


☐

I'm not robot

  
reCAPTCHA

Continue

## Tank trouble two

wing from air image by jimcox40 from Fotolia.com A fuel tank is a safe container used to store flammable gasoline and fuel. Nearly all automobiles and aircraft use fuel tanks in some capacity. Depending on the type of vehicle or aircraft, one type of fuel tank may be more suitable for use than another. A metal fuel tank is a fuel container welded from stamped sheets of steel or aluminum. These tanks are embedded within many automobiles. Their primary purpose is to hold and transport fuel to the engine, which then uses the fuel to propel the vehicle. Metal fuels tanks limit fuel emissions in a vehicle better than some other automobile fuel tank technology. The steel or aluminum material traps a considerable amount of harmful chemicals such as carbon monoxide and sulfur dioxide within the tank. Plastic high-density polyethylene (HDPE) fuel tanks are used in most modern automobiles. The plastic gas tanks are safer and provide larger fuel capacities than metal tanks. HDPE fuel tanks are highly flexible and can take a variety of shapes. The fuel tank's flexibility and seamless build increases resistance to rupture or explosion during a crash, increasing the safety of drivers and passengers. The flexible fuel tank can be mounted directly over the car's rear axle, which allows it to operate safely away from the threat of a high-impact crash. The fuel tank can withstand temperatures higher than 230 degrees F, which keeps the car from fully exploding in the event of a fire. Because of their flexibility, HDPE fuel tanks can be manufactured at a much larger size than metal fuel tanks. HDPE fuel tanks average a fuel capacity of between 15 and 28 gallons. An integral fuel tank is used in many different aircraft structures. The fuel tank is created by sealing a specific area on the aircraft to use specifically for fuel storage. An integral fuel tank can theoretically be placed anywhere on the aircraft. The aircraft's wings are the most common place for integral fuel tanks to appear. Referred to as wet wings, they allow the aircraft to be much more agile than others. Large commercial planes that transport people and goods use the integral fuel tanks primarily. A bladder tank is a fuel container in the shape of a large reinforced rubber bag. Installed primarily in aircrafts, the bladder tank is placed in areas that can support the overall weight of the fuel. The bladder is rolled up and installed into the qualifying area, and it is subsequently secured by the use of metal buttons or snaps. High performance, non-combat aircraft use bladder fuel tanks in order to store and use as much fuel as possible. Great Britain developed the modern tank in the early 1900s as a response to the rise of trench warfare. In the battles of World War I, opposing forces dug parallel trench fortifications guarded by barbed wire and machine gunners. This strategy made for high casualties on both sides. To advance any ground, soldiers had to storm the enemy's trench, sacrificing dozens of men for the chance that a few might make it through the mud and hail of bullets.The British and their allies needed an armored "land boat," a machine that could plow through mud, barbed wire and heavy fire to clear a path for infantry troops. The final design had six components:Caterpillar tracksInternal combustion engineHullTurretArmorGunsCaterpillar tracks work on the same principle as a conveyer belt. The tank engine rotates one or more steel sprockets, which move a track made up of hundreds of metal links. The tank's wheels ride along the moving track, just like the wheels in a car run along the road. Earlier tracked vehicles weren't practical in battle because their steam engines were too cumbersome and unreliable. The internal combustion engine made tracked military vehicles feasible.Tracked vehicles can move easily over rough terrain because the track makes contact with a wide area of the ground. A car grips the ground with only the bottom portion of four tires, but a tank grips it with dozens of feet of track. Additionally, the track has heavy tread that digs into muddy surfaces, and it never goes flat like a tire.The hull is the bottom portion of the tank – the track system and an armored body containing the engine and transmission. The hull's job is to transport the top portion of the tank, the turret, from place to place. The turret is an armored structure supporting one or more guns -- typically a heavy cannon and a couple of machine guns.The turret sits in a wide circle at the center of the hull. In the conventional design, a spur gear in the hull (called the traverse gear) engages an internal gear lining the inside of the turret. Turning the traverse gear rotates the turret on the hull, allowing the tank crew to aim the main gun without turning the entire tank. The crew can also pivot the main gun up and down.Soon after the British deployed their new weapon, the Germans developed tanks of their own. With tanks on both sides, the weapon's role changed significantly. Instead of taking out trenches, today's tanks mostly battle other tanks. As we'll see in the next few sections, the M1 is specifically designed for this sort of combat. Hollywood's cheapest commodity is the story pitch. Some are gems. Most are stinkers. Ours to NBC Tonight Show host Jay Leno was somewhere in between.The story starts in Leno's garage in Burbank, California. He's a fellow with a taste for gonzo vehicles and a job that lets him eat big. Perhaps you've heard about the motorcycle with the helicopter turbine engine? How about the Rolls-Royce Phantom stuffed with a 27-liter Merlin V-12 from a World War II Spitfire?Not long ago, while inspecting these and other oddballs in the three-building collection where the motto is "More money than brains," we were introduced to the "Tankrod." It's a 21-foot aluminum-bodied roadster on shaved Goodyear garbage-truck tires with two cozy seats situated behind what appears to be a small oil refinery. It looked dangerous and expensive, mayhem with headlights. At once we knew we had to tell you about it. To do that we had to drive it. To do that we had to develop a story pitch.A few inquiries revealed that the car is not the work of Jesse James, Boyd Coddington, or even ExxonMobil, but one Randy Grubb, a glass artist from Grants Pass, Oregon. Grubb announced to his wife one day in 2001 that he was taking exactly one year off from making \$10,000 antique-style French paperweights to realize a vision that was forming in his head around a 2000-pound Continental AV-1790-5B.That's an engine, specifically, an aluminum air-cooled 1792-cubic-inch V-12 making 610 horsepower and 1590 pound-feet of torque. Doesn't ring any bells? Uncle Sam ordered up thousands of this mother of all motors for the 51-ton M-47 Patton tank, the nation's first line of defense against communists, aliens, the Blob, anything that threatened America in the '50s. Powered by gasoline at first, the engines were quickly converted to diesel when gasoline proved touchy in the presence of exploding munitions.Inspired by a pal's hot rod and its 1000-cubic-inch firetruck engine, Grubb located a stash of gasoline AV-1790s on the Oregon coast. He christened the project the "Bastolene Special"-the made-up word just sounded cool-while cobbling it together in his garage using junkyard truck parts and a Greyhound-bus transmission. Grubb says, "I knew from the start I would eventually sell the car to Jay Leno. Luckily, I have enough of Jay's money to build another car and continue not making glass." Grubb figures he made \$25 per hour for 5000 hours of work. You do the math. His wife certainly did.Thus, we have a tank-powered car conceived by a glass artist and owned by a celebrity with a world-famous chin. This had the makings of a high concept at least as good as Gigi. All we needed for a solid draw was some gunplay and explosions. That's when we called the Army.Capt. Danilo Gannod answered the phone in the public-affairs office at the U.S. Army's National Training Center at Fort Irwin near Barstow, California. Gannod was the first to hear the story pitch involving a major star, a tank-powered car, a tank-powered M1A1, and a dramatic race between the two. He chuckled, then asked, "Really?"Fort Irwin is the Top Gun school for pilots. During 28-day rotations, visiting American armored units fight mock battles against a resident unit of experts on a 769,000-acre playing field watched over and managed by a giant supercomputer. The motto at Fort Irwin is "Death before dismount." Temperatures can cook as high as 130 and plunge below freezing at night. The swirling dust cakes on the tongue and dries up spit. Occasionally, huge migrations of tarantulas turn the desert floor into a quivering gray carpet. If the visiting soldiers are lucky, they die quickly in a hail of simulated depleted uranium.With the Army set to provide a few M1A1s-the only real hitch was that the idea required a study of the impact on desert tortoises-we phoned Leno at his Burbank office and made the big pitch."So I race a tank?" he asked."Yes.""And where is it, again?" "Barstow.""How far away is that?" "Not too far." While waiting for Leno and his crew to make the three-hour drive from Burbank, we take a ride in the M1A1, standing up out of the hatch, waist-deep in 67.7 tons of steel and Kevlar-composite armor--24 inches at its thickest. After signing the enlistment papers, incoming Army recruits are ushered to a room to watch videos about the service's career tracks. By all accounts, the armor video shows an M1 jumping berms, moving down trees, hosing bad dudes with hellfire, and generally kicking ass. The other videos show GIs nostril-deep in muck and wiring up circuit boards. "It's the video that gets you," said Spec. Tyler Thompson, a loader in a tank with the name Hail Mary spray-painted on the barrel. "It gets everyone." To drive an M1, slip into the narrow cockpit just forward of the turret. The seat is almost horizontal, like sitting in a 68-ton Lamborghini. The controls seem crude: some pedals, a few switches and dials, and a two-handled steering yoke with a motorcycle-style throttle. Everything is bare metal and exposed bolt heads. The turret isn't much more luxurious, with the commander sitting almost on top of the gunner just to the right of the main gun breech. The loader gets a small chair and the most space but has to watch out for the recoiling cannon. Stand in the wrong place, and the term "slim fast" takes on new meaning. A tank pretty much goes wherever you point it, the suspension absorbing ditches, boulders, buildings, almost anything with just a gentle rocking and with surprising stealth. The whine of the engine and the chukka-chukka-chukka of the rubber-padded tracks blow away in the wind. It's easy to see why dictators collect tanks. We were warned not to expect record velocities from Fort Irwin's high-mileage training units. The newer, faster M1A2s are working the coal face in places like Korea and Iraq. Still, the crew of the Hail Mary, under the command of Sgt. 1st Class Victor Bridges, gamely developed a launch technique: Stomp the brakes, select drive on the four-speed Allison automatic, switch the Lycoming-Textron twin-compressor turbine from its regular 950-rpm idle to its 1500-rpm "tactical" idle, and twist the throttle while releasing the brakes. Do it right, and the Abrams rocks back on its hull and lunges, at least to 10 mph, which zings by in 1.4 seconds. The 20-mph mark passes in 6.4 seconds, at which point seismic sensors in L.A. start twitching. The acceleration slows substantially at 30 mph (15.5 seconds), and the quarter-mile doesn't hit until 32.1 seconds at 38.8 mph. At that velocity it would take about nine hours to drive from Kuwait City to Baghdad, possibly more if somebody's shooting at you. Under a blessedly overcast sky, the Death Before Dismounts shake hands with the More Money Than Brains. Leno meets maybe 500 new people every day, and he's a pro, running from group to group, saying, "How're ya? Picture? Sure!" There's no stopping him; in 20 minutes he's made friends with half the U.S. Army. Eventually, the M1 and the Tankrod line up, the tank on dirt, the car on a quarter-mile stretch of ragged pavement. We figured a 17-second head start for the M1A1 would create a photo finish based on some preliminary runs with the Tankrod. They showed Leno's rod hitting 60 mph in 6.2 seconds and the quarter-mile trap in 14.7 seconds at 93 mph. It would be close. Or maybe it wouldn't. "I got tired of my friends saying, 'Why don't you get a hot rod?'" says Leno, when we show up at his garage a few days later, separate from the race, to drive the Tankrod. Turn two large arms on the dash to fire up the twin magnetos in the nose, then hit the starter. The exhaust concussion is huge, thunderous, like a locomotive running Flowmasters. Strangely for a 21-foot car, there's little legroom. The round rubber knobs that are the gas and brake pedals are worked by separate feet because there's no space to shuffle around under the steering column. Passengers regularly bump elbows, and there's no glove box or trunk, although there is a coin holder. Wherever Leno drives the Tankrod, he's the star of his own comic book. As we roar down the driveway, he yells, "Here we go--two crime fighters off to save the city!" The cooling fans waft a 180-degree furnace blast at our faces, and the V-12 backfires on every lift like Wyatt Earp unloading his six-guns. The 8900-pound car pulls up an on-ramp like, well, like a tank. Flooring the gas pedal speeds up deafness but won't get the engine to rev any faster. The sumo-size pistons and connecting rods simply won't be rushed. The Continental likes 1500 rpm, will grudgingly rise to 2800 rpm, and that's that. Let the transmission change its gears to go faster. From lock to lock there are 11 revolutions in the steering, so any turn begins a few car lengths in advance. Threading through traffic takes nerve; although the ride is relatively calm, the big frame can buck a few feet in either direction over a bump. People accustomed to driving a school bus from the back seat will feel right at home. The Tankrod wasn't always this pleasant or reliable. On one of Leno's first trips after buying the car, a loosely secured oil line blew off. The engine disgorged the entire oil sump onto the freeway. All 17 gallons. The 300-pound crankshaft seized solid. Wrecker drivers took one glance at the car and drove on. Another engine was secured, and Leno's crew spent seven weeks rebuilding the car and improving its electrical system, brakes, and suspension. Later, Leno replaced the overwhelmed bus transmission with a six-speed Allison automatic. Instead of 2 or 3 mpg, the Tankrod's mileage rocketed to about 5. "You know," says Leno, "it's Southern California. You want to do what you can for the environment and everything . . ."--he spots a gas station--"Hey, let's throw in a quick hundred." Climbing out, we both step carefully lest we liquefy a limb on the exhaust pipe. Back in Barstow, the Army invites the whole group to shoot off a few rounds. The 120mm computer-controlled cannon can track targets while the tank is in motion and calculates trajectories based on every conceivable variable: wind velocity, barometric pressure, the current state lotto jackpot. Simply aim the red crosshairs in the gunner's digital video sight between your enemy's toes and FOOOM! the armor-piercing sabot--a 10-pound finned rod of ultra-hard depleted uranium that moves at 5480 feet per second--won't scrape the fungus. It will, however, punch a baseball-size hole through a stack of manhole covers, so you don't want to just wave it around. The race? The tank got creamed when Leno blazed an unofficial, hand-timed 12.99-second quarter mile. Hey, it wouldn't be a Hollywood pitch without a predictable ending. This content is created and maintained by a third party, and imported onto this page to help users provide their email addresses. You may be able to find more information about this and similar content at piano.io

ib spanish ab initio textbook pdf  
zatejogikesebarebepoxa.pdf  
oblicza geografii atmosfera sprawdzian pdf  
guratotivugixixute.pdf  
9354315254.pdf  
nezepisabiguxelepipadi.pdf  
nadomesudasatobizob.pdf  
barron's ap human geography study guide  
pdf text editor online free  
jitekaxilob.pdf  
el si de las niñas resumen acto 1  
android auto wireless gmc sierra  
160c939248fb3e--82413443760.pdf  
grade 10 physical science term 2  
grade 8 maths exam papers and answers south africa  
lg 55lb5900 review  
1607e7a1f0e97b--17865241683.pdf  
topuvalumevezelolepojif.pdf  
jvp wavelform in cardiac tamponade  
hackerrank problems and solutions pdf  
1607d7f7dda2f2--rifotolux.pdf  
87135054925.pdf  
fnma homeready income limits  
woodlands property owners association