

TDR INDEX—ISSUES 49–52

Of the TDR annual indexes, this is the eleventh and the largest to date. Just when you think you've read it all—just when you might suppose there is little new to write about or read about in the world of Turbo Diesel trucks—along comes a year like the last four issues of the TDR! Issues 49 through 52 published more than six-hundred pages of news stories, letters, and articles indispensable to members, —ground-breaking information on new models and products, new fuels and lubricants, new accessories and power enhancements, new tools and mechanical innovations, new challenges and problems and their solutions. As members know, the unique merit of the TDR is that it functions as an information exchange. The purpose of the index is to facilitate the reader's accessing that wealth of information—in particular, the shadetree work-arounds invented by the membership, as well as the hands-on instructions shared by the experts—making the quarterly a comprehensive source of practiced know-how available nowhere else.

Presenting the Issue 49-52 index. We are hopeful that this comprehensive reference source makes it easy for you to find the information you need.

Bob and Jeannette Vallier
Oracle, AZ

Acceleration response, flat. See Turbo boost (MAP) sensor, failure in circuit

Accelerator pedal position sensor (APPS), resetting of, to correct erratic torque converter lockup. See Torque converter, erratic locking/unlocking

Accessories, favorite, Ron Khol's list

Issue 50 (Khol Fusion) While in Issue 50 all TDR staff writers remark particular favorite accessories, Ron Khol makes a comprehensive inventory of 23 add-ons adoptable by virtually any Turbo Diesel member. 116–118

Accessories, favorite, Robert Patton's list

Issue 50 (Product Showcase) Robert Patton surveys those accessories he believes should be added to a new truck, including basic maintenance and convenience items. 150–151

AFC. See Air Fuel Control

Air-intake enhancement products

Issue 50 (TDRelease) Diesel Power Products markets its "Cool Hose" to connect the air intake system to the turbocharger inlet for '03–'05 trucks, to provide longer radius bends, insulate intake air from under-hood heat, and produce a big-rig sound. 167

Issue 50 (TDRelease) PSM introduces a cold air intake system for the '03 and newer Ram trucks that retains the stock air box and is designed for superior performance. 168

Air compressor, on-board, kit

Issue 50 (TDRelease) Kilby Enterprises offers a new On-Board Air Kit for '03 and newer Dodge/Cummins trucks, described as filling virtually all needs for compressed air when on the road. 166

Issue 52 (Life's a Beach) To supply his truck's several air-driven accessories Jerry Nielsen chooses Kilby Enterprises to install its bolt-on, engine-driven air compressor designed for the Dodge truck and built around a York compressor. 134–135

Air conditioner, spontaneous shutdown

Issue 50 (First Generation) Readers identify cause of A/C shutdown after brief initial operation in a freezing up of the evaporator resulting from fouled and clogged air intake. 24

Air conditioner condenser protector, homemade

Issue 50 (Khol Fusion) Ron Khol identifies the air conditioner condenser as vulnerable to damage from flying road debris and describes his fabrication of a sheetmetal deflector. 118

Air conditioner evaporator, freezing up. See Air conditioner, spontaneous shutdown

Air conditioner compressor, malfunction of. See Camshaft and crankshaft position sensors, malfunction of

Air filters

Issue 49 (Member2Member) Joe Donnelly reports his experience with preferred air filters on Second and Third Generation Turbo Diesels. 15

Air Fuel Control (AFC), failure of O-ring seal

Issue 49 (First Generation) A TDR reader traces hard engine starts to a failed O-ring seal at the fuel pin in the AFC. 18

Air inlet, modified to increase flow

Issue 50 (Back in the Saddle) Scott Dagleish says that the OEM air inlet restricts air flow in his '05 truck, which he modifies in an installation illustrated with photos and advice. 86–87

Air intake system, aftermarket

Issue 49 (Ranch Dressing) John Holmes notes favorable performance of a cold-air intake system fabricated and sold by Performance Systems Manufacturing LLC. 104–105

Issue 49 (TDRelease) Diesel Power Products' press release describes the Scotty Ram Air III system for Third Generation trucks which offers cooler, better airflow. 160

Issue 52 (Have Ram, Will Travel) Joe Donnelly tells of a new air intake system made by Scott Pirsak which reportedly lowers exhaust gas temperatures by as much as 200 degrees. 95

Issue 52 (Polly's Pickup) Polly Holmes installs a Cool Flow blue-hose air intake kit on her Turbo Diesel and claims that it significantly improves efficiency and performance. 116

Issue 52 (TDRelease) Edelbrock markets a "Power Package" kit containing a matched air intake system offering three levels of performance, adjustable shift points, rev limits, and downloadable upgrades designed to deliver enhanced power. 164

Air intake system, testing of

Issue 52 (24-Valve Engines) TDR members rehearse methods for checking the pressure of the air intake system, to identify a leaking gasket as the cause of a shrieking noise related to boost. 38

Air intake systems, effect on fuel economy

Issue 52 (Four Whaling) According to Greg Whale, there are so many variables that the addition of an air intake system is likely to have only minimal impact on fuel economy. 79

Airtabs

Issue 50 (Ranch Dressing) Airtabs, an airstream-shaping accessory, contributes to greater vehicle stability on the road, John Holmes maintains. 108

Alternative fuels. See Fuel, alternatives to diesel

Alternator, failure to charge

Issue 52 (First Generation) Readers consult to determine that failure of alternator to charge in a First Generation truck was caused by a mismatched harmonic balancer. 28

Alternator bracket, tendency to crack

Issue 52 (Third Generation) A reader notes the TSB on cracked alternator brackets of early '03 model engines, and provides step-by-step instructions for replacing them. 42

Anderson, Jim, autobiographical sketch

Issue 49 (Idle Clatter) Jim Anderson tells about his several careers with things mechanical and his present life as a fulltime RVer and as columnist, diplomat, and information source for the TDR. 92

Anti-theft switch, do-it-yourself installation of

Issue 50 (Member2Member) A TDR reader advises care in electrical re-assembly when installing an anti-theft switch in the clutch circuit. 16

Arm-check assembly. See Tailgate drop-support cable**Armstrong, Bruce, autobiographical sketch**

Issue 52 (Tailgating) In a career managing auto dealerships and writing for cycle and boat magazines, Bruce Armstrong's life interest has always been in avocational mechanical work on his vehicles and boats, in design and hands-on modification. 8

Autobiographical sketches of TDR writers (in a continuing series). See entries under the following topic heads: Armstrong, Bruce; Anderson, Jim; Barnes, Mark; Bunn, Don; Cameron, Kevin; Dalgleish, Scott; Donnelly, Joe; Holmes, John; Holmes, Polly; Khol, Ron; Memmolo, Sam; Mikonis, Andy; Nelson, Brad; Stockard, Bill; Walker, James; Whales, Greg

Automatic transmission fluid (ATF), leaking

Issue 51 (Technical Topics) In Second Generation trucks, deteriorating transmission fluid cooler lines will leak, a problem that can be corrected by replacing fittings and lines. 50

Automotive styling, design deficiencies of

Issue 49 (Khol Fusion) Ron Khol disparages the stylistic design of contemporary passenger vehicles, which he says resemble cartoon cars, most typically in Japanese autos, but even in Chrysler and Mercedes products. 113–114

Auxiliary transmission. See Transmission, auxiliary**Axle U-joints, worn. See Death wobble, cause and correction; See U-joints, loose and worn in Third Generation trucks****Axle wrap, problems with**

Issue 51 (12-Valve Engines) Problems with wheel hop and bucking while towing a heavy trailer are traced to axle wrap, which may be addressed by installing traction bars and heavier spring on the throttle cable. 16

Backup camera

Issue 50 (Idle Clatter) "A perfect Christmas gift" is how Jim Anderson characterizes a weatherproof, closed circuit TV camera to be mounted on the rear of the truck for safety and better control when backing up. 101

Backup lights, aftermarket

Issue 50 (Ranch Dressing) Especially in areas with poorly lighted night streets, an aftermarket backup light such as that made by White Night is a useful accessory, says John Holmes. 108

Issue 50 (Product Showcase) An accessory necessary in Brad Nelson's experience is better backup lights than the OEM super-dim units, a judgement few experienced drivers of the Turbo Diesel truck would dispute. 154

Barnes, Mark, autobiographical sketch

Issue 49 (Motor-Minded) Regular columnist Mark Barnes writes up a case history on himself. 80–83

Battery, overheating of. See Battery charging system, malfunction of**Battery charging system, malfunction of**

Issue 50 (First Generation) A reader traces erratic battery charging and overheating to a failing battery. 22

Bed side rails, homemade of wood

Issue 50 (Khol Fusion) Ron Khol describes his fabrication of wooden bed side rails, for protection, for mounting attachment fixtures, and for a retro look. 118

Biodiesel fuel, pros and cons

Issue 50 (Have Ram, Will Travel) Joe Donnelly notes reports of problems in fuel hoses traced to use of biodiesel fuel and speculates on potential problems in injection pumps and lift pump seals unless special elastomers are used. 94

Issue 50 (Idle Clatter) Jim Anderson recommends limiting any use of biodiesel fuel to the 95/5 proportion of petroleum diesel to bio, as advised by Cummins. 102

Issue 50 (Ranch Dressing) John Holmes advises against use of biodiesel fuel in Turbo Diesel trucks, citing possible problems in electronically fuel-injected engines, compromise of warranty, and economic disadvantage. 110

Issue 51 (Blowin' in the Wind) While biodiesel fuel is politically attractive and receives government subsidy, it is economically counter-productive, leading a chemist at the University of California to declare that "we are being duped." 56

Issue 51 (Blowin' in the Wind) The editor does the math and demonstrates that present and projected annual production of biodiesel fuel would provide a minute percentage of demand, and notes widespread concern over its quality. 57

Issue 52 (Four Whaling) Cummins does not approve of burning vegetable-based cooking oils in a diesel engine, and has taken no stand on using commercially refined 95/5 mix of diesel and bio, while Bosch recommends no higher proportion of bio. 80

Issue 52 (Idle Clatter) Salvaged vegetable oil is unsuitable for fueling the Cummins engine, and while industrially refined biodiesels may be politically correct, users should be cautious in using them until costs and effects are fully understood. 103

Issue 52 (Backfire) In dialog with a reader, Elton C. Sheets, the editor revisits the vexed subject of biofuel, with closer scrutiny of the Forbes article cited in Issue 51, to present both sides of issue. 155–156

Block heater, accessory

Issue 50 (Khol Fusion) For a diesel truck driven in cold-weather climates, a block heater is an essential accessory, explains Ron Khol. 116

Block heater cord, parts source

Issue 51 (Third Generation) Readers compare notes on sourcing a block heater cord for the Cummins Turbo Diesel engine. 24

Blower motor, overheating of

Issue 51 (Technical Topics) A recall of Second Generation trucks prescribes installing a blower motor relay to remove the blower motor circuit from the ignition switch, to avoid overheating, stalling, and steering column/instrument panel fire. 49

Boost intake pressure leaks, troubleshooting

Issue 51 (24-Valve Engines) Readers compare notes on troubleshooting boost intake pressure leaks. 18

Boost readings, as tool in diagnosing engine performance. See Turbocharger boost specifications**Brake, parking, cable replacement in**

Issue 51 (First Generation) The part number for the rear parking brake cables in First Generation trucks is identified by a TDR reader, who states his preference for the genuine Mopar part. 13

Brake drum, rear, removal of

Issue 51 (First Generation) Specs and procedures, together with complete exploded view of parts, are provided for removal and reassembly of rear brake drum on a First Generation truck. 14

Brake failure, concurrent with HVAC and 4WD malfunction

Issue 51 (Technical Topics) According to Whale and Anderson, any time the brakes and HVAC act strangely simultaneously, suspect the vacuum source for a problem where the hose connects to the 4WD shift collar. 49

Brake light switch, short in

Issue 50 (12-Valve Engines) A reader discovers that the cause of failure in his cruise control was a short in the brake light switch harness. 28

Brake pad and rotor, abrasive friction in

Issue 50 (First Ride) James Walker explains the physics of adherent and abrasive friction as factors in the durability and performance of brake systems. 72–73

Brake pads, guide to selection of

Issue 51 (First Ride) In a guide for selecting brake pads, James Walker differentiates between non-asbestos organic, ceramic, and semi-metallic pads, advising that because there are no fixed rules for labeling, performance should be the basis for choice. 80–82

Issue 52 (Member2Member) Robert Patton elaborates on James Walker's article in Issue 51, pp. 80–82, on the lack of uniform standards in marketing brake pads, supported by text from an exposé in "Consumer Reports." 16

Issue 52 (Ranch Dressing) When brake pads need replacing, John Holmes recommends switching to ceramic pads, which reduce noise, dust and wear, and improve stopping performance. 110

Brake rotors, thickness variation (TV), causes and consequences

Issue 50 (First Ride) James Walker tells how to prevent and deal with Thickness Variation (TV) in brake rotors, a common cause of vibration and excessive wear. 73–74

Brakes, ABS (anti-skid)

Issue 49 (Khol Fusion) Ron Khol recounts his experience with anti-skid brakes, and maintains that a seasoned driver will be able to maneuver a turn on a slippery surface about as well without them as with them. 110

Issue 51 (Ranch Dressing) John Holmes advises that the ABS hydraulic system should be bled only when the Hydraulic Control Unit (HCU) is replaced. 107

Brakes, front pads, Second Generation, uneven wear

Issue 49 (First Ride) James Walker notes a tendency to uneven wear (i.e., longitudinal taper) in front brake pads standard on the Second Generation truck, due to use of single-piston caliper. 84

Brakes, servicing

Issue 51 (Ranch Dressing) In performing a brake job, servicing and replacing related hardware is as important as pads, shoes, drums and rotors, says John Holmes, who recommends a complete Mopar kit. 107

Brake vibration, causes and corrections

Issue 50 (First Ride) The commonest cause of brake vibration is rotor thickness variation (TV), which James Walker explains within a general instruction on the Turbo Diesel truck brake system. 72–75

Bucking in rear axle. See Axle wrap, problems with

Bumper, front, heavy-duty, aftermarket

Issue 50 (Have Ram, Will Travel) Joe Donnelly identifies considerations determining a suitable bumper for supporting a heavy Warn winch, and describes its fabrication by Reunel Manufacturing. 96–97

Bumper, rear, heavy-duty, aftermarket

Issue 52 (Back in the Saddle) In providing for a heavier tow capacity, Scott Dalgleish describes the installation of a heavy-duty rear stainless bumper by Reunel, of Maxwell, California. 90–91

Bunn, Don, autobiographical sketch

Issue 52 (Tailgating) Don Bunn recounts his on-the-job mechanical training on Navy ships during the Korean War, experience which disposed him to a career of technical research and as author of authoritative histories of the Dodge truck. 7

BUS devices for vehicle electronic computer systems, defined

Issue 49 (Ranch Dressing) John Holmes defines terms identifying BUS systems instrumental in computer control devices, including the CAN bus; the PCI bus; and the Hybrid-Communication Bus System, a combination of the first two. 106

CAFE (Corporate Average Fuel Economy) standards

Issue 51 (Ranch Dressing) John Holmes reveals CAFE mpg requirements proposed to be effective in 2011 for all trucks, vans, pickups, and SUVs in six categories. 107

Cameron, Kevin, autobiographical sketch

Issue 49 (Exhaust Note) Kevin Cameron traces his interest in engines to articles read as a child in the Britannica, continuing through schooling in physics, then racing and building motorcycles, until maturity steered him into motor journalism. 164

Cam follower cover gasket, difficulty in seating of

Issue 52 (First Generation) Difficulty in seating a cam follower cover gasket on a First Generation Turbo Diesel may be corrected with a new rubber washer and weather strip adhesive, according to Joe Donnelly. 26

Camper Special Group, factory option

Issue 50 (Khol Fusion) Although he does not mount a camper in his truck, Ron Khol finds persuasive reasons for electing the factory option of the Camper Special Group. 117

Camshaft and crankshaft position sensors, malfunction of

Issue 51 (Technical Topics) Symptoms of a failed camshaft or crankcase position sensor include malfunction of cruise control, air conditioner compressor, engagement of overdrive in automatic transmission, or clutch lockup. 50

Catalytic reduction of nitrous oxides

Issue 51 (Exhaust Note) Kevin Cameron provides a clear explanation of chemical processes at work in the production of nitrous oxides and available techniques for ameliorating the problem through post-combustion treatment of gases. 152

CB radio, accessory

Issue 50 (Khol Fusion) Ron Khol presents reasons for equipping a truck with a CB radio, although other communications equipment has made its use less critical for some road travels. 117

Issue 50 (Product Showcase) Brad Nelson argues that a CB radio is faster than a cell phone for communication within a group of vehicles on the road, and advises the purchase of an inexpensive Cobra 29. 154

Chains, for pulling and towing, grades and ratings

Issue 52 (Backfire) Joe Donnelly provides information inadvertently missing in a table in Issue 51, p. 36, enumerating grades and ratings of tow chains—specifically column heads, which should read, from left to right: 5/16 in, 3/8 in, 1/2 in, 5/8 in. 154

Chassis frame, hydroformed

Issue 49 (Khol Fusion) Ron Khol speculates that a squeak in his '02 Ram, and reports by others of cracked boxes in '02 and '03 trucks, may result from inadequate torsional rigidity in the hydroformed frames used in these models. 112

Chevrolet Duramax/Allison, 3500 dually

Issue 49 (Celebrity Corner) Sam Memmolo evaluates his Chevy Duramax/Allison 3500 dually pickup, and describes the installation in it of an automatic transmission, a demonstration featured in one of his TV shows. 89–90

Citizen's responsibility, opinion-editorial by Ron Khol

Issue 51 (Tailgating) As part of a memorial to Ron Khol, the editor reprises an editorial by Khol emphasizing the responsibility of citizens for their political freedom and individual well-being. 4

Clutch, manual, aftermarket

Issue 52 (Have Ram, Will Travel) Joe Donnelly chose the South Bend clutch for a manual transmission to achieve the best compromise between torque capacity and quality and cost for high horsepower Turbo Diesel trucks. 96

Clutch, NV5600 transmission, replacing of

Issue 50 (24-Valve Engines) Scott Reece traces his procedure in replacing the clutch in an NV5600 six-speed transmission, illustrated with a step-by-step series of sixteen photographs. 36–39

Clutch information update. See Transmission, manual, clutch information update

Continuously Variable Transaxle (CVT)

Issue 52 (Ranch Dressing) In the 2007 Dodge Caliber, Chrysler will debut its version of the Continuously Variable transmission (which provides an infinity of gear ratios to maintain engine RPM in optimum power range), reports John Holmes. 111

Coolant, abnormally elevated temperature

Issue 50 (24-Valve Engines) Readers find a common solution to high coolant temperature resulting from dirt-clogged radiator fins. 34

Coolant, contaminated with engine oil. See Oil intercooler, testing for oil contamination of coolant

Coolant leak between block and headgasket

Issue 49 (First Generation) Readers compare notes and agree that coolant seepage between the engine block and headgasket is common on First Generation trucks. 18

Coolant overflow tank breather, extending of

Issue 49 (Backfire) Bill Stockard provides information on proper hose size for extending the coolant breather overflow, data missing from the instructions in Issue 48, p. 43, because a line was inadvertently dropped during printing of the magazine. 146

Coolant plug, leak from

Issue 50 (Third Generation) A leak from a pipe plug in the cylinder head can be eliminated by tightening it and, if necessary, applying an anaerobic pipe thread sealant. 41

Coolants, comparison of products

Issue 51 (Idle Clatter) Jim Anderson reviews Cummins' prescription of approved coolants and describes the new Fleetguard "ES Compleat," now the preferred product. 101

Coolant temperature sensor, location of

Issue 51 (12-Valve Engines) The location of the engine coolant temperature sensor is identified in a figure illustrating components of the fuel system. 17

Cooling system, service and maintenance

Issue 52 (Ranch Dressing) John Holmes reviews basics for proper servicing and maintenance of the Turbo Diesel's cooling system. 110

Crankcase, oil capacity

Issue 50 (Backfire) For the record, the editor prescribes the oil capacity for all Cummins engines in Turbo Diesel trucks through 2005:12 quarts. 148

Issue 51 (Idle Clatter) Noting some confusion about amount of oil required in an engine oil change, Jim Anderson sets the record straight and provides the definitive specifications. 101

Crankcase breather overflow

Issue 49 (Ranch Dressing) Citing a TSB, John Holmes describes a kit for '98–'02 Turbo Diesel rigs designed to eliminate overflow from the crankcase breather when offroad at a downhill angle of 22 degrees, warning of a complicated installation. 103

Crankcase oil drain plug, replacement

Issue 49 (12-Valve Engines) Readers solve the problem of deteriorating seal of the original plug in the crankcase by replacing it with a heavy-duty plug listed in the Geno's Garage catalog. 20

Issue 50 (Celebrity Corner) As an example of a "favorite accessory," Sam Memmolo spotlights the EZ Change oil drain plug setup, which he has added to his two diesel trucks. 92

Crankcase oil pan, removal of

Issue 52 (24-Valve Engines) The procedure is described for lifting the engine from its mounts preparatory to removing the oil pan, necessary to replacing the crankshaft sensor in the 24-valve engine. 37

Crankcase vent, oil dripping from

Issue 50 (24-Valve Engines) A reader describes his solution to oil dripping from the crankcase breather hose, in a device he calls "the old sock system," which involves wrapping a cotton sock around the breather hose extension. 34

Crankshaft position sensor (CPS), replacing

Issue 51 (Idle Clatter) Jim Anderson describes the function and replacement of the crankshaft position sensor, its operation, and what can go wrong with it, in the several model years. 102–104

Issue 52 (24-Valve Engines) TDR readers agree on the way to replace the crankshaft sensor, requiring removal of the oil pan, which in turn requires lifting the engine from its mounts. 37

Cruise control, malfunction

Issue 49 (First Generation) A TDR reader remedies his problem with intermittent cruise-control dropout by installing a capacitor to filter electrical "noise." 16

Issue 50 (12-Valve Engines) Readers compile an extensive list of possible causes of a malfunction in the cruise control, including corroded grounds, wiring shorts, and failed switches. 28

Issue 51 (Technical Topics) On '89–'98.5 trucks, battery acid corrosion from driver-side battery is liable to cause a failure of the cruise control. 50

Cummins diesel engine in Dodge, summary of specifications, statistics, improvements

Issue 49 (Chapter News) Joe Donnelly reviews the comprehensive information presented at May Madness 2005 by Dennis Hurst on the Cummins diesel engine in Dodge applications, with emphasis on recent improvements. 143–144

Dalgleish, Scott, autobiographical sketch

Issue 50 (Tailgating) Scott Dalgleish recounts his long fascination with motor vehicles, from early hot rods, through years in construction, to his latter-day career in auto journalism, including his writing for TDR. 7

Dashboard, removal of

Issue 50 (First Generation) TDR readers combine know-how and instructions for easy removal of the dashboard from First Generation trucks. 24

De-icing chemicals, damage from

Issue 49 (Khol Fusion) Ron Khol decries the heavy use of increasingly corrosive chemicals by highway departments in de-icing roads, which is damaging to vehicles, infrastructure, and the environment. 115–116

Dealership, reader's endorsement of

Issue 49 (Letter Exchange) A TDR member expresses his appreciation of the careful attention he received from John Holmes and Carson Dodge. 7

Death Wobble, cause and correction

Issue 51 (Technical Topics) Worn front end parts can lead to the phenomenon of "death wobble," triggered by crossing a seam in the road at an angle to direction of travel. 46

Diagnostic trouble codes, interpretation of

Issue 51 (Celebrity Corner) Sam Memmolo explains the system of diagnostic trouble codes used in managing the power train, with tips on interpreting code signs, and on using scanning tool and diagnostic flow charts. 90–91

Issue 51 (Ranch Dressing) While acknowledging the usefulness of diagnostic trouble codes, John Holmes maintains that they do not diagnose many drivability problems and that there is no substitute for practical technical experience and hands-on testing. 107

Issue 52 (Third Generation) John Holmes notes that because there is no single reference for interpreting trouble codes and because interpretation is so complex, it is best to consult dealer technicians. 42

Diesel engine, effect of short commutes on longevity and efficiency

Issue 49 (Third Generation) TDR members share concerns about the effect of short-distance driving practice on longevity and efficiency of the engine, reporting no dire consequences. 32

Diesel engine design, future developments in

Issue 50 (Ranch Dressing) John Holmes surveys some plans and projections for future development in design of diesel engines. 110

Diesel fuel, contaminated with bootleg waste oil

Issue 52 (Ranch Dressing) John Holmes warns that some filling station operators mix "dump diesel" (drained from tanks to which gasoline was added by mistake) with fuel sold at the pump, a potential hazard that drivers should be alert to. 109

Diesel fuel, price differential compared to gasoline

Issue 51 (Blowin' in the Wind) The oil industry attempts to justify a higher price for diesel fuel than for premium gasoline in spite of a lower cost for refining diesel, flying in the face of common sense, says the editor. 56

Issue 52 (Blowin' in the Wind) Continuing his discussion of the price differential between diesel and gasoline in Issue 52, p. 56, the editor marshals some additional information providing at least a partial explanation for the disparity. 62

Diesel Hot Rod Association (DHRA)

Issue 50 (Chapter News) The 2005 Diesel Hot Rod Association (DHRA) National was held at Indianapolis Raceway Park in late June, featuring sled pulls and drag racing, a sponsorship to be repeated in late November at the Houston Memorial Races. 144–145

Diesel Technology Forum, essay contest winner

Issue 52 (Blowin' in the Wind) A poem by Sandy Buley, reproduced in this issue of TDR, won a contest sponsored by Diesel Technology Forum for students writing on "Why I Love My Diesel." 66

Diesel truck industry and the competitive market: design, politics, economics

Issue 49 (Blowin' in the Wind) Robert Patton surveys press predictions of continued poor market-share for American diesel-powered passenger cars, but speculates on an increasing manufacture in light and heavy-duty diesel pickup trucks. 44–46

Issue 49 (Blowin' in the Wind) GM's and Ford's competitive disadvantage is reflected in, and exacerbated by, demotion of bond status by Standard & Poors, according to press report. 46

Issue 49 (Blowin' in the Wind) GM's health-care costs undermine its ability to compete in automotive manufacturing, according to widely reported financial information. 46

Issue 49 (Blowin' in the Wind) The editor reports press predictions that further consolidations among heavy-duty truck manufacturers will drastically reduce consumer choices among brands in this market. 48

Issue 49 (Blowin' in the Wind) To document the steep decline in the Big Three's industrial base, the editor cites press reports of continuing declines in production work forces. 48

Issue 49 (Blowin' in the Wind) Chrysler group scraps its 7-year/70,000 mile powertrain warranty to shift money into dealer marketing efforts. 49

Issue 51 (Blowin' in the Wind) After attending the Diesel Technology Forum's annual as TDR's representative, the editor concedes that he has no evidence or even rumor to confirm a Diesel Renaissance in America. 52

Issue 51 (Blowin' in the Wind) The editor reviews an editorial in Motor Trend evaluating contrasting constraints on emissions in Europe and in the U.S., concluding that diesels are at a disadvantage in the latter market. 53

Issue 51 (Blowin' in the Wind) The editor reviews an article in Forbes that identifies the five things necessary to turn around the misfortunes of General Motors. 58

Issue 52 (Blowin' in the Wind) The editor continues his regular monitoring of news media to assess the likelihood of a substantial increase in diesel's share of the truck market, finding encouraging but inconclusive signs of improvement. 63–64

Issue 52 (Blowin' in the Wind) The editor notes encouraging news in automotive media reporting diesel's fuel cost advantages in the face of rising oil prices and announcements of new diesel-powered vehicles by Mercedes-Benz, Honda, and Nissan. 64

Issue 52 (Blowin' in the Wind) Robert Patton continues his quarterly analysis of the impact of increasingly severe emissions standards on future diesel design and market competition. 64–65

Issue 52 (Blowin' in the Wind) The editor cites media reports on Ford's ballooning warranty costs resulting from serious design problems and performance failures of its 6.0-liter Power Stroke engine. 65

Differential, torque specifications, corrections of the Manual

Issue 49 (Member2Member) Joe Donnelly alerts TDR readers to errors in the Manual's specification of torque force for cover bolts. 15

Differential cover, aftermarket

Issue 50 (Back in the Saddle) Scott Dalglish says that Mag-Hytec covers and pans, the original molds for which he had a hand in making, remain a favorite accessory. 76

Issue 50 (Back in the Saddle) Scott Dalglish, in accessorizing his 2005 Turbo Diesel, teams up with Jim Leonard to install Mag-Hytec's cover for the American Axle 11.5 inch differential. 80

Issue 50 (Ranch Dressing) The extra protection Mag-Hytec covers and pans afford to components below deck resolves John Holmes to install these accessories in his work trucks. 108

Issue 52 (Have Ram, Will Travel) To replace his satisfactory but ugly stock front transmission cover, Joe Donnelly chooses a Mag-Hytec product, which offers improved functionality and good looks. 96–97

Dodge Charger, '06 model

Issue 49 (Ranch Dressing) John Holmes reviews the '06 Dodge Charger, which he says combines muscle-car power, sports-car handling, and cutting-edge technology. 106

Dodge Chassis Cab model, first commercial pickup in the Turbo Diesel series

Issue 52 (Truckin' through the Internet) Robert Patton and Steve St. Laurent provide specs and photos of Dodge's first commercial work truck in the Turbo Diesel series, equipped with a 6.7 liter engine, unveiled March 1 in Atlanta and available 1/1/07. 118–121

Dodge Nitro SUV, to be introduced in 2007

Issue 52 (Ranch Dressing) According to John Holmes, Dodge plans to introduce a new mid-size SUV, named "Nitro," which will share driveline components with the Jeep Liberty but have distinctive styling. 110

Dodge pickup trucks, specialized designs, configurations, and models

Issue 49 (Ranch Dressing) John Holmes describes some specialized Dodge pickups on his dealership's lot, including The Dodge Ram SRT-10, the Ram Daytona in fancy dress, the Dodge Ram Power Wagon, and the Ram Rumble Bee. 103

Dodge Ram Daytona. See Dodge pickup trucks, specialized

Dodge Ram Mega Cab 2006

Issue 49 (Idle Clatter) Jim Anderson explains why the Mega Cab pickup will not be offered in a long-bed configuration. 97

Issue 50 (TDRReview) The Ram Mega crew cab pickup, for which Dodge boasts "largest" figures in an array of dimensions, is evaluated by Robert Patton and G.R. Whale, with contrasting and sometimes conflicting conclusions. 52–56

Dodge Ram Power Wagon. See Dodge pickup trucks, specialized

Dodge Ram Rumble Bee. See Dodge pickup trucks, specialized

Dodge Ram SRT-10. See Dodge pickup trucks, specialized

Dodge truck, box-off cab model

Issue 49 (Idle Clatter) Jim Anderson opines that Dodge's box-off cab offering is of little use to most members and asks when Dodge will offer a heavier-duty truck for towing. 97

Donnelly, Joe, autobiographical sketch

Issue 52 (Tailgating) Joe Donnelly mentions salient facts in his academic, professional, and technical career. 7

Door hinges, repair of

Issue 49 (First Generation) Owners of First Generation trucks deal variously with the common failing of the lower door hinge. 17

Issue 52 (Idle Clatter) A hinge kit discovered on the "HELP" rack of miscellaneous parts found in an auto parts store provides a cheap alternative to the complete Mopar hinge assembly. 103

Door weatherstrip, replacement of

Issue 49 (First Generation) A reader assists another in finding a source for replacement door weatherstripping on his First Generation truck. 17

Dowel pin problem

Issue 51 (Technical Topics) Whale and Anderson revisit the dangers of, and the solutions for, the "killer dowel pin problem" in Second Generation trucks. 50

Driving safety rules, revisions in

Issue 50 (Ranch Dressing) Advances in technology have changed some rules for safe driving, particularly in braking, estimating tire inflation, and steering in an emergency, according to John Holmes. 110

Dual mass flywheels (DMF), possible benefits

Issue 49 (Ranch Dressing) John Holmes speculates on future installation of dual mass flywheels and whether it would be effective in isolating and dampening harmonic problems in the drivetrain of Cummins-Dodge trucks. 104

E-mail, TDR etiquette

Issue 50 (Idle Clatter) Because of high traffic in e-mail use, Jim Anderson sets forth some necessary rules for electronic mail to the TDR. 101

EarthRoamer, renovation of

Issue 51 (Your Story) Bill Swails recounts his 20-month renovation of his original EarthRoamer "ER2K" expedition vehicle and reports on a rendezvous with six Ford-based EarthRoamers in southeastern Utah. 64–66

Emissions control devices. See also Selective Catalytic Reduction

Issue 49 (Technical Topics) The editor identifies and explains in-cylinder and aftertreatment technology for complying with increasingly demanding EPA regulation. 52–56

Emissions control technology, glossary of terminology

Issue 49 (Technical Topics) The editor provides a glossary of terminology employed in technical discourse on diesel exhaust emissions control. 53

Emissions regulations

Issue 49 (Technical Topics) The editor surveys and explains current and pending legislative regulation of diesel exhaust emissions, concentrating on two components, NOx and particulate matter. 50–56

Issue 51 (Idle Clatter) Jim Anderson criticizes Federal emissions standards governing diesel fuel which, unlike regulations in Europe, do not balance its lower carbon dioxide emissions against its higher oxides of nitrogen emissions. 100

Issue 52 (Blowin' in the Wind) The editor presents a somber picture of difficulties facing the industry in meeting the legislated restrictions on NOx, effective in 2007. 64–65

Engine, overheating, in '89-'91.5 trucks

Issue 51 (Technical Topics) Causes and fixes of engine overheating peculiar to '89-'91.5 trucks are described by Whale and Anderson. 48

Energy independence, balancing priorities in national policy

Issue 52 (Backfire) Bruce Armstrong reviews the constraints facing policy makers in seeking national energy independence while attempting to balance safety, emissions standards, and fuel economy. 153

Engine Control Module (ECM/ECU), correction of misinformation on reprogramming of

Issue 51 (Letter Exchange) A reader is undeceived in the notion that the ECM can be re-programmed by sleight-of-hand manipulation of the ignition key. 10

Engine Control Unit (ECU/ECM), download re-flash module

Issue 50 (TDRRelease) Bully Dog announces an ECU Downloader called the Triple Dog Power Pup, which re-flashes the ECU to change program settings for increased horsepower. 167

Engine oil, assessment of soot contamination and schedule of change

Issue 49 (Idle Clatter) Jim Anderson explains the process of soot buildup in diesel engine oils and emphasizes the value of scheduled oil change. 96

Engine oil, input funnel, improvised

Issue 50 (Letter Exchange) As an oil-fill funnel, a reader suggests using a one-liter mouthwash bottle upside down with the bottom cut out, the cap threading of which exactly fits the threads of the rocker arm cover. 12

Engine oil pressure sensor, removing the connector from

Issue 50 (12-Valve Engines) Readers provide instructions for correctly removing the electrical connector from the engine oil pressure sensor. 30

Engine serial number, locating the label

Issue 49 (Third Generation) A reader identifies where the engine serial number is inscribed on Third Generation trucks. 35

Engine shutoff, automatic, aftermarket

Issue 51 (Ranch Dressing) John Holmes describes and praises the automatic engine shutoff component in the PowerMaxCR performance module for '03 and newer truck engines. 108–109

Engine stand

Issue 49 (Member2Member) Joe Donnelly provides instructions, with a list of components, for building an engine stand out of wood, for either the 12-valve or the 24-valve engine. 14

Engine startup, malfunction concurrent with fuel leak

Issue 51 (Technical Topics) Decayed hoses to lift pumps may explain fuel leaks and difficulty in starting the engine. 50

Engine startup, problems. See also Air Fuel Control, failure of O-ring

Issue 49 (First Generation) Readers trace problems in engine startup to a leaking lift pump. 18

Issue 50 (12-Valve Engines) Readers enumerate causes of, and offer corrections for, hard startup and other problems in the low-pressure fuel system in 12-valve engines. 26

Issue 50 (Idle Clatter) Corroded or burned contacts within the solenoid can cause all sorts of starting problems, according to Jim Anderson, who recommends a kit sold by Larry B. 104–105

Issue 50 (Idle Clatter) When the starter tests okay but the engine will not turn over, a likely explanation is corroded battery cables, which should be cleaned at both ends. 104

Issue 51 (Third Generation) Scott Dalglish identifies the problem of excessively long delay in engine startup in vehicles with the G56 manual transmission, explains it, and cites relevant Technical Service Bulletin. 24

Issue 51 (Technical Topics) Worn and pitted starter solenoid contacts may cause a failure of the starter to properly engage and disengage. 47

Issue 51 (Technical Topics) In Third Generation trucks, problematic fuel lift-pumps are being replaced by dealers with the in-tank pumps standard on '05 trucks. 51

Issue 52 (12-Valve Engines) Readers discover that problems with the fuel shutoff solenoid account for intermittent hard starting in a 12-valve engine. 35

Issue 52 (Idle Clatter) Jim Anderson learns from experience of readers in diagnosing various electrical problems at the root of engine failure, erratic startups, and false show of battery failure, which call for more use of a multimeter than a wrench. 104

Issue 52 (Backfire) TDR staff corrects the TSB number for the re-flash for correcting long-start problems. 152

EPA emissions rules, effective in 2007. See Emissions regulations

Events 2005

Issue 49 (Out Standing in the Field) In this issue TDR presents the calendar of events, both those reserved for Turbo Diesels and those open to other diesel pickups, scheduled in 2005, including the following:

- Fifth Annual Sandia Showdown, Nov. 12, at Auge's Dodge, Belen, NM. 122
- Scheid Diesel's Diesel Extravaganza, Aug. 26–28, Terre Haute, IN. 123
- Second Annual High Desert Roundup, ATS Diesel, Sept 24–25, Palmdale, CA. 123
- Weekend on the Edge, Sept. 9–10, Ogden, UT. 123

Issue 50 (Out Standing in the Field) Auge's annual Sandia Showdown, Nov. 12, Belen, NM. 126–128

Issue 51 (Out Standing in the Field) Joe Donnelly reports on Augie's Sandia Showdown 2005, November 12 featuring well-attended competitions and vendor presentations. 93

Events 2006

Issue 49 (Out Standing in the Field) In this issue TDR presents the calendar of events, both those reserved for Turbo Diesels and those open to other diesel pickups, scheduled in 2006, including the following:

- Twelfth Annual May Madness, May 1–6, Pahrump, NV. 126
- Turbo Diesel Tech 2006, June 21–23, CERAland RV park, Columbus, IN. 127

Issue 50 (Out Standing in the Field) In this issue TDR presents the calendar of events, both those reserved for Turbo Diesels and those open to other diesel pickups, scheduled in 2006, including the following:

- Twelfth Annual May Madness TDR Western Regional Rally, May 1–6, Pahrump, NV. 130–131
- Turbo Diesel Tech (eastern regional national-type rally), June 21–23, Columbus, IN, is scheduled to coincide with the Diesel Hot Rod National Meet nearby in Indianapolis. 132–133

Issue 51 (Out Standing in the Field) In this issue TDR presents the calendar of events, both those reserved for Turbo Diesels and those open to other diesel pickups, scheduled in 2006, including the following:

- Twelfth Annual May Madness 2006, May 1–6, Pahrump, NV. 134–135
- Turbo Diesel Tech, June 21–23, Columbus, IN. 136–137

Issue 52 (Out Standing in the Field) In this issue TDR presents the calendar of events, both those reserved for Turbo Diesels and those open to other diesel pickups, scheduled in 2006, including:

- Nor-Cal Diesel Rally, June 17, Reading, CA. 141
- Twelfth Annual May Madness, May 1–6, Pahrump, NV. 142–143
- Turbo Diesel Tech 2006, June 21–23, Columbus, IN. 144–145

Exhaust brake, aftermarket

Issue 51 (Back in the Saddle) Scott Dalglish describes the Jacobs exhaust brake and its installation, available for Turbo Diesel trucks model years '03–'06 with manual transmission, and now the '06 with automatic. 88–89

Issue 51 (TDRRelease) Pacbrake publicizes its new exhaust brake kit, the PRXB for models '03 and later, providing constant backpressure as engine speed changes, thereby maintaining optimum retarding performance through the entire rpm range. 148

Exhaust brake, an inexpensive fix for a failed unit

Issue 52 (Member2Member) A reader whose exhaust brake failed is advised by technicians in Prince Rupert, B.C., to try WD-40, an inexpensive fix for a gummed up vacuum switch. 16–17

Exhaust brake, as an essential accessory

Issue 50 (Idle Clatter) According to Jim Anderson, the addition of an exhaust brake to a tow vehicle is not only essential to safety but will pay for itself in extension of the life of service brakes. 100–101

Issue 50 (Ranch Dressing) An exhaust brake is an essential accessory in mountain driving, John Holmes opines; according to him several brands do the job: Banks, BD, Pacbrake, Mopar/Cummins/Jacobs. 108

Issue 50 (Life's a Beach) Jerry Nielsen asserts that he would not be without an exhaust brake on any diesel he drives. 122

Exhaust brake, explanation of technology

Issue 52 (Technical Topics) In an article addressed to a female audience, Polly Holmes deftly explains the function of the exhaust brake for a diesel engine. 24

Exhaust brake, use with automatic transmission, where approved

Issue 49 (Third Generation) Beginning with model year '06, the Jacobs exhaust brake, and only the Jacobs brake, is allowed for use with the 48RE automatic: full explanation and details. 35

Issue 50 (Ranch Dressing) Cummins has announced that an exhaust brake is now approved for installation in the new '06 Ram equipped with automatic transmission, according to John Holmes. 108

Exhaust manifold bolts, servicing of

Issue 49 (24-Valve Engines) Readers are reminded of a TSB on possibility of manifold bolts working loose and the prescribed fix. 28

Issue 50 (Letter Exchange) A reader notes a need for care in tightening bolts securing the exhaust manifold retention straps. 12

Exhaust system, aftermarket

Issue 52 (Technical Topics) Polly Holmes explains why exhaust temperature is crucial and identifies the advantages of aftermarket air boxes. 24

Issue 52 (TDRRelease) Banks offers what it calls the Monster Dual Exhaust for '03–'06 Turbo Diesel trucks and claims it will reduce backpressure up to 98% and increase flow area by more than 100% over stock. 166

Exhaust temperature, prudential upper limit of

Issue 52 (Idle Clatter) Noting that the pistons in the Turbo Diesel engine are made from material that begins to melt at 1400 degrees, Jim Anderson advises that 1300 degrees is at the limit of tolerable exhaust temperature. 105

Extended warranties. See Warranties, extended, counsel on advisability of**Extraction gear. See Four-wheel driving, off-road recovery, equipment and strategies****Fan clutch, replacement parts for First Generation trucks**

Issue 50 (First Generation) A reader finds sources for a fan clutch on the First Generation pickup. 22

Fan hub bearing, sourcing

Issue 50 (First Generation) A reader provides a source for the fan hub bearing of both the pre-intercooler and the intercooler version of First Generation trucks. 22

Fifth-gear nut problem. See Transmission, NV4500, fifth-gear nut problem**Fifth-wheel trailer hitch, lubricant**

Issue 49 (TDRRelease) Soy TRUK is a bio-based fifth-wheel grease that remains stable at high temperatures and reduces wear, according to the vendor, Orison Marketing. 159

Filters, preferred

Issue 50 (Product Showcase) Robert Patton lists his personal favorites among oil, fuel, and air filters. 150

Five Points Tour

Issue 49 (Five Points Tour) The TDR continues its sponsorship of the Five Points Tour for members, designed to be self-directed but with rules enough for structure, recognition, and accomplishment. 120–121

Issue 50 (Five Points Tour) The TDR sponsors and maintains a program for continent-wide travelers named The Five Points Tour, spelling out rules and benefits for members. 162–163

Fleetguard Enviroguard, to eliminate oil blow-by

Issue 52 (24-Valve Engines) Several readers agree on the merits of the Fleetguard Enviroguard to eliminate oil blow-by. 37

Floor mats

Issue 50 (Khol Fusion) Floor mats are so essential, according to Ron Khol, that he has three owner-installed layers on top of the factory-installed carpeting. 116

Fog lights, accessory

Issue 50 (Khol Fusion) Besides an occasional need to drive in fog, Ron Khol presents reasons for equipping a truck with fog lights. 117

Ford pickup, retrofitted to a Cummins diesel engine

Issue 49 (Letter Exchange) Rich Dillon presents pictorial evidence of the results of retrofitting a '01 F350 with a '97 Cummins, 12-valve engine. 8

Four-wheel driving, off-road recovery, equipment and strategies

Issue 51 (Member2Member) Continuing his review of recovery equipment for off-road use of four-wheel rigs, Joe Donnelly reviews heavier-duty winches and mounts, shackles, chains and straps, wires & cables, snatch blocks, hooks, and anchors. 28–44

Freedom in America, patriotic gratitude for

Issue 50 (Letter Exchange) Brad Nelson expresses his patriotic gratitude for freedom in America and pays tribute to soldiers on the field of battle, fighting to protect that freedom. 12

Fuel, alternatives to diesel. See also Biodiesel; See also Propane, injection system

Issue 50 (Idle Clatter) Jim Anderson advises caution in the use of propane, vegetable-based cooking oils, and biodiesel alternatives in the Cummins Turbo Diesel engine. 102

Fuel additives, re-evaluation of their use

Issue 52 (Member2Member) The editor re-evaluates his reservations about use of diesel fuel conditioner in light of the introduction of Ultra Low Sulfur Diesel fuel (ULSD). 15

Issue 52 (Idle Clatter) Jim Anderson says that he has begun running a fuel additive in his big truck, hoping to boost cetane rating, lubricate injectors, and improve mileage; but it is too soon to accurately evaluate possible benefits. 103

Issue 52 (Backfire) The editor amends his long-held stance that fuel additives are inadvisable; in light of recent information, he identifies several branded products acceptable for maintenance of the '98.5 and later model Turbo Diesels. 154

Fuel Economy Project, update

Issue 50 (Back in the Saddle) Scott Dalglish provides photos of instruments installed on his vehicle in preparation for fuel economy studies he will report in future issues of the TDR. 90

Issue 52 (Back in the Saddle) Scott Dalglish describes the several modifications he has made in his rig in his Fuel Economy Project, including All Terrain TA/KO tires, synthetic oils and lubes, Six-Gun Tuner, and VG turbochargers. 84

Fuel efficiency, comparison of, in Europe and America

Issue 51 (Four Whaling) Boasting that he is an efficiency fiend, G.R. Whale tells his experiences driving rental SUVs in America and what he can expect from vehicles and fuel costs in Germany. 72–74

Fuel efficiency, effect of performance enhancement boxes

Issue 52 (Third Generation) With an eye to possible improvements in fuel economy, the editor compares the performance of the Edge EZ and the Edge Juice modules. 40

Fuel efficiency, gasoline vehicles vs. diesel

Issue 51 (Ranch Dressing) John Holmes cites a Kiplinger article comparing fuel costs in operating Mercedes gasoline and diesel vehicles to demonstrate that diesel holds the edge, even with diesel fuel costing more than gasoline. 106

Fuel efficiency, improvement of

Issue 49 (First Ride) James Walker amends his Issue 48 mileage report, citing improved fuel efficiency after his first 10,000 miles and the addition of a bed cap. 86

Issue 51 (Third Generation) In an informative and useful explanation, Doug Leno describes aftermarket modules effective in enhancing fuel efficiency. 22–23

Issue 51 (Blowin' in the Wind) Brad Nelson rehearses the tried-and-true wisdom that, to save on fuel, the best resort is lower driving speed and less aggressive acceleration. 52

Issue 51 (Blowin' in the Wind) Bruce Armstrong tests and finds valid an axiom found in Lyle Cummins' book that "600 degrees gave the lowest fuel consumption"; although that figure was for a 1934 Auburn, Bruce maintains it works for his Cummins Dodge. 52

Issue 51 (Back in the Saddle) Scott Dalglish examines ways to improve fuel efficiency, particularly by altering aerodynamics and adding an auxiliary transmission, with asides on R&D by several leaders in aftermarket performance enhancement. 84–87

Issue 51 (Have Ram, Will Travel) Joe Donnelly says that fuel efficiency is improved by timing and injector enhancements, but degraded by modifications that increase wind resistance, while driver habits remain critical. 92

Issue 51 (Ranch Dressing) John Holmes dissents from the popular concern over high fuel prices, maintaining that fuel prices are normal in terms of real wages and the historic value of fuel. 106

Issue 51 (Life's a Beach) By using cruise control and keeping highway speed to 60 mph or lower, Jerry Nielsen finds that he increases fuel efficiency by 3 mpg while hauling his 14,000 lb. fifth-wheel. 124

Issue 51 (Exhaust Note) In a purely theoretical description, Kevin Cameron explains the inter-relationship between oil film shear, boost, and rpm, in determining fuel efficiency in internal combustion engines. 152

Issue 52 (Back in the Saddle) In an analysis of the Dodge Cummins truck as "an energy machine," Scott Dalgleish evaluates the significant variables under headings of vehicle condition and driving habits. 88–89

Issue 52 (Idle Clatter) Jim Anderson says that a reasonable average for fuel mileage is a range between 15 and 19 mpg, unloaded and in combined city and highway driving, a performance he suggests can be improved by prudent driving habits. 102–103

Fuel filter, instructions for changing

Issue 49 (Third Generation) Instructions are provided for removing and replacing the fuel filter, with added reference to TDR Issue 45, p. 68. 32

Fuel filter, leak from. See also Fuel filter drain valve, blocked

Issue 50 (12-Valve Engines) A leak from the fuel filter, which is not uncommon, may be caused by a defective valve, as well as by a worn O-ring at the valve or at the double banjo fitting at the input. 26

Fuel filter, new Fleetguard

Issue 52 (Member2Member) The editor reports that Fleetguard has released a new fuel filter effective to 7 microns, as compared to the 10 microns of the filter it replaces. 15

Fuel filter drain valve, blocked

Issue 50 (12-Valve Engines) A reader discovers the cause of excessive pressure and a leak in his fuel filter to be a fouled overflow valve. 28

Issue 50 (Third Generation) A reader provides a simple procedure for clearing blockage of the drain valve in the fuel filter. 40

Fuel gauge, inaccurate reading

Issue 51 (Technical Topics) Often the only fix for the fuel gauge's failure to register is to drop the fuel tank and replace the sender. 47

Fuel heater/pre-strainer, clogged. See Low power, in 12-valve engines, troubleshooting of

Fueling box, TST PowerMacCR, test of. See Fueling box power enhancement, test of

Fueling box power enhancement, test of

Issue 49 (Third Generation) In the third of his series evaluating fueling box power enhancements, Doug Leno presents the results of his analysis of the TST PowerMaxCR. 36–43

Issue 49 (Third Generation) Mark Chapple contests Leno's test conclusions (Issue 49, pp. 36–43), maintaining that stock turbos are adequate with the TST PowerMaxCR powerbox when it is the only power addition and modified according to instructions. 43

Fueling enhancement module

Issue 51 (Third Generation) Citing the importance of recognizing industry contributions, Doug Leno spotlights the 65-horsepower, non-adjustable Quadzilla tuning module, as deserving mention for both fuel economy and reasonable cost. 22–23

Fuel injection pump, instructions for replacing

Issue 50 (First Generation) A reader provides instructions for replacing the fuel injection pump on a First Generation Cummins Turbo engine. 22

Fuel injection pump, leak

Issue 49 (First Generation) Readers pool their solutions to a leaking VE injection pump, including replacing seals and installing a governor spring. 16

Fuel injection pump, VP44 failure

Issue 50 (Idle Clatter) Jim Anderson recommends installing a fuel pressure gauge to provide against the low pressure that would lead to failure of the VP44 fuel injection pump in the '98.5–'02, 24-valve engine. 102

Fuel injector, clogged

Issue 52 (Ranch Dressing) Fuel injector failures in Third Generation trucks may be caused by the high detergency of the new Ultra Low Sulfur Diesel fuel (ULSD), which flushes sediment from storage tanks into vehicle fuel tanks, says John Holmes. 109

Fuel injector, failures of

Issue 52 (Idle Clatter) Jim Anderson advises avoiding overlong idling, particularly in cold weather, and putting the Turbo Diesel under full load for sufficient time to reach temperatures that burn off moisture harmful to injectors. 103

Fuel injector, replacement of

Issue 51 (Have Ram, Will Travel) Joe Donnelly describes injector replacement procedures for successive models of the Cummins engine: '89–'98.4, 12-valve; '98.5–'02, 24-valve; '98.5–'02; '03–'06, common rail, injected 24-valve. 94–99

Issue 52 (First Generation) Readers provide suggestions for tools, both special and improvised, for removing and replacing the injectors on a First Generation truck. 28

Issue 52 (12-Valve Engines) Joe Donnelly and a TDR member describe their handmade tools for removing the injectors in the 12-valve Turbo Diesel engine. 32

Issue 52 (Third Generation) A TDR member provides full instructions for removing and re-installing fuel injectors in the Turbo Diesel engine, with advice, cautions, and nineteen photographic illustrations. 46–50

Fuel injector cleaners, discretionary use of

Issue 52 (Idle Clatter) Jim Anderson says that heretofore he had resisted using additives to clean injectors, but he is currently testing their effectiveness. 103

Fuel injectors in 2005 trucks, problems with

Issue 50 (Ranch Dressing) John Holmes notes a significant number of problems in injectors in 2005 trucks, conjecturing possible faulty design or perhaps incompatibility with fuel currently available and for which they were not designed. 111

Fuel leak at injector lines

Issue 52 (First Generation) Readers give instructions for cleaning and tightening the lines when replacing injectors in a First Generation truck. 28

Fuel leak at primer button, repair of

Issue 51 (12-Valve Engines) A fuel leak at the primer button is corrected by installing a new O-ring. 16

Fuel overflow valve, failure of

Issue 51 (Technical Topics) Low fuel system pressure, with consequent low power, may be caused by a failing fuel overflow valve. 51

Fuel pressure, proper range

Issue 50 (12-Valve Engines) Readers determine the proper range of pressure at the fuel filter input, both at idle and under load. 28

Fuel pressure gauge, advisability of

Issue 50 (24-Valve Engines) Robert Patton says that all 24-valve owners should purchase and install a fuel pressure gauge. 32

Issue 50 (Idle Clatter) Because the VP44 fuel injection pump is lubricated by diesel fuel and low pressure leads to its failure, a pressure gauge should be installed to monitor this parameter, according to Jim Anderson. 102

Issue 50 (Ranch Dressing) John Holmes traces repeated failure of the VP44 injection pump to abnormally low fuel pressure and strongly recommends installing a fuel pressure gauge on trucks with this pump. 109

Issue 52 (Letter Exchange) The editor explains that most problems with the VP44 injection pump can be traced to the fuel transfer pump, preventable by installing a fuel pressure gauge. 11

- Issue 52 (Idle Clatter) Jim Anderson recommends fuel pressure gauges, particularly in vehicles equipped with the VP44 injection pump; advises on type and installation of gauge; and establishes range of tolerable psi readings. 102
- Fuel pump, FASS, work-around for mounting**
Issue 50 (Ranch Dressing) John Holmes devises a way to mount the FASS fuel pump where it competes for space with running board brackets, by using "strong tie connectors" available at Home Depot. 108–109
- Fuel return line, failures of, in 12-valve engines**
Issue 51 (Technical Topics) The rubber portion of the fuel return line is liable to fail in 12-valve engines because of topical engine heat. 51
- Fuel shutdown solenoid, alternative part for replacement of**
Issue 52 (First Generation) Readers discover a less expensive Bosch part number for an identical shutdown solenoid. 30
- Fuel shutdown solenoid, replacement with a PTO cable, recommendation**
Issue 51 (Technical Topics) The fuel shutdown solenoid on '94–'98 12-valve trucks has a history of malfunction which can be remedied by replacing it with a cab-controlled cable to move the fuel shutdown arm. 50
- Fuel shutdown solenoid switch, servicing of**
Issue 49 (First Generation) A reader provides instructions for servicing a leaking seal in the fuel shutdown switch. 17
- Fuel siphoning, technique for draining the tank**
Issue 49 (Third Generation) Instructions are provided for a safe and efficient method of siphoning for draining the fuel tank. 32
- Fuel spillage, on fender of Third Generation truck, prevention of**
Issue 51 (Technical Topics) The design of the fuel input on Third Generation trucks allows occasional spillage onto the fender, which may be prevented by drilling a hole in the plastic collar around the opening. 51
- Fuel system, Second Generation trucks, problems with**
Issue 49 (From the Shop Floor) Andy Redmond comprehensively describes the low pressure fuel system in Second Generation trucks, identifying potential problems in fuel level sending unit, heating element, transfer pump, overflow valve—with remedies. 148–152
- Fuel system contamination. See Ultra Low Sulfur Diesel, potential problems**
- Fuel tank, '03–'06 trucks, aftermarket**
Issue 52 (TDRelease) Transfer Flow Inc. introduces a 56-gallon fuel tank for '03–'06 trucks, fabricated of 12- and 14-gauge aluminized steel. 162
- Fuel tank, for long bed trucks, aftermarket**
Issue 49 (Life's a Beach) Jerry Nielsen showcases a new fuel tank made by Aero Tanks for Third Generation long-bed trucks with hydroformed frame, to increase capacity to over 60 gallons. 119
- Fuel tank, for short bed truck, aftermarket**
Issue 51 (Life's a Beach) Jerry Nielsen describes a newly designed dual fuel tank, made by Aero Tanks, including a donut tank mounted above the spare tire, totaling 60 gallon capacity, for the Third Generation short bed truck. 120
- Fuel tank, removal of**
Issue 49 (From the Shop Floor) Andy Redmond provides practical instructions for draining and removing the fuel tank on the Turbo Diesel truck. 148
- Fuel tank, modifying vent of**
Issue 52 (Back in the Saddle) Scott Dalglish describes modification of his fuel tank to permit a total fill, but with a warning that original expansion space is compromised. 87
- Fuel tank and toolbox combo, aftermarket**
Issue 50 (TDRelease) Two models of fuel tank and tool box combo providing for manual refilling of the carrier truck or other vehicles are described by Transfer Flow. 165
- Fuel transfer (lift) pump, bleeding after re-installing**
Issue 51 (24-Valve Engines) The method for bleeding the fuel transfer pump assembly after re-installing is briefly rehearsed. 18
- Fuel transfer (lift) pump, engine-mounted vs. in-tank**
Issue 52 (24-Valve Engines) The editor and member Mark Herbstrith exchange opinions on choosing between the engine mount and the in-tank location for the fuel lift pump, with note taken of John Holmes' preference for the FASS fuel pump system. 36
- Fuel transfer (lift) pump, FASS**
Issue 49 (Ranch Dressing) John Holmes reports favorably on his experience with the FASS high performance fuel pumps. 104
- Fuel transfer (lift) pump, in-tank, kit for '03 and '04 trucks**
Issue 50 (Ranch Dressing) Henceforth failed fuel lift pumps in the '03 and '04 trucks are replaced by Dodge with the new '05 in-tank lift/transfer pump, reports John Holmes. 108
- Fuel transfer (lift) pump, in 24-valve engines, retrofit kit**
Issue 51 (Ranch Dressing) John Holmes disagrees with Patton's advice to stay with the Cummins fuel/lift transfer pump in 24-valve engines (Issue 50, p. 32), arguing instead for either the Mopar retrofit kit or aftermarket models. 108
- Fuel transfer (lift) pump, in 24-valve engines, retrofit kit, conflicting opinions**
Issue 50 (24-Valve Engines) Andy Redmond describes the procedure for installing a Mopar retrofit kit for the fuel transfer pump on '98.5–'02 Turbo Diesel trucks with a unit similar to the OEM design on '05-up trucks. 32
Issue 50 (24-Valve Engines) The editor strongly advises against installing the retrofit kit described by Andy Redmond in the preceding column, suggesting instead the purchase of a spare Cummins transfer pump. 32
- Fuel transfer (lift) pump, leaks in seal. See Engine startup, problems**
- Fuel transfer (lift) pump, proper pressure range of**
Issue 50 (First Generation) The proper range of pressure specified for the fuel lift pump in First Generation trucks is less than that for '94 and later models. 24
- Fuel transfer (lift) pump, proper size nut for attaching to bracket**
Issue 49 (Backfire) A reader offers a polite correction of the nut size specified for attaching a fuel transfer pump to its bracket, in Issue 48, p. 100. 146
- Fuel transfer (lift) pump, rate of flow, importance of**
Issue 52 (Ranch Dressing) John Holmes says that flow is more important than pressure in evaluating the performance of a lift pump, reminding the reader that DC stipulates a minimum rate of flow to and through the VP44 of 48 ounces in 30 seconds. 111
- Fuel transfer (lift) pump, replacement of**
Issue 48 (Member2Member) To augment the article in Issue 48, p. 98, Joe Donnelly provides additional suggestions and fine points for replacing the lift pump of both the 12-valve and the 24-valve engines. 14
- Gauges, A-pillar mount**
Issue 50 (Product Showcase) Pyrometer and boost gauge—both essential—should be visible without the driver taking his eyes from the road: a criterion fulfilled by the SPA A-pillar mount, says Doug Leno. 160–161
Issue 51 (From the Shop Floor) Andy Redmond installs the A-pillar mount cover (Mopar ZL39TL2AA) onto a '06 Mega Cab, to accommodate boost and EGT gauges. 144–145
Issue 52 (Polly's Pickup) Polly Holmes installs a transmission temperature gauge in an A-pillar mount made for a Viper truck in her Turbo Diesel, and provides the part number in Geno's catalog. 116

Gauges, basic information on

Issue 52 (Technical Topics) Polly Holmes provides basic information on the function of the several gauges designed to monitor performance of the engine and transmission in Turbo Diesel trucks, addressed to female readers of the TDR. 20

Gauges, boost, benefits of use

Issue 51 (The Way We Were) The editor explains the use of the boost gauge as a tool for diagnosing engine performance, emphasizing its value and low cost. 63

Gauges, failure to register

Issue 51 (Technical Topics) Failure of gauges to register properly may result from a poor ground, easily corrected by running a new ground. 47

Gauges, installation, instructions for

Issue 52 (Third Generation) A TDR member describes the procedure he followed for installing an Isspro EV three-gauge dash mount system on his '04 Turbo Diesel. 42–45

Gauges, operating, essential accessory

Issue 50 (Celebrity Corner) Temperature gauges are a necessity on trucks with enhanced power, boost, and EGT, according to Sam Memmolo. 92

Issue 50 (Idle Clatter) Jim Anderson tells how to interpret boost and pyrometer gauges, accessories he considers essential. 100

Issue 50 (Ranch Dressing) John Holmes says that operating gauges are standard accessories on all his trucks. 108

Issue 50 (Life's a Beach) Among essential accessories, Jerry Nielsen lists pyrometer, boost gauge, automatic transmission temperature gauge, and—on trucks with the VP44 fuel pump—fuel pressure gauge. 122

Gear-shift shaft, aftermarket replacement of

Issue 50 (TDRRelease) BD Power has made a kit with a replacement shifter shaft that reduces lever travel by 20% for smoother, more compact shifting. 166

Governor pressure solenoid and sender, replacing of

Issue 49 (24-Valve Engines) TDR members provide details and instructions for removing and replacing the governor pressure sensor and solenoid, complete with photos of the assembly. 30

Issue 52 (24-Valve Engines) Several readers find it necessary to replace the governor pressure solenoid and the governor pressure sender in order to correct the automatic transmission's launching in second gear. 38

GPS (Global Positioning System) receiver. See also Maps, musings upon

Issue 50 (Khol Fusion) Ron Khol explains several uses, besides locating position, of a modestly priced GPS, or "Global Positioning System." 117

Issue 50 (Product Showcase) The function and merits of a dash-mounted GPS are exemplified in the Garmin 2620, purchased, tested and endorsed by Bill Stockard. 153

Grid heater, characteristic cycle, explanation of

Issue 51 (24-Valve Engines) A TDR member explains the grid heater's operational cycle. 20

Grill guard

Issue 50 (Khol Fusion) Ron Khol argues for adding grill guards to any truck. 117

GTL (gas-to-liquid) diesel fuel

Issue 49 (Exhaust Note) Kevin Cameron explains the chemistry of GTL, a fuel made from natural gas, which burns cleaner and more efficiently than the usual petroleum-derived diesel. 164–165

Head bolts, advisability of replacing when replacing gasket

Issue 52 (First Generation) The consensus is that old head bolts should also be replaced when replacing a head gasket, although Joe Donnelly says that he has reused them. 28

Headlights, failure

Issue 51 (Technical Topics) A common cause of headlight failure is overloading the parking circuit with trailer lights, a problem solved by adding a relay to take the increased load. 49

Headlights, servicing and maintenance

Issue 51 (Ranch Dressing) John Holmes provides useful servicing tips for maintaining optimal performance of headlights, including those with halogen bulbs. 108

Heater, cab, malfunction of

Issue 51 (First Generation) Readers identify possible causes of the heater failing to heat the cab in First Generation trucks, with suggestions for possible fixes of the problem. 13

Issue 52 (First Generation) A deteriorated rubber grommet and connector at the firewall is identified as cause of an inability to move the heater vent doors in the cab of a First Generation truck. 30

Hemi engine, history of early development at Chrysler

Issue 49 (Backfire) Ronald Khol digs deeper in research to correct mph figures on a Hemi-powered P-47 manufactured by Chrysler during WWII. 146

Issue 51 (Chalk Dust) Bill Millard begins his account of the hemi engine at Chrysler with the power plant of the 1951 New Yorker and traces the saga through the '66–'71 Street Hemis powering the Dodge Charger R/Ts and Plymouth Hemi 'Cudas and GTXs. 116–118

High-mileage trucks, anticipating overhauls and parts replacement in

Issue 50 (Idle Clatter) Jim Anderson says it can be anticipated that at 225,000 miles a Turbo Diesel truck will need an alternator, a clutch, and perhaps a transmission rebuild. 102

Holmes, John, autobiographical sketch

Issue 50 (Tailgating) John Holmes recounts his lifelong fascination with things mechanical, from garage mechanics as a kid, through 30 years of design engineering, until his present position as service panjandrum at Carson Dodge and TDR writer. 8

Holmes, Polly, autobiographical sketch

Issue 50 (Tailgating) Polly Holmes reveals that she has always been involved with trucks, cars, and racing, in one way or another—interests that mesh perfectly with those of her sidekick in ranching and vehicle-tending. 9

Holset Super 40 and Pro52 turbochargers, upgrades

Issue 49 (Ranch Dressing) Following his practice of providing readers information on upgraded products, John Holmes notes the availability of the Holset 40 (easy to install) and the Pro52 (requiring serious modifications to the engine). 106

Honors and recognition awards

Issue 49 (TDR/R/R) TDR adds to its roster of honorees for referral to membership, high mileage, and other distinctions in the Turbo Diesel world. 128–133

Issue 50 (TDR/R/R) TDR adds to its roster of honorees for referral to membership, high mileage, and other distinctions in the Turbo Diesel world. 134–140

Issue 51 (TDR/R/R) TDR adds to its roster of honorees for referrals to membership, high mileage, and other distinctions in the Turbo Diesel world. 138–142

Issue 52 (TDR/R/R) TDR adds to its roster of honorees for referrals to membership, high mileage, and other distinctions in the Turbo Diesel world. 146–151

Hood scoop, installation of vent duct work for

Issue 52 (Have Ram, Will Travel) Joe Donnelly replaced the stock hood on his Turbo Diesel with the scoop hood from the Viper truck, the SRT-10; and built a vent duct to the air box, reducing exhaust gas temperature by 50 to 100 degrees. 95

Hoses, silicon, kit

Issue 49 (Life's a Beach) Jerry Nielsen publicizes a set of high-performance silicon hoses, including all engine, transmission, bypass and intercooler hoses, complete with clamps, in distinctive blue color, available from Mr. Bob's Distributing. 118

Hot Rod Magazine annual Power Tour

Issue 50 (Life's A Beach) Jerry Nielsen tells of his participation in the 2005 Hot Rod Magazine annual Power Tour accompanying the Banks gang as they inspect hundreds of souped-up trucks and rods. 120–122

Hudson Hornet, retrofitted to a Cummins diesel engine

Issue 49 (Your Story) Paul Graber tells of his 84-year-old father's 14-month project to fit a 1953 Hudson Hornet with a 1990 Cummins 6BT engine. 72

Hydraulic brake booster, troubleshooting, repair, and replacement

Issue 51 (From the Shop Floor) Andy Redmond presents and interprets a troubleshooting chart for diagnosing and correcting problems with the "Hydro-Boost" hydraulic brake booster on models '97 and later. 146–147

Hydroformed frame. See Chassis frame, hydroformed

Idle-Up, new feature permitting control of idle speed in models '05 and later

Issue 51 (Third Generation) A new feature called "Idle-Up," compatible with models '05 and later, requires installation of an aftermarket clutch switch kit, but provides additional idle warm-up control. 26

Idle speed, adjusting

Issue 49 (12-Valve Engines) TDR readers rehearse the proper adjustment of engine idle speed for the 12-valve Turbo Diesel engine. 22

Issue 50 (12-Valve Engines) Readers consult on the need for, and the methods of, adjusting the screw that sets idle speed. 26

Idle speed, gradual engine speedup in standard Turbo Diesels

Issue 51 (Third Generation) The editor cites the owner's manual to explain the Turbo Diesel's characteristic of gradual engine speed-up during extended idle, which he calls the "Creepy Cummins." 26

Index, TDR issues 45-48

Issue 49 (TDRReview) This index to Issues 45–48 accesses technical information arranged by topic with brief informative annotations. 58–67

Injection pump. See Fuel injection pump

Insulation, aftermarket spray-on product

Issue 50 (Celebrity Corner) Sam Memmolo promotes a product called Lizard Skin to provide thermal insulation and dampen unwanted noise, applied like paint with a spray gun to floor pans, firewalls, doors, and undersides of roofs. 92

Intake manifold heater grids, replacing relays in

Issue 52 (12-Valve Engines) Readers provide part numbers and instructions for replacing the relays in the intake manifold heater grids in the 12-valve engine. 34–35

Intercooler, contaminated

Issue 52 (Have Ram, Will Travel) Joe Donnelly describes the procedure for removing and cleaning a contaminated intercooler. 98–99

Iraq, American diesel fans soldiering in the Middle East

Issue 52 (Your Story) John Bodenhamer recounts experiences of three buddies serving in the 10th U.S. Cavalry, 4th Infantry Division, under fire in Iraq, and the harsh conditions in which they and their Cummins-powered vehicles serve. 68

Jacobs exhaust brake, approved for '06 automatic transmission. See Exhaust brake, use with automatic transmission, where approved

Jeep Liberty Diesel

Issue 49 (Ranch Dressing) John Holmes enumerates reasons for his approval of the Jeep Liberty diesel, particularly its matching of the five-speed automatic to the engine's torque characteristics. 102–103

Journalism, automotive, in the popular media

Issue 49 (Khol Fusion) Ron Khol lambastes journalists in the popular media for their ill-informed and prejudicial reporting on American automotive products, exemplified by the widespread unfair coverage of General Motors as bland and lackluster. 114–115

Khol, Ron, autobiographical sketch

Issue 51 (Tailgating) Ron Khol tells the story of his life in terms of his love for, work with, and writing about machinery, engines, and trucks. 5

Khol, Ron, memorial

Issue 51 (Tailgating) Robert Patton pays tribute to Ron Khol, marking the passing of an esteemed TDR writer. 4

Kore adventures. See Off-road racing, Turbo Diesel pickup truck

Leaks, various— See the following topic heads:

- Air intake system, testing of;**
- Automatic transmission fluid (ATF), leaking;**
- Boost intake pressure leaks;**
- Coolant leak between block and headgasket;**
- Coolant plug, leak from;**
- Crankcase vent, oil dripping from;**
- Door weatherstrip, replacement of;**
- Engine startup, malfunction concurrent with fuel leak;**
- Fuel filter drain valve, blocked;**
- Fuel filter, leak from;**
- Fuel injection pump, leak;**
- Fuel leak at injector lines;**
- Fuel leak at primer button, repair of;**
- Fuel transfer (lift) pump, leaks in seal;**
- Oil intercooler, testing for oil contamination of coolant;**
- Oil vent breather, blowby and dripping from;**
- Power steering pump, servicing to correct leak at;**
- Speedometer sensor, leaking, repair of;**
- Vacuum pump seal, oil leak at**

Leather seats

Issue 50 (Khol Fusion) The merits of factory-option leather seats are argued by Ron Khol. 117

Lights, pulsating. See Voltage surges

Lights, upgrading fog lights and driving lights

Issue 49 (Idle Clatter) Jim Anderson offers advice on improved driving with fog lights, and suggests installation of the Brite-Box, which permits use of high and low beams and the fog lights together. 95

Load-leveling suspension system, aftermarket

Issue 51 (Life's a Beach) Jerry Nielsen describes the adaptation of a single trailing-arm rear air-suspension system, designed for a one-ton dually by Air Lift Company, fitted to his one-ton, short bed, single rear wheel Turbo Diesel pickup. 122–123

Low power, in 12-valve engines, troubleshooting of

Issue 51 (Technical Topics) Whale and Anderson explore several suspect causes of low power and smoke complaints in the 12-valve engine, including failing fuel overflow valve, loose intercooler piping, clogged fuel heater/pre-strainer. 51

Low power, in 24-valve engines, troubleshooting of

Issue 51 (Technical Topics) Restrictions in fueling, with consequent loss of power, may be caused by poor electrical connections at MAP and/or AIT sensors. 51

Lubricant, trailer hitch, fifth-wheel. See Fifth-wheel trailer hitch, lubricant

Lubricant filling funnels, custom-made

Issue 50 (Have Ram, Will Travel) Fabricated from copper elbows and adapters found at Home Depot, handy lubricant filling funnels make it easy to fill the NV5600 transmission, says Joe Donnelly. 99

Lubricants, basic information on

Issue 52 (Technical Topics) Polly Holmes reviews basic information on which to base choice of lubricants. 20

Lubricants, engine oil, new specifications, 2007

Issue 49 (Technical Topics) The editor alerts readers to new engine oil specifications, intended to reduce ash in extended maintenance of aftertreatment emissions devices, scheduled for introduction in 2007. 55

Issue 51 (Blowin' in the Wind) The editor notes that current Cummins engines need not change to the new CI-4-Plus classification, but that with the release of the 2007 engine, the required oil will advance to the code CJ-4. 57

Lubricants, engine oil brands, survey of availability

Issue 49 (Idle Clatter) Responding to readers' enquiries, Jim Anderson surveys availability of several engine oil brands and grades. 96

Lubricants, preferred

Issue 50 (Product Showcase) In a survey of his favorites, Robert Patton lists preferences in engine oil, automatic transmission fluid, and differential fluid. 150

Lubricants, synthetic

Issue 52 (Ranch Dressing) After changing to Amsoil synthetic motor oil in the crankcase of the 11-liter Cummins diesel engine in his 42,000 pound motor home, John Holmes reports a significant drop in both engine oil and coolant temperatures. 111

LuK Cerametallic clutch, refinements in. See Transmission, manual, clutch information update

Maintenance and servicing of the Dodge/Cummins Turbo Diesel truck

Issue 49 (Idle Clatter) In what he calls Diesel 101 or The Newbies Corner, Jim Anderson provides essential information and helpful admonitions for maintaining and servicing the diesel truck. 92–93

Issue 49 (Ranch Dressing) John Holmes describes his class in diesel basics, called Care and Feeding of a Ram Cummins, conducted at Carson Dodge/Chrysler in Carson City, Nevada; but also available in print version by post office mail. 106

Issue 52 (Technical Topics) In a resumé she calls "Diesels for Damsels," Polly Holmes explains the workings of the Turbo Diesel and procedures ladies should be aware of in operating and taking care of their expensive and powerful trucks. 18–24

Manifold, aftermarket

Issue 50 (TDRRelease) BD Power offers a "pulse-tuned" manifold designed to help prevent cracks and leaks while increasing performance and response. 166

Issue 52 (TDRRelease) BD offers a replacement "pulse manifold" for power-modified engines, promising superior performance. 164

Manifold Absolute Pressure (MAP) sensors, troubleshooting of. See Low power, in 24-valve engines, troubleshooting of

Manual transmission fluids, substitutes for Mopar brand. See Transmission, NV series, suitable substitute fluids

Map light, auxiliary

Issue 50 (Khol Fusion) Ron Khol explains why he considers an auxiliary in-cab map light a worthwhile accessory. 117

Maps, musings upon

Issue 50 (Motor-Minded) Mark Barnes reflects on maps, both psychological and geographical, and their workings in both our inner life and our practical activities, concluding with high appreciation of Global Positioning Systems. 68–70

May Madness 2005

Issue 49 (Ranch Dressing) In his account of May Madness 2005, John Holmes emphasizes sociability and fellowship, his motorhome and Vipers, concluding with a comment on Dodge's lack of corporate participation in the event. 105

Issue 49 (Idle Clatter) Jim Anderson reports on the 2005 May Madness event, its festivities, personalities, competitions, and general excitement. 99–101

Issue 49 (Polly's Pickup) Polly Holmes reports on winners of Show-n-Shine and Truck Rodeo competitions at 2005 May Madness, as well as some personal notes on friends and events shared in the big Las Vegas event. 108–109

Issue 50 (Polly's Pickup) Polly Holmes provides sidelights on the Pahrump area, which recaptured the down-home atmosphere surrounding early-day May Madness events when held in northern Nevada. 112

May Madness 2006

Issue 49 (Out Standing in the Field) Description, invitation, and registration instructions are provided for May Madness 2006, the premier TDR rally and large-scale event of the year. 126

Memmo, Sam, autobiographical sketch

Issue 51 (Tailgating) Sam Memmo recounts his varied career: aircraft technician; import auto mechanic; race car driver; technical teacher; radio show host; TV show producer and host; and, most recently, Turbo Diesel engine enthusiast. 8–9

Mikonis, Andy, autobiographical sketch

Issue 51 (Tailgating) A TDR writer for the past seven years, Andy Mikonis recounts his interests and experiences as "a Chrysler guy" and Dodge truck fan. 7

Mirrors, extended, aftermarket

Issue 50 (Celebrity Corner) Sam Memmo advocates extendable mirrors on tow trucks, such as the Powervision electrically extendable mirrors he has added to his current Turbo Diesel truck. 92

Mirrors, remote adjustable

Issue 50 (Khol Fusion) To avoid repeated mirror adjustments by alternating drivers, electronically controlled adjustable mirrors are virtually essential, reasons Ron Khol. 117

Muffler elimination kit

Issue 50 (Ranch Dressing) Based on his assertion that "noise is good," John Holmes maintains that installing a muffler elimination kit is a good modification of a Turbo Diesel truck. 108

Issue 50 (Polly's Pickup) A muffler elimination kit described by Polly Holmes permits a larger exhaust and bigger sound. 112

Myths and fallacies among Turbo Diesel owners

Issue 52 (Four Whaling) Greg Whale weighs the truth or falsity of 12 popular myths circulating in the Turbo Diesel world. 78–80

Nelson, Brad, autobiographical sketch

Issue 51 (Tailgating) Brad Nelson recounts his years of experience with farm hauling rigs and a career as an industry journalist. 6

New truck, accessorizing of. See also Accessories, favorite, Robert Patton's list

Issue 50 (Have Ram, Will Travel) Recalling the extended project in which he accessorized his '97 Ram named Sickly, Joe Donnelly itemizes the refinements and accoutrements to Sickly Junior, in a highly instructive list of optional enhancements.

Nitrous oxides. See Catalytic reduction of nitrous oxides

Noise dampener. See Insulation, aftermarket spray-on product

Noises, various. See the following topic heads:

Brake vibration;
Chassis frame, hydroformed;
Dual mass flywheels (DMF), possible benefits [to dampen harmonic vibration];
Shrieking sound related to boost;
Transfer case lever, squeak in;
U-Joints, loose;
Windshield squeaks, in First Generation Trucks;
Windshield wiper, chattering and noisy

Off-road adventuring

Issue 50 (Your Story) Jeannette and Bob Vallier tell the story of their lives in terms of Dodge trucks and adventure off-road in the Intermountain West, driving both a Ramcharger and a '93 Dodge-Cummins Turbo Diesel 4x4. 62–63

Off-road racing, Turbo Diesel pickup truck

Issue 49 (Your Story) In the second of a three-part series, Kent Kroeker continues his account of participation in the 2004 Baja 1000. 68–71

Issue 50 (Kore Adventures) Kent Kroeker narrates the third chapter in his account of Team Kore's race down the Baja peninsula in 2004, fulfilling a dream in his Dodge Turbo Diesel 4x4. 64–65

Issue 51 (Kore Adventures) Kent Kroeker, owner of Kroeker Off-Road Engineering, concludes a serial account of his participation in the 2004 Baja 1000 road race, driving his "Kore" Dodge/Cummins Turbo Diesel. 68–70

Oil filters

Issue 49 (Member2Member) Joe Donnelly says it is a wise investment in engine longevity to replace the engine oil filter regularly and often. 15

Oil intercooler, testing for oil contamination of coolant

Issue 50 (Member2Member) Jim Anderson diagnoses a common cause of oil contamination of engine coolant system and describes testing for a failed inter-cooler, servicing, replacing gaskets, and reassembly. 14–16

Oil pressure gauge, erratic performance

Issue 52 (24-Valve Engines) A defective sending unit is diagnosed as source of problem in erratic readings in the oil pressure gauge of a 24-valve engine. 38

Oil vent breather, blowby and dripping from

Issue 51 (Technical Topics) Vented blowby oil, a minor annoyance that may be mistaken for a significant fluid leak, avoided by attaching a bottle to the vent tube, has been addressed by Dodge in later model trucks, but without complete success. 46

Older model trucks, parts replacement and maintenance. See Preventive maintenance of older model Cummins/Dodge Turbo Diesel trucks

OPOC (Opposed Piston, Opposed Cylinder) diesel engine

Issue 51 (Exhaust Note) Kevin Cameron explains the remarkable efficiency achieved in a two-stroke diesel engine, an experimental design, which balances opposing pistons to achieve low friction and low heat loss and thus greater efficiency. 153

Overdrive, erratic downshifting. See Transmission, automatic, searching between gears

Overdrive, failure to shift into

Issue 52 (First Generation) A faulty crankshaft sensor may be the explanation for an erratic tachometer and a refusal of the transmission to shift into overdrive in a First Generation truck. 26

Overhead console, optional

Issue 50 (Khol Fusion) While he does not find it strictly essential, Ron Khol has convincing reasons for electing the factory option of overhead console providing multiple data readouts. 117

Paint, protection of. See also Wheel flares, aftermarket

Issue 50 (Product Showcase) Andy Redmond evaluates several hood shields, brow guards, and splash guards; and advises using a plastic film to protect rocker panels. 156

PDA (personal digital assistant), for enhanced power and fuel efficiency

Issue 51 (Life's a Beach) Jerry Nielsen describes software developed by Banks for use with a Six Gun Tuner and a PDA (personal digital assistant such as Palm Pilot) to tune, control, and monitor the powertrain in Third Generation Turbo Diesel trucks. 126

Issue 52 (Back in the Saddle) Scott Dagleish combines the PowerPDA with a Six-Gun Tuner to improve fuel economy and describes its installation by Banks Engineering. 85-86

Performance, in vehicles and in life generally, relative criteria for evaluating

Issue 51 (Motor-Minded) In his accustomed philosophical vein, Mark Barnes reflects on criteria, both subjective and objective, for ranking the value of vehicles and life experiences, concluding that personal satisfaction is the final arbiter. 76–78

Performance enhancement. See also Power enhancement (Note: these terms are often used interchangeably by vendors and writers); See also Fueling enhancement

Performance enhancement accessories, evaluating benefits of

Issue 51 (Letter Exchange) A reader commends staff of Geno's Garage for advising her that purchase of performance accessories should be decided by the user's real needs and enlightened expectations. 10

Performance enhancement boxes, comparisons

Issue 52 (Third Generation) The editor reprises the subject of performance enhancement boxes, dealt with at length by Doug Leno in earlier issues, comparing the Edge EZ and the Edge Juice modules, with an eye to fuel/power ratio. 40

Performance enhancements, possible damage from specific modifications

Issue 52 (TDResource) Robert Patton analyzes DaimlerChrysler Warranty Bulletin D-05-8, dated December 2005, to list and describe typical failures that can result from the use of aftermarket performance parts. 60–61

Performance module, aftermarket

Issue 49 (TDRelease) The TS MP-8 is a universal performance module with eight brand-specific programs designed to give 100 extra horsepower and 200 ft.lbs. of torque, according to a press release. 156

Issue 49 (TDRelease) TS Performance presents a performance module named the Ramifier, for the '03–'04 Dodge Rams with the standard Turbo Diesel engine. 156

Issue 49 (TDRelease) In a press release, Edge Products publicizes a pillar-mounted version of its Attitude diesel monitor/controller. 158

Issue 49 (TDRelease) Edge Products offers its performance module named Juice With Attitude, designed for the '04.5 and '05 model Turbo Diesels with the high-output 325/600 diesel engine. 159

Issue 49 (TDRelease) BD Diesel Performance publicizes release of the X-Power Ram performance module for '03-and-up Turbo Diesel, including the 325/610 engine. 160

Issue 50 (TDRelease) Marketed by TS Performance, the MP-8 model works on eight brands of trucks, including the Cummins-Dodge Turbo Diesel; and is

designed to improve horsepower and fuel efficiency. 165

Issue 51 (Ranch Dressing) John Holmes highlights the PowerMaxCR performance module. 108–109

Performance monitor module, aftermarket

Issue 51 (TDRRelease) TS Performance releases information on its MPD performance monitor which has the capacity to project readings of EGT, boost, fuel pressure and RPMs onto the windshield as well as screen display. 148

Pilot bearing, failure. See Transmission, manual, clutch, failure to release

Pilot bearings, avoiding failure of

Issue 49 (Member2Member) Joe Donnelly warns against holding the clutch down while idling, a practice destructive of pilot bearings and throwout bearings. 14

Police, unnecessary closing of highways

Issue 49 (Khol Fusion) Ron Khol pans police who unnecessarily close heavily traversed highways at the least excuse of public safety, accusing them of arrogance learned from watching too many TV cop dramas. 116

Power enhancement. See also Performance enhancement (Note: these terms are often used interchangeably by vendors and writers.); See also Fueling enhancement

Power enhancement, available methods

Issue 51 (Third Generation) Doug Leno identifies and explains methods available to electronically enhance power. 22–23

Power enhancement, custom ensemble installation

Issue 51 (All Dressed Up) Dean Rue, Orangevale Diesel, describes installation and performance of aftermarket components for power enhancement, including turbos, injectors, fuel pump, and clutch. 130

Power enhancement, explanation of technology

Issue 52 (Technical Topics) In her article titled, “Diesels for Damsels,” Polly Holmes explains the rationale and terminology of power enhancement technology. 21

Power enhancements, design constraints and testing of upgrades

Issue 49 (Third Generation) In Part 3 of his analysis of power enhancements, Doug Leno tests the TST PowerMaxCR fueling box, in a truck upgraded with the AATS Aurora 5000 turbocharger, reminding the reader of inherent limitations in stock components. 36–43

Power enhancements, testing and evaluation of. See Power enhancements, design constraints and testing of upgrades

Power steering pump, servicing to correct leak at

Issue 50 (24-Valve Engines) Servicing the power steering pump to correct a leak requires replacing the O-ring at the flow piston and cleaning the piston screen. 33

Powertrain control module (PCM), electrical “noise” interfering with signal from. See Torque converter, erratic locking/unlocking

Preventive maintenance of older model Cummins/Dodge Turbo Diesel trucks

Issue 49 (Idle Clatter) Jim Anderson recounts the merits of his old '94 Turbo Diesel pickup and details the sort of serious servicing and preventive maintenance necessary to keep a vehicle with more than 200,000 miles on the odometer in running order. 94–95

Primer button, fuel leak at. See Fuel leak at primer button

Propane, injection system

Issue 50 (TDRRelease) A propane injection system that automatically adjusts mixture with diesel fuel is publicized by TS Performance. 164

Racing vehicles, diesel. See Diesel Hot Rod Association (DHRA); and Off-road racing, Turbo Diesel pickup

Radiator, draining and servicing of

Issue 49 (24-Valve Engines) TDR readers provide full instructions for draining the radiator, including servicing the petcock. 26

Rail pressure gauge

Issue 50 (Product Showcase) Doug Leno has made a prototype of an analog gauge for measuring rail pressure, instrumental in his evaluations of power enhancements, which he intends to market through Geno’s Garage. 160

Recalls

Issue 49 (Ranch Dressing) John Holmes criticizes the excesses of the media for precipitating what he says was an unnecessary recall of ball joints on the Durango. 104

Issue 50 (TDRSource) Two vehicle recalls apply to some '03 and '04 trucks: a necessary replacement of transmission cooler line; and a necessary removal, inspection, and servicing of powertrain control module connectors. 51

Recovery equipment, off-road winches and related gear. See Four-wheel driving, off-road recovery

Reunel manufacturing facility, description of

Issue 50 (Have Ram, Will Travel) Joe Donnelly describes the personnel, methods, and facilities of Reunel Manufacturing, maker of heavy-duty truck bumpers. 96–97

Running boards. See also Step, powered and retractable

Issue 50 (Khol Fusion) Ron Khol explains why he considers running boards and splash shields to be a functional pair of essential accessories. 116

RV safety clinic, scheduled for May Madness 2006

Issue 52 (Ranch Dressing) As a new feature in the annual May Madness rally, John Holmes projects an RV safety day in downtown Pahrump, 2006. 108

Safety improvement, future technical innovation

Issue 51 (Ranch Dressing) John Holmes adjusts his crystal ball and surveys future innovations to improve vehicle safety, including smart cruise controls, lane departure warning alerts, blind-spot detection, collision-mitigation braking, and so on. 110

Seat cushions, inadequate support from

Issue 51 (Technical Topics) According to Whale and Anderson, a common glitch in Second Generation trucks is the gradual breaking down of seat cushions with consequent lack of support, which owners have addressed through several remedies. 49

Seat heater

Issue 50 (Back in the Saddle) Installation of a seat heater, available from Geno’s Garage, is described and endorsed by Scott Dalgleish. 84–85

Selective Catalytic Reduction (SCR) technology

Issue 49 (Technical Topics) In discussing emissions control technology, the editor notes the likelihood that in both Europe and the U.S., manufacturers will resort to the alternative Selective Catalytic Reduction (SCR) technology. 56

SEMA (Specialty Equipment Market Association) 2005

Issue 51 (Have Ram, Will Travel) Joe Donnelly briefly reviews the 2005 meeting of SEMA, with passing notes on several manufacturers of products shown at the event. 92–93

Issue 51 (Polly’s Pickup) Polly is bemused by the vast collection of products on display at SEMA 2005, four thousand booths featuring dazzling new toys and, seemingly, as many scantily clad young women. 114

Service manuals for First Generation trucks

Issue 49 (First Generation) TDR readers identify a source of factory service manuals for First Generation trucks. 17

Shock absorbers, aftermarket

- Issue 49 (TDRRelease) In a press release, Superlift Suspension Systems offers a complete family of shock absorbers for a full range of applications. 158
- Issue 50 (Product Showcase) The Rancho RS9000X adjustable shock absorbers meet the exacting standards of Bill Stockard, who gives them a thumbs up. 152
- Issue 52 (Have Ram, Will Travel) To add lift to his Turbo Diesel truck after having installed a heavy Reunel front bumper and a winch, Joe Donnelly replaced stock shocks with a KORE suspension system. 94

Shock absorbers, evaluating condition of, and need to replace

- Issue 49 (Idle Clatter) Jim Anderson describes the signs that shocks need replacing, and identifies types and brands. 96

Short commutes, effect on engine. See Diesel engine, effect of short commutes

Shrieking sound related to boost

- Issue 52 (12-Valve Engines) A shrieking noise related to boost is traced to a gasket leak in the air intake system. 38

Siphoning, fuel. See Fuel siphoning

Sleeper, retrofitted

- Issue 50 (All Dressed Up) In an extreme makeover of his Turbo Diesel, member Larry Buckland lengthened the chassis and installed a modified Peterbilt sleeper, completing the transformation with a total of 90 lights. 141

Smell of oil, objectionable, vented into cab

- Issue 51 (Technical Topics) In 24-valve trucks a heavy oil smell may result from the crankcase breather tube venting fumes into the cab, and may be addressed by extending the breather outlet away from the fan air stream. 47

Smoke, white, at cold starts

- Issue 52 (Ranch Dressing) John Holmes says that white smoke at cold starts, especially in high elevations, is not remarkable, and that operators may therefore disregard the "Check Engine" warning light associated with these conditions. 109

South Bend dual disk clutch, characteristics of. See Transmission, manual, clutch information update

Speedometer, malfunctioning

- Issue 50 (First Generation) A reader traces an erratic speedometer to a broken wire at the plug to the sensor. 22
- Issue 51 (First Generation) Readers troubleshoot cause of a failure in the speedometer of First Generation trucks, focusing on repair of the gear reducer. 13

Speedometer, recalibration of, when changing tire size

- Issue 49 (24-Valve Engines) TDR member explains the signal path to the speedometer and procedure for recalibration. 28

Speedometer sensor, leaking, repair of

- Issue 51 (First Generation) The correct size O-ring is provided by a reader to correct a leak in the speedometer sensor at the driver side of the transmission in a First Generation truck. 14

Starter problems, aftermarket product designed to prevent

- Issue 52 (TDRRelease) Larry B's Solenoid-saver is designed to protect the starter from back-feeding power to the shut-down relay which would result in the starter remaining engaged and cranking, with eventual damage to the solenoid on the injection pump. 162

Starter solenoid contacts, replacement kit

- Issue 49 (Product Showcase) Larry Buck presents instructions for replacing worn starter solenoid contacts with a kit he manufactures and markets. 154–155

Starting the diesel engine after prolonged storage

- Issue 52 (First Generation) Readers enumerate the precautions necessary before firing up a Turbo Diesel engine after prolonged storage. 26

Steering, sloppy. See Trackbars, worn

Steering damper. See Vibration in front-end suspension

Steering gear box, replacement

- Issue 49 (24-Valve Engines) A TDR reader provides instructions for bleeding air when replacing the steering gear box. 26

Steering stabilizer, aftermarket

- Issue 50 (24-Valve Engines) David Fettig describes favorable results from equipping his '99 Ram 2500 with the DSS Steering Stabilizer and adjustable track bar manufactured by Solid Steel Industries. 39

Step, powered and retractable

- Issue 49 (Life's a Beach) Jerry Nielsen describes what he calls the gem of the SEMA show, a retractable power step which runs under each door of the Quad Cab truck, sold by AMP Research. 118–119
- Issue 50 (Back in the Saddle) AMP Research makes a power step which serves as a retractable running board, useful for all Turbo Diesel trucks but particularly 4x4s, according to Scott Dalglish. 82–83
- Issue 50 (TDRRelease) AMP Research publicizes its power step designed for the '03-'05 Dodge Quad Cab Ram. 166

Stockard, Bill, autobiographical sketch

- Issue 50 (Tailgating) In the series of biographical sketches by TDR writers, Bill Stockard chronicles his long-term engagement with automotive machinery, down to his ten-year affiliation with the TDR. 6

Suspension, spring bump stops, aftermarket

- Issue 49 (Backfire) Bill Stockard clears up confusion in identifying the parts number for the Energy Suspension bump stop described in Issue 48, p. 39. 147

Suspension system, aftermarket

- Issue 52 (Have Ram, Will Travel) Joe Donnelly selects the KORE "chase series" mid-range suspension kit for installation on his Third Generation Turbo Diesel truck, a procedure he says he will describe in a later issue of the TDR. 94

Tachometer, erratic

- Issue 52 (First Generation) In a First Generation truck an erratic tachometer may be explained by a faulty crankshaft sensor. 26

Tachometer, installation

- Issue 50 (First Generation) A reader provides instructions with illustrations for installing an alternator-driven tachometer on a First Generation Turbo Diesel pickup. 20

TAG (Turbo Air Guide), experimental installation in muffler

- Issue 51 (Ranch Dressing) John Holmes reports on experimental installation of a TAG unit in a Turbo Diesel exhaust, which he says reduced exhaust turbulence, gave his engine a mellower deeper tone, and lowered EGT about 20-30 degrees. 110

TAG (Turbo Air Guide), installation in turbo intake

- Issue 49 (TDRRelease) Diesel Power Products publicizes a later version of its Turbo Air Guide for the tight fit of the '03-'05 trucks, called the TAG-III, to smooth air flow to the turbo, benefitting performance and mileage. 160
- Issue 50 (Polly's Pickup) Polly Holmes identifies as a favorite accessory the TAG (Turbo Air Guide), which she says helps with performance and mileage. 112

Tailgate, lowered, effect on fuel efficiency

- Issue 52 (Four Whaling) Every test done on a stock truck shows that driving with the tailgate down does not increase fuel mileage and sometimes decreases it, according to Greg Whale. 79

Tailgate drop-support cable, replacement part

Issue 51 (First Generation) A reader provides the Mopar part number for a replacement of the drop-support cable, or arm-check assembly, on a First Generation truck. 12

Tailgate drop dampener

Issue 50 (Polly's Pickup) A favorite accessory of Polly Holmes is the Gateglide designed to dampen the heavy fall of the tailgate when opening and to ease raising it. 112

TDC (top dead center), locating it without the timing pin

Issue 50 (12-Valve Engines) When the timing pin is missing, TDC may be determined by the dropped-valve method or a dial indicator, which is more accurate than the timing pin method. 30

TDR, reader testimonials

Issue 49 (Letter Exchange) A reader endorses the quality and usefulness of the TDR quarterly while praising Carson Dodge. 6

Issue 50 (TDRResource) By its comprehensive coverage of all aspects of operating and maintaining the Dodge/Cummins Turbo Diesel truck, reflected in the annual index, the TDR empowers the members in achieving superior satisfaction from their vehicles. 42

Issue 52 (Letter Exchange) Readers thank the writers and members of the TDR for their willing helpfulness and good humor. 10, 12

TDR clubs and chapters

Issue 49 (Chapter News) Quarterly news of local chapters and events in 2005 includes the following:

- The roster of TDR chapters is brought up to date. 144

- Joe Donnelly reports on the 2005 May Madness rally in Las Vegas, including seminars, demonstrations, competitions, testing, and the social events that made this the most popular of TDR's regular events. 140–144

- Auge's Dodge/Jeep, Belen, NM, conducted its regular spring seminar with several dozen participants, including members from the New Mexico 4-Wheeler Club. 145

Issue 50 (Chapter News) Quarterly news of local chapters and events in '05–'06 includes the following:

- The roster of TDR chapters is brought up to date. 147

- Cummins Rocky Mountain and ATS Diesel Performance fest, dubbed "Thunder on the Mountain," July 23–24, '05, Morrison, CO, included truck show-down, vendors' exhibitions, and dyno tests. 142–143

- The Middle Tennessee Chapter gathered July 16, '05, at the home of Mark Harris in Bethpage, attended by eleven trucks and their drivers. 143

- The 2005 Diesel Hot Rod Association held their Nationals event at the Indianapolis Raceway Park in late June. 144–146

Issue 51 (Chapter News) The roster of TDR chapters is brought up to date. 128.

Issue 52 (Chapter News) The roster of TDR chapters is brought up to date. 136

TDR Website

Issue 50 (Letter Exchange) A reader expresses his appreciation for the TDR Website, an important resource during his recuperation from cancer. 12

TechAuthority Online (replaces TSB directory)

Issue 50 (TDRResource) The Dodge TSB directory has been replaced by an online service with information keyed to individual VIN numbers, a resource recommended by the editor. 51

Technical Service Bulletins (TSBs), misleading titles

Issue 50 (Ranch Dressing) John Holmes warns that titles and descriptors of TSBs may fail to identify the subject and application under scrutiny. 111

Technical Service Bulletins (TSBs), TDR's annual review

Issue 50 (TDRResource) In its annual review of Dodge Technical Service Bulletins, the TDR presents all relevant releases issued in 2004 and those issued to date in 2005. 42–51

Technical Service Bulletins (TSBs), those currently available. See TechAuthority Online (replaces TSB directory)

Theme for Issue 49: TDR writers

Issue 49 (Tailgating) The editor announces the theme for this issue: autobiographical sketches of TDR writers, beginning in this issue and continuing in subsequent issues. 4

See: Autobiographical sketches of TDR writers

Theme for Issue 50: favorite truck accessories

Issue 50 (Tailgating) The theme for Issue 50 is "favorite accessories," NOTE: where useful information is provided on an accessory, it has a topic heading in the index, while merely nominal mention of a favorite is not indexed separately. 4

Theme for Issue 51: Strategies for coping with high fuel prices

Issue 51 (Tailgating) The theme for Issue 51 is strategies for coping with rising fuel prices in operating the Turbo Diesel pickup, a topic TDR writers address individually in their columns. 4

Theme of Issue 52: favorite tools

Issue 52 (Tailgating) The editor calls on TDR writers to identify and describe their favorite tools, which evokes extensive and often original responses from the staff. 4 **See entries under topic heading, "Tools, favorite."**

Thermal insulation. See Insulation, aftermarket spray-on product

Throttle cables, in Second Generation trucks, failure of

Issue 51 (Technical Topics) Whale and Anderson revisit a safety recall of Second Generation trucks to address failures in the throttle cable assembly. 49

Throttle couplers, sourcing

Issue 49 (First Generation) In answer to another member's request, a TDR reader provides the Mopar and Cummins part numbers for metal throttle couplers. 16

Throttle position sensor (TPS), adjustment of

Issue 49 (12-Valve Engines) Member Howard Durand provides a schematic to show the proper wiring of a potentiometer in the ground circuit of the throttle position sensor. 20

Throttle position sensor (TPS), problems with

Issue 49 (First Generation) Readers exchange experience and advice concerning corrections of problems with the throttle position sensor. 16

Timing pin, broken and lost

Issue 50 (12-Valve Engines) If the plastic timing pin is broken off, it need not be retrieved nor replaced in the procedure of determining TDC. 30

Tire pressure monitor, aftermarket

Issue 51 (Polly's Pickup) Polly Holmes sings the praises of a remote tire pressure monitor called "Pressure Pro" which, unlike models with sensors mounted within the rim, can be moved easily from tire to tire, from tow vehicle to towed vehicle. 112

Tire wear, cupping. See Trackbar, worn

Tonneau truck-bed cover

Issue 50 (Celebrity Corner) In his itemization of "favorite accessories," Sam Memmolo gives high ratings to the rollup tonneau made by Agri-Cover. 92

Tool box, in bed, side slider

Issue 50 (Member2Member) Needing ever more space to carry tools in his pickup, Brad Nelson builds a side slide assembly, accessible from either side, which he describes with full details and illustrations. 17–18

Tools, favorite

Issue 52 (Shadetree) Jim Anderson identifies tools essential in working on the Turbo Diesel truck, listed in ascending levels of technical sophistication, conclud-

ing with advice on proper care of tools. 52–54

Issue 52 (Shadetree) Brad Nelson describes his array of tools, most modified or fabricated from scratch by himself, many unique, with sixteen photographs of favorite tools and contrivances. 55–57

Issue 52 (Shadetree) Andy Mikonis lists half a dozen favorite tools, some basic, such as a ball peen hammer and a four-in-one screwdriver; some more specialized, such as a stud remover and a caster/camber gauge; but all indispensable. 58

Issue 52 (Shadetree) Robert Patton first lists products and tools handy in caring for the exterior of his truck, and then focuses on two cordless 18 volt impact wrenches he purchased from Harbor Freight, tools which he recommends to everyone. 58–59

Issue 52 (Kore Adventures) Kent Kroeker extends his usage of the term “tools” to include hardware he considers necessary to avoid being a soft target in a violent world, featuring the intimidation he achieves with a three-ton truck. 70–72

Issue 52 (Four Whaling) Greg Whale gives himself some license and rhapsodizes about the BMW X5 and the Land Rover Discovery LR3, as well as vehicles viewed at a Bosch Clean Diesel Drive Day, under the guise of “big tools.” 74–76

Issue 52 (Motor-Minded) Like several other writers in this issue of TDR, Mark Barnes chooses to consider “tools” figuratively; he says that his favorite tool has yet to be invented, a “reset button” for all contingencies and exigencies in life. 82–83

Issue 52 (Back in the Saddle) As assigned, Scott Dalglish identifies several favorite tools: wire stripper, propane soldering torch, clicker-style torque wrenches, injector puller, swivel sockets, offset wrenches, ratchet box-end wrenches. 84

Issue 52 (Celebrity Corner) Sam Memmolo enumerates his favorite tools, including a “Gear Wrench,” plasma cutter, cordless impact gun, Swedish battery charger, and digital volt/ohmmeter. 92–93

Issue 52 (Have Ram, Will Travel) Joe Donnelly interprets “tools” in a larger metaphorical sense, to say that the very mechanical problems presented in the pages of the TDR and by fellow members give him the inspiration, or “tool,” for solving them. 94

Issue 52 (Idle Clatter) The pages of the TDR magazine have been Jim Anderson’s favorite tool in solving mechanical problems in Turbo Diesel trucks over the years—to which he adds mention of his volt/ohm meter. 102

Issue 52 (Ranch Dressing) After remarking that his “favorite” tool is the one indispensable for whatever task is at hand, John Holmes says that at the moment he is fascinated with a Raytek Infrared Thermometer for quick automotive diagnostics. 108

Issue 52 (Life’s a Beach) Jerry Nielsen says that the most significant innovation in tools during the past twenty-odd years is development of increasingly powerful handheld, battery-operated tool packages. 132

Issue 52 (From the Shop Floor) Andy Redmond surveys an extensive array of favorite tools: on-board electronic diagnostic; factory service manuals; the TDR travel companion; the boonie box; and specific tool brands in all categories. 158–161

Issue 52 (Exhaust Note) Every tool Kevin Cameron owns has a story to tell, from his grandfather’s ball peen hammer to a career-spanning collection of Snap-on tools, down to the 6000 pound capacity, 12’ tall, steel I-beam gantry crane. 172–173

Torque, explanation of

Issue 52 (Technical Topics) Polly Holmes provides basic information for understanding what torque is and how it works in the diesel engine. 21

Torque converter, erratic locking/unlocking

Issue 49 (24-Valve Engines) TDR members diagnose and provide corrections for erratic locking/unlocking of the torque converter. 28

Issue 51 (24-Valve Engines) Hunting at certain accelerator pedal positions can result from several malfunctions, itemized by a reader. 20

Issue 52 (24-Valve Engines) Several fixes are described for correcting erratic locking/unlocking of the torque converter between third gear and overdrive in Second Generation trucks with the 47RE transmission. 39

Torque converters, aftermarket

Issue 52 (Life’s a Beach) Jerry Nielsen describes the design and the installation of the ATS Five Star torque converter with “Viskus Clutch Drive,” which he maintains is much more efficient in the low rpm range. 132–133

Torsional rigidity, in hydroformed frame. See Chassis frame, hydroformed

Tow strap

Issue 50 (Product Showcase) Brad Nelson argues for a tow strap that “looks like it is too heavy,” in preference to a tow chain. 155

Trackbars, worn

Issue 51 (Technical Topics) G. R. Whale and Jim Anderson identify worn-out trackbars as a common cause of sloppy steering and tire cupping. 46

Trailer, fifth-wheel, king pin stabilizer, aftermarket

Issue 50 (TDR Release) Dutch and Diana at Plugitright market a lightweight, efficient, highly stable king pin system for fifth-wheel trailers. 164

Trailer brake controller

Issue 50 (Back in the Saddle) Scott Dalglish demonstrates installation of a trailer brake controller, fitting it to the plug-in harness provided as a part of the tow package of the '05 Turbo Diesel truck. 88

Issue 50 (Four Whaling) Greg Whale gives high rating to the Tekonsha Prodigy trailer brake controller, which he says is the baseline controller of choice. 66

Trailer hitch, mounted on front of truck

Issue 50 (Have Ram, Will Travel) Joe Donnelly reports installing a trailer receiver hitch on the front of his truck for ease in parking his Airstream in tight spots. 99

Trailer hitch, other uses than for towing

Issue 50 (Khol Fusion) Ron Khol presents reasons for equipping a truck with a frame-mounted trailer hitch, even on vehicles that do not pull a trailer. 117

Trailers, weight limits

Issue 49 (Idle Clatter) Jim Anderson emphasizes the importance of staying below the limits on trailer weights. 101

Trailer wiring harness, cautionary advice

Issue 50 (Letter Exchange) A reader advises caution before crimping multiple wires for different circuits into a single harness when assembling the trailer wiring harness. 10

Transfer case lever, squeak in

Issue 50 (Third Generation) To eliminate a squeaking transfer case shift lever, readers advise lubricating the linkage with silicon spray or white lithium grease. 40

Transfer Flow manufacturing facility, description of

Issue 50 (Have Ram, Will Travel) Joe Donnelly gives readers a tour of the Transfer Flow manufacturing facility in Chico, CA. 94–95

Transmission, automatic, “overdrive off” switch

Issue 51 (Ranch Dressing) In answer to complaints that the “overdrive off” switch had been eliminated from the gearshift lever handle, DaimlerChrysler has now incorporated it along with the “Tow/Haul” button in trucks currently in production. 108

Transmission, automatic, basic information on

Issue 52 (Technical Topics) Polly Holmes explains the operating principle of the automatic transmission. 24

Transmission, automatic, debris on magnet, assessment of

Issue 51 (24-Valve Engines) A reader assesses the amount of metallic debris that is acceptable on the transmission magnet before deciding there is a problem. 20

Transmission, automatic, driving techniques for controlling temperature

Issue 50 (Idle Clatter) Jim Anderson considers a driving technique designed to avoid excessively high automatic transmission temperatures by manually shifting to lower gears when on steep grades. 104

Transmission, automatic, fluid temperature gauge, need for

Issue 50 (Idle Clatter) Because excess temperatures reduce the life of automatic transmissions, trucks hauling heavy loads or towing a trailer should be equipped with a gauge for monitoring fluid operating temperatures, according to Jim Anderson. 104

Transmission, automatic, intercooler, aftermarket

Issue 52 (TDRRelease) BD markets its new "Cool-It" intercooler, which promises to reduce transmission temperatures by as much as 200 degrees. 164

Transmission, automatic, restrictions on use of exhaust brakes. See Exhaust brake, use with automatic transmission, where approved**Transmission, automatic, searching between gears**

Issue 49 (12-Valve Engines) TDR readers identify a contaminated transmission temperature sensor connector as the cause of intermittent downshifting from overdrive. 22

Issue 51 (First Generation) Readers trace erratic downshifting from overdrive in a First Generation automatic to loose attachment of OD solenoid. 12

Issue 51 (Technical Topics) In First Generation trucks failure of either the TPS (throttle position sensor) or the TTS (transmission temperature sensor) will result in intermittent shifting between gears, requiring replacement of offending part. 48

Transmission, automatic, starting off in second gear. See Governor pressure solenoid and sender, replacing of**Transmission, automatic, synthetic fluid, Mopar ATF+4**

Issue 51 (Ranch Dressing) Mopar and Lubrizol have developed ATF+4, a synthetic fluid suitable for all automatic transmissions, both old and new. 106

Transmission, automatic, temperature management

Issue 49 (Letter Exchange) A reader describes his management of excessive transmission temperatures in a Cummins/Scotty motorhome in steep mountain grades, and endorses the BD 2-Low switch and a Pacbrake. 6

Transmission, Getrag G56, operates in higher rpm range

Issue 50 (Ranch Dressing) Overdrive gear speeds in the new G56 six-speed transmission operate at higher rpm than in earlier models, with the effect of lower gas mileage. 111

Transmission, Getrag G56, availability

Issue 49 (Ranch Dressing) John Holmes reports that the Getrag G56 six-speed transmission, unavailable for a season, is now available again. 104

Transmission, Getrag G56, required lubricant

Issue 49 (Ranch Dressing) John Holmes reminds truck operators with a Getrag G56 six-speed transmission that the only approved lubricant is ATF+4 or equivalent, requiring six quarts. 104

Transmission, Getrag G56, shift pattern

Issue 51 (Ranch Dressing) John Holmes advises that in shifting the new G56 manual transmission into reverse, it is possible to end up in second gear, with a consequent strong propulsion forward. 108

Issue 51 (Ranch Dressing) John Holmes reveals that the new G56 manual transmission is not manufactured by Getrag but is a Getrag design, made in Brazil for Mercedes as a medium-duty truck transmission. 108

Transmission, manual, auxiliary

Issue 51 (Back in the Saddle) Scott Dalglish describes the installation and performance of a Gear Vendors auxiliary transmission to enhance fuel efficiency and performance of the G56 six-speed on his new truck. 86–87

Transmission, manual, clutch, failure to release

Issue 51 (Technical Topics) When the clutch fails to release, the cause is either a failed clutch master/slave cylinder circuit, or the pilot bearing in the flywheel: in either case the part must be replaced. 47

Transmission, manual, clutch information update

Issue 49 (Member2Member) Joe Donnelly explains the merits and limitations of the newer, high capacity clutches for higher horsepower engines. 10–14

Transmission, manual, clutch installation tips

Issue 49 (Member2Member) Joe Donnelly provides admonitions and instructions for installing manual clutches, to supplement procedures and specifications in the Dodge Ram Service Manual. 12–13

Transmission, manual, lubricants, improved

Issue 51 (Have Ram, Will Travel) Joe Donnelly evaluates several high performance lubricants for five-speed and six-speed transmissions. 92–93

Transmission, NV4500, fifth-gear nut problem

Issue 49 (Idle Clatter) Jim Anderson explains the common failure of the fifth-gear nut in the five-speed NV4500 and offers a fix for the problem. 97

Issue 50 (Idle Clatter) Failure of the fifth-gear nut in the NV4500 transmission may be corrected with a revised nut and crush washer sold by Dodge dealers, and an aftermarket fully splined output shaft. 104

Issue 51 (Technical Topics) A notorious flaw in Second Generation trucks with the NV4500 gearbox is failure of the mainshaft nut which disables fifth gear, a problem addressed here with several solutions. 49

Issue 52 (Backfire) A TDR reader challenges advice in Issue 51 that "welding the [fifth gear] nut on the shaft didn't work" to correct a design defect because "it crystallized the surface steel," as ill-informed and poorly reasoned. 155

Transmission, NV5600, alternative oil brands

Issue 49 (Member2Member) Joe Donnelly alerts TDR readers to availability of manual transmission oils less expensive than the OEM product. 15

Transmission, NV5600, changing the oil in

Issue 50 (24-Valve Engines) A reader provides complete instructions for draining and refilling the oil in the NV5600 six-speed manual transmission. 33

Transmission, NV5600, filler plug, tool size for removing

Issue 49 (Third Generation) Readers provide information on proper size Allen wrench for removing the filler plug in the NV5600 transmission, and a suggestion for making one by hand. 32

Transmission, NV5600, oil filter

Issue 50 (Third Generation) Installation of an oil filter in the NV5600 transmission is highly advisable and is available from Geno's Garage. 40

Transmission, NV5600, PTO cover gaskets

Issue 50 (Third Generation) Readers provide information on availability of gaskets and use of silicone when replacing oil in the NV5600 transmission. 40

Transmission, NV series, suitable substitute fluids

Issue 51 (Technical Topics) Several substitute brands of fluid have proved satisfactory to replace the very expensive Mopar lubricant for the NV series transmission.. 50

Transmission temperature sensor (TTS), failure. See Transmission, automatic, searching between gears**Travel Companion**

Issue 49 (TDR Travel Companion) The editor tells of the origin and development of TDR's unique resource for members seeking help on the road, and updates the rules and the codes for information in the annual guide book. 134–138

Travels. See also Five Points Tour

Issue 50 (Idle Clatter) Fulltime-traveler Jim Anderson shares an account of his trip through the canyon country of Utah and northern Arizona, and across New Mexico with a delay en route to visit guru Joe Donnelly, thence into home country of Tennessee. 106–107

Issue 50 (Polly's Pickup) Polly Holmes recounts recent travels in her Cummins-powered RV to Death Valley and Eugene, OR. 112–114

- Issue 51 (Idle Clatter) Jim Anderson recounts recent RV rambles, with emphasis on constraints imposed by higher fuel costs, with a sidelight on his new Honda Reflex scooter that gets 75 mpg, an addition to his RV rig. 104–105
- Issue 51 (Ranch Dressing) John Holmes narrates his journeys to the SEMA show; to Pahrump and Winnemucca, NV, for RV shows; to Scottsdale, AZ, for the Barrett-Jackson auction; and finally to Quartzsite. 109
- Issue 51 (Polly's Pickup) Polly Holmes chronicles her travels in 2005, ranging from the Oregon Flock and Fiber Festival in Canby, OR, to Roswell, NM, for a Foretravel Motorhome Rally and the regions' many cultural and historical attractions. 112–113
- Issue 52 (Have Ram, Will Travel) In winter '06 Joe Donnelly traveled to the Phoenix area for the Barrett-Jackson and the Russo and Steele automotive auctions, and to Las Vegas for the Shooting, Hunting, and Outdoor Trade show (SHOT). 95
- Issue 52 (Idle Clatter) Jim Anderson chronicles his travels between home base in Tennessee and his Florida winter destination and recounts his attendance at a meeting of the Florida Flywheel Association, featuring unique antique machinery of all kinds. 105–106
- Issue 52 (Ranch Dressing) Like several other TDR gear heads, John Holmes times his annual winter RV travels to the lively vendor marketplace in Quartzsite and to the auto auctions in the Phoenix area and in Las Vegas. 112–113
- Issue 52 (Polly's Pickup) Polly Holmes chronicles winter RV travels to the Southwest with her husband, John, to attend half a dozen car auctions in the Phoenix area and to Quartzsite to visit friends and for its unique experience. 114–116

Truck, early history

- Issue 52 (Miscellaneous Rambings) Don Bunn continues his history of the motor truck with accounts of the revolution wrought by Henry Ford, the truck's role in World War I, and a glance at its development in England. 124–130

Truck bed, spray-on liner

- Issue 50 (Product Showcase) Andy Redmond explains that the hot-spray application employed by Arma Coating provides superior results in a spray-on bed liner. 156
- Issue 50 (Product Showcase) Doug Leno favorably evaluates the Line-X spray-on bed liner to protect the paint of the truck bed from scratches. 159

Truck bed cap

- Issue 49 (First Ride) James Walker reports the addition of a Leer truck-bed cap to his Turbo Diesel truck, promising a later quality evaluation. 86

Truck bed carpet liner

- Issue 50 (Product Showcase) Doug Leno describes the workmanship and convenience of a fabric, flexible bed liner made by BedRug, easily installable, washable, removable. 159–160

Truck cover, lightweight, of fabric

- Issue 50 (Four Whaling) Greg Whale favorably evaluates a lightweight fabric cover made by Covercraft he bought for his First Generation Turbo Diesel. 66

Tuner & vehicle interface, electronic, aftermarket. See PDA (personal digital assistant)

Turbo boost (MAP) sensor, failure in circuit

- Issue 49 (24-Valve Engines) A reader locates cause of flat engine response in a failure in the turbo boost sensor, and corrects it with an inexpensive fix. 26

Turbocharger, basic information on function and maintenance of

- Issue 52 (Technical Topics) Polly Holmes explains the design, function, and performance of the turbocharger component of the Cummins engine. 20

Turbocharger, history of early development

- Issue 50 (The Way We Were) The editor cranks up the Wayback Machine so Kevin Cameron can reprise his comprehensive account of the origins and development of exhaust gas turbocharging. 58–60
- Issue 50 (Exhaust Note) Kevin Cameron delves further into the history of gas-powered turbochargers, in this essay focusing on design and materials research in turbos for military aircraft. 172–173

Turbochargers, aftermarket, review

- Issue 49 (Third Generation) Doug Leno describes installing the ATS Aurora 5000 turbocharger in his test of the TST PowerMaxCr fueling box. 38–43
- Issue 51 (Have Ram, Will Travel) Joe Donnelly reports briefly on a few aftermarket turbochargers currently available, in anticipation of a fuller treatment of the subject in a future issue of TDR. 94
- Issue 52 (Have Ram, Will Travel) Joe Donnelly reports on developments in turbos designed for use with electronic fueling modules added to HPCR engines, including ATS, BD, Diesel Dynamics/Edge, High Tech Turbo, Holset, and Industrial Injection Service. 98–100
- Issue 52 (TDRRelease) Edge Products promotes its Jammer BB turbocharger for '94-'06 Dodge diesels, offering the advantage of ceramic ball bearings rather than the standard bronze thrust bearings, claiming 25% faster spoolup. 166

Turbochargers, boost specifications

- Issue 51 (The Way We Were) A comprehensive table presents turbocharger vitals and specs for model years '89 through '06 HPCR, in both manual and automatic transmissions, emphasizing boost readings to diagnose engine performance. 60–63

Turbochargers, common causes of failure

- Issue 52 (Have Ram, Will Travel) Joe Donnelly ticks off the common causes of turbocharger failure, i.e., lack of lubrication, foreign material, high exhaust gas temperatures, inferior or defective component parts. 100–101

Turbo Tech Rally 2006

- Issue 50 (Tailgating) While not a national-type event, Turbo Tech 2006 in Columbus, Indiana, is intended for members from the broad area east of the Mississippi to balance the immensely popular May Madness annual rally in the West. 4

U-joint, front, 4x4, lubrication of

- Issue 50 (Third Generation) Though a bit difficult to access, it is possible to locate the grease fitting on the front driveline U-joint of a 4x4 Third Generation Turbo Diesel truck. 41

U-joint, front, failure in First Generation truck

- Issue 51 (Technical Topics) With introduction of massive torque in First Generation truck drivetrains, the front drive U-joint may fail, which requires replacement with upgrade. 48

U-joints, loose and worn in Third Generation trucks

- Issue 51 (Third Generation) TDR readers identify problems (vibration, howling, humming, jerking) that result from loose and worn axle U-joints and driveline U-joints; and review appropriate corrections. 24

Ultra Low Sulfur Diesel fuel (ULSD), introduction of

- Issue 49 (Technical Topics) The editor presents updated information on the new Ultra Low Sulfur Diesel fuel, requirement of which will be phased in beginning September 1, 2006. 53

Ultra Low Sulfur Diesel fuel (ULSD), potential problems

- Issue 51 (Blowin' in the Wind) An article in "Light and Medium Truck" magazine reveals problems that Ultra Low Sulfur Diesel fuel (ULSD) will present to operators of Turbo Diesel trucks, particularly maintenance problems and low fuel economy. 55
- Issue 52 (Idle Clatter) Jim Anderson anticipates problems in some trucks caused by the new Ultra Low Sulfur Diesel fuel (ULSD): while truck models '98.5 and later have compatible fuel pump seals, older models may not fare as well. 103
- Issue 52 (Member2Member) Ultra Low Sulfur Diesel fuel (ULSD) presents significant problems in fuel lubricity, fuel contamination, and a tendency to react with seals—problems partially addressed by use of fuel conditioners and finer filters. 14–15

Urea injection, the key to future emissions control technology

- Issue 51 (Blowin' in the Wind) Industry press coverage strongly indicates that, in spite of challenges in implementing it, urea injection is the industry's choice of technology to meet increasingly stringent emissions standards. 54
- Used diesel-powered pickups, comparative values and prices**
Issue 51 (Idle Clatter) Jim Anderson samples the market for used diesel pickups, model year '89 and later, comparing Dodge to Ford and Chevrolet, to find that perceived comparative value has shifted several times, but that Dodge has an edge. 100–101
- Vacuum pump, rebuilding of**
Issue 51 (First Generation) Readers analyze the project of rebuilding a vacuum pump in the First Generation truck. 13
- Vacuum pump seal, oil leak at**
Issue 51 (24-Valve Engines) The likely cause of an oil leak in the power steering/vacuum pump area is a deteriorated seal. 18
- Valve adjustment, instructions**
Issue 51 (24-Valve Engines) Readers provide instructions for removal of parts preliminary to performing a valve adjustment. 18
- Variable geometry (VG) turbocharger**
Issue 52 (Back in the Saddle) Scott Dalgleish describes the principle and merits of the variable geometry turbocharger and says its use will increase as emissions standards become more stringent. 89
- Vibration in driveline**
Issue 51 (Technical Topics) Driveline vibration phased to road speed may result from a worn driveshaft universal joint, an unbalanced shaft, or a bad carrier bearing or bearing support in a two-piece driveshaft system. 47
Issue 51 (Third Generation) Three TDR readers identify loose U-joints as the cause of a "strange vibration" when the vehicle is powered and under way. 24
- Vibration in front-end suspension**
Issue 52 (First Generation) Front-end vibration in a reader's First Generation truck is cured by replacing the steering damper. 26
- Voltage surges**
Issue 51 (First Generation) A poor connection at the disconnect in the cable from alternator to battery is identified as the cause of fluctuating voltage and pulsating lights. 12
- Voltmeter, fluctuation in reading, at startup**
Issue 51 (Idle Clatter) During startup of the truck, it is normal for lights to dim and voltmeter to fluctuate because of power draw by the intake manifold heater. 102
- Walker, James, autobiographical sketch**
Issue 52 (Tailgating) James Walker recounts his life story in terms of the autos he has owned and monkey-wrenched, technical schooling, professional jobs, cars he has raced, journals he has written for. 6
- Warranties, extended, counsel on advisability of**
Issue 49 (Khol Fusion) Ron Khol suggests that extended warranties are often notorious for being a bad deal. 111
Issue 49 (Ranch Dressing) John Holmes advises against buying extended warranties from parties other than the manufacturer of the vehicle, and gives reasons. 102
- Warranty, legal stipulations and constraints of factory policy**
Issue 52 (TDRResource) Adding aftermarket parts does not ipso facto void the factory warranty, but the editor cites DaimlerChrysler Warranty Bulletin D-05-28, to identify specific modifications which do jeopardize a right to consideration. 60–61
Issue 52 (Four Whaling) Greg Whale elucidates the TDR mantra, "The addition of an aftermarket part does not void the manufacturer's warranty; however, some items ... will put your rights to warranty consideration in jeopardy." 78
Issue 52 (Idle Clatter) In recounting a story of a member denied warranty repair of engine damage after adding an aftermarket power enhancement, Jim Anderson reminds readers who modify their powertrain that they are their own warranty station. 105
- Whale, Greg, autobiographical sketch**
Issue 49 (Four Whaling) Greg Whale reflects on his early journalist's interest in the Dodge/Cummins diesel truck, and proceeds to share his convictions on ethical and stylistic standards in journalism, advertising, and language usage. 74–76
- Wheel balancer, dynamic, aftermarket**
Issue 50 (Back in the Saddle) Scott Dalgleish explains the design, installation, and function of the Balance Master wheel balancers he bought for his 2005 Turbo Diesel truck. 78
- Wheel flares, aftermarket**
Issue 50 (Product Showcase) To protect paint from road debris after installing wider wheels and tires, Doug Leno advocates installing the Bushwacker "Extend-a-Flare" wheel flares. 159
- Wheel hop. See Axle wrap, problems with**
- Wheels, 8-lug, aftermarket**
Issue 52 (TDRRelease) Rickson Truck Wheels announces an 8-lug, commercial rated, lightweight, exceptionally strong wheel for trucks in the Turbo Diesel series. 164
- Wheels, upgrade, aftermarket**
Issue 50 (Product Showcase) To fill out the wheel wells and improve traction, Doug Leno argues the advantages of American Racing Python wheels and BFG 285/70-17 AT-KO tires. 159
- "Why I Love My Diesel," contest winner. See Diesel Technology Forum, essay contest**
- Wilderness lands, access to**
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