

FROG
DE-LUXE
MODELS



▶ FROG "NO-SHOW" CEMENT TECHNIQUE

THE INDIVIDUAL PARTS OF THIS KIT ARE NOT ONLY DESIGNED TO INCORPORATE THE ULTIMATE IN AUTHENTIC DETAIL, BUT ARE ALSO PAINSTAKINGLY ENGINEERED TO INCLUDE SPECIAL CEMENTING SURFACES SUCH AS TABS, RIBS, SHOULDERS, ETC. USING THESE FEATURES IN COMBINATION WITH OUR UNIQUE ASSEMBLY DRAWINGS AND PROCEDURE, WE FEEL THAT YOUR EFFORTS AND OURS WILL BE AMPLY REWARDED BY A CLEAN, DURABLE, QUALITY SCALE MODEL OF SUPERIOR CRAFTSMANSHIP.

INTERESTING FACTS about your **WALKER BULLDOG** U.S. ARMY 76mm M-41 LIGHT TANK

THE U. S. ARMY WALKER BULLDOG TANK was the first completely new tank built by the Army since World War II. The existence of production models was publicly announced in March 1951. The Army provided a plant in Cleveland for the contractor, the Cadillac Division of General Motors, and assisted that company in tooling up for production.

This Light Tank is designed to be fast and highly maneuverable. It is used for probing, reconnaissance and patrol duty, and for knocking out any intervening light enemy opposition. Its primary mission is to detect points of enemy strength and weakness and to report such observations back to the Army Commander. The M-41 also has the ability to destroy small enemy units which might impede progress of our main forces. It also meets the modern demand of air transportability.

When this speedy little fighter arrived to support U.N. Forces on the Korean Battlefront, the enemy began to encounter much difficulty with this destructive and elusive "Bulldog." By the time enemy batteries managed to bring fire upon its last known position, most of their ammunition was expended upon empty target areas. When an enemy gunner was fortunate enough to get the "Bulldog" in his sights, he found it an almost impossible target, due to its extremely low silhouette and large number of deflecting surfaces designed into its hull and turret

armor. The Walker M-41 Light Tank has truly proven itself to be the "Bulldog" of Democracy.

GENERAL ORDNANCE DATA - The 76mm Gun Tank is an armored, full track, low silhouette, light combat vehicle, mounting a 76mm Gun. A cal. 50 machine gun is mounted on turret roof. The contours of hull and turret were designed for maximum projectile deflection. This vehicle carries a crew of four. Combat weight is 26 tons.

This vehicle is powered by a Continental 500 h.p. six cylinder, horizontally opposed, air cooled gasoline engine, with overhead valves and a single camshaft for each bank of three cylinders. The engine is supercharged; two conventional float-type carburetors are used, one for each bank of three cylinders. Cooling is provided by one axial flow fan mounted over the engine. Power is transmitted to the final drives and track sprockets through a cross drive transmission. Maximum speed of the vehicle is in excess of 40 mph with a cruising range of approximately 120 miles. Fuel capacity is 140 gallons. Cost to produce this vehicle is \$135,000.00.

The hull is a welded unit made up of armor steel castings, plates, and sections welded together. The "V" shaped front section is welded to the hull floor and side plates. The top of the "V" extends up and back to form the front of the vehicle. The rear sec-

tion is welded to the floor and side plates. The crew compartment is separated from the engine compartment by a bulkhead.

The removable engine compartment grilles (directly over the engine cooling fan) are attached to a frame work which is bolted to the hull. Hinged doors and grilles provide protection and accessibility to all other parts of the engine compartment.

The turret mounts the 76mm Gun which can be traversed 360 degrees in either direction both manually and hydraulically. The 76mm Gun can be elevated 19½ degrees and depressed 9½ degrees both manually and hydraulically.

Each road wheel is attached to the vehicle by a forged steel support arm which is independently sprung by a torsion bar extending across the hull immediately above the floor. The vehicle's fordability is 48 inches and can climb obstacles 28 inches in height plus ability to span a ditch 6 feet wide.

When the gun is in traveling position the length of the vehicle is 275 inches long, 128½ inches wide and 108 inches high.

Numerous types of 76mm ammunition, such as Armor Piercing, High Explosive, Tracer Smoke, etc., can be fired from the 76mm Gun. Shells vary in length from 31 to 34 inches and projectiles weigh approximately 8 to 15 pounds.

MADE OF TOUGH, DURABLE HIGH-IMPACT POLYSTYRENE PLASTIC

FROG INTERNATIONAL MODEL AIRCRAFT LTD. LONDON S.W.19



SERIES
M SCALE
3/8 in. = 1 ft.

WALKER BULLDOG

U.S. ARMY 76mm M-41 LIGHT TANK

assembly
instructions

M554
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YOUR FROG DE-LUXE MODEL

The U.S. Army M-41 Walker Bulldog Light Tank Weapon is another in a series of models built in strict accordance with specifications contained in official U.S. Army blueprints. We wish to take this opportunity to express our sincere gratitude to the U.S. Army Ordnance Corps, and the Office of the Chief of Information and Education, for generously furnishing complete and accurate data. Without this cooperation, the development of a completely authentic model would not have been possible. This model incorporates virtually all of the movable features of the actual weapon from traveling position through firing position, plus a unique suspension system wherein all Road Wheels are individually Spring Operated, similar to the real vehicle.

IN TRAVELING POSITION

The caterpillar action, necessary for fordability over uneven terrain, can best be demonstrated by pushing model over irregular object and surfaces while applying slight downward pressure. Note that authentic suspension permits realistic side to side and front to rear rocking. This feature alone should intrigue admirers of your completed model.

IN FIRING POSITION

The 76mm gun can be elevated 19.75 degrees, depressed 9.75 degrees and rotated 360 degrees by traversing turret. The crew members are easily adapted to combat positions. All of the hatches and doors operate, and the machine gun swivels, elevates and can be positioned for firing in either of two mounts on turret.

Your model is one of our SERIES "M", which are scaled $\frac{3}{8}$ in. = 1 ft. thus making possible a collection wherein all models are in true scale to each other.

PAINTING YOUR MODEL

Essentially, your model has been molded in authentic colors of Olive Drab for hull and turret, and black for the flexible track. However, it is recommended that certain small parts be painted to provide additional realism. Therefore, if you intend to paint your model we recommend that you fully examine all the steps in the instruction sheet for pieces requiring decoration. Complete the painting of all of these pieces prior to assembly, making certain to avoid getting paint on cementing areas. Use only enamel paints and allow sufficient drying time. Recommended tools for painting are a small (#1) artist's brush, and the end of a toothpick or opened paper clip for minute detailing, such as nuts, rivet heads, etc.

GENERAL INSTRUCTIONS

A. Notice that all parts are identified with a part number which is either stamped on the back of the piece or on a small detachable disc. Remove this disc once you properly identify it with the assembly you are working on.

B. Examine pieces and remove any other excess plastic with a sharp knife blade, making sure all protrusions have been removed. X-Acto knife sets are very handy for trimming and may be purchased at all hobby counters.

C. Purchase Frog cement for polystyrene plastic at your local store. Have a small cloth handy to wipe any cement you may accidentally get on your fingers.

D. See back of decals for instructions on how to apply.

"NO-SHOW" CEMENT TECHNIQUE




NO-SHOW CEMENTING is designed into your kit. The parts have been specifically engineered to enable you to complete a model which is free of burns and smears. The instructions and drawings have also been designed to carry out the "NO-SHOW" cementing feature, through the use of blue tones to indicate cementing areas. These design features will enable you to obtain favorable results and reward you with a model you will be proud to display.

1. First, locate and fit pieces together, prior to cementing.

NOTE: Most parts have been designed so that cement can be applied to underside or inside surfaces, to eliminate visible cement smears.

2. Apply cement wherever possible to underside or inside surfaces. Elsewhere, APPLY CEMENT SPARINGLY ONLY TO THE CEMENT AREAS INDICATED IN BLUE ON THE INSTRUCTION DRAWINGS. Hold or clamp parts until a permanent bond is assured.

LEGEND

-  -Cementing area.
-  -Special "No-Show" Cementing Points. Apply cement here after the parts are in assembled position.
-  -Hidden cementing areas.

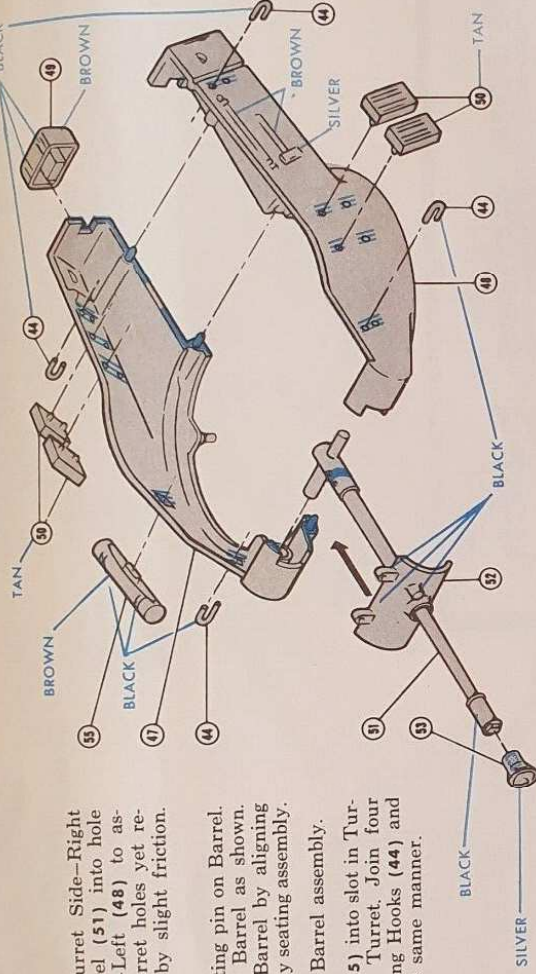
Follow numbered steps carefully for ease of assembly

NOTE: Circled numbers are ONLY for parts identification, and have no bearing on the assembly sequence.



NOTE: LIGHT GREY TONE INDICATES INDIVIDUAL PARTS. DARKER GREY TONE INDICATES PARTS THAT HAVE BEEN ASSEMBLED.

4 turret assembly, 76mm gun, tarpaulins, box



CHECK FIT OF PIECES AND TRIM IF NECESSARY

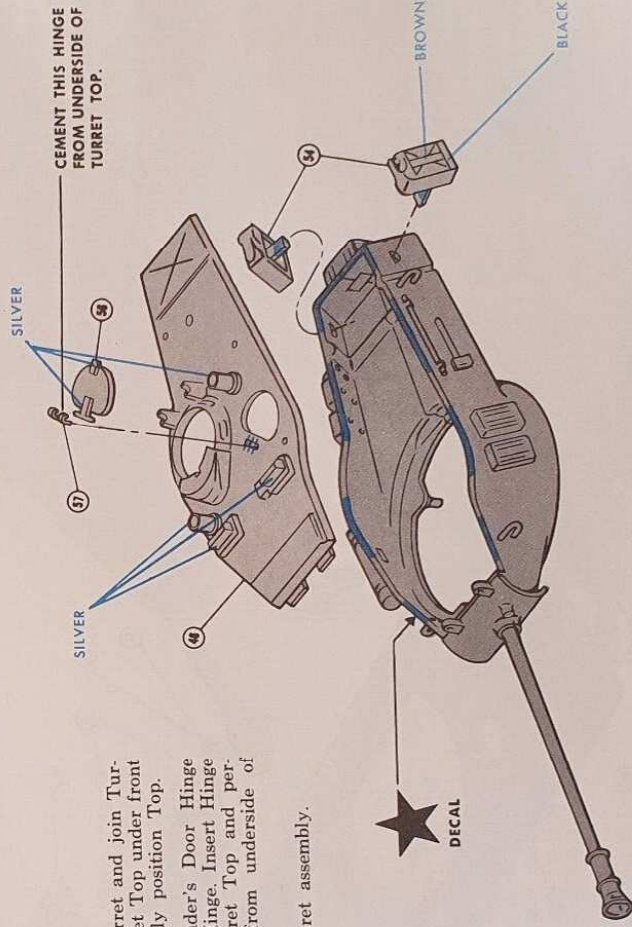
Apply cement to area indicated on Turret Side-Right (47) and insert large pin on Gun Barrel (51) into hole in Turret. Carefully join Turret Side-Left (48) to assembly. Gun Barrel should pivot in Turret holes yet remain in any desired position provided by slight friction. Allow cement to dry.

Apply cement to surface near small locating pin on Barrel. Position hole in Gun Shield (52) over Barrel as shown. Slide Shield along Barrel and join to Barrel by aligning small pin with slot in Shield and properly seating assembly.

Now join Flame Arrestor (53) to Gun Barrel assembly.

Insert locating tab on Tarpaulin Roll (55) into slot in Turret and apply cement from inside of Turret. Join four Small Tarpaulin Packs (50), four Lifting Hooks (44) and Tarpaulin Pack (49) to Turret in the same manner.

5 turret top, hooks, auxiliary cans



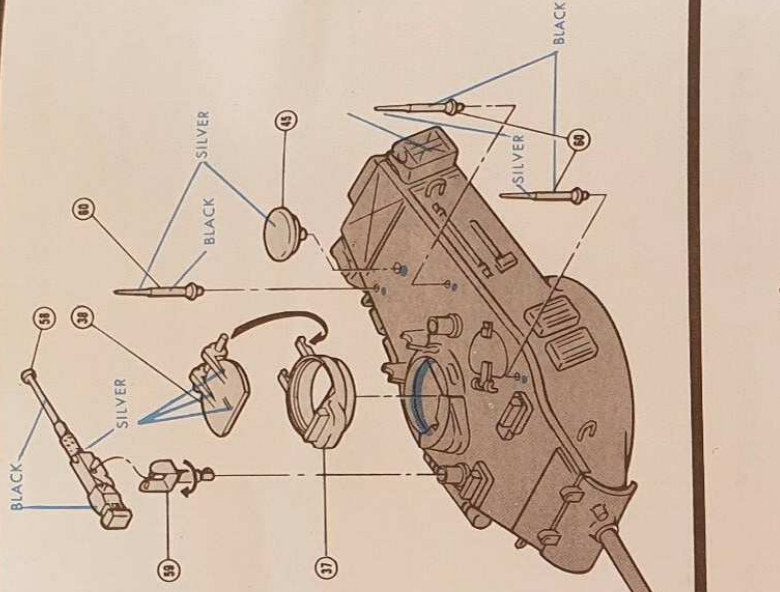
CHECK FIT OF PIECES AND TRIM IF NECESSARY

Apply cement to area indicated on Turret and join Turret Top (46) by inserting tabs on Turret Top under front ledge on assembled Turret and properly position Top.

Assemble Loader's Door (56) to Loader's Door Hinge (57) by inserting pins on Door into Hinge. Insert Hinge and Door assembly into slot in Turret Top and permanently join by applying cement from underside of Turret Top. Door should pivot freely.

Cement two Water Cans (54) to Turret assembly.

6 complete turret assembly



CHECK FIT OF PIECES AND TRIM IF NECESSARY

Cement Ventilator (45) to Turret assembly.

Assemble Commander's Hatch (37) to Commander's Hatch Door (38) by inserting pins on Door into cutouts in Hatch and close Door against Hatch. Apply cement to hole in Turret and join Hatch assembly.

Cement three Radio Masts (60) to Turret assembly.

Now carefully position and snap 50 cal. Machine Gun (58) into Gun Mount (59). Insert key on Mount into either of two sleeves on Turret making sure key enters cutout at bottom of sleeve and is free to pivot.

7 hull top, grilles, hatch, door, tool box

CHECK FIT OF PIECES AND TRIM IF NECESSARY

Position as shown and cement Tool Tray (31) to Hull Top (30).

Insert tabs on Lifting Shackles (43) into cutouts in Hull and apply cement from underside of Hull.

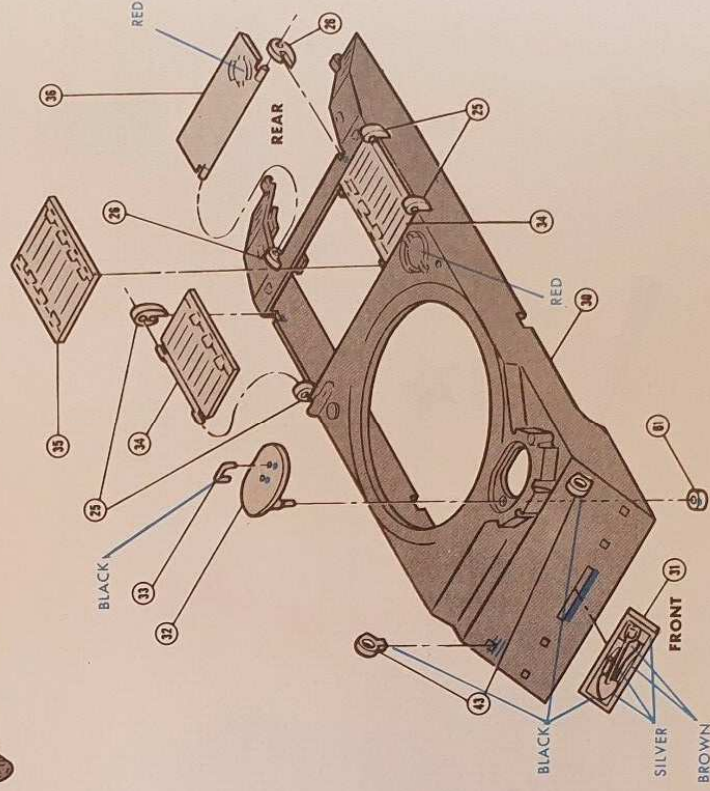
Cement Driver's Handle (33) to Driver's Door (32). Now insert pin on Door into hole provided in Hull. Place small amount of cement in hole in Pivot Cap (61) and place Cap over pin on Door. Door should be free to lift up and pivot.

Carefully examine drawing and correctly position and assemble one Grille Door Hinge (25) to Hull Top by first placing a small amount of cement into Hinge cutout in Hull Top. **Note:** Grille Door Hinges are the smallest Hinges in this kit. Now insert and seat Hinge, making sure short leg is on the outside of Hull. Assemble another Grille Door Hinge to Grille Door (34) as shown. Carefully apply small amount of cement to other Hinge cutout in Hull Top. Now insert pin on Grille Door into hole in Hinge already attached to Hull and at the same time insert and seat other Hinge. Grille Door should open and close freely.

Repeat above procedure for other Grille Door.

Repeat procedure again for proper assembly of Accessories Front Door (36) and Accessories Door Hinges (26). Note proper position for Hinges.

Center Grille (35) is shown in this step for simplicity and should be positioned over Motor opening (without cementing) when model is complete.



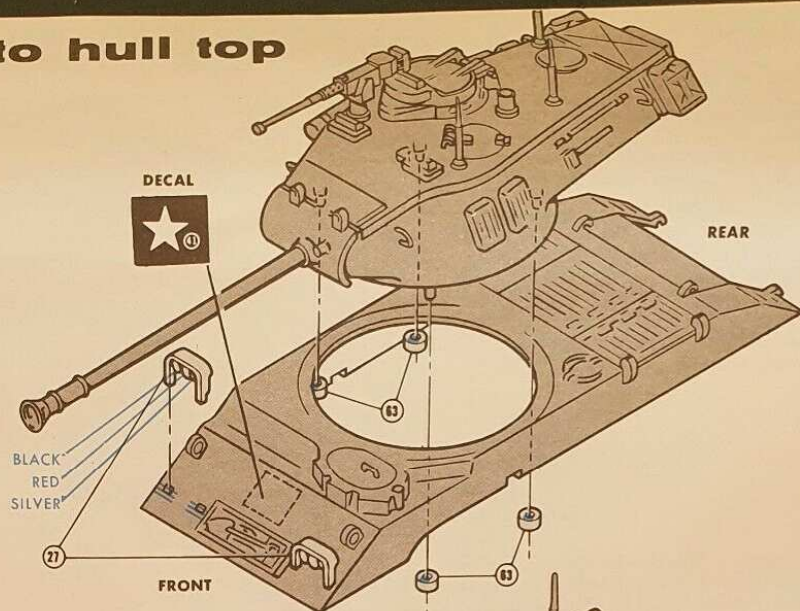
8 assemble turret to hull top

CHECK FIT OF PIECES AND TRIM IF NECESSARY

Cement Front Lights (27) to Hull Top.

Now insert pins on assembled Turret into opening in Hull Top. Carefully cement four Turret Ring Caps (63) to pins. Turret should be free to rotate. Set assembly aside.

NOTE: In order to maintain authenticity, the parts forming the Hatch and Grille hinges are of necessity small and fragile and great care should be exercised if you wish parts to operate. For display purposes, model can be cemented in any position without any loss in appearance.



9 assemble power plant, rear door, hull top to hull

CHECK FIT OF PIECES AND TRIM IF NECESSARY

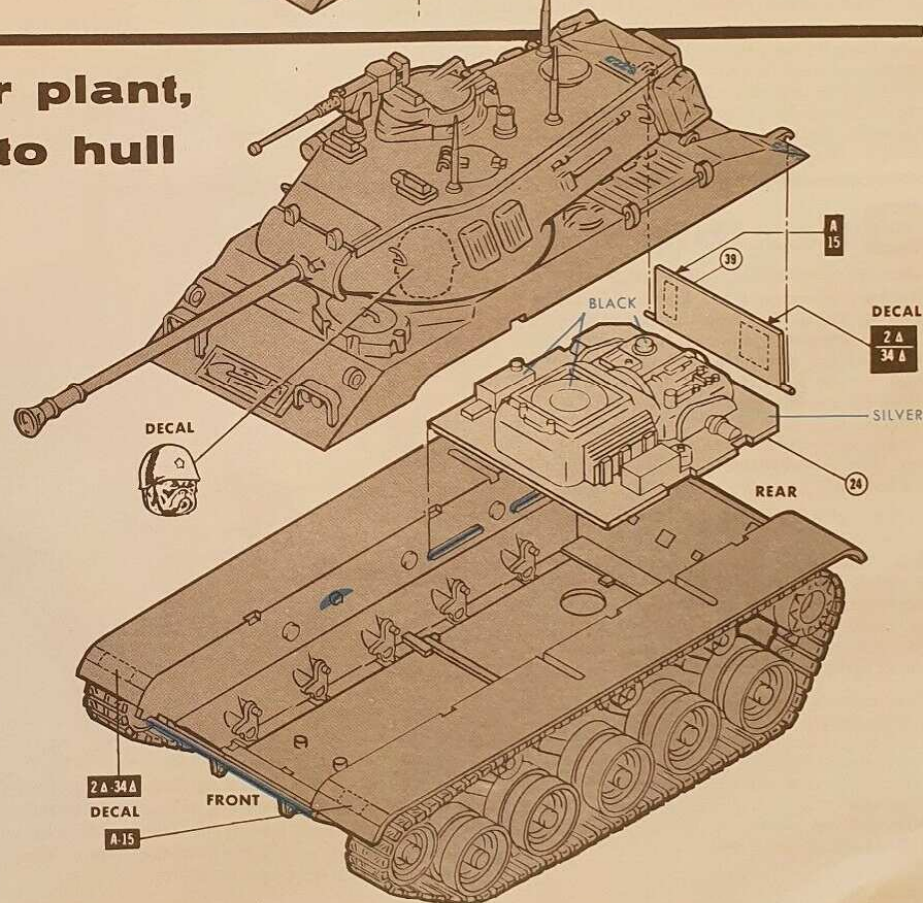
Apply cement to area indicated and join Motor (24) to Hull. **Note:** if desired, Motor should be painted and dry before assembly.

Assemble Accessories Rear Door (39) to Hull Top by inserting pins on Door into Hinges on Hull and closing Door. Keep Door from falling off Hull by placing scotch tape on both ends of Door temporarily.

Now carefully apply cement to rear end of Hull Top assembly as indicated by hidden "no show" cement on drawing. Avoid getting cement on Hinge pins. Also apply cement to front ledge and locating tab on Hull Bottom and join Hull Top assembly to Bottom.

TO APPLY DECALS—First see instructions on back of decals. Then cut decals apart **INSIDE** the dotted lines. See illustration for correct location, then apply one subject at a time. Slide decal partly off paper backing, hold decal in correct position on model, then slip backing from beneath decal. Adjust position if necessary, smooth out any wrinkles and blot with a soft cloth.

NOTE: Do not become alarmed if Decals appear milky against the olive drab background. This will disappear when Decals are thoroughly dry.



10 final assembly

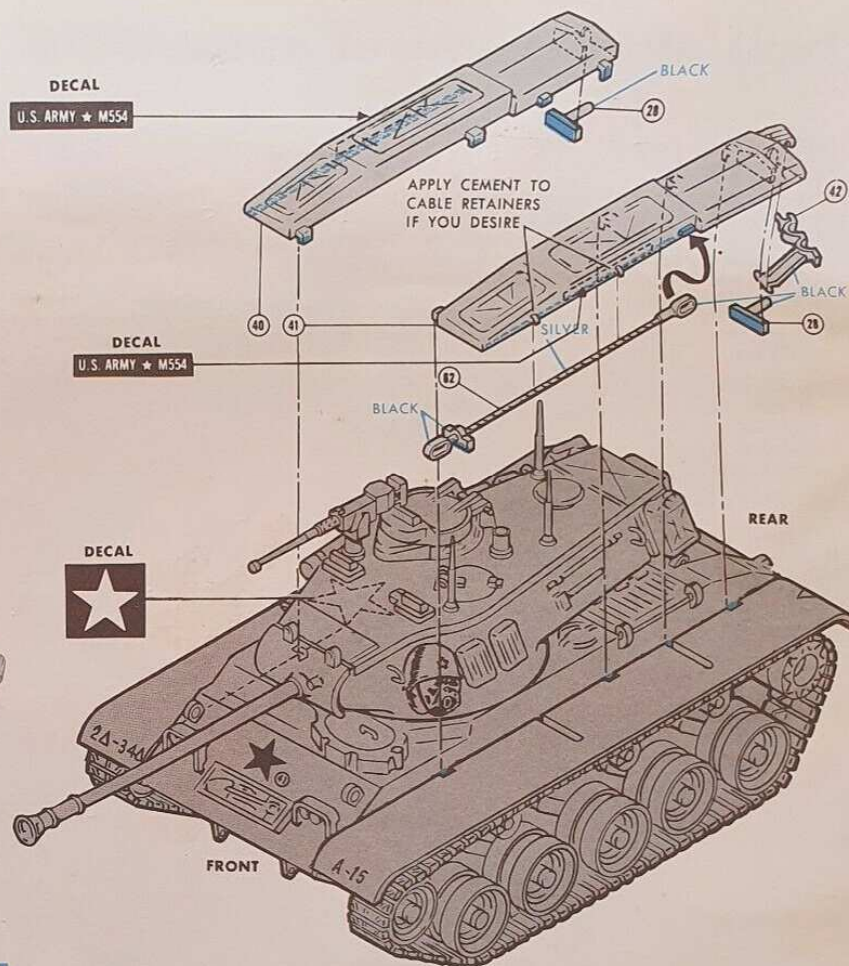
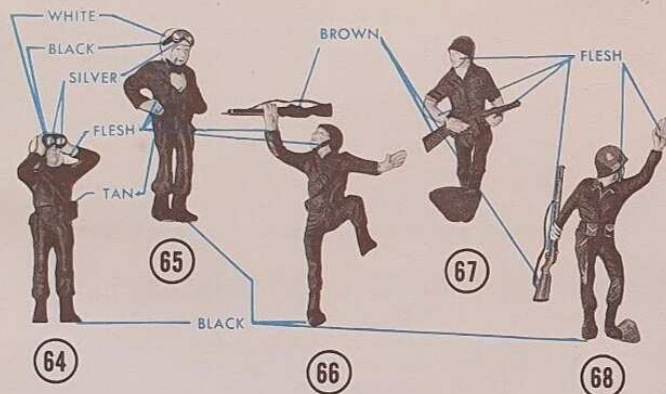
CHECK FIT OF PIECES AND TRIM IF NECESSARY

Cement Exhaust Pipe (28) to Fender Box-Right (40). Join Fender Box to Hull.

Cement remaining Exhaust Pipe to Fender Box-Left (41). Apply cement to tab on Fender Box-Left as shown and carefully position Towing Cable (62) as shown. Now insert loop on Cable over tab on Box and hook Cable into two "U" shaped retainers. Now insert Gun Traveling Lock (42) into "U" shaped hinge on Fender Box and join assembly to Hull.

Center Grille previously mentioned in step number 7 can be placed above Motor and your model is complete.

Crew members can be positioned in or out of the vehicle as desired.



Another super-detailed military model for your SERIES M collection ... by FROG

PARTS LIST FOR YOUR SERIES M WALKER BULLDOG

M554

Part No.	NAME	Part No.	NAME	Part No.	NAME	Part No.	NAME
1	RIGHT HULL PANEL	19	FINAL DRIVE SPROCKET (2)	37	COMMANDER'S HATCH	55	TARPAULIN ROLL
2	LEFT HULL PANEL	20	REAR HOOK (2)	38	COMMANDER'S HATCH DOOR	56	LOADER'S DOOR
3	FRONT PLATE	21	TOWING SHACKLE (4)	39	ACCESSORIES REAR DOOR	57	LOADER'S DOOR HINGE
4	REAR PLATE	22	PINTLE HOOK	40	FENDER BOX RIGHT	58	MACHINE GUN
5	OUTSIDE ROAD WHEEL (10)	23	TAIL LIGHTS (2)	41	FENDER BOX LEFT	59	GUN MOUNT
6	INSIDE ROAD WHEEL (10)	24	MOTOR	42	GUN TRAVELING LOCK	60	RADIO MAST (3)
7	ROAD WHEEL PIN (12)	25	GRILLE DOOR HINGE (4) (1 Extra)	43	LIFTING SHACKLE (2)	61	PIVOT CAP
8	ROAD WHEEL ARM (10)	26	ACCESSORIES DOOR HINGE (2) (1 Extra)	44	LIFTING HOOK (4)	62	TOWING CABLE
9	SPRING LEVER (10)	27	FRONT LIGHT (2)	45	VENTILATOR	63	TURRET RING CAP (4)
10	IDLER WHEEL-OUTSIDE (6)	28	EXHAUST PIPE (2)	46	TURRET TOP	64	COMMANDER
11	IDLER WHEEL-INSIDE (6)	29	HULL ACCESS PLATE	47	TURRET SIDE-RIGHT	65	RADIO MAN
12	IDLER WHEEL CAP (6)	30	HULL TOP	48	TURRET SIDE-LEFT	66	CLIMBING RIFLEMAN
13	FINAL DRIVE HOUSING-RIGHT	31	TOOL TRAY	49	TARPAULIN PACK	67	TOMMY GUNNER
14	FINAL DRIVE HOUSING-LEFT	32	DRIVER'S DOOR	50	SMALL TARPAULIN PACK (4)	68	INFANTRYMAN
15	COMPENSATING WHEEL-OUTSIDE (2)	33	DRIVER'S DOOR HANDLE	51	GUN BARREL	69	FLEXIBLE TRACK (2)
16	COMPENSATING WHEEL-INSIDE (2)	34	GRILLE DOOR (2)	52	GUN SHIELD	70	SPRING (10)
17	FINAL DRIVE PIN (2)	35	CENTER GRILLE	53	FLAME ARRESTOR	71	DECALS
18	FINAL DRIVE (2)	36	ACCESSORIES FRONT DOOR	54	WATER CAN (2)		

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