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A propane furnace is a fantastic thing to have in an RV – as long as it’s working. When it’s working properly, you turn up the thermostat and a few seconds later, heat is moving through the heating ducts and warming your RV’s living space, just like the furnace in any home. But, between the turning up of the thermostat and the heat flowing through the RV a series of events occurs that not only creates heat for your rig but also protects you from any harm that could come from the combination of a flame and some propane. This includes two safety switches – the sail switch, and the high-limit switch. In this post, we’re taking a closer look at the RV furnace sail switch – what it does, how it works, how you’ll know if it needs cleaning or replacement, and how to do it. Let’s go! How Does an RV Propane Furnace Work? An RV propane furnace is a forced-hot-air system that requires a thermostat, a control board, a relay, a blower motor, sail switch, high-level switch, ignitor, and some ductwork. To activate the system, you set the thermostat higher than the RV’s current temperature, which activates the blower motor. A propane burner generates heat, and air drawn in from the interior of the RV is blown past a heat exchanging surface. As it passes by that surface it becomes heated and is then distributed throughout the RV through the ducts. 12V electricity is required to turn on the furnace and to operate the fans. The exhaust gases created by the combustion process are vented to the outside of the RV through vents that look something like this: These are the Suburban furnace vents on the exterior of our Newmar Mountain Aire. If you have an Atwood or Dometic RV furnace, your vents make look a bit different. What Is a Sail Switch? The sail switch is the first of two safety switches in the system. It exists to prevent the furnace from even trying to ignite if the blower fan can’t run at the proper speed. This can happen under certain circumstances, including if your RV’s house battery bank is discharged too low to run the fan at full speed. The sail switch senses when the blower motor’s fan is moving air at the proper speed. If the switch does NOT sense proper fan speed, the furnace won’t fire. And that’s a good thing! Your sail switch is an important part of your RV propane furnace because it tells you that something isn’t right, AND it doesn’t allow the flow of propane (required for the furnace to light) under circumstances that aren’t optimal. If the sail switch doesn’t sense that the blower fan is running at the proper speed, the propane valve won’t open. It’s important to know that your RV furnace has to confirm two things before it can ignite. The first is that the blower fan is running at the proper speed, and this proof is made by the sail switch. The second thing your furnace has to determine in order to ignite is that its high-temperature limit switch, (sometimes referred to as the “furnace plenum thermostat”), hasn’t been tripped. This safety switch will cut the propane supply if the burner temp exceeds safe levels. Essentially, 12V electricity will not make it to the control circuit to ignite the furnace unless both of these switches respond appropriately when the furnace is turned on. Where Is the Sail Switch Located on an RV Furnace? The sail switch is located in the duct where it overrides the gas valve of the burner. If you have an access panel for your RV’s furnace giving you access from the outside wall of the RV, the sail switch is easiest to access and remove for cleaning or replacement. The following wiring diagram gives you an overview of the location of the sail switch and all other components of an RV furnace, as well as the path the circuit takes to drive the heat. This diagram happens to be for an Atwood/Dometic furnace, but placement should be similar on a Suburban furnace. The diagram offers an overview of the components of an RV furnace, as well as the path the circuit takes to drive the heat. This diagram happens to be for an Atwood/Dometic furnace, but placement should be similar on a Suburban furnace. (Diagram and photo credits: Atwood/Dometic) This is what a sail switch looks like – as you can see, the sail switches for Atwood, Suburban, and Dometic RV furnaces are all very similar: No products found. If you need to replace the sail switch in your RV furnace, be sure to consult your owner’s manual to make sure you’re ordering the appropriate switch for your furnace. For additional information on how to troubleshoot your RV furnace if it isn’t putting out any heat, please see our post, “My RV Furnace Fan Runs But There’s No Heat! Now, What?” How Do I Know If My RV Furnace Sail Switch is Bad? If you turn up your thermostat and you hear the furnace turn on, go through its initial 15-second startup phase, and then either stop running altogether or continue blowing only cold air, you’ll have confirmed that it has attempted to light but hasn’t been successful in getting past the sail switch. This can happen if your RV’s house batteries are too weak to spin the blower motor fast enough to create sufficient airflow for the sail switch to activate. This causes the furnace to blow cold air. There’s also a system of fault lights on the control board (Ignition Control Diagnostics) to assist with troubleshooting. Your owner’s manual will give you the fault codes for your particular furnace, but in general, if the blower comes on and about 30 seconds later turns off on its own, and you see a single flash, it’s very likely that the sail switch is either dirty or needs to be replaced. How Do I Test My RV Furnace Sail Switch? You can test the sail switch with a multimeter set to ohms. You’ll want to close/trigger the sail switch by hand, and then attach the red and black leads of your multimeter to each of the two connections on the switch. The multimeter will read “OL” (open line) while the sail switch is open. Close it by hand and then take your reading. If your sail switch is good, then with the circuit closed you’ll have a reading of between 0.0 – 0.2 ohms. Remember that the sail switch is essentially an opening in the electrical circuit. In order to allow current to pass through it, the switch needs to close to complete the circuit. So, that’s what you’re doing when you close the circuit by hand in order to test it. Can I Clean My RV Furnace Sail Switch? Yes, you can. Dust, animal hair, bug nests, or other debris can collect on a sail switch making it incapable of doing its job. If you find you have a dirty sail switch, cleaning it may be all you need to get your furnace working again. However, it’s not a bad idea to keep an extra sail switch on hand in case yours needs to be replaced, particularly if you use your RV in very cold weather. Can I Replace My RV Furnace Sail Switch Myself? Yes, you can! Once you’ve located and removed the sail switch, it’s not difficult to replace it. As always, we suggest taking a photo before removing any wires so that you’ve got something to fall back on if you need it. Though not related to the function of the sail switch, you may also want to consider the easy installation of screens on the furnace vents on the outside of your RV to prevent things like mud daubers from building nests, etc., and dust, dirt, and debris from collecting. They can really make a world of difference. Our vents take these covers, but you can also buy a set of a variety of screen covers for your rig. Have You Ever Replaced Your RV Furnace’s Sail Switch? So tell us – have you ever found yourself with a failed RV furnace sail switch that required either cleaning or replacement? We’d love to hear about your experience. And again – if you’re in a situation where your furnace is running but isn’t providing any heat, check out this post where we cover a variety of troubleshooting issues for RV furnaces. Free RVing Tips, Tricks, Reviews & Giveaways As 20-year full-timers, we share everything we’ve learned about RVing over the years. Join our online community to receive a wealth of great RVing knowledge delivered daily to your inbox. Whether you’re a new RVer or a seasoned full-timer, you’ll love the wide range of RVing topics we cover. Don’t miss a single article or any of our famous Giveaways. Subscribe to our newsletter today! A propane furnace is a fantastic thing to have in an RV – as long as it’s working. 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So tell us – have you ever found yourself with a failed RV furnace sail switch that required either cleaning or replacement? We’d love to hear about your experience. And again – if you’re in a situation where your furnace is running but isn’t providing any heat, check out this post where we cover a variety of troubleshooting issues for RV furnaces. Free RVing Tips, Tricks, Reviews & Giveaways As 20-year full-timers, we share everything we’ve learned about RVing over the years. Join our online community to receive a wealth of great RVing knowledge delivered daily to your inbox. Whether you’re a new RVer or a seasoned full-timer, you’ll love the wide range of RVing topics we cover. Don’t miss a single article or any of our famous Giveaways. Subscribe to our newsletter today! Unfortunately, RVs can require emergency repairs. Mobile repair may be your best (or only) option, so use RVHelp.com to get fixed up fast!When the dog days of summer hit, we could all use some great tips on how to stay cool in an RV without air conditioning!Manage your travel plans with free national park days in 2025. Make the most of your national parks without entrance fees. Discover more!Enjoy CATastrophe-free travels with your feline friends! We share tips for creating a cozy & safe environment in your RV for your kitties.Back-in RV sites may be cheaper, but pull-through sites can be worth every penny. Learn the difference so your next trip can be easy!Planning to visit some of the US’s magnificent national parks this summer? Learn which ones will require reservations or timed entry fees.Join the RV entrepreneurial movement! Find out how to balance work and travel with our essential RV business guide.Say goodbye to bumpy rides! Upgrade your RV with Liquid Springs active suspension system for a smooth ride. We cover benefits, costs & more.Crossing the border from the US into Canada with your RV? Explore our tips for seamlessly clearing customs & immigration.Don’t get to your destination to find the contents of the fridge on the floor! Try these tips to keep your fridge doors closed when driving.Discover the fascinating story behind KOA, what it stands for, and what it represents to campers. Dive with us into KOA’s world of camping!Destination trailers have become quite popular. Why? What makes them different from travel trailers and other RVs? We’ve got answers!Moisture build-up under your RV’s mattress can lead to mold that can cause odors, damage, and health problems. Learn how you can prevent it!RV mattresses are weird sizes and can be hard to get a fitted sheet onto. QuickZip sheets zip on and off in a jiffy and without the struggle!We wish it were otherwise, but trailer theft is a thing. When leaving your trailer parked/stored, be sure it’s properly secured. Here’s how!Got an RV with an older stereo, but want to wirelessly play music from your smartphone or tablet? We’ve got you covered with ways to upgrade!Thinking of a dash cam for your truck/RV? There’s lots to know about, so let us help! Learn the most important features + models to consider.RVs have many residential features, but adding house plants make your house-on-wheels feel like home. These ten plants do well on the road.From store-bought combustibles to flints to a DIY firestarter you can make at home, we’ve got you covered so your campfire gets lit quickly.Finding local storage for your RV can be a real challenge. Peer-to-peer service, Neighbor.com, could be the answer to your troubles.There are a lot of options when it comes to tonneau covers for truck beds. We cover the options and go over why we chose the BAKFlip MX4.Keep your car or truck looking great & shielded from your active lifestyle with stowable car seat protection. Get Scuvvers seat covers today!Grand Design, long known for its towable RVs, has now entered the motorized market. Check out their first product, the Lineage Class C RV.Driving around in, or towing, a vehicle with glazed brakes can be seriously dangerous. What are glazed brakes & what to do about them? Let us create a Safe Bet Adventure for you.A Safe Bet adventure is a custom-tailored holiday.We do all the work. You spend your time exploring the world, not the internet.With a Safe Bet Adventure, the vacation of your dreams becomes a reality. We offer an a la carte personal High Roller Host service to save you time.The High Roller Host service is designed to help you with your one off travel wants. We provide our time to be your personal travel assistant.From research and recommendations for unique accommodations (Airbnb, VRBO, bed and breakfasts) to a day by day guide for your trip to the best value for your point balances, we use our knowledge and network to help you create your own unique experiences. The average traveler spends 40 hours planning a vacation. We can give you back your time, plus a vacation. A sail switch is a very important component for the safety of the electric appliances on your RV. It saves you and your RV from lots of dangers. The Dometic sail switch is among the top favorite sail switch and has done a great duty for lots of people. However, there are some issues with this switch as well. If you ever face problems with the Dometic sail switch it can be dangerous at times depending on what kind of problem you face. That’s why you should know all the details about this sail switch problem and how can you solve them. Dometic Sail Switch Normally the Dometic sail switch does not show any problems. However, there are always some exceptions that can happen. Here is a list of common problems of Dometic sail switch- Due to its lack of a filter and its placement beneath refrigerators or in other low-lying areas, the air supply chamber is an entry point for dirt, trash, and other debris. This may result in the sail switch, being filthy and unable to notify the furnace system that the propane may be ignited safely. If you are facing this problem, you better not try to open the system and try to fix it all by yourself. Because there are lots of things closely linked to it. Thus, you should talk to a professional for cleaning and fix the problem. Whenever there is cold air coming from the furnace instead of heating it you should know that there is something wrong with the sail switch. The sail switch often stops working when there is a low battery and stops the ignition process. Hence, when you are trying to switch on the furnace it is not working. This may be the main problem of the furnace but it originated in the sail switch. That’s why you need to know about the main issue of the faulty furnace. The main fix for the problem is to recharge your battery. but if the battery is not charging anymore you have to think about testing it. If you have the proper equipment to check if the battery is good or has gone bad, you can do it at home. However, you can also take it to a battery shop for checking and replacement. If your sail switch is totally out then the furnace will not work. And sometimes the whole electric system will stop functioning. The damaged sail switch can turn out like that if there is a short circuit or something happened like an electric surge, etc. You can always see that when the Dometic sail switch is down it is not in a condition of repair. There is only one fix to this problem and that is changing the sail switch. When a sail switch dies there is not much that you can do about it. You can try to repair it. But the cost-benefit will always tell you that instead of trying to repair it, you should buy a new one. Because when you are out traveling on a cold winter night and if the sail switch that you repaired stops working that will be a serious issue. Now if your sail switch is down and you cannot turn on the furnace it would be a big issue and there is a way to fix it. You can bypass the sail switch which will reduce the safety but it will provide you the service you need for the time being till you get to fix the sail switch. But remember that it can be quite dangerous and may need expert hands to move and fix it. Here is how you do it- First, remove the furnace from its position. Remember to turn off the gas line otherwise, it will fill your RV. Always be cautious while removing the pipes and the wires because they can be quite fragile. And if you accidentally rip off any wire it can cost you later. Remove the sail switch from the furnace and you will get two wires. After that, you can use tape to connect those wires to the generator line. This can be quite dangerous and it is advised that you do not attempt this because there are plenty of wires and connections and different models have different types of systems. If you have connected the generator to the furnace, it should work now. And you can enjoy the warm air on a cold night. However, you should always contact a professional for any help with the sail switch as electric and fire-related systems can be dangerous. If you need to test the sail switch. close or activate the sail switch manually, and then link the multimeter’s red and black pins to the switch’s two contacts. As long as the sail switch is open, the multimeter shall display “OL” (open line). Shut it manually before beginning the measurement. A sail switch is turned on or off in reaction to the airflow or lack of a fluid, like air or water. Usually, a blade or a diaphragm, which is moved by the pressure of fluid or air passing by it, is used to control a sail switch. A sail switch is a tool for air testing. It serves as a protective feature and won’t allow the ignition to start till it detects 3 quarter of the motor’s rpm. It guarantees that the ignition disk is spinning quickly enough for the right amount of air and gas to be mixed together for a seamless ignite. A Dometic sail switch is a great option for your safety switches for a furnace or another electric device that needs ignition. Also, it is quite durable and there are very few cases where it breaks down. However, if you have trouble with your sail switch you should check why it is happening and if necessary, take professional help. Last updated on October 30th, 2023 at 06:27 am All of our reviews are based on exhaustive research, industry experience and whenever possible, hands-on testing. When you make a purchase using one of our chosen links we’ll receive a small percentage of the proceeds. This supports the site and keeps Jeffsetter running. You can read more here. When we travel in our RVs during the winter, we’re usually trying to enjoy snow, late-night campfires, and a ton of fun adventures, not necessarily the cold itself! Getting cold in an RV can be uncomfortable and cause problems for RVs such as freezing pipes. Luckily, your RV’s furnace is designed to help combat this and keep both you and your rig warm during winter weather. But what should you do if an RV furnace is blowing cold air? The most common cause of a furnace blowing cold air is an issue with the sail switch. When there is a problem with the sail switch, the furnace is unable to ignite and blows cold air instead. Lack of fuel, problems with the ignition itself, or the furnace’s power source can also cause this issue. Let’s dive into each of these reasons and why they can cause problems for your furnace. 4 Reasons Why An RV Furnace Is Blowing Cold Air RVs are fantastic rigs that allow us to travel extensively with the comforts of home. Staying warm is a key part of RVing, especially during the colder months, but what do you do if your RV furnace is blowing cold air? There are a few different reasons for an RV furnace not working as it should. Chances are, with a little troubleshooting, you’ll be able to diagnose your furnace issues and get cozy in no time! Reason 1: Sail Switch Sail switches are found in many different heating appliances, from stoves and furnaces to heaters, and they all serve the same purpose. They detect the movement of air through the furnace and can also detect if liquid is present prior to ignition which has a major role in fire prevention. When an RV furnace is blowing cold air, the sail switch may be the cause of the problem. The sail switch may be damaged, which is often just the result of common wear and tear, as discussed in the video below: If this is the cause, it’s time for a new switch! Sail switches can also stop working if they become blocked with dust, dirt, or pet fur. Cleaning the switch should resolve this issue, and keeping it clean in the future will help prevent further RV furnace problems. Lack of power can also be the cause of a sail switch not working, so if your rig isn’t getting the voltage it needs, both the sail switch and even the blower itself in the furnace likely won’t run properly. Reason 2: No Fuel It may seem obvious, but with so much going on at the campground, it can be easy to forget about gas. If you’ve run out of propane, the furnace won’t be able to ignite and will therefore be unable to produce any warm air. Thankfully, this is a simple fix, and you likely won’t forget to get propane again! Reason 3: Ignitor Problems with the ignitor can also be the cause of an RV furnace blowing cold air. In propane and other gas furnaces, the air is heated by gas that’s sent to the combustion chamber and ignited by a spark. To know if the problem is with the ignitor simply start up your furnace. If you hear a ticking sound in the beginning, then you’re good to go! If not, then you know the ignitor isn’t working. It’s then wise to check both the ignitor and the gas chamber of the furnace. Check the gas chamber for cracks as this can be a reason for gas escaping and failing to be ignited. It’s a good idea to also check the furnace’s insulation for the same reasons. Damage to the insulation or gas chamber will need to be fixed, or the furnace replaced. Reason 4: Propane An RV furnace that uses propane to produce heat can have a few specific problems resulting in cold air being blown through instead of hot. Camping during extremely low temperatures, well below freezing point, can make propane more vulnerable. Often, it will begin to liquefy in the extreme cold and this means there’s no gas to be ignited. Additionally, the newly added moisture in the furnace may cause different parts like the valve or regulator to freeze. It’s a good idea to have electric heaters on hand or a generator-powered backup if you have a propane furnace in case the worst happens and there’s no gas for the furnace! 2 Reasons Why An RV Furnace Is Blowing Lukewarm Air So, your RV furnace isn’t blowing cold air, but it isn’t blowing hot air either! If you’ve got an RV furnace that’s blowing lukewarm air, there are a few likely culprits. It’s worth trying to get to the bottom of the problem sooner rather than later as a cold RV when temperatures drop isn’t fun. Thermostat Occasionally, the cause of a problem can be really simple, and if you’ve got an RV furnace blowing lukewarm air, it may just be the thermostat. Your RV’s thermostat has two different modes it can be set to when it’s running; ‘On’ and ‘Auto’. Ideally, the thermostat should be set on auto as it then uses an array of sensors to blow hot air when the RV reaches an indicated temperature. If the thermostat is set to the ‘on’ position, the furnace won’t know when to make this distinction and may not always blow warm air. Dirty Or Damaged Air Filter The other cause of an RV furnace blowing lukewarm air is problems with the air filter. It can become clogged with dirt and dust like a sail switch if it’s not kept clean. Luckily, cleaning or even replacing a faulty air filter is easy, just be sure to choose a filter compatible with your RV’s furnace. An incompatible filter can be another reason for a furnace blowing lukewarm air. What To Look For When Replacing An RV Furnace RV furnaces are a game-changer for cold, drizzly days, but things won’t get any warmer if the furnace is blowing cold air instead of hot! If you’ve explored the potential causes of an RV furnace not working and have concluded that it’s time for a new one, there’s a lot to consider! Size It may seem obvious, but just like with anything in an RV, it’s wise to measure and check everything will fit into place! RVs can be pretty small, and everything tends to fit snuggly, and the same rules apply to a new RV furnace. Depending on your rig, it may be possible to relocate the furnace and put the new one in a different spot. This may require some professional help during the installation which will increase the overall spend, but the furnace will be installed safely and securely. Direct vs. Ducted Furnace The type of furnace you choose in your camper van is a big decision! The next thing you’ll want to figure out is what type of furnace you want in your RV, direct or ducted. The best way to figure out whether a direct or ducted furnace will work better is to simply take a look at your RV. If your rig is on the smaller side, a direct furnace will work best, whereas larger rigs will suit a ducted furnace better. This is because direct furnaces blow air from a single large faceplate on the front of the unit. A ducted furnace is what most are used to, with different vents along both the ceiling and roof blowing air throughout the entire rig which is ideal for large RVs. Propane Usage If you’re looking to replace your furnace with a new propane-powered one, it’s wise to be aware of propane usage beforehand. Most RV furnaces use around 20,000-50,000 BTUs, depending on the size. One gallon of propane can supply around 92,000 BTUs, so simply multiply this by the gallons in your propane tank, then divide the figure by the BTUs used by your furnace. This will give you the amount of propane you need to power your furnace. Carbon Monoxide Detector While seemingly unrelated to the furnace itself, this is perhaps the most important thing you’ll want to have when choosing a new RV furnace. A working carbon monoxide detector is vital in an RV as carbon monoxide is a byproduct of the combustion process in propane furnaces that heat the air. In small amounts it’s harmless, but in case of a problem with the furnace and large amounts of carbon monoxide are released, you need to know. Not having a functioning alarm means you’re putting yourself and loved ones at risk of carbon monoxide poisoning which poses a plethora of dangers. With all this in mind, you’ll absolutely be set to make the best decision for you and your rig when replacing your RV furnace. Closing Thoughts An RV furnace blowing cold or lukewarm air can be frustrating, especially when camping during the depths of winter! Taking appropriate precautions like keeping the sail switch and air filter clean, and ensuring you have enough propane on board are great ways of preventing future problems with an RV furnace. Keeping on top of RV maintenance will lead you to happy camping for you and your loved ones in the future. Keep a close eye on your furnace, as it often gets forgotten about, but you’ll soon know something’s wrong when it stops blowing warm air! Changing the Sail Switch on an RV Furnace: A Step-by-Step Guide If you’re experiencing issues with your RV furnace, it could be due to a faulty sail switch. The sail switch plays a critical role in the operation of your furnace, ensuring that the blower motor kicks on when necessary. Fortunately, replacing a sail switch is a relatively straightforward process that can be done with just a few simple tools. In this article, we’ll walk you through the steps required to change the sail switch on your RV furnace. What is a Sail Switch? Before we dive into the steps involved in changing a sail switch, let’s take a moment to understand what it does. The sail switch is essentially an airflow sensor that detects when air is flowing through the furnace. It’s located near the blower motor and is activated by a small metal plate (or “sail”) that moves as air passes by. When the sail moves, it triggers an electrical circuit that turns on the blower motor and starts the heating process. What You’ll Need Before you get started, make sure you have these tools and materials on hand: Replacement sail switch Screwdriver (Phillips or flathead, depending on your furnace model) Needle-nose pliers Wire cutters/strippers Electrical tape Clean cloth or rag Step-by-Step Guide to Changing Your Sail Switch Now that you have all your tools ready, let’s get started with changing your sail switch. Step 1: Turn off Power Supply The first thing you’ll need to do is turn off the power supply to your furnace. This is important for safety reasons and will prevent any accidental electrical shocks or damage to the unit. Step 2: Locate the Sail Switch The sail switch is typically located near the blower motor, but its exact position may vary depending on your RV furnace model. Refer to your furnace manual or consult an expert if you’re unsure where to find it. Step 3: Disconnect Wires Using your needle-nose pliers, carefully disconnect the wires that are connected to the sail switch. Make a note of which wire goes where so that you can reconnect them later. Step 4: Remove Old Sail Switch Next, use your screwdriver to remove the old sail switch from its housing. Be gentle but firm as you unscrew it and remove it from its mount. Step 5: Install New Sail Switch Take your replacement sail switch and install it in place of the old one. Make sure it’s secured tightly in its housing and that all screws are tightened firmly. Step 6: Reconnect Wires Reconnect the wires you previously disconnected, making sure to attach each wire to its corresponding terminal. Step 7: Test Your Furnace Before turning on the power supply, give your furnace a quick test by turning up the thermostat. If everything is working correctly, you should hear the blower motor kick on and feel warm air coming from your vents. In Conclusion Replacing a sail switch on an RV furnace isn’t overly complicated, but it does require some basic knowledge of electrical systems and tools. If you’re uncomfortable with any aspect of this process, don’t hesitate to consult a professional or seek out additional resources online. By following these steps carefully and taking the necessary precautions, you can have your furnace up and running again in no time. Changing the sail switch on a Dometic RV furnace may seem like a daunting task, but with the right tools and knowledge, it can be a straightforward process. The sail switch is an essential component of the furnace that detects airflow and ensures safe operation. If you notice that your furnace is not functioning properly or not producing enough heat, a faulty sail switch could be the culprit. If you own an RV or are planning to buy one, you might have heard about a sail switch on an RV furnace. But what is it, and why is it important? Let’s dive into the details of this essential component of your RV heating system. A sail switch is an important component of an RV furnace. It is a safety feature that ensures the proper functioning of the furnace. In this article, we will discuss what a sail switch is, how it works, and why it is important for your RV furnace. What Is the Sail Switch on an RV Furnace? When it comes to RV furnaces, there are several components that work together to ensure efficient and safe operation. One such component is the sail switch. If you own an RV, you probably know that a furnace is essential to keeping your home on wheels warm and comfortable during the colder months. However, have you ever heard of a sail switch? In this article, we will discuss what a sail switch does in an RV furnace and why it is important. The sail switch is an important component of an RV furnace that helps to ensure the safe and efficient operation of the unit. In this article, we will explore what a sail switch is, how it works, and why it is essential for the functioning of an RV furnace. What is a Sail Switch? Testing a sail switch on an RV furnace is an important step in ensuring the proper functioning of your heating system. The sail switch is a safety device that detects the presence of air flow, preventing the furnace from igniting if there is insufficient airflow. In this tutorial, we will guide you through the process of testing a sail switch on your RV furnace. , the free encyclopedia that anyone can edit. 117,922 active editors 6,999,761 articles in English The first UK Phantom on a test flight in 1968 From 1968 to 1992, the United Kingdom used the McDonnell Douglas F-4 Phantom II as one of its principal combat aircraft. The Phantom was procured to serve in both the Royal Navy's Fleet Air Arm and the Royal Air Force (RAF) in several different roles. Most Phantoms operated by the UK were built as a special batch containing a significant amount of British technology. Two variants were initially built: the F-4K was a carrier-based air-defence interceptor for the Fleet Air Arm, while the F-4M was initially used by the RAF for tactical strike and reconnaissance, before transitioning to an air defence role in the 1970s. In the mid-1980s, a third Phantom variant was obtained when fifteen former US Navy F-4J aircraft were purchased to augment the UK's air defences. Although the Fleet Air Arm ceased using the Phantom in 1978, the RAF retained it until 1992, when it was withdrawn as part of a series of post-Cold War defence cuts. (Full article...) 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Magoffin made pilots in his group sprint around an airfield for not saluting him? Archive Start a new article Nominate an article Nicușor Dan Author Banu Mushtaq and translator Deepa Bhasthi win the International Booker Prize for Heart Lamp: Selected Stories. Nicușor Dan (pictured) is elected as president of Romania. In the Portuguese legislative election, the Democratic Alliance wins the most seats in parliament. Austria, represented by JJ with the song "Wasted Love", wins the Eurovision Song Contest. A tornado outbreak leaves at least 27 people dead in the Midwestern and Southeastern United States. Ongoing: Gaza war M23 campaign Russian invasion of Ukraine timeline Sudanese civil war timeline Recent deaths: Charles Rangel Jim Irsay Yury Grigorovich Yuri Vladimirov Colton Ford Werenoi Nominate an article May 27 Manchu Prince Dorgon 1644 – Manchu regent Dorgon (depicted) defeated rebel leader Li Zicheng of the Shun dynasty at the Battle of Shanhai Pass, allowing the Manchus to enter and conquer the capital city of Beijing. 1799 – War of the Second Coalition: Austrian forces defeated the French Army of the Danube, capturing the strategically important Swiss town of Winterthur. 1954 – The security clearance of American nuclear physicist J. Robert Oppenheimer, head of Project Y, was revoked. 1967 – Australians voted overwhelmingly to include Indigenous Australians in population counts for constitutional purposes and to allow the federal government to make special laws affecting them in states. 1997 – A destructive F5-rated tornado tracked through a subdivision of homes northwest of Jarrell, Texas, killing 27 people. Diego Ramírez de Arellano (d. 1624)Julia Ward Howe (b. 1819)Cilla Black (b. 1943)Gérard Jean-Juste (d. 2009) More anniversaries: May 26 May 27 May 28 Archive By email List of days of the year About Anemonoides blanda, the Balkan anemone, Grecian windflower, or winter windflower, is a species of flowering plant in the family Ranunculaceae. The species is native to southeast Europe and the Middle East. It grows up to 10 to 15 centimetres (4 to 6 inches) tall and is valued for its daisy-like flowers, which appear in early spring, a time when little else is in flower. The flowers are found in various colors and are radially symmetrical, containing seven or more sepals and petals. This purple A. blanda flower was photographed in Bamberg, Germany. Photograph credit: Reinhold Möller Recently featured: Bluespotted ribbontail ray Black Lives Matter art Germanicus Archive More featured pictures Community portal – The central hub for editors, with resources, links, tasks, and announcements. Village pump – Forum for discussions about Wikipedia itself, including policies and technical issues. Site news – Sources of news about Wikipedia and the broader Wikimedia movement. Teahouse – Ask basic questions about using or editing Wikipedia. Help desk – Ask questions about using or editing Wikipedia. Reference desk – Ask research questions about encyclopedic topics. Content portals – A unique way to navigate the encyclopedia. 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Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles العربية Deutsch Español فارسی Français Italiano Nederlands 日本語 Polski Português Русский Svenska Українська Tiếng Việt 中文 250,000+ articles Bahasa Indonesia Bahasa Melayu Bân-lâm-gú Български Català Čeština Dansk Eesti Ελληνικά Esperanto Euskara עברית Հայերեն Magyar Norsk bokmål Română Simple English Slovenčina Srpski Srpskohrvatski Suomi Türkçe Oʻzbekcha 50,000+ articles Asturianu Azərbaycanca বাংলা Bosanski کوردی Frysk Gaeilge Galego Hrvatski ქართული Kurdî Latviešu Lietuvių मराठी Македонски മലയാളം Norsk nynorsk ਪੰਜਾਬੀ Shqip Slovenščina தமிழ் ไทย اردو Retrieved from " 2 This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.Find sources: "1644" – news · newspapers · books · scholar · JSTOR (August 2016) (Learn how and when to remove this message) Calendar year Years Millennium 2nd millennium Centuries 16th century 17th century 18th century Decades 1620s 1630s 1640s 1650s 1660s Years 1641 1642 1643 1644 1645 1646 1647 vte July 1: The Battle of Colberger Heide is fought between Sweden and Denmark-Norway off of the German coast. July 2: Parliament wins control of northern England from King Charles in the Battle of Marston Moor. 1644 by topic Arts and science Architecture Art Literature Music Science Leaders State leaders Colonial governors Religious leaders Birth and death categories Births – Deaths Establishments and disestablishments categories Establishments – Disestablishments Works category Works vte 1644 in various calendarsGregorian calendar1644MDCXLIVAb urbe condita2397Armenian calendar1093ԹՎ ՌՂԳAssyrian calendar6394Balinese saka calendar1565–1566Bengali calendar1050–1051Berber calendar2594English Regnal year19 Cha. 1 – 20 Cha. 1Buddhist calendar2188Burmese calendar1006Byzantine calendar7152–7153Chin

Wtenbogaert January 20 – Stefano Amadei, Italian painter (b. 1580) January 30 – William Chillingworth, controversial English churchman (b. 1602) January 31 – Georg II of Fleckenstein-Dagstuhl, German nobleman (b. 1588) February 28 – Guru Har Gobind, the Sixth Sikh Guru (b. 1595) March 15 – Countess Louise Juliana of Nassau, Regent of Bohemia (b. 1576) March 24 – Cecilia Renata of Austria, Queen of Poland (b. 1611) March 29 – Lord John Stewart, Scottish aristocrat, Royalist commander in the English Civil War (b. 1621) April 2 – Diego Salcedo, Spanish bishop (b. 1575) April 10 – Reverend William Brewster, English Pilgrim leader (b. 1567) April 25 – Chongzhen, last Ming Emperor of China (suicide) (b. 1611) April 28 – Zsófia Bosnyák, Hungarian noblewoman (b. 1609) May 26 – Alfonso III d'Este, Duke of Modena, Italian noble (b. 1591) June 17 Anne de Montafié, Countess of Clermont-en-Beauvaisis, French countess (b. 1577) John of St. Thomas, Portuguese philosopher (b. 1589) July 4 – Brian Twyne, English archivist (b. 1581) July 7 – Hedwig of Hesse-Kassel, countess consort of Schaumburg (b. 1569) July 16 – Giovanni Biliverti, Italian painter (b. 1585) July 25 – Amar Singh Rathore, Rajput nobleman affiliated with the royal house of Marwar (b. 1613) July 29 – Pope Urban VIII (b. 1568)[14] August 25 – Johann Heinrich Alting, German Lutheran theologian (b. 1583) September 4 – Johannes Wtenbogaert, Dutch leader of the Remonstrants (b. 1557) September 7 Guido Bentivoglio, Italian statesman and historian (b. 1579)[15] Ralph Corbie, Irish Jesuit (b. 1598) September 8 John Coke, English politician (b. 1563)[16] Francis Quarles, English poet (b. 1592)[17] October 6 – Elisabeth of France, queen of Philip IV of Spain (b. 1602) October 19 – Johann Friedrich, Count Palatine of Sulzbach-Hilpoltstein (b. 1587) October 30 – Jorge de Cárdenas y Manrique de Lara, Spanish noble (b. 1584) November 6 – Thomas Roe, English diplomat (b. c. 1581) November 10 – Luis Vélez de Guevara, Spanish writer (b. 1579) November 20 – Nathaniel Foote, American colonist (b. 1592) November 24 – Deodat del Monte, Flemish painter, architect (b. 1582) December 20 – Albert IV, Duke of Saxe-Eisenach (from 1640) (b. 1599) December 23 – Sir Alexander Carew, 2nd Baronet, English politician (b. 1609) December 28 – John Bankes, Attorney General and Chief Justice to King Charles I of England (b. 1589) December 30 – Jan Baptist van Helmont, Flemish chemist (b. 1577) ^ Braddick, Michael J. (2015). The Oxford handbook of the English revolution. Oxford, UK; New York: Oxford University Press. p. 103. ISBN 9780199695898. ^ Coward, Barry (1994). The Stuart age: England, 1603-1714. London New York: Longman. p. 223. ISBN 9780582067226. ^ a b "What Happened In 1644". hisdates.com. Retrieved March 3, 2016. ^ Edward S. Ellis, et al., The People's History of the World; Including Two Volumes on the Races of Mankind, Volume 5: United States (Chicago: The History Publishing Association, 1902) p. 127 ("The second outbreak occurred April 18th, 1644... Opechankano was taken prisoner, and died in Jamestown while a captive") ^ "Rupert, Prince", by Charles Harding Firth, in The Dictionary of National Biography, Volume 17 (Oxford University Press, 1922) p. 408 ("Rupert returned to Wales.. Defeating the parliamentarians at Stockport, he forced his way into Lancashire, stormed Bolton on 28 May, and captured Liverpool on 11 June", quoting Ormerod, Civil War Tracts of Lancashire, p. 187) ^ Levene, Mark (1999). The massacre in history. New York: Berghahn Books. p. 93. ISBN 9781571819345. ^ Jeremy Black (1996). The Cambridge Illustrated Atlas of Warfare: Renaissance to Revolution, 1492-1792. Cambridge University Press. p. 80. ^ Levillain, Philippe (2002). The papacy : an encyclopedia. New York: Routledge. p. 801. ISBN 9780415922289. ^ Walle, Willy (2003). The history of the relations between the Low Countries and China in the Qing era (1644-1911. Leuven, Belgium: Leuven University Press Ferdinand Verbiest Foundation. p. 90. ISBN 9789058673152. ^ Lowther, Kenneth (1979). Dartmoor, Exeter... London: Ward Lock. p. 35. ISBN 9780706357929. ^ Dumas, Alexandre (1998). The Vicomte de Bragelonne. Oxford New York: Oxford University Press. p. 674. ISBN 9780192834638. ^ Schiavone, Michael J. (2009). Dictionary of Maltese Biographies Vol. 1 A–F. Pietà: Pubblikazzjonijiet Indipendenza. p. 756. ISBN 9789993291329. ^ Fetis, FirstName (2013). Anthony Stradivari the Celebrated Violin Maker. Newburyport: Dover Publications. p. x. ISBN 9780486316529. ^ Baker, Christopher (2002). Absolutism and the scientific revolution, 1600-1720 : a biographical dictionary. Westport, Conn: Greenwood Press. p. 382. ISBN 9780313308277. ^ John Evelyn (2000). The Diary of John Evelyn: 1620-1649. Clarendon Press. p. 379. ^ Venning, Timothy (2005). Compendium of British office holders. Houndmills, Basingstoke, Hampshire New York: Palgrave Macmillan. p. 118. ISBN 9780230505872. ^ Baker, Christopher (2002). Absolutism and the scientific revolution, 1600-1720 : a biographical dictionary. Westport, Conn: Greenwood Press. p. 313. ISBN 9780313308277. Retrieved from " 3One hundred years, from 1501 to 1600 This article needs additional citations for verification. Please help improve this article by adding citations to reliable sources. Unsourced material may be challenged and removed.Find sources: "16th century" – news · newspapers · books · scholar · JSTOR (September 2022) (Learn how and when to remove this message) Millennia 2nd millennium Centuries 15th century 16th century 17th century Timelines 15th century 16th century 17th century State leaders 15th century 16th century 17th century Decades 1500s 1510s 1520s 1530s 1540s 1550s 1560s 1570s 1580s 1590s Categories: Births – Deaths Establishments – Disestablishments vte The world map by the Italian Amerigo Vespucci (from whose name the word America is derived) and Belgian Gerardus Mercator shows (besides the classical continents Europe, Africa, and Asia) the Americas as America sive India Nova', New Guinea, and other islands of Southeast Asia, as well as a hypothetical Arctic continent and a yet undetermined Terra Australis.[1]The 16th century began with the Julian year 1501 (represented by the Roman numerals MDI) and ended with either the Julian or the Gregorian year 1600 (MDC), depending on the reckoning used (the Gregorian calendar introduced a lapse of 10 days in October 1582).[1] The Renaissance in Italy and Europe saw the emergence of important artists, authors and scientists, and led to the foundation of important subjects which include accounting and political science. Copernicus proposed the heliocentric universe, which was met with strong resistance, and Tycho Brahe refuted the theory of celestial spheres through observational measurement of the 1572 appearance of a Milky Way supernova. These events directly challenged the long-held notion of an immutable universe supported by Ptolemy and Aristotle, and led to major revolutions in astronomy and science. Galileo Galilei became a champion of the new sciences, invented the first thermometer and made substantial contributions in the fields of physics and astronomy, becoming a major figure in the Scientific Revolution in Europe. Spain and Portugal colonized large parts of Central and South America, followed by France and England in Northern America and the Lesser Antilles. The Portuguese became the masters of trade between Brazil, the coasts of Africa, and their possessions in the Indies, whereas the Spanish came to dominate the Greater Antilles, Mexico, Peru, and opened trade across the Pacific Ocean, linking the Americas with the Indies. English and French privateers began to practice persistent theft of Spanish and Portuguese treasures. This era of colonialism established mercantilism as the leading school of economic thought, where the economic system was viewed as a zero-sum game in which any gain by one party required a loss by another. The mercantilist doctrine encouraged the many intra-European wars of the period and arguably fueled European expansion and imperialism throughout the world until the 19th century or early 20th century. The Reformation in central and northern Europe gave a major blow to the authority of the papacy and the Catholic Church. In England, the British-Italian Alberico Gentili wrote the first book on public international law and divided secularism from canon law and Catholic theology. European politics became dominated by religious conflicts, with the groundwork for the epochal Thirty Years' War being laid towards the end of the century. In the Middle East, the Ottoman Empire continued to expand, with the sultan taking the title of caliph, while dealing with a resurgent Persia. Iran and Iraq were caught by a major popularity of the Shia sect of Islam under the rule of the Safavid dynasty of warrior-mystics, providing grounds for a Persia independent of the majority-Sunni Muslim world.[2] In the Indian subcontinent, following the defeat of the Delhi Sultanate and Vijayanagara Empire, new powers emerged, the Sur Empire founded by Sher Shah Suri, Deccan sultanates, Rajput states, and the Mughal Empire[3] by Emperor Babur, a direct descendant of Timur and Genghis Khan.[4] His successors Humayun and Akbar, enlarged the empire to include most of South Asia. Japan suffered a severe civil war at this time, known as the Sengoku period, and emerged from it as a unified nation under Toyotomi Hideyoshi. China was ruled by the Ming dynasty, which was becoming increasingly isolationist, coming into conflict with Japan over the control of Korea as well as Japanese pirates. In Africa, Christianity had begun to spread in Central Africa and Southern Africa. Until the Scramble for Africa in the late 19th century, most of Africa was left uncolonized. For timelines of earlier events, see 15th century and Timeline of the Middle Ages. Mona Lisa, by Leonardo da Vinci, c. 1503–1506, one of the world's best-known paintings 1501: Michelangelo returns to his native Florence to begin work on the statue David. 1501: Safavid dynasty reunifies Iran and rules over it until 1736. Safavids adopt a Shia branch of Islam.[5] 1501: First Battle of Cannanore between the Third Portuguese Armada and Kingdom of Cochin under João da Nova and Zamorin of Kozhikode's navy marks the beginning of Portuguese conflicts in the Indian Ocean. 1502: First reported African slaves in the New World 1502: The Crimean Khanate sacks Sarai in the Golden Horde, ending its existence. 1503: Spain defeats France at the Battle of Cerignola. Considered to be the first battle in history won by gunpowder small arms. 1503: Leonardo da Vinci begins painting the Mona Lisa and completes it three years later. 1503: Nostradamus is born on either December 14 or December 21. 1504: A period of drought, with famine in all of Spain. 1504: Death of Isabella I of Castile; Joanna of Castile becomes the Queen. 1504: Foundation of the Sultanate of Sennar by Amara Dunqas, in what is modern Sudan 1505: Zhengde Emperor ascends the throne of Ming dynasty. 1505: Martin Luther enters St. Augustine's Monastery at Erfurt, Germany, on 17 July and begins his journey to instigating the Reformation. 1505: Sultan Trenggono builds the first Muslim kingdom in Java, called Demak, in Indonesia. Many other small kingdoms were established in other islands to fight against Portuguese. Each kingdom introduced local language as a way of communication and unity. 1506: Leonardo da Vinci completes the Mona Lisa. 1506: King Afonso I of Kongo wins the battle of Mbanza Kongo, resulting in Catholicism becoming Kongo's state religion.Battle of Cerignola: El Gran Capitan finds the corpse of Louis d'Armagnac, Duke of Nemours 1506: At least two thousand converted Jews are massacred in a Lisbon riot, Portugal. 1506: Christopher Columbus dies in Valladolid, Spain. 1506: Poland is invaded by Tatars from the Crimean Khanate. 1507: The first recorded epidemic of smallpox in the New World on the island of Hispaniola. It devastates the native Taíno population.[6] 1507: Afonso de Albuquerque conquered Hormuz and Muscat, among other bases in the Persian Gulf, taking control of the region at the entrance of the Gulf. 1508: The Christian-Islamic power struggle in Europe and West Asia spills over into the Indian Ocean as Battle of Chaul during the Portuguese-Mamluk War 1508–1512: Michelangelo paints the Sistine Chapel ceiling. 1509: The defeat of joint fleet of the Sultan of Gujarat, the Mamlûk Burji Sultanate of Egypt, and the Zamorin of Calicut with support of the Republic of Venice and the Ottoman Empire in Battle of Diu marks the beginning of Portuguese dominance of the Spice trade and the Indian Ocean. 1509: The Portuguese king sends Diogo Lopes de Sequeira to find Malacca, the eastern terminus of Asian trade. After initially receiving Sequeira, Sultan Mahmud Shah captures and/or kills several of his men and attempts an assault on the four Portuguese ships, which escape.[7] The Javanese fleet is also destroyed in Malacca. 1509: Krishnadevaraya ascends the throne of Vijayanagara Empire. Afonso de Albuquerque 1509–1510: The 'great plague' in various parts of Tudor England.[8] 1510: Afonso de Albuquerque of Portugal conquers Goa in India. 1511: Afonso de Albuquerque of Portugal conquers Malacca, the capital of the Sultanate of Malacca in present-day Malaysia. 1512: Copernicus writes Commentariolus, and proclaims the Sun the center of the Solar System. 1512: The southern part (historical core) of the Kingdom of Navarre is invaded by Castile and Aragon. 1512: Qutb Shahi dynasty, founded by Quli Qutb Mulk, rules Golconda Sultanate until 1687. 1512: The first Portuguese exploratory expedition was sent eastward from Malacca (in present-day Malaysia) to search for the 'Spice Islands' (Maluku) led by Francisco Serrão. Serrão is shipwrecked but struggles on to Hitu (northern Ambon) and wins the favour of the local rulers.[9] 1513: Machiavelli writes The Prince, a treatise about political philosophy 1513: The Portuguese mariner Jorge Álvares lands at Macau, China, during the Ming dynasty. 1513: Henry VIII defeats the French at the Battle of the Spurs. 1513: The Battle of Flodden Field in which invading Scots are defeated by Henry VIII's forces. 1513: Sultan Selim I ("The Grim") orders the massacre of Shia Muslims in Anatolia (present-day Turkey). 1513: Vasco Núñez de Balboa, in service of Spain arrives at the Pacific Ocean (which he called Mar del Sur) across the Isthmus of Panama. He was the first European to do so. 1514: The Battle of Orsha halts Muscovy's expansion into Eastern Europe. 1514: Dózsa rebellion (peasant revolt) in Hungary.Martin Luther initiated the Reformation with his Ninety-five Theses in 1517. 1514: The Battle of Chaldiran, the Ottoman Empire gains decisive victory against Safavid dynasty. 1515: Ascension of Francis I of France as King of France following the death of Louis XII. 1515: The Ottoman Empire wrests Eastern Anatolia from the Safavids after the Battle of Chaldiran. 1515: The Ottomans conquer the last beyliks of Anatolia, the Dulkadirs and the Ramadanids. 1516–1517: The Ottomans defeat the Mamluks and gain control of Egypt, Arabia, and the Levant. 1517: The Sweating sickness epidemic in Tudor England.[10] 1517: The Reformation begins when Martin Luther posts his Ninety-five Theses in Saxony. 1518: The Treaty of London was a non-aggression pact between the major European nations. The signatories were Burgundy, France, England, the Holy Roman Empire, the Netherlands, the Papal States and Spain, all of whom agreed not to attack one another and to come to the aid of any that were under attack. 1518: Mir Chakar Khan Rind leaves Baluchistan and settles in Punjab. 1518: Leo Africanus, also known as al-Hasan ibn Muhammad al-Wazzan al-Fasi, an Andalusian Berber diplomat who is best known for his book Descrittione dell'Africa (Description of Africa), is captured by Spanish pirates; he is taken to Rome and presented to Pope Leo X. 1518: The dancing plague of 1518 begins in Strasbourg, lasting for about one month. 1519: Leonardo da Vinci dies of natural causes on May 2.Europe at the time of the accession of Charles V in 1519 1519: Wang Yangming, the Chinese philosopher and governor of Jiangxi province, describes his intent to use the firepower of the fo-lang-ji, a breech-loading Portuguese culverin, in order to suppress the rebellion of Prince Zhu Chenhao. 1519: Barbary pirates led by Hayreddin Barbarossa, a Turk appointed to ruling position in Algiers by the Ottoman Empire, raid Provence and Toulon in southern France. 1519: Death of Emperor Maximilian; Charles I of Austria, Spain, and the Low Countries becomes Emperor of Holy Roman Empire as Charles V, Holy Roman Emperor (ruled until 1556). 1519–1522: Spanish expedition commanded by Magellan and Elcano are the first to Circumnavigate the Earth. 1519–1521: Hernán Cortés leads the Spanish conquest of the Aztec Empire. Ferdinand Magellan led the first expedition that circumnavigated the globe in 1519–1522. 1520–1566: The reign of Suleiman the Magnificent marks the zenith of the Ottoman Empire. 1520: The first European diplomatic mission to Ethiopia, sent by the Portuguese, arrives at Massawa 9 April, and reaches the imperial encampment of Emperor Dawit II in Shewa 9 October. 1520: Vijayanagara Empire forces under Krishnadevaraya defeat the Adil Shahi under at the Battle of Raichur 1520: Sultan Ali Mughayat Shah of Aceh begins an expansionist campaign capturing Daya on the west Sumatran coast (in present-day Indonesia), and the pepper and gold producing lands on the east coast. 1520: The Portuguese established a trading post in the village of Lamakera on the eastern side of Solor (in present-day Indonesia) as a transit harbour between Maluku and Malacca. 1521: Belgrade (in present-day Serbia) is captured by the Ottoman Empire. 1521: After building fortifications at Tuen Mun, the Portuguese attempt to invade Ming dynasty China, but are expelled by Chinese naval forces. 1521: Philippines encountered by Ferdinand Magellan. He was later killed in the Battle of Mactan in central Philippines in the same year. 1521: Jiajing Emperor ascended the throne of Ming dynasty, China. 1521: November, Ferdinand Magellan's expedition reaches Maluku (in present-day Indonesia) and after trade with Ternate returns to Europe with a load of cloves. 1521: Pati Unus leads the invasion of Malacca (in present-day Malaysia) against the Portuguese occupation. Pati Unus was killed in this battle, and was succeeded by his brother, sultan Trenggana. 1522: Rhodes falls to the Ottomans of Suleiman the Magnificent.[11]Sack of Rome of 1527 by Charles V's forces (painting by Johannes Lingelbach) 1522: The Portuguese ally themselves with the rulers of Ternate (in present-day Indonesia) and begin construction of a fort.[9] 1522: August, Luso-Sundanese Treaty signed between Portugal and Sunda Kingdom granted Portuguese permit to build fortress in Sunda Kelapa. 1523: Sweden gains independence from the Kalmar Union. 1523: The Cacao bean is introduced to Spain by Hernán Cortés 1524–1525: German Peasants' War in the Holy Roman Empire. 1524: Giovanni da Verrazzano is the first European to explore the Atlantic coast of North America between South Carolina and Newfoundland. 1524: Ismail I, the founder of Safavid dynasty, dies and Tahmasp I becomes king.Gun-wielding Ottoman Janissaries and defending Knights of Saint John at the siege of Rhodes in 1522, from an Ottoman manuscript 1525: Timurid Empire forces under Babur defeat the Lodi dynasty at the First Battle of Panipat, end of the Delhi Sultanate. 1525: German and Spanish forces defeat France at the Battle of Pavia, Francis I of France is captured. 1526: The Ottomans defeat the Kingdom of Hungary at the Battle of Mohács. 1526: Mughal Empire, founded by Babur. 1527: Sack of Rome with Pope Clement VII escaping and the Swiss Guards defending the Vatican being killed. The sack of the city of Rome considered the end of the Italian Renaissance. 1527: Protestant Reformation begins in Sweden. 1527: The last ruler of Majapahit falls from power. This state (located in present-day Indonesia) was finally extinguished at the hands of the Demak. A large number of courtiers, artisans, priests, and members of the royalty moved east to the island of Bali; however, the power and the seat of government transferred to Demak under the leadership of Pangeran, later Sultan Fatah. 1527: June 22, The Javanese Prince Fatahillah of the Cirebon Sultanate successfully defeated the Portuguese armed forces at the site of the Sunda Kelapa Harbor. The city was then renamed Jayakarta, meaning "a glorious victory." This eventful day came to be acknowledged as Jakarta's Founding Anniversary. 1527: Mughal Empire forces defeat the Rajput led by Rana Sanga of Mewar at the Battle of Khanwa 1529: The Austrians defeat the Ottoman Empire at the siege of Vienna. 1529: Treaty of Zaragoza defined the antimeridian of Tordesillas attributing the Moluccas to Portugal and Philippines to Spain. 1529: Imam Ahmad Gurey defeats the Ethiopian Emperor Dawit II in the Battle of Shimbra Kure, the opening clash of the Ethiopian–Adal War. Spanish conquistadors with their Tlaxcallan allies fighting against the Otomies of Metztitlan in present-day Mexico, a 16th-century codex 1531–1532: The Church of England breaks away from the Catholic Church and recognizes King Henry VIII as the head of the Church. 1531: The Inca Civil War is fought between the two brothers, Atahualpa and Huáscar. 1532: Francisco Pizarro leads the Spanish conquest of the Inca Empire. 1532: Foundation of São Vicente, the first permanent Portuguese settlement in the Americas. 1533: Anne Boleyn becomes Queen of England. 1533: Elizabeth Tudor is born. 1534: Jacques Cartier claims Canada for France. 1534: The Ottomans capture Baghdad from the Safavids. 1534: Affair of the Placards, where King Francis I becomes more active in repression of French Protestants. 1535: The Münster Rebellion, an attempt of radical, millennialist, Anabaptists to establish a theocracy, ends in bloodshed. 1535: The Portuguese in Ternate depose Sultan Tabariji (or Tabarija) and send him to Portuguese Goa where he converts to Christianity and bequeaths his Portuguese godfather Jordao de Freitas the island of Ambon.[12] Hairun becomes the next sultan. 1536: Catherine of Aragon dies in Kimbolton Castle, in England.Territorial expansion of the Ottoman Empire under Suleiman (in red and orange) 1536: In England, Anne Boleyn is beheaded for adultery and treason. 1536: Establishment of the Inquisition in Portugal. 1536: Foundation of Buenos Aires (in present-day Argentina) by Pedro de Mendoza. 1537: The Portuguese establish Recife in Pernambuco, north-east of Brazil. 1537: William Tyndale's partial translation of the Bible into English is published, which would eventually be incorporated into the King James Bible. 1538: Gonzalo Jiménez de Quesada founds Bogotá. 1538: Spanish–Venetian fleet is defeated by the Ottoman Turks at the Battle of Preveza. 1539: Hernando de Soto explores inland North America. Nicolaus Copernicus 1540: The Society of Jesus, or the Jesuits, is founded by Ignatius of Loyola and six companions with the approval of Pope Paul III. 1540: Sher Shah Suri founds the Suri dynasty in South Asia, an ethnic Pashtun (Pathan) of the house of Sur, who supplanted the Mughal dynasty as rulers of North India during the reign of the relatively ineffectual second Mughal emperor Humayun. Sher Shah Suri decisively defeats Humayun in the Battle of Bilgram (May 17, 1540). 1541: Pedro de Valdivia founds Santiago in Chile. 1541: An Algerian military campaign by Charles V of Spain (Habsburg) is unsuccessful. 1541: Amazon River is encountered and explored by Francisco de Orellana. 1541: Capture of Buda and the absorption of the major part of Hungary by the Ottoman Empire. 1541: Sahib I Giray of Crimea invades Russia. 1542: The Italian War of 1542–1546 War resumes between Francis I of France and Emperor Charles V. This time Henry VIII is allied with the Emperor, while James V of Scotland and Sultan Suleiman I are allied with the French. 1542: Akbar The Great is born in the Rajput Umarkot Fort 1542: Spanish explorer Ruy López de Villalobos named the island of Samar and Leyte Las Islas Filipinas honoring Philip II of Spain and became the official name of the archipelago. 1543: Ethiopian/Portuguese troops defeat the Adal army led by Imam Ahmad Gurey at the Battle of Wayna Daga; Imam Ahmad Gurey is killed at this battle. 1543: Copernicus publishes his theory that the Earth and the other planets revolve around the Sun 1543: The Nanban trade period begins after Portuguese traders make contact with Japan. 1544: The French defeat an Imperial–Spanish army at the Battle of Ceresole.Scenes of everyday life in Ming China, by Qiu Ying 1544: Battle of the Shirts in Scotland. The Frasers and Macdonalds of Clan Ranald fight over a disputed chiefship; reportedly, 5 Frasers and 8 Macdonalds survive. 1545: Songhai forces sack the Malian capital of Niani 1545: The Council of Trent meets for the first time in Trent (in northern Italy). 1546: Michelangelo Buonarroti is made chief architect of St. Peter's Basilica. 1546: Francis Xavier works among the peoples of Ambon, Ternate and Morotai (Moro) laying the foundations for a permanent mission. (to 1547) 1547: Henry VIII dies in the Palace of Whitehall on 28 January at the age of 55. 1547: Francis I dies in the Château de Rambouillet on 31 March at the age of 52. 1547: Edward VI becomes King of England and Ireland on 28 January and is crowned on 20 February at the age of 9. 1547: Emperor Charles V decisively dismantles the Schmalkaldic League at the Battle of Mühlberg. 1547: Grand Prince Ivan the Terrible is crowned tsar of (All) Russia, thenceforth becoming the first Russian tsar. 1548: Battle of Uedahara: Firearms are used for the first time on the battlefield in Japan, and Takeda Shingen is defeated by Murakami Yoshikiyo. 1548: Askia Daoud, who reigned from 1548 to 1583, establishes public libraries in Timbuktu (in present-day Mali). 1548: The Ming dynasty government of China issues a decree banning all foreign trade and closes down all seaports along the coast; these Hai jin laws came during the Wokou wars with Japanese pirates. 1549: Tomé de Sousa establishes Salvador in Bahia, north-east of Brazil. 1549: Arya Penangsang with the support of his teacher, Sunan Kudus, avenges the death of Raden Kikin by sending an envoy named Rangkud to kill Sunan Prawoto by Keris Kyai Satan Kober (in present-day Indonesia). The Islamic gunpowder empires: Mughal Army artillerymen during the reign of Jalaluddin Akbar 1550: The architect Mimar Sinan builds the Süleymaniye Mosque in Istanbul. 1550: Mongols led by Altan Khan invade China and besiege Beijing. 1550–1551: Valladolid debate concerning the human rights of the Indigenous people of the Americas. 1551: Fifth outbreak of sweating sickness in England. John Caius of Shrewsbury writes the first full contemporary account of the symptoms of the disease. 1551: North African pirates enslave the entire population of the Maltese island Gozo, between 5,000 and 6,000, sending them to Libya. 1552: Russia conquers the Khanate of Kazan in central Asia. 1552: Jesuit China Mission, Francis Xavier dies. 1553: Mary Tudor becomes the first queen regnant of England and restores the Church of England under Papal authority. 1553: The Portuguese found a settlement at Macau. 1554: Missionaries José de Anchieta and Manuel da Nóbrega establishes São Paulo, southeast Brazil. 1554: Princess Elizabeth is imprisoned in the Tower of London upon the orders of Mary I for suspicion of being involved in the Wyatt rebellion. 1555: The Muscovy Company is the first major English joint stock trading company. 1556: Publication in Venice of Delle Navigiationi et Viaggi (terzo volume) by Giovanni Battista Ramusio, secretary of Council of Ten, with plan La Terra de Hochelaga, an illustration of the Hochelaga.[13] 1556: The Shaanxi earthquake in China is history's deadliest known earthquake during the Ming dynasty. 1556: Georgius Agricola, the "Father of Mineralogy", publishes his De re metallica. 1556: Akbar defeats Hemu at the Second battle of Panipat. 1556: Russia conquers the Astrakhan Khanate. 1556–1605: During his reign, Akbar expands the Mughal Empire in a series of conquests (in the Indian subcontinent).Political map of the world in 1556 1556: Mir Chakar Khan Rind captures Delhi with Humayun. 1556: Pomponio Algerio, radical theologian, is executed by boiling in oil as part of the Roman Inquisition. 1557: Habsburg Spain declares bankruptcy. Philip II of Spain had to declare four state bankruptcies in 1557, 1560, 1575 and 1596. 1557: The Portuguese settle in Macau (on the western side of the Pearl River Delta across from present-day Hong Kong). 1557: The Ottomans capture Massawa, all but isolating Ethiopia from the rest of the world. 1558: Elizabeth Tudor becomes Queen Elizabeth I at age 25. 1558–1603: The Elizabethan era is considered the height of the English Renaissance. 1558–1583: Livonian War between Poland, Grand Principality of Lithuania, Sweden, Denmark and Russia. 1558: After 200 years, the Kingdom of England loses Calais to France. 1559: With the Peace of Cateau Cambrésis, the Italian Wars conclude. 1559: Sultan Hairun of Ternate (in present-day Indonesia) protests the Portuguese's Christianisation activities in his lands. Hostilities between Ternate and the Portuguese. The Mughal Emperor Akbar shoots the Rajput warrior Jaimal during the Siege of Chittorgarh in 1567 1560: Ottoman navy defeats the Spanish fleet at the Battle of Djerba. 1560: Elizabeth Bathory is born in Nyirbator, Hungary. 1560: By winning the Battle of Okehazama, Oda Nobunaga becomes one of the pre-eminent warlords of Japan. 1560: Jeanne d'Albret declares Calvinism the official religion of Navarre. 1560: Lazarus Church, Macau 1561: Sir Francis Bacon is born in London. 1561: The fourth battle of Kawanakajima between the Uesugi and Takeda at Hachimanbara takes place. 1561: Guido de Bres draws up the Belgic Confession of Protestant faith. 1562: Mughal emperor Akbar reconciles the Muslim and Hindu factions by marrying into the powerful Rajput Hindu caste. 1562–1598: French Wars of Religion between Catholics and Huguenots. 1562: Massacre of Wassy and Battle of Dreux in the French Wars of Religion. 1562: Portuguese Dominican priests build a palm-trunk fortress which Javanese Muslims burned down the following year. The fort was rebuilt from more durable materials and the Dominicans commenced the Christianisation of the local population.[12] 1563: Plague outbreak claimed 80,000 people in Elizabethan England. In London alone, over 20,000 people died of the disease. 1564: Galileo Galilei born on February 15 1564: William Shakespeare baptized 26 April 1565: Deccan sultanates defeat the Vijayanagara Empire at the Battle of Talikota. 1565: Mir Chakar Khan Rind dies at aged 97. 1565: Estácio de Sá establishes Rio de Janeiro in Brazil. 1565: The Hospitallers, a Crusading Order, defeat the Ottoman Empire at the siege of Malta (1565). 1565: Miguel López de Legazpi establishes in Cebu the first Spanish settlement in the Philippines starting a period of Spanish colonization that would last over three hundred years. 1565: Spanish navigator Andres de Urdaneta discovers the maritime route from Asia to the Americas across the Pacific Ocean, also known as the tornaviaje. 1565: Royal Exchange is founded by Thomas Gresham. 1566: Suleiman the Magnificent, ruler of the Ottoman Empire, dies on September 7, during the battle of Szigetvar.Siege of Valenciennes during the Dutch War of Independence in 1567 1566–1648: Eighty Years' War between Spain and the Netherlands. 1566: Da le Balle Contrade d'Oriente, composed by Cipriano de Rore. 1567: After 45 years' reign, Jiajing Emperor died in the Forbidden City, Longqing Emperor ascended the throne of Ming dynasty. 1567: Mary, Queen of Scots, is imprisoned by Elizabeth I. 1568: The Transylvanian Diet, under the patronage of the prince John Sigismund Zápolya, the former king of Hungary, inspired by the teachings of Ferenc Dávid, the founder of the Unitarian Church of Transylvania, promulgates the Edict of Torda, the first law of freedom of religion and of conscience in the World. 1568–1571: Morisco Revolt in Spain. 1568–1600: The Azuchi-Momoyama period in Japan. 1568: Hadiwijaya sent his adopted son and son in-law Sutawijaya, who would later become the first ruler of the Mataram dynasty of Indonesia, to kill Arya Penangsang. 1569: Rising of the North in England. 1569: Mercator 1569 world map published by Gerardus Mercator. 1569: The Polish–Lithuanian Commonwealth is created with the Union of Lublin which lasts until 1795. 1569: Peace treaty signed by Sultan Hairun of Ternate and Governor Lopez De Mesquita of Portugal. The Battle of Lepanto 1570: Ivan the Terrible, tsar of Russia, orders the massacre of inhabitants of Novgorod. 1570: Pope Pius V issues Regnans in Excelsis, a papal bull excommunicating all who obeyed Elizabeth I and calling on all Catholics to rebel against her. 1570: Sultan Hairun of Ternate (in present-day Indonesia) is killed by the Portuguese.[12] Babullah becomes the next Sultan. 1570: 20,000 inhabitants of Nicosia in Cyprus were massacred and every church, public building, and palace was looted. Cyprus fell to the Ottoman Turks the following year. 1571: Pope Pius V completes the Holy League as a united front against the Ottoman Turks, responding to the fall of Cyprus to the Ottomans. 1571: The Spanish-led Holy League navy destroys the Ottoman Empire navy at the Battle of Lepanto. 1571: Crimean Tatars attack and sack Moscow, burning everything but the Kremlin. 1571: American Indians kill Spanish missionaries in what would later be Jamestown, Virginia. 1571: Spanish conquistador Miguel López de Legazpi establishes Manila, Philippines as the capital of the Spanish East Indies. 1572: Brielle is taken from Habsburg Spain by Protestant Watergeuzen in the Capture of Brielle, in the Eighty Years' War. 1572: Spanish conquistadores apprehend the last Inca leader Tupak Amaru at Vilcabamba, Peru, and execute him in Cuzco. 1572: Jeanne d'Albret dies aged 43 and is succeeded by Henry of Navarre. 1572: Catherine de' Medici instigates the St. Bartholomew's Day massacre which takes the lives of Protestant leader Gaspard de Coligny and thousands of Huguenots. The violence spreads from Paris to other cities and the countryside. 1572: First edition of the epic The Lusiads of Luís Vaz de Camões, three years after the author returned from the East.[14] 1572: The 9 years old Taizi, Zhu Yijun ascended the throne of Ming dynasty, known as Wanli Emperor. 1573: After heavy losses on both sides the siege of Haarlem ends in a Spanish victory.St. Bartholomew's Day massacre of French Protestants 1574: in the Eighty Years' War the capital of Zeeland, Middelburg declares for the Protestants. 1574: After a siege of 4 months the siege of Leiden ends in a comprehensive Dutch rebel victory. 1575: Oda Nobunaga finally captures Nagashima fortress. 1575: Following a five-year war, the Ternateans under Sultan Babullah defeated the Portuguese. 1576: Tahmasp I, Safavid shah, dies. 1576: The Battle of Haldighati is fought between the ruler of Mewar, Maharana Pratap and the Mughal Empire's forces under Emperor Akbar led by Raja Man Singh. 1576: Sack of Antwerp by badly paid Spanish soldiers. 1577–1580: Francis Drake circles the world. 1577: Ki Ageng Pemanahan built his palace in Pasargede or Kotagede. 1578: King Sebastian of Portugal is killed at the Battle of Alcazarquivir. 1578: The Portuguese establish a fort on Tidore but the main centre for Portuguese activities in Maluku becomes Ambon.[12] 1578: Sonam Gyatso is conferred the title of Dalai Lama by Tumed Mongol ruler, Altan Khan. Recognised as the reincarnation of two previous Lamas, Sonam Gyatso becomes the third Dalai Lama in the lineage.[15] 1578: Governor-General Francisco de Sande officially declared war against Brunei in 1578, starting the Castilian War of 1578. 1579: The Union of Utrecht unifies the northern Netherlands, a foundation for the later Dutch Republic. 1579: The Union of Arras unifies the southern Netherlands, a foundation for the later states of the Spanish Netherlands, the Austrian Netherlands and Belgium.The Irish Gaelic chieftain's feast, from The Image of Ireland 1579: The British navigator Sir Francis Drake passes through Maluku and transit in Ternate on his circumnavigation of the world. The Portuguese establish a fort on Tidore but the main centre for Portuguese activities in Maluku becomes Ambon.[16] The fall of Spanish Armada 1580: Drake's royal reception after his attacks on Spanish possessions influences Philip II of Spain to build up the Spanish Armada. English ships in Spanish harbours are impounded. 1580: Spain unifies with Portugal under Philip II. The struggle for the throne of Portugal ends the Portuguese Empire. The Spanish and Portuguese crowns are united for 60 years, i.e. until 1640. 1580–1587: Nagasaki comes under control of the Jesuits. 1581: Dutch Act of Abjuration, declaring abjuring allegiance to Philip II of Spain. 1581: Bayinnaung dies at the age of 65. 1582: Oda Nobunaga commits seppuku during the Honnō-ji Incident coup by his general, Akechi Mitsuhide. 1582: Pope Gregory XIII issues the Gregorian calendar. The last day of the Julian calendar was Thursday, 4 October 1582 and this was followed by the first day of the Gregorian calendar, Friday, 15 October 1582 1582: Yermak Timofeyevich conquers the Siberia Khanate on behalf of the Stroganovs. 1583: Denmark builds the world's first theme park, Bakken. 1583: Death of Sultan Babullah of Ternate. 1584–1585: After the siege of Antwerp, many of its merchants flee to Amsterdam. According to Luc-Normand Tellier, "At its peak, between 1510 and 1557, Antwerp concentrated about 40% of the world trade...It is estimated that the port of Antwerp was earning the Spanish crown seven times more revenues than the Americas."[17] 1584: Ki Ageng Pemanahan died. Sultan Pajang raised Sutawijaya, son of Ki Ageng Pemanahan as the new ruler in Mataram, titled "Loring Ngabehi Market" (because of his home in the north of the market). 1585: Akbar annexes Kashmir and adds it to the Kabul SubahPortuguese fusta in India from a book by Jan Huygen van Linschoten 1585: Colony at Roanoke founded in North America. 1585–1604: The Anglo-Spanish War is fought on both sides of the Atlantic. 1587: Mary, Queen of Scots is executed by Elizabeth I. 1587: The reign of Abbas I marks the zenith of the Safavid dynasty. 1587: Troops that would invade Pajang Mataram Sultanate storm ravaged the eruption of Mount Merapi. Sutawijaya and his men survived. 1588: Mataram into the kingdom with Sutawijaya as Sultan, titled "Senapati Ingalaga