

2011 Bmw 323i Owners Manual File Type

This manual contains in-depth maintenance, service and repair information for the BMW 3 Series, E90, E91, E92, E93.

A practical restoration manual on the E36, the 3 Series BMWs built between 1990 & 1999. Covers all models from the 316 compact to the M3. Advice is given on acquiring a good pre-owned example plus restoring & modifying engines, bodywork, trim, electrics, suspension & mechanical parts. Detailed information on Alpina & M3 cars. A total of 148 fully illustrated colour and black & white

The BMW X3 (E83) Service Manual: 2004-2010 contains in-depth maintenance, service and repair information for the BMW X3 from 2004 to 2010. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your BMW. Engines covered: M54 engine: 2.5i, 3.0i (2004-2006) N52 engine: 3.0si, xDrive 30i (2007-2010) Transmissions covered: Manual: ZF GS6-37BZ (6-speed) Automatic: GM A5S390R (5-speed) Automatic: GM GA6L45R (6-speed) Ant Anstead's Building a Special brings the Haynes story full circle, coming 61 years after the original Building a 750 Special was written by John Haynes, Haynes Publishing's founder, when he was still a schoolboy. This book is a TV tie-in, following the 12-part TV series Ant Anstead Master Mechanic, aired on Motor Trend, part of the Discover Network in the US and UK, following Ant Anstead's build of his own-design 'special' car, taking inspiration from the Alfa 158 - the first World Championship-winning F1 car, which raced from the 1930s until the 1950s. The 12-part TV series followed Ant's build of the car, from the first design ideas, through the construction, culminating in the debut of the car during the 2019 US Grand Prix weekend in Austin, Texas. The book follows Ant's personal build of the car, from the selection of the donor MG TD for the chassis, and Alfa Romeo Spider for the engine and gearbox, through modifying the chassis, building the suspension, steering, brakes, bodywork and interior, and putting all the components together to produce a finished one-off 'special.' Content includes: Introduction The history of specials Planning Donor car Chassis, suspension, steering, rear axle Engine, fuel system, cooling system, ancillaries, exhaust Gearbox Bodywork Braking system Cockpit Wiring Preparation and painting Testing Setting up and Making road legal.

BMW 3- & 5-Series Petrol (81 - 91) up to J 3-Series (E30) 316, 316i, 318i, 320i, 325i; Saloon, Touring & Convertible (83 - 91, up to H). 5-Series (E28) 518, 518i, 525i, 528i, 535i, M535i; Saloon (81 - 88, up to F). 5-Series (E34) 518i, 520i, 525i, 530i, 535i; Saloon & Touring (88 - 91, F to J). Does NOT cover models with DOHC, V8 or Diesel engines, or 4x4. For other 3- & 5-series models see manuals no. 0276, 0632, 0815, 1560 or 3210 Petrol: 1.6 litre (1596cc) 1.8 litre (1766 & 1795cc) 2.0 litre (1990cc). 2.5 litre (2494cc). 2.8 litre (2788cc) 3.0 litre (2986cc) & 3.5 litre (3430cc) SOHC.

With a Haynes manual, you can do it yourself? from simple maintenance to basic repairs. Haynes writes every book based on a complete teardown of the motorcycle. We learn the best ways to do a job and that makes it quicker, easier and cheaper for you. Our books have clear instructions and hundreds of photographs that show each step. Whether you're a beginner or a pro, you can save big with Haynes! -Step-by-step procedures -Easy-to-follow photos -Complete troubleshooting section -Valuable short cuts -Model history and pre-ride checks in color -Color spark plug diagnosis and wiring diagrams -Tools and workshop tips section in color Complete coverage for your BMW R1200 Twins, 2004 thru 2009 -Routine Maintenance -Tune-up procedures -Engine, clutch and transmission repair -Cooling system -Fuel and exhaust -Emissions control -Ignition and electrical systems -Brakes, wheels and tires -Steering, suspension and final drive -Frame and bodywork -Wiring diagrams

As U.S. and Canadian automakers and dealers face bankruptcy and Toyota battles unprecedented quality-control problems, Lemon-Aid guides steer the confused and anxious buyer through the economic meltdown unlike any other car-and-truck books on the market. Phil Edmonston, Canada's automotive "Dr. Phil" for more than 40 years, pulls no punches. In this all-new guide he says: Chrysler's days are numbered with the dubious help of Fiat. Electric cars and ethanol power are PR gimmicks. Diesel and natural gas are the future. Be wary of "zombie" vehicles: Jaguar, Land Rover, Saab, and Volvo. Mercedes-Benz -- rich cars, poor quality. There's only one Saturn you should buy. Toyota -- enough apologies: "when you mess up, 'fess up."

If you're looking for better understanding of your E36 BMW, look no further! See and learn how to perform routine maintenance procedures with the highest level of clarity and comprehensiveness. This in-depth manual provides maintenance procedures for everything from brake fluid changes to resetting the service indicator. Covers M3, 318i, 323i, 325i, 328i, sedan, coupe and convertible models 1992-98.

The BMW 3 Series (E36) Service Manual: 1992-1998 is a comprehensive, single source of service information and specifications specifically for E36 platform BMW 3 Series models from 1989 to 1995. E36 models and engines covered: * 318i/is/iC (M42 - 1.8 liter engine) (M44 - 1.9 liter engine, OBD II) * 323is/iC (M52 - 2.5 liter engine, OBD II) * 325i/is/iC (M50 - 2.5 liter engine) * 328i/is/iC (M52 - 2.8 liter engine, OBDII) * M3 (S50US - 3.0 liter engine) (S52US - 3.2 liter engine, OBD II)

A guide to buying a used car or minivan features information on the strengths and weaknesses of each model, a safety summary, recalls, warranties, and service tips.

The BMW 3 Series (F30, F31, F34) Service Manual: 2012-2015 contains in-depth maintenance, service and repair information for the BMW 3 Series from 2012 to 2015. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your 3 Series. Engines (Gasoline): N20 engine: 320i, 328i, including xDrive N26 (SULEV) engine: 328i including xDrive N55 engine: 335i, including xDrive

BMW, that most performance-oriented of car companies, had no affordable sports roadster in its line-up before 1995. Stung into action by Mazda's revival of the classic two-seater roadster, the Germany company quickly staked its claim with the Z3, a classic long-nose, short-tail design that used existing BMW mechanical hardware to good effect. This new book tells the story of BMW's Z3 and Z4 two-seater roadsters and coupes, which since 1995 have been at the forefront of the affordable sports car market. The history of the Z3 and both generations of Z4 are covered as well as full specifications of all models; the formidable M Power derivatives and a guide to buying and owning. The book is profusely illustrated with over 200 colour photographs and diagrams. Contents include: Historical background to BMW's arrival in the two-seater sports car market; Complete history of the Z3 and both generations of Z4; Full specifications of all models; The formidable M Power derivatives; Guide to buying and owning.

Covers principles of operation, troubleshooting, maintenance and repair of the modern braking system. Information on tool selection and usage is included, plus a chapter on brake system modifications and high-performance brake parts.

The BMW Repair Manual: 7 Series (E32): 1988-1994 is the only comprehensive, single source of service information, technical specifications, and wiring schematics available

specifically for the BMW 7 Series from 1988 to 1994. The aim throughout this manual has been simplicity, clarity and completeness, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a repair professional or a do-it-yourself BMW owner, this manual will help you understand, care for and repair your E32 7 Series.

With a Haynes manual, you can do it yourself...from simple maintenance to basic repairs. Haynes writes every book based on a complete teardown of the vehicle. We learn the best ways to do a job and that makes it quicker, easier and cheaper for you. Our books have clear instructions and hundreds of photographs that show each step. Whether you're a beginner or a pro, you can save big with Haynes!

The BMW 4 Series Service Manual: 2014-2016 contains in-depth maintenance, service and repair information for the BMW 4 Series from 2014 to 2016. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your 4 Series. The do-it-yourself BMW owner will find this manual indispensable as a source of detailed maintenance and repair information. Even if you have no intention of working on your vehicle, you will find that reading and owning this manual makes it possible to discuss repairs more intelligently with a professional technician. Features: *Maintenance procedures from changing the cabin microfilter to replacing and registering a new battery. This manual tells you what to do and how and when to do it. *Front-to-rear fluid and lubricant service, including xDrive transfer case fluid and ATF. *Cylinder head cover gasket and crankshaft seal replacement. *Cooling system, thermostat and radiator service. *Gasoline fuel and ignition system diagrams and explanations for turbo-valvetronic-direct injection (TVDI) engines. *Service and repair information on BMW EfficientDynamics technology, such as Valvetronic, xDrive, TwinPower turbo, and DSC (dynamic stability control). *Twin scroll (gasoline) turbocharger replacement for 4- and 6-cylinder engines. *Step-by-step variable camshaft timing (VANOS) service. *Suspension repairs, including wheel bearing replacement. *Brakes, steering and ABS troubleshooting and repair. *Heating and air-conditioning repair, including A/C component replacement. *Body and lid repairs and adjustments, including Gran Coupe tailgate and rear doors. *Retractable hardtop service, including electrical, mechanical and hydraulic component operation, locations and replacement. *Electrical system service, with an easy-to-use illustrated component locator section. *Comprehensive wiring schematics, including fuses and grounds. *BMW OBD II diagnostic trouble codes, SAE-defined OBD II P-codes, as well as basic scan tool operation. *BMW factory tolerances, wear limits, adjustments and tightening torques. Engines: *N20 engine: 428i, including xDrive *N26 (SULEV) engine: 428i including xDrive *N55 engine: 435i, including xDrive Manual transmissions: *GS6-17BG (4-cylinder models) *GS6-45BZ (6-cylinder models, RWD) *GS6X-45BZ (6-cylinder models, with xDrive) Automatic transmissions: *ZF GA8HP45Z

The ultimate service manuals! Bentley manuals are the only comprehensive, single source of service information and specifications available for BMW cars. These manuals provide the highest level of clarity and completeness for all service and repair procedures. Enthusiasts, do-it-yourselfers, and professional technicians will appreciate the quality of photographs and illustrations, theory of operation, and accurate step-by-step instructions. If you are looking for better understanding of your BMW, look no further than Bentley. Even if you do not repair your

own vehicle, knowledge of its internal workings will help you when discussing repairs and maintenance with your professional automotive technician. This Bentley Manual is the only comprehensive, single source of service information and specifications available specifically for BMW 5 Series from 1997 to 2002. The aim throughout this manual has been simplicity, clarity and completeness, with practical explanations, step-by-step procedures and accurate specifications. Whether you are a professional or a do-it-yourself BMW owner, this manual will help you understand, care for and repair your E39 5 Series. Though the do-it-yourself BMW owner will find this manual indispensable as a source of detailed maintenance and repair information, the BMW owner who has no intention of working on his or her car will find that reading and owning this manual will make it possible to discuss repairs more intelligently with a professional technician.

Electrical issues in European cars can be intimidating. The Hack Mechanic Guide to European Automotive Electrical Systems shows you how to think about electricity in your car and then take on real-world electrical problems. The principles discussed can be applied to most conventional internal-combustion-engined vehicles, with a focus on European cars spanning the past six decades. Drawing on The Hack Mechanic's wisdom and experience, the 38 chapters cover key electrical topics such as battery, starter, alternator, ignition, circuits, and relays. Through a practical and informal approach featuring hundreds of full-color illustrations, author Rob Siegel takes the fear-factor out of projects like making wire repairs, measuring voltage drops, or figuring out if you have a bad fuel pump relay. Essential tools such as multimeters (DVOM), oscilloscopes, and scan tools are discussed, with special attention given to the automotive multimeter needed to troubleshoot many modern sensors. You'll get step-by-step troubleshooting procedures ranging from safely jump starting a battery to diagnosing parasitic current drain and vehicle energy diagnosis. And you'll find detailed testing procedures for most problematic electrical components on your European car such as oxygen sensors, crankshaft and camshaft sensors, wheel speed sensors, fuel pumps, solenoids, and actuators. Reading wiring diagrams and decoding the German DIN standard are also covered. Whether you are a DIY mechanic or a professional technician, The Hack Mechanic Guide to European Automotive Electrical Systems will increase your confidence in tackling automotive electrical problem-solving. This book applies to gasoline and diesel powered internal combustion engine vehicles. Not intended for hybrid or electric vehicles.

The MINI Cooper, Cooper S, Clubman (R55, R56, R57) 2007-2013 Service Manual is a comprehensive source of service information and specifications for MINI Cooper models from 2007 to 2013 (Mk II). The aim throughout this manual has been simplicity, clarity and completeness, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself MINI owner, this manual will help you understand, care for and repair your car. Engines covered: Cooper: 1.6 liter normally aspirated engine (engine codes N12, N16) Cooper S: 1.6 liter supercharged engine (engine codes N14, N18) Transmissions covered: Manual: 6-speed Getrag (GS6-55BG for Cooper, GS6-53BG for Cooper S) Automatic: 6-speed with Agitronic, Aisin (GA6F21WA)

Haynes manuals are written specifically for the do-it-yourselfer, yet are complete enough to be used by professional mechanics. Since 1960 Haynes has produced manuals written from hands-on experience based on a vehicle teardown with hundreds of photos and illustrations, making Haynes the world leader in automotive repair information.

For over 25 years Rob Siegel has written a monthly column called "The Hack Mechanic" for the BMW Car Club of America's magazine Roundel. In *Memoirs of a Hack Mechanic*, Rob Siegel shares his secrets to buying, fixing, and driving cool cars without risking the kids' tuition money or destroying his marriage. And that's something to brag about considering the dozens of cars, including twenty-five BMW 2002s, that have passed through his garage over the past three decades. With a steady dose of irreverent humor, *Memoirs of a Hack Mechanic* blends

car stories, DIY advice, and cautionary tales in a way that will resonate with the car-obsessed (and the people who love them).

The Volvo 240 Service Manual: 1983-1993 is a comprehensive source of service information and specifications for Volvo 240 and other Volvo 200-series cars built from model years 1983 through 1993. Whether you're a professional technician or a do-it-yourself Volvo owner, this manual will help you understand, maintain, and repair systems on the Volvo 240. Volvo 200-series and 240 models covered in this repair manual: * 1983-1985 - DL, GL * 1983-1985 - Turbo * 1986-1993 - 240, 240 DL Volvo 200-series and 240 gasoline engines covered in this repair manual: * B21F * B21F-T (Turbo) * B23F * B230F

Mechanically timed ignition is easy to understand and wonderfully straightforward to diagnose and repair, which is good because it's one of the most likely things on an older car to die and leave you in the lurch. Rob Siegel--better known as the Hack Mechanic-- explains how mechanical ignition works and discusses in detail how to set timing and advance. There is also a full chapter on troubleshooting mechanical ignition problems. Illustrated with over 100 photos and diagrams and supported by clear, step-by-step instructions, the Mechanical Ignition Handbook features sections on:*mechanical ignition basics and components*common repairs and recommended tools*adjusting point gap*setting dwell angle*locating the timing mark*finding top dead center*setting static and dynamic ignition timing*using both a standard and an advance timing light*testing coil resistance*Retrofitting breakerless electronic ignition (for those who say "enough!")Applies to vintage cars from the 1950s up through the mid 1980s that have either points and breakers or mechanical ignition advance, including: Porsche 356, Mechanically-timed Porsche 911, BMW 1600, BMW 2002, Ferrari 365, MGB, Austin-Healey Sprite, Jaguar E-Type, Triumph Spitfire, Triumph TR3, Mercedes models including the Mercedes 190 SL, Volkswagen Beetle, early Volvo, Pontiac GTO, vintage Chevrolet Camaro and other American muscle cars.

This BMW Repair Manual: 3 Series (E46): 1999-2005 is a comprehensive source of service information and technical specifications available for the BMW E46 platform 3 Series models from 1999 to 2005. Whether you're a professional or a do-it-yourself BMW owner, this manual will help you understand, care for and repair your car. Though the do-it-yourself 3 Series owner will find this manual indispensable as a source of detailed maintenance and repair information, the owner who has no intention of working on his or her car will find that reading and owning this manual will make it possible to discuss repairs more intelligently with a professional technician. BMW E46 models and engines covered in this repair manual: * 323i/Ci (M52 TU, 2.5 liter engine) * 328i/Ci (M52 TU, 2.8 liter engine) * 325i/Ci/xi (M54 / M56, 2.5 liter engine) * 330i/Cis/xi (M54, 3.0 liter engine) * M3 (S54, 3.2 liter Motorsport engine) Saloon (E90) & Touring (E91) with 4- and 6-cylinder engines. 318i, 320i, 325i & 330i petrol and 318d, 320d, 325d & 330d diesel. Does NOT cover 320Si, 335i, 335d, M3, Coupe, Convertible or models with xDrive. Does NOT cover facelifted model range introduced Sept 2008. Petrol: 2.0 litre (1995cc), 2.5 litre (2497cc) & 3.0 litre (2996cc). Turbo-Diesel: 2.0 litre (1995cc) & 3.0 litre (2993cc).

The BMW 7 Series (E38) Service Manual: 1995-2001 is a comprehensive source of service information and technical specifications available for the BMW 7 Series models from 1995 to 2001. Whether you're a professional or a do-it-yourself BMW owner, this manual will help you understand, care for and repair your car. Models, engines and transmissions covered: * 740i, 740iL: M60 4.0 liter, M62 or M62 TU 4.4 liter * 750iL: M73 or M73 TU 5.6 liter Engine management systems (Motronic): * Bosch M3.3 (OBD I) * Bosch M5.2 (OBD II) * Bosch M5.2.1 (OBD II) * Bosch M5.2.1 (OBD II / LEV) * Bosch ME 7.2 (OBD II) Automatic transmissions * A5S 560Z * A5S 440Z

Haynes offers the best coverage for cars, trucks, vans, SUVs and motorcycles on the market today. Each manual contains easy to follow step-by-step instructions linked to hundreds of

photographs and illustrations. Included in every manual: troubleshooting section to help identify specific problems; tips that give valuable short cuts to make the job easier and eliminate the need for special tools; notes, cautions and warnings for the home mechanic; color spark plug diagnosis and an easy to use index.

Produced from 1984-9, the BMW 3 Series' popularity and status is maybe due to the longevity of its design, its ability to satisfy the keen driver or its iconic status but, whatever it is, there is no doubt that the E30 is one car from the past that will stay with us into the future. Focusing on the common faults which crop up repeatedly and giving detailed, simple instructions regarding repairs, this book is uniquely invaluable for owners who wish to try their hand at their own maintenance, especially those who may previously have been prevented from doing so by a lack of technical know-how or specific knowledge.

Since its introduction in 1975, the BMW 3-series has earned a reputation as one of the world's greatest sports sedans. Unfortunately, it has also proven one of the more expensive to service and maintain. This book is dedicated to the legion of BMW 3-series owners who adore their cars and enjoy restoring, modifying, and maintaining them to perfection; its format allows more of these enthusiasts to get out into the garage and work on their BMWs-and in the process, to save a fortune. Created with the weekend mechanic in mind, this extensively illustrated manual offers 101 projects that will help you modify, maintain, and enhance your BMW 3-series sports sedan. Focusing on the 1984-1999 E30 and E36 models, 101 Performance Projects for Your BMW 3-Series presents all the necessary information, covers all the pitfalls, and assesses all the costs associated with performing an expansive array of weekend projects.

The BMW 3 Series (E90, E91, E92, E93) Service Manual: 2006-2011 contains in-depth maintenance, service and repair information for the BMW 3 Series from 2006 to 2011. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your BMW. Normally aspirated models (6-cylinder 3.0 engines) N52 engine: 325i, 325xi, 330i, 330xi (2006) N52KP engine 328i, 328xi (2007-2011) N51(SULEV) engine: 328i, 328xi (2007-2011) Turbo-charged models (6-cylinder 3.0 engines) N54 engine: 335i, 335xi (2009 - 2010), 335is (2011) N55 engine: 335i, 335xi (2011)

This Bentley Manual contains in-depth maintenance, service and repair information for the BMW 3 Series from 2006 to 2010. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your BMW.

This Bentley Manual is the only comprehensive, single source of service information and specifications for BMW 3 Series (E30) cars from 1984-1990. Whether you're a professional technician or a do-it-yourself BMW owner, this manual will help you understand, maintain, and repair every system on 3 Series cars.

S60 Saloon, inc. special/limited editions. Does not cover bi-fuel or AWD models, or S60R.
Petrol: 2.0 litre (1984cc), 2.3 litre (2319cc), 2.4 litre (2401cc & 2435cc) & 2.5 litre (2521cc).
Turbo-Diesel: 2.4/2.5 litre (2401cc).

Each Clymer manual provides specific and detailed instructions for performing everything from basic maintenance and troubleshooting to a complete overhaul of the machine. This manual covers the Harley-Davidson XL Sportster built from 2014 to 2017. Do-it-yourselfers will find this service and repair manual more comprehensive than the factory manual, making it an indispensable part of their tool box. Specific models covered include: XL883L SuperLow (2014-2017), XL883N Iron 883 (2014-2017), XL883R Roadster (2014-2015), XL1200C 1200 Custom (2014-2017), XL1200CA Custom Limited A (2014-2016), XL1200CB 1200 Custom Limited B (2014-2017), XL1200CP 1200 Custom (factory custom) (2014-2016), XL1200CX

Roadster (2016-2017), XL1200T SuperLow (2014-2017), XL1200V Seventy-Two (2014-2016), and XL1200X Forty-Eight (2014-2017).

The BMW X5 (E53) repair manual: 2000-2006 contains in-depth maintenance, service and repair information for BMW X5 models from 2000 to 2006. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your BMW. Models and engines: * 3.0i M54 engine, 6-cylinder 3.0 liter * 4.4i M62 TU engine, V8 4.4 liter * 4.4i N62 engine, V8 4.4 liter (Valvetronic) * 4.6is M62 TU engine, V8 4.6 liter * 4.8is N62 engine, V8 4.8 liter (Valvetronic) Transmissions (remove, install, external service): * Manual 5-speed S5D 280Z * Manual 6-speed GS6-37BZ * Automatic 5-speed A5S 390R * Automatic 5-speed A5S 440Z * Automatic 6-speed GA6HP26Z

"The automotive maven and former Member of Parliament might be the most trusted man in Canada, an inverse relationship to the people he writes about." – The Globe and Mail Lemon-Aid shows car and truck buyers how to pick the cheapest and most reliable vehicles from the past 30 years of auto production. This brand-new edition of the bestselling guide contains updated information on secret service bulletins that can save you money. Phil describes sales and service scams, lists which vehicles are factory goofs, and sets out the prices you should pay. As Canada's automotive "Dr. Phil" for over 40 years, Edmonston pulls no punches. His Lemon-Aid is more potent and provocative than ever.

The BMW 5 Series (E60, E61) Service Manual: 2004-2010 contains in-depth maintenance, service and repair information for the BMW 5 Series from 2004 to 2010. The aim throughout has been simplicity and clarity, with practical explanations, step-by-step procedures and accurate specifications. Whether you're a professional or a do-it-yourself BMW owner, this manual helps you understand, care for and repair your BMW. discuss repairs more intelligently with a professional technician. Models covered 525i and 530i * M54 engine (2004-2005) * N52 engine (2006-2007) 528i * N52K engine (2008-2010) 535i * N54 twin turbo engine (2008-2010) 545i * N62 V8 engine (2004-2005) 550i * N62 TU V8 engine (2006-2010)

The light-duty vehicle fleet is expected to undergo substantial technological changes over the next several decades. New powertrain designs, alternative fuels, advanced materials and significant changes to the vehicle body are being driven by increasingly stringent fuel economy and greenhouse gas emission standards. By the end of the next decade, cars and light-duty trucks will be more fuel efficient, weigh less, emit less air pollutants, have more safety features, and will be more expensive to purchase relative to current vehicles. Though the gasoline-powered spark ignition engine will continue to be the dominant powertrain configuration even through 2030, such vehicles will be equipped with advanced technologies, materials, electronics and controls, and aerodynamics. And by 2030, the deployment of alternative methods to propel and fuel vehicles and alternative modes of transportation, including autonomous vehicles, will be well underway. What are these new technologies - how will they work, and will some technologies be more effective than others? Written to inform The United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA) and Environmental Protection Agency (EPA) Corporate Average Fuel Economy (CAFE) and greenhouse gas (GHG) emission standards, this new report from the National Research Council is a technical evaluation of costs, benefits, and implementation issues of fuel reduction technologies for next-generation light-duty vehicles. Cost, Effectiveness, and Deployment of Fuel Economy Technologies for Light-Duty Vehicles estimates the cost, potential efficiency improvements, and barriers to commercial deployment of technologies that might be employed from 2020 to 2030. This report describes these promising technologies and makes recommendations for their inclusion on the list of technologies applicable for the 2017-2025 CAFE standards.

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