



Soldier Loads in Combat



Task Force Devil, CTF82



The Modern Warrior's Combat Load



First U.S. battlefield
load study since
USMC Makin Island Raid
Aug 17, 1942.

First known U.S. Army battlefield
load study in history.

Dismounted Combat Operations in Afghanistan



LTC Charles E. Dean
Devil CAAT Team Leader

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All photographs in this presentation were taken by members of the CALL Combat Arms Assessment Team

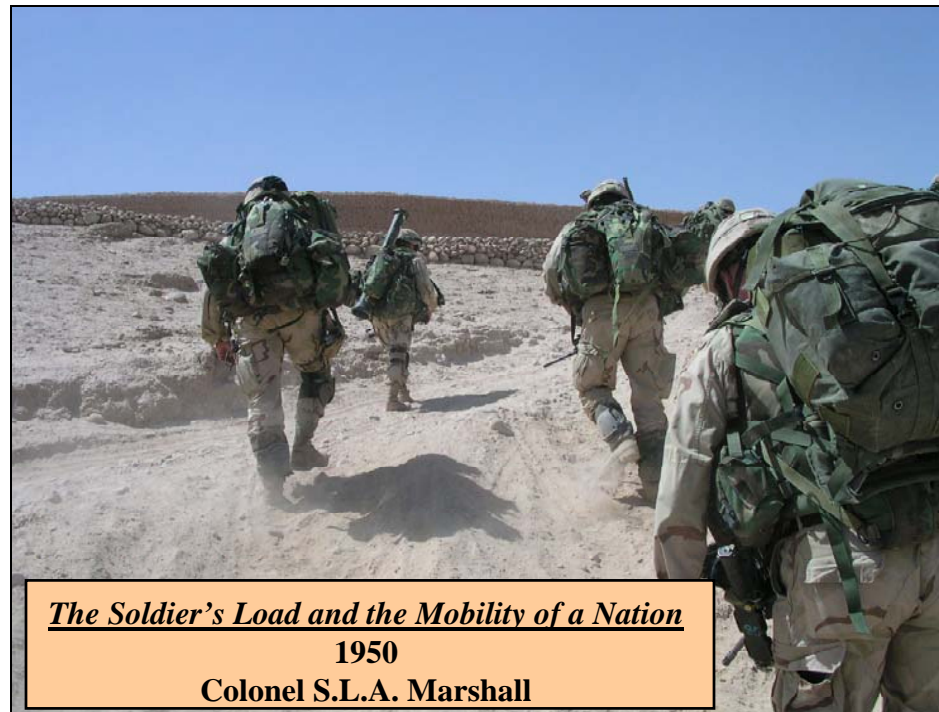


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“On the field of battle man is not only a thinking animal, he is a beast of burden. He is given great weights to carry. But unlike the mule, the jeep, or any other carrier, his chief function in war does not begin until the time he delivers that burden to the appointed ground...In fact we have always done better by a mule than by a man. We were careful not to load the mule with more than a third of his weight.”



The Soldier's Load and the Mobility of a Nation

1950

Colonel S.L.A. Marshall



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Devil CAAT Mission

Conduct a battlefield study of the modern Soldier's combat load in order drive Army reductions over this decade to equipment weight and bulk while enhancing Soldier capabilities. Directly support development of the Objective Force Warrior and the Soldier as a System .



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Volunteers Sought, Nov-Dec 2002



- *Infantrymen
- *Light Infantry experienced
- *Airborne and Ranger qualified
- *Top physical condition
- *Willing to carry equivalent loads as Soldiers and face same dangers
- *Willing to collect data in combat
- *Willing to fight when required
- *Willing to take orders from any small unit leader
- *Good listeners and learners
- *Parent unit approval for combat participation



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Task Force Devil, CTF82 Devil CAAT Pre-Mission Experience Levels

Name	Qualifications	EIB/CIB	Light Infantry Experience
LTC Dean	MPchtst, AAslt, Ranger	EIB	3-504 PIR; E/504; 2-508 PIR, 1-503 rd (101 st), HQ 504 th PIR
MAJ Glenn	MPchtst, Ranger	EIB	1-501 st PIR
CPT Covert	Pchtst, AAslt, Ranger, Pathfinder	EIB	2-87 th IN, 6 th RTB
MSG Sanchez	MPchtst, Ranger, Pathfinder	CIBs (Just Cause, Desert Storm); EIB	2-508 PIR; 1-504 PIR; 2-504 PIR; 3-504 PIR, 5 th RTB (MSG Sanchez deployed to Iraq on 14 Aug 03 with 173 rd Abn)
SFC(P) Donaldson	MPchtst, AAslt, Ranger, Pathfinder	CIB (Desert Storm) EIB	LRSD 101 st (Desert Storm), 1-327 IR, 2-75 th Rangers, 6 th RTB (2 tours)
SFC Dougherty	MPchtst, AAslt, Ranger, Pathfinder	Desert Storm (Arty) EIB	2-320 FA, 4 th RTB, 3-504 PIR, 1-327 IR, 2-502 IR (Kosovo), 6 th RTB
GS-13 DuPont	MPchtst, Ranger	CIB (Just Cause); EIB	2-325 AIR; 3-75 Rangers LRSD 7 th ID; ITB



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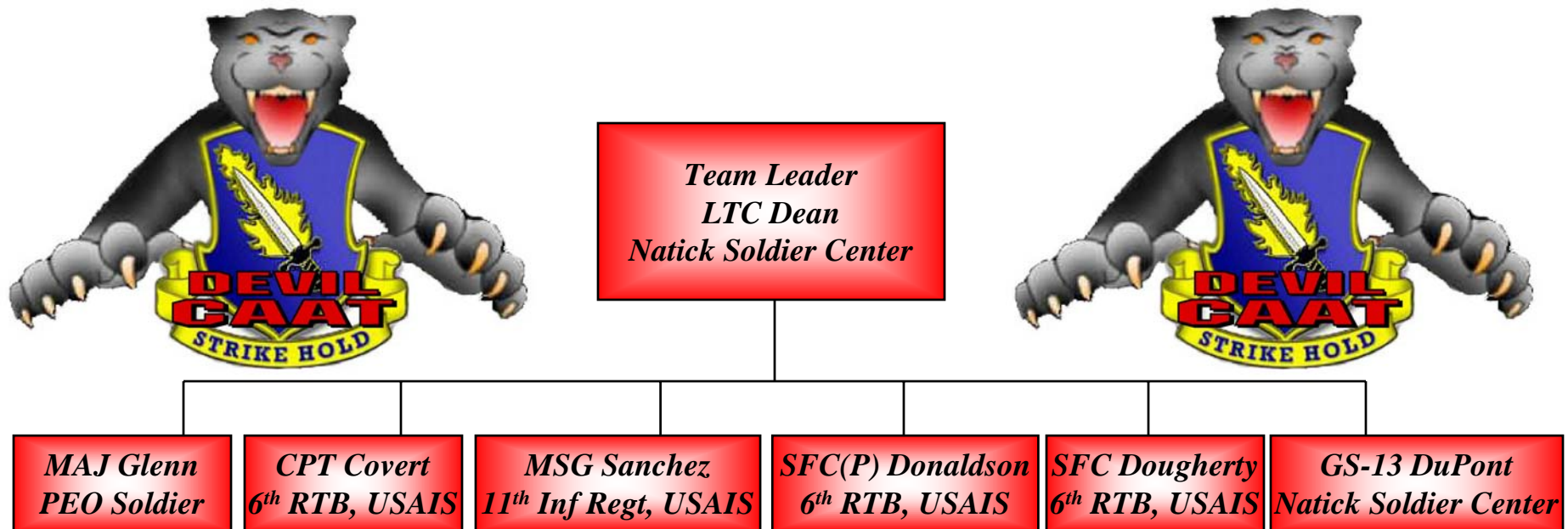


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Devil CAAT Composition



Team size permitted the simultaneous fielding of 3 separate 2-man teams across a battalion task force during combat operations



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Devil CAAT Collection Areas

- **Combat Load Data.**

- *Biomechanics data for NSC.*

- *UGR-A data for NSC.*



- *Rapid Fielding Initiative Data for PM Clothing and Individual Equipment (all your new gear).*

- *Spider Boot data for PM Clothing and Individual Equipment.*

- *Weapon and ammunition data for ARDEC.*

- *MOLLE frame data for PM Clothing and Individual Equipment.*

- *Ranger Training Brigade data from recent graduates.*



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Combat Load Definitions

Combat Load: *The minimum mission-essential equipment, as determined by the commander responsible for carrying out the mission, required for Soldiers to fight and survive immediate combat operations. The combat load is the essential load carried by Soldiers in forward subunits or the load that accompanies Soldiers other than fighting loads. (FM 21-18)*

Fighting Load: The fighting load includes bayonet, weapon, clothing, helmet, and LBE, and a reduced amount of ammunition. **Keep under 48 pounds when cross-loading small unit equipment. (FM 21-18)**

Approach March Load: The approach march load includes clothing, weapon, basic load of ammunition, LBE, small assault pack, or lightly loaded rucksack or poncho roll. **A limit of 72 pounds should be enforced. (FM 21-18)**

Emergency Approach March Loads: **Circumstances could require Soldiers to carry loads heavier than 72 pounds such as approach marches through terrain impassable to vehicles or where ground/air transportation resources are not available. Therefore, larger rucksacks must be carried.** These emergency approach march loads can be carried easily by well-conditioned Soldiers. When the mission demands that Soldiers be employed as porters, loads of up to 120 pounds can be carried for several days over distances of 20 km a day. Although loads of up to 150 pounds are feasible, the Soldier could become fatigued or even injured. If possible, contact with the enemy should be avoided since march speeds will be slow. (FM 21-18)

Combat Load definitions are based on United States Army Field Manual 21-18, *FOOT MARCHES*, 1 June 1990.



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What We Were ...What We Weren't

The Devil CAAT was:

- There to collect history for the Army that can be used to improve Soldier equipment and capabilities.
- There as fully functional members of TF Devil, ready to help in any way.
- Prepared to participate in operations at all levels and perform the combat duties thus assigned.
- Prepared to take orders and directions from our assigned leaders, regardless of level.
- Prepared to shoulder the load.
- Trained and ready to fight as Infantrymen.

The Devil CAAT was not:

- There to critique, judge, or otherwise discredit the small unit, the Task Force, CTF82, or CJTF180.
- There to tell TF Devil units what should be carried and what should not be carried during operations.
- There to interfere with TF operations.
- Expecting any special treatment.



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Pre-Mission Coordinations:

- Sought missions that:
 - Emphasized dismounted operations.
 - Expected long durations to push logistics.
 - Anticipated contact with enemy to push logistics.

Prep for Combat Collection:

- Weighed and Photographed combat loads.
 - Base Soldier weight.
 - Fighting Load weight.
 - Approach March Load weight.
 - Emergency Approach March Load weight (Rare).
- Provided weight data to units.
- Placed on special teams by units.
- Rehearsed with units.
- Packed identical gear as units.

During-Mission Collection:

- Went in on assaults at H-hour.
- Executed all tactical tasks with squad/platoon.
- Studied how the Soldiers performed with their loads.
- Studied problems with load carriage.
- Kept photographic log of missions.

Post-Mission Reviews:

- Attended AARs.
- Discussed with units their lessons learned relating to loads.
- Shared photos with units.

Data Collecting



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Operational Data Collection Events

Operation Name	Dates	Maneuver Unit	Devil CAAT Participants
AO Truman Checkpoint	4 Apr 03	118 th MPs	MAJ Glenn, SFC Dougherty
Operation Resolute Strike	8-9 Apr 03	C/3-504 PIR	LTC Dean, SFC Donaldson
Operation Resolute Strike	8-9 Apr 03	C/2-504 PIR	CPT Covert, MSG Sanchez
Firebase Orgun-E	8-10 Apr 03	D/3-504 PIR	MAJ Glenn, SFC Dougherty
Operation Crackdown	16-17 Apr 03	A/2-504 PIR	MAJ Glenn, SFC Dougherty
Operation Vigilant Guardian I	16 Apr 03	HQ/TF 2-504 PIR	LTC Dean
Operation Vigilant Guardian I	22-26 Apr 03	B/2-504 PIR	LTC Dean
Operation Vigilant Guardian I	22-26 Apr 03	C/2-504 PIR	CPT Covert, SFC Donaldson
Operation Vigilant Guardian I	22-26 Apr 03	D/1-504 PIR	MSG Sanchez
Operation Vigilant Guardian I	22-26 Apr 03	Combat Trains, TF 2-504 PIR	Mr. DuPont
Operation Desert Ascent	23-25 Apr 03	C/2-505 PIR	MAJ Glenn, SFC Dougherty
Operation Vigilant Guardian II	3 May 03	HQ/TF 2-504 PIR	LTC Dean
Operation Vigilant Guardian II	3-4 May 03	C/2-504 PIR	CPT Covert, SFC Donaldson
Operation Vigilant Guardian II	1-4 May 03	D/1-504 PIR	SFC Dougherty
Operation Vigilant Guardian II Team Village Operation	5 May 03	118 th MPs, TF2-504	Mr. DuPont



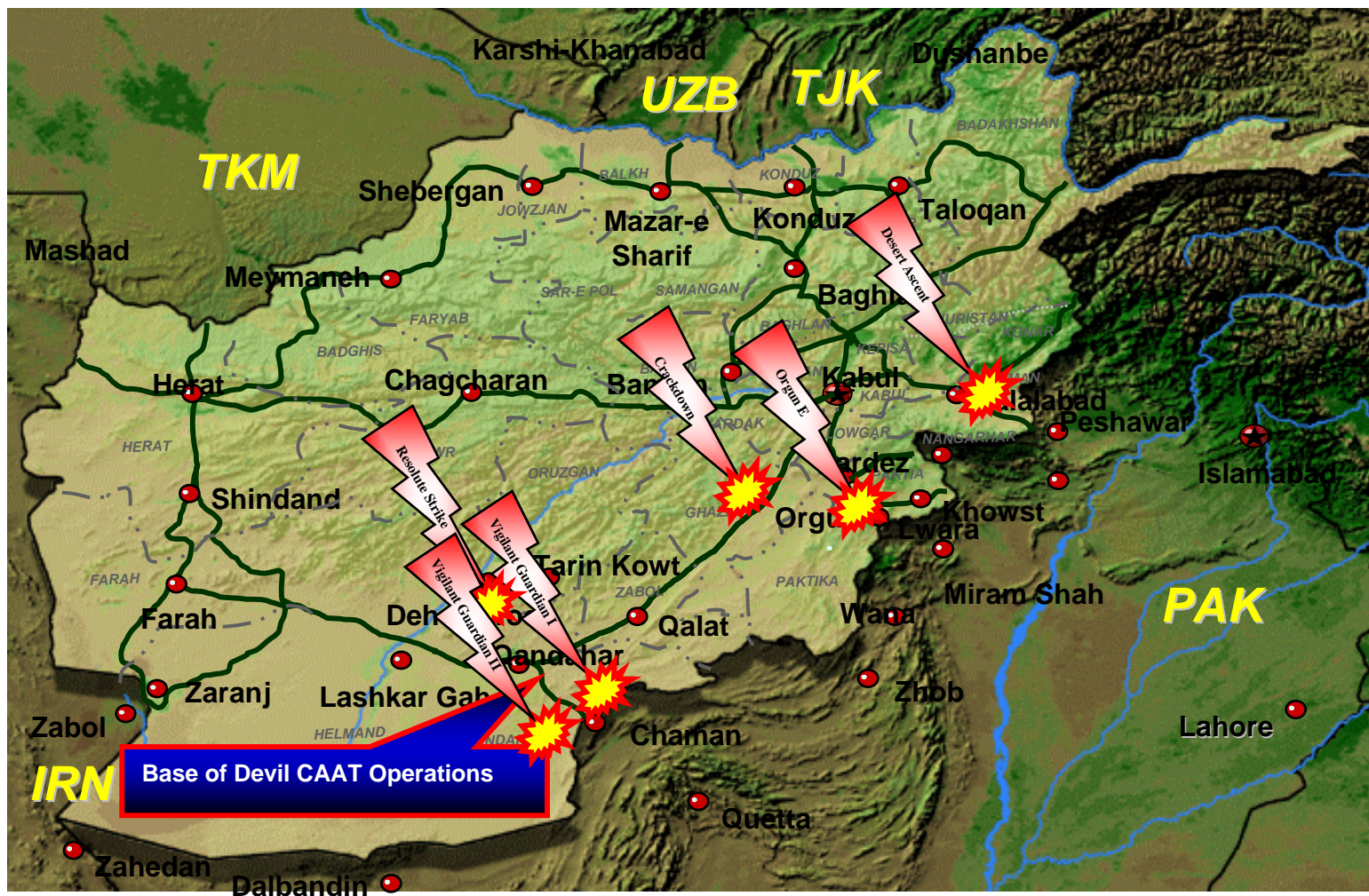
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Soldiers Under Load



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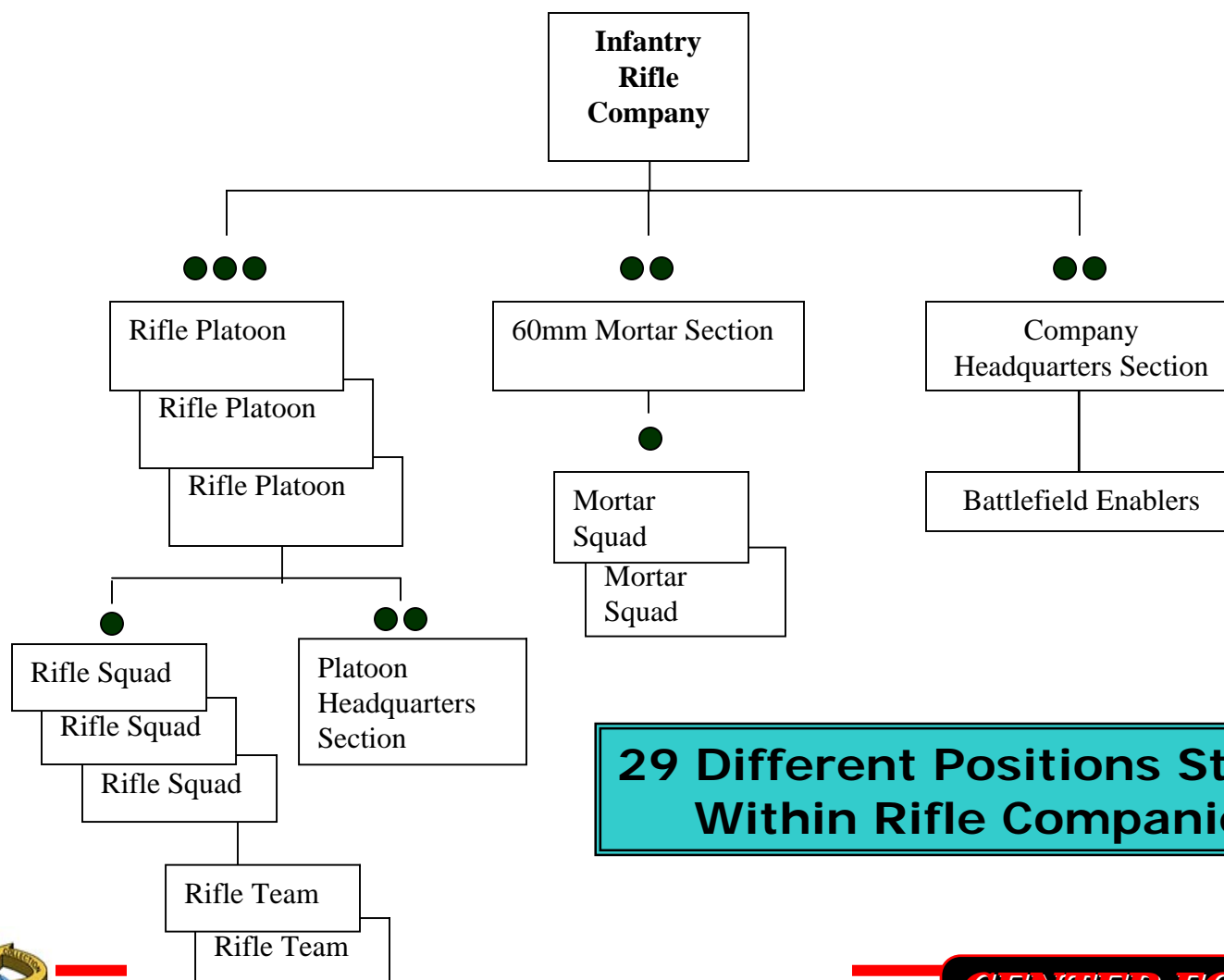




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29 Different Positions Studied Within Rifle Companies



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Duty Positions to be Studied

DUTY POSITION	Required Data Points		
Rifleman	0 - 9%	10-19%	20%
M203 Grenadier	0 - 9%	10-19%	20%
Automatic Rifleman (SAW)	0 - 9%	10-19%	20%
Anti-Tank Specialist (Javelin)	0 - 19%	20-39%	40%
Team Leader	0 - 9%	10-19%	20%
Squad Leader	0 - 29%	30-59%	60%
M240B Machine Gunner	0 - 29%	30-59%	60%
M240B Assistant Machine Gunner	0 - 29%	30-59%	60%
M240B Ammunition Bearer	0 - 29%	30-59%	60%
Rifle Platoon Leader	0 - 39%	40 - 79%	80%
Rifle Platoon Sergeant	0 - 39%	40 - 79%	80%
Radio Telephone Operator (RTO)	0 - 19%	20 - 39%	40%
Combat Medic	0 - 39%	40 - 79%	80%
FIST Team Leader	0 - 39%	40 - 79%	80%
Forward Observer	0 - 29%	30 - 59%	60%
FIST Radio Telephone Operator	0 - 19%	20 - 39%	40%
Sapper (Engineer)	0 - 39%	40 - 79%	80%
Mortar Section Sergeant	0 - 39%	40 - 79%	80%
Mortar Squad Leader	0 - 39%	40 - 79%	80%
Mortar Gunner	0 - 39%	40 - 79%	80%
Mortar Assistant Gunner	0 - 39%	40 - 79%	80%
Mortar Ammunition Bearer	0 - 19%	20 - 39%	40%
Company Commander	0 - 39%	40 - 79%	80%
Company Executive Officer	0 - 39%	40 - 79%	60%
First Sergeant	0 - 39%	40 - 79%	80%
Other (Unit Request)	0 - 39%	40 - 79%	80%

Percentages
of Soldiers in
Regiment



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Position in Unit	PLT	CO	BN	REGT	ORF1	DC01	DC02	DC03	DC04	DC05	DC06	DC07	DC07	DC08	DC09	DC10	Total Collected	Total Needed	%Regt Collected	Green % of Regt	Status
Rifleman	6	18	54	162	2	6	3	2	10	9	2	16	4				54	32	33%	20%	
M203 Grenadier	6	18	54	162	2	6	6		21	5	6	16	11				73	32	45%	20%	
Automatic Rifleman	6	18	54	162	2	6	6	2	21	12	6	18	12				85	32	52%	20%	
Antitank Specialist	2	6	18	54	1	2			5	1	2		3			1	15	22	28%	40%	
Rifle Team Leader	6	18	54	162	2	6	6	2	20	12	6	18	12				84	32	52%	20%	
Rifle Squad Leader	3	9	27	81	1	3	3	1	12	6	3	10	6	3	3	5	56	49	69%	60%	
Forward Observer	1	3	9	27	1	1	1		4	2	1	3	2	2	2	2	21	16	78%	60%	
Forward Observer RTO	1	3	9	27		1			4		1	2	1	1	1	1	12	11	44%	40%	
Weapons Squad Leader	1	3	9	27		1	1		3	2	1	2	2	2	2	2	18	16	67%	60%	
M240B Gunner	2	6	18	54	1	2	2	1	8	4	2	6	5	4	4	4	43	32	80%	60%	
M240B Asst Gunner	2	6	18	54	1	2	2	1	8	4	2	6	4	4	4	4	42	32	78%	60%	
M240B Ammo Bearer	2	6	18	54	1	2	2		8	3	2	6	4	3	4	4	39	32	72%	60%	
Rifle Platoon Sergeant	1	3	9	27		1	1	1	5	2	1	3	2	2	2	2	22	22	81%	80%	
Rifle Platoon Leader	1	3	9	27		1	1	1	5	2	1	3	2	2	2	2	22	22	81%	80%	
Platoon Medic	1	3	9	27	1	1	1		3	2	1	3	3	3	3	2	23	22	85%	80%	
Radio/Telephone Operator	1	3	9	27	1	1	1		3	2	1		2	1	1		13	11	48%	40%	
Mortar Section Leader	0	1	3	9		1	1		1	1		1	1	1	1		8	7	89%	80%	
Mortar Squad Leader	0	1	3	9		1	1		1			1	1	1	1		7	7	78%	80%	
60mm Mortar Gunner	0	2	6	18		2	2		3	2		2	2	2	2		17	14	94%	80%	
60mm Mortar Assistant Gunner	0	2	6	18		2	2		1	2		2	2	2	2		15	14	83%	80%	
60mm Mortar Ammo Bearer	0	2	6	18			2					2	1	2	2		9	7	50%	40%	
Rifle Company Commo Chief	0	1	3	9		1							1	1	1		4	4	44%	40%	
Fire Support Officer	0	1	3	9		1	1		1	1		1	1	1	1		8	7	89%	80%	
Fire Support NCO	0	1	3	9			1		1			1	1	1	1		6	7	67%	80%	
Sapper Engineer	0	3	9	27	3	3	3		8	8		8	5				38	22	141%	80%	
Company Executive Officer	0	1	3	9		1	1					1	1	1	1		6	5	67%	60%	
Company First Sergeant	0	1	3	9		1	1		2			1	1	1	1		8	7	89%	80%	
Company RTO	0	2	6	18		2	1		2				1	1			7	7	39%	40%	
Rifle Company Commander	0	1	3	9		1	1		2	1		1	1	1	1		9	7	100%	80%	
Total	42	145	435	1305	19	58	53	11	162	83	38	133	94	42	42	29	764	533			

Javelins Not Being Carried in Afghanistan Due to TWS Availability and Lack of Enemy Armor



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Soldier Loads in Combat



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FM 21-18
1990

Fighting
Loads
Should be
Kept < 48
lbs

FM 21-18
1990

Approach
March
Loads
Should be
Kept < 72
lbs

Position in Unit	Average Fighting Load	Average FL% Body Weight	Average Approach March Load	Average AML % Body Weight	Avg Emergency Approach March Load*	Average EAML % Body Weight
Rifleman	63.00	35.90%	95.67	54.72%	127.34	71.41%
M203 Grenadier	71.44	40.95%	104.88	60.25%	136.64	77.25%
Automatic Rifleman	79.08	44.74%	110.75	62.71%	140.36	79.56%
Antitank Specialist	67.66	37.57%	99.04	55.02%	130.20	79.65%
Rifle Team Leader	63.32	35.61%	93.78	52.43%	130.27	80.65%
Rifle Squad Leader	62.43	34.90%	94.98	52.59%	128.35	73.62%
Forward Observer	57.94	33.00%	91.40	52.12%	128.56	76.59%
Forward Observer RTO	60.13	35.37%	87.07	51.42%	119.13	74.94%
Weapons Squad Leader	62.66	34.02%	99.58	54.37%	132.15	69.19%
M240B Gunner	81.38	44.46%	113.36	62.21%	132.96	68.92%
M240B Asst Gunner	69.94	38.21%	120.96	66.11%	147.82	80.08%
M240B Ammo Bearer	68.76	36.59%	117.06	62.19%	144.03	78.46%
Rifle Platoon Sergeant	60.66	31.53%	89.96	46.35%	119.16	62.67%
Rifle Platoon Leader	62.36	34.02%	93.04	50.33%	117.62	65.44%
Platoon Medic	54.53	31.08%	91.72	51.58%	117.95	69.88%
Radio/Telephone Operator	64.98	35.60%	98.38	54.08%	no data avail	no data avail
Mortar Section Leader	58.31	30.59%	109.99	57.34%	149.30	90.49%
Mortar Squad Leader	60.98	37.89%	127.24	78.26%	142.30	96.80%
60mm Mortar Gunner	63.79	38.06%	108.76	64.22%	143.20	88.14%
60mm Mortar Assistant Gunner	55.34	31.93%	122.16	70.28%	no data avail	no data avail
60mm Mortar Ammo Bearer	53.13	30.14%	101.13	60.59%	no data avail	no data avail
Rifle Company Commo Chief	68.13	38.16%	109.69	61.67%	no data avail	no data avail
Fire Support Officer	54.11	27.32%	93.08	46.81%	no data avail	no data avail
Fire Support NCO	52.10	31.92%	90.08	55.22%	143.30	98.83%
Sapper Engineer	59.02	33.05%	95.70	53.50%	132.08	77.92%
Company Executive Officer	60.50	34.03%	93.65	52.81%	no data avail	no data avail
Company First Sergeant	62.88	33.69%	90.42	48.11%	126.00	86.30%
Company RTO	64.70	35.65%	98.09	54.27%	130.00	72.13%
Rifle Company Commander	66.10	37.08%	96.41	53.77%	111.20	70.83%
TOTAL AVERAGE	63.08	35.27%	101.31	56.74%	131.74	77.82%

Brit Army
Hygiene
Advisory
Committee
1920s

Soldiers
Should
Carry
<40-45 lbs

"The
Soldier's
Load and
the Mobility
of a Nation"
1950

Optimum
Load is
40-41 lbs

JRTC
Soldier Load
Study
1998

Approach
March
Loads
Should be
Kept < 30%
Body Weight

* Emergency Approach March Loads rarely carried during study, hence missing data.

All data is averaged across same positions in
the regiment

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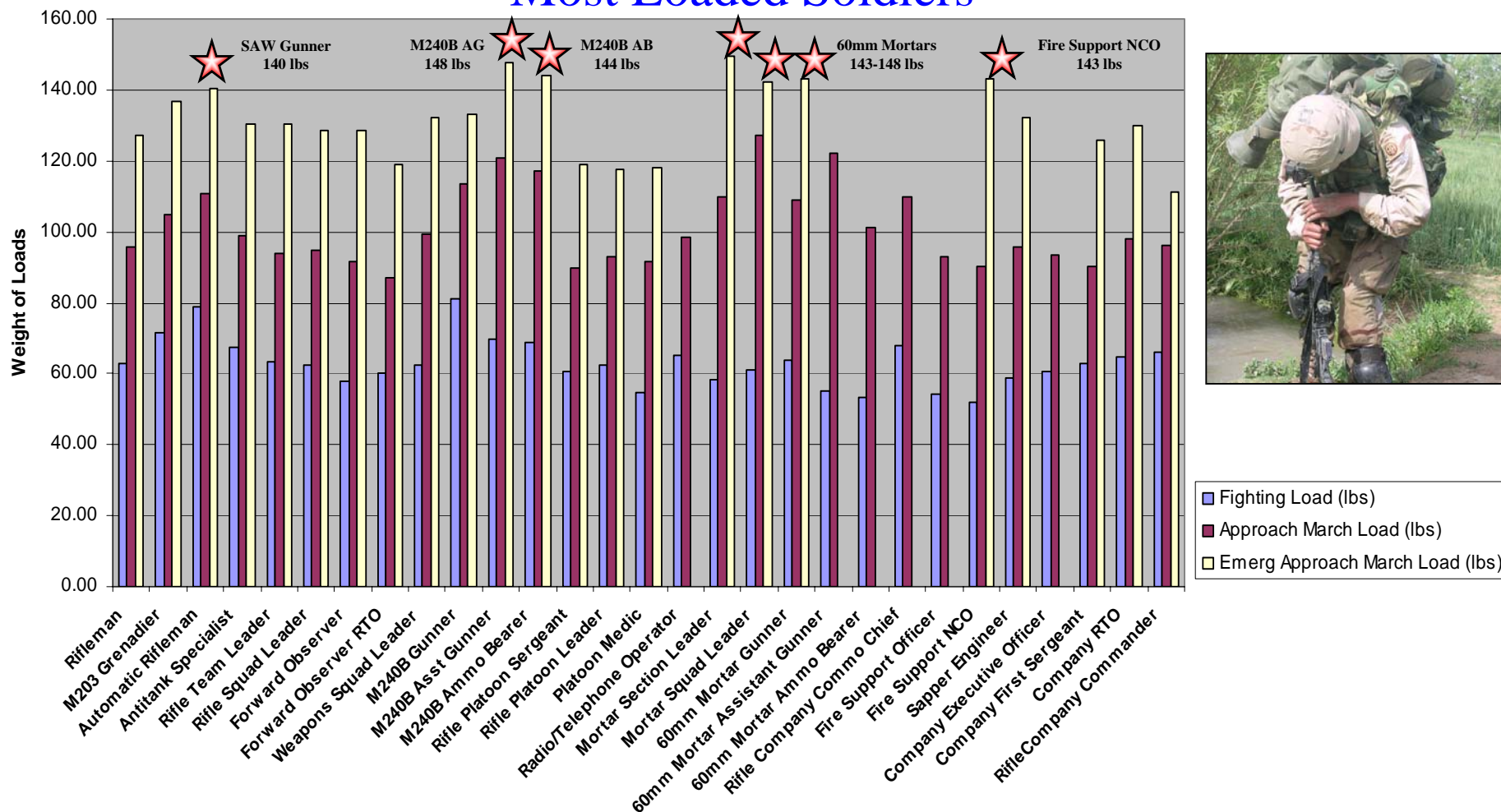




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Task Force Devil, CTF82 Most Loaded Soldiers



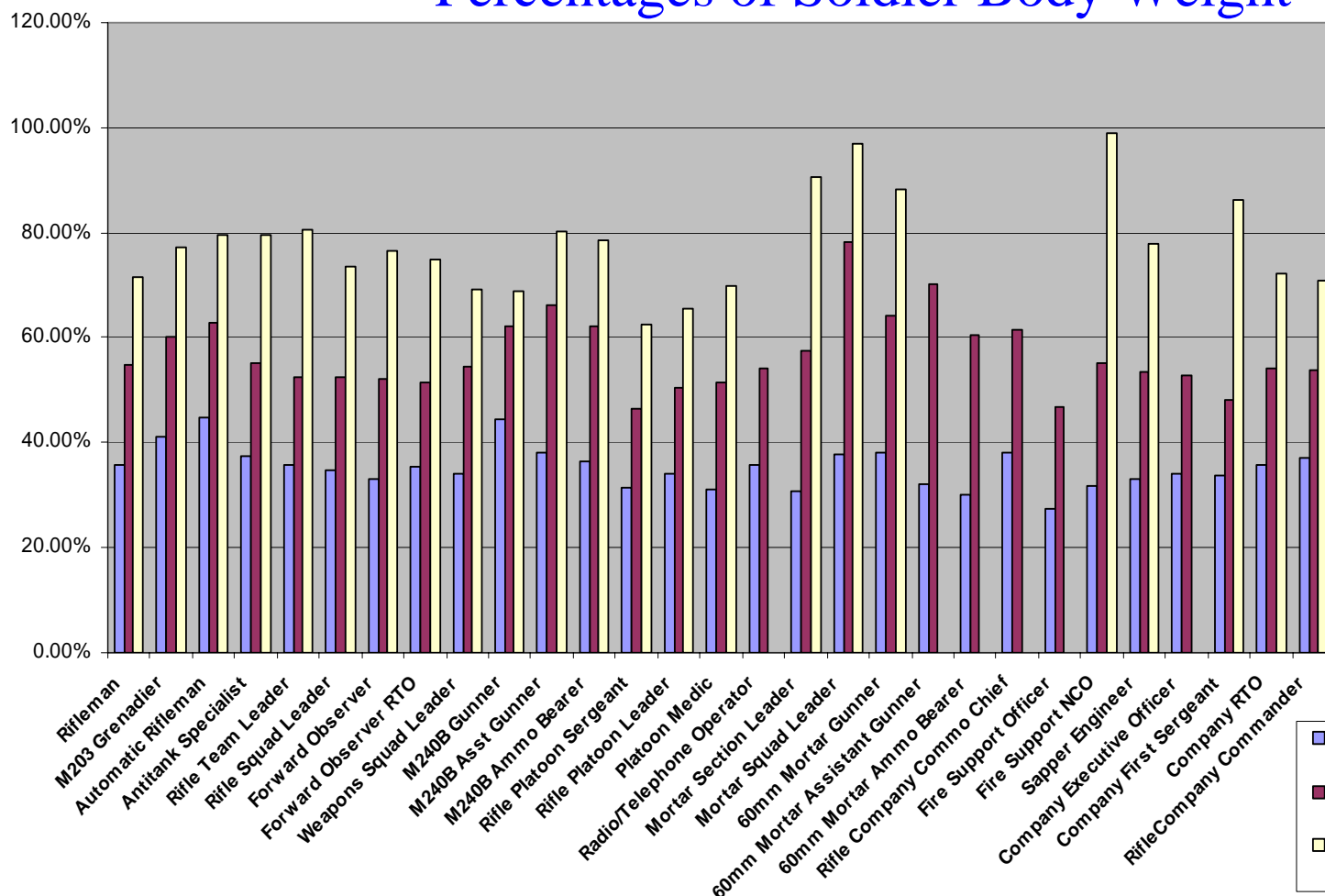
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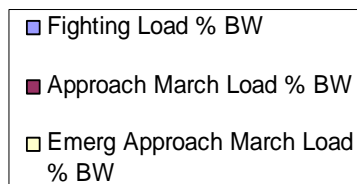
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Percentages of Soldier Body Weight



AVERAGES ACROSS TASK FORCE

Fighting Load: 30.80%
 Approach March Load: 52.56%
 Emergency Approach March Load: 73.09%



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Soldier Loads in Combat



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Worn on Body/Uniform:

- M4 Carbine with PEQ-2 Laser/PAQ-4 Laser, ACOG/CCO, and 30 rounds of 5.56mm ball ammunition.
- Desert Camouflage Uniform with Infrared Tape on left sleeve (1"x 1").
- Desert Combat Boots.
- Dog Tags.
- ID Card.
- Undershirt.
- Socks.
- Tactical gloves.
- Interceptor Body Armor with two Small Arms Protective Inserts.
- Advanced Combat Helmet with night vision mounting plate.
- Rigger belt.
- Notebook and pen.
- Watch.
- Knee and elbow pads.
- Sun, Sand, and Dust type Goggles or Wiley-X Goggles.
- Folding Knife/Multi-tool.

The Rifleman



Worn on Fighting Load Carrier/Interceptor Body Armor:

- MOLLE Fighting Load Carrier with modular MOLLE pouches.
- 180 rounds of 5.56mm ball ammunition.
- Bayonet.
- Fragmentation grenade.
- 64 ounces of water in two 1 quart canteens.
- Casualty and witness cards.
- 100 ounces of water in hydration system.
- Flex cuffs for personnel under custody.
- Night vision equipment (PVS-14/PVS-7).
- Iodine tablets.
- Lensatic compass.
- Flashlight.
- Chemlight.
- First Aid dressing and pouch.
- Canteen Cup.
- Ear plugs.

The combination of these two lists makes up the **Fighting Load** (Avg=63 lbs)



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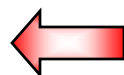
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Task Force Devil, CTF82 The Rifleman

Carried in Assault Rucksack:

- MOLLE Assault Rucksack or commercial assault rucksack, with MOLLE attachments.
- 500ml intravenous fluids bag with starter kit.
- 70 ounces of water in hydration system.
- Two Meals, Ready to Eat (MREs).
- Poncho and/or Bivy Sack.
- Poncho liner.
- Undershirt.
- Spare batteries.
- Two pair of socks.
- Polypropylene or silk long sleeve undershirt.
- M4/M16 Rifle Cleaning Kit.
- Personal hygiene kit.
- Rubber gloves.
- Sling rope with two snap links.



**Assault Rucksack + Fighting Load =
Approach March Load (Avg=96 lbs)**

**Main Rucksack + Fighting Load +
Assault Rucksack (sometimes) =
Emergency Approach March Load
(Avg=127 lbs)**



Carried in Main Rucksack: (Main rucksacks were rarely taken on operations during study)

- MOLLE main rucksack with Sleeping Bag Carrier or Large ALICE rucksack
- Improved Sleeping Bag (usually Green bag carried one per two men).
- Long Underwear or Polypropylene Jacket and Coveralls.
- Two Undershirts.
- Two pairs of socks.
- Cold Weather Gloves.
- Knit/Fleece Cap.
- Additional ammunition.
- Two Meals, Ready to Eat (MREs).
- Sleeping pad.



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Soldier Loads in Combat



Task Force Devil, C The Rifleman

Special Equipment:

- Lock pick (B).
- Collapsible Riot Baton (B).
- Bolt cutters (C or D).
- Metal detecting wand (C or D).
- 60mm mortar round (C or D).
- Combat Lifesaver Kit (C).
- Personnel Under Custody (PUC) Kit (sand bags, flex cuffs, trash bags, PUC cards, rubber gloves) (C).
- AT4 Anti-armor Weapon. (C or D).
- SMAW-D Bunker Buster Weapon. (C or D).
- Hooligan Tool. (C or D).
- Sledgehammer. (C or D).
- Entrenching Tool. (C or D).
- M18 Claymore Mine. (C or D).
- Pole-less Litter. (C or D).
- 200 rounds of 5.56mm linked ammunition for M249 SAW. (C or D).

No one Soldier carried all this equipment on any one mission



Special Equipment can be carried on the Fighting Load Carrier/IBA (B), in or attached to the Assault Rucksack (C), or in or attached to the Main Rucksack (D)



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M203 Grenadier



Rifleman Equipment Plus:

- M203 Grenade Launcher
- 26 40mm Grenades



Fighting Load Avg: 71 lbs

Approach March Load Avg: 105 lbs

Emergency Approach March Load Avg: 137 lbs



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M249 SAW Gunner



- M249 Squad Auto Weapon
- 100 rds 5.56mm linked (FL)
- 700 rds 5.56mm linked (AML)
- M249 Spare Barrel (AML)
- M249 Cleaning Kit



Fighting Load Avg: 79 lbs

Approach March Load Avg: 111 lbs

Emergency Approach March Load Avg: 140 lbs



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LESSONS LEARNED***



Soldier Loads in Combat



Task Force Devil, CTF82

M240B Machine Gunner



- M240B Machine Gun
- M9 Pistol w/45 x 9mm rounds
- 100 rds 7.62mm linked (FL)
- 200 rds 7.62mm linked (AML)
- M249 Spare Barrel (AML)
- M240B Cleaning Kit



Fighting Load Avg: 81 lbs

Approach March Load Avg: 113 lbs

Emergency Approach March Load Avg: 133 lbs



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Soldier Loads in Combat



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M240B Assistant Machine Gunner



Rifleman Equipment Plus:

- 400 rds 7.62mm linked (AML)
- M240B Tripod
- T&E Mechanism



Fighting Load Avg: 70 lbs

Approach March Load Avg: 121 lbs

Emergency Approach March Load Avg: 148 lbs



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Soldier Loads in Combat



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Combat Engineer Sapper



Rifleman Equipment Plus:

- Internal Communications Radio (FL)
- 4 x 1.25lb blocks C4 (AML)
- 50' Detonation Cord (AML)
- 30' Engineer Tape (AML)
- 3 x Time Initiating Systems (AML)
- Mine Probe (1/team)
- Mine Detector (1/team)
- Grapnel Hook (1/team)
- GPS (1/team)



Fighting Load Avg: 59 lbs

Approach March Load Avg: 96 lbs

Emergency Approach March Load Avg: 132 lbs



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Soldier Loads in Combat



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Major Findings



- Increased capabilities continue to increase physical burdens.
- Fit Soldiers are easily exhausted by their modern loads while operating in extreme environments.
- Body armor needs to continue to be lightened and made much more flexible.
- More emphasis and study needed on modern load carriage.
- Unit transportation assets need to carry the bulk of the Soldier's load.
- Units need more small unit ground vehicles.
- Small unit robot development needs to be accelerated.
- **Army level effort needs to go into reducing the Combat Load through doctrine and equipment changes. Needs unified action.**



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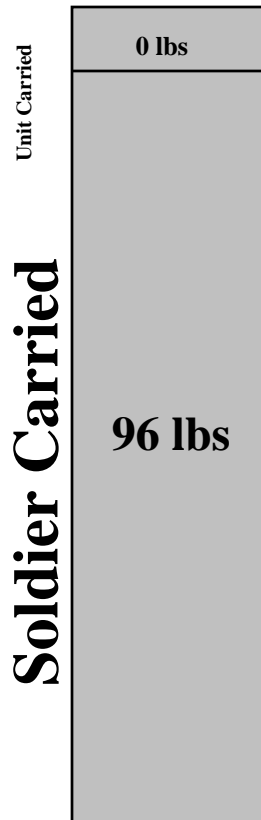
Soldier Loads in Combat



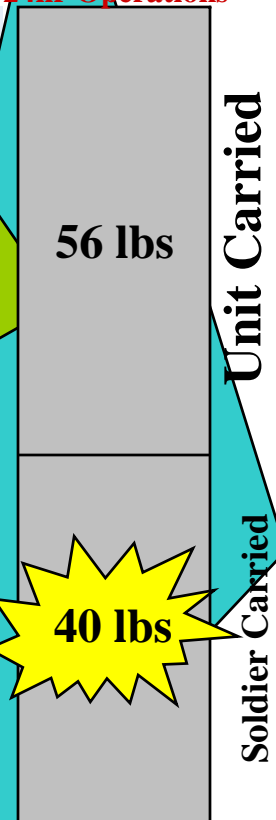
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So How Do We Reduce Weight?

Rifleman During
Today's 24hr Operations



Rifleman During
Today's and Tomorrow's
24hr Operations



Three Components to Reducing Weight
(Contribution Relative to Size of Arrow)

Re-design
Logistical
Practices

(Doctrine/Logistics/Cbt Devel Partnership)

And willingness to take measured risks

Reduce the Weight of
Soldier Worn
Technologies
(Cbt/Mat Devel
Partnership)



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Soldier Loads in Combat



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Reduce the Weight of Soldier Worn Technologies

- Recognize that all Soldiers have different jobs and carry different loads.
- Recognize that the need for most gear will not go away. Soldiers have basic needs that will remain over time.
- Make all attempts to create lightweight Soldier carried gear.
- Look to lighten ALL the gear that Soldiers carry, not just an item here or there.
- Make attempts to develop multi-functional gear to replace current one-task items.
- Follow industry and buy off the shelf, state-of-the art gear to replace Army clunkers (GPS as example). Throw it away when it dies.
- Reinvent many staple items to shed weight (machine gun tripods, ammunition (all types), batteries, body armor, and more).
- Re-design or purchase commercial load carriage systems that support all job specialties (example = Radio Telephone Operator – no load carriage system that meets his needs).



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LESSONS LEARNED***



Soldier Loads in Combat



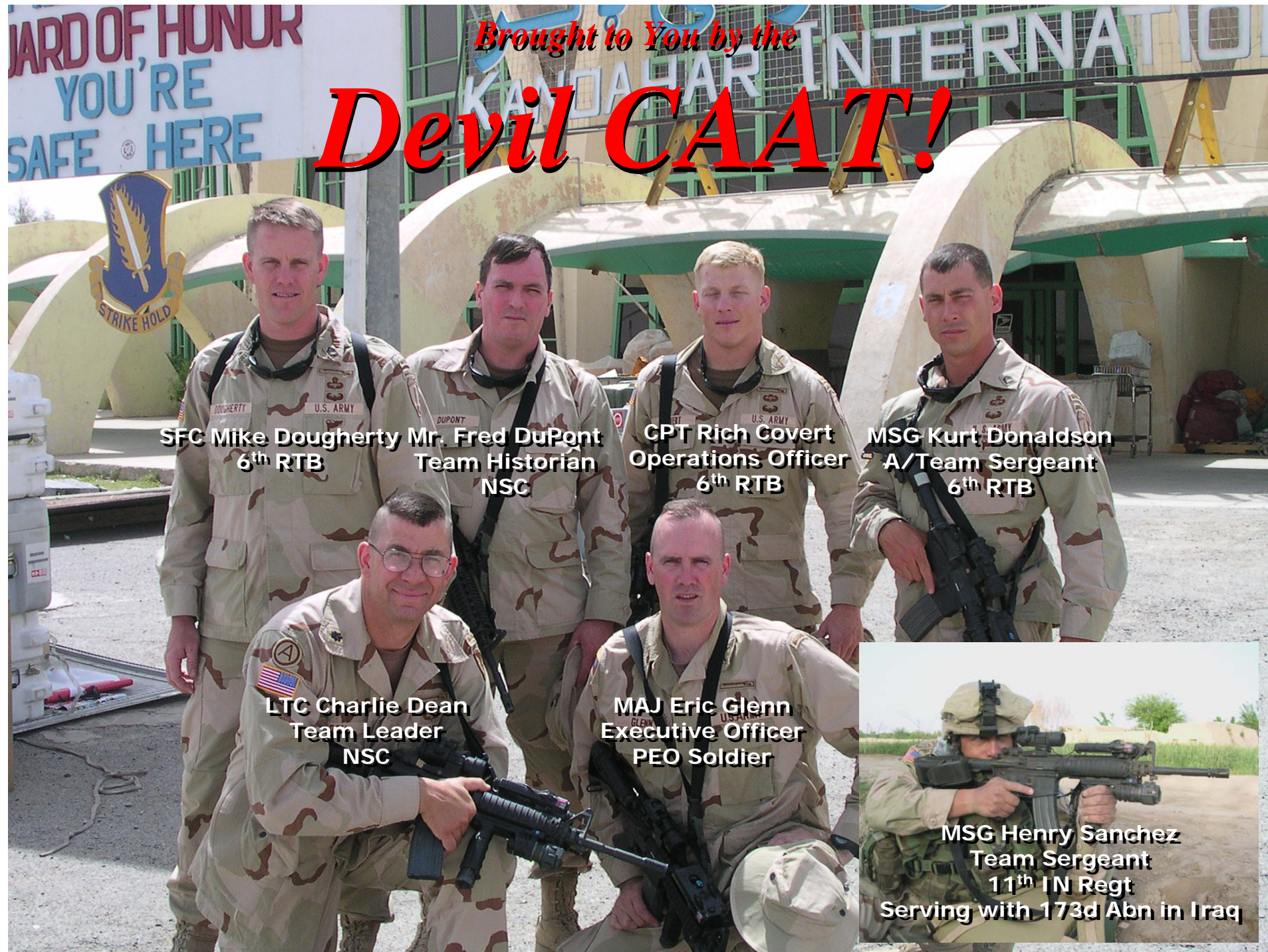
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And Take the Weight OFF the Soldier's Back!

- Re-think the logistical practices that the Army has been using since WWII and consider novel ways to resupply the dismounted Soldier, to include possible daytime LOGPACs and even multiple LOGPACs each day.
- Provide the platoon and squad with small unit logistics vehicles (SULVs) that can follow closely behind the unit during combat operations. Place most of the contents of the Soldier's Assault Rucksack on these vehicles. Place some of the Soldier's basic load of ammunition on these vehicles as well as specialty items (AT-4s, SMAW-Ds, etc.).
- Consider using available HMMWVs, Gators, and other vehicles currently within Task Forces as surrogate SULVs.
- Develop robotic vehicles to replace manned SULVs.



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Brought to You by the

Devil CAAT!

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Soldier Loads in Combat



Task Force Devil, CTF82

Questions?

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