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With over 110 years of experience, Briggs & Stratton is trusted by millions of people around the globe and backed by the largest service network in the industry. We are the world's largest small engine producer, the number one marketer for pressure washers, and a leading manufacturer of power generation, lawn and garden turf care and job site products. Learn More About Briggs & Stratton > Theres nothing quite as frustrating as a lawn mower that refuses to cooperate. Whether your Briggs & Stratton engine is sputtering, refusing to start, or simply not cutting like it used to, a broken lawnmower can quickly turn your weekend plans into a nightmare. But fear not! This comprehensive guide will walk you through the common problems you might encounter with your Briggs & Stratton lawn mower and provide you with the knowledge to diagnose and fix them yourself. Well cover everything from basic troubleshooting techniques to tackling more complex repairs, empowering you to keep your lawn pristine and your mower running smoothly.A Quick OverviewFixing a Briggs & Stratton lawn mower often starts with basic troubleshooting. This can include checking for simple issues like a clogged air filter, a dead battery, or lack of fuel. For more complex problems, understanding the engines components and how they work is crucial. Well guide you through identifying and addressing issues with the carburetor, ignition system, and even the engine itself. With a bit of patience and the right tools, youll be able to tackle most lawn mower problems with confidence.Basic Troubleshooting: Identifying the ProblemThe first step to fixing any problem is understanding its root cause. With a little investigation, you can often identify the culprit and avoid unnecessary repairs.1. Check for Basic IssuesBefore diving into complex repairs, start with the basics:Fuel: Is your mower out of fuel? Ensure the fuel tank is filled with fresh gasoline.Spark Plug: A faulty spark plug can prevent the engine from starting. Check the plug for wear, corrosion, or gaps that are too wide or narrow.Air Filter: A clogged air filter restricts airflow, impacting engine performance. Clean or replace the filter as needed.Battery: For electric start mowers, a dead battery can be the culprit. Charge or replace the battery if necessary.2. Inspect the Starter RopeIf your mower isnt starting and you hear a clicking sound, the starter rope might be the issue.Check for breaks: Inspect the starter rope for breaks or fraying.Ensure proper tension: The rope should be tight enough to rewind smoothly but not so tight that its difficult to pull.Lubricate the pulley: A dry pulley can make starting difficult. Apply a small amount of lubricant to the pulley.3. Listen for Engine SoundsEngine sounds can provide valuable clues about potential problems.Clicking: This could indicate a faulty starter, ignition system problem, or a loose connection.Sputtering: A sputtering engine might be due to a clogged carburetor, fuel filter issues, or a faulty spark plug.Backfiring: Backfiring could indicate a problem with the ignition system, carburetor, or intake manifold.Tackling Common Briggs & Stratton Lawn Mower ProblemsOnce youve ruled out basic issues, its time to tackle more specific problems.1. Troubleshooting Starting IssuesIf your mower wont start, youll need to investigate further.1. Engine Not Turning Over:Check the starter: If the engine doesnt turn over, the starter might be faulty. You can test the starter by jumping it with a car battery.Inspect the starter rope: Make sure the rope is properly attached to the engine and that its not frayed or broken.Look for seized components: Occasionally, the engines crankshaft might become seized due to lack of lubrication. This will require a more thorough inspection and potential repair.2. Engine Turning Over But Not Starting:Inspect the spark plug: A faulty spark plug can prevent the engine from starting. Remove the plug and check for wear, corrosion, or proper gap spacing.Verify the spark: Remove the spark plug wire from the plug and hold it near a grounded metal surface while cranking the engine. You should see a spark jump across the gap. If not, the ignition system may be faulty.Check for fuel: Ensure the fuel tank is filled with fresh gasoline and that the fuel line is clear.2. Addressing Performance ProblemsIf your mower is running but not performing well, youll need to investigate further.1. Poor Cutting Performance:Check the blade: A dull blade wont cut effectively. Sharpen or replace the blade as needed.Inspect the deck: The mower deck needs to be clear of debris to allow for proper airflow. Remove any grass clippings or other obstructions.Adjust the cutting height: The cutting height may need to be adjusted to achieve the desired results.2. Engine Smoking:Check the air filter: A clogged air filter can cause excessive smoke. Clean or replace the filter.Inspect the spark plug: A worn or fouled spark plug can also contribute to smoke. Replace the spark plug if necessary.Examine the carburetor: A dirty or faulty carburetor can lead to excessive smoke. Clean the carburetor or replace it if necessary.3. Diagnosing Carburetor IssuesThe carburetor is a critical component that mixes air and fuel for combustion.Check for clogs: A dirty carburetor can lead to poor performance and starting problems. Remove the carburetor and clean it thoroughly with carburetor cleaner.Inspect the float valve: The float valve controls fuel flow to the carburetor. A faulty float valve can cause fuel to overflow or leak. Replace the valve if necessary.Adjust the carburetor settings: The carburetor settings can be adjusted to fine-tune the air-fuel mixture. Consult your owners manual for specific instructions.4. Troubleshooting Ignition System IssuesThe ignition system is responsible for creating the spark that ignites the fuel-air mixture.Inspect the spark plug wires: Check the spark plug wires for cracks or wear. Replace any damaged wires.Test the spark plug: Remove the spark plug and test it for spark as described earlier.Verify the ignition coil: The ignition coil converts low voltage to high voltage to create the spark. Test the ignition coil with a multimeter to ensure its working properly.5. Addressing Engine ProblemsIn some cases, the engine itself might require repair.Check for lubrication: Insufficient lubrication can cause engine damage. Ensure the engine has the correct type and amount of oil.Inspect for leaks: Oil or fuel leaks can be a sign of a more serious problem. Address any leaks promptly.Examine the valves: The valves control airflow in and out of the cylinder. Faulty valves can lead to poor engine performance. Inspect and adjust the valves as needed.Replace worn parts: Over time, engine parts can wear out. Replace any worn or damaged parts, such as pistons, rings, or connecting rods.Tips for Maintaining Your Briggs & Stratton Lawn MowerRegular maintenance is key to keeping your lawn mower running smoothly.Change the oil: Change the engine oil regularly according to your owners manual.Clean the air filter: A clean air filter ensures proper airflow to the engine.Inspect the spark plug: Check the spark plug for wear and replace it every 100 hours of use.Sharpen the blade: A sharp blade provides a clean cut and prevents scalping.Store the mower properly: Store the mower in a dry, clean place during the off-season.Conclusion: Keep Your Lawn Mower Running StrongWith a little patience and understanding of the common problems that can arise, you can fix many of the issues you might encounter with your Briggs & Stratton lawn mower. Remember to start with basic troubleshooting, address specific problems systematically, and prioritize regular maintenance. By following these steps, youll be able to keep your mower running smoothly and your lawn looking its best!FAQWhat are the most common problems with Briggs & Stratton lawn mowers?The most common problems with Briggs & Stratton lawn mowers involve the engine. These issues can include difficulty starting, stalling, or running poorly. Other frequent problems include issues with the blade, such as dullness or damage, as well as malfunctions with the fuel system, such as leaks or clogged lines.Its also important to consider maintenance issues, such as lack of regular oil changes, air filter cleaning, or spark plug replacement. These simple yet crucial tasks can prevent more serious problems down the line.What should I do if my Briggs & Stratton lawn mower wont start?If your Briggs & Stratton lawn mower wont start, you should begin by checking the basics. Ensure theres fresh fuel in the tank, the fuel shut-off valve is open, and that theres a spark at the spark plug. Additionally, check if the air filter is clean and the carburetor isnt clogged. If these steps dont solve the issue, you may have a more serious problem like a faulty ignition coil or a clogged fuel line.In such situations, its best to consult your owners manual or seek professional assistance from a qualified mechanic. They can diagnose the issue and recommend the appropriate solution, whether its a simple repair or a replacement part.How can I troubleshoot a stalling Briggs & Stratton lawn mower?When your Briggs & Stratton lawn mower stalls, the problem may be due to a clogged carburetor, a faulty fuel pump, or a clogged air filter. It could also indicate a problem with the spark plug, ignition coil, or a failing engine.A thorough inspection of the fuel system, ignition system, and air filter is a good starting point for troubleshooting. If these components are in order, you may need to consider seeking professional assistance from a mechanic who can diagnose and repair the issue.What are some common lawn mower blade problems?Common lawn mower blade problems include dullness, damage, and incorrect height. A dull blade will result in an uneven cut and may cause damage to your lawn. A damaged blade, with cracks or chips, can be dangerous and may require immediate replacement.Incorrect blade height can also cause uneven cuts and affect the overall health of your lawn. Its essential to use the right blade height for your lawn type and adjust it as needed throughout the year.How do I clean my Briggs & Stratton lawn mower carburetor?Cleaning your Briggs & Stratton lawn mower carburetor can improve engine performance and solve starting problems. Start by disconnecting the fuel line and removing the carburetor from the engine. Use a carburetor cleaning kit or a spray cleaner to thoroughly clean all parts, paying particular attention to the jets and passages.Make sure to clean the float bowl and needle valve, ensuring they function correctly. Once clean, reassemble the carburetor and reconnect the fuel line, ensuring all connections are tight.How can I prevent future problems with my Briggs & Stratton lawn mower?Preventative maintenance is crucial to keeping your Briggs & Stratton lawn mower running smoothly. This includes regular oil changes, air filter cleaning, spark plug replacement, and carburetor cleaning.Inspect your mower before each use, checking the blade for dullness or damage, the fuel system for leaks, and the air filter for dirt. Following these simple steps will help your lawn mower operate efficiently and prevent costly repairs in the future.When should I replace my Briggs & Stratton lawn mower?Replacing your Briggs & Stratton lawn mower is necessary when repairs become too expensive or frequent. If the cost of repairs exceeds the value of the mower, or if youre experiencing constant issues despite regular maintenance, its time for a new one.Additionally, consider the age of your mower. If its over 10 years old, it may be nearing the end of its lifespan and prone to frequent breakdowns. A new mower will offer improved efficiency, performance, and reliability, making your lawn care easier and more enjoyable. Click the image to learn more. Headquartered in Milwaukee for over a century, the Briggs and Stratton Corporation began in 1908 as a partnership between inventor Stephen F. Briggs and investor Harold M. Stratton.[1] The company initially focused on manufacturing automobile parts such as locks, igniters, and starter switches, the last of which accounted for most of the companys business as the automobiles popularity soared in the early decades of the twentieth century. In 1919 Briggs & Stratton acquired the A.O. Smith Motor Wheel, a small engine that would drive research and development toward the four-cycle gasoline engine.[2] These engines were later installed in washing machines, garden tractors, cultivators, and gas-powered generators.[3]As the demand for gas engines grew, Briggs & Stratton developed new models for different purposes. The companys engines were manufactured for personal use, agriculture, and military logistics. During the Second World War, the United States military used Briggs & Stratton engines to power generators on the front lines, and integrated the companys ignition systems into planes for the Air Force.[4] The company thrived under the leadership of Charles Coughlin, who served as its president from 1935 until 1972.[5] During Coughlins tenure, Briggs & Stratton revolutionized the lawn and garden industry by producing the first lightweight aluminum engine.[6] As suburbanization grew after World War II, demand for home and garden equipment exploded. The aluminum engine accounted for nearly 80% of all Briggs & Stratton product orders in 1957.[7]The company had become one of the countrys leading producers of small engines by the 1970s. In 1981, its success landed the company on a Fortune 500 list that ranked Briggs & Stratton Corporation number 382 out of Americas 500 most profitable companies.[8] But the oil crisis of the late 1970s, combined with concern for the environment and small engine competition from Japanese businesses, prompted major investment in engine research and development. The company experimented with gas-electronic motors and created Vanguard, a new line of industrial/commercial products.[9] It also aggressively pursued international markets by allying with the Daihatsu Motor Company and Mitsubishi Heavy Industries.[10] Briggs & Stratton expanded their brand by creating the Motorsports Division in the 1990s, producing engine parts, racing gear, and the most racing engines by any one company in the world.[11] As of 2011 Briggs & Stratton employed over 3,000 people across the United States, producing more than nine million small engines every year. Over 16,000 dealers and retailers stocked and sold Briggs & Stratton products throughout the country and internationally.[12] Matthew Costello Anderson, Harry H. and Frederick I. Olson. Milwaukee: At the Gathering of Waters. Milwaukee: Milwaukee County Historical Society, 1981.Gurda, John. The Making of Milwaukee. Milwaukee: Milwaukee County Historical Society, 1999.Rodengen, Jeffrey L. The Legend of Briggs & Stratton. Fort Lauderdale: Write Stuff Syndicate, 1995. View Location on Map See Also Economy Industrial Landscapes City of Wauwatosa ,the free encyclopedia that anyone can edit.107,583 active editors 7,025,364 articles in EnglishSir William Gordon-Cumming (20July 1848 20May 1930) was a Scottish landowner, soldier and socialite. He was the central figure in the royal baccarat scandal of 1891. He joined the British Army in 1868 and saw service in South Africa, Egypt and the Sudan; he served with distinction and rose to the rank of lieutenant-colonel. An adventurer, he also hunted in the US and India. A friend of Edward, Prince of Wales, for over 20 years, in 1890 he attended a house party at Tranby Croft, where he took part in a game of baccarat at the behest of the prince. During the course of two nights' play he was accused of cheating, which he denied. After news of the affair leaked out, he sued five members of the party for slander; Edward was called as a witness. The case was a public spectacle in the UK and abroad, but the verdict went against Gordon-Cumming and he was ostracised from polite society. After the court case he married an American heiress, but their relationship was unhappy. (Fullarticle...)Recently featured: Great Wilbraham (causewayed enclosure)Henry de HinuberHurricane Claudette (2003)ArchiveBy emailMore featured articlesAboutPostcard with a Fula woman... that Franois-Edmond Fortier published more than 3,300 postcards of French West Africa (example pictured) between 1901 and 1920?... that a language riot broke out between members of Our Lady of the Rosary in 1917?... that Oleksandr Rodin's opera Kateryna was staged despite barricades, bombings, and an air-raid alarm?... that Paul Among the People treats the Pauline epistles as sources comparable to Homer, Aristophanes and Virgil on Greco-Roman attitudes?... that Gyula Kakas competed at two Olympics in gymnastics, set the Hungarian pole-vault record, and played for a national-champion football club?... that a lyric in Beautiful Chaos was praised for "spreading queer joy"?... that defending champions Bermuda did not compete in the women's football tournament at the 2015 Island Games?... that Vatican Taekwondo has no registered athletes or coaches?... that Iceland's entry for Eurovision in 2025 brought out a line of Ash Wednesday costumes?ArchiveStart a new articleNominate an articleMuhammadu BuhariFormer president of Nigeria Muhammadu Buhari (pictured) dies at the age of 82.Clashes between Druze militias and the Syrian Armed Forces result in hundreds of deaths.The International Criminal Court issues arrest warrants for Taliban leaders Hibatullah Akhundzada and Abdul Hakim Haqqani over their alleged persecution of women in Afghanistan.Flooding in Central Texas, United States, leaves at least 140 people dead.Ongoing: Gaza warRussian invasion of UkrainetimelineSudanese civil wartimelineRecent deaths: Raymond GuiotFelix BaumgartnerFauja SinghBradley John MurdochFrank BarrieIhor PokladNominate an articleJuly 20Forensic experts at the site of the Suru bombing1807 French brothers Claude and Nicphore Nipce received a patent for their Pyrolophore, one of the world's first internal combustion engines.1951 Abdullah I of Jordan was assassinated while visiting the Al-Aqsa Mosque in Jerusalem.1976 The Viking 1 lander became the first spacecraft to successfully land on Mars and perform its mission.1997 USSConstitution, one of the United States Navy's original six frigates, sailed for the first time in 116 years after a full restoration.2015 A suicide attack (aftermath pictured) in Suru, Turkey, for which Islamic State of Iraq and the Levant (ISIL) claimed responsibility, killed 34 people and injured 104 others.Alexander the Great (b.356 BC)Amanda Clement (d.1971)Bruce Lee (d.1973)Gisele Bndchen (b.1980)More anniversaries: July 19July 20July 21ArchiveBy emailList of days of the yearAboutC/2022 E3 (ZTF) is a non-periodic comet from the Oort cloud that was discovered by the Zwicky Transient Facility (ZTF) in 2022. With a comet nucleus of around 1 kilometre (0.62mi) in diameter, C/2022 E3 rotates on its axis once every 8.5 to 8.7 hours. Its tails of dust and gas extended for millions of kilometers and, during January 2023, an anti-tail was also visible. The comet reached its most recent perihelion in January 2023, at a distance of 1.11AU (166millionkm; 103millionmi) from the sun, and the closest approach to Earth was a few weeks later, at a distance of 0.28AU (42millionkm; 26millionmi). The comet reached magnitude 5 and was visible with the naked eye under moonless dark skies. This photograph of C/2022 E3 was taken in January 2023 and released by the Italian National Institute for Astrophysics.Photograph credit: Alessandro Bianconi; National Institute for AstrophysicsRecently featured: Passion fruitBasilica of StPaul, RabatClouded ApolloArchiveMore featured picturesCommunity 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.Wikipedia is written by volunteer editors and hosted by the Wikimedia Foundation, a non-profit organization that also hosts a range of other volunteer projects: CommonsFree media repository MediaWikiWiki software development Meta-WikiWikimedia project coordination WikibooksFree textbooks and manuals WikidataFree knowledge base WikinewsFree-content news WikiquoteCollection of quotations WikisourceFree-content library WikispeciesDirectory of species WikiversityFree learning tools WikivoyageFree travel guide WiktionaryDictionary and thesaurusThis Wikipedia is written in English. Many other Wikipedias are available; some of the largest are listed below. 1,000,000+ articles DeutschEspaolFranaisItalianoNederlandsPolskiPortugusSvenskaTing Vit 250,000+ articles Bahasa IndonesiaBahasa MelayuBn-lm-gCataletinaDanskEestiEsperantoEuskaraMagyarNorsk bokmlRomnSimple EnglishSloveninaSrpskiSrpskohrvatskiSuomiTrkeOzbekcha 50,000+ articles AsturianuAzrbaycancaBosanskiFryskGaeilgeGalegoHrvatskiKurdLatvieuLietuviNorsk nynorskShqipSloveninaRetrieved from " 2This 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:"1807"news newspapers books scholar JSTOR (November 2015) (Learn how and when to remove this message)Calendar yearYearsMillennium2ndmillenniumCenturies18thcentury19thcentury 20thcenturyDecades1780s1790s1800s 1810s1820sYears1804180518061807 180818091810vteFebruary 7: Napoleon leads French troops into Russia in winter, and fights the Battle of Eylau.June 14: Napoleon triumphs over Russia's General Benningsen, at the Battle of Friedland.1807 (MDCCCVII) was a common year starting on Thursday of the Gregorian calendarand a common year starting on Tuesday of the Julian calendar, the 1807th year of the Common Era (CE) and Anno Domini (AD) designations, the 807th year of the 2ndmillennium, the 7th year of the 19thcentury, and the 8th year of the 1800s decade. As of the start of 1807, the Gregorian calendar was 12 days ahead of the Julian calendar, which remained in localized use until 1923. Calendar year 1807 by topicHumanitiesArchaeologyArchitectureArtLiteraturePoetryMusicBy countryAustraliaBrazilCanadaDenmarkFranceGermanyNew ZealandNorwayRussiaSouth AfricaSwedenUnited KingdomUnited StatesOther topicsRail transportScienceSportsLists of leadersSovereign statesSovereign state leadersTerritorial governorsReligious leadersLawBirth and death categoriesBirthsDeathsEstablishments and disestablishments categoriesEstablishmentsDisestablishmentsWorks categoryWorksvte1807 in various calendarsGregorian calendar1807MDCCCVIIAb urbe condita2560Armenian calendar1256 Assyrian calendar6557Balinese saka calendar17281729Bengali calendar1213214Berber calendar2757British Regnal year47Geo.348Geo.3Buddhist calendar2351Burmese calendar1169Byzantine calendar73157316Chinese calendar (FireTiger)4504 or 4297to (FireRabbit)4505 or 4298Coptic calendar15231524Discordian calendar2973Ethiopian calendar17991800Hebrew calendar55675568Hindu calendars- Vikram Samvat18631864- Shaka Samvat17281729- Kali Yuga49074908Holocene calendar11807Igbo calendar807808Iranian calendar11851186Islamic calendar12211222Japanese calendarBunka 4()Javanese calendar17331734Julian calendarGregorian minus 12 daysKorean calendar4140Minguo calendar105 before ROC105Nanakshahi calendar339Thai solar calendar23492350Tibetan calendar(male Fire-Tiger)1933 or 1552 or 780to(female Fire-Hare)1934 or 1553 or 781Wikimedia Commons has media related to 1807.January 7 The United Kingdom of Great Britain and Ireland issues an Order in Council prohibiting British ships from trading with France or its allies.[1]January 20 The Sierra Leone Company, faced with bankruptcy because of the imminent abolition of the slave trade in British colonies, petitions the British government for purchase and transfer of its property to the Crown; Parliament approves the transfer on July 29, and it takes effect on January 1, 1808.[2]February 3 Napoleonic Wars and Anglo-Spanish War: Battle of Montevideo The British Army captures Montevideo from the Spanish Empire, as part of the British invasions of the Ro de la Plata.February 7 Napoleon leads the forces of the French Empire in an invasion of the Russian Empire, and begins fighting at the Battle of Eylau against Russian and Prussian forces.[3]February 8 Battle of Eylau: Napoleon fights a hard but inconclusive battle against the Russians under Bennigsen.February 10 The Survey of the Coast (renamed the United States Coast Survey in 1836 and the United States Coast and Geodetic Survey in 1878) is established; work begins on August 3, 1816.February 17 Henry Christopher is elected first President of the State of Haiti, ruling the northern part of the country.February 19 Burr conspiracy: In Alabama, former Vice President of the United States Aaron Burr is tried for conspiracy, but acquitted.February 23 The Slave Trade Act is passed in the House of Commons of the United Kingdom by an overwhelming majority.[4]March 2 The United States Congress passes the Act Prohibiting Importation of Slaves "into any port or place within the jurisdiction of the United States ... from any foreign kingdom, place, or country" (to take effect January 1, 1808).March 25The United Kingdom Slave Trade Act becomes law abolishing the slave trade in most of the British Empire[5] with effect from 1 May (slavery itself is abolished in British colonies in 1833).The Swansea and Mumbles Railway in South Wales, at this time known as the Oystermouth Railway, becomes the first passenger-carrying railway in the world.March 29 H. W. Olbers discovers the asteroid Vesta.April 412 Froberg mutiny: The British suppress a mutiny at Fort Ricasoli, Malta, by men of the irregularly-recruited Froberg Regiment.April 14 African Institution holds its first meeting in London; it is intended to improve social conditions in Sierra Leone.May 22 A grand jury indicts former Vice President of the United States Aaron Burr for treason.[6]May 24 Siege of Danzig ends after 6 weeks with Prussian and Russian defenders capitulating to French forces.May 29 Selim III, Ottoman Emperor since 1789, is deposed in favour of his nephew Mustafa IV.May 31 Primitive Methodism originates in an All Day of Prayer at Mow Cop, in the north midlands of England.[7]June 9 The Duke of Portland is chosen as Prime Minister after the United Kingdom general election.June 10 The Battle of Heilsberg ends in a draw.June 14 Battle of Friedland: Napoleon decisively defeats Bennigsen's Russian army.June 22 ChesapeakeLeopard affair: British Royal Navy fourth rate HMSLeopard attacks and boards United States Navy frigate USS Chesapeake off Norfolk, Virginia, seeking deserters. This act of British aggression plays a role in the run-up to the War of 1812.July 5 A disastrous British attack is mounted against Buenos Aires, during the second failed invasion of the Ro de la Plata.July 79 The Treaties of Tilsit are signed between France, Prussia and Russia. Napoleon and Russian Emperor Alexander I ally together against the British. The Prussians are forced to cede more than half their territory, which is formed into the Duchy of Warsaw in their former Polish lands, and the Kingdom of Westphalia in western Germany. The Free City of Danzig is also formed (established September 9 by Napoleon).July 13 With the death of Henry Benedict Stuart, the last Stuart claimant to the throne of the United Kingdom, Jacobitism comes to an effective end.July 20 Nicphore Nipce is awarded a patent by Napoleon Bonaparte for the Pyrolophore, the world's first internal combustion engine, after it successfully powers a boat upstream on the river Sane in France.August 17 The North River Steamboat, Robert Fulton's first American steamboat, leaves New York City for Albany on the Hudson River, inaugurating the first commercial steamboat service in the world.September 1 Former U.S. Vice President Aaron Burr is acquitted of treason. He had been accused of plotting to annex parts of Louisiana and Mexico, to become part of an independent republic.September 27 Battle of Copenhagen: The British Royal Navy bombards Copenhagen with fire bombs and phosphorus rockets, to prevent the Dano-Norwegian navy from surrendering to Napoleon; 30% of the city is destroyed, and 2,000 citizens are killed.September 7 Robert Morrison, the first Protestant missionary to China, arrives in Guangzhou (Canton).[8]September 13 Beethoven's Mass in C major, Op. 86, is premiered, commissioned by Nikolaus I, Prince Esterhzy, and displeasing him.[9]September 27 Napoleon purchases the Borghese art collection, including the Antinous Mondragone, and brings it to Paris.[10]October 9 Prussian Reform Movement: Serfdom is abolished by the October edict.October 13 The Geological Society of London is founded.October 30 El Escorial Conspiracy: Ferdinand, Prince of Asturias is arrested for conspiring against his father Charles IV of Spain.November 24 Battle of Abrantes, Portugal: The French under Jean-Andoche Junot take the town.November 29 Portuguese Queen Maria I and the Court embark at Lisbon, bound for Brazil. Rio de Janeiro becomes the Portuguese capital.December 511 Napoleonic Wars: Raid on Griessie A British Royal Navy squadron attacks the Dutch port of Griessie on Java in the Dutch East Indies, eliminating the last Dutch naval force in the Pacific and concluding the Java campaign of 18061807.[11]December 17 Napoleonic Wars: France issues the Milan Decree which confirms the Continental System (i.e. no European country is to trade with the United Kingdom).December 22 The United States Congress passes the Embargo Act, a trade embargo on all foreign nations.Battle of Hingakaka between two factions of Mori people, the largest battle ever fought in New Zealand, and the last fought there without firearms.[12] In 1807 or 1808 is fought the Battle of Moremonui, first of the Musket Wars.Robert E. LeeJanuary 13 Napoleon Bonaparte Buford, American general, railroad executive (d. 1883)January 19 Robert E. Lee, American Confederate general (d. 1870)January 28 Robert McClure, Irish-born Arctic explorer (d. 1873)February 10 Lajos Batthyny, 1st Prime Minister of Hungary (d. 1849)February 27 Henry Wadsworth Longfellow, American poet (d. 1882)[13]March 1 Wilford Woodruff, American religious leader (d. 1898)March 14 Josephine of Leuchtenberg, Queen of Sweden and Norway (d. 1876)April 2 William F. Packer, American politician (d. 1870)April 3 Jane Digby, English adventurer (d. 1881)April 20 John Milton, Governor of Florida (d. 1865)April 26 Charles Auguste Frossard, French general (d. 1875)May 28 Louis Agassiz, Swiss-born zoologist and geologist (d. 1873)June 6 Adrien-Franois Servais, Belgian musician (d. 1866)June 16 John Westcott, American surveyor and politician (d. 1888)Giuseppe GaribaldiJuly 4 Giuseppe Garibaldi, Italian patriot (d. 1882)August 11 David Rice Atchison, American politician (d. 1886)August 15 Jules Grvy, 4th President of France (d. 1891)August 18 Charles Francis Adams Sr., American historical editor, politician and diplomat (d. 1886)September 2 Fredrika Runeberg, Finnish writer (d. 1879)[14]September 7 Henry Sewell, 1st Premier of New Zealand (d. 1879)September 16 John Lenthall, American naval architect and shipbuilder (d. 1882)October 8 Harriet Taylor, English philosophical writer (d. 1858)[15]October 26 Barbu Catargiu, 1st Prime Minister of Romania (d. 1862)October 29 Aneo Kraljevi, Herzegovinian Catholic bishop (d. 1879)October 30 Christopher Wordsworth, Bishop of Lincoln (d. 1885)November 16 Eduard von Fransecky, Prussian general (d. 1890)December 8 Friedrich Traugott Ktzing, German pharmacist, botanist and phycologist (d. 1893)December 17 John Greenleaf Whittier, American Quaker poet and abolitionist (d. 1892)Pasquale PaoliFebruary 1 Sir Thomas Troubridge, 1st Baronet, British admiral (b. c.1758)February 5 Pasquale Paoli, Corsican patriot, military leader (b. 1725)February 27 Louise du Pierry, French astronomer (b.1746)March 10 Jean Thurel, French soldier (b. 1698)April 4 Jrme Lalande, French astronomer (b. 1732)April 10 Duchess Anna Amalia of Brunswick-Wolfenbttel, regent of Weimar and Eisenach (b. 1739)May 10 Jean-Baptiste Donatien de Vimeur, comte de Rochambeau, French soldier (b. 1725)May 13 Eliphalet Dyer, American statesman, judge (b. 1721)May 17 John Gunby, Maryland soldier in the American Revolutionary War (b. 1745)May 18 John Douglas, Scottish Anglican bishop, man of letters (b. 1721)June 9 Andrew Sterett, American naval officer (b. 1778)Angelica KauffmanJuly 13 Henry Benedict Stuart, Italian-born cardinal, Jacobite claimant to the British throne (b. 1725)July 19 Uriah Tracy, American politician and congressman from Connecticut, 1793 until 1807 (b. 1755)September 14 George Townshend, 1st Marquess Townshend, British field marshal (b. 1724)October 22 Jean-Francois Houbigant, French perfumer (b. 1752)November 2 Louis Auguste Le Tonnelier de Breteuil, Prime Minister of King Louis XVI of France (b. 1730)November 5 Angelica Kauffman, Swiss painter (b. 1741)November 8Darejan Dadiani, Georgian queen consort (b. 1738)Pierre-Alexandre-Laurent Forfait, French engineer, hydrographer, politician, and Minister of the Navy (17991801) (b. 1752)November 23 Jean-Francois Rewbell, French politician (b. 1747)November 26 Oliver Ellsworth, American founding father and 3rd Chief Justice of the United States Supreme Court (b. 1745)December 19 Friedrich Melchior, Baron von Grimm, German writer (b. 1723)December 21 John Newton, English cleric, hymnist (b. 1725)December 29 Diogo de Carvalho e Sampayo, Portuguese diplomat, scientist (b. 1750)^ William S. 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Oxford Dictionary of National Biography (onlineed.). Oxford University Press. doi:10.1093/ref:odnb/38051. (Subscription or UK public library membership required.)Retrieved from " 3Second-largest asteroid of the main asteroid beltThis article is about the asteroid. For the Roman goddess, see Vesta (mythology). For other uses, see Vesta (disambiguation).4 VestaTrue color image of Vesta taken by Dawn. The massive Rheasilvia Crater dominates Vesta's south pole.DiscoveryDiscoveredbyHeinrich Wilhelm OlbersDiscoverydate29 March 1807DesignationsMPCdesignation(4) VestaPronunciation/vst/[1]Named afterVestaMinorplanet categoryMain belt (Vesta family)AdjectivesVestanVestian[a]Symbol (historically astronomical, now astrological)Orbital characteristics[6]Epoch 13September 2023(JD2453300.5)Aphelion2.57AU (384millionkm)Perihelion2.15AU (322millionkm)Semi-major axis2.36AU (353millionkm)Eccentricity0.0894Orbital period (sidereal)3.63yr (1325.86d)Average orbital speed19.34km/sMean anomaly169.4Inclination7.1422 to ecliptic5.58 to invariable plane[7]Longitudeof ascendingnode103.71Timeof perihelion26 December 2021[8]Argumentof perihelion151.66SatellitesNoneEarthMOID1.14AU (171millionkm)Proper orbital elements[9]Proper semi-major axis2.36151AUProper eccentricity0.098758Proper inclination6.39234Proper mean motion99.1888deg/ yrProper orbital period3.62944 yr(1325.654 d)Precession of perihelion36.8729 (2343 years)arcsec/ yrPrecessionof the ascendingnode39.5979 (2182 years)arcsec/ yrPhysical characteristicsDimensions572.6km 557.2km 446.4km[10]Mean diameter525.40.2km[10]Flattening0.2204Surface area(8.660.2)105km2[b][11]Volume7.4970107km3[10]Mass(2.5902710.000058)1020kg[12]Mean density3.4560.035g/cm3[10]Equatorial surfacegravity0.22m/s2 (0.022g0)Equatorial escape velocity0.36km/sSynodic rotation period0.2226d (5.342h)[6][13]Equatorial rotationvelocity93.1m/s[c]Axial tilt29Northpole right ascension20h 32m[d]Northpole declination48[d]Geometric albedo0.423[15]Temperaturemin: 75K (198C)max: 250K (23C)[16]Spectral typeV[6][17]Apparent magnitude5.1[18] to 8.48Absolute magnitude(H)3.20[6][15]Angular diameter0.70 to 0.22Vesta (minor-planet designation: 4 Vesta) is one of the largest objects in the asteroid belt, with a mean diameter of 525 kilometres (326mi).[10] It was discovered by the German astronomer Heinrich Wilhelm Matthias Olbers on 29 March 1807[6] and is named after Vesta, the virgin goddess of home and hearth from Roman mythology.[19]Vesta is thought to be the second-largest asteroid, both by mass and by volume, after the dwarf planet Ceres.[20][21][22] Measurements give it a nominal volume only slightly larger than that of Pallas (about 5% greater), but it is 25% to 30% more massive. It constitutes an estimated 9% of the mass of the asteroid belt.[23] Vesta is the only known remaining rocky protoplanet of the kind that formed the terrestrial planets.[24] Numerous fragments of Vesta were ejected by collisions one and two billion years ago that left two enormous craters occupying much of Vesta's southern hemisphere.[25][26] Debris from these events has fallen to Earth as howarditeeucritediogenite (HED) meteorites, which have been a rich source of information about Vesta.[27][28][29]Vesta is the brightest asteroid visible from Earth. It is regularly as bright as magnitude 5.1,[18] at which times it is faintly visible to the naked eye. Its maximum distance from the Sun is slightly greater than the minimum distance of Ceres from the Sun,[e] although its orbit lies entirely within that of Ceres.[30]NASA's Dawn spacecraft entered orbit around Vesta on 16 July 2011 for a one-year exploration and left the orbit of Vesta on 5 September 2012[31] en route to its final destination, Ceres. Researchers continue to examine data collected by Dawn for additional insights into the formation and history of Vesta.[32][33]Vesta, Ceres, and the Moon with sizes shown to scaleHeinrich Olbers discovered Pallas in 1802, the year after the discovery of Ceres. He proposed that the two objects were the remnants of a destroyed planet. He sent a letter with his proposal to the British astronomer William Herschel, suggesting that a search near the locations where the orbits of Ceres and Pallas intersected might reveal more fragments. These orbital intersections were located in the constellations of Cetus and Virgo.[34] Olbers commenced his search in 1802, and on 29 March 1807 he discovered Vesta in the constellation Virgoa coincidence, because Ceres, Pallas, and Vesta are not fragments of a larger body. Because the asteroid Juno had been discovered in 1804, this made Vesta the fourth object to be identified in the region that is now known as the asteroid belt. The discovery was announced in a letter addressed to German astronomer Johann H. Schrter dated 31 March.[35] Because Olbers already had credit for discovering a planet (Pallas; at the time, the asteroids were considered to be planets), he gave the honor of naming his new discovery to German mathematician Carl Friedrich Gauss, whose orbital calculations had enabled astronomers to confirm the existence of Ceres, the first asteroid, and who had computed the orbit of the new planet in the remarkably short time of 10 hours.[36][37] Gauss decided on the Roman virgin goddess of home and hearth, Vesta.[38]Vesta was the fourth asteroid to be discovered, hence the number4 in its formal designation. The name Vesta, or national variants thereof

being classified as a dwarf planet today.[citation needed]Vesta's surface is covered by regolith distinct from that found on the Moon or asteroids such as Itokawa. This is because space weathering acts differently. Vesta's surface shows no significant trace of nanophase iron because the impact speeds on Vesta are too low to make rock melting and vaporization an appreciable process. Instead, regolith evolution is dominated by brecciation and subsequent mixing of bright and dark components.[103] The dark component is probably due to the infall of carbonaceous material, whereas the bright component is the original Vesta basaltic soil.[104]Some small Solar System bodies are suspected to be fragments of Vesta caused by impacts. The Vestian asteroids and HED meteorites are examples. The V-type asteroid 1929 Kollaa has been determined to have a composition akin to cumulate eucrite meteorites, indicating its origin deep within Vesta's crust.[28]Vesta is currently one of only eight identified Solar System bodies of which we have physical samples, coming from a number of meteorites suspected to be Vestan fragments. It is estimated that 1 out of 16 meteorites originated from Vesta.[105] The other identified Solar System samples are from Earth itself, meteorites from Mars, meteorites from the Moon, and samples returned from the Moon, the comet Wild 2, and the asteroids 25143 Itokawa, 162173 Ryugu, and 101955 Bennu.[29][k]Animation of Dawn's trajectory from 27 September 2007 to 5 October 2018 Dawn Earth Mars 4 Vesta 1 CeresFirst image of asteroids (Ceres and Vesta) taken from Mars. The image was made by the Curiosity rover on 20 April 2014.Animation of Dawn's trajectory around 4 Vesta from 15 July 2011 to 10 September 2012 Dawn 4 VestaIn 1981, a proposal for an asteroid mission was submitted to the European Space Agency (ESA). Named the Asteroidal Gravity Optical and Radar Analysis (AGORA), this spacecraft was to launch some time in 19901994 and perform two flybys of large asteroids. The preferred target for this mission was Vesta. AGORA would reach the asteroid belt either by a gravitational slingshot trajectory past Mars or by means of a small ion engine. However, the proposal was refused by the ESA. A joint NASAESA asteroid mission was then drawn up for a Multiple Asteroid Orbiter with Solar Electric Propulsion (MAOSEP), with one of the mission profiles including an orbit of Vesta. NASA indicated they were not interested in an asteroid mission. Instead, the ESA set up a technological study of a spacecraft with an ion drive. Other missions to the asteroid belt were proposed in the 1980s by France, Germany, Italy and the United States, but none were approved.[106] Exploration of Vesta by fly-by and impacting penetrator was the second main target of the first plan of the multi-aimed Soviet Vesta mission, developed in cooperation with European countries for realisation in 19911994 but canceled due to the dissolution of the Soviet Union.Artist's conception of Dawn orbiting VestaIn the early 1990s, NASA initiated the Discovery Program, which was intended to be a series of low-cost scientific missions. In 1996, the program's study team recommended a mission to explore the asteroid belt using a spacecraft with an ion engine as a high priority. Funding for this program remained problematic for several years, but by 2004 the Dawn vehicle had passed its critical design review[107] and construction proceeded.[citation needed]It launched on 27 September 2007 as the first space mission to Vesta. On 3 May 2011, Dawn acquired its first targeting image 1.2million kilometres (0.7510^6mi) from Vesta.[108] On 16 July 2011, NASA confirmed that it received telemetry from Dawn indicating that the spacecraft successfully entered Vesta's orbit.[109] It was scheduled to orbit Vesta for one year, until July 2012.[110] Dawn's arrival coincided with late summer in the southern hemisphere of Vesta, with the large crater at Vesta's south pole (Rheasilvia) in sunlight. Because a season on Vesta lasts eleven months, the northern hemisphere, including anticipated compression fractures opposite the crater, would become visible to Dawn's cameras before it left orbit.[111] Dawn left orbit around Vesta on 4 September 2012 11:26 p.m. PDT to travel to Ceres.[112]NASA/DLR released imagery and summary information from a survey orbit, two high-altitude orbits (6070m/pixel) and a low-altitude mapping orbit (20m/pixel), including digital terrain models, videos and atlases.[113][114][115][116][117][118] Scientists also used Dawn to calculate Vesta's precise mass and gravity field. The subsequent determination of the J2 component yielded a core diameter estimate of about 220km (140mi) assuming a crustal density similar to that of the HED.[113]Dawn data can be accessed by the public at the UCLA website.[119]Albedo and spectral maps of 4 Vesta, as determined from Hubble Space Telescope images from November 1994Elevation map of 4 Vesta, as determined from Hubble Space Telescope images of May 1996Elevation diagram of 4 Vesta (as determined from Hubble Space Telescope images of May 1996) viewed from the south-east, showing Rheasilvia crater at the south pole and Feralia Planitia near the equatorVesta seen by the Hubble Space Telescope in May 2007The 2006 IAU draft proposal on the definition of a planet listed Vesta as a candidate.[120] Vesta is shown fourth from the left along the bottom row.Vesta comes into view as the Dawn spacecraft approaches and enters orbit:Vesta from 100,000km(1 July 2011)Vesta from 41,000km(9 July 2011)In orbit at 16,000km(17 July 2011)In orbit from 10,500km(18 July 2011)The northern hemisphere from 5,200km(23 July 2011)In orbit from 5,200km(24 July 2011)In orbit from 3,700km(31 July 2011)Full rotation(1 August 2011)Composite greyscale imageCratered terrain with hills and ridges(6 August 2011)Densely cratered terrain near terminator(6 August 2011)Vestan craters in various states of degradation, with troughs at bottom(6 August 2011)Hill shaded central mound at the south pole of Vesta(2 February 2015)Detailed images retrieved during the high-altitude (6070m/pixel) and low-altitude (~20m/pixel) mapping orbits are available on the Dawn Mission website of JPL/NASA.[121]Annotated image from Earth's surface in June 2007 with (4) VestaIts size and unusually bright surface make Vesta the brightest asteroid, and it is occasionally visible to the naked eye from dark skies (without light pollution). In May and June 2007, Vesta reached a peak magnitude of +5.4, the brightest since 1989.[122] At that time, opposition and perihelion were only a few weeks apart.[123] It was brighter still at its 22 June 2018 opposition, reaching a magnitude of +5.3.[124]Less favorable oppositions during late autumn 2008 in the Northern Hemisphere still had Vesta at a magnitude of from +6.5 to +7.3.[125] Even when in conjunction with the Sun, Vesta will have a magnitude around +8.5; thus from a pollution-free sky it can be observed with binoculars even at elongations much smaller than near opposition.[125]In 2010, Vesta reached opposition in the constellation of Leo on the night of 1718 February, at about magnitude 6.1,[126] a brightness that makes it visible in binocular range but generally not for the naked eye. Under perfect dark sky conditions where all light pollution is absent it might be visible to an experienced observer without the use of a telescope or binoculars. Vesta came to opposition again on 5 August 2011, in the constellation of Capricornus at about magnitude 5.6.[126][127]Vesta was at opposition again on 9 December 2012.[128] According to Sky and Telescope magazine, this year Vesta came within about 6 degrees of 1 Ceres during the winter of 2012 and spring 2013.[129] Vesta orbits the Sun in 3.63 years and Ceres in 4.6 years, so every 17.4 years Vesta overtakes Ceres (the previous overtaking was in April 1996).[129] On 1 December 2012, Vesta had a magnitude of 6.6, but it had decreased to 8.4 by 1 May 2013.[129]Conjunction of Ceres and Vesta near the star Gamma Virginis on 5 July 2014 in the Constellation of Virgo.Ceres and Vesta came within one degree of each other in the night sky in July 2014.[129]3103 Eger3551 Verenia3908 Nyx4055 MagellanAsteroids in fictionDiogeniteEucriteList of former planetsHowarditeVesta family (vestoids)List of tallest mountains in the Solar System^ Marc Rayman of the JPL Dawn team used "Vestian" (analogous to the Greek cognate Hestian) a few times in 2010 and early 2011 in his Dawn Journal, and the Planetary Society continued to use that form for a few more years.[2] The word had been used elsewhere, e.g. in Tsiolkovsky (1960) The call of the cosmos. However, otherwise the shorter form "Vestan" has been used by JPL.[3] Most modern print sources also use "Vestan".[4][5]Note that the related word "Vestalian" refers to people or things associated with Vesta, such as the vestal virgins, not to Vesta herself.^ Calculated using the known dimensions assuming an ellipsoid.^ Calculated using (1) the known rotation period (5.342h)[6] and (2) the equatorial radius Req (285km)[10] of the best-fit biaxial ellipsoid to Asteroid 4 Vesta.^ a b topocentric coordinates computed for the selected location: Greenwich, United Kingdom[14]^ On 10 February 2009, during Ceres perihelion, Ceres was closer to the Sun than Vesta, because Vesta has an aphelion distance greater than Ceres's perihelion distance. (10 February 2009: Vesta 2.56AU; Ceres 2.54AU)^ wist is the closest Chinese approximation of the Latin pronunciation westa.^ Some sources contemporaneous to Gauss invented more elaborate forms, such as and .[43][44] A simplification of the latter from c.1930, ,[45] never caught on.^ This symbol can be seen in the top of the most elaborate of the earlier forms, . It dates from 1973, at the beginning of astrological interest in asteroids.[46]^ The data returned will include, for both asteroids, full surface imagery, full surface spectrometric mapping, elemental abundances, topographic profiles, gravity fields, and mapping of remnant magnetism, if any.[53]^ that is, blue in the north does not mean the same thing as blue in the south.^ Note that 6 Hebe may be the parent body for H chondrites, one of the most common meteorite types.^ "Vesta". Dictionary.com Unabridged (Online). n.d.^ "Search Results". Planetary Society. Archived from the original on 27 July 2020. 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starting or Pull Cords (depending on your engine type)Spark Plug LeadSpark PlugsWhen you start your lawn mower or small engine, you turn the flywheel and its magnets pass the coil (or armature). This creates a spark. The ignition system coordinates the timing so that the spark will ignite the air-fuel mixture in the combustion chamber just as it reaches maximum compression in each engine cycle- thus, maximizing the engines power.Once the engine is running, the flywheel keeps rotating, the magnets keep passing the coil and the spark plug keep firing based on a specific timing.Types of Ignition SystemsSolid-state systems: the more modern option, these systems use a tiny transistor in the coil or armature to close the electrical circuit that travels through the spark plug lead to the spark plug(s).Breaker point systems: used on engines made before 1980, these systems use a mechanical switch instead of a transistor to close the electrical circuit used to produce a spark.Common Flywheel ProblemsIf you are experiencing ignition timing issues, this is most often due to a sheared flywheel key. You can also test the flywheel magnets for any potential issues.For information regarding this, please visit our Inspecting the Flywheel and Key FAQ.Common Spark Plug Problems How To Test the Ignition Coil in Your Small Engine Safety Warnings: Stay clear of any rotating, moving parts, or other hazardous areas whenever attempting to start the engine or equipment.The coil is probably the easiest thing to check and therefore the first thing to check when embarking upon ignition system troubleshooting.Testing the Coil or ArmatureStep 1: Clip one end of the spark tester (service part number 19368) to the ignition cable and the other grounded to the cylinder head as shown below. Step 2: Spin the flywheel rapidly (at least 350 RPM) and watch for spark in the tester window.If the spark jumps the tester gap, your ignition coil is working fine. If not, it needs to be replaced.Engine quits while running? Hook the tester up between the ignition cable and the spark plug and start the engine. When it stops, monitor the window.Common Mistakes When Testing CoilsBe sure to unhook the coil from the equipment wiring harness as well as the engine's wiring harness and use the spark tester. Many a technician is fooled into replacing a good coil because the coil grounding lead was shorting out against a piece of sheet metal.DO NOT attach the tester to the spark plug for this test. The engine may start. Without the grounding lead installed, you won't be able to turn it off.Replacing Ignition Coils or Armatures An ignition armature must be set at a precise distance from the flywheel. Your engine repair manual will provide the proper gap for your engine. Common armature gap ranges are .006 - .010" and .010 - .014". Armatures are often packaged with a shim to assist in setting the gap. Index cards of the proper thickness also work well.Unhook the spark plug wire and secure it, removing any batteries, if equipped.Remove the old ignition coil (armature) mounting screws. Then, disconnect the stop switch wire from the flywheel brake and remove the coil.Attach a replacement coil from the original engine manufacturer, using mounting screws. Then, push the coil (armature) away from the flywheel and tighten one screw. Turn the flywheel so the magnets are on the opposite side from the ignition coil (armature). Place the appropriate shim between the rim of the flywheel and the ignition armature. While holding the shim, turn the flywheel until the magnets are directly adjacent to the armature Loosen the tight screw so the magnets pull the ignition armature against the flywheel and shim. Then, tighten both mounting screws and rotate the flywheel until the shim slips free.Reconnect the stop switch.Have an older, breaker point ignition system? Breaker point ignition systems were common through 1982. You can improve its reliability on a single-cylinder Briggs & Stratton engine equipped with breaker points and a two-leg armature by installing a solid-state ignition conversion kit (service part number 394970) that bypasses the points (conversion kit will not work with a three-legged ignition armature). Additional questions? Please consult a Briggs & Stratton Service Dealer for conversion kit and installation. Testing & Replacing a Stop Switch Safety Warning: Stay clear of any rotating, moving parts, or other hazardous areas whenever attempting to start the engine or equipment.Step 1: Insert the spark plug lead on one end of a spark tester and attach the tester's alligator clip to ground, such as an engine bolt (see image below). Step 2: Place the equipment stop switch control in the OFF or STOP position. If the engine is not connected to the equipment, ground the stop switch wire to the cylinder.Step 3: Attempt to start the engine using the rewind cord or key (if equipped). There should be no spark. If a spark appears, inspect the stop switch for damage. Consult your authorized service dealer if you find a faulty switch.Step 4: Place the stop switch control in RUN or START position. If the engine is not connected to the equipment, make sure the stop switch wire is not grounded.Step 5: Attempt to start the engine.A spark should be visible in the tester. If no spark appears, check for broken wires, shorts, grounds or a defective stop switch.Once you have confirmed that the stop switch is working, reconnect the spark plug lead.If your ignition start or push button start needs replacing, consult a Briggs & Stratton dealer near you. Ignition Module Failure Because the ignition module is electronic and does not utilize moving components, it is normally one of the most reliable part of the engine. When it does fail, it is usually due to heat caused from improper wiring of the ground wire to battery voltage.If the engine does not produce spark, other areas of the ignition system should be checked before focusing on the ignition module as source of failure (see above).If no fault is discovered in the above mentioned areas, the ignition module itself may need to be examined. To best determine the cause of failure, please consult an Authorized Dealer. This might look a little scary, but it's usually not serious. Your lawn mower's engine can smoke if your oil chamber is too full, or if oil leaked into the exhaust muffler when you tilted your mower to the side. It's simply burning off while the engine is hot. But if you're seeing lighter colored smoke, plus have trouble keeping your mower running, it's time for a serious look by a professional.Of course, there are those cases when special tools or skills are needed to make a fix, or DIY attempts aren't doing the trick. When it's time to call a pro to get the job done right, find aBriggs & Stratton Service Dealernear you. Click the image to learn more. Headquartered in Milwaukee for over a century, the Briggs and Stratton Corporation began in 1908 as a partnership between inventor Stephen F. Briggs and investor Harold M. Stratton.[1] The company initially focused on manufacturing automobile parts such as locks, igniters, and starter switches, the last of which accounted for most of the companys business as the automobiles popularity soared in the early decades of the twentieth century. In 1919 Briggs & Stratton acquired the A.O. Smith Motor Wheel, a small engine that would drive research and development toward the four-cycle gasoline engine.[2] These engines were later installed in washing machines, garden tractors, cultivators, and gas-powered generators.[3]As the demand for gas engines grew, Briggs & Stratton developed new models for different purposes. The companys engines were manufactured for personal use, agriculture, and military logistics. During the Second World War, the United States military used Briggs & Stratton engines to power generators on the front lines, and integrated the companys ignition systems into planes for the Air Force.[4] The company thrived under the leadership of Charles Coughlin, who served as its president from 1935 until 1972.[5] During Coughlins tenure, Briggs & Stratton revolutionized the lawn and garden industry by producing the first lightweight aluminum engine.[6] As suburbanization grew after World War II, demand for home and garden equipment exploded. The aluminum engine accounted for nearly 80% of all Briggs & Stratton product orders in 1957.[7]The company had become one of the countrys leading producers of small engines by the 1970s. In 1981, its success landed the company on a Fortune 500 list that ranked Briggs & Stratton Corporation number 382 out of Americas 500 most profitable companies.[8] But the oil crisis of the late 1970s, combined with concern for the environment and small engine competition from Japanese businesses, prompted major investment in engine research and development. The company experimented with gas-electronic motors and created Vanguard, a new line of industrial/commercial products.[9] It also aggressively pursued international markets by allying with the Daihatsu Motor Company and Mitsubishi Heavy Industries.[10] Briggs & Stratton expanded their brand by creating the Motorsports Division in the 1990s, producing engine parts, racing gear, and the most racing engines by any one company in the world.[11] As of 2011 Briggs & Stratton employed over 3,000 people across the United States, producing more than nine million small engines every year. Over 16,000 dealers and retailers stocked and sold Briggs & Stratton products throughout the country and internationally.[12] Matthew Costello Anderson, Harry H. and Frederick I. Olson. Milwaukee: At the Gathering of Waters. Milwaukee: Milwaukee County Historical Society, 1981.Gurda, John. The Making of Milwaukee. Milwaukee: Milwaukee County Historical Society, 1999.Rodengen, Jeffrey L. The Legend of Briggs & Stratton. Fort Lauderdale: Write Stuff Syndicate, 1995. View Location on Map See Also Economy Industrial Landscapes City of Wauwatosa Learning to handle Briggs And Stratto small engine repairs properly can save you time and money. This expanded guide provides a more in-depth overview of Briggs & Stratton engine basics, troubleshooting techniques, maintenance tips, and DIY repair instructions.Read on to become proficient at identifying engine parts, diagnosing issues, performing scheduled upkeep for peak performance, tackling common repairs, and sourcing replacement components. Equipped with this knowledge, you will keep your outdoor power equipment running efficiently for years. Types of Briggs & Stratton EnginesBriggs & Stratton makes three main types of small engines, each designed and optimized for different outdoor equipment applications: Vertical Shaft EnginesThese single or twin-cylinder engines sit upright and have a vertical crankshaft designed specifically for mowers, lawn tractors, tillers, and other wheeled equipment that requires power delivered parallel to the ground. Standard sizes range from 20hp for riding lawnmowers to 3.5hp for standard push mowers. They are engineered to produce ample rotational energy to drive belt-connected cutting blades and drive wheels.Horizontal Shaft EnginesAlso referred to as side valve engines, these compact powerplants feature a horizontal crankshaft configuration suitable for generating pumping pressure in pressure washers, turning electrical generators, powering hydraulic pumps, and running various other stationary equipment with mounted drive shafts. Intek & Professional SeriesBriggs & Stratton distinguishes their advanced professional duty models as Intek and Commercial Turf Series among their vertical and horizontal shaft engines. These heavy-duty engine lines feature durable cast iron cylinder sleeves, a larger intake, exhaust valves for optimal flow, and specially shaped combustion chambers designed to allow more efficient fuel burning for up to 20% more rotational power.Essential Parts of a Briggs And Stratton Small Engine All modern Briggs & Stratton engines consist of the same essential components and systems working in concert: Fuel delivery system (carburetor, fuel filter) providing proper gasoline vapor flowIgnition system (spark plug, magneto) generating timed high voltage spikesCombustion chamber (cylinder head, valves) where gasoline vapors ignite and burnCrankcase (houses crankshaft, connecting rod, and bearings), which converts linear to rotational motionLubrication system (oil sump, oil filter) evenly dispersing oil to prevent metal wearCooling and air intake system (recoil starter, fan blades) regulating operating temperature Familiarity with each subsystems function and maintenance needs is crucial in diagnosing and preventing issues through proper upkeep. Air Filter Maintenance The air filter guards against abrasive particulate ingestion into the engines delicate internal components. Over time, accumulated dust and debris can clog the air filter element, restricting airflow into the carburetor. This results in an overly rich fuel mixture, which causes performance loss, including uneven running, sputtering, power loss, and black smoke emitting from the exhaust. Cleaning or replacing air filters every 25 hours of equipment operation helps maintain adequate airflow. Service involves removing debris from the old filter or using compressed air to blow out particulates. Also, apply a few drops of new engine oil on the clean element before reattaching it to improve moisture resistance and filter excellent dust. Changing Spark Plugs The high voltage spark generated by the ignition system initiates power-generating combustion by arcing across a precisely calibrated spark plug gap. You should replace your Briggs & Stratton spark plug as scheduled every 100 hours of engine use. Over time, normal combustion byproducts accumulate on the spark plug electrodes embedded deep in the combustion chamber. This insulating residue prevents reliable sparking, leading to hard starting and rough running symptoms. Replacement involves using a proper spark plug socket wrench to remove the old, fouled plugs. Then, each new plugs gap is set to the engines specifications, usually around 0.030 inches for small engines, checking with a wire feeler gauge before reinstalling it into the cylinder head. Oil Changes Clean oil is essential for adequately lubricating internal moving parts in not just Briggs And Stratton machines but all small engines. But gasoline byproducts inevitably mix with oil after prolonged use, forming sticky residues and corrosive compounds rather than slicking metal surfaces. That is why DIY oil changes every 50 hours of run time to help remove contaminants before oil oxidizes and turns thick and black with age. The drain plug location differs between engine models but is often accessible at the base of the crankcase. After warming up the engine: Shut it off and carefully drain used oil into a catch pan through the dipstick tube or dedicated drain outlet before refilling the recommended capacity with fresh oil of the proper viscosity.Replace oil filters if equipped at this interval; prime new filters with oil beforehand.Always dispose of old DIY oil properly at approved recycling centers. Troubleshooting Common Briggs And Stratton Small Engine Problems Instead of immediately paying a small engine technician when equipment fails to start or runs poorly, there are several do-it-yourself troubleshooting steps you can perform to identify and resolve basic issues yourself:Engine Wont Start Troubleshooting First, confirm the fuel tank contains fresh gasoline at the proper fill level. Inspect the fuel petcock valve for blockages before tracing the fuel delivery line to check for crimps or cracks that could cause vapors to leak out. Verify fuel is reaching the carburetor by detaching the line to observe the flow. If fuel delivery is adequate, examine the spark plug next. Remove it and check for fouling deposits or improper gap spacing, which require replacement plugs. Reattach the plug securely and test for the presence of an electric spark by grounding the plug tip while pulling the recoil cord. No spark indicates issues with the magneto system wires or failed ignition armature coils. As a further test, spray starting fluid into the air filter intake while attempting electric starting. This helps bypass fuel delivery problems to check whether ignition failure is the root cause. If the engine combusts briefly off the starting fluid before stalling again, focus troubleshooting on fuel starvation rather than spark issues. Loss of Power Diagnosis Engines that start quickly but then lag or bog down under load demand may have one of several underlying issues impeding peak performance: Dirty or improperly serviced air filter leads to insufficient airflow and overly rich fuel mixtureThe failing spark plug no longer fires correctly inside the cylinderThick, oxidized engine oil from delayed oil changes increases mechanical dragSticky valve deposits in the combustion chamber prevent proper exhaust flowMethodically tackle essential maintenance items like air filters, spark plugs, and oil changes before investigating potential parts replacements involving the carburetor or valves. Confirm fixes restored full RPM range before addressing other lingering issues. Overheating Failure Modes Aside from insufficient or contaminated lubrication oil, another primary cause of catastrophic overheating in small engines is restricted airflow through the critical cooling system components.Excessive debris, dirt, and grass clippings can accumulate on external metal cooling fins, engine blower housings, or the internal flywheel fan blades, which all typically dissipate heat via forced air convection. Carefully inspect and remove built-up debris with compressed air or low-pressure water. Also, check cooling fan blades for any visible damage, like missing chunks or bent fins, which prevent hot airflow ejection.If overheating damage is severe enough to warp the cylinder head or melt internal parts, extensive engine disassembly and professional machining work may be required. Diagnosing Unusual Engine Noises Intermittent tapping noises indicate overly tight or bent valves that are no longer sealing properly against the combustion chamber. This exhaust leak allows hot gases to blow through valve seats continuously. Confirm suspicions through a cylinder leak-down test before reseating valves by manually regrinding rough edges or hard carbon deposits on the valve stem end.Knocking or rattling noises that change with engine RPM usually signify low oil levels or wear inside the crankcase bearings, spinning the connecting rod. Top off oil immediately if low while tearing down the engine further to inspect bearing raceways for damage.Loud grinding noises accompanied by shaking are the most serious, indicating catastrophic engine seizure, typically from insufficient lubrication or connecting rod failure. This requires complete engine disassembly and replacement of damaged parts like the crankshaft, piston, cylinder sleeve, etc. Performing Common Engine Repairs With the right mechanical skills and proper caution around safety issues inherent with small engines, many DIY repairs are very achievable for motivated owners. Here are few common Briggs And Stratton small engine problems and fixes. Cleaning Gummy Carburetors Carburetors mixing precise air and fuel flows are sensitive to small dirt particles clogging narrow passageways. Symptoms of a restricted, gummed-up carburetor include occasional sputtering, flat spots during throttle adjustments, difficult cold starting despite repeated pulls, or even complete failure to combust.The fix involves complete removal, disassembly, and careful cleaning of the carburetor body and all rubber gaskets with spray aerosol cleaners and wire brushes if needed. Ensure to flush all passageways thoroughly with fuel additive before reattaching the carburetor. Replacing Recoil Pull Cords After years of use, the thin nylon rope coiled inside manual pull-start recoil mechanisms often fray and snap unexpectedly. Replacements matched to the exact engine model are readily available. Carefully observe how the old rope feeds through a series of pulleys and starter pawls before unknotting and gently pulling out all remnants. Feed in the new rope following the same path through all pulley guides in the casting, avoiding any kinks. Finally, wind a fresh cord around the pulley spindle, securing it at the handle attachment point. Fixing Compression Loss Issues Engines plagued by difficult cold starting, sluggish acceleration, and significant power loss often suffer from low cylinder compression due to worn piston ring seals or leaked head gaskets failing to contain combustion pressure. Use a screw-in compression tester gauge to measure pressure levels in the combustion chamber before tearing down the top end.If compression is over 20% lower than factory spec, remove cylinder heads and scrape any debris around head mating surfaces with a razor. Check the head gasket closely for cracks or blown-out sections that allow compression leaks. Also, inspect the piston top and cylinder wall for abnormal scuffing wear patterns. Replace any worn parts before reassembly. Tuning Up for Peak Performance To keep older equipment running like new, engines occasionally need complete tune-ups covering all systems: Drain and replace oil, filters, and grease fittings if equippedReplace air filter and spark plugReset valve clearances, checking intake and exhaust gapsCheck ignition timing between coil and magnetoRemove debris buildup around the blower housing and finsConfirm blade sharpness on lawnmowers; replace if severely worn After all is adjusted and corrected, your Briggs & Stratton engine should feel as responsive as when first purchased. Tune-ups extend usable lifespan. Sourcing Replacement Briggs And Stratton Small Engine Parts With scheduled maintenance and minor repairs, single-cylinder small engines often log over 500-1000 running hours in their usable lifespan before core components like the crankshaft eventually reach fatigue limits. When major parts replacements become necessary, here are the best methods to source compatible Briggs & Stratton parts online: Search official Parts Lookup diagrams using your engine Type and Code (model number) for guaranteed fit. Exploded views show assembly.Consult your silver Model-Type-Code tag adhered to the engine or stamped markings.Local dealers stock common replacements like starters, alternators, and fuel pumps.When labels are worn off, match physical dimensions and shaft lengths. Stick with genuine Briggs & Stratton replacements, when possible, although compatible third-party components made by reputable firms can significantly cut costs on expensive parts like cylinder heads while providing equivalent functionality and warranties. Safety Best Practices While providing independence around equipment repairs, small gasoline engines also introduce hazards if improperly handled. Review these safety guidelines: Carefully read user manuals before attempting unfamiliar DIY servicing or fixes.Always wear OSHA-rated impact goggles and ear protection when engines runUse fitted work gloves and avoid loose clothing risks of catching in spinning partsEnsure adequate workshop ventilation to dilute toxic exhaust gases from indoor operations.Frequently check fuel lines and filters for cracks, allowing volatile vapor ignition by sparks.Allow hot components to fully cool before handling to prevent severe burns.Secure engines firmly in custom mounts or commercial workbenches before tearing them down to avoid dangerous tipping accidentsMaintain all protective housings and shields around high-speed components like mower blades.Keep an ABC fire extinguisher and complete first aid kit nearby for emergencies like fuel spills.Follow local environmental regulations for proper hazardous waste disposal after oil changes, solvent cleaning, etc. Stay safe while saving money through DIY service and repair! ConclusionWith proper care, Briggs and Stratton small engines provide years of reliable service. Learn preventative maintenance patterns tailored for your individual usage hours and operating conditions. Build mechanical confidence with basic DIY fixes before attempting more complex troubleshooting. Always emphasize safety precautions around hazardous equipment and fuels. Mastering small engine care pays dividends through greater independence and lower costs than repeated technician servicing and repairs. Dont waste time struggling to fix that broken small engine yourself. Gregs Small Engine Service & Repair has the parts, expertise and great customer service to solve your problems. Request convenient pick-up and delivery seven days a week, call us today! Frequently Asked Questions 1. How often should I change the oil in my small engine?For optimal performance and longevity, you should change your Briggs & Stratton engine oil every 50 hours of running time or at least once annually before winter storage. 2. What weight oil is best for my outdoor power equipment?Most Briggs & Stratton engines work well with standard 30W motor oil for temperatures above 32F. Using 10W-30 oil allows easier to start during chilly weather. Check manufacturer recommendations in your equipment user manual. 3. Should I use premium gasoline in my small engine?Regular 87-octane unleaded gasoline is suitable for typical consumer equipment, while commercial Briggs & Stratton Vanguard models benefit from 89-93 octane gas formulated with fuel stabilizer to prevent varnish deposits over longer run times. 4. How do I know if my small engine spark plug needs replacement?Inspect spark plugs every 100 running hours. Look for a light brown dusty color vs. wet black soot covering electrodes signaling oil burning. Use the wire feeler gauge to check that the exposed metal electrode gap matches the specs stamped on the plug. 5. Does water in the gas tank cause engine damage?Gas contaminated with water separates ethanol from suspension and can corrode steel components like carburetor jets. Drain the fuel tank immediately if water is observed before attempting to start. Disassemble and clean the carburetor if issues persist.6. Should I disconnect the battery before a small engine repair?Yes, always disconnect the negative battery terminal lead on equipment with electric starter motors or integrated ignition circuits to prevent accidental electric shocks or short circuits. Roman Kwasniewskis 1924 photograph of a gear twice as tall as a man reflects industrial Milwaukees special skill in metal fabrication. Milwaukee county residents enjoy summer sunshine and sand on Lake Michigans shoreline in 1985. Image of David Lenzs Wishes in the Wind courtesy of David Lenz and the Suzanne and Richard Pieper Family Foundation. This photograph from around 1920 shows the Basilica from the lagoon in Kosciuszko Park. Automobiles and boats traverse Milwaukees downtown by the Michigan Avenue Bridge in this 1974 photograph by Harold Mayer. The German sense of conviviality and comfort animated social gatherings among Milwaukeeans of various ethnic backgrounds, even at this Hard Time party taken by Roman Kwasniewski in 1924. Roman Kwasniewskis 1924 photograph of a gear twice as tall as a man reflects industrial Milwaukees special skill in metal fabrication. Welcome to the Encyclopedia of Milwaukee, a Digital Humanities Project sponsored by the History Department in the College of Letters and Science at the University of Wisconsin-Milwaukee. The EMKE offers approximately 700 entries on Milwaukee history topics ranging from arts and culture to philanthropy and nonprofit organizations to business and labor. We invite you to explore our content, learn more about the development of the project, and read our Frequently Asked Questions. Expand the Explore More button at the bottom of entries to read user comments and additional stories about how our authors wrote their contributions. If you would like to offer public feedback on an entry, you may register for a user account (look on the right hand side of the blue bar above) and then scroll down to the Comments section of the entry you would like to tell us more about. You may also use the Contact page to send us a direct message or the Support page.Margo Anderson and Amanda I. Seligman, Editors Robert George Bob Uecker was best known as a Milwaukee Brewers radio broadcaster, but he also gained fame as a national baseball commentator, actor, author, and commercial spokesman. Born in Milwaukee on January 26, 1935,... Read More Is your Briggs and Stratton lawn mower refusing to start or running poorly? Youre not alone. Many people face these frustrating issues, especially when the grass is growing faster than you can keep up with.Common issues with Briggs and Stratton lawn mowers include starting problems, poor performance, and excessive smoke. Identifying these issues early can save time and enhance performance.Troubleshooting Steps: Check fuel quality, spark plug condition, and battery charge when troubleshooting starting issues; maintain clean air filters and sharp blades for optimal performance.Essential Tools: Basic hand tools like wrenches, screwdrivers, and pliers are crucial for efficient repairs; having replacement parts such as spark plugs and filters on hand simplifies maintenance.Maintenance Tips: Regular oil changes, cleaning the mower after use, and inspecting belts and cables contribute to mower longevity and performance.Professional Help: Seek expert assistance for persistent issues, excessive smoke, unusual noises, or repeated repairs, indicating deeper mechanical problems may exist.Briggs and Stratton lawn mowers can present several common issues. Understanding these problems helps you diagnose and fix them quickly.An engine that wont start often indicates fuel or ignition problems. Check the following:Fuel: Ensure youve got fresh fuel in the tank. Stale or contaminated fuel can hinder starting.Spark Plug: Inspect the spark plug for damage or carbon buildup. A worn or dirty spark plug affects ignition.Battery: If youve got a battery-powered mower, confirm the batterys charge. Replace a dead battery.Starter: Listen for clicking sounds. If you hear clicks but the engine doesnt turn over, your starter may be failing.Poor performance leads to uneven cutting or stalling. Consider these factors:Blades: Dull or damaged blades cause a poor cut. Sharpen or replace them as needed.Air Filter: Clogged air filters restrict airflow. Clean or replace the filter to improve performance.Throttle Settings: Ensure the throttle is set correctly. Improper settings can reduce engine power.Fuel Mixture: Check the fuel-air mixture. The wrong ratio can cause stalling or rough running.Excessive smoke can signal serious issues. Pay attention to the color of the smoke:Blue Smoke: This indicates burning oil. Check for oil leaks or overfilling your oil reservoir.Black Smoke: This often means too much fuel or a clogged air filter. Review the air filter and adjust the fuel settings.White Smoke: White smoke points to coolant entering the engine. This can indicate a blown gasket requiring immediate attention.Addressing these common issues efficiently can restore your Briggs and Stratton lawn mowers performance.Gathering the right tools makes repairing your Briggs and Stratton lawn mower straightforward. Heres what you need to get started.Wrenches: Use a combination of metric and standard-sized wrenches to tighten or loosen bolts.Screwdrivers: Both flathead and Phillips screwdrivers help in removing various covers and components.Pliers: Needle-nose pliers assist in grasping small objects or wires during repairs.Socket Set: A socket set allows for efficient removal and attachment of nuts and bolts.Torque Wrench: Using a torque wrench ensures proper tightness, preventing damage from over-torquing.Spark Plug: Replace a damaged spark plug to restore engine starting and performance.Air Filter: Install a new air filter to improve airflow and engine efficiency.Blades: Sharpen or replace dull blades for a clean cut and optimal lawn appearance.Fuel Filter: A new fuel filter prevents debris from clogging the fuel system.Battery: Swap out a dead battery to ensure reliable starting and operation.Having these tools and replacement parts on hand simplifies the repair process, allowing you to quickly address any issues and get your lawn mower back in action.Refer to the following steps to tackle common issues with your Briggs and Stratton lawn mower. Each section provides clear directions to help you troubleshoot and fix the mower efficiently.Check for Fuel Issues: Inspect the fuel tank. If it contains stale or contaminated fuel, drain it. Use fresh fuel for the best performance.Examine the Spark Plug: Remove the spark plug. If it appears worn or dirty, replace it. Check for proper gap settings as specified in the user manual.Test the Battery: If your mower has an electric start, ensure the battery is charged. Replace a dead battery with a compatible model.Inspect for Blockages: Check the air filter and exhaust for clogs. Clean or replace these components to enhance air flow and prevent overheating.Verify Starter Functionality: Listen for clicks when starting. If you hear no sounds, a faulty starter may require replacement.Replace the Fuel Filter: Locate the fuel filter and remove it. Install a new filter to ensure clean fuel flow to the engine.Clear Fuel Lines: Inspect fuel lines for cracks or blockages. Replace damaged lines and clear any debris to restore proper function.Adjust the Carburetor: If the engine runs rough, adjust the carburetor settings. Refer to your manual for precise adjustment guidelines.Check for Leaks: Examine the fuel system for leaks. Tighten or replace loose fittings and components to prevent fuel loss.Regularly Change the Oil: Change the oil every 50 hours of operation or at the beginning of each season. Use the recommended oil type for your mower.Sharp Blades Matter: Keep blades sharp for a clean cut. Sharpen or replace them seasonally to maintain mowing efficiency.Clean the Mower After Use: Remove grass clippings and debris from the mower deck after each use. This practice prevents rust and enhances performance.Inspect Belts and Cables: Regularly check belts and cables for signs of wear. Replace them as needed to avoid engine strain.Store Properly: Store your mower in a dry, sheltered location during the off-season. Use a cover to protect it from dust and moisture.Adhering to these steps will improve your lawn mowers performance and increase its lifespan. Each category focuses on practical actions that you can implement to fix issues and maintain your equipment efficiently.Sometimes, troubleshooting your Briggs and Stratton lawn mower may not resolve the issues youre experiencing. Certain situations call for professional assistance to avoid further complications. Here are key indicators that its time to consult an expert:Persistent Starting Issues: If your mower refuses to start after replacing the spark plug, testing the battery, and confirming fuel flow, seek a professional. They can diagnose deeper problems like ignition system failures.Excessive Smoke: If your mower produces excessive smoke despite regular maintenance, dont ignore it. Blue smoke indicates oil burning, while black smoke often results from engine flooding. A technician can assess the engines internal components and rectify serious issues.Strange Noises: Unusual sounds like knocking or grinding signal potential mechanical failures. Professionals can identify the root cause, whether its a failing bearing or a loose component.Loss of Power While Mowing: If your mower operates sluggishly, even after cleaning filters and sharpening blades, it may indicate fuel or engine problems. A professional can fine-tune the engine for optimal performance.Fuel System Problems: If youve replaced the fuel filter and cleaned the lines but you still face fuel blockages or leaks, expert attention is necessary. Specialized tools help pinpoint fuel system failures that might be overlooked.Frequent Repairs: If you find yourself continually fixing the same issues, it may be time for professional intervention. Continuous repairs suggest deeper underlying problems that may require overhauling parts or systems.By recognizing these signs, you can effectively determine when to seek assistance. This proactive approach saves time and ensures lawn mower functionality all season long.Getting your Briggs and Stratton lawn mower back in shape doesnt have to be a daunting task. With a little patience and the right tools you can tackle those common issues and enjoy a well-maintained lawn. Remember to keep up with regular maintenance to prevent future problems and ensure your mower runs smoothly.If you find yourself facing persistent issues dont hesitate to reach out for professional help. Knowing when to call in an expert can save you time and frustration. By staying proactive and attentive youll keep your mower performing at its best for years to come. Happy mowing!If your mower wont start, check for stale fuel, a damaged spark plug, a dead battery, or a failing starter. These are common culprits. Ensure you have fresh fuel and inspect the spark plug for damage. If these dont resolve the issue, further troubleshooting may be necessary.To enhance performance, keep the blades sharp, clean or replace clogged air filters, and check throttle settings. Use the correct fuel mixture and perform regular maintenance, including oil changes. Following these steps will help maintain your lawn mowers efficiency.Excessive smoke can signal various issues: blue smoke usually indicates burning oil, black smoke points to too much fuel or a clogged air filter, while white smoke may suggest coolant entering the engine. Identifying the smoke color can help diagnose underlying problems.Gather essential tools like wrenches, screwdrivers, pliers, a socket set, and a torque wrench for repairs. These tools will help you tackle basic maintenance and troubleshooting effectively, making repairs much smoother.Consult a professional if you face persistent starting issues, excessive smoke, strange noises, loss of power, unresolved fuel system problems, or notice frequent recurring repairs. Recognizing these signs can save time and prevent further damage to your mower.

Briggs and stratton problems starting. Briggs and stratton q6500 problems. Briggs and stratton 17.5 hp engine problems. Briggs and stratton engine problems. Magneto briggs and stratton problems. Briggs and stratton governor problems. Briggs and stratton plastic carburetor problems. Briggs and stratton carburetor problems. Briggs and stratton instart battery problems. Briggs and stratton ready start problems. Common briggs and stratton problems. 500e briggs and stratton problems. Briggs and stratton starter motor problems. Briggs and stratton v twin carburetor problems. Briggs and stratton decompression valve problems.