#### HEADQUARTERS UNITED STATES ARMY, EUROPE AND SEVENTH ARMY APO New York 09403

USAREUR PAM ) No. 30-60-1 1 March 1973

## **IDENTIFICATION GUIDE**

#### PART ONE

### WEAPONS AND EQUIPMENT EAST EUROPEAN COMMUNIST ARMIES

#### **VOLUME IV**

ARMORED VEHICLES SCOUT CARS, APC'S AND TANK RECOVERY VEHICLES

#### HEADQUARTERS UNITED STATES ARMY, EUROPE AND SEVENTH ARMY APO New York 09403

1 March 1973

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FOR THE COMMANDER IN CHIEF:

**OFFICIAL:** 

SIDNEY GRITZ

Brigadier General, GS Adjutant General R. C. CONROY Major General, GS Chief of Staff

#### FOREWORD

The purpose of this guide is to present the essential tactical, technical and recognition data on weapons and equipment presently employed in the armies and security forces of the Communist countries of Eastern Europe.

Every effort has been made to make this guide comprehensive, within the limits of an unclassified publication. Any discrepancies noted or any information on new or modified weapons or equipment should be forwarded to this headquarters for inclusion in future change sheets.

Part One of this guide supersedes the weapons and armored vehicles sections of the <u>Identification Guide (Ordnance Equipment)</u> Warsaw Pact <u>Countries</u>, USAREUR Pam 30-60-1, Seventh Revised Edition, 31 July 1968; and it also replaces the same section that appeared in the rescinded (6 Oct 69) <u>Identification Handbook</u>, Yugoslav Army Weapons and Equipment, USAREUR Pam 30-60-5, 31 March 1965.

Part Two of this guide (to be published at a future date) will replace the truck and tractor sections of the above mentioned publications and of the <u>Identification Guide (Engineer Equipment)</u> Warsaw Pact Countries, USAREUR Pam 30-60-8, Fifth Edition, 27 February 1970.

Part Three of this guide (also to be published at a future date) will cover all other equipment, thus completing the replacement of the older guides mentioned.

The date of information for Part One, Volume Four, of the new guide is October 1972.

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HAROLD R. AARON Major General, GS Deputy Chief of Staff, Intelligence

#### TABLE OF CONTENTS

Page

FOREWORD 3 TABLE OF CONTENTS Δ INTRODUCTION volume one METRIC ABBREVIATIONS volume one CONVERSION TABLES volume one SIGNIFICANT TECHNICAL WORDS volume one DEFINITIONS volume one NOTE ON NOMENCLATURE AND MODEL DESIGNATIONS volume one

#### VOLUME ONE

#### SMALL ARMS AND AMMUNITION

AMMUNITION INFRARED DEVICES SMALL ARMS Soviet Pistols and Machine Pistols Czechoslovak Pistols and Machine Pistols Hungarian and Polish Pistols and Machine Pistols Yugoslav Pistols Soviet and Polish Submachineguns Czechoslovak and Romanian Submachineguns Yugoslav Submachineguns Bolt Action Rifles and Carbines Semiautomatic Rifles and Carbines Sniper Rifles Kalashnikov Assault Rifles Czechoslovak and German Assault Rifles Soviet Light Machineguns Czechoslovak and Yugoslav Light Machineguns General-Purpose Machineguns Soviet and Czechoslovak Medium Machineguns 12.7mm and 14.5mm Heavy Machineguns **GRENADES** Soviet Hand Grenades Czechoslovak, Hungarian and Yugoslav Hand Grenades Polish and Yugoslav Rifle Grenades Smoke Grenades **PYROTECHNICS** Signal Pistols, Hand Launchers, Illuminating Rockets and Related Ammunition RECOILLESS ANTITANK WEAPONS Antitank Grenade Launchers Antitank Rocket Launchers Soviet Recoilless Guns Czechoslovak Recoilless Guns Yugoslav Recoilless Guns and Rifles

#### ANTITANK GUIDED MISSILES

Antitank Guided Missiles AT-1 "SNAPPER" and AT-2 "SWATTER" Antitank Guided Missile AT-3 "SAGGER"

MORTARS

50mm, 60mm and 81mm Mortars

82mm Mortars

107mm and 120mm Mortars

160mm and 240mm Mortars

#### VOLUME TWO

#### ARTILLERY

FIELD AND COAST ARTILLERY CANNON Fire Control 45mm and 57mm Antitank Guns 76mm Field and Mountain Guns 85mm Field Guns 100mm Field Guns 105mm Howitzers 122mm Howitzers 122mm Field Guns 130mm Field and Coastal Guns 152mm Howitzers 152mm Gun-Howitzers 155mm Howitzers and Guns 203mm Howitzers and Gun-Howitzers FIELD ARTILLERY ROCKET LAUNCHERS Towed Multiround Rocket Launchers Truck-mounted 122mm Multiround Rocket Launchers Truck-mounted 130mm Multiround Rocket Launchers Truck-mounted 132mm and 140mm Multiround Rocket Launchers Truck-mounted 200mm and 250mm Multiround Rocket Launchers Truck and Tractor-Mounted 240mm Multiround Rocket Launchers SURFACE-TO-SURFACE FREE ROCKETS AND GUIDED MISSILES Surface-to-Surface Free Rockets Over Ground Surface-to-Surface Guided Ballistic Missiles Surface-to-Surface Guided Cruise Missiles AIR DEFENSE ARTILLERY MACHINEGUNS AND CANNON Fire Control Rifle Caliber Antiaircraft Machineguns 12.7mm Antiaircraft Machineguns 14.5mm Antiaircraft Heavy Machineguns 20mm Automatic Antiaircraft Guns 23mm and 30mm Automatic Antiaircraft Guns 37mm and 57mm Automatic Antiaircraft Guns 40mm Automatic Antiaircraft Guns 85mm and 88mm Antiaircraft Guns 90mm and 94mm Antiaircraft Guns 100mm and 130mm Antiaircraft Guns

SURFACE-TO-AIR GUIDED MISSILES Surface-To-Air Guided Missile SA-2 "GUIDELINE" Surface-To-Air Guided Missile SA-3 "GOA" Surface-To-Air Guided Missile SA-4 "GANEF" Surface-To-Air Guided Missile SA-6 "GAINFUL"

#### **VOLUME THREE**

#### ARMORED VEHICLES: TANKS AND SELF-PROPELLED ARTILLERY

ARMORED VEHICLES, GENERAL **Typical Tanks** Typical Assault Gun Typical Armored Cars and Personnel Carriers Tank Stowage Integral External Fuel Tank Tank Suspension System Tank Running Gear Springs Hull Construction T34/54/55/62, JS, PT 76 and BMP Tracks Cupolas Muzzle Brakes Mantlets Typical Tank Crew Positions Bore Evacuator (Soviet Type) Tank Driving Uniforms for Tank Crews Navigation Equipment Fire Control Equipment Training Crew Duties Tank-Mounted Engineer Equipment Water Jet Systems Tank Snorkeling VULNERABILITIES TANK GUNS Tank Guns, General Tank Guns of Soviet Origin Tank Guns of United States Origin OTHER ARMORED VEHICLE CANNON Other Armored Vehicle Cannon (Except Antiaircraft) Cannon of Soviet Origin Cannon of United States Origin ANTIAIRCRAFT GUNS ON SELF-PROPELLED MOUNTS TANK MACHINEGUNS TANKS New Soviet Tanks Light Tanks Medium Tanks T-34 and T-44 Series Medium Tanks T-54 and T-55 Series

Medium Tanks T-62 Series Medium Tanks M4 and M47, US Models Heavy Tanks JS Series Heavy Tanks T-10 Series ASSAULT GUNS AND SELF-PROPELLED CANNON Airborne Assault Guns Light and Medium Assault Guns

Heavy Assault Guns

Yugoslav Self-Propelled Cannon

Super Heavy Self-Propelled Cannon

SELF-PROPELLED ANTIAIRCRAFT AUTOMATIC WEAPONS

Wheeled Self-Propelled Antiaircraft Automatic Weapons Half-Track Self-Propelled Antiaircraft Automatic Weapons Tracked Self-Propelled Antiaircraft Automatic Weapons

#### **VOLUME FOUR**

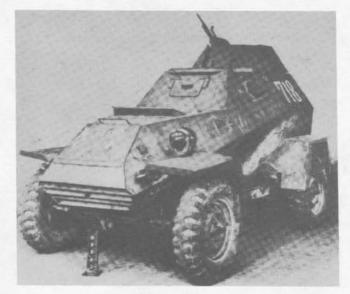
ARMORED VEHICLES: SCOUT CARS, APC'S AND TANK RECOVERY VEHICLES

Pa	age
ARMORED RECONNAISSANCE VEHICLES	
Soviet and East German Armored Cars and Water Cannon	
Yugoslav Armored Cars	
Soviet Amphibious Wheeled Reconnaissance Vehicles	1
Hungarian Amphibious Wheeled Reconnaissance Vehicles	1
ARMORED PERSONNEL CARRIERS AND INFANTRY COMBAT VEHICLES	6
Soviet Non-amphibious Wheeled Armored Personnel Carriers68	
Soviet Amphibious Wheeled Armored Personnel Carriers	0
Czechoslovak Amphibious Wheeled Armored Personnel Carriers10	
Half-Track Armored Personnel Carriers120	0
Soviet and Czechoslovak Amphibious Tracked Armored	
Personnel Carriers128	8
Yugoslav and Chinese Communist Amphibious Tracked Armored	
Personnel Carriers15	
Infantry Combat Vehicles150	6
TANK RECOVERY VEHICLES	
Medium Tank Recovery Vehicles T-34 Chassis	8
Medium Tank Recovery Vehicles T-54 and T-55 Chassis	6
Heavy Tank Recovery Vehicles JS Chassis	6
Yugoslav Tank Recovery Vehicles	3

# ARMORED

# RECONNAISSANCE

# VEHICLES



### ARMORED CARS

1

**BA-64** 

SK-1





SK-2 ARMORED WATER CANNON Armored car BA-64 Armored car SK-1 Armored water cannon SK-2

At the beginning of the German invasion in 1941, the USSR possessed large numbers of armored cars, which were all obsolete and lacked all-wheel-drive. Production was stopped during the first part of the war and not resumed until 1943. At this time, a new lightweight all-wheel-drive vehicle based on the chassis of the new Soviet GAZ-67B jeep was placed in production. This vehicle, the BA-64, was strictly a reconnaissance and liaison vehicle. Not only was it lightly armored, but it also had minimal armament--normally a single 7.62mm machinegun, although often a 14.5mm antitank rifle was carried instead. The crew was also very small, consisting of only a driver and a commander. Although the BA-64 found use in Soviet and other East European Communist armies as a reconnaissance vehicle into the early 1950s, it has since been withdrawn and now is found only in security forces.

As a result of their experiences with the riots in June 1953, the East Germans in 1954 began to produce two armored vehicles for security work. Both are based on standard East German-produced trucks. The smaller vehicle is the SK-1 armored car which employs the 4x4 version of the Robur Garant 30K light truck. The armament is a single machinegun. East German Army units have never employed the SK-1. Only police, security troops and workers' militia units use it. Although the SK-1 resembles the BA-64, the SK-1 is much larger.

The SK-2 armored water cannon is a riot-control vehicle built on the chassis of the East German G 5 (6x6) truck. The turretmounted, high-pressure water cannon is placed between the driver's cab and the water tank in the rear. The cab and the water cannon operator's compartment are armored against stones and similar missiles, but the water tank is not. In order to fill the water tank, the vehicle is brought into position above a water main manhole. The operator opens the hatch in the floor, lowers a filler pipe, and makes the connection. Filling takes from five to eight minutes. It is not necessary to leave the vehicle during filling. The tank may also be filled during operation. Maximum range is 70 meters. Four different jets are provided.

		DA CA	01/ 3	04.0
Vobiclo		<u>BA-64</u>	<u>SK-1</u>	<u>SK-2</u>
Vehicle	<b>L</b>	0 4	<b>F A</b>	0.1
W <b>eight c</b> bt Wheelbase	t mm	2.4 2130	5.4 3770	9 <b>.1</b> 3800+1250
Length		3660*	4000	7500
Width	mm	1740	2000	2500
Height w/o MG	mm	1740		
w/turret	mm	1900	2800	
•	m			4300
Track: front/rear	mm	1448	1500/1450	1800/1750
Clearance Tire size	mm	210	280	255
		7.00x16	7.50x20	8.25x20
Engine model		GAZ-MM	30K	EM 6
Horsepower		50	55	120 or 150
Cylinders		4 inline	4 inline	6 inline
Fuel		gasoline	Diesel	Diesel
Cooling	h /1	water	air	water
Speed: land	km/h	80	80	48
water	km/h			
Cruising range: road	km	600	350	585
Fuel capacity	1	90	70	150
Fuel consumption	1/100 km		16	36
Trench	mm	450	480	690
Step	mm °	400	400	500
Slope	0	30	28	23
Tilt		17	- 4 0	
Ford	m	470	540	1050
Armor: maximum	mm	15	8	5
Crew		2	5	3
Passengers				
Armament				
Main armament		7.62	7.9	
Model	m	DTM	7.9 MG34	water
Basic load	rds	1070	MG34 900	Cannon
Elevation	o	1070	900	4000 liters
Depression	0			+45
Traverse	0	260	260	-10
Axis of bore		360 17 <b>7</b> 5	360	360
Secondary armament	nm	(177 <b>0</b> )		<i>6</i> .
Basic load	mm rds			
Dasie Ivau	rus			

\*with spare tire





**BA-64** 

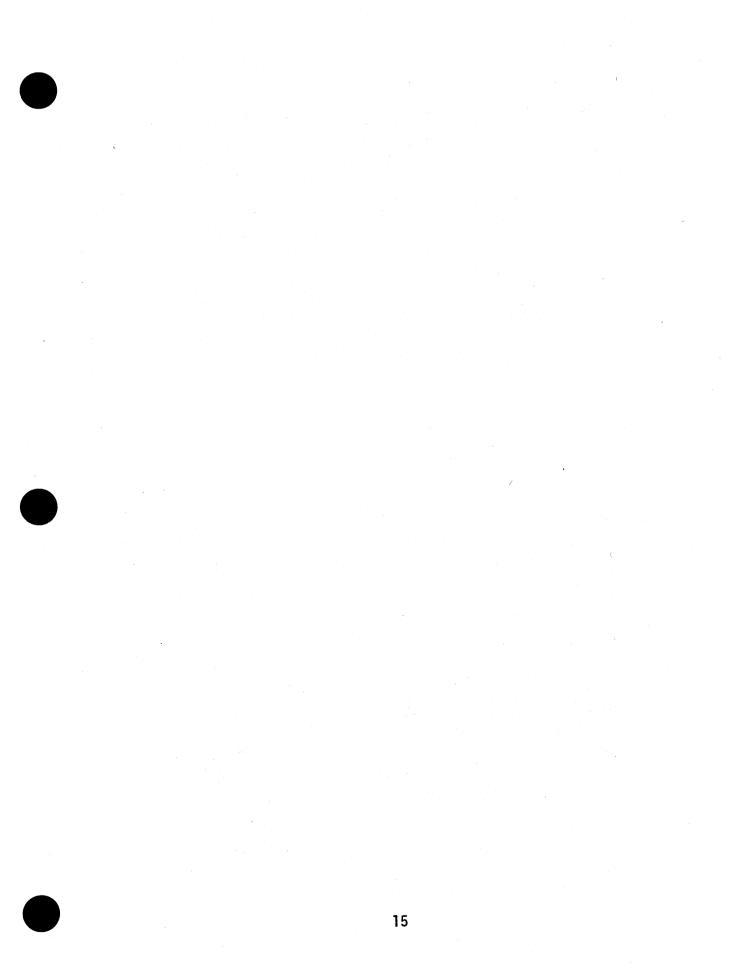




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SK-2







## SCOUT CAR M3A1



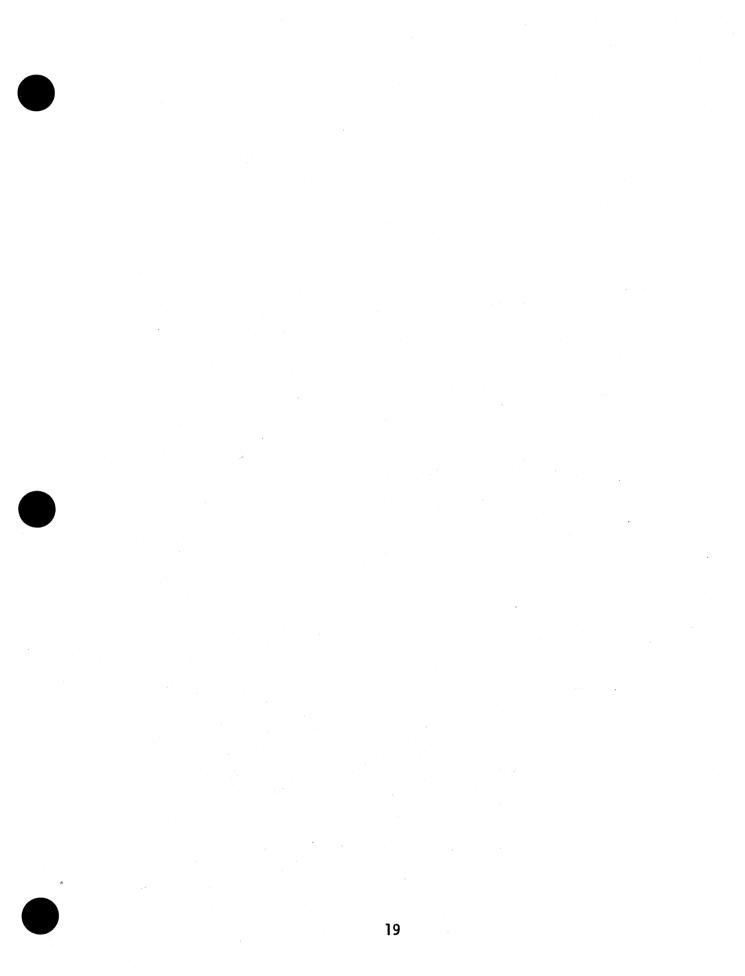
### **ARMORED CAR M8**

Scout car M3A1 Armored car M8

The M3Al four-wheel-drive scout car is a United States armored vehicle of World War II vintage. During the war, it was used by the Allies, including the Soviets, as a command and reconnaissance vehicle. In these roles it is still used in the Yugoslav Army. The M3Al is open-topped, does not have a centralized tire pressure regulation system, and is not amphibious. Its usual armament is a single machinegun.

The M8 six-wheel-drive light armored car is also a United States World War II armored vehicle. It mounts an open-topped turret armed with a 37mm gun and a 7.62mm machinegun. Some vehicles also carry a 12.7mm antiaircraft machinegun on a ring mount on top of the turret. The M8, which is still used for reconnaissance purposes by the Yugoslav Army, has better cross-country ability than the M3Al scout car, but it too is not amphibious.

		M3A1	M8
Vehicle	,		Contract of the second se
Weight cbt	t	5.3	7.8
Wheelbase	mm	3327	2032+1219
Length	mm	5613	5004
Width	mm	1956	2540
Height w/o MG	mm	1208	
w/turret	mm		2286
Track: front/rear	mm	1607/1657	1930
Clearance	mm	400	290
Tire size		8.25x20	9.00x20
Engine model		Hercules*	Hercules**
Horsepower		110	86
Cylinders		6 inline	6 inline
Fuel		gasoline	gasoline
Cooling		water	water
Speed: land	km/h	89	90
water	km/h		**
Cruising range: road	km	400	384
Fuel capacity	1	114.6	204
Fuel consumption	1/100 km	29	55
Trench	mm	550	550
Step	mm	305	<b>3</b> 05
Slope	0	31	31
Tilt	0		
Ford	mm	712	810
Armor: maximum	mm	12.7	50
Crew		2	4
Passengers		8	
<b>.</b> .			
Armament		-	
Main armament	nm	varies	37 gun
Model			M6
Basic load	rds		80
Elevation	0		+20
Depression	0		-10
Traverse	0		360
Axis of bore	mm		1845
Secondary armament AA	mm .		12.7 M2 HB
Coaxial	mm		7.62 M1919A4
Basic load 12.7mm	rds		420
7.62mm	rds		1575







#### SOVIET AMPHIBIOUS WHEELED RECONNAISSANCE VEHICLES

Amphibious scout car BRDM (BTR-40P) Amphibious scout car BRDM-rkh (BTR-40P-rkh) Amphibious scout car BRDM-U (BTR-40PU) Amphibious scout car BRDM-2 (BTR-40P-2) Amphibious scout car BRDM-2-rkh (BTR-40P-2-rkh) Amphibious scout car BRDM-2U (BTR-40P-2U)

The BRDM four-wheel-drive amphibious scout car first appeared in the spring of 1959 and rapidly became the standard light wheeled reconnaissance vehicle in most of the Warsaw Pact armies. It is now in the process of being replaced by the newer BRDM-2 and the Hungarian FUG scout cars. Resembling a cross between the GAZ-46 (MAV) amphibious jeep and the BTR-40 armored personnel carrier, the BRDM combines amphibious features with full armored cover. Cross-country ability is heightened by the use of a centralized tire pressure regulation system and through the use of two sets of small belly wheels which can be lowered to add flotation and assist in crossing gaps.

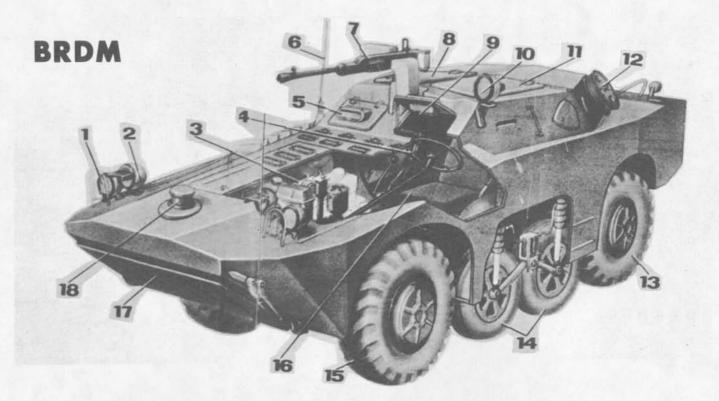
Four versions of the BRDM are in existence: the basic BRDM reconnaissance vehicle; the BRDM-rkh radiological-chemical reconnaissance vehicle with marking-flag dispensing devices; the BRDM-U command vehicle distinguishable only by extra radio antennas; and three different antitank guided missile carriers for AT-1 SNAPPER, AT-2 SWATTER, and AT-3 SAGGER antitank missiles. All versions of the BRDM are propelled in the water by a single waterjet. Recognition of the BRDM-rkh is facilitated by the presence of two canvas boxshaped devices mounted outboard on the rear deck. These are the marking-flag dispensers.

In an attempt to improve the amphibious characteristics and increase the combat power of their wheeled reconnaissance vehicles, the Soviets produced the BRDM-2. This vehicle differs from the original BRDM in that the powerplant has improved and moved to the rear of the vehicle, and that a small 14.5mm machinegun-armed turret has been fitted. This turret is identical to that found on the BTR-60PB armored personnel carrier.

Like the BRDM, the BRDM-2 comes in four versions: the basic reconnaissance vehicle; the BRDM-2-rkh radiological-chemical reconnaissance vehicle; the BRDM-2U command vehicle without turret but with generator and extra radios; and an antitank guided missile vehicle for the AT-3 SAGGER missile. All versions have water propulsion through a single waterjet like the BRDM. The reconnaissance versions have a land navigation system which gives coordinate readings.

The BRDM-2 has appeared in Soviet units and in many other Warsaw Pact forces such as the East German, Polish, Bulgarian and Romanian Armies. It has also been exported to Yugoslavia. Care must be taken to distinguish it from the Hungarian FUG (OT-65) and FUG-70 amphibious scout cars, which also have rear engines but have twin waterjets.

Vehicle		BRDM	BRDM-2
Weight cbt	t	5.6	7 0
Wheelbase	•	2800	7.0 3100
Length	mm		
Width	mm	5700 2250	5750
	mm		2350
Height w/o MG	m	1900	0010
w/turret	mm		2310
Track	mm	1600	1840
Clearance	m	315	335
Tire size		12.00x18	13.00x18
Engine model		GAZ-40P	GAZ-41
Horsepower		90	140
Cylinders		6 inline	V-8
Fuel .		gasoline	gasoline
Cooling		water	water
Speed: land	km/h	80	100
water	km/h	9	10
Cruising range: road	km	500	750
Fuel capacity	1	150	290
Fuel consumption	1/100 km	30	35-45
Trench	mm	1220	1250
Step	mm	400	400
Slope	0	30	30
Tilt	•	25	
Ford	mm		
Armor: maximum	mm	10	10
Crew		5	4
Passengers	. ·		
Armament			
Main armament	m	7.62 MG	14.5 MG
Model	*****	SGMB	KPVT
Basic load	rds	1250	500
Elevation	0	+23.5	+30
Depression	0	-6	-5
Traverse	0	90	360
Axis of bore	mm	20	2130
	m		
Secondary armament Basic load	mm		7.62 PKT
Dasic Ivau	rds		2000



- 1. Headlight
- 2. Blackout light
- 3. Engine
- 4. Steering wheel
- 5. Commander's vision port
- 6. Antenna
- 7. Machinegun
- 8. Armored hatch
- 9. Driver's vision port

- 10. Searchlight
- 11. Armored hatch
- 12. Communication wire and reel
- 13. Left rear tire
- 14. Rough terrain wheels (in lowered position)
- 15. Left front tire
- 16. Driver's seat
- 17. Bow vane
- 18. Stanchion



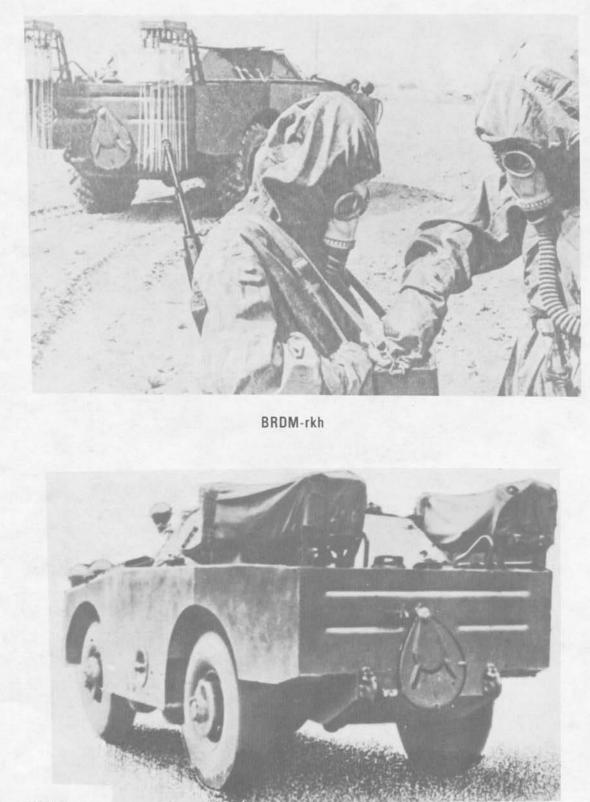
BRDM with rough terrain wheels in lowered position.



BRDM-U Command Vehicle (note extra antennas)



BRDM



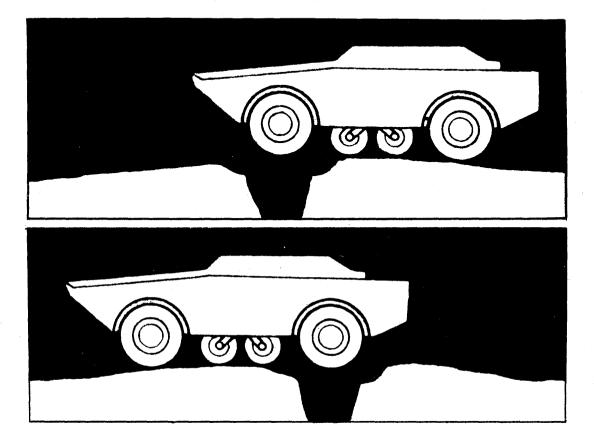
BRDM-rkh

BRDM with "SNAPPER" ATGM

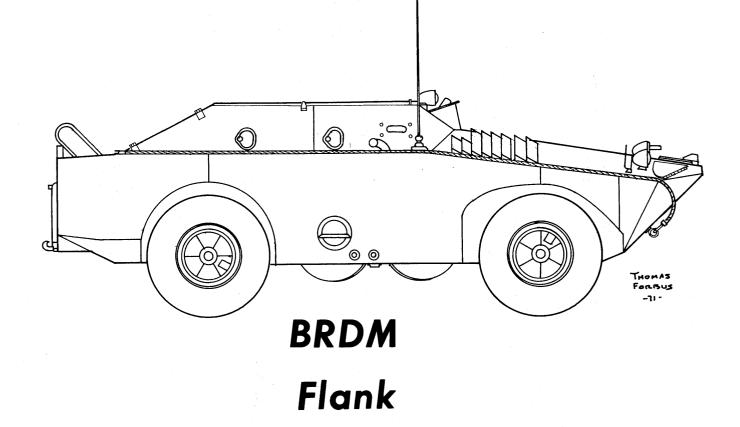


BRDM with "SWATTER" ATGM

BRDM with"SAGGER" ATGM

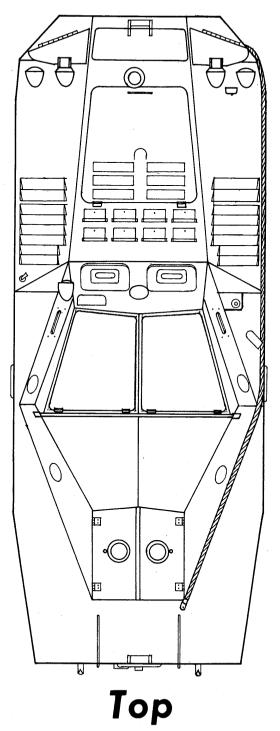


## ROUGH TERRAIN WHEELS IN OPERATION.

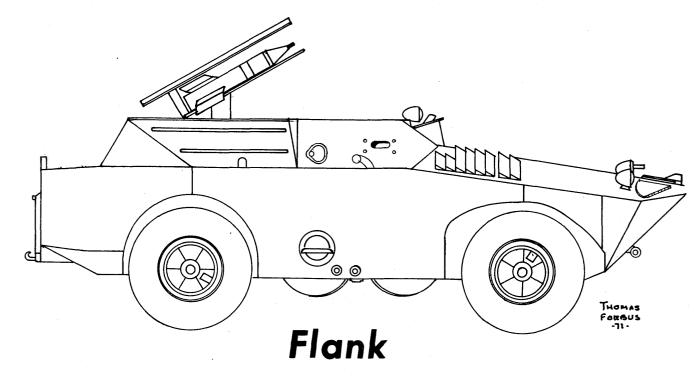


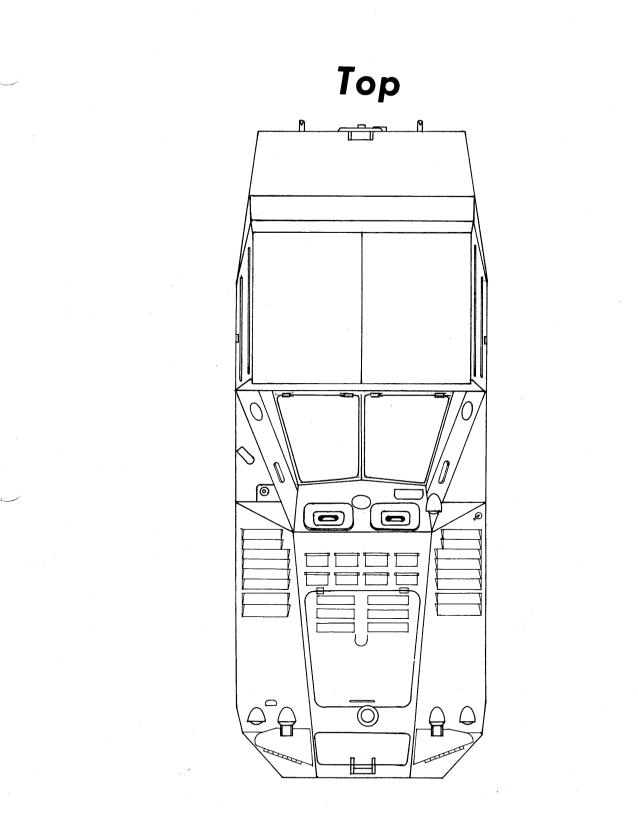
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BRDM

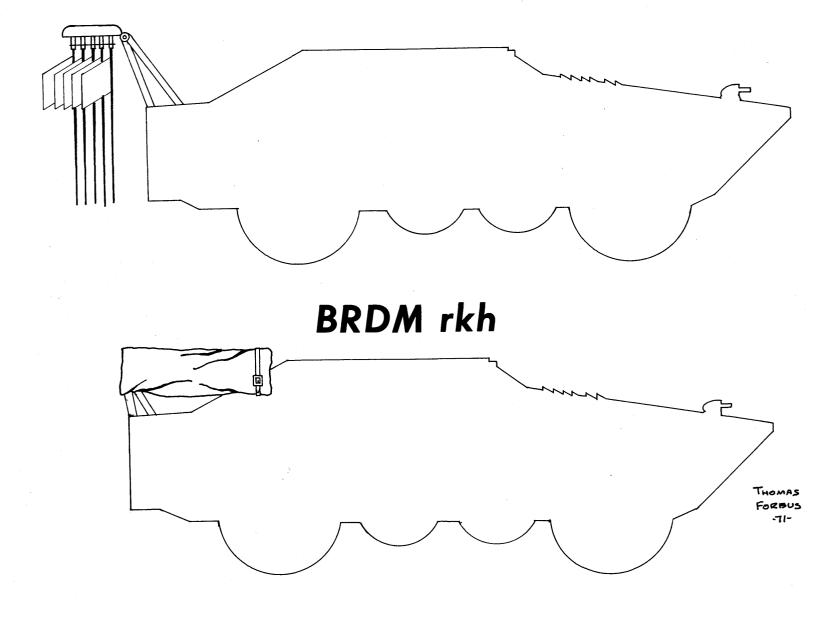


## **BRDM ATGM Carrier**





## **BRDM ATGM Carrier**





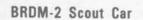
**BRDM-2** Scout Car

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BRDM-2 Scout Car





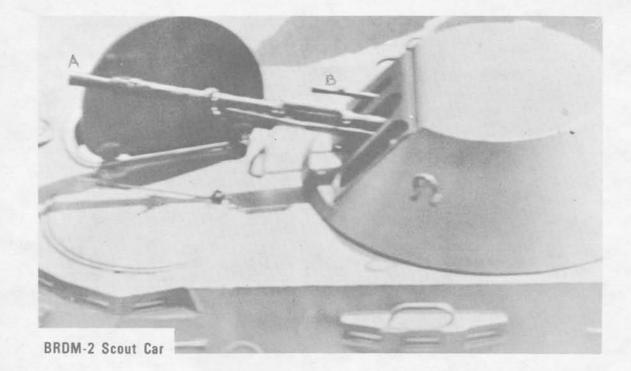


#### BRDM-2 Scout Car



1

BRDM-2 Scout Car



(used on BRDM-2, BTR-60PB and OT-64C(1)).

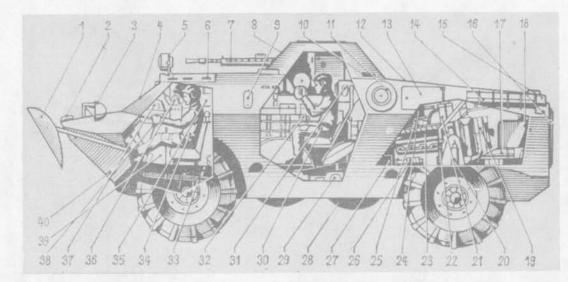
#### Top Photo

A. Tank machinegun 14.5mm KPVT

B. Tank machinegun 7.62mm PKT

#### Bottom Photo

- 1. Tank machinegun KPVT
- 2. Vertical stop for machineguns
- 3. Tank machinegun PKT
- 4. Turret lock
- 5. Latch for ammo belt box holder
- Bag for empty cartridge cases
   Firing switch for PKT machinegun
- 8. Traversing mechanism
- 9. Firing switch for KPVT machinegun
- 10. Telescopic sight
- 11. Elevating mechanism lock
- 12. Cocking lever for KPVT
- 13. Elevating mechanism
- 14. Traversing mechanism lock



#### BRDM-2

- 1. Bow vane
- 2. Towing eyes
- 3. Headlights
- 4. Observation slit
- 5. Commander's IR headlight
- 6. Driver's and commander's periscope
- 7. Armament: 14.5mm KPVT machinegun

7.62mm PKT coaxial machinegun

- 8. Revolving turret
- 9. Firing ports for small arms of crew
- 10. Air intake for filter system
- 11. Drum with winch cable
- 12. Covers of engine air intake
- 13. Engine compartment hatch
- 14. Exhaust pipe
- 15. Rear lights and towing eyes
- 16. Protective hatch for waterjet system
- 17. Waterjet system
- 18. Fuel tank
- 19. Ventilator, water and oil cooler
- 20. Hydraulic shock absorber

- 21. Air compressor
- 22. Generator
- 23. Engine
- 24. Carburetor with air filter
- 25. Ignition coil and distributor
- 26. Starter
- 27. Clutch
- 28. Belly wheels
- 29. Propulsion system
- 30. Gunner
- 31. Filter ventilation system
- 32. Ammunition for machineguns
- 33. Front-axle suspension
- 34. Driver
- 35. Radio
- 36. Commander (partly concealed by driver)
- 37. Navigational instruments
- 38. Steering system
- 39. Steering system
- 40. Cable winch

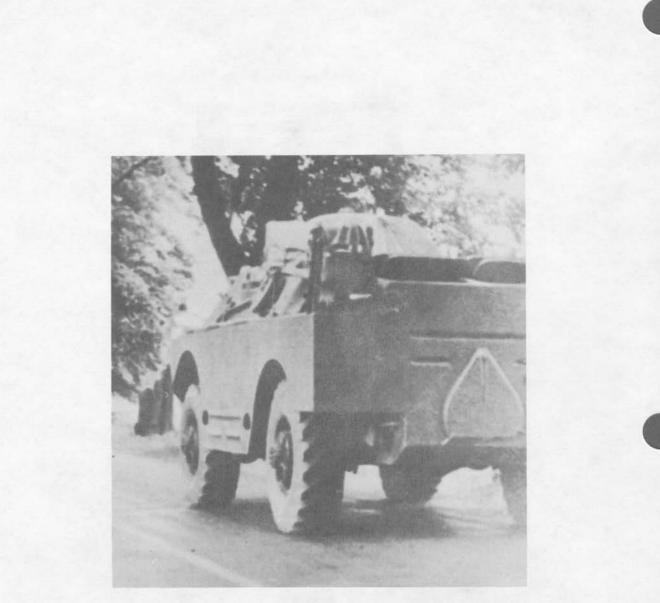




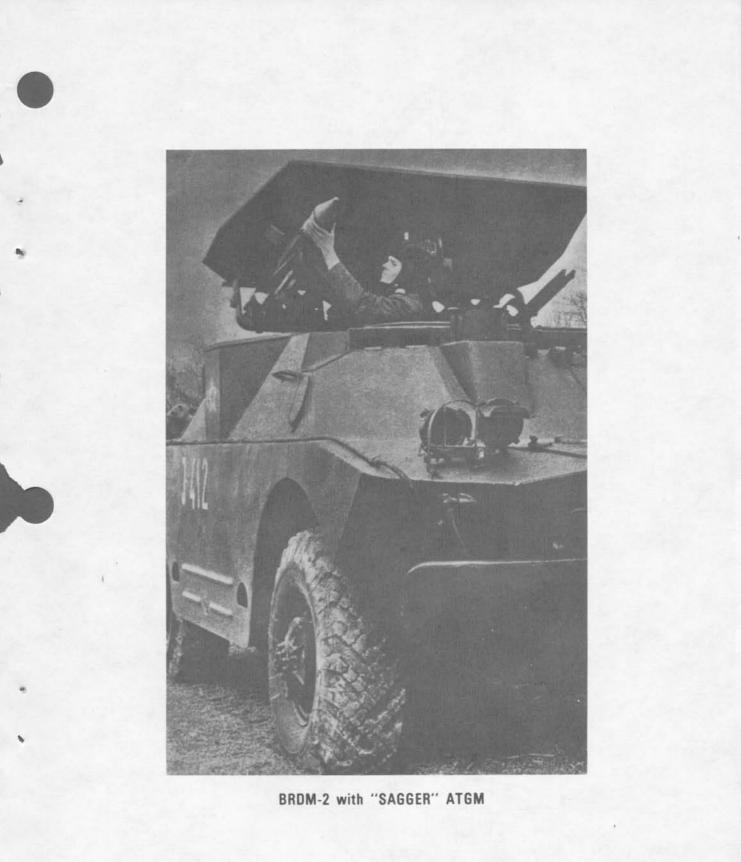
**BRDM-2U** Command Vehicle

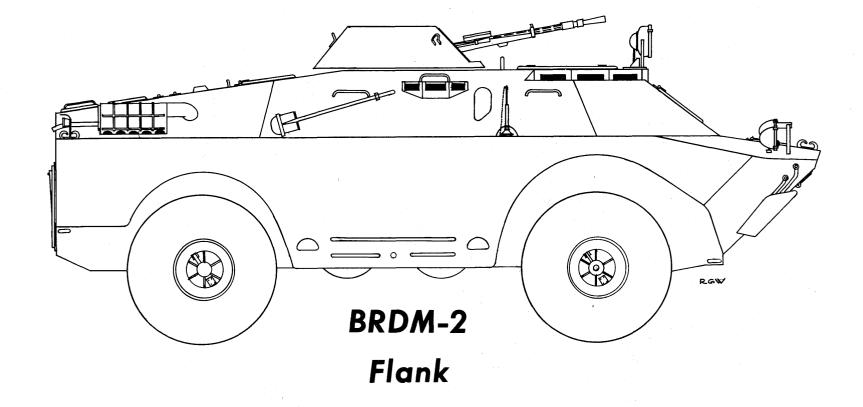


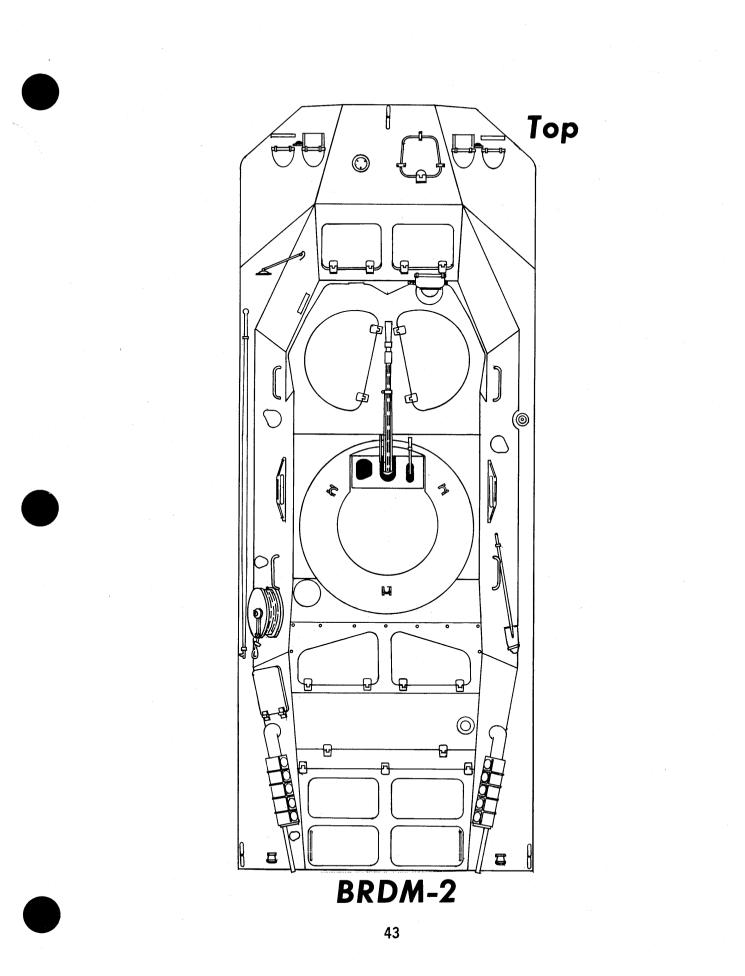
BRDM-2U

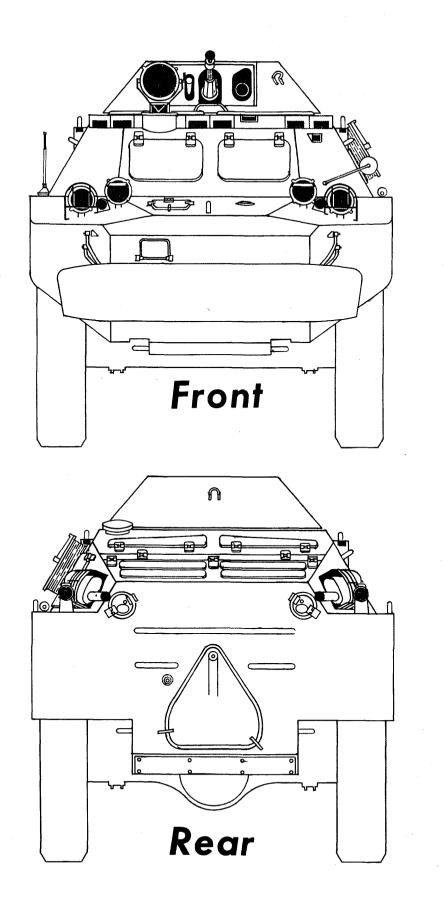


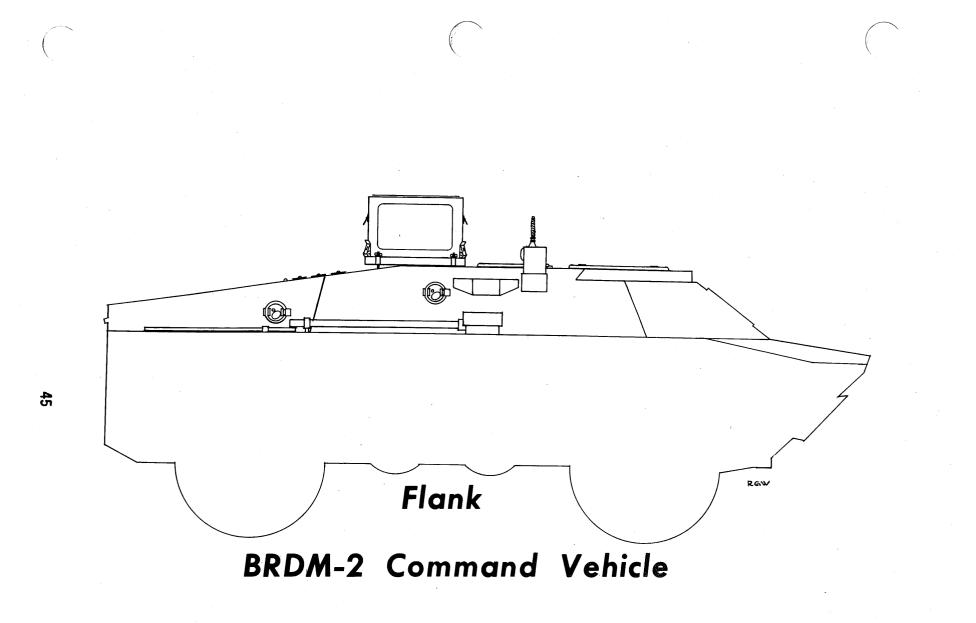
BRDM-2 rkh

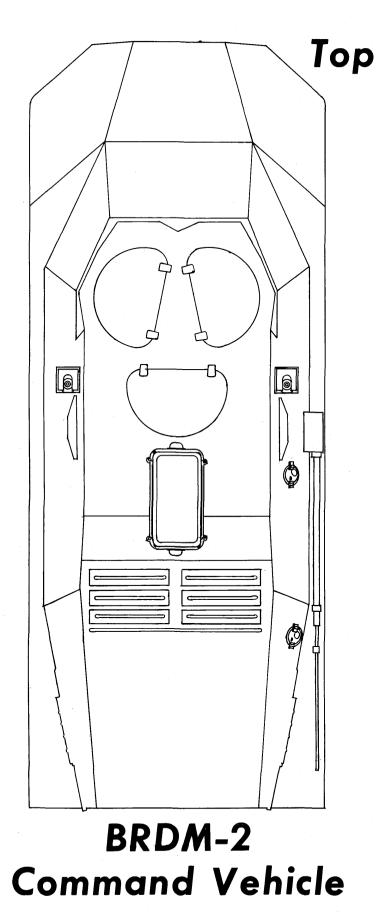


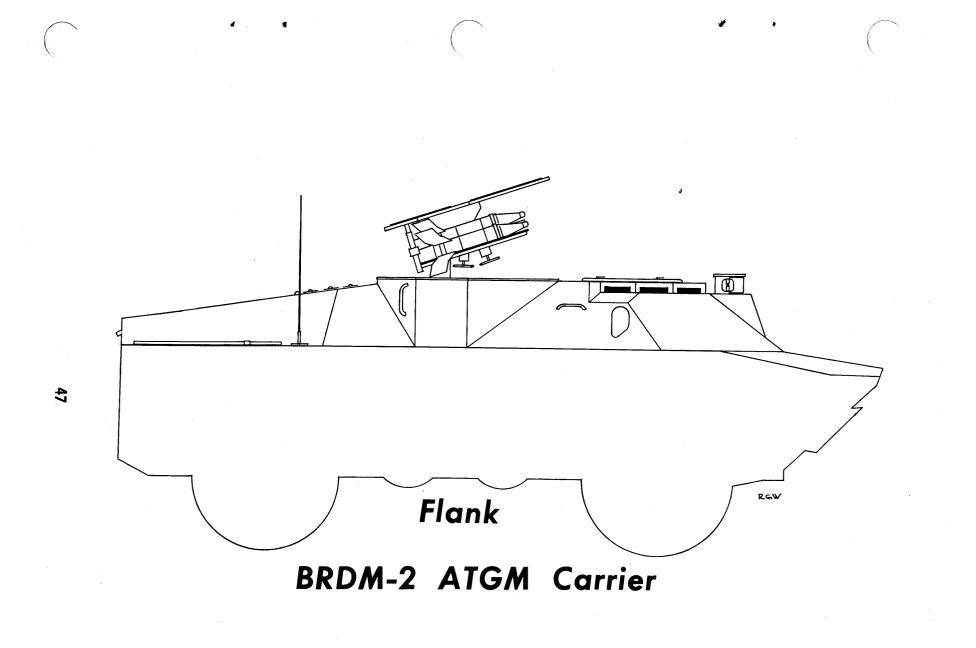


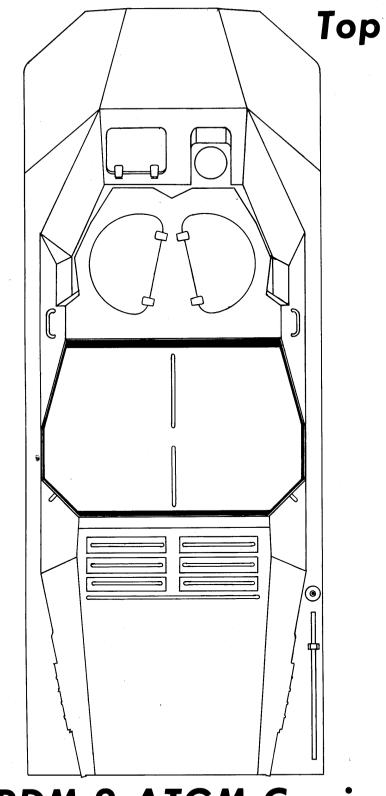




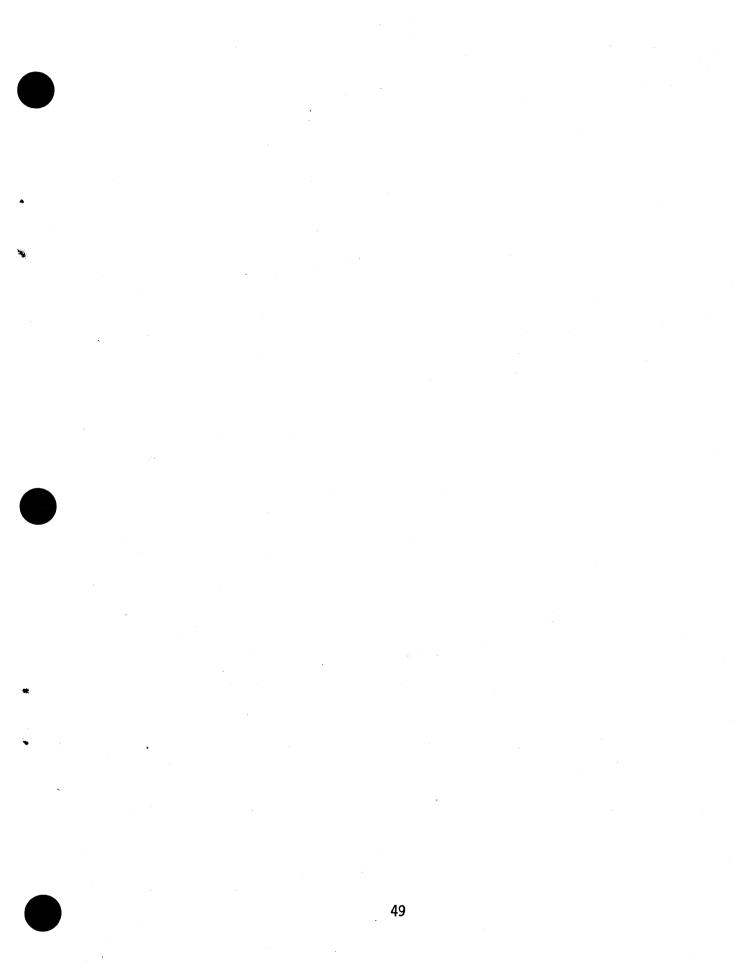




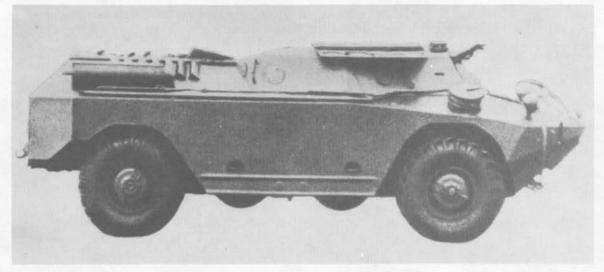




## **BRDM-2 ATGM Carrier**



### HUNGARIAN AMPHIBIOUS SCOUT CARS



### FUG (OT-65)



### FUG-70

HUNGARIAN AMPHIBIOUS WHEELED ARMORED RECONNAISSANCE VEHICLES

Amphibious scout car FUG (OT-65) Amphibious scout car FUG (OT-65) (CBR version) Amphibious scout car OT-65A Amphibious scout car FUG-70

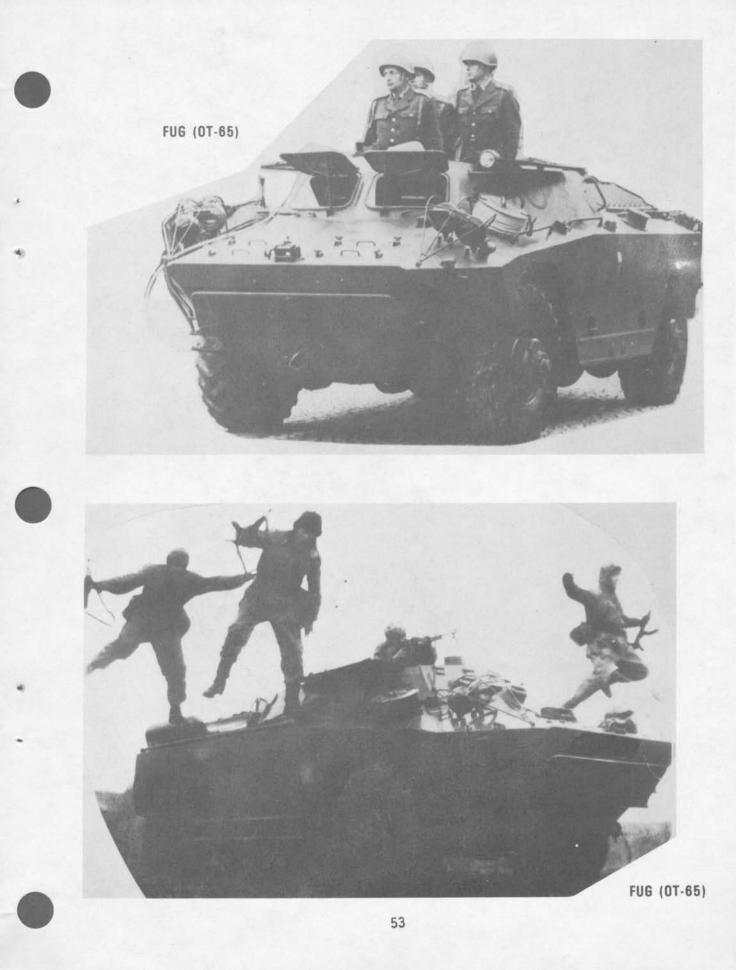
The FUG is a Hungarian amphibious scout car which is also employed in the Czechoslovak Army as the OT-65, and to a limited extent in the Polish Army. It resembles a Soviet BRDM-2 scout car without turret, but has two waterjet exhausts instead of one. Like the Soviet BRDM vehicles the FUG has a centralized tire-pressure regulation system and two sets of belly wheels. The powerplant, however, is a Hungarian diesel engine. In addition to its basic version, it has been observed in an ambulance role and as a radiological-chemical reconnaissance vehicle. The Czechoslovak Army has modified its OT-65 by adding the small turret from the OT-62B armored personnel carrier. This turret mounts a 7.62mm machinegun internally and an 82mm recoilless gun T-21 externally. This significantly increases the firepower of the vehicle which in the past had nothing more than an unmounted 7.62mm light machinegun.

In attempting to improve the FUG scout car, the Hungarians have developed a new FUG, which was first paraded in Budapest on 4 April 1970.\* This FUG-70, which is very similar to the older FUG, has extensive alterations on the front of the vehicle and mounts a 14.5mm machinegun armed turret. Further changes include the elimination of the belly wheels (which lowers the cross-country ability) and the addition of personnel hatches and firing ports on both sides of the vehicle. The new turret is larger than the Soviet turret on the BRDM-2, but is similarly armed. The FUG-70 appears to be a combination scout car and halfsquad armored personnel carrier. Some FUG-70's are issued to the East German border troops. A turretless version of the FUG-70 has been seen. It is not clear yet what its role will be, but it will most likely be a command vehicle.

\*A prototype vehicle (identified as the FUG-66) was paraded in September 1966, and was mistakenly believed to be the production model. Only a limited number of these vehicles were ever produced, and none have been sighted since the late 1960s.

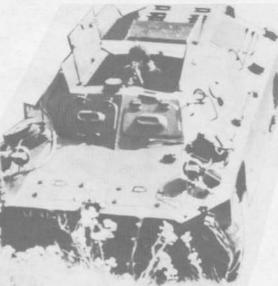
		FUG	FUG-70
Vehicle			
Weight cbt	t	6.1	7.0
Wheelbase	mm	3200	3200
Length Width	nm	5790	5790
	mm	2362	2362
Height w/o MG	m	1900 2250*	
w/turret Track	nm	1900	2525
Clearance	mm	305	1900
Tire size	mm	12.00x18	305 <b>30.00x18</b>
Engine model			
Horsepower		Csepel D-414.44 100	Raba-MAN D-2156
Cylinders		4 inline	6 inline
Fuel	,	Diesel	Diesel
Cooling		water	water
Speed: land	km/h	87	100
water	km/h	9	10
Cruising range: road	km	500	500
Fuel capacity	1	140	300
Fuel consumption	1/100 km	24	
Trench	mm	1300	600
Step	mm	400	400
Slope	0	32	30
Tilt	0		
Ford	mm	فنه جور کنا	
Armor: maximum	mm	10	10
Crew		5	3
Passengers			6
Armament			
Main armament	mm	7.62 MG	14.5 MG
Model		SGMB	KPVT
Basic load	rds	1250	500
Elevation	0	+23.5	+30
Depression	0	-6	-5
Traverse		90	360
Axis of bore	mm		2050
Secondary armament	mm	***	7.62 PKT
Basic load	rds		2000
TOT CEA			

\*0T-65A \*\*82mm rcl gun T-21 for OT-65A \*\*\*7.62mm machinegun M59T for OT-65A





FUG (0T-65)



FUG (0T-65)



FUG (0T-65)

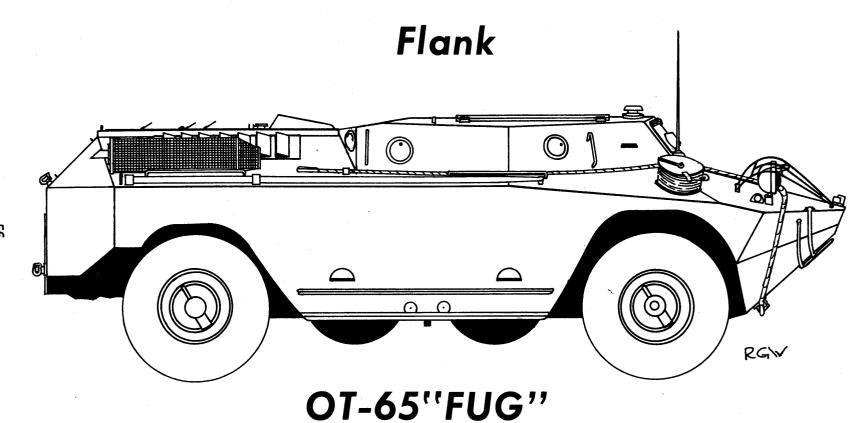
(NOTE: Vehicle to left rear is the FUG--66. This was a prototype of the FUG-70.)



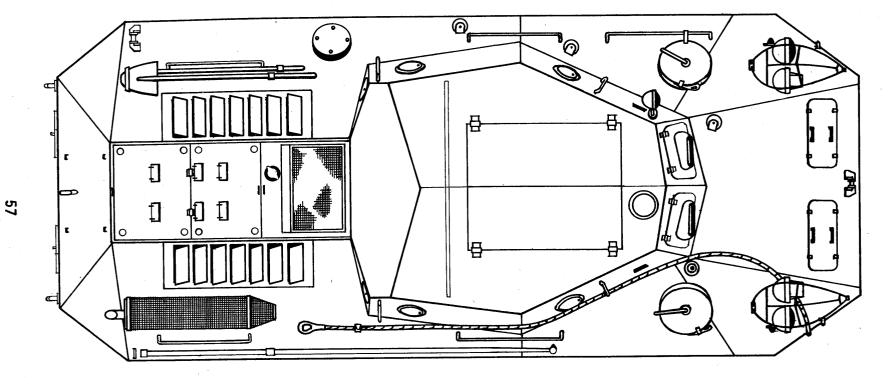
FUG (OT-65) CBR Recon Vehicle



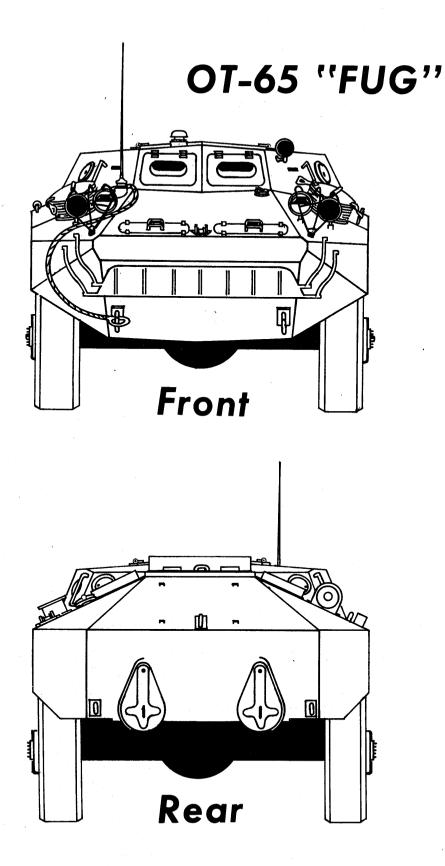
### **OT**-65A

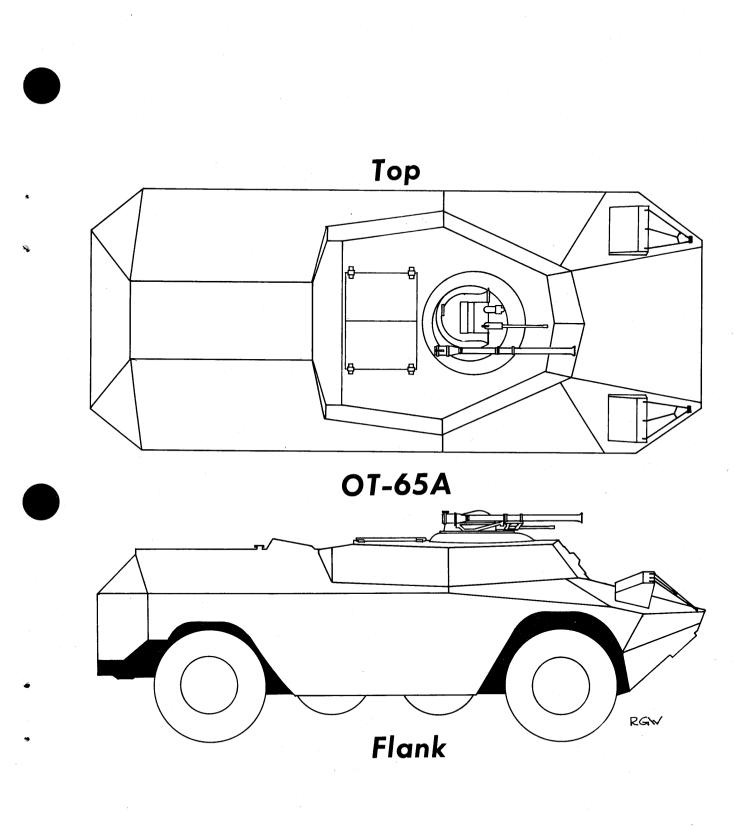


OT-65 "FUG"



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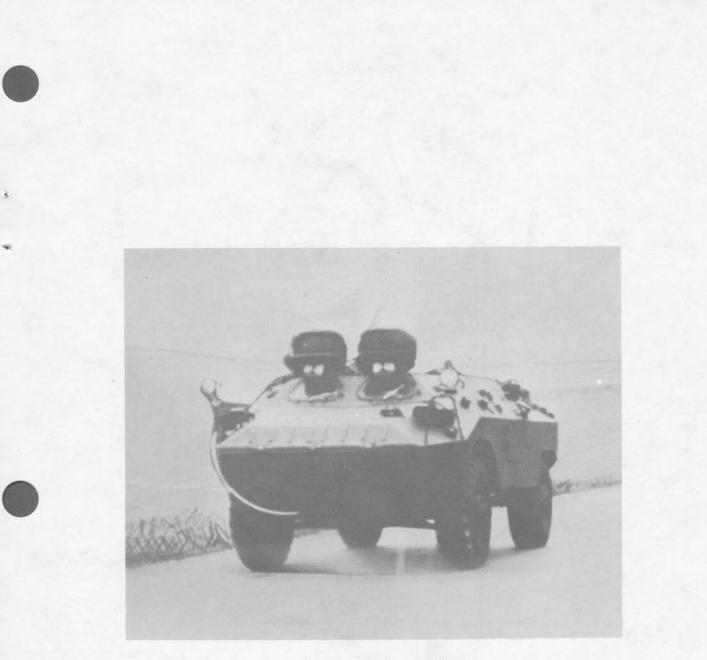


FUG-70

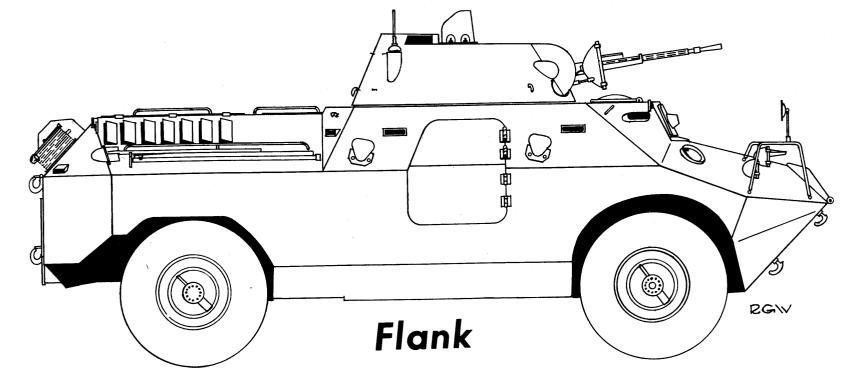
NOTE: FUG-70 is an APC/Scout Car combination.





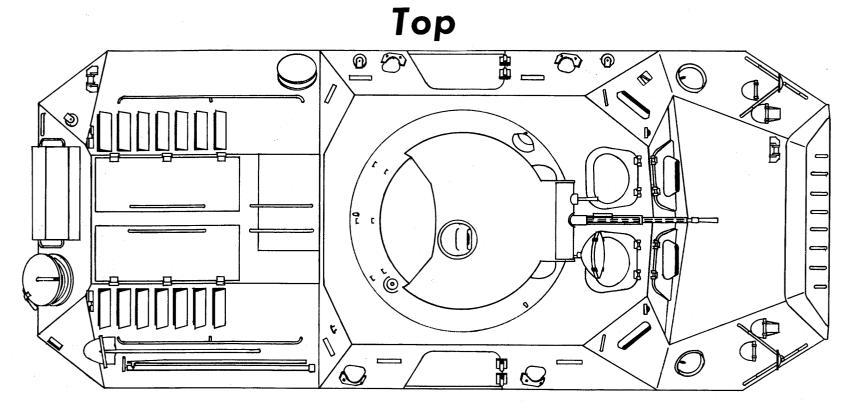


Turretless Version of FUG-70



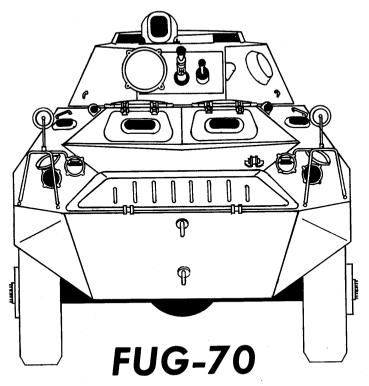
FUG-70

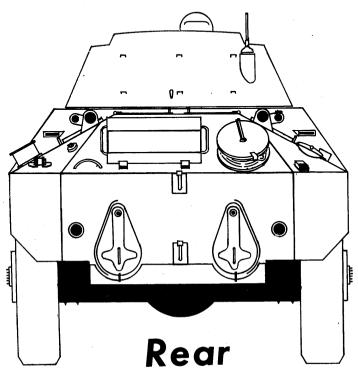
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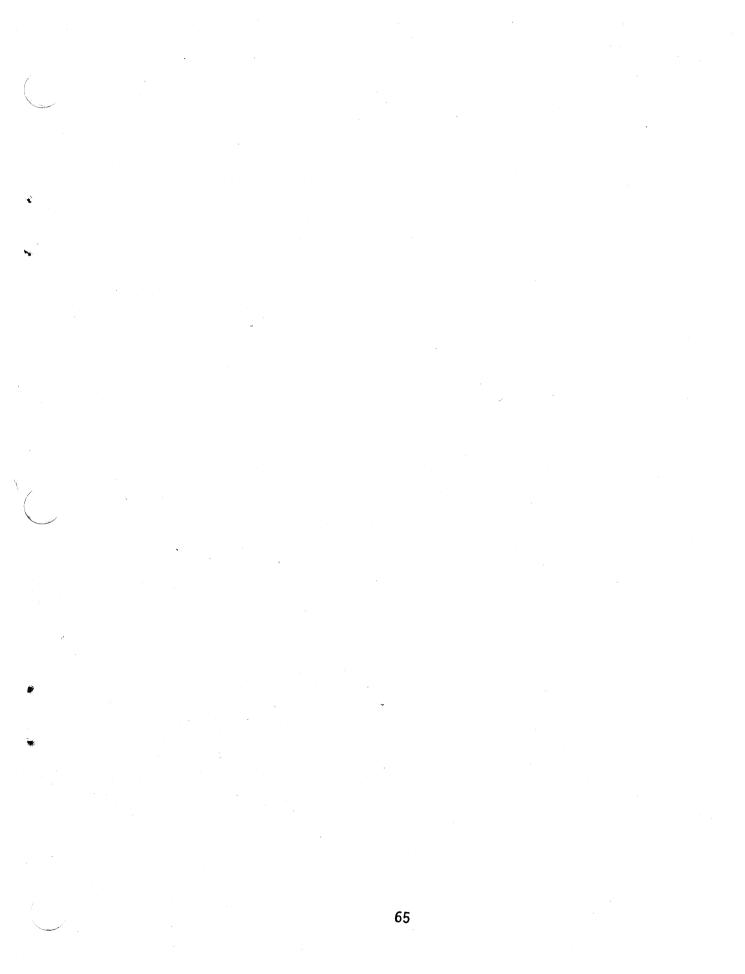


FUG-70

## Front







# ARMORED

# PERSONNEL CARRIERS



# INFANTRY COMBAT

# VEHICLES

## WHEELED ARMORED PERSONNEL CARRIERS



### BTR-40B





Armored personnel carrier BTR-40 Armored personnel carrier BTR-40A Armored personnel carrier BTR-40B Armored personnel carrier BTR-40kh Armored personnel carrier BTR-152 Armored personnel carrier BTR-152V1 Armored personnel carrier BTR-152V2 Armored personnel carrier BTR-152V3 Armored personnel carrier BTR-152K3 Armored personnel carrier BTR-152K Armored personnel carrier BTR-152A

Before and during World War II the Soviets did not employ any nationally-produced armored personnel carriers. Although the Soviets did produce armored scout cars, the only carriers used during the war were of United States, British or German origin. The first Sovietproduced carrier, which appeared around 1950, was the BTR-152, originally built on the chassis of the ZIL-151 truck, although a more powerful engine and larger single tires were used. Later versions, known primarily as BTR-152V, were built on the chassis of the ZIL-157 truck. They all use larger tires and are equipped with the now widely used centralized pressure regulation system.

Other variants are the BTR-152A, which mounts twin 14.5mm antiaircraft machineguns (See Volume Three), the BTR-152K, which is a BTR-152V3 with overhead cover, and the BTR-152U, an armored command vehicle. For convenience a list of these variants is provided below:

BTR-152	no pressure regulation device, no winch
BTR-152V1	external air lines, winch
BTR-152V2	internal air lines, no winch (refitted BTR-152)
BTR-152V3	internal air lines, winch, infrared driving lights
BTR-152K	same as BTR-152V3, with overhead armor cover
BTR-152U	armored command vehicle, usually built on chassis of
	BTR-152V1 or BTR-152V3
BTR-152A	antiaircraft vehicle with twin 14.5mm AA HMG

Although being replaced by improved tracked and wheeled models, the BTR-152 series of armored personnel carriers is still widely used in all Warsaw Pact armies except that of Czechoslovakia. It has also been exported to the Middle East and North Africa. The second Soviet armored personnel carrier, which went into production in 1951, was the BTR-40. It is a four-wheel-drive vehicle built on the chassis of the GAZ-63 truck with an armor layout resembling a cross between that of the United States M3Al scout car and the German armored half-tracks. The primary role of the BTR-40 was that of command and reconnaissance. In this role, it is still encountered in the Warsaw Pact armies, although the various BRDM and FUG amphibious scout cars have replaced it in most units. One role remaining today is that of a transporter for traffic regulators.

There are four variants of the BTR-40. The original vehicle was open-topped and usually armed with a pedestal-mounted 7.62mm SGMB machinegun. The second variant, the BTR-40A, is an antiaircraft vehicle carrying twin 14.5mm machineguns. The BTR-40B third variant is like the original, but has overhead armor cover. The fourth, the BTR-40kh, is a chemical reconnaissance vehicle carrying a marking-flag dispensing device.

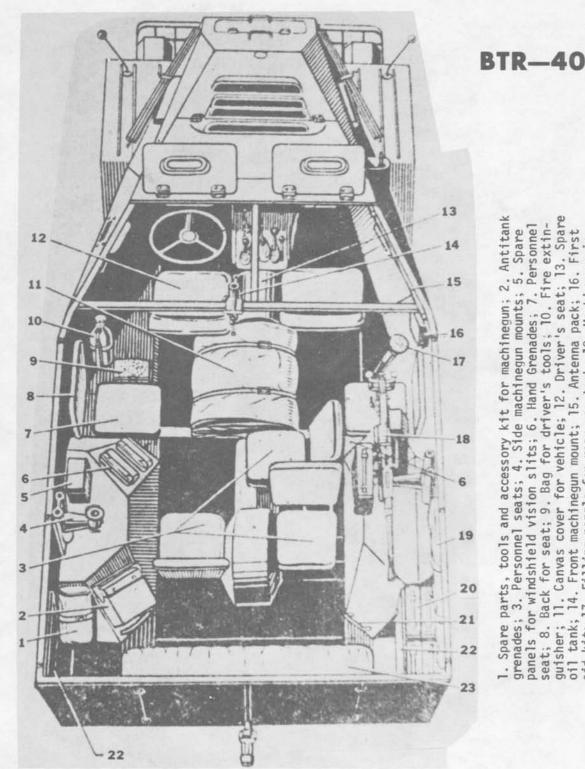
It should be noted that the BTR-40 is <u>not</u> amphibious and does not have the usual Soviet centralized tire pressure regulation system. It has been widely exported.

		BTR-40	BTR-152V1
Vehicle			
Weight cbt	t	5.3	8.95
Wheelbase	mm	2700	3300+1130
Length	mm	5000	6830
Width	mm	1900	2320
Height w/o MG	nm	1750	2050
w/turret	mm		
Track: front/rear	mm	1588/1600	1742/1720
Clearance	mm	275	295
Tire size		9.75x18	12.00x18
Engine model		GAZ - 40	ZIL-123
Horsepower		80	110
Cylinders		6 inline	6 inline
Fuel		gasoline	gasoline
Cooling		water	water
Speed: land	km/h	80	65
water	km/h		
Cruising range: road	km	285	650
Fuel capacity	1	120	300
Fuel consumption	1/100 km	42	46
Trench	mm	700	690
Step	m	4 <b>7</b> 0	600
Slope	0 · · ·	30	30
Tilt	0	20-25	
Ford	mm	900	800
Armor: maximum	mm	8	12
Crew		2	2
Passengers		8	17
Armament		•	
Main armament	mm	7.62 MG	7.62 MG
Model		SGMB	SGMB
Basic load	rds	1250	1250
Elevation	0	+23.5	+23.5
Depression	0	-6	-6
Traverse	0	90	90
Axis of bore	m		
Secondary armament	mm	* = **	
Basic load	rds		

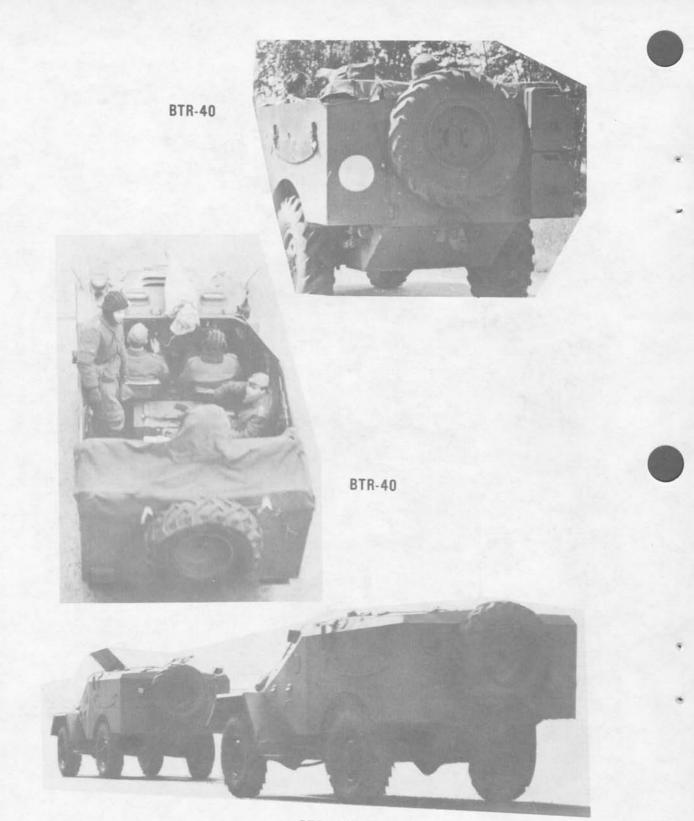




### BTR-40B



21. Handrail; 22. Pack for windshield; 23. Three place seat for personnel. aid kit; 17. Filling nozzle for rear gas tank; 18. Machinegun in carrying position; 19. Spare machinegun barrel; 20. Ammunition boxes; guisher; 11. Canvas cover for vehicle; 12. Driver's seat; 13. Spare oil tank; 14. Front machinegun mount; 15. Antenna pack; 16. First Spare parts, tools and accessory kit for machinegun; 2. Antitank grenades; 3. Personnel seats; 4. Side machinegun mounts; 5. Spare seat; 8. Back for seat; 9. Bag for driver's tools; 10. Fire extinpanels for windshield vision slits; 6. Hand Grenades; 7. Personnel



BTR-40B



# BTR-40A

AA version with twin 14.5mm machineguns





### **BTR-152**

12

- 1. Engine
- Antenna base
   Armored cover for window
- Machinegun
   Box containing spare parts and tools for the radio

- 6. Machinegun mount
   7. Squad leader's seat
   8. Passenger bench
   9. Intermediate bearing
   10. Differential
- 11. Armored cover for fuel tank filler
- 12. Transmission







BTR-152V3

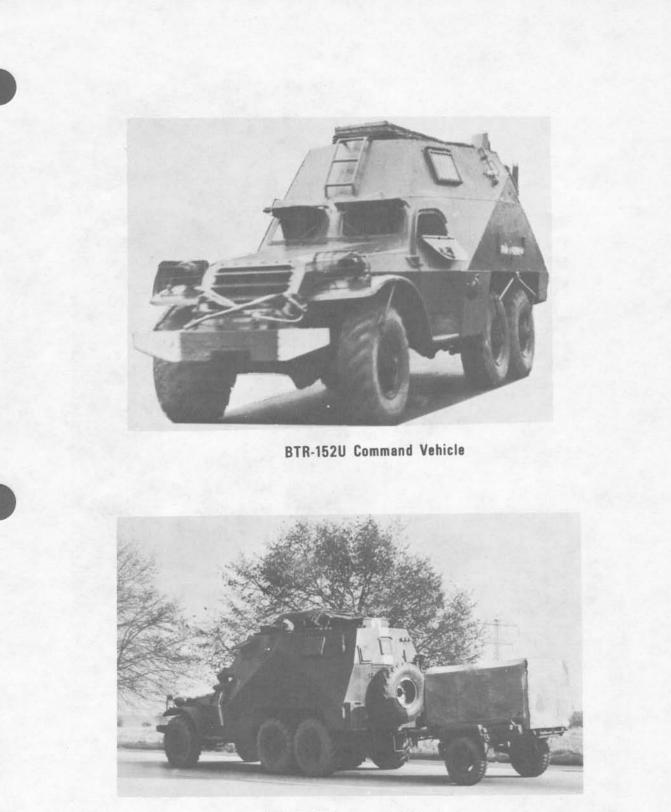
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BTR-152K

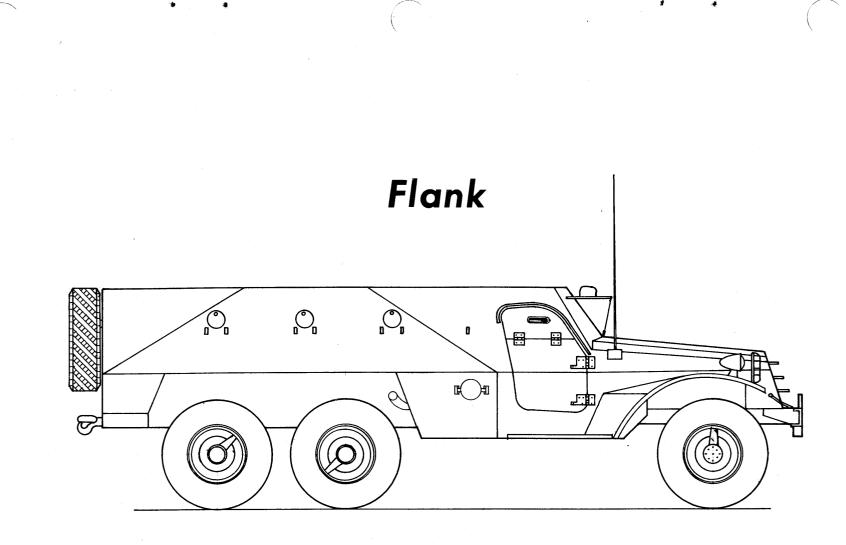


BTR-152K



BTR-152U Command Vehicle

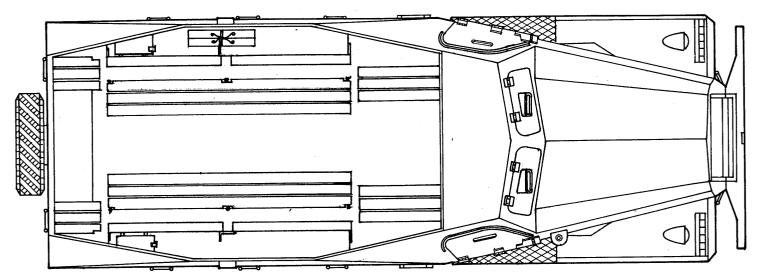




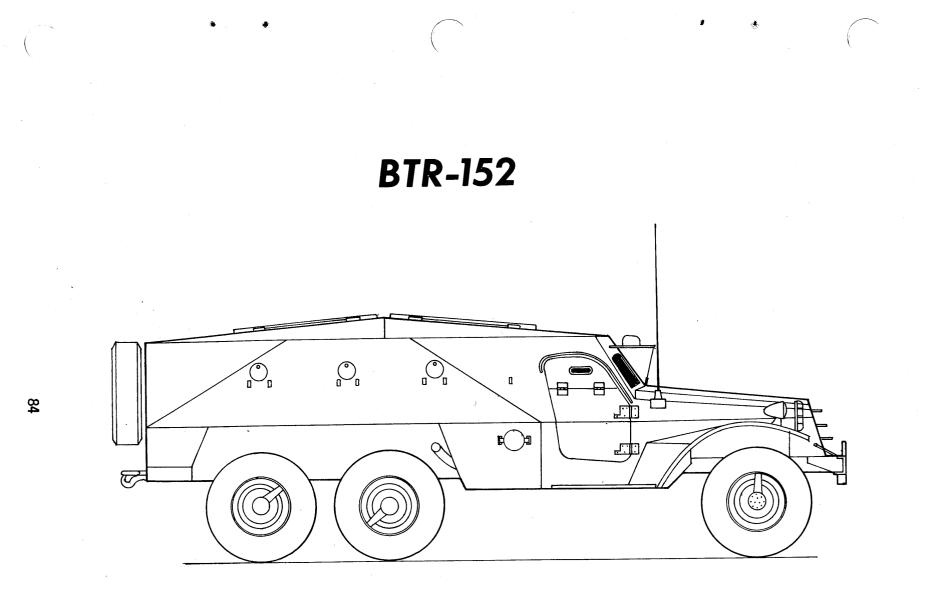
BTR-152

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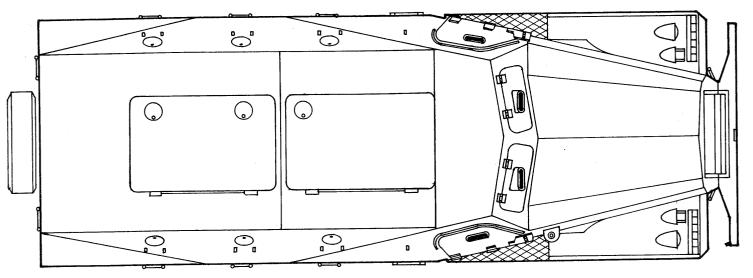


BTR-152



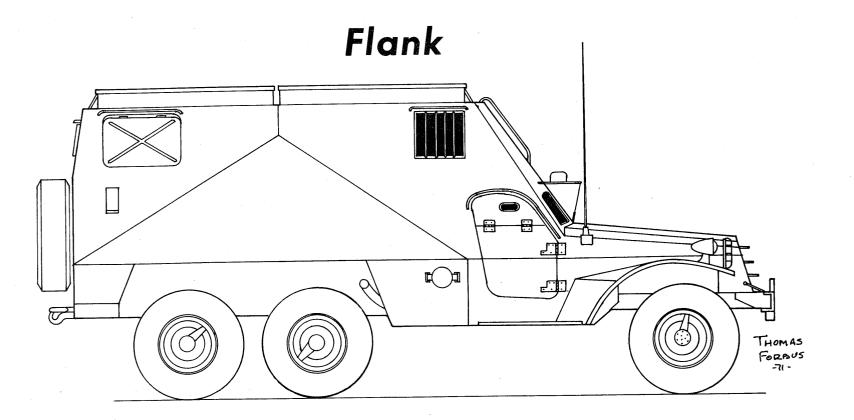
with armored roof





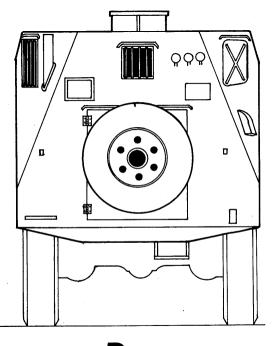
BTR-152 with armored roof

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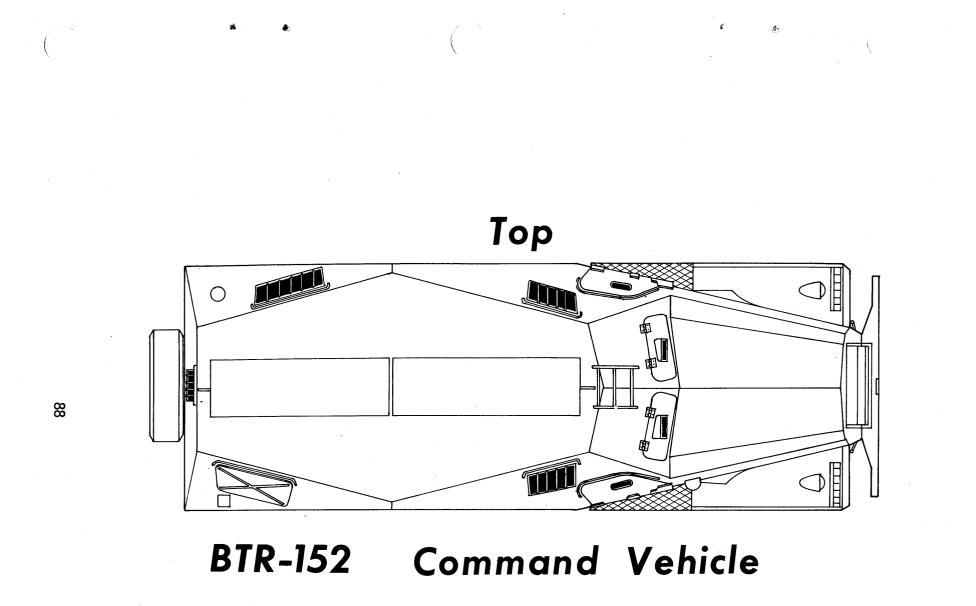


BTR-152 Command Vehicle

# **BTR-152 Command Vehicle**



Rear



# 

### SOVIET

### **AMPHIBIOUS WHEELED**

### **ARMORED PERSONNEL CARRIERS**

Armored personnel carrier BTR-60P Armored personnel carrier BTR-60PA Armored personnel carrier BTR-60PB Armored command vehicle BTR-60PU Armored forward air control vehicle

The eight-wheel-drive amphibious BTR-60P armored personnel carrier was first paraded on 7 November 1961. Since then it has undergone at least four modifications and has been issued in quantity to the East German, Bulgarian and Romanian Armies. It has also been exported to Yugoslavia. Significantly, it is the standard armored personnel carrier of the Soviet Naval Infantry--the Soviet Marine Corps.

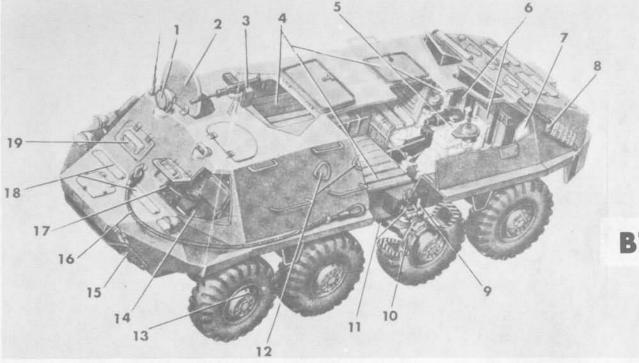
The BTR-60P is a large vehicle with a boatlike hull with wellsloped armor and a rear-mounted powerplant. All eight wheels are powered, and the forward two pairs steer the vehicle. Water propulsion is by waterjet similar to that used in the BRDM series of amphibious scout cars. The powerplant is unusual in that two six-cylinder inline gasoline engines of the type used on the BRDM are employed. The BTR-60P also carries infrared night driving equipment. The tires have the usual Soviet centralized pressure regulation system.

The first modification, the BTR-60PA, is largely notable through its overhead armor cover, lacking in the original BTR-60P. The second modification, the BTR-60PB, is also fitted with overhead armor cover, but in addition has a small conical turret on the forward half of the vehicle. This turret, which is identical to the one mounted on the BRDM-2 amphibious scout car, mounts both 14.5mm and 7.62mm machineguns.

The third modification is the BTR-60PU command vehicle which has a special canvas top and additional radios. The fourth variant, the Forward Air Control Vehicle, is a modified BTR-60PB with the armament removed from the turret which is then fitted with a plexiglass window. A large portable generator, similar to the one seen on the BRDM-2 command vehicle, is mounted on the rear deck.

		BTR-60PA	BTR-60PB
Vehicle		And and a second se	
Weight cbt	t	9.98	10.3
Wheelbase	mm	1350+1525+1350	1350+1525+1350
Length	mm	7560	7560
Width	mm	2825	2825
Height w/o MG	mm	2055	
w/turret	mm		2310
Track	mm	2370	2370
Clearance	mm	475	475
Tire size		13.00x18	13.00x18
Engine model (2x)		GAZ-49B	GAZ-49B
Horsepower		90	90
Cylinders		6 inline	6 inline
Fuel		gasoline	gasoline
Cooling		water	water
Speed: land	km/h	80	80
water	km/h	10	10
Cruising range: road	km	500	500
Fuel capacity	1	290	290
Fuel consumption	1/100 km	58	58
Trench	mm	2000	2000
Step	mm	400	400
Slope	0	30	30
Tilt	0	25	25
Ford	m		
Armor: maximum	mm	10	14
Crew		2	2
Passengers		16	14
<del>,</del>			
Armament			
Main armament	mm	7.62 MG	14.5 MG
Mode1		SGMB*	KPVT
Basic load	rds	2000	500
Elevation	0	+23.5	+30
Depression	0	-6	-5
Traverse	0	90	360
Axis of bore	mm		2130
Secondary armament	mm		7.62 PKT
Basic load	rds		2000

\*or PK



### BTR-60PA

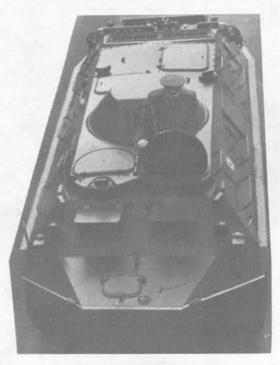
- 1. Searchlight
- 2. Commander's hatch cover
- 3. MG
- 4. Hatches and seats for men
- 5. Engines
- 6. Radiators
- 7. Fuel tank
- 8. Silencer
- 9. Shock absorber
- 10. Wheel reduction gear

- 11. Suspension bars
- 12. Visor covers
   13. Inflation valve
- 14. Driver's seat
- 15. Breakwater
- 16. Towing cable
- 17. Commander's seat
- 18. Air intake covers
- 19. Commander's vision slit









BTR-60PB



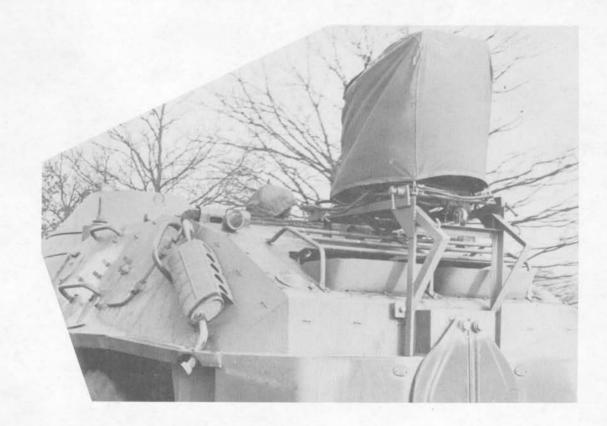
**BTR-60PU** Command Vehicle

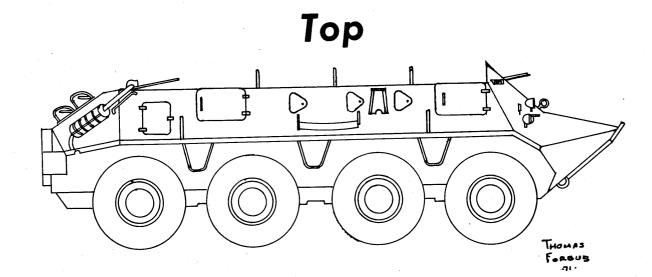


FORWARD AIR CONTROL

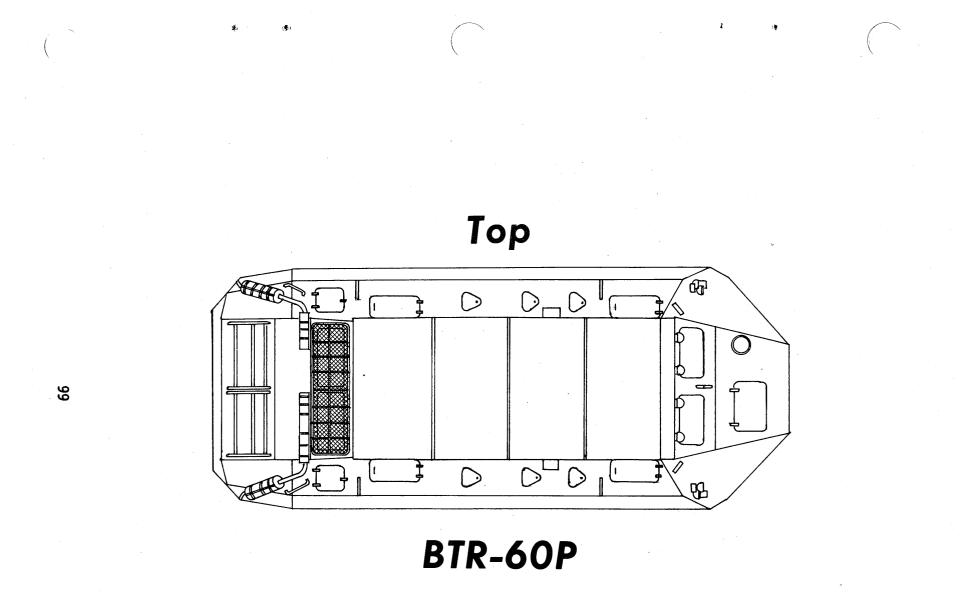
VEHICLE

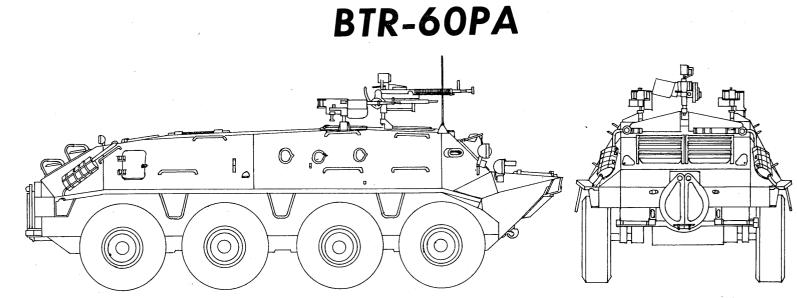
NOTE: Turret window and portable generator.





BTR-60P



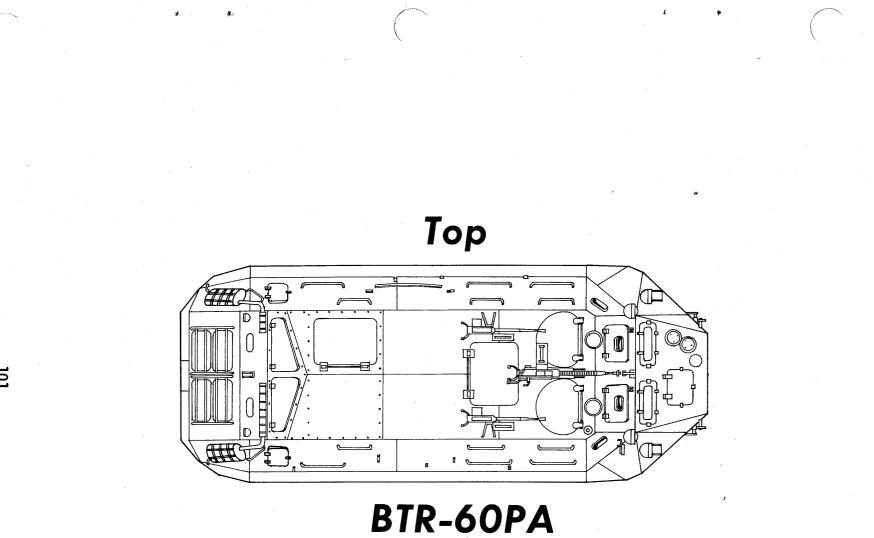


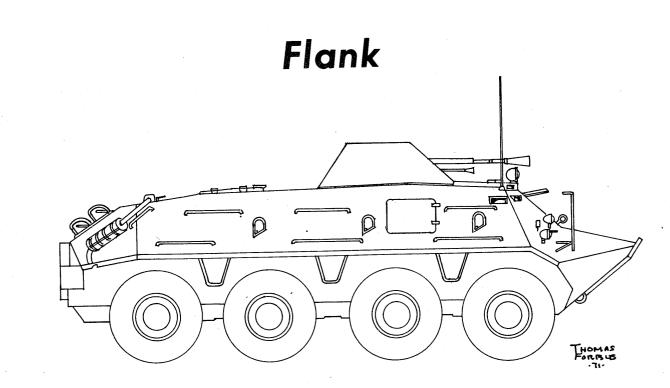
THOMAS FORBUS

Flank

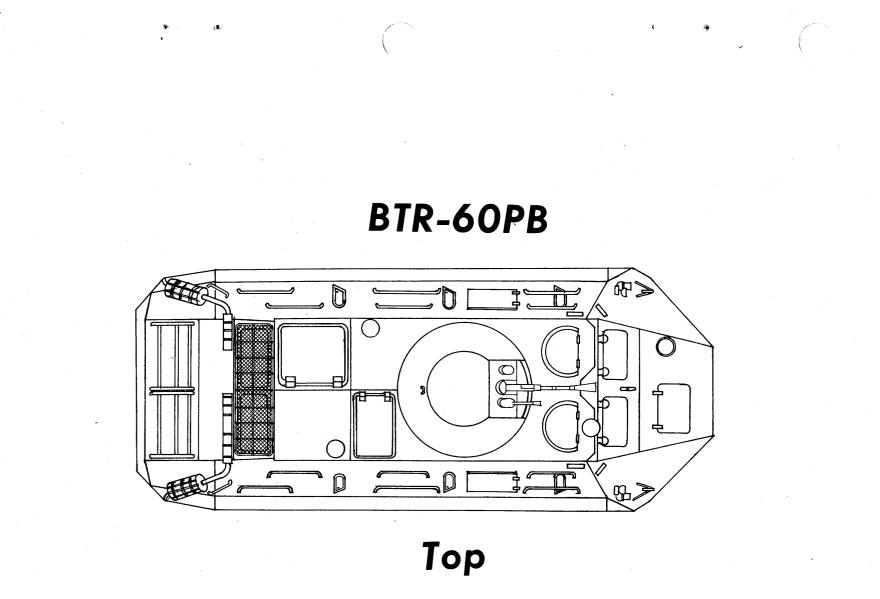
Rear

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BTR-60PB





# CZECH/POLISH

# AMPHIBIOUS WHEELED ARMORED PERSONNEL CARRIERS...OT-64 SERIES

CZECHOSLOVAK AMPHIBIOUS WHEELED ARMORED PERSONNEL CARRIERS

Armored personnel carrier OT-64A (SKOT) Armored personnel carrier OT-64B (SKOT-2) Armored personnel carrier OT-64C(1) (SKOT-2A) Armored personnel carrier OT-64C(2) (SKOT-2AP) Armored command vehicle R-2 Armored command vehicle R-3

The OT-64 (SKOT) eight-wheeled amphibious armored personnel carriers are a joint Czechoslovak/Polish development which are used in both armies in place of the Soviet BTR-60P vehicles. In spite of similarities in basic concept, the design shows many differences. The wheels are spaced differently; the water propulsion is by propellor; the engine is forward allowing rear exit for the passengers; and the powerplant is a single air-cooled diesel engine in place of two water-cooled gasoline engines. The driver and commander are placed forward of the engine compartment, while the passengers are to the rear. The vehicle is fully sealed and employs an overpressure system allowing it to operate over contaminated terrain.

There are at least six versions of the OT-64. The first is the OT-64A (SKOT) which is the basic vehicle. The Polish version of this vehicle mounts 7.62mm machineguns on pedestals; the Czechoslovak version has no mounted armament. The second version, OT-64B (SKOT-2), was used in Poland only. It mounted a shielded 7.62mm or 12.7mm machinegun pending the delivery of turrets with the 14.5mm machinegun.

The third version, the OT-64C(1) (SKOT-2A), uses a conical turret like that used on the Soviet BTR-60PB and BRDM-2 vehicles. This turret is armed with one 14.5mm KPVT machinegun and one 7.62mm PKT machinegun. It carries fewer passengers. The fourth version, used only in Poland, mounts a Polish 14.5mm machinegun turret of improved design which allows a maximum elevation of 89.5 degrees, permitting antiaircraft fire. This vehicle is known as the OT-64(2) (SKOT-2AP). In addition, there are two variants of a command vehicle, known as R-2 and R-3.

Vehicle	•	<u>0T-64A</u>	<u>0T-64C(1)</u>
Weight cbt	t	14.3	14.5
Wheelbase	mm	1300+2150+1300	1300+2150+1300
Length	mm	7440	7440
Width	nm	2500	2500
Height w/o MG	mm	2030	2300
w/turret	mm		2680
Track	mm	1860	1860
Clearance	mm	460	460
Tire size	**#11	13.00x18	13.00x18
Engine model		T 928-14	T 928-18
Horsepower		180	180
Cylinders		V-8	V-8
Fuel		Diesel	multifuel
Cooling		air	air
Speed: land	km/h	94.4	94.4
water	km/h	9	9
Cruising range: road	km	710	710
Fuel capacity	1	320	320
Fuel consumption	1/100 km	45	45
Trench	mm	2000	2000
Step	mm	500	500
Slope	0	35	35
Tilt	0	23	23
Ford	mm		
Armor: maximum	mm	10	10
Crew		2	2
Passengers		18	15
-			
Armament		<b>-</b>	
Main armament	mm	7.62 MG	14.5 MG
Model		SGMB*	KPVT
Basic load	rds	1250	500
Elevation	0	+23.5	+30
Depression	0	-6	-5
Traverse		90	360
Axis of bore	mm		2500
Secondary armament	mm		7.62 PKT
Basic load	rds		2000

\*or M59



**OT**-64A









OT-64A



0T-64A Note bow vane.



OT-64A With recoilless gun.



0T-64A



0T-64A



OT-64C(1) (without turret)

## **OT**-64B

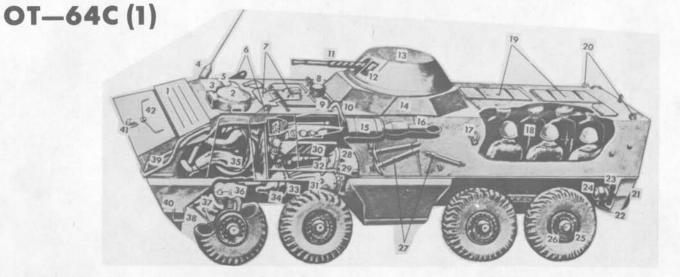






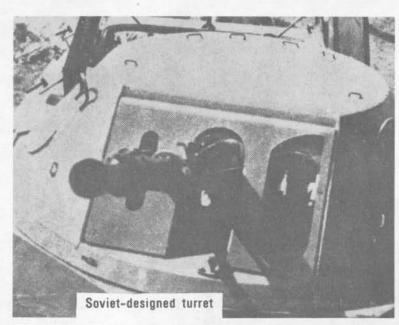


OT-64B



- 1. Bow vane
- 2. Driver's hatch
- 3. Searchlight
- 4. Antenna
- 5. Entrance hatch for vehicle commander
- 6. Fastening of lifting hook
- 7. Engine hatch
- 8. Intake for engine
- 9. Intake for radiator and transmission
- 10. Bilge drain pipe
- 11. Turret machineguns
- 12. Sight
- 13. Turret
- 14. Turret base
- 15. Muffler
- 16. Exhaust
- 17. Firing ports
- 18. Troop compartment
- 19. Entrance hatches
- 20. Lifting eyes
- 21. Rudder

- 22. Protective cover for propellor
- 23. Propellor in travel position
- 24. Propellor drive housing
- 25. Line for tire pressure regulation system
- 26. Divided wheel rim
- 27. Entrenching tools (shovel, pick, etc)
- 28. Transmission
- 29. Clutch with acceleration drive (transmission)
- 30. Engine
- 31. & 32. Engagement/disengagement lever and drive shaft for winch (older series only)
- 33. Transfer case for transmission
- 34. Intermediate gear for front drive axle
- 35. Driver
- 36. Independent suspension
- 37. Flexible axle for suspension
- 38. Tie rod system for front steering and axle
- 39. Lifting system for bow vane
- 40. Stirrup
- 41. Front tow hook
- 42. Entrenching tool (saw)



## OT-64C(1)



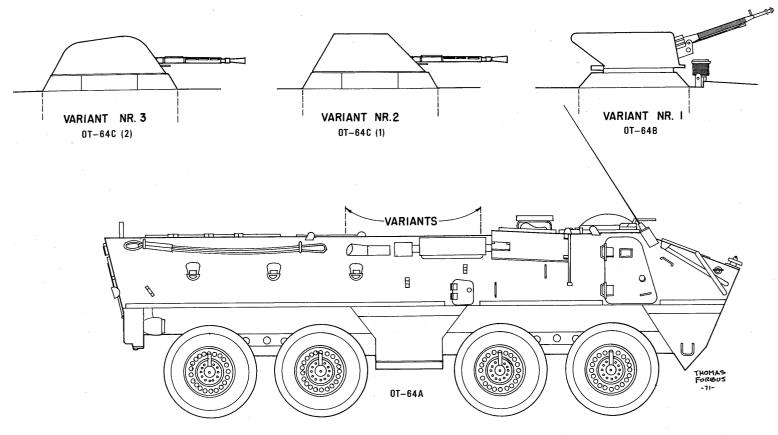




Polish-designed turret.

# OT-64C(2)

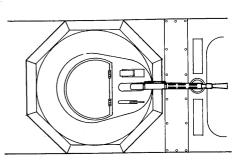


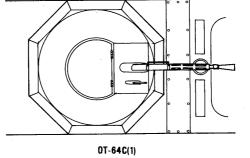


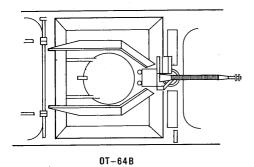
## **OT-64** Series

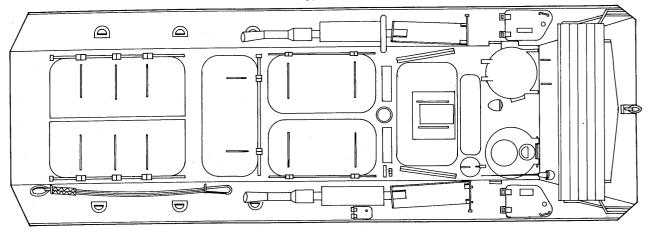
## **OT-64** Series

OT-64C(2)





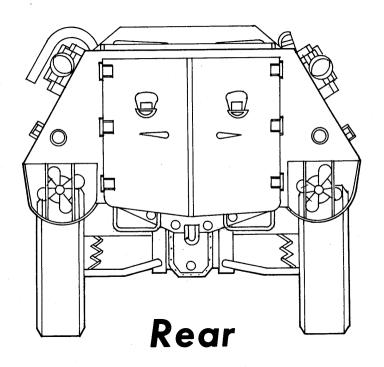




OT-64A

117





## HALF-TRACK ARMORED PERSONNEL CARRIERS



**OT**-810



#### M3

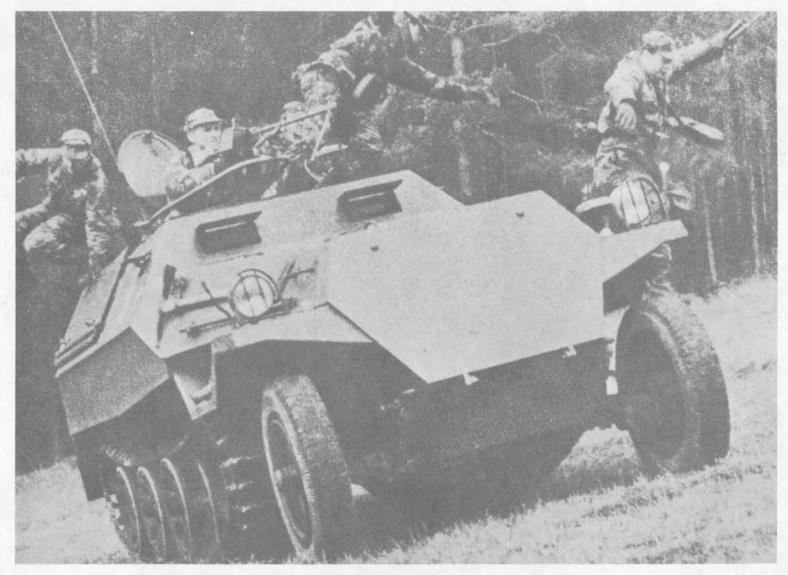
Armored personnel carrier M3 Armored personnel carrier OT-810 Armored personnel carrier OT-810 (antitank version)

Although half-track vehicles dominated the armored personnel carrier field on both sides during World War II, the postwar period has seen the steady decline in their importance. Two East European Communist armies, however, still use half-track vehicles, Yugoslavia and Czechoslovakia. Yugoslavia employs a considerable number of United States wartime half-tracks, primarily M3's. In addition, some half-track mounted United States self-propelled automatic antiaircraft weapons are held. The United States half-tracks differ in appearance from the German models and have drive on the wheels of the front axle. The armor is less favorably shaped. No overhead armor is employed.

The Czechoslovak OT-810 half-track armored personnel carrier is a modified version of the German World War II medium carrier Sd.Kfz.251. Although the original vehicles, also used by the Czechoslovaks, were open topped and had gasoline engines, later modifications had overhead armor and used Czechoslovak diesel engines. With the widespread introduction of the amphibious eight-wheel armored personnel carrier OT-64 in the Czechoslovak Army in recent years, the OT-810 has been relegated to an antitank role. At first it was used as an armored prime mover for the 82mm recoilless gun M59A, but more recently it has been extensively modified to carry this gun. A large folding shield, folding side armor plates and a mount for the gun have been installed. Arrangements to carry the ammunition have been made. The M59A may be fired from the vehicle or dismounted and fired from the ground. The OT-810 is used only in the Czechoslovak Army.

		<u>M3</u>	<u>0T-810</u>
Vehicle			
Weight cbt	t	9.1	8.5
Length	m	6172	5800
Width	mm	2477	2100
Height	mn	2261	1750
Track: wheels	mm	1626	1650
track	mm	1620	1600
Clearance	mm	485	300
Tire size		8.25x20	7.50x20
Track width	mm	305	300
Ground contact	nm	1187	1800
Engine model	*****	White*	Tatra
Horsepower		127	120
Cylinders		6 inline	6 inline
Fuel		gasoline	Diesel
Cooling		water	air
•	km /h	72	52.5
Speed	km/h	336	320
Cruising range	km		
Fuel capacity	]	227	160
Fuel consumption	1/100km	67	50
Ground pressure	kg/cm <sup>2</sup>	0.87	0.843
Trench	mm	550	1980
Step	mm	305	255
Slope	0	31	24
lilt	0		
Ford	mm	810	500
Armor: hull front	mm/°	12.7	12
hull side	mm/°	6.3	7
Crew/passengers		2/11	2/10
Armament			
Main armament	mm	varies	7.62 MG
Mode1			M59**
Basic load	rds		
Elevation	0		
Depression	0		
Traverse	0		
Axis of bore	mm		
	mm		
Secondary armament	mm		
Basic load	rds		

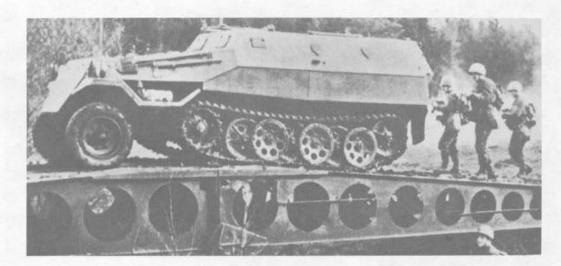
\*120 AX \*\*antitank weapon carrier version mounts one 82mm recoilless gun M59A



OT-810



OT-810



OT-810



OT-810 Antitank version



OT-810 Antitank version

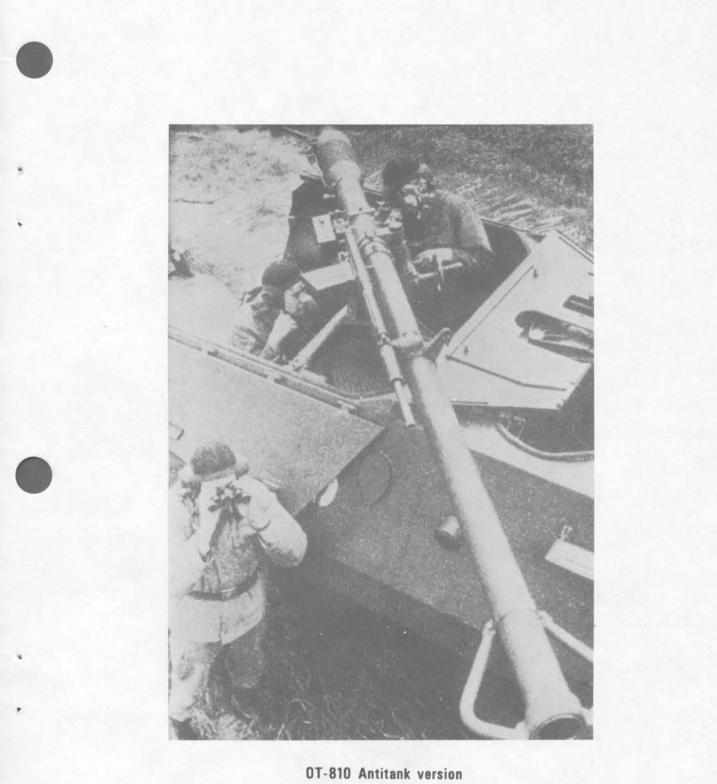


OT-810 Antitank version

OT-810



OT-810 Antitank version







# AMPHIBIOUS TRACKED ARMORED PERSONNEL CARRIERS



### BTR-50PK



### OT-62 "TOPAS"

#### SOVIET AND CZECHOSLOVAK AMPHIBIOUS TRACKED ARMORED PERSONNEL CARRIERS

Armored personnel carrier BTR-50P Armored personnel carrier BTR-50PA Armored personnel carrier BTR-50PK Armored command vehicle BTR-50PU Armored personnel carrier OT-62A (TOPAS) Armored personnel carrier OT-62B (TOPAS) Armored personnel carrier OT-62C (TOPAS-ZAP) Armored Recovery Vehicle WPT-TOPAS

Armored personnel carriers of the BTR-50P series are currently issued to the motorized rifle regiment of tank divisions in the Soviet and East German Armies, and in a modified form as command vehicles in virtually all Warsaw Pact armies. They have also been exported to the Middle East. The BTR-50P, which was first shown in public on November 1957, has undergone a number of modifications. The original BTR-50P had an open-topped fighting compartment, and at first, carried no armament. There is provision, however, for transporting 57mm, 76mm or 85mm guns in the fighting compartment. The guns are loaded onto the vehicle from the rear using folding ramps attached to the rear deck of the vehicle. The guns can be fired from the vehicle on land or water, or can be dismounted and used in a normal fashion. When firing from the vehicle in the water, however, the waterjet system must be in operation.

The slightly modified BTR-50PA differs from the BTR-50PK, which is fitted with overhead armor cover. It lacks the folding ramps for transporting the various light field pieces. The BTR-50PU armored command vehicles closely resemble the BTR-50PK in that they have overhead armor cover; however, the hatches on the top of the command vehicles are oval in shape. In addition, the most common version, the so-called Model-2, has two bays on the front of the superstructure. The BTR-50PU command vehicle is very elaborately equipped with a variety of radios and with a special land navigation system which includes a coordinate indicator and map course plotter. Great care must be taken to distinguish the BTR-50PU command vehicles from the Czechoslovak OT-62 armored personnel carriers which also have two bays, although, of different size.

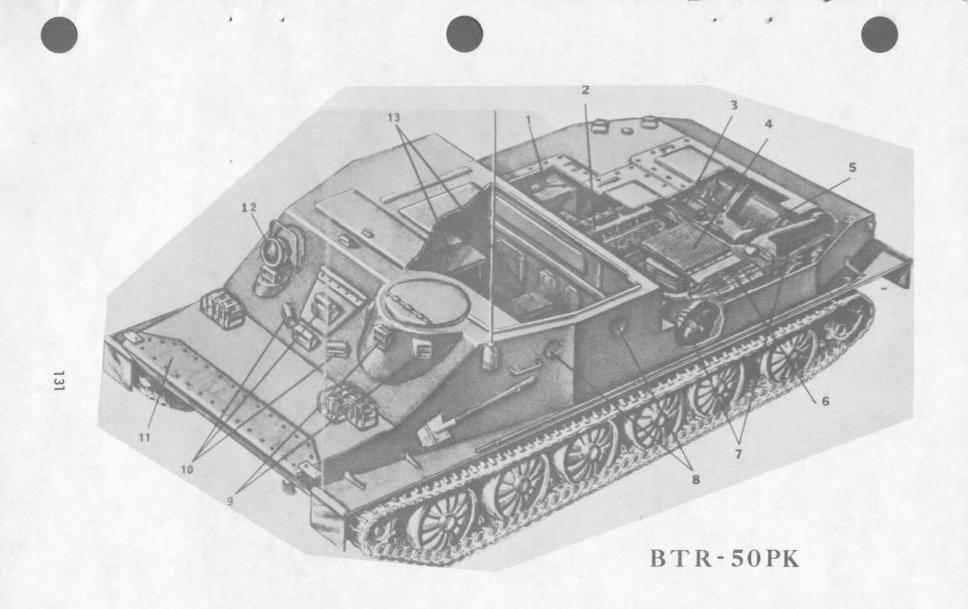
The Czechoslovak OT-62 (TOPAS) armored personnel carriers, based on the Soviet BTR-50PK, are used in both the Czechoslovak and Polish armies. In addition to a number of automotive improvements, which include a supercharged engine, the OT-62 is fully sealed and employs an overpressure system which allows it to operate over contaminated terrain. In appearance the OT-62 closely resembles the Soviet BTR-50PU command vehicle (Model-2); however, the right hand bay of the Czechoslovak vehicle is larger. The OT-62 also has doors on either side of the troop compartment for easier mounting and dismounting. The basic OT-62 has no fixed armament. The OT-62B, used only in the Czechoslovak Army, however, mounts a small turret on the right hand bay. This turret mounts a 7.62mm machineoun M59T internally, and an 82mm recoilless gun T-21 externally. The same turret is also mounted on the OT-65A amphibious scout car in the Czechoslovak Armv. Both versions of the OT-64 have also been sighted with the towed 82mm recoilless oun M59A being carried on the rear deck from which it can be fired.

The OT-62C (TOPAS-ZAP) is a recent Polish modification which mounts the same turret as does the OT-64C (2) wheeled armored personnel carrier. This turret is armed with one 14.5mm heavy machinegun KPVT and one 7.62mm machinegun PKT. The weapons are capable of 78 degrees of elevation to engage air targets. In addition to these models, command vehicle and armored ambulance versions of the OT-62 also exist.

The Polish forces have a further modification of the OT-62, known as the WPT-TOPAS. It is the basic vehicle for recovery of TOPAS armored personnel carriers and PT-76 tanks involved in over-the-beach landings. It closely resembles the OT-62A (TOPAS) but is additionally equipped with a winch of 2.5-ton capacity, a hand-operated one-ton capacity crane and other specialized recovery and repair equipment. Armament consists of one vehicular-mounted 7.62mm PK machinegun in addition to an RPG-7 antitank grenade launcher and twelve F-1 fragmentation hand grenades. The overall weight of the WPT-TOPAS is 15 tons.

Vehicle		BTR-50PK	0T-62B	0T-62C
Weight cbt	<b>4</b>	14 0	10	1.6 .00
Length	t	14.2	15	16.39
Width	mm	7080	7080	7000
	mm	3140	3140	3225 **
Height w/o MG Track	mm	1970	1970*	
Clearance	mm	2740	2740	2740
Track width	mm	370	370	425
Track on ground	mm	360 4080	360	360
Engine model	mm	4080 V-6	4080 DV 6	4080
Horsepower		240	PV-6	PV-6
Cylinders			300 C inline	300 C. d. 1d
Fuel		6 inline Diesel	6 inline	6 inline
Cooling			Diesel	Diesel
Speed: land/water	km/h	water 44/11	water	water
Cruising range	km/n	260	58.4/10.8	60/10.8
Fuel capacity	1	250	450	550
Fuel consumption	1/100 km	250 96	417	
Ground pressure	kg/cm	0.51	90	
Trench	Mm	2800	0.53 2800	2800
Step	mm	1100	1100	1100
Slope	0	38	38	38
Tilt	•	25	25	25
Ford	mm	23	25	25
Armor: maximum	mm	10	14	
Crew	*****	2	2	3
Passengers		20	18	3 12/8***
. abbeliger b		20	10	12/0
Armament				
Main armament	mm	7.62 MG	82 rcl gun	14.5 MG
Mode 1		SGMB	T-21	KPVT
Basic load	rds	1250	12	500
Elevation	0	+23.5	+20	+78
Depression	0	-6	-10	-5
Traverse	0	90	360	360
Axis of bore	m		2100	
Secondary armament	mm		7.62 M59T	7.62PKT
Basic load	rds	***	1250	2000
	-			

\*with turret 2230mm
\*\*with turret 2725mm
\*\*\*version I for infantry squad
version II for 2 82mm mortar squads



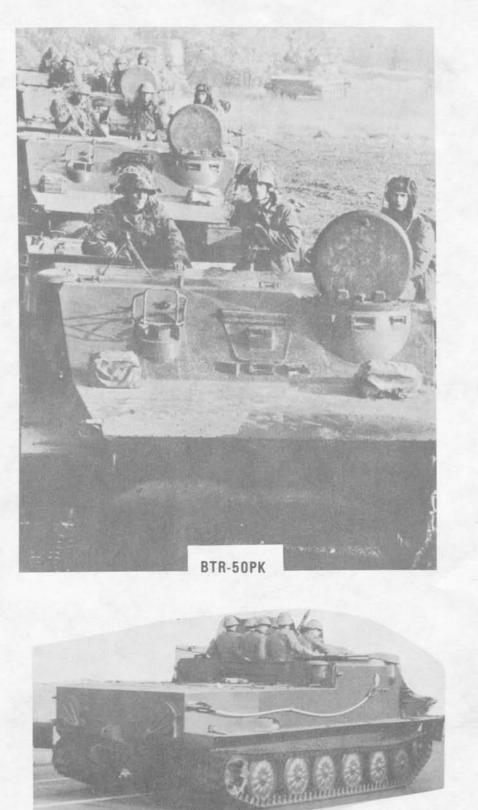
- 1. Fuel tank Engine
   Transmission
   Radiator
- 5. Clutch 6. Exhaust 7. Hydrojet
   8. Vision ports
- 9. Commander's vision devices
- 10. Driver's vision devices
- Bow vane
   Infrared headlight
   Passenger's seats





BTR-50P





BTR-50PK



BTR-50PU (Model 1)



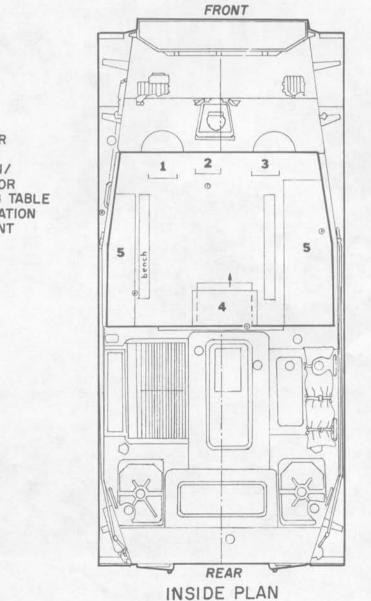


BTR-50PU (Model 2)

BTR-50PU (Model 2)

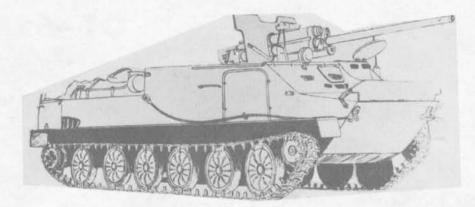


Interior of BTR-50PU



I. COMMANDER 2. DRIVER 3. NAVIGATION / NAVIGATOR 4. EXTENDING TABLE 5. COMMUNICATION EQUIPMENT • ANTENNA

BTR-50PU



BTR-50P with 57mm AT gun M1943



BTR-50P with AT gun







OT-62A



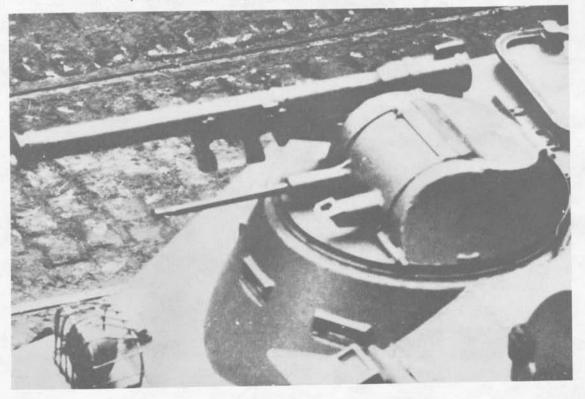
**OT-62A** 





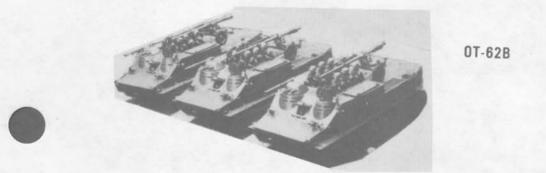
OT-62B

Closeup of mini turret with 7.62mm MG and 82mm recoilless gun.



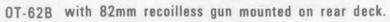


OT-62B with 82mm recoilless gun mounted on rear deck.





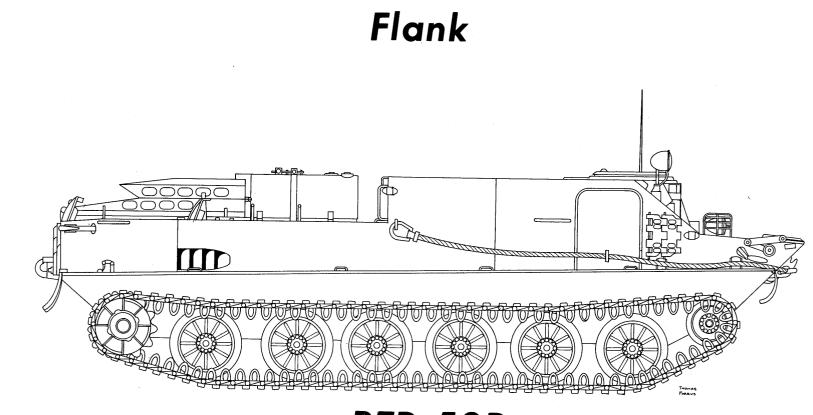






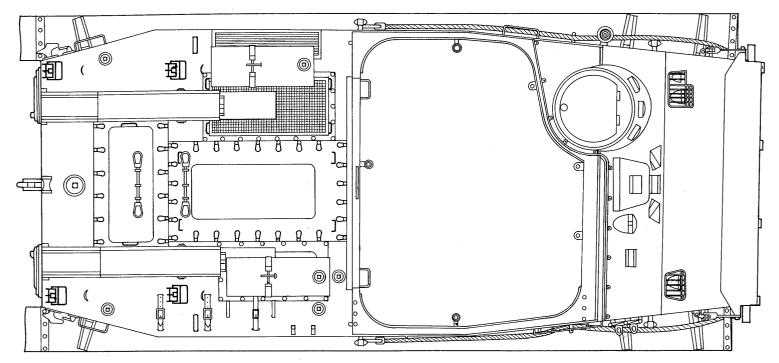
OT-62C with Polish-designed turret.



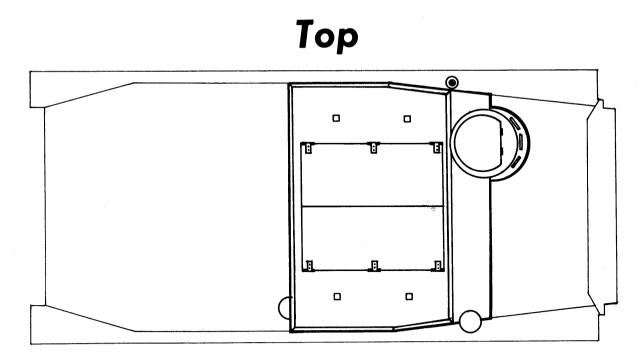


BTR-50P

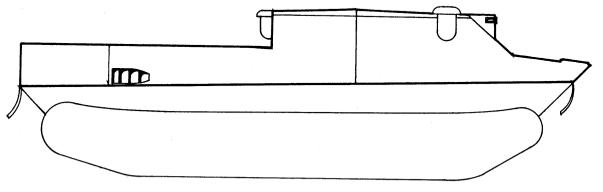
Тор



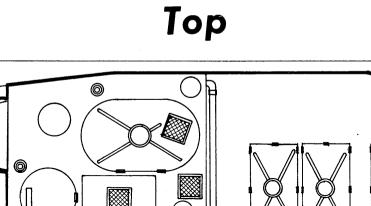
BTR-50P

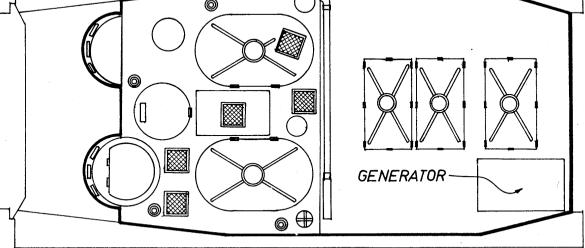


BTR-50PK

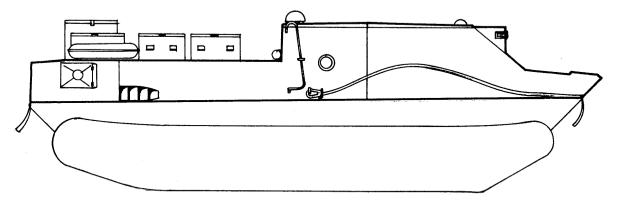


# Flank

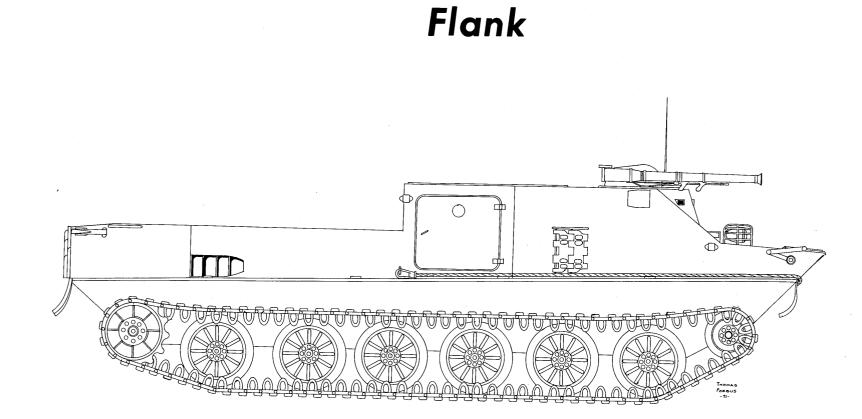




**BTR-50PU** 

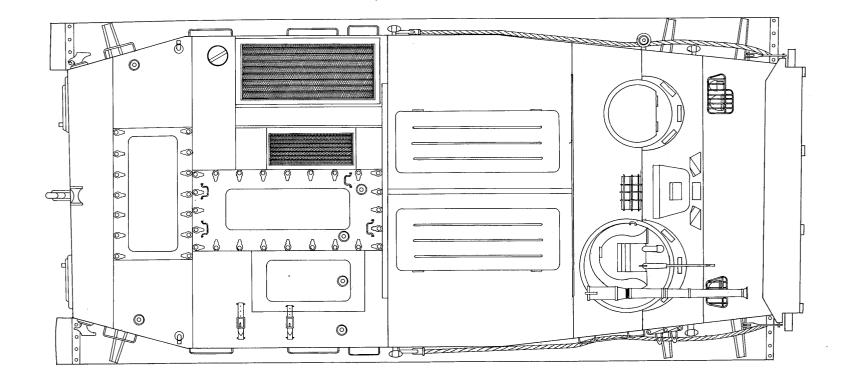


Flank



OT-62

Тор



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#### YUGOSLAV AND CHINESE COMMUNIST AMPHIBIOUS TRACKED ARMORED PERSONNEL CARRIERS

Armored personnel carrier M-60 Armored personnel carrier (Chinese Communist)

The Yugoslav amphibious tracked armored personnel carrier M-60 is a national development using components taken from other vehicles. The basic concept was inspired by the United States M59 carrier; the suspension was based on the Soviet SU-76 light assault gun; and the powerplant is a Yugoslav-made Austrian Saurer diesel engine which is used in the Hungarian K800 tracked artillery tractor and in a number of Yugoslav trucks. The K800 also uses a suspension derived from the SU-76. The main armament of the M-60 is a United States caliber .50 heavy machinegun, while the secondary armament is a Yugoslav M-53 copy of the German World War II MG 42 machinegun. The M-60 has not been produced in large quantities, and it has not been exported.

Among the variety of armored vehicles produced in Communist China is a tracked amphibious armored personnel carrier. Similar in design and configuration to the United States M113 carrier, the Chinese vehicle employs components of the PT-76 amphibious tank suspension, although the water propulsion is via track rather than waterjet. The normal main armament is a Chinese Type 54 copy of the Soviet 12.7mm heavy machinegun DShKM. The Chinese armored personnel carrier has been identified in use in the Albanian Army.

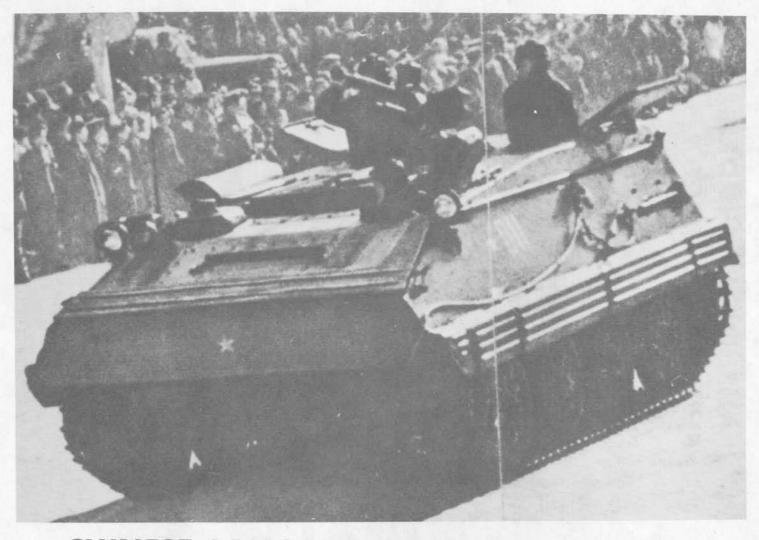
Vehicle		<u>M-60</u>
Weight cbt	t	9.5
Length	mm	5050
Width	nm	2750
Height w/o AA		1800
Track	mm	2370
Clearance	mm	
Track width	mm	350
	mm	300
Track on ground	mm	3000 EAMOS
Engine model		FAMOS
Horsepower		140 C. d. m. 1. d. m. m.
Cylinders Fuel		6 inline
		Diesel
Cooling Speed: land (water	lem /h	water
Speed: land/water	km/h	45/6
Cruising range	km r	400
Fuel capacity	] ] (100 km	150
Fuel consumption	1/100 km	38
Ground pressure Trench	kg/cm	0.6
	nm	2000
Step	mm	600
Slope	0	30
Tilt	-	26
Ford	mm	
Armor: maximum	mm	25
Crew		3
Passengers		10
Armament		
Main armament	mm	12.7 MG
Model		M2 HB
Basic load	rds	
Elevation	0	
Depression	0	
Traverse	0	
Axis of bore	mm	
Secondary armament	mm	7.9 M-53
Basic load	rds	

## YUGOSLAV AMPHIBIOUS ARMORED PERSONNEL CARRIER M60



Yugoslav Armored Personnel Carrier M-60

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## **CHINESE ARMORED PERSONNEL CARRIER**



Infantry combat vehicle BMP Infantry combat vehicle BMP-2

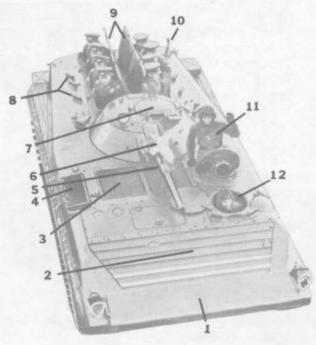
The Soviet BMP armored infantry combat vehicle is an entirely new type of light armored vehicle combining the features of a light tank, antitank guided missile carrier, and armored personnel carrier. It was first paraded in public on 7 November 1967 in Moscow, and since then has been issued to troop units of the Soviet Army in East Germany and to the Polish airborne division.

Although the chassis is new, it does incorporate some of the components of the PT-76 suspension. The BMP, however, does not use waterjet propulsion, and therefore, the tracks are different. In addition, track support rollers are used. Another innovation is that the powerplant is mounted on the right front of the vehicle, thus permitting rear access doors to the troop compartment. Since the original vehicle appeared a number of modifications have been made, the most obvious of which is the lengthening of the bow and the extension of the deflector shroud to the rear. These changes were made to improve the swimming characteristics which are inhibited by the forward placement of the powerplant.

The main armament of the BMP is a Johnn smoothbore short-recoil gun mounted together with a 7.62mm coaxial machinegun in a small conical turret. The short-recoil guns fire fin-stabilized HEAT projectiles capable of successfully attacking medium tanks up to 1000 meters in range. In addition, a mount for a launch rail for the AT-3 SAGGER wire-guided antitank guided missiles is provided. Other arrangements for mounted combat of the passengers are also provided by the firing ports found on both sides of the vehicles. These, too, have been modified in the BMP-2 version.

		BMP-2
Vehicle		10 5
Weight cbt	t	12.5
Length Width	mm	6750 3000
Height	mm	2000
Track	mm mm	2540
Clearance	mm	400
Track width	mm	300
Track on ground	mm	3600
Engine model		V-6
Horsepower		280
Cylinders		6 inline
Fuel		Diesel
Cooling		water
Speed: land/water	km/h	55/8
Cruising range	km	300
Fuel capacity	1	
Fuel consumption	1/100	
Ground pressure	kg/cm	0.57
Trench	mm	2700
Step	mm o	900
Slope	0	30
Tilt	-	
Ford	mm	14
Armor: maximum	mm	• •
Crew Passongons		3 8
Passengers		0
Armament		73
Main armament	mm	73 76 gun
Model		smoothbore
Basic load	rds	30
Elevation	11 O	+20
Depression	8	-5
Traverse		360
Axis of bore	mm	1410 7 62 DVT
Secondary armament	mm	7.62 PKT 1000
Basic load Supplemental armament	rds	ATGM
Model		AT-3 SAGGER
Basic load	rds	4
Dusic Iouu	1 43	F

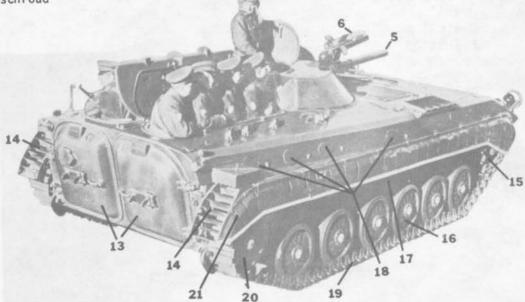
# BMP



- 1. Bow vane
- 2. Engine compartment
- 3. Radiator
- 4. Exhaust
- 5. 76mm gun
- SAGGER antitank guided missile
   Gunner's hatch
- 8. Vision devices for passengers 9. Passenger hatches 10. Antenna

- 11. Commander
- 12. Driver
- 13. Rear doors to passenger compartment
- 14. Track cover with water slits
- 15. Drive sprocket
  16. Roadwheel

- 17. Track support roller 18. Firing ports for small arms 19. Track
- 20. Idler wheel
- 21. Track schroud

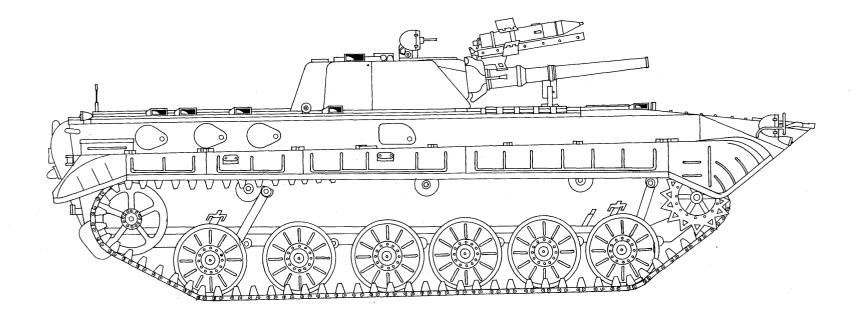




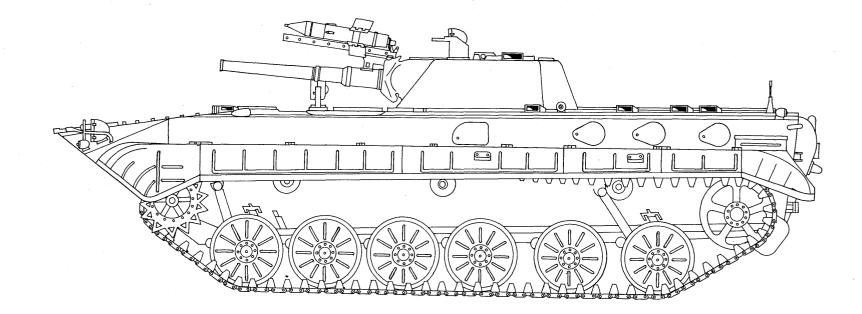


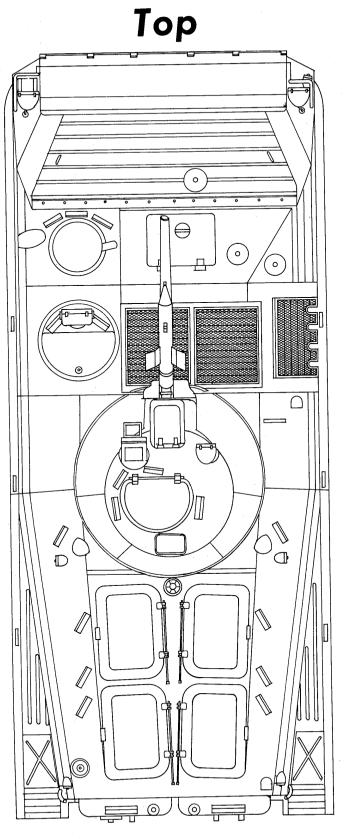


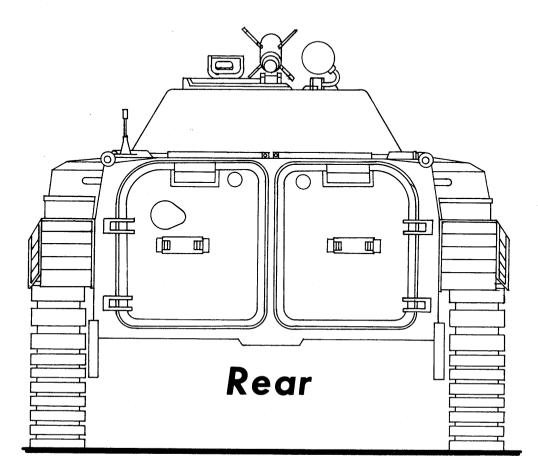
**Right Flank** 



# Left Flank







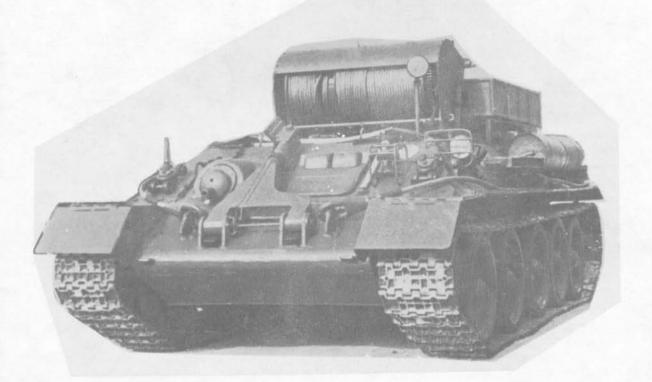
# TANK

# RECOVERY

# VEHICLES

### **MEDIUM TANK RECOVERY VEHICLES**

### T-34 CHASSIS



## T-34-T (MODEL-B)

### EAST GERMAN

#### MEDIUM TANK RECOVERY VEHICLES T-34 CHASSIS

Medium tank recovery vehicle T-34-T (Model-A) Medium tank recovery vehicle T-34-T (Model-B) Medium tank recovery vehicle T-34-T (Model-B--East German) Medium tank recovery vehicle WPT-34 Medium tank recovery vehicle SKP-5 Medium tank recovery vehicle (Czechoslovak) Medium tank recovery vehicle SU-85-T Medium tank recovery vehicle SU-100-T

For several years the Warsaw Pact armies have employed a wide variety of tank recovery vehicles based on the T-34 medium tank chassis or one of its variants. Originally, most of these vehicles were simply turretless tanks employed as towing vehicles. This model, referred to here as T-34-T (Model-A), has been largely displaced by improved versions, the MT-34-T (Model-B) or the SKP-5. In addition to these, there are other variants such as the WPT-34 Polish model, the East German version of the T-34-T (Model-B) with pushbar and the Czechoslovak vehicle with heavy crane.

The T-34-T (Model-B) was improved over the earlier model by the addition of a radio, a rigging assembly, a loading platform and a jib-crane. The rear deck has a cargo platform of 2.5-ton capacity and is designed for the transport of equipment accessories. The SKP-5 is essentially an armored vehicle with a 5-ton crane mounted in a rotatable turret. The East German version of the T-34-T (Model-B) differs primarily in that it has a special pushbar on the bow which is used in recovery operations where it is more desireable to push than to tow. The WPT-34 Polish recovery vehicle incorporates a large armored compartment forward, mounting a bow machinegun. It also features a large-diameter, telescoping snorkel allowing this vehicle to be used in fording operations. In addition, the Poles have fitted the vehicle with a large spade on the rear.

Both the Polish and Czechoslovak Armies employ the Czechoslovak heavy crane vehicle. The lifting capacity is much greater than that of the Soviet SKP-5, thus permitting the lifting of turrets, essential in removing the guns from modern Soviet medium tanks. The rarely encountered SU-85-T and SU-100-T are actually variants of the early T-34-T (Model-A) towing vehicles, but use the SU chassis in place of the tank chassis.

		T-34-T (B)	SKP-5
Vehicle			
Weight cbt	t	29	26
Length	m	6190	8000
Width	mm	3050	3050
Height	mm	2140	2600
Track	mm	2450	2450
Clearance	mm	400	400
Track Width	m	500	500
Ground contact	mm	3850	3850
Engine model		V-2-34*	V-2-34*
Horsepower		500	500
Cylinders		V-12	V-12
Fuel		Diesel	Diesel
Cooling		water	water
Speed	km/h	55	55
Cruising range	km	300	300
Fuel capacity	1	560	560
Fuel consumption	1/100km	190	190
Ground pressure	kg/cm <sup>2</sup>	0.75	0.68
Trench	mm	2500	2500
Step	mm	730	730
Slope	0	35	35
Tilt	0	25	25
Ford	mm	1300	1300
Armor: glacis plate	mm/°	45/60	45/60
upper hull side	mm/°	45/20	45/20
Crew		3	2
Towed load	t	15	
Winch capacity	t	130**	
Lifting capacity	t	3	5
Armament			
		none	none

\*some vehicles use the V-2-34M \*\*maximum "retrieving" capability



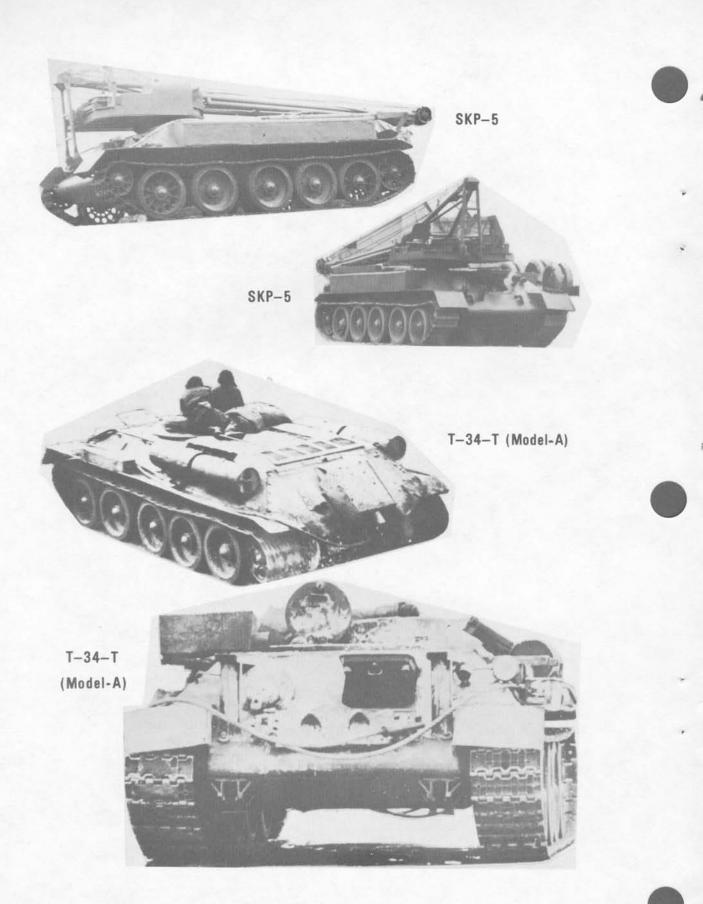
SU-85-T

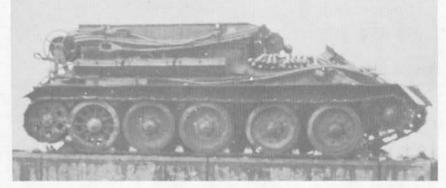


SU-85-T

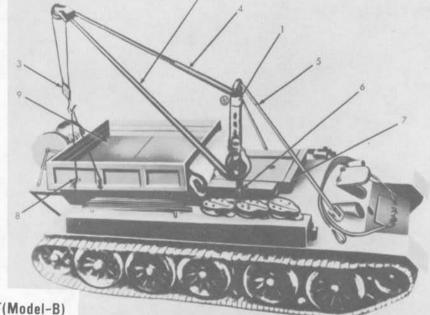


SU-100-T





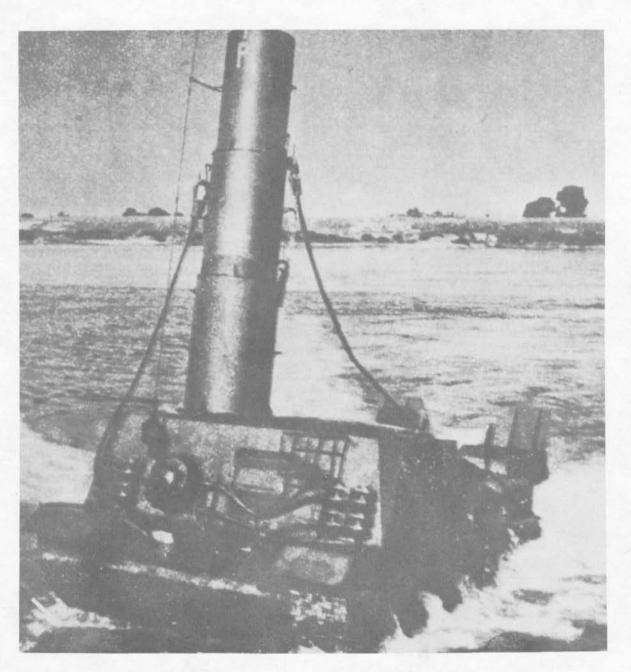
T-34-T (Model-B)



T-34-T(Model-B)

- 1. Support with winch
- 2. Jib
- Block and tackle with hook
   Telescopic arm
   Braces

- 6. Brackets 7. Brackets
- 8. Cable
- 9. Cargo platform



## POLISH WPT-34

with telescopic "CHIMNEY" snorkel.



#### CZECH T-34 WITH HEAVY CRANE

## MEDIUM TANK RECOVERY VEHICLES T-54/55 CHASSIS



Medium tank recovery vehicle T-54-T Medium tank recovery vehicle T-54 (A) Medium tank recovery vehicle T-54 (B) Medium tank recovery vehicle T-54 (C)

The most modern tank recovery vehicles used by the Warsaw Pact armies are those based on the T-54/55 medium tank chassis. The Soviet T-54-T has all of the features of the older T-34-T (Model-B), but is mounted on a more powerful chassis. In addition, it has a large spade mounted on the real of the vehicle and is equipped with a large-diameter "chimney" snorkel.

The East German Army has also developed a series of recovery vehicles using the T-54 chassis. Three variants have been identified to date. The first is the T-54 (A) which is termed an "armored prime mover without recovery equipment. The second, the T-54 (B), is termed "an armored prime mover with recovery equipment." The basic construction of these two vehicles is the same. Both are equipped with a snorkel for fording, a push/pull bar, welding and cutting equipment, radiation warning equipment, a chemical agent detector and a dismountable jib-crane with a lifting capacity of one ton. In addition, there are two boxes for the storage of spare parts and accessories. Both vehicles also can be equipped with mine-clearing devices.

The presence of rear-mounted brackets used for securing the tow cables and the front-mounted protective plate located above the driver's and commander's hatches distinguish the T-54 (B) from the T-54 (A). This protective plate is believed to provide protection for the equipment on the vehicle as well as for the crew. Both of the vehicles may be seen either with or without snorkel, but they should not be confused with the Soviet T-54-T which has a spade not present on the East German models.

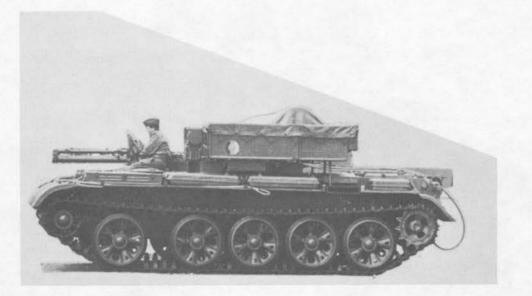
The third East German variant is the T-54 (C), which is equipped with a very heavy duty crane that immediately identifies it. Other differences include a BTU-type dozer blade on the front of the vehicle and a spade at the rear.

		T-54-T	T-54 (B)	T-54 (C)
Vehicle				**************************************
Weight cbt	t	32	32	34
Length	mm	7475	6750	8500
Width	mm	3270	3270	3400
Height	mm	1890	2200	2650
Track	mm	2640	2640	2640
Clearance	mm	425	425	425
Track width	mm	580	580	580
Ground contact	mm	3840	3840	3840
Engine model		V-54	V-54	V-54
Horsepower		520	520	520
Cylinders		V-12	V-12	V-12
Fuel		Diesel	Diesel	Diesel
Cooling		water	water	water
Speed	km/h	48	48	48
Cruising range	km	400	400	400
Fuel capacity	1	812	812	812
Fuel consumption	1/100km	190	190	190
Ground pressure	kg/cm	0.72	0.72	0.77
Trench	mm	2700	2700	2700
Step	mm	800	800	800
Slope	0	30	30	30
Tilt	0	30	30	30
Ford	mm	1400	1400	1400
Armor: glacis plate	mm/°	100/60	100/60	100/60
upper hull side		70/0	70/0	70/0
Crew		3	3	3
Towed load	t	Ū	5	5
Winch capacity	t			
Lifting capacity	ť	3	1	20
Letting cupucity	v	<b>v</b>	•	20
Armament				
- Trinaidello		none	none	none
		HUIC	none	none



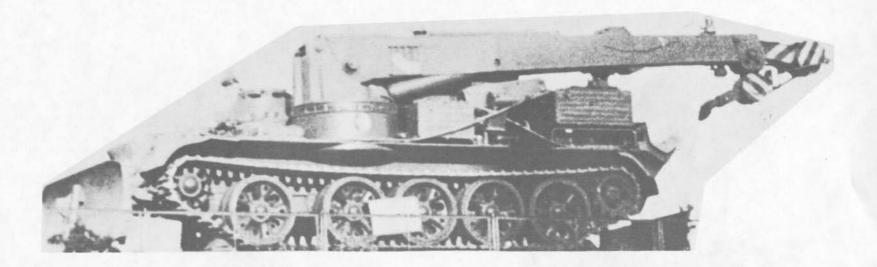


EAST GERMAN T-54 (A) WITHOUT EQUIPMENT



EAST GERMAN T-54 (A) WITHOUT EQUIPMENT





EAST GERMAN T-54 (C) WITH HEAVY CRANE



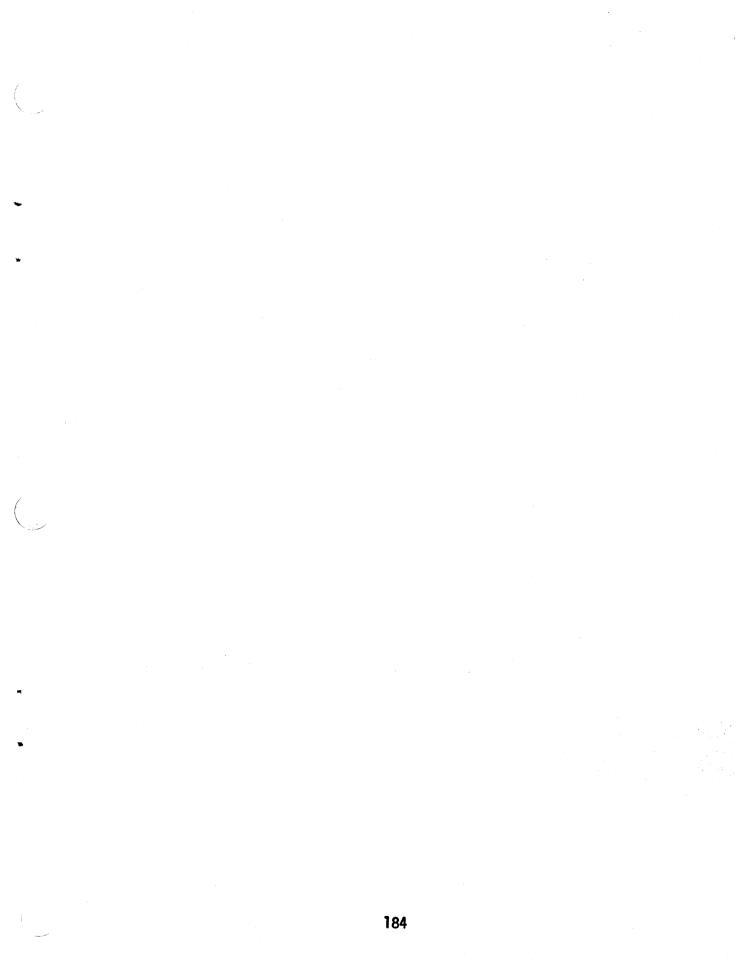


EAST GERMAN T-54(C) WITH HEAVY CRANE



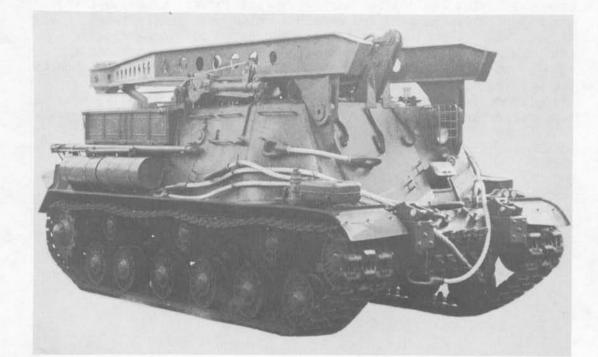
EAST GERMAN T-54(C)

Recovery Vehicle	Crane	Winch	Spade	Platform Stowage	Snorkel	Pushbar
T-34-T (Model-A)						
T-34-T (Model-B)	x	×		x		
T-34-T (Model-B) EGA	x	x		X		x
WPT-34 Polish		X	×	a de <b>x</b> ilana		
SKP-5	X					
T-34 Czech	X	×				
SU-85-T						
SU-100-T		<u></u>				
T-54 (A) EGA	x			×	x	x
T-54 (B) EGA	X			×	x	x
T-54 (C) Ega	X		x	x	- <b>X</b>	X
T-54-T	x	<u></u>	x	X	x	



## HEAVY TANK RECOVERY VEHICLES

## **JS CHASSIS**



JSU-T (MODEL-E)

Heavy tank recovery vehicle JS-2-T Heavy tank recovery vehicle JSU-T (Model-A) Heavy tank recovery vehicle JSU-T (Model-B) Heavy tank recovery vehicle JSU-T (Model-C) Heavy tank recovery vehicle JSU-T (Model-D) Heavy tank recovery vehicle JSU-T (Model-E)

Six different heavy tank recovery vehicles employ the basic chassis of the JS heavy tank series, either in the JS-2 or JSU form. The JS-2 and the JSU-T (Model-A) are simple towing vehicles like the original recovery vehicles using the T-34 chassis. These vehicles are no longer common.

The modernized JSU-T's (Models-B through E) have a variety of improvements, and are the standard heavy vehicles. They are used in both the Soviet and non-Soviet Warsaw Pact forces. The JSU-T (Model-B) has essentially the same improvements which were incorporated in the medium T-34-T (Model-B), with the added cargo platform, rigging equipment and a dismountable jib-crane. Model-C has an added spade, similar to that of the T-54-T, while the Model-D is distinguished by two pushing bars fitted to the front of the vehicle and a largediameter "chimney" snorkel. Model-D has no spade. Finally, Model-E has a spade and a large A-frame capable of lifting loads between 5 and 7 tons. The snorkel is lacking.

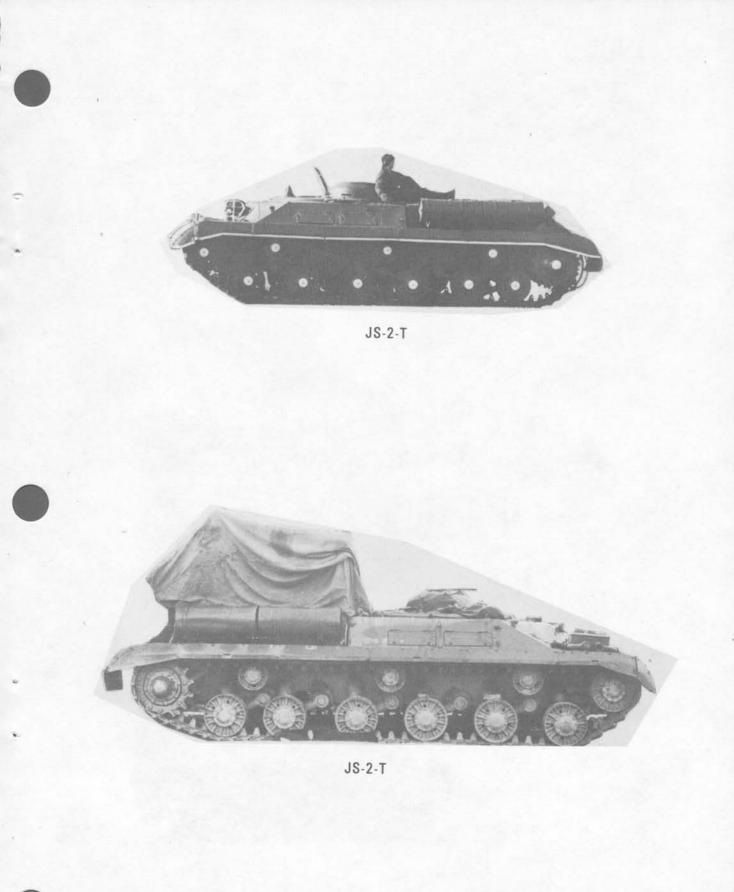
		JSU-T (B)	JSU-T (D)
<u>Vehicle</u>			
Weight cbt	t	44	45.5
Length	mm	6770	8325
Width	mm	3070	3070
Height	mm	3000	3500
Track	mm	2410	2410
Clearance	nm	460	460
Track width	mm	650	650
Ground contact	mm	4265	4265
Engine model		V-2-IS	V-2-IS
Horsepower		520	520
Cylinders		V-12	V-12
Fuel		Diesel	Diesel
Cooling		water	water
Speed	km/h	37	37
Cruising range	km	150	150
Fuel capacity	1	520	520
Fuel consumption	1/100km	350	350
Ground pressure	kg/cm <sup>2</sup>	0.79	0.82
Trench	mm	2500	2500
Step	mm	1000	1000
Slope	0	36	<b>3</b> 6
Tilt	0	30	30
Ford	mm	1300	1300
Armor: glacis plate	mm/°	110/70	110/70
upper hull side	mm/°	90/0	90/0
Crew		4	4
Towed load	t		
Winch capacity	t		
Lifting capacity	t ·	3	3
•			

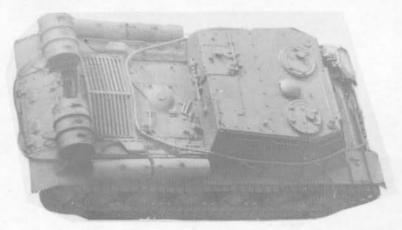
Armament

none

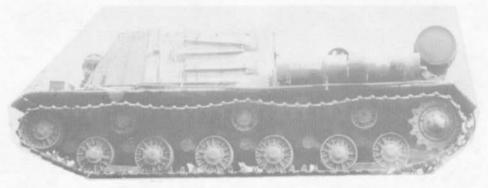
none

Recovery Vehicle	Crane	Winch	Spade	Stowage Platform	Snorkel	Pushbar
JS-2-T						`
JSU-T (Mode1-A)		X				
JSU-T (Model-B)	x	x		x		
JSU-T (Mode1-C)		x	x	x		
JSU-T (Model-D)		x		x	X	X
JSU-T (Model-E)		×	x	x		





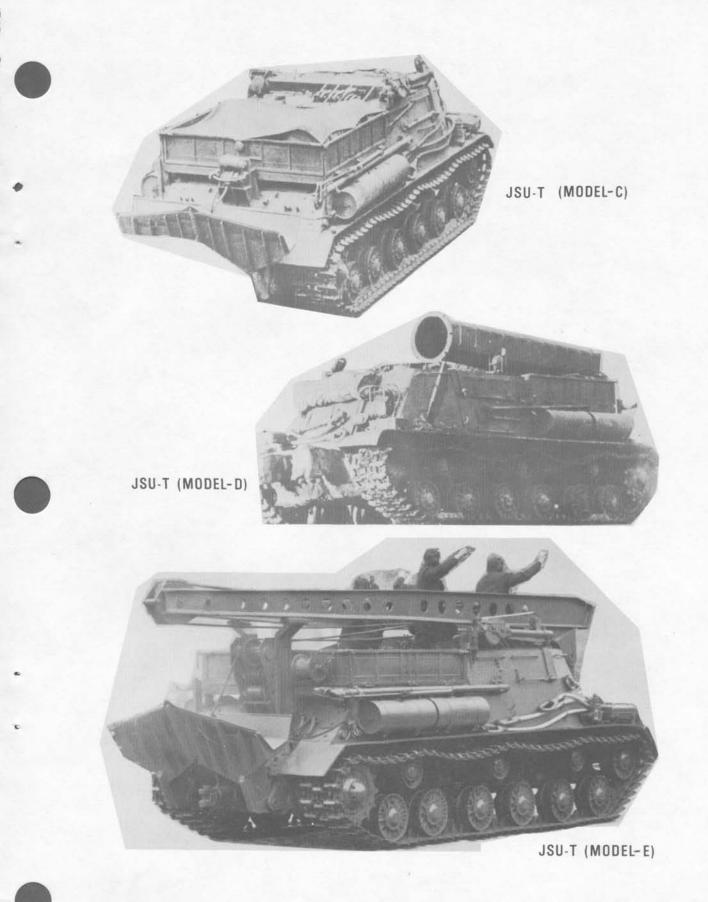
JSU-T (MODEL-A)



JSU-T (MODEL-A)



JSU-T (MODEL-B)





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Medium tank recovery vehicle M32 Medium tank recovery vehicle M74

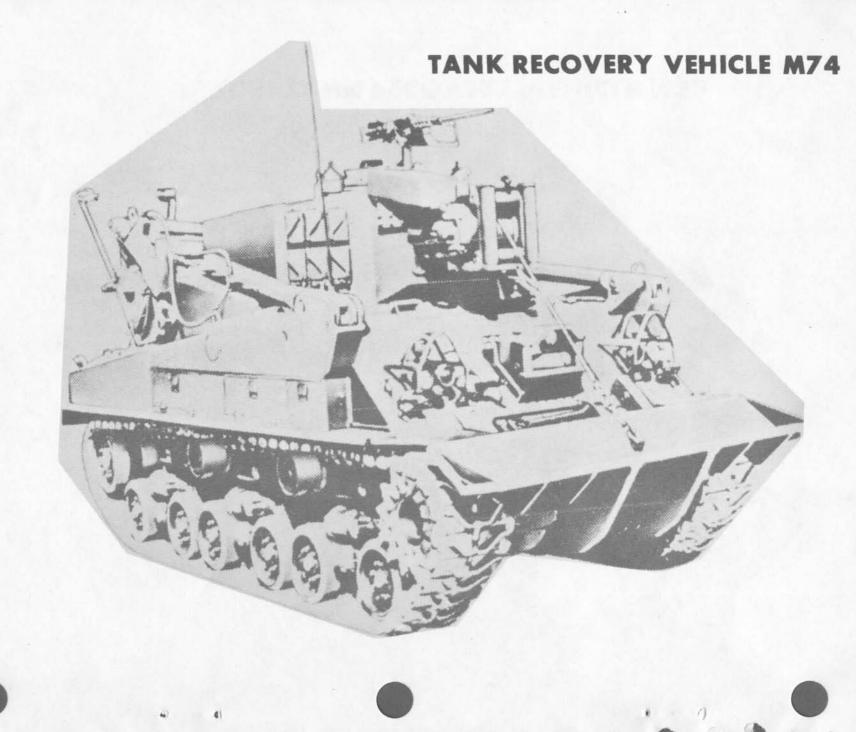
The M32 is a light-medium tank recovery vehicle of United States World War II origin. The various submodels of this vehicle are based on submodels of the M4 medium tank series. Unlike the later and more powerful M74, the M32 is not equipped with a spade. It does, however, have a winch and a crane. Unlike most Warsaw Pact tank recovery vehicles, the M32 is armed with two machineguns.

The M74 is based on the chassis of the M4A3E8 United States medium tank, using the horizontal volute spring suspension with center track guides. Although based on the M4 series tank, the M74 is a much more powerful and efficient tank recovery vehicle than the M32. In addition to a winch and crane, the M74 is fitted with a spade. Release, height adjustment and stowage of the spade in travel position is accomplished from within the vehicle. Like the M32, the M47 is armed with two machineguns.

Vehicle		<u>M32</u>	<u>M74</u>
<u>Vehicle</u> Weight cbt	t	27 0	42.2
Length w/crane	c mm	27.8 5928	7950
Width		2737	3098
Height w/crane	mm	2679	3391
Track		2108	2260
Clearance	mm	457	393
Track width	mm	432	584
Ground contact		3734	2692
Engine model	11411	Cont*	Ford GAA
Horsepower		350	525
Cylinders		9 red	V-8
Fuel		gasoline	gasoline
Cooling		air	water
Speed	km/h	42	45
Cruising range	km	160	160
Fuel capacity	]	651	636
Fuel consumption	1/100km	410	400
Ground pressure	kg/cm	0.626	0.956
Trench	mm	2286 -	2286
Step	mm	610	610
Slope	0	31	31
Tilt	0		
Ford	mm	1067	914
Armor: glacis plate	mm/°	60/47	60/47
upper hull side	mm/°	40/0	40/0
Crew		5	4
Towed load	t	9.1	45.5
Winch capacity	t	27.2	40.8
Lifting capacity	t	13.6	11.3
Armament			
Main armament	mm	12.7 MG	12.7 MG
Model		M2 HB	M2 HB
Basic load	rds	600	1050
Secondary armament	mm	7.62 M1919A4	7.62 M1919A4
Basic load	rds	1000	2000

\*R 975 C1





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