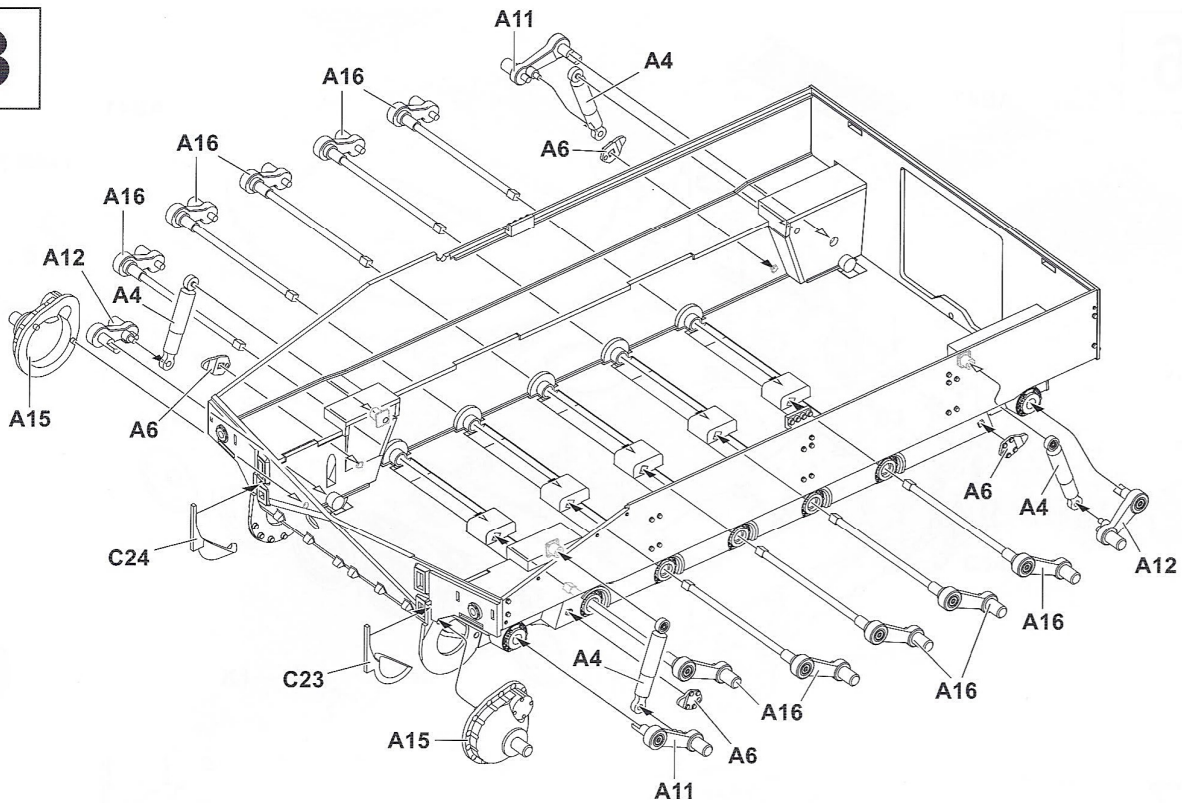
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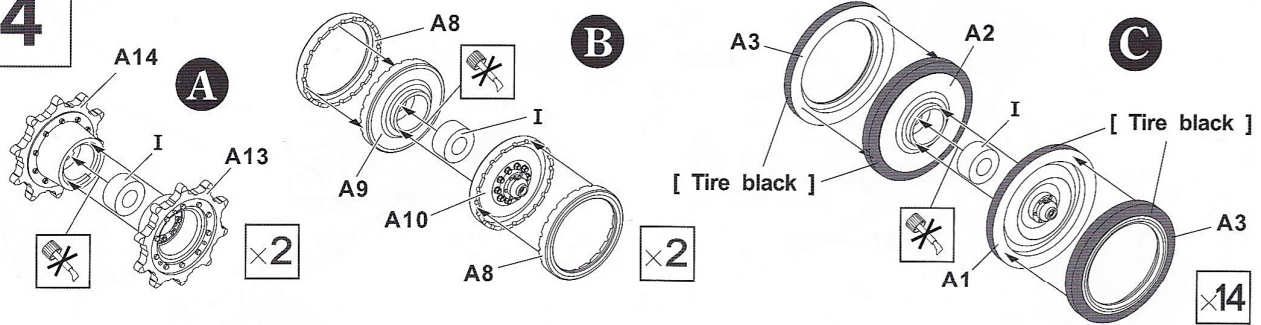
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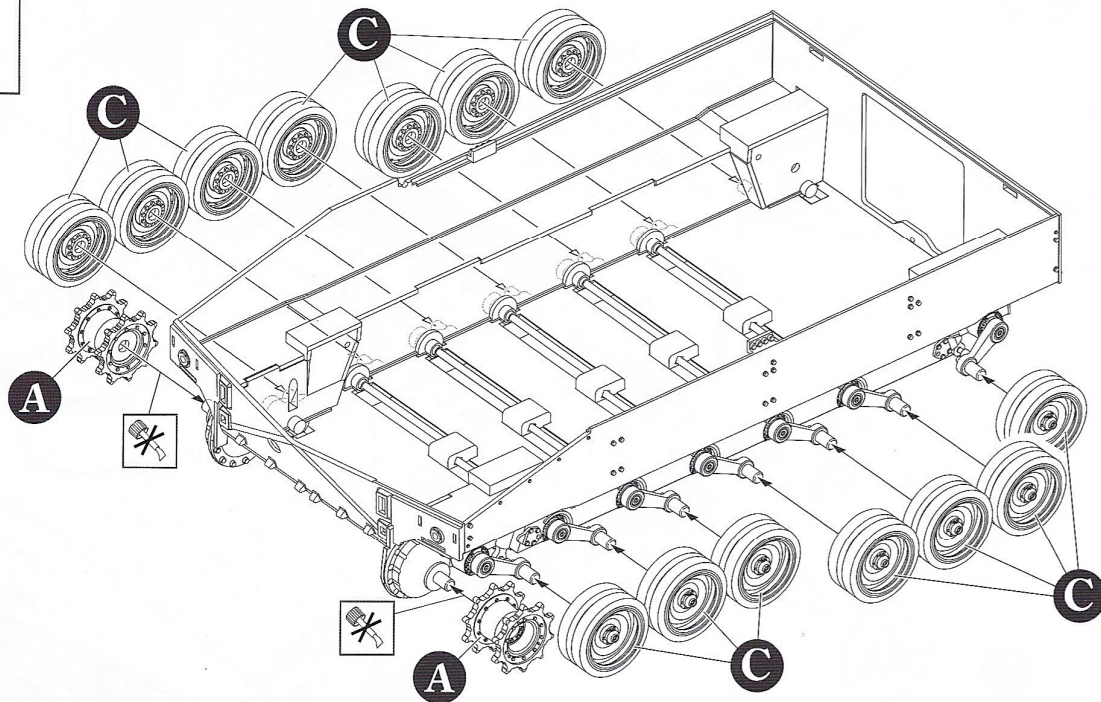
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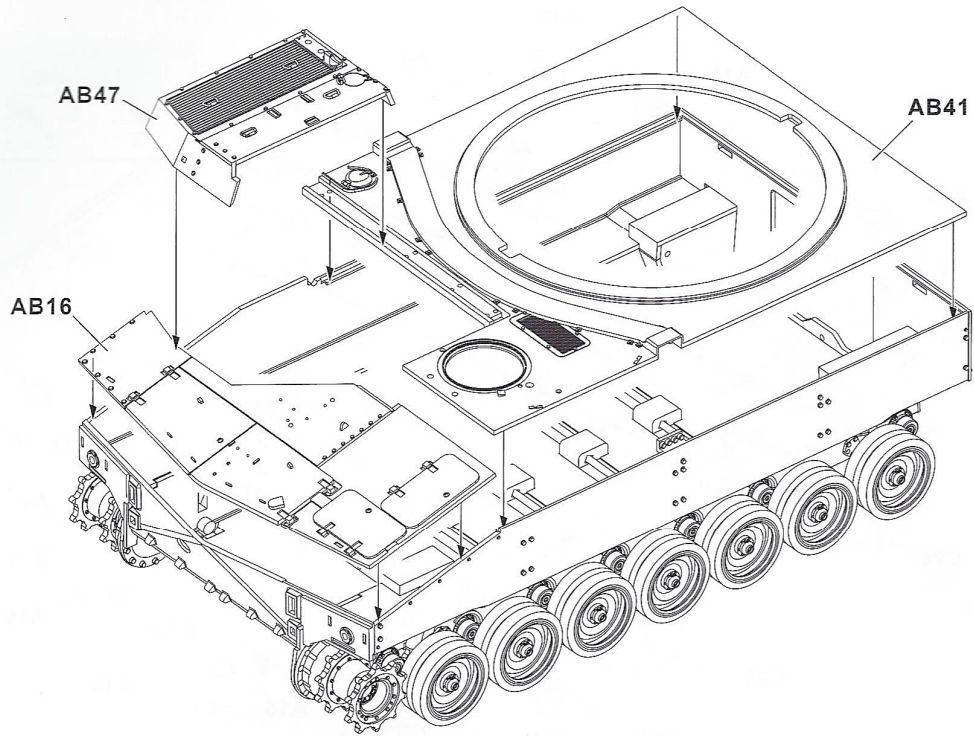
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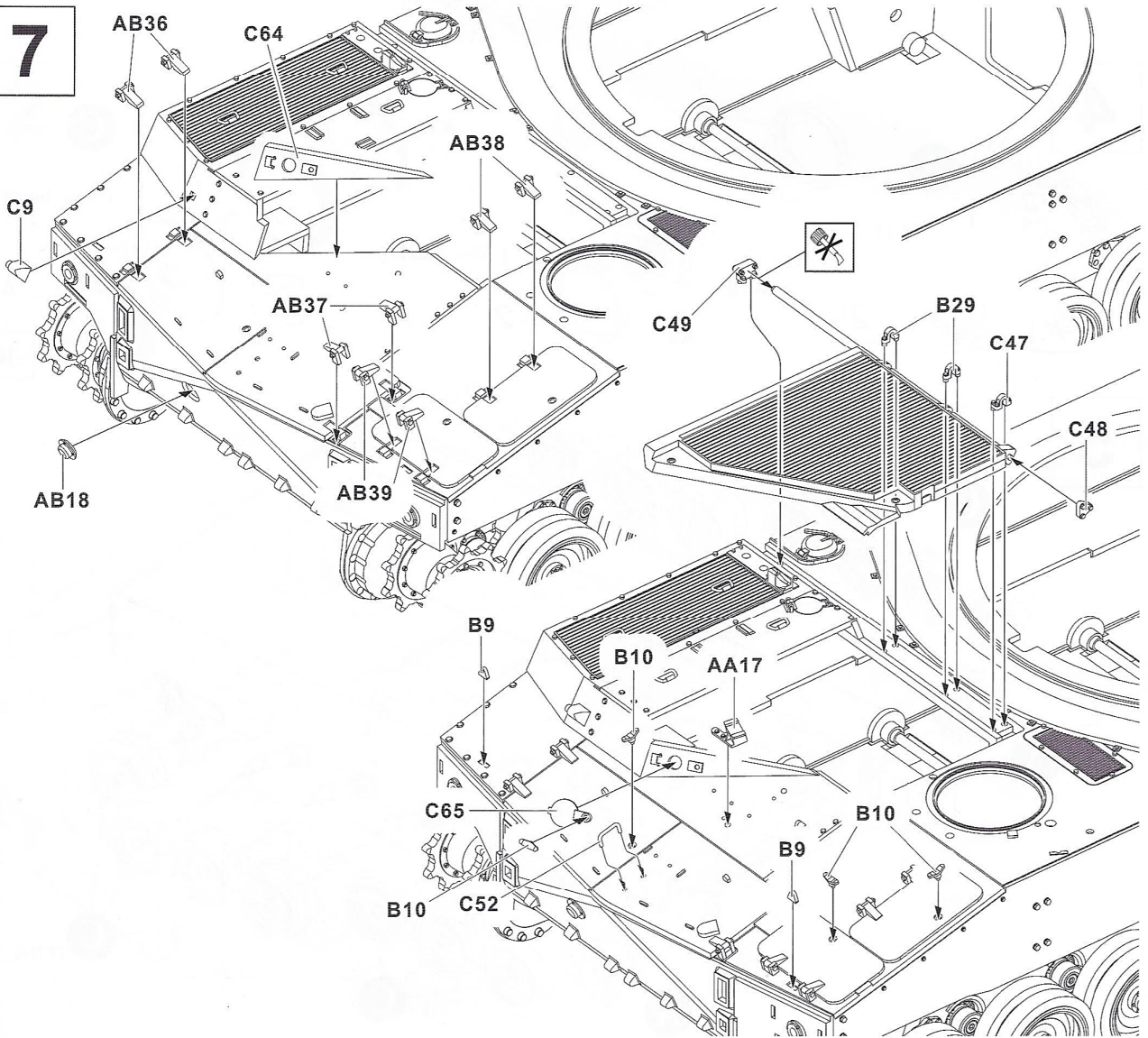
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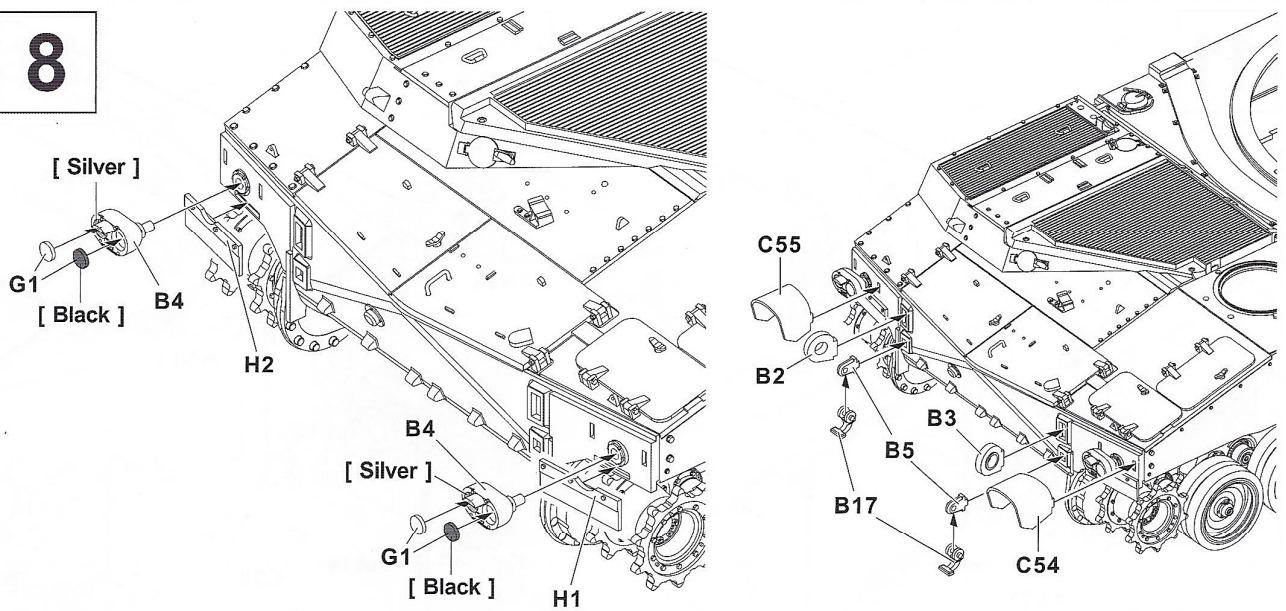
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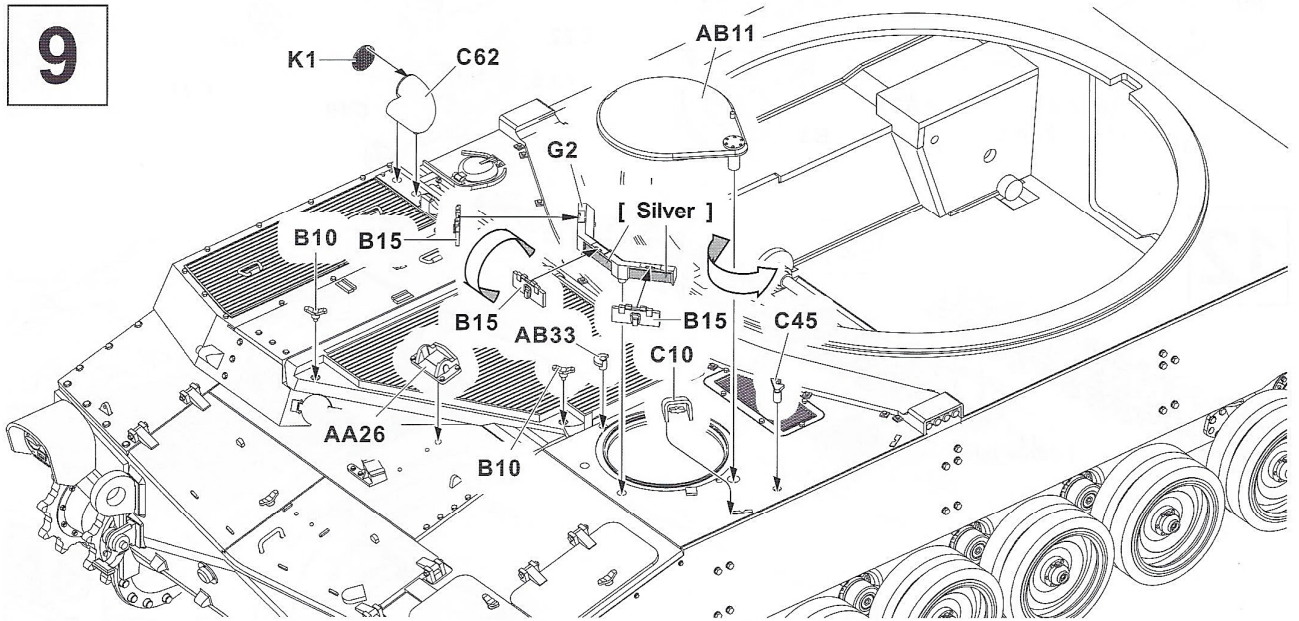
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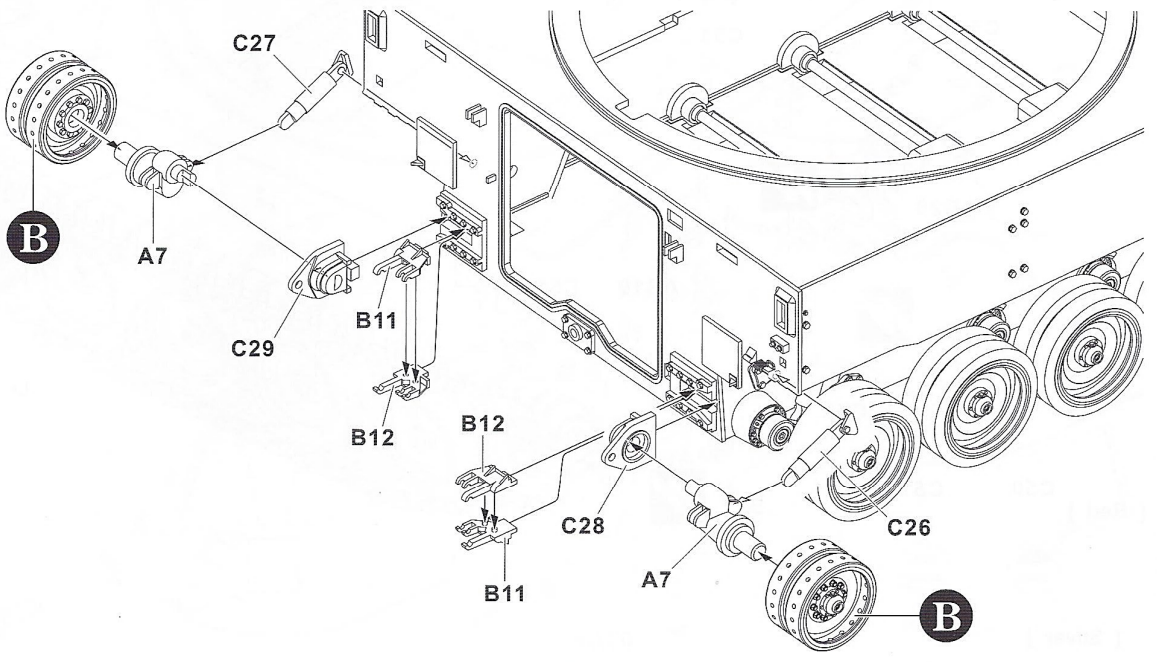
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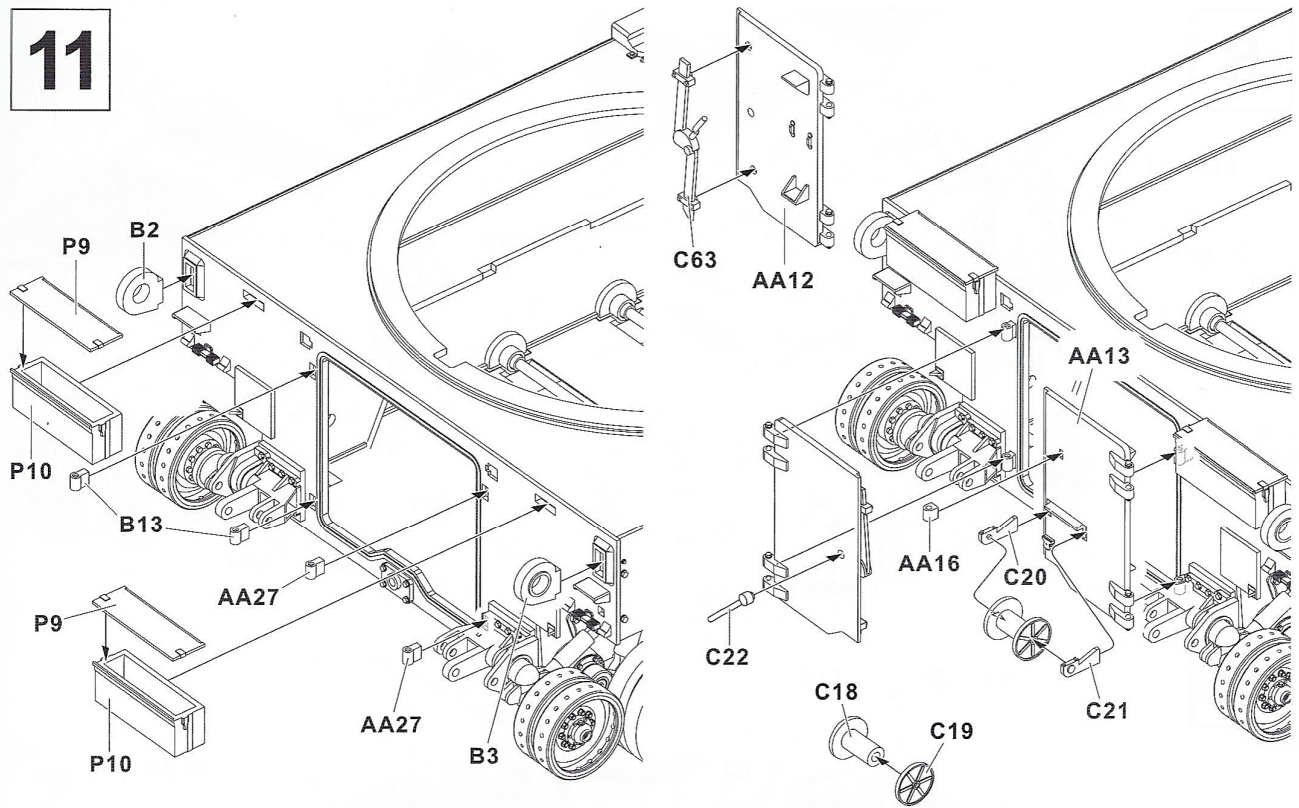
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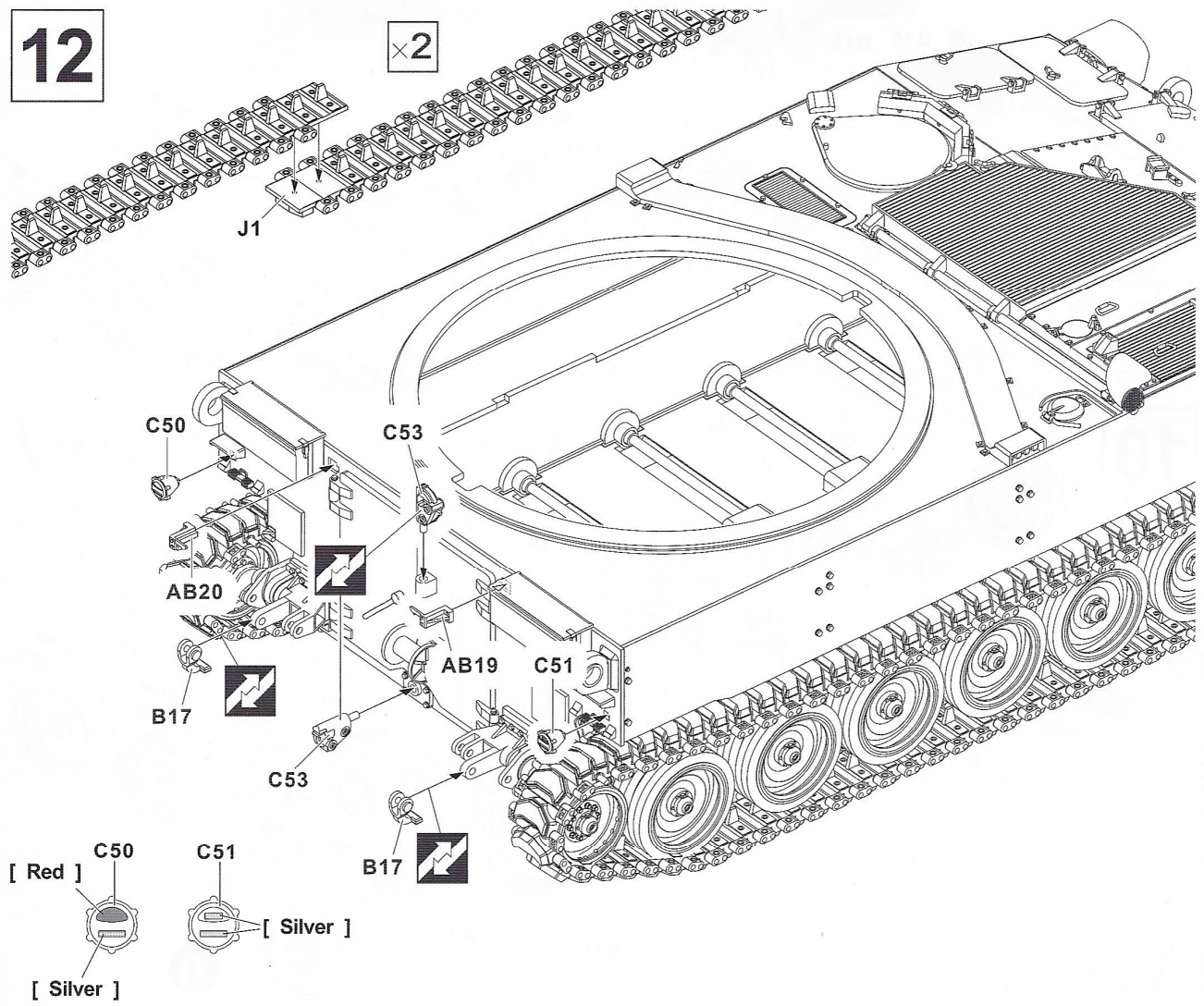
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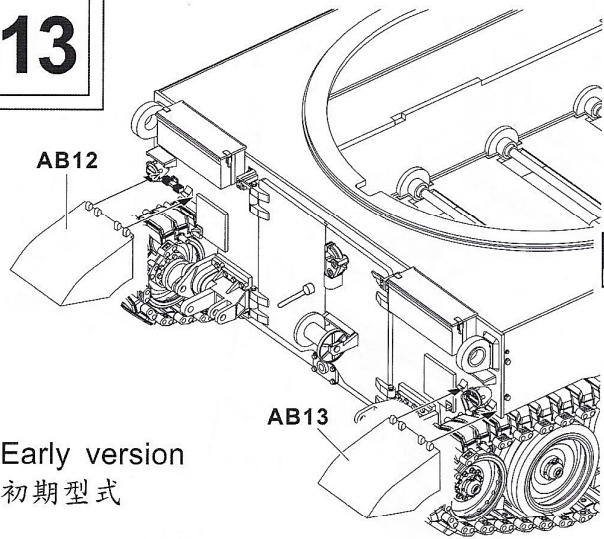
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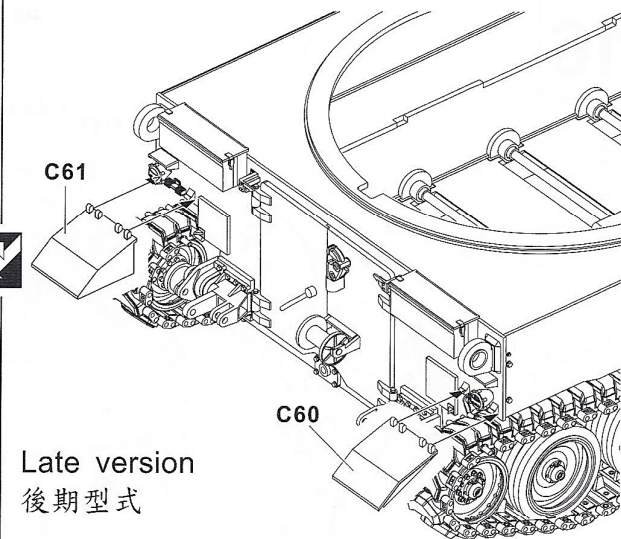
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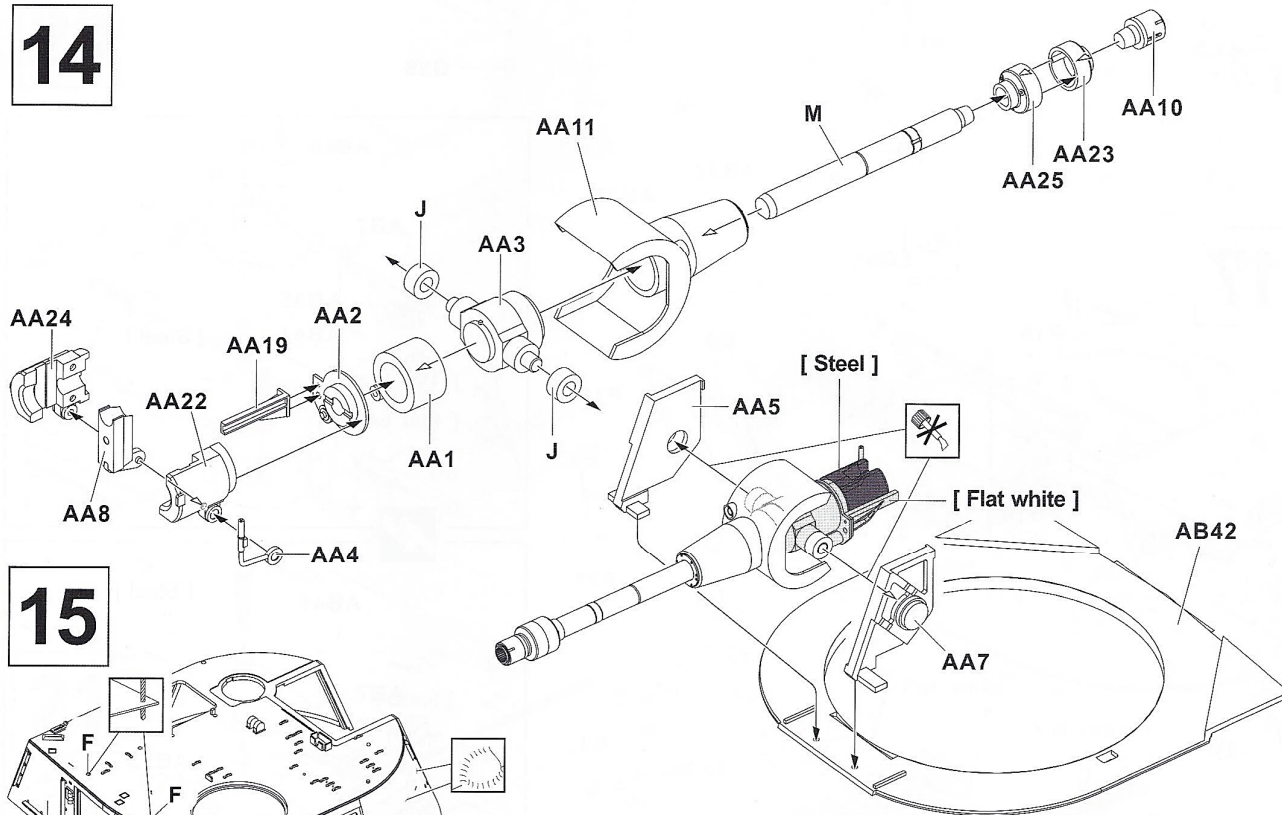


Early version
初期型式

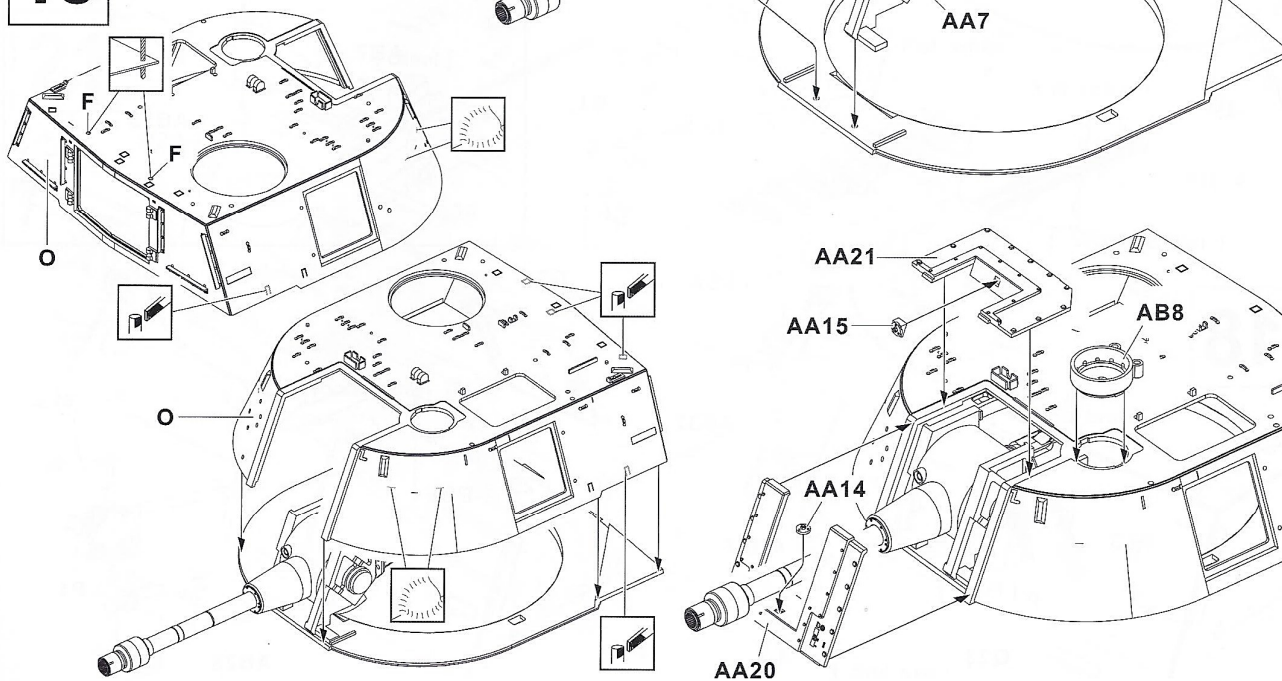


Late version
後期型式

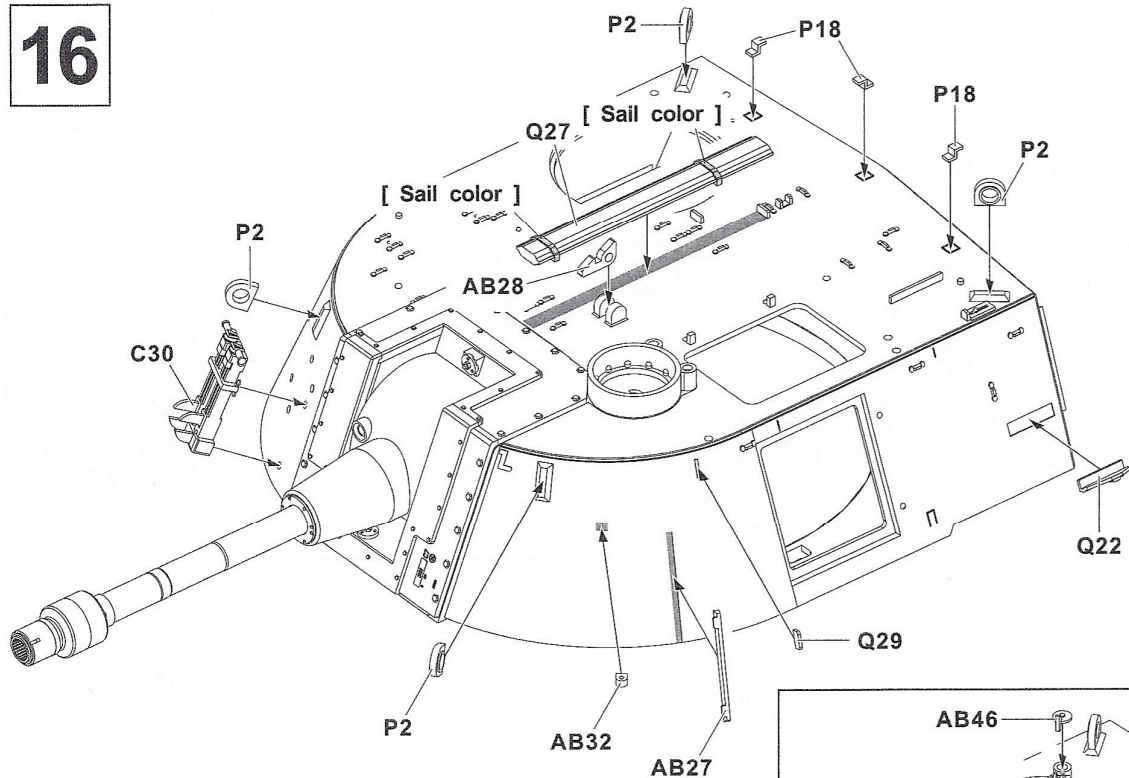
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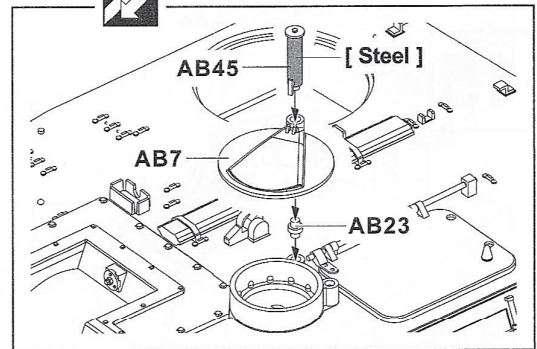
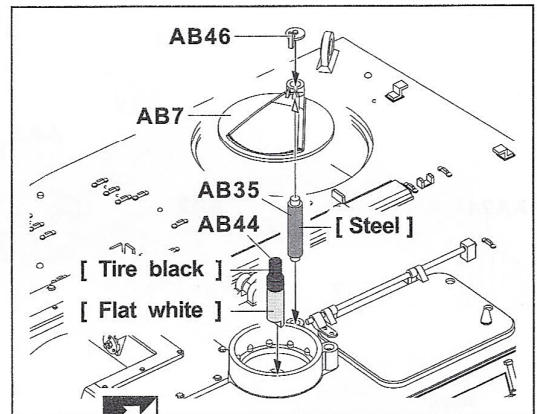
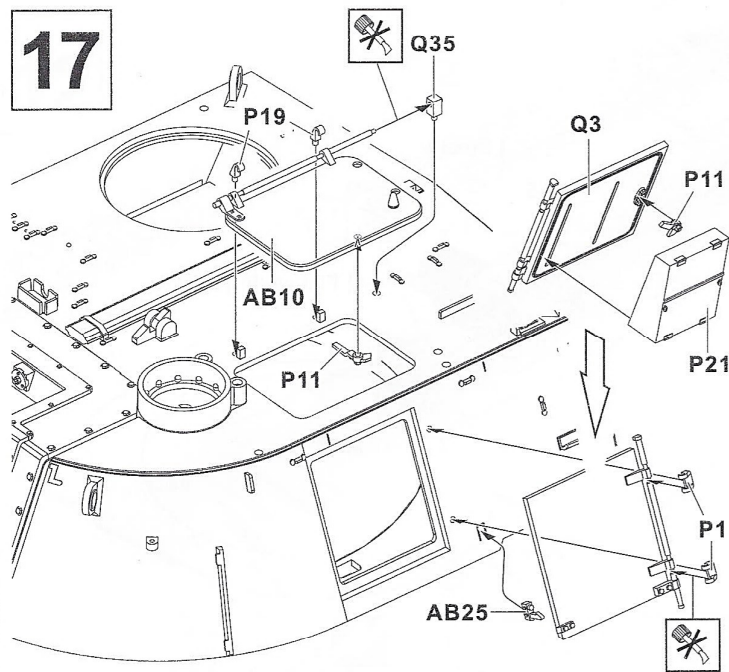
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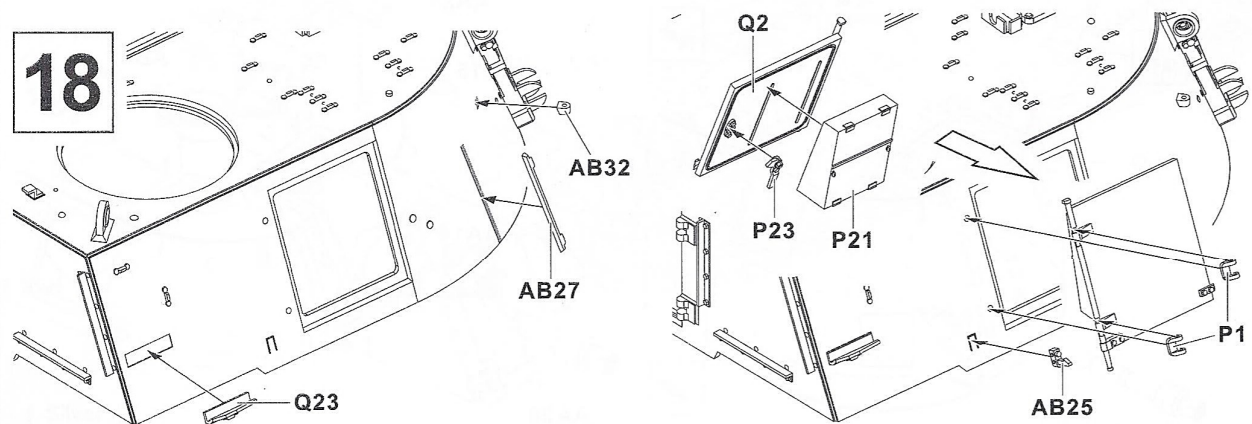
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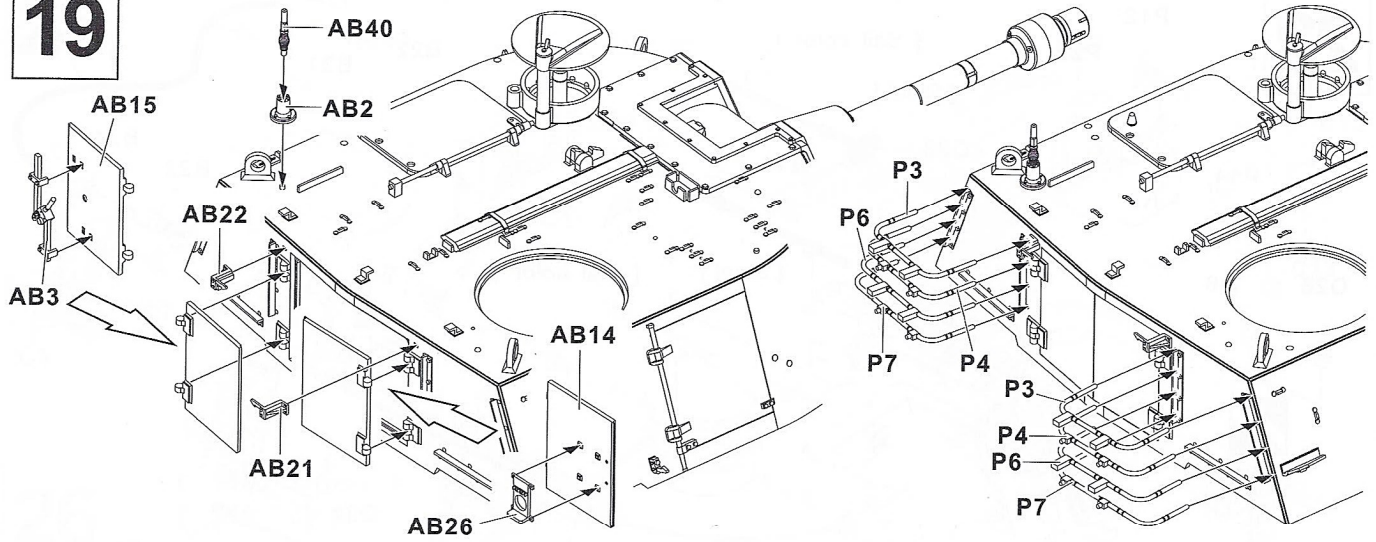
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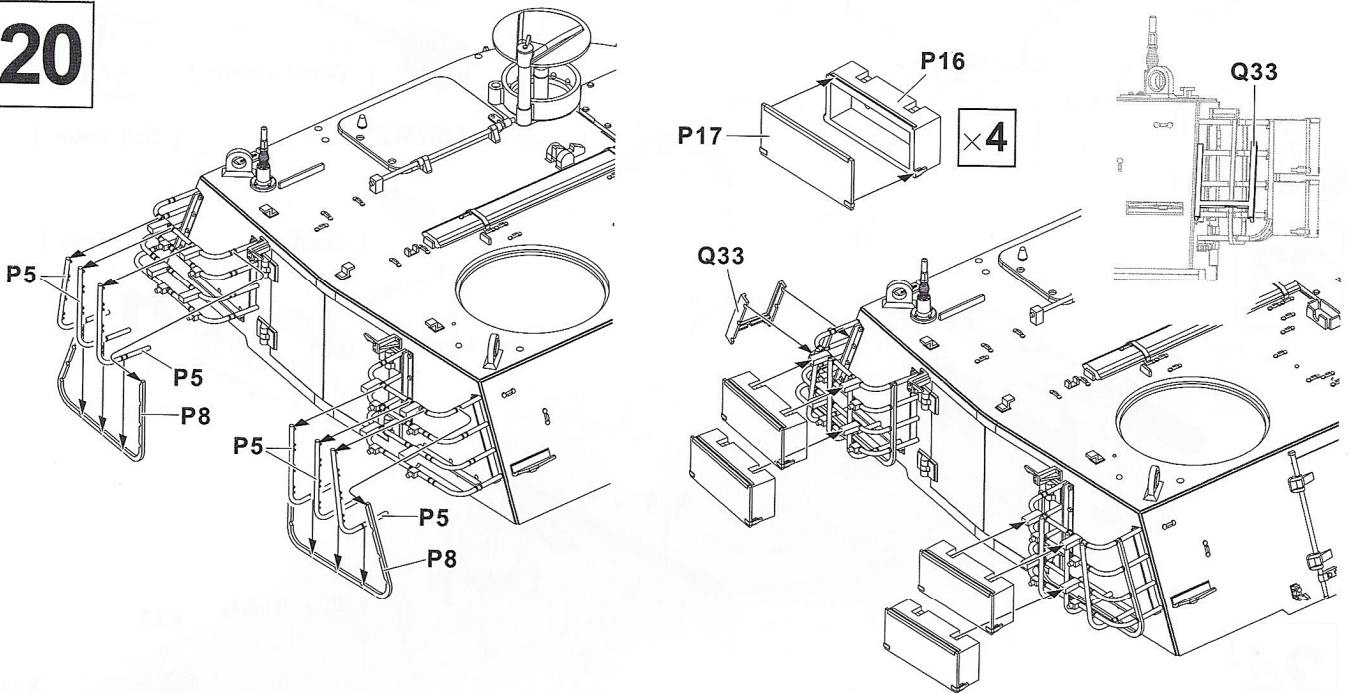
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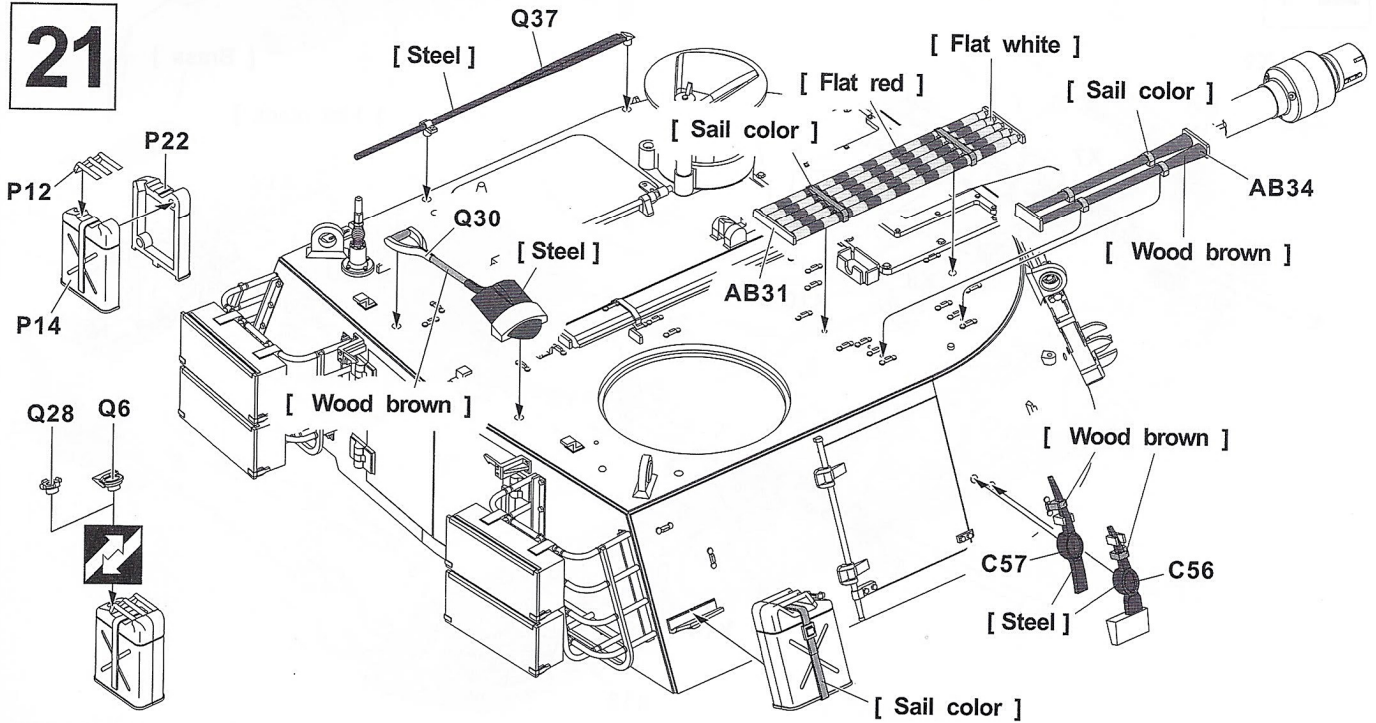
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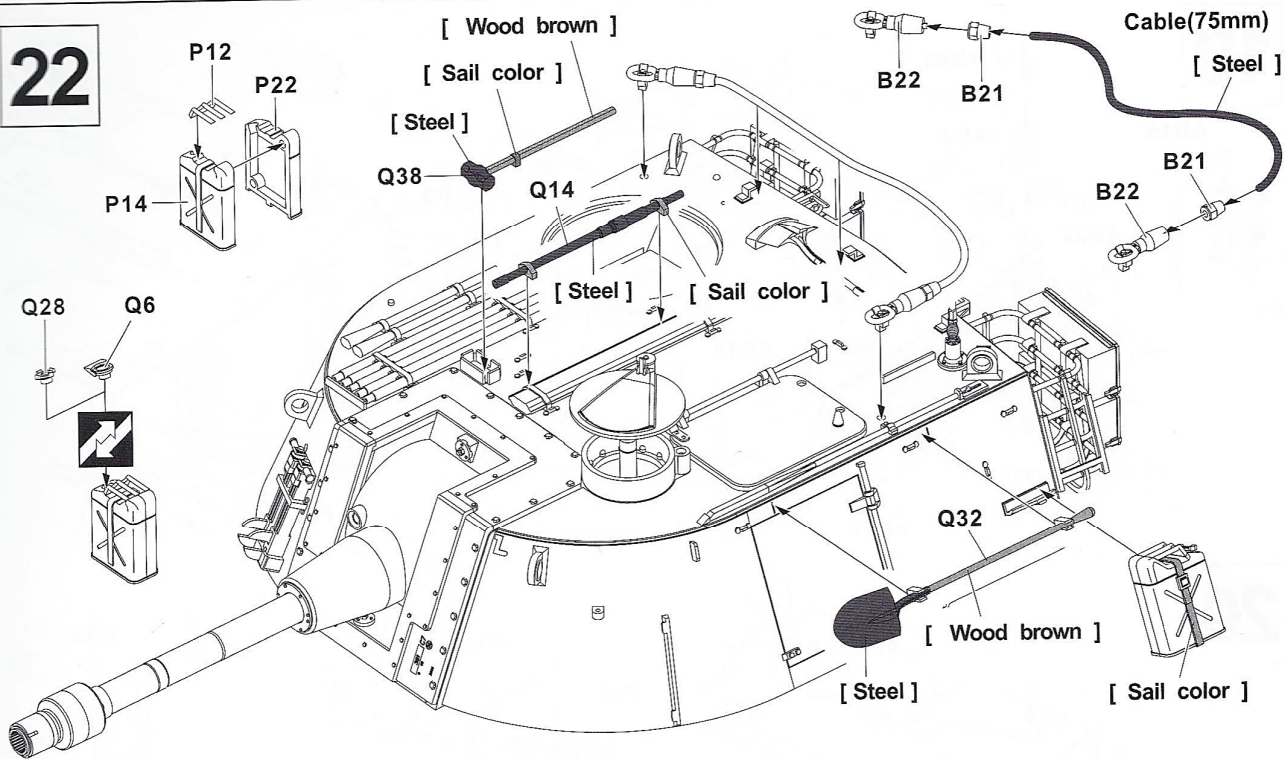
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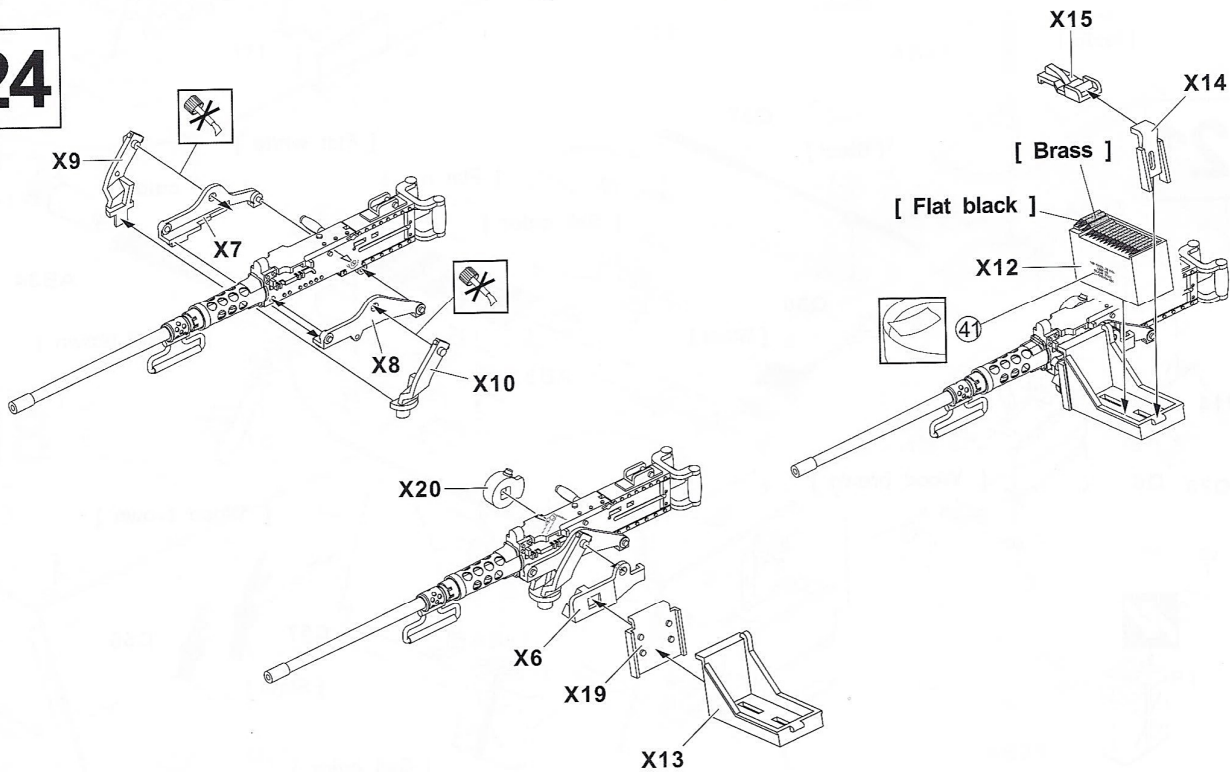
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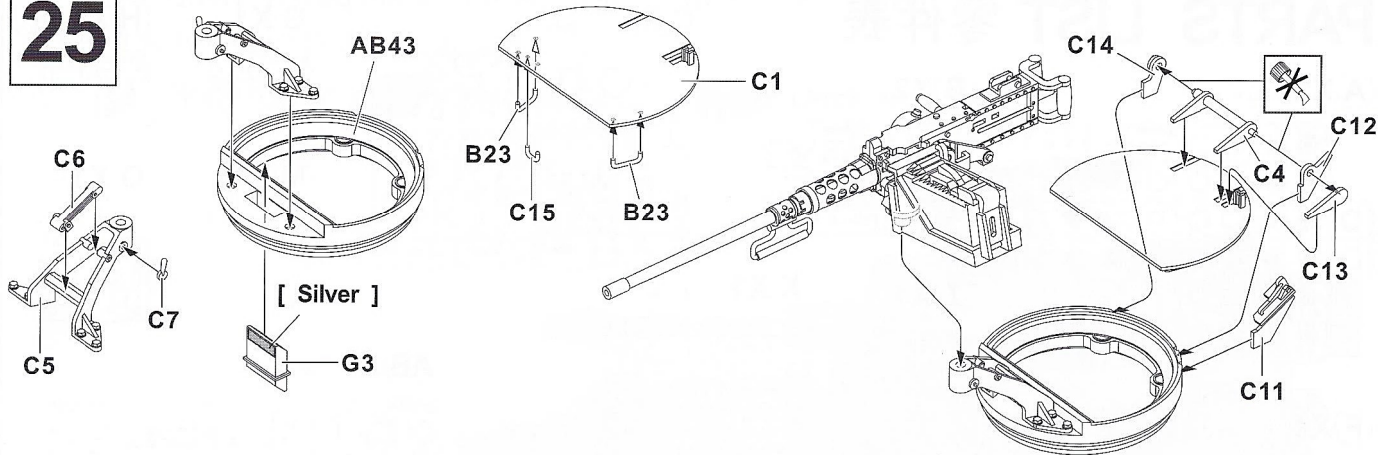
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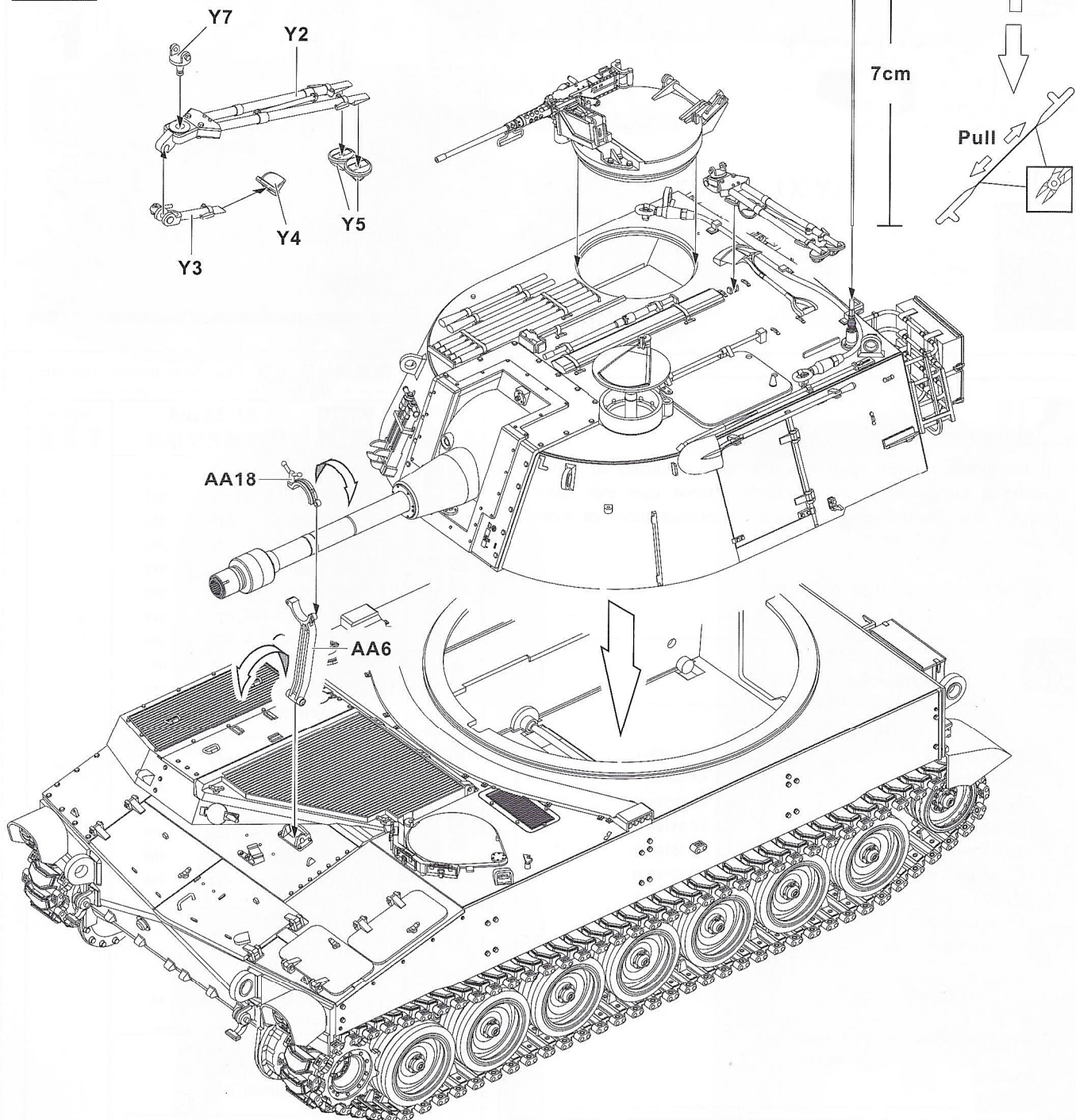


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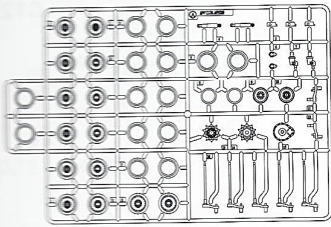
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《 M3 Tripod 》
《 M3三脚架 》

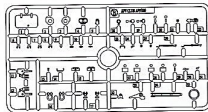


PARTS LIST 零件表

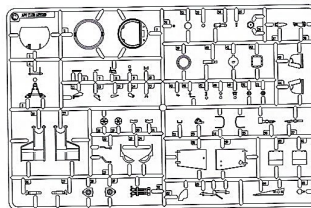
A X2 AF 35109



B X2 AF 35109



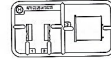
C X1 AF 35109



G X1 AF 35109



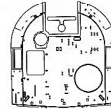
H X1 AF 35109



M X1 AF 35108



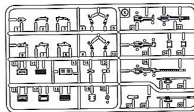
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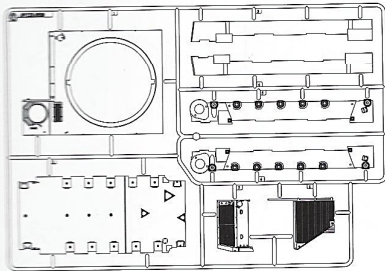
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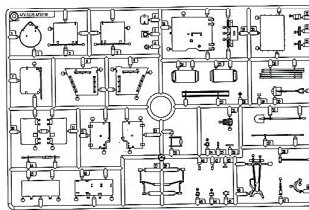
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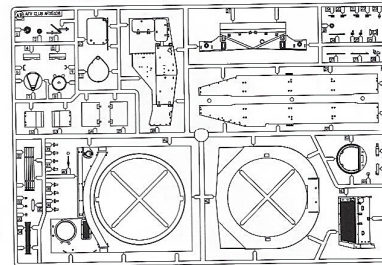
F X1 AF 35109



Q X1 AF 35109



AB X1 AF 35108



R X1 AF 35108



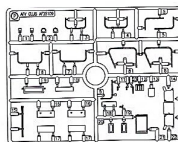
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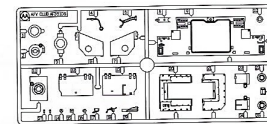
K X1 AF 35109



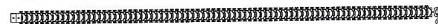
P X2 AF 35109



AA X1 AF 35108



J X2 AF 35109



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 35108 Parts Replacement Form

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> AF 35109-A | <input type="checkbox"/> AF 35109-J |
| <input type="checkbox"/> AF 35108-AA | <input type="checkbox"/> AF 35109-K |
| <input type="checkbox"/> AF 35108-AB | <input type="checkbox"/> AF 35108-M |
| <input type="checkbox"/> AF 35109-B | <input type="checkbox"/> AF 35108-O |
| <input type="checkbox"/> AF 35109-C | <input type="checkbox"/> AF 35109-P |
| <input type="checkbox"/> AF 35109-F | <input type="checkbox"/> AF 35109-Q |
| <input type="checkbox"/> AF 35109-G | <input type="checkbox"/> AF 35108-R |
| <input type="checkbox"/> AF 35109-H | <input type="checkbox"/> AF 35246-X |
| <input type="checkbox"/> AF 35S41-I | <input type="checkbox"/> AF 35246-Y |

Reason for replacement: Missing
 Broken

Signature: _____

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AF 35108 零件補充申請表

申請人
姓名 地址 電話

- | | |
|--------------------------------------|----------|
| <input type="checkbox"/> AF 35109-A | NT\$ 300 |
| <input type="checkbox"/> AF 35108-AA | NT\$ 200 |
| <input type="checkbox"/> AF 35108-AB | NT\$ 280 |
| <input type="checkbox"/> AF 35109-B | NT\$ 200 |
| <input type="checkbox"/> AF 35109-C | NT\$ 200 |
| <input type="checkbox"/> AF 35109-F | NT\$ 200 |
| <input type="checkbox"/> AF 35109-G | NT\$ 120 |
| <input type="checkbox"/> AF 35109-H | NT\$ 100 |
| <input type="checkbox"/> AF 35S41-I | NT\$ 80 |
| <input type="checkbox"/> AF 35109-J | NT\$ 280 |
| <input type="checkbox"/> AF 35109-K | NT\$ 120 |
| <input type="checkbox"/> AF 35108-M | NT\$ 180 |
| <input type="checkbox"/> AF 35108-O | NT\$ 180 |
| <input type="checkbox"/> AF 35109-P | NT\$ 220 |
| <input type="checkbox"/> AF 35109-Q | NT\$ 200 |
| <input type="checkbox"/> AF 35108-R | NT\$ 160 |
| <input type="checkbox"/> AF 35246-X | NT\$ 180 |
| <input type="checkbox"/> AF 35246-Y | NT\$ 150 |

+郵寄費 _____ NT\$ 80
(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 _____



總代理戰鷹企業 客服部收本公司將儘速為您處理。
請將本表與該部品相同金額之郵政匯票一同寄至。

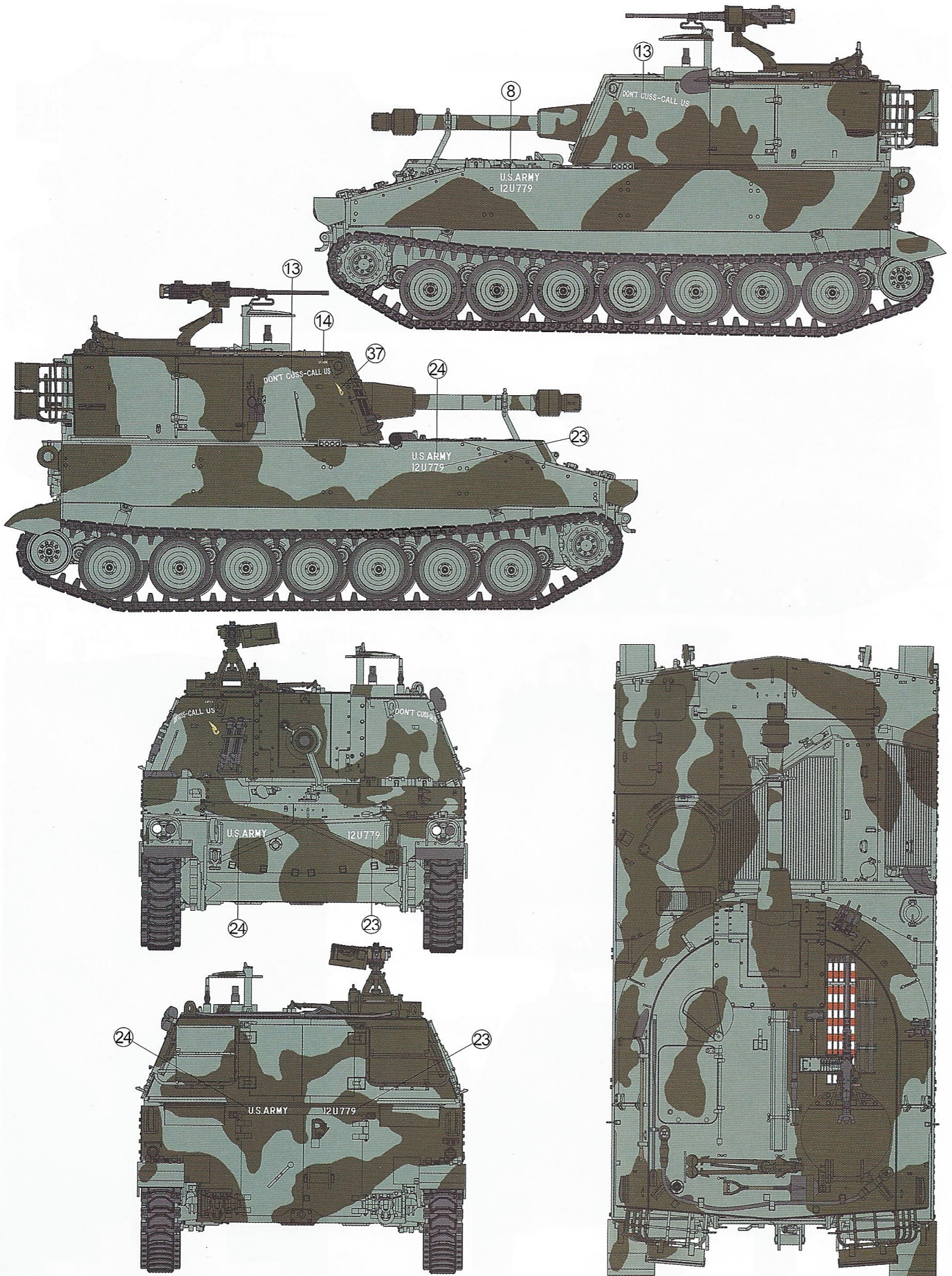
A

3rd Cavalry Regiment, 1st Australian Task Force, Sep. 1967.

澳大利亞第一特遣隊，第三騎兵團，1967年九月。




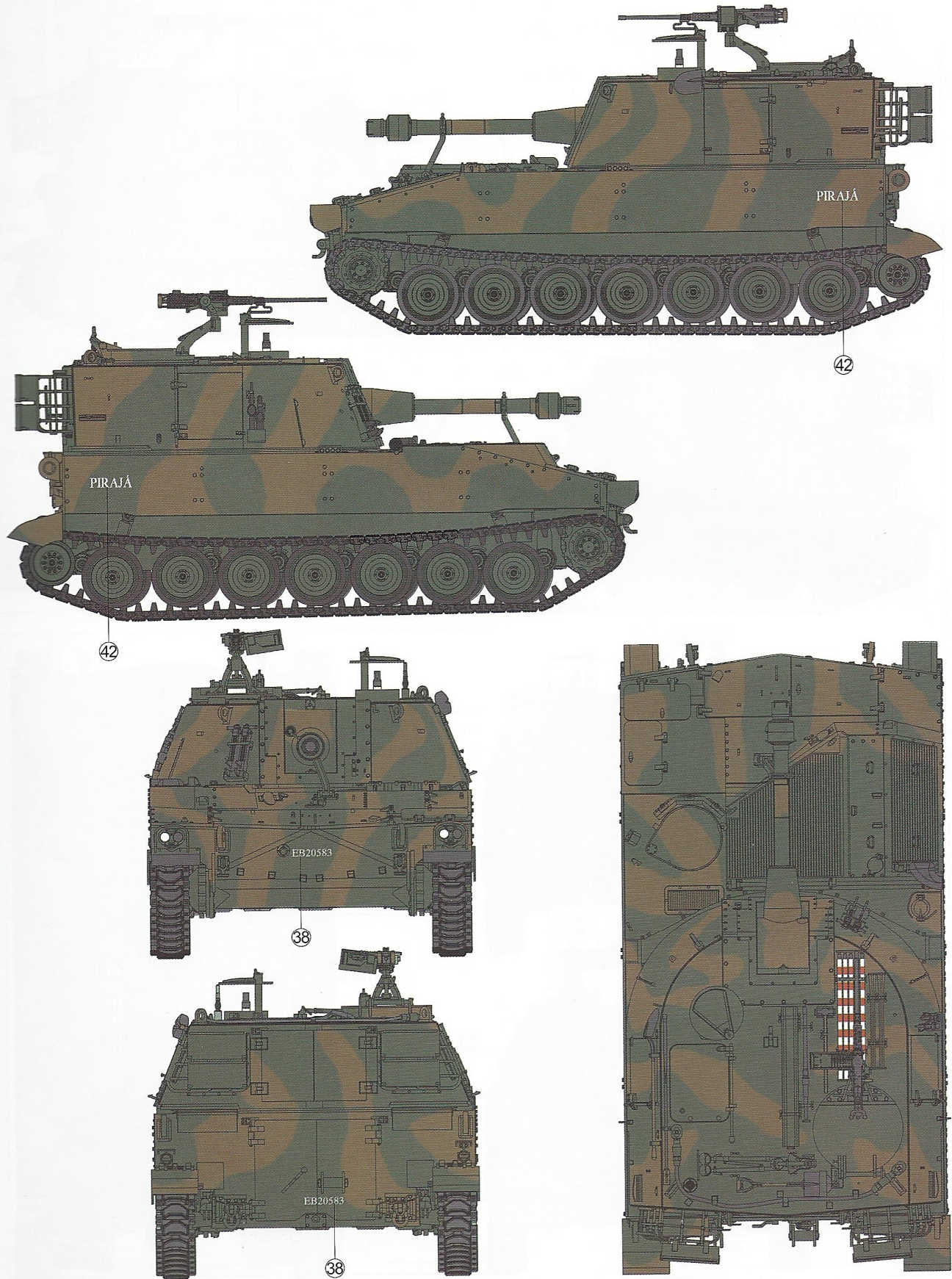
Body Color:  Olive drab (2)  Duck egg green



B Brazilian Army.
巴西陸軍。



Body Color:  Green FS34092  Desert sand FS30279



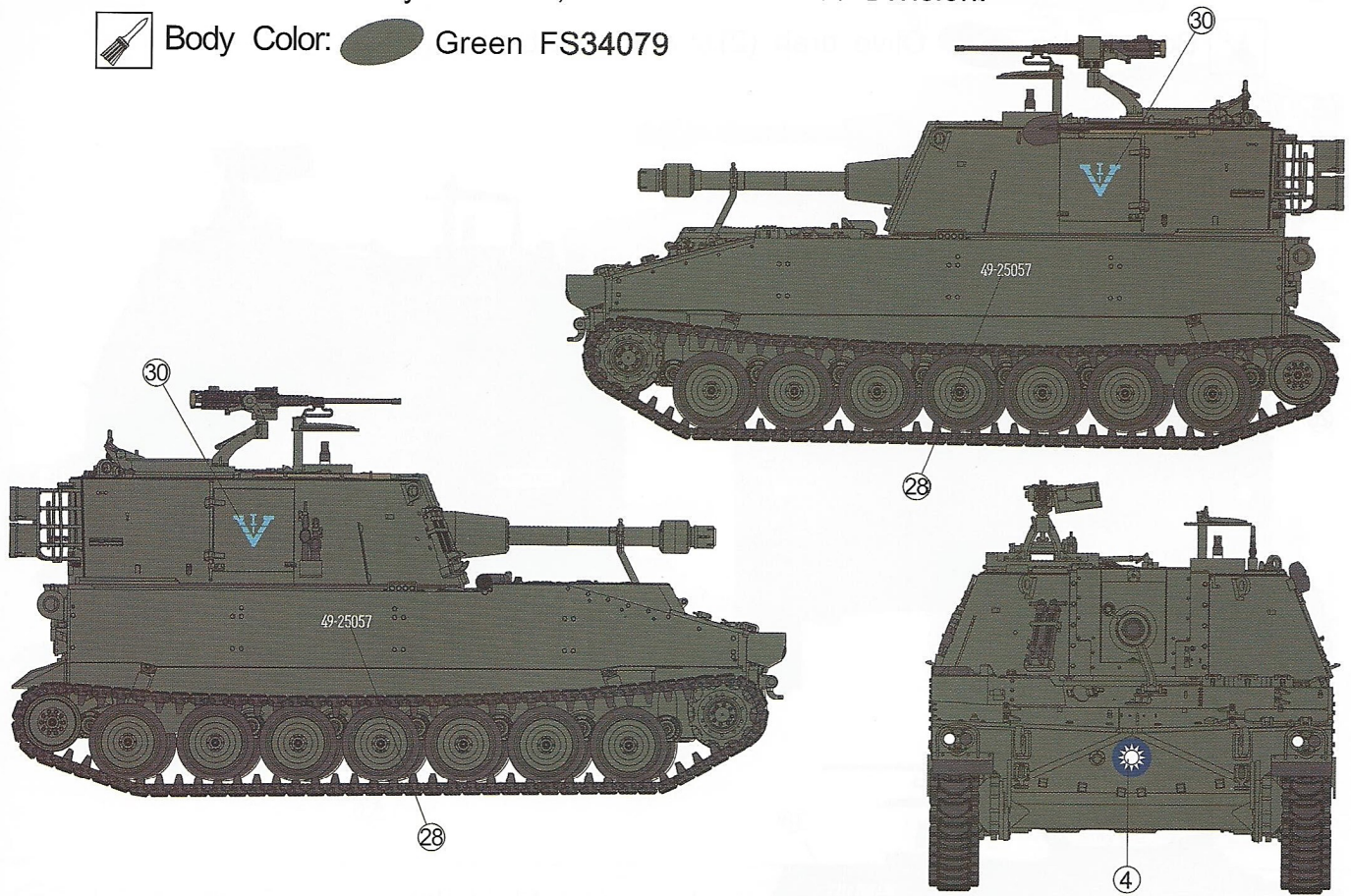
C

中華民國陸軍機械化一〇九師，砲兵四三三營。

ROCA, 433rd Artillery battalion, 109th Mechanized Division.



Body Color: Green FS34079



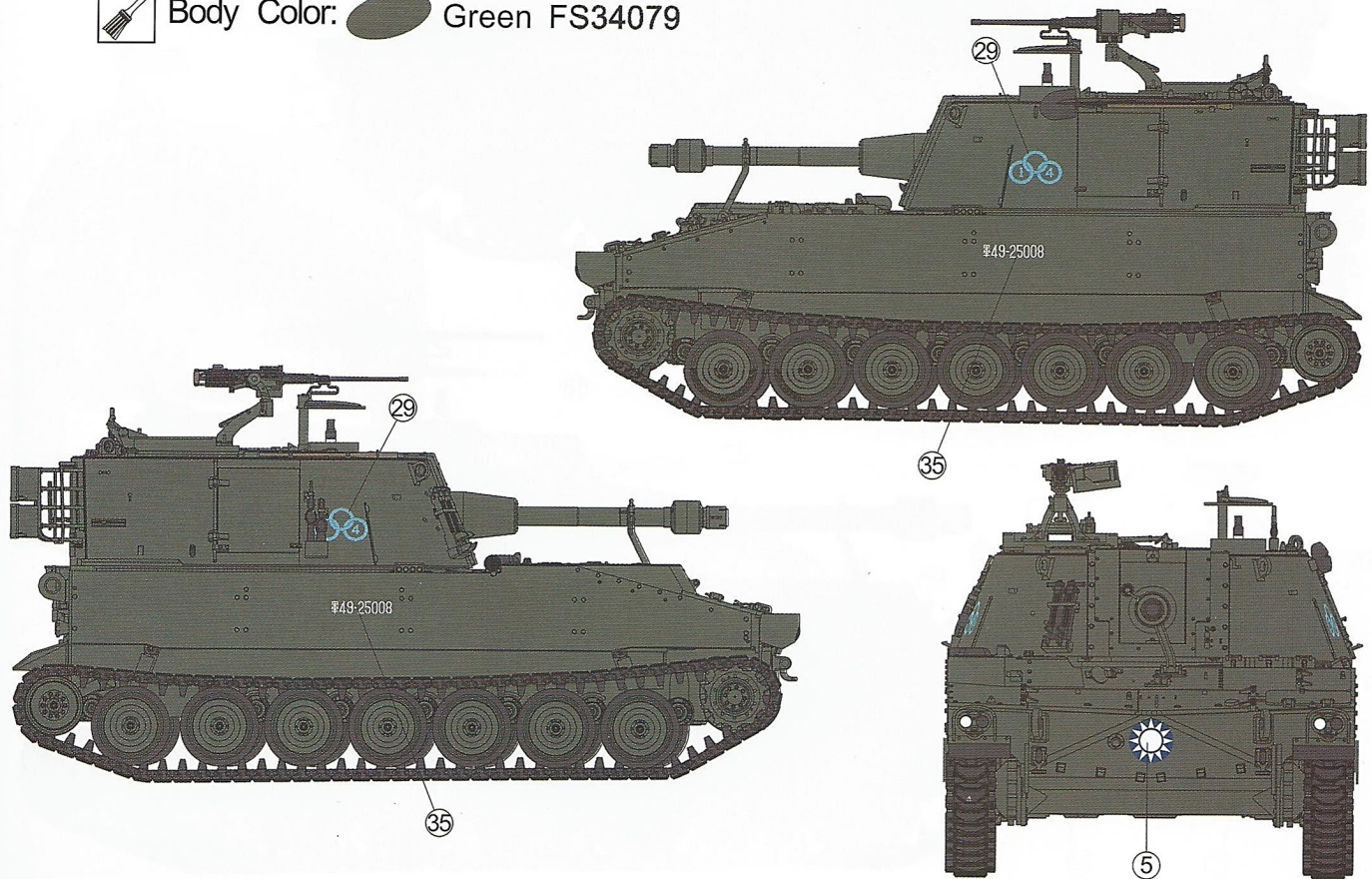
D

中華民國陸軍機械化二四九師，砲兵九九四營。

ROCA, 994th Artillery battalion, 249th Mechanized Division.

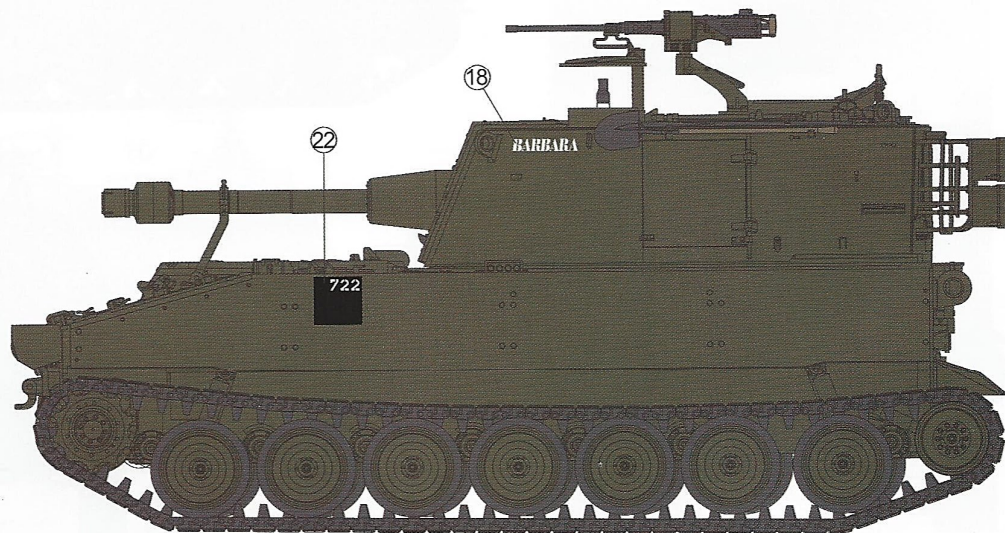
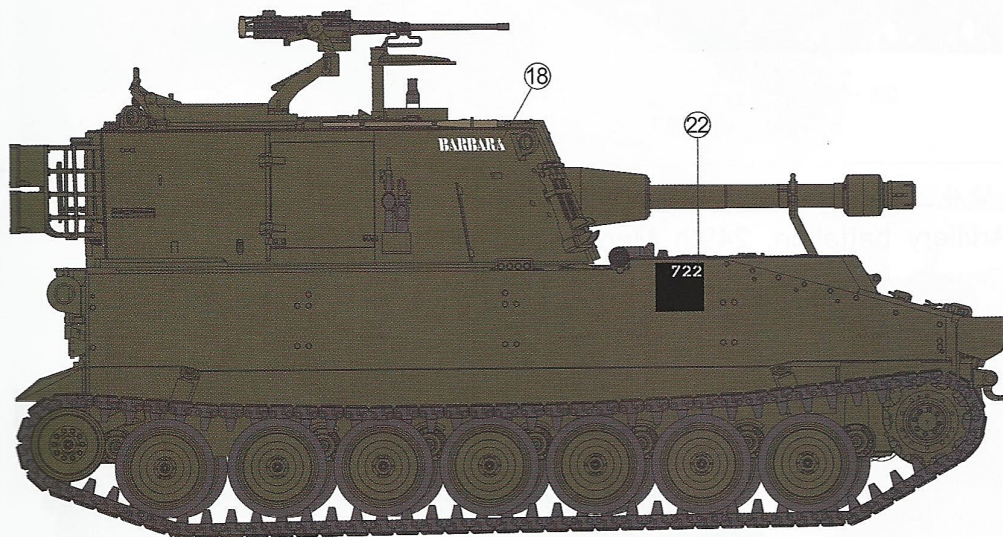
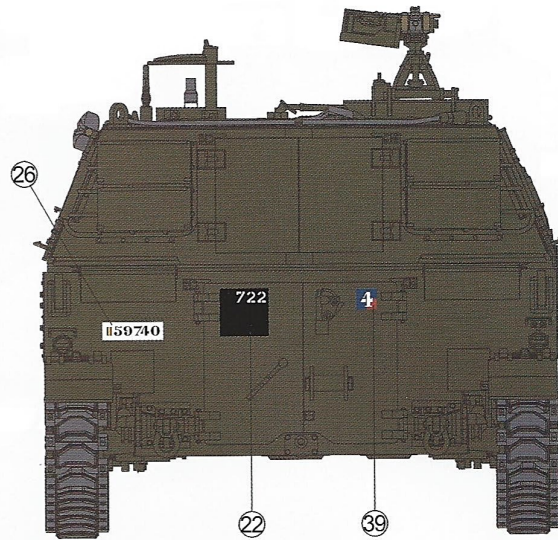
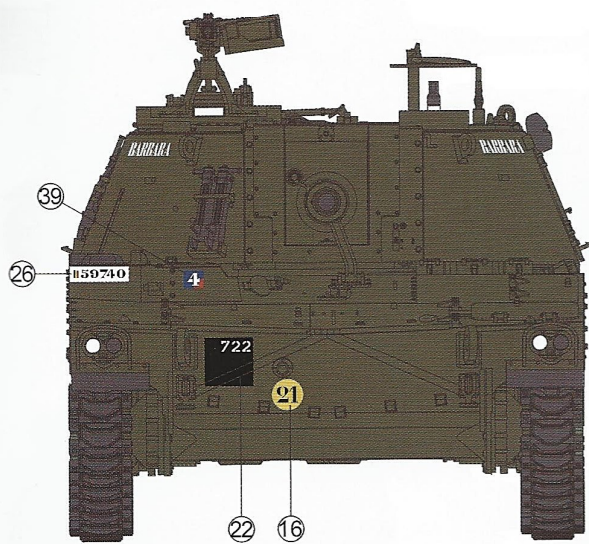


Body Color: Green FS34079



E Belgian Army.
比利時陸軍。

 Body Color:  Olive drab (2)



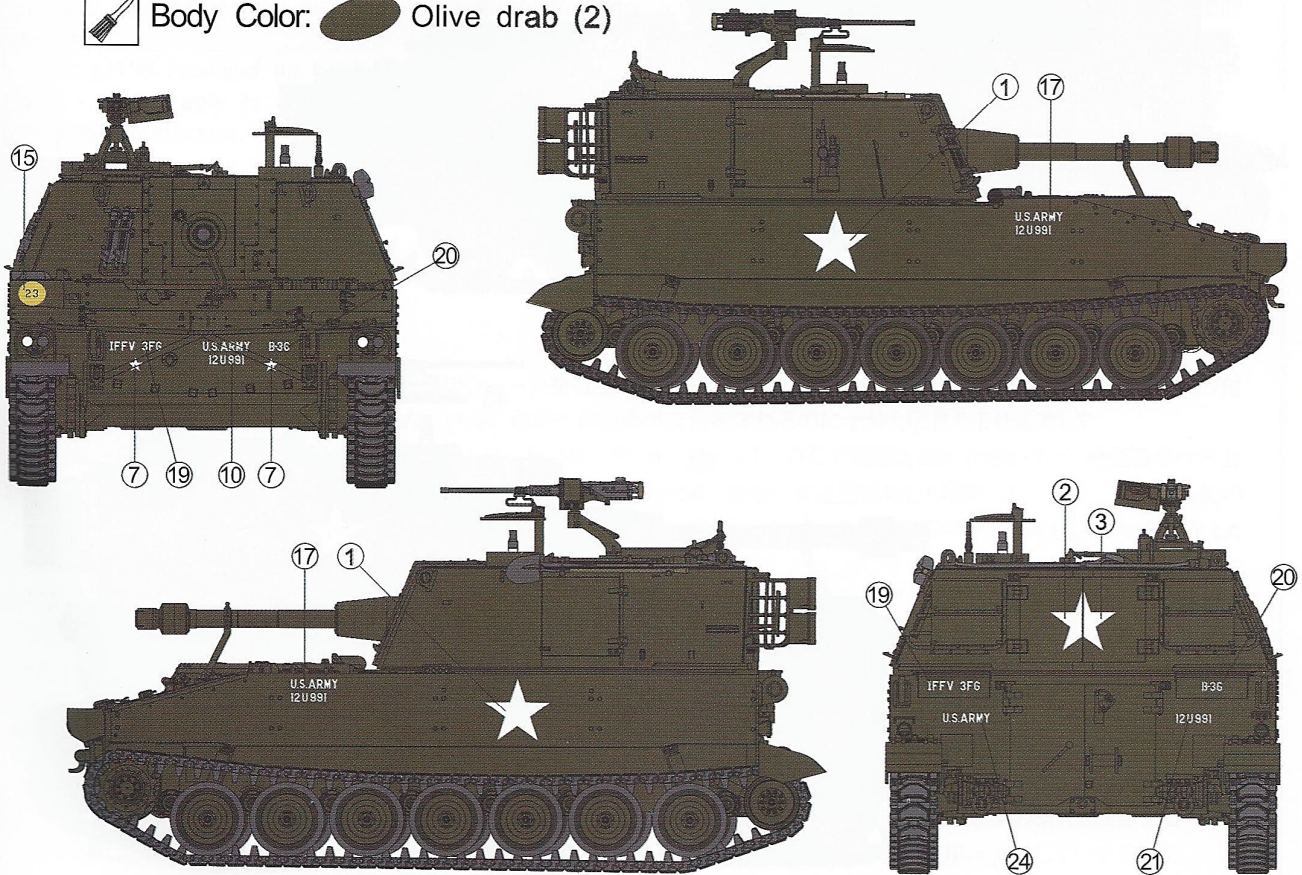
F Spanish Army, RACA 41.
 西班牙陸軍，第41炮兵團。

 Body Color:  Olive drab FS34087



G I FFV, 3rd Battalion, 6th Field Artillery Regiment.
 駐越南第一野戰軍，第六野戰砲兵團第三營。

 Body Color:  Olive drab (2)



H

II FFV, 1st Battalion, 40th Field Artillery Regiment.

駐越南第二野戰軍，第四十野戰炮兵團第一營。



Body Color:  Olive drab (2)

